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TABLES OF THEORETICAL LINE POSITIONS AND INTENSITIES FOR THE $\Delta v = 1$, $\Delta v = 2$ AND $\Delta v = 3$ VIBRATION-ROTATION BANDS OF $C^{12}O^{16}$ AND $C^{13}O^{16}$

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JUNE 1967

GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND

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ABSTRACT

Theoretical line positions and intensities are tabulated for the fundamental, first overtone and second overtone vibration-rotation bands of $C^{12}O^{16}$ and $C^{13}O^{16}$ for temperatures in the range 175-3500°K.

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EXPLANATION OF TABLES

Tabulated in this report are the line positions and intensities for the fundamental ($\Delta v = 1$), first overtone ($\Delta v = 2$) and second overtone ($\Delta v = 3$) vibration-rotation bands of $C^{12}O^{16}$ and $C^{13}O^{16}$ for temperatures in the range of 175-3500°K. The theory, molecular constants and computational procedure for generating these molecular parameters will be described in a separate publication (Kunde, 1967). For the temperature range 175-1800°K, collisional line half-widths due to $CO-N_2$ collisions are included and the integrated absorption coefficient or line intensity, S_{STP}^{lp}, is given in units of $cm^{-2} \cdot atm^{-1}$ corresponding to an absorption coefficient per unit length per unit pressure. The values of S_{STP}^{lp} are referenced to normal temperature and pressure conditions. For the temperature range 1000-3500°K, collisional line half-widths due to $CO-H_2$ are included and the line intensity, S^m, is given in units of $cm \cdot gm^{-1}$ corresponding to an absorption coefficient per unit mass. All of the calculations were performed on an IBM 7094. The $C^{12}O^{16}$ and $C^{13}O^{16}$ line intensities are weighted in accordance with a terrestrial C^{12}/C^{13} abundance ratio.

The column headings for the table are:

VU—Upper vibrational quantum state of transition.

VL—Lower vibrational quantum state of transition.

JU— Upper rotational quantum state of transition.

JL— Lower rotational quantum state of transition.

LOWER STATE ENERGY—Engery in wave numbers of lower quantum state.

CODE—Denotes isotopic species, 1-$C^{12}O^{16}$, 2-$C^{13}O^{16}$.

WAVE NUMBER—Wave number of transition.

WAVELENGTH—Wavelength of transition(vacuum)

HALF-WIDTH—Collisional line half-width in wave numbers due to colliding gas designated.

INTEGRATED ABSORPTION COEFFICIENT—Line intensity in units and for temperatures designated.

REFERENCE

Kunde, V. G., 1967: to be published.

Table 1—Fundamental band of CO, T = 175-300°K. The total number of lines included is 278. For temperatures less than 300°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-6}. The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
1	0	39	40	2999.27	2	1924.94	5.1950	0.0400	0.0	0.0	0.0	0.0	0.0	5.38E-07
1	0	38	39	2853.67	2	1929.79	5.1819	0.0400	0.0	0.0	0.0	0.0	0.0	1.06E-06
1	0	37	38	2711.64	2	1934.61	5.1690	0.0400	0.0	0.0	0.0	0.0	0.0	2.03E-06
1	0	44	45	3953.41	1	1937.82	5.1604	0.0400	0.0	0.0	0.0	0.0	0.0	5.88E-07
1	0	36	37	2573.18	2	1939.40	5.1562	0.0400	0.0	0.0	0.0	0.0	1.37E-06	3.85E-06
1	0	43	44	3782.62	1	1943.06	5.1465	0.0400	0.0	0.0	0.0	0.0	0.0	1.31E-06
1	0	35	36	2438.31	2	1944.16	5.1436	0.0400	0.0	0.0	0.0	0.0	2.70E-06	7.17E-06
1	0	42	43	3615.54	1	1948.27	5.1328	0.0400	0.0	0.0	0.0	0.0	0.0	2.85E-06
1	0	34	35	2307.02	2	1948.90	5.1311	0.0400	0.0	0.0	0.0	1.72E-06	5.23E-06	1.31E-05
1	0	41	42	3452.15	1	1953.45	5.1191	0.0400	0.0	0.0	0.0	0.0	1.48E-06	6.10E-06
1	0	33	34	2179.32	2	1953.61	5.1187	0.0400	0.0	0.0	0.0	3.49E-06	9.93E-06	2.35E-05
1	0	32	33	2055.22	2	1958.29	5.1065	0.0400	0.0	0.0	2.07E-06	6.94E-06	1.85E-05	4.15E-05
1	0	40	41	3292.48	1	1958.60	5.1057	0.0400	0.0	0.0	0.0	0.0	3.34E-06	1.28E-05
1	0	31	32	1934.72	2	1962.94	5.0944	0.0400	0.0	1.04E-06	4.35E-06	1.35E-05	3.37E-05	7.17E-05
1	0	39	40	3136.53	1	1963.73	5.0923	0.0400	0.0	0.0	0.0	1.57E-06	7.37E-06	2.65E-05
1	0	30	31	1817.82	2	1967.56	5.0824	0.0400	0.0	2.35E-06	8.91E-06	2.56E-05	6.02E-05	1.22E-04
1	0	38	39	2984.30	1	1968.82	5.0792	0.0400	0.0	0.0	0.0	3.69E-06	1.60E-05	5.37E-05
1	0	29	30	1704.53	2	1972.16	5.0706	0.0400	1.02E-06	5.14E-06	1.78E-05	4.76E-05	1.06E-04	2.03E-04
1	0	37	38	2835.80	1	1973.89	5.0661	0.0400	0.0	0.0	1.53E-06	8.46E-06	3.39E-05	1.07E-04
1	0	28	29	1594.85	2	1976.72	5.0589	0.0400	2.43E-06	1.09E-05	3.48E-05	8.67E-05	1.81E-04	3.33E-04
1	0	36	37	2691.03	1	1978.92	5.0533	0.0400	0.0	0.0	3.78E-06	1.90E-05	7.04E-05	2.09E-04
1	0	27	28	1488.80	2	1981.26	5.0473	0.0400	5.63E-06	2.27E-05	6.63E-05	1.54E-04	3.06E-04	5.36E-04
2	1	30	31	4027.09	1	1983.12	5.0426	0.0400	0.0	0.0	0.0	0.0	0.0	5.75E-07
1	0	35	36	2550.01	1	1983.93	5.0405	0.0400	0.0	1.33E-06	9.06E-06	4.16E-05	1.44E-04	4.00E-04
1	0	26	27	1386.36	2	1985.77	5.0358	0.0400	1.26E-05	4.58E-05	1.23E-04	2.69E-04	5.05E-04	8.46E-04
2	1	20	21	2936.50	2	1987.57	5.0313	0.0447	0.0	0.0	0.0	0.0	0.0	7.76E-07
2	1	29	30	3909.71	1	1987.91	5.0304	0.0400	0.0	0.0	0.0	0.0	0.0	9.78E-07
1	0	34	35	2412.73	1	1988.91	5.0279	0.0400	0.0	3.48E-06	2.12E-05	8.93E-05	2.87E-04	7.52E-04
1	0	25	26	1287.55	2	1990.25	5.0245	0.0400	2.74E-05	9.00E-05	2.24E-04	4.58E-04	8.17E-04	1.31E-03
2	1	19	20	2860.19	2	1991.84	5.0205	0.0456	0.0	0.0	0.0	0.0	0.0	1.07E-06
2	1	28	29	3796.07	1	1992.67	5.0184	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-06
1	0	33	34	2279.20	1	1993.86	5.0154	0.0400	0.0	8.84E-06	4.85E-05	1.87E-04	5.61E-04	1.39E-03
1	0	24	25	1192.36	2	1994.70	5.0133	0.0400	5.78E-05	1.72E-04	3.96E-04	7.63E-04	1.29E-03	1.99E-03
2	1	18	19	2787.51	2	1996.08	5.0098	0.0470	0.0	0.0	0.0	0.0	0.0	1.44E-06
2	1	27	28	3686.17	1	1997.40	5.0065	0.0400	0.0	0.0	0.0	0.0	0.0	2.68E-06
1	0	32	33	2149.44	1	1998.77	5.0031	0.0400	2.75E-06	2.18E-05	1.08E-04	3.84E-04	1.07E-03	2.51E-03
1	0	23	24	1100.81	2	1999.12	5.0022	0.0412	1.18E-04	3.20E-04	6.84E-04	1.24E-03	2.01E-03	2.97E-03
2	1	17	18	2718.44	2	2000.29	4.9993	0.0482	0.0	0.0	0.0	0.0	0.0	1.90E-06
2	1	26	27	3580.03	1	2002.10	4.9948	0.0400	0.0	0.0	0.0	0.0	0.0	4.30E-06
1	0	22	23	1012.90	2	2003.51	4.9912	0.0423	2.33E-04	5.77E-04	1.15E-03	1.98E-03	3.05E-03	4.35E-03
1	0	31	32	2023.43	1	2003.66	4.9909	0.0400	7.51E-06	5.25E-05	2.35E-04	7.71E-04	2.02E-03	4.47E-03
2	1	16	17	2652.99	2	2004.47	4.9888	0.0493	0.0	0.0	0.0	0.0	0.0	2.46E-06
2	1	25	26	3477.63	1	2006.77	4.9831	0.0400	0.0	0.0	0.0	0.0	1.62E-06	6.78E-06
1	0	21	22	928.62	2	2007.88	4.9804	0.0435	4.47E-04	1.01E-03	1.89E-03	3.08E-03	4.55E-03	6.25E-03
1	0	30	31	1901.19	1	2008.52	4.9788	0.0400	1.99E-05	1.23E-04	4.98E-04	1.51E-03	3.71E-03	7.79E-03
2	1	15	16	2591.16	2	2008.62	4.9785	0.0505	0.0	0.0	0.0	0.0	1.10E-06	3.12E-06
2	1	24	25	3379.00	1	2011.41	4.9716	0.0400	0.0	0.0	0.0	0.0	2.62E-06	1.05E-05
1	0	20	21	847.99	2	2012.21	4.9697	0.0447	8.29E-04	1.73E-03	3.03E-03	4.68E-03	6.63E-03	8.79E-03
2	1	14	15	2532.96	2	2012.74	4.9684	0.0517	0.0	0.0	0.0	0.0	1.40E-06	3.88E-06
1	0	29	30	1782.72	1	2013.35	4.9668	0.0400	5.11E-05	2.79E-04	1.03E-03	2.89E-03	6.68E-03	1.33E-02
2	1	23	24	3284.13	1	2016.01	4.9603	0.0412	0.0	0.0	0.0	0.0	4.14E-06	1.59E-05
1	0	19	20	771.00	2	2016.51	4.9591	0.0458	1.49E-03	2.87E-03	4.73E-03	6.96E-03	9.46E-03	1.21E-02
2	1	13	14	2478.38	2	2016.82	4.9583	0.0528	0.0	0.0	0.0	0.0	1.74E-06	4.71E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
1	0	28	29	1668.03	1	2018.14	4.9551	0.0400	1.27E-04	6.16E-04	2.08E-03	5.42E-03	1.18E-02	2.24E-02
2	1	22	23	3193.03	1	2020.59	4.9490	0.0423	0.0	0.0	0.0	1.33E-06	6.40E-06	2.36E-05
1	0	18	19	697.65	2	2020.78	4.9486	0.0470	2.59E-03	4.64E-03	7.19E-03	1.01E-02	1.32E-02	1.64E-02
2	1	12	13	2427.44	2	2020.88	4.9483	0.0540	0.0	0.0	0.0	0.0	2.12E-06	5.59E-06
1	0	27	28	1557.12	1	2022.91	4.9434	0.0400	3.06E-04	1.32E-03	4.08E-03	9.93E-03	2.04E-02	3.68E-02
2	1	11	12	2380.12	2	2024.91	4.9385	0.0542	0.0	0.0	0.0	0.0	2.51E-06	6.48E-06
1	0	17	18	627.96	2	2025.03	4.9382	0.0482	4.36E-03	7.26E-03	1.07E-02	1.43E-02	1.81E-02	2.18E-02
2	1	21	22	3105.69	1	2025.13	4.9380	0.0435	0.0	0.0	0.0	2.10E-06	9.69E-06	3.44E-05
1	0	26	27	1449.99	1	2027.64	4.9318	0.0400	7.13E-04	2.76E-03	7.82E-03	1.78E-02	3.45E-02	5.94E-02
2	1	10	11	2336.44	2	2028.90	4.9288	0.0545	0.0	0.0	0.0	0.0	2.89E-06	7.34E-06
1	0	16	17	561.92	2	2029.24	4.9280	0.0493	7.10E-03	1.10E-02	1.54E-02	1.98E-02	2.41E-02	2.82E-02
2	1	20	21	3022.13	1	2029.64	4.9270	0.0447	0.0	0.0	0.0	3.25E-06	1.43E-05	4.91E-05
1	0	25	26	1346.66	1	2032.35	4.9204	0.0400	1.61E-03	5.61E-03	1.46E-02	3.11E-02	5.71E-02	9.41E-02
2	1	9	10	2296.39	2	2032.86	4.9192	0.0547	0.0	0.0	0.0	1.07E-06	3.25E-06	8.09E-06
1	0	15	16	499.54	2	2033.42	4.9178	0.0505	1.12E-02	1.63E-02	2.16E-02	2.67E-02	3.15E-02	3.59E-02
2	1	19	20	2942.34	1	2034.12	4.9161	0.0458	0.0	0.0	0.0	4.90E-06	2.08E-05	6.86E-05
2	1	8	9	2259.98	2	2036.79	4.9097	0.0550	0.0	0.0	0.0	1.19E-06	3.54E-06	8.69E-06
1	0	24	25	1247.11	1	2037.02	4.9091	0.0400	3.51E-03	1.11E-02	2.66E-02	5.31E-02	9.26E-02	1.46E-01
1	0	14	15	440.81	2	2037.57	4.9078	0.0517	1.70E-02	2.34E-02	2.95E-02	3.52E-02	4.02E-02	4.47E-02
2	1	18	19	2866.33	1	2038.57	4.9054	0.0470	0.0	0.0	1.29E-06	7.23E-06	2.94E-05	9.40E-05
2	1	7	8	2227.21	2	2040.70	4.9003	0.0574	0.0	0.0	0.0	1.28E-06	3.74E-06	9.05E-06
1	0	23	24	1151.37	1	2041.66	4.8980	0.0412	7.42E-03	2.12E-02	4.72E-02	8.86E-02	1.47E-01	2.22E-01
1	0	13	14	385.75	2	2041.69	4.8979	0.0528	2.50E-02	3.25E-02	3.92E-02	4.51E-02	5.02E-02	5.44E-02
2	1	17	18	2794.11	1	2042.98	4.8948	0.0482	0.0	0.0	1.94E-06	1.04E-05	4.07E-05	1.26E-04
2	1	6	7	2198.07	2	2044.56	4.8910	0.0597	0.0	0.0	0.0	1.33E-06	3.82E-06	9.12E-06
1	0	12	13	334.34	2	2045.78	4.8881	0.0540	3.55E-02	4.37E-02	5.07E-02	5.64E-02	6.11E-02	6.47E-02
1	0	22	23	1059.42	1	2046.27	4.8869	0.0423	1.52E-02	3.94E-02	8.15E-02	1.44E-01	2.28E-01	3.32E-01
2	1	16	17	2725.67	1	2047.37	4.8843	0.0493	0.0	0.0	2.84E-06	1.46E-05	5.51E-05	1.66E-04
2	1	5	6	2172.57	2	2048.40	4.8819	0.0621	0.0	0.0	0.0	1.32E-06	3.74E-06	8.84E-06
1	0	11	12	286.60	2	2049.84	4.8784	0.0542	4.85E-02	5.69E-02	6.36E-02	6.87E-02	7.25E-02	7.52E-02
1	0	21	22	971.28	1	2050.85	4.8760	0.0435	3.00E-02	7.11E-02	1.37E-01	2.30E-01	3.47E-01	4.85E-01
2	1	15	16	2661.01	1	2051.72	4.8740	0.0505	0.0	0.0	4.04E-06	1.99E-05	7.29E-05	2.13E-04
2	1	4	5	2150.72	2	2052.21	4.8728	0.0645	0.0	0.0	0.0	1.25E-06	3.50E-06	8.19E-06
1	0	10	11	242.53	2	2053.86	4.8689	0.0545	6.40E-02	7.18E-02	7.74E-02	8.12E-02	8.38E-02	8.53E-02
1	0	20	21	886.95	1	2055.40	4.8652	0.0447	5.74E-02	1.25E-01	2.25E-01	3.57E-01	5.16E-01	6.95E-01
2	1	3	4	2132.50	2	2055.98	4.8639	0.0676	0.0	0.0	0.0	1.11E-06	3.09E-06	7.16E-06
2	1	14	15	2600.15	1	2056.04	4.8637	0.0517	0.0	0.0	5.60E-06	2.66E-05	9.41E-05	2.68E-04
1	0	9	10	202.12	2	2057.86	4.8594	0.0547	8.12E-02	8.74E-02	9.12E-02	9.33E-02	9.42E-02	9.43E-02
2	1	2	3	2117.93	2	2059.72	4.8550	0.0707	0.0	0.0	0.0	0.0	2.50E-06	5.77E-06
1	0	19	20	806.42	1	2059.91	4.8546	0.0458	1.06E-01	2.12E-01	3.59E-01	5.41E-01	7.50E-01	9.76E-01
2	1	13	14	2543.08	1	2060.32	4.8536	0.0528	0.0	1.11E-06	7.54E-06	3.45E-05	1.19E-04	3.29E-04
1	0	8	9	165.38	2	2061.83	4.8501	0.0550	9.90E-02	1.03E-01	1.04E-01	1.04E-01	1.03E-01	1.01E-01
2	1	1	2	2107.00	2	2063.43	4.8463	0.0738	0.0	0.0	0.0	0.0	1.77E-06	4.06E-06
1	0	18	19	729.71	1	2064.39	4.8440	0.0470	1.90E-01	3.51E-01	5.58E-01	8.01E-01	1.07E 00	1.34E 00
2	1	12	13	2489.80	1	2064.57	4.8436	0.0540	0.0	1.52E-06	9.86E-06	4.36E-05	1.46E-04	3.95E-04
1	0	7	8	132.31	2	2065.76	4.8408	0.0574	1.16E-01	1.16E-01	1.14E-01	1.12E-01	1.09E-01	1.06E-01
2	1	0	1	2099.72	2	2067.10	4.8377	0.0769	0.0	0.0	0.0	0.0	0.0	2.10E-06
2	1	11	12	2440.32	1	2068.79	4.8337	0.0542	0.0	2.00E-06	1.25E-05	5.36E-05	1.74E-04	4.63E-04
1	0	17	18	656.82	1	2068.84	4.8336	0.0482	3.28E-01	5.63E-01	8.45E-01	1.16E 00	1.48E 00	1.81E 00
1	0	6	7	102.91	2	2069.66	4.8317	0.0597	1.29E-01	1.25E-01	1.21E-01	1.16E-01	1.11E-01	1.07E-01
2	1	10	11	2394.64	1	2072.98	4.8240	0.0545	0.0	2.55E-06	1.54E-05	6.40E-05	2.03E-04	5.29E-04
1	0	16	17	587.75	1	2073.26	4.8233	0.0493	5.47E-01	8.75E-01	1.24E 00	1.63E 00	2.01E 00	2.38E 00
1	0	5	6	77.19	2	2073.53	4.8227	0.0621	1.37E-01	1.29E-01	1.22E-01	1.16E-01	1.09E-01	1.04E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	1	1	0	2096.07	2	2074.36	4.8208	0.0769	0.0	0.0	0.0	0.0	0.0	2.15E-06
2	1	9	10	2352.76	1	2077.13	4.8143	0.0547	0.0	3.14E-06	1.83E-05	7.41E-05	2.31E-04	5.89E-04
1	0	4	5	55.14	2	2077.37	4.8138	0.0645	1.37E-01	1.27E-01	1.18E-01	1.09E-01	1.02E-01	9.60E-02
1	0	15	16	522.50	1	2077.65	4.8131	0.0505	8.82E-01	1.32E 00	1.78E 00	2.23E 00	2.67E 00	3.07E 00
2	1	2	1	2099.72	2	2077.94	4.8125	0.0738	0.0	0.0	0.0	0.0	1.85E-06	4.22E-06
1	0	3	4	36.76	2	2081.17	4.8050	0.0676	1.28E-01	1.16E-01	1.06E-01	9.75E-02	9.03E-02	8.40E-02
2	1	8	9	2314.69	1	2081.25	4.8048	0.0550	0.0	3.73E-06	2.10E-05	8.32E-05	2.54E-04	6.37E-04
2	1	3	2	2107.00	2	2081.48	4.8043	0.0707	0.0	0.0	0.0	0.0	2.67E-06	6.13E-06
1	0	14	15	461.08	1	2082.00	4.8031	0.0517	1.37E 00	1.93E 00	2.47E 00	2.99E 00	3.45E 00	3.87E 00
1	0	2	3	22.06	2	2084.95	4.7963	0.0707	1.08E-01	9.66E-02	8.73E-02	7.97E-02	7.32E-02	6.77E-02
2	1	4	3	2117.93	2	2084.99	4.7962	0.0676	0.0	0.0	0.0	1.22E-06	3.37E-06	7.77E-06
2	1	7	8	2280.41	1	2085.33	4.7954	0.0574	0.0	4.24E-06	2.33E-05	9.02E-05	2.70E-04	6.69E-04
1	0	13	14	403.48	1	2086.32	4.7931	0.0528	2.06E 00	2.73E 00	3.34E 00	3.89E 00	4.36E 00	4.76E 00
2	1	5	4	2132.50	2	2088.47	4.7882	0.0645	0.0	0.0	0.0	1.41E-06	3.91E-06	9.07E-06
1	0	1	2	11.03	2	2088.69	4.7877	0.0738	7.90E-02	6.98E-02	6.26E-02	5.67E-02	5.18E-02	4.76E-02
2	1	6	7	2249.94	1	2089.38	4.7861	0.0597	0.0	4.63E-06	2.48E-05	9.41E-05	2.78E-04	6.78E-04
1	0	12	13	349.72	1	2090.61	4.7833	0.0540	2.98E 00	3.73E 00	4.38E 00	4.93E 00	5.37E 00	5.73E 00
2	1	6	5	2150.72	2	2091.92	4.7803	0.0621	0.0	0.0	0.0	1.52E-06	4.27E-06	9.98E-06
1	0	0	1	3.68	2	2092.40	4.7792	0.0769	4.20E-02	3.69E-02	3.28E-02	2.96E-02	2.69E-02	2.47E-02
2	1	5	6	2223.28	1	2093.40	4.7769	0.0621	0.0	4.81E-06	2.53E-05	9.42E-05	2.74E-04	6.61E-04
1	0	11	12	299.78	1	2094.86	4.7736	0.0542	4.15E 00	4.94E 00	5.57E 00	6.07E 00	6.45E 00	6.74E 00
2	1	7	6	2172.57	2	2095.33	4.7725	0.0597	0.0	0.0	0.0	1.57E-06	4.45E-06	1.05E-05
2	1	4	5	2200.42	1	2097.38	4.7679	0.0645	0.0	4.74E-06	2.44E-05	8.97E-05	2.58E-04	6.16E-04
2	1	8	7	2198.07	2	2098.70	4.7649	0.0574	0.0	0.0	0.0	1.55E-06	4.45E-06	1.06E-05
1	0	10	11	253.68	1	2099.08	4.7640	0.0545	5.57E 00	6.32E 00	6.87E 00	7.27E 00	7.54E 00	7.71E 00
1	0	1	0	-0.0	2	2099.72	4.7625	0.0769	4.34E-02	3.80E-02	3.37E-02	3.03E-02	2.75E-02	2.52E-02
2	1	3	4	2181.37	1	2101.33	4.7589	0.0676	0.0	4.35E-06	2.21E-05	8.01E-05	2.28E-04	5.40E-04
2	1	9	8	2227.21	2	2102.05	4.7573	0.0550	0.0	0.0	0.0	1.48E-06	4.31E-06	1.04E-05
1	0	9	10	211.42	1	2103.27	4.7545	0.0547	7.18E 00	7.80E 00	8.20E 00	8.44E 00	8.56E 00	8.60E 00
1	0	2	1	3.68	2	2103.33	4.7544	0.0738	8.44E-02	7.41E-02	6.59E-02	5.94E-02	5.41E-02	4.96E-02
2	1	2	3	2166.13	1	2105.25	4.7500	0.0707	0.0	3.65E-06	1.83E-05	6.57E-05	1.85E-04	4.37E-04
2	1	10	9	2259.98	2	2105.36	4.7498	0.0547	0.0	0.0	0.0	1.36E-06	4.04E-06	9.91E-06
1	0	3	2	11.03	2	2106.90	4.7463	0.0707	1.19E-01	1.06E-01	9.45E-02	8.56E-02	7.82E-02	7.20E-02
1	0	8	9	172.99	1	2107.42	4.7451	0.0550	8.88E 00	9.26E 00	9.45E 00	9.49E 00	9.44E 00	9.32E 00
2	1	11	10	2296.39	2	2108.63	4.7424	0.0545	0.0	0.0	0.0	1.22E-06	3.68E-06	9.17E-06
2	1	1	2	2154.70	1	2109.13	4.7413	0.0738	0.0	2.64E-06	1.31E-05	4.68E-05	1.31E-04	3.08E-04
1	0	4	3	22.06	2	2110.45	4.7383	0.0676	1.46E-01	1.30E-01	1.18E-01	1.07E-01	9.86E-02	9.12E-02
1	0	7	8	138.40	1	2111.54	4.7359	0.0574	1.05E 01	1.06E 01	1.05E 01	1.03E 01	1.01E 01	9.79E 00
2	1	12	11	2336.44	2	2111.88	4.7351	0.0542	0.0	0.0	0.0	1.06E-06	3.26E-06	8.26E-06
2	1	0	1	2147.08	1	2112.97	4.7327	0.0769	0.0	1.40E-06	6.90E-06	2.45E-05	6.84E-05	1.60E-04
1	0	5	4	36.76	2	2113.96	4.7305	0.0645	1.62E-01	1.47E-01	1.34E-01	1.23E-01	1.14E-01	1.06E-01
2	1	13	12	2380.12	2	2115.08	4.7280	0.0540	0.0	0.0	0.0	0.0	2.81E-06	7.27E-06
1	0	6	7	107.65	1	2115.63	4.7267	0.0597	1.18E 01	1.16E 01	1.12E 01	1.08E 01	1.04E 01	9.94E 00
1	0	6	5	55.14	2	2117.44	4.7227	0.0621	1.67E-01	1.54E-01	1.43E-01	1.33E-01	1.25E-01	1.17E-01
2	1	14	13	2427.44	2	2118.26	4.7209	0.0528	0.0	0.0	0.0	0.0	2.37E-06	6.25E-06
1	0	5	6	80.74	1	2119.68	4.7177	0.0621	1.27E 01	1.20E 01	1.14E 01	1.08E 01	1.02E 01	9.71E 00
2	1	1	0	2143.27	1	2120.56	4.7157	0.0769	0.0	1.44E-06	7.09E-06	2.51E-05	7.00E-05	1.63E-04
1	0	7	6	77.19	2	2120.88	4.7150	0.0597	1.63E-01	1.54E-01	1.45E-01	1.37E-01	1.30E-01	1.23E-01
2	1	15	14	2478.38	2	2121.40	4.7139	0.0517	0.0	0.0	0.0	0.0	1.95E-06	5.25E-06
1	0	4	5	57.67	1	2123.70	4.7088	0.0645	1.28E 01	1.19E 01	1.10E 01	1.03E 01	9.64E 00	9.05E 00
1	0	8	7	102.91	2	2124.29	4.7075	0.0574	1.51E-01	1.46E-01	1.41E-01	1.36E-01	1.30E-01	1.25E-01
2	1	2	1	2147.08	1	2124.30	4.7074	0.0738	0.0	2.81E-06	1.39E-05	4.92E-05	1.37E-04	3.21E-04
2	1	16	15	2532.96	2	2124.50	4.7070	0.0505	0.0	0.0	0.0	0.0	1.56E-06	4.32E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	1	17	16	2591.16	2	2127.57	4.7002	0.0493	0.0	0.0	0.0	0.0	1.23E-06	3.47E-06
1	0	9	8	132.31	2	2127.67	4.7000	0.0550	1.33E-01	1.34E-01	1.32E-01	1.29E-01	1.26E-01	1.22E-01
1	0	3	4	38.45	1	2127.68	4.7000	0.0676	1.20E 01	1.09E 01	9.99E 00	9.21E 00	8.54E 00	7.95E 00
2	1	3	2	2154.70	1	2128.00	4.6992	0.0707	0.0	3.99E-06	1.98E-05	7.08E-05	1.98E-04	4.65E-04
2	1	18	17	2652.99	2	2130.60	4.6935	0.0482	0.0	0.0	0.0	0.0	0.0	2.74E-06
1	0	10	9	165.38	2	2131.01	4.6926	0.0547	1.13E-01	1.17E-01	1.19E-01	1.19E-01	1.18E-01	1.16E-01
1	0	2	3	23.07	1	2131.63	4.6912	0.0707	1.02E 01	9.16E 00	8.28E 00	7.56E 00	6.95E 00	6.43E 00
2	1	4	3	2166.13	1	2131.67	4.6912	0.0676	0.0	4.91E-06	2.46E-05	8.85E-05	2.50E-04	5.88E-04
2	1	19	18	2718.44	2	2133.60	4.6869	0.0470	0.0	0.0	0.0	0.0	0.0	2.11E-06
1	0	11	10	202.12	2	2134.32	4.6853	0.0545	9.21E-02	9.91E-02	1.03E-01	1.06E-01	1.07E-01	1.07E-01
2	1	5	4	2181.37	1	2135.31	4.6832	0.0645	0.0	5.51E-06	2.80E-05	1.01E-04	2.89E-04	6.84E-04
1	0	1	2	11.54	1	2135.55	4.6826	0.0738	7.51E 00	6.64E 00	5.95E 00	5.39E 00	4.93E 00	4.54E 00
2	1	20	19	2787.51	2	2136.56	4.6804	0.0458	0.0	0.0	0.0	0.0	0.0	1.60E-06
1	0	12	11	242.53	2	2137.59	4.6782	0.0542	7.22E-02	8.09E-02	8.72E-02	9.16E-02	9.45E-02	9.62E-02
2	1	6	5	2200.42	1	2138.90	4.6753	0.0621	0.0	5.77E-06	2.98E-05	1.09E-04	3.14E-04	7.51E-04
1	0	0	1	3.85	1	2139.43	4.6741	0.0769	4.01E 00	3.51E 00	3.13E 00	2.82E 00	2.57E 00	2.36E 00
2	1	21	20	2860.19	2	2139.49	4.6740	0.0447	0.0	0.0	0.0	0.0	0.0	1.19E-06
1	0	13	12	286.60	2	2140.83	4.6711	0.0540	5.45E-02	6.39E-02	7.14E-02	7.71E-02	8.14E-02	8.45E-02
2	1	22	21	2936.50	2	2142.38	4.6677	0.0435	0.0	0.0	0.0	0.0	0.0	8.63E-07
2	1	7	6	2223.28	1	2142.47	4.6675	0.0597	0.0	5.72E-06	3.00E-05	1.12E-04	3.25E-04	7.86E-04
1	0	14	13	334.34	2	2144.04	4.6641	0.0528	3.97E-02	4.89E-02	5.67E-02	6.32E-02	6.84E-02	7.24E-02
2	1	8	7	2249.94	1	2145.99	4.6599	0.0574	0.0	5.41E-06	2.90E-05	1.10E-04	3.24E-04	7.92E-04
1	0	1	0	-0.0	1	2147.08	4.6575	0.0769	4.15E 00	3.62E 00	3.22E 00	2.89E 00	2.63E 00	2.41E 00
1	0	15	14	385.75	2	2147.21	4.6572	0.0517	2.79E-02	3.62E-02	4.38E-02	5.04E-02	5.60E-02	6.07E-02
2	1	9	8	2280.41	1	2149.48	4.6523	0.0550	0.0	4.89E-06	2.69E-05	1.04E-04	3.1[illegible]-04	7.71E-04
1	0	16	15	440.81	2	2150.35	4.6504	0.0505	1.90E-02	2.61E-02	3.29E-02	3.92E-02	4.49E-02	4.98E-02
1	0	2	1	3.85	1	2150.86	4.6493	0.0738	8.05E 00	7.06E 00	6.29E 00	5.67E 00	5.16E 00	4.73E 00
2	1	10	9	2314.69	1	2152.94	4.6448	0.0547	0.0	4.25E-06	2.40E-05	9.49E-05	2.90E-04	7.28E-04
1	0	17	16	499.54	2	2153.45	4.6437	0.0493	1.24E-02	1.82E-02	2.41E-02	2.98E-02	3.51E-02	4.00E-02
1	0	3	2	11.54	1	2154.60	4.6412	0.0707	1.13E 01	1.00E 01	8.99E 00	8.15E 00	7.45E 00	6.85E 00
2	1	11	10	2352.76	1	2156.35	4.6375	0.0545	0.0	3.56E-06	2.07E-05	8.40E-05	2.61E-04	6.68E-04
1	0	18	17	561.92	2	2156.51	4.6371	0.0482	7.90E-03	1.23E-02	1.71E-02	2.20E-02	2.69E-02	3.14E-02
1	0	4	3	23.07	1	2158.30	4.6333	0.0676	1.38E 01	1.23E 01	1.12E 01	1.02E 01	9.36E 00	8.66E 00
1	0	19	18	627.96	2	2159.54	4.6306	0.0470	4.85E-03	8.08E-03	1.19E-02	1.59E-02	2.01E-02	2.42E-02
2	1	12	11	2394.64	1	2159.73	4.6302	0.0542	0.0	2.88E-06	1.73E-05	7.21E-05	2.29E-04	5.97E-04
1	0	5	4	38.45	1	2161.97	4.6254	0.0645	1.52E 01	1.38E 01	1.27E 01	1.17E 01	1.08E 01	1.01E 01
1	0	20	19	697.65	2	2162.54	4.6242	0.0458	2.88E-03	5.16E-03	8.00E-03	1.12E-02	1.47E-02	1.83E-02
2	1	13	12	2440.32	1	2163.08	4.6230	0.0540	0.0	2.25E-06	1.40E-05	6.01E-05	1.96E-04	5.20E-04
1	0	21	20	771.00	2	2165.50	4.6179	0.0447	1.66E-03	3.20E-03	5.26E-03	7.75E-03	1.05E-02	1.35E-02
1	0	6	5	57.67	1	2165.60	4.6177	0.0621	1.56E 01	1.45E 01	1.35E 01	1.26E 01	1.18E 01	1.10E 01
2	1	14	13	2489.80	1	2166.38	4.6160	0.0528	0.0	1.70E-06	1.10E-05	4.88E-05	1.63E-04	4.42E-04
1	0	22	21	847.99	2	2168.43	4.6116	0.0435	9.24E-04	1.93E-03	3.37E-03	5.22E-03	7.39E-03	9.80E-03
1	0	7	6	80.74	1	2169.20	4.6100	0.0597	1.51E 01	1.43E 01	1.36E 01	1.28E 01	1.22E 01	1.16E 01
2	1	15	14	2543.08	1	2169.65	4.6090	0.0517	0.0	1.24E-06	8.42E-06	3.85E-05	1.32E-04	3.68E-04
1	0	23	22	928.62	2	2171.31	4.6055	0.0423	4.98E-04	1.13E-03	2.11E-03	3.43E-03	5.07E-03	6.96E-03
1	0	8	7	107.65	1	2172.76	4.6024	0.0574	1.38E 01	1.35E 01	1.31E 01	1.26E 01	1.21E 01	1.16E 01
2	1	16	15	2600.15	1	2172.88	4.6022	0.0505	0.0	0.0	6.25E-06	2.96E-05	1.05E-04	2.99E-04
1	0	24	23	1012.90	2	2174.17	4.5995	0.0412	2.60E-04	6.44E-04	1.29E-03	2.21E-03	3.41E-03	4.86E-03
2	1	17	16	2661.01	1	2176.08	4.5954	0.0493	0.0	0.0	4.50E-06	2.22E-05	8.12E-05	2.37E-04
1	0	9	8	138.40	1	2176.29	4.5950	0.0550	1.21E 01	1.22E 01	1.21E 01	1.19E 01	1.16E 01	1.13E 01
1	0	25	24	1100.81	2	2176.99	4.5935	0.0400	1.32E-04	3.57E-04	7.64E-04	1.39E-03	2.24E-03	3.32E-03
2	1	18	17	2725.67	1	2179.24	4.5888	0.0482	0.0	0.0	3.16E-06	1.62E-05	6.13E-05	1.84E-04
1	0	26	25	1192.36	2	2179.77	4.5876	0.0400	6.46E-05	1.92E-04	4.43E-04	8.54E-04	1.45E-03	2.23E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
1	0	10	9	172.99	1	2179.78	4.5876	0.0547	1.01E 01	1.06E 01	1.08E 01	1.08E 01	1.08E 01	1.06E 01
2	1	19	18	2794.11	1	2182.36	4.5822	0.0470	0.0	0.0	2.15E-06	1.16E-05	4.53E-05	1.40E-04
1	0	27	26	1287.55	2	2182.51	4.5819	0.0400	3.07E-05	1.01E-04	2.51E-04	5.13E-04	9.15E-04	1.47E-03
1	0	11	10	211.42	1	2183.23	4.5804	0.0545	8.15E 00	8.85E 00	9.30E 00	9.57E 00	9.71E 00	9.76E 00
1	0	28	27	1386.36	2	2185.22	4.5762	0.0400	1.42E-05	5.14E-05	1.38E-04	3.02E-04	5.66E-04	9.49E-04
2	1	20	19	2866.33	1	2185.44	4.5757	0.0458	0.0	0.0	1.43E-06	8.04E-06	3.27E-05	1.05E-04
1	0	12	11	253.68	1	2186.64	4.5732	0.0542	6.29E 00	7.13E 00	7.75E 00	8.20E 00	8.51E 00	8.70E 00
1	0	29	28	1488.80	2	2187.89	4.5706	0.0400	6.32E-06	2.55E-05	7.45E-05	1.74E-04	3.44E-04	6.02E-04
2	1	21	20	2942.34	1	2188.48	4.5694	0.0447	0.0	0.0	0.0	5.46E-06	2.31E-05	7.64E-05
1	0	13	12	299.78	1	2190.02	4.5662	0.0540	4.67E 00	5.55E 00	6.26E 00	6.82E 00	7.25E 00	7.57E 00
1	0	30	29	1594.85	2	2190.53	4.5651	0.0400	2.74E-06	1.23E-05	3.92E-05	9.76E-05	2.04E-04	3.75E-04
2	1	22	21	3022.13	1	2191.49	4.5631	0.0435	0.0	0.0	0.0	3.62E-06	1.60E-05	5.47E-05
1	0	31	30	1704.53	2	2193.13	4.5597	0.0400	1.15E-06	5.79E-06	2.01E-05	5.37E-05	1.19E-04	2.29E-04
1	0	14	13	349.72	1	2193.36	4.5592	0.0528	3.34E 00	4.18E 00	4.91E 00	5.52E 00	6.02E 00	6.43E 00
2	1	23	22	3105.69	1	2194.45	4.5570	0.0423	0.0	0.0	0.0	2.34E-06	1.08E-05	3.83E-05
1	0	32	31	1817.82	2	2195.69	4.5544	0.0400	0.0	2.65E-06	1.01E-05	2.89E-05	6.81E-05	1.38E-04
1	0	15	14	403.48	1	2196.67	4.5523	0.0517	2.30E 00	3.05E 00	3.73E 00	4.35E 00	4.88E 00	5.33E 00
2	1	24	23	3193.03	1	2197.38	4.5509	0.0412	0.0	0.0	0.0	1.48E-06	7.14E-06	2.63E-05
1	0	33	32	1934.72	2	2198.21	4.5492	0.0400	0.0	1.18E-06	4.92E-06	1.53E-05	3.81E-05	8.12E-05
1	0	16	15	461.08	1	2199.93	4.5456	0.0505	1.53E 00	2.15E 00	2.76E 00	3.33E 00	3.85E 00	4.32E 00
2	1	25	24	3284.13	1	2200.27	4.5449	0.0400	0.0	0.0	0.0	0.0	4.63E-06	1.77E-05
1	0	34	33	2055.22	2	2200.70	4.5440	0.0400	0.0	0.0	2.35E-06	7.86E-06	2.09E-05	4.70E-05
2	1	26	25	3379.00	1	2203.13	4.5390	0.0400	0.0	0.0	0.0	0.0	2.93E-06	1.17E-05
1	0	35	34	2179.32	2	2203.15	4.5390	0.0400	0.0	0.0	1.10E-06	3.97E-06	1.13E-05	2.67E-05
1	0	17	16	522.50	1	2203.16	4.5389	0.0493	9.84E-01	1.47E 00	1.98E 00	2.49E 00	2.97E 00	3.42E 00
1	0	36	35	2307.02	2	2205.56	4.5340	0.0400	0.0	0.0	0.0	1.96E-06	5.95E-06	1.49E-05
2	1	27	26	3477.63	1	2205.94	4.5332	0.0400	0.0	0.0	0.0	0.0	1.82E-06	7.59E-06
1	0	18	17	587.75	1	2206.36	4.5324	0.0482	6.10E-01	9.75E-01	1.39E 00	1.81E 00	2.24E 00	2.65E 00
1	0	37	36	2438.31	2	2207.94	4.5291	0.0400	0.0	0.0	0.0	0.0	3.08E-06	8.18E-06
2	1	28	27	3580.03	1	2208.71	4.5275	0.0400	0.0	0.0	0.0	0.0	1.11E-06	4.82E-06
1	0	19	18	656.82	1	2209.51	4.5259	0.0470	3.65E-01	6.27E-01	9.41E-01	1.29E 00	1.65E 00	2.01E 00
1	0	38	37	2573.18	2	2210.27	4.5243	0.0400	0.0	0.0	0.0	0.0	1.57E-06	4.40E-06
2	1	29	28	3686.17	1	2211.45	4.5219	0.0400	0.0	0.0	0.0	0.0	0.0	3.01E-06
1	0	39	38	2711.64	2	2212.57	4.5196	0.0400	0.0	0.0	0.0	0.0	0.0	2.33E-06
1	0	20	19	729.71	1	2212.63	4.5195	0.0458	2.12E-01	3.91E-01	6.23E-01	8.93E-01	1.19E 00	1.50E 00
2	1	30	29	3796.07	1	2214.14	4.5164	0.0400	0.0	0.0	0.0	0.0	0.0	1.84E-06
1	0	40	39	2853.67	2	2214.83	4.5150	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-06
1	0	21	20	806.42	1	2215.70	4.5132	0.0447	1.18E-01	2.37E-01	4.01E-01	6.04E-01	8.36E-01	1.09E 00
2	1	31	30	3909.71	1	2216.80	4.5110	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-06
1	0	41	40	2999.27	2	2217.06	4.5105	0.0400	0.0	0.0	0.0	0.0	0.0	6.18E-07
1	0	22	21	886.95	1	2218.75	4.5070	0.0435	6.40E-02	1.39E-01	2.51E-01	3.98E-01	5.75E-01	7.76E-01
2	1	32	31	4027.09	1	2219.42	4.5057	0.0400	0.0	0.0	0.0	0.0	0.0	6.49E-07
1	0	23	22	971.28	1	2221.75	4.5010	0.0423	3.35E-02	7.95E-02	1.53E-01	2.57E-01	3.87E-01	5.42E-01
1	0	24	23	1059.42	1	2224.71	4.4950	0.0412	1.70E-02	4.40E-02	9.12E-02	1.61E-01	2.55E-01	3.71E-01
1	0	25	24	1151.37	1	2227.64	4.4891	0.0400	8.31E-03	2.37E-02	5.28E-02	9.92E-02	1.65E-01	2.49E-01
1	0	26	25	1247.11	1	2230.52	4.4833	0.0400	3.94E-03	1.24E-02	2.98E-02	5.95E-02	1.04E-01	1.64E-01
1	0	27	26	1346.66	1	2233.37	4.4775	0.0400	1.81E-03	6.30E-03	1.64E-02	3.49E-02	6.41E-02	1.06E-01
1	0	28	27	1449.99	1	2236.18	4.4719	0.0400	8.02E-04	3.11E-03	8.79E-03	2.00E-02	3.88E-02	6.68E-02
1	0	29	28	1557.12	1	2238.95	4.4664	0.0400	3.44E-04	1.49E-03	4.60E-03	1.12E-02	2.30E-02	4.15E-02
1	0	30	29	1668.03	1	2241.68	4.4609	0.0400	1.43E-04	6.95E-04	2.34E-03	6.12E-03	1.33E-02	2.52E-02
1	0	31	30	1782.72	1	2244.37	4.4556	0.0400	5.78E-05	3.15E-04	1.16E-03	3.27E-03	7.56E-03	1.51E-02
1	0	32	31	1901.19	1	2247.02	4.4503	0.0400	2.25E-05	1.39E-04	5.64E-04	1.71E-03	4.20E-03	8.82E-03
1	0	33	32	2023.43	1	2249.63	4.4452	0.0400	8.52E-06	5.96E-05	2.67E-04	8.74E-04	2.29E-03	5.07E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
1	0	34	33	2149.44	1	2252.20	4.4401	0.0400	3.12E-06	2.48E-05	1.23E-04	4.37E-04	1.22E-03	2.86E-03
1	0	35	34	2279.20	1	2254.73	4.4351	0.0400	1.11E-06	1.01E-05	5.52E-05	2.13E-04	6.39E-04	1.58E-03
1	0	36	35	2412.73	1	2257.23	4.4302	0.0400	0.0	3.97E-06	2.42E-05	1.02E-04	3.27E-04	8.58E-04
1	0	37	36	2550.01	1	2259.68	4.4254	0.0400	0.0	1.52E-06	1.04E-05	4.76E-05	1.64E-04	4.57E-04
1	0	38	37	2691.03	1	2262.09	4.4207	0.0400	0.0	0.0	4.32E-06	2.17E-05	8.07E-05	2.39E-04
1	0	39	38	2835.80	1	2264.46	4.4161	0.0400	0.0	0.0	1.76E-06	9.71E-06	3.89E-05	1.23E-04
1	0	40	39	2984.30	1	2266.79	4.4115	0.0400	0.0	0.0	0.0	4.24E-06	1.84E-05	6.18E-05
1	0	41	40	3136.53	1	2269.07	4.4071	0.0400	0.0	0.0	0.0	1.81E-06	8.50E-06	3.06E-05
1	0	42	41	3292.48	1	2271.32	4.4027	0.0400	0.0	0.0	0.0	0.0	3.85E-06	1.48E-05
1	0	43	42	3452.15	1	2273.53	4.3984	0.0400	0.0	0.0	0.0	0.0	1.71E-06	7.07E-06
1	0	44	43	3615.54	1	2275.69	4.3943	0.0400	0.0	0.0	0.0	0.0	0.0	3.31E-06
1	0	45	44	3782.62	1	2277.81	4.3902	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-06
1	0	46	45	3953.41	1	2279.89	4.3862	0.0400	0.0	0.0	0.0	0.0	0.0	6.86E-07

Table 2—First overtone band of CO, T = 175-300°K. The total number of lines included is 280. For temperatures less than 300°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-8}. The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

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MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	39	40	2999.27	2	3970.16	2.5188	0.0400	0.0	0.0	0.0	0.0	0.0	3.38E-09
2	0	38	39	2853.67	2	3976.29	2.5149	0.0400	0.0	0.0	0.0	0.0	0.0	6.64E-09
2	0	37	38	2711.64	2	3982.38	2.5111	0.0400	0.0	0.0	0.0	0.0	0.0	1.28E-08
2	0	36	37	2573.18	2	3988.35	2.5073	0.0400	0.0	0.0	0.0	0.0	0.0	2.44E-08
2	0	35	36	2438.31	2	3994.29	2.5036	0.0400	0.0	0.0	0.0	0.0	1.72E-08	4.55E-08
2	0	34	35	2307.02	2	4000.18	2.4999	0.0400	0.0	0.0	0.0	1.10E-08	3.33E-08	8.33E-08
2	0	33	34	2179.32	2	4006.00	2.4963	0.0400	0.0	0.0	0.0	2.23E-08	6.33E-08	1.50E-07
2	0	32	33	2055.22	2	4011.76	2.4927	0.0400	0.0	0.0	1.32E-08	4.43E-08	1.18E-07	2.65E-07
2	0	31	32	1934.72	2	4017.46	2.4891	0.0400	0.0	0.0	2.79E-08	8.63E-08	2.16E-07	4.60E-07
2	0	44	45	3953.41	1	4019.94	2.4876	0.0400	0.0	0.0	0.0	0.0	0.0	3.65E-09
3	1	21	22	3016.41	2	4021.20	2.4868	0.0435	0.0	0.0	0.0	0.0	0.0	5.66E-09
2	0	30	31	1817.82	2	4023.09	2.4857	0.0400	0.0	1.51E-08	5.72E-08	1.65E-07	3.87E-07	7.83E-07
3	1	20	21	2936.50	2	4026.19	2.4837	0.0447	0.0	0.0	0.0	0.0	0.0	7.96E-09
2	0	43	44	3782.62	1	4026.72	2.4834	0.0400	0.0	0.0	0.0	0.0	0.0	8.13E-09
2	0	29	30	1704.53	2	4028.67	2.4822	0.0400	0.0	3.31E-08	1.15E-07	3.07E-07	6.80E-07	1.31E-06
3	1	19	20	2860.19	2	4031.11	2.4807	0.0458	0.0	0.0	0.0	0.0	0.0	1.10E-08
2	0	42	43	3615.54	1	4033.43	2.4793	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-08
2	0	28	29	1594.85	2	4034.19	2.4788	0.0400	1.57E-08	7.08E-08	2.25E-07	5.61E-07	1.17E-06	2.15E-06
3	1	18	19	2787.51	2	4035.97	2.4777	0.0470	0.0	0.0	0.0	0.0	0.0	1.49E-08
2	0	27	28	1488.80	2	4039.64	2.4755	0.0400	3.65E-08	1.47E-07	4.30E-07	1.00E-06	1.98E-06	3.48E-06
2	0	41	42	3452.15	1	4040.09	2.4752	0.0400	0.0	0.0	0.0	0.0	0.0	3.82E-08
3	1	17	18	2718.44	2	4040.77	2.4748	0.0482	0.0	0.0	0.0	0.0	0.0	1.97E-08
2	0	26	27	1386.36	2	4045.03	2.4722	0.0400	8.22E-08	2.99E-07	8.03E-07	1.75E-06	3.29E-06	5.51E-06
3	1	16	17	2652.99	2	4045.51	2.4719	0.0493	0.0	0.0	0.0	0.0	0.0	2.56E-08
2	0	40	41	3292.48	1	4046.68	2.4712	0.0400	0.0	0.0	0.0	0.0	2.09E-08	8.05E-08
3	1	15	16	2591.16	2	4050.18	2.4690	0.0505	0.0	0.0	0.0	0.0	1.15E-08	3.26E-08
2	0	25	26	1287.55	2	4050.36	2.4689	0.0400	1.79E-07	5.88E-07	1.46E-06	3.00E-06	5.34E-06	8.57E-06
2	0	39	40	3136.53	1	4053.20	2.4672	0.0400	0.0	0.0	0.0	0.0	4.63E-08	1.67E-07
3	1	14	15	2532.96	2	4054.79	2.4662	0.0517	0.0	0.0	0.0	0.0	1.47E-08	4.06E-08
2	0	24	25	1192.36	2	4055.62	2.4657	0.0400	3.79E-07	1.13E-06	2.60E-06	5.01E-06	8.49E-06	1.31E-05
3	1	30	31	4027.09	1	4057.21	2.4647	0.0400	0.0	0.0	0.0	0.0	0.0	5.69E-09
3	1	13	14	2478.38	2	4059.33	2.4635	0.0528	0.0	0.0	0.0	0.0	1.83E-08	4.95E-08
2	0	38	39	2984.30	1	4059.66	2.4633	0.0400	0.0	0.0	0.0	2.32E-08	1.01E-07	3.38E-07
2	0	23	24	1100.81	2	4060.84	2.4625	0.0412	7.77E-07	2.10E-06	4.50E-06	8.19E-06	1.32E-05	1.96E-05
3	1	29	30	3909.71	1	4063.05	2.4612	0.0400	0.0	0.0	0.0	0.0	0.0	9.71E-09
3	1	12	13	2427.44	2	4063.81	2.4607	0.0540	0.0	0.0	0.0	0.0	2.24E-08	5.90E-08
2	0	22	23	1012.90	2	4065.98	2.4594	0.0423	1.54E-06	3.82E-06	7.62E-06	1.31E-05	2.02E-05	2.88E-05
2	0	37	38	2835.80	1	4066.06	2.4594	0.0400	0.0	0.0	0.0	5.34E-08	2.14E-07	6.75E-07
3	1	11	12	2380.12	2	4068.23	2.4581	0.0542	0.0	0.0	0.0	0.0	2.66E-08	6.87E-08
3	1	28	29	3796.07	1	4068.82	2.4577	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-08
2	0	21	22	928.62	2	4071.06	2.4564	0.0435	2.97E-06	6.73E-06	1.26E-05	2.04E-05	3.02E-05	4.15E-05
2	0	36	37	2691.03	1	4072.39	2.4556	0.0400	0.0	0.0	2.39E-08	1.20E-07	4.46E-07	1.32E-06
3	1	10	11	2336.44	2	4072.59	2.4554	0.0545	0.0	0.0	0.0	0.0	3.08E-08	7.80E-08
3	1	27	28	3686.17	1	4074.53	2.4543	0.0400	0.0	0.0	0.0	0.0	0.0	2.68E-08
2	0	20	21	847.99	2	4076.08	2.4533	0.0447	5.52E-06	1.15E-05	2.02E-05	3.12E-05	4.42E-05	5.86E-05
3	1	9	10	2296.39	2	4076.88	2.4529	0.0547	0.0	0.0	0.0	1.15E-08	3.46E-08	8.64E-08
2	0	35	36	2550.01	1	4078.66	2.4518	0.0400	0.0	0.0	5.75E-08	2.64E-07	9.11E-07	2.54E-06
3	1	26	27	3580.03	1	4080.18	2.4509	0.0400	0.0	0.0	0.0	0.0	0.0	4.32E-08
2	0	19	20	771.00	2	4081.04	2.4504	0.0458	9.96E-06	1.92E-05	3.16E-05	4.65E-05	6.33E-05	8.11E-05
3	1	8	9	2259.98	2	4081.10	2.4503	0.0550	0.0	0.0	0.0	1.28E-08	3.79E-08	9.30E-08
2	0	34	35	2412.73	1	4084.86	2.4481	0.0400	0.0	2.21E-08	1.35E-07	5.68E-07	1.82E-06	4.78E-06
3	1	7	8	2227.21	2	4085.26	2.4478	0.0574	0.0	0.0	0.0	1.38E-08	4.02E-08	9.72E-08
3	1	25	26	3477.63	1	4085.76	2.4475	0.0400	0.0	0.0	0.0	0.0	1.64E-08	6.83E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	16	19	697.65	2	4085.93	2.4474	0.0470	1.74E-05	3.11E-05	4.82E-05	6.78E-05	8.87E-05	1.10E-04
3	1	6	7	2198.07	2	4089.36	2.4454	0.0597	0.0	0.0	0.0	1.43E-08	4.12E-08	9.83E-08
2	0	17	18	627.96	2	4090.77	2.4445	0.0482	2.94E-05	4.89E-05	7.17E-05	9.64E-05	1.22E-04	1.47E-04
2	0	33	34	2279.20	1	4091.00	2.4444	0.0400	0.0	5.64E-08	3.09E-07	1.19E-06	3.58E-06	8.85E-06
3	1	24	25	3279.00	1	4091.27	2.4442	0.0400	0.0	0.0	0.0	0.0	2.65E-08	1.06E-07
3	1	5	6	2172.57	2	4093.40	2.4430	0.0621	0.0	0.0	0.0	1.43E-08	4.05E-08	9.57E-08
2	0	16	17	561.92	2	4095.53	2.4417	0.0493	4.80E-05	7.47E-05	1.04E-04	1.34E-04	1.63E-04	1.91E-04
3	1	23	24	3284.13	1	4096.71	2.4410	0.0412	0.0	0.0	0.0	0.0	4.20E-08	1.61E-07
2	0	32	33	2149.44	1	4097.07	2.4408	0.0400	1.76E-08	1.40E-07	6.91E-07	2.46E-06	6.87E-06	1.61E-05
3	1	4	5	2150.72	2	4097.36	2.4406	0.0645	0.0	0.0	0.0	1.36E-08	3.80E-08	8.90E-08
2	0	15	16	499.54	2	4100.24	2.4389	0.0505	7.58E-05	1.11E-04	1.46E-04	1.81E-04	2.14E-04	2.44E-04
3	1	3	4	2132.50	2	4101.27	2.4383	0.0676	0.0	0.0	0.0	1.21E-08	3.36E-08	7.80E-08
3	1	22	23	3193.03	1	4102.09	2.4378	0.0423	0.0	0.0	0.0	1.35E-08	6.52E-08	2.40E-07
2	0	31	32	2023.43	1	4103.06	2.4372	0.0400	4.81E-08	3.37E-07	1.51E-06	4.94E-06	1.29E-05	2.86E-05
2	0	14	15	440.81	2	4104.88	2.4361	0.0517	1.16E-04	1.59E-04	2.01E-04	2.40E-04	2.74E-04	3.04E-04
3	1	2	3	2117.93	2	4105.11	2.4360	0.0707	0.0	0.0	0.0	0.0	2.73E-08	6.30E-08
3	1	21	22	3105.69	1	4107.41	2.4346	0.0435	0.0	0.0	0.0	2.15E-08	9.91E-08	3.51E-07
3	1	1	2	2107.00	2	4108.88	2.4338	0.0738	0.0	0.0	0.0	0.0	1.94E-08	4.45E-08
2	0	30	31	1901.19	1	4109.02	2.4337	0.0400	1.28E-07	7.89E-07	3.20E-06	9.71E-06	2.38E-05	5.00E-05
2	0	13	14	385.75	2	4109.46	2.4334	0.0528	1.71E-04	2.22E-04	2.68E-04	3.09E-04	3.43E-04	3.72E-04
3	1	0	1	2099.72	2	4112.59	2.4316	0.0769	0.0	0.0	0.0	0.0	1.01E-08	2.31E-08
3	1	20	21	3022.13	1	4112.65	2.4315	0.0447	0.0	0.0	0.0	3.33E-08	1.47E-07	5.04E-07
2	0	12	13	334.34	2	4113.97	2.4307	0.0540	2.43E-04	3.00E-04	3.48E-04	3.87E-04	4.19E-04	4.44E-04
2	0	29	30	1782.72	1	4114.90	2.4302	0.0400	3.29E-07	1.80E-06	6.63E-06	1.86E-05	4.30E-05	8.58E-05
3	1	19	20	2942.34	1	4117.83	2.4285	0.0458	0.0	0.0	0.0	5.05E-08	2.14E-07	7.07E-07
2	0	11	12	286.60	2	4118.42	2.4281	0.0542	3.34E-04	3.92E-04	4.38E-04	4.73E-04	4.99E-04	5.18E-04
3	1	1	0	2096.07	2	4119.81	2.4273	0.0769	0.0	0.0	0.0	0.0	1.04E-08	2.38E-08
2	0	28	29	1668.03	1	4120.71	2.4268	0.0400	8.21E-07	3.99E-06	1.34E-05	3.51E-05	7.63E-05	1.45E-04
2	0	10	11	242.53	2	4122.81	2.4255	0.0545	4.42E-04	4.96E-04	5.34E-04	5.61E-04	5.79E-04	5.89E-04
3	1	18	19	2866.33	1	4122.95	2.4254	0.0470	0.0	0.0	1.33E-08	7.47E-08	3.04E-07	9.72E-07
3	1	2	1	2099.72	2	4123.32	2.4252	0.0738	0.0	0.0	0.0	0.0	2.06E-08	4.71E-08
2	0	27	28	1557.12	1	4126.46	2.4234	0.0400	1.99E-06	8.59E-06	2.65E-05	6.45E-05	1.32E-04	2.39E-04
3	1	3	2	2107.00	2	4126.77	2.4232	0.0707	0.0	0.0	0.0	1.09E-08	2.99E-08	6.87E-08
2	0	9	10	202.12	2	4127.14	2.4230	0.0547	5.63E-04	6.06E-04	6.32E-04	6.47E-04	6.53E-04	6.54E-04
3	1	17	18	2794.11	1	4127.99	2.4225	0.0482	0.0	0.0	2.01E-08	1.08E-07	4.23E-07	1.31E-06
3	1	4	3	2117.93	2	4130.15	2.4212	0.0676	0.0	0.0	0.0	1.38E-08	3.79E-08	8.74E-08
2	0	8	9	165.38	2	4131.39	2.4205	0.0550	6.89E-04	7.14E-04	7.23E-04	7.23E-04	7.16E-04	7.05E-04
2	0	26	27	1449.99	1	4132.14	2.4201	0.0400	4.64E-06	1.80E-05	5.10E-05	1.16E-04	2.25E-04	3.87E-04
3	1	16	17	2725.67	1	4132.97	2.4196	0.0493	0.0	0.0	2.95E-08	1.52E-07	5.74E-07	1.73E-06
3	1	5	4	2132.50	2	4133.47	2.4193	0.0645	0.0	0.0	0.0	1.59E-08	4.42E-08	1.03E-07
2	0	7	8	132.31	2	4135.59	2.4180	0.0574	8.08E-04	8.09E-04	7.98E-04	7.81E-04	7.60E-04	7.38E-04
3	1	6	5	2150.72	2	4136.71	2.4174	0.0621	0.0	0.0	0.0	1.73E-08	4.85E-08	1.13E-07
2	0	25	26	1346.66	1	4137.75	2.4168	0.0400	1.05E-05	3.67E-05	9.56E-05	2.03E-04	3.74E-04	6.16E-04
3	1	15	16	2661.01	1	4137.88	2.4167	0.0505	0.0	0.0	4.22E-08	2.08E-07	7.61E-07	2.23E-06
2	0	6	7	102.91	2	4139.72	2.4156	0.0597	9.04E-04	8.79E-04	8.47E-04	8.13E-04	7.80E-04	7.47E-04
3	1	7	6	2172.57	2	4139.90	2.4155	0.0597	0.0	0.0	0.0	1.79E-08	5.08E-08	1.20E-07
3	1	14	15	2600.15	1	4142.72	2.4139	0.0517	0.0	0.0	5.87E-08	2.79E-07	9.86E-07	2.81E-06
3	1	8	7	2198.07	2	4143.01	2.4137	0.0574	0.0	0.0	0.0	1.78E-08	5.11E-08	1.22E-07
2	0	24	25	1247.11	1	4143.30	2.4135	0.0400	2.31E-05	7.26E-05	1.75E-04	3.49E-04	6.08E-04	9.59E-04
2	0	5	6	77.19	2	4143.79	2.4132	0.0621	9.63E-04	9.11E-04	8.60E-04	8.12E-04	7.68E-04	7.28E-04
3	1	9	8	2227.21	2	4146.06	2.4119	0.0550	0.0	0.0	0.0	1.70E-08	4.97E-08	1.20E-07
3	1	13	14	2543.08	1	4147.50	2.4111	0.0528	0.0	1.17E-08	7.94E-08	3.63E-07	1.25E-06	3.46E-06
2	0	4	5	55.14	2	4147.79	2.4109	0.0645	9.66E-04	8.94E-04	8.29E-04	7.72E-04	7.22E-04	6.78E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	23	24	1151.37	1	4148.78	2.4103	0.0412	4.89E-05	1.39E-04	3.11E-04	5.84E-04	9.69E-04	1.47E-03
3	1	10	9	2259.98	2	4149.04	2.4102	0.0547	0.0	0.0	0.0	1.58E-08	4.68E-08	1.15E-07
2	0	3	4	36.76	2	4151.72	2.4086	0.0676	9.03E-04	8.20E-04	7.50E-04	6.90E-04	6.39E-04	5.95E-04
3	1	11	10	2296.39	2	4151.96	2.4085	0.0545	0.0	0.0	0.0	1.42E-08	4.28E-08	1.07E-07
3	1	12	13	2489.80	1	4152.20	2.4084	0.0540	0.0	1.60E-08	1.04E-07	4.60E-07	1.54E-06	4.17E-06
2	0	22	23	1059.42	1	4154.19	2.4072	0.0423	1.00E-04	2.60E-04	5.39E-04	9.55E-04	1.51E-03	2.20E-03
3	1	12	11	2336.44	2	4154.81	2.4068	0.0542	0.0	0.0	0.0	1.23E-08	3.81E-08	9.66E-08
2	0	2	3	22.06	2	4155.60	2.4064	0.0707	7.68E-04	6.87E-04	6.21E-04	5.66E-04	5.20E-04	4.81E-04
3	1	11	12	2440.32	1	4156.84	2.4057	0.0542	0.0	2.12E-08	1.33E-07	5.68E-07	1.85E-06	4.91E-06
3	1	13	12	2380.12	2	4157.59	2.4052	0.0540	0.0	0.0	0.0	1.05E-08	3.30E-08	8.54E-08
2	0	1	2	11.03	2	4159.40	2.4042	0.0738	5.63E-04	4.98E-04	4.46E-04	4.04E-04	3.69E-04	3.40E-04
2	0	21	22	971.28	1	4159.54	2.4041	0.0435	1.99E-04	4.72E-04	9.11E-04	1.52E-03	2.30E-03	3.22E-03
3	1	14	13	2427.44	2	4160.31	2.4037	0.0528	0.0	0.0	0.0	0.0	2.79E-08	7.37E-08
3	1	10	11	2394.64	1	4161.41	2.4030	0.0545	0.0	2.72E-08	1.64E-07	6.80E-07	2.16E-06	5.63E-06
3	1	15	14	2476.38	2	4162.95	2.4021	0.0517	0.0	0.0	0.0	0.0	2.30E-08	6.22E-08
2	0	0	1	3.68	2	4163.14	2.4020	0.0769	3.01E-04	2.64E-04	2.35E-04	2.12E-04	1.93E-04	1.77E-04
2	0	20	21	866.95	1	4164.83	2.4011	0.0447	3.82E-04	8.31E-04	1.50E-03	2.38E-03	3.44E-03	4.63E-03
3	1	16	15	2532.96	2	4165.53	2.4007	0.0505	0.0	0.0	0.0	0.0	1.86E-08	5.14E-08
3	1	9	10	2362.76	1	4165.92	2.4004	0.0547	0.0	3.35E-08	1.95E-07	7.91E-07	2.46E-06	6.29E-06
3	1	17	16	2591.16	2	4168.05	2.3992	0.0493	0.0	0.0	0.0	0.0	1.46E-08	4.15E-08
2	0	19	20	806.42	1	4170.04	2.3981	0.0458	7.10E-04	1.42E-03	2.40E-03	3.62E-03	5.01E-03	6.53E-03
3	1	8	9	2314.69	1	4170.35	2.3979	0.0550	0.0	3.99E-08	2.25E-07	8.90E-07	2.72E-06	6.82E-06
2	0	1	0	-0.0	2	4170.43	2.3978	0.0769	3.13E-04	2.74E-04	2.43E-04	2.19E-04	1.99E-04	1.82E-04
3	1	18	17	2652.99	2	4170.49	2.3978	0.0482	0.0	0.0	0.0	0.0	1.13E-08	3.29E-08
3	1	19	18	2718.44	2	4172.87	2.3964	0.0470	0.0	0.0	0.0	0.0	0.0	2.55E-08
2	0	2	1	3.68	2	4173.98	2.3958	0.0738	6.12E-04	5.37E-04	4.78E-04	4.31E-04	3.92E-04	3.60E-04
3	1	7	8	2280.41	1	4174.71	2.3954	0.0574	0.0	4.56E-08	2.51E-07	9.69E-07	2.90E-06	7.18E-06
3	1	20	19	2787.51	2	4175.18	2.3951	0.0458	0.0	0.0	0.0	0.0	0.0	1.94E-08
2	0	18	19	729.71	1	4175.19	2.3951	0.0470	1.27E-03	2.36E-03	3.75E-03	5.37E-03	7.15E-03	9.01E-03
3	1	21	20	2860.19	2	4177.42	2.3938	0.0447	0.0	0.0	0.0	0.0	0.0	1.44E-08
2	0	3	2	11.03	2	4177.45	2.3938	0.0707	8.70E-04	7.69E-04	6.89E-04	6.24E-04	5.70E-04	5.25E-04
3	1	6	7	2249.94	1	4179.01	2.3929	0.0597	0.0	4.99E-08	2.68E-07	1.01E-06	2.99E-06	7.31E-06
3	1	22	21	2936.50	2	4179.59	2.3926	0.0435	0.0	0.0	0.0	0.0	0.0	1.05E-08
2	0	17	18	656.82	1	4180.27	2.3922	0.0482	2.21E-03	3.79E-03	5.69E-03	7.79E-03	9.97E-03	1.22E-02
2	0	4	3	22.06	2	4180.87	2.3918	0.0676	1.07E-03	9.53E-04	8.61E-04	7.85E-04	7.22E-04	6.68E-04
3	1	23	22	3016.41	2	4181.70	2.3914	0.0423	0.0	0.0	0.0	0.0	0.0	7.56E-09
3	1	5	6	2223.28	1	4183.24	2.3905	0.0621	0.0	5.21E-08	2.73E-07	1.02E-06	2.96E-06	7.15E-06
2	0	5	4	36.76	2	4184.22	2.3899	0.0645	1.19E-03	1.08E-03	9.86E-04	9.08E-04	8.41E-04	7.83E-04
2	0	16	17	587.75	1	4185.28	2.3893	0.0493	3.70E-03	5.91E-03	8.40E-03	1.10E-02	1.36E-02	1.61E-02
3	1	4	5	2200.42	1	4187.40	2.3881	0.0645	0.0	5.14E-08	2.65E-07	9.73E-07	2.80E-06	6.68E-06
2	0	6	5	55.14	2	4187.50	2.3881	0.0621	1.23E-03	1.14E-03	1.06E-03	9.86E-04	9.22E-04	8.65E-04
2	0	15	16	522.50	1	4190.23	2.3865	0.0505	5.99E-03	8.95E-03	1.21E-02	1.52E-02	1.81E-02	2.08E-02
2	0	7	6	77.19	2	4190.71	2.3862	0.0597	1.21E-03	1.14E-03	1.08E-03	1.02E-03	9.65E-04	9.14E-04
3	1	3	4	2181.37	1	4191.48	2.3858	0.0676	0.0	4.74E-08	2.41E-07	8.73E-07	2.48E-06	5.89E-06
2	0	8	7	102.91	2	4193.86	2.3844	0.0574	1.12E-03	1.09E-03	1.05E-03	1.01E-03	9.70E-04	9.29E-04
2	0	14	15	461.08	1	4195.11	2.3837	0.0517	9.35E-03	1.31E-02	1.68E-02	2.03E-02	2.35E-02	2.63E-02
3	1	2	3	2166.13	1	4195.50	2.3835	0.0707	0.0	3.98E-08	2.00E-07	7.18E-07	2.03E-06	4.77E-06
2	0	9	8	132.31	2	4196.94	2.3827	0.0550	1.00E-03	1.00E-03	9.88E-04	9.67E-04	9.41E-04	9.13E-04
3	1	1	2	2154.70	1	4199.45	2.3813	0.0738	0.0	2.90E-08	1.44E-07	5.14E-07	1.44E-06	3.38E-06
2	0	13	14	403.48	1	4199.92	2.3810	0.0528	1.41E-02	1.86E-02	2.28E-02	2.66E-02	2.98E-02	3.26E-02
2	0	10	9	165.38	2	4199.96	2.3810	0.0547	8.52E-04	8.82E-04	8.94E-04	8.93E-04	8.85E-04	8.71E-04
2	0	11	10	202.12	2	4202.91	2.3793	0.0545	6.97E-04	7.49E-04	7.82E-04	8.00E-04	8.08E-04	8.09E-04
3	1	0	1	2147.08	1	4203.33	2.3791	0.0769	0.0	1.54E-08	7.60E-08	2.70E-07	7.53E-07	1.76E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH M2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	12	13	349.72	1	4204.66	2.3783	0.0540	2.04E-02	2.56E-02	3.01E-02	3.38E-02	3.69E-02	3.93E-02
2	0	12	11	242.53	2	4205.79	2.3777	0.0542	5.49E-04	6.15E-04	6.63E-04	6.96E-04	7.18E-04	7.31E-04
2	0	13	12	286.60	2	4208.60	2.3761	0.0540	4.16E-04	4.88E-04	5.45E-04	5.89E-04	6.21E-04	6.45E-04
2	0	11	12	299.78	1	4209.33	2.3757	0.0542	2.86E-02	3.40E-02	3.84E-02	4.18E-02	4.44E-02	4.64E-02
3	1	1	0	2143.27	1	4210.88	2.3748	0.0769	0.0	1.60E-08	7.87E-08	2.79E-07	7.77E-07	1.81E-06
2	0	14	13	334.34	2	4211.35	2.3745	0.0528	3.04E-04	3.75E-04	4.35E-04	4.85E-04	5.24E-04	5.56E-04
2	0	10	11	253.68	1	4213.94	2.3731	0.0545	3.85E-02	4.36E-02	4.75E-02	5.02E-02	5.21E-02	5.33E-02
2	0	15	14	365.75	2	4214.03	2.3730	0.0517	2.15E-04	2.79E-04	3.38E-04	3.89E-04	4.32E-04	4.68E-04
3	1	2	1	2147.08	1	4214.55	2.3727	0.0738	0.0	3.13E-08	1.55E-07	5.49E-07	1.53E-06	3.58E-06
2	0	16	15	440.81	2	4216.64	2.3716	0.0505	1.47E-04	2.02E-04	2.55E-04	3.04E-04	3.47E-04	3.86E-04
3	1	3	2	2154.70	1	4218.15	2.3707	0.0707	0.0	4.47E-08	2.22E-07	7.93E-07	2.22E-06	5.21E-06
2	0	9	10	211.42	1	4218.48	2.3705	0.0547	4.98E-02	5.41E-02	5.68E-02	5.85E-02	5.94E-02	5.96E-02
2	0	17	16	499.54	2	4219.19	2.3701	0.0493	9.67E-05	1.41E-04	1.87E-04	2.31E-04	2.73E-04	3.11E-04
2	0	18	17	561.92	2	4221.67	2.3687	0.0482	6.17E-05	9.60E-05	1.34E-04	1.72E-04	2.10E-04	2.46E-04
3	1	4	3	2166.13	1	4221.68	2.3687	0.0676	0.0	5.53E-08	2.77E-07	9.96E-07	2.81E-06	6.62E-06
2	0	8	9	172.99	1	4222.94	2.3680	0.0550	6.18E-02	6.45E-02	6.57E-02	6.60E-02	6.56E-02	6.48E-02
2	0	19	18	627.96	2	4224.07	2.3674	0.0470	3.81E-05	6.34E-05	9.30E-05	1.25E-04	1.58E-04	1.90E-04
3	1	5	4	2181.37	1	4225.14	2.3668	0.0645	0.0	6.23E-08	3.16E-07	1.15E-06	3.26E-06	7.74E-06
2	0	20	19	697.65	2	4226.42	2.3661	0.0458	2.27E-05	4.07E-05	6.30E-05	8.86E-05	1.16E-04	1.44E-04
2	0	7	8	138.40	1	4227.35	2.3655	0.0574	7.33E-02	7.38E-02	7.32E-02	7.20E-02	7.03E-02	6.84E-02
3	1	6	5	2200.42	1	4228.53	2.3649	0.0621	0.0	6.56E-08	3.38E-07	1.24E-06	3.57E-06	8.53E-06
2	0	21	20	771.00	2	4228.69	2.3648	0.0447	1.31E-05	2.53E-05	4.17E-05	6.13E-05	8.34E-05	1.07E-04
2	0	22	21	847.99	2	4230.89	2.3636	0.0435	7.34E-06	1.53E-05	2.68E-05	4.15E-05	5.87E-05	7.79E-05
2	0	6	7	107.65	1	4231.68	2.3631	0.0557	8.30E-02	8.10E-02	7.84E-02	7.55E-02	7.26E-02	6.97E-02
3	1	7	6	2223.28	1	4231.85	2.3630	0.0597	0.0	6.53E-08	3.43E-07	1.28E-06	3.72E-06	8.97E-06
2	0	23	22	928.62	2	4233.03	2.3624	0.0423	3.98E-06	9.03E-06	1.68E-05	2.74E-05	4.05E-05	5.56E-05
3	1	8	7	2249.94	1	4235.09	2.3612	0.0574	0.0	6.20E-08	3.33E-07	1.26E-06	3.72E-06	9.08E-06
2	0	24	23	1012.90	2	4235.10	2.3612	0.0412	2.09E-06	5.16E-06	1.03E-05	1.77E-05	2.73E-05	3.89E-05
2	0	5	6	80.74	1	4235.94	2.3608	0.0621	8.92E-02	8.47E-02	8.02E-02	7.59E-02	7.20E-02	6.83E-02
2	0	25	24	1100.81	2	4237.10	2.3601	0.0400	1.06E-06	2.87E-06	6.15E-06	1.12E-05	1.81E-05	2.68E-05
3	1	9	8	2260.41	1	4238.27	2.3595	0.0550	0.0	5.64E-08	3.10E-07	1.20E-06	3.59E-06	8.88E-06
2	0	26	25	1192.36	2	4239.03	2.3590	0.0400	5.23E-07	1.56E-06	3.58E-06	6.90E-06	1.17E-05	1.80E-05
2	0	4	5	57.67	1	4240.13	2.3584	0.0645	9.03E-02	8.37E-02	7.78E-02	7.26E-02	6.80E-02	6.39E-02
2	0	27	26	1287.55	2	4240.89	2.3580	0.0400	2.50E-07	8.19E-07	2.03E-06	4.17E-06	7.43E-06	1.19E-05
3	1	10	9	2314.69	1	4241.37	2.3577	0.0547	0.0	4.93E-08	2.78E-07	1.10E-06	3.35E-06	8.42E-06
2	0	28	27	1386.36	2	4242.68	2.3570	0.0400	1.15E-07	4.19E-07	1.13E-06	2.46E-06	4.62E-06	7.74E-06
2	0	3	4	38.45	1	4244.26	2.3561	0.0676	8.50E-02	7.73E-02	7.08E-02	6.52E-02	6.04E-02	5.63E-02
3	1	11	10	2352.76	1	4244.40	2.3560	0.0545	0.0	4.14E-08	2.41E-07	9.77E-07	3.04E-06	7.76E-06
2	0	29	28	1488.80	2	4244.40	2.3560	0.0400	5.18E-08	2.09E-07	6.10E-07	1.42E-06	2.81E-06	4.93E-06
2	0	30	29	1594.85	2	4246.06	2.3551	0.0400	2.25E-08	1.01E-07	3.22E-07	8.03E-07	1.68E-06	3.08E-06
3	1	12	11	2394.64	1	4247.36	2.3544	0.0542	0.0	3.36E-08	2.03E-07	8.42E-07	2.68E-06	6.97E-06
2	0	31	30	1704.53	2	4247.64	2.3542	0.0400	0.0	4.79E-08	1.66E-07	4.44E-07	9.85E-07	1.90E-06
2	0	2	3	23.07	1	4248.31	2.3539	0.0707	7.27E-02	6.50E-02	5.88E-02	5.37E-02	4.94E-02	4.57E-02
2	0	32	31	1817.82	2	4249.16	2.3534	0.0400	0.0	2.21E-08	8.37E-08	2.41E-07	5.66E-07	1.15E-06
3	1	13	12	2440.32	1	4250.25	2.3528	0.0540	0.0	2.64E-08	1.65E-07	7.06E-07	2.30E-06	6.10E-06
2	0	33	32	1934.72	2	4250.60	2.3526	0.0400	0.0	0.0	4.12E-08	1.28E-07	3.19E-07	6.79E-07
2	0	34	33	2055.22	2	4251.98	2.3518	0.0400	0.0	0.0	1.98E-08	6.62E-08	1.76E-07	3.96E-07
2	0	1	2	11.54	1	4252.30	2.3517	0.0738	5.35E-02	4.73E-02	4.24E-02	3.84E-02	3.51E-02	3.23E-02
3	1	14	13	2489.80	1	4253.07	2.3512	0.0528	0.0	2.00E-08	1.30E-07	5.75E-07	1.92E-06	5.21E-06
2	0	35	34	2179.32	2	4253.28	2.3511	0.0400	0.0	0.0	0.0	3.36E-08	9.54E-08	2.26E-07
2	0	36	35	2307.02	2	4254.52	2.3504	0.0400	0.0	0.0	0.0	1.67E-08	5.07E-08	1.27E-07
2	0	37	36	2438.31	2	4255.68	2.3498	0.0400	0.0	0.0	0.0	0.0	2.64E-08	7.00E-08
3	1	15	14	2543.08	1	4255.81	2.3497	0.0517	0.0	1.47E-08	9.98E-08	4.56E-07	1.57E-06	4.35E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	0	1	3.85	1	4256.21	2.3495	0.0769	2.87E-02	2.51E-02	2.24E-02	2.02E-02	1.84E-02	1.69E-02
2	0	38	37	2573.18	2	4256.77	2.3492	0.0400	0.0	0.0	0.0	0.0	1.35E-08	3.79E-08
2	0	39	38	2711.64	2	4257.80	2.3486	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-08
3	1	16	15	2600.15	1	4258.48	2.3482	0.0505	0.0	1.05E-08	7.43E-08	3.52E-07	1.25E-06	3.55E-06
2	0	40	39	2857.67	2	4258.75	2.3481	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-08
2	0	41	40	2999.27	2	4259.63	2.3476	0.0400	0.0	0.0	0.0	0.0	0.0	5.41E-09
3	1	17	16	2661.01	1	4261.08	2.3468	0.0493	0.0	0.0	5.38E-08	2.65E-07	9.70E-07	2.83E-06
3	1	18	17	2725.67	1	4263.61	2.3454	0.0482	0.0	0.0	3.79E-08	1.95E-07	7.36E-07	2.21E-06
2	0	1	0	-0.0	1	4263.83	2.3453	0.0769	2.99E-02	2.61E-02	2.32E-02	2.09E-02	1.90E-02	1.74E-02
3	1	19	18	2794.11	1	4266.07	2.3441	0.0470	0.0	0.0	2.60E-08	1.39E-07	5.46E-07	1.69E-06
2	0	2	1	3.85	1	4267.54	2.3433	0.0736	5.83E-02	5.12E-02	4.56E-02	4.11E-02	3.74E-02	3.43E-02
3	1	20	19	2866.33	1	4268.45	2.3428	0.0458	0.0	0.0	1.73E-08	9.74E-08	3.96E-07	1.27E-06
3	1	21	20	2942.34	1	4270.76	2.3415	0.0447	0.0	0.0	1.12E-08	6.64E-08	2.81E-07	9.29E-07
2	0	3	2	11.54	1	4271.17	2.3413	0.0707	8.27E-02	7.31E-02	6.55E-02	5.93E-02	5.42E-02	4.99E-02
3	1	22	21	3022.13	1	4272.99	2.3403	0.0435	0.0	0.0	0.0	4.42E-08	1.95E-07	6.67E-07
2	0	4	3	23.07	1	4274.74	2.3393	0.0676	1.01E-01	9.03E-02	8.17E-02	7.45E-02	6.85E-02	6.34E-02
3	1	23	22	3105.69	1	4275.16	2.3391	0.0423	0.0	0.0	0.0	2.87E-08	1.32E-07	4.70E-07
3	1	24	23	3193.03	1	4277.24	2.3380	0.0412	0.0	0.0	0.0	1.82E-08	8.80E-08	3.24E-07
2	0	5	4	38.45	1	4278.23	2.3374	0.0645	1.12E-01	1.02E-01	9.31E-02	8.58E-02	7.95E-02	7.41E-02
3	1	25	24	3284.13	1	4279.26	2.3369	0.0400	0.0	0.0	0.0	1.13E-08	5.72E-08	2.19E-07
3	1	26	25	3379.00	1	4281.20	2.3358	0.0400	0.0	0.0	0.0	0.0	3.64E-08	1.46E-07
2	0	6	5	57.67	1	4281.65	2.3355	0.0621	1.15E-01	1.07E-01	9.94E-02	9.28E-02	8.68E-02	8.16E-02
3	1	27	26	3477.63	1	4283.07	2.3348	0.0400	0.0	0.0	0.0	0.0	2.27E-08	9.47E-08
3	1	28	27	3580.03	1	4284.86	2.3338	0.0400	0.0	0.0	0.0	0.0	1.38E-08	6.04E-08
2	0	7	6	80.74	1	4285.00	2.3337	0.0597	1.12E-01	1.06E-01	1.01E-01	9.54E-02	9.04E-02	8.58E-02
3	1	29	28	3686.17	1	4286.58	2.3329	0.0400	0.0	0.0	0.0	0.0	0.0	3.78E-08
3	1	30	29	3796.07	1	4288.23	2.3320	0.0400	0.0	0.0	0.0	0.0	0.0	2.32E-08
2	0	8	7	107.65	1	4288.28	2.3319	0.0574	1.03E-01	1.01E-01	9.75E-02	9.39E-02	9.03E-02	8.67E-02
3	1	31	30	3909.71	1	4289.80	2.3311	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-08
3	1	32	31	4027.09	1	4291.30	2.3303	0.0400	0.0	0.0	0.0	0.0	0.0	8.29E-09
2	0	9	8	138.40	1	4291.49	2.3302	0.0550	9.08E-02	9.14E-02	9.07E-02	8.91E-02	8.70E-02	8.47E-02
2	0	10	9	172.99	1	4294.63	2.3285	0.0547	7.64E-02	7.97E-02	8.13E-02	8.16E-02	8.12E-02	8.02E-02
2	0	11	10	211.42	1	4297.70	2.3268	0.0545	6.16E-02	6.69E-02	7.03E-02	7.24E-02	7.35E-02	7.38E-02
2	0	12	11	253.68	1	4300.69	2.3252	0.0542	4.78E-02	5.42E-02	5.89E-02	6.23E-02	6.46E-02	6.61E-02
2	0	13	12	299.78	1	4303.62	2.3236	0.0540	3.56E-02	4.24E-02	4.78E-02	5.21E-02	5.53E-02	5.78E-02
2	0	14	13	349.72	1	4306.47	2.3221	0.0528	2.56E-02	3.21E-02	3.76E-02	4.23E-02	4.62E-02	4.93E-02
2	0	15	14	403.48	1	4309.25	2.3206	0.0517	1.77E-02	2.35E-02	2.88E-02	3.35E-02	3.76E-02	4.10E-02
2	0	16	15	461.08	1	4311.95	2.3191	0.0505	1.19E-02	1.66E-02	2.14E-02	2.58E-02	2.98E-02	3.34E-02
2	0	17	16	522.50	1	4314.59	2.3177	0.0493	7.65E-03	1.14E-02	1.54E-02	1.94E-02	2.31E-02	2.66E-02
2	0	18	17	587.75	1	4317.15	2.3163	0.0482	4.76E-03	7.61E-03	1.08E-02	1.42E-02	1.75E-02	2.07E-02
2	0	19	18	656.82	1	4319.64	2.3150	0.0470	2.86E-03	4.92E-03	7.38E-03	1.01E-02	1.29E-02	1.58E-02
2	0	20	19	729.71	1	4322.06	2.3137	0.0458	1.67E-03	3.08E-03	4.90E-03	7.03E-03	9.35E-03	1.18E-02
2	0	21	20	806.42	1	4324.40	2.3125	0.0447	9.36E-04	1.87E-03	3.17E-03	4.77E-03	6.61E-03	8.61E-03
2	0	22	21	886.95	1	4326.67	2.3112	0.0435	5.09E-04	1.11E-03	2.00E-03	3.16E-03	4.57E-03	6.16E-03
2	0	23	22	971.28	1	4328.87	2.3101	0.0423	2.67E-04	6.34E-04	1.22E-03	2.05E-03	3.09E-03	4.32E-03
2	0	24	23	1059.42	1	4330.99	2.3089	0.0412	1.36E-04	3.53E-04	7.30E-04	1.29E-03	2.04E-03	2.97E-03
2	0	25	24	1151.37	1	4333.04	2.3078	0.0400	6.68E-05	1.91E-04	4.25E-04	7.98E-04	1.32E-03	2.00E-03
2	0	26	25	1247.11	1	4335.02	2.3068	0.0400	3.18E-05	1.00E-04	2.41E-04	4.81E-04	8.39E-04	1.32E-03
2	0	27	26	1346.66	1	4336.92	2.3058	0.0400	1.46E-05	5.11E-05	1.33E-04	2.83E-04	5.20E-04	8.57E-04
2	0	28	27	1449.99	1	4338.75	2.3048	0.0400	6.53E-06	2.53E-05	7.17E-05	1.63E-04	3.16E-04	5.45E-04
2	0	29	28	1557.12	1	4340.50	2.3039	0.0400	2.82E-06	1.22E-05	3.76E-05	9.15E-05	1.88E-04	3.39E-04
2	0	30	29	1668.03	1	4342.18	2.3030	0.0400	1.18E-06	5.71E-06	1.92E-05	5.03E-05	1.09E-04	2.07E-04
2	0	31	30	1782.72	1	4343.79	2.3021	0.0400	4.77E-07	2.61E-06	9.62E-06	2.71E-05	6.24E-05	1.24E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
2	0	32	31	1901.19	1	4345.32	2.3013	0.0400	1.87E-07	1.16E-06	4.69E-06	1.42E-05	3.49E-05	7.33E-05
2	0	33	32	2023.43	1	4346.77	2.3006	0.0400	7.13E-08	4.98E-07	2.23E-06	7.31E-06	1.91E-05	4.24E-05
2	0	34	33	2149.44	1	4348.15	2.2998	0.0400	2.62E-08	2.09E-07	1.03E-06	3.67E-06	1.03E-05	2.40E-05
2	0	35	34	2279.20	1	4349.46	2.2991	0.0400	0.0	8.51E-08	4.67E-07	1.80E-06	5.40E-06	1.34E-05
2	0	36	35	2412.73	1	4350.69	2.2985	0.0400	0.0	3.37E-08	2.06E-07	8.67E-07	2.78E-06	7.30E-06
2	0	37	36	2550.01	1	4351.85	2.2979	0.0400	0.0	1.30E-08	8.87E-08	4.07E-07	1.40E-06	3.91E-06
2	0	38	37	2691.03	1	4352.93	2.2973	0.0400	0.0	0.0	3.72E-08	1.87E-07	6.94E-07	2.06E-06
2	0	39	38	2835.80	1	4353.93	2.2968	0.0400	0.0	0.0	1.52E-08	8.40E-08	3.36E-07	1.06E-06
2	0	40	39	2984.30	1	4354.86	2.2963	0.0400	0.0	0.0	0.0	3.69E-08	1.60E-07	5.37E-07
2	0	41	40	3136.53	1	4355.71	2.2958	0.0400	0.0	0.0	0.0	1.59E-08	7.43E-08	2.67E-07
2	0	42	41	3292.48	1	4356.49	2.2954	0.0400	0.0	0.0	0.0	0.0	3.39E-08	1.30E-07
2	0	43	42	3452.15	1	4357.19	2.2951	0.0400	0.0	0.0	0.0	0.0	1.51E-08	6.25E-08
2	0	44	43	3615.54	1	4357.81	2.2947	0.0400	0.0	0.0	0.0	0.0	0.0	2.94E-08
2	0	45	44	3782.62	1	4358.36	2.2944	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-08
2	0	46	45	3953.41	1	4358.83	2.2942	0.0400	0.0	0.0	0.0	0.0	0.0	6.16E-09

Table 3—Second overtone band of CO, T = 175–300°K. The total number of lines included is 274. For temperatures less than 300°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-10}. The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

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MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
3	0	38	39	2853.67	2	5997.53	1.6674	0.0400	0.0	0.0	0.0	0.0	0.0	3.08E-11
3	0	37	38	2711.64	2	6004.84	1.6653	0.0400	0.0	0.0	0.0	0.0	0.0	5.97E-11
3	0	36	37	2573.18	2	6012.05	1.6633	0.0400	0.0	0.0	0.0	0.0	0.0	1.14E-10
3	0	35	36	2438.31	2	6019.17	1.6614	0.0400	0.0	0.0	0.0	0.0	0.0	2.13E-10
3	0	34	35	2307.02	2	6026.20	1.6594	0.0400	0.0	0.0	0.0	0.0	1.57E-10	3.92E-10
3	0	33	34	2179.32	2	6033.13	1.6575	0.0400	0.0	0.0	0.0	1.05E-10	2.99E-10	7.08E-10
4	1	20	21	2936.50	2	6039.61	1.6557	0.0447	0.0	0.0	0.0	0.0	0.0	5.52E-11
3	0	32	33	2055.22	2	6039.97	1.6556	0.0400	0.0	0.0	0.0	2.10E-10	5.60E-10	1.26E-09
4	1	19	20	2860.19	2	6045.19	1.6542	0.0458	0.0	0.0	0.0	0.0	0.0	7.66E-11
3	0	31	32	1934.72	2	6046.72	1.6538	0.0400	0.0	0.0	1.33E-10	4.11E-10	1.03E-09	2.19E-09
4	1	18	19	2787.51	2	6050.67	1.6527	0.0470	0.0	0.0	0.0	0.0	0.0	1.04E-10
3	0	30	31	1817.82	2	6053.37	1.6520	0.0400	0.0	0.0	2.74E-10	7.87E-10	1.85E-09	3.74E-09
4	1	17	18	2718.44	2	6056.06	1.6512	0.0482	0.0	0.0	0.0	0.0	0.0	1.39E-10
3	0	29	30	1704.53	2	6059.93	1.6502	0.0400	0.0	1.59E-10	5.51E-10	1.47E-09	3.26E-09	6.29E-09
4	1	16	17	2652.99	2	6061.35	1.6498	0.0493	0.0	0.0	0.0	0.0	0.0	1.81E-10
3	0	28	29	1594.85	2	6066.39	1.6484	0.0400	0.0	3.42E-10	1.09E-09	2.71E-09	5.67E-09	1.04E-08
4	1	15	16	2591.16	2	6066.54	1.6484	0.0505	0.0	0.0	0.0	0.0	0.0	2.32E-10
4	1	14	15	2532.96	2	6071.64	1.6470	0.0517	0.0	0.0	0.0	0.0	1.05E-10	2.91E-10
3	0	27	28	1488.80	2	6072.76	1.6467	0.0400	1.77E-10	7.16E-10	2.09E-09	4.87E-09	9.64E-09	1.69E-08
4	1	13	14	2478.38	2	6076.64	1.6456	0.0528	0.0	0.0	0.0	0.0	1.32E-10	3.56E-10
3	0	26	27	1386.35	2	6079.03	1.6450	0.0400	4.02E-10	1.46E-09	3.93E-09	8.57E-09	1.61E-08	2.70E-08
4	1	12	13	2427.44	2	6081.55	1.6443	0.0540	0.0	0.0	0.0	0.0	1.61E-10	4.25E-10
3	0	43	44	3782.62	1	6083.97	1.6437	0.0400	0.0	0.0	0.0	0.0	0.0	3.68E-11
3	0	25	26	1287.55	2	6085.22	1.6433	0.0400	8.83E-10	2.90E-09	7.20E-09	1.47E-08	2.63E-08	4.22E-08
4	1	11	12	2380.12	2	6086.36	1.6430	0.0542	0.0	0.0	0.0	0.0	1.93E-10	4.98E-10
4	1	10	11	2336.44	2	6091.08	1.6417	0.0545	0.0	0.0	0.0	0.0	2.24E-10	5.69E-10
3	0	24	25	1192.36	2	6091.30	1.6417	0.0400	1.88E-09	5.59E-09	1.29E-08	2.48E-08	4.20E-08	6.48E-08
3	0	42	43	3615.54	1	6092.19	1.6414	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-11
4	1	9	10	2296.39	2	6095.69	1.6405	0.0547	0.0	0.0	0.0	0.0	2.54E-10	6.33E-10
3	0	23	24	1100.81	2	6097.29	1.6401	0.0412	3.87E-09	1.05E-08	2.24E-08	4.08E-08	6.59E-08	9.76E-08
4	1	8	9	2259.98	2	6100.21	1.6393	0.0550	0.0	0.0	0.0	0.0	2.79E-10	6.85E-10
3	0	41	42	3452.15	1	6100.31	1.6393	0.0400	0.0	0.0	0.0	0.0	0.0	1.75E-10
3	0	22	23	1012.90	2	6103.19	1.6385	0.0423	7.73E-09	1.91E-08	3.81E-08	6.56E-08	1.01E-07	1.44E-07
4	1	7	8	2227.21	2	6104.64	1.6381	0.0574	0.0	0.0	0.0	1.02E-10	2.97E-10	7.19E-10
4	1	30	31	4027.09	1	6104.94	1.6380	0.0400	0.0	0.0	0.0	0.0	0.0	3.73E-11
3	0	40	41	3292.48	1	6108.34	1.6371	0.0400	0.0	0.0	0.0	0.0	0.0	3.70E-10
4	1	6	7	2198.07	2	6108.96	1.6369	0.0597	0.0	0.0	0.0	1.07E-10	3.06E-10	7.30E-10
3	0	21	22	928.62	2	6108.99	1.6369	0.0435	1.49E-08	3.39E-08	6.32E-08	1.03E-07	1.52E-07	2.09E-07
4	1	29	30	3909.71	1	6111.84	1.6362	0.0400	0.0	0.0	0.0	0.0	0.0	6.38E-11
4	1	5	6	2172.57	2	6113.19	1.6358	0.0621	0.0	0.0	0.0	1.07E-10	3.02E-10	7.14E-10
3	0	20	21	847.99	2	6114.70	1.6354	0.0447	2.80E-08	5.84E-08	1.02E-07	1.58E-07	2.24E-07	2.97E-07
3	0	39	40	3136.53	1	6116.26	1.6350	0.0400	0.0	0.0	0.0	0.0	2.14E-10	7.68E-10
4	1	4	5	2150.72	2	6117.33	1.6347	0.0645	0.0	0.0	0.0	1.02E-10	2.85E-10	6.67E-10
4	1	28	29	3796.07	1	6118.63	1.6344	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-10
3	0	19	20	771.00	2	6120.31	1.6339	0.0458	5.07E-08	9.79E-08	1.61E-07	2.37E-07	3.22E-07	4.13E-07
4	1	3	4	2132.50	2	6121.36	1.6336	0.0676	0.0	0.0	0.0	0.0	2.53E-10	5.87E-10
3	0	38	39	2984.30	1	6124.09	1.6329	0.0400	0.0	0.0	0.0	1.08E-10	4.66E-10	1.57E-09
4	1	2	3	2117.93	2	6125.30	1.6326	0.0707	0.0	0.0	0.0	0.0	2.07E-10	4.77E-10
4	1	27	28	3686.17	1	6125.32	1.6326	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-10
3	0	18	19	697.65	2	6125.83	1.6324	0.0470	8.90E-08	1.59E-07	2.47E-07	3.47E-07	4.54E-07	5.64E-07
4	1	1	2	2107.00	2	6129.14	1.6316	0.0738	0.0	0.0	0.0	0.0	1.47E-10	3.38E-10
3	0	17	18	627.96	2	6131.25	1.6310	0.0482	1.51E-07	2.52E-07	3.72E-07	4.97E-07	6.26E-07	7.55E-07
3	0	37	38	2835.80	1	6131.81	1.6308	0.0400	0.0	0.0	0.0	2.48E-10	9.95E-10	3.14E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
4	1	26	27	3580.03	1	6131.90	1.6308	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-10
4	1	0	1	2099.72	2	6132.88	1.6306	0.0769	0.0	0.0	0.0	0.0	0.0	1.76E-10
3	0	16	17	561.92	2	6136.57	1.6296	0.0493	2.48E-07	3.87E-07	5.38E-07	5.93E-07	8.45E-07	9.89E-07
4	1	25	26	3477.63	1	6138.39	1.6291	0.0400	0.0	0.0	0.0	0.0	1.10E-10	4.60E-10
3	0	36	37	2691.03	1	6139.44	1.6288	0.0400	0.0	0.0	1.12E-10	5.61E-10	2.08E-09	6.17E-09
4	1	1	0	2096.07	2	6140.07	1.6286	0.0769	0.0	0.0	0.0	0.0	0.0	1.84E-10
3	0	15	16	499.54	2	6141.80	1.6282	0.0505	3.95E-07	5.76E-07	7.63E-07	9.44E-07	1.11E-06	1.27E-06
4	1	2	1	2099.72	2	6143.51	1.6277	0.0738	0.0	0.0	0.0	0.0	1.60E-10	3.66E-10
4	1	24	25	3379.00	1	6144.78	1.6274	0.0400	0.0	0.0	0.0	0.0	1.80E-10	7.18E-10
4	1	3	2	2107.00	2	6146.86	1.6268	0.0707	0.0	0.0	0.0	0.0	2.34E-10	5.36E-10
3	0	14	15	440.81	2	6146.93	1.6268	0.0517	6.06E-07	8.33E-07	1.05E-06	1.25E-06	1.43E-06	1.59E-06
3	0	35	36	2550.01	1	6146.97	1.6268	0.0400	0.0	0.0	2.70E-10	1.24E-09	4.27E-09	1.19E-08
4	1	4	3	2117.93	2	6150.11	1.6260	0.0676	0.0	0.0	0.0	1.08E-10	2.98E-10	6.88E-10
4	1	23	24	3284.13	1	6151.07	1.6257	0.0412	0.0	0.0	0.0	0.0	2.87E-10	1.10E-09
3	0	13	14	385.75	2	6151.97	1.6255	0.0528	8.98E-07	1.17E-06	1.41E-06	1.62E-06	1.80E-06	1.95E-06
4	1	5	4	2132.50	2	6153.26	1.6252	0.0645	0.0	0.0	0.0	1.26E-10	3.50E-10	8.12E-10
3	0	34	35	2412.73	1	6154.40	1.6249	0.0400	0.0	1.04E-10	6.36E-10	2.67E-09	8.58E-09	2.25E-08
4	1	6	5	2150.72	2	6156.32	1.6243	0.0621	0.0	0.0	0.0	1.38E-10	3.86E-10	9.04E-10
3	0	12	13	334.34	2	6156.91	1.6242	0.0540	1.29E-06	1.58E-06	1.84E-06	2.05E-06	2.21E-06	2.35E-06
4	1	22	23	3193.03	1	6157.25	1.6241	0.0423	0.0	0.0	0.0	0.0	4.47E-10	1.65E-09
4	1	7	6	2172.57	2	6159.27	1.6236	0.0597	0.0	0.0	0.0	1.44E-10	4.07E-10	9.61E-10
3	0	33	34	2279.20	1	6161.72	1.6229	0.0400	0.0	2.66E-10	1.46E-09	5.65E-09	1.69E-08	4.18E-08
3	0	11	12	286.60	2	6161.75	1.6229	0.0542	1.77E-06	2.08E-06	2.32E-06	2.51E-06	2.65E-06	2.75E-06
4	1	8	7	2198.07	2	6162.12	1.6228	0.0574	0.0	0.0	0.0	1.44E-10	4.12E-10	9.84E-10
4	1	21	22	3105.69	1	6163.33	1.6225	0.0435	0.0	0.0	0.0	1.48E-10	6.83E-10	2.42E-09
4	1	9	8	2227.21	2	6164.88	1.6221	0.0550	0.0	0.0	0.0	1.38E-10	4.03E-10	9.75E-10
3	0	10	11	242.53	2	6166.50	1.6217	0.0545	2.36E-06	2.65E-06	2.85E-06	3.00E-06	3.09E-06	3.15E-06
4	1	10	9	2259.98	2	6167.53	1.6214	0.0547	0.0	0.0	0.0	1.29E-10	3.82E-10	9.36E-10
3	0	32	33	2149.44	1	6168.95	1.6210	0.0400	0.0	6.63E-10	3.28E-09	1.17E-08	3.26E-08	7.62E-08
4	1	20	21	3022.13	1	6169.31	1.6209	0.0447	0.0	0.0	0.0	2.31E-10	1.02E-09	3.49E-09
4	1	11	10	2296.39	2	6170.09	1.6207	0.0545	0.0	0.0	0.0	1.16E-10	3.51E-10	8.75E-10
3	0	9	10	202.12	2	6171.15	1.6204	0.0547	3.02E-06	3.25E-06	3.39E-06	3.47E-06	3.50E-06	3.51E-06
4	1	12	11	2336.44	2	6172.55	1.6201	0.0542	0.0	0.0	0.0	1.02E-10	3.14E-10	7.97E-10
4	1	13	12	2380.12	2	6174.90	1.6195	0.0540	0.0	0.0	0.0	0.0	2.74E-10	7.08E-10
4	1	19	20	2942.34	1	6175.19	1.6194	0.0458	0.0	0.0	0.0	3.52E-10	1.49E-09	4.93E-09
3	0	8	9	165.38	2	6175.70	1.6192	0.0550	3.71E-06	3.85E-06	3.90E-06	3.90E-06	3.86E-06	3.80E-06
3	0	31	32	2023.43	1	6176.08	1.6192	0.0400	2.29E-10	1.60E-09	7.17E-09	2.35E-08	6.16E-08	1.36E-07
4	1	14	13	2427.44	2	6177.16	1.6189	0.0528	0.0	0.0	0.0	0.0	2.33E-10	6.15E-10
4	1	15	14	2478.38	2	6179.32	1.6183	0.0517	0.0	0.0	0.0	0.0	1.93E-10	5.22E-10
3	0	7	8	132.31	2	6180.16	1.6181	0.0574	4.37E-06	4.38E-06	4.32E-06	4.23E-06	4.12E-06	4.00E-06
4	1	18	19	2866.33	1	6180.97	1.6179	0.0470	0.0	0.0	0.0	5.23E-10	2.13E-09	6.81E-09
4	1	16	15	2532.96	2	6181.38	1.6178	0.0505	0.0	0.0	0.0	0.0	1.57E-10	4.33E-10
3	0	30	31	1901.19	1	6183.11	1.6173	0.0400	6.12E-10	3.77E-09	1.53E-08	4.64E-08	1.14E-07	2.39E-07
4	1	17	16	2591.16	2	6183.33	1.6173	0.0493	0.0	0.0	0.0	0.0	1.24E-10	3.52E-10
3	0	6	7	102.91	2	6184.52	1.6169	0.0597	4.92E-06	4.78E-06	4.61E-06	4.43E-06	4.24E-06	4.06E-06
4	1	18	17	2652.99	2	6185.19	1.6168	0.0482	0.0	0.0	0.0	0.0	0.0	2.80E-10
4	1	17	18	2794.11	1	6186.65	1.6164	0.0482	0.0	0.0	1.41E-10	7.59E-10	2.98E-09	9.22E-09
4	1	19	18	2718.44	2	6186.94	1.6163	0.0470	0.0	0.0	0.0	0.0	0.0	2.18E-10
4	1	20	19	2787.51	2	6188.60	1.6159	0.0458	0.0	0.0	0.0	0.0	0.0	1.67E-10
3	0	5	6	77.19	2	6188.78	1.6158	0.0621	5.26E-06	4.98E-06	4.70E-06	4.44E-06	4.20E-06	3.98E-06
3	0	29	30	1782.72	1	6190.03	1.6155	0.0400	1.58E-09	8.62E-09	3.18E-08	8.95E-08	2.07E-07	4.12E-07
4	1	21	20	2860.19	2	6190.15	1.6155	0.0447	0.0	0.0	0.0	0.0	0.0	1.25E-10
4	1	22	21	2936.50	2	6191.61	1.6151	0.0435	0.0	0.0	0.0	0.0	0.0	9.17E-11

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
4	1	16	17	2725.67	1	6192.22	1.6149	0.0493	0.0	0.0	2.09E-10	1.07E-09	4.06E-09	1.22E-08
3	0	4	5	55.14	2	6192.95	1.6147	0.0645	5.30E-06	4.91E-06	4.55E-06	4.24E-06	3.96E-06	3.72E-06
3	0	28	29	1668.03	1	6196.86	1.6137	0.0400	3.97E-09	1.93E-08	6.49E-08	1.69E-07	3.68E-07	6.98E-07
3	0	3	4	36.76	2	6197.01	1.6137	0.0676	4.98E-06	4.52E-06	4.13E-06	3.81E-06	3.52E-06	3.28E-06
4	1	15	16	2661.01	1	6197.69	1.6135	0.0505	0.0	0.0	3.01E-10	1.48E-09	5.42E-09	1.58E-08
3	0	2	3	22.05	2	6200.98	1.6126	0.0707	4.26E-06	3.80E-06	3.44E-06	3.13E-06	2.88E-06	2.66E-06
4	1	14	15	2600.15	1	6203.06	1.6121	0.0517	0.0	0.0	4.20E-10	1.99E-09	7.05E-09	2.01E-08
3	0	27	28	1557.12	1	6203.59	1.6120	0.0400	9.65E-09	4.18E-08	1.29E-07	3.13E-07	5.43E-07	1.16E-06
3	0	1	2	11.03	2	6204.86	1.6116	0.0738	3.13E-06	2.77E-06	2.48E-06	2.25E-06	2.05E-06	1.89E-06
4	1	13	14	2543.03	1	6208.32	1.6107	0.0528	0.0	0.0	5.70E-10	2.61E-09	8.96E-09	2.49E-08
3	0	0	1	3.68	2	6208.63	1.6107	0.0769	1.68E-06	1.47E-06	1.31E-06	1.18E-06	1.08E-06	9.88E-07
3	0	26	27	1449.99	1	6210.21	1.6103	0.0400	2.27E-08	8.81E-08	2.49E-07	5.67E-07	1.10E-06	1.89E-06
4	1	12	13	2489.80	1	6213.48	1.6094	0.0540	0.0	1.16E-10	7.52E-10	3.32E-09	1.11E-08	3.01E-08
3	0	1	0	-0.0	2	6215.88	1.6088	0.0769	1.77E-06	1.55E-06	1.37E-06	1.24E-06	1.12E-06	1.03E-06
3	0	25	26	1346.66	1	6216.74	1.6086	0.0400	5.18E-08	1.81E-07	4.70E-07	1.00E-06	1.84E-06	3.03E-06
4	1	11	12	2440.32	1	6218.54	1.6081	0.0542	0.0	1.54E-10	9.52E-10	4.12E-09	1.34E-08	3.56E-08
3	0	2	1	3.68	2	6219.36	1.6079	0.0738	3.48E-06	3.05E-06	2.72E-06	2.45E-06	2.23E-06	2.05E-06
3	0	3	2	11.03	2	6222.74	1.6070	0.0707	4.98E-06	4.40E-06	3.95E-06	3.57E-06	3.26E-06	3.01E-06
3	0	24	25	1247.11	1	6223.16	1.6069	0.0400	1.14E-07	3.59E-07	8.64E-07	1.73E-06	3.01E-06	4.75E-06
4	1	10	11	2394.64	1	6223.50	1.6068	0.0545	0.0	1.98E-10	1.19E-09	4.96E-09	1.58E-08	4.10E-08
3	0	4	3	22.06	2	6226.03	1.6062	0.0676	6.15E-06	5.50E-06	4.97E-06	4.53E-06	4.16E-06	3.85E-06
4	1	9	10	2352.76	1	6228.35	1.6056	0.0547	0.0	2.46E-10	1.43E-09	5.79E-09	1.80E-08	4.60E-08
3	0	5	4	36.76	2	6229.21	1.6053	0.0645	6.90E-06	6.26E-06	5.73E-06	5.27E-06	4.88E-06	4.54E-06
3	0	23	24	1151.37	1	6229.48	1.6053	0.0412	2.44E-07	6.95E-07	1.55E-06	2.91E-06	4.82E-06	7.30E-06
3	0	6	5	55.14	2	6232.30	1.6045	0.0621	7.21E-06	6.67E-06	6.19E-06	5.76E-06	5.39E-06	5.06E-06
4	1	8	9	2314.69	1	6233.10	1.6043	0.0550	0.0	2.94E-10	1.66E-09	6.55E-09	2.00E-08	5.02E-08
3	0	7	6	77.19	2	6235.28	1.6038	0.0597	7.11E-06	6.72E-06	6.35E-06	6.00E-06	5.67E-06	5.38E-06
3	0	22	23	1059.42	1	6235.70	1.6037	0.0423	5.03E-07	1.30E-06	2.70E-06	4.78E-06	7.56E-06	1.10E-05
4	1	7	8	2280.41	1	6237.74	1.6031	0.0574	0.0	3.37E-10	1.85E-09	7.16E-09	2.15E-08	5.31E-08
3	0	8	7	102.91	2	6238.17	1.6030	0.0574	6.66E-06	6.46E-06	6.23E-06	5.99E-06	5.74E-06	5.50E-06
3	0	9	8	132.31	2	6240.96	1.6023	0.0550	5.95E-06	5.96E-06	5.88E-06	5.76E-06	5.60E-06	5.44E-06
3	0	21	22	971.28	1	6241.82	1.6021	0.0435	1.00E-06	2.38E-06	4.59E-06	7.68E-06	1.16E-05	1.62E-05
4	1	6	7	2249.94	1	6242.28	1.6020	0.0597	0.0	3.71E-10	1.99E-09	7.54E-09	2.22E-08	5.43E-08
3	0	10	9	165.38	2	6243.64	1.6016	0.0547	5.10E-06	5.28E-06	5.35E-06	5.35E-06	5.30E-06	5.22E-06
3	0	11	10	202.12	2	6246.23	1.6010	0.0545	4.20E-06	4.52E-06	4.71E-06	4.82E-06	4.87E-06	4.87E-06
4	1	5	6	2223.28	1	6246.72	1.6008	0.0621	0.0	3.89E-10	2.04E-09	7.60E-09	2.21E-08	5.34E-08
3	0	20	21	886.95	1	6247.84	1.6006	0.0447	1.94E-06	4.21E-06	7.60E-06	1.20E-05	1.74E-05	2.35E-05
3	0	12	11	242.53	2	6248.72	1.6003	0.0542	3.32E-06	3.73E-06	4.02E-06	4.22E-06	4.35E-06	4.43E-06
4	1	4	5	2200.42	1	6251.05	1.5997	0.0645	0.0	3.85E-10	1.99E-09	7.29E-09	2.09E-08	5.01E-08
3	0	13	12	286.60	2	6251.11	1.5997	0.0540	2.54E-06	2.98E-06	3.32E-06	3.59E-06	3.79E-06	3.93E-06
3	0	14	13	334.34	2	6253.40	1.5991	0.0528	1.87E-06	2.30E-06	2.67E-06	2.97E-06	3.21E-06	3.41E-06
3	0	19	20	806.42	1	6253.75	1.5990	0.0458	3.62E-06	7.24E-06	1.22E-05	1.84E-05	2.55E-05	3.33E-05
4	1	3	4	2181.37	1	6255.28	1.5986	0.0676	0.0	3.57E-10	1.81E-09	6.57E-09	1.87E-08	4.43E-08
3	0	15	14	385.75	2	6255.59	1.5986	0.0517	1.33E-06	1.72E-06	2.08E-06	2.39E-06	2.66E-06	2.88E-06
3	0	16	15	440.81	2	6257.68	1.5980	0.0505	9.09E-07	1.25E-06	1.58E-06	1.88E-06	2.15E-06	2.39E-06
4	1	2	3	2166.13	1	6259.41	1.5976	0.0707	0.0	3.01E-10	1.51E-09	5.43E-09	1.53E-08	3.61E-08
3	0	18	19	729.71	1	6259.56	1.5976	0.0470	6.52E-06	1.21E-05	1.92E-05	2.75E-05	3.66E-05	4.61E-05
3	0	17	16	499.54	2	6259.67	1.5975	0.0493	6.03E-07	8.80E-07	1.16E-06	1.44E-06	1.70E-06	1.94E-06
3	0	18	17	561.92	2	6261.56	1.5970	0.0482	3.86E-07	6.01E-07	8.37E-07	1.08E-06	1.31E-06	1.54E-06
3	0	19	18	627.96	2	6263.34	1.5966	0.0470	2.40E-07	3.99E-07	5.85E-07	7.86E-07	9.92E-07	1.20E-06
4	1	1	2	2154.70	1	6263.43	1.5966	0.0738	0.0	2.20E-10	1.09E-09	3.90E-09	1.09E-08	2.56E-08
3	0	20	19	697.65	2	6265.03	1.5962	0.0458	1.44E-07	2.57E-07	3.99E-07	5.60E-07	7.33E-07	9.10E-07
3	0	17	18	656.82	1	6265.27	1.5961	0.0482	1.14E-05	1.95E-05	2.93E-05	4.01E-05	5.14E-05	6.27E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
3	0	21	20	771.00	2	6266.62	1.5958	0.0447	8.34E-08	1.61E-07	2.65E-07	3.90E-07	5.30E-07	6.80E-07
4	1	0	1	2147.08	1	6267.34	1.5956	0.0769	0.0	1.17E-10	5.79E-10	2.05E-09	5.74E-09	1.34E-08
3	0	22	21	847.99	2	6268.10	1.5954	0.0435	4.69E-08	9.80E-08	1.71E-07	2.65E-07	3.75E-07	4.97E-07
3	0	23	22	928.62	2	6269.49	1.5950	0.0423	2.55E-08	5.79E-09	1.08E-07	1.76E-07	2.60E-07	3.57E-07
3	0	24	23	1012.90	2	6270.77	1.5947	0.0412	1.35E-08	3.33E-08	6.65E-08	1.14E-07	1.76E-07	2.51E-07
3	0	16	17	587.75	1	6270.88	1.5947	0.0493	1.92E-05	3.06E-05	4.35E-05	5.70E-05	7.04E-05	8.33E-05
3	0	25	24	1100.81	2	6271.95	1.5944	0.0400	6.88E-09	1.86E-08	3.99E-08	7.25E-08	1.17E-07	1.73E-07
3	0	26	25	1192.35	2	6273.03	1.5941	0.0400	3.40E-09	1.01E-08	2.33E-08	4.50E-08	7.62E-08	1.17E-07
3	0	27	26	1287.55	2	6274.01	1.5939	0.0400	1.63E-09	5.35E-09	1.33E-08	2.73E-08	4.86E-08	7.80E-08
4	1	1	0	2143.27	1	6274.86	1.5937	0.0769	0.0	1.23E-10	6.06E-10	2.15E-09	5.99E-09	1.40E-08
3	0	28	27	1386.36	2	6274.88	1.5937	0.0400	7.58E-10	2.75E-09	7.41E-09	1.62E-08	3.03E-08	5.09E-08
3	0	29	28	1488.80	2	6275.66	1.5935	0.0400	3.42E-10	1.38E-09	4.02E-09	9.38E-09	1.86E-08	3.25E-08
3	0	30	29	1594.85	2	6276.33	1.5933	0.0400	1.49E-10	6.71E-10	2.13E-09	5.32E-09	1.11E-08	2.04E-08
3	0	15	16	522.50	1	6276.39	1.5933	0.0505	3.12E-05	4.66E-05	6.28E-05	7.89E-05	9.42E-05	1.08E-04
3	0	31	30	1704.53	2	6276.90	1.5931	0.0400	0.0	3.20E-10	1.11E-09	2.97E-09	6.58E-09	1.27E-08
3	0	32	31	1817.82	2	6277.37	1.5930	0.0400	0.0	1.48E-10	5.63E-10	1.62E-09	3.81E-09	7.71E-09
3	0	40	39	2853.67	2	6277.41	1.5930	0.0400	0.0	0.0	0.0	0.0	0.0	7.48E-11
3	0	33	32	1934.72	2	6277.74	1.5929	0.0400	0.0	0.0	2.79E-10	8.65E-10	2.16E-09	4.60E-09
3	0	39	38	2711.64	2	6277.77	1.5929	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-10
3	0	34	33	2055.22	2	6278.00	1.5929	0.0400	0.0	0.0	1.35E-10	4.52E-10	1.20E-09	2.70E-09
3	0	38	37	2573.18	2	6278.02	1.5929	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-10
3	0	35	34	2179.32	2	6278.16	1.5928	0.0400	0.0	0.0	0.0	2.31E-10	6.56E-10	1.55E-09
3	0	37	36	2438.31	2	6278.17	1.5928	0.0400	0.0	0.0	0.0	0.0	1.84E-10	4.88E-10
3	0	36	35	2307.02	2	6278.22	1.5928	0.0400	0.0	0.0	0.0	1.15E-10	3.51E-10	8.79E-10
4	1	2	1	2147.03	1	6278.46	1.5927	0.0738	0.0	2.43E-10	1.20E-09	4.26E-09	1.19E-08	2.78E-08
3	0	14	15	461.08	1	6281.79	1.5919	0.0517	4.89E-05	6.86E-05	8.81E-05	1.06E-04	1.23E-04	1.38E-04
4	1	3	2	2154.70	1	6281.95	1.5919	0.0707	0.0	3.49E-10	1.74E-09	6.19E-09	1.74E-08	4.07E-08
4	1	4	3	2166.13	1	6285.34	1.5910	0.0676	0.0	4.35E-10	2.18E-09	7.83E-09	2.21E-08	5.20E-08
3	0	13	14	403.48	1	6287.09	1.5906	0.0528	7.40E-05	9.79E-05	1.20E-04	1.40E-04	1.57E-04	1.71E-04
4	1	5	4	2181.37	1	6288.63	1.5902	0.0645	0.0	4.93E-10	2.50E-09	9.08E-09	2.58E-08	6.12E-08
4	1	6	5	2200.42	1	6291.80	1.5894	0.0621	0.0	5.22E-10	2.69E-09	9.89E-09	2.84E-08	6.79E-08
3	0	12	13	349.72	1	6292.29	1.5892	0.0540	1.08E-04	1.35E-04	1.59E-04	1.79E-04	1.95E-04	2.08E-04
4	1	7	6	2223.28	1	6294.88	1.5886	0.0597	0.0	5.24E-10	2.75E-09	1.02E-08	2.98E-08	7.19E-08
3	0	11	12	299.78	1	6297.38	1.5880	0.0542	1.52E-04	1.81E-04	2.04E-04	2.22E-04	2.36E-04	2.46E-04
4	1	8	7	2249.94	1	6297.84	1.5878	0.0574	0.0	5.00E-10	2.68E-09	1.02E-08	3.00E-08	7.32E-08
4	1	9	8	2280.41	1	6300.70	1.5871	0.0550	0.0	4.57E-10	2.51E-09	9.71E-09	2.91E-08	7.20E-08
3	0	10	11	253.68	1	6302.37	1.5867	0.0545	2.05E-04	2.33E-04	2.53E-04	2.68E-04	2.78E-04	2.84E-04
4	1	10	9	2314.69	1	6303.46	1.5864	0.0547	0.0	4.02E-10	2.27E-09	8.97E-09	2.73E-08	6.87E-08
4	1	11	10	2352.76	1	6306.10	1.5858	0.0545	0.0	3.40E-10	1.98E-09	8.01E-09	2.49E-08	6.37E-08
3	0	9	10	211.42	1	6307.26	1.5855	0.0547	2.67E-04	2.90E-04	3.05E-04	3.14E-04	3.18E-04	3.20E-04
4	1	12	11	2394.64	1	6308.64	1.5851	0.0542	0.0	2.78E-10	1.67E-09	6.95E-09	2.21E-08	5.75E-08
4	1	13	12	2440.32	1	6311.08	1.5845	0.0540	0.0	2.19E-10	1.37E-09	5.86E-09	1.91E-08	5.06E-08
3	0	8	9	172.99	1	6312.05	1.5843	0.0550	3.33E-04	3.47E-04	3.54E-04	3.56E-04	3.54E-04	3.49E-04
4	1	14	13	2489.80	1	6313.40	1.5839	0.0528	0.0	1.67E-10	1.09E-09	4.80E-09	1.60E-08	4.35E-08
4	1	15	14	2543.08	1	6315.62	1.5834	0.0517	0.0	1.23E-10	8.37E-10	3.83E-09	1.31E-08	3.65E-08
3	0	7	8	138.40	1	6316.73	1.5831	0.0574	3.97E-04	4.00E-04	3.97E-04	3.90E-04	3.81E-04	3.70E-04
4	1	16	15	2600.15	1	6317.73	1.5828	0.0505	0.0	0.0	6.27E-10	2.97E-09	1.05E-08	2.99E-08
4	1	17	16	2661.01	1	6319.74	1.5823	0.0493	0.0	0.0	4.56E-10	2.25E-09	8.22E-09	2.40E-08
3	0	6	7	107.65	1	6321.30	1.5820	0.0597	4.52E-04	4.41E-04	4.26E-04	4.11E-04	3.95E-04	3.79E-04
4	1	18	17	2725.67	1	6321.64	1.5819	0.0482	0.0	0.0	3.23E-10	1.66E-09	6.27E-09	1.89E-08
4	1	19	18	2794.11	1	6323.43	1.5814	0.0470	0.0	0.0	2.22E-10	1.19E-09	4.68E-09	1.45E-08
4	1	20	19	2866.33	1	6325.11	1.5810	0.0458	0.0	0.0	1.49E-10	8.38E-10	3.41E-09	1.09E-08
3	0	5	6	80.74	1	6325.78	1.5808	0.0621	4.87E-04	4.63E-04	4.38E-04	4.15E-04	3.93E-04	3.73E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
4	1	21	20	2942.34	1	6326.68	1.5806	0.0447	0.0	0.0	0.0	5.74E-10	2.43E-09	8.03E-09
4	1	22	21	3022.13	1	6328.15	1.5802	0.0435	0.0	0.0	0.0	3.84E-10	1.70E-09	5.80E-09
4	1	23	22	3105.69	1	6329.51	1.5799	0.0423	0.0	0.0	0.0	2.51E-10	1.16E-09	4.10E-09
3	0	4	5	57.67	1	6330.14	1.5797	0.0645	4.96E-04	4.60E-04	4.27E-04	3.99E-04	3.73E-04	3.51E-04
4	1	24	23	3193.03	1	6330.76	1.5796	0.0412	0.0	0.0	0.0	1.60E-10	7.72E-10	2.84E-09
4	1	25	24	3284.13	1	6331.90	1.5793	0.0400	0.0	0.0	0.0	0.0	5.04E-10	1.93E-09
4	1	26	25	3379.00	1	6332.93	1.5790	0.0400	0.0	0.0	0.0	0.0	3.22E-10	1.29E-09
4	1	27	26	3477.63	1	6333.85	1.5788	0.0400	0.0	0.0	0.0	0.0	2.02E-10	8.42E-10
3	0	3	4	38.45	1	6334.41	1.5787	0.0676	4.69E-04	4.26E-04	3.90E-04	3.60E-04	3.33E-04	3.10E-04
4	1	28	27	3580.03	1	6334.67	1.5786	0.0400	0.0	0.0	0.0	0.0	1.24E-10	5.40E-10
4	1	29	28	3686.17	1	6335.37	1.5784	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-10
4	1	30	29	3796.07	1	6335.97	1.5783	0.0400	0.0	0.0	0.0	0.0	0.0	2.09E-10
4	1	31	30	3909.71	1	6336.45	1.5782	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-10
4	1	32	31	4027.09	1	6336.83	1.5781	0.0400	0.0	0.0	0.0	0.0	0.0	7.58E-11
3	0	2	3	23.07	1	6338.57	1.5776	0.0707	4.03E-04	3.60E-04	3.26E-04	2.97E-04	2.73E-04	2.53E-04
3	0	1	2	11.54	1	6342.62	1.5766	0.0738	2.98E-04	2.63E-04	2.36E-04	2.14E-04	1.95E-04	1.80E-04
3	0	0	1	3.85	1	6346.57	1.5757	0.0769	1.60E-04	1.40E-04	1.25E-04	1.13E-04	1.03E-04	9.42E-05
3	0	1	0	-0.0	1	6354.16	1.5738	0.0769	1.69E-04	1.48E-04	1.31E-04	1.18E-04	1.07E-04	9.81E-05
3	0	2	1	3.85	1	6357.79	1.5729	0.0738	3.32E-04	2.91E-04	2.59E-04	2.34E-04	2.13E-04	1.95E-04
3	0	3	2	11.54	1	6361.32	1.5720	0.0707	4.74E-04	4.19E-04	3.75E-04	3.40E-04	3.11E-04	2.86E-04
3	0	4	3	23.07	1	6364.75	1.5712	0.0676	5.82E-04	5.21E-04	4.71E-04	4.30E-04	3.95E-04	3.66E-04
3	0	5	4	38.45	1	6368.07	1.5703	0.0645	6.49E-04	5.90E-04	5.40E-04	4.98E-04	4.62E-04	4.30E-04
3	0	6	5	57.67	1	6371.28	1.5695	0.0621	6.74E-04	6.25E-04	5.81E-04	5.42E-04	5.07E-04	4.77E-04
3	0	7	6	80.74	1	6374.38	1.5688	0.0597	6.59E-04	6.25E-04	5.92E-04	5.61E-04	5.31E-04	5.04E-04
3	0	8	7	107.65	1	6377.39	1.5680	0.0574	6.11E-04	5.96E-04	5.77E-04	5.56E-04	5.34E-04	5.13E-04
3	0	9	8	138.40	1	6380.28	1.5673	0.0550	5.40E-04	5.44E-04	5.40E-04	5.30E-04	5.18E-04	5.04E-04
3	0	10	9	172.99	1	6383.07	1.5666	0.0547	4.57E-04	4.77E-04	4.87E-04	4.89E-04	4.86E-04	4.80E-04
3	0	11	10	211.42	1	6385.75	1.5660	0.0545	3.71E-04	4.03E-04	4.24E-04	4.36E-04	4.43E-04	4.45E-04
3	0	12	11	253.68	1	6388.32	1.5654	0.0542	2.89E-04	3.28E-04	3.57E-04	3.78E-04	3.92E-04	4.01E-04
3	0	13	12	299.78	1	6390.79	1.5648	0.0540	2.17E-04	2.58E-04	2.91E-04	3.17E-04	3.37E-04	3.52E-04
3	0	14	13	349.72	1	6393.15	1.5642	0.0528	1.57E-04	1.96E-04	2.31E-04	2.59E-04	2.83E-04	3.02E-04
3	0	15	14	403.48	1	6395.41	1.5636	0.0517	1.09E-04	1.45E-04	1.77E-04	2.06E-04	2.31E-04	2.53E-04
3	0	16	15	461.08	1	6397.55	1.5631	0.0505	7.34E-05	1.03E-04	1.32E-04	1.60E-04	1.85E-04	2.07E-04
3	0	17	16	522.50	1	6399.59	1.5626	0.0493	4.76E-05	7.12E-05	9.60E-05	1.21E-04	1.44E-04	1.66E-04
3	0	18	17	587.75	1	6401.53	1.5621	0.0482	2.98E-05	4.77E-05	6.77E-05	8.86E-05	1.10E-04	1.30E-04
3	0	19	18	656.82	1	6403.35	1.5617	0.0470	1.80E-05	3.09E-05	4.64E-05	6.35E-05	8.14E-05	9.93E-05
3	0	20	19	729.71	1	6405.07	1.5613	0.0458	1.05E-05	1.95E-05	3.10E-05	4.45E-05	5.92E-05	7.45E-05
3	0	21	20	806.42	1	6406.67	1.5609	0.0447	5.95E-06	1.19E-05	2.01E-05	3.03E-05	4.20E-05	5.47E-05
3	0	22	21	886.95	1	6408.18	1.5605	0.0435	3.25E-06	7.06E-06	1.27E-05	2.02E-05	2.92E-05	3.94E-05
3	0	23	22	971.28	1	6409.57	1.5602	0.0423	1.72E-06	4.07E-06	7.85E-06	1.31E-05	1.98E-05	2.78E-05
3	0	24	23	1059.42	1	6410.85	1.5599	0.0412	8.76E-07	2.27E-06	4.71E-06	8.34E-06	1.32E-05	1.92E-05
3	0	25	24	1151.37	1	6412.03	1.5596	0.0400	4.33E-07	1.24E-06	2.75E-06	5.17E-06	8.58E-06	1.30E-05
3	0	45	44	3782.62	1	6412.50	1.5595	0.0400	0.0	0.0	0.0	0.0	0.0	9.93E-11
3	0	26	25	1247.11	1	6413.09	1.5593	0.0400	2.07E-07	6.52E-07	1.57E-06	3.13E-06	5.46E-06	8.62E-06
3	0	44	43	3615.54	1	6413.53	1.5592	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-10
3	0	27	26	1346.66	1	6414.05	1.5591	0.0400	9.58E-08	3.34E-07	8.70E-07	1.85E-06	3.40E-06	5.61E-06
3	0	43	42	3452.15	1	6414.44	1.5590	0.0400	0.0	0.0	0.0	0.0	1.10E-10	4.52E-10
3	0	28	27	1449.99	1	6414.90	1.5589	0.0400	4.29E-08	1.66E-07	4.71E-07	1.07E-06	2.07E-06	3.58E-06
3	0	42	41	3292.48	1	6415.25	1.5588	0.0400	0.0	0.0	0.0	0.0	2.44E-10	9.38E-10
3	0	29	28	1557.12	1	6415.64	1.5587	0.0400	1.86E-08	8.05E-08	2.48E-07	6.04E-07	1.24E-06	2.24E-06
3	0	41	40	3136.53	1	6415.94	1.5586	0.0400	0.0	0.0	0.0	1.13E-10	5.31E-10	1.91E-09
3	0	30	29	1668.03	1	6416.27	1.5585	0.0400	7.80E-09	3.78E-08	1.27E-07	3.33E-07	7.24E-07	1.37E-06
3	0	40	39	2984.30	1	6416.52	1.5585	0.0400	0.0	0.0	0.0	2.62E-10	1.13E-09	3.82E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 175	T = 200	T = 225	T = 250	T = 275	T = 300
3	0	31	30	1782.72	1	6416.79	1.5584	0.0400	3.19E-09	1.74E-08	6.42E-08	1.81E-07	4.17E-07	8.31E-07
3	0	39	38	2835.80	1	6416.99	1.5584	0.0400	0.0	0.0	1.07E-10	5.93E-10	2.37E-09	7.49E-09
3	0	32	31	1901.19	1	6417.20	1.5583	0.0400	1.26E-09	7.77E-09	3.15E-08	9.57E-08	2.35E-07	4.93E-07
3	0	38	37	2691.03	1	6417.35	1.5583	0.0400	0.0	0.0	2.51E-10	1.31E-09	4.87E-09	1.44E-08
3	0	33	32	2023.43	1	6417.50	1.5582	0.0400	4.83E-10	3.37E-09	1.51E-08	4.95E-08	1.30E-07	2.87E-07
3	0	37	36	2550.01	1	6417.60	1.5582	0.0400	0.0	0.0	6.17E-10	2.84E-09	9.78E-09	2.72E-08
3	0	34	33	2149.44	1	6417.69	1.5582	0.0400	1.79E-10	1.42E-09	7.05E-09	2.51E-08	7.01E-08	1.64E-07
3	0	36	35	2412.73	1	6417.74	1.5582	0.0400	0.0	2.33E-10	1.43E-09	6.00E-09	1.92E-08	5.05E-08
3	0	35	34	2279.20	1	6417.77	1.5582	0.0400	0.0	5.85E-10	3.21E-09	1.24E-08	3.71E-08	9.18E-08

Table 4—Fundamental band of CO, T = 300-1800°K. The total number of lines included is 2692. For temperatures less than 1800°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-6}. The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

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MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	104	105	22582.21	1	1554.33	6.4336	0.0400	0.0	0.0	0.0	0.0	0.0	5.84E-07
1	0	107	108	21777.14	1	1556.96	6.4228	0.0400	0.0	0.0	0.0	0.0	0.0	5.76E-07
3	2	100	101	23050.98	1	1557.92	6.4188	0.0400	0.0	0.0	0.0	0.0	0.0	5.78E-07
2	1	103	104	22210.73	1	1560.96	6.4063	0.0400	0.0	0.0	0.0	0.0	0.0	7.82E-07
1	0	106	107	21392.98	1	1563.69	6.3951	0.0400	0.0	0.0	0.0	0.0	0.0	7.79E-07
3	2	99	100	22695.13	1	1564.44	6.3921	0.0400	0.0	0.0	0.0	0.0	0.0	7.63E-07
4	3	95	96	23229.68	1	1567.37	6.3801	0.0400	0.0	0.0	0.0	0.0	0.0	6.34E-07
2	1	102	103	21842.26	1	1567.58	6.3793	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-06
1	0	105	106	21011.81	1	1570.40	6.3678	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-06
3	2	98	99	22342.30	1	1570.94	6.3656	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-06
4	3	94	95	22892.46	1	1573.76	6.3542	0.0400	0.0	0.0	0.0	0.0	0.0	8.24E-07
2	1	101	102	21476.80	1	1574.17	6.3526	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-06
5	4	90	91	23492.04	1	1576.02	6.3451	0.0400	0.0	0.0	0.0	0.0	0.0	6.08E-07
1	0	104	105	20633.65	1	1577.09	6.3408	0.0400	0.0	0.0	0.0	0.0	0.0	1.41E-06
3	2	97	98	21992.52	1	1577.42	6.3395	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-06
4	3	93	94	22558.31	1	1580.12	6.3286	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-06
2	1	100	101	21114.38	1	1580.75	6.3261	0.0400	0.0	0.0	0.0	0.0	0.0	1.85E-06
5	4	89	90	23173.46	1	1582.26	6.3201	0.0400	0.0	0.0	0.0	0.0	0.0	7.78E-07
1	0	103	104	20258.50	1	1583.76	6.3141	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-06
3	2	96	97	21645.80	1	1583.88	6.3136	0.0400	0.0	0.0	0.0	0.0	0.0	1.73E-06
4	3	92	93	22227.24	1	1586.46	6.3033	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-06
2	1	99	100	20755.00	1	1587.31	6.3000	0.0400	0.0	0.0	0.0	0.0	0.0	2.44E-06
5	4	88	89	22857.99	1	1588.48	6.2953	0.0400	0.0	0.0	0.0	0.0	0.0	9.94E-07
6	5	84	85	23537.30	1	1589.95	6.2895	0.0400	0.0	0.0	0.0	0.0	0.0	6.58E-07
3	2	95	96	21302.14	1	1590.32	6.2880	0.0400	0.0	0.0	0.0	0.0	0.0	2.26E-06
1	0	102	103	19886.39	1	1590.41	6.2877	0.0400	0.0	0.0	0.0	0.0	0.0	2.54E-06
4	3	91	92	21899.26	1	1592.78	6.2783	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-06
2	1	98	99	20398.68	1	1593.84	6.2742	0.0400	0.0	0.0	0.0	0.0	0.0	3.23E-06
5	4	87	88	22545.62	1	1594.68	6.2709	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-06
6	5	83	84	23240.48	1	1596.02	6.2656	0.0400	0.0	0.0	0.0	0.0	0.0	8.28E-07
3	2	94	95	20961.57	1	1596.74	6.2628	0.0400	0.0	0.0	0.0	0.0	0.0	2.95E-06
1	0	101	102	19517.34	1	1597.04	6.2616	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-06
4	3	90	91	21574.38	1	1599.08	6.2536	0.0400	0.0	0.0	0.0	0.0	0.0	2.30E-06
2	1	97	98	20045.44	1	1600.36	6.2486	0.0400	0.0	0.0	0.0	0.0	0.0	4.25E-06
5	4	86	87	22236.39	1	1600.86	6.2466	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-06
6	5	82	83	22946.81	1	1602.07	6.2419	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-06
7	6	78	79	23704.85	1	1602.71	6.2394	0.0400	0.0	0.0	0.0	0.0	0.0	6.26E-07
3	2	93	94	20624.10	1	1603.13	6.2378	0.0400	0.0	0.0	0.0	0.0	0.0	3.84E-06
1	0	100	101	19151.35	1	1603.65	6.2358	0.0400	0.0	0.0	0.0	0.0	0.0	4.51E-06
4	3	89	90	21252.63	1	1605.36	6.2291	0.0400	0.0	0.0	0.0	0.0	0.0	2.95E-06
2	1	96	97	19695.29	1	1606.85	6.2234	0.0400	0.0	0.0	0.0	0.0	0.0	5.59E-06
5	4	85	86	21930.29	1	1607.02	6.2227	0.0400	0.0	0.0	0.0	0.0	0.0	2.04E-06
6	5	81	82	22656.29	1	1608.10	6.2185	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-06
7	6	77	78	23429.83	1	1608.61	6.2165	0.0400	0.0	0.0	0.0	0.0	0.0	7.73E-07
3	2	92	93	20289.75	1	1609.51	6.2131	0.0400	0.0	0.0	0.0	0.0	0.0	4.98E-06
1	0	99	100	18788.44	1	1610.24	6.2103	0.0400	0.0	0.0	0.0	0.0	0.0	5.99E-06
4	3	88	89	20934.01	1	1611.61	6.2050	0.0400	0.0	0.0	0.0	0.0	0.0	3.77E-06
5	4	84	85	21627.34	1	1613.15	6.1991	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-06
2	1	95	96	19348.24	1	1613.33	6.1984	0.0400	0.0	0.0	0.0	0.0	0.0	7.33E-06
6	5	80	81	22368.93	1	1614.11	6.1954	0.0400	0.0	0.0	0.0	0.0	0.0	1.62E-06
7	6	76	77	23157.98	1	1614.49	6.1939	0.0400	0.0	0.0	0.0	0.0	0.0	9.51E-07
3	2	91	92	19958.52	1	1615.87	6.1886	0.0400	0.0	0.0	0.0	0.0	0.0	6.44E-06
1	0	98	99	18428.62	1	1616.82	6.1850	0.0400	0.0	0.0	0.0	0.0	0.0	7.94E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	87	88	20618.54	1	1617.85	6.1810	0.0400	0.0	0.0	0.0	0.0	0.0	4.82E-06
5	4	83	84	21327.55	1	1619.26	6.1757	0.0400	0.0	0.0	0.0	0.0	0.0	3.25E-06
2	1	94	95	19004.32	1	1619.78	6.1737	0.0400	0.0	0.0	0.0	0.0	0.0	9.58E-06
8	7	71	72	23740.39	1	1620.00	6.1728	0.0400	0.0	0.0	0.0	0.0	0.0	6.35E-07
6	5	79	80	22084.76	1	1620.09	6.1725	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-06
7	6	75	76	22889.33	1	1620.34	6.1715	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-06
3	2	90	91	19630.43	1	1622.20	6.1645	0.0400	0.0	0.0	0.0	0.0	0.0	8.30E-06
1	0	97	98	18071.92	1	1623.37	6.1600	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-05
4	3	86	87	20306.23	1	1624.06	6.1574	0.0400	0.0	0.0	0.0	0.0	0.0	6.14E-06
5	4	82	83	21030.94	1	1625.35	6.1525	0.0400	0.0	0.0	0.0	0.0	0.0	4.09E-06
8	7	70	71	23490.38	1	1625.70	6.1512	0.0400	0.0	0.0	0.0	0.0	0.0	7.68E-07
6	5	78	79	21803.77	1	1626.06	6.1498	0.0400	0.0	0.0	0.0	0.0	0.0	2.50E-06
7	6	74	75	22623.88	1	1626.17	6.1494	0.0400	0.0	0.0	0.0	0.0	0.0	1.43E-06
2	1	93	94	18663.53	1	1626.22	6.1492	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-05
1	0	93	94	15964.29	2	1626.28	6.1490	0.0400	0.0	0.0	0.0	0.0	0.0	5.72E-07
2	1	89	90	16637.68	2	1628.31	6.1413	0.0400	0.0	0.0	0.0	0.0	0.0	6.36E-07
3	2	89	90	19305.50	1	1628.52	6.1405	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-05
1	0	96	97	17718.34	1	1629.90	6.1353	0.0400	0.0	0.0	0.0	0.0	1.13E-06	1.38E-05
4	3	85	86	19997.09	1	1630.25	6.1340	0.0400	0.0	0.0	0.0	0.0	0.0	7.80E-06
8	7	69	70	23243.58	1	1631.37	6.1298	0.0400	0.0	0.0	0.0	0.0	0.0	9.25E-07
5	4	81	82	20737.52	1	1631.41	6.1297	0.0400	0.0	0.0	0.0	0.0	0.0	5.13E-06
7	6	73	74	22361.64	1	1631.98	6.1275	0.0400	0.0	0.0	0.0	0.0	0.0	1.75E-06
6	5	77	78	21525.99	1	1631.99	6.1275	0.0400	0.0	0.0	0.0	0.0	0.0	3.10E-06
1	0	92	93	15637.47	2	1632.40	6.1259	0.0400	0.0	0.0	0.0	0.0	0.0	7.37E-07
2	1	92	93	18325.89	1	1632.63	6.1251	0.0400	0.0	0.0	0.0	0.0	1.20E-06	1.62E-05
2	1	88	89	16326.21	2	1634.32	6.1188	0.0400	0.0	0.0	0.0	0.0	0.0	8.10E-07
3	2	88	89	18983.73	1	1634.81	6.1169	0.0400	0.0	0.0	0.0	0.0	0.0	1.37E-05
3	2	84	85	17062.69	2	1635.71	6.1136	0.0400	0.0	0.0	0.0	0.0	0.0	6.43E-07
1	0	95	96	17367.91	1	1636.41	6.1109	0.0400	0.0	0.0	0.0	0.0	1.57E-06	1.82E-05
4	3	84	85	19691.13	1	1636.42	6.1109	0.0400	0.0	0.0	0.0	0.0	0.0	9.89E-06
8	7	68	69	23000.01	1	1637.03	6.1086	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-06
5	4	80	81	20447.30	1	1637.46	6.1070	0.0400	0.0	0.0	0.0	0.0	0.0	6.41E-06
7	6	72	73	22102.62	1	1637.77	6.1059	0.0400	0.0	0.0	0.0	0.0	0.0	2.13E-06
6	5	76	77	21251.42	1	1637.91	6.1053	0.0400	0.0	0.0	0.0	0.0	0.0	3.82E-06
1	0	91	92	15313.73	2	1638.50	6.1031	0.0400	0.0	0.0	0.0	0.0	0.0	9.48E-07
2	1	91	92	17991.41	1	1639.02	6.1012	0.0400	0.0	0.0	0.0	0.0	1.65E-06	2.11E-05
2	1	87	88	16017.84	2	1640.31	6.0964	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-06
3	2	87	88	18665.15	1	1641.08	6.0935	0.0400	0.0	0.0	0.0	0.0	1.23E-06	1.76E-05
3	2	83	84	16769.63	2	1641.58	6.0917	0.0400	0.0	0.0	0.0	0.0	0.0	8.05E-07
4	3	83	84	19388.37	1	1642.57	6.0880	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-05
8	7	67	68	22759.69	1	1642.65	6.0877	0.0400	0.0	0.0	0.0	0.0	0.0	1.33E-06
1	0	94	95	17020.62	1	1642.90	6.0868	0.0400	0.0	0.0	0.0	0.0	2.17E-06	2.38E-05
5	4	79	80	20160.30	1	1643.48	6.0846	0.0400	0.0	0.0	0.0	0.0	0.0	7.99E-06
7	6	71	72	21846.84	1	1643.53	6.0845	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-06
6	5	75	76	20980.08	1	1643.80	6.0835	0.0400	0.0	0.0	0.0	0.0	0.0	4.70E-06
1	0	90	91	14993.09	2	1644.59	6.0805	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-06
2	1	90	91	17660.10	1	1645.39	6.0776	0.0400	0.0	0.0	0.0	0.0	2.24E-06	2.72E-05
2	1	86	87	15712.59	2	1646.28	6.0743	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-06
9	8	62	63	23495.95	1	1646.63	6.0730	0.0400	0.0	0.0	0.0	0.0	0.0	7.65E-07
3	2	86	87	18349.76	1	1647.33	6.0704	0.0400	0.0	0.0	0.0	0.0	1.66E-06	2.24E-05
3	2	82	83	16479.69	2	1647.43	6.0701	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-06
4	3	78	79	17293.62	2	1648.04	6.0678	0.0400	0.0	0.0	0.0	0.0	0.0	6.64E-07
8	7	66	67	22522.63	1	1648.25	6.0670	0.0400	0.0	0.0	0.0	0.0	0.0	1.59E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	82	83	19088.83	1	1648.69	6.0654	0.0400	0.0	0.0	0.0	0.0	1.03E-06	1.57E-05
7	6	70	71	21594.31	1	1649.26	6.0633	0.0400	0.0	0.0	0.0	0.0	0.0	3.12E-06
1	0	93	94	16676.52	1	1649.37	6.0629	0.0400	0.0	0.0	0.0	0.0	3.00E-06	3.11E-05
5	4	78	79	19876.52	1	1649.47	6.0626	0.0400	0.0	0.0	0.0	0.0	0.0	9.94E-06
6	5	74	75	20711.97	1	1649.67	6.0618	0.0400	0.0	0.0	0.0	0.0	0.0	5.77E-06
1	0	89	90	14675.56	2	1650.65	6.0582	0.0400	0.0	0.0	0.0	0.0	0.0	1.55E-06
2	1	89	90	17331.98	1	1651.74	6.0542	0.0400	0.0	0.0	0.0	0.0	3.05E-06	3.51E-05
9	8	61	62	23277.50	1	1652.07	6.0530	0.0400	0.0	0.0	0.0	0.0	0.0	8.99E-07
2	1	85	86	15410.46	2	1652.23	6.0524	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-06
3	2	81	82	16192.90	2	1653.26	6.0487	0.0400	0.0	0.0	0.0	0.0	0.0	1.26E-06
3	2	85	86	18037.58	1	1653.55	6.0476	0.0400	0.0	0.0	0.0	0.0	2.22E-06	2.86E-05
4	3	77	78	17022.07	2	1653.75	6.0469	0.0400	0.0	0.0	0.0	0.0	0.0	8.17E-07
8	7	65	66	22288.82	1	1653.83	6.0466	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-06
4	3	81	82	18792.51	1	1654.79	6.0431	0.0400	0.0	0.0	0.0	0.0	1.36E-06	1.98E-05
7	6	69	70	21345.04	1	1654.98	6.0424	0.0400	0.0	0.0	0.0	0.0	0.0	3.77E-06
5	4	77	78	19595.97	1	1655.45	6.0407	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-05
6	5	73	74	20447.11	1	1655.51	6.0404	0.0400	0.0	0.0	0.0	0.0	0.0	7.06E-06
1	0	92	93	16335.59	1	1655.82	6.0393	0.0400	0.0	0.0	0.0	0.0	4.13E-06	4.06E-05
1	0	88	89	14361.15	2	1656.70	6.0361	0.0400	0.0	0.0	0.0	0.0	0.0	1.98E-06
9	8	60	61	23062.32	1	1657.48	6.0333	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-06
2	1	88	89	17007.07	1	1658.07	6.0311	0.0400	0.0	0.0	0.0	0.0	4.13E-06	4.52E-05
2	1	84	85	15111.48	2	1658.15	6.0308	0.0400	0.0	0.0	0.0	0.0	0.0	2.07E-06
3	2	80	81	15909.25	2	1659.07	6.0275	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-06
8	7	64	65	22058.29	1	1659.38	6.0263	0.0400	0.0	0.0	0.0	0.0	0.0	2.25E-06
4	3	76	77	16753.69	2	1659.43	6.0262	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-06
3	2	84	85	17728.62	1	1659.76	6.0250	0.0400	0.0	0.0	0.0	0.0	2.96E-06	3.63E-05
7	6	68	69	21099.03	1	1660.66	6.0217	0.0400	0.0	0.0	0.0	0.0	0.0	4.54E-06
4	3	80	81	18499.43	1	1660.87	6.0209	0.0400	0.0	0.0	0.0	0.0	1.79E-06	2.48E-05
6	5	72	73	20185.51	1	1661.33	6.0193	0.0400	0.0	0.0	0.0	0.0	0.0	8.61E-06
5	4	76	77	19318.68	1	1661.40	6.0190	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-05
1	0	91	92	15997.85	1	1662.25	6.0159	0.0400	0.0	0.0	0.0	0.0	5.67E-06	5.27E-05
1	0	87	88	14049.87	2	1662.72	6.0142	0.0400	0.0	0.0	0.0	0.0	0.0	2.52E-06
9	8	59	60	22850.43	1	1662.87	6.0137	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-06
2	1	83	84	14815.63	2	1664.06	6.0094	0.0400	0.0	0.0	0.0	0.0	0.0	2.60E-06
2	1	87	88	16685.38	1	1664.38	6.0082	0.0400	0.0	0.0	0.0	0.0	5.59E-06	5.80E-05
5	4	71	72	17393.93	2	1664.78	6.0068	0.0400	0.0	0.0	0.0	0.0	0.0	7.01E-07
3	2	79	80	15628.77	2	1664.86	6.0065	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-06
8	7	63	64	21831.04	1	1664.91	6.0063	0.0400	0.0	0.0	0.0	0.0	0.0	2.67E-06
4	3	75	76	16488.47	2	1665.10	6.0056	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-06
3	2	83	84	17422.89	1	1665.94	6.0026	0.0400	0.0	0.0	0.0	0.0	3.93E-06	4.60E-05
7	6	67	68	20856.30	1	1666.33	6.0012	0.0400	0.0	0.0	0.0	0.0	0.0	5.45E-06
4	3	79	80	18209.59	1	1666.93	5.9991	0.0400	0.0	0.0	0.0	0.0	2.34E-06	3.10E-05
6	5	71	72	19927.18	1	1667.13	5.9983	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-05
5	4	75	76	19044.64	1	1667.33	5.9976	0.0400	0.0	0.0	0.0	0.0	1.24E-06	1.88E-05
9	8	58	59	22641.83	1	1668.24	5.9943	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-06
1	0	90	91	15663.33	1	1668.65	5.9929	0.0400	0.0	0.0	0.0	0.0	7.75E-06	6.84E-05
1	0	86	87	13741.75	2	1668.72	5.9926	0.0400	0.0	0.0	0.0	0.0	0.0	3.20E-06
2	1	82	83	14522.95	2	1669.94	5.9882	0.0400	0.0	0.0	0.0	0.0	0.0	3.26E-06
5	4	70	71	17147.08	2	1670.30	5.9869	0.0400	0.0	0.0	0.0	0.0	0.0	8.45E-07
8	7	62	63	21607.08	1	1670.41	5.9866	0.0400	0.0	0.0	0.0	0.0	0.0	3.15E-06
3	2	78	79	15351.45	2	1670.62	5.9858	0.0400	0.0	0.0	0.0	0.0	0.0	2.39E-06
2	1	86	87	16366.91	1	1670.66	5.9857	0.0400	0.0	0.0	0.0	0.0	7.52E-06	7.43E-05
4	3	74	75	16226.44	2	1670.74	5.9854	0.0400	0.0	0.0	0.0	0.0	0.0	1.50E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	66	67	20616.86	1	1671.96	5.9810	0.0400	0.0	0.0	0.0	0.0	0.0	6.52E-06
3	2	82	83	17120.41	1	1672.10	5.9805	0.0400	0.0	0.0	0.0	0.0	5.21E-06	5.81E-05
6	5	70	71	19672.14	1	1672.90	5.9776	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-05
4	3	78	79	17923.02	1	1672.96	5.9774	0.0400	0.0	0.0	0.0	0.0	3.05E-06	3.86E-05
5	4	74	75	18773.88	1	1673.23	5.9765	0.0400	0.0	0.0	0.0	0.0	1.59E-06	2.31E-05
9	8	57	58	22436.54	1	1673.57	5.9753	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-06
1	0	85	86	13436.77	2	1674.70	5.9712	0.0400	0.0	0.0	0.0	0.0	0.0	4.06E-06
1	0	89	90	15332.04	1	1675.04	5.9700	0.0400	0.0	0.0	0.0	0.0	1.06E-05	8.84E-05
5	4	69	70	16903.43	2	1675.80	5.9673	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-06
2	1	81	82	14233.45	2	1675.81	5.9673	0.0400	0.0	0.0	0.0	0.0	0.0	4.08E-06
8	7	61	62	21386.43	1	1675.89	5.9670	0.0400	0.0	0.0	0.0	0.0	0.0	3.71E-06
4	3	73	74	15967.60	2	1676.36	5.9653	0.0400	0.0	0.0	0.0	0.0	0.0	1.82E-06
3	2	77	78	15077.32	2	1676.36	5.9653	0.0400	0.0	0.0	0.0	0.0	0.0	2.95E-06
2	1	85	86	16051.69	1	1676.93	5.9633	0.0400	0.0	0.0	0.0	0.0	1.01E-05	9.48E-05
7	6	65	66	20380.71	1	1677.58	5.9610	0.0400	0.0	0.0	0.0	0.0	0.0	7.79E-06
3	2	81	82	16821.19	1	1678.24	5.9586	0.0400	0.0	0.0	0.0	0.0	6.88E-06	7.31E-05
6	5	69	70	19420.38	1	1678.65	5.9572	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-05
9	8	56	57	22234.55	1	1678.88	5.9564	0.0400	0.0	0.0	0.0	0.0	0.0	1.93E-06
4	3	77	78	17639.71	1	1678.97	5.9560	0.0400	0.0	0.0	0.0	0.0	3.96E-06	4.80E-05
5	4	73	74	18506.41	1	1679.11	5.9555	0.0400	0.0	0.0	0.0	0.0	2.04E-06	2.83E-05
1	0	84	85	13134.97	2	1680.66	5.9500	0.0400	0.0	0.0	0.0	0.0	0.0	5.12E-06
5	4	68	69	16662.99	2	1681.27	5.9479	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-06
8	7	60	61	21169.09	1	1681.34	5.9476	0.0400	0.0	0.0	0.0	0.0	0.0	4.35E-06
1	0	88	89	15003.98	1	1681.40	5.9474	0.0400	0.0	0.0	0.0	0.0	1.44E-05	1.14E-04
2	1	80	81	13947.12	2	1681.65	5.9465	0.0400	0.0	0.0	0.0	0.0	0.0	5.08E-06
4	3	72	73	15711.97	2	1681.96	5.9454	0.0400	0.0	0.0	0.0	0.0	0.0	2.21E-06
3	2	76	77	14806.39	2	1682.08	5.9450	0.0400	0.0	0.0	0.0	0.0	0.0	3.63E-06
2	1	84	85	15739.73	1	1683.17	5.9412	0.0400	0.0	0.0	0.0	0.0	1.35E-05	1.21E-04
7	6	64	65	20147.87	1	1683.17	5.9412	0.0400	0.0	0.0	0.0	0.0	0.0	9.26E-06
9	8	55	56	22035.89	1	1684.17	5.9376	0.0400	0.0	0.0	0.0	0.0	0.0	2.23E-06
3	2	80	81	16525.24	1	1684.35	5.9370	0.0400	0.0	0.0	0.0	0.0	9.06E-06	9.18E-05
6	5	68	69	19171.93	1	1684.37	5.9369	0.0400	0.0	0.0	0.0	0.0	1.20E-06	1.85E-05
4	3	76	77	17359.69	1	1684.96	5.9349	0.0400	0.0	0.0	0.0	0.0	5.14E-06	5.95E-05
5	4	72	73	18242.22	1	1684.96	5.9349	0.0400	0.0	0.0	0.0	0.0	2.60E-06	3.46E-05
6	5	63	64	17436.43	2	1685.32	5.9336	0.0400	0.0	0.0	0.0	0.0	0.0	7.25E-07
1	0	83	84	12836.35	2	1686.60	5.9291	0.0400	0.0	0.0	0.0	0.0	1.15E-06	6.45E-06
5	4	67	68	16425.77	2	1686.72	5.9287	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-06
8	7	59	60	20955.06	1	1686.76	5.9285	0.0400	0.0	0.0	0.0	0.0	0.0	5.09E-06
2	1	79	80	13663.99	2	1687.47	5.9260	0.0400	0.0	0.0	0.0	0.0	0.0	6.32E-06
4	3	71	72	15459.54	2	1687.53	5.9258	0.0400	0.0	0.0	0.0	0.0	0.0	2.68E-06
1	0	87	88	14679.17	1	1687.75	5.9250	0.0400	0.0	0.0	0.0	0.0	1.95E-05	1.47E-04
3	2	75	76	14538.66	2	1687.78	5.9249	0.0400	0.0	0.0	0.0	0.0	0.0	4.45E-06
7	6	63	64	19918.36	1	1688.73	5.9216	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-05
2	1	83	84	15431.03	1	1689.38	5.9193	0.0400	0.0	0.0	0.0	0.0	1.80E-05	1.53E-04
9	8	54	55	21840.56	1	1689.43	5.9192	0.0400	0.0	0.0	0.0	0.0	0.0	2.57E-06
6	5	67	68	18926.79	1	1690.07	5.9169	0.0400	0.0	0.0	0.0	0.0	1.50E-06	2.23E-05
3	2	79	80	16232.57	1	1690.44	5.9156	0.0400	0.0	0.0	0.0	0.0	1.19E-05	1.15E-04
6	5	62	63	17217.54	2	1690.62	5.9150	0.0400	0.0	0.0	0.0	0.0	0.0	8.53E-07
5	4	71	72	17981.34	1	1690.80	5.9144	0.0400	0.0	0.0	0.0	0.0	3.30E-06	4.22E-05
4	3	75	76	17082.96	1	1690.92	5.9139	0.0400	0.0	0.0	0.0	0.0	6.63E-06	7.35E-05
5	4	66	67	16191.77	2	1692.14	5.9097	0.0400	0.0	0.0	0.0	0.0	0.0	1.73E-06
8	7	58	59	20744.37	1	1692.16	5.9096	0.0400	0.0	0.0	0.0	0.0	0.0	5.95E-06
1	0	82	83	12540.93	2	1692.52	5.9083	0.0400	0.0	0.0	0.0	0.0	1.51E-06	8.09E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	70	71	15210.34	2	1693.09	5.9064	0.0400	0.0	0.0	0.0	0.0	0.0	3.24E-06
2	1	78	79	13384.06	2	1693.27	5.9057	0.0400	0.0	0.0	0.0	0.0	1.28E-06	7.83E-06
3	2	74	75	14274.14	2	1693.46	5.9051	0.0400	0.0	0.0	0.0	0.0	0.0	5.45E-06
1	0	86	87	14357.63	1	1694.07	5.9029	0.0400	0.0	0.0	0.0	1.21E-06	2.63E-05	1.88E-04
7	6	62	63	19692.16	1	1694.27	5.9022	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-05
9	8	53	54	21648.56	1	1694.66	5.9009	0.0400	0.0	0.0	0.0	0.0	0.0	2.95E-06
2	1	82	83	15125.61	1	1695.58	5.8977	0.0400	0.0	0.0	0.0	0.0	2.39E-05	1.94E-04
6	5	66	67	18684.96	1	1695.74	5.8971	0.0400	0.0	0.0	0.0	0.0	1.87E-06	2.67E-05
6	5	61	62	17001.87	2	1695.89	5.8966	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-06
3	2	78	79	15943.20	1	1696.51	5.8945	0.0400	0.0	0.0	0.0	0.0	1.56E-05	1.44E-04
5	4	70	71	17723.78	1	1696.60	5.8941	0.0400	0.0	0.0	0.0	0.0	4.18E-06	5.13E-05
4	3	74	75	16809.55	1	1696.86	5.8932	0.0400	0.0	0.0	0.0	0.0	8.53E-06	9.05E-05
8	7	57	58	20537.02	1	1697.54	5.8909	0.0400	0.0	0.0	0.0	0.0	0.0	6.92E-06
5	4	65	66	15961.02	2	1697.55	5.8908	0.0400	0.0	0.0	0.0	0.0	0.0	2.06E-06
1	0	81	82	12248.70	2	1698.41	5.8879	0.0400	0.0	0.0	0.0	0.0	1.98E-06	1.01E-05
4	3	69	70	14964.37	2	1698.62	5.8871	0.0400	0.0	0.0	0.0	0.0	0.0	3.90E-06
2	1	77	78	13107.35	2	1699.04	5.8857	0.0400	0.0	0.0	0.0	0.0	1.65E-06	9.67E-06
3	2	73	74	14012.86	2	1699.11	5.8854	0.0400	0.0	0.0	0.0	0.0	0.0	6.65E-06
7	6	61	62	19469.31	1	1699.78	5.8831	0.0400	0.0	0.0	0.0	0.0	0.0	1.53E-05
9	8	52	53	21459.91	1	1699.86	5.8828	0.0400	0.0	0.0	0.0	0.0	0.0	3.38E-06
1	0	85	86	14039.36	1	1700.36	5.8811	0.0400	0.0	0.0	0.0	1.75E-06	3.54E-05	2.41E-04
6	5	60	61	16789.46	2	1701.14	5.8784	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-06
6	5	65	66	18446.48	1	1701.39	5.8775	0.0400	0.0	0.0	0.0	0.0	2.32E-06	3.20E-05
2	1	81	82	14823.48	1	1701.75	5.8763	0.0400	0.0	0.0	0.0	1.30E-06	3.17E-05	2.45E-04
5	4	69	70	17469.54	1	1702.39	5.8741	0.0400	0.0	0.0	0.0	0.0	5.27E-06	6.22E-05
3	2	77	78	15657.13	1	1702.56	5.8735	0.0400	0.0	0.0	0.0	0.0	2.03E-05	1.79E-04
4	3	73	74	16539.45	1	1702.77	5.8728	0.0400	0.0	0.0	0.0	0.0	1.09E-05	1.11E-04
8	7	56	57	20333.01	1	1702.88	5.8724	0.0400	0.0	0.0	0.0	0.0	0.0	8.04E-06
5	4	64	65	15733.51	2	1702.92	5.8723	0.0400	0.0	0.0	0.0	0.0	0.0	2.44E-06
4	3	68	69	14721.64	2	1704.12	5.8681	0.0400	0.0	0.0	0.0	0.0	0.0	4.68E-06
1	0	80	81	11959.70	2	1704.29	5.8675	0.0400	0.0	0.0	0.0	0.0	2.59E-06	1.27E-05
3	2	72	73	13754.80	2	1704.74	5.8660	0.0400	0.0	0.0	0.0	0.0	1.24E-06	8.08E-06
2	1	76	77	12833.86	2	1704.80	5.8658	0.0400	0.0	0.0	0.0	0.0	2.12E-06	1.19E-05
9	8	51	52	21274.62	1	1705.04	5.8650	0.0400	0.0	0.0	0.0	0.0	0.0	3.86E-06
7	6	60	61	19249.80	1	1705.26	5.8642	0.0400	0.0	0.0	0.0	0.0	1.15E-06	1.80E-05
6	5	59	60	16580.31	2	1706.37	5.8604	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-06
1	0	84	85	13724.39	1	1706.64	5.8595	0.0400	0.0	0.0	0.0	2.53E-06	4.75E-05	3.08E-04
6	5	64	65	18211.34	1	1707.02	5.8582	0.0400	0.0	0.0	0.0	0.0	2.87E-06	3.81E-05
2	1	80	81	14524.67	1	1707.90	5.8551	0.0400	0.0	0.0	0.0	1.84E-06	4.19E-05	3.08E-04
5	4	68	69	17218.64	1	1708.15	5.8543	0.0400	0.0	0.0	0.0	0.0	6.63E-06	7.51E-05
8	7	55	56	20132.36	1	1708.20	5.8541	0.0400	0.0	0.0	0.0	0.0	0.0	9.30E-06
5	4	63	64	15509.25	2	1708.28	5.8538	0.0400	0.0	0.0	0.0	0.0	0.0	2.88E-06
3	2	76	77	15374.38	1	1708.58	5.8528	0.0400	0.0	0.0	0.0	0.0	2.63E-05	2.22E-04
4	3	72	73	16272.68	1	1708.67	5.8525	0.0400	0.0	0.0	0.0	0.0	1.40E-05	1.36E-04
4	3	67	68	14482.17	2	1709.60	5.8493	0.0400	0.0	0.0	0.0	0.0	0.0	5.60E-06
1	0	79	80	11673.92	2	1710.14	5.8475	0.0400	0.0	0.0	0.0	0.0	3.38E-06	1.58E-05
9	8	50	51	21092.69	1	1710.19	5.8473	0.0400	0.0	0.0	0.0	0.0	0.0	4.39E-06
3	2	71	72	13499.99	2	1710.35	5.8468	0.0400	0.0	0.0	0.0	0.0	1.57E-06	9.80E-06
2	1	75	76	12563.62	2	1710.53	5.8461	0.0400	0.0	0.0	0.0	0.0	2.73E-06	1.47E-05
7	6	59	60	19033.64	1	1710.72	5.8455	0.0400	0.0	0.0	0.0	0.0	1.40E-06	2.11E-05
6	5	58	59	16374.42	2	1711.57	5.8426	0.0400	0.0	0.0	0.0	0.0	0.0	1.59E-06
6	5	63	64	17979.55	1	1712.61	5.8390	0.0400	0.0	0.0	0.0	0.0	3.54E-06	4.53E-05
1	0	83	84	13412.71	1	1712.90	5.8381	0.0400	0.0	0.0	0.0	3.65E-06	6.35E-05	3.92E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	7	54	55	19935.07	1	1713.50	5.8360	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-05
5	4	62	63	15288.27	2	1713.61	5.8356	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-06
5	4	67	68	16971.09	1	1713.88	5.8347	0.0400	0.0	0.0	0.0	0.0	8.31E-06	9.05E-05
7	6	53	54	17315.80	2	1713.97	5.8344	0.0400	0.0	0.0	0.0	0.0	0.0	7.94E-07
2	1	79	80	14229.17	1	1714.03	5.8342	0.0400	0.0	0.0	0.0	2.60E-06	5.51E-05	3.87E-04
4	3	71	72	16009.24	1	1714.53	5.8325	0.0400	0.0	0.0	0.0	0.0	1.78E-05	1.66E-04
3	2	75	76	15094.96	1	1714.58	5.8323	0.0400	0.0	0.0	0.0	1.31E-06	3.41E-05	2.75E-04
4	3	66	67	14245.95	2	1715.06	5.8307	0.0400	0.0	0.0	0.0	0.0	0.0	6.68E-06
9	8	49	50	20914.12	1	1715.31	5.8299	0.0400	0.0	0.0	0.0	0.0	0.0	4.98E-06
3	2	70	71	13248.44	2	1715.94	5.8277	0.0400	0.0	0.0	0.0	0.0	1.98E-06	1.19E-05
1	0	78	79	11391.37	2	1715.97	5.8276	0.0400	0.0	0.0	0.0	0.0	4.39E-06	1.96E-05
7	6	58	59	18820.86	1	1716.16	5.8270	0.0400	0.0	0.0	0.0	0.0	1.69E-06	2.47E-05
2	1	74	75	12296.62	2	1716.24	5.8267	0.0400	0.0	0.0	0.0	0.0	3.48E-06	1.80E-05
6	5	57	58	16171.80	2	1716.74	5.8250	0.0400	0.0	0.0	0.0	0.0	0.0	1.84E-06
6	5	62	63	17751.12	1	1718.19	5.8201	0.0400	0.0	0.0	0.0	0.0	4.35E-06	5.37E-05
8	7	53	54	19741.15	1	1718.76	5.8181	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-05
5	4	61	62	15070.55	2	1718.92	5.8176	0.0400	0.0	0.0	0.0	0.0	0.0	3.98E-06
7	6	52	53	17131.43	2	1718.99	5.8174	0.0400	0.0	0.0	0.0	0.0	0.0	9.06E-07
1	0	82	83	13104.36	1	1719.13	5.8169	0.0400	0.0	0.0	0.0	5.23E-06	8.46E-05	4.97E-04
5	4	66	67	16726.89	1	1719.59	5.8153	0.0400	0.0	0.0	0.0	0.0	1.04E-05	1.09E-04
2	1	78	79	13937.00	1	1720.14	5.8135	0.0400	0.0	0.0	0.0	3.66E-06	7.22E-05	4.85E-04
4	3	70	71	15749.16	1	1720.38	5.8127	0.0400	0.0	0.0	0.0	0.0	2.26E-05	2.03E-04
9	8	48	49	20738.93	1	1720.41	5.8126	0.0400	0.0	0.0	0.0	0.0	0.0	5.63E-06
4	3	65	66	14013.01	2	1720.50	5.8123	0.0400	0.0	0.0	0.0	0.0	1.17E-06	7.95E-06
3	2	74	75	14818.89	1	1720.56	5.8121	0.0400	0.0	0.0	0.0	1.80E-06	4.40E-05	3.40E-04
3	2	69	70	13000.15	2	1721.50	5.8089	0.0400	0.0	0.0	0.0	0.0	2.48E-06	1.43E-05
7	6	57	58	18611.44	1	1721.57	5.8087	0.0400	0.0	0.0	0.0	0.0	2.04E-06	2.88E-05
1	0	77	78	11112.08	2	1721.78	5.8079	0.0400	0.0	0.0	0.0	0.0	5.68E-06	2.42E-05
6	5	56	57	15972.47	2	1721.90	5.8075	0.0400	0.0	0.0	0.0	0.0	0.0	2.13E-06
2	1	73	74	12032.87	2	1721.92	5.8075	0.0400	0.0	0.0	0.0	0.0	4.44E-06	2.19E-05
6	5	61	62	17526.07	1	1723.73	5.8014	0.0400	0.0	0.0	0.0	0.0	5.32E-06	6.34E-05
7	6	51	52	16950.35	2	1723.98	5.8005	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-06
8	7	52	53	19550.62	1	1724.00	5.8005	0.0400	0.0	0.0	0.0	0.0	0.0	1.41E-05
5	4	60	61	14856.11	2	1724.20	5.7998	0.0400	0.0	0.0	0.0	0.0	0.0	4.66E-06
5	4	65	66	16486.06	1	1725.27	5.7962	0.0400	0.0	0.0	0.0	0.0	1.29E-05	1.30E-04
1	0	81	82	12799.33	1	1725.34	5.7960	0.0400	0.0	0.0	0.0	7.48E-06	1.12E-04	6.29E-04
9	8	47	48	20567.13	1	1725.47	5.7955	0.0400	0.0	0.0	0.0	0.0	0.0	6.35E-06
4	3	64	65	13783.34	2	1725.91	5.7940	0.0400	0.0	0.0	0.0	0.0	1.44E-06	9.43E-06
4	3	69	70	15492.44	1	1726.20	5.7931	0.0400	0.0	0.0	0.0	0.0	2.86E-05	2.46E-04
2	1	77	78	13648.17	1	1726.22	5.7930	0.0400	0.0	0.0	0.0	5.12E-06	9.44E-05	6.05E-04
3	2	73	74	14546.17	1	1726.51	5.7920	0.0400	0.0	0.0	0.0	2.47E-06	5.65E-05	4.18E-04
7	6	56	57	18405.41	1	1726.95	5.7906	0.0400	0.0	0.0	0.0	0.0	2.45E-06	3.35E-05
6	5	55	56	15776.43	2	1727.02	5.7903	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-06
3	2	68	69	12755.13	2	1727.04	5.7903	0.0400	0.0	0.0	0.0	0.0	3.10E-06	1.72E-05
1	0	76	77	10836.05	2	1727.57	5.7885	0.0400	0.0	0.0	0.0	0.0	7.33E-06	2.99E-05
2	1	72	73	11772.40	2	1727.59	5.7884	0.0400	0.0	0.0	0.0	0.0	5.64E-06	2.67E-05
7	6	50	51	16772.57	2	1728.95	5.7839	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-06
8	7	51	52	19363.47	1	1729.21	5.7830	0.0400	0.0	0.0	0.0	0.0	1.01E-06	1.62E-05
6	5	60	61	17304.39	1	1729.26	5.7828	0.0400	0.0	0.0	0.0	0.0	6.50E-06	7.47E-05
5	4	59	60	14644.96	2	1729.46	5.7822	0.0400	0.0	0.0	0.0	0.0	0.0	5.44E-06
9	8	46	47	20398.72	1	1730.51	5.7786	0.0400	0.0	0.0	0.0	0.0	0.0	7.13E-06
5	4	64	65	16248.61	1	1730.93	5.7772	0.0400	0.0	0.0	0.0	0.0	1.60E-05	1.56E-04
4	3	63	64	13556.96	2	1731.30	5.7760	0.0400	0.0	0.0	0.0	0.0	1.77E-06	1.12E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
1	0	80	81	12497.64	1	1731.52	5.7753	0.0400	0.0	0.0	0.0	1.06E-05	1.49E-04	7.93E-04
4	3	68	69	15239.10	1	1731.99	5.7737	0.0400	0.0	0.0	0.0	1.34E-06	3.60E-05	2.98E-04
6	5	54	55	15583.68	2	1732.12	5.7733	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-06
2	1	76	77	13362.69	1	1732.28	5.7727	0.0400	0.0	0.0	0.0	7.14E-06	1.23E-04	7.53E-04
7	6	55	56	18202.77	1	1732.30	5.7727	0.0400	0.0	0.0	0.0	0.0	2.93E-06	3.89E-05
3	2	72	73	14276.81	1	1732.43	5.7722	0.0400	0.0	0.0	0.0	3.38E-06	7.24E-05	5.13E-04
3	2	67	68	12513.40	2	1732.55	5.7718	0.0400	0.0	0.0	0.0	0.0	3.86E-06	2.06E-05
2	1	71	72	11515.21	2	1733.23	5.7696	0.0400	0.0	0.0	0.0	0.0	7.14E-06	3.25E-05
1	0	75	76	10563.28	2	1733.34	5.7692	0.0400	0.0	0.0	0.0	1.07E-06	9.43E-06	3.69E-05
7	6	49	50	16598.08	2	1733.89	5.7674	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-06
8	7	50	51	19179.72	1	1734.40	5.7657	0.0400	0.0	0.0	0.0	0.0	1.19E-06	1.84E-05
5	4	58	59	14437.11	2	1734.69	5.7647	0.0400	0.0	0.0	0.0	0.0	0.0	6.34E-06
6	5	59	60	17086.11	1	1734.75	5.7645	0.0400	0.0	0.0	0.0	0.0	7.90E-06	8.77E-05
9	8	45	46	20233.70	1	1735.52	5.7620	0.0400	0.0	0.0	0.0	0.0	0.0	7.99E-06
5	4	63	64	16014.55	1	1736.57	5.7585	0.0400	0.0	0.0	0.0	0.0	1.98E-05	1.85E-04
4	3	62	63	13333.88	2	1736.66	5.7582	0.0400	0.0	0.0	0.0	0.0	2.16E-06	1.32E-05
6	5	53	54	15394.23	2	1737.20	5.7564	0.0400	0.0	0.0	0.0	0.0	0.0	3.23E-06
7	6	54	55	18003.52	1	1737.63	5.7550	0.0400	0.0	0.0	0.0	0.0	3.49E-06	4.49E-05
1	0	79	80	12199.31	1	1737.69	5.7548	0.0400	0.0	0.0	0.0	1.51E-05	1.96E-04	9.98E-04
4	3	67	68	14989.13	1	1737.76	5.7545	0.0400	0.0	0.0	0.0	1.78E-06	4.53E-05	3.60E-04
3	2	66	67	12274.96	2	1738.05	5.7536	0.0400	0.0	0.0	0.0	0.0	4.80E-06	2.46E-05
2	1	75	76	13080.58	1	1738.31	5.7527	0.0400	0.0	0.0	0.0	9.91E-06	1.59E-04	9.34E-04
3	2	71	72	14010.82	1	1738.34	5.7526	0.0400	0.0	0.0	0.0	4.60E-06	9.24E-05	6.28E-04
7	6	48	49	16426.90	2	1738.80	5.7511	0.0400	0.0	0.0	0.0	0.0	0.0	1.49E-06
2	1	70	71	11261.30	2	1738.85	5.7509	0.0400	0.0	0.0	0.0	0.0	9.01E-06	3.94E-05
1	0	74	75	10293.79	2	1739.08	5.7502	0.0400	0.0	0.0	0.0	1.47E-06	1.21E-05	4.53E-05
8	7	49	50	18999.38	1	1739.56	5.7486	0.0400	0.0	0.0	0.0	0.0	1.39E-06	2.09E-05
5	4	57	58	14232.57	2	1739.90	5.7475	0.0400	0.0	0.0	0.0	0.0	1.05E-06	7.36E-06
6	5	58	59	16871.22	1	1740.22	5.7464	0.0400	0.0	0.0	0.0	0.0	9.57E-06	1.03E-04
9	8	44	45	20072.09	1	1740.51	5.7454	0.0400	0.0	0.0	0.0	0.0	0.0	8.92E-06
4	3	61	62	13114.11	2	1742.00	5.7405	0.0400	0.0	0.0	0.0	0.0	2.64E-06	1.55E-05
5	4	62	63	15783.89	1	1742.18	5.7399	0.0400	0.0	0.0	0.0	0.0	2.44E-05	2.20E-04
6	5	52	53	15208.11	2	1742.25	5.7397	0.0400	0.0	0.0	0.0	0.0	0.0	3.69E-06
7	6	53	54	17807.68	1	1742.93	5.7375	0.0400	0.0	0.0	0.0	0.0	4.15E-06	5.17E-05
4	3	66	67	14742.56	1	1743.51	5.7356	0.0400	0.0	0.0	0.0	2.36E-06	5.67E-05	4.33E-04
3	2	65	66	12039.83	2	1743.52	5.7355	0.0400	0.0	0.0	0.0	0.0	5.93E-06	2.94E-05
7	6	47	48	16259.04	2	1743.69	5.7350	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-06
1	0	78	79	11904.34	1	1743.83	5.7345	0.0400	0.0	0.0	0.0	2.12E-05	2.58E-04	1.25E-03
3	2	70	71	13748.23	1	1744.22	5.7332	0.0400	0.0	0.0	0.0	6.23E-06	1.18E-04	7.66E-04
2	1	74	75	12801.85	1	1744.32	5.7329	0.0400	0.0	0.0	0.0	1.37E-05	2.06E-04	1.16E-03
2	1	69	70	11010.69	2	1744.45	5.7325	0.0400	0.0	0.0	0.0	1.16E-06	1.13E-05	4.76E-05
8	7	48	49	18822.44	1	1744.69	5.7317	0.0400	0.0	0.0	0.0	0.0	1.62E-06	2.37E-05
1	0	73	74	10027.60	2	1744.80	5.7313	0.0400	0.0	0.0	0.0	2.00E-06	1.54E-05	5.54E-05
5	4	56	57	14031.34	2	1745.08	5.7304	0.0400	0.0	0.0	0.0	0.0	1.25E-06	8.52E-06
9	8	43	44	19913.90	1	1745.46	5.7291	0.0400	0.0	0.0	0.0	0.0	0.0	9.92E-06
6	5	57	58	16659.74	1	1745.67	5.7285	0.0400	0.0	0.0	0.0	0.0	1.16E-05	1.20E-04
6	5	51	52	15025.29	2	1747.27	5.7232	0.0400	0.0	0.0	0.0	0.0	0.0	4.20E-06
4	3	60	61	12897.64	2	1747.32	5.7231	0.0400	0.0	0.0	0.0	0.0	3.20E-06	1.82E-05
5	4	61	62	15556.63	1	1747.76	5.7216	0.0400	0.0	0.0	0.0	1.03E-06	2.99E-05	2.60E-04
7	6	52	53	17615.26	1	1748.21	5.7201	0.0400	0.0	0.0	0.0	0.0	4.91E-06	5.94E-05
7	6	46	47	16094.49	2	1748.55	5.7190	0.0400	0.0	0.0	0.0	0.0	0.0	1.87E-06
3	2	64	65	11808.00	2	1748.96	5.7177	0.0400	0.0	0.0	0.0	0.0	7.32E-06	3.49E-05
4	3	65	66	14499.39	1	1749.23	5.7168	0.0400	0.0	0.0	0.0	3.13E-06	7.07E-05	5.20E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	7	47	48	18648.93	1	1749.79	5.7150	0.0400	0.0	0.0	0.0	0.0	1.87E-06	2.67E-05
1	0	77	78	11612.75	1	1749.94	5.7145	0.0400	0.0	0.0	0.0	2.98E-05	3.38E-04	1.57E-03
2	1	68	69	10763.38	2	1750.02	5.7142	0.0400	0.0	0.0	0.0	1.54E-06	1.42E-05	5.73E-05
3	2	69	70	13489.02	1	1750.07	5.7141	0.0400	0.0	0.0	0.0	8.40E-06	1.49E-04	9.32E-04
5	4	55	56	13833.44	2	1750.24	5.7135	0.0400	0.0	0.0	0.0	0.0	1.49E-06	9.84E-06
2	1	73	74	12526.50	1	1750.31	5.7133	0.0400	0.0	0.0	0.0	1.89E-05	2.66E-04	1.43E-03
9	8	42	43	19759.12	1	1750.39	5.7130	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-05
1	0	72	73	9764.71	2	1750.50	5.7127	0.0400	0.0	0.0	0.0	2.71E-06	1.97E-05	6.76E-05
6	5	56	57	16451.68	1	1751.08	5.7108	0.0400	0.0	0.0	0.0	0.0	1.39E-05	1.40E-04
6	5	50	51	14845.80	2	1752.27	5.7069	0.0400	0.0	0.0	0.0	0.0	0.0	4.77E-06
4	3	59	60	12684.50	2	1752.61	5.7058	0.0400	0.0	0.0	0.0	0.0	3.87E-06	2.12E-05
5	4	60	61	15332.79	1	1753.32	5.7035	0.0400	0.0	0.0	0.0	1.32E-06	3.66E-05	3.07E-04
7	6	45	46	15933.27	2	1753.39	5.7032	0.0400	0.0	0.0	0.0	0.0	0.0	2.09E-06
7	6	51	52	17426.27	1	1753.46	5.7030	0.0400	0.0	0.0	0.0	0.0	5.79E-06	6.80E-05
3	2	63	64	11579.50	2	1754.38	5.7000	0.0400	0.0	0.0	0.0	0.0	8.99E-06	4.14E-05
8	7	46	47	18478.84	1	1754.87	5.6984	0.0400	0.0	0.0	0.0	0.0	2.17E-06	3.01E-05
4	3	64	65	14259.63	1	1754.92	5.6983	0.0400	0.0	0.0	0.0	4.11E-06	8.79E-05	6.22E-04
9	8	41	42	19607.77	1	1755.29	5.6971	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-05
5	4	54	55	13638.86	2	1755.38	5.6968	0.0400	0.0	0.0	0.0	0.0	1.77E-06	1.13E-05
2	1	67	68	10519.39	2	1755.57	5.6962	0.0400	0.0	0.0	0.0	2.04E-06	1.77E-05	6.88E-05
3	2	68	69	13233.23	1	1755.90	5.6951	0.0400	0.0	0.0	0.0	1.13E-05	1.88E-04	1.13E-03
1	0	76	77	11324.54	1	1756.04	5.6946	0.0400	0.0	0.0	0.0	4.17E-05	4.41E-04	1.95E-03
1	0	71	72	9505.12	2	1756.17	5.6942	0.0400	0.0	0.0	0.0	3.66E-06	2.49E-05	8.23E-05
2	1	72	73	12254.55	1	1756.27	5.6939	0.0400	0.0	0.0	0.0	2.59E-05	3.41E-04	1.75E-03
6	5	55	56	16247.05	1	1756.47	5.6932	0.0400	0.0	0.0	0.0	0.0	1.67E-05	1.62E-04
6	5	49	50	14669.65	2	1757.25	5.6907	0.0400	0.0	0.0	0.0	0.0	0.0	5.40E-06
4	3	58	59	12474.70	2	1757.88	5.6887	0.0400	0.0	0.0	0.0	0.0	4.67E-06	2.48E-05
7	6	44	45	15775.39	2	1758.20	5.6876	0.0400	0.0	0.0	0.0	0.0	0.0	2.33E-06
7	6	50	51	17240.70	1	1758.68	5.6861	0.0400	0.0	0.0	0.0	0.0	6.81E-06	7.76E-05
5	4	59	60	15112.37	1	1758.85	5.6855	0.0400	0.0	0.0	0.0	1.70E-06	4.45E-05	3.61E-04
3	2	62	63	11354.33	2	1759.78	5.6825	0.0400	0.0	0.0	0.0	1.04E-06	1.10E-05	4.89E-05
8	7	45	46	18312.18	1	1759.91	5.6821	0.0400	0.0	0.0	0.0	0.0	2.49E-06	3.37E-05
9	8	40	41	19459.85	1	1760.16	5.6813	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-05
5	4	53	54	13447.62	2	1760.49	5.6802	0.0400	0.0	0.0	0.0	0.0	2.09E-06	1.30E-05
4	3	63	64	14023.30	1	1760.59	5.6799	0.0400	0.0	0.0	0.0	5.39E-06	1.09E-04	7.42E-04
2	1	66	67	10278.73	2	1761.09	5.6783	0.0400	0.0	0.0	0.0	2.69E-06	2.20E-05	8.24E-05
3	2	67	68	12980.85	1	1761.71	5.6763	0.0400	0.0	0.0	0.0	1.51E-05	2.37E-04	1.37E-03
1	0	70	71	9248.86	2	1761.83	5.6759	0.0400	0.0	0.0	0.0	4.91E-06	3.15E-05	1.00E-04
6	5	54	55	16045.84	1	1761.84	5.6759	0.0400	0.0	0.0	0.0	0.0	1.99E-05	1.88E-04
1	0	75	76	11039.74	1	1762.11	5.6750	0.0400	0.0	0.0	1.06E-06	5.81E-05	5.74E-04	2.43E-03
6	5	48	49	14496.84	2	1762.19	5.6748	0.0400	0.0	0.0	0.0	0.0	0.0	6.09E-06
2	1	71	72	11986.02	1	1762.21	5.6747	0.0400	0.0	0.0	0.0	3.53E-05	4.37E-04	2.15E-03
7	6	43	44	15620.85	2	1762.98	5.6722	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-06
4	3	57	58	12268.22	2	1763.12	5.6718	0.0400	0.0	0.0	0.0	0.0	5.61E-06	2.88E-05
7	6	49	50	17058.57	1	1763.87	5.6694	0.0400	0.0	0.0	0.0	0.0	7.97E-06	8.82E-05
5	4	58	59	14895.39	1	1764.35	5.6678	0.0400	0.0	0.0	0.0	2.17E-06	5.41E-05	4.24E-04
8	7	44	45	18148.97	1	1764.93	5.6659	0.0400	0.0	0.0	0.0	0.0	2.86E-06	3.77E-05
9	8	39	40	19315.37	1	1765.00	5.6657	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-05
3	2	61	62	11132.49	2	1765.15	5.6652	0.0400	0.0	0.0	0.0	1.33E-06	1.34E-05	5.76E-05
5	4	52	53	13259.72	2	1765.57	5.6639	0.0400	0.0	0.0	0.0	0.0	2.47E-06	1.49E-05
4	3	62	63	13790.39	1	1766.23	5.6618	0.0400	0.0	0.0	0.0	7.03E-06	1.34E-04	8.82E-04
2	1	65	66	10041.41	2	1766.60	5.6606	0.0400	0.0	0.0	0.0	3.52E-06	2.73E-05	9.84E-05
6	5	47	48	14327.37	2	1767.12	5.6589	0.0400	0.0	0.0	0.0	0.0	0.0	6.85E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	53	54	15848.09	1	1767.18	5.6587	0.0400	0.0	0.0	0.0	0.0	2.37E-05	2.17E-04
1	0	69	70	8995.93	2	1767.46	5.6578	0.0400	0.0	0.0	0.0	6.58E-06	3.97E-05	1.21E-04
3	2	66	67	12731.90	1	1767.49	5.6577	0.0400	0.0	0.0	0.0	2.01E-05	2.97E-04	1.65E-03
7	6	42	43	15469.65	2	1767.74	5.6569	0.0400	0.0	0.0	0.0	0.0	0.0	2.85E-06
2	1	70	71	11720.90	1	1768.13	5.6557	0.0400	0.0	0.0	0.0	4.79E-05	5.57E-04	2.63E-03
1	0	74	75	10758.35	1	1768.15	5.6556	0.0400	0.0	0.0	1.64E-06	8.06E-05	7.44E-04	3.01E-03
4	3	56	57	12065.10	2	1768.34	5.6550	0.0400	0.0	0.0	0.0	0.0	6.72E-06	3.34E-05
7	6	48	49	16879.89	1	1769.04	5.6528	0.0400	0.0	0.0	0.0	0.0	9.29E-06	1.00E-04
9	8	38	39	19174.33	1	1769.81	5.6503	0.0400	0.0	0.0	0.0	0.0	1.04E-06	1.61E-05
5	4	57	58	14681.85	1	1769.83	5.6503	0.0400	0.0	0.0	0.0	2.77E-06	6.55E-05	4.96E-04
8	7	43	44	17989.20	1	1769.92	5.6500	0.0400	0.0	0.0	0.0	0.0	3.27E-06	4.20E-05
3	2	60	61	10914.00	2	1770.50	5.6481	0.0400	0.0	0.0	0.0	1.71E-06	1.63E-05	6.77E-05
5	4	51	52	13075.18	2	1770.63	5.6477	0.0400	0.0	0.0	0.0	0.0	2.90E-06	1.70E-05
4	3	61	62	13560.93	1	1771.85	5.6438	0.0400	0.0	0.0	0.0	9.13E-06	1.65E-04	1.05E-03
6	5	46	47	14161.26	2	1772.01	5.6433	0.0400	0.0	0.0	0.0	0.0	1.10E-06	7.68E-06
2	1	64	65	9807.43	2	1772.07	5.6431	0.0400	0.0	0.0	0.0	4.61E-06	3.38E-05	1.17E-04
7	6	41	42	15321.80	2	1772.47	5.6418	0.0400	0.0	0.0	0.0	0.0	0.0	3.15E-06
6	5	52	53	15653.78	1	1772.49	5.6418	0.0400	0.0	0.0	0.0	0.0	2.82E-05	2.49E-04
1	0	68	69	8746.33	2	1773.06	5.6400	0.0400	0.0	0.0	0.0	8.77E-06	4.99E-05	1.46E-04
3	2	65	66	12486.39	1	1773.24	5.6394	0.0400	0.0	0.0	0.0	2.66E-05	3.72E-04	1.98E-03
4	3	55	56	11865.33	2	1773.53	5.6385	0.0400	0.0	0.0	0.0	0.0	8.02E-06	3.86E-05
2	1	69	70	11459.21	1	1774.02	5.6369	0.0400	0.0	0.0	0.0	6.48E-05	7.08E-04	3.21E-03
1	0	73	74	10480.37	1	1774.18	5.6364	0.0400	0.0	0.0	2.52E-06	1.11E-04	9.61E-04	3.72E-03
7	6	47	48	16704.66	1	1774.18	5.6364	0.0400	0.0	0.0	0.0	0.0	1.08E-05	1.13E-04
9	8	37	38	19036.74	1	1774.59	5.6351	0.0400	0.0	0.0	0.0	0.0	1.16E-06	1.76E-05
8	7	42	43	17832.88	1	1774.89	5.6342	0.0400	0.0	0.0	0.0	0.0	3.72E-06	4.67E-05
5	4	56	57	14471.76	1	1775.29	5.6329	0.0400	0.0	0.0	0.0	3.51E-06	7.90E-05	5.78E-04
5	4	50	51	12893.99	2	1775.66	5.6317	0.0400	0.0	0.0	0.0	0.0	3.39E-06	1.93E-05
3	2	59	60	10698.87	2	1775.83	5.6312	0.0400	0.0	0.0	0.0	2.18E-06	1.98E-05	7.93E-05
6	5	45	46	13998.51	2	1776.88	5.6278	0.0400	0.0	0.0	0.0	0.0	1.27E-06	8.58E-06
7	6	40	41	15177.32	2	1777.17	5.6269	0.0400	0.0	0.0	0.0	0.0	0.0	3.46E-06
4	3	60	61	13334.93	1	1777.45	5.6260	0.0400	0.0	0.0	0.0	1.18E-05	2.02E-04	1.24E-03
2	1	63	64	9576.80	2	1777.53	5.6258	0.0400	0.0	0.0	0.0	5.99E-06	4.16E-05	1.39E-04
6	5	51	52	15462.93	1	1777.77	5.6250	0.0400	0.0	0.0	0.0	1.17E-06	3.33E-05	2.86E-04
1	0	67	68	8500.09	2	1778.64	5.6223	0.0400	0.0	0.0	0.0	1.16E-05	6.24E-05	1.76E-04
4	3	54	55	11668.92	2	1778.70	5.6221	0.0400	0.0	0.0	0.0	0.0	9.53E-06	4.45E-05
3	2	64	65	12244.32	1	1778.97	5.6212	0.0400	0.0	0.0	0.0	3.51E-05	4.63E-04	2.38E-03
7	6	46	47	16532.89	1	1779.29	5.6202	0.0400	0.0	0.0	0.0	0.0	1.25E-05	1.27E-04
9	8	36	37	18902.61	1	1779.35	5.6200	0.0400	0.0	0.0	0.0	0.0	1.28E-06	1.91E-05
8	7	41	42	17680.03	1	1779.82	5.6185	0.0400	0.0	0.0	0.0	0.0	4.22E-06	5.16E-05
2	1	68	69	11200.97	1	1779.88	5.6184	0.0400	0.0	0.0	1.48E-06	8.73E-05	8.97E-04	3.90E-03
1	0	72	73	10205.84	1	1780.18	5.6174	0.0400	0.0	0.0	3.87E-06	1.53E-04	1.24E-03	4.59E-03
5	4	49	50	12716.17	2	1780.67	5.6159	0.0400	0.0	0.0	0.0	0.0	3.95E-06	2.18E-05
5	4	55	56	14265.13	1	1780.71	5.6157	0.0400	0.0	0.0	0.0	4.43E-06	9.49E-05	6.72E-04
3	2	58	59	10487.10	2	1781.13	5.6144	0.0400	0.0	0.0	0.0	2.77E-06	2.39E-05	9.26E-05
6	5	44	45	13839.13	2	1781.72	5.6126	0.0400	0.0	0.0	0.0	0.0	1.45E-06	9.57E-06
7	6	39	40	15036.20	2	1781.85	5.6121	0.0400	0.0	0.0	0.0	0.0	0.0	3.78E-06
2	1	62	63	9349.53	2	1782.96	5.6087	0.0400	0.0	0.0	0.0	7.76E-06	5.11E-05	1.65E-04
4	3	59	60	13112.37	1	1783.01	5.6085	0.0400	0.0	0.0	0.0	1.52E-05	2.47E-04	1.46E-03
6	5	50	51	15275.54	1	1783.03	5.6084	0.0400	0.0	0.0	0.0	1.43E-06	3.92E-05	3.26E-04
4	3	53	54	11475.88	2	1783.84	5.6059	0.0400	0.0	0.0	0.0	1.03E-06	1.13E-05	5.12E-05
9	8	35	36	18771.94	1	1784.07	5.6052	0.0400	0.0	0.0	0.0	0.0	1.42E-06	2.07E-05
1	0	66	67	8257.20	2	1784.20	5.6048	0.0400	0.0	0.0	0.0	1.54E-05	7.78E-05	2.11E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	45	46	16364.60	1	1784.37	5.6042	0.0400	0.0	0.0	0.0	0.0	1.44E-05	1.43E-04
3	2	63	64	12005.71	1	1784.68	5.6032	0.0400	0.0	0.0	0.0	4.61E-05	5.75E-04	2.84E-03
8	7	40	41	17530.64	1	1784.72	5.6031	0.0400	0.0	0.0	0.0	0.0	4.77E-06	5.70E-05
5	4	48	49	12541.73	2	1785.65	5.6002	0.0400	0.0	0.0	0.0	0.0	4.59E-06	2.47E-05
2	1	67	68	10946.18	1	1785.72	5.6000	0.0400	0.0	0.0	2.20E-06	1.17E-04	1.13E-03	4.72E-03
5	4	54	55	14061.97	1	1786.11	5.5988	0.0400	0.0	0.0	0.0	5.56E-06	1.14E-04	7.79E-04
1	0	71	72	9934.75	1	1786.15	5.5986	0.0400	0.0	0.0	5.90E-06	2.09E-04	1.59E-03	5.63E-03
3	2	57	58	10278.70	2	1786.40	5.5978	0.0400	0.0	0.0	0.0	3.51E-06	2.88E-05	1.08E-04
7	6	38	39	14898.44	2	1786.50	5.5975	0.0400	0.0	0.0	0.0	0.0	0.0	4.13E-06
6	5	43	44	13683.11	2	1786.54	5.5974	0.0400	0.0	0.0	0.0	0.0	1.65E-06	1.06E-05
6	5	49	50	15091.63	1	1788.26	5.5920	0.0400	0.0	0.0	0.0	1.76E-06	4.59E-05	3.72E-04
2	1	61	62	9125.64	2	1788.37	5.5917	0.0400	0.0	0.0	0.0	1.00E-05	6.24E-05	1.94E-04
4	3	58	59	12893.29	1	1788.55	5.5911	0.0400	0.0	0.0	0.0	1.95E-05	3.01E-04	1.71E-03
9	8	34	35	18644.73	1	1788.77	5.5904	0.0400	0.0	0.0	0.0	0.0	1.56E-06	2.23E-05
4	3	52	53	11286.22	2	1788.96	5.5898	0.0400	0.0	0.0	0.0	1.27E-06	1.33E-05	5.86E-05
7	6	44	45	16199.77	1	1789.42	5.5884	0.0400	0.0	0.0	0.0	0.0	1.66E-05	1.60E-04
8	7	39	40	17384.73	1	1789.60	5.5878	0.0400	0.0	0.0	0.0	0.0	5.36E-06	6.26E-05
1	0	65	66	8017.69	2	1789.74	5.5874	0.0400	0.0	0.0	1.23E-06	2.02E-05	9.67E-05	2.52E-04
3	2	62	63	11770.57	1	1790.36	5.5855	0.0400	0.0	0.0	0.0	6.03E-05	7.11E-04	3.38E-03
5	4	47	48	12370.66	2	1790.60	5.5847	0.0400	0.0	0.0	0.0	0.0	5.32E-06	2.78E-05
7	6	37	38	14764.06	2	1791.12	5.5831	0.0400	0.0	0.0	0.0	0.0	0.0	4.49E-06
6	5	42	43	13530.48	2	1791.33	5.5824	0.0400	0.0	0.0	0.0	0.0	1.87E-06	1.18E-05
5	4	53	54	13862.29	1	1791.49	5.5819	0.0400	0.0	0.0	0.0	6.96E-06	1.35E-04	9.00E-04
2	1	66	67	10694.85	1	1791.54	5.5818	0.0400	0.0	0.0	3.25E-06	1.56E-04	1.42E-03	5.70E-03
3	2	56	57	10073.68	2	1791.65	5.5814	0.0400	0.0	0.0	0.0	4.42E-06	3.46E-05	1.25E-04
1	0	70	71	9667.11	1	1792.10	5.5800	0.0400	0.0	0.0	8.95E-06	2.85E-04	2.03E-03	6.90E-03
9	8	33	34	18521.00	1	1793.43	5.5759	0.0400	0.0	0.0	0.0	0.0	1.71E-06	2.40E-05
6	5	48	49	14911.20	1	1793.46	5.5758	0.0400	0.0	0.0	0.0	2.14E-06	5.37E-05	4.22E-04
2	1	60	61	8905.12	2	1793.75	5.5749	0.0400	0.0	0.0	0.0	1.29E-05	7.61E-05	2.29E-04
4	3	51	52	11099.95	2	1794.05	5.5740	0.0400	0.0	0.0	0.0	1.57E-06	1.57E-05	6.70E-05
4	3	57	58	12677.69	1	1794.07	5.5739	0.0400	0.0	0.0	0.0	2.49E-05	3.64E-04	2.01E-03
8	7	38	39	17242.29	1	1794.45	5.5727	0.0400	0.0	0.0	0.0	0.0	6.01E-06	6.86E-05
7	6	43	44	16038.43	1	1794.45	5.5727	0.0400	0.0	0.0	0.0	0.0	1.90E-05	1.79E-04
1	0	64	65	7781.55	2	1795.25	5.5703	0.0400	0.0	0.0	1.77E-06	2.65E-05	1.20E-04	3.01E-04
5	4	46	47	12202.98	2	1795.53	5.5694	0.0400	0.0	0.0	0.0	0.0	6.13E-06	3.12E-05
7	6	36	37	14633.06	2	1795.71	5.5688	0.0400	0.0	0.0	0.0	0.0	0.0	4.87E-06
3	2	61	62	11538.91	1	1796.01	5.5679	0.0400	0.0	0.0	1.17E-06	7.86E-05	8.76E-04	4.02E-03
6	5	41	42	13381.23	2	1796.09	5.5676	0.0400	0.0	0.0	0.0	0.0	2.11E-06	1.30E-05
5	4	52	53	13666.09	1	1796.83	5.5654	0.0400	0.0	0.0	0.0	8.67E-06	1.61E-04	1.04E-03
3	2	55	56	9872.04	2	1796.88	5.5652	0.0400	0.0	0.0	0.0	5.54E-06	4.14E-05	1.45E-04
2	1	65	66	10446.99	1	1797.33	5.5638	0.0400	0.0	0.0	4.77E-06	2.08E-04	1.78E-03	6.87E-03
1	0	69	70	9402.94	1	1798.03	5.5616	0.0400	0.0	0.0	1.35E-05	3.87E-04	2.59E-03	8.43E-03
9	8	32	33	18400.75	1	1798.07	5.5615	0.0400	0.0	0.0	0.0	0.0	1.87E-06	2.57E-05
6	5	47	48	14734.27	1	1798.63	5.5598	0.0400	0.0	0.0	0.0	2.60E-06	6.25E-05	4.78E-04
4	3	50	51	10917.06	2	1799.11	5.5583	0.0400	0.0	0.0	0.0	1.92E-06	1.84E-05	7.63E-05
2	1	59	60	8687.99	2	1799.11	5.5583	0.0400	0.0	0.0	0.0	1.64E-05	9.24E-05	2.68E-04
8	7	37	38	17103.34	1	1799.27	5.5578	0.0400	0.0	0.0	0.0	0.0	6.70E-06	7.49E-05
7	6	42	43	15880.58	1	1799.45	5.5573	0.0400	0.0	0.0	0.0	0.0	2.16E-05	1.98E-04
4	3	56	57	12465.57	1	1799.56	5.5569	0.0400	0.0	0.0	0.0	3.16E-05	4.40E-04	2.34E-03
7	6	35	36	14505.45	2	1800.28	5.5547	0.0400	0.0	0.0	0.0	0.0	0.0	5.26E-06
5	4	45	46	12038.69	2	1800.43	5.5542	0.0400	0.0	0.0	0.0	0.0	7.04E-06	3.49E-05
1	0	63	64	7548.79	2	1800.74	5.5533	0.0400	0.0	0.0	2.53E-06	3.46E-05	1.48E-04	3.58E-04
6	5	40	41	13235.37	2	1800.83	5.5530	0.0400	0.0	0.0	0.0	0.0	2.38E-06	1.43E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	2	60	61	11310.73	1	1801.64	5.5505	0.0400	0.0	0.0	1.66E-06	1.02E-04	1.08E-03	4.76E-03
3	2	54	55	9673.80	2	1802.08	5.5491	0.0400	0.0	0.0	0.0	6.92E-06	4.93E-05	1.67E-04
5	4	51	52	13473.39	1	1802.15	5.5489	0.0400	0.0	0.0	0.0	1.07E-05	1.90E-04	1.19E-03
9	8	31	32	18283.98	1	1802.67	5.5473	0.0400	0.0	0.0	0.0	0.0	2.03E-06	2.74E-05
2	1	64	65	10202.62	1	1803.10	5.5460	0.0400	0.0	0.0	6.96E-06	2.75E-04	2.23E-03	8.25E-03
6	5	46	47	14560.82	1	1803.78	5.5439	0.0400	0.0	0.0	0.0	3.15E-06	7.24E-05	5.39E-04
1	0	68	69	9142.25	1	1803.93	5.5435	0.0400	0.0	0.0	2.02E-05	5.23E-04	3.28E-03	1.03E-02
8	7	36	37	16967.88	1	1804.05	5.5431	0.0400	0.0	0.0	0.0	0.0	7.45E-06	8.14E-05
4	3	49	50	10737.57	2	1804.15	5.5428	0.0400	0.0	0.0	0.0	2.34E-06	2.15E-05	8.65E-05
7	6	41	42	15726.23	1	1804.42	5.5419	0.0400	0.0	0.0	0.0	0.0	2.45E-05	2.20E-04
2	1	58	59	8474.25	2	1804.44	5.5419	0.0400	0.0	0.0	1.06E-06	2.10E-05	1.12E-04	3.14E-04
7	6	34	35	14381.22	2	1804.81	5.5407	0.0400	0.0	0.0	0.0	0.0	0.0	5.66E-06
4	3	55	56	12256.95	1	1805.02	5.5401	0.0400	0.0	0.0	0.0	4.00E-05	5.30E-04	2.73E-03
5	4	44	45	11877.80	2	1805.31	5.5392	0.0400	0.0	0.0	0.0	0.0	8.06E-06	3.90E-05
6	5	39	40	13092.91	2	1805.54	5.5385	0.0400	0.0	0.0	0.0	0.0	2.66E-06	1.56E-05
1	0	62	63	7319.43	2	1806.20	5.5365	0.0400	0.0	0.0	3.60E-06	4.49E-05	1.82E-04	4.24E-04
3	2	59	60	11086.05	1	1807.25	5.5333	0.0400	0.0	0.0	2.34E-06	1.31E-04	1.32E-03	5.61E-03
9	8	30	31	18170.69	1	1807.25	5.5333	0.0400	0.0	0.0	0.0	0.0	2.20E-06	2.91E-05
3	2	53	54	9478.96	2	1807.26	5.5332	0.0400	0.0	0.0	0.0	8.61E-06	5.85E-05	1.93E-04
5	4	50	51	13284.19	1	1807.44	5.5327	0.0400	0.0	0.0	0.0	1.32E-05	2.25E-04	1.36E-03
8	7	35	36	16835.92	1	1808.81	5.5285	0.0400	0.0	0.0	0.0	0.0	8.25E-06	8.83E-05
2	1	63	64	9961.74	1	1808.84	5.5284	0.0400	0.0	0.0	1.01E-05	3.62E-04	2.77E-03	9.87E-03
6	5	45	46	14390.88	1	1808.90	5.5282	0.0400	0.0	0.0	0.0	3.79E-06	8.37E-05	6.06E-04
4	3	48	49	10561.49	2	1809.17	5.5274	0.0400	0.0	0.0	0.0	2.84E-06	2.50E-05	9.79E-05
7	6	33	34	14260.39	2	1809.32	5.5269	0.0400	0.0	0.0	0.0	0.0	0.0	6.07E-06
7	6	40	41	15575.37	1	1809.36	5.5268	0.0400	0.0	0.0	0.0	0.0	2.77E-05	2.43E-04
2	1	57	58	8263.93	2	1809.75	5.5256	0.0400	0.0	0.0	1.46E-06	2.66E-05	1.35E-04	3.66E-04
1	0	67	68	8885.04	1	1809.81	5.5254	0.0400	0.0	0.0	3.01E-05	7.03E-04	4.15E-03	1.25E-02
5	4	43	44	11720.32	2	1810.16	5.5244	0.0400	0.0	0.0	0.0	0.0	9.18E-06	4.33E-05
6	5	38	39	12953.84	2	1810.22	5.5242	0.0400	0.0	0.0	0.0	0.0	2.97E-06	1.71E-05
4	3	54	55	12051.84	1	1810.46	5.5235	0.0400	0.0	0.0	0.0	5.04E-05	6.36E-04	3.17E-03
1	0	61	62	7093.47	2	1811.64	5.5199	0.0400	0.0	0.0	5.10E-06	5.80E-05	2.23E-04	5.01E-04
9	8	29	30	18060.90	1	1811.79	5.5194	0.0400	0.0	0.0	0.0	0.0	2.37E-06	3.08E-05
3	2	52	53	9287.54	2	1812.41	5.5175	0.0400	0.0	0.0	0.0	1.07E-05	6.91E-05	2.21E-04
5	4	49	50	13098.50	1	1812.71	5.5166	0.0400	0.0	0.0	0.0	1.63E-05	2.64E-04	1.55E-03
3	2	58	59	10864.87	1	1812.82	5.5163	0.0400	0.0	0.0	3.28E-06	1.69E-04	1.60E-03	6.61E-03
8	7	34	35	16707.46	1	1813.54	5.5141	0.0400	0.0	0.0	0.0	0.0	9.09E-06	9.53E-05
7	6	32	33	14142.96	2	1813.81	5.5133	0.0400	0.0	0.0	0.0	0.0	0.0	6.48E-06
6	5	44	45	14224.45	1	1813.99	5.5127	0.0400	0.0	0.0	0.0	4.53E-06	9.63E-05	6.79E-04
4	3	47	48	10388.82	2	1814.16	5.5122	0.0400	0.0	0.0	0.0	3.43E-06	2.90E-05	1.10E-04
7	6	39	40	15428.02	1	1814.27	5.5119	0.0400	0.0	0.0	0.0	1.10E-06	3.13E-05	2.67E-04
2	1	62	63	9724.36	1	1814.55	5.5110	0.0400	0.0	0.0	1.45E-05	4.75E-04	3.43E-03	1.18E-02
6	5	37	38	12818.19	2	1814.87	5.5100	0.0400	0.0	0.0	0.0	0.0	3.31E-06	1.86E-05
5	4	42	43	11566.25	2	1814.98	5.5097	0.0400	0.0	0.0	0.0	0.0	1.04E-05	4.80E-05
2	1	56	57	8057.01	2	1815.03	5.5096	0.0400	0.0	0.0	2.01E-06	3.36E-05	1.62E-04	4.26E-04
1	0	66	67	8631.33	1	1815.66	5.5076	0.0400	0.0	0.0	4.46E-05	9.41E-04	5.23E-03	1.51E-02
4	3	53	54	11850.23	1	1815.86	5.5070	0.0400	0.0	0.0	0.0	6.32E-05	7.60E-04	3.67E-03
9	8	28	29	17954.60	1	1816.30	5.5057	0.0400	0.0	0.0	0.0	0.0	2.54E-06	3.25E-05
1	0	60	61	6870.93	2	1817.06	5.5034	0.0400	0.0	0.0	7.17E-06	7.47E-05	2.72E-04	5.91E-04
3	2	51	52	9099.53	2	1817.53	5.5020	0.0400	0.0	0.0	0.0	1.31E-05	8.15E-05	2.53E-04
5	4	48	49	12916.32	1	1817.94	5.5007	0.0400	0.0	0.0	0.0	1.99E-05	3.09E-04	1.77E-03
8	7	33	34	16582.50	1	1818.24	5.4998	0.0400	0.0	0.0	0.0	0.0	9.98E-06	1.03E-04
7	6	31	32	14028.93	2	1818.26	5.4998	0.0400	0.0	0.0	0.0	0.0	1.01E-06	6.90E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	2	57	58	10647.20	1	1818.37	5.4994	0.0400	0.0	0.0	4.58E-06	2.16E-04	1.95E-03	7.76E-03
6	5	43	44	14061.54	1	1819.05	5.4974	0.0400	0.0	0.0	0.0	5.40E-06	1.10E-04	7.58E-04
4	3	46	47	10219.57	2	1819.12	5.4972	0.0400	0.0	0.0	0.0	4.12E-06	3.34E-05	1.24E-04
7	6	38	39	15284.19	1	1819.15	5.4971	0.0400	0.0	0.0	0.0	1.28E-06	3.51E-05	2.93E-04
6	5	36	37	12685.95	2	1819.50	5.4960	0.0400	0.0	0.0	0.0	0.0	3.66E-06	2.02E-05
5	4	41	42	11415.59	2	1819.78	5.4952	0.0400	0.0	0.0	0.0	1.09E-06	1.18E-05	5.30E-05
2	1	61	62	9490.49	1	1820.24	5.4938	0.0400	0.0	0.0	2.08E-05	6.20E-04	4.24E-03	1.40E-02
2	1	55	56	7853.51	2	1820.29	5.4936	0.0400	0.0	0.0	2.73E-06	4.22E-05	1.94E-04	4.94E-04
9	8	27	28	17851.80	1	1820.79	5.4921	0.0400	0.0	0.0	0.0	0.0	2.71E-06	3.42E-05
4	3	52	53	11652.14	1	1821.25	5.4907	0.0400	0.0	0.0	1.12E-06	7.88E-05	9.04E-04	4.23E-03
1	0	65	66	8381.13	1	1821.49	5.4900	0.0400	0.0	0.0	6.57E-05	1.25E-03	6.57E-03	1.82E-02
1	0	59	60	6651.80	2	1822.45	5.4871	0.0400	0.0	0.0	1.00E-05	9.58E-05	3.31E-04	6.94E-04
3	2	50	51	8914.94	2	1822.63	5.4866	0.0400	0.0	0.0	0.0	1.61E-05	9.56E-05	2.88E-04
7	6	30	31	13918.32	2	1822.68	5.4864	0.0400	0.0	0.0	0.0	0.0	1.09E-06	7.32E-06
8	7	32	33	16461.06	1	1822.91	5.4857	0.0400	0.0	0.0	0.0	0.0	1.09E-05	1.10E-04
5	4	47	48	12737.67	1	1823.15	5.4850	0.0400	0.0	0.0	0.0	2.42E-05	3.60E-04	2.00E-03
3	2	56	57	10433.05	1	1823.90	5.4828	0.0400	0.0	0.0	6.35E-06	2.75E-04	2.36E-03	9.08E-03
7	6	37	38	15143.88	1	1824.01	5.4824	0.0400	0.0	0.0	0.0	1.48E-06	3.92E-05	3.20E-04
4	3	45	46	10053.75	2	1824.05	5.4823	0.0400	0.0	0.0	0.0	4.93E-06	3.85E-05	1.39E-04
6	5	42	43	13902.14	1	1824.08	5.4822	0.0400	0.0	0.0	0.0	6.40E-06	1.26E-04	8.44E-04
6	5	35	36	12557.12	2	1824.10	5.4822	0.0400	0.0	0.0	0.0	0.0	4.04E-06	2.18E-05
5	4	40	41	11268.36	2	1824.55	5.4808	0.0400	0.0	0.0	0.0	1.27E-06	1.33E-05	5.84E-05
9	8	26	27	17752.52	1	1825.24	5.4787	0.0400	0.0	0.0	0.0	0.0	2.89E-06	3.58E-05
2	1	54	55	7653.44	2	1825.53	5.4779	0.0400	0.0	0.0	3.71E-06	5.28E-05	2.32E-04	5.71E-04
2	1	60	61	9260.14	1	1825.91	5.4767	0.0400	0.0	0.0	2.97E-05	8.06E-04	5.21E-03	1.66E-02
4	3	51	52	11457.59	1	1826.60	5.4747	0.0400	0.0	0.0	1.50E-06	9.79E-05	1.07E-03	4.86E-03
7	6	29	30	13811.11	2	1827.08	5.4732	0.0400	0.0	0.0	0.0	0.0	1.17E-06	7.73E-06
1	0	64	65	8134.45	1	1827.29	5.4726	0.0400	0.0	0.0	9.61E-05	1.66E-03	8.22E-03	2.19E-02
8	7	31	32	16343.14	1	1827.55	5.4718	0.0400	0.0	0.0	0.0	0.0	1.19E-05	1.17E-04
3	2	49	50	8733.79	2	1827.70	5.4714	0.0400	0.0	0.0	0.0	1.97E-05	1.12E-04	3.28E-04
1	0	58	59	6436.11	2	1827.82	5.4710	0.0400	0.0	0.0	1.40E-05	1.22E-04	4.01E-04	8.13E-04
5	4	46	47	12562.54	1	1828.34	5.4694	0.0400	0.0	0.0	0.0	2.93E-05	4.18E-04	2.26E-03
6	5	34	35	12431.72	2	1828.67	5.4685	0.0400	0.0	0.0	0.0	0.0	4.44E-06	2.35E-05
7	6	36	37	15007.09	1	1828.83	5.4680	0.0400	0.0	0.0	0.0	1.70E-06	4.36E-05	3.49E-04
4	3	44	45	9891.36	2	1828.96	5.4676	0.0400	0.0	0.0	0.0	5.87E-06	4.41E-05	1.55E-04
6	5	41	42	13746.29	1	1829.08	5.4672	0.0400	0.0	0.0	0.0	7.56E-06	1.43E-04	9.36E-04
5	4	39	40	11124.55	2	1829.29	5.4666	0.0400	0.0	0.0	0.0	1.48E-06	1.49E-05	6.41E-05
3	2	55	56	10222.44	1	1829.39	5.4663	0.0400	0.0	0.0	8.76E-06	3.49E-04	2.85E-03	1.06E-02
9	8	25	26	17656.73	1	1829.66	5.4655	0.0400	0.0	0.0	0.0	0.0	3.05E-06	3.73E-05
2	1	53	54	7456.80	2	1830.74	5.4623	0.0400	0.0	0.0	4.99E-06	6.58E-05	2.76E-04	6.58E-04
7	6	28	29	13707.32	2	1831.45	5.4602	0.0400	0.0	0.0	0.0	0.0	1.26E-06	8.14E-06
2	1	59	60	9033.32	1	1831.55	5.4599	0.0400	0.0	0.0	4.20E-05	1.04E-03	6.39E-03	1.97E-02
4	3	50	51	11266.57	1	1831.93	5.4587	0.0400	0.0	0.0	2.00E-06	1.21E-04	1.27E-03	5.57E-03
8	7	30	31	16228.73	1	1832.16	5.4580	0.0400	0.0	0.0	0.0	0.0	1.29E-05	1.25E-04
3	2	48	49	8556.07	2	1832.75	5.4563	0.0400	0.0	0.0	1.17E-06	2.39E-05	1.30E-04	3.71E-04
1	0	63	64	7891.29	1	1833.07	5.4553	0.0400	0.0	0.0	1.40E-04	2.20E-03	1.02E-02	2.63E-02
1	0	57	58	6223.85	2	1833.16	5.4551	0.0400	0.0	0.0	1.93E-05	1.56E-04	4.85E-04	9.50E-04
6	5	33	34	12309.75	2	1833.21	5.4549	0.0400	0.0	0.0	0.0	0.0	4.86E-06	2.52E-05
5	4	45	46	12390.96	1	1833.49	5.4541	0.0400	0.0	0.0	0.0	3.53E-05	4.84E-04	2.55E-03
7	6	35	36	14873.83	1	1833.63	5.4537	0.0400	0.0	0.0	0.0	1.94E-06	4.83E-05	3.78E-04
4	3	43	44	9732.40	2	1833.84	5.4530	0.0400	0.0	0.0	0.0	6.96E-06	5.03E-05	1.73E-04
5	4	38	39	10984.19	2	1834.00	5.4526	0.0400	0.0	0.0	0.0	1.71E-06	1.67E-05	7.01E-05
9	8	24	25	17564.47	1	1834.05	5.4524	0.0400	0.0	0.0	0.0	0.0	3.22E-06	3.87E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF-WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	40	41	13593.96	1	1834.06	5.4524	0.0400	0.0	0.0	0.0	8.87E-06	1.62E-04	1.04E-03
3	2	54	55	10015.37	1	1834.87	5.4500	0.0400	0.0	0.0	1.20E-05	4.41E-04	3.42E-03	1.23E-02
7	6	27	28	13606.95	2	1835.79	5.4472	0.0400	0.0	0.0	0.0	0.0	1.34E-06	8.54E-06
2	1	52	53	7263.61	2	1835.92	5.4469	0.0400	0.0	0.0	6.69E-06	8.16E-05	3.27E-04	7.56E-04
8	7	29	30	16117.86	1	1836.74	5.4444	0.0400	0.0	0.0	0.0	0.0	1.39E-05	1.32E-04
2	1	58	59	8810.04	1	1837.16	5.4432	0.0400	0.0	0.0	5.92E-05	1.34E-03	7.81E-03	2.32E-02
4	3	49	50	11079.09	1	1837.23	5.4430	0.0400	0.0	0.0	2.65E-06	1.49E-04	1.49E-03	6.36E-03
6	5	32	33	12191.21	2	1837.73	5.4415	0.0400	0.0	0.0	0.0	0.0	5.30E-06	2.70E-05
3	2	47	48	8381.80	2	1837.77	5.4414	0.0400	0.0	0.0	1.52E-06	2.89E-05	1.51E-04	4.19E-04
7	6	34	35	14744.11	1	1838.39	5.4395	0.0400	0.0	0.0	0.0	2.21E-06	5.33E-05	4.09E-04
9	8	23	24	17475.72	1	1838.41	5.4395	0.0412	0.0	0.0	0.0	0.0	3.37E-06	4.00E-05
1	0	56	57	6015.03	2	1838.48	5.4393	0.0400	0.0	0.0	2.66E-05	1.97E-04	5.84E-04	1.11E-03
5	4	44	45	12222.92	1	1838.61	5.4389	0.0400	0.0	0.0	0.0	4.23E-05	5.57E-04	2.86E-03
5	4	37	38	10847.26	2	1838.69	5.4387	0.0400	0.0	0.0	0.0	1.97E-06	1.86E-05	7.63E-05
4	3	42	43	9576.89	2	1838.70	5.4386	0.0400	0.0	0.0	0.0	8.22E-06	5.72E-05	1.92E-04
1	0	62	63	7651.67	1	1838.82	5.4383	0.0400	0.0	0.0	2.02E-04	2.89E-03	1.27E-02	3.14E-02
6	5	39	40	13445.18	1	1839.01	5.4377	0.0400	0.0	0.0	0.0	1.04E-05	1.83E-04	1.14E-03
7	6	26	27	13510.01	2	1840.10	5.4345	0.0400	0.0	0.0	0.0	0.0	1.42E-06	8.92E-06
3	2	53	54	9811.84	1	1840.31	5.4339	0.0400	0.0	0.0	1.64E-05	5.54E-04	4.09E-03	1.43E-02
2	1	51	52	7073.87	2	1841.08	5.4316	0.0400	0.0	0.0	8.91E-06	1.01E-04	3.85E-04	8.66E-04
8	7	28	29	16010.51	1	1841.29	5.4310	0.0400	0.0	0.0	0.0	0.0	1.49E-05	1.40E-04
6	5	31	32	12076.10	2	1842.21	5.4283	0.0400	0.0	0.0	0.0	0.0	5.75E-06	2.88E-05
4	3	48	49	10895.17	1	1842.50	5.4274	0.0400	0.0	0.0	3.49E-06	1.82E-04	1.75E-03	7.25E-03
9	8	22	23	17390.49	1	1842.74	5.4267	0.0423	0.0	0.0	0.0	0.0	3.51E-06	4.11E-05
2	1	57	58	8590.31	1	1842.75	5.4267	0.0400	0.0	0.0	8.29E-05	1.72E-03	9.50E-03	2.73E-02
3	2	46	47	8210.98	2	1842.77	5.4266	0.0400	0.0	0.0	1.95E-06	3.48E-05	1.75E-04	4.72E-04
7	6	33	34	14617.93	1	1843.13	5.4256	0.0400	0.0	0.0	0.0	2.51E-06	5.86E-05	4.41E-04
5	4	36	37	10713.77	2	1843.35	5.4249	0.0400	0.0	0.0	0.0	2.25E-06	2.06E-05	8.29E-05
4	3	41	42	9424.83	2	1843.53	5.4244	0.0400	0.0	0.0	0.0	9.65E-06	6.48E-05	2.12E-04
5	4	43	44	12058.43	1	1843.71	5.4238	0.0400	0.0	0.0	0.0	5.05E-05	6.40E-04	3.20E-03
1	0	55	56	5809.67	2	1843.77	5.4237	0.0400	0.0	0.0	3.63E-05	2.48E-04	7.00E-04	1.29E-03
6	5	38	39	13299.95	1	1843.93	5.4232	0.0400	0.0	0.0	0.0	1.21E-05	2.06E-04	1.25E-03
7	6	25	26	13416.50	2	1844.38	5.4219	0.0400	0.0	0.0	0.0	0.0	1.50E-06	9.28E-06
1	0	61	62	7415.60	1	1844.54	5.4214	0.0400	0.0	1.25E-06	2.91E-04	3.79E-03	1.57E-02	3.74E-02
3	2	52	53	9611.86	1	1845.73	5.4179	0.0400	0.0	0.0	2.22E-05	6.93E-04	4.88E-03	1.65E-02
8	7	27	28	15906.70	1	1845.81	5.4177	0.0400	0.0	0.0	0.0	0.0	1.59E-05	1.47E-04
2	1	50	51	6887.58	2	1846.21	5.4165	0.0400	0.0	0.0	1.18E-05	1.24E-04	4.53E-04	9.89E-04
6	5	30	31	11964.44	2	1846.67	5.4152	0.0400	0.0	0.0	0.0	0.0	6.21E-06	3.05E-05
9	8	21	22	17308.79	1	1847.04	5.4141	0.0435	0.0	0.0	0.0	0.0	3.64E-06	4.21E-05
3	2	45	46	8043.62	2	1847.73	5.4120	0.0400	0.0	0.0	2.50E-06	4.18E-05	2.02E-04	5.29E-04
4	3	47	48	10714.80	1	1847.75	5.4120	0.0400	0.0	0.0	4.57E-06	2.22E-04	2.04E-03	8.22E-03
7	6	32	33	14495.30	1	1847.83	5.4118	0.0400	0.0	0.0	0.0	2.82E-06	6.41E-05	4.73E-04
5	4	35	36	10583.74	2	1847.98	5.4113	0.0400	0.0	0.0	0.0	2.57E-06	2.28E-05	8.97E-05
2	1	56	57	8374.14	1	1848.31	5.4103	0.0400	0.0	0.0	1.15E-04	2.20E-03	1.15E-02	3.19E-02
4	3	40	41	9276.23	2	1848.33	5.4103	0.0400	0.0	0.0	0.0	1.13E-05	7.32E-05	2.34E-04
7	6	24	25	13326.42	2	1848.64	5.4094	0.0400	0.0	0.0	0.0	0.0	1.57E-06	9.62E-06
5	4	42	43	11897.51	1	1848.78	5.4090	0.0400	0.0	0.0	0.0	6.00E-05	7.31E-04	3.56E-03
6	5	37	38	12158.27	1	1848.81	5.4089	0.0400	0.0	0.0	0.0	1.40E-05	2.30E-04	1.37E-03
1	0	54	55	5607.77	2	1849.04	5.4082	0.0400	0.0	0.0	4.94E-05	3.11E-04	8.37E-04	1.49E-03
1	0	60	61	7183.08	1	1850.24	5.4047	0.0400	0.0	2.15E-06	4.16E-04	4.93E-03	1.94E-02	4.45E-02
8	7	26	27	15806.43	1	1850.30	5.4045	0.0400	0.0	0.0	0.0	0.0	1.69E-05	1.54E-04
6	5	29	30	11856.22	2	1851.10	5.4022	0.0400	0.0	0.0	0.0	0.0	6.68E-06	3.23E-05
3	2	51	52	9415.45	1	1851.12	5.4021	0.0400	0.0	0.0	2.98E-05	8.63E-04	5.80E-03	1.90E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	8	20	21	17230.61	1	1851.30	5.4016	0.0447	0.0	0.0	0.0	0.0	3.75E-06	4.29E-05
2	1	49	50	6704.76	2	1851.32	5.4016	0.0400	0.0	0.0	1.55E-05	1.52E-04	5.31E-04	1.12E-03
7	6	31	32	14376.23	1	1852.51	5.3981	0.0400	0.0	0.0	0.0	3.16E-06	6.98E-05	5.05E-04
5	4	34	35	10457.16	2	1852.59	5.3978	0.0400	0.0	0.0	0.0	2.91E-06	2.50E-05	9.67E-05
3	2	44	45	7879.72	2	1852.68	5.3976	0.0400	0.0	0.0	3.19E-06	4.99E-05	2.31E-04	5.92E-04
7	6	23	24	13239.77	2	1852.86	5.3971	0.0412	0.0	0.0	0.0	0.0	1.65E-06	9.92E-06
4	3	46	47	10538.00	1	1852.96	5.3968	0.0400	0.0	0.0	5.95E-06	2.70E-04	2.37E-03	9.30E-03
4	3	39	40	9131.08	2	1853.11	5.3963	0.0400	0.0	0.0	0.0	1.31E-05	8.22E-05	2.57E-04
6	5	36	37	13020.16	1	1853.67	5.3947	0.0400	0.0	0.0	0.0	1.61E-05	2.56E-04	1.49E-03
5	4	41	42	11740.14	1	1853.82	5.3943	0.0400	0.0	0.0	0.0	7.10E-05	8.33E-04	3.95E-03
2	1	55	56	8161.53	1	1853.84	5.3942	0.0400	0.0	0.0	1.60E-04	2.80E-03	1.39E-02	3.73E-02
1	0	53	54	5409.33	2	1854.28	5.3929	0.0400	0.0	1.43E-06	6.67E-05	3.89E-04	9.97E-04	1.72E-03
8	7	25	26	15709.71	1	1854.76	5.3915	0.0400	0.0	0.0	0.0	0.0	1.79E-05	1.61E-04
6	5	28	29	11751.45	2	1855.50	5.3894	0.0400	0.0	0.0	0.0	0.0	7.16E-06	3.40E-05
9	8	19	20	17155.96	1	1855.53	5.3893	0.0458	0.0	0.0	0.0	0.0	3.85E-06	4.35E-05
1	0	59	60	6954.12	1	1855.92	5.3882	0.0400	0.0	3.67E-06	5.91E-04	6.40E-03	2.38E-02	5.26E-02
2	1	48	49	6525.41	2	1856.40	5.3868	0.0400	0.0	0.0	2.03E-05	1.85E-04	6.19E-04	1.28E-03
3	2	50	51	9222.61	1	1856.48	5.3865	0.0400	0.0	0.0	3.99E-05	1.07E-03	6.86E-03	2.18E-02
7	6	22	23	13156.57	2	1857.05	5.3849	0.0423	0.0	0.0	0.0	0.0	1.71E-06	1.02E-05
7	6	30	31	14260.70	1	1857.15	5.3846	0.0400	0.0	0.0	0.0	3.53E-06	7.57E-05	5.38E-04
5	4	33	34	10334.05	2	1857.16	5.3846	0.0400	0.0	0.0	0.0	3.28E-06	2.74E-05	1.04E-04
3	2	43	44	7719.30	2	1857.59	5.3833	0.0400	0.0	0.0	4.04E-06	5.92E-05	2.64E-04	6.59E-04
4	3	38	39	8989.41	2	1857.85	5.3826	0.0400	0.0	0.0	0.0	1.52E-05	9.21E-05	2.81E-04
4	3	45	46	10364.77	1	1858.15	5.3817	0.0400	0.0	0.0	7.70E-06	3.26E-04	2.75E-03	1.05E-02
6	5	35	36	12885.61	1	1858.50	5.3807	0.0400	0.0	0.0	0.0	1.84E-05	2.84E-04	1.62E-03
5	4	40	41	11586.35	1	1858.83	5.3797	0.0400	0.0	0.0	1.21E-06	8.35E-05	9.45E-04	4.38E-03
8	7	24	25	15616.54	1	1859.18	5.3787	0.0400	0.0	0.0	0.0	0.0	1.89E-05	1.67E-04
2	1	54	55	7952.49	1	1859.35	5.3782	0.0400	0.0	0.0	2.20E-04	3.54E-03	1.68E-02	4.35E-02
1	0	52	53	5214.37	2	1859.50	5.3778	0.0400	0.0	2.24E-06	8.96E-05	4.83E-04	1.18E-03	1.98E-03
9	8	18	19	17084.85	1	1859.73	5.3771	0.0470	0.0	0.0	0.0	0.0	3.92E-06	4.38E-05
6	5	27	28	11650.14	2	1859.88	5.3767	0.0400	0.0	0.0	0.0	0.0	7.64E-06	3.57E-05
7	6	21	22	13076.80	2	1861.22	5.3728	0.0435	0.0	0.0	0.0	0.0	1.77E-06	1.04E-05
2	1	47	48	6349.53	2	1861.45	5.3722	0.0400	0.0	0.0	2.64E-05	2.24E-04	7.20E-04	1.44E-03
1	0	58	59	6728.75	1	1861.56	5.3718	0.0400	0.0	6.20E-06	8.35E-04	8.27E-03	2.92E-02	6.22E-02
5	4	32	33	10214.39	2	1861.71	5.3714	0.0400	0.0	0.0	0.0	3.68E-06	2.99E-05	1.11E-04
7	6	29	30	14148.75	1	1861.77	5.3712	0.0400	0.0	0.0	0.0	3.91E-06	8.18E-05	5.71E-04
3	2	49	50	9033.35	1	1861.82	5.3711	0.0400	0.0	0.0	5.30E-05	1.32E-03	8.09E-03	2.49E-02
3	2	42	43	7562.35	2	1862.48	5.3692	0.0400	0.0	0.0	5.08E-06	7.00E-05	3.01E-04	7.33E-04
4	3	37	38	8851.20	2	1862.57	5.3689	0.0400	0.0	0.0	0.0	1.75E-05	1.03E-04	3.07E-04
4	3	44	45	10195.12	1	1863.31	5.3668	0.0400	0.0	0.0	9.90E-06	3.92E-04	3.17E-03	1.18E-02
6	5	34	35	12754.63	1	1863.31	5.3668	0.0400	0.0	0.0	0.0	2.10E-05	3.14E-04	1.76E-03
8	7	23	24	15526.91	1	1863.58	5.3660	0.0412	0.0	0.0	0.0	0.0	1.98E-05	1.73E-04
5	4	39	40	11436.14	1	1863.81	5.3654	0.0400	0.0	0.0	1.51E-06	9.78E-05	1.07E-03	4.83E-03
9	8	17	18	17017.28	1	1863.90	5.3651	0.0482	0.0	0.0	0.0	0.0	3.98E-06	4.39E-05
6	5	26	27	11552.28	2	1864.22	5.3642	0.0400	0.0	0.0	0.0	0.0	8.11E-06	3.73E-05
1	0	51	52	5022.89	2	1864.69	5.3628	0.0400	0.0	3.48E-06	1.20E-04	5.98E-04	1.40E-03	2.27E-03
2	1	53	54	7747.04	1	1864.83	5.3624	0.0400	0.0	0.0	3.00E-04	4.46E-03	2.01E-02	5.04E-02
7	6	20	21	13000.48	2	1865.35	5.3609	0.0447	0.0	0.0	0.0	0.0	1.82E-06	1.06E-05
5	4	31	32	10098.21	2	1866.23	5.3584	0.0400	0.0	0.0	0.0	4.11E-06	3.25E-05	1.19E-04
7	6	28	29	14040.35	1	1866.35	5.3581	0.0400	0.0	0.0	0.0	4.31E-06	8.79E-05	6.03E-04
2	1	46	47	6177.14	2	1866.48	5.3577	0.0400	0.0	0.0	3.41E-05	2.70E-04	8.34E-04	1.63E-03
3	2	48	49	8847.68	1	1867.12	5.3558	0.0400	0.0	0.0	7.01E-05	1.62E-03	9.50E-03	2.84E-02
1	0	57	58	6506.95	1	1867.19	5.3556	0.0400	0.0	1.04E-05	1.17E-03	1.06E-02	3.56E-02	7.32E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	36	37	8716.48	2	1867.27	5.3554	0.0400	0.0	0.0	0.0	2.01E-05	1.14E-04	3.33E-04
3	2	41	42	7408.88	2	1867.34	5.3552	0.0400	0.0	0.0	6.36E-06	8.24E-05	3.42E-04	8.11E-04
8	7	22	23	15440.84	1	1867.94	5.3535	0.0423	0.0	0.0	0.0	0.0	2.07E-05	1.78E-04
9	8	16	17	16953.25	1	1868.04	5.3532	0.0493	0.0	0.0	0.0	0.0	4.00E-06	4.37E-05
6	5	33	34	12627.23	1	1868.08	5.3531	0.0400	0.0	0.0	0.0	2.38E-05	3.46E-04	1.89E-03
4	3	43	44	10029.06	1	1868.44	5.3521	0.0400	0.0	0.0	1.27E-05	4.68E-04	3.65E-03	1.32E-02
6	5	25	26	11457.88	2	1868.53	5.3518	0.0400	0.0	0.0	0.0	0.0	8.57E-06	3.89E-05
5	4	38	39	11289.51	1	1868.77	5.3511	0.0400	0.0	0.0	1.86E-06	1.14E-04	1.20E-03	5.31E-03
7	6	19	20	12927.62	2	1869.46	5.3491	0.0458	0.0	0.0	0.0	0.0	1.87E-06	1.07E-05
1	0	50	51	4834.91	2	1869.85	5.3480	0.0400	0.0	5.37E-06	1.59E-04	7.36E-04	1.65E-03	2.59E-03
2	1	52	53	7545.17	1	1870.28	5.3468	0.0400	0.0	1.58E-06	4.08E-04	5.59E-03	2.40E-02	5.84E-02
5	4	30	31	9985.50	2	1870.72	5.3455	0.0400	0.0	0.0	0.0	4.57E-06	3.52E-05	1.26E-04
7	6	27	28	13935.53	1	1870.91	5.3450	0.0400	0.0	0.0	0.0	4.73E-06	9.41E-05	6.35E-04
2	1	45	46	6008.24	2	1871.48	5.3434	0.0400	0.0	0.0	4.38E-05	3.25E-04	9.62E-04	1.83E-03
4	3	35	36	8585.23	2	1871.93	5.3421	0.0400	0.0	0.0	1.10E-06	2.29E-05	1.26E-04	3.61E-04
9	8	15	16	16892.75	1	1872.14	5.3415	0.0505	0.0	0.0	0.0	0.0	4.00E-06	4.33E-05
3	2	40	41	7258.90	2	1872.18	5.3414	0.0400	0.0	0.0	7.90E-06	9.65E-05	3.86E-04	8.95E-04
8	7	21	22	15358.34	1	1872.27	5.3411	0.0435	0.0	0.0	0.0	0.0	2.15E-05	1.82E-04
3	2	47	48	8665.59	1	1872.40	5.3407	0.0400	0.0	0.0	9.21E-05	1.98E-03	1.11E-02	3.23E-02
1	0	56	57	6288.75	1	1872.78	5.3397	0.0400	0.0	1.73E-05	1.64E-03	1.36E-02	4.32E-02	8.60E-02
6	5	24	25	11366.95	2	1872.82	5.3395	0.0400	0.0	0.0	0.0	0.0	9.01E-06	4.03E-05
6	5	32	33	12503.41	1	1872.82	5.3395	0.0400	0.0	0.0	0.0	2.69E-05	3.79E-04	2.03E-03
7	6	18	19	12858.20	2	1873.53	5.3375	0.0470	0.0	0.0	0.0	0.0	1.90E-06	1.08E-05
4	3	42	43	9866.59	1	1873.55	5.3375	0.0400	0.0	0.0	1.61E-05	5.57E-04	4.18E-03	1.47E-02
5	4	37	38	11146.46	1	1873.69	5.3371	0.0400	0.0	0.0	2.28E-06	1.32E-04	1.34E-03	5.81E-03
1	0	49	50	4650.41	2	1874.99	5.3334	0.0400	0.0	8.21E-06	2.10E-04	9.03E-04	1.93E-03	2.95E-03
5	4	29	30	9876.27	2	1875.18	5.3328	0.0400	0.0	0.0	0.0	5.05E-06	3.79E-05	1.33E-04
7	6	26	27	13834.28	1	1875.43	5.3321	0.0400	0.0	0.0	0.0	5.17E-06	1.00E-04	6.66E-04
2	1	51	52	7346.91	1	1875.70	5.3313	0.0400	0.0	2.49E-06	5.50E-04	6.98E-03	2.86E-02	6.73E-02
9	8	14	15	16835.81	1	1876.22	5.3299	0.0517	0.0	0.0	0.0	0.0	3.97E-06	4.26E-05
2	1	44	45	5842.84	2	1876.46	5.3292	0.0400	0.0	0.0	5.60E-05	3.88E-04	1.11E-03	2.04E-03
8	7	20	21	15279.39	1	1876.57	5.3289	0.0447	0.0	0.0	0.0	0.0	2.22E-05	1.85E-04
4	3	34	35	8457.48	2	1876.57	5.3289	0.0400	0.0	0.0	1.32E-06	2.60E-05	1.39E-04	3.90E-04
3	2	39	40	7112.42	2	1876.99	5.3277	0.0400	0.0	0.0	9.76E-06	1.12E-04	4.35E-04	9.84E-04
6	5	23	24	11279.49	2	1877.08	5.3274	0.0412	0.0	0.0	0.0	0.0	9.43E-06	4.16E-05
6	5	31	32	12383.18	1	1877.53	5.3261	0.0400	0.0	0.0	0.0	3.01E-05	4.13E-04	2.18E-03
7	6	17	18	12792.23	2	1877.58	5.3260	0.0482	0.0	0.0	0.0	0.0	1.92E-06	1.08E-05
3	2	46	47	8487.11	1	1877.66	5.3258	0.0400	0.0	0.0	1.20E-04	2.40E-03	1.29E-02	3.66E-02
1	0	55	56	6074.14	1	1878.35	5.3238	0.0400	0.0	2.85E-05	2.27E-03	1.73E-02	5.24E-02	1.01E-01
5	4	36	37	11007.02	1	1878.59	5.3231	0.0400	0.0	0.0	2.78E-06	1.52E-04	1.50E-03	6.34E-03
4	3	41	42	9707.73	1	1878.62	5.3231	0.0400	0.0	0.0	2.03E-05	6.60E-04	4.76E-03	1.64E-02
5	4	28	29	9770.52	2	1879.62	5.3202	0.0400	0.0	0.0	0.0	5.56E-06	4.06E-05	1.41E-04
7	6	25	26	13736.61	1	1879.92	5.3194	0.0400	0.0	0.0	0.0	5.61E-06	1.06E-04	6.95E-04
1	0	48	49	4469.43	2	1880.11	5.3188	0.0400	0.0	1.24E-05	2.75E-04	1.10E-03	2.26E-03	3.35E-03
9	8	13	14	16782.41	1	1880.25	5.3184	0.0528	0.0	0.0	0.0	0.0	3.91E-06	4.16E-05
8	7	19	20	15204.01	1	1880.84	5.3168	0.0458	0.0	0.0	0.0	0.0	2.27E-05	1.88E-04
2	1	50	51	7152.25	1	1881.10	5.3160	0.0400	0.0	3.90E-06	7.38E-04	8.66E-03	3.39E-02	7.73E-02
4	3	33	34	8333.21	2	1881.18	5.3158	0.0400	0.0	0.0	1.57E-06	2.94E-05	1.52E-04	4.19E-04
6	5	22	23	11195.50	2	1881.30	5.3155	0.0423	0.0	0.0	0.0	0.0	9.82E-06	4.27E-05
2	1	43	44	5680.94	2	1881.40	5.3152	0.0400	0.0	1.22E-06	7.10E-05	4.62E-04	1.27E-03	2.28E-03
7	6	16	17	12729.73	2	1881.59	5.3147	0.0493	0.0	0.0	0.0	0.0	1.93E-06	1.07E-05
3	2	38	39	6969.43	2	1881.77	5.3141	0.0400	0.0	0.0	1.20E-05	1.30E-04	4.87E-04	1.08E-03
6	5	30	31	12266.54	1	1882.21	5.3129	0.0400	0.0	0.0	0.0	3.36E-05	4.48E-04	2.32E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	2	45	46	8312.24	1	1882.88	5.3110	0.0400	0.0	0.0	1.56E-04	2.91E-03	1.50E-02	4.13E-02
5	4	35	36	10871.18	1	1883.45	5.3094	0.0400	0.0	0.0	3.37E-06	1.75E-04	1.67E-03	6.89E-03
4	3	40	41	9552.46	1	1883.67	5.3088	0.0400	0.0	0.0	2.54E-05	7.78E-04	5.41E-03	1.81E-02
1	0	54	55	5863.14	1	1883.89	5.3082	0.0400	0.0	4.65E-05	3.14E-03	2.20E-02	6.31E-02	1.17E-01
5	4	27	28	9668.25	2	1884.03	5.3078	0.0400	0.0	0.0	0.0	6.08E-06	4.34E-05	1.48E-04
9	8	12	13	16732.56	1	1884.26	5.3071	0.0540	0.0	0.0	0.0	0.0	3.81E-06	4.03E-05
7	6	24	25	13642.53	1	1884.38	5.3068	0.0400	0.0	0.0	0.0	6.05E-06	1.12E-04	7.23E-04
8	7	18	19	15132.20	1	1885.08	5.3048	0.0470	0.0	0.0	0.0	0.0	2.32E-05	1.90E-04
1	0	47	48	4291.95	2	1885.19	5.3045	0.0400	0.0	1.87E-05	3.59E-04	1.34E-03	2.63E-03	3.80E-03
6	5	21	22	11114.98	2	1885.50	5.3036	0.0435	0.0	0.0	0.0	1.01E-06	1.02E-05	4.37E-05
7	6	15	16	12670.68	2	1885.58	5.3034	0.0505	0.0	0.0	0.0	0.0	1.93E-06	1.06E-05
4	3	32	33	8212.45	2	1885.76	5.3029	0.0400	0.0	0.0	1.85E-06	3.30E-05	1.66E-04	4.49E-04
2	1	42	43	5522.55	2	1886.33	5.3013	0.0400	0.0	1.74E-06	8.96E-05	5.47E-04	1.44E-03	2.54E-03
2	1	49	50	6961.20	1	1886.47	5.3009	0.0400	0.0	6.06E-06	9.85E-04	1.07E-02	4.00E-02	8.86E-02
3	2	37	38	6829.95	2	1886.52	5.3008	0.0400	0.0	0.0	1.46E-05	1.50E-04	5.44E-04	1.18E-03
6	5	29	30	12183.49	1	1886.86	5.2998	0.0400	0.0	0.0	0.0	3.73E-05	4.85E-04	2.46E-03
3	2	44	45	8140.98	1	1888.08	5.2964	0.0400	0.0	0.0	2.01E-04	3.50E-03	1.74E-02	4.64E-02
9	8	11	12	16686.27	1	1888.23	5.2960	0.0542	0.0	0.0	0.0	0.0	3.69E-06	3.86E-05
5	4	34	35	10738.94	1	1888.29	5.2958	0.0400	0.0	0.0	4.05E-06	1.99E-04	1.84E-03	7.47E-03
5	4	26	27	9569.48	2	1888.40	5.2955	0.0400	0.0	0.0	0.0	6.61E-06	4.61E-05	1.55E-04
4	3	39	40	9400.82	1	1888.69	5.2947	0.0400	0.0	0.0	3.17E-05	9.13E-04	6.12E-03	2.00E-02
7	6	23	24	13552.03	1	1888.81	5.2943	0.0412	0.0	0.0	0.0	6.49E-06	1.18E-04	7.48E-04
8	7	17	18	15063.96	1	1889.28	5.2930	0.0482	0.0	0.0	0.0	0.0	2.35E-05	1.90E-04
1	0	53	54	5655.77	1	1889.41	5.2927	0.0400	0.0	7.52E-05	4.30E-03	2.78E-02	7.59E-02	1.36E-01
7	6	14	15	12615.09	2	1889.53	5.2923	0.0517	0.0	0.0	0.0	0.0	1.91E-06	1.04E-05
6	5	20	21	11037.95	2	1889.67	5.2919	0.0447	0.0	0.0	0.0	1.06E-06	1.05E-05	4.45E-05
1	0	46	47	4117.99	2	1890.25	5.2903	0.0400	0.0	2.78E-05	4.65E-04	1.62E-03	3.05E-03	4.28E-03
4	3	31	32	8095.19	2	1890.31	5.2901	0.0400	0.0	0.0	2.16E-06	3.69E-05	1.81E-04	4.79E-04
2	1	41	42	5367.68	2	1891.22	5.2876	0.0400	0.0	2.47E-06	1.12E-04	6.45E-04	1.64E-03	2.81E-03
3	2	36	37	6693.98	2	1891.25	5.2875	0.0400	0.0	0.0	1.77E-05	1.73E-04	6.05E-04	1.28E-03
6	5	28	29	12044.05	1	1891.48	5.2869	0.0400	0.0	0.0	0.0	4.13E-05	5.22E-04	2.60E-03
2	1	48	49	6773.78	1	1891.82	5.2859	0.0400	0.0	9.33E-06	1.31E-03	1.32E-02	4.71E-02	1.01E-01
9	8	10	11	16643.52	1	1892.17	5.2849	0.0545	0.0	0.0	0.0	0.0	3.53E-06	3.67E-05
5	4	25	26	9474.20	2	1892.75	5.2833	0.0400	0.0	0.0	0.0	7.15E-06	4.87E-05	1.61E-04
5	4	33	34	10610.31	1	1893.09	5.2824	0.0400	0.0	0.0	4.84E-06	2.26E-04	2.03E-03	8.06E-03
7	6	22	23	13465.12	1	1893.21	5.2820	0.0423	0.0	0.0	0.0	6.91E-06	1.23E-04	7.70E-04
3	2	43	44	7973.35	1	1893.25	5.2819	0.0400	0.0	0.0	2.57E-04	4.20E-03	2.00E-02	5.21E-02
8	7	16	17	14999.30	1	1893.45	5.2814	0.0493	0.0	0.0	0.0	0.0	2.37E-05	1.90E-04
7	6	13	14	12562.97	2	1893.45	5.2814	0.0528	0.0	0.0	0.0	0.0	1.88E-06	1.02E-05
4	3	38	39	9252.79	1	1893.68	5.2807	0.0400	0.0	0.0	3.92E-05	1.06E-03	6.89E-03	2.20E-02
6	5	19	20	10964.39	2	1893.81	5.2804	0.0458	0.0	0.0	0.0	1.10E-06	1.07E-05	4.50E-05
4	3	30	31	7981.43	2	1894.84	5.2775	0.0400	0.0	0.0	2.52E-06	4.11E-05	1.96E-04	5.10E-04
1	0	52	53	5452.01	1	1894.90	5.2773	0.0400	0.0	1.21E-04	5.86E-03	3.49E-02	9.08E-02	1.58E-01
1	0	45	46	3947.55	2	1895.29	5.2762	0.0400	0.0	4.10E-05	5.98E-04	1.95E-03	3.53E-03	4.82E-03
3	2	35	36	6561.53	2	1895.94	5.2744	0.0400	0.0	0.0	2.13E-05	1.97E-04	6.69E-04	1.39E-03
6	5	27	28	11938.21	1	1896.07	5.2741	0.0400	0.0	0.0	0.0	4.53E-05	5.59E-04	2.74E-03
9	8	9	10	16604.34	1	1896.08	5.2740	0.0547	0.0	0.0	0.0	0.0	3.34E-06	3.45E-05
2	1	40	41	5216.33	2	1896.09	5.2740	0.0400	0.0	3.48E-06	1.40E-04	7.56E-04	1.86E-03	3.11E-03
5	4	24	25	9382.42	2	1897.07	5.2713	0.0400	0.0	0.0	0.0	7.70E-06	5.13E-05	1.67E-04
2	1	47	48	6589.98	1	1897.13	5.2711	0.0400	0.0	1.42E-05	1.72E-03	1.61E-02	5.51E-02	1.15E-01
7	6	12	13	12514.32	2	1897.34	5.2705	0.0540	0.0	0.0	0.0	0.0	1.83E-06	9.84E-06
7	6	21	22	13381.82	1	1897.58	5.2699	0.0435	0.0	0.0	0.0	7.32E-06	1.28E-04	7.89E-04
8	7	15	16	14938.22	1	1897.59	5.2698	0.0505	0.0	0.0	0.0	0.0	2.37E-05	1.88E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSOPPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	32	33	10485.30	1	1897.87	5.2691	0.0400	0.0	0.0	5.75E-06	2.56E-04	2.23E-03	8.67E-03
6	5	18	19	10894.32	2	1897.91	5.2690	0.0470	0.0	0.0	0.0	1.14E-06	1.09E-05	4.53E-05
3	2	42	43	7809.34	1	1898.39	5.2676	0.0400	0.0	1.02E-06	3.28E-04	5.00E-03	2.29E-02	5.82E-02
4	3	37	38	9108.38	1	1898.64	5.2669	0.0400	0.0	0.0	4.82E-05	1.24E-03	7.73E-03	2.42E-02
4	3	29	30	7871.18	2	1899.33	5.2650	0.0400	0.0	0.0	2.91E-06	4.55E-05	2.11E-04	5.40E-04
9	8	8	9	16568.71	1	1899.95	5.2633	0.0550	0.0	0.0	0.0	0.0	3.11E-06	3.20E-05
1	0	44	45	3780.65	2	1900.30	5.2623	0.0400	0.0	6.00E-05	7.66E-04	2.33E-03	4.06E-03	5.40E-03
1	0	51	52	5251.89	1	1900.36	5.2622	0.0400	0.0	1.91E-04	7.94E-03	4.36E-02	1.08E-01	1.83E-01
3	2	34	35	6432.60	2	1900.61	5.2615	0.0400	0.0	0.0	2.55E-05	2.25E-04	7.38E-04	1.50E-03
6	5	26	27	11835.99	1	1900.63	5.2614	0.0400	0.0	0.0	0.0	4.95E-05	5.96E-04	2.88E-03
2	1	39	40	5068.50	2	1900.93	5.2606	0.0400	0.0	4.85E-06	1.73E-04	8.82E-04	2.09E-03	3.42E-03
7	6	11	12	12469.13	2	1901.21	5.2598	0.0542	0.0	0.0	0.0	0.0	1.77E-06	9.44E-06
5	4	23	24	9294.14	2	1901.36	5.2594	0.0412	0.0	0.0	0.0	8.23E-06	5.37E-05	1.73E-04
8	7	14	15	14880.71	1	1901.70	5.2585	0.0517	0.0	0.0	0.0	0.0	2.35E-05	1.85E-04
7	6	20	21	13302.10	1	1901.91	5.2579	0.0447	0.0	0.0	0.0	7.71E-06	1.32E-04	8.05E-04
6	5	17	18	10827.74	2	1901.99	5.2577	0.0482	0.0	0.0	0.0	1.17E-06	1.11E-05	4.54E-05
2	1	46	47	6409.82	1	1902.42	5.2565	0.0400	0.0	2.15E-05	2.25E-03	1.96E-02	6.43E-02	1.31E-01
5	4	31	32	10363.92	1	1902.62	5.2559	0.0400	0.0	0.0	6.78E-06	2.87E-04	2.43E-03	9.28E-03
3	2	41	42	7648.97	1	1903.50	5.2535	0.0400	0.0	1.47E-06	4.14E-04	5.94E-03	2.62E-02	6.47E-02
4	3	36	37	8967.61	1	1903.57	5.2533	0.0400	0.0	0.0	5.89E-05	1.43E-03	8.64E-03	2.64E-02
9	8	7	8	16536.64	1	1903.79	5.2527	0.0574	0.0	0.0	0.0	0.0	2.86E-06	2.93E-05
4	3	28	29	7764.45	2	1903.80	5.2527	0.0400	0.0	0.0	3.35E-06	5.01E-05	2.27E-04	5.70E-04
7	6	10	11	12427.41	2	1905.04	5.2492	0.0545	0.0	0.0	0.0	0.0	1.69E-06	8.96E-06
6	5	25	26	11737.38	1	1905.15	5.2489	0.0400	0.0	0.0	0.0	5.38E-05	6.32E-04	3.01E-03
3	2	33	34	6307.19	2	1905.26	5.2486	0.0400	0.0	0.0	3.04E-05	2.54E-04	8.10E-04	1.62E-03
1	0	43	44	3617.28	2	1905.28	5.2486	0.0400	0.0	8.69E-05	9.74E-04	2.78E-03	4.65E-03	6.03E-03
5	4	22	23	9209.37	2	1905.62	5.2476	0.0423	0.0	0.0	0.0	8.75E-06	5.60E-05	1.77E-04
2	1	38	39	4924.21	2	1905.75	5.2473	0.0400	0.0	6.69E-06	2.13E-04	1.03E-03	2.35E-03	3.75E-03
8	7	13	14	14826.79	1	1905.77	5.2472	0.0528	0.0	0.0	0.0	0.0	2.31E-05	1.80E-04
1	0	50	51	5055.41	1	1905.79	5.2472	0.0400	0.0	3.01E-04	1.07E-02	5.43E-02	1.29E-01	2.10E-01
6	5	16	17	10764.64	2	1906.04	5.2465	0.0493	0.0	0.0	0.0	1.20E-06	1.11E-05	4.52E-05
7	6	19	20	13225.99	1	1906.21	5.2460	0.0458	0.0	0.0	0.0	8.06E-06	1.35E-04	8.17E-04
5	4	30	31	10246.16	1	1907.33	5.2429	0.0400	0.0	0.0	7.94E-06	3.21E-04	2.64E-03	9.90E-03
9	8	6	7	16508.13	1	1907.60	5.2422	0.0597	0.0	0.0	0.0	0.0	2.57E-06	2.63E-05
2	1	45	46	6233.30	1	1907.68	5.2420	0.0400	0.0	3.22E-05	2.93E-03	2.38E-02	7.48E-02	1.48E-01
4	3	27	28	7661.24	2	1908.24	5.2404	0.0400	0.0	0.0	3.82E-06	5.48E-05	2.42E-04	5.99E-04
4	3	35	36	8830.47	1	1908.47	5.2398	0.0400	0.0	0.0	7.14E-05	1.64E-03	9.61E-03	2.87E-02
3	2	40	41	7492.24	1	1908.58	5.2395	0.0400	0.0	2.09E-06	5.21E-04	7.01E-03	2.98E-02	7.18E-02
7	6	9	10	12389.16	2	1908.84	5.2388	0.0547	0.0	0.0	0.0	0.0	1.60E-06	8.42E-06
6	5	24	25	11642.38	1	1909.65	5.2366	0.0400	0.0	0.0	0.0	5.81E-05	6.68E-04	3.13E-03
8	7	12	13	14776.45	1	1909.81	5.2361	0.0540	0.0	0.0	0.0	0.0	2.26E-05	1.75E-04
5	4	21	22	9128.10	2	1909.85	5.2360	0.0435	0.0	0.0	0.0	9.25E-06	5.80E-05	1.82E-04
3	2	32	33	6185.32	2	1909.87	5.2360	0.0400	0.0	0.0	3.59E-05	2.86E-04	8.86E-04	1.73E-03
6	5	15	16	10705.04	2	1910.06	5.2354	0.0505	0.0	0.0	0.0	1.21E-06	1.11E-05	4.47E-05
1	0	42	43	3457.45	2	1910.24	5.2349	0.0400	0.0	1.25E-04	1.23E-03	3.30E-03	5.31E-03	6.72E-03
7	6	18	19	13153.48	1	1910.49	5.2343	0.0470	0.0	0.0	0.0	8.37E-06	1.38E-04	8.24E-04
2	1	37	38	4783.45	2	1910.53	5.2341	0.0400	0.0	9.15E-06	2.60E-04	1.18E-03	2.62E-03	4.10E-03
1	0	49	50	4862.58	1	1911.20	5.2323	0.0400	0.0	4.70E-04	1.43E-02	6.72E-02	1.52E-01	2.41E-01
9	8	5	6	16483.18	1	1911.37	5.2318	0.0621	0.0	0.0	0.0	0.0	2.26E-06	2.30E-05
5	4	29	30	10132.03	1	1912.02	5.2301	0.0400	0.0	0.0	9.24E-06	3.57E-04	2.86E-03	1.05E-02
7	6	8	9	12354.38	2	1912.60	5.2285	0.0550	0.0	0.0	0.0	0.0	1.49E-06	7.81E-06
4	3	26	27	7561.55	2	1912.65	5.2283	0.0400	0.0	0.0	4.33E-06	5.97E-05	2.58E-04	6.27E-04
2	1	44	45	6060.43	1	1912.91	5.2276	0.0400	0.0	4.77E-05	3.78E-03	2.87E-02	8.66E-02	1.66E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	34	35	8696.97	1	1913.34	5.2265	0.0400	0.0	0.0	8.61E-05	1.88E-03	1.06E-02	3.11E-02
3	2	39	40	7339.16	1	1913.63	5.2257	0.0400	0.0	2.95E-06	6.50E-04	8.23E-03	3.37E-02	7.94E-02
8	7	11	12	14729.70	1	1913.82	5.2252	0.0542	0.0	0.0	0.0	0.0	2.19E-05	1.68E-04
6	5	14	15	10648.93	2	1914.04	5.2246	0.0517	0.0	0.0	0.0	1.22E-06	1.10E-05	4.39E-05
5	4	20	21	9050.34	2	1914.05	5.2245	0.0447	0.0	0.0	0.0	9.71E-06	5.98E-05	1.85E-04
6	5	23	24	11551.01	1	1914.11	5.2244	0.0412	0.0	0.0	0.0	6.24E-05	7.01E-04	3.24E-03
3	2	31	32	6066.97	2	1914.46	5.2234	0.0400	0.0	0.0	4.21E-05	3.20E-04	9.64E-04	1.85E-03
7	6	17	18	13084.58	1	1914.73	5.2227	0.0482	0.0	0.0	0.0	8.63E-06	1.40E-04	8.27E-04
9	8	4	5	16461.79	1	1915.11	5.2216	0.0645	0.0	0.0	0.0	0.0	1.93E-06	1.95E-05
1	0	41	42	3301.17	2	1915.16	5.2215	0.0400	0.0	1.78E-04	1.55E-03	3.89E-03	6.04E-03	7.45E-03
2	1	36	37	4646.24	2	1915.29	5.2211	0.0400	0.0	1.24E-05	3.16E-04	1.36E-03	2.92E-03	4.47E-03
7	6	7	8	12323.08	2	1916.34	5.2183	0.0574	0.0	0.0	0.0	0.0	1.37E-06	7.13E-06
1	0	48	49	4673.40	1	1916.58	5.2176	0.0400	0.0	7.26E-04	1.90E-02	8.29E-02	1.79E-01	2.76E-01
5	4	28	29	10021.54	1	1916.67	5.2174	0.0400	0.0	0.0	1.07E-05	3.95E-04	3.08E-03	1.11E-02
4	3	25	26	7465.39	2	1917.03	5.2164	0.0400	0.0	0.0	4.87E-06	6.47E-05	2.73E-04	6.54E-04
8	7	10	11	14686.54	1	1917.80	5.2143	0.0545	0.0	0.0	0.0	0.0	2.09E-05	1.60E-04
6	5	13	14	10596.32	2	1918.00	5.2138	0.0528	0.0	0.0	0.0	1.21E-06	1.08E-05	4.29E-05
2	1	43	44	5891.22	1	1918.12	5.2134	0.0400	0.0	7.02E-05	4.85E-03	3.45E-02	9.98E-02	1.87E-01
4	3	33	34	8567.12	1	1918.18	5.2133	0.0400	0.0	0.0	1.03E-04	2.13E-03	1.17E-02	3.36E-02
5	4	19	20	8976.10	2	1918.22	5.2132	0.0458	0.0	0.0	0.0	1.01E-05	6.13E-05	1.87E-04
6	5	22	23	11463.27	1	1918.55	5.2123	0.0423	0.0	0.0	1.01E-06	6.65E-05	7.33E-04	3.34E-03
3	2	38	39	7189.73	1	1918.66	5.2120	0.0400	0.0	4.13E-06	8.06E-04	9.62E-03	3.80E-02	8.75E-02
9	8	3	4	16443.96	1	1918.81	5.2116	0.0676	0.0	0.0	0.0	0.0	1.57E-06	1.59E-05
7	6	16	17	13019.29	1	1918.93	5.2112	0.0493	0.0	0.0	0.0	8.83E-06	1.41E-04	8.25E-04
3	2	30	31	5952.17	2	1919.01	5.2110	0.0400	0.0	0.0	4.91E-05	3.56E-04	1.05E-03	1.97E-03
2	1	35	36	4512.58	2	1920.02	5.2083	0.0400	0.0	1.66E-05	3.82E-04	1.56E-03	3.24E-03	4.85E-03
7	6	6	7	12295.25	2	1920.04	5.2082	0.0597	0.0	0.0	0.0	0.0	1.23E-06	6.39E-06
1	0	40	41	3148.44	2	1920.07	5.2081	0.0400	0.0	2.51E-04	1.93E-03	4.58E-03	6.85E-03	8.24E-03
5	4	27	28	9914.69	1	1921.30	5.2048	0.0400	0.0	0.0	1.23E-05	4.35E-04	3.30E-03	1.17E-02
4	3	24	25	7372.76	2	1921.38	5.2046	0.0400	0.0	0.0	5.44E-06	6.97E-05	2.87E-04	6.79E-04
8	7	9	10	14646.97	1	1921.74	5.2036	0.0547	0.0	0.0	0.0	0.0	1.98E-05	1.50E-04
6	5	12	13	10547.20	2	1921.92	5.2031	0.0540	0.0	0.0	0.0	1.20E-06	1.06E-05	4.15E-05
1	0	47	48	4487.89	1	1921.93	5.2031	0.0400	0.0	1.11E-03	2.51E-02	1.02E-01	2.10E-01	3.14E-01
5	4	18	19	8905.38	2	1922.36	5.2019	0.0470	0.0	0.0	0.0	1.05E-05	6.25E-05	1.89E-04
9	8	2	3	16429.71	1	1922.48	5.2016	0.0707	0.0	0.0	0.0	0.0	1.20E-06	1.21E-05
6	5	21	22	11379.15	1	1922.95	5.2003	0.0435	0.0	0.0	1.11E-06	7.06E-05	7.62E-04	3.42E-03
4	3	32	33	8440.93	1	1922.99	5.2002	0.0400	0.0	0.0	1.23E-04	2.41E-03	1.29E-02	3.62E-02
7	6	15	16	12957.61	1	1923.11	5.1999	0.0505	0.0	0.0	0.0	8.96E-06	1.41E-04	8.17E-04
2	1	42	43	5725.68	1	1923.29	5.1994	0.0400	0.0	1.02E-04	6.19E-03	4.12E-02	1.15E-01	2.09E-01
3	2	29	30	5840.91	2	1923.54	5.1987	0.0400	0.0	0.0	5.68E-05	3.95E-04	1.13E-03	2.09E-03
3	2	37	38	7043.96	1	1923.65	5.1985	0.0400	0.0	5.71E-06	9.94E-04	1.12E-02	4.27E-02	9.60E-02
7	6	5	6	12270.90	2	1923.72	5.1983	0.0621	0.0	0.0	0.0	0.0	1.08E-06	5.60E-06
2	1	34	35	4382.47	2	1924.72	5.1956	0.0400	0.0	2.21E-05	4.58E-04	1.78E-03	3.57E-03	5.24E-03
1	0	39	40	2999.27	2	1924.94	5.1950	0.0400	0.0	3.50E-04	2.40E-03	5.35E-03	7.73E-03	9.08E-03
8	7	8	9	14610.99	1	1925.65	5.1931	0.0550	0.0	0.0	0.0	0.0	1.85E-05	1.39E-04
4	3	23	24	7283.66	2	1925.70	5.1929	0.0412	0.0	0.0	6.03E-06	7.46E-05	3.01E-04	7.02E-04
6	5	11	12	10501.59	2	1925.82	5.1926	0.0542	0.0	0.0	0.0	1.17E-06	1.02E-05	3.98E-05
5	4	26	27	9811.48	1	1925.89	5.1924	0.0400	0.0	0.0	1.40E-05	4.75E-04	3.53E-03	1.23E-02
9	8	1	2	16419.01	1	1926.12	5.1918	0.0738	0.0	0.0	0.0	0.0	0.0	8.13E-06
5	4	17	18	8838.17	2	1926.47	5.1908	0.0482	0.0	0.0	0.0	1.08E-05	6.33E-05	1.89E-04
7	6	14	15	12899.54	1	1927.25	5.1887	0.0517	0.0	0.0	0.0	9.03E-06	1.40E-04	8.04E-04
1	0	46	47	4306.05	1	1927.25	5.1887	0.0400	0.0	1.69E-03	3.29E-02	1.24E-01	2.46E-01	3.57E-01
6	5	20	21	11298.67	1	1927.32	5.1886	0.0447	0.0	0.0	1.20E-06	7.43E-05	7.87E-04	3.49E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	4	5	12250.03	2	1927.36	5.1884	0.0645	0.0	0.0	0.0	0.0	0.0	4.75E-06
4	3	31	32	8318.38	1	1927.78	5.1873	0.0400	0.0	0.0	1.45E-04	2.72E-03	1.41E-02	3.88E-02
3	2	28	29	5733.20	2	1928.04	5.1866	0.0400	0.0	1.07E-06	6.54E-05	4.35E-04	1.21E-03	2.21E-03
2	1	41	42	5563.80	1	1928.44	5.1855	0.0400	0.0	1.47E-04	7.85E-03	4.90E-02	1.31E-01	2.33E-01
3	2	36	37	6901.85	1	1928.62	5.1851	0.0400	0.0	7.83E-06	1.22E-03	1.29E-02	4.78E-02	1.05E-01
2	1	33	34	4255.91	2	1929.40	5.1830	0.0400	0.0	2.92E-05	5.45E-04	2.01E-03	3.97E-03	5.65E-03
8	7	7	8	14578.61	1	1929.52	5.1826	0.0574	0.0	0.0	0.0	0.0	1.70E-05	1.27E-04
6	5	10	11	10459.48	2	1929.68	5.1822	0.0545	0.0	0.0	0.0	1.13E-06	9.76E-06	3.78E-05
9	8	0	1	16411.88	1	1929.72	5.1821	0.0769	0.0	0.0	0.0	0.0	0.0	4.10E-06
1	0	38	39	2853.67	2	1929.79	5.1819	0.0400	1.06E-06	4.85E-04	2.95E-03	6.22E-03	8.68E-03	9.97E-03
4	3	22	23	7198.11	2	1930.00	5.1813	0.0423	0.0	0.0	6.64E-06	7.94E-05	3.14E-04	7.22E-04
5	4	25	26	9711.93	1	1930.45	5.1801	0.0400	0.0	0.0	1.58E-05	5.17E-04	3.74E-03	1.29E-02
5	4	16	17	8774.49	2	1930.55	5.1799	0.0493	0.0	0.0	0.0	1.10E-05	6.36E-05	1.88E-04
7	6	3	4	12232.63	2	1930.97	5.1787	0.0676	0.0	0.0	0.0	0.0	0.0	3.86E-06
7	6	13	14	12845.10	1	1931.36	5.1777	0.0528	0.0	0.0	0.0	9.01E-06	1.38E-04	7.86E-04
6	5	19	20	11221.82	1	1931.66	5.1769	0.0458	0.0	0.0	1.30E-06	7.78E-05	8.09E-04	3.55E-03
3	2	27	28	5629.04	2	1932.52	5.1746	0.0400	0.0	1.33E-06	7.48E-05	4.77E-04	1.30E-03	2.32E-03
4	3	30	31	8199.50	1	1932.53	5.1746	0.0400	0.0	0.0	1.70E-04	3.04E-03	1.53E-02	4.14E-02
1	0	45	46	4127.89	1	1932.55	5.1745	0.0400	0.0	2.54E-03	4.29E-02	1.51E-01	2.86E-01	4.04E-01
8	7	6	7	14549.82	1	1933.36	5.1723	0.0597	0.0	0.0	0.0	0.0	1.53E-05	1.14E-04
6	5	9	10	10420.87	2	1933.51	5.1719	0.0547	0.0	0.0	0.0	1.08E-06	9.22E-06	3.55E-05
3	2	35	36	6763.42	1	1933.55	5.1718	0.0400	0.0	1.06E-05	1.48E-03	1.49E-02	5.32E-02	1.14E-01
2	1	40	41	5405.60	1	1933.56	5.1718	0.0400	0.0	2.11E-04	9.89E-03	5.79E-02	1.49E-01	2.58E-01
2	1	32	33	4132.93	2	1934.05	5.1705	0.0400	0.0	3.81E-05	6.45E-04	2.27E-03	4.30E-03	6.06E-03
4	3	21	22	7116.09	2	1934.26	5.1699	0.0435	0.0	0.0	7.25E-06	8.39E-05	3.26E-04	7.39E-04
7	6	2	3	12218.71	2	1934.54	5.1692	0.0707	0.0	0.0	0.0	0.0	0.0	2.93E-06
5	4	15	16	8714.33	2	1934.60	5.1690	0.0505	0.0	0.0	0.0	1.12E-05	6.36E-05	1.86E-04
1	0	37	38	2711.64	2	1934.61	5.1690	0.0400	2.04E-06	6.65E-04	3.62E-03	7.20E-03	9.72E-03	1.09E-02
5	4	24	25	9616.03	1	1934.99	5.1680	0.0400	0.0	0.0	1.77E-05	5.59E-04	3.96E-03	1.34E-02
7	6	12	13	12794.27	1	1935.43	5.1668	0.0540	0.0	0.0	0.0	8.91E-06	1.35E-04	7.62E-04
6	5	18	19	11148.61	1	1935.97	5.1654	0.0470	0.0	0.0	1.39E-06	8.08E-05	8.26E-04	3.58E-03
9	8	1	0	16408.32	1	1936.81	5.1631	0.0769	0.0	0.0	0.0	0.0	0.0	4.12E-06
3	2	26	27	5528.43	2	1936.96	5.1627	0.0400	0.0	1.64E-06	8.48E-05	5.21E-04	1.38E-03	2.43E-03
8	7	5	6	14524.62	1	1937.17	5.1622	0.0621	0.0	0.0	0.0	0.0	1.35E-05	1.00E-04
4	3	29	30	8084.29	1	1937.25	5.1620	0.0400	0.0	0.0	1.98E-04	3.39E-03	1.66E-02	4.41E-02
6	5	8	9	10385.77	2	1937.31	5.1618	0.0550	0.0	0.0	0.0	1.01E-06	8.60E-06	3.29E-05
1	0	44	45	3953.41	1	1937.82	5.1604	0.0400	0.0	3.78E-03	5.56E-02	1.82E-01	3.32E-01	4.55E-01
7	6	1	2	12208.27	2	1938.09	5.1597	0.0738	0.0	0.0	0.0	0.0	0.0	1.98E-06
3	2	34	35	6628.66	1	1938.46	5.1587	0.0400	0.0	1.43E-05	1.79E-03	1.71E-02	5.90E-02	1.24E-01
4	3	20	21	7037.61	2	1938.49	5.1587	0.0447	0.0	0.0	7.86E-06	8.82E-05	3.36E-04	7.53E-04
5	4	14	15	8657.70	2	1938.62	5.1583	0.0517	0.0	0.0	0.0	1.12E-05	6.31E-05	1.83E-04
2	1	39	40	5251.08	1	1938.64	5.1583	0.0400	0.0	2.98E-04	1.24E-02	6.81E-02	1.69E-01	2.86E-01
2	1	31	32	4013.51	2	1938.67	5.1582	0.0400	0.0	4.92E-05	7.59E-04	2.54E-03	4.68E-03	6.48E-03
1	0	36	37	2573.18	2	1939.40	5.1562	0.0400	3.86E-06	9.04E-04	4.41E-03	8.30E-03	1.08E-02	1.19E-02
7	6	11	12	12747.07	1	1939.48	5.1560	0.0542	0.0	0.0	0.0	8.72E-06	1.31E-04	7.32E-04
5	4	23	24	9523.78	1	1939.49	5.1560	0.0412	0.0	0.0	1.98E-05	6.01E-04	4.16E-03	1.39E-02
6	5	17	18	11079.05	1	1940.24	5.1540	0.0482	0.0	0.0	1.48E-06	8.34E-05	8.39E-04	3.60E-03
9	8	2	1	16411.88	1	1940.31	5.1538	0.0738	0.0	0.0	0.0	0.0	0.0	8.24E-06
8	7	4	5	14503.03	1	1940.94	5.1521	0.0645	0.0	0.0	0.0	0.0	1.15E-05	8.50E-05
6	5	7	8	10354.17	2	1941.08	5.1518	0.0574	0.0	0.0	0.0	0.0	7.90E-06	3.01E-05
3	2	25	26	5431.39	2	1941.37	5.1510	0.0400	0.0	2.00E-06	9.56E-05	5.64E-04	1.46E-03	2.54E-03
7	6	0	1	12201.31	2	1941.60	5.1504	0.0769	0.0	0.0	0.0	0.0	0.0	9.95E-07
4	3	28	29	7972.75	1	1941.94	5.1495	0.0400	0.0	0.0	2.30E-04	3.75E-03	1.79E-02	4.67E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	13	14	8604.60	2	1942.61	5.1477	0.0528	0.0	0.0	0.0	1.12E-05	6.21E-05	1.79E-04
4	3	19	20	6962.68	2	1942.70	5.1475	0.0458	0.0	0.0	8.46E-06	9.21E-05	3.44E-04	7.63E-04
1	0	43	44	3782.62	1	1943.06	5.1465	0.0400	1.31E-06	5.57E-03	7.16E-02	2.19E-01	3.83E-01	5.12E-01
2	1	30	31	3897.66	2	1943.26	5.1460	0.0400	0.0	6.30E-05	8.86E-04	2.83E-03	5.08E-03	6.90E-03
3	2	33	34	6497.59	1	1943.34	5.1458	0.0400	0.0	1.91E-05	2.14E-03	1.94E-02	6.51E-02	1.34E-01
7	6	10	11	12703.48	1	1943.49	5.1454	0.0545	0.0	0.0	0.0	8.43E-06	1.25E-04	6.96E-04
2	1	38	39	5100.25	1	1943.70	5.1448	0.0400	0.0	4.18E-04	1.54E-02	7.98E-02	1.91E-01	3.15E-01
9	8	3	2	16419.01	1	1943.77	5.1446	0.0707	0.0	0.0	0.0	0.0	1.22E-06	1.23E-05
5	4	22	23	9435.20	1	1943.96	5.1441	0.0423	0.0	0.0	2.19E-05	6.42E-04	4.35E-03	1.43E-02
1	0	35	36	2438.31	2	1944.16	5.1436	0.0400	7.18E-06	1.22E-03	5.33E-03	9.51E-03	1.20E-02	1.29E-02
6	5	16	17	11013.12	1	1944.48	5.1428	0.0493	0.0	0.0	1.55E-06	8.54E-05	8.46E-04	3.59E-03
8	7	3	4	14485.03	1	1944.68	5.1422	0.0676	0.0	0.0	0.0	0.0	9.35E-06	6.91E-05
6	5	6	7	10326.08	2	1944.82	5.1419	0.0597	0.0	0.0	0.0	0.0	7.11E-06	2.70E-05
3	2	24	25	5337.91	2	1945.76	5.1394	0.0400	0.0	2.41E-06	1.07E-04	6.08E-04	1.54E-03	2.64E-03
5	4	12	13	8555.02	2	1946.57	5.1372	0.0540	0.0	0.0	0.0	1.11E-05	6.06E-05	1.73E-04
4	3	27	28	7864.89	1	1946.60	5.1372	0.0400	0.0	0.0	2.64E-04	4.13E-03	1.92E-02	4.93E-02
4	3	18	19	6891.30	2	1946.87	5.1364	0.0470	0.0	0.0	9.02E-06	9.55E-05	3.51E-04	7.70E-04
9	8	4	3	16429.71	1	1947.19	5.1356	0.0676	0.0	0.0	0.0	0.0	1.62E-06	1.63E-05
7	6	9	10	12663.53	1	1947.46	5.1349	0.0547	0.0	0.0	0.0	8.06E-06	1.19E-04	6.55E-04
2	1	29	30	3785.38	2	1947.82	5.1339	0.0400	0.0	8.00E-05	1.03E-03	3.14E-03	5.49E-03	7.32E-03
3	2	32	33	6370.20	1	1948.19	5.1330	0.0400	0.0	2.52E-05	2.56E-03	2.20E-02	7.16E-02	1.45E-01
1	0	42	43	3615.54	1	1948.27	5.1328	0.0400	2.85E-06	8.15E-03	9.15E-02	2.62E-01	4.41E-01	5.73E-01
8	7	2	3	14470.63	1	1948.38	5.1325	0.0707	0.0	0.0	0.0	0.0	7.12E-06	5.25E-05
5	4	21	22	9350.27	1	1948.39	5.1324	0.0435	0.0	0.0	2.40E-05	6.81E-04	4.53E-03	1.47E-02
6	5	5	6	10301.50	2	1948.53	5.1321	0.0621	0.0	0.0	0.0	0.0	6.25E-06	2.36E-05
7	6	1	0	12197.83	2	1948.53	5.1321	0.0769	0.0	0.0	0.0	0.0	0.0	1.00E-06
6	5	15	16	10950.85	1	1948.69	5.1317	0.0505	0.0	0.0	1.62E-06	8.68E-05	8.47E-04	3.56E-03
2	1	37	38	4953.12	1	1948.74	5.1315	0.0400	0.0	5.80E-04	1.90E-02	9.29E-02	2.15E-01	3.46E-01
1	0	34	35	2307.02	2	1948.90	5.1311	0.0400	1.31E-05	1.62E-03	6.40E-03	1.08E-02	1.33E-02	1.40E-02
3	2	23	24	5247.99	2	1950.11	5.1279	0.0412	0.0	2.87E-06	1.19E-04	6.52E-04	1.62E-03	2.73E-03
5	4	11	12	8508.98	2	1950.49	5.1269	0.0542	0.0	0.0	0.0	1.08E-05	5.86E-05	1.66E-04
9	8	5	4	16443.96	1	1950.58	5.1267	0.0645	0.0	0.0	0.0	0.0	2.00E-06	2.02E-05
4	3	17	18	6823.48	2	1951.01	5.1256	0.0482	0.0	0.0	9.54E-06	9.83E-05	3.56E-04	7.72E-04
4	3	26	27	7760.70	1	1951.23	5.1250	0.0400	0.0	0.0	3.01E-04	4.52E-03	2.05E-02	5.18E-02
7	6	8	9	12627.20	1	1951.41	5.1245	0.0550	0.0	0.0	0.0	7.59E-06	1.11E-04	6.08E-04
7	6	2	1	12201.31	2	1951.94	5.1231	0.0738	0.0	0.0	0.0	0.0	0.0	2.00E-06
8	7	1	2	14459.83	1	1952.05	5.1228	0.0738	0.0	0.0	0.0	0.0	4.81E-06	3.54E-05
6	5	4	5	10280.43	2	1952.20	5.1224	0.0645	0.0	0.0	0.0	0.0	5.33E-06	2.01E-05
2	1	28	29	3676.69	2	1952.35	5.1220	0.0400	0.0	1.01E-04	1.18E-03	3.47E-03	5.90E-03	7.74E-03
5	4	20	21	9269.02	1	1952.80	5.1209	0.0447	0.0	0.0	2.62E-05	7.18E-04	4.68E-03	1.50E-02
6	5	14	15	10892.23	1	1952.87	5.1207	0.0517	0.0	0.0	1.67E-06	8.75E-05	8.41E-04	3.50E-03
3	2	31	32	6246.50	1	1953.00	5.1203	0.0400	0.0	3.29E-05	3.03E-03	2.48E-02	7.83E-02	1.55E-01
1	0	41	42	3452.15	1	1953.45	5.1191	0.0400	6.11E-06	1.18E-02	1.16E-01	3.12E-01	5.05E-01	6.39E-01
1	0	33	34	2179.32	2	1953.61	5.1187	0.0400	2.35E-05	2.15E-03	7.64E-03	1.23E-02	1.46E-02	1.51E-02
2	1	36	37	4809.68	1	1953.74	5.1184	0.0400	0.0	7.99E-04	2.33E-02	1.08E-01	2.41E-01	3.79E-01
9	8	6	5	16461.79	1	1953.93	5.1179	0.0621	0.0	0.0	0.0	0.0	2.36E-06	2.39E-05
5	4	10	11	8466.48	2	1954.39	5.1167	0.0545	0.0	0.0	0.0	1.04E-05	5.60E-05	1.58E-04
3	2	22	23	5161.65	2	1954.44	5.1166	0.0423	0.0	3.39E-06	1.31E-04	6.95E-04	1.69E-03	2.81E-03
4	3	16	17	6759.20	2	1955.13	5.1147	0.0493	0.0	0.0	1.00E-05	1.01E-04	3.58E-04	7.69E-04
7	6	7	8	12594.50	1	1955.32	5.1143	0.0574	0.0	0.0	0.0	7.03E-06	1.02E-04	5.56E-04
7	6	3	2	12208.27	2	1955.32	5.1143	0.0707	0.0	0.0	0.0	0.0	0.0	2.99E-06
8	7	0	1	14452.63	1	1955.69	5.1133	0.0769	0.0	0.0	0.0	0.0	2.42E-06	1.78E-05
4	3	25	26	7660.20	1	1955.82	5.1129	0.0400	0.0	1.20E-06	3.41E-04	4.92E-03	2.18E-02	5.42E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	3	4	10262.87	2	1955.84	5.1129	0.0676	0.0	0.0	0.0	0.0	4.34E-06	1.63E-05
2	1	27	28	3571.58	2	1956.86	5.1102	0.0400	0.0	1.25E-04	1.36E-03	3.81E-03	6.32E-03	8.15E-03
6	5	13	14	10837.26	1	1957.01	5.1098	0.0528	0.0	0.0	1.70E-06	8.74E-05	8.30E-04	3.42E-03
5	4	19	20	9191.44	1	1957.17	5.1094	0.0458	0.0	0.0	2.83E-05	7.52E-04	4.81E-03	1.53E-02
9	8	7	6	16483.18	1	1957.25	5.1092	0.0597	0.0	0.0	0.0	0.0	2.70E-06	2.75E-05
3	2	30	31	6126.50	1	1957.79	5.1078	0.0400	0.0	4.25E-05	3.56E-03	2.78E-02	8.53E-02	1.66E-01
5	4	9	10	8427.51	2	1958.25	5.1066	0.0547	0.0	0.0	0.0	9.96E-06	5.30E-05	1.48E-04
1	0	32	33	2055.22	2	1958.29	5.1065	0.0400	4.15E-05	2.81E-03	9.06E-03	1.39E-02	1.60E-02	1.62E-02
1	0	40	41	3292.48	1	1958.60	5.1057	0.0400	1.28E-05	1.69E-02	1.47E-01	3.70E-01	5.76E-01	7.11E-01
7	6	4	3	12218.71	2	1958.67	5.1055	0.0676	0.0	0.0	0.0	0.0	0.0	3.96E-06
2	1	35	36	4669.95	1	1958.71	5.1054	0.0400	0.0	1.09E-03	2.84E-02	1.24E-01	2.69E-01	4.14E-01
3	2	21	22	5078.88	2	1958.73	5.1053	0.0435	0.0	3.96E-06	1.43E-04	7.35E-04	1.75E-03	2.87E-03
7	6	6	7	12565.43	1	1959.19	5.1041	0.0597	0.0	0.0	0.0	6.38E-06	9.17E-05	4.99E-04
4	3	15	16	6698.49	2	1959.21	5.1041	0.0505	0.0	0.0	1.04E-05	1.02E-04	3.58E-04	7.61E-04
6	5	2	3	10248.82	2	1959.45	5.1035	0.0707	0.0	0.0	0.0	0.0	3.30E-06	1.24E-05
4	3	24	25	7563.39	1	1960.39	5.1010	0.0400	0.0	1.45E-06	3.84E-04	5.33E-03	2.31E-02	5.65E-02
9	8	8	7	16508.13	1	1960.53	5.1007	0.0574	0.0	0.0	0.0	0.0	3.02E-06	3.08E-05
6	5	12	13	10785.94	1	1961.12	5.0991	0.0540	0.0	0.0	1.72E-06	8.64E-05	8.11E-04	3.32E-03
2	1	26	27	3470.06	2	1961.33	5.0986	0.0400	0.0	1.54E-04	1.54E-03	4.16E-03	6.74E-03	8.55E-03
5	4	18	19	9117.53	1	1961.51	5.0981	0.0470	0.0	0.0	3.03E-05	7.82E-04	4.92E-03	1.54E-02
7	6	5	4	12232.63	2	1961.99	5.0969	0.0645	0.0	0.0	0.0	0.0	0.0	4.91E-06
5	4	8	9	8392.08	2	1962.09	5.0966	0.0550	0.0	0.0	0.0	9.37E-06	4.94E-05	1.38E-04
3	2	29	30	6010.21	1	1962.55	5.0954	0.0400	0.0	5.44E-05	4.15E-03	3.10E-02	9.25E-02	1.77E-01
8	7	1	0	14449.03	1	1962.85	5.0946	0.0769	0.0	0.0	0.0	0.0	2.44E-06	1.79E-05
1	0	31	32	1934.72	2	1962.94	5.0944	0.0400	7.18E-05	3.64E-03	1.07E-02	1.56E-02	1.75E-02	1.73E-02
3	2	20	21	4999.68	2	1963.00	5.0942	0.0447	0.0	4.58E-06	1.55E-04	7.73E-04	1.81E-03	2.93E-03
6	5	1	2	10238.29	2	1963.03	5.0942	0.0738	0.0	0.0	0.0	0.0	2.23E-06	8.35E-06
7	6	5	6	12539.99	1	1963.03	5.0942	0.0621	0.0	0.0	0.0	5.64E-06	8.07E-05	4.37E-04
4	3	14	15	6641.34	2	1963.26	5.0936	0.0517	0.0	0.0	1.07E-05	1.03E-04	3.55E-04	7.49E-04
2	1	34	35	4533.94	1	1963.65	5.0926	0.0400	0.0	1.47E-03	3.44E-02	1.42E-01	2.98E-01	4.49E-01
1	0	39	40	3136.53	1	1963.73	5.0923	0.0400	2.65E-05	2.40E-02	1.84E-01	4.36E-01	6.54E-01	7.88E-01
9	8	9	8	16536.64	1	1963.78	5.0922	0.0550	0.0	0.0	0.0	0.0	3.31E-06	3.40E-05
4	3	23	24	7470.27	1	1964.93	5.0892	0.0412	0.0	1.75E-06	4.28E-04	5.73E-03	2.43E-02	5.85E-02
6	5	11	12	10738.28	1	1965.20	5.0885	0.0542	0.0	0.0	1.71E-06	8.46E-05	7.85E-04	3.19E-03
7	6	6	5	12250.03	2	1965.27	5.0884	0.0621	0.0	0.0	0.0	0.0	1.13E-06	5.82E-06
2	1	25	26	3372.13	2	1965.78	5.0870	0.0400	0.0	1.88E-04	1.74E-03	4.51E-03	7.14E-03	8.92E-03
5	4	17	18	9047.30	1	1965.82	5.0869	0.0482	0.0	0.0	3.21E-05	8.08E-04	5.00E-03	1.55E-02
5	4	7	8	8360.19	2	1965.89	5.0868	0.0574	0.0	0.0	0.0	8.67E-06	4.54E-05	1.26E-04
8	7	2	1	14452.63	1	1966.38	5.0855	0.0738	0.0	0.0	0.0	0.0	4.87E-06	3.59E-05
6	5	0	1	10231.26	2	1966.57	5.0850	0.0769	0.0	0.0	0.0	0.0	1.12E-06	4.21E-06
7	6	4	5	12518.18	1	1966.84	5.0843	0.0645	0.0	0.0	0.0	4.84E-06	6.88E-05	3.71E-04
9	8	10	9	16568.71	1	1966.99	5.0839	0.0547	0.0	0.0	0.0	0.0	3.57E-06	3.69E-05
3	2	19	20	4924.07	2	1967.24	5.0833	0.0458	0.0	5.24E-06	1.67E-04	8.08E-04	1.86E-03	2.97E-03
3	2	28	29	5897.62	1	1967.27	5.0832	0.0400	0.0	6.91E-05	4.82E-03	3.44E-02	9.99E-02	1.87E-01
4	3	13	14	6587.74	2	1967.28	5.0832	0.0528	0.0	0.0	1.09E-05	1.02E-04	3.50E-04	7.31E-04
1	0	30	31	1817.82	2	1967.56	5.0824	0.0400	1.22E-04	4.68E-03	1.25E-02	1.74E-02	1.90E-02	1.85E-02
7	6	7	6	12270.90	2	1968.52	5.0800	0.0597	0.0	0.0	0.0	0.0	1.29E-06	6.69E-06
2	1	33	34	4401.64	1	1968.56	5.0799	0.0400	0.0	1.96E-03	4.14E-02	1.62E-01	3.30E-01	4.87E-01
1	0	38	39	2984.30	1	1968.82	5.0792	0.0400	5.37E-05	3.38E-02	2.30E-01	5.12E-01	7.39E-01	8.70E-01
6	5	10	11	10694.28	1	1969.25	5.0781	0.0545	0.0	0.0	1.69E-06	8.19E-05	7.52E-04	3.04E-03
4	3	22	23	7380.84	1	1969.43	5.0776	0.0423	0.0	2.08E-06	4.75E-04	6.13E-03	2.54E-02	6.04E-02
5	4	6	7	8331.84	2	1969.66	5.0770	0.0597	0.0	0.0	0.0	7.86E-06	4.09E-05	1.13E-04
8	7	3	2	14459.83	1	1969.88	5.0765	0.0707	0.0	0.0	0.0	0.0	7.27E-06	5.36E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	16	17	8980.75	1	1970.10	5.0759	0.0493	0.0	0.0	3.38E-05	8.28E-04	5.04E-03	1.55E-02
9	8	11	10	16604.34	1	1970.16	5.0757	0.0545	0.0	0.0	0.0	0.0	3.80E-06	3.95E-05
2	1	24	25	3277.80	2	1970.20	5.0756	0.0400	0.0	2.27E-04	1.95E-03	4.87E-03	7.54E-03	9.28E-03
7	6	3	4	12500.01	1	1970.62	5.0745	0.0676	0.0	0.0	0.0	3.96E-06	5.61E-05	3.02E-04
4	3	12	13	6537.71	2	1971.27	5.0729	0.0540	0.0	0.0	1.10E-05	1.01E-04	3.42E-04	7.08E-04
3	2	18	19	4852.04	2	1971.44	5.0724	0.0470	0.0	5.92E-06	1.79E-04	8.39E-04	1.89E-03	3.00E-03
7	6	8	7	12295.25	2	1971.73	5.0717	0.0574	0.0	0.0	0.0	0.0	1.44E-06	7.51E-06
3	2	27	28	5788.74	1	1971.97	5.0711	0.0400	0.0	8.67E-05	5.54E-03	3.79E-02	1.07E-01	1.98E-01
1	0	29	30	1704.53	2	1972.16	5.0706	0.0400	2.03E-04	5.94E-03	1.45E-02	1.93E-02	2.05E-02	1.96E-02
6	5	9	10	10653.94	1	1973.26	5.0678	0.0547	0.0	0.0	1.64E-06	7.83E-05	7.12E-04	2.86E-03
9	8	12	11	16643.52	1	1973.30	5.0677	0.0542	0.0	0.0	0.0	0.0	4.00E-06	4.18E-05
8	7	4	3	14470.63	1	1973.34	5.0676	0.0676	0.0	0.0	0.0	0.0	9.62E-06	7.10E-05
5	4	5	6	8307.03	2	1973.40	5.0674	0.0621	0.0	0.0	0.0	6.95E-06	3.59E-05	9.89E-05
2	1	32	33	4273.06	1	1973.45	5.0673	0.0400	0.0	2.59E-03	4.94E-02	1.84E-01	3.63E-01	5.25E-01
6	5	1	0	10227.75	2	1973.57	5.0670	0.0769	0.0	0.0	0.0	0.0	1.13E-06	4.23E-06
1	0	37	38	2835.80	1	1973.89	5.0661	0.0400	1.07E-04	4.71E-02	2.84E-01	5.97E-01	8.33E-01	9.57E-01
4	3	21	22	7295.12	1	1973.90	5.0661	0.0435	0.0	2.45E-06	5.22E-04	6.51E-03	2.65E-02	6.21E-02
5	4	15	16	8917.88	1	1974.34	5.0650	0.0505	0.0	0.0	3.53E-05	8.42E-04	5.05E-03	1.53E-02
7	6	2	3	12485.47	1	1974.36	5.0649	0.0707	0.0	0.0	0.0	3.03E-06	4.27E-05	2.30E-04
2	1	23	24	3187.07	2	1974.59	5.0643	0.0412	0.0	2.72E-04	2.17E-03	5.22E-03	7.91E-03	9.60E-03
7	6	9	8	12323.08	2	1974.91	5.0635	0.0550	0.0	0.0	0.0	0.0	1.58E-06	8.28E-06
4	3	11	12	6491.25	2	1975.23	5.0627	0.0542	0.0	0.0	1.09E-05	9.88E-05	3.30E-04	6.80E-04
3	2	17	18	4783.59	2	1975.62	5.0617	0.0482	0.0	6.62E-06	1.89E-04	8.64E-04	1.92E-03	3.01E-03
9	8	13	12	16686.27	1	1976.40	5.0597	0.0540	0.0	0.0	0.0	0.0	4.17E-06	4.38E-05
3	2	26	27	5683.57	1	1976.63	5.0591	0.0400	0.0	1.08E-04	6.34E-03	4.16E-02	1.15E-01	2.08E-01
1	0	28	29	1594.85	2	1976.72	5.0589	0.0400	3.33E-04	7.49E-03	1.67E-02	2.14E-02	2.21E-02	2.08E-02
8	7	5	4	14485.03	1	1976.76	5.0588	0.0645	0.0	0.0	0.0	0.0	1.19E-05	8.79E-05
6	5	2	1	10231.26	2	1977.01	5.0581	0.0738	0.0	0.0	0.0	0.0	2.26E-06	8.46E-06
5	4	4	5	8285.77	2	1977.10	5.0579	0.0645	0.0	0.0	0.0	5.95E-06	3.06E-05	8.40E-05
6	5	8	9	10617.26	1	1977.24	5.0576	0.0550	0.0	0.0	1.57E-06	7.38E-05	6.65E-04	2.65E-03
7	6	10	9	12354.38	2	1978.06	5.0555	0.0547	0.0	0.0	0.0	0.0	1.71E-06	8.99E-06
7	6	1	2	12474.57	1	1978.06	5.0555	0.0738	0.0	0.0	0.0	2.05E-06	2.88E-05	1.55E-04
2	1	31	32	4148.21	1	1978.30	5.0548	0.0400	0.0	3.40E-03	5.86E-02	2.08E-01	3.97E-01	5.63E-01
4	3	20	21	7213.10	1	1978.34	5.0547	0.0447	0.0	2.85E-06	5.69E-04	6.87E-03	2.74E-02	6.34E-02
5	4	14	15	8858.70	1	1978.56	5.0542	0.0517	0.0	0.0	3.64E-05	8.49E-04	5.02E-03	1.51E-02
1	0	36	37	2691.03	1	1978.92	5.0533	0.0400	2.09E-04	6.50E-02	3.49E-01	6.93E-01	9.34E-01	1.05E 00
2	1	22	23	3099.94	2	1978.94	5.0532	0.0423	0.0	3.21E-04	2.39E-03	5.57E-03	8.26E-03	9.89E-03
4	3	10	11	6448.35	2	1979.16	5.0526	0.0545	0.0	0.0	1.07E-05	9.55E-05	3.16E-04	6.46E-04
9	8	14	13	16732.56	1	1979.46	5.0519	0.0528	0.0	0.0	0.0	0.0	4.30E-06	4.56E-05
3	2	16	17	4718.72	2	1979.77	5.0511	0.0493	0.0	7.32E-06	1.99E-04	8.84E-04	1.93E-03	3.00E-03
8	7	6	5	14503.03	1	1980.15	5.0501	0.0621	0.0	0.0	0.0	0.0	1.40E-05	1.04E-04
6	5	3	2	10238.29	2	1980.43	5.0494	0.0707	0.0	0.0	0.0	0.0	3.37E-06	1.26E-05
5	4	3	4	8268.04	2	1980.78	5.0485	0.0676	0.0	0.0	0.0	4.87E-06	2.50E-05	6.83E-05
7	6	11	10	12389.16	2	1981.17	5.0475	0.0545	0.0	0.0	0.0	0.0	1.82E-06	9.64E-06
6	5	7	8	10584.25	1	1981.18	5.0475	0.0574	0.0	0.0	1.47E-06	6.83E-05	6.11E-04	2.43E-03
1	0	27	28	1488.80	2	1981.26	5.0473	0.0400	5.36E-04	9.34E-03	1.92E-02	2.35E-02	2.37E-02	2.19E-02
3	2	25	26	5582.12	1	1981.26	5.0473	0.0400	0.0	1.33E-04	7.19E-03	4.53E-02	1.22E-01	2.18E-01
7	6	0	1	12467.30	1	1981.73	5.0461	0.0769	0.0	0.0	0.0	1.03E-06	1.45E-05	7.79E-05
9	8	15	14	16782.41	1	1982.49	5.0442	0.0517	0.0	0.0	0.0	0.0	4.40E-06	4.70E-05
5	4	13	14	8803.20	1	1982.74	5.0435	0.0528	0.0	0.0	3.72E-05	8.49E-04	4.95E-03	1.48E-02
4	3	19	20	7134.78	1	1982.75	5.0435	0.0458	0.0	3.28E-06	6.15E-04	7.21E-03	2.82E-02	6.44E-02
4	3	9	10	6409.02	2	1983.06	5.0427	0.0547	0.0	0.0	1.04E-05	9.12E-05	2.99E-04	6.08E-04
2	1	30	31	4027.09	1	1983.12	5.0426	0.0400	0.0	4.41E-03	6.90E-02	2.33E-01	4.33E-01	6.03E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	21	22	3016.41	2	1983.27	5.0422	0.0435	0.0	3.76E-04	2.62E-03	5.90E-03	8.58E-03	1.01E-02
8	7	7	6	14524.62	1	1983.50	5.0416	0.0597	0.0	0.0	0.0	0.0	1.61E-05	1.20E-04
6	5	4	3	10248.82	2	1983.81	5.0408	0.0676	0.0	0.0	0.0	0.0	4.46E-06	1.68E-05
3	2	15	16	4657.45	2	1983.88	5.0406	0.0505	0.0	7.99E-06	2.07E-04	8.97E-04	1.93E-03	2.97E-03
1	0	35	36	2550.01	1	1983.93	5.0405	0.0400	4.00E-04	8.88E-02	4.27E-01	8.00E-01	1.04E 00	1.15E 00
7	6	12	11	12427.41	2	1984.25	5.0397	0.0542	0.0	0.0	0.0	0.0	1.92E-06	1.02E-05
5	4	2	3	8253.86	2	1984.42	5.0393	0.0707	0.0	0.0	0.0	3.72E-06	1.90E-05	5.19E-05
6	5	6	7	10554.90	1	1985.09	5.0376	0.0597	0.0	0.0	1.35E-06	6.20E-05	5.51E-04	2.18E-03
9	8	16	15	16835.81	1	1985.48	5.0366	0.0505	0.0	0.0	0.0	0.0	4.46E-06	4.81E-05
1	0	26	27	1386.36	2	1985.77	5.0358	0.0400	8.47E-04	1.15E-02	2.18E-02	2.57E-02	2.52E-02	2.30E-02
3	2	24	25	5484.40	1	1985.87	5.0356	0.0400	0.0	1.62E-04	8.10E-03	4.91E-02	1.29E-01	2.27E-01
8	7	8	7	14549.82	1	1986.82	5.0332	0.0574	0.0	0.0	0.0	0.0	1.79E-05	1.34E-04
5	4	12	13	8751.40	1	1986.88	5.0330	0.0540	0.0	0.0	3.76E-05	8.40E-04	4.85E-03	1.43E-02
4	3	8	9	6373.27	2	1986.93	5.0329	0.0550	0.0	0.0	9.95E-06	8.58E-05	2.79E-04	5.64E-04
4	3	18	19	7060.17	1	1987.13	5.0324	0.0470	0.0	3.73E-06	6.60E-04	7.50E-03	2.88E-02	6.51E-02
6	5	5	4	10262.87	2	1987.16	5.0323	0.0645	0.0	0.0	0.0	0.0	5.51E-06	2.07E-05
7	6	13	12	12469.13	2	1987.30	5.0320	0.0540	0.0	0.0	0.0	0.0	2.00E-06	1.07E-05
2	1	20	21	2936.50	2	1987.57	5.0313	0.0447	0.0	4.36E-04	2.84E-03	6.21E-03	8.87E-03	1.03E-02
2	1	29	30	3909.71	1	1987.91	5.0304	0.0400	0.0	5.66E-03	8.07E-02	2.60E-01	4.70E-01	6.42E-01
3	2	14	15	4599.77	2	1987.97	5.0303	0.0517	0.0	8.62E-06	2.13E-04	9.03E-04	1.92E-03	2.92E-03
5	4	1	2	8243.23	2	1988.03	5.0301	0.0738	0.0	0.0	0.0	2.52E-06	1.28E-05	3.50E-05
9	8	17	16	16892.75	1	1988.43	5.0291	0.0493	0.0	0.0	0.0	0.0	4.50E-06	4.89E-05
1	0	34	35	2412.73	1	1988.91	5.0279	0.0400	7.52E-04	1.20E-01	5.18E-01	9.19E-01	1.16E 00	1.25E 00
6	5	5	6	10529.21	1	1988.97	5.0277	0.0621	0.0	0.0	1.21E-06	5.49E-05	4.85E-04	1.91E-03
7	6	1	0	12463.66	1	1988.97	5.0277	0.0769	0.0	0.0	0.0	1.04E-06	1.46E-05	7.85E-05
8	7	9	8	14578.61	1	1990.10	5.0249	0.0550	0.0	0.0	0.0	0.0	1.97E-05	1.48E-04
1	0	25	26	1287.55	2	1990.25	5.0245	0.0400	1.31E-03	1.41E-02	2.47E-02	2.79E-02	2.68E-02	2.40E-02
7	6	14	13	12514.32	2	1990.31	5.0243	0.0528	0.0	0.0	0.0	0.0	2.07E-06	1.12E-05
3	2	23	24	5390.41	1	1990.44	5.0240	0.0412	0.0	1.95E-04	9.06E-03	5.29E-02	1.36E-01	2.36E-01
6	5	6	5	10280.43	2	1990.47	5.0239	0.0621	0.0	0.0	0.0	0.0	6.52E-06	2.46E-05
4	3	7	8	6341.08	2	1990.76	5.0232	0.0574	0.0	0.0	9.32E-06	7.94E-05	2.56E-04	5.15E-04
5	4	11	12	8703.29	1	1991.00	5.0226	0.0542	0.0	0.0	3.75E-05	8.23E-04	4.69E-03	1.38E-02
9	8	18	17	16953.25	1	1991.34	5.0217	0.0482	0.0	0.0	0.0	0.0	4.50E-06	4.94E-05
4	3	17	18	6989.28	1	1991.47	5.0214	0.0482	0.0	4.20E-06	7.01E-04	7.75E-03	2.93E-02	6.55E-02
5	4	0	1	8236.14	2	1991.61	5.0211	0.0769	0.0	0.0	0.0	1.27E-06	6.47E-06	1.76E-05
2	1	19	20	2860.19	2	1991.84	5.0205	0.0458	1.07E-06	4.99E-04	3.07E-03	6.50E-03	9.11E-03	1.05E-02
3	2	13	14	4545.69	2	1992.02	5.0200	0.0528	0.0	9.17E-06	2.17E-04	9.01E-04	1.89E-03	2.86E-03
7	6	2	1	12467.30	1	1992.53	5.0187	0.0738	0.0	0.0	0.0	2.08E-06	2.92E-05	1.57E-04
2	1	28	29	3796.07	1	1992.67	5.0184	0.0400	1.63E-06	7.20E-03	9.37E-02	2.89E-01	5.08E-01	6.82E-01
6	5	4	5	10507.20	1	1992.81	5.0180	0.0645	0.0	0.0	1.04E-06	4.71E-05	4.14E-04	1.62E-03
7	6	15	14	12562.97	2	1993.28	5.0169	0.0517	0.0	0.0	0.0	0.0	2.12E-06	1.15E-05
8	7	10	9	14610.99	1	1993.35	5.0167	0.0547	0.0	0.0	0.0	0.0	2.12E-05	1.60E-04
6	5	7	6	10301.50	2	1993.75	5.0157	0.0597	0.0	0.0	0.0	0.0	7.46E-06	2.83E-05
1	0	33	34	2279.20	1	1993.86	5.0154	0.0400	1.39E-03	1.61E-01	6.24E-01	1.05E 00	1.28E 00	1.35E 00
9	8	19	18	17017.28	1	1994.22	5.0145	0.0470	0.0	0.0	0.0	0.0	4.47E-06	4.96E-05
4	3	6	7	6312.47	2	1994.56	5.0136	0.0597	0.0	0.0	8.55E-06	7.20E-05	2.31E-04	4.62E-04
1	0	24	25	1192.36	2	1994.70	5.0133	0.0400	1.99E-03	1.71E-02	2.77E-02	3.01E-02	2.83E-02	2.50E-02
3	2	22	23	5300.14	1	1994.98	5.0126	0.0423	0.0	2.32E-04	1.00E-02	5.66E-02	1.43E-01	2.43E-01
5	4	10	11	8658.86	1	1995.08	5.0123	0.0545	0.0	0.0	3.70E-05	7.97E-04	4.50E-03	1.31E-02
4	3	16	17	6922.10	1	1995.79	5.0105	0.0493	0.0	4.66E-06	7.39E-04	7.95E-03	2.96E-02	6.54E-02
3	2	12	13	4495.20	2	1996.04	5.0099	0.0540	0.0	9.63E-06	2.19E-04	8.91E-04	1.85E-03	2.77E-03
7	6	3	2	12474.57	1	1996.06	5.0099	0.0707	0.0	0.0	0.0	3.10E-06	4.36E-05	2.34E-04
2	1	18	19	2787.51	2	1996.08	5.0098	0.0470	1.44E-06	5.65E-04	3.28E-03	6.75E-03	9.30E-03	1.06E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	16	15	12615.09	2	1996.22	5.0095	0.0505	0.0	0.0	0.0	0.0	2.15E-06	1.18E-05
8	7	11	10	14646.97	1	1996.55	5.0086	0.0545	0.0	0.0	0.0	0.0	2.26E-05	1.72E-04
6	5	3	4	10488.85	1	1996.62	5.0085	0.0676	0.0	0.0	0.0	3.86E-05	3.37E-04	1.32E-03
6	5	8	7	10326.08	2	1997.00	5.0075	0.0574	0.0	0.0	0.0	0.0	8.35E-06	3.17E-05
9	8	20	19	17084.85	1	1997.06	5.0074	0.0458	0.0	0.0	0.0	0.0	4.42E-06	4.96E-05
2	1	27	28	3686.17	1	1997.40	5.0065	0.0400	2.68E-06	9.07E-03	1.08E-01	3.19E-01	5.47E-01	7.21E-01
4	3	5	6	6287.43	2	1998.33	5.0042	0.0621	0.0	0.0	7.64E-06	6.37E-05	2.03E-04	4.05E-04
5	4	1	0	8232.59	2	1998.67	5.0033	0.0769	0.0	0.0	0.0	1.28E-06	6.52E-06	1.77E-05
1	0	32	33	2149.44	1	1998.77	5.0031	0.0400	2.51E-03	2.14E-01	7.46E-01	1.19E 00	1.41E 00	1.46E 00
1	0	23	24	1100.81	2	1999.12	5.0022	0.0412	2.98E-03	2.05E-02	3.08E-02	3.23E-02	2.97E-02	2.59E-02
5	4	9	10	8618.14	1	1999.12	5.0022	0.0547	0.0	0.0	3.59E-05	7.63E-04	4.26E-03	1.24E-02
7	6	17	16	12670.68	2	1999.13	5.0022	0.0493	0.0	0.0	0.0	0.0	2.17E-06	1.20E-05
3	2	21	22	5213.61	1	1999.48	5.0013	0.0435	0.0	2.74E-04	1.11E-02	6.02E-02	1.49E-01	2.50E-01
7	6	4	3	12485.47	1	1999.56	5.0011	0.0676	0.0	0.0	0.0	4.08E-06	5.77E-05	3.10E-04
8	7	12	11	14686.54	1	1999.72	5.0007	0.0542	0.0	0.0	0.0	0.0	2.38E-05	1.82E-04
9	8	21	20	17155.96	1	1999.86	5.0003	0.0447	0.0	0.0	0.0	0.0	4.34E-06	4.92E-05
3	2	11	12	4448.31	2	2000.04	4.9999	0.0542	0.0	9.96E-06	2.18E-04	8.71E-04	1.79E-03	2.66E-03
4	3	15	16	6858.63	1	2000.07	4.9998	0.0505	0.0	5.12E-06	7.71E-04	8.09E-03	2.97E-02	6.49E-02
6	5	9	8	10354.17	2	2000.21	4.9995	0.0550	0.0	0.0	0.0	1.08E-06	9.16E-06	3.50E-05
2	1	17	18	2718.44	2	2000.29	4.9993	0.0482	1.90E-06	6.33E-04	3.47E-03	6.96E-03	9.43E-03	1.06E-02
6	5	2	3	10474.17	1	2000.40	4.9990	0.0707	0.0	0.0	0.0	2.95E-05	2.57E-04	1.00E-03
7	6	18	17	12729.73	2	2002.00	4.9950	0.0482	0.0	0.0	0.0	0.0	2.17E-06	1.21E-05
4	3	4	5	6265.97	2	2002.07	4.9948	0.0645	0.0	0.0	6.60E-06	5.46E-05	1.73E-04	3.44E-04
2	1	26	27	3580.03	1	2002.10	4.9948	0.0400	4.30E-06	1.13E-02	1.24E-01	3.51E-01	5.85E-01	7.58E-01
5	4	2	1	8236.14	2	2002.15	4.9946	0.0738	0.0	0.0	0.0	2.56E-06	1.30E-05	3.54E-05
9	8	22	21	17230.61	1	2002.62	4.9935	0.0435	0.0	0.0	0.0	0.0	4.23E-06	4.86E-05
8	7	13	12	14729.70	1	2002.86	4.9929	0.0540	0.0	0.0	0.0	1.02E-06	2.47E-05	1.91E-04
7	6	5	4	12500.01	1	2003.01	4.9925	0.0645	0.0	0.0	0.0	5.02E-06	7.12E-05	3.84E-04
5	4	8	9	8581.11	1	2003.14	4.9922	0.0550	0.0	0.0	3.44E-05	7.19E-04	3.98E-03	1.15E-02
6	5	10	9	10385.77	2	2003.39	4.9915	0.0547	0.0	0.0	0.0	1.16E-06	9.89E-06	3.80E-05
1	0	22	23	1012.90	2	2003.51	4.9912	0.0423	4.35E-03	2.42E-02	3.41E-02	3.45E-02	3.11E-02	2.67E-02
1	0	31	32	2023.43	1	2003.66	4.9909	0.0400	4.47E-03	2.81E-01	8.86E-01	1.35E 00	1.55E 00	1.57E 00
3	2	20	21	5130.82	1	2003.96	4.9901	0.0447	0.0	3.19E-04	1.21E-02	6.36E-02	1.54E-01	2.56E-01
3	2	10	11	4405.02	2	2004.00	4.9900	0.0545	0.0	1.01E-05	2.14E-04	8.43E-04	1.71E-03	2.53E-03
6	5	1	2	10463.16	1	2004.14	4.9897	0.0738	0.0	0.0	0.0	1.99E-05	1.74E-04	6.76E-04
4	3	14	15	6798.89	1	2004.31	4.9892	0.0517	0.0	5.55E-06	7.96E-04	8.17E-03	2.95E-02	6.40E-02
2	1	16	17	2652.99	2	2004.47	4.9888	0.0493	2.46E-06	7.00E-04	3.65E-03	7.12E-03	9.51E-03	1.06E-02
7	6	19	18	12792.23	2	2004.84	4.9879	0.0470	0.0	0.0	0.0	0.0	2.17E-06	1.22E-05
9	8	23	22	17308.79	1	2005.34	4.9867	0.0423	0.0	0.0	0.0	0.0	4.11E-06	4.78E-05
5	4	3	2	8243.23	2	2005.59	4.9861	0.0707	0.0	0.0	0.0	3.81E-06	1.94E-05	5.30E-05
4	3	3	4	6248.08	2	2005.78	4.9856	0.0676	0.0	0.0	5.44E-06	4.47E-05	1.41E-04	2.80E-04
8	7	14	13	14776.45	1	2005.96	4.9851	0.0528	0.0	0.0	0.0	1.04E-06	2.55E-05	1.98E-04
7	6	6	5	12518.18	1	2006.44	4.9840	0.0621	0.0	0.0	0.0	5.91E-06	8.42E-05	4.55E-04
6	5	11	10	10420.87	2	2006.54	4.9837	0.0545	0.0	0.0	0.0	1.23E-06	1.05E-05	4.07E-05
2	1	25	26	3477.63	1	2006.77	4.9831	0.0400	6.78E-06	1.39E-02	1.41E-01	3.83E-01	6.23E-01	7.95E-01
5	4	7	8	8547.78	1	2007.12	4.9823	0.0574	0.0	0.0	3.23E-05	6.66E-04	3.66E-03	1.05E-02
7	6	20	19	12858.20	2	2007.64	4.9810	0.0458	0.0	0.0	0.0	0.0	2.14E-06	1.22E-05
6	5	0	1	10455.82	1	2007.84	4.9805	0.0769	0.0	0.0	0.0	1.01E-05	8.75E-05	3.41E-04
1	0	21	22	928.62	2	2007.88	4.9804	0.0435	6.25E-03	2.84E-02	3.73E-02	3.66E-02	3.23E-02	2.73E-02
3	2	9	10	4365.34	2	2007.93	4.9803	0.0547	0.0	1.02E-05	2.08E-04	8.05E-04	1.62E-03	2.38E-03
9	8	24	23	17390.49	1	2008.03	4.9800	0.0412	0.0	0.0	0.0	0.0	3.97E-06	4.68E-05
3	2	19	20	5051.77	1	2008.40	4.9791	0.0458	0.0	3.68E-04	1.31E-02	6.67E-02	1.59E-01	2.60E-01
1	0	30	31	1901.19	1	2008.52	4.9788	0.0400	7.79E-03	3.65E-01	1.05E 00	1.51E 00	1.69E 00	1.68E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	13	14	6742.87	1	2008.53	4.9788	0.0528	0.0	5.93E-06	8.14E-04	8.17E-03	2.91E-02	6.26E-02
2	1	15	16	2591.16	2	2008.62	4.9785	0.0505	3.12E-06	7.66E-04	3.80E-03	7.23E-03	9.51E-03	1.05E-02
5	4	4	3	8253.86	2	2009.01	4.9776	0.0676	0.0	0.0	0.0	5.02E-06	2.57E-05	7.02E-05
8	7	15	14	14826.79	1	2009.02	4.9776	0.0517	0.0	0.0	0.0	1.05E-06	2.61E-05	2.04E-04
4	3	2	3	6233.77	2	2009.46	4.9765	0.0707	0.0	0.0	4.18E-06	3.41E-05	1.08E-04	2.13E-04
6	5	12	11	10459.48	2	2009.65	4.9760	0.0542	0.0	0.0	0.0	1.28E-06	1.11E-05	4.31E-05
7	6	7	6	12539.99	1	2009.83	4.9755	0.0597	0.0	0.0	0.0	6.73E-06	9.63E-05	5.23E-04
7	6	21	20	12927.62	2	2010.40	4.9741	0.0447	0.0	0.0	0.0	0.0	2.11E-06	1.22E-05
9	8	25	24	17475.72	1	2010.68	4.9734	0.0400	0.0	0.0	0.0	0.0	3.82E-06	4.56E-05
5	4	6	7	8518.15	1	2011.06	4.9725	0.0597	0.0	0.0	2.97E-05	6.05E-04	3.30E-03	9.43E-03
2	1	24	25	3379.00	1	2011.41	4.9716	0.0400	1.05E-05	1.70E-02	1.59E-01	4.15E-01	6.61E-01	8.29E-01
3	2	8	9	4329.25	2	2011.83	4.9706	0.0550	0.0	9.98E-06	1.99E-04	7.58E-04	1.51E-03	2.21E-03
8	7	16	15	14880.71	1	2012.04	4.9701	0.0505	0.0	0.0	0.0	1.05E-06	2.65E-05	2.09E-04
1	0	20	21	847.99	2	2012.21	4.9697	0.0447	8.80E-03	3.30E-02	4.06E-02	3.86E-02	3.34E-02	2.79E-02
5	4	5	4	8268.04	2	2012.39	4.9692	0.0645	0.0	0.0	0.0	6.18E-06	3.17E-05	8.69E-05
4	3	12	13	6690.57	1	2012.71	4.9684	0.0540	0.0	6.25E-06	8.24E-04	8.09E-03	2.85E-02	6.07E-02
6	5	13	12	10501.59	2	2012.73	4.9684	0.0540	0.0	0.0	0.0	1.32E-06	1.16E-05	4.52E-05
2	1	14	15	2532.96	2	2012.74	4.9684	0.0517	3.88E-06	8.27E-04	3.92E-03	7.29E-03	9.45E-03	1.03E-02
3	2	18	19	4976.46	1	2012.82	4.9682	0.0470	0.0	4.19E-04	1.40E-02	6.95E-02	1.62E-01	2.63E-01
4	3	1	2	6223.04	2	2013.10	4.9675	0.0738	0.0	0.0	2.84E-06	2.31E-05	7.26E-05	1.43E-04
7	6	22	21	13000.48	2	2013.13	4.9674	0.0435	0.0	0.0	0.0	0.0	2.06E-06	1.20E-05
7	6	8	7	12565.43	1	2013.18	4.9673	0.0574	0.0	0.0	0.0	7.47E-06	1.08E-04	5.87E-04
9	8	26	25	17564.47	1	2013.29	4.9670	0.0400	0.0	0.0	0.0	0.0	3.65E-06	4.42E-05
1	0	29	30	1782.72	1	2013.35	4.9668	0.0400	1.33E-02	4.70E-01	1.23E 00	1.69E 00	1.84E 00	1.79E 00
5	4	5	6	8492.22	1	2014.97	4.9629	0.0621	0.0	0.0	2.65E-05	5.36E-04	2.91E-03	8.27E-03
8	7	17	16	14938.22	1	2015.03	4.9627	0.0493	0.0	0.0	0.0	1.05E-06	2.66E-05	2.12E-04
6	5	1	0	10452.15	1	2015.15	4.9624	0.0769	0.0	0.0	0.0	1.02E-05	8.82E-05	3.43E-04
3	2	7	8	4296.77	2	2015.70	4.9611	0.0574	0.0	9.60E-06	1.86E-04	7.02E-04	1.39E-03	2.02E-03
5	4	6	5	8285.77	2	2015.74	4.9610	0.0621	0.0	0.0	0.0	7.28E-06	3.75E-05	1.03E-04
6	5	14	13	10547.20	2	2015.77	4.9609	0.0528	0.0	0.0	0.0	1.35E-06	1.19E-05	4.70E-05
7	6	23	22	13076.80	2	2015.83	4.9607	0.0423	0.0	0.0	0.0	0.0	2.01E-06	1.18E-05
9	8	27	26	17656.73	1	2015.86	4.9607	0.0400	0.0	0.0	0.0	0.0	3.47E-06	4.27E-05
2	1	23	24	3284.13	1	2016.01	4.9603	0.0412	1.59E-05	2.05E-02	1.78E-01	4.47E-01	6.96E-01	8.61E-01
7	6	9	8	12594.50	1	2016.49	4.9591	0.0550	0.0	0.0	0.0	8.13E-06	1.18E-04	6.46E-04
1	0	19	20	771.00	2	2016.51	4.9591	0.0458	1.21E-02	3.78E-02	4.38E-02	4.04E-02	3.43E-02	2.83E-02
4	3	0	1	6215.88	2	2016.71	4.9586	0.0769	0.0	0.0	1.44E-06	1.17E-05	3.66E-05	7.22E-05
2	1	13	14	2478.38	2	2016.82	4.9583	0.0528	4.71E-06	8.81E-04	3.99E-03	7.28E-03	9.32E-03	1.01E-02
4	3	11	12	6642.00	1	2016.86	4.9582	0.0542	0.0	6.50E-06	8.23E-04	7.93E-03	2.76E-02	5.84E-02
3	2	17	18	4904.90	1	2017.20	4.9574	0.0482	0.0	4.73E-04	1.49E-02	7.19E-02	1.65E-01	2.64E-01
8	7	18	17	14999.30	1	2017.98	4.9555	0.0482	0.0	0.0	0.0	1.03E-06	2.66E-05	2.14E-04
1	0	28	29	1668.03	1	2018.14	4.9551	0.0400	2.24E-02	6.00E-01	1.43E 00	1.88E 00	1.99E 00	1.90E 00
9	8	28	27	17752.52	1	2018.39	4.9544	0.0400	0.0	0.0	0.0	0.0	3.29E-06	4.11E-05
7	6	24	23	13156.57	2	2018.49	4.9542	0.0412	0.0	0.0	0.0	0.0	1.94E-06	1.16E-05
6	5	2	1	10455.82	1	2018.75	4.9536	0.0738	0.0	0.0	0.0	2.03E-05	1.76E-04	6.85E-04
6	5	15	14	10596.32	2	2018.78	4.9535	0.0517	0.0	0.0	0.0	1.36E-06	1.22E-05	4.85E-05
5	4	4	5	8470.00	1	2018.85	4.9533	0.0645	0.0	0.0	2.30E-05	4.59E-04	2.48E-03	7.03E-03
5	4	7	6	8307.03	2	2019.05	4.9528	0.0597	0.0	0.0	0.0	8.29E-06	4.30E-05	1.18E-04
3	2	6	7	4267.90	2	2019.53	4.9516	0.0597	0.0	9.02E-06	1.71E-04	6.37E-04	1.25E-03	1.81E-03
7	6	10	9	12627.20	1	2019.77	4.9511	0.0547	0.0	0.0	0.0	8.70E-06	1.27E-04	7.01E-04
2	1	22	23	3193.03	1	2020.59	4.9490	0.0423	2.36E-05	2.45E-02	1.97E-01	4.79E-01	7.30E-01	8.90E-01
1	0	18	19	697.65	2	2020.78	4.9486	0.0470	1.64E-02	4.29E-02	4.69E-02	4.19E-02	3.50E-02	2.86E-02
2	1	12	13	2427.44	2	2020.88	4.9483	0.0540	5.59E-06	9.26E-04	4.03E-03	7.20E-03	9.10E-03	9.80E-03
9	8	29	28	17851.80	1	2020.88	4.9483	0.0400	0.0	0.0	0.0	0.0	3.10E-06	3.94E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	7	19	18	15063.96	1	2020.89	4.9483	0.0470	0.0	0.0	0.0	1.01E-06	2.65E-05	2.15E-04
4	3	10	11	6597.16	1	2020.97	4.9481	0.0545	0.0	6.64E-06	8.12E-04	7.69E-03	2.65E-02	5.56E-02
7	6	25	24	13239.77	2	2021.11	4.9478	0.0400	0.0	0.0	0.0	0.0	1.87E-06	1.13E-05
3	2	16	17	4837.09	1	2021.54	4.9467	0.0493	0.0	5.26E-04	1.58E-02	7.38E-02	1.67E-01	2.64E-01
6	5	16	15	10648.93	2	2021.75	4.9462	0.0505	0.0	0.0	0.0	1.37E-06	1.24E-05	4.97E-05
6	5	3	2	10463.16	1	2022.31	4.9448	0.0707	0.0	0.0	0.0	3.02E-05	2.63E-04	1.02E-03
5	4	8	7	8331.84	2	2022.33	4.9448	0.0574	0.0	0.0	0.0	9.21E-06	4.80E-05	1.33E-04
5	4	3	4	8451.48	1	2022.70	4.9439	0.0676	0.0	0.0	1.89E-05	3.76E-04	2.02E-03	5.72E-03
1	0	27	28	1557.12	1	2022.91	4.9434	0.0400	3.68E-02	7.57E-01	1.65E 00	2.08E 00	2.14E 00	2.01E 00
7	6	11	10	12663.53	1	2023.01	4.9431	0.0545	0.0	0.0	0.0	9.17E-06	1.35E-04	7.50E-04
9	8	30	29	17954.60	1	2023.34	4.9423	0.0400	0.0	0.0	0.0	0.0	2.91E-06	3.75E-05
3	2	5	6	4242.63	2	2023.34	4.9423	0.0621	0.0	8.22E-06	1.53E-04	5.64E-04	1.10E-03	1.59E-03
7	6	26	25	13326.42	2	2023.70	4.9414	0.0400	0.0	0.0	0.0	0.0	1.79E-06	1.10E-05
8	7	20	19	15132.20	1	2023.76	4.9413	0.0458	0.0	0.0	0.0	0.0	2.61E-05	2.15E-04
4	3	1	0	6212.30	2	2023.83	4.9411	0.0769	0.0	0.0	1.45E-06	1.18E-05	3.69E-05	7.27E-05
6	5	17	16	10705.04	2	2024.69	4.9390	0.0493	0.0	0.0	0.0	1.36E-06	1.25E-05	5.06E-05
2	1	11	12	2380.12	2	2024.91	4.9385	0.0542	6.49E-06	9.59E-04	4.02E-03	7.04E-03	8.81E-03	9.42E-03
1	0	17	18	627.96	2	2025.03	4.9382	0.0482	2.18E-02	4.82E-02	4.98E-02	4.33E-02	3.56E-02	2.87E-02
4	3	9	10	6556.05	1	2025.06	4.9381	0.0547	0.0	6.67E-06	7.89E-04	7.35E-03	2.51E-02	5.24E-02
2	1	21	22	3105.69	1	2025.13	4.9380	0.0435	3.44E-05	2.90E-02	2.17E-01	5.10E-01	7.61E-01	9.15E-01
5	4	9	8	8360.19	2	2025.57	4.9369	0.0550	0.0	0.0	0.0	1.00E-05	5.27E-05	1.46E-04
9	8	31	30	18060.90	1	2025.75	4.9364	0.0400	0.0	0.0	0.0	0.0	2.72E-06	3.57E-05
6	5	4	3	10474.17	1	2025.84	4.9362	0.0676	0.0	0.0	0.0	3.98E-05	3.47E-04	1.36E-03
3	2	15	16	4773.03	1	2025.86	4.9362	0.0505	0.0	5.78E-04	1.65E-02	7.52E-02	1.67E-01	2.62E-01
7	6	12	11	12703.48	1	2026.22	4.9353	0.0542	0.0	0.0	0.0	9.55E-06	1.42E-04	7.94E-04
7	6	27	26	13416.50	2	2026.25	4.9352	0.0400	0.0	0.0	0.0	0.0	1.71E-06	1.07E-05
5	4	2	3	8436.66	1	2026.51	4.9346	0.0707	0.0	0.0	1.46E-05	2.88E-04	1.54E-03	4.35E-03
8	7	21	20	15204.01	1	2026.60	4.9344	0.0447	0.0	0.0	0.0	0.0	2.56E-05	2.13E-04
3	2	4	5	4220.97	2	2027.11	4.9331	0.0645	0.0	7.23E-06	1.32E-04	4.83E-04	9.39E-04	1.35E-03
4	3	2	1	6215.88	2	2027.35	4.9325	0.0738	0.0	0.0	2.89E-06	2.34E-05	7.36E-05	1.45E-04
6	5	18	17	10764.64	2	2027.59	4.9320	0.0482	0.0	0.0	0.0	1.34E-06	1.25E-05	5.12E-05
1	0	26	27	1449.99	1	2027.64	4.9318	0.0400	5.94E-02	9.45E-01	1.89E 00	2.29E 00	2.29E 00	2.12E 00
9	8	32	31	18170.69	1	2028.12	4.9307	0.0400	0.0	0.0	0.0	0.0	2.53E-06	3.38E-05
7	6	28	27	13510.01	2	2028.76	4.9291	0.0400	0.0	0.0	0.0	0.0	1.62E-06	1.03E-05
5	4	10	9	8392.08	2	2028.79	4.9290	0.0547	0.0	0.0	0.0	1.07E-05	5.69E-05	1.59E-04
2	1	10	11	2336.44	2	2028.90	4.9288	0.0545	7.34E-06	9.77E-04	3.96E-03	6.82E-03	8.44E-03	8.96E-03
4	3	8	9	6518.68	1	2029.10	4.9283	0.0550	0.0	6.58E-06	7.55E-04	6.93E-03	2.35E-02	4.87E-02
1	0	16	17	561.92	2	2029.24	4.9280	0.0493	2.83E-02	5.34E-02	5.23E-02	4.43E-02	3.59E-02	2.87E-02
6	5	5	4	10488.85	1	2029.33	4.9277	0.0645	0.0	0.0	1.09E-06	4.89E-05	4.29E-04	1.68E-03
7	6	13	12	12747.07	1	2029.39	4.9276	0.0540	0.0	0.0	0.0	9.84E-06	1.48E-04	8.32E-04
8	7	22	21	15279.39	1	2029.39	4.9276	0.0435	0.0	0.0	0.0	0.0	2.50E-05	2.11E-04
2	1	20	21	3022.13	1	2029.64	4.9270	0.0447	4.91E-05	3.39E-02	2.38E-01	5.39E-01	7.89E-01	9.36E-01
3	2	14	15	4712.73	1	2030.14	4.9258	0.0517	0.0	6.27E-04	1.70E-02	7.59E-02	1.67E-01	2.59E-01
5	4	1	2	8425.54	1	2030.26	4.9254	0.0738	0.0	0.0	9.90E-06	1.95E-04	1.04E-03	2.93E-03
6	5	19	18	10827.74	2	2030.46	4.9250	0.0470	0.0	0.0	0.0	1.31E-06	1.26E-05	5.14E-05
9	8	33	32	18283.98	1	2030.46	4.9250	0.0400	0.0	0.0	0.0	0.0	2.34E-06	3.19E-05
4	3	3	2	6223.04	2	2030.83	4.9241	0.0707	0.0	0.0	4.29E-06	3.49E-05	1.10E-04	2.17E-04
3	2	3	4	4202.92	2	2030.85	4.9240	0.0676	0.0	6.05E-06	1.09E-04	3.95E-04	7.66E-04	1.10E-03
7	6	29	28	13606.95	2	2031.24	4.9231	0.0400	0.0	0.0	0.0	0.0	1.53E-06	9.86E-06
5	4	11	10	8427.51	2	2031.97	4.9213	0.0545	0.0	0.0	0.0	1.13E-05	6.06E-05	1.70E-04
8	7	23	22	15358.34	1	2032.15	4.9209	0.0423	0.0	0.0	0.0	0.0	2.43E-05	2.07E-04
1	0	25	26	1346.66	1	2032.35	4.9204	0.0400	9.41E-02	1.17E 00	2.15E 00	2.50E 00	2.45E 00	2.22E 00
7	6	14	13	12794.27	1	2032.52	4.9200	0.0528	0.0	0.0	0.0	1.00E-05	1.53E-04	8.64E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	8	34	33	18400.75	1	2032.75	4.9194	0.0400	0.0	0.0	0.0	0.0	2.16E-06	2.99E-05
6	5	6	5	10507.20	1	2032.79	4.9193	0.0621	0.0	0.0	1.27E-06	5.75E-05	5.07E-04	1.99E-03
2	1	9	10	2296.39	2	2032.86	4.9192	0.0547	8.10E-06	9.79E-04	3.84E-03	6.51E-03	7.99E-03	8.43E-03
4	3	7	8	6485.03	1	2033.12	4.9185	0.0574	0.0	6.35E-06	7.10E-04	6.43E-03	2.16E-02	4.45E-02
6	5	20	19	10894.32	2	2033.29	4.9181	0.0458	0.0	0.0	0.0	1.28E-06	1.23E-05	5.14E-05
1	0	15	16	499.54	2	2033.42	4.9178	0.0505	3.59E-02	5.84E-02	5.45E-02	4.51E-02	3.59E-02	2.84E-02
7	6	30	29	13707.32	2	2033.68	4.9172	0.0400	0.0	0.0	0.0	0.0	1.44E-06	9.42E-06
5	4	0	1	8418.13	1	2034.02	4.9164	0.0769	0.0	0.0	5.02E-06	9.84E-05	5.25E-04	1.48E-03
2	1	19	20	2942.34	1	2034.12	4.9161	0.0458	6.86E-05	3.91E-02	2.58E-01	5.67E-01	8.13E-01	9.53E-01
4	3	4	3	6233.77	2	2034.27	4.9158	0.0676	0.0	0.0	5.63E-06	4.61E-05	1.45E-04	2.88E-04
3	2	13	14	4656.18	1	2034.39	4.9155	0.0528	0.0	6.72E-04	1.74E-02	7.60E-02	1.64E-01	2.53E-01
3	2	2	3	4188.48	2	2034.56	4.9151	0.0707	0.0	4.70E-06	8.37E-05	3.02E-04	5.84E-04	8.33E-04
8	7	24	23	15440.84	1	2034.87	4.9143	0.0412	0.0	0.0	0.0	0.0	2.34E-05	2.03E-04
9	8	35	34	18521.00	1	2035.01	4.9140	0.0400	0.0	0.0	0.0	0.0	1.98E-06	2.80E-05
5	4	12	11	8466.48	2	2035.11	4.9137	0.0542	0.0	0.0	0.0	1.18E-05	6.37E-05	1.80E-04
7	6	15	14	12845.10	1	2035.62	4.9125	0.0517	0.0	0.0	0.0	1.01E-05	1.56E-04	8.91E-04
7	6	31	30	13811.11	2	2036.08	4.9114	0.0400	0.0	0.0	0.0	0.0	1.35E-06	8.97E-06
6	5	21	20	10964.39	2	2036.09	4.9114	0.0447	0.0	0.0	0.0	1.24E-06	1.21E-05	5.11E-05
6	5	7	6	10529.21	1	2036.22	4.9111	0.0597	0.0	0.0	1.44E-06	6.55E-05	5.80E-04	2.28E-03
2	1	8	9	2259.98	2	2036.79	4.9097	0.0550	8.69E-06	9.63E-04	3.67E-03	6.13E-03	7.46E-03	7.82E-03
1	0	24	25	1247.11	1	2037.02	4.9091	0.0400	1.46E-01	1.43E 00	2.43E 00	2.71E 00	2.59E 00	2.32E 00
4	3	6	7	6455.12	1	2037.10	4.9089	0.0597	0.0	5.97E-06	6.52E-04	5.84E-03	1.95E-02	4.00E-02
9	8	36	35	18644.73	1	2037.22	4.9086	0.0400	0.0	0.0	0.0	0.0	1.81E-06	2.61E-05
8	7	25	24	15526.91	1	2037.56	4.9078	0.0400	0.0	0.0	0.0	0.0	2.25E-05	1.97E-04
1	0	14	15	440.81	2	2037.57	4.9078	0.0517	4.47E-02	6.32E-02	5.63E-02	4.54E-02	3.57E-02	2.80E-02
4	3	5	4	6248.08	2	2037.68	4.9075	0.0645	0.0	0.0	6.90E-06	5.67E-05	1.79E-04	3.56E-04
5	4	13	12	8508.98	2	2038.22	4.9062	0.0540	0.0	0.0	0.0	1.22E-05	6.64E-05	1.89E-04
3	2	1	2	4177.65	2	2038.23	4.9062	0.0738	0.0	3.22E-06	5.69E-05	2.04E-04	3.94E-04	5.61E-04
7	6	32	31	13918.32	2	2038.45	4.9057	0.0400	0.0	0.0	0.0	0.0	1.26E-06	8.51E-06
2	1	18	19	2866.33	1	2038.57	4.9054	0.0470	9.40E-05	4.47E-02	2.77E-01	5.91E-01	8.33E-01	9.64E-01
3	2	12	13	4603.40	1	2038.61	4.9053	0.0540	0.0	7.09E-04	1.76E-02	7.53E-02	1.61E-01	2.46E-01
7	6	16	15	12899.54	1	2038.68	4.9051	0.0505	0.0	0.0	0.0	1.01E-05	1.58E-04	9.11E-04
6	5	22	21	11037.95	2	2038.85	4.9047	0.0435	0.0	0.0	0.0	1.19E-06	1.19E-05	5.06E-05
9	8	37	36	18771.94	1	2039.40	4.9034	0.0400	0.0	0.0	0.0	0.0	1.65E-06	2.43E-05
6	5	8	7	10554.90	1	2039.60	4.9029	0.0574	0.0	0.0	1.58E-06	7.27E-05	6.48E-04	2.56E-03
8	7	26	25	15616.54	1	2040.20	4.9015	0.0400	0.0	0.0	0.0	0.0	2.15E-05	1.91E-04
2	1	7	8	2227.21	2	2040.70	4.9003	0.0574	9.05E-06	9.27E-04	3.44E-03	5.68E-03	6.86E-03	7.15E-03
7	6	33	32	14028.93	2	2040.78	4.9001	0.0400	0.0	0.0	0.0	0.0	1.17E-06	8.05E-06
4	3	5	6	6428.95	1	2041.05	4.8994	0.0621	0.0	5.46E-06	5.84E-04	5.18E-03	1.71E-02	3.51E-02
4	3	6	5	6265.97	2	2041.06	4.8994	0.0621	0.0	0.0	8.05E-06	6.67E-05	2.12E-04	4.22E-04
5	4	14	13	8555.02	2	2041.29	4.8989	0.0528	0.0	0.0	0.0	1.25E-05	6.85E-05	1.97E-04
5	4	1	0	8414.43	1	2041.40	4.8986	0.0769	0.0	0.0	5.06E-06	9.92E-05	5.29E-04	1.49E-03
9	8	38	37	18902.61	1	2041.53	4.8983	0.0400	0.0	0.0	0.0	0.0	1.50E-06	2.25E-05
6	5	23	22	11114.98	2	2041.58	4.8982	0.0423	0.0	0.0	0.0	1.13E-06	1.15E-05	4.98E-05
1	0	23	24	1151.37	1	2041.66	4.8980	0.0412	2.22E-01	1.73E 00	2.72E 00	2.93E 00	2.74E 00	2.41E 00
1	0	13	14	385.75	2	2041.69	4.8979	0.0528	5.44E-02	6.74E-02	5.74E-02	4.54E-02	3.52E-02	2.74E-02
7	6	17	16	12957.61	1	2041.70	4.8979	0.0493	0.0	0.0	0.0	1.00E-05	1.59E-04	9.25E-04
3	2	0	1	4170.43	2	2041.87	4.8975	0.0769	0.0	1.64E-06	2.88E-05	1.03E-04	1.99E-04	2.83E-04
3	2	11	12	4554.37	1	2042.79	4.8953	0.0542	0.0	7.37E-04	1.76E-02	7.39E-02	1.56E-01	2.37E-01
8	7	27	26	15709.71	1	2042.80	4.8952	0.0400	0.0	0.0	0.0	0.0	2.05E-05	1.85E-04
6	5	9	8	10584.25	1	2042.95	4.8949	0.0550	0.0	0.0	1.70E-06	7.91E-05	7.10E-04	2.82E-03
2	1	17	18	2794.11	1	2042.98	4.8948	0.0482	1.26E-04	5.04E-02	2.95E-01	6.12E-01	8.47E-01	9.70E-01
7	6	34	33	14142.96	2	2043.07	4.8946	0.0400	0.0	0.0	0.0	0.0	1.08E-06	7.58E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLFCULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	8	39	38	19036.74	1	2043.63	4.8933	0.0400	0.0	0.0	0.0	0.0	1.35E-06	2.08E-05
6	5	24	23	11195.50	2	2044.27	4.8917	0.0412	0.0	0.0	0.0	1.08E-06	1.11E-05	4.88E-05
5	4	15	14	8604.60	2	2044.33	4.8916	0.0517	0.0	0.0	0.0	1.26E-05	7.01E-05	2.03E-04
4	3	7	6	6287.43	2	2044.41	4.8914	0.0597	0.0	0.0	9.09E-06	7.60E-05	2.43E-04	4.85E-04
2	1	6	7	2198.07	2	2044.56	4.8910	0.0597	9.12E-06	8.71E-04	3.16E-03	5.16E-03	6.18E-03	6.42E-03
7	6	18	17	13019.29	1	2044.68	4.8907	0.0482	0.0	0.0	0.0	9.89E-06	1.59E-04	9.34E-04
4	3	4	5	6406.52	1	2044.96	4.8901	0.0645	0.0	4.81E-06	5.05E-04	4.44E-03	1.46E-02	2.98E-02
5	4	2	1	8418.13	1	2045.03	4.8899	0.0738	0.0	0.0	1.01E-05	1.98E-04	1.06E-03	2.97E-03
7	6	35	34	14260.39	2	2045.33	4.8892	0.0400	0.0	0.0	0.0	0.0	0.0	7.11E-06
8	7	28	27	15806.43	1	2045.37	4.8891	0.0400	0.0	0.0	0.0	0.0	1.94E-05	1.77E-04
9	8	40	39	19174.33	1	2045.68	4.8883	0.0400	0.0	0.0	0.0	0.0	1.22E-06	1.91E-05
1	0	12	13	334.34	2	2045.78	4.8881	0.0540	6.48E-02	7.09E-02	5.80E-02	4.49E-02	3.44E-02	2.65E-02
1	0	22	23	1059.42	1	2046.27	4.8869	0.0423	3.32E-01	2.07E 00	3.03E 00	3.14E 00	2.87E 00	2.49E 00
6	5	10	9	10617.26	1	2046.27	4.8869	0.0547	0.0	0.0	1.79E-06	8.46E-05	7.65E-04	3.06E-03
6	5	25	24	11279.49	2	2046.93	4.8854	0.0400	0.0	0.0	0.0	1.01E-06	1.07E-05	4.76E-05
3	2	10	11	4509.11	1	2046.94	4.8853	0.0545	0.0	7.54E-04	1.74E-02	7.16E-02	1.50E-01	2.25E-01
5	4	16	15	8657.70	2	2047.34	4.8844	0.0505	0.0	0.0	0.0	1.26E-05	7.12E-05	2.08E-04
2	1	16	17	2725.67	1	2047.37	4.8843	0.0493	1.66E-04	5.62E-02	3.11E-01	6.28E-01	8.57E-01	9.70E-01
7	6	36	35	14381.22	2	2047.55	4.8839	0.0400	0.0	0.0	0.0	0.0	0.0	6.65E-06
7	6	19	18	13084.58	1	2047.63	4.8837	0.0470	0.0	0.0	0.0	9.67E-06	1.58E-04	9.37E-04
9	8	41	40	19315.37	1	2047.69	4.8836	0.0400	0.0	0.0	0.0	0.0	1.09E-06	1.75E-05
4	3	8	7	6312.47	2	2047.72	4.8835	0.0574	0.0	0.0	1.00E-05	8.44E-05	2.71E-04	5.44E-04
8	7	29	28	15906.70	1	2047.90	4.8831	0.0400	0.0	0.0	0.0	0.0	1.82E-05	1.70E-04
2	1	5	6	2172.57	2	2048.40	4.8819	0.0621	8.85E-06	7.95E-04	2.83E-03	4.57E-03	5.44E-03	5.63E-03
5	4	3	2	8425.54	1	2048.63	4.8813	0.0707	0.0	0.0	1.50E-05	2.95E-04	1.58E-03	4.44E-03
4	3	3	4	6387.82	1	2048.84	4.8808	0.0676	0.0	4.03E-06	4.17E-04	3.64E-03	1.19E-02	2.43E-02
3	2	1	0	4166.82	2	2049.06	4.8803	0.0769	0.0	1.66E-06	2.91E-05	1.04E-04	2.00E-04	2.85E-04
6	5	11	10	10653.94	1	2049.54	4.8791	0.0545	0.0	0.0	1.86E-06	8.92E-05	8.14E-04	3.27E-03
6	5	26	25	11366.95	2	2049.55	4.8791	0.0400	0.0	0.0	0.0	0.0	1.03E-05	4.62E-05
9	8	42	41	19459.85	1	2049.66	4.8789	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-05
7	6	37	36	14505.45	2	2049.73	4.8787	0.0400	0.0	0.0	0.0	0.0	0.0	6.19E-06
1	0	11	12	286.60	2	2049.84	4.8784	0.0542	7.53E-02	7.35E-02	5.79E-02	4.40E-02	3.33E-02	2.55E-02
5	4	17	16	8714.33	2	2050.31	4.8773	0.0493	0.0	0.0	0.0	1.25E-05	7.18E-05	2.11E-04
8	7	30	29	16010.51	1	2050.39	4.8771	0.0400	0.0	0.0	0.0	0.0	1.71E-05	1.62E-04
7	6	20	19	13153.48	1	2050.53	4.8768	0.0458	0.0	0.0	0.0	9.38E-06	1.56E-04	9.35E-04
1	0	21	22	971.28	1	2050.85	4.8760	0.0435	4.85E-01	2.45E 00	3.34E 00	3.35E 00	3.00E 00	2.56E 00
4	3	9	8	6341.08	2	2051.00	4.8757	0.0550	0.0	0.0	1.08E-05	9.19E-05	2.98E-04	6.00E-04
3	2	9	10	4467.62	1	2051.06	4.8755	0.0547	0.0	7.59E-04	1.69E-02	6.86E-02	1.42E-01	2.12E-01
9	8	43	42	19607.77	1	2051.59	4.8743	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-05
2	1	15	16	2661.01	1	2051.72	4.8740	0.0505	2.13E-04	6.18E-02	3.26E-01	6.40E-01	8.60E-01	9.64E-01
7	6	38	37	14633.06	2	2051.87	4.8736	0.0400	0.0	0.0	0.0	0.0	0.0	5.75E-06
6	5	27	26	11457.88	2	2052.13	4.8730	0.0400	0.0	0.0	0.0	0.0	9.79E-06	4.47E-05
5	4	4	3	8436.66	1	2052.20	4.8728	0.0676	0.0	0.0	1.96E-05	3.88E-04	2.08E-03	5.88E-03
2	1	4	5	2150.72	2	2052.21	4.8728	0.0645	8.20E-06	6.99E-04	2.44E-03	3.91E-03	4.64E-03	4.78E-03
3	2	2	1	4170.43	2	2052.61	4.8718	0.0738	0.0	3.30E-06	5.79E-05	2.08E-04	4.00E-04	5.69E-04
4	3	2	3	6372.86	1	2052.68	4.8717	0.0707	0.0	3.13E-06	3.21E-04	2.78E-03	9.09E-03	1.84E-02
6	5	12	11	10694.28	1	2052.78	4.8714	0.0542	0.0	0.0	1.90E-06	9.29E-05	8.56E-04	3.46E-03
8	7	31	30	16117.86	1	2052.83	4.8713	0.0400	0.0	0.0	0.0	0.0	1.59E-05	1.54E-04
5	4	18	17	8774.49	2	2053.25	4.8703	0.0482	0.0	0.0	0.0	1.24E-05	7.19E-05	2.14E-04
7	6	21	20	13225.99	1	2053.40	4.8700	0.0447	0.0	0.0	0.0	9.04E-06	1.53E-04	9.28E-04
9	8	44	43	19759.12	1	2053.48	4.8698	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-05
1	0	10	11	242.53	2	2053.86	4.8689	0.0545	8.54E-02	7.50E-02	5.70E-02	4.26E-02	3.19E-02	2.43E-02
7	6	39	38	14764.06	2	2053.98	4.8686	0.0400	0.0	0.0	0.0	0.0	0.0	5.32E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	10	9	6373.27	2	2054.25	4.8680	0.0547	0.0	0.0	1.14E-05	9.85E-05	3.21E-04	6.51E-04
6	5	28	27	11552.28	2	2054.68	4.8669	0.0400	0.0	0.0	0.0	0.0	9.28E-06	4.30E-05
3	2	8	9	4429.89	1	2055.14	4.8658	0.0550	0.0	7.49E-04	1.62E-02	6.47E-02	1.33E-01	1.97E-01
8	7	32	31	16228.73	1	2055.24	4.8656	0.0400	0.0	0.0	0.0	0.0	1.48E-05	1.45E-04
9	8	45	44	19913.90	1	2055.33	4.8654	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-05
1	0	20	21	886.95	1	2055.40	4.8652	0.0447	6.95E-01	2.87E 00	3.66E 00	3.54E 00	3.11E 00	2.62E 00
5	4	5	4	8451.48	1	2055.72	4.8645	0.0645	0.0	0.0	2.40E-05	4.78E-04	2.57E-03	7.28E-03
2	1	3	4	2132.50	2	2055.98	4.8639	0.0676	7.17E-06	5.85E-04	2.02E-03	3.20E-03	3.78E-03	3.89E-03
6	5	13	12	10738.28	1	2055.99	4.8638	0.0540	0.0	0.0	1.93E-06	9.56E-05	8.90E-04	3.63E-03
2	1	14	15	2600.15	1	2056.04	4.8637	0.0517	2.68E-04	6.72E-02	3.37E-01	6.47E-01	8.56E-01	9.51E-01
7	6	40	39	14898.44	2	2056.05	4.8637	0.0400	0.0	0.0	0.0	0.0	0.0	4.91E-06
3	2	3	2	4177.65	2	2056.12	4.8635	0.0707	0.0	4.87E-06	8.60E-05	3.09E-04	5.96E-04	8.51E-04
5	4	19	18	8838.17	2	2056.15	4.8635	0.0470	0.0	0.0	0.0	1.21E-05	7.15E-05	2.15E-04
7	6	22	21	13302.10	1	2056.24	4.8632	0.0435	0.0	0.0	0.0	8.66E-06	1.49E-04	9.16E-04
4	3	1	2	6361.64	1	2056.49	4.8627	0.0738	0.0	2.15E-06	2.18E-04	1.88E-03	6.14E-03	1.24E-02
9	8	46	45	20072.09	1	2057.13	4.8611	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-05
6	5	29	28	11650.14	2	2057.19	4.8610	0.0400	0.0	0.0	0.0	0.0	8.76E-06	4.13E-05
4	3	11	10	6409.02	2	2057.46	4.8604	0.0545	0.0	0.0	1.18E-05	1.04E-04	3.42E-04	6.97E-04
8	7	33	32	16343.14	1	2057.61	4.8600	0.0400	0.0	0.0	0.0	0.0	1.37E-05	1.37E-04
1	0	9	10	202.12	2	2057.86	4.8594	0.0547	9.43E-02	7.52E-02	5.54E-02	4.07E-02	3.02E-02	2.28E-02
7	6	41	40	15036.20	2	2058.08	4.8589	0.0400	0.0	0.0	0.0	0.0	0.0	4.51E-06
9	8	47	46	20233.70	1	2058.90	4.8570	0.0400	0.0	0.0	0.0	0.0	0.0	9.67E-06
5	4	20	19	8905.38	2	2059.01	4.8567	0.0458	0.0	0.0	0.0	1.18E-05	7.06E-05	2.14E-04
7	6	23	22	13381.82	1	2059.03	4.8567	0.0423	0.0	0.0	0.0	8.24E-06	1.45E-04	9.00E-04
6	5	14	13	10785.94	1	2059.16	4.8563	0.0528	0.0	0.0	1.92E-06	9.73E-05	9.17E-04	3.77E-03
3	2	7	8	4395.93	1	2059.19	4.8563	0.0574	0.0	7.23E-04	1.52E-02	6.00E-02	1.22E-01	1.81E-01
5	4	6	5	8470.00	1	2059.22	4.8562	0.0621	0.0	0.0	2.80E-05	5.62E-04	3.04E-03	9.62E-03
3	2	4	3	4188.48	2	2059.60	4.8553	0.0676	0.0	6.33E-06	1.13E-04	4.08E-04	7.89E-04	1.13E-03
6	5	30	29	11751.45	2	2059.66	4.8552	0.0400	0.0	0.0	0.0	0.0	8.24E-06	3.94E-05
2	1	2	3	2117.93	2	2059.72	4.8550	0.0707	5.77E-06	4.55E-04	1.55E-03	2.45E-03	2.88E-03	2.96E-03
1	0	19	20	806.42	1	2059.91	4.8546	0.0458	9.76E-01	3.32E 00	3.97E 00	3.72E 00	3.20E 00	2.67E 00
8	7	34	33	16461.06	1	2059.94	4.8545	0.0400	0.0	0.0	0.0	0.0	1.26E-05	1.29E-04
7	6	42	41	15177.32	2	2060.07	4.8542	0.0400	0.0	0.0	0.0	0.0	0.0	4.13E-06
4	3	0	1	6354.16	1	2060.27	4.8537	0.0769	0.0	1.10E-06	1.10E-04	9.51E-04	3.10E-03	6.27E-03
2	1	13	14	2543.08	1	2060.32	4.8536	0.0528	3.29E-04	7.20E-02	3.45E-01	6.48E-01	8.46E-01	9.31E-01
9	8	48	47	20398.72	1	2060.62	4.8529	0.0400	0.0	0.0	0.0	0.0	0.0	8.66E-06
4	3	12	11	6448.35	2	2060.63	4.8529	0.0542	0.0	0.0	1.21E-05	1.08E-04	3.60E-04	7.38E-04
7	6	24	23	13465.12	1	2061.79	4.8502	0.0412	0.0	0.0	0.0	7.79E-06	1.40E-04	8.80E-04
1	0	8	9	165.38	2	2061.83	4.8501	0.0550	1.01E-01	7.40E-02	5.30E-02	3.84E-02	2.83E-02	2.12E-02
5	4	21	20	8976.10	2	2061.85	4.8500	0.0447	0.0	0.0	0.0	1.14E-05	6.94E-05	2.13E-04
7	6	43	42	15321.80	2	2062.02	4.8496	0.0400	0.0	0.0	0.0	0.0	0.0	3.77E-06
6	5	31	30	11856.22	2	2062.10	4.8494	0.0400	0.0	0.0	0.0	0.0	7.71E-06	3.75E-05
8	7	35	34	16582.50	1	2062.23	4.8491	0.0400	0.0	0.0	0.0	0.0	1.16E-05	1.20E-04
6	5	15	14	10837.26	1	2062.29	4.8490	0.0517	0.0	0.0	1.90E-06	9.82E-05	9.37E-04	3.88E-03
9	8	49	48	20567.13	1	2062.30	4.8490	0.0400	0.0	0.0	0.0	0.0	0.0	7.73E-06
5	4	7	6	8492.22	1	2062.67	4.8481	0.0597	0.0	0.0	3.16E-05	6.39E-04	3.48E-03	9.90E-03
3	2	5	4	4202.92	2	2063.05	4.8472	0.0645	0.0	7.66E-06	1.38E-04	5.02E-04	9.74E-04	1.40E-03
3	2	6	7	4365.74	1	2063.21	4.8468	0.0597	0.0	6.81E-04	1.40E-02	5.45E-02	1.10E-01	1.62E-01
2	1	1	2	2107.00	2	2063.43	4.8463	0.0738	4.06E-06	3.12E-04	1.05E-03	1.66E-03	1.95E-03	1.99E-03
4	3	13	12	6491.25	2	2063.78	4.8455	0.0540	0.0	0.0	1.23E-05	1.12E-04	3.75E-04	7.74E-04
7	6	44	43	15469.65	2	2063.94	4.8451	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-06
9	8	50	49	20738.93	1	2063.94	4.8451	0.0400	0.0	0.0	0.0	0.0	0.0	6.88E-06
1	0	18	19	729.71	1	2064.39	4.8440	0.0470	1.34E 00	3.80E 00	4.27E 00	3.89E 00	3.28E 00	2.70E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	7	36	35	16707.46	1	2064.48	4.8438	0.0400	0.0	0.0	0.0	0.0	1.06E-05	1.12E-04
7	6	25	24	13552.03	1	2064.50	4.8438	0.0400	0.0	0.0	0.0	7.32E-06	1.34E-04	8.56E-04
6	5	32	31	11964.44	2	2064.50	4.8438	0.0400	0.0	0.0	0.0	0.0	7.18E-06	3.56E-05
2	1	12	13	2489.80	1	2064.57	4.8436	0.0540	3.95E-04	7.61E-02	3.50E-01	6.43E-01	8.29E-01	9.04E-01
5	4	22	21	9050.34	2	2064.64	4.8435	0.0435	0.0	0.0	0.0	1.09E-05	6.78E-05	2.11E-04
6	5	16	15	10892.23	1	2065.38	4.8417	0.0505	0.0	0.0	1.86E-06	9.82E-05	9.50E-04	3.97E-03
9	8	51	50	20914.12	1	2065.54	4.8413	0.0400	0.0	0.0	0.0	0.0	0.0	6.11E-06
1	0	7	8	132.31	2	2065.76	4.8408	0.0574	1.06E-01	7.13E-02	4.97E-02	3.55E-02	2.60E-02	1.94E-02
7	6	45	44	15620.85	2	2065.82	4.8407	0.0400	0.0	0.0	0.0	0.0	0.0	3.12E-06
5	4	8	7	8518.15	1	2066.10	4.8400	0.0574	0.0	0.0	3.47E-05	7.09E-04	3.88E-03	1.11E-02
3	2	6	5	4220.97	2	2066.46	4.8392	0.0621	0.0	8.81E-06	1.61E-04	5.91E-04	1.15E-03	1.65E-03
8	7	37	36	16835.92	1	2066.69	4.8387	0.0400	0.0	0.0	0.0	0.0	9.62E-06	1.04E-04
6	5	33	32	12076.10	2	2066.86	4.8383	0.0400	0.0	0.0	0.0	0.0	6.66E-06	3.36E-05
4	3	14	13	6537.71	2	2066.88	4.8382	0.0528	0.0	0.0	1.23E-05	1.14E-04	3.87E-04	8.05E-04
9	8	52	51	21092.69	1	2067.09	4.8377	0.0400	0.0	0.0	0.0	0.0	0.0	5.40E-06
2	1	0	1	2099.72	2	2067.10	4.8377	0.0769	2.10E-06	1.59E-04	5.34E-04	8.37E-04	9.81E-04	1.00E-03
7	6	26	25	13642.53	1	2067.18	4.8375	0.0400	0.0	0.0	0.0	6.84E-06	1.28E-04	8.29E-04
3	2	5	6	4339.32	1	2067.19	4.8375	0.0621	0.0	6.23E-04	1.26E-02	4.83E-02	9.71E-02	1.42E-01
5	4	23	22	9128.10	2	2067.40	4.8370	0.0423	0.0	0.0	0.0	1.04E-05	6.59E-05	2.07E-04
7	6	46	45	15775.39	2	2067.65	4.8364	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-06
4	3	1	0	6350.41	1	2067.71	4.8363	0.0769	0.0	1.11E-06	1.12E-04	9.59E-04	3.12E-03	6.31E-03
6	5	17	16	10950.85	1	2068.43	4.8346	0.0493	0.0	0.0	1.80E-06	9.74E-05	9.55E-04	4.03E-03
9	8	53	52	21274.62	1	2068.60	4.8342	0.0400	0.0	0.0	0.0	0.0	0.0	4.76E-06
2	1	11	12	2440.32	1	2068.79	4.8337	0.0542	4.63E-04	7.92E-02	3.50E-01	6.31E-01	8.04E-01	8.70E-01
1	0	17	18	656.82	1	2068.84	4.8336	0.0482	1.81E 00	4.29E 00	4.56E 00	4.03E 00	3.34E 00	2.72E 00
8	7	38	37	16967.88	1	2068.86	4.8336	0.0400	0.0	0.0	0.0	0.0	8.71E-06	9.62E-05
6	5	34	33	12191.21	2	2069.18	4.8328	0.0400	0.0	0.0	0.0	0.0	6.15E-06	3.16E-05
7	6	47	46	15933.27	2	2069.45	4.8322	0.0400	0.0	0.0	0.0	0.0	0.0	2.54E-06
5	4	9	8	8547.78	1	2069.48	4.8321	0.0550	0.0	0.0	3.73E-05	7.71E-04	4.25E-03	1.22E-02
1	0	6	7	102.91	2	2069.66	4.8317	0.0597	1.07E-01	6.71E-02	4.57E-02	3.23E-02	2.34E-02	1.74E-02
7	6	27	26	13736.61	1	2069.82	4.8313	0.0400	0.0	0.0	0.0	6.35E-06	1.21E-04	8.00E-04
3	2	7	6	4242.63	2	2069.84	4.8313	0.0597	0.0	9.77E-06	1.82E-04	6.73E-04	1.32E-03	1.90E-03
4	3	15	14	6587.74	2	2069.96	4.8310	0.0517	0.0	0.0	1.22E-05	1.15E-04	3.96E-04	8.30E-04
9	8	54	53	21459.91	1	2070.07	4.8308	0.0400	0.0	0.0	0.0	0.0	0.0	4.19E-06
5	4	24	23	9209.37	2	2070.12	4.8306	0.0412	0.0	0.0	0.0	9.88E-06	6.37E-05	2.03E-04
8	7	39	38	17103.34	1	2070.99	4.8286	0.0400	0.0	0.0	0.0	0.0	7.86E-06	8.87E-05
3	2	4	5	4316.68	1	2071.14	4.8283	0.0645	0.0	5.49E-04	1.09E-02	4.14E-02	8.28E-02	1.21E-01
7	6	48	47	16094.49	2	2071.21	4.8281	0.0400	0.0	0.0	0.0	0.0	0.0	2.28E-06
4	3	2	1	6354.16	1	2071.38	4.8277	0.0738	0.0	2.20E-06	2.22E-04	1.91E-03	6.23E-03	1.26E-02
6	5	18	17	11013.12	1	2071.45	4.8275	0.0482	0.0	0.0	1.73E-06	9.59E-05	9.54E-04	4.07E-03
6	5	35	34	12309.75	2	2071.47	4.8275	0.0400	0.0	0.0	0.0	0.0	5.66E-06	2.96E-05
9	8	55	54	21648.56	1	2071.50	4.8274	0.0400	0.0	0.0	0.0	0.0	0.0	3.67E-06
7	6	28	27	13834.28	1	2072.42	4.8253	0.0400	0.0	0.0	0.0	5.86E-06	1.15E-04	7.68E-04
5	4	25	24	9294.14	2	2072.81	4.8244	0.0400	0.0	0.0	0.0	9.31E-06	6.12E-05	1.98E-04
5	4	10	9	8581.11	1	2072.83	4.8243	0.0547	0.0	0.0	3.93E-05	8.25E-04	4.58E-03	1.32E-02
9	8	56	55	21840.56	1	2072.88	4.8242	0.0400	0.0	0.0	0.0	0.0	0.0	3.21E-06
7	6	49	48	16259.04	2	2072.93	4.8241	0.0400	0.0	0.0	0.0	0.0	0.0	2.04E-06
2	1	10	11	2394.64	1	2072.98	4.8240	0.0545	5.29E-04	8.12E-02	3.46E-01	6.12E-01	7.71E-01	8.29E-01
4	3	16	15	6641.34	2	2073.00	4.8239	0.0505	0.0	0.0	1.20E-05	1.15E-04	4.02E-04	8.50E-04
8	7	40	39	17242.29	1	2073.07	4.8238	0.0400	0.0	0.0	0.0	0.0	7.06E-06	8.15E-05
3	2	8	7	4267.90	2	2073.18	4.8235	0.0574	0.0	1.05E-05	2.00E-04	7.47E-04	1.47E-03	2.13E-03
1	0	16	17	587.75	1	2073.26	4.8233	0.0493	2.38E 00	4.79E 00	4.81E 00	4.14E 00	3.38E 00	2.72E 00
1	0	5	6	77.19	2	2073.53	4.8227	0.0621	1.04E-01	6.12E-02	4.08E-02	2.86E-02	2.06E-02	1.53E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	36	35	12431.72	2	2073.72	4.8223	0.0400	0.0	0.0	0.0	0.0	5.19E-06	2.77E-05
9	8	57	56	22035.89	1	2074.22	4.8211	0.0400	0.0	0.0	0.0	0.0	0.0	2.79E-06
2	1	1	0	2096.07	2	2074.36	4.8208	0.0769	2.15E-06	1.61E-04	5.38E-04	8.44E-04	9.88E-04	1.01E-03
6	5	19	18	11079.05	1	2074.43	4.8206	0.0470	0.0	0.0	1.64E-06	9.36E-05	9.47E-04	4.08E-03
7	6	50	49	16426.90	2	2074.61	4.8202	0.0400	0.0	0.0	0.0	0.0	0.0	1.83E-06
7	6	29	28	13935.53	1	2074.98	4.8193	0.0400	0.0	0.0	0.0	5.38E-06	1.08E-04	7.35E-04
4	3	3	2	6361.64	1	2075.02	4.8192	0.0707	0.0	3.25E-06	3.30E-04	2.85E-03	9.30E-03	1.88E-02
3	2	3	4	4297.80	1	2075.05	4.8192	0.0676	0.0	4.60E-04	8.97E-03	3.40E-02	6.76E-02	9.85E-02
8	7	41	40	17384.73	1	2075.12	4.8190	0.0400	0.0	0.0	0.0	0.0	6.32E-06	7.46E-05
5	4	26	25	9382.42	2	2075.46	4.8182	0.0400	0.0	0.0	0.0	8.72E-06	5.86E-05	1.92E-04
9	8	58	57	22234.55	1	2075.51	4.8181	0.0400	0.0	0.0	0.0	0.0	0.0	2.43E-06
6	5	37	36	12557.12	2	2075.94	4.8171	0.0400	0.0	0.0	0.0	0.0	4.73E-06	2.58E-05
4	3	17	16	6698.49	2	2076.00	4.8170	0.0493	0.0	0.0	1.16E-05	1.15E-04	4.05E-04	8.64E-04
5	4	11	10	8618.14	1	2076.14	4.8166	0.0545	0.0	0.0	4.08E-05	8.69E-04	4.88E-03	1.42E-02
7	6	51	50	16598.08	2	2076.26	4.8164	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-06
3	2	9	8	4296.77	2	2076.49	4.8158	0.0550	0.0	1.11E-05	2.15E-04	8.13E-04	1.61E-03	2.35E-03
9	8	59	58	22436.54	1	2076.77	4.8152	0.0400	0.0	0.0	0.0	0.0	0.0	2.10E-06
2	1	9	10	2352.76	1	2077.13	4.8143	0.0547	5.89E-04	8.17E-02	3.37E-01	5.86E-01	7.32E-01	7.81E-01
8	7	42	41	17530.64	1	2077.13	4.8143	0.0400	0.0	0.0	0.0	0.0	5.63E-06	6.81E-05
1	0	4	5	55.14	2	2077.37	4.8138	0.0645	9.61E-02	5.39E-02	3.53E-02	2.45E-02	1.76E-02	1.30E-02
6	5	20	19	11148.61	1	2077.38	4.8138	0.0458	0.0	0.0	1.55E-06	9.08E-05	9.34E-04	4.07E-03
7	6	30	29	14040.35	1	2077.50	4.8135	0.0400	0.0	0.0	0.0	4.92E-06	1.01E-04	7.00E-04
1	0	15	16	522.50	1	2077.65	4.8131	0.0505	3.07E 00	5.28E 00	5.04E 00	4.22E 00	3.40E 00	2.71E 00
7	6	52	51	16772.57	2	2077.86	4.8126	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-06
2	1	2	1	2099.72	2	2077.94	4.8125	0.0738	4.23E-06	3.19E-04	1.07E-03	1.68E-03	1.97E-03	2.02E-03
9	8	60	59	22641.83	1	2077.97	4.8124	0.0400	0.0	0.0	0.0	0.0	0.0	1.81E-06
5	4	27	26	9474.20	2	2078.08	4.8121	0.0400	0.0	0.0	0.0	8.12E-06	5.58E-05	1.86E-04
6	5	38	37	12685.95	2	2078.11	4.8121	0.0400	0.0	0.0	0.0	0.0	4.30E-06	2.39E-05
4	3	4	3	6372.86	1	2078.62	4.8109	0.0676	0.0	4.22E-06	4.32E-04	3.75E-03	1.23E-02	2.50E-02
3	2	2	3	4282.70	1	2078.93	4.8102	0.0707	0.0	3.58E-04	6.90E-03	2.60E-02	5.15E-02	7.49E-02
4	3	18	17	6759.20	2	2078.97	4.8101	0.0482	0.0	0.0	1.12E-05	1.13E-04	4.05E-04	8.73E-04
8	7	43	42	17680.03	1	2079.09	4.8098	0.0400	0.0	0.0	0.0	0.0	5.00E-06	6.19E-05
9	8	61	60	22850.43	1	2079.14	4.8097	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-06
7	6	53	52	16950.35	2	2079.42	4.8090	0.0400	0.0	0.0	0.0	0.0	0.0	1.28E-06
5	4	12	11	8658.86	1	2079.42	4.8090	0.0542	0.0	0.0	4.18E-05	9.05E-04	5.12E-03	1.50E-02
3	2	10	9	4329.25	2	2079.77	4.8082	0.0547	0.0	1.14E-05	2.27E-04	8.71E-04	1.74E-03	2.55E-03
7	6	31	30	14148.75	1	2079.99	4.8077	0.0400	0.0	0.0	0.0	4.47E-06	9.43E-05	6.64E-04
6	5	39	38	12818.19	2	2080.25	4.8071	0.0400	0.0	0.0	0.0	0.0	3.89E-06	2.21E-05
9	8	62	61	23062.32	1	2080.26	4.8071	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-06
6	5	21	20	11221.82	1	2080.28	4.8070	0.0447	0.0	0.0	1.45E-06	8.74E-05	9.15E-04	4.04E-03
5	4	28	27	9569.48	2	2080.66	4.8062	0.0400	0.0	0.0	0.0	7.52E-06	5.29E-05	1.79E-04
7	6	54	53	17131.43	2	2080.94	4.8055	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-06
8	7	44	43	17832.88	1	2081.01	4.8054	0.0400	0.0	0.0	0.0	0.0	4.42E-06	5.61E-05
1	0	3	4	36.76	2	2081.17	4.8050	0.0676	8.41E-02	4.51E-02	2.91E-02	2.01E-02	1.43E-02	1.06E-02
2	1	8	9	2314.69	1	2081.25	4.8048	0.0550	6.37E-04	8.07E-02	3.23E-01	5.53E-01	6.84E-01	7.26E-01
9	8	63	62	23277.50	1	2081.34	4.8046	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-06
2	1	3	2	2107.00	2	2081.48	4.8043	0.0707	6.13E-06	4.71E-04	1.59E-03	2.51E-03	2.95E-03	3.02E-03
4	3	19	18	6823.48	2	2081.90	4.8033	0.0470	0.0	0.0	1.07E-05	1.11E-04	4.02E-04	8.77E-04
1	0	14	15	461.08	1	2082.00	4.8031	0.0517	3.87E 00	5.75E 00	5.22E 00	4.27E 00	3.39E 00	2.67E 00
4	3	5	4	6387.82	1	2082.18	4.8027	0.0645	0.0	5.10E-06	5.29E-04	4.62E-03	1.52E-02	3.09E-02
6	5	40	39	12953.84	2	2082.35	4.8023	0.0400	0.0	0.0	0.0	0.0	3.51E-06	2.04E-05
9	8	64	63	23495.95	1	2082.37	4.8022	0.0400	0.0	0.0	0.0	0.0	0.0	9.78E-07
7	6	55	54	17315.80	2	2082.43	4.8021	0.0400	0.0	0.0	0.0	0.0	0.0	9.90E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	32	31	14260.70	1	2082.43	4.8021	0.0400	0.0	0.0	0.0	4.04E-06	8.76E-05	6.28E-04
5	4	13	12	8703.29	1	2082.66	4.8016	0.0540	0.0	0.0	4.22E-05	9.31E-04	5.33E-03	1.57E-02
3	2	1	2	4271.38	1	2082.78	4.8013	0.0738	0.0	2.46E-04	4.69E-03	1.76E-02	3.48E-02	5.05E-02
8	7	45	44	17989.20	1	2082.90	4.8010	0.0400	0.0	0.0	0.0	0.0	3.90E-06	5.07E-05
3	2	11	10	4365.34	2	2083.01	4.8007	0.0545	0.0	1.15E-05	2.37E-04	9.19E-04	1.85E-03	2.73E-03
6	5	22	21	11298.67	1	2083.15	4.8004	0.0435	0.0	0.0	1.34E-06	8.36E-05	8.92E-04	3.98E-03
5	4	29	28	9668.25	2	2083.20	4.8003	0.0400	0.0	0.0	0.0	6.93E-06	4.99E-05	1.71E-04
6	5	41	40	13092.91	2	2084.41	4.7975	0.0400	0.0	0.0	0.0	0.0	3.15E-06	1.87E-05
8	7	46	45	18148.97	1	2084.74	4.7968	0.0400	0.0	0.0	0.0	0.0	3.42E-06	4.57E-05
4	3	20	19	6891.30	2	2084.80	4.7966	0.0458	0.0	0.0	1.01E-05	1.07E-04	3.98E-04	8.76E-04
7	6	33	32	14376.23	1	2084.84	4.7965	0.0400	0.0	0.0	0.0	3.63E-06	8.09E-05	5.91E-04
1	0	2	3	22.06	2	2084.95	4.7963	0.0707	6.77E-02	3.51E-02	2.24E-02	1.53E-02	1.09E-02	8.03E-03
2	1	4	3	2117.93	2	2084.99	4.7962	0.0676	7.77E-06	6.13E-04	2.09E-03	3.31E-03	3.90E-03	4.00E-03
2	1	7	8	2280.41	1	2085.33	4.7954	0.0574	6.69E-04	7.80E-02	3.03E-01	5.13E-01	6.30E-01	6.65E-01
5	4	30	29	9770.52	2	2085.70	4.7946	0.0400	0.0	0.0	0.0	6.35E-06	4.68E-05	1.63E-04
4	3	6	5	6406.52	1	2085.71	4.7945	0.0621	0.0	5.86E-06	6.17E-04	5.43E-03	1.79E-02	3.66E-02
5	4	14	13	8751.40	1	2085.86	4.7942	0.0528	0.0	0.0	4.22E-05	9.48E-04	5.49E-03	1.63E-02
6	5	23	22	11379.15	1	2085.98	4.7939	0.0423	0.0	0.0	1.24E-06	7.95E-05	8.65E-04	3.91E-03
3	2	12	11	4405.02	2	2086.22	4.7934	0.0542	0.0	1.14E-05	2.43E-04	9.57E-04	1.95E-03	2.89E-03
1	0	13	14	403.48	1	2086.32	4.7931	0.0528	4.76E 00	6.17E 00	5.35E 00	4.28E 00	3.35E 00	2.62E 00
6	5	42	41	13235.37	2	2086.44	4.7929	0.0400	0.0	0.0	0.0	0.0	2.82E-06	1.71E-05
8	7	47	46	18312.18	1	2086.54	4.7926	0.0400	0.0	0.0	0.0	0.0	2.99E-06	4.10E-05
3	2	0	1	4263.83	1	2086.59	4.7925	0.0769	0.0	1.25E-04	2.38E-03	8.89E-03	1.76E-02	2.55E-02
7	6	34	33	14495.30	1	2087.20	4.7911	0.0400	0.0	0.0	0.0	3.24E-06	7.45E-05	5.54E-04
4	3	21	20	6962.68	2	2087.66	4.7901	0.0447	0.0	0.0	9.45E-06	1.04E-04	3.90E-04	8.70E-04
5	4	31	30	9876.27	2	2088.17	4.7889	0.0400	0.0	0.0	0.0	5.78E-06	4.38E-05	1.55E-04
8	7	48	47	18478.84	1	2088.29	4.7886	0.0400	0.0	0.0	0.0	0.0	2.61E-06	3.67E-05
6	5	43	42	13381.23	2	2088.42	4.7883	0.0400	0.0	0.0	0.0	0.0	2.51E-06	1.56E-05
2	1	5	4	2132.50	2	2088.47	4.7882	0.0645	9.07E-06	7.41E-04	2.56E-03	4.07E-03	4.81E-03	4.95E-03
1	0	1	2	11.03	2	2088.69	4.7877	0.0738	4.77E-02	2.41E-02	1.52E-02	1.04E-02	7.38E-03	5.41E-03
6	5	24	23	11463.27	1	2088.77	4.7875	0.0412	0.0	0.0	1.13E-06	7.51E-05	8.33E-04	3.82E-03
5	4	15	14	8803.20	1	2089.02	4.7869	0.0517	0.0	0.0	4.17E-05	9.56E-04	5.60E-03	1.68E-02
4	3	7	6	6428.95	1	2089.20	4.7865	0.0597	0.0	6.49E-06	6.95E-04	6.18E-03	2.05E-02	4.20E-02
2	1	6	7	2249.94	1	2089.38	4.7861	0.0597	6.78E-04	7.35E-02	2.79E-01	4.67E-01	5.69E-01	5.98E-01
3	2	13	12	4448.31	2	2089.40	4.7861	0.0540	0.0	1.12E-05	2.46E-04	9.86E-04	2.03E-03	3.03E-03
7	6	35	34	14617.93	1	2089.52	4.7858	0.0400	0.0	0.0	0.0	2.89E-06	6.82E-05	5.18E-04
8	7	49	48	18648.93	1	2090.01	4.7847	0.0400	0.0	0.0	0.0	0.0	2.26E-06	3.27E-05
6	5	44	43	13530.48	2	2090.37	4.7838	0.0400	0.0	0.0	0.0	0.0	2.23E-06	1.42E-05
4	3	22	21	7037.61	2	2090.49	4.7836	0.0435	0.0	0.0	8.80E-06	9.94E-05	3.81E-04	8.60E-04
5	4	32	31	9985.50	2	2090.60	4.7833	0.0400	0.0	0.0	0.0	5.24E-06	4.08E-05	1.47E-04
1	0	12	13	349.72	1	2090.61	4.7833	0.0540	5.73E 00	6.52E 00	5.43E 00	4.24E 00	3.28E 00	2.54E 00
6	5	25	24	11551.01	1	2091.52	4.7812	0.0400	0.0	0.0	1.02E-06	7.05E-05	7.99E-04	3.71E-03
8	7	50	49	18822.44	1	2091.68	4.7808	0.0400	0.0	0.0	0.0	0.0	1.95E-06	2.91E-05
7	6	36	35	14744.11	1	2091.81	4.7805	0.0400	0.0	0.0	0.0	2.55E-06	6.23E-05	4.82E-04
2	1	6	5	2150.72	2	2091.92	4.7803	0.0621	9.99E-06	8.53E-04	2.99E-03	4.79E-03	5.69E-03	5.87E-03
5	4	16	15	8858.70	1	2092.15	4.7798	0.0505	0.0	0.0	4.07E-05	9.55E-04	5.68E-03	1.72E-02
6	5	45	44	13683.11	2	2092.28	4.7795	0.0400	0.0	0.0	0.0	0.0	1.97E-06	1.29E-05
1	0	0	1	3.68	2	2092.40	4.7792	0.0769	2.47E-02	1.23E-02	7.71E-03	5.25E-03	3.72E-03	2.73E-03
3	2	14	13	4495.20	2	2092.54	4.7789	0.0528	0.0	1.08E-05	2.46E-04	1.01E-03	2.10E-03	3.15E-03
4	3	8	7	6455.12	1	2092.66	4.7786	0.0574	0.0	6.97E-06	7.63E-04	6.85E-03	2.29E-02	4.71E-02
5	4	33	32	10098.21	2	2093.00	4.7778	0.0400	0.0	0.0	0.0	4.73E-06	3.78E-05	1.39E-04
4	3	23	22	7116.09	2	2093.28	4.7772	0.0423	0.0	0.0	8.12E-06	9.48E-05	3.70E-04	8.46E-04
8	7	51	50	18999.38	1	2093.31	4.7771	0.0400	0.0	0.0	0.0	0.0	1.68E-06	2.58E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	5	6	2223.28	1	2093.40	4.7769	0.0621	6.61E-04	6.73E-02	2.50E-01	4.14E-01	5.01E-01	5.24E-01
7	6	37	36	14873.83	1	2094.05	4.7754	0.0400	0.0	0.0	0.0	2.25E-06	5.66E-05	4.47E-04
3	2	1	0	4260.05	1	2094.10	4.7753	0.0769	0.0	1.27E-04	2.40E-03	8.96E-03	1.77E-02	2.56E-02
6	5	46	45	13839.13	2	2094.15	4.7752	0.0400	0.0	0.0	0.0	0.0	1.74E-06	1.16E-05
6	5	26	25	11642.38	1	2094.23	4.7750	0.0400	0.0	0.0	0.0	6.58E-05	7.62E-04	3.60E-03
1	0	11	12	299.78	1	2094.86	4.7736	0.0542	6.74E 00	6.80E 00	5.43E 00	4.17E 00	3.18E 00	2.45E 00
8	7	52	51	19179.72	1	2094.90	4.7735	0.0400	0.0	0.0	0.0	0.0	1.44E-06	2.27E-05
5	4	17	16	8917.88	1	2095.24	4.7727	0.0493	0.0	0.0	3.94E-05	9.47E-04	5.71E-03	1.74E-02
2	1	7	6	2172.57	2	2095.33	4.7725	0.0597	1.05E-05	9.45E-04	3.37E-03	5.45E-03	6.51E-03	6.75E-03
5	4	34	33	10214.39	2	2095.36	4.7724	0.0400	0.0	0.0	0.0	4.25E-06	3.49E-05	1.31E-04
3	2	15	14	4545.69	2	2095.64	4.7718	0.0517	0.0	1.02E-05	2.43E-04	1.02E-03	2.14E-03	3.25E-03
6	5	47	46	13998.51	2	2095.98	4.7710	0.0400	0.0	0.0	0.0	0.0	1.52E-06	1.05E-05
4	3	24	23	7198.11	2	2096.04	4.7709	0.0412	0.0	0.0	7.44E-06	8.97E-05	3.58E-04	8.28E-04
4	3	9	8	6485.03	1	2096.08	4.7708	0.0550	0.0	7.31E-06	8.20E-04	7.45E-03	2.51E-02	5.19E-02
7	6	38	37	15007.09	1	2096.25	4.7704	0.0400	0.0	0.0	0.0	1.97E-06	5.12E-05	4.13E-04
8	7	53	52	19363.47	1	2096.44	4.7700	0.0400	0.0	0.0	0.0	0.0	1.24E-06	2.00E-05
6	5	27	26	11737.38	1	2096.91	4.7689	0.0400	0.0	0.0	0.0	6.10E-05	7.24E-04	3.47E-03
2	1	4	5	2200.42	1	2097.38	4.7679	0.0645	6.16E-04	5.93E-02	2.16E-01	3.55E-01	4.28E-01	4.46E-01
5	4	35	34	10334.05	2	2097.68	4.7672	0.0400	0.0	0.0	0.0	3.79E-06	3.20E-05	1.22E-04
6	5	48	47	14161.26	2	2097.77	4.7670	0.0400	0.0	0.0	0.0	0.0	1.33E-06	9.39E-06
3	2	2	1	4263.83	1	2097.81	4.7669	0.0738	0.0	2.52E-04	4.78E-03	1.79E-02	3.53E-02	5.12E-02
8	7	54	53	19550.62	1	2097.95	4.7666	0.0400	0.0	0.0	0.0	0.0	1.05E-06	1.76E-05
5	4	18	17	8980.75	1	2098.29	4.7658	0.0482	0.0	0.0	3.78E-05	9.31E-04	5.70E-03	1.76E-02
7	6	39	38	15143.88	1	2098.42	4.7655	0.0400	0.0	0.0	0.0	1.72E-06	4.61E-05	3.81E-04
2	1	8	7	2198.07	2	2098.70	4.7649	0.0574	1.06E-05	1.02E-03	3.70E-03	6.05E-03	7.27E-03	7.57E-03
3	2	16	15	4599.77	2	2098.71	4.7648	0.0505	0.0	9.60E-06	2.38E-04	1.02E-03	2.17E-03	3.32E-03
4	3	25	24	7283.66	2	2098.76	4.7647	0.0400	0.0	0.0	6.77E-06	8.45E-05	3.44E-04	8.06E-04
1	0	10	11	253.68	1	2099.08	4.7640	0.0545	7.71E 00	6.97E 00	5.37E 00	4.05E 00	3.06E 00	2.33E 00
8	7	55	54	19741.15	1	2099.41	4.7632	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-05
4	3	10	9	6518.68	1	2099.46	4.7631	0.0547	0.0	7.50E-06	8.65E-04	7.96E-03	2.70E-02	5.62E-02
6	5	49	48	14327.37	2	2099.52	4.7630	0.0400	0.0	0.0	0.0	0.0	1.16E-06	8.40E-06
6	5	28	27	11835.99	1	2099.54	4.7629	0.0400	0.0	0.0	0.0	5.63E-05	6.83E-04	3.33E-03
1	0	1	0	-0.0	2	2099.72	4.7625	0.0769	2.52E-02	1.24E-02	7.79E-03	5.29E-03	3.75E-03	2.75E-03
5	4	36	35	10457.16	2	2099.96	4.7620	0.0400	0.0	0.0	0.0	3.37E-06	2.93E-05	1.14E-04
7	6	40	39	15284.19	1	2100.54	4.7607	0.0400	0.0	0.0	0.0	1.49E-06	4.14E-05	3.50E-04
8	7	56	55	19935.07	1	2100.82	4.7600	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-05
6	5	50	49	14496.84	2	2101.24	4.7591	0.0400	0.0	0.0	0.0	0.0	1.01E-06	7.50E-06
5	4	19	18	9047.30	1	2101.31	4.7589	0.0470	0.0	0.0	3.59E-05	9.09E-04	5.65E-03	1.76E-02
2	1	3	4	2181.37	1	2101.33	4.7589	0.0676	5.40E-04	4.97E-02	1.79E-01	2.91E-01	3.49E-01	3.63E-01
4	3	26	25	7372.76	2	2101.44	4.7586	0.0400	0.0	0.0	6.11E-06	7.91E-05	3.29E-04	7.82E-04
3	2	3	2	4271.38	1	2101.48	4.7586	0.0707	0.0	3.71E-04	7.10E-03	2.66E-02	5.27E-02	7.66E-02
3	2	17	16	4657.45	2	2101.75	4.7579	0.0493	0.0	8.90E-06	2.31E-04	1.01E-03	2.19E-03	3.38E-03
2	1	9	8	2227.21	2	2102.05	4.7573	0.0550	1.04E-05	1.07E-03	3.98E-03	6.59E-03	7.97E-03	8.34E-03
6	5	29	28	11938.21	1	2102.14	4.7571	0.0400	0.0	0.0	0.0	5.16E-05	6.43E-04	3.18E-03
8	7	57	56	20132.36	1	2102.20	4.7569	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-05
5	4	37	36	10583.74	2	2102.21	4.7569	0.0400	0.0	0.0	0.0	2.98E-06	2.67E-05	1.06E-04
7	6	41	40	15428.02	1	2102.62	4.7560	0.0400	0.0	0.0	0.0	1.29E-06	3.70E-05	3.20E-04
4	3	11	10	6556.05	1	2102.81	4.7555	0.0545	0.0	7.56E-06	8.97E-04	8.39E-03	2.87E-02	6.01E-02
6	5	51	50	14669.65	2	2102.91	4.7553	0.0400	0.0	0.0	0.0	0.0	0.0	6.66E-06
1	0	9	10	211.42	1	2103.27	4.7545	0.0547	8.60E 00	7.03E 00	5.23E 00	3.88E 00	2.90E 00	2.20E 00
1	0	2	1	3.68	2	2103.33	4.7544	0.0738	4.97E-02	2.46E-02	1.55E-02	1.05E-02	7.49E-03	5.49E-03
8	7	58	57	20333.01	1	2103.53	4.7539	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-05
4	3	27	26	7465.39	2	2104.09	4.7526	0.0400	0.0	0.0	5.48E-06	7.36E-05	3.13E-04	7.55E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	20	19	9117.53	1	2104.29	4.7522	0.0458	0.0	0.0	3.38E-05	8.80E-04	5.57E-03	1.76E-02
5	4	38	37	10713.77	2	2104.42	4.7519	0.0400	0.0	0.0	0.0	2.62E-06	2.43E-05	9.85E-05
6	5	52	51	14845.80	2	2104.55	4.7516	0.0400	0.0	0.0	0.0	0.0	0.0	5.91E-06
7	6	42	41	15575.37	1	2104.66	4.7514	0.0400	0.0	0.0	0.0	1.11E-06	3.29E-05	2.91E-04
6	5	30	29	12044.05	1	2104.69	4.7513	0.0400	0.0	0.0	0.0	4.71E-05	6.01E-04	3.03E-03
3	2	18	17	4718.72	2	2104.75	4.7512	0.0482	0.0	8.14E-06	2.22E-04	9.95E-04	2.19E-03	3.41E-03
8	7	59	58	20537.02	1	2104.81	4.7510	0.0400	0.0	0.0	0.0	0.0	0.0	8.75E-06
3	2	4	3	4282.70	1	2105.11	4.7503	0.0676	0.0	4.82E-04	9.31E-03	3.51E-02	6.97E-02	1.01E-01
2	1	2	3	2166.13	1	2105.25	4.7500	0.0707	4.37E-04	3.87E-02	1.38E-01	2.23E-01	2.66E-01	2.76E-01
2	1	10	9	2259.98	2	2105.36	4.7498	0.0547	9.92E-06	1.10E-03	4.21E-03	7.05E-03	8.60E-03	9.04E-03
8	7	60	59	20744.37	1	2106.06	4.7482	0.0400	0.0	0.0	0.0	0.0	0.0	7.55E-06
4	3	12	11	6597.16	1	2106.12	4.7481	0.0542	0.0	7.48E-06	9.18E-04	8.73E-03	3.02E-02	6.36E-02
6	5	53	52	15025.29	2	2106.14	4.7480	0.0400	0.0	0.0	0.0	0.0	0.0	5.22E-06
5	4	39	38	10847.26	2	2106.59	4.7470	0.0400	0.0	0.0	0.0	2.29E-06	2.19E-05	9.10E-05
7	6	43	42	15726.23	1	2106.66	4.7469	0.0400	0.0	0.0	0.0	0.0	2.92E-05	2.65E-04
4	3	28	27	7561.55	2	2106.70	4.7468	0.0400	0.0	0.0	4.88E-06	6.81E-05	2.96E-04	7.26E-04
1	0	3	2	11.03	2	2106.90	4.7463	0.0707	7.20E-02	3.64E-02	2.30E-02	1.57E-02	1.12E-02	8.21E-03
6	5	31	30	12153.49	1	2107.21	4.7456	0.0400	0.0	0.0	0.0	4.27E-05	5.60E-04	2.87E-03
5	4	21	20	9191.44	1	2107.23	4.7456	0.0447	0.0	0.0	3.16E-05	8.47E-04	5.46E-03	1.74E-02
8	7	61	60	20955.06	1	2107.26	4.7455	0.0400	0.0	0.0	0.0	0.0	0.0	6.49E-06
1	0	8	9	172.99	1	2107.42	4.7451	0.0550	9.32E 00	6.94E 00	5.02E 00	3.66E 00	2.71E 00	2.05E 00
6	5	54	53	15208.11	2	2107.70	4.7445	0.0400	0.0	0.0	0.0	0.0	0.0	4.60E-06
3	2	19	18	4783.59	2	2107.72	4.7445	0.0470	0.0	7.37E-06	2.12E-04	9.73E-04	2.17E-03	3.42E-03
8	7	62	61	21169.09	1	2108.41	4.7429	0.0400	0.0	0.0	0.0	0.0	0.0	5.56E-06
7	6	44	43	15880.58	1	2108.62	4.7424	0.0400	0.0	0.0	0.0	0.0	2.58E-05	2.40E-04
2	1	11	10	2296.39	2	2108.63	4.7424	0.0545	9.17E-06	1.11E-03	4.37E-03	7.44E-03	9.15E-03	9.68E-03
3	2	5	4	4297.80	1	2108.71	4.7422	0.0645	0.0	5.82E-04	1.14E-02	4.32E-02	8.60E-02	1.25E-01
5	4	40	39	10984.19	2	2108.72	4.7422	0.0400	0.0	0.0	0.0	2.00E-06	1.98E-05	8.38E-05
2	1	1	2	2154.70	1	2109.13	4.7413	0.0738	3.08E-04	2.66E-02	9.36E-02	1.51E-01	1.80E-01	1.86E-01
6	5	55	54	15394.23	2	2109.21	4.7411	0.0400	0.0	0.0	0.0	0.0	0.0	4.04E-06
4	3	29	28	7661.24	2	2109.27	4.7410	0.0400	0.0	0.0	4.31E-06	6.26E-05	2.79E-04	6.96E-04
4	3	13	12	6642.00	1	2109.39	4.7407	0.0540	0.0	7.29E-06	9.27E-04	8.97E-03	3.14E-02	6.66E-02
8	7	63	62	21386.43	1	2109.52	4.7404	0.0400	0.0	0.0	0.0	0.0	0.0	4.75E-06
6	5	32	31	12266.54	1	2109.69	4.7400	0.0400	0.0	0.0	0.0	3.86E-05	5.19E-04	2.71E-03
5	4	22	21	9269.02	1	2110.13	4.7390	0.0435	0.0	0.0	2.93E-05	8.10E-04	5.32E-03	1.72E-02
1	0	4	3	22.06	2	2110.45	4.7383	0.0676	9.12E-02	4.73E-02	3.02E-02	2.07E-02	1.48E-02	1.09E-02
7	6	45	44	16038.43	1	2110.53	4.7381	0.0400	0.0	0.0	0.0	0.0	2.27E-05	2.16E-04
8	7	64	63	21607.08	1	2110.59	4.7380	0.0400	0.0	0.0	0.0	0.0	0.0	4.04E-06
3	2	20	19	4852.04	2	2110.65	4.7379	0.0458	0.0	6.59E-06	2.00E-04	9.45E-04	2.15E-03	3.42E-03
6	5	56	55	15583.68	2	2110.69	4.7378	0.0400	0.0	0.0	0.0	0.0	0.0	3.54E-06
5	4	41	40	11124.55	2	2110.81	4.7375	0.0400	0.0	0.0	0.0	1.73E-06	1.77E-05	7.69E-05
1	0	7	8	138.40	1	2111.54	4.7359	0.0574	9.79E 00	6.72E 00	4.72E 00	3.40E 00	2.50E 00	1.87E 00
8	7	65	64	21831.04	1	2111.61	4.7357	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-06
4	3	30	29	7764.45	2	2111.81	4.7353	0.0400	0.0	0.0	3.79E-06	5.73E-05	2.62E-04	6.64E-04
2	1	12	11	2336.44	2	2111.88	4.7351	0.0542	8.27E-06	1.10E-03	4.48E-03	7.75E-03	9.63E-03	1.02E-02
6	5	57	56	15776.43	2	2112.12	4.7346	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-06
6	5	33	32	12383.18	1	2112.13	4.7346	0.0400	0.0	0.0	0.0	3.46E-05	4.80E-04	2.55E-03
3	2	6	5	4316.68	1	2112.27	4.7342	0.0621	0.0	6.69E-04	1.33E-02	5.07E-02	1.02E-01	1.49E-01
7	6	46	45	16199.77	1	2112.41	4.7339	0.0400	0.0	0.0	0.0	0.0	1.99E-05	1.95E-04
8	7	66	65	22058.29	1	2112.59	4.7335	0.0400	0.0	0.0	0.0	0.0	0.0	2.91E-06
4	3	14	13	6690.57	1	2112.63	4.7334	0.0528	0.0	6.99E-06	9.25E-04	9.13E-03	3.23E-02	6.91E-02
5	4	42	41	11268.36	2	2112.87	4.7329	0.0400	0.0	0.0	0.0	1.50E-06	1.58E-05	7.03E-05
2	1	0	1	2147.08	1	2112.97	4.7327	0.0769	1.60E-04	1.35E-02	4.74E-02	7.62E-02	9.07E-02	9.38E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	23	22	9350.27	1	2112.99	4.7326	0.0423	0.0	0.0	2.69E-05	7.69E-04	5.15E-03	1.68E-02
6	5	58	57	15972.47	2	2113.52	4.7314	0.0400	0.0	0.0	0.0	0.0	0.0	2.69E-06
8	7	67	66	22288.82	1	2113.52	4.7314	0.0400	0.0	0.0	0.0	0.0	0.0	2.46E-06
3	2	21	20	4924.07	2	2113.54	4.7314	0.0447	0.0	5.83E-06	1.87E-04	9.12E-04	2.11E-03	3.39E-03
1	0	5	4	36.76	2	2113.96	4.7305	0.0645	1.06E-01	5.71E-02	3.70E-02	2.55E-02	1.83E-02	1.35E-02
7	6	47	46	16364.60	1	2114.24	4.7298	0.0400	0.0	0.0	0.0	0.0	1.74E-05	1.74E-04
4	3	31	30	7871.18	2	2114.31	4.7297	0.0400	0.0	0.0	3.30E-06	5.22E-05	2.45E-04	6.31E-04
8	7	68	67	22522.63	1	2114.41	4.7295	0.0400	0.0	0.0	0.0	0.0	0.0	2.07E-06
6	5	34	33	12503.41	1	2114.53	4.7292	0.0400	0.0	0.0	0.0	3.09E-05	4.41E-04	2.39E-03
6	5	59	58	16171.80	2	2114.87	4.7284	0.0400	0.0	0.0	0.0	0.0	0.0	2.34E-06
5	4	43	42	11415.59	2	2114.89	4.7284	0.0400	0.0	0.0	0.0	1.29E-06	1.41E-05	6.40E-05
2	1	13	12	2380.12	2	2115.08	4.7280	0.0540	7.27E-06	1.08E-03	4.53E-03	7.98E-03	1.00E-02	1.07E-02
8	7	69	68	22759.69	1	2115.26	4.7276	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-06
1	0	6	7	107.65	1	2115.63	4.7267	0.0597	9.95E 00	6.34E 00	4.35E 00	3.09E 00	2.26E 00	1.68E 00
3	2	7	6	4339.32	1	2115.80	4.7263	0.0597	0.0	7.40E-04	1.50E-02	5.77E-02	1.16E-01	1.71E-01
5	4	24	23	9435.20	1	2115.82	4.7263	0.0412	0.0	0.0	2.45E-05	7.26E-04	4.96E-03	1.64E-02
4	3	15	14	6742.87	1	2115.83	4.7263	0.0517	0.0	6.62E-06	9.13E-04	9.20E-03	3.30E-02	7.11E-02
7	6	48	47	16532.89	1	2116.03	4.7258	0.0400	0.0	0.0	0.0	0.0	1.51E-05	1.56E-04
8	7	70	69	23000.01	1	2116.06	4.7258	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-06
6	5	60	59	16374.42	2	2116.19	4.7255	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-06
3	2	22	21	4999.68	2	2116.40	4.7250	0.0435	0.0	5.10E-06	1.74E-04	8.74E-04	2.06E-03	3.35E-03
4	3	32	31	7981.43	2	2116.78	4.7242	0.0400	0.0	0.0	2.86E-06	4.73E-05	2.27E-04	5.97E-04
8	7	71	70	23243.58	1	2116.81	4.7241	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-06
5	4	44	43	11566.25	2	2116.87	4.7240	0.0400	0.0	0.0	0.0	1.10E-06	1.25E-05	5.82E-05
6	5	35	34	12627.23	1	2116.88	4.7239	0.0400	0.0	0.0	0.0	2.75E-05	4.04E-04	2.23E-03
1	0	6	5	55.14	2	2117.44	4.7227	0.0621	1.17E-01	6.57E-02	4.32E-02	3.00E-02	2.16E-02	1.59E-02
6	5	61	60	16580.31	2	2117.46	4.7226	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-06
8	7	72	71	23490.38	1	2117.52	4.7225	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-06
7	6	49	48	16704.66	1	2117.78	4.7219	0.0400	0.0	0.0	0.0	0.0	1.31E-05	1.39E-04
8	7	73	72	23740.39	1	2118.18	4.7210	0.0400	0.0	0.0	0.0	0.0	0.0	8.39E-07
2	1	14	13	2427.44	2	2118.26	4.7209	0.0528	6.25E-06	1.04E-03	4.53E-03	8.13E-03	1.03E-02	1.12E-02
5	4	25	24	9523.78	1	2118.60	4.7201	0.0400	0.0	0.0	2.22E-05	6.81E-04	4.75E-03	1.60E-02
6	5	62	61	16789.46	2	2118.69	4.7199	0.0400	0.0	0.0	0.0	0.0	0.0	1.50E-06
5	4	45	44	11720.32	2	2118.81	4.7196	0.0400	0.0	0.0	0.0	0.0	1.10E-05	5.26E-05
4	3	16	15	6798.89	1	2118.99	4.7192	0.0505	0.0	6.18E-06	8.92E-04	9.19E-03	3.34E-02	7.27E-02
6	5	36	35	12754.63	1	2119.20	4.7188	0.0400	0.0	0.0	0.0	2.43E-05	3.68E-04	2.07E-03
4	3	33	32	8095.19	2	2119.21	4.7187	0.0400	0.0	0.0	2.46E-06	4.26E-05	2.11E-04	5.63E-04
3	2	23	22	5078.88	2	2119.23	4.7187	0.0423	0.0	4.41E-06	1.61E-04	8.32E-04	2.00E-03	3.29E-03
3	2	8	7	4365.74	1	2119.29	4.7186	0.0574	0.0	7.95E-04	1.64E-02	6.40E-02	1.30E-01	1.91E-01
7	6	50	49	16879.89	1	2119.49	4.7181	0.0400	0.0	0.0	0.0	0.0	1.13E-05	1.23E-04
1	0	5	6	80.74	1	2119.68	4.7177	0.0621	9.71E 00	5.80E 00	3.90E 00	2.74E 00	1.99E 00	1.48E 00
6	5	63	62	17001.87	2	2119.88	4.7172	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-06
2	1	1	0	2143.27	1	2120.56	4.7157	0.0769	1.63E-04	1.37E-02	4.79E-02	7.68E-02	9.14E-02	9.45E-02
5	4	46	45	11877.80	2	2120.71	4.7154	0.0400	0.0	0.0	0.0	0.0	9.70E-06	4.75E-05
1	0	7	6	77.19	2	2120.88	4.7150	0.0597	1.23E-01	7.28E-02	4.87E-02	3.41E-02	2.47E-02	1.83E-02
6	5	64	63	17217.54	2	2121.03	4.7147	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-06
7	6	51	50	17058.57	1	2121.15	4.7144	0.0400	0.0	0.0	0.0	0.0	9.71E-06	1.09E-04
5	4	26	25	9616.03	1	2121.35	4.7140	0.0400	0.0	0.0	2.00E-05	6.34E-04	4.53E-03	1.55E-02
2	1	15	14	2478.38	2	2121.40	4.7139	0.0517	5.25E-06	9.84E-04	4.48E-03	8.21E-03	1.06E-02	1.15E-02
6	5	37	36	12885.61	1	2121.48	4.7137	0.0400	0.0	0.0	0.0	2.14E-05	3.34E-04	1.92E-03
4	3	34	33	8212.45	2	2121.60	4.7134	0.0400	0.0	0.0	2.11E-06	3.82E-05	1.94E-04	5.29E-04
3	2	24	23	5161.65	2	2122.02	4.7125	0.0412	0.0	3.78E-06	1.47E-04	7.87E-04	1.93E-03	3.22E-03
4	3	17	16	6858.63	1	2122.12	4.7123	0.0493	0.0	5.70E-06	8.62E-04	9.11E-03	3.36E-02	7.38E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	65	64	17436.43	2	2122.14	4.7122	0.0400	0.0	0.0	0.0	0.0	0.0	9.39E-07
5	4	47	46	12038.69	2	2122.57	4.7113	0.0400	0.0	0.0	0.0	0.0	8.51E-06	4.27E-05
3	2	9	8	4395.93	1	2122.75	4.7109	0.0550	0.0	8.34E-04	1.76E-02	6.96E-02	1.42E-01	2.11E-01
7	6	52	51	17240.70	1	2122.77	4.7108	0.0400	0.0	0.0	0.0	0.0	8.32E-06	9.62E-05
1	0	4	5	57.67	1	2123.70	4.7088	0.0645	9.05E 00	5.12E 00	3.37E 00	2.35E 00	1.70E 00	1.26E 00
6	5	38	37	13020.16	1	2123.72	4.7087	0.0400	0.0	0.0	0.0	1.87E-05	3.02E-04	1.78E-03
4	3	35	34	8333.21	2	2123.95	4.7082	0.0400	0.0	0.0	1.79E-06	3.40E-05	1.78E-04	4.95E-04
5	4	27	26	9711.93	1	2124.06	4.7080	0.0400	0.0	0.0	1.78E-05	5.88E-04	4.29E-03	1.49E-02
1	0	8	7	102.91	2	2124.29	4.7075	0.0574	1.25E-01	7.84E-02	5.35E-02	3.79E-02	2.76E-02	2.06E-02
2	1	2	1	2147.08	1	2124.30	4.7074	0.0738	3.21E-04	2.72E-02	9.54E-02	1.53E-01	1.82E-01	1.89E-01
7	6	53	52	17426.27	1	2124.35	4.7073	0.0400	0.0	0.0	0.0	0.0	7.10E-06	8.46E-05
5	4	48	47	12202.98	2	2124.40	4.7072	0.0400	0.0	0.0	0.0	0.0	7.43E-06	3.83E-05
2	1	16	15	2532.96	2	2124.50	4.7070	0.0505	4.32E-06	9.22E-04	4.39E-03	8.21E-03	1.07E-02	1.18E-02
3	2	25	24	5247.99	2	2124.77	4.7064	0.0400	0.0	3.21E-06	1.34E-04	7.40E-04	1.85E-03	3.14E-03
4	3	18	17	6922.10	1	2125.21	4.7054	0.0482	0.0	5.19E-06	8.26E-04	8.95E-03	3.35E-02	7.44E-02
7	6	54	53	17615.26	1	2125.89	4.7039	0.0400	0.0	0.0	0.0	0.0	6.04E-06	7.41E-05
6	5	39	38	13158.27	1	2125.92	4.7038	0.0400	0.0	0.0	0.0	1.63E-05	2.71E-04	1.63E-03
3	2	10	9	4429.89	1	2126.16	4.7033	0.0547	0.0	8.55E-04	1.86E-02	7.43E-02	1.53E-01	2.28E-01
5	4	49	48	12370.66	2	2126.18	4.7033	0.0400	0.0	0.0	0.0	0.0	6.46E-06	3.42E-05
4	3	36	35	8457.48	2	2126.26	4.7031	0.0400	0.0	0.0	1.51E-06	3.02E-05	1.63E-04	4.62E-04
5	4	28	27	9811.48	1	2126.73	4.7021	0.0400	0.0	0.0	1.58E-05	5.42E-04	4.05E-03	1.43E-02
7	6	55	54	17807.68	1	2127.38	4.7006	0.0400	0.0	0.0	0.0	0.0	5.12E-06	6.48E-05
3	2	26	25	5337.91	2	2127.48	4.7004	0.0400	0.0	2.69E-06	1.21E-04	6.92E-04	1.77E-03	3.04E-03
2	1	17	16	2591.16	2	2127.57	4.7002	0.0493	3.48E-06	8.53E-04	4.26E-03	8.15E-03	1.08E-02	1.20E-02
1	0	9	8	132.31	2	2127.67	4.7000	0.0550	1.22E-01	8.23E-02	5.75E-02	4.12E-02	3.02E-02	2.26E-02
1	0	3	4	38.45	1	2127.68	4.7000	0.0676	7.95E 00	4.29E 00	2.79E 00	1.93E 00	1.39E 00	1.02E 00
5	4	50	49	12541.73	2	2127.93	4.6994	0.0400	0.0	0.0	0.0	0.0	5.60E-06	3.05E-05
2	1	3	2	2154.70	1	2128.00	4.6992	0.0707	4.65E-04	4.02E-02	1.42E-01	2.28E-01	2.72E-01	2.82E-01
6	5	40	39	13299.95	1	2128.07	4.6991	0.0400	0.0	0.0	0.0	1.41E-05	2.43E-04	1.50E-03
4	3	19	18	6989.28	1	2128.26	4.6987	0.0470	0.0	4.67E-06	7.84E-04	8.73E-03	3.32E-02	7.45E-02
4	3	37	36	8585.23	2	2128.54	4.6981	0.0400	0.0	0.0	1.27E-06	2.67E-05	1.48E-04	4.29E-04
7	6	56	55	18003.52	1	2128.84	4.6974	0.0400	0.0	0.0	0.0	0.0	4.32E-06	5.64E-05
5	4	29	28	9914.69	1	2129.36	4.6962	0.0400	0.0	0.0	1.39E-05	4.96E-04	3.81E-03	1.36E-02
3	2	11	10	4467.62	1	2129.55	4.6958	0.0545	0.0	8.60E-04	1.93E-02	7.83E-02	1.63E-01	2.44E-01
5	4	51	50	12716.17	2	2129.63	4.6957	0.0400	0.0	0.0	0.0	0.0	4.84E-06	2.71E-05
3	2	27	26	5431.39	2	2130.16	4.6945	0.0400	0.0	2.24E-06	1.08E-04	6.43E-04	1.68E-03	2.94E-03
6	5	41	40	13445.18	1	2130.19	4.6944	0.0400	0.0	0.0	0.0	1.21E-05	2.17E-04	1.37E-03
7	6	57	56	18202.77	1	2130.24	4.6943	0.0400	0.0	0.0	0.0	0.0	3.64E-06	4.90E-05
2	1	18	17	2652.99	2	2130.60	4.6935	0.0482	2.74E-06	7.80E-04	4.09E-03	8.03E-03	1.08E-02	1.21E-02
4	3	38	37	8716.48	2	2130.78	4.6931	0.0400	0.0	0.0	1.06E-06	2.34E-05	1.35E-04	3.97E-04
1	0	10	9	165.38	2	2131.01	4.6926	0.0547	1.16E-01	8.46E-02	6.07E-02	4.41E-02	3.26E-02	2.45E-02
4	3	20	19	7060.17	1	2131.27	4.6920	0.0458	0.0	4.15E-06	7.38E-04	8.45E-03	3.27E-02	7.42E-02
5	4	52	51	12893.99	2	2131.30	4.6920	0.0400	0.0	0.0	0.0	0.0	4.16E-06	2.40E-05
7	6	58	57	18405.41	1	2131.61	4.6913	0.0400	0.0	0.0	0.0	0.0	3.05E-06	4.25E-05
1	0	2	3	23.07	1	2131.63	4.6912	0.0707	6.43E 00	3.34E 00	2.15E 00	1.48E 00	1.06E 00	7.79E-01
2	1	4	3	2166.13	1	2131.67	4.6912	0.0676	5.88E-04	5.22E-02	1.86E-01	3.01E-01	3.60E-01	3.74E-01
5	4	30	29	10021.54	1	2131.95	4.6905	0.0400	0.0	0.0	1.21E-05	4.52E-04	3.56E-03	1.30E-02
6	5	42	41	13593.96	1	2132.26	4.6899	0.0400	0.0	0.0	0.0	1.04E-05	1.93E-04	1.25E-03
3	2	28	27	5528.43	2	2132.81	4.6887	0.0400	0.0	1.84E-06	9.60E-05	5.95E-04	1.59E-03	2.82E-03
3	2	12	11	4509.11	1	2132.89	4.6885	0.0542	0.0	8.51E-04	1.97E-02	8.14E-02	1.71E-01	2.58E-01
7	6	59	58	18611.44	1	2132.93	4.6884	0.0400	0.0	0.0	0.0	0.0	2.55E-06	3.66E-05
5	4	53	52	13075.18	2	2132.93	4.6884	0.0400	0.0	0.0	0.0	0.0	3.57E-06	2.12E-05
4	3	39	38	8851.20	2	2132.99	4.6883	0.0400	0.0	0.0	0.0	2.05E-05	1.22E-04	3.67E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	19	18	2718.44	2	2133.60	4.6869	0.0470	2.12E-06	7.05E-04	3.89E-03	7.85E-03	1.07E-02	1.21E-02
7	6	60	59	18820.86	1	2134.21	4.6856	0.0400	0.0	0.0	0.0	0.0	2.12E-06	3.15E-05
4	3	21	20	7134.78	1	2134.24	4.6855	0.0447	0.0	3.65E-06	6.89E-04	8.13E-03	3.20E-02	7.36E-02
6	5	43	42	13746.29	1	2134.30	4.6854	0.0400	0.0	0.0	0.0	8.90E-06	1.71E-04	1.13E-03
1	0	11	10	202.12	2	2134.32	4.6853	0.0545	1.07E-01	8.54E-02	6.31E-02	4.65E-02	3.47E-02	2.63E-02
5	4	31	30	10132.03	1	2134.50	4.6849	0.0400	0.0	0.0	1.05E-05	4.10E-04	3.31E-03	1.23E-02
5	4	54	53	13259.72	2	2134.51	4.6849	0.0400	0.0	0.0	0.0	0.0	3.05E-06	1.86E-05
4	3	40	39	8989.41	2	2135.15	4.6835	0.0400	0.0	0.0	0.0	1.78E-05	1.09E-04	3.37E-04
2	1	5	4	2181.37	1	2135.31	4.6832	0.0645	6.84E-04	6.30E-02	2.27E-01	3.70E-01	4.44E-01	4.62E-01
3	2	29	28	5629.04	2	2135.42	4.6829	0.0400	0.0	1.50E-06	8.47E-05	5.47E-04	1.50E-03	2.70E-03
7	6	61	60	19033.64	1	2135.44	4.6829	0.0400	0.0	0.0	0.0	0.0	1.76E-06	2.71E-05
1	0	1	2	11.54	1	2135.55	4.6826	0.0738	4.54E 00	2.30E 00	1.46E 00	9.99E-01	7.13E-01	5.25E-01
5	4	55	54	13447.62	2	2136.06	4.6815	0.0400	0.0	0.0	0.0	0.0	2.60E-06	1.63E-05
3	2	13	12	4554.37	1	2136.20	4.6812	0.0540	0.0	8.28E-04	1.99E-02	8.37E-02	1.77E-01	2.70E-01
6	5	44	43	13902.14	1	2136.29	4.6810	0.0400	0.0	0.0	0.0	7.56E-06	1.51E-04	1.02E-03
2	1	20	19	2787.51	2	2136.56	4.6804	0.0458	1.60E-06	6.29E-04	3.67E-03	7.61E-03	1.06E-02	1.21E-02
7	6	62	61	19249.80	1	2136.63	4.6803	0.0400	0.0	0.0	0.0	0.0	1.45E-06	2.32E-05
5	4	32	31	10246.16	1	2137.02	4.6794	0.0400	0.0	0.0	9.03E-06	3.70E-04	3.07E-03	1.16E-02
4	3	22	21	7213.10	1	2137.18	4.6791	0.0435	0.0	3.17E-06	6.37E-04	7.76E-03	3.12E-02	7.25E-02
4	3	41	40	9131.08	2	2137.22	4.6788	0.0400	0.0	0.0	0.0	1.54E-05	9.79E-05	3.09E-04
5	4	56	55	13638.86	2	2137.57	4.6782	0.0400	0.0	0.0	0.0	0.0	2.20E-06	1.43E-05
1	0	12	11	242.53	2	2137.59	4.6782	0.0542	9.62E-02	8.46E-02	6.46E-02	4.84E-02	3.65E-02	2.78E-02
7	6	63	62	19469.31	1	2137.78	4.6777	0.0400	0.0	0.0	0.0	0.0	1.20E-06	1.97E-05
3	2	30	29	5733.20	2	2137.99	4.6773	0.0400	0.0	1.21E-06	7.43E-05	5.00E-04	1.40E-03	2.57E-03
6	5	45	44	14061.54	1	2138.24	4.6767	0.0400	0.0	0.0	0.0	6.39E-06	1.33E-04	9.22E-04
7	6	64	63	19692.16	1	2138.88	4.6753	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-05
2	1	6	5	2200.42	1	2138.90	4.6753	0.0621	7.51E-04	7.23E-02	2.65E-01	4.35E-01	5.24E-01	5.48E-01
5	4	57	56	13833.44	2	2139.04	4.6750	0.0400	0.0	0.0	0.0	0.0	1.86E-06	1.25E-05
4	3	42	41	9276.23	2	2139.37	4.6743	0.0400	0.0	0.0	0.0	1.33E-05	8.74E-05	2.82E-04
1	0	0	1	3.85	1	2139.43	4.6741	0.0769	2.36E 00	1.17E 00	7.40E-01	5.05E-01	3.60E-01	2.65E-01
3	2	14	13	4603.40	1	2139.47	4.6741	0.0528	0.0	7.94E-04	1.98E-02	8.51E-02	1.83E-01	2.80E-01
5	4	33	32	10363.92	1	2139.49	4.6740	0.0400	0.0	0.0	7.72E-06	3.31E-04	2.83E-03	1.09E-02
2	1	21	20	2860.19	2	2139.49	4.6740	0.0447	1.19E-06	5.56E-04	3.44E-03	7.34E-03	1.04E-02	1.20E-02
7	6	65	64	19918.36	1	2139.93	4.6730	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-05
4	3	23	22	7295.12	1	2140.08	4.6727	0.0423	0.0	2.73E-06	5.85E-04	7.36E-03	3.01E-02	7.11E-02
6	5	46	45	14224.45	1	2140.15	4.6726	0.0400	0.0	0.0	0.0	5.38E-06	1.16E-04	8.28E-04
5	4	58	57	14031.34	2	2140.46	4.6719	0.0400	0.0	0.0	0.0	0.0	1.57E-06	1.08E-05
3	2	31	30	5840.91	2	2140.52	4.6718	0.0400	0.0	0.0	6.47E-05	4.54E-04	1.31E-03	2.44E-03
1	0	13	12	286.60	2	2140.83	4.6711	0.0540	8.45E-02	8.26E-02	6.53E-02	4.99E-02	3.79E-02	2.91E-02
7	6	66	65	20147.87	1	2140.95	4.6708	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-05
4	3	43	42	9424.83	2	2141.42	4.6698	0.0400	0.0	0.0	0.0	1.14E-05	7.77E-05	2.57E-04
5	4	59	58	14232.57	2	2141.85	4.6689	0.0400	0.0	0.0	0.0	0.0	1.32E-06	9.39E-06
7	6	67	66	20380.71	1	2141.91	4.6687	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-05
5	4	34	33	10485.30	1	2141.92	4.6687	0.0400	0.0	0.0	6.56E-06	2.96E-04	2.60E-03	1.02E-02
6	5	47	46	14390.88	1	2142.02	4.6685	0.0400	0.0	0.0	0.0	4.51E-06	1.01E-04	7.42E-04
2	1	22	21	2936.50	2	2142.38	4.6677	0.0435	0.0	4.86E-04	3.19E-03	7.03E-03	1.01E-02	1.18E-02
2	1	7	6	2223.28	1	2142.47	4.6675	0.0597	7.86E-04	8.00E-02	2.98E-01	4.94E-01	6.00E-01	6.29E-01
3	2	15	14	4656.18	1	2142.71	4.6670	0.0517	0.0	7.51E-04	1.96E-02	8.57E-02	1.86E-01	2.88E-01
7	6	68	67	20616.86	1	2142.84	4.6667	0.0400	0.0	0.0	0.0	0.0	0.0	8.53E-06
4	3	24	23	7380.84	1	2142.94	4.6665	0.0412	0.0	2.32E-06	5.33E-04	6.94E-03	2.90E-02	6.94E-02
3	2	32	31	5952.17	2	2143.02	4.6663	0.0400	0.0	0.0	5.60E-05	4.11E-04	1.22E-03	2.31E-03
5	4	60	59	14437.11	2	2143.20	4.6659	0.0400	0.0	0.0	0.0	0.0	1.10E-06	8.11E-06
4	3	44	43	9576.89	2	2143.43	4.6654	0.0400	0.0	0.0	0.0	9.74E-06	6.88E-05	2.33E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	6	69	68	20856.30	1	2143.72	4.6648	0.0400	0.0	0.0	0.0	0.0	0.0	7.15E-06
6	5	48	47	14560.82	1	2143.84	4.6645	0.0400	0.0	0.0	0.0	3.76E-06	8.78E-05	6.62E-04
1	0	14	13	334.34	2	2144.04	4.6641	0.0528	7.25E-02	7.95E-02	6.53E-02	5.08E-02	3.91E-02	3.03E-02
5	4	35	34	10610.31	1	2144.32	4.6635	0.0400	0.0	0.0	5.54E-06	2.62E-04	2.38E-03	9.53E-03
5	4	61	60	14644.96	2	2144.50	4.6631	0.0400	0.0	0.0	0.0	0.0	0.0	6.99E-06
7	6	70	69	21099.03	1	2144.55	4.6630	0.0400	0.0	0.0	0.0	0.0	0.0	5.98E-06
2	1	23	22	3016.41	2	2145.24	4.6615	0.0423	0.0	4.20E-04	2.94E-03	6.68E-03	9.79E-03	1.16E-02
7	6	71	70	21345.04	1	2145.34	4.6613	0.0400	0.0	0.0	0.0	0.0	0.0	4.98E-06
4	3	45	44	9732.40	2	2145.40	4.6611	0.0400	0.0	0.0	0.0	8.27E-06	6.07E-05	2.11E-04
3	2	33	32	6066.97	2	2145.48	4.6610	0.0400	0.0	0.0	4.81E-05	3.70E-04	1.13E-03	2.18E-03
6	5	49	48	14734.27	1	2145.62	4.6607	0.0400	0.0	0.0	0.0	3.12E-06	7.60E-05	5.89E-04
4	3	25	24	7470.27	1	2145.76	4.6604	0.0400	0.0	1.95E-06	4.82E-04	6.51E-03	2.78E-02	6.74E-02
5	4	62	61	14856.11	2	2145.76	4.6604	0.0400	0.0	0.0	0.0	0.0	0.0	6.01E-06
3	2	16	15	4712.73	1	2145.90	4.6600	0.0505	0.0	7.00E-04	1.91E-02	8.56E-02	1.89E-01	2.95E-01
2	1	8	7	2249.94	1	2145.99	4.6599	0.0574	7.92E-04	8.59E-02	3.27E-01	5.48E-01	6.69E-01	7.05E-01
7	6	72	71	21594.31	1	2146.08	4.6597	0.0400	0.0	0.0	0.0	0.0	0.0	4.14E-06
5	4	36	35	10738.94	1	2146.67	4.6584	0.0400	0.0	0.0	4.64E-06	2.31E-04	2.16E-03	8.85E-03
7	6	73	72	21846.84	1	2146.78	4.6581	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-06
5	4	63	62	15070.55	2	2146.99	4.6577	0.0400	0.0	0.0	0.0	0.0	0.0	5.15E-06
1	0	1	0	-0.0	1	2147.08	4.6575	0.0769	2.41E 00	1.19E 00	7.47E-01	5.09E-01	3.63E-01	2.67E-01
1	0	15	14	385.75	2	2147.21	4.6572	0.0517	6.08E-02	7.54E-02	6.45E-02	5.12E-02	4.00E-02	3.12E-02
4	3	46	45	9891.36	2	2147.33	4.6569	0.0400	0.0	0.0	0.0	7.00E-06	5.33E-05	1.90E-04
6	5	50	49	14911.20	1	2147.37	4.6569	0.0400	0.0	0.0	0.0	2.57E-06	6.55E-05	5.22E-04
7	6	74	73	22102.62	1	2147.43	4.6567	0.0400	0.0	0.0	0.0	0.0	0.0	2.83E-06
3	2	34	33	6185.32	2	2147.90	4.6557	0.0400	0.0	0.0	4.11E-05	3.31E-04	1.04E-03	2.05E-03
7	6	75	74	22361.64	1	2148.03	4.6554	0.0400	0.0	0.0	0.0	0.0	0.0	2.34E-06
2	1	24	23	3099.94	2	2148.06	4.6554	0.0412	0.0	3.59E-04	2.69E-03	6.32E-03	9.45E-03	1.14E-02
5	4	64	63	15288.27	2	2148.17	4.6551	0.0400	0.0	0.0	0.0	0.0	0.0	4.40E-06
4	3	26	25	7563.39	1	2148.54	4.6543	0.0400	0.0	1.62E-06	4.32E-04	6.06E-03	2.65E-02	6.52E-02
7	6	76	75	22623.88	1	2148.59	4.6542	0.0400	0.0	0.0	0.0	0.0	0.0	1.92E-06
5	4	37	36	10871.18	1	2148.98	4.6534	0.0400	0.0	0.0	3.86E-06	2.03E-04	1.96E-03	8.20E-03
6	5	51	50	15091.63	1	2149.06	4.6532	0.0400	0.0	0.0	0.0	2.12E-06	5.62E-05	4.61E-04
3	2	17	16	4773.03	1	2149.06	4.6532	0.0493	0.0	6.44E-04	1.84E-02	8.47E-02	1.90E-01	2.99E-01
7	6	77	76	22889.33	1	2149.11	4.6531	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-06
4	3	47	46	10053.75	2	2149.23	4.6528	0.0400	0.0	0.0	0.0	5.89E-06	4.66E-05	1.71E-04
5	4	65	64	15509.25	2	2149.31	4.6527	0.0400	0.0	0.0	0.0	0.0	0.0	3.74E-06
2	1	9	8	2280.41	1	2149.48	4.6523	0.0550	7.71E-04	9.00E-02	3.51E-01	5.96E-01	7.33E-01	7.75E-01
7	6	78	77	23157.98	1	2149.57	4.6521	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-06
7	6	79	78	23429.83	1	2150.00	4.6512	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-06
3	2	35	34	6307.19	2	2150.28	4.6506	0.0400	0.0	0.0	3.48E-05	2.95E-04	9.52E-04	1.91E-03
1	0	16	15	440.81	2	2150.35	4.6504	0.0505	4.98E-02	7.06E-02	6.31E-02	5.13E-02	4.05E-02	3.19E-02
7	6	80	79	23704.85	1	2150.37	4.6504	0.0400	0.0	0.0	0.0	0.0	0.0	8.51E-07
5	4	66	65	15733.51	2	2150.41	4.6503	0.0400	0.0	0.0	0.0	0.0	0.0	3.18E-06
6	5	52	51	15275.54	1	2150.72	4.6496	0.0400	0.0	0.0	0.0	1.73E-06	4.81E-05	4.06E-04
2	1	25	24	3187.07	2	2150.84	4.6493	0.0400	0.0	3.04E-04	2.44E-03	5.94E-03	9.06E-03	1.11E-02
1	0	2	1	3.85	1	2150.86	4.6493	0.0738	4.73E 00	2.35E 00	1.49E 00	1.02E 00	7.24E-01	5.33E-01
4	3	48	47	10219.57	2	2151.09	4.6488	0.0400	0.0	0.0	0.0	4.94E-06	4.07E-05	1.53E-04
5	4	38	37	11007.02	1	2151.25	4.6485	0.0400	0.0	0.0	3.20E-06	1.78E-04	1.77E-03	7.56E-03
4	3	27	26	7660.20	1	2151.28	4.6484	0.0400	0.0	1.34E-06	3.85E-04	5.61E-03	2.51E-02	6.27E-02
5	4	67	66	15961.02	2	2151.47	4.6480	0.0400	0.0	0.0	0.0	0.0	0.0	2.69E-06
3	2	18	17	4837.09	1	2152.19	4.6464	0.0482	0.0	5.86E-04	1.76E-02	8.32E-02	1.89E-01	3.01E-01
6	5	53	52	15462.93	1	2152.34	4.6461	0.0400	0.0	0.0	0.0	1.41E-06	4.10E-05	3.57E-04
5	4	68	67	16191.77	2	2152.48	4.6458	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	2	36	35	6432.60	2	2152.63	4.6455	0.0400	0.0	0.0	2.94E-05	2.61E-04	8.69E-04	1.78E-03
4	3	49	48	10388.82	2	2152.90	4.6449	0.0400	0.0	0.0	0.0	4.12E-06	3.53E-05	1.37E-04
2	1	10	9	2314.69	1	2152.94	4.6448	0.0547	7.28E-04	9.22E-02	3.70E-01	6.36E-01	7.89E-01	8.40E-01
1	0	17	16	499.54	2	2153.45	4.6437	0.0493	4.00E-02	6.52E-02	6.12E-02	5.08E-02	4.07E-02	3.24E-02
5	4	69	68	16425.77	2	2153.46	4.6437	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-06
5	4	39	38	11146.46	1	2153.49	4.6436	0.0400	0.0	0.0	2.63E-06	1.54E-04	1.59E-03	6.95E-03
2	1	26	25	3277.80	2	2153.59	4.6434	0.0400	0.0	2.54E-04	2.20E-03	5.55E-03	8.65E-03	1.07E-02
6	5	54	53	15653.78	1	2153.91	4.6427	0.0400	0.0	0.0	0.0	1.14E-06	3.48E-05	3.12E-04
4	3	28	27	7760.70	1	2153.99	4.6425	0.0400	0.0	1.09E-06	3.40E-04	5.16E-03	2.36E-02	6.01E-02
5	4	70	69	16662.99	2	2154.39	4.6417	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-06
1	0	3	2	11.54	1	2154.60	4.6412	0.0707	6.86E 00	3.47E 00	2.21E 00	1.51E 00	1.08E 00	7.96E-01
4	3	50	49	10561.49	2	2154.68	4.6411	0.0400	0.0	0.0	0.0	3.42E-06	3.06E-05	1.21E-04
3	2	37	36	6561.53	2	2154.94	4.6405	0.0400	0.0	0.0	2.46E-05	2.31E-04	7.90E-04	1.66E-03
3	2	19	18	4904.90	1	2155.27	4.6398	0.0470	0.0	5.26E-04	1.67E-02	8.11E-02	1.87E-01	3.02E-01
5	4	71	70	16903.43	2	2155.28	4.6398	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-06
6	5	55	54	15848.09	1	2155.43	4.6394	0.0400	0.0	0.0	0.0	0.0	2.94E-05	2.73E-04
5	4	40	39	11289.51	1	2155.68	4.6389	0.0400	0.0	0.0	2.15E-06	1.33E-04	1.43E-03	6.37E-03
5	4	72	71	17147.08	2	2156.13	4.6379	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-06
2	1	27	26	3372.13	2	2156.31	4.6376	0.0400	0.0	2.11E-04	1.97E-03	5.15E-03	8.22E-03	1.03E-02
2	1	11	10	2352.76	1	2156.35	4.6375	0.0545	6.68E-04	9.27E-02	3.83E-01	6.70E-01	8.39E-01	8.98E-01
4	3	51	50	10737.57	2	2156.42	4.6373	0.0400	0.0	0.0	0.0	2.83E-06	2.64E-05	1.08E-04
1	0	18	17	561.92	2	2156.51	4.6371	0.0482	3.15E-02	5.95E-02	5.87E-02	5.00E-02	4.07E-02	3.27E-02
4	3	29	28	7864.89	1	2156.65	4.6368	0.0400	0.0	0.0	2.99E-04	4.73E-03	2.22E-02	5.74E-02
6	5	56	55	16045.84	1	2156.92	4.6362	0.0400	0.0	0.0	0.0	0.0	2.48E-05	2.37E-04
5	4	73	72	17393.93	2	2156.93	4.6362	0.0400	0.0	0.0	0.0	0.0	0.0	9.36E-07
3	2	38	37	6693.98	2	2157.22	4.6356	0.0400	0.0	0.0	2.05E-05	2.02E-04	7.16E-04	1.53E-03
5	4	41	40	11436.14	1	2157.83	4.6343	0.0400	0.0	0.0	1.74E-06	1.15E-04	1.27E-03	5.81E-03
4	3	52	51	10917.06	2	2158.12	4.6337	0.0400	0.0	0.0	0.0	2.33E-06	2.27E-05	9.53E-05
1	0	4	3	23.07	1	2158.30	4.6333	0.0676	8.66E 00	4.51E 00	2.90E 00	1.99E 00	1.43E 00	1.05E 00
3	2	20	19	4976.46	1	2158.32	4.6332	0.0458	0.0	4.67E-04	1.57E-02	7.85E-02	1.84E-01	3.00E-01
6	5	57	56	16247.05	1	2158.36	4.6331	0.0400	0.0	0.0	0.0	0.0	2.08E-05	2.06E-04
2	1	28	27	3470.06	2	2158.98	4.6318	0.0400	0.0	1.73E-04	1.75E-03	4.76E-03	7.77E-03	9.94E-03
4	3	30	29	7972.75	1	2159.28	4.6312	0.0400	0.0	0.0	2.60E-04	4.30E-03	2.07E-02	5.45E-02
3	2	39	38	6829.95	2	2159.45	4.6308	0.0400	0.0	0.0	1.69E-05	1.77E-04	6.46E-04	1.41E-03
1	0	19	18	627.96	2	2159.54	4.6306	0.0470	2.42E-02	5.37E-02	5.58E-02	4.89E-02	4.04E-02	3.28E-02
2	1	12	11	2394.64	1	2159.73	4.6302	0.0542	5.97E-04	9.16E-02	3.92E-01	6.96E-01	8.81E-01	9.49E-01
6	5	58	57	16451.68	1	2159.76	4.6301	0.0400	0.0	0.0	0.0	0.0	1.74E-05	1.78E-04
4	3	53	52	11099.95	2	2159.78	4.6301	0.0400	0.0	0.0	0.0	1.91E-06	1.94E-05	8.40E-05
5	4	42	41	11586.35	1	2159.94	4.6298	0.0400	0.0	0.0	1.41E-06	9.84E-05	1.13E-03	5.29E-03
6	5	59	58	16659.74	1	2161.12	4.6272	0.0400	0.0	0.0	0.0	0.0	1.45E-05	1.53E-04
3	2	21	20	5051.77	1	2161.33	4.6268	0.0447	0.0	4.10E-04	1.47E-02	7.54E-02	1.90E-01	2.97E-01
4	3	54	53	11286.22	2	2161.40	4.6266	0.0400	0.0	0.0	0.0	1.55E-06	1.65E-05	7.38E-05
2	1	29	28	3571.58	2	2161.62	4.6262	0.0400	0.0	1.41E-04	1.54E-03	4.37E-03	7.31E-03	9.50E-03
3	2	40	39	6969.43	2	2161.65	4.6261	0.0400	0.0	0.0	1.39E-05	1.53E-04	5.80E-04	1.30E-03
4	3	31	30	8084.29	1	2161.87	4.6256	0.0400	0.0	0.0	2.25E-04	3.89E-03	1.93E-02	5.16E-02
1	0	5	4	38.45	1	2161.97	4.6254	0.0645	1.01E 01	5.44E 00	3.54E 00	2.45E 00	1.76E 00	1.30E 00
5	4	43	42	11740.14	1	2162.00	4.6253	0.0400	0.0	0.0	1.13E-06	8.39E-05	9.98E-04	4.79E-03
6	5	60	59	16871.22	1	2162.43	4.6244	0.0400	0.0	0.0	0.0	0.0	1.21E-05	1.32E-04
1	0	20	19	697.65	2	2162.54	4.6242	0.0458	1.83E-02	4.79E-02	5.27E-02	4.74E-02	3.98E-02	3.27E-02
4	3	55	54	11475.88	2	2162.98	4.6233	0.0400	0.0	0.0	0.0	1.26E-06	1.41E-05	6.47E-05
2	1	13	12	2440.32	1	2163.08	4.6230	0.0540	5.20E-04	8.91E-02	3.95E-01	7.15E-01	9.15E-01	9.94E-01
6	5	61	60	17086.11	1	2163.69	4.6217	0.0400	0.0	0.0	0.0	0.0	9.99E-06	1.13E-04
3	2	41	40	7112.42	2	2163.81	4.6215	0.0400	0.0	0.0	1.13E-05	1.33E-04	5.19E-04	1.19E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	44	43	11897.51	1	2164.03	4.6210	0.0400	0.0	0.0	0.0	7.11E-05	8.79E-04	4.33E-03
2	1	30	29	3676.69	2	2164.22	4.6206	0.0400	0.0	1.13E-04	1.35E-03	3.99E-03	6.85E-03	9.05E-03
3	2	22	21	5130.82	1	2164.30	4.6204	0.0435	0.0	3.56E-04	1.36E-02	7.19E-02	1.75E-01	2.93E-01
4	3	32	31	8199.50	1	2164.41	4.6202	0.0400	0.0	0.0	1.94E-04	3.51E-03	1.78E-02	4.87E-02
4	3	56	55	11668.92	2	2164.52	4.6200	0.0400	0.0	0.0	0.0	1.02E-06	1.19E-05	5.65E-05
6	5	62	61	17304.39	1	2164.92	4.6191	0.0400	0.0	0.0	0.0	0.0	8.24E-06	9.64E-05
1	0	21	20	771.00	2	2165.50	4.6179	0.0447	1.35E-02	4.22E-02	4.92E-02	4.56E-02	3.91E-02	3.24E-02
1	0	6	5	57.67	1	2165.60	4.6177	0.0621	1.10E 01	6.24E 00	4.12E 00	2.88E 00	2.08E 00	1.54E 00
3	2	42	41	7258.90	2	2165.93	4.6170	0.0400	0.0	0.0	9.21E-06	1.14E-04	4.63E-04	1.08E-03
5	4	45	44	12058.43	1	2166.01	4.6168	0.0400	0.0	0.0	0.0	6.00E-05	7.71E-04	3.90E-03
4	3	57	56	11865.33	2	2166.01	4.6168	0.0400	0.0	0.0	0.0	0.0	1.00E-05	4.92E-05
6	5	63	62	17526.07	1	2166.10	4.6166	0.0400	0.0	0.0	0.0	0.0	6.78E-06	8.21E-05
2	1	14	13	2489.80	1	2166.38	4.6160	0.0528	4.42E-04	8.53E-02	3.94E-01	7.27E-01	9.41E-01	1.03E 00
2	1	31	30	3785.38	2	2166.79	4.6151	0.0400	0.0	9.03E-05	1.17E-03	3.62E-03	6.39E-03	8.59E-03
4	3	33	32	8318.38	1	2166.92	4.6148	0.0400	0.0	0.0	1.65E-04	3.14E-03	1.64E-02	4.57E-02
3	2	23	22	5213.61	1	2167.23	4.6142	0.0423	0.0	3.05E-04	1.24E-02	6.82E-02	1.70E-01	2.87E-01
6	5	64	63	17751.12	1	2167.23	4.6142	0.0400	0.0	0.0	0.0	0.0	5.55E-06	6.97E-05
4	3	58	57	12065.10	2	2167.47	4.6137	0.0400	0.0	0.0	0.0	0.0	8.45E-06	4.27E-05
5	4	46	45	12222.62	1	2167.96	4.6126	0.0400	0.0	0.0	0.0	5.04E-05	6.74E-04	3.50E-03
3	2	43	42	7408.88	2	2168.01	4.6125	0.0400	0.0	0.0	7.43E-06	9.77E-05	4.11E-04	9.86E-04
6	5	65	64	17979.55	1	2168.32	4.6119	0.0400	0.0	0.0	0.0	0.0	4.53E-06	5.90E-05
1	0	22	21	847.99	2	2168.43	4.6116	0.0435	9.80E-03	3.68E-02	4.57E-02	4.37E-02	3.81E-02	3.20E-02
4	3	59	58	12268.22	2	2168.89	4.6107	0.0400	0.0	0.0	0.0	0.0	7.08E-06	3.70E-05
1	0	7	6	80.74	1	2169.20	4.6100	0.0597	1.16E 01	6.90E 00	4.64E 00	3.28E 00	2.38E 00	1.77E 00
2	1	32	31	3897.66	2	2169.32	4.6097	0.0400	0.0	7.13E-05	1.01E-03	3.27E-03	5.93E-03	8.12E-03
6	5	66	65	18211.34	1	2169.37	4.6096	0.0400	0.0	0.0	0.0	0.0	3.68E-06	4.98E-05
4	3	34	33	8440.93	1	2169.39	4.6096	0.0400	0.0	0.0	1.40E-04	2.80E-03	1.51E-02	4.28E-02
2	1	15	14	2543.08	1	2169.65	4.6090	0.0517	3.68E-04	8.06E-02	3.88E-01	7.32E-01	9.60E-01	1.06E 00
5	4	47	46	12390.96	1	2169.86	4.6086	0.0400	0.0	0.0	0.0	4.22E-05	5.87E-04	3.13E-03
3	2	44	43	7562.35	2	2170.05	4.6082	0.0400	0.0	0.0	5.95E-06	8.33E-05	3.63E-04	8.94E-04
3	2	24	23	5300.14	1	2170.13	4.6080	0.0412	0.0	2.59E-04	1.13E-02	6.42E-02	1.63E-01	2.80E-01
4	3	60	59	12474.70	2	2170.27	4.6077	0.0400	0.0	0.0	0.0	0.0	5.91E-06	3.19E-05
6	5	67	66	18446.48	1	2170.37	4.6075	0.0400	0.0	0.0	0.0	0.0	2.99E-06	4.19E-05
1	0	23	22	928.62	2	2171.31	4.6055	0.0423	6.97E-03	3.18E-02	4.20E-02	4.15E-02	3.69E-02	3.14E-02
6	5	68	67	18684.96	1	2171.33	4.6055	0.0400	0.0	0.0	0.0	0.0	2.41E-06	3.52E-05
4	3	61	60	12684.50	2	2171.61	4.6049	0.0400	0.0	0.0	0.0	0.0	4.92E-06	2.74E-05
5	4	48	47	12562.54	1	2171.72	4.6046	0.0400	0.0	0.0	0.0	3.51E-05	5.09E-04	2.79E-03
2	1	33	32	4013.51	2	2171.81	4.6045	0.0400	0.0	5.58E-05	8.69E-04	2.94E-03	5.48E-03	7.65E-03
4	3	35	34	8567.12	1	2171.82	4.6044	0.0400	0.0	0.0	1.18E-04	2.48E-03	1.38E-02	3.99E-02
3	2	45	44	7719.30	2	2172.06	4.6039	0.0400	0.0	0.0	4.74E-06	7.07E-05	3.20E-04	8.07E-04
6	5	69	68	18926.79	1	2172.24	4.6035	0.0400	0.0	0.0	0.0	0.0	1.94E-06	2.94E-05
1	0	8	7	107.65	1	2172.76	4.6024	0.0574	1.16E 01	7.41E 00	5.09E 00	3.63E 00	2.66E 00	1.99E 00
2	1	16	15	2600.15	1	2172.88	4.6022	0.0505	2.99E-04	7.50E-02	3.78E-01	7.30E-01	9.71E-01	1.08E 00
4	3	62	61	12897.64	2	2172.90	4.6021	0.0400	0.0	0.0	0.0	0.0	4.08E-06	2.35E-05
3	2	25	24	5390.41	1	2172.98	4.6020	0.0400	0.0	2.18E-04	1.02E-02	6.01E-02	1.56E-01	2.72E-01
6	5	70	69	19171.93	1	2173.11	4.6017	0.0400	0.0	0.0	0.0	0.0	1.56E-06	2.45E-05
5	4	49	48	12737.67	1	2173.54	4.6008	0.0400	0.0	0.0	0.0	2.91E-05	4.39E-04	2.48E-03
6	5	71	70	19420.38	1	2173.93	4.6000	0.0400	0.0	0.0	0.0	0.0	1.24E-06	2.04E-05
3	2	46	45	7879.72	2	2174.02	4.5998	0.0400	0.0	0.0	3.75E-06	5.97E-05	2.81E-04	7.27E-04
4	3	63	62	13114.11	2	2174.16	4.5995	0.0400	0.0	0.0	0.0	0.0	3.37E-06	2.01E-05
1	0	24	23	1012.90	2	2174.17	4.5995	0.0412	4.86E-03	2.71E-02	3.84E-02	3.92E-02	3.56E-02	3.07E-02
4	3	36	35	8696.97	1	2174.20	4.5994	0.0400	0.0	0.0	9.89E-05	2.18E-03	1.25E-02	3.70E-02
2	1	34	33	4132.93	2	2174.27	4.5992	0.0400	0.0	4.32E-05	7.40E-04	2.63E-03	5.04E-03	7.17E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	5	72	71	19672.14	1	2174.71	4.5983	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-05
5	4	50	49	12916.32	1	2175.31	4.5970	0.0400	0.0	0.0	0.0	2.40E-05	3.78E-04	2.19E-03
4	3	64	63	13333.88	2	2175.37	4.5969	0.0400	0.0	0.0	0.0	0.0	2.77E-06	1.72E-05
6	5	73	72	19927.18	1	2175.44	4.5968	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-05
3	2	26	25	5484.40	1	2175.80	4.5960	0.0400	0.0	1.81E-04	9.15E-03	5.59E-02	1.49E-01	2.63E-01
3	2	47	46	8043.62	2	2175.95	4.5957	0.0400	0.0	0.0	2.95E-06	5.01E-05	2.45E-04	6.52E-04
2	1	17	16	2661.01	1	2176.08	4.5954	0.0493	2.37E-04	6.90E-02	3.65E-01	7.23E-01	9.75E-01	1.10E 00
6	5	74	73	20185.51	1	2176.13	4.5953	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-05
1	0	9	8	138.40	1	2176.29	4.5950	0.0550	1.13E 01	7.75E 00	5.46E 00	3.94E 00	2.91E 00	2.19E 00
4	3	65	64	13556.96	2	2176.54	4.5944	0.0400	0.0	0.0	0.0	0.0	2.28E-06	1.46E-05
4	3	37	36	8830.47	1	2176.55	4.5944	0.0400	0.0	0.0	8.22E-05	1.91E-03	1.13E-02	3.42E-02
2	1	35	34	4255.91	2	2176.68	4.5942	0.0400	0.0	3.32E-05	6.27E-04	2.34E-03	4.62E-03	6.70E-03
6	5	75	74	20447.11	1	2176.77	4.5940	0.0400	0.0	0.0	0.0	0.0	0.0	9.50E-06
1	0	25	24	1100.81	2	2176.99	4.5935	0.0400	3.32E-03	2.29E-02	3.48E-02	3.68E-02	3.41E-02	2.99E-02
5	4	51	50	13098.50	1	2177.05	4.5934	0.0400	0.0	0.0	0.0	1.97E-05	3.24E-04	1.94E-03
6	5	76	75	20711.97	1	2177.36	4.5927	0.0400	0.0	0.0	0.0	0.0	0.0	7.79E-06
4	3	66	65	13783.34	2	2177.67	4.5921	0.0400	0.0	0.0	0.0	0.0	1.86E-06	1.24E-05
3	2	48	47	8210.98	2	2177.84	4.5917	0.0400	0.0	0.0	2.31E-06	4.19E-05	2.14E-04	5.83E-04
6	5	77	76	20980.08	1	2177.91	4.5916	0.0400	0.0	0.0	0.0	0.0	0.0	6.37E-06
6	5	78	77	21251.42	1	2178.41	4.5905	0.0400	0.0	0.0	0.0	0.0	0.0	5.20E-06
3	2	27	26	5582.12	1	2178.58	4.5901	0.0400	0.0	1.49E-04	8.14E-03	5.17E-02	1.41E-01	2.53E-01
5	4	52	51	13284.19	1	2178.74	4.5898	0.0400	0.0	0.0	0.0	1.61E-05	2.77E-04	1.70E-03
4	3	67	66	14013.01	2	2178.76	4.5898	0.0400	0.0	0.0	0.0	0.0	1.52E-06	1.05E-05
6	5	79	78	21525.99	1	2178.86	4.5896	0.0400	0.0	0.0	0.0	0.0	0.0	4.23E-06
4	3	38	37	8967.61	1	2178.86	4.5896	0.0400	0.0	0.0	6.79E-05	1.67E-03	1.02E-02	3.16E-02
2	1	36	35	4382.47	2	2179.06	4.5891	0.0400	0.0	2.52E-05	5.27E-04	2.07E-03	4.22E-03	6.24E-03
2	1	18	17	2725.67	1	2179.24	4.5888	0.0482	1.84E-04	6.26E-02	3.49E-01	7.09E-01	9.72E-01	1.11E 00
6	5	80	79	21803.77	1	2179.27	4.5887	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-06
6	5	81	80	22084.76	1	2179.63	4.5879	0.0400	0.0	0.0	0.0	0.0	0.0	2.77E-06
3	2	49	48	8381.80	2	2179.69	4.5878	0.0400	0.0	0.0	1.80E-06	3.49E-05	1.85E-04	5.20E-04
1	0	26	25	1192.36	2	2179.77	4.5876	0.0400	2.23E-03	1.92E-02	3.13E-02	3.44E-02	3.25E-02	2.89E-02
1	0	10	9	172.99	1	2179.78	4.5876	0.0547	1.06E 01	7.94E 00	5.75E 00	4.21E 00	3.13E 00	2.37E 00
4	3	68	67	14245.95	2	2179.81	4.5876	0.0400	0.0	0.0	0.0	0.0	1.23E-06	8.83E-06
6	5	82	81	22368.93	1	2179.95	4.5873	0.0400	0.0	0.0	0.0	0.0	0.0	2.24E-06
6	5	83	82	22656.29	1	2180.22	4.5867	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-06
5	4	53	52	13473.39	1	2180.39	4.5863	0.0400	0.0	0.0	0.0	1.31E-05	2.36E-04	1.49E-03
6	5	84	83	22946.81	1	2180.44	4.5862	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-06
6	5	85	84	23240.48	1	2180.61	4.5859	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-06
6	5	86	85	23537.30	1	2180.74	4.5856	0.0400	0.0	0.0	0.0	0.0	0.0	9.22E-07
4	3	69	68	14482.17	2	2180.82	4.5854	0.0400	0.0	0.0	0.0	0.0	0.0	7.42E-06
4	3	39	38	9108.38	1	2181.12	4.5848	0.0400	0.0	0.0	5.57E-05	1.45E-03	9.18E-03	2.90E-02
3	2	28	27	5683.57	1	2181.32	4.5844	0.0400	0.0	1.21E-04	7.18E-03	4.76E-02	1.33E-01	2.42E-01
2	1	37	36	4512.58	2	2181.41	4.5842	0.0400	0.0	1.90E-05	4.41E-04	1.82E-03	3.83E-03	5.79E-03
3	2	50	49	8556.07	2	2181.50	4.5840	0.0400	0.0	0.0	1.39E-06	2.89E-05	1.60E-04	4.62E-04
4	3	70	69	14721.64	2	2181.78	4.5834	0.0400	0.0	0.0	0.0	0.0	0.0	6.22E-06
5	4	54	53	13666.09	1	2181.99	4.5830	0.0400	0.0	0.0	0.0	1.06E-05	2.00E-04	1.31E-03
2	1	19	18	2794.11	1	2182.36	4.5822	0.0470	1.40E-04	5.62E-02	3.31E-01	6.91E-01	9.62E-01	1.11E 00
1	0	27	26	1287.55	2	2182.51	4.5819	0.0400	1.47E-03	1.59E-02	2.79E-02	3.19E-02	3.09E-02	2.79E-02
4	3	71	70	14964.37	2	2182.70	4.5815	0.0400	0.0	0.0	0.0	0.0	0.0	5.20E-06
1	0	11	10	211.42	1	2183.23	4.5804	0.0545	9.76E 00	7.98E 00	5.96E 00	4.43E 00	3.33E 00	2.53E 00
3	2	51	50	8733.79	2	2183.27	4.5803	0.0400	0.0	0.0	1.07E-06	2.39E-05	1.38E-04	4.10E-04
4	3	40	39	9252.79	1	2183.35	4.5801	0.0400	0.0	0.0	4.54E-05	1.25E-03	8.21E-03	2.65E-02
5	4	55	54	13862.29	1	2183.55	4.5797	0.0400	0.0	0.0	0.0	8.51E-06	1.69E-04	1.14E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	72	71	15210.34	2	2183.58	4.5796	0.0400	0.0	0.0	0.0	0.0	0.0	4.33E-06
2	1	38	37	4646.24	2	2183.71	4.5794	0.0400	0.0	1.42E-05	3.66E-04	1.60E-03	3.47E-03	5.35E-03
3	2	29	28	5788.74	1	2184.02	4.5787	0.0400	0.0	9.76E-05	6.30E-03	4.35E-02	1.24E-01	2.31E-01
4	3	73	72	15459.54	2	2184.42	4.5779	0.0400	0.0	0.0	0.0	0.0	0.0	3.60E-06
3	2	52	51	8914.94	2	2185.00	4.5767	0.0400	0.0	0.0	0.0	1.96E-05	1.18E-04	3.62E-04
5	4	56	55	14061.97	1	2185.07	4.5765	0.0400	0.0	0.0	0.0	6.83E-06	1.42E-04	9.88E-04
1	0	28	27	1386.36	2	2185.22	4.5762	0.0400	9.50E-04	1.30E-02	2.48E-02	2.94E-02	2.92E-02	2.68E-02
4	3	74	73	15711.97	2	2185.22	4.5762	0.0400	0.0	0.0	0.0	0.0	0.0	2.99E-06
2	1	20	19	2866.33	1	2185.44	4.5757	0.0458	1.05E-04	4.98E-02	3.11E-01	6.68E-01	9.47E-01	1.10E 00
4	3	41	40	9400.82	1	2185.53	4.5755	0.0400	0.0	0.0	3.68E-05	1.08E-03	7.31E-03	2.42E-02
4	3	75	74	15967.60	2	2185.97	4.5746	0.0400	0.0	0.0	0.0	0.0	0.0	2.47E-06
2	1	39	38	4783.45	2	2185.98	4.5746	0.0400	0.0	1.05E-05	3.02E-04	1.39E-03	3.12E-03	4.93E-03
5	4	57	56	14265.13	1	2186.55	4.5734	0.0400	0.0	0.0	0.0	5.45E-06	1.19E-04	8.56E-04
1	0	12	11	253.68	1	2186.64	4.5732	0.0542	8.70E 00	7.88E 00	6.09E 00	4.61E 00	3.49E 00	2.68E 00
4	3	76	75	16226.44	2	2186.68	4.5731	0.0400	0.0	0.0	0.0	0.0	0.0	2.03E-06
3	2	30	29	5897.62	1	2186.68	4.5731	0.0400	0.0	7.78E-05	5.48E-03	3.95E-02	1.16E-01	2.19E-01
3	2	53	52	9099.53	2	2186.69	4.5731	0.0400	0.0	0.0	0.0	1.60E-05	1.01E-04	3.18E-04
4	3	77	76	16488.47	2	2187.35	4.5717	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-06
4	3	42	41	9552.46	1	2187.68	4.5711	0.0400	0.0	0.0	2.96E-05	9.20E-04	6.48E-03	2.20E-02
1	0	29	28	1488.80	2	2187.89	4.5706	0.0400	6.03E-04	1.05E-02	2.18E-02	2.70E-02	2.74E-02	2.56E-02
4	3	78	77	16753.69	2	2187.97	4.5704	0.0400	0.0	0.0	0.0	0.0	0.0	1.37E-06
5	4	58	57	14471.76	1	2187.98	4.5704	0.0400	0.0	0.0	0.0	4.33E-06	9.93E-05	7.39E-04
2	1	40	39	4924.21	2	2188.21	4.5699	0.0400	0.0	7.68E-06	2.48E-04	1.21E-03	2.80E-03	4.53E-03
3	2	54	53	9287.54	2	2188.34	4.5697	0.0400	0.0	0.0	0.0	1.31E-05	8.62E-05	2.79E-04
2	1	21	20	2942.34	1	2188.48	4.5694	0.0447	7.64E-05	4.36E-02	2.89E-01	6.41E-01	9.26E-01	1.09E 00
4	3	79	78	17022.07	2	2188.55	4.5692	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-06
4	3	80	79	17293.62	2	2189.09	4.5681	0.0400	0.0	0.0	0.0	0.0	0.0	9.14E-07
3	2	31	30	6010.21	1	2189.30	4.5677	0.0400	0.0	6.15E-05	4.74E-03	3.57E-02	1.08E-01	2.07E-01
5	4	59	58	14681.85	1	2189.37	4.5675	0.0400	0.0	0.0	0.0	3.43E-06	8.26E-05	6.36E-04
4	3	43	42	9707.73	1	2189.78	4.5667	0.0400	0.0	0.0	2.37E-05	7.83E-04	5.73E-03	1.99E-02
3	2	55	54	9478.96	2	2189.96	4.5663	0.0400	0.0	0.0	0.0	1.06E-05	7.31E-05	2.45E-04
1	0	13	12	299.78	1	2190.02	4.5662	0.0540	7.57E 00	7.65E 00	6.14E 00	4.73E 00	3.62E 00	2.80E 00
2	1	41	40	5068.50	2	2190.40	4.5654	0.0400	0.0	5.57E-06	2.02E-04	1.04E-03	2.51E-03	4.14E-03
1	0	30	29	1594.85	2	2190.53	4.5651	0.0400	3.75E-04	8.46E-03	1.91E-02	2.46E-02	2.57E-02	2.43E-02
5	4	60	59	14895.39	1	2190.72	4.5647	0.0400	0.0	0.0	0.0	2.70E-06	6.85E-05	5.46E-04
2	1	22	21	3022.13	1	2191.49	4.5631	0.0435	5.47E-05	3.78E-02	2.67E-01	6.11E-01	9.00E-01	1.07E 00
3	2	56	55	9673.80	2	2191.53	4.5630	0.0400	0.0	0.0	0.0	8.54E-06	6.18E-05	2.13E-04
4	3	44	43	9866.59	1	2191.84	4.5624	0.0400	0.0	0.0	1.88E-05	6.63E-04	5.04E-03	1.80E-02
3	2	32	31	6126.50	1	2191.88	4.5623	0.0400	0.0	4.81E-05	4.06E-03	3.21E-02	9.96E-02	1.95E-01
5	4	61	60	15112.37	1	2192.02	4.5620	0.0400	0.0	0.0	0.0	2.12E-06	5.66E-05	4.67E-04
2	1	42	41	5216.33	2	2192.55	4.5609	0.0400	0.0	4.01E-06	1.63E-04	8.97E-04	2.23E-03	3.77E-03
3	2	57	56	9872.04	2	2193.06	4.5598	0.0400	0.0	0.0	0.0	6.86E-06	5.21E-05	1.85E-04
1	0	31	30	1704.53	2	2193.13	4.5597	0.0400	2.30E-04	6.73E-03	1.66E-02	2.23E-02	2.39E-02	2.31E-02
5	4	62	61	15332.79	1	2193.28	4.5594	0.0400	0.0	0.0	0.0	1.65E-06	4.66E-05	3.98E-04
1	0	14	13	349.72	1	2193.36	4.5592	0.0528	6.43E 00	7.32E 00	6.11E 00	4.81E 00	3.73E 00	2.90E 00
4	3	45	44	10029.06	1	2193.86	4.5582	0.0400	0.0	0.0	1.48E-05	5.58E-04	4.41E-03	1.61E-02
3	2	33	32	6246.50	1	2194.42	4.5570	0.0400	0.0	3.72E-05	3.46E-03	2.87E-02	9.17E-02	1.83E-01
2	1	23	22	3105.69	1	2194.45	4.5570	0.0423	3.83E-05	3.24E-02	2.45E-01	5.79E-01	8.70E-01	1.05E 00
5	4	63	62	15556.63	1	2194.49	4.5569	0.0400	0.0	0.0	0.0	1.29E-06	3.82E-05	3.38E-04
3	2	58	57	10073.68	2	2194.55	4.5567	0.0400	0.0	0.0	0.0	5.48E-06	4.37E-05	1.61E-04
2	1	43	42	5367.68	2	2194.67	4.5565	0.0400	0.0	2.86E-06	1.32E-04	7.67E-04	1.98E-03	3.43E-03
5	4	64	63	15783.89	1	2195.66	4.5544	0.0400	0.0	0.0	0.0	0.0	3.13E-05	2.87E-04
1	0	32	31	1817.82	2	2195.69	4.5544	0.0400	1.38E-04	5.30E-03	1.43E-02	2.01E-02	2.22E-02	2.18E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	46	45	10195.12	1	2195.84	4.5541	0.0400	0.0	0.0	1.16E-05	4.68E-04	3.85E-03	1.45E-02
3	2	59	58	10278.70	2	2196.00	4.5537	0.0400	0.0	0.0	0.0	4.37E-06	3.66E-05	1.39E-04
1	0	15	14	403.48	1	2196.67	4.5523	0.0517	5.33E 00	6.91E 00	6.02E 00	4.84E 00	3.80E 00	2.98E 00
2	1	44	43	5522.55	2	2196.74	4.5522	0.0400	0.0	2.02E-06	1.05E-04	6.52E-04	1.75E-03	3.10E-03
5	4	65	64	16014.55	1	2196.79	4.5521	0.0400	0.0	0.0	0.0	0.0	2.55E-05	2.42E-04
3	2	34	33	6370.20	1	2196.92	4.5518	0.0400	0.0	2.85E-05	2.93E-03	2.56E-02	8.41E-02	1.71E-01
2	1	24	23	3193.03	1	2197.38	4.5509	0.0412	2.63E-05	2.74E-02	2.22E-01	5.45E-01	8.36E-01	1.03E 00
3	2	60	59	10487.10	2	2197.41	4.5508	0.0400	0.0	0.0	0.0	3.46E-06	3.05E-05	1.20E-04
4	3	47	46	10364.77	1	2197.77	4.5501	0.0400	0.0	0.0	9.08E-06	3.91E-04	3.35E-03	1.29E-02
5	4	66	65	16248.61	1	2197.87	4.5499	0.0400	0.0	0.0	0.0	0.0	2.07E-05	2.04E-04
1	0	33	32	1934.72	2	2198.21	4.5492	0.0400	8.12E-05	4.14E-03	1.22E-02	1.81E-02	2.05E-02	2.05E-02
3	2	61	60	10698.87	2	2198.78	4.5480	0.0400	0.0	0.0	0.0	2.73E-06	2.53E-05	1.03E-04
2	1	45	44	5680.94	2	2198.78	4.5480	0.0400	0.0	1.41E-06	8.36E-05	5.52E-04	1.54E-03	2.80E-03
5	4	67	66	16486.06	1	2198.90	4.5477	0.0400	0.0	0.0	0.0	0.0	1.67E-05	1.72E-04
3	2	35	34	6497.59	1	2199.39	4.5467	0.0400	0.0	2.17E-05	2.47E-03	2.26E-02	7.67E-02	1.60E-01
4	3	48	47	10538.00	1	2199.67	4.5461	0.0400	0.0	0.0	7.04E-06	3.25E-04	2.90E-03	1.15E-02
5	4	68	67	16726.89	1	2199.89	4.5457	0.0400	0.0	0.0	0.0	0.0	1.35E-05	1.44E-04
1	0	16	15	461.08	1	2199.93	4.5456	0.0505	4.32E 00	6.43E 00	5.87E 00	4.82E 00	3.84E 00	3.05E 00
3	2	62	61	10914.00	2	2200.11	4.5452	0.0400	0.0	0.0	0.0	2.15E-06	2.09E-05	8.81E-05
2	1	25	24	3284.13	1	2200.27	4.5449	0.0400	1.77E-05	2.30E-02	2.01E-01	5.09E-01	7.99E-01	9.95E-01
1	0	34	33	2055.22	2	2200.70	4.5440	0.0400	4.70E-05	3.20E-03	1.04E-02	1.62E-02	1.88E-02	1.92E-02
2	1	46	45	5842.84	2	2200.78	4.5438	0.0400	0.0	0.0	6.61E-05	4.66E-04	1.35E-03	2.52E-03
5	4	69	68	16971.09	1	2200.84	4.5437	0.0400	0.0	0.0	0.0	0.0	1.08E-05	1.20E-04
3	2	63	62	11132.49	2	2201.39	4.5426	0.0400	0.0	0.0	0.0	1.68E-06	1.73E-05	7.53E-05
4	3	49	48	10714.80	1	2201.52	4.5423	0.0400	0.0	0.0	5.42E-06	2.68E-04	2.50E-03	1.02E-02
5	4	70	69	17218.64	1	2201.74	4.5419	0.0400	0.0	0.0	0.0	0.0	8.66E-06	1.00E-04
3	2	36	35	6628.66	1	2201.81	4.5417	0.0400	0.0	1.63E-05	2.06E-03	1.99E-02	6.97E-02	1.48E-01
5	4	71	70	17469.54	1	2202.60	4.5401	0.0400	0.0	0.0	0.0	0.0	6.91E-06	8.30E-05
3	2	64	63	11354.33	2	2202.64	4.5400	0.0400	0.0	0.0	0.0	1.31E-06	1.42E-05	6.41E-05
2	1	47	46	6008.24	2	2202.74	4.5398	0.0400	0.0	0.0	5.19E-05	3.91E-04	1.18E-03	2.26E-03
2	1	26	25	3379.00	1	2203.13	4.5390	0.0400	1.17E-05	1.91E-02	1.79E-01	4.74E-01	7.60E-01	9.60E-01
1	0	35	34	2179.32	2	2203.15	4.5390	0.0400	2.67E-05	2.45E-03	8.81E-03	1.44E-02	1.72E-02	1.80E-02
1	0	17	16	522.50	1	2203.16	4.5389	0.0493	3.42E 00	5.90E 00	5.66E 00	4.77E 00	3.86E 00	3.09E 00
4	3	50	49	10895.17	1	2203.33	4.5386	0.0400	0.0	0.0	4.15E-06	2.21E-04	2.15E-03	9.03E-03
5	4	72	71	17723.78	1	2203.41	4.5384	0.0400	0.0	0.0	0.0	0.0	5.49E-06	6.87E-05
3	2	65	64	11579.50	2	2203.84	4.5375	0.0400	0.0	0.0	0.0	1.02E-06	1.16E-05	5.44E-05
5	4	73	72	17981.34	1	2204.17	4.5369	0.0400	0.0	0.0	0.0	0.0	4.35E-06	5.67E-05
3	2	37	36	6763.42	1	2204.19	4.5368	0.0400	0.0	1.21E-05	1.71E-03	1.74E-02	6.30E-02	1.37E-01
2	1	48	47	6177.14	2	2204.66	4.5358	0.0400	0.0	0.0	4.05E-05	3.26E-04	1.02E-03	2.02E-03
5	4	74	73	18242.22	1	2204.89	4.5354	0.0400	0.0	0.0	0.0	0.0	3.43E-06	4.67E-05
3	2	66	65	11808.00	2	2205.01	4.5351	0.0400	0.0	0.0	0.0	0.0	9.49E-06	4.61E-05
4	3	51	50	11079.09	1	2205.10	4.5349	0.0400	0.0	0.0	3.16E-06	1.81E-04	1.84E-03	7.96E-03
1	0	36	35	2307.02	2	2205.56	4.5340	0.0400	1.49E-05	1.86E-03	7.39E-03	1.27E-02	1.57E-02	1.67E-02
5	4	75	74	18506.41	1	2205.57	4.5340	0.0400	0.0	0.0	0.0	0.0	2.70E-06	3.83E-05
2	1	27	26	3477.63	1	2205.94	4.5332	0.0400	7.59E-06	1.57E-02	1.59E-01	4.37E-01	7.19E-01	9.23E-01
3	2	67	66	12039.83	2	2206.13	4.5328	0.0400	0.0	0.0	0.0	0.0	7.72E-06	3.89E-05
5	4	76	75	18773.88	1	2206.19	4.5327	0.0400	0.0	0.0	0.0	0.0	2.12E-06	3.14E-05
1	0	18	17	587.75	1	2206.36	4.5324	0.0482	2.65E 00	5.35E 00	5.41E 00	4.68E 00	3.84E 00	3.11E 00
3	2	38	37	6901.85	1	2206.53	4.5320	0.0400	0.0	8.96E-06	1.41E-03	1.52E-02	5.67E-02	1.26E-01
2	1	49	48	6349.53	2	2206.54	4.5320	0.0400	0.0	0.0	3.14E-05	2.71E-04	8.85E-04	1.80E-03
5	4	77	76	19044.64	1	2206.78	4.5315	0.0400	0.0	0.0	0.0	0.0	1.66E-06	2.56E-05
4	3	52	51	11266.57	1	2206.82	4.5314	0.0400	0.0	0.0	2.39E-06	1.47E-04	1.57E-03	6.99E-03
3	2	68	67	12274.96	2	2207.21	4.5306	0.0400	0.0	0.0	0.0	0.0	6.26E-06	3.27E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	4	78	77	19318.68	1	2207.31	4.5304	0.0400	0.0	0.0	0.0	0.0	1.29E-06	2.09E-05
5	4	79	78	19595.97	1	2207.80	4.5294	0.0400	0.0	0.0	0.0	0.0	1.00E-06	1.69E-05
1	0	37	36	2438.31	2	2207.94	4.5291	0.0400	8.18E-06	1.39E-03	6.17E-03	1.12E-02	1.43E-02	1.55E-02
5	4	80	79	19876.52	1	2208.24	4.5285	0.0400	0.0	0.0	0.0	0.0	0.0	1.37E-05
3	2	69	68	12513.40	2	2208.25	4.5285	0.0400	0.0	0.0	0.0	0.0	5.06E-06	2.75E-05
2	1	50	49	6525.41	2	2208.38	4.5282	0.0400	0.0	0.0	2.42E-05	2.24E-04	7.64E-04	1.59E-03
4	3	53	52	11457.59	1	2208.51	4.5279	0.0400	0.0	0.0	1.79E-06	1.20E-04	1.33E-03	6.12E-03
5	4	81	80	20160.30	1	2208.64	4.5277	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-05
2	1	28	27	3580.03	1	2208.71	4.5275	0.0400	4.82E-06	1.27E-02	1.40E-01	4.02E-01	6.77E-01	8.83E-01
3	2	39	38	7043.96	1	2208.83	4.5273	0.0400	0.0	6.55E-06	1.15E-03	1.32E-02	5.09E-02	1.16E-01
5	4	82	81	20447.30	1	2208.99	4.5270	0.0400	0.0	0.0	0.0	0.0	0.0	8.90E-06
3	2	70	69	12755.13	2	2209.24	4.5264	0.0400	0.0	0.0	0.0	0.0	4.07E-06	2.30E-05
5	4	83	82	20737.52	1	2209.29	4.5263	0.0400	0.0	0.0	0.0	0.0	0.0	7.14E-06
1	0	19	18	656.82	1	2209.51	4.5259	0.0470	2.01E 00	4.79E 00	5.12E 00	4.55E 00	3.80E 00	3.11E 00
5	4	84	83	21030.94	1	2209.54	4.5258	0.0400	0.0	0.0	0.0	0.0	0.0	5.72E-06
5	4	85	84	21327.55	1	2209.75	4.5254	0.0400	0.0	0.0	0.0	0.0	0.0	4.57E-06
5	4	92	91	23492.04	1	2209.87	4.5252	0.0400	0.0	0.0	0.0	0.0	0.0	8.75E-07
5	4	86	85	21627.34	1	2209.91	4.5251	0.0400	0.0	0.0	0.0	0.0	0.0	3.63E-06
5	4	91	90	23173.46	1	2209.99	4.5249	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-06
5	4	87	86	21930.29	1	2210.02	4.5248	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-06
5	4	90	89	22857.99	1	2210.07	4.5247	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-06
5	4	88	87	22236.39	1	2210.09	4.5247	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-06
5	4	89	88	22545.62	1	2210.10	4.5247	0.0400	0.0	0.0	0.0	0.0	0.0	1.81E-06
4	3	54	53	11652.14	1	2210.15	4.5246	0.0400	0.0	0.0	1.34E-06	9.65E-05	1.13E-03	5.35E-03
2	1	51	50	6704.76	2	2210.19	4.5245	0.0400	0.0	0.0	1.86E-05	1.85E-04	6.57E-04	1.41E-03
3	2	71	70	13000.15	2	2210.20	4.5245	0.0400	0.0	0.0	0.0	0.0	3.27E-06	1.92E-05
1	0	38	37	2573.18	2	2210.27	4.5243	0.0400	4.40E-06	1.04E-03	5.11E-03	9.76E-03	1.29E-02	1.43E-02
3	2	40	39	7189.73	1	2211.09	4.5227	0.0400	0.0	4.74E-06	9.38E-04	1.14E-02	4.54E-02	1.06E-01
3	2	72	71	13248.44	2	2211.11	4.5226	0.0400	0.0	0.0	0.0	0.0	2.61E-06	1.60E-05
2	1	29	28	3686.17	1	2211.45	4.5219	0.0400	3.01E-06	1.02E-02	1.23E-01	3.67E-01	6.34E-01	8.42E-01
4	3	55	54	11850.23	1	2211.74	4.5213	0.0400	0.0	0.0	0.0	7.76E-05	9.50E-04	4.65E-03
2	1	52	51	6887.58	2	2211.95	4.5209	0.0400	0.0	0.0	1.41E-05	1.51E-04	5.63E-04	1.24E-03
3	2	73	72	13499.99	2	2211.98	4.5208	0.0400	0.0	0.0	0.0	0.0	2.08E-06	1.32E-05
1	0	39	38	2711.64	2	2212.57	4.5196	0.0400	2.33E-06	7.65E-04	4.21E-03	8.50E-03	1.16E-02	1.32E-02
1	0	20	19	729.71	1	2212.63	4.5195	0.0458	1.50E 00	4.24E 00	4.80E 00	4.40E 00	3.74E 00	3.09E 00
3	2	74	73	13754.80	2	2212.80	4.5192	0.0400	0.0	0.0	0.0	0.0	1.65E-06	1.10E-05
4	3	56	55	12051.84	1	2213.30	4.5181	0.0400	0.0	0.0	0.0	6.21E-05	7.98E-04	4.03E-03
3	2	41	40	7339.16	1	2213.31	4.5181	0.0400	0.0	3.40E-06	7.58E-04	9.74E-03	4.04E-02	9.62E-02
3	2	75	74	14012.86	2	2213.59	4.5175	0.0400	0.0	0.0	0.0	0.0	1.31E-06	9.04E-06
2	1	53	52	7073.87	2	2213.67	4.5174	0.0400	0.0	0.0	1.07E-05	1.24E-04	4.80E-04	1.09E-03
2	1	30	29	3796.07	1	2214.14	4.5164	0.0400	1.84E-06	8.13E-03	1.07E-01	3.33E-01	5.91E-01	7.99E-01
3	2	76	75	14274.14	2	2214.33	4.5160	0.0400	0.0	0.0	0.0	0.0	1.03E-06	7.44E-06
4	3	57	56	12256.95	1	2214.81	4.5151	0.0400	0.0	0.0	0.0	4.95E-05	6.67E-04	3.49E-03
1	0	40	39	2853.67	2	2214.83	4.5150	0.0400	1.21E-06	5.59E-04	3.45E-03	7.36E-03	1.04E-02	1.21E-02
3	2	77	76	14538.66	2	2215.03	4.5146	0.0400	0.0	0.0	0.0	0.0	0.0	6.11E-06
2	1	54	53	7263.61	2	2215.36	4.5139	0.0400	0.0	0.0	8.07E-06	1.00E-04	4.08E-04	9.59E-04
3	2	42	41	7492.24	1	2215.49	4.5137	0.0400	0.0	2.41E-06	6.08E-04	8.31E-03	3.58E-02	8.73E-02
3	2	78	77	14806.39	2	2215.68	4.5133	0.0400	0.0	0.0	0.0	0.0	0.0	5.00E-06
1	0	21	20	806.42	1	2215.70	4.5132	0.0447	1.09E 00	3.71E 00	4.47E 00	4.22E 00	3.65E 00	3.06E 00
4	3	58	57	12465.57	1	2216.27	4.5121	0.0400	0.0	0.0	0.0	3.92E-05	5.56E-04	3.01E-03
3	2	79	78	15077.32	2	2216.30	4.5120	0.0400	0.0	0.0	0.0	0.0	0.0	4.08E-06
2	1	31	30	3909.71	1	2216.80	4.5110	0.0400	1.10E-06	6.41E-03	9.22E-02	3.01E-01	5.49E-01	7.55E-01
3	2	80	79	15351.45	2	2216.86	4.5109	0.0400	0.0	0.0	0.0	0.0	0.0	3.32E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	55	54	7456.80	2	2217.00	4.5106	0.0400	0.0	0.0	6.04E-06	8.12E-05	3.46E-04	8.38E-04
1	0	41	40	2999.27	2	2217.06	4.5105	0.0400	0.0	4.04E-04	2.80E-03	6.35E-03	9.29E-03	1.10E-02
3	2	81	80	15628.77	2	2217.39	4.5098	0.0400	0.0	0.0	0.0	0.0	0.0	2.69E-06
3	2	43	42	7648.97	1	2217.63	4.5093	0.0400	0.0	1.70E-06	4.85E-04	7.06E-03	3.16E-02	7.90E-02
4	3	59	58	12677.69	1	2217.70	4.5092	0.0400	0.0	0.0	0.0	3.10E-05	4.62E-04	2.58E-03
3	2	82	81	15909.25	2	2217.87	4.5088	0.0400	0.0	0.0	0.0	0.0	0.0	2.18E-06
3	2	83	82	16192.90	2	2218.31	4.5079	0.0400	0.0	0.0	0.0	0.0	0.0	1.76E-06
2	1	56	55	7653.44	2	2218.60	4.5073	0.0400	0.0	0.0	4.49E-06	6.54E-05	2.92E-04	7.30E-04
3	2	84	83	16479.69	2	2218.71	4.5071	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-06
1	0	22	21	886.95	1	2218.75	4.5070	0.0435	7.76E-01	3.21E 00	4.12E 00	4.02E 00	3.55E 00	3.01E 00
3	2	85	84	16769.63	2	2219.06	4.5064	0.0400	0.0	0.0	0.0	0.0	0.0	1.14E-06
4	3	60	59	12893.29	1	2219.08	4.5064	0.0400	0.0	0.0	0.0	2.43E-05	3.83E-04	2.21E-03
1	0	42	41	3148.44	2	2219.24	4.5060	0.0400	0.0	2.90E-04	2.27E-03	5.44E-03	8.26E-03	1.00E-02
3	2	86	85	17062.69	2	2219.36	4.5058	0.0400	0.0	0.0	0.0	0.0	0.0	9.10E-07
2	1	32	31	4027.09	1	2219.42	4.5057	0.0400	0.0	5.00E-03	7.90E-02	2.70E-01	5.07E-01	7.11E-01
3	2	44	43	7809.34	1	2219.72	4.5051	0.0400	0.0	1.18E-06	3.85E-04	5.97E-03	2.77E-02	7.12E-02
2	1	57	56	7853.51	2	2220.17	4.5042	0.0400	0.0	0.0	3.33E-06	5.24E-05	2.46E-04	6.34E-04
4	3	61	60	13112.37	1	2220.41	4.5037	0.0400	0.0	0.0	0.0	1.90E-05	3.15E-04	1.89E-03
1	0	43	42	3301.17	2	2221.39	4.5017	0.0400	0.0	2.06E-04	1.82E-03	4.65E-03	7.31E-03	9.12E-03
2	1	58	57	8057.01	2	2221.69	4.5011	0.0400	0.0	0.0	2.45E-06	4.18E-05	2.06E-04	5.49E-04
4	3	62	61	13334.93	1	2221.71	4.5010	0.0400	0.0	0.0	0.0	1.48E-05	2.59E-04	1.61E-03
1	0	23	22	971.28	1	2221.75	4.5010	0.0423	5.42E-01	2.74E 00	3.77E 00	3.80E 00	3.43E 00	2.95E 00
3	2	45	44	7973.35	1	2221.77	4.5009	0.0400	0.0	0.0	3.03E-04	5.02E-03	2.43E-02	6.40E-02
2	1	33	32	4148.21	1	2221.99	4.5005	0.0400	0.0	3.86E-03	6.72E-02	2.41E-01	4.66E-01	6.67E-01
4	3	63	62	13560.93	1	2222.95	4.4985	0.0400	0.0	0.0	0.0	1.15E-05	2.12E-04	1.37E-03
2	1	59	58	8263.93	2	2223.17	4.4981	0.0400	0.0	0.0	1.79E-06	3.32E-05	1.72E-04	4.74E-04
1	0	44	43	3457.45	2	2223.50	4.4974	0.0400	0.0	1.45E-04	1.45E-03	3.95E-03	6.45E-03	8.24E-03
3	2	46	45	8140.98	1	2223.79	4.4968	0.0400	0.0	0.0	2.37E-04	4.20E-03	2.11E-02	5.72E-02
4	3	64	63	13790.39	1	2224.16	4.4961	0.0400	0.0	0.0	0.0	8.88E-06	1.73E-04	1.16E-03
2	1	34	33	4273.06	1	2224.53	4.4953	0.0400	0.0	2.95E-03	5.68E-02	2.14E-01	4.27E-01	6.23E-01
2	1	60	59	8474.25	2	2224.61	4.4952	0.0400	0.0	0.0	1.30E-06	2.63E-05	1.43E-04	4.07E-04
1	0	24	23	1059.42	1	2224.71	4.4950	0.0412	3.71E-01	2.32E 00	3.42E 00	3.57E 00	3.29E 00	2.87E 00
4	3	65	64	14023.30	1	2225.32	4.4937	0.0400	0.0	0.0	0.0	6.82E-06	1.41E-04	9.76E-04
1	0	45	44	3617.28	2	2225.57	4.4932	0.0400	0.0	1.01E-04	1.15E-03	3.34E-03	5.67E-03	7.43E-03
3	2	47	46	8312.24	1	2225.76	4.4928	0.0400	0.0	0.0	1.84E-04	3.50E-03	1.84E-02	5.11E-02
2	1	61	60	8687.99	2	2226.01	4.4923	0.0400	0.0	0.0	0.0	2.07E-05	1.18E-04	3.50E-04
4	3	66	65	14259.63	1	2226.43	4.4915	0.0400	0.0	0.0	0.0	5.22E-06	1.14E-04	8.21E-04
2	1	35	34	4401.64	1	2227.03	4.4903	0.0400	0.0	2.24E-03	4.77E-02	1.89E-01	3.89E-01	5.79E-01
2	1	62	61	8905.12	2	2227.37	4.4896	0.0400	0.0	0.0	0.0	1.62E-05	9.79E-05	2.99E-04
4	3	67	66	14499.39	1	2227.50	4.4893	0.0400	0.0	0.0	0.0	3.98E-06	9.20E-05	6.88E-04
1	0	46	45	3780.65	2	2227.60	4.4891	0.0400	0.0	7.01E-05	9.08E-04	2.81E-03	4.96E-03	6.68E-03
1	0	25	24	1151.37	1	2227.64	4.4891	0.0400	2.49E-01	1.94E 00	3.08E 00	3.34E 00	3.14E 00	2.79E 00
3	2	48	47	8487.11	1	2227.69	4.4890	0.0400	0.0	0.0	1.43E-04	2.90E-03	1.59E-02	4.54E-02
4	3	68	67	14742.56	1	2228.53	4.4873	0.0400	0.0	0.0	0.0	3.02E-06	7.40E-05	5.76E-04
2	1	63	62	9125.64	2	2228.69	4.4869	0.0400	0.0	0.0	0.0	1.27E-05	8.06E-05	2.55E-04
2	1	36	35	4533.94	1	2229.48	4.4854	0.0400	0.0	1.68E-03	3.97E-02	1.67E-01	3.53E-01	5.37E-01
4	3	69	68	14989.13	1	2229.51	4.4853	0.0400	0.0	0.0	0.0	2.28E-06	5.93E-05	4.80E-04
3	2	49	48	8665.59	1	2229.57	4.4852	0.0400	0.0	0.0	1.10E-04	2.39E-03	1.37E-02	4.02E-02
1	0	47	46	3947.55	2	2229.59	4.4851	0.0400	0.0	4.80E-05	7.11E-04	2.35E-03	4.32E-03	5.98E-03
2	1	64	63	9349.53	2	2229.97	4.4844	0.0400	0.0	0.0	0.0	9.85E-06	6.61E-05	2.17E-04
4	3	70	69	15239.10	1	2230.44	4.4834	0.0400	0.0	0.0	0.0	1.72E-06	4.74E-05	3.99E-04
1	0	26	25	1247.11	1	2230.52	4.4833	0.0400	1.64E-01	1.61E 00	2.75E 00	3.10E 00	2.99E 00	2.69E 00
2	1	65	64	9576.80	2	2231.21	4.4819	0.0400	0.0	0.0	0.0	7.62E-06	5.40E-05	1.84E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	3	71	70	15492.44	1	2231.33	4.4816	0.0400	0.0	0.0	0.0	1.28E-06	3.77E-05	3.31E-04
3	2	50	49	8847.68	1	2231.42	4.4815	0.0400	0.0	0.0	8.36E-05	1.97E-03	1.17E-02	3.55E-02
1	0	48	47	4117.99	2	2231.54	4.4812	0.0400	0.0	3.26E-05	5.54E-04	1.96E-03	3.75E-03	5.34E-03
2	1	37	36	4669.95	1	2231.90	4.4805	0.0400	0.0	1.24E-03	3.29E-02	1.46E-01	3.19E-01	4.96E-01
4	3	72	71	15749.16	1	2232.18	4.4799	0.0400	0.0	0.0	0.0	0.0	2.99E-05	2.73E-04
2	1	66	65	9807.43	2	2232.40	4.4795	0.0400	0.0	0.0	0.0	5.88E-06	4.40E-05	1.55E-04
4	3	73	72	16009.24	1	2232.98	4.4783	0.0400	0.0	0.0	0.0	0.0	2.36E-05	2.25E-04
3	2	51	50	9033.35	1	2233.22	4.4778	0.0400	0.0	0.0	6.35E-05	1.61E-03	1.00E-02	3.13E-02
1	0	27	26	1346.66	1	2233.37	4.4775	0.0400	1.06E-01	1.32E 00	2.44E 00	2.86E 00	2.82E 00	2.58E 00
1	0	49	48	4291.95	2	2233.46	4.4774	0.0400	0.0	2.20E-05	4.28E-04	1.63E-03	3.25E-03	4.75E-03
2	1	67	66	10041.41	2	2233.55	4.4772	0.0400	0.0	0.0	0.0	4.51E-06	3.57E-05	1.31E-04
4	3	74	73	16272.68	1	2233.73	4.4768	0.0400	0.0	0.0	0.0	0.0	1.86E-05	1.85E-04
2	1	38	37	4809.68	1	2234.27	4.4757	0.0400	0.0	9.16E-04	2.71E-02	1.27E-01	2.87E-01	4.56E-01
4	3	75	74	16539.45	1	2234.44	4.4754	0.0400	0.0	0.0	0.0	0.0	1.46E-05	1.52E-04
2	1	68	67	10278.73	2	2234.67	4.4749	0.0400	0.0	0.0	0.0	3.45E-06	2.89E-05	1.10E-04
3	2	52	51	9222.61	1	2234.98	4.4743	0.0400	0.0	0.0	4.79E-05	1.31E-03	8.53E-03	2.75E-02
4	3	76	75	16809.55	1	2235.10	4.4741	0.0400	0.0	0.0	0.0	0.0	1.14E-05	1.24E-04
1	0	50	49	4469.43	2	2235.33	4.4736	0.0400	0.0	1.47E-05	3.30E-04	1.34E-03	2.80E-03	4.21E-03
4	3	77	76	17082.96	1	2235.71	4.4729	0.0400	0.0	0.0	0.0	0.0	8.91E-06	1.01E-04
2	1	69	68	10519.39	2	2235.74	4.4728	0.0400	0.0	0.0	0.0	2.62E-06	2.33E-05	9.22E-05
1	0	28	27	1449.99	1	2236.18	4.4719	0.0400	6.68E-02	1.07E 00	2.15E 00	2.63E 00	2.66E 00	2.47E 00
4	3	78	77	17359.69	1	2236.28	4.4717	0.0400	0.0	0.0	0.0	0.0	6.93E-06	8.19E-05
2	1	39	38	4953.12	1	2236.61	4.4711	0.0400	0.0	6.67E-04	2.21E-02	1.10E-01	2.57E-01	4.18E-01
3	2	53	52	9415.45	1	2236.70	4.4709	0.0400	0.0	0.0	3.59E-05	1.06E-03	7.23E-03	2.40E-02
2	1	70	69	10763.38	2	2236.76	4.4708	0.0400	0.0	0.0	0.0	1.99E-06	1.87E-05	7.70E-05
4	3	79	78	17639.71	1	2236.81	4.4707	0.0400	0.0	0.0	0.0	0.0	5.36E-06	6.63E-05
1	0	51	50	4650.41	2	2237.17	4.4699	0.0400	0.0	9.70E-06	2.52E-04	1.10E-03	2.40E-03	3.72E-03
4	3	80	79	17923.02	1	2237.28	4.4697	0.0400	0.0	0.0	0.0	0.0	4.14E-06	5.36E-05
4	3	81	80	18209.59	1	2237.71	4.4689	0.0400	0.0	0.0	0.0	0.0	3.19E-06	4.32E-05
2	1	71	70	11010.69	2	2237.75	4.4688	0.0400	0.0	0.0	0.0	1.50E-06	1.50E-05	6.42E-05
4	3	82	81	18499.43	1	2238.09	4.4681	0.0400	0.0	0.0	0.0	0.0	2.44E-06	3.47E-05
4	3	97	96	23229.68	1	2238.11	4.4681	0.0400	0.0	0.0	0.0	0.0	0.0	9.34E-07
3	2	54	53	9611.86	1	2238.37	4.4675	0.0400	0.0	0.0	2.67E-05	8.53E-04	6.11E-03	2.09E-02
4	3	83	82	18792.51	1	2238.43	4.4674	0.0400	0.0	0.0	0.0	0.0	1.87E-06	2.78E-05
4	3	96	95	22892.46	1	2238.45	4.4674	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-06
2	1	72	71	11261.30	2	2238.69	4.4669	0.0400	0.0	0.0	0.0	1.13E-06	1.20E-05	5.33E-05
4	3	84	83	19088.83	1	2238.72	4.4668	0.0400	0.0	0.0	0.0	0.0	1.42E-06	2.22E-05
4	3	95	94	22558.31	1	2238.74	4.4668	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-06
2	1	40	39	5100.25	1	2238.90	4.4665	0.0400	0.0	4.81E-04	1.79E-02	9.44E-02	2.29E-01	3.82E-01
1	0	29	28	1557.12	1	2238.95	4.4664	0.0400	4.15E-02	8.55E-01	1.88E 00	2.40E 00	2.49E 00	2.35E 00
4	3	85	84	19388.37	1	2238.96	4.4664	0.0400	0.0	0.0	0.0	0.0	1.08E-06	1.77E-05
1	0	52	51	4834.91	2	2238.96	4.4664	0.0400	0.0	6.36E-06	1.91E-04	9.04E-04	2.05E-03	3.28E-03
4	3	94	93	22227.24	1	2238.98	4.4663	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-06
4	3	86	85	19691.13	1	2239.15	4.4660	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-05
4	3	93	92	21899.26	1	2239.17	4.4659	0.0400	0.0	0.0	0.0	0.0	0.0	2.60E-06
4	3	87	86	19997.09	1	2239.30	4.4657	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-05
4	3	92	91	21574.38	1	2239.31	4.4657	0.0400	0.0	0.0	0.0	0.0	0.0	3.33E-06
4	3	88	87	20306.23	1	2239.40	4.4655	0.0400	0.0	0.0	0.0	0.0	0.0	8.79E-06
4	3	91	90	21252.63	1	2239.41	4.4655	0.0400	0.0	0.0	0.0	0.0	0.0	4.26E-06
4	3	90	89	20934.01	1	2239.45	4.4654	0.0400	0.0	0.0	0.0	0.0	0.0	5.44E-06
4	3	89	88	20618.54	1	2239.45	4.4654	0.0400	0.0	0.0	0.0	0.0	0.0	6.92E-06
2	1	73	72	11515.21	2	2239.60	4.4651	0.0400	0.0	0.0	0.0	0.0	9.52E-06	4.41E-05
3	2	55	54	9811.84	1	2240.00	4.4643	0.0400	0.0	0.0	1.98E-05	6.84E-04	5.14E-03	1.82E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	74	73	11772.40	2	2240.45	4.4634	0.0400	0.0	0.0	0.0	0.0	7.54E-06	3.65E-05
1	0	53	52	5022.89	2	2240.72	4.4629	0.0400	0.0	4.14E-06	1.45E-04	7.36E-04	1.75E-03	2.88E-03
2	1	41	40	5251.08	1	2241.16	4.4620	0.0400	0.0	3.44E-04	1.45E-02	8.08E-02	2.03E-01	3.47E-01
2	1	75	74	12032.87	2	2241.27	4.4618	0.0400	0.0	0.0	0.0	0.0	5.96E-06	3.00E-05
3	2	56	55	10015.37	1	2241.59	4.4611	0.0400	0.0	0.0	1.46E-05	5.46E-04	4.31E-03	1.58E-02
1	0	30	29	1668.03	1	2241.68	4.4609	0.0400	2.52E-02	6.79E-01	1.63E 00	2.17E 00	2.32E 00	2.23E 00
2	1	76	75	12296.62	2	2242.04	4.4602	0.0400	0.0	0.0	0.0	0.0	4.69E-06	2.47E-05
1	0	54	53	5214.37	2	2242.43	4.4594	0.0400	0.0	2.66E-06	1.09E-04	5.97E-04	1.49E-03	2.52E-03
2	1	77	76	12563.62	2	2242.77	4.4588	0.0400	0.0	0.0	0.0	0.0	3.68E-06	2.02E-05
3	2	57	56	10222.44	1	2243.13	4.4581	0.0400	0.0	0.0	1.07E-05	4.34E-04	3.60E-03	1.36E-02
2	1	42	41	5405.60	1	2243.37	4.4576	0.0400	0.0	2.44E-04	1.16E-02	6.89E-02	1.80E-01	3.15E-01
2	1	78	77	12833.86	2	2243.46	4.4574	0.0400	0.0	0.0	0.0	0.0	2.88E-06	1.65E-05
1	0	55	54	5409.33	2	2244.11	4.4561	0.0400	0.0	1.70E-06	8.11E-05	4.82E-04	1.26E-03	2.20E-03
2	1	79	78	13107.35	2	2244.11	4.4561	0.0400	0.0	0.0	0.0	0.0	2.24E-06	1.34E-05
1	0	31	30	1782.72	1	2244.37	4.4556	0.0400	1.51E-02	5.33E-01	1.40E 00	1.96E 00	2.15E 00	2.11E 00
3	2	58	57	10433.05	1	2244.63	4.4551	0.0400	0.0	0.0	7.75E-06	3.43E-04	3.00E-03	1.17E-02
2	1	80	79	13384.06	2	2244.71	4.4549	0.0400	0.0	0.0	0.0	0.0	1.74E-06	1.09E-05
2	1	81	80	13663.99	2	2245.26	4.4538	0.0400	0.0	0.0	0.0	0.0	1.35E-06	8.84E-06
2	1	43	42	5563.80	1	2245.54	4.4533	0.0400	0.0	1.71E-04	9.23E-03	5.84E-02	1.59E-01	2.85E-01
1	0	56	55	5607.77	2	2245.74	4.4529	0.0400	0.0	1.08E-06	6.02E-05	3.87E-04	1.06E-03	1.91E-03
2	1	82	81	13947.12	2	2245.78	4.4528	0.0400	0.0	0.0	0.0	0.0	1.04E-06	7.14E-06
3	2	59	58	10647.20	1	2246.09	4.4522	0.0400	0.0	0.0	5.60E-06	2.70E-04	2.48E-03	1.00E-02
2	1	83	82	14233.45	2	2246.25	4.4519	0.0400	0.0	0.0	0.0	0.0	0.0	5.75E-06
2	1	84	83	14522.95	2	2246.67	4.4510	0.0400	0.0	0.0	0.0	0.0	0.0	4.62E-06
1	0	32	31	1901.19	1	2247.02	4.4503	0.0400	8.82E-03	4.15E-01	1.20E 00	1.76E 00	1.98E 00	1.98E 00
2	1	85	84	14815.63	2	2247.06	4.4503	0.0400	0.0	0.0	0.0	0.0	0.0	3.70E-06
1	0	57	56	5809.67	2	2247.34	4.4497	0.0400	0.0	0.0	4.44E-05	3.10E-04	8.89E-04	1.66E-03
2	1	86	85	15111.48	2	2247.40	4.4496	0.0400	0.0	0.0	0.0	0.0	0.0	2.96E-06
3	2	60	59	10864.87	1	2247.51	4.4494	0.0400	0.0	0.0	4.02E-06	2.12E-04	2.05E-03	8.59E-03
2	1	44	43	5725.68	1	2247.67	4.4491	0.0400	0.0	1.19E-04	7.30E-03	4.93E-02	1.39E-01	2.56E-01
2	1	87	86	15410.46	2	2247.69	4.4490	0.0400	0.0	0.0	0.0	0.0	0.0	2.36E-06
2	1	88	87	15712.59	2	2247.94	4.4485	0.0400	0.0	0.0	0.0	0.0	0.0	1.87E-06
2	1	89	88	16017.84	2	2248.14	4.4481	0.0400	0.0	0.0	0.0	0.0	0.0	1.48E-06
2	1	90	89	16326.21	2	2248.31	4.4478	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-06
2	1	91	90	16637.68	2	2248.42	4.4476	0.0400	0.0	0.0	0.0	0.0	0.0	9.25E-07
3	2	61	60	11086.05	1	2248.88	4.4467	0.0400	0.0	0.0	2.87E-06	1.65E-04	1.69E-03	7.33E-03
1	0	58	57	6015.03	2	2248.89	4.4466	0.0400	0.0	0.0	3.26E-05	2.46E-04	7.44E-04	1.43E-03
1	0	33	32	2023.43	1	2249.63	4.4452	0.0400	5.07E-03	3.20E-01	1.02E 00	1.57E 00	1.82E 00	1.86E 00
2	1	45	44	5891.22	1	2249.76	4.4449	0.0400	0.0	8.17E-05	5.73E-03	4.14E-02	1.22E-01	2.30E-01
3	2	62	61	11310.73	1	2250.20	4.4440	0.0400	0.0	0.0	2.04E-06	1.29E-04	1.38E-03	6.23E-03
1	0	59	58	6223.85	2	2250.41	4.4436	0.0400	0.0	0.0	2.38E-05	1.95E-04	6.20E-04	1.23E-03
3	2	63	62	11538.91	1	2251.49	4.4415	0.0400	0.0	0.0	1.44E-06	9.94E-05	1.13E-03	5.28E-03
2	1	46	45	6060.43	1	2251.81	4.4409	0.0400	0.0	5.57E-05	4.48E-03	3.46E-02	1.06E-01	2.05E-01
1	0	60	59	6436.11	2	2251.88	4.4407	0.0400	0.0	0.0	1.72E-05	1.54E-04	5.15E-04	1.06E-03
1	0	34	33	2149.44	1	2252.20	4.4401	0.0400	2.86E-03	2.44E-01	8.60E-01	1.39E 00	1.67E 00	1.73E 00
3	2	64	63	11770.57	1	2252.72	4.4391	0.0400	0.0	0.0	1.01E-06	7.66E-05	9.21E-04	4.46E-03
1	0	61	60	6651.80	2	2253.31	4.4379	0.0400	0.0	0.0	1.24E-05	1.21E-04	4.26E-04	9.09E-04
2	1	47	46	6233.30	1	2253.81	4.4369	0.0400	0.0	3.76E-05	3.47E-03	2.87E-02	9.16E-02	1.83E-01
3	2	65	64	12005.71	1	2253.92	4.4367	0.0400	0.0	0.0	0.0	5.87E-05	7.47E-04	3.76E-03
1	0	62	61	6870.93	2	2254.71	4.4352	0.0400	0.0	0.0	8.90E-06	9.48E-05	3.51E-04	7.76E-04
1	0	35	34	2279.20	1	2254.73	4.4351	0.0400	1.58E-03	1.84E-01	7.20E-01	1.23E 00	1.52E 00	1.61E 00
3	2	66	65	12244.32	1	2255.07	4.4345	0.0400	0.0	0.0	0.0	4.48E-05	6.04E-04	3.15E-03
2	1	48	47	6409.82	1	2255.77	4.4331	0.0400	0.0	2.52E-05	2.68E-03	2.38E-02	7.91E-02	1.63E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
1	0	63	62	7093.47	2	2256.06	4.4325	0.0400	0.0	0.0	6.34E-06	7.38E-05	2.89E-04	6.61E-04
3	2	67	66	12486.39	1	2256.17	4.4323	0.0400	0.0	0.0	0.0	3.41E-05	4.86E-04	2.64E-03
3	2	68	67	12731.90	1	2257.23	4.4302	0.0400	0.0	0.0	0.0	2.58E-05	3.90E-04	2.20E-03
1	0	36	35	2412.73	1	2257.23	4.4302	0.0400	8.58E-04	1.38E-01	5.99E-01	1.08E 00	1.37E 00	1.49E 00
1	0	64	63	7319.43	2	2257.37	4.4299	0.0400	0.0	0.0	4.49E-06	5.73E-05	2.36E-04	5.61E-04
2	1	49	48	6589.98	1	2257.69	4.4293	0.0400	0.0	1.67E-05	2.05E-03	1.96E-02	6.80E-02	1.44E-01
3	2	69	68	12980.85	1	2258.24	4.4282	0.0400	0.0	0.0	0.0	1.94E-05	3.12E-04	1.83E-03
1	0	65	64	7548.79	2	2258.64	4.4274	0.0400	0.0	0.0	3.17E-06	4.42E-05	1.93E-04	4.75E-04
3	2	70	69	13233.23	1	2259.21	4.4263	0.0400	0.0	0.0	0.0	1.46E-05	2.49E-04	1.52E-03
2	1	50	49	6773.78	1	2259.57	4.4256	0.0400	0.0	1.10E-05	1.56E-03	1.61E-02	5.83E-02	1.27E-01
1	0	37	36	2550.01	1	2259.68	4.4254	0.0400	4.57E-04	1.02E-01	4.95E-01	9.41E-01	1.24E 00	1.38E 00
1	0	66	65	7781.55	2	2259.86	4.4251	0.0400	0.0	0.0	2.22E-06	3.40E-05	1.57E-04	4.01E-04
3	2	71	70	13489.02	1	2260.14	4.4245	0.0400	0.0	0.0	0.0	1.09E-05	1.98E-04	1.26E-03
3	2	72	71	13748.23	1	2261.02	4.4228	0.0400	0.0	0.0	0.0	8.09E-06	1.56E-04	1.04E-03
1	0	67	66	8017.69	2	2261.05	4.4227	0.0400	0.0	0.0	1.54E-06	2.60E-05	1.27E-04	3.37E-04
2	1	51	50	6961.20	1	2261.41	4.4220	0.0400	0.0	7.16E-06	1.18E-03	1.31E-02	4.97E-02	1.12E-01
3	2	73	72	14010.82	1	2261.85	4.4212	0.0400	0.0	0.0	0.0	5.99E-06	1.23E-04	8.54E-04
1	0	38	37	2691.03	1	2262.09	4.4207	0.0400	2.39E-04	7.48E-02	4.07E-01	8.17E-01	1.11E 00	1.26E 00
1	0	68	67	8257.20	2	2262.19	4.4205	0.0400	0.0	0.0	1.07E-06	1.98E-05	1.03E-04	2.83E-04
3	2	74	73	14276.81	1	2262.64	4.4196	0.0400	0.0	0.0	0.0	4.41E-06	9.69E-05	7.01E-04
2	1	52	51	7152.25	1	2263.20	4.4185	0.0400	0.0	4.62E-06	8.89E-04	1.06E-02	4.22E-02	9.78E-02
1	0	69	68	8500.09	2	2263.29	4.4183	0.0400	0.0	0.0	0.0	1.51E-05	8.25E-05	2.37E-04
3	2	75	74	14546.17	1	2263.38	4.4182	0.0400	0.0	0.0	0.0	3.24E-06	7.59E-05	5.73E-04
3	2	76	75	14818.89	1	2264.07	4.4168	0.0400	0.0	0.0	0.0	2.37E-06	5.92E-05	4.67E-04
1	0	70	69	8746.33	2	2264.35	4.4163	0.0400	0.0	0.0	0.0	1.14E-05	6.62E-05	1.97E-04
1	0	39	38	2835.80	1	2264.46	4.4161	0.0400	1.23E-04	5.43E-02	3.32E-01	7.06E-01	9.97E-01	1.16E 00
3	2	77	76	15094.96	1	2264.72	4.4156	0.0400	0.0	0.0	0.0	1.73E-06	4.61E-05	3.80E-04
2	1	53	52	7346.91	1	2264.95	4.4151	0.0400	0.0	2.96E-06	6.64E-04	8.58E-03	3.58E-02	8.54E-02
3	2	78	77	15374.38	1	2265.33	4.4144	0.0400	0.0	0.0	0.0	1.25E-06	3.57E-05	3.08E-04
1	0	71	70	8995.93	2	2265.37	4.4143	0.0400	0.0	0.0	0.0	8.57E-06	5.29E-05	1.64E-04
3	2	102	101	23050.98	1	2265.54	4.4140	0.0400	0.0	0.0	0.0	0.0	0.0	8.72E-07
3	2	79	78	15657.13	1	2265.88	4.4133	0.0400	0.0	0.0	0.0	0.0	2.76E-05	2.49E-04
3	2	101	100	22695.13	1	2266.09	4.4129	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-06
1	0	72	71	9248.86	2	2266.35	4.4124	0.0400	0.0	0.0	0.0	6.42E-06	4.21E-05	1.36E-04
3	2	80	79	15943.20	1	2266.39	4.4123	0.0400	0.0	0.0	0.0	0.0	2.12E-05	2.01E-04
3	2	100	99	22342.30	1	2266.59	4.4119	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-06
2	1	54	53	7545.17	1	2266.66	4.4118	0.0400	0.0	1.87E-06	4.94E-04	6.90E-03	3.02E-02	7.43E-02
1	0	40	39	2984.30	1	2266.79	4.4115	0.0400	6.18E-05	3.91E-02	2.69E-01	6.07E-01	8.88E-01	1.06E 00
3	2	81	80	16232.57	1	2266.86	4.4114	0.0400	0.0	0.0	0.0	0.0	1.63E-05	1.61E-04
3	2	99	98	21992.52	1	2267.04	4.4110	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-06
3	2	82	81	16525.24	1	2267.27	4.4106	0.0400	0.0	0.0	0.0	0.0	1.25E-05	1.29E-04
1	0	73	72	9505.12	2	2267.28	4.4106	0.0400	0.0	0.0	0.0	4.79E-06	3.34E-05	1.13E-04
3	2	98	97	21645.80	1	2267.45	4.4102	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-06
3	2	83	82	16821.19	1	2267.64	4.4099	0.0400	0.0	0.0	0.0	0.0	9.50E-06	1.03E-04
3	2	97	96	21302.14	1	2267.80	4.4096	0.0400	0.0	0.0	0.0	0.0	0.0	3.36E-06
3	2	84	83	17120.41	1	2267.97	4.4092	0.0400	0.0	0.0	0.0	0.0	7.22E-06	8.23E-05
3	2	96	95	20961.57	1	2268.10	4.4090	0.0400	0.0	0.0	0.0	0.0	0.0	4.37E-06
1	0	74	73	9764.71	2	2268.17	4.4088	0.0400	0.0	0.0	0.0	3.56E-06	2.64E-05	9.28E-05
3	2	85	84	17422.89	1	2268.24	4.4087	0.0400	0.0	0.0	0.0	0.0	5.47E-06	6.54E-05
2	1	55	54	7747.04	1	2268.33	4.4085	0.0400	0.0	1.18E-06	3.64E-04	5.53E-03	2.53E-02	6.45E-02
3	2	95	94	20624.10	1	2268.36	4.4085	0.0400	0.0	0.0	0.0	0.0	0.0	5.66E-06
3	2	86	85	17728.62	1	2268.47	4.4083	0.0400	0.0	0.0	0.0	0.0	4.13E-06	5.18E-05
3	2	94	93	20289.75	1	2268.56	4.4081	0.0400	0.0	0.0	0.0	0.0	0.0	7.32E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	2	87	86	18037.58	1	2268.65	4.4079	0.0400	0.0	0.0	0.0	0.0	3.11E-06	4.10E-05
3	2	93	92	19958.52	1	2268.72	4.4078	0.0400	0.0	0.0	0.0	0.0	0.0	9.44E-06
3	2	88	87	18349.76	1	2268.78	4.4077	0.0400	0.0	0.0	0.0	0.0	2.33E-06	3.23E-05
3	2	92	91	19630.43	1	2268.83	4.4076	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-05
3	2	89	88	18665.15	1	2268.86	4.4075	0.0400	0.0	0.0	0.0	0.0	1.74E-06	2.54E-05
3	2	91	90	19305.50	1	2268.89	4.4074	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-05
3	2	90	89	18983.73	1	2268.90	4.4074	0.0400	0.0	0.0	0.0	0.0	1.30E-06	1.99E-05
1	0	75	74	10027.60	2	2269.02	4.4072	0.0400	0.0	0.0	0.0	2.63E-06	2.08E-05	7.63E-05
1	0	41	40	3136.53	1	2269.07	4.4071	0.0400	3.06E-05	2.78E-02	2.16E-01	5.19E-01	7.88E-01	9.60E-01
1	0	76	75	10293.79	2	2269.82	4.4056	0.0400	0.0	0.0	0.0	1.94E-06	1.64E-05	6.25E-05
2	1	56	55	7952.49	1	2269.95	4.4054	0.0400	0.0	0.0	2.67E-04	4.40E-03	2.12E-02	5.58E-02
1	0	77	76	10563.28	2	2270.58	4.4042	0.0400	0.0	0.0	0.0	1.42E-06	1.28E-05	5.11E-05
1	0	78	77	10836.05	2	2271.30	4.4028	0.0400	0.0	0.0	0.0	1.04E-06	1.00E-05	4.17E-05
1	0	42	41	3292.48	1	2271.32	4.4027	0.0400	1.48E-05	1.96E-02	1.73E-01	4.42E-01	6.96E-01	8.69E-01
2	1	57	56	8161.53	1	2271.53	4.4023	0.0400	0.0	0.0	1.95E-04	3.49E-03	1.77E-02	4.81E-02
1	0	79	78	11112.08	2	2271.98	4.4014	0.0400	0.0	0.0	0.0	0.0	7.78E-06	3.39E-05
1	0	80	79	11391.37	2	2272.61	4.4002	0.0400	0.0	0.0	0.0	0.0	6.03E-06	2.74E-05
2	1	58	57	8374.14	1	2273.07	4.3993	0.0400	0.0	0.0	1.41E-04	2.75E-03	1.47E-02	4.13E-02
1	0	81	80	11673.92	2	2273.20	4.3991	0.0400	0.0	0.0	0.0	0.0	4.66E-06	2.22E-05
1	0	43	42	3452.15	1	2273.53	4.3984	0.0400	7.07E-06	1.37E-02	1.37E-01	3.74E-01	6.12E-01	7.85E-01
1	0	82	81	11959.70	2	2273.75	4.3980	0.0400	0.0	0.0	0.0	0.0	3.59E-06	1.79E-05
1	0	83	82	12248.70	2	2274.25	4.3971	0.0400	0.0	0.0	0.0	0.0	2.75E-06	1.44E-05
2	1	59	58	8590.31	1	2274.56	4.3965	0.0400	0.0	0.0	1.02E-04	2.16E-03	1.22E-02	3.54E-02
1	0	84	83	12540.93	2	2274.71	4.3962	0.0400	0.0	0.0	0.0	0.0	2.11E-06	1.15E-05
1	0	85	84	12836.35	2	2275.12	4.3954	0.0400	0.0	0.0	0.0	0.0	1.61E-06	9.21E-06
1	0	86	85	13134.97	2	2275.49	4.3947	0.0400	0.0	0.0	0.0	0.0	1.22E-06	7.35E-06
1	0	44	43	3615.54	1	2275.69	4.3943	0.0400	3.31E-06	9.50E-03	1.08E-01	3.15E-01	5.36E-01	7.06E-01
1	0	87	86	13436.77	2	2275.82	4.3940	0.0400	0.0	0.0	0.0	0.0	0.0	5.84E-06
2	1	60	59	8810.04	1	2276.01	4.3937	0.0400	0.0	0.0	7.30E-05	1.69E-03	1.00E-02	3.02E-02
1	0	88	87	13741.75	2	2276.10	4.3935	0.0400	0.0	0.0	0.0	0.0	0.0	4.63E-06
1	0	89	88	14049.87	2	2276.34	4.3930	0.0400	0.0	0.0	0.0	0.0	0.0	3.66E-06
1	0	90	89	14361.15	2	2276.53	4.3927	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-06
1	0	91	90	14675.56	2	2276.68	4.3924	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-06
1	0	92	91	14993.09	2	2276.78	4.3922	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-06
1	0	95	94	15964.29	2	2276.82	4.3921	0.0400	0.0	0.0	0.0	0.0	0.0	8.48E-07
1	0	93	92	15313.73	2	2276.84	4.3921	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-06
1	0	94	93	15637.47	2	2276.85	4.3920	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-06
2	1	61	60	9033.32	1	2277.41	4.3910	0.0400	0.0	0.0	5.20E-05	1.32E-03	8.23E-03	2.58E-02
1	0	45	44	3782.62	1	2277.81	4.3902	0.0400	1.52E-06	6.52E-03	8.49E-02	2.64E-01	4.68E-01	6.32E-01
2	1	62	61	9260.14	1	2278.77	4.3883	0.0400	0.0	0.0	3.68E-05	1.02E-03	6.74E-03	2.19E-02
1	0	46	45	3953.41	1	2279.89	4.3862	0.0400	0.0	4.43E-03	6.61E-02	2.20E-01	4.07E-01	5.65E-01
2	1	63	62	9490.49	1	2280.09	4.3858	0.0400	0.0	0.0	2.59E-05	7.88E-04	5.49E-03	1.85E-02
2	1	64	63	9724.36	1	2281.36	4.3834	0.0400	0.0	0.0	1.81E-05	6.06E-04	4.46E-03	1.56E-02
1	0	47	46	4127.89	1	2281.93	4.3823	0.0400	0.0	2.98E-03	5.12E-02	1.83E-01	3.52E-01	5.03E-01
2	1	65	64	9961.74	1	2282.59	4.3810	0.0400	0.0	0.0	1.26E-05	4.63E-04	3.61E-03	1.31E-02
2	1	66	65	10202.62	1	2283.77	4.3787	0.0400	0.0	0.0	8.71E-06	3.53E-04	2.91E-03	1.10E-02
1	0	48	47	4306.05	1	2283.93	4.3784	0.0400	0.0	1.99E-03	3.93E-02	1.51E-01	3.03E-01	4.46E-01
2	1	67	66	10446.99	1	2284.91	4.3765	0.0400	0.0	0.0	5.99E-06	2.67E-04	2.34E-03	9.19E-03
1	0	49	48	4487.89	1	2285.89	4.3747	0.0400	0.0	1.31E-03	3.01E-02	1.24E-01	2.60E-01	3.94E-01
2	1	68	67	10694.85	1	2286.00	4.3745	0.0400	0.0	0.0	4.09E-06	2.02E-04	1.88E-03	7.66E-03
2	1	69	68	10946.18	1	2287.05	4.3724	0.0400	0.0	0.0	2.78E-06	1.51E-04	1.50E-03	6.36E-03
1	0	50	49	4673.40	1	2287.80	4.3710	0.0400	0.0	8.60E-04	2.28E-02	1.01E-01	2.23E-01	3.47E-01
2	1	70	69	11200.97	1	2288.05	4.3705	0.0400	0.0	0.0	1.88E-06	1.13E-04	1.19E-03	5.27E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	1	71	70	11459.21	1	2289.01	4.3687	0.0400	0.0	0.0	1.26E-06	8.44E-05	9.43E-04	4.35E-03
1	0	51	50	4862.58	1	2289.67	4.3674	0.0400	0.0	5.58E-04	1.72E-02	8.25E-02	1.90E-01	3.05E-01
2	1	72	71	11720.90	1	2289.93	4.3669	0.0400	0.0	0.0	0.0	6.26E-05	7.45E-04	3.58E-03
2	1	73	72	11986.02	1	2290.79	4.3653	0.0400	0.0	0.0	0.0	4.62E-05	5.86E-04	2.94E-03
1	0	52	51	5055.41	1	2291.50	4.3640	0.0400	0.0	3.59E-04	1.29E-02	6.69E-02	1.61E-01	2.67E-01
2	1	74	73	12254.55	1	2291.61	4.3637	0.0400	0.0	0.0	0.0	3.40E-05	4.59E-04	2.41E-03
2	1	75	74	12526.50	1	2292.39	4.3623	0.0400	0.0	0.0	0.0	2.49E-05	3.59E-04	1.96E-03
2	1	106	105	22582.21	1	2292.89	4.3613	0.0400	0.0	0.0	0.0	0.0	0.0	9.01E-07
2	1	76	75	12801.85	1	2293.12	4.3609	0.0400	0.0	0.0	0.0	1.81E-05	2.79E-04	1.60E-03
1	0	53	52	5251.89	1	2293.28	4.3606	0.0400	0.0	2.28E-04	9.63E-03	5.39E-02	1.36E-01	2.33E-01
2	1	105	104	22210.73	1	2293.61	4.3599	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-06
2	1	77	76	13080.58	1	2293.80	4.3596	0.0400	0.0	0.0	0.0	1.31E-05	2.17E-04	1.30E-03
2	1	104	103	21842.26	1	2294.28	4.3587	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-06
2	1	78	77	13362.69	1	2294.44	4.3584	0.0400	0.0	0.0	0.0	9.50E-06	1.68E-04	1.05E-03
2	1	103	102	21476.80	1	2294.89	4.3575	0.0400	0.0	0.0	0.0	0.0	0.0	2.12E-06
1	0	54	53	5452.01	1	2295.03	4.3572	0.0400	0.0	1.44E-04	7.13E-03	4.33E-02	1.15E-01	2.02E-01
2	1	79	78	13648.17	1	2295.03	4.3572	0.0400	0.0	0.0	0.0	6.84E-06	1.29E-04	8.46E-04
2	1	102	101	21114.38	1	2295.46	4.3564	0.0400	0.0	0.0	0.0	0.0	0.0	2.81E-06
2	1	80	79	13937.00	1	2295.57	4.3562	0.0400	0.0	0.0	0.0	4.90E-06	9.92E-05	6.80E-04
2	1	101	100	20755.00	1	2295.98	4.3554	0.0400	0.0	0.0	0.0	0.0	0.0	3.70E-06
2	1	81	80	14229.17	1	2296.07	4.3553	0.0400	0.0	0.0	0.0	3.50E-06	7.60E-05	5.46E-04
2	1	100	99	20398.68	1	2296.45	4.3545	0.0400	0.0	0.0	0.0	0.0	0.0	4.88E-06
2	1	82	81	14524.67	1	2296.52	4.3544	0.0400	0.0	0.0	0.0	2.48E-06	5.79E-05	4.36E-04
1	0	55	54	5655.77	1	2296.73	4.3540	0.0400	0.0	9.01E-05	5.25E-03	3.45E-02	9.61E-02	1.75E-01
2	1	99	98	20045.44	1	2296.87	4.3538	0.0400	0.0	0.0	0.0	0.0	0.0	6.40E-06
2	1	83	82	14823.48	1	2296.93	4.3536	0.0400	0.0	0.0	0.0	1.76E-06	4.41E-05	3.48E-04
2	1	98	97	19695.29	1	2297.23	4.3531	0.0400	0.0	0.0	0.0	0.0	0.0	8.39E-06
2	1	84	83	15125.61	1	2297.28	4.3530	0.0400	0.0	0.0	0.0	1.24E-06	3.34E-05	2.77E-04
2	1	97	96	19348.24	1	2297.55	4.3525	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-05
2	1	85	84	15431.03	1	2297.59	4.3524	0.0400	0.0	0.0	0.0	0.0	2.52E-05	2.19E-04
2	1	96	95	19004.32	1	2297.82	4.3520	0.0400	0.0	0.0	0.0	0.0	0.0	1.43E-05
2	1	86	85	15739.73	1	2297.85	4.3519	0.0400	0.0	0.0	0.0	0.0	1.90E-05	1.74E-04
2	1	95	94	18663.53	1	2298.05	4.3515	0.0400	0.0	0.0	0.0	0.0	1.27E-06	1.86E-05
2	1	87	86	16051.69	1	2298.07	4.3515	0.0400	0.0	0.0	0.0	0.0	1.42E-05	1.37E-04
2	1	94	93	18325.89	1	2298.22	4.3512	0.0400	0.0	0.0	0.0	0.0	1.74E-06	2.40E-05
2	1	88	87	16366.91	1	2298.23	4.3512	0.0400	0.0	0.0	0.0	0.0	1.06E-05	1.08E-04
2	1	93	92	17991.41	1	2298.34	4.3510	0.0400	0.0	0.0	0.0	0.0	2.37E-06	3.11E-05
2	1	89	88	16685.38	1	2298.35	4.3509	0.0400	0.0	0.0	0.0	0.0	7.93E-06	8.44E-05
1	0	56	55	5863.14	1	2298.38	4.3509	0.0400	0.0	5.59E-05	3.84E-03	2.75E-02	8.02E-02	1.51E-01
2	1	92	91	17660.10	1	2298.42	4.3508	0.0400	0.0	0.0	0.0	0.0	3.22E-06	4.01E-05
2	1	90	89	17007.07	1	2298.42	4.3508	0.0400	0.0	0.0	0.0	0.0	5.90E-06	6.60E-05
2	1	91	90	17331.98	1	2298.44	4.3508	0.0400	0.0	0.0	0.0	0.0	4.37E-06	5.15E-05
1	0	57	56	6074.14	1	2300.00	4.3478	0.0400	0.0	3.43E-05	2.79E-03	2.17E-02	6.68E-02	1.30E-01
1	0	58	57	6288.75	1	2301.57	4.3449	0.0400	0.0	2.09E-05	2.02E-03	1.71E-02	5.54E-02	1.12E-01
1	0	59	58	6506.95	1	2303.09	4.3420	0.0400	0.0	1.26E-05	1.45E-03	1.34E-02	4.57E-02	9.56E-02
1	0	60	59	6728.75	1	2304.57	4.3392	0.0400	0.0	7.54E-06	1.04E-03	1.05E-02	3.76E-02	8.15E-02
1	0	61	60	6954.12	1	2306.01	4.3365	0.0400	0.0	4.47E-06	7.35E-04	8.13E-03	3.09E-02	6.93E-02
1	0	62	61	7183.08	1	2307.41	4.3339	0.0400	0.0	2.63E-06	5.18E-04	6.28E-03	2.52E-02	5.87E-02
1	0	63	62	7415.60	1	2308.76	4.3313	0.0400	0.0	1.53E-06	3.64E-04	4.84E-03	2.05E-02	4.96E-02
1	0	64	63	7651.67	1	2310.07	4.3289	0.0400	0.0	0.0	2.53E-04	3.71E-03	1.66E-02	4.18E-02
1	0	65	64	7891.29	1	2311.33	4.3265	0.0400	0.0	0.0	1.76E-04	2.83E-03	1.34E-02	3.51E-02
1	0	66	65	8134.45	1	2312.54	4.3242	0.0400	0.0	0.0	1.21E-04	2.15E-03	1.08E-02	2.93E-02
1	0	67	66	8381.13	1	2313.72	4.3220	0.0400	0.0	0.0	8.29E-05	1.62E-03	8.68E-03	2.45E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
1	0	68	67	8631.33	1	2314.84	4.3200	0.0400	0.0	0.0	5.64E-05	1.22E-03	6.93E-03	2.04E-02
1	0	69	68	8885.04	1	2315.93	4.3179	0.0400	0.0	0.0	3.82E-05	9.15E-04	5.52E-03	1.69E-02
1	0	70	69	9142.25	1	2316.97	4.3160	0.0400	0.0	0.0	2.57E-05	6.82E-04	4.38E-03	1.40E-02
1	0	71	70	9402.94	1	2317.96	4.3141	0.0400	0.0	0.0	1.72E-05	5.07E-04	3.46E-03	1.15E-02
1	0	72	71	9667.11	1	2318.90	4.3124	0.0400	0.0	0.0	1.14E-05	3.75E-04	2.73E-03	9.46E-03
1	0	73	72	9934.75	1	2319.81	4.3107	0.0400	0.0	0.0	7.57E-06	2.76E-04	2.14E-03	7.75E-03
1	0	74	73	10205.84	1	2320.66	4.3091	0.0400	0.0	0.0	4.98E-06	2.02E-04	1.67E-03	6.33E-03
1	0	109	108	21777.14	1	2320.66	4.3091	0.0400	0.0	0.0	0.0	0.0	0.0	9.05E-07
1	0	75	74	10480.37	1	2321.47	4.3076	0.0400	0.0	0.0	3.26E-06	1.47E-04	1.31E-03	5.15E-03
1	0	108	107	21392.98	1	2321.50	4.3076	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-06
1	0	76	75	10758.35	1	2322.23	4.3062	0.0400	0.0	0.0	2.12E-06	1.07E-04	1.01E-03	4.19E-03
1	0	107	106	21011.81	1	2322.28	4.3061	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-06
1	0	77	76	11039.74	1	2322.95	4.3049	0.0400	0.0	0.0	1.37E-06	7.75E-05	7.85E-04	3.39E-03
1	0	106	105	20633.65	1	2323.02	4.3047	0.0400	0.0	0.0	0.0	0.0	0.0	2.20E-06
1	0	78	77	11324.54	1	2323.62	4.3036	0.0400	0.0	0.0	0.0	5.59E-05	6.05E-04	2.74E-03
1	0	105	104	20258.50	1	2323.70	4.3035	0.0400	0.0	0.0	0.0	0.0	0.0	2.94E-06
1	0	79	78	11612.75	1	2324.25	4.3025	0.0400	0.0	0.0	0.0	4.01E-05	4.65E-04	2.20E-03
1	0	104	103	19886.39	1	2324.34	4.3023	0.0400	0.0	0.0	0.0	0.0	0.0	3.92E-06
1	0	80	79	11904.34	1	2324.83	4.3014	0.0400	0.0	0.0	0.0	2.86E-05	3.56E-04	1.77E-03
1	0	103	102	19517.34	1	2324.92	4.3012	0.0400	0.0	0.0	0.0	0.0	0.0	5.21E-06
1	0	81	80	12199.31	1	2325.36	4.3004	0.0400	0.0	0.0	0.0	2.04E-05	2.72E-04	1.41E-03
1	0	102	101	19151.35	1	2325.46	4.3002	0.0400	0.0	0.0	0.0	0.0	0.0	6.92E-06
1	0	82	81	12497.64	1	2325.84	4.2995	0.0400	0.0	0.0	0.0	1.44E-05	2.07E-04	1.13E-03
1	0	101	100	18788.44	1	2325.94	4.2993	0.0400	0.0	0.0	0.0	0.0	0.0	9.15E-06
1	0	83	82	12799.33	1	2326.28	4.2987	0.0400	0.0	0.0	0.0	1.02E-05	1.57E-04	8.98E-04
1	0	100	99	18428.62	1	2326.37	4.2985	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-05
1	0	84	83	13104.36	1	2326.67	4.2980	0.0400	0.0	0.0	0.0	7.14E-06	1.19E-04	7.13E-04
1	0	99	98	18071.92	1	2326.76	4.2978	0.0400	0.0	0.0	0.0	0.0	1.20E-06	1.59E-05
1	0	85	84	13412.71	1	2327.01	4.2974	0.0400	0.0	0.0	0.0	5.00E-06	8.94E-05	5.64E-04
1	0	98	97	17718.34	1	2327.09	4.2972	0.0400	0.0	0.0	0.0	0.0	1.66E-06	2.09E-05
1	0	86	85	13724.39	1	2327.31	4.2968	0.0400	0.0	0.0	0.0	3.48E-06	6.71E-05	4.45E-04
1	0	97	96	17367.91	1	2327.38	4.2967	0.0400	0.0	0.0	0.0	0.0	2.30E-06	2.74E-05
1	0	87	86	14039.36	1	2327.55	4.2964	0.0400	0.0	0.0	0.0	2.41E-06	5.02E-05	3.50E-04
1	0	96	95	17020.62	1	2327.62	4.2962	0.0400	0.0	0.0	0.0	0.0	3.18E-06	3.57E-05
1	0	88	87	14357.63	1	2327.75	4.2960	0.0400	0.0	0.0	0.0	1.67E-06	3.74E-05	2.75E-04
1	0	95	94	16676.52	1	2327.80	4.2959	0.0400	0.0	0.0	0.0	0.0	4.38E-06	4.66E-05
1	0	89	88	14679.17	1	2327.91	4.2957	0.0400	0.0	0.0	0.0	1.15E-06	2.78E-05	2.15E-04
1	0	94	93	16335.59	1	2327.94	4.2956	0.0400	0.0	0.0	0.0	0.0	6.01E-06	6.05E-05
1	0	90	89	15003.98	1	2328.01	4.2955	0.0400	0.0	0.0	0.0	0.0	2.06E-05	1.68E-04
1	0	93	92	15997.85	1	2328.03	4.2955	0.0400	0.0	0.0	0.0	0.0	8.21E-06	7.84E-05
1	0	92	91	15663.33	1	2328.07	4.2954	0.0400	0.0	0.0	0.0	0.0	1.12E-05	1.01E-04
1	0	91	90	15332.04	1	2328.07	4.2954	0.0400	0.0	0.0	0.0	0.0	1.52E-05	1.30E-04

Table 5—First overtone band of CO, T = 300-1800°K. The total number of lines included is 3263. For temperatures less than 1800°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-8}. The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	86	87	26018.06	1	3383.32	2.9557	0.0400	0.0	0.0	0.0	0.0	0.0	3.92E-09
7	5	91	92	25701.90	1	3385.57	2.9534	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-09
6	4	96	97	25467.79	1	3386.98	2.9525	0.0400	0.0	0.0	0.0	0.0	0.0	3.45E-09
9	7	80	81	26133.74	1	3387.79	2.9518	0.0400	0.0	0.0	0.0	0.0	0.0	4.42E-09
10	8	74	75	26369.43	1	3389.88	2.9500	0.0400	0.0	0.0	0.0	0.0	0.0	4.38E-09
8	6	85	86	25718.04	1	3392.41	2.9478	0.0400	0.0	0.0	0.0	0.0	0.0	4.94E-09
7	5	90	91	25383.46	1	3395.37	2.9452	0.0400	0.0	0.0	0.0	0.0	0.0	4.96E-09
5	3	100	101	24961.22	1	3396.41	2.9443	0.0400	0.0	0.0	0.0	0.0	0.0	3.51E-09
9	7	79	80	25855.22	1	3396.50	2.9442	0.0400	0.0	0.0	0.0	0.0	0.0	5.47E-09
6	4	95	96	25130.91	1	3396.70	2.9440	0.0400	0.0	0.0	0.0	0.0	0.0	4.48E-09
11	9	67	68	26488.41	1	3397.49	2.9433	0.0400	0.0	0.0	0.0	0.0	0.0	4.55E-09
10	8	73	74	26112.42	1	3398.20	2.9427	0.0400	0.0	0.0	0.0	0.0	0.0	5.32E-09
8	6	84	85	25421.09	1	3401.43	2.9399	0.0400	0.0	0.0	0.0	0.0	0.0	6.20E-09
7	5	89	90	25068.06	1	3404.72	2.9371	0.0400	0.0	0.0	0.0	0.0	0.0	6.32E-09
4	2	104	105	24504.34	1	3404.80	2.9370	0.0400	0.0	0.0	0.0	0.0	0.0	3.07E-09
9	7	78	79	25579.82	1	3405.14	2.9367	0.0400	0.0	0.0	0.0	0.0	0.0	6.75E-09
11	9	66	67	26256.09	1	3405.36	2.9365	0.0400	0.0	0.0	0.0	0.0	0.0	5.41E-09
6	4	94	95	24797.05	1	3406.36	2.9357	0.0400	0.0	0.0	0.0	0.0	0.0	5.79E-09
5	3	99	100	24608.89	1	3406.38	2.9357	0.0400	0.0	0.0	0.0	0.0	0.0	4.61E-09
10	8	72	73	25858.57	1	3406.46	2.9356	0.0400	0.0	0.0	0.0	0.0	0.0	6.44E-05
8	6	83	84	25127.25	1	3410.40	2.9322	0.0400	0.0	0.0	0.0	0.0	0.0	7.78E-09
11	9	65	66	26026.96	1	3413.17	2.9298	0.0400	0.0	0.0	0.0	0.0	0.0	6.42E-09
9	7	77	78	25307.56	1	3413.73	2.9293	0.0400	0.0	0.0	0.0	0.0	0.0	8.31E-09
7	5	88	89	24755.73	1	3414.01	2.9291	0.0400	0.0	0.0	0.0	0.0	0.0	8.05E-09
10	8	71	72	25607.89	1	3414.66	2.9285	0.0400	0.0	0.0	0.0	0.0	0.0	7.78E-09
4	2	103	104	24136.54	1	3415.03	2.9282	0.0400	0.0	0.0	0.0	0.0	0.0	4.09E-09
6	4	93	94	24466.21	1	3415.97	2.9274	0.0400	0.0	0.0	0.0	0.0	0.0	7.47E-09
5	3	98	99	24259.57	1	3416.30	2.9271	0.0400	0.0	0.0	0.0	0.0	0.0	6.04E-09
12	10	58	59	26358.85	1	3416.57	2.9269	0.0400	0.0	0.0	0.0	0.0	0.0	5.44E-09
8	6	82	83	24836.50	1	3419.32	2.9246	0.0400	0.0	0.0	0.0	0.0	0.0	9.72E-09
11	9	64	65	25801.04	1	3420.92	2.9232	0.0400	0.0	0.0	0.0	0.0	0.0	7.59E-09
9	7	76	77	25038.44	1	3422.26	2.9220	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-08
3	1	107	108	23714.48	1	3422.65	2.9217	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-09
10	8	70	71	25360.39	1	3422.80	2.9216	0.0400	0.0	0.0	0.0	0.0	0.0	9.37E-09
7	5	87	88	24446.47	1	3423.24	2.9212	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-08
12	10	57	58	26157.68	1	3423.86	2.9207	0.0400	0.0	0.0	0.0	0.0	0.0	6.31E-09
4	2	102	103	23771.70	1	3425.21	2.9195	0.0400	0.0	0.0	0.0	0.0	0.0	5.43E-09
6	4	92	93	24138.43	1	3425.52	2.9193	0.0400	0.0	0.0	0.0	0.0	0.0	9.61E-09
5	3	97	98	23913.24	1	3426.17	2.9187	0.0400	0.0	0.0	0.0	0.0	0.0	7.89E-09
8	6	81	82	24548.88	1	3428.17	2.9170	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-08
11	9	63	64	25578.32	1	3428.61	2.9166	0.0400	0.0	0.0	0.0	0.0	0.0	8.94E-09
9	7	75	76	24772.47	1	3430.73	2.9148	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-08
10	8	69	70	25116.07	1	3430.89	2.9147	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-08
12	10	56	57	25959.75	1	3431.09	2.9145	0.0400	0.0	0.0	0.0	0.0	0.0	7.29E-09
7	5	86	87	24140.31	1	3432.42	2.9134	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-08
3	1	106	107	23334.10	1	3433.08	2.9128	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-09
6	4	91	92	23813.70	1	3435.01	2.9112	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-08
4	2	101	102	23409.84	1	3435.33	2.9109	0.0400	0.0	0.0	0.0	0.0	0.0	7.19E-09
5	3	96	97	23569.94	1	3435.98	2.9104	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-08
11	9	62	63	25358.84	1	3436.23	2.9102	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-08
8	6	80	81	24264.39	1	3436.97	2.9095	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-08
12	10	55	56	25765.06	1	3438.25	2.9085	0.0400	0.0	0.0	0.0	0.0	0.0	8.40E-09
10	8	68	69	24874.95	1	3438.91	2.9079	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	7	74	75	24509.67	1	3439.15	2.9077	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-08
7	5	85	86	23837.25	1	3441.54	2.9057	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-08
3	1	105	106	22556.67	1	3443.45	2.9041	0.0400	0.0	0.0	0.0	0.0	0.0	5.22E-09
11	9	61	62	25142.58	1	3443.80	2.9038	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-08
6	4	90	91	23492.04	1	3444.45	2.9032	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-08
12	10	54	55	25573.64	1	3445.36	2.9025	0.0400	0.0	0.0	0.0	0.0	0.0	9.65E-09
4	2	100	101	23050.98	1	3445.39	2.9024	0.0400	0.0	0.0	0.0	0.0	0.0	9.50E-09
8	6	79	80	23983.04	1	3445.71	2.9022	0.0400	0.0	0.0	0.0	0.0	0.0	1.87E-08
5	3	95	96	23229.68	1	3445.73	2.9021	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-08
10	8	67	68	24637.04	1	3446.87	2.9012	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-08
9	7	73	74	24250.05	1	3447.50	2.9007	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-08
2	0	109	110	22554.35	1	3450.56	2.8981	0.0400	0.0	0.0	0.0	0.0	0.0	2.43E-09
7	5	84	85	23537.30	1	3450.60	2.8980	0.0400	0.0	0.0	0.0	0.0	0.0	2.06E-08
11	9	60	61	24929.57	1	3451.31	2.8975	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-08
12	10	53	54	25365.48	1	3452.40	2.8965	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-08
3	1	104	105	22582.21	1	3453.78	2.8954	0.0400	0.0	0.0	0.0	0.0	0.0	6.99E-09
6	4	89	90	23173.46	1	3453.84	2.8953	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-08
8	6	78	79	23704.85	1	3454.39	2.8949	0.0400	0.0	0.0	0.0	0.0	0.0	2.31E-08
10	8	66	67	24402.34	1	3454.78	2.8945	0.0400	0.0	0.0	0.0	0.0	0.0	1.92E-08
4	2	99	100	22695.13	1	3455.41	2.8940	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-08
5	3	94	95	22892.46	1	3455.43	2.8940	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-08
9	7	72	73	23993.62	1	3455.80	2.8937	0.0400	0.0	0.0	0.0	0.0	0.0	2.25E-08
11	9	59	60	24719.80	1	3456.76	2.8912	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-08
12	10	52	53	25200.61	1	3459.38	2.8907	0.0400	0.0	0.0	0.0	0.0	0.0	1.26E-08
7	5	83	84	23240.48	1	3459.61	2.8905	0.0400	0.0	0.0	0.0	0.0	0.0	2.59E-08
2	0	108	109	22164.27	1	3461.13	2.8892	0.0400	0.0	0.0	0.0	0.0	0.0	3.29E-09
10	8	65	66	24170.88	1	3462.62	2.8880	0.0400	0.0	0.0	0.0	0.0	0.0	2.28E-08
8	6	77	78	23429.83	1	3463.02	2.8877	0.0400	0.0	0.0	0.0	0.0	0.0	2.85E-08
6	4	88	89	22857.99	1	3463.17	2.8875	0.0400	0.0	0.0	0.0	0.0	0.0	2.57E-08
9	7	71	72	23740.39	1	3464.03	2.8868	0.0400	0.0	0.0	0.0	0.0	0.0	2.73E-08
3	1	103	104	22210.73	1	3464.04	2.8868	0.0400	0.0	0.0	0.0	0.0	0.0	9.33E-09
5	3	93	94	22558.31	1	3465.08	2.8859	0.0400	0.0	0.0	0.0	0.0	0.0	2.24E-08
4	2	98	99	22342.30	1	3465.36	2.8857	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-08
11	9	58	59	24513.30	1	3466.14	2.8851	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-08
12	10	51	52	25019.01	1	3466.30	2.8849	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-08
7	5	82	83	22546.81	1	3468.56	2.8830	0.0400	0.0	0.0	0.0	0.0	0.0	3.25E-08
10	8	64	65	23942.65	1	3470.41	2.8815	0.0400	0.0	0.0	0.0	0.0	0.0	2.70E-08
8	6	76	77	23157.98	1	3471.59	2.8805	0.0400	0.0	0.0	0.0	0.0	0.0	3.51E-08
2	0	107	108	21777.14	1	3471.65	2.8805	0.0400	0.0	0.0	0.0	0.0	0.0	4.45E-09
9	7	70	71	23490.38	1	3472.21	2.8800	0.0400	0.0	0.0	0.0	0.0	0.0	3.29E-08
6	4	87	88	22545.62	1	3472.44	2.8798	0.0400	0.0	0.0	0.0	0.0	0.0	3.28E-08
12	10	50	51	24840.71	1	3473.16	2.8792	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-08
11	9	57	58	24310.07	1	3473.47	2.8790	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-08
3	1	102	103	21842.26	1	3474.26	2.8783	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-08
5	3	92	93	22227.24	1	3474.67	2.8780	0.0400	0.0	0.0	0.0	0.0	0.0	2.90E-08
4	2	97	98	21992.52	1	3475.27	2.8775	0.0400	0.0	0.0	0.0	0.0	0.0	2.16E-08
7	5	81	82	22656.29	1	3477.45	2.8757	0.0400	0.0	0.0	0.0	0.0	0.0	4.06E-08
10	8	63	64	23717.67	1	3478.13	2.8751	0.0400	0.0	0.0	0.0	0.0	0.0	3.19E-08
12	10	49	50	24665.70	1	3479.96	2.8736	0.0400	0.0	0.0	0.0	0.0	0.0	1.85E-08
8	6	75	76	22889.33	1	3480.09	2.8735	0.0400	0.0	0.0	0.0	0.0	0.0	4.30E-08
9	7	69	70	23243.58	1	3480.33	2.8733	0.0400	0.0	0.0	0.0	0.0	0.0	3.96E-08
11	9	56	57	24110.11	1	3480.73	2.8730	0.0400	0.0	0.0	0.0	0.0	0.0	2.63E-08
6	4	86	87	22236.39	1	3481.65	2.8722	0.0400	0.0	0.0	0.0	0.0	0.0	4.16E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	106	107	21392.98	1	3482.12	2.8718	0.0400	0.0	0.0	0.0	0.0	0.0	6.00E-09
5	3	91	92	21899.26	1	3484.20	2.8701	0.0400	0.0	0.0	0.0	0.0	0.0	3.73E-08
3	1	101	102	21476.80	1	3484.41	2.8699	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-08
4	2	96	97	21645.80	1	3485.11	2.8693	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-08
10	8	62	63	23495.95	1	3485.80	2.8688	0.0400	0.0	0.0	0.0	0.0	0.0	3.76E-08
7	5	80	81	22368.93	1	3486.25	2.8684	0.0400	0.0	0.0	0.0	0.0	0.0	5.06E-08
6	4	79	80	19482.71	2	3486.69	2.8680	0.0400	0.0	0.0	0.0	0.0	0.0	3.68E-09
12	10	48	49	24494.01	1	3486.69	2.8680	0.0400	0.0	0.0	0.0	0.0	0.0	2.08E-08
11	9	55	56	23913.44	1	3487.93	2.8670	0.0400	0.0	0.0	0.0	0.0	0.0	3.03E-08
9	7	68	69	23000.01	1	3488.39	2.8667	0.0400	0.0	0.0	0.0	0.0	0.0	4.76E-08
8	6	74	75	22623.88	1	3488.54	2.8665	0.0400	0.0	0.0	0.0	0.0	0.0	5.27E-08
6	4	85	86	21930.29	1	3490.81	2.8647	0.0400	0.0	0.0	0.0	0.0	0.0	5.27E-08
5	3	84	85	18988.68	2	3491.84	2.8638	0.0400	0.0	0.0	0.0	0.0	0.0	3.74E-09
2	0	105	106	21011.81	1	3492.53	2.8633	0.0400	0.0	0.0	0.0	0.0	0.0	8.08E-09
12	10	47	48	24325.62	1	3493.36	2.8626	0.0400	0.0	0.0	0.0	0.0	0.0	2.34E-08
10	8	61	62	23277.50	1	3493.40	2.8625	0.0400	0.0	0.0	0.0	0.0	0.0	4.41E-08
5	3	90	91	21574.38	1	3493.68	2.8623	0.0400	0.0	0.0	0.0	0.0	0.0	4.78E-08
3	1	100	101	21114.38	1	3494.52	2.8616	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-08
4	2	95	96	21302.14	1	3494.91	2.8613	0.0400	0.0	0.0	0.0	0.0	0.0	3.67E-08
6	4	78	79	19210.62	2	3494.97	2.8613	0.0400	0.0	0.0	0.0	0.0	0.0	4.53E-09
7	5	79	80	22084.76	1	3495.06	2.8612	0.0400	0.0	0.0	0.0	0.0	0.0	6.29E-08
11	9	54	55	23720.06	1	3495.07	2.8612	0.0400	0.0	0.0	0.0	0.0	0.0	3.49E-08
4	2	89	90	18574.52	2	3495.44	2.8609	0.0400	0.0	0.0	0.0	0.0	0.0	3.20E-09
7	5	72	73	19550.86	2	3495.85	2.8605	0.0400	0.0	0.0	0.0	0.0	0.0	4.62E-09
9	7	67	68	22759.69	1	3496.39	2.8601	0.0400	0.0	0.0	0.0	0.0	0.0	5.69E-08
8	6	73	74	22361.64	1	3496.94	2.8596	0.0400	0.0	0.0	0.0	0.0	0.0	6.42E-08
6	4	84	85	21627.34	1	3499.91	2.8572	0.0400	0.0	0.0	0.0	0.0	0.0	6.66E-08
12	10	46	47	24160.56	1	3499.97	2.8572	0.0400	0.0	0.0	0.0	0.0	0.0	2.63E-08
5	3	83	84	18698.40	2	3500.43	2.8568	0.0400	0.0	0.0	0.0	0.0	0.0	4.68E-09
10	8	60	61	23062.32	1	3500.94	2.8564	0.0400	0.0	0.0	0.0	0.0	0.0	5.17E-08
8	6	65	66	19781.77	2	3501.94	2.8556	0.0400	0.0	0.0	0.0	0.0	0.0	4.79E-09
11	9	53	54	23529.98	1	3502.15	2.8554	0.0400	0.0	0.0	0.0	0.0	0.0	4.01E-08
2	0	104	105	20633.65	1	3502.89	2.8548	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-08
5	3	89	90	21252.63	1	3503.10	2.8546	0.0400	0.0	0.0	0.0	0.0	0.0	6.12E-08
6	4	77	78	18941.66	2	3503.19	2.8545	0.0400	0.0	0.0	0.0	0.0	0.0	5.56E-09
7	5	71	72	19303.21	2	3503.70	2.8541	0.0400	0.0	0.0	0.0	0.0	0.0	5.57E-09
7	5	78	79	21803.77	1	3503.78	2.8541	0.0400	0.0	0.0	0.0	0.0	0.0	7.79E-08
4	2	88	89	18265.99	2	3504.32	2.8536	0.0400	0.0	0.0	0.0	0.0	0.0	4.06E-09
9	7	66	67	22522.63	1	3504.33	2.8536	0.0400	0.0	0.0	0.0	0.0	0.0	6.80E-08
3	1	99	100	20755.00	1	3504.57	2.8534	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-08
4	2	94	95	20961.57	1	3504.64	2.8534	0.0400	0.0	0.0	0.0	0.0	0.0	4.78E-08
8	6	72	73	22102.62	1	3505.27	2.8528	0.0400	0.0	0.0	0.0	0.0	0.0	7.82E-08
12	10	45	46	23998.83	1	3506.51	2.8518	0.0400	0.0	0.0	0.0	0.0	0.0	2.94E-08
10	8	59	60	22850.43	1	3508.43	2.8503	0.0400	0.0	0.0	0.0	0.0	0.0	6.04E-08
6	4	83	84	21327.55	1	3508.95	2.8499	0.0400	0.0	0.0	0.0	0.0	0.0	8.39E-08
5	3	82	83	18411.21	2	3508.95	2.8499	0.0400	0.0	0.0	0.0	0.0	0.0	5.83E-09
11	9	52	53	23343.22	1	3509.17	2.8497	0.0400	0.0	0.0	0.0	0.0	0.0	4.58E-08
8	6	64	65	19558.57	2	3509.37	2.8495	0.0400	0.0	0.0	0.0	0.0	0.0	5.65E-09
6	4	76	77	18675.82	2	3511.36	2.8479	0.0400	0.0	0.0	0.0	0.0	0.0	6.81E-09
7	5	70	71	19058.71	2	3511.51	2.8478	0.0400	0.0	0.0	0.0	0.0	0.0	6.69E-09
9	7	65	66	22288.82	1	3512.21	2.8472	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-08
7	5	77	78	21525.99	1	3512.45	2.8470	0.0400	0.0	0.0	0.0	0.0	0.0	9.63E-08
5	3	88	89	20934.01	1	3512.46	2.8470	0.0400	0.0	0.0	0.0	0.0	0.0	7.84E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
12	10	44	45	23840.43	1	3513.00	2.8466	0.0400	0.0	0.0	0.0	0.0	0.0	3.27E-08
4	2	87	88	17960.53	2	3513.15	2.8464	0.0400	0.0	0.0	0.0	0.0	0.0	5.14E-09
2	0	103	104	20258.50	1	3513.19	2.8464	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-08
8	6	71	72	21846.84	1	3513.54	2.8461	0.0400	0.0	0.0	0.0	0.0	0.0	9.48E-08
4	2	93	94	20624.10	1	3514.33	2.8455	0.0400	0.0	0.0	0.0	0.0	0.0	6.20E-08
3	1	98	99	20398.68	1	3514.56	2.8453	0.0400	0.0	0.0	0.0	0.0	0.0	3.81E-08
3	1	92	93	17590.57	2	3515.80	2.8443	0.0400	0.0	0.0	0.0	0.0	0.0	3.54E-09
10	8	58	59	22641.83	1	3515.85	2.8443	0.0400	0.0	0.0	0.0	0.0	0.0	7.04E-08
11	9	51	52	23159.78	1	3516.13	2.8440	0.0400	0.0	0.0	0.0	0.0	0.0	5.23E-08
8	6	63	64	19338.57	2	3516.75	2.8435	0.0400	0.0	0.0	0.0	0.0	0.0	6.65E-09
5	3	81	82	18127.12	2	3517.43	2.8430	0.0400	0.0	0.0	0.0	0.0	0.0	7.26E-09
6	4	82	83	21030.94	1	3517.94	2.8426	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-07
9	7	56	57	19779.64	2	3518.88	2.8418	0.0400	0.0	0.0	0.0	0.0	0.0	5.55E-09
7	5	69	70	18817.38	2	3519.25	2.8415	0.0400	0.0	0.0	0.0	0.0	0.0	8.02E-09
12	10	43	44	23665.38	1	3519.42	2.8414	0.0400	0.0	0.0	0.0	0.0	0.0	3.64E-08
6	4	75	76	18413.12	2	3519.47	2.8413	0.0400	0.0	0.0	0.0	0.0	0.0	8.31E-09
9	7	64	65	22058.29	1	3520.03	2.8409	0.0400	0.0	0.0	0.0	0.0	0.0	9.60E-08
7	5	76	77	21251.42	1	3521.05	2.8401	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-07
8	6	70	71	21594.31	1	3521.76	2.8395	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-07
5	3	87	88	20618.54	1	3521.77	2.8395	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-07
4	2	86	87	17658.15	2	3521.93	2.8394	0.0400	0.0	0.0	0.0	0.0	0.0	6.49E-09
11	9	50	51	22979.66	1	3523.02	2.8385	0.0400	0.0	0.0	0.0	0.0	0.0	5.94E-08
10	8	57	58	22436.54	1	3523.21	2.8383	0.0400	0.0	0.0	0.0	0.0	0.0	8.19E-08
2	0	102	103	19866.39	1	3523.44	2.8381	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-08
4	2	92	93	20289.75	1	3523.95	2.8377	0.0400	0.0	0.0	0.0	0.0	0.0	8.02E-08
8	6	62	63	19121.76	2	3524.07	2.8376	0.0400	0.0	0.0	0.0	0.0	0.0	7.80E-09
3	1	97	98	20045.44	1	3524.50	2.8373	0.0400	0.0	0.0	0.0	0.0	0.0	5.00E-08
3	1	91	92	17269.87	2	3524.88	2.8370	0.0400	0.0	0.0	0.0	0.0	0.0	4.53E-09
9	7	55	56	19567.32	2	3525.76	2.8363	0.0400	0.0	0.0	0.0	0.0	0.0	6.38E-09
12	10	42	43	23533.68	1	3525.77	2.8363	0.0400	0.0	0.0	0.0	0.0	0.0	4.03E-08
5	3	80	81	17846.16	2	3525.85	2.8362	0.0400	0.0	0.0	0.0	0.0	0.0	9.00E-09
6	4	81	82	20737.52	1	3526.87	2.8354	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-07
7	5	68	69	18579.22	2	3526.95	2.8353	0.0400	0.0	0.0	0.0	0.0	0.0	9.59E-09
6	4	74	75	18153.57	2	3527.53	2.8348	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-08
9	7	63	64	21831.04	1	3527.80	2.8346	0.0400	0.0	0.0	0.0	0.0	0.0	1.14E-07
7	5	75	76	20960.08	1	3529.59	2.8332	0.0400	0.0	0.0	0.0	0.0	0.0	1.46E-07
11	9	49	50	22802.87	1	3529.85	2.8330	0.0400	0.0	0.0	0.0	0.0	0.0	6.74E-08
8	6	69	70	21345.04	1	3529.91	2.8329	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-07
10	8	56	57	22234.55	1	3530.51	2.8325	0.0400	0.0	0.0	0.0	0.0	0.0	9.50E-08
4	2	85	86	17358.87	2	3530.65	2.8323	0.0400	0.0	0.0	0.0	0.0	0.0	8.18E-09
5	3	86	87	20306.23	1	3531.02	2.8320	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-07
8	6	61	62	18508.16	2	3531.34	2.8318	0.0400	0.0	0.0	0.0	0.0	0.0	9.12E-09
12	10	41	42	23385.33	1	3532.07	2.8312	0.0400	0.0	0.0	0.0	0.0	0.0	4.44E-08
9	7	54	55	19398.23	2	3532.59	2.8308	0.0400	0.0	0.0	0.0	0.0	0.0	7.32E-09
4	2	91	92	19958.52	1	3533.52	2.8300	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-07
2	0	101	102	19517.34	1	3533.64	2.8299	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-08
3	1	90	91	16952.23	2	3533.90	2.8297	0.0400	0.0	0.0	0.0	0.0	0.0	5.79E-09
5	3	79	80	17568.32	2	3534.21	2.8295	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-08
3	1	96	97	19695.29	1	3534.39	2.8293	0.0400	0.0	0.0	0.0	0.0	0.0	6.56E-08
7	5	67	68	18344.26	2	3534.56	2.8292	0.0400	0.0	0.0	0.0	0.0	0.0	1.14E-08
9	7	62	63	21607.08	1	3535.50	2.8285	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-07
6	4	73	74	17897.18	2	3535.53	2.8284	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-08
6	4	80	81	20447.30	1	3535.74	2.8283	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
11	9	48	49	22629.43	1	3536.62	2.8276	0.0400	0.0	0.0	0.0	0.0	0.0	7.61E-08
10	8	55	56	22035.89	1	3537.75	2.8267	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-07
8	6	68	69	21099.03	1	3538.01	2.8264	0.0400	0.0	0.0	0.0	0.0	0.0	1.66E-07
7	5	74	75	20711.97	1	3538.08	2.8264	0.0400	0.0	0.0	0.0	0.0	0.0	1.79E-07
12	10	40	41	23240.34	1	3538.25	2.8262	0.0400	0.0	0.0	0.0	0.0	0.0	4.89E-08
8	6	60	61	18697.77	2	3538.54	2.8260	0.0400	0.0	0.0	0.0	0.0	0.0	1.06E-08
4	2	84	85	17062.69	2	3539.32	2.8254	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-08
9	7	53	54	19212.38	2	3539.37	2.8254	0.0400	0.0	0.0	0.0	0.0	0.0	8.37E-09
5	3	85	86	19997.09	1	3540.22	2.8247	0.0400	0.0	0.0	0.0	0.0	0.0	1.62E-07
7	5	66	67	18112.48	2	3542.16	2.8231	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-08
5	3	78	79	17293.62	2	3542.52	2.8228	0.0400	0.0	0.0	0.0	0.0	0.0	1.37E-08
3	1	89	90	16637.68	2	3542.87	2.8226	0.0400	0.0	0.0	0.0	0.0	0.0	7.36E-09
4	2	90	91	19630.43	1	3543.03	2.8224	0.0400	0.0	0.0	0.0	0.0	0.0	1.33E-07
9	7	61	62	21366.43	1	3543.14	2.8224	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-07
11	9	47	48	22459.34	1	3543.33	2.8222	0.0400	0.0	0.0	0.0	0.0	0.0	8.57E-08
6	4	72	73	17643.96	2	3543.48	2.8221	0.0400	0.0	0.0	0.0	0.0	0.0	1.49E-08
2	0	100	101	19151.35	1	3543.78	2.8218	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-08
3	1	95	96	19348.24	1	3544.22	2.8215	0.0400	0.0	0.0	0.0	0.0	0.0	8.58E-08
12	10	39	40	23098.72	1	3544.46	2.8213	0.0400	0.0	0.0	0.0	0.0	0.0	5.36E-08
6	4	79	80	20160.30	1	3544.56	2.8212	0.0400	0.0	0.0	0.0	0.0	1.08E-08	2.05E-07
2	0	94	95	16254.18	2	3544.88	2.8210	0.0400	0.0	0.0	0.0	0.0	0.0	3.33E-09
10	8	54	55	21840.56	1	3544.93	2.8209	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-07
8	6	59	60	18490.61	2	3545.69	2.8203	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-08
8	6	67	68	20856.30	1	3546.05	2.8200	0.0400	0.0	0.0	0.0	0.0	0.0	2.00E-07
9	7	52	53	19029.77	2	3546.08	2.8200	0.0400	0.0	0.0	0.0	0.0	0.0	9.55E-09
7	5	73	74	20447.11	1	3546.51	2.8197	0.0400	0.0	0.0	0.0	0.0	1.09E-08	2.19E-07
4	2	83	84	16769.63	2	3547.94	2.8185	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-08
5	3	84	85	19691.13	1	3549.35	2.8174	0.0400	0.0	0.0	0.0	0.0	1.16E-08	2.05E-07
7	5	65	66	17883.92	2	3549.68	2.8172	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-08
11	9	46	47	22292.60	1	3549.97	2.8169	0.0400	0.0	0.0	0.0	0.0	0.0	9.63E-08
12	10	38	39	22960.48	1	3550.56	2.8165	0.0400	0.0	0.0	0.0	0.0	0.0	5.85E-08
9	7	60	61	21169.09	1	3550.72	2.8163	0.0400	0.0	0.0	0.0	0.0	0.0	1.85E-07
5	3	77	78	17022.07	2	3550.78	2.8163	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-08
6	4	71	72	17393.93	2	3551.37	2.8158	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-08
3	1	88	89	16326.21	2	3551.79	2.8155	0.0400	0.0	0.0	0.0	0.0	0.0	9.37E-09
10	8	53	54	21648.56	1	3552.04	2.8153	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-07
4	2	89	90	19305.50	1	3552.49	2.8149	0.0400	0.0	0.0	0.0	0.0	1.03E-08	1.71E-07
9	7	51	52	18850.42	2	3552.73	2.8147	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-08
8	6	58	59	18266.68	2	3552.78	2.8147	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-08
6	4	78	79	19876.52	1	3553.31	2.8143	0.0400	0.0	0.0	0.0	0.0	1.40E-08	2.55E-07
2	0	99	100	18788.44	1	3553.87	2.8138	0.0400	0.0	0.0	0.0	0.0	0.0	4.55E-08
3	1	94	95	19004.32	1	3553.99	2.8137	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-07
8	6	66	67	20616.86	1	3554.02	2.8137	0.0400	0.0	0.0	0.0	0.0	1.16E-08	2.39E-07
2	0	93	94	15964.29	2	3554.10	2.8137	0.0400	0.0	0.0	0.0	0.0	0.0	4.29E-09
7	5	72	73	20185.51	1	3554.88	2.8130	0.0400	0.0	0.0	0.0	0.0	1.39E-08	2.67E-07
4	2	82	83	16479.69	2	3556.50	2.8118	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-08
11	9	45	46	22129.23	1	3556.55	2.8117	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-07
12	10	37	38	22825.61	1	3556.60	2.8117	0.0400	0.0	0.0	0.0	0.0	0.0	6.37E-08
7	5	64	65	17658.56	2	3557.15	2.8112	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-08
9	7	59	60	20955.06	1	3558.24	2.8104	0.0400	0.0	0.0	0.0	0.0	0.0	2.17E-07
5	3	83	84	19388.37	1	3558.43	2.8102	0.0400	0.0	0.0	0.0	0.0	1.53E-08	2.59E-07
5	3	76	77	16753.69	2	3558.98	2.8098	0.0400	0.0	0.0	0.0	0.0	0.0	2.07E-08
10	8	52	53	21459.91	1	3559.10	2.8097	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	70	71	17147.08	2	3559.21	2.8096	0.0400	0.0	0.0	0.0	0.0	0.0	2.17E-08
9	7	50	51	18674.34	2	3559.33	2.8095	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-08
8	6	57	58	18085.99	2	3559.82	2.8091	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-08
3	1	87	88	16017.84	2	3560.65	2.8085	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-08
4	2	88	89	18983.73	1	3561.89	2.8075	0.0400	0.0	0.0	0.0	0.0	1.39E-08	2.19E-07
8	6	65	66	20380.71	1	3561.94	2.8075	0.0400	0.0	0.0	0.0	0.0	1.44E-08	2.85E-07
6	4	77	78	19595.97	1	3562.01	2.8074	0.0400	0.0	0.0	0.0	0.0	1.81E-08	3.16E-07
12	10	36	37	22694.13	1	3562.57	2.8070	0.0400	0.0	0.0	0.0	0.0	0.0	6.92E-08
11	9	44	45	21969.23	1	3563.07	2.8066	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-07
7	5	71	72	19927.18	1	3563.19	2.8065	0.0400	0.0	0.0	0.0	0.0	1.76E-08	3.25E-07
2	0	92	93	18637.47	2	3563.26	2.8064	0.0400	0.0	0.0	0.0	0.0	0.0	5.52E-09
3	1	93	94	18663.53	1	3563.71	2.8061	0.0400	0.0	0.0	0.0	0.0	0.0	1.46E-07
2	0	98	99	18428.62	1	3563.90	2.8059	0.0400	0.0	0.0	0.0	0.0	0.0	6.01E-08
7	5	63	64	17436.43	2	3564.56	2.8054	0.0400	0.0	0.0	0.0	0.0	0.0	2.24E-08
4	2	81	82	16152.90	2	3565.01	2.8050	0.0400	0.0	0.0	0.0	0.0	0.0	2.01E-08
9	7	58	59	20744.37	1	3565.69	2.8045	0.0400	0.0	0.0	0.0	0.0	1.21E-08	2.53E-07
9	7	49	50	18501.51	2	3565.87	2.8044	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-08
10	8	51	52	21274.62	1	3566.09	2.8042	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-07
8	6	56	57	17888.55	2	3566.80	2.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.93E-08
6	4	69	70	16903.43	2	3566.99	2.8035	0.0400	0.0	0.0	0.0	0.0	0.0	2.60E-08
5	3	75	76	16488.47	2	3567.13	2.8034	0.0400	0.0	0.0	0.0	0.0	0.0	2.54E-08
5	3	82	83	19088.83	1	3567.46	2.8031	0.0400	0.0	0.0	0.0	0.0	2.02E-08	3.26E-07
12	10	35	36	22566.05	1	3568.48	2.8023	0.0400	0.0	0.0	0.0	0.0	0.0	7.48E-08
3	1	86	87	15712.59	2	3569.46	2.8015	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-08
11	9	43	44	21812.60	1	3569.53	2.8015	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-07
8	6	64	65	20147.87	1	3569.80	2.8013	0.0400	0.0	0.0	0.0	0.0	1.78E-08	3.39E-07
6	4	76	77	19318.68	1	3570.65	2.8006	0.0400	0.0	0.0	0.0	0.0	2.34E-08	3.91E-07
4	2	87	88	18665.15	1	3571.24	2.8001	0.0400	0.0	0.0	0.0	0.0	1.87E-08	2.81E-07
7	5	70	71	19672.14	1	3571.44	2.8000	0.0400	0.0	0.0	0.0	0.0	2.23E-08	3.93E-07
7	5	62	63	17217.54	2	3571.92	2.7996	0.0400	0.0	0.0	0.0	0.0	0.0	2.64E-08
9	7	48	49	18331.96	2	3572.35	2.7993	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-08
2	0	91	92	18313.73	2	3572.37	2.7993	0.0400	0.0	0.0	0.0	0.0	0.0	7.08E-09
10	8	50	51	21092.69	1	3573.02	2.7988	0.0400	0.0	0.0	0.0	0.0	0.0	2.17E-07
9	7	57	58	20537.02	1	3573.09	2.7987	0.0400	0.0	0.0	0.0	0.0	1.45E-08	2.95E-07
3	1	92	93	18325.89	1	3573.37	2.7985	0.0400	0.0	0.0	0.0	0.0	1.32E-08	1.89E-07
4	2	80	81	15909.25	2	3573.46	2.7984	0.0400	0.0	0.0	0.0	0.0	0.0	2.49E-08
8	6	55	56	17694.37	2	3573.72	2.7982	0.0400	0.0	0.0	0.0	0.0	0.0	2.22E-08
2	0	97	98	18071.92	1	3573.88	2.7981	0.0400	0.0	0.0	0.0	0.0	0.0	7.92E-08
12	10	34	35	22441.36	1	3574.33	2.7977	0.0400	0.0	0.0	0.0	0.0	0.0	8.06E-08
6	4	68	69	16662.99	2	3574.71	2.7974	0.0400	0.0	0.0	0.0	0.0	0.0	3.12E-08
5	3	74	75	16226.44	2	3575.22	2.7970	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-08
11	9	42	43	21659.36	1	3575.92	2.7965	0.0400	0.0	0.0	0.0	0.0	0.0	1.48E-07
5	3	81	82	18752.51	1	3576.42	2.7961	0.0400	0.0	0.0	0.0	0.0	2.66E-08	4.09E-07
8	6	63	64	19918.36	1	3577.60	2.7952	0.0400	0.0	0.0	0.0	0.0	2.18E-08	4.02E-07
3	1	85	86	15410.46	2	3578.22	2.7947	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-08
9	7	47	48	18165.70	2	3578.77	2.7943	0.0400	0.0	0.0	0.0	0.0	0.0	1.76E-08
7	5	61	62	17001.87	2	3579.21	2.7939	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-08
6	4	75	76	19044.64	1	3579.23	2.7939	0.0400	0.0	0.0	0.0	0.0	3.01E-08	4.82E-07
7	5	69	70	19420.38	1	3579.63	2.7936	0.0400	0.0	0.0	0.0	0.0	2.80E-08	4.76E-07
10	8	49	50	20914.12	1	3579.89	2.7934	0.0400	0.0	0.0	0.0	0.0	1.14E-08	2.46E-07
12	10	33	34	22320.07	1	3580.11	2.7932	0.0400	0.0	0.0	0.0	0.0	0.0	8.66E-08
9	7	56	57	20333.01	1	3580.43	2.7930	0.0400	0.0	0.0	0.0	0.0	1.74E-08	3.42E-07
4	2	86	87	18349.76	1	3580.53	2.7929	0.0400	0.0	0.0	0.0	0.0	2.50E-08	3.58E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	54	55	17503.45	2	3580.58	2.7928	0.0400	0.0	0.0	0.0	0.0	0.0	2.55E-08
2	0	90	91	14993.09	2	3581.43	2.7922	0.0400	0.0	0.0	0.0	0.0	0.0	9.06E-09
4	2	79	80	15628.77	2	3581.86	2.7918	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-08
11	9	41	42	21509.51	1	3582.25	2.7915	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-07
6	4	67	68	16425.77	2	3582.38	2.7914	0.0400	0.0	0.0	0.0	0.0	0.0	3.72E-08
3	1	91	92	17991.41	1	3582.98	2.7910	0.0400	0.0	0.0	0.0	0.0	1.81E-08	2.44E-07
5	3	73	74	15567.60	2	3583.26	2.7908	0.0400	0.0	0.0	0.0	0.0	0.0	3.76E-08
2	0	96	97	17718.34	1	3583.80	2.7903	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-07
9	7	46	47	18002.73	2	3585.14	2.7893	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-08
5	3	80	81	18499.43	1	3585.33	2.7891	0.0400	0.0	0.0	0.0	0.0	3.49E-08	5.12E-07
8	6	62	63	19692.16	1	3585.33	2.7891	0.0400	0.0	0.0	0.0	0.0	2.68E-08	4.75E-07
12	10	32	33	22202.19	1	3585.82	2.7888	0.0400	0.0	0.0	0.0	0.0	0.0	9.26E-08
7	5	60	61	16789.46	2	3586.46	2.7883	0.0400	0.0	0.0	0.0	0.0	0.0	3.61E-08
10	8	48	49	20738.93	1	3586.69	2.7881	0.0400	0.0	0.0	0.0	0.0	1.33E-08	2.78E-07
3	1	84	85	15111.48	2	3586.92	2.7879	0.0400	0.0	0.0	0.0	0.0	0.0	2.39E-08
8	6	53	54	17315.80	2	3587.39	2.7875	0.0400	0.0	0.0	0.0	0.0	0.0	2.92E-08
9	7	55	56	20132.36	1	3587.70	2.7873	0.0400	0.0	0.0	0.0	0.0	2.08E-08	3.97E-07
6	4	74	75	18773.88	1	3587.76	2.7873	0.0400	0.0	0.0	0.0	0.0	3.86E-08	5.92E-07
7	5	68	69	19171.93	1	3587.77	2.7872	0.0400	0.0	0.0	0.0	0.0	3.51E-08	5.73E-07
11	9	40	41	21363.06	1	3588.51	2.7867	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-07
4	2	85	86	18037.58	1	3589.76	2.7857	0.0400	0.0	0.0	0.0	0.0	3.35E-08	4.56E-07
6	4	66	67	16191.77	2	3590.00	2.7855	0.0400	0.0	0.0	0.0	0.0	0.0	4.43E-08
4	2	78	79	15351.45	2	3590.20	2.7854	0.0400	0.0	0.0	0.0	0.0	0.0	3.82E-08
2	0	89	90	14675.56	2	3590.43	2.7852	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-08
5	3	72	73	15711.97	2	3591.24	2.7846	0.0400	0.0	0.0	0.0	0.0	0.0	4.57E-08
9	7	45	46	17843.04	2	3591.44	2.7844	0.0400	0.0	0.0	0.0	0.0	0.0	2.20E-08
12	10	31	32	22087.72	1	3591.48	2.7844	0.0400	0.0	0.0	0.0	0.0	0.0	9.87E-08
3	1	90	91	17660.10	1	3592.53	2.7836	0.0400	0.0	0.0	0.0	0.0	2.46E-08	3.15E-07
8	6	61	62	19469.31	1	3593.01	2.7832	0.0400	0.0	0.0	0.0	0.0	3.27E-08	5.60E-07
10	8	47	48	20567.13	1	3593.43	2.7829	0.0400	0.0	0.0	0.0	0.0	1.54E-08	3.14E-07
7	5	59	60	16580.31	2	3593.64	2.7827	0.0400	0.0	0.0	0.0	0.0	0.0	4.21E-08
2	0	95	96	17367.91	1	3593.66	2.7827	0.0400	0.0	0.0	0.0	0.0	1.12E-08	1.37E-07
8	6	52	53	17131.43	2	3594.13	2.7823	0.0400	0.0	0.0	0.0	0.0	0.0	3.34E-08
5	3	79	80	16209.59	1	3594.18	2.7823	0.0400	0.0	0.0	0.0	0.0	4.57E-08	6.40E-07
11	9	39	40	21220.01	1	3594.72	2.7819	0.0400	0.0	0.0	0.0	0.0	0.0	1.98E-07
9	7	54	55	19935.07	1	3594.92	2.7817	0.0400	0.0	0.0	0.0	0.0	2.48E-08	4.58E-07
3	1	83	84	14815.63	2	3595.57	2.7812	0.0400	0.0	0.0	0.0	0.0	0.0	3.01E-08
7	5	67	68	16926.79	1	3595.84	2.7810	0.0400	0.0	0.0	0.0	0.0	4.39E-08	6.89E-07
6	4	73	74	18506.41	1	3596.22	2.7807	0.0400	0.0	0.0	0.0	0.0	4.94E-08	7.25E-07
12	10	30	31	21976.67	1	3597.06	2.7800	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-07
6	4	65	66	15961.02	2	3597.56	2.7797	0.0400	0.0	0.0	0.0	0.0	0.0	5.26E-08
9	7	44	45	17686.66	2	3597.69	2.7796	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-08
4	2	77	78	15077.32	2	3598.49	2.7789	0.0400	0.0	0.0	0.0	0.0	0.0	4.71E-08
4	2	84	85	17728.62	1	3598.93	2.7786	0.0400	0.0	0.0	0.0	0.0	4.47E-08	5.79E-07
5	3	71	72	15459.54	2	3599.16	2.7784	0.0400	0.0	0.0	0.0	0.0	0.0	5.53E-08
2	0	88	89	14361.15	2	3599.38	2.7783	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-08
10	8	46	47	20398.72	1	3600.11	2.7777	0.0400	0.0	0.0	0.0	0.0	1.78E-08	3.53E-07
8	6	60	61	19249.80	1	3600.63	2.7773	0.0400	0.0	0.0	0.0	0.0	3.98E-08	6.58E-07
7	5	58	59	16374.42	2	3600.77	2.7772	0.0400	0.0	0.0	0.0	0.0	0.0	4.90E-08
8	6	51	52	16950.35	2	3600.82	2.7771	0.0400	0.0	0.0	0.0	0.0	0.0	3.80E-08
11	9	38	39	21080.37	1	3600.85	2.7771	0.0400	0.0	0.0	0.0	0.0	0.0	2.17E-07
3	1	89	90	17331.98	1	3602.03	2.7762	0.0400	0.0	0.0	0.0	0.0	3.33E-08	4.06E-07
9	7	53	54	19741.15	1	3602.07	2.7762	0.0400	0.0	0.0	0.0	0.0	2.95E-08	5.27E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
12	10	29	30	21869.04	1	3602.58	2.7758	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-07
5	3	78	79	17923.02	1	3602.98	2.7755	0.0400	0.0	0.0	0.0	0.0	5.96E-08	7.97E-07
2	0	94	95	17020.62	1	3603.48	2.7751	0.0400	0.0	0.0	0.0	0.0	1.54E-08	1.79E-07
7	5	66	67	18684.96	1	3603.85	2.7748	0.0400	0.0	0.0	0.0	0.0	5.47E-08	8.26E-07
9	7	43	44	17533.59	2	3603.87	2.7748	0.0400	0.0	0.0	0.0	0.0	0.0	2.71E-08
3	1	82	83	14522.95	2	3604.17	2.7746	0.0400	0.0	0.0	0.0	0.0	0.0	3.77E-08
6	4	72	73	18242.22	1	3604.63	2.7742	0.0400	0.0	0.0	0.0	0.0	6.30E-08	8.86E-07
6	4	64	65	15733.51	2	3605.06	2.7739	0.0400	0.0	0.0	0.0	0.0	0.0	6.23E-08
10	8	45	46	20233.70	1	3606.73	2.7726	0.0400	0.0	0.0	0.0	0.0	2.05E-08	3.96E-07
4	2	76	77	14806.39	2	3606.73	2.7726	0.0400	0.0	0.0	0.0	0.0	0.0	5.79E-08
11	9	37	38	20944.14	1	3606.93	2.7724	0.0400	0.0	0.0	0.0	0.0	1.09E-08	2.36E-07
5	3	70	71	15210.34	2	3607.04	2.7724	0.0400	0.0	0.0	0.0	0.0	0.0	6.67E-08
8	6	50	51	16772.57	2	3607.46	2.7720	0.0400	0.0	0.0	0.0	0.0	0.0	4.31E-08
7	5	57	58	16171.80	2	3607.84	2.7717	0.0400	0.0	0.0	0.0	0.0	0.0	5.69E-08
12	10	28	29	21764.84	1	3608.04	2.7716	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-07
4	2	83	84	17422.89	1	3608.05	2.7716	0.0400	0.0	0.0	0.0	0.0	5.94E-08	7.33E-07
8	6	59	60	19033.64	1	3608.18	2.7715	0.0400	0.0	0.0	0.0	0.0	4.82E-08	7.71E-07
2	0	87	88	14049.87	2	3608.28	2.7714	0.0400	0.0	0.0	0.0	0.0	0.0	1.88E-08
9	7	52	53	19550.62	1	3609.16	2.7707	0.0400	0.0	0.0	0.0	0.0	3.49E-08	6.05E-07
9	7	42	43	17383.83	2	3610.00	2.7701	0.0400	0.0	0.0	0.0	0.0	0.0	3.00E-08
3	1	88	89	17007.07	1	3611.46	2.7690	0.0400	0.0	0.0	0.0	0.0	4.52E-08	5.22E-07
5	3	77	78	17639.71	1	3611.71	2.7688	0.0400	0.0	0.0	0.0	0.0	7.74E-08	9.90E-07
7	5	65	66	18446.48	1	3611.81	2.7687	0.0400	0.0	0.0	0.0	0.0	6.78E-08	9.87E-07
6	4	63	64	15509.25	2	3612.50	2.7682	0.0400	0.0	0.0	0.0	0.0	0.0	7.36E-08
3	1	81	82	14233.45	2	3612.71	2.7680	0.0400	0.0	0.0	0.0	0.0	0.0	4.71E-08
11	9	36	37	20811.34	1	3612.94	2.7678	0.0400	0.0	0.0	0.0	0.0	1.21E-08	2.57E-07
6	4	71	72	17981.34	1	3612.97	2.7678	0.0400	0.0	0.0	0.0	0.0	8.00E-08	1.08E-06
2	0	93	94	16676.52	1	3613.23	2.7676	0.0400	0.0	0.0	0.0	0.0	2.13E-08	2.33E-07
10	8	44	45	20072.09	1	3613.29	2.7676	0.0400	0.0	0.0	0.0	0.0	2.35E-08	4.42E-07
12	10	27	28	21664.07	1	3613.43	2.7675	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-07
8	6	49	50	16598.08	2	3614.03	2.7670	0.0400	0.0	0.0	0.0	0.0	0.0	4.88E-08
7	5	56	57	15972.47	2	3614.85	2.7664	0.0400	0.0	0.0	0.0	0.0	0.0	6.58E-08
5	3	69	70	14964.37	2	3614.85	2.7664	0.0400	0.0	0.0	0.0	0.0	0.0	8.03E-08
4	2	75	76	14538.66	2	3614.91	2.7663	0.0400	0.0	0.0	0.0	0.0	0.0	7.10E-08
8	6	58	59	18820.86	1	3615.68	2.7657	0.0400	0.0	0.0	0.0	0.0	5.84E-08	9.02E-07
9	7	41	42	17237.39	2	3616.07	2.7654	0.0400	0.0	0.0	0.0	0.0	0.0	3.30E-08
9	7	51	52	19363.47	1	3616.19	2.7653	0.0400	0.0	0.0	0.0	0.0	4.11E-08	6.92E-07
4	2	82	83	17120.41	1	3617.11	2.7646	0.0400	0.0	0.0	0.0	0.0	7.87E-08	9.25E-07
2	0	86	87	13741.75	2	3617.13	2.7646	0.0400	0.0	0.0	0.0	0.0	0.0	2.38E-08
12	10	26	27	21566.74	1	3618.75	2.7634	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-07
11	9	35	36	20681.96	1	3618.88	2.7633	0.0400	0.0	0.0	0.0	0.0	1.34E-08	2.78E-07
7	5	64	65	18211.34	1	3619.70	2.7627	0.0400	0.0	0.0	0.0	0.0	8.39E-08	1.18E-06
10	8	43	44	19913.90	1	3619.78	2.7626	0.0400	0.0	0.0	0.0	0.0	2.68E-08	4.93E-07
6	4	62	63	15288.27	2	3619.89	2.7625	0.0400	0.0	0.0	0.0	0.0	0.0	8.66E-08
5	3	76	77	17359.69	1	3620.39	2.7621	0.0400	0.0	0.0	0.0	0.0	1.00E-07	1.23E-06
8	6	48	49	16426.90	2	3620.54	2.7620	0.0400	0.0	0.0	0.0	0.0	0.0	5.50E-08
3	1	87	88	16685.38	1	3620.85	2.7618	0.0400	0.0	0.0	0.0	0.0	6.10E-08	6.70E-07
3	1	80	81	13947.12	2	3621.20	2.7615	0.0400	0.0	0.0	0.0	0.0	0.0	5.86E-08
6	4	70	71	17723.78	1	3621.26	2.7615	0.0400	0.0	0.0	0.0	0.0	1.01E-07	1.31E-06
7	5	55	56	15776.43	2	3621.80	2.7611	0.0400	0.0	0.0	0.0	0.0	0.0	7.60E-08
9	7	40	41	17094.27	2	3622.07	2.7609	0.0400	0.0	0.0	0.0	0.0	0.0	3.63E-08
5	3	68	69	14721.64	2	3622.61	2.7604	0.0400	0.0	0.0	0.0	0.0	1.20E-08	9.63E-08
2	0	92	93	16335.59	1	3622.93	2.7602	0.0400	0.0	0.0	0.0	0.0	2.92E-08	3.03E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	2	74	75	14274.14	2	3623.04	2.7601	0.0400	0.0	0.0	0.0	0.0	1.16E-08	8.68E-08
8	6	57	58	18611.44	1	3623.11	2.7601	0.0400	0.0	0.0	0.0	0.0	7.05E-08	1.05E-06
9	7	50	51	19179.72	1	3623.15	2.7600	0.0400	0.0	0.0	0.0	0.0	4.83E-08	7.89E-07
12	10	25	26	21472.84	1	3624.01	2.7594	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-07
11	9	34	35	20556.01	1	3624.76	2.7588	0.0400	0.0	0.0	0.0	0.0	1.47E-08	3.00E-07
2	0	85	86	13436.77	2	3625.92	2.7579	0.0400	0.0	0.0	0.0	0.0	0.0	3.01E-08
4	2	81	82	16821.19	1	3626.11	2.7578	0.0400	0.0	0.0	0.0	0.0	1.04E-07	1.17E-06
10	8	42	43	19759.12	1	3626.20	2.7577	0.0400	0.0	0.0	0.0	0.0	3.05E-08	5.47E-07
8	6	47	48	16259.04	2	3627.00	2.7571	0.0400	0.0	0.0	0.0	0.0	0.0	6.19E-08
6	4	61	62	15070.55	2	3627.22	2.7569	0.0400	0.0	0.0	0.0	0.0	1.20E-08	1.02E-07
7	5	63	64	17979.55	1	3627.53	2.7567	0.0400	0.0	0.0	0.0	0.0	1.03E-07	1.40E-06
9	7	39	40	16954.49	2	3628.02	2.7563	0.0400	0.0	0.0	0.0	0.0	0.0	3.97E-08
7	5	54	55	15583.68	2	3628.70	2.7558	0.0400	0.0	0.0	0.0	0.0	0.0	8.74E-08
5	3	75	76	17082.96	1	3629.01	2.7556	0.0400	0.0	0.0	0.0	0.0	1.29E-07	1.51E-06
12	10	24	25	21382.39	1	3629.20	2.7554	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-07
6	4	69	70	17469.54	1	3629.49	2.7552	0.0400	0.0	0.0	0.0	0.0	1.28E-07	1.59E-06
3	1	79	80	13663.99	2	3629.63	2.7551	0.0400	0.0	0.0	0.0	0.0	1.08E-08	7.28E-08
9	7	49	50	18999.38	1	3630.06	2.7548	0.0400	0.0	0.0	0.0	0.0	5.65E-08	8.97E-07
3	1	86	87	16366.91	1	3630.17	2.7547	0.0400	0.0	0.0	0.0	0.0	8.21E-08	8.57E-07
5	3	67	68	14482.17	2	3630.32	2.7546	0.0400	0.0	0.0	0.0	0.0	1.50E-08	1.15E-07
8	6	56	57	18405.41	1	3630.48	2.7545	0.0400	0.0	0.0	0.0	0.0	8.48E-08	1.23E-06
11	9	33	34	20433.50	1	3630.58	2.7544	0.0400	0.0	0.0	0.0	0.0	1.61E-08	3.22E-07
4	2	73	74	14012.86	2	3631.11	2.7540	0.0400	0.0	0.0	0.0	0.0	1.48E-08	1.06E-07
10	8	41	42	19607.77	1	3632.57	2.7529	0.0400	0.0	0.0	0.0	0.0	3.45E-08	6.05E-07
2	0	91	92	15957.85	1	3632.58	2.7529	0.0400	0.0	0.0	0.0	0.0	4.00E-08	3.93E-07
8	6	46	47	16054.49	2	3633.39	2.7523	0.0400	0.0	0.0	0.0	0.0	0.0	6.94E-08
9	7	38	39	16818.04	2	3633.91	2.7519	0.0400	0.0	0.0	0.0	0.0	0.0	4.34E-08
12	10	23	24	21295.39	1	3634.33	2.7515	0.0412	0.0	0.0	0.0	0.0	0.0	1.45E-07
6	4	60	61	14856.11	2	3634.50	2.7514	0.0400	0.0	0.0	0.0	0.0	1.46E-08	1.19E-07
2	0	84	85	13134.97	2	3634.66	2.7513	0.0400	0.0	0.0	0.0	0.0	0.0	3.80E-08
4	2	80	81	16525.24	1	3635.06	2.7510	0.0400	0.0	0.0	0.0	0.0	1.37E-07	1.46E-06
7	5	62	63	17751.12	1	3635.31	2.7508	0.0400	0.0	0.0	0.0	0.0	1.27E-07	1.65E-06
7	5	53	54	15394.23	2	3635.54	2.7506	0.0400	0.0	0.0	0.0	0.0	1.12E-08	1.00E-07
11	9	32	33	20314.43	1	3636.33	2.7500	0.0400	0.0	0.0	0.0	0.0	1.76E-08	3.45E-07
9	7	48	49	18822.44	1	3636.90	2.7496	0.0400	0.0	0.0	0.0	0.0	6.58E-08	1.02E-06
5	3	74	75	16809.55	1	3637.57	2.7491	0.0400	0.0	0.0	0.0	0.0	1.66E-07	1.86E-06
6	4	68	69	17218.64	1	3637.66	2.7490	0.0400	0.0	0.0	0.0	0.0	1.61E-07	1.92E-06
8	6	55	56	18202.77	1	3637.79	2.7489	0.0400	0.0	0.0	0.0	0.0	1.02E-07	1.42E-06
5	3	66	67	14245.95	2	3637.96	2.7488	0.0400	0.0	0.0	0.0	0.0	1.85E-08	1.38E-07
3	1	78	79	13384.06	2	3638.01	2.7488	0.0400	0.0	0.0	0.0	0.0	1.40E-08	9.02E-08
10	8	40	41	19459.85	1	3638.87	2.7481	0.0400	0.0	0.0	0.0	0.0	3.90E-08	6.67E-07
4	2	72	73	13754.80	2	3639.13	2.7479	0.0400	0.0	0.0	0.0	0.0	1.88E-08	1.29E-07
12	10	22	23	21211.84	1	3639.39	2.7477	0.0423	0.0	0.0	0.0	0.0	0.0	1.49E-07
3	1	85	86	16051.69	1	3639.44	2.7477	0.0400	0.0	0.0	0.0	0.0	1.10E-07	1.09E-06
8	6	45	46	15933.27	2	3639.73	2.7475	0.0400	0.0	0.0	0.0	0.0	0.0	7.76E-08
9	7	37	38	16684.94	2	3639.74	2.7474	0.0400	0.0	0.0	0.0	0.0	0.0	4.72E-08
6	4	59	60	14644.96	2	3641.71	2.7460	0.0400	0.0	0.0	0.0	0.0	1.76E-08	1.39E-07
11	9	31	32	20198.81	1	3642.02	2.7457	0.0400	0.0	0.0	0.0	0.0	1.91E-08	3.68E-07
2	0	90	91	15663.33	1	3642.16	2.7456	0.0400	0.0	0.0	0.0	0.0	5.46E-08	5.09E-07
7	5	52	53	15208.11	2	3642.32	2.7455	0.0400	0.0	0.0	0.0	0.0	1.32E-08	1.15E-07
7	5	61	62	17526.07	1	3643.02	2.7450	0.0400	0.0	0.0	0.0	0.0	1.56E-07	1.95E-06
2	0	83	84	12836.35	2	3643.34	2.7447	0.0400	0.0	0.0	0.0	0.0	0.0	4.79E-08
9	7	47	48	16648.93	1	3643.68	2.7445	0.0400	0.0	0.0	0.0	0.0	7.64E-08	1.15E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	2	79	80	16232.57	1	3643.95	2.7443	0.0400	0.0	0.0	0.0	0.0	1.79E-07	1.83E-06
12	10	21	22	21131.74	1	3644.38	2.7440	0.0435	0.0	0.0	0.0	0.0	0.0	1.52E-07
8	6	54	55	18003.52	1	3645.04	2.7435	0.0400	0.0	0.0	0.0	0.0	1.21E-07	1.64E-06
10	8	39	40	19315.37	1	3645.11	2.7434	0.0400	0.0	0.0	0.0	0.0	4.39E-08	7.33E-07
9	7	36	37	16555.18	2	3645.51	2.7431	0.0400	0.0	0.0	0.0	0.0	0.0	5.11E-08
5	3	65	66	14013.01	2	3645.55	2.7431	0.0400	0.0	0.0	0.0	0.0	2.29E-08	1.64E-07
6	4	67	68	16971.09	1	3645.77	2.7429	0.0400	0.0	0.0	0.0	0.0	2.01E-07	2.31E-06
8	6	44	45	15775.39	2	3646.01	2.7427	0.0400	0.0	0.0	0.0	0.0	0.0	8.64E-08
5	3	73	74	16539.45	1	3646.07	2.7427	0.0400	0.0	0.0	0.0	0.0	2.13E-07	2.29E-06
3	1	77	78	13107.35	2	3646.34	2.7425	0.0400	0.0	0.0	0.0	0.0	1.80E-08	1.11E-07
4	2	71	72	13499.99	2	3647.09	2.7419	0.0400	0.0	0.0	0.0	0.0	2.37E-08	1.56E-07
11	9	30	31	20086.64	1	3647.64	2.7415	0.0400	0.0	0.0	0.0	0.0	2.07E-08	3.91E-07
3	1	84	85	15739.73	1	3648.65	2.7407	0.0400	0.0	0.0	0.0	0.0	1.47E-07	1.39E-06
6	4	58	59	14437.11	2	3648.87	2.7406	0.0400	0.0	0.0	0.0	0.0	2.12E-08	1.62E-07
7	5	51	52	15025.29	2	3649.04	2.7404	0.0400	0.0	0.0	0.0	0.0	1.56E-08	1.31E-07
12	10	20	21	21055.10	1	3649.31	2.7402	0.0447	0.0	0.0	0.0	0.0	0.0	1.55E-07
9	7	46	47	18478.84	1	3650.39	2.7394	0.0400	0.0	0.0	0.0	0.0	8.84E-08	1.29E-06
7	5	60	61	17304.39	1	3650.67	2.7392	0.0400	0.0	0.0	0.0	0.0	1.90E-07	2.30E-06
9	7	35	36	16428.77	2	3651.21	2.7388	0.0400	0.0	0.0	0.0	0.0	0.0	5.52E-08
10	8	38	39	19174.33	1	3651.28	2.7388	0.0400	0.0	0.0	0.0	0.0	4.91E-08	8.03E-07
2	0	89	90	15332.04	1	3651.70	2.7385	0.0400	0.0	0.0	0.0	0.0	7.42E-08	6.56E-07
2	0	82	83	12540.93	2	3651.97	2.7382	0.0400	0.0	0.0	0.0	0.0	1.06E-08	6.01E-08
8	6	43	44	15620.85	2	3652.23	2.7381	0.0400	0.0	0.0	0.0	0.0	1.04E-08	9.60E-08
8	6	53	54	17807.68	1	3652.23	2.7381	0.0400	0.0	0.0	0.0	0.0	1.44E-07	1.90E-06
4	2	78	79	15943.20	1	3652.78	2.7376	0.0400	0.0	0.0	0.0	0.0	2.34E-07	2.29E-06
5	3	64	65	13783.34	2	3653.09	2.7374	0.0400	0.0	0.0	0.0	0.0	2.82E-08	1.94E-07
11	9	29	30	19977.94	1	3653.19	2.7373	0.0400	0.0	0.0	0.0	0.0	2.23E-08	4.14E-07
6	4	66	67	16726.89	1	3653.82	2.7369	0.0400	0.0	0.0	0.0	0.0	2.51E-07	2.78E-06
12	10	19	20	20981.92	1	3654.17	2.7366	0.0458	0.0	0.0	0.0	0.0	0.0	1.58E-07
5	3	72	73	16272.68	1	3654.51	2.7363	0.0400	0.0	0.0	0.0	0.0	2.73E-07	2.80E-06
3	1	76	77	12833.86	2	3654.61	2.7363	0.0400	0.0	0.0	0.0	0.0	2.32E-08	1.37E-07
4	2	70	71	13248.44	2	3654.99	2.7360	0.0400	0.0	0.0	0.0	0.0	2.98E-08	1.89E-07
7	5	50	51	14845.80	2	3655.71	2.7354	0.0400	0.0	0.0	0.0	0.0	1.82E-08	1.49E-07
6	4	57	58	14232.57	2	3655.98	2.7352	0.0400	0.0	0.0	0.0	0.0	2.54E-08	1.88E-07
9	7	34	35	16305.72	2	3656.86	2.7346	0.0400	0.0	0.0	0.0	0.0	0.0	5.95E-08
9	7	45	46	18312.18	1	3657.05	2.7344	0.0400	0.0	0.0	0.0	0.0	1.02E-07	1.45E-06
10	8	37	38	19036.74	1	3657.39	2.7342	0.0400	0.0	0.0	0.0	0.0	5.48E-08	8.77E-07
3	1	83	84	15431.03	1	3657.81	2.7339	0.0400	0.0	0.0	0.0	0.0	1.96E-07	1.77E-06
7	5	59	60	17086.11	1	3658.27	2.7335	0.0400	0.0	0.0	0.0	0.0	2.31E-07	2.70E-06
8	6	42	43	15469.65	2	3658.39	2.7334	0.0400	0.0	0.0	0.0	0.0	1.18E-08	1.06E-07
11	9	28	29	19672.69	1	3658.68	2.7332	0.0400	0.0	0.0	0.0	0.0	2.40E-08	4.38E-07
12	10	18	19	20912.20	1	3658.96	2.7330	0.0470	0.0	0.0	0.0	0.0	0.0	1.59E-07
8	6	52	53	17615.26	1	3659.36	2.7327	0.0400	0.0	0.0	0.0	0.0	1.71E-07	2.18E-06
2	0	81	82	12248.70	2	3660.55	2.7318	0.0400	0.0	0.0	0.0	0.0	1.39E-08	7.52E-08
5	3	63	64	13556.96	2	3660.57	2.7318	0.0400	0.0	0.0	0.0	0.0	3.45E-08	2.30E-07
2	0	88	89	15003.98	1	3661.17	2.7314	0.0400	0.0	0.0	0.0	0.0	1.01E-07	8.47E-07
4	2	77	78	15657.13	1	3661.55	2.7311	0.0400	0.0	0.0	0.0	0.0	3.05E-07	2.85E-06
6	4	65	66	16486.06	1	3661.81	2.7309	0.0400	0.0	0.0	0.0	0.0	3.12E-07	3.32E-06
7	5	49	50	14669.65	2	3662.31	2.7305	0.0400	0.0	0.0	0.0	0.0	2.12E-08	1.68E-07
9	7	33	34	16166.04	2	3662.45	2.7304	0.0400	0.0	0.0	0.0	0.0	0.0	6.38E-08
3	1	75	76	12563.62	2	3662.83	2.7301	0.0400	0.0	0.0	0.0	0.0	2.97E-08	1.69E-07
4	2	69	70	13000.15	2	3662.84	2.7301	0.0400	0.0	0.0	0.0	0.0	3.74E-08	2.27E-07
5	3	71	72	16009.24	1	3662.89	2.7301	0.0400	0.0	0.0	0.0	1.01E-08	3.47E-07	3.42E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	56	57	14031.34	2	3663.02	2.7300	0.0400	0.0	0.0	0.0	0.0	3.05E-08	2.18E-07
10	8	36	37	18902.61	1	3663.44	2.7297	0.0400	0.0	0.0	0.0	0.0	6.09E-08	9.53E-07
9	7	44	45	18148.97	1	3663.64	2.7295	0.0400	0.0	0.0	0.0	0.0	1.17E-07	1.62E-06
12	10	17	18	20845.96	1	3663.69	2.7295	0.0482	0.0	0.0	0.0	0.0	0.0	1.60E-07
11	9	27	28	19770.91	1	3664.11	2.7292	0.0400	0.0	0.0	0.0	0.0	2.56E-08	4.61E-07
8	6	41	42	15321.80	2	3664.49	2.7289	0.0400	0.0	0.0	0.0	0.0	1.33E-08	1.17E-07
7	5	58	59	16871.22	1	3665.80	2.7279	0.0400	0.0	0.0	0.0	0.0	2.80E-07	3.17E-06
8	6	51	52	17426.27	1	3666.42	2.7275	0.0400	0.0	0.0	0.0	0.0	2.02E-07	2.50E-06
3	1	82	83	15125.61	1	3666.90	2.7271	0.0400	0.0	0.0	0.0	0.0	2.61E-07	2.23E-06
9	7	32	33	16069.71	2	3667.98	2.7263	0.0400	0.0	0.0	0.0	0.0	0.0	6.82E-08
5	3	62	63	13333.88	2	3667.99	2.7263	0.0400	0.0	0.0	0.0	0.0	4.22E-08	2.71E-07
12	10	16	17	20783.18	1	3668.35	2.7260	0.0493	0.0	0.0	0.0	0.0	0.0	1.59E-07
7	5	46	49	14496.84	2	3668.86	2.7256	0.0400	0.0	0.0	0.0	0.0	2.46E-08	1.90E-07
2	0	80	81	11959.70	2	3669.07	2.7255	0.0400	0.0	0.0	0.0	0.0	1.82E-08	9.39E-08
10	8	35	36	18771.94	1	3669.42	2.7252	0.0400	0.0	0.0	0.0	0.0	6.74E-08	1.03E-06
11	9	26	27	19672.59	1	3669.47	2.7252	0.0400	0.0	0.0	0.0	0.0	2.73E-08	4.83E-07
6	4	64	65	16248.61	1	3669.74	2.7250	0.0400	0.0	0.0	0.0	1.06E-08	3.87E-07	3.97E-06
6	4	55	56	13833.44	2	3670.01	2.7248	0.0400	0.0	0.0	0.0	0.0	3.63E-08	2.52E-07
9	7	43	44	17989.20	1	3670.16	2.7247	0.0400	0.0	0.0	0.0	0.0	1.34E-07	1.81E-06
4	2	76	77	15374.38	1	3670.26	2.7246	0.0400	0.0	0.0	0.0	1.34E-08	3.96E-07	3.53E-06
8	6	40	41	15177.32	2	3670.53	2.7244	0.0400	0.0	0.0	0.0	0.0	1.50E-08	1.29E-07
2	0	87	88	14679.17	1	3670.59	2.7244	0.0400	0.0	0.0	0.0	0.0	1.37E-07	1.09E-06
4	2	68	69	12755.13	2	3670.64	2.7243	0.0400	0.0	0.0	0.0	0.0	4.68E-08	2.74E-07
3	1	74	75	12296.62	2	3670.99	2.7241	0.0400	0.0	0.0	0.0	0.0	3.80E-08	2.07E-07
5	3	70	71	15749.16	1	3671.22	2.7239	0.0400	0.0	0.0	0.0	1.36E-08	4.41E-07	4.17E-06
12	10	15	16	20723.88	1	3672.94	2.7226	0.0505	0.0	0.0	0.0	0.0	0.0	1.58E-07
7	5	57	58	16659.74	1	3673.27	2.7224	0.0400	0.0	0.0	0.0	0.0	3.38E-07	3.70E-06
8	6	50	51	17240.70	1	3673.42	2.7223	0.0400	0.0	0.0	0.0	0.0	2.37E-07	2.85E-06
5	7	31	32	15956.77	2	3673.44	2.7222	0.0400	0.0	0.0	0.0	0.0	0.0	7.26E-08
11	9	25	26	19577.75	1	3674.76	2.7213	0.0400	0.0	0.0	0.0	0.0	2.89E-08	5.05E-07
10	8	34	35	18644.73	1	3675.33	2.7208	0.0400	0.0	0.0	0.0	0.0	7.43E-08	1.12E-06
7	5	47	48	14327.37	2	3675.35	2.7208	0.0400	0.0	0.0	0.0	0.0	2.85E-08	2.14E-07
5	3	61	62	13114.11	2	3675.36	2.7208	0.0400	0.0	0.0	0.0	0.0	5.14E-08	3.19E-07
3	1	81	82	14823.48	1	3675.94	2.7204	0.0400	0.0	0.0	0.0	1.33E-08	3.46E-07	2.82E-06
8	6	39	40	15036.20	2	3676.52	2.7200	0.0400	0.0	0.0	0.0	0.0	1.68E-08	1.41E-07
9	7	42	43	17832.88	1	3676.63	2.7199	0.0400	0.0	0.0	0.0	0.0	1.53E-07	2.01E-06
6	4	54	55	13638.86	2	3676.94	2.7197	0.0400	0.0	0.0	0.0	0.0	4.32E-08	2.91E-07
12	10	14	15	20668.05	1	3677.47	2.7193	0.0517	0.0	0.0	0.0	0.0	0.0	1.55E-07
2	0	79	80	11673.92	2	3677.54	2.7192	0.0400	0.0	0.0	0.0	0.0	2.38E-08	1.17E-07
6	4	63	64	16014.55	1	3677.61	2.7192	0.0400	0.0	0.0	0.0	1.39E-08	4.78E-07	4.72E-06
4	2	67	68	12513.40	2	3678.37	2.7186	0.0400	0.0	0.0	0.0	0.0	5.82E-08	3.28E-07
5	7	30	31	15847.20	2	3678.85	2.7182	0.0400	0.0	0.0	0.0	0.0	0.0	7.70E-08
4	2	75	76	15094.96	1	3678.92	2.7182	0.0400	0.0	0.0	0.0	1.86E-08	5.13E-07	4.37E-06
3	1	73	74	12032.87	2	3679.09	2.7181	0.0400	0.0	0.0	0.0	0.0	4.85E-08	2.53E-07
5	3	69	70	15452.44	1	3679.48	2.7178	0.0400	0.0	0.0	0.0	1.83E-08	5.57E-07	5.06E-06
2	0	86	87	14357.63	1	3679.95	2.7174	0.0400	0.0	0.0	0.0	0.0	1.84E-07	1.40E-06
11	9	24	25	19486.39	1	3679.99	2.7174	0.0400	0.0	0.0	0.0	0.0	3.05E-08	5.24E-07
8	6	49	50	17058.57	1	3680.36	2.7171	0.0400	0.0	0.0	0.0	0.0	2.78E-07	3.25E-06
7	5	56	57	16451.68	1	3680.68	2.7169	0.0400	0.0	0.0	0.0	1.06E-08	4.08E-07	4.31E-06
10	8	33	34	18521.00	1	3681.19	2.7165	0.0400	0.0	0.0	0.0	0.0	8.15E-08	1.20E-06
7	5	46	47	14161.26	2	3681.78	2.7161	0.0400	0.0	0.0	0.0	0.0	3.28E-08	2.41E-07
12	10	13	14	20619.70	1	3681.92	2.7160	0.0528	0.0	0.0	0.0	0.0	0.0	1.52E-07
8	6	38	39	14898.44	2	3682.44	2.7156	0.0400	0.0	0.0	0.0	0.0	1.87E-08	1.54E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	60	61	12897.64	2	3682.67	2.7154	0.0400	0.0	0.0	0.0	0.0	6.24E-08	3.74E-07
9	7	41	42	17680.03	1	3683.03	2.7152	0.0400	0.0	0.0	0.0	0.0	1.73E-07	2.23E-06
6	4	53	54	13447.62	2	3683.82	2.7146	0.0400	0.0	0.0	0.0	0.0	5.11E-08	3.34E-07
5	7	29	30	15741.00	2	3684.19	2.7143	0.0400	0.0	0.0	0.0	0.0	0.0	8.14E-08
3	1	80	81	14524.67	1	3684.92	2.7138	0.0400	0.0	0.0	0.0	1.89E-08	4.56E-07	3.55E-06
11	9	23	24	19398.52	1	3685.15	2.7136	0.0412	0.0	0.0	0.0	0.0	3.20E-08	5.43E-07
6	4	62	63	15783.89	1	3685.42	2.7134	0.0400	0.0	0.0	0.0	1.81E-08	5.89E-07	5.60E-06
2	0	78	79	11391.37	2	3685.95	2.7130	0.0400	0.0	0.0	0.0	0.0	3.09E-08	1.45E-07
4	2	66	67	12274.96	2	3686.06	2.7129	0.0400	0.0	0.0	0.0	0.0	7.23E-08	3.92E-07
12	10	12	13	20566.83	1	3686.31	2.7127	0.0540	0.0	0.0	0.0	0.0	0.0	1.47E-07
10	8	32	33	18400.75	1	3686.97	2.7123	0.0400	0.0	0.0	0.0	0.0	8.91E-08	1.29E-06
3	1	72	73	11772.40	2	3687.14	2.7121	0.0400	0.0	0.0	0.0	0.0	6.16E-08	3.08E-07
8	6	48	49	16879.89	1	3687.24	2.7121	0.0400	0.0	0.0	0.0	0.0	3.25E-07	3.68E-06
4	2	74	75	14818.89	1	3687.51	2.7119	0.0400	0.0	0.0	0.0	2.56E-08	6.62E-07	5.40E-06
5	3	68	69	15239.10	1	3687.69	2.7117	0.0400	0.0	0.0	0.0	2.45E-08	7.02E-07	6.12E-06
7	5	55	56	16247.05	1	3688.02	2.7115	0.0400	0.0	0.0	0.0	1.34E-08	4.89E-07	5.01E-06
7	5	45	46	13998.51	2	3688.15	2.7114	0.0400	0.0	0.0	0.0	0.0	3.77E-08	2.69E-07
8	6	37	38	14764.06	2	3688.30	2.7113	0.0400	0.0	0.0	0.0	0.0	2.08E-08	1.68E-07
2	0	85	86	14039.36	1	3689.26	2.7106	0.0400	0.0	0.0	0.0	1.16E-08	2.48E-07	1.79E-06
9	7	40	41	17530.64	1	3689.36	2.7105	0.0400	0.0	0.0	0.0	0.0	1.96E-07	2.46E-06
9	7	28	29	15638.19	2	3689.47	2.7104	0.0400	0.0	0.0	0.0	0.0	0.0	8.59E-08
5	3	59	60	12684.50	2	3689.92	2.7101	0.0400	0.0	0.0	0.0	0.0	7.55E-08	4.37E-07
11	9	22	23	19314.13	1	3690.25	2.7098	0.0423	0.0	0.0	0.0	0.0	3.34E-08	5.59E-07
12	10	11	12	20521.44	1	3690.63	2.7096	0.0542	0.0	0.0	0.0	0.0	0.0	1.42E-07
6	4	52	53	13259.72	2	3690.63	2.7096	0.0400	0.0	0.0	0.0	0.0	6.03E-08	3.83E-07
10	8	31	32	18283.98	1	3692.69	2.7081	0.0400	0.0	0.0	0.0	0.0	9.69E-08	1.38E-06
6	4	61	62	15556.63	1	3693.17	2.7077	0.0400	0.0	0.0	0.0	2.34E-08	7.22E-07	6.63E-06
4	2	65	66	12039.83	2	3693.68	2.7073	0.0400	0.0	0.0	0.0	0.0	8.95E-08	4.67E-07
3	1	79	80	14229.17	1	3693.85	2.7072	0.0400	0.0	0.0	0.0	2.67E-08	6.00E-07	4.45E-06
8	6	47	48	16704.66	1	3694.06	2.7070	0.0400	0.0	0.0	0.0	0.0	3.78E-07	4.17E-06
8	6	36	37	14633.06	2	3694.10	2.7070	0.0400	0.0	0.0	0.0	0.0	2.31E-08	1.82E-07
2	0	77	78	11112.08	2	3694.31	2.7069	0.0400	0.0	0.0	0.0	0.0	4.00E-08	1.80E-07
7	5	44	45	13839.13	2	3694.47	2.7067	0.0400	0.0	0.0	0.0	0.0	4.31E-08	3.00E-07
9	7	27	28	15538.77	2	3694.69	2.7066	0.0400	0.0	0.0	0.0	0.0	0.0	9.02E-08
12	10	10	11	20479.54	1	3694.89	2.7064	0.0545	0.0	0.0	0.0	0.0	0.0	1.35E-07
3	1	71	72	11515.21	2	3695.14	2.7063	0.0400	0.0	0.0	0.0	0.0	7.79E-08	3.74E-07
11	9	21	22	19233.23	1	3695.28	2.7062	0.0435	0.0	0.0	0.0	0.0	3.47E-08	5.73E-07
7	5	54	55	16045.84	1	3695.31	2.7061	0.0400	0.0	0.0	0.0	1.68E-08	5.85E-07	5.81E-06
9	7	39	40	17384.73	1	3695.64	2.7059	0.0400	0.0	0.0	0.0	0.0	2.21E-07	2.71E-06
5	3	67	68	14989.13	1	3695.84	2.7057	0.0400	0.0	0.0	0.0	3.27E-08	8.82E-07	7.39E-06
4	2	73	74	14546.17	1	3696.05	2.7056	0.0400	0.0	0.0	0.0	3.51E-08	8.51E-07	6.64E-06
5	3	58	59	12474.70	2	3697.11	2.7048	0.0400	0.0	0.0	0.0	0.0	9.12E-08	5.10E-07
6	4	51	52	13075.18	2	3697.39	2.7046	0.0400	0.0	0.0	0.0	0.0	7.10E-08	4.37E-07
10	8	30	31	18170.69	1	3698.35	2.7039	0.0400	0.0	0.0	0.0	0.0	1.05E-07	1.46E-06
2	0	84	85	13724.39	1	3698.51	2.7038	0.0400	0.0	0.0	0.0	1.67E-08	3.33E-07	2.28E-06
12	10	9	10	20441.12	1	3699.07	2.7034	0.0547	0.0	0.0	0.0	0.0	0.0	1.27E-07
8	6	35	36	14505.45	2	3699.84	2.7028	0.0400	0.0	0.0	0.0	0.0	2.55E-08	1.97E-07
9	7	26	27	15442.75	2	3699.85	2.7028	0.0400	0.0	0.0	0.0	0.0	1.05E-08	9.44E-08
11	9	20	21	19155.82	1	3700.24	2.7025	0.0447	0.0	0.0	0.0	0.0	3.59E-08	5.85E-07
7	5	43	44	13683.11	2	3700.72	2.7022	0.0400	0.0	0.0	0.0	0.0	4.92E-08	3.34E-07
8	6	46	47	16532.89	1	3700.81	2.7021	0.0400	0.0	0.0	0.0	1.12E-08	4.38E-07	4.70E-06
6	4	60	61	15332.79	1	3700.86	2.7021	0.0400	0.0	0.0	0.0	3.02E-08	8.83E-07	7.82E-06
4	2	64	65	11808.00	2	3701.25	2.7018	0.0400	0.0	0.0	0.0	0.0	1.10E-07	5.55E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	7	38	39	17242.29	1	3701.85	2.7014	0.0400	0.0	0.0	0.0	0.0	2.47E-07	2.97E-06
7	5	53	54	15848.09	1	3702.53	2.7009	0.0400	0.0	0.0	0.0	2.11E-08	6.98E-07	6.71E-06
2	0	76	77	10836.05	2	3702.62	2.7008	0.0400	0.0	0.0	0.0	0.0	5.15E-08	2.22E-07
3	1	78	79	13937.00	1	3702.71	2.7007	0.0400	0.0	0.0	0.0	3.75E-08	7.87E-07	5.57E-06
3	1	70	71	11261.30	2	3703.08	2.7005	0.0400	0.0	0.0	0.0	0.0	9.83E-08	4.53E-07
12	10	8	9	20406.19	1	3703.19	2.7004	0.0550	0.0	0.0	0.0	0.0	0.0	1.18E-07
5	3	66	67	14742.56	1	3703.92	2.6998	0.0400	0.0	0.0	0.0	4.34E-08	1.10E-06	8.89E-06
10	8	29	30	18060.90	1	3703.94	2.6998	0.0400	0.0	0.0	0.0	0.0	1.13E-07	1.55E-06
6	4	50	51	12893.99	2	3704.09	2.6997	0.0400	0.0	0.0	0.0	0.0	8.31E-08	4.98E-07
5	3	57	58	12268.22	2	3704.25	2.6996	0.0400	0.0	0.0	0.0	0.0	1.10E-07	5.94E-07
4	2	72	73	14276.81	1	3704.53	2.6994	0.0400	0.0	0.0	0.0	4.79E-08	1.09E-06	8.15E-06
9	7	25	26	15350.11	2	3704.95	2.6991	0.0400	0.0	0.0	0.0	0.0	1.11E-08	9.84E-08
11	9	19	20	19081.91	1	3705.14	2.6990	0.0458	0.0	0.0	0.0	0.0	3.68E-08	5.94E-07
8	6	34	35	14381.22	2	3705.52	2.6987	0.0400	0.0	0.0	0.0	0.0	2.80E-08	2.13E-07
7	5	42	43	13530.48	2	3706.91	2.6977	0.0400	0.0	0.0	0.0	0.0	5.58E-08	3.70E-07
12	10	7	8	20374.75	1	3707.24	2.6974	0.0574	0.0	0.0	0.0	0.0	0.0	1.08E-07
8	6	45	46	16364.60	1	3707.50	2.6972	0.0400	0.0	0.0	0.0	1.35E-08	5.06E-07	5.28E-06
2	0	83	84	13412.71	1	3707.70	2.6971	0.0400	0.0	0.0	0.0	2.41E-08	4.45E-07	2.90E-06
9	7	37	38	17103.34	1	3707.99	2.6969	0.0400	0.0	0.0	0.0	0.0	2.76E-07	3.25E-06
6	4	59	60	15112.37	1	3708.49	2.6965	0.0400	0.0	0.0	0.0	3.87E-08	1.08E-06	9.19E-06
4	2	63	64	11579.50	2	3708.76	2.6963	0.0400	0.0	0.0	0.0	1.14E-08	1.36E-07	6.58E-07
10	8	28	29	17954.60	1	3709.47	2.6958	0.0400	0.0	0.0	0.0	0.0	1.22E-07	1.64E-06
7	5	52	53	15653.78	1	3709.69	2.6956	0.0400	0.0	0.0	0.0	2.62E-08	8.28E-07	7.72E-06
11	9	18	19	19011.50	1	3709.97	2.6954	0.0470	0.0	0.0	0.0	0.0	3.76E-08	6.00E-07
9	7	24	25	15260.88	2	3709.98	2.6954	0.0400	0.0	0.0	0.0	0.0	1.17E-08	1.02E-07
6	4	49	50	12716.17	2	3710.73	2.6949	0.0400	0.0	0.0	0.0	0.0	9.71E-08	5.65E-07
2	0	75	76	10563.28	2	3710.87	2.6948	0.0400	0.0	0.0	0.0	0.0	6.63E-08	2.73E-07
3	1	69	70	11010.69	2	3710.96	2.6947	0.0400	0.0	0.0	0.0	1.19E-08	1.24E-07	5.47E-07
8	6	33	34	14260.39	2	3711.14	2.6946	0.0400	0.0	0.0	0.0	0.0	3.06E-08	2.28E-07
12	10	6	7	20346.80	1	3711.22	2.6945	0.0597	0.0	0.0	0.0	0.0	0.0	9.71E-08
5	3	56	57	12065.10	2	3711.33	2.6945	0.0400	0.0	0.0	0.0	0.0	1.32E-07	6.90E-07
3	1	77	78	13648.17	1	3711.52	2.6943	0.0400	0.0	0.0	0.0	5.26E-08	1.03E-06	6.95E-06
5	3	65	66	14499.39	1	3711.95	2.6940	0.0400	0.0	0.0	0.0	5.74E-08	1.38E-06	1.07E-05
4	2	71	72	14010.82	1	3712.95	2.6933	0.0400	0.0	0.0	0.0	6.52E-08	1.39E-06	9.97E-06
7	5	41	42	13381.23	2	3713.05	2.6932	0.0400	0.0	0.0	0.0	0.0	6.32E-08	4.09E-07
9	7	36	37	16967.88	1	3714.07	2.6925	0.0400	0.0	0.0	0.0	0.0	3.07E-07	3.54E-06
8	6	44	45	16199.77	1	3714.12	2.6924	0.0400	0.0	0.0	0.0	1.61E-08	5.82E-07	5.92E-06
11	9	17	18	18944.59	1	3714.73	2.6920	0.0482	0.0	0.0	0.0	0.0	3.82E-08	6.02E-07
10	8	27	28	17851.80	1	3714.93	2.6918	0.0400	0.0	0.0	0.0	0.0	1.31E-07	1.73E-06
9	7	23	24	15175.05	2	3714.96	2.6918	0.0412	0.0	0.0	0.0	0.0	1.22E-08	1.06E-07
12	10	5	6	20322.34	1	3715.13	2.6917	0.0621	0.0	0.0	0.0	0.0	0.0	8.52E-08
6	4	58	59	14895.39	1	3716.05	2.6910	0.0400	0.0	0.0	0.0	4.96E-08	1.31E-06	1.08E-05
4	2	62	63	11354.33	2	3716.22	2.6909	0.0400	0.0	0.0	0.0	1.48E-08	1.66E-07	7.77E-07
8	6	32	33	14142.96	2	3716.70	2.6906	0.0400	0.0	0.0	0.0	0.0	3.34E-08	2.44E-07
7	5	51	52	15462.93	1	3716.79	2.6905	0.0400	0.0	0.0	0.0	3.24E-08	9.80E-07	8.86E-06
2	0	82	83	13104.36	1	3716.83	2.6905	0.0400	0.0	0.0	0.0	3.46E-08	5.93E-07	3.68E-06
6	4	48	49	12541.73	2	3717.31	2.6901	0.0400	0.0	0.0	0.0	0.0	1.13E-07	6.39E-07
5	3	55	56	11865.33	2	3718.35	2.6894	0.0400	0.0	0.0	0.0	1.24E-08	1.57E-07	7.99E-07
3	1	68	69	10763.38	2	3718.79	2.6890	0.0400	0.0	0.0	0.0	1.58E-08	1.55E-07	6.59E-07
12	10	4	5	20301.37	1	3718.97	2.6889	0.0645	0.0	0.0	0.0	0.0	0.0	7.25E-08
2	0	74	75	10293.79	2	3719.06	2.6889	0.0400	0.0	0.0	0.0	0.0	8.50E-08	3.36E-07
7	5	40	41	13235.37	2	3719.12	2.6888	0.0400	0.0	0.0	0.0	0.0	7.12E-08	4.50E-07
11	9	16	17	18881.18	1	3719.42	2.6886	0.0493	0.0	0.0	0.0	0.0	3.85E-08	6.01E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	7	22	23	15092.63	2	3719.87	2.6883	0.0423	0.0	0.0	0.0	0.0	1.28E-08	1.09E-07
5	3	64	65	14259.63	1	3719.92	2.6882	0.0400	0.0	0.0	0.0	7.55E-08	1.71E-06	1.28E-05
9	7	35	36	16835.92	1	3720.09	2.6881	0.0400	0.0	0.0	0.0	0.0	3.41E-07	3.84E-06
3	1	76	77	13362.69	1	3720.27	2.6880	0.0400	0.0	0.0	0.0	7.33E-08	1.34E-06	8.65E-06
10	8	26	27	17752.52	1	3720.33	2.6879	0.0400	0.0	0.0	0.0	0.0	1.39E-07	1.81E-06
8	6	43	44	16038.43	1	3720.69	2.6877	0.0400	0.0	0.0	0.0	1.92E-08	6.67E-07	6.61E-06
4	2	70	71	13748.23	1	3721.31	2.6872	0.0400	0.0	0.0	0.0	8.83E-08	1.77E-06	1.22E-05
8	6	31	32	14028.93	2	3722.20	2.6866	0.0400	0.0	0.0	0.0	0.0	3.63E-08	2.60E-07
12	10	3	4	20283.89	1	3722.75	2.6862	0.0676	0.0	0.0	0.0	0.0	0.0	5.91E-08
6	4	57	58	14681.85	1	3723.56	2.6856	0.0400	0.0	0.0	0.0	6.32E-08	1.59E-06	1.27E-05
4	2	61	62	11132.49	2	3723.62	2.6856	0.0400	0.0	0.0	0.0	1.90E-08	2.03E-07	9.16E-07
6	4	47	48	12370.66	2	3723.83	2.6854	0.0400	0.0	0.0	0.0	0.0	1.31E-07	7.20E-07
7	5	50	51	15275.54	1	3723.83	2.6854	0.0400	0.0	0.0	0.0	4.00E-08	1.15E-06	1.01E-05
11	9	15	16	16821.29	1	3724.05	2.6852	0.0505	0.0	0.0	0.0	0.0	3.85E-08	5.96E-07
9	7	21	22	15013.62	2	3724.72	2.6848	0.0435	0.0	0.0	0.0	0.0	1.32E-08	1.11E-07
7	5	39	40	13092.91	2	3725.14	2.6845	0.0400	0.0	0.0	0.0	0.0	7.99E-08	4.94E-07
5	3	54	55	11668.92	2	3725.32	2.6843	0.0400	0.0	0.0	0.0	1.54E-08	1.87E-07	9.22E-07
10	8	25	26	17656.73	1	3725.66	2.6841	0.0400	0.0	0.0	0.0	0.0	1.48E-07	1.90E-06
2	0	81	82	12799.33	1	3725.91	2.6839	0.0400	0.0	0.0	0.0	4.94E-08	7.88E-07	4.65E-06
9	7	34	35	16707.46	1	3726.04	2.6838	0.0400	0.0	0.0	0.0	0.0	3.76E-07	4.15E-06
12	10	2	3	20269.91	1	3726.45	2.6835	0.0707	0.0	0.0	0.0	0.0	0.0	4.50E-08
3	1	67	68	10519.39	2	3726.56	2.6834	0.0400	0.0	0.0	0.0	2.10E-08	1.93E-07	7.92E-07
8	6	42	43	15880.58	1	3727.19	2.6830	0.0400	0.0	0.0	0.0	2.28E-08	7.61E-07	7.36E-06
2	0	73	74	10027.60	2	3727.20	2.6830	0.0400	0.0	0.0	0.0	1.32E-08	1.09E-07	4.11E-07
8	6	30	31	13518.32	2	3727.64	2.6827	0.0400	0.0	0.0	0.0	0.0	3.92E-08	2.76E-07
5	3	63	64	14023.30	1	3727.82	2.6825	0.0400	0.0	0.0	0.0	9.89E-08	2.12E-06	1.52E-05
11	9	14	15	18764.90	1	3728.61	2.6820	0.0517	0.0	0.0	0.0	0.0	3.83E-08	5.87E-07
3	1	75	76	13080.58	1	3728.97	2.6817	0.0400	0.0	0.0	0.0	1.02E-07	1.74E-06	1.07E-05
9	7	20	21	14938.02	2	3729.51	2.6813	0.0447	0.0	0.0	0.0	0.0	1.36E-08	1.13E-07
4	2	69	70	13489.02	1	3729.61	2.6812	0.0400	0.0	0.0	0.0	1.19E-07	2.24E-06	1.48E-05
12	10	1	2	20259.43	1	3730.09	2.6809	0.0738	0.0	0.0	0.0	0.0	0.0	3.04E-08
6	4	46	47	12202.98	2	3730.30	2.6807	0.0400	0.0	0.0	0.0	1.09E-08	1.51E-07	8.10E-07
7	5	49	50	15091.63	1	3730.81	2.6804	0.0400	0.0	0.0	0.0	4.90E-08	1.36E-06	1.16E-05
10	8	24	25	17564.47	1	3730.92	2.6803	0.0400	0.0	0.0	0.0	0.0	1.56E-07	1.97E-06
4	2	60	61	10914.00	2	3730.96	2.6803	0.0400	0.0	0.0	0.0	2.43E-08	2.47E-07	1.08E-06
6	4	56	57	14471.76	1	3731.00	2.6802	0.0400	0.0	0.0	0.0	8.03E-08	1.91E-06	1.48E-05
7	5	38	39	12953.84	2	3731.09	2.6802	0.0400	0.0	0.0	0.0	0.0	8.94E-08	5.40E-07
9	7	33	34	16582.50	1	3731.93	2.6796	0.0400	0.0	0.0	0.0	1.04E-08	4.13E-07	4.47E-06
5	3	53	54	11475.88	2	3732.22	2.6794	0.0400	0.0	0.0	0.0	1.92E-08	2.22E-07	1.06E-06
8	6	29	30	13811.11	2	3733.02	2.6788	0.0400	0.0	0.0	0.0	0.0	4.22E-08	2.92E-07
11	9	13	14	18712.02	1	3733.10	2.6787	0.0528	0.0	0.0	0.0	0.0	3.78E-08	5.74E-07
8	6	41	42	15726.23	1	3733.62	2.6784	0.0400	0.0	0.0	0.0	2.69E-08	8.65E-07	8.16E-06
12	10	0	1	20252.43	1	3733.65	2.6783	0.0769	0.0	0.0	0.0	0.0	0.0	1.53E-08
9	7	19	20	14665.84	2	3734.23	2.6779	0.0458	0.0	0.0	0.0	0.0	1.40E-08	1.15E-07
3	1	66	67	10278.73	2	3734.28	2.6779	0.0400	0.0	0.0	0.0	2.77E-08	2.41E-07	9.48E-07
2	0	80	81	12497.64	1	3734.93	2.6774	0.0400	0.0	0.0	0.0	7.02E-08	1.04E-06	5.87E-06
2	0	72	73	9764.71	2	3735.28	2.6772	0.0400	0.0	0.0	0.0	1.80E-08	1.38E-07	5.02E-07
5	3	62	63	13790.39	1	3735.67	2.6769	0.0400	0.0	0.0	0.0	1.29E-07	2.61E-06	1.81E-05
10	8	23	24	17475.72	1	3736.12	2.6766	0.0412	0.0	0.0	0.0	0.0	1.64E-07	2.04E-06
6	4	45	46	12038.69	2	3736.70	2.6762	0.0400	0.0	0.0	0.0	1.31E-08	1.74E-07	9.07E-07
7	5	37	38	12818.19	2	3736.99	2.6760	0.0400	0.0	0.0	0.0	0.0	9.96E-08	5.89E-07
11	9	12	13	18662.66	1	3737.53	2.6756	0.0540	0.0	0.0	0.0	0.0	3.69E-08	5.57E-07
3	1	74	75	12801.85	1	3737.60	2.6755	0.0400	0.0	0.0	0.0	1.41E-07	2.25E-06	1.33E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	48	49	14911.20	1	3737.72	2.6754	0.0400	0.0	0.0	0.0	5.99E-08	1.59E-06	1.31E-05
9	7	32	33	16461.06	1	3737.75	2.6754	0.0400	0.0	0.0	0.0	1.18E-08	4.52E-07	4.80E-06
4	2	68	69	13233.23	1	3737.86	2.6753	0.0400	0.0	0.0	0.0	1.60E-07	2.83E-06	1.79E-05
4	2	59	60	10698.87	2	3738.25	2.6750	0.0400	0.0	0.0	0.0	3.11E-08	2.99E-07	1.26E-06
8	6	28	29	13707.32	2	3738.33	2.6750	0.0400	0.0	0.0	0.0	0.0	4.53E-08	3.09E-07
6	4	55	56	14265.13	1	3738.39	2.6749	0.0400	0.0	0.0	0.0	1.01E-07	2.30E-06	1.72E-05
9	7	18	19	14797.07	2	3738.90	2.6746	0.0470	0.0	0.0	0.0	0.0	1.43E-08	1.16E-07
5	3	52	53	11286.22	2	3739.07	2.6745	0.0400	0.0	0.0	0.0	2.37E-08	2.63E-07	1.22E-06
8	6	40	41	15575.37	1	3740.00	2.6738	0.0400	0.0	0.0	0.0	3.15E-08	9.80E-07	9.02E-06
12	10	1	0	20248.94	1	3740.57	2.6734	0.0769	0.0	0.0	0.0	0.0	0.0	1.55E-08
10	8	22	23	17350.49	1	3741.25	2.6729	0.0423	0.0	0.0	0.0	0.0	1.71E-07	2.11E-06
11	9	11	12	18616.82	1	3741.88	2.6725	0.0542	0.0	0.0	0.0	0.0	3.58E-08	5.36E-07
3	1	65	66	10041.41	2	3741.94	2.6724	0.0400	0.0	0.0	0.0	3.63E-08	2.98E-07	1.13E-06
7	5	36	37	12685.95	2	3742.82	2.6718	0.0400	0.0	0.0	0.0	0.0	1.10E-07	6.40E-07
6	4	44	45	11877.80	2	3743.05	2.6716	0.0400	0.0	0.0	0.0	1.56E-08	1.99E-07	1.01E-06
2	0	71	72	9505.12	2	3743.31	2.6714	0.0400	0.0	0.0	0.0	2.42E-08	1.75E-07	6.11E-07
5	3	61	62	13560.93	1	3743.45	2.6713	0.0400	0.0	0.0	0.0	1.68E-07	3.21E-06	2.14E-05
9	7	17	18	14731.73	2	3743.49	2.6713	0.0482	0.0	0.0	0.0	0.0	1.45E-08	1.16E-07
9	7	31	32	16343.14	1	3743.51	2.6713	0.0400	0.0	0.0	0.0	1.32E-08	4.93E-07	5.13E-06
8	6	27	28	13606.95	2	3743.59	2.6712	0.0400	0.0	0.0	0.0	0.0	4.84E-08	3.25E-07
2	0	79	80	12199.31	1	3743.89	2.6710	0.0400	0.0	0.0	0.0	9.95E-08	1.38E-06	7.38E-06
12	10	2	1	20252.43	1	3743.93	2.6710	0.0738	0.0	0.0	0.0	0.0	0.0	3.11E-08
7	5	47	48	14734.27	1	3744.57	2.6705	0.0400	0.0	0.0	0.0	7.28E-08	1.85E-06	1.49E-05
4	2	58	59	10487.10	2	3745.48	2.6699	0.0400	0.0	0.0	0.0	3.95E-08	3.62E-07	1.47E-06
6	4	54	55	14061.97	1	3745.71	2.6697	0.0400	0.0	0.0	0.0	1.28E-07	2.76E-06	1.99E-05
5	3	51	52	11099.95	2	3745.86	2.6696	0.0400	0.0	0.0	0.0	2.92E-08	3.09E-07	1.39E-06
4	2	67	68	12980.85	1	3746.04	2.6695	0.0400	0.0	0.0	0.0	2.14E-07	3.57E-06	2.17E-05
3	1	73	74	12526.50	1	3746.17	2.6694	0.0400	0.0	0.0	0.0	1.94E-07	2.89E-06	1.64E-05
11	9	10	11	18574.50	1	3746.17	2.6694	0.0545	0.0	0.0	0.0	0.0	3.43E-08	5.10E-07
10	8	21	22	17308.79	1	3746.31	2.6693	0.0435	0.0	0.0	0.0	0.0	1.78E-07	2.16E-06
8	6	39	40	15428.02	1	3746.31	2.6693	0.0400	0.0	0.0	0.0	3.68E-08	1.10E-06	9.94E-06
12	10	3	2	20259.43	1	3747.21	2.6687	0.0707	0.0	0.0	0.0	0.0	0.0	4.67E-08
9	7	16	17	14669.81	2	3748.03	2.6681	0.0493	0.0	0.0	0.0	0.0	1.46E-08	1.16E-07
7	5	35	36	12557.12	2	3748.60	2.6677	0.0400	0.0	0.0	0.0	0.0	1.22E-07	6.92E-07
8	6	26	27	13510.01	2	3748.78	2.6675	0.0400	0.0	0.0	0.0	0.0	5.14E-08	3.40E-07
9	7	30	31	16228.73	1	3749.20	2.6672	0.0400	0.0	0.0	0.0	1.47E-08	5.34E-07	5.46E-06
6	4	43	44	11720.32	2	3749.33	2.6671	0.0400	0.0	0.0	0.0	1.85E-08	2.27E-07	1.13E-06
3	1	64	65	9807.43	2	3749.54	2.6670	0.0400	0.0	0.0	0.0	4.74E-08	3.69E-07	1.35E-06
11	9	9	10	18535.70	1	3750.39	2.6664	0.0547	0.0	0.0	0.0	0.0	3.25E-08	4.81E-07
12	10	4	3	20265.91	1	3750.43	2.6664	0.0676	0.0	0.0	0.0	0.0	0.0	6.21E-08
5	3	60	61	13334.93	1	3751.18	2.6658	0.0400	0.0	0.0	0.0	2.17E-07	3.93E-06	2.53E-05
2	0	70	71	9248.86	2	3751.29	2.6657	0.0400	0.0	0.0	0.0	3.26E-08	2.22E-07	7.41E-07
10	8	20	21	17230.61	1	3751.31	2.6657	0.0447	0.0	0.0	0.0	0.0	1.84E-07	2.21E-06
7	5	46	47	14560.82	1	3751.36	2.6657	0.0400	0.0	0.0	0.0	8.81E-08	2.15E-06	1.68E-05
9	7	15	16	14611.32	2	3752.51	2.6649	0.0505	0.0	0.0	0.0	0.0	1.46E-08	1.15E-07
8	6	38	39	15284.19	1	3752.55	2.6649	0.0400	0.0	0.0	0.0	4.28E-08	1.24E-06	1.09E-05
5	3	50	51	10917.06	2	3752.59	2.6648	0.0400	0.0	0.0	0.0	3.58E-08	3.63E-07	1.59E-06
4	2	57	58	10278.70	2	3752.65	2.6648	0.0400	0.0	0.0	0.0	5.01E-08	4.36E-07	1.72E-06
2	0	78	79	11904.34	1	3752.79	2.6647	0.0400	0.0	0.0	0.0	1.40E-07	1.81E-06	9.26E-06
6	4	53	54	13862.29	1	3752.97	2.6646	0.0400	0.0	0.0	0.0	1.60E-07	3.29E-06	2.31E-05
12	10	5	4	20283.89	1	3753.57	2.6641	0.0645	0.0	0.0	0.0	0.0	0.0	7.72E-08
8	6	25	26	13416.50	2	3753.91	2.6639	0.0400	0.0	0.0	0.0	0.0	5.45E-08	3.55E-07
4	2	66	67	12731.90	1	3754.16	2.6637	0.0400	0.0	0.0	0.0	2.85E-07	4.47E-06	2.62E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	34	35	12431.72	2	3754.31	2.6636	0.0400	0.0	0.0	0.0	0.0	1.34E-07	7.47E-07
11	9	8	9	18500.42	1	3754.55	2.6634	0.0550	0.0	0.0	0.0	0.0	3.04E-08	4.47E-07
3	1	72	73	12254.55	1	3754.69	2.6633	0.0400	0.0	0.0	0.0	2.65E-07	3.72E-06	2.01E-05
9	7	29	30	16117.86	1	3754.83	2.6632	0.0400	0.0	0.0	0.0	1.63E-08	5.77E-07	5.80E-06
6	4	42	43	11566.25	2	3755.56	2.6627	0.0400	0.0	0.0	0.0	2.18E-08	2.59E-07	1.25E-06
10	8	19	20	17155.96	1	3756.24	2.6622	0.0458	0.0	0.0	0.0	0.0	1.89E-07	2.24E-06
12	10	6	5	20301.37	1	3756.65	2.6619	0.0621	0.0	0.0	0.0	0.0	0.0	9.19E-08
9	7	14	15	14556.26	2	3756.92	2.6618	0.0517	0.0	0.0	0.0	0.0	1.45E-08	1.13E-07
3	1	63	64	9576.80	2	3757.09	2.6616	0.0400	0.0	0.0	0.0	6.17E-08	4.54E-07	1.60E-06
7	5	45	46	14390.88	1	3758.09	2.6609	0.0400	0.0	0.0	0.0	1.06E-07	2.48E-06	1.89E-05
11	9	7	8	18468.66	1	3758.63	2.6605	0.0574	0.0	0.0	0.0	0.0	2.80E-08	4.09E-07
8	6	37	38	15143.88	1	3758.73	2.6605	0.0400	0.0	0.0	0.0	4.96E-08	1.39E-06	1.19E-05
5	3	59	60	13112.37	1	3758.84	2.6604	0.0400	0.0	0.0	0.0	2.79E-07	4.80E-06	2.98E-05
8	6	24	25	13326.42	2	3758.98	2.6603	0.0400	0.0	0.0	0.0	0.0	5.74E-08	3.68E-07
2	0	69	70	8995.93	2	3759.21	2.6601	0.0400	0.0	0.0	0.0	4.36E-08	2.79E-07	8.97E-07
5	3	49	50	10737.57	2	3759.27	2.6601	0.0400	0.0	0.0	0.0	4.37E-08	4.25E-07	1.80E-06
12	10	7	6	20322.34	1	3759.65	2.6598	0.0597	0.0	0.0	0.0	0.0	0.0	1.06E-07
4	2	56	57	10073.68	2	3759.76	2.6597	0.0400	0.0	0.0	0.0	6.32E-08	5.24E-07	2.00E-06
7	5	33	34	12309.75	2	3759.97	2.6596	0.0400	0.0	0.0	0.0	1.04E-08	1.47E-07	8.03E-07
6	4	52	53	13666.09	1	3760.17	2.6595	0.0400	0.0	0.0	0.0	1.99E-07	3.92E-06	2.66E-05
9	7	28	29	16010.51	1	3760.39	2.6593	0.0400	0.0	0.0	0.0	1.80E-08	6.21E-07	6.14E-06
10	8	18	19	17084.85	1	3761.11	2.6588	0.0470	0.0	0.0	0.0	0.0	1.93E-07	2.26E-06
9	7	13	14	14504.62	2	3761.26	2.6587	0.0528	0.0	0.0	0.0	0.0	1.42E-08	1.10E-07
2	0	77	78	11612.75	1	3761.64	2.6584	0.0400	0.0	0.0	0.0	1.97E-07	2.37E-06	1.16E-05
6	4	41	42	11415.59	2	3761.73	2.6584	0.0400	0.0	0.0	0.0	2.56E-08	2.93E-07	1.39E-06
4	2	65	66	12486.39	1	3762.23	2.6580	0.0400	0.0	0.0	0.0	3.78E-07	5.59E-06	3.14E-05
12	10	8	7	20346.80	1	3762.58	2.6578	0.0574	0.0	0.0	0.0	0.0	0.0	1.19E-07
11	9	6	7	18440.43	1	3762.64	2.6577	0.0597	0.0	0.0	0.0	0.0	2.53E-08	3.68E-07
3	1	71	72	11986.02	1	3763.15	2.6573	0.0400	0.0	0.0	0.0	3.62E-07	4.75E-06	2.47E-05
8	6	23	24	13239.77	2	3763.99	2.6568	0.0412	0.0	0.0	0.0	0.0	6.02E-08	3.81E-07
3	1	62	63	9349.53	2	3764.58	2.6563	0.0400	0.0	0.0	0.0	8.00E-08	5.57E-07	1.89E-06
7	5	44	45	14224.45	1	3764.75	2.6562	0.0400	0.0	0.0	0.0	1.27E-07	2.86E-06	2.12E-05
8	6	36	37	15007.09	1	3764.85	2.6561	0.0400	0.0	0.0	0.0	5.71E-08	1.55E-06	1.30E-05
12	10	9	8	20374.75	1	3765.45	2.6557	0.0550	0.0	0.0	0.0	0.0	0.0	1.32E-07
9	7	12	13	14456.43	2	3765.55	2.6557	0.0540	0.0	0.0	0.0	0.0	1.39E-08	1.07E-07
7	5	32	33	12151.21	2	3765.56	2.6556	0.0400	0.0	0.0	0.0	1.17E-08	1.61E-07	8.60E-07
5	3	48	49	10561.49	2	3765.88	2.6554	0.0400	0.0	0.0	0.0	5.31E-08	4.95E-07	2.04E-06
9	7	27	28	15906.70	1	3765.89	2.6554	0.0400	0.0	0.0	0.0	1.98E-08	6.66E-07	6.47E-06
10	8	17	18	17017.28	1	3765.90	2.6554	0.0482	0.0	0.0	0.0	0.0	1.96E-07	2.27E-06
5	3	58	59	12893.29	1	3766.45	2.6550	0.0400	0.0	0.0	0.0	3.58E-07	5.85E-06	3.51E-05
11	9	5	6	18415.73	1	3766.59	2.6549	0.0621	0.0	0.0	0.0	0.0	2.23E-08	3.23E-07
4	2	55	56	9872.04	2	3766.82	2.6548	0.0400	0.0	0.0	0.0	7.95E-08	6.28E-07	2.32E-06
2	0	68	69	8746.33	2	3767.07	2.6546	0.0400	0.0	0.0	0.0	5.82E-08	3.51E-07	1.08E-06
6	4	51	52	13473.39	1	3767.31	2.6544	0.0400	0.0	0.0	0.0	2.48E-07	4.65E-06	3.06E-05
6	4	40	41	11268.36	2	3767.84	2.6540	0.0400	0.0	0.0	0.0	2.95E-08	3.31E-07	1.53E-06
12	10	10	9	20406.19	1	3768.24	2.6538	0.0547	0.0	0.0	0.0	0.0	0.0	1.44E-07
8	6	22	23	13156.57	2	3768.93	2.6533	0.0423	0.0	0.0	0.0	0.0	6.28E-08	3.92E-07
9	7	11	12	14411.66	2	3769.77	2.6527	0.0542	0.0	0.0	0.0	0.0	1.35E-08	1.03E-07
4	2	64	65	12244.32	1	3770.23	2.6524	0.0400	0.0	0.0	0.0	4.98E-07	6.96E-06	3.77E-05
2	0	76	77	11324.54	1	3770.42	2.6522	0.0400	0.0	0.0	0.0	2.76E-07	3.09E-06	1.44E-05
11	9	4	5	18394.55	1	3770.47	2.6522	0.0645	0.0	0.0	0.0	0.0	1.90E-08	2.75E-07
10	8	16	17	16953.25	1	3770.63	2.6521	0.0493	0.0	0.0	0.0	0.0	1.98E-07	2.27E-06
8	6	35	36	14873.83	1	3770.90	2.6519	0.0400	0.0	0.0	0.0	6.54E-08	1.72E-06	1.41E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
12	10	11	10	20441.12	1	3770.96	2.6518	0.0545	0.0	0.0	0.0	0.0	0.0	1.55E-07
7	5	31	32	12076.10	2	3771.09	2.6518	0.0400	0.0	0.0	0.0	1.30E-08	1.74E-07	9.17E-07
9	7	26	27	15806.43	1	3771.32	2.6516	0.0400	0.0	0.0	0.0	2.16E-08	7.11E-07	6.79E-06
7	5	43	44	14061.54	1	3771.35	2.6516	0.0400	0.0	0.0	0.0	1.52E-07	3.28E-06	2.37E-05
3	1	70	71	11720.90	1	3771.54	2.6514	0.0400	0.0	0.0	0.0	4.92E-07	6.06E-06	3.02E-05
3	1	61	62	9125.64	2	3772.01	2.6511	0.0400	0.0	0.0	0.0	1.03E-07	6.82E-07	2.24E-06
5	3	47	48	10388.82	2	3772.44	2.6508	0.0400	0.0	0.0	0.0	6.42E-08	5.74E-07	2.31E-06
12	10	12	11	20479.54	1	3773.61	2.6500	0.0542	0.0	0.0	0.0	0.0	0.0	1.65E-07
8	6	21	22	13076.80	2	3773.81	2.6498	0.0435	0.0	0.0	0.0	0.0	6.51E-08	4.02E-07
4	2	54	55	9673.80	2	3773.82	2.6498	0.0400	0.0	0.0	0.0	9.94E-08	7.49E-07	2.68E-06
6	4	39	40	11124.55	2	3773.89	2.6498	0.0400	0.0	0.0	0.0	3.48E-08	3.72E-07	1.68E-06
9	7	10	11	14370.33	2	3773.92	2.6498	0.0545	0.0	0.0	0.0	0.0	1.29E-08	9.79E-08
5	3	57	58	12677.69	1	3773.99	2.6497	0.0400	0.0	0.0	0.0	4.58E-07	7.10E-06	4.12E-05
11	9	3	4	18376.90	1	3774.28	2.6495	0.0676	0.0	0.0	0.0	0.0	1.55E-08	2.24E-07
6	4	50	51	13284.19	1	3774.38	2.6494	0.0400	0.0	0.0	0.0	3.06E-07	5.49E-06	3.50E-05
2	0	67	68	8500.09	2	3774.87	2.6491	0.0400	0.0	0.0	0.0	7.73E-08	4.39E-07	1.30E-06
10	8	15	16	16892.75	1	3775.30	2.6488	0.0505	0.0	0.0	0.0	0.0	1.98E-07	2.25E-06
12	10	13	12	20521.44	1	3776.18	2.6482	0.0540	0.0	0.0	0.0	0.0	0.0	1.73E-07
7	5	30	31	11964.44	2	3776.56	2.6479	0.0400	0.0	0.0	0.0	1.45E-08	1.89E-07	9.75E-07
9	7	25	26	15709.71	1	3776.69	2.6478	0.0400	0.0	0.0	0.0	2.35E-08	7.55E-07	7.11E-06
8	6	34	35	14744.11	1	3776.89	2.6477	0.0400	0.0	0.0	0.0	7.45E-08	1.90E-06	1.53E-05
7	5	42	43	13902.14	1	3777.88	2.6470	0.0400	0.0	0.0	0.0	1.80E-07	3.75E-06	2.65E-05
9	7	9	10	14332.44	2	3778.02	2.6469	0.0547	0.0	0.0	0.0	0.0	1.22E-08	9.22E-08
11	9	2	3	18362.78	1	3778.02	2.6469	0.0707	0.0	0.0	0.0	0.0	1.19E-08	1.71E-07
4	2	63	64	12005.71	1	3778.17	2.6468	0.0400	0.0	0.0	0.0	6.55E-07	8.64E-06	4.50E-05
8	6	20	21	13000.48	2	3778.63	2.6465	0.0447	0.0	0.0	0.0	0.0	6.72E-08	4.10E-07
12	10	14	13	20566.83	1	3778.69	2.6464	0.0528	0.0	0.0	0.0	0.0	0.0	1.81E-07
5	3	46	47	10219.57	2	3778.94	2.6462	0.0400	0.0	0.0	0.0	7.74E-08	6.64E-07	2.59E-06
2	0	75	76	11039.74	1	3779.15	2.6461	0.0400	0.0	0.0	0.0	3.84E-07	4.02E-06	1.80E-05
3	1	60	61	8905.12	2	3779.39	2.6459	0.0400	0.0	0.0	0.0	1.33E-07	8.31E-07	2.63E-06
3	1	69	70	11459.21	1	3779.88	2.6456	0.0400	0.0	0.0	0.0	6.65E-07	7.71E-06	3.68E-05
6	4	38	39	10984.19	2	3779.88	2.6456	0.0400	0.0	0.0	0.0	4.03E-08	4.16E-07	1.84E-06
10	8	14	15	16835.81	1	3779.89	2.6456	0.0517	0.0	0.0	0.0	0.0	1.97E-07	2.22E-06
4	2	53	54	9478.96	2	3780.76	2.6450	0.0400	0.0	0.0	0.0	1.24E-07	8.90E-07	3.09E-06
12	10	15	14	20615.70	1	3781.12	2.6447	0.0517	0.0	0.0	0.0	0.0	0.0	1.87E-07
6	4	49	50	13098.50	1	3781.39	2.6445	0.0400	0.0	0.0	0.0	3.76E-07	6.45E-06	4.00E-05
5	3	56	57	12465.57	1	3781.47	2.6445	0.0400	0.0	0.0	0.0	5.83E-07	8.60E-06	4.82E-05
11	9	1	2	18352.19	1	3781.69	2.6443	0.0738	0.0	0.0	0.0	0.0	0.0	1.15E-07
7	5	29	30	11856.22	2	3781.97	2.6441	0.0400	0.0	0.0	0.0	1.60E-08	2.03E-07	1.03E-06
9	7	24	25	15616.54	1	3781.98	2.6441	0.0400	0.0	0.0	0.0	2.54E-08	7.98E-07	7.40E-06
9	7	8	9	14257.99	2	3782.05	2.6441	0.0550	0.0	0.0	0.0	0.0	1.14E-08	8.57E-08
2	0	66	67	8257.20	2	3782.62	2.6437	0.0400	0.0	0.0	0.0	1.02E-07	5.48E-07	1.56E-06
8	6	33	34	14617.93	1	3782.81	2.6435	0.0400	0.0	0.0	0.0	8.45E-08	2.09E-06	1.65E-05
8	6	19	20	12927.62	2	3783.39	2.6431	0.0458	0.0	0.0	0.0	0.0	6.90E-08	4.16E-07
12	10	16	15	20668.05	1	3783.48	2.6431	0.0505	0.0	0.0	0.0	0.0	0.0	1.93E-07
7	5	41	42	13746.29	1	3784.36	2.6425	0.0400	0.0	0.0	0.0	2.13E-07	4.27E-06	2.94E-05
10	8	13	14	16782.41	1	3784.42	2.6424	0.0528	0.0	0.0	0.0	0.0	1.95E-07	2.17E-06
11	9	0	1	18345.12	1	3785.29	2.6418	0.0769	0.0	0.0	0.0	0.0	0.0	5.82E-08
5	3	45	46	10053.75	2	3785.38	2.6417	0.0400	0.0	0.0	0.0	9.27E-08	7.65E-07	2.91E-06
12	10	17	16	20723.88	1	3785.77	2.6415	0.0493	0.0	0.0	0.0	0.0	0.0	1.97E-07
6	4	37	38	10847.26	2	3785.80	2.6414	0.0400	0.0	0.0	0.0	4.65E-08	4.64E-07	2.00E-06
9	7	7	8	14266.98	2	3786.01	2.6413	0.0574	0.0	0.0	0.0	0.0	1.05E-08	7.84E-08
4	2	62	63	11770.57	1	3786.06	2.6413	0.0400	0.0	0.0	1.09E-08	8.56E-07	1.07E-05	5.36E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	59	60	8687.99	2	3786.71	2.6408	0.0400	0.0	0.0	0.0	1.70E-07	1.01E-06	3.09E-06
9	7	23	24	15526.91	1	3787.22	2.6405	0.0412	0.0	0.0	0.0	2.73E-08	8.39E-07	7.67E-06
7	5	28	29	11751.45	2	3787.32	2.6404	0.0400	0.0	0.0	0.0	1.76E-08	2.19E-07	1.09E-06
4	2	52	53	9287.54	2	3787.64	2.6402	0.0400	0.0	0.0	0.0	1.53E-07	1.05E-06	3.55E-06
2	0	74	75	10758.35	1	3787.82	2.6400	0.0400	0.0	0.0	1.02E-08	5.33E-07	5.22E-06	2.23E-05
12	10	18	17	20783.18	1	3787.99	2.6399	0.0482	0.0	0.0	0.0	0.0	0.0	2.00E-07
8	6	18	19	12858.20	2	3788.09	2.6399	0.0470	0.0	0.0	0.0	0.0	7.04E-08	4.19E-07
3	1	68	69	11200.97	1	3788.16	2.6398	0.0400	0.0	0.0	1.44E-08	8.96E-07	9.76E-06	4.47E-05
6	4	46	49	12916.32	1	3788.34	2.6397	0.0400	0.0	0.0	0.0	4.60E-07	7.56E-06	4.55E-05
8	6	32	33	14495.30	1	3788.67	2.6394	0.0400	0.0	0.0	0.0	9.53E-08	2.29E-06	1.77E-05
10	8	12	13	16732.56	1	3788.88	2.6393	0.0540	0.0	0.0	0.0	0.0	1.90E-07	2.11E-06
5	3	55	56	12256.95	1	3788.89	2.6393	0.0400	0.0	0.0	0.0	7.39E-07	1.04E-05	5.62E-05
9	7	6	7	14239.42	2	3789.91	2.6386	0.0597	0.0	0.0	0.0	0.0	0.0	7.04E-08
12	10	19	18	20845.96	1	3790.13	2.6384	0.0470	0.0	0.0	0.0	0.0	0.0	2.01E-07
2	0	65	66	8017.69	2	3790.32	2.6383	0.0400	0.0	0.0	0.0	1.34E-07	6.81E-07	1.87E-06
7	5	40	41	13593.96	1	3790.77	2.6380	0.0400	0.0	0.0	0.0	2.51E-07	4.84E-06	3.25E-05
6	4	36	37	10713.77	2	3791.67	2.6374	0.0400	0.0	0.0	0.0	5.33E-08	5.15E-07	2.18E-06
5	3	44	45	9891.36	2	3791.76	2.6373	0.0400	0.0	0.0	0.0	1.11E-07	8.78E-07	3.26E-06
12	10	20	19	20912.20	1	3792.20	2.6370	0.0458	0.0	0.0	0.0	0.0	0.0	2.02E-07
11	9	1	0	18341.60	1	3792.28	2.6369	0.0769	0.0	0.0	0.0	0.0	0.0	5.89E-08
9	7	22	23	15440.84	1	3792.38	2.6369	0.0423	0.0	0.0	0.0	2.91E-08	8.77E-07	7.91E-06
7	5	27	28	11650.14	2	3792.61	2.6367	0.0400	0.0	0.0	0.0	1.93E-08	2.34E-07	1.15E-06
8	6	17	18	12792.23	2	3792.72	2.6366	0.0482	0.0	0.0	0.0	0.0	7.14E-08	4.21E-07
10	8	11	12	16686.27	1	3793.27	2.6362	0.0542	0.0	0.0	0.0	0.0	1.85E-07	2.03E-06
9	7	5	6	14215.30	2	3793.75	2.6359	0.0621	0.0	0.0	0.0	0.0	0.0	6.18E-08
4	2	61	62	11538.91	1	3793.88	2.6358	0.0400	0.0	0.0	1.56E-08	1.12E-06	1.32E-05	6.37E-05
3	1	58	59	8474.25	2	3793.97	2.6358	0.0400	0.0	0.0	1.04E-08	2.17E-07	1.22E-06	3.62E-06
12	10	21	20	20981.92	1	3794.20	2.6356	0.0447	0.0	0.0	0.0	0.0	0.0	2.02E-07
8	6	31	32	14376.23	1	3794.46	2.6354	0.0400	0.0	0.0	0.0	1.07E-07	2.49E-06	1.90E-05
4	2	51	52	9099.53	2	3794.46	2.6354	0.0400	0.0	0.0	0.0	1.89E-07	1.24E-06	4.06E-06
6	4	47	48	12737.67	1	3795.23	2.6349	0.0400	0.0	0.0	0.0	5.61E-07	8.83E-06	5.17E-05
11	9	2	1	18345.12	1	3795.67	2.6346	0.0738	0.0	0.0	0.0	0.0	0.0	1.18E-07
12	10	22	21	21055.10	1	3796.13	2.6343	0.0435	0.0	0.0	0.0	0.0	0.0	2.00E-07
5	3	54	55	12051.84	1	3796.25	2.6342	0.0400	0.0	0.0	1.06E-08	9.32E-07	1.24E-05	6.53E-05
3	1	67	68	10946.18	1	3796.38	2.6341	0.0400	0.0	0.0	2.14E-08	1.20E-06	1.23E-05	5.41E-05
2	0	73	74	10480.37	1	3796.43	2.6341	0.0400	0.0	0.0	1.57E-08	7.36E-07	6.74E-06	2.75E-05
7	5	39	40	13445.18	1	3797.11	2.6336	0.0400	0.0	0.0	0.0	2.93E-07	5.47E-06	3.59E-05
8	6	16	17	12729.73	2	3797.29	2.6335	0.0493	0.0	0.0	0.0	0.0	7.19E-08	4.20E-07
6	4	35	36	10583.74	2	3797.48	2.6333	0.0400	0.0	0.0	0.0	6.08E-08	5.70E-07	2.36E-06
9	7	21	22	15358.34	1	3797.48	2.6333	0.0435	0.0	0.0	0.0	3.09E-08	9.12E-07	8.12E-06
9	7	4	5	14194.62	2	3797.52	2.6333	0.0645	0.0	0.0	0.0	0.0	0.0	5.26E-08
10	8	10	11	16643.52	1	3797.60	2.6332	0.0545	0.0	0.0	0.0	0.0	1.77E-07	1.94E-06
7	5	26	27	11552.28	2	3797.83	2.6331	0.0400	0.0	0.0	0.0	2.11E-08	2.49E-07	1.20E-06
2	0	64	65	7781.55	2	3797.96	2.6330	0.0400	0.0	0.0	1.11E-08	1.76E-07	8.43E-07	2.23E-06
12	10	23	22	21131.74	1	3797.98	2.6330	0.0423	0.0	0.0	0.0	0.0	0.0	1.98E-07
5	3	43	44	9732.40	2	3798.08	2.6329	0.0400	0.0	0.0	0.0	1.31E-07	1.00E-06	3.63E-06
11	9	3	2	18352.19	1	3798.99	2.6323	0.0707	0.0	0.0	0.0	0.0	1.23E-08	1.77E-07
12	10	24	23	21211.84	1	3799.76	2.6317	0.0412	0.0	0.0	0.0	0.0	0.0	1.95E-07
8	6	30	31	14260.70	1	3800.19	2.6314	0.0400	0.0	0.0	0.0	1.19E-07	2.71E-06	2.02E-05
3	1	57	58	8263.93	2	3801.17	2.6308	0.0400	0.0	0.0	1.43E-08	2.75E-07	1.48E-06	4.23E-06
4	2	50	51	8914.94	2	3801.23	2.6307	0.0400	0.0	0.0	0.0	2.33E-07	1.46E-06	4.64E-06
9	7	3	4	14177.38	2	3801.23	2.6307	0.0676	0.0	0.0	0.0	0.0	0.0	4.29E-08
12	10	25	24	21295.39	1	3801.46	2.6306	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	2	60	61	11310.73	1	3801.64	2.6304	0.0400	0.0	0.0	2.22E-08	1.45E-06	1.62E-05	7.54E-05
8	6	15	16	12670.68	2	3801.80	2.6303	0.0505	0.0	0.0	0.0	0.0	7.20E-08	4.16E-07
10	8	9	10	16604.34	1	3801.85	2.6303	0.0547	0.0	0.0	0.0	0.0	1.68E-07	1.82E-06
6	4	46	47	12562.54	1	3802.05	2.6302	0.0400	0.0	0.0	0.0	6.80E-07	1.03E-05	5.84E-05
11	9	4	3	18362.78	1	3802.24	2.6300	0.0676	0.0	0.0	0.0	0.0	1.64E-08	2.36E-07
9	7	20	21	15279.39	1	3802.52	2.6298	0.0447	0.0	0.0	0.0	3.26E-08	9.44E-07	8.30E-06
7	5	25	26	11457.88	2	3803.00	2.6295	0.0400	0.0	0.0	0.0	2.28E-08	2.64E-07	1.26E-06
12	10	26	25	21382.39	1	3803.10	2.6294	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-07
6	4	34	35	10457.16	2	3803.23	2.6293	0.0400	0.0	0.0	0.0	6.91E-08	6.28E-07	2.55E-06
7	5	38	39	13299.95	1	3803.39	2.6292	0.0400	0.0	0.0	0.0	3.42E-07	6.15E-06	3.94E-05
5	3	53	54	11850.23	1	3803.55	2.6291	0.0400	0.0	0.0	1.45E-08	1.17E-06	1.49E-05	7.56E-05
5	3	42	43	9576.89	2	3804.34	2.6286	0.0400	0.0	0.0	0.0	1.55E-07	1.14E-06	4.03E-06
3	1	66	67	10694.85	1	3804.54	2.6284	0.0400	0.0	0.0	3.15E-08	1.61E-06	1.55E-05	6.54E-05
12	10	27	26	21472.84	1	3804.66	2.6284	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-07
9	7	2	3	14163.60	2	3804.87	2.6282	0.0707	0.0	0.0	0.0	0.0	0.0	3.26E-08
2	0	72	73	10205.84	1	3804.98	2.6281	0.0400	0.0	0.0	2.42E-08	1.01E-06	8.68E-06	3.39E-05
11	9	5	4	18376.90	1	3805.42	2.6278	0.0645	0.0	0.0	0.0	0.0	2.03E-08	2.93E-07
2	0	63	64	7548.79	2	3805.54	2.6277	0.0400	0.0	0.0	1.59E-08	2.30E-07	1.04E-06	2.65E-06
8	6	29	30	14148.75	1	3805.86	2.6275	0.0400	0.0	0.0	0.0	1.33E-07	2.93E-06	2.15E-05
10	8	8	9	16568.71	1	3806.04	2.6274	0.0550	0.0	0.0	0.0	0.0	1.57E-07	1.70E-06
12	10	28	27	21566.74	1	3806.14	2.6273	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-07
8	6	14	15	12615.09	2	3806.24	2.6273	0.0517	0.0	0.0	0.0	0.0	7.15E-08	4.10E-07
9	7	19	20	15204.01	1	3807.48	2.6264	0.0458	0.0	0.0	0.0	3.42E-08	9.71E-07	8.44E-06
12	10	29	28	21664.07	1	3807.55	2.6264	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-07
4	2	49	50	8733.79	2	3807.94	2.6261	0.0400	0.0	0.0	1.23E-08	2.85E-07	1.71E-06	5.28E-06
7	5	24	25	11366.95	2	3808.10	2.6260	0.0400	0.0	0.0	0.0	2.46E-08	2.78E-07	1.31E-06
3	1	56	57	8057.01	2	3808.32	2.6258	0.0400	0.0	0.0	1.97E-08	3.48E-07	1.78E-06	4.92E-06
9	7	1	2	14153.26	2	3808.45	2.6257	0.0738	0.0	0.0	0.0	0.0	0.0	2.20E-08
11	9	6	5	18394.55	1	3808.53	2.6257	0.0621	0.0	0.0	0.0	0.0	2.41E-08	3.49E-07
6	4	45	46	12390.96	1	3808.81	2.6255	0.0400	0.0	0.0	0.0	8.21E-07	1.19E-05	6.59E-05
12	10	30	29	21764.84	1	3808.89	2.6254	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-07
6	4	33	34	10334.05	2	3808.92	2.6254	0.0400	0.0	0.0	0.0	7.81E-08	6.89E-07	2.74E-06
4	2	59	60	11086.05	1	3809.34	2.6251	0.0400	0.0	0.0	3.14E-08	1.87E-06	1.98E-05	8.89E-05
7	5	37	38	13158.27	1	3809.61	2.6249	0.0400	0.0	0.0	0.0	3.96E-07	6.89E-06	4.32E-05
12	10	31	30	21869.04	1	3810.15	2.6246	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-07
10	8	7	8	16536.64	1	3810.16	2.6246	0.0574	0.0	0.0	0.0	0.0	1.45E-07	1.55E-06
5	3	41	42	9424.83	2	3810.54	2.6243	0.0400	0.0	0.0	0.0	1.83E-07	1.30E-06	4.47E-06
8	6	13	14	12562.97	2	3810.62	2.6242	0.0528	0.0	0.0	0.0	0.0	7.05E-08	4.01E-07
5	3	52	53	11652.14	1	3810.78	2.6241	0.0400	0.0	0.0	1.96E-08	1.46E-06	1.77E-05	8.73E-05
12	10	32	31	21976.67	1	3811.34	2.6237	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-07
8	6	28	29	14040.35	1	3811.45	2.6237	0.0400	0.0	0.0	0.0	1.47E-07	3.16E-06	2.28E-05
11	9	7	6	18415.73	1	3811.57	2.6236	0.0597	0.0	0.0	0.0	0.0	2.77E-08	4.02E-07
9	7	0	1	14146.36	2	3811.96	2.6233	0.0769	0.0	0.0	0.0	0.0	0.0	1.11E-08
9	7	18	19	15132.20	1	3812.38	2.6230	0.0470	0.0	0.0	0.0	3.55E-08	9.93E-07	8.53E-06
12	10	33	32	22087.72	1	3812.46	2.6230	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-07
3	1	65	66	10446.99	1	3812.64	2.6229	0.0400	0.0	0.0	4.63E-08	2.13E-06	1.94E-05	7.88E-05
2	0	62	63	7319.43	2	3813.06	2.6226	0.0400	0.0	0.0	2.27E-08	2.99E-07	1.28E-06	3.15E-06
7	5	23	24	11279.49	2	3813.14	2.6225	0.0412	0.0	0.0	0.0	2.64E-08	2.92E-07	1.35E-06
2	0	71	72	9934.75	1	3813.48	2.6223	0.0400	0.0	0.0	3.69E-08	1.39E-06	1.11E-05	4.17E-05
12	10	34	33	22202.19	1	3813.50	2.6223	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-07
12	10	60	59	26358.85	1	3813.85	2.6220	0.0400	0.0	0.0	0.0	0.0	0.0	9.66E-09
10	8	6	7	16508.13	1	3814.21	2.6218	0.0597	0.0	0.0	0.0	0.0	1.31E-07	1.40E-06
12	10	35	34	22320.07	1	3814.46	2.6216	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
11	9	8	7	18440.43	1	3814.53	2.6216	0.0574	0.0	0.0	0.0	0.0	3.11E-08	4.53E-07
6	4	32	33	10214.39	2	3814.54	2.6215	0.0400	0.0	0.0	0.0	8.78E-08	7.53E-07	2.94E-06
4	2	46	49	8556.07	2	3814.59	2.6215	0.0400	0.0	0.0	1.60E-08	3.47E-07	2.00E-06	5.99E-06
12	10	59	58	26157.68	1	3814.81	2.6214	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-08
8	6	12	13	12514.32	2	3814.94	2.6213	0.0540	0.0	0.0	0.0	0.0	6.89E-08	3.89E-07
12	10	36	35	22441.36	1	3815.35	2.6210	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-07
3	1	55	56	7853.51	2	3815.41	2.6209	0.0400	0.0	0.0	2.69E-08	4.38E-07	2.13E-06	5.72E-06
6	4	44	45	12222.92	1	3815.51	2.6209	0.0400	0.0	0.0	1.05E-08	9.86E-07	1.37E-05	7.40E-05
12	10	58	57	25959.75	1	3815.68	2.6208	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-08
7	5	36	37	13020.16	1	3815.76	2.6207	0.0400	0.0	0.0	0.0	4.57E-07	7.69E-06	4.71E-05
12	10	37	36	22566.05	1	3816.17	2.6204	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-07
12	10	57	56	25765.06	1	3816.47	2.6202	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-08
5	3	40	41	9276.23	2	3816.68	2.6201	0.0400	0.0	0.0	0.0	2.14E-07	1.47E-06	4.93E-06
12	10	38	37	22694.13	1	3816.91	2.6199	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-07
4	2	58	59	10864.87	1	3816.98	2.6199	0.0400	0.0	0.0	4.41E-08	2.40E-06	2.42E-05	1.05E-04
8	6	27	28	13935.53	1	3816.99	2.6199	0.0400	0.0	0.0	0.0	1.61E-07	3.39E-06	2.40E-05
12	10	56	55	25573.64	1	3817.19	2.6197	0.0400	0.0	0.0	0.0	0.0	0.0	1.66E-08
9	7	17	18	15063.96	1	3817.22	2.6197	0.0482	0.0	0.0	0.0	3.67E-08	1.01E-06	8.57E-06
11	9	9	8	18468.66	1	3817.43	2.6196	0.0550	0.0	0.0	0.0	0.0	3.42E-08	5.01E-07
12	10	39	38	22825.61	1	3817.57	2.6195	0.0400	0.0	0.0	0.0	0.0	0.0	9.46E-08
12	10	55	54	25385.48	1	3817.83	2.6193	0.0400	0.0	0.0	0.0	0.0	0.0	1.88E-08
5	3	51	52	11457.59	1	3817.95	2.6192	0.0400	0.0	0.0	2.63E-08	1.82E-06	2.11E-05	1.01E-04
7	5	22	23	11195.50	2	3818.12	2.6191	0.0423	0.0	0.0	0.0	2.81E-08	3.05E-07	1.39E-06
12	10	40	39	22960.48	1	3818.16	2.6191	0.0400	0.0	0.0	0.0	0.0	0.0	8.76E-08
10	8	5	6	16483.18	1	3818.19	2.6190	0.0621	0.0	0.0	0.0	0.0	1.15E-07	1.23E-06
12	10	54	53	25200.61	1	3818.39	2.6189	0.0400	0.0	0.0	0.0	0.0	0.0	2.13E-08
12	10	41	40	23098.72	1	3818.67	2.6187	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-08
9	7	1	0	14142.91	2	3818.79	2.6186	0.0769	0.0	0.0	0.0	0.0	0.0	1.13E-08
12	10	53	52	25019.01	1	3818.88	2.6186	0.0400	0.0	0.0	0.0	0.0	0.0	2.40E-08
12	10	42	41	23240.34	1	3819.11	2.6184	0.0400	0.0	0.0	0.0	0.0	0.0	7.44E-08
8	6	11	12	12469.13	2	3819.19	2.6184	0.0542	0.0	0.0	0.0	0.0	6.67E-08	3.74E-07
12	10	52	51	24840.71	1	3819.28	2.6183	0.0400	0.0	0.0	0.0	0.0	0.0	2.71E-08
12	10	43	42	23385.33	1	3819.47	2.6182	0.0400	0.0	0.0	0.0	0.0	0.0	6.82E-08
12	10	51	50	24665.70	1	3819.61	2.6181	0.0400	0.0	0.0	0.0	0.0	0.0	3.04E-08
12	10	44	43	23533.68	1	3819.76	2.6180	0.0400	0.0	0.0	0.0	0.0	0.0	6.24E-08
12	10	50	49	24494.01	1	3819.86	2.6179	0.0400	0.0	0.0	0.0	0.0	0.0	3.40E-08
12	10	45	44	23685.38	1	3819.96	2.6178	0.0400	0.0	0.0	0.0	0.0	0.0	5.68E-08
12	10	49	48	24325.62	1	3820.04	2.6178	0.0400	0.0	0.0	0.0	0.0	0.0	3.79E-08
12	10	46	45	23840.43	1	3820.10	2.6177	0.0400	0.0	0.0	0.0	0.0	0.0	5.16E-08
6	4	31	32	10098.21	2	3820.11	2.6177	0.0400	0.0	0.0	0.0	9.82E-08	8.19E-07	3.14E-06
12	10	48	47	24160.56	1	3820.13	2.6177	0.0400	0.0	0.0	0.0	0.0	0.0	4.21E-08
12	10	47	46	23998.83	1	3820.15	2.6177	0.0400	0.0	0.0	0.0	0.0	0.0	4.67E-08
11	9	10	9	18500.42	1	3820.26	2.6176	0.0547	0.0	0.0	0.0	0.0	3.71E-08	5.46E-07
2	0	61	62	7093.47	2	3820.53	2.6174	0.0400	0.0	0.0	3.21E-08	3.86E-07	1.57E-06	3.72E-06
3	1	64	65	10202.62	1	3820.68	2.6173	0.0400	0.0	0.0	6.75E-08	2.82E-06	2.42E-05	9.46E-05
4	2	47	48	8381.80	2	3821.18	2.6170	0.0400	0.0	0.0	2.09E-08	4.20E-07	2.32E-06	6.77E-06
7	5	35	36	12885.61	1	3821.85	2.6165	0.0400	0.0	0.0	0.0	5.24E-07	8.55E-06	5.13E-05
2	0	70	71	9667.11	1	3821.91	2.6165	0.0400	0.0	0.0	5.59E-08	1.89E-06	1.42E-05	5.10E-05
9	7	16	17	14999.30	1	3821.98	2.6164	0.0493	0.0	0.0	0.0	3.76E-08	1.02E-06	8.57E-06
9	7	2	1	14146.36	2	3822.10	2.6164	0.0738	0.0	0.0	0.0	0.0	0.0	2.26E-08
10	8	4	5	16461.79	1	3822.10	2.6164	0.0645	0.0	0.0	0.0	0.0	9.83E-08	1.04E-06
6	4	43	44	12058.43	1	3822.15	2.6163	0.0400	0.0	0.0	1.34E-08	1.18E-06	1.58E-05	8.29E-05
3	1	54	55	7653.44	2	3822.44	2.6161	0.0400	0.0	0.0	3.65E-08	5.50E-07	2.55E-06	6.62E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	26	27	13834.28	1	3822.45	2.6161	0.0400	0.0	0.0	0.0	1.77E-07	3.62E-06	2.53E-05
5	3	39	40	9131.08	2	3822.76	2.6159	0.0400	0.0	0.0	0.0	2.49E-07	1.65E-06	5.42E-06
11	9	11	10	18535.70	1	3823.01	2.6157	0.0545	0.0	0.0	0.0	0.0	3.97E-08	5.87E-07
7	5	21	22	11114.98	2	3823.03	2.6157	0.0435	0.0	0.0	0.0	2.97E-08	3.16E-07	1.43E-06
8	6	10	11	12427.41	2	3823.38	2.6155	0.0545	0.0	0.0	0.0	0.0	6.40E-08	3.56E-07
4	2	57	58	10647.20	1	3824.56	2.6147	0.0400	0.0	0.0	6.17E-08	3.08E-06	2.94E-05	1.23E-04
5	3	50	51	11266.57	1	3825.06	2.6143	0.0400	0.0	0.0	3.52E-08	2.25E-06	2.49E-05	1.15E-04
9	7	3	2	14153.26	2	3825.36	2.6141	0.0707	0.0	0.0	0.0	0.0	0.0	3.39E-08
6	4	30	31	9985.50	2	3825.61	2.6140	0.0400	0.0	0.0	0.0	1.09E-07	8.87E-07	3.34E-06
11	9	12	11	18574.50	1	3825.69	2.6139	0.0542	0.0	0.0	0.0	0.0	4.19E-08	6.24E-07
10	8	3	4	16443.96	1	3825.95	2.6137	0.0676	0.0	0.0	0.0	0.0	8.03E-08	8.51E-07
9	7	15	16	14938.22	1	3826.68	2.6132	0.0505	0.0	0.0	0.0	3.83E-08	1.02E-06	8.51E-06
8	6	9	10	12389.16	2	3827.51	2.6127	0.0547	0.0	0.0	0.0	0.0	6.06E-08	3.35E-07
4	2	46	47	8210.98	2	3827.71	2.6125	0.0400	0.0	0.0	2.69E-08	5.07E-07	2.69E-06	7.63E-06
8	6	25	26	13736.61	1	3827.85	2.6124	0.0400	0.0	0.0	0.0	1.92E-07	3.85E-06	2.64E-05
7	5	34	35	12754.63	1	3827.87	2.6124	0.0400	0.0	0.0	0.0	5.98E-07	9.45E-06	5.55E-05
7	5	20	21	11037.95	2	3827.89	2.6124	0.0447	0.0	0.0	0.0	3.13E-08	3.27E-07	1.46E-06
2	0	60	61	6870.93	2	3827.94	2.6124	0.0400	0.0	0.0	4.52E-08	4.98E-07	1.92E-06	4.38E-06
11	9	13	12	18616.82	1	3828.30	2.6121	0.0540	0.0	0.0	0.0	0.0	4.38E-08	6.57E-07
9	7	4	3	14163.60	2	3828.54	2.6120	0.0676	0.0	0.0	0.0	0.0	0.0	4.51E-08
3	1	63	64	9961.74	1	3828.66	2.6119	0.0400	0.0	0.0	9.80E-08	3.72E-06	3.01E-05	1.13E-04
6	4	42	43	11897.51	1	3828.72	2.6118	0.0400	0.0	0.0	1.70E-08	1.40E-06	1.81E-05	9.25E-05
5	3	38	39	8989.41	2	3828.79	2.6118	0.0400	0.0	0.0	1.13E-08	2.89E-07	1.85E-06	5.94E-06
3	1	53	54	7456.80	2	3829.42	2.6114	0.0400	0.0	0.0	4.93E-08	6.86E-07	3.04E-06	7.64E-06
10	8	2	3	16429.71	1	3829.72	2.6112	0.0707	0.0	0.0	0.0	0.0	6.13E-08	6.48E-07
2	0	69	70	9402.94	1	3830.29	2.6108	0.0400	0.0	0.0	8.43E-08	2.56E-06	1.81E-05	6.23E-05
11	9	14	13	18662.66	1	3830.84	2.6104	0.0528	0.0	0.0	0.0	0.0	4.54E-08	6.86E-07
6	4	29	30	9876.27	2	3831.06	2.6102	0.0400	0.0	0.0	0.0	1.21E-07	9.57E-07	3.54E-06
9	7	14	15	14860.71	1	3831.31	2.6101	0.0517	0.0	0.0	0.0	3.86E-08	1.02E-06	8.39E-06
8	6	8	9	12354.38	2	3831.57	2.6099	0.0550	0.0	0.0	0.0	0.0	5.66E-08	3.12E-07
9	7	5	4	14177.38	2	3831.66	2.6098	0.0645	0.0	0.0	0.0	0.0	0.0	5.61E-08
4	2	56	57	10433.05	1	3832.08	2.6095	0.0400	0.0	0.0	8.57E-08	3.93E-06	3.56E-05	1.44E-04
5	3	49	50	11079.09	1	3832.11	2.6095	0.0400	0.0	0.0	4.68E-08	2.78E-06	2.94E-05	1.32E-04
7	5	19	20	10964.39	2	3832.68	2.6091	0.0458	0.0	0.0	0.0	3.27E-08	3.36E-07	1.48E-06
8	6	24	25	13642.53	1	3833.19	2.6088	0.0400	0.0	0.0	0.0	2.08E-07	4.07E-06	2.75E-05
11	9	15	14	18712.02	1	3833.31	2.6087	0.0517	0.0	0.0	0.0	0.0	4.66E-08	7.10E-07
10	8	1	2	16419.01	1	3833.42	2.6086	0.0738	0.0	0.0	0.0	0.0	4.15E-08	4.38E-07
7	5	33	34	12627.23	1	3833.83	2.6084	0.0400	0.0	0.0	0.0	6.79E-07	1.04E-05	5.99E-05
4	2	45	46	8043.62	2	3834.18	2.6081	0.0400	0.0	0.0	3.46E-08	6.09E-07	3.11E-06	8.58E-06
9	7	6	5	14194.62	2	3834.71	2.6078	0.0621	0.0	0.0	0.0	0.0	0.0	6.68E-08
5	3	37	38	8851.20	2	3834.75	2.6077	0.0400	0.0	0.0	1.37E-08	3.34E-07	2.07E-06	6.49E-06
6	4	41	42	11740.14	1	3835.23	2.6074	0.0400	0.0	0.0	2.15E-08	1.66E-06	2.06E-05	1.03E-04
2	0	59	60	6651.80	2	3835.29	2.6074	0.0400	0.0	0.0	6.32E-08	6.38E-07	2.33E-06	5.15E-06
8	6	7	8	12323.08	2	3835.57	2.6072	0.0574	0.0	0.0	0.0	0.0	5.21E-08	2.85E-07
11	9	16	15	18764.90	1	3835.71	2.6071	0.0505	0.0	0.0	0.0	0.0	4.75E-08	7.30E-07
9	7	13	14	14826.79	1	3835.87	2.6070	0.0528	0.0	0.0	0.0	3.86E-08	1.00E-06	8.22E-06
3	1	52	53	7263.61	2	3836.33	2.6067	0.0400	0.0	0.0	6.61E-08	8.53E-07	3.61E-06	8.79E-06
6	4	28	29	9770.52	2	3836.44	2.6066	0.0400	0.0	0.0	0.0	1.33E-07	1.03E-06	3.75E-06
3	1	62	63	9724.36	1	3836.58	2.6065	0.0400	0.0	0.0	1.41E-07	4.88E-06	3.73E-05	1.35E-04
10	8	0	1	16411.88	1	3837.06	2.6062	0.0769	0.0	0.0	0.0	0.0	2.10E-08	2.21E-07
7	5	18	19	10894.32	2	3837.41	2.6059	0.0470	0.0	0.0	0.0	3.39E-08	3.43E-07	1.49E-06
9	7	7	6	14215.30	2	3837.70	2.6057	0.0597	0.0	0.0	0.0	0.0	1.04E-08	7.71E-08
11	9	17	16	18821.29	1	3838.03	2.6055	0.0493	0.0	0.0	0.0	0.0	4.81E-08	7.45E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	23	24	13552.03	1	3838.46	2.6052	0.0412	0.0	0.0	0.0	2.24E-07	4.28E-06	2.86E-05
2	0	68	69	9142.25	1	3838.60	2.6051	0.0400	0.0	0.0	1.26E-07	3.46E-06	2.30E-05	7.59E-05
5	3	48	49	10895.17	1	3839.10	2.6048	0.0400	0.0	0.0	6.17E-08	3.41E-06	3.45E-05	1.50E-04
8	6	6	7	12295.25	2	3839.50	2.6045	0.0597	0.0	0.0	0.0	0.0	4.70E-08	2.56E-07
4	2	55	56	10222.44	1	3839.53	2.6045	0.0400	0.0	0.0	1.18E-07	4.99E-06	4.30E-05	1.69E-04
7	5	32	33	12503.41	1	3839.73	2.6043	0.0400	0.0	0.0	0.0	7.67E-07	1.14E-05	6.45E-05
11	9	18	17	18881.18	1	3840.28	2.6040	0.0482	0.0	0.0	0.0	0.0	4.83E-08	7.56E-07
9	7	12	13	14776.45	1	3840.37	2.6039	0.0540	0.0	0.0	0.0	3.83E-08	9.83E-07	7.98E-06
4	2	44	45	7879.72	2	3840.59	2.6038	0.0400	0.0	0.0	4.41E-08	7.28E-07	3.57E-06	9.60E-06
9	7	8	7	14239.42	2	3840.62	2.6037	0.0574	0.0	0.0	0.0	0.0	1.17E-08	8.69E-08
5	3	36	37	8716.48	2	3840.65	2.6037	0.0400	0.0	0.0	1.66E-08	3.84E-07	2.30E-06	7.07E-06
6	4	40	41	11566.35	1	3841.67	2.6030	0.0400	0.0	0.0	2.69E-08	1.96E-06	2.34E-05	1.14E-04
6	4	27	28	9668.25	2	3841.76	2.6030	0.0400	0.0	0.0	0.0	1.46E-07	1.10E-06	3.95E-06
7	5	17	18	10827.74	2	3842.07	2.6028	0.0482	0.0	0.0	0.0	3.50E-08	3.48E-07	1.50E-06
11	9	19	18	18944.59	1	3842.46	2.6025	0.0470	0.0	0.0	0.0	0.0	4.82E-08	7.62E-07
2	0	58	59	6436.11	2	3842.59	2.6024	0.0400	0.0	0.0	8.81E-08	8.16E-07	2.83E-06	6.05E-06
3	1	51	52	7073.87	2	3843.19	2.6020	0.0400	0.0	0.0	8.82E-08	1.05E-06	4.26E-06	1.01E-05
8	6	5	6	12270.90	2	3843.37	2.6019	0.0621	0.0	0.0	0.0	0.0	4.15E-08	2.25E-07
9	7	9	8	14266.98	2	3843.48	2.6018	0.0550	0.0	0.0	0.0	0.0	1.29E-08	9.62E-08
8	6	22	23	13465.12	1	3843.66	2.6017	0.0423	0.0	0.0	0.0	2.39E-07	4.48E-06	2.95E-05
10	8	1	0	16408.32	1	3844.12	2.6014	0.0769	0.0	0.0	0.0	0.0	2.13E-08	2.24E-07
3	1	61	62	9490.49	1	3844.44	2.6012	0.0400	0.0	0.0	2.03E-07	6.38E-06	4.61E-05	1.61E-04
11	9	20	19	19011.50	1	3844.56	2.6011	0.0458	0.0	0.0	0.0	0.0	4.78E-08	7.64E-07
9	7	11	12	14729.70	1	3844.80	2.6009	0.0542	0.0	0.0	0.0	3.76E-08	9.53E-07	7.68E-06
7	5	31	32	12363.18	1	3845.56	2.6004	0.0400	0.0	0.0	0.0	8.63E-07	1.25E-05	6.91E-05
5	3	47	48	10714.80	1	3846.02	2.6001	0.0400	0.0	0.0	8.10E-08	4.16E-06	4.03E-05	1.71E-04
9	7	10	9	14297.99	2	3846.26	2.5999	0.0547	0.0	0.0	0.0	0.0	1.40E-08	1.05E-07
5	3	35	36	8585.23	2	3846.49	2.5998	0.0400	0.0	0.0	2.00E-08	4.38E-07	2.55E-06	7.67E-06
11	9	21	20	19081.91	1	3846.60	2.5997	0.0447	0.0	0.0	0.0	0.0	4.72E-08	7.62E-07
7	5	16	17	10764.64	2	3846.68	2.5996	0.0493	0.0	0.0	0.0	3.58E-08	3.51E-07	1.50E-06
2	0	67	68	8885.04	1	3846.86	2.5995	0.0400	0.0	0.0	1.88E-07	4.66E-06	2.91E-05	9.21E-05
4	2	54	55	10015.37	1	3846.93	2.5995	0.0400	0.0	0.0	1.63E-07	6.31E-06	5.18E-05	1.96E-04
4	2	43	44	7719.30	2	3846.95	2.5995	0.0400	0.0	0.0	5.60E-08	8.66E-07	4.09E-06	1.07E-05
6	4	26	27	9569.48	2	3847.02	2.5994	0.0400	0.0	0.0	0.0	1.60E-07	1.17E-06	4.14E-06
8	6	4	5	12250.03	2	3847.17	2.5993	0.0645	0.0	0.0	0.0	0.0	3.54E-08	1.92E-07
10	8	2	1	16411.88	1	3847.55	2.5991	0.0738	0.0	0.0	0.0	0.0	4.26E-08	4.49E-07
6	4	39	40	11436.14	1	3848.05	2.5987	0.0400	0.0	0.0	3.35E-08	2.29E-06	2.64E-05	1.26E-04
11	9	22	21	19155.82	1	3848.56	2.5984	0.0435	0.0	0.0	0.0	0.0	4.63E-08	7.57E-07
8	6	21	22	13381.82	1	3848.79	2.5982	0.0435	0.0	0.0	0.0	2.54E-07	4.67E-06	3.03E-05
9	7	11	10	14332.44	2	3848.98	2.5981	0.0545	0.0	0.0	0.0	0.0	1.50E-08	1.13E-07
9	7	10	11	14686.54	1	3849.16	2.5980	0.0545	0.0	0.0	0.0	3.64E-08	9.15E-07	7.32E-06
2	0	57	58	6223.85	2	3849.83	2.5975	0.0400	0.0	0.0	1.22E-07	1.04E-06	3.43E-06	7.08E-06
3	1	50	51	6887.58	2	3849.99	2.5974	0.0400	0.0	0.0	1.17E-07	1.30E-06	5.02E-06	1.15E-05
11	9	23	22	19233.23	1	3850.44	2.5971	0.0423	0.0	0.0	0.0	0.0	4.51E-08	7.47E-07
10	8	3	2	16419.01	1	3850.90	2.5968	0.0707	0.0	0.0	0.0	0.0	6.39E-08	6.74E-07
8	6	3	4	12232.63	2	3850.91	2.5968	0.0676	0.0	0.0	0.0	0.0	2.89E-08	1.56E-07
7	5	15	16	10705.04	2	3851.22	2.5966	0.0505	0.0	0.0	0.0	3.64E-08	3.51E-07	1.48E-06
7	5	30	31	12266.54	1	3851.32	2.5965	0.0400	0.0	0.0	1.01E-08	9.64E-07	1.36E-05	7.37E-05
9	7	12	11	14370.33	2	3851.64	2.5963	0.0542	0.0	0.0	0.0	0.0	1.58E-08	1.20E-07
6	4	25	26	9474.20	2	3852.21	2.5959	0.0400	0.0	0.0	0.0	1.73E-07	1.25E-06	4.33E-06
3	1	60	61	9260.14	1	3852.24	2.5959	0.0400	0.0	0.0	2.89E-07	8.29E-06	5.67E-05	1.91E-04
11	9	24	23	19314.13	1	3852.26	2.5959	0.0412	0.0	0.0	0.0	0.0	4.38E-08	7.34E-07
5	3	34	35	8457.48	2	3852.27	2.5959	0.0400	0.0	0.0	2.40E-08	4.99E-07	2.81E-06	8.29E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	46	47	10538.00	1	3852.88	2.5955	0.0400	0.0	0.0	1.06E-07	5.05E-06	4.70E-05	1.94E-04
4	2	42	43	7562.35	2	3853.24	2.5952	0.0400	0.0	0.0	7.06E-08	1.03E-06	4.66E-06	1.19E-05
5	7	9	10	14646.97	1	3853.45	2.5951	0.0547	0.0	0.0	0.0	3.49E-08	8.68E-07	6.90E-06
8	6	20	21	13302.10	1	3853.86	2.5948	0.0447	0.0	0.0	0.0	2.68E-07	4.83E-06	3.10E-05
11	9	25	24	19398.52	1	3854.00	2.5947	0.0400	0.0	0.0	0.0	0.0	4.23E-08	7.19E-07
10	8	4	3	16429.71	1	3854.19	2.5946	0.0676	0.0	0.0	0.0	0.0	8.48E-08	8.96E-07
5	7	13	12	14411.66	2	3854.23	2.5946	0.0540	0.0	0.0	0.0	0.0	1.66E-08	1.27E-07
4	2	53	54	9811.84	1	3854.26	2.5945	0.0400	0.0	0.0	2.22E-07	7.95E-06	6.21E-05	2.28E-04
6	4	38	39	11289.51	1	3854.37	2.5945	0.0400	0.0	0.0	4.14E-08	2.68E-06	2.98E-05	1.39E-04
8	6	2	3	12218.71	2	3854.59	2.5943	0.0707	0.0	0.0	0.0	0.0	2.21E-08	1.19E-07
2	0	66	67	8631.33	1	3855.06	2.5940	0.0400	0.0	0.0	2.79E-07	6.24E-06	3.67E-05	1.12E-04
11	9	26	25	19486.39	1	3855.67	2.5936	0.0400	0.0	0.0	0.0	0.0	4.06E-08	7.00E-07
7	5	14	15	10648.93	2	3855.69	2.5936	0.0517	0.0	0.0	0.0	3.67E-08	3.49E-07	1.46E-06
11	9	69	68	26488.41	1	3855.76	2.5935	0.0400	0.0	0.0	0.0	0.0	0.0	8.83E-09
3	1	49	50	6704.76	2	3856.73	2.5929	0.0400	0.0	0.0	1.54E-07	1.59E-06	5.89E-06	1.31E-05
5	7	14	13	14456.43	2	3856.75	2.5929	0.0528	0.0	0.0	0.0	0.0	1.72E-08	1.32E-07
2	0	56	57	6015.03	2	3857.01	2.5927	0.0400	0.0	0.0	1.68E-07	1.32E-06	4.13E-06	8.26E-06
7	5	29	30	12153.49	1	3857.02	2.5927	0.0400	0.0	0.0	1.18E-08	1.07E-06	1.47E-05	7.84E-05
11	9	27	26	19577.75	1	3857.26	2.5925	0.0400	0.0	0.0	0.0	0.0	3.88E-08	6.79E-07
6	4	24	25	9382.42	2	3857.35	2.5925	0.0400	0.0	0.0	0.0	1.87E-07	1.31E-06	4.50E-06
11	9	68	67	26256.09	1	3857.39	2.5924	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-08
10	8	5	4	16443.96	1	3857.40	2.5924	0.0645	0.0	0.0	0.0	0.0	1.05E-07	1.11E-06
5	7	8	9	14610.99	1	3857.67	2.5922	0.0550	0.0	0.0	0.0	3.29E-08	8.12E-07	6.42E-06
5	3	33	34	8333.21	2	3857.99	2.5920	0.0400	0.0	0.0	2.85E-08	5.64E-07	3.08E-06	8.92E-06
6	6	1	2	12208.27	2	3858.20	2.5919	0.0738	0.0	0.0	0.0	0.0	1.49E-08	8.03E-08
11	9	28	27	19672.59	1	3858.78	2.5915	0.0400	0.0	0.0	0.0	0.0	3.69E-08	6.56E-07
8	6	19	20	13225.99	1	3858.86	2.5914	0.0458	0.0	0.0	0.0	2.81E-07	4.97E-06	3.15E-05
11	9	67	66	26026.96	1	3858.94	2.5914	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-08
9	7	15	14	14504.62	2	3859.20	2.5912	0.0517	0.0	0.0	0.0	0.0	1.77E-08	1.37E-07
4	2	41	42	7408.88	2	3859.48	2.5910	0.0400	0.0	0.0	8.85E-08	1.21E-06	5.30E-06	1.32E-05
5	3	45	46	10364.77	1	3859.68	2.5909	0.0400	0.0	0.0	1.37E-07	6.11E-06	5.45E-05	2.19E-04
3	1	59	60	9033.32	1	3859.97	2.5907	0.0400	0.0	0.0	4.09E-07	1.07E-05	6.95E-05	2.25E-04
7	5	13	14	10596.32	2	3860.11	2.5906	0.0528	0.0	0.0	0.0	3.66E-08	3.44E-07	1.43E-06
11	9	29	28	19770.91	1	3860.22	2.5905	0.0400	0.0	0.0	0.0	0.0	3.50E-08	6.31E-07
11	9	66	65	25801.04	1	3860.41	2.5904	0.0400	0.0	0.0	0.0	0.0	0.0	1.43E-08
10	6	6	5	16461.79	1	3860.54	2.5903	0.0621	0.0	0.0	0.0	0.0	1.25E-07	1.33E-06
6	4	37	38	11146.46	1	3860.62	2.5903	0.0400	0.0	0.0	5.09E-08	3.11E-06	3.34E-05	1.52E-04
4	2	52	53	9611.86	1	3861.53	2.5896	0.0400	0.0	0.0	3.01E-07	9.95E-06	7.41E-05	2.63E-04
9	7	16	15	14556.26	2	3861.59	2.5896	0.0505	0.0	0.0	0.0	0.0	1.80E-08	1.41E-07
11	9	30	29	19872.69	1	3861.60	2.5896	0.0400	0.0	0.0	0.0	0.0	3.30E-08	6.04E-07
8	6	0	1	12201.31	2	3861.74	2.5895	0.0769	0.0	0.0	0.0	0.0	0.0	4.05E-08
11	9	65	64	25578.32	1	3861.80	2.5895	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-08
9	7	7	8	14578.61	1	3861.82	2.5895	0.0574	0.0	0.0	0.0	3.05E-08	7.48E-07	5.88E-06
6	4	23	24	9294.14	2	3862.42	2.5891	0.0412	0.0	0.0	0.0	2.01E-07	1.38E-06	4.66E-06
7	5	28	29	12044.05	1	3862.65	2.5889	0.0400	0.0	0.0	1.36E-08	1.19E-06	1.58E-05	8.31E-05
11	9	31	30	19977.94	1	3862.89	2.5887	0.0400	0.0	0.0	0.0	0.0	3.10E-08	5.78E-07
11	9	64	63	25358.84	1	3863.12	2.5886	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-08
2	0	65	66	8381.13	1	3863.19	2.5885	0.0400	0.0	0.0	4.12E-07	8.32E-06	4.61E-05	1.35E-04
3	1	48	49	6525.41	2	3863.42	2.5884	0.0400	0.0	0.0	2.02E-07	1.94E-06	6.88E-06	1.49E-05
10	8	7	6	16463.18	1	3863.62	2.5882	0.0597	0.0	0.0	0.0	0.0	1.43E-07	1.53E-06
5	3	32	33	8212.45	2	3863.65	2.5882	0.0400	0.0	0.0	3.37E-08	6.35E-07	3.37E-06	9.58E-06
8	6	18	19	13153.48	1	3863.80	2.5881	0.0470	0.0	0.0	0.0	2.93E-07	5.09E-06	3.19E-05
9	7	17	16	14611.32	2	3863.91	2.5881	0.0493	0.0	0.0	0.0	0.0	1.83E-08	1.44E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
11	9	32	31	20086.64	1	3864.12	2.5879	0.0400	0.0	0.0	0.0	0.0	2.90E-08	5.50E-07
2	0	55	56	5809.67	2	3864.13	2.5879	0.0400	0.0	0.0	2.31E-07	1.66E-06	4.97E-06	9.61E-06
11	9	63	62	25142.58	1	3864.35	2.5878	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-08
7	5	12	13	10547.20	2	3864.46	2.5877	0.0540	0.0	0.0	0.0	3.62E-08	3.37E-07	1.39E-06
11	9	33	32	20198.81	1	3865.26	2.5871	0.0400	0.0	0.0	0.0	0.0	2.70E-08	5.22E-07
11	9	62	61	24929.57	1	3865.50	2.5870	0.0400	0.0	0.0	0.0	0.0	0.0	2.63E-08
4	2	40	41	7258.90	2	3865.65	2.5869	0.0400	0.0	0.0	1.10E-07	1.42E-06	6.00E-06	1.46E-05
9	7	6	7	14549.82	1	3865.91	2.5867	0.0597	0.0	0.0	0.0	2.78E-08	6.76E-07	5.29E-06
9	7	18	17	14669.81	2	3866.16	2.5865	0.0482	0.0	0.0	0.0	0.0	1.84E-08	1.46E-07
11	9	34	33	20314.43	1	3866.34	2.5864	0.0400	0.0	0.0	0.0	0.0	2.51E-08	4.93E-07
5	3	44	45	10195.12	1	3866.41	2.5864	0.0400	0.0	0.0	1.76E-07	7.36E-06	6.30E-05	2.46E-04
11	9	61	60	24719.80	1	3866.58	2.5863	0.0400	0.0	0.0	0.0	0.0	0.0	3.04E-08
10	8	8	7	16508.13	1	3866.62	2.5862	0.0574	0.0	0.0	0.0	0.0	1.61E-07	1.72E-06
6	4	36	37	11007.02	1	3866.81	2.5861	0.0400	0.0	0.0	6.22E-08	3.59E-06	3.73E-05	1.66E-04
11	9	35	34	20433.50	1	3867.34	2.5858	0.0400	0.0	0.0	0.0	0.0	2.32E-08	4.65E-07
6	4	22	23	9209.37	2	3867.43	2.5857	0.0423	0.0	0.0	0.0	2.14E-07	1.44E-06	4.80E-06
11	9	60	59	24513.30	1	3867.58	2.5856	0.0400	0.0	0.0	0.0	0.0	0.0	3.51E-08
3	1	58	59	8810.04	1	3867.65	2.5855	0.0400	0.0	0.0	5.78E-07	1.39E-05	8.51E-05	2.66E-04
7	5	27	28	11938.21	1	3868.22	2.5852	0.0400	0.0	0.0	1.56E-08	1.31E-06	1.70E-05	8.78E-05
11	9	36	35	20556.01	1	3868.26	2.5851	0.0400	0.0	0.0	0.0	0.0	2.13E-08	4.36E-07
9	7	19	18	14731.73	2	3868.34	2.5851	0.0470	0.0	0.0	0.0	0.0	1.84E-08	1.48E-07
11	9	59	58	24310.07	1	3868.49	2.5850	0.0400	0.0	0.0	0.0	0.0	0.0	4.04E-08
8	6	1	0	12197.83	2	3868.64	2.5849	0.0769	0.0	0.0	0.0	0.0	0.0	4.11E-08
8	6	17	18	13084.58	1	3868.67	2.5849	0.0482	0.0	0.0	0.0	3.02E-07	5.18E-06	3.21E-05
4	2	51	52	9415.45	1	3868.74	2.5848	0.0400	0.0	0.0	4.06E-07	1.24E-05	8.82E-05	3.04E-04
7	5	11	12	10501.59	2	3868.74	2.5848	0.0542	0.0	0.0	0.0	3.55E-08	3.26E-07	1.34E-06
11	9	37	36	20681.96	1	3869.11	2.5846	0.0400	0.0	0.0	0.0	0.0	1.95E-08	4.08E-07
5	3	31	32	8095.19	2	3869.25	2.5845	0.0400	0.0	0.0	3.96E-08	7.12E-07	3.67E-06	1.02E-05
11	9	58	57	24110.11	1	3869.33	2.5844	0.0400	0.0	0.0	0.0	0.0	0.0	4.63E-08
10	8	9	8	16536.64	1	3869.55	2.5843	0.0550	0.0	0.0	0.0	0.0	1.77E-07	1.90E-06
11	9	36	37	20811.34	1	3869.88	2.5841	0.0400	0.0	0.0	0.0	0.0	1.78E-08	3.80E-07
9	7	5	6	14524.62	1	3869.93	2.5840	0.0621	0.0	0.0	0.0	2.47E-08	5.96E-07	4.65E-06
3	1	47	48	6349.53	2	3870.04	2.5840	0.0400	0.0	0.0	2.64E-07	2.36E-06	8.02E-06	1.69E-05
11	9	57	56	23913.44	1	3870.09	2.5839	0.0400	0.0	0.0	0.0	0.0	0.0	5.30E-08
9	7	20	19	14797.07	2	3870.45	2.5837	0.0458	0.0	0.0	0.0	0.0	1.83E-08	1.49E-07
11	9	39	38	20944.14	1	3870.58	2.5836	0.0400	0.0	0.0	0.0	0.0	1.62E-08	3.53E-07
11	9	56	55	23720.06	1	3870.78	2.5835	0.0400	0.0	0.0	0.0	0.0	0.0	6.05E-08
2	0	54	55	5607.77	2	3871.20	2.5832	0.0400	0.0	0.0	3.14E-07	2.09E-06	5.95E-06	1.11E-05
11	9	40	39	21080.37	1	3871.21	2.5832	0.0400	0.0	0.0	0.0	0.0	1.47E-08	3.26E-07
2	0	64	65	8134.45	1	3871.27	2.5831	0.0400	0.0	0.0	6.03E-07	1.10E-05	5.77E-05	1.62E-04
11	9	55	54	23529.98	1	3871.38	2.5831	0.0400	0.0	0.0	0.0	0.0	0.0	6.88E-08
11	9	41	40	21220.01	1	3871.75	2.5828	0.0400	0.0	0.0	0.0	0.0	1.32E-08	3.01E-07
4	2	39	40	7112.42	2	3871.77	2.5828	0.0400	0.0	0.0	1.36E-07	1.66E-06	6.76E-06	1.61E-05
11	9	54	53	23343.22	1	3871.91	2.5827	0.0400	0.0	0.0	0.0	0.0	0.0	7.80E-08
8	6	2	1	12201.31	2	3871.99	2.5827	0.0738	0.0	0.0	0.0	0.0	1.53E-08	8.24E-08
11	9	42	41	21363.06	1	3872.22	2.5825	0.0400	0.0	0.0	0.0	0.0	1.19E-08	2.77E-07
11	9	53	52	23159.78	1	3872.36	2.5824	0.0400	0.0	0.0	0.0	0.0	0.0	8.82E-08
6	4	21	22	9128.10	2	3872.38	2.5824	0.0435	0.0	0.0	0.0	2.27E-07	1.50E-06	4.93E-06
10	8	10	9	16568.71	1	3872.41	2.5824	0.0547	0.0	0.0	0.0	0.0	1.92E-07	2.07E-06
9	7	21	20	14865.84	2	3872.50	2.5823	0.0447	0.0	0.0	0.0	0.0	1.80E-08	1.48E-07
11	9	43	42	21509.51	1	3872.62	2.5822	0.0400	0.0	0.0	0.0	0.0	1.06E-08	2.53E-07
11	9	52	51	22979.66	1	3872.73	2.5822	0.0400	0.0	0.0	0.0	0.0	0.0	9.94E-08
11	9	44	43	21659.36	1	3872.94	2.5820	0.0400	0.0	0.0	0.0	0.0	0.0	2.31E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	35	36	10871.18	1	3872.94	2.5820	0.0400	0.0	0.0	7.55E-08	4.13E-06	4.15E-05	1.81E-04
7	5	10	11	10459.48	2	3872.97	2.5820	0.0545	0.0	0.0	0.0	3.44E-08	3.13E-07	1.27E-06
11	9	51	50	22802.87	1	3873.03	2.5820	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-07
5	3	43	44	10029.06	1	3873.08	2.5819	0.0400	0.0	0.0	2.26E-07	8.81E-06	7.25E-05	2.76E-04
11	9	45	44	21812.60	1	3873.18	2.5819	0.0400	0.0	0.0	0.0	0.0	0.0	2.11E-07
11	9	50	49	22629.43	1	3873.25	2.5818	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-07
11	9	46	45	21969.23	1	3873.35	2.5817	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-07
11	9	49	48	22459.34	1	3873.39	2.5817	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-07
11	9	47	46	22129.23	1	3873.44	2.5817	0.0400	0.0	0.0	0.0	0.0	0.0	1.73E-07
11	9	48	47	22292.60	1	3873.45	2.5817	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-07
8	6	16	17	13019.29	1	3873.47	2.5817	0.0493	0.0	0.0	0.0	3.10E-07	5.23E-06	3.21E-05
7	5	26	27	11835.99	1	3873.72	2.5815	0.0400	0.0	0.0	1.78E-08	1.43E-06	1.82E-05	9.24E-05
9	7	4	5	14503.03	1	3873.87	2.5814	0.0645	0.0	0.0	0.0	2.12E-08	5.09E-07	3.96E-06
9	7	22	21	14938.02	2	3874.48	2.5810	0.0435	0.0	0.0	0.0	0.0	1.77E-08	1.47E-07
5	3	30	31	7981.43	2	3874.79	2.5808	0.0400	0.0	0.0	4.61E-08	7.93E-07	3.98E-06	1.09E-05
10	8	11	10	16604.34	1	3875.20	2.5805	0.0545	0.0	0.0	0.0	0.0	2.05E-07	2.23E-06
3	1	57	58	8590.31	1	3875.26	2.5805	0.0400	0.0	0.0	8.10E-07	1.78E-05	1.04E-04	3.13E-04
8	6	3	2	12208.27	2	3875.27	2.5805	0.0707	0.0	0.0	0.0	0.0	2.30E-08	1.24E-07
4	2	50	51	9222.61	1	3875.89	2.5801	0.0400	0.0	0.0	5.45E-07	1.54E-05	1.04E-04	3.49E-04
9	7	23	22	15013.62	2	3876.39	2.5797	0.0423	0.0	0.0	0.0	0.0	1.73E-08	1.46E-07
3	1	46	47	6177.14	2	3876.61	2.5796	0.0400	0.0	0.0	3.41E-07	2.85E-06	9.30E-06	1.91E-05
7	5	9	10	10420.87	2	3877.12	2.5792	0.0547	0.0	0.0	0.0	3.29E-08	2.97E-07	1.20E-06
6	4	20	21	9050.34	2	3877.27	2.5791	0.0447	0.0	0.0	0.0	2.39E-07	1.55E-06	5.03E-06
9	7	3	4	14485.03	1	3877.75	2.5788	0.0676	0.0	0.0	0.0	1.74E-08	4.16E-07	3.23E-06
4	2	38	39	6969.43	2	3877.82	2.5788	0.0400	0.0	0.0	1.68E-07	1.92E-06	7.59E-06	1.77E-05
10	8	12	11	16643.52	1	3877.92	2.5787	0.0542	0.0	0.0	0.0	0.0	2.17E-07	2.37E-06
8	6	15	16	12957.61	1	3878.20	2.5785	0.0505	0.0	0.0	0.0	3.16E-07	5.25E-06	3.19E-05
2	0	53	54	5409.33	2	3878.21	2.5785	0.0400	0.0	0.0	4.26E-07	2.62E-06	7.10E-06	1.29E-05
9	7	24	23	15092.63	2	3878.24	2.5785	0.0412	0.0	0.0	0.0	0.0	1.68E-08	1.44E-07
8	6	4	3	12218.71	2	3878.49	2.5783	0.0676	0.0	0.0	0.0	0.0	3.05E-08	1.65E-07
6	4	34	35	10738.94	1	3879.00	2.5780	0.0400	0.0	0.0	9.10E-08	4.72E-06	4.60E-05	1.96E-04
7	5	25	26	11737.38	1	3879.16	2.5779	0.0400	0.0	0.0	2.02E-08	1.56E-06	1.94E-05	9.68E-05
2	0	63	64	7891.29	1	3879.28	2.5778	0.0400	0.0	0.0	8.78E-07	1.46E-05	7.19E-05	1.94E-04
5	3	42	43	9866.59	1	3879.69	2.5775	0.0400	0.0	0.0	2.87E-07	1.05E-05	8.31E-05	3.08E-04
9	7	25	24	15175.05	2	3880.01	2.5773	0.0400	0.0	0.0	0.0	0.0	1.63E-08	1.41E-07
5	3	29	30	7871.18	2	3880.27	2.5771	0.0400	0.0	0.0	5.34E-08	8.79E-07	4.30E-06	1.16E-05
10	8	13	12	16666.27	1	3880.56	2.5769	0.0540	0.0	0.0	0.0	0.0	2.26E-07	2.49E-06
7	5	8	9	10385.77	2	3881.22	2.5765	0.0550	0.0	0.0	0.0	3.10E-08	2.77E-07	1.11E-06
9	7	2	3	14470.63	1	3881.56	2.5763	0.0707	0.0	0.0	0.0	1.33E-08	3.18E-07	2.46E-06
8	6	5	4	12232.63	2	3881.64	2.5762	0.0645	0.0	0.0	0.0	0.0	3.79E-08	2.05E-07
9	7	26	25	15260.88	2	3881.71	2.5762	0.0400	0.0	0.0	0.0	0.0	1.57E-08	1.37E-07
6	4	19	20	8976.10	2	3882.10	2.5759	0.0458	0.0	0.0	0.0	2.50E-07	1.59E-06	5.11E-06
3	1	56	57	8374.14	1	3882.82	2.5754	0.0400	0.0	0.0	1.13E-06	2.28E-05	1.26E-04	3.68E-04
8	6	14	15	12899.54	1	3882.87	2.5754	0.0517	0.0	0.0	0.0	3.19E-07	5.23E-06	3.14E-05
4	2	49	50	9033.35	1	3882.97	2.5753	0.0400	0.0	0.0	7.26E-07	1.90E-05	1.23E-04	4.00E-04
3	1	45	46	6008.24	2	3883.11	2.5753	0.0400	0.0	0.0	4.39E-07	3.43E-06	1.07E-05	2.15E-05
10	8	14	13	16732.56	1	3883.14	2.5752	0.0528	0.0	0.0	0.0	0.0	2.34E-07	2.60E-06
9	7	27	26	15350.11	2	3883.35	2.5751	0.0400	0.0	0.0	0.0	0.0	1.50E-08	1.33E-07
4	2	37	38	6829.95	2	3883.82	2.5748	0.0400	0.0	0.0	2.05E-07	2.22E-06	8.48E-06	1.93E-05
7	5	24	25	11642.38	1	3884.53	2.5743	0.0400	0.0	0.0	2.28E-08	1.69E-06	2.05E-05	1.01E-04
8	6	6	5	12250.03	2	3884.73	2.5742	0.0621	0.0	0.0	0.0	0.0	4.50E-08	2.44E-07
9	7	28	27	15442.75	2	3884.92	2.5741	0.0400	0.0	0.0	0.0	0.0	1.43E-08	1.29E-07
6	4	33	34	10610.31	1	3884.99	2.5740	0.0400	0.0	0.0	1.09E-07	5.37E-06	5.08E-05	2.12E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	52	53	5214.37	2	3885.16	2.5739	0.0400	0.0	1.38E-08	5.73E-07	3.26E-06	8.44E-06	1.48E-05
7	5	7	8	10354.17	2	3885.25	2.5738	0.0574	0.0	0.0	0.0	2.88E-08	2.55E-07	1.02E-06
9	7	1	2	14459.83	1	3885.30	2.5738	0.0738	0.0	0.0	0.0	0.0	2.15E-07	1.66E-06
10	8	15	14	16782.41	1	3885.64	2.5736	0.0517	0.0	0.0	0.0	0.0	2.41E-07	2.69E-06
5	3	28	29	7764.45	2	3885.68	2.5736	0.0400	0.0	0.0	6.16E-08	9.71E-07	4.63E-06	1.22E-05
5	3	41	42	9707.73	1	3886.24	2.5732	0.0400	0.0	0.0	3.63E-07	1.25E-05	9.49E-05	3.43E-04
9	7	29	28	15538.77	2	3886.42	2.5731	0.0400	0.0	0.0	0.0	0.0	1.36E-08	1.24E-07
6	4	18	19	8505.38	2	3886.86	2.5728	0.0470	0.0	0.0	1.04E-08	2.60E-07	1.63E-06	5.16E-06
2	0	62	63	7651.67	1	3887.24	2.5725	0.0400	0.0	0.0	1.27E-06	1.92E-05	8.93E-05	2.32E-04
8	6	13	14	12845.10	1	3887.47	2.5724	0.0528	0.0	0.0	0.0	3.19E-07	5.16E-06	3.08E-05
8	6	7	6	12270.90	2	3887.74	2.5722	0.0597	0.0	0.0	0.0	0.0	5.17E-08	2.81E-07
9	7	30	29	15638.19	2	3887.85	2.5721	0.0400	0.0	0.0	0.0	0.0	1.28E-08	1.20E-07
10	8	16	15	16835.81	1	3888.07	2.5720	0.0505	0.0	0.0	0.0	0.0	2.45E-07	2.77E-06
9	7	0	1	14452.63	1	3888.97	2.5714	0.0769	0.0	0.0	0.0	0.0	1.09E-07	8.39E-07
9	7	31	30	15741.00	2	3889.21	2.5712	0.0400	0.0	0.0	0.0	0.0	1.21E-08	1.15E-07
7	5	6	7	10326.08	2	3889.22	2.5712	0.0597	0.0	0.0	0.0	2.61E-08	2.31E-07	9.18E-07
3	1	44	45	5842.84	2	3889.56	2.5710	0.0400	0.0	0.0	5.62E-07	4.11E-06	1.24E-05	2.41E-05
4	2	36	37	6693.98	2	3889.76	2.5709	0.0400	0.0	0.0	2.49E-07	2.56E-06	9.45E-06	2.10E-05
7	5	23	24	11551.01	1	3889.83	2.5708	0.0412	0.0	0.0	2.54E-08	1.82E-06	2.16E-05	1.05E-04
4	2	48	49	8847.68	1	3889.99	2.5707	0.0400	0.0	0.0	9.61E-07	2.34E-05	1.45E-04	4.57E-04
3	1	55	56	8161.53	1	3890.31	2.5705	0.0400	0.0	0.0	1.57E-06	2.90E-05	1.52E-04	4.30E-04
10	8	17	16	16892.75	1	3890.43	2.5704	0.0493	0.0	0.0	0.0	0.0	2.48E-07	2.83E-06
9	7	32	31	15847.20	2	3890.50	2.5704	0.0400	0.0	0.0	0.0	0.0	1.14E-08	1.09E-07
8	6	8	7	12295.25	2	3890.70	2.5702	0.0574	0.0	0.0	0.0	0.0	5.81E-08	3.17E-07
6	4	32	33	10485.30	1	3890.92	2.5701	0.0400	0.0	0.0	1.30E-07	6.07E-06	5.58E-05	2.28E-04
5	3	27	28	7661.24	2	3891.04	2.5700	0.0400	0.0	0.0	7.05E-08	1.07E-06	4.96E-06	1.29E-05
6	4	17	18	8838.17	2	3891.56	2.5697	0.0482	0.0	0.0	1.11E-08	2.68E-07	1.65E-06	5.19E-06
9	7	33	32	15956.77	2	3891.72	2.5696	0.0400	0.0	0.0	0.0	0.0	1.06E-08	1.04E-07
8	6	12	13	12794.27	1	3892.00	2.5694	0.0540	0.0	0.0	0.0	3.17E-07	5.06E-06	2.99E-05
2	0	51	52	5022.89	2	3892.05	2.5693	0.0400	0.0	2.15E-08	7.67E-07	4.04E-06	9.99E-06	1.70E-05
10	8	18	17	16953.25	1	3892.71	2.5689	0.0482	0.0	0.0	0.0	0.0	2.49E-07	2.87E-06
5	3	40	41	9552.46	1	3892.72	2.5689	0.0400	0.0	0.0	4.56E-07	1.47E-05	1.08E-04	3.81E-04
9	7	34	33	16069.71	2	3892.87	2.5688	0.0400	0.0	0.0	0.0	0.0	0.0	9.85E-08
7	5	5	6	10301.50	2	3893.12	2.5686	0.0621	0.0	0.0	0.0	2.32E-08	2.03E-07	8.06E-07
8	6	9	8	12323.08	2	3893.59	2.5683	0.0550	0.0	0.0	0.0	0.0	6.40E-08	3.51E-07
9	7	35	34	16166.04	2	3893.95	2.5681	0.0400	0.0	0.0	0.0	0.0	0.0	9.30E-08
10	8	19	18	17017.28	1	3894.93	2.5674	0.0470	0.0	0.0	0.0	0.0	2.49E-07	2.89E-06
9	7	36	35	16305.72	2	3894.96	2.5674	0.0400	0.0	0.0	0.0	0.0	0.0	8.75E-08
7	5	22	23	11463.27	1	3895.07	2.5673	0.0423	0.0	0.0	2.82E-08	1.95E-06	2.26E-05	1.08E-04
2	0	61	62	7415.60	1	3895.13	2.5673	0.0400	0.0	0.0	1.83E-06	2.51E-05	1.11E-04	2.77E-04
4	2	35	36	6561.53	2	3895.63	2.5670	0.0400	0.0	0.0	3.01E-07	2.93E-06	1.05E-05	2.28E-05
9	7	37	36	16428.77	2	3895.90	2.5668	0.0400	0.0	0.0	0.0	0.0	0.0	8.20E-08
3	1	43	44	5680.94	2	3895.95	2.5668	0.0400	0.0	1.18E-08	7.15E-07	4.90E-06	1.42E-05	2.69E-05
9	7	1	0	14449.03	1	3896.10	2.5667	0.0769	0.0	0.0	0.0	0.0	1.10E-07	8.50E-07
6	4	16	17	8774.49	2	3896.19	2.5666	0.0493	0.0	0.0	1.16E-08	2.74E-07	1.67E-06	5.18E-06
5	3	26	27	7561.55	2	3896.33	2.5665	0.0400	0.0	0.0	8.02E-08	1.17E-06	5.30E-06	1.36E-05
8	6	10	9	12354.38	2	3896.41	2.5665	0.0547	0.0	0.0	0.0	0.0	6.94E-08	3.82E-07
8	6	11	12	12747.07	1	3896.46	2.5664	0.0542	0.0	0.0	0.0	3.11E-07	4.91E-06	2.88E-05
10	8	76	75	26369.43	1	3896.49	2.5664	0.0400	0.0	0.0	0.0	0.0	0.0	9.11E-09
9	7	38	37	16555.18	2	3896.77	2.5662	0.0400	0.0	0.0	0.0	0.0	0.0	7.66E-08
6	4	31	32	10363.92	1	3896.79	2.5662	0.0400	0.0	0.0	1.53E-07	6.84E-06	6.10E-05	2.45E-04
4	2	47	48	8665.59	1	3896.95	2.5661	0.0400	0.0	0.0	1.26E-06	2.86E-05	1.70E-04	5.20E-04
7	5	4	5	10280.43	2	3896.95	2.5661	0.0645	0.0	0.0	0.0	1.99E-08	1.74E-07	6.86E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	8	20	19	17084.85	1	3897.07	2.5660	0.0458	0.0	0.0	0.0	0.0	2.46E-07	2.90E-06
9	7	39	38	16684.94	2	3897.58	2.5657	0.0400	0.0	0.0	0.0	0.0	0.0	7.13E-08
3	1	54	55	7952.49	1	3897.74	2.5656	0.0400	0.0	0.0	2.16E-06	3.68E-05	1.84E-04	5.02E-04
9	7	40	39	16818.04	2	3898.31	2.5652	0.0400	0.0	0.0	0.0	0.0	0.0	6.62E-08
10	8	75	74	26112.42	1	3898.65	2.5650	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-08
2	0	50	51	4834.91	2	3898.88	2.5648	0.0400	0.0	3.32E-08	1.02E-06	4.99E-06	1.18E-05	1.95E-05
9	7	41	40	16954.49	2	3898.97	2.5648	0.0400	0.0	0.0	0.0	0.0	0.0	6.12E-08
5	3	39	40	9400.82	1	3899.13	2.5647	0.0400	0.0	0.0	5.69E-07	1.73E-05	1.22E-04	4.21E-04
10	8	21	20	17155.96	1	3899.13	2.5647	0.0447	0.0	0.0	0.0	0.0	2.43E-07	2.89E-06
8	6	11	10	12389.16	2	3899.16	2.5647	0.0545	0.0	0.0	0.0	0.0	7.43E-08	4.11E-07
9	7	58	57	19779.64	2	3899.24	2.5646	0.0400	0.0	0.0	0.0	0.0	0.0	9.95E-09
9	7	42	41	17094.27	2	3899.55	2.5644	0.0400	0.0	0.0	0.0	0.0	0.0	5.64E-08
9	7	2	1	14452.63	1	3899.56	2.5644	0.0738	0.0	0.0	0.0	0.0	2.21E-07	1.70E-06
9	7	57	56	19587.32	2	3899.80	2.5642	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-08
9	7	43	42	17237.39	2	3900.07	2.5641	0.0400	0.0	0.0	0.0	0.0	0.0	5.18E-08
7	5	21	22	11379.15	1	3900.24	2.5639	0.0435	0.0	0.0	3.10E-08	2.07E-06	2.36E-05	1.11E-04
9	7	56	55	19398.23	2	3900.29	2.5639	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-08
9	7	44	43	17383.83	2	3900.52	2.5638	0.0400	0.0	0.0	0.0	0.0	0.0	4.74E-08
9	7	55	54	19212.38	2	3900.71	2.5636	0.0400	0.0	0.0	0.0	0.0	0.0	1.46E-08
7	5	3	4	10262.87	2	3900.73	2.5636	0.0676	0.0	0.0	0.0	1.63E-08	1.42E-07	5.59E-07
10	8	74	73	25858.57	1	3900.73	2.5636	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-08
6	4	15	16	8714.33	2	3900.76	2.5636	0.0505	0.0	0.0	1.21E-08	2.79E-07	1.67E-06	5.14E-06
8	6	10	11	12703.48	1	3900.85	2.5635	0.0545	0.0	0.0	0.0	3.02E-07	4.71E-06	2.75E-05
9	7	45	44	17533.59	2	3900.89	2.5635	0.0400	0.0	0.0	0.0	0.0	0.0	4.33E-08
9	7	54	53	19029.77	2	3901.05	2.5634	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-08
10	8	22	21	17230.61	1	3901.13	2.5634	0.0435	0.0	0.0	0.0	0.0	2.38E-07	2.86E-06
9	7	46	45	17686.66	2	3901.20	2.5633	0.0400	0.0	0.0	0.0	0.0	0.0	3.94E-08
9	7	53	52	18850.42	2	3901.32	2.5632	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-08
9	7	47	46	17843.04	2	3901.43	2.5632	0.0400	0.0	0.0	0.0	0.0	0.0	3.57E-08
4	2	34	35	6432.60	2	3901.45	2.5631	0.0400	0.0	0.0	3.61E-07	3.34E-06	1.16E-05	2.47E-05
9	7	52	51	18674.34	2	3901.52	2.5631	0.0400	0.0	0.0	0.0	0.0	0.0	2.09E-08
5	3	25	26	7465.39	2	3901.56	2.5631	0.0400	0.0	0.0	9.05E-08	1.27E-06	5.62E-06	1.42E-05
9	7	48	47	18002.73	2	3901.59	2.5631	0.0400	0.0	0.0	0.0	0.0	0.0	3.23E-08
9	7	51	50	18501.51	2	3901.65	2.5630	0.0400	0.0	0.0	0.0	0.0	0.0	2.34E-08
9	7	49	48	18165.70	2	3901.68	2.5630	0.0400	0.0	0.0	0.0	0.0	0.0	2.91E-08
9	7	50	49	18331.96	2	3901.70	2.5630	0.0400	0.0	0.0	0.0	0.0	0.0	2.61E-08
8	6	12	11	12427.41	2	3901.85	2.5629	0.0542	0.0	0.0	0.0	0.0	7.85E-08	4.37E-07
3	1	42	43	5522.55	2	3902.28	2.5626	0.0400	0.0	1.70E-08	9.04E-07	5.81E-06	1.62E-05	2.99E-05
6	4	30	31	10246.16	1	3902.59	2.5624	0.0400	0.0	0.0	1.80E-07	7.65E-06	6.64E-05	2.61E-04
10	8	73	72	25607.89	1	3902.73	2.5623	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-08
9	7	3	2	14459.83	1	3902.95	2.5622	0.0707	0.0	0.0	0.0	1.39E-08	3.31E-07	2.56E-06
2	0	60	61	7183.08	1	3902.97	2.5622	0.0400	0.0	1.30E-08	2.62E-06	3.28E-05	1.36E-04	3.29E-04
10	8	23	22	17308.79	1	3903.05	2.5621	0.0423	0.0	0.0	0.0	0.0	2.32E-07	2.83E-06
4	2	46	47	8487.11	1	3903.85	2.5616	0.0400	0.0	0.0	1.65E-06	3.49E-05	1.98E-04	5.89E-04
7	5	2	3	10248.82	2	3904.43	2.5612	0.0707	0.0	0.0	0.0	1.25E-08	1.08E-07	4.26E-07
8	6	13	12	12469.13	2	3904.47	2.5612	0.0540	0.0	0.0	0.0	0.0	8.22E-08	4.61E-07
10	8	72	71	25360.39	1	3904.65	2.5610	0.0400	0.0	0.0	0.0	0.0	0.0	1.89E-08
10	8	24	23	17390.49	1	3904.90	2.5609	0.0412	0.0	0.0	0.0	0.0	2.25E-07	2.78E-06
3	1	53	54	7747.04	1	3905.11	2.5607	0.0400	0.0	0.0	2.96E-06	4.64E-05	2.21E-04	5.83E-04
8	6	9	10	12663.53	1	3905.18	2.5607	0.0547	0.0	0.0	0.0	2.89E-07	4.47E-06	2.59E-05
6	4	14	15	8657.70	2	3905.27	2.5606	0.0517	0.0	0.0	1.25E-08	2.81E-07	1.66E-06	5.07E-06
7	5	20	21	11298.67	1	3905.35	2.5606	0.0447	0.0	0.0	3.38E-08	2.15E-06	2.44E-05	1.14E-04
5	3	38	39	9252.79	1	3905.49	2.5605	0.0400	0.0	0.0	7.05E-07	2.02E-05	1.38E-04	4.64E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	49	50	4650.41	2	3905.66	2.5604	0.0400	0.0	5.08E-08	1.35E-06	6.13E-06	1.39E-05	2.23E-05
9	7	4	3	14470.63	1	3906.27	2.5600	0.0676	0.0	0.0	0.0	1.84E-08	4.40E-07	3.40E-06
10	8	71	70	25116.07	1	3906.48	2.5598	0.0400	0.0	0.0	0.0	0.0	0.0	2.25E-08
10	8	25	24	17475.72	1	3906.67	2.5597	0.0400	0.0	0.0	0.0	0.0	2.17E-07	2.71E-06
5	3	24	25	7372.76	2	3906.73	2.5597	0.0400	0.0	0.0	1.01E-07	1.37E-06	5.94E-06	1.48E-05
8	6	14	13	12514.32	2	3907.02	2.5595	0.0528	0.0	0.0	0.0	0.0	8.52E-08	4.81E-07
4	2	33	34	6307.19	2	3907.20	2.5594	0.0400	0.0	0.0	4.30E-07	3.78E-06	1.27E-05	2.67E-05
7	5	1	2	10238.29	2	3908.08	2.5588	0.0738	0.0	0.0	0.0	0.0	7.33E-08	2.88E-07
10	8	70	69	24874.95	1	3908.24	2.5587	0.0400	0.0	0.0	0.0	0.0	0.0	2.67E-08
6	4	29	30	10132.03	1	3908.32	2.5586	0.0400	0.0	0.0	2.09E-07	8.52E-06	7.19E-05	2.78E-04
10	8	26	25	17564.47	1	3908.37	2.5586	0.0400	0.0	0.0	0.0	0.0	2.08E-07	2.64E-06
3	1	41	42	5367.68	2	3908.54	2.5585	0.0400	0.0	2.41E-08	1.14E-06	6.87E-06	1.84E-05	3.32E-05
8	6	8	9	12627.20	1	3909.44	2.5579	0.0550	0.0	0.0	0.0	2.73E-07	4.19E-06	2.41E-05
8	6	15	14	12562.97	2	3909.51	2.5579	0.0517	0.0	0.0	0.0	0.0	8.76E-08	4.99E-07
9	7	5	4	14485.03	1	3909.52	2.5579	0.0645	0.0	0.0	0.0	2.27E-08	5.45E-07	4.23E-06
6	4	13	14	8604.60	2	3909.72	2.5577	0.0528	0.0	0.0	1.27E-08	2.81E-07	1.64E-06	4.96E-06
10	8	69	68	24637.04	1	3909.92	2.5576	0.0400	0.0	0.0	0.0	0.0	0.0	3.16E-08
10	8	27	26	17656.73	1	3910.00	2.5575	0.0400	0.0	0.0	0.0	0.0	1.99E-07	2.56E-06
7	5	19	20	11221.82	1	3910.38	2.5573	0.0458	0.0	0.0	3.65E-08	2.30E-06	2.52E-05	1.16E-04
4	2	45	46	8312.24	1	3910.68	2.5571	0.0400	0.0	0.0	2.15E-06	4.23E-05	2.30E-04	6.66E-04
2	0	59	60	6954.12	1	3910.74	2.5571	0.0400	0.0	2.22E-08	3.72E-06	4.25E-05	1.67E-04	3.89E-04
10	8	68	67	24402.34	1	3911.52	2.5566	0.0400	0.0	0.0	0.0	0.0	0.0	3.74E-08
10	8	28	27	17752.52	1	3911.56	2.5565	0.0400	0.0	0.0	0.0	0.0	1.89E-07	2.47E-06
7	5	0	1	10231.26	2	3911.66	2.5565	0.0769	0.0	0.0	0.0	0.0	3.70E-08	1.45E-07
5	3	37	38	9108.38	1	3911.78	2.5564	0.0400	0.0	0.0	8.69E-07	2.35E-05	1.55E-04	5.09E-04
5	3	23	24	7283.66	2	3911.83	2.5563	0.0412	0.0	0.0	1.13E-07	1.47E-06	6.24E-06	1.53E-05
8	6	16	15	12615.09	2	3911.92	2.5563	0.0505	0.0	0.0	0.0	0.0	8.94E-08	5.13E-07
2	0	48	49	4469.43	2	3912.37	2.5560	0.0400	0.0	7.72E-08	1.77E-06	7.49E-06	1.62E-05	2.53E-05
3	1	52	53	7545.17	1	3912.42	2.5560	0.0400	0.0	1.50E-08	4.02E-06	5.82E-05	2.64E-04	6.75E-04
9	7	6	5	14503.03	1	3912.70	2.5558	0.0621	0.0	0.0	0.0	2.69E-08	6.47E-07	5.03E-06
4	2	32	33	6185.32	2	3912.89	2.5557	0.0400	0.0	0.0	5.09E-07	4.26E-06	1.39E-05	2.86E-05
10	8	67	66	24170.88	1	3913.03	2.5556	0.0400	0.0	0.0	0.0	0.0	0.0	4.40E-08
10	8	29	28	17851.80	1	3913.04	2.5556	0.0400	0.0	0.0	0.0	0.0	1.79E-07	2.38E-06
8	6	7	8	12594.50	1	3913.63	2.5552	0.0574	0.0	0.0	0.0	2.53E-07	3.86E-06	2.21E-05
6	4	28	29	10021.54	1	3913.99	2.5549	0.0400	0.0	0.0	2.43E-07	9.45E-06	7.77E-05	2.95E-04
6	4	12	13	8555.02	2	3914.10	2.5549	0.0540	0.0	0.0	1.29E-08	2.78E-07	1.61E-06	4.82E-06
8	6	17	16	12670.68	2	3914.27	2.5548	0.0493	0.0	0.0	0.0	0.0	9.05E-08	5.24E-07
10	8	30	29	17954.60	1	3914.44	2.5546	0.0400	0.0	0.0	0.0	0.0	1.68E-07	2.28E-06
10	8	66	65	23942.65	1	3914.47	2.5546	0.0400	0.0	0.0	0.0	0.0	0.0	5.17E-08
3	1	40	41	5216.33	2	3914.75	2.5544	0.0400	0.0	3.40E-08	1.42E-06	8.07E-06	2.09E-05	3.68E-05
7	5	18	19	11148.61	1	3915.35	2.5540	0.0470	0.0	0.0	3.92E-08	2.40E-06	2.58E-05	1.17E-04
10	8	31	30	18060.90	1	3915.77	2.5538	0.0400	0.0	0.0	0.0	0.0	1.58E-07	2.17E-06
9	7	7	6	14524.62	1	3915.81	2.5538	0.0597	0.0	0.0	0.0	3.07E-08	7.43E-07	5.80E-06
10	8	65	64	23717.67	1	3915.83	2.5537	0.0400	0.0	0.0	0.0	0.0	0.0	6.05E-08
8	6	18	17	12729.73	2	3916.56	2.5533	0.0482	0.0	0.0	0.0	0.0	9.11E-08	5.32E-07
5	3	22	23	7198.11	2	3916.88	2.5531	0.0423	0.0	0.0	1.25E-07	1.57E-06	6.53E-06	1.58E-05
10	8	32	31	18170.69	1	3917.03	2.5530	0.0400	0.0	0.0	0.0	0.0	1.48E-07	2.07E-06
10	8	64	63	23495.95	1	3917.11	2.5529	0.0400	0.0	0.0	0.0	0.0	0.0	7.07E-08
4	2	44	45	8140.98	1	3917.45	2.5527	0.0400	0.0	0.0	2.78E-06	5.10E-05	2.67E-04	7.50E-04
8	6	6	7	12565.43	1	3917.75	2.5525	0.0597	0.0	0.0	0.0	2.31E-07	3.49E-06	1.99E-05
5	3	36	37	8967.61	1	3918.00	2.5523	0.0400	0.0	0.0	1.06E-06	2.72E-05	1.73E-04	5.57E-04
10	8	33	32	18283.98	1	3918.21	2.5522	0.0400	0.0	0.0	0.0	0.0	1.38E-07	1.96E-06
10	8	63	62	23277.50	1	3918.31	2.5521	0.0400	0.0	0.0	0.0	0.0	0.0	8.23E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	11	12	8508.98	2	3918.42	2.5520	0.0542	0.0	0.0	1.29E-08	2.73E-07	1.56E-06	4.64E-06
2	0	58	59	6728.75	1	3918.45	2.5520	0.0400	0.0	3.76E-08	5.27E-06	5.50E-05	2.05E-04	4.61E-04
4	2	31	32	6066.97	2	3918.53	2.5520	0.0400	0.0	0.0	5.98E-07	4.78E-06	1.52E-05	3.06E-05
7	5	1	0	10227.75	2	3918.62	2.5519	0.0769	0.0	0.0	0.0	0.0	3.76E-08	1.47E-07
8	6	19	18	12792.23	2	3918.77	2.5518	0.0470	0.0	0.0	0.0	0.0	9.10E-08	5.37E-07
9	7	8	7	14549.82	1	3918.84	2.5518	0.0574	0.0	0.0	0.0	3.43E-08	8.34E-07	6.53E-06
2	0	47	48	4291.95	2	3919.03	2.5517	0.0400	0.0	1.16E-07	2.32E-06	9.11E-06	1.89E-05	2.87E-05
10	8	34	33	18400.75	1	3919.32	2.5515	0.0400	0.0	0.0	0.0	0.0	1.28E-07	1.85E-06
10	8	62	61	23062.32	1	3919.43	2.5514	0.0400	0.0	0.0	0.0	0.0	0.0	9.55E-08
6	4	27	28	9914.69	1	3919.59	2.5513	0.0400	0.0	0.0	2.80E-07	1.04E-05	8.36E-05	3.12E-04
3	1	51	52	7346.91	1	3919.66	2.5512	0.0400	0.0	2.37E-08	5.44E-06	7.28E-05	3.15E-04	7.80E-04
7	5	17	18	11079.05	1	3920.26	2.5509	0.0482	0.0	0.0	4.17E-08	2.48E-06	2.63E-05	1.18E-04
10	8	35	34	18521.00	1	3920.35	2.5508	0.0400	0.0	0.0	0.0	0.0	1.18E-07	1.74E-06
10	8	61	60	22850.43	1	3920.47	2.5507	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-07
3	1	39	40	5068.50	2	3920.90	2.5504	0.0400	0.0	4.74E-08	1.76E-06	9.43E-06	2.36E-05	4.05E-05
8	6	20	19	12858.20	2	3920.92	2.5504	0.0458	0.0	0.0	0.0	0.0	9.04E-08	5.40E-07
10	8	36	35	18644.73	1	3921.31	2.5502	0.0400	0.0	0.0	0.0	0.0	1.08E-07	1.63E-06
10	8	60	59	22641.83	1	3921.43	2.5501	0.0400	0.0	0.0	0.0	0.0	0.0	1.28E-07
8	6	5	6	12539.99	1	3921.80	2.5498	0.0621	0.0	0.0	0.0	2.05E-07	3.08E-06	1.75E-05
9	7	9	8	14578.61	1	3921.81	2.5498	0.0550	0.0	0.0	0.0	3.74E-08	9.18E-07	7.22E-06
5	3	21	22	7116.09	2	3921.86	2.5498	0.0435	0.0	0.0	1.37E-07	1.66E-06	6.79E-06	1.62E-05
7	5	2	1	10231.26	2	3922.00	2.5497	0.0738	0.0	0.0	0.0	0.0	7.53E-08	2.95E-07
10	8	37	36	18771.94	1	3922.19	2.5496	0.0400	0.0	0.0	0.0	0.0	9.92E-08	1.53E-06
10	8	59	58	22436.54	1	3922.32	2.5495	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-07
6	4	10	11	8466.48	2	3922.68	2.5493	0.0545	0.0	0.0	1.27E-08	2.64E-07	1.49E-06	4.42E-06
10	8	38	37	18902.61	1	3923.00	2.5491	0.0400	0.0	0.0	0.0	0.0	9.04E-08	1.42E-06
8	6	21	20	12927.62	2	3923.00	2.5491	0.0447	0.0	0.0	0.0	0.0	8.93E-08	5.39E-07
10	8	58	57	22234.55	1	3923.13	2.5490	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-07
10	8	39	38	19036.74	1	3923.73	2.5486	0.0400	0.0	0.0	0.0	0.0	8.21E-08	1.32E-06
10	8	57	56	22035.89	1	3923.85	2.5485	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-07
4	2	30	31	5952.17	2	3924.10	2.5484	0.0400	0.0	0.0	6.99E-07	5.34E-06	1.65E-05	3.26E-05
5	3	35	36	8830.47	1	3924.16	2.5483	0.0400	0.0	0.0	1.29E-06	3.13E-05	1.93E-04	6.07E-04
4	2	43	44	7973.35	1	3924.16	2.5483	0.0400	0.0	0.0	3.56E-06	6.12E-05	3.08E-04	8.42E-04
10	8	40	39	19174.33	1	3924.39	2.5482	0.0400	0.0	0.0	0.0	0.0	7.42E-08	1.22E-06
10	8	56	55	21840.56	1	3924.50	2.5481	0.0400	0.0	0.0	0.0	0.0	0.0	2.21E-07
9	7	10	9	14610.99	1	3924.71	2.5480	0.0547	0.0	0.0	0.0	4.02E-08	9.94E-07	7.87E-06
10	8	41	40	19315.37	1	3924.97	2.5478	0.0400	0.0	0.0	0.0	0.0	6.69E-08	1.12E-06
8	6	22	21	13000.48	2	3925.01	2.5478	0.0435	0.0	0.0	0.0	0.0	8.76E-08	5.35E-07
10	8	55	54	21648.56	1	3925.08	2.5477	0.0400	0.0	0.0	0.0	0.0	1.03E-08	2.52E-07
7	5	16	17	11013.12	1	3925.09	2.5477	0.0493	0.0	0.0	4.40E-08	2.55E-06	2.65E-05	1.18E-04
6	4	26	27	9811.48	1	3925.13	2.5477	0.0400	0.0	0.0	3.20E-07	1.14E-05	8.94E-05	3.29E-04
7	5	3	2	10238.29	2	3925.31	2.5476	0.0707	0.0	0.0	0.0	1.31E-08	1.13E-07	4.43E-07
10	8	42	41	19459.85	1	3925.48	2.5475	0.0400	0.0	0.0	0.0	0.0	6.00E-08	1.03E-06
10	8	54	53	21459.91	1	3925.57	2.5474	0.0400	0.0	0.0	0.0	0.0	1.21E-08	2.86E-07
2	0	46	47	4117.99	2	3925.63	2.5474	0.0400	0.0	1.73E-07	3.01E-06	1.10E-05	2.20E-05	3.25E-05
8	6	4	5	12518.18	1	3925.78	2.5473	0.0645	0.0	0.0	0.0	1.76E-07	2.63E-06	1.49E-05
10	8	43	42	19607.77	1	3925.91	2.5472	0.0400	0.0	0.0	0.0	0.0	5.36E-08	9.43E-07
10	8	53	52	21274.62	1	3925.99	2.5471	0.0400	0.0	0.0	0.0	0.0	1.41E-08	3.24E-07
2	0	57	58	6506.95	1	3926.11	2.5471	0.0400	0.0	6.32E-08	7.42E-06	7.09E-05	2.51E-04	5.43E-04
10	8	44	43	19759.12	1	3926.26	2.5470	0.0400	0.0	0.0	0.0	0.0	4.77E-08	8.60E-07
10	8	52	51	21092.69	1	3926.32	2.5469	0.0400	0.0	0.0	0.0	0.0	1.64E-08	3.66E-07
10	8	45	44	19913.90	1	3926.54	2.5468	0.0400	0.0	0.0	0.0	0.0	4.23E-08	7.82E-07
10	8	51	50	20914.12	1	3926.59	2.5467	0.0400	0.0	0.0	0.0	0.0	1.90E-08	4.12E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	8	46	45	20072.09	1	3926.74	2.5466	0.0400	0.0	0.0	0.0	0.0	3.74E-08	7.08E-07
10	8	50	49	20738.93	1	3926.77	2.5466	0.0400	0.0	0.0	0.0	0.0	2.19E-08	4.62E-07
5	3	20	21	7037.61	2	3926.78	2.5466	0.0447	0.0	0.0	1.49E-07	1.75E-06	7.03E-06	1.65E-05
3	1	50	51	7152.25	1	3926.84	2.5466	0.0400	0.0	3.72E-08	7.32E-06	9.05E-05	3.74E-04	8.98E-04
10	8	47	46	20233.70	1	3926.86	2.5466	0.0400	0.0	0.0	0.0	0.0	3.29E-08	6.39E-07
6	4	9	10	8427.51	2	3926.87	2.5466	0.0547	0.0	0.0	1.23E-08	2.53E-07	1.42E-06	4.16E-06
10	8	49	48	20567.13	1	3926.88	2.5466	0.0400	0.0	0.0	0.0	0.0	2.52E-08	5.16E-07
10	8	48	47	20398.72	1	3926.91	2.5465	0.0400	0.0	0.0	0.0	0.0	2.88E-08	5.76E-07
8	6	23	22	13076.80	2	3926.95	2.5465	0.0423	0.0	0.0	0.0	0.0	8.56E-08	5.29E-07
3	1	38	39	4924.21	2	3926.99	2.5465	0.0400	0.0	6.56E-08	2.17E-06	1.10E-05	2.65E-05	4.45E-05
9	7	11	10	14646.97	1	3927.53	2.5461	0.0545	0.0	0.0	0.0	4.26E-08	1.06E-06	8.45E-06
7	5	4	3	10248.82	2	3928.56	2.5455	0.0676	0.0	0.0	0.0	1.73E-08	1.50E-07	5.90E-07
8	6	24	23	13156.57	2	3928.83	2.5453	0.0412	0.0	0.0	0.0	0.0	8.32E-08	5.21E-07
4	2	29	30	5840.91	2	3929.61	2.5448	0.0400	0.0	1.18E-08	8.10E-07	5.92E-06	1.78E-05	3.47E-05
8	6	3	4	12500.01	1	3929.70	2.5447	0.0676	0.0	0.0	0.0	1.44E-07	2.15E-06	1.21E-05
7	5	15	16	10950.85	1	3929.86	2.5446	0.0505	0.0	0.0	4.60E-08	2.59E-06	2.67E-05	1.17E-04
5	3	34	35	8696.97	1	3930.26	2.5444	0.0400	0.0	0.0	1.56E-06	3.58E-05	2.14E-04	6.59E-04
9	7	12	11	14686.54	1	3930.28	2.5443	0.0542	0.0	0.0	0.0	4.46E-08	1.12E-06	8.98E-06
6	4	25	26	9711.93	1	3930.60	2.5441	0.0400	0.0	0.0	3.63E-07	1.25E-05	9.53E-05	3.44E-04
8	6	25	24	13239.77	2	3930.64	2.5441	0.0400	0.0	0.0	0.0	0.0	8.04E-08	5.10E-07
4	2	42	43	7809.34	1	3930.80	2.5440	0.0400	0.0	1.37E-08	4.54E-06	7.31E-05	3.53E-04	9.42E-04
6	4	8	9	8392.08	2	3931.00	2.5439	0.0550	0.0	0.0	1.18E-08	2.39E-07	1.32E-06	3.87E-06
5	3	19	20	6962.68	2	3931.64	2.5435	0.0458	0.0	0.0	1.60E-07	1.83E-06	7.23E-06	1.68E-05
7	5	5	4	10262.87	2	3931.75	2.5434	0.0645	0.0	0.0	0.0	2.14E-08	1.86E-07	7.33E-07
2	0	45	46	3947.55	2	3932.17	2.5431	0.0400	0.0	2.57E-07	3.88E-06	1.33E-05	2.54E-05	3.66E-05
8	6	26	25	13326.42	2	3932.37	2.5430	0.0400	0.0	0.0	0.0	0.0	7.73E-08	4.97E-07
9	7	13	12	14729.70	1	3932.96	2.5426	0.0540	0.0	0.0	0.0	4.61E-08	1.17E-06	9.46E-06
3	1	37	38	4783.45	2	3933.02	2.5426	0.0400	0.0	8.99E-08	2.65E-06	1.27E-05	2.97E-05	4.88E-05
8	6	2	3	12485.47	1	3933.54	2.5422	0.0707	0.0	0.0	0.0	1.11E-07	1.64E-06	9.25E-06
2	0	56	57	6288.75	1	3933.70	2.5421	0.0400	0.0	1.05E-07	1.04E-05	9.09E-05	3.05E-04	6.39E-04
3	1	49	50	6961.20	1	3933.96	2.5420	0.0400	0.0	5.80E-08	9.78E-06	1.12E-04	4.42E-04	1.03E-03
8	6	27	26	13416.50	2	3934.04	2.5419	0.0400	0.0	0.0	0.0	0.0	7.40E-08	4.83E-07
7	5	14	15	10892.23	1	3934.56	2.5416	0.0517	0.0	0.0	4.76E-08	2.62E-06	2.66E-05	1.16E-04
7	5	6	5	10280.43	2	3934.87	2.5414	0.0621	0.0	0.0	0.0	2.53E-08	2.21E-07	8.73E-07
6	4	7	8	8360.19	2	3935.06	2.5413	0.0574	0.0	0.0	1.11E-08	2.21E-07	1.22E-06	3.55E-06
4	2	28	29	5733.20	2	3935.06	2.5413	0.0400	0.0	1.48E-08	9.36E-07	6.55E-06	1.92E-05	3.67E-05
9	7	14	13	14776.45	1	3935.57	2.5409	0.0528	0.0	0.0	0.0	4.72E-08	1.21E-06	9.86E-06
8	6	28	27	13510.01	2	3935.64	2.5409	0.0400	0.0	0.0	0.0	0.0	7.05E-08	4.67E-07
6	4	24	25	9616.03	1	3936.01	2.5406	0.0400	0.0	0.0	4.09E-07	1.35E-05	1.01E-04	3.60E-04
5	3	33	34	8567.12	1	3936.29	2.5405	0.0400	0.0	0.0	1.87E-06	4.08E-05	2.37E-04	7.13E-04
5	3	18	19	6891.30	2	3936.43	2.5404	0.0470	0.0	0.0	1.72E-07	1.91E-06	7.39E-06	1.70E-05
9	7	82	81	26133.74	1	3936.56	2.5403	0.0400	0.0	0.0	0.0	0.0	0.0	9.80E-09
8	6	29	28	13606.95	2	3937.17	2.5399	0.0400	0.0	0.0	0.0	0.0	6.69E-08	4.50E-07
8	6	1	2	12474.57	1	3937.31	2.5398	0.0738	0.0	0.0	0.0	7.51E-08	1.11E-06	6.25E-06
4	2	41	42	7648.97	1	3937.38	2.5398	0.0400	0.0	1.97E-08	5.76E-06	8.68E-05	4.04E-04	1.05E-03
7	5	7	6	10301.50	2	3937.92	2.5394	0.0597	0.0	0.0	0.0	2.89E-08	2.54E-07	1.01E-06
9	7	15	14	14826.79	1	3938.11	2.5393	0.0517	0.0	0.0	0.0	4.79E-08	1.25E-06	1.02E-05
8	6	30	29	13707.32	2	3938.63	2.5390	0.0400	0.0	0.0	0.0	0.0	6.31E-08	4.32E-07
2	0	44	45	3780.65	2	3938.65	2.5389	0.0400	0.0	3.76E-07	4.98E-06	1.60E-05	2.93E-05	4.10E-05
3	1	36	37	4646.24	2	3938.95	2.5387	0.0400	0.0	1.22E-07	3.23E-06	1.46E-05	3.31E-05	5.32E-05
6	4	6	7	8331.84	2	3939.06	2.5387	0.0597	0.0	0.0	1.02E-08	2.01E-07	1.10E-06	3.19E-06
9	7	81	80	25855.22	1	3939.18	2.5386	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-08
7	5	13	14	10837.26	1	3939.20	2.5386	0.0528	0.0	0.0	4.87E-08	2.63E-06	2.63E-05	1.14E-04

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VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	31	30	13811.11	2	3940.03	2.5381	0.0400	0.0	0.0	0.0	0.0	5.95E-08	4.13E-07
4	2	27	28	5629.04	2	3940.44	2.5378	0.0400	0.0	1.85E-08	1.07E-06	7.20E-06	2.06E-05	3.88E-05
9	7	16	15	14880.71	1	3940.57	2.5377	0.0505	0.0	0.0	0.0	4.81E-08	1.27E-06	1.05E-05
7	5	8	7	10326.08	2	3940.90	2.5375	0.0574	0.0	0.0	0.0	3.23E-08	2.85E-07	1.14E-06
3	1	48	49	6773.78	1	3941.02	2.5374	0.0400	0.0	8.94E-08	1.30E-05	1.38E-04	5.21E-04	1.18E-03
8	6	0	1	12467.30	1	3941.02	2.5374	0.0769	0.0	0.0	0.0	3.80E-08	5.62E-07	3.16E-06
5	3	17	18	6823.48	2	3941.17	2.5373	0.0482	0.0	0.0	1.82E-07	1.97E-06	7.51E-06	1.71E-05
2	0	55	56	6074.14	1	3941.22	2.5373	0.0400	0.0	1.74E-07	1.44E-05	1.16E-04	3.70E-04	7.48E-04
8	6	32	31	13918.32	2	3941.35	2.5372	0.0400	0.0	0.0	0.0	0.0	5.57E-08	3.94E-07
6	4	23	24	9523.78	1	3941.35	2.5372	0.0412	0.0	0.0	4.57E-07	1.46E-05	1.06E-04	3.74E-04
9	7	80	79	25579.82	1	3941.71	2.5370	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-08
5	3	32	33	8440.93	1	3942.25	2.5366	0.0400	0.0	0.0	2.23E-06	4.63E-05	2.60E-04	7.68E-04
8	6	33	32	14028.93	2	3942.60	2.5364	0.0400	0.0	0.0	0.0	0.0	5.20E-08	3.75E-07
8	6	67	66	15781.77	2	3942.84	2.5362	0.0400	0.0	0.0	0.0	0.0	0.0	9.43E-09
9	7	17	16	14938.22	1	3942.96	2.5362	0.0493	0.0	0.0	0.0	4.80E-08	1.28E-06	1.07E-05
6	4	5	6	8307.03	2	3942.99	2.5361	0.0621	0.0	0.0	0.0	1.79E-07	9.71E-07	2.80E-06
7	5	12	13	10785.94	1	3943.76	2.5357	0.0540	0.0	0.0	4.93E-08	2.61E-06	2.57E-05	1.11E-04
8	6	34	33	14142.96	2	3943.78	2.5356	0.0400	0.0	0.0	0.0	0.0	4.84E-08	3.55E-07
7	5	9	8	10354.17	2	3943.82	2.5356	0.0550	0.0	0.0	0.0	3.53E-08	3.14E-07	1.26E-06
4	2	40	41	7492.24	1	3943.90	2.5356	0.0400	0.0	2.81E-08	7.25E-06	1.03E-04	4.60E-04	1.17E-03
8	6	66	65	15558.57	2	3944.03	2.5355	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-08
9	7	79	78	25307.56	1	3944.16	2.5354	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-08
3	1	35	36	4512.58	2	3944.90	2.5349	0.0400	0.0	1.64E-07	3.91E-06	1.68E-05	3.68E-05	5.78E-05
8	6	35	34	14260.39	2	3944.90	2.5349	0.0400	0.0	0.0	0.0	0.0	4.48E-08	3.35E-07
2	0	43	44	3617.28	2	3945.07	2.5348	0.0400	0.0	5.46E-07	6.35E-06	1.91E-05	3.37E-05	4.59E-05
8	6	65	64	15338.57	2	3945.15	2.5348	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-08
9	7	18	17	14999.30	1	3945.28	2.5347	0.0482	0.0	0.0	0.0	4.75E-08	1.29E-06	1.08E-05
4	2	26	27	5528.43	2	3945.77	2.5344	0.0400	0.0	2.28E-08	1.22E-06	7.88E-06	2.20E-05	4.07E-05
5	3	16	17	6759.20	2	3945.83	2.5343	0.0493	0.0	0.0	1.92E-07	2.02E-06	7.58E-06	1.71E-05
8	6	36	35	14381.22	2	3945.94	2.5343	0.0400	0.0	0.0	0.0	0.0	4.13E-08	3.15E-07
8	6	64	63	15121.76	2	3946.19	2.5341	0.0400	0.0	0.0	0.0	0.0	0.0	1.50E-08
9	7	78	77	25038.44	1	3946.53	2.5339	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-08
6	4	22	23	9435.20	1	3946.62	2.5338	0.0423	0.0	0.0	5.07E-07	1.56E-05	1.12E-04	3.86E-04
7	5	10	9	10365.77	2	3946.68	2.5338	0.0547	0.0	0.0	0.0	3.80E-08	3.40E-07	1.37E-06
6	4	4	5	8285.77	2	3946.86	2.5337	0.0645	0.0	0.0	0.0	1.53E-07	8.30E-07	2.39E-06
8	6	37	36	14505.45	2	3946.91	2.5336	0.0400	0.0	0.0	0.0	0.0	3.79E-08	2.95E-07
8	6	63	62	15908.16	2	3947.16	2.5335	0.0400	0.0	0.0	0.0	0.0	0.0	1.73E-08
9	7	19	18	15063.96	1	3947.53	2.5332	0.0470	0.0	0.0	0.0	4.66E-08	1.28E-06	1.09E-05
8	6	38	37	14633.06	2	3947.82	2.5330	0.0400	0.0	0.0	0.0	0.0	3.47E-08	2.75E-07
3	1	47	48	6589.98	1	3948.02	2.5329	0.0400	0.0	1.37E-07	1.71E-05	1.69E-04	6.11E-04	1.34E-03
8	6	62	61	18697.77	2	3948.06	2.5329	0.0400	0.0	0.0	0.0	0.0	0.0	2.00E-08
5	3	31	32	8318.38	1	3948.15	2.5328	0.0400	0.0	0.0	2.64E-06	5.21E-05	2.85E-04	8.25E-04
8	6	1	0	12463.66	1	3948.22	2.5328	0.0769	0.0	0.0	0.0	3.86E-08	5.70E-07	3.20E-06
7	5	11	12	10738.28	1	3948.26	2.5328	0.0542	0.0	0.0	4.93E-08	2.56E-06	2.50E-05	1.06E-04
8	6	39	38	14764.06	2	3948.65	2.5325	0.0400	0.0	0.0	0.0	0.0	3.16E-08	2.56E-07
2	0	54	55	5863.14	1	3948.69	2.5325	0.0400	0.0	2.85E-07	2.00E-05	1.47E-04	4.47E-04	8.74E-04
9	7	77	76	24772.47	1	3948.82	2.5324	0.0400	0.0	0.0	0.0	0.0	0.0	2.65E-08
8	6	61	60	18490.61	2	3948.88	2.5324	0.0400	0.0	0.0	0.0	0.0	0.0	2.31E-08
8	6	40	39	14858.44	2	3949.41	2.5320	0.0400	0.0	0.0	0.0	0.0	2.87E-08	2.37E-07
7	5	11	10	10420.87	2	3949.46	2.5320	0.0545	0.0	0.0	0.0	4.03E-08	3.64E-07	1.47E-06
8	6	60	59	18286.68	2	3949.63	2.5319	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-08
9	7	20	19	15132.20	1	3949.71	2.5318	0.0458	0.0	0.0	0.0	4.54E-08	1.27E-06	1.09E-05
8	6	41	40	15036.20	2	3950.10	2.5316	0.0400	0.0	0.0	0.0	0.0	2.59E-08	2.19E-07

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8	6	59	58	18085.99	2	3950.31	2.5314	0.0400	0.0	0.0	0.0	0.0	0.0	3.05E-08
4	2	39	40	7339.16	1	3950.35	2.5314	0.0400	0.0	3.97E-08	9.07E-06	1.21E-04	5.22E-04	1.29E-03
5	3	15	16	6658.49	2	3950.44	2.5314	0.0505	0.0	0.0	2.00E-07	2.06E-06	7.60E-06	1.70E-05
6	4	3	4	8268.04	2	3950.67	2.5312	0.0676	0.0	0.0	0.0	1.26E-07	6.78E-07	1.95E-06
8	6	42	41	15177.32	2	3950.72	2.5312	0.0400	0.0	0.0	0.0	0.0	2.33E-08	2.02E-07
3	1	34	35	4382.47	2	3950.75	2.5312	0.0400	0.0	2.19E-07	4.70E-06	1.92E-05	4.07E-05	6.26E-05
8	6	58	57	17888.55	2	3950.91	2.5311	0.0400	0.0	0.0	0.0	0.0	0.0	3.49E-08
9	7	76	75	24509.67	1	3951.02	2.5310	0.0400	0.0	0.0	0.0	0.0	0.0	3.21E-08
4	2	25	26	5431.39	2	3951.03	2.5310	0.0400	0.0	2.79E-08	1.38E-06	8.57E-06	2.34E-05	4.26E-05
8	6	43	42	15321.80	2	3951.27	2.5308	0.0400	0.0	0.0	0.0	0.0	2.09E-08	1.85E-07
8	6	57	56	17694.37	2	3951.44	2.5307	0.0400	0.0	0.0	0.0	0.0	0.0	3.99E-08
2	0	42	43	3457.45	2	3951.44	2.5307	0.0400	0.0	7.86E-07	8.04E-06	2.27E-05	3.85E-05	5.12E-05
8	6	2	1	12467.30	1	3951.71	2.5306	0.0738	0.0	0.0	0.0	7.73E-08	1.14E-06	6.42E-06
8	6	44	43	15469.65	2	3951.75	2.5305	0.0400	0.0	0.0	0.0	0.0	1.87E-08	1.69E-07
9	7	21	20	15204.01	1	3951.81	2.5305	0.0447	0.0	0.0	0.0	4.40E-08	1.25E-06	1.09E-05
6	4	21	22	9350.27	1	3951.83	2.5305	0.0435	0.0	0.0	5.59E-07	1.66E-05	1.16E-04	3.97E-04
8	6	56	55	17503.45	2	3951.90	2.5304	0.0400	0.0	0.0	0.0	0.0	0.0	4.54E-08
8	6	45	44	15620.85	2	3952.16	2.5303	0.0400	0.0	0.0	0.0	0.0	1.66E-08	1.54E-07
7	5	12	11	10459.48	2	3952.18	2.5302	0.0542	0.0	0.0	0.0	4.22E-08	3.85E-07	1.57E-06
8	6	55	54	17315.80	2	3952.29	2.5302	0.0400	0.0	0.0	0.0	0.0	0.0	5.15E-08
8	6	46	45	15775.39	2	3952.49	2.5301	0.0400	0.0	0.0	0.0	0.0	1.47E-08	1.40E-07
8	6	54	53	17131.43	2	3952.60	2.5300	0.0400	0.0	0.0	0.0	0.0	0.0	5.83E-08
7	5	10	11	10694.28	1	3952.69	2.5299	0.0545	0.0	0.0	4.88E-08	2.48E-06	2.40E-05	1.02E-04
8	6	47	46	15933.27	2	3952.76	2.5299	0.0400	0.0	0.0	0.0	0.0	1.30E-08	1.27E-07
8	6	53	52	16950.35	2	3952.84	2.5298	0.0400	0.0	0.0	0.0	0.0	0.0	6.58E-08
8	6	48	47	16094.49	2	3952.95	2.5298	0.0400	0.0	0.0	0.0	0.0	1.15E-08	1.15E-07
8	6	52	51	16772.57	2	3953.00	2.5297	0.0400	0.0	0.0	0.0	0.0	0.0	7.40E-08
8	6	49	48	16259.04	2	3953.07	2.5297	0.0400	0.0	0.0	0.0	0.0	1.00E-08	1.03E-07
8	6	51	50	16598.08	2	3953.10	2.5297	0.0400	0.0	0.0	0.0	0.0	0.0	8.29E-08
8	6	50	49	16426.90	2	3953.12	2.5296	0.0400	0.0	0.0	0.0	0.0	0.0	9.27E-08
9	7	75	74	24250.05	1	3953.15	2.5296	0.0400	0.0	0.0	0.0	0.0	0.0	3.88E-08
9	7	22	21	15279.39	1	3953.84	2.5292	0.0435	0.0	0.0	0.0	4.23E-08	1.23E-06	1.08E-05
5	3	30	31	8159.50	1	3953.99	2.5291	0.0400	0.0	0.0	3.11E-06	5.85E-05	3.11E-04	8.82E-04
6	4	2	3	8253.86	2	3954.41	2.5288	0.0707	0.0	0.0	0.0	9.65E-08	5.18E-07	1.48E-06
7	5	13	12	10501.59	2	3954.83	2.5286	0.0540	0.0	0.0	0.0	4.38E-08	4.03E-07	1.65E-06
3	1	46	47	6409.82	1	3954.95	2.5285	0.0400	0.0	2.07E-07	2.25E-05	2.07E-04	7.14E-04	1.52E-03
5	3	14	15	6641.34	2	3954.98	2.5285	0.0517	0.0	0.0	2.06E-07	2.07E-06	7.57E-06	1.67E-05
8	6	3	2	12474.57	1	3955.14	2.5284	0.0707	0.0	0.0	0.0	1.16E-07	1.71E-06	9.63E-06
9	7	74	73	23993.62	1	3955.20	2.5283	0.0400	0.0	0.0	0.0	0.0	0.0	4.67E-08
9	7	23	22	15358.34	1	3955.79	2.5279	0.0423	0.0	0.0	0.0	4.04E-08	1.20E-06	1.07E-05
2	0	53	54	5655.77	1	3956.10	2.5277	0.0400	0.0	4.61E-07	2.74E-05	1.86E-04	5.38E-04	1.02E-03
4	2	24	25	5337.91	2	3956.23	2.5277	0.0400	0.0	3.37E-08	1.55E-06	9.27E-06	2.47E-05	4.44E-05
3	1	33	34	4255.91	2	3956.53	2.5275	0.0400	0.0	2.89E-07	5.61E-06	2.17E-05	4.48E-05	6.76E-05
4	2	38	39	7189.73	1	3956.74	2.5273	0.0400	0.0	5.56E-08	1.13E-05	1.41E-04	5.90E-04	1.43E-03
6	4	20	21	9269.02	1	3956.97	2.5272	0.0447	0.0	0.0	6.10E-07	1.76E-05	1.21E-04	4.07E-04
7	5	9	10	10653.94	1	3957.05	2.5271	0.0547	0.0	0.0	4.75E-08	2.38E-06	2.28E-05	9.58E-05
9	7	73	72	23740.39	1	3957.16	2.5271	0.0400	0.0	0.0	0.0	0.0	0.0	5.61E-08
7	5	14	13	10547.20	2	3957.42	2.5269	0.0528	0.0	0.0	0.0	4.49E-08	4.18E-07	1.72E-06
9	7	24	23	15440.84	1	3957.68	2.5267	0.0412	0.0	0.0	0.0	3.84E-08	1.16E-06	1.05E-05
2	0	41	42	3301.17	2	3957.74	2.5267	0.0400	0.0	1.12E-06	1.01E-05	2.68E-05	4.39E-05	5.69E-05
6	4	1	2	8243.23	2	3958.09	2.5265	0.0738	0.0	0.0	0.0	6.54E-08	3.51E-07	1.00E-06
8	6	4	3	12485.47	1	3958.49	2.5262	0.0676	0.0	0.0	0.0	1.53E-07	2.27E-06	1.28E-05
9	7	72	71	23490.38	1	3959.04	2.5259	0.0400	0.0	0.0	0.0	0.0	0.0	6.71E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	13	14	6587.74	2	3959.46	2.5256	0.0528	0.0	0.0	2.11E-07	2.07E-06	7.47E-06	1.64E-05
9	7	25	24	15526.91	1	3959.48	2.5256	0.0400	0.0	0.0	0.0	3.63E-08	1.12E-06	1.02E-05
5	3	29	30	8084.29	1	3959.76	2.5254	0.0400	0.0	0.0	3.63E-06	6.52E-05	3.37E-04	9.39E-04
7	5	15	14	10596.32	2	3959.94	2.5253	0.0517	0.0	0.0	0.0	4.56E-08	4.29E-07	1.79E-06
9	7	71	70	23243.58	1	3960.85	2.5247	0.0400	0.0	0.0	0.0	0.0	0.0	8.01E-08
9	7	26	25	15616.54	1	3961.22	2.5245	0.0400	0.0	0.0	0.0	3.40E-08	1.07E-06	9.96E-06
7	5	8	9	10617.26	1	3961.34	2.5244	0.0550	0.0	0.0	4.55E-08	2.25E-06	2.13E-05	8.92E-05
4	2	23	24	5247.99	2	3961.37	2.5244	0.0412	0.0	4.04E-08	1.73E-06	9.96E-06	2.60E-05	4.60E-05
6	4	0	1	8236.14	2	3961.70	2.5242	0.0769	0.0	0.0	0.0	3.31E-08	1.77E-07	5.06E-07
8	6	5	4	12500.01	1	3961.78	2.5241	0.0645	0.0	0.0	0.0	1.89E-07	2.82E-06	1.59E-05
3	1	45	46	6233.30	1	3961.82	2.5241	0.0400	0.0	3.11E-07	2.93E-05	2.51E-04	8.32E-04	1.73E-03
6	4	19	20	9191.44	1	3962.04	2.5240	0.0458	0.0	0.0	6.61E-07	1.85E-05	1.25E-04	4.15E-04
3	1	32	33	4132.93	2	3962.26	2.5238	0.0400	0.0	3.79E-07	6.65E-06	2.46E-05	4.91E-05	7.27E-05
7	5	16	15	10648.93	2	3962.39	2.5237	0.0505	0.0	0.0	0.0	4.59E-08	4.38E-07	1.84E-06
9	7	70	69	23000.01	1	3962.57	2.5236	0.0400	0.0	0.0	0.0	0.0	0.0	9.53E-08
9	7	27	26	15709.71	1	3962.88	2.5234	0.0400	0.0	0.0	0.0	3.18E-08	1.02E-06	9.64E-06
4	2	37	38	7043.96	1	3963.06	2.5233	0.0400	0.0	7.72E-08	1.39E-05	1.65E-04	6.64E-04	1.57E-03
2	0	52	53	5452.01	1	3963.44	2.5231	0.0400	0.0	7.41E-07	3.74E-05	2.35E-04	6.45E-04	1.18E-03
5	3	12	13	6537.71	2	3963.88	2.5228	0.0540	0.0	0.0	2.13E-07	2.06E-06	7.31E-06	1.59E-05
2	0	40	41	3148.44	2	3963.98	2.5227	0.0400	0.0	1.59E-06	1.27E-05	3.16E-05	4.98E-05	6.31E-05
9	7	69	68	22759.69	1	3964.22	2.5226	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-07
9	7	28	27	15806.43	1	3964.47	2.5224	0.0400	0.0	0.0	0.0	2.95E-08	9.71E-07	9.30E-06
7	5	17	16	10705.04	2	3964.77	2.5222	0.0493	0.0	0.0	0.0	4.58E-08	4.43E-07	1.88E-06
8	6	6	5	12518.18	1	3964.99	2.5221	0.0621	0.0	0.0	0.0	2.23E-07	3.34E-06	1.89E-05
5	3	28	29	7972.75	1	3965.46	2.5218	0.0400	0.0	1.11E-08	4.22E-06	7.24E-05	3.64E-04	9.98E-04
7	5	7	8	10584.25	1	3965.57	2.5217	0.0574	0.0	0.0	4.29E-08	2.09E-06	1.97E-05	8.18E-05
9	7	68	67	22522.63	1	3965.78	2.5216	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-07
9	7	29	28	15906.70	1	3965.98	2.5214	0.0400	0.0	0.0	0.0	2.72E-08	9.17E-07	8.94E-06
4	2	22	23	5161.65	2	3966.45	2.5211	0.0423	0.0	4.78E-08	1.91E-06	1.06E-05	2.72E-05	4.75E-05
6	4	18	19	9117.53	1	3967.04	2.5208	0.0470	0.0	0.0	7.10E-07	1.93E-05	1.28E-04	4.20E-04
7	5	18	17	10764.64	2	3967.09	2.5207	0.0482	0.0	0.0	0.0	4.54E-08	4.45E-07	1.90E-06
9	7	67	66	22288.82	1	3967.26	2.5206	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-07
9	7	30	29	16010.51	1	3967.42	2.5205	0.0400	0.0	0.0	0.0	2.50E-08	8.63E-07	8.55E-06
3	1	31	32	4013.51	2	3967.93	2.5202	0.0400	0.0	4.91E-07	7.83E-06	2.76E-05	5.36E-05	7.78E-05
8	6	7	6	12539.99	1	3968.14	2.5201	0.0597	0.0	0.0	0.0	2.55E-07	3.84E-06	2.18E-05
5	3	11	12	6491.25	2	3968.23	2.5200	0.0542	0.0	0.0	2.13E-07	2.02E-06	7.09E-06	1.53E-05
3	1	44	45	6060.43	1	3968.63	2.5198	0.0400	0.0	4.62E-07	3.79E-05	3.03E-04	9.64E-04	1.95E-03
9	7	66	65	22058.29	1	3968.67	2.5197	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-07
6	4	1	0	8232.59	2	3968.72	2.5197	0.0769	0.0	0.0	0.0	3.36E-08	1.80E-07	5.13E-07
9	7	31	30	16117.86	1	3968.79	2.5197	0.0400	0.0	0.0	0.0	2.28E-08	8.10E-07	8.16E-06
4	2	36	37	6901.85	1	3969.33	2.5193	0.0400	0.0	1.06E-07	1.71E-05	1.91E-04	7.43E-04	1.72E-03
7	5	19	18	10827.74	2	3969.34	2.5193	0.0470	0.0	0.0	0.0	4.47E-08	4.45E-07	1.92E-06
7	5	6	7	10554.90	1	3969.72	2.5191	0.0597	0.0	0.0	3.95E-08	1.90E-06	1.78E-05	7.36E-05
9	7	65	64	21831.04	1	3969.99	2.5189	0.0400	0.0	0.0	0.0	0.0	0.0	2.18E-07
9	7	32	31	16228.73	1	3970.08	2.5188	0.0400	0.0	0.0	0.0	2.08E-08	7.57E-07	7.76E-06
2	0	39	40	2999.27	2	3970.16	2.5188	0.0400	0.0	2.22E-06	1.58E-05	3.70E-05	5.63E-05	6.96E-05
2	0	51	52	5251.89	1	3970.72	2.5184	0.0400	0.0	1.18E-06	5.08E-05	2.94E-04	7.70E-04	1.37E-03
5	3	27	28	7864.89	1	3971.10	2.5182	0.0400	0.0	1.40E-08	4.86E-06	8.00E-05	3.92E-04	1.06E-03
8	6	8	7	12565.43	1	3971.21	2.5181	0.0574	0.0	0.0	0.0	2.85E-07	4.31E-06	2.46E-05
9	7	64	63	21607.08	1	3971.24	2.5181	0.0400	0.0	0.0	0.0	0.0	1.05E-08	2.55E-07
9	7	33	32	16343.14	1	3971.30	2.5181	0.0400	0.0	0.0	0.0	1.88E-08	7.04E-07	7.35E-06
4	2	21	22	5078.88	2	3971.47	2.5180	0.0435	0.0	5.61E-08	2.10E-06	1.13E-05	2.84E-05	4.88E-05
7	5	20	19	10894.32	2	3971.51	2.5179	0.0458	0.0	0.0	0.0	4.37E-08	4.42E-07	1.93E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	17	18	9047.30	1	3971.98	2.5176	0.0482	0.0	0.0	7.57E-07	2.00E-05	1.30E-04	4.23E-04
6	4	2	1	8236.14	2	3972.14	2.5175	0.0738	0.0	0.0	0.0	6.74E-08	3.61E-07	1.03E-06
9	7	63	62	21386.43	1	3972.41	2.5174	0.0400	0.0	0.0	0.0	0.0	1.27E-08	2.97E-07
9	7	34	33	16461.06	1	3972.44	2.5173	0.0400	0.0	0.0	0.0	1.69E-08	6.52E-07	6.94E-06
5	3	10	11	6448.35	2	3972.52	2.5173	0.0545	0.0	0.0	2.10E-07	1.95E-06	6.81E-06	1.46E-05
9	7	62	61	21169.09	1	3973.49	2.5167	0.0400	0.0	0.0	0.0	0.0	1.53E-08	3.46E-07
9	7	35	34	16582.50	1	3973.51	2.5167	0.0400	0.0	0.0	0.0	1.52E-08	6.01E-07	6.52E-06
3	1	30	31	3897.66	2	3973.53	2.5167	0.0400	0.0	6.30E-07	9.16E-06	3.08E-05	5.82E-05	8.30E-05
7	5	21	20	10964.39	2	3973.63	2.5166	0.0447	0.0	0.0	0.0	4.24E-08	4.36E-07	1.92E-06
7	5	5	6	10529.21	1	3973.81	2.5165	0.0621	0.0	0.0	3.54E-08	1.69E-06	1.57E-05	6.47E-05
8	6	9	8	12594.50	1	3974.21	2.5162	0.0550	0.0	0.0	0.0	3.11E-07	4.74E-06	2.72E-05
8	6	88	87	26018.06	1	3974.22	2.5162	0.0400	0.0	0.0	0.0	0.0	0.0	9.26E-09
9	7	36	35	16707.46	1	3974.50	2.5160	0.0400	0.0	0.0	0.0	1.35E-08	5.52E-07	6.11E-06
9	7	61	60	20955.06	1	3974.50	2.5160	0.0400	0.0	0.0	0.0	0.0	1.84E-08	4.01E-07
3	1	43	44	5891.22	1	3975.37	2.5155	0.0400	0.0	6.80E-07	4.88E-05	3.65E-04	1.11E-03	2.19E-03
9	7	37	36	16835.92	1	3975.42	2.5155	0.0400	0.0	0.0	0.0	1.20E-08	5.05E-07	5.70E-06
9	7	60	59	20744.37	1	3975.43	2.5155	0.0400	0.0	0.0	0.0	0.0	2.19E-08	4.63E-07
6	4	3	2	8243.23	2	3975.48	2.5154	0.0707	0.0	0.0	0.0	1.01E-07	5.40E-07	1.54E-06
4	2	35	36	6763.42	1	3975.52	2.5154	0.0400	0.0	1.44E-07	2.08E-05	2.20E-04	8.29E-04	1.87E-03
7	5	22	21	11037.95	2	3975.67	2.5153	0.0435	0.0	0.0	0.0	4.09E-08	4.28E-07	1.91E-06
9	7	38	37	16967.88	1	3976.26	2.5149	0.0400	0.0	0.0	0.0	1.06E-08	4.60E-07	5.30E-06
9	7	59	58	20537.02	1	3976.28	2.5149	0.0400	0.0	0.0	0.0	0.0	2.62E-08	5.35E-07
2	0	38	39	2853.67	2	3976.29	2.5149	0.0400	0.0	3.08E-06	1.95E-05	4.31E-05	6.34E-05	7.66E-05
4	2	20	21	4999.68	2	3976.42	2.5148	0.0447	0.0	6.51E-08	2.28E-06	1.19E-05	2.94E-05	4.99E-05
5	3	26	27	7760.70	1	3976.67	2.5147	0.0400	0.0	1.74E-08	5.57E-06	8.79E-05	4.20E-04	1.11E-03
5	3	9	10	6409.02	2	3976.74	2.5146	0.0547	0.0	0.0	2.04E-07	1.87E-06	6.46E-06	1.38E-05
6	4	16	17	8980.75	1	3976.86	2.5145	0.0493	0.0	0.0	7.99E-07	2.05E-05	1.32E-04	4.23E-04
9	7	39	38	17103.34	1	3977.02	2.5144	0.0400	0.0	0.0	0.0	0.0	4.17E-07	4.92E-06
9	7	58	57	20333.01	1	3977.06	2.5144	0.0400	0.0	0.0	0.0	0.0	3.11E-08	6.16E-07
8	6	10	9	12627.20	1	3977.14	2.5144	0.0547	0.0	0.0	0.0	3.34E-07	5.13E-06	2.96E-05
8	6	87	86	25716.04	1	3977.30	2.5143	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-08
7	5	23	22	11114.98	2	3977.65	2.5140	0.0423	0.0	0.0	0.0	3.91E-08	4.18E-07	1.89E-06
9	7	40	39	17242.29	1	3977.71	2.5140	0.0400	0.0	0.0	0.0	0.0	3.76E-07	4.54E-06
9	7	57	56	20132.36	1	3977.75	2.5140	0.0400	0.0	0.0	0.0	0.0	3.69E-08	7.07E-07
7	5	4	5	10507.20	1	3977.83	2.5139	0.0645	0.0	0.0	3.07E-08	1.45E-06	1.34E-05	5.51E-05
2	0	50	51	5055.41	1	3977.94	2.5139	0.0400	0.0	1.86E-06	6.85E-05	3.67E-04	9.16E-04	1.57E-03
9	7	41	40	17384.73	1	3978.33	2.5136	0.0400	0.0	0.0	0.0	0.0	3.39E-07	4.18E-06
9	7	56	55	19935.07	1	3978.37	2.5136	0.0400	0.0	0.0	0.0	0.0	4.36E-08	8.09E-07
6	4	4	3	8253.86	2	3978.77	2.5133	0.0676	0.0	0.0	0.0	1.34E-07	7.18E-07	2.05E-06
9	7	42	41	17530.64	1	3978.87	2.5133	0.0400	0.0	0.0	0.0	0.0	3.03E-07	3.83E-06
9	7	55	54	19741.15	1	3978.91	2.5133	0.0400	0.0	0.0	0.0	0.0	5.13E-08	9.22E-07
3	1	29	30	3785.38	2	3979.07	2.5131	0.0400	0.0	8.01E-07	1.07E-05	3.42E-05	6.30E-05	8.82E-05
9	7	43	42	17680.03	1	3979.33	2.5130	0.0400	0.0	0.0	0.0	0.0	2.71E-07	3.50E-06
9	7	54	53	19550.62	1	3979.37	2.5130	0.0400	0.0	0.0	0.0	0.0	6.01E-08	1.05E-06
7	5	24	23	11195.50	2	3979.55	2.5128	0.0412	0.0	0.0	0.0	3.73E-08	4.05E-07	1.86E-06
9	7	44	43	17832.88	1	3979.72	2.5127	0.0400	0.0	0.0	0.0	0.0	2.41E-07	3.19E-06
9	7	53	52	19363.47	1	3979.75	2.5127	0.0400	0.0	0.0	0.0	0.0	7.03E-08	1.19E-06
8	6	11	10	12663.53	1	3980.00	2.5126	0.0545	0.0	0.0	0.0	3.54E-07	5.48E-06	3.18E-05
9	7	45	44	17989.20	1	3980.03	2.5125	0.0400	0.0	0.0	0.0	0.0	2.13E-07	2.90E-06
9	7	52	51	19179.72	1	3980.05	2.5125	0.0400	0.0	0.0	0.0	0.0	8.18E-08	1.34E-06
9	7	46	45	18148.97	1	3980.26	2.5124	0.0400	0.0	0.0	0.0	0.0	1.88E-07	2.62E-05
9	7	51	50	18999.38	1	3980.28	2.5124	0.0400	0.0	0.0	0.0	0.0	9.48E-08	1.51E-06
8	6	86	85	25421.09	1	3980.29	2.5124	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	7	47	46	18312.18	1	3980.42	2.5123	0.0400	0.0	0.0	0.0	0.0	1.65E-07	2.36E-06
9	7	50	49	18822.44	1	3980.43	2.5123	0.0400	0.0	0.0	0.0	0.0	1.10E-07	1.70E-06
9	7	48	47	18478.84	1	3980.50	2.5122	0.0400	0.0	0.0	0.0	0.0	1.45E-07	2.13E-06
9	7	49	48	18648.93	1	3980.51	2.5122	0.0400	0.0	0.0	0.0	0.0	1.26E-07	1.90E-06
5	3	8	9	6373.27	2	3980.90	2.5120	0.0550	0.0	0.0	1.95E-07	1.77E-06	6.04E-06	1.28E-05
4	2	19	20	4924.07	2	3981.31	2.5117	0.0458	0.0	7.47E-08	2.47E-06	1.25E-05	3.02E-05	5.08E-05
7	5	25	24	11279.49	2	3981.39	2.5117	0.0400	0.0	0.0	0.0	3.53E-08	3.92E-07	1.82E-06
4	2	34	35	6628.66	1	3981.65	2.5115	0.0400	0.0	1.95E-07	2.52E-05	2.53E-04	9.21E-04	2.04E-03
6	4	15	16	8917.88	1	3981.66	2.5115	0.0505	0.0	0.0	8.35E-07	2.09E-05	1.32E-04	4.21E-04
7	5	3	4	10488.85	1	3981.78	2.5114	0.0676	0.0	0.0	2.54E-08	1.19E-06	1.10E-05	4.50E-05
6	4	5	4	8268.04	2	3981.98	2.5113	0.0645	0.0	0.0	0.0	1.65E-07	8.90E-07	2.55E-06
3	1	42	43	5725.68	1	3982.05	2.5113	0.0400	0.0	9.93E-07	6.24E-05	4.36E-04	1.28E-03	2.45E-03
5	3	25	26	7660.20	1	3982.18	2.5112	0.0400	0.0	2.15E-08	6.33E-06	9.60E-05	4.48E-04	1.17E-03
2	0	37	38	2711.64	2	3982.35	2.5111	0.0400	1.29E-08	4.24E-06	2.39E-05	5.00E-05	7.11E-05	8.39E-05
8	6	12	11	12703.48	1	3982.78	2.5108	0.0542	0.0	0.0	0.0	3.70E-07	5.79E-06	3.38E-05
7	5	26	25	11366.95	2	3983.16	2.5106	0.0400	0.0	0.0	0.0	3.32E-08	3.76E-07	1.77E-06
8	6	85	84	25127.25	1	3983.20	2.5105	0.0400	0.0	0.0	0.0	0.0	0.0	1.79E-08
3	1	28	29	3676.69	2	3984.56	2.5097	0.0400	0.0	1.01E-06	1.23E-05	3.79E-05	6.80E-05	9.36E-05
7	5	74	73	19550.86	2	3984.70	2.5096	0.0400	0.0	0.0	0.0	0.0	0.0	9.80E-09
7	5	27	26	11487.88	2	3984.86	2.5095	0.0400	0.0	0.0	0.0	3.11E-08	3.60E-07	1.72E-06
5	3	7	8	6341.08	2	3985.00	2.5094	0.0574	0.0	0.0	1.84E-07	1.64E-06	5.57E-06	1.17E-05
2	0	49	50	4862.58	1	3985.10	2.5093	0.0400	0.0	2.91E-06	9.18E-05	4.55E-04	1.09E-03	1.81E-03
6	4	6	5	8285.77	2	3985.14	2.5093	0.0621	0.0	0.0	1.01E-08	1.95E-07	1.06E-06	3.04E-06
8	6	13	12	12747.07	1	3985.50	2.5091	0.0540	0.0	0.0	0.0	3.83E-07	6.05E-06	3.56E-05
7	5	2	3	10474.17	1	3985.66	2.5090	0.0707	0.0	0.0	1.96E-08	9.15E-07	8.38E-06	3.43E-05
8	6	84	83	24836.50	1	3986.02	2.5088	0.0400	0.0	0.0	0.0	0.0	0.0	2.22E-08
4	2	18	19	4852.04	2	3986.14	2.5087	0.0470	0.0	8.47E-08	2.64E-06	1.30E-05	3.09E-05	5.14E-05
7	5	73	72	19303.21	2	3986.39	2.5085	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-08
6	4	14	15	8858.70	1	3986.40	2.5085	0.0517	0.0	0.0	8.65E-07	2.12E-05	1.32E-04	4.16E-04
7	5	28	27	11552.28	2	3986.49	2.5085	0.0400	0.0	0.0	0.0	2.89E-08	3.43E-07	1.66E-06
5	3	24	25	7563.39	1	3987.62	2.5078	0.0400	0.0	2.62E-08	7.14E-06	1.04E-04	4.75E-04	1.22E-03
4	2	33	34	6457.59	1	3987.72	2.5077	0.0400	0.0	2.60E-07	3.03E-05	2.88E-04	1.02E-03	2.20E-03
7	5	72	71	19058.71	2	3988.00	2.5075	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-08
7	5	29	28	11650.14	2	3988.06	2.5075	0.0400	0.0	0.0	0.0	2.68E-08	3.25E-07	1.60E-06
8	6	14	13	12794.27	1	3988.14	2.5074	0.0528	0.0	0.0	0.0	3.91E-07	6.26E-06	3.71E-05
6	4	7	6	8307.03	2	3988.22	2.5074	0.0597	0.0	0.0	1.14E-08	2.23E-07	1.22E-06	3.51E-06
2	0	36	37	2573.18	2	3988.35	2.5073	0.0400	2.44E-08	5.77E-06	2.91E-05	5.77E-05	7.94E-05	9.16E-05
3	1	41	42	5563.80	1	3988.67	2.5071	0.0400	0.0	1.44E-06	7.92E-05	5.20E-04	1.47E-03	2.74E-03
8	6	83	82	24548.88	1	3988.77	2.5070	0.0400	0.0	0.0	0.0	0.0	0.0	2.75E-08
5	3	6	7	6312.47	2	3989.03	2.5069	0.0597	0.0	0.0	1.69E-07	1.49E-06	5.03E-06	1.06E-05
7	5	1	2	10463.16	1	3989.47	2.5066	0.0738	0.0	0.0	1.34E-08	6.21E-07	5.67E-06	2.32E-05
7	5	71	70	18817.38	2	3989.53	2.5066	0.0400	0.0	0.0	0.0	0.0	0.0	1.66E-08
7	5	30	29	11751.45	2	3989.55	2.5065	0.0400	0.0	0.0	0.0	2.47E-08	3.06E-07	1.53E-06
3	1	27	28	3571.58	2	3989.98	2.5063	0.0400	0.0	1.26E-06	1.41E-05	4.18E-05	7.30E-05	9.88E-05
8	6	15	14	12845.10	1	3990.71	2.5058	0.0517	0.0	0.0	0.0	3.97E-07	6.42E-06	3.84E-05
4	2	17	18	4763.59	2	3990.90	2.5057	0.0482	0.0	9.51E-08	2.81E-06	1.35E-05	3.14E-05	5.17E-05
7	5	31	30	11856.22	2	3990.97	2.5057	0.0400	0.0	0.0	0.0	2.26E-08	2.88E-07	1.47E-06
7	5	70	69	18579.22	2	3990.99	2.5056	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-08
6	4	13	14	8803.20	1	3991.07	2.5056	0.0528	0.0	0.0	8.86E-07	2.12E-05	1.30E-04	4.08E-04
6	4	8	7	8331.84	2	3991.24	2.5055	0.0574	0.0	0.0	1.26E-08	2.49E-07	1.36E-06	3.95E-06
8	6	82	81	24264.39	1	3991.43	2.5054	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-08
2	0	48	49	4673.40	1	3992.19	2.5049	0.0400	0.0	4.51E-06	1.22E-04	5.62E-04	1.28E-03	2.07E-03
7	5	32	31	11964.44	2	3992.33	2.5048	0.0400	0.0	0.0	0.0	2.06E-08	2.70E-07	1.40E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	69	68	18344.26	2	3992.37	2.5048	0.0400	0.0	0.0	0.0	0.0	0.0	2.32E-08
5	3	5	6	6287.43	2	3993.00	2.5044	0.0621	0.0	0.0	1.51E-07	1.32E-06	4.44E-06	9.28E-06
5	3	23	24	7470.27	1	3993.00	2.5044	0.0412	0.0	3.16E-08	8.00E-06	1.12E-04	5.02E-04	1.27E-03
7	5	0	1	10455.82	1	3993.21	2.5043	0.0769	0.0	0.0	0.0	3.14E-07	2.87E-06	1.17E-05
8	6	16	15	12899.54	1	3993.21	2.5043	0.0505	0.0	0.0	0.0	3.99E-07	6.54E-06	3.94E-05
7	5	33	32	12076.10	2	3993.61	2.5040	0.0400	0.0	0.0	0.0	1.88E-08	2.52E-07	1.33E-06
7	5	68	67	18112.48	2	3993.68	2.5040	0.0400	0.0	0.0	0.0	0.0	0.0	2.73E-08
4	2	32	33	6370.20	1	3993.72	2.5039	0.0400	0.0	3.44E-07	3.61E-05	3.27E-04	1.12E-03	2.38E-03
8	6	81	80	23583.04	1	3994.01	2.5037	0.0400	0.0	0.0	0.0	0.0	0.0	4.17E-08
6	4	9	8	8360.19	2	3994.19	2.5036	0.0550	0.0	0.0	1.36E-08	2.73E-07	1.50E-06	4.37E-06
2	0	35	36	2438.31	2	3994.29	2.5036	0.0400	4.55E-08	7.79E-06	3.53E-05	6.63E-05	8.83E-05	9.97E-05
7	5	34	33	12191.21	2	3994.83	2.5032	0.0400	0.0	0.0	0.0	1.69E-08	2.34E-07	1.26E-06
7	5	67	66	17883.92	2	3994.92	2.5032	0.0400	0.0	0.0	0.0	0.0	0.0	3.21E-08
3	1	40	41	5405.60	1	3995.22	2.5030	0.0400	0.0	2.06E-06	1.00E-04	6.16E-04	1.67E-03	3.04E-03
3	1	26	27	3470.06	2	3995.34	2.5029	0.0400	0.0	1.56E-06	1.61E-05	4.57E-05	7.80E-05	1.04E-04
4	2	16	17	4718.72	2	3995.61	2.5027	0.0493	0.0	1.05E-07	2.96E-06	1.38E-05	3.18E-05	5.17E-05
8	6	17	16	12957.61	1	3995.64	2.5027	0.0493	0.0	0.0	0.0	3.97E-07	6.60E-06	4.02E-05
6	4	12	13	8751.40	1	3995.67	2.5027	0.0540	0.0	0.0	8.99E-07	2.11E-05	1.28E-04	3.97E-04
7	5	35	34	12309.75	2	3995.97	2.5025	0.0400	0.0	0.0	0.0	1.52E-08	2.16E-07	1.18E-06
7	5	66	65	17658.56	2	3996.08	2.5025	0.0400	0.0	0.0	0.0	0.0	0.0	3.76E-08
8	6	80	79	23704.85	1	3996.51	2.5022	0.0400	0.0	0.0	0.0	0.0	0.0	5.11E-08
5	3	4	5	6265.97	2	3996.90	2.5019	0.0645	0.0	0.0	1.31E-07	1.14E-06	3.79E-06	7.90E-06
7	5	36	35	12431.72	2	3997.05	2.5018	0.0400	0.0	0.0	0.0	1.36E-08	1.99E-07	1.11E-06
6	4	10	9	8392.08	2	3997.08	2.5018	0.0547	0.0	0.0	1.45E-08	2.93E-07	1.63E-06	4.76E-06
7	5	65	64	17436.43	2	3997.17	2.5018	0.0400	0.0	0.0	0.0	0.0	0.0	4.39E-08
8	6	18	17	13019.29	1	3997.99	2.5013	0.0482	0.0	0.0	0.0	3.93E-07	6.63E-06	4.07E-05
7	5	37	36	12557.12	2	3998.05	2.5012	0.0400	0.0	0.0	0.0	1.21E-08	1.83E-07	1.04E-06
7	5	64	63	17217.54	2	3998.18	2.5011	0.0400	0.0	0.0	0.0	0.0	0.0	5.11E-08
5	3	22	23	7380.84	1	3998.31	2.5011	0.0423	0.0	3.77E-08	8.89E-06	1.21E-04	5.27E-04	1.31E-03
8	6	79	78	23429.83	1	3998.93	2.5007	0.0400	0.0	0.0	0.0	0.0	0.0	6.25E-08
7	5	38	37	12685.95	2	3998.99	2.5006	0.0400	0.0	0.0	0.0	1.07E-08	1.67E-07	9.71E-07
7	5	63	62	17001.87	2	3999.12	2.5005	0.0400	0.0	0.0	0.0	0.0	0.0	5.94E-08
2	0	47	48	4487.89	1	3999.22	2.5005	0.0400	0.0	6.92E-06	1.62E-04	6.90E-04	1.51E-03	2.36E-03
4	2	31	32	6246.50	1	3999.66	2.5002	0.0400	0.0	4.50E-07	4.29E-05	3.69E-04	1.23E-03	2.56E-03
7	5	39	38	12818.19	2	3999.85	2.5001	0.0400	0.0	0.0	0.0	0.0	1.52E-07	9.02E-07
6	4	11	10	8427.51	2	3999.89	2.5001	0.0545	0.0	0.0	1.51E-08	3.11E-07	1.74E-06	5.12E-06
7	5	62	61	16789.46	2	3999.99	2.5000	0.0400	0.0	0.0	0.0	0.0	0.0	6.87E-08
2	0	34	35	2307.02	2	4000.18	2.4999	0.0400	8.34E-08	1.04E-05	4.25E-05	7.57E-05	9.77E-05	1.08E-04
6	4	11	12	8703.29	1	4000.20	2.4999	0.0542	0.0	0.0	9.00E-07	2.07E-05	1.24E-04	3.82E-04
4	2	15	16	4657.45	2	4000.25	2.4998	0.0505	0.0	1.16E-07	3.08E-06	1.41E-05	3.19E-05	5.13E-05
8	6	19	18	13084.58	1	4000.27	2.4998	0.0470	0.0	0.0	0.0	3.85E-07	6.61E-06	4.10E-05
7	5	1	0	10452.15	1	4000.48	2.4997	0.0769	0.0	0.0	0.0	3.19E-07	2.91E-06	1.19E-05
3	1	25	26	3372.13	2	4000.63	2.4996	0.0400	0.0	1.91E-06	1.83E-05	4.98E-05	8.30E-05	1.09E-04
7	5	40	39	12953.84	2	4000.65	2.4996	0.0400	0.0	0.0	0.0	0.0	1.38E-07	8.35E-07
5	3	3	4	6248.08	2	4000.74	2.4995	0.0676	0.0	0.0	1.09E-07	9.34E-07	3.10E-06	6.44E-06
7	5	61	60	16580.31	2	4000.78	2.4995	0.0400	0.0	0.0	0.0	0.0	0.0	7.94E-08
8	6	78	77	23157.98	1	4001.26	2.4992	0.0400	0.0	0.0	0.0	0.0	0.0	7.63E-08
7	5	41	40	13092.91	2	4001.37	2.4991	0.0400	0.0	0.0	0.0	0.0	1.24E-07	7.71E-07
7	5	60	59	16374.42	2	4001.50	2.4991	0.0400	0.0	0.0	0.0	0.0	0.0	9.13E-08
3	1	39	40	5251.08	1	4001.71	2.4989	0.0400	0.0	2.92E-06	1.25E-04	7.26E-04	1.90E-03	3.37E-03
7	5	42	41	13235.37	2	4002.02	2.4987	0.0400	0.0	0.0	0.0	0.0	1.12E-07	7.09E-07
7	5	59	58	16171.80	2	4002.14	2.4987	0.0400	0.0	0.0	0.0	0.0	1.04E-08	1.05E-07
8	6	20	19	13153.48	1	4002.48	2.4985	0.0458	0.0	0.0	0.0	3.75E-07	6.54E-06	4.11E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	43	42	13381.23	2	4002.60	2.4984	0.0400	0.0	0.0	0.0	0.0	1.00E-07	6.50E-07
6	4	12	11	8466.48	2	4002.65	2.4983	0.0542	0.0	0.0	1.56E-08	3.26E-07	1.84E-06	5.45E-06
7	5	58	57	15972.47	2	4002.72	2.4983	0.0400	0.0	0.0	0.0	0.0	1.23E-08	1.20E-07
7	5	44	43	13530.48	2	4003.11	2.4981	0.0400	0.0	0.0	0.0	0.0	8.93E-08	5.94E-07
7	5	57	56	15776.43	2	4003.21	2.4980	0.0400	0.0	0.0	0.0	0.0	1.45E-08	1.38E-07
8	6	77	76	22889.33	1	4003.52	2.4978	0.0400	0.0	0.0	0.0	0.0	0.0	9.28E-08
7	5	45	44	13683.11	2	4003.55	2.4978	0.0400	0.0	0.0	0.0	0.0	7.94E-08	5.41E-07
5	3	21	22	7295.12	1	4003.55	2.4978	0.0435	0.0	4.45E-08	9.81E-06	1.28E-04	5.50E-04	1.35E-03
7	5	56	55	15583.68	2	4003.64	2.4977	0.0400	0.0	0.0	0.0	0.0	1.70E-08	1.57E-07
7	5	46	45	13839.13	2	4003.92	2.4976	0.0400	0.0	0.0	0.0	0.0	7.03E-08	4.91E-07
7	5	55	54	15394.23	2	4003.99	2.4975	0.0400	0.0	0.0	0.0	0.0	1.99E-08	1.78E-07
7	5	2	1	10455.82	1	4004.01	2.4975	0.0738	0.0	0.0	1.38E-08	6.39E-07	5.83E-06	2.38E-05
7	5	47	46	13998.51	2	4004.21	2.4974	0.0400	0.0	0.0	0.0	0.0	6.20E-08	4.45E-07
7	5	54	53	15208.11	2	4004.27	2.4973	0.0400	0.0	0.0	0.0	0.0	2.32E-08	2.02E-07
7	5	48	47	14161.26	2	4004.44	2.4972	0.0400	0.0	0.0	0.0	0.0	5.45E-08	4.01E-07
7	5	53	52	15025.29	2	4004.48	2.4972	0.0400	0.0	0.0	0.0	0.0	2.70E-08	2.28E-07
5	3	2	3	6233.77	2	4004.51	2.4972	0.0707	0.0	0.0	8.37E-08	7.16E-07	2.37E-06	4.91E-06
7	5	49	48	14327.37	2	4004.59	2.4971	0.0400	0.0	0.0	0.0	0.0	4.77E-08	3.61E-07
7	5	52	51	14845.80	2	4004.62	2.4971	0.0400	0.0	0.0	0.0	0.0	3.13E-08	2.57E-07
8	6	21	20	13225.99	1	4004.62	2.4971	0.0447	0.0	0.0	0.0	3.63E-07	6.44E-06	4.09E-05
6	4	10	11	8658.86	1	4004.66	2.4971	0.0545	0.0	0.0	8.90E-07	2.01E-05	1.19E-04	3.65E-04
7	5	50	49	14496.84	2	4004.67	2.4971	0.0400	0.0	0.0	0.0	0.0	4.16E-08	3.23E-07
7	5	51	50	14669.65	2	4004.68	2.4971	0.0400	0.0	0.0	0.0	0.0	3.62E-08	2.89E-07
4	2	14	15	4599.77	2	4004.82	2.4970	0.0517	0.0	1.25E-07	3.19E-06	1.42E-05	3.17E-05	5.07E-05
6	4	13	12	8508.98	2	4005.33	2.4967	0.0540	0.0	0.0	1.59E-08	3.37E-07	1.93E-06	5.74E-06
4	2	30	31	6126.50	1	4005.53	2.4965	0.0400	0.0	5.83E-07	5.05E-05	4.15E-04	1.34E-03	2.74E-03
8	6	76	75	22623.88	1	4005.69	2.4964	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-07
3	1	24	25	3277.80	2	4005.87	2.4963	0.0400	0.0	2.32E-06	2.05E-05	5.39E-05	8.78E-05	1.13E-04
2	0	33	34	2179.32	2	4006.00	2.4963	0.0400	1.50E-07	1.38E-05	5.08E-05	8.60E-05	1.08E-04	1.17E-04
2	0	46	47	4306.05	1	4006.19	2.4961	0.0400	0.0	1.05E-05	2.13E-04	8.44E-04	1.76E-03	2.69E-03
8	6	22	21	13302.10	1	4006.68	2.4958	0.0435	0.0	0.0	0.0	3.49E-07	6.31E-06	4.05E-05
7	5	3	2	10463.16	1	4007.47	2.4953	0.0707	0.0	0.0	2.06E-08	9.56E-07	8.74E-06	3.57E-05
8	6	75	74	22361.64	1	4007.79	2.4951	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-07
6	4	14	13	8555.02	2	4007.95	2.4950	0.0528	0.0	0.0	1.60E-08	3.45E-07	1.99E-06	5.99E-06
3	1	38	39	5100.25	1	4008.13	2.4949	0.0400	0.0	4.10E-06	1.56E-04	8.51E-04	2.15E-03	3.73E-03
5	3	1	2	6223.04	2	4008.22	2.4949	0.0738	0.0	0.0	5.70E-08	4.85E-07	1.60E-06	3.32E-06
8	6	23	22	13381.82	1	4008.67	2.4946	0.0423	0.0	0.0	0.0	3.33E-07	6.14E-06	4.00E-05
5	3	20	21	7213.10	1	4008.72	2.4946	0.0447	0.0	5.20E-08	1.07E-05	1.36E-04	5.71E-04	1.39E-03
6	4	9	10	8618.14	1	4009.06	2.4943	0.0547	0.0	0.0	8.67E-07	1.93E-05	1.13E-04	3.44E-04
4	2	13	14	4545.69	2	4009.33	2.4942	0.0528	0.0	1.33E-07	3.26E-06	1.42E-05	3.14E-05	4.96E-05
8	6	74	73	22102.62	1	4009.80	2.4939	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-07
6	4	15	14	8604.60	2	4010.50	2.4935	0.0517	0.0	0.0	1.59E-08	3.51E-07	2.05E-06	6.21E-06
8	6	24	23	13465.12	1	4010.59	2.4934	0.0412	0.0	0.0	0.0	3.16E-07	5.94E-06	3.92E-05
7	5	4	3	10474.17	1	4010.86	2.4932	0.0676	0.0	0.0	2.71E-08	1.27E-06	1.16E-05	4.75E-05
3	1	23	24	3187.07	2	4011.04	2.4931	0.0412	0.0	2.78E-06	2.29E-05	5.80E-05	9.25E-05	1.18E-04
4	2	29	30	6010.21	1	4011.33	2.4929	0.0400	0.0	7.49E-07	5.91E-05	4.63E-04	1.46E-03	2.92E-03
8	6	73	72	21846.84	1	4011.73	2.4927	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-07
2	0	32	33	2055.22	2	4011.76	2.4927	0.0400	2.65E-07	1.81E-05	6.04E-05	9.73E-05	1.18E-04	1.26E-04
5	3	0	1	6215.88	2	4011.87	2.4926	0.0769	0.0	0.0	2.90E-08	2.46E-07	8.11E-07	1.68E-06
8	6	25	24	13552.03	1	4012.43	2.4923	0.0400	0.0	0.0	0.0	2.98E-07	5.72E-06	3.83E-05
6	4	16	15	8657.70	2	4012.98	2.4919	0.0505	0.0	0.0	1.57E-08	3.53E-07	2.09E-06	6.38E-06
7	5	93	92	25701.90	1	4012.98	2.4919	0.0400	0.0	0.0	0.0	0.0	0.0	9.75E-09
2	0	45	46	4127.89	1	4013.10	2.4918	0.0400	0.0	1.59E-05	2.78E-04	1.03E-03	2.06E-03	3.05E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	8	9	8581.11	1	4013.39	2.4917	0.0550	0.0	0.0	8.32E-07	1.82E-05	1.06E-04	3.21E-04
8	6	72	71	21594.31	1	4013.58	2.4915	0.0400	0.0	0.0	0.0	0.0	0.0	2.37E-07
4	2	12	13	4495.20	2	4013.78	2.4914	0.0540	0.0	1.41E-07	3.30E-06	1.41E-05	3.07E-05	4.82E-05
5	3	19	20	7134.78	1	4013.83	2.4914	0.0458	0.0	6.00E-08	1.16E-05	1.43E-04	5.89E-04	1.41E-03
7	5	5	4	10488.85	1	4014.18	2.4912	0.0645	0.0	0.0	3.33E-08	1.56E-06	1.44E-05	5.90E-05
8	6	26	25	13642.53	1	4014.20	2.4912	0.0400	0.0	0.0	0.0	2.80E-07	5.49E-06	3.72E-05
3	1	37	38	4953.12	1	4014.49	2.4910	0.0400	0.0	5.71E-06	1.93E-04	9.94E-04	2.42E-03	4.10E-03
8	6	71	70	21345.04	1	4015.35	2.4904	0.0400	0.0	0.0	0.0	0.0	1.22E-08	2.83E-07
6	4	17	16	8714.33	2	4015.40	2.4904	0.0493	0.0	0.0	1.53E-08	3.52E-07	2.11E-06	6.52E-06
8	6	27	26	13736.61	1	4015.90	2.4901	0.0400	0.0	0.0	0.0	2.61E-07	5.23E-06	3.60E-05
3	1	22	23	3099.94	2	4016.15	2.4899	0.0423	0.0	3.30E-06	2.54E-05	6.20E-05	9.69E-05	1.22E-04
7	5	92	91	25383.46	1	4016.44	2.4898	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-08
8	6	70	69	21099.03	1	4017.04	2.4894	0.0400	0.0	0.0	0.0	0.0	1.51E-08	3.38E-07
4	2	28	29	5897.62	1	4017.07	2.4894	0.0400	0.0	9.53E-07	6.87E-05	5.15E-04	1.58E-03	3.10E-03
7	5	6	5	10507.20	1	4017.42	2.4892	0.0621	0.0	0.0	3.90E-08	1.85E-06	1.71E-05	7.02E-05
2	0	31	32	1934.72	2	4017.46	2.4891	0.0400	4.60E-07	2.35E-05	7.13E-05	1.09E-04	1.29E-04	1.35E-04
8	6	28	27	13834.28	1	4017.52	2.4891	0.0400	0.0	0.0	0.0	2.42E-07	4.96E-06	3.47E-05
6	4	7	8	8547.78	1	4017.65	2.4890	0.0574	0.0	0.0	7.84E-07	1.69E-05	9.79E-05	2.94E-04
6	4	18	17	8774.49	2	4017.75	2.4890	0.0482	0.0	0.0	1.48E-08	3.49E-07	2.12E-06	6.61E-06
4	2	11	12	4448.31	2	4018.17	2.4887	0.0542	0.0	1.46E-07	3.30E-06	1.38E-05	2.98E-05	4.64E-05
8	6	69	68	20856.30	1	4018.65	2.4884	0.0400	0.0	0.0	0.0	0.0	1.87E-08	4.01E-07
5	3	18	19	7060.17	1	4018.87	2.4883	0.0470	0.0	6.86E-08	1.25E-05	1.49E-04	6.04E-04	1.43E-03
5	3	1	0	6212.30	2	4018.96	2.4882	0.0769	0.0	0.0	2.94E-08	2.50E-07	8.22E-07	1.70E-06
8	6	29	28	13935.53	1	4019.07	2.4881	0.0400	0.0	0.0	0.0	2.23E-07	4.69E-06	3.33E-05
7	5	91	90	25068.06	1	4019.81	2.4877	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-08
2	0	44	45	3953.41	1	4019.94	2.4876	0.0400	0.0	2.37E-05	3.61E-04	1.24E-03	2.39E-03	3.44E-03
6	4	19	18	8838.17	2	4020.03	2.4875	0.0470	0.0	0.0	1.42E-08	3.43E-07	2.12E-06	6.67E-06
8	6	68	67	20616.86	1	4020.18	2.4875	0.0400	0.0	0.0	0.0	0.0	2.30E-08	4.76E-07
8	6	30	29	14040.35	1	4020.55	2.4872	0.0400	0.0	0.0	0.0	2.04E-07	4.41E-06	3.19E-05
7	5	7	6	10529.21	1	4020.60	2.4872	0.0597	0.0	0.0	4.42E-08	2.11E-06	1.96E-05	8.09E-05
3	1	36	37	4809.68	1	4020.79	2.4871	0.0400	0.0	7.87E-06	2.38E-04	1.15E-03	2.72E-03	4.50E-03
3	1	21	22	3016.41	2	4021.20	2.4868	0.0435	0.0	3.88E-06	2.79E-05	6.59E-05	1.01E-04	1.25E-04
8	6	67	66	20380.71	1	4021.63	2.4866	0.0400	0.0	0.0	0.0	0.0	2.82E-08	5.62E-07
6	4	6	7	8518.15	1	4021.84	2.4864	0.0597	0.0	0.0	7.22E-07	1.54E-05	8.85E-05	2.65E-04
8	6	31	30	14148.75	1	4021.95	2.4864	0.0400	0.0	0.0	0.0	1.87E-07	4.13E-06	3.04E-05
6	4	20	19	8905.38	2	4022.24	2.4862	0.0458	0.0	0.0	1.35E-08	3.35E-07	2.10E-06	6.69E-06
5	3	2	1	6215.88	2	4022.40	2.4861	0.0738	0.0	0.0	5.89E-08	5.00E-07	1.65E-06	3.41E-06
4	2	10	11	4405.02	2	4022.49	2.4860	0.0545	0.0	1.49E-07	3.25E-06	1.34E-05	2.86E-05	4.43E-05
4	2	27	28	5788.74	1	4022.75	2.4859	0.0400	0.0	1.20E-06	7.94E-05	5.70E-04	1.70E-03	3.29E-03
8	6	66	65	20147.87	1	4023.01	2.4857	0.0400	0.0	0.0	0.0	0.0	3.45E-08	6.63E-07
2	0	30	31	1817.82	2	4023.09	2.4857	0.0400	7.83E-07	3.03E-05	8.36E-05	1.22E-04	1.41E-04	1.44E-04
7	5	90	89	24755.73	1	4023.10	2.4856	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-08
8	6	32	31	14260.70	1	4023.27	2.4855	0.0400	0.0	0.0	0.0	1.70E-07	3.86E-06	2.89E-05
6	4	81	80	19482.71	2	4023.45	2.4854	0.0400	0.0	0.0	0.0	0.0	0.0	8.41E-09
7	5	8	7	10554.90	1	4023.71	2.4853	0.0574	0.0	0.0	4.88E-08	2.35E-06	2.20E-05	9.11E-05
5	3	17	18	6969.28	1	4023.85	2.4852	0.0482	0.0	7.74E-08	1.33E-05	1.55E-04	6.16E-04	1.44E-03
8	6	65	64	19918.36	1	4024.30	2.4849	0.0400	0.0	0.0	0.0	0.0	4.21E-08	7.79E-07
6	4	21	20	8976.10	2	4024.38	2.4849	0.0447	0.0	0.0	1.27E-08	3.25E-07	2.08E-06	6.67E-06
8	6	33	32	14376.23	1	4024.52	2.4848	0.0400	0.0	0.0	0.0	1.53E-07	3.58E-06	2.74E-05
8	6	64	63	19652.16	1	4025.51	2.4842	0.0400	0.0	0.0	0.0	0.0	5.11E-08	9.12E-07
6	4	80	79	19210.62	2	4025.64	2.4841	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-08
8	6	34	33	14495.30	1	4025.70	2.4840	0.0400	0.0	0.0	0.0	1.38E-07	3.32E-06	2.58E-05
5	3	3	2	6223.04	2	4025.78	2.4840	0.0707	0.0	0.0	8.79E-08	7.49E-07	2.47E-06	5.12E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	5	6	8492.22	1	4025.96	2.4839	0.0621	0.0	0.0	6.48E-07	1.37E-05	7.82E-05	2.33E-04
3	1	20	21	2936.50	2	4026.19	2.4837	0.0447	0.0	4.51E-06	3.04E-05	6.96E-05	1.05E-04	1.28E-04
7	5	89	88	24446.47	1	4026.30	2.4837	0.0400	0.0	0.0	0.0	0.0	0.0	2.47E-08
6	4	22	21	9050.34	2	4026.46	2.4836	0.0435	0.0	0.0	1.19E-08	3.13E-07	2.04E-06	6.62E-06
8	6	63	62	19469.31	1	4026.64	2.4835	0.0400	0.0	0.0	0.0	0.0	6.19E-08	1.07E-06
2	0	43	44	3782.62	1	4026.72	2.4834	0.0400	0.0	3.50E-05	4.66E-04	1.50E-03	2.76E-03	3.88E-03
7	5	9	8	10564.25	1	4026.74	2.4834	0.0550	0.0	0.0	5.27E-08	2.57E-06	2.42E-05	1.01E-04
4	2	9	10	4365.34	2	4026.75	2.4834	0.0547	0.0	1.50E-07	3.17E-06	1.28E-05	2.72E-05	4.18E-05
8	6	35	34	14617.93	1	4026.80	2.4834	0.0400	0.0	0.0	0.0	1.23E-07	3.05E-06	2.42E-05
3	1	35	36	4669.95	1	4027.02	2.4832	0.0400	0.0	1.07E-05	2.90E-04	1.33E-03	3.04E-03	4.91E-03
8	6	62	61	19249.80	1	4027.70	2.4828	0.0400	0.0	0.0	0.0	0.0	7.46E-08	1.24E-06
6	4	79	78	18941.66	2	4027.74	2.4828	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-08
8	6	36	35	14744.11	1	4027.83	2.4827	0.0400	0.0	0.0	0.0	1.10E-07	2.80E-06	2.27E-05
4	2	26	27	5663.57	1	4028.36	2.4824	0.0400	0.0	1.50E-06	9.11E-05	6.27E-04	1.82E-03	3.47E-03
6	4	23	22	5128.10	2	4028.47	2.4823	0.0423	0.0	0.0	1.10E-08	3.00E-07	1.99E-06	6.54E-06
2	0	29	30	1704.53	2	4028.67	2.4822	0.0400	1.31E-06	3.86E-05	9.73E-05	1.36E-04	1.52E-04	1.53E-04
8	6	61	60	19033.64	1	4028.67	2.4822	0.0400	0.0	0.0	0.0	0.0	8.97E-08	1.44E-06
5	3	16	17	6922.10	1	4028.76	2.4822	0.0493	0.0	8.63E-08	1.41E-05	1.59E-04	6.23E-04	1.44E-03
8	6	37	36	14873.83	1	4028.78	2.4821	0.0400	0.0	0.0	0.0	9.71E-08	2.56E-06	2.11E-05
5	3	4	3	6233.77	2	4029.10	2.4819	0.0676	0.0	0.0	1.16E-07	9.91E-07	3.28E-06	6.81E-06
7	5	88	87	24140.31	1	4029.43	2.4817	0.0400	0.0	0.0	0.0	0.0	0.0	3.11E-08
8	6	60	59	18820.86	1	4029.57	2.4817	0.0400	0.0	0.0	0.0	0.0	1.07E-07	1.67E-06
8	6	38	37	15007.09	1	4029.65	2.4816	0.0400	0.0	0.0	0.0	8.56E-08	2.33E-06	1.96E-05
7	5	10	9	10617.26	1	4029.71	2.4816	0.0547	0.0	0.0	5.58E-08	2.76E-06	2.62E-05	1.10E-04
6	4	78	77	18675.82	2	4029.77	2.4815	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-08
6	4	4	5	8470.00	1	4030.01	2.4814	0.0645	0.0	0.0	5.62E-07	1.18E-05	6.68E-05	1.98E-04
8	6	59	58	18611.44	1	4030.39	2.4811	0.0400	0.0	0.0	0.0	0.0	1.28E-07	1.93E-06
6	4	24	23	9209.37	2	4030.40	2.4811	0.0412	0.0	0.0	1.01E-08	2.85E-07	1.93E-06	6.43E-06
8	6	39	38	15143.88	1	4030.45	2.4811	0.0400	0.0	0.0	0.0	7.50E-08	2.11E-06	1.82E-05
4	2	8	9	4329.25	2	4030.94	2.4808	0.0550	0.0	1.48E-07	3.03E-06	1.21E-05	2.54E-05	3.89E-05
3	1	19	20	2660.19	2	4031.11	2.4807	0.0458	1.10E-08	5.18E-06	3.29E-05	7.31E-05	1.08E-04	1.30E-04
8	6	58	57	18405.41	1	4031.13	2.4807	0.0400	0.0	0.0	0.0	0.0	1.53E-07	2.22E-06
8	6	40	39	15264.19	1	4031.18	2.4807	0.0400	0.0	0.0	0.0	6.54E-08	1.90E-06	1.68E-05
6	4	77	76	18413.12	2	4031.73	2.4803	0.0400	0.0	0.0	0.0	0.0	0.0	1.83E-08
8	6	57	56	18202.77	1	4031.79	2.4803	0.0400	0.0	0.0	0.0	0.0	1.82E-07	2.56E-06
8	6	41	40	15428.02	1	4031.83	2.4803	0.0400	0.0	0.0	0.0	5.68E-08	1.71E-06	1.54E-05
6	4	25	24	9294.14	2	4032.27	2.4800	0.0400	0.0	0.0	0.0	2.70E-07	1.86E-06	6.29E-06
5	3	5	4	6248.08	2	4032.35	2.4799	0.0645	0.0	0.0	1.42E-07	1.23E-06	4.07E-06	8.46E-06
8	6	56	55	18003.52	1	4032.37	2.4799	0.0400	0.0	0.0	0.0	0.0	2.15E-07	2.93E-06
8	6	42	41	15575.37	1	4032.40	2.4799	0.0400	0.0	0.0	0.0	4.90E-08	1.53E-06	1.41E-05
7	5	87	86	23837.25	1	4032.47	2.4799	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-08
7	5	11	10	10653.94	1	4032.60	2.4798	0.0545	0.0	0.0	5.82E-08	2.92E-06	2.80E-05	1.18E-04
8	6	55	54	17807.68	1	4032.87	2.4796	0.0400	0.0	0.0	0.0	0.0	2.53E-07	3.35E-06
8	6	43	42	15726.23	1	4032.90	2.4796	0.0400	0.0	0.0	0.0	4.22E-08	1.36E-06	1.29E-05
3	1	34	35	4533.94	1	4033.19	2.4794	0.0400	0.0	1.45E-05	3.52E-04	1.53E-03	3.38E-03	5.35E-03
8	6	54	53	17615.26	1	4033.30	2.4794	0.0400	0.0	0.0	0.0	0.0	2.98E-07	3.81E-06
8	6	44	43	15860.58	1	4033.32	2.4793	0.0400	0.0	0.0	0.0	3.61E-08	1.21E-06	1.17E-05
2	0	42	43	3615.54	1	4033.43	2.4793	0.0400	1.78E-08	5.13E-05	5.97E-04	1.80E-03	3.18E-03	4.35E-03
5	3	15	16	6658.63	1	4033.59	2.4792	0.0505	0.0	9.50E-08	1.48E-05	1.63E-04	6.27E-04	1.44E-03
6	4	76	75	18153.57	2	4033.60	2.4792	0.0400	0.0	0.0	0.0	0.0	0.0	2.21E-08
8	6	53	52	17426.27	1	4033.65	2.4791	0.0400	0.0	0.0	0.0	0.0	3.48E-07	4.33E-06
8	6	45	44	16038.43	1	4033.66	2.4791	0.0400	0.0	0.0	0.0	3.07E-08	1.07E-06	1.06E-05
4	2	25	26	5582.12	1	4033.90	2.4790	0.0400	0.0	1.85E-06	1.04E-04	6.85E-04	1.95E-03	3.64E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	6	52	51	17240.70	1	4033.92	2.4790	0.0400	0.0	0.0	0.0	0.0	4.06E-07	4.90E-06
8	6	46	45	16199.77	1	4033.93	2.4790	0.0400	0.0	0.0	0.0	2.60E-08	9.42E-07	9.62E-06
6	4	3	4	8451.48	1	4034.00	2.4789	0.0676	0.0	0.0	4.65E-07	9.68E-06	5.47E-05	1.62E-04
6	4	26	25	9382.42	2	4034.08	2.4789	0.0400	0.0	0.0	0.0	2.54E-07	1.79E-06	6.13E-06
8	6	51	50	17058.57	1	4034.12	2.4789	0.0400	0.0	0.0	0.0	1.06E-08	4.72E-07	5.53E-06
8	6	47	46	16364.60	1	4034.12	2.4789	0.0400	0.0	0.0	0.0	2.19E-08	8.27E-07	8.67E-06
2	0	28	29	1594.85	2	4034.19	2.4788	0.0400	2.15E-06	4.88E-05	1.13E-04	1.51E-04	1.64E-04	1.62E-04
8	6	50	49	16879.89	1	4034.23	2.4788	0.0400	0.0	0.0	0.0	1.28E-08	5.46E-07	6.22E-06
8	6	48	47	16532.89	1	4034.23	2.4788	0.0400	0.0	0.0	0.0	1.84E-08	7.22E-07	7.78E-06
8	6	49	48	16704.66	1	4034.27	2.4788	0.0400	0.0	0.0	0.0	1.54E-08	6.29E-07	6.97E-06
4	2	7	8	4296.77	2	4035.07	2.4783	0.0574	0.0	1.43E-07	2.85E-06	1.13E-05	2.34E-05	3.56E-05
6	4	75	74	17857.18	2	4035.41	2.4781	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-08
7	5	12	11	10694.28	1	4035.42	2.4781	0.0542	0.0	0.0	5.99E-08	3.05E-06	2.95E-05	1.25E-04
7	5	86	85	23537.30	1	4035.43	2.4781	0.0400	0.0	0.0	0.0	0.0	0.0	4.86E-08
5	3	6	5	6265.97	2	4035.53	2.4780	0.0621	0.0	0.0	1.67E-07	1.45E-06	4.83E-06	1.01E-05
6	4	27	26	9474.20	2	4035.81	2.4778	0.0400	0.0	0.0	0.0	2.37E-07	1.71E-06	5.95E-06
3	1	18	19	2787.51	2	4035.97	2.4777	0.0470	1.49E-08	5.89E-06	3.53E-05	7.61E-05	1.10E-04	1.32E-04
6	4	74	73	17643.96	2	4037.14	2.4770	0.0400	0.0	0.0	0.0	0.0	0.0	3.20E-08
6	4	28	27	9569.48	2	4037.47	2.4768	0.0400	0.0	0.0	0.0	2.21E-07	1.62E-06	5.74E-06
6	4	2	3	8436.66	1	4037.91	2.4765	0.0707	0.0	0.0	3.59E-07	7.43E-06	4.18E-05	1.23E-04
7	5	13	12	10738.28	1	4038.17	2.4764	0.0540	0.0	0.0	6.08E-08	3.16E-06	3.08E-05	1.32E-04
7	5	85	84	23240.48	1	4038.30	2.4763	0.0400	0.0	0.0	0.0	0.0	0.0	6.06E-08
5	3	14	15	6798.89	1	4038.37	2.4762	0.0517	0.0	1.03E-07	1.53E-05	1.65E-04	6.25E-04	1.42E-03
5	3	7	6	6287.43	2	4038.65	2.4761	0.0597	0.0	0.0	1.90E-07	1.66E-06	5.56E-06	1.16E-05
6	4	73	72	17393.93	2	4038.79	2.4760	0.0400	0.0	0.0	0.0	0.0	0.0	3.83E-08
6	4	29	28	9668.25	2	4039.07	2.4758	0.0400	0.0	0.0	0.0	2.04E-07	1.54E-06	5.52E-06
4	2	6	7	4267.90	2	4039.13	2.4758	0.0597	0.0	1.34E-07	2.63E-06	1.02E-05	2.12E-05	3.21E-05
3	1	33	34	4401.64	1	4039.29	2.4757	0.0400	0.0	1.95E-05	4.24E-04	1.75E-03	3.74E-03	5.80E-03
4	2	24	25	5484.40	1	4039.38	2.4756	0.0400	0.0	2.26E-06	1.17E-04	7.45E-04	2.07E-03	3.81E-03
2	0	27	28	1488.80	2	4039.64	2.4755	0.0400	3.48E-06	6.11E-05	1.30E-04	1.67E-04	1.77E-04	1.72E-04
2	0	41	42	3452.15	1	4040.09	2.4752	0.0400	3.82E-08	7.44E-05	7.60E-04	2.14E-03	3.65E-03	4.86E-03
6	4	72	71	17147.08	2	4040.37	2.4750	0.0400	0.0	0.0	0.0	0.0	0.0	4.57E-08
6	4	30	29	9770.52	2	4040.59	2.4749	0.0400	0.0	0.0	0.0	1.88E-07	1.45E-06	5.29E-06
3	1	17	18	2718.44	2	4040.77	2.4748	0.0482	1.97E-08	6.62E-06	3.75E-05	7.88E-05	1.12E-04	1.33E-04
7	5	14	13	10785.94	1	4040.85	2.4747	0.0528	0.0	0.0	6.10E-08	3.23E-06	3.19E-05	1.37E-04
7	5	84	83	22946.81	1	4041.09	2.4746	0.0400	0.0	0.0	0.0	0.0	0.0	7.53E-08
5	3	8	7	6312.47	2	4041.70	2.4742	0.0574	0.0	0.0	2.09E-07	1.85E-06	6.24E-06	1.31E-05
6	4	1	2	8425.54	1	4041.76	2.4742	0.0736	0.0	0.0	2.45E-07	5.04E-06	2.83E-05	8.34E-05
6	4	71	70	16903.43	2	4041.87	2.4741	0.0400	0.0	0.0	0.0	0.0	0.0	5.44E-08
6	4	31	30	9876.27	2	4042.05	2.4740	0.0400	0.0	0.0	0.0	1.72E-07	1.36E-06	5.06E-06
5	3	13	14	6742.87	1	4043.07	2.4734	0.0528	0.0	1.11E-07	1.57E-05	1.65E-04	6.19E-04	1.39E-03
4	2	5	6	4242.63	2	4043.13	2.4733	0.0621	0.0	1.23E-07	2.36E-06	9.10E-06	1.87E-05	2.82E-05
6	4	70	69	16662.99	2	4043.30	2.4732	0.0400	0.0	0.0	0.0	0.0	0.0	6.45E-08
6	4	32	31	9585.50	2	4043.44	2.4731	0.0400	0.0	0.0	0.0	1.57E-07	1.28E-06	4.82E-06
7	5	15	14	10837.26	1	4043.46	2.4731	0.0517	0.0	0.0	6.06E-08	3.27E-06	3.27E-05	1.42E-04
7	5	83	82	22656.29	1	4043.81	2.4729	0.0400	0.0	0.0	0.0	0.0	0.0	9.33E-08
6	4	69	68	16425.77	2	4044.65	2.4724	0.0400	0.0	0.0	0.0	0.0	0.0	7.64E-08
5	3	9	8	6341.08	2	4044.69	2.4724	0.0550	0.0	0.0	2.26E-07	2.02E-06	6.87E-06	1.45E-05
6	4	33	32	10098.21	2	4044.75	2.4723	0.0400	0.0	0.0	0.0	1.42E-07	1.19E-06	4.57E-06
4	2	23	24	5390.41	1	4044.79	2.4723	0.0412	0.0	2.74E-06	1.31E-04	8.05E-04	2.18E-03	3.96E-03
2	0	26	27	1386.36	2	4045.03	2.4722	0.0400	5.51E-06	7.58E-05	1.48E-04	1.83E-04	1.89E-04	1.81E-04
3	1	32	33	4273.06	1	4045.33	2.4720	0.0400	0.0	2.58E-05	5.08E-04	1.99E-03	4.12E-03	6.26E-03
3	1	16	17	2652.99	2	4045.51	2.4719	0.0493	2.57E-08	7.35E-06	3.95E-05	8.09E-05	1.13E-04	1.33E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	0	1	8418.13	1	4045.53	2.4719	0.0769	0.0	0.0	1.24E-07	2.55E-06	1.43E-05	4.21E-05
6	4	68	67	16151.77	2	4045.93	2.4716	0.0400	0.0	0.0	0.0	0.0	0.0	9.01E-08
7	5	16	15	10892.23	1	4045.99	2.4716	0.0505	0.0	0.0	5.95E-08	3.28E-06	3.33E-05	1.46E-04
6	4	34	33	10214.39	2	4046.00	2.4716	0.0400	0.0	0.0	0.0	1.28E-07	1.10E-06	4.32E-06
7	5	82	81	22368.93	1	4046.44	2.4713	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-07
2	0	40	41	3292.48	1	4046.68	2.4712	0.0400	8.05E-08	1.07E-04	9.61E-04	2.55E-03	4.17E-03	5.41E-03
4	2	4	5	4220.97	2	4047.07	2.4709	0.0645	0.0	1.08E-07	2.04E-06	7.82E-06	1.60E-05	2.40E-05
6	4	67	66	15961.02	2	4047.13	2.4709	0.0400	0.0	0.0	0.0	0.0	1.08E-08	1.06E-07
6	4	35	34	10334.05	2	4047.18	2.4709	0.0400	0.0	0.0	0.0	1.15E-07	1.02E-06	4.07E-06
5	3	10	9	6373.27	2	4047.60	2.4706	0.0547	0.0	0.0	2.40E-07	2.17E-06	7.44E-06	1.58E-05
5	3	12	13	6690.57	1	4047.71	2.4705	0.0540	0.0	1.17E-07	1.59E-05	1.64E-04	6.07E-04	1.36E-03
6	4	66	65	15733.51	2	4048.26	2.4702	0.0400	0.0	0.0	0.0	0.0	1.31E-08	1.24E-07
6	4	36	35	10457.16	2	4048.28	2.4702	0.0400	0.0	0.0	0.0	1.03E-07	9.38E-07	3.82E-06
7	5	17	16	10980.85	1	4048.45	2.4701	0.0493	0.0	0.0	5.79E-08	3.27E-06	3.36E-05	1.48E-04
7	5	81	80	22084.76	1	4048.98	2.4698	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-07
6	4	65	64	15509.25	2	4049.32	2.4696	0.0400	0.0	0.0	0.0	0.0	1.59E-08	1.46E-07
6	4	37	36	10583.74	2	4049.32	2.4696	0.0400	0.0	0.0	0.0	9.15E-08	8.60E-07	3.57E-06
6	4	98	97	25467.79	1	4050.12	2.4691	0.0400	0.0	0.0	0.0	0.0	0.0	9.16E-09
4	2	22	23	5300.14	1	4050.13	2.4691	0.0423	0.0	3.27E-06	1.46E-04	8.64E-04	2.29E-03	4.10E-03
3	1	15	16	2591.16	2	4050.18	2.4690	0.0505	3.26E-08	8.06E-06	4.13E-05	8.24E-05	1.14E-04	1.32E-04
6	4	38	37	10713.77	2	4050.29	2.4690	0.0400	0.0	0.0	0.0	8.09E-08	7.84E-07	3.33E-06
6	4	64	63	15288.27	2	4050.30	2.4690	0.0400	0.0	0.0	0.0	0.0	1.93E-08	1.70E-07
2	0	25	26	1287.55	2	4050.36	2.4689	0.0400	8.58E-06	9.30E-05	1.68E-04	1.99E-04	2.01E-04	1.89E-04
5	3	11	10	6409.02	2	4050.45	2.4689	0.0545	0.0	0.0	2.51E-07	2.30E-06	7.96E-06	1.70E-05
7	5	18	17	11013.12	1	4050.84	2.4686	0.0482	0.0	0.0	5.58E-08	3.23E-06	3.37E-05	1.50E-04
4	2	3	4	4202.92	2	4050.94	2.4686	0.0676	0.0	9.10E-08	1.69E-06	6.42E-06	1.31E-05	1.96E-05
6	4	39	38	10847.26	2	4051.18	2.4684	0.0400	0.0	0.0	0.0	7.12E-08	7.13E-07	3.09E-06
6	4	63	62	15070.55	2	4051.21	2.4684	0.0400	0.0	0.0	0.0	0.0	2.32E-08	1.97E-07
3	1	31	32	4148.21	1	4051.30	2.4683	0.0400	0.0	3.39E-05	6.03E-04	2.25E-03	4.52E-03	6.73E-03
7	5	80	79	21803.77	1	4051.45	2.4682	0.0400	0.0	0.0	0.0	0.0	0.0	1.75E-07
6	4	40	39	10984.19	2	4052.01	2.4679	0.0400	0.0	0.0	0.0	6.24E-08	6.45E-07	2.86E-06
6	4	62	61	14856.11	2	4052.04	2.4679	0.0400	0.0	0.0	0.0	0.0	2.78E-08	2.29E-07
5	3	11	12	6642.00	1	4052.28	2.4677	0.0542	0.0	1.22E-07	1.60E-05	1.61E-04	5.90E-04	1.31E-03
6	4	41	40	11124.55	2	4052.76	2.4675	0.0400	0.0	0.0	0.0	5.44E-08	5.82E-07	2.64E-06
6	4	61	60	14644.96	2	4052.80	2.4674	0.0400	0.0	0.0	0.0	0.0	3.33E-08	2.65E-07
6	4	1	0	8414.43	1	4052.87	2.4674	0.0769	0.0	0.0	1.26E-07	2.59E-06	1.45E-05	4.27E-05
7	5	19	18	11079.05	1	4053.16	2.4672	0.0470	0.0	0.0	5.33E-08	3.17E-06	3.36E-05	1.51E-04
2	0	39	40	3136.53	1	4053.20	2.4672	0.0400	1.67E-07	1.52E-04	1.21E-03	3.01E-03	4.75E-03	6.01E-03
5	3	12	11	6448.35	2	4053.24	2.4672	0.0542	0.0	0.0	2.59E-07	2.41E-06	8.41E-06	1.80E-05
6	4	42	41	11268.36	2	4053.45	2.4670	0.0400	0.0	0.0	0.0	4.72E-08	5.23E-07	2.42E-06
6	4	60	59	14437.11	2	4053.49	2.4670	0.0400	0.0	0.0	0.0	0.0	3.97E-08	3.05E-07
7	5	79	78	21528.99	1	4053.83	2.4668	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-07
6	4	97	96	25130.91	1	4053.96	2.4667	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-08
6	4	43	42	11415.59	2	4054.06	2.4667	0.0400	0.0	0.0	0.0	4.07E-08	4.67E-07	2.22E-06
6	4	59	58	14232.57	2	4054.11	2.4666	0.0400	0.0	0.0	0.0	0.0	4.72E-08	3.52E-07
6	4	44	43	11566.25	2	4054.60	2.4663	0.0400	0.0	0.0	0.0	3.50E-08	4.17E-07	2.03E-06
6	4	58	57	14031.34	2	4054.65	2.4663	0.0400	0.0	0.0	0.0	0.0	5.60E-08	4.04E-07
4	2	2	3	4188.48	2	4054.75	2.4662	0.0707	0.0	7.10E-08	1.30E-06	4.92E-06	9.98E-06	1.49E-05
3	1	14	15	2532.96	2	4054.79	2.4662	0.0517	4.07E-08	8.74E-06	4.27E-05	8.33E-05	1.14E-04	1.30E-04
6	4	45	44	11720.32	2	4055.07	2.4660	0.0400	0.0	0.0	0.0	2.99E-08	3.70E-07	1.84E-06
6	4	57	56	13833.44	2	4055.11	2.4660	0.0400	0.0	0.0	0.0	0.0	6.61E-08	4.62E-07
7	5	20	19	11148.61	1	4055.40	2.4658	0.0458	0.0	0.0	5.04E-08	3.08E-06	3.33E-05	1.52E-04
4	2	21	22	5213.61	1	4055.41	2.4658	0.0435	0.0	3.87E-06	1.62E-04	9.22E-04	2.39E-03	4.23E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	46	45	11877.80	2	4055.47	2.4658	0.0400	0.0	0.0	0.0	2.55E-08	3.27E-07	1.67E-06
6	4	56	55	13638.86	2	4055.51	2.4658	0.0400	0.0	0.0	0.0	0.0	7.79E-08	5.28E-07
2	0	24	25	1192.36	2	4055.63	2.4657	0.0400	1.31E-05	1.13E-04	1.89E-04	2.16E-04	2.13E-04	1.98E-04
6	4	47	46	12032.09	2	4055.80	2.4656	0.0400	0.0	0.0	0.0	2.16E-08	2.88E-07	1.51E-06
6	4	55	54	13447.62	2	4055.83	2.4656	0.0400	0.0	0.0	0.0	0.0	9.14E-08	6.00E-07
5	3	13	12	6491.25	2	4055.96	2.4655	0.0540	0.0	0.0	2.63E-07	2.50E-06	8.79E-06	1.90E-05
6	4	48	47	12202.98	2	4056.06	2.4654	0.0400	0.0	0.0	0.0	1.82E-08	2.53E-07	1.36E-06
6	4	54	53	13259.72	2	4056.08	2.4654	0.0400	0.0	0.0	0.0	0.0	1.07E-07	6.81E-07
7	5	76	77	21251.42	1	4056.14	2.4654	0.0400	0.0	0.0	0.0	0.0	1.14E-08	2.62E-07
6	4	49	48	12370.66	2	4056.24	2.4653	0.0400	0.0	0.0	0.0	1.53E-08	2.21E-07	1.22E-06
6	4	53	52	13075.18	2	4056.26	2.4653	0.0400	0.0	0.0	0.0	0.0	1.24E-07	7.70E-07
6	4	50	49	12541.73	2	4056.35	2.4653	0.0400	0.0	0.0	0.0	1.28E-08	1.92E-07	1.09E-06
6	4	52	51	12897.99	2	4056.36	2.4653	0.0400	0.0	0.0	0.0	0.0	1.44E-07	8.69E-07
6	4	51	50	12716.17	2	4056.39	2.4652	0.0400	0.0	0.0	0.0	1.07E-08	1.67E-07	9.77E-07
6	4	2	1	8418.13	1	4056.44	2.4652	0.0738	0.0	0.0	2.53E-07	5.19E-06	2.91E-05	8.57E-05
5	3	10	11	6597.16	1	4056.78	2.4650	0.0545	0.0	1.25E-07	1.58E-05	1.57E-04	5.67E-04	1.25E-03
3	1	30	31	4027.09	1	4057.21	2.4647	0.0400	0.0	4.40E-05	7.12E-04	2.53E-03	4.94E-03	7.21E-03
7	5	21	20	11221.82	1	4057.57	2.4645	0.0447	0.0	0.0	4.74E-08	2.98E-06	3.27E-05	1.51E-04
6	4	96	95	24797.05	1	4057.72	2.4644	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-08
7	5	77	76	20980.08	1	4058.36	2.4640	0.0400	0.0	0.0	0.0	0.0	1.45E-08	3.19E-07
4	2	1	2	4177.65	2	4058.49	2.4640	0.0738	0.0	4.88E-08	8.88E-07	3.34E-06	6.76E-06	1.01E-05
5	3	14	13	6537.71	2	4058.61	2.4639	0.0528	0.0	0.0	2.65E-07	2.56E-06	9.11E-06	1.98E-05
3	1	13	14	2478.38	2	4059.33	2.4635	0.0528	4.96E-08	9.34E-06	4.37E-05	8.34E-05	1.12E-04	1.28E-04
2	0	38	39	2984.30	1	4059.66	2.4633	0.0400	3.38E-07	2.15E-04	1.51E-03	3.53E-03	5.38E-03	6.64E-03
7	5	22	21	11298.67	1	4059.67	2.4633	0.0435	0.0	0.0	4.41E-08	2.86E-06	3.20E-05	1.49E-04
6	4	3	2	8425.54	1	4059.93	2.4631	0.0707	0.0	0.0	3.77E-07	7.77E-06	4.36E-05	1.29E-04
7	5	76	75	20711.97	1	4060.50	2.4628	0.0400	0.0	0.0	0.0	0.0	1.84E-08	3.88E-07
4	2	20	21	5130.82	1	4060.62	2.4627	0.0447	0.0	4.53E-06	1.77E-04	9.77E-04	2.49E-03	4.33E-03
2	0	23	24	1100.81	2	4060.84	2.4625	0.0412	1.96E-05	1.36E-04	2.11E-04	2.32E-04	2.25E-04	2.05E-04
5	3	15	14	6587.74	2	4061.19	2.4623	0.0517	0.0	0.0	2.63E-07	2.59E-06	9.36E-06	2.05E-05
5	3	9	10	6556.05	1	4061.21	2.4623	0.0547	0.0	1.26E-07	1.54E-05	1.50E-04	5.39E-04	1.18E-03
6	4	95	94	24466.21	1	4061.39	2.4622	0.0400	0.0	0.0	0.0	0.0	0.0	1.93E-08
7	5	23	22	11379.15	1	4061.69	2.4620	0.0423	0.0	0.0	4.08E-08	2.73E-06	3.11E-05	1.47E-04
4	2	0	1	4170.43	2	4062.16	2.4617	0.0769	0.0	2.49E-08	4.51E-07	1.69E-06	3.42E-06	5.10E-06
7	5	75	74	20447.11	1	4062.56	2.4615	0.0400	0.0	0.0	0.0	0.0	2.33E-08	4.70E-07
3	1	29	30	3909.71	1	4063.05	2.4612	0.0400	0.0	5.67E-05	8.34E-04	2.83E-03	5.37E-03	7.70E-03
6	4	4	3	8436.66	1	4063.36	2.4610	0.0676	0.0	0.0	4.97E-07	1.03E-05	5.79E-05	1.71E-04
7	5	24	23	11463.27	1	4063.65	2.4608	0.0412	0.0	0.0	3.74E-08	2.59E-06	3.01E-05	1.44E-04
5	3	16	15	6641.34	2	4063.70	2.4608	0.0505	0.0	0.0	2.59E-07	2.61E-06	9.53E-06	2.11E-05
3	1	12	13	2427.44	2	4063.81	2.4607	0.0540	5.90E-08	9.85E-06	4.42E-05	8.27E-05	1.10E-04	1.24E-04
5	3	86	85	18988.68	2	4064.33	2.4604	0.0400	0.0	0.0	0.0	0.0	0.0	9.06E-09
7	5	74	73	20185.51	1	4064.54	2.4603	0.0400	0.0	0.0	0.0	0.0	2.94E-08	5.68E-07
6	4	94	93	24138.43	1	4064.98	2.4600	0.0400	0.0	0.0	0.0	0.0	0.0	2.47E-08
7	5	25	24	11551.01	1	4065.52	2.4597	0.0400	0.0	0.0	3.40E-08	2.44E-06	2.90E-05	1.41E-04
5	3	8	9	6518.68	1	4065.57	2.4597	0.0550	0.0	1.25E-07	1.48E-05	1.42E-04	5.05E-04	1.10E-03
4	2	19	20	5051.77	1	4065.76	2.4596	0.0458	0.0	5.24E-06	1.92E-04	1.03E-03	2.57E-03	4.42E-03
2	0	22	23	1012.90	2	4065.98	2.4594	0.0423	2.88E-05	1.62E-04	2.34E-04	2.49E-04	2.36E-04	2.12E-04
2	0	37	38	2875.80	1	4066.06	2.4594	0.0400	6.75E-07	3.00E-04	1.87E-03	4.13E-03	6.07E-03	7.32E-03
5	3	17	16	6699.49	2	4066.15	2.4593	0.0493	0.0	0.0	2.53E-07	2.60E-06	9.64E-06	2.15E-05
7	5	73	72	19927.18	1	4066.44	2.4592	0.0400	0.0	0.0	0.0	0.0	3.69E-08	6.84E-07
6	4	5	4	8451.48	1	4066.71	2.4590	0.0645	0.0	0.0	6.11E-07	1.27E-05	7.18E-05	2.13E-04
5	3	85	84	18698.40	2	4066.86	2.4589	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-08
7	5	26	25	11642.38	1	4067.32	2.4586	0.0400	0.0	0.0	3.07E-08	2.29E-06	2.78E-05	1.37E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	11	12	2380.12	2	4068.23	2.4581	0.0542	6.87E-08	1.02E-05	4.43E-05	8.12E-05	1.07E-04	1.20E-04
7	5	72	71	19672.14	1	4068.26	2.4581	0.0400	0.0	0.0	0.0	0.0	4.62E-08	8.22E-07
6	4	93	92	23813.70	1	4068.49	2.4579	0.0400	0.0	0.0	0.0	0.0	0.0	3.14E-08
5	3	18	17	6759.20	2	4068.53	2.4579	0.0482	0.0	0.0	2.44E-07	2.58E-06	9.69E-06	2.19E-05
3	1	28	29	3796.07	1	4068.82	2.4577	0.0400	1.63E-08	7.24E-05	9.73E-04	3.15E-03	5.82E-03	8.20E-03
7	5	27	26	11737.38	1	4069.06	2.4576	0.0400	0.0	0.0	2.75E-06	2.13E-06	2.65E-05	1.33E-04
5	3	84	83	18411.21	2	4069.32	2.4574	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-08
4	2	1	0	4166.82	2	4069.32	2.4574	0.0769	0.0	2.54E-08	4.59E-07	1.72E-06	3.47E-06	5.17E-06
5	3	7	8	6485.03	1	4069.87	2.4571	0.0574	0.0	1.21E-07	1.39E-05	1.32E-04	4.66E-04	1.01E-03
6	4	6	5	8470.00	1	4069.99	2.4570	0.0621	0.0	0.0	7.16E-07	1.50E-05	8.51E-05	2.53E-04
7	5	71	70	19420.38	1	4069.99	2.4570	0.0400	0.0	0.0	0.0	0.0	5.76E-08	9.85E-07
7	5	28	27	11835.99	1	4070.71	2.4566	0.0400	0.0	0.0	2.45E-08	1.97E-06	2.51E-05	1.28E-04
4	2	18	19	4976.46	1	4070.84	2.4565	0.0470	0.0	6.00E-06	2.07E-04	1.07E-03	2.64E-03	4.48E-03
5	3	19	18	6823.48	2	4070.84	2.4565	0.0470	0.0	0.0	2.34E-07	2.53E-06	9.67E-06	2.20E-05
2	0	21	22	528.62	2	4071.06	2.4564	0.0435	4.15E-05	1.90E-04	2.58E-04	2.65E-04	2.46E-04	2.18E-04
7	5	70	69	19171.93	1	4071.65	2.4560	0.0400	0.0	0.0	0.0	0.0	7.16E-08	1.18E-06
5	3	83	82	18127.12	2	4071.70	2.4560	0.0400	0.0	0.0	0.0	0.0	0.0	1.71E-08
6	4	92	91	23492.04	1	4071.91	2.4558	0.0400	0.0	0.0	0.0	0.0	0.0	3.99E-08
7	5	29	28	11938.21	1	4072.30	2.4556	0.0400	0.0	0.0	2.17E-08	1.82E-06	2.37E-05	1.22E-04
2	0	36	37	2691.03	1	4072.39	2.4556	0.0400	1.32E-06	4.15E-04	2.31E-03	4.80E-03	6.81E-03	8.04E-03
3	1	10	11	2336.44	2	4072.59	2.4554	0.0545	7.81E-08	1.05E-05	4.37E-05	7.88E-05	1.03E-04	1.14E-04
4	2	2	1	4170.43	2	4072.80	2.4553	0.0738	0.0	5.07E-06	9.18E-07	3.44E-06	6.95E-06	1.04E-05
5	3	20	19	6891.30	2	4073.09	2.4551	0.0458	0.0	0.0	2.22E-07	2.47E-06	9.59E-06	2.21E-05
6	4	7	6	8492.22	1	4073.21	2.4551	0.0597	0.0	0.0	8.10E-07	1.71E-05	9.78E-05	2.92E-04
7	5	69	68	18526.79	1	4073.23	2.4551	0.0400	0.0	0.0	0.0	0.0	8.87E-08	1.40E-06
7	5	30	29	12044.05	1	4073.81	2.4547	0.0400	0.0	0.0	1.90E-08	1.66E-06	2.22E-05	1.17E-04
5	3	82	81	17846.16	2	4074.00	2.4546	0.0400	0.0	0.0	0.0	0.0	0.0	2.10E-08
5	3	6	7	6455.12	1	4074.09	2.4545	0.0597	0.0	1.14E-07	1.29E-05	1.20E-04	4.22E-04	9.08E-04
3	1	27	28	3686.17	1	4074.53	2.4543	0.0400	2.68E-08	9.14E-05	1.13E-03	3.49E-03	6.28E-03	8.69E-03
7	5	68	67	18684.96	1	4074.73	2.4542	0.0400	0.0	0.0	0.0	0.0	1.09E-07	1.66E-06
7	5	31	30	12153.49	1	4075.24	2.4538	0.0400	0.0	0.0	1.66E-08	1.52E-06	2.08E-05	1.12E-04
6	4	91	90	23173.46	1	4075.25	2.4538	0.0400	0.0	0.0	0.0	0.0	0.0	5.05E-08
5	3	21	20	6962.68	2	4075.27	2.4538	0.0447	0.0	0.0	2.09E-07	2.40E-06	9.45E-06	2.20E-05
4	2	17	18	4904.90	1	4075.85	2.4535	0.0482	0.0	6.78E-06	2.21E-04	1.11E-03	2.69E-03	4.52E-03
2	0	20	21	847.99	2	4076.08	2.4533	0.0447	5.86E-05	2.21E-04	2.81E-04	2.80E-04	2.55E-04	2.23E-04
7	5	67	66	18446.48	1	4076.14	2.4533	0.0400	0.0	0.0	0.0	0.0	1.35E-07	1.97E-06
4	2	3	2	4177.65	2	4076.21	2.4533	0.0707	0.0	7.52E-08	1.37E-06	5.15E-06	1.04E-05	1.56E-05
5	3	81	80	17868.32	2	4076.23	2.4532	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-08
6	4	8	7	8518.15	1	4076.35	2.4532	0.0574	0.0	0.0	8.94E-07	1.91E-05	1.10E-04	3.28E-04
7	5	32	31	12266.54	1	4076.60	2.4530	0.0400	0.0	0.0	1.44E-08	1.38E-06	1.94E-05	1.06E-04
3	1	9	10	2296.39	2	4076.88	2.4529	0.0547	8.64E-08	1.05E-05	4.26E-05	7.56E-05	9.74E-05	1.08E-04
5	3	22	21	7037.61	2	4077.37	2.4526	0.0435	0.0	0.0	1.95E-07	2.31E-06	9.26E-06	2.19E-05
7	5	66	65	18211.34	1	4077.48	2.4525	0.0400	0.0	0.0	0.0	0.0	1.65E-07	2.33E-06
7	5	33	32	12363.18	1	4077.88	2.4523	0.0400	0.0	0.0	1.24E-08	1.24E-06	1.80E-05	1.00E-04
5	3	5	6	6428.95	1	4078.25	2.4520	0.0621	0.0	1.05E-07	1.15E-05	1.07E-04	3.72E-04	7.98E-04
5	3	80	79	17293.62	2	4078.38	2.4520	0.0400	0.0	0.0	0.0	0.0	0.0	3.15E-08
6	4	90	89	22857.99	1	4078.50	2.4519	0.0400	0.0	0.0	0.0	0.0	0.0	6.37E-08
2	0	35	36	2550.01	1	4078.66	2.4518	0.0400	2.54E-06	5.69E-04	2.82E-03	5.55E-03	7.62E-03	8.79E-03
7	5	65	64	17579.55	1	4078.74	2.4517	0.0400	0.0	0.0	0.0	0.0	2.02E-07	2.74E-06
7	5	34	33	12503.41	1	4079.09	2.4515	0.0400	0.0	0.0	1.06E-08	1.12E-06	1.67E-05	9.44E-05
5	3	23	22	7116.09	2	4079.41	2.4513	0.0423	0.0	0.0	1.81E-07	2.21E-06	9.03E-06	2.16E-05
6	4	9	8	8547.78	1	4079.42	2.4513	0.0550	0.0	0.0	9.65E-07	2.09E-05	1.21E-04	3.63E-04
4	2	4	3	4188.48	2	4079.56	2.4512	0.0676	0.0	9.83E-08	1.81E-06	6.82E-06	1.38E-05	2.07E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	64	63	17751.12	1	4079.92	2.4510	0.0400	0.0	0.0	0.0	0.0	2.45E-07	3.21E-06
3	1	26	27	3580.03	1	4080.18	2.4509	0.0400	4.32E-08	1.14E-04	1.29E-03	3.84E-03	6.75E-03	9.17E-03
7	5	35	34	12627.23	1	4080.23	2.4508	0.0400	0.0	0.0	0.0	9.97E-07	1.53E-05	8.86E-05
5	3	79	78	17022.07	2	4080.46	2.4507	0.0400	0.0	0.0	0.0	0.0	0.0	3.84E-08
4	2	16	17	4637.09	1	4080.79	2.4505	0.0493	0.0	7.57E-06	2.34E-04	1.15E-03	2.73E-03	4.53E-03
7	5	63	62	17526.07	1	4081.02	2.4504	0.0400	0.0	0.0	0.0	0.0	2.98E-07	3.76E-06
2	0	19	20	771.00	2	4081.04	2.4504	0.0458	8.12E-05	2.55E-04	3.05E-04	2.94E-04	2.63E-04	2.28E-04
3	1	8	9	2259.98	2	4081.10	2.4503	0.0550	9.31E-08	1.04E-05	4.08E-05	7.14E-05	9.12E-05	1.00E-04
7	5	36	35	12754.63	1	4081.29	2.4502	0.0400	0.0	0.0	0.0	8.86E-07	1.41E-05	8.28E-05
5	3	24	23	7198.11	2	4081.38	2.4502	0.0412	0.0	0.0	1.67E-07	2.10E-06	8.76E-06	2.12E-05
6	4	89	88	22545.62	1	4081.68	2.4500	0.0400	0.0	0.0	0.0	0.0	0.0	8.05E-08
7	5	62	61	17304.39	1	4082.04	2.4498	0.0400	0.0	0.0	0.0	0.0	3.60E-07	4.39E-06
7	5	37	36	12885.61	1	4082.28	2.4496	0.0400	0.0	0.0	0.0	7.84E-07	1.28E-05	7.72E-05
5	3	4	5	6406.52	1	4082.34	2.4496	0.0645	0.0	9.25E-08	1.00E-05	9.21E-05	3.19E-04	6.81E-04
6	4	10	9	8581.11	1	4082.42	2.4495	0.0547	0.0	0.0	1.02E-06	2.24E-05	1.31E-04	3.95E-04
5	3	78	77	16753.69	2	4082.45	2.4495	0.0400	0.0	0.0	0.0	0.0	0.0	4.67E-08
4	2	5	4	4202.92	2	4082.84	2.4493	0.0645	0.0	1.19E-07	2.22E-06	8.43E-06	1.72E-05	2.57E-05
7	5	61	60	17086.11	1	4082.98	2.4492	0.0400	0.0	0.0	0.0	0.0	4.33E-07	5.10E-06
7	5	38	37	13020.16	1	4083.19	2.4491	0.0400	0.0	0.0	0.0	6.89E-07	1.16E-05	7.16E-05
5	3	25	24	7283.66	2	4083.29	2.4490	0.0400	0.0	0.0	1.52E-07	1.98E-06	8.45E-06	2.07E-05
7	5	60	59	16871.22	1	4083.84	2.4487	0.0400	0.0	0.0	0.0	1.22E-08	5.20E-07	5.91E-06
7	5	39	38	13158.27	1	4084.02	2.4486	0.0400	0.0	0.0	0.0	6.03E-07	1.05E-05	6.62E-05
5	3	77	76	16468.47	2	4084.38	2.4484	0.0400	0.0	0.0	0.0	0.0	0.0	5.67E-08
7	5	59	58	16659.74	1	4084.63	2.4482	0.0400	0.0	0.0	0.0	1.54E-08	6.23E-07	6.85E-06
6	4	88	87	22236.39	1	4084.77	2.4481	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-07
7	5	40	39	13299.95	1	4084.78	2.4481	0.0400	0.0	0.0	0.0	5.25E-07	9.49E-06	6.10E-05
2	0	34	35	2412.73	1	4084.86	2.4481	0.0400	4.78E-06	7.71E-04	3.43E-03	6.39E-03	8.49E-03	9.57E-03
5	3	26	25	7372.76	2	4085.12	2.4479	0.0400	0.0	0.0	1.38E-07	1.86E-06	8.11E-06	2.02E-05
3	1	7	8	2227.21	2	4085.26	2.4478	0.0574	9.73E-08	1.00E-05	3.84E-05	6.63E-05	8.41E-05	9.19E-05
7	5	58	57	16451.68	1	4085.33	2.4478	0.0400	0.0	0.0	0.0	1.93E-08	7.43E-07	7.91E-06
6	4	11	10	8618.14	1	4085.34	2.4478	0.0545	0.0	0.0	1.07E-06	2.37E-05	1.39E-04	4.24E-04
7	5	41	40	13445.18	1	4085.46	2.4477	0.0400	0.0	0.0	0.0	4.55E-07	8.52E-06	5.61E-05
4	2	15	16	4773.03	1	4085.67	2.4476	0.0505	0.0	8.35E-06	2.45E-04	1.17E-03	2.74E-03	4.51E-03
3	1	25	26	3477.63	1	4085.76	2.4475	0.0400	6.83E-08	1.42E-04	1.47E-03	4.20E-03	7.21E-03	9.64E-03
2	0	18	19	697.65	2	4085.93	2.4474	0.0470	1.10E-04	2.90E-04	3.27E-04	3.07E-04	2.69E-04	2.31E-04
7	5	57	56	16247.05	1	4085.96	2.4474	0.0400	0.0	0.0	0.0	2.41E-08	8.84E-07	9.11E-06
4	2	6	5	4220.97	2	4086.06	2.4473	0.0621	0.0	1.38E-07	2.60E-06	9.97E-06	2.04E-05	3.06E-05
7	5	42	41	13593.96	1	4086.07	2.4473	0.0400	0.0	0.0	0.0	3.93E-07	7.61E-06	5.13E-05
5	3	76	75	16226.44	2	4086.23	2.4472	0.0400	0.0	0.0	0.0	0.0	0.0	6.85E-08
5	3	3	4	6387.82	1	4086.35	2.4472	0.0676	0.0	7.78E-08	8.30E-06	7.57E-05	2.61E-04	5.55E-04
7	5	56	55	16045.84	1	4086.51	2.4471	0.0400	0.0	0.0	0.0	3.00E-08	1.05E-06	1.05E-05
7	5	43	42	13746.29	1	4086.60	2.4470	0.0400	0.0	0.0	0.0	3.37E-07	6.78E-06	4.68E-05
5	3	27	26	7465.39	2	4086.89	2.4468	0.0400	0.0	0.0	1.24E-07	1.74E-06	7.74E-06	1.96E-05
7	5	55	54	15848.09	1	4086.98	2.4468	0.0400	0.0	0.0	0.0	3.72E-08	1.24E-06	1.20E-05
7	5	44	43	13902.14	1	4087.05	2.4468	0.0400	0.0	0.0	0.0	2.88E-07	6.01E-06	4.25E-05
7	5	54	53	15657.78	1	4087.38	2.4466	0.0400	0.0	0.0	0.0	4.58E-08	1.46E-06	1.36E-05
7	5	45	44	14061.54	1	4087.43	2.4465	0.0400	0.0	0.0	0.0	2.45E-07	5.30E-06	3.85E-05
7	5	53	52	15462.93	1	4087.69	2.4464	0.0400	0.0	0.0	0.0	5.62E-08	1.71E-06	1.55E-05
7	5	46	45	14224.45	1	4087.73	2.4463	0.0400	0.0	0.0	0.0	2.07E-07	4.67E-06	3.48E-05
6	4	87	86	21930.29	1	4087.78	2.4463	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-07
7	5	52	51	15275.54	1	4087.93	2.4462	0.0400	0.0	0.0	0.0	6.87E-08	1.99E-06	1.76E-05
7	5	47	46	14390.88	1	4087.96	2.4462	0.0400	0.0	0.0	0.0	1.74E-07	4.09E-06	3.13E-05
5	3	75	74	15967.60	2	4088.00	2.4462	0.0400	0.0	0.0	0.0	0.0	0.0	8.26E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	5	51	50	15091.63	1	4089.09	2.4461	0.0400	0.0	0.0	0.0	8.35E-08	2.32E-06	1.99E-05
7	5	48	47	14960.82	1	4088.11	2.4461	0.0400	0.0	0.0	0.0	1.46E-07	3.57E-06	2.81E-05
7	5	50	49	14911.20	1	4088.17	2.4461	0.0400	0.0	0.0	0.0	1.01E-07	2.69E-06	2.24E-05
7	5	49	48	14734.27	1	4088.18	2.4461	0.0400	0.0	0.0	0.0	1.22E-07	3.10E-06	2.51E-05
6	4	12	11	8658.86	1	4088.20	2.4461	0.0542	0.0	0.0	1.10E-06	2.48E-05	1.47E-04	4.51E-04
5	3	28	27	7561.55	2	4088.58	2.4458	0.0400	0.0	0.0	1.11E-07	1.62E-06	7.36E-06	1.89E-05
4	2	7	6	4242.63	2	4089.21	2.4455	0.0597	0.0	1.54E-07	2.95E-06	1.14E-05	2.34E-05	3.54E-05
3	1	6	7	2198.07	2	4089.36	2.4454	0.0597	9.83E-08	9.47E-06	3.54E-05	6.04E-05	7.60E-05	8.27E-05
5	3	74	73	15711.97	2	4089.70	2.4452	0.0400	0.0	0.0	0.0	0.0	1.05E-08	9.94E-08
5	3	102	101	24961.22	1	4089.85	2.4451	0.0400	0.0	0.0	0.0	0.0	0.0	9.78E-09
5	3	29	28	7661.24	2	4090.21	2.4449	0.0400	0.0	0.0	9.86E-08	1.49E-06	6.96E-06	1.82E-05
5	3	2	3	6372.86	1	4090.30	2.4448	0.0707	0.0	6.07E-08	6.40E-06	5.81E-05	1.99E-04	4.23E-04
4	2	14	15	4712.73	1	4090.48	2.4447	0.0517	0.0	9.09E-06	2.54E-04	1.19E-03	2.74E-03	4.46E-03
6	4	86	85	21627.34	1	4090.70	2.4446	0.0400	0.0	0.0	0.0	0.0	0.0	1.59E-07
2	0	17	18	627.96	2	4090.77	2.4445	0.0482	1.47E-04	3.27E-04	3.48E-04	3.17E-04	2.74E-04	2.32E-04
6	4	13	12	8703.29	1	4090.99	2.4444	0.0540	0.0	0.0	1.11E-06	2.56E-05	1.54E-04	4.74E-04
2	0	33	34	2279.20	1	4091.00	2.4444	0.0400	8.85E-06	1.04E-03	4.14E-03	7.32E-03	9.41E-03	1.04E-02
3	1	24	25	3379.00	1	4091.27	2.4442	0.0400	1.06E-07	1.73E-04	1.67E-03	4.58E-03	7.66E-03	1.01E-02
5	3	73	72	15459.54	2	4091.32	2.4442	0.0400	0.0	0.0	0.0	0.0	1.31E-08	1.19E-07
5	3	30	29	7764.45	2	4091.77	2.4439	0.0400	0.0	0.0	8.69E-08	1.37E-06	6.56E-06	1.74E-05
4	2	8	7	4267.90	2	4092.29	2.4436	0.0574	0.0	1.67E-07	3.26E-06	1.27E-05	2.63E-05	3.98E-05
5	3	72	71	15210.34	2	4092.86	2.4433	0.0400	0.0	0.0	0.0	0.0	1.64E-08	1.42E-07
5	3	31	30	7671.18	2	4093.25	2.4430	0.0400	0.0	0.0	7.62E-08	1.26E-06	6.16E-06	1.66E-05
3	1	5	6	2172.57	2	4093.40	2.4430	0.0621	9.57E-08	8.67E-06	3.18E-05	5.36E-05	6.71E-05	7.27E-05
6	4	85	84	21327.55	1	4093.54	2.4429	0.0400	0.0	0.0	0.0	0.0	0.0	1.99E-07
6	4	14	13	8751.40	1	4093.70	2.4428	0.0528	0.0	0.0	1.11E-06	2.62E-05	1.59E-04	4.94E-04
5	3	101	100	24608.89	1	4094.00	2.4426	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-08
5	3	1	2	6361.04	1	4094.18	2.4425	0.0738	0.0	4.18E-08	4.36E-06	3.94E-05	1.35E-04	2.86E-04
5	3	71	70	14964.37	2	4094.34	2.4424	0.0400	0.0	0.0	0.0	0.0	2.03E-08	1.70E-07
5	3	32	31	7981.43	2	4094.67	2.4422	0.0400	0.0	0.0	6.64E-08	1.14E-06	5.76E-06	1.58E-05
4	2	13	14	4656.18	1	4095.21	2.4419	0.0528	0.0	9.77E-06	2.61E-04	1.19E-03	2.71E-03	4.38E-03
4	2	9	8	4296.77	2	4095.31	2.4418	0.0550	0.0	1.76E-07	3.52E-06	1.39E-05	2.89E-05	4.41E-05
2	0	16	17	561.92	2	4095.53	2.4417	0.0493	1.91E-04	3.64E-04	3.68E-04	3.26E-04	2.77E-04	2.32E-04
5	3	70	69	14721.64	2	4095.73	2.4416	0.0400	0.0	0.0	0.0	0.0	2.51E-08	2.02E-07
5	3	33	32	8095.19	2	4096.02	2.4414	0.0400	0.0	0.0	5.75E-08	1.04E-06	5.36E-06	1.50E-05
6	4	84	83	21030.94	1	4096.30	2.4412	0.0400	0.0	0.0	0.0	0.0	1.12E-08	2.48E-07
6	4	15	14	8803.20	1	4096.34	2.4412	0.0517	0.0	0.0	1.11E-06	2.65E-05	1.63E-04	5.10E-04
3	1	23	24	3284.13	1	4096.71	2.4410	0.0412	1.61E-07	2.10E-04	1.88E-03	4.95E-03	8.10E-03	1.05E-02
5	3	69	68	14482.17	2	4097.05	2.4408	0.0400	0.0	0.0	0.0	0.0	3.09E-08	2.39E-07
2	0	32	33	2149.44	1	4097.07	2.4408	0.0400	1.61E-05	1.38E-03	4.97E-03	8.33E-03	1.04E-02	1.12E-02
5	3	34	33	8212.45	2	4097.30	2.4406	0.0400	0.0	0.0	4.95E-08	9.34E-07	4.97E-06	1.42E-05
3	1	4	5	2150.72	2	4097.36	2.4406	0.0645	8.90E-08	7.65E-06	2.75E-05	4.61E-05	5.74E-05	6.20E-05
5	3	0	1	6354.16	1	4097.99	2.4402	0.0769	0.0	2.14E-08	2.22E-06	2.00E-05	6.82E-05	1.45E-04
5	3	100	99	24259.57	1	4098.06	2.4402	0.0400	0.0	0.0	0.0	0.0	0.0	1.66E-08
4	2	10	9	4329.25	2	4098.26	2.4401	0.0547	0.0	1.82E-07	3.74E-06	1.49E-05	3.14E-05	4.80E-05
5	3	68	67	14245.95	2	4098.30	2.4400	0.0400	0.0	0.0	0.0	0.0	3.79E-08	2.83E-07
5	3	35	34	8333.21	2	4098.51	2.4399	0.0400	0.0	0.0	4.23E-08	8.37E-07	4.59E-06	1.33E-05
6	4	16	15	8858.70	1	4098.91	2.4397	0.0505	0.0	0.0	1.09E-06	2.66E-05	1.66E-04	5.24E-04
6	4	83	82	20737.52	1	4098.98	2.4396	0.0400	0.0	0.0	0.0	0.0	1.46E-08	3.08E-07
5	3	67	66	14013.01	2	4099.48	2.4393	0.0400	0.0	0.0	0.0	0.0	4.64E-08	3.34E-07
5	3	36	35	8457.48	2	4099.65	2.4392	0.0400	0.0	0.0	3.59E-08	7.47E-07	4.22E-06	1.25E-05
4	2	12	13	4603.40	1	4099.89	2.4391	0.0540	0.0	1.03E-05	2.65E-04	1.19E-03	2.66E-03	4.26E-03
2	0	15	16	499.54	2	4100.24	2.4389	0.0505	2.44E-04	3.99E-04	3.84E-04	3.33E-04	2.79E-04	2.31E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	66	65	13783.34	2	4100.57	2.4387	0.0400	0.0	0.0	0.0	0.0	5.65E-08	3.92E-07
5	3	37	36	8585.23	2	4100.72	2.4386	0.0400	0.0	0.0	3.03E-08	6.63E-07	3.86E-06	1.17E-05
4	2	11	10	4365.34	2	4101.14	2.4383	0.0545	0.0	1.85E-07	3.90E-06	1.58E-05	3.35E-05	5.16E-05
3	1	3	4	2132.50	2	4101.27	2.4383	0.0676	7.81E-08	6.42E-06	2.28E-05	3.79E-05	4.69E-05	5.06E-05
6	4	17	16	8917.88	1	4101.40	2.4382	0.0493	0.0	0.0	1.05E-06	2.65E-05	1.67E-04	5.34E-04
6	4	82	81	20447.30	1	4101.58	2.4381	0.0400	0.0	0.0	0.0	0.0	1.89E-08	3.81E-07
5	3	65	64	13556.96	2	4101.60	2.4381	0.0400	0.0	0.0	0.0	0.0	6.87E-08	4.59E-07
5	3	38	37	8716.48	2	4101.72	2.4380	0.0400	0.0	0.0	2.54E-08	5.86E-07	3.52E-06	1.09E-05
5	3	99	98	23912.24	1	4102.03	2.4378	0.0400	0.0	0.0	0.0	0.0	0.0	2.15E-08
3	1	22	23	3193.03	1	4102.09	2.4378	0.0423	2.40E-07	2.52E-04	2.09E-03	5.32E-03	8.52E-03	1.09E-02
5	3	64	63	13333.88	2	4102.55	2.4375	0.0400	0.0	0.0	0.0	0.0	8.31E-08	5.37E-07
5	3	39	38	8851.20	2	4102.64	2.4375	0.0400	0.0	0.0	2.11E-08	5.15E-07	3.20E-06	1.01E-05
2	0	31	32	2023.43	1	4103.08	2.4372	0.0400	2.86E-05	1.81E-03	5.91E-03	9.43E-03	1.14E-02	1.21E-02
5	3	63	62	13114.11	2	4103.43	2.4370	0.0400	0.0	0.0	0.0	0.0	1.00E-07	6.25E-07
5	3	40	39	8989.41	2	4103.50	2.4369	0.0400	0.0	0.0	1.75E-08	4.50E-07	2.89E-06	9.32E-06
4	2	91	90	16574.52	2	4103.73	2.4368	0.0400	0.0	0.0	0.0	0.0	0.0	8.23E-09
6	4	18	17	8980.75	1	4103.83	2.4367	0.0482	0.0	0.0	1.02E-06	2.61E-05	1.68E-04	5.40E-04
4	2	12	11	4405.02	2	4103.96	2.4367	0.0542	0.0	1.84E-07	4.02E-06	1.66E-05	3.54E-05	5.49E-05
6	4	81	80	20160.30	1	4104.09	2.4366	0.0400	0.0	0.0	0.0	0.0	2.45E-08	4.71E-07
5	3	62	61	12857.64	2	4104.23	2.4365	0.0400	0.0	0.0	0.0	0.0	1.21E-07	7.26E-07
5	3	41	40	9131.08	2	4104.29	2.4365	0.0400	0.0	0.0	1.44E-08	3.92E-07	2.60E-06	8.58E-06
4	2	11	12	4554.37	1	4104.49	2.4364	0.0542	0.0	1.08E-05	2.66E-04	1.17E-03	2.59E-03	4.11E-03
2	0	14	15	440.81	2	4104.88	2.4361	0.0517	3.04E-04	4.33E-04	3.98E-04	3.36E-04	2.78E-04	2.28E-04
5	3	61	60	12684.50	2	4104.96	2.4361	0.0400	0.0	0.0	0.0	0.0	1.44E-07	8.41E-07
5	3	42	41	9276.23	2	4105.00	2.4361	0.0400	0.0	0.0	1.18E-08	3.40E-07	2.33E-06	7.88E-06
3	1	2	3	2117.93	2	4105.11	2.4360	0.0707	6.31E-08	5.01E-06	1.76E-05	2.90E-05	3.59E-05	3.85E-05
5	3	1	0	6350.41	1	4105.40	2.4358	0.0769	0.0	2.18E-08	2.26E-06	2.03E-05	6.92E-05	1.47E-04
5	3	60	59	12474.70	2	4105.62	2.4357	0.0400	0.0	0.0	0.0	1.17E-08	1.72E-07	9.70E-07
5	3	43	42	9424.83	2	4105.65	2.4357	0.0400	0.0	0.0	0.0	2.93E-07	2.09E-06	7.21E-06
5	3	98	97	23569.94	1	4105.93	2.4355	0.0400	0.0	0.0	0.0	0.0	0.0	2.78E-08
6	4	19	18	9047.30	1	4106.18	2.4354	0.0470	0.0	0.0	9.69E-07	2.56E-05	1.67E-04	5.44E-04
5	3	59	58	12268.22	2	4106.20	2.4353	0.0400	0.0	0.0	0.0	1.46E-08	2.06E-07	1.12E-06
5	3	44	43	9576.89	2	4106.22	2.4353	0.0400	0.0	0.0	0.0	2.51E-07	1.86E-06	6.57E-06
6	4	80	79	19876.52	1	4106.53	2.4351	0.0400	0.0	0.0	0.0	0.0	3.15E-08	5.80E-07
4	2	90	89	18265.99	2	4106.61	2.4351	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-08
4	2	13	12	4448.31	2	4106.71	2.4350	0.0540	0.0	1.81E-07	4.09E-06	1.71E-05	3.70E-05	5.78E-05
5	3	58	57	12065.10	2	4106.71	2.4350	0.0400	0.0	0.0	0.0	1.82E-08	2.44E-07	1.29E-06
5	3	45	44	9732.40	2	4106.72	2.4350	0.0400	0.0	0.0	0.0	2.15E-07	1.65E-06	5.97E-06
5	3	57	56	11865.33	2	4107.14	2.4348	0.0400	0.0	0.0	0.0	2.26E-08	2.89E-07	1.48E-06
5	3	46	45	9891.36	2	4107.15	2.4348	0.0400	0.0	0.0	0.0	1.82E-07	1.45E-06	5.41E-06
3	1	21	22	3105.69	1	4107.41	2.4346	0.0435	3.51E-07	2.99E-04	2.31E-03	5.68E-03	8.91E-03	1.12E-02
5	3	47	46	10053.75	2	4107.51	2.4346	0.0400	0.0	0.0	0.0	1.54E-07	1.28E-06	4.89E-06
5	3	56	55	11668.92	2	4107.51	2.4346	0.0400	0.0	0.0	0.0	2.80E-08	3.41E-07	1.69E-06
5	3	55	54	11475.88	2	4107.80	2.4344	0.0400	0.0	0.0	0.0	3.44E-08	4.01E-07	1.92E-06
5	3	48	47	10219.57	2	4107.80	2.4344	0.0400	0.0	0.0	0.0	1.30E-07	1.12E-06	4.40E-06
5	3	49	48	10388.82	2	4108.02	2.4343	0.0400	0.0	0.0	0.0	1.09E-07	9.78E-07	3.94E-06
5	3	54	53	11286.22	2	4108.02	2.4343	0.0400	0.0	0.0	0.0	4.22E-08	4.69E-07	2.18E-06
5	3	53	52	11099.95	2	4108.16	2.4342	0.0400	0.0	0.0	0.0	5.14E-08	5.48E-07	2.47E-06
5	3	50	49	10561.49	2	4108.16	2.4342	0.0400	0.0	0.0	0.0	9.10E-08	8.51E-07	3.53E-06
5	3	52	51	10917.06	2	4108.23	2.4341	0.0400	0.0	0.0	0.0	6.25E-08	6.37E-07	2.79E-06
5	3	51	50	10737.57	2	4108.23	2.4341	0.0400	0.0	0.0	0.0	7.56E-08	7.37E-07	3.14E-06
6	4	20	19	9117.53	1	4108.46	2.4340	0.0458	0.0	0.0	9.17E-07	2.49E-05	1.65E-04	5.44E-04
3	1	1	2	2107.00	2	4108.88	2.4338	0.0738	4.45E-08	3.44E-06	1.20E-05	1.97E-05	2.43E-05	2.60E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	79	78	19595.97	1	4108.88	2.4338	0.0400	0.0	0.0	0.0	0.0	4.05E-08	7.13E-07
5	3	2	1	6354.16	1	4109.00	2.4337	0.0738	0.0	4.35E-08	4.51E-06	4.06E-05	1.39E-04	2.94E-04
2	0	30	31	1901.19	1	4109.02	2.4337	0.0400	5.00E-05	2.37E-03	6.99E-03	1.06E-02	1.25E-02	1.30E-02
4	2	10	11	4509.11	1	4109.03	2.4337	0.0545	0.0	1.11E-05	2.63E-04	1.13E-03	2.49E-03	3.93E-03
4	2	14	13	4495.20	2	4109.39	2.4335	0.0528	0.0	1.75E-07	4.11E-06	1.76E-05	3.83E-05	6.03E-05
4	2	89	88	17960.53	2	4109.42	2.4334	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-08
2	0	13	14	385.75	2	4109.46	2.4334	0.0528	3.72E-04	4.64E-04	4.08E-04	3.37E-04	2.75E-04	2.24E-04
5	3	97	96	23229.68	1	4109.73	2.4333	0.0400	0.0	0.0	0.0	0.0	0.0	3.58E-08
6	4	21	20	9191.44	1	4110.66	2.4327	0.0447	0.0	0.0	8.60E-07	2.41E-05	1.62E-04	5.41E-04
6	4	78	77	19318.68	1	4111.15	2.4324	0.0400	0.0	0.0	0.0	0.0	5.18E-08	8.73E-07
4	2	15	14	4545.69	2	4112.01	2.4319	0.0517	0.0	1.67E-07	4.08E-06	1.78E-05	3.94E-05	6.24E-05
4	2	88	87	17658.15	2	4112.16	2.4318	0.0400	0.0	0.0	0.0	0.0	0.0	1.62E-08
5	3	3	2	6361.64	1	4112.53	2.4316	0.0707	0.0	6.44E-08	6.73E-06	6.08E-05	2.08E-04	4.41E-04
3	1	0	1	2099.72	2	4112.59	2.4316	0.0769	2.32E-08	1.76E-06	6.09E-06	9.99E-06	1.23E-05	1.32E-05
3	1	20	21	3022.13	1	4112.65	2.4315	0.0447	5.04E-07	3.50E-04	2.53E-03	6.02E-03	9.26E-03	1.15E-02
6	4	22	21	9269.02	1	4112.79	2.4314	0.0435	0.0	0.0	8.00E-07	2.31E-05	1.59E-04	5.36E-04
6	4	77	76	19044.64	1	4113.34	2.4311	0.0400	0.0	0.0	0.0	0.0	6.61E-08	1.07E-06
5	3	96	95	22892.46	1	4113.46	2.4310	0.0400	0.0	0.0	0.0	0.0	0.0	4.61E-08
4	2	9	10	4467.62	1	4113.49	2.4310	0.0547	0.0	1.12E-05	2.57E-04	1.09E-03	2.37E-03	3.71E-03
2	0	12	13	334.34	2	4113.97	2.4307	0.0540	4.44E-04	4.90E-04	4.13E-04	3.35E-04	2.69E-04	2.18E-04
4	2	16	15	4599.77	2	4114.56	2.4304	0.0505	0.0	1.58E-07	4.02E-06	1.79E-05	4.01E-05	6.41E-05
4	2	87	86	17358.87	2	4114.81	2.4302	0.0400	0.0	0.0	0.0	0.0	0.0	2.03E-08
6	4	23	22	9350.27	1	4114.85	2.4302	0.0423	0.0	0.0	7.38E-07	2.20E-05	1.54E-04	5.28E-04
2	0	29	30	1782.72	1	4114.90	2.4302	0.0400	8.58E-05	3.05E-03	8.21E-03	1.19E-02	1.36E-02	1.39E-02
6	4	76	75	18773.88	1	4115.45	2.4299	0.0400	0.0	0.0	0.0	0.0	8.41E-08	1.30E-06
5	3	4	3	6372.86	1	4115.99	2.4295	0.0676	0.0	8.41E-08	8.87E-06	8.04E-05	2.76E-04	5.87E-04
6	4	24	23	9435.20	1	4116.84	2.4290	0.0412	0.0	0.0	6.76E-07	2.09E-05	1.49E-04	5.17E-04
4	2	17	16	4657.45	2	4117.04	2.4289	0.0493	0.0	1.47E-07	3.91E-06	1.79E-05	4.05E-05	6.54E-05
5	3	95	94	22558.31	1	4117.10	2.4289	0.0400	0.0	0.0	0.0	0.0	0.0	5.91E-08
4	2	86	85	17062.69	2	4117.39	2.4287	0.0400	0.0	0.0	0.0	0.0	0.0	2.52E-08
6	4	75	74	18506.41	1	4117.47	2.4287	0.0400	0.0	0.0	0.0	0.0	1.07E-07	1.58E-06
3	1	19	20	2942.34	1	4117.83	2.4285	0.0458	7.07E-07	4.06E-04	2.76E-03	6.35E-03	9.57E-03	1.18E-02
4	2	8	9	4429.89	1	4117.89	2.4284	0.0550	0.0	1.11E-05	2.47E-04	1.03E-03	2.22E-03	3.46E-03
2	0	11	12	266.60	2	4118.42	2.4281	0.0542	5.18E-04	5.09E-04	4.13E-04	3.29E-04	2.62E-04	2.10E-04
6	4	25	24	9523.78	1	4118.75	2.4279	0.0400	0.0	0.0	6.14E-07	1.96E-05	1.44E-04	5.05E-04
5	3	5	4	6367.82	1	4119.38	2.4276	0.0645	0.0	1.02E-07	1.09E-05	9.94E-05	3.42E-04	7.30E-04
6	4	74	73	18242.22	1	4119.42	2.4275	0.0400	0.0	0.0	0.0	0.0	1.35E-07	1.91E-06
4	2	18	17	4718.72	2	4119.45	2.4275	0.0482	0.0	1.35E-07	3.78E-06	1.77E-05	4.07E-05	6.63E-05
3	1	1	0	2096.07	2	4119.81	2.4273	0.0769	2.38E-08	1.80E-06	6.19E-06	1.01E-05	1.25E-05	1.33E-05
4	2	85	84	16769.63	2	4119.89	2.4273	0.0400	0.0	0.0	0.0	0.0	0.0	3.14E-08
6	4	26	25	9616.03	1	4120.59	2.4268	0.0400	0.0	0.0	5.54E-07	1.84E-05	1.37E-04	4.90E-04
5	3	94	93	22227.24	1	4120.66	2.4268	0.0400	0.0	0.0	0.0	0.0	0.0	7.56E-08
2	0	28	29	1668.03	1	4120.71	2.4268	0.0400	1.45E-04	3.91E-03	9.59E-03	1.33E-02	1.47E-02	1.48E-02
6	4	73	72	17981.34	1	4121.28	2.4264	0.0400	0.0	0.0	0.0	0.0	1.70E-07	2.30E-06
4	2	19	18	4783.59	2	4121.79	2.4261	0.0470	0.0	1.22E-07	3.62E-06	1.73E-05	4.06E-05	6.68E-05
4	2	7	8	4295.93	1	4122.22	2.4259	0.0574	0.0	1.07E-05	2.33E-04	9.58E-04	2.05E-03	3.17E-03
4	2	84	83	16479.69	2	4122.32	2.4258	0.0400	0.0	0.0	0.0	0.0	0.0	3.88E-08
6	4	27	26	9711.93	1	4122.35	2.4258	0.0400	0.0	0.0	4.96E-07	1.71E-05	1.31E-04	4.74E-04
5	3	6	5	6406.52	1	4122.70	2.4256	0.0621	0.0	1.18E-07	1.28E-05	1.17E-04	4.06E-04	8.68E-04
2	0	10	11	242.53	2	4122.81	2.4255	0.0545	5.90E-04	5.22E-04	4.09E-04	3.19E-04	2.51E-04	2.00E-04
3	1	18	19	2866.33	1	4122.95	2.4254	0.0470	9.72E-07	4.65E-04	2.97E-03	6.64E-03	9.83E-03	1.19E-02
6	4	72	71	17723.78	1	4123.07	2.4254	0.0400	0.0	0.0	0.0	0.0	2.13E-07	2.77E-06
3	1	2	1	2099.72	2	4123.32	2.4252	0.0738	4.71E-08	3.58E-06	1.24E-05	2.03E-05	2.50E-05	2.68E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	4	28	27	9811.48	1	4124.04	2.4248	0.0400	0.0	0.0	4.41E-07	1.58E-05	1.24E-04	4.56E-04
4	2	20	19	4852.04	2	4124.07	2.4248	0.0458	0.0	1.10E-07	3.43E-06	1.69E-05	4.02E-05	6.70E-05
5	3	93	92	21899.26	1	4124.13	2.4248	0.0400	0.0	0.0	0.0	0.0	0.0	9.64E-08
4	2	83	82	16192.90	2	4124.67	2.4244	0.0400	0.0	0.0	0.0	0.0	0.0	4.80E-08
6	4	71	70	17469.54	1	4124.77	2.4244	0.0400	0.0	0.0	0.0	0.0	2.66E-07	3.33E-06
6	4	29	28	9914.69	1	4125.66	2.4239	0.0400	0.0	0.0	3.89E-07	1.45E-05	1.17E-04	4.37E-04
5	3	7	6	6428.95	1	4125.95	2.4237	0.0597	0.0	1.31E-07	1.44E-05	1.34E-04	4.66E-04	1.00E-03
4	2	21	20	4924.07	2	4126.28	2.4235	0.0447	0.0	9.77E-08	3.23E-06	1.64E-05	3.97E-05	6.68E-05
6	4	70	69	17218.64	1	4126.40	2.4234	0.0400	0.0	0.0	0.0	0.0	3.31E-07	3.99E-06
2	0	27	28	1557.12	1	4126.46	2.4234	0.0400	2.39E-04	4.95E-03	1.11E-02	1.47E-02	1.59E-02	1.57E-02
4	2	6	7	4365.74	1	4126.48	2.4234	0.0597	0.0	1.01E-05	2.15E-04	8.74E-04	1.85E-03	2.86E-03
3	1	3	2	2107.00	2	4126.77	2.4232	0.0707	6.87E-08	5.32E-06	1.85E-05	3.04E-05	3.75E-05	4.02E-05
4	2	82	81	15909.25	2	4126.94	2.4231	0.0400	0.0	0.0	0.0	0.0	0.0	5.91E-08
2	0	9	10	202.12	2	4127.14	2.4230	0.0547	6.54E-04	5.25E-04	3.98E-04	3.06E-04	2.39E-04	1.89E-04
6	4	30	29	10021.54	1	4127.20	2.4229	0.0400	0.0	0.0	3.41E-07	1.33E-05	1.10E-04	4.17E-04
5	3	92	91	21574.38	1	4127.52	2.4228	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-07
6	4	69	68	16971.09	1	4127.94	2.4225	0.0400	0.0	0.0	0.0	0.0	4.11E-07	4.76E-06
3	1	17	18	2754.11	1	4127.99	2.4225	0.0482	1.31E-06	5.27E-04	3.18E-03	6.90E-03	1.00E-02	1.20E-02
4	2	22	21	4999.68	2	4128.42	2.4222	0.0435	0.0	8.58E-08	3.01E-06	1.58E-05	3.88E-05	6.62E-05
4	2	106	105	24504.34	1	4128.63	2.4221	0.0400	0.0	0.0	0.0	0.0	0.0	9.01E-09
6	4	31	30	10132.03	1	4128.67	2.4221	0.0400	0.0	0.0	2.98E-07	1.21E-05	1.03E-04	3.98E-04
5	3	8	7	6455.12	1	4129.12	2.4218	0.0574	0.0	1.42E-07	1.59E-05	1.49E-04	5.23E-04	1.13E-03
4	2	81	80	15628.77	2	4129.14	2.4218	0.0400	0.0	0.0	0.0	0.0	0.0	7.26E-08
6	4	68	67	16726.89	1	4129.41	2.4217	0.0400	0.0	0.0	0.0	1.24E-08	5.09E-07	5.66E-06
6	4	32	31	10246.16	1	4130.07	2.4213	0.0400	0.0	0.0	2.58E-07	1.10E-05	9.55E-05	3.77E-04
3	1	4	3	2117.93	2	4130.15	2.4212	0.0676	8.75E-08	6.95E-06	2.44E-05	4.03E-05	4.98E-05	5.35E-05
4	2	23	22	5078.88	2	4130.49	2.4210	0.0423	0.0	7.46E-08	2.79E-06	1.51E-05	3.78E-05	6.53E-05
4	2	5	6	4339.32	1	4130.67	2.4209	0.0621	0.0	9.30E-06	1.93E-04	7.77E-04	1.64E-03	2.52E-03
6	4	67	66	16486.06	1	4130.79	2.4208	0.0400	0.0	0.0	0.0	1.62E-08	6.27E-07	6.71E-06
5	3	91	90	21292.63	1	4130.83	2.4208	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-07
4	2	80	79	15351.45	2	4131.26	2.4206	0.0400	0.0	0.0	0.0	0.0	0.0	8.89E-08
6	4	33	32	10363.92	1	4131.39	2.4205	0.0400	0.0	0.0	2.22E-07	9.91E-06	8.86E-05	3.57E-04
2	0	8	9	165.38	2	4131.39	2.4205	0.0550	7.05E-04	5.19E-04	3.82E-04	2.89E-04	2.24E-04	1.76E-04
6	4	66	65	16248.61	1	4132.10	2.4201	0.0400	0.0	0.0	0.0	2.10E-08	7.70E-07	7.94E-06
2	0	26	27	1449.99	1	4132.14	2.4201	0.0400	3.87E-04	6.21E-03	1.28E-02	1.62E-02	1.71E-02	1.66E-02
5	3	9	8	6485.03	1	4132.23	2.4200	0.0550	0.0	1.49E-07	1.72E-05	1.63E-04	5.75E-04	1.25E-03
4	2	24	23	5161.65	2	4132.49	2.4198	0.0412	0.0	6.42E-08	2.57E-06	1.43E-05	3.67E-05	6.41E-05
6	4	34	33	10485.30	1	4132.63	2.4198	0.0400	0.0	0.0	1.89E-07	8.89E-06	8.18E-05	3.36E-04
3	1	16	17	2725.67	1	4132.97	2.4196	0.0493	1.73E-06	5.89E-04	3.37E-03	7.11E-03	1.02E-02	1.21E-02
4	2	105	104	24136.54	1	4133.08	2.4195	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-08
4	2	79	78	15077.32	2	4133.30	2.4194	0.0400	0.0	0.0	0.0	0.0	1.27E-08	1.09E-07
6	4	65	64	16014.55	1	4133.32	2.4194	0.0400	0.0	0.0	0.0	2.72E-08	9.43E-07	9.36E-06
3	1	5	4	2132.50	2	4133.47	2.4193	0.0645	1.03E-07	8.44E-06	3.00E-05	4.98E-05	6.17E-05	6.65E-05
6	4	35	34	10610.31	1	4133.80	2.4191	0.0400	0.0	0.0	1.61E-07	7.93E-06	7.52E-05	3.15E-04
5	3	90	89	20934.01	1	4134.05	2.4189	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-07
4	2	25	24	5247.99	2	4134.43	2.4187	0.0400	0.0	5.46E-08	2.34E-06	1.35E-05	3.54E-05	6.27E-05
6	4	64	63	15783.89	1	4134.47	2.4187	0.0400	0.0	0.0	0.0	3.51E-08	1.15E-06	1.10E-05
4	2	4	5	4316.68	1	4134.80	2.4185	0.0645	0.0	8.22E-06	1.68E-04	6.68E-04	1.40E-03	2.14E-03
6	4	36	35	10738.94	1	4134.89	2.4184	0.0400	0.0	0.0	1.35E-07	7.03E-06	6.88E-05	2.94E-04
5	3	10	9	6518.68	1	4135.26	2.4182	0.0547	0.0	1.54E-07	1.82E-05	1.75E-04	6.23E-04	1.35E-03
4	2	78	77	14806.39	2	4135.27	2.4182	0.0400	0.0	0.0	0.0	0.0	1.62E-08	1.32E-07
6	4	63	62	15556.63	1	4135.53	2.4181	0.0400	0.0	0.0	0.0	4.50E-08	1.40E-06	1.29E-05
2	0	7	8	132.31	2	4135.59	2.4180	0.0574	7.38E-04	5.02E-04	3.60E-04	2.69E-04	2.06E-04	1.62E-04

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6	4	37	36	10871.18	1	4135.91	2.4178	0.0400	0.0	0.0	1.13E-07	6.21E-06	6.27E-05	2.74E-04
4	2	26	25	5337.91	2	4136.29	2.4176	0.0400	0.0	4.61E-06	2.12E-06	1.27E-05	3.39E-05	6.10E-05
6	4	62	61	15332.79	1	4136.52	2.4175	0.0400	0.0	0.0	0.0	5.75E-08	1.69E-06	1.51E-05
3	1	6	5	2150.72	2	4136.71	2.4174	0.0621	1.14E-07	9.76E-06	3.51E-05	5.88E-05	7.33E-05	7.92E-05
6	4	38	37	11007.02	1	4136.86	2.4173	0.0400	0.0	0.0	9.44E-08	5.46E-06	5.69E-05	2.54E-04
4	2	77	76	14538.66	2	4137.16	2.4171	0.0400	0.0	0.0	0.0	0.0	2.05E-08	1.61E-07
5	3	89	88	20618.54	1	4137.19	2.4171	0.0400	0.0	0.0	0.0	0.0	1.20E-08	2.49E-07
6	4	61	60	15112.37	1	4137.43	2.4170	0.0400	0.0	0.0	0.0	7.31E-08	2.04E-06	1.76E-05
4	2	104	103	23771.70	1	4137.45	2.4169	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-08
6	4	39	38	11146.46	1	4137.72	2.4168	0.0400	0.0	0.0	7.80E-08	4.77E-06	5.14E-05	2.35E-04
2	0	25	26	1346.66	1	4137.75	2.4168	0.0400	6.16E-04	7.70E-03	1.46E-02	1.78E-02	1.83E-02	1.74E-02
3	1	15	16	2661.01	1	4137.88	2.4167	0.0505	2.23E-06	6.51E-04	3.53E-03	7.26E-03	1.02E-02	1.20E-02
4	2	27	26	5431.39	2	4138.09	2.4166	0.0400	0.0	3.84E-08	1.90E-06	1.18E-05	3.24E-05	5.91E-05
5	3	11	10	6556.05	1	4138.23	2.4165	0.0545	0.0	1.55E-07	1.90E-05	1.85E-04	6.65E-04	1.45E-03
6	4	60	59	14895.39	1	4138.26	2.4165	0.0400	0.0	0.0	0.0	9.26E-08	2.45E-06	2.04E-05
6	4	40	39	11289.51	1	4138.52	2.4163	0.0400	0.0	0.0	6.40E-08	4.15E-06	4.63E-05	2.16E-04
4	2	3	4	4297.80	1	4138.85	2.4161	0.0676	0.0	6.91E-06	1.39E-04	5.49E-04	1.15E-03	1.75E-03
4	2	76	75	14274.14	2	4138.98	2.4161	0.0400	0.0	0.0	0.0	0.0	2.60E-08	1.95E-07
6	4	59	58	14681.85	1	4139.01	2.4160	0.0400	0.0	0.0	0.0	1.17E-07	2.95E-06	2.36E-05
6	4	41	40	11436.14	1	4139.23	2.4159	0.0400	0.0	0.0	5.23E-08	3.59E-06	4.15E-05	1.98E-04
6	4	58	57	14471.76	1	4139.68	2.4156	0.0400	0.0	0.0	0.0	1.47E-07	3.52E-06	2.74E-05
2	0	6	7	102.91	2	4139.72	2.4156	0.0597	7.48E-04	4.73E-04	3.32E-04	2.45E-04	1.87E-04	1.45E-04
4	2	28	27	5528.43	2	4139.82	2.4156	0.0400	0.0	3.17E-08	1.70E-06	1.10E-05	3.07E-05	5.70E-05
6	4	42	41	11586.35	1	4139.87	2.4155	0.0400	0.0	0.0	4.24E-08	3.09E-06	3.70E-05	1.81E-04
3	1	7	6	2172.57	2	4139.90	2.4155	0.0597	1.20E-07	1.09E-05	3.98E-05	6.73E-05	8.42E-05	9.13E-05
5	3	88	87	20306.23	1	4140.25	2.4153	0.0400	0.0	0.0	0.0	0.0	1.60E-08	3.15E-07
6	4	57	56	14265.13	1	4140.28	2.4153	0.0400	0.0	0.0	0.0	1.84E-07	4.20E-06	3.15E-05
6	4	43	42	11740.14	1	4140.44	2.4152	0.0400	0.0	0.0	3.41E-08	2.65E-06	3.29E-05	1.65E-04
4	2	75	74	14012.86	2	4140.72	2.4150	0.0400	0.0	0.0	0.0	0.0	3.27E-08	2.35E-07
6	4	56	55	14061.97	1	4140.79	2.4150	0.0400	0.0	0.0	0.0	2.30E-07	4.99E-06	3.62E-05
6	4	44	43	11857.51	1	4140.93	2.4149	0.0400	0.0	0.0	2.73E-08	2.26E-06	2.91E-05	1.50E-04
5	3	12	11	6597.16	1	4141.12	2.4148	0.0542	0.0	1.55E-07	1.95E-05	1.93E-04	7.01E-04	1.54E-03
6	4	55	54	13862.29	1	4141.23	2.4147	0.0400	0.0	0.0	0.0	2.85E-07	5.90E-06	4.15E-05
6	4	45	44	12058.43	1	4141.34	2.4147	0.0400	0.0	0.0	2.17E-08	1.91E-06	2.57E-05	1.36E-04
4	2	29	28	5629.04	2	4141.48	2.4146	0.0400	0.0	2.60E-08	1.51E-06	1.01E-05	2.91E-05	5.48E-05
6	4	54	53	13666.09	1	4141.59	2.4145	0.0400	0.0	0.0	0.0	3.52E-07	6.95E-06	4.74E-05
6	4	46	45	12222.92	1	4141.68	2.4145	0.0400	0.0	0.0	1.72E-08	1.62E-06	2.26E-05	1.22E-04
4	2	103	102	23409.84	1	4141.73	2.4145	0.0400	0.0	0.0	0.0	0.0	0.0	2.06E-08
6	4	53	52	13472.39	1	4141.87	2.4144	0.0400	0.0	0.0	0.0	4.33E-07	8.16E-06	5.40E-05
6	4	47	46	12390.96	1	4141.93	2.4143	0.0400	0.0	0.0	1.35E-08	1.36E-06	1.97E-05	1.10E-04
6	4	52	51	13284.19	1	4142.07	2.4143	0.0400	0.0	0.0	0.0	5.30E-07	9.55E-06	6.13E-05
6	4	48	47	12562.54	1	4142.12	2.4142	0.0400	0.0	0.0	1.05E-08	1.14E-06	1.72E-05	9.84E-05
6	4	51	50	13098.50	1	4142.20	2.4142	0.0400	0.0	0.0	0.0	6.46E-07	1.11E-05	6.93E-05
6	4	49	48	12737.67	1	4142.22	2.4142	0.0400	0.0	0.0	0.0	9.45E-07	1.49E-05	8.78E-05
6	4	50	49	12916.32	1	4142.25	2.4141	0.0400	0.0	0.0	0.0	7.83E-07	1.29E-05	7.82E-05
4	2	74	73	13754.80	2	4142.38	2.4141	0.0400	0.0	0.0	0.0	0.0	4.10E-08	2.84E-07
3	1	14	15	2600.15	1	4142.72	2.4139	0.0517	2.81E-06	7.09E-04	3.67E-03	7.36E-03	1.02E-02	1.19E-02
4	2	2	3	4282.70	1	4142.84	2.4138	0.0707	0.0	5.40E-06	1.07E-04	4.21E-04	8.77E-04	1.33E-03
3	1	8	7	2198.07	2	4143.01	2.4137	0.0574	1.22E-07	1.18E-05	4.40E-05	7.50E-05	9.45E-05	1.03E-04
4	2	30	29	5733.20	2	4143.07	2.4137	0.0400	0.0	2.10E-08	1.33E-06	9.30E-06	2.73E-05	5.24E-05
5	3	87	86	19997.09	1	4143.22	2.4136	0.0400	0.0	0.0	0.0	0.0	2.11E-08	3.96E-07
2	0	24	25	1247.11	1	4143.30	2.4135	0.0400	9.59E-04	9.45E-03	1.66E-02	1.94E-02	1.95E-02	1.82E-02
2	0	5	6	77.19	2	4143.79	2.4132	0.0621	7.28E-04	4.34E-04	2.98E-04	2.18E-04	1.65E-04	1.28E-04

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5	3	13	12	6642.00	1	4143.94	2.4132	0.0540	0.0	1.51E-07	1.98E-05	2.00E-04	7.32E-04	1.62E-03
4	2	73	72	13499.99	2	4143.97	2.4131	0.0400	0.0	0.0	0.0	0.0	5.14E-08	3.41E-07
4	2	31	30	5840.91	2	4144.59	2.4128	0.0400	0.0	1.69E-08	1.16E-06	8.51E-06	2.57E-05	5.00E-05
4	2	72	71	13248.44	2	4145.49	2.4123	0.0400	0.0	0.0	0.0	0.0	6.40E-08	4.08E-07
4	2	102	101	23050.98	1	4145.93	2.4120	0.0400	0.0	0.0	0.0	0.0	0.0	2.70E-08
4	2	32	31	5952.17	2	4146.04	2.4119	0.0400	0.0	1.35E-08	1.01E-06	7.74E-06	2.40E-05	4.76E-05
3	1	9	8	2227.21	2	4146.06	2.4119	0.0550	1.20E-07	1.24E-05	4.75E-05	8.20E-05	1.04E-04	1.14E-04
5	3	86	85	19691.13	1	4146.11	2.4119	0.0400	0.0	0.0	0.0	0.0	2.78E-08	4.97E-07
5	3	14	13	6690.57	1	4146.68	2.4116	0.0528	0.0	1.46E-07	1.98E-05	2.04E-04	7.56E-04	1.69E-03
4	2	1	2	4271.38	1	4146.75	2.4115	0.0738	0.0	3.72E-06	7.31E-05	2.86E-04	5.94E-04	9.02E-04
4	2	71	70	13000.15	2	4146.93	2.4114	0.0400	0.0	0.0	0.0	0.0	7.96E-08	4.87E-07
4	2	33	32	6066.97	2	4147.42	2.4111	0.0400	0.0	1.06E-08	8.74E-07	7.00E-06	2.23E-05	4.51E-05
3	1	13	14	2543.08	1	4147.50	2.4111	0.0528	3.46E-06	7.63E-04	3.77E-03	7.40E-03	1.01E-02	1.17E-02
2	0	4	5	85.14	2	4147.79	2.4109	0.0645	6.78E-04	3.83E-04	2.58E-04	1.87E-04	1.41E-04	1.09E-04
3	1	94	93	17590.57	2	4148.03	2.4108	0.0400	0.0	0.0	0.0	0.0	0.0	9.52E-09
4	2	70	69	12785.13	2	4148.30	2.4106	0.0400	0.0	0.0	0.0	0.0	9.86E-08	5.80E-07
4	2	34	33	6185.32	2	4148.73	2.4104	0.0400	0.0	0.0	7.51E-07	6.31E-06	2.07E-05	4.26E-05
2	0	23	24	1151.37	1	4148.78	2.4103	0.0412	1.47E-03	1.15E-02	1.86E-02	2.10E-02	2.06E-02	1.90E-02
5	3	85	84	19388.37	1	4148.92	2.4103	0.0400	0.0	0.0	0.0	0.0	3.66E-08	6.23E-07
3	1	10	9	2259.98	2	4149.04	2.4102	0.0547	1.15E-07	1.28E-05	5.04E-05	8.81E-05	1.13E-04	1.24E-04
5	3	15	14	6742.87	1	4149.36	2.4100	0.0517	0.0	1.39E-07	1.96E-05	2.07E-04	7.75E-04	1.75E-03
4	2	69	68	12513.40	2	4149.59	2.4099	0.0400	0.0	0.0	0.0	0.0	1.22E-07	6.89E-07
4	2	35	34	6307.19	2	4149.97	2.4097	0.0400	0.0	0.0	6.40E-07	5.65E-06	1.91E-05	4.00E-05
4	2	101	100	22695.13	1	4150.04	2.4096	0.0400	0.0	0.0	0.0	0.0	0.0	3.52E-08
4	2	0	1	4263.83	1	4150.60	2.4093	0.0769	0.0	1.90E-06	3.71E-05	1.45E-04	3.00E-04	4.56E-04
4	2	68	67	12274.96	2	4150.80	2.4092	0.0400	0.0	0.0	0.0	1.06E-08	1.50E-07	8.16E-07
3	1	93	92	17269.87	2	4151.12	2.4090	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-08
4	2	36	35	6432.60	2	4151.14	2.4090	0.0400	0.0	0.0	5.43E-07	5.03E-06	1.75E-05	3.75E-05
5	3	84	83	19088.83	1	4151.65	2.4087	0.0400	0.0	0.0	0.0	0.0	4.79E-08	7.77E-07
2	0	3	4	36.76	2	4151.72	2.4086	0.0676	5.95E-04	3.22E-04	2.14E-04	1.54E-04	1.15E-04	8.89E-05
4	2	67	66	12039.83	2	4151.95	2.4085	0.0400	0.0	0.0	0.0	1.37E-08	1.83E-07	9.63E-07
5	3	16	15	6798.89	1	4151.96	2.4085	0.0505	0.0	1.30E-07	1.93E-05	2.07E-04	7.88E-04	1.79E-03
3	1	11	10	2296.39	2	4151.96	2.4085	0.0545	1.07E-07	1.30E-05	5.26E-05	9.34E-05	1.20E-04	1.33E-04
3	1	12	13	2489.80	1	4152.20	2.4084	0.0540	4.17E-06	8.09E-04	3.83E-03	7.36E-03	9.96E-03	1.14E-02
4	2	37	36	6561.53	2	4152.24	2.4083	0.0400	0.0	0.0	4.57E-07	4.46E-06	1.60E-05	3.50E-05
4	2	66	65	11808.00	2	4153.01	2.4079	0.0400	0.0	0.0	0.0	1.78E-08	2.24E-07	1.13E-06
4	2	38	37	6693.98	2	4153.27	2.4077	0.0400	0.0	0.0	3.82E-07	3.93E-06	1.46E-05	3.26E-05
4	2	65	64	11579.50	2	4154.01	2.4073	0.0400	0.0	0.0	0.0	2.28E-08	2.73E-07	1.33E-06
4	2	100	99	22342.30	1	4154.07	2.4073	0.0400	0.0	0.0	0.0	0.0	0.0	4.59E-08
3	1	92	91	16952.23	2	4154.14	2.4072	0.0400	0.0	0.0	0.0	0.0	0.0	1.53E-08
2	0	22	23	1059.42	1	4154.19	2.4072	0.0423	2.20E-03	1.38E-02	2.08E-02	2.26E-02	2.17E-02	1.97E-02
4	2	39	38	6829.95	2	4154.23	2.4072	0.0400	0.0	0.0	3.18E-07	3.45E-06	1.32E-05	3.02E-05
5	3	83	82	18792.51	1	4154.30	2.4071	0.0400	0.0	0.0	0.0	0.0	6.25E-08	9.68E-07
5	3	17	16	6858.63	1	4154.49	2.4070	0.0493	0.0	1.20E-07	1.87E-05	2.06E-04	7.95E-04	1.83E-03
3	1	12	11	2336.44	2	4154.81	2.4068	0.0542	9.66E-08	1.30E-05	5.42E-05	9.77E-05	1.27E-04	1.42E-04
4	2	64	63	11354.33	2	4154.93	2.4068	0.0400	0.0	0.0	0.0	2.92E-08	3.31E-07	1.56E-06
4	2	40	39	6969.43	2	4155.12	2.4067	0.0400	0.0	0.0	2.63E-07	3.02E-06	1.19E-05	2.79E-05
2	0	2	3	22.06	2	4155.60	2.4064	0.0707	4.81E-04	2.51E-04	1.65E-04	1.18E-04	8.82E-05	6.78E-05
4	2	63	62	11132.49	2	4155.77	2.4063	0.0400	0.0	0.0	0.0	3.73E-08	4.00E-07	1.82E-06
4	2	41	40	7112.42	2	4155.94	2.4062	0.0400	0.0	0.0	2.16E-07	2.62E-06	1.07E-05	2.56E-05
4	2	62	61	10914.00	2	4156.55	2.4058	0.0400	0.0	0.0	0.0	4.73E-08	4.82E-07	2.11E-06
4	2	42	41	7258.90	2	4156.69	2.4058	0.0400	0.0	0.0	1.76E-07	2.27E-06	9.61E-06	2.35E-05
3	1	11	12	2440.32	1	4156.84	2.4057	0.0542	4.91E-06	8.45E-04	3.84E-03	7.24E-03	9.69E-03	1.10E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	82	81	18499.43	1	4156.86	2.4057	0.0400	0.0	0.0	0.0	0.0	8.13E-08	1.20E-06
5	3	18	17	6922.10	1	4156.95	2.4056	0.0482	0.0	1.10E-07	1.80E-05	2.03E-04	7.97E-04	1.85E-03
3	1	91	90	16637.68	2	4157.07	2.4055	0.0400	0.0	0.0	0.0	0.0	0.0	1.93E-08
4	2	61	60	10698.87	2	4157.24	2.4054	0.0400	0.0	0.0	0.0	5.98E-08	5.78E-07	2.45E-06
4	2	43	42	7408.88	2	4157.36	2.4054	0.0400	0.0	0.0	1.43E-07	1.95E-06	8.58E-06	2.15E-05
3	1	13	12	2380.12	2	4157.59	2.4052	0.0540	8.54E-08	1.27E-05	5.50E-05	1.01E-04	1.33E-04	1.49E-04
4	2	60	59	10487.10	2	4157.87	2.4051	0.0400	0.0	0.0	0.0	7.52E-08	6.91E-07	2.83E-06
4	2	44	43	7562.35	2	4157.97	2.4050	0.0400	0.0	0.0	1.15E-07	1.67E-06	7.63E-06	1.96E-05
4	2	99	98	21992.52	1	4158.01	2.4050	0.0400	0.0	0.0	0.0	0.0	0.0	5.97E-08
4	2	1	0	4260.05	1	4158.08	2.4050	0.0769	0.0	1.94E-06	3.78E-05	1.47E-04	3.05E-04	4.62E-04
4	2	59	58	10278.70	2	4158.42	2.4048	0.0400	0.0	0.0	0.0	9.44E-08	8.26E-07	3.27E-06
4	2	45	44	7719.30	2	4158.50	2.4047	0.0400	0.0	0.0	9.20E-08	1.43E-06	6.75E-06	1.78E-05
4	2	58	57	10073.68	2	4158.90	2.4045	0.0400	0.0	0.0	0.0	1.18E-07	9.83E-07	3.77E-06
4	2	46	45	7879.72	2	4158.97	2.4044	0.0400	0.0	0.0	7.32E-08	1.21E-06	5.95E-06	1.61E-05
4	2	57	56	9872.04	2	4159.30	2.4043	0.0400	0.0	0.0	0.0	1.47E-07	1.17E-06	4.33E-06
5	3	81	80	18209.59	1	4159.34	2.4042	0.0400	0.0	0.0	0.0	0.0	1.05E-07	1.49E-06
5	3	19	18	6989.28	1	4159.34	2.4042	0.0470	0.0	9.94E-08	1.72E-05	1.99E-04	7.93E-04	1.86E-03
4	2	47	46	8043.62	2	4159.36	2.4042	0.0400	0.0	0.0	5.79E-08	1.02E-06	5.23E-06	1.45E-05
2	0	1	2	11.03	2	4159.40	2.4042	0.0738	3.40E-04	1.73E-04	1.12E-04	8.01E-05	5.97E-05	4.58E-05
2	0	21	22	971.28	1	4159.54	2.4041	0.0435	3.22E-03	1.64E-02	2.30E-02	2.41E-02	2.27E-02	2.03E-02
4	2	56	55	9673.80	2	4159.63	2.4041	0.0400	0.0	0.0	0.0	1.82E-07	1.38E-06	4.95E-06
4	2	48	47	8210.98	2	4159.68	2.4040	0.0400	0.0	0.0	4.55E-08	8.59E-07	4.58E-06	1.30E-05
4	2	55	54	9478.96	2	4159.89	2.4039	0.0400	0.0	0.0	0.0	2.24E-07	1.62E-06	5.65E-06
4	2	49	48	8381.80	2	4159.92	2.4039	0.0400	0.0	0.0	3.56E-08	7.19E-07	3.99E-06	1.17E-05
3	1	90	89	16326.21	2	4159.93	2.4039	0.0400	0.0	0.0	0.0	0.0	0.0	2.42E-08
4	2	54	53	9287.54	2	4160.08	2.4038	0.0400	0.0	0.0	0.0	2.76E-07	1.90E-06	6.43E-06
4	2	50	49	8556.07	2	4160.10	2.4038	0.0400	0.0	0.0	2.77E-08	5.95E-07	3.47E-06	1.04E-05
4	2	53	52	9099.53	2	4160.19	2.4037	0.0400	0.0	0.0	1.25E-08	3.37E-07	2.22E-06	7.29E-06
4	2	51	50	8733.79	2	4160.20	2.4037	0.0400	0.0	0.0	2.14E-08	4.97E-07	3.00E-06	9.29E-06
4	2	52	51	8914.94	2	4160.23	2.4037	0.0400	0.0	0.0	1.64E-08	4.10E-07	2.59E-06	8.24E-06
3	1	14	13	2427.44	2	4160.31	2.4037	0.0528	7.37E-08	1.23E-05	5.53E-05	1.03E-04	1.38E-04	1.55E-04
3	1	10	11	2394.64	1	4161.41	2.4030	0.0545	5.63E-06	8.69E-04	3.81E-03	7.05E-03	9.33E-03	1.05E-02
5	3	20	19	7060.17	1	4161.65	2.4029	0.0458	0.0	8.87E-08	1.62E-05	1.94E-04	7.84E-04	1.86E-03
4	2	2	1	4263.83	1	4161.71	2.4029	0.0738	0.0	3.87E-06	7.56E-05	2.95E-04	6.11E-04	9.28E-04
5	3	80	79	17923.02	1	4161.74	2.4028	0.0400	0.0	0.0	0.0	0.0	1.36E-07	1.84E-06
4	2	98	97	21645.80	1	4161.87	2.4028	0.0400	0.0	0.0	0.0	0.0	0.0	7.74E-08
3	1	89	88	16017.84	2	4162.70	2.4023	0.0400	0.0	0.0	0.0	0.0	0.0	3.05E-08
3	1	15	14	2478.38	2	4162.95	2.4021	0.0517	6.22E-08	1.17E-05	5.49E-05	1.05E-04	1.41E-04	1.61E-04
2	0	0	1	3.68	2	4163.14	2.4020	0.0769	1.77E-04	8.83E-05	5.71E-05	4.06E-05	3.02E-05	2.32E-05
5	3	21	20	7134.78	1	4163.89	2.4016	0.0447	0.0	7.83E-08	1.52E-05	1.87E-04	7.70E-04	1.85E-03
5	3	79	78	17639.71	1	4164.06	2.4015	0.0400	0.0	0.0	0.0	0.0	1.75E-07	2.26E-06
2	0	20	21	886.95	1	4164.83	2.4011	0.0447	4.63E-03	1.92E-02	2.53E-02	2.56E-02	2.36E-02	2.09E-02
4	2	3	2	4271.38	1	4165.28	2.4008	0.0707	0.0	5.73E-06	1.13E-04	4.42E-04	9.16E-04	1.39E-03
3	1	88	87	15712.59	2	4165.41	2.4007	0.0400	0.0	0.0	0.0	0.0	0.0	3.83E-08
3	1	16	15	2532.96	2	4165.53	2.4007	0.0505	5.14E-08	1.10E-05	5.40E-05	1.05E-04	1.44E-04	1.65E-04
4	2	97	96	21302.14	1	4165.65	2.4006	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-07
3	1	9	10	2352.76	1	4165.92	2.4004	0.0547	6.29E-06	8.78E-04	3.72E-03	6.77E-03	8.87E-03	9.92E-03
5	3	22	21	7213.10	1	4166.05	2.4004	0.0435	0.0	6.84E-08	1.41E-05	1.79E-04	7.53E-04	1.83E-03
5	3	78	77	17359.69	1	4166.30	2.4002	0.0400	0.0	0.0	0.0	0.0	2.25E-07	2.77E-06
3	1	87	86	15410.46	2	4168.03	2.3992	0.0400	0.0	0.0	0.0	0.0	0.0	4.79E-08
3	1	17	16	2591.16	2	4168.05	2.3992	0.0493	4.15E-08	1.03E-05	5.26E-05	1.05E-04	1.45E-04	1.69E-04
5	3	23	22	7295.12	1	4168.15	2.3991	0.0423	0.0	5.90E-08	1.30E-05	1.71E-04	7.31E-04	1.80E-03
5	3	77	76	17082.96	1	4168.46	2.3990	0.0400	0.0	0.0	0.0	0.0	2.88E-07	3.39E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	2	4	3	4282.70	1	4168.77	2.3988	0.0676	0.0	7.49E-06	1.48E-04	5.84E-04	1.22E-03	1.85E-03
4	2	96	95	20961.57	1	4169.34	2.3985	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-07
2	0	19	20	806.42	1	4170.04	2.3981	0.0458	6.53E-03	2.24E-02	2.75E-02	2.70E-02	2.44E-02	2.13E-02
5	3	24	23	7380.84	1	4170.17	2.3980	0.0412	0.0	5.04E-08	1.19E-05	1.62E-04	7.07E-04	1.77E-03
3	1	8	9	2314.69	1	4170.35	2.3979	0.0550	6.82E-06	8.70E-04	3.58E-03	6.41E-03	8.32E-03	9.25E-03
2	0	1	0	-0.0	2	4170.43	2.3978	0.0769	1.82E-04	9.01E-05	5.81E-05	4.12E-05	3.07E-05	2.35E-05
3	1	18	17	2652.99	2	4170.49	2.3978	0.0482	3.29E-08	9.42E-06	5.07E-05	1.04E-04	1.46E-04	1.71E-04
5	3	76	75	16809.55	1	4170.53	2.3978	0.0400	0.0	0.0	0.0	0.0	3.67E-07	4.14E-06
3	1	86	85	15111.48	2	4170.58	2.3977	0.0400	0.0	0.0	0.0	0.0	0.0	5.97E-08
3	1	109	108	23714.48	1	4171.20	2.3974	0.0400	0.0	0.0	0.0	0.0	0.0	8.86E-09
5	3	25	24	7470.27	1	4172.11	2.3969	0.0400	0.0	4.26E-08	1.08E-05	1.52E-04	6.79E-04	1.72E-03
4	2	5	4	4257.80	1	4172.19	2.3968	0.0645	0.0	9.08E-06	1.82E-04	7.22E-04	1.51E-03	2.30E-03
5	3	75	74	16539.45	1	4172.52	2.3966	0.0400	0.0	0.0	0.0	1.19E-08	4.66E-07	5.04E-06
3	1	19	18	2718.44	2	4172.87	2.3964	0.0470	2.55E-08	8.55E-06	4.85E-05	1.02E-04	1.45E-04	1.72E-04
4	2	95	94	20624.10	1	4172.95	2.3964	0.0400	0.0	0.0	0.0	0.0	0.0	1.66E-07
3	1	85	84	14815.63	2	4173.05	2.3963	0.0400	0.0	0.0	0.0	0.0	0.0	7.43E-08
2	0	2	1	3.68	2	4173.98	2.3958	0.0738	3.60E-04	1.80E-04	1.16E-04	8.26E-05	6.15E-05	4.72E-05
5	3	26	25	7563.39	1	4173.99	2.3958	0.0400	0.0	3.56E-08	9.73E-06	1.42E-04	6.49E-04	1.67E-03
5	3	74	73	16272.68	1	4174.44	2.3955	0.0400	0.0	0.0	0.0	1.60E-08	5.91E-07	6.11E-06
3	1	7	8	2280.41	1	4174.71	2.3954	0.0574	7.18E-06	8.43E-04	3.38E-03	5.97E-03	7.68E-03	8.50E-03
3	1	20	19	2787.51	2	4175.18	2.3951	0.0458	1.94E-08	7.67E-06	4.59E-05	9.93E-05	1.44E-04	1.72E-04
2	0	18	19	729.71	1	4175.19	2.3951	0.0470	9.01E-03	2.57E-02	2.97E-02	2.83E-02	2.51E-02	2.17E-02
3	1	84	83	14522.95	2	4175.45	2.3950	0.0400	0.0	0.0	0.0	0.0	1.18E-08	9.23E-08
4	2	6	5	4316.68	1	4175.55	2.3949	0.0621	0.0	1.05E-05	2.14E-04	8.52E-04	1.79E-03	2.74E-03
5	3	27	26	7660.20	1	4175.79	2.3948	0.0400	0.0	2.95E-08	8.70E-06	1.32E-04	6.18E-04	1.61E-03
3	1	108	107	23334.10	1	4175.87	2.3947	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-08
5	3	73	72	16009.24	1	4176.27	2.3945	0.0400	0.0	0.0	0.0	2.15E-08	7.45E-07	7.40E-06
4	2	94	93	20289.75	1	4176.47	2.3944	0.0400	0.0	0.0	0.0	0.0	1.08E-08	2.13E-07
3	1	21	20	2860.19	2	4177.42	2.3938	0.0447	1.44E-08	6.80E-06	4.32E-05	9.61E-05	1.42E-04	1.72E-04
2	0	3	2	11.03	2	4177.45	2.3938	0.0707	5.25E-04	2.67E-04	1.74E-04	1.24E-04	9.22E-05	7.08E-05
5	3	28	27	7760.70	1	4177.51	2.3938	0.0400	0.0	2.42E-08	7.72E-06	1.22E-04	5.85E-04	1.55E-03
3	1	83	82	14233.45	2	4177.76	2.3936	0.0400	0.0	0.0	0.0	0.0	1.53E-08	1.14E-07
5	3	72	71	15749.16	1	4178.02	2.3935	0.0400	0.0	0.0	0.0	2.88E-08	9.37E-07	8.92E-06
4	2	7	6	4339.32	1	4178.83	2.3930	0.0597	0.0	1.17E-05	2.42E-04	9.73E-04	2.05E-03	3.16E-03
3	1	6	7	2249.94	1	4179.01	2.3929	0.0597	7.31E-06	7.98E-04	3.12E-03	5.44E-03	6.96E-03	7.65E-03
5	3	29	28	7864.89	1	4179.16	2.3928	0.0400	0.0	1.96E-08	6.81E-06	1.12E-04	5.51E-04	1.49E-03
3	1	22	21	2936.50	2	4179.59	2.3926	0.0435	1.06E-08	5.97E-06	4.03E-05	9.24E-05	1.39E-04	1.70E-04
5	3	71	70	15492.44	1	4179.69	2.3925	0.0400	0.0	0.0	0.0	3.84E-08	1.17E-06	1.07E-05
4	2	93	92	19958.52	1	4179.91	2.3924	0.0400	0.0	0.0	0.0	0.0	1.46E-08	2.72E-07
3	1	82	81	13947.12	2	4180.00	2.3923	0.0400	0.0	0.0	0.0	0.0	1.98E-08	1.41E-07
2	0	17	18	656.82	1	4180.27	2.3922	0.0482	1.22E-02	2.91E-02	3.18E-02	2.94E-02	2.56E-02	2.19E-02
3	1	107	106	22956.67	1	4180.46	2.3921	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-08
5	3	30	29	7972.75	1	4180.74	2.3919	0.0400	0.0	1.57E-08	5.96E-06	1.02E-04	5.16E-04	1.42E-03
2	0	4	3	22.06	2	4180.87	2.3918	0.0676	6.68E-04	3.48E-04	2.29E-04	1.64E-04	1.22E-04	9.42E-05
5	3	70	69	15239.10	1	4181.28	2.3916	0.0400	0.0	0.0	0.0	5.09E-08	1.47E-06	1.29E-05
3	1	23	22	3016.41	2	4181.70	2.3914	0.0423	0.0	5.18E-06	3.73E-05	8.82E-05	1.35E-04	1.68E-04
4	2	8	7	4365.74	1	4182.04	2.3912	0.0574	0.0	1.26E-05	2.67E-04	1.08E-03	2.30E-03	3.55E-03
3	1	81	80	13663.99	2	4182.17	2.3911	0.0400	0.0	0.0	0.0	0.0	2.55E-08	1.74E-07
5	3	31	30	8084.29	1	4182.24	2.3911	0.0400	0.0	1.25E-08	5.19E-06	9.32E-05	4.83E-04	1.35E-03
5	3	69	68	14989.13	1	4182.80	2.3907	0.0400	0.0	0.0	0.0	6.72E-08	1.82E-06	1.54E-05
3	1	5	6	2223.28	1	4183.24	2.3905	0.0621	7.15E-06	7.32E-04	2.80E-03	4.84E-03	6.15E-03	6.74E-03
4	2	92	91	19630.43	1	4183.27	2.3905	0.0400	0.0	0.0	0.0	0.0	1.96E-08	3.47E-07
5	3	32	31	8199.50	1	4183.67	2.3902	0.0400	0.0	0.0	4.48E-06	8.44E-05	4.49E-04	1.28E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	24	23	3099.94	2	4183.73	2.3902	0.0412	0.0	4.45E-06	3.42E-05	8.37E-05	1.31E-04	1.65E-04
2	0	5	4	36.76	2	4184.22	2.3899	0.0645	7.83E-04	4.23E-04	2.81E-04	2.02E-04	1.52E-04	1.17E-04
5	3	68	67	14742.56	1	4184.23	2.3899	0.0400	0.0	0.0	0.0	8.84E-08	2.26E-06	1.83E-05
3	1	80	79	13384.06	2	4184.26	2.3899	0.0400	0.0	0.0	0.0	0.0	3.27E-08	2.13E-07
3	1	106	105	22582.21	1	4184.97	2.3895	0.0400	0.0	0.0	0.0	0.0	0.0	2.09E-08
5	3	33	32	8318.38	1	4185.02	2.3895	0.0400	0.0	0.0	3.85E-06	7.60E-05	4.16E-04	1.21E-03
4	2	9	8	4395.93	1	4185.18	2.3894	0.0550	0.0	1.32E-05	2.87E-04	1.18E-03	2.53E-03	3.93E-03
2	0	16	17	587.75	1	4185.28	2.3893	0.0493	1.61E-02	3.26E-02	3.37E-02	3.03E-02	2.60E-02	2.20E-02
5	3	67	66	14499.39	1	4185.58	2.3892	0.0400	0.0	0.0	0.0	1.16E-07	2.79E-06	2.18E-05
3	1	25	24	3187.07	2	4185.70	2.3891	0.0400	0.0	3.78E-06	3.12E-05	7.90E-05	1.26E-04	1.61E-04
3	1	79	78	13107.35	2	4186.27	2.3888	0.0400	0.0	0.0	0.0	0.0	4.18E-08	2.61E-07
5	3	34	33	8440.93	1	4186.30	2.3887	0.0400	0.0	0.0	3.28E-06	6.81E-05	3.84E-04	1.14E-03
4	2	91	90	19305.50	1	4186.54	2.3886	0.0400	0.0	0.0	0.0	0.0	2.63E-08	4.42E-07
5	3	66	65	14259.63	1	4186.85	2.3884	0.0400	0.0	0.0	0.0	1.51E-07	3.44E-06	2.58E-05
3	1	4	5	2200.42	1	4187.40	2.3881	0.0645	6.68E-06	6.48E-04	2.43E-03	4.16E-03	5.26E-03	5.74E-03
2	0	6	5	55.14	2	4187.50	2.3881	0.0621	8.66E-04	4.89E-04	3.30E-04	2.39E-04	1.80E-04	1.39E-04
5	3	35	34	8567.12	1	4187.51	2.3881	0.0400	0.0	0.0	2.78E-06	6.07E-05	3.53E-04	1.07E-03
3	1	26	25	3277.80	2	4187.60	2.3880	0.0400	0.0	3.18E-06	2.82E-05	7.41E-05	1.21E-04	1.57E-04
5	3	65	64	14023.30	1	4188.04	2.3878	0.0400	0.0	0.0	0.0	1.96E-07	4.22E-06	3.05E-05
3	1	78	77	12833.86	2	4188.21	2.3877	0.0400	0.0	0.0	0.0	0.0	5.34E-08	3.18E-07
4	2	10	9	4429.89	1	4188.25	2.3876	0.0547	0.0	1.36E-05	3.04E-04	1.27E-03	2.74E-03	4.27E-03
5	3	36	35	8696.97	1	4188.64	2.3874	0.0400	0.0	0.0	2.34E-06	5.38E-05	3.22E-04	9.95E-04
5	3	64	63	13790.39	1	4189.15	2.3871	0.0400	0.0	0.0	0.0	2.53E-07	5.16E-06	3.59E-05
3	1	105	104	22210.73	1	4189.39	2.3870	0.0400	0.0	0.0	0.0	0.0	0.0	2.76E-08
3	1	27	26	3372.13	2	4189.43	2.3870	0.0400	0.0	2.65E-06	2.53E-05	6.91E-05	1.15E-04	1.52E-04
5	3	37	36	8830.47	1	4189.69	2.3868	0.0400	0.0	0.0	1.96E-06	4.74E-05	2.94E-04	9.25E-04
4	2	90	89	18983.73	1	4189.73	2.3868	0.0400	0.0	0.0	0.0	0.0	3.51E-08	5.60E-07
3	1	77	76	12863.62	2	4190.07	2.3866	0.0400	0.0	0.0	0.0	0.0	6.78E-08	3.88E-07
5	3	63	62	13560.93	1	4190.19	2.3865	0.0400	0.0	0.0	0.0	3.26E-07	6.28E-06	4.21E-05
2	0	15	16	522.50	1	4190.23	2.3865	0.0505	2.08E-02	3.61E-02	3.54E-02	3.10E-02	2.62E-02	2.19E-02
5	3	38	37	8967.61	1	4190.67	2.3863	0.0400	0.0	0.0	1.62E-06	4.16E-05	2.66E-04	8.57E-04
2	0	7	6	77.19	2	4190.71	2.3862	0.0597	9.14E-04	5.44E-04	3.74E-04	2.73E-04	2.07E-04	1.61E-04
5	3	62	61	13334.93	1	4191.14	2.3860	0.0400	0.0	0.0	0.0	4.18E-07	7.62E-06	4.93E-05
3	1	28	27	3470.06	2	4191.19	2.3860	0.0400	0.0	2.18E-06	2.26E-05	6.40E-05	1.09E-04	1.46E-04
4	2	11	10	4467.62	1	4191.25	2.3859	0.0545	0.0	1.38E-05	3.17E-04	1.34E-03	2.92E-03	4.59E-03
3	1	3	4	2181.37	1	4191.48	2.3858	0.0676	5.89E-06	5.45E-04	2.02E-03	3.43E-03	4.31E-03	4.69E-03
5	3	39	38	9108.38	1	4191.57	2.3857	0.0400	0.0	0.0	1.34E-06	3.63E-05	2.40E-04	7.91E-04
3	1	76	75	12296.62	2	4191.86	2.3856	0.0400	0.0	0.0	0.0	0.0	8.59E-08	4.70E-07
5	3	61	60	13112.37	1	4192.01	2.3855	0.0400	0.0	0.0	0.0	5.32E-07	9.21E-06	5.75E-05
5	3	40	39	9252.79	1	4192.40	2.3853	0.0400	0.0	0.0	1.10E-06	3.15E-05	2.16E-04	7.28E-04
5	3	60	59	12893.29	1	4192.81	2.3850	0.0400	0.0	0.0	0.0	6.76E-07	1.11E-05	6.69E-05
4	2	89	88	18665.15	1	4192.84	2.3850	0.0400	0.0	0.0	0.0	0.0	4.68E-08	7.11E-07
3	1	29	28	3571.58	2	4192.88	2.3850	0.0400	0.0	1.78E-06	2.00E-05	5.90E-05	1.03E-04	1.40E-04
5	3	41	40	9400.82	1	4193.15	2.3848	0.0400	0.0	0.0	8.94E-07	2.72E-05	1.93E-04	6.67E-04
5	3	59	58	12677.69	1	4193.53	2.3846	0.0400	0.0	0.0	0.0	8.56E-07	1.33E-05	7.78E-05
3	1	75	74	12032.87	2	4193.57	2.3846	0.0400	0.0	0.0	0.0	0.0	1.08E-07	5.69E-07
3	1	104	103	21842.26	1	4193.72	2.3845	0.0400	0.0	0.0	0.0	0.0	0.0	3.65E-08
5	3	42	41	9552.46	1	4193.82	2.3845	0.0400	0.0	0.0	7.23E-07	2.34E-05	1.72E-04	6.09E-04
2	0	8	7	102.91	2	4193.86	2.3844	0.0574	9.30E-04	5.88E-04	4.12E-04	3.05E-04	2.32E-04	1.81E-04
4	2	12	11	4509.11	1	4194.17	2.3843	0.0542	0.0	1.37E-05	3.26E-04	1.40E-03	3.08E-03	4.87E-03
5	3	58	57	12465.57	1	4194.17	2.3843	0.0400	0.0	0.0	1.04E-08	1.08E-06	1.60E-05	9.01E-05
5	3	43	42	9707.73	1	4194.42	2.3841	0.0400	0.0	0.0	5.81E-07	2.00E-05	1.53E-04	5.54E-04
3	1	30	29	3676.69	2	4194.50	2.3841	0.0400	0.0	1.44E-06	1.76E-05	5.41E-05	9.72E-05	1.34E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	3	57	56	12256.95	1	4194.73	2.3839	0.0400	0.0	0.0	1.42E-08	1.35E-06	1.91E-05	1.04E-04
5	3	44	43	9866.59	1	4194.94	2.3838	0.0400	0.0	0.0	4.64E-07	1.70E-05	1.35E-04	5.03E-04
2	0	14	15	461.08	1	4195.11	2.3837	0.0517	2.63E-02	3.94E-02	3.68E-02	3.15E-02	2.62E-02	2.17E-02
3	1	74	73	11772.40	2	4195.20	2.3837	0.0400	0.0	0.0	0.0	1.09E-08	1.36E-07	6.87E-07
5	3	56	55	12051.84	1	4195.21	2.3837	0.0400	0.0	0.0	1.93E-08	1.69E-06	2.27E-05	1.20E-04
2	0	96	95	16294.18	2	4195.25	2.3836	0.0400	0.0	0.0	0.0	0.0	0.0	9.25E-09
5	3	45	44	10029.06	1	4195.39	2.3836	0.0400	0.0	0.0	3.68E-07	1.44E-05	1.19E-04	4.54E-04
3	1	2	3	2166.13	1	4195.50	2.3835	0.0707	4.77E-06	4.26E-04	1.56E-03	2.63E-03	3.29E-03	3.58E-03
5	3	55	54	11850.23	1	4195.61	2.3834	0.0400	0.0	0.0	2.60E-08	2.11E-06	2.69E-05	1.37E-04
5	3	46	45	10195.12	1	4195.76	2.3834	0.0400	0.0	0.0	2.91E-07	1.21E-05	1.04E-04	4.09E-04
4	2	88	87	16349.76	1	4195.87	2.3833	0.0400	0.0	0.0	0.0	0.0	6.23E-08	8.99E-07
5	3	54	53	11652.14	1	4195.94	2.3833	0.0400	0.0	0.0	3.48E-08	2.61E-06	3.18E-05	1.57E-04
5	3	47	46	10364.77	1	4196.05	2.3832	0.0400	0.0	0.0	2.28E-07	1.02E-05	9.12E-05	3.67E-04
3	1	31	30	3785.38	2	4196.05	2.3832	0.0400	0.0	1.15E-06	1.54E-05	4.94E-05	9.12E-05	1.28E-04
5	3	53	52	11457.59	1	4196.19	2.3831	0.0400	0.0	0.0	4.64E-08	3.21E-06	3.74E-05	1.79E-04
5	3	48	47	10538.00	1	4196.27	2.3831	0.0400	0.0	0.0	1.77E-07	8.51E-06	7.94E-05	3.29E-04
5	3	52	51	11266.57	1	4196.36	2.3830	0.0400	0.0	0.0	6.14E-08	3.94E-06	4.38E-05	2.04E-04
5	3	49	48	10714.80	1	4196.40	2.3830	0.0400	0.0	0.0	1.37E-07	7.07E-06	6.88E-05	2.93E-04
5	3	51	50	11079.09	1	4196.45	2.3830	0.0400	0.0	0.0	8.08E-08	4.81E-06	5.11E-05	2.31E-04
5	3	50	49	10895.17	1	4196.47	2.3830	0.0400	0.0	0.0	1.06E-07	5.84E-06	5.94E-05	2.60E-04
3	1	73	72	11515.21	2	4196.76	2.3828	0.0400	0.0	0.0	0.0	1.45E-08	1.71E-07	8.27E-07
2	0	9	8	132.31	2	4196.94	2.3827	0.0550	9.14E-04	6.21E-04	4.45E-04	3.33E-04	2.56E-04	2.00E-04
4	2	13	12	4554.37	1	4197.02	2.3826	0.0540	0.0	1.34E-05	3.30E-04	1.45E-03	3.22E-03	5.12E-03
3	1	32	31	3897.66	2	4197.53	2.3824	0.0400	0.0	9.17E-07	1.33E-05	4.49E-05	8.51E-05	1.22E-04
3	1	103	102	21476.80	1	4197.97	2.3821	0.0400	0.0	0.0	0.0	0.0	0.0	4.81E-08
3	1	72	71	11261.30	2	4198.25	2.3819	0.0400	0.0	0.0	0.0	1.93E-08	2.14E-07	9.92E-07
2	0	95	94	15964.29	2	4198.46	2.3818	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-08
4	2	87	86	18037.58	1	4198.81	2.3816	0.0400	0.0	0.0	0.0	0.0	8.26E-08	1.13E-06
3	1	33	32	4013.51	2	4198.95	2.3815	0.0400	0.0	7.21E-07	1.15E-05	4.06E-05	7.91E-05	1.15E-04
3	1	1	2	2154.70	1	4199.45	2.3813	0.0738	3.38E-06	2.93E-04	1.06E-03	1.79E-03	2.23E-03	2.42E-03
3	1	71	70	11010.69	2	4199.66	2.3811	0.0400	0.0	0.0	0.0	2.55E-08	2.66E-07	1.19E-06
4	2	14	13	4603.40	1	4199.81	2.3811	0.0528	0.0	1.29E-05	3.30E-04	1.48E-03	3.32E-03	5.33E-03
2	0	13	14	403.48	1	4199.92	2.3810	0.0528	3.26E-02	4.24E-02	3.79E-02	3.16E-02	2.60E-02	2.13E-02
2	0	10	9	165.38	2	4199.96	2.3810	0.0547	8.72E-04	6.41E-04	4.72E-04	3.58E-04	2.77E-04	2.18E-04
3	1	34	33	4132.93	2	4200.29	2.3808	0.0400	0.0	5.62E-07	9.87E-06	3.65E-05	7.32E-05	1.09E-04
3	1	70	69	10763.38	2	4200.99	2.3804	0.0400	0.0	0.0	0.0	3.36E-08	3.30E-07	1.42E-06
3	1	35	34	4255.91	2	4201.56	2.3801	0.0400	0.0	4.34E-07	8.41E-06	3.27E-05	6.74E-05	1.02E-04
2	0	94	93	15637.47	2	4201.60	2.3800	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-08
4	2	86	85	17728.62	1	4201.67	2.3800	0.0400	0.0	0.0	0.0	0.0	1.09E-07	1.43E-06
3	1	102	101	21114.38	1	4202.14	2.3797	0.0400	0.0	0.0	0.0	0.0	0.0	6.31E-08
3	1	69	68	10519.39	2	4202.25	2.3797	0.0400	0.0	0.0	0.0	4.41E-08	4.09E-07	1.68E-06
4	2	15	14	4656.18	1	4202.52	2.3795	0.0517	0.0	1.22E-05	3.27E-04	1.50E-03	3.41E-03	5.51E-03
3	1	36	35	4382.47	2	4202.76	2.3794	0.0400	0.0	3.32E-07	7.11E-06	2.91E-05	6.18E-05	9.56E-05
2	0	11	10	202.12	2	4202.91	2.3793	0.0545	8.09E-04	6.50E-04	4.93E-04	3.79E-04	2.96E-04	2.34E-04
3	1	0	1	2147.08	1	4203.33	2.3791	0.0769	1.76E-06	1.50E-04	5.40E-04	9.05E-04	1.13E-03	1.22E-03
3	1	68	67	10278.73	2	4203.44	2.3790	0.0400	0.0	0.0	0.0	5.76E-08	5.04E-07	2.00E-06
3	1	37	36	4512.58	2	4203.90	2.3787	0.0400	0.0	2.51E-07	5.98E-06	2.57E-05	5.65E-05	8.91E-05
4	2	85	84	17422.89	1	4204.45	2.3784	0.0400	0.0	0.0	0.0	0.0	1.44E-07	1.79E-06
3	1	67	66	10041.41	2	4204.55	2.3784	0.0400	0.0	0.0	0.0	7.49E-08	6.19E-07	2.36E-06
2	0	12	13	349.72	1	4204.66	2.3783	0.0540	3.93E-02	4.51E-02	3.85E-02	3.15E-02	2.55E-02	2.07E-02
2	0	93	92	15313.73	2	4204.66	2.3783	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-08
3	1	38	37	4646.24	2	4204.96	2.3781	0.0400	0.0	1.89E-07	4.99E-06	2.27E-05	5.14E-05	8.28E-05
4	2	16	15	4712.73	1	4205.15	2.3780	0.0505	0.0	1.15E-05	3.21E-04	1.50E-03	3.46E-03	5.65E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	66	65	9807.43	2	4205.58	2.3778	0.0400	0.0	0.0	0.0	9.69E-08	7.57E-07	2.79E-06
2	0	12	11	242.53	2	4205.79	2.3777	0.0542	7.31E-04	6.47E-04	5.07E-04	3.96E-04	3.12E-04	2.49E-04
3	1	39	38	4783.45	2	4205.95	2.3776	0.0400	0.0	1.40E-07	4.14E-06	1.99E-05	4.66E-05	7.67E-05
3	1	101	100	20755.00	1	4206.22	2.3774	0.0400	0.0	0.0	0.0	0.0	0.0	8.27E-08
3	1	65	64	9576.80	2	4206.55	2.3772	0.0400	0.0	0.0	0.0	1.25E-07	9.24E-07	3.27E-06
3	1	40	39	4924.21	2	4206.87	2.3771	0.0400	0.0	1.03E-07	3.41E-06	1.73E-05	4.20E-05	7.08E-05
4	2	84	83	17120.41	1	4207.14	2.3769	0.0400	0.0	0.0	0.0	0.0	1.89E-07	2.24E-06
3	1	64	63	9349.53	2	4207.43	2.3767	0.0400	0.0	0.0	0.0	1.60E-07	1.12E-06	3.84E-06
2	0	92	91	14993.09	2	4207.64	2.3766	0.0400	0.0	0.0	0.0	0.0	0.0	2.43E-08
4	2	17	16	4773.03	1	4207.72	2.3766	0.0493	0.0	1.06E-05	3.11E-04	1.49E-03	3.49E-03	5.75E-03
3	1	41	40	5068.50	2	4207.72	2.3766	0.0400	0.0	7.54E-08	2.80E-06	1.50E-05	3.77E-05	6.51E-05
3	1	63	62	9125.64	2	4208.25	2.3763	0.0400	0.0	0.0	0.0	2.05E-07	1.36E-06	4.48E-06
3	1	42	41	5216.33	2	4208.50	2.3761	0.0400	0.0	5.45E-08	2.28E-06	1.30E-05	3.38E-05	5.96E-05
2	0	13	12	286.60	2	4208.60	2.3761	0.0540	6.45E-04	6.35E-04	5.15E-04	4.10E-04	3.26E-04	2.62E-04
3	1	62	61	8905.12	2	4208.99	2.3759	0.0400	0.0	0.0	1.05E-08	2.61E-07	1.64E-06	5.22E-06
3	1	43	42	5367.68	2	4209.21	2.3757	0.0400	0.0	3.91E-08	1.84E-06	1.12E-05	3.01E-05	5.44E-05
2	0	11	12	299.78	1	4209.33	2.3757	0.0542	4.64E-02	4.71E-02	3.87E-02	3.10E-02	2.49E-02	2.00E-02
3	1	61	60	8687.99	2	4209.66	2.3755	0.0400	0.0	0.0	1.44E-08	3.30E-07	1.97E-06	6.07E-06
4	2	83	82	16821.19	1	4209.75	2.3754	0.0400	0.0	0.0	0.0	0.0	2.47E-07	2.80E-06
3	1	44	43	5522.55	2	4209.85	2.3754	0.0400	0.0	2.78E-08	1.48E-06	9.55E-06	2.67E-05	4.95E-05
4	2	18	17	4837.09	1	4210.21	2.3752	0.0482	0.0	9.68E-06	2.99E-04	1.47E-03	3.49E-03	5.82E-03
3	1	100	99	20398.68	1	4210.22	2.3752	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-07
3	1	60	59	8474.25	2	4210.25	2.3752	0.0400	0.0	0.0	1.98E-08	4.16E-07	2.36E-06	7.02E-06
3	1	45	44	5680.94	2	4210.41	2.3751	0.0400	0.0	1.96E-08	1.18E-06	8.13E-06	2.36E-05	4.49E-05
2	0	91	90	14675.56	2	4210.54	2.3750	0.0400	0.0	0.0	0.0	0.0	0.0	3.07E-08
3	1	59	58	8263.93	2	4210.77	2.3749	0.0400	0.0	0.0	2.72E-08	5.24E-07	2.83E-06	8.12E-06
3	1	1	0	2143.27	1	4210.88	2.3748	0.0769	1.81E-06	1.53E-04	5.49E-04	9.19E-04	1.15E-03	1.24E-03
3	1	46	45	5842.84	2	4210.91	2.3748	0.0400	0.0	1.36E-08	9.40E-07	6.89E-06	2.08E-05	4.06E-05
3	1	58	57	8057.01	2	4211.22	2.3746	0.0400	0.0	0.0	3.70E-08	6.56E-07	3.37E-06	9.37E-06
3	1	47	46	6008.24	2	4211.33	2.3745	0.0400	0.0	0.0	7.42E-07	5.81E-06	1.83E-05	3.66E-05
2	0	14	13	334.34	2	4211.35	2.3745	0.0528	5.56E-04	6.13E-04	5.17E-04	4.19E-04	3.38E-04	2.73E-04
3	1	57	56	7853.51	2	4211.59	2.3744	0.0400	0.0	0.0	5.00E-08	8.18E-07	4.00E-06	1.08E-05
3	1	48	47	6177.14	2	4211.68	2.3743	0.0400	0.0	0.0	5.82E-07	4.87E-06	1.60E-05	3.28E-05
3	1	56	55	7653.44	2	4211.89	2.3742	0.0400	0.0	0.0	6.73E-08	1.02E-06	4.74E-06	1.24E-05
3	1	49	48	6349.53	2	4211.96	2.3742	0.0400	0.0	0.0	4.54E-07	4.07E-06	1.39E-05	2.94E-05
3	1	55	54	7456.80	2	4212.12	2.3741	0.0400	0.0	0.0	8.99E-08	1.26E-06	5.59E-06	1.41E-05
3	1	50	49	6525.41	2	4212.17	2.3741	0.0400	0.0	0.0	3.52E-07	3.39E-06	1.20E-05	2.62E-05
3	1	54	53	7263.61	2	4212.27	2.3740	0.0400	0.0	0.0	1.20E-07	1.55E-06	6.56E-06	1.61E-05
4	2	82	81	16525.24	1	4212.28	2.3740	0.0400	0.0	0.0	0.0	0.0	3.22E-07	3.48E-06
3	1	51	50	6704.76	2	4212.30	2.3740	0.0400	0.0	0.0	2.71E-07	2.80E-06	1.04E-05	2.33E-05
3	1	53	52	7073.87	2	4212.35	2.3740	0.0400	0.0	0.0	1.58E-07	1.89E-06	7.68E-06	1.83E-05
3	1	52	51	6867.58	2	4212.36	2.3740	0.0400	0.0	0.0	2.08E-07	2.31E-06	8.96E-06	2.07E-05
4	2	19	18	4904.90	1	4212.63	2.3738	0.0470	0.0	8.74E-06	2.85E-04	1.44E-03	3.48E-03	5.85E-03
2	0	90	89	14361.15	2	4213.37	2.3734	0.0400	0.0	0.0	0.0	0.0	0.0	3.87E-08
2	0	10	11	253.68	1	4213.94	2.3731	0.0545	5.33E-02	4.85E-02	3.84E-02	3.02E-02	2.39E-02	1.91E-02
2	0	15	14	385.75	2	4214.03	2.3730	0.0517	4.68E-04	5.84E-04	5.13E-04	4.25E-04	3.47E-04	2.83E-04
3	1	99	98	20045.44	1	4214.13	2.3730	0.0400	0.0	0.0	0.0	0.0	0.0	1.41E-07
3	1	2	1	2147.08	1	4214.55	2.3727	0.0738	3.58E-06	3.05E-04	1.10E-03	1.84E-03	2.30E-03	2.49E-03
4	2	81	80	16232.57	1	4214.73	2.3726	0.0400	0.0	0.0	0.0	1.15E-08	4.19E-07	4.31E-06
4	2	20	19	4976.46	1	4214.98	2.3725	0.0458	0.0	7.79E-06	2.69E-04	1.40E-03	3.44E-03	5.85E-03
2	0	89	88	14049.87	2	4216.11	2.3719	0.0400	0.0	0.0	0.0	0.0	0.0	4.88E-08
2	0	16	15	440.81	2	4216.64	2.3716	0.0505	3.86E-04	5.49E-04	5.04E-04	4.27E-04	3.53E-04	2.90E-04
4	2	80	79	15943.20	1	4217.10	2.3713	0.0400	0.0	0.0	0.0	1.55E-08	5.43E-07	5.34E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	2	21	20	5051.77	1	4217.25	2.3712	0.0447	0.0	6.86E-06	2.52E-04	1.35E-03	3.37E-03	5.81E-03
3	1	98	97	19695.29	1	4217.96	2.3708	0.0400	0.0	0.0	0.0	0.0	1.02E-08	1.83E-07
3	1	3	2	2154.70	1	4218.15	2.3707	0.0707	5.21E-06	4.53E-04	1.64E-03	2.76E-03	3.44E-03	3.73E-03
2	0	111	110	22554.35	1	4218.23	2.3707	0.0400	0.0	0.0	0.0	0.0	0.0	7.69E-09
2	0	9	10	211.42	1	4218.48	2.3705	0.0547	5.96E-02	4.90E-02	3.75E-02	2.90E-02	2.28E-02	1.81E-02
2	0	88	87	13741.75	2	4218.79	2.3703	0.0400	0.0	0.0	0.0	0.0	0.0	6.14E-08
2	0	17	16	499.54	2	4219.19	2.3701	0.0493	3.11E-04	5.10E-04	4.91E-04	4.25E-04	3.56E-04	2.96E-04
4	2	79	78	15657.13	1	4219.39	2.3700	0.0400	0.0	0.0	0.0	2.20E-08	7.01E-07	6.58E-06
4	2	22	21	5130.82	1	4219.45	2.3700	0.0435	0.0	5.98E-06	2.34E-04	1.29E-03	3.29E-03	5.75E-03
2	0	87	86	13436.77	2	4221.38	2.3689	0.0400	0.0	0.0	0.0	0.0	1.17E-08	7.69E-08
4	2	23	22	5213.61	1	4221.58	2.3688	0.0423	0.0	5.16E-06	2.15E-04	1.23E-03	3.20E-03	5.66E-03
4	2	78	77	15374.38	1	4221.59	2.3688	0.0400	0.0	0.0	0.0	3.03E-08	9.02E-07	8.10E-06
2	0	18	17	561.92	2	4221.67	2.3687	0.0482	2.46E-04	4.68E-04	4.73E-04	4.20E-04	3.58E-04	3.00E-04
3	1	4	3	2166.13	1	4221.68	2.3687	0.0676	6.62E-06	5.91E-04	2.16E-03	3.65E-03	4.57E-03	4.97E-03
3	1	97	96	19348.24	1	4221.70	2.3687	0.0400	0.0	0.0	0.0	0.0	1.40E-08	2.37E-07
2	0	8	9	172.99	1	4222.94	2.3680	0.0550	6.48E-02	4.86E-02	3.61E-02	2.75E-02	2.14E-02	1.69E-02
2	0	110	109	22164.27	1	4223.04	2.3680	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-08
4	2	24	23	5300.14	1	4223.64	2.3676	0.0412	0.0	4.39E-06	1.97E-04	1.16E-03	3.09E-03	5.54E-03
4	2	77	76	15094.96	1	4223.71	2.3676	0.0400	0.0	0.0	0.0	4.16E-08	1.16E-06	9.93E-06
2	0	86	85	13134.97	2	4223.90	2.3675	0.0400	0.0	0.0	0.0	0.0	1.54E-08	9.62E-08
2	0	19	18	627.96	2	4224.07	2.3674	0.0470	1.90E-04	4.24E-04	4.52E-04	4.12E-04	3.56E-04	3.02E-04
3	1	5	4	2181.37	1	4225.14	2.3668	0.0645	7.74E-06	7.17E-04	2.65E-03	4.50E-03	5.67E-03	6.17E-03
3	1	96	95	19004.32	1	4225.36	2.3667	0.0400	0.0	0.0	0.0	0.0	1.91E-08	3.07E-07
4	2	25	24	5390.41	1	4225.62	2.3665	0.0400	0.0	3.71E-06	1.78E-04	1.09E-03	2.97E-03	5.40E-03
4	2	76	75	14818.89	1	4225.75	2.3664	0.0400	0.0	0.0	0.0	5.68E-08	1.48E-06	1.21E-05
2	0	85	84	12836.35	2	4226.34	2.3661	0.0400	0.0	0.0	0.0	0.0	2.01E-08	1.20E-07
2	0	20	19	657.65	2	4226.42	2.3661	0.0458	1.44E-04	3.79E-04	4.28E-04	4.01E-04	3.53E-04	3.03E-04
2	0	7	8	138.40	1	4227.35	2.3655	0.0574	6.84E-02	4.72E-02	3.41E-02	2.56E-02	1.97E-02	1.55E-02
4	2	26	25	5484.40	1	4227.53	2.3654	0.0400	0.0	3.09E-06	1.60E-04	1.02E-03	2.83E-03	5.23E-03
4	2	75	74	14546.17	1	4227.72	2.3653	0.0400	0.0	0.0	0.0	7.72E-08	1.88E-06	1.48E-05
2	0	109	108	21777.14	1	4227.77	2.3653	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-08
3	1	6	5	2200.42	1	4228.53	2.3649	0.0621	8.53E-06	8.27E-04	3.10E-03	5.32E-03	6.72E-03	7.34E-03
2	0	21	20	771.00	2	4228.69	2.3648	0.0447	1.07E-04	3.36E-04	4.02E-04	3.88E-04	3.47E-04	3.01E-04
2	0	84	83	12540.93	2	4228.70	2.3648	0.0400	0.0	0.0	0.0	0.0	2.62E-08	1.49E-07
3	1	95	94	18663.53	1	4228.93	2.3647	0.0400	0.0	0.0	0.0	0.0	2.61E-08	3.96E-07
4	2	27	26	5582.12	1	4229.36	2.3644	0.0400	0.0	2.55E-06	1.43E-04	9.47E-04	2.69E-03	5.05E-03
4	2	74	73	14276.81	1	4229.60	2.3643	0.0400	0.0	0.0	0.0	1.04E-07	2.39E-06	1.80E-05
2	0	22	21	847.99	2	4230.89	2.3636	0.0435	7.79E-05	2.94E-04	3.74E-04	3.73E-04	3.40E-04	2.98E-04
2	0	83	82	12246.70	2	4230.99	2.3635	0.0400	0.0	0.0	0.0	0.0	3.41E-08	1.85E-07
4	2	28	27	5683.57	1	4231.12	2.3634	0.0400	0.0	2.09E-06	1.27E-04	8.75E-04	2.55E-03	4.86E-03
4	2	73	72	14010.82	1	4231.39	2.3633	0.0400	0.0	0.0	0.0	1.41E-07	3.02E-06	2.18E-05
2	0	6	7	107.65	1	4231.68	2.3631	0.0597	6.97E-02	4.47E-02	3.15E-02	2.34E-02	1.79E-02	1.40E-02
3	1	7	6	2223.28	1	4231.85	2.3630	0.0597	8.97E-06	9.19E-04	3.51E-03	6.07E-03	7.72E-03	8.46E-03
3	1	94	93	18325.89	1	4232.42	2.3627	0.0400	0.0	0.0	0.0	0.0	3.54E-08	5.09E-07
2	0	108	107	21392.98	1	4232.42	2.3627	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-08
4	2	29	28	5788.74	1	4232.80	2.3625	0.0400	0.0	1.69E-06	1.12E-04	8.03E-04	2.40E-03	4.65E-03
2	0	23	22	928.62	2	4233.03	2.3624	0.0423	5.56E-05	2.55E-04	3.46E-04	3.56E-04	3.31E-04	2.94E-04
4	2	72	71	13748.23	1	4233.11	2.3623	0.0400	0.0	0.0	0.0	1.89E-07	3.81E-06	2.64E-05
2	0	82	81	11959.70	2	4233.20	2.3623	0.0400	0.0	0.0	0.0	0.0	4.41E-08	2.29E-07
4	2	30	29	5897.62	1	4234.42	2.3616	0.0400	0.0	1.35E-06	9.76E-05	7.32E-04	2.25E-03	4.43E-03
4	2	71	70	13489.02	1	4234.75	2.3614	0.0400	0.0	0.0	0.0	2.53E-07	4.78E-06	3.18E-05
3	1	8	7	2249.94	1	4235.09	2.3612	0.0574	9.08E-06	9.91E-04	3.87E-03	6.76E-03	8.65E-03	9.52E-03
2	0	24	23	1012.90	2	4235.10	2.3612	0.0412	3.90E-05	2.19E-04	3.17E-04	3.37E-04	3.20E-04	2.89E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	81	80	11673.92	2	4235.33	2.3611	0.0400	0.0	0.0	0.0	0.0	5.70E-08	2.83E-07
2	1	93	92	17991.41	1	4235.83	2.3608	0.0400	0.0	0.0	0.0	0.0	4.79E-08	6.53E-07
2	0	5	6	80.74	1	4235.94	2.3608	0.0621	6.83E-02	4.10E-02	2.83E-02	2.08E-02	1.58E-02	1.23E-02
4	2	31	30	6010.21	1	4235.95	2.3607	0.0400	0.0	1.07E-06	8.48E-05	6.66E-04	2.10E-03	4.22E-03
4	2	70	69	13233.23	1	4236.31	2.3605	0.0400	0.0	0.0	0.0	3.36E-07	5.99E-06	3.82E-05
2	0	107	106	21011.81	1	4236.98	2.3602	0.0400	0.0	0.0	0.0	0.0	0.0	2.48E-08
2	0	25	24	1100.81	2	4237.10	2.3601	0.0400	2.68E-05	1.85E-04	2.89E-04	3.18E-04	3.08E-04	2.82E-04
2	0	80	79	11391.37	2	4237.39	2.3599	0.0400	0.0	0.0	0.0	0.0	7.33E-08	3.48E-07
4	2	32	31	6126.50	1	4237.41	2.3599	0.0400	0.0	8.45E-07	7.32E-05	6.02E-04	1.95E-03	3.99E-03
4	2	69	68	12980.85	1	4237.79	2.3597	0.0400	0.0	0.0	0.0	4.45E-07	7.47E-06	4.57E-05
3	1	9	8	2280.41	1	4238.27	2.3595	0.0550	8.88E-06	1.04E-03	4.17E-03	7.38E-03	9.51E-03	1.05E-02
4	2	33	32	6246.50	1	4238.80	2.3592	0.0400	0.0	6.58E-07	6.28E-05	5.42E-04	1.81E-03	3.77E-03
2	0	26	25	1192.36	2	4239.03	2.3590	0.0400	1.80E-05	1.56E-04	2.61E-04	2.98E-04	2.95E-04	2.74E-04
3	1	92	91	17660.10	1	4239.16	2.3590	0.0400	0.0	0.0	0.0	0.0	6.45E-08	8.35E-07
4	2	68	67	12731.90	1	4239.18	2.3589	0.0400	0.0	0.0	0.0	5.87E-07	9.28E-06	5.46E-05
2	0	79	78	11112.08	2	4239.37	2.3588	0.0400	0.0	0.0	0.0	0.0	9.40E-08	4.26E-07
4	2	34	33	6370.20	1	4240.11	2.3584	0.0400	0.0	5.08E-07	5.34E-05	4.84E-04	1.66E-03	3.54E-03
2	0	4	5	57.67	1	4240.13	2.3584	0.0645	6.39E-02	3.63E-02	2.46E-02	1.79E-02	1.35E-02	1.05E-02
4	2	67	66	12466.39	1	4240.50	2.3582	0.0400	0.0	0.0	0.0	7.71E-07	1.15E-05	6.50E-05
2	0	27	26	1287.55	2	4240.89	2.3580	0.0400	1.19E-05	1.29E-04	2.34E-04	2.77E-04	2.81E-04	2.65E-04
2	0	78	77	10836.05	2	4241.28	2.3578	0.0400	0.0	0.0	0.0	1.20E-08	1.20E-07	5.21E-07
4	2	35	34	6497.59	1	4241.35	2.3577	0.0400	0.0	3.88E-07	4.52E-05	4.31E-04	1.53E-03	3.31E-03
3	1	10	9	2314.69	1	4241.37	2.3577	0.0547	8.42E-06	1.07E-03	4.42E-03	7.92E-03	1.03E-02	1.14E-02
2	0	106	105	20633.65	1	4241.45	2.3577	0.0400	0.0	0.0	0.0	0.0	0.0	3.30E-08
4	2	66	65	12244.32	1	4241.74	2.3575	0.0400	0.0	0.0	1.06E-08	1.01E-06	1.42E-05	7.71E-05
3	1	91	90	17331.98	1	4242.40	2.3572	0.0400	0.0	0.0	0.0	0.0	8.67E-08	1.06E-06
4	2	36	35	6628.66	1	4242.52	2.3571	0.0400	0.0	2.93E-07	3.79E-05	3.81E-04	1.39E-03	3.09E-03
2	0	28	27	1386.36	2	4242.68	2.3570	0.0400	7.75E-06	1.06E-04	2.08E-04	2.57E-04	2.67E-04	2.55E-04
4	2	65	64	12005.71	1	4242.90	2.3569	0.0400	0.0	0.0	1.52E-08	1.31E-06	1.74E-05	9.12E-05
2	0	77	76	10563.28	2	4243.11	2.3568	0.0400	0.0	0.0	0.0	1.63E-08	1.53E-07	6.36E-07
4	2	37	36	6763.42	1	4243.60	2.3565	0.0400	0.0	2.20E-07	3.16E-05	3.36E-04	1.27E-03	2.87E-03
4	2	64	63	11770.57	1	4243.98	2.3563	0.0400	0.0	0.0	2.17E-08	1.70E-06	2.13E-05	1.08E-04
2	0	3	4	38.45	1	4244.26	2.3561	0.0676	5.63E-02	3.06E-02	2.04E-02	1.47E-02	1.11E-02	8.57E-03
3	1	11	10	2352.76	1	4244.40	2.3560	0.0545	7.77E-06	1.08E-03	4.60E-03	8.37E-03	1.10E-02	1.23E-02
2	0	29	28	1488.80	2	4244.40	2.3560	0.0400	4.93E-06	8.67E-05	1.84E-04	2.37E-04	2.52E-04	2.45E-04
4	2	38	37	6901.85	1	4244.61	2.3559	0.0400	0.0	1.63E-07	2.62E-05	2.94E-04	1.15E-03	2.66E-03
2	0	76	75	10292.79	2	4244.87	2.3558	0.0400	0.0	0.0	0.0	2.21E-08	1.94E-07	7.73E-07
4	2	63	62	11538.91	1	4244.98	2.3557	0.0400	0.0	0.0	3.07E-08	2.19E-06	2.60E-05	1.27E-04
4	2	39	38	7043.96	1	4245.55	2.3554	0.0400	0.0	1.20E-07	2.16E-05	2.56E-04	1.03E-03	2.45E-03
3	1	90	89	17007.07	1	4245.56	2.3554	0.0400	0.0	0.0	0.0	0.0	1.16E-07	1.35E-06
2	0	105	104	20258.50	1	4245.84	2.3552	0.0400	0.0	0.0	0.0	0.0	0.0	4.38E-08
4	2	62	61	11310.73	1	4245.90	2.3552	0.0400	0.0	0.0	4.31E-08	2.82E-06	3.16E-05	1.48E-04
2	0	30	29	1594.85	2	4246.06	2.3551	0.0400	3.09E-06	6.99E-05	1.61E-04	2.17E-04	2.36E-04	2.34E-04
4	2	40	39	7189.73	1	4246.41	2.3549	0.0400	0.0	8.71E-08	1.77E-05	2.22E-04	9.29E-04	2.25E-03
2	0	75	74	10027.60	2	4246.55	2.3549	0.0400	0.0	0.0	0.0	2.99E-08	2.46E-07	9.38E-07
4	2	61	60	11066.05	1	4246.74	2.3547	0.0400	0.0	0.0	6.03E-08	3.60E-06	3.83E-05	1.73E-04
4	2	41	40	7339.16	1	4247.20	2.3545	0.0400	0.0	6.28E-08	1.43E-05	1.92E-04	8.30E-04	2.06E-03
3	1	12	11	2394.64	1	4247.36	2.3544	0.0542	6.97E-06	1.08E-03	4.72E-03	8.74E-03	1.16E-02	1.30E-02
4	2	60	59	10864.87	1	4247.50	2.3543	0.0400	0.0	0.0	8.38E-08	4.58E-06	4.63E-05	2.02E-04
2	0	31	30	1704.53	2	4247.64	2.3542	0.0400	1.90E-06	5.59E-05	1.41E-04	1.98E-04	2.22E-04	2.23E-04
4	2	42	41	7492.24	1	4247.90	2.3541	0.0400	0.0	4.49E-08	1.16E-05	1.64E-04	7.39E-04	1.88E-03
2	0	74	73	9764.71	2	4248.15	2.3540	0.0400	0.0	0.0	0.0	4.01E-08	3.10E-07	1.13E-06
4	2	59	58	10647.20	1	4248.19	2.3539	0.0400	0.0	0.0	1.16E-07	5.82E-06	5.57E-05	2.35E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	2	3	23.07	1	4248.31	2.3539	0.0707	4.57E-02	2.39E-02	1.57E-02	1.13E-02	8.47E-03	6.54E-03
4	2	43	42	7648.97	1	4248.54	2.3538	0.0400	0.0	3.18E-08	9.29E-06	1.40E-04	6.55E-04	1.71E-03
3	1	89	88	16685.38	1	4248.63	2.3537	0.0400	0.0	0.0	0.0	0.0	1.56E-07	1.72E-06
4	2	58	57	10433.05	1	4248.79	2.3536	0.0400	0.0	0.0	1.60E-07	7.35E-06	6.69E-05	2.73E-04
4	2	44	43	7809.34	1	4249.09	2.3534	0.0400	0.0	2.23E-08	7.40E-06	1.19E-04	5.79E-04	1.55E-03
2	0	32	31	1817.82	2	4249.16	2.3534	0.0400	1.15E-06	4.43E-05	1.22E-04	1.80E-04	2.07E-04	2.12E-04
4	2	57	56	10222.44	1	4249.32	2.3533	0.0400	0.0	0.0	2.19E-07	9.25E-06	8.00E-05	3.15E-04
4	2	45	44	7973.35	1	4249.57	2.3532	0.0400	0.0	1.55E-08	5.86E-06	1.01E-04	5.09E-04	1.40E-03
2	0	73	72	9505.12	2	4249.68	2.3531	0.0400	0.0	0.0	0.0	5.36E-08	3.90E-07	1.37E-06
4	2	56	55	10015.37	1	4249.77	2.3531	0.0400	0.0	0.0	2.98E-07	1.16E-05	9.54E-05	3.63E-04
4	2	46	45	8140.98	1	4249.98	2.3530	0.0400	0.0	1.06E-08	4.61E-06	8.48E-05	4.46E-04	1.26E-03
2	0	104	103	19866.39	1	4250.14	2.3529	0.0400	0.0	0.0	0.0	0.0	0.0	5.79E-08
4	2	55	54	9811.84	1	4250.14	2.3529	0.0400	0.0	0.0	4.02E-07	1.44E-05	1.13E-04	4.18E-04
3	1	13	12	2440.32	1	4250.25	2.3528	0.0540	6.10E-06	1.05E-03	4.78E-03	9.01E-03	1.21E-02	1.37E-02
4	2	47	46	8312.24	1	4250.30	2.3528	0.0400	0.0	0.0	3.60E-06	7.10E-05	3.89E-04	1.13E-03
4	2	54	53	9611.86	1	4250.43	2.3527	0.0400	0.0	0.0	5.41E-07	1.79E-05	1.34E-04	4.78E-04
4	2	48	47	8487.11	1	4250.55	2.3526	0.0400	0.0	0.0	2.80E-06	5.92E-05	3.38E-04	1.01E-03
2	0	33	32	1934.72	2	4250.60	2.3526	0.0400	6.80E-07	3.48E-05	1.05E-04	1.62E-04	1.92E-04	2.01E-04
4	2	53	52	9415.45	1	4250.64	2.3526	0.0400	0.0	0.0	7.22E-07	2.21E-05	1.58E-04	5.46E-04
4	2	49	48	8665.59	1	4250.73	2.3525	0.0400	0.0	0.0	2.16E-06	4.91E-05	2.92E-04	8.98E-04
4	2	52	51	9222.61	1	4250.78	2.3525	0.0400	0.0	0.0	9.59E-07	2.72E-05	1.85E-04	6.21E-04
4	2	50	49	8847.68	1	4250.82	2.3525	0.0400	0.0	0.0	1.66E-06	4.05E-05	2.52E-04	7.97E-04
4	2	51	50	9033.35	1	4250.84	2.3525	0.0400	0.0	0.0	1.27E-06	3.33E-05	2.16E-04	7.05E-04
2	0	72	71	9248.86	2	4251.13	2.3523	0.0400	0.0	0.0	0.0	7.14E-08	4.88E-07	1.64E-06
3	1	88	87	16366.91	1	4251.62	2.3520	0.0400	0.0	0.0	0.0	0.0	2.08E-07	2.18E-06
2	0	34	33	2058.22	2	4251.98	2.3518	0.0400	3.96E-07	2.70E-05	9.03E-05	1.46E-04	1.77E-04	1.89E-04
2	0	1	2	11.54	1	4252.30	2.3517	0.0738	3.23E-02	1.65E-02	1.07E-02	7.68E-03	5.74E-03	4.42E-03
2	0	71	70	8595.93	2	4252.51	2.3516	0.0400	0.0	0.0	0.0	9.47E-08	6.09E-07	1.97E-06
3	1	14	13	2489.80	1	4253.07	2.3512	0.0528	5.21E-06	1.01E-03	4.79E-03	9.20E-03	1.25E-02	1.43E-02
2	0	35	34	2179.32	2	4253.28	2.3511	0.0400	2.26E-07	2.08E-05	7.67E-05	1.30E-04	1.63E-04	1.77E-04
2	0	70	69	8746.33	2	4253.81	2.3508	0.0400	0.0	0.0	0.0	1.25E-07	7.58E-07	2.35E-06
2	0	103	102	19517.34	1	4254.36	2.3505	0.0400	0.0	0.0	0.0	0.0	0.0	7.65E-08
2	0	36	35	2307.02	2	4254.52	2.3504	0.0400	1.27E-07	1.59E-05	6.48E-05	1.16E-04	1.50E-04	1.66E-04
3	1	87	86	16051.69	1	4254.53	2.3504	0.0400	0.0	0.0	0.0	0.0	2.76E-07	2.76E-06
2	0	69	68	8500.09	2	4255.04	2.3502	0.0400	0.0	0.0	0.0	1.64E-07	9.39E-07	2.81E-06
2	0	37	36	2438.31	2	4255.68	2.3498	0.0400	7.00E-08	1.20E-05	5.44E-05	1.02E-04	1.36E-04	1.55E-04
3	1	15	14	2543.08	1	4255.81	2.3497	0.0517	4.35E-06	9.59E-04	4.74E-03	9.30E-03	1.28E-02	1.47E-02
2	0	68	67	8257.20	2	4256.20	2.3495	0.0400	0.0	0.0	1.12E-08	2.15E-07	1.16E-06	3.33E-06
2	0	0	1	3.85	1	4256.21	2.3495	0.0769	1.69E-02	8.42E-03	5.47E-03	3.89E-03	2.90E-03	2.23E-03
2	0	38	37	2573.18	2	4256.77	2.3492	0.0400	3.79E-08	8.98E-06	4.53E-05	8.99E-05	1.24E-04	1.44E-04
2	0	67	66	8017.69	2	4257.28	2.3489	0.0400	0.0	0.0	1.60E-08	2.80E-07	1.43E-06	3.95E-06
3	1	86	85	15739.73	1	4257.36	2.3489	0.0400	0.0	0.0	0.0	1.13E-08	3.66E-07	3.48E-06
2	0	39	38	2711.64	2	4257.80	2.3486	0.0400	2.02E-08	6.65E-06	3.75E-05	7.87E-05	1.12E-04	1.33E-04
2	0	66	65	7781.55	2	4258.28	2.3484	0.0400	0.0	0.0	2.29E-08	3.64E-07	1.75E-06	4.66E-06
3	1	16	15	2600.15	1	4258.48	2.3483	0.0505	3.55E-06	8.97E-04	4.64E-03	9.32E-03	1.30E-02	1.51E-02
2	0	102	101	19151.35	1	4258.49	2.3483	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-07
2	0	40	39	2857.67	2	4258.75	2.3481	0.0400	1.05E-08	4.89E-06	3.09E-05	6.85E-05	1.01E-04	1.22E-04
2	0	65	64	7548.79	2	4259.21	2.3479	0.0400	0.0	0.0	3.25E-08	4.70E-07	2.14E-06	5.49E-06
2	0	41	40	2999.27	2	4259.63	2.3476	0.0400	0.0	3.56E-06	2.52E-05	5.94E-05	9.08E-05	1.12E-04
2	0	64	63	7319.43	2	4260.07	2.3474	0.0400	0.0	0.0	4.58E-08	6.05E-07	2.61E-06	6.44E-06
3	1	85	84	15431.03	1	4260.10	2.3474	0.0400	0.0	0.0	0.0	1.60E-08	4.83E-07	4.38E-06
2	0	42	41	3148.44	2	4260.44	2.3472	0.0400	0.0	2.57E-06	2.05E-05	5.12E-05	8.11E-05	1.03E-04
2	0	63	62	7097.47	2	4260.85	2.3470	0.0400	0.0	0.0	6.41E-08	7.75E-07	3.16E-06	7.54E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	17	16	2661.01	1	4261.08	2.3468	0.0493	2.83E-06	8.29E-04	4.50E-03	9.26E-03	1.31E-02	1.54E-02
2	0	43	42	3301.17	2	4261.18	2.3468	0.0400	0.0	1.83E-06	1.66E-05	4.40E-05	7.22E-05	9.39E-05
2	0	62	61	6870.93	2	4261.56	2.3466	0.0400	0.0	0.0	8.94E-08	9.88E-07	3.82E-06	8.80E-06
2	0	44	43	3457.45	2	4261.85	2.3464	0.0400	0.0	1.30E-06	1.33E-05	3.75E-05	6.40E-05	8.54E-05
2	0	61	60	6651.80	2	4262.20	2.3462	0.0400	0.0	0.0	1.24E-07	1.25E-06	4.60E-06	1.02E-05
2	0	45	44	3617.28	2	4262.45	2.3461	0.0400	0.0	9.11E-07	1.06E-05	3.19E-05	5.65E-05	7.73E-05
2	0	101	100	18788.44	1	4262.54	2.3460	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-07
2	0	60	59	6436.11	2	4262.76	2.3459	0.0400	0.0	0.0	1.71E-07	1.59E-06	5.52E-06	1.19E-05
3	1	84	83	15125.61	1	4262.77	2.3459	0.0400	0.0	0.0	0.0	2.27E-08	6.36E-07	5.49E-06
2	0	46	45	3780.65	2	4262.98	2.3458	0.0400	0.0	6.33E-07	8.39E-06	2.70E-05	4.97E-05	6.98E-05
2	0	59	58	6223.85	2	4263.25	2.3456	0.0400	0.0	0.0	2.34E-07	2.00E-06	6.62E-06	1.37E-05
2	0	47	46	3947.55	2	4263.43	2.3455	0.0400	0.0	4.36E-07	6.61E-06	2.27E-05	4.36E-05	6.28E-05
3	1	18	17	2725.67	1	4263.61	2.3454	0.0482	2.21E-06	7.56E-04	4.32E-03	9.13E-03	1.31E-02	1.56E-02
2	0	58	57	6015.03	2	4263.66	2.3454	0.0400	0.0	0.0	3.20E-07	2.51E-06	7.91E-06	1.59E-05
2	0	48	47	4117.99	2	4263.81	2.3453	0.0400	0.0	2.98E-07	5.17E-06	1.90E-05	3.80E-05	5.64E-05
2	0	1	0	-0.0	1	4263.83	2.3453	0.0769	1.74E-02	8.60E-03	5.56E-03	3.95E-03	2.95E-03	2.27E-03
2	0	57	56	5809.67	2	4264.01	2.3452	0.0400	0.0	0.0	4.34E-07	3.14E-06	9.41E-06	1.83E-05
2	0	49	48	4291.95	2	4264.12	2.3452	0.0400	0.0	2.02E-07	4.02E-06	1.59E-05	3.31E-05	5.04E-05
2	0	56	55	5607.77	2	4264.27	2.3451	0.0400	0.0	1.02E-08	5.85E-07	3.91E-06	1.12E-05	2.10E-05
2	0	50	49	4469.43	2	4264.36	2.3450	0.0400	0.0	1.35E-07	3.11E-06	1.32E-05	2.86E-05	4.49E-05
2	0	55	54	5409.33	2	4264.47	2.3450	0.0400	0.0	1.61E-08	7.85E-07	4.84E-06	1.32E-05	2.40E-05
2	0	51	50	4650.41	2	4264.53	2.3449	0.0400	0.0	9.00E-08	2.39E-06	1.09E-05	2.47E-05	3.99E-05
2	0	54	53	5214.37	2	4264.59	2.3449	0.0400	0.0	2.51E-08	1.05E-06	5.96E-06	1.55E-05	2.74E-05
2	0	52	51	4834.91	2	4264.62	2.3449	0.0400	0.0	5.93E-08	1.83E-06	8.94E-06	2.12E-05	3.53E-05
2	0	53	52	5022.89	2	4264.64	2.3449	0.0400	0.0	3.87E-08	1.39E-06	7.32E-06	1.82E-05	3.11E-05
3	1	83	82	14823.48	1	4265.35	2.3445	0.0400	0.0	0.0	0.0	3.20E-08	8.35E-07	6.86E-06
3	1	19	18	2794.11	1	4266.07	2.3441	0.0470	1.69E-06	6.81E-04	4.11E-03	8.92E-03	1.30E-02	1.56E-02
2	0	100	99	18428.62	1	4266.50	2.3438	0.0400	0.0	0.0	0.0	0.0	1.19E-08	1.74E-07
2	0	2	1	3.85	1	4267.54	2.3433	0.0738	3.43E-02	1.71E-02	1.11E-02	7.92E-03	5.92E-03	4.55E-03
3	1	82	81	14524.67	1	4267.84	2.3431	0.0400	0.0	0.0	0.0	4.50E-08	1.09E-06	8.56E-06
3	1	20	19	2866.33	1	4268.45	2.3428	0.0458	1.27E-06	6.06E-04	3.88E-03	8.66E-03	1.28E-02	1.56E-02
3	1	81	80	14229.17	1	4270.26	2.3418	0.0400	0.0	0.0	0.0	6.29E-08	1.42E-06	1.06E-05
2	0	99	98	18071.92	1	4270.38	2.3417	0.0400	0.0	0.0	0.0	0.0	1.64E-08	2.27E-07
3	1	21	20	2942.34	1	4270.76	2.3415	0.0447	9.29E-07	5.33E-04	3.62E-03	8.35E-03	1.26E-02	1.55E-02
2	0	3	2	11.54	1	4271.17	2.3413	0.0707	4.99E-02	2.54E-02	1.66E-02	1.19E-02	8.87E-03	6.83E-03
3	1	80	79	13937.00	1	4272.60	2.3405	0.0400	0.0	0.0	0.0	8.77E-08	1.85E-06	1.32E-05
3	1	22	21	3022.13	1	4272.99	2.3403	0.0435	6.67E-07	4.64E-04	3.36E-03	7.99E-03	1.23E-02	1.53E-02
2	0	98	97	17718.34	1	4274.18	2.3396	0.0400	0.0	0.0	0.0	0.0	2.26E-08	2.96E-07
2	0	4	3	23.07	1	4274.74	2.3393	0.0676	6.34E-02	3.32E-02	2.19E-02	1.57E-02	1.18E-02	9.08E-03
3	1	79	78	13648.17	1	4274.85	2.3393	0.0400	0.0	0.0	0.0	1.22E-07	2.39E-06	1.63E-05
3	1	23	22	3105.69	1	4275.16	2.3391	0.0423	4.70E-07	3.99E-04	3.09E-03	7.60E-03	1.19E-02	1.51E-02
3	1	78	77	13362.69	1	4277.02	2.3381	0.0400	0.0	0.0	0.0	1.68E-07	3.09E-06	2.01E-05
3	1	24	23	3193.03	1	4277.24	2.3380	0.0412	3.24E-07	3.40E-04	2.82E-03	7.18E-03	1.15E-02	1.48E-02
2	0	97	96	17367.91	1	4277.89	2.3376	0.0400	0.0	0.0	0.0	0.0	3.11E-08	3.84E-07
2	0	5	4	38.45	1	4278.23	2.3374	0.0645	7.41E-02	4.02E-02	2.68E-02	1.94E-02	1.46E-02	1.13E-02
3	1	77	76	13080.58	1	4279.11	2.3369	0.0400	0.0	0.0	0.0	2.31E-07	3.97E-06	2.47E-05
3	1	25	24	3264.13	1	4279.26	2.3369	0.0400	2.19E-07	2.86E-04	2.55E-03	6.75E-03	1.11E-02	1.44E-02
3	1	76	75	12801.85	1	4281.12	2.3358	0.0400	0.0	0.0	0.0	3.16E-07	5.08E-06	3.03E-05
3	1	26	25	3379.00	1	4281.20	2.3358	0.0400	1.46E-07	2.38E-04	2.29E-03	6.29E-03	1.06E-02	1.39E-02
2	0	96	95	17020.62	1	4281.52	2.3356	0.0400	0.0	0.0	0.0	0.0	4.26E-08	4.98E-07
2	0	6	5	57.67	1	4281.65	2.3355	0.0621	8.16E-02	4.64E-02	3.14E-02	2.29E-02	1.73E-02	1.34E-02
3	1	75	74	12526.50	1	4283.05	2.3348	0.0400	0.0	0.0	0.0	4.32E-07	6.49E-06	3.70E-05
3	1	27	26	3477.63	1	4283.07	2.3348	0.0400	9.47E-08	1.96E-04	2.05E-03	5.84E-03	1.00E-02	1.34E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	28	27	3580.03	1	4284.86	2.3338	0.0400	6.04E-08	1.60E-04	1.81E-03	5.38E-03	9.48E-03	1.29E-02
3	1	74	73	12254.55	1	4284.89	2.3338	0.0400	0.0	0.0	0.0	5.86E-07	8.26E-06	4.50E-05
2	0	7	6	80.74	1	4285.00	2.3337	0.0597	8.58E-02	5.15E-02	3.56E-02	2.61E-02	1.99E-02	1.55E-02
2	0	95	94	16676.52	1	4285.06	2.3337	0.0400	0.0	0.0	0.0	0.0	5.82E-08	6.44E-07
3	1	29	28	3686.17	1	4286.58	2.3329	0.0400	3.78E-08	1.29E-04	1.59E-03	4.94E-03	8.91E-03	1.24E-02
3	1	73	72	11986.02	1	4286.66	2.3328	0.0400	0.0	0.0	0.0	7.92E-07	1.05E-05	5.47E-05
3	1	30	29	3796.07	1	4288.23	2.3320	0.0400	2.32E-08	1.03E-04	1.39E-03	4.50E-03	8.34E-03	1.18E-02
2	0	8	7	107.65	1	4288.28	2.3319	0.0574	8.67E-02	5.56E-02	3.92E-02	2.91E-02	2.23E-02	1.74E-02
3	1	72	71	11720.90	1	4288.34	2.3319	0.0400	0.0	0.0	1.39E-08	1.07E-06	1.32E-05	6.62E-05
2	0	94	93	16335.59	1	4288.52	2.3318	0.0400	0.0	0.0	0.0	0.0	7.93E-08	8.30E-07
3	1	31	30	3909.71	1	4289.80	2.3311	0.0400	1.40E-08	8.18E-05	1.20E-03	4.09E-03	7.78E-03	1.12E-02
3	1	71	70	11459.21	1	4289.95	2.3310	0.0400	0.0	0.0	2.06E-08	1.43E-06	1.66E-05	7.99E-05
3	1	32	31	4027.09	1	4291.30	2.3303	0.0400	0.0	6.42E-05	1.04E-03	3.69E-03	7.23E-03	1.06E-02
3	1	70	69	11200.97	1	4291.47	2.3302	0.0400	0.0	0.0	3.05E-08	1.91E-06	2.09E-05	9.62E-05
2	0	9	8	138.40	1	4291.49	2.3302	0.0550	8.47E-02	5.84E-02	4.22E-02	3.17E-02	2.45E-02	1.92E-02
2	0	93	92	15997.85	1	4291.89	2.3300	0.0400	0.0	0.0	0.0	0.0	1.08E-07	1.07E-06
3	1	33	32	4148.21	1	4292.72	2.3295	0.0400	0.0	4.99E-05	8.88E-04	3.31E-03	6.69E-03	9.98E-03
3	1	69	68	10946.18	1	4292.92	2.3294	0.0400	0.0	0.0	4.49E-08	2.53E-06	2.61E-05	1.15E-04
3	1	34	33	4273.06	1	4294.06	2.3288	0.0400	0.0	3.83E-05	7.55E-04	2.96E-03	6.15E-03	9.37E-03
3	1	68	67	10694.85	1	4294.28	2.3287	0.0400	0.0	0.0	6.56E-08	3.35E-06	3.25E-05	1.38E-04
2	0	10	9	172.99	1	4294.63	2.3285	0.0547	8.02E-02	6.01E-02	4.46E-02	3.40E-02	2.65E-02	2.09E-02
2	0	92	91	15663.33	1	4295.18	2.3282	0.0400	0.0	0.0	0.0	0.0	1.45E-07	1.37E-06
3	1	35	34	4401.64	1	4295.34	2.3281	0.0400	0.0	2.92E-05	6.37E-04	2.63E-03	5.64E-03	8.77E-03
3	1	67	66	10446.99	1	4295.57	2.3280	0.0400	0.0	0.0	9.54E-08	4.41E-06	4.03E-05	1.65E-04
3	1	36	35	4533.94	1	4296.53	2.3275	0.0400	0.0	2.20E-05	5.34E-04	2.33E-03	5.15E-03	8.17E-03
3	1	66	65	10202.62	1	4296.77	2.3273	0.0400	0.0	0.0	1.38E-07	5.78E-06	4.98E-05	1.96E-04
3	1	37	36	4669.95	1	4297.66	2.3268	0.0400	0.0	1.64E-05	4.45E-04	2.04E-03	4.67E-03	7.58E-03
2	0	11	10	211.42	1	4297.70	2.3268	0.0545	7.38E-02	6.07E-02	4.65E-02	3.60E-02	2.82E-02	2.24E-02
3	1	65	64	9961.74	1	4297.90	2.3267	0.0400	0.0	0.0	1.98E-07	7.55E-06	6.14E-05	2.32E-04
2	0	91	90	15332.04	1	4298.39	2.3265	0.0400	0.0	0.0	0.0	0.0	1.96E-07	1.75E-06
3	1	38	37	4809.68	1	4298.70	2.3263	0.0400	0.0	1.22E-05	3.68E-04	1.79E-03	4.23E-03	7.01E-03
3	1	64	63	9724.36	1	4298.94	2.3262	0.0400	0.0	0.0	2.83E-07	9.81E-06	7.53E-05	2.74E-04
3	1	39	38	4953.12	1	4299.67	2.3258	0.0400	0.0	8.91E-06	3.02E-04	1.56E-03	3.81E-03	6.46E-03
3	1	63	62	9490.49	1	4299.91	2.3256	0.0400	0.0	0.0	4.02E-07	1.27E-05	9.21E-05	3.23E-04
3	1	40	39	5100.25	1	4300.57	2.3253	0.0400	0.0	6.46E-06	2.47E-04	1.35E-03	3.41E-03	5.93E-03
2	0	12	11	253.68	1	4300.69	2.3252	0.0542	6.61E-02	6.02E-02	4.77E-02	3.75E-02	2.98E-02	2.38E-02
3	1	62	61	9260.14	1	4300.80	2.3252	0.0400	0.0	0.0	5.67E-07	1.63E-05	1.12E-04	3.79E-04
3	1	41	40	5251.08	1	4301.38	2.3248	0.0400	0.0	4.65E-06	2.00E-04	1.16E-03	3.05E-03	5.42E-03
2	0	90	89	15003.98	1	4301.52	2.3248	0.0400	0.0	0.0	0.0	0.0	2.63E-07	2.23E-06
3	1	61	60	9033.32	1	4301.60	2.3247	0.0400	0.0	0.0	7.95E-07	2.09E-05	1.36E-04	4.44E-04
3	1	42	41	5405.60	1	4302.13	2.3244	0.0400	0.0	3.31E-06	1.61E-04	9.93E-04	2.71E-03	4.94E-03
3	1	60	59	8810.04	1	4302.33	2.3243	0.0400	0.0	0.0	1.11E-06	2.67E-05	1.65E-04	5.18E-04
3	1	43	42	5563.80	1	4302.79	2.3241	0.0400	0.0	2.33E-06	1.29E-04	8.47E-04	2.40E-03	4.49E-03
3	1	59	58	8590.31	1	4302.98	2.3240	0.0400	0.0	0.0	1.54E-06	3.40E-05	1.99E-04	6.03E-04
3	1	44	43	5725.68	1	4303.38	2.3238	0.0400	0.0	1.63E-06	1.02E-04	7.18E-04	2.11E-03	4.06E-03
3	1	58	57	8374.14	1	4303.55	2.3237	0.0400	0.0	0.0	2.13E-06	4.30E-05	2.39E-04	7.01E-04
2	0	13	12	299.78	1	4303.62	2.3236	0.0540	5.78E-02	5.87E-02	4.83E-02	3.87E-02	3.10E-02	2.50E-02
3	1	45	44	5891.22	1	4303.90	2.3235	0.0400	0.0	1.13E-06	8.09E-05	6.06E-04	1.86E-03	3.66E-03
3	1	57	56	8161.53	1	4304.05	2.3234	0.0400	0.0	0.0	2.92E-06	5.42E-05	2.86E-04	8.12E-04
3	1	46	45	6060.43	1	4304.34	2.3232	0.0400	0.0	7.73E-07	6.35E-05	5.09E-04	1.62E-03	3.29E-03
3	1	56	55	7952.49	1	4304.46	2.3232	0.0400	0.0	1.07E-08	3.99E-06	6.81E-05	3.42E-04	9.38E-04
2	0	89	88	14679.17	1	4304.56	2.3231	0.0400	0.0	0.0	0.0	1.40E-08	3.54E-07	2.84E-06
3	1	47	46	6233.30	1	4304.70	2.3230	0.0400	0.0	5.25E-07	4.95E-05	4.25E-04	1.41E-03	2.95E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	1	55	54	7747.04	1	4304.80	2.3230	0.0400	0.0	1.71E-08	5.41E-06	8.50E-05	4.07E-04	1.08E-03
3	1	48	47	6409.82	1	4304.98	2.3229	0.0400	0.0	3.53E-07	3.84E-05	3.54E-04	1.23E-03	2.63E-03
3	1	54	53	7545.17	1	4305.06	2.3228	0.0400	0.0	2.71E-08	7.29E-06	1.06E-04	4.82E-04	1.24E-03
3	1	49	48	6589.98	1	4305.19	2.3228	0.0400	0.0	2.36E-07	2.96E-05	2.93E-04	1.06E-03	2.34E-03
3	1	53	52	7346.91	1	4305.24	2.3228	0.0400	0.0	4.25E-08	9.76E-06	1.31E-04	5.69E-04	1.42E-03
3	1	50	49	6773.78	1	4305.32	2.3227	0.0400	0.0	1.56E-07	2.26E-05	2.41E-04	9.13E-04	2.07E-03
3	1	52	51	7152.25	1	4305.34	2.3227	0.0400	0.0	6.61E-08	1.30E-05	1.61E-04	6.68E-04	1.61E-03
3	1	51	50	6961.20	1	4305.37	2.3227	0.0400	0.0	1.02E-07	1.72E-05	1.98E-04	7.83E-04	1.83E-03
2	0	14	13	349.72	1	4306.47	2.3221	0.0528	4.93E-02	5.64E-02	4.83E-02	3.95E-02	3.20E-02	2.61E-02
2	0	88	87	14357.63	1	4307.52	2.3215	0.0400	0.0	0.0	0.0	2.03E-08	4.73E-07	3.61E-06
2	0	15	14	403.48	1	4309.25	2.3206	0.0517	4.10E-02	5.35E-02	4.77E-02	3.99E-02	3.28E-02	2.69E-02
2	0	87	86	14039.36	1	4310.40	2.3200	0.0400	0.0	0.0	0.0	2.92E-08	6.31E-07	4.58E-06
2	0	16	15	461.08	1	4311.95	2.3191	0.0505	3.34E-02	5.00E-02	4.67E-02	4.00E-02	3.33E-02	2.76E-02
2	0	86	85	13724.39	1	4313.19	2.3185	0.0400	0.0	0.0	0.0	4.18E-08	8.39E-07	5.79E-06
2	0	17	16	522.50	1	4314.59	2.3177	0.0493	2.66E-02	4.61E-02	4.53E-02	3.97E-02	3.35E-02	2.80E-02
2	0	85	84	13412.71	1	4315.90	2.3170	0.0400	0.0	0.0	0.0	5.57E-08	1.11E-06	7.30E-06
2	0	18	17	587.75	1	4317.15	2.3163	0.0482	2.07E-02	4.20E-02	4.34E-02	3.91E-02	3.36E-02	2.84E-02
2	0	84	83	13104.36	1	4318.53	2.3156	0.0400	0.0	0.0	0.0	8.49E-08	1.47E-06	9.17E-06
2	0	19	18	656.82	1	4319.64	2.3150	0.0470	1.58E-02	3.78E-02	4.13E-02	3.82E-02	3.33E-02	2.85E-02
2	0	83	82	12799.33	1	4321.08	2.3142	0.0400	0.0	0.0	0.0	1.20E-07	1.93E-06	1.15E-05
2	0	20	19	729.71	1	4322.06	2.3137	0.0458	1.18E-02	3.36E-02	3.89E-02	3.70E-02	3.29E-02	2.85E-02
2	0	82	81	12497.64	1	4323.54	2.3129	0.0400	0.0	0.0	0.0	1.69E-07	2.53E-06	1.44E-05
2	0	21	20	806.42	1	4324.40	2.3125	0.0447	8.61E-03	2.95E-02	3.63E-02	3.57E-02	3.23E-02	2.83E-02
2	0	81	80	12199.31	1	4325.93	2.3116	0.0400	0.0	0.0	0.0	2.38E-07	3.31E-06	1.79E-05
2	0	22	21	886.95	1	4326.67	2.3112	0.0435	6.16E-03	2.56E-02	3.37E-02	3.41E-02	3.15E-02	2.79E-02
2	0	80	79	11904.34	1	4328.23	2.3104	0.0400	0.0	0.0	0.0	3.32E-07	4.31E-06	2.22E-05
2	0	23	22	971.28	1	4328.87	2.3101	0.0423	4.32E-03	2.20E-02	3.09E-02	3.24E-02	3.05E-02	2.74E-02
2	0	79	78	11612.75	1	4330.45	2.3092	0.0400	0.0	0.0	0.0	4.63E-07	5.59E-06	2.75E-05
2	0	24	23	1059.42	1	4330.99	2.3089	0.0412	2.97E-03	1.87E-02	2.82E-02	3.06E-02	2.94E-02	2.68E-02
2	0	78	77	11324.54	1	4332.59	2.3081	0.0400	0.0	0.0	0.0	6.41E-07	7.23E-06	3.40E-05
2	0	25	24	1151.37	1	4333.04	2.3078	0.0400	2.00E-03	1.57E-02	2.55E-02	2.87E-02	2.82E-02	2.61E-02
2	0	77	76	11039.74	1	4334.64	2.3070	0.0400	0.0	0.0	1.51E-08	8.85E-07	9.32E-06	4.19E-05
2	0	26	25	1247.11	1	4335.02	2.3068	0.0400	1.32E-03	1.30E-02	2.29E-02	2.68E-02	2.69E-02	2.53E-02
2	0	76	75	10758.35	1	4336.62	2.3059	0.0400	0.0	0.0	2.32E-08	1.22E-06	1.20E-05	5.14E-05
2	0	27	26	1346.66	1	4336.92	2.3058	0.0400	8.57E-04	1.07E-02	2.04E-02	2.48E-02	2.56E-02	2.44E-02
2	0	75	74	10480.37	1	4338.51	2.3049	0.0400	0.0	0.0	3.55E-08	1.66E-06	1.53E-05	6.29E-05
2	0	28	27	1449.99	1	4338.75	2.3048	0.0400	5.45E-04	8.73E-03	1.80E-02	2.28E-02	2.41E-02	2.34E-02
2	0	74	73	10205.84	1	4340.33	2.3040	0.0400	0.0	0.0	5.39E-08	2.26E-06	1.95E-05	7.68E-05
2	0	29	28	1557.12	1	4340.50	2.3039	0.0400	3.39E-04	7.03E-03	1.58E-02	2.09E-02	2.27E-02	2.24E-02
2	0	73	72	9934.75	1	4342.06	2.3031	0.0400	0.0	0.0	8.14E-08	3.07E-06	2.48E-05	9.35E-05
2	0	30	29	1668.03	1	4342.18	2.3030	0.0400	2.07E-04	5.60E-03	1.37E-02	1.90E-02	2.12E-02	2.13E-02
2	0	72	71	9667.11	1	4343.71	2.3022	0.0400	0.0	0.0	1.22E-07	4.15E-06	3.14E-05	1.13E-04
2	0	31	30	1782.72	1	4343.79	2.3021	0.0400	1.24E-04	4.43E-03	1.19E-02	1.73E-02	1.98E-02	2.02E-02
2	0	71	70	9402.94	1	4345.28	2.3013	0.0400	0.0	0.0	1.83E-07	5.57E-06	3.97E-05	1.37E-04
2	0	32	31	1901.19	1	4345.32	2.3013	0.0400	7.33E-05	3.47E-03	1.03E-02	1.56E-02	1.84E-02	1.91E-02
2	0	33	32	2023.43	1	4346.77	2.3006	0.0400	4.24E-05	2.69E-03	8.76E-03	1.40E-02	1.70E-02	1.80E-02
2	0	70	69	9142.25	1	4346.78	2.3006	0.0400	0.0	0.0	2.71E-07	7.46E-06	4.98E-05	1.65E-04
2	0	34	33	2149.44	1	4348.15	2.2998	0.0400	2.40E-05	2.06E-03	7.43E-03	1.25E-02	1.56E-02	1.69E-02
2	0	69	68	8885.04	1	4348.19	2.2998	0.0400	0.0	0.0	4.01E-07	9.93E-06	6.24E-05	1.99E-04
2	0	35	34	2279.20	1	4349.46	2.2991	0.0400	1.34E-05	1.56E-03	6.26E-03	1.11E-02	1.43E-02	1.58E-02
2	0	68	67	8631.33	1	4349.52	2.2991	0.0400	0.0	0.0	5.88E-07	1.32E-05	7.79E-05	2.38E-04
2	0	36	35	2412.73	1	4350.69	2.2985	0.0400	7.30E-06	1.18E-03	5.24E-03	9.77E-03	1.30E-02	1.47E-02
2	0	67	66	8381.13	1	4350.77	2.2984	0.0400	0.0	0.0	8.58E-07	1.74E-05	9.69E-05	2.85E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VL	VI	JL	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
2	0	37	36	2550.01	1	4351.85	2.2979	0.0400	3.91E-06	8.76E-04	4.35E-03	8.58E-03	1.18E-02	1.36E-02
2	0	66	65	8134.45	1	4351.94	2.2978	0.0400	0.0	0.0	1.24E-06	2.29E-05	1.20E-04	3.39E-04
2	0	38	37	2691.03	1	4352.93	2.2973	0.0400	2.06E-06	6.46E-04	3.59E-03	7.49E-03	1.07E-02	1.26E-02
2	0	65	64	7891.29	1	4353.03	2.2972	0.0400	0.0	0.0	1.80E-06	2.99E-05	1.48E-04	4.02E-04
2	0	39	38	2835.80	1	4353.93	2.2968	0.0400	1.06E-06	4.72E-04	2.94E-03	6.51E-03	9.59E-03	1.16E-02
2	0	64	63	7651.67	1	4354.04	2.2967	0.0400	0.0	0.0	2.57E-06	3.90E-05	1.82E-04	4.76E-04
2	0	40	39	2984.30	1	4354.86	2.2963	0.0400	5.38E-07	3.41E-04	2.40E-03	5.62E-03	8.58E-03	1.06E-02
2	0	63	62	7415.60	1	4354.98	2.2962	0.0400	0.0	1.51E-08	3.67E-06	5.05E-05	2.23E-04	5.62E-04
2	0	41	40	3136.53	1	4355.71	2.2958	0.0400	2.67E-07	2.44E-04	1.94E-03	4.83E-03	7.65E-03	9.72E-03
2	0	62	61	7183.06	1	4355.83	2.2958	0.0400	0.0	2.58E-08	5.19E-06	6.52E-05	2.72E-04	6.61E-04
2	0	42	41	3292.48	1	4356.49	2.2954	0.0400	1.30E-07	1.73E-04	1.56E-03	4.13E-03	6.80E-03	8.85E-03
2	0	61	60	6954.12	1	4356.61	2.2954	0.0400	0.0	4.35E-08	7.31E-06	8.37E-05	3.31E-04	7.75E-04
2	0	43	42	3452.15	1	4357.19	2.2951	0.0400	6.25E-08	1.22E-04	1.24E-03	3.52E-03	6.01E-03	8.03E-03
2	0	60	59	6728.75	1	4357.30	2.2950	0.0400	0.0	7.30E-08	1.02E-05	1.07E-04	4.01E-04	9.05E-04
2	0	44	43	3615.54	1	4357.81	2.2947	0.0400	2.94E-08	8.48E-05	9.87E-04	2.98E-03	5.29E-03	7.26E-03
2	0	59	58	6506.95	1	4357.92	2.2947	0.0400	0.0	1.21E-07	1.43E-05	1.37E-04	4.85E-04	1.06E-03
2	0	45	44	3782.62	1	4358.36	2.2944	0.0400	1.36E-08	5.85E-05	7.78E-04	2.51E-03	4.64E-03	6.54E-03
2	0	58	57	6288.75	1	4358.46	2.2944	0.0400	0.0	2.00E-07	1.97E-05	1.73E-04	5.85E-04	1.23E-03
2	0	46	45	3957.41	1	4358.87	2.2942	0.0400	0.0	4.00E-05	6.09E-04	2.10E-03	4.05E-03	5.87E-03
2	0	57	56	6074.14	1	4358.92	2.2941	0.0400	0.0	3.27E-07	2.72E-05	2.19E-04	7.02E-04	1.43E-03
2	0	47	46	4127.89	1	4359.23	2.2940	0.0400	0.0	2.70E-05	4.74E-04	1.76E-03	3.53E-03	5.25E-03
2	0	56	55	5863.14	1	4359.30	2.2939	0.0400	0.0	5.30E-07	3.72E-05	2.76E-04	8.40E-04	1.65E-03
2	0	48	47	4306.05	1	4359.54	2.2938	0.0400	0.0	1.81E-05	3.66E-04	1.46E-03	3.05E-03	4.68E-03
2	0	55	54	5655.77	1	4359.60	2.2938	0.0400	0.0	8.52E-07	5.06E-05	3.45E-04	1.00E-03	1.90E-03
2	0	49	48	4487.89	1	4359.78	2.2937	0.0400	0.0	1.20E-05	2.81E-04	1.20E-03	2.64E-03	4.16E-03
2	0	54	53	5452.01	1	4359.83	2.2937	0.0400	0.0	1.35E-06	6.84E-05	4.30E-04	1.19E-03	2.18E-03
2	0	50	49	4673.40	1	4359.95	2.2936	0.0400	0.0	7.92E-06	2.15E-04	9.89E-04	2.26E-03	3.68E-03
2	0	53	52	5251.89	1	4359.97	2.2936	0.0400	0.0	2.14E-06	9.20E-05	5.34E-04	1.40E-03	2.50E-03
2	0	51	50	4862.58	1	4360.03	2.2936	0.0400	0.0	5.17E-06	1.63E-04	8.09E-04	1.94E-03	3.25E-03
2	0	52	51	5050.41	1	4360.04	2.2936	0.0400	0.0	3.34E-06	1.23E-04	6.59E-04	1.65E-03	2.85E-03

Table 6—Second overtone band of CO, T = 300-1800°K. The total number of lines included is 3558. For temperatures less than 1800°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-10} The line intensities correspond to an absorption coefficient per unit length per unit pressure at NTP conditions.

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MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
13	10	68	69	28546.96	1	5088.50	1.9652	0.0400	0.0	0.0	0.0	0.0	0.0	2.75E-11
12	9	75	76	28460.70	1	5088.69	1.9651	0.0400	0.0	0.0	0.0	0.0	0.0	2.32E-11
14	11	60	61	28586.38	1	5092.93	1.9635	0.0400	0.0	0.0	0.0	0.0	0.0	3.22E-11
11	8	81	82	28255.82	1	5095.64	1.9625	0.0400	0.0	0.0	0.0	0.0	0.0	2.06E-11
13	10	67	68	28313.86	1	5098.76	1.9613	0.0400	0.0	0.0	0.0	0.0	0.0	3.28E-11
10	7	87	88	28169.73	1	5099.03	1.9612	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-11
12	9	74	75	28203.20	1	5099.64	1.9609	0.0400	0.0	0.0	0.0	0.0	0.0	2.83E-11
14	11	59	60	28380.87	1	5102.40	1.9599	0.0400	0.0	0.0	0.0	0.0	0.0	3.74E-11
11	8	80	81	27977.05	1	5107.19	1.9580	0.0400	0.0	0.0	0.0	0.0	0.0	2.55E-11
13	10	66	67	28083.91	1	5108.92	1.9574	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-11
12	9	73	74	27948.82	1	5110.50	1.9568	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-11
10	7	86	87	27869.71	1	5111.16	1.9565	0.0400	0.0	0.0	0.0	0.0	0.0	2.11E-11
14	11	58	59	28178.56	1	5111.77	1.9563	0.0400	0.0	0.0	0.0	0.0	0.0	4.35E-11
11	8	79	80	27701.36	1	5118.65	1.9536	0.0400	0.0	0.0	0.0	0.0	0.0	3.16E-11
13	10	65	66	27857.12	1	5119.00	1.9535	0.0400	0.0	0.0	0.0	0.0	0.0	4.61E-11
14	11	57	58	27979.44	1	5121.04	1.9527	0.0400	0.0	0.0	0.0	0.0	0.0	5.05E-11
12	9	72	73	27697.55	1	5121.27	1.9526	0.0400	0.0	0.0	0.0	0.0	0.0	4.16E-11
10	7	85	86	27572.73	1	5123.21	1.9519	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-11
9	6	91	92	27563.95	1	5124.23	1.9515	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-11
13	10	64	65	27633.50	1	5128.97	1.9497	0.0400	0.0	0.0	0.0	0.0	0.0	5.45E-11
11	8	78	79	27428.76	1	5130.01	1.9493	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-11
14	11	56	57	27783.53	1	5130.22	1.9492	0.0400	0.0	0.0	0.0	0.0	0.0	5.84E-11
12	9	71	72	27449.42	1	5131.95	1.9486	0.0400	0.0	0.0	0.0	0.0	0.0	5.02E-11
8	5	96	97	27339.41	1	5134.85	1.9475	0.0400	0.0	0.0	0.0	0.0	0.0	1.41E-11
10	7	84	85	27278.79	1	5135.16	1.9474	0.0400	0.0	0.0	0.0	0.0	0.0	3.34E-11
9	6	90	91	27248.71	1	5136.77	1.9467	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-11
13	10	63	64	27413.06	1	5138.86	1.9460	0.0400	0.0	0.0	0.0	0.0	0.0	6.43E-11
14	11	55	56	27590.84	1	5139.30	1.9458	0.0400	0.0	0.0	0.0	0.0	0.0	6.74E-11
11	8	77	78	27159.25	1	5141.28	1.9450	0.0400	0.0	0.0	0.0	0.0	0.0	4.79E-11
12	9	70	71	27204.43	1	5142.53	1.9446	0.0400	0.0	0.0	0.0	0.0	0.0	6.04E-11
10	7	83	84	26987.90	1	5147.03	1.9429	0.0400	0.0	0.0	0.0	0.0	0.0	4.18E-11
8	5	95	96	27005.92	1	5147.88	1.9425	0.0400	0.0	0.0	0.0	0.0	0.0	1.83E-11
14	11	54	55	27401.37	1	5148.29	1.9424	0.0400	0.0	0.0	0.0	0.0	0.0	7.76E-11
13	10	62	63	27195.80	1	5148.64	1.9423	0.0400	0.0	0.0	0.0	0.0	0.0	7.55E-11
9	6	89	90	26936.49	1	5149.22	1.9420	0.0400	0.0	0.0	0.0	0.0	0.0	2.88E-11
11	8	76	77	26892.85	1	5152.46	1.9408	0.0400	0.0	0.0	0.0	0.0	0.0	5.88E-11
12	9	69	70	26962.59	1	5153.01	1.9406	0.0400	0.0	0.0	0.0	0.0	0.0	7.26E-11
7	4	100	101	26845.17	1	5156.57	1.9393	0.0400	0.0	0.0	0.0	0.0	0.0	1.28E-11
14	11	53	54	27215.13	1	5157.18	1.9390	0.0400	0.0	0.0	0.0	0.0	0.0	8.90E-11
13	10	61	62	26981.75	1	5158.34	1.9386	0.0400	0.0	0.0	0.0	0.0	0.0	8.85E-11
10	7	82	83	26700.09	1	5158.80	1.9384	0.0400	0.0	0.0	0.0	0.0	0.0	5.22E-11
8	5	94	95	26675.41	1	5160.82	1.9377	0.0400	0.0	0.0	0.0	0.0	0.0	2.36E-11
9	6	88	89	26627.30	1	5161.57	1.9374	0.0400	0.0	0.0	0.0	0.0	0.0	3.66E-11
12	9	68	69	26723.91	1	5163.41	1.9367	0.0400	0.0	0.0	0.0	0.0	0.0	8.69E-11
11	8	75	76	26629.57	1	5163.54	1.9367	0.0400	0.0	0.0	0.0	0.0	0.0	7.19E-11
14	11	52	53	27032.14	1	5165.97	1.9357	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-10
13	10	60	61	26770.90	1	5167.93	1.9350	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-10
7	4	99	100	26496.37	1	5169.99	1.9342	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-11
10	7	81	82	26415.37	1	5170.48	1.9341	0.0400	0.0	0.0	0.0	0.0	0.0	6.51E-11
8	5	93	94	26347.89	1	5173.67	1.9329	0.0400	0.0	0.0	0.0	0.0	0.0	3.03E-11
12	9	67	68	26488.41	1	5173.70	1.9329	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-10
9	6	87	88	26321.15	1	5173.84	1.9328	0.0400	0.0	0.0	0.0	0.0	0.0	4.65E-11
11	8	74	75	26369.43	1	5174.54	1.9325	0.0400	0.0	0.0	0.0	0.0	0.0	8.77E-11

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
14	11	51	52	26852.39	1	5174.66	1.9325	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-10
13	10	59	60	26563.26	1	5177.44	1.9315	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-10
10	7	80	81	26133.74	1	5182.06	1.9297	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-11
14	11	50	51	26675.90	1	5183.26	1.9293	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-10
7	4	98	99	26150.54	1	5183.33	1.9293	0.0400	0.0	0.0	0.0	0.0	0.0	2.20E-11
12	9	66	67	26256.09	1	5183.91	1.9290	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-10
11	8	73	74	26112.42	1	5185.43	1.9285	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-10
9	6	86	87	26018.06	1	5186.02	1.9283	0.0400	0.0	0.0	0.0	0.0	0.0	5.88E-11
8	5	92	93	26023.39	1	5186.43	1.9281	0.0400	0.0	0.0	0.0	0.0	0.0	3.89E-11
13	10	58	59	26358.85	1	5186.84	1.9280	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-10
6	3	103	104	26035.98	1	5190.57	1.9266	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-11
14	11	49	50	26502.68	1	5191.77	1.9261	0.0400	0.0	0.0	0.0	0.0	0.0	1.49E-10
10	7	79	80	25855.22	1	5193.56	1.9255	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-10
12	9	65	66	26026.96	1	5194.02	1.9253	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-10
13	10	57	58	26157.68	1	5196.15	1.9245	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-10
11	8	72	73	25858.57	1	5196.24	1.9245	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-10
7	4	97	98	25807.67	1	5196.58	1.9243	0.0400	0.0	0.0	0.0	0.0	0.0	2.87E-11
9	6	85	86	25718.04	1	5198.10	1.9238	0.0400	0.0	0.0	0.0	0.0	0.0	7.43E-11
8	5	91	92	25701.90	1	5199.10	1.9234	0.0400	0.0	0.0	0.0	0.0	0.0	4.98E-11
14	11	48	49	26332.73	1	5200.17	1.9230	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-10
12	9	64	65	25801.04	1	5204.03	1.9216	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-10
6	3	102	103	25674.78	1	5204.30	1.9215	0.0400	0.0	0.0	0.0	0.0	0.0	1.79E-11
10	7	78	79	25579.82	1	5204.96	1.9212	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-10
13	10	56	57	25959.75	1	5205.37	1.9211	0.0400	0.0	0.0	0.0	0.0	0.0	1.89E-10
11	8	71	72	25607.89	1	5206.95	1.9205	0.0400	0.0	0.0	0.0	0.0	0.0	1.57E-10
14	11	47	48	26166.05	1	5208.48	1.9199	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-10
7	4	96	97	25467.79	1	5209.74	1.9195	0.0400	0.0	0.0	0.0	0.0	0.0	3.73E-11
9	6	84	85	25421.09	1	5210.09	1.9194	0.0400	0.0	0.0	0.0	0.0	0.0	9.35E-11
8	5	90	91	25383.46	1	5211.67	1.9188	0.0400	0.0	0.0	0.0	0.0	0.0	6.36E-11
12	9	63	64	25578.32	1	5213.95	1.9179	0.0400	0.0	0.0	0.0	0.0	0.0	2.05E-10
13	10	55	56	25765.06	1	5214.49	1.9177	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-10
10	7	77	78	25307.56	1	5216.27	1.9171	0.0400	0.0	0.0	0.0	0.0	0.0	1.53E-10
14	11	46	47	26002.67	1	5216.69	1.9169	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-10
11	8	70	71	25360.39	1	5217.57	1.9166	0.0400	0.0	0.0	0.0	0.0	0.0	1.89E-10
6	3	101	102	25316.52	1	5217.95	1.9165	0.0400	0.0	0.0	0.0	0.0	0.0	2.37E-11
9	6	83	84	25127.25	1	5221.99	1.9150	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-10
7	4	95	96	25130.91	1	5222.80	1.9147	0.0400	0.0	0.0	0.0	0.0	0.0	4.83E-11
13	10	54	55	25573.64	1	5223.51	1.9144	0.0400	0.0	0.0	0.0	0.0	0.0	2.52E-10
5	2	106	107	25248.79	1	5223.75	1.9143	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-11
12	9	62	63	25358.84	1	5223.78	1.9143	0.0400	0.0	0.0	0.0	0.0	0.0	2.41E-10
8	5	89	90	25068.06	1	5224.16	1.9142	0.0400	0.0	0.0	0.0	0.0	0.0	8.10E-11
14	11	45	46	25842.57	1	5224.80	1.9139	0.0400	0.0	0.0	0.0	0.0	0.0	2.39E-10
10	7	76	77	25038.44	1	5227.48	1.9130	0.0400	0.0	0.0	0.0	0.0	0.0	1.88E-10
11	8	69	70	25116.07	1	5228.09	1.9127	0.0400	0.0	0.0	0.0	0.0	0.0	2.27E-10
6	3	100	101	24961.22	1	5231.50	1.9115	0.0400	0.0	0.0	0.0	0.0	0.0	3.12E-11
13	10	53	54	25385.48	1	5232.44	1.9112	0.0400	0.0	0.0	0.0	0.0	0.0	2.90E-10
14	11	44	45	25685.79	1	5232.82	1.9110	0.0400	0.0	0.0	0.0	0.0	0.0	2.67E-10
12	9	61	62	25142.58	1	5233.51	1.9108	0.0400	0.0	0.0	0.0	0.0	0.0	2.83E-10
9	6	82	83	24836.50	1	5233.80	1.9107	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-10
7	4	94	95	24797.05	1	5235.78	1.9099	0.0400	0.0	0.0	0.0	0.0	0.0	6.25E-11
8	5	88	89	24755.73	1	5236.56	1.9097	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-10
5	2	105	106	24875.10	1	5237.79	1.9092	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-11
11	8	68	69	24874.95	1	5238.52	1.9089	0.0400	0.0	0.0	0.0	0.0	0.0	2.73E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	75	76	24772.47	1	5238.61	1.9089	0.0400	0.0	0.0	0.0	0.0	0.0	2.30E-10
14	11	43	44	25532.30	1	5240.74	1.9081	0.0400	0.0	0.0	0.0	0.0	0.0	2.97E-10
13	10	52	53	25200.61	1	5241.26	1.9079	0.0400	0.0	0.0	0.0	0.0	0.0	3.32E-10
12	9	60	61	24929.57	1	5243.14	1.9073	0.0400	0.0	0.0	0.0	0.0	0.0	3.32E-10
6	3	99	100	24608.89	1	5244.97	1.9066	0.0400	0.0	0.0	0.0	0.0	0.0	4.10E-11
9	6	81	82	24548.88	1	5245.52	1.9064	0.0400	0.0	0.0	0.0	0.0	0.0	1.84E-10
14	11	42	43	25382.13	1	5248.56	1.9053	0.0400	0.0	0.0	0.0	0.0	0.0	3.29E-10
7	4	93	94	24466.21	1	5248.67	1.9052	0.0400	0.0	0.0	0.0	0.0	0.0	8.07E-11
8	5	87	88	24446.47	1	5248.86	1.9052	0.0400	0.0	0.0	0.0	0.0	0.0	1.31E-10
11	8	67	68	24637.04	1	5248.86	1.9052	0.0400	0.0	0.0	0.0	0.0	0.0	3.27E-10
10	7	74	75	24509.67	1	5249.63	1.9049	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-10
13	10	51	52	25019.01	1	5250.00	1.9048	0.0400	0.0	0.0	0.0	0.0	0.0	3.79E-10
5	2	104	105	24504.34	1	5251.74	1.9041	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-11
12	9	59	60	24719.80	1	5252.68	1.9038	0.0400	0.0	0.0	0.0	0.0	0.0	3.87E-10
10	7	65	66	21654.64	2	5254.79	1.9030	0.0400	0.0	0.0	0.0	0.0	0.0	2.63E-11
4	1	109	110	24484.04	1	5256.11	1.9025	0.0400	0.0	0.0	0.0	0.0	0.0	8.66E-12
14	11	41	42	25235.28	1	5256.28	1.9025	0.0400	0.0	0.0	0.0	0.0	0.0	3.64E-10
9	6	80	81	24264.39	1	5257.14	1.9022	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-10
9	6	72	73	21432.71	2	5257.84	1.9019	0.0400	0.0	0.0	0.0	0.0	0.0	2.15E-11
6	3	98	99	24259.57	1	5258.34	1.9017	0.0400	0.0	0.0	0.0	0.0	0.0	5.37E-11
13	10	50	51	24840.71	1	5258.63	1.9016	0.0400	0.0	0.0	0.0	0.0	0.0	4.32E-10
11	8	66	67	24402.34	1	5259.10	1.9015	0.0400	0.0	0.0	0.0	0.0	0.0	3.90E-10
10	7	73	74	24250.05	1	5260.57	1.9009	0.0400	0.0	0.0	0.0	0.0	0.0	3.44E-10
8	5	86	87	24140.31	1	5261.08	1.9008	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-10
7	4	92	93	24138.43	1	5261.47	1.9006	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-10
12	9	58	59	24513.30	1	5262.12	1.9004	0.0400	0.0	0.0	0.0	0.0	0.0	4.53E-10
14	11	40	41	25091.76	1	5263.90	1.8997	0.0400	0.0	0.0	0.0	0.0	0.0	4.00E-10
10	7	64	65	21433.60	2	5264.31	1.8996	0.0400	0.0	0.0	0.0	0.0	0.0	3.11E-11
5	2	103	104	24136.54	1	5265.60	1.8991	0.0400	0.0	0.0	0.0	0.0	0.0	2.91E-11
8	5	78	79	21102.53	2	5267.11	1.8986	0.0400	0.0	0.0	0.0	0.0	0.0	1.87E-11
13	10	49	50	24665.70	1	5267.17	1.8986	0.0400	0.0	0.0	0.0	0.0	0.0	4.90E-10
9	6	71	72	21187.44	2	5268.01	1.8983	0.0400	0.0	0.0	0.0	0.0	0.0	2.59E-11
9	6	79	80	23983.04	1	5268.67	1.8980	0.0400	0.0	0.0	0.0	0.0	0.0	2.85E-10
11	8	65	66	24170.88	1	5269.25	1.8978	0.0400	0.0	0.0	0.0	0.0	0.0	4.64E-10
4	1	108	109	24097.80	1	5270.46	1.8974	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-11
10	7	72	73	23993.62	1	5271.41	1.8970	0.0400	0.0	0.0	0.0	0.0	0.0	4.18E-10
14	11	39	40	24951.57	1	5271.42	1.8970	0.0400	0.0	0.0	0.0	0.0	0.0	4.40E-10
12	9	57	58	24310.07	1	5271.47	1.8970	0.0400	0.0	0.0	0.0	0.0	0.0	5.27E-10
6	3	97	98	23913.24	1	5271.63	1.8969	0.0400	0.0	0.0	0.0	0.0	0.0	7.03E-11
8	5	85	86	23837.25	1	5273.20	1.8964	0.0400	0.0	0.0	0.0	0.0	0.0	2.11E-10
10	7	63	64	21215.71	2	5273.74	1.8962	0.0400	0.0	0.0	0.0	0.0	0.0	3.66E-11
7	4	91	92	23813.70	1	5274.17	1.8960	0.0400	0.0	0.0	0.0	0.0	0.0	1.33E-10
13	10	48	49	24494.01	1	5275.61	1.8955	0.0400	0.0	0.0	0.0	0.0	0.0	5.54E-10
8	5	77	78	20836.14	2	5277.84	1.8947	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-11
9	6	70	71	20945.30	2	5278.10	1.8946	0.0400	0.0	0.0	0.0	0.0	0.0	3.11E-11
14	11	38	39	24814.72	1	5278.85	1.8944	0.0400	0.0	0.0	0.0	0.0	0.0	4.81E-10
11	8	64	65	23942.65	1	5279.30	1.8942	0.0400	0.0	0.0	0.0	0.0	0.0	5.50E-10
5	2	102	103	23771.70	1	5279.37	1.8942	0.0400	0.0	0.0	0.0	0.0	0.0	3.87E-11
9	6	78	79	23704.85	1	5280.11	1.8939	0.0400	0.0	0.0	0.0	0.0	0.0	3.53E-10
12	9	56	57	24110.11	1	5280.72	1.8937	0.0400	0.0	0.0	0.0	0.0	0.0	6.12E-10
10	7	71	72	23740.39	1	5282.16	1.8932	0.0400	0.0	0.0	0.0	0.0	0.0	5.07E-10
10	7	62	63	21001.00	2	5283.08	1.8928	0.0400	0.0	0.0	0.0	0.0	0.0	4.29E-11
13	10	47	48	24325.62	1	5283.96	1.8925	0.0400	0.0	0.0	0.0	0.0	0.0	6.25E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	83	84	20602.01	2	5284.30	1.8924	0.0400	0.0	0.0	0.0	0.0	0.0	1.71E-11
4	1	107	108	23714.48	1	5284.71	1.8923	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-11
6	3	96	97	23569.94	1	5284.83	1.8922	0.0400	0.0	0.0	0.0	0.0	0.0	9.16E-11
8	5	84	85	23537.30	1	5285.23	1.8921	0.0400	0.0	0.0	0.0	0.0	0.0	2.67E-10
14	11	37	38	24681.22	1	5286.18	1.8917	0.0400	0.0	0.0	0.0	0.0	0.0	5.25E-10
7	4	90	91	23492.04	1	5286.79	1.8915	0.0400	0.0	0.0	0.0	0.0	0.0	1.71E-10
9	6	69	70	20706.29	2	5288.10	1.8910	0.0400	0.0	0.0	0.0	0.0	0.0	3.73E-11
8	5	76	77	20572.85	2	5288.49	1.8909	0.0400	0.0	0.0	0.0	0.0	0.0	2.81E-11
11	8	63	64	23717.67	1	5289.26	1.8906	0.0400	0.0	0.0	0.0	0.0	0.0	6.51E-10
12	9	55	56	23913.44	1	5289.88	1.8904	0.0400	0.0	0.0	0.0	0.0	0.0	7.09E-10
9	6	77	78	23429.83	1	5291.46	1.8898	0.0400	0.0	0.0	0.0	0.0	0.0	4.36E-10
13	10	46	47	24160.56	1	5292.21	1.8896	0.0400	0.0	0.0	0.0	0.0	0.0	7.03E-10
10	7	61	62	20789.45	2	5292.34	1.8895	0.0400	0.0	0.0	0.0	0.0	0.0	5.02E-11
10	7	70	71	23490.38	1	5292.82	1.8894	0.0400	0.0	0.0	0.0	0.0	0.0	6.13E-10
5	2	101	102	23409.84	1	5293.05	1.8893	0.0400	0.0	0.0	0.0	0.0	0.0	5.12E-11
14	11	36	37	24551.07	1	5293.40	1.8891	0.0400	0.0	0.0	0.0	0.0	0.0	5.70E-10
7	4	82	83	20317.56	2	5295.51	1.8884	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-11
8	5	83	84	23240.48	1	5297.17	1.8878	0.0400	0.0	0.0	0.0	0.0	0.0	3.36E-10
6	3	95	96	23229.68	1	5297.93	1.8875	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-10
9	6	68	69	20470.42	2	5298.00	1.8875	0.0400	0.0	0.0	0.0	0.0	0.0	4.46E-11
4	1	106	107	23334.10	1	5298.87	1.8872	0.0400	0.0	0.0	0.0	0.0	0.0	2.12E-11
12	9	54	55	23720.06	1	5298.94	1.8872	0.0400	0.0	0.0	0.0	0.0	0.0	8.19E-10
8	5	75	76	20312.67	2	5299.05	1.8871	0.0400	0.0	0.0	0.0	0.0	0.0	3.43E-11
11	8	62	63	23495.95	1	5299.12	1.8871	0.0400	0.0	0.0	0.0	0.0	0.0	7.68E-10
7	4	89	90	23173.46	1	5299.31	1.8870	0.0400	0.0	0.0	0.0	0.0	0.0	2.18E-10
13	10	45	46	23998.83	1	5300.36	1.8867	0.0400	0.0	0.0	0.0	0.0	0.0	7.89E-10
14	11	35	36	24424.27	1	5300.53	1.8866	0.0400	0.0	0.0	0.0	0.0	0.0	6.18E-10
10	7	60	61	20581.09	2	5301.50	1.8863	0.0400	0.0	0.0	0.0	0.0	0.0	5.85E-11
9	6	76	77	23157.98	1	5302.71	1.8858	0.0400	0.0	0.0	0.0	0.0	0.0	5.37E-10
10	7	69	70	23243.58	1	5303.38	1.8856	0.0400	0.0	0.0	0.0	0.0	0.0	7.39E-10
7	4	81	82	20036.19	2	5306.62	1.8844	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-11
5	2	100	101	23050.98	1	5306.65	1.8844	0.0400	0.0	0.0	0.0	0.0	0.0	6.77E-11
14	11	34	35	24300.84	1	5307.56	1.8841	0.0400	0.0	0.0	0.0	0.0	0.0	6.67E-10
9	6	67	68	20237.70	2	5307.82	1.8840	0.0400	0.0	0.0	0.0	0.0	0.0	5.32E-11
12	9	53	54	23529.98	1	5307.90	1.8840	0.0400	0.0	0.0	0.0	0.0	0.0	9.42E-10
13	10	44	45	23840.43	1	5308.41	1.8838	0.0400	0.0	0.0	0.0	0.0	0.0	8.81E-10
11	8	61	62	23277.50	1	5308.88	1.8836	0.0400	0.0	0.0	0.0	0.0	0.0	9.03E-10
8	5	82	83	22946.81	1	5309.01	1.8836	0.0400	0.0	0.0	0.0	0.0	0.0	4.22E-10
8	5	74	75	20055.60	2	5309.52	1.8834	0.0400	0.0	0.0	0.0	0.0	0.0	4.17E-11
10	7	59	60	20375.92	2	5310.57	1.8830	0.0400	0.0	0.0	0.0	0.0	0.0	6.81E-11
6	3	87	88	19878.00	2	5310.85	1.8829	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-11
6	3	94	95	22892.46	1	5310.95	1.8829	0.0400	0.0	0.0	0.0	0.0	0.0	1.55E-10
7	4	88	89	22857.99	1	5311.75	1.8826	0.0400	0.0	0.0	0.0	0.0	0.0	2.79E-10
4	1	105	106	22956.67	1	5312.95	1.8822	0.0400	0.0	0.0	0.0	0.0	0.0	2.85E-11
10	7	68	69	23000.01	1	5313.85	1.8819	0.0400	0.0	0.0	0.0	0.0	0.0	8.89E-10
9	6	75	76	22889.33	1	5313.87	1.8819	0.0400	0.0	0.0	0.0	0.0	0.0	6.60E-10
14	11	33	34	24180.77	1	5314.49	1.8816	0.0400	0.0	0.0	0.0	0.0	0.0	7.17E-10
13	10	43	44	23685.38	1	5316.36	1.8810	0.0400	0.0	0.0	0.0	0.0	0.0	9.82E-10
12	9	52	53	23343.22	1	5316.77	1.8808	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-09
9	6	66	67	20008.15	2	5317.56	1.8806	0.0400	0.0	0.0	0.0	0.0	0.0	6.33E-11
7	4	80	81	19757.90	2	5317.65	1.8805	0.0400	0.0	0.0	0.0	0.0	0.0	3.30E-11
11	8	60	61	23062.32	1	5318.56	1.8802	0.0400	0.0	0.0	0.0	0.0	0.0	1.06E-09
10	7	58	59	20173.95	2	5319.56	1.8799	0.0400	0.0	0.0	0.0	0.0	0.0	7.93E-11

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	73	74	19801.66	2	5319.90	1.8797	0.0400	0.0	0.0	0.0	0.0	0.0	5.07E-11
5	2	99	100	22695.13	1	5320.15	1.8796	0.0400	0.0	0.0	0.0	0.0	0.0	8.92E-11
8	5	81	82	22656.29	1	5320.77	1.8794	0.0400	0.0	0.0	0.0	0.0	0.0	5.28E-10
14	11	32	33	24064.08	1	5321.32	1.8792	0.0400	0.0	0.0	0.0	0.0	0.0	7.68E-10
6	3	86	87	19578.50	2	5322.43	1.8788	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-11
6	3	93	94	22558.31	1	5323.87	1.8783	0.0400	0.0	0.0	0.0	0.0	0.0	2.00E-10
7	4	87	88	22545.62	1	5324.09	1.8783	0.0400	0.0	0.0	0.0	0.0	0.0	3.56E-10
13	10	42	43	23533.68	1	5324.22	1.8782	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-09
10	7	67	68	22759.69	1	5324.22	1.8782	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-09
9	6	74	75	22623.88	1	5324.94	1.8780	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-10
12	9	51	52	23159.78	1	5325.54	1.8777	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-09
4	1	104	105	22582.21	1	5326.93	1.8773	0.0400	0.0	0.0	0.0	0.0	0.0	3.82E-11
9	6	65	66	19781.77	2	5327.20	1.8772	0.0400	0.0	0.0	0.0	0.0	0.0	7.50E-11
14	11	31	32	23950.76	1	5328.05	1.8769	0.0400	0.0	0.0	0.0	0.0	0.0	8.20E-10
11	8	59	60	22850.43	1	5328.13	1.8768	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-09
10	7	57	58	19975.19	2	5328.45	1.8767	0.0400	0.0	0.0	0.0	0.0	0.0	9.21E-11
7	4	79	80	19482.71	2	5328.59	1.8767	0.0400	0.0	0.0	0.0	0.0	0.0	4.08E-11
8	5	72	73	19550.86	2	5330.20	1.8761	0.0400	0.0	0.0	0.0	0.0	0.0	6.14E-11
3	0	109	110	22554.35	1	5331.32	1.8757	0.0400	0.0	0.0	0.0	0.0	0.0	9.50E-12
13	10	41	42	23385.33	1	5331.97	1.8755	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-09
8	5	80	81	22368.93	1	5332.43	1.8753	0.0400	0.0	0.0	0.0	0.0	0.0	6.60E-10
5	2	98	99	22342.30	1	5333.56	1.8749	0.0400	0.0	0.0	0.0	0.0	0.0	1.17E-10
6	3	85	86	19282.05	2	5333.92	1.8748	0.0400	0.0	0.0	0.0	0.0	0.0	2.70E-11
12	9	50	51	22979.66	1	5334.21	1.8747	0.0400	0.0	0.0	0.0	0.0	0.0	1.41E-09
10	7	66	67	22522.63	1	5334.50	1.8746	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-09
14	11	30	31	23840.83	1	5334.69	1.8745	0.0400	0.0	0.0	0.0	0.0	0.0	8.72E-10
9	6	73	74	22361.64	1	5335.91	1.8741	0.0400	0.0	0.0	0.0	0.0	0.0	9.89E-10
5	2	91	92	19200.73	2	5335.92	1.8741	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-11
7	4	86	87	22236.39	1	5336.34	1.8739	0.0400	0.0	0.0	0.0	0.0	0.0	4.53E-10
6	3	92	93	22227.24	1	5336.71	1.8738	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-10
9	6	64	65	19558.57	2	5336.75	1.8738	0.0400	0.0	0.0	0.0	0.0	0.0	8.87E-11
10	7	56	57	19779.64	2	5337.25	1.8736	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-10
11	8	58	59	22641.83	1	5337.61	1.8735	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-09
7	4	78	79	19210.62	2	5339.44	1.8729	0.0400	0.0	0.0	0.0	0.0	0.0	5.03E-11
13	10	40	41	23240.34	1	5339.63	1.8728	0.0400	0.0	0.0	0.0	0.0	0.0	1.33E-09
8	5	71	72	19303.21	2	5340.40	1.8725	0.0400	0.0	0.0	0.0	0.0	0.0	7.42E-11
4	1	103	104	22210.73	1	5340.83	1.8724	0.0400	0.0	0.0	0.0	0.0	0.0	5.10E-11
14	11	29	30	23734.29	1	5341.22	1.8722	0.0400	0.0	0.0	0.0	0.0	0.0	9.25E-10
12	9	49	50	22802.87	1	5342.79	1.8717	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-09
8	5	79	80	22084.76	1	5344.00	1.8713	0.0400	0.0	0.0	0.0	0.0	0.0	8.22E-10
10	7	65	66	22288.82	1	5344.68	1.8710	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-09
6	3	84	85	18988.68	2	5345.33	1.8708	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-11
3	0	108	109	22164.27	1	5345.70	1.8707	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-11
10	7	55	56	19587.32	2	5345.97	1.8706	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-10
9	6	63	64	19338.57	2	5346.22	1.8705	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-10
9	6	72	73	22102.62	1	5346.79	1.8703	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-09
5	2	97	98	21992.52	1	5346.89	1.8702	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-10
11	8	57	58	22436.54	1	5347.00	1.8702	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-09
13	10	39	40	23098.72	1	5347.19	1.8701	0.0400	0.0	0.0	0.0	0.0	0.0	1.46E-09
14	11	28	29	23631.13	1	5347.65	1.8700	0.0400	0.0	0.0	0.0	0.0	0.0	9.80E-10
5	2	90	91	18886.10	2	5347.88	1.8699	0.0400	0.0	0.0	0.0	0.0	0.0	1.81E-11
7	4	85	86	21930.29	1	5348.50	1.8697	0.0400	0.0	0.0	0.0	0.0	0.0	5.75E-10
6	3	91	92	21899.26	1	5349.45	1.8694	0.0400	0.0	0.0	0.0	0.0	0.0	3.33E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	77	78	18941.66	2	5350.21	1.8691	0.0400	0.0	0.0	0.0	0.0	0.0	6.19E-11
8	5	70	71	19058.71	2	5350.52	1.8690	0.0400	0.0	0.0	0.0	0.0	0.0	8.93E-11
12	9	48	49	22629.43	1	5351.26	1.8687	0.0400	0.0	0.0	0.0	0.0	0.0	1.82E-09
14	11	27	28	23531.37	1	5353.98	1.8678	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-09
10	7	54	55	19398.23	2	5354.59	1.8676	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-10
4	1	102	103	21842.26	1	5354.64	1.8675	0.0400	0.0	0.0	0.0	0.0	0.0	6.80E-11
13	10	38	39	22960.48	1	5354.66	1.8675	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-09
10	7	64	65	22058.29	1	5354.77	1.8675	0.0400	0.0	0.0	0.0	0.0	0.0	1.81E-09
8	5	78	79	21803.77	1	5355.47	1.8672	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-09
9	6	62	63	19121.76	2	5355.59	1.8672	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-10
11	8	56	57	22234.55	1	5356.29	1.8670	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-09
6	3	83	84	18698.40	2	5356.65	1.8668	0.0400	0.0	0.0	0.0	0.0	0.0	4.25E-11
9	6	71	72	21846.84	1	5357.58	1.8665	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-09
12	9	47	48	22459.34	1	5359.65	1.8658	0.0400	0.0	0.0	0.0	0.0	0.0	2.05E-09
5	2	89	90	18574.52	2	5359.76	1.8658	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-11
3	0	107	108	21777.14	1	5359.99	1.8657	0.0400	0.0	0.0	0.0	0.0	0.0	1.74E-11
5	2	96	97	21645.80	1	5360.12	1.8656	0.0400	0.0	0.0	0.0	0.0	0.0	2.01E-10
14	11	26	27	23435.02	1	5360.21	1.8656	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-09
8	5	69	70	18817.38	2	5360.55	1.8655	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-10
7	4	84	85	21627.34	1	5360.57	1.8655	0.0400	0.0	0.0	0.0	0.0	0.0	7.28E-10
7	4	76	77	18675.82	2	5360.89	1.8654	0.0400	0.0	0.0	0.0	0.0	0.0	7.59E-11
13	10	37	38	22825.61	1	5362.02	1.8650	0.0400	0.0	0.0	0.0	0.0	0.0	1.75E-09
6	3	90	91	21574.38	1	5362.11	1.8649	0.0400	0.0	0.0	0.0	0.0	0.0	4.27E-10
10	7	53	54	19212.38	2	5363.12	1.8646	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-10
10	7	63	64	21831.04	1	5364.77	1.8640	0.0400	0.0	0.0	0.0	0.0	0.0	2.14E-09
9	6	61	62	18908.16	2	5364.88	1.8640	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-10
11	8	55	56	22035.89	1	5365.48	1.8638	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-09
14	11	25	26	23342.06	1	5366.34	1.8635	0.0400	0.0	0.0	0.0	0.0	0.0	1.14E-09
8	5	77	78	21525.99	1	5366.86	1.8633	0.0400	0.0	0.0	0.0	0.0	0.0	1.27E-09
6	3	82	83	18411.21	2	5367.89	1.8629	0.0400	0.0	0.0	0.0	0.0	0.0	5.31E-11
12	9	46	47	22292.60	1	5367.93	1.8629	0.0400	0.0	0.0	0.0	0.0	0.0	2.31E-09
9	6	70	71	21594.31	1	5368.27	1.8628	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-09
4	1	101	102	21476.80	1	5368.36	1.8628	0.0400	0.0	0.0	0.0	0.0	0.0	9.03E-11
13	10	36	37	22694.13	1	5369.28	1.8624	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-09
8	5	68	69	18579.22	2	5370.50	1.8620	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-10
7	4	75	76	18413.12	2	5371.49	1.8617	0.0400	0.0	0.0	0.0	0.0	0.0	9.29E-11
5	2	88	89	18265.99	2	5371.54	1.8617	0.0400	0.0	0.0	0.0	0.0	0.0	2.92E-11
10	7	52	53	19029.77	2	5371.57	1.8617	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-10
4	1	94	95	18241.11	2	5371.88	1.8615	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-11
14	11	24	25	23252.52	1	5372.37	1.8614	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-09
7	4	83	84	21327.55	1	5372.54	1.8613	0.0400	0.0	0.0	0.0	0.0	0.0	9.19E-10
5	2	95	96	21302.14	1	5373.27	1.8611	0.0400	0.0	0.0	0.0	0.0	0.0	2.62E-10
9	6	60	61	18697.77	2	5374.08	1.8608	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-10
3	0	106	107	21392.98	1	5374.20	1.8607	0.0400	0.0	0.0	0.0	0.0	0.0	2.35E-11
11	8	54	55	21840.56	1	5374.57	1.8606	0.0400	0.0	0.0	0.0	0.0	1.04E-10	2.64E-09
10	7	62	63	21607.08	1	5374.66	1.8606	0.0400	0.0	0.0	0.0	0.0	1.03E-10	2.53E-09
6	3	89	90	21252.63	1	5374.67	1.8606	0.0400	0.0	0.0	0.0	0.0	0.0	5.47E-10
12	9	45	46	22129.23	1	5376.11	1.8601	0.0400	0.0	0.0	0.0	0.0	0.0	2.60E-09
13	10	35	36	22566.05	1	5376.45	1.8600	0.0400	0.0	0.0	0.0	0.0	0.0	2.06E-09
8	5	76	77	21251.42	1	5378.15	1.8594	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-09
14	11	23	24	23166.39	1	5378.29	1.8593	0.0412	0.0	0.0	0.0	0.0	0.0	1.23E-09
9	6	69	70	21345.04	1	5378.87	1.8591	0.0400	0.0	0.0	0.0	0.0	0.0	2.15E-09
6	3	81	82	18127.12	2	5379.04	1.8591	0.0400	0.0	0.0	0.0	0.0	0.0	6.62E-11

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	51	52	18850.42	2	5379.92	1.8588	0.0400	0.0	0.0	0.0	0.0	0.0	2.12E-10
8	5	67	68	18344.26	2	5380.35	1.8586	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-10
4	1	100	101	21114.38	1	5381.99	1.8580	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-10
7	4	74	75	18153.57	2	5381.99	1.8580	0.0400	0.0	0.0	0.0	0.0	0.0	1.13E-10
9	6	59	60	18490.61	2	5383.18	1.8576	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-10
5	2	87	88	17960.53	2	5383.25	1.8576	0.0400	0.0	0.0	0.0	0.0	0.0	3.71E-11
13	10	34	35	22441.36	1	5383.51	1.8575	0.0400	0.0	0.0	0.0	0.0	0.0	2.23E-09
11	8	53	54	21648.56	1	5383.57	1.8575	0.0400	0.0	0.0	0.0	0.0	1.23E-10	3.05E-09
14	11	22	23	23083.67	1	5384.12	1.8573	0.0423	0.0	0.0	0.0	0.0	0.0	1.27E-09
4	1	93	94	17914.32	2	5384.13	1.8573	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-11
12	9	44	45	21969.23	1	5384.20	1.8573	0.0400	0.0	0.0	0.0	0.0	1.12E-10	2.91E-09
7	4	82	83	21030.94	1	5384.43	1.8572	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-09
10	7	61	62	21386.43	1	5384.47	1.8572	0.0400	0.0	0.0	0.0	0.0	1.26E-10	2.98E-09
5	2	94	95	20961.57	1	5386.32	1.8566	0.0400	0.0	0.0	0.0	0.0	0.0	3.42E-10
6	3	88	89	20934.01	1	5387.14	1.8563	0.0400	0.0	0.0	0.0	0.0	0.0	7.02E-10
10	7	50	51	18674.34	2	5388.18	1.8559	0.0400	0.0	0.0	0.0	0.0	0.0	2.41E-10
3	0	105	106	21011.81	1	5388.31	1.8559	0.0400	0.0	0.0	0.0	0.0	0.0	3.17E-11
8	5	75	76	20980.08	1	5389.35	1.8555	0.0400	0.0	0.0	0.0	0.0	0.0	1.93E-09
9	6	68	69	21099.03	1	5389.38	1.8555	0.0400	0.0	0.0	0.0	0.0	1.14E-10	2.59E-09
14	11	21	22	23004.38	1	5389.85	1.8553	0.0435	0.0	0.0	0.0	0.0	0.0	1.31E-09
6	3	80	81	17846.16	2	5390.10	1.8553	0.0400	0.0	0.0	0.0	0.0	0.0	8.23E-11
8	5	66	67	18112.48	2	5390.12	1.8552	0.0400	0.0	0.0	0.0	0.0	0.0	1.83E-10
13	10	33	34	22320.07	1	5390.48	1.8551	0.0400	0.0	0.0	0.0	0.0	0.0	2.40E-09
12	9	43	44	21812.60	1	5392.19	1.8545	0.0400	0.0	0.0	0.0	0.0	1.28E-10	3.24E-09
9	6	58	59	18286.68	2	5392.20	1.8545	0.0400	0.0	0.0	0.0	0.0	0.0	2.29E-10
7	4	73	74	17897.18	2	5392.41	1.8545	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-10
11	8	52	53	21459.91	1	5392.48	1.8544	0.0400	0.0	0.0	0.0	0.0	1.46E-10	3.50E-09
10	7	60	61	21169.09	1	5394.18	1.8538	0.0400	0.0	0.0	0.0	0.0	1.53E-10	3.51E-09
5	2	86	87	17658.15	2	5394.86	1.8536	0.0400	0.0	0.0	0.0	0.0	0.0	4.70E-11
14	11	20	21	22928.51	1	5395.47	1.8534	0.0447	0.0	0.0	0.0	0.0	0.0	1.34E-09
4	1	99	100	20755.00	1	5395.54	1.8534	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-10
7	4	81	82	20737.52	1	5396.22	1.8531	0.0400	0.0	0.0	0.0	0.0	0.0	1.45E-09
4	1	92	93	17590.57	2	5396.30	1.8531	0.0400	0.0	0.0	0.0	0.0	0.0	1.95E-11
10	7	49	50	18501.51	2	5396.35	1.8531	0.0400	0.0	0.0	0.0	0.0	0.0	2.74E-10
13	10	32	33	22202.19	1	5397.35	1.8528	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-09
5	2	93	94	20624.10	1	5399.28	1.8521	0.0400	0.0	0.0	0.0	0.0	0.0	4.43E-10
6	3	87	88	20618.54	1	5399.52	1.8520	0.0400	0.0	0.0	0.0	0.0	0.0	8.98E-10
9	6	67	68	20856.30	1	5399.79	1.8519	0.0400	0.0	0.0	0.0	0.0	1.43E-10	3.11E-09
8	5	65	66	17883.92	2	5399.80	1.8519	0.0400	0.0	0.0	0.0	0.0	0.0	2.17E-10
12	9	42	43	21659.36	1	5400.09	1.8518	0.0400	0.0	0.0	0.0	0.0	1.46E-10	3.61E-09
8	5	74	75	20711.97	1	5400.45	1.8517	0.0400	0.0	0.0	0.0	0.0	1.11E-10	2.37E-09
14	11	19	20	22856.06	1	5400.99	1.8515	0.0458	0.0	0.0	0.0	0.0	0.0	1.36E-09
6	3	79	80	17568.32	2	5401.08	1.8515	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-10
9	6	57	58	18085.99	2	5401.13	1.8515	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-10
11	8	51	52	21274.62	1	5401.28	1.8514	0.0400	0.0	0.0	0.0	0.0	1.73E-10	4.02E-09
3	0	104	105	20633.65	1	5402.34	1.8510	0.0400	0.0	0.0	0.0	0.0	0.0	4.26E-11
7	4	72	73	17643.96	2	5402.74	1.8509	0.0400	0.0	0.0	0.0	0.0	0.0	1.68E-10
10	7	59	60	20955.06	1	5403.79	1.8506	0.0400	0.0	0.0	0.0	0.0	1.86E-10	4.11E-09
13	10	31	32	22087.72	1	5404.11	1.8504	0.0400	0.0	0.0	0.0	0.0	1.04E-10	2.75E-09
10	7	48	49	18331.96	2	5404.43	1.8503	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-10
5	2	85	86	17358.87	2	5406.39	1.8497	0.0400	0.0	0.0	0.0	0.0	0.0	5.93E-11
14	11	18	19	22787.05	1	5406.41	1.8497	0.0470	0.0	0.0	0.0	0.0	0.0	1.38E-09
12	9	41	42	21509.51	1	5407.88	1.8492	0.0400	0.0	0.0	0.0	0.0	1.65E-10	4.00E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	80	81	20447.30	1	5407.92	1.8491	0.0400	0.0	0.0	0.0	0.0	0.0	1.82E-09
4	1	91	92	17269.87	2	5408.37	1.8490	0.0400	0.0	0.0	0.0	0.0	0.0	2.50E-11
4	1	98	99	20398.68	1	5408.99	1.8488	0.0400	0.0	0.0	0.0	0.0	0.0	2.09E-10
8	5	64	65	17658.56	2	5409.38	1.8486	0.0400	0.0	0.0	0.0	0.0	0.0	2.57E-10
9	6	56	57	17888.55	2	5409.97	1.8484	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-10
11	8	50	51	21092.69	1	5409.99	1.8484	0.0400	0.0	0.0	0.0	0.0	2.03E-10	4.59E-09
9	6	66	67	20616.86	1	5410.10	1.8484	0.0400	0.0	0.0	0.0	0.0	1.78E-10	3.73E-09
13	10	30	31	21976.67	1	5410.78	1.8482	0.0400	0.0	0.0	0.0	0.0	1.13E-10	2.93E-09
8	5	73	74	20447.11	1	5411.46	1.8479	0.0400	0.0	0.0	0.0	0.0	1.42E-10	2.90E-09
14	11	17	18	22721.46	1	5411.73	1.8478	0.0482	0.0	0.0	0.0	0.0	0.0	1.39E-09
6	3	86	87	20306.23	1	5411.81	1.8478	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-09
6	3	78	79	17293.62	2	5411.97	1.8478	0.0400	0.0	0.0	0.0	0.0	0.0	1.26E-10
5	2	92	93	20289.75	1	5412.16	1.8477	0.0400	0.0	0.0	0.0	0.0	0.0	5.74E-10
10	7	47	48	18165.70	2	5412.42	1.8476	0.0400	0.0	0.0	0.0	0.0	0.0	3.49E-10
7	4	71	72	17393.93	2	5412.98	1.8474	0.0400	0.0	0.0	0.0	0.0	0.0	2.03E-10
10	7	58	59	20744.37	1	5413.31	1.8473	0.0400	0.0	0.0	0.0	0.0	2.25E-10	4.82E-09
12	9	40	41	21363.06	1	5415.58	1.8465	0.0400	0.0	0.0	0.0	0.0	1.87E-10	4.41E-09
3	0	103	104	20258.50	1	5416.27	1.8463	0.0400	0.0	0.0	0.0	0.0	0.0	5.71E-11
14	11	16	17	22659.31	1	5416.95	1.8461	0.0493	0.0	0.0	0.0	0.0	0.0	1.39E-09
13	10	29	30	21869.04	1	5417.35	1.8459	0.0400	0.0	0.0	0.0	0.0	1.22E-10	3.11E-09
5	2	84	85	17062.69	2	5417.84	1.8458	0.0400	0.0	0.0	0.0	0.0	0.0	7.47E-11
11	8	49	50	20914.12	1	5418.60	1.8455	0.0400	0.0	0.0	0.0	0.0	2.38E-10	5.22E-09
9	6	55	56	17694.37	2	5418.72	1.8455	0.0400	0.0	0.0	0.0	0.0	0.0	3.57E-10
8	5	63	64	17436.43	2	5418.88	1.8454	0.0400	0.0	0.0	0.0	0.0	0.0	3.04E-10
7	4	79	80	20160.30	1	5419.53	1.8452	0.0400	0.0	0.0	0.0	0.0	1.17E-10	2.27E-09
10	7	46	47	18002.73	2	5420.31	1.8449	0.0400	0.0	0.0	0.0	0.0	0.0	3.92E-10
9	6	65	66	20380.71	1	5420.32	1.8449	0.0400	0.0	0.0	0.0	0.0	2.21E-10	4.45E-09
4	1	90	91	16952.23	2	5420.37	1.8449	0.0400	0.0	0.0	0.0	0.0	0.0	3.19E-11
14	11	15	16	22600.61	1	5422.07	1.8443	0.0505	0.0	0.0	0.0	0.0	0.0	1.38E-09
4	1	97	98	20045.44	1	5422.35	1.8442	0.0400	0.0	0.0	0.0	0.0	0.0	2.75E-10
8	5	72	73	20185.51	1	5422.38	1.8442	0.0400	0.0	0.0	0.0	0.0	1.81E-10	3.54E-09
10	7	57	58	20537.02	1	5422.73	1.8441	0.0400	0.0	0.0	0.0	0.0	2.73E-10	5.64E-09
6	3	77	78	17022.07	2	5422.77	1.8441	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-10
7	4	70	71	17147.08	2	5423.14	1.8440	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-10
12	9	39	40	21220.01	1	5423.17	1.8439	0.0400	0.0	0.0	0.0	0.0	2.11E-10	4.86E-09
13	10	28	29	21764.84	1	5423.82	1.8437	0.0400	0.0	0.0	0.0	0.0	1.31E-10	3.30E-09
6	3	85	86	19997.09	1	5424.01	1.8437	0.0400	0.0	0.0	0.0	0.0	0.0	1.46E-09
5	2	91	92	19958.52	1	5424.94	1.8433	0.0400	0.0	0.0	0.0	0.0	0.0	7.41E-10
14	11	14	15	22545.34	1	5427.08	1.8426	0.0517	0.0	0.0	0.0	0.0	0.0	1.36E-09
11	8	48	49	20738.93	1	5427.12	1.8426	0.0400	0.0	0.0	0.0	0.0	2.78E-10	5.93E-09
9	6	54	55	17503.45	2	5427.37	1.8425	0.0400	0.0	0.0	0.0	0.0	0.0	4.12E-10
10	7	45	46	17843.04	2	5428.12	1.8423	0.0400	0.0	0.0	0.0	0.0	0.0	4.39E-10
8	5	62	63	17217.54	2	5428.29	1.8422	0.0400	0.0	0.0	0.0	0.0	0.0	3.58E-10
5	2	83	84	16769.63	2	5429.20	1.8419	0.0400	0.0	0.0	0.0	0.0	0.0	9.39E-11
3	0	102	103	19886.39	1	5430.12	1.8416	0.0400	0.0	0.0	0.0	0.0	0.0	7.63E-11
13	10	27	28	21664.07	1	5430.18	1.8416	0.0400	0.0	0.0	0.0	0.0	1.41E-10	3.49E-09
9	6	64	65	20147.87	1	5430.45	1.8415	0.0400	0.0	0.0	0.0	0.0	2.73E-10	5.31E-09
12	9	38	39	21080.37	1	5430.67	1.8414	0.0400	0.0	0.0	0.0	0.0	2.36E-10	5.33E-09
7	4	78	79	19876.52	1	5431.04	1.8413	0.0400	0.0	0.0	0.0	0.0	1.52E-10	2.83E-09
14	11	13	14	22493.51	1	5431.99	1.8409	0.0528	0.0	0.0	0.0	0.0	0.0	1.34E-09
10	7	56	57	20333.01	1	5432.05	1.8409	0.0400	0.0	0.0	0.0	0.0	3.28E-10	6.57E-09
4	1	89	90	16637.68	2	5432.28	1.8408	0.0400	0.0	0.0	0.0	0.0	0.0	4.07E-11
7	4	69	70	16903.43	2	5433.20	1.8405	0.0400	0.0	0.0	0.0	0.0	0.0	2.95E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF. WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	71	72	19927.18	1	5433.20	1.8405	0.0400	0.0	0.0	0.0	0.0	2.30E-10	4.32E-09
6	3	76	77	16753.69	2	5433.49	1.8404	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-10
11	8	47	48	20567.13	1	5435.54	1.8397	0.0400	0.0	0.0	0.0	0.0	3.23E-10	6.71E-09
4	1	96	97	19695.29	1	5435.62	1.8397	0.0400	0.0	0.0	0.0	0.0	0.0	3.60E-10
10	7	44	45	17686.66	2	5435.83	1.8396	0.0400	0.0	0.0	0.0	0.0	0.0	4.90E-10
9	6	53	54	17315.80	2	5435.94	1.8396	0.0400	0.0	0.0	0.0	0.0	0.0	4.73E-10
6	3	84	85	19691.13	1	5436.11	1.8396	0.0400	0.0	0.0	0.0	0.0	1.02E-10	1.85E-09
13	10	26	27	21566.74	1	5436.45	1.8394	0.0400	0.0	0.0	0.0	0.0	1.50E-10	3.67E-09
14	11	12	13	22445.13	1	5436.80	1.8393	0.0540	0.0	0.0	0.0	0.0	0.0	1.30E-09
8	5	61	62	17001.87	2	5437.62	1.8390	0.0400	0.0	0.0	0.0	0.0	0.0	4.20E-10
5	2	90	91	19630.43	1	5437.63	1.8390	0.0400	0.0	0.0	0.0	0.0	0.0	9.54E-10
12	9	37	38	20944.14	1	5438.07	1.8389	0.0400	0.0	0.0	0.0	0.0	2.64E-10	5.83E-09
5	2	82	83	16479.69	2	5440.47	1.8381	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-10
9	6	63	64	19918.36	1	5440.48	1.8381	0.0400	0.0	0.0	0.0	0.0	3.36E-10	6.30E-09
10	7	55	56	20132.36	1	5441.28	1.8378	0.0400	0.0	0.0	0.0	0.0	3.94E-10	7.64E-09
14	11	11	12	22400.19	1	5441.50	1.8377	0.0542	0.0	0.0	0.0	0.0	0.0	1.25E-09
7	4	77	78	19595.97	1	5442.46	1.8374	0.0400	0.0	0.0	0.0	0.0	1.98E-10	3.51E-09
13	10	25	26	21472.84	1	5442.61	1.8374	0.0400	0.0	0.0	0.0	0.0	1.60E-10	3.84E-09
7	4	68	69	16662.99	2	5443.18	1.8372	0.0400	0.0	0.0	0.0	0.0	0.0	3.54E-10
10	7	43	44	17533.59	2	5443.45	1.8371	0.0400	0.0	0.0	0.0	0.0	0.0	5.45E-10
11	8	46	47	20398.72	1	5443.86	1.8369	0.0400	0.0	0.0	0.0	0.0	3.74E-10	7.57E-09
3	0	101	102	19517.34	1	5443.88	1.8369	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-10
8	5	70	71	19672.14	1	5443.93	1.8369	0.0400	0.0	0.0	0.0	0.0	2.91E-10	5.24E-09
4	1	88	89	16326.21	2	5444.10	1.8369	0.0400	0.0	0.0	0.0	0.0	0.0	5.19E-11
6	3	75	76	16488.47	2	5444.12	1.8368	0.0400	0.0	0.0	0.0	0.0	0.0	2.35E-10
3	0	94	95	16294.18	2	5444.42	1.8367	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-11
9	6	52	53	17131.43	2	5444.42	1.8367	0.0400	0.0	0.0	0.0	0.0	0.0	5.43E-10
12	9	36	37	20811.34	1	5445.37	1.8364	0.0400	0.0	0.0	0.0	0.0	2.94E-10	6.35E-09
14	11	10	11	22358.71	1	5446.10	1.8362	0.0545	0.0	0.0	0.0	0.0	0.0	1.20E-09
8	5	60	61	16789.46	2	5446.85	1.8359	0.0400	0.0	0.0	0.0	0.0	0.0	4.92E-10
6	3	83	84	19388.37	1	5448.13	1.8355	0.0400	0.0	0.0	0.0	0.0	1.36E-10	2.34E-09
13	10	24	25	21382.39	1	5448.68	1.8353	0.0400	0.0	0.0	0.0	0.0	1.69E-10	4.01E-09
4	1	95	96	19348.24	1	5448.81	1.8353	0.0400	0.0	0.0	0.0	0.0	0.0	4.71E-10
5	2	89	90	19305.50	1	5450.23	1.8348	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-09
9	6	62	63	19692.16	1	5450.42	1.8347	0.0400	0.0	0.0	0.0	0.0	4.13E-10	7.47E-09
10	7	54	55	19935.07	1	5450.42	1.8347	0.0400	0.0	0.0	0.0	0.0	4.71E-10	8.85E-09
14	11	9	10	22320.67	1	5450.60	1.8347	0.0547	0.0	0.0	0.0	0.0	0.0	1.13E-09
10	7	42	43	17383.83	2	5450.98	1.8345	0.0400	0.0	0.0	0.0	0.0	0.0	6.04E-10
5	2	81	82	16192.90	2	5451.65	1.8343	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-10
11	8	45	46	20233.70	1	5452.08	1.8342	0.0400	0.0	0.0	0.0	0.0	4.32E-10	8.51E-09
12	9	35	36	20681.96	1	5452.57	1.8340	0.0400	0.0	0.0	0.0	0.0	3.26E-10	6.89E-09
9	6	51	52	16950.35	2	5452.81	1.8339	0.0400	0.0	0.0	0.0	0.0	0.0	6.20E-10
7	4	67	68	16425.77	2	5453.07	1.8338	0.0400	0.0	0.0	0.0	0.0	0.0	4.23E-10
7	4	76	77	19318.68	1	5453.79	1.8336	0.0400	0.0	0.0	0.0	0.0	2.56E-10	4.35E-09
8	5	69	70	19420.38	1	5454.57	1.8333	0.0400	0.0	0.0	0.0	0.0	3.67E-10	6.35E-09
13	10	23	24	21295.39	1	5454.64	1.8333	0.0412	0.0	0.0	0.0	0.0	1.78E-10	4.16E-09
6	3	74	75	16226.44	2	5454.66	1.8333	0.0400	0.0	0.0	0.0	0.0	0.0	2.87E-10
14	11	8	9	22286.09	1	5455.00	1.8332	0.0550	0.0	0.0	0.0	0.0	0.0	1.06E-09
4	1	87	88	16017.84	2	5455.84	1.8329	0.0400	0.0	0.0	0.0	0.0	0.0	6.61E-11
8	5	59	60	16580.31	2	5455.99	1.8328	0.0400	0.0	0.0	0.0	0.0	0.0	5.75E-10
3	0	93	94	15964.29	2	5456.70	1.8326	0.0400	0.0	0.0	0.0	0.0	0.0	1.70E-11
3	0	100	101	19151.35	1	5457.55	1.8323	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-10
10	7	41	42	17237.39	2	5458.42	1.8320	0.0400	0.0	0.0	0.0	0.0	0.0	6.68E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE.

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
14	11	7	8	22254.96	1	5459.29	1.8317	0.0574	0.0	0.0	0.0	0.0	0.0	9.69E-10
10	7	53	54	19741.15	1	5459.45	1.8317	0.0400	0.0	0.0	0.0	0.0	5.61E-10	1.02E-08
12	9	34	35	20556.01	1	5459.67	1.8316	0.0400	0.0	0.0	0.0	0.0	3.59E-10	7.46E-09
6	3	82	83	19088.83	1	5460.05	1.8315	0.0400	0.0	0.0	0.0	0.0	1.80E-10	2.96E-09
11	8	44	45	20072.09	1	5460.21	1.8314	0.0400	0.0	0.0	0.0	0.0	4.97E-10	9.54E-09
9	6	61	62	19469.31	1	5460.26	1.8314	0.0400	0.0	0.0	0.0	0.0	5.06E-10	8.82E-09
13	10	22	23	21211.84	1	5460.50	1.8313	0.0423	0.0	0.0	0.0	0.0	1.87E-10	4.30E-09
9	6	50	51	16772.57	2	5461.10	1.8311	0.0400	0.0	0.0	0.0	0.0	0.0	7.06E-10
4	1	94	95	19004.32	1	5461.90	1.8309	0.0400	0.0	0.0	0.0	0.0	0.0	6.15E-10
5	2	88	89	18983.73	1	5462.74	1.8306	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-09
5	2	80	81	15909.25	2	5462.75	1.8306	0.0400	0.0	0.0	0.0	0.0	0.0	1.83E-10
7	4	66	67	16191.77	2	5462.87	1.8305	0.0400	0.0	0.0	0.0	0.0	0.0	5.05E-10
14	11	6	7	22227.29	1	5463.48	1.8303	0.0597	0.0	0.0	0.0	0.0	0.0	8.74E-10
7	4	75	76	19044.64	1	5465.03	1.8298	0.0400	0.0	0.0	0.0	0.0	3.30E-10	5.38E-09
8	5	58	59	16374.42	2	5465.04	1.8298	0.0400	0.0	0.0	0.0	0.0	0.0	6.72E-10
8	5	68	69	19171.93	1	5465.11	1.8298	0.0400	0.0	0.0	0.0	0.0	4.61E-10	7.67E-09
6	3	73	74	15967.60	2	5465.11	1.8298	0.0400	0.0	0.0	0.0	0.0	0.0	3.50E-10
10	7	40	41	17094.27	2	5465.77	1.8296	0.0400	0.0	0.0	0.0	0.0	0.0	7.36E-10
13	10	21	22	21131.74	1	5466.26	1.8294	0.0435	0.0	0.0	0.0	0.0	1.95E-10	4.43E-09
12	9	33	34	20433.50	1	5466.68	1.8293	0.0400	0.0	0.0	0.0	0.0	3.95E-10	8.04E-09
4	1	86	87	15712.59	2	5467.49	1.8290	0.0400	0.0	0.0	0.0	0.0	0.0	8.40E-11
14	11	5	6	22203.07	1	5467.56	1.8290	0.0621	0.0	0.0	0.0	0.0	0.0	7.69E-10
11	8	43	44	19913.90	1	5468.23	1.8287	0.0400	0.0	0.0	0.0	0.0	5.69E-10	1.07E-08
10	7	52	53	19550.62	1	5468.39	1.8287	0.0400	0.0	0.0	0.0	0.0	6.66E-10	1.18E-08
3	0	92	93	15637.47	2	5468.90	1.8285	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-11
9	6	49	50	16598.08	2	5469.30	1.8284	0.0400	0.0	0.0	0.0	0.0	0.0	8.02E-10
9	6	60	61	19249.80	1	5470.00	1.8282	0.0400	0.0	0.0	0.0	0.0	6.17E-10	1.04E-08
3	0	99	100	18788.44	1	5471.13	1.8278	0.0400	0.0	0.0	0.0	0.0	0.0	1.79E-10
14	11	4	5	22182.32	1	5471.55	1.8276	0.0645	0.0	0.0	0.0	0.0	0.0	6.57E-10
6	3	81	82	18792.51	1	5471.88	1.8275	0.0400	0.0	0.0	0.0	0.0	2.38E-10	3.72E-09
13	10	20	21	21055.10	1	5471.92	1.8275	0.0447	0.0	0.0	0.0	0.0	2.02E-10	4.53E-09
7	4	65	66	15961.02	2	5472.58	1.8273	0.0400	0.0	0.0	0.0	0.0	0.0	6.01E-10
10	7	39	40	16954.49	2	5473.02	1.8271	0.0400	0.0	0.0	0.0	0.0	0.0	8.09E-10
12	9	32	33	20314.43	1	5473.58	1.8270	0.0400	0.0	0.0	0.0	0.0	4.33E-10	8.64E-09
5	2	79	80	15628.77	2	5473.76	1.8269	0.0400	0.0	0.0	0.0	0.0	0.0	2.28E-10
8	5	57	58	16171.80	2	5474.00	1.8268	0.0400	0.0	0.0	0.0	0.0	0.0	7.83E-10
4	1	93	94	18663.53	1	5474.90	1.8265	0.0400	0.0	0.0	0.0	0.0	0.0	8.01E-10
5	2	87	88	18665.15	1	5475.16	1.8264	0.0400	0.0	0.0	0.0	0.0	1.32E-10	2.02E-09
14	11	3	4	22165.02	1	5475.42	1.8263	0.0676	0.0	0.0	0.0	0.0	0.0	5.37E-10
6	3	72	73	15711.97	2	5475.48	1.8263	0.0400	0.0	0.0	0.0	0.0	0.0	4.26E-10
8	5	67	68	18926.79	1	5475.56	1.8263	0.0400	0.0	0.0	0.0	0.0	5.78E-10	9.24E-09
11	8	42	43	19759.12	1	5476.16	1.8261	0.0400	0.0	0.0	0.0	0.0	6.50E-10	1.19E-08
7	4	74	75	18773.88	1	5476.17	1.8261	0.0400	0.0	0.0	0.0	0.0	4.24E-10	6.62E-09
10	7	51	52	19363.47	1	5477.24	1.8257	0.0400	0.0	0.0	0.0	0.0	7.88E-10	1.35E-08
9	6	48	49	16426.90	2	5477.42	1.8257	0.0400	0.0	0.0	0.0	0.0	0.0	9.08E-10
13	10	19	20	20981.92	1	5477.48	1.8257	0.0458	0.0	0.0	0.0	0.0	2.08E-10	4.62E-09
4	1	85	86	15410.46	2	5479.06	1.8251	0.0400	0.0	0.0	0.0	0.0	0.0	1.06E-10
14	11	2	3	22151.18	1	5479.20	1.8251	0.0707	0.0	0.0	0.0	0.0	0.0	4.10E-10
9	6	59	60	19033.64	1	5479.65	1.8249	0.0400	0.0	0.0	0.0	0.0	7.49E-10	1.22E-08
10	7	38	39	16818.04	2	5480.18	1.8248	0.0400	0.0	0.0	0.0	0.0	0.0	8.85E-10
12	9	31	32	20198.81	1	5480.38	1.8247	0.0400	0.0	0.0	0.0	0.0	4.71E-10	9.24E-09
3	0	91	92	15313.73	2	5481.02	1.8245	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-11
7	4	64	65	15733.51	2	5482.21	1.8241	0.0400	0.0	0.0	0.0	0.0	0.0	7.14E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
14	11	1	2	22140.79	1	5482.87	1.8239	0.0738	0.0	0.0	0.0	0.0	0.0	2.78E-10
8	5	56	57	15972.47	2	5482.88	1.8239	0.0400	0.0	0.0	0.0	0.0	0.0	9.10E-10
13	10	18	19	20912.20	1	5482.94	1.8238	0.0470	0.0	0.0	0.0	0.0	2.13E-10	4.68E-09
6	3	80	81	18499.43	1	5483.62	1.8236	0.0400	0.0	0.0	0.0	0.0	3.13E-10	4.68E-09
11	8	41	42	19607.77	1	5483.99	1.8235	0.0400	0.0	0.0	0.0	0.0	7.39E-10	1.32E-08
3	0	98	99	18428.62	1	5484.62	1.8233	0.0400	0.0	0.0	0.0	0.0	0.0	2.37E-10
5	2	78	79	15351.45	2	5484.69	1.8233	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-10
9	6	47	48	16259.04	2	5485.44	1.8230	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-09
6	3	71	72	15459.54	2	5485.75	1.8229	0.0400	0.0	0.0	0.0	0.0	0.0	5.17E-10
8	5	66	67	18684.96	1	5485.91	1.8229	0.0400	0.0	0.0	0.0	0.0	7.21E-10	1.11E-08
10	7	50	51	19179.72	1	5485.98	1.8228	0.0400	0.0	0.0	0.0	0.0	9.28E-10	1.55E-08
14	11	0	1	22133.87	1	5486.43	1.8227	0.0769	0.0	0.0	0.0	0.0	0.0	1.41E-10
12	9	30	31	20086.64	1	5487.08	1.8225	0.0400	0.0	0.0	0.0	0.0	5.12E-10	9.85E-09
7	4	73	74	18506.41	1	5487.22	1.8224	0.0400	0.0	0.0	0.0	0.0	5.44E-10	8.13E-09
10	7	37	38	16684.94	2	5487.25	1.8224	0.0400	0.0	0.0	0.0	0.0	0.0	9.66E-10
5	2	86	87	18349.76	1	5487.49	1.8223	0.0400	0.0	0.0	0.0	0.0	1.78E-10	2.59E-09
4	1	92	93	18325.89	1	5487.81	1.8222	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-09
13	10	17	18	20845.96	1	5488.29	1.8221	0.0482	0.0	0.0	0.0	0.0	2.17E-10	4.71E-09
9	6	58	59	18820.86	1	5489.21	1.8218	0.0400	0.0	0.0	0.0	0.0	9.11E-10	1.43E-08
4	1	84	85	15111.48	2	5490.54	1.8213	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-10
8	5	55	56	15776.43	2	5491.66	1.8209	0.0400	0.0	0.0	0.0	0.0	1.09E-10	1.05E-09
11	8	40	41	19459.85	1	5491.72	1.8209	0.0400	0.0	0.0	0.0	0.0	8.37E-10	1.46E-08
7	4	63	64	15509.25	2	5491.74	1.8209	0.0400	0.0	0.0	0.0	0.0	0.0	8.45E-10
3	0	90	91	14993.09	2	5493.05	1.8205	0.0400	0.0	0.0	0.0	0.0	0.0	3.61E-11
14	11	1	0	22130.41	1	5493.25	1.8204	0.0769	0.0	0.0	0.0	0.0	0.0	1.44E-10
9	6	46	47	16094.49	2	5493.37	1.8204	0.0400	0.0	0.0	0.0	0.0	1.14E-10	1.15E-09
13	10	16	17	20783.18	1	5493.55	1.8203	0.0493	0.0	0.0	0.0	0.0	2.19E-10	4.72E-09
12	9	29	30	19977.94	1	5493.69	1.8203	0.0400	0.0	0.0	0.0	0.0	5.53E-10	1.05E-08
10	7	36	37	16555.18	2	5494.22	1.8201	0.0400	0.0	0.0	0.0	0.0	0.0	1.05E-09
14	11	62	61	28586.38	1	5494.26	1.8201	0.0400	0.0	0.0	0.0	0.0	0.0	9.53E-11
10	7	49	50	18999.38	1	5494.63	1.8200	0.0400	0.0	0.0	0.0	0.0	1.09E-09	1.76E-08
6	3	79	80	18209.59	1	5495.26	1.8198	0.0400	0.0	0.0	0.0	0.0	4.11E-10	5.86E-09
5	2	77	78	15077.32	2	5495.53	1.8197	0.0400	0.0	0.0	0.0	0.0	0.0	3.49E-10
6	3	70	71	15210.34	2	5495.94	1.8195	0.0400	0.0	0.0	0.0	0.0	0.0	6.25E-10
8	5	65	66	18446.48	1	5496.17	1.8194	0.0400	0.0	0.0	0.0	0.0	8.97E-10	1.33E-08
14	11	2	1	22133.87	1	5496.50	1.8193	0.0738	0.0	0.0	0.0	0.0	0.0	2.90E-10
14	11	61	60	28380.87	1	5497.57	1.8190	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-10
3	0	97	98	18071.92	1	5498.02	1.8188	0.0400	0.0	0.0	0.0	0.0	0.0	3.13E-10
7	4	72	73	18242.22	1	5498.17	1.8188	0.0400	0.0	0.0	0.0	0.0	6.94E-10	9.96E-09
9	6	57	58	18611.44	1	5498.67	1.8186	0.0400	0.0	0.0	0.0	0.0	1.10E-09	1.68E-08
13	10	15	16	20723.88	1	5498.70	1.8186	0.0505	0.0	0.0	0.0	0.0	2.20E-10	4.70E-09
11	8	39	40	19315.37	1	5499.36	1.8184	0.0400	0.0	0.0	0.0	0.0	9.44E-10	1.61E-08
14	11	3	2	22140.79	1	5499.65	1.8183	0.0707	0.0	0.0	0.0	0.0	0.0	4.37E-10
5	2	85	86	18037.58	1	5499.72	1.8183	0.0400	0.0	0.0	0.0	0.0	2.38E-10	3.30E-09
12	9	28	29	19872.69	1	5500.19	1.8181	0.0400	0.0	0.0	0.0	0.0	5.97E-10	1.11E-08
8	5	54	55	15583.68	2	5500.35	1.8181	0.0400	0.0	0.0	0.0	0.0	1.30E-10	1.22E-09
4	1	91	92	17991.41	1	5500.63	1.8180	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-09
14	11	60	59	28178.56	1	5500.76	1.8179	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-10
10	7	35	36	16428.77	2	5501.11	1.8178	0.0400	0.0	0.0	0.0	0.0	1.06E-10	1.14E-09
7	4	62	63	15288.27	2	5501.19	1.8178	0.0400	0.0	0.0	0.0	0.0	1.12E-10	9.97E-10
9	6	45	46	15933.27	2	5501.21	1.8178	0.0400	0.0	0.0	0.0	0.0	1.31E-10	1.29E-09
4	1	83	84	14815.63	2	5501.93	1.8175	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-10
14	11	4	3	22151.18	1	5502.69	1.8173	0.0676	0.0	0.0	0.0	0.0	0.0	5.84E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	48	49	18822.44	1	5503.18	1.8171	0.0400	0.0	0.0	0.0	0.0	1.27E-09	2.01E-08
13	10	14	15	20668.05	1	5503.74	1.8169	0.0517	0.0	0.0	0.0	0.0	2.20E-10	4.65E-09
14	11	59	58	27979.44	1	5503.83	1.8169	0.0400	0.0	0.0	0.0	0.0	0.0	1.42E-10
3	0	89	90	14675.56	2	5504.99	1.8165	0.0400	0.0	0.0	0.0	0.0	0.0	4.61E-11
14	11	5	4	22165.02	1	5505.62	1.8163	0.0645	0.0	0.0	0.0	0.0	0.0	7.29E-10
6	3	69	70	14964.37	2	5506.04	1.8162	0.0400	0.0	0.0	0.0	0.0	0.0	7.54E-10
5	2	76	77	14806.39	2	5506.28	1.8161	0.0400	0.0	0.0	0.0	0.0	0.0	4.30E-10
8	5	64	65	18211.34	1	5506.33	1.8161	0.0400	0.0	0.0	0.0	0.0	1.11E-09	1.59E-08
12	9	27	28	19770.91	1	5506.59	1.8160	0.0400	0.0	0.0	0.0	0.0	6.42E-10	1.17E-08
14	11	58	57	27783.53	1	5506.79	1.8159	0.0400	0.0	0.0	0.0	0.0	0.0	1.62E-10
6	3	78	79	17923.02	1	5506.81	1.8159	0.0400	0.0	0.0	0.0	0.0	5.37E-10	7.31E-09
11	8	38	39	19174.33	1	5506.89	1.8159	0.0400	0.0	0.0	0.0	0.0	1.06E-09	1.76E-08
10	7	34	35	16305.72	2	5507.90	1.8156	0.0400	0.0	0.0	0.0	0.0	1.17E-10	1.23E-09
9	6	56	57	18405.41	1	5508.03	1.8155	0.0400	0.0	0.0	0.0	0.0	1.33E-09	1.96E-08
14	11	6	5	22182.32	1	5508.45	1.8154	0.0621	0.0	0.0	0.0	0.0	0.0	8.73E-10
13	10	13	14	20615.70	1	5508.69	1.8153	0.0528	0.0	0.0	0.0	0.0	2.18E-10	4.56E-09
8	5	53	54	15394.23	2	5508.95	1.8152	0.0400	0.0	0.0	0.0	0.0	1.54E-10	1.40E-09
9	6	44	45	15775.39	2	5508.96	1.8152	0.0400	0.0	0.0	0.0	0.0	1.50E-10	1.44E-09
7	4	71	72	17981.34	1	5509.03	1.8152	0.0400	0.0	0.0	0.0	0.0	8.84E-10	1.22E-08
14	11	57	56	27590.84	1	5509.64	1.8150	0.0400	0.0	0.0	0.0	0.0	0.0	1.84E-10
7	4	61	62	15070.55	2	5510.54	1.8147	0.0400	0.0	0.0	0.0	0.0	1.36E-10	1.17E-09
14	11	7	6	22203.07	1	5511.18	1.8145	0.0597	0.0	0.0	0.0	0.0	0.0	1.01E-09
3	0	96	97	17718.34	1	5511.33	1.8144	0.0400	0.0	0.0	0.0	0.0	0.0	4.12E-10
10	7	47	48	18648.93	1	5511.64	1.8143	0.0400	0.0	0.0	0.0	0.0	1.49E-09	2.27E-08
5	2	84	85	17728.62	1	5511.87	1.8143	0.0400	0.0	0.0	0.0	0.0	3.18E-10	4.21E-09
14	11	56	55	27401.37	1	5512.38	1.8141	0.0400	0.0	0.0	0.0	0.0	0.0	2.08E-10
12	9	26	27	19672.59	1	5512.89	1.8139	0.0400	0.0	0.0	0.0	0.0	6.86E-10	1.24E-08
4	1	82	83	14522.95	2	5513.24	1.8138	0.0400	0.0	0.0	0.0	0.0	0.0	2.12E-10
4	1	90	91	17660.10	1	5513.36	1.8138	0.0400	0.0	0.0	0.0	0.0	1.33E-10	1.74E-09
13	10	12	13	20566.83	1	5513.53	1.8137	0.0540	0.0	0.0	0.0	0.0	2.13E-10	4.44E-09
14	11	8	7	22227.29	1	5513.80	1.8136	0.0574	0.0	0.0	0.0	0.0	0.0	1.15E-09
11	8	37	38	19036.74	1	5514.33	1.8135	0.0400	0.0	0.0	0.0	0.0	1.19E-09	1.93E-08
10	7	33	34	16186.04	2	5514.59	1.8134	0.0400	0.0	0.0	0.0	0.0	1.28E-10	1.32E-09
14	11	55	54	27215.13	1	5515.01	1.8132	0.0400	0.0	0.0	0.0	0.0	0.0	2.35E-10
6	3	68	69	14721.64	2	5516.06	1.8129	0.0400	0.0	0.0	0.0	0.0	1.11E-10	9.07E-10
14	11	9	8	22254.96	1	5516.31	1.8128	0.0550	0.0	0.0	0.0	0.0	0.0	1.27E-09
8	5	63	64	17979.55	1	5516.40	1.8128	0.0400	0.0	0.0	0.0	0.0	1.37E-09	1.89E-08
9	6	43	44	15620.85	2	5516.61	1.8127	0.0400	0.0	0.0	0.0	0.0	1.71E-10	1.61E-09
3	0	88	89	14361.15	2	5516.85	1.8126	0.0400	0.0	0.0	0.0	0.0	0.0	5.89E-11
5	2	75	76	14538.66	2	5516.94	1.8126	0.0400	0.0	0.0	0.0	0.0	0.0	5.29E-10
9	6	55	56	18202.77	1	5517.29	1.8125	0.0400	0.0	0.0	0.0	0.0	1.60E-09	2.28E-08
8	5	52	53	15208.11	2	5517.46	1.8124	0.0400	0.0	0.0	0.0	0.0	1.83E-10	1.61E-09
14	11	54	53	27032.14	1	5517.52	1.8124	0.0400	0.0	0.0	0.0	0.0	0.0	2.65E-10
13	10	11	12	20521.44	1	5518.27	1.8122	0.0542	0.0	0.0	0.0	0.0	2.08E-10	4.28E-09
6	3	77	78	17639.71	1	5518.27	1.8122	0.0400	0.0	0.0	0.0	0.0	6.99E-10	9.10E-09
14	11	10	9	22286.09	1	5518.72	1.8120	0.0547	0.0	0.0	0.0	0.0	0.0	1.39E-09
12	9	25	26	19577.75	1	5519.10	1.8119	0.0400	0.0	0.0	0.0	0.0	7.31E-10	1.30E-08
7	4	70	71	17723.78	1	5519.80	1.8117	0.0400	0.0	0.0	0.0	0.0	1.12E-09	1.48E-08
7	4	60	61	14856.11	2	5519.81	1.8117	0.0400	0.0	0.0	0.0	0.0	1.65E-10	1.38E-09
14	11	53	52	26852.39	1	5519.92	1.8116	0.0400	0.0	0.0	0.0	0.0	0.0	2.97E-10
10	7	46	47	18478.84	1	5519.99	1.8116	0.0400	0.0	0.0	0.0	0.0	1.72E-09	2.57E-08
14	11	11	10	22320.67	1	5521.02	1.8113	0.0545	0.0	0.0	0.0	0.0	0.0	1.51E-09
10	7	32	33	16069.71	2	5521.20	1.8112	0.0400	0.0	0.0	0.0	0.0	1.40E-10	1.42E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
11	8	36	37	18902.61	1	5521.66	1.8111	0.0400	0.0	0.0	0.0	0.0	1.32E-09	2.11E-08
14	11	52	51	26675.90	1	5522.20	1.8109	0.0400	0.0	0.0	0.0	0.0	0.0	3.32E-10
13	10	10	11	20479.54	1	5522.91	1.8106	0.0545	0.0	0.0	0.0	0.0	2.00E-10	4.09E-09
14	11	12	11	22358.71	1	5523.22	1.8105	0.0542	0.0	0.0	0.0	0.0	0.0	1.61E-09
5	2	83	84	17422.89	1	5523.92	1.8103	0.0400	0.0	0.0	0.0	0.0	4.24E-10	5.34E-09
9	6	42	43	15469.65	2	5524.18	1.8102	0.0400	0.0	0.0	0.0	0.0	1.95E-10	1.79E-09
14	11	51	50	26502.68	1	5524.38	1.8102	0.0400	0.0	0.0	0.0	0.0	0.0	3.71E-10
4	1	81	82	14233.45	2	5524.46	1.8101	0.0400	0.0	0.0	0.0	0.0	0.0	2.66E-10
3	0	95	96	17367.91	1	5524.55	1.8101	0.0400	0.0	0.0	0.0	0.0	0.0	5.41E-10
12	9	24	25	19486.39	1	5525.20	1.8099	0.0400	0.0	0.0	0.0	0.0	7.74E-10	1.35E-08
14	11	13	12	22400.19	1	5525.30	1.8099	0.0540	0.0	0.0	0.0	0.0	0.0	1.70E-09
8	5	51	52	15025.29	2	5525.88	1.8097	0.0400	0.0	0.0	0.0	0.0	2.15E-10	1.84E-09
6	3	67	68	14482.17	2	5525.98	1.8096	0.0400	0.0	0.0	0.0	0.0	1.39E-10	1.09E-09
4	1	89	90	17331.98	1	5526.00	1.8096	0.0400	0.0	0.0	0.0	0.0	1.81E-10	2.24E-09
8	5	62	63	17751.12	1	5526.38	1.8095	0.0400	0.0	0.0	0.0	0.0	1.69E-09	2.24E-08
14	11	50	49	26332.73	1	5526.44	1.8095	0.0400	0.0	0.0	0.0	0.0	0.0	4.12E-10
9	6	54	55	18003.52	1	5526.46	1.8095	0.0400	0.0	0.0	0.0	0.0	1.92E-09	2.65E-08
14	11	14	13	22445.13	1	5527.29	1.8092	0.0528	0.0	0.0	0.0	0.0	0.0	1.79E-09
13	10	9	10	20441.12	1	5527.45	1.8092	0.0547	0.0	0.0	0.0	0.0	1.90E-10	3.87E-09
5	2	74	75	14274.14	2	5527.52	1.8091	0.0400	0.0	0.0	0.0	0.0	0.0	6.48E-10
10	7	31	32	15956.77	2	5527.71	1.8091	0.0400	0.0	0.0	0.0	0.0	1.52E-10	1.51E-09
10	7	45	46	18312.18	1	5528.25	1.8089	0.0400	0.0	0.0	0.0	0.0	1.99E-09	2.89E-08
14	11	49	48	26166.05	1	5528.39	1.8088	0.0400	0.0	0.0	0.0	0.0	0.0	4.57E-10
3	0	87	88	14049.87	2	5528.62	1.8088	0.0400	0.0	0.0	0.0	0.0	0.0	7.52E-11
11	8	35	36	18771.94	1	5528.90	1.8087	0.0400	0.0	0.0	0.0	0.0	1.47E-09	2.29E-08
7	4	59	60	14644.96	2	5528.99	1.8086	0.0400	0.0	0.0	0.0	0.0	2.00E-10	1.61E-09
14	11	15	14	22493.51	1	5529.16	1.8086	0.0517	0.0	0.0	0.0	0.0	0.0	1.86E-09
6	3	76	77	17359.69	1	5529.64	1.8084	0.0400	0.0	0.0	0.0	0.0	9.07E-10	1.13E-08
14	11	48	47	26002.67	1	5530.23	1.8082	0.0400	0.0	0.0	0.0	0.0	0.0	5.05E-10
7	4	69	70	17469.54	1	5530.47	1.8082	0.0400	0.0	0.0	0.0	0.0	1.42E-09	1.80E-08
14	11	16	15	22545.34	1	5530.93	1.8080	0.0505	0.0	0.0	0.0	0.0	0.0	1.92E-09
12	9	23	24	19398.52	1	5531.19	1.8079	0.0412	0.0	0.0	0.0	0.0	8.16E-10	1.41E-08
9	6	41	42	15321.80	2	5531.65	1.8078	0.0400	0.0	0.0	0.0	0.0	2.21E-10	1.98E-09
13	10	8	9	20406.19	1	5531.88	1.8077	0.0550	0.0	0.0	0.0	0.0	1.78E-10	3.61E-09
14	11	47	46	25842.57	1	5531.96	1.8077	0.0400	0.0	0.0	0.0	0.0	0.0	5.57E-10
14	11	17	16	22600.61	1	5532.59	1.8075	0.0493	0.0	0.0	0.0	0.0	0.0	1.97E-09
14	11	46	45	25685.79	1	5533.57	1.8072	0.0400	0.0	0.0	0.0	0.0	0.0	6.11E-10
10	7	30	31	15847.20	2	5534.12	1.8070	0.0400	0.0	0.0	0.0	0.0	1.65E-10	1.61E-09
14	11	18	17	22659.31	1	5534.15	1.8070	0.0482	0.0	0.0	0.0	0.0	0.0	2.01E-09
8	5	50	51	14845.80	2	5534.21	1.8069	0.0400	0.0	0.0	0.0	0.0	2.53E-10	2.10E-09
14	11	45	44	25532.30	1	5535.08	1.8067	0.0400	0.0	0.0	0.0	0.0	0.0	6.69E-10
9	6	53	54	17807.68	1	5535.54	1.8065	0.0400	0.0	0.0	0.0	0.0	2.29E-09	3.07E-08
4	1	80	81	13947.12	2	5535.59	1.8065	0.0400	0.0	0.0	0.0	0.0	0.0	3.33E-10
14	11	19	18	22721.46	1	5535.59	1.8065	0.0470	0.0	0.0	0.0	0.0	0.0	2.04E-09
6	3	66	67	14245.95	2	5535.82	1.8064	0.0400	0.0	0.0	0.0	0.0	1.72E-10	1.30E-09
5	2	82	83	17120.41	1	5535.88	1.8064	0.0400	0.0	0.0	0.0	0.0	5.64E-10	6.76E-09
11	8	34	35	18644.73	1	5536.04	1.8063	0.0400	0.0	0.0	0.0	0.0	1.62E-09	2.48E-08
13	10	7	8	20374.75	1	5536.20	1.8063	0.0574	0.0	0.0	0.0	0.0	1.64E-10	3.31E-09
8	5	61	62	17526.07	1	5536.25	1.8063	0.0400	0.0	0.0	0.0	0.0	2.07E-09	2.65E-08
10	7	44	45	18148.97	1	5536.41	1.8062	0.0400	0.0	0.0	0.0	0.0	2.30E-09	3.25E-08
14	11	44	43	25382.13	1	5536.47	1.8062	0.0400	0.0	0.0	0.0	0.0	0.0	7.30E-10
14	11	20	19	22787.05	1	5536.93	1.8061	0.0458	0.0	0.0	0.0	0.0	0.0	2.06E-09
12	9	22	23	19314.13	1	5537.09	1.8060	0.0423	0.0	0.0	0.0	0.0	8.56E-10	1.46E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	94	95	17020.62	1	5537.68	1.8058	0.0400	0.0	0.0	0.0	0.0	0.0	7.08E-10
14	11	43	42	25235.28	1	5537.75	1.8058	0.0400	0.0	0.0	0.0	0.0	0.0	7.93E-10
5	2	73	74	14012.86	2	5538.00	1.8057	0.0400	0.0	0.0	0.0	0.0	1.09E-10	7.92E-10
7	4	58	59	14437.11	2	5538.07	1.8057	0.0400	0.0	0.0	0.0	0.0	2.42E-10	1.88E-09
14	11	21	20	22856.06	1	5538.16	1.8057	0.0447	0.0	0.0	0.0	0.0	0.0	2.06E-09
4	1	88	89	17007.07	1	5538.55	1.8055	0.0400	0.0	0.0	0.0	0.0	2.45E-10	2.89E-09
14	11	42	41	25091.76	1	5538.93	1.8054	0.0400	0.0	0.0	0.0	0.0	0.0	8.60E-10
9	6	40	41	15177.32	2	5539.03	1.8054	0.0400	0.0	0.0	0.0	0.0	2.49E-10	2.18E-09
14	11	22	21	22928.51	1	5539.29	1.8053	0.0435	0.0	0.0	0.0	0.0	0.0	2.06E-09
14	11	41	40	24951.57	1	5539.99	1.8051	0.0400	0.0	0.0	0.0	0.0	0.0	9.28E-10
14	11	23	22	23004.38	1	5540.30	1.8050	0.0423	0.0	0.0	0.0	0.0	0.0	2.04E-09
3	0	86	87	13741.75	2	5540.31	1.8050	0.0400	0.0	0.0	0.0	0.0	0.0	9.58E-11
13	10	6	7	20346.80	1	5540.43	1.8049	0.0597	0.0	0.0	0.0	0.0	1.49E-10	2.99E-09
10	7	29	30	15741.00	2	5540.44	1.8049	0.0400	0.0	0.0	0.0	0.0	1.78E-10	1.71E-09
6	3	75	76	17082.96	1	5540.91	1.8048	0.0400	0.0	0.0	0.0	0.0	1.17E-09	1.40E-08
14	11	40	39	24814.72	1	5540.94	1.8047	0.0400	0.0	0.0	0.0	0.0	0.0	9.99E-10
7	4	68	69	17218.64	1	5541.05	1.8047	0.0400	0.0	0.0	0.0	0.0	1.79E-09	2.18E-08
14	11	24	23	23083.67	1	5541.21	1.8047	0.0412	0.0	0.0	0.0	0.0	0.0	2.02E-09
14	11	39	38	24681.22	1	5541.78	1.8045	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-09
14	11	25	24	23166.39	1	5542.01	1.8044	0.0400	0.0	0.0	0.0	0.0	0.0	1.98E-09
8	5	49	50	14669.65	2	5542.45	1.8043	0.0400	0.0	0.0	0.0	0.0	2.96E-10	2.39E-09
14	11	38	37	24551.07	1	5542.51	1.8042	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-09
14	11	26	25	23252.52	1	5542.70	1.8042	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-09
12	9	21	22	19233.23	1	5542.89	1.8041	0.0435	0.0	0.0	0.0	0.0	8.93E-10	1.50E-08
11	8	33	34	18521.00	1	5543.08	1.8041	0.0400	0.0	0.0	0.0	0.0	1.79E-09	2.68E-08
14	11	37	36	24424.27	1	5543.12	1.8040	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-09
13	10	70	69	28546.96	1	5543.29	1.8040	0.0400	0.0	0.0	0.0	0.0	0.0	9.49E-11
14	11	27	26	23342.06	1	5543.29	1.8040	0.0400	0.0	0.0	0.0	0.0	0.0	1.89E-09
14	11	36	35	24300.84	1	5543.63	1.8039	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-09
14	11	28	27	23435.02	1	5543.76	1.8038	0.0400	0.0	0.0	0.0	0.0	0.0	1.84E-09
14	11	35	34	24180.77	1	5544.03	1.8037	0.0400	0.0	0.0	0.0	0.0	0.0	1.37E-09
14	11	29	28	23531.37	1	5544.13	1.8037	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-09
14	11	34	33	24064.08	1	5544.32	1.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-09
14	11	30	29	23631.13	1	5544.39	1.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.71E-09
10	7	43	44	17989.20	1	5544.48	1.8036	0.0400	0.0	0.0	0.0	0.0	2.64E-09	3.63E-08
14	11	33	32	23950.76	1	5544.50	1.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-09
9	6	52	53	17615.26	1	5544.51	1.8036	0.0400	0.0	0.0	0.0	0.0	2.73E-09	3.54E-08
14	11	31	30	23734.29	1	5544.53	1.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-09
13	10	5	6	20322.34	1	5544.55	1.8036	0.0621	0.0	0.0	0.0	0.0	1.32E-10	2.63E-09
14	11	32	31	23840.83	1	5544.57	1.8036	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-09
6	3	65	66	14013.01	2	5545.56	1.8032	0.0400	0.0	0.0	0.0	0.0	2.13E-10	1.55E-09
8	5	60	61	17304.39	1	5546.04	1.8031	0.0400	0.0	0.0	0.0	0.0	2.53E-09	3.13E-08
9	6	39	40	15036.20	2	5546.32	1.8030	0.0400	0.0	0.0	0.0	0.0	2.80E-10	2.40E-09
4	1	79	80	13663.99	2	5546.64	1.8029	0.0400	0.0	0.0	0.0	0.0	0.0	4.14E-10
10	7	28	29	15638.19	2	5546.67	1.8029	0.0400	0.0	0.0	0.0	0.0	1.92E-10	1.81E-09
7	4	57	58	14232.57	2	5547.07	1.8028	0.0400	0.0	0.0	0.0	0.0	2.92E-10	2.20E-09
13	10	69	68	28313.86	1	5547.47	1.8026	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-10
5	2	81	82	16821.19	1	5547.75	1.8025	0.0400	0.0	0.0	0.0	0.0	7.46E-10	8.53E-09
5	2	72	73	13754.80	2	5548.40	1.8023	0.0400	0.0	0.0	0.0	0.0	1.38E-10	9.66E-10
13	10	4	5	20301.37	1	5548.57	1.8023	0.0645	0.0	0.0	0.0	0.0	1.13E-10	2.25E-09
12	9	20	21	19155.82	1	5548.59	1.8023	0.0447	0.0	0.0	0.0	0.0	9.26E-10	1.54E-08
11	8	32	33	18400.75	1	5550.02	1.8018	0.0400	0.0	0.0	0.0	0.0	1.96E-09	2.88E-08
8	5	48	49	14496.84	2	5550.60	1.8016	0.0400	0.0	0.0	0.0	0.0	3.44E-10	2.71E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	93	94	16676.52	1	5550.72	1.8016	0.0400	0.0	0.0	0.0	0.0	0.0	9.24E-10
4	1	87	88	16685.38	1	5551.01	1.8015	0.0400	0.0	0.0	0.0	0.0	3.33E-10	3.72E-09
7	4	67	68	16971.09	1	5551.54	1.8013	0.0400	0.0	0.0	0.0	0.0	2.24E-09	2.63E-08
13	10	68	67	28083.91	1	5551.54	1.8013	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-10
3	0	85	86	13436.77	2	5551.91	1.8012	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-10
6	3	74	75	16809.55	1	5552.09	1.8011	0.0400	0.0	0.0	0.0	0.0	1.51E-09	1.73E-08
10	7	42	43	17832.88	1	5552.44	1.8010	0.0400	0.0	0.0	0.0	0.0	3.02E-09	4.05E-08
13	10	3	4	20283.89	1	5552.48	1.8010	0.0676	0.0	0.0	0.0	0.0	0.0	1.84E-09
10	7	27	28	15538.77	2	5552.81	1.8009	0.0400	0.0	0.0	0.0	0.0	2.06E-10	1.91E-09
9	6	51	52	17426.27	1	5553.39	1.8007	0.0400	0.0	0.0	0.0	0.0	3.23E-09	4.07E-08
9	6	38	39	14898.44	2	5553.51	1.8007	0.0400	0.0	0.0	0.0	0.0	3.14E-10	2.63E-09
12	9	19	20	19081.91	1	5554.18	1.8004	0.0458	0.0	0.0	0.0	0.0	9.55E-10	1.57E-08
6	3	64	65	13783.34	2	5555.22	1.8001	0.0400	0.0	0.0	0.0	0.0	2.63E-10	1.84E-09
13	10	67	66	27857.12	1	5555.49	1.8000	0.0400	0.0	0.0	0.0	0.0	0.0	1.52E-10
8	5	59	60	17086.11	1	5555.72	1.7999	0.0400	0.0	0.0	0.0	0.0	3.09E-09	3.68E-08
7	4	56	57	14031.34	2	5555.98	1.7999	0.0400	0.0	0.0	0.0	0.0	3.51E-10	2.56E-09
13	10	2	3	20269.91	1	5556.29	1.7998	0.0707	0.0	0.0	0.0	0.0	0.0	1.40E-09
11	8	31	32	18283.98	1	5556.85	1.7996	0.0400	0.0	0.0	0.0	0.0	2.14E-09	3.08E-08
4	1	78	79	13384.06	2	5557.60	1.7993	0.0400	0.0	0.0	0.0	0.0	0.0	5.15E-10
8	5	47	48	14327.37	2	5558.66	1.7990	0.0400	0.0	0.0	0.0	0.0	4.00E-10	3.06E-09
5	2	71	72	13499.99	2	5558.72	1.7990	0.0400	0.0	0.0	0.0	0.0	1.75E-10	1.17E-09
10	7	26	27	15442.75	2	5558.85	1.7989	0.0400	0.0	0.0	0.0	0.0	2.20E-10	2.01E-09
13	10	66	65	27633.50	1	5559.33	1.7988	0.0400	0.0	0.0	0.0	0.0	0.0	1.76E-10
5	2	80	81	16525.24	1	5559.52	1.7987	0.0400	0.0	0.0	0.0	0.0	9.85E-10	1.07E-08
12	9	18	19	19011.50	1	5559.67	1.7987	0.0470	0.0	0.0	0.0	0.0	9.80E-10	1.59E-08
13	10	1	2	20259.43	1	5559.99	1.7986	0.0738	0.0	0.0	0.0	0.0	0.0	9.51E-10
10	7	41	42	17680.03	1	5560.31	1.7985	0.0400	0.0	0.0	0.0	0.0	3.43E-09	4.50E-08
9	6	37	38	14764.06	2	5560.61	1.7984	0.0400	0.0	0.0	0.0	0.0	3.50E-10	2.88E-09
7	4	66	67	16726.89	1	5561.93	1.7979	0.0400	0.0	0.0	0.0	0.0	2.81E-09	3.16E-08
9	6	50	51	17240.70	1	5562.18	1.7979	0.0400	0.0	0.0	0.0	0.0	3.81E-09	4.66E-08
13	10	65	64	27413.06	1	5563.06	1.7976	0.0400	0.0	0.0	0.0	0.0	0.0	2.04E-10
6	3	73	74	16539.45	1	5563.18	1.7975	0.0400	0.0	0.0	0.0	0.0	1.95E-09	2.13E-08
4	1	86	87	16366.91	1	5563.37	1.7975	0.0400	0.0	0.0	0.0	0.0	4.49E-10	4.77E-09
3	0	84	85	13134.97	2	5563.43	1.7975	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-10
11	8	30	31	18170.69	1	5563.59	1.7974	0.0400	0.0	0.0	0.0	0.0	2.32E-09	3.29E-08
13	10	0	1	20252.43	1	5563.59	1.7974	0.0769	0.0	0.0	0.0	0.0	0.0	4.82E-10
3	0	92	93	16335.59	1	5563.67	1.7974	0.0400	0.0	0.0	0.0	0.0	1.14E-10	1.20E-09
7	4	55	56	13833.44	2	5564.79	1.7970	0.0400	0.0	0.0	0.0	0.0	4.20E-10	2.97E-09
6	3	63	64	13556.96	2	5564.79	1.7970	0.0400	0.0	0.0	0.0	0.0	3.23E-10	2.19E-09
10	7	25	26	15350.11	2	5564.79	1.7970	0.0400	0.0	0.0	0.0	0.0	2.33E-10	2.10E-09
12	9	17	18	18944.59	1	5565.06	1.7969	0.0482	0.0	0.0	0.0	0.0	9.98E-10	1.60E-08
8	5	58	59	16871.22	1	5565.31	1.7968	0.0400	0.0	0.0	0.0	0.0	3.76E-09	4.33E-08
8	5	46	47	14161.26	2	5566.62	1.7964	0.0400	0.0	0.0	0.0	0.0	4.63E-10	3.45E-09
13	10	64	63	27195.80	1	5566.67	1.7964	0.0400	0.0	0.0	0.0	0.0	0.0	2.36E-10
9	6	36	37	14633.06	2	5567.62	1.7961	0.0400	0.0	0.0	0.0	0.0	3.89E-10	3.13E-09
10	7	40	41	17530.64	1	5568.08	1.7960	0.0400	0.0	0.0	0.0	0.0	3.89E-09	4.98E-08
4	1	77	78	13107.35	2	5568.47	1.7958	0.0400	0.0	0.0	0.0	0.0	1.01E-10	6.38E-10
5	2	70	71	13248.44	2	5568.94	1.7957	0.0400	0.0	0.0	0.0	0.0	2.21E-10	1.42E-09
13	10	63	62	26981.75	1	5570.17	1.7953	0.0400	0.0	0.0	0.0	0.0	0.0	2.72E-10
11	8	29	30	18060.90	1	5570.23	1.7953	0.0400	0.0	0.0	0.0	0.0	2.51E-09	3.50E-08
12	9	16	17	18881.18	1	5570.35	1.7952	0.0493	0.0	0.0	0.0	0.0	1.01E-09	1.61E-08
13	10	1	0	20248.94	1	5570.48	1.7952	0.0769	0.0	0.0	0.0	0.0	0.0	4.92E-10
10	7	24	25	15260.88	2	5570.65	1.7951	0.0400	0.0	0.0	0.0	0.0	2.47E-10	2.19E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	49	50	17058.57	1	5570.86	1.7951	0.0400	0.0	0.0	0.0	0.0	4.49E-09	5.32E-08
5	2	79	80	16232.57	1	5571.20	1.7949	0.0400	0.0	0.0	0.0	0.0	1.30E-09	1.35E-08
7	4	65	66	16486.06	1	5572.22	1.7946	0.0400	0.0	0.0	0.0	0.0	3.50E-09	3.79E-08
7	4	54	55	13638.86	2	5573.52	1.7942	0.0400	0.0	0.0	0.0	0.0	5.01E-10	3.44E-09
13	10	62	61	26770.90	1	5573.55	1.7942	0.0400	0.0	0.0	0.0	0.0	0.0	3.13E-10
13	10	2	1	20252.43	1	5573.76	1.7941	0.0738	0.0	0.0	0.0	0.0	0.0	9.93E-10
6	3	72	73	16272.68	1	5574.17	1.7940	0.0400	0.0	0.0	0.0	0.0	2.49E-09	2.61E-08
6	3	62	63	13333.88	2	5574.27	1.7940	0.0400	0.0	0.0	0.0	0.0	3.96E-10	2.59E-09
8	5	45	46	13998.51	2	5574.50	1.7939	0.0400	0.0	0.0	0.0	0.0	5.33E-10	3.87E-09
9	6	35	36	14505.45	2	5574.54	1.7939	0.0400	0.0	0.0	0.0	0.0	4.31E-10	3.40E-09
8	5	57	58	16659.74	1	5574.81	1.7938	0.0400	0.0	0.0	0.0	1.12E-10	4.57E-09	5.09E-08
3	0	83	84	12836.35	2	5574.86	1.7938	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-10
12	9	15	16	18821.29	1	5575.54	1.7935	0.0505	0.0	0.0	0.0	0.0	1.02E-09	1.60E-08
4	1	85	86	16051.69	1	5575.64	1.7935	0.0400	0.0	0.0	0.0	0.0	6.04E-10	6.11E-09
10	7	39	40	17384.73	1	5575.75	1.7935	0.0400	0.0	0.0	0.0	0.0	4.40E-09	5.50E-08
10	7	23	24	15175.05	2	5576.40	1.7933	0.0412	0.0	0.0	0.0	0.0	2.60E-10	2.28E-09
3	0	91	92	15997.85	1	5576.53	1.7932	0.0400	0.0	0.0	0.0	0.0	1.56E-10	1.56E-09
11	8	28	29	17954.60	1	5576.77	1.7932	0.0400	0.0	0.0	0.0	0.0	2.71E-09	3.72E-08
13	10	61	60	26563.26	1	5576.82	1.7931	0.0400	0.0	0.0	0.0	0.0	0.0	3.58E-10
13	10	3	2	20259.43	1	5576.95	1.7931	0.0707	0.0	0.0	0.0	0.0	0.0	1.50E-09
5	2	69	70	13000.15	2	5579.08	1.7924	0.0400	0.0	0.0	0.0	0.0	2.78E-10	1.72E-09
4	1	76	77	12833.86	2	5579.26	1.7924	0.0400	0.0	0.0	0.0	0.0	1.31E-10	7.88E-10
9	6	48	49	16879.89	1	5579.45	1.7923	0.0400	0.0	0.0	0.0	1.22E-10	5.26E-09	6.06E-08
13	10	60	59	26358.85	1	5579.98	1.7921	0.0400	0.0	0.0	0.0	0.0	0.0	4.08E-10
13	10	4	3	20269.91	1	5580.02	1.7921	0.0676	0.0	0.0	0.0	0.0	1.01E-10	2.00E-09
12	9	14	15	18764.90	1	5580.62	1.7919	0.0517	0.0	0.0	0.0	0.0	1.01E-09	1.58E-08
9	6	34	35	14381.22	2	5581.36	1.7917	0.0400	0.0	0.0	0.0	0.0	4.75E-10	3.67E-09
10	7	22	23	15092.63	2	5582.07	1.7915	0.0423	0.0	0.0	0.0	0.0	2.72E-10	2.35E-09
7	4	53	54	13447.62	2	5582.16	1.7914	0.0400	0.0	0.0	0.0	0.0	5.96E-10	3.97E-09
8	5	44	45	13839.13	2	5582.28	1.7914	0.0400	0.0	0.0	0.0	0.0	6.12E-10	4.34E-09
7	4	64	65	16248.61	1	5582.42	1.7913	0.0400	0.0	0.0	0.0	1.18E-10	4.35E-09	4.54E-08
5	2	78	79	15943.20	1	5582.79	1.7912	0.0400	0.0	0.0	0.0	0.0	1.70E-09	1.69E-08
13	10	5	4	20283.89	1	5582.99	1.7912	0.0645	0.0	0.0	0.0	0.0	1.26E-10	2.50E-09
13	10	59	58	26157.68	1	5583.02	1.7911	0.0400	0.0	0.0	0.0	0.0	0.0	4.68E-10
11	8	27	28	17851.80	1	5583.21	1.7911	0.0400	0.0	0.0	0.0	0.0	2.92E-09	3.94E-08
10	7	38	39	17242.29	1	5583.32	1.7910	0.0400	0.0	0.0	0.0	1.05E-10	4.95E-09	6.05E-08
6	3	61	62	13114.11	2	5583.66	1.7909	0.0400	0.0	0.0	0.0	0.0	4.83E-10	3.05E-09
8	5	56	57	16451.68	1	5584.21	1.7908	0.0400	0.0	0.0	0.0	1.42E-10	5.52E-09	5.95E-08
6	3	71	72	16009.24	1	5585.07	1.7905	0.0400	0.0	0.0	0.0	0.0	3.18E-09	3.19E-08
12	9	13	14	18712.02	1	5585.60	1.7903	0.0528	0.0	0.0	0.0	0.0	1.00E-09	1.55E-08
13	10	6	5	20301.37	1	5585.86	1.7902	0.0621	0.0	0.0	0.0	0.0	1.50E-10	2.99E-09
13	10	58	57	25959.75	1	5585.95	1.7902	0.0400	0.0	0.0	0.0	0.0	0.0	5.34E-10
3	0	82	83	12540.93	2	5586.20	1.7901	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-10
10	7	21	22	15013.62	2	5587.63	1.7897	0.0435	0.0	0.0	0.0	0.0	2.83E-10	2.42E-09
4	1	84	85	15739.73	1	5587.83	1.7896	0.0400	0.0	0.0	0.0	0.0	8.11E-10	7.79E-09
9	6	47	48	16704.66	1	5587.94	1.7896	0.0400	0.0	0.0	0.0	1.49E-10	6.14E-09	6.89E-08
9	6	33	34	14260.39	2	5588.09	1.7895	0.0400	0.0	0.0	0.0	0.0	5.22E-10	3.95E-09
13	10	7	6	20322.34	1	5588.62	1.7894	0.0597	0.0	0.0	0.0	0.0	1.74E-10	3.47E-09
13	10	57	56	25765.06	1	5588.77	1.7893	0.0400	0.0	0.0	0.0	0.0	0.0	6.07E-10
5	2	68	69	12755.13	2	5589.13	1.7892	0.0400	0.0	0.0	0.0	0.0	3.48E-10	2.07E-09
3	0	90	91	15663.33	1	5589.30	1.7891	0.0400	0.0	0.0	0.0	0.0	2.13E-10	2.02E-09
11	8	26	27	17752.52	1	5589.55	1.7891	0.0400	0.0	0.0	0.0	0.0	3.13E-09	4.15E-08
4	1	75	76	12563.62	2	5589.96	1.7889	0.0400	0.0	0.0	0.0	0.0	1.68E-10	9.71E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	43	44	13683.11	2	5589.97	1.7889	0.0400	0.0	0.0	0.0	0.0	7.01E-10	4.84E-09
12	9	12	13	18662.66	1	5590.48	1.7888	0.0540	0.0	0.0	0.0	0.0	9.86E-10	1.51E-08
7	4	52	53	13259.72	2	5590.70	1.7887	0.0400	0.0	0.0	0.0	0.0	7.06E-10	4.56E-09
12	9	77	76	28460.70	1	5590.77	1.7887	0.0400	0.0	0.0	0.0	0.0	0.0	9.15E-11
10	7	37	38	17103.34	1	5590.79	1.7887	0.0400	0.0	0.0	0.0	1.22E-10	5.55E-09	6.63E-08
13	10	8	7	20346.80	1	5591.27	1.7885	0.0574	0.0	0.0	0.0	0.0	1.96E-10	3.93E-09
13	10	56	55	25573.64	1	5591.47	1.7884	0.0400	0.0	0.0	0.0	0.0	0.0	6.89E-10
7	4	63	64	16014.55	1	5592.53	1.7881	0.0400	0.0	0.0	0.0	1.54E-10	5.39E-09	5.41E-08
6	3	60	61	12897.64	2	5592.96	1.7880	0.0400	0.0	0.0	0.0	0.0	5.88E-10	3.58E-09
10	7	20	21	14938.02	2	5593.11	1.7879	0.0447	0.0	0.0	0.0	0.0	2.94E-10	2.48E-09
8	5	55	56	16247.05	1	5593.51	1.7878	0.0400	0.0	0.0	0.0	1.80E-10	6.66E-09	6.94E-08
13	10	9	8	20374.75	1	5593.82	1.7877	0.0550	0.0	0.0	0.0	0.0	2.17E-10	4.37E-09
13	10	55	54	25385.48	1	5594.06	1.7876	0.0400	0.0	0.0	0.0	0.0	0.0	7.79E-10
5	2	77	78	15657.13	1	5594.29	1.7875	0.0400	0.0	0.0	0.0	0.0	2.22E-09	2.10E-08
9	6	32	33	14142.96	2	5594.73	1.7874	0.0400	0.0	0.0	0.0	0.0	5.71E-10	4.24E-09
12	9	11	12	18616.82	1	5595.25	1.7872	0.0542	0.0	0.0	0.0	0.0	9.59E-10	1.46E-08
12	9	76	75	28203.20	1	5595.73	1.7871	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-10
11	8	25	26	17656.73	1	5595.78	1.7871	0.0400	0.0	0.0	0.0	0.0	3.33E-09	4.36E-08
6	3	70	71	15749.16	1	5595.87	1.7870	0.0400	0.0	0.0	0.0	1.23E-10	4.05E-09	3.90E-08
13	10	10	9	20406.19	1	5596.26	1.7869	0.0547	0.0	0.0	0.0	0.0	2.36E-10	4.78E-09
9	6	46	47	16532.89	1	5596.33	1.7869	0.0400	0.0	0.0	0.0	1.80E-10	7.14E-09	7.79E-08
13	10	54	53	25200.61	1	5596.54	1.7868	0.0400	0.0	0.0	0.0	0.0	0.0	8.78E-10
3	0	81	82	12248.70	2	5597.45	1.7865	0.0400	0.0	0.0	0.0	0.0	0.0	3.07E-10
8	5	42	43	13530.48	2	5597.57	1.7865	0.0400	0.0	0.0	0.0	0.0	7.99E-10	5.38E-09
10	7	36	37	16967.88	1	5598.16	1.7863	0.0400	0.0	0.0	0.0	1.41E-10	6.19E-09	7.25E-08
10	7	19	20	14865.84	2	5598.48	1.7862	0.0458	0.0	0.0	0.0	0.0	3.03E-10	2.52E-09
13	10	11	10	20441.12	1	5598.60	1.7862	0.0545	0.0	0.0	0.0	0.0	2.54E-10	5.17E-09
13	10	53	52	25019.01	1	5598.91	1.7861	0.0400	0.0	0.0	0.0	0.0	0.0	9.87E-10
5	2	67	68	12513.40	2	5599.08	1.7860	0.0400	0.0	0.0	0.0	0.0	4.35E-10	2.49E-09
7	4	51	52	13075.18	2	5599.16	1.7860	0.0400	0.0	0.0	0.0	0.0	8.34E-10	5.23E-09
4	1	83	84	15431.03	1	5599.92	1.7857	0.0400	0.0	0.0	0.0	0.0	1.08E-09	9.92E-09
12	9	10	11	18574.50	1	5599.93	1.7857	0.0545	0.0	0.0	0.0	0.0	9.23E-10	1.40E-08
4	1	74	75	12296.62	2	5600.57	1.7855	0.0400	0.0	0.0	0.0	0.0	2.16E-10	1.19E-09
12	9	75	74	27948.82	1	5600.57	1.7855	0.0400	0.0	0.0	0.0	0.0	0.0	1.31E-10
13	10	12	11	20479.54	1	5600.83	1.7854	0.0542	0.0	0.0	0.0	0.0	2.69E-10	5.52E-09
13	10	52	51	24840.71	1	5601.16	1.7853	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-09
9	6	31	32	14028.93	2	5601.27	1.7853	0.0400	0.0	0.0	0.0	0.0	6.21E-10	4.54E-09
11	8	24	25	17564.47	1	5601.92	1.7851	0.0400	0.0	0.0	0.0	0.0	3.54E-09	4.55E-08
3	0	89	90	15332.04	1	5601.98	1.7851	0.0400	0.0	0.0	0.0	0.0	2.90E-10	2.61E-09
6	3	59	60	12684.50	2	5602.17	1.7850	0.0400	0.0	0.0	0.0	0.0	7.13E-10	4.20E-09
7	4	62	63	15783.89	1	5602.54	1.7849	0.0400	0.0	0.0	0.0	2.01E-10	6.65E-09	6.43E-08
8	5	54	55	16045.84	1	5602.72	1.7848	0.0400	0.0	0.0	0.0	2.27E-10	8.00E-09	8.07E-08
13	10	13	12	20521.44	1	5602.95	1.7848	0.0540	0.0	0.0	0.0	0.0	2.83E-10	5.84E-09
13	10	51	50	24665.70	1	5603.30	1.7847	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-09
10	7	18	19	14797.07	2	5603.77	1.7845	0.0470	0.0	0.0	0.0	0.0	3.10E-10	2.56E-09
12	9	9	10	18535.70	1	5604.50	1.7843	0.0547	0.0	0.0	0.0	0.0	8.78E-10	1.32E-08
9	6	45	46	16364.60	1	5604.63	1.7842	0.0400	0.0	0.0	0.0	2.18E-10	8.27E-09	8.79E-08
13	10	14	13	20566.83	1	5604.97	1.7841	0.0528	0.0	0.0	0.0	0.0	2.95E-10	6.13E-09
8	5	41	42	13381.23	2	5605.07	1.7841	0.0400	0.0	0.0	0.0	0.0	9.07E-10	5.97E-09
12	9	74	73	27697.55	1	5605.29	1.7840	0.0400	0.0	0.0	0.0	0.0	0.0	1.56E-10
13	10	50	49	24494.01	1	5605.33	1.7840	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-09
10	7	35	36	16835.92	1	5605.44	1.7840	0.0400	0.0	0.0	0.0	1.62E-10	6.88E-09	7.89E-08
5	2	76	77	15374.38	1	5605.69	1.7839	0.0400	0.0	0.0	0.0	0.0	2.89E-09	2.62E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	3	69	70	15492.44	1	5606.59	1.7836	0.0400	0.0	0.0	0.0	1.66E-10	5.13E-09	4.74E-08
13	10	15	14	20615.70	1	5606.87	1.7835	0.0517	0.0	0.0	0.0	0.0	3.04E-10	6.38E-09
13	10	49	48	24325.62	1	5607.25	1.7834	0.0400	0.0	0.0	0.0	0.0	0.0	1.53E-09
7	4	50	51	12893.99	2	5607.52	1.7833	0.0400	0.0	0.0	0.0	0.0	9.81E-10	5.97E-09
9	6	30	31	13918.32	2	5607.72	1.7833	0.0400	0.0	0.0	0.0	0.0	6.74E-10	4.83E-09
11	8	23	24	17475.72	1	5607.96	1.7832	0.0412	0.0	0.0	0.0	0.0	3.73E-09	4.74E-08
3	0	80	81	11959.70	2	5608.62	1.7830	0.0400	0.0	0.0	0.0	0.0	0.0	3.85E-10
13	10	16	15	20668.05	1	5608.68	1.7830	0.0505	0.0	0.0	0.0	0.0	3.12E-10	6.59E-09
10	7	17	18	14731.73	2	5608.95	1.7829	0.0482	0.0	0.0	0.0	0.0	3.15E-10	2.58E-09
5	2	66	67	12274.96	2	5608.95	1.7829	0.0400	0.0	0.0	0.0	0.0	5.42E-10	2.99E-09
12	9	8	9	18500.42	1	5608.96	1.7829	0.0550	0.0	0.0	0.0	0.0	8.24E-10	1.23E-08
13	10	48	47	24160.56	1	5609.06	1.7828	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-09
12	9	73	72	27449.42	1	5609.90	1.7826	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-10
13	10	17	16	20723.88	1	5610.37	1.7824	0.0493	0.0	0.0	0.0	0.0	3.17E-10	6.76E-09
13	10	47	46	23998.83	1	5610.75	1.7823	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-09
4	1	73	74	12032.87	2	5611.09	1.7822	0.0400	0.0	0.0	0.0	0.0	2.75E-10	1.46E-09
6	3	58	59	12474.70	2	5611.30	1.7821	0.0400	0.0	0.0	0.0	0.0	8.65E-10	4.93E-09
8	5	53	54	15848.09	1	5611.83	1.7819	0.0400	0.0	0.0	0.0	2.85E-10	9.57E-09	9.36E-08
4	1	82	83	15125.61	1	5611.91	1.7819	0.0400	0.0	0.0	0.0	0.0	1.44E-09	1.26E-08
13	10	18	17	20783.18	1	5611.96	1.7819	0.0482	0.0	0.0	0.0	0.0	3.20E-10	6.89E-09
13	10	46	45	23840.43	1	5612.33	1.7818	0.0400	0.0	0.0	0.0	0.0	0.0	2.05E-09
7	4	61	62	15556.63	1	5612.46	1.7818	0.0400	0.0	0.0	0.0	2.61E-10	8.17E-09	7.63E-08
8	5	40	41	13235.37	2	5612.48	1.7817	0.0400	0.0	0.0	0.0	0.0	1.03E-09	6.59E-09
10	7	34	35	16707.46	1	5612.61	1.7817	0.0400	0.0	0.0	0.0	1.85E-10	7.62E-09	8.55E-08
9	6	44	45	16199.77	1	5612.83	1.7816	0.0400	0.0	0.0	0.0	2.61E-10	9.55E-09	9.88E-08
12	9	7	8	18468.66	1	5613.33	1.7815	0.0574	0.0	0.0	0.0	0.0	7.61E-10	1.13E-08
13	10	19	18	20845.96	1	5613.44	1.7814	0.0470	0.0	0.0	0.0	0.0	3.21E-10	6.98E-09
13	10	45	44	23685.38	1	5613.81	1.7813	0.0400	0.0	0.0	0.0	0.0	0.0	2.25E-09
11	8	22	23	17390.49	1	5613.89	1.7813	0.0423	0.0	0.0	0.0	0.0	3.92E-09	4.90E-08
10	7	16	17	14669.81	2	5614.05	1.7812	0.0493	0.0	0.0	0.0	0.0	3.19E-10	2.58E-09
9	6	29	30	13811.11	2	5614.08	1.7812	0.0400	0.0	0.0	0.0	0.0	7.27E-10	5.13E-09
12	9	72	71	27204.43	1	5614.40	1.7811	0.0400	0.0	0.0	0.0	0.0	0.0	2.20E-10
3	0	88	89	15003.98	1	5614.56	1.7811	0.0400	0.0	0.0	0.0	0.0	3.96E-10	3.38E-09
13	10	20	19	20912.20	1	5614.82	1.7810	0.0458	0.0	0.0	0.0	0.0	3.20E-10	7.03E-09
13	10	44	43	23533.68	1	5615.17	1.7809	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-09
7	4	49	50	12716.17	2	5615.79	1.7807	0.0400	0.0	0.0	0.0	0.0	1.15E-09	6.80E-09
13	10	21	20	20981.92	1	5616.08	1.7806	0.0447	0.0	0.0	0.0	0.0	3.17E-10	7.05E-09
13	10	43	42	23385.33	1	5616.42	1.7805	0.0400	0.0	0.0	0.0	0.0	0.0	2.67E-09
5	2	75	76	15094.96	1	5617.00	1.7803	0.0400	0.0	0.0	0.0	1.34E-10	3.75E-09	3.25E-08
6	3	68	69	15239.10	1	5617.20	1.7802	0.0400	0.0	0.0	0.0	2.23E-10	6.48E-09	5.75E-08
13	10	22	21	21055.10	1	5617.24	1.7802	0.0435	0.0	0.0	0.0	0.0	3.12E-10	7.03E-09
13	10	42	41	23240.34	1	5617.55	1.7801	0.0400	0.0	0.0	0.0	0.0	0.0	2.89E-09
12	9	6	7	18440.43	1	5617.58	1.7801	0.0597	0.0	0.0	0.0	0.0	6.90E-10	1.02E-08
13	10	23	22	21131.74	1	5618.29	1.7799	0.0423	0.0	0.0	0.0	0.0	3.06E-10	6.97E-09
13	10	41	40	23098.72	1	5618.58	1.7798	0.0400	0.0	0.0	0.0	0.0	1.00E-10	3.13E-09
5	2	65	66	12039.83	2	5618.74	1.7798	0.0400	0.0	0.0	0.0	0.0	6.72E-10	3.57E-09
12	9	71	70	26962.59	1	5618.78	1.7797	0.0400	0.0	0.0	0.0	0.0	0.0	2.60E-10
10	7	15	16	14611.32	2	5619.04	1.7797	0.0505	0.0	0.0	0.0	0.0	3.20E-10	2.57E-09
13	10	24	23	21211.84	1	5619.23	1.7796	0.0412	0.0	0.0	0.0	0.0	2.99E-10	6.88E-09
13	10	40	39	22960.48	1	5619.50	1.7795	0.0400	0.0	0.0	0.0	0.0	1.11E-10	3.37E-09
10	7	33	34	16582.50	1	5619.68	1.7795	0.0400	0.0	0.0	0.0	2.10E-10	8.40E-09	9.24E-08
3	0	79	80	11673.92	2	5619.70	1.7795	0.0400	0.0	0.0	0.0	0.0	0.0	4.81E-10
11	8	21	22	17308.79	1	5619.72	1.7794	0.0435	0.0	0.0	0.0	0.0	4.09E-09	5.05E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	39	40	13092.91	2	5619.81	1.7794	0.0400	0.0	0.0	0.0	0.0	1.15E-09	7.26E-09
13	10	25	24	21295.39	1	5620.07	1.7793	0.0400	0.0	0.0	0.0	0.0	2.90E-10	6.77E-09
13	10	39	38	22825.61	1	5620.30	1.7793	0.0400	0.0	0.0	0.0	0.0	1.21E-10	3.62E-09
6	3	57	58	12268.22	2	5620.33	1.7793	0.0400	0.0	0.0	0.0	0.0	1.05E-09	5.76E-09
9	6	28	29	13707.32	2	5620.34	1.7793	0.0400	0.0	0.0	0.0	0.0	7.85E-10	5.44E-09
13	10	26	25	21382.39	1	5620.79	1.7791	0.0400	0.0	0.0	0.0	0.0	2.79E-10	6.62E-09
8	5	52	53	15653.78	1	5620.84	1.7791	0.0400	0.0	0.0	0.0	3.56E-10	1.14E-08	1.08E-07
9	6	43	44	16038.43	1	5620.93	1.7791	0.0400	0.0	0.0	0.0	3.12E-10	1.10E-08	1.11E-07
13	10	38	37	22694.13	1	5621.00	1.7790	0.0400	0.0	0.0	0.0	0.0	1.32E-10	3.87E-09
13	10	27	26	21472.84	1	5621.41	1.7789	0.0400	0.0	0.0	0.0	0.0	2.68E-10	6.45E-09
4	1	72	73	11772.40	2	5621.53	1.7789	0.0400	0.0	0.0	0.0	0.0	3.51E-10	1.79E-09
13	10	37	36	22566.05	1	5621.59	1.7789	0.0400	0.0	0.0	0.0	0.0	1.44E-10	4.13E-09
12	9	5	6	18415.73	1	5621.74	1.7788	0.0621	0.0	0.0	0.0	0.0	6.10E-10	9.00E-09
13	10	28	27	21566.74	1	5621.92	1.7788	0.0400	0.0	0.0	0.0	0.0	2.56E-10	6.26E-09
13	10	36	35	22441.36	1	5622.06	1.7787	0.0400	0.0	0.0	0.0	0.0	1.56E-10	4.38E-09
7	4	60	61	15332.79	1	5622.28	1.7786	0.0400	0.0	0.0	0.0	3.37E-10	1.00E-08	9.02E-08
13	10	29	28	21664.07	1	5622.32	1.7786	0.0400	0.0	0.0	0.0	0.0	2.44E-10	6.05E-09
13	10	35	34	22320.07	1	5622.43	1.7786	0.0400	0.0	0.0	0.0	0.0	1.69E-10	4.64E-09
13	10	30	29	21764.84	1	5622.61	1.7785	0.0400	0.0	0.0	0.0	0.0	2.31E-10	5.82E-09
13	10	34	33	22202.19	1	5622.68	1.7785	0.0400	0.0	0.0	0.0	0.0	1.81E-10	4.89E-09
13	10	31	30	21869.04	1	5622.79	1.7785	0.0400	0.0	0.0	0.0	0.0	2.19E-10	5.61E-09
13	10	33	32	22087.72	1	5622.83	1.7785	0.0400	0.0	0.0	0.0	0.0	1.94E-10	5.14E-09
13	10	32	31	21976.67	1	5622.87	1.7785	0.0400	0.0	0.0	0.0	0.0	2.06E-10	5.38E-09
12	9	70	69	26723.91	1	5623.04	1.7784	0.0400	0.0	0.0	0.0	0.0	0.0	3.07E-10
4	1	81	82	14823.48	1	5623.82	1.7782	0.0400	0.0	0.0	0.0	0.0	1.92E-09	1.59E-08
10	7	14	15	14556.26	2	5623.94	1.7781	0.0517	0.0	0.0	0.0	0.0	3.19E-10	2.54E-09
7	4	48	49	12541.73	2	5623.98	1.7781	0.0400	0.0	0.0	0.0	0.0	1.34E-09	7.73E-09
11	8	20	21	17230.61	1	5625.45	1.7776	0.0447	0.0	0.0	0.0	0.0	4.25E-09	5.18E-08
12	9	4	5	18394.55	1	5625.79	1.7775	0.0645	0.0	0.0	0.0	0.0	5.23E-10	7.69E-09
9	6	27	28	13606.95	2	5626.51	1.7773	0.0400	0.0	0.0	0.0	0.0	8.43E-10	5.75E-09
10	7	32	33	16461.06	1	5626.66	1.7773	0.0400	0.0	0.0	0.0	2.37E-10	9.22E-09	9.95E-08
8	5	38	39	12953.84	2	5627.03	1.7771	0.0400	0.0	0.0	0.0	0.0	1.30E-09	7.97E-09
3	0	87	88	14679.17	1	5627.06	1.7771	0.0400	0.0	0.0	0.0	0.0	5.39E-10	4.36E-09
12	9	69	68	26488.41	1	5627.20	1.7771	0.0400	0.0	0.0	0.0	0.0	0.0	3.60E-10
6	3	67	68	14989.13	1	5627.72	1.7769	0.0400	0.0	0.0	0.0	2.98E-10	8.16E-09	6.96E-08
5	2	74	75	14818.89	1	5628.22	1.7768	0.0400	0.0	0.0	0.0	1.85E-10	4.85E-09	4.02E-08
5	2	64	65	11808.00	2	5628.43	1.7767	0.0400	0.0	0.0	0.0	0.0	8.31E-10	4.25E-09
10	7	13	14	14504.62	2	5628.75	1.7766	0.0528	0.0	0.0	0.0	0.0	3.16E-10	2.49E-09
9	6	42	43	15880.58	1	5628.93	1.7765	0.0400	0.0	0.0	0.0	3.71E-10	1.26E-08	1.24E-07
6	3	56	57	12065.10	2	5629.27	1.7764	0.0400	0.0	0.0	0.0	0.0	1.26E-09	6.72E-09
12	9	3	4	18376.90	1	5629.74	1.7763	0.0676	0.0	0.0	0.0	0.0	4.29E-10	6.29E-09
8	5	51	52	15462.93	1	5629.76	1.7763	0.0400	0.0	0.0	0.0	4.42E-10	1.35E-08	1.25E-07
3	0	78	79	11391.37	2	5630.70	1.7760	0.0400	0.0	0.0	0.0	0.0	1.25E-10	5.99E-10
11	8	19	20	17155.96	1	5631.08	1.7759	0.0458	0.0	0.0	0.0	0.0	4.39E-09	5.29E-08
12	9	68	67	26256.09	1	5631.23	1.7758	0.0400	0.0	0.0	0.0	0.0	0.0	4.22E-10
4	1	71	72	11515.21	2	5631.87	1.7756	0.0400	0.0	0.0	0.0	0.0	4.45E-10	2.18E-09
7	4	59	60	15112.37	1	5632.00	1.7756	0.0400	0.0	0.0	0.0	4.34E-10	1.22E-08	1.06E-07
7	4	47	48	12370.66	2	5632.07	1.7755	0.0400	0.0	0.0	0.0	1.07E-10	1.56E-09	8.75E-09
9	6	26	27	13510.01	2	5632.58	1.7754	0.0400	0.0	0.0	0.0	0.0	9.01E-10	6.06E-09
10	7	12	13	14456.43	2	5633.45	1.7751	0.0540	0.0	0.0	0.0	0.0	3.10E-10	2.42E-09
10	7	31	32	16343.14	1	5633.53	1.7751	0.0400	0.0	0.0	0.0	2.66E-10	1.01E-08	1.07E-07
12	9	2	3	18362.78	1	5633.58	1.7751	0.0707	0.0	0.0	0.0	0.0	3.29E-10	4.81E-09
8	5	37	38	12818.19	2	5634.17	1.7749	0.0400	0.0	0.0	0.0	0.0	1.45E-09	8.71E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
12	9	67	66	26026.96	1	5635.15	1.7746	0.0400	0.0	0.0	0.0	0.0	0.0	4.93E-10
4	1	80	81	14524.67	1	5635.63	1.7744	0.0400	0.0	0.0	0.0	1.04E-10	2.54E-09	2.01E-08
11	8	18	19	17084.85	1	5636.61	1.7741	0.0470	0.0	0.0	0.0	0.0	4.50E-09	5.37E-08
9	6	41	42	15726.23	1	5636.83	1.7740	0.0400	0.0	0.0	0.0	4.39E-10	1.43E-08	1.38E-07
12	9	1	2	18352.19	1	5637.32	1.7739	0.0738	0.0	0.0	0.0	0.0	2.23E-10	3.26E-09
5	2	63	64	11579.50	2	5638.03	1.7737	0.0400	0.0	0.0	0.0	0.0	1.02E-09	5.05E-09
10	7	11	12	14411.66	2	5638.07	1.7737	0.0542	0.0	0.0	0.0	0.0	3.01E-10	2.34E-09
6	3	55	56	11865.33	2	5638.12	1.7736	0.0400	0.0	0.0	0.0	1.17E-10	1.51E-09	7.81E-09
6	3	66	67	14742.56	1	5638.15	1.7736	0.0400	0.0	0.0	0.0	3.97E-10	1.02E-08	8.39E-08
9	6	25	26	13416.50	2	5638.56	1.7735	0.0400	0.0	0.0	0.0	0.0	9.59E-10	6.35E-09
8	5	50	51	15275.54	1	5638.58	1.7735	0.0400	0.0	0.0	0.0	5.47E-10	1.60E-08	1.43E-07
12	9	66	65	25801.04	1	5638.96	1.7734	0.0400	0.0	0.0	0.0	0.0	0.0	5.74E-10
11	8	83	82	28255.82	1	5638.97	1.7734	0.0400	0.0	0.0	0.0	0.0	0.0	9.10E-11
5	2	73	74	14546.17	1	5639.35	1.7733	0.0400	0.0	0.0	0.0	2.54E-10	6.25E-09	4.96E-08
3	0	86	87	14357.63	1	5639.46	1.7732	0.0400	0.0	0.0	0.0	0.0	7.28E-10	5.61E-09
7	4	46	47	12202.98	2	5640.07	1.7730	0.0400	0.0	0.0	0.0	1.29E-10	1.81E-09	9.87E-09
10	7	30	31	16228.73	1	5640.31	1.7730	0.0400	0.0	0.0	0.0	2.98E-10	1.10E-08	1.14E-07
12	9	0	1	18345.12	1	5640.96	1.7727	0.0769	0.0	0.0	0.0	0.0	1.13E-10	1.65E-09
8	5	36	37	12685.95	2	5641.21	1.7727	0.0400	0.0	0.0	0.0	1.03E-10	1.61E-09	9.50E-09
3	0	77	78	11112.08	2	5641.61	1.7725	0.0400	0.0	0.0	0.0	0.0	1.62E-10	7.44E-10
7	4	58	59	14895.39	1	5641.63	1.7725	0.0400	0.0	0.0	0.0	5.58E-10	1.49E-08	1.25E-07
11	8	17	18	17017.28	1	5642.04	1.7724	0.0482	0.0	0.0	0.0	1.03E-10	4.59E-09	5.41E-08
4	1	70	71	11261.30	2	5642.13	1.7724	0.0400	0.0	0.0	0.0	0.0	5.63E-10	2.64E-09
10	7	10	11	14370.33	2	5642.58	1.7722	0.0545	0.0	0.0	0.0	0.0	2.90E-10	2.24E-09
12	9	65	64	25578.32	1	5642.65	1.7722	0.0400	0.0	0.0	0.0	0.0	0.0	6.67E-10
9	6	24	25	13326.42	2	5644.45	1.7717	0.0400	0.0	0.0	0.0	0.0	1.02E-09	6.63E-09
11	8	82	81	27977.05	1	5644.59	1.7716	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-10
9	6	40	41	15575.37	1	5644.64	1.7716	0.0400	0.0	0.0	0.0	5.17E-10	1.63E-08	1.53E-07
12	9	64	63	25358.84	1	5646.23	1.7711	0.0400	0.0	0.0	0.0	0.0	0.0	7.72E-10
6	3	54	55	11668.92	2	5646.88	1.7709	0.0400	0.0	0.0	0.0	1.47E-10	1.81E-09	9.05E-09
10	7	29	30	16117.86	1	5646.98	1.7709	0.0400	0.0	0.0	0.0	3.31E-10	1.19E-08	1.21E-07
10	7	9	10	14332.44	2	5647.00	1.7709	0.0547	0.0	0.0	0.0	0.0	2.76E-10	2.11E-09
8	5	49	50	15091.63	1	5647.30	1.7708	0.0400	0.0	0.0	0.0	6.74E-10	1.89E-08	1.64E-07
4	1	79	80	14229.17	1	5647.35	1.7707	0.0400	0.0	0.0	0.0	1.47E-10	3.35E-09	2.53E-08
11	8	16	17	16953.25	1	5647.36	1.7707	0.0493	0.0	0.0	0.0	1.06E-10	4.65E-09	5.43E-08
5	2	62	63	11354.33	2	5647.55	1.7707	0.0400	0.0	0.0	0.0	1.10E-10	1.26E-09	5.98E-09
12	9	1	0	18341.60	1	5647.91	1.7706	0.0769	0.0	0.0	0.0	0.0	1.16E-10	1.69E-09
7	4	45	46	12038.69	2	5647.97	1.7705	0.0400	0.0	0.0	0.0	1.55E-10	2.09E-09	1.11E-08
8	5	35	36	12557.12	2	5648.16	1.7705	0.0400	0.0	0.0	0.0	1.17E-10	1.79E-09	1.03E-08
6	3	65	66	14499.39	1	5648.48	1.7704	0.0400	0.0	0.0	0.0	5.26E-10	1.28E-08	1.01E-07
12	9	63	62	25142.58	1	5649.70	1.7700	0.0400	0.0	0.0	0.0	0.0	0.0	8.91E-10
11	8	81	80	27701.36	1	5650.10	1.7699	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-10
9	6	23	24	13239.77	2	5650.24	1.7698	0.0412	0.0	0.0	0.0	0.0	1.07E-09	6.88E-09
5	2	72	73	14276.81	1	5650.38	1.7698	0.0400	0.0	0.0	0.0	3.48E-10	8.02E-09	6.10E-08
7	4	57	58	14681.85	1	5651.16	1.7695	0.0400	0.0	0.0	0.0	7.15E-10	1.82E-08	1.47E-07
12	9	2	1	18345.12	1	5651.24	1.7695	0.0738	0.0	0.0	0.0	0.0	2.33E-10	3.40E-09
10	7	8	9	14297.99	2	5651.32	1.7695	0.0550	0.0	0.0	0.0	0.0	2.59E-10	1.97E-09
3	0	85	86	14039.36	1	5651.77	1.7694	0.0400	0.0	0.0	0.0	0.0	9.83E-10	7.20E-09
4	1	69	70	11010.69	2	5652.30	1.7692	0.0400	0.0	0.0	0.0	0.0	7.10E-10	3.20E-09
9	6	39	40	15428.02	1	5652.34	1.7692	0.0400	0.0	0.0	0.0	6.07E-10	1.84E-08	1.69E-07
3	0	76	77	10836.05	2	5652.43	1.7691	0.0400	0.0	0.0	0.0	0.0	2.10E-10	9.21E-10
11	8	15	16	16892.75	1	5652.58	1.7691	0.0505	0.0	0.0	0.0	1.08E-10	4.68E-09	5.41E-08
12	9	62	61	24929.57	1	5653.05	1.7690	0.0400	0.0	0.0	0.0	0.0	0.0	1.02E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	28	29	16010.51	1	5653.56	1.7688	0.0400	0.0	0.0	0.0	3.68E-10	1.29E-08	1.29E-07
12	9	3	2	18352.19	1	5654.45	1.7685	0.0707	0.0	0.0	0.0	0.0	3.51E-10	5.13E-09
8	5	34	35	12431.72	2	5655.02	1.7683	0.0400	0.0	0.0	0.0	1.33E-10	1.97E-09	1.12E-08
11	8	80	79	27428.76	1	5655.49	1.7682	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-10
10	7	7	8	14266.98	2	5655.55	1.7682	0.0574	0.0	0.0	0.0	0.0	2.39E-10	1.81E-09
6	3	53	54	11475.88	2	5655.55	1.7682	0.0400	0.0	0.0	0.0	1.83E-10	2.15E-09	1.05E-08
7	4	44	45	11877.80	2	5655.79	1.7681	0.0400	0.0	0.0	0.0	1.86E-10	2.40E-09	1.24E-08
8	5	48	49	14911.20	1	5655.93	1.7681	0.0400	0.0	0.0	0.0	8.26E-10	2.22E-08	1.87E-07
9	6	22	23	13156.57	2	5655.94	1.7681	0.0423	0.0	0.0	0.0	0.0	1.12E-09	7.12E-09
12	9	61	60	24719.80	1	5656.28	1.7679	0.0400	0.0	0.0	0.0	0.0	0.0	1.18E-09
5	2	61	62	11132.49	2	5656.97	1.7677	0.0400	0.0	0.0	0.0	1.42E-10	1.54E-09	7.07E-09
12	9	4	3	18362.78	1	5657.56	1.7675	0.0676	0.0	0.0	0.0	0.0	4.69E-10	6.86E-09
11	8	14	15	16835.81	1	5657.70	1.7675	0.0517	0.0	0.0	0.0	1.10E-10	4.67E-09	5.36E-08
6	3	64	65	14259.63	1	5658.72	1.7672	0.0400	0.0	0.0	0.0	6.94E-10	1.59E-08	1.21E-07
4	1	78	79	13937.00	1	5658.98	1.7671	0.0400	0.0	0.0	0.0	2.07E-10	4.40E-09	3.17E-08
12	9	60	59	24513.30	1	5659.41	1.7670	0.0400	0.0	0.0	0.0	0.0	0.0	1.34E-09
10	7	6	7	14239.42	2	5659.68	1.7669	0.0597	0.0	0.0	0.0	0.0	2.16E-10	1.63E-09
9	6	38	39	15284.19	1	5659.95	1.7668	0.0400	0.0	0.0	0.0	7.08E-10	2.08E-08	1.86E-07
10	7	27	28	15906.70	1	5660.03	1.7668	0.0400	0.0	0.0	0.0	4.06E-10	1.38E-08	1.37E-07
12	9	5	4	18376.90	1	5660.57	1.7666	0.0645	0.0	0.0	0.0	0.0	5.85E-10	8.57E-09
7	4	56	57	14471.76	1	5660.60	1.7666	0.0400	0.0	0.0	0.0	9.11E-10	2.20E-08	1.73E-07
11	8	79	78	27159.25	1	5660.76	1.7665	0.0400	0.0	0.0	0.0	0.0	0.0	1.99E-10
5	2	71	72	14010.82	1	5661.31	1.7664	0.0400	0.0	0.0	0.0	4.75E-10	1.03E-08	7.49E-08
9	6	21	22	13076.80	2	5661.54	1.7663	0.0435	0.0	0.0	0.0	0.0	1.17E-09	7.33E-09
8	5	33	34	12309.75	2	5661.79	1.7662	0.0400	0.0	0.0	0.0	1.51E-10	2.17E-09	1.20E-08
4	1	68	69	10763.38	2	5662.39	1.7660	0.0400	0.0	0.0	0.0	0.0	8.93E-10	3.87E-09
12	9	59	58	24310.07	1	5662.42	1.7660	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-09
11	8	13	14	16782.41	1	5662.72	1.7659	0.0528	0.0	0.0	0.0	1.10E-10	4.63E-09	5.26E-08
3	0	75	76	10563.28	2	5663.16	1.7658	0.0400	0.0	0.0	0.0	0.0	2.71E-10	1.14E-09
12	9	6	5	18394.55	1	5663.47	1.7657	0.0621	0.0	0.0	0.0	0.0	6.98E-10	1.03E-08
7	4	43	44	11720.32	2	5663.51	1.7657	0.0400	0.0	0.0	0.0	2.21E-10	2.75E-09	1.39E-08
10	7	5	6	14215.30	2	5663.71	1.7656	0.0621	0.0	0.0	0.0	0.0	1.91E-10	1.44E-09
3	0	84	85	13724.39	1	5663.99	1.7655	0.0400	0.0	0.0	0.0	0.0	1.32E-09	9.22E-09
6	3	52	53	11286.22	2	5664.13	1.7655	0.0400	0.0	0.0	0.0	2.28E-10	2.56E-09	1.20E-08
8	5	47	48	14734.27	1	5664.45	1.7654	0.0400	0.0	0.0	0.0	1.01E-09	2.59E-08	2.12E-07
12	9	58	57	24110.11	1	5665.32	1.7651	0.0400	0.0	0.0	0.0	0.0	0.0	1.76E-09
11	8	78	77	26892.85	1	5665.92	1.7649	0.0400	0.0	0.0	0.0	0.0	0.0	2.41E-10
12	9	7	6	18415.73	1	5666.26	1.7648	0.0597	0.0	0.0	0.0	0.0	8.06E-10	1.19E-08
5	2	60	61	10914.00	2	5666.31	1.7648	0.0400	0.0	0.0	0.0	1.83E-10	1.88E-09	8.32E-09
10	7	26	27	15806.43	1	5666.41	1.7648	0.0400	0.0	0.0	0.0	4.46E-10	1.48E-08	1.44E-07
9	6	20	21	13000.48	2	5667.04	1.7646	0.0447	0.0	0.0	0.0	0.0	1.21E-09	7.51E-09
9	6	37	38	15143.88	1	5667.46	1.7645	0.0400	0.0	0.0	0.0	8.21E-10	2.33E-08	2.04E-07
11	8	12	13	16732.56	1	5667.63	1.7644	0.0540	0.0	0.0	0.0	1.10E-10	4.55E-09	5.13E-08
10	7	4	5	14194.62	2	5667.65	1.7644	0.0645	0.0	0.0	0.0	0.0	1.64E-10	1.23E-09
12	9	57	56	23913.44	1	5668.10	1.7643	0.0400	0.0	0.0	0.0	0.0	0.0	2.01E-09
8	5	32	33	12191.21	2	5668.46	1.7641	0.0400	0.0	0.0	0.0	1.70E-10	2.38E-09	1.29E-08
6	3	63	64	14023.30	1	5668.86	1.7640	0.0400	0.0	0.0	0.0	9.12E-10	1.98E-08	1.45E-07
12	9	8	7	18440.43	1	5668.95	1.7640	0.0574	0.0	0.0	0.0	0.0	9.10E-10	1.35E-08
7	4	55	56	14265.13	1	5669.94	1.7637	0.0400	0.0	0.0	0.0	1.16E-09	2.66E-08	2.02E-07
4	1	77	78	13648.17	1	5670.51	1.7635	0.0400	0.0	0.0	0.0	2.91E-10	5.77E-09	3.97E-08
12	9	56	55	23720.06	1	5670.77	1.7634	0.0400	0.0	0.0	0.0	0.0	0.0	2.28E-09
11	8	77	76	26629.57	1	5670.96	1.7634	0.0400	0.0	0.0	0.0	0.0	0.0	2.90E-10
7	4	42	43	11566.25	2	5671.14	1.7633	0.0400	0.0	0.0	0.0	2.62E-10	3.14E-09	1.55E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	3	4	14177.38	2	5671.48	1.7632	0.0676	0.0	0.0	0.0	0.0	1.34E-10	1.00E-09
12	9	9	8	18468.66	1	5671.53	1.7632	0.0550	0.0	0.0	0.0	0.0	1.01E-09	1.50E-08
5	2	70	71	13748.23	1	5672.15	1.7630	0.0400	0.0	0.0	0.0	6.45E-10	1.31E-08	9.16E-08
4	1	67	68	10519.39	2	5672.38	1.7629	0.0400	0.0	0.0	0.0	1.20E-10	1.12E-09	4.66E-09
11	8	11	12	16686.27	1	5672.44	1.7629	0.0542	0.0	0.0	0.0	1.08E-10	4.43E-09	4.96E-08
9	6	19	20	12927.62	2	5672.45	1.7629	0.0458	0.0	0.0	0.0	0.0	1.25E-09	7.65E-09
6	3	51	52	11099.95	2	5672.62	1.7629	0.0400	0.0	0.0	0.0	2.82E-10	3.02E-09	1.38E-08
10	7	25	26	15709.71	1	5672.68	1.7628	0.0400	0.0	0.0	0.0	4.87E-10	1.58E-08	1.52E-07
8	5	46	47	14560.82	1	5672.88	1.7628	0.0400	0.0	0.0	0.0	1.22E-09	3.02E-08	2.41E-07
12	9	55	54	23529.98	1	5673.33	1.7626	0.0400	0.0	0.0	0.0	0.0	0.0	2.58E-09
3	0	74	75	10293.79	2	5673.81	1.7625	0.0400	0.0	0.0	0.0	0.0	3.48E-10	1.40E-09
12	9	10	9	18500.42	1	5674.01	1.7624	0.0547	0.0	0.0	0.0	0.0	1.10E-09	1.64E-08
9	6	36	37	15007.09	1	5674.87	1.7622	0.0400	0.0	0.0	0.0	9.49E-10	2.61E-08	2.23E-07
8	5	31	32	12076.10	2	5675.03	1.7621	0.0400	0.0	0.0	0.0	1.91E-10	2.59E-09	1.38E-08
10	7	2	3	14163.60	2	5675.22	1.7620	0.0707	0.0	0.0	0.0	0.0	1.03E-10	7.68E-10
5	2	59	60	10698.87	2	5675.55	1.7619	0.0400	0.0	0.0	0.0	2.34E-10	2.28E-09	9.77E-09
12	9	54	53	23343.22	1	5675.78	1.7619	0.0400	0.0	0.0	0.0	0.0	0.0	2.91E-09
11	8	76	75	26369.43	1	5675.88	1.7618	0.0400	0.0	0.0	0.0	0.0	0.0	3.49E-10
3	0	83	84	13412.71	1	5676.12	1.7618	0.0400	0.0	0.0	0.0	0.0	1.77E-09	1.18E-08
12	9	11	10	18535.70	1	5676.38	1.7617	0.0545	0.0	0.0	0.0	0.0	1.18E-09	1.77E-08
11	8	10	11	16643.52	1	5677.15	1.7614	0.0545	0.0	0.0	0.0	1.05E-10	4.27E-09	4.74E-08
9	6	18	19	12858.20	2	5677.77	1.7613	0.0470	0.0	0.0	0.0	0.0	1.28E-09	7.76E-09
12	9	53	52	23159.78	1	5678.11	1.7611	0.0400	0.0	0.0	0.0	0.0	1.04E-10	3.28E-09
12	9	12	11	18574.50	1	5678.64	1.7610	0.0542	0.0	0.0	0.0	0.0	1.25E-09	1.89E-08
7	4	41	42	11415.59	2	5678.68	1.7610	0.0400	0.0	0.0	0.0	3.09E-10	3.57E-09	1.72E-08
10	7	24	25	15616.54	1	5678.85	1.7609	0.0400	0.0	0.0	0.0	5.29E-10	1.68E-08	1.59E-07
10	7	1	2	14153.26	2	5678.87	1.7609	0.0738	0.0	0.0	0.0	0.0	0.0	5.20E-10
6	3	62	63	13790.39	1	5678.91	1.7609	0.0400	0.0	0.0	0.0	1.19E-09	2.45E-08	1.72E-07
7	4	54	55	14061.97	1	5679.18	1.7608	0.0400	0.0	0.0	0.0	1.46E-09	3.20E-08	2.35E-07
12	9	52	51	22979.66	1	5680.33	1.7605	0.0400	0.0	0.0	0.0	0.0	1.20E-10	3.68E-09
11	8	75	74	26112.42	1	5680.69	1.7604	0.0400	0.0	0.0	0.0	0.0	0.0	4.18E-10
12	9	13	12	18616.82	1	5680.80	1.7603	0.0540	0.0	0.0	0.0	0.0	1.31E-09	2.00E-08
6	3	50	51	10917.06	2	5681.02	1.7602	0.0400	0.0	0.0	0.0	3.47E-10	3.56E-09	1.58E-08
8	5	45	46	14390.88	1	5681.22	1.7602	0.0400	0.0	0.0	0.0	1.48E-09	3.51E-08	2.72E-07
8	5	30	31	11964.44	2	5681.52	1.7601	0.0400	0.0	0.0	0.0	2.13E-10	2.81E-09	1.48E-08
11	8	9	10	16604.34	1	5681.75	1.7600	0.0547	0.0	0.0	0.0	1.01E-10	4.06E-09	4.48E-08
4	1	76	77	13362.69	1	5681.95	1.7600	0.0400	0.0	0.0	0.0	4.07E-10	7.53E-09	4.95E-08
9	6	35	36	14873.83	1	5682.18	1.7599	0.0400	0.0	0.0	0.0	1.09E-09	2.90E-08	2.43E-07
4	1	66	67	10278.73	2	5682.28	1.7599	0.0400	0.0	0.0	0.0	1.58E-10	1.39E-09	5.59E-09
10	7	0	1	14146.36	2	5682.41	1.7598	0.0769	0.0	0.0	0.0	0.0	0.0	2.64E-10
12	9	51	50	22802.87	1	5682.44	1.7598	0.0400	0.0	0.0	0.0	0.0	1.38E-10	4.12E-09
12	9	14	13	18662.66	1	5682.85	1.7597	0.0528	0.0	0.0	0.0	0.0	1.37E-09	2.10E-08
5	2	69	70	13489.02	1	5682.90	1.7597	0.0400	0.0	0.0	0.0	8.72E-10	1.66E-08	1.12E-07
9	6	17	18	12792.23	2	5682.99	1.7596	0.0482	0.0	0.0	0.0	0.0	1.30E-09	7.82E-09
10	7	89	88	28169.73	1	5683.57	1.7595	0.0400	0.0	0.0	0.0	0.0	0.0	8.29E-11
3	0	73	74	10027.60	2	5684.37	1.7592	0.0400	0.0	0.0	0.0	0.0	4.46E-10	1.72E-09
12	9	50	49	22629.43	1	5684.44	1.7592	0.0400	0.0	0.0	0.0	0.0	1.59E-10	4.59E-09
5	2	58	59	10487.10	2	5684.71	1.7591	0.0400	0.0	0.0	0.0	2.99E-10	2.77E-09	1.15E-08
12	9	15	14	18712.02	1	5684.80	1.7591	0.0517	0.0	0.0	0.0	0.0	1.41E-09	2.18E-08
10	7	23	24	15526.91	1	5684.92	1.7590	0.0412	0.0	0.0	0.0	5.71E-10	1.78E-08	1.65E-07
11	8	74	73	25858.57	1	5685.39	1.7589	0.0400	0.0	0.0	0.0	0.0	0.0	4.99E-10
7	4	40	41	11268.36	2	5686.13	1.7587	0.0400	0.0	0.0	0.0	3.62E-10	4.05E-09	1.90E-08
11	8	8	9	16568.71	1	5686.26	1.7586	0.0550	0.0	0.0	0.0	0.0	3.81E-09	4.19E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
12	9	49	48	22459.34	1	5686.32	1.7586	0.0400	0.0	0.0	0.0	0.0	1.81E-10	5.10E-09
12	9	16	15	18764.90	1	5686.63	1.7585	0.0505	0.0	0.0	0.0	0.0	1.45E-09	2.26E-08
10	7	67	66	21654.64	2	5687.01	1.7584	0.0400	0.0	0.0	0.0	0.0	0.0	9.25E-11
8	5	29	30	11856.22	2	5687.91	1.7581	0.0400	0.0	0.0	0.0	2.36E-10	3.04E-09	1.57E-08
12	9	48	47	22292.60	1	5688.09	1.7581	0.0400	0.0	0.0	0.0	0.0	2.06E-10	5.65E-09
9	6	16	17	12729.73	2	5688.11	1.7581	0.0493	0.0	0.0	0.0	0.0	1.32E-09	7.84E-09
3	0	82	83	13104.36	1	5688.15	1.7580	0.0400	0.0	0.0	0.0	1.36E-10	2.37E-09	1.50E-08
7	4	53	54	13862.29	1	5688.33	1.7580	0.0400	0.0	0.0	0.0	1.84E-09	3.84E-08	2.73E-07
12	9	17	16	18821.29	1	5688.36	1.7580	0.0493	0.0	0.0	0.0	0.0	1.47E-09	2.31E-08
6	3	61	62	13560.93	1	5688.86	1.7578	0.0400	0.0	0.0	0.0	1.55E-09	3.02E-08	2.05E-07
10	7	1	0	14142.91	2	5689.21	1.7577	0.0769	0.0	0.0	0.0	0.0	0.0	2.70E-10
6	3	49	50	10737.57	2	5689.33	1.7577	0.0400	0.0	0.0	0.0	4.25E-10	4.19E-09	1.81E-08
9	6	34	35	14744.11	1	5689.39	1.7577	0.0400	0.0	0.0	0.0	1.25E-09	3.22E-08	2.64E-07
8	5	44	45	14224.45	1	5689.45	1.7576	0.0400	0.0	0.0	0.0	1.78E-09	4.05E-08	3.06E-07
12	9	47	46	22129.23	1	5689.75	1.7575	0.0400	0.0	0.0	0.0	0.0	2.34E-10	6.24E-09
10	7	88	87	27869.71	1	5689.86	1.7575	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-10
11	8	73	72	25607.89	1	5689.96	1.7575	0.0400	0.0	0.0	0.0	0.0	0.0	5.95E-10
12	9	18	17	18881.18	1	5689.99	1.7575	0.0482	0.0	0.0	0.0	0.0	1.48E-09	2.36E-08
10	7	66	65	21433.60	2	5690.42	1.7573	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-10
11	8	7	8	16536.64	1	5690.65	1.7573	0.0574	0.0	0.0	0.0	0.0	3.52E-09	3.85E-08
10	7	22	23	15440.84	1	5690.89	1.7572	0.0423	0.0	0.0	0.0	6.13E-10	1.87E-08	1.71E-07
12	9	46	45	21969.23	1	5691.30	1.7571	0.0400	0.0	0.0	0.0	0.0	2.64E-10	6.87E-09
12	9	19	18	18944.59	1	5691.50	1.7570	0.0470	0.0	0.0	0.0	0.0	1.49E-09	2.39E-08
4	1	65	66	10041.41	2	5692.10	1.7568	0.0400	0.0	0.0	0.0	2.08E-10	1.73E-09	6.70E-09
10	7	2	1	14146.36	2	5692.46	1.7567	0.0738	0.0	0.0	0.0	0.0	0.0	5.44E-10
12	9	45	44	21812.60	1	5692.74	1.7566	0.0400	0.0	0.0	0.0	0.0	2.97E-10	7.53E-09
12	9	20	19	19011.50	1	5692.91	1.7566	0.0458	0.0	0.0	0.0	0.0	1.48E-09	2.40E-08
9	6	15	16	12670.68	2	5693.14	1.7565	0.0505	0.0	0.0	0.0	0.0	1.33E-09	7.80E-09
4	1	75	76	13080.58	1	5693.30	1.7565	0.0400	0.0	0.0	0.0	5.66E-10	9.80E-09	6.16E-08
7	4	39	40	11124.55	2	5693.49	1.7564	0.0400	0.0	0.0	0.0	4.23E-10	4.57E-09	2.10E-08
5	2	68	69	13233.23	1	5693.56	1.7564	0.0400	0.0	0.0	0.0	1.17E-09	2.11E-08	1.36E-07
10	7	65	64	21215.71	2	5693.72	1.7563	0.0400	0.0	0.0	0.0	0.0	0.0	1.24E-10
5	2	57	58	10278.70	2	5693.78	1.7563	0.0400	0.0	0.0	0.0	3.80E-10	3.36E-09	1.35E-08
12	9	44	43	21659.36	1	5694.07	1.7562	0.0400	0.0	0.0	0.0	0.0	3.32E-10	8.24E-09
8	5	28	29	11751.45	2	5694.20	1.7562	0.0400	0.0	0.0	0.0	2.61E-10	3.28E-09	1.67E-08
12	9	21	20	19081.91	1	5694.21	1.7562	0.0447	0.0	0.0	0.0	0.0	1.47E-09	2.41E-08
11	8	72	71	25360.39	1	5694.43	1.7561	0.0400	0.0	0.0	0.0	0.0	0.0	7.06E-10
3	0	72	73	9764.71	2	5694.84	1.7560	0.0400	0.0	0.0	0.0	0.0	5.70E-10	2.11E-09
11	8	6	7	16508.13	1	5694.95	1.7559	0.0597	0.0	0.0	0.0	0.0	3.19E-09	3.47E-08
12	9	43	42	21509.51	1	5695.28	1.7558	0.0400	0.0	0.0	0.0	0.0	3.71E-10	8.97E-09
12	9	22	21	19155.82	1	5695.40	1.7558	0.0435	0.0	0.0	0.0	0.0	1.45E-09	2.40E-08
10	7	3	2	14153.26	2	5695.61	1.7557	0.0707	0.0	0.0	0.0	0.0	1.10E-10	8.22E-10
10	7	87	86	27572.73	1	5696.03	1.7556	0.0400	0.0	0.0	0.0	0.0	0.0	1.28E-10
12	9	42	41	21363.06	1	5696.39	1.7555	0.0400	0.0	0.0	0.0	0.0	4.12E-10	9.74E-09
12	9	23	22	19233.23	1	5696.49	1.7555	0.0423	0.0	0.0	0.0	0.0	1.42E-09	2.38E-08
9	6	33	34	14617.93	1	5696.50	1.7555	0.0400	0.0	0.0	0.0	1.42E-09	3.55E-08	2.85E-07
10	7	21	22	15358.34	1	5696.76	1.7554	0.0435	0.0	0.0	0.0	6.53E-10	1.95E-08	1.77E-07
10	7	64	63	21001.00	2	5696.92	1.7553	0.0400	0.0	0.0	0.0	0.0	0.0	1.43E-10
7	4	52	53	13666.09	1	5697.38	1.7552	0.0400	0.0	0.0	0.0	2.30E-09	4.58E-08	3.16E-07
12	9	41	40	21220.01	1	5697.38	1.7552	0.0400	0.0	0.0	0.0	0.0	4.57E-10	1.05E-08
12	9	24	23	19314.13	1	5697.46	1.7552	0.0412	0.0	0.0	0.0	0.0	1.38E-09	2.35E-08
6	3	48	49	10561.49	2	5697.54	1.7551	0.0400	0.0	0.0	0.0	5.19E-10	4.90E-09	2.05E-08
8	5	43	44	14061.54	1	5697.59	1.7551	0.0400	0.0	0.0	0.0	2.13E-09	4.67E-08	3.43E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	14	15	12615.09	2	5698.08	1.7550	0.0517	0.0	0.0	0.0	0.0	1.32E-09	7.72E-09
12	9	40	39	21080.37	1	5698.27	1.7549	0.0400	0.0	0.0	0.0	0.0	5.03E-10	1.14E-08
12	9	25	24	19398.52	1	5698.33	1.7549	0.0400	0.0	0.0	0.0	0.0	1.34E-09	2.31E-08
10	7	4	3	14163.60	2	5698.67	1.7548	0.0676	0.0	0.0	0.0	0.0	1.47E-10	1.10E-09
6	3	60	61	13334.93	1	5698.72	1.7548	0.0400	0.0	0.0	0.0	2.01E-09	3.70E-08	2.42E-07
11	8	71	70	25116.07	1	5698.77	1.7548	0.0400	0.0	0.0	0.0	0.0	0.0	8.36E-10
12	9	39	38	20944.14	1	5699.04	1.7547	0.0400	0.0	0.0	0.0	0.0	5.53E-10	1.22E-08
12	9	26	25	19486.39	1	5699.09	1.7547	0.0400	0.0	0.0	0.0	0.0	1.29E-09	2.26E-08
11	8	5	6	16483.18	1	5699.14	1.7547	0.0621	0.0	0.0	0.0	0.0	2.83E-09	3.06E-08
12	9	38	37	20811.34	1	5699.70	1.7545	0.0400	0.0	0.0	0.0	0.0	6.05E-10	1.31E-08
12	9	27	26	19577.75	1	5699.74	1.7545	0.0400	0.0	0.0	0.0	0.0	1.24E-09	2.20E-08
10	7	63	62	20789.45	2	5700.01	1.7544	0.0400	0.0	0.0	0.0	0.0	0.0	1.64E-10
3	0	81	82	12799.33	1	5700.10	1.7544	0.0400	0.0	0.0	0.0	1.95E-10	3.16E-09	1.90E-08
12	9	37	36	20681.96	1	5700.25	1.7543	0.0400	0.0	0.0	0.0	0.0	6.59E-10	1.40E-08
12	9	28	27	19672.59	1	5700.28	1.7543	0.0400	0.0	0.0	0.0	0.0	1.18E-09	2.13E-08
8	5	27	28	11650.14	2	5700.40	1.7543	0.0400	0.0	0.0	0.0	2.88E-10	3.53E-09	1.76E-08
12	9	36	35	20556.01	1	5700.70	1.7542	0.0400	0.0	0.0	0.0	0.0	7.15E-10	1.48E-08
12	9	29	28	19770.91	1	5700.72	1.7542	0.0400	0.0	0.0	0.0	0.0	1.12E-09	2.06E-08
7	4	38	39	10984.19	2	5700.75	1.7542	0.0400	0.0	0.0	0.0	4.91E-10	5.13E-09	2.30E-08
12	9	35	34	20433.50	1	5701.03	1.7541	0.0400	0.0	0.0	0.0	0.0	7.72E-10	1.57E-08
12	9	30	29	19872.69	1	5701.04	1.7541	0.0400	0.0	0.0	0.0	0.0	1.06E-09	1.98E-08
12	9	34	33	20314.43	1	5701.25	1.7540	0.0400	0.0	0.0	0.0	0.0	8.30E-10	1.66E-08
12	9	31	30	19977.94	1	5701.26	1.7540	0.0400	0.0	0.0	0.0	0.0	1.01E-09	1.90E-08
12	9	33	32	20198.81	1	5701.36	1.7540	0.0400	0.0	0.0	0.0	0.0	8.89E-10	1.74E-08
12	9	32	31	20086.64	1	5701.37	1.7540	0.0400	0.0	0.0	0.0	0.0	9.48E-10	1.83E-08
10	7	5	4	14177.38	2	5701.62	1.7539	0.0645	0.0	0.0	0.0	0.0	1.84E-10	1.37E-09
4	1	64	65	9807.43	2	5701.83	1.7538	0.0400	0.0	0.0	0.0	2.73E-10	2.15E-09	8.00E-09
10	7	86	85	27278.79	1	5702.09	1.7537	0.0400	0.0	0.0	0.0	0.0	0.0	1.59E-10
10	7	20	21	15279.39	1	5702.53	1.7536	0.0447	0.0	0.0	0.0	6.92E-10	2.03E-08	1.81E-07
5	2	56	57	10073.68	2	5702.75	1.7535	0.0400	0.0	0.0	0.0	4.82E-10	4.05E-09	1.57E-08
9	6	13	14	12562.97	2	5702.91	1.7535	0.0528	0.0	0.0	0.0	0.0	1.31E-09	7.58E-09
10	7	62	61	20581.09	2	5702.99	1.7535	0.0400	0.0	0.0	0.0	0.0	0.0	1.88E-10
11	8	70	69	24874.95	1	5703.01	1.7535	0.0400	0.0	0.0	0.0	0.0	0.0	9.87E-10
11	8	4	5	16461.79	1	5703.23	1.7534	0.0645	0.0	0.0	0.0	0.0	2.42E-09	2.62E-08
9	6	32	33	14495.30	1	5703.51	1.7533	0.0400	0.0	0.0	0.0	1.61E-09	3.90E-08	3.07E-07
5	2	67	68	12980.85	1	5704.12	1.7531	0.0400	0.0	0.0	0.0	1.57E-09	2.66E-08	1.65E-07
10	7	6	5	14194.62	2	5704.48	1.7530	0.0621	0.0	0.0	0.0	0.0	2.19E-10	1.65E-09
4	1	74	75	12801.85	1	5704.56	1.7530	0.0400	0.0	0.0	0.0	7.85E-10	1.27E-08	7.64E-08
3	0	71	72	9505.12	2	5705.22	1.7528	0.0400	0.0	0.0	0.0	0.0	7.26E-10	2.57E-09
8	5	42	43	13902.14	1	5705.62	1.7527	0.0400	0.0	0.0	0.0	2.54E-09	5.36E-08	3.84E-07
6	3	47	48	10388.82	2	5705.67	1.7526	0.0400	0.0	0.0	0.0	6.30E-10	5.71E-09	2.33E-08
10	7	61	60	20375.92	2	5705.87	1.7526	0.0400	0.0	0.0	0.0	0.0	0.0	2.15E-10
7	4	51	52	13473.39	1	5706.33	1.7524	0.0400	0.0	0.0	0.0	2.87E-09	5.45E-08	3.65E-07
8	5	26	27	11552.28	2	5706.51	1.7524	0.0400	0.0	0.0	0.0	3.15E-10	3.78E-09	1.86E-08
11	8	69	68	24637.04	1	5707.13	1.7522	0.0400	0.0	0.0	0.0	0.0	0.0	1.16E-09
11	8	3	4	16443.96	1	5707.21	1.7522	0.0676	0.0	0.0	0.0	0.0	1.99E-09	2.14E-08
10	7	7	6	14215.30	2	5707.24	1.7522	0.0597	0.0	0.0	0.0	0.0	2.54E-10	1.91E-09
9	6	12	13	12514.32	2	5707.66	1.7520	0.0540	0.0	0.0	0.0	0.0	1.29E-09	7.38E-09
7	4	37	38	10847.26	2	5707.92	1.7520	0.0400	0.0	0.0	0.0	5.68E-10	5.74E-09	2.52E-08
10	7	85	84	26987.90	1	5708.03	1.7519	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-10
10	7	19	20	15204.01	1	5708.19	1.7519	0.0458	0.0	0.0	0.0	7.28E-10	2.10E-08	1.85E-07
6	3	59	60	13112.37	1	5708.48	1.7518	0.0400	0.0	0.0	0.0	2.60E-09	4.53E-08	2.86E-07
10	7	60	59	20173.95	2	5708.64	1.7517	0.0400	0.0	0.0	0.0	0.0	0.0	2.45E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	8	7	14239.42	2	5709.90	1.7513	0.0574	0.0	0.0	0.0	0.0	2.87E-10	2.16E-09
9	6	31	32	14376.23	1	5710.42	1.7512	0.0400	0.0	0.0	0.0	1.81E-09	4.27E-08	3.30E-07
11	8	2	3	16429.71	1	5711.09	1.7510	0.0707	0.0	0.0	0.0	0.0	1.52E-09	1.64E-08
11	8	68	67	24402.34	1	5711.13	1.7510	0.0400	0.0	0.0	0.0	0.0	0.0	1.36E-09
10	7	59	58	19975.19	2	5711.30	1.7509	0.0400	0.0	0.0	0.0	0.0	0.0	2.80E-10
4	1	63	64	9576.80	2	5711.47	1.7509	0.0400	0.0	0.0	0.0	3.56E-10	2.65E-09	9.52E-09
5	2	55	56	9872.04	2	5711.64	1.7508	0.0400	0.0	0.0	0.0	6.09E-10	4.87E-09	1.83E-08
3	0	80	81	12497.64	1	5711.95	1.7507	0.0400	0.0	0.0	0.0	2.79E-10	4.19E-09	2.40E-08
9	6	11	12	12469.13	2	5712.30	1.7506	0.0542	0.0	0.0	0.0	0.0	1.25E-09	7.13E-09
10	7	9	8	14266.98	2	5712.46	1.7506	0.0550	0.0	0.0	0.0	0.0	3.17E-10	2.41E-09
8	5	25	26	11457.88	2	5712.52	1.7505	0.0400	0.0	0.0	0.0	3.44E-10	4.02E-09	1.95E-08
8	5	41	42	13746.29	1	5713.56	1.7502	0.0400	0.0	0.0	0.0	3.01E-09	6.12E-08	4.28E-07
6	3	46	47	10219.57	2	5713.70	1.7502	0.0400	0.0	0.0	0.0	7.62E-10	6.62E-09	2.63E-08
10	7	18	19	15132.20	1	5713.76	1.7502	0.0470	0.0	0.0	0.0	7.61E-10	2.15E-08	1.88E-07
10	7	84	83	26700.09	1	5713.85	1.7501	0.0400	0.0	0.0	0.0	0.0	0.0	2.41E-10
10	7	58	57	19779.64	2	5713.86	1.7501	0.0400	0.0	0.0	0.0	0.0	0.0	3.18E-10
5	2	66	67	12731.90	1	5714.58	1.7499	0.0400	0.0	0.0	0.0	2.10E-09	3.35E-08	1.99E-07
11	8	1	2	16419.01	1	5714.86	1.7498	0.0738	0.0	0.0	0.0	0.0	1.03E-09	1.11E-08
10	7	10	9	14297.99	2	5714.92	1.7498	0.0547	0.0	0.0	0.0	0.0	3.46E-10	2.64E-09
7	4	36	37	10713.77	2	5715.00	1.7498	0.0400	0.0	0.0	0.0	6.54E-10	6.40E-09	2.75E-08
11	8	67	66	24170.88	1	5715.02	1.7498	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-09
7	4	50	51	13284.19	1	5715.19	1.7497	0.0400	0.0	0.0	0.0	3.56E-09	6.46E-08	4.20E-07
3	0	70	71	9248.86	2	5715.51	1.7496	0.0400	0.0	0.0	0.0	1.34E-10	9.20E-10	3.13E-09
4	1	73	74	12526.50	1	5715.72	1.7496	0.0400	0.0	0.0	0.0	1.08E-09	1.64E-08	9.45E-08
10	7	57	56	19587.32	2	5716.32	1.7494	0.0400	0.0	0.0	0.0	0.0	0.0	3.62E-10
9	6	10	11	12427.41	2	5716.85	1.7492	0.0545	0.0	0.0	0.0	0.0	1.21E-09	6.81E-09
9	6	30	31	14260.70	1	5717.23	1.7491	0.0400	0.0	0.0	0.0	2.02E-09	4.65E-08	3.53E-07
10	7	11	10	14332.44	2	5717.28	1.7491	0.0545	0.0	0.0	0.0	0.0	3.72E-10	2.85E-09
6	3	58	59	12893.29	1	5718.15	1.7488	0.0400	0.0	0.0	0.0	3.35E-09	5.55E-08	3.38E-07
8	5	24	25	11366.95	2	5718.44	1.7487	0.0400	0.0	0.0	0.0	3.72E-10	4.26E-09	2.04E-08
11	8	0	1	16411.88	1	5718.53	1.7487	0.0769	0.0	0.0	0.0	0.0	5.25E-10	5.62E-09
10	7	56	55	19398.23	2	5718.66	1.7487	0.0400	0.0	0.0	0.0	0.0	0.0	4.09E-10
11	8	66	65	23942.65	1	5718.79	1.7486	0.0400	0.0	0.0	0.0	0.0	0.0	1.86E-09
10	7	17	18	15063.96	1	5719.22	1.7485	0.0482	0.0	0.0	0.0	7.89E-10	2.20E-08	1.90E-07
10	7	12	11	14370.33	2	5719.55	1.7484	0.0542	0.0	0.0	0.0	0.0	3.96E-10	3.05E-09
10	7	83	82	26415.37	1	5719.56	1.7484	0.0400	0.0	0.0	0.0	0.0	0.0	2.96E-10
5	2	54	55	9673.80	2	5720.43	1.7481	0.0400	0.0	0.0	0.0	7.65E-10	5.84E-09	2.13E-08
10	7	55	54	19212.38	2	5720.91	1.7480	0.0400	0.0	0.0	0.0	0.0	0.0	4.62E-10
4	1	62	63	9349.53	2	5721.02	1.7479	0.0400	0.0	0.0	0.0	4.63E-10	3.27E-09	1.13E-08
9	6	9	10	12389.16	2	5721.30	1.7479	0.0547	0.0	0.0	0.0	0.0	1.15E-09	6.44E-09
8	5	40	41	13593.96	1	5721.40	1.7478	0.0400	0.0	0.0	0.0	3.56E-09	6.96E-08	4.75E-07
6	3	45	46	10053.75	2	5721.64	1.7478	0.0400	0.0	0.0	0.0	9.17E-10	7.66E-09	2.96E-08
10	7	13	12	14411.66	2	5721.71	1.7477	0.0540	0.0	0.0	0.0	0.0	4.16E-10	3.23E-09
7	4	35	36	10583.74	2	5721.98	1.7476	0.0400	0.0	0.0	0.0	7.49E-10	7.11E-09	2.99E-08
11	8	65	64	23717.67	1	5722.45	1.7475	0.0400	0.0	0.0	0.0	0.0	0.0	2.16E-09
10	7	54	53	19029.77	2	5723.05	1.7473	0.0400	0.0	0.0	0.0	0.0	0.0	5.20E-10
3	0	79	80	12199.31	1	5723.70	1.7471	0.0400	0.0	0.0	0.0	3.96E-10	5.55E-09	3.03E-08
10	7	14	13	14456.43	2	5723.77	1.7471	0.0528	0.0	0.0	0.0	0.0	4.34E-10	3.39E-09
9	6	29	30	14148.75	1	5723.94	1.7470	0.0400	0.0	0.0	0.0	2.25E-09	5.04E-08	3.76E-07
7	4	49	50	13098.50	1	5723.95	1.7470	0.0400	0.0	0.0	0.0	4.39E-09	7.63E-08	4.81E-07
8	5	23	24	11279.49	2	5724.27	1.7469	0.0412	0.0	0.0	0.0	4.01E-10	4.50E-09	2.12E-08
10	7	16	17	14999.30	1	5724.58	1.7469	0.0493	0.0	0.0	0.0	8.13E-10	2.23E-08	1.90E-07
5	2	65	66	12486.39	1	5724.95	1.7467	0.0400	0.0	0.0	0.0	2.79E-09	4.19E-08	2.40E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	53	52	18850.42	2	5725.08	1.7467	0.0400	0.0	0.0	0.0	0.0	0.0	5.83E-10
10	7	82	81	26133.74	1	5725.15	1.7467	0.0400	0.0	0.0	0.0	0.0	0.0	3.62E-10
11	8	1	0	16408.32	1	5725.56	1.7466	0.0769	0.0	0.0	0.0	0.0	5.37E-10	5.74E-09
9	6	8	9	12354.38	2	5725.66	1.7465	0.0550	0.0	0.0	0.0	0.0	1.08E-09	6.01E-09
3	0	69	70	8995.93	2	5725.72	1.7465	0.0400	0.0	0.0	0.0	1.79E-10	1.16E-09	3.80E-09
10	7	15	14	14504.62	2	5725.74	1.7465	0.0517	0.0	0.0	0.0	0.0	4.48E-10	3.53E-09
11	8	64	63	23495.95	1	5726.00	1.7464	0.0400	0.0	0.0	0.0	0.0	0.0	2.51E-09
4	1	72	73	12254.55	1	5726.79	1.7462	0.0400	0.0	0.0	0.0	1.49E-09	2.12E-08	1.17E-07
10	7	52	51	18674.34	2	5727.01	1.7461	0.0400	0.0	0.0	0.0	0.0	0.0	6.52E-10
10	7	16	15	14556.26	2	5727.60	1.7459	0.0505	0.0	0.0	0.0	0.0	4.60E-10	3.65E-09
6	3	57	58	12677.69	1	5727.72	1.7459	0.0400	0.0	0.0	0.0	4.30E-09	6.76E-08	3.99E-07
10	7	51	50	18501.51	2	5728.83	1.7456	0.0400	0.0	0.0	0.0	0.0	0.0	7.26E-10
7	4	34	35	10457.16	2	5728.87	1.7455	0.0400	0.0	0.0	0.0	3.53E-10	7.86E-09	3.24E-08
11	8	2	1	16411.88	1	5728.91	1.7455	0.0738	0.0	0.0	0.0	0.0	1.08E-09	1.16E-08
5	2	53	54	9478.96	2	5729.14	1.7455	0.0400	0.0	0.0	0.0	9.57E-10	6.97E-09	2.46E-08
8	5	39	40	13445.18	1	5729.15	1.7455	0.0400	0.0	0.0	0.0	4.18E-09	7.89E-08	5.26E-07
10	7	17	16	14611.32	2	5729.36	1.7454	0.0493	0.0	0.0	0.0	0.0	4.68E-10	3.75E-09
11	8	63	62	23277.50	1	5729.43	1.7454	0.0400	0.0	0.0	0.0	0.0	0.0	2.90E-09
6	3	44	45	9891.36	2	5729.49	1.7454	0.0400	0.0	0.0	0.0	1.10E-09	8.83E-09	3.33E-08
10	7	15	16	14938.22	1	5729.83	1.7453	0.0505	0.0	0.0	0.0	8.30E-10	2.24E-08	1.90E-07
9	6	7	8	12323.08	2	5729.92	1.7452	0.0574	0.0	0.0	0.0	0.0	9.94E-10	5.53E-09
8	5	22	23	11195.50	2	5730.00	1.7452	0.0423	0.0	0.0	0.0	4.29E-10	4.72E-09	2.19E-08
4	1	61	62	9125.64	2	5730.48	1.7451	0.0400	0.0	0.0	0.0	5.99E-10	4.01E-09	1.34E-08
10	7	50	49	18331.96	2	5730.55	1.7450	0.0400	0.0	0.0	0.0	0.0	0.0	8.07E-10
9	6	28	29	14040.35	1	5730.55	1.7450	0.0400	0.0	0.0	0.0	2.51E-09	5.46E-08	4.01E-07
10	7	81	80	25855.22	1	5730.62	1.7450	0.0400	0.0	0.0	0.0	0.0	0.0	4.42E-10
10	7	18	17	14669.81	2	5731.03	1.7449	0.0482	0.0	0.0	0.0	0.0	4.73E-10	3.83E-09
10	7	49	48	18165.70	2	5732.16	1.7445	0.0400	0.0	0.0	0.0	0.0	0.0	8.94E-10
11	8	3	2	16419.01	1	5732.16	1.7445	0.0707	0.0	0.0	0.0	0.0	1.63E-09	1.75E-08
10	7	19	18	14731.73	2	5732.59	1.7444	0.0470	0.0	0.0	0.0	0.0	4.75E-10	3.88E-09
7	4	48	49	12916.32	1	5732.61	1.7444	0.0400	0.0	0.0	0.0	5.40E-09	9.98E-08	5.50E-07
11	8	62	61	23062.32	1	5732.75	1.7444	0.0400	0.0	0.0	0.0	0.0	1.08E-10	3.34E-09
10	7	48	47	18002.73	2	5733.67	1.7441	0.0400	0.0	0.0	0.0	0.0	0.0	9.87E-10
10	7	20	19	14797.07	2	5734.05	1.7440	0.0458	0.0	0.0	0.0	0.0	4.74E-10	3.92E-09
9	6	6	7	12295.25	2	5734.08	1.7440	0.0597	0.0	0.0	0.0	0.0	9.01E-10	4.99E-09
10	7	14	15	14880.71	1	5734.99	1.7437	0.0517	0.0	0.0	0.0	8.42E-10	2.24E-09	1.88E-07
10	7	47	46	17843.04	2	5735.07	1.7437	0.0400	0.0	0.0	0.0	0.0	0.0	1.09E-09
5	2	64	65	12244.32	1	5735.23	1.7436	0.0400	0.0	0.0	0.0	3.70E-09	5.24E-09	2.88E-07
11	8	4	3	16429.71	1	5735.31	1.7436	0.0676	0.0	0.0	0.0	0.0	2.18E-09	2.34E-08
3	0	78	79	11904.34	1	5735.37	1.7436	0.0400	0.0	0.0	0.0	5.61E-10	7.32E-09	3.81E-08
10	7	21	20	14865.84	2	5735.42	1.7436	0.0447	0.0	0.0	0.0	0.0	4.71E-10	3.93E-09
8	5	21	22	11114.98	2	5735.63	1.7435	0.0435	0.0	0.0	0.0	4.57E-10	4.92E-09	2.26E-08
7	4	33	34	10334.05	2	5735.67	1.7435	0.0400	0.0	0.0	0.0	9.68E-10	8.65E-09	3.50E-08
3	0	68	69	8746.33	2	5735.84	1.7434	0.0400	0.0	0.0	0.0	2.40E-10	1.47E-09	4.60E-09
11	8	61	60	22850.43	1	5735.96	1.7434	0.0400	0.0	0.0	0.0	0.0	1.28E-10	3.84E-09
10	7	80	79	25579.82	1	5735.98	1.7434	0.0400	0.0	0.0	0.0	0.0	0.0	5.39E-10
10	7	46	45	17686.66	2	5736.37	1.7433	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-09
10	7	22	21	14938.02	2	5736.68	1.7432	0.0435	0.0	0.0	0.0	0.0	4.65E-10	3.93E-09
8	5	38	39	13299.95	1	5736.79	1.7431	0.0400	0.0	0.0	0.0	4.88E-09	8.91E-08	5.80E-07
9	6	27	28	13935.53	1	5737.06	1.7431	0.0400	0.0	0.0	0.0	2.77E-09	5.90E-08	4.25E-07
9	6	74	73	21432.71	2	5737.11	1.7430	0.0400	0.0	0.0	0.0	0.0	0.0	8.72E-11
6	3	56	57	12465.57	1	5737.19	1.7430	0.0400	0.0	0.0	0.0	5.50E-09	8.22E-08	4.68E-07
6	3	43	44	9732.40	2	5737.25	1.7430	0.0400	0.0	0.0	0.0	1.31E-09	1.01E-08	3.72E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	45	44	17533.59	2	5737.57	1.7429	0.0400	0.0	0.0	0.0	0.0	1.02E-10	1.30E-09
5	2	52	53	9287.54	2	5737.75	1.7428	0.0400	0.0	0.0	0.0	1.19E-09	8.29E-09	2.84E-08
4	1	71	72	11986.02	1	5737.76	1.7428	0.0400	0.0	0.0	0.0	2.04E-09	2.71E-08	1.43E-07
10	7	23	22	15013.62	2	5737.84	1.7428	0.0423	0.0	0.0	0.0	0.0	4.56E-10	3.90E-09
9	6	5	6	12270.90	2	5738.14	1.7427	0.0621	0.0	0.0	0.0	0.0	7.97E-10	4.40E-09
9	6	93	92	27563.95	1	5738.34	1.7427	0.0400	0.0	0.0	0.0	0.0	0.0	9.76E-11
11	8	5	4	16443.96	1	5738.35	1.7427	0.0645	0.0	0.0	0.0	0.0	2.71E-09	2.92E-08
10	7	44	43	17383.83	2	5738.66	1.7426	0.0400	0.0	0.0	0.0	0.0	1.14E-10	1.42E-09
10	7	24	23	15092.63	2	5738.90	1.7425	0.0412	0.0	0.0	0.0	0.0	4.45E-10	3.86E-09
11	8	60	59	22641.83	1	5739.05	1.7424	0.0400	0.0	0.0	0.0	0.0	1.52E-10	4.39E-09
10	7	43	42	17237.39	2	5739.65	1.7423	0.0400	0.0	0.0	0.0	0.0	1.26E-10	1.54E-09
10	7	25	24	15175.05	2	5739.85	1.7422	0.0400	0.0	0.0	0.0	0.0	4.32E-10	3.79E-09
4	1	60	61	8905.12	2	5739.85	1.7422	0.0400	0.0	0.0	0.0	7.71E-10	4.90E-09	1.58E-08
10	7	13	14	14826.79	1	5740.04	1.7421	0.0528	0.0	0.0	0.0	8.45E-10	2.22E-08	1.85E-07
10	7	42	41	17094.27	2	5740.54	1.7420	0.0400	0.0	0.0	0.0	0.0	1.40E-10	1.67E-09
10	7	26	25	15260.88	2	5740.71	1.7419	0.0400	0.0	0.0	0.0	0.0	4.18E-10	3.72E-09
7	4	47	48	12737.67	1	5741.17	1.7418	0.0400	0.0	0.0	0.0	6.60E-09	1.05E-07	6.26E-07
8	5	20	21	11037.95	2	5741.17	1.7418	0.0447	0.0	0.0	0.0	4.83E-10	5.11E-09	2.31E-08
10	7	79	78	25307.56	1	5741.22	1.7418	0.0400	0.0	0.0	0.0	0.0	0.0	6.54E-10
9	6	73	72	21187.44	2	5741.24	1.7418	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-10
11	8	6	5	16461.79	1	5741.28	1.7418	0.0621	0.0	0.0	0.0	0.0	3.24E-09	3.50E-08
10	7	41	40	16954.49	2	5741.32	1.7418	0.0400	0.0	0.0	0.0	0.0	1.55E-10	1.80E-09
10	7	27	26	15350.11	2	5741.47	1.7417	0.0400	0.0	0.0	0.0	0.0	4.02E-10	3.63E-09
10	7	40	39	16818.04	2	5742.00	1.7416	0.0400	0.0	0.0	0.0	0.0	1.70E-10	1.94E-09
11	8	59	58	22436.54	1	5742.02	1.7415	0.0400	0.0	0.0	0.0	0.0	1.80E-10	5.05E-09
9	6	4	5	12250.03	2	5742.11	1.7415	0.0645	0.0	0.0	0.0	0.0	5.93E-10	3.76E-09
10	7	28	27	15442.75	2	5742.12	1.7415	0.0400	0.0	0.0	0.0	0.0	3.85E-10	3.52E-09
7	4	32	33	10214.39	2	5742.37	1.7414	0.0400	0.0	0.0	0.0	1.09E-09	9.48E-09	3.77E-08
10	7	39	38	16684.94	2	5742.57	1.7414	0.0400	0.0	0.0	0.0	0.0	1.85E-10	2.08E-09
10	7	29	28	15538.77	2	5742.67	1.7414	0.0400	0.0	0.0	0.0	0.0	3.67E-10	3.41E-09
10	7	38	37	16555.18	2	5743.04	1.7412	0.0400	0.0	0.0	0.0	0.0	2.03E-10	2.22E-09
10	7	30	29	15638.19	2	5743.12	1.7412	0.0400	0.0	0.0	0.0	0.0	3.48E-10	3.29E-09
10	7	37	36	16428.77	2	5743.41	1.7411	0.0400	0.0	0.0	0.0	0.0	2.20E-10	2.36E-09
9	6	26	27	13834.28	1	5743.47	1.7411	0.0400	0.0	0.0	0.0	3.05E-09	6.33E-08	4.49E-07
10	7	31	30	15741.00	2	5743.47	1.7411	0.0400	0.0	0.0	0.0	0.0	3.30E-10	3.17E-09
10	7	36	35	16305.72	2	5743.68	1.7410	0.0400	0.0	0.0	0.0	0.0	2.38E-10	2.50E-09
10	7	32	31	15847.20	2	5743.72	1.7410	0.0400	0.0	0.0	0.0	0.0	3.12E-10	3.05E-09
10	7	35	34	16186.04	2	5743.84	1.7410	0.0400	0.0	0.0	0.0	0.0	2.56E-10	2.64E-09
10	7	33	32	15956.77	2	5743.86	1.7410	0.0400	0.0	0.0	0.0	0.0	2.93E-10	2.92E-09
10	7	34	33	16069.71	2	5743.90	1.7410	0.0400	0.0	0.0	0.0	0.0	2.75E-10	2.78E-09
11	8	7	6	16483.18	1	5744.11	1.7409	0.0597	0.0	0.0	0.0	0.0	3.74E-09	4.05E-08
8	5	37	38	13158.27	1	5744.33	1.7408	0.0400	0.0	0.0	0.0	5.68E-09	1.00E-07	6.38E-07
11	8	58	57	22234.55	1	5744.89	1.7407	0.0400	0.0	0.0	0.0	0.0	2.13E-10	5.78E-09
6	3	42	43	9576.89	2	5744.92	1.7407	0.0400	0.0	0.0	0.0	1.55E-09	1.16E-08	4.15E-08
10	7	12	13	14776.45	1	5744.99	1.7406	0.0540	0.0	0.0	0.0	8.41E-10	2.19E-08	1.80E-07
9	6	92	91	27248.71	1	5745.07	1.7406	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-10
9	6	72	71	20945.30	2	5745.26	1.7406	0.0400	0.0	0.0	0.0	0.0	0.0	1.22E-10
5	2	63	64	12005.71	1	5745.41	1.7405	0.0400	0.0	0.0	0.0	4.87E-09	5.51E-08	3.45E-07
3	0	67	68	8500.09	2	5745.87	1.7404	0.0400	0.0	0.0	0.0	3.19E-10	1.84E-09	5.55E-09
9	6	3	4	12232.63	2	5745.98	1.7403	0.0676	0.0	0.0	0.0	0.0	5.60E-10	3.07E-09
5	2	51	52	9099.53	2	5746.28	1.7403	0.0400	0.0	0.0	0.0	1.48E-09	9.83E-09	3.26E-08
10	7	78	77	25038.44	1	5746.35	1.7402	0.0400	0.0	0.0	0.0	0.0	0.0	7.92E-10
6	3	55	56	12256.95	1	5746.57	1.7402	0.0400	0.0	0.0	0.0	7.00E-09	9.95E-08	5.48E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	19	20	10964.39	2	5746.62	1.7402	0.0458	0.0	0.0	0.0	5.07E-10	5.27E-09	2.36E-08
11	8	8	7	16508.13	1	5746.84	1.7401	0.0574	0.0	0.0	0.0	1.07E-10	4.22E-09	4.59E-08
3	0	77	78	11612.75	1	5746.94	1.7401	0.0400	0.0	0.0	0.0	7.90E-10	9.62E-09	4.78E-08
11	8	57	56	22035.89	1	5747.64	1.7398	0.0400	0.0	0.0	0.0	0.0	2.50E-10	6.59E-09
4	1	70	71	11720.90	1	5748.64	1.7395	0.0400	0.0	0.0	0.0	2.78E-09	3.47E-08	1.76E-07
7	4	31	32	10098.21	2	5748.99	1.7394	0.0400	0.0	0.0	0.0	1.23E-09	1.04E-08	4.03E-08
4	1	59	60	8687.99	2	5749.13	1.7394	0.0400	0.0	0.0	0.0	9.90E-10	5.96E-09	1.85E-08
9	6	71	70	20706.29	2	5749.17	1.7394	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-10
11	8	9	8	16536.64	1	5749.45	1.7393	0.0550	0.0	0.0	0.0	1.18E-10	4.67E-09	5.10E-08
7	4	46	47	12562.54	1	5749.64	1.7392	0.0400	0.0	0.0	0.0	8.03E-09	1.23E-07	7.11E-07
9	6	2	3	12218.71	2	5749.75	1.7392	0.0707	0.0	0.0	0.0	0.0	4.29E-10	2.35E-09
9	6	25	26	13736.61	1	5749.78	1.7392	0.0400	0.0	0.0	0.0	3.34E-09	6.76E-08	4.72E-07
10	7	11	12	14729.70	1	5749.83	1.7392	0.0542	0.0	0.0	0.0	8.28E-10	2.13E-08	1.74E-07
11	8	56	55	21840.56	1	5750.28	1.7390	0.0400	0.0	0.0	0.0	0.0	2.94E-10	7.50E-09
10	7	77	76	24772.47	1	5751.35	1.7387	0.0400	0.0	0.0	0.0	0.0	0.0	9.56E-10
9	6	91	90	26936.49	1	5751.68	1.7386	0.0400	0.0	0.0	0.0	0.0	0.0	1.53E-10
8	5	36	37	13020.16	1	5751.78	1.7386	0.0400	0.0	0.0	0.0	6.57E-09	1.12E-07	6.98E-07
8	5	18	19	10894.32	2	5751.96	1.7385	0.0470	0.0	0.0	0.0	5.29E-10	5.41E-09	2.39E-08
11	8	10	9	16568.71	1	5751.97	1.7385	0.0547	0.0	0.0	0.0	1.27E-10	5.09E-09	5.59E-08
6	3	41	42	9424.83	2	5752.49	1.7384	0.0400	0.0	0.0	0.0	1.83E-09	1.32E-08	4.62E-08
11	8	55	54	21648.56	1	5752.80	1.7383	0.0400	0.0	0.0	0.0	0.0	3.44E-10	9.51E-09
9	6	70	69	20470.42	2	5752.98	1.7382	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-10
9	6	1	2	12208.27	2	5753.43	1.7381	0.0738	0.0	0.0	0.0	0.0	2.91E-10	1.59E-09
11	8	11	10	16604.34	1	5754.37	1.7378	0.0545	0.0	0.0	0.0	1.36E-10	5.46E-09	6.04E-08
10	7	10	11	14686.54	1	5754.58	1.7377	0.0545	0.0	0.0	0.0	8.06E-10	2.05E-08	1.67E-07
5	2	50	51	8914.94	2	5754.71	1.7377	0.0400	0.0	0.0	0.0	1.82E-09	1.16E-09	3.74E-08
11	8	54	53	21459.91	1	5755.22	1.7376	0.0400	0.0	0.0	0.0	0.0	4.01E-10	9.62E-09
5	2	62	63	11770.57	1	5755.49	1.7375	0.0400	0.0	0.0	0.0	6.39E-09	9.08E-08	4.12E-07
7	4	30	31	9985.50	2	5755.50	1.7375	0.0400	0.0	0.0	0.0	1.37E-09	1.13E-08	4.31E-08
3	0	66	67	8257.20	2	5755.81	1.7374	0.0400	0.0	0.0	0.0	4.23E-10	2.30E-09	6.68E-09
6	3	54	55	12051.84	1	5755.85	1.7374	0.0400	0.0	0.0	1.01E-10	8.87E-09	1.20E-07	6.40E-07
9	6	24	25	13642.53	1	5755.99	1.7373	0.0400	0.0	0.0	0.0	3.63E-09	7.19E-08	4.94E-07
10	7	76	75	24509.67	1	5756.25	1.7372	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-09
11	8	12	11	16643.52	1	5756.67	1.7371	0.0542	0.0	0.0	0.0	1.43E-10	5.80E-09	6.45E-08
9	6	69	68	20237.70	2	5756.68	1.7371	0.0400	0.0	0.0	0.0	0.0	0.0	1.98E-10
9	6	0	1	12201.31	2	5757.01	1.7370	0.0769	0.0	0.0	0.0	0.0	1.48E-10	8.07E-10
8	5	17	18	10827.74	2	5757.22	1.7369	0.0482	0.0	0.0	0.0	5.48E-10	5.52E-09	2.42E-08
11	8	53	52	21274.62	1	5757.52	1.7369	0.0400	0.0	0.0	0.0	0.0	4.65E-10	1.08E-08
7	4	45	46	12390.96	1	5758.01	1.7367	0.0400	0.0	0.0	0.0	9.74E-09	1.43E-07	8.04E-07
9	6	90	89	26627.30	1	5758.18	1.7367	0.0400	0.0	0.0	0.0	0.0	0.0	1.90E-10
4	1	58	59	8474.25	2	5758.32	1.7366	0.0400	0.0	0.0	0.0	1.27E-09	7.26E-09	2.18E-08
3	0	76	77	11324.54	1	5758.42	1.7366	0.0400	0.0	0.0	0.0	1.11E-09	1.26E-08	5.98E-09
11	8	13	12	16686.27	1	5758.86	1.7365	0.0540	0.0	0.0	0.0	1.48E-10	6.09E-09	6.82E-08
8	5	35	36	12885.61	1	5759.13	1.7364	0.0400	0.0	0.0	0.0	7.57E-09	1.25E-07	7.62E-07
10	7	9	10	14646.97	1	5759.22	1.7363	0.0547	0.0	0.0	0.0	7.75E-10	1.95E-08	1.58E-07
4	1	69	70	11459.21	1	5759.43	1.7363	0.0400	0.0	0.0	0.0	3.77E-09	4.42E-08	2.15E-07
11	8	52	51	21092.69	1	5759.71	1.7362	0.0400	0.0	0.0	0.0	0.0	5.38E-10	1.22E-08
6	3	40	41	9276.23	2	5759.97	1.7361	0.0400	0.0	0.0	0.0	2.16E-09	1.50E-08	5.11E-08
9	6	68	67	20008.15	2	5760.27	1.7360	0.0400	0.0	0.0	0.0	0.0	0.0	2.32E-10
11	8	14	13	16732.56	1	5760.95	1.7358	0.0528	0.0	0.0	0.0	1.53E-10	6.34E-09	7.15E-08
10	7	75	74	24250.05	1	5761.02	1.7358	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-09
11	8	51	50	20914.12	1	5761.78	1.7356	0.0400	0.0	0.0	0.0	0.0	6.20E-10	1.36E-08
7	4	29	30	9876.27	2	5761.93	1.7355	0.0400	0.0	0.0	0.0	1.52E-09	1.22E-08	4.58E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	23	24	13552.03	1	5762.10	1.7355	0.0412	0.0	0.0	0.0	3.92E-09	7.60E-08	5.15E-07
8	5	16	17	10764.64	2	5762.38	1.7354	0.0493	0.0	0.0	0.0	5.64E-10	5.59E-09	2.42E-08
11	8	15	14	16782.41	1	5762.92	1.7352	0.0517	0.0	0.0	0.0	1.56E-10	6.54E-09	7.44E-08
5	2	49	50	8733.79	2	5763.05	1.7352	0.0400	0.0	0.0	0.0	2.24E-09	1.36E-08	4.28E-08
11	8	50	49	20738.93	1	5763.74	1.7350	0.0400	0.0	0.0	0.0	0.0	7.12E-10	1.52E-08
10	7	8	9	14610.99	1	5763.76	1.7350	0.0550	0.0	0.0	0.0	7.35E-10	1.84E-08	1.47E-07
9	6	67	66	19781.77	2	5763.76	1.7350	0.0400	0.0	0.0	0.0	0.0	0.0	2.70E-10
9	6	1	0	12197.83	2	5763.87	1.7349	0.0769	0.0	0.0	0.0	0.0	1.51E-10	8.25E-10
9	6	89	88	26321.15	1	5764.55	1.7347	0.0400	0.0	0.0	0.0	0.0	0.0	2.38E-10
11	8	16	15	16835.81	1	5764.80	1.7347	0.0505	0.0	0.0	0.0	1.57E-10	6.70E-09	7.68E-08
6	3	53	54	11850.23	1	5765.03	1.7346	0.0400	0.0	0.0	1.37E-10	1.12E-08	1.44E-07	7.45E-07
5	2	61	62	11538.91	1	5765.48	1.7345	0.0400	0.0	0.0	1.16E-10	8.34E-09	9.98E-08	4.90E-07
11	8	49	48	20567.13	1	5765.60	1.7344	0.0400	0.0	0.0	0.0	0.0	8.14E-10	1.69E-08
3	0	65	66	8017.69	2	5765.66	1.7344	0.0400	0.0	0.0	0.0	5.59E-10	2.87E-09	8.01E-09
10	7	74	73	23993.62	1	5765.69	1.7344	0.0400	0.0	0.0	0.0	0.0	0.0	1.65E-09
7	4	44	45	12222.92	1	5766.28	1.7342	0.0400	0.0	0.0	1.24E-10	1.17E-08	1.65E-07	9.07E-07
8	5	34	35	12754.63	1	5766.37	1.7342	0.0400	0.0	0.0	0.0	8.67E-09	1.39E-07	8.28E-07
11	8	17	16	16892.75	1	5766.56	1.7341	0.0493	0.0	0.0	0.0	1.58E-10	6.80E-09	7.87E-08
9	6	66	65	19558.57	2	5767.13	1.7340	0.0400	0.0	0.0	0.0	0.0	0.0	3.13E-10
9	6	2	1	12201.31	2	5767.15	1.7340	0.0738	0.0	0.0	0.0	0.0	3.05E-10	1.67E-09
11	8	48	47	20398.72	1	5767.34	1.7339	0.0400	0.0	0.0	0.0	0.0	9.28E-10	1.88E-08
6	3	39	40	9131.08	2	5767.36	1.7339	0.0400	0.0	0.0	0.0	2.52E-09	1.69E-08	5.65E-08
4	1	57	58	8263.93	2	5767.42	1.7339	0.0400	0.0	0.0	0.0	1.62E-09	8.82E-09	2.56E-08
8	5	15	16	10705.04	2	5767.44	1.7339	0.0505	0.0	0.0	0.0	5.75E-10	5.62E-09	2.41E-08
9	6	22	23	13465.12	1	5768.10	1.7337	0.0423	0.0	0.0	0.0	4.21E-09	7.99E-08	5.35E-07
10	7	7	8	14578.61	1	5768.19	1.7336	0.0574	0.0	0.0	0.0	6.85E-10	1.70E-08	1.36E-07
11	8	18	17	16953.25	1	5768.22	1.7336	0.0482	0.0	0.0	0.0	1.57E-10	6.86E-09	8.02E-08
7	4	28	29	9770.52	2	5768.25	1.7336	0.0400	0.0	0.0	0.0	1.69E-09	1.32E-08	4.87E-08
11	8	47	46	20233.70	1	5768.96	1.7334	0.0400	0.0	0.0	0.0	0.0	1.05E-09	2.08E-08
11	8	19	18	17017.28	1	5769.77	1.7332	0.0470	0.0	0.0	0.0	1.55E-10	6.88E-09	8.12E-08
3	0	75	76	11039.74	1	5769.81	1.7332	0.0400	0.0	0.0	0.0	1.55E-09	1.64E-08	7.46E-08
4	1	68	69	11200.97	1	5770.12	1.7331	0.0400	0.0	0.0	0.0	5.09E-09	5.62E-08	2.62E-07
10	7	73	72	23740.39	1	5770.23	1.7330	0.0400	0.0	0.0	0.0	0.0	0.0	1.97E-09
9	6	3	2	12208.27	2	5770.34	1.7330	0.0707	0.0	0.0	0.0	0.0	4.61E-10	2.52E-09
9	6	65	64	19338.57	2	5770.40	1.7330	0.0400	0.0	0.0	0.0	0.0	0.0	3.63E-10
11	8	46	45	20072.09	1	5770.48	1.7330	0.0400	0.0	0.0	0.0	0.0	1.19E-09	2.29E-08
9	6	88	87	26018.06	1	5770.81	1.7329	0.0400	0.0	0.0	0.0	0.0	0.0	2.97E-10
11	8	20	19	17084.85	1	5771.21	1.7327	0.0458	0.0	0.0	0.0	1.52E-10	6.85E-09	8.17E-08
5	2	48	49	8556.07	2	5771.30	1.7327	0.0400	0.0	0.0	1.26E-10	2.74E-09	1.60E-08	4.87E-08
11	8	45	44	19913.90	1	5771.88	1.7325	0.0400	0.0	0.0	0.0	0.0	1.34E-09	2.51E-08
8	5	14	15	10648.93	2	5772.40	1.7324	0.0517	0.0	0.0	0.0	5.92E-10	5.61E-09	2.39E-08
10	7	6	7	14549.82	1	5772.52	1.7323	0.0597	0.0	0.0	0.0	6.25E-10	1.54E-08	1.22E-07
11	8	21	20	17155.96	1	5772.54	1.7323	0.0447	0.0	0.0	0.0	1.47E-10	6.78E-09	8.19E-08
11	8	44	43	19759.12	1	5773.18	1.7321	0.0400	0.0	0.0	0.0	0.0	1.50E-09	2.75E-08
9	6	4	3	12218.71	2	5773.43	1.7321	0.0676	0.0	0.0	0.0	0.0	6.15E-10	3.37E-09
8	5	33	34	12627.23	1	5773.52	1.7320	0.0400	0.0	0.0	0.0	9.88E-09	1.53E-07	8.97E-07
9	6	64	63	19121.76	2	5773.57	1.7320	0.0400	0.0	0.0	0.0	0.0	0.0	4.19E-10
11	8	22	21	17230.61	1	5773.77	1.7320	0.0435	0.0	0.0	0.0	1.43E-10	6.68E-09	8.15E-08
9	6	21	22	13381.82	1	5774.01	1.7319	0.0435	0.0	0.0	0.0	4.49E-09	8.36E-08	5.52E-07
6	3	52	53	11652.14	1	5774.12	1.7319	0.0400	0.0	0.0	1.87E-10	1.40E-08	1.72E-07	8.63E-07
11	8	43	42	19607.77	1	5774.36	1.7318	0.0400	0.0	0.0	0.0	0.0	1.68E-09	3.00E-08
7	4	43	44	12058.43	1	5774.45	1.7318	0.0400	0.0	0.0	1.59E-10	1.41E-08	1.91E-07	1.02E-06
7	4	27	28	9668.25	2	5774.49	1.7318	0.0400	0.0	0.0	0.0	1.86E-09	1.42E-08	5.16E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
10	7	72	71	23490.38	1	5774.66	1.7317	0.0400	0.0	0.0	0.0	0.0	0.0	2.35E-09
6	3	38	39	8989.41	2	5774.66	1.7317	0.0400	0.0	0.0	1.14E-10	2.94E-09	1.90E-08	6.21E-08
11	8	23	22	17308.79	1	5774.89	1.7316	0.0423	0.0	0.0	0.0	1.37E-10	6.54E-09	8.08E-08
5	2	60	61	11310.73	1	5775.37	1.7315	0.0400	0.0	0.0	1.65E-10	1.08E-08	1.23E-07	5.82E-07
3	0	64	65	7781.55	2	5775.42	1.7315	0.0400	0.0	0.0	0.0	7.35E-10	3.56E-09	9.59E-09
11	8	42	41	19459.85	1	5775.43	1.7315	0.0400	0.0	0.0	0.0	0.0	1.87E-09	3.26E-08
11	8	24	23	17390.49	1	5775.90	1.7313	0.0412	0.0	0.0	0.0	1.31E-10	6.36E-09	7.97E-08
11	8	41	40	19315.37	1	5776.39	1.7312	0.0400	0.0	0.0	0.0	0.0	2.07E-09	3.53E-08
9	6	5	4	12232.63	2	5776.41	1.7312	0.0645	0.0	0.0	0.0	0.0	7.68E-10	4.21E-09
4	1	56	57	8057.01	2	5776.43	1.7312	0.0400	0.0	0.0	1.16E-10	2.06E-09	1.07E-08	3.00E-08
9	6	63	62	18908.16	2	5776.63	1.7311	0.0400	0.0	0.0	0.0	0.0	0.0	4.82E-10
10	7	5	6	14524.62	1	5776.74	1.7311	0.0621	0.0	0.0	0.0	5.57E-10	1.36E-08	1.08E-07
11	8	25	24	17475.72	1	5776.80	1.7311	0.0400	0.0	0.0	0.0	1.24E-10	6.16E-09	7.83E-08
9	6	87	86	25718.04	1	5776.96	1.7310	0.0400	0.0	0.0	0.0	0.0	0.0	3.69E-10
11	8	40	39	19174.33	1	5777.24	1.7309	0.0400	0.0	0.0	0.0	0.0	2.29E-09	3.81E-08
8	5	13	14	10596.32	2	5777.28	1.7309	0.0528	0.0	0.0	0.0	5.84E-10	5.56E-09	2.35E-08
11	8	26	25	17564.47	1	5777.59	1.7308	0.0400	0.0	0.0	0.0	1.17E-10	5.94E-09	7.65E-08
11	8	39	38	19036.74	1	5777.98	1.7307	0.0400	0.0	0.0	0.0	0.0	2.52E-09	4.10E-08
11	8	27	26	17656.73	1	5778.28	1.7306	0.0400	0.0	0.0	0.0	1.10E-10	5.70E-09	7.45E-08
11	8	38	37	18902.61	1	5778.61	1.7305	0.0400	0.0	0.0	0.0	0.0	2.76E-09	4.40E-08
11	8	28	27	17752.52	1	5778.86	1.7304	0.0400	0.0	0.0	0.0	1.02E-10	5.44E-09	7.21E-08
10	7	71	70	23243.58	1	5778.98	1.7304	0.0400	0.0	0.0	0.0	0.0	0.0	2.78E-09
11	8	37	36	18771.94	1	5779.13	1.7304	0.0400	0.0	0.0	0.0	0.0	3.01E-09	4.70E-08
9	6	6	5	12250.03	2	5779.30	1.7303	0.0621	0.0	0.0	0.0	0.0	9.16E-10	5.04E-09
11	8	29	28	17851.80	1	5779.32	1.7303	0.0400	0.0	0.0	0.0	0.0	5.16E-09	6.96E-08
5	2	47	48	8381.80	2	5779.46	1.7303	0.0400	0.0	0.0	1.64E-10	3.33E-09	1.87E-08	5.53E-08
11	8	36	35	18644.73	1	5779.54	1.7302	0.0400	0.0	0.0	0.0	0.0	3.26E-09	5.00E-08
9	6	62	61	18697.77	2	5779.58	1.7302	0.0400	0.0	0.0	0.0	0.0	0.0	5.53E-10
11	8	30	29	17954.60	1	5779.68	1.7302	0.0400	0.0	0.0	0.0	0.0	4.88E-09	6.69E-08
9	6	20	21	13302.10	1	5779.81	1.7302	0.0447	0.0	0.0	0.0	4.77E-09	8.70E-08	5.67E-07
11	8	35	34	18521.00	1	5779.84	1.7302	0.0400	0.0	0.0	0.0	0.0	3.53E-09	5.30E-08
11	8	31	30	18060.90	1	5779.93	1.7301	0.0400	0.0	0.0	0.0	0.0	4.62E-09	6.44E-08
11	8	34	33	18400.75	1	5780.02	1.7301	0.0400	0.0	0.0	0.0	0.0	3.80E-09	5.59E-08
11	8	32	31	18170.69	1	5780.07	1.7301	0.0400	0.0	0.0	0.0	0.0	4.35E-09	6.17E-08
11	8	33	32	18283.98	1	5780.10	1.7301	0.0400	0.0	0.0	0.0	0.0	4.07E-09	5.88E-08
8	5	32	33	12503.41	1	5780.57	1.7299	0.0400	0.0	0.0	1.06E-10	1.12E-08	1.69E-07	9.68E-07
7	4	26	27	9569.48	2	5780.63	1.7299	0.0400	0.0	0.0	0.0	2.04E-09	1.52E-08	5.44E-08
4	1	67	68	10946.18	1	5780.71	1.7299	0.0400	0.0	0.0	1.21E-10	6.85E-09	7.11E-08	3.18E-07
10	7	4	5	14503.03	1	5780.87	1.7298	0.0645	0.0	0.0	0.0	4.80E-10	1.17E-08	9.23E-08
3	0	74	75	10758.35	1	5781.10	1.7298	0.0400	0.0	0.0	0.0	2.15E-09	2.14E-08	9.27E-08
6	3	37	38	8851.20	2	5781.86	1.7295	0.0400	0.0	0.0	1.39E-10	3.40E-09	2.13E-08	6.81E-08
8	5	12	13	10547.20	2	5782.05	1.7295	0.0540	0.0	0.0	0.0	5.80E-10	5.46E-09	2.29E-08
9	6	7	6	12270.90	2	5782.10	1.7295	0.0597	0.0	0.0	0.0	0.0	1.06E-09	5.85E-09
9	6	61	60	18490.61	2	5782.43	1.7294	0.0400	0.0	0.0	0.0	0.0	0.0	6.33E-10
7	4	42	43	11897.51	1	5782.52	1.7293	0.0400	0.0	0.0	2.03E-10	1.68E-08	2.19E-07	1.14E-06
9	6	86	85	25421.09	1	5782.98	1.7292	0.0400	0.0	0.0	0.0	0.0	0.0	4.58E-10
6	3	51	52	11457.59	1	5783.11	1.7292	0.0400	0.0	0.0	2.52E-10	1.75E-08	2.06E-07	9.98E-07
10	7	70	69	23000.01	1	5783.18	1.7292	0.0400	0.0	0.0	0.0	0.0	1.07E-10	3.29E-09
8	5	98	97	27339.41	1	5784.39	1.7288	0.0400	0.0	0.0	0.0	0.0	0.0	8.67E-11
9	6	8	7	12295.25	2	5784.79	1.7287	0.0574	0.0	0.0	0.0	0.0	1.20E-09	6.63E-09
10	7	3	4	14485.03	1	5784.88	1.7286	0.0676	0.0	0.0	0.0	3.96E-10	9.59E-09	7.55E-08
3	0	63	64	7548.79	2	5785.09	1.7286	0.0400	0.0	0.0	0.0	9.62E-10	4.41E-09	1.14E-08
5	2	59	60	11086.05	1	5785.17	1.7286	0.0400	0.0	0.0	2.34E-10	1.40E-08	1.51E-07	6.89E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	60	59	18286.68	2	5785.17	1.7286	0.0400	0.0	0.0	0.0	0.0	0.0	7.22E-10
4	1	55	56	7853.51	2	5785.35	1.7285	0.0400	0.0	0.0	1.59E-10	2.61E-09	1.29E-08	3.50E-08
9	6	19	20	13225.99	1	5785.51	1.7285	0.0458	0.0	0.0	0.0	5.02E-09	9.00E-08	5.79E-07
7	4	25	26	9474.20	2	5786.68	1.7281	0.0400	0.0	0.0	0.0	2.23E-09	1.62E-08	5.71E-08
8	5	11	12	10501.59	2	5786.73	1.7281	0.0542	0.0	0.0	0.0	5.71E-10	5.31E-09	2.21E-08
10	7	69	68	22759.69	1	5787.26	1.7279	0.0400	0.0	0.0	0.0	0.0	1.31E-10	3.88E-09
9	6	9	8	12323.08	2	5787.38	1.7279	0.0550	0.0	0.0	0.0	0.0	1.33E-09	7.37E-09
8	5	80	79	21102.53	2	5787.40	1.7279	0.0400	0.0	0.0	0.0	0.0	0.0	8.58E-11
8	5	31	32	12383.18	1	5787.51	1.7279	0.0400	0.0	0.0	1.25E-10	1.26E-08	1.85E-07	1.04E-06
5	2	46	47	8210.98	2	5787.53	1.7279	0.0400	0.0	0.0	2.13E-10	4.04E-09	2.17E-08	6.26E-08
9	6	59	58	18085.99	2	5787.80	1.7278	0.0400	0.0	0.0	0.0	0.0	0.0	8.26E-10
10	7	2	3	14470.63	1	5788.80	1.7275	0.0707	0.0	0.0	0.0	3.04E-10	7.35E-09	5.77E-08
9	6	85	84	25127.25	1	5788.89	1.7274	0.0400	0.0	0.0	0.0	0.0	0.0	5.67E-10
6	3	36	37	8716.48	2	5788.97	1.7274	0.0400	0.0	0.0	1.69E-10	3.92E-09	2.38E-08	7.44E-08
9	6	10	9	12354.38	2	5789.87	1.7272	0.0547	0.0	0.0	0.0	0.0	1.44E-09	8.08E-09
9	6	58	57	17888.55	2	5790.33	1.7270	0.0400	0.0	0.0	0.0	0.0	0.0	9.42E-10
7	4	41	42	11740.14	1	5790.50	1.7270	0.0400	0.0	0.0	2.57E-10	2.00E-08	2.51E-07	1.27E-06
9	6	18	19	13153.48	1	5791.11	1.7268	0.0470	0.0	0.0	0.0	5.25E-09	9.25E-08	5.89E-07
4	1	66	67	10694.85	1	5791.22	1.7268	0.0400	0.0	0.0	1.79E-10	9.18E-09	8.96E-08	3.85E-07
10	7	68	67	22522.63	1	5791.24	1.7267	0.0400	0.0	0.0	0.0	0.0	1.60E-10	4.56E-09
8	5	10	11	10459.48	2	5791.31	1.7267	0.0545	0.0	0.0	0.0	5.55E-10	5.12E-09	2.11E-08
8	5	97	96	27005.92	1	5791.68	1.7266	0.0400	0.0	0.0	0.0	0.0	0.0	1.10E-10
6	3	50	51	11266.57	1	5792.00	1.7265	0.0400	0.0	0.0	3.38E-10	2.18E-08	2.44E-07	1.15E-06
8	5	79	78	20836.14	2	5792.15	1.7265	0.0400	0.0	0.0	0.0	0.0	0.0	1.04E-10
9	6	11	10	12389.16	2	5792.27	1.7264	0.0545	0.0	0.0	0.0	1.06E-10	1.55E-09	8.74E-09
3	0	73	74	10480.37	1	5792.30	1.7264	0.0400	0.0	0.0	0.0	2.98E-09	2.77E-08	1.15E-07
10	7	1	2	14459.83	1	5792.61	1.7263	0.0738	0.0	0.0	0.0	2.07E-10	4.99E-09	3.91E-08
7	4	24	25	9382.42	2	5792.63	1.7263	0.0400	0.0	0.0	0.0	2.41E-09	1.72E-08	5.97E-08
9	6	57	56	17694.37	2	5792.75	1.7263	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-09
4	1	54	55	7653.44	2	5794.18	1.7259	0.0400	0.0	0.0	2.16E-10	3.28E-09	1.54E-08	4.07E-08
8	5	30	31	12266.54	1	5794.36	1.7258	0.0400	0.0	0.0	1.47E-10	1.42E-08	2.02E-07	1.11E-06
9	6	12	11	12427.41	2	5794.56	1.7258	0.0542	0.0	0.0	0.0	1.12E-10	1.65E-09	9.34E-09
9	6	84	83	24836.50	1	5794.68	1.7257	0.0400	0.0	0.0	0.0	0.0	0.0	6.99E-10
3	0	62	63	7319.43	2	5794.68	1.7257	0.0400	0.0	0.0	0.0	1.25E-09	5.44E-09	1.36E-08
5	2	58	59	10864.87	1	5794.87	1.7257	0.0400	0.0	0.0	3.31E-10	1.82E-08	1.85E-07	8.15E-07
9	6	56	55	17503.45	2	5795.07	1.7256	0.0400	0.0	0.0	0.0	0.0	0.0	1.21E-09
10	7	67	66	22288.82	1	5795.09	1.7256	0.0400	0.0	0.0	0.0	0.0	1.95E-10	5.35E-09
5	2	45	46	8043.62	2	5795.50	1.7255	0.0400	0.0	0.0	2.75E-10	4.87E-09	2.52E-08	7.06E-08
8	5	9	10	10420.87	2	5795.80	1.7254	0.0547	0.0	0.0	0.0	5.33E-10	4.87E-09	2.00E-08
6	3	35	36	8585.23	2	5795.99	1.7253	0.0400	0.0	0.0	2.04E-10	4.50E-09	2.65E-08	8.10E-08
10	7	0	1	14452.63	1	5796.31	1.7252	0.0769	0.0	0.0	0.0	1.05E-10	2.53E-09	1.98E-08
9	6	17	18	13084.58	1	5796.60	1.7251	0.0482	0.0	0.0	0.0	5.45E-09	9.45E-08	5.95E-07
9	6	13	12	12469.13	2	5796.76	1.7251	0.0540	0.0	0.0	0.0	1.16E-10	1.74E-09	9.89E-09
8	5	78	77	20572.85	2	5796.79	1.7251	0.0400	0.0	0.0	0.0	0.0	0.0	1.25E-10
9	6	55	54	17315.80	2	5797.28	1.7249	0.0400	0.0	0.0	0.0	0.0	1.11E-10	1.37E-09
7	4	40	41	11586.35	1	5798.38	1.7246	0.0400	0.0	0.0	3.23E-10	2.36E-08	2.86E-07	1.42E-06
7	4	23	24	9294.14	2	5798.49	1.7246	0.0412	0.0	0.0	0.0	2.60E-09	1.81E-08	6.22E-08
10	7	66	65	22058.29	1	5798.83	1.7245	0.0400	0.0	0.0	0.0	0.0	2.37E-10	6.25E-09
8	5	96	95	26675.41	1	5798.85	1.7245	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-10
9	6	14	13	12514.32	2	5798.86	1.7245	0.0528	0.0	0.0	0.0	1.20E-10	1.81E-09	1.04E-08
9	6	54	53	17131.43	2	5799.39	1.7243	0.0400	0.0	0.0	0.0	0.0	1.29E-10	1.54E-09
8	5	8	9	10385.77	2	5800.18	1.7241	0.0550	0.0	0.0	0.0	5.05E-10	4.57E-09	1.87E-08
9	6	83	82	24548.88	1	5800.36	1.7240	0.0400	0.0	0.0	0.0	0.0	0.0	8.61E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	3	49	50	11079.09	1	5800.80	1.7239	0.0400	0.0	0.0	4.51E-10	2.70E-08	2.89E-07	1.32E-06
9	6	15	14	12562.97	2	5800.85	1.7239	0.0517	0.0	0.0	0.0	1.23E-10	1.87E-09	1.08E-08
8	5	29	30	12153.49	1	5801.11	1.7238	0.0400	0.0	0.0	1.72E-10	1.58E-08	2.19E-07	1.19E-06
8	5	77	76	20312.67	2	5801.32	1.7237	0.0400	0.0	0.0	0.0	0.0	0.0	1.50E-10
9	6	53	52	16950.35	2	5801.39	1.7237	0.0400	0.0	0.0	0.0	0.0	1.49E-10	1.73E-09
4	1	65	66	10446.99	1	5801.62	1.7237	0.0400	0.0	0.0	2.63E-10	1.22E-08	1.13E-07	4.65E-07
9	6	16	17	13019.29	1	5802.00	1.7235	0.0493	0.0	0.0	0.0	5.62E-09	9.59E-08	5.97E-07
10	7	65	64	21831.04	1	5802.46	1.7234	0.0400	0.0	0.0	0.0	0.0	2.86E-10	7.28E-09
9	6	16	15	12615.09	2	5802.75	1.7233	0.0505	0.0	0.0	0.0	1.24E-10	1.92E-09	1.12E-08
6	3	34	35	8457.48	2	5802.92	1.7233	0.0400	0.0	0.0	2.46E-10	5.14E-09	2.93E-08	8.78E-08
4	1	53	54	7456.80	2	5802.92	1.7233	0.0400	0.0	0.0	2.94E-10	4.12E-09	1.85E-08	4.72E-08
9	6	52	51	16772.57	2	5803.29	1.7232	0.0400	0.0	0.0	0.0	0.0	1.71E-10	1.94E-09
5	2	44	45	7879.72	2	5803.39	1.7231	0.0400	0.0	0.0	3.52E-10	5.85E-09	2.90E-08	7.94E-08
3	0	72	73	10205.84	1	5803.40	1.7231	0.0400	0.0	0.0	0.0	4.12E-09	3.58E-08	1.42E-07
10	7	1	0	14449.03	1	5803.41	1.7231	0.0769	0.0	0.0	0.0	1.08E-10	2.59E-09	2.03E-08
3	0	61	62	7093.47	2	5804.17	1.7229	0.0400	0.0	0.0	1.34E-10	1.63E-09	6.69E-09	1.61E-08
7	4	22	23	9209.37	2	5804.25	1.7229	0.0423	0.0	0.0	0.0	2.79E-09	1.91E-08	6.44E-08
8	5	7	8	10354.17	2	5804.48	1.7228	0.0574	0.0	0.0	0.0	4.70E-10	4.23E-09	1.72E-08
5	2	57	58	10647.20	1	5804.48	1.7228	0.0400	0.0	0.0	4.65E-10	2.34E-08	2.26E-07	9.63E-07
9	6	17	16	12670.68	2	5804.54	1.7228	0.0493	0.0	0.0	0.0	1.25E-10	1.95E-09	1.15E-08
9	6	51	50	16598.08	2	5805.08	1.7226	0.0400	0.0	0.0	0.0	0.0	1.97E-10	2.17E-09
8	5	76	75	20055.60	2	5805.74	1.7224	0.0400	0.0	0.0	0.0	0.0	0.0	1.80E-10
8	5	95	94	26347.89	1	5805.91	1.7224	0.0400	0.0	0.0	0.0	0.0	0.0	1.78E-10
9	6	82	81	24264.39	1	5805.91	1.7224	0.0400	0.0	0.0	0.0	0.0	0.0	1.06E-09
10	7	64	63	21607.08	1	5805.98	1.7224	0.0400	0.0	0.0	0.0	0.0	3.44E-10	8.46E-09
7	4	39	40	11436.14	1	5806.16	1.7223	0.0400	0.0	0.0	4.03E-10	2.78E-08	3.25E-07	1.57E-06
9	6	18	17	12729.73	2	5806.24	1.7223	0.0482	0.0	0.0	0.0	1.24E-10	1.97E-09	1.17E-08
9	6	50	49	16426.90	2	5806.77	1.7221	0.0400	0.0	0.0	0.0	0.0	2.25E-10	2.41E-09
10	7	2	1	14452.63	1	5806.80	1.7221	0.0738	0.0	0.0	0.0	2.17E-10	5.23E-09	4.10E-08
9	6	15	16	12957.61	1	5807.29	1.7220	0.0505	0.0	0.0	0.0	5.75E-09	9.67E-08	5.96E-07
8	5	28	29	12044.05	1	5807.75	1.7218	0.0400	0.0	0.0	2.00E-10	1.76E-08	2.38E-07	1.27E-06
9	6	19	18	12792.23	2	5807.83	1.7218	0.0470	0.0	0.0	0.0	1.23E-10	1.98E-09	1.19E-08
9	6	49	48	16259.04	2	5808.35	1.7217	0.0400	0.0	0.0	0.0	0.0	2.56E-10	2.67E-09
8	5	6	7	10326.08	2	5808.67	1.7216	0.0597	0.0	0.0	0.0	4.29E-10	3.83E-09	1.55E-08
9	6	20	19	12858.20	2	5809.33	1.7214	0.0458	0.0	0.0	0.0	1.21E-10	1.98E-09	1.20E-08
10	7	63	62	21386.43	1	5809.38	1.7214	0.0400	0.0	0.0	0.0	0.0	4.13E-10	9.79E-09
6	3	48	49	10895.17	1	5809.50	1.7213	0.0400	0.0	0.0	5.98E-10	3.32E-08	3.41E-07	1.51E-06
6	3	33	34	8333.21	2	5809.75	1.7212	0.0400	0.0	0.0	2.93E-10	5.83E-09	3.23E-08	9.49E-08
9	6	48	47	16094.49	2	5809.83	1.7212	0.0400	0.0	0.0	0.0	0.0	2.91E-10	2.95E-09
7	4	21	22	9128.10	2	5809.92	1.7212	0.0435	0.0	0.0	1.09E-10	2.97E-09	1.99E-08	6.64E-08
8	5	75	74	19801.66	2	5810.05	1.7212	0.0400	0.0	0.0	0.0	0.0	0.0	2.15E-10
10	7	3	2	14459.83	1	5810.08	1.7211	0.0707	0.0	0.0	0.0	3.27E-10	7.88E-09	6.18E-08
9	6	21	20	12927.62	2	5810.72	1.7210	0.0447	0.0	0.0	0.0	1.18E-10	1.96E-09	1.20E-08
5	2	43	44	7719.30	2	5811.18	1.7208	0.0400	0.0	0.0	4.49E-10	6.99E-09	3.34E-08	8.90E-08
9	6	47	46	15933.27	2	5811.20	1.7208	0.0400	0.0	0.0	0.0	0.0	3.29E-10	3.26E-09
9	6	81	80	23983.04	1	5811.36	1.7208	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-09
4	1	52	53	7263.61	2	5811.57	1.7207	0.0400	0.0	0.0	3.96E-10	5.14E-09	2.20E-08	5.45E-08
4	1	64	65	10202.62	1	5811.93	1.7206	0.0400	0.0	0.0	3.85E-10	1.62E-08	1.41E-07	5.60E-07
9	6	22	21	13000.48	2	5812.02	1.7206	0.0435	0.0	0.0	0.0	1.14E-10	1.93E-09	1.20E-08
9	6	46	45	15775.39	2	5812.47	1.7204	0.0400	0.0	0.0	0.0	0.0	3.70E-10	3.58E-09
9	6	14	15	12899.54	1	5812.48	1.7204	0.0517	0.0	0.0	0.0	5.83E-09	9.67E-08	5.91E-07
10	7	62	61	21169.09	1	5812.66	1.7204	0.0400	0.0	0.0	0.0	0.0	4.93E-10	1.13E-08
8	5	5	6	10301.50	2	5812.77	1.7204	0.0621	0.0	0.0	0.0	3.82E-10	3.39E-09	1.37E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	94	93	26023.39	1	5812.84	1.7203	0.0400	0.0	0.0	0.0	0.0	0.0	2.24E-10
9	6	23	22	13076.80	2	5813.21	1.7202	0.0423	0.0	0.0	0.0	1.10E-10	1.90E-09	1.19E-08
10	7	4	3	14470.63	1	5813.26	1.7202	0.0676	0.0	0.0	0.0	4.35E-10	1.05E-08	8.26E-08
3	0	60	61	6870.93	2	5813.58	1.7201	0.0400	0.0	0.0	1.89E-10	2.10E-09	8.19E-09	1.91E-08
9	6	45	44	15620.85	2	5813.64	1.7201	0.0400	0.0	0.0	0.0	0.0	4.15E-10	3.91E-09
7	4	38	39	11289.51	1	5813.84	1.7200	0.0400	0.0	0.0	5.01E-10	3.26E-08	3.67E-07	1.73E-06
5	2	56	57	10433.05	1	5813.99	1.7200	0.0400	0.0	0.0	6.49E-10	3.00E-08	2.75E-07	1.13E-06
8	5	74	73	19550.86	2	5814.26	1.7199	0.0400	0.0	0.0	0.0	0.0	0.0	2.56E-10
9	6	24	23	13156.57	2	5814.30	1.7199	0.0412	0.0	0.0	0.0	1.05E-10	1.85E-09	1.18E-08
8	5	27	28	11938.21	1	5814.30	1.7199	0.0400	0.0	0.0	2.31E-10	1.95E-08	2.57E-07	1.34E-06
3	0	71	72	9934.75	1	5814.41	1.7199	0.0400	0.0	0.0	1.49E-10	5.65E-09	4.60E-08	1.75E-07
9	6	44	43	15469.65	2	5814.70	1.7198	0.0400	0.0	0.0	0.0	0.0	4.64E-10	4.27E-09
9	6	25	24	13239.77	2	5815.29	1.7196	0.0400	0.0	0.0	0.0	1.00E-10	1.80E-09	1.16E-08
7	4	20	21	9050.34	2	5815.49	1.7195	0.0447	0.0	0.0	1.19E-10	3.15E-09	2.07E-08	6.82E-08
9	6	43	42	15321.80	2	5815.66	1.7195	0.0400	0.0	0.0	0.0	0.0	5.17E-10	4.64E-09
10	7	61	60	20955.06	1	5815.83	1.7194	0.0400	0.0	0.0	0.0	0.0	5.87E-10	1.30E-08
9	6	26	25	13326.42	2	5816.18	1.7193	0.0400	0.0	0.0	0.0	0.0	1.73E-09	1.13E-08
10	7	5	4	14485.03	1	5816.34	1.7193	0.0645	0.0	0.0	0.0	5.41E-10	1.31E-08	1.03E-07
6	3	32	33	8212.45	2	5816.48	1.7193	0.0400	0.0	0.0	3.47E-10	6.59E-09	3.54E-08	1.02E-07
9	6	42	41	15177.32	2	5816.51	1.7192	0.0400	0.0	0.0	0.0	0.0	5.73E-10	5.03E-09
9	6	80	79	23704.85	1	5816.68	1.7192	0.0400	0.0	0.0	0.0	0.0	0.0	1.58E-09
8	5	4	5	10280.43	2	5816.77	1.7192	0.0645	0.0	0.0	0.0	3.29E-10	2.91E-09	1.17E-08
9	6	27	26	13416.50	2	5816.97	1.7191	0.0400	0.0	0.0	0.0	0.0	1.67E-09	1.10E-08
9	6	41	40	15036.20	2	5817.26	1.7190	0.0400	0.0	0.0	0.0	0.0	6.33E-10	5.43E-09
9	6	13	14	12845.10	1	5817.57	1.7189	0.0528	0.0	0.0	0.0	5.86E-09	9.59E-08	5.81E-07
9	6	28	27	13510.01	2	5817.65	1.7189	0.0400	0.0	0.0	0.0	0.0	1.59E-09	1.07E-08
9	6	40	39	14898.44	2	5817.91	1.7188	0.0400	0.0	0.0	0.0	0.0	6.96E-10	5.85E-09
6	3	47	48	10714.80	1	5818.10	1.7188	0.0400	0.0	0.0	7.88E-10	4.07E-08	4.00E-07	1.72E-06
9	6	29	28	13606.95	2	5818.24	1.7187	0.0400	0.0	0.0	0.0	0.0	1.52E-09	1.04E-08
8	5	73	72	19303.21	2	5818.36	1.7187	0.0400	0.0	0.0	0.0	0.0	0.0	3.04E-10
9	6	39	38	14764.06	2	5818.45	1.7187	0.0400	0.0	0.0	0.0	0.0	7.63E-10	6.27E-09
9	6	30	29	13707.32	2	5818.72	1.7186	0.0400	0.0	0.0	0.0	0.0	1.44E-09	9.99E-09
5	2	42	43	7562.35	2	5818.88	1.7185	0.0400	0.0	0.0	5.68E-10	8.31E-09	3.82E-08	9.94E-08
9	6	38	37	14633.06	2	5818.89	1.7185	0.0400	0.0	0.0	0.0	0.0	8.33E-10	6.70E-09
10	7	60	59	20744.37	1	5818.89	1.7185	0.0400	0.0	0.0	0.0	0.0	6.96E-10	1.49E-08
9	6	31	30	13811.11	2	5819.10	1.7185	0.0400	0.0	0.0	0.0	0.0	1.37E-09	9.63E-09
9	6	37	36	14505.45	2	5819.23	1.7184	0.0400	0.0	0.0	0.0	0.0	9.05E-10	7.14E-09
10	7	6	5	14503.03	1	5819.31	1.7184	0.0621	0.0	0.0	0.0	6.43E-10	1.56E-08	1.24E-07
9	6	32	31	13918.32	2	5819.38	1.7184	0.0400	0.0	0.0	0.0	0.0	1.29E-09	9.25E-09
9	6	36	35	14381.22	2	5819.46	1.7184	0.0400	0.0	0.0	0.0	0.0	9.80E-10	7.58E-09
9	6	33	32	14028.93	2	5819.55	1.7183	0.0400	0.0	0.0	0.0	0.0	1.21E-09	8.85E-09
9	6	35	34	14260.39	2	5819.59	1.7183	0.0400	0.0	0.0	0.0	0.0	1.06E-09	8.01E-09
9	6	34	33	14142.96	2	5819.62	1.7183	0.0400	0.0	0.0	0.0	0.0	1.13E-09	8.44E-09
8	5	93	92	25701.90	1	5819.66	1.7183	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-10
4	1	51	52	7073.87	2	5820.12	1.7182	0.0400	0.0	0.0	5.31E-10	6.39E-09	2.61E-08	6.28E-08
8	5	3	4	10262.87	2	5820.67	1.7180	0.0676	0.0	0.0	0.0	2.71E-10	2.39E-09	9.55E-09
8	5	26	27	11835.99	1	5820.75	1.7180	0.0400	0.0	0.0	2.65E-10	2.15E-08	2.76E-07	1.42E-06
7	4	19	20	8976.10	2	5820.97	1.7179	0.0458	0.0	0.0	1.28E-10	3.31E-09	2.14E-08	6.96E-08
7	4	37	38	11146.46	1	5821.42	1.7178	0.0400	0.0	0.0	6.18E-10	3.80E-08	4.13E-07	1.91E-06
10	7	59	58	20537.02	1	5821.84	1.7177	0.0400	0.0	0.0	0.0	0.0	8.27E-10	1.71E-08
9	6	79	78	23429.83	1	5821.89	1.7177	0.0400	0.0	0.0	0.0	0.0	0.0	1.92E-09
4	1	63	64	9961.74	1	5822.15	1.7176	0.0400	0.0	0.0	5.61E-10	2.15E-08	1.76E-07	6.72E-07
10	7	7	6	14524.62	1	5822.17	1.7176	0.0597	0.0	0.0	0.0	7.39E-10	1.81E-08	1.43E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	72	71	19058.71	2	5822.35	1.7175	0.0400	0.0	0.0	0.0	0.0	0.0	3.60E-10
9	6	12	13	12794.27	1	5822.55	1.7175	0.0540	0.0	0.0	0.0	5.84E-09	9.44E-08	5.67E-07
3	0	59	60	6651.80	2	5822.89	1.7174	0.0400	0.0	0.0	2.66E-10	2.70E-09	9.99E-09	2.25E-08
6	3	31	32	8095.19	2	5823.13	1.7173	0.0400	0.0	0.0	4.09E-10	7.41E-09	3.87E-08	1.10E-07
5	2	55	56	10222.44	1	5823.40	1.7172	0.0400	0.0	0.0	9.01E-10	3.82E-08	3.34E-07	1.33E-06
8	5	2	3	10248.82	2	5824.48	1.7169	0.0707	0.0	0.0	0.0	2.09E-10	1.83E-09	7.30E-09
10	7	58	57	20333.01	1	5824.67	1.7168	0.0400	0.0	0.0	0.0	0.0	9.80E-10	1.96E-08
10	7	8	7	14549.82	1	5824.93	1.7168	0.0574	0.0	0.0	0.0	8.28E-10	2.04E-08	1.62E-07
3	0	70	71	9667.11	1	5825.33	1.7166	0.0400	0.0	0.0	2.27E-10	7.73E-09	5.90E-08	2.15E-07
8	5	71	70	18817.38	2	5826.23	1.7164	0.0400	0.0	0.0	0.0	0.0	0.0	4.25E-10
7	4	18	19	8905.38	2	5826.35	1.7163	0.0470	0.0	0.0	1.38E-10	3.45E-09	2.19E-08	7.06E-08
8	5	92	91	25383.46	1	5826.36	1.7163	0.0400	0.0	0.0	0.0	0.0	0.0	3.55E-10
5	2	41	42	7408.88	2	5826.49	1.7163	0.0400	0.0	0.0	7.15E-10	9.83E-09	4.36E-08	1.11E-07
6	3	46	47	10538.00	1	5826.60	1.7163	0.0400	0.0	0.0	1.03E-09	4.97E-08	4.68E-07	1.96E-06
9	6	78	77	23157.98	1	5826.98	1.7162	0.0400	0.0	0.0	0.0	0.0	0.0	2.33E-09
8	5	25	26	11737.38	1	5827.09	1.7161	0.0400	0.0	0.0	3.02E-10	2.35E-08	2.95E-07	1.50E-06
10	7	57	56	20132.36	1	5827.39	1.7160	0.0400	0.0	0.0	0.0	0.0	1.16E-09	2.25E-08
9	6	11	12	12747.07	1	5827.44	1.7160	0.0542	0.0	0.0	0.0	5.75E-09	9.20E-08	5.48E-07
10	7	9	8	14578.61	1	5827.58	1.7160	0.0550	0.0	0.0	0.0	9.10E-10	2.26E-08	1.80E-07
8	5	1	2	10238.29	2	5828.19	1.7158	0.0738	0.0	0.0	0.0	1.42E-10	1.24E-09	4.95E-09
4	1	50	51	6887.58	2	5828.59	1.7157	0.0400	0.0	0.0	7.07E-10	7.90E-09	3.09E-08	7.22E-08
7	4	36	37	11007.02	1	5828.90	1.7156	0.0400	0.0	0.0	7.57E-10	4.40E-08	4.63E-07	2.09E-06
6	3	30	31	7981.43	2	5829.68	1.7154	0.0400	0.0	0.0	4.79E-10	8.29E-09	4.21E-08	1.17E-07
10	7	56	55	19935.07	1	5829.99	1.7153	0.0400	0.0	0.0	0.0	0.0	1.36E-09	2.56E-08
8	5	70	69	18579.22	2	5830.01	1.7153	0.0400	0.0	0.0	0.0	0.0	0.0	5.00E-10
10	7	10	9	14610.99	1	5830.13	1.7152	0.0547	0.0	0.0	0.0	9.83E-10	2.46E-08	1.97E-07
7	4	17	18	8838.17	2	5831.64	1.7148	0.0482	0.0	0.0	1.47E-10	3.58E-09	2.24E-08	7.13E-08
8	5	0	1	10231.26	2	5831.80	1.7147	0.0769	0.0	0.0	0.0	0.0	6.30E-10	2.51E-09
9	6	77	76	22889.33	1	5831.96	1.7147	0.0400	0.0	0.0	0.0	0.0	0.0	2.82E-09
3	0	58	59	6436.11	2	5832.12	1.7146	0.0400	0.0	0.0	3.72E-10	3.47E-09	1.22E-08	2.65E-08
9	6	10	11	12703.48	1	5832.21	1.7146	0.0545	0.0	0.0	0.0	5.61E-09	8.87E-08	5.25E-07
4	1	62	63	9724.36	1	5832.27	1.7146	0.0400	0.0	0.0	8.11E-10	2.82E-08	2.19E-07	8.04E-07
10	7	55	54	19741.15	1	5832.49	1.7145	0.0400	0.0	0.0	0.0	0.0	1.59E-09	2.91E-08
10	7	11	10	14646.97	1	5832.57	1.7145	0.0545	0.0	0.0	0.0	1.05E-09	2.64E-08	2.13E-07
5	2	54	55	10015.37	1	5832.72	1.7145	0.0400	0.0	0.0	1.24E-09	4.86E-08	4.03E-07	1.55E-06
8	5	91	90	25068.06	1	5832.94	1.7144	0.0400	0.0	0.0	0.0	0.0	0.0	4.44E-10
8	5	24	25	11642.38	1	5833.33	1.7143	0.0400	0.0	0.0	3.42E-10	2.56E-08	3.14E-07	1.57E-06
8	5	69	68	18344.26	2	5833.67	1.7142	0.0400	0.0	0.0	0.0	0.0	0.0	5.87E-10
5	2	40	41	7258.90	2	5834.00	1.7141	0.0400	0.0	0.0	8.94E-10	1.16E-08	4.95E-08	1.23E-07
10	7	54	53	19550.62	1	5834.87	1.7138	0.0400	0.0	0.0	0.0	0.0	1.86E-09	3.29E-08
10	7	12	11	14686.54	1	5834.90	1.7138	0.0542	0.0	0.0	0.0	1.10E-09	2.80E-08	2.28E-07
6	3	45	46	10364.77	1	5835.00	1.7138	0.0400	0.0	0.0	1.34E-09	6.04E-08	5.45E-07	2.22E-06
7	4	102	101	26845.17	1	5835.85	1.7135	0.0400	0.0	0.0	0.0	0.0	0.0	8.68E-11
6	3	29	30	7871.18	2	5836.14	1.7135	0.0400	0.0	0.0	5.57E-10	9.22E-09	4.57E-08	1.25E-07
3	0	69	70	9402.94	1	5836.15	1.7135	0.0400	0.0	0.0	3.44E-10	1.05E-08	7.54E-08	2.64E-07
7	4	35	36	10871.18	1	5836.28	1.7134	0.0400	0.0	0.0	9.22E-10	5.07E-08	5.17E-07	2.29E-06
9	6	76	75	22623.88	1	5836.82	1.7133	0.0400	0.0	0.0	0.0	0.0	1.17E-10	3.40E-09
7	4	16	17	8774.49	2	5836.83	1.7133	0.0493	0.0	0.0	1.55E-10	3.69E-09	2.27E-08	7.16E-08
9	6	9	10	12663.53	1	5836.89	1.7132	0.0547	0.0	0.0	0.0	5.39E-09	8.45E-08	4.97E-07
4	1	49	50	6704.76	2	5836.97	1.7132	0.0400	0.0	0.0	9.37E-10	9.73E-09	3.64E-08	8.26E-08
10	7	53	52	19363.47	1	5837.13	1.7132	0.0400	0.0	0.0	0.0	0.0	2.16E-09	3.71E-08
10	7	13	12	14729.70	1	5837.13	1.7132	0.0540	0.0	0.0	0.0	1.14E-09	2.94E-08	2.41E-07
8	5	68	67	18112.48	2	5837.24	1.7131	0.0400	0.0	0.0	0.0	0.0	0.0	6.87E-10

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	1	0	10227.75	2	5838.72	1.7127	0.0769	0.0	0.0	0.0	0.0	6.46E-10	2.57E-09
10	7	14	13	14776.45	1	5839.25	1.7125	0.0528	0.0	0.0	0.0	1.18E-09	3.06E-08	2.53E-07
10	7	52	51	19179.72	1	5839.29	1.7125	0.0400	0.0	0.0	0.0	0.0	2.51E-09	4.18E-08
8	5	90	89	24755.73	1	5839.40	1.7125	0.0400	0.0	0.0	0.0	0.0	0.0	5.54E-10
8	5	23	24	11551.01	1	5839.48	1.7125	0.0412	0.0	0.0	3.84E-10	2.77E-08	3.32E-07	1.64E-06
7	4	85	84	20602.01	2	5839.71	1.7124	0.0400	0.0	0.0	0.0	0.0	0.0	8.77E-11
8	5	67	66	17883.92	2	5840.69	1.7121	0.0400	0.0	0.0	0.0	0.0	0.0	8.01E-10
3	0	57	58	6223.85	2	5841.25	1.7120	0.0400	0.0	0.0	5.19E-10	4.45E-09	1.48E-08	3.12E-08
10	7	15	14	14826.79	1	5841.26	1.7120	0.0517	0.0	0.0	0.0	1.20E-09	3.16E-08	2.63E-07
10	7	51	50	18999.38	1	5841.33	1.7119	0.0400	0.0	0.0	0.0	0.0	2.89E-09	4.69E-08
5	2	39	40	7112.42	2	5841.43	1.7119	0.0400	0.0	0.0	1.11E-09	1.36E-08	5.61E-08	1.36E-07
9	6	8	9	12627.20	1	5841.46	1.7119	0.0550	0.0	0.0	0.0	5.11E-09	7.94E-08	4.65E-07
9	6	75	74	22361.64	1	5841.56	1.7119	0.0400	0.0	0.0	0.0	0.0	1.47E-10	4.08E-09
7	4	15	16	8714.33	2	5841.93	1.7118	0.0505	0.0	0.0	1.62E-10	3.76E-09	2.28E-08	7.13E-08
5	2	53	54	9811.84	1	5841.94	1.7118	0.0400	0.0	0.0	1.70E-09	6.14E-08	4.85E-07	1.81E-06
8	5	2	1	10231.26	2	5842.04	1.7117	0.0738	0.0	0.0	0.0	1.49E-10	1.30E-09	5.19E-09
4	1	61	62	9490.49	1	5842.30	1.7117	0.0400	0.0	0.0	1.17E-09	3.70E-08	2.71E-07	9.59E-07
6	3	28	29	7764.45	2	5842.50	1.7116	0.0400	0.0	0.0	6.45E-10	1.02E-08	4.94E-08	1.33E-07
10	7	16	15	14880.71	1	5843.17	1.7114	0.0505	0.0	0.0	0.0	1.21E-09	3.23E-08	2.71E-07
10	7	50	49	18822.44	1	5843.26	1.7114	0.0400	0.0	0.0	0.0	0.0	3.32E-09	5.24E-08
6	3	44	45	10195.12	1	5843.31	1.7114	0.0400	0.0	0.0	1.74E-09	7.30E-08	6.32E-07	2.51E-06
7	4	34	35	10738.94	1	5843.56	1.7113	0.0400	0.0	0.0	1.12E-09	5.82E-08	5.75E-07	2.49E-06
7	4	101	100	26496.37	1	5843.58	1.7113	0.0400	0.0	0.0	0.0	0.0	0.0	1.12E-10
8	5	66	65	17658.56	2	5844.04	1.7111	0.0400	0.0	0.0	0.0	0.0	0.0	9.32E-10
10	7	17	16	14938.22	1	5844.96	1.7109	0.0493	0.0	0.0	0.0	1.21E-09	3.28E-08	2.78E-07
7	4	84	83	20317.56	2	5844.97	1.7109	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-10
10	7	49	48	18648.93	1	5845.08	1.7108	0.0400	0.0	0.0	0.0	0.0	3.81E-09	5.83E-08
4	1	48	49	6525.41	2	5845.25	1.7108	0.0400	0.0	0.0	1.23E-09	1.19E-08	4.28E-08	9.42E-08
8	5	3	2	10238.29	2	5845.26	1.7108	0.0707	0.0	0.0	0.0	2.25E-10	1.96E-09	7.83E-09
8	5	22	23	11463.27	1	5845.52	1.7107	0.0423	0.0	0.0	4.27E-10	2.98E-08	3.50E-07	1.70E-06
8	5	89	88	24446.47	1	5845.75	1.7106	0.0400	0.0	0.0	0.0	0.0	0.0	6.95E-10
9	6	7	8	12594.50	1	5845.93	1.7106	0.0574	0.0	0.0	0.0	4.77E-09	7.35E-08	4.28E-07
9	6	74	73	22102.62	1	5846.19	1.7105	0.0400	0.0	0.0	0.0	0.0	1.84E-10	4.90E-09
10	7	18	17	14999.30	1	5846.66	1.7104	0.0482	0.0	0.0	0.0	1.21E-09	3.31E-08	2.83E-07
10	7	48	47	18478.84	1	5846.79	1.7103	0.0400	0.0	0.0	0.0	0.0	4.35E-09	6.48E-08
3	0	68	69	9142.25	1	5846.88	1.7103	0.0400	0.0	0.0	5.17E-10	1.43E-08	9.60E-08	3.22E-07
7	4	14	15	8657.70	2	5846.93	1.7103	0.0517	0.0	0.0	1.68E-10	3.81E-09	2.28E-08	7.06E-08
8	5	65	64	17436.43	2	5847.28	1.7102	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-09
10	7	19	18	15063.96	1	5848.24	1.7099	0.0470	0.0	0.0	0.0	1.19E-09	3.31E-08	2.86E-07
10	7	47	46	18312.18	1	5848.38	1.7099	0.0400	0.0	0.0	0.0	0.0	4.94E-09	7.17E-08
8	5	4	3	10248.82	2	5848.38	1.7099	0.0676	0.0	0.0	0.0	2.99E-10	2.62E-09	1.05E-08
5	2	38	39	6969.43	2	5848.76	1.7098	0.0400	0.0	0.0	1.37E-09	1.58E-08	6.32E-08	1.49E-07
6	3	27	28	7661.24	2	5848.77	1.7098	0.0400	0.0	0.0	7.43E-10	1.13E-08	5.33E-08	1.41E-07
10	7	20	19	15132.20	1	5849.72	1.7095	0.0458	0.0	0.0	0.0	1.16E-09	3.30E-08	2.88E-07
10	7	46	45	18148.97	1	5849.86	1.7094	0.0400	0.0	0.0	0.0	0.0	5.59E-09	7.91E-08
7	4	83	82	20036.19	2	5850.12	1.7094	0.0400	0.0	0.0	0.0	0.0	0.0	1.32E-10
3	0	56	57	6015.03	2	5850.30	1.7093	0.0400	0.0	0.0	7.19E-10	5.67E-09	1.80E-08	3.65E-08
9	6	6	7	12565.43	1	5850.30	1.7093	0.0597	0.0	0.0	0.0	4.36E-09	6.67E-08	3.86E-07
8	5	64	63	17217.54	2	5850.41	1.7093	0.0400	0.0	0.0	0.0	0.0	1.03E-10	1.25E-09
9	6	73	72	21846.84	1	5850.71	1.7092	0.0400	0.0	0.0	0.0	0.0	2.29E-10	5.85E-09
7	4	33	34	10610.31	1	5850.75	1.7092	0.0400	0.0	0.0	1.34E-09	6.65E-08	6.36E-07	2.70E-06
5	2	52	53	9611.86	1	5851.07	1.7091	0.0400	0.0	0.0	2.32E-09	7.73E-08	5.82E-07	2.10E-06
10	7	21	20	15204.01	1	5851.08	1.7091	0.0447	0.0	0.0	0.0	1.13E-09	3.26E-08	2.88E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	100	99	26150.54	1	5851.20	1.7091	0.0400	0.0	0.0	0.0	0.0	0.0	1.44E-10
10	7	45	44	17989.20	1	5851.24	1.7090	0.0400	0.0	0.0	0.0	1.12E-10	6.31E-09	8.70E-08
8	5	5	4	10262.87	2	5851.40	1.7090	0.0645	0.0	0.0	0.0	3.73E-10	3.28E-09	1.31E-08
8	5	21	22	11379.15	1	5851.46	1.7090	0.0435	0.0	0.0	4.72E-10	3.18E-08	3.66E-07	1.76E-06
6	3	43	44	10029.06	1	5851.52	1.7090	0.0400	0.0	0.0	2.23E-09	8.77E-08	7.31E-07	2.82E-06
7	4	13	14	8604.60	2	5851.83	1.7089	0.0528	0.0	0.0	1.72E-10	3.83E-09	2.26E-08	6.94E-08
8	5	88	87	24140.31	1	5851.98	1.7088	0.0400	0.0	0.0	0.0	0.0	0.0	8.69E-10
4	1	60	61	9260.14	1	5852.23	1.7088	0.0400	0.0	0.0	1.67E-09	4.82E-08	3.34E-07	1.14E-06
10	7	22	21	15279.39	1	5852.35	1.7087	0.0435	0.0	0.0	0.0	1.09E-09	3.21E-08	2.87E-07
10	7	44	43	17832.88	1	5852.50	1.7087	0.0400	0.0	0.0	0.0	1.31E-10	7.09E-09	9.53E-08
8	5	63	62	17001.87	2	5853.44	1.7084	0.0400	0.0	0.0	0.0	0.0	1.23E-10	1.44E-09
4	1	47	48	6349.53	2	5853.45	1.7084	0.0400	0.0	0.0	1.61E-09	1.45E-08	5.00E-08	1.07E-07
10	7	23	22	15358.34	1	5853.50	1.7084	0.0423	0.0	0.0	0.0	1.05E-09	3.14E-08	2.84E-07
10	7	43	42	17680.03	1	5853.64	1.7083	0.0400	0.0	0.0	0.0	1.52E-10	7.93E-09	1.04E-07
8	5	6	5	10280.43	2	5854.32	1.7081	0.0621	0.0	0.0	0.0	4.43E-10	3.91E-09	1.57E-08
10	7	24	23	15440.84	1	5854.54	1.7081	0.0412	0.0	0.0	0.0	1.00E-09	3.06E-08	2.80E-07
9	6	5	6	12539.99	1	5854.56	1.7081	0.0621	0.0	0.0	0.0	3.88E-09	5.90E-08	3.41E-07
10	7	42	41	17530.64	1	5854.68	1.7080	0.0400	0.0	0.0	0.0	1.76E-10	8.83E-09	1.13E-07
6	3	26	27	7561.55	2	5854.94	1.7080	0.0400	0.0	0.0	8.50E-10	1.24E-08	5.72E-08	1.49E-07
9	6	72	71	21594.31	1	5855.11	1.7079	0.0400	0.0	0.0	0.0	0.0	2.84E-10	6.98E-09
7	4	82	81	19757.90	2	5855.17	1.7079	0.0400	0.0	0.0	0.0	0.0	0.0	1.61E-10
10	7	25	24	15526.91	1	5855.48	1.7078	0.0400	0.0	0.0	0.0	9.50E-10	2.96E-08	2.75E-07
10	7	41	40	17384.73	1	5855.61	1.7078	0.0400	0.0	0.0	0.0	2.02E-10	9.81E-09	1.23E-07
5	2	37	38	6829.95	2	5856.00	1.7077	0.0400	0.0	0.0	1.68E-09	1.84E-08	7.09E-08	1.64E-07
10	7	26	25	15616.54	1	5856.31	1.7076	0.0400	0.0	0.0	0.0	8.96E-10	2.85E-08	2.69E-07
8	5	62	61	16789.46	2	5856.36	1.7075	0.0400	0.0	0.0	0.0	0.0	1.46E-10	1.66E-09
10	7	40	39	17242.29	1	5856.43	1.7075	0.0400	0.0	0.0	0.0	2.31E-10	1.08E-08	1.33E-07
7	4	12	13	8555.02	2	5856.64	1.7075	0.0540	0.0	0.0	1.75E-10	3.81E-09	2.22E-08	6.77E-08
10	7	27	26	15709.71	1	5857.03	1.7074	0.0400	0.0	0.0	0.0	8.39E-10	2.73E-08	2.61E-07
10	7	39	38	17103.34	1	5857.13	1.7073	0.0400	0.0	0.0	0.0	2.63E-10	1.19E-08	1.43E-07
8	5	7	6	10301.50	2	5857.14	1.7073	0.0597	0.0	0.0	0.0	5.10E-10	4.52E-09	1.82E-08
8	5	20	21	11298.67	1	5857.30	1.7073	0.0447	0.0	0.0	5.18E-10	3.38E-08	3.82E-07	1.81E-06
3	0	67	68	8885.04	1	5857.52	1.7072	0.0400	0.0	0.0	7.73E-10	1.92E-08	1.22E-07	3.92E-07
10	7	28	27	15806.43	1	5857.64	1.7072	0.0400	0.0	0.0	0.0	7.82E-10	2.60E-08	2.53E-07
10	7	38	37	16967.88	1	5857.73	1.7071	0.0400	0.0	0.0	0.0	2.97E-10	1.31E-08	1.53E-07
7	4	32	33	10485.30	1	5857.83	1.7071	0.0400	0.0	0.0	1.60E-09	7.55E-08	7.01E-07	2.91E-06
8	5	87	86	23837.25	1	5858.09	1.7070	0.0400	0.0	0.0	0.0	0.0	0.0	1.08E-09
10	7	29	28	15906.70	1	5858.14	1.7070	0.0400	0.0	0.0	0.0	7.24E-10	2.47E-08	2.44E-07
10	7	37	36	16835.92	1	5858.21	1.7070	0.0400	0.0	0.0	0.0	3.35E-10	1.43E-08	1.64E-07
10	7	30	29	16010.51	1	5858.53	1.7069	0.0400	0.0	0.0	0.0	6.67E-10	2.33E-08	2.35E-07
10	7	36	35	16707.46	1	5858.59	1.7069	0.0400	0.0	0.0	0.0	3.76E-10	1.55E-08	1.74E-07
7	4	99	98	25807.67	1	5858.70	1.7069	0.0400	0.0	0.0	0.0	0.0	0.0	1.85E-10
9	6	4	5	12518.18	1	5858.71	1.7069	0.0645	0.0	0.0	0.0	3.35E-09	5.07E-08	2.91E-07
10	7	31	30	16117.86	1	5858.81	1.7068	0.0400	0.0	0.0	0.0	6.15E-10	2.20E-08	2.25E-07
10	7	35	34	16582.50	1	5858.85	1.7068	0.0400	0.0	0.0	0.0	4.19E-10	1.68E-08	1.85E-07
10	7	32	31	16228.73	1	5858.99	1.7068	0.0400	0.0	0.0	0.0	5.63E-10	2.07E-08	2.16E-07
10	7	34	33	16461.06	1	5859.01	1.7068	0.0400	0.0	0.0	0.0	4.65E-10	1.81E-08	1.95E-07
10	7	33	32	16343.14	1	5859.05	1.7068	0.0400	0.0	0.0	0.0	5.13E-10	1.94E-08	2.06E-07
8	5	61	60	16580.31	2	5859.18	1.7067	0.0400	0.0	0.0	0.0	0.0	1.73E-10	1.90E-09
3	0	55	56	5809.67	2	5859.25	1.7067	0.0400	0.0	0.0	9.90E-10	7.19E-09	2.17E-08	4.27E-08
9	6	71	70	21345.04	1	5859.39	1.7067	0.0400	0.0	0.0	0.0	0.0	3.52E-10	8.29E-09
6	3	42	43	9866.59	1	5859.63	1.7066	0.0400	0.0	0.0	2.85E-09	1.05E-07	8.41E-07	3.17E-06
8	5	8	7	10326.08	2	5859.87	1.7065	0.0574	0.0	0.0	0.0	5.72E-10	5.11E-09	2.06E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	51	52	9415.45	1	5860.09	1.7065	0.0400	0.0	0.0	3.15E-09	9.68E-08	6.96E-07	2.44E-06
7	4	81	80	19482.71	2	5860.10	1.7065	0.0400	0.0	0.0	0.0	0.0	0.0	1.96E-10
6	3	25	26	7465.39	2	5861.02	1.7062	0.0400	0.0	0.0	9.64E-10	1.36E-08	6.10E-08	1.56E-07
7	4	11	12	8508.98	2	5861.35	1.7061	0.0542	0.0	0.0	1.75E-10	3.75E-09	2.16E-08	6.55E-08
4	1	46	47	6177.14	2	5861.55	1.7060	0.0400	0.0	0.0	2.10E-09	1.77E-08	5.83E-08	1.21E-07
8	5	60	59	16374.42	2	5861.89	1.7059	0.0400	0.0	0.0	0.0	0.0	2.04E-10	2.17E-09
4	1	59	60	9033.32	1	5862.07	1.7059	0.0400	0.0	0.0	2.37E-09	6.25E-08	4.10E-07	1.35E-06
8	5	9	8	10354.17	2	5862.49	1.7058	0.0550	0.0	0.0	0.0	6.29E-10	5.66E-09	2.30E-08
9	6	3	4	12500.01	1	5862.77	1.7057	0.0676	0.0	0.0	0.0	2.76E-09	4.16E-08	2.38E-07
8	5	19	20	11221.82	1	5863.03	1.7056	0.0458	0.0	0.0	5.63E-10	3.56E-08	3.95E-07	1.85E-06
5	2	36	37	6693.98	2	5863.14	1.7056	0.0400	0.0	0.0	2.05E-09	2.12E-08	7.93E-08	1.79E-07
9	6	70	69	21099.03	1	5863.56	1.7054	0.0400	0.0	0.0	0.0	0.0	4.34E-10	9.83E-09
8	5	86	85	23537.30	1	5864.08	1.7053	0.0400	0.0	0.0	0.0	0.0	0.0	1.35E-09
8	5	59	58	16171.80	2	5864.49	1.7052	0.0400	0.0	0.0	0.0	0.0	2.41E-10	2.48E-09
7	4	31	32	10363.92	1	5864.81	1.7051	0.0400	0.0	0.0	1.90E-09	8.52E-08	7.69E-07	3.14E-06
7	4	80	79	19210.62	2	5864.92	1.7051	0.0400	0.0	0.0	0.0	0.0	0.0	2.38E-10
8	5	10	9	10385.77	2	5865.02	1.7050	0.0547	0.0	0.0	0.0	6.81E-10	6.16E-09	2.52E-08
7	4	10	11	8466.48	2	5865.96	1.7048	0.0545	0.0	0.0	1.74E-10	3.65E-09	2.09E-08	6.26E-08
7	4	98	97	25467.79	1	5866.07	1.7047	0.0400	0.0	0.0	0.0	0.0	0.0	2.37E-10
9	6	2	3	12485.47	1	5866.72	1.7045	0.0707	0.0	0.0	0.0	2.12E-09	3.19E-08	1.82E-07
8	5	58	57	15972.47	2	5866.99	1.7045	0.0400	0.0	0.0	0.0	0.0	2.84E-10	2.83E-09
6	3	24	25	7372.76	2	5867.01	1.7044	0.0400	0.0	0.0	1.09E-09	1.47E-08	6.48E-08	1.63E-07
8	5	11	10	10420.87	2	5867.45	1.7043	0.0545	0.0	0.0	0.0	7.26E-10	6.63E-09	2.72E-08
9	6	69	68	20856.30	1	5867.61	1.7043	0.0400	0.0	0.0	0.0	0.0	5.32E-10	1.16E-08
6	3	41	42	9707.73	1	5867.64	1.7043	0.0400	0.0	0.0	3.62E-09	1.25E-07	9.64E-07	3.54E-06
3	0	66	67	8631.33	1	5868.06	1.7041	0.0400	0.0	0.0	1.15E-09	2.58E-08	1.54E-07	4.76E-07
3	0	54	55	5607.77	2	5868.12	1.7041	0.0400	0.0	0.0	1.36E-09	9.08E-09	2.61E-08	4.97E-08
8	5	18	19	11148.61	1	5868.67	1.7040	0.0470	0.0	0.0	6.07E-10	3.73E-08	4.07E-07	1.88E-06
5	2	50	51	9222.61	1	5869.02	1.7039	0.0400	0.0	0.0	4.24E-09	1.21E-07	8.28E-07	2.81E-06
8	5	57	56	15776.43	2	5869.38	1.7038	0.0400	0.0	0.0	0.0	0.0	3.34E-10	3.23E-09
4	1	45	46	6008.24	2	5869.56	1.7037	0.0400	0.0	0.0	2.72E-09	2.13E-08	6.77E-08	1.37E-07
7	4	79	78	18941.66	2	5869.64	1.7037	0.0400	0.0	0.0	0.0	0.0	0.0	2.88E-10
8	5	12	11	10459.48	2	5869.78	1.7036	0.0542	0.0	0.0	0.0	7.64E-10	7.04E-09	2.91E-08
8	5	85	84	23240.48	1	5869.96	1.7036	0.0400	0.0	0.0	0.0	0.0	0.0	1.67E-09
5	2	35	36	6561.53	2	5870.19	1.7035	0.0400	0.0	0.0	2.49E-09	2.44E-08	8.82E-08	1.95E-07
7	4	9	10	8427.51	2	5870.48	1.7034	0.0547	0.0	0.0	1.70E-10	3.51E-09	1.99E-08	5.93E-08
9	6	1	2	12474.57	1	5870.56	1.7034	0.0738	0.0	0.0	0.0	1.45E-09	2.16E-08	1.24E-07
9	6	68	67	20616.86	1	5871.55	1.7031	0.0400	0.0	0.0	0.0	0.0	6.51E-10	1.37E-08
8	5	56	55	15583.68	2	5871.67	1.7031	0.0400	0.0	0.0	0.0	0.0	3.91E-10	3.66E-09
7	4	30	31	10246.16	1	5871.70	1.7031	0.0400	0.0	0.0	2.23E-09	9.58E-08	8.40E-07	3.36E-06
4	1	58	59	8810.04	1	5871.81	1.7031	0.0400	0.0	0.0	3.36E-09	8.11E-08	5.05E-07	1.60E-06
8	5	13	12	10501.59	2	5872.00	1.7030	0.0540	0.0	0.0	0.0	7.96E-10	7.41E-09	3.08E-08
6	3	23	24	7283.66	2	5872.90	1.7027	0.0412	0.0	0.0	1.22E-09	1.59E-08	6.85E-08	1.70E-07
7	4	97	96	25130.91	1	5873.33	1.7026	0.0400	0.0	0.0	0.0	0.0	0.0	3.03E-10
8	5	55	54	15394.23	2	5873.85	1.7025	0.0400	0.0	0.0	0.0	0.0	4.56E-10	4.14E-09
8	5	14	13	10547.20	2	5874.13	1.7024	0.0528	0.0	0.0	0.0	8.20E-10	7.72E-09	3.23E-08
8	5	17	18	11079.05	1	5874.20	1.7024	0.0482	0.0	0.0	6.49E-10	3.88E-08	4.16E-07	1.90E-06
7	4	78	77	18675.82	2	5874.25	1.7023	0.0400	0.0	0.0	0.0	0.0	0.0	3.47E-10
9	6	0	1	12467.30	1	5874.30	1.7023	0.0769	0.0	0.0	0.0	7.35E-10	1.10E-08	6.27E-08
7	4	8	9	8392.08	2	5874.90	1.7022	0.0550	0.0	0.0	1.63E-10	3.32E-09	1.87E-08	5.54E-08
9	6	67	66	20380.71	1	5875.37	1.7020	0.0400	0.0	0.0	0.0	0.0	7.94E-10	1.61E-08
6	3	40	41	9552.46	1	5875.56	1.7020	0.0400	0.0	0.0	4.56E-09	1.48E-07	1.10E-06	3.94E-06
8	5	84	83	22946.81	1	5875.72	1.7019	0.0400	0.0	0.0	0.0	0.0	0.0	2.07E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	54	53	15208.11	2	5875.93	1.7019	0.0400	0.0	0.0	0.0	0.0	5.29E-10	4.67E-09
8	5	15	14	10596.32	2	5876.16	1.7018	0.0517	0.0	0.0	0.0	8.37E-10	7.97E-09	3.37E-08
3	0	53	54	5409.33	2	5876.89	1.7016	0.0400	0.0	0.0	1.84E-09	1.14E-08	3.13E-08	5.78E-08
5	2	34	35	6432.60	2	5877.15	1.7015	0.0400	0.0	0.0	2.99E-09	2.79E-08	9.78E-08	2.12E-07
4	1	44	45	5842.84	2	5877.48	1.7014	0.0400	0.0	0.0	3.49E-09	2.57E-08	7.82E-08	1.54E-07
5	2	49	50	9033.35	1	5877.85	1.7013	0.0400	0.0	0.0	5.67E-09	1.50E-07	9.82E-07	3.23E-06
8	5	53	52	15025.29	2	5877.90	1.7013	0.0400	0.0	0.0	0.0	0.0	6.13E-10	5.25E-09
8	5	16	15	10648.93	2	5878.09	1.7012	0.0505	0.0	0.0	0.0	8.47E-10	8.17E-09	3.48E-08
7	4	29	30	10132.03	1	5878.48	1.7011	0.0400	0.0	0.0	2.61E-09	1.07E-07	9.13E-07	3.59E-06
3	0	65	66	8381.13	1	5878.50	1.7011	0.0400	0.0	0.0	1.70E-09	3.46E-08	1.94E-07	5.76E-07
6	3	22	23	7198.11	2	5878.70	1.7011	0.0423	0.0	0.0	1.35E-09	1.71E-08	7.20E-08	1.77E-07
7	4	77	76	18413.12	2	5878.75	1.7010	0.0400	0.0	0.0	0.0	0.0	0.0	4.18E-10
9	6	66	65	20147.87	1	5879.08	1.7009	0.0400	0.0	0.0	0.0	0.0	9.65E-10	1.88E-08
7	4	7	8	8360.19	2	5879.23	1.7009	0.0574	0.0	0.0	1.54E-10	3.10E-09	1.73E-08	5.09E-08
8	5	16	17	11013.12	1	5879.63	1.7008	0.0493	0.0	0.0	6.87E-10	4.00E-08	4.22E-07	1.91E-06
8	5	52	51	14845.80	2	5879.76	1.7007	0.0400	0.0	0.0	0.0	0.0	7.07E-10	5.89E-09
8	5	17	16	10705.04	2	5879.92	1.7007	0.0493	0.0	0.0	0.0	8.50E-10	8.31E-09	3.57E-08
7	4	96	95	24797.05	1	5880.48	1.7005	0.0400	0.0	0.0	0.0	0.0	0.0	3.85E-10
8	5	83	82	22656.29	1	5881.36	1.7003	0.0400	0.0	0.0	0.0	0.0	0.0	2.55E-09
4	1	57	58	8590.31	1	5881.45	1.7003	0.0400	0.0	0.0	4.74E-09	1.05E-07	6.18E-07	1.90E-06
9	6	1	0	12463.66	1	5881.47	1.7003	0.0769	0.0	0.0	0.0	7.53E-10	1.13E-08	6.41E-08
8	5	51	50	14669.65	2	5881.52	1.7002	0.0400	0.0	0.0	0.0	0.0	8.12E-10	6.58E-09
8	5	18	17	10764.64	2	5881.64	1.7002	0.0482	0.0	0.0	0.0	8.47E-10	8.40E-09	3.64E-08
9	6	65	64	19918.36	1	5882.68	1.6999	0.0400	0.0	0.0	0.0	0.0	1.17E-09	2.19E-08
7	4	76	75	18153.57	2	5883.14	1.6998	0.0400	0.0	0.0	0.0	0.0	0.0	5.02E-10
8	5	50	49	14496.84	2	5883.18	1.6998	0.0400	0.0	0.0	0.0	0.0	9.30E-10	7.33E-09
8	5	19	18	10827.74	2	5883.27	1.6997	0.0470	0.0	0.0	0.0	8.37E-10	8.43E-09	3.69E-08
6	3	39	40	9400.82	1	5883.37	1.6997	0.0400	0.0	0.0	5.71E-09	1.75E-07	1.25E-06	4.37E-06
7	4	6	7	8331.84	2	5883.45	1.6997	0.0597	0.0	0.0	1.42E-10	2.83E-09	1.56E-08	4.60E-08
5	2	33	34	6307.19	2	5884.02	1.6995	0.0400	0.0	0.0	3.58E-09	3.17E-08	1.08E-07	2.30E-07
6	3	21	22	7116.09	2	5884.40	1.6994	0.0435	0.0	0.0	1.49E-09	1.82E-08	7.53E-08	1.82E-07
8	5	49	48	14327.37	2	5884.73	1.6993	0.0400	0.0	0.0	0.0	0.0	1.06E-09	8.14E-09
8	5	20	19	10894.32	2	5884.80	1.6993	0.0458	0.0	0.0	0.0	8.22E-10	8.41E-09	3.72E-08
9	6	2	1	12467.30	1	5884.89	1.6993	0.0738	0.0	0.0	0.0	1.52E-09	2.27E-08	1.29E-07
8	5	15	16	10950.85	1	5884.96	1.6992	0.0505	0.0	0.0	7.21E-10	4.10E-08	4.26E-07	1.91E-06
7	4	28	29	10021.54	1	5885.16	1.6992	0.0400	0.0	0.0	3.05E-09	1.19E-07	9.92E-07	3.83E-06
4	1	43	44	5680.94	2	5885.30	1.6991	0.0400	0.0	0.0	4.46E-09	3.07E-08	9.01E-08	1.73E-07
3	0	52	53	5214.37	2	5885.57	1.6991	0.0400	0.0	0.0	2.50E-09	1.43E-08	3.74E-08	6.69E-08
9	6	64	63	19692.16	1	5886.16	1.6989	0.0400	0.0	0.0	0.0	0.0	1.41E-09	2.55E-08
8	5	48	47	14161.26	2	5886.18	1.6989	0.0400	0.0	0.0	0.0	0.0	1.21E-09	9.00E-09
8	5	21	20	10964.39	2	5886.22	1.6989	0.0447	0.0	0.0	0.0	8.01E-10	8.33E-09	3.73E-08
5	2	48	49	8847.68	1	5886.59	1.6988	0.0400	0.0	0.0	7.54E-09	1.85E-07	1.16E-06	3.71E-06
8	5	82	81	22368.93	1	5886.89	1.6987	0.0400	0.0	0.0	0.0	0.0	1.13E-10	3.14E-09
7	4	75	74	17897.18	2	5887.42	1.6985	0.0400	0.0	0.0	0.0	0.0	0.0	6.01E-10
7	4	95	94	24466.21	1	5887.50	1.6985	0.0400	0.0	0.0	0.0	0.0	0.0	4.89E-10
8	5	47	46	13998.51	2	5887.52	1.6985	0.0400	0.0	0.0	0.0	0.0	1.37E-09	9.93E-09
8	5	22	21	11037.95	2	5887.55	1.6985	0.0435	0.0	0.0	0.0	7.76E-10	8.21E-09	3.72E-08
7	4	5	6	8307.03	2	5887.59	1.6985	0.0621	0.0	0.0	1.28E-10	2.52E-09	1.39E-08	4.06E-08
9	6	3	2	12474.57	1	5888.21	1.6983	0.0707	0.0	0.0	0.0	2.28E-09	3.42E-08	1.95E-07
8	5	46	45	13839.13	2	5888.76	1.6982	0.0400	0.0	0.0	0.0	0.0	1.54E-09	1.09E-08
8	5	23	22	11114.98	2	5888.77	1.6981	0.0423	0.0	0.0	0.0	7.47E-10	8.05E-09	3.69E-08
3	0	64	65	8134.45	1	5888.85	1.6981	0.0400	0.0	0.0	2.50E-09	4.60E-08	2.43E-07	6.94E-07
9	6	63	62	19469.31	1	5889.53	1.6979	0.0400	0.0	0.0	0.0	0.0	1.69E-09	2.96E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	45	44	13683.11	2	5889.89	1.6978	0.0400	0.0	0.0	0.0	0.0	1.73E-09	1.20E-08
8	5	24	23	11195.50	2	5889.90	1.6978	0.0412	0.0	0.0	0.0	7.14E-10	7.85E-09	3.65E-08
6	3	20	21	7037.61	2	5890.00	1.6978	0.0447	0.0	0.0	1.63E-09	1.93E-08	7.83E-08	1.87E-07
8	5	14	15	10892.23	1	5890.18	1.6977	0.0517	0.0	0.0	7.50E-10	4.16E-08	4.26E-07	1.89E-06
5	2	32	33	6185.32	2	5890.79	1.6976	0.0400	0.0	0.0	4.25E-09	3.59E-08	1.19E-07	2.48E-07
8	5	25	24	11279.49	2	5890.92	1.6975	0.0400	0.0	0.0	0.0	6.79E-10	7.62E-09	3.59E-08
8	5	44	43	13530.48	2	5890.92	1.6975	0.0400	0.0	0.0	0.0	1.01E-10	1.94E-09	1.31E-08
4	1	56	57	8374.14	1	5891.00	1.6975	0.0400	0.0	0.0	6.64E-09	1.35E-07	7.54E-07	2.24E-06
6	3	38	39	9252.79	1	5891.09	1.6975	0.0400	0.0	0.0	7.11E-09	2.05E-07	1.42E-06	4.84E-06
9	6	4	3	12485.47	1	5891.43	1.6974	0.0676	0.0	0.0	0.0	3.04E-09	4.57E-08	2.61E-07
7	4	74	73	17643.96	2	5891.60	1.6973	0.0400	0.0	0.0	0.0	0.0	0.0	7.17E-10
7	4	4	5	8285.77	2	5891.62	1.6973	0.0645	0.0	0.0	1.11E-10	2.17E-09	1.19E-08	3.47E-08
7	4	27	28	9914.69	1	5891.74	1.6973	0.0400	0.0	0.0	3.53E-09	1.32E-07	1.07E-06	4.07E-06
8	5	26	25	11366.95	2	5891.84	1.6973	0.0400	0.0	0.0	0.0	6.42E-10	7.35E-09	3.51E-08
8	5	43	42	13381.23	2	5891.85	1.6973	0.0400	0.0	0.0	0.0	1.16E-10	2.16E-09	1.42E-08
8	5	81	80	22084.76	1	5892.30	1.6971	0.0400	0.0	0.0	0.0	0.0	1.45E-10	3.84E-09
8	5	27	26	11457.88	2	5892.66	1.6970	0.0400	0.0	0.0	0.0	6.03E-10	7.06E-09	3.42E-08
8	5	42	41	13235.37	2	5892.67	1.6970	0.0400	0.0	0.0	0.0	1.34E-10	2.40E-09	1.54E-08
9	6	62	61	19249.80	1	5892.78	1.6970	0.0400	0.0	0.0	0.0	0.0	2.03E-09	3.42E-08
4	1	42	43	5522.55	2	5893.04	1.6969	0.0400	0.0	1.06E-10	5.66E-09	3.66E-08	1.03E-07	1.94E-07
8	5	28	27	11552.28	2	5893.37	1.6968	0.0400	0.0	0.0	0.0	5.64E-10	6.75E-09	3.32E-08
8	5	41	40	13092.91	2	5893.39	1.6968	0.0400	0.0	0.0	0.0	1.53E-10	2.65E-09	1.67E-08
8	5	29	28	11650.14	2	5893.99	1.6966	0.0400	0.0	0.0	0.0	5.24E-10	6.42E-09	3.21E-08
8	5	40	39	12953.84	2	5894.01	1.6966	0.0400	0.0	0.0	0.0	1.74E-10	2.92E-09	1.80E-08
6	3	105	104	26035.98	1	5894.03	1.6966	0.0400	0.0	0.0	0.0	0.0	0.0	9.95E-11
3	0	51	52	5022.89	2	5894.17	1.6966	0.0400	0.0	0.0	3.36E-09	1.78E-08	4.45E-08	7.72E-08
7	4	94	93	24138.43	1	5894.40	1.6965	0.0400	0.0	0.0	0.0	0.0	0.0	6.19E-10
8	5	30	29	11751.45	2	5894.50	1.6965	0.0400	0.0	0.0	0.0	4.84E-10	6.08E-09	3.09E-08
8	5	39	38	12818.19	2	5894.52	1.6965	0.0400	0.0	0.0	0.0	1.97E-10	3.20E-09	1.93E-08
9	6	5	4	12500.01	1	5894.54	1.6965	0.0645	0.0	0.0	0.0	3.78E-09	5.70E-08	3.27E-07
8	5	31	30	11856.22	2	5894.92	1.6964	0.0400	0.0	0.0	0.0	4.48E-10	5.77E-09	2.98E-08
8	5	38	37	12685.95	2	5894.93	1.6964	0.0400	0.0	0.0	0.0	2.22E-10	3.50E-09	2.06E-08
8	5	32	31	11964.44	2	5895.23	1.6963	0.0400	0.0	0.0	0.0	4.11E-10	5.44E-09	2.86E-08
5	2	47	48	8665.59	1	5895.23	1.6963	0.0400	0.0	0.0	9.96E-09	2.27E-07	1.36E-06	4.24E-06
8	5	37	36	12557.12	2	5895.24	1.6963	0.0400	0.0	0.0	0.0	2.50E-10	3.80E-09	2.20E-08
8	5	13	14	10837.26	1	5895.31	1.6963	0.0528	0.0	0.0	7.71E-10	4.19E-08	4.23E-07	1.86E-06
8	5	33	32	12076.10	2	5895.43	1.6962	0.0400	0.0	0.0	0.0	3.76E-10	5.11E-09	2.73E-08
8	5	36	35	12431.72	2	5895.44	1.6962	0.0400	0.0	0.0	0.0	2.79E-10	4.12E-09	2.33E-08
6	3	19	20	6962.68	2	5895.52	1.6962	0.0458	0.0	0.0	1.76E-09	2.03E-08	8.09E-08	1.91E-07
8	5	35	34	12309.75	2	5895.54	1.6962	0.0400	0.0	0.0	0.0	3.10E-10	4.45E-09	2.47E-08
8	5	34	33	12191.21	2	5895.54	1.6962	0.0400	0.0	0.0	0.0	3.42E-10	4.78E-09	2.60E-08
7	4	3	4	8268.04	2	5895.56	1.6962	0.0676	0.0	0.0	0.0	1.79E-09	9.75E-09	2.84E-08
6	3	89	88	19878.00	2	5895.56	1.6962	0.0400	0.0	0.0	0.0	0.0	0.0	9.54E-11
7	4	73	72	17393.93	2	5895.67	1.6962	0.0400	0.0	0.0	0.0	0.0	0.0	8.53E-10
9	6	61	60	19033.64	1	5895.92	1.6961	0.0400	0.0	0.0	0.0	0.0	2.42E-09	3.94E-08
5	2	31	32	6066.97	2	5897.47	1.6956	0.0400	0.0	0.0	5.02E-09	4.04E-08	1.30E-07	2.66E-07
9	6	6	5	12518.18	1	5897.54	1.6956	0.0621	0.0	0.0	0.0	4.49E-09	6.80E-08	3.91E-07
8	5	80	79	21803.77	1	5897.59	1.6956	0.0400	0.0	0.0	0.0	0.0	1.85E-10	4.70E-09
7	4	26	27	9811.48	1	5898.23	1.6954	0.0400	0.0	0.0	4.05E-09	1.46E-07	1.15E-06	4.31E-06
6	3	37	38	9108.38	1	5898.71	1.6953	0.0400	0.0	0.0	8.79E-09	2.39E-07	1.60E-06	5.33E-06
9	6	60	59	18820.86	1	5898.95	1.6952	0.0400	0.0	0.0	0.0	0.0	2.87E-09	4.52E-08
3	0	63	64	7891.29	1	5899.10	1.6952	0.0400	0.0	0.0	3.65E-09	6.10E-08	3.04E-07	8.35E-07
7	4	2	3	8253.86	2	5899.39	1.6951	0.0707	0.0	0.0	0.0	1.38E-09	7.48E-09	2.17E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	72	71	17147.08	2	5899.63	1.6950	0.0400	0.0	0.0	0.0	0.0	0.0	1.01E-09
8	5	12	13	10785.94	1	5900.33	1.6948	0.0540	0.0	0.0	7.84E-10	4.17E-08	4.17E-07	1.82E-06
9	6	7	6	12539.99	1	5900.44	1.6948	0.0597	0.0	0.0	0.0	5.16E-09	7.85E-08	4.53E-07
4	1	55	56	8161.53	1	5900.45	1.6948	0.0400	0.0	0.0	9.25E-09	1.72E-07	9.17E-07	2.63E-06
4	1	41	42	5367.68	2	5900.68	1.6947	0.0400	0.0	1.51E-10	7.13E-09	4.34E-08	1.18E-07	2.16E-07
6	3	18	19	6891.30	2	5900.93	1.6946	0.0470	0.0	0.0	1.90E-09	2.12E-08	8.32E-08	1.94E-07
7	4	93	92	23813.70	1	5901.19	1.6946	0.0400	0.0	0.0	0.0	0.0	0.0	7.82E-10
6	3	88	87	19578.50	2	5901.23	1.6946	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-10
9	6	59	58	18611.44	1	5901.86	1.6944	0.0400	0.0	0.0	0.0	0.0	3.42E-09	5.21E-08
6	3	104	103	25674.78	1	5902.10	1.6943	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-10
3	0	50	51	4834.91	2	5902.67	1.6941	0.0400	0.0	1.46E-10	4.48E-09	2.21E-08	5.28E-08	8.87E-08
8	5	79	78	21525.99	1	5902.77	1.6941	0.0400	0.0	0.0	0.0	0.0	2.36E-10	5.73E-09
7	4	1	2	8243.23	2	5903.13	1.6940	0.0738	0.0	0.0	0.0	9.38E-10	5.08E-09	1.47E-08
9	6	8	7	12565.43	1	5903.23	1.6940	0.0574	0.0	0.0	0.0	5.79E-09	8.86E-08	5.13E-07
7	4	71	70	16903.43	2	5903.48	1.6939	0.0400	0.0	0.0	0.0	0.0	1.03E-10	1.20E-09
5	2	46	47	8487.11	1	5903.77	1.6938	0.0400	0.0	0.0	1.31E-08	2.78E-07	1.60E-06	4.82E-06
5	2	30	31	5952.17	2	5904.05	1.6938	0.0400	0.0	0.0	5.88E-09	4.52E-08	1.41E-07	2.84E-07
7	4	25	26	9711.93	1	5904.61	1.6936	0.0400	0.0	0.0	4.63E-09	1.60E-07	1.24E-06	4.54E-06
9	6	58	57	18405.41	1	5904.66	1.6936	0.0400	0.0	0.0	0.0	0.0	4.06E-09	5.98E-08
8	5	11	12	10738.28	1	5905.24	1.6934	0.0542	0.0	0.0	7.88E-10	4.11E-08	4.06E-07	1.76E-06
9	6	9	8	12594.50	1	5905.92	1.6932	0.0550	0.0	0.0	0.0	6.36E-09	9.80E-08	5.71E-07
6	3	36	37	8967.61	1	5906.22	1.6931	0.0400	0.0	0.0	1.08E-08	2.78E-07	1.79E-06	5.85E-06
6	3	17	18	6823.48	2	5906.25	1.6931	0.0482	0.0	0.0	2.02E-09	2.20E-08	8.49E-08	1.96E-07
7	4	0	1	8236.14	2	5906.78	1.6930	0.0769	0.0	0.0	0.0	4.77E-10	2.58E-09	7.47E-09
6	3	87	86	19282.05	2	5906.79	1.6930	0.0400	0.0	0.0	0.0	0.0	0.0	1.47E-10
7	4	70	69	16662.99	2	5907.23	1.6928	0.0400	0.0	0.0	0.0	0.0	1.27E-10	1.41E-09
9	6	57	56	18202.77	1	5907.34	1.6928	0.0400	0.0	0.0	0.0	0.0	4.80E-09	6.85E-08
8	5	78	77	21251.42	1	5907.83	1.6927	0.0400	0.0	0.0	0.0	0.0	3.00E-10	6.97E-09
7	4	92	91	23492.04	1	5907.86	1.6927	0.0400	0.0	0.0	0.0	0.0	0.0	9.84E-10
4	1	40	41	5216.33	2	5908.23	1.6926	0.0400	0.0	2.14E-10	8.94E-09	5.12E-08	1.34E-07	2.40E-07
9	6	10	9	12627.20	1	5908.50	1.6925	0.0547	0.0	0.0	0.0	6.87E-09	1.07E-07	6.24E-07
3	0	62	63	7651.67	1	5909.26	1.6923	0.0400	0.0	0.0	5.29E-09	8.05E-08	3.79E-07	1.00E-06
4	1	54	55	7952.49	1	5909.80	1.6921	0.0400	0.0	0.0	1.28E-08	2.19E-07	1.11E-06	3.08E-06
9	6	56	55	18003.52	1	5909.92	1.6921	0.0400	0.0	0.0	0.0	1.00E-10	5.65E-09	7.81E-08
6	3	103	102	25316.52	1	5910.04	1.6920	0.0400	0.0	0.0	0.0	0.0	0.0	1.69E-10
8	5	10	11	10694.28	1	5910.06	1.6920	0.0545	0.0	0.0	7.82E-10	4.01E-08	3.92E-07	1.68E-06
5	2	29	30	5840.91	2	5910.54	1.6919	0.0400	0.0	0.0	6.85E-09	5.04E-08	1.53E-07	3.03E-07
7	4	69	68	16425.77	2	5910.86	1.6918	0.0400	0.0	0.0	0.0	0.0	1.55E-10	1.66E-09
7	4	24	25	9616.03	1	5910.89	1.6918	0.0400	0.0	0.0	5.24E-09	1.75E-07	1.32E-06	4.76E-06
9	6	11	10	12663.53	1	5910.97	1.6918	0.0545	0.0	0.0	0.0	7.31E-09	1.15E-07	6.74E-07
3	0	49	50	4650.41	2	5911.08	1.6917	0.0400	0.0	2.24E-10	5.96E-09	2.72E-08	6.23E-08	1.02E-07
6	3	16	17	6759.20	2	5911.48	1.6916	0.0493	0.0	0.0	2.14E-09	2.27E-08	8.62E-08	1.97E-07
5	2	45	46	8312.24	1	5912.21	1.6914	0.0400	0.0	0.0	1.71E-08	3.38E-07	1.86E-06	5.47E-06
6	3	86	85	18988.68	2	5912.24	1.6914	0.0400	0.0	0.0	0.0	0.0	0.0	1.82E-10
9	6	55	54	17807.68	1	5912.38	1.6914	0.0400	0.0	0.0	0.0	1.23E-10	6.63E-09	8.89E-08
8	5	77	76	20980.08	1	5912.77	1.6913	0.0400	0.0	0.0	0.0	0.0	3.80E-10	8.45E-09
9	6	12	11	12703.48	1	5913.34	1.6911	0.0542	0.0	0.0	0.0	7.69E-09	1.22E-07	7.20E-07
6	3	35	36	8830.47	1	5913.64	1.6910	0.0400	0.0	0.0	1.32E-08	3.21E-07	2.01E-06	6.40E-06
7	4	1	0	8232.59	2	5913.77	1.6910	0.0769	0.0	0.0	0.0	4.89E-10	2.64E-09	7.65E-09
7	4	68	67	16191.77	2	5914.40	1.6908	0.0400	0.0	0.0	0.0	0.0	1.88E-10	1.94E-09
7	4	91	90	23173.46	1	5914.41	1.6908	0.0400	0.0	0.0	0.0	0.0	0.0	1.23E-09
9	6	54	53	17615.26	1	5914.72	1.6907	0.0400	0.0	0.0	0.0	1.51E-10	7.76E-09	1.01E-07
8	5	9	10	10653.94	1	5914.77	1.6907	0.0547	0.0	0.0	7.65E-10	3.86E-08	3.74E-07	1.59E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	13	12	12747.07	1	5915.60	1.6904	0.0540	0.0	0.0	0.0	7.99E-09	1.28E-07	7.62E-07
4	1	39	40	5068.50	2	5915.68	1.6904	0.0400	0.0	3.00E-10	1.11E-08	6.02E-08	1.52E-07	2.66E-07
6	3	15	16	6698.49	2	5916.61	1.6902	0.0505	0.0	0.0	2.24E-09	2.32E-08	8.68E-08	1.97E-07
5	2	28	29	5733.20	2	5916.94	1.6901	0.0400	0.0	1.26E-10	7.96E-09	5.61E-08	1.66E-07	3.23E-07
9	6	53	52	17426.27	1	5916.96	1.6901	0.0400	0.0	0.0	0.0	1.84E-10	9.03E-09	1.14E-07
7	4	23	24	9523.78	1	5917.06	1.6900	0.0412	0.0	0.0	5.89E-09	1.89E-07	1.40E-06	4.98E-06
7	4	2	1	8236.14	2	5917.12	1.6900	0.0738	0.0	0.0	0.0	9.86E-10	5.33E-09	1.54E-08
6	3	85	84	18698.40	2	5917.58	1.6899	0.0400	0.0	0.0	0.0	0.0	0.0	2.25E-10
8	5	76	75	20711.97	1	5917.60	1.6899	0.0400	0.0	0.0	0.0	0.0	4.79E-10	1.02E-08
9	6	14	13	12794.27	1	5917.75	1.6898	0.0528	0.0	0.0	0.0	8.21E-09	1.33E-07	7.98E-07
7	4	67	66	15961.02	2	5917.82	1.6898	0.0400	0.0	0.0	0.0	0.0	2.28E-10	2.27E-09
6	3	102	101	24961.22	1	5917.86	1.6898	0.0400	0.0	0.0	0.0	0.0	0.0	2.19E-10
4	1	53	54	7747.04	1	5919.06	1.6895	0.0400	0.0	0.0	1.76E-08	2.78E-07	1.34E-06	3.60E-06
9	6	52	51	17240.70	1	5919.08	1.6895	0.0400	0.0	0.0	0.0	2.23E-10	1.05E-08	1.28E-07
3	0	61	62	7415.60	1	5919.33	1.6894	0.0400	0.0	0.0	7.64E-09	1.06E-07	4.70E-07	1.20E-06
8	5	8	9	10617.26	1	5919.38	1.6894	0.0550	0.0	0.0	7.37E-10	3.66E-08	3.51E-07	1.49E-06
3	0	48	49	4469.43	2	5919.40	1.6894	0.0400	0.0	3.42E-10	7.87E-09	3.34E-08	7.33E-08	1.16E-07
9	6	15	14	12845.10	1	5919.80	1.6892	0.0517	0.0	0.0	0.0	8.37E-09	1.37E-07	8.30E-07
7	4	3	2	8243.23	2	5920.37	1.6891	0.0707	0.0	0.0	0.0	1.48E-09	8.04E-09	2.33E-08
5	2	44	45	8140.98	1	5920.55	1.6890	0.0400	0.0	0.0	2.21E-08	4.09E-07	2.17E-06	6.19E-06
7	4	90	89	22857.99	1	5920.84	1.6889	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-09
6	3	34	35	8696.97	1	5920.96	1.6889	0.0400	0.0	0.0	1.60E-08	3.69E-07	2.23E-06	6.97E-06
9	6	51	50	17058.57	1	5921.09	1.6889	0.0400	0.0	0.0	0.0	2.70E-10	1.21E-08	1.44E-07
7	4	66	65	15733.51	2	5921.14	1.6889	0.0400	0.0	0.0	0.0	0.0	2.76E-10	2.65E-09
6	3	14	15	6641.34	2	5921.64	1.6887	0.0517	0.0	0.0	2.32E-09	2.35E-08	8.68E-08	1.95E-07
9	6	16	15	12899.54	1	5921.74	1.6887	0.0505	0.0	0.0	0.0	8.45E-09	1.40E-07	8.56E-07
8	5	75	74	20447.11	1	5922.31	1.6885	0.0400	0.0	0.0	0.0	0.0	6.02E-10	1.23E-08
6	3	84	83	18411.21	2	5922.81	1.6884	0.0400	0.0	0.0	0.0	0.0	0.0	2.76E-10
9	6	50	49	16879.89	1	5922.99	1.6883	0.0400	0.0	0.0	0.0	3.24E-10	1.40E-08	1.61E-07
4	1	38	39	4924.21	2	5923.05	1.6883	0.0400	0.0	4.17E-10	1.38E-08	7.03E-08	1.72E-07	2.93E-07
7	4	22	23	9435.20	1	5923.14	1.6883	0.0423	0.0	0.0	6.57E-09	2.04E-07	1.47E-06	5.17E-06
5	2	27	28	5629.04	2	5923.24	1.6883	0.0400	0.0	1.58E-10	9.18E-09	6.20E-08	1.80E-07	3.43E-07
7	4	4	3	8253.86	2	5923.52	1.6882	0.0676	0.0	0.0	1.03E-10	1.98E-09	1.07E-08	3.12E-08
9	6	17	16	12957.61	1	5923.58	1.6882	0.0493	0.0	0.0	0.0	8.45E-09	1.42E-07	8.77E-07
8	5	7	8	10584.25	1	5923.88	1.6881	0.0574	0.0	0.0	6.96E-10	3.42E-08	3.25E-07	1.37E-06
7	4	65	64	15509.25	2	5924.35	1.6879	0.0400	0.0	0.0	0.0	0.0	3.32E-10	3.08E-09
9	6	49	48	16704.66	1	5924.77	1.6878	0.0400	0.0	0.0	0.0	3.88E-10	1.60E-08	1.80E-07
9	6	18	17	13019.29	1	5925.30	1.6877	0.0482	0.0	0.0	0.0	8.40E-09	1.43E-07	8.93E-07
6	3	101	100	24608.89	1	5925.57	1.6876	0.0400	0.0	0.0	0.0	0.0	0.0	2.84E-10
9	6	48	47	16532.89	1	5926.44	1.6874	0.0400	0.0	0.0	0.0	4.62E-10	1.83E-08	2.00E-07
6	3	13	14	6587.74	2	5926.57	1.6873	0.0528	0.0	0.0	2.38E-09	2.36E-08	8.61E-08	1.92E-07
7	4	5	4	8268.04	2	5926.58	1.6873	0.0645	0.0	0.0	1.27E-10	2.46E-09	1.34E-08	3.90E-08
8	5	74	73	20185.51	1	5926.91	1.6872	0.0400	0.0	0.0	0.0	0.0	7.54E-10	1.48E-08
9	6	19	18	13084.58	1	5926.92	1.6872	0.0470	0.0	0.0	0.0	8.28E-09	1.43E-07	9.04E-07
7	4	89	88	22545.62	1	5927.15	1.6872	0.0400	0.0	0.0	0.0	0.0	0.0	1.94E-09
7	4	64	63	15288.27	2	5927.45	1.6871	0.0400	0.0	0.0	0.0	0.0	3.98E-10	3.56E-09
3	0	47	48	4291.95	2	5927.62	1.6870	0.0400	0.0	5.17E-10	1.03E-08	4.09E-08	8.59E-08	1.32E-07
6	3	83	82	18127.12	2	5927.93	1.6869	0.0400	0.0	0.0	0.0	0.0	0.0	3.39E-10
9	6	47	46	16364.60	1	5928.01	1.6869	0.0400	0.0	0.0	0.0	5.47E-10	2.08E-08	2.22E-07
6	3	33	34	8567.12	1	5928.18	1.6869	0.0400	0.0	0.0	1.92E-08	4.22E-07	2.47E-06	7.57E-06
4	1	52	53	7545.17	1	5928.22	1.6868	0.0400	0.0	0.0	2.41E-08	3.51E-07	1.61E-06	4.18E-06
8	5	6	7	10554.90	1	5928.28	1.6868	0.0597	0.0	0.0	6.44E-10	3.12E-08	2.95E-07	1.24E-06
9	6	20	19	13153.48	1	5928.43	1.6868	0.0458	0.0	0.0	0.0	8.10E-09	1.43E-07	9.09E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	43	44	7973.35	1	5928.80	1.6867	0.0400	0.0	0.0	2.85E-08	4.93E-07	2.51E-06	6.98E-06
7	4	21	22	9350.27	1	5929.12	1.6866	0.0435	0.0	0.0	7.27E-09	2.18E-07	1.54E-06	5.35E-06
3	0	60	61	7183.08	1	5929.30	1.6865	0.0400	0.0	0.0	1.10E-08	1.38E-07	5.82E-07	1.43E-06
5	2	26	27	5528.43	2	5929.45	1.6865	0.0400	0.0	1.96E-10	1.05E-08	6.82E-08	1.93E-07	3.62E-07
9	6	46	45	16199.77	1	5929.46	1.6865	0.0400	0.0	0.0	0.0	6.46E-10	2.36E-08	2.45E-07
7	4	6	5	8285.77	2	5929.53	1.6865	0.0621	0.0	0.0	1.50E-10	2.93E-09	1.60E-08	4.67E-08
9	6	21	20	13225.99	1	5929.83	1.6864	0.0447	0.0	0.0	0.0	7.87E-09	1.41E-07	9.09E-07
4	1	37	38	4783.45	2	5930.32	1.6862	0.0400	0.0	5.73E-10	1.70E-08	8.17E-08	1.93E-07	3.22E-07
7	4	63	62	15070.55	2	5930.45	1.6862	0.0400	0.0	0.0	0.0	0.0	4.76E-10	4.11E-09
9	6	45	44	16038.43	1	5930.79	1.6861	0.0400	0.0	0.0	0.0	7.58E-10	2.67E-08	2.69E-07
9	6	22	21	13302.10	1	5931.13	1.6860	0.0435	0.0	0.0	0.0	7.60E-09	1.39E-07	9.05E-07
8	5	73	72	19927.18	1	5931.39	1.6859	0.0400	0.0	0.0	0.0	0.0	9.42E-10	1.77E-08
6	3	12	13	6537.71	2	5931.42	1.6859	0.0540	0.0	0.0	2.42E-09	2.35E-08	8.47E-08	1.87E-07
9	6	44	43	15880.58	1	5932.02	1.6858	0.0400	0.0	0.0	0.0	8.85E-10	3.00E-08	2.95E-07
9	6	23	22	13381.82	1	5932.31	1.6857	0.0423	0.0	0.0	0.0	7.29E-09	1.36E-07	8.96E-07
7	4	7	6	8307.03	2	5932.39	1.6857	0.0597	0.0	0.0	1.71E-10	3.37E-09	1.85E-08	5.42E-08
8	5	5	6	10529.21	1	5932.58	1.6856	0.0621	0.0	0.0	5.80E-10	2.78E-08	2.62E-07	1.09E-06
6	3	82	81	17846.16	2	5932.94	1.6855	0.0400	0.0	0.0	0.0	0.0	0.0	4.14E-10
9	6	43	42	15726.23	1	5933.14	1.6854	0.0400	0.0	0.0	0.0	1.03E-09	3.36E-08	3.23E-07
6	3	100	99	24259.57	1	5933.15	1.6854	0.0400	0.0	0.0	0.0	0.0	0.0	3.66E-10
7	4	62	61	14856.11	2	5933.34	1.6854	0.0400	0.0	0.0	0.0	0.0	5.67E-10	4.73E-09
7	4	88	87	22236.39	1	5933.35	1.6854	0.0400	0.0	0.0	0.0	0.0	0.0	2.43E-09
9	6	24	23	13465.12	1	5933.39	1.6854	0.0412	0.0	0.0	0.0	6.95E-09	1.32E-07	8.83E-07
9	6	42	41	15575.37	1	5934.14	1.6852	0.0400	0.0	0.0	0.0	1.19E-09	3.75E-08	3.52E-07
9	6	25	24	13552.03	1	5934.36	1.6851	0.0400	0.0	0.0	0.0	6.58E-09	1.28E-07	8.66E-07
7	4	20	21	9269.02	1	5934.99	1.6849	0.0447	0.0	0.0	7.98E-09	2.32E-07	1.61E-06	5.50E-06
9	6	41	40	15428.02	1	5935.03	1.6849	0.0400	0.0	0.0	0.0	1.37E-09	4.17E-08	3.82E-07
7	4	8	7	8331.84	2	5935.14	1.6849	0.0574	0.0	0.0	1.90E-10	3.78E-09	2.09E-08	6.15E-08
9	6	26	25	13642.53	1	5935.23	1.6849	0.0400	0.0	0.0	0.0	6.20E-09	1.23E-07	8.46E-07
6	3	32	33	8440.93	1	5935.30	1.6848	0.0400	0.0	0.0	2.30E-08	4.80E-07	2.73E-06	8.18E-06
5	2	25	26	5431.39	2	5935.56	1.6848	0.0400	0.0	2.41E-10	1.20E-08	7.46E-08	2.06E-07	3.81E-07
3	0	46	47	4117.99	2	5935.76	1.6847	0.0400	0.0	7.75E-10	1.35E-08	4.98E-08	1.00E-07	1.50E-07
8	5	72	71	19672.14	1	5935.76	1.6847	0.0400	0.0	0.0	0.0	0.0	1.17E-09	2.11E-08
9	6	40	39	15284.19	1	5935.82	1.6847	0.0400	0.0	0.0	0.0	1.57E-09	4.61E-08	4.13E-07
9	6	27	26	13736.61	1	5935.98	1.6846	0.0400	0.0	0.0	0.0	5.80E-09	1.18E-07	8.22E-07
7	4	61	60	14644.96	2	5936.13	1.6846	0.0400	0.0	0.0	0.0	0.0	6.73E-10	5.43E-09
6	3	11	12	6491.25	2	5936.16	1.6846	0.0542	0.0	0.0	2.43E-09	2.32E-08	8.25E-08	1.81E-07
9	6	39	38	15143.88	1	5936.49	1.6845	0.0400	0.0	0.0	0.0	1.79E-09	5.08E-08	4.45E-07
9	6	28	27	13834.28	1	5936.62	1.6845	0.0400	0.0	0.0	0.0	5.40E-09	1.12E-07	7.96E-07
8	5	4	5	10507.20	1	5936.77	1.6844	0.0645	0.0	0.0	5.05E-10	2.40E-08	2.24E-07	9.36E-07
5	2	42	43	7809.34	1	5936.95	1.6844	0.0400	0.0	1.10E-10	3.65E-08	5.91E-07	2.89E-06	7.84E-06
9	6	38	37	15007.09	1	5937.05	1.6843	0.0400	0.0	0.0	0.0	2.03E-09	5.58E-08	4.78E-07
9	6	29	28	13935.53	1	5937.16	1.6843	0.0400	0.0	0.0	0.0	5.00E-09	1.06E-07	7.67E-07
4	1	51	52	7346.91	1	5937.28	1.6843	0.0400	0.0	1.42E-10	3.27E-08	4.41E-07	1.93E-06	4.85E-06
9	6	37	36	14873.83	1	5937.50	1.6842	0.0400	0.0	0.0	0.0	2.29E-09	6.10E-08	5.11E-07
4	1	36	37	4646.24	2	5937.50	1.6842	0.0400	0.0	7.82E-10	2.07E-08	9.45E-08	2.16E-07	3.53E-07
9	6	30	29	14040.35	1	5937.58	1.6842	0.0400	0.0	0.0	0.0	4.60E-09	1.00E-07	7.36E-07
7	4	9	8	8360.19	2	5937.80	1.6841	0.0550	0.0	0.0	2.06E-10	4.16E-09	2.32E-08	6.84E-08
9	6	36	35	14744.11	1	5937.84	1.6841	0.0400	0.0	0.0	0.0	2.57E-09	6.63E-08	5.45E-07
6	3	81	80	17568.32	2	5937.84	1.6841	0.0400	0.0	0.0	0.0	0.0	0.0	5.05E-10
9	6	31	30	14148.75	1	5937.90	1.6841	0.0400	0.0	0.0	0.0	4.23E-09	9.47E-08	7.07E-07
9	6	35	34	14617.93	1	5938.08	1.6840	0.0400	0.0	0.0	0.0	2.87E-09	7.19E-08	5.78E-07
9	6	32	31	14260.70	1	5938.11	1.6840	0.0400	0.0	0.0	0.0	3.87E-09	8.90E-08	6.76E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
9	6	34	33	14495.30	1	5938.20	1.6840	0.0400	0.0	0.0	0.0	3.19E-09	7.75E-08	6.12E-07
9	6	33	32	14376.23	1	5938.21	1.6840	0.0400	0.0	0.0	0.0	3.52E-09	8.33E-08	6.45E-07
7	4	60	59	14437.11	2	5938.80	1.6838	0.0400	0.0	0.0	0.0	0.0	7.96E-10	6.21E-09
3	0	59	60	6954.12	1	5939.17	1.6837	0.0400	0.0	0.0	1.56E-08	1.80E-07	7.17E-07	1.69E-06
7	4	87	86	21930.29	1	5939.43	1.6837	0.0400	0.0	0.0	0.0	0.0	1.17E-10	3.04E-09
8	5	71	70	19420.38	1	5940.01	1.6835	0.0400	0.0	0.0	0.0	0.0	1.45E-09	2.52E-08
7	4	10	9	8392.08	2	5940.36	1.6834	0.0547	0.0	0.0	2.20E-10	4.49E-09	2.52E-08	7.49E-08
6	3	99	98	23913.24	1	5940.62	1.6833	0.0400	0.0	0.0	0.0	0.0	0.0	4.71E-10
7	4	19	20	9191.44	1	5940.76	1.6833	0.0458	0.0	0.0	8.69E-09	2.44E-07	1.67E-06	5.63E-06
6	3	10	11	6448.35	2	5940.81	1.6833	0.0545	0.0	0.0	2.41E-09	2.26E-08	7.95E-08	1.73E-07
8	5	3	4	10488.85	1	5940.86	1.6833	0.0676	0.0	0.0	4.19E-10	1.98E-08	1.84E-07	7.66E-07
7	4	59	58	14232.57	2	5941.38	1.6831	0.0400	0.0	0.0	0.0	0.0	9.43E-10	7.12E-09
5	2	24	25	5337.91	2	5941.58	1.6831	0.0400	0.0	2.93E-10	1.35E-08	8.11E-08	2.19E-07	3.99E-07
6	3	31	32	8318.38	1	5942.32	1.6828	0.0400	0.0	0.0	2.74E-08	5.43E-07	3.00E-06	8.82E-06
6	3	80	79	17293.62	2	5942.64	1.6828	0.0400	0.0	0.0	0.0	0.0	0.0	6.15E-10
7	4	11	10	8427.51	2	5942.82	1.6827	0.0545	0.0	0.0	2.32E-10	4.79E-09	2.71E-08	8.10E-08
3	0	45	46	3947.55	2	5943.80	1.6824	0.0400	0.0	1.15E-09	1.75E-08	6.03E-08	1.17E-07	1.70E-07
7	4	58	57	14031.34	2	5943.84	1.6824	0.0400	0.0	0.0	0.0	0.0	1.11E-09	8.14E-09
8	5	70	69	19171.93	1	5944.14	1.6823	0.0400	0.0	0.0	0.0	0.0	1.79E-09	2.99E-08
4	1	35	36	4512.58	2	5944.59	1.6822	0.0400	0.0	1.06E-09	2.52E-08	1.09E-07	2.41E-07	3.85E-07
8	5	2	3	10474.17	1	5944.84	1.6821	0.0707	0.0	0.0	3.25E-10	1.53E-08	1.41E-07	5.87E-07
5	2	41	42	7648.97	1	5944.99	1.6821	0.0400	0.0	1.59E-10	4.65E-08	7.06E-07	3.32E-06	8.77E-06
7	4	12	11	8466.48	2	5945.18	1.6820	0.0542	0.0	0.0	2.40E-10	5.04E-09	2.88E-08	8.66E-08
6	3	9	10	6409.02	2	5945.36	1.6820	0.0547	0.0	0.0	2.35E-09	2.17E-08	7.58E-08	1.64E-07
7	4	86	85	21627.34	1	5945.39	1.6820	0.0400	0.0	0.0	0.0	0.0	1.54E-10	3.79E-09
7	4	57	56	13833.44	2	5946.21	1.6817	0.0400	0.0	0.0	0.0	0.0	1.31E-09	9.29E-09
4	1	50	51	7152.25	1	5946.25	1.6817	0.0400	0.0	2.25E-10	4.42E-08	5.50E-07	2.30E-06	5.61E-06
7	4	18	19	9117.53	1	5946.43	1.6817	0.0470	0.0	0.0	9.39E-09	2.56E-07	1.72E-06	5.73E-06
6	3	79	78	17022.07	2	5947.33	1.6814	0.0400	0.0	0.0	0.0	0.0	0.0	7.46E-10
7	4	13	12	8508.98	2	5947.44	1.6814	0.0540	0.0	0.0	2.46E-10	5.25E-09	3.03E-08	9.17E-08
5	2	23	24	5247.99	2	5947.51	1.6814	0.0412	0.0	3.53E-10	1.51E-08	8.77E-08	2.32E-07	4.16E-07
6	3	98	97	23569.94	1	5947.97	1.6812	0.0400	0.0	0.0	0.0	0.0	0.0	6.05E-10
8	5	69	68	18926.79	1	5948.17	1.6812	0.0400	0.0	0.0	0.0	0.0	2.21E-09	3.54E-08
7	4	56	55	13638.86	2	5948.46	1.6811	0.0400	0.0	0.0	0.0	0.0	1.54E-09	1.06E-08
8	5	1	2	10463.16	1	5948.72	1.6810	0.0738	0.0	0.0	2.22E-10	1.04E-08	9.60E-08	3.98E-07
3	0	58	59	6728.75	1	5948.94	1.6810	0.0400	0.0	1.59E-10	2.23E-08	2.34E-07	8.83E-07	2.01E-06
6	3	30	31	8199.50	1	5949.24	1.6809	0.0400	0.0	0.0	3.23E-08	6.11E-07	3.28E-06	9.46E-06
7	4	14	13	8555.02	2	5949.60	1.6808	0.0528	0.0	0.0	2.49E-10	5.41E-09	3.16E-08	9.63E-08
6	3	8	9	6373.27	2	5949.81	1.6807	0.0550	0.0	0.0	2.26E-09	2.06E-08	7.12E-08	1.53E-07
5	2	93	92	19200.73	2	5950.09	1.6806	0.0400	0.0	0.0	0.0	0.0	0.0	8.91E-11
7	4	55	54	13447.62	2	5950.61	1.6805	0.0400	0.0	0.0	0.0	0.0	1.79E-09	1.20E-08
7	4	85	84	21327.55	1	5951.23	1.6803	0.0400	0.0	0.0	0.0	0.0	2.00E-10	4.71E-09
5	2	108	107	25248.79	1	5951.54	1.6802	0.0400	0.0	0.0	0.0	0.0	0.0	9.77E-11
4	1	34	35	4382.47	2	5951.58	1.6802	0.0400	0.0	1.41E-09	3.03E-08	1.25E-07	2.68E-07	4.18E-07
7	4	15	14	8604.60	2	5951.66	1.6802	0.0517	0.0	0.0	2.49E-10	5.52E-09	3.26E-08	1.00E-07
3	0	44	45	3780.65	2	5951.76	1.6802	0.0400	0.0	1.70E-09	2.25E-08	7.26E-08	1.35E-07	1.92E-07
6	3	78	77	16753.69	2	5951.90	1.6801	0.0400	0.0	0.0	0.0	0.0	0.0	9.02E-10
7	4	17	18	9047.30	1	5952.00	1.6801	0.0482	0.0	0.0	1.00E-08	2.67E-07	1.76E-06	5.80E-06
8	5	68	67	18684.96	1	5952.07	1.6801	0.0400	0.0	0.0	0.0	0.0	2.71E-09	4.17E-08
8	5	0	1	10455.82	1	5952.49	1.6800	0.0769	0.0	0.0	1.13E-10	5.28E-09	4.88E-08	2.02E-07
7	4	54	53	13259.72	2	5952.66	1.6799	0.0400	0.0	0.0	0.0	1.16E-10	2.09E-09	1.35E-08
5	2	40	41	7492.24	1	5952.94	1.6798	0.0400	0.0	2.27E-10	5.87E-08	8.38E-07	3.80E-06	9.79E-06
5	2	22	23	5161.65	2	5953.34	1.6797	0.0423	0.0	4.20E-10	1.68E-08	9.42E-08	2.44E-07	4.32E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULFS
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	16	15	8657.70	2	5953.62	1.6797	0.0505	0.0	0.0	2.46E-10	5.58E-09	3.34E-08	1.04E-07
6	3	7	8	6341.08	2	5954.17	1.6795	0.0574	0.0	0.0	2.14E-09	1.92E-08	6.59E-08	1.41E-07
7	4	53	52	13075.18	2	5954.60	1.6794	0.0400	0.0	0.0	0.0	1.40E-10	2.42E-09	1.52E-08
4	1	49	50	6961.20	1	5955.12	1.6792	0.0400	0.0	3.51E-10	5.93E-08	6.85E-07	2.73E-06	6.47E-06
6	3	97	96	23229.68	1	5955.20	1.6792	0.0400	0.0	0.0	0.0	0.0	0.0	7.74E-10
7	4	17	16	8714.33	2	5955.48	1.6791	0.0493	0.0	0.0	2.42E-10	5.60E-09	3.40E-08	1.06E-07
8	5	67	66	18446.48	1	5955.86	1.6790	0.0400	0.0	0.0	0.0	0.0	3.31E-09	4.91E-08
6	3	29	30	8084.29	1	5956.06	1.6790	0.0400	0.0	0.0	3.78E-08	6.83E-07	3.57E-06	1.01E-05
5	2	92	91	18886.10	2	5956.17	1.6789	0.0400	0.0	0.0	0.0	0.0	0.0	1.11E-10
6	3	77	76	16488.47	2	5956.37	1.6789	0.0400	0.0	0.0	0.0	0.0	1.00E-10	1.09E-09
7	4	52	51	12893.99	2	5956.43	1.6789	0.0400	0.0	0.0	0.0	1.69E-10	2.80E-09	1.71E-08
7	4	84	83	21030.94	1	5956.96	1.6787	0.0400	0.0	0.0	0.0	0.0	2.61E-10	5.84E-09
7	4	18	17	8774.49	2	5957.24	1.6786	0.0482	0.0	0.0	2.35E-10	5.57E-09	3.43E-08	1.08E-07
7	4	16	17	8980.75	1	5957.47	1.6786	0.0493	0.0	0.0	1.07E-08	2.76E-07	1.79E-06	5.83E-06
7	4	51	50	12716.17	2	5958.16	1.6784	0.0400	0.0	0.0	0.0	2.03E-10	3.22E-09	1.91E-08
6	3	6	7	6312.47	2	5958.43	1.6783	0.0597	0.0	0.0	1.97E-09	1.75E-08	5.98E-08	1.27E-07
4	1	33	34	4255.91	2	5958.48	1.6783	0.0400	0.0	1.87E-09	3.64E-08	1.42E-07	2.96E-07	4.53E-07
3	0	57	58	6506.95	1	5958.62	1.6782	0.0400	0.0	2.68E-10	3.15E-08	3.03E-07	1.08E-06	2.39E-06
7	4	19	18	8838.17	2	5958.90	1.6782	0.0470	0.0	0.0	2.26E-10	5.51E-09	3.44E-08	1.10E-07
5	2	21	22	5078.88	2	5959.07	1.6781	0.0435	0.0	4.95E-10	1.85E-08	1.01E-07	2.55E-07	4.46E-07
8	5	66	65	18211.34	1	5959.54	1.6780	0.0400	0.0	0.0	0.0	0.0	4.03E-09	5.76E-08
3	0	43	44	3617.28	2	5959.62	1.6780	0.0400	0.0	2.47E-09	2.88E-08	8.71E-08	1.56E-07	2.16E-07
8	5	1	0	10452.15	1	5959.73	1.6779	0.0769	0.0	0.0	1.16E-10	5.42E-09	4.99E-08	2.06E-07
7	4	50	49	12541.73	2	5959.79	1.6779	0.0400	0.0	0.0	0.0	2.43E-10	3.69E-09	2.13E-08
5	2	107	106	24875.10	1	5959.93	1.6779	0.0400	0.0	0.0	0.0	0.0	0.0	1.29E-10
7	4	20	19	8905.38	2	5960.46	1.6777	0.0458	0.0	0.0	2.16E-10	5.40E-09	3.43E-08	1.11E-07
6	3	76	75	16226.44	2	5960.73	1.6776	0.0400	0.0	0.0	0.0	0.0	1.26E-10	1.31E-09
5	2	39	40	7339.16	1	5960.80	1.6776	0.0400	0.0	3.23E-10	7.38E-08	9.90E-07	4.33E-06	1.09E-05
7	4	49	48	12370.66	2	5961.31	1.6775	0.0400	0.0	0.0	0.0	2.89E-10	4.22E-09	2.37E-08
7	4	21	20	8976.10	2	5961.92	1.6773	0.0447	0.0	0.0	2.04E-10	5.26E-09	3.40E-08	1.11E-07
5	2	91	90	18574.52	2	5962.14	1.6773	0.0400	0.0	0.0	0.0	0.0	0.0	1.39E-10
6	3	96	95	22892.46	1	5962.31	1.6772	0.0400	0.0	0.0	0.0	0.0	0.0	9.88E-10
7	4	83	82	20737.52	1	5962.57	1.6771	0.0400	0.0	0.0	0.0	0.0	3.37E-10	7.22E-09
6	3	5	6	6287.43	2	5962.60	1.6771	0.0621	0.0	0.0	1.78E-09	1.56E-08	5.30E-08	1.12E-07
7	4	48	47	12202.98	2	5962.72	1.6771	0.0400	0.0	0.0	0.0	3.43E-10	4.80E-09	2.62E-08
6	3	28	29	7972.75	1	5962.78	1.6771	0.0400	0.0	1.16E-10	4.42E-08	7.63E-07	3.88E-06	1.08E-05
7	4	15	16	8917.88	1	5962.83	1.6771	0.0505	0.0	0.0	1.12E-08	2.82E-07	1.80E-06	5.83E-06
8	5	65	64	17979.55	1	5963.10	1.6770	0.0400	0.0	0.0	0.0	0.0	4.88E-09	6.73E-08
8	5	2	1	10455.82	1	5963.19	1.6770	0.0738	0.0	0.0	2.34E-10	1.09E-08	1.01E-07	4.17E-07
7	4	22	21	9050.34	2	5963.27	1.6769	0.0435	0.0	0.0	1.92E-10	5.10E-09	3.35E-08	1.11E-07
4	1	48	49	6773.78	1	5963.89	1.6768	0.0400	0.0	5.44E-10	7.92E-08	8.47E-07	3.23E-06	7.43E-06
7	4	47	46	12038.69	2	5964.04	1.6767	0.0400	0.0	0.0	0.0	4.04E-10	5.44E-09	2.89E-08
7	4	23	22	9128.10	2	5964.53	1.6766	0.0423	0.0	0.0	1.79E-10	4.90E-09	3.28E-08	1.10E-07
5	2	20	21	4999.68	2	5964.71	1.6765	0.0447	0.0	5.78E-10	2.03E-08	1.07E-07	2.66E-07	4.59E-07
6	3	75	74	15967.60	2	5964.99	1.6764	0.0400	0.0	0.0	0.0	0.0	1.57E-10	1.57E-09
7	4	46	45	11877.80	2	5965.24	1.6764	0.0400	0.0	0.0	0.0	4.74E-10	6.14E-09	3.19E-08
4	1	32	33	4132.93	2	5965.28	1.6764	0.0400	0.0	2.46E-09	4.33E-08	1.61E-07	3.25E-07	4.89E-07
7	4	24	23	9209.37	2	5965.68	1.6763	0.0412	0.0	0.0	1.66E-10	4.68E-09	3.20E-08	1.08E-07
7	4	45	44	11720.32	2	5966.35	1.6761	0.0400	0.0	0.0	0.0	5.54E-10	6.91E-09	3.49E-08
8	5	64	63	17751.12	1	5966.55	1.6760	0.0400	0.0	0.0	0.0	1.11E-10	5.90E-09	7.84E-08
8	5	3	2	10463.16	1	5966.55	1.6760	0.0707	0.0	0.0	3.51E-10	1.64E-08	1.52E-07	6.29E-07
6	3	4	5	6265.97	2	5966.66	1.6760	0.0645	0.0	0.0	1.55E-09	1.35E-08	4.55E-08	9.61E-08
7	4	25	24	9294.14	2	5966.74	1.6760	0.0400	0.0	0.0	1.52E-10	4.45E-09	3.10E-08	1.06E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	44	43	11566.25	2	5967.34	1.6758	0.0400	0.0	0.0	0.0	6.44E-10	7.74E-09	3.82E-08
3	0	42	43	3457.45	2	5967.38	1.6758	0.0400	0.0	3.58E-09	3.67E-08	1.04E-07	1.79E-07	2.41E-07
7	4	26	25	9382.42	2	5967.69	1.6757	0.0400	0.0	0.0	1.39E-10	4.20E-09	2.99E-08	1.04E-07
5	2	90	89	18265.99	2	5967.99	1.6756	0.0400	0.0	0.0	0.0	0.0	0.0	1.73E-10
7	4	82	81	20447.30	1	5968.07	1.6756	0.0400	0.0	0.0	0.0	0.0	4.36E-10	8.90E-09
7	4	14	15	8858.70	1	5968.09	1.6756	0.0517	0.0	0.0	1.16E-08	2.87E-07	1.80E-06	5.78E-06
5	2	106	105	24504.34	1	5968.20	1.6755	0.0400	0.0	0.0	0.0	0.0	0.0	1.70E-10
3	0	56	57	6288.75	1	5968.21	1.6755	0.0400	0.0	4.49E-10	4.43E-08	3.91E-07	1.33E-06	2.82E-06
7	4	43	42	11415.59	2	5968.24	1.6755	0.0400	0.0	0.0	0.0	7.45E-10	8.64E-09	4.16E-08
7	4	27	26	9474.20	2	5968.54	1.6755	0.0400	0.0	0.0	1.26E-10	3.95E-09	2.87E-08	1.01E-07
5	2	38	39	7189.73	1	5968.55	1.6754	0.0400	0.0	4.54E-10	9.21E-08	1.16E-06	4.91E-06	1.20E-05
7	4	42	41	11268.36	2	5969.03	1.6753	0.0400	0.0	0.0	0.0	8.58E-10	9.61E-09	4.52E-08
6	3	74	73	15711.97	2	5969.13	1.6753	0.0400	0.0	0.0	0.0	0.0	1.96E-10	1.87E-09
7	4	28	27	9569.48	2	5969.29	1.6752	0.0400	0.0	0.0	1.13E-10	3.68E-09	2.74E-08	9.84E-08
6	3	95	94	22558.31	1	5969.30	1.6752	0.0400	0.0	0.0	0.0	0.0	0.0	1.26E-09
6	3	27	28	7864.89	1	5969.39	1.6752	0.0400	0.0	1.47E-10	5.12E-08	8.48E-07	4.21E-06	1.15E-05
7	4	41	40	11124.55	2	5969.72	1.6751	0.0400	0.0	0.0	0.0	9.84E-10	1.06E-08	4.89E-08
8	5	4	3	10474.17	1	5969.80	1.6751	0.0676	0.0	0.0	4.66E-10	2.19E-08	2.03E-07	8.42E-07
8	5	63	62	17526.07	1	5969.89	1.6751	0.0400	0.0	0.0	0.0	1.41E-10	7.11E-09	9.10E-08
7	4	29	28	9668.25	2	5969.94	1.6751	0.0400	0.0	0.0	1.01E-10	3.42E-09	2.61E-08	9.50E-08
5	2	19	20	4924.07	2	5970.25	1.6750	0.0458	0.0	6.66E-10	2.21E-08	1.12E-07	2.75E-07	4.69E-07
7	4	40	39	10984.19	2	5970.30	1.6750	0.0400	0.0	0.0	0.0	1.12E-09	1.17E-08	5.27E-08
7	4	30	29	9770.52	2	5970.48	1.6749	0.0400	0.0	0.0	0.0	3.16E-09	2.47E-08	9.14E-08
6	3	3	4	6248.08	2	5970.63	1.6749	0.0676	0.0	0.0	1.28E-09	1.11E-08	3.73E-08	7.87E-08
7	4	39	38	10847.26	2	5970.78	1.6748	0.0400	0.0	0.0	0.0	1.27E-09	1.29E-08	5.66E-08
7	4	31	30	9876.27	2	5970.93	1.6748	0.0400	0.0	0.0	0.0	2.92E-09	2.34E-08	8.80E-08
7	4	38	37	10713.77	2	5971.16	1.6747	0.0400	0.0	0.0	0.0	1.44E-09	1.41E-08	6.06E-08
7	4	32	31	9985.50	2	5971.27	1.6747	0.0400	0.0	0.0	0.0	2.68E-09	2.20E-08	8.44E-08
7	4	37	36	10583.74	2	5971.44	1.6746	0.0400	0.0	0.0	0.0	1.62E-09	1.53E-08	6.47E-08
7	4	33	32	10098.21	2	5971.51	1.6746	0.0400	0.0	0.0	0.0	2.45E-09	2.07E-08	8.07E-08
7	4	36	35	10457.16	2	5971.61	1.6746	0.0400	0.0	0.0	0.0	1.81E-09	1.66E-08	6.87E-08
7	4	34	33	10214.39	2	5971.64	1.6746	0.0400	0.0	0.0	0.0	2.22E-09	1.93E-08	7.68E-08
7	4	35	34	10334.05	2	5971.68	1.6746	0.0400	0.0	0.0	0.0	2.01E-09	1.80E-08	7.28E-08
4	1	31	32	4013.51	2	5971.99	1.6745	0.0400	0.0	3.20E-09	5.12E-08	1.81E-07	3.56E-07	5.26E-07
4	1	47	48	6589.98	1	5972.56	1.6743	0.0400	0.0	8.36E-10	1.05E-07	1.04E-06	3.81E-06	8.50E-06
8	5	5	4	10488.85	1	5972.94	1.6742	0.0645	0.0	0.0	5.76E-10	2.72E-08	2.53E-07	1.05E-06
8	5	62	61	17304.39	1	5973.11	1.6742	0.0400	0.0	0.0	0.0	1.79E-10	8.52E-09	1.05E-07
6	3	73	72	15459.54	2	5973.17	1.6742	0.0400	0.0	0.0	0.0	0.0	2.43E-10	2.23E-09
7	4	13	14	8803.20	1	5973.25	1.6741	0.0528	0.0	0.0	1.20E-08	2.89E-07	1.79E-06	5.70E-06
7	4	81	80	20160.30	1	5973.44	1.6741	0.0400	0.0	0.0	0.0	0.0	5.61E-10	1.09E-08
5	2	89	88	17960.53	2	5973.74	1.6740	0.0400	0.0	0.0	0.0	0.0	0.0	2.16E-10
6	3	2	3	6233.77	2	5974.50	1.6738	0.0707	0.0	0.0	9.94E-10	8.55E-09	2.86E-08	6.02E-08
3	0	41	42	3301.17	2	5975.06	1.6736	0.0400	0.0	5.13E-09	4.64E-08	1.24E-07	2.05E-07	2.69E-07
5	2	18	19	4852.04	2	5975.70	1.6734	0.0470	0.0	7.60E-10	2.37E-08	1.18E-07	2.83E-07	4.77E-07
6	3	26	27	7760.70	1	5975.91	1.6734	0.0400	0.0	1.84E-10	5.90E-08	9.37E-07	4.53E-06	1.22E-05
8	5	6	5	10507.20	1	5975.98	1.6734	0.0621	0.0	0.0	6.79E-10	3.23E-08	3.02E-07	1.26E-06
6	3	94	93	22227.24	1	5976.17	1.6733	0.0400	0.0	0.0	0.0	0.0	0.0	1.60E-09
5	2	37	38	7043.96	1	5976.20	1.6733	0.0400	0.0	6.32E-10	1.14E-07	1.36E-06	5.54E-06	1.33E-05
8	5	61	60	17086.11	1	5976.21	1.6733	0.0400	0.0	0.0	0.0	2.25E-10	1.02E-08	1.22E-07
5	2	105	104	24136.54	1	5976.35	1.6733	0.0400	0.0	0.0	0.0	0.0	0.0	2.22E-10
6	3	72	71	15210.34	2	5977.10	1.6731	0.0400	0.0	0.0	0.0	0.0	3.01E-10	2.65E-09
3	0	55	56	6074.14	1	5977.70	1.6729	0.0400	0.0	7.45E-10	6.19E-08	5.01E-07	1.62E-06	3.32E-06
6	3	1	2	6223.04	2	5978.28	1.6727	0.0738	0.0	0.0	6.80E-10	5.82E-09	1.94E-08	4.08E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	12	13	8751.40	1	5978.30	1.6727	0.0540	0.0	0.0	1.22E-08	2.88E-07	1.77E-06	5.57E-06
4	1	30	31	3897.66	2	5978.61	1.6726	0.0400	0.0	4.13E-09	6.01E-08	2.03E-07	3.89E-07	5.63E-07
7	4	80	79	19876.52	1	5978.71	1.6726	0.0400	0.0	0.0	0.0	0.0	7.19E-10	1.34E-08
8	5	7	6	10529.21	1	5978.91	1.6725	0.0597	0.0	0.0	7.73E-10	3.71E-08	3.49E-07	1.46E-06
8	5	60	59	16871.22	1	5979.21	1.6725	0.0400	0.0	0.0	0.0	2.82E-10	1.21E-08	1.40E-07
5	2	88	87	17658.15	2	5979.38	1.6724	0.0400	0.0	0.0	0.0	0.0	0.0	2.69E-10
6	3	71	70	14964.37	2	5980.92	1.6720	0.0400	0.0	0.0	0.0	0.0	3.70E-10	3.15E-09
5	2	17	18	4783.59	2	5981.06	1.6719	0.0482	0.0	8.57E-10	2.54E-08	1.22E-07	2.89E-07	4.82E-07
4	1	46	47	6409.82	1	5981.14	1.6719	0.0400	0.0	1.27E-09	1.38E-07	1.28E-06	4.47E-06	9.69E-06
8	5	8	7	10554.90	1	5981.74	1.6718	0.0574	0.0	0.0	8.58E-10	4.16E-08	3.93E-07	1.65E-06
6	3	0	1	6215.88	2	5981.95	1.6717	0.0769	0.0	0.0	3.47E-10	2.96E-09	9.87E-09	2.07E-08
8	5	59	58	16659.74	1	5982.09	1.6717	0.0400	0.0	0.0	0.0	3.54E-10	1.45E-08	1.61E-07
6	3	25	26	7660.20	1	5982.33	1.6716	0.0400	0.0	2.28E-10	6.75E-08	1.03E-06	4.86E-06	1.29E-05
3	0	40	41	3148.44	2	5982.64	1.6715	0.0400	0.0	7.28E-09	5.83E-08	1.46E-07	2.33E-07	3.00E-07
6	3	93	92	21899.26	1	5982.92	1.6714	0.0400	0.0	0.0	0.0	0.0	0.0	2.02E-09
7	4	11	12	8703.29	1	5983.26	1.6713	0.0542	0.0	0.0	1.23E-08	2.84E-07	1.72E-06	5.39E-06
5	2	36	37	6901.85	1	5983.76	1.6712	0.0400	0.0	8.72E-10	1.41E-07	1.58E-06	6.23E-06	1.46E-05
7	4	79	78	19595.97	1	5983.85	1.6712	0.0400	0.0	0.0	0.0	0.0	9.18E-10	1.64E-08
5	2	104	103	23771.70	1	5984.39	1.6710	0.0400	0.0	0.0	0.0	0.0	0.0	2.91E-10
8	5	9	8	10584.25	1	5984.46	1.6710	0.0550	0.0	0.0	9.32E-10	4.57E-08	4.35E-07	1.84E-06
6	3	70	69	14721.64	2	5984.64	1.6709	0.0400	0.0	0.0	0.0	0.0	4.55E-10	3.72E-09
8	5	58	57	16451.68	1	5984.85	1.6709	0.0400	0.0	0.0	0.0	4.43E-10	1.72E-08	1.86E-07
5	2	87	86	17358.87	2	5984.91	1.6709	0.0400	0.0	0.0	0.0	0.0	0.0	3.35E-10
4	1	29	30	3785.38	2	5985.14	1.6708	0.0400	0.0	5.27E-09	7.02E-08	2.27E-07	4.22E-07	6.00E-07
5	2	16	17	4718.72	2	5986.31	1.6705	0.0493	0.0	9.56E-10	2.68E-08	1.26E-07	2.93E-07	4.84E-07
8	5	10	9	10617.26	1	5987.08	1.6703	0.0547	0.0	0.0	9.93E-10	4.94E-08	4.74E-07	2.01E-06
3	0	54	55	5863.14	1	5987.09	1.6703	0.0400	0.0	1.22E-09	8.60E-08	6.40E-07	1.96E-06	3.90E-06
8	5	57	56	16247.05	1	5987.51	1.6701	0.0400	0.0	0.0	0.0	5.51E-10	2.04E-08	2.13E-07
7	4	10	11	8658.86	1	5988.11	1.6700	0.0545	0.0	0.0	1.22E-08	2.77E-07	1.66E-06	5.16E-06
6	3	69	68	14482.17	2	5988.25	1.6699	0.0400	0.0	0.0	0.0	0.0	5.57E-10	4.38E-09
6	3	24	25	7563.39	1	5988.64	1.6698	0.0400	0.0	2.80E-10	7.65E-08	1.12E-06	5.18E-06	1.35E-05
7	4	78	77	19318.68	1	5988.88	1.6698	0.0400	0.0	0.0	0.0	0.0	1.17E-09	2.00E-08
6	3	1	0	6212.30	2	5989.01	1.6697	0.0769	0.0	0.0	3.56E-10	3.04E-09	1.01E-08	2.12E-08
6	3	92	91	21574.38	1	5989.56	1.6696	0.0400	0.0	0.0	0.0	0.0	1.04E-10	2.55E-09
8	5	11	10	10653.94	1	5989.58	1.6696	0.0545	0.0	0.0	1.04E-09	5.25E-08	5.09E-07	2.17E-06
4	1	45	46	6233.30	1	5989.62	1.6696	0.0400	0.0	1.92E-09	1.81E-07	1.56E-06	5.23E-06	1.10E-05
8	5	56	55	16045.84	1	5990.05	1.6694	0.0400	0.0	0.0	0.0	6.82E-10	2.40E-08	2.43E-07
3	0	39	40	2999.27	2	5990.13	1.6694	0.0400	0.0	1.02E-08	7.27E-08	1.72E-07	2.65E-07	3.32E-07
5	2	86	85	17062.69	2	5990.33	1.6694	0.0400	0.0	0.0	0.0	0.0	0.0	4.15E-10
5	2	35	36	6763.42	1	5991.21	1.6691	0.0400	0.0	1.19E-09	1.72E-07	1.83E-06	6.98E-06	1.60E-05
5	2	15	16	4657.45	2	5991.48	1.6690	0.0505	0.0	1.05E-09	2.81E-08	1.29E-07	2.96E-07	4.83E-07
4	1	28	29	3676.69	2	5991.57	1.6690	0.0400	0.0	6.69E-09	8.16E-08	2.53E-07	4.58E-07	6.41E-07
6	3	68	67	14245.95	2	5991.75	1.6690	0.0400	0.0	0.0	0.0	0.0	6.79E-10	5.14E-09
8	5	12	11	10694.28	1	5991.99	1.6689	0.0542	0.0	0.0	1.08E-09	5.52E-08	5.40E-07	2.32E-06
5	2	103	102	23409.84	1	5992.30	1.6688	0.0400	0.0	0.0	0.0	0.0	0.0	3.80E-10
6	3	2	1	6215.88	2	5992.39	1.6688	0.0738	0.0	0.0	7.17E-10	6.13E-09	2.04E-08	4.28E-08
8	5	55	54	15848.09	1	5992.47	1.6688	0.0400	0.0	0.0	0.0	8.40E-10	2.83E-08	2.77E-07
7	4	9	10	8618.14	1	5992.85	1.6687	0.0547	0.0	0.0	1.19E-08	2.67E-07	1.59E-06	4.89E-06
7	4	77	76	19044.64	1	5993.79	1.6684	0.0400	0.0	0.0	0.0	0.0	1.48E-09	2.42E-08
8	5	13	12	10738.28	1	5994.28	1.6683	0.0540	0.0	0.0	1.10E-09	5.74E-08	5.67E-07	2.45E-06
8	5	54	53	15653.78	1	5994.79	1.6681	0.0400	0.0	0.0	0.0	1.03E-09	3.31E-08	3.14E-07
6	3	23	24	7470.27	1	5994.86	1.6681	0.0412	0.0	3.40E-10	8.62E-08	1.22E-06	5.49E-06	1.41E-05
6	3	67	66	14013.01	2	5995.14	1.6680	0.0400	0.0	0.0	0.0	0.0	8.25E-10	6.02E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	85	84	16769.63	2	5995.64	1.6679	0.0400	0.0	0.0	0.0	0.0	0.0	5.13E-10
6	3	3	2	6223.04	2	5995.67	1.6679	0.0707	0.0	0.0	1.08E-09	9.23E-09	3.08E-08	6.47E-08
6	3	91	90	21252.63	1	5996.08	1.6678	0.0400	0.0	0.0	0.0	0.0	1.38E-10	3.21E-09
3	0	53	54	5655.77	1	5996.38	1.6677	0.0400	0.0	2.00E-09	1.19E-07	8.13E-07	2.37E-06	4.56E-06
8	5	14	13	10785.94	1	5996.47	1.6676	0.0528	0.0	0.0	1.11E-09	5.90E-08	5.89E-07	2.57E-06
5	2	14	15	4599.77	2	5996.54	1.6676	0.0517	0.0	1.14E-09	2.92E-08	1.31E-07	2.96E-07	4.79E-07
8	5	53	52	15462.93	1	5996.99	1.6675	0.0400	0.0	0.0	0.0	1.26E-09	3.86E-08	3.56E-07
7	4	8	9	8581.11	1	5997.50	1.6674	0.0550	0.0	0.0	1.15E-08	2.54E-07	1.49E-06	4.58E-06
3	0	38	39	2853.67	2	5997.53	1.6674	0.0400	0.0	1.43E-08	9.02E-08	2.01E-07	2.99E-07	3.67E-07
4	1	27	28	3571.58	2	5997.90	1.6673	0.0400	0.0	8.40E-09	9.43E-08	2.80E-07	4.95E-07	6.80E-07
4	1	44	45	6060.43	1	5998.00	1.6672	0.0400	0.0	2.86E-09	2.35E-07	1.89E-06	6.09E-06	1.25E-05
6	3	66	65	13783.34	2	5998.43	1.6671	0.0400	0.0	0.0	0.0	0.0	9.98E-10	7.02E-09
8	5	15	14	10837.26	1	5998.55	1.6671	0.0517	0.0	0.0	1.11E-09	6.00E-08	6.07E-07	2.67E-06
5	2	34	35	6628.66	1	5998.57	1.6671	0.0400	0.0	1.61E-09	2.09E-07	2.11E-06	7.78E-06	1.74E-05
7	4	76	75	18773.88	1	5998.59	1.6671	0.0400	0.0	0.0	0.0	0.0	1.88E-09	2.94E-08
6	3	4	3	6233.77	2	5998.86	1.6670	0.0676	0.0	0.0	1.43E-09	1.23E-08	4.12E-08	8.66E-08
8	5	52	51	15275.54	1	5999.08	1.6669	0.0400	0.0	0.0	0.0	1.53E-09	4.49E-08	4.01E-07
5	2	102	101	23050.98	1	6000.09	1.6666	0.0400	0.0	0.0	0.0	0.0	0.0	4.94E-10
8	5	16	15	10892.23	1	6000.53	1.6665	0.0505	0.0	0.0	1.09E-09	6.06E-08	6.21E-07	2.75E-06
5	2	84	83	16479.69	2	6000.84	1.6664	0.0400	0.0	0.0	0.0	0.0	0.0	6.32E-10
6	3	22	23	7380.84	1	6000.97	1.6664	0.0423	0.0	4.07E-10	9.63E-08	1.31E-06	5.80E-06	1.47E-05
8	5	51	50	15091.63	1	6001.05	1.6664	0.0400	0.0	0.0	0.0	1.85E-09	5.20E-08	4.51E-07
5	2	13	14	4545.69	2	6001.51	1.6662	0.0528	0.0	1.23E-09	3.00E-08	1.32E-07	2.94E-07	4.72E-07
6	3	65	64	13556.96	2	6001.61	1.6662	0.0400	0.0	0.0	0.0	0.0	1.20E-09	8.17E-09
6	3	5	4	6248.08	2	6001.95	1.6661	0.0645	0.0	0.0	1.77E-09	1.53E-08	5.14E-08	1.08E-07
7	4	7	8	8547.78	1	6002.03	1.6661	0.0574	0.0	0.0	1.09E-08	2.37E-07	1.38E-06	4.22E-06
8	5	17	16	10950.85	1	6002.39	1.6660	0.0493	0.0	0.0	1.07E-09	6.06E-08	6.30E-07	2.82E-06
6	3	90	89	20934.01	1	6002.48	1.6660	0.0400	0.0	0.0	0.0	0.0	1.82E-10	4.02E-09
8	5	50	49	14911.20	1	6002.92	1.6659	0.0400	0.0	0.0	0.0	2.23E-09	6.00E-08	5.06E-07
7	4	75	74	18506.41	1	6003.27	1.6658	0.0400	0.0	0.0	0.0	0.0	2.37E-09	3.54E-08
4	1	26	27	3470.06	2	6004.15	1.6655	0.0400	0.0	1.05E-08	1.08E-07	3.09E-07	5.32E-07	7.20E-07
8	5	18	17	11013.12	1	6004.15	1.6655	0.0482	0.0	0.0	1.03E-09	6.02E-08	6.35E-07	2.87E-06
8	5	49	48	14734.27	1	6004.67	1.6654	0.0400	0.0	0.0	0.0	2.68E-09	6.89E-08	5.65E-07
6	3	64	63	13333.88	2	6004.68	1.6654	0.0400	0.0	0.0	0.0	0.0	1.45E-09	9.47E-09
3	0	37	38	2711.64	2	6004.84	1.6653	0.0400	0.0	1.97E-08	1.11E-07	2.34E-07	3.37E-07	4.04E-07
6	3	6	5	6265.97	2	6004.93	1.6653	0.0621	0.0	0.0	2.09E-09	1.82E-08	6.14E-08	1.30E-07
3	0	52	53	5452.01	1	6005.58	1.6651	0.0400	0.0	3.22E-09	1.63E-07	1.03E-06	2.86E-06	5.31E-06
8	5	19	18	11079.05	1	6005.81	1.6651	0.0470	0.0	0.0	9.91E-10	5.93E-08	6.35E-07	2.90E-06
5	2	33	34	6497.59	1	6005.82	1.6651	0.0400	0.0	2.16E-09	2.52E-07	2.42E-06	8.63E-06	1.90E-05
5	2	83	82	16192.90	2	6005.93	1.6650	0.0400	0.0	0.0	0.0	0.0	0.0	7.77E-10
4	1	43	44	5891.22	1	6006.28	1.6649	0.0400	0.0	4.23E-09	3.04E-07	2.29E-06	7.06E-06	1.41E-05
8	5	48	47	14560.82	1	6006.31	1.6649	0.0400	0.0	0.0	0.0	3.19E-09	7.88E-08	6.29E-07
5	2	12	13	4495.20	2	6006.39	1.6649	0.0540	0.0	1.30E-09	3.05E-08	1.31E-07	2.89E-07	4.60E-07
7	4	6	7	8518.15	1	6006.47	1.6649	0.0597	0.0	0.0	1.01E-08	2.17E-07	1.26E-06	3.81E-06
6	3	21	22	7295.12	1	6006.98	1.6647	0.0435	0.0	4.84E-10	1.07E-07	1.41E-06	6.08E-06	1.52E-05
8	5	20	19	11148.61	1	6007.35	1.6646	0.0458	0.0	0.0	9.43E-10	5.80E-08	6.32E-07	2.92E-06
6	3	63	62	13114.11	2	6007.65	1.6645	0.0400	0.0	0.0	0.0	0.0	1.73E-09	1.10E-08
5	2	101	100	22695.13	1	6007.76	1.6645	0.0400	0.0	0.0	0.0	0.0	0.0	6.42E-10
6	3	7	6	6287.43	2	6007.82	1.6645	0.0597	0.0	0.0	2.38E-09	2.09E-08	7.10E-08	1.51E-07
7	4	74	73	18242.22	1	6007.83	1.6645	0.0400	0.0	0.0	0.0	0.0	2.97E-09	4.27E-08
8	5	47	46	14390.88	1	6007.84	1.6645	0.0400	0.0	0.0	0.0	3.79E-09	8.99E-08	6.98E-07
4	1	111	110	24484.04	1	6008.35	1.6644	0.0400	0.0	0.0	0.0	0.0	0.0	7.52E-11
6	3	89	88	20618.54	1	6008.76	1.6642	0.0400	0.0	0.0	0.0	0.0	2.41E-10	5.07E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
8	5	21	20	11221.82	1	6008.79	1.6642	0.0447	0.0	0.0	8.89E-10	5.63E-08	6.25E-07	2.92E-06
8	5	46	45	14224.45	1	6009.25	1.6641	0.0400	0.0	0.0	0.0	4.48E-09	1.02E-07	7.71E-07
4	1	96	95	18241.11	2	6009.77	1.6640	0.0400	0.0	0.0	0.0	0.0	0.0	8.13E-11
8	5	22	21	11298.67	1	6010.12	1.6639	0.0435	0.0	0.0	8.32E-10	5.43E-08	6.14E-07	2.91E-06
4	1	25	26	3372.13	2	6010.29	1.6638	0.0400	0.0	1.29E-08	1.23E-07	3.38E-07	5.70E-07	7.58E-07
6	3	62	61	12897.64	2	6010.51	1.6638	0.0400	0.0	0.0	0.0	1.25E-10	2.07E-09	1.26E-08
8	5	45	44	14061.54	1	6010.56	1.6637	0.0400	0.0	0.0	0.0	5.27E-09	1.15E-07	8.50E-07
6	3	8	7	6312.47	2	6010.61	1.6637	0.0574	0.0	0.0	2.65E-09	2.35E-08	8.01E-08	1.71E-07
7	4	5	6	8492.22	1	6010.80	1.6637	0.0621	0.0	0.0	9.08E-09	1.93E-07	1.11E-06	3.36E-06
5	2	82	81	15909.25	2	6010.91	1.6636	0.0400	0.0	0.0	0.0	0.0	0.0	9.53E-10
5	2	11	12	4448.31	2	6011.16	1.6636	0.0542	0.0	1.35E-09	3.06E-08	1.29E-07	2.82E-07	4.46E-07
8	5	23	22	11379.15	1	6011.34	1.6635	0.0423	0.0	0.0	7.72E-10	5.21E-08	6.00E-07	2.88E-06
8	5	44	43	13902.14	1	6011.75	1.6634	0.0400	0.0	0.0	0.0	6.16E-09	1.30E-07	9.33E-07
3	0	36	37	2573.18	2	6012.05	1.6633	0.0400	1.14E-10	2.70E-08	1.36E-07	2.71E-07	3.78E-07	4.42E-07
7	4	73	72	17981.34	1	6012.28	1.6633	0.0400	0.0	0.0	0.0	0.0	3.72E-09	5.12E-08
8	5	24	23	11463.27	1	6012.45	1.6632	0.0412	0.0	0.0	7.11E-10	4.96E-08	5.83E-07	2.83E-06
8	5	43	42	13746.29	1	6012.84	1.6631	0.0400	0.0	0.0	0.0	7.18E-09	1.46E-07	1.02E-06
6	3	20	21	7213.10	1	6012.89	1.6631	0.0447	0.0	5.68E-10	1.17E-07	1.50E-06	6.35E-06	1.56E-05
5	2	32	33	6370.20	1	6012.98	1.6631	0.0400	0.0	2.87E-09	3.02E-07	2.75E-06	9.54E-06	2.05E-05
6	3	61	60	12684.50	2	6013.26	1.6630	0.0400	0.0	0.0	0.0	1.56E-10	2.46E-09	1.45E-08
6	3	9	8	6341.08	2	6013.30	1.6630	0.0550	0.0	0.0	2.88E-09	2.58E-08	8.87E-08	1.90E-07
8	5	25	24	11551.01	1	6013.46	1.6629	0.0400	0.0	0.0	6.50E-10	4.69E-08	5.63E-07	2.78E-06
8	5	42	41	13593.96	1	6013.81	1.6628	0.0400	0.0	0.0	0.0	8.32E-09	1.63E-07	1.11E-06
8	5	26	25	11642.38	1	6014.35	1.6627	0.0400	0.0	0.0	5.90E-10	4.42E-08	5.42E-07	2.71E-06
4	1	42	43	5725.68	1	6014.47	1.6627	0.0400	0.0	6.20E-09	3.90E-07	2.75E-06	8.16E-06	1.58E-05
8	5	41	40	13445.18	1	6014.67	1.6626	0.0400	0.0	0.0	0.0	9.59E-09	1.81E-07	1.21E-06
3	0	51	52	5251.89	1	6014.68	1.6626	0.0400	0.0	5.16E-09	2.22E-07	1.29E-06	3.43E-06	6.18E-06
6	3	88	87	20306.23	1	6014.93	1.6625	0.0400	0.0	0.0	0.0	0.0	3.19E-10	6.37E-09
7	4	4	5	8470.00	1	6015.03	1.6625	0.0645	0.0	0.0	7.91E-09	1.67E-07	9.56E-07	2.88E-06
8	5	27	26	11737.38	1	6015.14	1.6625	0.0400	0.0	0.0	5.31E-10	4.13E-08	5.18E-07	2.63E-06
5	2	100	99	22342.30	1	6015.32	1.6624	0.0400	0.0	0.0	0.0	0.0	0.0	8.30E-10
8	5	40	39	13299.95	1	6015.42	1.6624	0.0400	0.0	0.0	0.0	1.10E-08	2.01E-07	1.31E-06
5	2	81	80	15628.77	2	6015.78	1.6623	0.0400	0.0	0.0	0.0	0.0	1.23E-10	1.16E-09
8	5	28	27	11835.99	1	6015.82	1.6623	0.0400	0.0	0.0	4.75E-10	3.84E-08	4.94E-07	2.55E-06
5	2	10	11	4405.02	2	6015.85	1.6623	0.0545	0.0	1.39E-09	3.04E-08	1.26E-07	2.72E-07	4.27E-07
6	3	10	9	6373.27	2	6015.89	1.6623	0.0547	0.0	0.0	3.07E-09	2.79E-08	9.67E-08	2.08E-07
6	3	60	59	12474.70	2	6015.91	1.6623	0.0400	0.0	0.0	0.0	1.95E-10	2.91E-09	1.66E-08
8	5	39	38	13158.27	1	6016.06	1.6622	0.0400	0.0	0.0	0.0	1.26E-08	2.22E-07	1.41E-06
4	1	95	94	17914.32	2	6016.15	1.6622	0.0400	0.0	0.0	0.0	0.0	0.0	1.03E-10
4	1	24	25	3277.80	2	6016.35	1.6621	0.0400	0.0	1.57E-08	1.39E-07	3.68E-07	6.06E-07	7.95E-07
8	5	29	28	11938.21	1	6016.39	1.6621	0.0400	0.0	0.0	4.21E-10	3.55E-08	4.68E-07	2.45E-06
8	5	38	37	13020.16	1	6016.58	1.6621	0.0400	0.0	0.0	1.10E-10	1.43E-08	2.43E-07	1.52E-06
7	4	72	71	17723.78	1	6016.62	1.6621	0.0400	0.0	0.0	0.0	0.0	4.63E-09	6.13E-08
8	5	30	29	12044.05	1	6016.85	1.6620	0.0400	0.0	0.0	3.71E-10	3.26E-08	4.41E-07	2.35E-06
8	5	37	36	12885.61	1	6017.00	1.6620	0.0400	0.0	0.0	1.31E-10	1.61E-08	2.66E-07	1.63E-06
4	1	110	109	24097.80	1	6017.08	1.6619	0.0400	0.0	0.0	0.0	0.0	0.0	1.00E-10
8	5	31	30	12153.49	1	6017.20	1.6619	0.0400	0.0	0.0	3.26E-10	3.00E-08	4.16E-07	2.26E-06
8	5	36	35	12754.63	1	6017.31	1.6619	0.0400	0.0	0.0	1.55E-10	1.81E-08	2.90E-07	1.73E-06
8	5	32	31	12266.54	1	6017.44	1.6618	0.0400	0.0	0.0	2.85E-10	2.74E-08	3.91E-07	2.16E-06
8	5	35	34	12627.23	1	6017.51	1.6618	0.0400	0.0	0.0	1.82E-10	2.02E-08	3.15E-07	1.84E-06
8	5	33	32	12383.18	1	6017.57	1.6618	0.0400	0.0	0.0	2.47E-10	2.49E-08	3.65E-07	2.06E-06
8	5	34	33	12503.41	1	6017.59	1.6618	0.0400	0.0	0.0	2.13E-10	2.25E-08	3.40E-07	1.95E-06
6	3	11	10	6409.02	2	6018.38	1.6616	0.0545	0.0	0.0	3.23E-09	2.98E-08	1.04E-07	2.25E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLFCULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBFR CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
6	3	59	58	12268.22	2	6018.45	1.6616	0.0400	0.0	0.0	0.0	2.43E-10	3.46E-09	1.91E-08
6	3	19	20	7134.78	1	6018.70	1.6615	0.0458	0.0	6.59E-10	1.28F-07	1.58E-06	6.58E-06	1.60E-05
7	4	3	4	8451.48	1	6019.15	1.6614	0.0676	0.0	0.0	6.57F-09	1.38E-07	7.85E-07	2.36E-06
3	0	35	36	2438.31	2	6019.17	1.6614	0.0400	2.13E-10	3.65E-08	1.66E-07	3.13E-07	4.22E-07	4.83E-07
5	2	31	32	6246.50	1	6020.03	1.6611	0.0400	0.0	3.77E-09	3.60E-07	3.12E-06	1.05E-05	2.21E-05
5	2	9	10	4365.34	2	6020.43	1.6610	0.0547	0.0	1.40E-09	2.97E-08	1.21E-07	2.59E-07	4.04E-07
5	2	80	79	15351.45	2	6020.55	1.6610	0.0400	0.0	0.0	0.0	0.0	1.57F-10	1.42E-09
6	3	12	11	6448.35	2	6020.78	1.6609	0.0542	0.0	0.0	3.34F-09	3.13F-08	1.10E-07	2.40E-07
7	4	71	70	17469.54	1	6020.83	1.6609	0.0400	0.0	0.0	0.0	1.16F-10	5.76E-09	7.31E-08
6	3	58	57	12065.10	2	6020.89	1.6609	0.0400	0.0	0.0	0.0	3.02E-10	4.09F-09	2.18E-08
6	3	87	86	19997.09	1	6020.98	1.6609	0.0400	0.0	0.0	0.0	0.0	4.19E-10	7.98E-09
4	1	23	24	3187.07	2	6022.30	1.6605	0.0412	0.0	1.89E-08	1.56F-07	3.98E-07	6.42E-07	8.30E-07
4	1	94	93	17590.57	2	6022.42	1.6605	0.0400	0.0	0.0	0.0	0.0	0.0	1.30E-10
4	1	41	42	5563.80	1	6022.55	1.6604	0.0400	0.0	9.01E-09	4.98E-07	3.29E-06	9.38E-06	1.78E-05
5	2	99	98	21992.52	1	6022.75	1.6604	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-09
6	3	13	12	6491.25	2	6023.07	1.6603	0.0540	0.0	0.0	3.42E-09	3.26E-08	1.16E-07	2.55E-07
7	4	2	3	8436.66	1	6023.17	1.6603	0.0707	0.0	0.0	5.09E-09	1.06E-07	6.02E-07	1.80E-06
6	3	57	56	11865.33	2	6023.22	1.6602	0.0400	0.0	0.0	0.0	3.73E-10	4.82E-09	2.49E-08
3	0	50	51	5055.41	1	6023.68	1.6601	0.0400	0.0	8.17E-09	3.01E-07	1.62E-06	4.10E-06	7.15E-06
6	3	18	19	7060.17	1	6024.41	1.6599	0.0470	0.0	7.57E-10	1.38E-07	1.66F-06	6.79E-06	1.63E-05
5	2	8	9	4329.25	2	6024.92	1.6598	0.0550	0.0	1.39E-09	2.86E-08	1.15E-07	2.44E-07	3.78E-07
7	4	70	69	17218.64	1	6024.94	1.6598	0.0400	0.0	0.0	0.0	1.53F-10	7.13E-09	8.69E-08
5	2	79	78	15077.32	2	6025.20	1.6597	0.0400	0.0	0.0	0.0	0.0	1.99E-10	1.72E-09
6	3	14	13	6537.71	2	6025.26	1.6597	0.0528	0.0	0.0	3.46E-09	3.36E-08	1.21E-07	2.67E-07
6	3	56	55	11668.92	2	6025.45	1.6596	0.0400	0.0	0.0	0.0	4.59E-10	5.66E-09	2.84E-08
4	1	109	108	23714.48	1	6025.68	1.6596	0.0400	0.0	0.0	0.0	0.0	0.0	1.33E-10
3	0	34	35	2307.02	2	6026.20	1.6594	0.0400	3.92E-10	4.91E-08	2.00E-07	3.59E-07	4.69E-07	5.26E-07
6	3	86	85	19691.13	1	6026.91	1.6592	0.0400	0.0	0.0	0.0	0.0	5.50E-10	9.97E-09
5	2	30	31	6126.50	1	6026.99	1.6592	0.0400	0.0	4.90F-09	4.25E-07	3.51F-06	1.15E-05	2.38E-05
7	4	1	2	8425.54	1	6027.09	1.6592	0.0738	0.0	0.0	3.48F-09	7.21E-08	4.09E-07	1.22E-06
6	3	15	14	6587.74	2	6027.35	1.6591	0.0517	0.0	0.0	3.46E-09	3.43E-08	1.25E-07	2.78E-07
6	3	55	54	11475.88	2	6027.57	1.6590	0.0400	0.0	0.0	0.0	5.63F-10	6.62E-09	3.22E-08
4	1	22	23	3099.94	2	6028.17	1.6589	0.0423	0.0	2.26E-08	1.74E-07	4.28F-07	6.76E-07	8.62E-07
4	1	93	92	17269.87	2	6028.58	1.6588	0.0400	0.0	0.0	0.0	0.0	0.0	1.63E-10
7	4	69	68	16971.09	1	6028.93	1.6587	0.0400	0.0	0.0	0.0	2.00E-10	8.79E-09	1.03E-07
5	2	7	8	4296.77	2	6029.31	1.6586	0.0574	0.0	1.35E-09	2.70E-08	1.07E-07	2.26E-07	3.48E-07
6	3	16	15	6641.34	2	6029.35	1.6586	0.0505	0.0	0.0	3.42E-09	3.46E-08	1.28E-07	2.87E-07
6	3	54	53	11286.22	2	6029.58	1.6585	0.0400	0.0	0.0	0.0	6.86E-10	7.72E-09	3.64E-08
5	2	78	77	14806.39	2	6029.75	1.6584	0.0400	0.0	0.0	0.0	0.0	2.52E-10	2.09E-09
6	3	17	18	6989.28	1	6030.01	1.6584	0.0482	0.0	8.58F-10	1.48E-07	1.73F-06	6.95E-06	1.65E-05
5	2	98	97	21645.80	1	6030.07	1.6584	0.0400	0.0	0.0	0.0	0.0	0.0	1.38E-09
4	1	40	41	5405.60	1	6030.54	1.6582	0.0400	0.0	1.30E-08	6.31F-07	3.91E-06	1.07E-05	1.98E-05
7	4	0	1	8418.13	1	6030.90	1.6581	0.0769	0.0	0.0	1.78E-09	3.67E-08	2.08E-07	6.21E-07
6	3	17	16	6698.49	2	6031.24	1.6580	0.0493	0.0	0.0	3.35F-09	3.47E-08	1.30E-07	2.94E-07
6	3	53	52	11099.95	2	6031.49	1.6580	0.0400	0.0	0.0	0.0	8.34E-10	8.96E-09	4.10E-08
3	0	49	50	4862.58	1	6032.59	1.6577	0.0400	0.0	1.28E-08	4.05E-07	2.02E-06	4.88E-06	8.25E-06
6	3	85	84	19388.37	1	6032.72	1.6576	0.0400	0.0	0.0	0.0	0.0	7.70E-10	1.24E-08
7	4	68	67	16726.89	1	6032.80	1.6576	0.0400	0.0	0.0	0.0	2.60E-10	1.08E-08	1.22E-07
6	3	18	17	6759.20	2	6033.03	1.6575	0.0482	0.0	0.0	3.26E-09	3.46E-08	1.31E-07	3.00E-07
3	0	33	34	2179.32	2	6033.13	1.6575	0.0400	7.09E-10	6.52F-08	2.41E-07	4.10E-07	5.19E-07	5.71E-07
6	3	52	51	10917.06	2	6033.29	1.6575	0.0400	0.0	0.0	0.0	1.01E-09	1.04E-08	4.61E-08
5	2	6	7	4267.90	2	6033.60	1.6574	0.0597	0.0	1.28F-09	2.50F-08	9.80E-08	2.05E-07	3.15E-07
5	2	29	30	6010.21	1	6033.84	1.6573	0.0400	0.0	6.32E-09	4.99E-07	3.94E-06	1.25E-05	2.54E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	21	22	3016.41	2	6033.94	1.6573	0.0435	0.0	2.67E-08	1.93E-07	4.58E-07	7.09E-07	8.91E-07
4	1	108	107	23334.10	1	6034.16	1.6572	0.0400	0.0	0.0	0.0	0.0	0.0	1.77E-10
5	2	77	76	14538.66	2	6034.19	1.6572	0.0400	0.0	0.0	0.0	0.0	3.18E-10	2.52E-09
4	1	92	91	16952.23	2	6034.63	1.6571	0.0400	0.0	0.0	0.0	0.0	0.0	2.04E-10
6	3	19	18	6823.48	2	6034.72	1.6571	0.0470	0.0	0.0	3.13E-09	3.41E-08	1.32E-07	3.04E-07
6	3	51	50	10737.57	2	6034.99	1.6570	0.0400	0.0	0.0	0.0	1.21E-09	1.20E-08	5.16E-08
6	3	16	17	6922.10	1	6035.51	1.6569	0.0493	0.0	9.62E-10	1.57E-07	1.79E-06	7.07E-06	1.66E-05
6	3	20	19	6891.30	2	6036.31	1.6566	0.0458	0.0	0.0	2.99E-09	3.35E-08	1.31E-07	3.06E-07
7	4	67	66	16486.06	1	6036.56	1.6566	0.0400	0.0	0.0	0.0	3.37E-10	1.32E-08	1.44E-07
6	3	50	49	10561.49	2	6036.59	1.6566	0.0400	0.0	0.0	0.0	1.45E-09	1.37E-08	5.77E-08
5	2	97	96	21302.14	1	6037.27	1.6564	0.0400	0.0	0.0	0.0	0.0	0.0	1.77E-09
6	3	21	20	6962.68	2	6037.80	1.6562	0.0447	0.0	0.0	2.83E-09	3.26E-08	1.30E-07	3.07E-07
5	2	5	6	4242.63	2	6037.80	1.6562	0.0621	0.0	1.17E-09	2.25E-08	8.74E-08	1.81E-07	2.78E-07
6	3	49	48	10388.82	2	6038.08	1.6562	0.0400	0.0	0.0	0.0	1.73E-09	1.57E-08	6.42E-08
7	4	1	0	8414.43	1	6038.20	1.6561	0.0769	0.0	0.0	1.83E-09	3.76E-08	2.13E-07	6.36E-07
6	3	84	83	19088.83	1	6038.41	1.6561	0.0400	0.0	0.0	0.0	0.0	9.38E-10	1.54E-08
4	1	39	40	5251.08	1	6038.43	1.6561	0.0400	0.0	1.85E-08	7.95E-07	4.63E-06	1.23E-05	2.21E-05
5	2	76	75	14274.14	2	6038.52	1.6560	0.0400	0.0	0.0	0.0	0.0	4.00E-10	3.04E-09
6	3	22	21	7037.61	2	6039.19	1.6559	0.0435	0.0	0.0	2.66E-09	3.15E-08	1.28E-07	3.06E-07
6	3	48	47	10219.57	2	6039.46	1.6558	0.0400	0.0	0.0	0.0	2.06E-09	1.79E-08	7.12E-08
4	1	20	21	2936.50	2	6039.61	1.6557	0.0447	0.0	3.12E-08	2.11E-07	4.86E-07	7.38E-07	9.17E-07
3	0	32	33	2055.22	2	6039.97	1.6556	0.0400	1.26E-09	8.59E-08	2.87E-07	4.65E-07	5.71E-07	6.16E-07
7	4	66	65	16248.61	1	6040.21	1.6556	0.0400	0.0	0.0	0.0	4.36E-10	1.61E-08	1.69E-07
6	3	23	22	7116.09	2	6040.48	1.6555	0.0423	0.0	0.0	2.47E-09	3.03E-08	1.25E-07	3.03E-07
4	1	91	90	16637.68	2	6040.57	1.6555	0.0400	0.0	0.0	0.0	0.0	0.0	2.56E-10
5	2	28	29	5897.62	1	6040.60	1.6555	0.0400	0.0	8.09E-09	5.84E-07	4.41E-06	1.36E-05	2.72E-05
6	3	47	46	10053.75	2	6040.74	1.6554	0.0400	0.0	0.0	0.0	2.43E-09	2.03E-08	7.87E-08
6	3	15	16	6858.63	1	6040.91	1.6554	0.0505	0.0	1.06E-09	1.66E-07	1.83E-06	7.14E-06	1.66E-05
3	0	48	49	4673.40	1	6041.40	1.6552	0.0400	0.0	2.00E-08	5.42E-07	2.51E-06	5.78E-06	9.50E-06
6	3	24	23	7198.11	2	6041.67	1.6552	0.0412	0.0	0.0	2.29E-09	2.89E-08	1.22E-07	2.99E-07
7	4	2	1	8418.13	1	6041.70	1.6552	0.0738	0.0	0.0	3.68E-09	7.59E-08	4.30E-07	1.28E-06
5	2	4	5	4220.97	2	6041.90	1.6551	0.0645	0.0	1.04E-09	1.96E-08	7.54E-08	1.56E-07	2.38E-07
6	3	46	45	9891.36	2	6041.92	1.6551	0.0400	0.0	0.0	0.0	2.85E-09	2.30E-08	8.67E-08
4	1	107	106	22956.67	1	6042.52	1.6549	0.0400	0.0	0.0	0.0	0.0	0.0	2.34E-10
5	2	75	74	14012.86	2	6042.75	1.6549	0.0400	0.0	0.0	0.0	0.0	5.01E-10	3.65E-09
6	3	25	24	7283.66	2	6042.75	1.6549	0.0400	0.0	0.0	2.10E-09	2.75E-08	1.18E-07	2.94E-07
6	3	45	44	9732.40	2	6042.99	1.6548	0.0400	0.0	0.0	0.0	3.34E-09	2.59E-08	9.52E-08
7	4	65	64	16014.55	1	6043.74	1.6546	0.0400	0.0	0.0	0.0	5.60E-10	1.96E-08	1.97E-07
6	3	26	25	7372.76	2	6043.74	1.6546	0.0400	0.0	0.0	1.91E-09	2.59E-08	1.14E-07	2.88E-07
6	3	44	43	9576.89	2	6043.96	1.6545	0.0400	0.0	0.0	1.19E-10	3.89E-09	2.90E-08	1.04E-07
6	3	83	82	18792.51	1	6043.99	1.6545	0.0400	0.0	0.0	0.0	0.0	1.22E-09	1.91E-08
5	2	96	95	20961.57	1	6044.35	1.6544	0.0400	0.0	0.0	0.0	0.0	1.02E-10	2.27E-09
6	3	27	26	7465.39	2	6044.62	1.6544	0.0400	0.0	0.0	1.73E-09	2.43E-08	1.09E-07	2.80E-07
6	3	43	42	9424.83	2	6044.82	1.6543	0.0400	0.0	0.0	1.46E-10	4.51E-09	3.24E-08	1.14E-07
7	4	3	2	8425.54	1	6045.09	1.6542	0.0707	0.0	0.0	5.52E-09	1.14E-07	6.48E-07	1.94E-06
4	1	19	20	2860.19	2	6045.19	1.6542	0.0458	0.0	3.61E-08	2.29E-07	5.13E-07	7.64E-07	9.38E-07
6	3	28	27	7561.55	2	6045.40	1.6542	0.0400	0.0	0.0	1.55E-09	2.27E-08	1.04E-07	2.71E-07
6	3	42	41	9276.23	2	6045.58	1.6541	0.0400	0.0	0.0	1.79E-10	5.20E-09	3.61E-08	1.23E-07
5	2	3	4	4202.92	2	6045.90	1.6540	0.0676	0.0	8.75E-10	1.63E-08	6.22E-08	1.28E-07	1.95E-07
6	3	29	28	7661.24	2	6046.08	1.6540	0.0400	0.0	0.0	1.38E-09	2.10E-08	9.91E-08	2.62E-07
4	1	38	39	5100.25	1	6046.21	1.6539	0.0400	0.0	2.60E-08	9.94E-07	5.45E-06	1.39E-05	2.45E-05
6	3	14	15	6798.89	1	6046.21	1.6539	0.0517	0.0	1.16E-09	1.72E-07	1.86E-06	7.16E-06	1.65E-05
6	3	41	40	9131.08	2	6046.24	1.6539	0.0400	0.0	0.0	2.18E-10	5.96E-09	4.00E-08	1.34E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	90	89	16326.21	2	6046.39	1.6539	0.0400	0.0	0.0	0.0	0.0	0.0	3.19E-10
6	3	30	29	7764.45	2	6046.66	1.6538	0.0400	0.0	0.0	1.22E-09	1.94E-08	9.37E-08	2.52E-07
3	0	31	32	1934.72	2	6046.72	1.6538	0.0400	2.19E-09	1.12E-07	3.40E-07	5.25E-07	6.27E-07	6.63E-07
6	3	40	39	8989.41	2	6046.79	1.6538	0.0400	0.0	0.0	2.63E-10	6.81E-09	4.41E-08	1.44E-07
5	2	74	73	13754.80	2	6046.86	1.6538	0.0400	0.0	0.0	0.0	0.0	6.25E-10	4.38E-09
6	3	31	30	7871.18	2	6047.13	1.6537	0.0400	0.0	0.0	1.08E-09	1.79E-08	8.87E-08	2.42E-07
7	4	64	63	15783.89	1	6047.15	1.6537	0.0400	0.0	0.0	0.0	7.17E-10	2.38E-08	2.30E-07
6	3	39	38	8851.20	2	6047.24	1.6536	0.0400	0.0	0.0	3.16E-10	7.74E-09	4.85E-08	1.55E-07
5	2	27	28	5788.74	1	6047.25	1.6536	0.0400	0.0	1.03E-08	6.79E-07	4.90E-06	1.48E-05	2.90E-05
6	3	32	31	7981.43	2	6047.50	1.6536	0.0400	0.0	0.0	9.49E-10	1.64E-08	8.35E-08	2.32E-07
6	3	38	37	8716.48	2	6047.59	1.6536	0.0400	0.0	0.0	3.77E-10	8.75E-09	5.31E-08	1.66E-07
6	3	33	32	8095.19	2	6047.77	1.6535	0.0400	0.0	0.0	8.27E-10	1.50E-08	7.83E-08	2.22E-07
6	3	37	36	8585.23	2	6047.83	1.6535	0.0400	0.0	0.0	4.47E-10	9.84E-09	5.79E-08	1.77E-07
6	3	34	33	8212.45	2	6047.94	1.6535	0.0400	0.0	0.0	7.16E-10	1.36E-08	7.31E-08	2.11E-07
6	3	36	35	8457.48	2	6047.97	1.6534	0.0400	0.0	0.0	5.26E-10	1.10E-08	6.29E-08	1.89E-07
6	3	35	34	8333.21	2	6048.01	1.6534	0.0400	0.0	0.0	6.16E-10	1.23E-08	6.79E-08	2.00E-07
7	4	4	3	8436.66	1	6048.37	1.6533	0.0676	0.0	0.0	7.31E-09	1.52E-07	8.65E-07	2.59E-06
6	3	82	81	18499.43	1	6049.46	1.6530	0.0400	0.0	0.0	0.0	0.0	1.58E-09	2.36E-08
5	2	2	3	4188.48	2	6049.80	1.6529	0.0707	0.0	6.86E-10	1.26E-08	4.79E-08	9.81E-08	1.49E-07
3	0	47	48	4487.89	1	6050.11	1.6529	0.0400	0.0	3.08E-08	7.21E-07	3.09E-06	6.83E-06	1.09E-05
7	4	63	62	15556.63	1	6050.45	1.6528	0.0400	0.0	0.0	0.0	9.13E-10	2.87E-08	2.68E-07
4	1	18	19	2787.51	2	6050.67	1.6527	0.0470	1.04E-10	4.13E-08	2.47E-07	5.37E-07	7.87E-07	9.54E-07
4	1	106	105	22522.21	1	6050.76	1.6527	0.0400	0.0	0.0	0.0	0.0	0.0	3.09E-10
5	2	73	72	13499.99	2	6050.87	1.6527	0.0400	0.0	0.0	0.0	0.0	7.77E-10	5.22E-09
5	2	95	94	20624.10	1	6051.31	1.6525	0.0400	0.0	0.0	0.0	0.0	1.37E-10	2.89E-09
6	3	13	14	6742.87	1	6051.40	1.6525	0.0528	0.0	1.25E-09	1.78E-07	1.88E-06	7.12E-06	1.63E-05
7	4	5	4	8451.48	1	6051.55	1.6525	0.0645	0.0	0.0	9.04E-09	1.89E-07	1.08E-06	3.24E-06
4	1	89	88	16017.84	2	6052.11	1.6523	0.0400	0.0	0.0	0.0	0.0	0.0	3.99E-10
3	0	30	31	1817.82	2	6053.37	1.6520	0.0400	3.75E-09	1.45E-07	4.00E-07	5.90E-07	6.85E-07	7.11E-07
5	2	1	2	4177.65	2	6053.61	1.6519	0.0738	0.0	4.73E-10	8.62E-09	3.26E-08	6.67E-08	1.01E-07
7	4	62	61	15332.79	1	6053.64	1.6519	0.0400	0.0	0.0	0.0	1.16E-09	3.44E-08	3.11E-07
5	2	26	27	5683.57	1	6053.81	1.6519	0.0400	0.0	1.29E-08	7.83E-07	5.42E-06	1.59E-05	3.08E-05
4	1	37	38	4953.12	1	6053.90	1.6518	0.0400	0.0	3.64E-08	1.23E-06	6.38E-06	1.57E-05	2.70E-05
7	4	6	5	8470.00	1	6054.62	1.6516	0.0621	0.0	0.0	1.07E-08	2.25E-07	1.29E-06	3.88E-06
5	2	72	71	13248.44	2	6054.77	1.6516	0.0400	0.0	0.0	0.0	0.0	9.63E-10	6.22E-09
6	3	81	80	18209.59	1	6054.80	1.6516	0.0400	0.0	0.0	0.0	0.0	2.03E-09	2.91E-08
4	1	17	18	2718.44	2	6056.06	1.6512	0.0482	1.39E-10	4.66E-08	2.65E-07	5.59E-07	8.05E-07	9.65E-07
6	3	12	13	6690.57	1	6056.49	1.6511	0.0540	0.0	1.33E-09	1.81E-07	1.88E-06	7.02E-06	1.59E-05
7	4	61	60	15112.37	1	6056.72	1.6511	0.0400	0.0	0.0	0.0	1.46E-09	4.12E-08	3.59E-07
5	2	0	1	4170.43	2	6057.32	1.6509	0.0769	0.0	2.43E-10	4.40E-09	1.66E-08	3.39E-08	5.12E-08
7	4	7	6	8492.22	1	6057.59	1.6508	0.0597	0.0	0.0	1.21E-08	2.58E-07	1.49E-06	4.50E-06
4	1	88	87	15712.59	2	6057.72	1.6508	0.0400	0.0	0.0	0.0	0.0	0.0	4.99E-10
5	2	94	93	20289.75	1	6058.15	1.6507	0.0400	0.0	0.0	0.0	0.0	1.84E-10	3.68E-09
5	2	71	70	13000.15	2	6058.56	1.6506	0.0400	0.0	0.0	0.0	0.0	1.19E-09	7.38E-09
3	0	46	47	4306.05	1	6058.72	1.6505	0.0400	0.0	4.71E-08	9.52E-07	3.80E-06	8.03E-06	1.24E-05
4	1	105	104	22210.73	1	6058.88	1.6505	0.0400	0.0	0.0	0.0	0.0	0.0	4.06E-10
7	4	60	59	14895.39	1	6059.68	1.6503	0.0400	0.0	0.0	0.0	1.84E-09	4.92E-08	4.14E-07
3	0	29	30	1704.53	2	6059.93	1.6502	0.0400	6.29E-09	1.85E-07	4.68E-07	6.59E-07	7.44E-07	7.59E-07
6	3	80	79	17923.02	1	6060.03	1.6502	0.0400	0.0	0.0	0.0	0.0	2.61E-09	3.57E-08
5	2	25	26	5582.12	1	6060.26	1.6501	0.0400	0.0	1.60E-08	8.97E-07	5.96E-06	1.71E-05	3.25E-05
7	4	8	7	8518.15	1	6060.45	1.6500	0.0574	0.0	0.0	1.35E-08	2.89E-07	1.68E-06	5.10E-06
4	1	16	17	2652.99	2	6061.35	1.6498	0.0493	1.82E-10	5.20E-08	2.80E-07	5.77E-07	8.18E-07	9.71E-07
6	3	11	12	6642.00	1	6061.48	1.6498	0.0542	0.0	1.39E-09	1.82E-07	1.85E-06	6.85E-06	1.54E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	36	37	4809.68	1	6061.50	1.6498	0.0400	0.0	5.04E-08	1.52E-06	7.44E-06	1.77E-05	2.98E-05
5	2	70	69	12755.13	2	6062.25	1.6496	0.0400	0.0	0.0	0.0	0.0	1.46E-09	8.73E-09
7	4	59	58	14681.85	1	6062.52	1.6495	0.0400	0.0	0.0	0.0	2.31E-09	5.88E-08	4.78E-07
7	4	9	8	8547.78	1	6063.21	1.6493	0.0550	0.0	0.0	1.46E-08	3.18E-07	1.86E-06	5.66E-06
4	1	87	86	15410.46	2	6063.22	1.6493	0.0400	0.0	0.0	0.0	0.0	0.0	6.21E-10
5	2	1	0	4166.82	2	6064.44	1.6490	0.0769	0.0	2.50E-10	4.52E-09	1.70E-08	3.47E-08	5.25E-08
5	2	93	92	19958.52	1	6064.87	1.6488	0.0400	0.0	0.0	0.0	0.0	2.47E-10	4.67E-09
6	3	79	78	17639.71	1	6065.14	1.6488	0.0400	0.0	0.0	0.0	0.0	3.35E-09	4.37E-08
7	4	58	57	14471.76	1	6065.26	1.6487	0.0400	0.0	0.0	0.0	2.89E-09	7.00E-08	5.51E-07
5	2	69	68	12513.40	2	6065.82	1.6486	0.0400	0.0	0.0	0.0	1.19E-10	1.80E-09	1.03E-08
7	4	10	9	8581.11	1	6065.86	1.6486	0.0547	0.0	0.0	1.56E-08	3.43E-07	2.02E-06	6.20E-06
6	3	10	11	6597.16	1	6066.36	1.6484	0.0545	0.0	1.44E-09	1.81E-07	1.81E-06	6.62E-06	1.48E-05
3	0	28	29	1594.85	2	6066.39	1.6484	0.0400	1.04E-08	2.36E-07	5.45E-07	7.35E-07	8.09E-07	8.11E-07
4	1	15	16	2591.16	2	6066.54	1.6484	0.0505	2.32E-10	5.74E-08	2.94E-07	5.90E-07	8.25E-07	9.70E-07
5	2	24	25	5484.40	1	6066.61	1.6484	0.0400	0.0	1.97E-08	1.02E-06	6.52E-06	1.83E-05	3.41E-05
4	1	104	103	21842.26	1	6066.88	1.6483	0.0400	0.0	0.0	0.0	0.0	0.0	5.33E-10
3	0	45	46	4127.89	1	6067.24	1.6482	0.0400	0.0	7.13E-08	1.25E-06	4.65E-06	9.41E-06	1.42E-05
5	2	2	1	4170.43	2	6067.86	1.6480	0.0738	0.0	5.03E-10	9.11E-09	3.44E-08	7.01E-08	1.06E-07
7	4	57	56	14265.13	1	6067.88	1.6480	0.0400	0.0	0.0	0.0	3.61E-09	8.31E-08	6.32E-07
7	4	11	10	8618.14	1	6068.40	1.6479	0.0545	0.0	0.0	1.63E-08	3.65E-07	2.17E-06	6.69E-06
4	1	86	85	15111.48	2	6068.61	1.6478	0.0400	0.0	0.0	0.0	0.0	0.0	7.72E-10
4	1	35	36	4669.95	1	6068.99	1.6477	0.0400	0.0	6.91E-08	1.87E-06	8.63E-06	1.99E-05	3.26E-05
5	2	68	67	12274.96	2	6069.29	1.6476	0.0400	0.0	0.0	0.0	1.54E-10	2.19E-09	1.21E-08
6	3	78	77	17359.69	1	6070.14	1.6474	0.0400	0.0	0.0	0.0	0.0	4.28E-09	5.34E-08
7	4	56	55	14061.97	1	6070.38	1.6473	0.0400	0.0	0.0	0.0	4.48E-09	9.82E-08	7.23E-07
7	4	12	11	8658.86	1	6070.84	1.6472	0.0542	0.0	0.0	1.69E-08	3.84E-07	2.30E-06	7.15E-06
6	3	9	10	6556.05	1	6071.14	1.6471	0.0547	0.0	1.45E-09	1.78E-07	1.74E-06	6.32E-06	1.40E-05
5	2	3	2	4177.65	2	6071.17	1.6471	0.0707	0.0	7.51E-10	1.37E-08	5.18E-08	1.06E-07	1.60E-07
5	2	92	91	19630.43	1	6071.47	1.6470	0.0400	0.0	0.0	0.0	0.0	3.29E-10	5.90E-09
4	1	14	15	2532.96	2	6071.64	1.6470	0.0517	2.91E-10	6.25E-08	3.06E-07	6.00E-07	8.26E-07	9.62E-07
5	2	67	66	12039.83	2	6072.66	1.6467	0.0400	0.0	0.0	0.0	1.98E-10	2.67E-09	1.42E-08
3	0	27	28	1488.80	2	6072.76	1.6467	0.0400	1.69E-08	2.97E-07	6.31E-07	8.16E-07	8.75E-07	8.62E-07
7	4	55	54	13862.29	1	6072.78	1.6467	0.0400	0.0	0.0	0.0	5.53E-09	1.16E-07	8.25E-07
5	2	23	24	5390.41	1	6072.86	1.6467	0.0412	0.0	2.39E-08	1.15E-06	7.08E-06	1.94E-05	3.57E-05
7	4	13	12	8703.29	1	6073.17	1.6466	0.0540	0.0	0.0	1.72E-08	3.98E-07	2.42E-06	7.55E-06
4	1	85	84	14815.63	2	6073.89	1.6464	0.0400	0.0	0.0	0.0	0.0	1.15E-10	9.56E-10
5	2	4	3	4188.48	2	6074.39	1.6463	0.0676	0.0	9.88E-10	1.82E-08	6.90E-08	1.41E-07	2.15E-07
4	1	103	102	21476.80	1	6074.76	1.6462	0.0400	0.0	0.0	0.0	0.0	0.0	6.98E-10
6	3	77	76	17082.96	1	6075.02	1.6461	0.0400	0.0	0.0	0.0	1.20E-10	5.44E-09	6.50E-08
7	4	54	53	13666.09	1	6075.06	1.6461	0.0400	0.0	0.0	0.0	6.81E-09	1.36E-07	9.38E-07
7	4	14	13	8751.40	1	6075.39	1.6460	0.0528	0.0	0.0	1.74E-08	4.09E-07	2.51E-06	7.91E-06
3	0	44	45	3953.41	1	6075.65	1.6459	0.0400	0.0	1.07E-07	1.63E-06	5.65E-06	1.10E-05	1.61E-05
6	3	8	9	6518.68	1	6075.82	1.6459	0.0550	0.0	1.44E-09	1.71E-07	1.66E-06	5.95E-06	1.31E-05
5	2	66	65	11808.00	2	6075.91	1.6458	0.0400	0.0	0.0	0.0	2.54E-10	3.24E-09	1.66E-08
4	1	34	35	4533.94	1	6076.38	1.6457	0.0400	0.0	9.38E-08	2.28E-06	9.95E-06	2.22E-05	3.57E-05
4	1	13	14	2478.38	2	6076.64	1.6456	0.0528	3.56E-10	6.71E-08	3.15E-07	6.03E-07	8.21E-07	9.47E-07
7	4	53	52	13473.39	1	6077.23	1.6455	0.0400	0.0	0.0	0.0	8.33E-09	1.59E-07	1.06E-06
7	4	15	14	8803.20	1	6077.51	1.6454	0.0517	0.0	0.0	1.73E-08	4.17E-07	2.59E-06	8.22E-06
5	2	5	4	4202.92	2	6077.51	1.6454	0.0645	0.0	1.21E-09	2.25E-08	8.58E-08	1.77E-07	2.68E-07
5	2	91	90	19305.50	1	6077.96	1.6453	0.0400	0.0	0.0	0.0	0.0	4.37E-10	7.44E-09
5	2	22	23	5300.14	1	6079.01	1.6450	0.0423	0.0	2.87E-08	1.29E-06	7.64E-06	2.05E-05	3.72E-05
3	0	26	27	1386.36	2	6079.03	1.6450	0.0400	2.70E-08	3.71E-07	7.26E-07	9.00E-07	9.42E-07	9.13E-07
5	2	65	64	11579.50	2	6079.06	1.6450	0.0400	0.0	0.0	0.0	3.24E-10	3.91E-09	1.94E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	84	83	14522.95	2	6079.06	1.6450	0.0400	0.0	0.0	0.0	0.0	1.49E-10	1.18E-09
7	4	52	51	13284.19	1	6079.28	1.6449	0.0400	0.0	0.0	0.0	1.01E-08	1.85E-07	1.20E-06
7	4	16	15	8858.70	1	6079.52	1.6449	0.0505	0.0	0.0	1.71E-08	4.20E-07	2.64E-06	8.48E-06
6	3	76	75	16809.55	1	6079.78	1.6448	0.0400	0.0	0.0	0.0	1.63E-10	6.90E-09	7.88E-08
6	3	7	8	6485.03	1	6080.40	1.6446	0.0574	0.0	1.40E-09	1.62E-07	1.55E-06	5.51E-06	1.21E-05
5	2	6	5	4220.97	2	6080.53	1.6446	0.0621	0.0	1.41E-09	2.65E-08	1.02E-07	2.11E-07	3.21E-07
7	4	51	50	13098.50	1	6081.23	1.6444	0.0400	0.0	0.0	0.0	1.23E-08	2.14E-07	1.35E-06
7	4	17	16	8917.88	1	6081.42	1.6444	0.0493	0.0	0.0	1.67E-08	4.20E-07	2.68E-06	8.68E-06
4	1	12	13	2427.44	2	6081.55	1.6443	0.0540	4.26E-10	7.11E-08	3.20E-07	6.02E-07	8.08E-07	9.25E-07
5	2	64	63	11354.33	2	6082.11	1.6442	0.0400	0.0	0.0	0.0	4.12E-10	4.71E-09	2.25E-08
4	1	102	101	21114.38	1	6082.53	1.6441	0.0400	0.0	0.0	0.0	0.0	0.0	9.11E-10
7	4	50	49	12916.32	1	6083.06	1.6439	0.0400	0.0	0.0	1.19E-10	1.48E-08	2.47E-07	1.52E-06
7	4	18	17	8980.75	1	6083.21	1.6439	0.0482	0.0	0.0	1.61E-08	4.17E-07	2.70E-06	8.83E-06
5	2	7	6	4242.63	2	6083.45	1.6438	0.0597	0.0	1.59E-09	3.02E-08	1.17E-07	2.44E-07	3.73E-07
4	1	33	34	4401.64	1	6083.67	1.6437	0.0400	0.0	1.26E-07	2.75E-06	1.14E-05	2.47E-05	3.88E-05
3	0	43	44	3782.62	1	6083.97	1.6437	0.0400	0.0	1.59E-07	2.11E-06	6.84E-06	1.27E-05	1.82E-05
4	1	83	82	14233.45	2	6084.12	1.6436	0.0400	0.0	0.0	0.0	0.0	1.92E-10	1.45E-09
5	2	90	89	18983.73	1	6084.33	1.6436	0.0400	0.0	0.0	0.0	0.0	5.78E-10	9.36E-09
6	3	75	74	16539.45	1	6084.43	1.6435	0.0400	0.0	0.0	0.0	2.19E-10	8.71E-09	9.54E-08
7	4	49	48	12737.67	1	6084.78	1.6434	0.0400	0.0	0.0	1.54E-10	1.78E-08	2.85E-07	1.70E-06
6	3	6	7	6455.12	1	6084.87	1.6434	0.0597	0.0	1.33E-09	1.50E-07	1.42E-06	5.01E-06	1.09E-05
7	4	19	18	9047.30	1	6084.90	1.6434	0.0470	0.0	0.0	1.55E-08	4.10E-07	2.70E-06	8.93E-06
5	2	63	62	11132.49	2	6085.04	1.6434	0.0400	0.0	0.0	0.0	5.22E-10	5.65E-09	2.60E-08
5	2	21	22	5213.61	1	6085.05	1.6434	0.0435	0.0	3.42E-08	1.43E-06	8.20E-06	2.15E-05	3.85E-05
3	0	25	26	1287.55	2	6085.22	1.6433	0.0400	4.22E-08	4.58E-07	8.28E-07	9.87E-07	1.01E-06	9.63E-07
5	2	8	7	4267.90	2	6086.27	1.6430	0.0574	0.0	1.72E-09	3.36E-08	1.32E-07	2.75E-07	4.23E-07
4	1	11	12	2380.12	2	6086.36	1.6430	0.0542	4.99E-10	7.43E-08	3.22E-07	5.93E-07	7.88E-07	8.96E-07
7	4	48	47	12562.54	1	6086.38	1.6430	0.0400	0.0	0.0	1.97E-10	2.13E-08	3.26E-07	1.89E-06
7	4	20	19	9117.53	1	6086.48	1.6430	0.0458	0.0	0.0	1.47E-08	4.01E-07	2.69E-06	8.98E-06
5	2	62	61	10914.00	2	6087.87	1.6426	0.0400	0.0	0.0	0.0	6.57E-10	6.76E-09	3.00E-08
7	4	47	46	12390.96	1	6087.88	1.6426	0.0400	0.0	0.0	2.51E-10	2.54E-08	3.72E-07	2.10E-06
7	4	21	20	9191.44	1	6087.95	1.6426	0.0447	0.0	0.0	1.38E-08	3.89E-07	2.65E-06	8.98E-06
3	0	96	95	16294.18	2	6088.54	1.6424	0.0400	0.0	0.0	0.0	0.0	0.0	9.43E-11
6	3	74	73	16272.68	1	6088.96	1.6423	0.0400	0.0	0.0	0.0	2.94E-10	1.10E-08	1.15E-07
5	2	9	8	4296.77	2	6088.99	1.6423	0.0550	0.0	1.82E-09	3.65E-08	1.45E-07	3.05E-07	4.71E-07
4	1	82	81	13947.12	2	6089.07	1.6423	0.0400	0.0	0.0	0.0	0.0	2.47E-10	1.79E-09
6	3	5	6	6428.95	1	6089.23	1.6422	0.0621	0.0	1.23E-09	1.35E-07	1.26E-06	4.44E-06	9.65E-06
7	4	46	45	12222.92	1	6089.26	1.6422	0.0400	0.0	0.0	3.18E-10	3.00E-08	4.23E-07	2.32E-06
7	4	22	21	9269.02	1	6089.31	1.6422	0.0435	0.0	0.0	1.29E-08	3.75E-07	2.61E-06	8.93E-06
4	1	101	100	20755.00	1	6090.17	1.6420	0.0400	0.0	0.0	0.0	0.0	0.0	1.19E-09
7	4	45	44	12058.43	1	6090.53	1.6419	0.0400	0.0	0.0	4.00E-10	3.54E-08	4.79E-07	2.56E-06
7	4	23	22	9350.27	1	6090.57	1.6419	0.0423	0.0	0.0	1.20E-08	3.60E-07	2.55E-06	8.83E-06
5	2	89	88	18665.15	1	6090.58	1.6419	0.0400	0.0	0.0	0.0	0.0	7.69E-10	1.18E-08
5	2	61	60	10698.87	2	6090.60	1.6419	0.0400	0.0	0.0	0.0	8.24E-10	8.05E-09	3.46E-08
4	1	32	33	4273.06	1	6090.86	1.6418	0.0400	0.0	1.68E-07	3.31E-06	1.30E-05	2.73E-05	4.20E-05
5	2	20	21	5130.82	1	6091.00	1.6418	0.0447	0.0	4.02E-08	1.57E-06	8.73E-06	2.25E-05	3.97E-05
4	1	10	11	2336.44	2	6091.08	1.6417	0.0545	5.69E-10	7.63E-08	3.19E-07	5.79E-07	7.61E-07	8.59E-07
3	0	111	110	22554.35	1	6091.27	1.6417	0.0400	0.0	0.0	0.0	0.0	0.0	8.63E-11
3	0	24	25	1192.36	2	6091.30	1.6417	0.0400	6.48E-08	5.59E-07	9.38E-07	1.08E-06	1.08E-06	1.01E-06
5	2	10	9	4329.25	2	6091.62	1.6416	0.0547	0.0	1.89E-09	3.90E-08	1.57E-07	3.32E-07	5.15E-07
7	4	44	43	11897.51	1	6091.69	1.6416	0.0400	0.0	0.0	5.00E-10	4.15E-08	5.41E-07	2.82E-06
7	4	24	23	9435.20	1	6091.72	1.6416	0.0412	0.0	0.0	1.10E-08	3.42E-07	2.47E-06	8.69E-06
3	0	42	43	3615.54	1	6092.19	1.6414	0.0400	0.0	2.33E-07	2.72E-06	8.24E-06	1.47E-05	2.05E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
7	4	43	42	11740.14	1	6092.74	1.6413	0.0400	0.0	0.0	6.21E-10	4.84E-08	6.07E-07	3.09E-06
7	4	25	24	9523.78	1	6092.75	1.6413	0.0400	0.0	0.0	1.01E-08	3.24E-07	2.39E-06	8.52E-06
5	2	60	59	10487.10	2	6093.21	1.6412	0.0400	0.0	0.0	0.0	1.03E-09	9.55E-09	3.96E-08
6	3	73	72	16009.24	1	6093.38	1.6411	0.0400	0.0	0.0	0.0	3.93E-10	1.38E-08	1.38E-07
6	3	4	5	6406.52	1	6093.50	1.6411	0.0645	0.0	1.09E-09	1.18E-07	1.09E-06	3.81E-06	8.26E-06
7	4	26	25	9616.03	1	6093.68	1.6410	0.0400	0.0	0.0	9.12E-09	3.04E-07	2.30E-06	8.31E-06
7	4	42	41	11586.35	1	6093.68	1.6410	0.0400	0.0	0.0	7.66E-10	5.61E-08	6.79E-07	3.37E-06
4	1	81	80	13663.99	2	6093.91	1.6410	0.0400	0.0	0.0	0.0	0.0	3.17E-10	2.19E-09
5	2	11	10	4365.34	2	6094.14	1.6409	0.0545	0.0	1.93E-09	4.09E-08	1.67E-07	3.57E-07	5.57E-07
7	4	41	40	11436.14	1	6094.51	1.6408	0.0400	0.0	0.0	9.40E-10	6.48E-08	7.57E-07	3.66E-06
7	4	27	26	9711.93	1	6094.51	1.6408	0.0400	0.0	0.0	8.20E-09	2.84E-07	2.19E-06	8.06E-06
3	0	95	94	15964.29	2	6094.89	1.6407	0.0400	0.0	0.0	0.0	0.0	0.0	1.20E-10
7	4	40	39	11289.51	1	6095.22	1.6406	0.0400	0.0	0.0	1.14E-09	7.45E-08	8.40E-07	3.97E-06
7	4	28	27	9811.48	1	6095.22	1.6406	0.0400	0.0	0.0	7.32E-09	2.64E-07	2.09E-06	7.80E-06
4	1	9	10	2296.39	2	6095.69	1.6405	0.0547	6.33E-10	7.71E-08	3.12E-07	5.57E-07	7.26E-07	8.14E-07
5	2	59	58	10278.70	2	6095.73	1.6405	0.0400	0.0	0.0	0.0	1.29E-09	1.14E-08	4.56E-08
7	4	29	28	9914.69	1	6095.82	1.6405	0.0400	0.0	0.0	6.49E-09	2.44E-07	1.98E-06	7.50E-06
7	4	39	38	11146.46	1	6095.83	1.6405	0.0400	0.0	0.0	1.39E-09	8.51E-08	9.28E-07	4.29E-06
7	4	38	37	11007.02	1	6096.32	1.6403	0.0400	0.0	0.0	1.67E-09	9.68E-08	1.02E-06	4.61E-06
7	4	30	29	10021.54	1	6096.32	1.6403	0.0400	0.0	0.0	5.71E-09	2.24E-07	1.86E-06	7.19E-06
5	2	12	11	4405.02	2	6096.57	1.6403	0.0542	0.0	1.94E-09	4.24E-08	1.76E-07	3.79E-07	5.96E-07
7	4	31	30	10132.03	1	6096.70	1.6402	0.0400	0.0	0.0	5.02E-09	2.05E-07	1.76E-06	6.90E-06
7	4	37	36	10871.18	1	6096.71	1.6402	0.0400	0.0	0.0	1.99E-09	1.10E-07	1.12E-06	4.94E-06
5	2	88	87	18349.76	1	6096.71	1.6402	0.0400	0.0	0.0	0.0	0.0	1.02E-09	1.49E-08
5	2	19	20	5051.77	1	6096.84	1.6402	0.0458	0.0	4.68E-08	1.72E-06	9.24E-06	2.33E-05	4.07E-05
7	4	32	31	10246.16	1	6096.98	1.6402	0.0400	0.0	0.0	4.38E-09	1.88E-07	1.65E-06	6.59E-06
7	4	36	35	10738.94	1	6096.98	1.6402	0.0400	0.0	0.0	2.36E-09	1.23E-07	1.22E-06	5.28E-06
7	4	35	34	10610.31	1	6097.14	1.6401	0.0400	0.0	0.0	2.78E-09	1.38E-07	1.32E-06	5.61E-06
7	4	33	32	10363.92	1	6097.14	1.6401	0.0400	0.0	0.0	3.79E-09	1.70E-07	1.54E-06	6.27E-06
7	4	34	33	10485.30	1	6097.20	1.6401	0.0400	0.0	0.0	3.26E-09	1.54E-07	1.43E-06	5.94E-06
3	0	23	24	1100.81	2	6097.29	1.6401	0.0412	9.76E-08	6.76E-07	1.05E-06	1.17E-06	1.14E-06	1.06E-06
6	3	3	4	6387.82	1	6097.66	1.6400	0.0676	0.0	9.19E-10	9.81E-08	9.00E-07	3.13E-06	6.77E-06
6	3	72	71	15749.16	1	6097.68	1.6400	0.0400	0.0	0.0	0.0	5.23E-10	1.72E-08	1.66E-07
4	1	100	99	20398.68	1	6097.69	1.6400	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-09
4	1	31	32	4148.21	1	6097.95	1.6399	0.0400	0.0	2.21E-07	3.94E-06	1.48E-05	3.01E-05	4.54E-05
5	2	58	57	10073.68	2	6098.13	1.6398	0.0400	0.0	0.0	0.0	1.60E-09	1.35E-08	5.23E-08
4	1	80	79	13384.06	2	6098.65	1.6397	0.0400	0.0	0.0	0.0	0.0	4.05E-10	2.67E-09
5	2	13	12	4448.31	2	6098.89	1.6396	0.0540	0.0	1.92E-09	4.34E-08	1.83E-07	3.99E-07	6.31E-07
3	0	110	109	22164.27	1	6099.97	1.6394	0.0400	0.0	0.0	0.0	0.0	0.0	1.15E-10
4	1	8	9	2259.98	2	6100.21	1.6393	0.0550	6.85E-10	7.65E-08	3.01E-07	5.29E-07	6.83E-07	7.61E-07
3	0	41	42	3452.15	1	6100.31	1.6393	0.0400	1.75E-10	3.40E-07	3.48E-06	9.87E-06	1.70E-05	2.30E-05
5	2	57	56	9872.04	2	6100.43	1.6392	0.0400	0.0	0.0	0.0	1.98E-09	1.59E-08	5.98E-08
5	2	14	13	4495.20	2	6101.11	1.6390	0.0528	0.0	1.86E-09	4.38E-08	1.88E-07	4.15E-07	6.61E-07
3	0	94	93	15637.47	2	6101.13	1.6390	0.0400	0.0	0.0	0.0	0.0	0.0	1.51E-10
6	3	2	3	6372.86	1	6101.71	1.6389	0.0707	0.0	7.20E-10	7.60E-08	6.93E-07	2.40E-06	5.18E-06
6	3	71	70	15492.44	1	6101.87	1.6388	0.0400	0.0	0.0	0.0	6.93E-10	2.14E-08	1.98E-07
5	2	18	19	4976.46	1	6102.58	1.6387	0.0470	0.0	5.38E-08	1.86E-06	9.71E-06	2.41E-05	4.15E-05
5	2	56	55	9673.80	2	6102.63	1.6386	0.0400	0.0	0.0	0.0	2.45E-09	1.87E-08	6.81E-08
5	2	87	86	18037.58	1	6102.73	1.6386	0.0400	0.0	0.0	0.0	0.0	1.34E-09	1.87E-08
3	0	22	23	1012.90	2	6103.19	1.6385	0.0423	1.44E-07	8.09E-07	1.18E-06	1.26E-06	1.20E-06	1.10E-06
5	2	15	14	4545.69	2	6103.24	1.6385	0.0517	0.0	1.79E-09	4.38E-08	1.92E-07	4.28E-07	6.88E-07
4	1	79	78	13107.35	2	6103.28	1.6385	0.0400	0.0	0.0	0.0	0.0	5.15E-10	3.25E-09
4	1	7	8	2227.21	2	6104.64	1.6381	0.0574	7.19E-10	7.42E-08	2.85E-07	4.94E-07	6.32E-07	7.01E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	55	54	9478.96	2	6104.71	1.6381	0.0400	0.0	0.0	0.0	3.00E-09	2.19E-08	7.74E-08
4	1	30	31	4027.09	1	6104.94	1.6380	0.0400	0.0	2.89E-07	4.67E-06	1.67E-05	3.30E-05	4.88E-05
4	1	99	98	20045.44	1	6105.10	1.6380	0.0400	0.0	0.0	0.0	0.0	1.04E-10	1.99E-09
5	2	16	15	4599.77	2	6105.26	1.6379	0.0505	0.0	1.70E-09	4.33E-08	1.94E-07	4.39E-07	7.11E-07
6	3	1	2	6361.64	1	6105.66	1.6378	0.0738	0.0	4.97E-10	5.20E-08	4.72E-07	1.63E-06	3.51E-06
6	3	70	69	15239.10	1	6105.94	1.6377	0.0400	0.0	0.0	0.0	9.13E-10	2.66E-08	2.36E-07
5	2	54	53	9287.54	2	6106.70	1.6375	0.0400	0.0	0.0	1.26E-10	3.67E-09	2.56E-08	8.76E-08
5	2	17	16	4657.45	2	6107.19	1.6374	0.0493	0.0	1.59E-09	4.24E-08	1.94E-07	4.46E-07	7.29E-07
3	0	93	92	15313.73	2	6107.26	1.6374	0.0400	0.0	0.0	0.0	0.0	0.0	1.91E-10
4	1	78	77	12833.86	2	6107.79	1.6373	0.0400	0.0	0.0	0.0	0.0	6.54E-10	3.95E-09
5	2	17	18	4904.90	1	6108.22	1.6371	0.0482	0.0	6.11E-08	2.00E-06	1.01E-05	2.47E-05	4.21E-05
3	0	40	41	3292.48	1	6108.34	1.6371	0.0400	3.70E-10	4.91E-07	4.42E-06	1.18E-05	1.95E-05	2.57E-05
3	0	109	108	21777.14	1	6108.54	1.6371	0.0400	0.0	0.0	0.0	0.0	0.0	1.54E-10
5	2	53	52	9099.53	2	6108.58	1.6370	0.0400	0.0	0.0	1.65E-10	4.47E-09	2.97E-08	9.89E-08
5	2	86	85	17728.62	1	6108.63	1.6370	0.0400	0.0	0.0	0.0	0.0	1.77E-09	2.34E-08
4	1	6	7	2198.07	2	6108.96	1.6369	0.0597	7.30E-10	7.03E-08	2.63E-07	4.52E-07	5.74E-07	6.34E-07
3	0	21	22	928.62	2	6108.99	1.6369	0.0435	2.09E-07	9.58E-07	1.30E-06	1.34E-06	1.26E-06	1.14E-06
5	2	18	17	4718.72	2	6109.01	1.6369	0.0482	0.0	1.47E-09	4.11E-08	1.93E-07	4.50E-07	7.43E-07
6	3	0	1	6354.16	1	6109.50	1.6368	0.0769	0.0	2.55E-10	2.66E-08	2.40E-07	8.30E-07	1.78E-06
6	3	69	68	14989.13	1	6109.90	1.6367	0.0400	0.0	0.0	0.0	1.20E-09	3.28E-08	2.80E-07
5	2	52	51	8914.94	2	6110.35	1.6366	0.0400	0.0	0.0	2.15E-10	5.41E-09	3.44E-08	1.11E-07
5	2	19	18	4783.59	2	6110.74	1.6365	0.0470	0.0	1.34E-09	3.96E-08	1.91E-07	4.51E-07	7.53E-07
4	1	29	30	3909.71	1	6111.84	1.6362	0.0400	0.0	3.73E-07	5.50E-06	1.87E-05	3.60E-05	5.23E-05
5	2	51	50	8733.79	2	6112.02	1.6361	0.0400	0.0	0.0	2.79E-10	6.52E-09	3.98E-08	1.25E-07
4	1	77	76	12563.62	2	6112.20	1.6361	0.0400	0.0	0.0	0.0	0.0	8.26E-10	4.78E-09
5	2	20	19	4852.04	2	6112.36	1.6360	0.0458	0.0	1.21E-09	3.77E-08	1.87E-07	4.49E-07	7.58E-07
4	1	98	97	19695.29	1	6112.38	1.6360	0.0400	0.0	0.0	0.0	0.0	1.42E-10	2.57E-09
4	1	5	6	2172.57	2	6113.19	1.6358	0.0621	7.14E-10	6.47E-08	2.37E-07	4.03E-07	5.09E-07	5.60E-07
3	0	92	91	14993.09	2	6113.28	1.6358	0.0400	0.0	0.0	0.0	0.0	0.0	2.40E-10
5	2	50	49	8556.07	2	6113.58	1.6357	0.0400	0.0	0.0	3.59E-10	7.83E-09	4.57E-08	1.39E-07
6	3	68	67	14742.56	1	6113.74	1.6357	0.0400	0.0	0.0	0.0	1.57E-09	4.04E-08	3.32E-07
5	2	16	17	4837.09	1	6113.76	1.6357	0.0493	0.0	6.86E-08	2.12E-06	1.05E-05	2.51E-05	4.24E-05
5	2	21	20	4924.07	2	6113.88	1.6356	0.0447	0.0	1.08E-09	3.57E-08	1.82E-07	4.45E-07	7.59E-07
5	2	85	84	17422.89	1	6114.41	1.6355	0.0400	0.0	0.0	0.0	0.0	2.32E-09	2.92E-08
3	0	20	21	847.99	2	6114.70	1.6354	0.0447	2.97E-07	1.12E-06	1.43E-06	1.43E-06	1.31E-06	1.17E-06
5	2	49	48	8381.80	2	6115.04	1.6353	0.0400	0.0	0.0	4.60E-10	9.35E-09	5.24E-08	1.55E-07
5	2	22	21	4999.68	2	6115.30	1.6352	0.0435	0.0	9.52E-10	3.35E-08	1.76E-07	4.38E-07	7.56E-07
3	0	39	40	3136.53	1	6116.26	1.6350	0.0400	7.68E-10	7.02E-07	5.58E-06	1.40E-05	2.23E-05	2.86E-05
5	2	48	47	8210.98	2	6116.39	1.6350	0.0400	0.0	0.0	5.86E-10	1.11E-08	5.98E-08	1.73E-07
4	1	76	75	12296.62	2	6116.50	1.6349	0.0400	0.0	0.0	0.0	0.0	1.04E-09	5.77E-09
5	2	23	22	5078.88	2	6116.62	1.6349	0.0423	0.0	8.31E-10	3.11E-08	1.69E-07	4.28E-07	7.50E-07
6	3	1	0	6350.41	1	6116.88	1.6348	0.0769	0.0	2.63E-10	2.73E-08	2.47E-07	8.51E-07	1.83E-06
3	0	108	107	21392.98	1	6116.99	1.6348	0.0400	0.0	0.0	0.0	0.0	0.0	2.05E-10
4	1	4	5	2150.72	2	6117.33	1.6347	0.0645	6.67E-10	5.73E-08	2.07E-07	3.48E-07	4.37E-07	4.79E-07
6	3	67	66	14499.39	1	6117.47	1.6347	0.0400	0.0	0.0	0.0	2.04E-09	4.96E-08	3.92E-07
5	2	47	46	8043.62	2	6117.64	1.6346	0.0400	0.0	0.0	7.41E-10	1.31E-08	6.79E-08	1.91E-07
5	2	24	23	5161.65	2	6117.84	1.6346	0.0412	0.0	7.18E-10	2.87E-08	1.61E-07	4.17E-07	7.39E-07
4	1	28	29	3796.07	1	6118.63	1.6344	0.0400	1.08E-10	4.79E-07	6.45E-06	2.10E-05	3.92E-05	5.60E-05
5	2	46	45	7879.72	2	6118.79	1.6343	0.0400	0.0	0.0	9.32E-10	1.55E-08	7.69E-08	2.11E-07
5	2	25	24	5247.99	2	6118.96	1.6343	0.0400	0.0	6.14E-10	2.63E-08	1.53E-07	4.04E-07	7.26E-07
3	0	91	90	14675.56	2	6119.19	1.6342	0.0400	0.0	0.0	0.0	0.0	0.0	3.00E-10
5	2	15	16	4773.03	1	6119.20	1.6342	0.0505	0.0	7.61E-08	2.23E-06	1.08E-05	2.54E-05	4.24E-05
4	1	97	96	19348.24	1	6119.55	1.6341	0.0400	0.0	0.0	0.0	0.0	1.93E-10	3.30E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	45	44	7719.30	2	6119.83	1.6340	0.0400	0.0	0.0	1.16E-09	1.81E-08	8.67E-08	2.31E-07
5	2	26	25	5337.91	2	6119.97	1.6340	0.0400	0.0	5.20E-10	2.40E-08	1.44E-07	3.89E-07	7.10E-07
5	2	84	83	17120.41	1	6120.07	1.6340	0.0400	0.0	0.0	0.0	0.0	3.03E-09	3.64F-08
3	0	19	20	771.00	2	6120.31	1.6339	0.0458	4.14E-07	1.30E-06	1.56E-06	1.51E-06	1.36E-06	1.20E-06
6	3	2	1	6354.16	1	6120.41	1.6339	0.0738	0.0	5.28E-10	5.50E-08	4.97E-07	1.72E-06	3.69E-06
4	1	75	74	12032.87	2	6120.70	1.6338	0.0400	0.0	0.0	0.0	0.0	1.31E-09	6.94E-09
5	2	44	43	7562.35	2	6120.76	1.6338	0.0400	0.0	0.0	1.45E-09	2.12E-08	9.74E-08	2.54E-07
5	2	27	26	5431.39	2	6120.89	1.6337	0.0400	0.0	4.36E-10	2.16E-08	1.35E-07	3.73E-07	6.90E-07
6	3	66	65	14259.63	1	6121.08	1.6337	0.0400	0.0	0.0	0.0	2.64E-09	6.06E-08	4.61E-07
4	1	3	4	2132.50	2	6121.36	1.6336	0.0676	5.88E-10	4.83E-08	1.72E-07	2.87E-07	3.59E-07	3.92E-07
5	2	43	42	7408.88	2	6121.60	1.6336	0.0400	0.0	0.0	1.78E-09	2.46E-08	1.09E-07	2.77E-07
5	2	28	27	5528.43	2	6121.70	1.6335	0.0400	0.0	3.61E-10	1.94F-08	1.26E-07	3.56E-07	6.69E-07
5	2	42	41	7258.90	2	6122.33	1.6334	0.0400	0.0	0.0	2.19E-09	2.84E-08	1.21E-07	3.01E-07
5	2	29	28	5629.04	2	6122.41	1.6333	0.0400	0.0	2.97E-10	1.73E-08	1.17E-07	3.38E-07	6.45E-07
5	2	41	40	7112.42	2	6122.95	1.6332	0.0400	0.0	0.0	2.67E-09	3.26E-08	1.35E-07	3.26E-07
5	2	30	29	5733.20	2	6123.02	1.6332	0.0400	0.0	2.41E-10	1.53E-08	1.08E-07	3.19E-07	6.20E-07
5	2	40	39	6969.43	2	6123.47	1.6331	0.0400	0.0	0.0	3.23E-09	3.73E-08	1.49E-07	3.52E-07
5	2	31	30	5840.91	2	6123.53	1.6330	0.0400	0.0	1.96E-10	1.35E-08	9.91E-08	3.02E-07	5.96E-07
6	3	3	2	6361.64	1	6123.84	1.6330	0.0707	0.0	7.89E-10	8.25E-08	7.49E-07	2.59E-06	5.57E-06
5	2	39	38	6829.95	2	6123.89	1.6329	0.0400	0.0	0.0	3.89E-09	4.24E-08	1.64E-07	3.79E-07
5	2	32	31	5952.17	2	6123.93	1.6329	0.0400	0.0	1.57E-10	1.18E-08	9.08E-08	2.84E-07	5.71E-07
3	0	38	39	2984.30	1	6124.09	1.6329	0.0400	1.57E-09	9.95E-07	7.00E-06	1.65F-05	2.53E-05	3.18E-05
5	2	38	37	6693.98	2	6124.21	1.6329	0.0400	0.0	0.0	4.64E-09	4.80E-08	1.80E-07	4.07E-07
5	2	33	32	6066.97	2	6124.24	1.6329	0.0400	0.0	1.25E-10	1.03E-08	8.27E-08	2.66E-07	5.45E-07
5	2	37	36	6561.53	2	6124.42	1.6328	0.0400	0.0	0.0	5.52E-09	5.41F-08	1.96E-07	4.35E-07
5	2	34	33	6185.32	2	6124.43	1.6328	0.0400	0.0	0.0	8.88E-09	7.50E-08	2.48E-07	5.18E-07
5	2	14	15	4712.73	1	6124.53	1.6328	0.0517	0.0	8.32E-08	2.33E-06	1.09E-05	2.55F-05	4.21E-05
5	2	35	34	6307.19	2	6124.53	1.6328	0.0400	0.0	0.0	7.63E-09	6.76E-08	2.30E-07	4.90E-07
5	2	36	35	6432.60	2	6124.53	1.6328	0.0400	0.0	0.0	6.51E-09	6.07E-08	2.13E-07	4.63E-07
6	3	65	64	14023.30	1	6124.58	1.6328	0.0400	0.0	0.0	0.0	3.40F-09	7.39E-08	5.41E-07
4	1	74	73	11772.40	2	6124.78	1.6327	0.0400	0.0	0.0	0.0	1.29E-10	1.63E-09	8.33E-09
3	0	90	89	14361.15	2	6124.99	1.6327	0.0400	0.0	0.0	0.0	0.0	0.0	3.75E-10
4	1	2	3	2117.93	2	6125.30	1.6326	0.0707	4.77E-10	3.79E-08	1.33E-07	2.21E-07	2.76E-07	3.00E-07
3	0	107	106	21011.81	1	6125.32	1.6326	0.0400	0.0	0.0	0.0	0.0	0.0	2.72E-10
4	1	27	28	3686.17	1	6125.32	1.6326	0.0400	1.78E-10	6.09F-07	7.51E-06	2.34E-05	4.26E-05	5.97E-05
5	2	83	82	16821.19	1	6125.62	1.6325	0.0400	0.0	0.0	0.0	0.0	3.95E-09	4.52E-08
3	0	18	19	697.65	2	6125.83	1.6324	0.0470	5.65E-07	1.49E-06	1.68E-06	1.58E-06	1.40E-06	1.22E-06
4	1	96	95	19004.32	1	6126.59	1.6322	0.0400	0.0	0.0	0.0	0.0	2.61E-10	4.24E-09
6	3	4	3	6372.86	1	6127.16	1.6321	0.0676	0.0	1.04E-09	1.09E-07	9.97E-07	3.46E-06	7.45E-06
6	3	64	63	13790.39	1	6127.96	1.6319	0.0400	0.0	0.0	0.0	4.36E-09	8.96E-08	6.32E-07
4	1	73	72	11515.21	2	6128.76	1.6317	0.0400	0.0	0.0	0.0	1.71E-10	2.04E-09	9.97E-09
4	1	1	2	2107.00	2	6129.14	1.6316	0.0738	3.38E-10	2.61E-08	9.10E-08	1.51E-07	1.87E-07	2.04E-07
5	2	13	14	4656.18	1	6129.76	1.6314	0.0528	0.0	8.98E-08	2.40E-06	1.10E-05	2.54E-05	4.15E-05
6	3	5	4	6387.82	1	6130.37	1.6312	0.0645	0.0	1.27E-09	1.35E-07	1.24E-06	4.31E-06	9.32E-06
3	0	89	88	14049.87	2	6130.68	1.6311	0.0400	0.0	0.0	0.0	0.0	0.0	4.71E-10
5	2	82	81	16525.24	1	6131.05	1.6310	0.0400	0.0	0.0	0.0	1.29E-10	5.12E-09	5.59E-08
6	3	63	62	13560.93	1	6131.23	1.6310	0.0400	0.0	0.0	0.0	5.57E-09	1.08E-07	7.37E-07
3	0	17	18	627.96	2	6131.25	1.6310	0.0482	7.55E-07	1.68E-06	1.80E-06	1.65F-06	1.44E-06	1.23E-06
3	0	37	38	2835.80	1	6131.81	1.6308	0.0400	3.14E-09	1.40E-06	8.71E-06	1.93E-05	2.87E-05	3.51E-05
4	1	26	27	3580.03	1	6131.90	1.6308	0.0400	2.89E-10	7.66E-07	8.67E-06	2.59E-05	4.60E-05	6.34E-05
4	1	72	71	11261.30	2	6132.63	1.6306	0.0400	0.0	0.0	0.0	2.26E-10	2.53E-09	1.19E-08
4	1	0	1	2099.72	2	6132.88	1.6306	0.0769	1.77E-10	1.34E-08	4.65E-08	7.66E-08	9.52E-08	1.03E-07
6	3	6	5	6406.52	1	6133.48	1.6304	0.0621	0.0	1.47E-09	1.59E-07	1.47E-06	5.15E-06	1.12E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	95	94	18663.53	1	6133.52	1.6304	0.0400	0.0	0.0	0.0	0.0	3.53E-10	5.42E-09
3	0	106	105	20633.65	1	6133.53	1.6304	0.0400	0.0	0.0	0.0	0.0	0.0	3.59E-10
6	3	62	61	13334.93	1	6134.38	1.6302	0.0400	0.0	0.0	0.0	7.08E-09	1.30E-07	8.55E-07
5	2	12	13	4603.40	1	6134.88	1.6300	0.0540	0.0	9.56E-08	2.45E-06	1.10E-05	2.50E-05	4.06E-05
3	0	88	87	13741.75	2	6136.25	1.6297	0.0400	0.0	0.0	0.0	0.0	0.0	5.90E-10
5	2	81	80	16232.57	1	6136.36	1.6296	0.0400	0.0	0.0	0.0	1.80E-10	6.62E-09	6.90E-08
4	1	71	70	11010.69	2	6136.39	1.6296	0.0400	0.0	0.0	0.0	2.97E-10	3.13E-09	1.41E-08
6	3	7	6	6428.95	1	6136.48	1.6296	0.0597	0.0	1.64E-09	1.81E-07	1.69E-06	5.95E-06	1.29E-05
3	0	16	17	561.92	2	6136.57	1.6296	0.0493	9.89E-07	1.88E-06	1.91E-06	1.70E-06	1.46E-06	1.24E-06
6	3	61	60	13112.37	1	6137.42	1.6293	0.0400	0.0	0.0	0.0	8.96E-09	1.56E-07	9.90E-07
4	1	25	26	3477.63	1	6138.39	1.6291	0.0400	4.60E-10	9.54E-07	9.95E-06	2.85E-05	4.94E-05	6.70E-05
6	3	8	7	6455.12	1	6139.38	1.6288	0.0574	0.0	1.79E-09	2.01E-07	1.90E-06	6.71E-06	1.47E-05
3	0	36	37	2691.03	1	6139.44	1.6288	0.0400	6.17E-09	1.94E-06	1.08E-05	2.26E-05	3.24E-05	3.87E-05
5	2	11	12	4554.37	1	6139.91	1.6287	0.0542	0.0	1.00E-07	2.47E-06	1.09E-05	2.44E-05	3.94E-05
4	1	70	69	10763.38	2	6140.05	1.6287	0.0400	0.0	0.0	0.0	3.89E-10	3.86E-09	1.68E-08
4	1	1	0	2096.07	2	6140.07	1.6286	0.0769	1.84E-10	1.38E-08	4.78E-08	7.87E-08	9.77E-08	1.06E-07
4	1	94	93	18325.89	1	6140.33	1.6286	0.0400	0.0	0.0	0.0	0.0	4.75E-10	6.92E-09
6	3	60	59	12893.29	1	6140.35	1.6286	0.0400	0.0	0.0	0.0	1.13E-08	1.87E-07	1.14E-06
5	2	80	79	15943.20	1	6141.56	1.6283	0.0400	0.0	0.0	0.0	2.48E-10	8.54E-09	8.50E-08
3	0	105	104	20258.50	1	6141.62	1.6282	0.0400	0.0	0.0	0.0	0.0	0.0	4.74E-10
3	0	87	86	13436.77	2	6141.72	1.6282	0.0400	0.0	0.0	0.0	0.0	1.11E-10	7.36E-10
3	0	15	16	499.54	2	6141.80	1.6282	0.0505	1.27E-06	2.08E-06	2.00E-06	1.74E-06	1.48E-06	1.24E-06
6	3	9	8	6485.03	1	6142.17	1.6281	0.0550	0.0	1.89E-09	2.18E-07	2.08E-06	7.42E-06	1.63E-05
6	3	59	58	12677.69	1	6143.17	1.6278	0.0400	0.0	0.0	1.26E-10	1.42E-08	2.24E-07	1.32E-06
4	1	2	1	2099.72	2	6143.51	1.6277	0.0738	3.66E-10	2.78E-08	9.63E-08	1.59E-07	1.97E-07	2.14E-07
4	1	69	68	10519.39	2	6143.59	1.6277	0.0400	0.0	0.0	0.0	5.07E-10	4.74E-09	1.98E-08
4	1	24	25	3379.00	1	6144.78	1.6274	0.0400	7.18E-10	1.17E-06	1.13E-05	3.12E-05	5.28E-05	7.05E-05
5	2	10	11	4509.11	1	6144.83	1.6274	0.0545	0.0	1.03E-07	2.46E-06	1.06E-05	2.36E-05	3.78E-05
6	3	10	9	6518.68	1	6144.85	1.6274	0.0547	0.0	1.96E-09	2.33E-07	2.25E-06	8.08E-06	1.78E-05
6	3	58	57	12465.57	1	6145.87	1.6271	0.0400	0.0	0.0	1.72E-10	1.79E-08	2.67E-07	1.52E-06
5	2	79	78	15657.13	1	6146.64	1.6269	0.0400	0.0	0.0	0.0	3.41E-10	1.10E-08	1.04E-07
4	1	3	2	2107.00	2	6146.86	1.6268	0.0707	5.37E-10	4.15E-08	1.45E-07	2.39E-07	2.98E-07	3.24E-07
3	0	14	15	440.81	2	6146.93	1.6268	0.0517	1.59E-06	2.27E-06	2.08E-06	1.77E-06	1.48E-06	1.23E-06
3	0	35	36	2550.01	1	6146.97	1.6268	0.0400	1.19E-08	2.67E-06	1.32E-05	2.62E-05	3.64E-05	4.25E-05
4	1	93	92	17991.41	1	6147.02	1.6268	0.0400	0.0	0.0	0.0	0.0	6.37E-10	8.80E-09
4	1	68	67	10278.73	2	6147.03	1.6268	0.0400	0.0	0.0	0.0	6.57E-10	5.81E-09	2.33E-08
3	0	86	85	13134.97	2	6147.08	1.6268	0.0400	0.0	0.0	0.0	0.0	1.44E-10	9.16E-10
6	3	11	10	6556.05	1	6147.43	1.6267	0.0545	0.0	2.00E-09	2.44E-07	2.39E-06	8.67E-06	1.92E-05
6	3	57	56	12256.95	1	6148.45	1.6264	0.0400	0.0	0.0	2.33E-10	2.23E-08	3.18E-07	1.75E-06
3	0	104	103	19886.39	1	6149.59	1.6261	0.0400	0.0	0.0	0.0	0.0	0.0	6.24E-10
5	2	9	10	4467.62	1	6149.64	1.6261	0.0547	0.0	1.05E-07	2.41E-06	1.03E-05	2.26E-05	3.58E-05
6	3	12	11	6597.16	1	6149.90	1.6260	0.0542	0.0	1.99E-09	2.52E-07	2.51E-06	9.19E-06	2.05E-05
4	1	4	3	2117.93	2	6150.11	1.6260	0.0676	6.88E-10	5.46E-08	1.92E-07	3.19E-07	3.98E-07	4.34E-07
4	1	67	66	10041.41	2	6150.37	1.6259	0.0400	0.0	0.0	0.0	8.49E-10	7.08E-09	2.74E-08
6	3	56	55	12051.84	1	6150.93	1.6258	0.0400	0.0	0.0	3.15E-10	2.78E-08	3.76E-07	2.01E-06
4	1	23	24	3284.13	1	6151.07	1.6257	0.0412	1.10E-09	1.43E-06	1.28E-05	3.40E-05	5.62E-05	7.39E-05
5	2	78	77	15374.38	1	6151.61	1.6256	0.0400	0.0	0.0	0.0	4.67E-10	1.40E-08	1.28E-07
3	0	13	14	385.75	2	6151.97	1.6255	0.0528	1.96E-06	2.44E-06	2.15E-06	1.78E-06	1.47E-06	1.21E-06
6	3	13	12	6642.00	1	6152.26	1.6254	0.0540	0.0	1.96E-09	2.57E-07	2.61E-06	9.65E-06	2.17E-05
3	0	85	84	12836.35	2	6152.33	1.6254	0.0400	0.0	0.0	0.0	0.0	1.88E-10	1.14E-09
4	1	5	4	2132.50	2	6153.26	1.6252	0.0645	8.12E-10	6.68E-08	2.37E-07	3.97E-07	4.97E-07	5.43E-07
6	3	55	54	11850.23	1	6153.29	1.6251	0.0400	0.0	0.0	4.22E-10	3.44E-08	4.44E-07	2.29E-06
4	1	66	65	9807.43	2	6153.59	1.6251	0.0400	0.0	0.0	0.0	1.09E-09	8.61E-09	3.21E-08

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	92	91	17660.10	1	6153.60	1.6251	0.0400	0.0	0.0	0.0	0.0	8.52E-10	1.12E-08
5	2	8	9	4429.89	1	6154.36	1.6249	0.0550	0.0	1.04E-07	2.33E-06	9.76E-06	2.12E-05	3.36E-05
3	0	34	35	2412.73	1	6154.40	1.6249	0.0400	2.25E-08	3.63E-06	1.62E-05	3.03E-05	4.06E-05	4.65E-05
6	3	14	13	6690.57	1	6154.52	1.6248	0.0528	0.0	1.90E-09	2.59E-07	2.68E-06	1.00E-05	2.27E-05
6	3	54	53	11652.14	1	6155.54	1.6246	0.0400	0.0	0.0	5.63E-10	4.24E-08	5.21E-07	2.61E-06
4	1	6	5	2150.72	2	6156.32	1.6243	0.0621	9.04E-10	7.77E-08	2.80E-07	4.72E-07	5.93E-07	6.50E-07
5	2	77	76	15094.96	1	6156.45	1.6243	0.0400	0.0	0.0	0.0	6.37E-10	1.79E-08	1.56E-07
6	3	15	14	6742.87	1	6156.67	1.6243	0.0517	0.0	1.82E-09	2.58E-07	2.73E-06	1.03E-05	2.36E-05
4	1	65	64	9576.80	2	6156.71	1.6242	0.0400	0.0	0.0	0.0	1.40E-09	1.04E-08	3.74E-08
3	0	12	13	334.34	2	6156.91	1.6242	0.0540	2.35E-06	2.59E-06	2.19E-06	1.78E-06	1.45E-06	1.19E-06
4	1	22	23	3193.03	1	6157.25	1.6241	0.0423	1.65E-09	1.73E-06	1.43E-05	3.67E-05	5.94E-05	7.70E-05
3	0	103	102	19517.34	1	6157.44	1.6241	0.0400	0.0	0.0	0.0	0.0	0.0	8.19E-10
3	0	84	83	12540.93	2	6157.47	1.6240	0.0400	0.0	0.0	0.0	0.0	2.44E-10	1.41E-09
6	3	53	52	11457.59	1	6157.67	1.6240	0.0400	0.0	0.0	7.47E-10	5.20E-08	6.10E-07	2.96E-06
6	3	16	15	6798.89	1	6158.72	1.6237	0.0505	0.0	1.71E-09	2.54E-07	2.75E-06	1.06E-05	2.43E-05
5	2	7	8	4395.93	1	6158.97	1.6236	0.0574	0.0	1.01E-07	2.20E-06	9.12E-06	1.97E-05	3.09E-05
4	1	7	6	2172.57	2	6159.27	1.6236	0.0597	9.62E-10	8.71E-08	3.20E-07	5.43E-07	6.86E-07	7.54E-07
6	3	52	51	11266.57	1	6159.70	1.6235	0.0400	0.0	0.0	9.84E-10	6.35E-08	7.12E-07	3.35E-06
4	1	64	63	9349.53	2	6159.72	1.6235	0.0400	0.0	0.0	0.0	1.78E-09	1.26E-08	4.35E-08
4	1	91	90	17331.98	1	6160.05	1.6234	0.0400	0.0	0.0	0.0	0.0	1.13E-09	1.41E-08
6	3	17	16	6858.63	1	6160.65	1.6232	0.0493	0.0	1.59E-09	2.48E-07	2.75E-06	1.07E-05	2.49E-05
5	2	76	75	14818.89	1	6161.19	1.6231	0.0400	0.0	0.0	0.0	8.65E-10	2.27E-08	1.89E-07
6	3	51	50	11079.09	1	6161.61	1.6230	0.0400	0.0	0.0	1.29E-09	7.71E-08	8.27E-07	3.78E-06
3	0	33	34	2279.20	1	6161.72	1.6229	0.0400	4.18E-08	4.90E-06	1.96E-05	3.48E-05	4.52E-05	5.07E-05
3	0	11	12	286.60	2	6161.75	1.6229	0.0542	2.75E-06	2.71E-06	2.20E-06	1.76E-06	1.41E-06	1.15E-06
4	1	8	7	2198.07	2	6162.12	1.6228	0.0574	9.85E-10	9.48E-08	3.55E-07	6.09E-07	7.74E-07	8.55E-07
6	3	18	17	6922.10	1	6162.48	1.6227	0.0482	0.0	1.46E-09	2.40E-07	2.72E-06	1.08E-05	2.54E-05
3	0	83	82	12248.70	2	6162.50	1.6227	0.0400	0.0	0.0	0.0	0.0	3.16E-10	1.74E-09
4	1	63	62	9125.64	2	6162.63	1.6227	0.0400	0.0	0.0	0.0	2.26E-09	1.51E-08	5.05E-08
4	1	21	22	3105.69	1	6163.33	1.6225	0.0435	2.42E-09	2.06E-06	1.60E-05	3.94E-05	6.24E-05	7.98E-05
6	3	50	49	10895.17	1	6163.40	1.6225	0.0400	0.0	0.0	1.68E-09	9.32E-08	9.56E-07	4.25E-06
5	2	6	7	4365.74	1	6163.47	1.6225	0.0597	0.0	9.63E-08	2.04E-06	8.35E-06	1.79E-05	2.80E-05
6	3	19	18	6989.28	1	6164.20	1.6223	0.0470	0.0	1.33E-09	2.30E-07	2.68E-06	1.08E-05	2.56E-05
4	1	9	8	2227.21	2	6164.88	1.6221	0.0550	9.75E-10	1.01E-07	3.86E-07	6.69E-07	8.58E-07	9.51E-07
6	3	49	48	10714.80	1	6165.09	1.6220	0.0400	0.0	0.0	2.17E-09	1.12E-07	1.10E-06	4.76E-06
3	0	102	101	19151.35	1	6165.17	1.6220	0.0400	0.0	0.0	0.0	0.0	0.0	1.07E-09
4	1	62	61	8905.12	2	6165.43	1.6219	0.0400	0.0	0.0	1.14E-10	2.85E-09	1.81E-08	5.84E-08
5	2	75	74	14546.17	1	6165.80	1.6219	0.0400	0.0	0.0	0.0	1.17E-09	2.88E-08	2.29E-07
6	3	20	19	7060.17	1	6165.82	1.6218	0.0458	0.0	1.19E-09	2.18E-07	2.62E-06	1.07E-05	2.58E-05
4	1	90	89	17007.07	1	6166.39	1.6217	0.0400	0.0	0.0	0.0	0.0	1.51E-09	1.78E-08
3	0	10	11	242.53	2	6166.50	1.6217	0.0545	3.15E-06	2.79E-06	2.18E-06	1.72E-06	1.37E-06	1.10E-06
6	3	48	47	10538.00	1	6166.66	1.6216	0.0400	0.0	0.0	2.79E-09	1.34E-07	1.26E-06	5.31E-06
6	3	21	20	7134.78	1	6167.32	1.6215	0.0447	0.0	1.06E-09	2.05E-07	2.54E-06	1.06E-05	2.57E-05
3	0	82	81	11959.70	2	6167.43	1.6214	0.0400	0.0	0.0	0.0	0.0	4.07E-10	2.14E-09
4	1	10	9	2259.98	2	6167.53	1.6214	0.0547	9.37E-10	1.05E-07	4.12E-07	7.24E-07	9.34E-07	1.04E-06
5	2	5	6	4339.32	1	6167.87	1.6213	0.0621	0.0	8.87E-08	1.84E-06	7.46E-06	1.59E-05	2.47E-05
4	1	61	60	8687.99	2	6168.12	1.6212	0.0400	0.0	0.0	1.56E-10	3.58E-09	2.16E-08	6.72E-08
6	3	47	46	10364.77	1	6168.12	1.6212	0.0400	0.0	0.0	3.56E-09	1.60E-07	1.45E-06	5.90E-06
6	3	22	21	7213.10	1	6168.72	1.6211	0.0435	0.0	9.28E-10	1.92E-07	2.45E-06	1.04E-05	2.56E-05
3	0	32	33	2149.44	1	6168.95	1.6210	0.0400	7.62E-08	6.54E-06	2.36E-05	3.98E-05	5.01E-05	5.50E-05
4	1	20	21	3022.13	1	6169.31	1.6209	0.0447	3.49E-09	2.43E-06	1.76E-05	4.20E-05	6.53E-05	8.23E-05
6	3	46	45	10195.12	1	6169.47	1.6209	0.0400	0.0	0.0	4.52E-09	1.90E-07	1.65E-06	6.54E-06
6	3	23	22	7295.12	1	6170.01	1.6207	0.0423	0.0	8.05E-10	1.78E-07	2.34E-06	1.01E-05	2.53E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
4	1	11	10	2296.39	2	6170.09	1.6207	0.0545	8.76E-10	1.07E-07	4.32E-07	7.71E-07	1.00E-06	1.13E-06
5	2	74	73	14276.81	1	6170.30	1.6207	0.0400	0.0	0.0	0.0	1.57E-09	3.63E-08	2.77E-07
6	3	45	44	10029.06	1	6170.71	1.6206	0.0400	0.0	0.0	5.70E-09	2.24E-07	1.87E-06	7.22E-06
4	1	60	59	8474.25	2	6170.71	1.6206	0.0400	0.0	0.0	2.12E-10	4.48E-09	2.56E-08	7.72E-08
3	0	9	10	202.12	2	6171.15	1.6204	0.0547	3.51E-06	2.82E-06	2.14E-06	1.65E-06	1.30E-06	1.05E-06
6	3	24	23	7380.84	1	6171.19	1.6204	0.0412	0.0	6.90E-10	1.63E-07	2.23E-06	9.83E-06	2.49E-05
6	3	44	43	9866.59	1	6171.84	1.6203	0.0400	0.0	0.0	7.14E-09	2.63E-07	2.11E-06	7.95E-06
5	2	4	5	4316.68	1	6172.17	1.6202	0.0645	0.0	7.88E-08	1.61E-06	6.44E-06	1.36E-05	2.12E-05
3	0	81	80	11673.92	2	6172.24	1.6202	0.0400	0.0	0.0	0.0	0.0	5.23E-10	2.62E-09
6	3	25	24	7470.27	1	6172.26	1.6202	0.0400	0.0	5.86E-10	1.49E-07	2.10E-06	9.49E-06	2.44E-05
4	1	12	11	2336.44	2	6172.55	1.6201	0.0542	7.98E-10	1.07E-07	4.47E-07	8.11E-07	1.07E-06	1.20E-06
4	1	89	88	16685.38	1	6172.61	1.6201	0.0400	0.0	0.0	0.0	0.0	2.01E-09	2.25E-08
3	0	101	100	18788.44	1	6172.78	1.6200	0.0400	0.0	0.0	0.0	0.0	0.0	1.40E-09
6	3	43	42	9707.73	1	6172.86	1.6200	0.0400	0.0	0.0	8.89E-09	3.07E-07	2.37E-06	8.71E-06
4	1	59	58	8263.93	2	6173.19	1.6199	0.0400	0.0	0.0	2.89E-10	5.61E-09	3.06E-08	8.89E-08
6	3	26	25	7563.39	1	6173.23	1.6199	0.0400	0.0	4.92E-10	1.35E-07	1.97E-06	9.11E-06	2.38E-05
6	3	42	41	9552.46	1	6173.76	1.6198	0.0400	0.0	0.0	1.10E-08	3.57E-07	2.66E-06	9.52E-06
6	3	27	26	7660.20	1	6174.08	1.6197	0.0400	0.0	4.09E-10	1.21E-07	1.84E-06	8.70E-06	2.30E-05
6	3	41	40	9400.82	1	6174.55	1.6196	0.0400	0.0	0.0	1.35E-08	4.13E-07	2.96E-06	1.04E-05
5	2	73	72	14010.82	1	6174.69	1.6195	0.0400	0.0	0.0	0.0	2.11E-09	4.57E-08	3.34E-07
6	3	28	27	7760.70	1	6174.83	1.6195	0.0400	0.0	3.37E-10	1.08E-07	1.71E-06	8.27E-06	2.23E-05
4	1	13	12	2380.12	2	6174.90	1.6195	0.0540	7.09E-10	1.06E-07	4.57E-07	8.44E-07	1.12E-06	1.27E-06
4	1	19	20	2942.34	1	6175.19	1.6194	0.0458	4.93E-09	2.83E-06	1.92E-05	4.45E-05	6.78E-05	8.45E-05
6	3	40	39	9252.79	1	6175.24	1.6194	0.0400	0.0	0.0	1.65E-08	4.76E-07	3.29E-06	1.12E-05
6	3	29	28	7864.89	1	6175.46	1.6193	0.0400	0.0	2.74E-10	9.53E-08	1.58E-06	7.83E-06	2.14E-05
4	1	58	57	8057.01	2	6175.56	1.6193	0.0400	0.0	0.0	3.92E-10	6.99E-09	3.63E-08	1.02E-07
3	0	8	9	165.38	2	6175.70	1.6192	0.0550	3.80E-06	2.80E-06	2.06E-06	1.57E-06	1.23E-06	9.78E-07
6	3	39	38	9108.38	1	6175.81	1.6192	0.0400	0.0	0.0	2.00E-08	5.45E-07	3.64E-06	1.21E-05
6	3	30	29	7972.75	1	6175.99	1.6192	0.0400	0.0	2.21E-10	8.38E-08	1.45E-06	7.37E-06	2.05E-05
3	0	31	32	2023.43	1	6176.08	1.6192	0.0400	1.36E-07	8.64E-06	2.82E-05	4.52E-05	5.53E-05	5.94E-05
6	3	38	37	8967.61	1	6176.27	1.6191	0.0400	0.0	0.0	2.41E-08	6.20E-07	4.01E-06	1.31E-05
5	2	3	4	4297.80	1	6176.37	1.6191	0.0676	0.0	6.65E-08	1.34E-06	5.32E-06	1.12E-05	1.73E-05
6	3	31	30	8084.29	1	6176.41	1.6191	0.0400	0.0	1.77E-10	7.35E-08	1.33E-06	6.94E-06	1.97E-05
6	3	37	36	8830.47	1	6176.62	1.6190	0.0400	0.0	0.0	2.89E-08	7.03E-07	4.39E-06	1.40E-05
6	3	32	31	8199.50	1	6176.72	1.6190	0.0400	0.0	1.41E-10	6.40E-08	1.21E-06	6.51E-06	1.88E-05
6	3	36	35	8696.97	1	6176.86	1.6189	0.0400	0.0	0.0	3.43E-08	7.92E-07	4.80E-06	1.50E-05
6	3	33	32	8318.38	1	6176.92	1.6189	0.0400	0.0	1.11E-10	5.53E-08	1.10E-06	6.07E-06	1.79E-05
3	0	80	79	11391.37	2	6176.95	1.6189	0.0400	0.0	0.0	0.0	0.0	6.69E-10	3.21E-09
6	3	35	34	8567.12	1	6176.99	1.6189	0.0400	0.0	0.0	4.05E-08	8.88E-07	5.21E-06	1.60E-05
6	3	34	33	8440.93	1	6177.01	1.6189	0.0400	0.0	0.0	4.75E-08	9.90E-07	5.64E-06	1.69E-05
4	1	14	13	2427.44	2	6177.16	1.6189	0.0528	6.15E-10	1.03E-07	4.62E-07	8.68E-07	1.17E-06	1.34E-06
4	1	57	56	7853.51	2	6177.83	1.6187	0.0400	0.0	0.0	5.28E-10	8.69E-09	4.29E-08	1.17E-07
4	1	88	87	16366.91	1	6178.71	1.6185	0.0400	0.0	0.0	0.0	0.0	2.67E-09	2.84E-08
5	2	72	71	13748.23	1	6178.96	1.6184	0.0400	0.0	0.0	0.0	2.81E-09	5.72E-08	4.01E-07
4	1	15	14	2478.38	2	6179.32	1.6183	0.0517	5.22E-10	9.84E-08	4.61E-07	8.85E-07	1.20E-06	1.39E-06
4	1	56	55	7653.44	2	6180.00	1.6181	0.0400	0.0	0.0	7.07E-10	1.07E-08	5.05E-08	1.33E-07
3	0	7	8	132.31	2	6180.16	1.6181	0.0574	4.00E-06	2.72E-06	1.95E-06	1.47E-06	1.14E-06	9.02E-07
3	0	100	99	18428.62	1	6180.27	1.6181	0.0400	0.0	0.0	0.0	0.0	1.23E-10	1.82E-09
5	2	2	3	4282.70	1	6180.46	1.6180	0.0707	0.0	5.22E-08	1.04E-06	4.10E-06	8.61E-06	1.33E-05
4	1	18	19	2866.33	1	6180.97	1.6179	0.0470	6.81E-09	3.26E-06	2.09E-05	4.68E-05	7.01E-05	8.62E-05
4	1	16	15	2532.96	2	6181.38	1.6178	0.0505	4.34E-10	9.32E-08	4.56E-07	8.94E-07	1.23E-06	1.44E-06
3	0	79	78	11112.08	2	6181.54	1.6177	0.0400	0.0	0.0	0.0	0.0	8.54E-10	3.92E-09
4	1	55	54	7456.80	2	6182.06	1.6176	0.0400	0.0	0.0	9.41E-10	1.32E-08	5.93E-08	1.52E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	30	31	1901.19	1	6183.11	1.6173	0.0400	2.39E-07	1.13E-05	3.35E-05	5.11E-05	6.07E-05	6.40E-05
5	2	71	70	13489.02	1	6183.11	1.6173	0.0400	0.0	0.0	0.0	3.74E-09	7.14E-08	4.80E-07
4	1	17	16	2591.16	2	6183.33	1.6173	0.0493	3.52E-10	8.70E-08	4.46E-07	8.96E-07	1.25E-06	1.47E-06
4	1	54	53	7263.61	2	6184.01	1.6171	0.0400	0.0	0.0	1.25E-09	1.62E-08	6.93E-08	1.72E-07
5	2	1	2	4271.38	1	6184.44	1.6170	0.0738	0.0	3.61E-08	7.09E-07	2.79E-06	5.85E-06	9.02E-06
3	0	6	7	102.91	2	6184.52	1.6169	0.0597	4.07E-06	2.57E-06	1.81E-06	1.34E-06	1.03E-06	8.15E-07
4	1	87	86	16051.69	1	6184.69	1.6169	0.0400	0.0	0.0	0.0	0.0	3.53E-09	3.58E-08
4	1	18	17	2652.99	2	6185.19	1.6168	0.0482	2.80E-10	8.03E-08	4.33E-07	8.90E-07	1.26E-06	1.50E-06
4	1	53	52	7073.87	2	6185.85	1.6166	0.0400	0.0	0.0	1.64E-09	1.97E-08	8.08E-08	1.94E-07
3	0	78	77	10836.05	2	6186.03	1.6165	0.0400	0.0	0.0	0.0	1.07E-10	1.09E-09	4.77E-09
4	1	17	18	2794.11	1	6186.65	1.6164	0.0482	9.22E-09	3.71E-06	2.24E-05	4.89E-05	7.19E-05	8.74E-05
4	1	19	18	2718.44	2	6186.94	1.6163	0.0470	2.18E-10	7.32E-08	4.16E-07	8.78E-07	1.27E-06	1.52E-06
5	2	70	69	13233.23	1	6187.15	1.6163	0.0400	0.0	0.0	0.0	4.94E-09	8.88E-08	5.73E-07
4	1	52	51	6887.58	2	6187.60	1.6161	0.0400	0.0	0.0	2.14E-09	2.39E-08	9.37E-08	2.19E-07
3	0	99	98	18071.92	1	6187.65	1.6161	0.0400	0.0	0.0	0.0	0.0	1.69E-10	2.36E-09
5	2	0	1	4263.83	1	6188.32	1.6159	0.0769	0.0	1.85E-08	3.62E-07	1.42E-06	2.97E-06	4.58E-06
4	1	20	19	2787.51	2	6188.60	1.6159	0.0458	1.67E-10	6.60E-08	3.96E-07	8.60E-07	1.26E-06	1.53E-06
3	0	5	6	77.19	2	6188.78	1.6158	0.0621	3.98E-06	2.37E-06	1.63E-06	1.20E-06	9.16E-07	7.20E-07
4	1	51	50	6704.76	2	6189.23	1.6157	0.0400	0.0	0.0	2.78E-09	2.89E-08	1.08E-07	2.46E-07
3	0	29	30	1782.72	1	6190.03	1.6155	0.0400	4.12E-07	1.47E-05	3.95E-05	5.75E-05	6.63E-05	6.86E-05
4	1	21	20	2860.19	2	6190.15	1.6155	0.0447	1.25E-10	5.88E-08	3.74E-07	8.36E-07	1.25E-06	1.53E-06
3	0	77	76	10563.28	2	6190.41	1.6154	0.0400	0.0	0.0	0.0	1.45E-10	1.37E-09	5.78E-09
4	1	86	85	15739.73	1	6190.56	1.6154	0.0400	0.0	0.0	0.0	1.42E-10	4.66E-09	4.49E-08
4	1	50	49	6525.41	2	6190.77	1.6153	0.0400	0.0	0.0	3.59E-09	3.48E-08	1.25E-07	2.75E-07
5	2	69	68	12980.85	1	6191.07	1.6152	0.0400	0.0	0.0	0.0	6.50E-09	1.10E-07	6.82E-07
4	1	22	21	2936.50	2	6191.61	1.6151	0.0435	0.0	5.19E-08	3.51E-07	8.08E-07	1.23E-06	1.52E-06
4	1	49	48	6349.53	2	6192.19	1.6149	0.0400	0.0	0.0	4.61E-09	4.16E-08	1.43E-07	3.07E-07
4	1	16	17	2725.67	1	6192.22	1.6149	0.0493	1.22E-08	4.17E-06	2.39E-05	5.06E-05	7.32E-05	8.81E-05
3	0	4	5	55.14	2	6192.95	1.6147	0.0645	3.72E-06	2.10E-06	1.42E-06	1.03E-06	7.87E-07	6.17E-07
4	1	23	22	3016.41	2	6192.96	1.6147	0.0423	0.0	4.52E-08	3.26E-07	7.75E-07	1.20E-06	1.51E-06
4	1	48	47	6177.14	2	6193.52	1.6146	0.0400	0.0	0.0	5.89E-09	4.95E-08	1.64E-07	3.41E-07
4	1	24	23	3099.94	2	6194.21	1.6144	0.0412	0.0	3.90E-08	3.01E-07	7.39E-07	1.17E-06	1.49E-06
3	0	76	75	10293.79	2	6194.68	1.6143	0.0400	0.0	0.0	0.0	1.96E-10	1.74E-09	6.99E-09
4	1	47	46	6008.24	2	6194.73	1.6143	0.0400	0.0	0.0	7.46E-09	5.87E-08	1.86E-07	3.78E-07
5	2	68	67	12731.90	1	6194.88	1.6142	0.0400	0.0	0.0	0.0	8.52E-09	1.36E-07	8.09E-07
3	0	98	97	17718.34	1	6194.90	1.6142	0.0400	0.0	0.0	0.0	0.0	2.31E-10	3.06E-09
4	1	25	24	3187.07	2	6195.36	1.6141	0.0400	0.0	3.33E-08	2.75E-07	7.01E-07	1.13E-06	1.46E-06
5	2	1	0	4260.05	1	6195.77	1.6140	0.0769	0.0	1.91E-08	3.72E-07	1.46E-06	3.05E-06	4.69E-06
4	1	46	45	5842.84	2	6195.85	1.6140	0.0400	0.0	1.36E-10	9.40E-09	6.92E-08	2.11E-07	4.17E-07
4	1	85	84	15431.03	1	6196.31	1.6139	0.0400	0.0	0.0	0.0	2.01E-10	6.12E-09	5.62E-08
4	1	26	25	3277.80	2	6196.41	1.6138	0.0400	0.0	2.82E-08	2.50E-07	6.60E-07	1.09E-06	1.43E-06
4	1	45	44	5680.94	2	6196.86	1.6137	0.0400	0.0	1.94E-10	1.18E-08	8.13E-08	2.38E-07	4.59E-07
3	0	28	29	1668.03	1	6196.86	1.6137	0.0400	6.98E-07	1.89E-05	4.64E-05	6.45E-05	7.24E-05	7.36E-05
3	0	3	4	36.76	2	6197.01	1.6137	0.0676	3.28E-06	1.77E-06	1.18E-06	8.53E-07	6.46E-07	5.05E-07
4	1	27	26	3372.13	2	6197.35	1.6136	0.0400	0.0	2.35E-08	2.25E-07	6.18E-07	1.04E-06	1.39E-06
4	1	15	16	2661.01	1	6197.69	1.6135	0.0505	1.58E-08	4.63E-06	2.51E-05	5.20E-05	7.41E-05	8.82E-05
4	1	44	43	5522.55	2	6197.76	1.6135	0.0400	0.0	2.74E-10	1.47E-08	9.49E-08	2.68E-07	5.03E-07
4	1	28	27	3470.06	2	6198.20	1.6134	0.0400	0.0	1.95E-08	2.02E-07	5.76E-07	9.93E-07	1.34E-06
4	1	43	42	5367.68	2	6198.56	1.6133	0.0400	0.0	3.84E-10	1.81E-08	1.10E-07	3.00E-07	5.50E-07
5	2	67	66	12486.39	1	6198.58	1.6133	0.0400	0.0	0.0	1.06E-10	1.11E-08	1.67E-07	9.56E-07
3	0	75	74	10027.60	2	6198.84	1.6132	0.0400	0.0	0.0	0.0	2.63E-10	2.18E-09	8.43E-09
4	1	29	28	3571.58	2	6198.94	1.6132	0.0400	0.0	1.60E-08	1.79E-07	5.33E-07	9.42E-07	1.30E-06
4	1	42	41	5216.33	2	6199.26	1.6131	0.0400	0.0	5.33E-10	2.23E-08	1.28E-07	3.35E-07	5.99E-07

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	2	1	4263.83	1	6199.33	1.6131	0.0738	0.0	3.83E-08	7.50E-07	2.94E-06	6.16E-06	9.47E-06
4	1	30	29	3676.69	2	6199.58	1.6130	0.0400	0.0	1.30E-08	1.58E-07	4.91E-07	8.90E-07	1.24E-06
4	1	41	40	5068.50	2	6199.86	1.6129	0.0400	0.0	7.32E-10	2.72E-08	1.47E-07	3.72E-07	6.50E-07
4	1	31	30	3785.38	2	6200.12	1.6129	0.0400	0.0	1.05E-08	1.40E-07	4.52E-07	8.41E-07	1.20E-06
4	1	40	39	4924.21	2	6200.35	1.6128	0.0400	0.0	9.97E-10	3.30E-08	1.68E-07	4.11E-07	7.02E-07
4	1	32	31	3897.66	2	6200.55	1.6128	0.0400	0.0	8.39E-09	1.22E-07	4.13E-07	7.90E-07	1.15E-06
4	1	39	38	4783.45	2	6200.73	1.6127	0.0400	0.0	1.34E-09	3.98E-08	1.92E-07	4.53E-07	7.57E-07
4	1	33	32	4013.51	2	6200.89	1.6127	0.0400	0.0	6.65E-09	1.06E-07	3.76E-07	7.40E-07	1.09E-06
3	0	2	3	22.06	2	6200.98	1.6126	0.0707	2.67E-06	1.39E-06	9.14E-07	6.57E-07	4.96E-07	3.87E-07
4	1	38	37	4646.24	2	6201.02	1.6126	0.0400	0.0	1.80E-09	4.76E-08	2.17E-07	4.97E-07	8.12E-07
4	1	34	33	4132.93	2	6201.12	1.6126	0.0400	0.0	5.21E-09	9.17E-08	3.41E-07	6.89E-07	1.04E-06
4	1	37	36	4512.58	2	6201.20	1.6126	0.0400	0.0	2.38E-09	5.67E-08	2.45E-07	5.43E-07	8.68E-07
4	1	35	34	4255.91	2	6201.25	1.6126	0.0400	0.0	4.05E-09	7.86E-08	3.07E-07	6.40E-07	9.81E-07
4	1	36	35	4382.47	2	6201.27	1.6126	0.0400	0.0	3.12E-09	6.70E-08	2.75E-07	5.91E-07	9.25E-07
4	1	84	83	15125.61	1	6201.94	1.6124	0.0400	0.0	0.0	0.0	2.84E-10	8.02E-09	7.01E-08
3	0	97	96	17367.91	1	6202.03	1.6124	0.0400	0.0	0.0	0.0	0.0	3.15E-10	3.94E-09
5	2	66	65	12244.32	1	6202.16	1.6123	0.0400	0.0	0.0	1.51E-10	1.44E-08	2.04E-07	1.13E-06
5	2	3	2	4271.38	1	6202.79	1.6122	0.0707	0.0	5.72E-08	1.13E-06	4.43E-06	9.29E-06	1.43E-05
3	0	74	73	9764.71	2	6202.90	1.6121	0.0400	0.0	0.0	0.0	3.51E-10	2.74E-09	1.01E-08
4	1	14	15	2600.15	1	6203.06	1.6121	0.0517	2.01E-08	5.07E-06	2.63E-05	5.30E-05	7.44E-05	8.77E-05
3	0	27	28	1557.12	1	6203.59	1.6120	0.0400	1.16E-06	2.41E-05	5.41E-05	7.20E-05	7.87E-05	7.85E-05
3	0	1	2	11.03	2	6204.86	1.6116	0.0738	1.89E-06	9.60E-07	6.26E-07	4.48E-07	3.37E-07	2.63E-07
5	2	65	64	12005.71	1	6205.62	1.6114	0.0400	0.0	0.0	2.15E-10	1.86E-08	2.50E-07	1.32E-06
5	2	4	3	4282.70	1	6206.15	1.6113	0.0676	0.0	7.52E-08	1.49E-06	5.90E-06	1.24E-05	1.91E-05
3	0	73	72	9505.12	2	6206.84	1.6111	0.0400	0.0	0.0	0.0	4.66E-10	3.42E-09	1.21E-08
4	1	83	82	14823.48	1	6207.46	1.6110	0.0400	0.0	0.0	0.0	3.98E-10	1.05E-08	8.72E-08
4	1	13	14	2543.08	1	6208.32	1.6107	0.0528	2.49E-08	5.48E-06	2.71E-05	5.35E-05	7.41E-05	8.66E-05
3	0	0	1	3.68	2	6208.63	1.6107	0.0769	9.88E-07	4.93E-07	3.20E-07	2.28E-07	1.71E-07	1.33E-07
5	2	64	63	11770.57	1	6208.97	1.6106	0.0400	0.0	0.0	3.04E-10	2.40E-08	3.03E-07	1.55E-06
3	0	96	95	17020.62	1	6209.05	1.6106	0.0400	0.0	0.0	0.0	0.0	4.29E-10	5.07E-09
5	2	5	4	4297.80	1	6209.39	1.6105	0.0645	0.0	9.18E-08	1.84E-06	7.34E-06	1.55E-05	2.39E-05
3	0	26	27	1449.99	1	6210.21	1.6103	0.0400	1.89E-06	3.04E-05	6.26E-05	7.99E-05	8.51E-05	8.35E-05
3	0	72	71	9248.86	2	6210.68	1.6101	0.0400	0.0	0.0	0.0	6.17E-10	4.25E-09	1.45E-08
5	2	63	62	11538.91	1	6212.21	1.6097	0.0400	0.0	0.0	4.27E-10	3.07E-08	3.67E-07	1.81E-06
5	2	6	5	4316.68	1	6212.54	1.6096	0.0621	0.0	1.07E-07	2.17E-06	8.72E-06	1.85E-05	2.87E-05
4	1	82	81	14524.67	1	6212.86	1.6096	0.0400	0.0	0.0	0.0	5.57E-10	1.36E-08	1.08E-07
4	1	12	13	2489.80	1	6213.48	1.6094	0.0540	3.01E-08	5.84E-06	2.77E-05	5.35E-05	7.31E-05	8.47E-05
3	0	71	70	8995.93	2	6214.42	1.6092	0.0400	0.0	0.0	0.0	8.13E-10	5.28E-09	1.73E-08
5	2	62	61	11310.73	1	6215.33	1.6089	0.0400	0.0	0.0	5.96E-10	3.91E-08	4.43E-07	2.10E-06
5	2	7	6	4339.32	1	6215.57	1.6089	0.0597	0.0	1.19E-07	2.48E-06	1.00E-05	2.13E-05	3.32E-05
3	0	1	0	-0.0	2	6215.88	1.6088	0.0769	1.03E-06	5.09E-07	3.29E-07	2.34E-07	1.76E-07	1.37E-07
3	0	95	94	16676.52	1	6215.95	1.6088	0.0400	0.0	0.0	0.0	0.0	5.81E-10	6.50E-09
3	0	25	26	1346.66	1	6216.74	1.6086	0.0400	3.03E-06	3.79E-05	7.20E-05	8.81E-05	9.15E-05	8.83E-05
3	0	70	69	8746.33	2	6218.04	1.6082	0.0400	0.0	0.0	0.0	1.07E-09	6.52E-09	2.05E-08
4	1	81	80	14229.17	1	6218.14	1.6082	0.0400	0.0	0.0	0.0	7.75E-10	1.77E-08	1.34E-07
5	2	61	60	11086.05	1	6218.34	1.6081	0.0400	0.0	0.0	8.27E-10	4.96E-08	5.33E-07	2.44E-06
5	2	8	7	4365.74	1	6218.51	1.6081	0.0574	0.0	1.29E-07	2.75E-06	1.12E-05	2.41E-05	3.76E-05
4	1	11	12	2440.32	1	6218.54	1.6081	0.0542	3.56E-08	6.13E-06	2.79E-05	5.29E-05	7.15E-05	8.22E-05
3	0	2	1	3.68	2	6219.36	1.6079	0.0738	2.05E-06	1.02E-06	6.63E-07	4.73E-07	3.55E-07	2.76E-07
5	2	60	59	10864.87	1	6221.24	1.6074	0.0400	0.0	0.0	1.14E-09	6.26E-08	6.38E-07	2.82E-06
5	2	9	8	4395.93	1	6221.33	1.6074	0.0550	0.0	1.37E-07	2.98E-06	1.23E-05	2.66E-05	4.18E-05
3	0	69	68	8500.09	2	6221.56	1.6073	0.0400	0.0	0.0	0.0	1.39E-09	8.03E-09	2.43E-08
3	0	94	93	16335.59	1	6222.72	1.6070	0.0400	0.0	0.0	0.0	0.0	7.84E-10	8.31E-09

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	3	2	11.03	2	6222.74	1.6070	0.0707	3.01E-06	1.53E-06	9.96E-07	7.13E-07	5.37E-07	4.18E-07
3	0	24	25	1247.11	1	6223.16	1.6069	0.0400	4.75E-06	4.68E-05	8.21E-05	9.65E-05	9.79E-05	9.31E-05
4	1	80	79	13937.00	1	6223.30	1.6069	0.0400	0.0	0.0	0.0	1.07E-09	2.28E-08	1.65E-07
4	1	10	11	2394.64	1	6223.50	1.6068	0.0545	4.10E-08	6.34E-06	2.78E-05	5.17E-05	6.91E-05	7.89E-05
5	2	59	58	10647.20	1	6224.02	1.6067	0.0400	0.0	0.0	1.57E-09	7.91E-08	7.65E-07	3.27E-06
5	2	10	9	4429.89	1	6224.05	1.6067	0.0547	0.0	1.42E-07	3.17E-06	1.33E-05	2.90E-05	4.58E-05
3	0	68	67	8257.20	2	6224.97	1.6064	0.0400	0.0	0.0	0.0	1.81E-09	9.85E-09	2.86E-08
3	0	4	3	22.06	2	6226.03	1.6062	0.0676	3.85E-06	2.01E-06	1.32E-06	9.50E-07	7.17E-07	5.59E-07
5	2	11	10	4467.62	1	6226.66	1.6060	0.0545	0.0	1.44E-07	3.32E-06	1.42E-05	3.11E-05	4.94E-05
5	2	58	57	10433.05	1	6226.69	1.6060	0.0400	0.0	0.0	2.16E-09	9.96E-08	9.14E-07	3.77E-06
3	0	67	66	8017.69	2	6228.27	1.6056	0.0400	0.0	0.0	1.33E-10	2.34E-09	1.20E-08	3.37E-08
4	1	9	10	2352.76	1	6228.35	1.6056	0.0547	4.60E-08	6.43E-06	2.73E-05	4.99E-05	6.60E-05	7.49E-05
4	1	79	78	13648.17	1	6228.35	1.6056	0.0400	0.0	0.0	0.0	1.48E-09	2.94E-08	2.03E-07
5	2	12	11	4509.11	1	6229.17	1.6054	0.0542	0.0	1.44E-07	3.43E-06	1.49E-05	3.30E-05	5.28E-05
3	0	5	4	36.76	2	6229.21	1.6053	0.0645	4.55E-06	2.46E-06	1.63E-06	1.18E-06	8.95E-07	7.00E-07
5	2	57	56	10222.44	1	6229.24	1.6053	0.0400	0.0	0.0	2.94E-09	1.25E-07	1.09E-06	4.34E-06
3	0	93	92	15997.85	1	6229.38	1.6053	0.0400	0.0	0.0	0.0	0.0	1.06E-09	1.06E-08
3	0	23	24	1151.37	1	6229.48	1.6053	0.0412	7.30E-06	5.72E-05	9.29E-05	1.05E-04	1.04E-04	9.75E-05
3	0	66	65	7781.55	2	6231.46	1.6048	0.0400	0.0	0.0	1.89E-10	3.02E-09	1.47E-08	3.95E-08
5	2	13	12	4554.37	1	6231.57	1.6047	0.0540	0.0	1.42E-07	3.50E-06	1.54E-05	3.46E-05	5.58E-05
5	2	56	55	10015.37	1	6231.68	1.6047	0.0400	0.0	0.0	3.98E-09	1.55E-07	1.29E-06	4.99E-06
3	0	6	5	55.14	2	6232.30	1.6045	0.0621	5.06E-06	2.86E-06	1.93E-06	1.41E-06	1.07E-06	8.38E-07
4	1	8	9	2314.69	1	6233.10	1.6043	0.0550	5.02E-08	6.40E-06	2.64E-05	4.75E-05	6.22E-05	7.01E-05
4	1	78	77	13362.69	1	6233.28	1.6043	0.0400	0.0	0.0	0.0	2.04E-09	3.77E-08	2.49E-07
5	2	14	13	4603.40	1	6233.86	1.6041	0.0528	0.0	1.37E-07	3.52E-06	1.58E-05	3.59E-05	5.84E-05
5	2	55	54	9811.84	1	6234.01	1.6041	0.0400	0.0	0.0	5.35E-09	1.93E-07	1.53E-06	5.70E-06
3	0	65	64	7548.79	2	6234.55	1.6040	0.0400	0.0	0.0	2.66E-10	3.87E-09	1.78E-08	4.62E-08
3	0	7	6	77.19	2	6235.28	1.6038	0.0597	5.38E-06	3.20E-06	2.20E-06	1.62E-06	1.24E-06	9.73E-07
3	0	22	23	1059.42	1	6235.70	1.6037	0.0423	1.10E-05	6.91E-05	1.04E-04	1.14E-04	1.10E-04	1.02E-04
3	0	92	91	15663.33	1	6235.93	1.6036	0.0400	0.0	0.0	0.0	0.0	1.42E-09	1.35E-08
5	2	15	14	4656.18	1	6236.04	1.6036	0.0517	0.0	1.31E-07	3.51E-06	1.61E-05	3.70E-05	6.06E-05
5	2	54	53	9611.86	1	6236.22	1.6035	0.0400	0.0	0.0	7.16E-09	2.38E-07	1.80E-06	6.50E-06
3	0	64	63	7319.43	2	6237.53	1.6032	0.0400	0.0	0.0	3.72E-10	4.95E-09	2.15E-08	5.38E-08
4	1	7	8	2280.41	1	6237.74	1.6031	0.0574	5.31E-08	6.24E-06	2.50E-05	4.44E-05	5.77E-05	6.47E-05
4	1	77	76	13080.58	1	6238.10	1.6031	0.0400	0.0	0.0	0.0	2.78E-09	4.83E-08	3.04E-07
5	2	16	15	4712.73	1	6238.12	1.6030	0.0505	0.0	1.23E-07	3.46E-06	1.62E-05	3.78E-05	6.25E-05
3	0	8	7	102.91	2	6238.17	1.6030	0.0574	5.50E-06	3.48E-06	2.44E-06	1.81E-06	1.40E-06	1.10E-06
5	2	53	52	9415.45	1	6238.33	1.6030	0.0400	0.0	0.0	9.52E-09	2.93E-07	2.11E-06	7.39E-06
5	2	17	16	4773.03	1	6240.09	1.6025	0.0493	0.0	1.15E-07	3.37E-06	1.62E-05	3.83E-05	6.40E-05
5	2	52	51	9222.61	1	6240.32	1.6025	0.0400	0.0	0.0	1.26E-08	3.58E-07	2.46E-06	8.37E-06
3	0	63	62	7093.47	2	6240.41	1.6025	0.0400	0.0	0.0	5.18E-10	6.29E-09	2.59E-08	6.25E-08
3	0	9	8	132.31	2	6240.96	1.6023	0.0550	5.44E-06	3.70E-06	2.66E-06	1.99E-06	1.55E-06	1.23E-06
3	0	21	22	971.28	1	6241.82	1.6021	0.0435	1.62E-05	8.25E-05	1.16E-04	1.22E-04	1.16E-04	1.06E-04
5	2	18	17	4837.09	1	6241.96	1.6021	0.0482	0.0	1.05E-07	3.26E-06	1.61E-05	3.86E-05	6.50E-05
5	2	51	50	9033.35	1	6242.19	1.6020	0.0400	0.0	0.0	1.65E-08	4.36E-07	2.86E-06	9.45E-06
4	1	6	7	2249.94	1	6242.28	1.6020	0.0597	5.43E-08	5.92E-06	2.32E-05	4.07E-05	5.25E-05	5.85E-05
3	0	91	90	15332.04	1	6242.35	1.6020	0.0400	0.0	0.0	0.0	0.0	1.89E-09	1.71E-08
4	1	76	75	12801.85	1	6242.80	1.6018	0.0400	0.0	0.0	0.0	3.79E-09	6.15E-08	3.70E-07
3	0	62	61	6870.93	2	6243.18	1.6017	0.0400	0.0	0.0	7.17E-10	7.96E-09	3.10E-08	7.23E-08
3	0	10	9	165.38	2	6243.64	1.6016	0.0547	5.22E-06	3.84E-06	2.83E-06	2.16E-06	1.68E-06	1.34E-06
5	2	19	18	4904.90	1	6243.71	1.6016	0.0470	0.0	9.54E-08	3.12E-06	1.58E-05	3.85E-05	6.57E-05
5	2	50	49	8847.68	1	6243.96	1.6015	0.0400	0.0	0.0	2.16E-08	5.28E-07	3.32E-06	1.06E-05
5	2	20	19	4976.46	1	6245.36	1.6012	0.0458	0.0	8.55E-08	2.96E-06	1.54E-05	3.83E-05	6.60E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
5	2	49	48	8665.59	1	6245.61	1.6011	0.0400	0.0	0.0	2.79E-08	6.37E-07	3.83E-06	1.19E-05
3	0	61	60	6651.80	2	6245.84	1.6011	0.0400	0.0	0.0	9.85E-10	1.00E-08	3.71E-08	8.35E-08
3	0	11	10	202.12	2	6246.23	1.6010	0.0545	4.87E-06	3.91E-06	2.97E-06	2.30E-06	1.81E-06	1.45E-06
4	1	5	6	2223.28	1	6246.72	1.6008	0.0621	5.34E-08	5.46E-06	2.09E-05	3.63E-05	4.66E-05	5.17E-05
5	2	21	20	5051.77	1	6246.90	1.6008	0.0447	0.0	7.57E-08	2.78E-06	1.50E-05	3.78E-05	6.59E-05
5	2	48	47	8487.11	1	6247.15	1.6007	0.0400	0.0	0.0	3.60E-08	7.64E-07	4.40E-06	1.33E-05
4	1	75	74	12526.50	1	6247.38	1.6007	0.0400	0.0	0.0	0.0	5.14E-09	7.80E-08	4.50E-07
3	0	20	21	886.95	1	6247.84	1.6006	0.0447	2.35E-05	9.75E-05	1.28E-04	1.31E-04	1.22E-04	1.09E-04
5	2	22	21	5130.82	1	6248.33	1.6004	0.0435	0.0	6.63E-08	2.59E-06	1.44E-05	3.71E-05	6.55E-05
3	0	60	59	6436.11	2	6248.40	1.6004	0.0400	0.0	0.0	1.35E-09	1.26E-08	4.41E-08	9.60E-08
5	2	47	46	8312.24	1	6248.58	1.6004	0.0400	0.0	0.0	4.61E-08	9.13E-07	5.04E-06	1.48E-05
3	0	90	89	15003.98	1	6248.66	1.6003	0.0400	0.0	0.0	0.0	0.0	2.52E-09	2.16E-08
3	0	12	11	242.53	2	6248.72	1.6003	0.0542	4.43E-06	3.92E-06	3.08E-06	2.42E-06	1.92E-06	1.55E-06
5	2	23	22	5213.61	1	6249.65	1.6001	0.0423	0.0	5.74E-08	2.40E-06	1.38E-05	3.62E-05	6.48E-05
5	2	46	45	8140.98	1	6249.90	1.6000	0.0400	0.0	1.35E-10	5.87E-08	1.08E-06	5.75E-06	1.64E-05
3	0	59	58	6223.85	2	6250.85	1.5998	0.0400	0.0	0.0	1.84E-09	1.58E-08	5.27E-08	1.11E-07
5	2	24	23	5300.14	1	6250.87	1.5998	0.0412	0.0	4.92E-08	2.20E-06	1.31E-05	3.51E-05	6.37E-05
4	1	4	5	2200.42	1	6251.05	1.5997	0.0645	5.01E-08	4.85E-06	1.82E-05	3.14E-05	4.00E-05	4.43E-05
5	2	45	44	7973.35	1	6251.10	1.5997	0.0400	0.0	1.95E-10	7.41E-08	1.28E-06	6.53E-06	1.82E-05
3	0	13	12	286.60	2	6251.11	1.5997	0.0540	3.93E-06	3.87E-06	3.14E-06	2.51E-06	2.02E-06	1.64E-06
4	1	74	73	12254.55	1	6251.85	1.5995	0.0400	0.0	0.0	0.0	6.94E-09	9.87E-08	5.45E-07
5	2	25	24	5390.41	1	6251.98	1.5995	0.0400	0.0	4.16E-08	2.00E-06	1.23E-05	3.38E-05	6.23E-05
5	2	44	43	7809.34	1	6252.20	1.5994	0.0400	0.0	2.80E-10	9.31E-08	1.51E-06	7.38E-06	2.00E-05
5	2	26	25	5484.40	1	6252.97	1.5992	0.0400	0.0	3.49E-08	1.81E-06	1.16E-05	3.25E-05	6.07E-05
5	2	43	42	7648.97	1	6253.18	1.5992	0.0400	0.0	3.97E-10	1.16E-07	1.76E-06	8.31E-06	2.20E-05
3	0	58	57	6015.03	2	6253.19	1.5992	0.0400	0.0	0.0	2.50E-09	1.97E-08	6.26E-08	1.27E-07
3	0	14	13	334.34	2	6253.40	1.5991	0.0528	3.41E-06	3.76E-06	3.17E-06	2.58E-06	2.10E-06	1.72E-06
3	0	19	20	806.42	1	6253.75	1.5990	0.0458	3.33E-05	1.14E-04	1.40E-04	1.38E-04	1.26E-04	1.12E-04
5	2	27	26	5582.12	1	6253.86	1.5990	0.0400	0.0	2.90E-08	1.62E-06	1.08E-05	3.10E-05	5.89E-05
5	2	42	41	7492.24	1	6254.05	1.5990	0.0400	0.0	5.58E-10	1.44E-07	2.05E-06	9.32E-06	2.40E-05
5	2	28	27	5683.57	1	6254.64	1.5988	0.0400	0.0	2.38E-08	1.45E-06	1.00E-05	2.94E-05	5.69E-05
5	2	41	40	7339.16	1	6254.81	1.5988	0.0400	0.0	7.76E-10	1.77E-07	2.38E-06	1.04E-05	2.62E-05
3	0	89	88	14679.17	1	6254.84	1.5988	0.0400	0.0	0.0	0.0	1.32E-10	3.36E-09	2.74E-08
4	1	3	4	2181.37	1	6255.28	1.5986	0.0676	4.43E-08	4.10E-06	1.52E-05	2.59E-05	3.29E-05	3.63E-05
5	2	29	28	5788.74	1	6255.31	1.5986	0.0400	0.0	1.93E-08	1.28E-06	9.23E-06	2.78E-05	5.47E-05
3	0	57	56	5809.67	2	6255.43	1.5986	0.0400	0.0	0.0	3.38E-09	2.45E-08	7.42E-08	1.46E-07
5	2	40	39	7189.73	1	6255.46	1.5986	0.0400	0.0	1.07E-09	2.17E-07	2.74E-06	1.16E-05	2.84E-05
3	0	15	14	385.75	2	6255.59	1.5986	0.0517	2.89E-06	3.60E-06	3.17E-06	2.63E-06	2.17E-06	1.79E-06
5	2	30	29	5897.62	1	6255.88	1.5985	0.0400	0.0	1.55E-08	1.12E-06	8.46E-06	2.62E-05	5.23E-05
5	2	39	38	7043.96	1	6256.00	1.5985	0.0400	0.0	1.46E-09	2.64E-07	3.15E-06	1.28E-05	3.08E-05
4	1	73	72	11986.02	1	6256.20	1.5984	0.0400	0.0	0.0	1.09E-10	9.33E-09	1.24E-07	6.58E-07
5	2	31	30	6010.21	1	6256.33	1.5984	0.0400	0.0	1.24E-08	9.82E-07	7.75E-06	2.46E-05	5.01E-05
5	2	38	37	6901.85	1	6256.42	1.5984	0.0400	0.0	1.98E-09	3.18E-07	3.59E-06	1.41E-05	3.31E-05
5	2	32	31	6126.50	1	6256.67	1.5983	0.0400	0.0	9.85E-09	8.54E-07	7.06E-06	2.31E-05	4.78E-05
5	2	37	36	6763.42	1	6256.74	1.5983	0.0400	0.0	2.65E-09	3.82E-07	4.07E-06	1.55E-05	3.56E-05
5	2	33	32	6246.50	1	6256.91	1.5982	0.0400	0.0	7.73E-09	7.37E-07	6.39E-06	2.15E-05	4.54E-05
5	2	36	35	6628.66	1	6256.95	1.5982	0.0400	0.0	3.51E-09	4.55E-07	4.59E-06	1.69E-05	3.81E-05
5	2	34	33	6370.20	1	6257.03	1.5982	0.0400	0.0	6.00E-09	6.32E-07	5.76E-06	2.00E-05	4.30E-05
5	2	35	34	6497.59	1	6257.04	1.5982	0.0400	0.0	4.61E-09	5.38E-07	5.16E-06	1.84E-05	4.05E-05
3	0	56	55	5607.77	2	6257.56	1.5981	0.0400	0.0	0.0	4.53E-09	3.04E-08	8.76E-08	1.67E-07
3	0	16	15	440.81	2	6257.68	1.5980	0.0505	2.39E-06	3.40E-06	3.13E-06	2.66E-06	2.22E-06	1.85E-06
4	1	2	3	2166.13	1	6259.41	1.5976	0.0707	3.61E-08	3.22E-06	1.18E-05	2.00E-05	2.53E-05	2.78E-05
3	0	18	19	729.71	1	6259.56	1.5976	0.0470	4.61E-05	1.31E-04	1.53E-04	1.46E-04	1.31E-04	1.14E-04

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3	0	55	54	5409.33	2	6259.59	1.5975	0.0400	0.0	1.24E-10	6.05E-09	3.75E-08	1.03E-07	1.90E-07
3	0	17	16	499.54	2	6259.67	1.5975	0.0493	1.94E-06	3.18E-06	3.06E-06	2.66E-06	2.25E-06	1.90E-06
4	1	72	71	11720.90	1	6260.44	1.5973	0.0400	0.0	0.0	1.61E-10	1.25E-08	1.56E-07	7.91E-07
3	0	88	87	14357.63	1	6260.91	1.5972	0.0400	0.0	0.0	0.0	1.90E-10	4.48E-09	3.46E-08
3	0	54	53	5214.37	2	6261.51	1.5971	0.0400	0.0	1.92E-10	8.03E-09	4.60E-08	1.21E-07	2.16E-07
3	0	18	17	561.92	2	6261.56	1.5970	0.0482	1.54E-06	2.93E-06	2.96E-06	2.64E-06	2.27E-06	1.93E-06
3	0	53	52	5022.89	2	6263.33	1.5966	0.0400	0.0	2.95E-10	1.06E-08	5.62E-08	1.41E-07	2.44E-07
3	0	19	18	627.96	2	6263.34	1.5966	0.0470	1.20E-06	2.67E-06	2.85E-06	2.61E-06	2.28E-06	1.96E-06
4	1	1	2	2154.70	1	6263.43	1.5966	0.0738	2.56E-08	2.23E-06	8.07E-06	1.36E-05	1.72E-05	1.89E-05
4	1	71	70	11459.21	1	6264.56	1.5963	0.0400	0.0	0.0	2.39E-10	1.66E-08	1.95E-07	9.49E-07
3	0	20	19	697.65	2	6265.03	1.5962	0.0458	9.11E-07	2.40E-06	2.71E-06	2.55E-06	2.27E-06	1.97E-06
3	0	52	51	4834.91	2	6265.04	1.5962	0.0400	0.0	4.50E-10	1.39E-08	6.83E-08	1.63E-07	2.75E-07
3	0	17	18	656.82	1	6265.27	1.5961	0.0482	6.27E-05	1.50E-04	1.64E-04	1.52E-04	1.34E-04	1.16E-04
3	0	21	20	771.00	2	6266.62	1.5958	0.0447	6.80E-07	2.14E-06	2.56E-06	2.48E-06	2.24E-06	1.97E-06
3	0	51	50	4650.41	2	6266.64	1.5958	0.0400	0.0	6.80E-10	1.81E-08	8.26E-08	1.89E-07	3.09E-07
3	0	87	86	14039.36	1	6266.87	1.5957	0.0400	0.0	0.0	0.0	2.73E-10	5.95E-09	4.37E-08
4	1	0	1	2147.08	1	6267.34	1.5956	0.0769	1.34E-08	1.14E-06	4.12E-06	6.94E-06	8.74E-06	9.59E-06
3	0	22	21	847.99	2	6268.10	1.5954	0.0435	4.98E-07	1.88E-06	2.39E-06	2.39E-06	2.20E-06	1.96E-06
3	0	50	49	4469.43	2	6268.15	1.5954	0.0400	0.0	1.02E-09	2.34E-08	9.95E-08	2.18E-07	3.47E-07
4	1	70	69	11200.97	1	6268.57	1.5953	0.0400	0.0	0.0	3.51E-10	2.20E-08	2.43E-07	1.14E-06
3	0	23	22	928.62	2	6269.49	1.5950	0.0423	3.57E-07	1.64E-06	2.22E-06	2.30E-06	2.15E-06	1.94E-06
3	0	49	48	4291.95	2	6269.54	1.5950	0.0400	0.0	1.51E-09	3.01E-08	1.19E-07	2.51E-07	3.87E-07
3	0	24	23	1012.90	2	6270.77	1.5947	0.0412	2.51E-07	1.41E-06	2.05E-06	2.19E-06	2.09E-06	1.91E-06
3	0	48	47	4117.99	2	6270.83	1.5947	0.0400	0.0	2.22E-09	3.85E-08	1.42E-07	2.87E-07	4.31E-07
3	0	16	17	587.75	1	6270.88	1.5947	0.0493	8.33E-05	1.69E-04	1.75E-04	1.58E-04	1.37E-04	1.17E-04
3	0	25	24	1100.81	2	6271.95	1.5944	0.0400	1.73E-07	1.20E-06	1.87E-06	2.07E-06	2.03E-06	1.88E-06
3	0	47	46	3947.55	2	6272.02	1.5944	0.0400	0.0	3.23E-09	4.89E-08	1.69E-07	3.27E-07	4.78E-07
4	1	69	68	10946.18	1	6272.46	1.5943	0.0400	0.0	0.0	5.13E-10	2.91E-08	3.02E-07	1.35E-06
3	0	86	85	13724.39	1	6272.70	1.5942	0.0400	0.0	0.0	0.0	3.89E-10	7.87E-09	5.50E-08
3	0	26	25	1192.36	2	6273.03	1.5941	0.0400	1.17E-07	1.01E-06	1.70E-06	1.95E-06	1.95E-06	1.83E-06
3	0	46	45	3780.65	2	6273.10	1.5941	0.0400	0.0	4.66E-09	6.18E-08	2.00E-07	3.71E-07	5.28E-07
3	0	27	26	1287.55	2	6274.01	1.5939	0.0400	7.80E-08	8.46E-07	1.53E-06	1.82E-06	1.87E-06	1.78E-06
3	0	45	44	3617.28	2	6274.08	1.5939	0.0400	0.0	6.66E-09	7.76E-08	2.35E-07	4.20E-07	5.81E-07
4	1	1	0	2143.27	1	6274.86	1.5937	0.0769	1.40E-08	1.18E-06	4.24E-06	7.13E-06	8.97E-06	9.83E-06
3	0	28	27	1386.36	2	6274.88	1.5937	0.0400	5.09E-08	6.99E-07	1.37E-06	1.70E-06	1.78E-06	1.72E-06
3	0	44	43	3457.45	2	6274.96	1.5936	0.0400	0.0	9.44E-09	9.68E-08	2.75E-07	4.72E-07	6.38E-07
3	0	29	28	1488.80	2	6275.66	1.5935	0.0400	3.26E-08	5.72E-07	1.22E-06	1.57E-06	1.69E-06	1.66E-06
3	0	43	42	3301.17	2	6275.73	1.5934	0.0400	0.0	1.33E-08	1.20E-07	3.20E-07	5.30E-07	6.98E-07
4	1	68	67	10694.85	1	6276.24	1.5933	0.0400	0.0	0.0	7.45E-10	3.82E-08	3.74E-07	1.61E-06
3	0	30	29	1594.85	2	6276.33	1.5933	0.0400	2.04E-08	4.63E-07	1.07E-06	1.44E-06	1.59E-06	1.59E-06
3	0	42	41	3148.44	2	6276.39	1.5933	0.0400	0.0	1.84E-08	1.48E-07	3.70E-07	5.92E-07	7.61E-07
3	0	15	16	522.50	1	6276.39	1.5933	0.0505	1.08E-04	1.88E-04	1.85E-04	1.62E-04	1.39E-04	1.17E-04
3	0	31	30	1704.53	2	6276.90	1.5931	0.0400	1.27E-08	3.74E-07	9.43E-07	1.33E-06	1.50E-06	1.53E-06
3	0	41	40	2999.27	2	6276.95	1.5931	0.0400	0.0	2.54E-08	1.81E-07	4.27E-07	6.58E-07	8.26E-07
3	0	32	31	1817.82	2	6277.37	1.5930	0.0400	7.71E-09	2.98E-07	8.24E-07	1.21E-06	1.41E-06	1.47E-06
3	0	40	39	2853.67	2	6277.41	1.5930	0.0400	0.0	3.47E-08	2.20E-07	4.90E-07	7.29E-07	8.94E-07
3	0	33	32	1934.72	2	6277.74	1.5929	0.0400	4.61E-09	2.36E-07	7.15E-07	1.10E-06	1.32E-06	1.40E-06
3	0	39	38	2711.64	2	6277.77	1.5929	0.0400	1.42E-10	4.70E-08	2.65E-07	5.59E-07	8.04E-07	9.64E-07
3	0	34	33	2055.22	2	6278.00	1.5929	0.0400	2.70E-09	1.85E-07	6.17E-07	9.99E-07	1.23E-06	1.33E-06
3	0	38	37	2573.18	2	6278.02	1.5929	0.0400	2.66E-10	6.29E-08	3.18E-07	6.34E-07	8.83E-07	1.03E-06
3	0	35	34	2179.32	2	6278.16	1.5928	0.0400	1.56E-09	1.43E-07	5.28E-07	8.99E-07	1.14E-06	1.25E-06
3	0	37	36	2438.31	2	6278.17	1.5928	0.0400	4.88E-10	8.36E-08	3.79E-07	7.16E-07	9.65E-07	1.11E-06
3	0	36	35	2307.02	2	6278.22	1.5928	0.0400	8.79E-10	1.10E-07	4.49E-07	8.04E-07	1.05E-06	1.18E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF-WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	85	84	13412.71	1	6278.42	1.5928	0.0400	0.0	0.0	0.0	5.53E-10	1.04E-08	6.90E-08
4	1	2	1	2147.08	1	6278.46	1.5927	0.0738	2.78E-08	2.37E-06	8.53E-06	1.44E-05	1.81E-05	1.99E-05
4	1	67	66	10446.99	1	6279.90	1.5924	0.0400	0.0	0.0	1.08E-09	5.00E-08	4.61E-07	1.90E-06
3	0	14	15	461.08	1	6281.79	1.5919	0.0517	1.38E-04	2.06E-04	1.93E-04	1.66E-04	1.39E-04	1.17E-04
4	1	3	2	2154.70	1	6281.95	1.5919	0.0707	4.07E-08	3.54E-06	1.28E-05	2.16E-05	2.73E-05	3.00E-05
4	1	66	65	10202.62	1	6283.45	1.5915	0.0400	0.0	0.0	1.54E-09	6.50E-08	5.65E-07	2.25E-06
3	0	84	83	13104.36	1	6284.02	1.5913	0.0400	0.0	0.0	0.0	7.83E-10	1.36E-08	8.63E-08
4	1	4	3	2166.13	1	6285.34	1.5910	0.0676	5.20E-08	4.65E-06	1.70E-05	2.88E-05	3.65E-05	4.02E-05
4	1	65	64	9961.74	1	6286.88	1.5906	0.0400	0.0	0.0	2.20E-09	8.43E-08	6.91E-07	2.65E-06
3	0	13	14	403.48	1	6287.09	1.5906	0.0528	1.71E-04	2.23E-04	1.99E-04	1.67E-04	1.39E-04	1.15E-04
4	1	5	4	2181.37	1	6288.63	1.5902	0.0645	6.12E-08	5.67E-06	2.10E-05	3.58E-05	4.55E-05	5.02E-05
3	0	83	82	12799.33	1	6289.50	1.5900	0.0400	0.0	0.0	0.0	1.10E-09	1.79E-08	1.08E-07
4	1	64	63	9724.36	1	6290.20	1.5898	0.0400	0.0	0.0	3.12E-09	1.09E-07	8.42E-07	3.10E-06
4	1	6	5	2200.42	1	6291.80	1.5894	0.0621	6.79E-08	6.58E-06	2.47E-05	4.26E-05	5.43E-05	6.01E-05
3	0	12	13	349.72	1	6292.29	1.5892	0.0540	2.08E-04	2.38E-04	2.04E-04	1.67E-04	1.37E-04	1.13E-04
4	1	63	62	9490.49	1	6293.40	1.5890	0.0400	0.0	0.0	4.40E-09	1.39E-07	1.02E-06	3.63E-06
3	0	82	81	12497.64	1	6294.87	1.5886	0.0400	0.0	0.0	0.0	1.55E-09	2.33E-08	1.34E-07
4	1	7	6	2223.28	1	6294.88	1.5886	0.0597	7.19E-08	7.36E-06	2.82E-05	4.89E-05	6.28E-05	6.97E-05
4	1	62	61	9260.14	1	6296.49	1.5882	0.0400	0.0	0.0	6.16E-09	1.78E-07	1.24E-06	4.23E-06
3	0	11	12	299.78	1	6297.38	1.5880	0.0542	2.46E-04	2.50E-04	2.06E-04	1.66E-04	1.34E-04	1.09E-04
4	1	8	7	2249.94	1	6297.84	1.5878	0.0574	7.32E-08	7.99E-06	3.12E-05	5.48E-05	7.08E-05	7.90E-05
4	1	61	60	9033.32	1	6299.47	1.5874	0.0400	0.0	0.0	8.58E-09	2.27E-07	1.49E-06	4.91E-06
3	0	81	80	12199.31	1	6300.12	1.5873	0.0400	0.0	0.0	0.0	2.16E-09	3.03E-08	1.66E-07
4	1	9	8	2280.41	1	6300.70	1.5871	0.0550	7.20E-08	8.46E-06	3.39E-05	6.02E-05	7.83E-05	8.77E-05
4	1	60	59	8810.04	1	6302.33	1.5867	0.0400	0.0	0.0	1.19E-08	2.87E-07	1.78E-06	5.68E-06
3	0	10	11	253.68	1	6302.37	1.5867	0.0545	2.84E-04	2.59E-04	2.05E-04	1.62E-04	1.30E-04	1.05E-04
4	1	10	9	2314.69	1	6303.46	1.5864	0.0547	6.87E-08	8.76E-06	3.61E-05	6.50E-05	8.52E-05	9.60E-05
4	1	59	58	8590.31	1	6305.08	1.5860	0.0400	0.0	0.0	1.64E-08	3.63E-07	2.14E-06	6.59E-06
3	0	80	79	11904.34	1	6305.25	1.5860	0.0400	0.0	0.0	0.0	3.00E-09	3.92E-08	2.05E-07
4	1	11	10	2352.76	1	6306.10	1.5858	0.0545	6.37E-08	8.90E-06	3.78E-05	6.91E-05	9.14E-05	1.04E-04
3	0	9	10	211.42	1	6307.26	1.5855	0.0547	3.20E-04	2.63E-04	2.02E-04	1.57E-04	1.24E-04	9.99E-05
4	1	58	57	8374.14	1	6307.71	1.5854	0.0400	0.0	0.0	2.26E-08	4.58E-07	2.57E-06	7.63E-06
4	1	12	11	2394.64	1	6308.64	1.5851	0.0542	5.75E-08	8.88E-06	3.90E-05	7.25E-05	9.69E-05	1.11E-04
4	1	57	56	8161.53	1	6310.23	1.5847	0.0400	0.0	0.0	3.09E-08	5.75E-07	3.06E-06	8.79E-06
3	0	79	78	11612.75	1	6310.27	1.5847	0.0400	0.0	0.0	0.0	4.16E-09	5.07E-08	2.52E-07
4	1	13	12	2440.32	1	6311.08	1.5845	0.0540	5.06E-08	8.72E-06	3.97E-05	7.52E-05	1.02E-04	1.17E-04
3	0	8	9	172.99	1	6312.05	1.5843	0.0550	3.49E-04	2.62E-04	1.95E-04	1.49E-04	1.17E-04	9.36E-05
4	1	56	55	7952.49	1	6312.64	1.5841	0.0400	0.0	1.12E-10	4.19E-08	7.18E-07	3.64E-06	1.01E-05
4	1	14	13	2489.80	1	6313.40	1.5839	0.0528	4.35E-08	8.44E-06	4.00E-05	7.72E-05	1.06E-04	1.22E-04
4	1	55	54	7747.04	1	6314.94	1.5835	0.0400	0.0	1.79E-10	5.66E-08	8.93E-07	4.31E-06	1.16E-05
3	0	78	77	11324.54	1	6315.17	1.5835	0.0400	0.0	0.0	0.0	5.73E-09	6.52E-08	3.10E-07
4	1	15	14	2543.08	1	6315.62	1.5834	0.0517	3.65E-08	8.05E-06	3.98E-05	7.85E-05	1.09E-04	1.27E-04
3	0	7	8	138.40	1	6316.73	1.5831	0.0574	3.70E-04	2.56E-04	1.85E-04	1.39E-04	1.09E-04	8.64E-05
4	1	54	53	7545.17	1	6317.12	1.5830	0.0400	0.0	2.82E-10	7.59E-08	1.11E-06	5.08E-06	1.32E-05
4	1	16	15	2600.15	1	6317.73	1.5828	0.0505	2.99E-08	7.57E-06	3.92E-05	7.91E-05	1.11E-04	1.31E-04
4	1	53	52	7346.91	1	6319.19	1.5825	0.0400	0.0	4.40E-10	1.01E-07	1.36E-06	5.97E-06	1.50E-05
4	1	17	16	2661.01	1	6319.74	1.5823	0.0493	2.40E-08	7.03E-06	3.82E-05	7.89E-05	1.12E-04	1.34E-04
3	0	77	76	11039.74	1	6319.95	1.5823	0.0400	0.0	0.0	1.34E-10	7.86E-09	8.35E-08	3.80E-07
4	1	52	51	7152.25	1	6321.14	1.5820	0.0400	0.0	6.81E-10	1.34E-07	1.67E-06	6.98E-06	1.71E-05
3	0	6	7	107.65	1	6321.30	1.5820	0.0597	3.79E-04	2.43E-04	1.71E-04	1.28E-04	9.87E-05	7.82E-05
4	1	18	17	2725.67	1	6321.64	1.5819	0.0482	1.89E-08	6.44E-06	3.68E-05	7.82E-05	1.13E-04	1.36E-04
4	1	51	50	6961.20	1	6322.99	1.5815	0.0400	0.0	1.04E-09	1.77E-07	2.04E-06	8.14E-06	1.93E-05
4	1	19	18	2794.11	1	6323.43	1.5814	0.0470	1.45E-08	5.83E-06	3.52E-05	7.69E-05	1.13E-04	1.38E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	76	75	10758.35	1	6324.62	1.5811	0.0400	0.0	0.0	2.04E-10	1.07E-08	1.07E-07	4.64E-07
4	1	50	49	6773.78	1	6324.72	1.5811	0.0400	0.0	1.59E-09	2.31E-07	2.47E-06	9.44E-06	2.17E-05
4	1	20	19	2866.33	1	6325.11	1.5810	0.0458	1.09E-08	5.22E-06	3.34E-05	7.50E-05	1.12E-04	1.38E-04
3	0	5	6	80.74	1	6325.78	1.5808	0.0621	3.73E-04	2.24E-04	1.55E-04	1.14E-04	8.77E-05	6.91E-05
4	1	49	48	6589.98	1	6326.34	1.5807	0.0400	0.0	2.39E-09	3.00E-07	2.99E-06	1.09E-05	2.44E-05
4	1	21	20	2942.34	1	6326.68	1.5806	0.0447	8.03E-09	4.61E-06	3.14E-05	7.26E-05	1.11E-04	1.38E-04
4	1	48	47	6409.82	1	6327.85	1.5803	0.0400	0.0	3.57E-09	3.88E-07	3.59E-06	1.26E-05	2.73E-05
4	1	22	21	3022.13	1	6328.15	1.5802	0.0435	5.80E-09	4.03E-06	2.92E-05	6.99E-05	1.09E-04	1.37E-04
3	0	75	74	10480.37	1	6329.17	1.5800	0.0400	0.0	0.0	3.10E-10	1.46E-08	1.36E-07	5.64E-07
4	1	47	46	6233.30	1	6329.24	1.5800	0.0400	0.0	5.27E-09	4.98E-07	4.29E-06	1.44E-05	3.04E-05
4	1	23	22	3105.69	1	6329.51	1.5799	0.0423	4.10E-09	3.49E-06	2.70E-05	6.68E-05	1.06E-04	1.35E-04
3	0	4	5	57.67	1	6330.14	1.5797	0.0645	3.51E-04	1.99E-04	1.35E-04	9.88E-05	7.54E-05	5.92E-05
4	1	46	45	6060.43	1	6330.53	1.5796	0.0400	0.0	7.72E-09	6.35E-07	5.11E-06	1.64E-05	3.37E-05
4	1	24	23	3193.03	1	6330.76	1.5796	0.0412	2.85E-09	2.98E-06	2.48E-05	6.34E-05	1.03E-04	1.33E-04
4	1	45	44	5891.22	1	6331.70	1.5794	0.0400	0.0	1.12E-08	8.04E-07	6.05E-06	1.87E-05	3.73E-05
4	1	25	24	3284.13	1	6331.90	1.5793	0.0400	1.93E-09	2.52E-06	2.25E-05	5.98E-05	9.89E-05	1.30E-04
4	1	44	43	5725.68	1	6332.76	1.5791	0.0400	0.0	1.61E-08	1.01E-06	7.13E-06	2.12E-05	4.12E-05
4	1	26	25	3379.00	1	6332.93	1.5790	0.0400	1.29E-09	2.11E-06	2.03E-05	5.60E-05	9.48E-05	1.27E-04
3	0	74	73	10205.84	1	6333.61	1.5789	0.0400	0.0	0.0	4.69E-10	1.98E-08	1.72E-07	6.85E-07
4	1	43	42	5563.80	1	6333.71	1.5789	0.0400	0.0	2.29E-08	1.27E-06	8.36E-06	2.39E-05	4.53E-05
4	1	27	26	3477.63	1	6333.85	1.5788	0.0400	8.42E-10	1.74E-06	1.82E-05	5.22E-05	9.04E-05	1.23E-04
3	0	3	4	38.45	1	6334.41	1.5787	0.0676	3.10E-04	1.69E-04	1.13E-04	8.16E-05	6.20E-05	4.86E-05
4	1	42	41	5405.60	1	6334.54	1.5786	0.0400	0.0	3.23E-08	1.57E-06	9.75E-06	2.68E-05	4.95E-05
4	1	28	27	3580.03	1	6334.67	1.5786	0.0400	5.40E-10	1.43E-06	1.62E-05	4.83E-05	8.58E-05	1.18E-04
4	1	41	40	5251.08	1	6335.27	1.5785	0.0400	0.0	4.51E-08	1.94E-06	1.13E-05	3.00E-05	5.40E-05
4	1	29	28	3686.17	1	6335.37	1.5784	0.0400	3.39E-10	1.16E-06	1.43E-05	4.45E-05	8.11E-05	1.14E-04
4	1	40	39	5100.25	1	6335.89	1.5783	0.0400	0.0	6.24E-08	2.38E-06	1.31E-05	3.34E-05	5.87E-05
4	1	30	29	3796.07	1	6335.97	1.5783	0.0400	2.09E-10	9.30E-07	1.25E-05	4.07E-05	7.62E-05	1.09E-04
4	1	39	38	4953.12	1	6336.39	1.5782	0.0400	0.0	8.54E-08	2.90E-06	1.50E-05	3.70E-05	6.36E-05
4	1	31	30	3909.71	1	6336.45	1.5782	0.0400	1.27E-10	7.42E-07	1.09E-05	3.73E-05	7.17E-05	1.04E-04
4	1	38	37	4809.68	1	6336.78	1.5781	0.0400	0.0	1.16E-07	3.51E-06	1.71E-05	4.08E-05	6.86E-05
4	1	32	31	4027.09	1	6336.83	1.5781	0.0400	0.0	5.87E-07	9.50E-06	3.39E-05	6.71E-05	9.94E-05
4	1	37	36	4669.95	1	6337.07	1.5780	0.0400	0.0	1.56E-07	4.21E-06	1.94E-05	4.49E-05	7.37E-05
4	1	33	32	4148.21	1	6337.10	1.5780	0.0400	0.0	4.59E-07	8.19E-06	3.07E-05	6.25E-05	9.44E-05
4	1	36	35	4533.94	1	6337.24	1.5780	0.0400	0.0	2.07E-07	5.03E-06	2.20E-05	4.91E-05	7.89E-05
4	1	34	33	4273.06	1	6337.26	1.5780	0.0400	0.0	3.56E-07	7.01E-06	2.76E-05	5.79E-05	8.92E-05
4	1	35	34	4401.64	1	6337.30	1.5780	0.0400	0.0	2.73E-07	5.96E-06	2.47E-05	5.34E-05	8.41E-05
3	0	73	72	9934.75	1	6337.93	1.5778	0.0400	0.0	0.0	7.04E-10	2.67E-08	2.17E-07	8.28E-07
3	0	2	3	23.07	1	6338.57	1.5776	0.0707	2.53E-04	1.32E-04	8.73E-05	6.29E-05	4.76E-05	3.72E-05
3	0	72	71	9667.11	1	6342.13	1.5768	0.0400	0.0	0.0	1.05E-09	3.58E-08	2.73E-07	9.98E-07
3	0	1	2	11.54	1	6342.62	1.5766	0.0738	1.80E-04	9.16E-05	5.98E-05	4.29E-05	3.24E-05	2.53E-05
3	0	71	70	9402.94	1	6346.22	1.5757	0.0400	0.0	0.0	1.56E-09	4.78E-08	3.43E-07	1.20E-06
3	0	0	1	3.85	1	6346.57	1.5757	0.0769	9.42E-05	4.71E-05	3.06E-05	2.19E-05	1.65E-05	1.28E-05
3	0	70	69	9142.25	1	6350.19	1.5748	0.0400	0.0	0.0	2.30E-09	6.35E-08	4.28E-07	1.44E-06
3	0	69	68	8885.04	1	6354.05	1.5738	0.0400	0.0	0.0	3.38E-09	8.41E-08	5.33E-07	1.72E-06
3	0	1	0	-0.0	1	6354.16	1.5738	0.0769	9.81E-05	4.86E-05	3.15E-05	2.25E-05	1.69E-05	1.32E-05
3	0	2	1	3.85	1	6357.79	1.5729	0.0738	1.95E-04	9.76E-05	6.34E-05	4.53E-05	3.41E-05	2.66E-05
3	0	68	67	8631.33	1	6357.80	1.5729	0.0400	0.0	0.0	4.92E-09	1.11E-07	6.60E-07	2.04E-06
3	0	3	2	11.54	1	6361.32	1.5720	0.0707	2.86E-04	1.46E-04	9.51E-05	6.83E-05	5.15E-05	4.02E-05
3	0	67	66	8381.13	1	6361.43	1.5720	0.0400	0.0	0.0	7.13E-09	1.45E-07	8.15E-07	2.42E-06
3	0	4	3	23.07	1	6364.75	1.5712	0.0676	3.66E-04	1.91E-04	1.26E-04	9.10E-05	6.88E-05	5.38E-05
3	0	66	65	8134.45	1	6364.94	1.5711	0.0400	0.0	0.0	1.03E-08	1.89E-07	1.00E-06	2.87E-06
3	0	5	4	38.45	1	6368.07	1.5703	0.0645	4.30E-04	2.34E-04	1.56E-04	1.13E-04	8.59E-05	6.73E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	65	64	7891.29	1	6368.34	1.5703	0.0400	0.0	0.0	1.47E-08	2.46E-07	1.23E-06	3.38E-06
3	0	6	5	57.67	1	6371.28	1.5695	0.0621	4.77E-04	2.71E-04	1.84E-04	1.34E-04	1.02E-04	8.05E-05
3	0	64	63	7651.67	1	6371.63	1.5695	0.0400	0.0	0.0	2.09E-08	3.18E-07	1.50E-06	3.97E-06
3	0	7	6	80.74	1	6374.38	1.5688	0.0597	5.04E-04	3.03E-04	2.09E-04	1.54E-04	1.18E-04	9.34E-05
3	0	63	62	7415.60	1	6374.80	1.5687	0.0400	0.0	1.22E-10	2.96E-08	4.09E-07	1.82E-06	4.65E-06
3	0	8	7	107.65	1	6377.39	1.5680	0.0574	5.13E-04	3.29E-04	2.32E-04	1.73E-04	1.34E-04	1.06E-04
3	0	62	61	7183.08	1	6377.86	1.5679	0.0400	0.0	2.06E-10	4.16E-08	5.24E-07	2.21E-06	5.42E-06
3	0	9	8	138.40	1	6380.28	1.5673	0.0550	5.04E-04	3.48E-04	2.52E-04	1.90E-04	1.48E-04	1.18E-04
3	0	61	60	6954.12	1	6380.80	1.5672	0.0400	0.0	3.46E-10	5.81E-08	6.68E-07	2.66E-06	6.31E-06
3	0	10	9	172.99	1	6383.07	1.5666	0.0547	4.80E-04	3.60E-04	2.68E-04	2.05E-04	1.61E-04	1.29E-04
3	0	60	59	6728.75	1	6383.63	1.5665	0.0400	0.0	5.74E-10	8.06E-08	8.47E-07	3.20E-06	7.31E-06
3	0	11	10	211.42	1	6385.75	1.5660	0.0545	4.45E-04	3.65E-04	2.80E-04	2.18E-04	1.72E-04	1.39E-04
3	0	59	58	6506.95	1	6386.34	1.5658	0.0400	0.0	9.52E-10	1.12E-07	1.08E-06	3.86E-06	8.50E-06
3	0	12	11	253.68	1	6388.32	1.5654	0.0542	4.01E-04	3.65E-04	2.89E-04	2.29E-04	1.83E-04	1.48E-04
3	0	58	57	6288.75	1	6388.95	1.5652	0.0400	0.0	1.56E-09	1.54E-07	1.36E-06	4.63E-06	9.84E-06
3	0	13	12	299.78	1	6390.79	1.5648	0.0540	3.52E-04	3.58E-04	2.94E-04	2.37E-04	1.92E-04	1.57E-04
3	0	57	56	6074.14	1	6391.43	1.5646	0.0400	0.0	2.54E-09	2.11E-07	1.71E-06	5.53E-06	1.14E-05
3	0	14	13	349.72	1	6393.15	1.5642	0.0528	3.02E-04	3.46E-04	2.96E-04	2.43E-04	1.99E-04	1.64E-04
3	0	56	55	5863.14	1	6393.81	1.5640	0.0400	0.0	4.10E-09	2.88E-07	2.14E-06	6.58E-06	1.31E-05
3	0	15	14	403.48	1	6395.41	1.5636	0.0517	2.53E-04	3.29E-04	2.94E-04	2.47E-04	2.05E-04	1.70E-04
3	0	55	54	5655.77	1	6396.07	1.5635	0.0400	0.0	6.56E-09	3.90E-07	2.67E-06	7.80E-06	1.50E-05
3	0	16	15	461.08	1	6397.55	1.5631	0.0505	2.07E-04	3.10E-04	2.90E-04	2.49E-04	2.09E-04	1.75E-04
3	0	54	53	5452.01	1	6398.22	1.5629	0.0400	0.0	1.04E-08	5.25E-07	3.31E-06	9.22E-06	1.72E-05
3	0	17	16	522.50	1	6399.59	1.5626	0.0493	1.66E-04	2.87E-04	2.82E-04	2.48E-04	2.12E-04	1.79E-04
3	0	53	52	5251.89	1	6400.26	1.5624	0.0400	0.0	1.63E-08	7.02E-07	4.09E-06	1.08E-05	1.96E-05
3	0	18	17	587.75	1	6401.53	1.5621	0.0482	1.30E-04	2.63E-04	2.72E-04	2.46E-04	2.13E-04	1.82E-04
3	0	52	51	5055.41	1	6402.18	1.5620	0.0400	0.0	2.53E-08	9.32E-07	5.02E-06	1.27E-05	2.22E-05
3	0	19	18	656.82	1	6403.35	1.5617	0.0470	9.93E-05	2.38E-04	2.60E-04	2.41E-04	2.13E-04	1.84E-04
3	0	51	50	4862.58	1	6403.99	1.5615	0.0400	0.0	3.90E-08	1.23E-06	6.14E-06	1.48E-05	2.51E-05
3	0	20	19	729.71	1	6405.07	1.5613	0.0458	7.45E-05	2.12E-04	2.46E-04	2.35E-04	2.11E-04	1.85E-04
3	0	50	49	4673.40	1	6405.69	1.5611	0.0400	0.0	5.95E-08	1.62E-06	7.47E-06	1.72E-05	2.83E-05
3	0	21	20	806.42	1	6406.67	1.5609	0.0447	5.47E-05	1.87E-04	2.31E-04	2.28E-04	2.08E-04	1.84E-04
3	0	49	48	4487.89	1	6407.28	1.5607	0.0400	0.0	9.00E-08	2.11E-06	9.04E-06	2.00E-05	3.18E-05
3	0	22	21	886.95	1	6408.18	1.5605	0.0435	3.94E-05	1.64E-04	2.15E-04	2.19E-04	2.04E-04	1.83E-04
3	0	48	47	4306.05	1	6408.75	1.5604	0.0400	0.0	1.35E-07	2.73E-06	1.09E-05	2.30E-05	3.57E-05
3	0	23	22	971.28	1	6409.57	1.5602	0.0423	2.78E-05	1.41E-04	1.99E-04	2.09E-04	1.99E-04	1.81E-04
3	0	47	46	4127.89	1	6410.11	1.5600	0.0400	0.0	2.00E-07	3.51E-06	1.30E-05	2.64E-05	3.98E-05
3	0	24	23	1059.42	1	6410.85	1.5599	0.0412	1.92E-05	1.20E-04	1.82E-04	1.98E-04	1.93E-04	1.78E-04
3	0	46	45	3953.41	1	6411.36	1.5597	0.0400	0.0	2.94E-07	4.48E-06	1.56E-05	3.02E-05	4.43E-05
3	0	25	24	1151.37	1	6412.03	1.5596	0.0400	1.30E-05	1.02E-04	1.65E-04	1.87E-04	1.85E-04	1.74E-04
3	0	45	44	3782.62	1	6412.50	1.5595	0.0400	0.0	4.28E-07	5.70E-06	1.84E-05	3.44E-05	4.90E-05
3	0	26	25	1247.11	1	6413.09	1.5593	0.0400	8.62E-06	8.49E-05	1.49E-04	1.75E-04	1.78E-04	1.69E-04
3	0	44	43	3615.54	1	6413.53	1.5592	0.0400	2.14E-10	6.17E-07	7.19E-06	2.18E-05	3.90E-05	5.41E-05
3	0	27	26	1346.66	1	6414.05	1.5591	0.0400	5.61E-06	7.01E-05	1.33E-04	1.63E-04	1.69E-04	1.64E-04
3	0	43	42	3452.15	1	6414.44	1.5590	0.0400	4.52E-10	8.81E-07	9.01E-06	2.56E-05	4.40E-05	5.95E-05
3	0	28	27	1449.99	1	6414.90	1.5589	0.0400	3.58E-06	5.73E-05	1.18E-04	1.51E-04	1.61E-04	1.58E-04
3	0	42	41	3292.48	1	6415.25	1.5588	0.0400	9.38E-10	1.25E-06	1.12E-05	2.99E-05	4.95E-05	6.53E-05
3	0	29	28	1557.12	1	6415.64	1.5587	0.0400	2.24E-06	4.64E-05	1.04E-04	1.39E-04	1.52E-04	1.51E-04
3	0	41	40	3136.53	1	6415.94	1.5586	0.0400	1.91E-09	1.75E-06	1.39E-05	3.47E-05	5.54E-05	7.13E-05
3	0	30	29	1668.03	1	6416.27	1.5585	0.0400	1.37E-06	3.71E-05	9.12E-05	1.27E-04	1.42E-04	1.45E-04
3	0	40	39	2984.30	1	6416.52	1.5585	0.0400	3.82E-09	2.42E-06	1.70E-05	4.01E-05	6.18E-05	7.75E-05
3	0	31	30	1782.72	1	6416.79	1.5584	0.0400	8.31E-07	2.96E-05	7.96E-05	1.16E-04	1.34E-04	1.39E-04
3	0	39	38	2835.80	1	6416.99	1.5584	0.0400	7.49E-09	3.33E-06	2.08E-05	4.61E-05	6.85E-05	8.40E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH N2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM-2*ATM-1 T = 300	T = 600	T = 900	T = 1200	T = 1500	T = 1800
3	0	32	31	1901.19	1	6417.20	1.5583	0.0400	4.93E-07	2.33E-05	6.90E-05	1.05E-04	1.25E-04	1.32E-04
3	0	38	37	2691.03	1	6417.35	1.5583	0.0400	1.44E-08	4.53E-06	2.52E-05	5.28E-05	7.57E-05	9.07E-05
3	0	33	32	2023.43	1	6417.50	1.5582	0.0400	2.87E-07	1.82E-05	5.94E-05	9.52E-05	1.16E-04	1.25E-04
3	0	37	36	2550.01	1	6417.60	1.5582	0.0400	2.72E-08	6.10E-06	3.03E-05	6.00E-05	8.33E-05	9.75E-05
3	0	34	33	2149.44	1	6417.69	1.5582	0.0400	1.64E-07	1.41E-05	5.07E-05	8.55E-05	1.08E-04	1.18E-04
3	0	36	35	2412.73	1	6417.74	1.5582	0.0400	5.05E-08	8.14E-06	3.63E-05	6.79E-05	9.12E-05	1.04E-04
3	0	35	34	2279.20	1	6417.77	1.5582	0.0400	9.19E-08	1.08E-05	4.30E-05	7.64E-05	9.94E-05	1.11E-04

Table 7—Fundamental band of CO, T = 1000-3500°K. The total number of lines included is 4352. For temperatures less than 3500°K, the line intensities were set equal to zero for intensities less than approximately 2×10^{-5}. The line intensities correspond to a mass absorption coefficient.

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VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	123	124	35647.34	1	1358.99	7.3584	0.0303	0.0	0.0	0.0	5.14E-05	1.04E-03	8.34E-03
4	3	126	127	35119.70	1	1360.06	7.3526	0.0303	0.0	0.0	0.0	5.76E-05	1.11E-03	8.56E-03
3	2	129	130	34615.31	1	1360.83	7.3485	0.0303	0.0	0.0	0.0	5.96E-05	1.09E-03	8.16E-03
6	5	119	120	35797.48	1	1364.41	7.3292	0.0303	0.0	0.0	0.0	5.44E-05	1.12E-03	9.05E-03
5	4	122	123	35234.96	1	1365.86	7.3214	0.0303	0.0	0.0	0.0	6.50E-05	1.27E-03	9.85E-03
4	3	125	126	34695.28	1	1367.01	7.3152	0.0303	0.0	0.0	0.0	7.33E-05	1.36E-03	1.02E-02
3	2	128	129	34178.80	1	1367.86	7.3107	0.0303	0.0	0.0	0.0	7.64E-05	1.35E-03	9.74E-03
2	1	131	132	33685.91	1	1368.43	7.3076	0.0303	0.0	0.0	0.0	6.98E-05	1.17E-03	8.20E-03
7	6	115	116	35996.63	1	1369.33	7.3028	0.0303	0.0	0.0	0.0	5.45E-05	1.14E-03	9.37E-03
6	5	118	119	35399.70	1	1371.17	7.2930	0.0303	0.0	0.0	0.0	6.83E-05	1.35E-03	1.06E-02
5	4	121	122	34825.16	1	1372.70	7.2849	0.0303	0.0	0.0	0.0	8.20E-05	1.54E-03	1.16E-02
8	7	111	112	36244.30	1	1373.76	7.2793	0.0303	0.0	0.0	0.0	5.20E-05	1.12E-03	9.31E-03
4	3	124	125	34273.40	1	1373.94	7.2783	0.0303	0.0	0.0	0.0	9.32E-05	1.66E-03	1.21E-02
3	2	127	128	33744.82	1	1374.88	7.2734	0.0303	0.0	0.0	0.0	9.79E-05	1.65E-03	1.16E-02
2	1	130	131	33239.78	1	1375.53	7.2699	0.0303	0.0	0.0	0.0	9.00E-05	1.45E-03	9.84E-03
7	6	114	115	35613.45	1	1375.99	7.2675	0.0303	0.0	0.0	0.0	6.78E-05	1.37E-03	1.09E-02
9	8	107	108	36539.95	1	1377.67	7.2586	0.0303	0.0	0.0	0.0	4.73E-05	1.05E-03	8.89E-03
6	5	117	118	35004.53	1	1377.91	7.2574	0.0303	0.0	0.0	0.0	8.55E-05	1.63E-03	1.25E-02
5	4	120	121	34417.95	1	1379.54	7.2488	0.0303	0.0	0.0	0.0	1.03E-04	1.86E-03	1.37E-02
8	7	110	111	35875.71	1	1380.31	7.2448	0.0303	0.0	0.0	0.0	6.40E-05	1.33E-03	1.08E-02
4	3	123	124	33854.11	1	1380.86	7.2419	0.0303	0.0	0.0	0.0	1.18E-04	2.02E-03	1.43E-02
3	2	126	127	33313.39	1	1381.88	7.2365	0.0303	0.0	0.0	0.0	1.25E-04	2.03E-03	1.38E-02
2	1	129	130	32796.18	1	1382.62	7.2326	0.0303	0.0	0.0	0.0	1.16E-04	1.79E-03	1.18E-02
7	6	113	114	35232.91	1	1382.63	7.2326	0.0303	0.0	0.0	0.0	8.41E-05	1.64E-03	1.28E-02
1	0	132	133	32302.84	1	1383.06	7.2303	0.0303	0.0	0.0	0.0	7.93E-05	1.17E-03	7.43E-03
9	8	106	107	36185.95	1	1384.11	7.2249	0.0303	0.0	0.0	0.0	5.77E-05	1.23E-03	1.02E-02
6	5	116	117	34611.99	1	1384.64	7.2221	0.0303	0.0	0.0	0.0	1.07E-04	1.96E-03	1.46E-02
5	4	119	120	34013.35	1	1386.35	7.2132	0.0303	0.0	0.0	0.0	1.30E-04	2.25E-03	1.61E-02
8	7	109	110	35509.81	1	1386.84	7.2106	0.0303	0.0	0.0	0.0	7.87E-05	1.58E-03	1.25E-02
10	9	102	103	36543.60	1	1387.39	7.2078	0.0303	0.0	0.0	0.0	4.99E-05	1.10E-03	9.39E-03
4	3	122	123	33437.40	1	1387.76	7.2059	0.0303	0.0	0.0	0.0	1.50E-04	2.46E-03	1.69E-02
3	2	125	126	32884.54	1	1388.87	7.2001	0.0303	0.0	0.0	0.0	1.60E-04	2.49E-03	1.65E-02
7	6	112	113	34855.04	1	1389.25	7.1981	0.0303	0.0	0.0	0.0	1.04E-04	1.96E-03	1.49E-02
2	1	128	129	32355.13	1	1389.69	7.1958	0.0303	0.0	0.0	0.0	1.49E-04	2.21E-03	1.41E-02
1	0	131	132	31849.57	1	1390.21	7.1932	0.0303	0.0	0.0	0.0	1.03E-04	1.45E-03	8.93E-03
9	8	105	106	35834.66	1	1390.53	7.1915	0.0303	0.0	0.0	0.0	7.04E-05	1.45E-03	1.18E-02
6	5	115	116	34222.09	1	1391.35	7.1873	0.0303	0.0	0.0	0.0	1.33E-04	2.36E-03	1.71E-02
5	4	118	119	33611.38	1	1393.15	7.1780	0.0303	0.0	0.0	0.0	1.63E-04	2.73E-03	1.90E-02
8	7	108	109	35146.60	1	1393.35	7.1769	0.0303	0.0	0.0	0.0	9.67E-05	1.87E-03	1.45E-02
10	9	101	102	36206.90	1	1393.70	7.1751	0.0303	0.0	0.0	0.0	6.03E-05	1.29E-03	1.07E-02
4	3	121	122	33023.30	1	1394.64	7.1703	0.0303	0.0	0.0	0.0	1.89E-04	2.99E-03	2.00E-02
3	2	124	125	32458.27	1	1395.84	7.1641	0.0303	0.0	0.0	0.0	2.03E-04	3.04E-03	1.96E-02
7	6	111	112	34479.86	1	1395.85	7.1641	0.0303	0.0	0.0	0.0	1.29E-04	2.34E-03	1.73E-02
11	10	97	98	36625.89	1	1396.34	7.1616	0.0303	0.0	0.0	0.0	4.96E-05	1.11E-03	9.47E-03
2	1	127	128	31916.65	1	1396.74	7.1595	0.0303	0.0	0.0	0.0	1.91E-04	2.71E-03	1.68E-02
9	8	104	105	35486.10	1	1396.93	7.1586	0.0303	0.0	0.0	0.0	8.56E-05	1.71E-03	1.36E-02
1	0	130	131	31398.83	1	1397.35	7.1564	0.0303	0.0	0.0	0.0	1.33E-04	1.79E-03	1.07E-02
6	5	114	115	33834.87	1	1398.05	7.1528	0.0303	0.0	0.0	0.0	1.66E-04	2.83E-03	2.00E-02
8	7	107	108	34786.11	1	1399.85	7.1436	0.0303	0.0	0.0	0.0	1.18E-04	2.21E-03	1.67E-02
5	4	117	118	33212.05	1	1399.93	7.1432	0.0303	0.0	0.0	0.0	2.05E-04	3.29E-03	2.23E-02
10	9	100	101	35872.95	1	1399.99	7.1429	0.0303	0.0	0.0	0.0	7.27E-05	1.51E-03	1.23E-02
4	3	120	121	32611.84	1	1401.51	7.1352	0.0303	0.0	0.0	0.0	2.39E-04	3.63E-03	2.36E-02
7	6	110	111	34107.37	1	1402.44	7.1304	0.0303	0.0	0.0	0.0	1.59E-04	2.79E-03	2.01E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	96	97	36306.52	1	1402.51	7.1301	0.0303	0.0	0.0	0.0	5.93E-05	1.28E-03	1.07E-02
3	2	123	124	32034.61	1	1402.79	7.1287	0.0303	0.0	0.0	0.0	2.59E-04	3.71E-03	2.32E-02
9	8	103	104	35140.28	1	1403.32	7.1260	0.0303	0.0	0.0	0.0	1.04E-04	2.01E-03	1.56E-02
2	1	126	127	31480.76	1	1403.78	7.1236	0.0303	0.0	0.0	0.0	2.45E-04	3.34E-03	2.01E-02
1	0	129	130	30950.66	1	1404.47	7.1201	0.0303	0.0	0.0	0.0	1.71E-04	2.22E-03	1.29E-02
6	5	113	114	33450.32	1	1404.72	7.1189	0.0303	0.0	0.0	0.0	2.06E-04	3.40E-03	2.34E-02
10	9	99	100	35541.77	1	1406.26	7.1111	0.0303	0.0	0.0	0.0	8.75E-05	1.76E-03	1.40E-02
8	7	106	107	34428.34	1	1406.32	7.1108	0.0303	0.0	0.0	0.0	1.45E-04	2.62E-03	1.93E-02
5	4	116	117	32815.40	1	1406.70	7.1088	0.0303	0.0	0.0	0.0	2.57E-04	3.97E-03	2.62E-02
4	3	119	120	32203.01	1	1408.36	7.1005	0.0303	0.0	0.0	0.0	3.01E-04	4.40E-03	2.78E-02
11	10	95	96	35989.95	1	1408.66	7.0989	0.0303	0.0	0.0	0.0	7.07E-05	1.48E-03	1.22E-02
7	6	109	110	33737.59	1	1409.01	7.0972	0.0303	0.0	0.0	0.0	1.96E-04	3.32E-03	2.33E-02
9	8	102	103	34797.22	1	1409.68	7.0938	0.0303	0.0	0.0	0.0	1.26E-04	2.36E-03	1.78E-02
3	2	122	123	31613.57	1	1409.73	7.0936	0.0303	0.0	0.0	0.0	3.28E-04	4.53E-03	2.75E-02
12	11	91	92	36484.12	1	1410.52	7.0896	0.0303	0.0	0.0	0.0	5.50E-05	1.21E-03	1.03E-02
2	1	125	126	31047.46	1	1410.80	7.0882	0.0303	0.0	0.0	0.0	3.13E-04	4.10E-03	2.39E-02
6	5	112	113	33068.48	1	1411.38	7.0853	0.0303	0.0	0.0	0.0	2.56E-04	4.07E-03	2.73E-02
1	0	128	129	30505.08	1	1411.58	7.0843	0.0303	0.0	0.0	0.0	2.21E-04	2.74E-03	1.54E-02
10	9	98	99	35213.38	1	1412.51	7.0796	0.0303	0.0	0.0	0.0	1.05E-04	2.05E-03	1.59E-02
8	7	105	106	34073.32	1	1412.78	7.0782	0.0303	0.0	0.0	0.0	1.77E-04	3.09E-03	2.22E-02
5	4	115	116	32421.43	1	1413.44	7.0749	0.0303	0.0	0.0	0.0	3.21E-04	4.78E-03	3.07E-02
11	10	94	95	35676.18	1	1414.80	7.0681	0.0303	0.0	0.0	0.0	8.42E-05	1.72E-03	1.38E-02
4	3	118	119	31796.86	1	1415.20	7.0661	0.0303	0.0	0.0	0.0	3.80E-04	5.33E-03	3.28E-02
7	6	108	109	33370.55	1	1415.56	7.0643	0.0303	0.0	0.0	0.0	2.41E-04	3.94E-03	2.70E-02
9	8	101	102	34456.93	1	1416.02	7.0620	0.0303	0.0	0.0	0.0	1.53E-04	2.77E-03	2.04E-02
12	11	90	91	36184.92	1	1416.53	7.0595	0.0303	0.0	0.0	0.0	6.49E-05	1.39E-03	1.15E-02
3	2	121	122	31195.18	1	1416.65	7.0589	0.0303	0.0	0.0	0.0	4.16E-04	5.52E-03	3.26E-02
2	1	124	125	30616.80	1	1417.81	7.0531	0.0303	0.0	0.0	0.0	4.00E-04	5.02E-03	2.85E-02
6	5	111	112	32689.35	1	1418.02	7.0521	0.0303	0.0	0.0	0.0	3.18E-04	4.86E-03	3.18E-02
1	0	127	128	30062.09	1	1418.67	7.0489	0.0303	0.0	0.0	0.0	2.84E-04	3.38E-03	1.85E-02
10	9	97	98	34887.79	1	1418.74	7.0485	0.0303	0.0	0.0	0.0	1.26E-04	2.38E-03	1.81E-02
8	7	104	105	33721.07	1	1419.22	7.0461	0.0303	0.0	0.0	0.0	2.16E-04	3.65E-03	2.56E-02
5	4	114	115	32030.15	1	1420.17	7.0414	0.0303	0.0	0.0	0.0	4.01E-04	5.75E-03	3.60E-02
11	10	93	94	35365.23	1	1420.91	7.0377	0.0303	0.0	0.0	0.0	1.00E-04	1.99E-03	1.56E-02
4	3	117	118	31393.38	1	1422.02	7.0323	0.0303	0.0	0.0	0.0	4.78E-04	6.45E-03	3.86E-02
7	6	107	108	33006.25	1	1422.09	7.0319	0.0303	0.0	0.0	0.0	2.96E-04	4.67E-03	3.13E-02
9	8	100	101	34119.43	1	1422.35	7.0306	0.0303	0.0	0.0	0.0	1.84E-04	3.24E-03	2.34E-02
12	11	89	90	35888.57	1	1422.52	7.0298	0.0303	0.0	0.0	0.0	7.65E-05	1.59E-03	1.30E-02
3	2	120	121	30779.46	1	1423.56	7.0246	0.0303	0.0	0.0	0.0	5.27E-04	6.72E-03	3.85E-02
13	12	85	86	36457.07	1	1423.58	7.0245	0.0303	0.0	0.0	0.0	5.65E-05	1.24E-03	1.05E-02
6	5	110	111	32312.95	1	1424.64	7.0193	0.0303	0.0	0.0	0.0	3.93E-04	5.80E-03	3.70E-02
2	1	123	124	30188.78	1	1424.80	7.0185	0.0303	0.0	0.0	0.0	5.10E-04	6.15E-03	3.39E-02
10	9	96	97	34565.00	1	1424.94	7.0178	0.0303	0.0	0.0	0.0	1.51E-04	2.77E-03	2.06E-02
8	7	103	104	33371.58	1	1425.63	7.0144	0.0303	0.0	0.0	0.0	2.63E-04	4.29E-03	2.94E-02
1	0	126	127	29621.73	1	1425.74	7.0139	0.0303	0.0	0.0	0.0	3.65E-04	4.16E-03	2.21E-02
5	4	113	114	31641.59	1	1426.88	7.0083	0.0303	0.0	0.0	0.0	4.99E-04	6.91E-03	4.21E-02
11	10	92	93	35057.12	1	1427.00	7.0077	0.0303	0.0	0.0	0.0	1.19E-04	2.28E-03	1.76E-02
12	11	88	89	35595.07	1	1428.49	7.0004	0.0303	0.0	0.0	0.0	9.00E-05	1.82E-03	1.45E-02
7	6	106	107	32644.72	1	1428.60	6.9999	0.0303	0.0	0.0	0.0	3.63E-04	5.54E-03	3.61E-02
9	8	99	100	33784.73	1	1428.65	6.9996	0.0303	0.0	0.0	0.0	2.23E-04	3.78E-03	2.67E-02
4	3	116	117	30992.61	1	1428.82	6.9988	0.0303	0.0	0.0	0.0	6.00E-04	7.80E-03	4.54E-02
13	12	84	85	36178.12	1	1429.43	6.9958	0.0303	0.0	0.0	0.0	6.59E-05	1.41E-03	1.17E-02
3	2	119	120	30366.41	1	1430.44	6.9909	0.0303	0.0	0.0	0.0	6.66E-04	8.16E-03	4.55E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	9	95	96	34245.04	1	1431.13	6.9875	0.0303	0.0	0.0	0.0	1.80E-04	3.21E-03	2.33E-02
6	5	109	110	31939.30	1	1431.25	6.9869	0.0303	0.0	0.0	0.0	4.86E-04	6.91E-03	4.30E-02
2	1	122	123	29763.41	1	1431.77	6.9844	0.0303	0.0	0.0	0.0	6.50E-04	7.51E-03	4.02E-02
8	7	102	103	33024.89	1	1432.03	6.9831	0.0303	0.0	0.0	0.0	3.19E-04	5.05E-03	3.38E-02
1	0	125	126	29184.00	1	1432.80	6.9793	0.0303	0.0	0.0	0.0	4.68E-04	5.12E-03	2.63E-02
11	10	91	92	34751.86	1	1433.07	6.9780	0.0303	0.0	0.0	0.0	1.41E-04	2.63E-03	1.98E-02
5	4	112	113	31255.77	1	1433.58	6.9755	0.0303	0.0	0.0	0.0	6.21E-04	8.29E-03	4.92E-02
12	11	87	88	35304.45	1	1434.44	6.9714	0.0303	0.0	0.0	0.0	1.06E-04	2.08E-03	1.63E-02
9	8	98	99	33452.85	1	1434.94	6.9689	0.0303	0.0	0.0	0.0	2.68E-04	4.41E-03	3.04E-02
7	6	105	106	32285.97	1	1435.09	6.9682	0.0303	0.0	0.0	0.0	4.45E-04	6.55E-03	4.17E-02
13	12	83	84	35902.06	1	1435.25	6.9674	0.0303	0.0	0.0	0.0	7.67E-05	1.60E-03	1.30E-02
4	3	115	116	30594.55	1	1435.60	6.9657	0.0303	0.0	0.0	0.0	7.52E-04	9.41E-03	5.34E-02
10	9	94	95	33927.93	1	1437.30	6.9575	0.0303	0.0	0.0	0.0	2.15E-04	3.71E-03	2.64E-02
3	2	118	119	29956.07	1	1437.31	6.9574	0.0303	0.0	0.0	0.0	8.41E-04	9.91E-03	5.38E-02
6	5	108	109	31568.43	1	1437.83	6.9549	0.0303	0.0	0.0	0.0	5.98E-04	8.23E-03	4.99E-02
8	7	101	102	32681.01	1	1438.41	6.9521	0.0303	0.0	0.0	0.0	3.87E-04	5.92E-03	3.87E-02
2	1	121	122	29340.73	1	1438.73	6.9506	0.0303	0.0	0.0	0.0	8.26E-04	9.17E-03	4.77E-02
11	10	90	91	34449.46	1	1439.11	6.9487	0.0303	0.0	0.0	0.0	1.66E-04	3.02E-03	2.23E-02
1	0	124	125	28748.94	1	1439.84	6.9452	0.0303	0.0	0.0	0.0	5.99E-04	6.29E-03	3.14E-02
5	4	111	112	30872.70	1	1440.25	6.9432	0.0303	0.0	0.0	0.0	7.72E-04	9.93E-03	5.74E-02
12	11	86	87	35016.70	1	1440.37	6.9427	0.0303	0.0	0.0	0.0	1.24E-04	2.37E-03	1.82E-02
13	12	82	83	35628.90	1	1441.05	6.9394	0.0303	0.0	0.0	0.0	8.91E-05	1.81E-03	1.45E-02
9	8	97	98	33123.80	1	1441.20	6.9387	0.0303	0.0	0.0	0.0	3.22E-04	5.14E-03	3.47E-02
7	6	104	105	31930.02	1	1441.57	6.9369	0.0303	0.0	0.0	0.0	5.43E-04	7.73E-03	4.81E-02
4	3	114	115	30199.23	1	1442.36	6.9331	0.0303	0.0	0.0	0.0	9.41E-04	1.13E-02	6.26E-02
10	9	93	94	33613.67	1	1443.45	6.9278	0.0303	0.0	0.0	0.0	2.56E-04	4.29E-03	2.99E-02
3	2	117	118	29548.44	1	1444.17	6.9244	0.0303	0.0	0.0	2.41E-05	1.06E-03	1.20E-02	6.34E-02
6	5	107	108	31200.33	1	1444.40	6.9233	0.0303	0.0	0.0	0.0	7.37E-04	9.78E-03	5.78E-02
8	7	100	101	32339.95	1	1444.77	6.9215	0.0303	0.0	0.0	0.0	4.69E-04	6.94E-03	4.44E-02
11	10	89	90	34149.94	1	1445.14	6.9197	0.0303	0.0	0.0	0.0	1.96E-04	3.46E-03	2.50E-02
2	1	120	121	28920.75	1	1445.67	6.9172	0.0303	0.0	0.0	2.60E-05	1.05E-03	1.12E-02	5.65E-02
12	11	85	86	34731.85	1	1446.27	6.9143	0.0303	0.0	0.0	0.0	1.45E-04	2.70E-03	2.04E-02
13	12	81	82	35358.64	1	1446.83	6.9117	0.0303	0.0	0.0	0.0	1.03E-04	2.04E-03	1.61E-02
1	0	123	124	28316.55	1	1446.87	6.9115	0.0303	0.0	0.0	2.07E-05	7.56E-04	7.71E-03	3.74E-02
5	4	110	111	30492.39	1	1446.91	6.9113	0.0303	0.0	0.0	0.0	9.57E-04	1.19E-02	6.68E-02
9	8	96	97	32797.60	1	1447.45	6.9087	0.0303	0.0	0.0	0.0	3.86E-04	5.99E-03	3.94E-02
7	6	103	104	31576.87	1	1448.02	6.9060	0.0303	0.0	0.0	0.0	6.63E-04	9.12E-03	5.53E-02
4	3	113	114	29806.66	1	1449.11	6.9008	0.0303	0.0	0.0	2.57E-05	1.17E-03	1.36E-02	7.33E-02
10	9	92	93	33302.29	1	1449.57	6.8986	0.0303	0.0	0.0	0.0	3.05E-04	4.95E-03	3.38E-02
6	5	106	107	30835.03	1	1450.94	6.8921	0.0303	0.0	0.0	0.0	9.05E-04	1.16E-02	6.69E-02
3	2	116	117	29143.55	1	1451.00	6.8918	0.0303	0.0	0.0	3.21E-05	1.33E-03	1.45E-02	7.47E-02
8	7	99	100	32001.73	1	1451.11	6.8913	0.0303	0.0	0.0	0.0	5.66E-04	8.12E-03	5.07E-02
11	10	88	89	33853.30	1	1451.15	6.8911	0.0303	0.0	0.0	0.0	2.32E-04	3.96E-03	2.81E-02
12	11	84	85	34449.91	1	1452.15	6.8863	0.0303	0.0	0.0	0.0	1.69E-04	3.07E-03	2.27E-02
13	12	80	81	35091.32	1	1452.59	6.8843	0.0303	0.0	0.0	0.0	1.20E-04	2.31E-03	1.78E-02
2	1	119	120	28503.48	1	1452.59	6.8843	0.0303	0.0	0.0	3.50E-05	1.33E-03	1.36E-02	6.69E-02
5	4	109	110	30114.87	1	1453.55	6.8797	0.0303	0.0	0.0	2.48E-05	1.18E-03	1.42E-02	7.78E-02
9	8	95	96	32474.26	1	1453.67	6.8791	0.0303	0.0	0.0	0.0	4.63E-04	6.94E-03	4.48E-02
1	0	122	123	27886.86	1	1453.88	6.8781	0.0303	0.0	0.0	2.81E-05	9.77E-04	9.44E-03	4.45E-02
7	6	102	103	31226.56	1	1454.46	6.8754	0.0303	0.0	0.0	0.0	8.07E-04	1.07E-02	6.36E-02
10	9	91	92	32993.78	1	1455.68	6.8696	0.0303	0.0	0.0	0.0	3.62E-04	5.71E-03	3.81E-02
4	3	112	113	29416.86	1	1455.84	6.8689	0.0303	0.0	0.0	3.39E-05	1.47E-03	1.64E-02	8.58E-02
11	10	87	88	33559.57	1	1457.13	6.8628	0.0303	0.0	0.0	0.0	2.72E-04	4.54E-03	3.15E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	98	99	31666.36	1	1457.43	6.8614	0.0303	0.0	0.0	0.0	6.83E-04	9.49E-03	5.79E-02
6	5	105	106	30472.55	1	1457.47	6.8612	0.0303	0.0	0.0	2.20E-05	1.11E-03	1.37E-02	7.73E-02
3	2	115	116	28741.41	1	1457.82	6.8596	0.0303	0.0	0.0	4.27E-05	1.68E-03	1.76E-02	8.79E-02
12	11	83	84	34170.88	1	1458.01	6.8587	0.0303	0.0	0.0	0.0	1.98E-04	3.49E-03	2.53E-02
13	12	79	80	34826.92	1	1458.32	6.8572	0.0303	0.0	0.0	0.0	1.38E-04	2.60E-03	1.97E-02
2	1	118	119	28088.95	1	1459.50	6.8517	0.0303	0.0	0.0	4.70E-05	1.68E-03	1.65E-02	7.91E-02
9	8	94	95	32153.80	1	1459.87	6.8499	0.0303	0.0	0.0	0.0	5.53E-04	8.05E-03	5.08E-02
5	4	108	109	29740.16	1	1460.17	6.8485	0.0303	0.0	0.0	3.23E-05	1.46E-03	1.69E-02	9.04E-02
7	6	101	102	30879.08	1	1460.87	6.8452	0.0303	0.0	0.0	0.0	9.80E-04	1.26E-02	7.30E-02
1	0	121	122	27459.88	1	1460.87	6.8452	0.0303	0.0	0.0	3.81E-05	1.24E-03	1.15E-02	5.28E-02
10	9	90	91	32688.18	1	1461.76	6.8411	0.0303	0.0	0.0	0.0	4.28E-04	6.56E-03	4.30E-02
4	3	111	112	29029.84	1	1462.55	6.8374	0.0303	0.0	0.0	4.46E-05	1.82E-03	1.97E-02	1.00E-01
11	10	86	87	33268.76	1	1463.09	6.8348	0.0303	0.0	0.0	0.0	3.20E-04	5.18E-03	3.53E-02
8	7	97	98	31333.86	1	1463.74	6.8318	0.0303	0.0	0.0	0.0	8.23E-04	1.11E-02	6.61E-02
12	11	82	83	33894.79	1	1463.85	6.8313	0.0303	0.0	0.0	0.0	2.30E-04	3.96E-03	2.81E-02
6	5	104	105	30112.89	1	1463.98	6.8307	0.0303	0.0	0.0	2.84E-05	1.36E-03	1.63E-02	8.93E-02
13	12	78	79	34565.47	1	1464.03	6.8305	0.0303	0.0	0.0	0.0	1.59E-04	2.92E-03	2.18E-02
3	2	114	115	28342.04	1	1464.62	6.8277	0.0303	0.0	0.0	5.67E-05	2.10E-03	2.12E-02	1.03E-01
9	8	93	94	31836.23	1	1466.06	6.8210	0.0303	0.0	0.0	0.0	6.60E-04	9.31E-03	5.75E-02
2	1	117	118	27677.16	1	1466.39	6.8195	0.0303	0.0	0.0	6.29E-05	2.12E-03	2.01E-02	9.34E-02
5	4	107	108	29368.25	1	1466.77	6.8177	0.0303	0.0	0.0	4.20E-05	1.80E-03	2.01E-02	1.05E-01
7	6	100	101	30534.46	1	1467.27	6.8154	0.0303	0.0	0.0	2.34E-05	1.19E-03	1.48E-02	8.38E-02
10	9	89	90	32385.48	1	1467.82	6.8128	0.0303	0.0	0.0	0.0	5.06E-04	7.54E-03	4.84E-02
1	0	120	121	27035.63	1	1467.85	6.8127	0.0303	0.0	0.0	5.15E-05	1.58E-03	1.41E-02	6.27E-02
11	10	85	86	32980.87	1	1469.03	6.8072	0.0303	0.0	0.0	0.0	3.75E-04	5.91E-03	3.95E-02
4	3	110	111	28645.63	1	1469.25	6.8062	0.0303	0.0	0.0	5.85E-05	2.27E-03	2.36E-02	1.17E-01
12	11	81	82	33621.65	1	1469.67	6.8042	0.0303	0.0	0.0	0.0	2.67E-04	4.48E-03	3.13E-02
13	12	77	78	34306.98	1	1469.72	6.8040	0.0303	0.0	0.0	0.0	1.83E-04	3.28E-03	2.40E-02
8	7	96	97	31004.25	1	1470.02	6.8026	0.0303	0.0	0.0	0.0	9.89E-04	1.29E-02	7.53E-02
6	5	103	104	29756.08	1	1470.47	6.8005	0.0303	0.0	0.0	3.65E-05	1.66E-03	1.92E-02	1.03E-01
3	2	113	114	27945.45	1	1471.41	6.7962	0.0303	0.0	0.0	7.51E-05	2.63E-03	2.56E-02	1.21E-01
9	8	92	93	31521.56	1	1472.22	6.7925	0.0303	0.0	0.0	0.0	7.86E-04	1.08E-02	6.51E-02
2	1	116	117	27268.14	1	1473.26	6.7877	0.0303	0.0	0.0	8.42E-05	2.68E-03	2.44E-02	1.10E-01
5	4	106	107	28999.19	1	1473.36	6.7872	0.0303	0.0	0.0	5.45E-05	2.22E-03	2.39E-02	1.22E-01
7	6	99	100	30192.72	1	1473.64	6.7859	0.0303	0.0	0.0	2.97E-05	1.44E-03	1.74E-02	9.59E-02
10	9	88	89	32085.71	1	1473.87	6.7849	0.0303	0.0	0.0	0.0	5.98E-04	8.65E-03	5.44E-02
1	0	119	120	26614.14	1	1474.81	6.7805	0.0303	0.0	0.0	6.94E-05	2.01E-03	1.72E-02	7.43E-02
11	10	84	85	32695.94	1	1474.95	6.7799	0.0303	0.0	0.0	0.0	4.39E-04	6.73E-03	4.41E-02
13	12	76	77	34051.46	1	1475.39	6.7779	0.0303	0.0	0.0	0.0	2.11E-04	3.68E-03	2.65E-02
12	11	80	81	33351.46	1	1475.46	6.7775	0.0303	0.0	0.0	0.0	3.10E-04	5.06E-03	3.47E-02
4	3	109	110	28264.23	1	1475.92	6.7754	0.0303	0.0	0.0	7.66E-05	2.81E-03	2.82E-02	1.36E-01
8	7	95	96	30677.52	1	1476.27	6.7738	0.0303	0.0	0.0	2.28E-05	1.19E-03	1.50E-02	8.56E-02
6	5	102	103	29402.14	1	1476.94	6.7708	0.0303	0.0	0.0	4.69E-05	2.02E-03	2.27E-02	1.18E-01
3	2	112	113	27551.67	1	1478.17	6.7651	0.0303	0.0	0.0	9.93E-05	3.20E-03	3.08E-02	1.42E-01
9	8	91	92	31209.82	1	1478.36	6.7643	0.0303	0.0	0.0	0.0	9.34E-04	1.24E-02	7.35E-02
10	9	87	88	31788.87	1	1479.88	6.7573	0.0303	0.0	0.0	0.0	7.05E-04	9.91E-03	6.11E-02
5	4	105	106	28632.97	1	1479.92	6.7571	0.0303	0.0	0.0	7.06E-05	2.73E-03	2.84E-02	1.41E-01
7	6	98	99	29853.86	1	1480.00	6.7568	0.0303	0.0	0.0	3.77E-05	1.74E-03	2.03E-02	1.10E-01
2	1	115	116	26861.92	1	1480.11	6.7563	0.0303	0.0	0.0	1.12E-04	3.37E-03	2.95E-02	1.30E-01
11	10	83	84	32413.95	1	1480.84	6.7529	0.0303	0.0	0.0	0.0	5.12E-04	7.65E-03	4.92E-02
13	12	75	76	33798.93	1	1481.03	6.7521	0.0303	0.0	0.0	0.0	2.41E-04	4.12E-03	2.91E-02
12	11	79	80	33084.24	1	1481.23	6.7511	0.0303	0.0	0.0	0.0	3.58E-04	5.70E-03	3.84E-02
1	0	118	119	26195.41	1	1481.75	6.7488	0.0303	0.0	0.0	9.35E-05	2.55E-03	2.10E-02	8.80E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	94	95	30353.71	1	1482.51	6.7453	0.0303	0.0	0.0	2.87E-05	1.42E-03	1.74E-02	9.72E-02
4	3	108	109	27885.68	1	1482.58	6.7450	0.0303	0.0	0.0	1.00E-04	3.48E-03	3.37E-02	1.59E-01
6	5	101	102	29051.07	1	1483.40	6.7413	0.0303	0.0	0.0	6.00E-05	2.47E-03	2.67E-02	1.36E-01
9	8	90	91	30901.00	1	1484.48	6.7364	0.0303	0.0	0.0	2.07E-05	1.11E-03	1.43E-02	8.30E-02
3	2	111	112	27160.71	1	1484.92	6.7344	0.0303	0.0	0.0	1.31E-04	4.10E-03	3.70E-02	1.66E-01
10	9	86	87	31495.00	1	1485.88	6.7300	0.0303	0.0	0.0	0.0	8.29E-04	1.13E-02	6.85E-02
7	6	97	98	29517.91	1	1486.34	6.7279	0.0303	0.0	0.0	4.78E-05	2.10E-03	2.38E-02	1.25E-01
5	4	104	105	28269.62	1	1486.47	6.7273	0.0303	0.0	0.0	9.12E-05	3.35E-03	3.36E-02	1.63E-01
13	12	74	75	33549.38	1	1486.65	6.7265	0.0303	0.0	0.0	0.0	2.76E-04	4.60E-03	3.20E-02
11	10	82	83	32134.93	1	1486.72	6.7262	0.0303	0.0	0.0	0.0	5.97E-04	8.68E-03	5.48E-02
2	1	114	115	26458.50	1	1486.95	6.7252	0.0303	0.0	0.0	1.50E-04	4.23E-03	3.57E-02	1.53E-01
12	11	78	79	32820.01	1	1486.98	6.7250	0.0303	0.0	0.0	0.0	4.14E-04	6.42E-03	4.25E-02
1	0	117	118	25779.47	1	1488.67	6.7174	0.0303	0.0	0.0	1.26E-04	3.23E-03	2.55E-02	1.04E-01
8	7	93	94	30032.83	1	1488.73	6.7171	0.0303	0.0	0.0	3.59E-05	1.70E-03	2.02E-02	1.10E-01
4	3	107	108	27509.97	1	1489.22	6.7149	0.0303	0.0	0.0	1.31E-04	4.30E-03	4.01E-02	1.85E-01
6	5	100	101	28702.89	1	1489.83	6.7122	0.0303	0.0	0.0	7.66E-05	3.00E-03	3.14E-02	1.56E-01
9	8	89	90	30595.13	1	1490.58	6.7088	0.0303	0.0	0.0	2.56E-05	1.31E-03	1.65E-02	9.35E-02
3	2	110	111	26772.58	1	1491.65	6.7040	0.0303	0.0	0.0	1.72E-04	5.11E-03	4.44E-02	1.94E-01
10	9	85	86	31204.08	1	1491.86	6.7030	0.0303	0.0	0.0	0.0	9.74E-04	1.30E-02	7.67E-02
13	12	73	74	33302.84	1	1492.24	6.7013	0.0303	0.0	0.0	0.0	3.15E-04	5.13E-03	3.51E-02
11	10	81	82	31858.89	1	1492.57	6.6999	0.0303	0.0	0.0	0.0	6.95E-04	9.84E-03	6.09E-02
7	6	96	97	29184.87	1	1492.65	6.6995	0.0303	0.0	0.0	6.03E-05	2.53E-03	2.77E-02	1.43E-01
12	11	77	78	32558.77	1	1492.70	6.6993	0.0303	0.0	0.0	0.0	4.77E-04	7.22E-03	4.69E-02
5	4	103	104	27909.14	1	1492.99	6.6980	0.0303	0.0	0.0	1.18E-04	4.10E-03	3.98E-02	1.88E-01
2	1	113	114	26057.89	1	1493.77	6.6945	0.0303	0.0	0.0	1.99E-04	5.31E-03	4.31E-02	1.80E-01
8	7	92	93	29714.89	1	1494.93	6.6893	0.0303	0.0	0.0	4.48E-05	2.03E-03	2.34E-02	1.25E-01
1	0	116	117	25366.34	1	1495.58	6.6864	0.0303	0.0	0.0	1.69E-04	4.08E-03	3.10E-02	1.23E-01
4	3	106	107	27137.13	1	1495.84	6.6852	0.0303	0.0	0.0	1.70E-04	5.31E-03	4.78E-02	2.14E-01
6	5	99	100	28357.62	1	1496.24	6.6834	0.0303	0.0	0.0	9.77E-05	3.64E-03	3.69E-02	1.79E-01
9	8	88	89	30292.22	1	1496.65	6.6816	0.0303	0.0	0.0	3.16E-05	1.55E-03	1.99E-02	1.05E-01
10	9	84	85	30916.14	1	1497.81	6.6764	0.0303	0.0	0.0	2.12E-05	1.14E-03	1.48E-02	8.57E-02
13	12	72	73	33059.32	1	1497.81	6.6764	0.0303	0.0	0.0	0.0	3.59E-04	5.71E-03	3.84E-02
3	2	109	110	26387.31	1	1498.36	6.6740	0.0303	0.0	0.0	2.26E-04	6.35E-03	5.32E-02	2.27E-01
12	11	76	77	32300.53	1	1498.40	6.6738	0.0303	0.0	0.0	0.0	5.48E-04	8.11E-03	5.17E-02
11	10	80	81	31585.85	1	1498.40	6.6738	0.0303	0.0	0.0	0.0	8.07E-04	1.11E-02	6.77E-02
7	6	95	96	28854.77	1	1498.95	6.6713	0.0303	0.0	0.0	7.60E-05	3.04E-03	3.23E-02	1.63E-01
5	4	102	103	27551.57	1	1499.50	6.6689	0.0303	0.0	0.0	1.51E-04	5.01E-03	4.70E-02	2.17E-01
2	1	112	113	25660.13	1	1500.57	6.6641	0.0303	0.0	0.0	2.63E-04	6.65E-03	5.20E-02	2.11E-01
8	7	91	92	29399.89	1	1501.11	6.6617	0.0303	0.0	0.0	5.58E-05	2.41E-03	2.70E-02	1.41E-01
4	3	105	106	26767.18	1	1502.44	6.6558	0.0303	0.0	0.0	2.21E-04	6.54E-03	5.68E-02	2.48E-01
1	0	115	116	24956.02	1	1502.47	6.6557	0.0303	0.0	0.0	2.26E-04	5.15E-03	3.76E-02	1.45E-01
6	5	98	99	28015.28	1	1502.63	6.6550	0.0303	0.0	0.0	1.24E-04	4.40E-03	4.31E-02	2.05E-01
9	8	87	88	29992.29	1	1502.71	6.6546	0.0303	0.0	0.0	3.89E-05	1.83E-03	2.17E-02	1.18E-01
13	12	71	72	32818.82	1	1503.36	6.6518	0.0303	0.0	0.0	0.0	4.09E-04	6.35E-03	4.20E-02
10	9	83	84	30631.19	1	1503.74	6.6501	0.0303	0.0	0.0	2.58E-05	1.33E-03	1.68E-02	9.57E-02
12	11	75	76	32045.30	1	1504.08	6.6486	0.0303	0.0	0.0	0.0	6.30E-04	9.09E-03	5.70E-02
11	10	79	80	31315.80	1	1504.20	6.6481	0.0303	0.0	0.0	0.0	9.35E-04	1.26E-02	7.50E-02
3	2	108	109	26004.91	1	1505.06	6.6443	0.0303	0.0	0.0	2.97E-04	7.88E-03	6.37E-02	2.64E-01
7	6	94	95	28527.61	1	1505.22	6.6435	0.0303	0.0	0.0	9.55E-05	3.65E-03	3.75E-02	1.85E-01
5	4	101	102	27196.90	1	1505.99	6.6402	0.0303	0.0	0.0	1.94E-04	6.12E-03	5.54E-02	2.49E-01
8	7	90	91	29087.87	1	1507.26	6.6346	0.0303	0.0	0.0	6.93E-05	2.87E-03	3.11E-02	1.60E-01
2	1	111	112	25265.22	1	1507.36	6.6341	0.0303	0.0	0.0	3.49E-04	8.32E-03	6.26E-02	2.47E-01
9	8	86	87	29695.34	1	1508.74	6.6280	0.0303	0.0	0.0	4.78E-05	2.16E-03	2.49E-02	1.33E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	12	70	71	32581.36	1	1508.88	6.6274	0.0303	0.0	0.0	0.0	4.64E-04	7.05E-03	4.59E-02
6	5	97	98	27675.87	1	1509.00	6.6269	0.0303	0.0	0.0	1.58E-04	5.32E-03	5.05E-02	2.35E-01
4	3	104	105	26400.13	1	1509.02	6.6268	0.0303	0.0	0.0	2.86E-04	8.03E-03	6.76E-02	2.87E-01
1	0	114	115	24548.55	1	1509.35	6.6254	0.0303	0.0	0.0	3.01E-04	6.49E-03	4.56E-02	1.71E-01
10	9	82	83	30349.24	1	1509.65	6.6241	0.0303	0.0	0.0	3.14E-05	1.56E-03	1.91E-02	1.07E-01
12	11	74	75	31793.11	1	1509.73	6.6237	0.0303	0.0	0.0	0.0	7.21E-04	1.02E-02	6.27E-02
11	10	78	79	31048.78	1	1509.99	6.6226	0.0303	0.0	0.0	0.0	1.08E-03	1.42E-02	8.31E-02
7	6	93	94	28203.41	1	1511.48	6.6160	0.0303	0.0	0.0	1.20E-04	4.37E-03	4.36E-02	2.10E-01
3	2	107	108	25625.40	1	1511.73	6.6149	0.0303	0.0	0.0	3.88E-04	9.76E-03	7.61E-02	3.08E-01
5	4	100	101	26845.17	1	1512.46	6.6117	0.0303	0.0	0.0	2.49E-04	7.45E-03	6.53E-02	2.87E-01
8	7	89	90	28778.82	1	1513.40	6.6076	0.0303	0.0	0.0	8.59E-05	3.40E-03	3.59E-02	1.80E-01
2	1	110	111	24873.19	1	1514.12	6.6045	0.0303	0.0	0.0	4.60E-04	1.04E-02	7.53E-02	2.89E-01
13	12	69	70	32346.95	1	1514.38	6.6034	0.0303	0.0	0.0	0.0	5.26E-04	7.81E-03	5.00E-02
9	8	85	86	29401.38	1	1514.75	6.6017	0.0303	0.0	0.0	5.87E-05	2.54E-03	2.84E-02	1.49E-01
6	5	96	97	27339.41	1	1515.36	6.5991	0.0303	0.0	0.0	1.99E-04	6.42E-03	5.90E-02	2.68E-01
12	11	73	74	31543.96	1	1515.36	6.5991	0.0303	0.0	0.0	0.0	8.25E-04	1.13E-02	6.88E-02
10	9	81	82	30070.30	1	1515.54	6.5983	0.0303	0.0	0.0	3.81E-05	1.82E-03	2.17E-02	1.19E-01
4	3	103	104	26035.98	1	1515.58	6.5981	0.0303	0.0	0.0	3.70E-04	9.86E-03	7.99E-02	3.32E-01
11	10	77	78	30784.78	1	1515.75	6.5974	0.0303	0.0	0.0	2.36E-05	1.25E-03	1.60E-02	9.19E-02
1	0	113	114	24143.93	1	1516.20	6.5954	0.0303	0.0	0.0	4.01E-04	8.16E-03	5.52E-02	2.01E-01
7	6	92	93	27882.18	1	1517.71	6.5889	0.0303	0.0	0.0	1.50E-04	5.22E-03	5.05E-02	2.38E-01
3	2	106	107	25248.79	1	1518.39	6.5859	0.0303	0.0	0.0	5.06E-04	1.21E-02	9.07E-02	3.57E-01
5	4	99	100	26496.37	1	1518.91	6.5837	0.0303	0.0	0.0	3.18E-04	9.05E-03	7.67E-02	3.29E-01
8	7	88	89	28472.78	1	1519.51	6.5811	0.0303	0.0	0.0	1.06E-04	4.03E-03	4.13E-02	2.03E-01
13	12	68	69	32115.60	1	1519.85	6.5796	0.0303	0.0	0.0	0.0	5.94E-04	8.64E-03	5.45E-02
9	8	84	85	29110.45	1	1520.74	6.5757	0.0303	0.0	0.0	7.18E-05	2.98E-03	3.25E-02	1.67E-01
2	1	109	110	24484.04	1	1520.87	6.5752	0.0303	0.0	0.0	6.06E-04	1.29E-02	9.04E-02	3.38E-01
12	11	72	73	31297.86	1	1520.97	6.5748	0.0303	0.0	0.0	0.0	9.41E-04	1.26E-02	7.54E-02
10	9	80	81	29794.40	1	1521.40	6.5729	0.0303	0.0	0.0	4.61E-05	2.11E-03	2.46E-02	1.32E-01
11	10	76	77	30523.82	1	1521.48	6.5725	0.0303	0.0	0.0	2.82E-05	1.44E-03	1.79E-02	1.01E-01
6	5	95	96	27005.92	1	1521.69	6.5716	0.0303	0.0	0.0	2.52E-04	7.73E-03	6.88E-02	3.06E-01
4	3	102	103	25674.78	1	1522.13	6.5697	0.0303	0.0	0.0	4.77E-04	1.21E-02	9.46E-02	3.84E-01
1	0	112	113	23742.18	1	1523.04	6.5658	0.0303	0.0	0.0	5.34E-04	1.02E-02	6.66E-02	2.37E-01
4	3	99	100	23706.26	2	1523.29	6.5647	0.0303	0.0	0.0	2.01E-05	3.83E-04	2.48E-03	8.79E-03
7	6	91	92	27563.95	1	1523.92	6.5620	0.0303	0.0	0.0	1.87E-04	6.22E-03	5.85E-02	2.70E-01
3	2	105	106	24875.10	1	1525.02	6.5573	0.0303	0.0	0.0	6.59E-04	1.49E-02	1.08E-01	4.15E-01
13	12	67	68	31887.32	1	1525.30	6.5561	0.0303	0.0	0.0	0.0	6.71E-04	9.54E-03	5.92E-02
5	4	98	99	26150.54	1	1525.33	6.5560	0.0303	0.0	0.0	4.05E-04	1.10E-02	9.01E-02	3.78E-01
8	7	87	88	28169.73	1	1525.60	6.5548	0.0303	0.0	0.0	1.31E-04	4.77E-03	4.74E-02	2.28E-01
3	2	102	103	22858.91	2	1526.54	6.5508	0.0303	0.0	0.0	2.88E-05	4.86E-04	2.90E-03	9.71E-03
12	11	71	72	31054.82	1	1526.55	6.5507	0.0303	0.0	0.0	0.0	1.07E-03	1.41E-02	8.26E-02
9	8	83	84	28822.53	1	1526.71	6.5500	0.0303	0.0	0.0	8.76E-05	3.49E-03	3.70E-02	1.86E-01
11	10	75	76	30265.92	1	1527.19	6.5480	0.0303	0.0	0.0	3.37E-05	1.65E-03	2.01E-02	1.12E-01
10	9	79	80	29521.54	1	1527.25	6.5477	0.0303	0.0	0.0	5.56E-05	2.45E-03	2.78E-02	1.47E-01
2	1	108	109	24097.80	1	1527.60	6.5462	0.0303	0.0	0.0	7.96E-04	1.61E-02	1.08E-01	3.95E-01
6	5	94	95	26675.41	1	1528.00	6.5445	0.0303	0.0	0.0	3.17E-04	9.29E-03	8.01E-02	3.48E-01
4	3	101	102	25316.52	1	1528.65	6.5417	0.0303	0.0	0.0	6.13E-04	1.48E-02	1.12E-01	4.42E-01
4	3	98	99	23371.00	2	1529.44	6.5383	0.0303	0.0	0.0	2.54E-05	4.62E-04	2.90E-03	1.00E-02
2	1	105	106	22032.61	2	1529.48	6.5382	0.0303	0.0	0.0	3.61E-05	5.41E-04	2.98E-03	9.43E-03
1	0	111	112	23343.33	1	1529.86	6.5365	0.0303	0.0	0.0	7.08E-04	1.28E-02	8.04E-02	2.78E-01
7	6	90	91	27248.71	1	1530.11	6.5355	0.0303	0.0	0.0	2.33E-04	7.41E-03	6.76E-02	3.05E-01
13	12	66	67	31662.11	1	1530.73	6.5328	0.0303	0.0	0.0	0.0	7.55E-04	1.05E-02	6.43E-02
3	2	104	105	24504.34	1	1531.64	6.5289	0.0303	0.0	0.0	8.56E-04	1.83E-02	1.28E-01	4.81E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	86	87	27869.71	1	1531.67	6.5288	0.0303	0.0	0.0	1.62E-04	5.63E-03	5.44E-02	2.57E-01
5	4	97	98	25807.67	1	1531.74	6.5285	0.0303	0.0	0.0	5.15E-04	1.33E-02	1.06E-01	4.32E-01
5	4	94	95	23930.47	2	1531.82	6.5282	0.0303	0.0	0.0	2.03E-05	3.99E-04	2.64E-03	9.51E-03
12	11	70	71	30814.84	1	1532.11	6.5269	0.0303	0.0	0.0	2.29E-05	1.22E-03	1.56E-02	9.02E-02
9	8	82	83	28537.65	1	1532.66	6.5246	0.0303	0.0	0.0	1.07E-04	4.08E-03	4.21E-02	2.08E-01
3	2	101	102	22511.64	2	1532.77	6.5241	0.0303	0.0	0.0	3.68E-05	5.91E-04	3.41E-03	1.11E-02
11	10	74	75	30011.07	1	1532.88	6.5237	0.0303	0.0	0.0	4.01E-05	1.90E-03	2.25E-02	1.23E-01
10	9	78	79	29251.72	1	1533.06	6.5229	0.0303	0.0	0.0	6.69E-05	2.84E-03	3.14E-02	1.63E-01
6	5	93	94	26347.89	1	1534.29	6.5177	0.0303	0.0	0.0	3.99E-04	1.11E-02	9.32E-02	3.96E-01
2	1	107	108	23714.48	1	1534.31	6.5176	0.0303	0.0	0.0	1.04E-03	2.00E-02	1.30E-01	4.60E-01
4	3	100	101	24961.22	1	1535.15	6.5140	0.0303	0.0	0.0	7.87E-04	1.80E-02	1.32E-01	5.09E-01
4	3	97	98	23038.65	2	1535.56	6.5123	0.0303	0.0	0.0	3.21E-05	5.56E-04	3.38E-03	1.14E-02
2	1	104	105	21673.27	2	1535.80	6.5113	0.0303	0.0	0.0	4.65E-05	6.62E-04	3.53E-03	1.09E-02
13	12	65	66	31439.99	1	1536.13	6.5099	0.0303	0.0	0.0	0.0	8.48E-04	1.16E-02	6.97E-02
7	6	89	90	26936.49	1	1536.28	6.5092	0.0303	0.0	0.0	2.90E-04	8.81E-03	7.79E-02	3.45E-01
1	0	110	111	22947.38	1	1536.66	6.5076	0.0303	0.0	0.0	9.37E-04	1.60E-02	9.68E-02	3.26E-01
12	11	69	70	30577.96	1	1537.64	6.5035	0.0303	0.0	0.0	2.69E-05	1.38E-03	1.73E-02	9.85E-02
8	7	85	86	27572.73	1	1537.72	6.5031	0.0303	0.0	0.0	1.99E-04	6.63E-03	6.23E-02	2.88E-01
5	4	93	94	23612.99	2	1537.83	6.5027	0.0303	0.0	0.0	2.53E-05	4.76E-04	3.06E-03	1.08E-02
5	4	96	97	25467.79	1	1538.13	6.5014	0.0303	0.0	0.0	6.53E-04	1.61E-02	1.24E-01	4.94E-01
3	2	103	104	24136.54	1	1538.24	6.5009	0.0303	0.0	0.0	1.11E-03	2.25E-02	1.53E-01	5.57E-01
11	10	73	74	29759.31	1	1538.55	6.4996	0.0303	0.0	0.0	4.76E-05	2.17E-03	2.52E-02	1.35E-01
9	8	81	82	28255.82	1	1538.58	6.4995	0.0303	0.0	0.0	1.30E-04	4.77E-03	4.79E-02	2.32E-01
10	9	77	78	28984.96	1	1538.86	6.4983	0.0303	0.0	0.0	8.04E-05	3.28E-03	3.53E-02	1.80E-01
3	2	100	101	22167.28	2	1538.98	6.4978	0.0303	0.0	0.0	4.69E-05	7.16E-04	4.00E-03	1.28E-02
6	5	89	90	24233.98	2	1539.58	6.4953	0.0303	0.0	0.0	0.0	3.80E-04	2.59E-03	9.51E-03
6	5	92	93	26023.39	1	1540.56	6.4911	0.0303	0.0	0.0	5.00E-04	1.33E-02	1.08E-01	4.50E-01
2	1	106	107	23334.10	1	1541.00	6.4893	0.0303	0.0	0.0	1.37E-03	2.47E-02	1.55E-01	5.35E-01
13	12	64	65	31220.98	1	1541.50	6.4872	0.0303	0.0	0.0	0.0	9.51E-04	1.27E-02	7.54E-02
4	3	99	100	24608.89	1	1541.64	6.4866	0.0303	0.0	0.0	1.01E-03	2.19E-02	1.55E-01	5.86E-01
4	3	96	97	22709.22	2	1541.66	6.4865	0.0303	0.0	0.0	4.04E-05	6.68E-04	3.93E-03	1.30E-02
2	1	103	104	21316.81	2	1542.10	6.4847	0.0303	0.0	0.0	5.98E-05	8.08E-04	4.16E-03	1.25E-02
7	6	88	89	26627.30	1	1542.43	6.4833	0.0303	0.0	0.0	3.59E-04	1.05E-02	8.98E-02	3.89E-01
12	11	68	69	30344.16	1	1543.15	6.4803	0.0303	0.0	0.0	3.15E-05	1.56E-03	1.92E-02	1.07E-01
1	0	109	110	22554.35	1	1543.45	6.4790	0.0303	0.0	0.0	1.24E-03	2.00E-02	1.16E-01	3.82E-01
8	7	84	85	27278.79	1	1543.74	6.4778	0.0303	0.0	0.0	2.44E-04	7.79E-03	7.13E-02	3.23E-01
5	4	92	93	23298.45	2	1543.82	6.4774	0.0303	0.0	0.0	3.15E-05	5.67E-04	3.53E-03	1.22E-02
11	10	72	73	29510.62	1	1544.19	6.4759	0.0303	0.0	0.0	5.64E-05	2.48E-03	2.81E-02	1.48E-01
9	8	80	81	27977.05	1	1544.48	6.4747	0.0303	0.0	0.0	1.57E-04	5.55E-03	5.43E-02	2.58E-01
5	4	95	96	25130.91	1	1544.50	6.4746	0.0303	0.0	0.0	8.27E-04	1.94E-02	1.44E-01	5.65E-01
10	9	76	77	28721.29	1	1544.63	6.4740	0.0303	0.0	0.0	9.63E-05	3.79E-03	3.98E-02	1.99E-01
3	2	102	103	23771.70	1	1544.82	6.4732	0.0303	0.0	0.0	1.43E-03	2.77E-02	1.81E-01	6.44E-01
1	0	106	107	20487.70	2	1544.91	6.4729	0.0303	0.0	0.0	5.62E-05	6.74E-04	3.21E-03	9.12E-03
3	2	99	100	21825.82	2	1545.17	6.4718	0.0303	0.0	0.0	5.95E-05	8.66E-04	4.69E-03	1.46E-02
6	5	88	89	23934.27	2	1545.46	6.4706	0.0303	0.0	0.0	2.27E-05	4.48E-04	2.97E-03	1.07E-02
6	5	91	92	25701.90	1	1546.81	6.4649	0.0303	0.0	0.0	6.26E-04	1.59E-02	1.25E-01	5.10E-01
13	12	63	64	31005.07	1	1546.85	6.4648	0.0303	0.0	0.0	0.0	1.06E-03	1.39E-02	8.14E-02
2	1	105	106	22956.67	1	1547.68	6.4613	0.0303	0.0	0.0	1.78E-03	3.06E-02	1.85E-01	6.23E-01
4	3	95	96	22362.73	2	1547.74	6.4610	0.0303	0.0	0.0	5.08E-05	8.00E-04	4.57E-03	1.48E-02
4	3	98	99	24259.57	1	1548.10	6.4595	0.0303	0.0	0.0	1.29E-03	2.67E-02	1.83E-01	6.73E-01
2	1	102	103	20963.26	2	1548.38	6.4584	0.0303	0.0	0.0	7.66E-05	9.85E-04	4.91E-03	1.44E-02
7	6	87	88	26321.18	1	1548.56	6.4576	0.0303	0.0	0.0	4.45E-04	1.24E-02	1.03E-01	4.39E-01
12	11	67	68	30113.47	1	1548.64	6.4573	0.0303	0.0	0.0	3.68E-05	1.77E-03	2.12E-02	1.17E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	83	84	26987.90	1	1549.75	6.4527	0.0303	0.0	0.0	2.99E-04	9.15E-03	8.14E-02	3.61E-01
5	4	91	92	22986.86	2	1549.79	6.4525	0.0303	0.0	0.0	3.91E-05	6.73E-04	4.07E-03	1.37E-02
11	10	71	72	29265.04	1	1549.81	6.4524	0.0303	0.0	0.0	6.66E-05	2.83E-03	3.13E-02	1.63E-01
1	0	108	109	22164.27	1	1550.21	6.4507	0.0303	0.0	0.0	1.63E-03	2.50E-02	1.40E-01	4.46E-01
9	8	79	80	27701.36	1	1550.36	6.4501	0.0303	0.0	0.0	1.90E-04	6.45E-03	6.15E-02	2.87E-01
10	9	75	76	28460.70	1	1550.38	6.4500	0.0303	0.0	0.0	1.15E-04	4.36E-03	4.47E-02	2.20E-01
5	4	94	95	24797.05	1	1550.84	6.4481	0.0303	0.0	0.0	1.04E-03	2.34E-02	1.68E-01	6.44E-01
1	0	105	106	20121.98	2	1551.28	6.4463	0.0303	0.0	0.0	7.27E-05	8.28E-04	3.81E-03	1.06E-02
6	5	87	88	23637.53	2	1551.31	6.4462	0.0303	0.0	0.0	2.80E-05	5.28E-04	3.40E-03	1.20E-02
3	2	98	99	21487.30	2	1551.35	6.4460	0.0303	0.0	0.0	7.55E-05	1.05E-03	5.48E-03	1.67E-02
3	2	101	102	23409.84	1	1551.38	6.4459	0.0303	0.0	0.0	1.85E-03	3.39E-02	2.14E-01	7.44E-01
13	12	62	63	30792.28	1	1552.17	6.4426	0.0303	0.0	0.0	2.24E-05	1.19E-03	1.52E-02	8.78E-02
7	6	83	84	24334.02	2	1552.30	6.4421	0.0303	0.0	0.0	0.0	3.92E-04	2.70E-03	9.98E-03
6	5	90	91	25383.46	1	1553.03	6.4390	0.0303	0.0	0.0	7.82E-04	1.90E-02	1.45E-01	5.77E-01
4	3	94	95	22059.18	2	1553.80	6.4358	0.0303	0.0	0.0	6.36E-05	9.58E-04	5.30E-03	1.68E-02
12	11	66	67	29885.90	1	1554.10	6.4346	0.0303	0.0	0.0	4.29E-05	1.99E-03	2.34E-02	1.27E-01
2	1	104	105	22582.21	1	1554.33	6.4336	0.0303	0.0	0.0	2.32E-03	3.77E-02	2.20E-01	7.23E-01
4	3	97	98	23913.24	1	1554.55	6.4327	0.0303	0.0	0.0	1.64E-03	3.24E-02	2.14E-01	7.71E-01
2	1	101	102	20612.63	2	1554.64	6.4324	0.0303	0.0	0.0	9.80E-05	1.20E-03	5.77E-03	1.66E-02
7	6	86	87	26018.06	1	1554.67	6.4322	0.0303	0.0	0.0	5.49E-04	1.46E-02	1.19E-01	4.94E-01
11	10	70	71	29022.55	1	1555.40	6.4292	0.0303	0.0	0.0	7.85E-05	3.22E-03	3.49E-02	1.78E-01
8	7	82	83	26700.09	1	1555.73	6.4278	0.0303	0.0	0.0	3.64E-04	1.07E-02	9.27E-02	4.04E-01
5	4	90	91	22678.24	2	1555.74	6.4278	0.0303	0.0	0.0	4.85E-05	7.98E-04	4.69E-03	1.55E-02
10	9	74	75	28203.20	1	1556.10	6.4263	0.0303	0.0	0.0	1.37E-04	5.01E-03	5.01E-02	2.42E-01
9	8	78	79	27428.76	1	1556.21	6.4259	0.0303	0.0	0.0	2.29E-04	7.49E-03	6.95E-02	3.18E-01
1	0	107	108	21777.14	1	1556.96	6.4228	0.0303	0.0	0.0	2.14E-03	3.10E-02	1.68E-01	5.21E-01
6	5	86	87	23343.78	2	1557.15	6.4220	0.0303	0.0	0.0	3.43E-05	6.21E-04	3.89E-03	1.34E-02
5	4	93	94	24466.21	1	1557.17	6.4219	0.0303	0.0	0.0	1.32E-03	2.81E-02	1.96E-01	7.33E-01
13	12	61	62	30582.61	1	1557.47	6.4207	0.0303	0.0	0.0	2.58E-05	1.32E-03	1.66E-02	9.46E-02
3	2	97	98	21151.72	2	1557.50	6.4205	0.0303	0.0	0.0	9.54E-05	1.26E-03	6.40E-03	1.90E-02
1	0	104	105	19759.18	2	1557.63	6.4200	0.0303	0.0	0.0	9.38E-05	1.01E-03	4.51E-03	1.22E-02
3	2	100	101	23050.98	1	1557.92	6.4188	0.0303	0.0	0.0	2.38E-03	4.14E-02	2.53E-01	8.58E-01
7	6	82	83	24055.05	2	1558.02	6.4184	0.0303	0.0	0.0	2.27E-05	4.56E-04	3.06E-03	1.11E-02
6	5	89	90	25068.06	1	1559.24	6.4134	0.0303	0.0	0.0	9.73E-04	2.26E-02	1.68E-01	6.53E-01
12	11	65	66	29661.45	1	1559.53	6.4122	0.0303	0.0	0.0	4.98E-05	2.24E-03	2.58E-02	1.38E-01
4	3	93	94	21738.60	2	1559.85	6.4109	0.0303	0.0	0.0	7.96E-05	1.14E-03	6.14E-03	1.90E-02
7	6	85	86	25718.04	1	1560.75	6.4072	0.0303	0.0	0.0	6.77E-04	1.73E-02	1.36E-01	5.55E-01
2	1	100	101	20264.94	2	1560.89	6.4066	0.0303	0.0	0.0	1.25E-04	1.45E-03	6.78E-03	1.90E-02
2	1	103	104	22210.73	1	1560.96	6.4063	0.0303	0.0	2.50E-05	3.02E-03	4.65E-02	2.62E-01	8.38E-01
11	10	69	70	28783.19	1	1560.97	6.4063	0.0303	0.0	0.0	9.22E-05	3.66E-03	3.87E-02	1.94E-01
4	3	96	97	23569.94	1	1560.97	6.4063	0.0303	0.0	0.0	2.09E-03	3.92E-02	2.51E-01	8.83E-01
5	4	89	90	22372.60	2	1561.67	6.4034	0.0303	0.0	0.0	6.00E-05	9.45E-04	5.39E-03	1.74E-02
8	7	81	82	26415.37	1	1561.69	6.4033	0.0303	0.0	0.0	4.44E-04	1.25E-02	1.06E-01	4.51E-01
10	9	73	74	27948.82	1	1561.81	6.4028	0.0303	0.0	0.0	1.63E-04	5.75E-03	5.61E-02	2.66E-01
9	8	77	78	27159.25	1	1562.04	6.4019	0.0303	0.0	0.0	2.76E-04	8.67E-03	7.84E-02	3.53E-01
13	12	60	61	30376.09	1	1562.74	6.3990	0.0303	0.0	0.0	2.95E-05	1.47E-03	1.81E-02	1.02E-01
6	5	85	86	23053.02	2	1562.96	6.3981	0.0303	0.0	0.0	4.19E-05	7.28E-04	4.44E-03	1.50E-02
5	4	92	93	24138.43	1	1563.48	6.3960	0.0303	0.0	0.0	1.65E-03	3.37E-02	2.28E-01	8.33E-01
3	2	96	97	20819.09	2	1563.64	6.3953	0.0303	0.0	0.0	1.20E-04	1.52E-03	7.46E-03	2.17E-02
1	0	106	107	21392.98	1	1563.69	6.3951	0.0303	0.0	2.84E-05	2.81E-03	3.85E-02	2.01E-01	6.08E-01
7	6	81	82	23779.10	2	1563.71	6.3950	0.0303	0.0	0.0	2.75E-05	5.31E-04	3.47E-03	1.24E-02
1	0	103	104	19399.30	2	1563.97	6.3940	0.0303	0.0	0.0	1.21E-04	1.24E-03	5.33E-03	1.41E-02
3	2	99	100	22695.13	1	1564.44	6.3921	0.0303	0.0	2.26E-05	3.06E-03	5.06E-02	2.98E-01	9.88E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	64	65	29440.12	1	1564.94	6.3900	0.0303	0.0	0.0	5.77E-05	2.52E-03	2.83E-02	1.49E-01
6	5	88	89	24755.73	1	1565.43	6.3880	0.0303	0.0	0.0	1.21E-03	2.69E-02	1.93E-01	7.38E-01
4	3	92	93	21420.99	2	1565.87	6.3862	0.0303	0.0	0.0	9.93E-05	1.36E-03	7.11E-03	2.15E-02
11	10	68	69	28546.96	1	1566.52	6.3836	0.0303	0.0	0.0	1.08E-04	4.15E-03	4.29E-02	2.12E-01
7	6	84	85	25421.09	1	1566.81	6.3824	0.0303	0.0	0.0	8.32E-04	2.04E-02	1.56E-01	6.22E-01
2	1	99	100	19920.19	2	1567.12	6.3811	0.0303	0.0	0.0	1.59E-04	1.76E-03	7.96E-03	2.18E-02
4	3	95	96	23229.68	1	1567.37	6.3801	0.0303	0.0	0.0	2.65E-03	4.74E-02	2.94E-01	1.01E 00
10	9	72	73	27697.55	1	1567.48	6.3797	0.0303	0.0	0.0	1.94E-04	6.58E-03	6.27E-02	2.92E-01
5	4	88	89	22069.95	2	1567.58	6.3793	0.0303	0.0	0.0	7.40E-05	1.12E-03	6.19E-03	1.96E-02
2	1	102	103	21842.26	1	1567.58	6.3793	0.0303	0.0	3.54E-05	3.91E-03	5.72E-02	3.11E-01	9.70E-01
8	7	80	81	26133.74	1	1567.62	6.3791	0.0303	0.0	0.0	5.39E-04	1.46E-02	1.20E-01	5.02E-01
9	8	76	77	26892.85	1	1567.85	6.3782	0.0303	0.0	0.0	3.31E-04	1.00E-02	8.84E-02	3.90E-01
13	12	59	60	30172.71	1	1567.99	6.3776	0.0303	0.0	0.0	3.37E-05	1.63E-03	1.97E-02	1.09E-01
6	5	84	85	22765.26	2	1568.75	6.3745	0.0303	0.0	0.0	5.12E-05	8.53E-04	5.06E-03	1.68E-02
7	6	80	81	23506.16	2	1569.39	6.3719	0.0303	0.0	0.0	3.32E-05	6.16E-04	3.92E-03	1.37E-02
3	2	95	96	20489.43	2	1569.75	6.3704	0.0303	0.0	0.0	1.52E-04	1.82E-03	8.69E-03	2.47E-02
5	4	91	92	23813.70	1	1569.76	6.3704	0.0303	0.0	0.0	2.07E-03	4.03E-02	2.65E-01	9.46E-01
1	0	102	103	19042.35	2	1570.28	6.3683	0.0303	0.0	0.0	1.55E-04	1.52E-03	6.29E-03	1.62E-02
12	11	63	64	29221.95	1	1570.33	6.3681	0.0303	0.0	0.0	6.67E-05	2.82E-03	3.11E-02	1.61E-01
1	0	105	106	21011.81	1	1570.40	6.3678	0.0303	0.0	4.07E-05	3.68E-03	4.78E-02	2.40E-01	7.07E-01
3	2	98	99	22342.30	1	1570.94	6.3656	0.0303	0.0	3.15E-05	3.92E-03	6.16E-02	3.51E-01	1.14E 00
6	5	87	88	24446.47	1	1571.59	6.3630	0.0303	0.0	0.0	1.50E-03	3.19E-02	2.23E-01	8.32E-01
4	3	91	92	21106.37	2	1571.87	6.3618	0.0303	0.0	0.0	1.24E-04	1.62E-03	8.21E-03	2.43E-02
11	10	67	68	28313.86	1	1572.04	6.3612	0.0303	0.0	0.0	1.26E-04	4.69E-03	4.75E-02	2.31E-01
7	6	83	84	25127.25	1	1572.85	6.3579	0.0303	0.0	0.0	1.02E-03	2.39E-02	1.78E-01	6.97E-01
10	9	71	72	27449.42	1	1573.14	6.3567	0.0303	0.0	0.0	2.29E-04	7.51E-03	6.99E-02	3.21E-01
13	12	58	59	29972.48	1	1573.21	6.3564	0.0303	0.0	0.0	3.84E-05	1.81E-03	2.15E-02	1.17E-01
2	1	98	99	19578.40	2	1573.32	6.3560	0.0303	0.0	0.0	2.02E-04	2.13E-03	9.32E-03	2.49E-02
5	4	87	88	21770.31	2	1573.47	6.3554	0.0303	0.0	0.0	9.12E-05	1.32E-03	7.10E-03	2.21E-02
8	7	79	80	25855.22	1	1573.53	6.3551	0.0303	0.0	0.0	6.53E-04	1.70E-02	1.36E-01	5.59E-01
9	8	75	76	26629.57	1	1573.63	6.3547	0.0303	0.0	0.0	3.96E-04	1.16E-02	9.94E-02	4.31E-01
4	3	94	95	22892.46	1	1573.76	6.3542	0.0303	0.0	2.37E-05	3.36E-03	5.71E-02	3.43E-01	1.15E 00
2	1	101	102	21476.80	1	1574.17	6.3526	0.0303	0.0	5.00E-05	5.05E-03	7.02E-02	3.68E-01	1.12E 00
6	5	83	84	22480.53	2	1574.52	6.3511	0.0303	0.0	0.0	6.23E-05	9.98E-04	5.76E-03	1.88E-02
7	6	79	80	23236.26	2	1575.04	6.3490	0.0303	0.0	0.0	4.00E-05	7.13E-04	4.43E-03	1.52E-02
12	11	62	63	29006.93	1	1575.68	6.3465	0.0303	0.0	0.0	7.69E-05	3.15E-03	3.41E-02	1.74E-01
3	2	94	95	20162.75	2	1575.85	6.3458	0.0303	0.0	0.0	1.90E-04	2.18E-03	1.01E-02	2.81E-02
5	4	90	91	23492.04	1	1576.02	6.3451	0.0303	0.0	0.0	2.60E-03	4.82E-02	3.07E-01	1.07E 00
1	0	101	102	18688.36	2	1576.58	6.3428	0.0303	0.0	0.0	1.99E-04	1.85E-03	7.41E-03	1.86E-02
1	0	104	105	20633.65	1	1577.09	6.3408	0.0303	0.0	5.82E-05	4.80E-03	5.91E-02	2.86E-01	8.23E-01
3	2	97	98	21992.52	1	1577.42	6.3395	0.0303	0.0	4.38E-05	5.01E-03	7.49E-02	4.13E-01	1.30E 00
11	10	66	67	28083.91	1	1577.53	6.3390	0.0303	0.0	0.0	1.48E-04	5.30E-03	5.24E-02	2.51E-01
6	5	86	87	24140.31	1	1577.73	6.3382	0.0303	0.0	0.0	1.86E-03	3.78E-02	2.56E-01	9.38E-01
4	3	90	91	20794.75	2	1577.86	6.3377	0.0303	0.0	0.0	1.53E-04	1.93E-03	9.46E-03	2.75E-02
13	12	57	58	29775.43	1	1578.41	6.3355	0.0303	0.0	0.0	4.37E-05	2.00E-03	2.33E-02	1.25E-01
10	9	70	71	27204.43	1	1578.77	6.3340	0.0303	0.0	0.0	2.70E-04	8.56E-03	7.79E-02	3.51E-01
7	6	82	83	24836.50	1	1578.87	6.3336	0.0303	0.0	0.0	1.25E-03	2.81E-02	2.03E-01	7.80E-01
5	4	86	87	21473.68	2	1579.33	6.3318	0.0303	0.0	0.0	1.12E-04	1.55E-03	8.13E-03	2.47E-02
9	8	74	75	26369.43	1	1579.39	6.3316	0.0303	0.0	0.0	4.73E-04	1.33E-02	1.12E-01	4.75E-01
8	7	78	79	25579.82	1	1579.42	6.3314	0.0303	0.0	0.0	7.89E-04	1.98E-02	1.54E-01	6.21E-01
2	1	97	98	19239.58	2	1579.51	6.3311	0.0303	0.0	0.0	2.57E-04	2.58E-03	1.09E-02	2.85E-02
4	3	93	94	22558.31	1	1580.12	6.3286	0.0303	0.0	3.24E-05	4.24E-03	6.88E-02	4.01E-01	1.31E 00
6	5	82	83	22198.82	2	1580.27	6.3280	0.0303	0.0	0.0	7.57E-05	1.16E-03	6.54E-03	2.09E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	78	79	22969.40	2	1580.67	6.3264	0.0303	0.0	0.0	4.80E-05	8.25E-04	4.99E-03	1.68E-02
2	1	100	101	21114.38	1	1580.75	6.3261	0.0303	0.0	7.04E-05	6.52E-03	8.60E-02	4.36E-01	1.30E 00
12	11	61	62	28795.07	1	1581.02	6.3250	0.0303	0.0	0.0	8.84E-05	3.52E-03	3.73E-02	1.87E-01
3	2	93	94	19839.07	2	1581.93	6.3214	0.0303	0.0	0.0	2.39E-04	2.61E-03	1.17E-02	3.19E-02
5	4	89	90	23173.46	1	1582.26	6.3201	0.0303	0.0	2.13E-05	3.24E-03	5.74E-02	3.55E-01	1.21E 00
1	0	100	101	18337.33	2	1582.86	6.3177	0.0303	0.0	0.0	2.55E-04	2.25E-03	8.72E-03	2.14E-02
11	10	65	66	27857.12	1	1583.00	6.3171	0.0303	0.0	0.0	1.72E-04	5.97E-03	5.78E-02	2.73E-01
13	12	56	57	29581.54	1	1583.58	6.3148	0.0303	0.0	0.0	4.95E-05	2.21E-03	2.52E-02	1.34E-01
1	0	103	104	20258.50	1	1583.76	6.3141	0.0303	0.0	8.29E-05	6.26E-03	7.29E-02	3.41E-01	9.55E-01
4	3	89	90	20486.14	2	1583.82	6.3138	0.0303	0.0	0.0	1.90E-04	2.28E-03	1.09E-02	3.10E-02
6	5	85	86	23837.25	1	1583.85	6.3137	0.0303	0.0	0.0	2.29E-03	4.47E-02	2.95E-01	1.06E 00
3	2	96	97	21645.80	1	1583.88	6.3136	0.0303	0.0	6.06E-05	6.38E-03	9.09E-02	4.85E-01	1.49E 00
10	9	69	70	26962.59	1	1584.37	6.3117	0.0303	0.0	0.0	3.18E-04	9.74E-03	8.65E-02	3.84E-01
7	6	81	82	24548.88	1	1584.86	6.3097	0.0303	0.0	0.0	1.52E-03	3.29E-02	2.32E-01	8.72E-01
9	8	73	74	26112.42	1	1585.13	6.3086	0.0303	0.0	0.0	5.64E-04	1.53E-02	1.25E-01	5.24E-01
5	4	85	86	21180.08	2	1585.18	6.3084	0.0303	0.0	0.0	1.37E-04	1.82E-03	9.29E-03	2.77E-02
8	7	77	78	25307.56	1	1585.29	6.3080	0.0303	0.0	0.0	9.51E-04	2.29E-02	1.74E-01	6.89E-01
2	1	96	97	18903.75	2	1585.68	6.3064	0.0303	0.0	0.0	3.24E-04	3.11E-03	1.27E-02	3.25E-02
6	5	81	82	21920.16	2	1586.00	6.3052	0.0303	0.0	0.0	9.17E-05	1.36E-03	7.41E-03	2.33E-02
7	6	77	78	22705.59	2	1586.28	6.3041	0.0303	0.0	0.0	5.75E-05	9.51E-04	5.61E-03	1.86E-02
12	11	60	61	28586.38	1	1586.33	6.3039	0.0303	0.0	0.0	1.01E-04	3.92E-03	4.07E-02	2.02E-01
4	3	92	93	22227.24	1	1586.46	6.3033	0.0303	0.0	4.41E-05	5.34E-03	8.27E-02	4.66E-01	1.50E 00
2	1	99	100	20755.00	1	1587.31	6.3000	0.0303	0.0	9.87E-05	8.39E-03	1.05E-01	5.15E-01	1.49E 00
3	2	92	93	19518.39	2	1587.98	6.2973	0.0303	0.0	0.0	2.98E-04	3.12E-03	1.36E-02	3.61E-02
11	10	64	65	27633.50	1	1588.45	6.2954	0.0303	0.0	0.0	1.99E-04	6.71E-03	6.36E-02	2.96E-01
5	4	88	89	22857.99	1	1588.48	6.2953	0.0303	0.0	2.87E-05	4.04E-03	6.84E-02	4.10E-01	1.37E 00
13	12	55	56	29390.83	1	1588.72	6.2944	0.0303	0.0	0.0	5.60E-05	2.43E-03	2.72E-02	1.43E-01
1	0	99	100	17989.28	2	1589.12	6.2928	0.0303	0.0	0.0	3.25E-04	2.73E-03	1.02E-02	2.46E-02
4	3	88	89	20180.55	2	1589.76	6.2903	0.0303	0.0	0.0	2.35E-04	2.71E-03	1.25E-02	3.49E-02
6	5	84	85	23537.30	1	1589.95	6.2895	0.0303	0.0	0.0	2.82E-03	5.28E-02	3.38E-01	1.19E 00
10	9	68	69	26723.91	1	1589.95	6.2895	0.0303	0.0	0.0	3.74E-04	1.11E-02	9.60E-02	4.19E-01
3	2	95	96	21302.14	1	1590.32	6.2880	0.0303	0.0	8.37E-05	8.12E-03	1.10E-01	5.68E-01	1.71E 00
1	0	102	103	19886.39	1	1590.41	6.2877	0.0303	0.0	1.18E-04	8.13E-03	8.99E-02	4.05E-01	1.11E 00
7	6	80	81	24264.39	1	1590.83	6.2860	0.0303	0.0	0.0	1.85E-03	3.84E-02	2.64E-01	9.72E-01
9	8	72	73	25858.57	1	1590.84	6.2860	0.0303	0.0	0.0	6.70E-04	1.75E-02	1.40E-01	5.76E-01
5	4	84	85	20889.52	2	1591.01	6.2853	0.0303	0.0	0.0	1.68E-04	2.14E-03	1.06E-02	3.10E-02
8	7	76	77	25038.44	1	1591.13	6.2848	0.0303	0.0	0.0	1.14E-03	2.65E-02	1.96E-01	7.63E-01
12	11	59	60	28380.87	1	1591.61	6.2829	0.0303	0.0	0.0	1.16E-04	4.35E-03	4.43E-02	2.17E-01
6	5	80	81	21644.55	2	1591.71	6.2826	0.0303	0.0	0.0	1.11E-04	1.58E-03	8.39E-03	2.59E-02
2	1	95	96	18570.92	2	1591.83	6.2821	0.0303	0.0	0.0	4.09E-04	3.74E-03	1.48E-02	3.70E-02
7	6	76	77	22444.85	2	1591.87	6.2819	0.0303	0.0	0.0	6.87E-05	1.10E-03	6.30E-03	2.05E-02
4	3	91	92	21899.26	1	1592.78	6.2783	0.0303	0.0	6.00E-05	6.71E-03	9.91E-02	5.42E-01	1.70E 00
13	12	54	55	29203.32	1	1593.83	6.2742	0.0303	0.0	0.0	6.32E-05	2.67E-03	2.94E-02	1.52E-01
2	1	98	99	20398.68	1	1593.84	6.2742	0.0303	0.0	1.38E-04	1.08E-02	1.28E-01	6.07E-01	1.72E 00
11	10	63	64	27413.06	1	1593.87	6.2740	0.0303	0.0	0.0	2.31E-04	7.53E-03	6.99E-02	3.20E-01
3	2	91	92	19200.73	2	1594.02	6.2734	0.0303	0.0	0.0	3.72E-04	3.72E-03	1.57E-02	4.09E-02
5	4	87	88	22545.62	1	1594.68	6.2709	0.0303	0.0	3.84E-05	5.02E-03	8.13E-02	4.73E-01	1.55E 00
1	0	98	99	17644.22	2	1595.36	6.2682	0.0303	0.0	0.0	4.14E-04	3.31E-03	1.20E-02	2.82E-02
10	9	67	68	26488.41	1	1595.51	6.2676	0.0303	0.0	0.0	4.38E-04	1.25E-02	1.06E-01	4.57E-01
4	3	87	88	19878.00	2	1595.68	6.2669	0.0303	0.0	0.0	2.90E-04	3.20E-03	1.44E-02	3.93E-02
6	5	83	84	23240.48	1	1596.02	6.2656	0.0303	0.0	2.25E-05	3.47E-03	6.21E-02	3.87E-01	1.33E 00
9	8	71	72	25607.89	1	1596.53	6.2636	0.0303	0.0	0.0	7.95E-04	2.00E-02	1.56E-01	6.32E-01
3	2	94	95	20961.57	1	1596.74	6.2628	0.0303	0.0	1.15E-04	1.03E-02	1.33E-01	6.65E-01	1.96E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	79	80	23983.04	1	1596.78	6.2626	0.0303	0.0	0.0	2.25E-03	4.48E-02	2.99E-01	1.08E 00
5	4	83	84	20602.01	2	1596.81	6.2625	0.0303	0.0	0.0	2.05E-04	2.51E-03	1.21E-02	3.47E-02
12	11	58	59	28178.56	1	1596.87	6.2623	0.0303	0.0	0.0	1.32E-04	4.82E-03	4.82E-02	2.33E-01
8	7	75	76	24772.47	1	1596.95	6.2619	0.0303	0.0	0.0	1.37E-03	3.06E-02	2.21E-01	8.44E-01
1	0	101	102	19517.34	1	1597.04	6.2616	0.0303	0.0	1.67E-04	1.05E-02	1.11E-01	4.81E-01	1.28E 00
6	5	79	80	21372.00	2	1597.40	6.2602	0.0303	0.0	0.0	1.34E-04	1.83E-03	9.49E-03	2.87E-02
7	6	75	76	22187.18	2	1597.43	6.2601	0.0303	0.0	0.0	8.19E-05	1.26E-03	7.07E-03	2.26E-02
2	1	94	95	18241.11	2	1597.96	6.2580	0.0303	0.0	0.0	5.15E-04	4.49E-03	1.73E-02	4.21E-02
13	12	53	54	29019.00	1	1598.92	6.2542	0.0303	0.0	0.0	7.10E-05	2.92E-03	3.17E-02	1.62E-01
4	3	90	91	21574.38	1	1599.08	6.2536	0.0303	0.0	8.12E-05	8.42E-03	1.19E-01	6.29E-01	1.93E 00
11	10	62	63	27195.80	1	1599.26	6.2529	0.0303	0.0	0.0	2.66E-04	8.43E-03	7.66E-02	3.46E-01
3	2	90	91	18886.10	2	1600.04	6.2498	0.0303	0.0	0.0	4.63E-04	4.43E-03	1.81E-02	4.62E-02
2	1	97	98	20045.44	1	1600.36	6.2486	0.0303	0.0	1.92E-04	1.38E-02	1.56E-01	7.15E-01	1.98E 00
5	4	86	87	22236.39	1	1600.86	6.2466	0.0303	0.0	5.12E-05	6.22E-03	9.65E-02	5.45E-01	1.75E 00
10	9	66	67	26256.09	1	1601.04	6.2459	0.0303	0.0	0.0	5.12E-04	1.42E-02	1.18E-01	4.98E-01
1	0	97	98	17302.17	2	1601.58	6.2438	0.0303	0.0	0.0	5.26E-04	4.01E-03	1.41E-02	3.22E-02
4	3	86	87	19578.50	2	1601.59	6.2438	0.0303	0.0	0.0	3.57E-04	3.77E-03	1.65E-02	4.41E-02
6	5	82	83	22946.81	1	1602.07	6.2419	0.0303	0.0	2.95E-05	4.25E-03	7.30E-02	4.42E-01	1.49E 00
12	11	57	58	27979.44	1	1602.10	6.2418	0.0303	0.0	0.0	1.51E-04	5.34E-03	5.23E-02	2.49E-01
9	8	70	71	25360.39	1	1602.20	6.2414	0.0303	0.0	0.0	9.40E-04	2.28E-02	1.74E-01	6.93E-01
5	4	82	83	20317.56	2	1602.60	6.2399	0.0303	0.0	0.0	2.49E-04	2.93E-03	1.37E-02	3.87E-02
7	6	78	79	23704.85	1	1602.71	6.2394	0.0303	0.0	0.0	2.72E-03	5.21E-02	3.39E-01	1.20E 00
8	7	74	75	24509.67	1	1602.75	6.2393	0.0303	0.0	0.0	1.64E-03	3.53E-02	2.48E-01	9.32E-01
7	6	74	75	21932.59	2	1602.97	6.2384	0.0303	0.0	0.0	9.74E-05	1.44E-03	7.91E-03	2.49E-02
6	5	78	79	21102.53	2	1603.06	6.2381	0.0303	0.0	0.0	1.61E-04	2.12E-03	1.07E-02	3.18E-02
3	2	93	94	20624.10	1	1603.13	6.2378	0.0303	0.0	1.58E-04	1.30E-02	1.60E-01	7.77E-01	2.23E 00
1	0	100	101	19151.35	1	1603.65	6.2358	0.0303	0.0	2.35E-04	1.36E-02	1.36E-01	5.70E-01	1.48E 00
13	12	52	53	28837.89	1	1603.98	6.2345	0.0303	0.0	0.0	7.97E-05	3.20E-03	3.40E-02	1.72E-01
2	1	93	94	17914.32	2	1604.07	6.2341	0.0303	0.0	0.0	6.47E-04	5.38E-03	2.00E-02	4.78E-02
11	10	61	62	26981.75	1	1604.63	6.2320	0.0303	0.0	0.0	3.07E-04	9.41E-03	8.39E-02	3.73E-01
4	3	89	90	21252.63	1	1605.36	6.2291	0.0303	0.0	1.10E-04	1.05E-02	1.42E-01	7.29E-01	2.19E 00
3	2	89	90	18574.52	2	1606.03	6.2265	0.0303	0.0	0.0	5.75E-04	5.26E-03	2.09E-02	5.21E-02
10	9	65	66	26026.96	1	1606.54	6.2246	0.0303	0.0	0.0	5.97E-04	1.60E-02	1.30E-01	5.41E-01
2	1	96	97	19695.29	1	1606.85	6.2234	0.0303	0.0	2.67E-04	1.76E-02	1.90E-01	8.41E-01	2.27E 00
5	4	85	86	21930.29	1	1607.02	6.2227	0.0303	0.0	6.82E-05	7.70E-03	1.14E-01	6.27E-01	1.97E 00
12	11	56	57	27783.53	1	1607.30	6.2216	0.0303	0.0	0.0	1.71E-04	5.90E-03	5.67E-02	2.66E-01
4	3	85	86	19282.05	2	1607.47	6.2210	0.0303	0.0	0.0	4.39E-04	4.44E-03	1.89E-02	4.95E-02
1	0	96	97	16963.14	2	1607.79	6.2197	0.0303	0.0	0.0	6.67E-04	4.84E-03	1.65E-02	3.68E-02
9	8	69	70	25116.07	1	1607.84	6.2195	0.0303	0.0	0.0	1.11E-03	2.60E-02	1.94E-01	7.59E-01
6	5	81	82	22656.29	1	1608.10	6.2185	0.0303	0.0	3.87E-05	5.20E-03	8.56E-02	5.04E-01	1.67E 00
5	4	81	82	20036.19	2	1608.36	6.2175	0.0303	0.0	0.0	3.03E-04	3.41E-03	1.56E-02	4.31E-02
7	6	73	74	21681.10	2	1608.49	6.2170	0.0303	0.0	0.0	1.16E-04	1.65E-03	8.84E-03	2.73E-02
8	7	73	74	24250.05	1	1608.52	6.2169	0.0303	0.0	0.0	1.96E-03	4.06E-02	2.78E-01	1.03E 00
7	6	77	78	23429.83	1	1608.61	6.2165	0.0303	0.0	2.03E-05	3.29E-03	6.05E-02	3.84E-01	1.34E 00
6	5	77	78	20836.14	2	1608.70	6.2162	0.0303	0.0	0.0	1.93E-04	2.44E-03	1.21E-02	3.52E-02
13	12	51	52	28659.99	1	1609.02	6.2150	0.0303	0.0	0.0	8.92E-05	3.49E-03	3.65E-02	1.82E-01
3	2	92	93	20289.75	1	1609.51	6.2131	0.0303	0.0	2.16E-04	1.65E-02	1.93E-01	9.06E-01	2.55E 00
11	10	60	61	26770.90	1	1609.98	6.2113	0.0303	0.0	0.0	3.52E-04	1.05E-02	9.16E-02	4.02E-01
2	1	92	93	17590.57	2	1610.16	6.2106	0.0303	0.0	2.04E-05	8.11E-04	6.43E-03	2.33E-02	5.43E-02
1	0	99	100	18788.44	1	1610.24	6.2103	0.0303	0.0	3.31E-04	1.76E-02	1.66E-01	6.75E-01	1.71E 00
4	3	88	89	20934.01	1	1611.61	6.2050	0.0303	0.0	1.48E-04	1.32E-02	1.69E-01	8.44E-01	2.48E 00
3	2	88	89	18265.99	2	1612.01	6.2034	0.0303	0.0	0.0	7.13E-04	6.23E-03	2.40E-02	5.88E-02
10	9	64	65	25801.04	1	1612.03	6.2034	0.0303	0.0	0.0	6.94E-04	1.80E-02	1.43E-01	5.87E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	55	56	27590.84	1	1612.48	6.2016	0.0303	0.0	0.0	1.94E-04	6.50E-03	6.14E-02	2.85E-01
5	4	84	85	21627.34	1	1613.15	6.1991	0.0303	0.0	9.05E-05	9.50E-03	1.35E-01	7.20E-01	2.22E 00
4	3	84	85	18988.68	2	1613.33	6.1984	0.0303	0.0	0.0	5.38E-04	5.22E-03	2.16E-02	5.54E-02
2	1	95	96	19348.24	1	1613.33	6.1984	0.0303	0.0	3.70E-04	2.25E-02	2.30E-01	9.87E-01	2.60E 00
9	8	68	69	24874.95	1	1613.45	6.1979	0.0303	0.0	0.0	1.30E-03	2.96E-02	2.15E-01	8.29E-01
1	0	95	96	16627.14	2	1613.97	6.1959	0.0303	0.0	2.67E-05	8.44E-04	5.83E-03	1.92E-02	4.20E-02
7	6	72	73	21432.71	2	1613.99	6.1958	0.0303	0.0	0.0	1.37E-04	1.89E-03	9.86E-03	3.00E-02
13	12	50	51	28485.31	1	1614.03	6.1957	0.0303	0.0	0.0	9.95E-05	3.79E-03	3.91E-02	1.93E-01
5	4	80	81	19757.90	2	1614.10	6.1954	0.0303	0.0	0.0	3.67E-04	3.97E-03	1.77E-02	4.79E-02
6	5	80	81	22368.93	1	1614.11	6.1954	0.0303	0.0	5.05E-05	6.34E-03	1.00E-01	5.74E-01	1.86E 00
8	7	72	73	23993.62	1	1614.27	6.1948	0.0303	0.0	0.0	2.33E-03	4.66E-02	3.12E-01	1.13E 00
6	5	76	77	20572.85	2	1614.32	6.1946	0.0303	0.0	0.0	2.31E-04	2.92E-03	1.36E-02	3.88E-02
7	6	76	77	23157.98	1	1614.49	6.1939	0.0303	0.0	2.61E-05	3.96E-03	7.02E-02	4.33E-01	1.48E 00
11	10	59	60	26563.26	1	1615.30	6.1908	0.0303	0.0	0.0	4.04E-04	1.17E-02	9.99E-02	4.32E-01
3	2	91	92	19958.52	1	1615.87	6.1886	0.0303	0.0	2.95E-04	2.08E-02	2.32E-01	1.05E 00	2.90E 00
2	1	91	92	17269.87	2	1616.23	6.1872	0.0303	0.0	2.75E-05	1.01E-03	7.68E-03	2.69E-02	6.15E-02
1	0	98	99	18428.62	1	1616.82	6.1850	0.0303	0.0	4.64E-04	2.27E-02	2.03E-01	7.98E-01	1.97E 00
10	9	63	64	25578.32	1	1617.48	6.1825	0.0303	0.0	0.0	8.04E-04	2.02E-02	1.57E-01	6.35E-01
12	11	54	55	27401.37	1	1617.63	6.1819	0.0303	0.0	0.0	2.19E-04	7.14E-03	6.63E-02	3.03E-01
4	3	87	88	20618.54	1	1617.85	6.1810	0.0303	0.0	1.99E-04	1.64E-02	2.01E-01	9.75E-01	2.81E 00
3	2	87	88	17960.53	2	1617.97	6.1806	0.0303	0.0	2.03E-05	8.81E-04	7.38E-03	2.76E-02	6.62E-02
13	12	49	50	28313.87	1	1619.01	6.1766	0.0303	0.0	0.0	1.11E-04	4.12E-03	4.17E-02	2.03E-01
9	8	67	68	24637.04	1	1619.05	6.1765	0.0303	0.0	0.0	1.53E-03	3.35E-02	2.39E-01	9.04E-01
4	3	83	84	18698.40	2	1619.16	6.1760	0.0303	0.0	0.0	6.57E-04	6.12E-03	2.46E-02	6.20E-02
5	4	83	84	21327.55	1	1619.26	6.1757	0.0303	0.0	1.20E-04	1.17E-02	1.59E-01	8.25E-01	2.49E 00
7	6	71	72	21187.44	2	1619.47	6.1749	0.0303	0.0	0.0	1.62E-04	2.15E-03	1.10E-02	3.28E-02
2	1	94	95	19004.32	1	1619.78	6.1737	0.0303	0.0	5.11E-04	2.86E-02	2.79E-01	1.16E 00	2.98E 00
5	4	79	80	19482.71	2	1619.82	6.1735	0.0303	0.0	0.0	4.43E-04	4.62E-03	2.00E-02	5.32E-02
6	5	75	76	20312.67	2	1619.92	6.1731	0.0303	0.0	0.0	2.76E-04	3.24E-03	1.52E-02	4.28E-02
8	7	71	72	23740.39	1	1620.00	6.1728	0.0303	0.0	0.0	2.77E-03	5.34E-02	3.49E-01	1.24E 00
6	5	79	80	22084.76	1	1620.09	6.1725	0.0303	0.0	6.57E-05	7.71E-03	1.17E-01	6.52E-01	2.07E 00
1	0	94	95	16294.18	2	1620.13	6.1723	0.0303	0.0	3.65E-05	1.06E-03	7.01E-03	2.24E-02	4.78E-02
7	6	75	76	22889.33	1	1620.34	6.1715	0.0303	0.0	3.35E-05	4.76E-03	8.12E-02	4.89E-01	1.64E 00
11	10	58	59	26358.85	1	1620.59	6.1706	0.0303	0.0	0.0	4.61E-04	1.30E-02	1.09E-01	4.64E-01
3	2	90	91	19630.43	1	1622.20	6.1645	0.0303	0.0	4.01E-04	2.61E-02	2.78E-01	1.23E 00	3.29E 00
2	1	90	91	16952.23	2	1622.28	6.1642	0.0303	0.0	3.70E-05	1.26E-03	9.15E-03	3.11E-02	6.96E-02
12	11	53	54	27215.13	1	1622.75	6.1624	0.0303	0.0	0.0	2.47E-04	7.83E-03	7.14E-02	3.23E-01
10	9	62	63	25358.84	1	1622.91	6.1618	0.0303	0.0	0.0	9.30E-04	2.26E-02	1.73E-01	6.87E-01
1	0	97	98	18071.92	1	1623.37	6.1600	0.0303	0.0	6.49E-04	2.91E-02	2.48E-01	9.41E-01	2.27E 00
3	2	86	87	17658.15	2	1623.90	6.1580	0.0303	0.0	2.69E-05	1.09E-03	8.72E-03	3.17E-02	7.44E-02
13	12	48	49	28145.66	1	1623.96	6.1578	0.0303	0.0	0.0	1.23E-04	4.46E-03	4.45E-02	2.14E-01
4	3	86	87	20306.23	1	1624.06	6.1574	0.0303	0.0	2.66E-04	2.04E-02	2.39E-01	1.13E 00	3.17E 00
9	8	66	67	24402.34	1	1624.61	6.1553	0.0303	0.0	0.0	1.79E-03	3.80E-02	2.64E-01	9.85E-01
7	6	70	71	20945.30	2	1624.92	6.1541	0.0303	0.0	0.0	1.90E-04	2.46E-03	1.22E-02	3.59E-02
4	3	82	83	18411.21	2	1624.98	6.1539	0.0303	0.0	0.0	8.01E-04	7.16E-03	2.80E-02	6.92E-02
5	4	82	83	21030.94	1	1625.35	6.1525	0.0303	0.0	1.58E-04	1.44E-02	1.87E-01	9.44E-01	2.80E 00
6	5	74	75	20055.60	2	1625.50	6.1520	0.0303	0.0	0.0	3.29E-04	3.72E-03	1.71E-02	4.72E-02
5	4	78	79	19210.62	2	1625.52	6.1519	0.0303	0.0	0.0	5.34E-04	5.35E-03	2.26E-02	5.90E-02
8	7	70	71	23490.38	1	1625.70	6.1512	0.0303	0.0	0.0	3.28E-03	6.11E-02	3.89E-01	1.36E 00
11	10	57	58	26157.68	1	1625.85	6.1506	0.0303	0.0	0.0	5.26E-04	1.44E-02	1.18E-01	4.97E-01
6	5	78	79	21803.77	1	1626.06	6.1498	0.0303	0.0	8.53E-05	9.35E-03	1.36E-01	7.40E-01	2.31E 00
7	6	74	75	22623.88	1	1626.17	6.1494	0.0303	0.0	4.27E-05	5.71E-03	9.37E-02	5.50E-01	1.81E 00
2	1	93	94	18663.53	1	1626.22	6.1492	0.0303	0.0	7.03E-04	3.63E-02	3.37E-01	1.35E 00	3.41E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	93	94	15964.29	2	1626.28	6.1490	0.0303	0.0	4.97E-05	1.34E-03	8.42E-03	2.61E-02	5.44E-02
12	11	52	53	27032.14	1	1627.85	6.1431	0.0303	0.0	0.0	2.77E-04	9.57E-03	7.69E-02	3.43E-01
2	1	89	90	16637.68	2	1628.31	6.1413	0.0303	0.0	4.96E-05	1.57E-03	1.09E-02	3.59E-02	7.86E-02
10	9	61	62	25142.58	1	1628.32	6.1413	0.0303	0.0	0.0	1.07E-03	2.53E-02	1.89E-01	7.42E-01
3	2	89	90	19305.50	1	1628.52	6.1405	0.0303	0.0	5.43E-04	3.27E-02	3.33E-01	1.42E 00	3.74E 00
13	12	47	48	27980.70	1	1628.89	6.1391	0.0303	0.0	0.0	1.36E-04	4.82E-03	4.73E-02	2.26E-01
3	2	85	86	17358.87	2	1629.81	6.1357	0.0303	0.0	3.55E-05	1.34E-03	1.03E-02	3.64E-02	8.36E-02
1	0	96	97	17718.34	1	1629.90	6.1353	0.0303	0.0	9.05E-04	3.73E-02	3.02E-01	1.11E 00	2.61E 00
9	8	65	66	24170.88	1	1630.15	6.1344	0.0303	0.0	0.0	2.09E-03	4.29E-02	2.92E-01	1.07E 00
4	3	85	86	19997.09	1	1630.25	6.1340	0.0303	0.0	3.55E-04	2.52E-02	2.84E-01	1.30E 00	3.57E 00
7	6	69	70	20706.29	2	1630.35	6.1337	0.0303	0.0	0.0	2.23E-04	2.78E-03	1.35E-02	3.92E-02
4	3	81	82	18127.12	2	1630.78	6.1320	0.0303	0.0	2.15E-05	9.75E-04	8.36E-03	3.18E-02	7.72E-02
6	5	73	74	19801.66	2	1631.05	6.1310	0.0303	0.0	0.0	3.91E-04	4.27E-03	1.91E-02	5.19E-02
11	10	56	57	25959.75	1	1631.09	6.1309	0.0303	0.0	0.0	5.98E-04	1.59E-02	1.28E-01	5.32E-01
5	4	77	78	18941.66	2	1631.19	6.1305	0.0303	0.0	0.0	6.42E-04	6.19E-03	2.55E-02	6.53E-02
8	7	69	70	23243.58	1	1631.37	6.1298	0.0303	0.0	2.50E-05	3.88E-03	6.96E-02	4.34E-01	1.49E 00
5	4	81	82	20737.52	1	1631.41	6.1297	0.0303	0.0	2.07E-04	1.76E-02	2.20E-01	1.08E 00	3.13E 00
7	6	73	74	22361.64	1	1631.98	6.1275	0.0303	0.0	5.44E-05	6.82E-03	1.08E-01	6.18E-01	2.00E 00
6	5	77	78	21525.99	1	1631.99	6.1275	0.0303	0.0	1.10E-04	1.13E-02	1.59E-01	8.39E-01	2.57E 00
1	0	92	93	15637.47	2	1632.40	6.1259	0.0303	0.0	6.74E-05	1.68E-03	1.01E-02	3.03E-02	6.18E-02
2	1	92	93	18325.89	1	1632.63	6.1251	0.0303	0.0	9.64E-04	4.60E-02	4.07E-01	1.58E 00	3.89E 00
12	11	51	52	26852.39	1	1632.92	6.1240	0.0303	0.0	0.0	3.10E-04	9.36E-03	8.25E-02	3.64E-01
10	9	60	61	24929.57	1	1633.70	6.1211	0.0303	0.0	0.0	1.23E-03	2.82E-02	2.07E-01	8.00E-01
13	12	46	47	27818.98	1	1633.79	6.1207	0.0303	0.0	0.0	1.50E-04	5.20E-03	5.03E-02	2.37E-01
2	1	88	89	16326.21	2	1634.32	6.1188	0.0303	0.0	6.63E-05	1.95E-03	1.29E-02	4.14E-02	8.88E-02
3	2	86	89	18983.73	1	1634.81	6.1169	0.0303	0.0	7.33E-04	4.09E-02	3.98E-01	1.65E 00	4.24E 00
9	8	64	65	23942.65	1	1635.67	6.1137	0.0303	0.0	0.0	2.43E-03	4.83E-02	3.22E-01	1.16E 00
3	2	84	85	17062.69	2	1635.71	6.1136	0.0303	0.0	4.68E-05	1.64E-03	1.21E-02	4.16E-02	9.37E-02
7	6	68	69	20470.42	2	1635.75	6.1134	0.0303	0.0	0.0	2.62E-04	3.15E-03	1.50E-02	4.27E-02
11	10	55	56	25765.06	1	1636.31	6.1113	0.0303	0.0	0.0	6.78E-04	1.75E-02	1.39E-01	5.69E-01
1	0	95	96	17367.91	1	1636.41	6.1109	0.0303	0.0	1.26E-03	4.76E-02	3.67E-01	1.30E 00	3.00E 00
4	3	84	85	19691.13	1	1636.42	6.1109	0.0303	0.0	4.72E-04	3.12E-02	3.36E-01	1.49E 00	4.02E 00
4	3	80	81	17846.16	2	1636.55	6.1104	0.0303	0.0	2.79E-05	1.18E-03	9.75E-03	3.61E-02	8.59E-02
6	5	72	73	19550.86	2	1636.58	6.1103	0.0303	0.0	0.0	4.64E-04	4.88E-03	2.13E-02	5.70E-02
5	4	76	77	18675.82	2	1636.85	6.1093	0.0303	0.0	0.0	7.70E-04	7.15E-03	2.87E-02	7.22E-02
8	7	68	69	23000.01	1	1637.03	6.1086	0.0303	0.0	3.13E-05	4.57E-03	7.93E-02	4.82E-01	1.63E 00
5	4	80	81	20447.30	1	1637.46	6.1070	0.0303	0.0	2.71E-04	2.15E-02	2.58E-01	1.23E 00	3.50E 00
7	6	72	73	22102.62	1	1637.77	6.1059	0.0303	0.0	6.90E-05	8.14E-03	1.24E-01	6.93E-01	2.21E 00
6	5	76	77	21251.42	1	1637.91	6.1053	0.0303	0.0	1.42E-04	1.37E-02	1.84E-01	9.48E-01	2.85E 00
12	11	50	51	26675.90	1	1637.97	6.1051	0.0303	0.0	0.0	3.47E-04	1.02E-02	8.83E-02	3.85E-01
1	0	91	92	15313.73	2	1638.50	6.1031	0.0303	0.0	9.13E-05	2.11E-03	1.21E-02	3.51E-02	7.01E-02
13	12	45	46	27660.53	1	1638.66	6.1025	0.0303	0.0	0.0	1.65E-04	5.60E-03	5.33E-02	2.48E-01
2	1	91	92	17991.41	1	1639.02	6.1012	0.0303	0.0	1.32E-03	5.80E-02	4.90E-01	1.84E 00	4.43E 00
10	9	59	60	24719.80	1	1639.05	6.1011	0.0303	0.0	0.0	1.42E-03	3.14E-02	2.26E-01	8.60E-01
2	1	87	88	16017.84	2	1640.31	6.0964	0.0303	0.0	8.85E-05	2.42E-03	1.53E-02	4.77E-02	1.00E-01
3	2	87	88	18665.15	1	1641.08	6.0935	0.0303	0.0	9.88E-04	5.11E-02	4.75E-01	1.91E 00	4.80E 00
7	6	67	68	20237.70	2	1641.14	6.0933	0.0303	0.0	0.0	3.06E-04	3.56E-03	1.66E-02	4.65E-02
9	8	63	64	23717.67	1	1641.16	6.0933	0.0303	0.0	0.0	2.83E-03	5.44E-02	3.54E-01	1.26E 00
11	10	54	55	25573.64	1	1641.49	6.0920	0.0303	0.0	0.0	7.67E-04	1.93E-02	1.50E-01	6.07E-01
3	2	83	84	16769.63	2	1641.58	6.0917	0.0303	0.0	6.14E-05	2.01E-03	1.42E-02	4.75E-02	1.05E-01
6	5	71	72	19303.21	2	1642.09	6.0898	0.0303	0.0	0.0	5.48E-04	5.57E-03	2.38E-02	6.24E-02
4	3	79	80	17568.32	2	1642.31	6.0890	0.0303	0.0	3.61E-05	1.43E-03	1.13E-02	4.10E-02	9.55E-02
5	4	75	76	18413.12	2	1642.48	6.0884	0.0303	0.0	0.0	9.21E-04	8.24E-03	3.23E-02	7.98E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	83	84	19388.37	1	1642.57	6.0880	0.0303	0.0	6.26E-04	3.85E-02	3.97E-01	1.71E 00	4.52E 00
8	7	67	68	22759.69	1	1642.65	6.0877	0.0303	0.0	3.89E-05	5.37E-03	9.00E-02	5.36E-01	1.79E 00
1	0	94	95	17020.62	1	1642.90	6.0868	0.0303	0.0	1.74E-03	6.07E-02	4.46E-01	1.53E 00	3.44E 00
12	11	49	50	26502.68	1	1642.98	6.0865	0.0303	0.0	0.0	3.86E-04	1.11E-02	9.45E-02	4.07E-01
5	4	79	80	20160.30	1	1643.48	6.0846	0.0303	0.0	3.54E-04	2.62E-02	3.02E-01	1.40E 00	3.91E 00
13	12	44	45	27505.34	1	1643.50	6.0846	0.0303	0.0	0.0	1.81E-04	6.00E-03	5.63E-02	2.60E-01
7	6	71	72	21846.84	1	1643.53	6.0845	0.0303	0.0	8.73E-05	9.68E-03	1.42E-01	7.75E-01	2.43E 00
6	5	75	76	20980.08	1	1643.80	6.0835	0.0303	0.0	1.83E-04	1.65E-02	2.13E-01	1.07E 00	3.16E 00
10	9	58	59	24513.30	1	1644.38	6.0813	0.0303	0.0	0.0	1.62E-03	3.50E-02	2.46E-01	9.25E-01
1	0	90	91	14993.09	2	1644.59	6.0805	0.0303	0.0	1.23E-04	2.63E-03	1.44E-02	4.06E-02	7.95E-02
2	1	90	91	17660.10	1	1645.39	6.0776	0.0303	0.0	1.80E-03	7.31E-02	5.88E-01	2.15E 00	5.04E 00
2	1	86	87	15712.59	2	1646.28	6.0743	0.0303	0.0	1.18E-04	2.99E-03	1.81E-02	5.48E-02	1.13E-01
7	6	66	67	20008.15	2	1646.49	6.0735	0.0303	0.0	0.0	3.57E-04	4.02E-03	1.83E-02	5.05E-02
9	8	62	63	23495.95	1	1646.63	6.0730	0.0303	0.0	0.0	3.27E-03	6.10E-02	3.89E-01	1.37E 00
11	10	53	54	25385.48	1	1646.65	6.0729	0.0303	0.0	0.0	8.65E-04	2.12E-02	1.62E-01	6.46E-01
3	2	86	87	18349.76	1	1647.33	6.0704	0.0303	0.0	1.33E-03	6.37E-02	5.66E-01	2.20E 00	5.43E 00
3	2	82	83	16479.69	2	1647.43	6.0701	0.0303	0.0	8.04E-05	2.46E-03	1.67E-02	5.42E-02	1.17E-01
6	5	70	71	19058.71	2	1647.58	6.0695	0.0303	0.0	0.0	6.47E-04	6.35E-03	2.65E-02	6.83E-02
12	11	48	49	26332.73	1	1647.97	6.0681	0.0303	0.0	0.0	4.29E-04	1.20E-02	1.01E-01	4.29E-01
4	3	78	79	17293.62	2	1648.04	6.0678	0.0303	0.0	4.65E-05	1.73E-03	1.32E-02	4.63E-02	1.06E-01
5	4	74	75	18153.57	2	1648.09	6.0676	0.0303	0.0	2.41E-05	1.10E-03	9.48E-03	3.62E-02	8.79E-02
8	7	66	67	22522.63	1	1648.25	6.0670	0.0303	0.0	4.83E-05	6.30E-03	1.02E-01	5.94E-01	1.95E 00
13	12	43	44	27353.43	1	1648.31	6.0668	0.0303	0.0	0.0	1.98E-04	6.43E-03	5.94E-02	2.71E-01
4	3	82	83	19088.83	1	1648.69	6.0654	0.0303	0.0	8.27E-04	4.74E-02	4.68E-01	1.96E 00	5.08E 00
7	6	70	71	21594.31	1	1649.26	6.0633	0.0303	0.0	1.10E-04	1.15E-02	1.63E-01	8.67E-01	2.67E 00
1	0	93	94	16676.52	1	1649.37	6.0629	0.0303	0.0	2.40E-03	7.73E-02	5.40E-01	1.79E 00	3.94E 00
5	4	78	79	19876.52	1	1649.47	6.0626	0.0303	0.0	4.60E-04	3.19E-02	3.53E-01	1.59E 00	4.35E 00
6	5	74	75	20711.97	1	1649.67	6.0618	0.0303	0.0	2.34E-04	1.98E-02	2.47E-01	1.21E 00	3.50E 00
10	9	57	58	24310.07	1	1649.68	6.0618	0.0303	0.0	0.0	1.85E-03	3.88E-02	2.68E-01	9.93E-01
1	0	89	90	14675.56	2	1650.65	6.0582	0.0303	0.0	1.66E-04	3.28E-03	1.72E-02	4.70E-02	8.99E-02
2	1	89	90	17331.98	1	1651.74	6.0542	0.0303	0.0	2.44E-03	9.18E-02	7.05E-01	2.49E 00	5.73E 00
11	10	52	53	25200.61	1	1651.79	6.0540	0.0303	0.0	0.0	9.74E-04	2.32E-02	1.74E-01	6.87E-01
7	6	65	66	19781.77	2	1651.83	6.0539	0.0303	0.0	0.0	4.15E-04	4.52E-03	2.02E-02	5.48E-02
9	8	61	62	23277.50	1	1652.07	6.0530	0.0303	0.0	2.42E-05	3.78E-03	6.83E-02	4.27E-01	1.48E 00
2	1	85	86	15410.46	2	1652.23	6.0524	0.0303	0.0	1.56E-04	3.69E-03	2.14E-02	6.29E-02	1.27E-01
12	11	47	48	26166.05	1	1652.93	6.0499	0.0303	0.0	0.0	4.75E-04	1.30E-02	1.07E-01	4.52E-01
6	5	69	70	18817.38	2	1653.04	6.0495	0.0303	0.0	0.0	7.61E-04	7.22E-03	2.94E-02	7.47E-02
13	12	42	43	27204.80	1	1653.10	6.0492	0.0303	0.0	0.0	2.16E-04	6.87E-03	6.26E-02	2.83E-01
3	2	81	82	16192.90	2	1653.26	6.0487	0.0303	0.0	1.05E-04	3.00E-03	1.95E-02	6.17E-02	1.31E-01
3	2	85	86	18037.58	1	1653.55	6.0476	0.0303	0.0	1.78E-03	7.91E-02	6.72E-01	2.54E 00	6.13E 00
5	4	73	74	17897.18	2	1653.68	6.0471	0.0303	0.0	3.05E-05	1.31E-03	1.09E-02	4.06E-02	9.68E-02
4	3	77	78	17022.07	2	1653.75	6.0469	0.0303	0.0	5.98E-05	2.08E-03	1.53E-02	5.23E-02	1.18E-01
8	7	65	66	22288.82	1	1653.83	6.0466	0.0303	0.0	5.97E-05	7.37E-03	1.15E-01	6.57E-01	2.12E 00
4	3	81	82	18792.51	1	1654.79	6.0431	0.0303	0.0	1.09E-03	5.82E-02	5.51E-01	2.24E 00	5.69E 00
10	9	56	57	24110.11	1	1654.95	6.0425	0.0303	0.0	0.0	2.11E-03	4.29E-02	2.91E-01	1.06E 00
7	6	69	70	21345.04	1	1654.98	6.0424	0.0303	0.0	1.38E-04	1.36E-02	1.86E-01	9.67E-01	2.93E 00
5	4	77	78	19595.97	1	1655.45	6.0407	0.0303	0.0	5.97E-04	3.86E-02	4.11E-01	1.81E 00	4.85E 00
6	5	73	74	20447.11	1	1655.51	6.0404	0.0303	0.0	2.98E-04	2.37E-02	2.85E-01	1.36E 00	3.86E 00
1	0	92	93	16335.59	1	1655.82	6.0393	0.0303	0.0	3.31E-03	9.80E-02	6.52E-01	2.10E 00	4.50E 00
1	0	88	89	14361.15	2	1656.70	6.0361	0.0303	0.0	2.22E-04	4.09E-03	2.04E-02	5.42E-02	1.02E-01
11	10	51	52	25019.01	1	1656.89	6.0354	0.0303	0.0	0.0	1.09E-03	2.53E-02	1.87E-01	7.29E-01
7	6	64	65	19558.57	2	1657.14	6.0345	0.0303	0.0	0.0	4.81E-04	5.08E-03	2.22E-02	5.94E-02
9	8	60	61	23062.32	1	1657.48	6.0333	0.0303	0.0	2.93E-05	4.36E-03	7.63E-02	4.68E-01	1.59E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	12	41	42	27059.45	1	1657.85	6.0319	0.0303	0.0	0.0	2.35E-04	7.31E-03	6.58E-02	2.94E-01
12	11	46	47	26002.67	1	1657.86	6.0319	0.0303	0.0	0.0	5.25E-04	1.40E-02	1.14E-01	4.75E-01
2	1	88	89	17007.07	1	1658.07	6.0311	0.0303	0.0	3.31E-03	1.15E-01	8.44E-01	2.89E 00	6.51E 00
2	1	84	85	15111.48	2	1658.15	6.0308	0.0303	0.0	2.06E-04	4.54E-03	2.53E-02	7.21E-02	1.42E-01
6	5	68	69	18579.22	2	1658.48	6.0296	0.0303	0.0	0.0	8.93E-04	3.19E-03	3.26E-02	8.15E-02
3	2	80	81	15909.25	2	1659.07	6.0275	0.0303	0.0	1.37E-04	3.64E-03	2.27E-02	7.01E-02	1.46E-01
5	4	72	73	17643.96	2	1659.24	6.0269	0.0303	0.0	3.84E-05	1.55E-03	1.25E-02	4.53E-02	1.06E-01
8	7	64	65	22058.29	1	1659.38	6.0263	0.0303	0.0	7.35E-05	8.59E-03	1.30E-01	7.25E-01	2.30E 00
4	3	76	77	16753.69	2	1659.43	6.0262	0.0303	0.0	7.66E-05	2.50E-03	1.76E-02	5.90E-02	1.30E-01
3	2	84	85	17728.62	1	1659.76	6.0250	0.0303	0.0	2.37E-03	9.80E-02	7.97E-01	2.93E 00	6.91E 00
10	9	55	56	23913.44	1	1660.20	6.0234	0.0303	0.0	0.0	2.39E-03	4.74E-02	3.15E-01	1.14E 00
7	6	68	69	21099.03	1	1660.66	6.0217	0.0303	0.0	1.73E-04	1.61E-02	2.12E-01	1.08E 00	3.20E 00
4	3	80	81	18499.43	1	1660.87	6.0209	0.0303	0.0	1.43E-03	7.12E-02	6.47E-01	2.56E 00	6.37E 00
6	5	72	73	20185.51	1	1661.33	6.0193	0.0303	0.0	3.79E-04	2.83E-02	3.28E-01	1.52E 00	4.26E 00
5	4	76	77	19318.68	1	1661.40	6.0190	0.0303	0.0	7.71E-04	4.67E-02	4.78E-01	2.04E 00	5.38E 00
11	10	50	51	24840.71	1	1661.97	6.0170	0.0303	0.0	0.0	1.22E-03	2.76E-02	2.01E-01	7.72E-01
1	0	91	92	15997.85	1	1662.25	6.0159	0.0303	0.0	4.54E-03	1.24E-01	7.86E-01	2.45E 00	5.13E 00
7	6	63	64	19338.57	2	1662.43	6.0153	0.0303	0.0	0.0	5.57E-04	5.69E-03	2.44E-02	6.42E-02
13	12	40	41	26917.39	1	1662.58	6.0147	0.0303	0.0	0.0	2.55E-04	7.77E-03	6.89E-02	3.06E-01
1	0	87	88	14049.87	2	1662.72	6.0142	0.0303	0.0	2.97E-04	5.07E-03	2.43E-02	6.25E-02	1.15E-01
12	11	45	46	25842.57	1	1662.77	6.0141	0.0303	0.0	0.0	5.79E-04	1.51E-02	1.21E-01	4.98E-01
9	8	59	60	22850.43	1	1662.87	6.0137	0.0303	0.0	3.54E-05	5.01E-03	8.51E-02	5.11E-01	1.71E 00
6	5	67	68	18344.26	2	1663.89	6.0100	0.0303	0.0	2.18E-05	1.05E-03	9.27E-03	3.61E-02	8.88E-02
2	1	83	84	14815.63	2	1664.06	6.0094	0.0303	0.0	2.71E-04	5.57E-03	2.97E-02	8.25E-02	1.59E-01
2	1	87	88	16685.38	1	1664.38	6.0082	0.0303	0.0	4.47E-03	1.44E-01	1.01E 00	3.35E 00	7.38E 00
5	4	71	72	17393.93	2	1664.78	6.0068	0.0303	0.0	4.83E-05	1.84E-03	1.42E-02	5.06E-02	1.17E-01
3	2	79	80	15628.77	2	1664.86	6.0065	0.0303	0.0	1.77E-04	4.42E-03	2.65E-02	7.95E-02	1.62E-01
8	7	63	64	21831.04	1	1664.91	6.0063	0.0303	0.0	9.03E-05	1.00E-02	1.47E-01	7.99E-01	2.50E 00
4	3	75	76	16488.47	2	1665.10	6.0056	0.0303	0.0	9.78E-05	3.00E-03	2.04E-02	6.63E-02	1.44E-01
10	9	54	55	23720.06	1	1665.43	6.0045	0.0303	0.0	0.0	2.71E-03	5.22E-02	3.41E-01	1.21E 00
3	2	83	84	17422.89	1	1665.94	6.0026	0.0303	0.0	3.15E-03	1.21E-01	9.43E-01	3.36E 00	7.78E 00
7	6	67	68	20856.30	1	1666.33	6.0012	0.0303	0.0	2.16E-04	1.89E-02	2.41E-01	1.20E 00	3.50E 00
4	3	79	80	18209.59	1	1666.93	5.9991	0.0303	0.0	1.87E-03	8.70E-02	7.58E-01	2.92E 00	7.12E 00
11	10	49	50	24665.70	1	1667.02	5.9987	0.0303	0.0	0.0	1.36E-03	3.01E-02	2.15E-01	8.17E-01
6	5	71	72	19927.18	1	1667.13	5.9983	0.0303	0.0	4.81E-04	3.37E-02	3.76E-01	1.71E 00	4.69E 00
13	12	39	40	26778.63	1	1667.28	5.9978	0.0303	0.0	0.0	2.75E-04	8.24E-03	7.21E-02	3.17E-01
5	4	75	76	19044.64	1	1667.33	5.9976	0.0303	0.0	9.93E-04	5.64E-02	5.54E-01	2.31E 00	5.97E 00
12	11	44	45	25685.79	1	1667.65	5.9965	0.0303	0.0	0.0	6.35E-04	1.62E-02	1.28E-01	5.22E-01
7	6	62	63	19121.76	2	1667.69	5.9963	0.0303	0.0	0.0	6.42E-04	6.37E-03	2.67E-02	6.94E-02
9	8	58	59	22641.83	1	1668.24	5.9943	0.0303	0.0	4.27E-05	5.74E-03	9.47E-02	5.57E-01	1.84E 00
1	0	90	91	15663.33	1	1668.65	5.9929	0.0303	0.0	6.21E-03	1.57E-01	9.46E-01	2.85E 00	5.85E 00
1	0	86	87	13741.75	2	1668.72	5.9926	0.0303	0.0	3.96E-04	6.29E-03	2.87E-02	7.20E-02	1.29E-01
6	5	66	67	18112.48	2	1669.29	5.9906	0.0303	0.0	2.70E-05	1.22E-03	1.05E-02	3.99E-02	9.66E-02
2	1	82	83	14522.95	2	1669.94	5.9882	0.0303	0.0	3.56E-04	6.82E-03	3.49E-02	9.42E-02	1.78E-01
5	4	70	71	17147.08	2	1670.30	5.9869	0.0303	0.0	6.06E-05	2.18E-03	1.62E-02	5.64E-02	1.28E-01
8	7	62	63	21607.08	1	1670.41	5.9866	0.0303	0.0	1.10E-04	1.16E-02	1.65E-01	8.79E-01	2.71E 00
10	9	53	54	23529.98	1	1670.62	5.9858	0.0303	0.0	0.0	3.06E-03	5.74E-02	3.68E-01	1.29E 00
3	2	78	79	15351.45	2	1670.62	5.9858	0.0303	0.0	2.29E-04	5.34E-03	3.08E-02	9.00E-02	1.81E-01
2	1	86	87	16366.91	1	1670.66	5.9857	0.0303	0.0	6.02E-03	1.80E-01	1.20E 00	3.88E 00	8.35E 00
4	3	74	75	16226.44	2	1670.74	5.9854	0.0303	0.0	1.24E-04	3.59E-03	2.35E-02	7.45E-02	1.59E-01
13	12	38	39	26643.18	1	1671.95	5.9810	0.0303	0.0	0.0	2.97E-04	8.71E-03	7.53E-02	3.28E-01
7	6	66	67	20616.86	1	1671.96	5.9810	0.0303	0.0	2.68E-04	2.22E-02	2.74E-01	1.33E 00	3.82E 00
11	10	48	49	24494.01	1	1672.05	5.9807	0.0303	0.0	0.0	1.52E-03	3.26E-02	2.30E-01	8.62E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	2	82	83	17120.41	1	1672.10	5.9805	0.0303	0.0	4.17E-03	1.49E-01	1.11E 00	3.86E 00	8.75E 00
12	11	43	44	25532.30	1	1672.50	5.9791	0.0303	0.0	0.0	6.96E-04	1.74E-02	1.35E-01	5.45E-01
6	5	70	71	19672.14	1	1672.90	5.9776	0.0303	0.0	6.08E-04	4.01E-02	4.31E-01	1.91E 00	5.16E 00
7	6	61	62	18908.16	2	1672.93	5.9775	0.0303	0.0	0.0	7.39E-04	7.11E-03	2.92E-02	7.48E-02
4	3	78	79	17923.02	1	1672.96	5.9774	0.0303	0.0	2.44E-03	1.06E-01	8.86E-01	3.32E 00	7.95E 00
5	4	74	75	18773.88	1	1673.23	5.9765	0.0303	0.0	1.27E-03	6.78E-02	6.41E-01	2.61E 00	6.62E 00
9	8	57	58	22436.54	1	1673.57	5.9753	0.0303	0.0	5.13E-05	6.57E-03	1.05E-01	6.07E-01	1.98E 00
6	5	65	66	17883.92	2	1674.66	5.9714	0.0303	0.0	3.32E-05	1.42E-03	1.18E-02	4.40E-02	1.05E-01
1	0	85	86	13436.77	2	1674.70	5.9712	0.0303	0.0	5.26F-04	7.77E-03	3.40E-02	8.27E-02	1.45E-01
1	0	89	90	15332.04	1	1675.04	5.9700	0.0303	0.0	8.46E-03	1.97E-01	1.14E 00	3.32E 00	6.66E 00
10	9	52	53	23343.22	1	1675.79	5.9673	0.0303	0.0	2.17E-05	3.45E-03	6.30E-02	3.97E-01	1.38E 00
5	4	69	70	16903.43	2	1675.80	5.9673	0.0303	0.0	7.57E-05	2.56E-03	1.85E-02	6.27E-02	1.40E-01
2	1	81	82	14233.45	2	1675.81	5.9673	0.0303	0.0	4.66E-04	8.32E-03	4.09E-02	1.07E-01	1.99E-01
8	7	61	62	21386.43	1	1675.89	5.9670	0.0303	0.0	1.35E-04	1.34E-02	1.85E-01	9.65E-01	2.93E 00
4	3	73	74	15967.60	2	1676.36	5.9653	0.0303	0.0	1.58E-04	4.28E-03	2.70E-02	8.36E-02	1.75E-01
3	2	77	78	15077.32	2	1676.36	5.9653	0.0303	0.0	2.95E-04	6.45E-03	3.58E-02	1.02E-01	2.00E-01
13	12	37	38	26511.04	1	1676.59	5.9645	0.0303	0.0	0.0	3.19F-04	9.18E-03	7.84E-02	3.38E-01
2	1	85	86	16051.69	1	1676.93	5.9633	0.0303	0.0	8.09E-03	2.24E-01	1.43E 00	4.48E 00	9.45E 00
11	10	47	48	24325.62	1	1677.04	5.9629	0.0303	0.0	0.0	1.68E-03	3.53E-02	2.45E-01	9.09E-01
12	11	42	43	25382.13	1	1677.32	5.9619	0.0303	0.0	0.0	7.60E-04	1.86E-02	1.42E-01	5.69E-01
7	6	65	66	20380.71	1	1677.58	5.9610	0.0303	0.0	3.32E-04	2.60E-02	3.10E-01	1.47E 00	4.16E 00
7	6	60	61	18697.77	2	1678.15	5.9589	0.0303	0.0	0.0	8.49E-04	7.92E-03	3.19E-02	8.05E-02
3	2	81	82	16821.19	1	1678.24	5.9586	0.0303	0.0	5.51E-03	1.84E-01	1.31E 00	4.42E 00	9.82E 00
6	5	69	70	19420.38	1	1678.65	5.9572	0.0303	0.0	7.65E-04	4.75E-02	4.93E-01	2.13E 00	5.66E 00
9	8	56	57	22234.55	1	1678.88	5.9564	0.0303	0.0	6.13E-05	7.49E-03	1.17E-01	6.60E-01	2.12E 00
4	3	77	78	17639.71	1	1678.97	5.9560	0.0303	0.0	3.17E-03	1.29E-01	1.03E 00	3.77E 00	8.86E 00
5	4	73	74	18506.41	1	1679.11	5.9555	0.0303	0.0	1.63E-03	8.14E-02	7.41E-01	2.94E 00	7.32E 00
6	5	64	65	17658.56	2	1680.00	5.9524	0.0303	0.0	4.06E-05	1.65E-03	1.33E-02	4.84E-02	1.14E-01
1	0	84	85	13134.97	2	1680.66	5.9500	0.0303	0.0	6.97E-04	9.57E-03	4.01E-02	9.49E-02	1.63E-01
10	9	51	52	23159.78	1	1680.93	5.9491	0.0303	0.0	2.54E-05	3.88E-03	6.89F-02	4.26E-01	1.46E 00
13	12	36	37	26382.21	1	1681.21	5.9481	0.0308	0.0	0.0	3.42E-04	9.66E-03	8.14E-02	3.48E-01
5	4	68	69	16662.99	2	1681.27	5.9479	0.0303	0.0	9.42E-05	3.01E-03	2.10E-02	6.96E-02	1.53E-01
8	7	60	61	21169.09	1	1681.34	5.9476	0.0303	0.0	1.64E-04	1.55E-02	2.07E-01	1.06E 00	3.16E 00
1	0	88	89	15003.98	1	1681.40	5.9474	0.0303	0.0	1.15E-02	2.48E-01	1.36E 00	3.86E 00	7.57E 00
2	1	80	81	13947.12	2	1681.65	5.9465	0.0303	0.0	6.08E-04	1.01E-02	4.78E-02	1.22E-01	2.22E-01
4	3	72	73	15711.97	2	1681.96	5.9454	0.0303	0.0	2.00E-04	5.09E-03	3.09E-02	9.35E-02	1.92E-01
11	10	46	47	24160.56	1	1682.01	5.9453	0.0303	0.0	0.0	1.86E-03	3.82E-02	2.60E-01	9.55E-01
3	2	76	77	14806.39	2	1682.08	5.9450	0.0303	0.0	3.78E-04	7.76E-03	4.14E-02	1.15E-01	2.22E-01
12	11	41	42	25235.28	1	1682.11	5.9449	0.0303	0.0	0.0	8.27E-04	1.98E-02	1.50E-01	5.92E-01
2	1	84	85	15739.73	1	1683.17	5.9412	0.0303	0.0	1.08E-02	2.78E-01	1.70E 00	5.17E 00	1.07E 01
7	6	64	65	20147.87	1	1683.17	5.9412	0.0303	0.0	4.10F-04	3.04E-02	3.50E-01	1.62E 00	4.53E 00
7	6	59	60	18490.61	2	1683.34	5.9406	0.0303	0.0	0.0	9.72E-04	8.81E-03	3.48E-02	8.65E-02
9	8	55	56	22035.89	1	1684.17	5.9376	0.0303	0.0	7.31E-05	8.52E-03	1.29E-01	7.16E-01	2.27E 00
3	2	80	81	16525.24	1	1684.35	5.9370	0.0303	0.0	7.26E-03	2.25E-01	1.54E 00	5.05E 00	1.10E 01
6	5	68	69	19171.93	1	1684.37	5.9369	0.0303	0.0	9.60E-04	5.62E-02	5.63E-01	2.38E 00	6.21E 00
5	4	72	73	18242.22	1	1684.96	5.9349	0.0303	0.0	2.08E-03	9.75E-02	8.54E-01	3.30E 00	8.08E 00
4	3	76	77	17359.69	1	1684.96	5.9349	0.0303	0.0	4.11E-03	1.56E-01	1.20E 00	4.27E 00	9.85E 00
6	5	63	64	17436.43	2	1685.32	5.9336	0.0303	0.0	4.96E-05	1.91E-03	1.49E-02	5.32E-02	1.23E-01
13	12	35	36	26256.71	1	1685.79	5.9319	0.0312	0.0	0.0	3.65E-04	1.01E-02	8.44E-02	3.58E-01
10	9	50	51	22979.66	1	1686.05	5.9310	0.0303	0.0	2.97E-05	4.34E-03	7.52E-02	4.58E-01	1.55E 00
1	0	83	84	12836.35	2	1686.60	5.9291	0.0303	0.0	9.20E-04	1.18E-02	4.73E-02	1.09E-01	1.83E-01
5	4	67	68	16425.77	2	1686.72	5.9287	0.0303	0.0	1.17E-04	3.53E-03	2.38E-02	7.71E-02	1.67E-01
8	7	59	60	20955.06	1	1686.76	5.9285	0.0303	0.0	1.98E-04	1.78E-02	2.31F-01	1.16E 00	3.41E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	40	41	25091.76	1	1686.87	5.9281	0.0303	0.0	0.0	8.98E-04	2.11E-02	1.57E-01	6.15E-01
11	10	45	46	23998.83	1	1686.95	5.9279	0.0303	0.0	0.0	2.05E-03	4.11E-02	2.76E-01	1.00E 00
2	1	79	80	13663.99	2	1687.47	5.9260	0.0303	0.0	7.90E-04	1.23E-02	5.58E-02	1.39E-01	2.48E-01
4	3	71	72	15459.54	2	1687.53	5.9258	0.0303	0.0	2.52E-04	6.04E-03	3.54E-02	1.05E-01	2.11E-01
1	0	87	88	14679.17	1	1687.75	5.9250	0.0303	2.56E-05	1.56E-02	3.11E-01	1.63E 00	4.48E 00	8.59E 00
3	2	75	76	14538.66	2	1687.78	5.9249	0.0303	0.0	4.84E-04	9.32E-03	4.78E-02	1.29E-01	2.46E-01
7	6	58	59	18286.68	2	1688.51	5.9224	0.0303	0.0	2.35E-05	1.11E-03	9.77E-03	3.79E-02	9.29E-02
7	6	63	64	19918.36	1	1688.73	5.9216	0.0303	0.0	5.05E-04	3.54E-02	3.95E-01	1.79E 00	4.92E 00
2	1	83	84	15431.03	1	1689.38	5.9193	0.0303	0.0	1.44E-02	3.45E-01	2.02E 00	5.95E 00	1.20E 01
9	8	54	55	21840.56	1	1689.43	5.9192	0.0303	0.0	8.69E-05	9.66E-03	1.42E-01	7.75E-01	2.43E 00
6	5	67	68	18926.79	1	1690.07	5.9169	0.0303	0.0	1.20E-03	6.63E-02	6.41E-01	2.65E 00	6.79E 00
13	12	34	35	26134.53	1	1690.34	5.9160	0.0317	0.0	0.0	3.88E-04	1.06E-02	8.73E-02	3.67E-01
3	2	79	80	16232.57	1	1690.44	5.9156	0.0303	0.0	9.52E-03	2.76E-01	1.81E 00	5.77E 00	1.23E 01
6	5	62	63	17217.54	2	1690.62	5.9150	0.0303	0.0	6.04E-05	2.21E-03	1.67E-02	5.84E-02	1.33E-01
5	4	71	72	17981.34	1	1690.80	5.9144	0.0303	0.0	2.64E-03	1.16E-01	9.83E-01	3.70E 00	8.91E 00
4	3	75	76	17082.96	1	1690.92	5.9139	0.0303	0.0	5.31E-03	1.89E-01	1.40E 00	4.84E 00	1.09E 01
10	9	49	50	22802.87	1	1691.13	5.9132	0.0303	0.0	3.46E-05	4.85E-03	8.19E-02	4.90E-01	1.64E 00
12	11	39	40	24951.57	1	1691.61	5.9115	0.0303	0.0	0.0	9.72E-04	2.24E-02	1.64E-01	6.38E-01
11	10	44	45	23840.43	1	1691.87	5.9106	0.0303	0.0	0.0	2.26E-03	4.42E-02	2.92E-01	1.05E 00
5	4	66	67	16191.77	2	1692.14	5.9097	0.0303	0.0	1.44E-04	4.13E-03	2.69E-02	8.53E-02	1.81E-01
8	7	58	59	20744.37	1	1692.16	5.9096	0.0303	0.0	2.39E-04	2.05E-02	2.57E-01	1.26E 00	3.67E 00
1	0	82	83	12540.93	2	1692.52	5.9083	0.0303	0.0	1.21E-03	1.44E-02	5.56E-02	1.24E-01	2.06E-01
4	3	70	71	15210.34	2	1693.09	5.9064	0.0303	0.0	3.16E-04	7.15E-03	4.04E-02	1.17E-01	2.32E-01
2	1	78	79	13384.06	2	1693.27	5.9057	0.0303	0.0	1.02E-03	1.49E-02	6.50E-02	1.57E-01	2.76E-01
3	2	74	75	14274.14	2	1693.46	5.9051	0.0303	0.0	6.18E-04	1.12E-02	5.52E-02	1.46E-01	2.71E-01
7	6	57	58	18085.99	2	1693.65	5.9044	0.0303	0.0	2.81E-05	1.27E-03	1.08E-02	4.11E-02	9.96E-02
1	0	86	87	14357.63	1	1694.07	5.9029	0.0303	4.03E-05	2.10E-02	3.89E-01	1.95E 00	5.19E 00	9.74E 00
7	6	62	63	19692.16	1	1694.27	5.9022	0.0303	0.0	6.19E-04	4.11E-02	4.44E-01	1.97E 00	5.33E 00
9	8	53	54	21648.56	1	1694.66	5.9009	0.0303	0.0	1.03E-04	1.09E-02	1.56E-01	8.38E-01	2.59E 00
13	12	33	34	26015.68	1	1694.87	5.9002	0.0321	0.0	0.0	4.12E-04	1.11E-02	9.00E-02	3.76E-01
2	1	82	83	15125.61	1	1695.58	5.8977	0.0303	2.54E-05	1.92E-02	4.26E-01	2.39E 00	6.84E 00	1.35E 01
6	5	66	67	18684.96	1	1695.74	5.8971	0.0303	0.0	1.50E-03	7.80E-02	7.29E-01	2.94E 00	7.42E 00
6	5	61	62	17001.87	2	1695.89	5.8966	0.0303	0.0	7.33E-05	2.55E-03	1.87E-02	6.39E-02	1.44E-01
10	9	48	49	22629.43	1	1696.19	5.8956	0.0303	0.0	4.02E-05	5.40E-03	8.90E-02	5.24E-01	1.73E 00
12	11	38	39	24814.72	1	1696.31	5.8951	0.0303	0.0	0.0	1.05E-03	2.37E-02	1.72E-01	6.60E-01
3	2	78	79	15943.20	1	1696.51	5.8945	0.0303	0.0	1.25E-02	3.37E-01	2.12E 00	6.57E 00	1.38E 01
5	4	70	71	17723.78	1	1696.60	5.8941	0.0303	0.0	3.35E-03	1.39E-01	1.13E 00	4.15E 00	9.80E 00
11	10	43	44	23685.38	1	1696.75	5.8936	0.0303	0.0	0.0	2.47E-03	4.74E-02	3.09E-01	1.10E 00
4	3	74	75	16809.55	1	1696.86	5.8932	0.0303	0.0	6.83E-03	2.27E-01	1.62E 00	5.46E 00	1.21E 01
8	7	57	58	20537.02	1	1697.54	5.8909	0.0303	0.0	2.88E-04	2.34E-02	2.86E-01	1.38E 00	3.95E 00
5	4	65	66	15961.02	2	1697.55	5.8908	0.0303	0.0	1.78E-04	4.82E-03	3.04E-02	9.42E-02	1.97E-01
1	0	81	82	12248.70	2	1698.41	5.8879	0.0303	0.0	1.59E-03	1.77E-02	6.53E-02	1.42E-01	2.30E-01
4	3	69	70	14964.37	2	1698.62	5.8871	0.0303	0.0	3.96E-04	8.43E-03	4.61E-02	1.30E-01	2.54E-01
7	6	56	57	17888.55	2	1698.77	5.8866	0.0303	0.0	3.34E-05	1.44E-03	1.20E-02	4.46E-02	1.07E-01
2	1	77	78	13107.35	2	1699.04	5.8857	0.0303	0.0	1.32E-03	1.81E-02	7.55E-02	1.78E-01	3.06E-01
3	2	73	74	14012.86	2	1699.11	5.8854	0.0303	0.0	7.86E-04	1.33E-02	6.35E-02	1.63E-01	2.99E-01
13	12	32	33	25900.18	1	1699.36	5.8846	0.0326	0.0	0.0	4.36E-04	1.15E-02	9.26E-02	3.83E-01
7	6	61	62	19469.31	1	1699.78	5.8831	0.0303	0.0	7.57E-04	4.76E-02	4.99E-01	2.17E 00	5.77E 00
9	8	52	53	21459.91	1	1699.86	5.8828	0.0303	0.0	1.21E-04	1.23E-02	1.72E-01	9.03E-01	2.76E 00
1	0	85	86	14039.36	1	1700.36	5.8811	0.0303	6.31E-05	2.83E-02	4.85E-01	2.32E 00	6.00E 00	1.10E 01
12	11	37	38	24681.22	1	1700.99	5.8789	0.0303	0.0	0.0	1.13E-03	2.50E-02	1.79E-01	6.82E-01
6	5	60	61	16789.46	2	1701.14	5.8784	0.0303	0.0	8.87E-05	2.93E-03	2.08E-02	6.98E-02	1.55E-01
10	9	47	48	22459.34	1	1701.22	5.8781	0.0303	0.0	4.65E-05	6.00E-03	9.65E-02	5.59E-01	1.83E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	65	66	18446.48	1	1701.39	5.8775	0.0303	0.0	1.86E-03	9.15E-02	8.26E-01	3.26E 00	8.09E 00
11	10	42	43	23533.68	1	1701.61	5.8768	0.0303	0.0	0.0	2.70E-03	5.08E-02	3.26E-01	1.15E 00
2	1	81	82	14823.48	1	1701.75	5.8763	0.0303	3.88E-05	2.54E-02	5.25E-01	2.82E 00	7.84E 00	1.52E 01
5	4	69	70	17469.54	1	1702.39	5.8741	0.0303	0.0	4.22E-03	1.65E-01	1.29E 00	4.64E 00	1.08E 01
3	2	77	78	15657.13	1	1702.56	5.8735	0.0303	0.0	1.62E-02	4.10E-01	2.48E 00	7.47E 00	1.53E 01
4	3	73	74	16539.45	1	1702.77	5.8728	0.0303	0.0	8.76E-03	2.73E-01	1.88E 00	6.16E 00	1.34E 01
8	7	56	57	20333.01	1	1702.88	5.8724	0.0303	0.0	3.45E-04	2.68E-02	3.17E-01	1.50E 00	4.23E 00
5	4	64	65	15733.51	2	1702.92	5.8723	0.0303	0.0	2.19E-04	5.61E-03	3.42E-02	1.04E-01	2.14E-01
13	12	31	32	25788.01	1	1703.82	5.8692	0.0331	0.0	0.0	4.59E-04	1.19E-02	9.50E-02	3.90E-01
7	6	55	56	17694.37	2	1703.86	5.8690	0.0303	0.0	3.97E-05	1.63E-03	1.32E-02	4.83E-02	1.14E-01
4	3	68	69	14721.64	2	1704.12	5.8681	0.0303	0.0	4.93E-04	9.93E-03	5.24E-02	1.44E-01	2.77E-01
1	0	80	81	11959.70	2	1704.29	5.8675	0.0303	0.0	2.08E-03	2.16E-02	7.64E-02	1.61E-01	2.57E-01
3	2	72	73	13754.80	2	1704.74	5.8660	0.0303	0.0	9.95E-04	1.59E-02	7.29E-02	1.83E-01	3.29E-01
2	1	76	77	12833.86	2	1704.80	5.8658	0.0303	0.0	1.70E-03	2.18E-02	8.75E-02	2.01E-01	3.40E-01
9	8	51	52	21274.62	1	1705.04	5.8650	0.0303	0.0	1.43E-04	1.39E-02	1.88E-01	9.72E-01	2.93E 00
7	6	60	61	19249.80	1	1705.26	5.8642	0.0303	0.0	9.21E-04	5.51E-02	5.58E-01	2.38E 00	6.24E 00
12	11	36	37	24551.07	1	1705.64	5.8629	0.0308	0.0	0.0	1.21E-03	2.63E-02	1.86E-01	7.02E-01
10	9	46	47	22292.60	1	1706.23	5.8609	0.0303	0.0	5.35E-05	6.64E-03	1.04E-01	5.95E-01	1.92E 00
6	5	59	60	16580.31	2	1706.37	5.8604	0.0303	0.0	1.07E-04	3.36E-03	2.31E-02	7.62E-02	1.66E-01
11	10	41	42	23385.33	1	1706.43	5.8602	0.0303	0.0	0.0	2.95E-03	5.42E-02	3.43E-01	1.19E 00
1	0	84	85	13724.39	1	1706.64	5.8595	0.0303	9.84E-05	3.80E-02	6.04E-01	2.77E 00	6.93E 00	1.25E 01
6	5	64	65	18211.34	1	1707.02	5.8582	0.0303	0.0	2.30E-03	1.07E-01	9.35E-01	3.60E 00	8.81E 00
2	1	80	81	14524.67	1	1707.90	5.8551	0.0303	5.91E-05	3.35E-02	6.45E-01	3.32E 00	9.98E 00	1.70E 01
5	4	68	69	17218.64	1	1708.15	5.8543	0.0303	0.0	5.31E-03	1.95E-01	1.48E 00	5.17E 00	1.18E 01
8	7	55	56	20132.36	1	1708.20	5.8541	0.0303	0.0	4.12E-04	3.05E-02	3.51E-01	1.63E 00	4.53E 00
13	12	30	31	25679.20	1	1708.26	5.8539	0.0335	0.0	0.0	4.82E-04	1.23E-02	9.73E-02	3.97E-01
5	4	63	64	15509.25	2	1708.28	5.8538	0.0303	0.0	2.68E-04	6.51E-03	3.85E-02	1.14E-01	2.32E-01
3	2	76	77	15374.38	1	1708.58	5.8528	0.0303	2.47E-05	2.11E-02	4.98E-01	2.89E 00	8.48E 00	1.71E 01
4	3	72	73	16272.68	1	1708.67	5.8525	0.0303	0.0	1.12E-02	3.28E-01	2.17E 00	6.94E 00	1.48E 01
7	6	54	55	17503.45	2	1708.93	5.8516	0.0303	0.0	4.70E-05	1.84E-03	1.45E-02	5.22E-02	1.21E-01
4	3	67	68	14482.17	2	1709.60	5.8493	0.0303	0.0	6.14E-04	1.17E-02	5.95E-02	1.60E-01	3.03E-01
1	0	79	80	11673.92	2	1710.14	5.8475	0.0303	0.0	2.71E-03	2.62E-02	8.93E-02	1.84E-01	2.87E-01
9	8	50	51	21092.69	1	1710.19	5.8473	0.0303	0.0	1.55E-04	1.55E-02	2.05E-01	1.04E 00	3.11E 00
12	11	35	36	24424.27	1	1710.26	5.8471	0.0312	0.0	0.0	1.29E-03	2.76E-02	1.93E-01	7.22E-01
3	2	71	72	13499.99	2	1710.35	5.8468	0.0303	0.0	1.26E-03	1.89E-02	8.36E-02	2.05E-01	3.62E-01
2	1	75	76	12563.62	2	1710.53	5.8461	0.0303	0.0	2.18E-03	2.62E-02	1.01E-01	2.27E-01	3.76E-01
7	6	59	60	19033.64	1	1710.72	5.8455	0.0303	0.0	1.12E-03	6.35E-02	6.24E-01	2.60E 00	6.73E 00
10	9	45	46	22129.23	1	1711.20	5.8439	0.0303	0.0	6.15E-05	7.33E-03	1.13E-01	6.32E-01	2.02E 00
11	10	40	41	23240.34	1	1711.23	5.8437	0.0303	0.0	2.06E-05	3.20E-03	5.77E-02	3.60E-01	1.24E 00
6	5	58	59	16374.42	2	1711.57	5.8426	0.0303	0.0	1.28E-04	3.84E-03	2.57E-02	8.30E-02	1.79E-01
6	5	63	64	17979.55	1	1712.61	5.8390	0.0303	0.0	2.83E-03	1.25E-01	1.06E 00	3.98E 00	9.58E 00
13	12	29	30	25573.73	1	1712.66	5.8389	0.0340	0.0	0.0	5.04E-04	1.27E-02	9.93E-02	4.02E-01
1	0	83	84	13412.71	1	1712.90	5.8381	0.0303	1.53E-04	5.08E-02	7.50E-01	3.28E 00	7.99E 00	1.41E 01
8	7	54	55	19935.07	1	1713.50	5.8360	0.0303	0.0	4.91E-04	3.46E-02	3.87E-01	1.76E 00	4.85E 00
5	4	62	63	15288.27	2	1713.61	5.8356	0.0303	0.0	3.27E-04	7.53E-03	4.31E-02	1.25E-01	2.51E-01
5	4	67	68	16971.09	1	1713.88	5.8347	0.0303	0.0	6.65E-03	2.30E-01	1.68E 00	5.76E 00	1.29E 01
7	6	53	54	17315.80	2	1713.97	5.8344	0.0303	0.0	5.53E-05	2.08E-03	1.59E-02	5.62E-02	1.29E-01
2	1	79	80	14229.17	1	1714.03	5.8342	0.0303	8.95E-05	4.41E-02	7.91E-01	3.90E 00	1.03E 01	1.91E 01
4	3	71	72	16009.24	1	1714.53	5.8325	0.0303	0.0	1.43E-02	3.92E-01	2.50E 00	7.79E 00	1.64E 01
3	2	75	76	15094.96	1	1714.58	5.8323	0.0303	3.66E-05	2.73E-02	6.03E-01	3.36E 00	9.61E 00	1.90E 01
12	11	34	35	24300.84	1	1714.85	5.8314	0.0317	0.0	0.0	1.38E-03	2.89E-02	2.00E-01	7.41E-01
4	3	66	67	14245.95	2	1715.06	5.8307	0.0303	0.0	7.60E-04	1.37E-02	6.73E-02	1.77E-01	3.30E-01
9	8	49	50	20914.12	1	1715.31	5.8299	0.0303	0.0	1.95E-04	1.74E-02	2.24E-01	1.12E 00	3.29E 00

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	2	70	71	13248.44	2	1715.94	5.8277	0.0303	0.0	1.58E-03	2.24E-02	9.56E-02	2.29E-01	3.97E-01
1	0	78	79	11391.37	2	1715.97	5.8276	0.0303	2.79E-05	3.52E-03	3.19E-02	1.04E-01	2.08E-01	3.19E-01
11	10	39	40	23098.72	1	1716.00	5.8275	0.0303	0.0	2.30E-05	3.47E-03	6.12E-02	3.77E-01	1.29E 00
10	9	44	45	21969.23	1	1716.15	5.8270	0.0303	0.0	7.03E-05	8.07E-03	1.21E-01	6.70E-01	2.12E 00
7	6	58	59	18820.86	1	1716.16	5.8270	0.0303	0.0	1.35E-03	7.30E-02	6.96E-01	2.85E 00	7.25E 00
2	1	74	75	12296.62	2	1716.24	5.8267	0.0303	0.0	2.79E-03	3.14E-02	1.17E-01	2.55E-01	4.16E-01
6	5	57	58	16171.80	2	1716.74	5.8250	0.0303	0.0	1.54E-04	4.39E-03	2.85E-02	9.03E-02	1.92E-01
13	12	28	29	25471.62	1	1717.03	5.8240	0.0359	0.0	0.0	5.26E-04	1.31E-02	1.01E-01	4.07E-01
6	5	62	63	17751.12	1	1718.19	5.8201	0.0303	0.0	3.48E-03	1.45E-01	1.19E 00	4.39E 00	1.04E 01
8	7	53	54	19741.15	1	1718.76	5.8181	0.0303	0.0	5.82E-04	3.92E-02	4.27E-01	1.91E 00	5.18E 00
5	4	61	62	15070.55	2	1718.92	5.8176	0.0303	0.0	3.97E-04	8.70E-03	4.83E-02	1.37E-01	2.71E-01
7	6	52	53	17131.43	2	1718.99	5.8174	0.0303	0.0	6.50E-05	2.33E-03	1.74E-02	6.05E-02	1.37E-01
1	0	82	83	13104.36	1	1719.13	5.8169	0.0303	2.36E-04	6.77E-02	9.28E-01	3.89E 00	9.19E 00	1.58E 01
12	11	33	34	24180.77	1	1719.40	5.8160	0.0321	0.0	0.0	1.46E-03	3.01E-02	2.06E-01	7.59E-01
5	4	66	67	16726.89	1	1719.59	5.8153	0.0303	0.0	8.31E-03	2.72E-01	1.92E 00	6.41E 00	1.42E 01
2	1	78	79	13937.00	1	1720.14	5.8135	0.0303	1.35E-04	5.78E-02	9.68E-01	4.57E 00	1.17E 01	2.14E 01
4	3	70	71	15749.16	1	1720.38	5.8127	0.0303	0.0	1.81E-02	4.68E-01	2.87E 00	8.74E 00	1.81E 01
9	8	48	49	20738.93	1	1720.41	5.8126	0.0303	0.0	2.27E-04	1.94E-02	2.44E-01	1.20E 00	3.48E 00
4	3	65	66	14013.01	2	1720.50	5.8123	0.0303	0.0	9.39E-04	1.60E-02	7.61E-02	1.96E-01	3.59E-01
3	2	74	75	14818.89	1	1720.56	5.8121	0.0303	5.38E-05	3.52E-02	7.28E-01	3.90E 00	1.09E 01	2.11E 01
11	10	38	39	22960.48	1	1720.74	5.8115	0.0303	0.0	2.57E-05	3.74E-03	6.48E-02	3.94E-01	1.33E 00
10	9	43	44	21812.60	1	1721.07	5.8103	0.0303	0.0	8.01E-05	8.86E-03	1.30E-01	7.08E-01	2.22E 00
13	12	27	28	25372.88	1	1721.38	5.8093	0.0379	0.0	0.0	5.47E-04	1.34E-02	1.03E-01	4.10E-01
3	2	69	70	13000.15	2	1721.50	5.8089	0.0303	0.0	1.99E-03	2.65E-02	1.09E-01	2.55E-01	4.36E-01
7	6	57	58	18611.44	1	1721.57	5.8087	0.0303	0.0	1.63E-03	8.37E-02	7.75E-01	3.10E 00	7.80E 00
1	0	77	78	11112.08	2	1721.78	5.8079	0.0303	4.13E-05	4.55E-03	3.86E-02	1.21E-01	2.36E-01	3.55E-01
6	5	56	57	15972.47	2	1721.90	5.8075	0.0303	0.0	1.83E-04	4.99E-03	3.15E-02	9.80E-02	2.05E-01
2	1	73	74	12032.87	2	1721.92	5.8075	0.0303	2.08E-05	3.56E-03	3.76E-02	1.35E-01	2.87E-01	4.59E-01
6	5	61	62	17526.07	1	1723.73	5.8014	0.0303	0.0	4.26E-03	1.69E-01	1.34E 00	4.83E 00	1.13E 01
12	11	32	33	24064.08	1	1723.93	5.8007	0.0326	0.0	0.0	1.55E-03	3.14E-02	2.12E-01	7.75E-01
7	6	51	52	16950.35	2	1723.98	5.8005	0.0303	0.0	7.61E-05	2.62E-03	1.90E-02	6.50E-02	1.46E-01
8	7	52	53	19550.62	1	1724.00	5.8005	0.0303	0.0	6.88E-04	4.43E-02	4.69E-01	2.06E 00	5.52E 00
5	4	60	61	14856.11	2	1724.20	5.7998	0.0303	0.0	4.81E-04	1.00E-02	5.39E-02	1.50E-01	2.92E-01
5	4	65	66	16486.06	1	1725.27	5.7962	0.0303	0.0	1.03E-02	3.19E-01	2.18E 00	7.11E 00	1.55E 01
1	0	81	82	12799.33	1	1725.34	5.7960	0.0303	3.62E-04	9.00E-02	1.15E 00	4.60E 00	1.06E 01	1.78E 01
11	10	37	38	22825.61	1	1725.46	5.7956	0.0303	0.0	2.86E-05	4.03E-03	6.84E-02	4.11E-01	1.38E 00
9	8	47	48	20567.13	1	1725.47	5.7955	0.0303	0.0	2.62E-04	2.15E-02	2.64E-01	1.28E 00	3.67E 00
13	12	26	27	25277.50	1	1725.69	5.7948	0.0398	0.0	0.0	5.66E-04	1.37E-02	1.04E-01	4.13E-01
4	3	64	65	13783.34	2	1725.91	5.7940	0.0303	0.0	1.16E-03	1.86E-02	8.58E-02	2.16E-01	3.90E-01
10	9	42	43	21659.36	1	1725.96	5.7939	0.0303	0.0	9.09E-05	9.70E-03	1.39E-01	7.47E-01	2.31E 00
4	3	69	70	15492.44	1	1726.20	5.7931	0.0303	2.53E-05	2.29E-02	5.57E-01	3.29E 00	9.78E 00	1.99E 01
2	1	77	78	13648.17	1	1726.22	5.7930	0.0303	2.02E-04	7.56E-02	1.18E 00	5.35E 00	1.33E 01	2.38E 01
3	2	73	74	14546.17	1	1726.51	5.7920	0.0303	7.88E-05	4.53E-02	8.77E-01	4.52E 00	1.23E 01	2.34E 01
7	6	56	57	18405.41	1	1726.95	5.7906	0.0303	0.0	1.96E-03	9.57E-02	8.60E-01	3.38E 00	8.38E 00
6	5	55	56	15776.43	2	1727.02	5.7903	0.0303	0.0	2.18E-04	5.66E-03	3.48E-02	1.06E-01	2.19E-01
3	2	68	69	12755.13	2	1727.04	5.7903	0.0303	0.0	2.48E-03	3.12E-02	1.24E-01	2.83E-01	4.77E-01
1	0	76	77	10836.05	2	1727.57	5.7885	0.0303	6.08E-05	5.87E-03	4.66E-02	1.41E-01	2.67E-01	3.94E-01
2	1	72	73	11772.40	2	1727.59	5.7884	0.0303	2.99E-05	4.52E-03	4.49E-02	1.55E-01	3.22E-01	5.06E-01
12	11	31	32	23950.76	1	1728.43	5.7856	0.0331	0.0	0.0	1.63E-03	3.26E-02	2.18E-01	7.89E-01
7	6	50	51	16772.57	2	1728.95	5.7839	0.0303	0.0	8.88E-05	2.93E-03	2.08E-02	6.95E-02	1.54E-01
8	7	51	52	19363.47	1	1729.21	5.7830	0.0303	0.0	8.10E-04	4.99E-02	5.14E-01	2.22E 00	5.87E 00
6	5	60	61	17304.39	1	1729.26	5.7828	0.0303	0.0	5.20E-03	1.95E-01	1.60E 00	5.30E 00	1.22E 01
5	4	59	60	14644.96	2	1729.46	5.7822	0.0303	0.0	5.81E-04	1.15E-02	6.00E-02	1.64E-01	3.14E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	12	25	26	25185.49	1	1729.97	5.7804	0.0418	0.0	0.0	5.84E-04	1.39E-02	1.05E-01	4.14E-01
11	10	36	37	22694.13	1	1730.14	5.7799	0.0308	0.0	3.16E-05	4.33E-03	7.21E-02	4.27E-01	1.42E 00
9	8	46	47	20398.72	1	1730.51	5.7786	0.0303	0.0	3.03E-04	2.39E-02	2.86E-01	1.36E 00	3.87E 00
10	9	41	42	21509.51	1	1730.83	5.7776	0.0303	0.0	1.03E-04	1.06E-02	1.49E-01	7.87E-01	2.41E 00
5	4	64	65	16248.61	1	1730.93	5.7772	0.0303	0.0	1.28E-02	3.74E-01	2.46E 00	7.88E 00	1.68E 01
4	3	63	64	13556.96	2	1731.30	5.7760	0.0303	0.0	1.42E-03	2.16E-02	9.65E-02	2.38E-01	4.23E-01
1	0	80	81	12497.64	1	1731.52	5.7753	0.0303	5.54E-04	1.19E-01	1.41E 00	5.43E 00	1.21E 01	2.00E 01
4	3	68	69	15239.10	1	1731.99	5.7737	0.0303	3.60E-05	2.89E-02	6.61E-01	3.77E 00	1.09E 01	2.18E 01
6	5	54	55	15583.68	2	1732.12	5.7733	0.0303	0.0	2.59E-04	6.41E-03	3.83E-02	1.15E-01	2.34E-01
2	1	76	77	13362.69	1	1732.28	5.7727	0.0303	3.02E-04	9.84E-02	1.44E 00	6.25E 00	1.51E 01	2.66E 01
7	6	55	56	18202.77	1	1732.30	5.7727	0.0303	0.0	2.34E-03	1.09E-01	9.53E-01	3.67E 00	8.98E 00
3	2	72	73	14276.81	1	1732.43	5.7722	0.0303	1.15E-04	5.80E-02	1.05E 00	5.23E 00	1.38E 01	2.58E 01
3	2	67	68	12513.40	2	1732.55	5.7718	0.0303	0.0	3.09E-03	3.67E-02	1.41E-01	3.15E-01	5.21E-01
12	11	30	31	23840.83	1	1732.90	5.7707	0.0335	0.0	0.0	1.71E-03	3.37E-02	2.23E-01	8.02E-01
2	1	71	72	11515.21	2	1733.23	5.7696	0.0303	4.27E-05	5.72E-03	5.34E-02	1.78E-01	3.61E-01	5.57E-01
1	0	75	76	10563.28	2	1733.34	5.7692	0.0303	8.91E-05	7.55E-03	5.62E-02	1.63E-01	3.02E-01	4.37E-01
7	6	49	50	16598.08	2	1733.89	5.7674	0.0303	0.0	1.03E-04	3.26E-03	2.26E-02	7.45E-02	1.63E-01
13	12	24	25	25096.85	1	1734.22	5.7663	0.0437	0.0	0.0	6.00E-04	1.41E-02	1.06E-01	4.14E-01
8	7	50	51	19179.72	1	1734.40	5.7657	0.0303	0.0	9.51E-04	5.60E-02	5.63E-01	2.38E 00	6.23E 00
5	4	58	59	14437.11	2	1734.69	5.7647	0.0303	0.0	6.99E-04	1.32E-02	6.68E-02	1.79E-01	3.38E-01
6	5	59	60	17086.11	1	1734.75	5.7645	0.0303	0.0	6.32E-03	2.25E-01	1.68E 00	5.81E 00	1.32E 01
11	10	35	36	22566.05	1	1734.79	5.7644	0.0312	0.0	3.49E-05	4.63E-03	7.57E-02	4.44E-01	1.46E 00
9	8	45	46	20233.70	1	1735.52	5.7620	0.0303	0.0	3.48E-04	2.64E-02	3.09E-01	1.45E 00	4.07E 00
10	9	40	41	21363.06	1	1735.66	5.7615	0.0303	0.0	1.16E-04	1.15E-02	1.58E-01	8.27E-01	2.51E 00
5	4	63	64	16014.55	1	1736.57	5.7585	0.0303	0.0	1.58E-02	4.37E-01	2.79E 00	8.71E 00	1.83E 01
4	3	62	63	13333.88	2	1736.66	5.7582	0.0303	0.0	1.73E-03	2.50E-02	1.08E-01	2.62E-01	4.58E-01
6	5	53	54	15394.23	2	1737.20	5.7564	0.0303	0.0	3.05E-04	7.24E-03	4.21E-02	1.24E-01	2.50E-01
12	11	29	30	23734.29	1	1737.34	5.7559	0.0340	0.0	0.0	1.80E-03	3.48E-02	2.28E-01	8.14E-01
7	6	54	55	18003.52	1	1737.63	5.7550	0.0303	0.0	2.79E-03	1.24E-01	1.05E 00	3.99E 00	9.61E 00
1	0	79	80	12199.31	1	1737.69	5.7548	0.0303	8.42E-04	1.57E-01	1.74E 00	6.39E 00	1.39E 01	2.24E 01
4	3	67	68	14989.13	1	1737.76	5.7545	0.0303	5.10E-05	3.63E-02	7.82E-01	4.30E 00	1.22E 01	2.39E 01
3	2	66	67	12274.96	2	1738.05	5.7536	0.0303	0.0	3.84E-03	4.31E-02	1.60E-01	3.49E-01	5.68E-01
2	1	75	76	13080.58	1	1738.31	5.7527	0.0303	4.49E-04	1.28E-01	1.74E 00	7.29E 00	1.72E 01	2.96E 01
3	2	71	72	14010.82	1	1738.34	5.7526	0.0303	1.66E-04	7.40E-02	1.26E 00	6.03E 00	1.56E 01	2.85E 01
13	12	23	24	25011.59	1	1738.44	5.7523	0.0457	0.0	0.0	6.14E-04	1.43E-02	1.06E-01	4.13E-01
7	6	48	49	16426.90	2	1738.80	5.7511	0.0303	0.0	1.19E-04	3.63E-03	2.45E-02	7.95E-02	1.72E-01
2	1	70	71	11261.30	2	1738.85	5.7509	0.0303	6.09E-05	7.21E-03	6.35E-02	2.04E-01	4.03E-01	6.12E-01
1	0	74	75	10293.79	2	1739.08	5.7502	0.0303	1.30E-04	9.68E-03	6.75E-02	1.89E-01	3.40E-01	4.83E-01
11	10	34	35	22441.36	1	1739.42	5.7490	0.0317	0.0	3.83E-05	4.93E-03	7.93E-02	4.59E-01	1.50E 00
8	7	49	50	18999.38	1	1739.56	5.7486	0.0303	0.0	1.11E-03	6.27E-02	6.14E-01	2.56E 00	6.60E 00
5	4	57	58	14232.57	2	1739.90	5.7475	0.0303	0.0	8.39E-04	1.50E-02	7.41E-02	1.95E-01	3.67E-01
6	5	58	59	16871.22	1	1740.22	5.7464	0.0303	0.0	7.67E-03	2.60E-01	1.87E 00	6.35E 00	1.42E 01
10	9	39	40	21220.01	1	1740.47	5.7456	0.0303	0.0	1.30E-04	1.25E-02	1.68E-01	8.66E-01	2.61E 00
9	8	44	45	20072.09	1	1740.51	5.7454	0.0303	0.0	3.99E-04	2.91E-02	3.33E-01	1.53E 00	4.27E 00
12	11	28	29	23631.13	1	1741.75	5.7414	0.0359	0.0	0.0	1.87E-03	3.58E-02	2.32E-01	8.23E-01
4	3	61	62	13114.11	2	1742.00	5.7405	0.0303	0.0	2.11E-03	2.90E-02	1.21E-01	2.87E-01	4.95E-01
5	4	62	63	15783.89	1	1742.18	5.7399	0.0303	0.0	1.95E-02	5.09E-01	3.14E 00	9.61E 00	1.99E 01
6	5	52	53	15208.11	2	1742.25	5.7397	0.0303	0.0	3.59E-04	8.15E-03	4.62E-02	1.33E-01	2.65E-01
13	12	22	23	24929.71	1	1742.62	5.7385	0.0476	0.0	0.0	6.26E-04	1.44E-02	1.06E-01	4.10E-01
7	6	53	54	17807.68	1	1742.93	5.7375	0.0303	0.0	3.32E-03	1.41E-01	1.16E 00	4.32E 00	1.03E 01
4	3	66	67	14742.56	1	1743.51	5.7356	0.0303	7.18E-05	4.54E-02	9.23E-01	4.90E 00	1.36E 01	2.62E 01
3	2	65	66	12039.83	2	1743.52	5.7355	0.0303	2.76E-05	4.75E-03	5.04E-02	1.81E-01	3.86E-01	6.18E-01
7	6	47	48	16259.04	2	1743.69	5.7350	0.0303	0.0	1.38E-04	4.02E-03	2.65E-02	8.47E-02	1.81E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	78	79	11904.34	1	1743.83	5.7345	0.0303	1.27E-03	2.07E-01	2.13E 00	7.51E 00	1.58E 01	2.51E 01
11	10	33	34	22320.07	1	1744.01	5.7339	0.0321	0.0	4.19E-05	5.24E-03	8.28E-02	4.74E-01	1.54E 00
3	2	70	71	13748.23	1	1744.22	5.7332	0.0303	2.40E-04	9.42E-02	1.51E 00	6.94E 00	1.75E 01	3.15E 01
2	1	74	75	12801.85	1	1744.32	5.7329	0.0303	6.63E-04	1.65E-01	2.11E 00	8.47E 00	1.95E 01	3.29E 01
2	1	69	70	11010.69	2	1744.45	5.7325	0.0303	8.62E-05	9.07E-03	7.52E-02	2.33E-01	4.50E-01	6.71E-01
8	7	48	49	18822.44	1	1744.69	5.7317	0.0303	0.0	1.29E-03	7.00E-02	6.69E-01	2.74E 00	6.98E 00
1	0	73	74	10027.60	2	1744.80	5.7313	0.0303	1.88E-04	1.24E-02	8.09E-02	2.18E-01	3.83E-01	5.34E-01
5	4	56	57	14031.34	2	1745.08	5.7304	0.0303	0.0	1.00E-03	1.71E-02	8.21E-02	2.12E-01	3.89E-01
10	9	38	39	21080.37	1	1745.24	5.7299	0.0303	0.0	1.45E-04	1.35E-02	1.78E-01	9.06E-01	2.70E 00
9	8	43	44	19913.90	1	1745.46	5.7291	0.0303	0.0	4.55E-04	3.20E-02	3.57E-01	1.62E 00	4.47E 00
6	5	57	58	16659.74	1	1745.67	5.7285	0.0303	0.0	9.26E-03	2.98E-01	2.09E 00	6.94E 00	1.53E 01
12	11	27	28	23531.37	1	1746.13	5.7270	0.0379	0.0	0.0	1.95E-03	3.67E-02	2.36E-01	8.31E-01
13	12	21	22	24851.22	1	1746.78	5.7248	0.0496	0.0	0.0	6.35E-04	1.44E-02	1.05E-01	4.07E-01
6	5	51	52	15025.29	2	1747.27	5.7232	0.0303	0.0	4.21E-04	9.14E-03	5.05E-02	1.43E-01	2.82E-01
4	3	60	61	12897.64	2	1747.32	5.7231	0.0303	0.0	2.56E-03	3.34E-02	1.36E-01	3.14E-01	5.34E-01
5	4	61	62	15556.63	1	1747.76	5.7216	0.0303	2.56E-05	2.39E-02	5.92E-01	3.54E 00	1.06E 01	2.16E 01
7	6	52	53	17615.26	1	1748.21	5.7201	0.0303	0.0	3.93E-03	1.59E-01	1.28E 00	4.66E 00	1.10E 01
7	6	46	47	16094.49	2	1748.55	5.7190	0.0303	0.0	1.58E-04	4.44E-03	2.86E-02	9.00E-02	1.90E-01
11	10	32	33	22202.19	1	1748.58	5.7189	0.0326	0.0	4.56E-05	5.55E-03	8.63E-02	4.88E-01	1.57E 00
3	2	64	65	11808.00	2	1748.96	5.7177	0.0303	3.80E-05	5.86E-03	5.88E-02	2.04E-01	4.26E-01	6.72E-01
4	3	65	66	14499.39	1	1749.23	5.7168	0.0303	1.01E-04	5.66E-02	1.09E 00	5.57E 00	1.51E 01	2.86E 01
8	7	47	48	18648.93	1	1749.79	5.7150	0.0303	0.0	1.50E-03	7.79E-02	7.26E-01	2.92E 00	7.37E 00
1	0	77	78	11612.75	1	1749.94	5.7145	0.0303	1.92E-03	2.71E-01	2.60E 00	8.80E 00	1.80E 01	2.81E 01
10	9	37	38	20944.14	1	1749.99	5.7143	0.0303	0.0	1.61E-04	1.45E-02	1.88E-01	9.45E-01	2.79E 00
2	1	68	69	10763.38	2	1750.02	5.7142	0.0303	1.22E-04	1.14E-02	8.88E-02	2.66E-01	5.01E-01	7.35E-01
3	2	69	70	13489.02	1	1750.07	5.7141	0.0303	3.45E-04	1.19E-01	1.80E 00	7.98E 00	1.96E 01	3.47E 01
5	4	55	56	13833.44	2	1750.24	5.7135	0.0303	0.0	1.19E-03	1.95E-02	9.07E-02	2.30E-01	4.16E-01
2	1	73	74	12526.50	1	1750.31	5.7133	0.0303	9.75E-04	2.13E-01	2.55E 00	9.83E 00	2.20E 01	3.65E 01
9	8	42	43	19759.12	1	1750.39	5.7130	0.0303	0.0	5.17E-04	3.50E-02	3.83E-01	1.72E 00	4.67E 00
12	11	26	27	23435.02	1	1750.47	5.7128	0.0398	0.0	0.0	2.02E-03	3.75E-02	2.39E-01	8.36E-01
1	0	72	73	9764.71	2	1750.50	5.7127	0.0303	2.72E-04	1.57E-02	9.68E-02	2.51E-01	4.30E-01	5.89E-01
13	12	20	21	24776.12	1	1750.90	5.7113	0.0515	0.0	0.0	6.42E-04	1.44E-02	1.05E-01	4.01E-01
6	5	56	57	16451.68	1	1751.08	5.7108	0.0303	0.0	1.11E-02	3.42E-01	2.32E 00	7.57E 00	1.64E 01
6	5	50	51	14845.80	2	1752.27	5.7069	0.0303	0.0	4.92E-04	1.02E-02	5.51E-02	1.54E-01	2.99E-01
4	3	59	60	12684.50	2	1752.61	5.7058	0.0303	0.0	3.10E-03	3.84E-02	1.51E-01	3.43E-01	5.75E-01
11	10	31	32	22087.72	1	1753.11	5.7041	0.0331	0.0	4.95E-05	5.86E-03	8.96E-02	5.02E-01	1.60E 00
5	4	60	61	15332.79	1	1753.32	5.7035	0.0303	3.49E-05	2.93E-02	6.86E-01	3.97E 00	1.16E 01	2.34E 01
7	6	45	46	15933.27	2	1753.39	5.7032	0.0303	0.0	1.81E-04	4.90E-03	3.08E-02	9.55E-02	2.00E-01
7	6	51	52	17426.27	1	1753.46	5.7030	0.0303	0.0	4.64E-03	1.80E-01	1.40E 00	5.03E 00	1.17E 01
3	2	63	64	11579.50	2	1754.38	5.7000	0.0303	5.21E-05	7.20E-03	6.85E-02	2.30E-01	4.70E-01	7.29E-01
10	9	36	37	20811.34	1	1754.71	5.6989	0.0308	0.0	1.79E-04	1.56E-02	1.99E-01	9.84E-01	2.88E 00
12	11	25	26	23342.06	1	1754.79	5.6987	0.0418	0.0	0.0	2.09E-03	3.82E-02	2.41E-01	8.39E-01
8	7	46	47	18478.84	1	1754.87	5.6984	0.0303	0.0	1.74E-03	8.65E-02	7.87E-01	3.12E 00	7.77E 00
4	3	64	65	14259.63	1	1754.92	5.6983	0.0303	1.40E-04	7.04E-02	1.28E 00	6.32E 00	1.67E 01	3.12E 01
13	12	19	20	24704.41	1	1755.00	5.6980	0.0535	0.0	0.0	6.45E-04	1.44E-02	1.03E-01	3.95E-01
9	8	41	42	19607.77	1	1755.29	5.6971	0.0303	0.0	5.86E-04	3.83E-02	4.10E-01	1.81E 00	4.87E 00
5	4	54	55	13638.86	2	1755.38	5.6968	0.0303	0.0	1.42E-03	2.21E-02	9.99E-02	2.48E-01	4.44E-01
2	1	67	68	10519.39	2	1755.57	5.6962	0.0303	1.71E-04	1.42E-02	1.05E-01	3.02E-01	5.57E-01	8.04E-01
3	2	68	69	13233.23	1	1755.90	5.6951	0.0303	4.92E-04	1.51E-01	2.14E 00	9.14E 00	2.19E 01	3.81E 01
1	0	76	77	11324.54	1	1756.04	5.6946	0.0303	2.88E-03	3.53E-01	3.17E 00	1.03E 01	2.05E 01	3.13E 01
1	0	71	72	9505.12	2	1756.17	5.6942	0.0303	3.90E-04	2.00E-02	1.15E-01	2.88E-01	4.82E-01	6.49E-01
2	1	72	73	12254.55	1	1756.27	5.6939	0.0303	1.43E-03	2.73E-01	3.06E 00	1.14E 01	2.48E 01	4.04E 01
6	5	55	56	16247.05	1	1756.47	5.6932	0.0303	0.0	1.34E-02	3.90E-01	2.57E 00	8.23E 00	1.76E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	49	50	14669.65	2	1757.25	5.6907	0.0303	0.0	5.73E-04	1.14E-02	6.00E-02	1.65E-01	3.16E-01
11	10	30	31	21976.67	1	1757.61	5.6895	0.0335	0.0	5.35E-05	6.17E-03	9.28E-02	5.14E-01	1.63E 00
4	3	58	59	12474.70	2	1757.86	5.6887	0.0303	0.0	3.74E-03	4.40E-02	1.69E-01	3.75E-01	6.19E-01
7	6	44	45	15775.39	2	1758.20	5.6876	0.0303	0.0	2.07E-04	5.38E-03	3.31E-02	1.01E-01	2.09E-01
7	6	50	51	17240.70	1	1758.68	5.6861	0.0303	0.0	5.45E-03	2.02E-01	1.54E 00	5.41E 00	1.24E 01
5	4	59	60	15112.37	1	1758.85	5.6855	0.0303	4.72E-05	3.57E-02	7.93E-01	4.45E 00	1.28E 01	2.53E 01
13	12	18	19	24636.09	1	1759.06	5.6849	0.0552	0.0	0.0	6.45E-04	1.42E-02	1.02E-01	3.87E-01
12	11	24	25	23252.52	1	1759.07	5.6848	0.0437	0.0	0.0	2.14E-03	3.88E-02	2.43E-01	8.40E-01
10	9	35	36	20681.96	1	1759.40	5.6838	0.0312	0.0	1.98E-04	1.67E-02	2.09E-01	1.02E 00	2.96E 00
3	2	62	63	11364.33	2	1759.78	5.6825	0.0303	7.10E-05	8.82E-03	7.95E-02	2.59E-01	5.17E-01	7.90E-01
8	7	45	46	18312.18	1	1759.91	5.6821	0.0303	0.0	2.00E-03	9.57E-02	8.50E-01	3.31E 00	8.17E 00
9	8	40	41	19459.85	1	1760.16	5.6813	0.0303	0.0	6.60E-04	4.17E-02	4.37E-01	1.90E 00	5.07E 00
5	4	53	54	13447.62	2	1760.49	5.6802	0.0303	0.0	1.68E-03	2.50E-02	1.10E-01	2.68E-01	4.73E-01
4	3	63	64	14023.30	1	1760.59	5.6799	0.0303	1.94E-04	8.71E-02	1.49E 00	7.15E 00	1.85E 01	3.40E 01
2	1	66	67	10278.73	2	1761.09	5.6783	0.0303	2.38E-04	1.77E-02	1.23E-01	3.43E-01	6.18E-01	8.78E-01
3	2	67	68	12980.85	1	1761.71	5.6763	0.0303	6.98E-04	1.90E-01	2.53E 00	1.05E 01	2.44E 01	4.18E 01
1	0	70	71	9248.86	2	1761.83	5.6759	0.0303	5.58E-04	2.52E-02	1.37E-01	3.30E-01	5.39E-01	7.13E-01
6	5	54	55	16045.84	1	1761.84	5.6759	0.0303	0.0	1.60E-02	4.44E-01	2.85E 00	8.94E 00	1.89E 01
11	10	29	30	21869.04	1	1762.09	5.6751	0.0340	0.0	5.75E-05	6.46E-03	9.58E-02	5.26E-01	1.65E 00
1	0	75	76	11039.74	1	1762.11	5.6750	0.0303	4.29E-03	4.60E-01	3.85E 00	1.20E 01	2.33E 01	3.49E 01
6	5	48	49	14496.84	2	1762.19	5.6748	0.0303	0.0	6.64E-04	1.27E-02	6.51E-02	1.76E-01	3.33E-01
2	1	71	72	11986.02	1	1762.21	5.6747	0.0303	2.07E-03	3.50E-01	3.68E 00	1.32E 01	2.80E 01	4.47E 01
7	6	43	44	15620.85	2	1762.98	5.6722	0.0303	0.0	2.35E-04	5.90E-03	3.55E-02	1.07E-01	2.19E-01
13	12	17	18	24571.17	1	1763.08	5.6719	0.0568	0.0	0.0	6.42E-04	1.40E-02	9.97E-02	3.77E-01
4	3	57	58	12268.22	2	1763.12	5.6718	0.0303	2.33E-05	4.49E-03	5.04E-02	1.87E-01	4.08E-01	6.65E-01
12	11	23	24	23166.39	1	1763.33	5.6711	0.0457	0.0	0.0	2.20E-03	3.92E-02	2.44E-01	8.38E-01
7	6	49	50	17058.57	1	1763.87	5.6694	0.0303	0.0	6.38E-03	2.26E-01	1.68E 00	5.81E 00	1.31E 01
10	9	34	35	20556.01	1	1764.06	5.6687	0.0317	0.0	2.17E-04	1.78E-02	2.19E-01	1.06E 00	3.04E 00
5	4	58	59	14895.39	1	1764.35	5.6678	0.0303	6.36E-05	4.33E-02	9.15E-01	4.97E 00	1.40E 01	2.73E 01
8	7	44	45	18148.97	1	1764.93	5.6659	0.0303	0.0	2.29E-03	1.06E-01	9.17E-01	3.52E 00	8.58E 00
9	8	39	40	19315.37	1	1765.00	5.6657	0.0303	0.0	7.42E-04	4.52E-02	4.64E-01	1.99E 00	5.26E 00
3	2	61	62	11132.49	2	1765.15	5.6652	0.0303	9.64E-05	1.08E-02	9.20E-02	2.90E-01	5.68E-01	8.55E-01
5	4	52	53	13259.72	2	1765.57	5.6639	0.0303	0.0	1.98E-03	2.81E-02	1.21E-01	2.89E-01	5.04E-01
4	3	62	63	13790.39	1	1766.23	5.6618	0.0303	2.68E-04	1.08E-01	1.74E 00	8.08E 00	2.04E 01	3.69E 01
11	10	28	29	21764.84	1	1766.53	5.6608	0.0359	0.0	6.16E-05	6.75E-03	9.86E-02	5.35E-01	1.67E 00
2	1	65	66	10041.41	2	1766.60	5.6606	0.0303	3.31E-04	2.19E-02	1.44E-01	3.89E-01	6.84E-01	9.56E-01
13	12	16	17	24509.65	1	1767.08	5.6591	0.0585	0.0	0.0	6.35E-04	1.38E-02	9.73E-02	3.67E-01
6	5	47	48	14327.37	2	1767.12	5.6589	0.0303	0.0	7.68E-04	1.41E-02	7.06E-02	1.87E-01	3.51E-01
6	5	53	54	15848.09	1	1767.18	5.6587	0.0303	0.0	1.90E-02	5.05E-01	3.15E 00	9.68E 00	2.02E 01
1	0	69	70	8995.93	2	1767.46	5.6578	0.0303	7.93E-04	3.18E-02	1.63E-01	3.78E-01	6.02E-01	7.83E-01
3	2	66	67	12731.90	1	1767.49	5.6577	0.0303	9.87E-04	2.38E-01	3.00E 00	1.19E 01	2.72E 01	4.58E 01
12	11	22	23	23083.67	1	1767.55	5.6575	0.0476	0.0	0.0	2.24E-03	3.95E-02	2.44E-01	8.33E-01
7	6	42	43	15469.65	2	1767.74	5.6569	0.0303	0.0	2.67E-04	6.45E-03	3.80E-02	1.13E-01	2.28E-01
2	1	70	71	11720.90	1	1768.13	5.6557	0.0303	3.00E-03	4.46E-01	4.40E 00	1.52E 01	3.14E 01	4.93E 01
1	0	74	75	10758.35	1	1768.15	5.6556	0.0303	6.36E-03	5.96E-01	4.67E 00	1.40E 01	2.64E 01	3.88E 01
4	3	56	57	12065.10	2	1768.34	5.6550	0.0303	3.08E-05	5.38E-03	5.75E-02	2.08E-01	4.44E-01	7.13E-01
10	9	33	34	20433.50	1	1768.69	5.6539	0.0321	0.0	2.38E-04	1.90E-02	2.29E-01	1.09E 00	3.12E 00
7	6	48	49	16879.89	1	1769.04	5.6528	0.0303	0.0	7.44E-03	2.53E-01	1.83E 00	6.22E 00	1.39E 01
9	8	38	39	19174.33	1	1769.81	5.6503	0.0303	0.0	8.30E-04	4.89E-02	4.92E-01	2.09E 00	5.46E 00
5	4	57	58	14661.85	1	1769.83	5.6503	0.0303	8.52E-05	5.24E-02	1.05E 00	5.55E 00	1.53E 01	2.94E 01
8	7	43	44	17989.20	1	1769.92	5.6500	0.0303	0.0	2.62E-03	1.16E-01	9.86E-01	3.73E 00	8.99E 00
3	2	60	61	10914.00	2	1770.50	5.6481	0.0303	1.30E-04	1.31E-02	1.06E-01	3.25E-01	6.22E-01	9.23E-01
5	4	51	52	13075.18	2	1770.63	5.6477	0.0303	0.0	2.32E-03	3.16E-02	1.32E-01	3.11E-01	5.35E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	27	28	21664.07	1	1770.94	5.6467	0.0379	0.0	6.56E-05	7.03E-03	1.01E-01	5.44E-01	1.69E 00
13	12	15	16	24451.53	1	1771.04	5.6464	0.0591	0.0	0.0	6.25E-04	1.34E-02	9.44E-02	3.54E-01
12	11	21	22	23004.38	1	1771.74	5.6442	0.0496	0.0	0.0	2.27E-03	3.97E-02	2.43E-01	9.26E-01
4	3	61	62	13560.93	1	1771.85	5.6438	0.0303	3.68E-04	1.32E-01	2.03E 00	9.10E 00	2.25E 01	4.01E 01
6	5	46	47	14161.26	2	1772.01	5.6433	0.0303	0.0	8.84E-04	1.56E-02	7.63E-02	1.99E-01	3.70E-01
2	1	64	65	9807.43	2	1772.07	5.6431	0.0303	4.57E-04	2.71E-02	1.68E-01	4.39E-01	7.57E-01	1.04E 00
7	6	41	42	15321.80	2	1772.47	5.6418	0.0303	0.0	3.01E-04	7.02E-03	4.05E-02	1.19E-01	2.38E-01
6	5	52	53	15653.78	1	1772.49	5.6418	0.0303	2.30E-05	2.25E-02	5.71E-01	3.46E 00	1.05E 01	2.15E 01
1	0	68	69	8746.33	2	1773.06	5.6400	0.0303	1.12E-03	3.99E-02	1.93E-01	4.32E-01	6.71E-01	8.59E-01
3	2	65	66	12486.39	1	1773.24	5.6394	0.0303	1.39E-03	2.98E-01	3.53E 00	1.36E 01	3.03E 01	5.01E 01
10	9	32	33	20314.43	1	1773.29	5.6392	0.0326	0.0	2.59E-04	2.01E-02	2.38E-01	1.13E 00	3.19E 00
4	3	55	56	11865.33	2	1773.53	5.6385	0.0303	4.04E-05	6.42E-03	6.54E-02	2.30E-01	4.92E-01	7.63E-01
2	1	69	70	11459.21	1	1774.02	5.6369	0.0303	4.32E-03	5.67E-01	5.26E 00	1.74E 01	3.52E 01	5.43E 01
1	0	73	74	10480.37	1	1774.18	5.6364	0.0303	9.38E-03	7.70E-01	5.64E 00	1.63E 01	2.99E 01	4.31E 01
7	6	47	48	16704.66	1	1774.18	5.6364	0.0303	0.0	8.65E-03	2.82E-01	1.99E 00	6.65E 00	1.47E 01
9	8	37	38	19036.74	1	1774.59	5.6351	0.0303	0.0	9.25E-04	5.28E-02	5.21E-01	2.19E 00	5.64E 00
8	7	42	43	17832.88	1	1774.89	5.6342	0.0303	0.0	2.98E-03	1.27E-01	1.06E 00	3.94E 00	9.40E 00
13	12	14	15	24396.82	1	1774.98	5.6339	0.0597	0.0	0.0	6.10E-04	1.30E-02	9.10E-02	3.41E-01
5	4	56	57	14471.76	1	1775.29	5.6329	0.0303	1.14E-04	6.32E-02	1.21E 00	6.18E 00	1.67E 01	3.16E 01
11	10	26	27	21566.74	1	1775.33	5.6328	0.0398	0.0	6.96E-05	7.29E-03	1.03E-01	5.52E-01	1.70E 00
5	4	50	51	12893.99	2	1775.66	5.6317	0.0303	0.0	2.72E-03	3.54E-02	1.44E-01	3.34E-01	5.67E-01
3	2	59	60	10698.87	2	1775.83	5.6312	0.0303	1.75E-04	1.59E-02	1.22E-01	3.63E-01	6.81E-01	9.95E-01
12	11	20	21	22928.51	1	1775.90	5.6309	0.0515	0.0	0.0	2.30E-03	3.97E-02	2.41E-01	8.15E-01
6	5	45	46	13998.51	2	1776.88	5.6278	0.0303	0.0	1.01E-03	1.72E-02	8.22E-02	2.12E-01	3.88E-01
7	6	40	41	15177.32	2	1777.17	5.6269	0.0303	0.0	3.38E-04	7.63E-03	4.31E-02	1.24E-01	2.47E-01
4	3	60	61	13334.93	1	1777.45	5.6260	0.0303	5.02E-04	1.62E-01	2.36E 00	1.02E 01	2.48E 01	4.34E 01
2	1	63	64	9576.80	2	1777.53	5.6258	0.0303	6.28E-04	3.33E-02	1.96E-01	4.95E-01	8.35E-01	1.13E 00
6	5	51	52	15462.93	1	1777.77	5.6250	0.0303	2.98E-05	2.66E-02	6.45E-01	3.81E 00	1.13E 01	2.29E 01
10	9	31	32	20198.81	1	1777.86	5.6247	0.0331	0.0	2.82E-04	2.12E-02	2.48E-01	1.16E 00	3.25E 00
1	0	67	68	8500.09	2	1778.64	5.6223	0.0303	1.58E-03	5.00E-02	2.27E-01	4.92E-01	7.47E-01	9.40E-01
4	3	54	55	11668.92	2	1778.70	5.6221	0.0303	5.28E-05	7.63E-03	7.43E-02	2.53E-01	5.22E-01	8.15E-01
13	12	13	14	24345.52	1	1778.87	5.6215	0.0604	0.0	0.0	5.92E-04	1.26E-02	8.73E-02	3.26E-01
3	2	64	65	12244.32	1	1778.97	5.6212	0.0303	1.94E-03	3.71E-01	4.15E 00	1.54E 01	3.36E 01	5.47E 01
7	6	46	47	16532.89	1	1779.29	5.6202	0.0303	0.0	1.00E-02	3.13E-01	2.16E 00	7.10E 00	1.55E 01
9	8	36	37	18902.61	1	1779.35	5.6200	0.0308	0.0	1.03E-03	5.68E-02	5.49E-01	2.27E 00	5.82E 00
11	10	25	26	21472.84	1	1779.68	5.6190	0.0418	0.0	7.36E-05	7.53E-03	1.05E-01	5.57E-01	1.71E 00
8	7	41	42	17680.03	1	1779.82	5.6185	0.0303	0.0	3.38E-03	1.39E-01	1.13E 00	4.15E 00	9.81E 00
2	1	68	69	11200.97	1	1779.88	5.6184	0.0303	6.19E-03	7.18E-01	6.26E 00	2.00E 01	3.95E 01	5.98E 01
12	11	19	20	22856.06	1	1780.03	5.6179	0.0535	0.0	0.0	2.31E-03	3.95E-02	2.38E-01	8.02E-01
1	0	72	73	10205.84	1	1780.18	5.6174	0.0303	1.38E-02	9.91E-01	6.81E 00	1.89E 01	3.38E 01	4.78E 01
5	4	49	50	12716.17	2	1780.67	5.6159	0.0303	0.0	3.17E-03	3.96E-02	1.57E-01	3.58E-01	6.01E-01
5	4	55	56	14265.13	1	1780.71	5.6157	0.0303	1.51E-04	7.60E-02	1.38E 00	6.86E 00	1.81E 01	3.39E 01
3	2	58	59	10487.10	2	1781.13	5.6144	0.0303	2.34E-04	1.92E-02	1.40E-01	4.04E-01	7.44E-01	1.07E 00
6	5	44	45	13839.13	2	1781.72	5.6126	0.0303	0.0	1.16E-03	1.90E-02	8.84E-02	2.24E-01	4.07E-01
7	6	39	40	15036.20	2	1781.85	5.6121	0.0303	0.0	3.78E-04	8.26E-03	4.57E-02	1.30E-01	2.56E-01
10	9	30	31	20086.64	1	1782.40	5.6104	0.0335	0.0	3.05E-04	2.24E-02	2.57E-01	1.19E 00	3.31E 00
13	12	12	13	24297.62	1	1782.74	5.6093	0.0610	0.0	0.0	5.71E-04	1.20E-02	8.32E-02	3.09E-01
2	1	62	63	9349.53	2	1782.96	5.6087	0.0303	8.59E-04	4.09E-02	2.28E-01	5.58E-01	9.19E-01	1.23E 00
4	3	59	60	13112.37	1	1783.01	5.6085	0.0303	6.82E-04	1.98E-01	2.73E 00	1.15E 01	2.72E 01	4.70E 01
6	5	50	51	15275.54	1	1783.03	5.6084	0.0303	3.83E-05	3.14E-02	7.27E-01	4.17E 00	1.22E 01	2.44E 01
4	3	53	54	11475.88	2	1783.84	5.6059	0.0303	6.86E-05	9.05E-03	8.40E-02	2.79E-01	5.64E-01	8.70E-01
11	10	24	25	21382.39	1	1784.00	5.6054	0.0437	0.0	7.73E-05	7.75E-03	1.07E-01	5.61E-01	1.71E 00
9	8	35	36	18771.94	1	1784.07	5.6052	0.0312	0.0	1.14E-03	6.08E-02	5.78E-01	2.36E 00	6.00E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	18	19	22787.05	1	1784.12	5.6050	0.0552	0.0	0.0	2.31E-03	3.91E-02	2.35E-01	7.86E-01
1	0	66	67	8257.20	2	1784.20	5.6048	0.0303	2.21E-03	6.23E-02	2.68E-01	5.59E-01	8.30E-01	1.03E 00
7	6	45	46	16364.60	1	1784.37	5.6042	0.0303	0.0	1.15E-02	3.47E-01	2.33E 00	7.56E 00	1.63E 01
3	2	63	64	12005.71	1	1784.68	5.6032	0.0303	2.70E-03	4.60E-01	4.87E 00	1.75E 01	3.72E 01	5.96E 01
8	7	40	41	17530.64	1	1784.72	5.6031	0.0303	0.0	3.82E-03	1.52E-01	1.21E 00	4.37E 00	1.02E 01
5	4	48	49	12541.73	2	1785.65	5.6002	0.0303	0.0	3.68E-03	4.41E-02	1.71E-01	3.82E-01	6.35E-01
2	1	67	68	10946.18	1	1785.72	5.6000	0.0303	8.83E-03	9.06E-01	7.44E 00	2.29E 01	4.41E 01	6.57E 01
5	4	54	55	14061.97	1	1786.11	5.5988	0.0303	1.99E-04	9.09E-02	1.57E 00	7.60E 00	1.97E 01	3.64E 01
1	0	71	72	9934.75	1	1786.15	5.5986	0.0303	2.01E-02	1.27E 00	8.19E 00	2.18E 01	3.81E 01	5.29E 01
3	2	57	58	10278.70	2	1786.40	5.5978	0.0303	3.11E-04	2.31E-02	1.61E-01	4.50E-01	8.11E-01	1.15E 00
7	6	38	39	14898.44	2	1786.50	5.5975	0.0303	0.0	4.22E-04	8.91E-03	4.84E-02	1.36E-01	2.65E-01
6	5	43	44	13683.11	2	1786.54	5.5974	0.0303	0.0	1.32E-03	2.08E-02	9.49E-02	2.37E-01	4.25E-01
13	12	11	12	24253.14	1	1786.57	5.5973	0.0617	0.0	0.0	5.45E-04	1.14E-02	7.86E-02	2.91E-01
10	9	29	30	19977.94	1	1786.90	5.5963	0.0340	0.0	3.28E-04	2.35E-02	2.65E-01	1.21E 00	3.36E 00
12	11	17	18	22721.46	1	1788.19	5.5922	0.0568	0.0	0.0	2.30E-03	3.86E-02	2.30E-01	7.67E-01
6	5	49	50	15091.63	1	1788.26	5.5920	0.0303	4.90E-05	3.68E-02	8.16E-01	4.56E 00	1.31E 01	2.59E 01
11	10	23	24	21295.39	1	1788.29	5.5919	0.0457	0.0	8.09E-05	7.94E-03	1.08E-01	5.63E-01	1.70E 00
2	1	61	62	9125.64	2	1788.37	5.5917	0.0303	1.17E-03	5.00E-02	2.64E-01	6.26E-01	1.01E 00	1.33E 00
4	3	58	59	12893.29	1	1788.55	5.5911	0.0303	9.21E-04	2.41E-01	3.15E 00	1.28E 01	2.98E 01	5.07E 01
9	8	34	35	18644.73	1	1788.77	5.5904	0.0317	0.0	1.25E-03	6.50E-02	6.06E-01	2.44E 00	6.16E 00
4	3	52	53	11286.22	2	1788.96	5.5898	0.0303	8.86E-05	1.07E-02	9.48E-02	3.06E-01	6.08E-01	9.26E-01
7	6	44	45	16199.77	1	1789.42	5.5884	0.0303	0.0	1.33E-02	3.84E-01	2.52E 00	8.03E 00	1.71E 01
8	7	39	40	17384.73	1	1789.60	5.5878	0.0303	0.0	4.29E-03	1.65E-01	1.28E 00	4.59E 00	1.06E 01
1	0	65	66	8017.69	2	1789.74	5.5874	0.0303	3.08E-03	7.74E-02	3.14E-01	6.34E-01	9.20E-01	1.12E 00
3	2	62	63	11770.57	1	1790.36	5.5855	0.0303	3.73E-03	5.69E-01	5.69E 00	1.98E 01	4.12E 01	6.49E 01
13	12	10	11	24212.08	1	1790.37	5.5854	0.0625	0.0	0.0	5.16E-04	1.07E-02	7.37E-02	2.72E-01
5	4	47	48	12370.66	2	1790.60	5.5847	0.0303	2.10E-05	4.26E-03	4.90E-02	1.85E-01	4.08E-01	6.69E-01
7	6	37	38	14764.06	2	1791.12	5.5831	0.0303	0.0	4.69E-04	9.59E-03	5.11E-02	1.42E-01	2.74E-01
6	5	42	43	13530.48	2	1791.33	5.5824	0.0303	0.0	1.50E-03	2.28E-02	1.02E-01	2.50E-01	4.44E-01
10	9	28	29	19872.69	1	1791.38	5.5823	0.0359	0.0	3.51E-04	2.45E-02	2.73E-01	1.24E 00	3.40E 00
5	4	53	54	13862.29	1	1791.49	5.5819	0.0303	2.61E-04	1.08E-01	1.79E 00	8.40E 00	2.14E 01	3.89E 01
2	1	66	67	10694.85	1	1791.54	5.5818	0.0303	1.25E-02	1.14E 00	8.81E 00	2.62E 01	4.92E 01	7.20E 01
3	2	56	57	10073.68	2	1791.65	5.5814	0.0303	4.11E-04	2.77E-02	1.84E-01	4.99E-01	9.82E-01	1.24E 00
1	0	70	71	9667.11	1	1792.10	5.5800	0.0303	2.92E-02	1.63E 00	9.82E 00	2.52E 01	4.29E 01	5.85E 01
12	11	16	17	22659.31	1	1792.22	5.5797	0.0585	0.0	0.0	2.28E-03	3.79E-02	2.24E-01	7.46E-01
11	10	22	23	21211.84	1	1792.54	5.5787	0.0476	0.0	8.42E-05	8.10E-03	1.09E-01	5.64E-01	1.70E 00
9	8	33	34	18521.00	1	1793.43	5.5759	0.0321	0.0	1.37E-03	6.92E-02	6.34E-01	2.52E 00	6.32E 00
6	5	48	49	14911.20	1	1793.46	5.5758	0.0303	6.24E-05	4.30E-02	9.13E-01	4.98E 00	1.40E 01	2.74E 01
2	1	60	61	8905.12	2	1793.75	5.5749	0.0303	1.58E-03	6.09E-02	3.06E-01	7.01E-01	1.11E 00	1.43E 00
4	3	51	52	11099.95	2	1794.05	5.5740	0.0303	1.14E-04	1.26E-02	1.07E-01	3.36E-01	6.55E-01	9.85E-01
4	3	57	58	12677.69	1	1794.07	5.5739	0.0303	1.24E-03	2.92E-01	3.63E 00	1.44E 01	3.26E 01	5.47E 01
13	12	9	10	24174.43	1	1794.14	5.5737	0.0624	0.0	0.0	4.83E-04	9.98E-03	6.83E-02	2.52E-01
8	7	38	39	17242.29	1	1794.45	5.5727	0.0303	0.0	4.81E-03	1.79E-01	1.36E 00	4.80E 00	1.10E 01
7	6	43	44	16038.43	1	1794.45	5.5727	0.0303	0.0	1.52E-02	4.23E-01	2.71E 00	8.51E 00	1.80E 01
1	0	64	65	7781.55	2	1795.25	5.5703	0.0303	4.27E-03	9.59E-02	3.68E-01	7.17E-01	1.02E 00	1.22E 00
5	4	46	47	12202.98	2	1795.53	5.5694	0.0303	2.62E-05	4.91E-03	5.43E-02	2.00E-01	4.34E-01	7.04E-01
7	6	36	37	14633.06	2	1795.71	5.5688	0.0308	0.0	5.19E-04	1.03E-02	5.38E-02	1.47E-01	2.82E-01
10	9	27	28	19770.91	1	1795.83	5.5685	0.0379	0.0	3.75E-04	2.56E-02	2.80E-01	1.26E 00	3.43E 00
3	2	61	62	11538.91	1	1796.01	5.5679	0.0303	5.13E-03	7.01E-01	6.64E 00	2.23E 01	4.54E 01	7.05E 01
6	5	41	42	13381.23	2	1796.09	5.5676	0.0303	0.0	1.69E-03	2.48E-02	1.08E-01	2.63E-01	4.63E-01
12	11	15	16	22600.61	1	1796.22	5.5672	0.0591	0.0	0.0	2.24E-03	3.70E-02	2.18E-01	7.21E-01
11	10	21	22	21131.74	1	1796.77	5.5655	0.0496	0.0	8.71E-05	8.23E-03	1.10E-01	5.62E-01	1.68E 00
5	4	52	53	13666.09	1	1796.83	5.5654	0.0303	3.40E-04	1.29E-01	2.03E 00	9.26E 00	2.31E 01	4.15E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	2	55	56	9872.04	2	1796.88	5.5652	0.0303	5.41E-04	3.31F-02	2.10E-01	5.53F-01	9.59E-01	1.32E 00
2	1	65	66	10446.99	1	1797.33	5.5638	0.0303	1.76F-02	1.43E 00	1.04E 01	2.9ÆE 01	5.48F 01	7.89E 01
13	12	8	9	24140.20	1	1797.87	5.5621	0.0624	0.0	0.0	4.46E-04	9.18E-03	6.27F-02	2.31E-01
1	0	69	70	9402.94	1	1798.03	5.5616	0.0303	4.22E-02	2.07E 00	1.17E 01	2.90F 01	4.82E 01	6.45E 01
9	8	32	33	18400.75	1	1798.07	5.5615	0.0326	0.0	1.50E-03	7.34E-02	6.61E-01	2.60E 00	6.46E 00
6	5	47	48	14734.27	1	1798.63	5.5598	0.0303	7.91F-05	5.00E-02	1.02E 00	5.42F 00	1.50E 01	2.90E 01
2	1	59	60	8687.99	2	1799.11	5.5583	0.0303	2.13E-03	7.40E-02	3.53E-01	7.84E-01	1.21F 00	1.55E 00
4	3	50	51	10917.06	2	1799.11	5.5583	0.0303	1.46E-04	1.47F-02	1.20E-01	3.67F-01	7.04E-01	1.05E 00
8	7	37	38	17103.34	1	1799.27	5.5578	0.0303	0.0	5.37E-03	1.93E-01	1.44E 00	5.02F 00	1.14F 01
7	6	42	43	15880.58	1	1799.45	5.5573	0.0303	0.0	1.73F-02	4.64F-01	2.91E 00	9.00E 00	1.88E 01
4	3	56	57	12465.57	1	1799.56	5.5569	0.0303	1.65E-03	3.53F-01	4.17E 00	1.60F 01	3.56E 01	5.89E 01
12	11	14	15	22545.34	1	1800.18	5.5550	0.0597	0.0	0.0	2.19E-03	3.59F-02	2.10E-01	6.93F-01
10	9	26	27	19672.59	1	1800.25	5.5548	0.0398	0.0	3.98E-04	2.65E-02	2.87F-01	1.28F 00	3.46F 00
7	6	35	36	14505.45	2	1800.28	5.5547	0.0312	0.0	5.72E-04	1.10F-02	5.65E-02	1.53E-01	2.90F-01
5	4	45	46	12038.69	2	1800.43	5.5542	0.0303	3.26E-05	5.64F-03	6.00E-02	2.16F-01	4.61E-01	7.40E-01
1	0	63	64	7548.79	2	1800.74	5.5533	0.0303	5.89F-03	1.18E-01	4.29E-01	8.10F-01	1.12E 00	1.33F 00
6	5	40	41	13235.37	2	1800.83	5.5530	0.0303	0.0	1.90E-03	2.70F-02	1.15F-01	2.76E-01	4.81F-01
11	10	20	21	21055.10	1	1800.96	5.5526	0.0515	0.0	8.97E-05	8.32E-03	1.10E-01	5.58F-01	1.66E 00
13	12	7	8	24109.38	1	1801.57	5.5507	0.0623	0.0	0.0	4.06E-04	8.32F-03	5.67E-02	2.08E-01
3	2	60	61	11310.73	1	1801.64	5.5505	0.0303	7.03E-03	8.61E-01	7.72E 00	2.51E 01	5.00F 01	7.64E 01
3	2	54	55	9673.80	2	1802.08	5.5491	0.0303	7.08E-04	3.94E-02	2.38E-01	6.10F-01	1.04E 00	1.42E 00
5	4	51	52	13473.39	1	1802.15	5.5489	0.0303	4.41F-04	1.53E-01	2.30E 00	1.02E 01	2.50E 01	4.43F 01
9	8	31	32	18283.98	1	1802.67	5.5473	0.0331	0.0	1.63E-03	7.76E-02	6.88E-01	2.64F 00	6.59E 00
2	1	64	65	10202.62	1	1803.10	5.5460	0.0303	2.48F-02	1.78E 00	1.22E 01	3.39F 01	6.09E 01	9.62F 01
6	5	46	47	14560.82	1	1803.78	5.5439	0.0303	9.96F-05	5.80E-02	1.13E 00	5.88F 00	1.60E 01	3.06F 01
1	0	68	69	9142.25	1	1803.93	5.5435	0.0303	6.07E-02	2.63E 00	1.40F 01	3.33E 01	5.40F 01	7.11E 01
8	7	36	37	16967.88	1	1804.05	5.5431	0.0308	0.0	5.97E-03	2.08E-01	1.52E 00	5.23E 00	1.18F 01
12	11	13	14	22493.51	1	1804.12	5.5429	0.0604	0.0	0.0	2.13E-03	3.46F-02	2.02E-01	6.63E-01
4	3	49	50	10737.57	2	1804.15	5.5428	0.0303	1.85E-04	1.72E-02	1.34F-01	4.00E-01	7.55F-01	1.11E 00
7	6	41	42	15726.23	1	1804.42	5.5419	0.0303	0.0	1.96F-02	5.08E-01	3.12F 00	9.49E 00	1.96F 01
2	1	58	59	8474.25	2	1804.44	5.5419	0.0303	2.86F-03	8.96E-02	4.06F-01	8.75F-01	1.33E 00	1.67E 00
10	9	25	26	19577.75	1	1804.64	5.5413	0.0418	0.0	4.21E-04	2.74E-02	2.93E-01	1.29F 00	3.47E 00
7	6	34	35	14381.22	2	1804.81	5.5407	0.0317	0.0	6.28E-04	1.17E-02	5.91F-02	1.58E-01	2.98F-01
4	3	55	56	12256.95	1	1805.02	5.5401	0.0303	2.20E-03	4.24F-01	4.77E 00	1.78F 01	3.88E 01	6.33F 01
11	10	19	20	20981.92	1	1805.13	5.5398	0.0535	0.0	9.18E-05	8.37E-03	1.09E-01	5.52F-01	1.64E 00
13	12	6	7	24081.99	1	1805.24	5.5394	0.0620	0.0	0.0	3.63F-04	7.41E-03	5.03E-02	1.84E-01
5	4	44	45	11877.80	2	1805.31	5.5392	0.0303	4.02E-05	6.45F-03	6.61E-02	2.33E-01	4.89F-01	7.76E-01
6	5	39	40	13092.91	2	1805.54	5.5385	0.0303	0.0	2.13E-03	2.92F-02	1.23F-01	2.90E-01	4.99F-01
1	0	62	63	7319.43	2	1806.20	5.5365	0.0303	8.08F-03	1.45E-01	5.00F-01	9.13F-01	1.24F 00	1.44F 00
9	8	30	31	18170.69	1	1807.25	5.5333	0.0335	0.0	1.76E-03	8.17E-02	7.13E-01	2.75F 00	6.71E 00
3	2	59	60	11086.05	1	1807.25	5.5333	0.0303	9.57E-03	1.05E 00	8.95F 00	2.82F 01	5.50E 01	8.27E 01
3	2	53	54	9478.96	2	1807.26	5.5332	0.0303	9.23E-04	4.68E-02	2.70E-01	6.73F-01	1.12E 00	1.51F 00
5	4	50	51	13284.19	1	1807.44	5.5327	0.0303	5.70E-04	1.80E-01	2.59F 00	1.12F 01	2.69F 01	4.71E 01
12	11	12	13	22445.13	1	1808.02	5.5309	0.0610	0.0	0.0	2.05E-03	3.31E-02	1.92E-01	6.29E-01
8	7	35	36	16835.92	1	1808.81	5.5285	0.0312	0.0	6.60E-03	2.23F-01	1.60E 00	5.44F 00	1.21E 01
2	1	63	64	9961.74	1	1808.84	5.5284	0.0303	3.45F-02	2.22E 00	1.44E 01	3.95F 01	6.75F 01	9.40E 01
13	12	5	6	24058.02	1	1808.87	5.5283	0.0617	0.0	0.0	3.17F-04	6.46F-03	4.37E-02	1.60E-01
6	5	45	46	14390.88	1	1808.90	5.5282	0.0303	1.25E-04	6.70F-02	1.26E 00	6.37E 00	1.71E 01	3.22E 01
10	9	24	25	19486.39	1	1808.99	5.5279	0.0437	0.0	4.43E-04	2.82F-02	2.97E-01	1.30F 00	3.48F 00
4	3	48	49	10561.49	2	1809.17	5.5274	0.0303	2.35E-04	2.00F-02	1.49E-01	4.35F-01	8.07E-01	1.17F 00
11	10	18	19	20912.20	1	1809.26	5.5271	0.0552	0.0	9.35E-05	8.38E-03	1.08E-01	5.44F-01	1.60E 00
7	6	33	34	14260.39	2	1809.32	5.5269	0.0321	0.0	6.86E-04	1.24F-02	6.17E-02	1.63E-01	3.05E-01
7	6	40	41	15575.37	1	1809.36	5.5268	0.0303	2.34E-05	2.22F-02	5.54E-01	3.33F 00	9.99E 00	2.04F 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	1	57	58	8263.93	2	1809.75	5.5256	0.0303	3.81E-03	1.08E-01	4.65E-01	9.74E-01	1.45E 00	1.79E 00
1	0	67	68	8885.04	1	1809.81	5.5254	0.0303	8.68E-02	3.32E 00	1.67E 01	3.82E 01	6.04E 01	7.82E 01
5	4	43	44	11720.32	2	1810.16	5.5244	0.0303	4.95E-05	7.35E-03	7.26E-02	2.50E-01	5.18E-01	8.12E-01
6	5	38	39	12953.84	2	1810.22	5.5242	0.0303	0.0	2.38E-03	3.16E-02	1.30E-01	3.03E-01	5.17E-01
4	3	54	55	12051.84	1	1810.46	5.5235	0.0303	2.91E-03	5.09E-01	5.45E 00	1.97E 01	4.23E 01	6.79E 01
1	0	61	62	7093.47	2	1811.64	5.5199	0.0303	1.10E-02	1.78E-01	5.80E-01	1.03E 00	1.36E 00	1.56E 00
9	8	29	30	18060.90	1	1811.79	5.5194	0.0340	0.0	1.90E-03	8.58E-02	7.37E-01	2.81E 00	6.82E 00
12	11	11	12	22400.19	1	1811.88	5.5191	0.0617	0.0	0.0	1.96E-03	3.14E-02	1.82E-01	5.93E-01
3	2	52	53	9287.54	2	1812.41	5.5175	0.0303	1.20E-03	5.54E-02	3.05E-01	7.40E-01	1.21E 00	1.61E 00
13	12	4	5	24037.46	1	1812.47	5.5173	0.0614	0.0	0.0	2.69E-04	5.45E-03	3.69E-02	1.35E-01
5	4	49	50	13098.50	1	1812.71	5.5166	0.0303	7.31E-04	2.11E-01	2.91E 00	1.22E 01	2.90E 01	5.00E 01
3	2	58	59	10864.87	1	1812.82	5.5163	0.0303	1.30E-02	1.28E 00	1.04E 01	3.16E 01	6.04E 01	8.94E 01
10	9	23	24	19398.52	1	1813.31	5.5148	0.0457	0.0	4.64E-04	2.89E-02	3.01E-01	1.31E 00	3.47E 00
11	10	17	18	20845.96	1	1813.36	5.5146	0.0568	0.0	9.46E-05	8.35E-03	1.07E-01	5.33E-01	1.56E 00
8	7	34	35	16707.46	1	1813.54	5.5141	0.0317	0.0	7.28E-03	2.38E-01	1.68E 00	5.64E 00	1.25E 01
7	6	32	33	14142.96	2	1813.81	5.5133	0.0326	0.0	7.47E-04	1.32E-02	6.43E-02	1.68E-01	3.11E-01
6	5	44	45	14224.45	1	1813.99	5.5127	0.0303	1.55E-04	7.71E-02	1.39E 00	6.88E 00	1.81E 01	3.39E 01
4	3	47	48	10388.82	2	1814.16	5.5122	0.0303	2.95E-04	2.32E-02	1.66E-01	4.73E-01	8.62E-01	1.24E 00
7	6	39	40	15428.02	1	1814.27	5.5119	0.0303	2.83E-05	2.50E-02	6.03E-01	3.54E 00	1.05E 01	2.13E 01
2	1	62	63	9724.36	1	1814.55	5.5110	0.0303	4.79E-02	2.75E 00	1.68E 01	4.36E 01	7.47E 01	1.02E 02
6	5	37	38	12818.19	2	1814.87	5.5100	0.0303	0.0	2.65E-03	3.40E-02	1.37E-01	3.16E-01	5.34E-01
5	4	42	43	11566.25	2	1814.98	5.5097	0.0303	6.05E-05	8.35E-03	7.94E-02	2.67E-01	5.46E-01	8.48E-01
2	1	56	57	8057.01	2	1815.03	5.5096	0.0303	5.06E-03	1.30E-01	5.33E-01	1.08E 00	1.58E 00	1.93E 00
1	0	66	67	8631.33	1	1815.66	5.5076	0.0303	1.23E-01	4.19E 00	1.98E 01	4.37E 01	6.75E 01	8.58E 01
12	11	10	11	22358.71	1	1815.72	5.5075	0.0625	0.0	0.0	1.85E-03	2.96E-02	1.70E-01	5.54E-01
4	3	53	54	11850.23	1	1815.86	5.5070	0.0303	3.83E-03	6.08E-01	6.21E 00	2.18E 01	4.59E 01	7.27E 01
13	12	3	4	24020.34	1	1816.03	5.5065	0.0611	0.0	0.0	2.18E-04	4.42E-03	2.98E-02	1.09E-01
9	8	28	29	17954.60	1	1816.30	5.5057	0.0359	0.0	2.03E-03	8.98E-02	7.59E-01	2.87E 00	6.90E 00
1	0	60	61	6870.93	2	1817.06	5.5034	0.0303	1.50E-02	2.18E-01	6.71E-01	1.15E 00	1.50E 00	1.69E 00
11	10	16	17	20783.18	1	1817.42	5.5023	0.0585	0.0	9.51E-05	8.27E-03	1.05E-01	5.20E-01	1.52E 00
3	2	51	52	9099.53	2	1817.53	5.5020	0.0303	1.54E-03	6.52E-02	3.44E-01	8.11E-01	1.31E 00	1.72E 00
10	9	22	23	19314.13	1	1817.61	5.5017	0.0476	0.0	4.83E-04	2.95E-02	3.04E-01	1.31E 00	3.46E 00
5	4	48	49	12916.32	1	1817.94	5.5007	0.0303	9.33E-04	2.47E-01	3.26E 00	1.34E 01	3.11E 01	5.31E 01
8	7	33	34	16582.50	1	1818.24	5.4998	0.0321	0.0	7.99E-03	2.54E-01	1.76E 00	5.83E 00	1.28E 01
7	6	31	32	14028.93	2	1818.26	5.4998	0.0331	0.0	8.10E-04	1.39E-02	6.67E-02	1.73E-01	3.17E-01
3	2	57	58	10647.20	1	1818.37	5.4994	0.0303	1.75E-02	1.56E 00	1.19E 01	3.53E 01	6.61E 01	9.65E 01
6	5	43	44	14061.54	1	1819.05	5.4974	0.0303	1.93E-04	8.84E-02	1.53E 00	7.41E 00	1.93E 01	3.55E 01
4	3	46	47	10219.57	2	1819.12	5.4972	0.0303	3.70E-04	2.68E-02	1.84E-01	5.12E-01	9.18E-01	1.30E 00
7	6	38	39	15284.19	1	1819.15	5.4971	0.0303	3.40E-05	2.81E-02	6.53E-01	3.76E 00	1.10E 01	2.21E 01
6	5	36	37	12685.95	2	1819.50	5.4960	0.0308	0.0	2.93E-03	3.65E-02	1.44E-01	3.29E-01	5.51E-01
12	11	9	10	22320.67	1	1819.52	5.4960	0.0624	0.0	0.0	1.74E-03	2.75E-02	1.58E-01	5.13E-01
13	12	2	3	24006.64	1	1819.56	5.4958	0.0609	0.0	0.0	1.65E-04	3.34E-03	2.26E-02	8.23E-02
5	4	41	42	11415.59	2	1819.78	5.4952	0.0303	7.35E-05	9.45E-03	8.67E-02	2.86E-01	5.75E-01	8.84E-01
2	1	61	62	9490.49	1	1820.24	5.4938	0.0303	6.62E-02	3.39E 00	1.97E 01	4.92E 01	8.25E 01	1.11E 02
2	1	55	56	7853.51	2	1820.29	5.4936	0.0303	6.68E-03	1.56E-01	6.08E-01	1.20E 00	1.72E 00	2.07E 00
9	8	27	28	17851.80	1	1820.79	5.4921	0.0379	0.0	2.17E-03	9.36E-02	7.80E-01	2.92E 00	6.98E 00
4	3	52	53	11652.14	1	1821.25	5.4907	0.0303	5.01E-03	7.24E-01	7.05E 00	2.41E 01	4.97E 01	7.77E 01
11	10	15	16	20723.88	1	1821.46	5.4901	0.0591	0.0	9.49E-05	8.14E-03	1.03E-01	5.05E-01	1.47E 00
1	0	65	66	8381.13	1	1821.49	5.4900	0.0303	1.75E-01	5.26E 00	2.34E 01	4.99E 01	7.52E 01	9.40E 01
10	9	21	22	19233.23	1	1821.87	5.4889	0.0496	0.0	5.01E-04	3.00E-02	3.05E-01	1.30E 00	3.43E 00
1	0	59	60	6651.80	2	1822.45	5.4871	0.0303	2.02E-02	2.65E-01	7.75E-01	1.29E 00	1.64E 00	1.82E 00
3	2	50	51	8914.94	2	1822.63	5.4866	0.0303	1.98E-03	7.66E-02	3.86E-01	8.88E-01	1.41E 00	1.82E 00
7	6	30	31	13918.32	2	1822.68	5.4864	0.0335	0.0	8.74E-04	1.46E-02	6.91E-02	1.77E-01	3.23E-01

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8	7	32	33	16461.06	1	1822.91	5.4857	0.0326	0.0	8.73E-03	2.69E-01	1.84E 00	6.02E 00	1.31E 01
13	12	1	2	23996.36	1	1823.06	5.4853	0.0606	0.0	0.0	1.11E-04	2.25E-03	1.51E-02	5.52E-02
5	4	47	48	12737.67	1	1823.15	5.4850	0.0303	1.18E-03	2.88E-01	3.64E 00	1.46E 01	3.33E 01	5.61F 01
12	11	8	9	22286.09	1	1823.29	5.4846	0.0624	0.0	0.0	1.61E-03	2.53E-02	1.45E-01	4.70F-01
3	2	56	57	10433.05	1	1823.90	5.4828	0.0303	2.34F-02	1.89E 00	1.37E 01	3.94F 01	7.23E 01	1.04E 02
7	6	37	38	15143.88	1	1824.01	5.4824	0.0303	4.07E-05	3.14E-02	7.06E-01	3.99E 00	1.15E 01	2.28E 01
4	3	45	46	10053.75	2	1824.05	5.4823	0.0303	4.60E-04	3.08E-02	2.04E-01	5.53F-01	9.76E-01	1.37E 00
6	5	42	43	13902.14	1	1824.08	5.4822	0.0303	2.37E-04	1.01E-01	1.69E 00	7.96E 00	2.04E 01	3.72E 01
6	5	35	36	12557.12	2	1824.10	5.4822	0.0312	0.0	3.24E-03	3.91E-02	1.52E-01	3.41E-01	5.67E-01
5	4	40	41	11268.36	2	1824.55	5.4808	0.0303	8.88E-05	1.06E-02	9.44E-02	3.04F-01	6.04E-01	9.20E-01
9	8	26	27	17752.52	1	1825.24	5.4787	0.0398	0.0	2.31E-03	9.72E-02	7.99E-01	2.96E 00	7.03E 00
11	10	14	15	20668.05	1	1825.46	5.4781	0.0597	0.0	9.40E-05	7.96E-03	9.95F-02	4.87E-01	1.41E 00
2	1	54	55	7653.44	2	1825.53	5.4779	0.0303	8.77E-03	1.86E-01	6.91E-01	1.33E 00	1.86F 00	2.21E 00
2	1	60	61	9260.14	1	1825.91	5.4767	0.0303	9.09E-02	4.17F 00	2.29E 01	5.55F 01	9.10E 01	1.21F 02
10	9	20	21	19155.82	1	1826.10	5.4762	0.0515	0.0	5.16E-04	3.04F-02	3.06E-01	1.29F 00	3.39E 00
13	12	0	1	23989.51	1	1826.52	5.4749	0.0603	0.0	0.0	5.60F-05	1.13E-03	7.61F-03	2.77E-02
4	3	51	52	11457.59	1	1826.60	5.4747	0.0303	6.52E-03	8.58E-01	7.98E 00	2.65E 01	5.37E 01	8.29E 01
12	11	7	8	22254.96	1	1827.02	5.4734	0.0623	0.0	0.0	1.46F-03	2.30E-02	1.31F-01	4.24E-01
7	6	29	30	13811.11	2	1827.08	5.4732	0.0340	0.0	9.39E-04	1.53E-02	7.13E-02	1.81E-01	3.27E-01
1	0	64	65	8134.45	1	1827.29	5.4726	0.0303	2.46E-01	6.58E 00	2.76E 01	5.68F 01	8.36E 01	1.03E 02
8	7	31	32	16343.14	1	1827.55	5.4718	0.0331	0.0	9.50E-03	2.85E-01	1.91E 00	6.19F 00	1.34E 01
3	2	49	50	8733.79	2	1827.70	5.4714	0.0303	2.52E-03	8.96E-02	4.32E-01	9.69E-01	1.51E 00	1.93E 00
1	0	58	59	6436.11	2	1827.82	5.4710	0.0303	2.72F-02	3.21E-01	8.93E-01	1.44E 00	1.80E 00	1.96F 00
5	4	46	47	12562.54	1	1828.34	5.4694	0.0303	1.50E-03	3.35E-01	4.06E 00	1.58E 01	3.56E 01	5.93E 01
6	5	34	35	12431.72	2	1828.67	5.4685	0.0317	0.0	3.56E-03	4.17E-02	1.59E-01	3.53E-01	5.82E-01
7	6	36	37	15007.09	1	1828.83	5.4680	0.0308	4.83E-05	3.49E-02	7.61E-01	4.21F 00	1.20F 01	2.36E 01
4	3	44	45	9891.36	2	1828.96	5.4676	0.0303	5.70E-04	3.53E-02	2.25E-01	5.95F-01	1.04E 00	1.44E 00
6	5	41	42	13746.29	1	1829.08	5.4672	0.0303	2.90E-04	1.15E-01	1.85E 00	8.53E 00	2.15E 01	3.89E 01
5	4	39	40	11124.55	2	1829.29	5.4666	0.0303	1.07E-04	1.20E-02	1.02E-01	3.24E-01	6.34E-01	9.55E-01
3	2	55	56	10222.44	1	1829.39	5.4663	0.0303	3.13E-02	2.28E 00	1.58E 01	4.38E 01	7.89E 01	1.12E 02
11	10	13	14	20615.70	1	1829.43	5.4662	0.0604	0.0	9.25E-05	7.73E-03	9.60F-02	4.68E-01	1.35E 00
9	8	25	26	17656.73	1	1829.66	5.4655	0.0418	0.0	2.45E-03	1.01E-01	8.15F-01	2.99E 00	7.06E 00
10	9	19	20	19081.91	1	1830.30	5.4636	0.0535	0.0	5.28E-04	3.06E-02	3.04E-01	1.28E 00	3.33E 00
12	11	6	7	22227.29	1	1830.72	5.4623	0.0620	0.0	0.0	1.31E-03	2.05F-02	1.16E-01	3.76E-01
2	1	53	54	7456.80	2	1830.74	5.4623	0.0303	1.14F-02	2.21E-01	7.84E-01	1.46E 00	2.02E 00	2.36E 00
7	6	28	29	13707.32	2	1831.45	5.4602	0.0359	0.0	1.01F-03	1.60E-02	7.33E-02	1.84E-01	3.31E-01
2	1	59	60	9033.32	1	1831.55	5.4599	0.0303	1.24E-01	5.12E 00	2.66E 01	6.24E 01	1.00E 02	1.31E 02
4	3	50	51	11266.57	1	1831.93	5.4587	0.0303	8.43E-03	1.01E 00	9.01E 00	2.91E 01	5.79E 01	8.83E 01
8	7	30	31	16228.73	1	1832.16	5.4580	0.0335	0.0	1.03E-02	3.01E-01	1.98E 00	6.35E 00	1.36E 01
3	2	48	49	8556.07	2	1832.75	5.4563	0.0303	3.20E-03	1.04E-01	4.83E-01	1.06F 00	1.62E 00	2.04E 00
1	0	63	64	7891.29	1	1833.07	5.4553	0.0303	3.44E-01	8.20E 00	3.24E 01	6.45E 01	9.28E 01	1.12E 02
1	0	57	58	6223.85	2	1833.16	5.4551	0.0303	3.64E-02	3.88E-01	1.03E 00	1.60F 00	1.96E 00	2.12E 00
6	5	33	34	12309.75	2	1833.21	5.4549	0.0321	0.0	3.89E-03	4.43E-02	1.66E-01	3.65E-01	5.96E-01
13	12	1	0	23986.09	1	1833.33	5.4546	0.0603	0.0	0.0	5.64E-05	1.14E-03	7.65E-03	2.79E-02
11	10	12	13	20566.83	1	1833.36	5.4545	0.0610	0.0	9.02E-05	7.45E-03	9.19F-02	4.46E-01	1.28E 00
5	4	45	46	12390.96	1	1833.49	5.4541	0.0303	1.88E-03	3.87E-01	4.51E 00	1.71E 01	3.80F 01	6.25E 01
7	6	35	36	14873.83	1	1833.63	5.4537	0.0312	5.70E-05	3.87E-02	8.17E-01	4.44E 00	1.25E 01	2.43E 01
4	3	43	44	9732.40	2	1833.84	5.4530	0.0303	7.02E-04	4.03E-02	2.47E-01	6.40E-01	1.10E 00	1.50E 00
5	4	38	39	10984.19	2	1834.00	5.4526	0.0303	1.28E-04	1.34E-02	1.11E-01	3.43E-01	6.63E-01	9.90E-01
9	8	24	25	17564.47	1	1834.05	5.4524	0.0437	0.0	2.57E-03	1.04E-01	8.29F-01	3.02E 00	7.08E 00
6	5	40	41	13593.96	1	1834.06	5.4524	0.0303	3.54F-04	1.30E-01	2.02E 00	9.12E 00	2.27E 01	4.05E 01
12	11	5	6	22203.07	1	1834.39	5.4514	0.0617	0.0	0.0	1.14E-03	1.78E-02	1.01E-01	3.26E-01
10	9	18	19	19011.50	1	1834.46	5.4512	0.0552	0.0	5.38E-04	3.06E-02	3.02E-01	1.26E 00	3.27E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	2	54	55	10015.37	1	1834.87	5.4500	0.0303	4.15E-02	2.74E 00	1.80E 01	4.87E 01	8.59E 01	1.20E 02
7	6	27	28	13606.95	2	1835.79	5.4472	0.0379	0.0	1.07E-03	1.66E-02	7.52E-02	1.87E-01	3.34E-01
2	1	52	53	7263.61	2	1835.92	5.4469	0.0303	1.49E-02	2.61E-01	8.87E-01	1.61E 00	2.18E 00	2.52E 00
13	12	2	1	23989.51	1	1836.69	5.4446	0.0606	0.0	0.0	1.13E-04	2.27E-03	1.53E-02	5.58E-02
8	7	29	30	16117.86	1	1836.74	5.4444	0.0340	0.0	1.11E-02	3.16E-01	2.05E 00	6.50E 00	1.38E 01
2	1	58	59	8810.04	1	1837.16	5.4432	0.0303	1.69E-01	6.25E 00	3.08E 01	7.00E 01	1.10E 02	1.42E 02
4	3	49	50	11079.09	1	1837.23	5.4430	0.0303	1.09E-02	1.19E 00	1.01E 01	3.19E 01	6.24E 01	9.38E 01
11	10	11	12	20521.44	1	1837.27	5.4429	0.0617	0.0	8.71E-05	7.12E-03	8.72E-02	4.22E-01	1.21E 00
6	5	32	33	12191.21	2	1837.73	5.4415	0.0326	2.27E-05	4.24E-03	4.70E-02	1.73E-01	3.76E-01	6.09E-01
3	2	47	48	8381.80	2	1837.77	5.4414	0.0303	4.03E-03	1.21E-01	5.38E-01	1.15E 00	1.73E 00	2.16E 00
12	11	4	5	22182.32	1	1838.02	5.4406	0.0614	0.0	0.0	9.68E-04	1.51E-02	8.53E-02	2.75E-01
7	6	34	35	14744.11	1	1838.39	5.4395	0.0317	6.70E-05	4.27E-02	8.74E-01	4.66E 00	1.29E 01	2.50E 01
9	8	23	24	17475.72	1	1838.41	5.4395	0.0457	0.0	2.70E-03	1.06E-01	8.40E-01	3.03E 00	7.07E 00
1	0	56	57	6015.03	2	1838.48	5.4393	0.0303	4.84E-02	4.67E-01	1.18E 00	1.78E 00	2.14E 00	2.27E 00
10	9	17	18	18944.59	1	1838.60	5.4389	0.0568	0.0	5.45E-04	3.05E-02	2.98E-01	1.24E 00	3.19E 00
5	4	44	45	12222.92	1	1838.61	5.4389	0.0303	2.34E-03	4.46E-01	4.99E 00	1.85E 01	4.04E 01	6.57E 01
5	4	37	38	10847.26	2	1838.69	5.4387	0.0303	1.52E-04	1.49E-02	1.19E-01	3.63E-01	6.92E-01	1.02E 00
4	3	42	43	9576.89	2	1838.70	5.4386	0.0303	8.59E-04	4.58E-02	2.71E-01	6.86E-01	1.16E 00	1.57E 00
1	0	62	63	7651.67	1	1838.82	5.4383	0.0303	4.79E-01	1.02E 01	3.81E 01	7.32E 01	1.03E 02	1.22E 02
6	5	39	40	13445.18	1	1839.01	5.4377	0.0303	4.28E-04	1.47E-01	2.20E 00	9.72E 00	2.38E 01	4.22E 01
13	12	3	2	23996.36	1	1840.01	5.4348	0.0609	0.0	0.0	1.68E-04	3.40E-03	2.29E-02	8.37E-02
7	6	26	27	13510.01	2	1840.10	5.4345	0.0398	0.0	1.14E-03	1.73E-02	7.69E-02	1.89E-01	3.36E-01
3	2	53	54	9811.84	1	1840.31	5.4339	0.0303	5.47E-02	3.28E 00	2.06E 01	5.39E 01	9.33E 01	1.29E 02
2	1	51	52	7073.87	2	1841.08	5.4316	0.0303	1.92E-02	3.09E-01	1.00E 00	1.77E 00	2.35E 00	2.68E 00
11	10	10	11	20479.54	1	1841.14	5.4314	0.0625	0.0	8.33E-05	6.74E-03	8.21E-02	3.95E-01	1.13E 00
8	7	28	29	16010.51	1	1841.29	5.4310	0.0359	0.0	1.19E-02	3.31E-01	2.12E 00	6.64E 00	1.40E 01
12	11	3	4	22165.02	1	1841.62	5.4300	0.0611	0.0	0.0	7.86E-04	1.22E-02	6.90E-02	2.22E-01
6	5	31	32	12076.10	2	1842.21	5.4283	0.0331	2.60E-05	4.60E-03	4.96E-02	1.80E-01	3.86E-01	6.21E-01
4	3	48	49	10895.17	1	1842.50	5.4274	0.0303	1.39E-02	1.40E 00	1.14E 01	3.49E 01	6.70E 01	9.95E 01
10	9	16	17	18881.18	1	1842.70	5.4268	0.0585	0.0	5.48E-04	3.03E-02	2.93E-01	1.21E 00	3.10E 00
9	8	22	23	17390.49	1	1842.74	5.4267	0.0476	0.0	2.81E-03	1.09E-01	8.48E-01	3.03E 00	7.04E 00
2	1	57	58	8590.31	1	1842.75	5.4267	0.0303	2.28E-01	7.61E 00	3.56E 01	7.84E 01	1.21E 02	1.53E 02
3	2	46	47	8210.98	2	1842.77	5.4266	0.0303	5.06E-03	1.40E-01	5.97E-01	1.24E 00	1.84E 00	2.27E 00
7	6	33	34	14617.93	1	1843.13	5.4256	0.0321	7.81E-05	4.69E-02	9.32E-01	4.88E 00	1.34E 01	2.57E 01
13	12	4	3	24006.64	1	1843.29	5.4251	0.0611	0.0	0.0	2.23E-04	4.52E-03	3.05E-02	1.11E-01
5	4	36	37	10713.77	2	1843.35	5.4249	0.0308	1.79E-04	1.65E-02	1.28E-01	3.82E-01	7.20E-01	1.06E 00
4	3	41	42	9424.83	2	1843.53	5.4244	0.0303	1.05E-03	5.19E-02	2.96E-01	7.33E-01	1.22E 00	1.64E 00
5	4	43	44	12058.43	1	1843.71	5.4238	0.0303	2.91E-03	5.12E-01	5.51E 00	2.00E 01	4.29E 01	6.90E 01
1	0	55	56	5809.67	2	1843.77	5.4237	0.0303	6.40E-02	5.61E-01	1.34E 00	1.98E 00	2.33E 00	2.44E 00
6	5	38	39	13299.95	1	1843.93	5.4232	0.0303	5.16E-04	1.65E-01	2.38E 00	1.03E 01	2.50E 01	4.38E 01
7	6	25	26	13416.50	2	1844.38	5.4219	0.0418	0.0	1.20E-03	1.78E-02	7.84E-02	1.91E-01	3.38E-01
1	0	61	62	7415.60	1	1844.54	5.4214	0.0303	6.64E-01	1.26E 01	4.45E 01	8.27E 01	1.14E 02	1.33E 02
11	10	9	10	20441.12	1	1844.97	5.4201	0.0624	0.0	7.87E-05	6.31E-03	7.65E-02	3.67E-01	1.05E 00
12	11	2	3	22151.18	1	1845.19	5.4195	0.0609	0.0	0.0	5.96E-04	9.24E-03	5.22E-02	1.68E-01
3	2	52	53	9611.86	1	1845.73	5.4179	0.0303	7.18E-02	3.91E 00	2.34E 01	5.96E 01	1.01E 02	1.38E 02
8	7	27	28	15906.70	1	1845.81	5.4177	0.0379	0.0	1.28E-02	3.45E-01	2.18E 00	6.76E 00	1.42E 01
2	1	50	51	6887.58	2	1846.21	5.4165	0.0303	2.47E-02	3.63E-01	1.13E 00	1.94E 00	2.53E 00	2.85E 00
13	12	5	4	24020.34	1	1846.54	5.4155	0.0614	0.0	0.0	2.77E-04	5.61E-03	3.80E-02	1.39E-01
6	5	30	31	11964.44	2	1846.67	5.4152	0.0335	2.97E-05	4.98E-03	5.22E-02	1.86E-01	3.96E-01	6.32E-01
10	9	15	16	18821.29	1	1846.77	5.4149	0.0591	0.0	5.47E-04	2.98E-02	2.86E-01	1.17E 00	3.00E 00
9	8	21	22	17308.79	1	1847.04	5.4141	0.0496	0.0	2.92E-03	1.10E-01	8.52E-01	3.03E 00	6.98E 00
3	2	45	46	8043.62	2	1847.73	5.4120	0.0303	6.31E-03	1.61E-01	6.61E-01	1.34E 00	1.96E 00	2.39E 00
4	3	47	48	10714.80	1	1847.75	5.4120	0.0303	1.77E-02	1.63E 00	1.27E 01	3.81E 01	7.18E 01	1.05E 02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	32	33	14495.30	1	1847.83	5.4118	0.0326	9.06E-05	5.13E-02	9.90E-01	5.10E 00	1.38E 01	2.63E 01
5	4	35	36	10583.74	2	1847.98	5.4113	0.0312	2.11E-04	1.82E-02	1.37E-01	4.02E-01	7.48E-01	1.09E 00
2	1	56	57	8374.14	1	1848.31	5.4103	0.0303	3.07E-01	9.23E 00	4.10E 01	8.76E 01	1.32E 02	1.65E 02
4	3	40	41	9276.23	2	1848.33	5.4103	0.0303	1.27E-03	5.86E-02	3.22E-01	7.82E-01	1.28E 00	1.71E 00
7	6	24	25	13326.42	2	1848.64	5.4094	0.0437	0.0	1.26E-03	1.83E-02	7.96E-02	1.93E-01	3.38E-01
12	11	1	2	22140.79	1	1848.72	5.4091	0.0606	0.0	0.0	4.01E-04	6.21E-03	3.50E-02	1.13E-01
11	10	8	9	20406.19	1	1848.77	5.4090	0.0624	0.0	7.34E-05	5.84E-03	7.04E-02	3.36E-01	9.59E-01
5	4	42	43	11897.51	1	1848.78	5.4090	0.0303	3.59E-03	5.86E-01	6.06E 00	2.15E 01	4.54E 01	7.23E 01
6	5	37	38	13158.27	1	1848.81	5.4089	0.0303	6.17E-04	1.84E-01	2.58E 00	1.10E 01	2.61E 01	4.54E 01
1	0	54	55	5607.77	2	1849.04	5.4082	0.0303	8.43E-02	6.70E-01	1.53E 00	2.19E 00	2.53E 00	2.61E 00
13	12	6	5	24037.46	1	1849.76	5.4061	0.0617	0.0	0.0	3.29E-04	6.68E-03	4.53E-02	1.66E-01
1	0	60	61	7183.08	1	1850.24	5.4047	0.0303	9.14E-01	1.55E 01	5.19E 01	9.34E 01	1.26E 02	1.45E 02
8	7	26	27	15806.43	1	1850.30	5.4045	0.0398	0.0	1.36E-02	3.59E-01	2.23E 00	6.86E 00	1.43E 01
10	9	14	15	18764.90	1	1850.80	5.4031	0.0597	0.0	5.43E-04	2.92E-02	2.78E-01	1.13E 00	2.89E 00
6	5	29	30	11856.22	2	1851.10	5.4022	0.0340	3.36E-05	5.35E-03	5.47E-02	1.92E-01	4.04E-01	6.41E-01
3	2	51	52	9415.45	1	1851.12	5.4021	0.0303	9.36E-02	4.64E 00	2.65E 01	6.57E 01	1.09E 02	1.47E 02
9	8	20	21	17230.61	1	1851.30	5.4016	0.0515	0.0	3.01E-03	1.12E-01	8.53E-01	3.01E 00	6.90E 00
2	1	49	50	6704.76	2	1851.32	5.4016	0.0303	3.16E-02	4.25E-01	1.26E 00	2.12E 00	2.71E 00	3.02E 00
12	11	0	1	22133.87	1	1852.21	5.3990	0.0603	0.0	0.0	2.02E-04	3.12E-03	1.76E-02	5.65E-02
7	6	31	32	14376.23	1	1852.51	5.3981	0.0331	1.04E-04	5.59E-02	1.05E 00	5.31E 00	1.42E 01	2.69E 01
11	10	7	8	20374.75	1	1852.54	5.3980	0.0623	0.0	6.73E-05	5.32E-03	6.38E-02	3.04E-01	8.66E-01
5	4	34	35	10457.16	2	1852.59	5.3978	0.0317	2.46E-04	2.01E-02	1.47E-01	4.21E-01	7.75E-01	1.12E 00
3	2	44	45	7879.72	2	1852.68	5.3976	0.0303	7.83E-03	1.85E-01	7.30E-01	1.45E 00	2.08E 00	2.51E 00
7	6	23	24	13239.77	2	1852.86	5.3971	0.0457	0.0	1.32E-03	1.88E-02	8.06E-02	1.93E-01	3.37E-01
13	12	7	6	24058.02	1	1852.94	5.3968	0.0620	0.0	0.0	3.79E-04	7.72E-03	5.24E-02	1.92E-01
4	3	46	47	10538.00	1	1852.96	5.3968	0.0303	2.24E-02	1.90E 00	1.42E 01	4.14E 01	7.68E 01	1.11E 02
4	3	39	40	9131.08	2	1853.11	5.3963	0.0303	1.53E-03	6.58E-02	3.50E-01	8.32E-01	1.35E 00	1.77E 00
6	5	36	37	13020.16	1	1853.67	5.3947	0.0308	7.35E-04	2.05E-01	2.78E 00	1.16E 01	2.73E 01	4.69E 01
5	4	41	42	11740.14	1	1853.82	5.3943	0.0303	4.41E-03	6.67E-01	6.65E 00	2.30E 01	4.80E 01	7.55E 01
2	1	55	56	8161.53	1	1853.84	5.3942	0.0303	4.10E-01	1.12E 01	4.71E 01	9.76E 01	1.44E 02	1.78E 02
1	0	53	54	5409.33	2	1854.28	5.3929	0.0303	1.10E-01	7.98E-01	1.74E 00	2.42E 00	2.74E 00	2.79E 00
8	7	25	26	15709.71	1	1854.76	5.3915	0.0418	0.0	1.44E-02	3.71E-01	2.28E 00	6.94E 00	1.43E 01
10	9	13	14	18712.02	1	1854.81	5.3914	0.0604	0.0	5.34E-04	2.83E-02	2.68E-01	1.09E 00	2.76E 00
6	5	28	29	11751.45	2	1855.50	5.3894	0.0359	3.78E-05	5.74E-03	5.72E-02	1.98E-01	4.12E-01	6.49E-01
9	8	19	20	17155.96	1	1855.53	5.3893	0.0535	0.0	3.08E-03	1.13E-01	8.51E-01	2.98E 00	6.80E 00
1	0	59	60	6954.12	1	1855.92	5.3882	0.0303	1.25E 00	1.91E 01	6.04E 01	1.05E 02	1.38E 02	1.57E 02
13	12	8	7	24081.99	1	1856.08	5.3877	0.0623	0.0	0.0	4.26E-04	8.72E-03	5.93E-02	2.18E-01
11	10	6	7	20346.80	1	1856.28	5.3871	0.0620	0.0	6.06E-05	4.76E-03	5.69E-02	2.70E-01	7.68E-01
2	1	48	49	6525.41	2	1856.40	5.3868	0.0303	4.01E-02	4.96E-01	1.41E 00	2.31E 00	2.91E 00	3.20E 00
3	2	50	51	9222.61	1	1856.48	5.3865	0.0303	1.21E-01	5.49E 00	2.99E 01	7.22E 01	1.18E 02	1.57E 02
7	6	22	23	13156.57	2	1857.05	5.3849	0.0476	0.0	1.37E-03	1.92E-02	8.12E-02	1.94E-01	3.35E-01
7	6	30	31	14260.70	1	1857.15	5.3846	0.0335	1.20E-04	6.07E-02	1.11E 00	5.51E 00	1.46E 01	2.74E 01
5	4	33	34	10334.05	2	1857.16	5.3846	0.0321	2.86E-04	2.20E-02	1.56E-01	4.41E-01	8.01E-01	1.14E 00
3	2	43	44	7719.30	2	1857.59	5.3833	0.0303	9.66E-03	2.12E-01	8.03E-01	1.56E 00	2.20E 00	2.63E 00
4	3	38	39	8989.41	2	1857.85	5.3826	0.0303	1.83E-03	7.37E-02	3.79E-01	8.83E-01	1.41E 00	1.84E 00
4	3	45	46	10364.77	1	1858.15	5.3817	0.0303	2.82E-02	2.20E 00	1.58E 01	4.49E 01	8.19E 01	1.17E 02
6	5	35	36	12885.61	1	1858.50	5.3807	0.0312	8.69E-04	2.28E-01	2.99E 00	1.22E 01	2.84E 01	4.84E 01
10	9	12	13	18662.66	1	1858.78	5.3799	0.0610	0.0	5.21E-04	2.73E-02	2.56E-01	1.04E 00	2.63E 00
5	4	40	41	11586.35	1	1858.83	5.3797	0.0303	5.38E-03	7.56E-01	7.27E 00	2.46E 01	5.06E 01	7.88E 01
12	11	1	0	22130.41	1	1859.10	5.3789	0.0603	0.0	0.0	2.03E-04	3.14E-03	1.77E-02	5.69E-02
8	7	24	25	15616.54	1	1859.18	5.3787	0.0437	0.0	1.51E-02	3.83E-01	2.32E 00	7.00E 00	1.44E 01
13	12	9	8	24109.38	1	1859.19	5.3787	0.0624	0.0	0.0	4.71E-04	9.67E-03	6.59E-02	2.42E-01
2	1	54	55	7952.49	1	1859.35	5.3782	0.0303	5.46E-01	1.34E 01	5.40E 01	1.08E 02	1.57E 02	1.91E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	52	53	5214.37	2	1859.50	5.3778	0.0303	1.44E-01	9.47E-01	1.97E 00	2.67E 00	2.96E 00	2.98E 00
9	8	18	19	17084.85	1	1859.73	5.3771	0.0552	0.0	3.14E-03	1.13E-01	8.44E-01	2.94E 00	6.67E 00
6	5	27	28	11650.14	2	1859.88	5.3767	0.0379	4.24E-05	6.12E-03	5.95E-02	2.03E-01	4.19E-01	6.56E-01
11	10	5	6	20322.34	1	1859.98	5.3764	0.0617	0.0	5.33E-05	4.16E-03	4.96E-02	2.35E-01	6.67E-01
7	6	21	22	13076.80	2	1861.22	5.3728	0.0496	0.0	1.42E-03	1.95E-02	8.16E-02	1.93E-01	3.33E-01
2	1	47	48	6349.53	2	1861.45	5.3722	0.0303	5.07E-02	5.77E-01	1.57E 00	2.51E 00	3.11E 00	3.38E 00
1	0	58	59	6728.75	1	1861.56	5.3718	0.0303	1.71E 00	2.34E 01	7.00E 01	1.18E 02	1.52E 02	1.70E 02
5	4	32	33	10214.39	2	1861.71	5.3714	0.0326	3.30E-04	2.40E-02	1.65E-01	4.59E-01	8.25E-01	1.17E 00
7	6	29	30	14148.75	1	1861.77	5.3712	0.0340	1.36E-04	6.55E-02	1.16E 00	5.70E 00	1.50E 01	2.78E 01
3	2	49	50	9033.35	1	1861.82	5.3711	0.0303	1.57E-01	6.48E 00	3.37E 01	7.92E 01	1.27E 02	1.67E 02
13	12	10	9	24140.20	1	1862.26	5.3698	0.0624	0.0	0.0	5.12E-04	1.06E-02	7.23E-02	2.66E-01
3	2	42	43	7562.35	2	1862.48	5.3692	0.0303	1.19E-02	2.41E-01	8.81E-01	1.67E 00	2.33E 00	2.75E 00
12	11	2	1	22133.87	1	1862.49	5.3692	0.0606	0.0	0.0	4.06E-04	6.28E-03	3.55E-02	1.14E-01
4	3	37	38	8851.20	2	1862.57	5.3689	0.0303	2.18E-03	8.22E-02	4.09E-01	9.34E-01	1.47E 00	1.90E 00
10	9	11	12	18616.82	1	1862.71	5.3685	0.0617	0.0	5.03E-04	2.61E-02	2.44E-01	9.81E-01	2.48E 00
6	5	34	35	12754.63	1	1863.31	5.3668	0.0317	1.02E-03	2.52E-01	3.20E 00	1.28E 01	2.95E 01	4.98E 01
4	3	44	45	10195.12	1	1863.31	5.3668	0.0303	3.52E-02	2.54E 00	1.75E 01	4.86E 01	8.72E 01	1.24E 02
8	7	23	24	15526.91	1	1863.58	5.3660	0.0457	0.0	1.59E-02	3.93E-01	2.35E 00	7.03E 00	1.44E 01
11	10	4	5	20301.37	1	1863.65	5.3658	0.0614	0.0	4.54E-05	3.53E-03	4.19E-02	1.98E-01	5.62E-01
5	4	39	40	11436.14	1	1863.81	5.3654	0.0303	6.53E-03	8.54E-01	7.92E 00	2.63E 01	5.32E 01	8.21E 01
9	8	17	18	17017.28	1	1863.90	5.3651	0.0568	0.0	3.18E-03	1.13E-01	8.34E-01	2.88E 00	6.51E 00
6	5	26	27	11552.28	2	1864.22	5.3642	0.0398	4.71E-05	6.50E-03	6.18E-02	2.08E-01	4.25E-01	6.60E-01
1	0	51	52	5022.89	2	1864.69	5.3628	0.0303	1.86E-01	1.12E 00	2.23E 00	2.93E 00	3.20E 00	3.18E 00
2	1	53	54	7747.04	1	1864.83	5.3624	0.0303	7.22E-01	1.61E 01	6.16E 01	1.20E 02	1.71E 02	2.05E 02
13	12	11	10	24174.43	1	1865.29	5.3611	0.0625	0.0	0.0	5.51E-04	1.14E-02	7.84E-02	2.90E-01
7	6	20	21	13000.48	2	1865.35	5.3609	0.0515	0.0	1.46E-03	1.97E-02	8.16E-02	1.91E-01	3.29E-01
12	11	3	2	22140.79	1	1865.84	5.3595	0.0609	0.0	0.0	6.07E-04	9.40E-03	5.31E-02	1.71E-01
5	4	31	32	10098.21	2	1866.23	5.3584	0.0331	3.79E-04	2.60E-02	1.75E-01	4.77E-01	8.48E-01	1.19E 00
7	6	28	29	14040.35	1	1866.35	5.3581	0.0359	1.54E-04	7.04E-02	1.22E 00	5.89E 00	1.53E 01	2.82E 01
2	1	46	47	6177.14	2	1866.48	5.3577	0.0303	6.38E-02	6.68E-01	1.75E 00	2.72E 00	3.32E 00	3.57E 00
10	9	10	11	18574.50	1	1866.62	5.3573	0.0625	0.0	4.82E-04	2.47E-02	2.29E-01	9.20E-01	2.31E 00
3	2	48	49	8847.68	1	1867.12	5.3558	0.0303	2.01E-01	7.60E 00	3.79E 01	8.67E 01	1.37E 02	1.77E 02
1	0	57	58	6506.95	1	1867.19	5.3556	0.0303	2.32E 00	2.85E 01	8.11E 01	1.32E 02	1.67E 02	1.84E 02
4	3	36	37	8716.48	2	1867.27	5.3554	0.0308	2.58E-03	9.13E-02	4.40E-01	9.85E-01	1.53E 00	1.96E 00
11	10	3	4	20283.89	1	1867.28	5.3554	0.0611	0.0	3.70E-05	2.86E-03	3.39E-02	1.60E-01	4.54E-01
3	2	41	42	7408.88	2	1867.34	5.3552	0.0303	1.45E-02	2.74E-01	9.64E-01	1.79E 00	2.45E 00	2.87E 00
8	7	22	23	15440.84	1	1867.94	5.3535	0.0476	0.0	1.66E-02	4.02E-01	2.37E 00	7.04E 00	1.43E 01
9	8	16	17	16953.25	1	1868.04	5.3532	0.0585	0.0	3.20E-03	1.12E-01	8.19E-01	2.81E 00	6.33E 00
6	5	33	34	12627.23	1	1868.08	5.3531	0.0321	1.19E-03	2.77E-01	3.42E 00	1.35E 01	3.05E 01	5.11E 01
13	12	12	11	24212.08	1	1868.29	5.3525	0.0617	0.0	0.0	5.85E-04	1.22E-02	8.41E-02	3.12E-01
4	3	43	44	10029.06	1	1868.44	5.3521	0.0303	4.38E-02	2.92E 00	1.93E 01	5.24E 01	9.27E 01	1.30E 02
6	5	25	26	11457.88	2	1868.53	5.3518	0.0418	5.21E-05	6.86E-03	6.38E-02	2.12E-01	4.29E-01	6.63E-01
5	4	38	39	11289.51	1	1868.77	5.3511	0.0303	7.88E-03	9.61E-01	8.61E 00	2.80E 01	5.58E 01	8.52E 01
12	11	4	3	22151.18	1	1869.16	5.3500	0.0611	0.0	0.0	8.05E-04	1.25E-02	7.06E-02	2.27E-01
7	6	19	20	12927.62	2	1869.46	5.3491	0.0535	0.0	1.50E-03	1.98E-02	8.12E-02	1.89E-01	3.23E-01
1	0	50	51	4834.91	2	1869.85	5.3480	0.0303	2.40E-01	1.32E 00	2.51E 00	3.21E 00	3.44E 00	3.38E 00
2	1	52	53	7545.17	1	1870.28	5.3468	0.0303	9.50E-01	1.92E 01	7.02E 01	1.33E 02	1.85E 02	2.19E 02
10	9	9	10	18535.70	1	1870.49	5.3462	0.0624	0.0	4.55E-04	2.32E-02	2.14E-01	8.54E-01	2.14E 00
5	4	30	31	9985.50	2	1870.72	5.3455	0.0335	4.33E-04	2.82E-02	1.84E-01	4.95E-01	8.70E-01	1.21E 00
11	10	2	3	20269.91	1	1870.88	5.3451	0.0609	0.0	2.81E-05	2.17E-03	2.57E-02	1.21E-01	3.43E-01
7	6	27	28	13935.53	1	1870.91	5.3450	0.0379	1.74E-04	7.54E-02	1.27E 00	6.06E 00	1.56E 01	2.85E 01
13	12	13	12	24253.14	1	1871.25	5.3440	0.0610	0.0	0.0	6.17E-04	1.29E-02	8.95E-02	3.32E-01
2	1	45	46	6008.24	2	1871.48	5.3434	0.0303	7.98E-02	7.71E-01	1.94E 00	2.94E 00	3.53E 00	3.76E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	35	36	8586.23	2	1871.93	5.3421	0.0312	3.04E-03	1.01E-01	4.72E-01	1.04E 00	1.59E 00	2.02E 00
9	8	15	16	16892.76	1	1872.14	5.3415	0.0591	0.0	3.20E-03	1.10E-01	8.00E-01	2.73E 00	6.13E 00
3	2	40	41	7258.90	2	1872.18	5.3414	0.0303	1.76E-02	3.09E-01	1.06E 00	1.91E 00	2.58E 00	2.99E 00
8	7	21	22	15358.34	1	1872.27	5.3411	0.0496	2.00E-05	1.72E-02	4.09E-01	2.39E 00	7.03E 00	1.42E 01
3	2	47	48	8665.59	1	1872.40	5.3407	0.0303	2.57E-01	8.89E 00	4.25E 01	9.46E 01	1.47E 02	1.87E 02
12	11	5	4	22165.02	1	1872.45	5.3406	0.0614	0.0	0.0	9.98E-04	1.55E-02	8.79E-02	2.83E-01
1	0	56	57	6288.75	1	1872.78	5.3397	0.0303	3.12E 00	3.46E 01	9.35E 01	1.48E 02	1.83E 02	1.98E 02
6	5	24	25	11366.95	2	1872.82	5.3395	0.0437	5.72E-05	7.22E-03	6.57E-02	2.16E-01	4.33E-01	6.64E-01
6	5	32	33	12503.41	1	1872.82	5.3395	0.0326	1.39E-03	3.03E-01	3.63E 00	1.41E 01	3.15E 01	5.24E 01
7	6	18	19	12858.20	2	1873.53	5.3375	0.0552	0.0	1.52E-03	1.98E-02	8.05E-02	1.87E-01	3.17E-01
4	3	42	43	9866.59	1	1873.55	5.3375	0.0303	5.42E-02	3.35E 00	2.13E 01	5.64E 01	9.82E 01	1.36E 02
5	4	37	38	11146.46	1	1873.69	5.3371	0.0303	9.46E-03	1.08E 00	9.32E 00	2.97E 01	5.84E 01	8.84E 01
13	12	14	13	24297.62	1	1874.17	5.3357	0.0604	0.0	0.0	6.44E-04	1.36E-02	9.45E-02	3.52E-01
10	9	8	9	18500.42	1	1874.33	5.3352	0.0624	0.0	4.25E-04	2.14E-02	1.97E-01	7.84E-01	1.96E 00
11	10	1	2	20259.43	1	1874.45	5.3349	0.0606	0.0	0.0	1.46E-03	1.73E-02	8.14E-02	2.30E-01
1	0	49	50	4660.41	2	1874.99	5.3334	0.0303	3.07E-01	1.55E 00	2.81E 00	3.51E 00	3.70E 00	3.69E 00
5	4	29	30	9876.27	2	1875.18	5.3328	0.0340	4.91E-04	3.03E-02	1.93E-01	5.11E-01	8.89E-01	1.23E 00
7	6	26	27	13834.28	1	1875.43	5.3321	0.0398	1.94E-04	8.03E-02	1.32E 00	6.21E 00	1.58E 01	2.88E 01
12	11	6	5	22182.32	1	1875.70	5.3313	0.0617	0.0	0.0	1.19E-03	1.85E-02	1.05E-01	3.38E-01
2	1	51	52	7548.91	1	1875.79	5.3313	0.0303	1.24E 00	2.29E 01	7.97E 01	1.47E 02	2.01E 02	2.34E 02
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	1	44	45	5842.64	2	1876.46	5.3292	0.0303	9.92E-02	8.86E-01	2.14E 00	3.18E 00	3.78E 00	3.98E [illegible]
8	7	20	21	16279.39	1	1876.57	5.3289	0.0515	2.15E-05	1.77E-02	4.14E-01	2.39E 00	6.99E 00	1.40E [illegible]
4	3	34	35	8457.48	2	1876.57	5.3289	0.0317	3.55E-03	1.11E-01	5.04E-01	1.09E 00	1.65E 00	2.08E [illegible]
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	12	15	14	24345.52	1	1877.06	5.3275	0.0597	0.0	0.0	6.68E-04	1.42E-02	9.91E-02	3.71E [illegible]
8	7	23	24	17278.89	2	1877.08	5.3274	0.0487	8.28E-05	7.65E-03	8.73E-02	2.18E-01	4.38E-01	6.83E [illegible]
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	6	27	28	12752.28	2	1877.38	5.3266	0.0303	0.0	1.04E-02	1.97E-02	7.91E-02	1.82E-01	3.09E-01
7	6	46	47	8487.11	1	1877.66	5.3258	0.0303	3.85E-01	1.04E 01	4.74E 01	1.03E 02	1.57E 02	1.78E 02
11	10	0	1	20252.43	1	1877.98	5.3249	0.0603	0.0	0.0	7.36E-04	8.68E-03	4.09E-02	1[illegible]
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	0	55	56	6074.14	1	1878.35	5.3238	0.0303	4.19E 00	4.19E 01	1.08E 02	1.66E 02	2.00E 02	[illegible]
6	4	36	37	11007.02	1	1878.59	5.3231	0.0308	1.13E-02	1.20E 00	1.01E 01	3.14E 01	6.10E 01	[illegible]
4	3	41	42	9707.73	1	1878.62	5.3231	0.0303	6.67E-02	3.82E 00	2.34E 01	6.06E 01	1.04E 02	[illegible]
12	11	7	6	22203.07	1	1878.91	5.3222	0.0620	0.0	0.0	1.36E-03	2.13E-02	1.21E-01	[illegible]
5	4	28	29	9770.52	2	1879.62	5.3202	0.0359	5.54E-04	3.25E-02	2.02E-01	5.27E-01	9.07E-01	[illegible]
13	12	16	15	24356.82	1	1879.91	5.3194	0.0591	0.0	0.0	6.87E-04	1.47E-02	1.03E-01	[illegible]
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	0	48	49	4469.43	2	1880.11	5.3188	0.0303	3.92E-01	1.81E 00	3.15E 00	3.83E 00	3.97E 0[illegible]	[illegible]
9	8	13	14	16789.41	1	1880.25	5.3184	0.0604	0.0	3.13E-03	1.05E-01	7.50E-01	2.53E [illegible]	[illegible]
8	7	19	20	15204.01	1	1880.84	5.3168	0.0535	2.28E-05	1.82E-02	4.17E-01	2.38E 00	6.92E [illegible]	
2	1	50	51	7152.25	1	1881.10	5.3160	0.0303	1.62E 00	2.71E 01	9.01E 01	1.62E 02	2.17E [illegible]	
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	1	43	44	5605.94	2	1881.40	5.3152	0.0303	1.00E 01	1.01E 00	2.30E 00	3.42E 00	3.[illegible]	[illegible]
7	6	18	17	12729.73	2	1881.39	5.3147	0.0303	0.0	1.33E 03	1.93E-07	7.03E-02	1.7[illegible]	[illegible]
2	1	52	53	8050.42	2	1881.77	5.3141	0.0303	3.54E 00	3.00E-01	1.04E 00	2.15E 00	3.[illegible]	[illegible]
10	9	6	7	18440.43	1	1881.90	5.3138	0.0620	0.0	3.51E-04	1.75E-02	1.59E-01	6.[illegible]	[illegible]
12	11	8	7	22997.29	1	1882.00	5.3132	0.0603	0.0	0.0	1.63E-03	2.41E-02	[illegible]	[illegible]
6	5	33	34	12966.56	1	1882.31	5.3130	0.0336	1.84E-03	3.60E-01	4.07E 00	1.69E 01	[illegible]	[illegible]
13	12	17	16	24481.53	1	1882.72	5.3118	0.0600	0.0	0.0	7.40E-04	1.82E-02	[illegible]	[illegible]
3	2	46	46	8312.24	1	1882.88	5.3110	0.0303	4.11E-01	1.20E 01	6.28E 01	1.12E 02	[illegible]	[illegible]

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	35	36	10871.18	1	1883.45	5.3094	0.0312	1.34E-02	1.33E 00	1.08E 01	3.31E 01	6.35E 01	9.43E 01
4	3	40	41	9552.46	1	1883.67	5.3088	0.0303	8.16E-02	4.33E 00	2.56E 01	6.49E 01	1.10E 02	1.49E 02
1	0	54	55	5863.14	1	1883.89	5.3082	0.0303	5.59E 00	5.06E 01	1.23E 02	1.84E 02	2.18E 02	2.30E 02
5	4	27	28	9668.25	2	1884.03	5.3078	0.0379	6.21E-04	3.47E-02	2.10E-01	5.41E-01	9.23E-01	1.26E 00
9	8	12	13	16732.56	1	1884.26	5.3071	0.0610	0.0	3.05E-03	1.01E-01	7.18E-01	2.42E 00	5.36E 00
7	6	24	25	13642.53	1	1884.38	5.3068	0.0437	2.38E-04	8.96E-02	1.42E 00	6.46E 00	1.62E 01	2.90E 01
11	10	1	0	20248.94	1	1884.93	5.3052	0.0603	0.0	0.0	7.40E-04	8.74E-03	4.12E-02	1.16E-01
8	7	18	19	15132.20	1	1885.08	5.3048	0.0552	2.41E-05	1.86E-02	4.18E-01	2.37E 00	6.83E 00	1.36E 01
1	0	47	48	4291.95	2	1885.19	5.3045	0.0303	4.96E-01	2.11E 00	3.52E 00	4.17E 00	4.25E 00	4.02E 00
12	11	9	8	22254.96	1	1885.23	5.3044	0.0624	0.0	0.0	1.70E-03	2.67E-02	1.53E-01	4.94E-01
6	5	21	22	11114.98	2	1885.50	5.3036	0.0496	7.27E-05	8.15E-03	6.98E-02	2.21E-01	4.33E-01	6.54E-01
13	12	18	17	24509.65	1	1885.50	5.3036	0.0568	0.0	0.0	7.15E-04	1.56E-02	1.10E-01	4.18E-01
7	6	15	16	12670.68	2	1885.58	5.3034	0.0591	0.0	1.54E-03	1.92E-02	7.61E-02	1.73E-01	2.91E-01
10	9	5	6	18415.73	1	1885.64	5.3032	0.0617	0.0	3.09E-04	1.53E-02	1.39E-01	5.48E-01	1.36E 00
4	3	32	33	8212.45	2	1885.76	5.3029	0.0326	4.79E-03	1.33E-01	5.69E-01	1.19E 00	1.76E 00	2.18E 00
2	1	42	43	5522.55	2	1886.33	5.3013	0.0303	1.51E-01	1.16E 00	2.59E 00	3.67E 00	4.21E 00	4.33E 00
2	1	49	50	6961.20	1	1886.47	5.3009	0.0303	2.09E 00	3.20E 01	1.02E 02	1.77E 02	2.34E 02	2.66E 02
3	2	37	38	6829.95	2	1886.52	5.3008	0.0303	3.04E-02	4.35E-01	1.34E 00	2.28E 00	2.97E 00	3.34E 00
6	5	29	30	12153.49	1	1886.86	5.2998	0.0340	2.10E-03	3.88E-01	4.28E 00	1.58E 01	3.42E 01	5.54E 01
3	2	44	45	8140.98	1	1888.08	5.2964	0.0303	5.15E-01	1.39E 01	5.86E 01	1.21E 02	1.79E 02	2.20E 02
9	8	11	12	16686.27	1	1888.23	5.2960	0.0617	0.0	2.95E-03	9.65E-02	6.82E-01	2.29E 00	5.06E 00
13	12	19	18	24571.17	1	1888.23	5.2960	0.0552	0.0	0.0	7.22E-04	1.59E-02	1.13E-01	4.30E-01
5	4	34	35	10738.94	1	1888.29	5.2958	0.0317	1.57E-02	1.48E 00	1.16E 01	3.48E 01	6.60E 01	9.71E 01
12	11	10	9	22286.09	1	1888.34	5.2957	0.0624	0.0	0.0	1.85E-03	2.92E-02	1.67E-01	5.43E-01
11	10	2	1	20252.43	1	1888.36	5.2956	0.0606	0.0	0.0	1.48E-03	1.75E-02	8.24E-02	2.33E-01
5	4	26	27	9569.48	2	1888.40	5.2955	0.0398	6.92E-04	3.69E-02	2.18E-01	5.54E-01	9.36E-01	1.27E 00
4	3	39	40	9400.82	1	1888.69	5.2947	0.0303	9.92E-02	4.90E 00	2.79E 01	6.93E 01	1.15E 02	1.55E 02
7	6	23	24	13552.03	1	1888.81	5.2943	0.0457	2.61E-04	9.43E-02	1.45E 00	6.55E 00	1.62E 01	2.90E 01
8	7	17	18	15063.96	1	1889.28	5.2930	0.0568	2.52E-05	1.88E-02	4.17E-01	2.34E 00	6.70E 00	1.33E 01
10	9	4	5	18394.55	1	1889.34	5.2929	0.0614	0.0	2.63E-04	1.30E-02	1.17E-01	4.62E-01	1.15E 00
1	0	53	54	5655.77	1	1889.41	5.2927	0.0303	7.41E 00	6.07E 01	1.41E 02	2.04E 02	2.37E 02	2.47E 02
7	6	14	15	12615.09	2	1889.53	5.2923	0.0597	0.0	1.53E-03	1.88E-02	7.39E-02	1.67E-01	2.80E-01
6	5	20	21	11037.95	2	1889.67	5.2919	0.0515	7.77E-05	8.39E-03	7.06E-02	2.21E-01	4.30E-01	6.46E-01
1	0	46	47	4117.99	2	1890.25	5.2903	0.0303	6.25E-01	2.44E 00	3.91E 00	4.53E 00	4.54E 00	4.24E 00
4	3	31	32	8095.19	2	1890.31	5.2901	0.0331	5.50E-03	1.45E-01	6.02E-01	1.23E 00	1.81E 00	2.22E 00
13	12	20	19	24636.09	1	1890.93	5.2884	0.0535	0.0	0.0	7.27E-04	1.61E-02	1.16E-01	4.42E-01
2	1	41	42	5367.68	2	1891.22	5.2876	0.0303	1.85E-01	1.31E 00	2.84E 00	3.93E 00	4.44E 00	4.52E 00
3	2	36	37	6693.98	2	1891.25	5.2875	0.0308	3.60E-02	4.84E-01	1.44E 00	2.41E 00	3.09E 00	3.45E 00
12	11	11	10	22320.67	1	1891.40	5.2871	0.0625	0.0	0.0	1.98E-03	3.15E-02	1.81E-01	5.90E-01
6	5	28	29	12044.05	1	1891.48	5.2869	0.0359	2.38E-03	4.18E-01	4.49E 00	1.63E 01	3.49E 01	5.62E 01
11	10	3	2	20259.43	1	1891.75	5.2861	0.0609	0.0	2.87E-05	2.21E-03	2.62E-02	1.23E-01	3.49E-01
2	1	48	49	6773.78	1	1891.82	5.2859	0.0303	2.69E 00	3.77E 01	1.14E 02	1.94E 02	2.52E 02	2.82E 02
9	8	10	11	16643.52	1	1892.17	5.2849	0.0625	0.0	2.82E-03	9.14E-02	6.43E-01	2.14E 00	4.73E 00
5	4	25	26	9474.20	2	1892.75	5.2833	0.0418	7.65E-04	3.90E-02	2.26E-01	5.65E-01	9.46E-01	1.28E 00
10	9	3	4	18376.90	1	1893.01	5.2826	0.0611	0.0	2.14E-04	1.05E-02	9.48E-02	3.74E-01	9.28E-01
5	4	33	34	10610.31	1	1893.09	5.2824	0.0321	1.84E-02	1.63E 00	1.24E 01	3.66E 01	6.84E 01	9.98E 01
7	6	22	23	13465.12	1	1893.21	5.2820	0.0476	2.84E-04	9.84E-02	1.49E 00	6.62E 00	1.63E 01	2.89E 01
3	2	43	44	7973.35	1	1893.25	5.2819	0.0303	6.42E-01	1.60E 01	6.48E 01	1.31E 02	1.90E 02	2.31E 02
7	6	13	14	12562.97	2	1893.45	5.2814	0.0604	0.0	1.50E-03	1.83E-02	7.12E-02	1.60E-01	2.67E-01
8	7	16	17	14999.30	1	1893.45	5.2814	0.0585	2.62E-05	1.90E-02	4.14E-01	2.30E 00	6.54E 00	1.29E 01
13	12	21	20	24704.41	1	1893.60	5.2809	0.0515	0.0	0.0	7.27E-04	1.63E-02	1.18E-01	4.52E-01
4	3	38	39	9252.79	1	1893.68	5.2807	0.0303	1.20E-01	5.52E 00	3.04E 01	7.37E 01	1.21E 02	1.61E 02
6	5	19	20	10964.39	2	1893.81	5.2804	0.0535	8.24E-05	8.59E-03	7.11E-02	2.20E-01	4.26E-01	6.36E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	12	11	22358.71	1	1894.44	5.2786	0.0617	0.0	0.0	2.11E-03	3.37E-02	1.95E-01	6.35E-01
4	3	30	31	7981.43	2	1894.84	5.2775	0.0335	6.29E-03	1.57E-01	6.34E-01	1.28E 00	1.86E 00	2.26E 00
1	0	52	53	5452.01	1	1894.90	5.2773	0.0303	9.78E 00	7.27E 01	1.61E 02	2.26E 02	2.58E 02	2.64E 02
11	10	4	3	20269.91	1	1895.10	5.2768	0.0611	0.0	3.80E-05	2.93E-03	3.47E-02	1.64E-01	4.64E-01
1	0	45	46	3947.55	2	1895.29	5.2762	0.0303	7.84E-01	2.82E 00	4.34E 00	4.90E 00	4.84E 00	4.46E 00
3	2	35	36	6561.53	2	1895.94	5.2744	0.0312	4.25E-02	5.36E-01	1.54E 00	2.54E 00	3.22E 00	3.55E 00
6	5	27	28	11938.21	1	1896.07	5.2741	0.0379	2.68E-03	4.48E-01	4.69E 00	1.68E 01	3.56E 01	5.69E 01
9	8	9	10	16604.34	1	1896.08	5.2740	0.0624	0.0	2.67E-03	8.57E-02	5.99E-01	1.99E 00	4.38E 00
2	1	40	41	5216.33	2	1896.09	5.2740	0.0303	2.24E-01	1.49E 00	3.10E 00	4.20E 00	4.68E 00	4.71E 00
13	12	22	21	24776.12	1	1896.22	5.2736	0.0496	0.0	0.0	7.24E-04	1.64E-02	1.19E-01	4.60E-01
10	9	2	3	18362.78	1	1896.65	5.2725	0.0609	0.0	1.63E-04	7.98E-03	7.19E-02	2.83E-01	7.02E-01
5	4	24	25	9382.42	2	1897.07	5.2713	0.0437	8.41E-04	4.11E-02	2.33E-01	5.74E-01	9.54E-01	1.28E 00
2	1	47	48	6589.98	1	1897.13	5.2711	0.0303	3.44E 00	4.41E 01	1.28E 02	2.12E 02	2.70E 02	2.99E 02
7	6	12	13	12514.32	2	1897.34	5.2705	0.0610	0.0	1.47E-03	1.76E-02	6.82E-02	1.53E-01	2.54E-01
12	11	13	12	22400.19	1	1897.43	5.2703	0.0610	0.0	0.0	2.22E-03	3.57E-02	2.07E-01	6.78E-01
7	6	21	22	13381.82	1	1897.58	5.2699	0.0496	3.06E-04	1.02E-01	1.51E 00	6.66E 00	1.62E 01	2.87E 01
8	7	15	16	14938.22	1	1897.59	5.2698	0.0591	2.69E-05	1.90E-02	4.08E-01	2.24E 00	6.36E 00	1.25E 01
5	4	32	33	10485.30	1	1897.87	5.2691	0.0326	2.14E-02	1.78E 00	1.32E 01	3.82E 01	7.07E 01	1.02E 02
6	5	18	19	10894.32	2	1897.91	5.2690	0.0552	8.68E-05	8.75E-03	7.12E-02	2.18E-01	4.19E-01	6.23E-01
3	2	42	43	7809.34	1	1898.39	5.2676	0.0303	7.96E-01	1.84E 01	7.15E 01	1.41E 02	2.02E 02	2.43E 02
11	10	5	4	20283.89	1	1898.42	5.2675	0.0614	0.0	4.69E-05	3.64E-03	4.32E-02	2.04E-01	5.78E-01
4	3	37	38	9108.38	1	1898.64	5.2669	0.0303	1.44E-01	6.19E 00	3.29E 01	7.83E 01	1.27E 02	1.67E 02
13	12	23	22	24851.22	1	1898.81	5.2665	0.0476	0.0	0.0	7.18E-04	1.64E-02	1.21E-01	4.67E-01
4	3	29	30	7871.18	2	1899.33	5.2650	0.0340	7.14E-03	1.69E-01	6.66E-01	1.32E 00	1.90E 00	2.30E 00
9	8	8	9	16568.71	1	1899.95	5.2633	0.0624	0.0	2.49E-03	7.93E-02	5.52E-01	1.83E 00	4.01E 00
10	9	1	2	18352.19	1	1900.25	5.2625	0.0606	0.0	1.10E-04	5.37E-03	4.83E-02	1.90E-01	4.71E-01
1	0	44	45	3780.65	2	1900.30	5.2623	0.0303	9.77E-01	3.25E 00	4.80E 00	5.30E 00	5.14E 00	4.69E 00
1	0	51	52	5251.89	1	1900.36	5.2622	0.0303	1.28E 01	8.67E 01	1.83E 02	2.50E 02	2.79E 02	2.82E 02
12	11	14	13	22445.13	1	1900.39	5.2621	0.0604	0.0	0.0	2.32E-03	3.76E-02	2.19E-01	7.18E-01
3	2	34	35	6432.60	2	1900.61	5.2615	0.0317	4.98E-02	5.91E-01	1.65E 00	2.66E 00	3.34E 00	3.65E 00
6	5	26	27	11835.99	1	1900.63	5.2614	0.0398	3.00E-03	4.77E-01	4.88E 00	1.72E 01	3.62E 01	5.74E 01
2	1	39	40	5068.50	2	1900.93	5.2606	0.0303	2.71E-01	1.67E 00	3.37E 00	4.47E 00	4.91E 00	4.90E 00
7	6	11	12	12469.13	2	1901.21	5.2598	0.0617	0.0	1.42E-03	1.68E-02	6.47E-02	1.46E-01	2.39E-01
13	12	24	23	24929.71	1	1901.35	5.2594	0.0457	0.0	0.0	7.09E-04	1.64E-02	1.21E-01	4.72E-01
5	4	23	24	9294.14	2	1901.36	5.2594	0.0457	9.19E-04	4.30E-02	2.39E-01	5.82E-01	9.58E-01	1.28E 00
8	7	14	15	14880.71	1	1901.70	5.2585	0.0597	2.75E-05	1.88E-02	4.00E-01	2.18E 00	6.14E 00	1.20E 01
11	10	6	5	20301.37	1	1901.71	5.2584	0.0617	0.0	5.54E-05	4.32E-03	5.14E-02	2.44E-01	6.90E-01
7	6	20	21	13302.10	1	1901.91	5.2579	0.0515	3.29E-04	1.06E-01	1.53E 00	6.67E 00	1.62E 01	2.84E 01
6	5	17	18	10827.74	2	1901.99	5.2577	0.0568	9.06E-05	8.86E-03	7.09E-02	2.16E-01	4.11E-01	6.09E-01
2	1	46	47	6409.82	1	1902.42	5.2565	0.0303	4.37E 00	5.15E 01	1.43E 02	2.31E 02	2.89E 02	3.17E 02
5	4	31	32	10363.92	1	1902.62	5.2559	0.0331	2.48E-02	1.95E 00	1.40E 01	3.99E 01	7.28E 01	1.05E 02
12	11	15	14	22493.51	1	1903.31	5.2540	0.0597	0.0	0.0	2.40E-03	3.92E-02	2.29E-01	7.55E-01
3	2	41	42	7648.97	1	1903.50	5.2535	0.0303	9.82E-01	2.10E 01	7.86E 01	1.51E 02	2.13E 02	2.54E 02
4	3	36	37	8967.61	1	1903.57	5.2533	0.0308	1.72E-01	6.92E 00	3.56E 01	8.29E 01	1.33E 02	1.73E 02
9	8	7	8	16536.64	1	1903.79	5.2527	0.0623	0.0	2.29E-03	7.23E-02	5.00E-01	1.65E 00	3.62E 00
4	3	28	29	7764.45	2	1903.80	5.2527	0.0359	8.07E-03	1.81E-01	6.97E-01	1.36E 00	1.94E 00	2.33E 00
10	9	0	1	18345.12	1	1903.81	5.2526	0.0603	0.0	5.55E-05	2.70E-03	2.43E-02	9.55E-02	2.37E-01
13	12	25	24	25011.59	1	1903.86	5.2525	0.0437	0.0	0.0	6.97E-04	1.63E-02	1.22E-01	4.76E-01
11	10	7	6	20322.34	1	1904.96	5.2495	0.0620	0.0	6.35E-05	4.97E-03	5.93E-02	2.82E-01	8.00E-01
7	6	10	11	12427.41	2	1905.04	5.2492	0.0625	0.0	1.35E-03	1.59E-02	6.09E-02	1.36E-01	2.24E-01
6	5	25	26	11737.38	1	1905.15	5.2489	0.0418	3.34E-03	5.06E-01	5.06E 00	1.76E 01	3.66E 01	5.78E 01
3	2	33	34	6307.19	2	1905.26	5.2486	0.0321	5.80E-02	6.49E-01	1.76E 00	2.79E 00	3.45E 00	3.75E 00
1	0	43	44	3617.28	2	1905.28	5.2486	0.0303	1.21E 00	3.73E 00	5.30E 00	5.71E 00	5.45E 00	4.92E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	22	23	9209.37	2	1905.62	5.2476	0.0476	9.97E-04	4.48E-02	2.44E-01	5.87E-01	9.59E-01	1.27E 00
2	1	38	39	4924.21	2	1905.75	5.2473	0.0303	3.26E-01	1.88E 00	3.66E 00	4.75E 00	5.15E 00	5.08E 00
8	7	13	14	14826.79	1	1905.77	5.2472	0.0604	2.78E-05	1.85E-02	3.89E-01	2.10E 00	5.90E 00	1.15E 01
1	0	50	51	5055.41	1	1905.79	5.2472	0.0303	1.67E 01	1.03E 02	2.07E 02	2.75E 02	3.02E 02	3.01E 02
6	5	16	17	10764.64	2	1906.04	5.2465	0.0585	9.39E-05	8.90E-03	7.03E-02	2.12E-01	4.02E-01	5.92E-01
12	11	16	15	22545.34	1	1906.20	5.2460	0.0591	0.0	0.0	2.47E-03	4.06E-02	2.39E-01	7.90E-01
7	6	19	20	13225.99	1	1906.21	5.2460	0.0535	3.50E-04	1.08E-01	1.55E 00	6.66E 00	1.60E 01	2.80E 01
13	12	26	25	25096.85	1	1906.33	5.2457	0.0418	0.0	0.0	6.83E-04	1.62E-02	1.22E-01	4.79E-01
5	4	30	31	10246.16	1	1907.33	5.2429	0.0335	2.85E-02	2.12E 00	1.48E 01	4.14E 01	7.49E 01	1.07E 02
9	8	6	7	16508.13	1	1907.60	5.2422	0.0620	0.0	2.06E-03	6.47E-02	4.46E-01	1.47E 00	3.21E 00
2	1	45	46	6233.30	1	1907.68	5.2420	0.0303	5.53E 00	5.99E 01	1.60E 02	2.51E 02	3.09E 02	3.34E 02
11	10	8	7	20346.80	1	1908.17	5.2406	0.0623	0.0	7.10E-05	5.59E-03	6.70E-02	3.19E-01	9.07E-01
4	3	27	28	7661.24	2	1908.24	5.2404	0.0379	9.06E-03	1.94E-01	7.27E-01	1.40E 00	1.97E 00	2.35E 00
4	3	35	36	8830.47	1	1908.47	5.2398	0.0312	2.04E-01	7.70E 00	3.83E 01	8.75E 01	1.38E 02	1.78E 02
3	2	40	41	7492.24	1	1908.58	5.2395	0.0303	1.20E 00	2.38E 01	8.61E 01	1.62E 02	2.25E 02	2.65E 02
13	12	27	26	25185.49	1	1908.77	5.2390	0.0398	0.0	0.0	6.66E-04	1.60E-02	1.21E-01	4.80E-01
7	6	9	10	12389.16	2	1908.84	5.2388	0.0624	0.0	1.28E-03	1.49E-02	5.67E-02	1.26E-01	2.07E-01
12	11	17	16	22600.61	1	1909.04	5.2382	0.0585	0.0	0.0	2.53E-03	4.19E-02	2.48E-01	8.22E-01
6	5	24	25	11642.38	1	1909.65	5.2366	0.0437	3.69E-03	5.35E-01	5.22E 00	1.79E 01	3.70E 01	5.79E 01
8	7	12	13	14776.45	1	1909.81	5.2361	0.0610	2.78E-05	1.81E-02	3.75E-01	2.02E 00	5.63E 00	1.09E 01
5	4	21	22	9128.10	2	1909.85	5.2360	0.0496	1.07E-03	4.65E-02	2.48E-01	5.90E-01	9.56E-01	1.26E 00
3	2	32	33	6185.32	2	1909.87	5.2360	0.0326	6.73E-02	7.09E-01	1.87E 00	2.91E 00	3.56E 00	3.83E 00
6	5	15	16	10705.04	2	1910.06	5.2354	0.0591	9.65E-05	8.89E-03	6.92E-02	2.07E-01	3.90E-01	5.72E-01
1	0	42	43	3457.45	2	1910.24	5.2349	0.0303	1.49E 00	4.26E 00	5.83E 00	6.13E 00	5.77E 00	5.16E 00
7	6	18	19	13153.48	1	1910.49	5.2343	0.0552	3.70E-04	1.11E-01	1.55E 00	6.61E 00	1.58E 01	2.74E 01
2	1	37	38	4783.45	2	1910.53	5.2341	0.0303	3.90E-01	2.10E 00	3.95E 00	5.04E 00	5.38E 00	5.27E 00
10	9	1	0	18341.60	1	1910.84	5.2333	0.0603	0.0	5.59E-05	2.72E-03	2.44E-02	9.60E-02	2.38E-01
13	12	28	27	25277.50	1	1911.16	5.2324	0.0379	0.0	0.0	6.47E-04	1.58E-02	1.20E-01	4.80E-01
1	0	49	50	4862.58	1	1911.20	5.2323	0.0303	2.17E 01	1.22E 02	2.34E 02	3.02E 02	3.26E 02	3.21E 02
11	10	9	8	20374.75	1	1911.34	5.2319	0.0624	0.0	7.78E-05	6.17E-03	7.43E-02	3.55E-01	1.01E 00
9	8	5	6	16483.18	1	1911.37	5.2318	0.0617	0.0	1.81E-03	5.66E-02	3.89E-01	1.28E 00	2.79E 00
12	11	18	17	22659.31	1	1911.85	5.2305	0.0568	0.0	0.0	2.57E-03	4.29E-02	2.55E-01	8.51E-01
5	4	29	30	10132.03	1	1912.02	5.2301	0.0340	3.26E-02	2.29E 00	1.56E 01	4.29E 01	7.67E 01	1.08E 02
7	6	8	9	12354.38	2	1912.60	5.2285	0.0624	0.0	1.19E-03	1.38E-02	5.22E-02	1.15E-01	1.90E-01
4	3	26	27	7561.55	2	1912.65	5.2283	0.0398	1.01E-02	2.06E-01	7.55E-01	1.44E 00	2.00E 00	2.37E 00
2	1	44	45	6060.43	1	1912.91	5.2276	0.0303	6.95E 00	6.93E 01	1.78E 02	2.73E 02	3.30E 02	3.53E 02
4	3	34	35	8696.97	1	1913.34	5.2265	0.0317	2.41E-01	8.52E 00	4.11E 01	9.22E 01	1.44E 02	1.84E 02
13	12	29	28	25372.88	1	1913.51	5.2260	0.0359	0.0	0.0	6.26E-04	1.55E-02	1.19E-01	4.79E-01
3	2	39	40	7339.16	1	1913.63	5.2257	0.0303	1.47E 00	2.70E 01	9.40E 01	1.73E 02	2.37E 02	2.77E 02
8	7	11	12	14729.70	1	1913.82	5.2252	0.0617	2.75E-05	1.75E-02	3.59E-01	1.92E 00	5.33E 00	1.03E 01
6	5	14	15	10648.93	2	1914.04	5.2246	0.0597	9.82E-05	8.82E-03	6.77E-02	2.01E-01	3.76E-01	5.50E-01
5	4	20	21	9050.34	2	1914.05	5.2245	0.0515	1.15E-03	4.79E-02	2.51E-01	5.90E-01	9.50E-01	1.25E 00
6	5	23	24	11551.01	1	1914.11	5.2244	0.0457	4.05E-03	5.62E-01	5.37E 00	1.82E 01	3.72E 01	5.79E 01
10	9	2	1	18345.12	1	1914.30	5.2238	0.0606	0.0	1.12E-04	5.44E-03	4.89E-02	1.92E-01	4.77E-01
3	2	31	32	6066.97	2	1914.46	5.2234	0.0331	7.75E-02	7.72E-01	1.98E 00	3.03E 00	3.66E 00	3.91E 00
11	10	10	9	20406.19	1	1914.48	5.2233	0.0624	0.0	8.40E-05	6.72E-03	8.12E-02	3.89E-01	1.11E 00
12	11	19	18	22721.46	1	1914.63	5.2229	0.0552	0.0	0.0	2.60E-03	4.38E-02	2.62E-01	8.77E-01
7	6	17	18	13084.58	1	1914.73	5.2227	0.0568	3.87E-04	1.12E-01	1.55E 00	6.53E 00	1.55E 01	2.68E 01
9	8	4	5	16461.79	1	1915.11	5.2216	0.0614	0.0	1.54E-03	4.80E-02	3.29E-01	1.08E 00	2.35E 00
1	0	41	42	3301.17	2	1915.16	5.2215	0.0303	1.83E 00	4.84E 00	6.38E 00	6.57E 00	6.10E 00	5.39E 00
2	1	36	37	4646.24	2	1915.29	5.2211	0.0308	4.64E-01	2.34E 00	4.26E 00	5.32E 00	5.61E 00	5.44E 00
13	12	30	29	25471.62	1	1915.83	5.2197	0.0340	0.0	0.0	6.04E-04	1.51E-02	1.18E-01	4.76E-01
7	6	7	8	12323.08	2	1916.34	5.2183	0.0623	0.0	1.09E-03	1.26E-02	4.74E-02	1.04E-01	1.71E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	48	49	4673.40	1	1916.58	5.2176	0.0303	2.80E 01	1.43E 02	2.64E 02	3.31E 02	3.51E 02	3.41E 02
5	4	28	29	10021.54	1	1916.67	5.2174	0.0359	3.70E-02	2.47E 00	1.63E 01	4.43E 01	7.85E 01	1.10E 02
4	3	25	26	7465.39	2	1917.03	5.2164	0.0418	1.12E-02	2.18E-01	7.82E-01	1.47E 00	2.03E 00	2.38E 00
12	11	20	19	22787.05	1	1917.36	5.2155	0.0535	0.0	0.0	2.61E-03	4.44E-02	2.68E-01	9.00E-01
11	10	11	10	20441.12	1	1917.59	5.2149	0.0625	0.0	8.95E-05	7.22E-03	8.77E-02	4.22E-01	1.21E 00
10	9	3	2	18352.19	1	1917.72	5.2145	0.0609	0.0	1.66E-04	8.13E-03	7.32E-02	2.88E-01	7.14E-01
8	7	10	11	14686.54	1	1917.80	5.2143	0.0625	2.68E-05	1.68E-02	3.40E-01	1.81E 00	5.00E 00	9.65E 00
6	5	13	14	10596.32	2	1918.00	5.2138	0.0604	9.90E-05	8.67E-03	6.58E-02	1.94E-01	3.61E-01	5.26E-01
13	12	31	30	25573.73	1	1918.10	5.2135	0.0335	0.0	0.0	5.80E-04	1.48E-02	1.16E-01	4.72E-01
2	1	43	44	5891.22	1	1918.12	5.2134	0.0303	8.69E 00	7.99E 01	1.97E 02	2.95E 02	3.51E 02	3.71E 02
4	3	33	34	8567.12	1	1918.18	5.2133	0.0321	2.83E-01	9.40E 00	4.40E 01	9.67E 01	1.49E 02	1.89E 02
5	4	19	20	8976.10	2	1918.22	5.2132	0.0535	1.22E-03	4.91E-02	2.53E-01	5.88E-01	9.41E-01	1.23E 00
6	5	22	23	11463.27	1	1918.55	5.2123	0.0476	4.41E-03	5.87E-01	5.50E 00	1.84E 01	3.73E 01	5.77E 01
3	2	38	39	7189.73	1	1918.66	5.2120	0.0303	1.78E 00	3.05E 01	1.02E 02	1.85E 02	2.49E 02	2.88E 02
9	8	3	4	16443.96	1	1918.81	5.2116	0.0611	0.0	1.26E-03	3.89E-02	2.66E-01	8.72E-01	1.90E 00
7	6	16	17	13019.29	1	1918.93	5.2112	0.0585	4.03E-04	1.13E-01	1.54E 00	6.42E 00	1.52E 01	2.61E 01
3	2	30	31	5952.17	2	1919.01	5.2110	0.0335	8.87E-02	8.37E-01	2.08E 00	3.14E 00	3.76E 00	3.99E 00
2	1	35	36	4512.58	2	1920.02	5.2083	0.0312	5.48E-01	2.59E 00	4.57E 00	5.61E 00	5.94E 00	5.61E 00
7	6	6	7	12295.25	2	1920.04	5.2082	0.0620	0.0	9.85E-04	1.12E-02	4.22E-02	9.28E-02	1.52E-01
12	11	21	20	22856.06	1	1920.06	5.2082	0.0515	0.0	0.0	2.61E-03	4.49E-02	2.72E-01	9.20E-01
1	0	40	41	3148.44	2	1920.07	5.2081	0.0303	2.23E 00	5.48E 00	6.98E 00	7.03E 00	6.42E 00	5.62E 00
13	12	32	31	25679.20	1	1920.34	5.2074	0.0331	0.0	0.0	5.55E-04	1.43E-02	1.14E-01	4.67E-01
11	10	12	11	20479.54	1	1920.65	5.2066	0.0617	0.0	9.43E-05	7.67E-03	9.37E-02	4.52E-01	1.30E 00
10	9	4	3	18362.78	1	1921.11	5.2053	0.0611	0.0	2.20E-04	1.08E-02	9.72E-02	3.83E-01	9.51E-01
5	4	27	28	9914.69	1	1921.30	5.2048	0.0379	4.17E-02	2.65E 00	1.71E 01	4.57E 01	8.00E 01	1.11E 02
4	3	24	25	7372.76	2	1921.38	5.2046	0.0437	1.23E-02	2.30E-01	8.06E-01	1.49E 00	2.04E 00	2.39E 00
8	7	9	10	14646.97	1	1921.74	5.2036	0.0624	2.59E-05	1.59E-02	3.19E-01	1.68E 00	4.64E 00	8.93E 00
6	5	12	13	10547.20	2	1921.92	5.2031	0.0610	9.89E-05	8.46E-03	6.34E-02	1.85E-01	3.44E-01	5.00E-01
1	0	47	48	4487.89	1	1921.93	5.2031	0.0303	3.59E 01	1.68E 02	2.96E 02	3.62E 02	3.77E 02	3.62E 02
5	4	18	19	8905.38	2	1922.36	5.2019	0.0552	1.29E-03	5.00E-02	2.53E-01	5.84E-01	9.27E-01	1.20E 00
9	8	2	3	16429.71	1	1922.48	5.2016	0.0609	0.0	9.59E-04	2.96E-02	2.02E-01	6.60E-01	1.44E 00
13	12	33	32	25788.01	1	1922.54	5.2015	0.0326	0.0	0.0	5.30E-04	1.39E-02	1.12E-01	4.61E-01
12	11	22	21	22928.51	1	1922.72	5.2010	0.0496	0.0	0.0	2.60E-03	4.52E-02	2.76E-01	9.37E-01
6	5	21	22	11379.15	1	1922.95	5.2003	0.0496	4.77E-03	6.10E-01	5.60E 00	1.85E 01	3.72E 01	5.73E 01
4	3	32	33	8440.93	1	1922.99	5.2002	0.0326	3.30E-01	1.03E 01	4.68E 01	1.01E 02	1.54E 02	1.94E 02
7	6	15	16	12957.61	1	1923.11	5.1999	0.0591	4.15E-04	1.13E-01	1.52E 00	6.28E 00	1.47E 01	2.53E 01
2	1	42	43	5725.68	1	1923.29	5.1994	0.0303	1.08E 01	9.18E 01	2.17E 02	3.18E 02	3.72E 02	3.89E 02
3	2	29	30	5840.91	2	1923.54	5.1987	0.0340	1.01E-01	9.03E-01	2.19E 00	3.25E 00	3.85E 00	4.05E 00
3	2	37	38	7043.96	1	1923.65	5.1985	0.0303	2.14E 00	3.42E 01	1.11E 02	1.96E 02	2.61E 02	2.99E 02
11	10	13	12	20521.44	1	1923.68	5.1984	0.0610	0.0	9.82E-05	8.08E-03	9.93E-02	4.81E-01	1.39E 00
7	6	5	6	12270.90	2	1923.72	5.1983	0.0617	0.0	8.66E-04	9.82E-03	3.68E-02	8.06E-02	1.32E-01
10	9	5	4	18376.90	1	1924.47	5.1962	0.0614	0.0	2.72E-04	1.34E-02	1.21E-01	4.76E-01	1.18E 00
13	12	34	33	25900.18	1	1924.69	5.1956	0.0321	0.0	0.0	5.04E-04	1.34E-02	1.09E-01	4.54E-01
2	1	34	35	4382.47	2	1924.72	5.1956	0.0317	6.43E-01	2.86E 00	4.89E 00	5.89E 00	6.06E 00	5.77E 00
1	0	39	40	2999.27	2	1924.94	5.1950	0.0303	2.70E 00	6.19E 00	7.60E 00	7.49E 00	6.79E 00	5.85E 00
12	11	23	22	23004.38	1	1925.34	5.1939	0.0476	0.0	0.0	2.58E-03	4.53E-02	2.78E-01	9.50E-01
8	7	8	9	14610.99	1	1925.65	5.1931	0.0624	2.45E-05	1.48E-02	2.95E-01	1.55E 00	4.26E 00	8.18E 00
4	3	23	24	7283.66	2	1925.70	5.1929	0.0457	1.35E-02	2.41E-01	8.27E-01	1.51E 00	2.05E 00	2.38E 00
6	5	11	12	10501.59	2	1925.82	5.1926	0.0617	9.76E-05	8.17E-03	6.06E-02	1.76E-01	3.26E-01	4.72E-01
5	4	26	27	9811.48	1	1925.89	5.1924	0.0398	4.68E-02	2.82E 00	1.78E 01	4.69E 01	8.13E 01	1.12E 02
9	8	1	2	16419.01	1	1926.12	5.1918	0.0606	0.0	6.47E-04	1.99E-02	1.36E-01	4.43E-01	9.64E-01
5	4	17	18	8838.17	2	1926.47	5.1908	0.0568	1.34E-03	5.07E-02	2.52E-01	5.76E-01	9.09E-01	1.17E 00
11	10	14	13	20566.83	1	1926.68	5.1903	0.0604	0.0	1.01E-04	8.43E-03	1.04E-01	5.08E-01	1.47E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	12	35	34	26015.68	1	1926.81	5.1899	0.0317	0.0	0.0	4.78E-04	1.30E-02	1.06E-01	4.46E-01
7	6	14	15	12899.54	1	1927.25	5.1887	0.0597	4.24E-04	1.12E-01	1.49E 00	6.10E 00	1.42E 01	2.43E 01
1	0	46	47	4306.05	1	1927.25	5.1887	0.0303	4.57E 01	1.97E 02	3.31E 02	3.95E 02	4.04E 02	3.83E 02
6	5	20	21	11298.67	1	1927.32	5.1886	0.0515	5.12E-03	6.30E-01	5.68E 00	1.85E 01	3.71E 01	5.67E 01
7	6	4	5	12250.03	2	1927.36	5.1884	0.0614	0.0	7.38E-04	8.32E-03	3.11E-02	6.80E-02	1.11E-01
4	3	31	32	8318.38	1	1927.78	5.1873	0.0331	3.83E-01	1.13E 01	4.97E 01	1.06E 02	1.59E 02	1.98E 02
10	9	6	5	18394.55	1	1927.79	5.1873	0.0617	0.0	3.21E-04	1.59E-02	1.44E-01	5.68E-01	1.41E 00
12	11	24	23	23083.67	1	1927.92	5.1869	0.0457	0.0	0.0	2.54E-03	4.52E-02	2.80E-01	9.61E-01
3	2	28	29	5733.20	2	1928.04	5.1866	0.0359	1.14E-01	9.70E-01	2.29E 00	3.36E 00	3.93E 00	4.10E 00
2	1	41	42	5563.80	1	1928.44	5.1855	0.0303	1.33E 01	1.05E 02	2.39E 02	3.42E 02	3.94E 02	4.08E 02
3	2	36	37	6901.85	1	1928.62	5.1851	0.0308	2.56E 00	3.83E 01	1.20E 02	2.08E 02	2.73E 02	3.09E 02
13	12	36	35	26134.53	1	1928.89	5.1843	0.0312	0.0	0.0	4.52E-04	1.25E-02	1.03E-01	4.38E-01
2	1	33	34	4255.91	2	1929.40	5.1830	0.0321	7.51E-01	3.15E 00	5.22E 00	6.17E 00	6.27E 00	5.92E 00
8	7	7	8	14578.61	1	1929.52	5.1826	0.0623	2.29E-05	1.36E-02	2.69E-01	1.41E 00	3.85E 00	7.39E 00
11	10	15	14	20615.70	1	1929.63	5.1823	0.0597	0.0	1.04E-04	8.73E-03	1.09E-01	5.32E-01	1.54E 00
6	5	10	11	10459.48	2	1929.68	5.1822	0.0625	9.52E-05	7.81E-03	5.74E-02	1.66E-01	3.05E-01	4.41E-01
9	8	0	1	16411.88	1	1929.72	5.1821	0.0603	0.0	3.26E-04	1.00E-02	6.82E-02	2.23E-01	4.84E-01
1	0	38	39	2853.67	2	1929.79	5.1819	0.0303	3.25E 00	6.95E 00	8.25E 00	7.97E 00	7.08E 00	6.07E 00
4	3	22	23	7198.11	2	1930.00	5.1813	0.0476	1.46E-02	2.51E-01	8.45E-01	1.52E 00	2.06E 00	2.37E 00
5	4	25	26	9711.93	1	1930.45	5.1801	0.0418	5.21E-02	3.00E 00	1.85E 01	4.79E 01	8.24E 01	1.13E 02
12	11	25	24	23166.39	1	1930.46	5.1801	0.0437	0.0	0.0	2.50E-03	4.49E-02	2.81E-01	9.69E-01
5	4	16	17	8774.49	2	1930.55	5.1799	0.0585	1.39E-03	5.10E-02	2.50E-01	5.66E-01	8.88E-01	1.14E 00
13	12	37	36	26256.71	1	1930.92	5.1789	0.0308	0.0	0.0	4.25E-04	1.19E-02	1.00E-01	4.28E-01
7	6	3	4	12232.63	2	1930.97	5.1787	0.0611	0.0	6.01E-04	6.76E-03	2.52E-02	5.50E-02	8.97E-02
10	9	7	6	18415.73	1	1931.07	5.1785	0.0620	0.0	3.68E-04	1.83E-02	1.66E-01	6.57E-01	1.64E 00
7	6	13	14	12845.10	1	1931.36	5.1777	0.0604	4.28E-04	1.11E-01	1.45E 00	5.89E 00	1.37E 01	2.33E 01
6	5	19	20	11221.82	1	1931.66	5.1769	0.0535	5.46E-03	6.48E-01	5.73E 00	1.85E 01	3.67E 01	5.59E 01
3	2	27	28	5629.04	2	1932.52	5.1746	0.0379	1.28E-01	1.04E 00	2.39E 00	3.45E 00	4.00E 00	4.15E 00
4	3	30	31	8199.50	1	1932.53	5.1746	0.0335	4.40E-01	1.23E 01	5.26E 01	1.10E 02	1.63E 02	2.02E 02
11	10	16	15	20668.05	1	1932.55	5.1745	0.0591	0.0	1.05E-04	8.98E-03	1.13E-01	5.55E-01	1.61E 00
1	0	45	46	4127.89	1	1932.55	5.1745	0.0303	5.79E 01	2.29E 02	3.70E 02	4.30E 02	4.33E 02	4.05E 02
13	12	38	37	26382.21	1	1932.92	5.1735	0.0303	0.0	0.0	3.99E-04	1.14E-02	9.71E-02	4.18E-01
12	11	26	25	23252.52	1	1932.97	5.1734	0.0418	0.0	0.0	2.44E-03	4.45E-02	2.81E-01	9.74E-01
8	7	6	7	14549.82	1	1933.36	5.1723	0.0620	2.09E-05	1.23E-02	2.41E-01	1.25E 00	3.43E 00	6.56E 00
6	5	9	10	10420.87	2	1933.51	5.1719	0.0624	9.17E-05	7.39E-03	5.38E-02	1.54E-01	2.84E-01	4.08E-01
3	2	35	36	6763.42	1	1933.55	5.1718	0.0312	3.04E 00	4.26E 01	1.29E 02	2.20E 02	2.85E 02	3.20E 02
2	1	40	41	5405.60	1	1933.56	5.1718	0.0303	1.64E 01	1.20E 02	2.62E 02	3.66E 02	4.17E 02	4.26E 02
2	1	32	33	4132.93	2	1934.05	5.1705	0.0326	8.72E-01	3.44E 00	5.55E 00	6.45E 00	6.48E 00	6.06E 00
4	3	21	22	7116.09	2	1934.26	5.1699	0.0496	1.58E-02	2.61E-01	8.59E-01	1.53E 00	2.05E 00	2.36E 00
10	9	8	7	18440.43	1	1934.32	5.1698	0.0623	0.0	4.11E-04	2.05E-02	1.87E-01	7.44E-01	1.86E 00
7	6	2	3	12218.71	2	1934.54	5.1692	0.0609	0.0	4.58E-04	5.13E-03	1.91E-02	4.16E-02	6.78E-02
5	4	15	16	8714.33	2	1934.60	5.1690	0.0591	1.43E-03	5.09E-02	2.46E-01	5.53E-01	8.62E-01	1.11E 00
1	0	37	38	2711.64	2	1934.61	5.1690	0.0303	3.90E 00	7.78E 00	8.92E 00	8.45E 00	7.41E 00	6.29E 00
13	12	39	38	26511.04	1	1934.88	5.1683	0.0303	0.0	0.0	3.74E-04	1.09E-02	9.37E-02	4.07E-01
5	4	24	25	9616.03	1	1934.99	5.1680	0.0437	5.76E-02	3.17E 00	1.91E 01	4.89E 01	8.32E 01	1.14E 02
12	11	27	26	23342.06	1	1935.43	5.1668	0.0398	0.0	0.0	2.38E-03	4.40E-02	2.79E-01	9.76E-01
7	6	12	13	12794.27	1	1935.43	5.1668	0.0610	4.29E-04	1.08E-01	1.40E 00	5.65E 00	1.30E 01	2.21E 01
11	10	17	16	20723.88	1	1935.44	5.1668	0.0585	0.0	1.06E-04	9.18E-03	1.16E-01	5.75E-01	1.68E 00
6	5	18	19	11148.61	1	1935.97	5.1654	0.0552	5.77E-03	6.62E-01	5.75E 00	1.84E 01	3.62E 01	5.49E 01
13	12	40	39	26643.18	1	1936.79	5.1632	0.0303	0.0	0.0	3.49E-04	1.04E-02	9.03E-02	3.96E-01
9	8	1	0	16408.32	1	1936.81	5.1631	0.0603	0.0	3.29E-04	1.01E-02	6.86E-02	2.24E-01	4.87E-01
3	2	26	27	5528.43	2	1936.96	5.1627	0.0398	1.43E-01	1.11E 00	2.49E 00	3.54E 00	4.06E 00	4.18E 00
8	7	5	6	14524.62	1	1937.17	5.1622	0.0617	0.0	1.08E-02	2.11E-01	1.09E 00	2.98E 00	5.69E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	29	30	8084.29	1	1937.25	5.1620	0.0340	5.04E-01	1.33E 01	5.54E 01	1.14E 02	1.67E 02	2.06E 02
6	5	8	9	10385.77	2	1937.31	5.1618	0.0624	8.69E-05	6.89E-03	4.97E-02	1.42E-01	2.60E-01	3.74E-01
10	9	9	8	18468.66	1	1937.53	5.1612	0.0624	0.0	4.51E-04	2.27E-02	2.08E-01	8.27E-01	2.07E 00
1	0	44	45	3953.41	1	1937.82	5.1604	0.0303	7.30E 01	2.66E 02	4.11E 02	4.67E 02	4.62E 02	4.27E 02
12	11	28	27	23435.02	1	1937.86	5.1603	0.0379	0.0	0.0	2.31E-03	4.33E-02	2.77E-01	9.76E-01
7	6	1	2	12208.27	2	1938.09	5.1597	0.0606	0.0	3.09E-04	3.45E-03	1.28E-02	2.79E-02	4.55E-02
11	10	18	17	20783.18	1	1938.28	5.1592	0.0568	0.0	1.06E-04	9.33E-03	1.19E-01	5.93E-01	1.74E 00
3	2	34	35	6628.66	1	1938.46	5.1587	0.0317	3.60E 00	4.72E 01	1.39E 02	2.32E 02	2.96E 02	3.29E 02
4	3	20	21	7037.61	2	1938.49	5.1587	0.0515	1.69E-02	2.69E-01	8.70E-01	1.54E 00	2.04E 00	2.33E 00
5	4	14	15	8657.70	2	1938.62	5.1583	0.0597	1.46E-03	5.05E-02	2.41E-01	5.37E-01	8.33E-01	1.06E 00
2	1	39	40	5251.08	1	1938.64	5.1583	0.0303	2.00E 01	1.36E 02	2.87E 02	3.92E 02	4.39E 02	4.44E 02
2	1	31	32	4013.51	2	1938.67	5.1582	0.0331	1.01E 00	3.75E 00	5.88E 00	6.71E 00	6.67E 00	6.19E 00
13	12	41	40	26778.63	1	1938.67	5.1582	0.0303	0.0	0.0	3.25E-04	9.93E-03	8.68E-02	3.84E-01
1	0	36	37	2573.18	2	1939.40	5.1562	0.0308	4.64E 00	8.67E 00	9.62E 00	8.93E 00	7.73E 00	6.50E 00
7	6	11	12	12747.07	1	1939.48	5.1560	0.0617	4.24E-04	1.05E-01	1.34E 00	5.37E 00	1.23E 01	2.09E 01
5	4	23	24	9523.78	1	1939.49	5.1560	0.0457	6.33E-02	3.33E 00	1.96E 01	4.96E 01	8.37E 01	1.14E 02
6	5	17	18	11079.05	1	1940.24	5.1540	0.0568	6.05E-03	6.72E-01	5.74E 00	1.82E 01	3.56E 01	5.37E 01
12	11	29	28	23531.37	1	1940.25	5.1540	0.0359	0.0	0.0	2.24E-03	4.25E-02	2.75E-01	9.72E-01
9	8	2	1	16411.88	1	1940.31	5.1538	0.0606	0.0	6.56E-04	2.02E-02	1.37E-01	4.49E-01	9.75E-01
13	12	42	41	26917.39	1	1940.50	5.1533	0.0303	0.0	0.0	3.01E-04	9.30E-03	8.32E-02	3.72E-01
10	9	10	9	18500.42	1	1940.70	5.1528	0.0624	0.0	4.87E-04	2.47E-02	2.27E-01	9.07E-01	2.27E 00
8	7	4	5	14503.03	1	1940.94	5.1521	0.0614	0.0	9.19E-03	1.79E-01	9.24E-01	2.52E 00	4.80E 00
6	5	7	8	10354.17	2	1941.08	5.1518	0.0623	8.10E-05	6.32E-03	4.53E-02	1.29E-01	2.35E-01	3.37E-01
11	10	19	18	20845.96	1	1941.09	5.1517	0.0552	0.0	1.06E-04	9.43E-03	1.22E-01	6.08E-01	1.79E 00
3	2	25	26	5431.39	2	1941.37	5.1510	0.0418	1.59E-01	1.17E 00	2.58E 00	3.61E 00	4.11E 00	4.21E 00
7	6	0	1	12201.31	2	1941.60	5.1504	0.0603	0.0	1.56E-04	1.74E-03	6.44E-03	1.40E-02	2.29E-02
4	3	28	29	7972.75	1	1941.94	5.1495	0.0359	5.73E-01	1.43E 01	5.82E 01	1.18E 02	1.71E 02	2.09E 02
13	12	43	42	27059.45	1	1942.29	5.1486	0.0303	0.0	0.0	2.78E-04	8.78E-03	7.97E-02	3.59E-01
12	11	30	29	23631.13	1	1942.60	5.1477	0.0340	0.0	0.0	2.16E-03	4.15E-02	2.71E-01	9.67E-01
5	4	13	14	8604.60	2	1942.61	5.1477	0.0604	1.47E-03	4.97E-02	2.34E-01	5.18E-01	8.00E-01	1.02E 00
4	3	19	20	6962.68	2	1942.70	5.1475	0.0535	1.80E-02	2.76E-01	8.77E-01	1.53E 00	2.02E 00	2.29E 00
1	0	43	44	3782.62	1	1943.06	5.1465	0.0303	9.15E 01	3.07E 02	4.56E 02	5.05E 02	4.92E 02	4.50E 02
2	1	30	31	3897.66	2	1943.26	5.1460	0.0335	1.15E 00	4.07E 00	6.20E 00	6.97E 00	6.85E 00	6.31E 00
3	2	33	34	6497.59	1	1943.34	5.1458	0.0321	4.23E 00	5.22E 01	1.49E 02	2.43E 02	3.07E 02	3.39E 02
7	6	10	11	12703.48	1	1943.49	5.1454	0.0625	4.15E-04	1.00E-01	1.27E 00	5.06E 00	1.16E 01	1.95E 01
2	1	38	39	5100.25	1	1943.70	5.1448	0.0303	2.43E 01	1.53E 02	3.12E 02	4.18E 02	4.62E 02	4.62E 02
9	8	3	2	16419.01	1	1943.77	5.1446	0.0609	0.0	9.79E-04	3.01E-02	2.06E-01	6.72E-01	1.46E 00
10	9	11	10	18535.70	1	1943.84	5.1445	0.0625	0.0	5.19E-04	2.65E-02	2.45E-01	9.83E-01	2.47E 00
11	10	20	19	20912.20	1	1943.86	5.1444	0.0535	0.0	1.05E-04	9.47E-03	1.23E-01	6.21E-01	1.84E 00
5	4	22	23	9435.20	1	1943.96	5.1441	0.0476	6.91E-02	3.48E 00	2.01E 01	5.02E 01	8.40E 01	1.13E 02
13	12	44	43	27204.80	1	1944.05	5.1439	0.0303	0.0	0.0	2.57E-04	8.26E-03	7.61E-02	3.46E-01
1	0	35	36	2438.31	2	1944.16	5.1436	0.0312	5.49E 00	9.63E 00	1.03E 01	9.42E 00	8.05E 00	6.71E 00
6	5	16	17	11013.12	1	1944.48	5.1428	0.0585	6.30E-03	6.77E-01	5.70E 00	1.79E 01	3.48E 01	5.23E 01
8	7	3	4	14485.03	1	1944.68	5.1422	0.0611	0.0	7.49E-03	1.45E-01	7.49E-01	2.03E 00	3.88E 00
6	5	6	7	10326.08	2	1944.82	5.1419	0.0620	7.39E-05	5.69E-03	4.06E-02	1.15E-01	2.09E-01	2.99E-01
12	11	31	30	23734.29	1	1944.91	5.1416	0.0335	0.0	0.0	2.07E-03	4.05E-02	2.67E-01	9.59E-01
3	2	24	25	5337.91	2	1945.76	5.1394	0.0437	1.75E-01	1.23E 00	2.66E 00	3.67E 00	4.15E 00	4.22E 00
13	12	45	44	27353.43	1	1945.76	5.1394	0.0303	0.0	0.0	2.36E-04	7.76E-03	7.25E-02	3.33E-01
5	4	12	13	8555.02	2	1946.57	5.1372	0.0610	1.47E-03	4.85E-02	2.26E-01	4.96E-01	7.62E-01	9.66E-01
11	10	21	20	20981.92	1	1946.59	5.1372	0.0515	0.0	1.03E-04	9.47E-03	1.25E-01	6.31E-01	1.88E 00
4	3	27	28	7864.89	1	1946.60	5.1372	0.0379	6.48E-01	1.54E 01	6.09E 01	1.21E 02	1.75E 02	2.12E 02
4	3	18	19	6891.30	2	1946.87	5.1364	0.0552	1.89E-02	2.81E-01	8.79E-01	1.52E 00	1.99E 00	2.25E 00
10	9	12	11	18574.50	1	1946.94	5.1363	0.0617	0.0	5.46E-04	2.82E-02	2.62E-01	1.05E 00	2.66E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	32	31	23840.83	1	1947.18	5.1356	0.0331	0.0	0.0	1.98E-03	3.93E-02	2.62E-01	9.48E-01
9	8	4	3	16429.71	1	1947.19	5.1356	0.0611	0.0	1.29E-03	4.00E-02	2.73E-01	8.94E-01	1.95E 00
13	12	46	45	27505.34	1	1947.42	5.1350	0.0303	0.0	0.0	2.16E-04	7.27E-03	6.89E-02	3.20E-01
7	6	9	10	12863.53	1	1947.46	5.1349	0.0624	4.00E-04	9.49E-02	1.19E 00	4.72E 00	1.08E 01	1.81E 01
2	1	29	30	3785.38	2	1947.82	5.1339	0.0340	1.31E 00	4.39E 00	6.52E 00	7.21E 00	7.01E 00	6.41E 00
3	2	32	33	6370.20	1	1948.19	5.1330	0.0326	4.94E 00	5.73E 01	1.59E 02	2.55E 02	3.18E 02	3.47E 02
1	0	42	43	3615.54	1	1948.27	5.1328	0.0303	1.14E 02	3.53E 02	5.04E 02	5.45E 02	5.22E 02	4.72E 02
8	7	2	3	14470.63	1	1948.38	5.1325	0.0609	0.0	5.70E-03	1.10E-01	5.67E-01	1.54E 00	2.93E 00
5	4	21	22	9350.27	1	1948.39	5.1324	0.0496	7.48E-02	3.62E 00	2.05E 01	5.05E 01	8.39E 01	1.12E 02
7	6	1	0	12197.83	2	1948.53	5.1321	0.0603	0.0	1.57E-04	1.75E-03	6.48E-03	1.41E-02	2.30E-02
6	5	5	6	10301.50	2	1948.53	5.1321	0.0617	6.57E-05	5.01E-03	3.54E-02	1.00E-01	1.82E-01	2.60E-01
6	5	15	16	10950.85	1	1948.69	5.1317	0.0591	6.49E-03	6.78E-01	5.63E 00	1.75E 01	3.38E 01	5.06E 01
2	1	37	38	4953.12	1	1948.74	5.1315	0.0303	2.93E 01	1.72E 02	3.39E 02	4.45E 02	4.84E 02	4.80E 02
1	0	34	35	2307.02	2	1948.90	5.1311	0.0317	6.46E 00	1.06E 01	1.11E 01	9.90E 00	8.36E 00	6.90E 00
13	12	47	46	27660.53	1	1949.05	5.1307	0.0303	0.0	0.0	1.98E-04	6.80E-03	6.54E-02	3.07E-01
11	10	22	21	21055.10	1	1949.28	5.1301	0.0496	0.0	1.01E-04	9.43E-03	1.25E-01	6.40E-01	1.91E 00
12	11	33	32	23950.76	1	1949.41	5.1298	0.0326	0.0	0.0	1.89E-03	3.81E-02	2.57E-01	9.36E-01
10	9	13	12	18616.82	1	1950.01	5.1282	0.0610	0.0	5.69E-04	2.97E-02	2.78E-01	1.12E 00	2.84E 00
3	2	23	24	5247.99	2	1950.11	5.1279	0.0457	1.92E-01	1.29E 00	2.73E 00	3.73E 00	4.17E 00	4.21E 00
5	4	11	12	8508.98	2	1950.49	5.1269	0.0617	1.45E-03	4.69E-02	2.16E-01	4.71E-01	7.21E-01	9.12E-01
9	8	5	4	16443.96	1	1950.58	5.1267	0.0614	0.0	1.60E-03	4.95E-02	3.39E-01	1.11E 00	2.42E 00
13	12	48	47	27818.98	1	1950.64	5.1265	0.0303	0.0	0.0	1.80E-04	6.34E-03	6.19E-02	2.94E-01
4	3	17	18	6823.48	2	1951.01	5.1256	0.0568	1.98E-02	2.85E-01	8.76E-01	1.50E 00	1.95E 00	2.20E 00
4	3	26	27	7760.70	1	1951.23	5.1250	0.0398	7.27E-01	1.64E 01	6.35E 01	1.25E 02	1.78E 02	2.14E 02
7	6	8	9	12627.20	1	1951.41	5.1245	0.0624	3.80E-04	8.86E-02	1.10E 00	4.35E 00	9.88E 00	1.66E 01
12	11	34	33	24064.08	1	1951.60	5.1240	0.0321	0.0	0.0	1.80E-03	3.68E-02	2.51E-01	9.21E-01
11	10	23	22	21131.74	1	1951.94	5.1231	0.0476	0.0	9.80E-05	9.34E-03	1.26E-01	6.45E-01	1.94E 00
7	6	2	1	12201.31	2	1951.94	5.1231	0.0606	0.0	3.13E-04	3.50E-03	1.30E-02	2.83E-02	4.60E-02
8	7	1	2	14459.83	1	1952.05	5.1228	0.0606	0.0	3.85E-03	7.41E-02	3.81E-01	1.03E 00	1.97E 00
13	12	49	48	27980.70	1	1952.18	5.1225	0.0303	0.0	0.0	1.64E-04	5.90E-03	5.85E-02	2.81E-01
6	5	4	5	10280.43	2	1952.20	5.1224	0.0614	5.65E-05	4.26E-03	3.01E-02	8.46E-02	1.53E-01	2.19E-01
2	1	28	29	3676.69	2	1952.35	5.1220	0.0359	1.49E 00	4.73E 00	6.84E 00	7.44E 00	7.16E 00	6.50E 00
5	4	20	21	9269.02	1	1952.80	5.1209	0.0515	8.04E-02	3.75E 00	2.08E 01	5.07E 01	8.35E 01	1.11E 02
6	5	14	15	10892.23	1	1952.87	5.1207	0.0597	6.64E-03	6.74E-01	5.51E 00	1.70E 01	3.27E 01	4.87E 01
3	2	31	32	6246.50	1	1953.00	5.1203	0.0331	5.74E 00	6.27E 01	1.69E 02	2.66E 02	3.28E 02	3.56E 02
10	9	14	13	18662.66	1	1953.04	5.1202	0.0604	0.0	5.87E-04	3.09E-02	2.92E-01	1.18E 00	3.00E 00
1	0	41	42	3452.15	1	1953.45	5.1191	0.0303	1.41E 02	4.04E 02	5.55E 02	5.87E 02	5.53E 02	4.95E 02
1	0	33	34	2179.32	2	1953.61	5.1187	0.0321	7.55E 00	1.17E 01	1.18E 01	1.04E 01	8.65E 00	7.09E 00
13	12	50	49	28145.66	1	1953.68	5.1185	0.0303	0.0	0.0	1.49E-04	5.48E-03	5.52E-02	2.68E-01
2	1	36	37	4809.68	1	1953.74	5.1184	0.0308	3.51E 01	1.93E 02	3.67E 02	4.71E 02	5.07E 02	4.98E 02
12	11	35	34	24180.77	1	1953.76	5.1183	0.0317	0.0	0.0	1.70E-03	3.55E-02	2.44E-01	9.05E-01
9	8	6	5	16461.79	1	1953.93	5.1179	0.0617	0.0	1.89E-03	5.88E-02	4.04E-01	1.33E 00	2.89E 00
5	4	10	11	8466.48	2	1954.39	5.1167	0.0625	1.42E-03	4.49E-02	2.05E-01	4.44E-01	6.76E-01	8.53E-01
3	2	22	23	5161.65	2	1954.44	5.1166	0.0476	2.09E-01	1.35E 00	2.79E 00	3.76E 00	4.18E 00	4.20E 00
11	10	24	23	21211.84	1	1954.55	5.1163	0.0457	0.0	9.47E-05	9.21E-03	1.25E-01	6.49E-01	1.96E 00
4	3	16	17	6759.20	2	1955.13	5.1147	0.0585	2.06E-02	2.87E-01	8.69E-01	1.47E 00	1.91E 00	2.14E 00
13	12	51	50	28313.87	1	1955.14	5.1147	0.0303	0.0	0.0	1.34E-04	5.07E-03	5.19E-02	2.55E-01
7	6	3	2	12208.27	2	1955.32	5.1143	0.0609	0.0	4.67E-04	5.23E-03	1.94E-02	4.24E-02	6.90E-02
7	6	7	8	12594.50	1	1955.32	5.1143	0.0623	3.54E-04	8.14E-02	1.00E 00	3.95E 00	8.95E 00	1.50E 01
8	7	0	1	14452.63	1	1955.69	5.1133	0.0603	0.0	1.94E-03	3.73E-02	1.92E-01	5.20E-01	9.88E-01
4	3	25	26	7660.20	1	1955.82	5.1129	0.0418	8.11E-01	1.75E 01	6.59E 01	1.28E 02	1.80E 02	2.15E 02
6	5	3	4	10262.87	2	1955.84	5.1129	0.0611	4.64E-05	3.48E-03	2.44E-02	6.85E-02	1.24E-01	1.77E-01
12	11	36	35	24300.84	1	1955.87	5.1128	0.0312	0.0	0.0	1.61E-03	3.41E-02	2.37E-01	8.87E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	9	15	14	18712.02	1	1956.03	5.1124	0.0597	0.0	6.00E-04	3.21E-02	3.04E-01	1.24E 00	3.16E 00
13	12	52	51	28485.31	1	1956.56	5.1110	0.0303	0.0	0.0	1.21E-04	4.69E-03	4.88E-02	2.43E-01
2	1	27	28	3571.58	2	1956.86	5.1102	0.0379	1.67E 00	5.06E 00	7.14E 00	7.66E 00	7.30E 00	6.58E 00
6	5	13	14	10837.26	1	1957.01	5.1098	0.0604	6.71E-03	6.64E-01	5.37E 00	1.64E 01	3.14E 01	4.66E 01
11	10	25	24	21295.39	1	1957.13	5.1095	0.0437	0.0	9.12E-05	9.04E-03	1.24E-01	6.50E-01	1.98E 00
5	4	19	20	9191.44	1	1957.17	5.1094	0.0535	8.58E-02	3.85E 00	2.10E 01	5.06E 01	8.28E 01	1.10E 02
9	8	7	6	16483.18	1	1957.25	5.1092	0.0620	0.0	2.16E-03	6.77E-02	4.66E-01	1.53E 00	3.35E 00
3	2	30	31	6126.50	1	1957.79	5.1078	0.0335	6.61E 00	6.83E 01	1.78E 02	2.77E 02	3.38E 02	3.63E 02
13	12	53	52	28659.99	1	1957.93	5.1074	0.0303	0.0	0.0	1.09E-04	4.32E-03	4.57E-02	2.30E-01
12	11	37	36	24424.27	1	1957.94	5.1074	0.0308	0.0	0.0	1.51E-03	3.26E-02	2.30E-01	8.67E-01
5	4	9	10	8427.51	2	1958.25	5.1066	0.0624	1.37E-03	4.24E-02	1.92E-01	4.14E-01	6.28E-01	7.90E-01
1	0	32	33	2055.22	2	1958.29	5.1065	0.0326	8.78E 00	1.28E 01	1.26E 01	1.08E 01	8.94E 00	7.26E 00
1	0	40	41	3292.48	1	1958.60	5.1057	0.0303	1.74E 02	4.61E 02	6.10E 02	6.30E 02	5.85E 02	5.18E 02
7	6	4	3	12218.71	2	1958.67	5.1055	0.0611	0.0	6.18E-04	6.93E-03	2.58E-02	5.64E-02	9.19E-02
2	1	35	36	4669.95	1	1958.71	5.1054	0.0312	4.19E 01	2.15E 02	3.96E 02	4.99E 02	5.29E 02	5.14E 02
3	2	21	22	5078.88	2	1958.73	5.1053	0.0496	2.25E-01	1.40E 00	2.84E 00	3.78E 00	4.17E 00	4.17E 00
10	9	16	15	18764.90	1	1958.98	5.1047	0.0591	0.0	6.10E-04	3.30E-02	3.15E-01	1.29E 00	3.30E 00
7	6	6	7	12565.43	1	1959.19	5.1041	0.0620	3.24E-04	7.34E-02	8.98E-01	3.52E 00	7.96E 00	1.33E 01
4	3	15	16	6698.49	2	1959.21	5.1041	0.0591	2.12E-02	2.87E-01	8.56E-01	1.44E 00	1.85E 00	2.07E 00
13	12	54	53	28837.89	1	1959.26	5.1040	0.0303	0.0	0.0	9.75E-05	3.97E-03	4.28E-02	2.18E-01
6	5	2	3	10248.82	2	1959.45	5.1035	0.0609	3.56E-05	2.65E-03	1.85E-02	5.19E-02	9.39E-02	1.34E-01
11	10	26	25	21382.39	1	1959.67	5.1029	0.0418	0.0	8.73E-05	8.85E-03	1.23E-01	6.50E-01	1.99E 00
12	11	38	37	24551.07	1	1959.97	5.1021	0.0303	0.0	0.0	1.42E-03	3.12E-02	2.23E-01	8.46E-01
4	3	24	25	7563.39	1	1960.39	5.1010	0.0437	8.98E-01	1.85E 01	6.81E 01	1.30E 02	1.82E 02	2.16E 02
9	8	8	7	16508.13	1	1960.53	5.1007	0.0623	0.0	2.42E-03	7.61E-02	5.26E-01	1.74E 00	3.80E 00
13	12	55	54	29019.00	1	1960.55	5.1006	0.0303	0.0	0.0	8.72E-05	3.65E-03	4.00E-02	2.06E-01
6	5	12	13	10785.94	1	1961.12	5.0991	0.0610	6.72E-03	6.49E-01	5.18E 00	1.57E 01	3.00E 01	4.44E 01
2	1	26	27	3470.06	2	1961.33	5.0986	0.0398	1.87E 00	5.39E 00	7.43E 00	7.85E 00	7.41E 00	6.63E 00
5	4	18	19	9117.53	1	1961.51	5.0981	0.0552	9.08E-02	3.94E 00	2.11E 01	5.03E 01	8.17E 01	1.08E 02
13	12	56	55	29203.32	1	1961.80	5.0974	0.0303	0.0	0.0	7.78E-05	3.34E-03	3.73E-02	1.95E-01
10	9	17	16	18821.29	1	1961.90	5.0971	0.0585	0.0	6.14E-04	3.37E-02	3.25E-01	1.34E 00	3.43E 00
12	11	39	38	24681.22	1	1961.96	5.0969	0.0303	0.0	0.0	1.33E-03	2.97E-02	2.15E-01	8.24E-01
7	6	5	4	12232.63	2	1961.99	5.0969	0.0614	0.0	7.63E-04	8.60E-03	3.21E-02	7.01E-02	1.14E-01
5	4	8	9	8392.08	2	1962.09	5.0966	0.0624	1.30E-03	3.96E-02	1.77E-01	3.81E-01	5.76E-01	7.23E-01
11	10	27	26	21472.84	1	1962.17	5.0964	0.0398	0.0	8.32E-05	8.62E-03	1.22E-01	6.47E-01	1.99E 00
3	2	29	30	6010.21	1	1962.55	5.0954	0.0340	7.58E 00	7.41E 01	1.88E 02	2.87E 02	3.46E 02	3.69E 02
8	7	1	0	14449.03	1	1962.85	5.0946	0.0603	0.0	1.95E-03	3.76E-02	1.93E-01	5.23E-01	9.95E-01
1	0	31	32	1934.72	2	1962.94	5.0944	0.0331	1.01E 01	1.40E 01	1.3[illegible] 01	1.13E 01	9.21E 00	7.42E 00
13	12	57	56	29390.83	1	1963.00	5.0942	0.0303	0.0	0.0	6.[illegible]E-05	3.05E-03	3.47E-02	1.83E-01
3	2	20	21	4999.68	2	1963.00	5.0942	0.0515	2.41E-01	1.45E 00	2.88E 00	3.79E 00	4.14E 00	4.12E 00
7	6	5	6	12539.99	1	1963.03	5.0942	0.0617	2.88E-04	6.46E-02	7.85E-01	3.07E 00	6.92E 00	1.15E 01
6	5	1	2	10238.29	2	1963.03	5.0942	0.0606	2.41E-05	1.79E-03	1.25E-02	3.49E-02	6.30E-02	8.97E-02
4	3	14	15	6641.34	2	1963.26	5.0936	0.0597	2.16E-02	2.85E-01	8.39E-01	1.40E 00	1.79E 00	1.99E 00
2	1	34	35	4533.94	1	1963.65	5.0926	0.0317	4.96E 01	2.39E 02	4.26E 02	5.26E 02	5.50E 02	5.30E 02
1	0	39	40	3136.53	1	1963.73	5.0923	0.0303	2.12E 02	5.24E 02	6.67E 02	6.74E 02	6.17E 02	5.40E 02
9	8	9	8	16536.64	1	1963.78	5.0922	0.0624	0.0	2.65E-03	8.40E-02	5.83E-01	1.93E 00	4.24E 00
12	11	40	39	24814.72	1	1963.91	5.0919	0.0303	0.0	0.0	1.24E-03	2.83E-02	2.07E-01	8.00E-01
13	12	58	57	29581.54	1	1964.16	5.0912	0.0303	0.0	0.0	6.14E-05	2.78E-03	3.22E-02	1.73E-01
11	10	28	27	21566.74	1	1964.64	5.0900	0.0379	0.0	7.90E-05	8.36E-03	1.20E-01	6.42E-01	1.99E 00
10	9	18	17	18881.18	1	1964.78	5.0896	0.0568	0.0	6.15E-04	3.42E-02	3.33E-01	1.38E 00	3.55E 00
4	3	23	24	7470.27	1	1964.93	5.0892	0.0457	9.88E-01	1.95E 01	7.01E 01	1.32E 02	1.83E 02	2.16E 02
6	5	11	12	10738.28	1	1965.20	5.0885	0.0617	6.66E-03	6.29E-01	4.96E 00	1.50E 01	2.84E 01	4.19E 01
7	6	6	5	12250.03	2	1965.27	5.0884	0.0617	0.0	9.02E-04	1.02E-02	3.82E-02	8.36E-02	1.37E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	12	59	58	29775.43	1	1965.28	5.0883	0.0303	0.0	0.0	5.43E-05	2.53E-03	2.98E-02	1.62E-01
2	1	25	26	3372.13	2	1965.78	5.0870	0.0418	2.08E 00	5.72E 00	7.70E 00	8.02E 00	7.50E 00	6.67E 00
12	11	41	40	24951.57	1	1965.82	5.0869	0.0303	0.0	0.0	1.15E-03	2.68E-02	1.99E-01	7.76E-01
5	4	17	18	9047.30	1	1965.82	5.0869	0.0568	9.54E-02	4.00E 00	2.11E 01	4.99E 01	8.03E 01	1.05E 02
5	4	7	8	8360.19	2	1965.89	5.0868	0.0623	1.21E-03	3.63E-02	1.62E-01	3.46E-01	5.21E-01	6.53E-01
13	12	60	59	29972.48	1	1966.35	5.0856	0.0303	0.0	0.0	4.79E-05	2.30E-03	2.76E-02	1.52E-01
8	7	2	1	14452.63	1	1966.38	5.0855	0.0606	0.0	3.90E-03	7.51E-02	3.86E-01	1.05E 00	1.99E 00
6	5	0	1	10231.26	2	1966.57	5.0850	0.0603	0.0	9.00E-04	6.27E-03	1.76E-02	3.17E-02	4.51E-02
7	6	4	5	12518.18	1	1966.84	5.0843	0.0614	2.48E-04	5.51E-02	6.66E-01	2.59E 00	5.84E 00	9.73E 00
9	8	10	9	16568.71	1	1966.99	5.0839	0.0624	0.0	2.86E-03	9.14E-02	6.37E-01	2.12E 00	4.65E 00
11	10	29	28	21664.07	1	1967.06	5.0837	0.0359	0.0	7.45E-05	8.08E-03	1.17E-01	6.35E-01	1.98E 00
3	2	19	20	4924.07	2	1967.24	5.0833	0.0535	2.57E-01	1.49E 00	2.90E 00	3.78E 00	4.10E 00	4.06E 00
3	2	28	29	5897.62	1	1967.27	5.0832	0.0359	8.64E 00	8.00E 01	1.98E 02	2.97E 02	3.55E 02	3.75E 02
4	3	13	14	6587.74	2	1967.28	5.0832	0.0604	2.18E-02	2.80E-01	8.15E-01	1.35E 00	1.72E 00	1.91E 00
13	12	61	60	30172.71	1	1967.38	5.0829	0.0303	0.0	0.0	4.21E-05	2.08E-03	2.55E-02	1.42E-01
1	0	30	31	1817.82	2	1967.56	5.0824	0.0335	1.16E 01	1.52E 01	1.41E 01	1.17E 01	9.46E 00	7.56E 00
10	9	19	18	18944.59	1	1967.62	5.0823	0.0552	0.0	6.12E-04	3.45E-02	3.39E-01	1.41E 00	3.66E 00
12	11	42	41	25091.76	1	1967.69	5.0821	0.0303	0.0	0.0	1.07E-03	2.53E-02	1.91E-01	7.51E-01
13	12	62	61	30376.09	1	1968.36	5.0804	0.0303	0.0	0.0	3.70E-05	1.88E-03	2.35E-02	1.33E-01
7	6	7	6	12270.90	2	1968.52	5.0800	0.0620	0.0	1.03E-03	1.18E-02	4.41E-02	9.68E-02	1.58E-01
2	1	33	34	4401.64	1	1968.56	5.0799	0.0321	5.84E 01	2.64E 02	4.56E 02	5.53E 02	5.71E 02	5.46E 02
1	0	38	39	2984.30	1	1968.82	5.0792	0.0303	2.58E 02	5.92E 02	7.28E 02	7.19E 02	6.49E 02	5.63E 02
6	5	10	11	10694.28	1	1969.25	5.0781	0.0625	6.51E-03	6.02E-01	4.71E 00	1.41E 01	2.66E 01	3.92E 01
13	12	63	62	30582.61	1	1969.30	5.0779	0.0303	0.0	0.0	3.24E-05	1.70E-03	2.16E-02	1.24E-01
4	3	22	23	7380.84	1	1969.43	5.0776	0.0476	1.08E 00	2.04E 01	7.19E 01	1.34E 02	1.84E 02	2.15E 02
11	10	30	29	21764.84	1	1969.44	5.0776	0.0340	0.0	7.01E-05	7.78E-03	1.15E-01	6.27E-01	1.97E 00
12	11	43	42	25235.28	1	1969.51	5.0774	0.0303	0.0	0.0	9.84E-04	2.39E-02	1.82E-01	7.26E-01
5	4	6	7	8331.84	2	1969.66	5.0770	0.0620	1.10E-03	3.27E-02	1.45E-01	3.08E-01	4.64E-01	5.79E-01
8	7	3	2	14459.83	1	1969.88	5.0765	0.0609	0.0	5.82E-03	1.12E-01	5.78E-01	1.57E 00	2.98E 00
5	4	16	17	8980.75	1	1970.10	5.0759	0.0585	9.93E-02	4.04E 00	2.09E 01	4.90E 01	7.85E 01	1.03E 02
9	8	11	10	16604.34	1	1970.16	5.0757	0.0625	0.0	3.05E-03	9.81E-02	6.88E-01	2.29E 00	5.06E 00
13	12	64	63	30792.28	1	1970.20	5.0756	0.0303	0.0	0.0	2.83E-05	1.53E-03	1.98E-02	1.16E-01
2	1	24	25	3277.80	2	1970.20	5.0756	0.0437	2.30E 00	6.03E 00	7.94E 00	8.17E 00	7.57E 00	6.69E 00
10	9	20	19	19011.50	1	1970.42	5.0751	0.0535	0.0	6.05E-04	3.47E-02	3.44E-01	1.44E 00	3.76E 00
7	6	3	4	12500.01	1	1970.62	5.0745	0.0611	2.04E-04	4.49E-02	5.41E-01	2.10E 00	4.72E 00	7.86E 00
13	12	65	64	31005.07	1	1971.05	5.0734	0.0303	0.0	0.0	2.46E-05	1.37E-03	1.82E-02	1.08E-01
4	3	12	13	6537.71	2	1971.27	5.0729	0.0610	2.18E-02	2.74E-01	7.87E-01	1.29E 00	1.64E 00	1.81E 00
12	11	44	43	25382.13	1	1971.30	5.0728	0.0303	0.0	0.0	9.07E-04	2.25E-02	1.74E-01	6.99E-01
3	2	18	19	4852.04	2	1971.44	5.0724	0.0552	2.71E-01	1.52E 00	2.91E 00	3.76E 00	4.05E 00	3.98E 00
7	6	8	7	12295.25	2	1971.73	5.0717	0.0623	0.0	1.16E-03	1.32E-02	4.98E-02	1.10E-01	1.80E-01
11	10	31	30	21869.04	1	1971.79	5.0715	0.0335	0.0	6.56E-05	7.47E-03	1.12E-01	6.17E-01	1.95E 00
13	12	66	65	31220.98	1	1971.86	5.0714	0.0303	0.0	0.0	2.14E-05	1.23E-03	1.66E-02	9.99E-02
3	2	27	28	5788.74	1	1971.97	5.0711	0.0379	9.77E 00	8.60E 01	2.07E 02	3.06E 02	3.62E 02	3.80E 02
1	0	29	30	1704.53	2	1972.16	5.0706	0.0340	1.33E 01	1.64E 01	1.48E 01	1.22E 01	9.69E 00	7.69E 00
13	12	67	66	31439.99	1	1972.62	5.0694	0.0303	0.0	0.0	0.0	1.10E-03	1.52E-02	9.26E-02
12	11	45	44	25532.30	1	1973.04	5.0683	0.0303	0.0	0.0	8.33E-04	2.11E-02	1.66E-01	6.73E-01
10	9	21	20	19081.91	1	1973.19	5.0679	0.0515	0.0	5.94E-04	3.47E-02	3.47E-01	1.47E 00	3.84E 00
6	5	9	10	10653.94	1	1973.26	5.0678	0.0624	6.29E-03	5.70E-01	4.41E 00	1.31E 01	2.48E 01	3.63E 01
9	8	12	11	16643.52	1	1973.30	5.0677	0.0617	0.0	3.20E-03	1.04E-01	7.35E-01	2.46E 00	5.44E 00
13	12	68	67	31662.11	1	1973.34	5.0676	0.0303	0.0	0.0	0.0	9.81E-04	1.39E-02	8.57E-02
8	7	4	3	14470.63	1	1973.34	5.0676	0.0611	0.0	7.70E-03	1.49E-01	7.68E-01	2.09E 00	3.97E 00
5	4	5	6	8307.03	2	1973.40	5.0674	0.0617	9.81E-04	2.88E-02	1.27E-01	2.68E-01	4.03E-01	5.03E-01
2	1	32	33	4273.06	1	1973.45	5.0673	0.0326	6.83E 01	2.91E 02	4.87E 02	5.79E 02	5.91E 02	5.60E 02

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CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	1	0	10227.75	2	1973.57	5.0670	0.0603	0.0	9.06E-04	6.32E-03	1.77E-02	3.19E-02	4.54E-02
1	0	37	38	2835.80	1	1973.89	5.0661	0.0303	3.12E 02	6.67E 02	7.92E 02	7.66E 02	6.81E 02	5.85E 02
4	3	21	22	7295.12	1	1973.90	5.0661	0.0496	1.17E 00	2.12E 01	7.33E 01	1.35E 02	1.84E 02	2.14E 02
13	12	69	68	31887.32	1	1974.02	5.0658	0.0303	0.0	0.0	0.0	8.74E-04	1.26E-02	7.93E-02
11	10	32	31	21976.67	1	1974.09	5.0656	0.0331	0.0	6.11E-05	7.14E-03	1.09E-01	6.06E-01	1.93E 00
5	4	15	16	8917.88	1	1974.34	5.0650	0.0591	1.03E-01	4.04E 00	2.06E 01	4.79E 01	7.64E 01	9.95E 01
7	6	2	3	12485.47	1	1974.36	5.0649	0.0609	1.57E-04	3.42E-02	4.11E-01	1.59E 00	3.58E 00	5.94E 00
2	1	23	24	3187.07	2	1974.59	5.0643	0.0457	2.52E 00	6.34E 00	8.16E 00	8.29E 00	7.61E 00	6.69E 00
13	12	70	69	32115.60	1	1974.65	5.0642	0.0303	0.0	0.0	0.0	7.77E-04	1.15E-02	7.32E-02
12	11	46	45	25685.79	1	1974.75	5.0639	0.0303	0.0	0.0	7.63E-04	1.98E-02	1.57E-01	6.46E-01
7	6	9	8	12323.08	2	1974.91	5.0635	0.0624	0.0	1.27E-03	1.46E-02	5.52E-02	1.22E-01	2.00E-01
4	3	11	12	6491.25	2	1975.23	5.0627	0.0617	2.15E-02	2.65E-01	7.53E-01	1.23E 00	1.55E 00	1.71E 00
13	12	71	70	32346.95	1	1975.23	5.0627	0.0303	0.0	0.0	0.0	6.89E-04	1.04E-02	6.74E-02
3	2	17	18	4783.59	2	1975.62	5.0617	0.0568	2.84E-01	1.54E 00	2.90E 00	3.71E 00	3.97E 00	3.89E 00
13	12	72	71	32581.36	1	1975.77	5.0613	0.0303	0.0	0.0	0.0	6.10E-04	9.42E-03	6.20E-02
10	9	22	21	19155.82	1	1975.92	5.0609	0.0496	0.0	5.80E-04	3.45E-02	3.49E-01	1.49E 00	3.91E 00
13	12	73	72	32818.82	1	1976.26	5.0601	0.0303	0.0	0.0	0.0	5.39E-04	8.51E-03	5.70E-02
11	10	33	32	22087.72	1	1976.36	5.0598	0.0326	0.0	5.67E-05	6.81E-03	1.05E-01	5.93E-01	1.90E 00
9	8	13	12	16686.27	1	1976.40	5.0597	0.0610	0.0	3.34E-03	1.10E-01	7.79E-01	2.62E 00	5.80E 00
12	11	47	46	25842.57	1	1976.41	5.0597	0.0303	0.0	0.0	6.96E-04	1.85E-02	1.49E-01	6.19E-01
3	2	26	27	5683.57	1	1976.63	5.0591	0.0398	1.10E 01	9.19E 01	2.16E 02	3.15E 02	3.68E 02	3.84E 02
13	12	74	73	33059.32	1	1976.71	5.0589	0.0303	0.0	0.0	0.0	4.76E-04	7.68E-03	5.23E-02
1	0	28	29	1594.85	2	1976.72	5.0589	0.0359	1.51E 01	1.77E 01	1.56E 01	1.26E 01	9.91E 00	7.80E 00
8	7	5	4	14485.03	1	1976.76	5.0588	0.0614	0.0	9.51E-03	1.84E-01	9.54E-01	2.59E 00	4.95E 00
6	5	2	1	10231.26	2	1977.01	5.0581	0.0606	2.45E-05	1.81E-03	1.26E-02	3.53E-02	6.38E-02	9.08E-02
5	4	4	5	8285.77	2	1977.10	5.0579	0.0614	8.44E-04	2.45E-02	1.07E-01	2.27E-01	3.40E-01	4.24E-01
13	12	75	74	33302.84	1	1977.11	5.0579	0.0303	0.0	0.0	0.0	4.19E-04	6.92E-03	4.79E-02
6	5	8	9	10617.26	1	1977.24	5.0576	0.0624	5.97E-03	5.33E-01	4.09E 00	1.21E 01	2.27E 01	3.33E 01
13	12	76	75	33549.38	1	1977.47	5.0570	0.0303	0.0	0.0	0.0	3.68E-04	6.23E-03	4.38E-02
13	12	77	76	33798.93	1	1977.78	5.0562	0.0303	0.0	0.0	0.0	3.22E-04	5.59E-03	4.01E-02
12	11	48	47	26002.67	1	1978.03	5.0555	0.0303	0.0	0.0	6.34E-04	1.72E-02	1.41E-01	5.93E-01
13	12	78	77	34051.46	1	1978.04	5.0555	0.0303	0.0	0.0	0.0	2.82E-04	5.01E-03	3.65E-02
7	6	1	2	12474.57	1	1978.06	5.0555	0.0606	1.06E-04	2.31E-02	2.77E-01	1.07E 00	2.40E 00	3.99E 00
7	6	10	9	12354.38	2	1978.06	5.0555	0.0624	0.0	1.37E-03	1.59E-02	6.04E-02	1.34E-01	2.20E-01
13	12	79	78	34306.98	1	1978.26	5.0549	0.0303	0.0	0.0	0.0	2.46E-04	4.49E-03	3.33E-02
2	1	31	32	4148.21	1	1978.30	5.0548	0.0331	7.94E 01	3.18E 02	5.18E 02	6.05E 02	6.10E 02	5.73E 02
13	12	87	86	36457.07	1	1978.32	5.0548	0.0303	0.0	0.0	0.0	7.80E-05	1.75E-03	1.50E-02
4	3	20	21	7213.10	1	1978.34	5.0547	0.0515	1.26E 00	2.19E 01	7.44E 01	1.35E 02	1.83E 02	2.12E 02
13	12	80	79	34565.47	1	1978.43	5.0545	0.0303	0.0	0.0	0.0	2.15E-04	4.01E-03	3.03E-02
13	12	86	85	36178.12	1	1978.48	5.0544	0.0303	0.0	0.0	0.0	9.07E-05	1.98E-03	1.67E-02
13	12	81	80	34826.92	1	1978.56	5.0542	0.0303	0.0	0.0	0.0	1.87E-04	3.58E-03	2.75E-02
5	4	14	15	8858.70	1	1978.56	5.0542	0.0597	1.05E-01	4.02E 00	2.02E 01	4.66E 01	7.39E 01	9.58E 01
11	10	34	33	22202.19	1	1978.58	5.0541	0.0321	0.0	5.24E-05	6.47E-03	1.02E-01	5.79E-01	1.87E 00
13	12	85	84	35902.06	1	1978.59	5.0541	0.0303	0.0	0.0	0.0	1.05E-04	2.23E-03	1.85E-02
10	9	23	22	19233.23	1	1978.61	5.0541	0.0476	0.0	5.64E-04	3.42E-02	3.50E-01	1.50E 00	3.96E 00
13	12	82	81	35091.32	1	1978.64	5.0540	0.0303	0.0	0.0	0.0	1.62E-04	3.19E-03	2.49E-02
13	12	84	83	35628.90	1	1978.65	5.0540	0.0303	0.0	0.0	0.0	1.22E-04	2.52E-03	2.04E-02
13	12	83	82	35358.64	1	1978.67	5.0539	0.0303	0.0	0.0	0.0	1.41E-04	2.84E-03	2.26E-02
1	0	36	37	2691.03	1	1978.92	5.0533	0.0308	3.75E 02	7.48E 02	8.58E 02	8.13E 02	7.13E 02	6.06E 02
2	1	22	23	3099.94	2	1978.94	5.0532	0.0476	2.74E 00	6.62E 00	8.35E 00	8.37E 00	7.63E 00	6.66E 00
4	3	10	11	6448.35	2	1979.16	5.0526	0.0625	2.10E-02	2.53E-01	7.13E-01	1.16E 00	1.46E 00	1.60E 00
9	8	14	13	16732.56	1	1979.46	5.0519	0.0604	0.0	3.44E-03	1.14E-01	8.18E-01	2.76E 00	6.14E 00
12	11	49	48	26166.05	1	1979.61	5.0515	0.0303	0.0	0.0	5.76E-04	1.60E-02	1.33E-01	5.66E-01

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CARBON MONOXIDE

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3	2	16	17	4718.72	2	1979.77	5.0511	0.0585	2.95E-01	1.55E 00	2.88E 00	3.65E 00	3.89E 00	3.79E 00
8	7	6	5	14503.03	1	1980.15	5.0501	0.0617	0.0	1.12E-02	2.19E-01	1.14E 00	3.09E 00	5.91E 00
6	5	3	2	10238.29	2	1980.43	5.0494	0.0609	3.65E-05	2.70E-03	1.89E-02	5.29E-02	9.56E-02	1.36E-01
11	10	35	34	22320.07	1	1980.77	5.0485	0.0317	0.0	4.82E-05	6.12E-03	9.77E-02	5.64E-01	1.84E 00
5	4	3	4	8268.04	2	1980.78	5.0485	0.0611	6.94E-04	2.00E-02	8.71E-02	1.84E-01	2.75E-01	3.42E-01
12	11	50	49	26332.73	1	1981.14	5.0476	0.0303	0.0	0.0	5.21E-04	1.48E-02	1.26E-01	5.40E-01
7	6	11	10	12389.16	2	1981.17	5.0475	0.0625	0.0	1.46E-03	1.71E-02	6.52E-02	1.45E-01	2.39E-01
6	5	7	8	10584.25	1	1981.18	5.0475	0.0623	5.58E-03	4.90E-01	3.73E 00	1.10E 01	2.06E 01	3.00E 01
10	9	24	23	19314.13	1	1981.26	5.0473	0.0457	0.0	5.45E-04	3.37E-02	3.49E-01	1.51E 00	4.00E 00
3	2	25	26	5582.12	1	1981.26	5.0473	0.0418	1.23E 01	9.78E 01	2.24E 02	3.22E 02	3.73E 02	3.87E 02
1	0	27	28	1488.80	2	1981.26	5.0473	0.0379	1.70E 01	1.90E 01	1.63E 01	1.29E 01	1.01E 01	7.89E 00
7	6	0	1	12467.30	1	1981.73	5.0461	0.0603	5.37E-05	1.16E-02	1.39E-01	5.39E-01	1.21E 00	2.01E 00
9	8	15	14	16782.41	1	1982.49	5.0442	0.0597	0.0	3.62E-03	1.19E-01	8.53E-01	2.89E 00	6.46E 00
12	11	51	50	26502.68	1	1982.63	5.0438	0.0303	0.0	0.0	4.71E-04	1.37E-02	1.18E-01	5.13E-01
5	4	13	14	8803.20	1	1982.74	5.0435	0.0604	1.06E-01	3.97E 00	1.97E 01	4.50E 01	7.10E 01	9.17E 01
4	3	19	20	7134.78	1	1982.75	5.0435	0.0535	1.34E 00	2.26E 01	7.52E 01	1.35E 02	1.82E 02	2.09E 02
11	10	36	35	22441.36	1	1982.92	5.0431	0.0312	0.0	4.42E-05	5.78E-03	9.38E-02	5.48E-01	1.80E 00
4	3	9	10	6409.02	2	1983.06	5.0427	0.0624	2.03E-02	2.39E-01	6.68E-01	1.08E 00	1.35E 00	1.48E 00
2	1	30	31	4027.09	1	1983.12	5.0426	0.0335	9.17E 01	3.47E 02	5.48E 02	6.30E 02	6.29E 02	5.85E 02
2	1	21	22	3016.41	2	1983.27	5.0422	0.0496	2.96E 00	6.87E 00	8.50E 00	8.43E 00	7.62E 00	6.62E 00
8	7	7	6	14524.62	1	1983.50	5.0416	0.0620	2.21E-05	1.29E-02	2.52E-01	1.31E 00	3.58E 00	6.84E 00
6	5	4	3	10248.82	2	1983.81	5.0408	0.0611	4.80E-05	3.57E-03	2.50E-02	7.03E-02	1.27E-01	1.81E-01
10	9	25	24	19398.52	1	1983.87	5.0407	0.0437	0.0	5.24E-04	3.31E-02	3.47E-01	1.51E 00	4.03E 00
3	2	15	16	4657.45	2	1983.88	5.0406	0.0591	3.04E-01	1.55E 00	2.84E 00	3.57E 00	3.77E 00	3.67E 00
1	0	35	36	2550.01	1	1983.93	5.0405	0.0312	4.48E 02	8.35E 02	9.26E 02	8.60E 02	7.45E 02	6.27E 02
12	11	52	51	26675.90	1	1984.09	5.0401	0.0303	0.0	0.0	4.24E-04	1.27E-02	1.11E-01	4.88E-01
7	6	12	11	12427.41	2	1984.25	5.0397	0.0617	0.0	1.54E-03	1.82E-02	6.98E-02	1.56E-01	2.57E-01
5	4	2	3	8253.86	2	1984.42	5.0393	0.0609	5.32E-04	1.52E-02	6.61E-02	1.39E-01	2.08E-01	2.59E-01
11	10	37	36	22566.05	1	1985.02	5.0377	0.0308	0.0	4.03E-05	5.43E-03	8.99E-02	5.31E-01	1.76E 00
6	5	6	7	10554.90	1	1985.09	5.0376	0.0620	5.10E-03	4.41E-01	3.34E 00	9.81E 00	1.83E 01	2.67E 01
9	8	16	15	16835.81	1	1985.48	5.0366	0.0591	0.0	3.57E-03	1.22E-01	8.84E-01	3.01E 00	6.75E 00
12	11	53	52	26852.39	1	1985.49	5.0365	0.0303	0.0	0.0	3.80E-04	1.17E-02	1.04E-01	4.63E-01
1	0	26	27	1386.36	2	1985.77	5.0358	0.0398	1.90E 01	2.02E 01	1.69E 01	1.33E 01	1.03E 01	7.97E 00
3	2	24	25	5484.40	1	1985.87	5.0356	0.0437	1.36E 01	1.04E 02	2.32E 02	3.29E 02	3.77E 02	3.89E 02
10	9	26	25	19486.39	1	1986.45	5.0341	0.0418	0.0	5.02E-04	3.23E-02	3.43E-01	1.51E 00	4.05E 00
8	7	8	7	14549.82	1	1986.82	5.0332	0.0623	2.44E-05	1.44E-02	2.83E-01	1.48E 00	4.05E 00	7.76E 00
12	11	54	53	27032.14	1	1986.86	5.0331	0.0303	0.0	0.0	3.41E-04	1.07E-02	9.72E-02	4.38E-01
5	4	12	13	8751.40	1	1986.88	5.0330	0.0610	1.06E-01	3.88E 00	1.90E 01	4.32E 01	6.78E 01	8.73E 01
4	3	8	9	6373.27	2	1986.93	5.0329	0.0624	1.92E-02	2.23E-01	6.18E-01	9.94E-01	1.24E 00	1.36E 00
11	10	38	37	22694.13	1	1987.09	5.0325	0.0303	0.0	3.66E-05	5.09E-03	8.58E-02	5.13E-01	1.72E 00
4	3	18	19	7060.17	1	1987.13	5.0324	0.0552	1.43E 00	2.31E 01	7.55E 01	1.34E 02	1.79E 02	2.06E 02
6	5	5	4	10262.87	2	1987.16	5.0323	0.0614	5.88E-05	4.41E-03	3.10E-02	8.73E-02	1.58E-01	2.26E-01
7	6	13	12	12469.13	2	1987.30	5.0320	0.0610	0.0	1.60E-03	1.91E-02	7.39E-02	1.66E-01	2.75E-01
2	1	20	21	2936.50	2	1987.57	5.0313	0.0515	3.18E 00	7.10E 00	8.62E 00	8.48E 00	7.58E 00	6.55E 00
2	1	29	30	3909.71	1	1987.91	5.0304	0.0340	1.05E 02	3.77E 02	5.79E 02	6.54E 02	6.45E 02	5.96E 02
3	2	14	15	4599.77	2	1987.97	5.0303	0.0597	3.10E-01	1.54E 00	2.78E 00	3.46E 00	3.65E 00	3.53E 00
5	4	1	2	8243.23	2	1988.03	5.0301	0.0606	3.61E-04	1.03E-02	4.45E-02	9.36E-02	1.40E-01	1.74E-01
12	11	55	54	27215.13	1	1988.18	5.0297	0.0303	0.0	0.0	3.04E-04	9.83E-03	9.07E-02	4.14E-01
9	8	17	16	16892.75	1	1988.43	5.0291	0.0585	0.0	3.60E-03	1.24E-01	9.10E-01	3.12E 00	7.02E 00
1	0	34	35	2412.73	1	1988.91	5.0279	0.0317	5.32E 02	9.28E 02	9.96E 02	9.07E 02	7.76E 02	6.47E 02
6	5	5	6	10529.21	1	1988.97	5.0277	0.0617	4.54E-03	3.89E-01	2.92E 00	8.55E 00	1.59E 01	2.32E 01
7	6	1	0	12463.66	1	1988.97	5.0277	0.0603	5.42E-05	1.17E-02	1.40E-01	5.42E-01	1.22E 00	2.02E 00
10	9	27	26	19577.75	1	1988.98	5.0277	0.0398	0.0	4.78E-04	3.15E-02	3.39E-01	1.50E 00	4.06E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	39	38	22825.61	1	1989.11	5.0274	0.0303	0.0	3.32E-05	4.76E-03	8.17E-02	4.95E-01	1.67E 00
12	11	56	55	27401.37	1	1989.46	5.0265	0.0303	0.0	0.0	2.71E-04	8.99E-03	8.45E-02	3.90E-01
8	7	9	8	14578.61	1	1990.10	5.0249	0.0624	2.64E-05	1.58E-02	3.13E-01	1.64E 00	4.50E 00	8.64E 00
1	0	25	26	1287.55	2	1990.25	5.0245	0.0418	2.12E 01	2.15E 01	1.75E 01	1.36E 01	1.04E 01	8.01E 00
7	6	14	13	12514.32	2	1990.31	5.0243	0.0604	0.0	1.66E-03	2.00E-02	7.77E-02	1.75E-01	2.91E-01
3	2	23	24	5390.41	1	1990.44	5.0240	0.0457	1.50E 01	1.09E 02	2.39E 02	3.34E 02	3.80E 02	3.89E 02
6	5	6	5	10280.43	2	1990.47	5.0239	0.0617	6.90E-05	5.22E-03	3.69E-02	1.04E-01	1.89E-01	2.70E-01
12	11	57	56	27590.84	1	1990.70	5.0234	0.0303	0.0	0.0	2.41E-04	8.21E-03	7.85E-02	3.68E-01
4	3	7	8	6341.08	2	1990.76	5.0232	0.0623	1.79E-02	2.05E-01	5.64E-01	9.02E-01	1.12E 00	1.22E 00
5	4	11	12	8703.29	1	1991.00	5.0226	0.0617	1.05E-01	3.76E 00	1.82E 01	4.11E 01	6.42E 01	8.24E 01
11	10	40	39	22960.48	1	1991.10	5.0223	0.0303	0.0	2.99E-05	4.43E-03	7.76E-02	4.76E-01	1.62E 00
9	8	18	17	16953.25	1	1991.34	5.0217	0.0568	0.0	3.60E-03	1.26E-01	9.33E-01	3.22E 00	7.26E 00
4	3	17	18	6989.28	1	1991.47	5.0214	0.0568	1.50E 00	2.35E 01	7.55E 01	1.33E 02	1.76E 02	2.01E 02
10	9	28	27	19672.59	1	1991.48	5.0214	0.0379	0.0	4.53E-04	3.05E-02	3.33E-01	1.49E 00	4.05E 00
5	4	0	1	8236.14	2	1991.61	5.0211	0.0603	1.82E-04	5.18E-03	2.24E-02	4.71E-02	7.03E-02	8.73E-02
2	1	19	20	2860.19	2	1991.84	5.0205	0.0535	3.38E 00	7.29E 00	8.69E 00	8.43E 00	7.51E 00	6.45E 00
12	11	58	57	27783.53	1	1991.89	5.0204	0.0303	0.0	0.0	2.13E-04	7.48E-03	7.29E-02	3.46E-01
3	2	13	14	4545.69	2	1992.02	5.0200	0.0604	3.13E-01	1.52E 00	2.71E 00	3.34E 00	3.50E 00	3.39E 00
7	6	2	1	12467.30	1	1992.53	5.0187	0.0606	1.08E-04	2.34E-02	2.80E-01	1.08E 00	2.43E 00	4.04E 00
2	1	28	29	3796.07	1	1992.67	5.0184	0.0359	1.20E 02	4.07E 02	6.09E 02	6.77E 02	6.61E 02	6.06E 02
6	5	4	5	10507.20	1	1992.81	5.0180	0.0614	3.91E-03	3.31E-01	2.48E 00	7.23E 00	1.34E 01	1.95E 01
12	11	59	58	27979.44	1	1993.04	5.0175	0.0303	0.0	0.0	1.88E-04	6.79E-03	6.75E-02	3.24E-01
11	10	41	40	23098.72	1	1993.04	5.0175	0.0303	0.0	2.69E-05	4.12E-03	7.35E-02	4.57E-01	1.57E 00
7	6	15	14	12562.97	2	1993.28	5.0169	0.0597	0.0	1.70E-03	2.07E-02	8.11E-02	1.93E-01	3.06E-01
8	7	10	9	14610.99	1	1993.35	5.0167	0.0624	2.80E-05	1.70E-02	3.40E-01	1.79E 00	4.94E 00	9.50E 00
6	5	7	6	10301.50	2	1993.75	5.0157	0.0620	7.82E-05	5.98E-03	4.24E-02	1.20E-01	2.18E-01	3.12E-01
1	0	33	34	2279.20	1	1993.86	5.0154	0.0321	6.27E 02	1.03E 03	1.07E 03	9.54E 02	8.06E 02	6.66E 02
10	9	29	28	19770.91	1	1993.94	5.0152	0.0359	0.0	4.27E-04	2.95E-02	3.26E-01	1.47E 00	4.04E 00
12	11	60	59	28178.56	1	1994.15	5.0147	0.0303	0.0	0.0	1.66E-04	6.16E-03	6.24E-02	3.04E-01
9	8	19	18	17017.28	1	1994.22	5.0145	0.0552	0.0	3.58E-03	1.28E-01	9.50E-01	3.30E 00	7.48E 00
4	3	6	7	6312.47	2	1994.56	5.0136	0.0620	1.64E-02	1.85E-01	5.05E-01	8.04E-01	9.98E-01	1.09E 00
1	0	24	25	1192.36	2	1994.70	5.0133	0.0437	2.34E 01	2.27E 01	1.81E 01	1.38E 01	1.05E 01	8.04E 00
11	10	42	41	23240.34	1	1994.94	5.0127	0.0303	0.0	2.40E-05	3.81E-03	6.95E-02	4.38E-01	1.52E 00
3	2	22	23	5300.14	1	1994.98	5.0126	0.0476	1.64E 01	1.14E 02	2.45E 02	3.38E 02	3.82E 02	3.88E 02
5	4	10	11	8658.86	1	1995.08	5.0123	0.0625	1.03E-01	3.60E 00	1.73E 01	3.87E 01	6.03E 01	7.71E 01
12	11	61	60	28380.87	1	1995.21	5.0120	0.0303	0.0	0.0	1.45E-04	5.58E-03	5.75E-02	2.84E-01
4	3	16	17	6922.10	1	1995.79	5.0105	0.0585	1.56E 00	2.37E 01	7.50E 01	1.31E 02	1.72E 02	1.96E 02
3	2	12	13	4495.20	2	1996.04	5.0099	0.0610	3.13E-01	1.48E 00	2.61E 00	3.20E 00	3.34E 00	3.21E 00
7	6	3	2	12474.57	1	1996.06	5.0099	0.0609	1.61E-04	3.49E-02	4.19E-01	1.62E 00	3.64E 00	6.06E 00
2	1	18	19	2787.51	2	1996.08	5.0098	0.0552	3.57E 00	7.44E 00	8.72E 00	8.37E 00	7.41E 00	6.33E 00
7	6	16	15	12615.09	2	1996.22	5.0095	0.0591	0.0	1.72E-03	2.13E-02	8.41E-02	1.91E-01	3.20E-01
12	11	62	61	28586.38	1	1996.23	5.0094	0.0303	0.0	0.0	1.28E-04	5.03E-03	5.30E-02	2.66E-01
10	9	30	29	19872.69	1	1996.35	5.0091	0.0340	0.0	4.01E-04	2.84E-02	3.19E-01	1.45E 00	4.01E 00
8	7	11	10	14646.97	1	1996.55	5.0086	0.0625	2.93E-05	1.81E-02	3.65E-01	1.93E 00	5.35E 00	1.03E 01
6	5	3	4	10488.85	1	1996.62	5.0085	0.0611	3.22E-03	2.70E-01	2.01E 00	5.86E 00	1.09E 01	1.58E 01
11	10	43	42	23385.33	1	1996.80	5.0080	0.0303	0.0	2.14E-05	3.52E-03	6.55E-02	4.19E-01	1.47E 00
6	5	8	7	10326.08	2	1997.00	5.0075	0.0623	8.64E-05	6.68E-03	4.78E-02	1.36E-01	2.47E-01	3.54E-01
9	8	20	19	17084.85	1	1997.06	5.0074	0.0535	0.0	3.54E-03	1.28E-01	9.64E-01	3.37E 00	7.67E 00
12	11	63	62	28795.07	1	1997.21	5.0070	0.0303	0.0	0.0	1.12E-04	4.53E-03	4.87E-02	2.48E-01
2	1	27	28	3686.17	1	1997.40	5.0065	0.0379	1.36E 02	4.38E 02	6.38E 02	6.98E 02	6.75E 02	6.14E 02
12	11	64	63	29006.93	1	1998.14	5.0047	0.0303	0.0	0.0	9.75E-05	4.08E-03	4.47E-02	2.31E-01
4	3	5	6	6287.43	2	1998.33	5.0042	0.0617	1.46E-02	1.63E-01	4.41E-01	7.01E-01	9.68E-01	9.43E-01
11	10	44	43	23533.68	1	1998.62	5.0035	0.0303	0.0	0.0	3.24E-03	6.16E-02	3.99E-01	1.42E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	1	0	8232.59	2	1998.67	5.0033	0.0603	1.84E-04	5.22E-03	2.26E-02	4.74E-02	7.07E-02	8.78E-02
10	9	31	30	19977.94	1	1998.73	5.0032	0.0335	0.0	3.75E-04	2.72E-02	3.10E-01	1.43E 00	3.98E 00
1	0	32	33	2149.44	1	1998.77	5.0031	0.0326	7.35E 02	1.13E 03	1.14E 03	1.00E 03	8.35E 02	6.84E 02
12	11	65	64	29221.95	1	1999.02	5.0025	0.0303	0.0	0.0	8.48E-05	3.66E-03	4.09E-02	2.14E-01
1	0	23	24	1100.81	2	1999.12	5.0022	0.0457	2.57E 01	2.38E 01	1.86E 01	1.40E 01	1.06E 01	8.04E 00
5	4	9	10	8618.14	1	1999.12	5.0022	0.0624	9.97E-02	3.41E 00	1.62E 01	3.61E 01	5.60E 01	7.15E 01
7	6	17	16	12670.68	2	1999.13	5.0022	0.0585	0.0	1.74E-03	2.18E-02	8.67E-02	1.98E-01	3.33E-01
3	2	21	22	5213.61	1	1999.48	5.0013	0.0496	1.78E 01	1.19E 02	2.50E 02	3.41E 02	3.82E 02	3.86E 02
7	6	4	3	12485.47	1	1999.56	5.0011	0.0611	2.11E-04	4.62E-02	5.55E-01	2.16E 00	4.84E 00	9.06E 00
8	7	12	11	14686.54	1	1999.72	5.0007	0.0617	3.03E-05	1.90E-02	3.88E-01	2.07E 00	5.74E 00	1.11E 01
9	8	21	20	17155.96	1	1999.86	5.0003	0.0515	0.0	3.47E-03	1.28E-01	9.73E-01	3.42E 00	7.84E 00
12	11	66	65	29440.12	1	1999.87	5.0003	0.0303	0.0	0.0	7.36E-05	3.27E-03	3.74E-02	1.99E-01
3	2	11	12	4448.31	2	2000.04	4.9999	0.0617	3.10E-01	1.43E 00	2.50E 00	3.05E 00	3.16E 00	3.03E 00
4	3	15	16	6858.63	1	2000.07	4.9998	0.0591	1.61E 00	2.38E 01	7.41E 01	1.28E 02	1.68E 02	1.90E 02
6	5	9	8	10354.17	2	2000.21	4.9995	0.0624	9.34E-05	7.33E-03	5.27E-02	1.50E-01	2.75E-01	3.95E-01
2	1	17	18	2718.44	2	2000.29	4.9993	0.0568	3.75E 00	7.55E 00	8.71E 00	8.27E 00	7.27E 00	6.19E 00
6	5	2	3	10474.17	1	2000.40	4.9990	0.0609	2.47E-03	2.06E-01	1.53E 00	4.44E 00	8.23E 00	1.19E 01
11	10	45	44	23685.38	1	2000.40	4.9990	0.0303	0.0	0.0	2.97E-03	5.78E-02	3.80E-01	1.36E 00
12	11	67	66	29661.45	1	2000.66	4.9984	0.0303	0.0	0.0	6.37E-05	2.92E-03	3.41E-02	1.84E-01
10	9	32	31	20086.64	1	2001.07	4.9973	0.0331	0.0	3.49E-04	2.60E-02	3.01E-01	1.40E 00	3.93E 00
12	11	68	67	29885.90	1	2001.42	4.9965	0.0303	0.0	0.0	5.49E-05	2.61E-03	3.11E-02	1.70E-01
7	6	18	17	12729.73	2	2002.00	4.9950	0.0568	0.0	1.74E-03	2.21E-02	8.89E-02	2.04E-01	3.45E-01
4	3	4	5	6265.97	2	2002.07	4.9948	0.0614	1.26E-02	1.39E-01	3.74E-01	5.93E-01	7.32E-01	7.95E-01
2	1	26	27	3580.03	1	2002.10	4.9948	0.0398	1.53E 02	4.69E 02	6.66E 02	7.18E 02	6.87E 02	6.21E 02
12	11	69	68	30113.47	1	2002.13	4.9947	0.0303	0.0	0.0	4.73E-05	2.32E-03	2.83E-02	1.57E-01
11	10	46	45	23840.43	1	2002.14	4.9947	0.0303	0.0	0.0	2.72E-03	5.40E-02	3.61E-01	1.31E 00
5	4	2	1	8236.14	2	2002.15	4.9946	0.0606	3.67E-04	1.04E-02	4.51E-02	9.48E-02	1.42E-01	1.76E-01
9	8	22	21	17230.61	1	2002.62	4.9935	0.0496	0.0	3.39E-03	1.27E-01	9.78E-01	3.46E 00	7.98E 00
12	11	70	69	30344.16	1	2002.79	4.9930	0.0303	0.0	0.0	4.06E-05	2.06E-03	2.57E-02	1.45E-01
8	7	13	12	14729.70	1	2002.86	4.9929	0.0610	3.09E-05	1.98E-02	4.08E-01	2.19E 00	6.10E 00	1.18E 01
7	6	5	4	12500.01	1	2003.01	4.9925	0.0614	2.59E-04	5.70E-02	6.88E-01	2.68E 00	6.03E 00	1.00E 01
5	4	8	9	8581.11	1	2003.14	4.9922	0.0624	9.47E-02	3.19E 00	1.50E 01	3.33E 01	5.14E 01	6.55E 01
10	9	33	32	20198.81	1	2003.37	4.9916	0.0326	0.0	3.24E-04	2.48E-02	2.92E-01	1.37E 00	3.88E 00
6	5	10	9	10385.77	2	2003.39	4.9915	0.0624	9.94E-05	7.92E-03	5.74E-02	1.64E-01	3.02E-01	4.34E-01
12	11	71	70	30577.96	1	2003.41	4.9915	0.0303	0.0	0.0	3.48E-05	1.83E-03	2.33E-02	1.34E-01
1	0	22	23	1012.90	2	2003.51	4.9912	0.0476	2.80E 01	2.49E 01	1.91E 01	1.42E 01	1.06E 01	8.01E 00
1	0	31	32	2023.43	1	2003.66	4.9909	0.0331	8.56E 02	1.24E 03	1.21E 03	1.05E 03	8.62E 02	7.00E 02
11	10	47	46	23998.83	1	2003.84	4.9904	0.0303	0.0	0.0	2.48E-03	5.04E-02	3.42E-01	1.25E 00
3	2	20	21	5130.82	1	2003.96	4.9901	0.0515	1.92E 01	1.23E 02	2.54E 02	3.43E 02	3.80E 02	3.82E 02
12	11	72	71	30814.84	1	2003.98	4.9901	0.0303	0.0	0.0	2.98E-05	1.61E-03	2.10E-02	1.23E-01
3	2	10	11	4405.02	2	2004.00	4.9900	0.0625	3.03E-01	1.37E 00	2.37E 00	2.87E 00	2.97E 00	2.83E 00
6	5	1	2	10463.16	1	2004.14	4.9897	0.0606	1.67E-03	1.39E-01	1.03E 00	2.99E 00	5.53E 00	8.01E 00
4	3	14	15	6798.89	1	2004.31	4.9892	0.0597	1.65E 00	2.36E 01	7.27E 01	1.25E 02	1.62E 02	1.83E 02
2	1	16	17	2652.99	2	2004.47	4.9888	0.0585	3.90E 00	7.61E 00	8.64E 00	8.14E 00	7.11E 00	6.02E 00
12	11	73	72	31054.82	1	2004.51	4.9888	0.0303	0.0	0.0	2.54E-05	1.42E-03	1.90E-02	1.13E-01
7	6	19	18	12792.23	2	2004.84	4.9879	0.0552	0.0	1.73E-03	2.24E-02	9.07E-02	2.10E-01	3.56E-01
12	11	74	73	31297.86	1	2004.99	4.9876	0.0303	0.0	0.0	2.16E-05	1.25E-03	1.71E-02	1.03E-01
12	11	93	92	36484.12	1	2005.29	4.9868	0.0303	0.0	0.0	0.0	7.80E-05	1.75E-03	1.51E-02
9	8	23	22	17308.79	1	2005.34	4.9867	0.0476	0.0	3.29E-03	1.26E-01	9.79E-01	3.49E 00	8.09E 00
12	11	75	74	31543.96	1	2005.42	4.9865	0.0303	0.0	0.0	0.0	1.10E-03	1.54E-02	9.47E-02
11	10	48	47	24160.56	1	2005.49	4.9863	0.0303	0.0	0.0	2.25E-03	4.69E-02	3.23E-01	1.20E 00
5	4	3	2	8243.23	2	2005.59	4.9861	0.0609	5.45E-04	1.56E-02	6.75E-02	1.42E-01	2.12E-01	2.64E-01
10	9	34	33	20314.43	1	2005.63	4.9860	0.0321	0.0	2.99E-04	2.35E-02	2.81E-01	1.34E 00	3.81E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	11	92	91	36184.92	1	2005.70	4.9858	0.0303	0.0	0.0	0.0	9.19E-05	2.01E-03	1.69E-02
4	3	3	4	6248.08	2	2005.78	4.9856	0.0611	1.03E-02	1.13E-01	3.04E-01	4.80E-01	5.92E-01	6.42E-01
12	11	76	75	31793.11	1	2005.81	4.9855	0.0303	0.0	0.0	0.0	9.68E-04	1.39E-02	8.66E-02
8	7	14	13	14776.45	1	2005.96	4.9851	0.0604	3.11E-05	2.04E-02	4.26E-01	2.30E 00	6.44E 00	1.25E 01
12	11	91	90	35888.57	1	2006.06	4.9849	0.0303	0.0	0.0	0.0	1.08E-04	2.29E-03	1.89E-02
12	11	77	76	32045.30	1	2006.16	4.9846	0.0303	0.0	0.0	0.0	8.47E-04	1.24E-02	7.90E-02
12	11	90	89	35595.07	1	2006.38	4.9841	0.0303	0.0	0.0	0.0	1.27E-04	2.61E-03	2.12E-02
7	6	6	5	12518.18	1	2006.44	4.9840	0.0617	3.03E-04	6.74E-02	8.17E-01	3.19E 00	7.19E 00	1.20E 01
12	11	78	77	32300.53	1	2006.46	4.9839	0.0303	0.0	0.0	0.0	7.41E-04	1.11E-02	7.20E-02
6	5	11	10	10420.87	2	2006.54	4.9837	0.0625	1.04E-04	8.43E-03	6.17E-02	1.78E-01	3.27E-01	4.72E-01
12	11	89	88	35304.45	1	2006.65	4.9834	0.0303	0.0	0.0	0.0	1.48E-04	2.97E-03	2.36E-02
12	11	79	78	32558.77	1	2006.71	4.9833	0.0303	0.0	0.0	0.0	6.46E-04	9.96E-03	6.55E-02
2	1	25	26	3477.63	1	2006.77	4.9831	0.0418	1.71E 02	4.99E 02	6.92E 02	7.36E 02	6.97E 02	6.25E 02
12	11	88	87	35016.70	1	2006.87	4.9829	0.0303	0.0	0.0	0.0	1.73E-04	3.38E-03	2.63E-02
12	11	80	79	32820.01	1	2006.91	4.9828	0.0303	0.0	0.0	0.0	5.62E-04	8.89E-03	5.96E-02
12	11	87	86	34731.85	1	2007.04	4.9825	0.0303	0.0	0.0	0.0	2.02E-04	3.84E-03	2.93E-02
12	11	81	80	33084.24	1	2007.07	4.9824	0.0303	0.0	0.0	0.0	4.89E-04	7.92E-03	5.40E-02
11	10	49	48	24325.62	1	2007.10	4.9823	0.0303	0.0	0.0	2.04E-03	4.36E-02	3.05E-01	1.14E 00
5	4	7	8	8547.78	1	2007.12	4.9823	0.0623	8.85E-02	2.93E 00	1.37E 01	3.02E 01	4.65E 01	5.92E 01
12	11	86	85	34449.91	1	2007.16	4.9822	0.0303	0.0	0.0	0.0	2.35E-04	4.35E-03	3.26E-02
12	11	82	81	33351.46	1	2007.18	4.9821	0.0303	0.0	0.0	0.0	4.24E-04	7.05E-03	4.90E-02
12	11	85	84	34170.88	1	2007.24	4.9820	0.0303	0.0	0.0	0.0	2.73E-04	4.92E-03	3.61E-02
12	11	83	82	33621.65	1	2007.25	4.9819	0.0303	0.0	0.0	0.0	3.67E-04	6.26E-03	4.43E-02
12	11	84	83	33894.79	1	2007.27	4.9819	0.0303	0.0	0.0	0.0	3.17E-04	5.55E-03	4.00E-02
7	6	20	19	12858.20	2	2007.64	4.9810	0.0535	0.0	1.72E-03	2.25E-02	9.20E-02	2.14E-01	3.65E-01
6	5	0	1	10455.82	1	2007.84	4.9805	0.0603	8.47E-04	7.01E-02	5.18E-01	1.50E 00	2.78E 00	4.04E 00
10	9	35	34	20433.50	1	2007.85	4.9805	0.0317	0.0	2.75E-04	2.22E-02	2.71E-01	1.30E 00	3.74E 00
1	0	21	22	928.62	2	2007.88	4.9804	0.0496	3.03E 01	2.59E 01	1.94E 01	1.43E 01	1.06E 01	7.96E 00
3	2	9	10	4365.34	2	2007.93	4.9803	0.0624	2.92E-01	1.30E 00	2.22E 00	2.68E 00	2.76E 00	2.63E 00
9	8	24	23	17390.49	1	2008.03	4.9800	0.0457	0.0	3.18E-03	1.24E-01	9.76E-01	3.51E 00	8.17E 00
3	2	19	20	5051.77	1	2008.40	4.9791	0.0535	2.05E 01	1.27E 02	2.57E 02	3.42E 02	3.77E 02	3.77E 02
1	0	30	31	1901.19	1	2008.52	4.9788	0.0335	9.91E 02	1.35E 03	1.29E 03	1.09E 03	8.88E 02	7.16E 02
4	3	13	14	6742.87	1	2008.53	4.9788	0.0604	1.67E 00	2.33E 01	7.08E 01	1.20E 02	1.56E 02	1.75E 02
2	1	15	16	2591.16	2	2008.62	4.9785	0.0591	4.02E 00	7.62E 00	8.52E 00	7.96E 00	6.91E 00	5.83E 00
11	10	50	49	24494.01	1	2008.67	4.9784	0.0303	0.0	0.0	1.85E-03	4.04E-02	2.87E-01	1.09E 00
5	4	4	3	8253.86	2	2009.01	4.9776	0.0611	7.17E-04	2.06E-02	8.95E-02	1.89E-01	2.82E-01	3.51E-01
8	7	15	14	14826.79	1	2009.02	4.9776	0.0597	3.10E-05	2.09E-02	4.41E-01	2.40E 00	6.74E 00	1.32E 01
4	3	2	3	6233.77	2	2009.46	4.9765	0.0609	7.91E-03	8.61E-02	2.31E-01	3.64E-01	4.48E-01	4.85E-01
6	5	12	11	10459.48	2	2009.65	4.9760	0.0617	1.08E-04	8.88E-03	6.56E-02	1.90E-01	3.51E-01	5.08E-01
7	6	7	6	12539.99	1	2009.83	4.9755	0.0620	3.43E-04	7.71E-02	9.40E-01	3.68E 00	8.32E 00	1.39E 01
10	9	36	35	20556.01	1	2010.04	4.9750	0.0312	0.0	2.51E-04	2.09E-02	2.60E-01	1.27E 00	3.66E 00
11	10	51	50	24665.70	1	2010.20	4.9746	0.0303	0.0	0.0	1.67E-03	3.74E-02	2.70E-01	1.04E 00
7	6	21	20	12927.62	2	2010.40	4.9741	0.0515	0.0	1.69E-03	2.25E-02	9.30E-02	2.18E-01	3.73E-01
9	8	25	24	17475.72	1	2010.68	4.9734	0.0437	0.0	3.06E-03	1.22E-01	9.69E-01	3.52E 00	8.23E 00
5	4	6	7	8518.15	1	2011.06	4.9725	0.0620	8.09E-02	2.64E 00	1.23E 01	2.70E 01	4.14E 01	5.25E 01
2	1	24	25	3379.00	1	2011.41	4.9716	0.0437	1.90E 02	5.29E 02	7.17E 02	7.51E 02	7.05E 02	6.28E 02
11	10	52	51	24840.71	1	2011.68	4.9710	0.0303	0.0	0.0	1.50E-03	3.45E-02	2.53E-01	9.83E-01
3	2	8	9	4329.25	2	2011.83	4.9706	0.0624	2.77E-01	1.21E 00	2.06E 00	2.46E 00	2.53E 00	2.40E 00
8	7	16	15	14880.71	1	2012.04	4.9701	0.0591	3.07E-05	2.12E-02	4.53E-01	2.48E 00	7.02E 00	1.38E 01
10	9	37	36	20681.96	1	2012.18	4.9697	0.0308	0.0	2.29E-04	1.97E-02	2.49E-01	1.23E 00	3.58E 00
1	0	20	21	847.99	2	2012.21	4.9697	0.0515	3.25E 01	2.67E 01	1.97E 01	1.43E 01	1.05E 01	7.88E 00
5	4	5	4	8268.04	2	2012.39	4.9692	0.0614	8.80E-04	2.54E-02	1.11E-01	2.34E-01	3.51E-01	4.37E-01
4	3	12	13	6690.57	1	2012.71	4.9684	0.0610	1.68E 00	2.28E 01	6.84E 01	1.15E 02	1.49E 02	1.67E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	13	12	10501.59	2	2012.73	4.9684	0.0610	1.10E-04	9.26E-03	6.90E-02	2.01E-01	3.73E-01	5.42E-01
2	1	14	15	2532.96	2	2012.74	4.9684	0.0597	4.10E 00	7.57E 00	8.35E 00	7.73E 00	6.68E 00	5.62E 00
3	2	18	19	4976.46	1	2012.82	4.9682	0.0552	2.17E 01	1.30E 02	2.58E 02	3.41E 02	3.73E 02	3.71E 02
4	3	1	2	6223.04	2	2013.10	4.9675	0.0606	5.36E-03	5.81E-02	1.55E-01	2.45E-01	3.01E-01	3.26E-01
11	10	53	52	25019.01	1	2013.13	4.9674	0.0303	0.0	0.0	1.34E-03	3.17E-02	2.37E-01	9.31E-01
7	6	22	21	13000.48	2	2013.13	4.9674	0.0496	0.0	1.65E-03	2.24E-02	9.36E-02	2.21E-01	3.80E-01
7	6	8	7	12565.43	1	2013.18	4.9673	0.0623	3.79E-04	8.62E-02	1.06E 00	4.15E 00	9.41E 00	1.57E 01
9	8	26	25	17564.47	1	2013.29	4.9670	0.0418	0.0	2.92E-03	1.19E-01	9.59E-01	3.51E 00	8.27E 00
1	0	29	30	1782.72	1	2013.35	4.9668	0.0340	1.14E 03	1.47E 03	1.36E 03	1.13E 03	9.12E 02	7.29E 02
10	9	38	37	20811.34	1	2014.28	4.9646	0.0303	0.0	2.08E-04	1.84E-02	2.37E-01	1.19E 00	3.49E 00
11	10	54	53	25200.61	1	2014.53	4.9639	0.0303	0.0	0.0	1.20E-03	2.91E-02	2.22E-01	8.81E-01
5	4	5	6	8492.22	1	2014.97	4.9629	0.0617	7.21E-02	2.33E 00	1.08E 01	2.35E 01	3.60E 01	4.56E 01
8	7	17	16	14938.22	1	2015.03	4.9627	0.0585	3.00E-05	2.13E-02	4.62E-01	2.56E 00	7.27E 00	1.43E 01
6	5	1	0	10452.15	1	2015.15	4.9624	0.0603	8.54E-04	7.06E-02	5.22E-01	1.51E 00	2.80E 00	4.05E 00
3	2	7	8	4296.77	2	2015.70	4.9611	0.0623	2.59E-01	1.11E 00	1.87E 00	2.24E 00	2.29E 00	2.17E 00
5	4	6	5	8285.77	2	2015.74	4.9610	0.0617	1.03E-03	3.00E-02	1.32E-01	2.79E-01	4.19E-01	5.22E-01
6	5	14	13	10547.20	2	2015.77	4.9609	0.0604	1.11E-04	9.56E-03	7.21E-02	2.11E-01	3.94E-01	5.74E-01
7	6	23	22	13076.80	2	2015.83	4.9607	0.0476	0.0	1.61E-03	2.22E-02	9.38E-02	2.23E-01	3.86E-01
9	8	27	26	17656.73	1	2015.86	4.9607	0.0398	0.0	2.78E-03	1.16E-01	9.46E-01	3.49E 00	8.28E 00
11	10	55	54	25385.48	1	2015.88	4.9606	0.0303	0.0	0.0	1.07E-03	2.67E-02	2.07E-01	8.32E-01
2	1	23	24	3284.13	1	2016.01	4.9603	0.0457	2.10E 02	5.58E 02	7.39E 02	7.64E 02	7.10E 02	6.29E 02
10	9	39	38	20944.14	1	2016.33	4.9595	0.0303	0.0	1.88E-04	1.72E-02	2.26E-01	1.14E 00	3.40E 00
7	6	9	8	12594.50	1	2016.49	4.9591	0.0624	4.09E-04	9.44E-02	1.17E 00	4.60E 00	1.05E 01	1.75E 01
1	0	19	20	771.00	2	2016.51	4.9591	0.0535	3.46E 01	2.75E 01	1.99E 01	1.43E 01	1.04E 01	7.76E 00
4	3	0	1	6215.88	2	2016.71	4.9586	0.0603	2.71E-03	2.93E-02	7.82E-02	1.23E-01	1.51E-01	1.64E-01
2	1	13	14	2478.38	2	2016.82	4.9583	0.0604	4.15E 00	7.46E 00	8.13E 00	7.47E 00	6.42E 00	5.37E 00
4	3	11	12	6642.00	1	2016.86	4.9582	0.0617	1.66E 00	2.21E 01	6.56E 01	1.10E 02	1.41E 02	1.57E 02
3	2	17	18	4904.90	1	2017.20	4.9574	0.0568	2.29E 01	1.32E 02	2.58E 02	3.37E 02	3.66E 02	3.63E 02
11	10	56	55	25573.64	1	2017.20	4.9574	0.0303	0.0	0.0	9.54E-04	2.44E-02	1.92E-01	7.84E-01
8	7	18	17	14999.30	1	2017.98	4.9555	0.0568	2.92E-05	2.13E-02	4.69E-01	2.62E 00	7.49E 00	1.48E 01
1	0	28	29	1668.03	1	2018.14	4.9551	0.0359	1.30E 03	1.59E 03	1.43E 03	1.17E 03	9.35E 02	7.41E 02
10	9	40	39	21080.37	1	2018.35	4.9545	0.0303	0.0	1.69E-04	1.60E-02	2.14E-01	1.10E 00	3.30E 00
9	8	28	27	17752.52	1	2018.39	4.9544	0.0379	0.0	2.63E-03	1.12E-01	9.29E-01	3.46E 00	8.27E 00
11	10	57	56	25765.06	1	2018.47	4.9542	0.0303	0.0	0.0	8.46E-04	2.22E-02	1.79E-01	7.38E-01
7	6	24	23	13156.57	2	2018.49	4.9542	0.0457	0.0	1.55E-03	2.19E-02	9.36E-02	2.24E-01	3.90E-01
6	5	2	1	10455.82	1	2018.75	4.9536	0.0606	1.70E-03	1.41E-01	1.04E 00	3.03E 00	5.60E 00	8.11E 00
6	5	15	14	10596.32	2	2018.78	4.9535	0.0597	1.11E-04	9.78E-03	7.47E-02	2.21E-01	4.13E-01	6.04E-01
5	4	4	5	8470.00	1	2018.85	4.9533	0.0614	6.22E-02	1.99E 00	9.13E 00	1.99E 01	3.04E 01	3.85E 01
5	4	7	6	8307.03	2	2019.05	4.9528	0.0620	1.17E-03	3.44E-02	1.52E-01	3.22E-01	4.85E-01	6.05E-01
3	2	6	7	4267.90	2	2019.53	4.9516	0.0620	2.36E-01	1.00E 00	1.68E 00	1.99E 00	2.04E 00	1.93E 00
11	10	58	57	25959.75	1	2019.70	4.9512	0.0303	0.0	0.0	7.49E-04	2.02E-02	1.66E-01	6.94E-01
7	6	10	9	12627.20	1	2019.77	4.9511	0.0624	4.34E-04	1.02E-01	1.27E 00	5.03E 00	1.15E 01	1.93E 01
10	9	41	40	21220.01	1	2020.33	4.9497	0.0303	0.0	1.52E-04	1.49E-02	2.03E-01	1.05E 00	3.19E 00
2	1	22	23	3193.03	1	2020.59	4.9490	0.0476	2.30E 02	5.85E 02	7.58E 02	7.73E 02	7.13E 02	6.28E 02
1	0	18	19	697.65	2	2020.78	4.9486	0.0552	3.66E 01	2.81E 01	2.00E 01	1.42E 01	1.03E 01	7.62E 00
2	1	12	13	2427.44	2	2020.88	4.9483	0.0610	4.15E 00	7.29E 00	7.85E 00	7.16E 00	6.12E 00	5.11E 00
11	10	59	58	26157.68	1	2020.88	4.9483	0.0303	0.0	0.0	6.61E-04	1.84E-02	1.53E-01	6.51E-01
9	8	29	28	17851.80	1	2020.88	4.9483	0.0359	0.0	2.48E-03	1.08E-01	9.10E-01	3.42E 00	8.23E 00
8	7	19	18	15063.96	1	2020.89	4.9483	0.0552	2.81E-05	2.12E-02	4.74E-01	2.67E 00	7.68E 00	1.52E 01
4	3	10	11	6597.16	1	2020.97	4.9481	0.0625	1.63E 00	2.12E 01	6.22E 01	1.04E 02	1.32E 02	1.47E 02
7	6	25	24	13239.77	2	2021.11	4.9478	0.0437	0.0	1.50E-03	2.15E-02	9.31E-02	2.25E-01	3.93E-01
3	2	16	17	4837.09	1	2021.54	4.9467	0.0585	2.39E 01	1.34E 02	2.57E 02	3.32E 02	3.59E 02	3.53E 02
6	5	16	15	10648.93	2	2021.75	4.9462	0.0591	1.10E-04	9.94E-03	7.68E-02	2.29E-01	4.31E-01	6.31E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	60	59	26358.85	1	2022.02	4.9455	0.0303	0.0	0.0	5.82E-04	1.66E-02	1.42E-01	6.09E-01
10	9	42	41	21363.06	1	2022.27	4.9449	0.0303	0.0	1.36E-04	1.37E-02	1.92E-01	1.01E 00	3.09E 00
6	5	3	2	10463.16	1	2022.31	4.9448	0.0609	2.53E-03	2.10E-01	1.56E 00	4.53E 00	8.39E 00	1.22E 01
5	4	8	7	8331.84	2	2022.33	4.9448	0.0623	1.29E-03	3.85E-02	1.71E-01	3.64E-01	5.48E-01	6.86E-01
5	4	3	4	8451.48	1	2022.70	4.9439	0.0611	5.11E-02	1.62E 00	7.41E 00	1.61E 01	2.46E 01	3.11E 01
1	0	27	28	1557.12	1	2022.91	4.9434	0.0379	1.48E 03	1.71E 03	1.50E 03	1.21E 03	9.55E 02	7.52E 02
7	6	11	10	12663.53	1	2023.01	4.9431	0.0625	4.54E-04	1.08E-01	1.36E 00	5.43E 00	1.24E 01	2.09E 01
11	10	61	60	26563.26	1	2023.12	4.9429	0.0303	0.0	0.0	5.10E-04	1.50E-02	1.30E-01	5.70E-01
9	8	30	29	17954.60	1	2023.34	4.9423	0.0340	0.0	2.33E-03	1.04E-01	8.89E-01	3.38E 00	8.17E 00
3	2	5	6	4242.63	2	2023.34	4.9423	0.0617	2.10E-01	8.82E-01	1.47E 00	1.74E 00	1.77E 00	1.67E 00
7	6	26	25	13326.42	2	2023.70	4.9414	0.0418	0.0	1.43E-03	2.11E-02	9.22E-02	2.25E-01	3.95E-01
8	7	20	19	15132.20	1	2023.76	4.9413	0.0535	2.68E-05	2.09E-02	4.75E-01	2.70E 00	7.84E 00	1.56E 01
4	3	1	0	6212.30	2	2023.83	4.9411	0.0603	2.74E-03	2.95E-02	7.87E-02	1.24E-01	1.52E-01	1.65E-01
10	9	43	42	21509.51	1	2024.16	4.9403	0.0303	0.0	1.21E-04	1.27E-02	1.80E-01	9.65E-01	2.98E 00
11	10	62	61	26770.90	1	2024.17	4.9403	0.0303	0.0	0.0	4.47E-04	1.36E-02	1.20E-01	5.32E-01
6	5	17	16	10705.04	2	2024.69	4.9390	0.0585	1.08E-04	1.00E-02	7.85E-02	2.36E-01	4.46E-01	6.57E-01
2	1	11	12	2380.12	2	2024.91	4.9385	0.0617	4.11E 00	7.05E 00	7.51E 00	6.81E 00	5.80E 00	4.82E 00
1	0	17	18	627.96	2	2025.03	4.9382	0.0568	3.85E 01	2.85E 01	1.99E 01	1.40E 01	1.01E 01	7.46E 00
4	3	9	10	6556.05	1	2025.06	4.9381	0.0624	1.57E 00	2.01E 01	5.84E 01	9.67E 01	1.23E 02	1.36E 02
2	1	21	22	3105.69	1	2025.13	4.9380	0.0496	2.50E 02	6.09E 02	7.74E 02	7.90E 02	7.14E 02	6.25E 02
11	10	63	62	26981.75	1	2025.18	4.9378	0.0303	0.0	0.0	3.90E-04	1.22E-02	1.10E-01	4.95E-01
5	4	9	8	8360.19	2	2025.57	4.9369	0.0624	1.40E-03	4.22E-02	1.88E-01	4.04E-01	6.10E-01	7.65E-01
9	8	31	30	18060.90	1	2025.75	4.9364	0.0335	0.0	2.18E-03	9.98E-02	8.65E-01	3.32E 00	8.10E 00
6	5	4	3	10474.17	1	2025.84	4.9362	0.0611	3.33E-03	2.78E-01	2.07E 00	6.02E 00	1.12E 01	1.62E 01
3	2	15	16	4773.03	1	2025.86	4.9362	0.0591	2.47E 01	1.34E 02	2.54E 02	3.25E 02	3.49E 02	3.42E 02
10	9	44	43	21659.36	1	2026.02	4.9358	0.0303	0.0	1.07E-04	1.17E-02	1.70E-01	9.19E-01	2.87E 00
11	10	64	63	27195.80	1	2026.15	4.9355	0.0303	0.0	0.0	3.40E-04	1.10E-02	1.01E-01	4.61E-01
7	6	12	11	12703.48	1	2026.22	4.9353	0.0617	4.68E-04	1.14E-01	1.45E 00	5.80E 00	1.33E 01	2.25E 01
7	6	27	26	13416.50	2	2026.25	4.9352	0.0398	0.0	1.37E-03	2.05E-02	9.11E-02	2.24E-01	3.96E-01
5	4	2	3	8436.66	1	2026.51	4.9346	0.0609	3.92E-02	1.23E 00	5.63E 00	1.22E 01	1.86E 01	2.35E 01
8	7	21	20	15204.01	1	2026.60	4.9344	0.0515	2.54E-05	2.05E-02	4.75E-01	2.73E 00	7.96E 00	1.60E 01
11	10	65	64	27413.06	1	2027.07	4.9332	0.0303	0.0	0.0	2.95E-04	9.92E-03	9.24E-02	4.28E-01
3	2	4	5	4220.97	2	2027.11	4.9331	0.0614	1.81E-01	7.52E-01	1.25E 00	1.47E 00	1.49E 00	1.41E 00
4	3	2	1	6215.88	2	2027.35	4.9325	0.0606	5.45E-03	5.89E-02	1.57E-01	2.48E-01	3.05E-01	3.30E-01
6	5	18	17	10764.64	2	2027.59	4.9320	0.0568	1.05E-04	1.00E-02	7.98E-02	2.42E-01	4.60E-01	6.80E-01
1	0	26	27	1449.99	1	2027.64	4.9318	0.0398	1.67E 03	1.84E 03	1.57E 03	1.25E 03	9.72E 02	7.60E 02
10	9	45	44	21812.60	1	2027.83	4.9314	0.0303	0.0	9.48E-05	1.07E-02	1.59E-01	8.74E-01	2.76E 00
11	10	66	65	27633.50	1	2027.94	4.9311	0.0303	0.0	0.0	2.55E-04	8.78E-03	8.44E-02	3.97E-01
9	8	32	31	18170.69	1	2028.12	4.9307	0.0331	0.0	2.02E-03	9.53E-02	8.39E-01	3.26E 00	8.00E 00
7	6	28	27	13510.01	2	2028.76	4.9291	0.0379	0.0	1.30E-03	1.99E-02	8.96E-02	2.22E-01	3.96E-01
11	10	67	66	27857.12	1	2028.77	4.9291	0.0303	0.0	0.0	2.21E-04	7.83E-03	7.70E-02	3.67E-01
5	4	10	9	8392.08	2	2028.79	4.9290	0.0624	1.48E-03	4.55E-02	2.05E-01	4.41E-01	6.69E-01	8.40E-01
2	1	10	11	2336.44	2	2028.90	4.9288	0.0625	4.02E 00	6.76E 00	7.12E 00	6.41E 00	5.44E 00	4.51E 00
4	3	8	9	6518.68	1	2029.10	4.9283	0.0624	1.50E 00	1.88E 01	5.41E 01	8.91E 01	1.13E 02	1.25E 02
1	0	16	17	561.92	2	2029.24	4.9280	0.0585	4.00E 01	2.87E 01	1.98E 01	1.38E 01	9.88E 00	7.26E 00
6	5	5	4	10488.85	1	2029.33	4.9277	0.0614	4.08E-03	3.43E-01	2.56E 00	7.47E 00	1.39E 01	2.02E 01
7	6	13	12	12747.07	1	2029.39	4.9276	0.0610	4.77E-04	1.19E-01	1.52E 00	6.14E 00	1.42E 01	2.40E 01
8	7	22	21	15279.39	1	2029.39	4.9276	0.0496	2.39E-05	2.00E-02	4.72E-01	2.74E 00	8.06E 00	1.62E 01
11	10	68	67	28083.91	1	2029.56	4.9272	0.0303	0.0	0.0	1.90E-04	6.98E-03	7.01E-02	3.40E-01
10	9	46	45	21969.23	1	2029.60	4.9271	0.0303	0.0	8.34E-05	9.76E-03	1.49E-01	8.30E-01	2.65E 00
2	1	20	21	3022.13	1	2029.64	4.9270	0.0515	2.69E 02	6.32E 02	7.87E 02	7.84E 02	7.11E 02	6.19E 02
3	2	14	15	4712.73	1	2030.14	4.9258	0.0597	2.53E 01	1.33E 02	2.49E 02	3.16E 02	3.38E 02	3.30E 02
5	4	1	2	8425.54	1	2030.28	4.9254	0.0606	2.66E-02	8.33E-01	3.79E 00	8.22E 00	1.25E 01	1.58E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	69	68	28313.86	1	2030.30	4.9254	0.0303	0.0	0.0	1.64E-04	6.20E-03	6.36E-02	3.13E-01
9	8	33	32	18283.98	1	2030.46	4.9250	0.0326	0.0	1.87E-03	9.07E-02	8.12E-01	3.18E 00	7.89E 00
6	5	19	18	10827.74	2	2030.46	4.9250	0.0552	1.01E-04	9.99E-03	8.06E-02	2.46E-01	4.72E-01	7.01E-01
4	3	3	2	6223.04	2	2030.83	4.9241	0.0609	8.11E-03	8.80E-02	2.35E-01	3.71E-01	4.57E-01	4.95E-01
3	2	3	4	4202.92	2	2030.85	4.9240	0.0611	1.49E-01	6.13E-01	1.01E 00	1.19E 00	1.21E 00	1.14E 00
11	10	99	98	36625.89	1	2030.99	4.9237	0.0303	0.0	0.0	0.0	7.21E-05	1.64E-03	1.43E-02
11	10	70	69	28546.96	1	2031.00	4.9237	0.0303	0.0	0.0	1.40E-04	5.50E-03	5.77E-02	2.89E-01
7	6	29	28	13606.95	2	2031.24	4.9231	0.0359	0.0	1.23E-03	1.93E-02	8.79E-02	2.20E-01	3.95E-01
10	9	47	46	22129.23	1	2031.33	4.9229	0.0303	0.0	7.31E-05	8.90E-03	1.39E-01	7.86E-01	2.53E 00
11	10	71	70	28783.19	1	2031.65	4.9221	0.0303	0.0	0.0	1.20E-04	4.87E-03	5.23E-02	2.66E-01
11	10	98	97	36306.52	1	2031.66	4.9221	0.0303	0.0	0.0	0.0	8.60E-05	1.90E-03	1.62E-02
5	4	11	10	8427.51	2	2031.97	4.9213	0.0625	1.55E-03	4.85E-02	2.20E-01	4.76E-01	7.25E-01	9.13E-01
8	7	23	22	15358.34	1	2032.15	4.9209	0.0476	2.24E-05	1.94E-02	4.67E-01	2.74E 00	8.13E 00	1.65E 01
11	10	72	71	29022.55	1	2032.26	4.9206	0.0303	0.0	0.0	1.02E-04	4.30E-03	4.72E-02	2.44E-01
11	10	97	96	35989.95	1	2032.28	4.9206	0.0303	0.0	0.0	0.0	1.02E-04	2.19E-03	1.83E-02
1	0	25	26	1346.66	1	2032.35	4.9204	0.0418	1.86E 03	1.96E 03	1.63E 03	1.28E 03	9.87E 02	7.66E 02
7	6	14	13	12794.27	1	2032.52	4.9200	0.0604	4.81E-04	1.22E-01	1.59E 00	6.45E 00	1.49E 01	2.54E 01
9	8	34	33	18400.75	1	2032.75	4.9194	0.0321	0.0	1.73E-03	8.60E-02	7.83E-01	3.11E 00	7.76E 00
6	5	6	5	10507.20	1	2032.79	4.9193	0.0617	4.77E-03	4.06E-01	3.04E 00	8.89E 00	1.65E 01	2.41E 01
11	10	73	72	29265.04	1	2032.82	4.9193	0.0303	0.0	0.0	8.71E-05	3.79E-03	4.26E-02	2.24E-01
11	10	96	95	35676.18	1	2032.85	4.9192	0.0303	0.0	0.0	0.0	1.22E-04	2.53E-03	2.06E-02
2	1	9	10	2296.39	2	2032.86	4.9192	0.0624	3.88E 00	6.40E 00	6.68E 00	5.99E 00	5.05E 00	4.19E 00
10	9	48	47	22292.60	1	2033.02	4.9188	0.0303	0.0	6.39E-05	8.08E-03	1.29E-01	7.43E-01	2.42E 00
4	3	7	8	6485.03	1	2033.12	4.9185	0.0623	1.40E 00	1.73E 01	4.94E 01	8.09E 01	1.02E 02	1.13E 02
6	5	20	19	10894.32	2	2033.29	4.9181	0.0535	9.69E-05	9.87E-03	8.10E-02	2.50E-01	4.82E-01	7.19E-01
11	10	74	73	29510.62	1	2033.34	4.9180	0.0303	0.0	0.0	7.40E-05	3.33E-03	3.84E-02	2.05E-01
11	10	95	94	35365.23	1	2033.38	4.9179	0.0303	0.0	0.0	0.0	1.44E-04	2.91E-03	2.32E-02
1	0	15	16	499.54	2	2033.42	4.9178	0.0591	4.13E 01	2.88E 01	1.95E 01	1.35E 01	9.60E 00	7.03E 00
7	6	30	29	13707.32	2	2033.68	4.9172	0.0340	0.0	1.15E-03	1.86E-02	8.60E-02	2.17E-01	3.93E-01
11	10	75	74	29759.31	1	2033.81	4.9169	0.0303	0.0	0.0	6.27E-05	2.93E-03	3.45E-02	1.88E-01
11	10	94	93	35057.12	1	2033.85	4.9168	0.0303	0.0	0.0	0.0	1.71E-04	3.34E-03	2.61E-02
5	4	0	1	8418.13	1	2034.02	4.9164	0.0603	1.35E-02	4.20E-01	1.91E 00	4.14E 00	6.30E 00	7.93E 00
2	1	19	20	2942.34	1	2034.12	4.9161	0.0535	2.88E 02	6.51E 02	7.96E 02	7.84E 02	7.06E 02	6.11E 02
11	10	76	75	30011.07	1	2034.23	4.9159	0.0303	0.0	0.0	5.30E-05	2.56E-03	3.10E-02	1.71E-01
4	3	4	3	6233.77	2	2034.27	4.9158	0.0611	1.07E-02	1.16E-01	3.12E-01	4.93E-01	6.08E-01	6.58E-01
11	10	93	92	34751.86	1	2034.28	4.9157	0.0303	0.0	0.0	0.0	2.02E-04	3.84E-03	2.94E-02
3	2	13	14	4656.18	1	2034.39	4.9155	0.0604	2.56E 01	1.32E 02	2.43E 02	3.06E 02	3.25E 02	3.16E 02
3	2	2	3	4188.48	2	2034.56	4.9151	0.0609	1.14E-01	4.67E-01	7.68E-01	9.03E-01	9.15E-01	8.62E-01
11	10	77	76	30265.92	1	2034.61	4.9149	0.0303	0.0	0.0	4.46E-05	2.24E-03	2.77E-02	1.56E-01
11	10	92	91	34449.46	1	2034.66	4.9148	0.0303	0.0	0.0	0.0	2.38E-04	4.40E-03	3.30E-02
10	9	49	48	22459.34	1	2034.67	4.9148	0.0303	0.0	5.56E-05	7.32E-03	1.20E-01	7.00E-01	2.31E 00
8	7	24	23	15440.84	1	2034.87	4.9143	0.0457	2.07E-05	1.88E-02	4.59E-01	2.73E 00	8.16E 00	1.66E 01
11	10	78	77	30523.82	1	2034.94	4.9141	0.0303	0.0	0.0	3.75E-05	1.96E-03	2.48E-02	1.42E-01
11	10	91	90	34149.94	1	2034.99	4.9140	0.0303	0.0	0.0	0.0	2.80E-04	5.03E-03	3.69E-02
9	8	35	34	18521.00	1	2035.01	4.9140	0.0317	0.0	1.59E-03	8.13E-02	7.53E-01	3.02E 00	7.61E 00
5	4	12	11	8466.48	2	2035.11	4.9137	0.0617	1.60E-03	5.10E-02	2.34E-01	5.09E-01	7.78E-01	9.82E-01
11	10	79	78	30784.78	1	2035.23	4.9134	0.0303	0.0	0.0	3.15E-05	1.70E-03	2.22E-02	1.29E-01
11	10	90	89	33853.30	1	2035.27	4.9134	0.0303	0.0	0.0	0.0	3.29E-04	5.74E-03	4.13E-02
11	10	80	79	31048.78	1	2035.47	4.9129	0.0303	0.0	0.0	2.64E-05	1.48E-03	1.98E-02	1.17E-01
11	10	89	88	33559.57	1	2035.50	4.9128	0.0303	0.0	0.0	0.0	3.85E-04	6.54E-03	4.62E-02
7	6	15	14	12845.10	1	2035.62	4.9125	0.0597	4.79E-04	1.25E-01	1.64E 00	6.72E 00	1.57E 01	2.67E 01
11	10	81	80	31315.80	1	2035.66	4.9124	0.0303	0.0	0.0	2.20E-05	1.28E-03	1.76E-02	1.06E-01
11	10	88	87	33268.76	1	2035.69	4.9123	0.0303	0.0	0.0	0.0	4.51E-04	7.45E-03	5.15E-02

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	10	82	81	31585.85	1	2035.80	4.9121	0.0303	0.0	0.0	0.0	1.11E-03	1.56E-02	9.64E-02
11	10	87	86	32980.87	1	2035.83	4.9120	0.0303	0.0	0.0	0.0	5.27E-04	8.46E-03	5.74E-02
11	10	83	82	31858.89	1	2035.90	4.9118	0.0303	0.0	0.0	0.0	9.62E-04	1.39E-02	8.71E-02
11	10	86	85	32695.94	1	2035.92	4.9118	0.0303	0.0	0.0	0.0	6.14E-04	9.60E-03	6.38E-02
11	10	84	83	32134.93	1	2035.95	4.9117	0.0303	0.0	0.0	0.0	8.30E-04	1.23E-02	7.86E-02
11	10	85	84	32413.95	1	2035.96	4.9117	0.0303	0.0	0.0	0.0	7.14E-04	1.09E-02	7.09E-02
7	6	31	30	13811.11	2	2036.08	4.9114	0.0335	0.0	1.08E-03	1.78E-02	8.38E-02	2.14E-01	3.89E-01
6	5	21	20	10964.39	2	2036.09	4.9114	0.0515	9.21E-05	9.71E-03	8.10E-02	2.53E-01	4.90E-01	7.35E-01
6	5	7	6	10529.21	1	2036.22	4.9111	0.0620	5.41E-03	4.64E-01	3.50E 00	1.03E 01	1.91E 01	2.79E 01
10	9	50	49	22629.43	1	2036.27	4.9109	0.0303	0.0	4.82E-05	6.62E-03	1.11E-01	6.59E-01	2.20E 00
2	1	8	9	2259.98	2	2036.79	4.9097	0.0624	3.68E 00	5.97E 00	6.18E 00	5.51E 00	4.64E 00	3.83E 00
1	0	24	25	1247.11	1	2037.02	4.9091	0.0437	2.07E 03	2.08E 03	1.69E 03	1.30E 03	9.99E 02	7.70E 02
4	3	6	7	6455.12	1	2037.10	4.9089	0.0620	1.28E 00	1.56E 01	4.42E 01	7.22E 01	9.11E 01	1.00E 02
9	8	36	35	18644.73	1	2037.22	4.9086	0.0312	0.0	1.45E-03	7.66E-02	7.22E-01	2.93E 00	7.45E 00
8	7	25	24	15526.91	1	2037.56	4.9078	0.0437	0.0	1.80E-02	4.51E-01	2.71E 00	8.17E 00	1.68E 01
1	0	14	15	440.81	2	2037.57	4.9078	0.0597	4.22E 01	2.86E 01	1.91E 01	1.31E 01	9.29E 00	6.77E 00
4	3	5	4	6248.08	2	2037.68	4.9075	0.0614	1.31E-02	1.44E-01	3.87E-01	6.12E-01	7.56E-01	8.20E-01
10	9	51	50	22802.87	1	2037.83	4.9072	0.0303	0.0	4.17E-05	5.96E-03	1.02E-01	6.19E-01	2.09E 00
5	4	13	12	8508.98	2	2038.22	4.9062	0.0610	1.64E-03	5.32E-02	2.46E-01	5.39E-01	8.28E-01	1.05E 00
3	2	1	2	4177.65	2	2038.23	4.9062	0.0606	7.75E-02	3.15E-01	5.17E-01	6.07E-01	6.15E-01	5.79E-01
7	6	32	31	13918.32	2	2038.45	4.9057	0.0331	0.0	1.01E-03	1.71E-02	8.15E-02	2.10E-01	3.85E-01
2	1	18	19	2866.33	1	2038.57	4.9054	0.0552	3.06E 02	6.67E 02	8.00E 02	7.80E 02	6.97E 02	6.01E 02
3	2	12	13	4603.40	1	2038.61	4.9053	0.0610	2.57E 01	1.29E 02	2.35E 02	2.94E 02	3.10E 02	3.01E 02
7	6	16	15	12899.54	1	2038.68	4.9051	0.0591	4.73E-04	1.27E-01	1.69E 00	6.96E 00	1.63E 01	2.79E 01
6	5	22	21	11037.95	2	2038.85	4.9047	0.0496	8.69E-05	9.49E-03	8.06E-02	2.54E-01	4.97E-01	7.48E-01
10	9	52	51	22979.66	1	2039.35	4.9035	0.0303	0.0	3.59E-05	5.35E-03	9.42E-02	5.80E-01	1.98E 00
9	8	37	36	18771.94	1	2039.40	4.9034	0.0308	0.0	1.32E-03	7.19E-02	6.91E-01	2.84E 00	7.27E 00
6	5	8	7	10554.90	1	2039.60	4.9029	0.0623	5.96E-03	5.19E-01	3.93E 00	1.16E 01	2.17E 01	3.16E 01
8	7	26	25	15616.54	1	2040.20	4.9015	0.0418	0.0	1.72E-02	4.40E-01	2.68E 00	8.15E 00	1.68E 01
2	1	7	8	2227.21	2	2040.70	4.9003	0.0623	3.44E 00	5.49E 00	5.64E 00	5.00E 00	4.20E 00	3.46E 00
7	6	33	32	14028.93	2	2040.78	4.9001	0.0326	0.0	9.36E-04	1.63E-02	7.89E-02	2.06E-01	3.80E-01
10	9	53	52	23169.78	1	2040.83	4.9000	0.0303	0.0	3.08E-05	4.80E-03	8.66E-02	5.43E-01	1.98E 00
4	3	5	6	6428.95	1	2041.05	4.8994	0.0617	1.14E 00	1.37E 01	3.87E 01	6.30E 01	7.93E 01	8.72E 01
4	3	6	5	6265.97	2	2041.06	4.8994	0.0617	1.53E-02	1.70E-01	4.60E-01	7.29E-01	9.02E-01	9.79E-01
5	4	14	13	8555.02	2	2041.29	4.8989	0.0604	1.65E-03	5.49E-02	2.57E-01	5.67E-01	8.74E-01	1.11E 00
5	4	1	0	8414.43	1	2041.40	4.8986	0.0603	1.36E-02	4.23E-01	1.92E 00	4.16E 00	6.34E 00	7.99E 00
9	8	38	37	18902.61	1	2041.53	4.8983	0.0303	0.0	1.20E-03	6.73E-02	6.59E-01	2.74E 00	7.09E 00
6	5	23	22	11114.98	2	2041.58	4.8982	0.0476	8.14E-05	9.23E-03	7.99E-02	2.54E-01	5.01E-01	7.59E-01
1	0	23	24	1151.37	1	2041.66	4.8980	0.0457	2.29E 03	2.19E 03	1.74E 03	1.33E 03	1.01E 03	7.71E 02
1	0	13	14	385.75	2	2041.69	4.8979	0.0604	4.27E 01	2.82E 01	1.86E 01	1.27E 01	8.92E 00	6.48E 00
7	6	17	16	12957.61	1	2041.70	4.8979	0.0585	4.63E-04	1.28E-01	1.72E 00	7.17E 00	1.69E 01	2.90E 01
3	2	0	1	4170.43	2	2041.87	4.8975	0.0603	3.92E-02	1.59E-01	2.60E-01	3.05E-01	3.09E-01	2.91E-01
10	9	54	53	23343.22	1	2042.26	4.8965	0.0303	0.0	2.63E-05	4.28E-03	7.95E-02	5.07E-01	1.78E 00
3	2	11	12	4554.37	1	2042.79	4.8953	0.0617	2.55E 01	1.25E 02	2.25E 02	2.79E 02	2.94E 02	2.84E 02
8	7	27	26	15709.71	1	2042.80	4.8952	0.0398	0.0	1.64E-02	4.28E-01	2.65E 00	8.11E 00	1.68E 01
6	5	9	8	10584.25	1	2042.95	4.8949	0.0624	6.44E-03	5.68E-01	4.34E 00	1.28E 01	2.41E 01	3.52E 01
2	1	17	18	2794.11	1	2042.98	4.8948	0.0568	3.23E 02	6.79E 02	8.01E 02	7.72E 02	6.86E 02	5.88E 02
7	6	34	33	14142.96	2	2043.07	4.8946	0.0321	0.0	8.65E-04	1.55E-02	7.63E-02	2.01E-01	3.74E-01
9	8	39	38	19036.74	1	2043.63	4.8933	0.0303	0.0	1.08E-03	6.28E-02	6.26E-01	2.64E 00	6.89E 00
10	9	55	54	23529.98	1	2043.65	4.8932	0.0303	0.0	2.24E-05	3.82E-03	7.27E-02	4.72E-01	1.68E 00
6	5	24	23	11195.50	2	2044.27	4.8917	0.0457	7.57E-05	8.93E-03	7.88E-02	2.54E-01	5.04E-01	7.68E-01
5	4	15	14	8604.60	2	2044.33	4.8916	0.0597	1.65E-03	5.62E-02	2.66E-01	5.91E-01	9.16E-01	1.17E 00
4	3	7	6	6287.43	2	2044.41	4.8914	0.0620	1.74E-02	1.94E-01	5.29E-01	8.42E-01	1.04E 00	1.14E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	1	6	7	2198.07	2	2044.56	4.8910	0.0620	3.14E 00	4.95E 00	5.05E 00	4.46E 00	3.74E 00	3.07E 00
7	6	18	17	13019.29	1	2044.68	4.8907	0.0568	4.49E-04	1.27E-01	1.75E 00	7.34E 00	1.74E 01	3.00E 01
4	3	4	5	6406.52	1	2044.96	4.8901	0.0614	9.84E-01	1.17E 01	3.29E 01	5.33E 01	6.69E 01	7.35E 01
10	9	56	55	23720.06	1	2045.00	4.8900	0.0303	0.0	0.0	3.39E-03	6.64E-02	4.39E-01	1.58E 00
5	4	2	1	8418.13	1	2045.03	4.8899	0.0606	2.71E-02	8.46E-01	3.84E 00	8.33E 00	1.27E 01	1.60E 01
7	6	35	34	14260.39	2	2045.33	4.8892	0.0317	0.0	7.97E-04	1.47E-02	7.35E-02	1.96E-01	3.68E-01
8	7	28	27	15806.43	1	2045.37	4.8891	0.0379	0.0	1.55E-02	4.14E-01	2.60E 00	8.04E 00	1.68E 01
9	8	40	39	19174.33	1	2045.68	4.8883	0.0303	0.0	9.73E-04	5.84E-02	5.94E-01	2.54E 00	6.69E 00
1	0	12	13	334.34	2	2045.78	4.8881	0.0610	4.28E 01	2.76E 01	1.80E 01	1.22E 01	8.51E 00	6.16E 00
1	0	22	23	1059.42	1	2046.27	4.8869	0.0476	2.51E 03	2.30E 03	1.79E 03	1.34E 03	1.01E 03	7.70E 02
6	5	10	9	10617.26	1	2046.27	4.8869	0.0624	6.83E-03	6.13E-01	4.72E 00	1.40E 01	2.64E 01	3.87E 01
10	9	57	56	23913.44	1	2046.31	4.8868	0.0303	0.0	0.0	3.00E-03	6.05E-02	4.07E-01	1.48E 00
6	5	25	24	11279.49	2	2046.93	4.8854	0.0437	7.00E-05	8.59E-03	7.73E-02	2.52E-01	5.05E-01	7.74E-01
3	2	10	11	4509.11	1	2046.94	4.8853	0.0625	2.50E 01	1.20E 02	2.13E 02	2.64E 02	2.76E 02	2.66E 02
5	4	16	15	8657.70	2	2047.34	4.8844	0.0591	1.63E-03	5.70E-02	2.74E-01	6.13E-01	9.54E-01	1.22E 00
2	1	16	17	2725.67	1	2047.37	4.8843	0.0585	3.37E 02	6.86E 02	7.96E 02	7.61E 02	6.71E 02	5.73E 02
7	6	36	35	14381.22	2	2047.55	4.8839	0.0312	0.0	7.31E-04	1.38E-02	7.06E-02	1.90E-01	3.60E-01
10	9	58	57	24110.11	1	2047.57	4.8838	0.0303	0.0	0.0	2.65E-03	5.50E-02	3.77E-01	1.39E 00
7	6	19	18	13084.58	1	2047.63	4.8837	0.0552	4.32E-04	1.27E-01	1.76E 00	7.47E 00	1.78E 01	3.09E 01
9	8	41	40	19315.37	1	2047.69	4.8836	0.0303	0.0	8.72E-04	5.41E-02	5.62E-01	2.44E 00	6.48E 00
4	3	8	7	6312.47	2	2047.72	4.8835	0.0623	1.92E-02	2.17E-01	5.95E-01	9.50E-01	1.19E 00	1.29E 00
8	7	29	28	15906.70	1	2047.90	4.8831	0.0359	0.0	1.46E-02	4.00E-01	2.54E 00	7.95E 00	1.67E 01
2	1	5	6	2172.57	2	2048.40	4.8819	0.0617	2.80E 00	4.36E 00	4.42E 00	3.89E 00	3.25E 00	2.67E 00
5	4	3	2	8425.54	1	2048.63	4.8813	0.0609	4.03E-02	1.26E 00	5.75E 00	1.28E 01	1.90E 01	2.40E 01
10	9	59	58	24310.07	1	2048.79	4.8809	0.0303	0.0	0.0	2.34E-03	4.99E-02	3.40E-01	1.31E 00
4	3	3	4	6387.82	1	2048.84	4.8808	0.0611	8.10E-01	9.55E 00	2.67E 01	4.32E 01	5.42E 01	5.94E 01
3	2	1	0	4166.82	2	2049.06	4.8803	0.0603	3.95E-02	1.60E-01	2.62E-01	3.07E-01	3.11E-01	2.93E-01
6	5	11	10	10653.94	1	2049.54	4.8791	0.0625	7.14E-03	6.52E-01	5.07E 00	1.51E 01	2.86E 01	4.20E 01
6	5	26	25	11366.95	2	2049.55	4.8791	0.0418	6.42E-05	8.22E-03	7.56E-02	2.50E-01	5.05E-01	7.78E-01
9	8	42	41	19459.85	1	2049.66	4.8789	0.0303	0.0	7.78E-04	5.00E-02	5.30E-01	2.33E 00	6.26E 00
7	6	37	36	14505.45	2	2049.73	4.8787	0.0308	0.0	6.67E-04	1.30E-02	6.76E-02	1.85E-01	3.53E-01
1	0	11	12	286.60	2	2049.84	4.8784	0.0617	4.24E 01	2.67E 01	1.72E 01	1.16E 01	8.06E 00	5.82E 00
10	9	60	59	24513.30	1	2049.96	4.8781	0.0303	0.0	0.0	2.06E-03	4.51E-02	3.22E-01	1.22E 00
5	4	17	16	8714.33	2	2050.31	4.8773	0.0585	1.60E-03	5.75E-02	2.80E-01	6.32E-01	9.89E-01	1.27E 00
8	7	30	29	16010.51	1	2050.39	4.8771	0.0340	0.0	1.37E-02	3.84E-01	2.48E 00	7.83E 00	1.66E 01
7	6	20	19	13153.48	1	2050.53	4.8768	0.0535	4.13E-04	1.25E-01	1.77E 00	7.57E 00	1.82E 01	3.17E 01
1	0	21	22	971.28	1	2050.85	4.8760	0.0496	2.73E 03	2.40E 03	1.83E 03	1.36E 03	1.01E 03	7.66E 02
4	3	9	8	6341.08	2	2051.00	4.8757	0.0624	2.07E-02	2.38E-01	6.57E-01	1.05E 00	1.31E 00	1.43E 00
3	2	9	10	4467.62	1	2051.06	4.8755	0.0624	2.42E 01	1.14E 02	2.00E 02	2.46E 02	2.57E 02	2.47E 02
10	9	61	60	24719.80	1	2051.09	4.8755	0.0303	0.0	0.0	1.80E-03	4.07E-02	2.97E-01	1.14E 00
9	8	43	42	19607.77	1	2051.59	4.8743	0.0303	0.0	6.92E-04	4.61E-02	4.99E-01	2.22E 00	6.04E 00
2	1	15	16	2661.01	1	2051.72	4.8740	0.0591	3.49E 02	6.88E 02	7.87E 02	7.45E 02	6.54E 02	5.55E 02
7	6	38	37	14633.06	2	2051.87	4.8736	0.0303	0.0	6.07E-04	1.22E-02	6.46E-02	1.78E-01	3.44E-01
6	5	27	26	11457.88	2	2052.13	4.8730	0.0398	5.86E-05	7.84E-03	7.37E-02	2.47E-01	5.03E-01	7.79E-01
10	9	62	61	24929.57	1	2052.18	4.8729	0.0303	0.0	0.0	1.57E-03	3.67E-02	2.73E-01	1.06E 00
5	4	4	3	8436.66	1	2052.20	4.8728	0.0611	5.29E-02	1.67E 00	7.62E 00	1.66E 01	2.53E 01	3.19E 01
2	1	4	5	2150.72	2	2052.21	4.8728	0.0614	2.41E 00	3.71E 00	3.75E 00	3.29E 00	2.74E 00	2.25E 00
3	2	2	1	4170.43	2	2052.61	4.8718	0.0606	7.88E-02	3.20E-01	5.24E-01	6.15E-01	6.23E-01	5.86E-01
4	3	2	3	6372.86	1	2052.68	4.8717	0.0609	6.22E-01	7.28E 00	2.03E 01	3.27E 01	4.10E 01	4.49E 01
6	5	12	11	10694.28	1	2052.78	4.8714	0.0617	7.36E-03	6.85E-01	5.38E 00	1.82E 01	3.07E 01	4.52E 01
8	7	31	30	16117.86	1	2052.83	4.8713	0.0335	0.0	1.28E-02	3.68E-01	2.41E 00	7.70E 00	1.64E 01
10	9	63	62	25142.58	1	2053.22	4.8704	0.0303	0.0	0.0	1.37E-03	3.30E-02	2.50E-01	9.92E-01
5	4	18	17	8774.49	2	2053.25	4.8703	0.0568	1.56E-03	5.75E-02	2.84E-01	6.47E-01	1.02E 00	1.31E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	21	20	13225.99	1	2053.40	4.8700	0.0515	3.91E-04	1.22E-01	1.76E 00	7.64E 00	1.85E 01	3.23E 01
9	8	44	43	19759.12	1	2053.48	4.8698	0.0303	0.0	6.13E-04	4.23E-02	4.69E-01	2.12E 00	5.81E 00
1	0	10	11	242.53	2	2053.86	4.8689	0.0625	4.14E 01	2.56E 01	1.63E 01	1.09E 01	7.57E 00	5.44E 00
7	6	39	38	14764.06	2	2053.98	4.8686	0.0303	0.0	5.50E-04	1.14E-02	6.16E-02	1.72E-01	3.35E-01
10	9	64	63	25358.84	1	2054.22	4.8680	0.0303	0.0	0.0	1.19E-03	2.96E-02	2.29E-01	9.22E-01
4	3	10	9	6373.27	2	2054.25	4.8680	0.0624	2.20E-02	2.57E-01	7.15E-01	1.15E 00	1.44E 00	1.58E 00
6	5	28	27	11552.28	2	2054.68	4.8669	0.0379	5.31E-05	7.43E-03	7.15E-02	2.43E-01	4.99E-01	7.79E-01
3	2	8	9	4429.89	1	2055.14	4.8658	0.0624	2.30E 01	1.06E 02	1.86E 02	2.27E 02	2.36E 02	2.26E 02
10	9	65	64	25578.32	1	2055.18	4.8658	0.0303	0.0	0.0	1.04E-03	2.65E-02	2.09E-01	8.55E-01
8	7	32	31	16228.73	1	2055.24	4.8656	0.0331	0.0	1.19E-02	3.51E-01	2.34E 00	7.55E 00	1.62E 01
9	8	45	44	19913.90	1	2055.33	4.8654	0.0303	0.0	5.41E-04	3.87E-02	4.39E-01	2.01E 00	5.58E 00
1	0	20	21	886.95	1	2055.40	4.8652	0.0515	2.95E 03	2.49E 03	1.86E 03	1.36E 03	1.01E 03	7.59E 02
5	4	5	4	8451.48	1	2055.72	4.8645	0.0614	6.49E-02	2.06E 00	9.44E 00	2.06E 01	3.14E 01	3.97E 01
2	1	3	4	2132.50	2	2055.98	4.8639	0.0611	1.98E 00	3.03E 00	3.04E 00	2.67E 00	2.22E 00	1.82E 00
6	5	13	12	10738.28	1	2055.99	4.8638	0.0610	7.50E-03	7.13E-01	5.66E 00	1.71E 01	3.26E 01	4.82E 01
2	1	14	15	2600.15	1	2056.04	4.8637	0.0597	3.57E 02	6.86E 02	7.73E 02	7.25E 02	6.33E 02	5.35E 02
7	6	40	39	14898.44	2	2056.05	4.8637	0.0303	0.0	4.96E-04	1.07E-02	5.85E-02	1.66E-01	3.26E-01
10	9	66	65	25801.04	1	2056.09	4.8636	0.0303	0.0	0.0	8.95E-04	2.37E-02	1.91E-01	7.92E-01
3	2	3	2	4177.65	2	2056.12	4.8635	0.0609	1.17E-01	4.78E-01	7.84E-01	9.21E-01	9.33E-01	8.79E-01
5	4	19	18	8838.17	2	2056.15	4.8635	0.0552	1.50E-03	5.72E-02	2.87E-01	6.60E-01	1.05E 00	1.35E 00
7	6	22	21	13302.10	1	2056.24	4.8632	0.0496	3.67E-04	1.19E-01	1.75E 00	7.67E 00	1.87E 01	3.29E 01
10	9	104	103	36543.60	1	2056.32	4.8631	0.0303	0.0	0.0	0.0	7.44E-05	1.68E-03	1.46E-02
4	3	1	2	6361.64	1	2056.49	4.8627	0.0606	4.22E-01	4.92E 00	1.37E 01	2.20E 01	2.75E 01	3.02E 01
10	9	67	66	26026.96	1	2056.96	4.8615	0.0303	0.0	0.0	7.72E-04	2.11E-02	1.74E-01	7.33E-01
9	8	46	45	20072.09	1	2057.13	4.8611	0.0303	0.0	4.75E-04	3.54E-02	4.10E-01	1.91E 00	5.35E 00
6	5	29	28	11650.14	2	2057.19	4.8610	0.0359	4.78E-05	7.02E-03	6.91E-02	2.38E-01	4.94E-01	7.76E-01
10	9	103	102	36206.90	1	2057.20	4.8610	0.0303	0.0	0.0	0.0	8.96E-05	1.96E-03	1.66E-02
4	3	11	10	6409.02	2	2057.46	4.8604	0.0625	2.31E-02	2.74E-01	7.68E-01	1.24E 00	1.56E 00	1.71E 00
8	7	33	32	16343.14	1	2057.61	4.8600	0.0326	0.0	1.10E-02	3.34E-01	2.26E 00	7.38E 00	1.60E 01
10	9	68	67	26256.09	1	2057.78	4.8596	0.0303	0.0	0.0	6.65E-04	1.88E-02	1.58E-01	6.77E-01
1	0	9	10	202.12	2	2057.86	4.8594	0.0624	4.00E 01	2.42E 01	1.53E 01	1.02E 01	7.03E 00	5.04E 00
10	9	102	101	35872.95	1	2058.04	4.8590	0.0303	0.0	0.0	0.0	1.08E-04	2.29E-03	1.89E-02
7	6	41	40	15036.20	2	2058.08	4.8589	0.0303	0.0	4.46E-04	9.90E-03	5.55E-02	1.59E-01	3.16E-01
10	9	69	68	26488.41	1	2058.55	4.8578	0.0303	0.0	0.0	5.71E-04	1.67E-02	1.44E-01	6.24E-01
10	9	101	100	35541.77	1	2058.83	4.8571	0.0303	0.0	0.0	0.0	1.29E-04	2.66E-03	2.15E-02
9	8	47	46	20233.70	1	2058.90	4.8570	0.0303	0.0	4.16E-04	3.22E-02	3.82E-01	1.81E 00	5.12E 00
5	4	20	19	8905.38	2	2059.01	4.8567	0.0535	1.44E-03	5.66E-02	2.88E-01	6.69E-01	1.07E 00	1.39E 00
7	6	23	22	13381.82	1	2059.03	4.8567	0.0476	3.43E-04	1.16E-01	1.73E 00	7.67E 00	1.88E 01	3.33E 01
6	5	14	13	10785.94	1	2059.16	4.8563	0.0604	7.55E-03	7.35E-01	5.90E 00	1.80E 01	3.44E 01	5.10E 01
3	2	7	8	4395.93	1	2059.19	4.8563	0.0623	2.15E 01	9.78E 01	1.70E 02	2.06E 02	2.14E 02	2.04E 02
5	4	6	5	8470.00	1	2059.22	4.8562	0.0617	7.59E-02	2.43E 00	1.12E 01	2.45E 01	3.75E 01	4.74E 01
10	9	70	69	26723.91	1	2059.28	4.8561	0.0303	0.0	0.0	4.89E-04	1.47E-02	1.30E-01	5.75E-01
10	9	100	99	35213.38	1	2059.56	4.8554	0.0303	0.0	0.0	0.0	1.55E-04	3.09E-03	2.44E-02
3	2	4	3	4188.48	2	2059.60	4.8553	0.0611	1.54E-01	6.32E-01	1.04E 00	1.22E 00	1.24E 00	1.17E 00
6	5	30	29	11751.45	2	2059.66	4.8552	0.0340	4.28E-05	6.59E-03	6.66E-02	2.33E-01	4.87E-01	7.71E-01
2	1	2	3	2117.93	2	2059.72	4.8550	0.0609	1.52E 00	2.31E 00	2.31E 00	2.02E 00	1.68E 00	1.37E 00
1	0	19	20	806.42	1	2059.91	4.8546	0.0535	3.16E 03	2.57E 03	1.88E 03	1.36E 03	1.00E 03	7.50E 02
8	7	34	33	16461.06	1	2059.94	4.8545	0.0321	0.0	1.01E-02	3.16E-01	2.18E 00	7.19E 00	1.57E 01
10	9	71	70	26962.59	1	2059.97	4.8544	0.0303	0.0	0.0	4.17E-04	1.30E-02	1.18E-01	5.29E-01
7	6	42	41	15177.32	2	2060.07	4.8542	0.0303	0.0	4.00E-04	9.17E-03	5.25E-02	1.53E-01	3.06E-01
10	9	99	98	34887.79	1	2060.25	4.8538	0.0303	0.0	0.0	0.0	1.95E-04	3.58E-03	2.77E-02
4	3	0	1	6354.16	1	2060.27	4.8537	0.0603	2.13E-01	2.48E 00	6.88E 00	1.11E 01	1.39E 01	1.52E 01
2	1	13	14	2543.08	1	2060.32	4.8536	0.0604	3.63E 02	6.78E 02	7.53E 02	7.01E 02	6.08E 02	5.13E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION.** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	9	72	71	27204.43	1	2060.61	4.8529	0.0303	0.0	0.0	3.55E-04	1.15E-02	1.06E-01	4.85E-01
9	8	48	47	20398.72	1	2060.62	4.8529	0.0303	0.0	3.63E-04	2.92E-02	3.55E-01	1.71E 00	4.89E 00
4	3	12	11	6448.35	2	2060.63	4.8529	0.0617	2.38E-02	2.88E-01	8.16E-01	1.33E 00	1.67E 00	1.84E 00
10	9	98	97	34565.00	1	2060.89	4.8523	0.0303	0.0	0.0	0.0	2.21E-04	4.14E-03	3.13E-02
10	9	73	72	27449.42	1	2061.21	4.8515	0.0303	0.0	0.0	3.02E-04	1.01E-02	9.57E-02	4.45E-01
10	9	97	96	34245.04	1	2061.48	4.8509	0.0303	0.0	0.0	0.0	2.64E-04	4.79E-03	3.54E-02
10	9	74	73	27697.55	1	2061.75	4.8502	0.0303	0.0	0.0	2.56E-04	8.89E-03	8.61E-02	4.07E-01
7	6	24	23	13465.12	1	2061.79	4.8502	0.0457	3.18E-04	1.12E-01	1.71E 00	7.64E 00	1.89E 01	3.37E 01
1	0	8	9	165.38	2	2061.83	4.8501	0.0624	3.80E 01	2.26E 01	1.42E 01	9.37E 00	6.46E 00	4.62E 00
5	4	21	20	8976.10	2	2061.85	4.8500	0.0515	1.36E-03	5.56E-02	2.88E-01	6.76E-01	1.09E 00	1.42E 00
10	9	96	95	33927.93	1	2062.01	4.8496	0.0303	0.0	0.0	0.0	3.14E-04	5.53E-03	4.00E-02
7	6	43	42	15321.80	2	2062.02	4.8496	0.0303	0.0	3.57E-04	8.47E-03	4.95E-02	1.46E-01	2.95E-01
6	5	31	30	11856.22	2	2062.10	4.8494	0.0335	3.81E-05	6.17E-03	6.39E-02	2.27E-01	4.80E-01	7.65E-01
8	7	35	34	16582.50	1	2062.23	4.8491	0.0317	0.0	9.27E-03	2.99E-01	2.10E 00	7.00E 00	1.54E 01
10	9	75	74	27948.82	1	2062.26	4.8490	0.0303	0.0	0.0	2.17E-04	7.80E-03	7.74E-02	3.72E-01
6	5	15	14	10837.26	1	2062.29	4.8490	0.0597	7.52E-03	7.50E-01	6.10E 00	1.87E 01	3.60E 01	5.36E 01
9	8	49	48	20567.13	1	2062.30	4.8490	0.0303	0.0	3.15E-04	2.64E-02	3.29E-01	1.61E 00	4.66E 00
10	9	95	94	33613.67	1	2062.50	4.8485	0.0303	0.0	0.0	0.0	3.73E-04	6.37E-03	4.51E-02
5	4	7	6	8492.22	1	2062.67	4.8481	0.0620	8.59E-02	2.78E 00	1.29E 01	2.82E 01	4.34E 01	5.50E 01
10	9	76	75	28203.20	1	2062.72	4.8480	0.0303	0.0	0.0	1.83E-04	6.82E-03	6.94E-02	3.39E-01
10	9	94	93	33302.29	1	2062.95	4.8474	0.0303	0.0	0.0	0.0	4.42E-04	7.33E-03	5.08E-02
3	2	5	4	4202.92	2	2063.05	4.8472	0.0614	1.89E-01	7.80E-01	1.29E 00	1.52E 00	1.54E 00	1.46E 00
10	9	77	76	28460.70	1	2063.13	4.8470	0.0303	0.0	0.0	1.54E-04	5.96E-03	6.21E-02	3.09E-01
3	2	6	7	4365.74	1	2063.21	4.8468	0.0620	1.97E 01	8.82E 01	1.52E 02	1.84E 02	1.90E 02	1.82E 02
10	9	93	92	32993.78	1	2063.34	4.8465	0.0303	0.0	0.0	0.0	5.23E-04	8.42E-03	5.72E-02
2	1	1	2	2107.00	2	2063.43	4.8463	0.0606	1.03E 00	1.56E 00	1.56E 00	1.36E 00	1.13E 00	9.22E-01
10	9	78	77	28721.29	1	2063.49	4.8462	0.0303	0.0	0.0	1.29E-04	5.19E-03	5.55E-02	2.81E-01
10	9	92	91	32688.18	1	2063.68	4.8457	0.0303	0.0	0.0	0.0	6.18E-04	9.66E-03	6.42E-02
4	3	13	12	6491.25	2	2063.78	4.8455	0.0610	2.43E-02	3.00E-01	8.59E-01	1.41E 00	1.78E 00	1.97E 00
10	9	79	78	28984.96	1	2063.81	4.8454	0.0303	0.0	0.0	1.08E-04	4.52E-03	4.95E-02	2.55E-01
9	8	50	49	20738.93	1	2063.94	4.8451	0.0303	0.0	2.73E-04	2.39E-02	3.05E-01	1.51E 00	4.44E 00
7	6	44	43	15469.65	2	2063.94	4.8451	0.0303	0.0	3.17E-04	7.80E-03	4.66E-02	1.39E-01	2.85E-01
10	9	91	90	32385.48	1	2063.98	4.8450	0.0303	0.0	0.0	0.0	7.28E-04	1.11E-02	7.20E-02
10	9	80	79	29251.72	1	2064.09	4.8447	0.0303	0.0	0.0	9.03E-05	3.92E-03	4.41E-02	2.32E-01
10	9	90	89	32085.71	1	2064.23	4.8444	0.0303	0.0	0.0	0.0	8.57E-04	1.26E-02	8.07E-02
10	9	81	80	29521.54	1	2064.31	4.8442	0.0303	0.0	0.0	7.52E-05	3.40E-03	3.92E-02	2.10E-01
1	0	18	19	729.71	1	2064.39	4.8440	0.0552	3.36E 03	2.63E 03	1.89E 03	1.36E 03	9.90E 02	7.37E 02
10	9	89	88	31788.87	1	2064.43	4.8440	0.0303	0.0	0.0	0.0	1.01E-03	1.44E-02	9.03E-02
8	7	36	35	16707.46	1	2064.48	4.8438	0.0312	0.0	8.47E-03	2.81E-01	2.01E 00	6.79E 00	1.51E 01
10	9	82	81	29794.40	1	2064.49	4.8438	0.0303	0.0	0.0	6.25E-05	2.94E-03	3.48E-02	1.90E-01
7	6	25	24	13552.03	1	2064.50	4.8438	0.0437	2.92E-04	1.07E-01	1.67E 00	7.58E 00	1.89E 01	3.39E 01
6	5	32	31	11964.44	2	2064.50	4.8438	0.0331	3.37E-05	5.75E-03	6.11E-02	2.20E-01	4.71E-01	7.56E-01
2	1	12	13	2489.80	1	2064.57	4.8436	0.0610	3.64E 02	6.64E 02	7.29E 02	6.73E 02	5.81E 02	4.88E 02
10	9	88	87	31495.00	1	2064.58	4.8436	0.0303	0.0	0.0	0.0	1.18E-03	1.64E-02	1.01E-01
10	9	83	82	30070.30	1	2064.62	4.8435	0.0303	0.0	0.0	5.19E-05	2.53E-03	3.08E-02	1.71E-01
5	4	22	21	9050.34	2	2064.64	4.8435	0.0496	1.29E-03	5.43E-02	2.87E-01	6.80E-01	1.10E 00	1.45E 00
10	9	87	86	31204.08	1	2064.68	4.8434	0.0303	0.0	0.0	2.40E-05	1.38E-03	1.87E-02	1.12E-01
10	9	84	83	30349.24	1	2064.71	4.8433	0.0303	0.0	0.0	4.29E-05	2.18E-03	2.73E-02	1.55E-01
10	9	86	85	30916.14	1	2064.74	4.8432	0.0303	0.0	0.0	2.92E-05	1.61E-03	2.12E-02	1.25E-01
10	9	85	84	30631.19	1	2064.75	4.8432	0.0303	0.0	0.0	3.54E-05	1.88E-03	2.41E-02	1.39E-01
6	5	16	15	10892.23	1	2065.38	4.8417	0.0591	7.42E-03	7.60E-01	6.26E 00	1.94E 01	3.75E 01	5.60E 01
9	8	51	50	20914.12	1	2065.54	4.8413	0.0303	0.0	2.36E-04	2.15E-02	2.81E-01	1.42E 00	4.22E 00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	45	44	15620.85	2	2065.82	4.8407	0.0303	0.0	2.81E-04	7.17E-03	4.37E-02	1.33E-01	2.74E-01
5	4	8	7	8518.15	1	2066.10	4.8400	0.0623	9.47E-02	3.11E 00	1.45E 01	3.19E 01	4.91E 01	6.23E 01
3	2	6	5	4220.97	2	2066.46	4.8392	0.0617	2.21E-01	9.22E-01	1.53E 00	1.81E 00	1.84E 00	1.74E 00
8	7	37	36	16835.92	1	2066.69	4.8387	0.0308	0.0	7.70E-03	2.64E-01	1.92E 00	6.67E 00	1.47E 01
6	5	33	32	12076.10	2	2066.86	4.8383	0.0326	2.96E-05	5.33E-03	5.82E-02	2.13E-01	4.61E-01	7.46E-01
4	3	14	13	6537.71	2	2066.88	4.8382	0.0604	2.45E-02	3.10E-01	8.96E-01	1.48E 00	1.88E 00	2.08E 00
9	8	52	51	21092.69	1	2067.09	4.8377	0.0303	0.0	2.03E-04	1.93E-02	2.59E-01	1.33E 00	4.00E 00
2	1	0	1	2099.72	2	2067.10	4.8377	0.0603	5.22E-01	7.86E-01	7.84E-01	6.83E-01	5.67E-01	4.64E-01
7	6	26	25	13642.53	1	2067.18	4.8375	0.0418	2.67E-04	1.02E-01	1.63E 00	7.50E 00	1.89E 01	3.40E 01
3	2	5	6	4339.32	1	2067.19	4.8375	0.0617	1.76E 01	7.77E 01	1.33E 02	1.60E 02	1.65E 02	1.58E 02
5	4	23	22	9128.10	2	2067.40	4.8370	0.0476	1.20E-03	5.28E-02	2.84E-01	6.81E-01	1.11E 00	1.47E 00
7	6	46	45	15775.39	2	2067.65	4.8364	0.0303	0.0	2.48E-04	6.56E-03	4.09E-02	1.26E-01	2.63E-01
4	3	1	0	6350.41	1	2067.71	4.8363	0.0603	2.15E-01	2.50E 00	6.93E 00	1.12E 01	1.39E 01	1.53E 01
6	5	17	16	10950.85	1	2068.43	4.8346	0.0585	7.26E-03	7.65E-01	6.39E 00	2.00E 01	3.88E 01	5.82E 01
9	8	53	52	21274.62	1	2068.60	4.8342	0.0303	0.0	1.73E-04	1.72E-02	2.38E-01	1.24E 00	3.78E 00
2	1	11	12	2440.32	1	2068.79	4.8337	0.0617	3.62E 02	6.44E 02	6.99E 02	6.41E 02	5.51E 02	4.61E 02
1	0	17	18	656.82	1	2068.84	4.8336	0.0568	3.54E 03	2.68E 03	1.90E 03	1.35E 03	9.75E 02	7.22E 02
8	7	38	37	16967.88	1	2068.86	4.8336	0.0303	0.0	6.98E-03	2.47E-01	1.83E 00	6.34E 00	1.44E 01
6	5	34	33	12191.21	2	2069.18	4.8328	0.0321	2.59E-05	4.93E-03	5.53E-02	2.06E-01	4.50E-01	7.34E-01
7	6	47	46	15933.27	2	2069.45	4.8322	0.0303	0.0	2.19E-04	5.99E-03	3.82E-02	1.20E-01	2.52E-01
5	4	9	8	8547.78	1	2069.48	4.8321	0.0624	1.02E-01	3.41E 00	1.60E 01	3.53E 01	5.45E 01	6.94E 01
1	0	6	7	102.91	2	2069.66	4.8317	0.0620	3.25E 01	1.88E 01	1.16E 01	7.59E 00	5.20E 00	3.71E 00
7	6	27	26	13736.61	1	2069.82	4.8313	0.0398	2.43E-04	9.72E-02	1.58E 00	7.39E 00	1.88E 01	3.41E 01
3	2	7	6	4242.63	2	2069.84	4.8313	0.0620	2.51E-01	1.06E 00	1.76E 00	2.09E 00	2.13E 00	2.02E 00
4	3	15	14	6587.74	2	2069.96	4.8310	0.0597	2.45E-02	3.17E-01	9.28E-01	1.54E 00	1.97E 00	2.19E 00
9	8	54	53	21459.91	1	2070.07	4.8308	0.0303	0.0	1.49E-04	1.54E-02	2.18E-01	1.16E 00	3.57E 00
5	4	24	23	9209.37	2	2070.12	4.8306	0.0457	1.12E-03	5.10E-02	2.80E-01	6.79E-01	1.11E 00	1.48E 00
8	7	39	38	17103.34	1	2070.99	4.8286	0.0303	0.0	6.30E-03	2.30E-01	1.74E 00	6.10E 00	1.40E 01
3	2	4	5	4316.68	1	2071.14	4.8283	0.0614	1.52E 01	6.63E 01	1.13E 02	1.36E 02	1.40E 02	1.33E 02
7	6	48	47	16094.49	2	2071.21	4.8281	0.0303	0.0	1.91E-04	5.45E-03	3.56E-02	1.13E-01	2.41E-01
4	3	2	1	6354.16	1	2071.38	4.8277	0.0606	4.29E-01	4.99E 00	1.38E 01	2.23E 01	2.79E 01	3.06E 01
6	5	18	17	11013.12	1	2071.45	4.8275	0.0568	7.04E-03	7.64E-01	6.48E 00	2.04E 01	3.99E 01	6.02E 01
6	5	35	34	12309.75	2	2071.47	4.8275	0.0317	2.25E-05	4.53E-03	5.23E-02	1.98E-01	4.38E-01	7.21E-01
9	8	55	54	21648.56	1	2071.50	4.8274	0.0303	0.0	1.26E-04	1.37E-02	1.99E-01	1.08E 00	3.37E 00
7	6	28	27	13834.28	1	2072.42	4.8253	0.0379	2.19E-04	9.19E-02	1.53E 00	7.25E 00	1.86E 01	3.40E 01
5	4	25	24	9294.14	2	2072.81	4.8244	0.0437	1.03E-03	4.90E-02	2.75E-01	6.75E-01	1.12E 00	1.49E 00
5	4	10	9	8581.11	1	2072.83	4.8243	0.0624	1.09E-01	3.67E 00	1.74E 01	3.86E 01	5.98E 01	7.62E 01
9	8	56	55	21840.56	1	2072.88	4.8242	0.0303	0.0	1.07E-04	1.21E-02	1.82E-01	1.00E 00	3.17E 00
7	6	49	48	16259.04	2	2072.93	4.8241	0.0303	0.0	1.66E-04	4.95E-03	3.31E-02	1.07E-01	2.30E-01
2	1	10	11	2394.64	1	2072.98	4.8240	0.0625	3.55E 02	6.18E 02	6.63E 02	6.05E 02	5.17E 02	4.32E 02
4	3	16	15	6641.34	2	2073.00	4.8239	0.0591	2.42E-02	3.22E-01	9.54E-01	1.60E 00	2.05E 00	2.29E 00
8	7	40	39	17242.29	1	2073.07	4.8238	0.0303	0.0	5.66E-03	2.14E-01	1.65E 00	5.86E 00	1.35E 01
3	2	8	7	4267.90	2	2073.18	4.8235	0.0623	2.77E-01	1.18E 00	1.98E 00	2.36E 00	2.41E 00	2.29E 00
1	0	16	17	587.75	1	2073.26	4.8233	0.0585	3.70E 03	2.71E 03	1.89E 03	1.33E 03	9.54E 02	7.04E 02
1	0	5	6	77.19	2	2073.53	4.8227	0.0617	2.89E 01	1.65E 01	1.01E 01	6.62E 00	4.53E 00	3.22E 00
6	5	36	35	12431.72	2	2073.72	4.8223	0.0312	0.0	4.15E-03	4.94E-02	1.90E-01	4.26E-01	7.07E-01
9	8	57	56	22035.89	1	2074.22	4.8211	0.0303	0.0	9.00E-05	1.07E-02	1.65E-01	9.30E-01	2.98E 00
2	1	1	0	2096.07	2	2074.36	4.8208	0.0603	5.26E-01	7.92E-01	7.89E-01	6.88E-01	5.71E-01	4.67E-01
6	5	19	18	11079.05	1	2074.43	4.8206	0.0552	6.76E-03	7.58E-01	6.54E 00	2.08E 01	4.09E 01	6.19E 01
7	6	50	49	16426.90	2	2074.61	4.8202	0.0303	0.0	1.45E-04	4.48E-03	3.07E-02	1.01E-01	2.20E-01
7	6	29	28	13935.53	1	2074.98	4.8193	0.0359	1.96E-04	8.65E-02	1.48E 00	7.10E 00	1.84E 01	3.38E 01
4	3	3	2	6361.64	1	2075.02	4.8192	0.0609	6.38E-01	7.45E 00	2.07E 01	3.34E 01	4.18E 01	4.56E 01
3	2	3	4	4297.80	1	2075.05	4.8192	0.0611	1.25E 01	5.41E 01	9.18E 01	1.10E 02	1.13E 02	1.07E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	41	40	17384.73	1	2075.12	4.8190	0.0303	0.0	5.06E-03	1.98E-01	1.56E 00	5.62E 00	1.31E 01
5	4	26	25	9382.42	2	2075.46	4.8182	0.0418	9.47E-04	4.69E-02	2.69E-01	6.68E-01	1.12E 00	1.50E 00
9	8	58	57	22234.55	1	2075.51	4.8181	0.0303	0.0	7.58E-05	9.48E-03	1.50E-01	8.61E-01	2.80E 00
6	5	37	36	12557.12	2	2075.94	4.8171	0.0308	0.0	3.79E-03	4.64E-02	1.82E-01	4.13E-01	6.91E-01
4	3	17	16	6698.49	2	2076.00	4.8170	0.0585	2.37E-02	3.24E-01	9.74E-01	1.65E 00	2.13E 00	2.38E 00
5	4	11	10	8618.14	1	2076.14	4.8166	0.0625	1.13E-01	3.90E 00	1.87E 01	4.16E 01	6.47E 01	8.28E 01
7	6	51	50	16598.08	2	2076.26	4.8164	0.0303	0.0	1.25E-04	4.04E-03	2.84E-02	9.48E-02	2.09E-01
3	2	9	8	4296.77	2	2076.49	4.8158	0.0624	2.99E-01	1.29E 00	2.19E 00	2.62E 00	2.68E 00	2.55E 00
9	8	59	58	22436.54	1	2076.77	4.8152	0.0303	0.0	6.35E-05	8.34E-03	1.36E-01	7.95E-01	2.62E 00
8	7	42	41	17530.64	1	2077.13	4.8143	0.0303	0.0	4.51E-03	1.83E-01	1.47E 00	5.37E 00	1.27E 01
2	1	9	10	2352.76	1	2077.13	4.8143	0.0624	3.43E 02	5.86E 02	6.23E 02	5.65E 02	4.81E 02	4.01E 02
1	0	4	5	55.14	2	2077.37	4.8138	0.0614	2.49E 01	1.41E 01	8.61E 00	5.60E 00	3.82E 00	2.71E 00
6	5	20	19	11148.61	1	2077.38	4.8138	0.0535	6.45E-03	7.48E-01	6.56E 00	2.11E 01	4.17E 01	6.35E 01
7	6	30	29	14040.35	1	2077.50	4.8135	0.0340	1.75E-04	8.10E-02	1.42E 00	6.92E 00	1.81E 01	3.35E 01
1	0	15	16	522.50	1	2077.65	4.8131	0.0591	3.83E 03	2.72E 03	1.87E 03	1.30E 03	9.29E 02	6.82E 02
7	6	52	51	16772.57	2	2077.86	4.8126	0.0303	0.0	1.08E-04	3.64E-03	2.62E-02	8.89E-02	1.99E-01
2	1	2	1	2099.72	2	2077.94	4.8125	0.0606	1.05E 00	1.58E 00	1.58E 00	1.38E 00	1.14E 00	9.34E-01
9	8	60	59	22641.83	1	2077.97	4.8124	0.0303	0.0	5.31E-05	7.32E-03	1.23E-01	7.33E-01	2.45E 00
5	4	27	26	9474.20	2	2078.08	4.8121	0.0398	8.63E-04	4.47E-02	2.61E-01	6.59E-01	1.11E 00	1.50E 00
6	5	38	37	12685.95	2	2078.11	4.8121	0.0303	0.0	3.44E-03	4.35E-02	1.74E-01	3.99E-01	6.74E-01
4	3	4	3	6372.86	1	2078.62	4.8109	0.0611	8.38E-01	9.84E 00	2.74E 01	4.44E 01	5.56E 01	6.10E 01
3	2	2	3	4282.70	1	2078.93	4.8102	0.0609	9.58E 00	4.13E 01	6.97E 01	8.34E 01	8.56E 01	8.13E 01
4	3	18	17	6759.20	2	2078.97	4.8101	0.0568	2.30E-02	3.24E-01	9.89E-01	1.69E 00	2.19E 00	2.46E 00
8	7	43	42	17680.03	1	2079.09	4.8098	0.0303	0.0	4.01E-03	1.68E-01	1.38E 00	5.13E 00	1.22E 01
9	8	61	60	22850.43	1	2079.14	4.8097	0.0303	0.0	4.42E-05	6.41E-03	1.11E-01	6.75E-01	2.29E 00
5	4	12	11	8658.86	1	2079.42	4.8090	0.0617	1.17E-01	4.10E 00	1.98E 01	4.45E 01	6.94E 01	8.90E 01
7	6	53	52	16950.35	2	2079.42	4.8090	0.0303	0.0	9.29E-05	3.27E-03	2.41E-02	8.33E-02	1.88E-01
3	2	10	9	4329.25	2	2079.77	4.8082	0.0624	3.18E-01	1.40E 00	2.38E 00	2.86E 00	2.94E 00	2.80E 00
7	6	31	30	14148.75	1	2079.99	4.8077	0.0335	1.55E-04	7.55E-02	1.36E 00	6.73E 00	1.78E 01	3.32E 01
6	5	39	38	12818.19	2	2080.25	4.8071	0.0303	0.0	3.12E-03	4.07E-02	1.66E-01	3.85E-01	6.56E-01
9	8	62	61	23062.32	1	2080.26	4.8071	0.0303	0.0	3.66E-05	5.59E-03	9.98E-02	6.20E-01	2.13E 00
6	5	21	20	11221.82	1	2080.28	4.8070	0.0515	6.10E-03	7.33E-01	6.54E 00	2.12E 01	4.24E 01	6.48E 01
5	4	28	27	9569.48	2	2080.66	4.8062	0.0379	7.81E-04	4.23E-02	2.54E-01	6.48E-01	1.10E 00	1.50E 00
9	8	109	108	36539.95	1	2080.80	4.8058	0.0303	0.0	0.0	0.0	7.24E-05	1.64E-03	1.42E-02
7	6	54	53	17131.43	2	2080.94	4.8055	0.0303	0.0	7.96E-05	2.92E-03	2.22E-02	7.79E-02	1.78E-01
8	7	44	43	17832.88	1	2081.01	4.8054	0.0303	0.0	3.54E-03	1.54E-01	1.30E 00	4.88E 00	1.17E 01
1	0	3	4	36.76	2	2081.17	4.8050	0.0611	2.05E 01	1.15E 01	6.99E 00	4.63E 00	3.09E 00	2.19E 00
2	1	8	9	2314.69	1	2081.25	4.8048	0.0624	3.27E 02	5.48E 02	5.78E 02	5.21E 02	4.42E 02	3.67E 02
9	8	63	62	23277.50	1	2081.34	4.8046	0.0303	0.0	3.03E-05	4.87E-03	8.96E-02	5.68E-01	1.98E 00
2	1	3	2	2107.00	2	2081.48	4.8043	0.0609	1.56E 00	2.36E 00	2.36E 00	2.06E 00	1.71E 00	1.40E 00
4	3	19	18	6823.48	2	2081.90	4.8033	0.0552	2.22E-02	3.22E-01	9.99E-01	1.72E 00	2.25E 00	2.54E 00
9	8	108	107	36185.95	1	2081.91	4.8033	0.0303	0.0	0.0	0.0	8.81E-05	1.93E-03	1.63E-02
1	0	14	15	461.08	1	2082.00	4.8031	0.0597	3.93E 03	2.71E 03	1.83E 03	1.27E 03	9.00E 02	6.58E 02
4	3	5	4	6387.82	1	2082.18	4.8027	0.0614	1.03E 00	1.22E 01	3.40E 01	5.51E 01	6.92E 01	7.59E 01
6	5	40	39	12953.84	2	2082.35	4.8023	0.0303	0.0	2.81E-03	3.79E-02	1.58E-01	3.71E-01	6.37E-01
9	8	64	63	23495.95	1	2082.37	4.8022	0.0303	0.0	2.50E-05	4.23E-03	8.03E-02	5.20E-01	1.84E 00
7	6	32	31	14260.70	1	2082.43	4.8021	0.0331	1.36E-04	7.01E-02	1.30E 00	6.52E 00	1.74E 01	3.28E 01
7	6	55	54	17315.80	2	2082.43	4.8021	0.0303	0.0	6.80E-05	2.61E-03	2.03E-02	7.27E-02	1.68E-01
5	4	13	12	8703.29	1	2082.66	4.8016	0.0610	1.19E-01	4.27E 00	2.08E 01	4.70E 01	7.37E 01	9.49E 01
3	2	1	2	4271.38	1	2082.78	4.8013	0.0606	6.50E 00	2.79E 01	4.70E 01	5.61E 01	5.75E 01	5.46E 01
8	7	45	44	17989.20	1	2082.90	4.8010	0.0303	0.0	3.12E-03	1.41E-01	1.21E 00	4.64E 00	1.13E 01
9	8	107	106	35834.66	1	2082.96	4.8009	0.0303	0.0	0.0	0.0	1.07E-04	2.27E-03	1.87E-02
3	2	11	10	4365.34	2	2083.01	4.8007	0.0625	3.32E-01	1.49E 00	2.55E 00	3.09E 00	3.19E 00	3.04E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	22	21	11298.67	1	2083.15	4.8004	0.0496	5.73E-03	7.14E-01	6.49E 00	2.13E 01	4.29E 01	6.59E 01
5	4	29	28	9668.25	2	2083.20	4.8003	0.0359	7.03E-04	3.99E-02	2.45E-01	6.35E-01	1.09E 00	1.50E 00
9	8	65	64	23717.67	1	2083.36	4.7999	0.0303	0.0	2.05E-05	3.66E-03	7.18E-02	4.75E-01	1.71E 00
7	6	56	55	17503.45	2	2083.87	4.7988	0.0303	0.0	5.79E-05	2.32E-03	1.86E-02	6.77E-02	1.59E-01
9	8	106	105	35486.10	1	2083.96	4.7986	0.0303	0.0	0.0	0.0	1.30E-04	2.66E-03	2.14E-02
9	8	66	65	23942.65	1	2084.31	4.7978	0.0303	0.0	0.0	3.16E-03	6.40E-02	4.33E-01	1.59E 00
6	5	41	40	13092.91	2	2084.41	4.7975	0.0303	0.0	2.52E-03	3.52E-02	1.49E-01	3.56E-01	6.18E-01
8	7	46	45	18148.97	1	2084.74	4.7968	0.0303	0.0	2.74E-03	1.29E-01	1.13E 00	4.39E 00	1.08E 01
4	3	20	19	6891.30	2	2084.80	4.7966	0.0535	2.12E-02	3.18E-01	1.00E 00	1.74E 00	2.29E 00	2.60E 00
7	6	33	32	14376.23	1	2084.84	4.7965	0.0326	1.19E-04	6.48E-02	1.23E 00	6.30E 00	1.70E 01	3.23E 01
9	8	105	104	35140.28	1	2084.92	4.7963	0.0303	0.0	0.0	0.0	1.67E-04	3.11E-03	2.45E-02
1	0	2	3	22.06	2	2084.95	4.7963	0.0609	1.57E 01	8.75E 00	5.31E 00	3.44E 00	2.34E 00	1.66E 00
2	1	4	3	2117.93	2	2084.99	4.7962	0.0611	2.05E 00	3.12E 00	3.13E 00	2.74E 00	2.28E 00	1.86E 00
9	8	67	66	24170.88	1	2085.20	4.7957	0.0303	0.0	0.0	2.72E-03	5.70E-02	3.94E-01	1.46E 00
7	6	57	56	17694.37	2	2085.27	4.7955	0.0303	0.0	4.91E-05	2.06E-03	1.70E-02	6.29E-02	1.50E-01
2	1	7	8	2280.41	1	2085.33	4.7954	0.0623	3.06E 02	5.04E 02	5.27E 02	4.73E 02	4.01E 02	3.32E 02
5	4	30	29	9770.52	2	2085.70	4.7946	0.0340	6.28E-04	3.75E-02	2.36E-01	6.20E-01	1.08E 00	1.49E 00
4	3	6	5	6406.52	1	2085.71	4.7945	0.0617	1.20E 00	1.43E 01	4.04E 01	6.56E 01	8.25E 01	9.06E 01
9	8	104	103	34797.22	1	2085.82	4.7943	0.0303	0.0	0.0	0.0	1.90E-04	3.64E-03	2.80E-02
5	4	14	13	8751.40	1	2085.86	4.7942	0.0604	1.20E-01	4.39E 00	2.17E 01	4.94E 01	7.78E 01	1.00E 02
6	5	23	22	11379.15	1	2085.98	4.7939	0.0476	5.34E-03	6.92E-01	6.42E 00	2.13E 01	4.32E 01	6.68E 01
9	8	68	67	24402.34	1	2086.06	4.7937	0.0303	0.0	0.0	2.34E-03	5.06E-02	3.58E-01	1.35E 00
3	2	12	11	4405.02	2	2086.22	4.7934	0.0617	3.43E-01	1.56E 00	2.71E 00	3.30E 00	3.42E 00	3.27E 00
1	0	13	14	403.48	1	2086.32	4.7931	0.0604	4.00E 03	2.68E 03	1.79E 03	1.22E 03	8.66E 02	6.31E 02
6	5	42	41	13235.37	2	2086.44	4.7929	0.0303	0.0	2.26E-03	3.26E-02	1.41E-01	3.41E-01	5.98E-01
8	7	47	46	18312.18	1	2086.54	4.7926	0.0303	0.0	2.40E-03	1.17E-01	1.05E 00	4.16E 00	1.03E 01
3	2	0	1	4263.83	1	2086.59	4.7925	0.0603	3.29E 00	1.41E 01	2.37E 01	2.82E 01	2.89E 01	2.74E 01
7	6	58	57	17888.55	2	2086.64	4.7924	0.0303	0.0	4.15E-05	1.83E-03	1.55E-02	5.84E-02	1.41E-01
9	8	103	102	34456.93	1	2086.67	4.7923	0.0303	0.0	0.0	0.0	2.29E-04	4.25E-03	3.19E-02
9	8	69	68	24637.04	1	2086.87	4.7919	0.0303	0.0	0.0	2.01E-03	4.49E-02	3.24E-01	1.24E 00
7	6	34	33	14495.30	1	2087.20	4.7911	0.0321	1.03E-04	5.96E-02	1.17E 00	6.07E 00	1.66E 01	3.17E 01
9	8	102	101	34119.43	1	2087.47	4.7905	0.0303	0.0	0.0	0.0	2.76E-04	4.96E-03	3.64E-02
9	8	70	69	24874.95	1	2087.64	4.7901	0.0303	0.0	0.0	1.71E-03	3.97E-02	2.94E-01	1.14E 00
4	3	21	20	6962.68	2	2087.66	4.7901	0.0515	2.01E-02	3.13E-01	1.00E 00	1.76E 00	2.33E 00	2.66E 00
7	6	59	58	18085.99	2	2087.96	4.7894	0.0303	0.0	3.49E-05	1.61E-03	1.40E-02	5.41E-02	1.32E-01
5	4	31	30	9876.27	2	2088.17	4.7889	0.0335	5.58E-04	3.51E-02	2.26E-01	6.04E-01	1.06E 00	1.47E 00
9	8	101	100	33784.73	1	2088.22	4.7888	0.0303	0.0	0.0	0.0	3.32E-04	5.77E-03	4.14E-02
8	7	48	47	18478.84	1	2088.29	4.7886	0.0303	0.0	2.09E-03	1.06E-01	9.80E-01	3.92E 00	9.86E 00
9	8	71	70	25116.07	1	2088.36	4.7884	0.0303	0.0	0.0	1.46E-03	3.51E-02	2.65E-01	1.05E 00
6	5	43	42	13381.23	2	2088.42	4.7883	0.0303	0.0	2.01E-03	3.00E-02	1.33E-01	3.26E-01	5.77E-01
2	1	5	4	2132.50	2	2088.47	4.7882	0.0614	2.52E 00	3.85E 00	3.88E 00	3.40E 00	2.84E 00	2.32E 00
1	0	1	2	11.03	2	2088.69	4.7877	0.0606	1.07E 01	5.91E 00	3.58E 00	2.31E 00	1.57E 00	1.11E 00
6	5	24	23	11463.27	1	2088.77	4.7875	0.0457	4.94E-03	6.67E-01	6.31E 00	2.12E 01	4.34E 01	6.74E 01
9	8	100	99	33452.85	1	2088.93	4.7871	0.0303	0.0	0.0	0.0	3.99E-04	6.71E-03	4.71E-02
5	4	15	14	8803.20	1	2089.02	4.7869	0.0597	1.19E-01	4.49E 00	2.24E 01	5.15E 01	8.14E 01	1.06E 02
9	8	72	71	25360.39	1	2089.03	4.7869	0.0303	0.0	0.0	1.24E-03	3.09E-02	2.39E-01	9.64E-01
4	3	7	6	6428.95	1	2089.20	4.7865	0.0620	1.36E 00	1.64E 01	4.64E 01	7.57E 01	9.54E 01	1.05E 02
7	6	60	59	18286.68	2	2089.24	4.7864	0.0303	0.0	2.93E-05	1.42E-03	1.27E-02	5.00E-02	1.24E-01
2	1	6	7	2249.94	1	2089.38	4.7861	0.0620	2.80E 02	4.55E 02	4.73E 02	4.22E 02	3.57E 02	2.95E 02
3	2	13	12	4448.31	2	2089.40	4.7861	0.0610	3.50E-01	1.63E 00	2.85E 00	3.49E 00	3.64E 00	3.49E 00
7	6	35	34	14617.93	1	2089.52	4.7858	0.0317	8.92E-05	5.46E-02	1.10E 00	5.83E 00	1.61E 01	3.11E 01
9	8	99	98	33123.80	1	2089.58	4.7857	0.0303	0.0	0.0	0.0	4.78E-04	7.79E-03	5.34E-02
9	8	73	72	25607.89	1	2089.66	4.7855	0.0303	0.0	0.0	1.05E-03	2.72E-02	2.15E-01	8.82E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	49	48	18648.93	1	2090.01	4.7847	0.0303	0.0	1.81E-03	9.59E-02	9.08E-01	3.69E 00	9.39E 00
9	8	98	97	32797.60	1	2090.18	4.7843	0.0303	0.0	0.0	0.0	5.71E-04	9.04E-03	6.06E-02
9	8	74	73	25858.57	1	2090.24	4.7841	0.0303	0.0	0.0	8.93E-04	2.38E-02	1.94E-01	8.07E-01
6	5	44	43	13530.48	2	2090.37	4.7838	0.0303	0.0	1.78E-03	2.76E-02	1.25E-01	3.11E-01	5.56E-01
7	6	61	60	18490.61	2	2090.48	4.7836	0.0303	0.0	2.45E-05	1.25E-03	1.15E-02	4.61E-02	1.16E-01
4	3	22	21	7037.61	2	2090.49	4.7836	0.0496	1.90E-02	3.05E-01	9.96E-01	1.77E 00	2.36E 00	2.71E 00
5	4	32	31	9985.50	2	2090.60	4.7833	0.0331	4.93E-04	3.26E-02	2.16E-01	5.86E-01	1.04E 00	1.46E 00
1	0	12	13	349.72	1	2090.61	4.7833	0.0610	4.02E 03	2.63E 03	1.73E 03	1.18E 03	8.27E 02	6.00E 02
9	8	97	96	32474.26	1	2090.74	4.7830	0.0303	0.0	0.0	0.0	6.82E-04	1.05E-02	6.86E-02
9	8	75	74	26112.42	1	2090.78	4.7829	0.0303	0.0	0.0	7.54E-04	2.09E-02	1.74E-01	7.37E-01
9	8	96	95	32153.80	1	2091.25	4.7818	0.0303	0.0	0.0	0.0	8.13E-04	1.21E-02	7.75E-02
9	8	76	75	26369.43	1	2091.27	4.7818	0.0303	0.0	0.0	6.35E-04	1.82E-02	1.56E-01	6.71E-01
6	5	25	24	11551.01	1	2091.52	4.7812	0.0437	4.54E-03	6.40E-01	6.18E 00	2.11E 01	4.34E 01	6.78E 01
7	6	62	61	18697.77	2	2091.68	4.7808	0.0303	0.0	2.04E-05	1.09E-03	1.04E-02	4.24E-02	1.08E-01
8	7	50	49	18822.44	1	2091.68	4.7808	0.0303	0.0	1.57E-03	8.65E-02	8.39E-01	3.47E 00	8.93E 00
9	8	95	94	31836.23	1	2091.70	4.7808	0.0303	0.0	0.0	0.0	9.67E-04	1.39E-02	8.76E-02
9	8	77	76	26629.57	1	2091.72	4.7808	0.0303	0.0	0.0	5.33E-04	1.59E-02	1.39E-01	6.11E-01
7	6	36	35	14744.11	1	2091.81	4.7805	0.0312	7.66E-05	4.99E-02	1.04E 00	5.59E 00	1.56E 01	3.04E 01
2	1	6	5	2150.72	2	2091.92	4.7803	0.0617	2.95E 00	4.55E 00	4.60E 00	4.05E 00	3.38E 00	2.77E 00
9	8	94	93	31521.56	1	2092.11	4.7799	0.0303	0.0	0.0	0.0	1.15E-03	1.61E-02	9.87E-02
9	8	78	77	26892.85	1	2092.12	4.7798	0.0303	0.0	0.0	4.47E-04	1.38E-02	1.24E-01	5.55E-01
5	4	16	15	8858.70	1	2092.15	4.7798	0.0591	1.17E-01	4.55E 00	2.30E 01	5.33E 01	8.48E 01	1.10E 02
6	5	45	44	13683.11	2	2092.28	4.7795	0.0303	0.0	1.58E-03	2.54E-02	1.17E-01	2.96E-01	5.35E-01
1	0	0	1	3.68	2	2092.40	4.7792	0.0603	5.40E 00	2.98E 00	1.80E 00	1.16E 00	7.90E-01	5.60E-01
9	8	93	92	31209.82	1	2092.47	4.7790	0.0303	0.0	0.0	2.36E-05	1.36E-03	1.85E-02	1.11E-01
9	8	79	78	27159.25	1	2092.47	4.7790	0.0303	0.0	0.0	3.73E-04	1.20E-02	1.11E-01	5.04E-01
3	2	14	13	4495.20	2	2092.54	4.7789	0.0604	3.53E-01	1.68E 00	2.98E 00	3.67E 00	3.84E 00	3.70E 00
4	3	8	7	6455.12	1	2092.66	4.7786	0.0623	1.50E 00	1.83E 01	5.22E 01	8.54E 01	1.08E 02	1.19E 02
9	8	92	91	30901.00	1	2092.78	4.7783	0.0303	0.0	0.0	2.92E-05	1.61E-03	2.12E-02	1.25E-01
9	8	80	79	27428.76	1	2092.78	4.7783	0.0303	0.0	0.0	3.11E-04	1.04E-02	9.84E-02	4.57E-01
7	6	63	62	18908.16	2	2092.84	4.7782	0.0303	0.0	0.0	9.55E-04	9.36E-03	3.90E-02	1.01E-01
5	4	33	32	10098.21	2	2093.00	4.7778	0.0326	4.33E-04	3.03E-02	2.06E-01	5.69E-01	1.02E 00	1.44E 00
9	8	91	90	30595.13	1	2093.04	4.7777	0.0303	0.0	0.0	3.61E-05	1.90E-03	2.44E-02	1.40E-01
9	8	81	80	27701.36	1	2093.04	4.7777	0.0303	0.0	0.0	2.59E-04	9.01E-03	8.74E-02	4.13E-01
9	8	82	81	27977.05	1	2093.25	4.7773	0.0303	0.0	0.0	2.15E-04	7.78E-03	7.75E-02	3.73E-01
9	8	90	89	30292.22	1	2093.26	4.7772	0.0303	0.0	0.0	4.44E-05	2.24E-03	2.79E-02	1.57E-01
4	3	23	22	7116.09	2	2093.28	4.7772	0.0476	1.77E-02	2.96E-01	9.86E-01	1.77E 00	2.38E 00	2.75E 00
8	7	51	50	18999.38	1	2093.31	4.7771	0.0303	0.0	1.35E-03	7.77E-02	7.73E-01	3.26E 00	8.48E 00
2	1	5	6	2223.28	1	2093.40	4.7769	0.0617	2.50E 02	4.01E 02	4.14E 02	3.69E 02	3.10E 02	2.56E 02
9	8	89	88	29992.29	1	2093.42	4.7769	0.0303	0.0	0.0	5.45E-05	2.64E-03	3.19E-02	1.76E-01
9	8	83	82	28255.82	1	2093.42	4.7769	0.0303	0.0	0.0	1.78E-04	6.70E-03	6.86E-02	3.37E-01
9	8	84	83	28537.65	1	2093.54	4.7766	0.0303	0.0	0.0	1.47E-04	5.77E-03	6.06E-02	3.03E-01
9	8	88	87	29695.34	1	2093.54	4.7766	0.0303	0.0	0.0	6.68E-05	3.10E-03	3.64E-02	1.97E-01
9	8	85	84	28822.53	1	2093.61	4.7764	0.0303	0.0	0.0	1.21E-04	4.95E-03	5.35E-02	2.73E-01
9	8	87	86	29401.38	1	2093.61	4.7764	0.0303	0.0	0.0	8.16E-05	3.63E-03	4.14E-02	2.20E-01
9	8	86	85	29110.45	1	2093.63	4.7764	0.0303	0.0	0.0	9.95E-05	4.24E-03	4.71E-02	2.45E-01
7	6	64	63	19121.76	2	2093.96	4.7756	0.0303	0.0	0.0	8.33E-04	8.41E-03	3.58E-02	9.39E-02
7	6	37	36	14873.83	1	2094.05	4.7754	0.0308	6.54E-05	4.53E-02	9.71E-01	5.34E 00	1.51E 01	2.97E 01
3	2	1	0	4260.05	1	2094.10	4.7753	0.0603	3.32E 00	1.42E 01	2.38E 01	2.84E 01	2.91E 01	2.76E 01
6	5	46	45	13839.13	2	2094.15	4.7752	0.0303	0.0	1.39E-03	2.32E-02	1.10E-01	2.81E-01	5.13E-01
6	5	26	25	11642.38	1	2094.23	4.7750	0.0418	4.15E-03	6.10E-01	6.03E 00	2.08E 01	4.33E 01	6.81E 01
1	0	11	12	299.78	1	2094.86	4.7736	0.0617	3.99E 03	2.55E 03	1.66E 03	1.12E 03	7.84E 02	5.67E 02
8	7	52	51	19179.72	1	2094.90	4.7735	0.0303	0.0	1.16E-03	6.97E-02	7.11E-01	3.05E 00	8.04E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	65	64	19338.57	2	2095.04	4.7732	0.0303	0.0	0.0	7.24E-04	7.55E-03	3.28E-02	8.73E-02
5	4	17	16	8917.88	1	2095.24	4.7727	0.0585	1.15E-01	4.57E 00	2.35E 01	5.48E 01	8.77E 01	1.15E 02
2	1	7	6	2172.57	2	2095.33	4.7725	0.0620	3.34E 00	5.21E 00	5.30E 00	4.68E 00	3.91E 00	3.21E 00
5	4	34	33	10214.39	2	2095.36	4.7724	0.0321	3.78E-04	2.79E-02	1.95E-01	5.48E-01	9.92E-01	1.41E 00
3	2	15	14	4545.69	2	2095.64	4.7718	0.0597	3.52E-01	1.72E 00	3.08E 00	3.83E 00	4.02E 00	3.89E 00
6	5	47	46	13998.51	2	2095.98	4.7710	0.0303	0.0	1.22E-03	2.12E-02	1.02E-01	2.66E-01	4.92E-01
4	3	24	23	7198.11	2	2096.04	4.7709	0.0457	1.65E-02	2.86E-01	9.72E-01	1.77E 00	2.39E 00	2.78E 00
7	6	66	65	19558.57	2	2096.07	4.7708	0.0303	0.0	0.0	6.28E-04	6.75E-03	3.00E-02	8.10E-02
4	3	9	8	6485.03	1	2096.08	4.7708	0.0624	1.62E 00	2.01E 01	5.76E 01	9.46E 01	1.20E 02	1.33E 02
7	6	38	37	15007.09	1	2096.25	4.7704	0.0303	5.55E-05	4.10E-02	9.07E-01	5.08E 00	1.46E 01	2.89E 01
8	7	53	52	19363.47	1	2096.44	4.7700	0.0303	0.0	9.89E-04	6.22E-02	6.53E-01	2.85E 00	7.60E 00
6	5	27	26	11737.38	1	2096.91	4.7689	0.0398	3.76E-03	5.79E-01	5.86E 00	2.05E 01	4.30E 01	6.81E 01
7	6	67	66	19781.77	2	2097.07	4.7686	0.0303	0.0	0.0	5.43E-04	6.03E-03	2.73E-02	7.51E-02
2	1	4	5	2200.42	1	2097.38	4.7679	0.0614	2.15E 02	3.42E 02	3.51E 02	3.12E 02	2.62E 02	2.16E 02
5	4	35	34	10334.05	2	2097.68	4.7672	0.0317	3.28E-04	2.57E-02	1.85E-01	5.27E-01	9.66E-01	1.39E 00
6	5	48	47	14161.26	2	2097.77	4.7670	0.0303	0.0	1.07E-03	1.92E-02	9.52E-02	2.52E-01	4.70E-01
3	2	2	1	4263.83	1	2097.81	4.7669	0.0606	6.62E 00	2.83E 01	4.76E 01	5.69E 01	5.83E 01	5.53E 01
8	7	54	53	19550.62	1	2097.95	4.7666	0.0303	0.0	8.43E-04	5.55E-02	5.98E-01	2.65E 00	7.18E 00
7	6	68	67	20008.15	2	2098.02	4.7664	0.0303	0.0	0.0	4.68E-04	5.38E-03	2.49E-02	6.94E-02
5	4	18	17	8980.75	1	2098.29	4.7658	0.0568	1.11E-01	4.56E 00	2.38E 01	5.61E 01	9.03E 01	1.18E 02
7	6	39	38	15143.88	1	2098.42	4.7655	0.0303	4.68E-05	3.69E-02	8.45E-01	4.83E 00	1.40E 01	2.81E 01
2	1	8	7	2198.07	2	2098.70	4.7649	0.0623	3.68E 00	5.82E 00	5.96E 00	5.28E 00	4.43E 00	3.64E 00
3	2	16	15	4599.77	2	2098.71	4.7648	0.0591	3.48E-01	1.74E 00	3.17E 00	3.96E 00	4.19E 00	4.06E 00
4	3	25	24	7283.66	2	2098.76	4.7647	0.0437	1.52E-02	2.75E-01	9.53E-01	1.75E 00	2.40E 00	2.80E 00
7	6	69	68	20237.70	2	2098.93	4.7643	0.0303	0.0	0.0	4.03E-04	4.78E-03	2.26E-02	6.41E-02
1	0	10	11	253.68	1	2099.08	4.7640	0.0625	3.92E 03	2.45E 03	1.58E 03	1.06E 03	7.37E 02	5.31E 02
8	7	55	54	19741.15	1	2099.41	4.7632	0.0303	0.0	7.15E-04	4.93E-02	5.46E-01	2.47E 00	6.76E 00
4	3	10	9	6518.68	1	2099.46	4.7631	0.0624	1.72E 00	2.16E 01	6.26E 01	1.03E 02	1.31E 02	1.46E 02
6	5	49	48	14327.37	2	2099.52	4.7630	0.0303	0.0	9.30E-04	1.74E-02	8.85E-02	2.38E-01	4.49E-01
6	5	28	27	11835.99	1	2099.54	4.7629	0.0379	3.39E-03	5.47E-01	5.66E 00	2.01E 01	4.26E 01	6.79E 01
1	0	1	0	-0.0	2	2099.72	4.7625	0.0603	5.45E 00	3.00E 00	1.81E 00	1.17E 00	7.96E-01	5.63E-01
7	6	70	69	20470.42	2	2099.80	4.7624	0.0303	0.0	0.0	3.46E-04	4.24E-03	2.05E-02	5.91E-02
5	4	36	35	10457.16	2	2099.96	4.7620	0.0312	2.83E-04	2.35E-02	1.74E-01	5.06E-01	9.38E-01	1.36E 00
7	6	40	39	15284.19	1	2100.54	4.7607	0.0303	3.93E-05	3.31E-02	7.84E-01	4.57E 00	1.35E 01	2.72E 01
7	6	71	70	20706.29	2	2100.62	4.7605	0.0303	0.0	0.0	2.96E-04	3.76E-03	1.86E-02	5.45E-02
8	7	56	55	19935.07	1	2100.82	4.7600	0.0303	0.0	6.05E-04	4.37E-02	4.97E-01	2.29E 00	6.36E 00
6	5	50	49	14496.84	2	2101.24	4.7591	0.0303	0.0	8.07E-04	1.58E-02	8.20E-02	2.24E-01	4.28E-01
5	4	19	18	9047.30	1	2101.31	4.7589	0.0552	1.07E-01	4.53E 00	2.40E 01	5.71E 01	9.25E 01	1.22E 02
2	1	3	4	2181.37	1	2101.33	4.7589	0.0611	1.77E 02	2.79E 02	2.86E 02	2.53E 02	2.12E 02	1.75E 02
7	6	72	71	20945.30	2	2101.41	4.7587	0.0303	0.0	0.0	2.53E-04	3.32E-03	1.68E-02	5.01E-02
4	3	26	25	7372.76	2	2101.44	4.7586	0.0418	1.39E-02	2.63E-01	9.31E-01	1.74E 00	2.39E 00	2.81E 00
3	2	3	2	4271.38	1	2101.48	4.7586	0.0609	9.84E 00	4.22E 01	7.12E 01	8.52E 01	8.73E 01	8.29E 01
3	2	17	16	4657.45	2	2101.75	4.7579	0.0585	3.41E-01	1.75E 00	3.24E 00	4.08E 00	4.34E 00	4.22E 00
2	1	9	8	2227.21	2	2102.05	4.7573	0.0624	3.98E 00	6.38E 00	6.58E 00	5.85E 00	4.92E 00	4.06E 00
6	5	29	28	11938.21	1	2102.14	4.7571	0.0359	3.03E-03	5.15E-01	5.46E 00	1.97E 01	4.21E 01	6.76E 01
7	6	73	72	21187.44	2	2102.15	4.7570	0.0303	0.0	0.0	2.15E-04	2.93E-03	1.52E-02	4.60E-02
8	7	57	56	20132.36	1	2102.20	4.7569	0.0303	0.0	5.10E-04	3.86E-02	4.52E-01	2.12E 00	5.98E 00
5	4	37	36	10583.74	2	2102.21	4.7569	0.0308	2.42E-04	2.14E-02	1.64E-01	4.84E-01	9.08E-01	1.33E 00
7	6	41	40	15428.02	1	2102.62	4.7560	0.0303	3.27E-05	2.96E-02	7.26E-01	4.32E 00	1.29E 01	2.63E 01
4	3	11	10	6556.05	1	2102.81	4.7555	0.0625	1.79E 00	2.30E 01	6.71E 01	1.12E 02	1.42E 02	1.58E 02
7	6	74	73	21432.71	2	2102.85	4.7555	0.0303	0.0	0.0	1.83E-04	2.58E-03	1.37E-02	4.21E-02
6	5	51	50	14669.65	2	2102.91	4.7553	0.0303	0.0	6.98E-04	1.42E-02	7.58E-02	2.10E-01	4.07E-01
1	0	9	10	211.42	1	2103.27	4.7545	0.0624	3.79E 03	2.32E 03	1.48E 03	9.86E 02	6.85E 02	4.93E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	2	1	3.68	2	2103.33	4.7544	0.0606	1.09E 01	6.00F 00	3.63F 00	2.34F 00	1.59E 00	1.13E 00
7	6	75	74	21681.10	2	2103.51	4.7540	0.0303	0.0	0.0	1.55E-04	2.27E-03	1.23E-02	3.86E-02
8	7	58	57	20333.01	1	2103.53	4.7539	0.0303	0.0	4.28F-04	3.40E-02	4.10E-01	1.96F 00	5.60E 00
4	3	27	26	7465.39	2	2104.09	4.7526	0.0398	1.26E-02	2.50F-01	9.06E-01	1.71E 00	2.38E 00	2.81F 00
7	6	76	75	21932.59	2	2104.12	4.7526	0.0303	0.0	0.0	1.31E-04	1.99E-03	1.11E-02	3.53F-02
5	4	20	19	9117.53	1	2104.29	4.7522	0.0535	1.02E-01	4.46E 00	2.41F 01	5.78E 01	9.43E 01	1.25F 02
5	4	38	37	10713.77	2	2104.42	4.7519	0.0303	2.07E-04	1.94E-02	1.53E-01	4.62E-01	8.78E-01	1.30F 00
6	5	52	51	14845.80	2	2104.55	4.7516	0.0303	0.0	6.02F-04	1.28E-02	6.99E-02	1.97E-01	3.86E-01
7	6	42	41	15575.37	1	2104.66	4.7514	0.0303	2.72F-05	2.64E-02	6.69E-01	4.07E 00	1.23E 01	2.54E 01
7	6	77	76	22187.18	2	2104.69	4.7513	0.0303	0.0	0.0	1.11F-04	1.74E-03	9.94E-03	3.22F-02
6	5	30	29	12044.05	1	2104.69	4.7513	0.0340	2.70E-03	4.81E-01	5.24E 00	1.92F 01	4.14F 01	6.70E 01
3	2	18	17	4718.72	2	2104.75	4.7512	0.0568	3.31E-01	1.75E 00	3.28E 00	4.18E 00	4.47F 00	4.37E 00
8	7	59	58	20537.02	1	2104.81	4.7510	0.0303	0.0	3.58F-04	2.99F-02	3.71F-01	1.81E 00	5.24F 00
3	2	4	3	4282.70	1	2105.11	4.7503	0.0611	1.29E 01	5.58E 01	9.44F 01	1.13E 02	1.16E 02	1.10F 02
7	6	78	77	22444.85	2	2105.22	4.7501	0.0303	0.0	0.0	9.32F-05	1.52E-03	8.90F-03	2.93E-02
2	1	2	3	2166.13	1	2105.25	4.7500	0.0609	1.36E 02	2.13E 02	2.17E 02	1.92E 02	1.61E 02	1.32F 02
2	1	10	9	2259.98	2	2105.36	4.7498	0.0624	4.22E 00	6.89E 00	7.16E 00	6.39E 00	5.40E 00	4.46E 00
7	6	79	78	22705.59	2	2105.71	4.7490	0.0303	0.0	0.0	7.83E-05	1.33E-03	7.95E-03	2.67E-02
8	7	113	112	36244.30	1	2105.75	4.7489	0.0303	0.0	0.0	0.0	8.16F-05	1.80E-03	1.53E-02
8	7	60	59	20744.37	1	2106.06	4.7482	0.0303	0.0	2.99E-04	2.62E-02	3.35E-01	1.67F 00	4.90E 00
4	3	12	11	6597.16	1	2106.12	4.7481	0.0617	1.85E 00	2.42E 01	7.12F 01	1.19E 02	1.53E 02	1.70F 02
6	5	53	52	15025.29	2	2106.14	4.7480	0.0303	0.0	5.17E-04	1.15E-02	6.43F-02	1.85F-01	3.66E-01
7	6	80	79	22969.40	2	2106.15	4.7480	0.0303	0.0	0.0	6.55E-05	1.15E-03	7.09E-03	2.42F-02
7	6	81	80	23236.26	2	2106.55	4.7471	0.0303	0.0	0.0	5.48E-05	1.00F-03	6.32E-03	2.20E-02
5	4	39	38	10847.26	2	2106.59	4.7470	0.0303	1.75E-04	1.76E-02	1.43E-01	4.40F-01	8.46E-01	1.26E 00
7	6	43	42	15726.23	1	2106.66	4.7469	0.0303	2.24E-05	2.34E-02	6.15E-01	3.82F 00	1.18E 01	2.45E 01
4	3	28	27	7561.55	2	2106.70	4.7468	0.0379	1.14E-02	2.37E-01	8.78E-01	1.68E 00	2.36E 00	2.81E 00
7	6	82	81	23506.16	2	2106.90	4.7463	0.0303	0.0	0.0	4.57E-05	8.68F-04	5.62E-03	1.99E-02
1	0	3	2	11.03	2	2106.90	4.7463	0.0609	1.61F 01	8.95E 00	5.42E 00	3.51E 00	2.39F 00	1.69E 00
8	7	112	111	35875.71	1	2107.02	4.7460	0.0303	0.0	0.0	0.0	1.00E-04	2.13E-03	1.76E-02
6	5	31	30	12153.49	1	2107.21	4.7456	0.0335	2.38E-03	4.49E-01	5.01E 00	1.86F 01	4.07F 01	6.63F 01
7	6	83	82	23779.10	2	2107.22	4.7456	0.0303	0.0	0.0	3.80E-05	7.50F-04	4.99E-03	1.80E-02
5	4	21	20	9191.44	1	2107.23	4.7456	0.0515	9.61E-02	4.37E 00	2.40E 01	5.83E 01	9.58E 01	1.27E 02
8	7	61	60	20955.06	1	2107.26	4.7455	0.0303	0.0	2.48E-04	2.29E-02	3.02F-01	1.53E 00	4.57E 00
1	0	8	9	172.99	1	2107.42	4.7451	0.0624	3.61E 03	2.17E 03	1.37E 03	9.10E 02	6.30F 02	4.52E 02
7	6	84	83	24055.05	2	2107.48	4.7450	0.0303	0.0	0.0	3.19E-05	6.48E-04	4.42F-03	1.63E-02
6	5	54	53	15208.11	2	2107.70	4.7445	0.0303	0.0	4.42E-04	1.02E-02	5.90F-02	1.72E-01	3.46E-01
7	6	85	84	24334.02	2	2107.71	4.7445	0.0303	0.0	0.0	2.61E-05	5.58F-04	3.92E-03	1.47E-02
3	2	19	18	4783.59	2	2107.72	4.7445	0.0552	3.18E-01	1.74E 00	3.31E 00	4.26F 00	4.58E 00	4.50E 00
8	7	111	110	35509.81	1	2108.24	4.7433	0.0303	0.0	0.0	0.0	1.23E-04	2.52F-03	2.04F-02
8	7	62	61	21169.09	1	2108.41	4.7429	0.0303	0.0	2.06E-04	2.00E-02	2.71E-01	1.41E 00	4.26E 00
7	6	44	43	15880.58	1	2108.62	4.7424	0.0303	0.0	2.07E-02	5.64E-01	3.59F 00	1.12E 01	2.36E 01
2	1	11	10	2296.39	2	2108.63	4.7424	0.0625	4.42E 00	7.33E 00	7.68E 00	6.90E 00	5.85E 00	4.85E 00
3	2	5	4	4297.80	1	2108.71	4.7422	0.0614	1.58E 01	6.89E 01	1.17E 02	1.40E 02	1.44E 02	1.37E 02
5	4	40	39	10984.19	2	2108.72	4.7422	0.0303	1.48E-04	1.58F-02	1.33E-01	4.18E-01	8.14F-01	1.22E 00
2	1	1	2	2154.70	1	2109.13	4.7413	0.0606	9.25E 01	1.44E 02	1.46F 02	1.29E 02	1.08E 02	8.87E 01
6	5	55	54	15394.23	2	2109.21	4.7411	0.0303	0.0	3.77E-04	9.14E-03	5.40E-02	1.61E-01	3.27E-01
4	3	29	28	7661.24	2	2109.27	4.7410	0.0359	1.03E-02	2.23F-01	8.48E-01	1.65E 00	2.34E 00	2.80E 00
4	3	13	12	6642.00	1	2109.39	4.7407	0.0610	1.88E 00	2.51E 01	7.49E 01	1.26F 02	1.62E 02	1.81F 02
8	7	110	109	35146.60	1	2109.42	4.7406	0.0303	0.0	0.0	0.0	1.50F-04	2.98E-03	2.35E-02
8	7	63	62	21386.43	1	2109.52	4.7404	0.0303	0.0	1.70E-04	1.73E-02	2.43F-01	1.29E 00	3.96F 00
6	5	32	31	12266.54	1	2109.69	4.7400	0.0331	2.09E-03	4.16E-01	4.78E 00	1.80F 01	3.98E 01	6.58F 01
5	4	22	21	9269.02	1	2110.13	4.7390	0.0496	9.02F-02	4.26E 00	2.38E 01	5.95F 01	9.68E 01	1.30F 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*CM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	4	3	22.06	2	2110.45	4.7383	0.0611	2.12E 01	1.18E 01	7.19E 00	4.66E 00	3.17E 00	2.25E 00
7	6	45	44	16038.43	1	2110.53	4.7381	0.0303	0.0	1.82E-02	5.15E-01	3.35E 00	1.06E 01	2.26E 01
8	7	109	108	34786.11	1	2110.54	4.7381	0.0303	0.0	0.0	0.0	1.83E-04	3.51E-03	2.70E-02
8	7	64	63	21607.08	1	2110.59	4.7380	0.0303	0.0	1.39E-04	1.50E-02	2.18E-01	1.18E 00	3.67E 00
3	2	20	19	4852.04	2	2110.65	4.7379	0.0535	3.04E-01	1.72E 00	3.33E 00	4.32E 00	4.68E 00	4.62E 00
6	5	56	55	15583.68	2	2110.69	4.7378	0.0303	0.0	3.20E-04	8.12E-03	4.94E-02	1.50E-01	3.08E-01
5	4	41	40	11124.55	2	2110.81	4.7375	0.0303	1.24E-04	1.42E-02	1.24E-01	3.95E-01	7.81E-01	1.19E 00
1	0	7	8	138.40	1	2111.54	4.7359	0.0623	3.38E 03	2.00E 03	1.25E 03	8.27E 02	5.71E 02	4.08E 02
8	7	65	64	21831.04	1	2111.61	4.7357	0.0303	0.0	1.14E-04	1.30E-02	1.95E-01	1.08E 00	3.40E 00
8	7	108	107	34428.34	1	2111.61	4.7357	0.0303	0.0	0.0	0.0	2.24E-04	4.14E-03	3.10E-02
4	3	30	29	7764.45	2	2111.81	4.7353	0.0340	9.17E-03	2.10E-01	8.15E-01	1.61E 00	2.30E 00	2.78E 00
2	1	12	11	2336.44	2	2111.88	4.7351	0.0617	4.56E 00	7.71E 00	8.16E 00	7.37E 00	6.27E 00	5.21E 00
6	5	57	56	15776.43	2	2112.12	4.7346	0.0303	0.0	2.71E-04	7.20E-03	4.50E-02	1.39E-01	2.90E-01
6	5	33	32	12383.18	1	2112.13	4.7346	0.0326	1.83E-03	3.84E-01	4.54E 00	1.74E 01	3.89E 01	6.45E 01
3	2	6	5	4316.68	1	2112.27	4.7342	0.0617	1.85E 01	8.13E 01	1.39E 02	1.67E 02	1.72E 02	1.64E 02
7	6	46	45	16199.77	1	2112.41	4.7339	0.0303	0.0	1.59E-02	4.70E-01	3.13E 00	1.01E 01	2.17E 01
8	7	66	65	22058.29	1	2112.59	4.7335	0.0303	0.0	9.33E-05	1.12E-02	1.73E-01	9.80E-01	3.15E 00
4	3	14	13	6690.57	1	2112.63	4.7334	0.0604	1.89E 00	2.59E 01	7.80E 01	1.32E 02	1.71E 02	1.92E 02
8	7	107	106	34073.32	1	2112.63	4.7334	0.0303	0.0	0.0	0.0	2.72E-04	4.87E-03	3.56E-02
5	4	42	41	11268.36	2	2112.87	4.7329	0.0303	1.03E-04	1.27E-02	1.14E-01	3.73E-01	7.48E-01	1.15E 00
2	1	0	1	2147.08	1	2112.97	4.7327	0.0603	4.68E 01	7.26E 01	7.36E 01	6.49E 01	5.43E 01	4.46E 01
5	4	23	22	9350.27	1	2112.99	4.7326	0.0476	8.40E-02	4.12E 00	2.35E 01	5.84E 01	9.75E 01	1.31E 02
6	5	58	57	15972.47	2	2113.52	4.7314	0.0303	0.0	2.29E-04	6.37E-03	4.10E-02	1.29E-01	2.73E-01
8	7	67	66	22288.82	1	2113.52	4.7314	0.0303	0.0	7.60E-05	9.65E-03	1.54E-01	8.91E-01	2.91E 00
3	2	21	20	4924.07	2	2113.54	4.7314	0.0515	2.88E-01	1.69E 00	3.32E 00	4.36E 00	4.75E 00	4.72E 00
8	7	106	105	33721.07	1	2113.60	4.7313	0.0303	0.0	0.0	0.0	3.31E-04	5.72E-03	4.09E-02
1	0	5	4	36.76	2	2113.96	4.7305	0.0614	2.60E 01	1.46E 01	8.92E 00	5.79E 00	3.95E 00	2.80E 00
7	6	47	46	16364.60	1	2114.24	4.7298	0.0303	0.0	1.39E-02	4.27E-01	2.91E 00	9.51E 00	2.07E 01
4	3	31	30	7871.18	2	2114.31	4.7297	0.0335	8.14E-03	1.96E-01	7.82E-01	1.57E 00	2.27E 00	2.75E 00
8	7	68	67	22522.63	1	2114.41	4.7295	0.0303	0.0	6.16E-05	8.28E-03	1.37E-01	8.08E-01	2.68E 00
8	7	105	104	33371.58	1	2114.52	4.7292	0.0303	0.0	0.0	0.0	4.01E-04	6.71E-03	4.68E-02
6	5	34	33	12503.41	1	2114.53	4.7292	0.0321	1.59E-03	3.53E-01	4.29E 00	1.68E 01	3.79E 01	6.33E 01
6	5	59	58	16171.80	2	2114.87	4.7284	0.0303	0.0	1.92E-04	5.62E-03	3.72E-02	1.19E-01	2.56E-01
5	4	43	42	11415.59	2	2114.89	4.7284	0.0303	8.57E-05	1.13E-02	1.05E-01	3.52E-01	7.15E-01	1.11E 00
2	1	13	12	2380.12	2	2115.08	4.7280	0.0610	4.64E 00	8.02E 00	8.58E 00	7.81E 00	6.67E 00	5.56E 00
8	7	69	68	22759.69	1	2115.26	4.7276	0.0303	0.0	4.98E-05	7.08E-03	1.21E-01	7.32E-01	2.47E 00
8	7	104	103	33024.89	1	2115.39	4.7273	0.0303	0.0	0.0	0.0	4.86E-04	7.86E-03	5.36E-02
1	0	6	7	107.65	1	2115.63	4.7267	0.0620	3.10E 03	1.81E 03	1.12E 03	7.38E 02	5.08E 02	3.63E 02
3	2	7	6	4339.32	1	2115.80	4.7263	0.0620	2.10E 01	9.30E 01	1.60E 02	1.93E 02	1.99E 02	1.90E 02
5	4	24	23	9435.20	1	2115.82	4.7263	0.0457	7.77E-02	3.97E 00	2.31E 01	5.82E 01	9.79E 01	1.33E 02
4	3	15	14	6742.87	1	2115.83	4.7263	0.0597	1.88E 00	2.64E 01	8.06E 01	1.38E 02	1.79E 02	2.01E 02
7	6	48	47	16532.89	1	2116.03	4.7258	0.0303	0.0	1.21E-02	3.86E-01	2.70E 00	8.97E 00	1.97E 01
8	7	70	69	23000.01	1	2116.06	4.7258	0.0303	0.0	4.01E-05	6.05E-03	1.07E-01	6.62E-01	2.27E 00
6	5	60	59	16374.42	2	2116.19	4.7255	0.0303	0.0	1.61E-04	4.94E-03	3.37E-02	1.10E-01	2.39E-01
8	7	103	102	32681.01	1	2116.21	4.7254	0.0303	0.0	0.0	0.0	5.88E-04	9.20E-03	6.12E-02
3	2	22	21	4999.68	2	2116.40	4.7250	0.0496	2.71E-01	1.65E 00	3.30E 00	4.38E 00	4.81E 00	4.80E 00
4	3	32	31	7981.43	2	2116.78	4.7242	0.0331	7.18E-03	1.82E-01	7.47E-01	1.52E 00	2.22E 00	2.72E 00
8	7	71	70	23243.58	1	2116.81	4.7241	0.0303	0.0	3.22E-05	5.15E-03	9.44E-02	5.97E-01	2.08E 00
5	4	44	43	11566.25	2	2116.87	4.7240	0.0303	7.06E-05	1.00E-02	9.69E-02	3.30E-01	6.81E-01	1.07E 00
6	5	35	34	12627.23	1	2116.88	4.7239	0.0317	1.37E-03	3.23E-01	4.05E 00	1.61E 01	3.68E 01	6.20E 01
8	7	102	101	32339.95	1	2116.97	4.7237	0.0303	0.0	0.0	0.0	7.09E-04	1.07E-02	6.98E-02
1	0	6	5	55.14	2	2117.44	4.7227	0.0617	3.05E 01	1.73E 01	1.06E 01	6.89E 00	4.71E 00	3.39E 00
6	5	61	60	16580.31	2	2117.46	4.7226	0.0303	0.0	1.35E-04	4.34E-03	3.04E-02	1.01E-01	2.24E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	7	72	71	23490.38	1	2117.52	4.7225	0.0303	0.0	2.58E-05	4.37E-03	8.30E-02	5.38E-01	1.91E 00
8	7	101	100	32001.73	1	2117.69	4.7221	0.0303	0.0	0.0	0.0	8.54E-04	1.25E-02	7.96E-02
7	6	49	48	16704.66	1	2117.78	4.7219	0.0303	0.0	1.05E-02	3.49E-01	2.50E 00	8.44E 00	1.88E 01
8	7	73	72	23740.39	1	2118.18	4.7210	0.0303	0.0	2.06E-05	3.70E-03	7.29E-02	4.84E-01	1.75E 00
2	1	14	13	2427.44	2	2118.26	4.7209	0.0604	4.68E 00	8.27E 00	8.95E 00	8.20E 00	7.04E 00	5.89E 00
8	7	100	99	31666.36	1	2118.36	4.7206	0.0303	0.0	0.0	0.0	1.03E-03	1.46E-02	9.05E-02
5	4	25	24	9523.78	1	2118.60	4.7201	0.0437	7.13E-02	3.80E 00	2.26E 01	5.77E 01	9.79E 01	1.33E 02
6	5	62	61	16789.46	2	2118.69	4.7199	0.0303	0.0	1.12E-04	3.79E-03	2.74E-02	9.34E-02	2.09E-01
8	7	74	73	23993.62	1	2118.80	4.7197	0.0303	0.0	0.0	3.13E-03	6.39E-02	4.35E-01	1.60E 00
5	4	45	44	11720.32	2	2118.81	4.7196	0.0303	5.79E-05	8.83E-03	8.88E-02	3.10E-01	6.48E-01	1.02E 00
8	7	99	98	31333.86	1	2118.98	4.7193	0.0303	0.0	0.0	2.10E-05	1.23E-03	1.70E-02	1.03E-01
4	3	16	15	6798.89	1	2118.99	4.7192	0.0591	1.85E 00	2.67E 01	8.28E 01	1.42E 02	1.86E 02	2.10E 02
6	5	36	35	12754.63	1	2119.20	4.7188	0.0312	1.17E-03	2.95E-01	3.80E 00	1.54E 01	3.57E 01	6.07E 01
4	3	33	32	8095.19	2	2119.21	4.7187	0.0326	6.29E-03	1.69E-01	7.11E-01	1.47E 00	2.17E 00	2.68E 00
3	2	23	22	5078.88	2	2119.23	4.7187	0.0476	2.53E-01	1.60E 00	3.27E 00	4.38E 00	4.85E 00	4.87E 00
3	2	8	7	4365.74	1	2119.29	4.7186	0.0623	2.31E 01	1.04E 02	1.79E 02	2.18E 02	2.25E 02	2.15E 02
8	7	75	74	24250.05	1	2119.37	4.7184	0.0303	0.0	0.0	2.64E-03	5.59E-02	3.99E-01	1.45E 00
7	6	50	49	16879.89	1	2119.49	4.7181	0.0303	0.0	9.04E-03	3.14E-01	2.31E 00	7.93E 00	1.79E 01
8	7	98	97	31004.25	1	2119.55	4.7180	0.0303	0.0	0.0	2.64E-05	1.48E-03	1.97E-02	1.17E-01
1	0	5	6	80.74	1	2119.68	4.7177	0.0617	2.76E 03	1.59E 03	9.84E 02	6.44E 02	4.42E 02	3.15E 02
6	5	63	62	17001.87	2	2119.88	4.7172	0.0303	0.0	9.28E-05	3.31E-03	2.47E-02	8.58E-02	1.95E-01
8	7	76	75	24509.67	1	2119.90	4.7172	0.0303	0.0	0.0	2.22E-03	4.88E-02	3.48E-01	1.32E 00
8	7	97	96	30677.52	1	2120.07	4.7168	0.0303	0.0	0.0	3.31E-05	1.77E-03	2.28E-02	1.32E-01
8	7	77	76	24772.47	1	2120.38	4.7161	0.0303	0.0	0.0	1.86E-03	4.25E-02	3.11E-01	1.20E 00
8	7	96	95	30353.71	1	2120.55	4.7158	0.0303	0.0	0.0	4.13E-05	2.11E-03	2.64E-02	1.50E-01
2	1	1	0	2143.27	1	2120.56	4.7157	0.0603	4.72E 01	7.32E 01	7.42E 01	6.54E 01	5.47E 01	4.49E 01
5	4	46	45	11877.80	2	2120.71	4.7154	0.0303	4.73E-05	7.77E-03	8.11E-02	2.89E-01	6.15E-01	9.83E-01
8	7	78	77	25038.44	1	2120.81	4.7152	0.0303	0.0	0.0	1.55E-03	3.69E-02	2.77E-01	1.09E 00
1	0	7	6	77.19	2	2120.88	4.7150	0.0620	3.45E 01	1.98E 01	1.22E 01	7.96E 00	5.45E 00	3.88E 00
8	7	95	94	30032.83	1	2120.97	4.7148	0.0303	0.0	0.0	5.16E-05	2.51E-03	3.05E-02	1.69E-01
6	5	64	63	17217.54	2	2121.03	4.7147	0.0303	0.0	7.67E-05	2.88E-03	2.22E-02	7.86E-02	1.81E-01
7	6	51	50	17058.57	1	2121.15	4.7144	0.0303	0.0	7.78E-03	2.82E-01	2.12E 00	7.43E 00	1.70E 01
8	7	79	78	25307.56	1	2121.20	4.7143	0.0303	0.0	0.0	1.30E-03	3.20E-02	2.47E-01	9.92E-01
8	7	94	93	29714.89	1	2121.34	4.7140	0.0303	0.0	0.0	6.42E-05	2.99E-03	3.52E-02	1.91E-01
5	4	26	25	9616.03	1	2121.35	4.7140	0.0418	6.50E-02	3.63E 00	2.21E 01	5.70E 01	9.76E 01	1.34E 02
2	1	15	14	2478.38	2	2121.40	4.7139	0.0597	4.66E 00	8.45E 00	9.26E 00	8.55E 00	7.37E 00	6.19E 00
6	5	37	36	12885.61	1	2121.48	4.7137	0.0308	9.99E-04	2.67E-01	3.56E 00	1.47E 01	3.45E 01	5.92E 01
8	7	80	79	25579.82	1	2121.54	4.7136	0.0303	0.0	0.0	1.08E-03	2.77E-02	2.19E-01	8.98E-01
4	3	34	33	8212.45	2	2121.60	4.7134	0.0321	5.48E-03	1.55E-01	6.74E-01	1.42E 00	2.12E 00	2.64E 00
8	7	93	92	29399.89	1	2121.67	4.7133	0.0303	0.0	0.0	7.98E-05	3.55E-03	4.06E-02	2.16E-01
8	7	81	80	25855.22	1	2121.83	4.7129	0.0303	0.0	0.0	8.96E-04	2.39E-02	1.95E-01	8.12E-01
8	7	92	91	29087.87	1	2121.95	4.7126	0.0303	0.0	0.0	9.89E-05	4.21E-03	4.66E-02	2.43E-01
3	2	24	23	5161.65	2	2122.02	4.7125	0.0457	2.35E-01	1.54E 00	3.22E 00	4.37E 00	4.87E 00	4.92E 00
8	7	82	81	26133.74	1	2122.08	4.7124	0.0303	0.0	0.0	7.42E-04	2.06E-02	1.72E-01	7.33E-01
4	3	17	16	6858.63	1	2122.12	4.7123	0.0585	1.81E 00	2.69E 01	8.44E 01	1.47E 02	1.93E 02	2.19E 02
6	5	65	64	17436.43	2	2122.14	4.7122	0.0303	0.0	6.32E-05	2.50E-03	1.99E-02	7.19E-02	1.69E-01
8	7	91	90	28778.82	1	2122.17	4.7122	0.0303	0.0	0.0	1.22E-04	4.98E-03	5.36E-02	2.73E-01
8	7	83	82	26415.37	1	2122.28	4.7119	0.0303	0.0	0.0	6.13E-04	1.78E-02	1.52E-01	6.60E-01
8	7	90	89	28472.78	1	2122.36	4.7117	0.0303	0.0	0.0	1.51E-04	5.87E-03	6.14E-02	3.06E-01
8	7	84	83	26700.09	1	2122.43	4.7116	0.0303	0.0	0.0	5.06E-04	1.52E-02	1.34E-01	5.94E-01
8	7	89	88	28169.73	1	2122.49	4.7114	0.0303	0.0	0.0	1.86E-04	6.92E-03	7.03E-02	3.43E-01
8	7	85	84	26987.90	1	2122.54	4.7113	0.0303	0.0	0.0	4.16E-04	1.31E-02	1.18E-01	5.34E-01
8	7	88	87	27869.71	1	2122.57	4.7113	0.0303	0.0	0.0	2.28E-04	8.13E-03	8.03E-02	3.84E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	47	46	12038.69	2	2122.57	4.7113	0.0303	3.83E-05	6.81E-03	7.39E-02	2.70E-01	5.82E-01	9.41E-01
8	7	86	85	27278.79	1	2122.60	4.7112	0.0303	0.0	0.0	3.41E-04	1.12E-02	1.04E-01	4.79E-01
8	7	87	86	27572.73	1	2122.61	4.7112	0.0303	0.0	0.0	2.79E-04	9.55E-03	9.15E-02	4.29E-01
3	2	9	8	4395.93	1	2122.75	4.7109	0.0624	2.49E 01	1.14E 02	1.98E 02	2.41E 02	2.50E 02	2.40E 02
7	6	52	51	17240.70	1	2122.77	4.7108	0.0303	0.0	6.66E-03	2.52E-01	1.95E 00	6.95E 00	1.61E 01
6	5	66	65	17658.56	2	2123.21	4.7098	0.0303	0.0	5.19E-05	2.17E-03	1.78E-02	6.57E-02	1.56E-01
1	0	4	5	57.67	1	2123.70	4.7088	0.0614	2.38E 03	1.36E 03	8.35E 02	5.45E 02	3.73E 02	2.66E 02
6	5	38	37	13020.16	1	2123.72	4.7087	0.0303	8.46E-04	2.42E-01	3.33E 00	1.40E 01	3.33E 01	5.76E 01
4	3	35	34	8333.21	2	2123.95	4.7082	0.0317	4.75E-03	1.43E-01	6.37E-01	1.36E 00	2.06E 00	2.59E 00
5	4	27	26	9711.93	1	2124.06	4.7080	0.0398	5.89E-02	3.44E 00	2.14E 01	5.61E 01	9.69E 01	1.34E 02
6	5	67	66	17883.92	2	2124.23	4.7076	0.0303	0.0	4.24E-05	1.87E-03	1.58E-02	5.99E-02	1.44E-01
1	0	8	7	102.91	2	2124.29	4.7075	0.0623	3.81E 01	2.21E 01	1.37E 01	8.98E 00	6.17E 00	4.40E 00
2	1	2	1	2147.08	1	2124.30	4.7074	0.0606	9.41E 01	1.46E 02	1.48E 02	1.31E 02	1.09E 02	8.99E 01
7	6	53	52	17426.27	1	2124.35	4.7073	0.0303	0.0	5.69E-03	2.25E-01	1.79E 00	6.48E 00	1.52E 01
5	4	48	47	12202.98	2	2124.40	4.7072	0.0303	3.09E-05	5.95E-03	6.71E-02	2.51E-01	5.50E-01	9.00E-01
2	1	16	15	2532.96	2	2124.50	4.7070	0.0591	4.61E 00	8.57E 00	9.52E 00	8.86E 00	7.68E 00	6.47E 00
3	2	25	24	5247.99	2	2124.77	4.7064	0.0437	2.16E-01	1.48E 00	3.15E 00	4.34E 00	4.88E 00	4.95E 00
4	3	18	17	6922.10	1	2125.21	4.7054	0.0568	1.75E 00	2.68E 01	8.55E 01	1.50E 02	1.98E 02	2.26E 02
6	5	68	67	18112.48	2	2125.22	4.7054	0.0303	0.0	3.46E-05	1.61E-03	1.41E-02	5.45E-02	1.34E-01
7	6	54	53	17615.26	1	2125.89	4.7039	0.0303	0.0	4.84E-03	2.00E-01	1.64E 00	6.04E 00	1.43E 01
6	5	39	38	13158.27	1	2125.92	4.7038	0.0303	7.13E-04	2.17E-01	3.09E 00	1.33E 01	3.20E 01	5.59E 01
3	2	10	9	4429.89	1	2126.16	4.7033	0.0624	2.64E 01	1.23E 02	2.15E 02	2.63E 02	2.74E 02	2.64E 02
6	5	69	68	18344.26	2	2126.16	4.7033	0.0303	0.0	2.81E-05	1.38E-03	1.25E-02	4.95E-02	1.23E-01
5	4	49	48	12370.66	2	2126.18	4.7033	0.0303	2.48E-05	5.18E-03	6.08E-02	2.33E-01	5.19E-01	8.58E-01
4	3	36	35	8457.48	2	2126.26	4.7031	0.0312	4.09E-03	1.31E-01	6.00E-01	1.31E 00	2.00E 00	2.53E 00
5	4	28	27	9811.48	1	2126.73	4.7021	0.0379	5.30E-02	3.25E 00	2.07E 01	5.50E 01	9.60E 01	1.33E 02
6	5	70	69	18579.22	2	2127.06	4.7013	0.0303	0.0	2.28E-05	1.19E-03	1.11E-02	4.49E-02	1.14E-01
7	6	55	54	17807.68	1	2127.38	4.7006	0.0303	0.0	4.10E-03	1.78E-01	1.49E 00	5.61E 00	1.35E 01
3	2	26	25	5337.91	2	2127.48	4.7004	0.0418	1.98E-01	1.42E 00	3.08E 00	4.29E 00	4.87E 00	4.97E 00
2	1	17	16	2591.16	2	2127.57	4.7002	0.0585	4.51E 00	8.63E 00	9.72E 00	9.12E 00	7.95E 00	6.73E 00
1	0	9	8	132.31	2	2127.67	4.7000	0.0624	4.11E 01	2.42E 01	1.51E 01	9.95E 00	6.86E 00	4.90E 00
1	0	3	4	38.45	1	2127.68	4.7000	0.0611	1.96E 03	1.11E 03	6.79E 02	4.42E 02	3.02E 02	2.15E 02
6	5	71	70	18817.38	2	2127.92	4.6994	0.0303	0.0	0.0	1.01E-03	9.83E-03	4.06E-02	1.05E-01
5	4	50	49	12541.73	2	2127.93	4.6994	0.0303	0.0	4.49E-03	5.49E-02	2.16E-01	4.88E-01	8.17E-01
2	1	3	2	2154.70	1	2128.00	4.6992	0.0609	1.40E 02	2.18E 02	2.22E 02	1.96E 02	1.64E 02	1.35E 02
6	5	40	39	13299.95	1	2128.07	4.6991	0.0303	5.97E-04	1.95E-01	2.87E 00	1.26E 01	3.07E 01	5.42E 01
4	3	19	18	6989.28	1	2128.26	4.6987	0.0552	1.68E 00	2.66E 01	8.62E 01	1.53E 02	2.03E 02	2.33E 02
4	3	37	36	8585.23	2	2128.54	4.6981	0.0308	3.50E-03	1.19E-01	5.63E-01	1.25E 00	1.94E 00	2.48E 00
6	5	72	71	19058.71	2	2128.74	4.6976	0.0303	0.0	0.0	8.65E-04	8.68E-03	3.67E-02	9.60E-02
7	6	56	55	18003.52	1	2128.84	4.6974	0.0303	0.0	3.46E-03	1.57E-01	1.36E 00	5.21E 00	1.27E 01
5	4	29	28	9914.69	1	2129.36	4.6962	0.0359	4.73E-02	3.05E 00	1.99E 01	5.38E 01	9.48E 01	1.33E 02
6	5	73	72	19303.21	2	2129.51	4.6959	0.0303	0.0	0.0	7.36E-04	7.65E-03	3.31E-02	8.81E-02
3	2	11	10	4467.62	1	2129.55	4.6958	0.0625	2.76E 01	1.30E 02	2.31E 02	2.84E 02	2.97E 02	2.86E 02
5	4	51	50	12716.17	2	2129.63	4.6957	0.0303	0.0	3.87E-03	4.95E-02	1.99E-01	4.59E-01	7.77E-01
3	2	27	26	5431.39	2	2130.16	4.6945	0.0398	1.80E-01	1.35E 00	3.00E 00	4.23E 00	4.84E 00	4.98E 00
6	5	41	40	13445.18	1	2130.19	4.6944	0.0303	4.97E-04	1.74E-01	2.65E 00	1.19E 01	2.94E 01	5.24E 01
7	6	117	116	35996.63	1	2130.20	4.6944	0.0303	0.0	0.0	0.0	8.79E-05	1.89E-03	1.58E-02
7	6	57	56	18202.77	1	2130.24	4.6943	0.0303	0.0	2.91E-03	1.39E-01	1.23E 00	4.82E 00	1.19E 01
6	5	74	73	19550.86	2	2130.24	4.6943	0.0303	0.0	0.0	6.24E-04	6.72E-03	2.98E-02	8.07E-02
2	1	18	17	2652.99	2	2130.60	4.6935	0.0568	4.37E 00	8.63E 00	9.86E 00	9.33E 00	8.19E 00	6.96E 00
4	3	38	37	8716.48	2	2130.78	4.6931	0.0303	2.98E-03	1.08E-01	5.27E-01	1.19E 00	1.87E 00	2.41E 00
6	5	75	74	19801.66	2	2130.93	4.6928	0.0303	0.0	0.0	5.29E-04	5.90E-03	2.68E-02	7.38E-02
1	0	10	9	165.38	2	2131.01	4.6926	0.0624	4.36E 01	2.61E 01	1.64E 01	1.09E 01	7.52E 00	5.39E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	20	19	7060.17	1	2131.27	4.6920	0.0535	1.60E 00	2.62E 01	8.64E 01	1.54E 02	2.07E 02	2.38E 02
5	4	52	51	12893.99	2	2131.30	4.6920	0.0303	0.0	3.33E-03	4.44E-02	1.84E-01	4.30E-01	7.37E-01
6	5	76	75	20055.60	2	2131.58	4.6914	0.0303	0.0	0.0	4.46E-04	5.17E-03	2.41E-02	6.74E-02
7	6	58	57	18405.41	1	2131.61	4.6913	0.0303	0.0	2.44E-03	1.22E-01	1.12E 00	4.45E 00	1.12E 01
1	0	2	3	23.07	1	2131.63	4.6912	0.0609	1.51E 03	8.46E 02	5.16E 02	3.35E 02	2.29E 02	1.63E 02
7	6	116	115	35613.45	1	2131.65	4.6912	0.0303	0.0	0.0	0.0	1.09E-04	2.26E-03	1.84E-02
2	1	4	3	2166.13	1	2131.67	4.6912	0.0611	1.84E 02	2.88E 02	2.94E 02	2.60E 02	2.18E 02	1.79E 02
5	4	30	29	10021.54	1	2131.95	4.6905	0.0340	4.20E-02	2.85E 00	1.91E 01	5.24E 01	9.33E 01	1.32E 02
6	5	77	76	20312.67	2	2132.18	4.6900	0.0303	0.0	0.0	3.76E-04	4.52E-03	2.16E-02	6.14E-02
6	5	42	41	13593.96	1	2132.26	4.6899	0.0303	4.11E-04	1.55E-01	2.44E 00	1.12E 01	2.81E 01	5.06E 01
6	5	78	77	20572.85	2	2132.74	4.6888	0.0303	0.0	0.0	3.16E-04	3.94E-03	1.93E-02	5.59E-02
3	2	28	27	5528.43	2	2132.81	4.6887	0.0379	1.63E-01	1.27E 00	2.90E 00	4.15E 00	4.80E 00	4.97E 00
3	2	12	11	4509.11	1	2132.89	4.6885	0.0617	2.84E 01	1.37E 02	2.45E 02	3.03E 02	3.18E 02	3.08E 02
5	4	53	52	13075.18	2	2132.93	4.6884	0.0303	0.0	2.86E-03	3.98E-02	1.69E-01	4.02E-01	6.98E-01
7	6	59	58	18611.44	1	2132.93	4.6884	0.0303	0.0	2.04E-03	1.07E-01	1.01E 00	4.11E 00	1.04E 01
4	3	39	38	8851.20	2	2132.99	4.6883	0.0303	2.52E-03	9.73E-02	4.92E-01	1.14E 00	1.81E 00	2.35E 00
7	6	115	114	35232.91	1	2133.05	4.6881	0.0303	0.0	0.0	0.0	1.35E-04	2.69E-03	2.13E-02
6	5	79	78	20836.14	2	2133.26	4.6877	0.0303	0.0	0.0	2.65E-04	3.43E-03	1.72E-02	5.08E-02
2	1	19	18	2718.44	2	2133.60	4.6869	0.0552	4.21E 00	8.56E 00	9.95E 00	9.51E 00	8.39E 00	7.17E 00
6	5	80	79	21102.53	2	2133.73	4.6866	0.0303	0.0	0.0	2.21E-04	2.98E-03	1.53E-02	4.62E-02
6	5	81	80	21372.00	2	2134.16	4.6857	0.0303	0.0	0.0	1.85E-04	2.58E-03	1.37E-02	4.18E-02
7	6	60	59	18620.86	1	2134.21	4.6856	0.0303	0.0	1.70E-03	9.39E-02	9.12E-01	3.78E 00	9.74E 00
4	3	21	20	7134.78	1	2134.24	4.6855	0.0515	1.51E 00	2.56E 01	8.61E 01	1.56E 02	2.10E 02	2.43E 02
6	5	43	42	13746.29	1	2134.30	4.6854	0.0303	3.38E-04	1.37E-01	2.25E 00	1.05E 01	2.68E 01	4.87E 01
1	0	11	10	202.12	2	2134.32	4.6853	0.0625	4.56E 01	2.78E 01	1.76E 01	1.17E 01	8.14E 00	5.85E 00
7	6	114	113	34855.04	1	2134.39	4.6852	0.0303	0.0	0.0	0.0	1.66E-04	3.20E-03	2.48E-02
5	4	31	30	10132.03	1	2134.50	4.6849	0.0335	3.71E-02	2.65E 00	1.83E 01	5.09E 01	9.16E 01	1.30E 02
5	4	54	53	13259.72	2	2134.51	4.6849	0.0303	0.0	2.44E-03	3.55E-02	1.55E-01	3.76E-01	6.60E-01
6	5	82	81	21644.55	2	2134.55	4.6848	0.0303	0.0	0.0	1.54E-04	2.24E-03	1.21E-02	3.79E-02
6	5	83	82	21920.16	2	2134.89	4.6841	0.0303	0.0	0.0	1.28E-04	1.93E-03	1.08E-02	3.42E-02
4	3	40	39	8989.41	2	2135.15	4.6835	0.0303	2.12E-03	8.75E-02	4.57E-01	1.08E 00	1.74E 00	2.28E 00
6	5	84	83	22198.82	2	2135.19	4.6834	0.0303	0.0	0.0	1.06E-04	1.66E-03	9.52E-03	3.09E-02
2	1	5	4	2181.37	1	2135.31	4.6832	0.0614	2.25E 02	3.56E 02	3.64E 02	3.23E 02	2.71E 02	2.23E 02
3	2	29	28	5629.04	2	2135.42	4.6829	0.0359	1.46E-01	1.20E 00	2.80E 00	4.07E 00	4.75E 00	4.95E 00
7	6	61	60	19033.64	1	2135.44	4.6829	0.0303	0.0	1.41E-03	8.20E-02	8.21E-01	3.47E 00	9.08E 00
6	5	85	84	22480.53	2	2135.45	4.6829	0.0303	0.0	0.0	8.73E-05	1.43E-03	8.42E-03	2.78E-02
1	0	1	2	11.54	1	2135.55	4.6826	0.0606	1.02E 03	5.71E 02	3.48E 02	2.26E 02	1.54E 02	1.09E 02
6	5	86	85	22765.26	2	2135.66	4.6824	0.0303	0.0	0.0	7.19E-05	1.23E-03	7.43E-03	2.51E-02
7	6	113	112	34479.86	1	2135.69	4.6823	0.0303	0.0	0.0	0.0	2.05E-04	3.81E-03	2.87E-02
6	5	87	86	23053.02	2	2135.83	4.6820	0.0303	0.0	0.0	5.92E-05	1.05E-03	6.55E-03	2.25E-02
6	5	88	87	23343.78	2	2135.95	4.6818	0.0303	0.0	0.0	4.85E-05	9.02E-04	5.76E-03	2.02E-02
6	5	89	88	23637.53	2	2136.03	4.6816	0.0303	0.0	0.0	3.97E-05	7.70E-04	5.06E-03	1.81E-02
6	5	91	90	24233.98	2	2136.05	4.6815	0.0303	0.0	0.0	2.64E-05	5.58E-04	3.88E-03	1.45E-02
5	4	55	54	13447.62	2	2136.06	4.6815	0.0303	0.0	2.08E-03	3.16E-02	1.42E-01	3.50E-01	6.23E-01
6	5	90	89	23934.27	2	2136.06	4.6815	0.0303	0.0	0.0	3.25E-05	6.57E-04	4.44E-03	1.62E-02
3	2	13	12	4554.37	1	2136.20	4.6812	0.0610	2.88E 01	1.42E 02	2.57E 02	3.21E 02	3.38E 02	3.28E 02
6	5	44	43	13902.14	1	2136.29	4.6810	0.0303	2.77E-04	1.21E-01	2.06E 00	9.84E 00	2.54E 01	4.68E 01
2	1	20	19	2787.51	2	2136.56	4.6804	0.0535	4.02E 00	8.45E 00	9.98E 00	9.64E 00	8.57E 00	7.35E 00
7	6	62	61	19249.80	1	2136.63	4.6803	0.0303	0.0	1.16E-03	7.14E-02	7.37E-01	3.18E 00	8.45E 00
7	6	112	111	34107.37	1	2136.93	4.6796	0.0303	0.0	0.0	0.0	2.52E-04	4.52E-03	3.32E-02
5	4	32	31	10246.16	1	2137.02	4.6794	0.0331	3.25E-02	2.46E 00	1.74E 01	4.93E 01	8.97E 01	1.28E 02
4	3	22	21	7213.10	1	2137.18	4.6791	0.0496	1.41E 00	2.49E 01	8.54E 01	1.56E 02	2.12E 02	2.47E 02
4	3	41	40	9131.08	2	2137.28	4.6788	0.0303	1.78E-03	7.84E-02	4.24E-01	1.02E 00	1.67E 00	2.21E 00

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	56	55	13638.86	2	2137.57	4.6782	0.0303	0.0	1.76E-03	2.81E-02	1.29E-01	3.25E-01	5.87E-01
1	0	12	11	242.53	2	2137.59	4.6782	0.0617	4.70E 01	2.92E 01	1.87E 01	1.25E 01	8.73E 00	6.29E 00
7	6	63	62	19469.31	1	2137.78	4.6777	0.0303	0.0	9.58E-04	6.19E-02	6.61E-01	2.91E 00	7.85E 00
3	2	30	29	5733.20	2	2137.99	4.6773	0.0340	1.30E-01	1.12E 00	2.69E 00	3.97E 00	4.68E 00	4.91E 00
7	6	111	110	33737.59	1	2138.12	4.6770	0.0303	0.0	0.0	0.0	3.09E-04	5.36E-03	3.83E-02
6	5	45	44	14061.54	1	2138.24	4.6767	0.0303	2.25E-04	1.06E-01	1.88E 00	9.19E 00	2.41E 01	4.49E 01
7	6	64	63	19692.16	1	2138.88	4.6753	0.0303	0.0	7.86E-04	5.36E-02	5.91E-01	2.66E 00	7.28E 00
2	1	6	5	2200.42	1	2138.90	4.6753	0.0617	2.63E 02	4.20E 02	4.32E 02	3.84E 02	3.23E 02	2.67E 02
5	4	57	56	13833.44	2	2139.04	4.6750	0.0303	0.0	1.49E-03	2.49E-02	1.18E-01	3.02E-01	5.52E-01
7	6	110	109	33370.55	1	2139.26	4.6745	0.0303	0.0	0.0	0.0	3.79E-04	6.34E-03	4.43E-02
4	3	42	41	9276.23	2	2139.37	4.6743	0.0303	1.48E-03	7.00E-02	3.92E-01	9.62E-01	1.59E 00	2.13E 00
1	0	0	1	3.85	1	2139.43	4.6741	0.0603	5.19E 02	2.88E 02	1.75E 02	1.14E 02	7.74E 01	5.49E 01
3	2	14	13	4603.40	1	2139.47	4.6741	0.0604	2.90E 01	1.46E 02	2.68E 02	3.36E 02	3.57E 02	3.47E 02
5	4	33	32	10363.92	1	2139.49	4.6740	0.0326	2.84E-02	2.27E 00	1.65E 01	4.75E 01	8.75E 01	1.26E 02
2	1	21	20	2860.19	2	2139.49	4.6740	0.0515	3.80E 00	8.29E 00	9.97E 00	9.72E 00	8.70E 00	7.50E 00
7	6	65	64	19918.36	1	2139.93	4.6730	0.0303	0.0	6.43E-04	4.63E-02	5.27E-01	2.43E 00	6.74E 00
4	3	23	22	7295.12	1	2140.08	4.6727	0.0476	1.32E 00	2.41E 01	8.43E 01	1.56E 02	2.14E 02	2.50E 02
6	5	46	45	14224.45	1	2140.15	4.6726	0.0303	1.82E-04	9.29E-02	1.71E 00	8.57E 00	2.28E 01	4.30E 01
7	6	109	108	33006.25	1	2140.35	4.6721	0.0303	0.0	0.0	0.0	4.64E-04	7.49E-03	5.10E-02
5	4	58	57	14031.34	2	2140.46	4.6719	0.0303	0.0	1.26E-03	2.20E-02	1.07E-01	2.80E-01	5.18E-01
3	2	31	30	5840.91	2	2140.52	4.6718	0.0335	1.15E-01	1.05E 00	2.58E 00	3.86E 00	4.60E 00	4.87E 00
1	0	13	12	286.60	2	2140.83	4.6711	0.0610	4.79E 01	3.04E 01	1.97E 01	1.33E 01	9.28E 00	6.71E 00
7	6	66	65	20147.87	1	2140.95	4.6708	0.0303	0.0	5.24E-04	3.99E-02	4.69E-01	2.21E 00	6.23E 00
7	6	108	107	32644.72	1	2141.38	4.6699	0.0303	0.0	0.0	0.0	5.66E-04	8.84E-03	5.87E-02
4	3	43	42	9424.83	2	2141.42	4.6698	0.0303	1.22E-03	6.22E-02	3.61E-01	9.05E-01	1.52E 00	2.06E 00
5	4	59	58	14232.57	2	2141.85	4.6689	0.0303	0.0	1.05E-03	1.94E-02	9.70E-02	2.59E-01	4.86E-01
7	6	67	66	20380.71	1	2141.91	4.6687	0.0303	0.0	4.25E-04	3.42E-02	4.16E-01	2.00E 00	5.75E 00
5	4	34	33	10485.30	1	2141.92	4.6687	0.0321	2.46E-02	2.08E 00	1.56E 01	4.57E 01	8.52E 01	1.24E 02
6	5	47	46	14390.88	1	2142.02	4.6685	0.0303	1.47E-04	8.10E-02	1.55E 00	7.96E 00	2.16E 01	4.10E 01
7	6	107	106	32285.97	1	2142.37	4.6677	0.0303	0.0	0.0	0.0	6.91E-04	1.04E-02	6.75E-02
2	1	22	21	2936.50	2	2142.38	4.6677	0.0496	3.58E 00	8.08E 00	9.90E 00	9.77E 00	8.81E 00	7.63E 00
2	1	7	6	2223.28	1	2142.47	4.6675	0.0620	2.98E 02	4.80E 02	4.97E 02	4.43E 02	3.74E 02	3.09E 02
3	2	15	14	4656.18	1	2142.71	4.6670	0.0597	2.88E 01	1.49E 02	2.77E 02	3.50E 02	3.73E 02	3.64E 02
7	6	68	67	20616.86	1	2142.84	4.6667	0.0303	0.0	3.44E-04	2.93E-02	3.69E-01	1.82E 00	5.30E 00
4	3	24	23	7380.84	1	2142.94	4.6665	0.0457	1.22E 00	2.32E 01	8.28E 01	1.55E 02	2.15E 02	2.53E 02
3	2	32	31	5952.17	2	2143.02	4.6663	0.0331	1.01E-01	9.75E-01	2.46E 00	3.75E 00	4.51E 00	4.81E 00
5	4	60	59	14437.11	2	2143.20	4.6659	0.0303	0.0	8.81E-04	1.70E-02	8.78E-02	2.39E-01	4.55E-01
7	6	106	105	31930.02	1	2143.31	4.6657	0.0303	0.0	0.0	0.0	8.41E-04	1.23E-02	7.75E-02
4	3	44	43	9576.89	2	2143.43	4.6654	0.0303	1.01E-03	5.51E-02	3.31E-01	8.50E-01	1.45E 00	1.98E 00
7	6	69	68	20856.30	1	2143.72	4.6648	0.0303	0.0	2.78E-04	2.51E-02	3.26E-01	1.64E 00	4.87E 00
6	5	48	47	14560.82	1	2143.84	4.6645	0.0303	1.17E-04	7.03E-02	1.40E 00	7.38E 00	2.03E 01	3.91E 01
1	0	14	13	334.34	2	2144.04	4.6641	0.0604	4.82E 01	3.13E 01	2.05E 01	1.39E 01	9.79E 00	7.10E 00
7	6	105	104	31576.87	1	2144.19	4.6638	0.0303	0.0	0.0	0.0	1.02E-03	1.44E-02	8.89E-02
5	4	35	34	10610.31	1	2144.32	4.6635	0.0317	2.11E-02	1.90E 00	1.47E 01	4.39E 01	8.28E 01	1.22E 02
5	4	61	60	14644.96	2	2144.50	4.6631	0.0303	0.0	7.34E-04	1.49E-02	7.92E-02	2.20E-01	4.25E-01
7	6	70	69	21099.03	1	2144.55	4.6630	0.0303	0.0	2.23E-04	2.14E-02	2.88E-01	1.49E 00	4.47E 00
7	6	104	103	31226.56	1	2145.03	4.6619	0.0303	0.0	0.0	2.14E-05	1.24E-03	1.69E-02	1.02E-01
2	1	23	22	3016.41	2	2145.24	4.6615	0.0476	3.34E 00	7.84E 00	9.79E 00	9.77E 00	8.88E 00	7.74E 00
7	6	71	70	21345.04	1	2145.34	4.6613	0.0303	0.0	1.79E-04	1.82E-02	2.54E-01	1.34E 00	4.10E 00
4	3	45	44	9732.40	2	2145.40	4.6611	0.0303	8.25E-04	4.86E-02	3.03E-01	7.96E-01	1.38E 00	1.90E 00
3	2	33	32	6066.97	2	2145.48	4.6610	0.0326	8.88E-02	9.02E-01	2.34E 00	3.62E 00	4.41E 00	4.74E 00
6	5	49	48	14734.27	1	2145.62	4.6607	0.0303	9.35E-05	6.08E-02	1.26E 00	6.83E 00	1.91E 01	3.72E 01
4	3	25	24	7470.27	1	2145.76	4.6604	0.0437	1.11E 00	2.22E 01	8.10E 01	1.54E 02	2.15E 02	2.54E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER, CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	62	61	14856.11	2	2145.76	4.6604	0.0303	0.0	6.10E-04	1.30E-02	7.14F-02	2.02E-01	3.96E-01
7	6	103	102	30879.08	1	2145.81	4.6602	0.0303	0.0	0.0	2.73E-05	1.50E-03	1.98E-02	1.17E-01
3	2	16	15	4712.73	1	2145.90	4.6600	0.0591	2.84E 01	1.51E 02	2.84E 02	3.63E 02	3.88E 02	3.81E 02
2	1	8	7	2249.94	1	2145.99	4.6599	0.0623	3.28E 02	5.36E 02	5.58E 02	5.00E 02	4.23E 02	3.50E 02
7	6	72	71	21594.31	1	2146.08	4.6597	0.0303	0.0	1.43E-04	1.54E-02	2.23E-01	1.21F 00	3.76F 00
7	6	102	101	30534.46	1	2146.55	4.6586	0.0303	0.0	0.0	3.46E-05	1.82E-03	2.31E-02	1.33E-01
5	4	36	35	10738.94	1	2146.67	4.6584	0.0312	1.81E-02	1.73E 00	1.38F 01	4.20E 01	8.02F 01	1.19E 02
7	6	73	72	21846.84	1	2146.78	4.6581	0.0303	0.0	1.14E-04	1.30E-02	1.95E-01	1.08E 00	3.43E 00
5	4	63	62	15070.55	2	2146.99	4.6577	0.0303	0.0	5.05E-04	1.13E-02	6.42E-02	1.85E-01	3.69E-01
1	0	1	0	-0.0	1	2147.08	4.6575	0.0603	5.23E 02	2.90E 02	1.76E 02	1.14E 02	7.79E 01	5.53E 01
1	0	15	14	385.75	2	2147.21	4.6572	0.0597	4.81E 01	3.20E 01	2.13E 01	1.45E 01	1.03E 01	7.47E 00
7	6	101	100	30192.72	1	2147.23	4.6572	0.0303	0.0	0.0	4.39E-05	2.19E-03	2.70E-02	1.52E-01
4	3	46	45	9891.36	2	2147.33	4.6569	0.0303	6.71E-04	4.27E-02	2.77E-01	7.44E-01	1.31E 00	1.82E 00
6	5	50	49	14911.20	1	2147.37	4.6569	0.0303	7.40E-05	5.24E-02	1.14E 00	6.30E 00	1.79E 01	3.54E 01
7	6	74	73	22102.62	1	2147.43	4.6567	0.0303	0.0	9.02E-05	1.10E-02	1.71E-01	9.71E-01	3.13E 00
7	6	100	99	29853.86	1	2147.87	4.6558	0.0303	0.0	0.0	5.55E-05	2.64E-03	3.15E-02	1.73E-01
3	2	34	33	6185.32	2	2147.90	4.6557	0.0321	7.73E-02	8.31E-01	2.22E 00	3.49E 00	4.30E 00	4.66E 00
7	6	75	74	22361.64	1	2148.03	4.6554	0.0303	0.0	7.13E-05	9.23E-03	1.49E-01	8.69E-01	2.86E 00
2	1	24	23	3099.94	2	2148.06	4.6554	0.0457	3.09E 00	7.56E 00	9.63E 00	9.73F 00	8.92E 00	7.82E 00
5	4	64	63	15288.27	2	2148.17	4.6551	0.0303	0.0	4.16E-04	9.86E-03	5.76E-02	1.70E-01	3.43E-01
7	6	99	98	29517.91	1	2148.45	4.6545	0.0303	0.0	0.0	7.01E-05	3.17E-03	3.67E-02	1.97E-01
4	3	26	25	7563.39	1	2148.54	4.6543	0.0418	1.01E 00	2.12E 01	7.89E 01	1.52F 02	2.14E 02	2.55E 02
7	6	76	75	22623.88	1	2148.59	4.6542	0.0303	0.0	5.62E-05	7.75E-03	1.30F-01	7.77E-01	2.60F 00
5	4	37	36	10871.18	1	2148.98	4.6534	0.0308	1.54E-02	1.57E 00	1.29E 01	4.01F 01	7.75E 01	1.16F 02
7	6	98	97	29184.87	1	2148.99	4.6533	0.0303	0.0	0.0	8.82E-05	3.81E-03	4.27E-02	2.24E-01
3	2	17	16	4773.03	1	2149.06	4.6532	0.0585	2.77E 01	1.52E 02	2.90E 02	3.73E 02	4.02E 02	3.95E 02
6	5	51	50	15091.63	1	2149.06	4.6532	0.0303	5.83E-05	4.50E-02	1.02E 00	5.80F 00	1.68E 01	3.35E 01
7	6	77	76	22889.33	1	2149.11	4.6531	0.0303	0.0	4.41F-05	6.49E-03	1.13E-01	6.93E-01	2.36E 00
4	3	47	46	10053.75	2	2149.23	4.6528	0.0303	5.44E-04	3.74E-02	2.52E-01	6.93E-01	1.24E 00	1.75E 00
5	4	65	64	15509.25	2	2149.31	4.6527	0.0303	0.0	3.42F-04	8.55E-03	5.15E-02	1.55E-01	3.18E-01
7	6	97	96	28854.77	1	2149.48	4.6523	0.0303	0.0	0.0	1.11E-04	4.56E-03	4.95E-02	2.54E-01
2	1	9	8	2280.41	1	2149.48	4.6523	0.0624	3.54E 02	5.87E 02	6.16F 02	5.54F 02	4.70E 02	3.90E 02
7	6	78	77	23157.98	1	2149.57	4.6521	0.0303	0.0	3.45E-05	5.42E-03	9.82F-02	6.17F-01	2.14E 00
7	6	96	95	28527.61	1	2149.92	4.6513	0.0303	0.0	0.0	1.39E-04	5.46E-03	5.74E-02	2.88E-01
7	6	79	78	23429.83	1	2150.00	4.6512	0.0303	0.0	2.70E-05	4.51E-03	8.51F-02	5.49E-01	1.94E 00
3	2	35	34	6307.19	2	2150.28	4.6506	0.0317	6.69E-02	7.62E-01	2.09E 00	3.36F 00	4.18E 00	4.57E 00
7	6	95	94	28203.41	1	2150.31	4.6505	0.0303	0.0	0.0	1.74E-04	5.52E-03	6.64E-02	3.26E-01
1	0	16	15	440.81	2	2150.35	4.6504	0.0591	4.74E 01	3.24E 01	2.18E 01	1.50E 01	1.07E 01	7.81E 00
7	6	80	79	23704.85	1	2150.37	4.6504	0.0303	0.0	2.10E-05	3.75E-03	7.35E-02	4.87E-01	1.75E 00
5	4	66	65	15733.51	2	2150.41	4.6503	0.0303	0.0	2.81E-04	7.39E-03	4.60E-02	1.42E-01	2.95E-01
7	6	94	93	27882.18	1	2150.65	4.6498	0.0303	0.0	0.0	2.17E-04	7.76E-03	7.67F-02	3.68E-01
7	6	81	80	23983.04	1	2150.70	4.6496	0.0303	0.0	0.0	3.11E-03	6.34E-02	4.31E-01	1.58E 00
6	5	52	51	15275.54	1	2150.72	4.6496	0.0303	4.56F-05	3.85E-02	9.12E-01	5.32F 00	1.57F 01	3.17E 01
2	1	25	24	3187.07	2	2150.84	4.6493	0.0437	2.84E 00	7.26E 00	9.44E 00	9.66E 00	8.93E 00	7.87E 00
1	0	2	1	3.85	1	2150.86	4.6493	0.0606	1.04E 03	5.80E 02	3.53E 02	2.29E 02	1.56E 02	1.11E 02
7	6	93	92	27563.95	1	2150.94	4.6491	0.0303	0.0	0.0	2.70E-04	9.23E-03	8.85E-02	4.15E-01
7	6	82	81	24264.39	1	2150.98	4.6490	0.0303	0.0	0.0	2.57E-03	5.46E-02	3.82E-01	1.43F 00
4	3	48	47	10219.57	2	2151.09	4.6488	0.0303	4.38E-04	3.26E-02	2.29E-01	6.44E-01	1.17E 00	1.67E 00
7	6	92	91	27248.71	1	2151.18	4.6486	0.0303	0.0	0.0	3.35E-04	1.10E-02	1.02E-01	4.68E-01
7	6	83	82	24548.88	1	2151.21	4.6485	0.0303	0.0	0.0	2.12E-03	4.69E-02	3.37E-01	1.29E 00
5	4	38	37	11007.02	1	2151.25	4.6485	0.0303	1.30E-02	1.42E 00	1.21F 01	3.81F 01	7.46E 01	1.13E 02
4	3	27	26	7660.20	1	2151.28	4.6484	0.0398	9.18E-01	2.01E 01	7.66E 01	1.49E 02	2.12E 02	2.55E 02
7	6	91	90	26936.49	1	2151.38	4.6482	0.0303	0.0	0.0	4.16E-04	1.30E-02	1.17E-01	5.27F-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	6	84	83	24836.50	1	2151.40	4.6481	0.0303	0.0	0.0	1.74E-03	4.02E-02	2.97E-01	1.16E 00
5	4	67	66	15961.02	2	2151.47	4.6480	0.0303	0.0	2.29E-04	6.38E-03	4.10E-02	1.29E-01	2.73E-01
7	6	90	89	26627.30	1	2151.52	4.6479	0.0303	0.0	0.0	5.14E-04	1.54E-02	1.35E-01	5.92E-01
7	6	85	84	25127.25	1	2151.54	4.6478	0.0303	0.0	0.0	1.43E-03	3.44E-02	2.61E-01	1.04E 00
7	6	89	88	26321.15	1	2151.62	4.6477	0.0303	0.0	0.0	6.33E-04	1.81E-02	1.54E-01	6.64E-01
7	6	86	85	25421.09	1	2151.63	4.6476	0.0303	0.0	0.0	1.17E-03	2.94E-02	2.30E-01	9.30E-01
7	6	88	87	26018.06	1	2151.67	4.6476	0.0303	0.0	0.0	7.79E-04	2.13E-02	1.76E-01	7.44E-01
7	6	87	86	25718.04	1	2151.68	4.6475	0.0303	0.0	0.0	9.56E-04	2.51E-02	2.01E-01	8.33E-01
3	2	18	17	4837.09	1	2152.19	4.6464	0.0568	2.68E 01	1.51E 02	2.93E 02	3.81E 02	4.13E 02	4.09E 02
6	5	53	52	15462.93	1	2152.34	4.6461	0.0303	3.56E-05	3.28E-02	8.13E-01	4.87E 00	1.46E 01	3.00E 01
5	4	68	67	16191.77	2	2152.48	4.6458	0.0303	0.0	1.86E-04	5.49E-03	3.65E-02	1.17E-01	2.52E-01
3	2	36	35	6432.60	2	2152.63	4.6455	0.0312	5.75E-02	6.96E-01	1.97E 00	3.22E 00	4.06E 00	4.47E 00
4	3	49	48	10388.82	2	2152.90	4.6449	0.0303	3.51E-04	2.83E-02	2.07E-01	5.97E-01	1.10E 00	1.59E 00
2	1	10	9	2314.69	1	2152.94	4.6448	0.0624	3.75E 02	6.32E 02	6.69E 02	6.06E 02	5.15E 02	4.28E 02
1	0	17	16	499.54	2	2153.45	4.6437	0.0585	4.64E 01	3.26E 01	2.23E 01	1.55E 01	1.11E 01	8.11E 00
5	4	69	68	16425.77	2	2153.46	4.6437	0.0303	0.0	1.51E-04	4.71E-03	3.23E-02	1.06E-01	2.32E-01
5	4	39	38	11146.46	1	2153.49	4.6436	0.0303	1.09E-02	1.27E 00	1.12E 01	3.61E 01	7.18E 01	1.09E 02
2	1	26	25	3277.80	2	2153.59	4.6434	0.0418	2.60E 00	6.93E 00	9.21E 00	9.55E 00	8.90E 00	7.90E 00
6	5	54	53	15653.78	1	2153.91	4.6427	0.0303	2.75E-05	2.79E-02	7.23E-01	4.45E 00	1.36E 01	2.83E 01
4	3	28	27	7760.70	1	2153.99	4.6425	0.0379	8.25E-01	1.89E 01	7.40E 01	1.46E 02	2.10E 02	2.54E 02
6	5	121	120	35797.48	1	2154.17	4.6422	0.0303	0.0	0.0	0.0	9.01E-05	1.90E-03	1.57E-02
5	4	70	69	16662.99	2	2154.39	4.6417	0.0303	0.0	1.22E-04	4.03E-03	2.86E-02	9.64E-02	2.14E-01
1	0	3	2	11.54	1	2154.60	4.6412	0.0609	1.55E 03	8.66E 02	5.27E 02	3.42E 02	2.34E 02	1.66E 02
4	3	50	49	10561.49	2	2154.68	4.6411	0.0303	2.79E-04	2.45E-02	1.87E-01	5.52E-01	1.04E 00	1.51E 00
3	2	37	36	6561.53	2	2154.94	4.6405	0.0308	4.92E-02	6.33E-01	1.85E 00	3.08E 00	3.93E 00	4.37E 00
3	2	19	18	4904.90	1	2155.27	4.6398	0.0552	2.57E 01	1.50E 02	2.95E 02	3.88E 02	4.23E 02	4.20E 02
5	4	71	70	16903.43	2	2155.28	4.6398	0.0303	0.0	9.85E-05	3.44E-03	2.53E-02	8.72E-02	1.97E-01
6	5	55	54	15848.09	1	2155.43	4.6394	0.0303	2.12E-05	2.36E-02	6.40E-01	4.06E 00	1.27E 01	2.66E 01
5	4	40	39	11289.51	1	2155.68	4.6389	0.0303	9.15E-03	1.14E 00	1.04E 01	3.42E 01	6.88E 01	1.06E 02
6	5	120	119	35399.70	1	2155.79	4.6387	0.0303	0.0	0.0	0.0	1.13E-04	2.29E-03	1.84E-02
5	4	72	71	17147.08	2	2156.13	4.6379	0.0303	0.0	7.91E-05	2.93E-03	2.23E-02	7.87E-02	1.81E-01
2	1	27	26	3372.13	2	2156.31	4.6376	0.0398	2.36E 00	6.58E 00	8.96E 00	9.41E 00	8.85E 00	7.91E 00
2	1	11	10	2352.76	1	2156.35	4.6375	0.0625	3.91E 02	6.72E 02	7.18E 02	6.52E 02	5.57E 02	4.65E 02
4	3	51	50	10737.57	2	2156.42	4.6373	0.0303	2.21E-04	2.11E-02	1.68E-01	5.10E-01	9.72E-01	1.44E 00
1	0	18	17	561.92	2	2156.51	4.6371	0.0568	4.50E 01	3.26E 01	2.26E 01	1.59E 01	1.14E 01	8.39E 00
4	3	29	28	7864.89	1	2156.65	4.6368	0.0359	7.36E-01	1.78E 01	7.12E 01	1.43E 02	2.07E 02	2.52E 02
6	5	56	55	16045.84	1	2156.92	4.6362	0.0303	0.0	1.99E-02	5.66E-01	3.69E 00	1.17E 01	2.50E 01
5	4	73	72	17393.93	2	2156.93	4.6362	0.0303	0.0	6.33E-05	2.49E-03	1.96E-02	7.09E-02	1.66E-01
3	2	38	37	6693.98	2	2157.22	4.6356	0.0303	4.18E-02	5.73E-01	1.73E 00	2.93E 00	3.79E 00	4.25E 00
6	5	119	118	35004.53	1	2157.36	4.6353	0.0303	0.0	0.0	0.0	1.40E-04	2.75E-03	2.15E-02
5	4	74	73	17643.96	2	2157.70	4.6346	0.0303	0.0	5.05E-05	2.11E-03	1.73E-02	6.38E-02	1.52E-01
5	4	41	40	11436.14	1	2157.83	4.6343	0.0303	7.60E-03	1.02E 00	9.60E 00	3.22E 01	6.58E 01	1.02E 02
4	3	52	51	10917.06	2	2158.12	4.6337	0.0303	1.74E-04	1.81E-02	1.51E-01	4.69E-01	9.10E-01	1.36E 00
1	0	4	3	23.07	1	2158.30	4.6333	0.0611	2.04E 03	1.14E 03	6.99E 02	4.55E 02	3.11E 02	2.21E 02
3	2	20	19	4976.46	1	2158.32	4.6332	0.0535	2.44E 01	1.48E 02	2.96E 02	3.92E 02	4.31E 02	4.30E 02
6	5	57	56	16247.05	1	2158.36	4.6331	0.0303	0.0	1.67E-02	4.99E-01	3.35E 00	1.08E 01	2.34E 01
5	4	75	74	17897.18	2	2158.42	4.6330	0.0303	0.0	4.02E-05	1.78E-03	1.51E-02	5.73E-02	1.38E-01
6	5	118	117	34611.99	1	2158.88	4.6320	0.0303	0.0	0.0	0.0	1.75E-04	3.29E-03	2.51E-02
2	1	28	27	3470.06	2	2158.98	4.6318	0.0379	2.13E 00	6.22E 00	8.67E 00	9.24E 00	8.78E 00	7.89E 00
5	4	76	75	18153.57	2	2159.10	4.6316	0.0303	0.0	3.18E-05	1.50E-03	1.32E-02	5.14E-02	1.26E-01
4	3	30	29	7972.75	1	2159.28	4.6312	0.0340	6.53E-01	1.66E 01	6.83E 01	1.39E 02	2.04E 02	2.50E 02
3	2	39	38	6829.95	2	2159.45	4.6308	0.0303	3.53E-02	5.17E-01	1.61E 00	2.79E 00	3.65E 00	4.14E 00
1	0	19	18	627.96	2	2159.54	4.6306	0.0552	4.32E 01	3.23E 01	2.28E 01	1.61E 01	1.17E 01	8.64E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	77	76	18413.12	2	2159.73	4.6302	0.0303	0.0	2.52E-05	1.26E-03	1.15E-02	4.60E-02	1.15E-01
2	1	12	11	2394.64	1	2159.73	4.6302	0.0617	4.02E 02	7.05E 02	7.61F 02	6.96E 02	5.97E 02	5.00E 02
6	5	58	57	16451.68	1	2159.76	4.6301	0.0303	0.0	1.40E-02	4.38E-01	3.03E 00	1.00E 01	2.19E 01
4	3	53	52	11099.95	2	2159.78	4.6301	0.0303	1.37E-04	1.55E-02	1.35E-01	4.31E-01	8.51F-01	1.29E 00
5	4	42	41	11586.35	1	2159.94	4.6298	0.0303	6.28E-03	9.03E-01	8.84E 00	3.03E 01	6.29E 01	9.87E 01
5	4	78	77	18675.82	2	2160.32	4.6289	0.0303	0.0	0.0	1.06E-03	1.01E-02	4.11E-02	1.05E-01
6	5	117	116	34222.09	1	2160.35	4.6289	0.0303	0.0	0.0	0.0	2.17F-04	3.94E-03	2.92E-02
5	4	79	78	18941.66	2	2160.87	4.6278	0.0303	0.0	0.0	8.85E-04	8.74F-03	3.66F-02	9.51E-02
6	5	59	58	16659.74	1	2161.12	4.6272	0.0303	0.0	1.16E-02	3.84F-01	2.74E 00	9.23E 00	2.05E 01
3	2	21	20	5051.77	1	2161.33	4.6268	0.0515	2.30F 01	1.44E 02	2.95E 02	3.95E 02	4.38E 02	4.39E 02
5	4	80	79	19210.62	2	2161.38	4.6267	0.0303	0.0	0.0	7.39F-04	7.59E-03	3.26E-02	8.62E-02
4	3	54	53	11286.22	2	2161.40	4.6266	0.0303	1.07E-04	1.33E-02	1.20E-01	3.95E-01	7.94E-01	1.22E 00
2	1	29	28	3571.58	2	2161.62	4.6262	0.0359	1.91E 00	5.86E 00	8.36E 00	9.04E 00	8.67E 00	7.86E 00
3	2	40	39	6969.43	2	2161.65	4.6261	0.0303	2.97E-02	4.65E-01	1.50E 00	2.64E 00	3.51F 00	4.01E 00
6	5	116	115	33834.87	1	2161.76	4.6259	0.0303	0.0	0.0	0.0	2.69F-04	4.72E-03	3.40E-02
5	4	81	80	19482.71	2	2161.84	4.6257	0.0303	0.0	0.0	6.15E-04	6.57E-03	2.90F-02	7.81E-02
4	3	31	30	8084.29	1	2161.87	4.6256	0.0335	5.75E-01	1.54E 01	6.52E 01	1.35E 02	2.00E 02	2.47F 02
1	0	5	4	38.45	1	2161.97	4.6254	0.0614	2.49E 03	1.41E 03	8.66E 02	5.65E 02	3.86E 02	2.75F 02
5	4	43	42	11740.14	1	2162.00	4.6253	0.0303	5.16E-03	7.99E-01	8.11F 00	2.85E 01	5.99E 01	9.50E 01
5	4	82	81	19757.90	2	2162.26	4.6248	0.0303	0.0	0.0	5.11E-04	5.68E-03	2.57E-02	7.06F-02
6	5	60	59	16871.22	1	2162.43	4.6244	0.0303	0.0	9.67E-03	3.36E-01	2.47F 00	9.49E 00	1.91E 01
1	0	20	19	697.65	2	2162.54	4.6242	0.0535	4.12E 01	3.19E 01	2.29E 01	1.64E 01	1.19F 01	8.86E 00
5	4	83	82	20036.19	2	2162.63	4.6240	0.0303	0.0	0.0	4.24E-04	4.90F-03	2.28E-02	6.38E-02
5	4	84	83	20317.56	2	2162.96	4.6233	0.0303	0.0	0.0	3.50E-04	4.22F-03	2.02E-02	5.75E-02
4	3	55	54	11475.88	2	2162.98	4.6233	0.0303	8.28E-05	1.13E-02	1.07E-01	3.61E-01	7.39E-01	1.15E 00
2	1	13	12	2440.32	1	2163.08	4.6230	0.0610	4.09E 02	7.33E 02	7.99E 02	7.36E 02	6.35E 02	5.32E 02
6	5	115	114	33450.32	1	2163.13	4.6229	0.0303	0.0	0.0	0.0	3.34E-04	5.63E-03	3.95E-02
5	4	85	84	20602.01	2	2163.25	4.6227	0.0303	0.0	0.0	2.89E-04	3.62E-03	1.78E-02	5.18F-02
5	4	96	95	23930.47	2	2163.48	4.6222	0.0303	0.0	0.0	2.97E-05	6.01E-04	4.06E-03	1.48E-02
5	4	86	85	20889.52	2	2163.50	4.6221	0.0303	0.0	0.0	2.38E-04	3.11F-03	1.57F-02	4.65E-02
5	4	95	94	23612.99	2	2163.68	4.6218	0.0303	0.0	0.0	3.69E-05	7.14E-04	4.68E-03	1.67E-02
6	5	61	60	17086.11	1	2163.69	4.6217	0.0303	0.0	8.00E-03	2.93E-01	2.22E 00	7.79E 00	1.78E 01
5	4	87	86	21180.08	2	2163.70	4.6217	0.0303	0.0	0.0	1.95E-04	2.66E-03	1.38E-02	4.18E-02
3	2	41	40	7112.42	2	2163.81	4.6215	0.0303	2.48E-02	4.16E-01	1.39E 00	2.50E 00	3.36F 00	3.88E 00
5	4	94	93	23298.45	2	2163.84	4.6214	0.0303	0.0	0.0	4.58E-05	8.47F-04	5.39E-03	1.89E-02
5	4	88	87	21473.68	2	2163.85	4.6214	0.0303	0.0	0.0	1.60E-04	2.27F-03	1.21E-02	3.75E-02
5	4	93	92	22986.86	2	2163.96	4.6212	0.0303	0.0	0.0	5.68E-05	1.00F-03	6.20F-03	2.12F-02
5	4	89	88	21770.31	2	2163.96	4.6212	0.0303	0.0	0.0	1.31E-04	1.94E-03	1.06E-02	3.35E-02
5	4	92	91	22678.24	2	2164.02	4.6210	0.0303	0.0	0.0	7.02F-05	1.19E-03	7.11E-03	2.38E-02
5	4	90	89	22069.95	2	2164.03	4.6210	0.0303	0.0	0.0	1.06E-04	1.65E-03	9.32E-03	3.00E-02
5	4	44	43	11897.51	1	2164.03	4.6210	0.0303	4.21F-03	7.04E-01	7.42E 00	2.66E 01	5.69E 01	9.12E 01
5	4	91	90	22372.60	2	2164.05	4.6210	0.0303	0.0	0.0	8.65E-05	1.40F-03	8.15E-03	2.68E-02
2	1	30	29	3676.69	2	2164.22	4.6206	0.0340	1.70F 00	5.49E 00	8.03E 00	8.82E 00	8.55E 00	7.80E 00
3	2	22	21	5130.82	1	2164.30	4.6204	0.0496	2.16F 01	1.40E 02	2.92E 02	3.96F 02	4.42F 02	4.46E 02
4	3	32	31	8199.50	1	2164.41	4.6202	0.0331	5.04E-01	1.43E 01	6.20F 01	1.31E 02	1.96E 02	2.44E 02
6	5	114	113	33068.48	1	2164.44	4.6201	0.0303	0.0	0.0	0.0	4.13E-04	6.71E-03	4.59E-02
4	3	56	55	11668.92	2	2164.52	4.6200	0.0303	6.39F-05	9.54E-03	9.49E-02	3.29E-01	6.87E-01	1.08E 00
6	5	62	61	17304.39	1	2164.92	4.6191	0.0303	0.0	6.60E-03	2.54E-01	1.99E 00	7.13E 00	1.66E 01
1	0	21	20	771.00	2	2165.50	4.6179	0.0515	3.90E 01	3.13E 01	2.28E 01	1.65F 01	1.21E 01	9.04E 00
1	0	6	5	57.67	1	2165.60	4.6177	0.0617	2.92E 03	1.67E 03	1.03E 03	6.72E 02	4.61E 02	3.28E 02
6	5	113	112	32689.35	1	2165.70	4.6174	0.0303	0.0	0.0	0.0	5.09F-04	7.99E-03	5.33E-02
3	2	42	41	7258.90	2	2165.93	4.6170	0.0303	2.06E-02	3.71E-01	1.28E 00	2.36E 00	3.22F 00	3.75E 00
4	3	57	56	11865.33	2	2166.01	4.6168	0.0303	4.91E-05	8.05F-03	8.40E-02	3.00E-01	6.37E-01	1.02F 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*CM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	45	44	12058.43	1	2166.01	4.6168	0.0303	3.42E-03	6.17E-01	6.77E 00	2.49E 01	5.39E 01	8.75E 01
6	5	63	62	17526.07	1	2166.10	4.6166	0.0303	0.0	5.43E-03	2.21E-01	1.78E 00	6.52E 00	1.54E 01
2	1	14	13	2489.80	1	2166.38	4.6160	0.0604	4.11E 02	7.54E 02	8.33E 02	7.72E 02	6.69E 02	5.63E 02
2	1	31	30	3785.38	2	2166.79	4.6151	0.0335	1.50E 00	5.12E 00	7.69E 00	8.58E 00	8.40E 00	7.72E 00
6	5	112	111	32312.95	1	2166.91	4.6149	0.0303	0.0	0.0	0.0	6.28E-04	9.50E-03	6.17E-02
4	3	33	32	8318.38	1	2166.92	4.6148	0.0326	4.38E-01	1.32E 01	5.88E 01	1.26E 02	1.91E 02	2.40E 02
3	2	23	22	5213.61	1	2167.23	4.6142	0.0476	2.01E 01	1.36E 02	2.88E 02	3.96E 02	4.45E 02	4.52E 02
6	5	64	63	17751.12	1	2167.23	4.6142	0.0303	0.0	4.44E-03	1.91E-01	1.59E 00	5.95E 00	1.43E 01
4	3	58	57	12065.10	2	2167.47	4.6137	0.0303	3.75E-05	6.77E-03	7.41E-02	2.72E-01	5.89E-01	9.55E-01
5	4	46	45	12222.92	1	2167.96	4.6126	0.0303	2.76E-03	5.40E-01	6.15E 00	2.32E 01	5.10E 01	8.37E 01
3	2	43	42	7408.88	2	2168.01	4.6125	0.0303	1.70E-02	3.29E-01	1.18E 00	2.22E 00	3.07E 00	3.62E 00
6	5	111	110	31939.30	1	2168.06	4.6124	0.0303	0.0	0.0	0.0	7.73E-04	1.13E-02	7.14E-02
6	5	65	64	17979.55	1	2168.32	4.6119	0.0303	0.0	3.63E-03	1.64E-01	1.42E 00	5.42E 00	1.32E 01
1	0	22	21	847.99	2	2168.43	4.6116	0.0496	3.66E 01	3.05E 01	2.27E 01	1.66E 01	1.22E 01	9.20E 00
4	3	59	58	12268.22	2	2168.89	4.6107	0.0303	2.85E-05	5.67E-03	6.52E-02	2.46E-01	5.44E-01	8.95E-01
6	5	110	109	31568.43	1	2169.17	4.6101	0.0303	0.0	0.0	0.0	9.49E-04	1.34E-02	8.25E-02
1	0	7	6	80.74	1	2169.20	4.6100	0.0620	3.30E 03	1.91E 03	1.18E 03	7.75E 02	5.33E 02	3.80E 02
2	1	32	31	3897.66	2	2169.32	4.6097	0.0331	1.32E 00	4.75E 00	7.33E 00	8.32E 00	8.23E 00	7.62E 00
6	5	66	65	18211.34	1	2169.37	4.6096	0.0303	0.0	2.95E-03	1.41E-01	1.26E 00	4.93E 00	1.22E 01
4	3	34	33	8440.93	1	2169.39	4.6096	0.0321	3.79E-01	1.21E 01	5.56E 01	1.21E 02	1.86E 02	2.36E 02
2	1	15	14	2543.08	1	2169.65	4.6090	0.0597	4.08E 02	7.69E 02	8.60E 02	8.04E 02	7.00E 02	5.92E 02
5	4	47	46	12390.96	1	2169.86	4.6086	0.0303	2.22E-03	4.70E-01	5.58E 00	2.15E 01	4.81E 01	7.99E 01
3	2	44	43	7562.35	2	2170.05	4.6082	0.0303	1.40E-02	2.91E-01	1.08E 00	2.08E 00	2.92E 00	3.48E 00
3	2	24	23	5300.14	1	2170.13	4.6080	0.0457	1.85E 01	1.31E 02	2.83E 02	3.94E 02	4.46E 02	4.56E 02
6	5	109	108	31200.33	1	2170.22	4.6078	0.0303	0.0	0.0	2.02E-05	1.16E-03	1.58E-02	9.53E-02
4	3	60	59	12474.70	2	2170.27	4.6077	0.0303	2.15E-05	4.73E-03	5.72E-02	2.23E-01	5.02E-01	8.37E-01
6	5	67	66	18446.48	1	2170.37	4.6075	0.0303	0.0	2.39E-03	1.21E-01	1.12E 00	4.47E 00	1.12E 01
6	5	108	107	30835.03	1	2171.23	4.6057	0.0303	0.0	0.0	2.60E-05	1.42E-03	1.87E-02	1.10E-01
1	0	23	22	928.62	2	2171.31	4.6055	0.0476	3.42E 01	2.95E 01	2.24E 01	1.66E 01	1.23E 01	9.32E 00
6	5	68	67	18684.96	1	2171.33	4.6055	0.0303	0.0	1.93E-03	1.04E-01	9.89E-01	4.05E 00	1.03E 01
4	3	61	60	12684.50	2	2171.61	4.6049	0.0303	0.0	3.94E-03	5.00E-02	2.01E-01	4.62E-01	7.81E-01
5	4	48	47	12562.54	1	2171.72	4.6046	0.0303	1.77E-03	4.07E-01	5.04E 00	1.99E 01	4.53E 01	7.61E 01
2	1	33	32	4013.51	2	2171.81	4.6045	0.0326	1.16E 00	4.39E 00	6.97E 00	8.04E 00	8.04E 00	7.51E 00
4	3	35	34	8567.12	1	2171.82	4.6044	0.0317	3.26E-01	1.10E 01	5.23E 01	1.16E 02	1.81E 02	2.31E 02
3	2	45	44	7719.30	2	2172.06	4.6039	0.0303	1.14E-02	2.56E-01	9.90E-01	1.94E 00	2.78E 00	3.34E 00
6	5	107	106	30472.55	1	2172.18	4.6037	0.0303	0.0	0.0	3.35E-05	1.74E-03	2.21E-02	1.26E-01
6	5	69	68	18926.79	1	2172.24	4.6035	0.0303	0.0	1.55E-03	8.84E-02	8.74E-01	3.66E 00	9.51E 00
1	0	8	7	107.65	1	2172.76	4.6024	0.0623	3.63E 03	2.13E 03	1.33E 03	8.74E 02	6.03E 02	4.31E 02
2	1	16	15	2600.15	1	2172.88	4.6022	0.0591	4.02E 02	7.78E 02	8.82E 02	8.32E 02	7.28E 02	6.18E 02
4	3	62	61	12897.64	2	2172.90	4.6021	0.0303	0.0	3.27E-03	4.36E-02	1.81E-01	4.24E-01	7.28E-01
3	2	25	24	5390.41	1	2172.98	4.6020	0.0437	1.69E 01	1.25E 02	2.77E 02	3.90E 02	4.46E 02	4.58E 02
6	5	106	105	30112.89	1	2173.08	4.6018	0.0303	0.0	0.0	4.30E-05	2.12E-03	2.60E-02	1.45E-01
6	5	70	69	19171.93	1	2173.11	4.6017	0.0303	0.0	1.25E-03	7.52E-02	7.70E-01	3.30E 00	8.72E 00
5	4	49	48	12737.67	1	2173.54	4.6008	0.0303	1.41E-03	3.52E-01	4.54E 00	1.84E 01	4.25E 01	7.24E 01
6	5	71	70	19420.38	1	2173.93	4.6000	0.0303	0.0	9.97E-04	6.38E-02	6.77E-01	2.98E 00	7.99E 00
6	5	105	104	29756.08	1	2173.93	4.6000	0.0303	0.0	0.0	5.51E-05	2.59E-03	3.06E-02	1.67E-01
3	2	46	45	7879.72	2	2174.02	4.5998	0.0303	9.27E-03	2.25E-01	9.02E-01	1.82E 00	2.63E 00	3.20E 00
4	3	63	62	13114.11	2	2174.16	4.5995	0.0303	0.0	2.70E-03	3.80E-02	1.62E-01	3.89E-01	6.77E-01
1	0	24	23	1012.90	2	2174.17	4.5995	0.0457	3.16E 01	2.85E 01	2.20E 01	1.65E 01	1.24E 01	9.41E 00
4	3	36	35	8696.97	1	2174.20	4.5994	0.0312	2.78E-01	1.00E 01	4.91E 01	1.11E 02	1.75E 02	2.25E 02
2	1	34	33	4132.93	2	2174.27	4.5992	0.0321	1.00E 00	4.04E 00	6.60E 00	7.75E 00	7.84E 00	7.38E 00
6	5	72	71	19672.14	1	2174.71	4.5983	0.0303	0.0	7.94E-04	5.40E-02	5.94E-01	2.67E 00	7.31E 00
6	5	104	103	29402.14	1	2174.74	4.5983	0.0303	0.0	0.0	7.05E-05	3.14E-03	3.60E-02	1.91E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

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5	4	50	49	12916.32	1	2175.31	4.5970	0.0303	1.11E-03	3.03E-01	4.08E 00	1.70E 01	3.99E 01	6.87E 01
4	3	64	63	13333.88	2	2175.37	4.5969	0.0303	0.0	2.22E-03	3.30E-02	1.46E-01	3.56E-01	6.29E-01
6	5	73	72	19927.18	1	2175.44	4.5968	0.0303	0.0	6.31E-04	4.56E-02	5.20E-01	2.40E 00	6.68E 00
6	5	103	102	29051.07	1	2175.49	4.5967	0.0303	0.0	0.0	8.99E-05	3.91E-03	4.22E-02	2.19E-01
3	2	26	25	5484.40	1	2175.80	4.5960	0.0418	1.54E 01	1.19E 02	2.70E 02	3.85E 02	4.44E 02	4.60E 02
3	2	47	46	8043.62	2	2175.95	4.5957	0.0303	7.49E-03	1.97E-01	8.21E-01	1.69E 00	2.49E 00	3.07E 00
2	1	17	16	2661.01	1	2176.08	4.5954	0.0585	3.92E 02	7.81E 02	8.99E 02	8.55E 02	7.53E 02	6.42E 02
6	5	74	73	20185.51	1	2176.13	4.5953	0.0303	0.0	4.99E-04	3.84E-02	4.55E-01	2.15E 00	6.09E 00
6	5	102	101	28702.89	1	2176.19	4.5952	0.0303	0.0	0.0	1.15E-04	4.62E-03	4.94E-02	2.51E-01
1	0	9	8	138.40	1	2176.29	4.5950	0.0624	3.92E 03	2.33E 03	1.46E 03	9.69E 02	6.70E 02	4.80E 02
4	3	65	64	13556.96	2	2176.54	4.5944	0.0303	0.0	1.82E-03	2.85E-02	1.30E-01	3.25E-01	5.84E-01
4	3	37	36	8830.47	1	2176.55	4.5944	0.0308	2.36E-01	9.08E 00	4.59E 01	1.06E 02	1.69E 02	2.20E 02
2	1	35	34	4255.91	2	2176.68	4.5942	0.0317	8.67E-01	3.70E 00	6.23E 00	7.44E 00	7.62E 00	7.24E 00
6	5	75	74	20447.11	1	2176.77	4.5940	0.0303	0.0	3.94E-04	3.23E-02	3.97E-01	1.92E 00	5.54E 00
6	5	101	100	28357.62	1	2176.84	4.5938	0.0303	0.0	0.0	1.45E-04	5.58E-03	5.78E-02	2.87E-01
1	0	25	24	1100.81	2	2176.99	4.5935	0.0437	2.91E 01	2.73E 01	2.16E 01	1.64E 01	1.24E 01	9.48E 00
5	4	51	50	13098.50	1	2177.05	4.5934	0.0303	8.72E-04	2.60E-01	3.65E 00	1.56E 01	3.74E 01	6.51E 01
6	5	76	75	20711.97	1	2177.36	4.5927	0.0303	0.0	3.09E-04	2.70E-02	3.45E-01	1.72E 00	5.04E 00
6	5	100	99	28015.28	1	2177.44	4.5925	0.0303	0.0	0.0	1.84E-04	6.74E-03	6.75E-02	3.27E-01
5	4	125	124	35647.34	1	2177.63	4.5921	0.0303	0.0	0.0	0.0	8.69E-05	1.81E-03	1.48E-02
4	3	66	65	13783.34	2	2177.67	4.5921	0.0303	0.0	1.49E-03	2.46E-02	1.16E-01	2.96E-01	5.40E-01
3	2	48	47	8210.98	2	2177.84	4.5917	0.0303	6.02E-03	1.71E-01	7.44E-01	1.57E 00	2.35E 00	2.93E 00
6	5	77	76	20980.08	1	2177.91	4.5916	0.0303	0.0	2.42E-04	2.26E-02	3.00E-01	1.53E 00	4.57E 00
6	5	99	98	27675.87	1	2178.00	4.5914	0.0303	0.0	0.0	2.33E-04	8.12E-03	7.87E-02	3.72E-01
6	5	78	77	21251.42	1	2178.41	4.5905	0.0303	0.0	1.89E-04	1.89E-02	2.60E-01	1.36E 00	4.14E 00
6	5	98	97	27339.41	1	2178.50	4.5903	0.0303	0.0	0.0	2.94E-04	9.76E-03	9.17E-02	4.24E-01
3	2	27	26	5582.12	1	2178.58	4.5901	0.0398	1.39E 01	1.13E 02	2.61E 02	3.79E 02	4.41E 02	4.59E 02
5	4	52	51	13284.19	1	2178.74	4.5898	0.0303	6.81E-04	2.22E-01	3.26E 00	1.43E 01	3.49E 01	6.16E 01
4	3	67	66	14013.01	2	2178.76	4.5898	0.0303	0.0	1.21E-03	2.12E-02	1.03E-01	2.70E-01	5.00E-01
4	3	38	37	8967.61	1	2178.86	4.5896	0.0303	2.00E-01	8.19E 00	4.28E 01	1.01E 02	1.63E 02	2.14E 02
6	5	79	78	21525.99	1	2178.86	4.5896	0.0303	0.0	1.47E-04	1.56E-02	2.25E-01	1.21E 00	3.75E 00
6	5	97	96	27005.92	1	2178.95	4.5894	0.0303	0.0	0.0	3.71E-04	1.17E-02	1.07E-01	4.81E-01
2	1	36	35	4382.47	2	2179.06	4.5891	0.0312	7.44E-01	3.38E 00	5.86E 00	7.13E 00	7.39E 00	7.08E 00
2	1	18	17	2725.67	1	2179.24	4.5888	0.0568	3.78E 02	7.78E 02	9.10E 02	8.74E 02	7.75E 02	6.63E 02
6	5	80	79	21803.77	1	2179.27	4.5887	0.0303	0.0	1.14E-04	1.30E-02	1.94E-01	1.07E 00	3.39E 00
6	5	96	95	26675.41	1	2179.36	4.5885	0.0303	0.0	0.0	4.66E-04	1.40E-02	1.24E-01	5.46E-01
5	4	124	123	35234.96	1	2179.43	4.5884	0.0303	0.0	0.0	0.0	1.10E-04	2.19E-03	1.74E-02
6	5	81	80	22084.76	1	2179.63	4.5879	0.0303	0.0	8.84E-05	1.07E-02	1.67E-01	9.49E-01	3.06E 00
3	2	49	48	8381.80	2	2179.69	4.5878	0.0303	4.81E-03	1.48E-01	6.72E-01	1.45E 00	2.21E 00	2.79E 00
6	5	95	94	26347.89	1	2179.71	4.5878	0.0303	0.0	0.0	5.84E-04	1.68E-02	1.43E-01	6.19E-01
1	0	26	25	1192.36	2	2179.77	4.5876	0.0418	2.65E 01	2.61E 01	2.10E 01	1.62E 01	1.24E 01	9.51E 00
1	0	10	9	172.99	1	2179.78	4.5876	0.0624	4.15E 03	2.51E 03	1.59E 03	1.06E 03	7.34E 02	5.27E 02
4	3	68	67	14245.95	2	2179.81	4.5876	0.0303	0.0	9.87E-04	1.82E-02	9.17E-02	2.45E-01	4.61E-01
6	5	82	81	22368.93	1	2179.95	4.5873	0.0303	0.0	6.81E-05	8.86E-03	1.44E-01	8.37E-01	2.75E 00
6	5	94	93	26023.39	1	2180.02	4.5871	0.0303	0.0	0.0	7.30E-04	2.00E-02	1.66E-01	7.00E-01
6	5	83	82	22656.29	1	2180.22	4.5867	0.0303	0.0	5.24E-05	7.29E-03	1.23E-01	7.38E-01	2.48E 00
6	5	93	92	25701.90	1	2180.28	4.5866	0.0303	0.0	0.0	9.11E-04	2.38E-02	1.91E-01	7.91E-01
5	4	53	52	13473.39	1	2180.39	4.5863	0.0303	5.29E-04	1.89E-01	2.90E 00	1.31E 01	3.25E 01	5.81E 01
6	5	84	83	22946.81	1	2180.44	4.5862	0.0303	0.0	4.01E-05	5.99E-03	1.05E-01	6.50E-01	2.22E 00
6	5	92	91	25383.46	1	2180.49	4.5861	0.0303	0.0	0.0	1.13E-03	2.84E-02	2.21E-01	8.93E-01
6	5	85	84	23240.48	1	2180.61	4.5859	0.0303	0.0	3.06E-05	4.90E-03	9.01E-02	5.71E-01	1.99E 00
6	5	91	90	25068.06	1	2180.65	4.5858	0.0303	0.0	0.0	1.41E-03	3.36E-02	2.54E-01	1.01E 00
6	5	86	85	23537.30	1	2180.74	4.5856	0.0303	0.0	2.33E-05	4.01E-03	7.68E-02	5.01E-01	1.79E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	5	90	89	24755.73	1	2180.76	4.5856	0.0303	0.0	0.0	1.74E-03	3.99E-02	2.92E-01	1.13E 00
6	5	87	86	23837.25	1	2180.81	4.5855	0.0303	0.0	0.0	3.27E-03	6.54E-02	4.39E-01	1.60E 00
4	3	69	68	14482.17	2	2180.82	4.5854	0.0303	0.0	7.99E-04	1.56E-02	8.13E-02	2.22E-01	4.25E-01
6	5	89	88	24446.47	1	2180.83	4.5854	0.0303	0.0	0.0	2.15E-03	4.71E-02	3.35E-01	1.27E 00
6	5	88	87	24140.31	1	2180.85	4.5854	0.0303	0.0	0.0	2.66E-03	5.56E-02	3.84E-01	1.43E 00
4	3	39	38	9108.38	1	2181.12	4.5848	0.0303	1.67E-01	7.35E 00	3.97E 01	9.56E 01	1.56E 02	2.07E 02
5	4	123	122	34825.16	1	2181.18	4.5847	0.0303	0.0	0.0	0.0	1.38E-04	2.65E-03	2.05E-02
3	2	28	27	5683.57	1	2181.32	4.5844	0.0379	1.25E 01	1.06E 02	2.52E 02	3.71E 02	4.37E 02	4.58E 02
2	1	37	36	4512.58	2	2181.41	4.5842	0.0308	6.35E-01	3.07E 00	5.49E 00	6.81E 00	7.15E 00	6.91E 00
3	2	50	49	8556.07	2	2181.50	4.5840	0.0303	3.82E-03	1.28E-01	6.06E-01	1.34E 00	2.08E 00	2.65E 00
4	3	70	69	14721.64	2	2181.78	4.5834	0.0303	0.0	6.44E-04	1.33E-02	7.19E-02	2.01E-01	3.91E-01
5	4	54	53	13666.09	1	2181.99	4.5830	0.0303	4.09E-04	1.60E-01	2.58E 00	1.19E 01	3.02E 01	5.48E 01
2	1	19	18	2794.11	1	2182.36	4.5822	0.0552	3.63E 02	7.71E 02	9.16E 02	8.89E 02	7.93E 02	6.82E 02
1	0	27	26	1287.55	2	2182.51	4.5819	0.0398	2.41E 01	2.47E 01	2.04E 01	1.59E 01	1.23E 01	9.52E 00
4	3	71	70	14964.37	2	2182.70	4.5815	0.0303	0.0	5.18E-04	1.14E-02	6.34E-02	1.82E-01	3.59E-01
5	4	122	121	34417.95	1	2182.87	4.5811	0.0303	0.0	0.0	0.0	1.73E-04	3.21E-03	2.41E-02
1	0	11	10	211.42	1	2183.23	4.5804	0.0625	4.32E 03	2.66E 03	1.70E 03	1.14E 03	7.94E 02	5.72E 02
3	2	51	50	8733.79	2	2183.27	4.5803	0.0303	3.02E-03	1.11E-01	5.45E-01	1.24E 00	1.95E 00	2.52E 00
4	3	40	39	9252.79	1	2183.35	4.5801	0.0303	1.40E-01	6.57E 00	3.68E 01	9.04E 01	1.50E 02	2.01E 02
5	4	55	54	13862.29	1	2183.55	4.5797	0.0303	3.14E-04	1.35E-01	2.28E 00	1.09E 01	2.81E 01	5.15E 01
4	3	72	71	15210.34	2	2183.58	4.5796	0.0303	0.0	4.15E-04	9.67E-03	5.59E-02	1.64E-01	3.29E-01
2	1	38	37	4646.24	2	2183.71	4.5794	0.0303	5.39E-01	2.78E 00	5.13E 00	6.49E 00	6.90E 00	6.73E 00
3	2	29	28	5788.74	1	2184.02	4.5787	0.0359	1.11E 01	9.95E 01	2.43E 02	3.62E 02	4.31E 02	4.55E 02
4	3	73	72	15459.54	2	2184.42	4.5779	0.0303	0.0	3.32E-04	8.20E-03	4.91E-02	1.47E-01	3.02E-01
5	4	121	120	34013.35	1	2184.52	4.5777	0.0303	0.0	0.0	0.0	2.17E-04	3.87E-03	2.83E-02
3	2	52	51	8914.94	2	2185.00	4.5767	0.0303	2.38E-03	9.48E-02	4.88E-01	1.14E 00	1.83E 00	2.39E 00
5	4	56	55	14061.97	1	2185.07	4.5765	0.0303	2.40E-04	1.14E-01	2.01E 00	9.89E 00	2.60E 01	4.84E 01
1	0	28	27	1386.36	2	2185.22	4.5762	0.0379	2.17E 01	2.34E 01	1.98E 01	1.56E 01	1.22E 01	9.49E 00
4	3	74	73	15711.97	2	2185.22	4.5762	0.0303	0.0	2.64E-04	6.94E-03	4.31E-02	1.32E-01	2.76E-01
2	1	20	19	2866.33	1	2185.44	4.5757	0.0535	3.45E 02	7.58E 02	9.18E 02	8.99E 02	8.08E 02	6.98E 02
4	3	41	40	9400.82	1	2185.53	4.5755	0.0303	1.16E-01	5.85E 00	3.39E 01	8.52E 01	1.43E 02	1.94E 02
4	3	75	74	15967.60	2	2185.97	4.5746	0.0303	0.0	2.10E-04	5.85E-03	3.77E-02	1.19E-01	2.52E-01
2	1	39	38	4783.45	2	2185.98	4.5746	0.0303	4.55E-01	2.50E 00	4.78E 00	6.16E 00	6.64E 00	6.54E 00
5	4	120	119	33611.38	1	2186.11	4.5743	0.0303	0.0	0.0	0.0	2.72E-04	4.66E-03	3.31E-02
5	4	57	56	14265.13	1	2186.55	4.5734	0.0303	1.83E-04	9.52E-02	1.77E 00	8.96E 00	2.40E 01	4.53E 01
1	0	12	11	253.68	1	2186.64	4.5732	0.0617	4.45E 03	2.80E 03	1.81E 03	1.22E 03	8.51E 02	6.15E 02
4	3	76	75	16226.44	2	2186.68	4.5731	0.0303	0.0	1.66E-04	4.92E-03	3.29E-02	1.06E-01	2.30E-01
3	2	30	29	5897.62	1	2186.68	4.5731	0.0340	9.86E 00	9.29E 01	2.33E 02	3.53E 02	4.24E 02	4.51E 02
3	2	53	52	9099.53	2	2186.69	4.5731	0.0303	1.86E-03	8.10E-02	4.36E-01	1.05E 00	1.71E 00	2.26E 00
4	3	77	76	16488.47	2	2187.35	4.5717	0.0303	0.0	1.31E-04	4.13E-03	2.87E-02	9.51E-02	2.09E-01
5	4	119	118	33212.05	1	2187.64	4.5711	0.0303	0.0	0.0	0.0	3.40E-04	5.61E-03	3.88E-02
4	3	42	41	9552.46	1	2187.68	4.5711	0.0303	9.55E-02	5.19E 00	3.12E 01	8.01E 01	1.37E 02	1.87E 02
1	0	29	28	1488.80	2	2187.89	4.5706	0.0359	1.94E 01	2.20E 01	1.91E 01	1.53E 01	1.20E 01	9.45E 00
4	3	78	77	16753.69	2	2187.97	4.5704	0.0303	0.0	1.03E-04	3.46E-03	2.50E-02	8.49E-02	1.90E-01
5	4	58	57	14471.76	1	2187.98	4.5704	0.0303	1.38E-04	7.95E-02	1.56E 00	8.10E 00	2.22E 01	4.24E 01
2	1	40	39	4924.21	2	2188.21	4.5699	0.0303	3.81E-01	2.24E 00	4.44E 00	5.84E 00	6.38E 00	6.34E 00
3	2	54	53	9287.54	2	2188.34	4.5697	0.0303	1.45E-03	6.90E-02	3.88E-01	9.57E-01	1.59E 00	2.13E 00
2	1	21	20	2942.34	1	2188.48	4.5694	0.0515	3.25E 02	7.41E 02	9.14E 02	9.06E 02	8.20E 02	7.12E 02
4	3	79	78	17022.07	2	2188.55	4.5692	0.0303	0.0	8.04E-05	2.89E-03	2.17E-02	7.56E-02	1.72E-01
4	3	80	79	17293.62	2	2189.09	4.5681	0.0303	0.0	6.28E-05	2.41E-03	1.88E-02	6.73E-02	1.56E-01
5	4	118	117	32815.40	1	2189.13	4.5680	0.0303	0.0	0.0	0.0	4.24E-04	6.74E-03	4.53E-02
3	2	31	30	6010.21	1	2189.30	4.5677	0.0335	8.68E 00	8.63E 01	2.22E 02	3.42E 02	4.15E 02	4.45E 02
5	4	59	58	14681.85	1	2189.37	4.5675	0.0303	1.04E-04	6.62E-02	1.36E 00	7.31E 00	2.04E 01	3.96E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	81	80	17568.32	2	2189.58	4.5671	0.0303	0.0	4.88E-05	2.00E-03	1.63E-02	5.97E-02	1.41E-01
4	3	43	42	9707.73	1	2189.78	4.5667	0.0303	7.83E-02	4.59E 00	2.86E 01	7.51E 01	1.30E 02	1.90E 02
3	2	55	54	9478.96	2	2189.96	4.5663	0.0303	1.12E-03	5.86E-02	3.45E-01	8.74E-01	1.48E 00	2.01E 00
1	0	13	12	299.78	1	2190.02	4.5662	0.0610	4.52E 03	2.90E 03	1.90E 03	1.29E 03	9.04E 02	6.55E 02
4	3	82	81	17846.16	2	2190.03	4.5661	0.0303	0.0	3.79E-05	1.66E-03	1.40E-02	5.29E-02	1.28E-01
4	3	101	100	23706.26	2	2190.15	4.5659	0.0303	0.0	0.0	3.02E-05	5.92E-04	3.92E-03	1.41E-02
2	1	41	40	5068.50	2	2190.40	4.5654	0.0303	3.18E-01	2.01E 00	4.11E 00	5.52E 00	6.11E 00	6.14E 00
4	3	83	82	18127.12	2	2190.44	4.5653	0.0303	0.0	2.93E-05	1.37E-03	1.21E-02	4.68E-02	1.15E-01
1	0	30	29	1594.85	2	2190.53	4.5651	0.0340	1.72E 01	2.06E 01	1.83E 01	1.49E 01	1.19E 01	9.37E 00
4	3	100	99	23371.00	2	2190.55	4.5651	0.0303	0.0	0.0	3.80E-05	7.11E-04	4.56E-03	1.60E-02
5	4	117	116	32421.43	1	2190.56	4.5650	0.0303	0.0	0.0	0.0	5.28E-04	8.08E-03	5.29E-02
5	4	60	59	14895.39	1	2190.72	4.5647	0.0303	7.78E-05	5.49E-02	1.19E 00	6.58E 00	1.87E 01	3.69E 01
4	3	84	83	18411.21	2	2190.80	4.5645	0.0303	0.0	2.26E-05	1.13E-03	1.04E-02	4.14E-02	1.04E-01
4	3	99	98	23038.65	2	2190.90	4.5643	0.0303	0.0	0.0	4.78E-05	8.52E-04	5.29E-03	1.82E-02
4	3	85	84	18698.40	2	2191.12	4.5639	0.0303	0.0	0.0	9.33E-04	8.91E-03	3.65E-02	9.32E-02
4	3	98	97	22709.22	2	2191.21	4.5637	0.0303	0.0	0.0	6.00E-05	1.02E-03	6.14E-03	2.06E-02
4	3	86	85	18988.68	2	2191.40	4.5633	0.0303	0.0	0.0	7.66E-04	7.63E-03	3.21E-02	8.37E-02
4	3	97	96	22382.73	2	2191.48	4.5631	0.0303	0.0	0.0	7.52E-05	1.22E-03	7.11E-03	2.34E-02
2	1	22	21	3022.13	1	2191.49	4.5631	0.0496	3.04E 02	7.21E 02	9.05E 02	9.08E 02	8.28E 02	7.24E 02
3	2	56	55	9673.80	2	2191.53	4.5630	0.0303	8.62E-04	4.95E-02	3.06E-01	7.97E-01	1.37E 00	1.89E 00
4	3	87	86	19282.05	2	2191.63	4.5628	0.0303	0.0	0.0	6.28E-04	6.52E-03	2.82E-02	7.51E-02
4	3	96	95	22059.18	2	2191.70	4.5627	0.0303	0.0	0.0	9.39E-05	1.45E-03	8.22E-03	2.64E-02
4	3	88	87	19578.50	2	2191.81	4.5624	0.0303	0.0	0.0	5.13E-04	5.56E-03	2.49E-02	6.73E-02
4	3	44	43	9866.59	1	2191.84	4.5624	0.0303	6.38E-02	4.03E 00	2.62E 01	7.02E 01	1.23E 02	1.72E 02
4	3	95	94	21738.60	2	2191.87	4.5623	0.0303	0.0	0.0	1.17E-04	1.73E-03	9.49E-03	2.99E-02
3	2	32	31	6126.50	1	2191.88	4.5623	0.0331	7.59E 00	7.98E 01	2.11E 02	3.31E 02	4.06E 02	4.39E 02
5	4	116	115	32030.15	1	2191.94	4.5622	0.0303	0.0	0.0	0.0	6.57E-04	9.68E-03	6.17E-02
4	3	89	88	19878.00	2	2191.96	4.5621	0.0303	0.0	0.0	4.19E-04	4.73E-03	2.17E-02	6.02E-02
4	3	94	93	21420.99	2	2192.00	4.5620	0.0303	0.0	0.0	1.46E-04	2.06E-03	1.09E-02	3.37E-02
5	4	61	60	15112.37	1	2192.02	4.5620	0.0303	5.79E-05	4.53E-02	1.03E 00	5.91E 00	1.72E 01	3.44E 01
4	3	90	89	20180.55	2	2192.05	4.5619	0.0303	0.0	0.0	3.40E-04	4.02E-03	1.90E-02	5.37E-02
4	3	93	92	21106.37	2	2192.08	4.5619	0.0303	0.0	0.0	1.81E-04	2.44E-03	1.26E-02	3.79E-02
4	3	92	91	20794.75	2	2192.11	4.5618	0.0303	0.0	0.0	2.24E-04	2.89E-03	1.45E-02	4.27E-02
4	3	91	90	20486.14	2	2192.11	4.5618	0.0303	0.0	0.0	2.76E-04	3.41E-03	1.66E-02	4.79E-02
2	1	42	41	5216.33	2	2192.55	4.5609	0.0303	2.64E-01	1.79E 00	3.79E 00	5.20E 00	5.84E 00	5.93E 00
3	2	57	56	9872.04	2	2193.06	4.5598	0.0303	6.60E-04	4.17E-02	2.70E-01	7.24E-01	1.27E 00	1.78E 00
1	0	31	30	1704.53	2	2193.13	4.5597	0.0335	1.52E 01	1.92E 01	1.75E 01	1.45E 01	1.16E 01	9.28E 00
5	4	115	114	31641.59	1	2193.27	4.5594	0.0303	0.0	0.0	0.0	8.15E-04	1.16E-02	7.19E-02
5	4	62	61	15332.79	1	2193.28	4.5594	0.0303	4.29E-05	3.73E-02	8.98E-01	5.29E 00	1.57E 01	3.19E 01
1	0	14	13	349.72	1	2193.36	4.5592	0.0604	4.53E 03	2.99E 03	1.98E 03	1.35E 03	9.52E 02	6.93E 02
4	3	45	44	10029.06	1	2193.86	4.5582	0.0303	5.17E-02	3.53E 00	2.38E 01	6.55E 01	1.17E 02	1.65E 02
3	2	33	32	6246.50	1	2194.42	4.5570	0.0326	6.59E 00	7.34E 01	2.00E 02	3.19E 02	3.96E 02	4.32E 02
2	1	23	22	3105.69	1	2194.45	4.5570	0.0476	2.82E 02	6.96E 02	8.93E 02	9.06E 02	9.33E 02	7.32E 02
5	4	63	62	15556.63	1	2194.49	4.5569	0.0303	3.16E-05	3.06E-02	7.77E-01	4.73E 00	1.44E 01	2.96E 01
5	4	114	113	31255.77	1	2194.55	4.5567	0.0303	0.0	0.0	0.0	1.01E-03	1.38E-02	8.36E-02
3	2	58	57	10073.68	2	2194.55	4.5567	0.0303	5.03E-04	3.50E-02	2.38E-01	6.57E-01	1.18E 00	1.67E 00
2	1	43	42	5367.68	2	2194.67	4.5565	0.0303	2.17E-01	1.58E 00	3.48E 00	4.89E 00	5.57E 00	5.71E 00
5	4	64	63	15783.89	1	2195.66	4.5544	0.0303	2.32E-05	2.50E-02	6.71E-01	4.22E 00	1.31E 01	2.74E 01
1	0	32	31	1817.82	2	2195.69	4.5544	0.0331	1.34E 01	1.78E 01	1.67E 01	1.40E 01	1.14E 01	9.16E 00
5	4	113	112	30872.70	1	2195.78	4.5542	0.0303	0.0	0.0	2.27E-05	1.25E-03	1.68E-02	9.71E-02
4	3	46	45	10195.12	1	2195.84	4.5541	0.0303	4.17E-02	3.08E 00	2.16E 01	6.09E 01	1.11E 02	1.58E 02
3	2	59	58	10278.70	2	2196.00	4.5537	0.0303	3.81E-04	2.93E-02	2.09E-01	5.95E-01	1.09E 00	1.56E 00
1	0	15	14	403.48	1	2196.67	4.5523	0.0597	4.50E 03	3.04E 03	2.04E 03	1.40E 03	9.97E 02	7.28E 02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	1	44	43	5522.55	2	2196.74	4.5522	0.0303	1.78E-01	1.40E 00	3.19E 00	4.58E 00	5.30E 00	5.49E 00
5	4	65	64	16014.55	1	2196.79	4.5521	0.0303	0.0	2.04E-02	5.78E-01	3.76E 00	1.19E 01	2.54E 01
3	2	34	33	6370.20	1	2196.92	4.5518	0.0321	5.69E 00	6.73E 01	1.89E 02	3.07E 02	3.86E 02	4.24E 02
5	4	112	111	30492.39	1	2196.95	4.5518	0.0303	0.0	0.0	2.96E-05	1.54E-03	1.96E-02	1.13E-01
2	1	24	23	3193.03	1	2197.38	4.5509	0.0457	2.60E 02	6.69E 02	8.77E 02	9.01E 02	8.35E 02	7.39E 02
3	2	60	59	10487.10	2	2197.41	4.5508	0.0303	2.87E-04	2.44E-02	1.83E-01	5.37E-01	1.00E 00	1.46E 00
4	3	47	46	10364.77	1	2197.77	4.5501	0.0303	3.34E-02	2.68E 00	1.96E 01	5.65E 01	1.04E 02	1.51E 02
5	4	66	65	16248.61	1	2197.87	4.5499	0.0303	0.0	1.65E-02	4.96E-01	3.34E 00	1.08E 01	2.34E 01
5	4	111	110	30114.87	1	2198.08	4.5494	0.0303	0.0	0.0	3.85E-05	1.90E-03	2.33E-02	1.31E-01
1	0	33	32	1934.72	2	2198.21	4.5492	0.0326	1.17E 01	1.64E 01	1.58E 01	1.36E 01	1.11E 01	9.02E 00
2	1	45	44	5680.94	2	2198.78	4.5480	0.0303	1.45E-01	1.23E 00	2.92E 00	4.28E 00	5.03E 00	5.27E 00
3	2	61	60	10698.87	2	2198.78	4.5480	0.0303	2.16E-04	2.03E-02	1.60E-01	4.84E-01	9.20E-01	1.36E 00
5	4	67	66	16486.06	1	2198.90	4.5477	0.0303	0.0	1.34E-02	4.25E-01	2.96E 00	9.81E 00	2.16E 01
5	4	110	109	29740.16	1	2199.15	4.5472	0.0303	0.0	0.0	5.00E-05	2.34E-03	2.77E-02	1.51E-01
3	2	35	34	6497.59	1	2199.39	4.5467	0.0317	4.89E 00	6.14E 01	1.78E 02	2.94E 02	3.74E 02	4.15E 02
4	3	48	47	10538.00	1	2199.67	4.5461	0.0303	2.66E-02	2.32E 00	1.77E 01	5.23E 01	9.82E 01	1.44E 02
5	4	68	67	16726.89	1	2199.89	4.5457	0.0303	0.0	1.08E-02	3.63E-01	2.61E 00	8.87E 00	1.98E 01
1	0	16	15	461.08	1	2199.93	4.5456	0.0591	4.43E 03	3.08E 03	2.09E 03	1.45E 03	1.04E 03	7.60E 02
3	2	62	61	10914.00	2	2200.11	4.5452	0.0303	1.61E-04	1.68E-02	1.40E-01	4.35E-01	8.44E-01	1.27E 00
5	4	109	108	29368.25	1	2200.17	4.5451	0.0303	0.0	0.0	6.48E-05	2.88E-03	3.29E-02	1.75E-01
2	1	25	24	3284.13	1	2200.27	4.5449	0.0437	2.38E 02	6.40E 02	8.57E 02	8.92E 02	8.35E 02	7.43E 02
1	0	34	33	2055.22	2	2200.70	4.5440	0.0321	1.01E 01	1.51E 01	1.50E 01	1.31E 01	1.08E 01	8.86E 00
2	1	46	45	5842.84	2	2200.78	4.5438	0.0303	1.18E-01	1.08E 00	2.66E 00	3.99E 00	4.77E 00	5.05E 00
5	4	69	68	16971.09	1	2200.84	4.5437	0.0303	0.0	8.66E-03	3.09E-01	2.30E 00	8.01E 00	1.82E 01
5	4	108	107	28999.19	1	2201.14	4.5431	0.0303	0.0	0.0	8.38E-05	3.53E-03	3.89E-02	2.02E-01
3	2	63	62	11132.49	2	2201.39	4.5426	0.0303	1.20E-04	1.38E-02	1.21E-01	3.90E-01	7.73E-01	1.18E 00
4	3	49	48	10714.80	1	2201.52	4.5423	0.0303	2.11E-02	2.00E 00	1.59E 01	4.83E 01	9.22E 01	1.36E 02
5	4	70	69	17218.64	1	2201.74	4.5419	0.0303	0.0	6.93E-03	2.62E-01	2.03E 00	7.22E 00	1.67E 01
3	2	36	35	6628.66	1	2201.81	4.5417	0.0312	4.17E 00	5.58E 01	1.67E 02	2.81E 02	3.62E 02	4.05E 02
5	4	107	106	28632.97	1	2202.06	4.5412	0.0303	0.0	0.0	1.08E-04	4.32E-03	4.60E-02	2.32E-01
4	3	128	127	35119.70	1	2202.55	4.5402	0.0303	0.0	0.0	0.0	9.93E-05	1.97E-03	1.55E-02
5	4	71	70	17469.54	1	2202.60	4.5401	0.0303	0.0	5.53E-03	2.22E-01	1.78E 00	6.50E 00	1.53E 01
3	2	64	63	11354.33	2	2202.64	4.5400	0.0303	8.83E-05	1.14E-02	1.05E-01	3.49E-01	7.07E-01	1.09E 00
2	1	47	46	6008.24	2	2202.74	4.5398	0.0303	9.50E-02	9.41E-01	2.42E 00	3.72E 00	4.51E 00	4.83E 00
5	4	106	105	28269.62	1	2202.93	4.5394	0.0303	0.0	0.0	1.39E-04	5.28E-03	5.43E-02	2.68E-01
2	1	26	25	3379.00	1	2203.13	4.5390	0.0418	2.16E 02	6.09E 02	8.33E 02	8.80E 02	8.31E 02	7.44E 02
1	0	35	34	2179.32	2	2203.15	4.5390	0.0317	8.74E 00	1.38E 01	1.41E 01	1.25E 01	1.05E 01	8.69E 00
1	0	17	16	522.50	1	2203.16	4.5389	0.0585	4.31E 03	3.09E 03	2.13E 03	1.49E 03	1.07E 03	7.89E 02
4	3	50	49	10895.17	1	2203.33	4.5386	0.0303	1.66E-02	1.72E 00	1.43E 01	4.45E 01	8.64E 01	1.29E 02
5	4	72	71	17723.78	1	2203.41	4.5384	0.0303	0.0	4.40E-03	1.89E-01	1.56E 00	5.84E 00	1.40E 01
5	4	105	104	27909.14	1	2203.75	4.5377	0.0303	0.0	0.0	1.79E-04	6.44E-03	6.40E-02	3.08E-01
3	2	65	64	11579.50	2	2203.84	4.5375	0.0303	6.49E-05	9.31E-03	9.09E-02	3.12E-01	6.45E-01	1.01E 00
5	4	73	72	17981.34	1	2204.17	4.5369	0.0303	0.0	3.48E-03	1.58E-01	1.37E 00	5.23E 00	1.27E 01
3	2	37	36	6763.42	1	2204.19	4.5368	0.0308	3.53E 00	5.05E 01	1.56E 02	2.67E 02	3.49E 02	3.95E 02
4	3	127	126	34695.28	1	2204.48	4.5362	0.0303	0.0	0.0	0.0	1.26E-04	2.40E-03	1.84E-02
5	4	104	103	27551.57	1	2204.52	4.5361	0.0303	0.0	0.0	2.29E-04	7.85E-03	7.53E-02	3.53E-01
2	1	48	47	6177.14	2	2204.66	4.5358	0.0303	7.62E-02	8.18E-01	2.19E 00	3.45E 00	4.25E 00	4.61E 00
5	4	74	73	18242.22	1	2204.89	4.5354	0.0303	0.0	2.75E-03	1.33E-01	1.19E 00	4.68E 00	1.16E 01
3	2	66	65	11808.00	2	2205.01	4.5351	0.0303	4.75E-05	7.60E-03	7.84E-02	2.78E-01	5.88E-01	9.37E-01
4	3	51	50	11079.09	1	2205.10	4.5349	0.0303	1.30E-02	1.47E 00	1.28E 01	4.09E 01	8.08E 01	1.23E 02
5	4	103	102	27196.90	1	2205.23	4.5347	0.0303	0.0	0.0	2.93E-04	9.54E-03	8.85E-02	4.05E-01
1	0	36	35	2307.02	2	2205.56	4.5340	0.0312	7.49E 00	1.26E 01	1.33E 01	1.20E 01	1.02E 01	8.49E 00
5	4	75	74	18506.41	1	2205.57	4.5340	0.0303	0.0	2.16E-03	1.12E-01	1.04E 00	4.18E 00	1.06E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	4	102	101	26845.17	1	2205.90	4.5333	0.0303	0.0	0.0	3.75E-04	1.16E-02	1.04E-01	4.64E-01
2	1	27	26	3477.63	1	2205.94	4.5332	0.0398	1.95E 02	5.76E 02	8.08E 02	8.65E 02	8.25E 02	7.44E 02
3	2	67	66	12039.83	2	2206.13	4.5328	0.0303	3.46E-05	6.18E-03	6.74E-02	2.47E-01	5.34E-01	8.65E-01
5	4	76	75	18773.88	1	2206.19	4.5327	0.0303	0.0	1.70E-03	9.33E-02	9.02E-01	3.73E 00	9.59E 00
4	3	126	125	34273.40	1	2206.36	4.5324	0.0303	0.0	0.0	0.0	1.60E-04	2.92E-03	2.17E-02
1	0	18	17	587.75	1	2206.36	4.5324	0.0568	4.16E 03	3.08E 03	2.16E 03	1.53E 03	1.10E 03	8.15E 02
5	4	101	100	26496.37	1	2206.52	4.5320	0.0303	0.0	0.0	4.77E-04	1.40E-02	1.22E-01	5.31E-01
3	2	38	37	6901.85	1	2206.53	4.5320	0.0303	2.98E 00	4.54E 01	1.45E 02	2.54E 02	3.36E 02	3.83E 02
2	1	49	48	6349.53	2	2206.54	4.5320	0.0303	6.07E-02	7.09E-01	1.98E 00	3.19E 00	4.00E 00	4.39E 00
5	4	77	76	19044.64	1	2206.78	4.5315	0.0303	0.0	1.33E-03	7.78E-02	7.82E-01	3.32E 00	8.70E 00
4	3	52	51	11266.57	1	2206.82	4.5314	0.0303	1.01E-02	1.26E 00	1.14E 01	3.75E 01	7.53E 01	1.16E 02
5	4	100	99	26150.54	1	2207.09	4.5309	0.0303	0.0	0.0	6.06E-04	1.70E-02	1.42E-01	6.06E-01
3	2	68	67	12274.96	2	2207.21	4.5306	0.0303	2.50E-05	5.01E-03	5.78E-02	2.19E-01	4.85E-01	7.98E-01
5	4	78	77	19318.68	1	2207.31	4.5304	0.0303	0.0	1.03E-03	6.47E-02	6.77E-01	2.95E 00	7.87E 00
5	4	99	98	25807.67	1	2207.61	4.5298	0.0303	0.0	0.0	7.68E-04	2.05E-02	1.66E-01	6.91E-01
5	4	79	78	19595.97	1	2207.80	4.5294	0.0303	0.0	8.02E-04	5.37E-02	5.85E-01	2.62E 00	7.12E 00
1	0	37	36	2438.31	2	2207.94	4.5291	0.0308	6.38E 00	1.14E 01	1.25E 01	1.15E 01	9.88E 00	8.29E 00
5	4	98	97	25467.79	1	2208.08	4.5288	0.0303	0.0	0.0	9.72E-04	2.46E-02	1.94E-01	7.88E-01
4	3	125	124	33854.11	1	2208.18	4.5286	0.0303	0.0	0.0	0.0	2.02E-04	3.55E-03	2.57E-02
5	4	80	79	19876.52	1	2208.24	4.5285	0.0303	0.0	6.21E-04	4.44E-02	5.04E-01	2.32E 00	6.43E 00
3	2	69	68	12513.40	2	2208.25	4.5285	0.0303	0.0	4.05E-03	4.94E-02	1.94E-01	4.39E-01	7.35E-01
2	1	50	49	6525.41	2	2208.38	4.5282	0.0303	4.82E-02	6.12E-01	1.78E 00	2.95E 00	3.76E 00	4.17E 00
5	4	97	96	25130.91	1	2208.50	4.5280	0.0303	0.0	0.0	1.23E-03	2.96E-02	2.25E-01	8.96E-01
4	3	53	52	11457.59	1	2208.51	4.5279	0.0303	7.85E-03	1.07E 00	1.01E 01	3.42E 01	7.02E 01	1.09E 02
5	4	81	80	20160.30	1	2208.64	4.5277	0.0303	0.0	4.79E-04	3.67E-02	4.34E-01	2.05E 00	5.79E 00
2	1	28	27	3580.03	1	2208.71	4.5275	0.0379	1.75E 02	5.42E 02	7.79E 02	8.47E 02	8.16E 02	7.41E 02
3	2	39	38	7043.96	1	2208.83	4.5273	0.0303	2.49E 00	4.07E 01	1.34E 02	2.41E 02	3.23E 02	3.72E 02
5	4	96	95	24797.05	1	2208.87	4.5272	0.0303	0.0	0.0	1.54E-03	3.55E-02	2.62E-01	1.02E 00
5	4	82	81	20447.30	1	2208.99	4.5270	0.0303	0.0	3.68E-04	3.02E-02	3.72E-01	1.81E 00	5.21E 00
5	4	95	94	24466.21	1	2209.19	4.5265	0.0303	0.0	0.0	1.94E-03	4.26E-02	3.04E-01	1.15E 00
3	2	70	69	12755.13	2	2209.24	4.5264	0.0303	0.0	3.26E-03	4.22E-02	1.71E-01	3.97E-01	6.76E-01
5	4	83	82	20737.52	1	2209.29	4.5263	0.0303	0.0	2.82E-04	2.48E-02	3.19E-01	1.59E 00	4.68E 00
5	4	94	93	24138.43	1	2209.47	4.5260	0.0303	0.0	0.0	2.43E-03	5.09E-02	3.52E-01	1.31E 00
1	0	19	18	656.82	1	2209.51	4.5259	0.0552	3.99E 03	3.05E 03	2.17E 03	1.55E 03	1.13E 03	8.38E 02
5	4	84	83	21030.94	1	2209.54	4.5258	0.0303	0.0	2.16E-04	2.04E-02	2.72E-01	1.40E 00	4.20E 00
5	4	93	92	23813.70	1	2209.69	4.5255	0.0303	0.0	0.0	3.04E-03	6.07E-02	4.07E-01	1.48E 00
5	4	85	84	21327.55	1	2209.75	4.5254	0.0303	0.0	1.64E-04	1.66E-02	2.32E-01	1.23E 00	3.76E 00
5	4	92	91	23492.04	1	2209.87	4.5252	0.0303	0.0	2.23E-05	3.79E-03	7.23E-02	4.70E-01	1.67E 00
5	4	86	85	21627.34	1	2209.91	4.5251	0.0303	0.0	1.25E-04	1.36E-02	1.98E-01	1.08E 00	3.37E 00
4	3	124	123	33437.40	1	2209.95	4.5250	0.0303	0.0	0.0	0.0	2.55E-04	4.31E-03	3.03E-02
5	4	91	90	23173.46	1	2209.99	4.5249	0.0303	0.0	2.99E-05	4.72E-03	8.60E-02	5.42E-01	1.88E 00
5	4	87	86	21930.29	1	2210.02	4.5248	0.0303	0.0	9.42E-05	1.10E-02	1.68E-01	9.41E-01	3.01E 00
5	4	90	89	22857.99	1	2210.07	4.5247	0.0303	0.0	4.00E-05	5.86E-03	1.02E-01	6.24E-01	2.12E 00
5	4	88	87	22236.39	1	2210.09	4.5247	0.0303	0.0	7.10E-05	8.96E-03	1.43E-01	8.22E-01	2.68E 00
5	4	89	88	22545.62	1	2210.10	4.5247	0.0303	0.0	5.34E-05	7.25E-03	1.21E-01	7.17E-01	2.39E 00
4	3	54	53	11652.14	1	2210.15	4.5246	0.0303	6.05E-03	9.02E-01	8.99E 00	3.12E 01	6.52E 01	1.03E 02
2	1	51	50	6704.76	2	2210.19	4.5245	0.0303	3.80E-02	5.26E-01	1.60E 00	2.72E 00	3.52E 00	3.96E 00
3	2	71	70	13000.15	2	2210.20	4.5245	0.0303	0.0	2.62E-03	3.59E-02	1.51E-01	3.58E-01	6.20E-01
1	0	38	37	2573.18	2	2210.27	4.5243	0.0303	5.41E 00	1.03E 01	1.16E 01	1.09E 01	9.53E 00	8.07E 00
3	2	40	39	7169.73	1	2211.09	4.5227	0.0303	2.06E 00	3.64E 01	1.24E 02	2.27E 02	3.09E 02	3.60E 02
3	2	72	71	13248.44	2	2211.11	4.5226	0.0303	0.0	2.09E-03	3.05E-02	1.33E-01	3.23E-01	5.68E-01
2	1	29	28	3686.17	1	2211.45	4.5219	0.0359	1.55E 02	5.06E 02	7.49E 02	8.27E 02	8.04E 02	7.36E 02
4	3	123	122	33023.30	1	2211.66	4.5215	0.0303	0.0	0.0	0.0	3.22E-04	5.22E-03	3.57E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	55	54	11850.23	1	2211.74	4.5213	0.0303	4.64E-03	7.61E-01	7.95E 00	2.84E 01	6.04E 01	9.67E 01
2	1	52	51	6887.58	2	2211.95	4.5209	0.0303	2.98E-02	4.51E-01	1.43E 00	2.50E 00	3.29E 00	3.75E 00
3	2	73	72	13499.99	2	2211.98	4.5208	0.0303	0.0	1.67E-03	2.58E-02	1.17E-01	2.90E-01	5.20E-01
1	0	39	38	2711.64	2	2212.57	4.5196	0.0303	4.55E 00	9.29E 00	1.08E 01	1.04E 01	9.17E 00	7.84E 00
1	0	20	19	729.71	1	2212.63	4.5195	0.0535	3.78E 03	2.99E 03	2.17E 03	1.57E 03	1.15E 03	8.58E 02
3	2	74	73	13754.80	2	2212.80	4.5192	0.0303	0.0	1.32E-03	2.18E-02	1.02E-01	2.61E-01	4.75E-01
4	3	56	55	12051.84	1	2213.30	4.5181	0.0303	3.54E-03	6.39E-01	7.01E 00	2.58E 01	5.59E 01	9.08E 01
3	2	41	40	7339.16	1	2213.31	4.5181	0.0303	1.72E 00	3.24E 01	1.15E 02	2.14E 02	2.96E 02	3.47E 02
4	3	122	121	32611.84	1	2213.32	4.5181	0.0303	0.0	0.0	0.0	4.06E-04	6.32E-03	4.20E-02
3	2	75	74	14012.86	2	2213.59	4.5175	0.0303	0.0	1.05E-03	1.84E-02	8.94E-02	2.34E-01	4.33E-01
2	1	53	52	7073.87	2	2213.67	4.5174	0.0303	2.33E-02	3.85E-01	1.28E 00	2.29E 00	3.07E 00	3.54E 00
2	1	30	29	3796.07	1	2214.14	4.5164	0.0340	1.37E 02	4.73E 02	7.17E 02	8.04E 02	7.91E 02	7.29E 02
3	2	76	75	14274.14	2	2214.33	4.5160	0.0303	0.0	8.27E-04	1.54E-02	7.80E-02	2.09E-01	3.95E-01
4	3	57	56	12256.95	1	2214.81	4.5151	0.0303	2.68E-03	5.35E-01	6.16E 00	2.33E 01	5.16E 01	8.50E 01
1	0	40	39	2853.67	2	2214.83	4.5150	0.0303	3.81E 00	8.33E 00	1.00E 01	9.81E 00	8.80E 00	7.60E 00
4	3	121	120	32203.01	1	2214.93	4.5148	0.0303	0.0	0.0	0.0	5.10E-04	7.64E-03	4.94E-02
3	2	77	76	14538.66	2	2215.03	4.5146	0.0303	0.0	6.51E-04	1.29E-02	6.79E-02	1.87E-01	3.59E-01
2	1	54	53	7263.61	2	2215.36	4.5139	0.0303	1.81E-02	3.27E-01	1.13E 00	2.09E 00	2.86E 00	3.34E 00
3	2	42	41	7492.24	1	2215.49	4.5137	0.0303	1.41E 00	2.87E 01	1.05E 02	2.01E 02	2.82E 02	3.35E 02
3	2	78	77	14806.39	2	2215.68	4.5133	0.0303	0.0	5.10E-04	1.08E-02	5.90E-02	1.66E-01	3.26E-01
1	0	21	20	806.42	1	2215.70	4.5132	0.0515	3.56E 03	2.93E 03	2.16E 03	1.58E 03	1.17E 03	8.75E 02
4	3	58	57	12465.57	1	2216.27	4.5121	0.0303	2.02E-03	4.46E-01	5.40E 00	2.11E 01	4.76E 01	7.95E 01
3	2	79	78	15077.32	2	2216.30	4.5120	0.0303	0.0	3.99E-04	9.01E-03	5.11E-02	1.48E-01	2.95E-01
4	3	120	119	31796.86	1	2216.49	4.5116	0.0303	0.0	0.0	0.0	6.40E-04	9.23E-03	5.79E-02
2	1	31	30	3909.71	1	2216.80	4.5110	0.0335	1.21E 02	4.39E 02	6.84E 02	7.80E 02	7.75E 02	7.20E 02
3	2	80	79	15351.45	2	2216.86	4.5109	0.0303	0.0	3.10E-04	7.49E-03	4.42E-02	1.32E-01	2.67E-01
2	1	55	54	7456.80	2	2217.00	4.5106	0.0303	1.39E-02	2.77E-01	1.01E 00	1.91E 00	2.66E 00	3.15E 00
1	0	41	40	2999.27	2	2217.06	4.5105	0.0303	3.17E 00	7.44E 00	9.28E 00	9.27E 00	8.43E 00	7.35E 00
3	2	104	103	22858.91	2	2217.20	4.5102	0.0303	0.0	0.0	4.40E-05	7.65E-04	4.68E-03	1.59E-02
3	2	81	80	15628.77	2	2217.39	4.5098	0.0303	0.0	2.41E-04	6.22E-03	3.82E-02	1.17E-01	2.42E-01
3	2	43	42	7648.97	1	2217.63	4.5093	0.0303	1.16E 00	2.53E 01	9.65E 01	1.88E 02	2.68E 02	3.22E 02
4	3	59	58	12677.69	1	2217.70	4.5092	0.0303	1.52E-03	3.70E-01	4.72E 00	1.90E 01	4.38E 01	7.42E 01
3	2	103	102	22511.64	2	2217.71	4.5092	0.0303	0.0	0.0	5.60E-05	9.26E-04	5.47E-03	1.82E-02
3	2	82	81	15909.25	2	2217.87	4.5088	0.0303	0.0	1.87E-04	5.15E-03	3.29E-02	1.03E-01	2.18E-01
4	3	119	118	31393.38	1	2217.99	4.5086	0.0303	0.0	0.0	0.0	8.02E-04	1.11E-02	6.79E-02
3	2	102	101	22167.28	2	2218.17	4.5082	0.0303	0.0	0.0	7.11E-05	1.12E-03	6.40E-03	2.07E-02
3	2	83	82	16192.90	2	2218.31	4.5079	0.0303	0.0	1.44E-04	4.25E-03	2.83E-02	9.13E-02	1.97E-01
3	2	101	100	21825.82	2	2218.59	4.5074	0.0303	0.0	0.0	9.00E-05	1.35E-03	7.46E-03	2.36E-02
2	1	56	55	7653.44	2	2218.60	4.5073	0.0303	1.07E-02	2.34E-01	8.91E-01	1.74E 00	2.47E 00	2.96E 00
3	2	84	83	16479.69	2	2218.71	4.5071	0.0303	0.0	1.11E-04	3.50E-03	2.43E-02	8.05E-02	1.77E-01
1	0	22	21	886.95	1	2218.75	4.5070	0.0496	3.33E 03	2.84E 03	2.14E 03	1.58E 03	1.18E 03	8.89E 02
3	2	100	99	21487.30	2	2218.96	4.5066	0.0303	0.0	0.0	1.14E-04	1.62E-03	8.69E-03	2.69E-02
3	2	85	84	16769.63	2	2219.06	4.5064	0.0303	0.0	8.48E-05	2.88E-03	2.08E-02	7.10E-02	1.59E-01
4	3	60	59	12893.29	1	2219.08	4.5064	0.0303	1.13E-03	3.06E-01	4.11E 00	1.71E 01	4.02E 01	6.91E 01
1	0	42	41	3148.44	2	2219.24	4.5060	0.0303	2.63E 00	6.61E 00	8.55E 00	8.73E 00	8.05E 00	7.09E 00
3	2	99	98	21151.72	2	2219.28	4.5060	0.0303	0.0	0.0	1.43E-04	1.95E-03	1.01E-02	3.06E-02
3	2	86	85	17062.69	2	2219.36	4.5058	0.0303	0.0	6.48E-05	2.36E-03	1.78E-02	6.24E-02	1.43E-01
2	1	32	31	4027.09	1	2219.42	4.5057	0.0331	1.05E 02	4.06E 02	6.50E 02	7.54E 02	7.58E 02	7.10E 02
4	3	118	117	30992.61	1	2219.45	4.5056	0.0303	0.0	0.0	0.0	1.00E-03	1.34E-02	7.95E-02
3	2	98	97	20819.09	2	2219.56	4.5054	0.0303	0.0	0.0	1.80E-04	2.34E-03	1.17E-02	3.47E-02
3	2	87	86	17358.87	2	2219.63	4.5053	0.0303	0.0	4.93E-05	1.93E-03	1.52E-02	5.48E-02	1.28E-01
3	2	44	43	7809.34	1	2219.72	4.5051	0.0303	9.40E-01	2.22E 01	8.81E 01	1.76E 02	2.54E 02	3.09E 02
3	2	97	96	20489.43	2	2219.79	4.5049	0.0303	0.0	0.0	2.26E-04	2.80E-03	1.36E-02	3.94E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	2	88	87	17658.16	2	2219.84	4.5048	0.0303	0.0	3.75E-09	1.57E-03	1.99E-02	4.90E-02	1.19E-01
3	2	96	95	20162.76	2	2219.98	4.5045	0.0303	0.0	0.0	2.83E-04	3.34E-03	1.58E-02	4.86E-02
3	2	89	88	17960.53	2	2220.02	4.5045	0.0303	0.0	2.04E-05	1.28E-03	1.10E-02	4.20E-02	1.02E-01
3	2	95	94	19839.07	2	2220.12	4.5043	0.0303	0.0	0.0	3.54E-04	3.38E-03	1.92E-02	5.04E-02
3	2	90	89	18265.99	2	2220.15	4.5042	0.0303	0.0	2.14E-05	1.04E-03	9.73E-03	3.67E-02	9.11E-02
2	1	57	56	7853.51	2	2220.17	4.5042	0.0303	9.18E-03	1.97E-01	7.86E-01	1.58E 00	2.93E 00	2.79E 00
3	2	94	93	19518.39	2	2220.21	4.5041	0.0303	0.0	0.0	4.41E-04	4.74E-03	2.17E-02	6.69E-02
3	2	91	90	18674.62	2	2220.23	4.5040	0.0303	0.0	0.0	9.42E-04	7.90E-03	3.70E-02	9.12E-02
3	2	92	91	18886.10	2	2220.27	4.5040	0.0303	0.0	0.0	6.80E-04	6.68E-03	2.79E-02	7.23E-02
3	2	93	92	19200.73	2	2220.27	4.5040	0.0303	0.0	0.0	5.48E-04	5.73E-03	2.42E-02	6.41E-02
4	3	61	60	13112.37	1	2220.41	4.5037	0.0303	8.41E-04	2.53E-01	3.97E 00	1.69E 01	3.68E 01	6.43E 01
4	3	117	116	30594.55	1	2220.45	4.5036	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
1	0	43	42	3301.17	2	2221.39	4.5017	0.0303	2.16E 00	5.85E 00	7.86E 00	9.19E 00	9.67E 00	6.83E 0[illegible]
2	1	58	57	8057.01	2	2221.69	4.5011	0.0303	6.27E-03	1.79E-01	6.02E 01	1.47E 00	2.11E 00	2.61E [illegible]
4	3	62	61	13334.93	1	2221.71	4.5010	0.0303	6.21E-04	2.08E-01	3.10E 00	1.77E 01	3.37E 01	5.97E [illegible]
1	0	23	22	971.28	1	2221.75	4.5010	0.0476	3.09E 03	2.74E 03	2.11E 03	1.58E 03	1.19E 03	9.00E [illegible]
3	2	45	44	7973.35	1	2221.77	4.5009	0.0303	7.60E-01	1.94E 01	8.02E 01	1.54E 02	2.41E 02	2.99E [illegible]
2	1	33	32	4148.21	1	2221.99	4.5005	0.0326	9.15E 01	3.73E 02	6.15E 02	[illegible]	[illegible]	[illegible]
4	3	116	115	30199.23	1	2222.20	4.5000	0.0303	0.0	0.0	3.11E-04	[illegible]	[illegible]	[illegible]
4	3	63	62	13560.93	1	2222.95	4.4985	0.0303	4.56E-04	1.70E-01	2.69E 00	1.22E 01	3.07E 01	5.5[illegible]
2	1	59	58	8263.93	2	2223.17	4.4981	0.0303	4.70E-03	1.38E-01	6.07E-01	1.24E 00	1.99E 00	[illegible]
4	3	115	114	29806.66	1	2223.49	4.4974	0.0303	0.0	0.0	4.05E-05	1.06E-03	9.31E-02	1.[illegible]
1	0	44	43	3457.45	2	2223.60	4.4974	0.0303	1.77E 00	5.16E 00	7.20E 00	7.48E 00	7.30E 00	A[illegible]
3	2	46	45	8140.98	1	2223.79	4.4968	0.0303	5.11E-01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	3	64	63	13790.39	1	2224.16	4.4961	0.0303	3.33E-04	1.49E-01	2.41E 00	1.09E 01	[illegible]	[illegible]
2	1	34	33	4273.06	1	2224.53	4.4953	0.0321	7.03E 01	3.42E 02	6.81E 02	6.08E 02	7.18E 02	
2	1	60	59	8474.25	2	2224.61	4.4952	0.0303	3.53E-03	1.14E-01	6.31E-01	1.17E 00	1.79E 00	
1	0	24	23	1069.42	1	2224.71	4.4950	0.0467	2.84E 03	2.64E 03	2.07E 03	1.57E 03	1.19E 03	
4	3	114	113	29416.86	1	2224.74	4.4949	0.0303	0.0	0.0	9.39E-06	2.41E-03	2.76E-02	
4	3	65	64	14023.30	1	2225.32	4.4937	0.0303	2.49E-04	1.13E-01	1.98E 00	9.70E 00	3.64E 01	
1	0	45	44	3617.28	2	2225.67	4.4930	0.0303	1.44E 00	4.94E 00	[illegible]	[illegible]	[illegible]	[illegible]
3	2	47	46	8312.24	1	2225.76	4.4928	0.0303	4.89E-01	1.47E 01	6.58E 01	1.41E 02	2.18E [illegible]	[illegible]
4	3	113	112	29029.04	1	2225.93	4.4925	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
2	1	61	60	8687.99	2	2226.01	4.4923	0.0303	2.64E-03	9.49E-02	4.64E-01	1.09E 00	1.69E	
4	3	66	65	14259.63	1	2226.43	4.4915	0.0303	1.75E-04	9.13E-02	1.70E 00	9.69E 00	3.31E	
2	1	35	34	4401.64	1	2227.03	4.4903	0.0317	5.76E 01	3.11E 02	5.46E 02	6.69E 02	6.97E	
4	3	112	111	28646.63	1	2227.07	4.4902	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
3	2	131	130	34615.31	1	2227.26	4.4898	0.0303	0.0	0.0	0.0	1.05E-04	1.7[illegible]	
2	1	62	61	8905.12	2	2227.37	4.4896	0.0303	1.97E-03	7.84E-02	4.03E-01	9.63E-01	1.5[illegible]	
4	3	67	66	14499.39	1	2227.60	4.4893	0.0303	1.26E-04	[illegible]	1.49E 00	[illegible]	[illegible]	[illegible]
1	0	46	45	3780.65	2	2227.60	4.4891	0.0303	1.16E 00	3.97E 00	5.99E 00	6.68E 00	6.[illegible]	
1	0	25	24	1151.37	1	2227.64	4.4891	0.0457	2.60E 03	2.70E 03	2.03E 03	1.55E 03	1.[illegible]	
3	2	48	47	8487.11	1	2227.69	4.4890	0.0303	3.89E-01	1.27E 01	5.93E 01	1.71E 02	2.[illegible]	
4	3	111	110	28264.23	1	2228.16	4.4880	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
4	3	68	67	14742.56	1	2228.53	4.4873	0.0303	9.02E-05	5.92E-02	1.24E 00	6.79E 00		
2	1	63	62	9126.64	2	2228.69	4.4869	0.0303	1.46E-03	6.45E-02	3.60E-01	9.45E-01		
4	3	110	109	27885.68	1	2229.20	4.4859	0.0303	0.0	0.0	1.57E-04	5.47E-03		
3	2	130	129	34178.80	1	2229.32	4.4857	0.0303	0.0	0.0	0.0	1.74E-04		
2	1	36	35	4533.94	1	2229.48	4.4854	0.0312	5.75E 01	2.83E 02	5.11E 02	6.33E 02		
4	3	69	68	14989.13	1	2229.61	4.4853	0.0303	6.42E-05	4.76E-02	1.09E 00	5.03E 00		
3	2	49	48	8665.59	1	2229.67	4.4852	0.0303	3.07E-01	1.09E 01	5.33E 01	1.21E 0[illegible]		
1	0	47	46	3947.55	2	2229.59	4.4851	0.0303	9.37E-01	3.46E 00	5.43E 00	6.21E 0[illegible]		
2	1	64	63	9349.53	2	2229.97	4.4844	0.0303	1.07E-03	5.24E-02	3.40E-01	[illegible]		

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	109	108	27509.97	1	2230.19	4.4839	0.0303	0.0	0.0	2.04E-04	6.93E-03	6.63E-02	3.10E-01
4	3	70	69	15239.10	1	2230.44	4.4834	0.0303	4.55E-05	3.79E-02	8.94E-01	5.21E 00	1.53E 01	3.10E 01
1	0	26	25	1247.11	1	2230.52	4.4833	0.0418	2.36E 03	2.39E 03	1.97E 03	1.53E 03	1.18E 03	9.13E 02
4	3	108	107	27137.13	1	2231.12	4.4821	0.0303	0.0	0.0	2.64E-04	8.51E-03	7.86E-02	3.59E-01
2	1	65	64	9576.80	2	2231.21	4.4819	0.0303	7.87E-04	4.33E-02	2.62E-01	6.74E-01	1.15E 00	1.58E 00
3	2	129	128	33744.82	1	2231.32	4.4817	0.0303	0.0	0.0	0.0	1.71E-04	2.98E-03	2.14E-02
4	3	71	70	15492.44	1	2231.33	4.4816	0.0303	3.21E-05	3.02E-02	7.56E-01	4.57E 00	1.38E 01	2.83E 01
3	2	50	49	8847.68	1	2231.42	4.4815	0.0303	2.41E-01	9.39E 00	4.78E 01	1.11E 02	1.77E 02	2.31E 02
1	0	48	47	4117.99	2	2231.54	4.4812	0.0303	7.50E-01	3.01E 00	4.91E 00	5.76E 00	5.84E 00	5.50E 00
2	1	37	36	4669.95	1	2231.90	4.4805	0.0308	4.87E 01	2.55E 02	4.77E 02	6.08E 02	6.50E 02	6.36E 02
4	3	107	106	26767.18	1	2232.01	4.4803	0.0303	0.0	0.0	3.41E-04	1.04E-02	9.30E-02	4.14E-01
4	3	72	71	15749.16	1	2232.18	4.4799	0.0303	2.25E-05	2.39E-02	6.38E-01	4.00E 00	1.24E 01	2.59E 01
2	1	66	65	9807.43	2	2232.40	4.4795	0.0303	5.74E-04	3.52E-02	2.25E-01	5.99E-01	1.05E 00	1.46E 00
4	3	106	105	26400.13	1	2232.85	4.4786	0.0303	0.0	0.0	4.41E-04	1.28E-02	1.10E-01	4.77E-01
4	3	73	72	16009.24	1	2232.98	4.4783	0.0303	0.0	1.89E-02	5.37E-01	3.49E 00	1.11E 01	2.36E 01
3	2	51	50	9033.35	1	2233.22	4.4778	0.0303	1.89E-01	8.02E 00	4.27E 01	1.02E 02	1.66E 02	2.19E 02
3	2	128	127	33313.39	1	2233.27	4.4777	0.0303	0.0	0.0	0.0	2.18E-04	3.64E-03	2.54E-02
1	0	27	26	1346.66	1	2233.37	4.4775	0.0398	2.12E 03	2.26E 03	1.91E 03	1.50E 03	1.17E 03	9.12E 02
1	0	49	48	4291.95	2	2233.46	4.4774	0.0303	5.96E-01	2.60E 00	4.43E 00	5.33E 00	5.49E 00	5.23E 00
2	1	67	66	10041.41	2	2233.55	4.4772	0.0303	4.16E-04	2.86E-02	1.93E-01	5.32E-01	9.52E-01	1.39E 00
4	3	105	104	26035.98	1	2233.63	4.4770	0.0303	0.0	0.0	5.68E-04	1.56E-02	1.30E-01	5.49E-01
4	3	74	73	16272.68	1	2233.73	4.4768	0.0303	0.0	1.49E-02	4.50E-01	3.04E 00	9.90E 00	2.15E 01
2	1	38	37	4809.68	1	2234.27	4.4757	0.0303	4.09E 01	2.30E 02	4.44E 02	5.77E 02	6.25E 02	6.18E 02
4	3	104	103	25674.78	1	2234.37	4.4755	0.0303	0.0	0.0	7.30E-04	1.91E-02	1.53E-01	6.32E-01
4	3	75	74	16539.45	1	2234.44	4.4754	0.0303	0.0	1.17E-02	3.77E-01	2.65E 00	8.94E 00	1.95E 01
2	1	68	67	10278.73	2	2234.67	4.4749	0.0303	3.01E-04	2.31E-02	1.66E-01	4.72E-01	8.63E-01	1.24E 00
3	2	52	51	9222.61	1	2234.98	4.4743	0.0303	1.47E-01	6.83E 00	3.80E 01	9.32E 01	1.54E 02	2.06E 02
4	3	103	102	25316.52	1	2235.05	4.4742	0.0303	0.0	0.0	9.36E-04	2.32E-02	1.80E-01	7.25E-01
4	3	76	75	16809.55	1	2235.10	4.4741	0.0303	0.0	9.15E-03	3.15E-01	2.30E 00	7.87E 01	1.77E 01
3	2	127	126	32884.54	1	2235.17	4.4739	0.0303	0.0	0.0	0.0	2.78E-04	4.45E-03	3.01E-02
1	0	50	49	4469.43	2	2235.33	4.4736	0.0303	4.72E-01	2.24E 00	3.98E 00	4.92E 00	5.15E 00	4.97E 00
4	3	102	101	24961.22	1	2235.69	4.4729	0.0303	0.0	0.0	1.20E-03	2.82E-02	2.12E-01	8.39E-01
4	3	77	76	17082.96	1	2235.71	4.4729	0.0303	0.0	7.14E-03	2.62E-01	1.99E 00	7.00E 00	1.60E 01
2	1	69	68	10519.39	2	2235.74	4.4728	0.0303	2.16E-04	1.87E-02	1.42E-01	4.17E-01	7.91E-01	1.14E 00
1	0	28	27	1449.99	1	2236.18	4.4719	0.0379	1.90E 03	2.13E 03	1.84E 03	1.47E 03	1.16E 03	9.08E 02
4	3	101	100	24608.89	1	2236.27	4.4717	0.0303	0.0	0.0	1.53E-03	3.43E-02	2.49E-01	9.53E-01
4	3	78	77	17359.69	1	2236.28	4.4717	0.0303	0.0	5.55E-03	2.17E-01	1.72E 00	6.21E 00	1.45E 01
2	1	39	38	4953.12	1	2236.61	4.4711	0.0303	3.42E 01	2.06E 02	4.12E 02	5.46E 02	6.00E 02	5.99E 02
3	2	53	52	9415.45	1	2236.70	4.4709	0.0303	1.13E-01	5.79E 00	3.38E 01	9.51E 01	1.44E 02	1.95E 02
2	1	70	69	10763.38	2	2236.76	4.4708	0.0303	1.54E-04	1.50E-02	1.21E-01	3.69E-01	7.05E-01	1.05E 00
4	3	79	78	17639.71	1	2236.81	4.4707	0.0303	0.0	4.30E-03	1.80E-01	1.48E 00	5.50E 00	1.31E 01
4	3	100	99	24259.57	1	2236.81	4.4707	0.0303	0.0	0.0	1.95E-03	4.15E-02	2.91E-01	1.00E 00
3	2	126	125	32458.27	1	2237.01	4.4703	0.0303	0.0	0.0	0.0	3.53E-04	5.42E-03	3.56E-02
1	0	51	50	4650.41	2	2237.17	4.4699	0.0303	3.71E-01	1.92E 00	3.57E 00	4.53E 00	4.92E 00	4.71E 00
4	3	80	79	17923.02	1	2237.28	4.4697	0.0303	0.0	3.32E-03	1.49E-01	1.28E 00	4.86E 00	1.18E 01
4	3	99	98	23913.24	1	2237.29	4.4697	0.0303	0.0	0.0	2.47E-03	5.02E-02	3.40E-01	1.24E 00
4	3	81	80	18209.59	1	2237.71	4.4689	0.0303	0.0	2.55E-03	1.23E-01	1.10E 00	4.29E 00	1.06E 01
4	3	98	97	23569.94	1	2237.73	4.4688	0.0303	0.0	0.0	3.14E-03	6.06E-02	3.97E-01	1.42E 00
2	1	71	70	11010.69	2	2237.75	4.4688	0.0303	1.10E-04	1.20E-02	1.02E-01	3.24E-01	6.36E-01	9.61E-01
4	3	82	81	18499.43	1	2238.09	4.4681	0.0303	0.0	1.96E-03	1.01E-01	9.70E-01	3.78E 00	9.56E 00
4	3	97	96	23229.68	1	2238.11	4.4681	0.0303	0.0	2.47E-05	3.97E-03	7.29E-02	4.63E-01	1.62E 00
3	2	54	53	9611.86	1	2238.37	4.4675	0.0303	8.71E-02	4.89E 00	2.99E 01	7.76E 01	1.33E 02	1.83E 02
4	3	83	82	18792.51	1	2238.43	4.4674	0.0303	0.0	1.50E-03	8.27E-02	8.03E-01	3.33E 00	8.59E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	3	96	95	22892.46	1	2238.45	4.4674	0.0303	0.0	3.39E-05	5.00E-03	8.77E-02	5.39E-01	1.84E 00
2	1	72	71	11261.30	2	2238.69	4.4669	0.0303	7.77E-05	9.58E-03	8.66E-02	2.85E-01	5.72E-01	8.80E-01
4	3	84	83	19088.83	1	2238.72	4.4668	0.0303	0.0	1.14E-03	6.76E-02	6.85E-01	2.92E 00	7.69E 00
4	3	95	94	22568.31	1	2238.74	4.4668	0.0303	0.0	4.62E-05	6.30E-03	1.05E-01	6.26E-01	2.09E 00
3	2	125	124	32034.61	1	2238.80	4.4667	0.0303	0.0	0.0	0.0	4.47E-04	6.60E-03	4.22E-02
2	1	40	39	5100.29	1	2238.90	4.4665	0.0303	2.84E 01	1.83E 02	3.80E 02	5.15E 02	5.74E 02	5.79E 02
1	0	22	21	1587.12	1	2238.95	4.4664	0.0350	1.69E 03	1.99E 03	1.77E 03	1.44E 03	1.14E 03	9.02E 02
4	3	85	84	19388.37	1	2238.96	4.4664	0.0303	0.0	8.65E-04	5.52E-02	5.84E-01	2.56E 00	6.88E 00
1	0	62	61	4834.01	2	2238.96	4.4664	0.0303	2.91E-01	1.65E 00	3.19E 00	4.16E 00	4.51E 00	4.46E 00
4	3	94	93	22227.24	1	2238.98	4.4663	0.0303	0.0	6.28E-05	7.91E-03	1.26E-01	7.26E-01	2.37E 00
4	3	86	85	19891.13	1	2239.15	4.4660	0.0303	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	3	93	92	21899.26	1	2239.17	4.4659	0.0303	0.0	8.61E-05	9.91E-03	1.01E-01	[illegible]	[illegible]
1	0	87	86	10887.08	1	2239.38	4.4657	0.0303	0.0	4.93E-05	3.05E-02	9.21E-01	[illegible]	[illegible]
4	3	92	91	21674.38	1	2239.31	4.4657	0.0303	0.0	1.15E-04	1.24E-02	1.80E-01	9.72E-01	3.03E [illegible]
4	3	88	87	20306.23	1	2239.38	4.4655	0.0303	0.0	3.71E-04	2.95E-02	3.57E-01	1.71E 00	4.89E [illegible]
4	3	91	90	21602.03	1	2239.41	4.4655	0.0303	0.0	1.55E-04	1.65E-02	2.14E-01	1.12E 00	3.42E [illegible]
4	3	89	88	20618.54	1	2239.45	4.4654	0.0303	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 00
4	3	90	89	20934.01	1	2239.48	4.4654	0.0303	0.0	9.08E-04	1.92E-02	2.54E-01	1.29E 00	3.08 [illegible]
2	1	73	72	11515.21	2	2239.68	4.4651	0.0303	3.91E-05	7.94E-03	7.37E-02	2.08E-01	5.11E-01	[illegible]
3	2	55	54	9811.04	1	2240.00	4.4645	0.0303	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 2E 02
2	1	74	73	11779.40	2	2240.65	4.4634	0.0303	3.88E-05	6.04E-03	6.19E-02	2.18E-01	4.61E-01	7. [illegible]
3	2	124	123	31614.57	1	2240.50	4.4636	0.0303	0.0	0.0	0.0	5.55E-04	9.03E-03	[illegible]
1	0	53	52	5072.89	2	2240.72	4.4629	0.0303	2.26E-01	1.40E 00	2.85E 00	3.91E 00	4.21E 00	[illegible]
2	1	41	40	5261.08	1	2241.16	4.4620	0.0303	2.37E 01	1.66E 02	3.00E 02	[illegible]	[illegible]	[illegible]
2	1	75	74	12039.97	2	2241.97	4.4618	0.0303	2.67E-05	4.77E-03	5.90E-02	1.91E-01	4.13E-01	
3	2	56	55	10015.37	1	2241.59	4.4611	0.0303	5.07E-02	3.45E 00	2.33E 01	6.39E 01	1.14E 02	
1	0	30	29	1558.03	1	2241.68	4.4609	0.0340	1.49E 03	1.85E 03	1.69E 03	1.40E 03	1.12E 03	[illegible]
2	1	76	75	12296.62	2	2242.04	4.4602	0.0303	0.0	3.76E-03	4.36E-02	1.66E-01	3.69E-01	
3	2	123	122	31105.18	1	2242.22	4.4599	0.0303	0.0	0.0	0.0	7.16E-04	9.75E-03	
1	0	54	53	5214.37	2	2242.43	4.4594	0.0303	1.78E-01	1.19E 00	2.53E 00	3.49E 00	3.91E 00	
2	1	77	76	12563.62	2	2242.77	4.4588	0.0303	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	2	57	56	10222.44	1	2243.13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 02 5.38E 02
2	1	42	41	5405.60	1	2243.37	4.4576	0.0303	1.45E 01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	1	78	77	12833.86	2	2243.46	4.4574	0.0303	0.0	2.31E-03	3.03E-02	1.27E 01	2.97E [illegible]	[illegible]
3	2	122	121	30779.46	1	2243.84	4.4566	0.0303	0.0	0.0	0.0	9.03E-04	1.18E [illegible]	[illegible]
2	1	107	106	22032.61	2	2244.08	4.4562	0.0303	0.0	0.0	5.62E-05	8.08E-04	4.40E-03	1.68E-02
1	0	55	54	5409.33	2	2244.11	4.4561	0.0303	1.35E-01	1.01E 00	2.24E 00	3.17E 00	3.64 [illegible]	
2	1	79	78	13107.38	2	2244.11	4.4561	0.0303	0.0	1.90E-03	2.54E-02	1.06E-01	2.84 [illegible]	[illegible]
1	0	31	30	1782.72	1	2244.37	4.4556	0.0339	1.31E 03	1.77E 03	1.61E 03	1.39E 03	1.1 [illegible]	[illegible]
3	2	58	57	10433.05	1	2244.63	4.4551	0.0303	2.84E-02	2.40E 00	1.79E 01	5.22E 01	9. [illegible]	[illegible]
2	1	108	105	21873.27	2	2244.70	4.4549	0.0303	0.0	0.0	7.31E-05	1.06E-03	5. [illegible]	[illegible]
2	1	80	79	13384.06	2	2244.71	4.4549	0.0303	0.0	1.40E-03	2.11E-02	9.38E-02	2. [illegible]	[illegible]
2	1	81	80	13663.99	2	2245.26	4.4538	0.0303	0.0	1.08E-03	1.79E 00	0.00E-00	[illegible]	[illegible]
2	1	105	104	21316.81	2	2245.27	4.4538	0.0303	0.0	0.0	9.23E-05	1.29E-03		
3	2	121	120	30366.41	1	2245.42	4.4535	0.0303	0.0	0.0	2.21E-03	1.14E-03		
2	1	43	42	5563.80	1	2245.54	4.4533	0.0303	1.50E 01	1.27E 02	2.94E 02	4.26E 02		
1	0	56	55	5607.77	2	2245.74	4.4529	0.0303	1.03E-01	8.48E-01	1.98E 00	2.88E 00		
2	1	82	81	13947.12	2	2245.78	4.4529	0.0303	0.0	8.35E-04	1.44E-02	6.96E-02		
2	1	104	103	20963.26	2	2245.80	4.4528	0.0303	0.0	0.0	1.18E-04	1.56E-03		
3	2	59	58	10847.20	1	2246.07	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.94E 01	1.61E 02
2	1	83	82	14233.45	2	2246.25	4.4519	0.0303	0.0	6.43E-04	1.19E-02	5.88E-0 [illegible]		
2	1	103	102	20612.03	2	2246.27	4.4519	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
2	1	84	83	14522.95	2	2246.67	4.4510	0.0303	0.0	4.73E-04	9.77E-03	5.13E- [illegible]		

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*CM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	1	102	101	20264.94	2	2246.71	4.4510	0.0303	0.0	0.0	1.91E-04	2.39E-03	1.09E-02	3.11E-02
3	2	120	119	29956.07	1	2246.94	4.4505	0.0303	0.0	0.0	2.96E-05	1.43E-04	1.73E-02	9.59E-02
1	0	32	31	1901.19	1	2247.02	4.4503	0.0331	1.14E 07	1.59E 07	1.53E 03	1.31E 03	1.07E 07	9.69E 02
2	1	85	84	14815.63	2	2247.06	4.4503	0.0303	0.0	3.77E-04	8.01E-03	4.38E-02	1.24E-01	2.43E-01
2	1	101	100	19920.19	2	2247.09	4.4502	0.0303	0.0	0.0	2.43E-04	2.77E-03	1.29E-02	3.55E-02
1	0	57	56	5809.67	2	2247.34	4.4497	0.0303	7.88E-02	7.12E-01	1.75E 00	2.62E 00	3.12E 00	3.30E 00
2	1	86	85	15111.48	2	2247.40	4.4496	0.0303	0.0	2.87E-04	6.55E-03	3.74E-02	1.00E-01	2.18E-01
2	1	100	99	19578.40	2	2247.43	4.4495	0.0303	0.0	0.0	3.07E-04	3.34E-03	1.49E-02	4.05E-02
3	2	60	59	10864.87	1	2247.51	4.4494	0.0303	1.60E-02	1.64E 00	1.35E 01	4.32E 01	9.17E 01	1.22E 02
2	1	44	43	5725.68	1	2247.67	4.4491	0.0303	1.28E 01	1.11E 02	2.69E 02	3.98E 02	4.71E 02	4.96E 02
2	1	87	86	15410.46	2	2247.69	4.4490	0.0303	0.0	2.18E-04	5.35E-03	3.19E-02	9.55E-02	1.95E-01
2	1	99	98	19239.58	2	2247.72	4.4490	0.0303	0.0	0.0	3.88E-04	4.01E-03	1.73E-02	4.61E-02
2	1	88	87	15712.59	2	2247.94	4.4485	0.0303	0.0	1.65E-04	4.36E-03	2.71E-02	3.36E-02	1.74E-01
2	1	98	97	18903.75	2	2247.97	4.4485	0.0303	0.0	0.0	4.89E-04	4.82E-03	2.02E-02	5.23E-02
2	1	89	88	16017.84	2	2248.14	4.4481	0.0303	0.0	1.25E-04	3.54E-03	2.30E-02	7.30E-02	1.55E-01
2	1	97	96	18570.92	2	2248.17	4.4481	0.0303	0.0	0.0	6.15E-04	5.78E-03	2.34E-02	5.04E-02
2	1	90	89	16326.21	2	2248.31	4.4478	0.0303	0.0	9.39E-05	2.87E-03	1.05E-02	5.37E-02	1.39E-01
2	1	96	95	18241.11	2	2248.32	4.4478	0.0303	0.0	0.0	7.72E-04	6.91E-03	2.73E-02	6.73E-02
2	1	91	90	16637.68	2	2248.42	4.4476	0.0303	0.0	7.04E-05	2.32E-03	1.65E-02	5.55E-02	1.37E-01
3	2	119	118	29548.44	1	2248.42	4.4476	0.0303	0.0	0.0	3.93E-05	1.80E-03	2.00E-02	1.13E-01
2	1	95	94	17914.32	2	2248.43	4.4475	0.0303	0.0	2.16E-05	9.66E-04	9.26E-03	3.14E-02	7.62E-02
2	1	92	91	16952.23	2	2248.49	4.4474	0.0303	0.0	5.27E-05	1.87E-03	1.39E-02	4.87E-02	1.10E-01
2	1	94	93	17590.57	2	2248.50	4.4474	0.0303	0.0	2.92E-05	1.21E-03	9.84E-03	3.53E-02	8.61E-02
2	1	93	92	17269.87	2	2248.52	4.4474	0.0303	0.0	3.93E-05	1.50E-03	1.17E-02	4.19E-02	9.72E-02
3	2	61	60	11086.05	1	2248.88	4.4467	0.0303	1.19E-02	1.35E 00	1.18E 01	3.78E 01	7.42E 01	1.14E 02
1	0	58	57	6015.03	2	2248.89	4.4466	0.0303	5.97E-02	5.96E-01	1.54E 00	2.37E 00	2.88E 00	3.03E 00
1	0	33	32	2023.43	1	2249.63	4.4452	0.0326	9.89E 02	1.46E 03	1.45E 07	1.26E 03	1.05E 07	9.54E 02
2	1	45	44	5891.22	1	2249.76	4.4449	0.0303	1.03E 01	9.73E 01	2.44E 02	3.71E 02	4.46E 02	4.75E 02
3	2	118	117	29143.55	1	2249.84	4.4448	0.0303	0.0	0.0	5.22E-05	2.25E-03	2.52E-02	1.32E-01
3	2	62	61	11310.73	1	2250.20	4.4440	0.0303	8.74E-03	1.11E 00	1.02E 01	3.38E 01	6.83E 01	1.06E 02
1	0	59	58	6223.85	2	2250.41	4.4436	0.0303	4.50E-02	4.97E-01	1.35E 00	2.14E 00	2.55E 00	2.89E 00
3	2	117	116	28741.41	1	2251.20	4.4421	0.0303	0.0	0.0	6.92E-05	2.92E-03	3.07E-02	1.55E-01
3	2	63	62	11538.91	1	2251.49	4.4415	0.0303	6.40E-03	9.06E-01	8.80E 00	3.01E 01	5.23E 01	9.77E 01
2	1	46	45	6060.43	1	2251.81	4.4409	0.0303	8.28E 00	8.47E 01	2.21E 02	3.44E 02	4.21E 02	4.54E 02
1	0	60	59	6436.11	2	2251.88	4.4407	0.0303	3.38E-02	4.12E-01	1.18E 00	1.93E 00	2.44E 00	2.69E 00
1	0	34	33	2149.44	1	2252.20	4.4401	0.0321	8.51E 02	1.33E 03	1.36E 07	1.21E 03	1.02E 03	3.37E 02
3	2	116	115	28342.04	1	2252.52	4.4395	0.0303	0.0	0.0	9.16E-05	3.52E-03	3.64E-02	1.81E-01
3	2	64	63	11770.57	1	2252.72	4.4391	0.0303	4.66E-03	7.78E-01	7.59E 00	2.59E 01	5.67E 01	9.03E 01
1	0	61	60	6651.80	2	2253.31	4.4379	0.0303	2.52E-02	3.41E-01	1.02E 00	1.73E 00	2.24E 00	2.51E 00
3	2	115	114	27945.45	1	2253.78	4.4370	0.0303	0.0	0.0	1.21E-04	4.38E-03	4.37E-02	2.11E-01
2	1	47	46	6233.30	1	2253.81	4.4369	0.0303	6.60E 00	7.34E 01	2.00E 02	3.19E 02	3.95E 02	4.32E 02
3	2	65	64	12005.71	1	2253.92	4.4367	0.0303	3.38E-03	5.99E-01	6.50E 00	2.38E 01	5.15E 01	8.34E 01
2	1	133	132	33685.91	1	2253.95	4.4367	0.0303	0.0	0.0	0.0	1.25E-04	2.17E-03	1.55E-02
1	0	62	61	6870.93	2	2254.71	4.4352	0.0303	1.87E-02	2.81E-01	8.91E-01	1.55E 00	2.05E 00	2.37E 00
1	0	35	34	2279.20	1	2254.73	4.4351	0.0317	7.28E 02	1.21E 03	1.28E 07	1.16E 03	9.85E 02	9.19E 02
3	2	114	113	27551.67	1	2254.99	4.4346	0.0303	0.0	0.0	1.59E-04	5.45E-03	5.24E-02	2.46E-01
3	2	66	65	12244.32	1	2255.07	4.4345	0.0303	2.44E-03	4.84E-01	5.57E 00	2.11E 01	4.57E 01	7.69E 01
2	1	48	47	6409.82	1	2255.77	4.4331	0.0303	5.24E 00	6.34E 01	1.80E 02	2.95E 02	3.73E 02	4.11E 02
1	0	63	62	7093.47	2	2256.06	4.4325	0.0303	1.38E-02	2.31E-01	7.72E-01	1.39E 00	1.89E 00	2.17E 00
2	1	132	131	33239.78	1	2256.08	4.4325	0.0303	0.0	0.0	0.0	1.61E-04	2.67E-03	1.85E-02
3	2	113	112	27160.71	1	2256.15	4.4323	0.0303	0.0	0.0	2.09E-04	6.79E-03	6.27E-02	2.87E-01
3	2	67	66	12486.39	1	2256.17	4.4323	0.0303	1.75E-03	3.89E-01	4.75E 00	1.86E 01	4.22E 01	7.07E 01
3	2	68	67	12731.90	1	2257.23	4.4302	0.0303	1.26E-03	3.13E-01	4.04E 00	1.64E 01	3.81E 01	6.49E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICTENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	36	35	2412.73	1	2257.23	4.4302	0.0312	6.19E 02	1.10E 03	1.20E 03	1.10E 03	9.52E 02	7.99E 02
3	2	112	111	26772.58	1	2257.26	4.4302	0.0303	0.0	0.0	2.74E-04	8.40E-03	7.49E-02	3.34E-01
1	0	64	63	7319.43	2	2257.37	4.4299	0.0303	1.02E-02	1.89E-01	6.67E-01	1.24E 00	1.71E 00	2.01E 00
2	1	49	48	6589.98	1	2257.69	4.4293	0.0303	4.13E 00	5.45E 01	1.62E 02	2.71E 02	3.49E 02	3.90E 02
2	1	131	130	32796.18	1	2258.15	4.4284	0.0303	0.0	0.0	0.0	2.06E-04	3.28E-03	2.21E-02
3	2	69	68	12980.85	1	2258.24	4.4282	0.0303	8.84E-04	2.50E-01	3.43E 00	1.45E 01	3.44E 01	5.95E 01
3	2	111	110	26387.31	1	2258.32	4.4281	0.0303	0.0	0.0	3.59E-04	1.04E-02	8.94E-02	3.88E-01
1	0	65	64	7548.79	2	2258.64	4.4274	0.0303	7.42E-03	1.54E-01	5.75E-01	1.11E 00	1.56E 00	1.86E 00
3	2	70	69	13233.23	1	2259.21	4.4263	0.0303	6.24E-04	1.99E-01	2.91E 00	1.27E 01	3.09E 01	5.45E 01
3	2	110	109	26004.91	1	2259.32	4.4261	0.0303	0.0	0.0	4.68E-04	1.29E-02	1.06E-01	4.50E-01
2	1	50	49	6773.78	1	2259.57	4.4256	0.0303	3.24E 00	4.67E 01	1.45E 02	2.50E 02	3.27E 02	3.70E 02
1	0	37	36	2550.01	1	2259.68	4.4254	0.0308	5.23E 02	9.93E 02	1.12E 03	1.05E 03	9.18E 02	7.78E 02
1	0	66	65	7781.55	2	2259.86	4.4251	0.0303	5.39E-03	1.26E-01	4.95E-01	9.84E-01	1.42E 00	1.72E 00
3	2	71	70	13489.02	1	2260.14	4.4245	0.0303	4.38E-04	1.58E-01	2.46E 00	1.11E 01	2.78E 01	4.98E 01
2	1	130	129	32355.13	1	2260.18	4.4244	0.0303	0.0	0.0	0.0	2.64E-04	4.03E-03	2.63E-02
3	2	109	108	25625.40	1	2260.28	4.4242	0.0303	0.0	0.0	6.10E-04	1.59E-02	1.27E-01	5.22E-01
3	2	72	71	13748.23	1	2261.02	4.4228	0.0303	3.06E-04	1.25E-01	2.07E 00	9.73E 00	2.49E 01	4.54E 01
1	0	67	66	8017.69	2	2261.05	4.4227	0.0303	3.90E-03	1.02E-01	4.24E-01	8.73E-01	1.29E 00	1.58E 00
3	2	108	107	25248.79	1	2261.18	4.4225	0.0303	0.0	0.0	7.93E-04	1.95E-02	1.50E-01	6.04E-01
2	1	51	50	6961.20	1	2261.41	4.4220	0.0303	2.52E 00	3.98E 01	1.29E 02	2.29E 02	3.05E 02	3.50E 02
3	2	73	72	14010.82	1	2261.85	4.4212	0.0303	2.13E-04	9.87E-02	1.74E 00	8.49E 00	2.22E 01	4.13E 01
3	2	107	106	24875.10	1	2262.03	4.4208	0.0303	0.0	0.0	1.03E-03	2.40E-02	1.78E-01	6.98E-01
1	0	38	37	2691.03	1	2262.09	4.4207	0.0303	4.39E 02	8.92E 02	1.04E 03	9.97E 02	8.82E 02	7.55E 02
2	1	129	128	31916.65	1	2262.15	4.4206	0.0303	0.0	0.0	0.0	3.38E-04	4.94E-03	3.13E-02
1	0	68	67	8257.20	2	2262.19	4.4205	0.0303	2.81E-03	8.22E-02	3.63E-01	7.73E-01	1.17E 00	1.46E 00
3	2	74	73	14276.81	1	2262.64	4.4196	0.0303	1.47E-04	7.76E-02	1.45E 00	7.39E 00	1.99E 01	3.76E 01
3	2	106	105	24504.34	1	2262.83	4.4192	0.0303	0.0	0.0	1.33E-03	2.94E-02	2.11E-01	8.06E-01
2	1	52	51	7152.25	1	2263.20	4.4185	0.0303	1.96E 00	3.38E 01	1.15E 02	2.09E 02	2.84E 02	3.30E 02
1	0	69	68	8500.09	2	2263.29	4.4183	0.0303	2.01E-03	6.61E-02	3.09E-01	6.83E-01	1.05E 00	1.34E 00
3	2	75	74	14546.17	1	2263.38	4.4182	0.0303	1.01E-04	6.08E-02	1.22E 00	6.41E 00	1.77E 01	3.41E 01
3	2	105	104	24136.54	1	2263.59	4.4178	0.0303	0.0	0.0	1.72E-03	3.61E-02	2.50E-01	9.29E-01
2	1	128	127	31480.76	1	2264.06	4.4168	0.0303	0.0	0.0	0.0	4.32E-04	6.05E-03	3.72E-02
3	2	76	75	14818.89	1	2264.07	4.4168	0.0303	6.94E-05	4.74E-02	1.01E 00	5.56E 00	1.58E 01	3.09E 01
3	2	104	103	23771.70	1	2264.29	4.4164	0.0303	0.0	0.0	2.21E-03	4.41E-02	2.95E-01	1.07E 00
1	0	70	69	8746.33	2	2264.35	4.4163	0.0303	1.43E-03	5.30E-02	2.63E-01	6.02E-01	9.51E-01	1.23E 00
1	0	39	38	2835.80	1	2264.46	4.4161	0.0303	3.66E 02	7.98E 02	9.63E 02	9.43E 02	8.47E 02	7.32E 02
3	2	77	76	15094.96	1	2264.72	4.4156	0.0303	4.73E-05	3.69E-02	8.42E-01	4.81E 00	1.40E 01	2.80E 01
3	2	103	102	23409.84	1	2264.94	4.4151	0.0303	0.0	0.0	2.85E-03	5.38E-02	3.48E-01	1.23E 00
2	1	53	52	7346.91	1	2264.95	4.4151	0.0303	1.51E 00	2.86E 01	1.02E 02	1.91E 02	2.64E 02	3.11E 02
3	2	78	77	15374.38	1	2265.33	4.4144	0.0303	3.21E-05	2.86E-02	6.98E-01	4.15E 00	1.24E 01	2.53E 01
1	0	71	70	8995.93	2	2265.37	4.4143	0.0303	1.02E-03	4.23E-02	2.23E-01	5.29E-01	8.56E-01	1.13E 00
3	2	102	101	23050.98	1	2265.54	4.4140	0.0303	0.0	2.37E-05	3.65E-03	6.55E-02	4.09E-01	1.41E 00
3	2	79	78	15657.13	1	2265.88	4.4133	0.0303	2.16E-05	2.21E-02	5.77E-01	3.57E 00	1.10E 01	2.28E 01
2	1	127	126	31047.46	1	2265.93	4.4132	0.0303	0.0	0.0	0.0	5.51E-04	7.40E-03	4.42E-02
3	2	101	100	22695.13	1	2266.09	4.4129	0.0303	0.0	3.31E-05	4.67E-03	7.97E-02	4.80E-01	1.62E 00
1	0	72	71	9248.86	2	2266.35	4.4124	0.0303	7.16E-04	3.37E-02	1.89E-01	4.64E-01	7.70E-01	1.03E 00
3	2	80	79	15943.20	1	2266.39	4.4123	0.0303	0.0	1.70E-02	4.76E-01	3.07E 00	9.69E 00	2.06E 01
3	2	100	99	22342.30	1	2266.59	4.4119	0.0303	0.0	4.60E-05	5.96E-03	9.67E-02	5.64E-01	1.85E 00
2	1	54	53	7545.17	1	2266.66	4.4118	0.0303	1.16E 00	2.42E 01	9.01E 01	1.74E 02	2.45E 02	2.93E 02
1	0	40	39	2984.30	1	2266.79	4.4115	0.0303	3.04E 02	7.11E 02	8.89E 02	8.89E 02	8.10E 02	7.07E 02
3	2	81	80	16232.57	1	2266.86	4.4114	0.0303	0.0	1.31E-02	3.91E-01	2.63E 00	8.54E 00	1.85E 01
3	2	99	98	21992.52	1	2267.04	4.4110	0.0303	0.0	6.37E-05	7.60E-03	1.17E-01	6.60E-01	2.12E 00
3	2	82	81	16525.24	1	2267.27	4.4106	0.0303	0.0	9.98E-03	3.21E-01	2.25E 00	7.52E 00	1.66E 01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH HZ	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM**M-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	73	72	9505.12	2	2267.28	4.4106	0.0303	5.03E-04	2.68E-02	1.59E-01	4.07E-01	6.91E-01	9.42E-01
3	2	98	97	21645.80	1	2267.45	4.4102	0.0303	0.0	8.79E-05	9.65E-03	1.42E-01	7.79E-01	9.49E 00
3	2	83	82	16821.19	1	2267.64	4.4099	0.0303	0.0	7.61E-03	9.63E-01	1.92E 00	6.61E 00	1.49E 01
2	1	126	125	30616.80	1	2267.73	4.4097	0.0303	0.0	0.0	0.0	7.01E-04	9.04E-03	5.24E-02
3	2	97	96	21302.14	1	2267.80	4.4096	0.0303	0.0	1.21E-04	1.22E-02	1.71E-01	9.01E-01	9.76E 00
3	2	84	83	17120.41	1	2267.97	4.4092	0.0303	0.0	5.70E-03	2.14E-01	1.64E 00	5.79E 00	1.37E 01
3	2	96	95	20961.57	1	2268.10	4.4090	0.0303	0.0	1.66E-04	1.55E-02	2.06E-01	1.05E 00	3.14E 00
1	0	74	73	9764.71	2	2268.17	4.4088	0.0303	3.51E-04	2.12E-02	1.34E-01	3.55E-01	6.10E-01	8.59E-01
3	2	85	84	17472.89	1	2268.24	4.4087	0.0303	0.0	4.38E-03	1.75E-01	1.39E 00	5.07E 00	1.19E 01
2	1	55	54	7747.04	1	2268.33	4.4085	0.0303	8.82E-01	9.03E 01	7.95E 01	1.50E 02	2.37E 02	2.75E 02
3	2	95	94	20624.10	1	2268.36	4.4085	0.0303	0.0	2.27E-04	1.95E-02	2.47E-01	1.22E 00	3.57E 00
3	2	86	85	17728.62	1	2268.47	4.4083	0.0303	0.0	3.31E-03	1.42E-01	1.18E 00	4.43E 00	1.06E 01
3	2	94	93	20289.75	1	2268.56	4.4081	0.0303	0.0	3.10E-04	2.46E-02	2.96E-01	1.42E 00	4.06E 00
3	2	87	86	18037.68	1	2268.65	4.4079	0.0303	0.0	2.49E-03	1.15E-01	1.00E 00	3.87E 00	9.49E 00
3	2	93	92	19958.52	1	2268.72	4.4078	0.0303	0.0	4.21E-04	3.09E-02	3.55E-01	1.56E 00	4.60E 00
3	2	88	87	18349.76	1	2268.78	4.4077	0.0303	0.0	1.96E-03	9.20E-02	5.48E-01	2.37E 00	8.47E 00
3	2	92	91	19630.43	1	2268.83	4.4076	0.0303	0.0	5.71E-04	3.87E-02	4.24E-01	1.91E 00	5.21E 00
3	2	89	88	18665.15	1	2268.86	4.4075	0.0303	0.0	1.79E-03	7.49E-02	7.15E-01	2.93E 00	7.49E 00
3	2	91	90	19305.50	1	2268.89	4.4074	0.0303	0.0	7.71E-04	4.83E-02	5.06E-01	2.20E 00	5.89E 00
3	2	90	89	18983.73	1	2268.90	4.4074	0.0303	0.0	1.04E-03	6.02E-02	6.02E-01	2.54E 00	6.66E 00
1	0	75	74	10027.60	2	2269.02	4.4072	0.0303	2.44E-04	1.67E-02	1.13E-01	3.10E-01	5.54E-01	7.82E-01
1	0	41	40	3136.53	1	2269.07	4.4071	0.0303	2.50E 02	6.31E 02	8.14E 02	9.37E 02	7.73E 02	6.82E 02
2	1	125	124	30188.78	1	2269.49	4.4063	0.0303	0.0	0.0	0.0	8.91E-04	1.10E-02	6.21E-02
1	0	76	75	10373.73	2	2269.55	4.4062	0.0303	1.60E 03	1.91E 02	[illegible]	[illegible]	[illegible]	[illegible]
2	1	56	55	7952.49	1	2269.95	4.4054	0.0303	6.69E-01	1.70E 01	6.99E 01	1.43E 02	2.10E 02	2.57E 0
1	0	77	76	10707.20	2	2270.08	4.4052	0.0303	1.16E-04	1.07E-02	7.88E-02	2.34E-01	4.40E-01	6.498E-01
2	1	124	123	29767.41	1	2271.18	4.4030	0.0303	0.0	0.0	2.40E 03	1.17E 03	1.34E 03	7.75E 02
1	0	78	77	10836.06	2	2271.30	4.4028	0.0303	7.94E-05	8.01E-03	6.56E-02	2.03E-01	3.99E-01	5.85E
1	0	42	41	3222.48	1	2271.33	4.4027	0.0303	3.08E 03	5.07E 02	7.70E 02	7.30E 02	7.70E 02	6.77E 02
2	1	57	56	8101.60	1	2271.33	4.4023	0.0303	5.05E-01	1.42E 01	6.17E 01	1.29E 02	1.47E 02	2.41E 02
1	0	79	78	11112.00	2	2271.90	4.4014	0.0303	5.41E-05	6.23E-03	5.45E-02	1.73E-01	3.44E-01	5.[illegible]
1	0	108	107	20487.70	2	2272.21	4.4010	0.0303	0.0	0.0	8.85E-05	1.10E-03	5.34E-03	1.5[illegible]
1	0	80	79	11391.77	2	2272.51	4.4005	0.0303	3.[illegible]E-05	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	0	107	106	20121.98	2	2272.84	4.3998	0.0303	0.0	0.0	1.14E-04	1.34E-03	4.31E-03	1.[illegible]
2	1	123	122	29340.73	1	2272.84	4.3998	0.0303	0.0	0.0	3.27E-05	1.43E-03	1.67E-02	9.[illegible]
2	1	58	57	8274.14	1	2273.07	4.3993	0.0303	7.70E 01	1.10E 01	7.70E 01	1.11E 02	1.77E 02	2.[illegible]E 02
1	0	81	80	11673.92	2	2273.20	4.3991	0.0303	3.47E-05	3.73E-03	3.74E-02	1.30E-01	2.73E-01	
1	0	106	105	19759.18	2	2273.43	4.3986	0.0303	0.0	0.0	1.47E-04	1.64E-03	7.44E-03	
1	0	43	42	3452.15	1	2273.53	4.3984	0.0303	1.67E 02	4.90E 02	6.86E 02	7.34E 02	6.00E 02	
1	0	82	81	11959.70	2	2273.75	4.3980	0.0303	0.0	2.87E-03	3.08E-02	1.19E-01	2.41E-01	
1	0	105	104	19399.30	2	2273.97	4.3976	0.0303	0.0	0.0	1.88E-04	1.09E-03	3.76E-03	
1	0	83	82	12248.70	2	2274.25	4.3971	0.0303	0.0	2.20E-03	2.54E-02	9.60E-02	2.12E-01	
2	1	122	121	28920.75	1	2274.44	4.3967	0.0303	0.0	0.0	4.34E-05	1.31E-03	1.30E-02	
1	0	104	103	19042.35	2	2274.46	4.3966	0.0303	0.0	0.0	2.41E-04	2.43E-03	1.03E-02	[illegible]
2	1	59	58	8703.21	1	2274.56	4.3965	0.0303	2.02E 01	9.73E 00	4.47E 01	1.07E 02	1.47E 02	[illegible]
1	0	84	83	12640.93	2	2274.71	4.3962	0.0303	0.0	1.69E-03	2.08E-02	8.22E-02	1.07E-01	[illegible]
1	0	103	102	18689.36	2	2274.91	4.3959	0.0303	0.0	0.0	7.99E 04	9.37E 03	1.31E [illegible]	[illegible]
1	0	85	84	12836.35	2	2275.12	4.3954	0.0303	0.0	1.29E-03	1.70E-02	7.02E-02	1.64E [illegible]	[illegible]
1	0	102	101	18337.33	2	2275.31	4.3950	0.0303	0.0	0.0	3.93E-04	3.57E-03	1.42E [illegible]	[illegible]
1	0	86	85	13134.97	2	2275.49	4.3947	0.0303	0.0	9.78E-04	1.30E-02	5.99E-02	1.44[illegible]	[illegible]
1	0	101	100	17999.00	2	2275.61	4.3945	0.0303	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]
1	0	44	43	3618.64	1	2275.66	4.3943	0.0303	1.35E 03	4.30E 02	6.35E 02	5.86E 02	[illegible]	[illegible]
1	0	87	86	13433.77	2	2275.67	4.3940	0.0303	0.0	7.41E-04	[illegible]	[illegible]	[illegible]	[illegible]

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GV-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	100	99	17644.22	2	2275.97	4.3937	0.0303	0.0	0.0	6.34E-04	5.22E-03	1.94E-02	4.61E-02
2	1	121	120	28503.48	1	2275.98	4.3937	0.0303	0.0	0.0	5.81E-05	2.29E-03	2.41E-02	1.21E-01
2	1	60	59	8810.04	1	2276.01	4.3937	0.0303	2.09E-01	5.02E 00	4.06E 01	9.39E 01	1.50E 02	1.95E 02
1	0	88	87	13741.75	2	2276.10	4.3935	0.0303	0.0	5.60E-04	9.21E-03	4.32E-02	1.10E-01	2.01E-01
1	0	99	98	17302.17	2	2276.23	4.3932	0.0303	0.0	2.08E-05	8.02E-04	6.29E-03	2.26E-02	5.25E-02
1	0	89	88	14049.87	2	2276.34	4.3930	0.0303	0.0	4.21E-04	7.47E-03	3.66E-02	9.63E-02	1.79E-01
1	0	98	97	16963.14	2	2276.44	4.3928	0.0303	0.0	2.84E-05	1.01E-03	7.56E-03	2.63E-02	5.98E-02
1	0	90	89	14361.15	2	2276.53	4.3927	0.0303	0.0	3.16E-04	6.04E-03	3.10E-02	9.39E-02	1.60E-01
1	0	97	96	16627.14	2	2276.61	4.3925	0.0303	0.0	3.88E-05	1.29E-03	9.08E-03	3.05E-02	6.79E-02
1	0	91	90	14675.56	2	2276.68	4.3924	0.0303	0.0	2.37E-04	4.87E-03	2.62E-02	7.30E-02	1.42E-01
1	0	96	95	16294.18	2	2276.74	4.3922	0.0303	0.0	5.29E-05	1.61E-03	1.09E-02	3.55E-02	7.71E-02
1	0	92	91	14993.09	2	2276.78	4.3922	0.0303	0.0	1.76E-04	3.92E-03	2.20E-02	6.34E-02	1.26E-01
1	0	95	94	15964.29	2	2276.82	4.3921	0.0303	0.0	7.19E-05	2.01E-03	1.30E-02	4.11E-02	8.73E-02
1	0	93	92	15313.73	2	2276.84	4.3921	0.0303	0.0	1.31E-04	3.15E-03	1.95E-02	5.50E-02	1.12E-01
1	0	94	93	15637.47	2	2276.85	4.3920	0.0303	0.0	9.72E-05	2.52E-03	1.55E-02	4.76E-02	9.88E-02
2	1	61	60	9033.32	1	2277.41	4.3910	0.0303	1.55E-01	5.59E 00	3.52E 01	8.40E 01	1.37E 02	1.81E 02
2	1	120	119	28088.95	1	2277.47	4.3908	0.0303	0.0	0.0	7.79E-05	2.88E-03	2.92E-02	1.42E-01
1	0	45	44	3782.62	1	2277.81	4.3902	0.0303	1.09E 02	3.75E 02	5.69E 02	6.37E 02	6.27E 02	5.78E 02
2	1	62	61	9260.14	1	2278.77	4.3883	0.0303	1.13E-01	5.39E 00	3.04E 01	7.50E 01	1.25E 02	1.68E 02
2	1	119	118	27677.16	1	2278.91	4.3881	0.0303	0.0	0.0	1.04E-04	3.63E-03	3.53E-02	1.67E-01
1	0	46	45	3953.41	1	2279.89	4.3862	0.0303	8.73E 01	3.26E 02	5.14E 02	5.91E 02	5.91E 02	5.52E 02
2	1	63	62	9490.49	1	2280.09	4.3858	0.0303	9.29E-02	4.40E 00	2.62E 01	6.69E 01	1.14E 02	1.55E 02
2	1	118	117	27268.14	1	2280.29	4.3854	0.0303	0.0	0.0	1.39E-04	4.55E-03	4.26E-02	1.96E-01
2	1	64	63	9724.36	1	2281.36	4.3834	0.0303	6.02E-02	3.57E 00	2.25E 01	5.94E 01	1.03E 02	1.43E 02
2	1	117	116	26861.92	1	2281.63	4.3828	0.0303	0.0	0.0	1.84E-04	5.71E-03	5.14E-02	2.30E-01
1	0	47	46	4127.89	1	2281.93	4.3823	0.0303	6.95E 01	2.82E 02	4.64E 02	5.47E 02	5.56E 02	5.26E 02
2	1	65	64	9961.74	1	2282.59	4.3810	0.0303	4.35E-02	2.89E 00	1.93E 01	5.27E 01	9.38E 01	1.32E 02
1	0	134	133	32302.84	1	2282.82	4.3805	0.0303	0.0	0.0	0.0	1.44E-04	2.19E-03	1.43E-02
2	1	116	115	26458.50	1	2282.91	4.3804	0.0303	0.0	0.0	2.44E-04	7.14E-03	6.19E-02	2.70E-01
2	1	66	65	10202.62	1	2283.77	4.3787	0.0303	3.12E-02	2.33E 00	1.65E 01	4.66E 01	8.40E 01	1.22E 02
1	0	48	47	4306.05	1	2283.93	4.3784	0.0303	5.50E 01	2.43E 02	4.17E 02	5.05E 02	5.23E 02	5.00E 02
2	1	115	114	26057.89	1	2284.14	4.3780	0.0303	0.0	0.0	3.22E-04	8.93E-03	7.44E-02	3.16E-01
2	1	67	66	10446.99	1	2284.91	4.3765	0.0303	2.23E-02	1.88E 00	1.41E 01	4.12E 01	7.57E 01	1.12E 02
1	0	133	132	31849.57	1	2284.97	4.3764	0.0303	0.0	0.0	0.0	1.96E-04	2.70E-03	1.71E-02
2	1	114	113	25660.13	1	2285.32	4.3758	0.0303	0.0	0.0	4.26E-04	1.11E-02	3.93E-02	3.69E-01
1	0	49	48	4487.89	1	2285.89	4.3747	0.0303	4.32E 01	2.09E 02	3.74E 02	4.65E 02	4.90E 02	4.74E 02
2	1	68	67	10694.85	1	2286.00	4.3745	0.0303	1.59E-02	1.50E 00	1.19E 01	3.63E 01	6.92E 01	1.03E 02
2	1	113	112	25265.22	1	2286.44	4.3736	0.0303	0.0	0.0	5.61E-04	1.39E-02	1.07E-01	4.30E-01
2	1	69	68	10946.18	1	2287.05	4.3724	0.0303	1.12E-02	1.20E 00	1.01E 01	3.19E 01	6.23E 01	9.39E 01
1	0	132	131	31398.83	1	2287.07	4.3724	0.0303	0.0	0.0	0.0	2.40E-04	3.34E-03	2.04E-02
2	1	112	111	24873.19	1	2287.52	4.3715	0.0303	0.0	0.0	7.38E-04	1.72E-02	1.28E-01	5.01E-01
1	0	50	49	4673.40	1	2287.80	4.3710	0.0303	3.38E 01	1.78E 02	3.35E 02	4.27E 02	4.59E 02	4.49E 02
2	1	70	69	11200.97	1	2288.05	4.3705	0.0303	7.90E-03	9.53E-01	8.56E 00	2.79E 01	5.60E 01	8.59E 01
2	1	111	110	24484.04	1	2288.54	4.3696	0.0303	0.0	0.0	9.69E-04	2.14E-02	1.53E-01	5.83E-01
2	1	71	70	11459.21	1	2289.01	4.3687	0.0303	5.53E-03	7.55E-01	7.21E 00	2.44E 01	5.02E 01	7.94E 01
1	0	131	130	30950.66	1	2289.12	4.3685	0.0303	0.0	0.0	0.0	3.09E-04	4.11E-03	2.44E-02
2	1	110	109	24097.80	1	2289.51	4.3677	0.0303	0.0	0.0	1.27E-03	2.65E-02	1.97E-01	6.79E-01
1	0	51	50	4862.58	1	2289.67	4.3674	0.0303	2.63E 01	1.52E 02	2.99E 02	3.91E 02	4.27E 02	4.24E 02
2	1	72	71	11720.90	1	2289.93	4.3669	0.0303	3.85E-03	5.96E-01	6.07E 00	2.13E 01	4.50E 01	7.15E 01
2	1	109	108	23714.48	1	2290.43	4.3660	0.0303	0.0	0.0	1.65E-03	3.27E-02	2.19E-01	7.87E-01
2	1	73	72	11986.02	1	2290.79	4.3653	0.0303	2.67E-03	4.69E-01	5.09E 00	1.86E 01	4.02E 01	6.50E 01
1	0	130	129	30505.08	1	2291.11	4.3647	0.0303	0.0	0.0	0.0	3.06E-04	5.06E-03	2.91E-02
2	1	108	107	23334.10	1	2291.30	4.3643	0.0303	0.0	0.0	2.16E-03	4.03E-02	2.59E-01	9.12E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	52	51	5055.41	1	2291.50	4.3640	0.0303	2.04E 01	1.29E 02	2.65E 02	3.58E 02	3.98E 02	4.00E 02
2	1	74	73	12254.55	1	2291.61	4.3637	0.0303	1.84E-03	3.68E-01	4.25E 00	1.62E 01	3.58E 01	5.91E 01
2	1	107	106	22956.67	1	2292.12	4.3628	0.0303	0.0	0.0	2.80E-03	4.97E-02	3.08E-01	1.06E 00
2	1	75	74	12526.50	1	2292.39	4.3623	0.0303	1.26E-03	2.87E-01	3.55E 00	1.40E 01	3.19E 01	5.36E 01
2	1	106	105	22582.21	1	2292.89	4.3613	0.0303	0.0	2.64E-05	3.64E-03	6.11E-02	3.65E-01	1.22E 00
1	0	129	128	30062.09	1	2293.04	4.3610	0.0303	0.0	0.0	0.0	5.08E-04	6.22E-03	3.47E-02
2	1	76	75	12801.85	1	2293.12	4.3609	0.0303	8.60E-04	2.24E-01	2.95E 00	1.21E 01	2.83E 01	4.85E 01
1	0	53	52	5251.89	1	2293.28	4.3606	0.0303	1.57E 01	1.09E 02	2.35E 02	3.26E 02	3.69E 02	3.77E 02
2	1	105	104	22210.73	1	2293.61	4.3599	0.0303	0.0	3.74E-05	4.71E-03	7.50E-02	4.32E-01	1.41E 00
2	1	77	76	13080.58	1	2293.80	4.3596	0.0303	5.84E-04	1.74E-01	2.45E 00	1.05E 01	2.51E 01	4.39E 01
2	1	104	103	21842.26	1	2294.28	4.3587	0.0303	0.0	5.28E-05	6.08E-03	9.18E-02	5.11E-01	1.62E 00
2	1	78	77	13362.69	1	2294.44	4.3584	0.0303	3.94E-04	1.34E-01	2.02E 00	9.03E 00	2.23E 01	3.96E 01
2	1	103	102	21476.80	1	2294.89	4.3575	0.0303	0.0	7.42E-05	7.83E-03	1.12E-01	6.03E-01	1.87E 00
1	0	128	127	29621.73	1	2294.93	4.3574	0.0303	0.0	0.0	0.0	6.50E-04	7.63E-03	4.14E-02
2	1	79	78	13648.17	1	2295.03	4.3572	0.0303	2.65E-04	1.03E-01	1.67E 00	7.76E 00	1.97E 01	3.57E 01
1	0	54	53	5452.01	1	2295.03	4.3572	0.0303	1.20E 01	9.17E 01	2.08E 02	2.96E 02	3.42E 02	3.54E 02
2	1	102	101	21114.38	1	2295.46	4.3564	0.0303	0.0	1.04E-04	1.01E-02	1.37E-01	7.10E-01	2.15E 00
2	1	80	79	13937.00	1	2295.57	4.3562	0.0303	1.77E-04	7.95E-02	1.38E 00	6.66E 00	1.74E 01	3.21E 01
2	1	101	100	20755.00	1	2295.98	4.3554	0.0303	0.0	1.45E-04	1.29E-02	1.67E-01	8.36E-01	2.47E 00
2	1	81	80	14229.17	1	2296.07	4.3553	0.0303	1.18E-04	6.08E-02	1.13E 00	5.70E 00	1.53E 01	2.89E 01
2	1	100	99	20398.68	1	2296.45	4.3545	0.0303	0.0	2.03E-04	1.65E-02	2.03E-01	9.82E-01	2.83E 00
2	1	82	81	14524.67	1	2296.52	4.3544	0.0303	7.81E-05	4.64E-02	9.25E-01	4.87E 00	1.34E 01	2.59E 01
1	0	55	54	5655.77	1	2296.73	4.3540	0.0303	9.10E 00	7.69E 01	1.83E 02	2.69E 02	3.17E 02	3.32E 02
1	0	127	126	29184.00	1	2296.75	4.3540	0.0303	0.0	0.0	0.0	8.31E-04	9.36E-03	4.92E-02
2	1	99	98	20045.44	1	2296.87	4.3538	0.0303	0.0	2.82E-04	2.11E-02	2.46E-01	1.15E 00	3.24E 00
2	1	83	82	14823.48	1	2296.93	4.3536	0.0303	5.14E-05	3.53E-02	7.55E-01	4.15E 00	1.18E 01	2.32E 01
2	1	98	97	19695.29	1	2297.23	4.3531	0.0303	0.0	3.90E-04	2.69E-02	2.98E-01	1.35E 00	3.70E 00
2	1	84	83	15125.61	1	2297.28	4.3530	0.0303	3.37E-05	2.67E-02	6.15E-01	3.53E 00	1.03E 01	2.07E 01
2	1	97	96	19348.24	1	2297.55	4.3525	0.0303	0.0	5.39E-04	3.41E-02	3.60E-01	1.58E 00	4.23E 00
2	1	85	84	15431.03	1	2297.59	4.3524	0.0303	2.20E-05	2.02E-02	5.00E-01	3.00E 00	9.03E 00	1.85E 01
2	1	96	95	19004.32	1	2297.82	4.3520	0.0303	0.0	7.42E-04	4.33E-02	4.34E-01	1.84E 00	4.82E 00
2	1	86	85	15739.73	1	2297.85	4.3519	0.0303	0.0	1.52E-02	4.05E-01	2.54E 00	7.88E 00	1.68E 01
2	1	95	94	18663.53	1	2298.05	4.3515	0.0303	0.0	1.02E-03	5.47E-02	5.23E-01	2.15E 00	5.49E 00
2	1	87	86	16051.69	1	2298.07	4.3515	0.0303	0.0	1.14E-02	3.28E-01	2.15E 00	6.87E 00	1.47E 01
2	1	94	93	18325.89	1	2298.22	4.3512	0.0303	0.0	1.39E-03	6.90E-02	6.29E-01	2.50E 00	6.24E 00
2	1	88	87	16366.91	1	2298.23	4.3512	0.0303	0.0	8.53E-03	2.64E-01	1.82E 00	5.97E 00	1.31E 01
2	1	93	92	17991.41	1	2298.34	4.3510	0.0303	0.0	1.90E-03	8.69E-02	7.54E-01	2.90E 00	7.08E 00
2	1	89	88	16685.38	1	2298.35	4.3509	0.0303	0.0	6.35E-03	2.13E-01	1.53E 00	5.19E 00	1.16E 01
1	0	56	55	5863.14	1	2298.38	4.3509	0.0303	6.88E 00	6.43E 01	1.60E 02	2.43E 02	2.92E 02	3.11E 02
2	1	90	89	17007.07	1	2298.42	4.3508	0.0303	0.0	4.72E-03	1.71E-01	1.29E 00	4.50E 00	1.03E 01
2	1	92	91	17660.10	1	2298.42	4.3508	0.0303	0.0	2.58E-03	1.09E-01	9.02E-01	3.36E 00	8.03E 00
2	1	91	90	17331.98	1	2298.44	4.3508	0.0303	0.0	3.50E-03	1.37E-01	1.09E 00	3.89E 00	9.09E 00
1	0	126	125	28748.94	1	2298.53	4.3506	0.0303	0.0	0.0	2.60E-05	1.06E-03	1.14E-02	5.84E-02
1	0	57	56	6074.14	1	2300.00	4.3478	0.0303	5.18E 00	5.35E 01	1.41E 02	2.20E 02	2.69E 02	2.91E 02
1	0	125	124	28316.55	1	2300.25	4.3474	0.0303	0.0	0.0	3.52E-05	1.35E-03	1.40E-02	6.93E-02
1	0	58	57	6288.75	1	2301.57	4.3449	0.0303	3.87E 00	4.43E 01	1.23E 02	1.98E 02	2.47E 02	2.71E 02
1	0	124	123	27886.86	1	2301.92	4.3442	0.0303	0.0	0.0	4.77E-05	1.72E-03	1.71E-02	8.22E-02
1	0	59	58	6506.95	1	2303.09	4.3420	0.0303	2.88E 00	3.66E 01	1.07E 02	1.78E 02	2.27E 02	2.52E 02
1	0	123	122	27459.88	1	2303.54	4.3411	0.0303	0.0	0.0	6.44E-05	2.18E-03	2.08E-02	9.72E-02
1	0	60	59	6728.75	1	2304.57	4.3392	0.0303	2.13E 00	3.01E 01	9.27E 01	1.59E 02	2.08E 02	2.36E 02
1	0	122	121	27035.63	1	2305.10	4.3382	0.0303	0.0	0.0	8.67E-05	2.77E-03	2.53E-02	1.15E-01
1	0	61	60	6954.12	1	2306.01	4.3365	0.0303	1.57E 00	2.47E 01	8.02E 01	1.42E 02	1.90E 02	2.19E 02
1	0	121	120	26614.14	1	2306.61	4.3354	0.0303	0.0	0.0	1.17E-04	3.50E-03	3.08E-02	1.36E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	62	61	7183.08	1	2307.41	4.3339	0.0303	1.15E 00	2.02E 01	6.92E 01	1.27E 02	1.73E 02	2.02E 02
1	0	120	119	26195.41	1	2308.07	4.3326	0.0303	0.0	0.0	1.56E-04	4.42E-03	3.73E-02	1.60E-01
1	0	63	62	7415.60	1	2308.76	4.3313	0.0303	8.35E-01	1.64E 01	5.96E 01	1.13E 02	1.57E 02	1.86E 02
1	0	119	118	25779.47	1	2309.47	4.3300	0.0303	0.0	0.0	2.09E-04	5.57E-03	4.52E-02	1.88E-01
1	0	64	63	7651.67	1	2310.07	4.3289	0.0303	6.05E-01	1.33E 01	5.11E 01	1.00E 02	1.43E 02	1.72E 02
1	0	118	117	25366.34	1	2310.82	4.3275	0.0303	0.0	0.0	2.80E-04	7.01E-03	5.47E-02	2.22E-01
1	0	65	64	7891.29	1	2311.33	4.3265	0.0303	4.36E-01	1.08E 01	4.37E 01	8.88E 01	1.30E 02	1.59E 02
1	0	117	116	24956.02	1	2312.12	4.3250	0.0303	0.0	0.0	3.73E-04	8.81E-03	6.61E-02	2.60E-01
1	0	66	65	8134.45	1	2312.54	4.3242	0.0303	3.12E-01	8.66E 00	3.73E 01	7.85E 01	1.17E 02	1.46E 02
1	0	116	115	24548.55	1	2313.37	4.3227	0.0303	0.0	0.0	4.95E-04	1.10E-02	7.97E-02	3.05E-01
1	0	67	66	8381.13	1	2313.72	4.3220	0.0303	2.22E-01	6.95E 00	3.18E 01	6.92E 01	1.06E 02	1.34E 02
1	0	115	114	24143.93	1	2314.57	4.3205	0.0303	0.0	0.0	6.57E-04	1.38E-02	9.60E-02	3.58E-01
1	0	68	67	8631.33	1	2314.84	4.3200	0.0303	1.58E-01	5.55E 00	2.70E 01	6.09E 01	9.54E 01	1.23E 02
1	0	114	113	23742.18	1	2315.71	4.3183	0.0303	0.0	0.0	8.70E-04	1.73E-02	1.15E-01	4.18E-01
1	0	69	68	8885.04	1	2315.93	4.3179	0.0303	1.11E-01	4.42E 00	2.28E 01	5.34E 01	8.58E 01	1.12E 02
1	0	113	112	23343.33	1	2316.80	4.3163	0.0303	0.0	0.0	1.15E-03	2.16E-02	1.39E-01	4.89E-01
1	0	70	69	9142.25	1	2316.97	4.3160	0.0303	7.79E-02	3.51E 00	1.92E 01	4.68E 01	7.70E 01	1.03E 02
1	0	112	111	22947.38	1	2317.85	4.3143	0.0303	0.0	0.0	1.52E-03	2.69E-02	1.66E-01	5.71E-01
1	0	71	70	9402.94	1	2317.96	4.3141	0.0303	5.43E-02	2.77E 00	1.62E 01	4.09E 01	6.90E 01	9.36E 01
1	0	111	110	22554.35	1	2318.84	4.3125	0.0303	0.0	0.0	1.99E-03	3.34E-02	1.99E-01	6.65E-01
1	0	72	71	9667.11	1	2318.90	4.3124	0.0303	3.77E-02	2.18E 00	1.36E 01	3.56E 01	6.17E 01	8.53E 01
1	0	110	109	22164.27	1	2319.77	4.3108	0.0303	0.0	2.10E-05	2.62E-03	4.14E-02	2.38E-01	7.74E-01
1	0	73	72	9934.75	1	2319.81	4.3107	0.0303	2.60E-02	1.71E 00	1.14E 01	3.10E 01	5.51E 01	7.75E 01
1	0	74	73	10205.84	1	2320.66	4.3091	0.0303	1.79E-02	1.34E 00	9.50E 00	2.69E 01	4.91E 01	7.04E 01
1	0	109	108	21777.14	1	2320.66	4.3091	0.0303	0.0	3.02E-05	3.43E-03	5.13E-02	2.84E-01	8.99E-01
1	0	75	74	10480.37	1	2321.47	4.3076	0.0303	1.22E-02	1.05E 00	7.91E 00	2.33E 01	4.36E 01	6.38E 01
1	0	108	107	21392.98	1	2321.50	4.3076	0.0303	0.0	4.32E-05	4.48E-03	6.34E-02	3.38E-01	1.04E 00
1	0	76	75	10758.35	1	2322.23	4.3062	0.0303	8.30E-03	8.12E-01	6.57E 00	2.01E 01	3.87E 01	5.77E 01
1	0	107	106	21011.81	1	2322.28	4.3061	0.0303	0.0	6.17E-05	5.84E-03	7.83E-02	4.02E-01	1.21E 00
1	0	77	76	11039.74	1	2322.95	4.3049	0.0303	5.61E-03	6.28E-01	5.44E 00	1.74E 01	3.43E 01	5.21E 01
1	0	106	105	20633.65	1	2323.02	4.3047	0.0303	0.0	8.79E-05	7.59E-03	9.64E-02	4.78E-01	1.40E 00
1	0	78	77	11324.54	1	2323.62	4.3036	0.0303	3.78E-03	4.85E-01	4.49E 00	1.49E 01	3.03E 01	4.70E 01
1	0	105	104	20258.50	1	2323.70	4.3035	0.0303	0.0	1.25E-04	9.85E-03	1.19E-01	5.67E-01	1.62E 00
1	0	79	78	11612.75	1	2324.25	4.3025	0.0303	2.53E-03	3.73E-01	3.70E 00	1.28E 01	2.68E 01	4.23E 01
1	0	104	103	19886.39	1	2324.34	4.3023	0.0303	0.0	1.77E-04	1.28E-02	1.45E-01	6.72E-01	1.87E 00
1	0	80	79	11904.34	1	2324.83	4.3014	0.0303	1.68E-03	2.85E-01	3.04E 00	1.10E 01	2.36E 01	3.80E 01
1	0	103	102	19517.34	1	2324.92	4.3012	0.0303	0.0	2.49E-04	1.65E-02	1.78E-01	7.94E-01	2.15E 00
1	0	81	80	12199.31	1	2325.36	4.3004	0.0303	1.12E-03	2.18E-01	2.49E 00	9.40E 00	2.08E 01	3.41E 01
1	0	102	101	19151.35	1	2325.46	4.3002	0.0303	0.0	3.51E-04	2.12E-02	2.18E-01	9.37E-01	2.48E 00
1	0	82	81	12497.64	1	2325.84	4.2995	0.0303	7.36E-04	1.66E-01	2.04E 00	8.02E 00	1.82E 01	3.06E 01
1	0	101	100	18788.44	1	2325.94	4.2993	0.0303	0.0	4.92E-04	2.73E-02	2.66E-01	1.10E 00	2.85E 00
1	0	83	82	12799.33	1	2326.28	4.2987	0.0303	4.83E-04	1.26E-01	1.66E 00	6.83E 00	1.60E 01	2.74E 01
1	0	100	99	18428.62	1	2326.37	4.2985	0.0303	0.0	6.88E-04	3.50E-02	3.24E-01	1.30E 00	3.27E 00
1	0	84	83	13104.36	1	2326.67	4.2980	0.0303	3.15E-04	9.50E-02	1.35E 00	5.80E 00	1.40E 01	2.44E 01
1	0	99	98	18071.92	1	2326.76	4.2978	0.0303	0.0	9.59E-04	4.48E-02	3.94E-01	1.53E 00	3.75E 00
1	0	85	84	13412.71	1	2327.01	4.2974	0.0303	2.05E-04	7.16E-02	1.09E 00	4.92E 00	1.22E 01	2.18E 01
1	0	98	97	17718.34	1	2327.09	4.2972	0.0303	0.0	1.33E-03	5.72E-02	4.78E-01	1.79E 00	4.30E 00
1	0	86	85	13724.39	1	2327.31	4.2968	0.0303	1.32E-04	5.37E-02	8.85E-01	4.16E 00	1.06E 01	1.94E 01
1	0	97	96	17367.91	1	2327.38	4.2967	0.0303	0.0	1.84E-03	7.28E-02	5.78E-01	2.10E 00	4.91E 00
1	0	87	86	14039.36	1	2327.55	4.2964	0.0303	8.52E-05	4.02E-02	7.14E-01	3.51E 00	9.25E 00	1.73E 01
1	0	96	95	17020.62	1	2327.62	4.2962	0.0303	0.0	2.55E-03	9.25E-02	6.99E-01	2.45E 00	5.60E 00
1	0	88	87	14357.63	1	2327.75	4.2960	0.0303	5.45E-05	3.00E-02	5.75E-01	2.96E 00	8.04E 00	1.53E 01
1	0	95	94	16676.52	1	2327.80	4.2959	0.0303	0.0	3.51E-03	1.17E-01	8.43E-01	2.86E 00	6.39E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
1	0	89	88	14679.17	1	2327.91	4.2957	0.0303	3.47E-05	2.23E-02	4.61E-01	2.49E 00	6.97E 00	1.36E 01
1	0	94	93	16335.59	1	2327.94	4.2956	0.0303	0.0	4.81E-03	1.48E-01	1.01E 00	3.33E 00	7.27E 00
1	0	90	89	15003.98	1	2328.01	4.2955	0.0303	2.20E-05	1.65E-02	3.69E-01	2.09E 00	6.03E 00	1.20E 01
1	0	93	92	15997.85	1	2328.03	4.2955	0.0303	0.0	6.58E-03	1.87E-01	1.22E 00	3.87E 00	8.26E 00
1	0	91	90	15332.04	1	2328.07	4.2954	0.0303	0.0	1.22E-02	2.95E-01	1.75E 00	5.22E 00	1.06E 01
1	0	92	91	15663.33	1	2328.07	4.2954	0.0303	0.0	8.97E-03	2.35E-01	1.46E 00	4.50E 00	9.38E 00

Table 8—First overtone band of CO, T = 1000-3500°K. The total number of lines included is 4794. For temperatures less than 3500°K, the line intensities were set equal to zero for intensities less than approximately 1×10^{-6}. The line intensities correspond to a mass absorption coefficient.

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*CM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	13	91	92	39871.45	1	2998.51	3.3350	0.0303	0.0	0.0	0.0	0.0	2.87E-05	3.19E-04
13	11	101	102	39629.28	1	2999.69	3.3337	0.0303	0.0	0.0	0.0	0.0	2.87E-05	3.01E-04
14	12	96	97	39712.19	1	2999.91	3.3334	0.0303	0.0	0.0	0.0	0.0	2.79E-05	3.06E-04
16	14	85	86	39830.51	1	3004.28	3.3286	0.0303	0.0	0.0	0.0	1.01E-06	3.21E-05	3.55E-04
15	13	90	91	39578.67	1	3007.62	3.3249	0.0303	0.0	0.0	0.0	1.05E-06	3.27E-05	3.56E-04
12	10	105	106	39279.59	1	3007.03	3.3245	0.0303	0.0	0.0	0.0	0.0	2.69E-05	2.90E-04
14	12	95	96	39402.37	1	3009.33	3.3230	0.0303	0.0	0.0	0.0	1.06E-06	3.21E-05	3.45E-04
13	11	100	101	39302.44	1	3009.42	3.3229	0.0303	0.0	0.0	0.0	0.0	2.98E-05	3.19E-04
16	14	84	85	39557.56	1	3013.01	3.3199	0.0303	0.0	0.0	0.0	1.17E-06	3.62E-05	3.94E-04
11	9	109	110	38976.29	1	3015.14	3.3166	0.0303	0.0	0.0	0.0	0.0	2.57E-05	2.68E-04
15	13	89	90	39288.66	1	3016.67	3.3149	0.0303	0.0	0.0	0.0	1.23E-06	3.72E-05	3.97E-04
12	10	104	105	38938.42	1	3017.91	3.3136	0.0303	0.0	0.0	0.0	1.05E-06	3.06E-05	3.19E-04
14	12	94	95	39095.29	1	3018.69	3.3127	0.0303	0.0	0.0	0.0	1.24E-06	3.68E-05	3.97E-04
13	11	99	100	38978.30	1	3019.10	3.3122	0.0303	0.0	0.0	0.0	1.18E-06	3.45E-05	3.61E-04
10	8	113	114	38719.96	1	3021.35	3.3098	0.0303	0.0	0.0	0.0	0.0	2.41E-05	2.47E-04
16	14	83	84	39287.42	1	3021.69	3.3094	0.0303	0.0	0.0	0.0	1.35E-06	4.09E-05	4.36E-04
11	9	108	109	38620.75	1	3025.38	3.3054	0.0303	0.0	0.0	0.0	1.07E-06	3.23E-05	3.08E-04
15	13	88	89	39001.43	1	3025.66	3.3051	0.0303	0.0	0.0	0.0	1.44E-06	4.26E-05	4.43E-04
12	10	103	104	38599.92	1	3027.95	3.3027	0.0303	0.0	0.0	0.0	1.26E-06	3.57E-05	3.64E-04
14	12	93	94	38790.96	1	3028.01	3.3025	0.0303	0.0	0.0	0.0	1.46E-06	4.22E-05	4.35E-04
13	11	98	99	38656.67	1	3029.73	3.3007	0.0303	0.0	0.0	0.0	1.40E-06	3.99E-05	4.08E-04
16	14	82	83	39020.11	1	3030.31	3.3000	0.0303	0.0	0.0	0.0	1.56E-06	4.61E-05	4.83E-04
10	8	112	113	38350.04	1	3031.94	3.2983	0.0303	0.0	0.0	0.0	1.03E-06	2.95E-05	2.86E-04
15	13	87	88	38717.00	1	3034.60	3.2953	0.0303	0.0	0.0	0.0	1.68E-06	4.82E-05	4.94E-04
11	9	107	108	38267.86	1	3035.57	3.2943	0.0303	0.0	0.0	0.0	1.30E-06	3.56E-05	3.54E-04
14	12	92	93	38489.41	1	3037.26	3.2924	0.0303	0.0	0.0	0.0	1.72E-06	4.82E-05	4.88E-04
9	7	116	117	38126.84	1	3037.29	3.2924	0.0303	0.0	0.0	0.0	0.0	2.57E-05	2.53E-04
12	10	102	103	38264.10	1	3037.72	3.2919	0.0303	0.0	0.0	0.0	1.52E-06	4.16E-05	4.14E-04
13	11	97	98	38338.18	1	3038.30	3.2913	0.0303	0.0	0.0	0.0	1.67E-06	4.61E-05	4.61E-04
16	14	81	82	38755.64	1	3038.87	3.2907	0.0303	0.0	0.0	0.0	1.80E-06	5.18E-05	5.33E-04
8	6	120	121	37951.65	1	3041.74	3.2876	0.0303	0.0	0.0	0.0	0.0	2.23E-05	2.14E-04
10	8	111	112	37982.73	1	3042.27	3.2870	0.0303	0.0	0.0	0.0	1.27E-06	3.38E-05	3.30E-04
15	13	86	87	38435.39	1	3043.49	3.2857	0.0303	0.0	0.0	0.0	1.96E-06	5.47E-05	5.51E-04
11	9	106	107	37917.62	1	3045.70	3.2833	0.0303	0.0	0.0	0.0	1.57E-06	4.17E-05	4.06E-04
14	12	91	92	38190.62	1	3046.46	3.2825	0.0303	0.0	0.0	0.0	2.02E-06	5.51E-05	5.46E-04
16	14	80	81	38494.02	1	3047.37	3.2815	0.0303	0.0	0.0	0.0	2.09E-06	5.82E-05	5.80E-04
12	10	101	102	37930.99	1	3047.55	3.2813	0.0303	0.0	0.0	0.0	1.82E-06	4.84E-05	4.71E-04
13	11	96	97	38022.23	1	3047.91	3.2810	0.0303	0.0	0.0	0.0	1.98E-06	5.31E-05	5.20E-04
9	7	115	116	37745.10	1	3047.97	3.2809	0.0303	0.0	0.0	0.0	1.17E-06	3.06E-05	2.94E-04
15	13	85	86	38156.60	1	3052.31	3.2762	0.0303	0.0	0.0	0.0	2.28E-06	6.23E-05	6.12E-04
10	8	110	111	37618.05	1	3052.65	3.2758	0.0303	0.0	0.0	0.0	1.55E-06	4.03E-05	3.81E-04
8	6	119	120	37555.49	1	3052.67	3.2758	0.0303	0.0	0.0	0.0	1.03E-06	2.63E-05	2.50E-04
14	12	90	91	37894.64	1	3055.61	3.2727	0.0303	0.0	0.0	0.0	2.37E-06	6.20E-05	6.10E-04
11	9	105	106	37570.06	1	3055.77	3.2725	0.0303	0.0	0.0	0.0	1.91E-06	4.99E-05	4.68E-04
16	14	79	80	38235.27	1	3055.82	3.2724	0.0303	0.0	0.0	0.0	2.39E-06	6.52E-05	6.48E-04
13	11	95	96	37709.03	1	3057.27	3.2709	0.0303	0.0	0.0	0.0	2.35E-06	6.11E-05	5.95E-04
12	10	100	101	37600.60	1	3057.32	3.2708	0.0303	0.0	0.0	0.0	2.10E-06	5.63E-05	5.36E-04
9	7	114	115	37365.96	1	3058.60	3.2695	0.0303	0.0	0.0	0.0	1.45E-06	3.65E-05	3.42E-04
15	13	84	85	37880.65	1	3061.08	3.2668	0.0303	0.0	0.0	0.0	2.68E-06	7.01E-05	6.85E-04
10	8	109	110	37256.02	1	3062.98	3.2648	0.0303	0.0	0.0	0.0	1.99E-06	4.73E-05	4.39E-04
8	6	118	119	37161.69	1	3063.54	3.2642	0.0303	0.0	0.0	0.0	1.28E-06	3.16E-05	2.92E-04
16	14	78	79	37979.39	1	3064.21	3.2635	0.0303	0.0	0.0	0.0	2.74E-06	7.31E-05	7.17E-04
14	12	89	90	37601.46	1	3064.79	3.2630	0.0303	0.0	0.0	0.0	2.78E-06	7.16E-05	6.91E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	104	105	37225.20	1	3065.80	3.2618	0.0303	0.0	0.0	0.0	2.31E-06	5.72E-05	5.31E-04
13	11	94	95	37398.61	1	3066.67	3.2609	0.0303	0.0	0.0	0.0	2.78E-06	7.03E-05	6.60E-04
12	10	99	100	37272.94	1	3067.03	3.2605	0.0303	0.0	0.0	0.0	2.62E-06	6.53E-05	6.08E-04
7	5	122	123	37006.34	1	3067.50	3.2600	0.0303	0.0	0.0	0.0	1.07E-06	2.60E-05	2.37E-04
9	7	113	114	36989.44	1	3069.17	3.2582	0.0303	0.0	0.0	0.0	1.79E-06	4.35E-05	3.97E-04
15	13	83	84	37607.55	1	3069.80	3.2575	0.0303	0.0	0.0	0.0	3.08E-06	7.92E-05	7.55E-04
16	14	77	78	37726.41	1	3072.54	3.2546	0.0303	0.0	0.0	0.0	3.13E-06	8.17E-05	7.84E-04
10	8	108	109	36896.64	1	3073.25	3.2539	0.0303	0.0	0.0	0.0	2.31E-06	5.57E-05	5.05E-04
14	12	88	89	37311.09	1	3073.73	3.2534	0.0303	0.0	0.0	0.0	3.26E-06	8.17E-05	7.62E-04
8	6	117	118	36770.87	1	3074.36	3.2527	0.0303	0.0	0.0	0.0	1.59E-06	3.79E-05	3.41E-04
11	9	103	104	36883.04	1	3075.77	3.2512	0.0303	0.0	0.0	0.0	2.78E-06	6.69E-05	6.06E-04
13	11	93	94	37090.97	1	3076.02	3.2510	0.0303	0.0	0.0	0.0	3.29E-06	8.07E-05	7.42E-04
12	10	98	99	36948.03	1	3076.69	3.2502	0.0303	0.0	0.0	0.0	3.13E-06	7.56E-05	6.88E-04
15	13	82	83	37337.31	1	3078.45	3.2484	0.0303	0.0	0.0	0.0	3.56E-06	8.94E-05	8.36E-04
7	5	121	122	36600.82	1	3078.56	3.2483	0.0303	0.0	0.0	0.0	1.34E-06	3.13E-05	2.78E-04
9	7	112	113	36615.54	1	3079.69	3.2471	0.0303	0.0	0.0	0.0	2.20E-06	5.17E-05	4.60E-04
16	14	76	77	37476.32	1	3080.81	3.2459	0.0303	0.0	0.0	0.0	3.58E-06	9.11E-05	8.60E-04
6	4	125	126	36479.76	1	3081.78	3.2449	0.0303	0.0	0.0	0.0	1.04E-06	2.41E-05	2.12E-04
14	12	87	88	37023.57	1	3082.70	3.2439	0.0303	0.0	0.0	0.0	3.82E-06	9.30E-05	8.51E-04
10	8	107	108	36539.95	1	3083.47	3.2431	0.0303	0.0	0.0	0.0	2.82E-06	6.56E-05	5.81E-04
8	6	116	117	36382.44	1	3085.13	3.2414	0.0303	0.0	0.0	0.0	1.93E-06	4.54E-05	3.97E-04
13	11	92	93	36786.14	1	3085.31	3.2412	0.0303	0.0	0.0	0.0	3.88E-06	9.25E-05	8.32E-04
11	9	102	103	36543.60	1	3085.68	3.2408	0.0303	0.0	0.0	0.0	3.36E-06	7.81E-05	6.92E-04
12	10	97	98	36625.89	1	3086.30	3.2401	0.0303	0.0	0.0	0.0	3.73E-06	8.75E-05	7.79E-04
15	13	81	82	37069.95	1	3087.05	3.2393	0.0303	0.0	0.0	0.0	4.11E-06	1.01E-04	9.25E-04
16	14	75	76	37229.15	1	3089.03	3.2373	0.0303	0.0	0.0	0.0	4.09E-06	1.02E-04	9.42E-04
7	5	120	121	36197.86	1	3089.58	3.2367	0.0303	0.0	0.0	0.0	1.67E-06	3.76E-05	3.25E-04
9	7	111	112	36244.30	1	3090.16	3.2361	0.0303	0.0	0.0	0.0	2.71E-06	6.13E-05	5.32E-04
14	12	86	87	36738.89	1	3091.62	3.2345	0.0303	0.0	0.0	0.0	4.46E-06	1.06E-04	9.49E-04
6	4	124	125	36062.28	1	3093.03	3.2331	0.0303	0.0	0.0	0.0	1.31E-06	2.92E-05	2.50E-04
10	8	106	107	36185.95	1	3093.64	3.2324	0.0303	0.0	0.0	0.0	3.43E-06	7.72E-05	6.67E-04
13	11	91	92	36484.12	1	3094.55	3.2315	0.0303	0.0	0.0	0.0	4.57E-06	1.06E-04	9.33E-04
11	9	101	102	36206.90	1	3095.54	3.2305	0.0303	0.0	0.0	0.0	4.04E-06	9.10E-05	7.88E-04
15	13	80	81	36805.48	1	3095.59	3.2304	0.0303	0.0	0.0	0.0	4.74E-06	1.13E-04	1.02E-03
8	6	115	116	35996.63	1	3095.85	3.2301	0.0303	0.0	0.0	0.0	2.46E-06	5.43E-05	4.63E-04
12	10	96	97	36306.52	1	3095.85	3.2301	0.0303	0.0	0.0	0.0	4.44E-06	1.01E-04	8.80E-04
16	14	74	75	36984.90	1	3097.19	3.2287	0.0303	0.0	0.0	0.0	4.65E-06	1.13E-04	1.03E-03
14	12	85	86	36457.07	1	3100.49	3.2253	0.0303	0.0	0.0	0.0	5.20E-06	1.20E-04	1.06E-03
7	5	119	120	35797.48	1	3100.54	3.2252	0.0303	0.0	0.0	0.0	2.08E-06	4.51E-05	3.80E-04
9	7	110	111	35875.71	1	3100.58	3.2252	0.0303	0.0	0.0	0.0	3.33E-06	7.27E-05	6.15E-04
13	11	90	91	36184.92	1	3103.73	3.2219	0.0303	0.0	0.0	0.0	5.37E-06	1.21E-04	1.04E-03
10	8	105	106	35834.66	1	3103.75	3.2219	0.0303	0.0	0.0	0.0	4.17E-06	9.07E-05	7.65E-04
15	13	79	80	36543.91	1	3104.08	3.2216	0.0303	0.0	0.0	0.0	5.46E-06	1.27E-04	1.13E-03
6	4	123	124	35647.34	1	3104.24	3.2214	0.0303	0.0	0.0	0.0	1.65E-06	3.53E-05	2.94E-04
16	14	73	74	36743.59	1	3105.29	3.2203	0.0303	0.0	0.0	0.0	5.28E-06	1.25E-04	1.13E-03
12	10	95	96	35989.95	1	3105.35	3.2202	0.0303	0.0	0.0	0.0	5.28E-06	1.17E-04	9.94E-04
11	9	100	101	35872.95	1	3105.35	3.2202	0.0303	0.0	0.0	0.0	4.85E-06	1.06E-04	8.96E-04
8	6	114	115	35613.45	1	3106.51	3.2190	0.0303	0.0	0.0	0.0	3.04E-06	6.48E-05	5.39E-04
5	3	127	128	35546.66	1	3106.96	3.2186	0.0303	0.0	0.0	0.0	1.19E-06	2.51E-05	2.08E-04
14	12	84	85	36178.12	1	3109.29	3.2162	0.0303	0.0	0.0	0.0	6.05E-06	1.36E-04	1.18E-03
9	7	109	110	35509.81	1	3110.95	3.2145	0.0303	0.0	0.0	0.0	4.08E-06	8.60E-05	7.10E-04
7	5	118	119	35399.70	1	3111.45	3.2139	0.0303	0.0	0.0	0.0	2.60E-06	5.47E-05	4.45E-04
15	13	78	79	36285.25	1	3112.50	3.2129	0.0303	0.0	0.0	0.0	6.28E-06	1.43E-04	1.24E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	11	89	90	35888.57	1	3112.86	3.2125	0.0303	0.0	0.0	0.0	6.31E-06	1.38E-04	1.17E-03
16	14	72	73	36505.22	1	3113.33	3.2120	0.0303	0.0	0.0	0.0	5.99E-06	1.39E-04	1.23E-03
10	8	104	105	35486.10	1	3113.81	3.2115	0.0303	0.0	0.0	0.0	5.05E-06	1.06E-04	8.76E-04
12	10	94	95	35676.18	1	3114.79	3.2105	0.0303	0.0	0.0	0.0	6.26E-06	1.34E-04	1.12E-03
11	9	99	100	35541.77	1	3115.10	3.2102	0.0303	0.0	0.0	0.0	5.82E-06	1.23E-04	1.02E-03
6	4	122	123	35234.96	1	3115.39	3.2099	0.0303	0.0	0.0	0.0	2.08E-06	4.26E-05	3.45E-04
8	6	113	114	35232.91	1	3117.13	3.2081	0.0303	0.0	0.0	0.0	3.76E-06	7.73E-05	6.26E-04
14	12	83	84	35902.06	1	3118.04	3.2071	0.0303	0.0	0.0	0.0	7.03E-06	1.54E-04	1.31E-03
5	3	126	127	35119.70	1	3118.35	3.2068	0.0303	0.0	0.0	0.0	1.50E-06	3.05E-05	2.45E-04
15	13	77	78	36029.51	1	3120.87	3.2042	0.0303	0.0	0.0	0.0	7.20E-06	1.60E-04	1.37E-03
9	7	108	109	35146.60	1	3121.26	3.2038	0.0303	0.0	0.0	0.0	4.99E-06	1.02E-04	8.18E-04
16	14	71	72	36269.81	1	3121.31	3.2038	0.0303	0.0	0.0	0.0	6.79E-06	1.54E-04	1.34E-03
13	11	88	89	35595.07	1	3121.93	3.2031	0.0303	0.0	0.0	0.0	7.41E-06	1.58E-04	1.31E-03
7	5	117	118	35004.53	1	3122.31	3.2028	0.0303	0.0	0.0	0.0	3.24E-06	6.52E-05	5.20E-04
10	8	103	104	35140.28	1	3123.82	3.2012	0.0303	0.0	0.0	0.0	6.11E-06	1.25E-04	1.00E-03
12	10	93	94	35365.23	1	3124.17	3.2008	0.0303	0.0	0.0	0.0	7.41E-06	1.54E-04	1.26E-03
11	9	98	99	35213.38	1	3124.80	3.2002	0.0303	0.0	0.0	0.0	6.97E-06	1.43E-04	1.16E-03
6	4	121	122	34825.16	1	3126.49	3.1985	0.0303	0.0	0.0	0.0	2.60E-06	5.14E-05	4.05E-04
14	12	82	83	35628.90	1	3126.74	3.1982	0.0303	0.0	0.0	0.0	8.15E-06	1.74E-04	1.45E-03
8	6	112	113	34855.04	1	3127.69	3.1972	0.0303	0.0	0.0	0.0	4.64E-06	9.20E-05	7.26E-04
15	13	76	77	35776.71	1	3129.18	3.1957	0.0303	0.0	0.0	0.0	8.24E-06	1.78E-04	1.50E-03
16	14	70	71	36037.37	1	3129.23	3.1957	0.0303	0.0	0.0	0.0	7.67E-06	1.70E-04	1.46E-03
5	3	125	126	34695.28	1	3129.69	3.1952	0.0303	0.0	0.0	0.0	1.90E-06	3.71E-05	2.90E-04
13	11	87	88	35304.45	1	3130.94	3.1939	0.0303	0.0	0.0	0.0	8.68E-06	1.80E-04	1.46E-03
9	7	107	108	34786.11	1	3131.52	3.1933	0.0303	0.0	0.0	0.0	6.09E-06	1.20E-04	9.42E-04
4	2	129	130	34615.31	1	3131.92	3.1929	0.0303	0.0	0.0	0.0	1.21E-06	2.34E-05	1.82E-04
7	5	116	117	34611.99	1	3133.11	3.1917	0.0303	0.0	0.0	0.0	4.04E-06	7.83E-05	6.08E-04
12	10	92	93	35057.12	1	3133.50	3.1913	0.0303	0.0	0.0	0.0	8.76E-06	1.77E-04	1.42E-03
10	8	102	103	34797.22	1	3133.77	3.1910	0.0303	0.0	0.0	0.0	7.39E-06	1.46E-04	1.14E-03
11	9	97	98	34887.79	1	3134.44	3.1904	0.0303	0.0	0.0	0.0	8.33E-06	1.66E-04	1.31E-03
14	12	81	82	35358.64	1	3135.37	3.1894	0.0303	0.0	0.0	0.0	9.43E-06	1.95E-04	1.60E-03
16	14	69	70	35807.91	1	3137.10	3.1877	0.0303	0.0	0.0	0.0	8.64E-06	1.88E-04	1.58E-03
15	13	75	76	35526.85	1	3137.43	3.1873	0.0303	0.0	0.0	0.0	9.41E-06	1.99E-04	1.65E-03
6	4	120	121	34417.95	1	3137.54	3.1872	0.0303	0.0	0.0	0.0	3.26E-06	6.20E-05	4.75E-04
8	6	111	112	34479.86	1	3138.20	3.1865	0.0303	0.0	0.0	0.0	5.72E-06	1.09E-04	8.42E-04
13	11	86	87	35016.70	1	3139.90	3.1848	0.0303	0.0	0.0	0.0	1.02E-05	2.05E-04	1.63E-03
5	3	124	125	34273.40	1	3140.99	3.1837	0.0303	0.0	0.0	0.0	2.40E-06	4.51E-05	3.42E-04
9	7	106	107	34428.34	1	3141.72	3.1830	0.0303	0.0	0.0	0.0	7.43E-06	1.41E-04	1.08E-03
12	10	91	92	34751.86	1	3142.78	3.1819	0.0303	0.0	0.0	0.0	1.03E-05	2.03E-04	1.59E-03
4	2	128	129	34178.80	1	3143.45	3.1812	0.0303	0.0	0.0	0.0	1.54E-06	2.87E-05	2.16E-04
10	8	101	102	34456.93	1	3143.67	3.1810	0.0303	0.0	0.0	0.0	8.91E-06	1.70E-04	1.31E-03
7	5	115	116	34222.09	1	3143.87	3.1808	0.0303	0.0	0.0	0.0	5.03E-06	9.38E-05	7.09E-04
14	12	80	81	35091.32	1	3143.95	3.1807	0.0303	0.0	0.0	0.0	1.09E-05	2.21E-04	1.77E-03
11	9	96	97	34565.00	1	3144.03	3.1806	0.0303	0.0	0.0	0.0	9.93E-06	1.92E-04	1.48E-03
16	14	68	69	35581.43	1	3144.90	3.1798	0.0303	0.0	0.0	0.0	9.73E-06	2.07E-04	1.72E-03
15	13	74	75	35279.96	1	3145.63	3.1790	0.0303	0.0	0.0	0.0	1.07E-05	2.22E-04	1.80E-03
6	4	119	120	34013.35	1	3148.54	3.1761	0.0303	0.0	0.0	0.0	4.09E-06	7.45E-05	5.56E-04
8	6	110	111	34107.37	1	3148.65	3.1760	0.0303	0.0	0.0	0.0	7.04E-06	1.30E-04	9.75E-04
13	11	85	86	34731.85	1	3148.80	3.1758	0.0303	0.0	0.0	0.0	1.19E-05	2.33E-04	1.82E-03
9	7	105	106	34073.32	1	3151.87	3.1727	0.0303	0.0	0.0	0.0	9.04E-06	1.66E-04	1.24E-03
12	10	90	91	34449.46	1	3152.00	3.1726	0.0303	0.0	0.0	0.0	1.22E-05	2.32E-04	1.78E-03
5	3	123	124	33854.11	1	3152.23	3.1724	0.0303	0.0	0.0	0.0	3.03E-06	5.46E-05	4.03E-04
14	12	79	80	34926.92	1	3152.47	3.1721	0.0303	0.0	0.0	0.0	1.26E-05	2.48E-04	1.96E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	14	67	68	35357.96	1	3152.65	3.1719	0.0303	0.0	0.0	0.0	1.09E-05	2.27E-04	1.86E-03
10	8	100	101	34119.43	1	3153.52	3.1711	0.0303	0.0	0.0	0.0	1.07E-05	1.98E-04	1.49E-03
11	9	95	96	34245.04	1	3153.56	3.1710	0.0303	0.0	0.0	0.0	1.18E-05	2.21E-04	1.68E-03
15	13	73	74	35036.03	1	3153.76	3.1708	0.0303	0.0	0.0	0.0	1.22E-05	2.47E-04	1.97E-03
7	5	114	115	33834.87	1	3154.57	3.1700	0.0303	0.0	0.0	0.0	6.24E-06	1.12E-04	8.26E-04
4	2	127	128	33744.82	1	3154.94	3.1696	0.0303	0.0	0.0	0.0	1.97E-06	3.50E-05	2.57E-04
13	11	84	85	34449.91	1	3157.64	3.1669	0.0303	0.0	0.0	0.0	1.38E-05	2.66E-04	2.03E-03
8	6	109	110	33737.59	1	3159.05	3.1655	0.0303	0.0	0.0	0.0	8.65E-06	1.54E-04	1.13E-03
6	4	118	119	33611.38	1	3159.49	3.1651	0.0303	0.0	0.0	0.0	5.11E-06	8.99E-05	6.52E-04
16	14	66	67	35137.49	1	3160.33	3.1642	0.0303	0.0	0.0	0.0	1.22E-05	2.50E-04	2.01E-03
14	12	78	79	34565.47	1	3160.93	3.1636	0.0303	0.0	0.0	0.0	1.45E-05	2.79E-04	2.16E-03
12	10	89	90	34149.94	1	3161.16	3.1634	0.0303	0.0	0.0	0.0	1.43E-05	2.66E-04	2.00E-03
15	13	72	73	34795.09	1	3161.84	3.1627	0.0303	0.0	0.0	0.0	1.39E-05	2.74E-04	2.15E-03
9	7	104	105	33721.07	1	3161.97	3.1626	0.0303	0.0	0.0	0.0	1.10E-05	1.95E-04	1.43E-03
11	9	94	95	33927.93	1	3163.04	3.1615	0.0303	0.0	0.0	0.0	1.41E-05	2.55E-04	1.89E-03
10	8	99	100	33784.73	1	3163.31	3.1612	0.0303	0.0	0.0	0.0	1.29E-05	2.31E-04	1.69E-03
5	3	122	123	33437.40	1	3163.42	3.1611	0.0303	0.0	0.0	0.0	3.82E-06	6.61E-05	4.74E-04
7	5	113	114	33450.32	1	3165.22	3.1593	0.0303	0.0	0.0	0.0	7.73E-06	1.34E-04	9.62E-04
4	2	126	127	33313.39	1	3166.37	3.1582	0.0303	0.0	0.0	0.0	2.50E-06	4.27E-05	3.04E-04
13	11	83	84	34170.88	1	3166.43	3.1581	0.0303	0.0	0.0	0.0	1.61E-05	2.90E-04	2.26E-03
16	14	65	66	34920.04	1	3167.96	3.1566	0.0303	0.0	0.0	0.0	1.37E-05	2.73E-04	2.17E-03
14	12	77	78	34306.98	1	3169.34	3.1552	0.0303	0.0	0.0	0.0	1.66E-05	3.13E-04	2.38E-03
8	6	108	109	33370.55	1	3169.40	3.1552	0.0303	0.0	0.0	0.0	1.06E-05	1.82E-04	1.30E-03
15	13	71	72	34557.13	1	3169.86	3.1547	0.0303	0.0	0.0	0.0	1.57E-05	3.03E-04	2.35E-03
12	10	88	89	33853.30	1	3170.27	3.1543	0.0303	0.0	0.0	0.0	1.68E-05	3.04E-04	2.24E-03
6	4	117	118	33212.05	1	3170.39	3.1542	0.0303	0.0	0.0	0.0	6.39E-06	1.08E-04	7.64E-04
9	7	103	104	33371.58	1	3172.01	3.1526	0.0303	0.0	0.0	0.0	1.33E-05	2.29E-04	1.64E-03
11	9	93	94	33613.67	1	3172.46	3.1521	0.0303	0.0	0.0	0.0	1.67E-05	2.94E-04	2.13E-03
10	8	98	99	33452.85	1	3173.04	3.1516	0.0303	0.0	0.0	0.0	1.55E-05	2.68E-04	1.92E-03
5	3	121	122	33023.30	1	3174.56	3.1500	0.0303	0.0	0.0	0.0	4.80E-06	7.99E-05	5.57E-04
13	11	82	83	33894.79	1	3175.16	3.1494	0.0303	0.0	0.0	0.0	1.87E-05	3.39E-04	2.50E-03
16	14	64	65	34705.62	1	3175.53	3.1491	0.0303	0.0	0.0	0.0	1.53E-05	2.99E-04	2.34E-03
7	5	112	113	33068.48	1	3175.82	3.1488	0.0303	0.0	0.0	0.0	9.57E-06	1.60E-04	1.12E-03
14	12	76	77	34051.46	1	3177.69	3.1469	0.0303	0.0	0.0	0.0	1.91E-05	3.50E-04	2.62E-03
4	2	125	126	32884.54	1	3177.75	3.1469	0.0303	0.0	0.0	0.0	3.17E-06	5.21E-05	3.60E-04
15	13	70	71	34322.18	1	3177.82	3.1468	0.0303	0.0	0.0	0.0	1.78E-05	3.36E-04	2.56E-03
12	10	87	88	33559.57	1	3179.32	3.1453	0.0303	0.0	0.0	0.0	1.98E-05	3.47E-04	2.51E-03
8	6	107	108	33006.25	1	3179.70	3.1449	0.0303	0.0	0.0	0.0	1.30E-05	2.16E-04	1.50E-03
3	1	129	130	32796.18	1	3179.96	3.1447	0.0303	0.0	0.0	0.0	1.69E-06	2.75E-05	1.89E-04
6	4	116	117	32815.40	1	3181.23	3.1434	0.0303	0.0	0.0	0.0	7.97E-06	1.30E-04	8.94E-04
11	9	92	93	33302.29	1	3181.83	3.1428	0.0303	0.0	0.0	0.0	1.98E-05	3.38E-04	2.40E-03
9	7	102	103	33024.89	1	3182.00	3.1427	0.0303	0.0	0.0	0.0	1.61E-05	2.68E-04	1.87E-03
10	8	97	98	33123.80	1	3182.72	3.1420	0.0303	0.0	0.0	0.0	1.85E-05	3.11E-04	2.18E-03
16	14	63	64	34494.25	1	3183.03	3.1417	0.0303	0.0	0.0	0.0	1.70E-05	3.27E-04	2.52E-03
13	11	81	82	33621.65	1	3183.83	3.1409	0.0303	0.0	0.0	0.0	2.17E-05	3.82E-04	2.78E-03
5	3	120	121	32611.84	1	3185.65	3.1391	0.0303	0.0	0.0	0.0	6.03E-06	9.55E-05	6.54E-04
15	13	69	70	34090.25	1	3185.72	3.1390	0.0303	0.0	0.0	0.0	2.01E-05	3.71E-04	2.78E-03
14	12	75	76	33798.93	1	3185.97	3.1388	0.0303	0.0	0.0	0.0	2.18E-05	3.91E-04	2.87E-03
7	5	111	112	32689.35	1	3186.36	3.1384	0.0303	0.0	0.0	0.0	1.18E-05	1.91E-04	1.30E-03
12	10	86	87	33268.76	1	3188.31	3.1365	0.0303	0.0	0.0	0.0	2.32E-05	3.95E-04	2.80E-03
4	2	124	125	32458.27	1	3189.08	3.1357	0.0303	0.0	0.0	0.0	4.02E-06	6.34E-05	4.25E-04
8	6	106	107	32644.72	1	3189.94	3.1349	0.0303	0.0	0.0	0.0	1.59E-05	2.55E-04	1.73E-03
16	14	62	63	34285.92	1	3190.48	3.1343	0.0303	0.0	0.0	0.0	1.90E-05	3.56E-04	2.71E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	91	92	32993.78	1	3191.14	3.1337	0.0303	0.0	0.0	0.0	2.34E-05	3.88E-04	2.70E-03
3	1	128	129	32355.13	1	3191.53	3.1333	0.0303	0.0	0.0	0.0	2.16E-06	3.37E-05	2.24E-04
9	7	101	102	32681.01	1	3191.94	3.1329	0.0303	0.0	0.0	0.0	1.95E-05	3.14E-04	2.14E-03
6	4	115	116	32421.43	1	3192.02	3.1328	0.0303	0.0	0.0	0.0	9.94E-06	1.56E-04	1.04E-03
10	8	96	97	32797.60	1	3192.35	3.1325	0.0303	0.0	0.0	0.0	2.21E-05	3.61E-04	2.48E-03
13	11	80	81	33351.46	1	3192.44	3.1324	0.0303	0.0	0.0	0.0	2.51E-05	4.31E-04	3.08E-03
15	13	68	69	33861.33	1	3193.56	3.1313	0.0303	0.0	0.0	0.0	2.27E-05	4.09E-04	3.02E-03
14	12	74	75	33549.38	1	3194.20	3.1307	0.0303	0.0	0.0	0.0	2.49E-05	4.36F-04	3.15E-03
5	3	119	120	32203.01	1	3196.69	3.1282	0.0303	0.0	0.0	0.0	7.56E-06	1.16E-04	7.67E-04
7	5	110	111	32312.95	1	3196.86	3.1281	0.0303	0.0	0.0	0.0	1.46E-05	2.27E-04	1.51E-03
12	10	85	86	32980.87	1	3197.25	3.1277	0.0303	0.0	0.0	0.0	2.72E-05	4.50E-04	3.13E-03
16	14	61	62	34080.64	1	3197.87	3.1271	0.0303	0.0	0.0	0.0	2.10E-05	3.88E-04	2.91E-03
8	6	105	106	32285.97	1	3200.13	3.1249	0.0303	0.0	0.0	0.0	1.93E-05	3.00E-04	1.99E-03
4	2	123	124	32034.61	1	3200.36	3.1246	0.0303	0.0	0.0	0.0	5.08E-06	7.70E-05	5.02E-04
11	9	90	91	32688.18	1	3200.40	3.1246	0.0303	0.0	0.0	0.0	2.76E-05	4.45E-04	3.03E-03
13	11	79	80	33084.24	1	3201.00	3.1240	0.0303	0.0	0.0	0.0	2.90E-05	4.86E-04	3.40E-03
15	13	67	68	33635.45	1	3201.34	3.1237	0.0303	0.0	0.0	0.0	2.55E-05	4.50E-04	3.27E-03
9	7	100	101	32339.95	1	3201.82	3.1232	0.0303	0.0	0.0	0.0	2.35E-05	3.67E-04	2.44E-03
10	8	95	96	32474.26	1	3201.92	3.1231	0.0303	0.0	0.0	0.0	2.64E-05	4.17E-04	2.80E-03
14	12	73	74	33302.84	1	3202.38	3.1227	0.0303	0.0	0.0	0.0	2.84E-05	4.86E-04	3.45E-03
6	4	114	115	32030.15	1	3202.76	3.1223	0.0303	0.0	0.0	0.0	1.24E-05	1.87E-04	1.22E-03
3	1	127	128	31916.65	1	3203.05	3.1220	0.0303	0.0	0.0	0.0	2.75E-06	4.13E-05	2.67E-04
16	14	60	61	33878.44	1	3205.19	3.1199	0.0303	0.0	0.0	0.0	2.33E-05	4.21E-04	3.11E-03
12	10	84	85	32695.94	1	3206.13	3.1190	0.0303	0.0	0.0	0.0	3.17E-05	5.12E-04	3.49E-03
7	5	109	110	31939.30	1	3207.30	3.1179	0.0303	0.0	0.0	0.0	1.79E-05	2.69E-04	1.74E-03
5	3	118	119	31796.86	1	3207.67	3.1175	0.0303	0.0	0.0	0.0	9.49E-06	1.41E-04	9.01E-04
15	13	66	67	33412.62	1	3209.06	3.1162	0.0303	0.0	0.0	0.0	2.86E-05	4.95E-04	3.54E-03
13	11	78	79	32820.01	1	3209.50	3.1157	0.0303	0.0	0.0	0.0	3.34E-05	5.46F-04	3.76E-03
11	9	89	90	32385.48	1	3209.60	3.1157	0.0303	0.0	0.0	0.0	3.25E-05	5.09E-04	3.40E-03
8	6	104	105	31930.02	1	3210.26	3.1150	0.0303	0.0	0.0	0.0	2.36E-05	3.53E-04	2.29E-03
14	12	72	73	33059.32	1	3210.49	3.1148	0.0303	0.0	0.0	0.0	3.23E-05	5.40E-04	3.77E-03
10	8	94	95	32153.80	1	3211.43	3.1139	0.0303	0.0	0.0	0.0	3.15E-05	4.82E-04	3.17E-03
4	2	122	123	31613.57	1	3211.59	3.1137	0.0303	0.0	0.0	0.0	6.42E-06	9.34E-05	5.91E-04
9	7	99	100	32001.73	1	3211.65	3.1137	0.0303	0.0	0.0	0.0	2.83E-05	4.28E-04	2.78E-03
16	14	59	60	33679.31	1	3212.46	3.1129	0.0303	0.0	0.0	0.0	2.57E-05	4.57E-04	3.33E-03
6	4	113	114	31641.59	1	3213.45	3.1119	0.0303	0.0	0.0	0.0	1.54E-05	2.24E-04	1.42E-03
3	1	126	127	31480.76	1	3214.52	3.1109	0.0303	0.0	0.0	0.0	3.51E-06	5.04E-05	3.17E-04
12	10	83	84	32413.95	1	3214.95	3.1105	0.0303	0.0	0.0	0.0	3.70E-05	5.81E-04	3.89E-03
15	13	65	66	33192.84	1	3216.73	3.1087	0.0303	0.0	0.0	0.0	3.21E-05	5.43E-04	3.83E-03
7	5	108	109	31568.43	1	3217.68	3.1078	0.0303	0.0	0.0	0.0	2.21E-05	3.19E-04	2.02E-03
13	11	77	78	32558.77	1	3217.94	3.1076	0.0303	0.0	0.0	0.0	3.85E-05	6.13E-04	4.14E-03
14	12	71	72	32818.82	1	3218.55	3.1070	0.0303	0.0	0.0	0.0	3.67E-05	5.99E-04	4.12E-03
5	3	117	118	31393.38	1	3218.60	3.1069	0.0303	0.0	0.0	0.0	1.19E-05	1.70E-04	1.06E-03
11	9	88	89	32085.71	1	3218.74	3.1068	0.0303	0.0	0.0	0.0	3.83E-05	5.83E-04	3.81E-03
16	14	58	59	33483.27	1	3219.66	3.1059	0.0303	0.0	0.0	0.0	2.85E-05	4.95E-04	3.57E-03
8	6	103	104	31576.87	1	3220.34	3.1053	0.0303	0.0	0.0	0.0	2.86E-05	4.15E-04	2.62E-03
10	8	93	94	31836.23	1	3220.89	3.1047	0.0303	0.0	0.0	0.0	3.74E-05	5.56E-04	3.58E-03
9	7	98	99	31666.36	1	3221.42	3.1042	0.0303	0.0	0.0	0.0	3.41E-05	4.98E-04	3.17E-03
4	2	121	122	31195.18	1	3222.76	3.1029	0.0303	0.0	0.0	0.0	8.09E-06	1.13E-04	6.96E-04
12	10	82	83	32134.93	1	3223.72	3.1020	0.0303	0.0	0.0	0.0	4.30E-05	6.58E-04	4.32E-03
6	4	112	113	31255.77	1	3224.09	3.1017	0.0303	0.0	0.0	0.0	1.91E-05	2.68E-04	1.66E-03
15	13	64	65	32976.12	1	3224.33	3.1014	0.0303	0.0	0.0	0.0	3.58E-05	5.95E-04	4.13E-03
3	1	125	126	31047.46	1	3225.94	3.0999	0.0303	0.0	0.0	0.0	4.47E-06	6.16E-05	3.75E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	11	76	77	32300.53	1	3226.33	3.0995	0.0303	0.0	0.0	0.0	4.42E-05	6.87E-04	4.56E-03
14	12	70	71	32581.36	1	3226.54	3.0993	0.0303	0.0	0.0	0.0	4.16E-05	6.64E-04	4.49E-03
16	14	57	58	33290.32	1	3226.81	3.0990	0.0303	0.0	0.0	0.0	3.14E-05	5.36E-04	3.81E-03
11	9	87	88	31788.87	1	3227.83	3.0981	0.0303	0.0	0.0	0.0	4.51E-05	6.67E-04	4.28E-03
7	5	107	108	31200.33	1	3228.01	3.0979	0.0303	0.0	0.0	0.0	2.71E-05	3.78E-04	2.33E-03
5	3	116	117	30992.61	1	3229.49	3.0965	0.0303	0.0	0.0	0.0	1.49E-05	2.04E-04	1.24E-03
10	8	92	93	31521.56	1	3230.29	3.0957	0.0303	0.0	0.0	0.0	4.44E-05	6.41E-04	4.03E-03
8	6	102	103	31226.56	1	3230.37	3.0956	0.0303	0.0	0.0	0.0	3.47E-05	4.87E-04	3.01E-03
9	7	97	98	31333.86	1	3231.14	3.0949	0.0303	0.0	0.0	0.0	4.09E-05	5.79E-04	3.60E-03
15	13	63	64	32762.48	1	3231.87	3.0942	0.0303	0.0	0.0	0.0	4.00E-05	6.50E-04	4.46E-03
12	10	81	82	31858.89	1	3232.42	3.0937	0.0303	0.0	0.0	0.0	5.00E-05	7.45E-04	4.80E-03
16	14	56	57	33100.48	1	3233.89	3.0923	0.0303	0.0	0.0	0.0	3.45E-05	5.80E-04	4.07E-03
4	2	120	121	30779.46	1	3233.89	3.0923	0.0303	0.0	0.0	0.0	1.02E-05	1.37E-04	8.19E-04
14	12	69	70	32346.95	1	3234.48	3.0917	0.0303	0.0	0.0	0.0	4.70E-05	7.34E-04	4.89E-03
13	11	75	76	32045.30	1	3234.65	3.0915	0.0303	0.0	0.0	0.0	5.07E-05	7.69E-04	5.01E-03
6	4	111	112	30872.70	1	3234.67	3.0915	0.0303	0.0	0.0	0.0	2.36E-05	3.20E-04	1.93E-03
11	9	86	87	31495.00	1	3236.86	3.0894	0.0303	0.0	0.0	0.0	5.29E-05	7.62E-04	4.79E-03
3	1	124	125	30616.80	1	3237.31	3.0890	0.0303	0.0	0.0	0.0	5.68E-06	7.51E-05	4.44E-04
7	5	106	107	30835.03	1	3238.29	3.0880	0.0303	0.0	0.0	0.0	3.31E-05	4.48E-04	2.69E-03
15	13	62	63	32551.91	1	3239.36	3.0870	0.0303	0.0	0.0	0.0	4.45E-05	7.09E-04	4.79E-03
10	8	91	92	31209.82	1	3239.64	3.0868	0.0303	0.0	0.0	0.0	5.26E-05	7.37E-04	4.54E-03
5	3	115	116	30594.55	1	3240.32	3.0861	0.0303	0.0	0.0	0.0	1.86E-05	2.46E-04	1.45E-03
8	6	101	102	30879.08	1	3240.34	3.0861	0.0303	0.0	0.0	0.0	4.21E-05	5.71E-04	3.44E-03
9	7	96	97	31004.25	1	3240.80	3.0857	0.0303	0.0	0.0	0.0	4.90E-05	6.72E-04	4.09E-03
16	14	55	56	32913.75	1	3240.91	3.0856	0.0303	0.0	0.0	0.0	3.79E-05	6.25E-04	4.33E-03
12	10	80	81	31585.85	1	3241.08	3.0854	0.0303	0.0	0.0	0.0	5.79E-05	8.41E-04	5.32E-03
14	12	68	69	32115.60	1	3242.36	3.0842	0.0303	0.0	0.0	0.0	5.31E-05	8.11E-04	5.32E-03
13	11	74	75	31793.11	1	3242.92	3.0836	0.0303	0.0	0.0	0.0	5.79E-05	8.58E-04	5.51E-03
4	2	119	120	30366.41	1	3244.96	3.0817	0.0303	0.0	0.0	0.0	1.28E-05	1.65E-04	9.62E-04
6	4	110	111	30492.39	1	3245.20	3.0815	0.0303	0.0	0.0	0.0	2.92E-05	3.81E-04	2.24E-03
11	9	85	86	31204.08	1	3245.83	3.0809	0.0303	0.0	0.0	1.04E-06	6.21E-05	8.69E-04	5.35E-03
15	13	61	62	32344.45	1	3246.78	3.0800	0.0303	0.0	0.0	0.0	4.95E-05	7.73E-04	5.15E-03
16	14	54	55	32730.14	1	3247.87	3.0789	0.0303	0.0	0.0	0.0	4.16E-05	6.73E-04	4.61E-03
7	5	105	106	30472.55	1	3248.52	3.0783	0.0303	0.0	0.0	0.0	4.05E-05	5.29E-04	3.10E-03
3	1	123	124	30188.78	1	3248.62	3.0782	0.0303	0.0	0.0	0.0	7.20E-06	9.14E-05	5.25E-04
10	8	90	91	30901.00	1	3248.94	3.0779	0.0303	0.0	0.0	1.08E-06	6.22E-05	8.46E-04	5.11E-03
12	10	79	80	31315.80	1	3249.67	3.0772	0.0303	0.0	0.0	1.10E-06	6.70E-05	9.49E-04	5.89E-03
14	12	67	68	31887.32	1	3250.17	3.0768	0.0303	0.0	0.0	0.0	5.98E-05	8.93E-04	5.77E-03
8	6	100	101	30534.46	1	3250.26	3.0767	0.0303	0.0	0.0	0.0	5.09E-05	6.69E-04	3.93E-03
9	7	95	96	30677.52	1	3250.41	3.0765	0.0303	0.0	0.0	1.05E-06	5.85E-05	7.79E-04	4.63E-03
5	3	114	115	30199.23	1	3251.09	3.0759	0.0303	0.0	0.0	0.0	2.32E-05	2.95E-04	1.70E-03
13	11	73	74	31543.96	1	3251.13	3.0759	0.0303	0.0	0.0	1.05E-06	6.62E-05	9.57E-04	6.04E-03
2	0	127	128	30062.09	1	3251.30	3.0757	0.0303	0.0	0.0	0.0	2.62E-06	3.28E-05	1.87E-04
15	13	60	61	32140.09	1	3254.14	3.0730	0.0303	0.0	0.0	0.0	5.49E-05	8.41E-04	5.52E-03
11	9	84	85	30916.14	1	3254.75	3.0724	0.0303	0.0	0.0	1.26E-06	7.26E-05	9.89E-04	5.98E-03
16	14	53	54	32549.66	1	3254.77	3.0724	0.0303	0.0	0.0	0.0	4.54E-05	7.24E-04	4.89E-03
6	4	109	110	30114.87	1	3255.68	3.0716	0.0303	0.0	0.0	0.0	3.60E-05	4.54E-04	3.60E-03
4	2	118	119	29956.07	1	3255.99	3.0713	0.0303	0.0	0.0	0.0	1.61E-05	2.00E-04	1.13E-03
14	12	66	67	31662.11	1	3257.93	3.0694	0.0303	0.0	0.0	1.05E-06	6.72E-05	9.83E-04	6.25E-03
10	8	89	90	30595.13	1	3258.17	3.0692	0.0303	0.0	0.0	1.34E-06	7.34E-05	9.73E-04	5.73E-03
12	10	78	79	31048.78	1	3258.21	3.0692	0.0303	0.0	0.0	1.32E-06	7.74E-05	1.07E-03	6.51E-03
7	5	104	105	30112.89	1	3258.69	3.0687	0.0303	0.0	0.0	0.0	4.94E-05	6.23E-04	3.56E-03
13	11	72	73	31297.86	1	3259.28	3.0682	0.0303	0.0	0.0	1.24E-06	7.54E-05	1.07E-03	6.61E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	122	123	29763.41	1	3259.89	3.0676	0.0303	0.0	0.0	0.0	9.11E-06	1.11E-04	6.21E-04
9	7	94	95	30353.71	1	3259.96	3.0675	0.0303	0.0	0.0	1.32E-06	6.99E-05	9.02E-04	5.24E-03
8	6	99	100	30192.72	1	3260.13	3.0674	0.0303	0.0	0.0	1.18E-06	6.14E-05	7.80E-04	4.49E-03
15	13	59	60	31938.83	1	3261.44	3.0661	0.0303	0.0	0.0	0.0	6.07E-05	9.13E-04	5.91E-03
16	14	52	53	32272.31	1	3261.61	3.0660	0.0303	0.0	0.0	0.0	4.96E-05	7.77E-04	5.18E-03
5	3	113	114	29806.66	1	3261.82	3.0658	0.0303	0.0	0.0	0.0	2.89E-05	3.54E-04	1.98E-03
2	0	126	127	29621.73	1	3262.81	3.0648	0.0303	0.0	0.0	0.0	3.34E-06	4.02E-05	2.23E-04
11	9	83	84	30631.19	1	3263.61	3.0641	0.0303	0.0	0.0	1.54E-06	8.48E-05	1.12E-03	6.66E-03
14	12	65	66	31439.99	1	3265.63	3.0622	0.0303	0.0	0.0	1.22E-06	7.54E-05	1.08E-03	6.76E-03
6	4	108	109	29740.16	1	3266.10	3.0618	0.0303	0.0	0.0	0.0	4.43E-05	5.39E-04	3.01E-03
12	10	77	78	30784.78	1	3266.68	3.0612	0.0303	0.0	0.0	1.58E-06	8.92E-05	1.20E-03	7.19E-03
4	2	117	118	29548.44	1	3266.96	3.0609	0.0303	0.0	0.0	0.0	2.03E-05	2.42E-04	1.33E-03
10	8	88	89	30292.22	1	3267.35	3.0606	0.0303	0.0	0.0	1.65E-06	8.67E-05	1.11E-03	6.44E-03
13	11	71	72	31054.82	1	3267.37	3.0606	0.0303	0.0	0.0	1.46E-06	8.57E-05	1.18E-03	7.22E-03
16	14	51	52	32198.11	1	3268.38	3.0596	0.0303	0.0	0.0	0.0	5.40E-05	8.32E-04	5.49E-03
15	13	58	59	31740.70	1	3268.68	3.0593	0.0303	0.0	0.0	1.04E-06	6.72E-05	9.91E-04	6.34E-03
7	5	103	104	29756.08	1	3268.81	3.0592	0.0303	0.0	0.0	1.24E-06	6.02E-05	7.34E-04	4.10E-03
9	7	93	94	30032.83	1	3269.45	3.0586	0.0303	0.0	0.0	1.64E-06	8.32E-05	1.04E-03	5.93E-03
8	6	98	99	29853.86	1	3269.93	3.0582	0.0303	0.0	0.0	1.50E-06	7.40E-05	9.10E-04	5.12E-03
3	1	121	122	29340.73	1	3271.10	3.0571	0.0303	0.0	0.0	0.0	1.15E-05	1.35E-04	7.32E-04
11	9	82	83	30349.24	1	3272.41	3.0559	0.0303	0.0	0.0	1.36E-06	9.89E-05	1.28E-03	7.42E-03
5	3	112	113	29416.86	1	3272.49	3.0558	0.0303	0.0	0.0	0.0	3.59E-05	4.24E-04	2.31E-03
14	12	64	65	31220.98	1	3273.27	3.0550	0.0303	0.0	0.0	1.40E-06	8.44E-05	1.18E-03	7.31E-03
2	0	125	126	29184.00	1	3274.26	3.0541	0.0303	0.0	0.0	0.0	4.27E-06	4.92E-05	2.64E-04
12	10	76	77	30523.82	1	3275.10	3.0533	0.0303	0.0	0.0	1.89E-06	1.03E-04	1.35E-03	7.93E-03
16	14	50	51	32027.05	1	3275.10	3.0533	0.0303	0.0	0.0	0.0	5.86E-05	8.89E-04	5.80E-03
13	11	70	71	30814.84	1	3275.40	3.0531	0.0303	0.0	0.0	1.72E-06	9.73E-05	1.31E-03	7.88E-03
15	13	57	58	31545.70	1	3275.86	3.0526	0.0303	0.0	0.0	1.18E-06	7.42E-05	1.07E-03	6.78E-03
6	4	107	108	29368.25	1	3276.47	3.0521	0.0303	0.0	0.0	1.18E-06	5.45E-05	6.40E-04	3.48E-03
10	8	87	88	29992.29	1	3276.47	3.0521	0.0303	0.0	0.0	2.03E-06	1.02E-04	1.28E-03	7.23E-03
4	2	116	117	29143.55	1	3277.88	3.0508	0.0303	0.0	0.0	0.0	2.54E-05	2.92E-04	1.56E-03
7	5	102	103	29402.14	1	3278.87	3.0498	0.0303	0.0	0.0	1.58E-06	7.32E-05	8.63E-04	4.70E-03
9	7	92	93	29714.89	1	3278.90	3.0498	0.0303	0.0	0.0	2.04E-06	9.90E-05	1.20E-03	6.69E-03
8	6	97	98	29517.91	1	3279.69	3.0491	0.0303	0.0	0.0	1.89E-06	8.90E-05	1.06E-03	5.82E-03
14	12	63	64	31005.07	1	3280.85	3.0480	0.0303	0.0	0.0	1.62E-06	9.43E-05	1.30E-03	7.88E-03
11	9	81	82	30070.30	1	3281.16	3.0477	0.0303	0.0	0.0	2.26E-06	1.15E-04	1.45E-03	8.25E-03
16	14	49	50	31859.17	1	3281.75	3.0472	0.0303	0.0	0.0	0.0	6.35E-05	9.48E-04	6.11E-03
3	1	120	121	28920.75	1	3282.27	3.0467	0.0303	0.0	0.0	0.0	1.45E-05	1.64E-04	9.63E-04
15	13	56	57	31353.83	1	3282.98	3.0460	0.0303	0.0	0.0	1.33E-06	8.18E-05	1.16E-03	7.24E-03
5	3	111	112	29029.84	1	3283.11	3.0459	0.0303	0.0	0.0	1.02E-06	4.46E-05	5.07E-04	2.69E-03
13	11	69	70	30577.96	1	3283.37	3.0457	0.0303	0.0	0.0	2.01E-06	1.10E-04	1.45E-03	8.59E-03
12	10	75	76	30265.92	1	3283.47	3.0456	0.0303	0.0	0.0	2.25E-06	1.18E-04	1.51E-03	8.73E-03
10	8	86	87	29695.34	1	3285.54	3.0436	0.0303	0.0	0.0	2.49E-06	1.20E-04	1.46E-03	8.11E-03
2	0	124	125	28748.94	1	3285.67	3.0435	0.0303	0.0	0.0	0.0	5.43E-06	6.02E-05	3.14E-04
6	4	106	107	28999.19	1	3286.79	3.0425	0.0303	0.0	0.0	1.53E-06	6.69E-05	7.59E-04	4.02E-03
9	7	91	92	29399.89	1	3288.28	3.0411	0.0303	0.0	0.0	2.54E-06	1.17E-04	1.38E-03	7.55E-03
16	14	48	49	31694.45	1	3288.34	3.0410	0.0303	0.0	0.0	1.07E-06	6.87E-05	1.01E-03	6.43E-03
14	12	62	63	30792.28	1	3288.37	3.0410	0.0303	0.0	0.0	1.86E-06	1.05E-04	1.42E-03	8.49E-03
4	2	115	116	28741.41	1	3288.74	3.0407	0.0303	0.0	0.0	0.0	3.18E-05	3.52E-04	1.83E-03
7	5	101	102	29051.07	1	3288.88	3.0405	0.0303	0.0	0.0	2.02E-06	8.89E-05	1.01E-03	5.39E-03
8	6	96	97	29184.87	1	3289.39	3.0401	0.0303	0.0	0.0	2.38E-06	1.07E-04	1.23E-03	6.62E-03
11	9	80	81	29794.40	1	3289.84	3.0397	0.0303	0.0	0.0	2.72E-06	1.34E-04	1.64E-03	9.16E-03
15	13	55	56	31165.11	1	3290.04	3.0395	0.0303	0.0	0.0	1.51E-06	8.99E-05	1.26E-03	7.72E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	11	68	69	30344.16	1	3291.29	3.0383	0.0303	0.0	0.0	2.35E-06	1.25E-04	1.61E-03	9.35E-03
12	10	74	75	30011.07	1	3291.77	3.0379	0.0303	0.0	0.0	2.67E-06	1.35E-04	1.69E-03	9.59E-03
3	1	119	120	28503.48	1	3293.38	3.0364	0.0303	0.0	0.0	0.0	1.83E-05	1.98E-04	1.02E-03
5	3	110	111	28645.63	1	3293.68	3.0361	0.0303	0.0	0.0	1.33E-06	5.52E-05	6.06E-04	3.14E-03
10	8	85	86	29401.38	1	3294.55	3.0353	0.0303	0.0	0.0	3.05E-06	1.41E-04	1.67E-03	9.08E-03
16	14	47	48	31532.90	1	3294.86	3.0350	0.0303	0.0	0.0	1.18E-06	7.41E-05	1.07E-03	6.76E-03
14	12	61	62	30582.61	1	3295.83	3.0341	0.0303	0.0	0.0	2.13E-06	1.17E-04	1.54E-03	9.13E-03
2	0	123	124	28316.55	1	3297.02	3.0330	0.0303	0.0	0.0	0.0	6.91E-06	7.34E-05	3.72E-04
15	13	54	55	30979.55	1	3297.04	3.0330	0.0303	0.0	0.0	1.70E-06	9.86E-05	1.35E-03	8.22E-03
6	4	105	106	28632.97	1	3297.05	3.0330	0.0303	0.0	0.0	1.98E-06	8.20E-05	8.98E-04	4.64E-03
9	7	90	91	29087.87	1	3297.61	3.0325	0.0303	0.0	0.0	3.14E-06	1.39E-04	1.59E-03	8.50E-03
11	9	79	80	29521.54	1	3298.47	3.0317	0.0303	0.0	0.0	3.29E-06	1.55E-04	1.85E-03	1.01E-02
7	5	100	101	28702.89	1	3298.84	3.0314	0.0303	0.0	0.0	2.57E-06	1.08E-04	1.19E-03	6.17E-03
8	6	95	96	28854.77	1	3299.03	3.0312	0.0303	0.0	0.0	2.99E-06	1.28E-04	1.43E-03	7.52E-03
13	11	67	68	30113.47	1	3299.14	3.0311	0.0303	0.0	0.0	2.74E-06	1.41E-04	1.77E-03	1.02E-02
4	2	114	115	28342.04	1	3299.56	3.0307	0.0303	0.0	0.0	1.00E-06	3.98E-05	4.24E-04	2.15E-03
12	10	73	74	29759.31	1	3300.01	3.0303	0.0303	0.0	0.0	3.17E-06	1.54E-04	1.88E-03	1.05E-02
16	14	46	47	31374.53	1	3301.33	3.0291	0.0303	0.0	0.0	1.30E-06	7.98E-05	1.14E-03	7.09E-03
14	12	60	61	30376.09	1	3303.23	3.0273	0.0303	0.0	0.0	2.44E-06	1.30E-04	1.68E-03	9.80E-03
10	8	84	85	29110.45	1	3303.51	3.0271	0.0303	0.0	0.0	3.73E-06	1.66E-04	1.90E-03	1.01E-02
15	13	53	54	30797.15	1	3303.97	3.0267	0.0303	0.0	0.0	1.91E-06	1.08E-04	1.46E-03	8.73E-03
5	3	109	110	28264.23	1	3304.19	3.0265	0.0303	0.0	0.0	1.74E-06	6.83E-05	7.22E-04	3.64E-03
3	1	118	119	28088.95	1	3304.44	3.0262	0.0303	0.0	0.0	0.0	2.31E-05	2.40E-04	1.20E-03
9	7	89	90	28778.82	1	3306.88	3.0240	0.0303	0.0	0.0	3.89E-06	1.65E-04	1.83E-03	9.55E-03
13	11	66	67	29885.90	1	3306.94	3.0239	0.0303	0.0	0.0	3.19E-06	1.58E-04	1.95E-03	1.10E-02
11	9	78	79	29251.72	1	3307.05	3.0238	0.0303	0.0	0.0	3.95E-06	1.79E-04	2.09E-03	1.12E-02
6	4	104	105	28269.62	1	3307.26	3.0237	0.0303	0.0	0.0	2.55E-06	1.00E-04	1.06E-03	5.35E-03
16	14	45	46	31219.36	1	3307.73	3.0232	0.0303	0.0	0.0	1.42E-06	8.57E-05	1.20E-03	7.43E-03
12	10	72	73	29510.62	1	3308.20	3.0228	0.0303	0.0	0.0	3.75E-06	1.76E-04	2.10E-03	1.15E-02
2	0	122	123	27886.86	1	3308.33	3.0227	0.0303	0.0	0.0	0.0	8.77E-06	8.95E-05	4.40E-04
8	6	94	95	28527.61	1	3308.62	3.0224	0.0303	0.0	0.0	3.75E-06	1.53E-04	1.66E-03	8.52E-03
7	5	99	100	28357.62	1	3308.74	3.0223	0.0303	0.0	0.0	3.27E-06	1.30E-04	1.39E-03	7.05E-03
4	2	113	114	27945.45	1	3310.32	3.0209	0.0303	0.0	0.0	1.32E-06	4.97E-05	5.09E-04	2.51E-03
14	12	59	60	30172.71	1	3310.56	3.0206	0.0303	0.0	0.0	2.78E-06	1.44E-04	1.83E-03	1.05E-02
15	13	52	53	30617.92	1	3310.84	3.0204	0.0303	0.0	0.0	2.14E-06	1.18E-04	1.56E-03	9.26E-03
10	8	83	84	28822.53	1	3312.40	3.0190	0.0303	0.0	0.0	4.55E-06	1.94E-04	2.16E-03	1.13E-02
16	14	44	45	31067.38	1	3314.07	3.0174	0.0303	0.0	0.0	1.56E-06	9.18E-05	1.27E-03	7.77E-03
5	3	108	109	27885.68	1	3314.65	3.0169	0.0303	0.0	0.0	2.26E-06	8.44E-05	8.60E-04	4.23E-03
13	11	65	66	29661.45	1	3314.67	3.0169	0.0303	0.0	0.0	3.70E-06	1.78E-04	2.15E-03	1.19E-02
3	1	117	118	27677.16	1	3315.45	3.0162	0.0303	0.0	0.0	0.0	2.91E-05	2.91E-04	1.41E-03
11	9	77	78	28984.96	1	3315.56	3.0161	0.0303	0.0	0.0	4.74E-06	2.07E-04	2.34E-03	1.24E-02
9	7	88	89	28472.78	1	3316.10	3.0156	0.0303	0.0	0.0	4.81E-06	1.95E-04	2.10E-03	1.08E-02
12	10	71	72	29265.04	1	3316.33	3.0154	0.0303	0.0	0.0	4.42E-06	2.01E-04	2.34E-03	1.26E-02
6	4	103	104	27909.14	1	3317.41	3.0144	0.0303	0.0	0.0	3.27E-06	1.22E-04	1.25E-03	6.16E-03
15	13	51	52	30441.87	1	3317.66	3.0142	0.0303	0.0	0.0	2.39E-06	1.29E-04	1.68E-03	9.81E-03
14	12	58	59	29972.48	1	3317.84	3.0140	0.0303	0.0	0.0	3.17E-06	1.59E-04	1.99E-03	1.13E-02
8	6	93	94	28203.41	1	3318.15	3.0137	0.0303	0.0	0.0	4.68E-06	1.83E-04	1.92E-03	9.65E-03
7	5	98	99	28015.28	1	3318.59	3.0133	0.0303	0.0	0.0	4.14E-06	1.57E-04	1.62E-03	8.05E-03
2	0	121	122	27459.88	1	3319.58	3.0124	0.0303	0.0	0.0	0.0	1.11E-05	1.09E-04	5.20E-04
16	14	43	44	30918.60	1	3320.34	3.0117	0.0303	0.0	0.0	1.70E-06	9.81E-05	1.34E-03	8.10E-03
4	2	112	113	27551.67	1	3321.03	3.0111	0.0303	0.0	0.0	1.74E-06	6.19E-05	6.11E-04	2.94E-03
10	8	82	83	28537.65	1	3321.24	3.0109	0.0303	0.0	0.0	5.53E-06	2.26E-04	2.46E-03	1.26E-02
13	11	64	65	29440.12	1	3322.35	3.0099	0.0303	0.0	0.0	4.28E-06	1.99E-04	2.36E-03	1.29E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	76	77	28721.29	1	3324.02	3.0084	0.0303	0.0	0.0	5.67E-06	2.38E-04	2.63E-03	1.37E-02
12	10	70	71	29022.55	1	3324.40	3.0081	0.0303	0.0	0.0	5.20E-06	2.28E-04	2.60E-03	1.38E-02
15	13	50	51	30269.01	1	3324.41	3.0081	0.0303	0.0	0.0	2.66E-06	1.40E-04	1.79E-03	1.04E-02
5	3	107	108	27509.97	1	3325.06	3.0075	0.0303	0.0	0.0	2.94E-06	1.04E-04	1.02E-03	4.90E-03
14	12	57	58	29775.43	1	3325.06	3.0075	0.0303	0.0	0.0	3.61E-06	1.76E-04	2.16E-03	1.21E-02
9	7	87	88	28169.73	1	3325.26	3.0073	0.0303	0.0	0.0	5.93E-06	2.30E-04	2.41E-03	1.21E-02
3	1	116	117	27268.14	1	3326.40	3.0063	0.0303	0.0	0.0	1.07E-06	3.66E-05	3.52E-04	1.66E-03
16	14	42	43	30773.04	1	3326.56	3.0061	0.0303	0.0	0.0	1.85E-06	1.05E-04	1.41E-03	8.44E-03
6	4	102	103	27551.57	1	3327.51	3.0052	0.0303	0.0	0.0	4.20E-06	1.49E-04	1.47E-03	7.08E-03
8	6	92	93	27882.18	1	3327.63	3.0051	0.0303	0.0	0.0	5.84E-06	2.18E-04	2.22E-03	1.09E-02
7	5	97	98	27675.87	1	3328.38	3.0045	0.0303	0.0	0.0	5.24E-06	1.89E-04	1.89E-03	9.18E-03
13	11	63	64	29221.95	1	3329.96	3.0030	0.0303	0.0	0.0	4.94E-06	2.23E-04	2.59E-03	1.39E-02
10	8	81	82	28255.82	1	3330.02	3.0030	0.0303	0.0	0.0	6.71E-06	2.64E-04	2.79E-03	1.41E-02
2	0	120	121	27035.63	1	3330.78	3.0023	0.0303	0.0	0.0	0.0	1.41E-05	1.32E-04	6.13E-04
15	13	49	50	30099.34	1	3331.09	3.0020	0.0303	0.0	0.0	2.96E-06	1.52E-04	1.91E-03	1.09E-02
4	2	111	112	27160.71	1	3331.69	3.0015	0.0303	0.0	0.0	2.29E-06	7.70E-05	7.33E-04	3.43E-03
14	12	56	57	29581.54	1	3332.21	3.0010	0.0303	0.0	0.0	4.09E-06	1.95E-04	2.34E-03	1.29E-02
12	10	69	70	28783.19	1	3332.41	3.0008	0.0303	0.0	0.0	6.10E-06	2.59E-04	2.88E-03	1.50E-02
11	9	75	76	28460.70	1	3332.42	3.0008	0.0303	0.0	0.0	6.77E-06	2.74E-04	2.95E-03	1.51E-02
16	14	41	42	30630.69	1	3332.71	3.0006	0.0303	0.0	0.0	2.01E-06	1.11E-04	1.48E-03	8.77E-03
8	6	86	87	25188.84	2	3333.06	3.0002	0.0303	0.0	0.0	0.0	1.01E-05	7.94E-05	3.24E-04
9	7	86	87	27869.71	1	3334.36	2.9991	0.0303	0.0	0.0	7.29E-06	2.71E-04	2.76E-03	1.36E-02
5	3	106	107	27137.13	1	3335.41	2.9981	0.0303	0.0	0.0	3.82E-06	1.28E-04	1.21E-03	5.67E-03
7	5	91	92	24842.27	2	3336.19	2.9974	0.0303	0.0	0.0	0.0	9.50E-06	7.23E-05	2.88E-04
8	6	91	92	27563.95	1	3337.05	2.9967	0.0303	0.0	0.0	7.27E-06	2.59E-04	2.56E-03	1.23E-02
3	1	115	116	26861.92	1	3337.31	2.9964	0.0303	0.0	0.0	1.43E-06	4.60E-05	4.25E-04	1.95E-03
13	11	62	63	29006.93	1	3337.52	2.9962	0.0303	0.0	0.0	5.69E-06	2.49E-04	2.83E-03	1.50E-02
6	4	101	102	27196.90	1	3337.56	2.9962	0.0303	0.0	0.0	5.37E-06	1.81E-04	1.73E-03	8.13E-03
15	13	48	49	29932.87	1	3337.72	2.9961	0.0303	0.0	0.0	3.28E-06	1.64E-04	2.04E-03	1.15E-02
7	5	96	97	27339.41	1	3338.11	2.9957	0.0303	0.0	0.0	6.61E-06	2.28E-04	2.21E-03	1.05E-02
10	8	80	81	27977.05	1	3338.75	2.9951	0.0303	0.0	0.0	8.12E-06	3.07E-04	3.16E-03	1.56E-02
16	14	40	41	30491.56	1	3338.79	2.9951	0.0303	0.0	0.0	2.18E-06	1.18E-04	1.55E-03	9.10E-03
14	12	55	56	29390.83	1	3339.31	2.9946	0.0303	0.0	0.0	4.63E-06	2.14E-04	2.52E-03	1.38E-02
12	10	68	69	28546.96	1	3340.36	2.9937	0.0303	0.0	0.0	7.15E-06	2.93E-04	3.19E-03	1.64E-02
11	9	74	75	28203.20	1	3340.76	2.9933	0.0303	0.0	0.0	8.06E-06	3.14E-04	3.31E-03	1.66E-02
8	6	85	86	24900.92	2	3341.65	2.9925	0.0303	0.0	0.0	0.0	1.18E-05	9.04E-05	3.62E-04
2	0	119	120	26614.14	1	3341.93	2.9923	0.0303	0.0	0.0	0.0	1.78E-05	1.60E-04	7.23E-04
4	2	110	111	26772.58	1	3342.29	2.9920	0.0303	0.0	0.0	3.01E-06	9.56E-05	8.77E-04	3.99E-03
9	7	85	86	27572.73	1	3343.41	2.9910	0.0303	0.0	0.0	8.95E-06	3.19E-04	3.16E-03	1.52E-02
15	13	47	48	29769.62	1	3344.28	2.9902	0.0303	0.0	0.0	3.63E-06	1.77E-04	2.17E-03	1.21E-02
16	14	39	40	30355.66	1	3344.81	2.9897	0.0303	0.0	0.0	2.35E-06	1.25E-04	1.62E-03	9.42E-03
13	11	61	62	28795.07	1	3345.02	2.9895	0.0303	0.0	0.0	6.53E-06	2.77E-04	3.09E-03	1.62E-02
7	5	90	91	24536.65	2	3345.08	2.9895	0.0303	0.0	0.0	0.0	1.12E-05	8.29E-05	3.24E-04
5	3	105	106	26767.18	1	3345.71	2.9889	0.0303	0.0	0.0	4.95E-06	1.57E-04	1.44E-03	6.56E-03
14	12	54	55	29203.32	1	3346.34	2.9883	0.0303	0.0	0.0	5.22E-06	2.35E-04	2.72E-03	1.47E-02
8	6	90	91	27248.71	1	3346.42	2.9883	0.0303	0.0	0.0	9.03E-06	3.07E-04	2.95E-03	1.39E-02
6	4	95	96	24250.88	2	3346.97	2.9878	0.0303	0.0	0.0	0.0	9.75E-06	7.01E-05	2.68E-04
10	8	79	80	27701.36	1	3347.42	2.9874	0.0303	0.0	0.0	9.81E-06	3.56E-04	3.57E-03	1.73E-02
6	4	100	101	26845.17	1	3347.55	2.9873	0.0303	0.0	0.0	6.86E-06	2.20E-04	2.03E-03	9.32E-03
7	5	95	96	27005.92	1	3347.80	2.9870	0.0303	0.0	0.0	8.33E-06	2.74E-04	2.57E-03	1.19E-02
3	1	114	115	26458.50	1	3348.16	2.9867	0.0303	0.0	0.0	1.90E-06	5.76E-05	5.13E-04	2.29E-03
12	10	67	68	28313.86	1	3348.25	2.9866	0.0303	0.0	0.0	8.35E-06	3.31E-04	3.52E-03	1.78E-02
11	9	73	74	27948.82	1	3349.04	2.9859	0.0303	0.0	0.0	9.57E-06	3.60E-04	3.70E-03	1.83E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	84	85	24615.98	2	3350.18	2.9849	0.0303	0.0	0.0	0.0	1.38E-05	1.03E-04	4.04E-04
16	14	38	39	30223.00	1	3350.77	2.9844	0.0303	0.0	0.0	2.53E-06	1.32E-04	1.69E-03	9.73E-03
15	13	46	47	29609.58	1	3350.78	2.9844	0.0303	0.0	0.0	4.00E-06	1.91E-04	2.30E-03	1.27E-02
9	7	84	85	27278.79	1	3352.40	2.9829	0.0303	0.0	0.0	1.10E-05	3.75E-04	3.61E-03	1.70E-02
13	11	60	61	28586.38	1	3352.45	2.9829	0.0303	0.0	0.0	7.48E-06	3.08E-04	3.37E-03	1.74E-02
4	2	109	110	26387.31	1	3352.84	2.9825	0.0303	0.0	0.0	3.94E-06	1.19E-04	1.05E-03	4.65E-03
2	0	118	119	26195.41	1	3353.03	2.9824	0.0303	0.0	0.0	0.0	2.25E-05	1.95E-04	8.54E-04
14	12	53	54	29019.00	1	3353.31	2.9821	0.0303	0.0	0.0	5.87E-06	2.58E-04	2.93E-03	1.56E-02
7	5	89	90	24233.98	2	3353.91	2.9816	0.0303	0.0	0.0	0.0	1.32E-05	9.49E-05	3.63E-04
8	6	89	90	26936.49	1	3355.73	2.9800	0.0303	0.0	0.0	1.12E-05	3.64E-04	3.39E-03	1.56E-02
5	3	104	105	26400.13	1	3355.96	2.9798	0.0303	0.0	0.0	6.39E-06	1.92E-04	1.70E-03	7.57E-03
10	8	78	79	27428.76	1	3356.03	2.9797	0.0303	0.0	0.0	1.18E-05	4.13E-04	4.03E-03	1.92E-02
12	10	66	67	28083.91	1	3356.08	2.9797	0.0303	0.0	0.0	9.73E-06	3.73E-04	3.88E-03	1.94E-02
6	4	94	95	23930.47	2	3356.10	2.9796	0.0303	0.0	0.0	0.0	1.16E-05	8.10E-05	3.03E-04
16	14	37	38	30093.57	1	3356.67	2.9791	0.0303	0.0	0.0	2.71E-06	1.39E-04	1.75E-03	1.00E-02
15	13	45	46	29452.77	1	3357.22	2.9787	0.0303	0.0	0.0	4.40E-06	2.05E-04	2.44E-03	1.33E-02
11	9	72	73	27697.55	1	3357.26	2.9786	0.0303	0.0	0.0	1.13E-05	4.12E-04	4.13E-03	2.00E-02
7	5	94	95	26675.41	1	3357.42	2.9785	0.0303	0.0	0.0	1.05E-05	3.28E-04	2.98E-03	1.35E-02
6	4	99	100	26496.37	1	3357.49	2.9784	0.0303	0.0	0.0	8.74E-06	2.67E-04	2.39E-03	1.07E-02
8	6	83	84	24334.02	2	3358.66	2.9774	0.0303	0.0	0.0	0.0	1.61E-05	1.17E-04	4.49E-04
3	1	113	114	26057.89	1	3358.96	2.9771	0.0303	0.0	0.0	2.52E-06	7.21E-05	6.18E-04	2.68E-03
13	11	59	60	28380.87	1	3359.82	2.9763	0.0303	0.0	0.0	8.55E-06	3.42E-04	3.66E-03	1.86E-02
14	12	52	53	28837.89	1	3360.22	2.9760	0.0303	0.0	0.0	6.59E-06	2.82E-04	3.15E-03	1.66E-02
9	7	83	84	26987.90	1	3361.33	2.9750	0.0303	0.0	0.0	1.34E-05	4.39E-04	4.11E-03	1.90E-02
16	14	36	37	29967.39	1	3362.50	2.9740	0.0308	0.0	0.0	2.90E-06	1.46E-04	1.82E-03	1.03E-02
7	5	88	89	23934.27	2	3362.69	2.9738	0.0303	0.0	0.0	0.0	1.56E-05	1.09E-04	4.08E-04
4	2	108	109	26004.91	1	3363.34	2.9732	0.0303	0.0	0.0	5.15E-06	1.47E-04	1.25E-03	5.40E-03
15	13	44	45	29299.19	1	3363.59	2.9730	0.0303	0.0	0.0	4.82E-06	2.20E-04	2.58E-03	1.40E-02
12	10	65	66	27857.12	1	3363.85	2.9728	0.0303	0.0	0.0	1.13E-05	4.20E-04	4.28E-03	2.10E-02
2	0	117	118	25779.47	1	3364.07	2.9726	0.0303	0.0	0.0	1.03E-06	2.84E-05	2.37E-04	1.01E-03
10	8	77	78	27159.25	1	3364.58	2.9721	0.0303	0.0	0.0	1.42E-05	4.77E-04	4.55E-03	2.13E-02
8	6	88	89	26627.30	1	3364.98	2.9718	0.0303	0.0	0.0	1.39E-05	4.32E-04	3.91E-03	1.76E-02
6	4	93	94	23612.99	2	3365.18	2.9716	0.0303	0.0	0.0	0.0	1.38E-05	9.35E-05	3.43E-04
11	9	71	72	27449.42	1	3365.43	2.9714	0.0303	0.0	0.0	1.34E-05	4.70E-04	4.60E-03	2.20E-02
5	3	98	99	23371.00	2	3366.14	2.9708	0.0303	0.0	0.0	0.0	1.09E-05	7.20E-05	2.59E-04
5	3	103	104	26035.98	1	3366.15	2.9708	0.0303	0.0	0.0	8.24E-06	2.35E-04	2.01E-03	8.73E-03
7	5	93	94	26347.89	1	3366.99	2.9700	0.0303	0.0	0.0	1.31E-05	3.92E-04	3.46E-03	1.53E-02
14	12	51	52	28659.99	1	3367.07	2.9699	0.0303	0.0	0.0	7.38E-06	3.08E-04	3.38E-03	1.75E-02
8	6	82	83	24055.05	2	3367.08	2.9699	0.0303	0.0	0.0	0.0	1.87E-05	1.32E-04	5.00E-04
13	11	58	59	28178.56	1	3367.14	2.9699	0.0303	0.0	0.0	9.76E-06	3.80E-04	3.99E-03	2.00E-02
6	4	98	99	26150.54	1	3367.38	2.9697	0.0303	0.0	0.0	1.11E-05	3.23E-04	2.79E-03	1.22E-02
16	14	35	36	29844.47	1	3368.27	2.9689	0.0312	0.0	0.0	3.09E-06	1.53E-04	1.89E-03	1.06E-02
3	1	112	113	25660.13	1	3369.71	2.9676	0.0303	0.0	0.0	3.33E-06	9.01E-05	7.43E-04	3.14E-03
15	13	43	44	29148.84	1	3369.91	2.9674	0.0303	0.0	0.0	5.27E-06	2.36E-04	2.72E-03	1.46E-02
9	7	82	83	26700.09	1	3370.21	2.9672	0.0303	0.0	0.0	1.63E-05	5.14E-04	4.68E-03	2.12E-02
7	5	87	88	23637.53	2	3371.42	2.9661	0.0303	0.0	0.0	0.0	1.83E-05	1.24E-04	4.57E-04
12	10	64	65	27633.50	1	3371.56	2.9660	0.0303	0.0	0.0	1.31E-05	4.72E-04	4.70E-03	2.27E-02
10	8	76	77	26892.85	1	3373.07	2.9647	0.0303	0.0	0.0	1.70E-05	5.51E-04	5.11E-03	2.35E-02
11	9	70	71	27204.43	1	3373.53	2.9643	0.0303	0.0	0.0	1.58E-05	5.35E-04	5.11E-03	2.40E-02
4	2	107	108	25625.40	1	3373.79	2.9640	0.0303	0.0	0.0	6.72E-06	1.81E-04	1.49E-03	6.27E-03
14	12	50	51	28485.31	1	3373.85	2.9640	0.0303	0.0	0.0	8.23E-06	3.35E-04	3.62E-03	1.86E-02
16	14	34	35	29724.80	1	3373.97	2.9639	0.0317	0.0	0.0	3.29E-06	1.60E-04	1.95E-03	1.09E-02
8	6	87	88	26321.15	1	3374.18	2.9637	0.0303	0.0	0.0	1.71E-05	5.11E-04	4.49E-03	1.98E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	92	93	23298.45	2	3374.20	2.9637	0.0303	0.0	0.0	0.0	1.64E-05	1.09E-04	3.86E-04
13	11	57	58	27979.44	1	3374.39	2.9635	0.0303	0.0	0.0	1.11E-05	4.20E-04	4.33E-03	2.14E-02
2	0	116	117	25366.34	1	3375.07	2.9629	0.0303	0.0	0.0	1.38E-06	3.58E-05	2.87E-04	1.19E-03
8	6	81	82	23779.10	2	3375.45	2.9626	0.0303	0.0	0.0	1.05E-06	2.18E-05	1.50E-04	5.55E-04
5	3	97	98	23038.65	2	3375.46	2.9626	0.0303	0.0	0.0	0.0	1.31E-05	8.37E-05	2.95E-04
15	13	42	43	29001.74	1	3376.15	2.9620	0.0303	0.0	0.0	5.74E-06	2.52E-04	2.86E-03	1.52E-02
5	3	102	103	25674.78	1	3376.29	2.9619	0.0303	0.0	0.0	1.06E-05	2.88E-04	2.38E-03	1.00E-02
7	5	92	93	26023.39	1	3376.51	2.9616	0.0303	0.0	0.0	1.64E-05	4.68E-04	4.00E-03	1.73E-02
6	4	97	98	25807.67	1	3377.20	2.9610	0.0303	0.0	0.0	1.41E-05	3.90E-04	3.26E-03	1.39E-02
9	7	81	82	26415.37	1	3379.03	2.9594	0.0303	0.0	0.0	1.99E-05	6.00E-04	5.32E-03	2.37E-02
12	10	63	64	27413.06	1	3379.22	2.9593	0.0303	0.0	0.0	1.52E-05	5.28E-04	5.16E-03	2.46E-02
16	14	33	34	29608.40	1	3379.61	2.9589	0.0321	0.0	0.0	3.48E-06	1.67E-04	2.01E-03	1.11E-02
7	5	86	87	23343.78	2	3380.09	2.9585	0.0303	0.0	0.0	1.11E-06	2.15E-05	1.42E-04	5.12E-04
3	1	111	112	25265.22	1	3380.40	2.9582	0.0303	0.0	0.0	4.39E-06	1.12E-04	8.92E-04	3.67E-03
14	12	49	50	28313.87	1	3380.58	2.9581	0.0303	0.0	0.0	9.17E-06	3.64E-04	3.87E-03	1.96E-02
10	8	75	76	26629.57	1	3381.51	2.9573	0.0303	0.0	0.0	2.04E-05	6.34E-04	5.74E-03	2.59E-02
13	11	56	57	27783.53	1	3381.58	2.9572	0.0303	0.0	0.0	1.26E-05	4.64E-04	4.70E-03	2.29E-02
11	9	69	70	26962.59	1	3381.58	2.9572	0.0303	0.0	0.0	1.86E-05	6.07E-04	5.68E-03	2.62E-02
15	13	41	42	28857.89	1	3382.34	2.9565	0.0303	0.0	0.0	6.24E-06	2.68E-04	3.00E-03	1.58E-02
6	4	91	92	22986.86	2	3383.17	2.9558	0.0303	0.0	0.0	1.06E-06	1.94E-05	1.24E-04	4.35E-04
8	6	86	87	26018.06	1	3383.32	2.9557	0.0303	0.0	0.0	2.11E-05	6.03E-04	5.15E-03	2.23E-02
8	6	80	81	23506.16	2	3383.77	2.9553	0.0303	0.0	0.0	1.27E-06	2.52E-05	1.69E-04	6.15E-04
4	2	106	107	25248.79	1	3384.18	2.9549	0.0303	0.0	0.0	8.74E-06	2.23E-04	1.77E-03	7.27E-03
5	3	96	97	22709.22	2	3384.73	2.9544	0.0303	0.0	0.0	0.0	1.56E-05	9.71E-05	3.35E-04
16	14	32	33	29495.27	1	3385.18	2.9541	0.0326	0.0	0.0	3.68E-06	1.73E-04	2.06E-03	1.13E-02
7	5	91	92	25701.90	1	3385.97	2.9534	0.0303	0.0	0.0	2.05E-05	5.59E-04	4.62E-03	1.96E-02
2	0	115	116	24956.02	1	3386.01	2.9533	0.0303	0.0	0.0	1.84E-06	4.50E-05	3.47E-04	1.40E-03
5	3	101	102	25316.52	1	3386.38	2.9530	0.0303	0.0	0.0	1.36E-05	3.51E-04	2.80E-03	1.16E-02
12	10	62	63	27195.80	1	3386.81	2.9526	0.0303	0.0	0.0	1.75E-05	5.91E-04	5.65E-03	2.65E-02
6	4	96	97	25467.79	1	3386.98	2.9525	0.0303	0.0	0.0	1.78E-05	4.70E-04	3.81E-03	1.59E-02
14	12	48	49	28145.66	1	3387.24	2.9523	0.0303	0.0	0.0	1.02E-05	3.94E-04	4.13E-03	2.07E-02
9	7	80	81	26133.74	1	3387.79	2.9518	0.0303	0.0	0.0	2.41E-05	6.99E-04	6.04E-03	2.63E-02
15	13	40	41	28717.30	1	3388.46	2.9512	0.0303	0.0	0.0	6.76E-06	2.85E-04	3.15E-03	1.64E-02
13	11	55	56	27590.84	1	3388.71	2.9510	0.0303	0.0	0.0	1.43E-05	5.12E-04	5.08E-03	2.45E-02
7	5	85	86	23053.02	2	3388.71	2.9510	0.0303	0.0	0.0	1.36E-06	2.53E-05	1.62E-04	5.72E-04
11	9	68	69	26723.91	1	3389.57	2.9502	0.0303	0.0	0.0	2.18E-05	6.89E-04	6.29E-03	2.96E-02
10	8	74	75	26369.43	1	3389.88	2.9500	0.0303	0.0	0.0	2.43E-05	7.29E-04	6.44E-03	2.86E-02
16	14	31	32	29385.40	1	3390.69	2.9493	0.0331	0.0	0.0	3.87E-06	1.79E-04	2.12E-03	1.15E-02
3	1	110	111	24873.19	1	3391.05	2.9489	0.0303	0.0	0.0	5.78E-06	1.40E-04	1.07E-03	4.28E-03
8	6	79	80	23236.26	2	3392.03	2.9481	0.0303	0.0	0.0	1.53E-06	2.92E-05	1.91E-04	6.81E-04
6	4	90	91	22678.24	2	3392.09	2.9480	0.0303	0.0	0.0	1.30E-06	2.30E-05	1.42E-04	4.89E-04
8	6	85	86	25718.04	1	3392.41	2.9478	0.0303	0.0	0.0	2.60E-05	7.11E-04	5.90E-03	2.50E-02
14	12	47	48	27980.70	1	3393.84	2.9465	0.0303	0.0	0.0	1.13E-05	4.26E-04	4.39E-03	2.18E-02
5	3	95	96	22382.73	2	3393.94	2.9464	0.0303	0.0	0.0	1.11E-06	1.87E-05	1.13E-04	3.80E-04
4	2	100	101	22167.28	2	3394.27	2.9461	0.0303	0.0	0.0	0.0	1.30E-05	7.69E-05	2.55E-04
12	10	61	62	26981.75	1	3394.34	2.9461	0.0303	0.0	0.0	2.01E-05	6.59E-04	6.17E-03	2.86E-02
4	2	105	106	24875.10	1	3394.52	2.9459	0.0303	0.0	0.0	1.14E-05	2.75E-04	2.13E-03	8.42E-03
15	13	39	40	28579.97	1	3394.52	2.9459	0.0303	0.0	0.0	7.31E-06	3.01E-04	3.29E-03	1.70E-02
7	5	90	91	25383.46	1	3395.37	2.9452	0.0303	0.0	0.0	2.55E-05	6.63E-04	5.33E-03	2.21E-02
13	11	54	55	27401.37	1	3395.78	2.9448	0.0303	0.0	0.0	1.62E-05	5.63E-04	5.49E-03	2.61E-02
16	14	30	31	29278.82	1	3396.13	2.9445	0.0335	0.0	0.0	4.06E-06	1.85E-04	2.16E-03	1.17E-02
5	3	100	101	24961.22	1	3396.41	2.9443	0.0303	0.0	0.0	1.74E-05	4.27E-04	3.29E-03	1.33E-02
9	7	79	80	25855.22	1	3396.50	2.9442	0.0303	0.0	0.0	2.92E-05	8.13E-04	6.84E-03	2.93E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	95	96	25130.91	1	3396.70	2.9440	0.0303	0.0	0.0	2.25E-05	5.65E-04	4.44E-03	1.81E-02
2	0	114	115	24548.55	1	3396.90	2.9439	0.0303	0.0	0.0	2.45E-06	5.66E-05	4.20E-04	1.64E-03
7	5	84	85	22765.26	2	3397.27	2.9435	0.0303	0.0	0.0	1.66E-06	2.96E-05	1.85E-04	6.39E-04
11	9	67	68	26488.41	1	3397.49	2.9433	0.0303	0.0	0.0	2.55E-05	7.79E-04	6.96E-03	3.11E-02
10	8	73	74	26112.42	1	3398.20	2.9427	0.0303	0.0	0.0	2.89E-05	8.37E-04	7.21E-03	3.14E-02
8	6	78	79	22969.40	2	3400.24	2.9410	0.0303	0.0	0.0	1.84E-06	3.37E-05	2.15E-04	7.53E-04
14	12	46	47	27818.98	1	3400.37	2.9409	0.0303	0.0	0.0	1.24E-05	4.60E-04	4.67E-03	2.29E-02
15	13	38	39	28445.91	1	3400.51	2.9407	0.0303	0.0	0.0	7.87E-06	3.19E-04	3.43E-03	1.76E-02
6	4	89	90	22372.60	2	3400.96	2.9403	0.0303	0.0	0.0	1.61E-06	2.71E-05	1.63E-04	5.49E-04
8	6	84	85	25421.09	1	3401.43	2.9399	0.0303	0.0	0.0	3.19E-05	8.36E-04	6.75E-03	2.81E-02
16	14	29	30	29175.52	1	3401.51	2.9399	0.0340	0.0	0.0	4.25E-06	1.91E-04	2.21E-03	1.19E-02
3	1	109	110	24484.04	1	3401.63	2.9398	0.0303	0.0	0.0	7.59E-06	1.74E-04	1.28E-03	4.99E-03
12	10	60	61	26770.90	1	3401.81	2.9396	0.0303	0.0	0.0	2.31E-05	7.34E-04	6.74E-03	3.07E-02
13	11	53	54	27215.13	1	3402.79	2.9388	0.0303	0.0	0.0	1.82E-05	6.17E-04	5.92E-03	2.78E-02
5	3	94	95	22059.18	2	3403.10	2.9385	0.0303	0.0	0.0	1.39E-06	2.23E-05	1.30E-04	4.30E-04
4	2	99	100	21825.82	2	3403.73	2.9380	0.0303	0.0	0.0	1.01E-06	1.57E-05	8.98E-05	2.91E-04
7	5	89	90	25068.06	1	3404.72	2.9371	0.0303	0.0	0.0	3.16E-05	7.88E-04	6.14E-03	2.49E-02
4	2	104	105	24504.34	1	3404.80	2.9370	0.0303	0.0	0.0	1.47E-05	3.38E-04	2.49E-03	9.74E-03
9	7	78	79	25579.82	1	3405.14	2.9367	0.0303	0.0	0.0	3.52E-05	9.43E-04	7.73E-03	3.25E-02
11	9	66	67	26256.09	1	3405.36	2.9365	0.0303	0.0	0.0	2.98E-05	8.80E-04	7.69E-03	3.39E-02
7	5	83	84	22480.53	2	3405.79	2.9362	0.0303	0.0	0.0	2.02E-06	3.45E-05	2.10E-04	7.12E-04
6	4	94	95	24797.05	1	3406.36	2.9357	0.0303	0.0	0.0	2.84E-05	6.79E-04	5.16E-03	2.06E-02
5	3	99	100	24608.89	1	3406.38	2.9357	0.0303	0.0	0.0	2.22E-05	5.18E-04	3.87E-03	1.52E-02
15	13	37	38	28315.13	1	3406.44	2.9356	0.0303	0.0	0.0	8.45E-06	3.36E-04	3.58E-03	1.81E-02
10	8	72	73	25858.57	1	3406.46	2.9356	0.0303	0.0	0.0	3.43E-05	9.58E-04	8.06E-03	3.45E-02
16	14	28	29	29075.50	1	3406.82	2.9353	0.0359	0.0	0.0	4.43E-06	1.96E-04	2.25E-03	1.20E-02
14	12	45	46	27660.53	1	3406.85	2.9353	0.0303	0.0	0.0	1.37E-05	4.95E-04	4.95E-03	2.40E-02
2	0	113	114	24143.93	1	3407.74	2.9345	0.0303	0.0	0.0	3.26E-06	7.10E-05	5.07E-04	1.93E-03
8	6	77	78	22705.59	2	3408.39	2.9339	0.0303	0.0	0.0	2.20E-06	3.89E-05	2.41E-04	8.32E-04
12	10	59	60	26563.26	1	3409.22	2.9332	0.0303	0.0	0.0	2.64E-05	8.15E-04	7.34E-03	3.30E-02
13	11	52	53	27032.14	1	3409.73	2.9328	0.0303	0.0	0.0	2.05E-05	6.76E-04	6.37E-03	2.96E-02
6	4	88	89	22069.95	2	3409.77	2.9327	0.0303	0.0	0.0	1.98E-06	3.20E-05	1.87E-04	6.17E-04
8	6	83	84	25127.25	1	3410.40	2.9322	0.0303	0.0	0.0	3.91E-05	9.82E-04	7.70E-03	3.14E-02
16	14	27	28	28978.78	1	3412.07	2.9308	0.0379	0.0	0.0	4.61E-06	2.01E-04	2.29E-03	1.21E-02
3	1	108	109	24097.80	1	3412.17	2.9307	0.0303	0.0	0.0	9.95E-06	2.15E-04	1.53E-03	5.81E-03
5	3	93	94	21738.60	2	3412.22	2.9306	0.0303	0.0	0.0	1.73E-06	2.66E-05	1.51E-04	4.86E-04
15	13	36	37	28187.63	1	3412.31	2.9306	0.0308	0.0	0.0	9.05E-06	3.53E-04	3.71E-03	1.87E-02
4	2	98	99	21487.30	2	3413.13	2.9299	0.0303	0.0	0.0	1.28E-06	1.90E-05	1.05E-04	3.32E-04
11	9	65	66	26026.96	1	3413.17	2.9298	0.0303	0.0	0.0	3.47E-05	9.91E-04	8.48E-03	3.67E-02
14	12	44	45	27505.34	1	3413.26	2.9298	0.0303	0.0	0.0	1.50E-05	5.31E-04	5.23E-03	2.51E-02
9	7	77	78	25307.56	1	3413.73	2.9293	0.0303	0.0	0.0	4.24E-05	1.09E-03	8.72E-03	3.60E-02
7	5	88	89	24755.73	1	3414.01	2.9291	0.0303	0.0	0.0	3.93E-05	9.35E-04	7.08E-03	2.81E-02
7	5	82	83	22198.82	2	3414.24	2.9289	0.0303	0.0	0.0	2.45E-06	4.02E-05	2.38E-04	7.93E-04
10	8	71	72	25607.89	1	3414.66	2.9285	0.0303	0.0	0.0	4.07E-05	1.09E-03	8.99E-03	3.79E-02
4	2	103	104	24136.54	1	3415.03	2.9282	0.0303	0.0	0.0	1.90E-05	4.14E-04	2.95E-03	1.12E-02
6	4	93	94	24466.21	1	3415.97	2.9274	0.0303	0.0	0.0	3.56E-05	8.14E-04	5.99E-03	2.33E-02
5	3	98	99	24259.57	1	3416.30	2.9271	0.0303	0.0	0.0	2.83E-05	6.28E-04	4.53E-03	1.74E-02
8	6	76	77	22444.85	2	3416.49	2.9270	0.0303	0.0	0.0	2.62E-06	4.47E-05	2.71E-04	9.17E-04
12	10	58	59	26358.85	1	3416.57	2.9269	0.0303	0.0	0.0	3.02E-05	9.05E-04	7.99E-03	3.54E-02
13	11	51	52	26852.39	1	3416.62	2.9269	0.0303	0.0	0.0	2.29E-05	7.38E-04	6.84E-03	3.14E-02
16	14	26	27	28885.35	1	3417.25	2.9263	0.0398	0.0	0.0	4.78E-06	2.06E-04	2.32E-03	1.22E-02
15	13	35	36	28063.42	1	3418.11	2.9256	0.0312	0.0	0.0	9.66E-06	3.70E-04	3.85E-03	1.92E-02
2	0	112	113	23742.18	1	3418.52	2.9252	0.0303	0.0	0.0	4.32E-06	8.88E-05	6.10E-04	2.26E-03

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	87	88	21770.31	2	3418.53	2.9252	0.0303	0.0	0.0	2.44E-06	3.77E-05	2.14E-04	6.93E-04
8	6	82	83	24836.50	1	3419.32	2.9246	0.0303	0.0	0.0	4.78E-05	1.15E-03	8.78E-03	3.51E-02
14	12	43	44	27353.43	1	3419.61	2.9243	0.0303	0.0	0.0	1.64E-05	5.69E-04	5.53E-03	2.62E-02
11	9	64	65	25801.04	1	3420.92	2.9232	0.0303	0.0	0.0	4.03E-05	1.11E-03	9.33E-03	3.98E-02
5	3	92	93	21420.99	2	3421.27	2.9229	0.0303	0.0	0.0	2.15E-06	3.16E-05	1.74E-04	5.49E-04
9	7	76	77	25038.44	1	3422.26	2.9220	0.0303	0.0	0.0	5.09E-05	1.26E-03	9.83E-03	3.98E-02
16	14	25	26	28795.22	1	3422.37	2.9220	0.0418	0.0	0.0	4.93E-06	2.10E-04	2.34E-03	1.23E-02
4	2	97	98	21151.72	2	3422.49	2.9218	0.0303	0.0	0.0	1.61E-06	2.28E-05	1.22E-04	3.78E-04
3	1	107	108	23714.48	1	3422.65	2.9217	0.0303	0.0	0.0	1.30E-05	2.67E-04	1.83E-03	6.76E-03
7	5	81	82	21920.16	2	3422.65	2.9217	0.0303	0.0	0.0	2.96E-06	4.68E-05	2.70E-04	8.82E-04
10	8	70	71	25360.39	1	3422.80	2.9216	0.0303	0.0	0.0	4.80E-05	1.25E-03	1.00E-02	4.15E-02
7	5	87	88	24446.47	1	3423.24	2.9212	0.0303	0.0	0.0	4.87E-05	1.11E-03	8.15E-03	3.17E-02
13	11	50	51	26675.90	1	3423.44	2.9210	0.0303	0.0	0.0	2.56E-05	8.05E-04	7.33E-03	3.32E-02
15	13	34	35	27942.50	1	3423.85	2.9207	0.0317	0.0	0.0	1.03E-05	3.87E-04	3.98E-03	1.97E-02
12	10	57	58	26157.68	1	3423.86	2.9207	0.0303	0.0	0.0	3.44E-05	1.00E-03	8.69E-03	3.80E-02
8	6	75	76	22187.18	2	3424.54	2.9201	0.0303	0.0	0.0	3.12E-06	5.13E-05	3.03E-04	1.01E-03
4	2	102	103	23771.70	1	3425.21	2.9195	0.0303	0.0	0.0	2.45E-05	5.07E-04	3.49E-03	1.30E-02
6	4	92	93	24138.43	1	3425.52	2.9193	0.0303	0.0	0.0	4.47E-05	9.73E-04	6.95E-03	2.65E-02
14	12	42	43	27204.80	1	3425.89	2.9189	0.0303	0.0	0.0	1.79E-05	6.08E-04	5.82E-03	2.74E-02
5	3	97	98	23913.24	1	3426.17	2.9187	0.0303	0.0	0.0	3.60E-05	7.60E-04	5.31E-03	1.99E-02
6	4	86	87	21473.68	2	3427.24	2.9178	0.0303	0.0	0.0	3.00E-06	4.44E-05	2.45E-04	7.77E-04
16	14	24	25	28708.40	1	3427.42	2.9176	0.0437	0.0	0.0	5.07E-06	2.13E-04	2.36E-03	1.23E-02
8	6	81	82	24548.88	1	3428.17	2.9170	0.0303	0.0	0.0	5.82E-05	1.35E-03	9.99E-03	3.92E-02
11	9	63	64	25578.32	1	3428.61	2.9166	0.0303	0.0	0.0	4.66E-05	1.25E-03	1.02E-02	4.31E-02
2	0	111	112	23343.33	1	3429.25	2.9161	0.0303	0.0	0.0	5.71E-06	1.11E-04	7.34E-04	2.65E-03
15	13	33	34	27824.87	1	3429.53	2.9159	0.0321	0.0	0.0	1.09E-05	4.04E-04	4.10E-03	2.01E-02
13	11	49	50	26502.68	1	3430.20	2.9153	0.0303	0.0	0.0	2.86E-05	8.75E-04	7.84E-03	3.51E-02
5	3	91	92	21106.37	2	3430.28	2.9152	0.0303	0.0	0.0	2.67E-06	3.75E-05	2.00E-04	6.19E-04
9	7	75	76	24772.47	1	3430.73	2.9148	0.0303	0.0	0.0	6.11E-05	1.46E-03	1.11E-02	4.40E-02
10	8	69	70	25116.07	1	3430.89	2.9147	0.0303	0.0	0.0	5.66E-05	1.42E-03	1.11E-02	4.53E-02
7	5	80	81	21644.55	2	3431.00	2.9146	0.0303	0.0	0.0	3.58E-06	5.44E-05	3.05E-04	9.79E-04
12	10	56	57	25959.75	1	3431.09	2.9145	0.0303	0.0	0.0	3.92E-05	1.11E-03	9.43E-03	4.07E-02
3	1	101	102	20612.63	2	3431.78	2.9139	0.0303	0.0	0.0	1.20E-06	1.58E-05	8.01E-05	2.39E-04
4	2	96	97	20819.09	2	3431.79	2.9139	0.0303	0.0	0.0	2.03E-06	2.74E-05	1.42E-04	4.30E-04
14	12	41	42	27059.45	1	3432.11	2.9137	0.0303	0.0	0.0	1.95E-05	6.48E-04	6.12E-03	2.85E-02
16	14	23	24	28624.89	1	3432.40	2.9134	0.0457	0.0	0.0	5.19E-06	2.16E-04	2.37E-03	1.23E-02
7	5	86	87	24140.31	1	3432.42	2.9134	0.0303	0.0	0.0	6.02E-05	1.31E-03	9.37E-03	3.57E-02
8	6	74	75	21932.59	2	3432.53	2.9133	0.0303	0.0	0.0	3.71E-06	5.88E-05	3.39E-04	1.11E-03
3	1	106	107	23334.10	1	3433.09	2.9128	0.0303	0.0	0.0	1.70E-05	3.29E-04	2.19E-03	7.85E-03
6	4	91	92	23813.70	1	3435.01	2.9112	0.0303	0.0	0.0	5.59E-05	1.16E-03	8.04E-03	3.00E-02
15	13	32	33	27710.55	1	3435.13	2.9111	0.0326	0.0	0.0	1.15E-05	4.20E-04	4.22E-03	2.05E-02
4	2	101	102	23409.84	1	3435.33	2.9109	0.0303	0.0	0.0	3.15E-05	6.19E-04	4.12E-03	1.49E-02
6	4	85	86	21180.08	2	3435.89	2.9105	0.0303	0.0	0.0	3.67E-06	5.22E-05	2.80E-04	8.70E-04
5	3	96	97	23569.94	1	3435.98	2.9104	0.0303	0.0	0.0	4.57E-05	9.18E-04	6.20E-03	2.27E-02
11	9	62	63	25358.84	1	3436.23	2.9102	0.0303	0.0	0.0	5.39E-05	1.40E-03	1.12E-02	4.65E-02
13	11	48	49	26332.73	1	3436.90	2.9096	0.0303	0.0	0.0	3.18E-05	9.49E-04	8.37E-03	3.70E-02
8	6	80	81	24264.39	1	3436.97	2.9095	0.0303	0.0	0.0	7.08E-05	1.57E-03	1.14E-02	4.36E-02
16	14	22	23	28544.68	1	3437.32	2.9092	0.0476	0.0	0.0	5.29E-06	2.17E-04	2.37E-03	1.22E-02
12	10	55	56	25765.06	1	3438.25	2.9085	0.0303	0.0	0.0	4.45E-05	1.22E-03	1.02E-02	4.35E-02
14	12	40	41	26917.39	1	3438.27	2.9084	0.0303	0.0	0.0	2.12E-05	6.89E-04	6.42E-03	2.96E-02
10	8	68	69	24874.95	1	3438.91	2.9079	0.0303	0.0	0.0	6.65E-05	1.61E-03	1.23E-02	4.95E-02
9	7	74	75	24509.67	1	3439.15	2.9077	0.0303	0.0	0.0	7.30E-05	1.68E-03	1.24E-02	4.85E-02
5	3	90	91	20794.75	2	3439.24	2.9076	0.0303	0.0	0.0	3.31E-06	4.45E-05	2.30E-04	6.96E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	79	80	21372.00	2	3439.30	2.9076	0.0303	0.0	0.0	4.31E-06	6.30E-05	3.45E-04	1.08E-03
2	0	110	111	22947.38	1	3439.93	2.9070	0.0303	0.0	0.0	7.54E-06	1.39E-04	8.82E-04	3.10E-03
8	6	73	74	21681.10	2	3440.46	2.9066	0.0303	0.0	0.0	4.40E-06	6.72E-05	3.79E-04	1.22E-03
15	13	31	32	27599.54	1	3440.68	2.9064	0.0331	0.0	0.0	1.21E-05	4.35E-04	4.33E-03	2.09E-02
4	2	95	96	20489.43	2	3441.04	2.9061	0.0303	0.0	0.0	2.55E-06	3.28E-05	1.65E-04	4.88E-04
3	1	100	101	20264.94	2	3441.32	2.9059	0.0303	0.0	0.0	1.53E-06	1.91E-05	9.39E-05	2.74E-04
7	5	85	86	23837.25	1	3441.54	2.9057	0.0303	0.0	0.0	7.42E-05	1.55E-03	1.07E-02	4.01E-02
16	14	21	22	28467.79	1	3442.17	2.9051	0.0496	0.0	0.0	5.37E-06	2.18E-04	2.36E-03	1.21E-02
3	1	105	106	22956.67	1	3443.45	2.9041	0.0303	0.0	0.0	2.21E-05	4.06E-04	2.59E-03	9.10E-03
13	11	47	48	26166.05	1	3443.53	2.9040	0.0303	0.0	0.0	3.52E-05	1.03E-03	8.91E-03	3.90E-02
11	9	61	62	25142.58	1	3443.80	2.9038	0.0303	0.0	0.0	6.21E-05	1.56E-03	1.23E-02	5.02E-02
14	12	39	40	26778.63	1	3444.36	2.9033	0.0303	0.0	0.0	2.29E-05	7.30E-04	6.72E-03	3.07E-02
6	4	90	91	23492.04	1	3444.45	2.9032	0.0303	0.0	0.0	6.97E-05	1.38E-03	9.29E-03	3.39E-02
6	4	84	85	20889.52	2	3444.49	2.9032	0.0303	0.0	0.0	4.48E-06	6.11E-05	3.19E-04	9.72E-04
12	10	54	55	25573.64	1	3445.36	2.9025	0.0303	0.0	0.0	5.03E-05	1.35E-03	1.10E-02	4.65E-02
4	2	100	101	23050.98	1	3445.39	2.9024	0.0303	0.0	0.0	4.05E-05	7.55E-04	4.85E-03	1.72E-02
8	6	79	80	23983.04	1	3445.71	2.9022	0.0303	0.0	0.0	8.58E-05	1.83E-03	1.29E-02	4.85E-02
5	3	95	96	23229.68	1	3445.73	2.9021	0.0303	0.0	0.0	5.78E-05	1.11E-03	7.24E-03	2.59E-02
15	13	30	31	27491.84	1	3446.16	2.9018	0.0335	0.0	0.0	1.27E-05	4.50E-04	4.43E-03	2.13E-02
10	8	67	68	24637.04	1	3446.87	2.9012	0.0303	0.0	0.0	7.80E-05	1.83E-03	1.37E-02	5.39E-02
16	14	20	21	28394.22	1	3446.96	2.9011	0.0515	0.0	0.0	5.43E-06	2.19E-04	2.35E-03	1.20E-02
9	7	73	74	24250.05	1	3447.50	2.9007	0.0303	0.0	0.0	8.70E-05	1.93E-03	1.39E-02	5.34E-02
7	5	78	79	21102.53	2	3447.54	2.9006	0.0303	0.0	0.0	5.18E-06	7.29E-05	3.88E-04	1.20E-03
5	3	89	90	20486.14	2	3448.14	2.9001	0.0303	0.0	0.0	4.09E-06	5.26E-05	2.64E-04	7.83E-04
8	6	72	73	21432.71	2	3448.34	2.8999	0.0303	0.0	0.0	5.21E-06	7.67E-05	4.22E-04	1.33E-03
13	11	46	47	26002.67	1	3450.10	2.8985	0.0303	0.0	0.0	3.89E-05	1.11E-03	9.48E-03	4.10E-02
4	2	94	95	20162.75	2	3450.24	2.8983	0.0303	0.0	0.0	3.19E-06	3.92E-05	1.91E-04	5.53E-04
14	12	38	39	26643.18	1	3450.39	2.8982	0.0303	0.0	0.0	2.47E-05	7.72E-04	7.01E-03	3.17E-02
2	0	109	110	22554.35	1	3450.56	2.8981	0.0303	0.0	0.0	9.94E-06	1.72E-04	1.06E-03	3.62E-03
7	5	84	85	23537.30	1	3450.60	2.8980	0.0303	0.0	0.0	9.13E-05	1.83E-03	1.23E-02	4.50E-02
3	1	99	100	19920.19	2	3450.81	2.8979	0.0303	0.0	0.0	1.95E-06	2.31E-05	1.10E-04	3.13E-04
11	9	60	61	24929.57	1	3451.31	2.8975	0.0303	0.0	0.0	7.14E-05	1.74E-03	1.34E-02	5.40E-02
15	13	29	30	27387.45	1	3451.57	2.8972	0.0340	0.0	0.0	1.33E-05	4.64E-04	4.52E-03	2.15E-02
16	14	19	20	28323.98	1	3451.68	2.8971	0.0535	0.0	0.0	5.47E-06	2.18E-04	2.32E-03	1.18E-02
12	10	53	54	25385.48	1	3452.40	2.8965	0.0303	0.0	0.0	5.68E-05	1.48E-03	1.19E-02	4.95E-02
6	4	83	84	20602.01	2	3453.04	2.8960	0.0303	0.0	0.0	5.47E-06	7.15E-05	3.63E-04	1.09E-03
3	1	104	105	22582.21	1	3453.78	2.8954	0.0303	0.0	0.0	2.87E-05	5.00E-04	3.08E-03	1.05E-02
6	4	89	90	23173.46	1	3453.84	2.8953	0.0303	0.0	0.0	8.68E-05	1.65E-03	1.07E-02	3.82E-02
8	6	78	79	23704.85	1	3454.39	2.8949	0.0303	0.0	0.0	1.04E-04	2.13E-03	1.46E-02	5.39E-02
10	8	66	67	24402.34	1	3454.78	2.8945	0.0303	0.0	0.0	9.12E-05	2.06E-03	1.51E-02	5.87E-02
4	2	99	100	22695.13	1	3455.41	2.8940	0.0303	0.0	0.0	5.18E-05	9.19E-04	5.71E-03	1.97E-02
5	3	94	95	22892.46	1	3455.43	2.8940	0.0303	0.0	0.0	7.30E-05	1.33E-03	8.44E-03	2.95E-02
7	5	77	78	20836.14	2	3455.73	2.8937	0.0303	0.0	0.0	6.22E-06	8.41E-05	4.37E-04	1.33E-03
9	7	72	73	23993.62	1	3455.80	2.8937	0.0303	0.0	0.0	1.04E-04	2.21E-03	1.56E-02	5.88E-02
8	6	71	72	21187.44	2	3456.16	2.8934	0.0303	0.0	0.0	6.14E-06	8.74E-05	4.70E-04	1.46E-03
16	14	18	19	28257.05	1	3456.33	2.8932	0.0552	0.0	0.0	5.47E-06	2.16E-04	2.29E-03	1.16E-02
14	12	37	38	26511.04	1	3456.36	2.8932	0.0303	0.0	0.0	2.66E-05	8.15E-04	7.31E-03	3.28E-02
13	11	45	46	25842.57	1	3456.61	2.8930	0.0303	0.0	0.0	4.29E-05	1.20E-03	1.01E-02	4.31E-02
15	13	28	29	27286.39	1	3456.92	2.8927	0.0359	0.0	0.0	1.39E-05	4.78E-04	4.61E-03	2.18E-02
5	3	88	89	20180.55	2	3456.98	2.8927	0.0303	0.0	0.0	5.05E-06	6.22E-05	3.04E-04	8.81E-04
11	9	59	60	24719.80	1	3458.76	2.8912	0.0303	0.0	0.0	8.18E-05	1.94E-03	1.46E-02	5.81E-02
12	10	52	53	25200.61	1	3459.38	2.8907	0.0303	0.0	0.0	6.39E-05	1.62E-03	1.28E-02	5.26E-02
4	2	93	94	19839.07	2	3459.38	2.8907	0.0303	0.0	0.0	3.99E-06	4.68E-05	2.21E-04	6.26E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	83	84	23240.48	1	3459.61	2.8905	0.0303	0.0	0.0	1.12E-04	2.15E-03	1.41E-02	5.05E-02
3	1	98	99	19578.40	2	3460.25	2.8900	0.0303	0.0	0.0	2.47E-06	2.79E-05	1.28E-04	3.58E-04
16	14	17	18	28193.46	1	3460.92	2.8894	0.0568	0.0	0.0	5.45E-06	2.13E-04	2.25E-03	1.13E-02
2	0	108	109	22164.27	1	3461.13	2.8892	0.0303	0.0	0.0	1.31E-05	2.14E-04	1.27E-03	4.22E-03
6	4	82	83	20317.56	2	3461.53	2.8889	0.0303	0.0	0.0	6.65E-06	8.35E-05	4.13E-04	1.21E-03
15	13	27	28	27188.66	1	3462.20	2.8883	0.0379	0.0	0.0	1.45E-05	4.90E-04	4.69E-03	2.20E-02
14	12	36	37	26382.21	1	3462.26	2.8883	0.0308	0.0	0.0	2.85E-05	8.57E-04	7.59E-03	3.38E-02
10	8	65	66	24170.88	1	3462.62	2.8880	0.0303	0.0	0.0	1.06E-04	2.33E-03	1.67E-02	6.38E-02
8	6	77	78	23429.83	1	3463.02	2.8877	0.0303	0.0	0.0	1.25E-04	2.47E-03	1.65E-02	5.98E-02
13	11	44	45	25685.79	1	3463.06	2.8876	0.0303	0.0	0.0	4.71E-05	1.28E-03	1.06E-02	4.51E-02
6	4	88	89	22857.99	1	3463.17	2.8875	0.0303	0.0	0.0	1.08E-04	1.96E-03	1.24E-02	4.32E-02
7	5	76	77	20572.85	2	3463.86	2.8870	0.0303	0.0	0.0	7.44E-06	9.69E-05	4.91E-04	1.46E-03
8	6	70	71	20945.30	2	3463.93	2.8869	0.0303	0.0	0.0	7.23E-06	9.94E-05	5.22E-04	1.60E-03
9	7	71	72	23740.39	1	3464.03	2.8868	0.0303	0.0	0.0	1.23E-04	2.53E-03	1.74E-02	6.45E-02
3	1	103	104	22210.73	1	3464.04	2.8868	0.0303	0.0	0.0	3.72E-05	6.15E-04	3.65E-03	1.22E-02
5	3	93	94	22558.31	1	3465.08	2.8859	0.0303	0.0	0.0	9.20E-05	1.60E-03	9.81E-03	3.36E-02
4	2	98	99	22342.30	1	3465.36	2.8857	0.0303	0.0	0.0	6.62E-05	1.12E-03	6.71E-03	2.26E-02
16	14	16	17	28133.20	1	3465.43	2.8856	0.0585	0.0	0.0	5.40E-06	2.09E-04	2.19E-03	1.10E-02
5	3	87	88	19878.00	2	3465.78	2.8854	0.0303	0.0	0.0	6.23E-06	7.35E-05	3.48E-04	9.91E-04
11	9	58	59	24513.30	1	3466.14	2.8851	0.0303	0.0	0.0	9.37E-05	2.16E-03	1.60E-02	6.25E-02
12	10	51	52	25019.01	1	3466.30	2.8849	0.0303	0.0	0.0	7.17E-05	1.78E-03	1.38E-02	5.59E-02
15	13	26	27	27094.25	1	3467.42	2.8840	0.0398	0.0	0.0	1.50E-05	5.01E-04	4.76E-03	2.22E-02
14	12	35	36	26256.71	1	3468.10	2.8834	0.0312	0.0	0.0	3.04E-05	9.00E-04	7.87E-03	3.47E-02
4	2	92	93	19518.39	2	3468.48	2.8831	0.0303	0.0	0.0	4.98E-06	5.57E-05	2.55E-04	7.08E-04
7	5	82	83	22946.81	1	3468.56	2.8830	0.0303	0.0	0.0	1.37E-04	2.52E-03	1.61E-02	5.65E-02
13	11	43	44	25532.30	1	3469.44	2.8823	0.0303	0.0	0.0	5.17E-05	1.38E-03	1.12E-02	4.72E-02
3	1	97	98	19239.58	2	3469.64	2.8821	0.0303	0.0	0.0	3.12E-06	3.36E-05	1.50E-04	4.08E-04
16	14	15	16	28076.27	1	3469.89	2.8819	0.0591	0.0	0.0	5.32E-06	2.04E-04	2.13E-03	1.06E-02
6	4	81	82	20036.19	2	3469.97	2.8819	0.0303	0.0	0.0	8.07E-06	9.73E-05	4.68E-04	1.35E-03
10	8	64	65	23942.65	1	3470.41	2.8815	0.0303	0.0	0.0	1.24E-04	2.62E-03	1.84E-02	6.92E-02
8	6	76	77	23157.98	1	3471.59	2.8805	0.0303	0.0	0.0	1.51E-04	2.86E-03	1.86E-02	6.63E-02
8	6	69	70	20706.29	2	3471.65	2.8805	0.0303	0.0	0.0	8.48E-06	1.13E-04	5.79E-04	1.74E-03
2	0	107	108	21777.14	1	3471.65	2.8805	0.0303	0.0	0.0	1.71E-05	2.66E-04	1.52E-03	4.91E-03
7	5	75	76	20312.67	2	3471.94	2.8802	0.0303	0.0	0.0	8.88E-06	1.11E-04	5.61E-04	1.61E-03
9	7	70	71	23490.38	1	3472.21	2.8800	0.0303	0.0	0.0	1.45E-04	2.89E-03	1.94E-02	7.07E-02
6	4	87	88	22545.62	1	3472.44	2.8798	0.0303	0.0	0.0	1.34E-04	2.33E-03	1.43E-02	4.88E-02
15	13	25	26	27003.18	1	3472.57	2.8797	0.0418	0.0	0.0	1.55E-05	5.11E-04	4.81E-03	2.23E-02
12	10	50	51	24840.71	1	3473.16	2.8792	0.0303	0.0	0.0	8.03E-05	1.94E-03	1.48E-02	5.92E-02
11	9	57	58	24310.07	1	3473.47	2.8790	0.0303	0.0	0.0	1.07E-04	2.39E-03	1.74E-02	6.71E-02
14	12	34	35	26134.53	1	3473.87	2.8786	0.0317	0.0	0.0	3.24E-05	9.41E-04	8.15E-03	3.56E-02
3	1	102	103	21842.26	1	3474.26	2.8783	0.0303	0.0	0.0	4.81E-05	7.54E-04	4.32E-03	1.41E-02
16	14	14	15	28022.67	1	3474.27	2.8783	0.0597	0.0	0.0	5.20E-06	1.98E-04	2.06E-03	1.02E-02
5	3	86	87	19578.50	2	3474.52	2.8781	0.0303	0.0	0.0	7.67E-06	8.66E-05	3.99E-04	1.11E-03
5	3	92	93	22227.24	1	3474.67	2.8780	0.0303	0.0	0.0	1.16E-04	1.92E-03	1.14E-02	3.81E-02
4	2	97	98	21992.52	1	3475.27	2.8775	0.0303	0.0	0.0	8.44E-05	1.35E-03	7.87E-03	2.59E-02
13	11	42	43	25382.13	1	3475.76	2.8771	0.0303	0.0	0.0	5.64E-05	1.47E-03	1.19E-02	4.92E-02
7	5	81	82	22656.29	1	3477.45	2.8757	0.0303	0.0	1.14E-06	1.68E-04	2.95E-03	1.83E-02	6.31E-02
4	2	91	92	19200.73	2	3477.52	2.8756	0.0303	0.0	0.0	6.19E-06	6.63E-05	2.94E-04	8.00E-04
15	13	24	25	26915.45	1	3477.66	2.8755	0.0437	0.0	0.0	1.60E-05	5.20E-04	4.85E-03	2.23E-02
10	8	63	64	23717.67	1	3478.13	2.8751	0.0303	0.0	0.0	1.44E-04	2.95E-03	2.02E-02	7.49E-02
6	4	80	81	19757.90	2	3478.36	2.8749	0.0303	0.0	0.0	9.76E-06	1.13E-04	5.31E-04	1.50E-03
16	14	13	14	27972.41	1	3478.59	2.8747	0.0604	0.0	0.0	5.05E-06	1.91E-04	1.98E-03	9.80E-03
3	1	96	97	18903.75	2	3478.98	2.8744	0.0303	0.0	0.0	3.94E-06	4.04E-05	1.74E-04	4.64E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	68	69	20470.42	2	3479.30	2.8741	0.0303	0.0	0.0	9.93E-06	1.28E-04	6.40E-04	1.90E-03
14	12	33	34	26015.68	1	3479.58	2.8739	0.0321	0.0	0.0	3.44E-05	9.82E-04	8.41E-03	3.64E-02
7	5	74	75	20055.60	2	3479.96	2.8736	0.0303	0.0	0.0	1.06E-05	1.28E-04	6.17E-04	1.78E-03
12	10	49	50	24665.70	1	3479.96	2.8736	0.0303	0.0	0.0	8.96E-05	2.11E-03	1.59E-02	6.27E-02
8	6	75	76	22889.33	1	3480.09	2.8735	0.0303	0.0	1.17E-06	1.81E-04	3.30E-03	2.09E-02	7.33E-02
9	7	69	70	23243.58	1	3480.33	2.8733	0.0303	0.0	1.02E-06	1.72E-04	3.29E-03	2.16E-02	7.74E-02
11	9	56	57	24110.11	1	3480.73	2.8730	0.0303	0.0	0.0	1.22E-04	2.65E-03	1.89E-02	7.19E-02
6	4	86	87	22236.39	1	3481.65	2.8722	0.0303	0.0	1.25E-06	1.66E-04	2.76E-03	1.64E-02	5.50E-02
13	11	41	42	25235.28	1	3482.02	2.8719	0.0303	0.0	0.0	6.15E-05	1.57E-03	1.25E-02	5.13E-02
2	0	106	107	21392.98	1	3482.12	2.8718	0.0303	0.0	0.0	2.24E-05	3.29E-04	1.81E-03	5.72E-03
15	13	23	24	26831.07	1	3482.68	2.8714	0.0457	0.0	0.0	1.64E-05	5.26E-04	4.87E-03	2.23E-02
16	14	12	13	27925.50	1	3482.84	2.8712	0.0610	0.0	0.0	4.88E-06	1.83E-04	1.89E-03	9.32E-03
5	3	85	86	19282.05	2	3483.21	2.8709	0.0303	0.0	0.0	9.41E-06	1.02E-04	4.56E-04	1.25E-03
5	3	91	92	21899.26	1	3484.20	2.8701	0.0303	0.0	1.18E-06	1.45E-04	2.29E-03	1.32E-02	4.32E-02
3	1	101	102	21476.80	1	3484.41	2.8699	0.0303	0.0	0.0	6.20E-05	9.23E-04	5.11E-03	1.62E-02
4	2	96	97	21645.80	1	3485.11	2.8693	0.0303	0.0	0.0	1.07E-04	1.64E-03	9.21E-03	2.96E-02
14	12	32	33	25900.18	1	3485.23	2.8693	0.0326	0.0	0.0	3.64E-05	1.02E-03	8.65E-03	3.72E-02
10	8	62	63	23495.95	1	3485.80	2.8688	0.0303	0.0	0.0	1.66E-04	3.30E-03	2.22E-02	8.10E-02
7	5	80	81	22368.93	1	3486.29	2.8684	0.0303	0.0	1.49E-06	2.04E-04	3.45E-03	2.08E-02	7.04E-02
4	2	90	91	18886.10	2	3486.50	2.8682	0.0303	0.0	0.0	7.69E-06	7.87E-05	3.39E-04	9.01E-04
12	10	48	49	24494.01	1	3486.69	2.8680	0.0303	0.0	0.0	9.97E-05	2.29E-03	1.69E-02	6.62E-02
6	4	79	80	19482.71	2	3486.69	2.8680	0.0303	0.0	0.0	1.18E-05	1.31E-04	6.00E-04	1.66E-03
8	6	67	68	20237.70	2	3486.91	2.8679	0.0303	0.0	0.0	1.16E-05	1.44E-04	7.08E-04	2.06E-03
16	14	11	12	27881.92	1	3487.02	2.8678	0.0617	0.0	0.0	4.66E-06	1.74E-04	1.78E-03	8.79E-03
15	13	22	23	26750.03	1	3487.63	2.8673	0.0476	0.0	0.0	1.67E-05	5.31E-04	4.87E-03	2.22E-02
11	9	55	56	23913.44	1	3487.93	2.8670	0.0303	0.0	0.0	1.39E-04	2.93E-03	2.05E-02	7.69E-02
7	5	73	74	19801.66	2	3487.93	2.8670	0.0303	0.0	0.0	1.26E-05	1.47E-04	6.90E-04	1.95E-03
13	11	40	41	25091.76	1	3488.21	2.8668	0.0303	0.0	0.0	6.68E-05	1.67E-03	1.31E-02	5.33E-02
3	1	95	96	18570.92	2	3488.26	2.8668	0.0303	0.0	0.0	4.96E-06	4.85E-05	2.03E-04	5.28E-04
9	7	68	69	23000.01	1	3488.39	2.8667	0.0303	0.0	1.27E-06	2.02E-04	3.74E-03	2.40E-02	8.46E-02
8	6	74	75	22623.88	1	3488.54	2.8665	0.0303	0.0	1.49E-06	2.17E-04	3.81E-03	2.35E-02	8.09E-02
14	12	31	32	25786.01	1	3490.81	2.8647	0.0331	0.0	0.0	3.83E-05	1.06E-03	8.88E-03	3.79E-02
6	4	85	86	21930.29	1	3490.81	2.8647	0.0303	0.0	1.67E-06	2.05E-04	3.26E-03	1.89E-02	6.19E-02
16	14	10	11	27841.70	1	3491.13	2.8644	0.0625	0.0	0.0	4.42E-06	1.64E-04	1.67E-03	8.23E-03
5	3	84	85	18988.68	2	3491.84	2.8638	0.0303	0.0	0.0	1.15E-05	1.20E-04	5.21E-04	1.40E-03
15	13	21	22	26672.34	1	3492.52	2.8633	0.0496	0.0	0.0	1.70E-05	5.33E-04	4.86E-03	2.21E-02
2	0	105	106	21011.81	1	3492.53	2.8633	0.0303	0.0	0.0	2.93E-05	4.07E-04	2.16E-03	6.64E-03
12	10	47	48	24325.62	1	3493.36	2.8626	0.0303	0.0	0.0	1.11E-04	2.48E-03	1.81E-02	6.98E-02
10	8	61	62	23277.50	1	3493.40	2.8625	0.0303	0.0	1.13E-06	1.92E-04	3.70E-03	2.43E-02	8.75E-02
5	3	90	91	21574.38	1	3493.68	2.8623	0.0303	0.0	1.60E-06	1.81E-04	2.74E-03	1.53E-02	4.89E-02
13	11	39	40	24951.57	1	3494.34	2.8618	0.0303	0.0	0.0	7.23E-05	1.77E-03	1.37E-02	5.53E-02
8	6	66	67	20008.15	2	3494.45	2.8617	0.0303	0.0	0.0	1.35E-05	1.63E-04	7.81E-04	2.24E-03
3	1	100	101	21114.38	1	3494.52	2.8616	0.0303	0.0	0.0	7.98E-05	1.13E-03	6.03E-03	1.87E-02
4	2	95	96	21302.14	1	3494.91	2.8613	0.0303	0.0	1.28E-06	1.36E-04	1.98E-03	1.08E-02	3.38E-02
6	4	78	79	19210.62	2	3494.97	2.8613	0.0303	0.0	0.0	1.42E-05	1.52E-04	6.77E-04	1.84E-03
7	5	79	80	22084.76	1	3495.06	2.8612	0.0303	0.0	1.94E-06	2.48E-04	4.03E-03	2.37E-02	7.84E-02
11	9	54	55	23720.06	1	3495.07	2.8612	0.0303	0.0	0.0	1.57E-04	3.23E-03	2.22E-02	8.22E-02
16	14	9	10	27804.81	1	3495.17	2.8611	0.0624	0.0	0.0	4.14E-06	1.53E-04	1.56E-03	7.63E-03
4	2	89	90	18574.52	2	3495.44	2.8609	0.0303	0.0	0.0	9.52E-06	9.32E-05	3.90E-04	1.01E-03
7	5	72	73	19550.86	2	3495.85	2.8605	0.0303	0.0	0.0	1.49E-05	1.67E-04	7.70E-04	2.14E-03
14	12	30	31	25679.20	1	3496.32	2.8601	0.0335	0.0	0.0	4.03E-05	1.10E-03	9.10E-03	3.86E-02
9	7	67	68	22759.69	1	3496.39	2.8601	0.0303	0.0	1.58E-06	2.37E-04	4.25E-03	2.66E-02	9.23E-02
8	6	73	74	22361.64	1	3496.94	2.8596	0.0303	0.0	1.90E-06	2.59E-04	4.38E-03	2.64E-02	8.92E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	INTEGRATED ABSORPTION COEFFICIENT CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	13	20	21	26598.00	1	3497.34	2.8593	0.0515	0.0	0.0	1.72E-05	5.34E-04	4.83E-03	2.18E-02
3	1	94	95	18241.11	2	3497.50	2.8592	0.0303	0.0	0.0	6.23E-06	5.81E-05	2.35E-04	5.99E-04
16	14	8	9	27771.27	1	3499.15	2.8578	0.0624	0.0	0.0	3.83E-06	1.41E-04	1.43E-03	6.99E-03
6	4	84	85	21627.34	1	3499.91	2.8572	0.0303	0.0	2.21E-06	2.53E-04	3.85E-03	2.17E-02	6.95E-02
12	10	46	47	24160.56	1	3499.97	2.8572	0.0303	0.0	0.0	1.22E-04	2.68E-03	1.92E-02	7.34E-02
13	11	38	39	24814.72	1	3500.41	2.8568	0.0303	0.0	0.0	7.81E-05	1.88E-03	1.43E-02	5.72E-02
5	3	83	84	18698.40	2	3500.43	2.8568	0.0303	0.0	0.0	1.41E-05	1.40E-04	5.94E-04	1.56E-03
10	8	60	61	23062.32	1	3500.94	2.8564	0.0303	0.0	1.36E-06	2.21E-04	4.13E-03	2.66E-02	9.43E-02
14	12	29	30	25573.73	1	3501.77	2.8557	0.0340	0.0	0.0	4.22E-05	1.13E-03	9.29E-03	3.91E-02
8	6	65	66	19781.77	2	3501.94	2.8556	0.0303	0.0	0.0	1.57E-05	1.83E-04	8.59E-04	2.43E-03
15	13	19	20	26527.02	1	3502.09	2.8554	0.0535	0.0	0.0	1.73E-05	5.32E-04	4.78E-03	2.15E-02
11	9	53	54	23529.98	1	3502.15	2.8554	0.0303	0.0	0.0	1.78E-04	3.55E-03	2.39E-02	8.76E-02
2	0	104	105	20633.65	1	3502.89	2.8548	0.0303	0.0	0.0	3.81E-05	5.02E-04	2.57E-03	7.70E-03
16	14	7	8	27741.09	1	3503.06	2.8546	0.0623	0.0	0.0	3.50E-06	1.28E-04	1.29E-03	6.32E-03
5	3	89	90	21252.63	1	3503.10	2.8546	0.0303	0.0	2.16E-06	2.26E-04	3.26E-03	1.77E-02	5.53E-02
6	4	77	78	18941.66	2	3503.19	2.8545	0.0303	0.0	0.0	1.71E-05	1.76E-04	7.63E-04	2.04E-03
7	5	71	72	19303.21	2	3503.70	2.8541	0.0303	0.0	0.0	1.76E-05	1.91E-04	8.68E-04	2.35E-03
7	5	78	79	21803.77	1	3503.78	2.8541	0.0303	0.0	2.51E-06	3.01E-04	4.69E-03	2.68E-02	8.72E-02
4	2	88	89	18265.99	2	3504.32	2.8536	0.0303	0.0	0.0	1.18E-05	1.10E-04	4.49E-04	1.14E-03
9	7	66	67	22522.63	1	3504.33	2.8536	0.0303	0.0	1.95E-06	2.78E-04	4.81E-03	2.94E-02	1.01E-01
3	1	99	100	20755.00	1	3504.57	2.8534	0.0303	0.0	1.10E-06	1.03E-04	1.38E-03	7.11E-03	2.15E-02
4	2	94	95	20961.57	1	3504.64	2.8534	0.0303	0.0	1.76E-06	1.72E-04	2.38E-03	1.26E-02	3.86E-02
8	6	72	73	22102.62	1	3505.27	2.8528	0.0303	0.0	2.40E-06	3.09E-04	5.03E-03	2.96E-02	9.82E-02
13	11	37	38	24681.22	1	3506.41	2.8519	0.0303	0.0	0.0	8.40E-05	1.98E-03	1.49E-02	5.91E-02
12	10	45	46	23998.83	1	3506.51	2.8518	0.0303	0.0	0.0	1.35E-04	2.89E-03	2.04E-02	7.71E-02
3	1	93	94	17914.32	2	3506.68	2.8517	0.0303	0.0	0.0	7.80E-06	6.95E-05	2.73E-04	6.79E-04
15	13	18	19	26459.40	1	3506.78	2.8516	0.0552	0.0	0.0	1.73E-05	5.28E-04	4.71E-03	2.11E-02
16	14	6	7	27714.25	1	3506.90	2.8515	0.0620	0.0	0.0	3.13E-06	1.14E-04	1.15E-03	5.61E-03
14	12	28	29	25471.62	1	3507.15	2.8513	0.0359	0.0	0.0	4.41E-05	1.17E-03	9.48E-03	3.96E-02
2	0	98	99	17644.22	2	3507.50	2.8510	0.0303	0.0	0.0	3.24E-06	2.78E-05	1.06E-04	2.60E-04
10	8	59	60	22850.43	1	3508.43	2.8503	0.0303	0.0	1.65E-06	2.53E-04	4.60E-03	2.90E-02	1.01E-01
6	4	83	84	21327.55	1	3508.95	2.8499	0.0303	0.0	2.92E-06	3.12E-04	4.54E-03	2.48E-02	7.80E-02
5	3	82	83	18411.21	2	3508.95	2.8499	0.0303	0.0	0.0	1.72E-05	1.64E-04	6.76E-04	1.74E-03
11	9	52	53	23343.22	1	3509.17	2.8497	0.0303	0.0	1.16E-06	2.00E-04	3.90E-03	2.58E-02	9.33E-02
8	6	64	65	19558.57	2	3509.37	2.8495	0.0303	0.0	0.0	1.82E-05	2.05E-04	9.45E-04	2.63E-03
16	14	5	6	27690.77	1	3510.67	2.8485	0.0617	0.0	0.0	2.74E-06	9.97E-05	1.00E-03	4.88E-03
6	4	76	77	18675.82	2	3511.36	2.8479	0.0303	0.0	0.0	2.05E-05	2.03E-04	8.59E-04	2.25E-03
15	13	17	18	26395.14	1	3511.40	2.8479	0.0568	0.0	0.0	1.73E-05	5.21E-04	4.63E-03	2.06E-02
7	5	70	71	19058.71	2	3511.51	2.8478	0.0303	0.0	0.0	2.07E-05	2.17E-04	9.54E-04	2.57E-03
9	7	65	66	22288.82	1	3512.21	2.8472	0.0303	0.0	2.41E-06	3.25E-04	5.43E-03	3.25E-02	1.09E-01
13	11	36	37	24551.07	1	3512.35	2.8471	0.0308	0.0	0.0	9.01E-05	2.09E-03	1.55E-02	6.10E-02
7	5	77	78	21525.99	1	3512.45	2.8470	0.0303	0.0	3.25E-06	3.64E-04	5.46E-03	3.04E-02	9.69E-02
5	3	88	89	20934.01	1	3512.46	2.8470	0.0303	0.0	2.91E-06	2.82E-04	3.89E-03	2.04E-02	6.26E-02
14	12	27	28	25372.88	1	3512.47	2.8470	0.0379	0.0	0.0	4.59E-05	1.20E-03	9.65E-03	4.01E-02
12	10	44	45	23840.43	1	3513.00	2.8466	0.0303	0.0	0.0	1.49E-04	3.11E-03	2.16E-02	8.08E-02
4	2	87	88	17960.53	2	3513.15	2.8464	0.0303	0.0	0.0	1.46E-05	1.31E-04	5.16E-04	1.29E-03
2	0	103	104	20258.50	1	3513.19	2.8464	0.0303	0.0	0.0	4.95E-05	6.19E-04	3.06E-03	8.92E-03
8	6	71	72	21846.84	1	3513.54	2.8461	0.0303	0.0	3.04E-06	3.67E-04	5.77E-03	3.31E-02	1.08E-01
4	2	93	94	20624.10	1	3514.33	2.8455	0.0303	0.0	2.41E-06	2.18E-04	2.87E-03	1.46E-02	4.39E-02
16	14	4	5	27670.64	1	3514.37	2.8455	0.0614	0.0	0.0	2.33E-06	8.44E-05	8.47E-04	4.12E-03
3	1	98	99	20398.68	1	3514.56	2.8453	0.0303	0.0	1.54E-06	1.31E-04	1.67E-03	8.37E-03	2.47E-02
3	1	92	93	17590.57	2	3515.80	2.8443	0.0303	0.0	0.0	9.76E-06	8.29E-05	3.16E-04	7.69E-04
10	8	58	59	22641.83	1	3515.85	2.8443	0.0303	0.0	1.99E-06	2.91E-04	5.12E-03	3.17E-02	1.09E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	13	16	17	26334.25	1	3515.96	2.8442	0.0585	0.0	0.0	1.71E-05	5.12E-04	4.52E-03	2.00E-02
11	9	51	52	23159.78	1	3516.13	2.8440	0.0303	0.0	1.36E-06	2.25E-04	4.27E-03	2.78E-02	9.91E-02
8	6	63	64	19338.57	2	3516.75	2.8435	0.0303	0.0	0.0	2.11E-05	2.30E-04	1.04E-03	2.84E-03
2	0	97	98	17302.17	2	3516.92	2.8434	0.0303	0.0	0.0	4.11E-06	3.35E-05	1.24E-04	2.96E-04
5	3	81	82	18127.12	2	3517.43	2.8430	0.0303	0.0	0.0	2.09E-05	1.91E-04	7.68E-04	1.94E-03
14	12	26	27	25277.50	1	3517.73	2.8427	0.0398	0.0	0.0	4.77E-05	1.23E-03	9.79E-03	4.04E-02
6	4	82	83	21030.94	1	3517.94	2.8426	0.0303	0.0	3.84E-06	3.82E-04	5.34E-03	2.83E-02	8.74E-02
16	14	3	4	27653.86	1	3518.01	2.8425	0.0611	0.0	0.0	1.89E-06	6.85E-05	6.86E-04	3.33E-03
13	11	35	36	24424.27	1	3518.22	2.8423	0.0312	0.0	0.0	9.64E-05	2.19E-03	1.61E-02	6.27E-02
7	5	69	70	18817.38	2	3519.25	2.8415	0.0303	0.0	0.0	2.44E-05	2.47E-04	1.06E-03	2.80E-03
12	10	43	44	23685.38	1	3519.42	2.8414	0.0303	0.0	0.0	1.63E-04	3.34E-03	2.29E-02	8.46E-02
6	4	75	76	18413.12	2	3519.47	2.8413	0.0303	0.0	0.0	2.45E-05	2.34E-04	9.65E-04	2.48E-03
9	7	64	65	22058.29	1	3520.03	2.8409	0.0303	0.0	2.97E-06	3.78E-04	6.13E-03	3.59E-02	1.19E-01
15	13	15	16	26276.73	1	3520.44	2.8406	0.0591	0.0	0.0	1.68E-05	5.00E-04	4.39E-03	1.94E-02
7	5	76	77	21251.42	1	3521.05	2.8401	0.0303	0.0	4.18E-06	4.39E-04	6.33E-03	3.43E-02	1.07E-01
16	14	2	3	27640.44	1	3521.57	2.8396	0.0609	0.0	0.0	1.44E-06	5.19E-05	5.20E-04	2.52E-03
8	6	70	71	21594.31	1	3521.76	2.8395	0.0303	0.0	3.82E-06	4.36E-04	6.60E-03	3.70E-02	1.18E-01
5	3	87	88	20618.54	1	3521.77	2.8395	0.0303	0.0	3.90E-06	3.51E-04	4.63E-03	2.36E-02	7.08E-02
4	2	86	87	17658.15	2	3521.93	2.8394	0.0303	0.0	0.0	1.80E-05	1.54E-04	5.92E-04	1.45E-03
14	12	25	26	25185.49	1	3522.91	2.8386	0.0418	0.0	0.0	4.93E-05	1.25E-03	9.90E-03	4.06E-02
11	9	50	51	22979.66	1	3523.02	2.8385	0.0303	0.0	1.59E-06	2.52E-04	4.66E-03	2.98E-02	1.05E-01
10	8	57	58	22436.54	1	3523.21	2.8383	0.0303	0.0	2.39E-06	3.33E-04	5.69E-03	3.45E-02	1.17E-01
2	0	102	103	19886.39	1	3523.44	2.8381	0.0303	0.0	0.0	6.42E-05	7.61E-04	3.62E-03	1.03E-02
4	2	92	93	20289.75	1	3523.95	2.8377	0.0303	0.0	3.29E-06	2.74E-04	3.45E-03	1.70E-02	4.99E-02
13	11	34	35	24300.84	1	3524.03	2.8377	0.0317	0.0	0.0	1.03E-04	2.30E-03	1.67E-02	6.44E-02
8	6	62	63	19121.76	2	3524.07	2.8376	0.0303	0.0	0.0	2.43E-05	2.57E-04	1.14E-03	3.07E-03
3	1	97	98	20045.44	1	3524.50	2.8373	0.0303	0.0	2.14E-06	1.68E-04	2.03E-03	9.83E-03	2.83E-02
15	13	14	15	26222.57	1	3524.86	2.8370	0.0597	0.0	0.0	1.65E-05	4.86E-04	4.25E-03	1.87E-02
3	1	91	92	17269.87	2	3524.88	2.8370	0.0303	0.0	0.0	1.22E-05	9.88E-05	3.65E-04	8.69E-04
16	14	1	2	27630.37	1	3525.06	2.8368	0.0606	0.0	0.0	0.0	3.50E-05	3.50E-04	1.69E-03
12	10	42	43	23533.68	1	3525.77	2.8363	0.0303	0.0	0.0	1.78E-04	3.57E-03	2.41E-02	8.83E-02
5	3	80	81	17846.16	2	3525.85	2.8362	0.0303	0.0	0.0	2.53E-05	2.23E-04	8.71E-04	2.16E-03
2	0	96	97	16963.14	2	3526.29	2.8358	0.0303	0.0	0.0	5.20E-06	4.04E-05	1.45E-04	3.38E-04
6	4	81	82	20737.52	1	3526.87	2.8354	0.0303	0.0	5.05E-06	4.68E-04	6.27E-03	3.24E-02	9.78E-02
7	5	68	69	18579.22	2	3526.95	2.8353	0.0303	0.0	0.0	2.86E-05	2.80E-04	1.17E-03	3.06E-03
6	4	74	75	18153.57	2	3527.53	2.8348	0.0303	0.0	0.0	2.92E-05	2.69E-04	1.08E-03	2.74E-03
9	7	63	64	21831.04	1	3527.80	2.8346	0.0303	0.0	3.65E-06	4.40E-04	6.89E-03	3.95E-02	1.29E-01
14	12	24	25	25096.85	1	3528.03	2.8344	0.0437	0.0	0.0	5.08E-05	1.27E-03	9.98E-03	4.07E-02
16	14	0	1	27623.66	1	3528.49	2.8341	0.0603	0.0	0.0	0.0	1.76E-05	1.76E-04	8.53E-04
15	13	13	14	26171.80	1	3529.21	2.8335	0.0604	0.0	0.0	1.60E-05	4.69E-04	4.08E-03	1.79E-02
7	5	75	76	20980.08	1	3529.59	2.8332	0.0303	0.0	5.37E-06	5.28E-04	7.32E-03	3.87E-02	1.19E-01
13	11	33	34	24180.77	1	3529.78	2.8330	0.0321	0.0	0.0	1.09E-04	2.40E-03	1.72E-02	6.60E-02
11	9	49	50	22802.87	1	3529.85	2.8330	0.0303	0.0	1.85E-06	2.82E-04	5.08E-03	3.20E-02	1.11E-01
8	6	69	70	21345.04	1	3529.91	2.8329	0.0303	0.0	4.80E-06	5.15E-04	7.53E-03	4.12E-02	1.30E-01
10	8	56	57	22234.55	1	3530.51	2.8325	0.0303	0.0	2.86E-06	3.80E-04	6.30E-03	3.76E-02	1.26E-01
4	2	85	86	17358.87	2	3530.65	2.8323	0.0303	0.0	0.0	2.21E-05	1.82E-04	6.78E-04	1.62E-03
5	3	86	87	20306.23	1	3531.02	2.8320	0.0303	0.0	5.22E-06	4.36E-04	5.49E-03	2.72E-02	7.99E-02
8	6	61	62	18908.16	2	3531.34	2.8318	0.0303	0.0	0.0	2.79E-05	2.87E-04	1.24E-03	3.31E-03
12	10	41	42	23385.33	1	3532.07	2.8312	0.0303	0.0	1.11E-06	1.95E-04	3.82E-03	2.54E-02	9.21E-02
14	12	23	24	25011.59	1	3533.09	2.8304	0.0457	0.0	0.0	5.20E-05	1.29E-03	1.00E-02	4.06E-02
15	13	12	13	26124.39	1	3533.50	2.8301	0.0610	0.0	0.0	1.55E-05	4.50E-04	3.89E-03	1.70E-02
4	2	91	92	19958.52	1	3533.52	2.8300	0.0303	0.0	4.48E-06	3.45E-04	4.13E-03	1.98E-02	5.67E-02
2	0	101	102	19517.34	1	3533.64	2.8299	0.0303	0.0	1.20E-06	8.30E-05	9.33E-04	4.29E-03	1.19E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	90	91	16952.23	2	3533.90	2.8297	0.0303	0.0	0.0	1.51E-05	1.17E-04	4.21E-04	9.81E-04
5	3	79	80	17568.32	2	3534.21	2.8295	0.0303	0.0	0.0	3.06E-05	2.59E-04	9.86E-04	2.40E-03
3	1	96	97	19695.29	1	3534.39	2.8293	0.0303	0.0	2.96E-06	2.14E-04	2.47E-03	1.15E-02	3.25E-02
7	5	67	68	18344.26	2	3534.58	2.8292	0.0303	0.0	0.0	3.34E-05	3.17E-04	1.30E-03	3.33E-03
16	14	1	0	27620.30	1	3535.13	2.8287	0.0603	0.0	0.0	0.0	1.78E-05	1.78E-04	8.62E-04
13	11	32	33	24064.08	1	3535.46	2.8285	0.0326	0.0	0.0	1.16E-04	2.50E-03	1.78E-02	6.74E-02
9	7	62	63	21607.08	1	3535.50	2.8285	0.0303	0.0	4.46E-06	5.10E-04	7.74E-03	4.34E-02	1.39E-01
6	4	73	74	17897.18	2	3535.53	2.8284	0.0303	0.0	0.0	3.47E-05	3.08E-04	1.21E-03	3.01E-03
2	0	95	96	16627.14	2	3535.61	2.8284	0.0303	0.0	0.0	6.56E-06	4.86E-05	1.69E-04	3.85E-04
6	4	80	81	20447.30	1	3535.74	2.8283	0.0303	0.0	6.60E-06	5.71E-04	7.34E-03	3.69E-02	1.09E-01
11	9	48	49	22629.43	1	3536.62	2.8276	0.0303	0.0	2.15E-06	3.14E-04	5.52E-03	3.42E-02	1.18E-01
15	13	11	12	26080.36	1	3537.71	2.8267	0.0617	0.0	0.0	1.48E-05	4.28E-04	3.69E-03	1.61E-02
10	8	55	56	22035.89	1	3537.75	2.8267	0.0303	0.0	3.41E-06	4.32E-04	6.97E-03	4.08E-02	1.35E-01
8	6	68	69	21099.03	1	3538.01	2.8264	0.0303	0.0	6.01E-06	6.08E-04	8.57E-03	4.58E-02	1.42E-01
14	12	22	23	24929.71	1	3538.08	2.8264	0.0476	0.0	0.0	5.31E-05	1.30E-03	1.00E-02	4.05E-02
7	5	74	75	20711.97	1	3538.08	2.8264	0.0303	0.0	6.87E-06	6.34E-04	8.46E-03	4.36E-02	1.31E-01
12	10	40	41	23240.34	1	3538.29	2.8262	0.0303	0.0	1.25E-06	2.12E-04	4.06E-03	2.67E-02	9.58E-02
16	14	2	1	27623.66	1	3538.35	2.8262	0.0606	0.0	0.0	0.0	3.58E-05	3.57E-04	1.73E-03
8	6	60	61	18697.77	2	3538.54	2.8260	0.0303	0.0	0.0	3.20E-05	3.19E-04	1.35E-03	3.56E-03
4	2	84	85	17062.69	2	3539.32	2.8254	0.0303	0.0	0.0	2.71E-05	2.14E-04	7.75E-04	1.82E-03
5	3	85	86	19997.09	1	3540.22	2.8247	0.0303	0.0	6.96E-06	5.41E-04	6.51E-03	3.13E-02	9.00E-02
16	14	87	86	39830.51	1	3540.95	2.8241	0.0303	0.0	0.0	0.0	2.14E-06	6.89E-05	7.70E-04
13	11	31	32	23950.76	1	3541.07	2.8240	0.0331	0.0	0.0	1.22E-04	2.60E-03	1.82E-02	6.87E-02
16	14	3	2	27630.37	1	3541.50	2.8237	0.0609	0.0	0.0	1.49E-06	5.37E-05	5.37E-04	2.60E-03
15	13	10	11	26039.71	1	3541.86	2.8234	0.0625	0.0	0.0	1.40E-05	4.03E-04	3.46E-03	1.50E-02
7	5	66	67	18112.48	2	3542.16	2.8231	0.0303	0.0	0.0	3.90E-05	3.58E-04	1.43E-03	3.62E-03
5	3	78	79	17293.62	2	3542.52	2.8228	0.0303	0.0	0.0	3.69E-05	3.01E-04	1.12E-03	2.66E-03
3	1	89	90	16637.68	2	3542.87	2.8226	0.0303	0.0	0.0	1.88E-05	1.39E-04	4.85E-04	1.11E-03
14	12	21	22	24851.22	1	3543.00	2.8225	0.0496	0.0	0.0	5.40E-05	1.31E-03	1.00E-02	4.02E-02
4	2	90	91	19630.43	1	3543.03	2.8224	0.0303	0.0	6.08E-06	4.32E-04	4.94E-03	2.29E-02	6.43E-02
9	7	61	62	21386.43	1	3543.14	2.8224	0.0303	0.0	5.44E-06	5.89E-04	8.67E-03	4.76E-02	1.51E-01
11	9	47	48	22459.34	1	3543.33	2.8222	0.0303	0.0	2.49E-06	3.49E-04	5.99E-03	3.65E-02	1.24E-01
6	4	72	73	17643.96	2	3543.48	2.8221	0.0303	0.0	0.0	4.12E-05	3.53E-04	1.35E-03	3.31E-03
2	0	100	101	19151.35	1	3543.78	2.8218	0.0303	0.0	1.69E-06	1.07E-04	1.14E-03	5.07E-03	1.37E-02
16	14	86	85	39557.56	1	3544.20	2.8215	0.0303	0.0	0.0	0.0	2.46E-06	7.72E-05	8.48E-04
3	1	95	96	19348.24	1	3544.22	2.8215	0.0303	0.0	4.09E-06	2.72E-04	2.99E-03	1.35E-02	3.71E-02
12	10	39	40	23098.72	1	3544.46	2.8213	0.0303	0.0	1.40E-06	2.29E-04	4.32E-03	2.80E-02	9.94E-02
6	4	79	80	20160.30	1	3544.56	2.8212	0.0303	0.0	8.61E-06	6.96E-04	8.58E-03	4.19E-02	1.22E-01
16	14	4	3	27640.44	1	3544.57	2.8212	0.0611	0.0	0.0	1.98E-06	7.16E-05	7.17E-04	3.48E-03
2	0	94	95	16294.18	2	3544.88	2.8210	0.0303	0.0	0.0	8.26E-06	5.83E-05	1.96E-04	4.37E-04
10	8	54	55	21840.56	1	3544.93	2.8209	0.0303	0.0	4.06E-06	4.90E-04	7.70E-03	4.42E-02	1.44E-01
8	6	59	60	18490.61	2	3545.69	2.8203	0.0303	0.0	0.0	3.67E-05	3.55E-04	1.47E-03	3.82E-03
15	13	9	10	26002.45	1	3545.94	2.8201	0.0624	0.0	0.0	1.32E-05	3.76E-04	3.22E-03	1.39E-02
8	6	67	68	20856.30	1	3546.05	2.8200	0.0303	0.0	7.49E-06	7.15E-04	9.74E-03	5.09E-02	1.55E-01
7	5	73	74	20447.11	1	3546.51	2.8197	0.0303	0.0	8.76E-06	7.59E-04	9.75E-03	4.90E-02	1.45E-01
13	11	30	31	23840.83	1	3546.62	2.8196	0.0335	0.0	0.0	1.28E-04	2.69E-03	1.87E-02	6.99E-02
16	14	85	84	39287.42	1	3547.37	2.8190	0.0303	0.0	0.0	0.0	2.83E-06	8.65E-05	9.32E-04
16	14	5	4	27653.86	1	3547.58	2.8188	0.0614	0.0	0.0	2.46E-06	8.93E-05	8.95E-04	4.35E-03
14	12	20	21	24776.12	1	3547.86	2.8186	0.0515	0.0	0.0	5.47E-05	1.31E-03	9.97E-03	3.98E-02
4	2	83	84	16769.63	2	3547.94	2.8185	0.0303	0.0	0.0	3.32E-05	2.51E-04	8.85E-04	2.04E-03
5	3	84	85	19691.13	1	3549.35	2.8174	0.0303	0.0	9.25E-06	6.68E-04	7.70E-03	3.60E-02	1.01E-01
7	5	65	66	17883.92	2	3549.68	2.8172	0.0303	0.0	0.0	4.54E-05	4.03E-04	1.58E-03	3.93E-03
15	13	8	9	25968.57	1	3549.95	2.8169	0.0624	0.0	0.0	1.22E-05	3.46E-04	2.95E-03	1.28E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	46	47	22292.60	1	3549.97	2.8169	0.0303	0.0	2.87E-06	3.87E-04	6.48E-03	3.88E-02	1.31E-01
16	14	64	83	39020.11	1	3550.46	2.8165	0.0303	0.0	0.0	0.0	3.24E-06	9.67E-05	1.02E-03
16	14	6	5	27670.64	1	3550.51	2.8165	0.0617	0.0	0.0	2.93E-06	1.07E-04	1.07E-03	5.21E-03
12	10	38	39	22960.48	1	3550.56	2.8165	0.0303	0.0	1.57E-06	2.48E-04	4.58E-03	2.92E-02	1.03E-01
9	7	60	61	21169.09	1	3550.72	2.8163	0.0303	0.0	6.60E-06	6.80E-04	9.69E-03	5.22E-02	1.62E-01
5	3	77	78	17022.07	2	3550.78	2.8163	0.0303	0.0	1.17E-06	4.45E-05	3.48E-04	1.26E-03	2.95E-03
6	4	71	72	17393.93	2	3551.37	2.8158	0.0303	0.0	1.17E-06	4.88E-05	4.03E-04	1.51E-03	3.62E-03
3	1	88	89	16326.21	2	3551.79	2.8155	0.0303	0.0	0.0	2.33E-05	1.65E-04	5.59E-04	1.25E-03
10	8	53	54	21648.56	1	3552.04	2.8153	0.0303	0.0	4.80E-06	5.55E-04	8.48E-03	4.78E-02	1.54E-01
13	11	29	30	23734.29	1	3552.11	2.8152	0.0340	0.0	0.0	1.34E-04	2.77E-03	1.91E-02	7.09E-02
4	2	89	90	19305.50	1	3552.49	2.8149	0.0303	0.0	8.21E-06	5.41E-04	5.90E-03	2.66E-02	7.28E-02
14	12	19	20	24704.41	1	3552.65	2.8148	0.0535	0.0	0.0	5.51E-05	1.31E-03	9.87E-03	3.92E-02
8	6	58	59	18286.68	2	3552.78	2.8147	0.0303	0.0	0.0	4.19E-05	3.94E-04	1.61E-03	4.10E-03
6	4	78	79	19876.52	1	3553.31	2.8143	0.0303	0.0	1.12E-05	8.45E-04	1.00E-02	4.76E-02	1.36E-01
16	14	7	6	27690.77	1	3553.38	2.8142	0.0620	0.0	0.0	3.39E-06	1.24E-04	1.24E-03	6.06E-03
16	14	83	82	38755.64	1	3553.47	2.8141	0.0303	0.0	0.0	0.0	3.71E-06	1.08E-04	1.12E-03
2	0	99	100	18788.44	1	3553.87	2.8138	0.0303	0.0	2.37E-06	1.38E-04	1.40E-03	5.98E-03	1.58E-02
15	13	7	8	25938.07	1	3553.90	2.8138	0.0623	0.0	0.0	1.11E-05	3.15E-04	2.68E-03	1.16E-02
3	1	94	95	19004.32	1	3553.99	2.8137	0.0303	0.0	5.64E-06	3.46E-04	3.61E-03	1.58E-02	4.24E-02
8	6	66	67	20616.86	1	3554.02	2.8137	0.0303	0.0	9.30E-06	8.39E-04	1.10E-02	5.64E-02	1.69E-01
2	0	93	94	15964.29	2	3554.10	2.8137	0.0303	0.0	0.0	1.04E-05	6.99E-05	2.28E-04	4.97E-04
7	5	72	73	20185.51	1	3554.88	2.8130	0.0303	0.0	1.11E-05	9.06E-04	1.12E-02	5.49E-02	1.60E-01
16	14	8	7	27714.25	1	3556.17	2.8120	0.0623	0.0	0.0	3.83E-06	1.40E-04	1.41E-03	6.89E-03
16	14	82	81	38494.02	1	3556.39	2.8118	0.0303	0.0	0.0	0.0	4.24E-06	1.20E-04	1.23E-03
4	2	82	83	16479.69	2	3556.50	2.8118	0.0303	0.0	1.22E-06	4.06E-05	2.94E-04	1.01E-03	2.27E-03
11	9	45	46	22129.23	1	3556.55	2.8117	0.0303	0.0	3.30E-06	4.27E-04	6.99E-03	4.13E-02	1.37E-01
12	10	37	38	22825.61	1	3556.60	2.8117	0.0303	0.0	1.74E-06	2.67E-04	4.83E-03	3.05E-02	1.06E-01
7	5	64	65	17658.56	2	3557.15	2.8112	0.0303	0.0	1.19E-06	5.27E-05	4.53E-04	1.74E-03	4.25E-03
14	12	18	19	24636.09	1	3557.37	2.8111	0.0552	0.0	0.0	5.52E-05	1.30E-03	9.74E-03	3.85E-02
13	11	28	29	23631.13	1	3557.53	2.8109	0.0359	0.0	0.0	1.41E-04	2.86E-03	1.95E-02	7.19E-02
15	13	6	7	25910.95	1	3557.77	2.8107	0.0620	0.0	0.0	9.95E-06	2.81E-04	2.38E-03	1.03E-02
9	7	59	60	20955.06	1	3558.24	2.8104	0.0303	0.0	7.99E-06	7.81E-04	1.08E-02	5.70E-02	1.75E-01
5	3	83	84	19388.37	1	3558.43	2.8102	0.0303	0.0	1.23E-05	8.24E-04	9.09E-03	4.13E-02	1.14E-01
16	14	9	8	27741.09	1	3558.90	2.8099	0.0624	0.0	0.0	4.25E-06	1.56E-04	1.58E-03	7.71E-03
5	3	76	77	16753.69	2	3558.98	2.8098	0.0303	0.0	1.50E-06	5.34E-05	4.03E-04	1.42E-03	3.26E-03
10	8	52	53	21459.91	1	3559.10	2.8097	0.0303	0.0	5.67E-06	6.26E-04	9.31E-03	5.16E-02	1.64E-01
6	4	70	71	17147.08	2	3559.21	2.8096	0.0303	0.0	1.47E-06	5.76E-05	4.60E-04	1.68E-03	3.97E-03
16	14	81	80	38235.27	1	3559.24	2.8096	0.0303	0.0	0.0	0.0	4.84E-06	1.34E-04	1.34E-03
8	6	57	58	18085.99	2	3559.82	2.8091	0.0303	0.0	0.0	4.78E-05	4.37E-04	1.75E-03	4.40E-03
3	1	87	88	16017.84	2	3560.65	2.8085	0.0303	0.0	0.0	2.89E-05	1.96E-04	6.43E-04	1.41E-03
16	14	10	9	27771.27	1	3561.55	2.8078	0.0624	0.0	0.0	4.64E-06	1.71E-04	1.74E-03	8.50E-03
15	13	5	6	25887.22	1	3561.58	2.8077	0.0617	0.0	0.0	8.71E-06	2.45E-04	2.07E-03	8.93E-03
4	2	88	89	18983.73	1	3561.89	2.8075	0.0303	0.0	1.11E-05	6.76E-04	7.05E-03	3.08E-02	8.25E-02
8	6	65	66	20380.71	1	3561.94	2.8075	0.0303	0.0	1.15E-05	9.82E-04	1.25E-02	6.24E-02	1.84E-01
16	14	80	79	37979.39	1	3562.00	2.8074	0.0303	0.0	0.0	0.0	5.51E-06	1.49E-04	1.47E-03
6	4	77	78	19595.97	1	3562.01	2.8074	0.0303	0.0	1.45E-05	1.02E-03	1.17E-02	5.39E-02	1.51E-01
14	12	17	18	24571.17	1	3562.03	2.8074	0.0568	0.0	0.0	5.51E-05	1.28E-03	9.56E-03	3.76E-02
12	10	36	37	22694.13	1	3562.57	2.8070	0.0308	0.0	1.93E-06	2.87E-04	5.10E-03	3.18E-02	1.10E-01
13	11	27	28	23531.37	1	3562.88	2.8067	0.0379	0.0	0.0	1.47E-04	2.94E-03	1.98E-02	7.27E-02
11	9	44	45	21969.23	1	3563.07	2.8066	0.0303	0.0	3.77E-06	4.71E-04	7.53E-03	4.38E-02	1.44E-01
7	5	71	72	19927.18	1	3563.19	2.8065	0.0303	0.0	1.41E-05	1.08E-03	1.29E-02	6.15E-02	1.76E-01
2	0	92	93	15637.47	2	3563.26	2.8064	0.0303	0.0	0.0	1.30E-05	8.35E-05	2.64E-04	5.63E-04
3	1	93	94	18663.53	1	3563.71	2.8061	0.0303	0.0	7.75E-06	4.37E-04	4.35E-03	1.84E-02	4.83E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	98	99	18428.62	1	3563.90	2.8059	0.0303	0.0	3.32E-06	1.77E-04	1.70E-03	7.05E-03	1.82E-02
16	14	11	10	27804.81	1	3564.13	2.8057	0.0625	0.0	0.0	5.01E-06	1.86E-04	1.89E-03	9.27E-03
7	5	63	64	17436.43	2	3564.56	2.8054	0.0303	0.0	1.46E-06	6.11E-05	5.08E-04	1.91E-03	4.60E-03
16	14	79	78	37726.41	1	3564.68	2.8053	0.0303	0.0	0.0	0.0	6.27E-06	1.65E-04	1.60E-03
4	2	81	82	16192.90	2	3565.01	2.8050	0.0303	0.0	1.59E-06	4.94E-05	3.44E-04	1.15E-03	2.54E-03
15	13	4	5	25866.88	1	3565.32	2.8048	0.0614	0.0	0.0	7.40E-06	2.07E-04	1.75E-03	7.53E-03
9	7	58	59	20744.37	1	3565.69	2.8045	0.0303	0.0	9.66E-06	8.98E-04	1.20E-02	6.23E-02	1.89E-01
10	8	51	52	21274.62	1	3566.09	2.8042	0.0303	0.0	6.67E-06	7.05E-04	1.02E-02	5.55E-02	1.74E-01
14	12	16	17	24509.65	1	3566.62	2.8038	0.0585	0.0	0.0	5.46E-05	1.26E-03	9.34E-03	3.66E-02
16	14	12	11	27841.70	1	3566.64	2.8038	0.0617	0.0	0.0	5.35E-06	1.99E-04	2.04E-03	1.00E-02
8	6	56	57	17888.55	2	3566.80	2.8036	0.0303	0.0	1.16E-06	5.44E-05	4.83E-04	1.90E-03	4.71E-03
6	4	69	70	16903.43	2	3566.99	2.8035	0.0303	0.0	1.84E-06	6.78E-05	5.23E-04	1.87E-03	4.34E-03
5	3	75	76	16488.47	2	3567.13	2.8034	0.0303	0.0	1.91E-06	6.40E-05	4.64E-04	1.59E-03	3.60E-03
16	14	78	77	37476.32	1	3567.28	2.8033	0.0303	0.0	0.0	0.0	7.11E-06	1.83E-04	1.74E-03
5	3	82	83	19088.83	1	3567.46	2.8031	0.0303	0.0	1.62E-05	1.01E-03	1.07E-02	4.72E-02	1.28E-01
13	11	26	27	23435.02	1	3568.17	2.8026	0.0398	0.0	0.0	1.52E-04	3.01E-03	2.01E-02	7.33E-02
12	10	35	36	22566.05	1	3568.48	2.8023	0.0312	0.0	2.13E-06	3.07E-04	5.36E-03	3.30E-02	1.13E-01
15	13	3	4	25849.93	1	3568.98	2.8019	0.0611	0.0	0.0	6.01E-06	1.68E-04	1.42E-03	6.09E-03
16	14	13	12	27881.92	1	3569.08	2.8018	0.0610	0.0	0.0	5.66E-06	2.12E-04	2.17E-03	1.07E-02
3	1	86	87	15712.59	2	3569.46	2.8015	0.0303	0.0	1.29E-06	3.57E-05	2.32E-04	7.39E-04	1.58E-03
11	9	43	44	21812.60	1	3569.53	2.8015	0.0303	0.0	4.30E-06	5.17E-04	8.09E-03	4.63E-02	1.51E-01
16	14	77	76	37229.15	1	3569.80	2.8013	0.0303	0.0	0.0	0.0	8.05E-06	2.02E-04	1.89E-03
8	6	64	65	20147.87	1	3569.80	2.8013	0.0303	0.0	1.42E-05	1.15E-03	1.41E-02	6.89E-02	2.00E-01
6	4	76	77	19318.68	1	3570.65	2.8006	0.0303	0.0	1.87E-05	1.24E-03	1.35E-02	6.10E-02	1.68E-01
14	12	15	16	24451.53	1	3571.14	2.8002	0.0591	0.0	0.0	5.38E-05	1.23E-03	9.08E-03	3.54E-02
4	2	87	88	18665.15	1	3571.24	2.8001	0.0303	0.0	1.49E-05	8.44E-04	8.40E-03	3.56E-02	9.34E-02
7	5	70	71	19672.14	1	3571.44	2.8000	0.0303	0.0	1.78E-05	1.28E-03	1.47E-02	6.88E-02	1.93E-01
16	14	14	13	27925.50	1	3571.44	2.8000	0.0604	0.0	0.0	5.93E-06	2.24E-04	2.30E-03	1.14E-02
7	5	62	63	17217.54	2	3571.92	2.7996	0.0303	0.0	1.77E-06	7.05E-05	5.69E-04	2.09E-03	4.97E-03
16	14	76	75	36984.90	1	3572.23	2.7994	0.0303	0.0	0.0	0.0	9.10E-06	2.23E-04	2.06E-03
2	0	91	92	15313.73	2	3572.37	2.7993	0.0303	0.0	0.0	1.63E-05	9.97E-05	3.06E-04	6.37E-04
15	13	2	3	25836.37	1	3572.58	2.7991	0.0609	0.0	0.0	4.57E-06	1.28E-04	1.08E-03	4.61E-03
10	8	50	51	21092.69	1	3573.02	2.7988	0.0303	0.0	7.82E-06	7.91E-04	1.12E-02	5.97E-02	1.85E-01
9	7	57	58	20537.02	1	3573.09	2.7987	0.0303	0.0	1.16E-05	1.03E-03	1.34E-02	6.79E-02	2.03E-01
3	1	92	93	18325.89	1	3573.37	2.7985	0.0303	0.0	1.06E-05	5.52E-04	5.24E-03	2.15E-02	5.50E-02
13	11	25	26	23342.06	1	3573.39	2.7985	0.0418	0.0	0.0	1.58E-04	3.07E-03	2.04E-02	7.37E-02
4	2	80	81	15909.25	2	3573.46	2.7984	0.0303	0.0	2.06E-06	6.00E-05	4.01E-04	1.30E-03	2.83E-03
8	6	55	56	17694.37	2	3573.72	2.7982	0.0303	0.0	1.38E-06	6.17E-05	5.33E-04	2.05E-03	5.04E-03
16	14	15	14	27972.41	1	3573.74	2.7982	0.0597	0.0	0.0	6.18E-06	2.34E-04	2.42E-03	1.20E-02
2	0	97	98	18071.92	1	3573.88	2.7981	0.0303	0.0	4.63E-06	2.27E-04	2.07E-03	8.30E-03	2.09E-02
15	13	93	92	39871.45	1	3573.96	2.7980	0.0303	0.0	0.0	0.0	2.02E-06	6.56E-05	7.36E-04
12	10	34	35	22441.36	1	3574.33	2.7977	0.0317	0.0	2.35E-06	3.28E-04	5.61E-03	3.42E-02	1.16E-01
16	14	75	74	36743.59	1	3574.59	2.7975	0.0303	0.0	0.0	0.0	1.03E-05	2.46E-04	2.23E-03
6	4	68	69	16662.99	2	3574.71	2.7974	0.0303	0.0	2.29E-06	7.97E-05	5.94E-04	2.07E-03	4.74E-03
5	3	74	75	16226.44	2	3575.22	2.7970	0.0303	0.0	2.44E-06	7.65E-05	5.35E-04	1.79E-03	3.97E-03
14	12	14	15	24396.82	1	3575.59	2.7967	0.0597	0.0	0.0	5.27E-05	1.20E-03	8.78E-03	3.41E-02
11	9	42	43	21659.36	1	3575.92	2.7965	0.0303	0.0	4.89E-06	5.66E-04	8.67E-03	4.89E-02	1.58E-01
16	14	16	15	28022.67	1	3575.96	2.7965	0.0591	0.0	0.0	6.38E-06	2.44E-04	2.54E-03	1.26E-02
15	13	1	2	25826.20	1	3576.11	2.7963	0.0606	0.0	0.0	3.08E-06	8.59E-05	7.23E-04	3.10E-03
5	3	81	82	18792.51	1	3576.42	2.7961	0.0303	0.0	2.13E-05	1.24E-03	1.26E-02	5.40E-02	1.43E-01
16	14	74	73	36505.22	1	3576.87	2.7957	0.0303	0.0	0.0	0.0	1.16E-05	2.71E-04	2.41E-03
8	6	63	64	19918.36	1	3577.60	2.7952	0.0303	0.0	1.75E-05	1.33E-03	1.59E-02	7.60E-02	2.17E-01
15	13	92	91	39578.67	1	3577.67	2.7951	0.0303	0.0	0.0	0.0	2.36E-06	7.42E-05	8.16E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	14	17	16	28076.27	1	3578.11	2.7948	0.0585	0.0	0.0	6.56E-06	2.53E-04	2.64E-03	1.32E-02
3	1	85	86	15410.46	2	3578.22	2.7947	0.0303	0.0	1.71E-06	4.40E-05	2.74E-04	8.48E-04	1.78E-03
13	11	24	25	23252.52	1	3578.55	2.7944	0.0437	0.0	0.0	1.62E-04	3.13E-03	2.06E-02	7.39E-02
16	14	73	72	36269.81	1	3579.06	2.7940	0.0303	0.0	0.0	0.0	1.30E-05	2.98E-04	2.61E-03
7	5	61	62	17001.87	2	3579.21	2.7939	0.0303	0.0	2.15E-06	8.13E-05	6.35E-04	2.29E-03	5.36E-03
6	4	75	76	19044.64	1	3579.23	2.7939	0.0303	0.0	2.41E-05	1.49E-03	1.57E-02	6.89E-02	1.86E-01
15	13	0	1	25819.42	1	3579.57	2.7936	0.0603	0.0	0.0	1.55E-06	4.33E-05	3.64E-04	1.56E-03
7	5	69	70	19420.38	1	3579.63	2.7936	0.0303	0.0	2.24E-05	1.52E-03	1.68E-02	7.67E-02	2.12E-01
10	8	49	50	20914.12	1	3579.89	2.7934	0.0303	0.0	9.14E-06	8.85E-04	1.22E-02	6.40E-02	1.96E-01
14	12	13	14	24345.52	1	3579.98	2.7933	0.0604	0.0	0.0	5.13E-05	1.16E-03	8.44E-03	3.27E-02
12	10	33	34	22320.07	1	3580.11	2.7932	0.0321	0.0	2.57E-06	3.49E-04	5.87E-03	3.53E-02	1.19E-01
16	14	18	17	28133.20	1	3580.19	2.7931	0.0568	0.0	0.0	6.69E-06	2.60E-04	2.73E-03	1.37E-02
9	7	56	57	20333.01	1	3580.43	2.7930	0.0303	0.0	1.40E-05	1.18E-03	1.49E-02	7.40E-02	2.18E-01
4	2	86	87	18349.76	1	3580.53	2.7929	0.0303	0.0	2.01E-05	1.05E-03	9.99E-03	4.11E-02	1.06E-01
8	6	54	55	17503.45	2	3580.58	2.7928	0.0303	0.0	1.64E-06	6.98E-05	5.87E-04	2.22E-03	5.38E-03
16	14	72	71	36037.37	1	3581.18	2.7924	0.0303	0.0	0.0	0.0	1.46E-05	3.26E-04	2.82E-03
15	13	91	90	39288.66	1	3581.30	2.7923	0.0303	0.0	0.0	0.0	2.73E-06	8.38E-05	9.03E-04
2	0	90	91	14993.09	2	3581.43	2.7922	0.0303	0.0	0.0	2.03E-05	1.19E-04	3.53E-04	7.20E-04
4	2	79	80	15628.77	2	3581.86	2.7918	0.0303	0.0	2.68E-06	7.28E-05	4.67E-04	1.48E-03	3.15E-03
16	14	19	18	28193.46	1	3582.20	2.7916	0.0552	0.0	0.0	6.80E-06	2.67E-04	2.82E-03	1.42E-02
11	9	41	42	21509.51	1	3582.25	2.7915	0.0303	0.0	5.53E-06	6.18E-04	9.26E-03	5.16E-02	1.64E-01
6	4	67	68	16425.77	2	3582.38	2.7914	0.0303	0.0	2.84E-06	9.34E-05	6.72E-04	2.29E-03	5.16E-03
3	1	91	92	17991.41	1	3582.98	2.7910	0.0303	0.0	1.45E-05	6.96E-04	6.29E-03	2.50E-02	6.26E-02
16	14	71	70	35807.91	1	3583.22	2.7908	0.0303	0.0	0.0	0.0	1.63E-05	3.57E-04	3.04E-03
5	3	73	74	15967.60	2	3583.26	2.7908	0.0303	0.0	3.09E-06	9.11E-05	6.14E-04	2.01E-03	4.37E-03
13	11	23	24	23166.39	1	3583.64	2.7905	0.0457	0.0	1.00E-06	1.67E-04	3.17E-03	2.07E-02	7.39E-02
2	0	96	97	17718.34	1	3583.80	2.7903	0.0303	0.0	6.45E-06	2.90E-04	2.52E-03	9.75E-03	2.40E-02
16	14	20	19	28257.05	1	3584.13	2.7901	0.0535	0.0	0.0	6.87E-06	2.72E-04	2.89E-03	1.46E-02
14	12	12	13	24297.62	1	3584.30	2.7899	0.0610	0.0	0.0	4.95E-05	1.11E-03	8.05E-03	3.11E-02
15	13	90	89	39001.43	1	3584.85	2.7895	0.0303	0.0	0.0	0.0	3.17E-06	9.44E-05	9.99E-04
16	14	70	69	35581.43	1	3585.17	2.7893	0.0303	0.0	0.0	0.0	1.82E-05	3.91E-04	3.27E-03
5	3	80	81	18499.43	1	3585.33	2.7891	0.0303	0.0	2.80E-05	1.52E-03	1.48E-02	6.16E-02	1.60E-01
8	6	62	63	19692.16	1	3585.33	2.7891	0.0303	0.0	2.14E-05	1.55E-03	1.79E-02	8.36E-02	2.35E-01
12	10	32	33	22202.19	1	3585.82	2.7888	0.0326	0.0	2.80E-06	3.69E-04	6.12E-03	3.64E-02	1.22E-01
16	14	21	20	28323.98	1	3585.99	2.7886	0.0515	0.0	0.0	6.90E-06	2.76E-04	2.95E-03	1.50E-02
15	13	1	0	25816.03	1	3586.29	2.7884	0.0603	0.0	0.0	1.57E-06	4.38E-05	3.68E-04	1.58E-03
7	5	60	61	16789.46	2	3586.46	2.7883	0.0303	0.0	2.60E-06	9.34E-05	7.08E-04	2.50E-03	5.77E-03
10	8	48	49	20738.93	1	3586.69	2.7881	0.0303	0.0	1.06E-05	9.88E-04	1.33E-02	6.85E-02	2.07E-01
3	1	84	85	15111.48	2	3586.92	2.7879	0.0303	0.0	2.25E-06	5.41E-05	3.23E-04	9.70E-04	2.00E-03
16	14	69	68	35357.96	1	3587.05	2.7878	0.0303	0.0	0.0	0.0	2.03E-05	4.26E-04	3.51E-03
8	6	53	54	17315.80	2	3587.39	2.7875	0.0303	0.0	1.93E-06	7.88E-05	6.45E-04	2.40E-03	5.73E-03
9	7	55	56	20132.36	1	3587.70	2.7873	0.0303	0.0	1.67E-05	1.34E-03	1.65E-02	8.04E-02	2.33E-01
6	4	74	75	18773.88	1	3587.76	2.7873	0.0303	0.0	3.09E-05	1.80E-03	1.82E-02	7.77E-02	2.06E-01
7	5	68	69	19171.93	1	3587.77	2.7872	0.0303	0.0	2.81E-05	1.79E-03	1.92E-02	8.55E-02	2.32E-01
16	14	22	21	28394.22	1	3587.78	2.7872	0.0496	0.0	0.0	6.91E-06	2.79E-04	3.00E-03	1.54E-02
15	13	89	88	38717.00	1	3588.32	2.7868	0.0303	0.0	0.0	0.0	3.68E-06	1.07E-04	1.11E-03
11	9	40	41	21363.06	1	3588.51	2.7867	0.0303	0.0	6.23E-06	6.73E-04	9.88E-03	5.42E-02	1.71E-01
14	12	11	12	24253.14	1	3588.55	2.7866	0.0617	0.0	0.0	4.74E-05	1.05E-03	7.63E-03	2.94E-02
13	11	22	23	23083.67	1	3588.66	2.7866	0.0476	0.0	1.04E-06	1.70E-04	3.20E-03	2.07E-02	7.37E-02
16	14	68	67	35137.49	1	3588.84	2.7864	0.0303	0.0	0.0	0.0	2.26E-05	4.64E-04	3.77E-03
16	14	23	22	28467.79	1	3589.49	2.7859	0.0476	0.0	0.0	6.88E-06	2.81E-04	3.04E-03	1.56E-02
15	13	2	1	25819.42	1	3589.54	2.7859	0.0606	0.0	0.0	3.15E-06	8.79E-05	7.40E-04	3.17E-03
4	2	85	86	18037.58	1	3589.76	2.7857	0.0303	0.0	2.68E-05	1.30E-03	1.19E-02	4.73E-02	1.19E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	66	67	16191.77	2	3590.00	2.7855	0.0303	0.0	3.51E-06	1.09E-04	7.60E-04	2.54E-03	5.62E-03
4	2	78	79	15351.45	2	3590.20	2.7854	0.0303	0.0	3.46E-06	8.80E-05	5.43E-04	1.67E-03	3.49E-03
2	0	89	90	14675.56	2	3590.43	2.7852	0.0303	0.0	1.16E-06	2.52E-05	1.41E-04	4.07E-04	8.13E-04
16	14	67	66	34920.04	1	3590.56	2.7851	0.0303	0.0	0.0	0.0	2.51E-05	5.05E-04	4.04E-03
16	14	24	23	28544.68	1	3591.14	2.7846	0.0457	0.0	0.0	6.82E-06	2.81E-04	3.08E-03	1.59E-02
5	3	72	73	15711.97	2	3591.24	2.7846	0.0303	0.0	3.90E-06	1.08E-04	7.04E-04	2.24E-03	4.81E-03
12	10	31	32	22087.72	1	3591.48	2.7844	0.0331	0.0	3.04E-06	3.90E-04	6.36E-03	3.74E-02	1.24E-01
15	13	88	87	38435.39	1	3591.71	2.7842	0.0303	0.0	0.0	0.0	4.25E-06	1.20E-04	1.22E-03
16	14	66	65	34705.62	1	3592.20	2.7838	0.0303	0.0	0.0	0.0	2.78E-05	5.48E-04	4.32E-03
3	1	90	91	17660.10	1	3592.53	2.7836	0.0303	0.0	1.97E-05	8.75E-04	7.54E-03	2.90E-02	7.11E-02
16	14	25	24	28624.89	1	3592.71	2.7834	0.0437	0.0	0.0	6.74E-06	2.81E-04	3.10E-03	1.61E-02
15	13	3	2	25826.20	1	3592.72	2.7834	0.0609	0.0	0.0	4.73E-06	1.32E-04	1.11E-03	4.77E-03
14	12	10	11	24212.08	1	3592.73	2.7834	0.0625	0.0	0.0	4.49E-05	9.93E-04	7.16E-03	2.75E-02
8	6	61	62	19469.31	1	3593.01	2.7832	0.0303	0.0	2.62E-05	1.79E-03	2.01E-02	9.18E-02	2.55E-01
10	8	47	48	20567.13	1	3593.43	2.7829	0.0303	0.0	1.23E-05	1.10E-03	1.44E-02	7.32E-02	2.19E-01
13	11	21	22	23004.38	1	3593.62	2.7827	0.0496	0.0	1.08E-06	1.73E-04	3.22E-03	2.07E-02	7.32E-02
7	5	59	60	16580.31	2	3593.64	2.7827	0.0303	0.0	3.13E-06	1.07E-04	7.88E-04	2.73E-03	6.21E-03
2	0	95	96	17367.91	1	3593.66	2.7827	0.0303	0.0	8.94E-06	3.70E-04	3.06E-03	1.14E-02	2.75E-02
16	14	65	64	34494.25	1	3593.76	2.7826	0.0303	0.0	0.0	0.0	3.07E-05	5.94E-04	4.61E-03
8	6	52	53	17131.43	2	3594.13	2.7823	0.0303	0.0	2.27E-06	8.87E-05	7.06E-04	2.58E-03	6.09E-03
5	3	79	80	18209.59	1	3594.18	2.7823	0.0303	0.0	3.66E-05	1.86E-03	1.73E-02	7.02E-02	1.79E-01
16	14	26	25	28708.40	1	3594.20	2.7823	0.0418	0.0	0.0	6.63E-06	2.80E-04	3.11E-03	1.62E-02
11	9	39	40	21220.01	1	3594.72	2.7819	0.0303	0.0	7.00E-06	7.30E-04	1.05E-02	5.68E-02	1.78E-01
9	7	54	55	19935.07	1	3594.92	2.7817	0.0303	0.0	1.99E-05	1.52E-03	1.82E-02	8.72E-02	2.50E-01
15	13	87	86	38156.60	1	3595.01	2.7816	0.0303	0.0	0.0	0.0	4.92E-06	1.35E-04	1.35E-03
16	14	64	63	34285.92	1	3595.23	2.7815	0.0303	0.0	0.0	0.0	3.39E-05	6.42E-04	4.92E-03
3	1	83	84	14815.63	2	3595.57	2.7812	0.0303	0.0	2.96E-06	6.64E-05	3.79E-04	1.11E-03	2.24E-03
16	14	27	26	28795.22	1	3595.62	2.7812	0.0398	0.0	0.0	6.49E-06	2.78E-04	3.11E-03	1.63E-02
15	13	4	3	25836.37	1	3595.83	2.7810	0.0611	0.0	0.0	6.30E-06	1.76E-04	1.48E-03	6.37E-03
7	5	67	68	18926.79	1	3595.84	2.7810	0.0303	0.0	3.51E-05	2.12E-03	2.19E-02	9.50E-02	2.54E-01
6	4	73	74	18506.41	1	3596.22	2.7807	0.0303	0.0	3.96E-05	2.15E-03	2.10E-02	8.75E-02	2.27E-01
16	14	63	62	34080.64	1	3596.63	2.7804	0.0303	0.0	0.0	3.73E-05	6.93E-04	5.23E-03	
14	12	9	10	24174.43	1	3596.85	2.7802	0.0624	0.0	0.0	4.21E-05	9.27E-04	6.66E-03	2.55E-02
16	14	28	27	28885.35	1	3596.97	2.7801	0.0379	0.0	0.0	6.34E-06	2.75E-04	3.10E-03	1.64E-02
12	10	30	31	21976.67	1	3597.06	2.7800	0.0335	0.0	3.28E-06	4.11E-04	6.59E-03	3.83E-02	1.26E-01
6	4	65	66	15961.02	2	3597.56	2.7797	0.0303	0.0	4.32E-06	1.27E-04	8.58E-04	2.80E-03	6.10E-03
16	14	62	61	33878.44	1	3597.95	2.7794	0.0303	0.0	0.0	0.0	4.10E-05	7.47E-04	5.56E-03
15	13	86	85	37880.65	1	3598.23	2.7791	0.0303	0.0	0.0	0.0	5.67E-06	1.52E-04	1.49E-03
16	14	29	28	28978.78	1	3598.25	2.7791	0.0359	0.0	0.0	6.16E-06	2.71E-04	3.08E-03	1.64E-02
4	2	77	78	15077.32	2	3598.49	2.7789	0.0303	0.0	4.45E-06	1.06E-04	6.30E-04	1.89E-03	3.88E-03
13	11	20	21	22928.51	1	3598.51	2.7789	0.0515	0.0	1.12E-06	1.75E-04	3.23E-03	2.06E-02	7.24E-02
15	13	5	4	25849.93	1	3598.87	2.7786	0.0614	0.0	0.0	7.84E-06	2.19E-04	1.85E-03	7.96E-03
4	2	84	85	17728.62	1	3598.93	2.7786	0.0303	0.0	3.58E-05	1.62E-03	1.41E-02	5.45E-02	1.34E-01
5	3	71	72	15459.54	2	3599.16	2.7784	0.0303	0.0	4.92E-06	1.29E-04	8.05E-04	2.51E-03	5.28E-03
16	14	61	60	33679.31	1	3599.20	2.7784	0.0303	0.0	0.0	0.0	4.49E-05	8.04E-04	5.90E-03
2	0	88	89	14361.15	2	3599.38	2.7783	0.0303	0.0	1.56E-06	3.14E-05	1.68E-04	4.70E-04	9.19E-04
16	14	30	29	29075.50	1	3599.45	2.7782	0.0340	0.0	0.0	5.97E-06	2.66E-04	3.06E-03	1.64E-02
10	8	46	47	20398.72	1	3600.11	2.7777	0.0303	0.0	1.42E-05	1.22E-03	1.56E-02	7.80E-02	2.31E-01
16	14	60	59	33483.27	1	3600.36	2.7775	0.0303	0.0	0.0	0.0	4.92E-05	8.63E-04	6.26E-03
16	14	31	30	29175.52	1	3600.57	2.7773	0.0335	0.0	0.0	5.78E-06	2.61E-04	3.03E-03	1.64E-02
8	6	60	61	19249.80	1	3600.63	2.7773	0.0303	0.0	3.19E-05	2.07E-03	2.24E-02	1.01E-01	2.75E-01
7	5	58	59	16374.42	2	3600.77	2.7772	0.0303	0.0	3.76E-06	1.23E-04	8.76E-04	2.98E-03	6.67E-03
8	6	51	52	16950.35	2	3600.82	2.7771	0.0303	0.0	2.66E-06	9.95E-05	7.73E-04	2.77E-03	6.47E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	38	39	21080.37	1	3600.85	2.7771	0.0303	0.0	7.83E-06	7.90E-04	1.11E-02	5.95E-02	1.84E-01
14	12	8	9	24140.20	1	3600.90	2.7771	0.0624	0.0	0.0	3.90E-05	8.54E-04	6.12E-03	2.34E-02
15	13	85	84	37607.55	1	3601.37	2.7767	0.0303	0.0	0.0	0.0	6.53E-06	1.70E-04	1.64E-03
16	14	59	58	33290.32	1	3601.45	2.7767	0.0303	0.0	0.0	0.0	5.38E-05	9.27E-04	6.63E-03
16	14	32	31	29278.82	1	3601.63	2.7765	0.0331	0.0	0.0	5.57E-06	2.55E-04	3.00E-03	1.63E-02
15	13	6	5	25866.88	1	3601.84	2.7764	0.0617	0.0	0.0	9.34E-06	2.62E-04	2.22E-03	9.54E-03
3	1	89	90	17331.98	1	3602.03	2.7762	0.0303	0.0	2.67E-05	1.10E-03	9.01E-03	3.36E-02	8.06E-02
9	7	53	54	19741.15	1	3602.07	2.7762	0.0303	0.0	2.36E-05	1.73E-03	2.01E-02	9.44E-02	2.67E-01
16	14	58	57	33100.48	1	3602.45	2.7759	0.0303	0.0	0.0	0.0	5.87E-05	9.94E-04	7.02E-03
12	10	29	30	21869.04	1	3602.58	2.7758	0.0340	0.0	3.53E-06	4.31E-04	6.80E-03	3.92E-02	1.28E-01
16	14	33	32	29385.40	1	3602.60	2.7758	0.0326	0.0	0.0	5.35E-06	2.49E-04	2.95E-03	1.62E-02
5	3	78	79	17923.02	1	3602.98	2.7755	0.0303	0.0	4.77E-05	2.26E-03	2.02E-02	7.98E-02	1.90E-01
13	11	19	20	22856.06	1	3603.34	2.7752	0.0535	0.0	1.15E-06	1.77E-04	3.22E-03	2.04E-02	7.14E-02
16	14	57	56	32913.75	1	3603.38	2.7752	0.0303	0.0	0.0	0.0	6.39E-05	1.06E-03	7.41E-03
2	0	94	95	17020.62	1	3603.48	2.7751	0.0303	0.0	1.24E-05	4.71E-04	3.70E-03	1.34E-02	3.14E-02
16	14	34	33	29495.27	1	3603.51	2.7751	0.0321	0.0	0.0	5.12E-06	2.42E-04	2.90E-03	1.60E-02
7	5	66	67	18684.96	1	3603.85	2.7748	0.0303	0.0	4.38E-05	2.49E-03	2.48E-02	1.05E-01	2.77E-01
3	1	82	83	14522.95	2	3604.17	2.7746	0.0303	0.0	3.89E-06	8.13E-05	4.45E-04	1.27E-03	2.50E-03
16	14	56	55	32730.14	1	3604.23	2.7745	0.0303	0.0	0.0	0.0	6.05E-05	1.14E-03	7.82E-03
16	14	35	34	29608.40	1	3604.34	2.7744	0.0317	0.0	0.0	4.89E-06	2.35E-04	2.85E-03	1.58E-02
15	13	84	83	37337.31	1	3604.42	2.7744	0.0303	0.0	0.0	0.0	7.50E-06	1.91E-04	1.80E-03
6	4	72	73	18242.22	1	3604.63	2.7742	0.0303	0.0	5.04E-05	2.58E-03	2.41E-02	9.83E-02	2.51E-01
15	13	7	6	25887.22	1	3604.74	2.7741	0.0620	0.0	0.0	1.08E-05	3.04E-04	2.58E-03	1.11E-02
14	12	7	8	24109.38	1	3604.87	2.7740	0.0623	0.0	0.0	3.56E-05	7.76E-04	5.55E-03	2.11E-02
16	14	55	54	32549.66	1	3605.01	2.7739	0.0303	0.0	0.0	1.03E-06	7.54E-05	1.21E-03	8.23E-03
6	4	64	65	15733.51	2	3605.06	2.7739	0.0303	0.0	5.30E-06	1.48E-04	9.65E-04	3.08E-03	6.62E-03
16	14	36	35	29724.80	1	3605.09	2.7739	0.0312	0.0	0.0	4.65E-06	2.27E-04	2.78E-03	1.56E-02
16	14	54	53	32372.31	1	3605.70	2.7734	0.0303	0.0	0.0	1.14E-06	8.16E-05	1.29E-03	8.65E-03
16	14	37	36	29844.47	1	3605.77	2.7733	0.0308	0.0	0.0	4.41E-06	2.19E-04	2.72E-03	1.54E-02
16	14	53	52	32198.11	1	3606.32	2.7729	0.0303	0.0	0.0	1.26E-06	8.81E-05	1.37E-03	9.08E-03
16	14	38	37	29967.39	1	3606.37	2.7729	0.0303	0.0	0.0	4.17E-06	2.11E-04	2.65E-03	1.51E-02
10	8	45	46	20233.70	1	3606.73	2.7726	0.0303	0.0	1.64E-05	1.35E-03	1.68E-02	8.30E-02	2.43E-01
4	2	76	77	14806.39	2	3606.73	2.7726	0.0303	0.0	5.71E-06	1.28E-04	7.29E-04	2.13E-03	4.29E-03
16	14	52	51	32027.05	1	3606.86	2.7725	0.0303	0.0	0.0	1.39E-06	9.49E-05	1.45E-03	9.51E-03
16	14	39	38	30093.57	1	3606.90	2.7725	0.0303	0.0	0.0	3.93E-06	2.03E-04	2.57E-03	1.48E-02
11	9	37	38	20944.14	1	3606.93	2.7724	0.0303	0.0	8.72E-06	8.52E-04	1.18E-02	6.21E-02	1.91E-01
5	3	70	71	15210.34	2	3607.04	2.7724	0.0303	0.0	6.17E-06	1.52E-04	9.19E-04	2.79E-03	5.78E-03
16	14	51	50	31859.17	1	3607.32	2.7721	0.0303	0.0	0.0	1.54E-06	1.02E-04	1.53E-03	9.95E-03
16	14	40	39	30223.00	1	3607.35	2.7721	0.0303	0.0	0.0	3.69E-06	1.94E-04	2.49E-03	1.44E-02
15	13	83	82	37069.95	1	3607.39	2.7721	0.0303	0.0	0.0	0.0	8.60E-06	2.13E-04	1.97E-03
8	6	50	51	16772.57	2	3607.46	2.7720	0.0303	0.0	3.11E-06	1.11E-04	8.43E-04	2.97E-03	6.86E-03
15	13	8	7	25910.95	1	3607.57	2.7719	0.0623	0.0	0.0	1.22E-05	3.45E-04	2.93E-03	1.26E-02
16	14	50	49	31694.45	1	3607.71	2.7718	0.0303	0.0	0.0	1.69E-06	1.09E-04	1.62E-03	1.04E-02
16	14	41	40	30355.66	1	3607.73	2.7718	0.0303	0.0	0.0	3.46E-06	1.85E-04	2.41E-03	1.41E-02
7	5	57	58	16171.80	2	3607.84	2.7717	0.0303	0.0	4.51E-06	1.40E-04	9.72E-04	3.24E-03	7.16E-03
16	14	49	48	31532.90	1	3608.02	2.7716	0.0303	0.0	0.0	1.85E-06	1.17E-04	1.71E-03	1.08E-02
16	14	42	41	30491.56	1	3608.03	2.7716	0.0303	0.0	0.0	3.23E-06	1.76E-04	2.32E-03	1.37E-02
12	10	28	29	21764.84	1	3608.04	2.7716	0.0359	0.0	3.79E-06	4.51E-04	7.02E-03	4.01E-02	1.30E-01
4	2	83	84	17422.89	1	3608.05	2.7716	0.0303	0.0	4.75E-05	2.00E-03	1.66E-02	6.26E-02	1.51E-01
13	11	18	19	22787.05	1	3608.10	2.7715	0.0552	0.0	1.17E-06	1.77E-04	3.20E-03	2.01E-02	7.01E-02
8	6	59	60	19033.64	1	3608.18	2.7715	0.0303	0.0	3.86E-05	2.39E-03	2.51E-02	1.10E-01	2.96E-01
16	14	48	47	31374.53	1	3608.25	2.7714	0.0303	0.0	0.0	2.02E-06	1.25E-04	1.79E-03	1.13E-02
16	14	43	42	30630.69	1	3608.26	2.7714	0.0303	0.0	0.0	3.01E-06	1.68E-04	2.24E-03	1.33E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	87	86	14049.87	2	3608.28	2.7714	0.0303	0.0	2.09E-06	3.90E-05	1.09E-04	5.42E-04	1.04E-03
16	14	47	46	31219.36	1	3608.40	2.7713	0.0303	0.0	0.0	2.20E-06	1.33E-04	1.88E-03	1.17E-02
16	14	44	43	30773.04	1	3608.41	2.7713	0.0303	0.0	0.0	2.79E-06	1.59E-04	2.15E-03	1.29E-02
16	14	45	44	30918.60	1	3608.48	2.7712	0.0303	0.0	0.0	2.59E-06	1.50E-04	2.06E-03	1.25E-02
16	14	46	45	31067.38	1	3608.48	2.7712	0.0303	0.0	0.0	2.39E-06	1.42E-04	1.97E-03	1.21E-02
14	12	98	97	39712.19	1	3608.68	2.7711	0.0303	0.0	0.0	0.0	2.10E-05	5.70E-05	7.44E-04
14	12	8	7	24081.99	1	3608.78	2.7710	0.0620	0.0	0.0	3.19E-05	6.93E-04	4.94E-03	1.88E-02
9	7	52	53	19550.62	1	3609.16	2.7707	0.0303	0.0	2.79E-05	1.95E-03	2.21E-02	1.02E-01	2.88E-01
15	13	82	81	36805.48	1	3610.29	2.7699	0.0303	0.0	0.0	0.0	9.85E-06	2.39E-04	2.16E-03
15	13	9	8	25938.07	1	3610.33	2.7698	0.0624	0.0	0.0	1.35E-05	3.84E-04	3.27E-03	1.41E-02
3	1	88	89	17007.07	1	3611.46	2.7690	0.0303	0.0	3.62E-05	1.37E-03	1.08E-02	3.90E-02	9.14E-02
5	3	77	78	17639.71	1	3611.71	2.7688	0.0303	0.0	5.20E-05	2.74E-03	2.36E-02	9.05E-02	2.22E-01
7	5	65	66	18446.48	1	3611.81	2.7687	0.0303	0.0	5.43E-05	2.92E-03	2.81E-02	1.17E-01	3.02E-01
6	4	63	64	15509.25	2	3612.50	2.7682	0.0303	0.0	6.49E-06	1.72E-04	1.08E-03	3.39E-03	7.17E-03
14	12	5	6	24058.02	1	3612.62	2.7681	0.0617	0.0	0.0	2.79E-05	6.05E-04	4.30E-03	1.63E-02
3	1	81	82	14233.45	2	3612.71	2.7680	0.0303	0.0	5.09E-06	9.92E-05	5.21E-04	1.44E-03	2.79E-03
14	12	97	96	39402.37	1	3612.78	2.7680	0.0303	0.0	0.0	0.0	2.47E-06	7.65E-05	8.32E-04
13	11	17	18	22721.46	1	3612.79	2.7679	0.0568	0.0	1.18E-05	1.77E-04	3.15E-03	1.98E-02	6.86E-02
11	9	36	37	20811.34	1	3612.94	2.7678	0.0308	0.0	9.68E-06	9.16E-04	1.24E-02	6.47E-02	1.97E-01
6	4	71	72	17981.34	1	3612.97	2.7678	0.0303	0.0	6.40E-05	3.07E-03	2.78E-02	1.19E-01	2.76E-01
15	13	10	9	25968.57	1	3613.01	2.7678	0.0624	0.0	0.0	1.48E-05	4.21E-04	3.60E-03	1.56E-02
15	13	81	80	36543.91	1	3613.10	2.7677	0.0303	0.0	0.0	0.0	1.12E-05	2.85E-04	2.37E-03
2	0	93	94	16676.52	1	3613.23	2.7676	0.0303	0.0	1.70E-05	5.98E-04	4.47E-03	1.57E-02	3.59E-02
10	8	44	45	20072.09	1	3613.29	2.7676	0.0303	0.0	1.88E-05	1.49E-03	1.62E-02	8.81E-02	2.54E-01
12	10	27	28	21664.07	1	3613.43	2.7675	0.0379	0.0	4.06E-06	4.71E-04	7.22E-03	4.08E-02	1.32E-01
8	6	49	50	16598.08	2	3614.03	2.7670	0.0303	0.0	3.62E-06	1.24E-04	9.17E-04	3.18E-03	7.25E-03
7	5	56	57	15972.47	2	3614.85	2.7664	0.0303	0.0	5.39E-06	1.59E-04	1.08E-03	3.52E-03	7.68E-03
5	3	69	70	14964.37	2	3614.85	2.7664	0.0303	0.0	7.73E-06	1.79E-04	1.05E-03	3.11E-03	6.33E-03
4	2	75	76	14538.66	2	3614.91	2.7663	0.0303	0.0	7.31E-06	1.53E-04	8.42E-04	2.40E-03	4.75E-03
15	13	11	10	26002.45	1	3615.63	2.7658	0.0625	0.0	0.0	1.59E-05	4.56E-04	3.91E-03	1.70E-02
8	6	58	59	18820.86	1	3615.68	2.7657	0.0303	0.0	4.68E-05	2.75E-03	2.80E-02	1.20E-01	3.20E-01
15	13	80	79	36285.25	1	3615.83	2.7656	0.0303	0.0	0.0	0.0	1.28E-05	2.95E-04	2.59E-03
9	7	51	52	19363.47	1	3616.19	2.7653	0.0303	0.0	3.29E-05	2.20E-03	2.42E-02	1.10E-01	3.03E-01
14	12	4	5	24037.46	1	3616.40	2.7652	0.0614	0.0	0.0	2.37E-05	5.12E-04	3.63E-03	1.38E-02
14	12	96	95	39095.29	1	3616.80	2.7649	0.0303	0.0	0.0	0.0	2.90E-06	8.72E-05	9.28E-04
4	2	82	83	17120.41	1	3617.11	2.7646	0.0303	0.0	6.30E-05	2.46E-03	1.96E-02	7.17E-02	1.69E-01
2	0	86	87	13741.75	2	3617.13	2.7646	0.0303	0.0	2.79E-06	4.83E-05	2.36E-04	6.24E-04	1.17E-03
13	11	16	17	22659.31	1	3617.41	2.7644	0.0585	0.0	1.19E-06	1.76E-04	3.11E-03	1.93E-02	6.67E-02
15	13	12	11	26039.71	1	3618.17	2.7638	0.0617	0.0	0.0	1.70E-05	4.90E-04	4.21E-03	1.83E-02
15	13	79	78	36029.51	1	3618.47	2.7636	0.0303	0.0	0.0	0.0	1.46E-05	3.27E-04	2.97E-03
12	10	26	27	21566.74	1	3618.75	2.7634	0.0398	0.0	4.31E-06	4.89E-04	7.40E-03	4.14E-02	1.33E-01
11	9	35	36	20681.96	1	3618.88	2.7633	0.0312	0.0	1.07E-05	9.82E-04	1.31E-02	6.72E-02	2.03E-01
7	5	64	65	18211.34	1	3619.70	2.7627	0.0303	0.0	6.72E-05	3.41E-03	3.18E-02	1.29E-01	3.29E-01
10	8	43	44	19913.90	1	3619.78	2.7626	0.0303	0.0	2.15E-05	1.64E-03	1.95E-02	9.33E-02	2.67E-01
6	4	62	63	15288.27	2	3619.89	2.7626	0.0303	0.0	7.92E-06	1.99E-04	1.22E-03	3.72E-03	7.78E-03
14	12	3	4	24020.34	1	3620.10	2.7624	0.0611	0.0	0.0	1.93E-05	4.19E-04	2.94E-03	1.12E-02
5	3	76	77	17359.69	1	3620.39	2.7621	0.0303	0.0	8.03E-05	3.32E-03	2.74E-02	1.03E-01	2.46E-01
8	6	48	49	16426.90	2	3620.54	2.7620	0.0303	0.0	4.19E-06	1.38E-04	9.96E-04	3.40E-03	7.66E-03
15	13	13	12	26080.36	1	3620.65	2.7619	0.0618	0.0	0.0	1.80E-05	5.21E-04	4.50E-03	1.96E-02
14	12	95	94	38790.96	1	3620.73	2.7619	0.0303	0.0	0.0	0.0	3.39E-06	9.92E-05	1.03E-03
3	1	87	88	16685.38	1	3620.85	2.7618	0.0303	0.0	4.89E-05	1.77E-03	1.29E-02	4.52E-02	1.04E-01
15	13	78	77	35776.71	1	3621.04	2.7616	0.0303	0.0	0.0	0.0	1.66E-05	3.63E-04	3.08E-03
3	1	80	81	13947.12	2	3621.20	2.7615	0.0303	0.0	6.64E-06	1.21E-04	6.09E-04	1.64E-03	3.12E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	70	71	17723.78	1	3621.26	2.7615	0.0303	0.0	8.11E-05	3.66E-03	3.18E-02	1.23E-01	3.04E-01
7	5	55	56	15776.43	2	3621.80	2.7611	0.0303	0.0	6.42E-06	1.81E-04	1.19E-03	3.82E-03	8.22E-03
13	11	15	16	22600.61	1	3621.97	2.7609	0.0591	0.0	1.19E-06	1.73E-04	3.04E-03	1.88E-02	6.47E-02
5	3	68	69	14721.64	2	3622.61	2.7604	0.0303	0.0	9.64E-06	2.11E-04	1.19E-03	3.45E-03	6.92E-03
2	0	92	93	16335.59	1	3622.93	2.7602	0.0303	0.0	2.34E-05	7.57E-04	5.39E-03	1.83E-02	4.09E-02
4	2	74	75	14274.14	2	3623.04	2.7601	0.0303	0.0	9.33E-06	1.84E-04	9.71E-04	2.70E-03	5.24E-03
15	13	14	13	26124.39	1	3623.05	2.7601	0.0604	0.0	0.0	1.89E-05	5.50E-04	4.77E-03	2.09E-02
8	6	57	58	18611.44	1	3623.11	2.7601	0.0303	0.0	5.65E-05	3.15E-03	3.12E-02	1.31E-01	3.44E-01
9	7	50	51	19179.72	1	3623.15	2.7600	0.0303	0.0	3.86E-05	2.47E-03	2.65E-02	1.18E-01	3.22E-01
15	13	77	76	35526.85	1	3623.53	2.7597	0.0303	0.0	0.0	0.0	1.88E-05	4.02E-04	3.35E-03
14	12	2	3	24006.64	1	3623.73	2.7596	0.0609	0.0	0.0	1.47E-05	3.15E-04	2.23E-03	8.45E-03
12	10	25	26	21472.84	1	3624.01	2.7594	0.0418	0.0	4.57E-06	5.07E-04	7.56E-03	4.20E-02	1.34E-01
14	12	94	93	38489.41	1	3624.58	2.7589	0.0303	0.0	0.0	0.0	3.97E-06	1.13E-04	1.15E-03
11	9	34	35	20556.01	1	3624.76	2.7588	0.0317	0.0	1.18E-05	1.05E-03	1.37E-02	6.97E-02	2.08E-01
15	13	15	14	26171.80	1	3625.38	2.7583	0.0597	0.0	0.0	1.96E-05	5.76E-04	5.02E-03	2.20E-02
2	0	85	86	13436.77	2	3625.92	2.7579	0.0303	0.0	3.70E-06	5.96E-05	2.79E-04	7.16E-04	1.31E-03
15	13	76	75	35279.96	1	3625.93	2.7579	0.0303	0.0	0.0	0.0	2.13E-05	4.44E-04	3.64E-03
4	2	81	82	16821.19	1	3626.11	2.7578	0.0303	0.0	8.32E-05	3.02E-03	2.31E-02	8.21E-02	1.90E-01
10	8	42	43	19759.12	1	3626.20	2.7577	0.0303	0.0	2.44E-05	1.80E-03	2.09E-02	9.86E-02	2.79E-01
13	11	14	15	22545.34	1	3626.46	2.7575	0.0597	0.0	1.18E-06	1.70E-04	2.95E-03	1.82E-02	6.23E-02
8	6	47	48	16259.04	2	3627.00	2.7571	0.0303	0.0	4.84E-06	1.53E-04	1.08E-03	3.63E-03	8.08E-03
6	4	61	62	15070.55	2	3627.22	2.7569	0.0303	0.0	9.62E-06	2.29E-04	1.36E-03	4.08E-03	8.37E-03
14	12	1	2	23996.36	1	3627.30	2.7569	0.0606	0.0	0.0	9.89E-06	2.12E-04	1.59E-03	5.68E-03
7	5	63	64	17979.55	1	3627.53	2.7567	0.0303	0.0	8.28E-05	3.98E-03	3.59E-02	1.43E-01	3.57E-01
15	13	16	15	26222.57	1	3627.63	2.7566	0.0591	0.0	0.0	2.03E-05	6.00E-04	5.25E-03	2.31E-02
15	13	75	74	35036.03	1	3628.25	2.7561	0.0303	0.0	0.0	0.0	2.40E-05	4.90E-04	3.95E-03
14	12	93	92	38190.62	1	3628.35	2.7561	0.0303	0.0	0.0	0.0	4.63E-06	1.28E-04	1.28E-03
7	5	54	55	15583.68	2	3628.70	2.7558	0.0303	0.0	7.62E-06	2.05E-04	1.31E-03	4.13E-03	8.77E-03
5	3	75	76	17082.96	1	3629.01	2.7556	0.0303	0.0	1.04E-04	4.01E-03	3.18E-02	1.16E-01	2.74E-01
12	10	24	25	21382.39	1	3629.20	2.7554	0.0437	0.0	4.81E-06	5.22E-04	7.70E-03	4.24E-02	1.34E-01
6	4	69	70	17469.54	1	3629.49	2.7552	0.0303	0.0	1.02E-04	4.34E-03	3.64E-02	1.38E-01	3.34E-01
3	1	79	80	13663.99	2	3629.63	2.7551	0.0303	0.0	8.63E-06	1.47E-04	7.11E-04	1.86E-03	3.47E-03
15	13	17	16	26276.73	1	3629.82	2.7550	0.0585	0.0	0.0	2.08E-05	6.21E-04	5.46E-03	2.42E-02
9	7	49	50	18999.38	1	3630.06	2.7548	0.0303	0.0	4.52E-05	2.77E-03	2.90E-02	1.27E-01	3.41E-01
3	1	86	87	16366.91	1	3630.17	2.7547	0.0303	0.0	6.58E-05	2.14E-03	1.54E-02	5.22E-02	1.17E-01
5	3	67	68	14482.17	2	3630.32	2.7546	0.0303	0.0	1.20E-05	2.48E-04	1.35E-03	3.83E-03	7.55E-03
8	6	56	57	18405.41	1	3630.48	2.7545	0.0303	0.0	6.79E-05	3.61E-03	3.46E-02	1.43E-01	3.70E-01
15	13	74	73	34795.09	1	3630.50	2.7544	0.0303	0.0	0.0	0.0	2.71E-05	5.40E-04	4.29E-03
11	9	33	34	20433.50	1	3630.58	2.7544	0.0321	0.0	1.29E-05	1.12E-03	1.43E-02	7.21E-02	2.14E-01
14	12	0	1	23989.51	1	3630.79	2.7542	0.0603	0.0	0.0	4.99E-06	1.07E-04	7.56E-04	2.86E-03
13	11	13	14	22493.51	1	3630.88	2.7542	0.0604	0.0	1.17E-06	1.65E-04	2.85E-03	1.75E-02	5.97E-02
4	2	73	74	14012.86	2	3631.11	2.7540	0.0303	0.0	1.19E-05	2.19E-04	1.12E-03	3.03E-03	5.78E-03
15	13	18	17	26334.25	1	3631.93	2.7534	0.0568	0.0	0.0	2.13E-05	6.39E-04	5.65E-03	2.51E-02
14	12	92	91	37894.64	1	3632.03	2.7533	0.0303	0.0	0.0	0.0	5.40E-06	1.45E-04	1.42E-03
10	8	41	42	19607.77	1	3632.57	2.7529	0.0303	0.0	2.77E-05	1.96E-03	2.24E-02	1.04E-01	2.91E-01
2	0	91	92	15997.85	1	3632.58	2.7529	0.0303	0.0	3.20E-05	9.56E-04	6.49E-03	2.13E-02	4.66E-02
15	13	73	72	34557.13	1	3632.66	2.7528	0.0303	0.0	0.0	0.0	3.05E-05	5.94E-04	4.64E-03
8	6	46	47	16094.49	2	3633.39	2.7523	0.0303	0.0	5.57E-06	1.70E-04	1.17E-03	3.86E-03	8.50E-03
15	13	19	18	26395.14	1	3633.97	2.7518	0.0552	0.0	0.0	2.16E-05	6.54E-04	5.82E-03	2.60E-02
12	10	23	24	21295.39	1	3634.33	2.7515	0.0457	0.0	5.05E-06	5.36E-04	7.81E-03	4.26E-02	1.34E-01
6	4	60	61	14856.11	2	3634.50	2.7514	0.0303	0.0	1.17E-05	2.64E-04	1.52E-03	4.46E-03	9.02E-03
2	0	84	85	13134.97	2	3634.66	2.7513	0.0303	0.0	4.90E-06	7.34E-05	3.30E-04	8.21E-04	1.48E-03
15	13	72	71	34322.18	1	3634.74	2.7512	0.0303	0.0	0.0	0.0	3.42E-05	6.52E-04	5.01E-03

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	80	81	16525.24	1	3635.06	2.7510	0.0303	0.0	1.09E-04	3.71E-03	2.72E-02	9.38E-02	2.13E-01
13	11	12	13	22445.13	1	3635.24	2.7508	0.0610	0.0	1.14E-06	1.59E-04	2.74E-03	1.67E-02	5.68E-02
7	5	62	63	17751.12	1	3635.31	2.7508	0.0303	0.0	1.02E-04	4.62E-03	4.04E-02	1.57E-01	3.88E-01
7	5	53	54	15394.23	2	3635.54	2.7506	0.0303	0.0	9.00E-06	2.32E-04	1.44E-03	4.46E-03	9.36E-03
14	12	91	90	37601.46	1	3635.63	2.7506	0.0303	0.0	0.0	0.0	6.28E-06	1.64E-04	1.58E-03
15	13	20	19	26459.40	1	3635.94	2.7503	0.0535	0.0	0.0	2.18E-05	6.67E-04	5.97E-03	2.68E-02
11	9	32	33	20314.43	1	3636.33	2.7500	0.0326	0.0	1.41E-05	1.18E-03	1.50E-02	7.43E-02	2.19E-01
15	13	71	70	34090.25	1	3636.75	2.7497	0.0303	0.0	0.0	0.0	3.84E-05	7.15E-04	5.40E-03
9	7	48	49	18822.44	1	3636.90	2.7496	0.0303	0.0	5.27E-05	3.10E-03	3.16E-02	1.36E-01	3.61E-01
5	3	74	75	16809.55	1	3637.57	2.7491	0.0303	0.0	1.33E-04	4.84E-03	3.69E-02	1.31E-01	3.03E-01
14	12	1	0	23986.09	1	3637.58	2.7491	0.0603	0.0	0.0	5.05E-06	1.08E-04	7.65E-04	2.89E-03
6	4	68	69	17218.64	1	3637.66	2.7490	0.0303	0.0	1.29E-04	5.14E-03	4.16E-02	1.54E-01	3.66E-01
8	6	55	56	18202.77	1	3637.79	2.7489	0.0303	0.0	8.13E-05	4.12E-03	3.84E-02	1.56E-01	3.97E-01
15	13	21	20	26527.02	1	3637.84	2.7489	0.0515	0.0	0.0	2.19E-05	6.76E-04	6.10E-03	2.75E-02
5	3	66	67	14245.95	2	3637.96	2.7488	0.0303	0.0	1.48E-05	2.90E-04	1.53E-03	4.24E-03	8.22E-03
3	1	78	79	13384.06	2	3638.01	2.7488	0.0303	0.0	1.12E-05	1.78E-04	8.27E-04	2.11E-03	3.86E-03
15	13	70	69	33861.33	1	3638.67	2.7483	0.0303	0.0	0.0	0.0	4.29E-05	7.82E-04	5.82E-03
10	8	40	41	19459.85	1	3638.87	2.7481	0.0303	0.0	3.12E-05	2.14E-03	2.39E-02	1.09E-01	3.04E-01
4	2	72	73	13754.80	2	3639.13	2.7479	0.0303	0.0	1.50E-05	2.61E-04	1.28E-03	3.39E-03	6.36E-03
14	12	90	89	37311.09	1	3639.15	2.7479	0.0303	0.0	0.0	0.0	7.29E-06	1.85E-04	1.74E-03
12	10	22	23	21211.84	1	3639.39	2.7477	0.0476	0.0	5.26E-06	5.49E-04	7.89E-03	4.27E-02	1.34E-01
3	1	85	86	16051.69	1	3639.44	2.7477	0.0303	0.0	8.83E-05	2.67E-03	1.63E-02	6.03E-02	1.32E-01
13	11	11	12	22400.19	1	3639.52	2.7476	0.0617	0.0	1.10E-06	1.53E-04	2.60E-03	1.58E-02	5.37E-02
15	13	22	21	26598.00	1	3639.66	2.7475	0.0496	0.0	0.0	2.19E-05	6.83E-04	6.20E-03	2.81E-02
8	6	45	46	15933.27	2	3639.73	2.7475	0.0303	0.0	6.39E-06	1.87E-04	1.26E-03	4.10E-03	8.93E-03
15	13	69	68	33635.45	1	3640.51	2.7469	0.0303	0.0	0.0	0.0	4.79E-05	8.54E-04	6.26E-03
14	12	2	1	23989.51	1	3640.86	2.7466	0.0606	0.0	0.0	1.01E-05	2.17E-04	1.54E-03	5.81E-03
15	13	23	22	26672.34	1	3641.41	2.7462	0.0476	0.0	0.0	2.18E-05	6.88E-04	6.29E-03	2.86E-02
6	4	59	60	14644.96	2	3641.71	2.7460	0.0303	0.0	1.41E-05	3.03E-04	1.69E-03	4.87E-03	9.70E-03
13	11	103	102	39629.28	1	3641.78	2.7459	0.0303	0.0	0.0	0.0	2.05E-06	6.50E-05	7.19E-04
11	9	31	32	20198.81	1	3642.02	2.7457	0.0331	0.0	1.53E-05	1.25E-03	1.56E-02	7.65E-02	2.23E-01
2	0	90	91	15663.33	1	3642.16	2.7456	0.0303	0.0	4.37E-05	1.20E-03	7.79E-03	2.48E-02	5.30E-02
15	13	68	67	33412.62	1	3642.28	2.7455	0.0303	0.0	0.0	0.0	5.34E-05	9.31E-04	6.72E-03
7	5	52	53	15208.11	2	3642.32	2.7455	0.0303	0.0	1.06E-05	2.61E-04	1.58E-03	4.81E-03	9.96E-03
14	12	89	88	37023.57	1	3642.58	2.7453	0.0303	0.0	0.0	0.0	8.47E-06	2.09E-04	1.93E-03
7	5	61	62	17526.07	1	3643.02	2.7450	0.0303	0.0	1.25E-04	5.36E-03	4.54E-02	1.73E-01	4.20E-01
15	13	24	23	26750.03	1	3643.08	2.7449	0.0457	0.0	0.0	2.16E-05	6.89E-04	6.35E-03	2.90E-02
2	0	83	84	12836.35	2	3643.34	2.7447	0.0303	0.0	6.47E-06	9.03E-05	3.88E-04	9.40E-04	1.66E-03
9	7	47	48	18648.93	1	3643.68	2.7445	0.0303	0.0	6.12E-05	3.45E-03	3.43E-02	1.45E-01	3.82E-01
13	11	10	11	22358.71	1	3643.74	2.7444	0.0625	0.0	1.06E-06	1.45E-04	2.46E-03	1.49E-02	5.03E-02
4	2	79	80	16232.57	1	3643.95	2.7443	0.0303	0.0	1.44E-04	4.53E-03	3.19E-02	1.07E-01	2.38E-01
15	13	67	66	33192.84	1	3643.96	2.7443	0.0303	0.0	0.0	0.0	5.93E-05	1.01E-03	7.21E-03
14	12	3	2	23996.36	1	3644.08	2.7442	0.0609	0.0	0.0	1.52E-05	3.26E-04	2.31E-03	8.74E-03
12	10	21	22	21131.74	1	3644.38	2.7440	0.0496	0.0	5.46E-06	5.59E-04	7.94E-03	4.27E-02	1.33E-01
15	13	25	24	26831.07	1	3644.69	2.7437	0.0437	0.0	0.0	2.13E-05	6.89E-04	6.39E-03	2.94E-02
8	6	54	55	18003.52	1	3645.04	2.7435	0.0303	0.0	9.71E-05	4.69E-03	4.25E-02	1.69E-01	4.25E-01
10	8	39	40	19315.37	1	3645.11	2.7434	0.0303	0.0	3.51E-05	2.32E-03	2.54E-02	1.15E-01	3.16E-01
5	3	65	66	14013.01	2	3645.55	2.7431	0.0303	0.0	1.83E-05	3.39E-04	1.73E-03	4.68E-03	8.94E-03
15	13	66	65	32976.12	1	3645.56	2.7431	0.0303	0.0	0.0	0.0	6.58E-05	1.10E-03	7.71E-03
6	4	67	68	16971.09	1	3645.77	2.7429	0.0303	0.0	1.61E-04	6.07E-03	4.74E-02	1.71E-01	4.00E-01
14	12	88	87	36738.89	1	3645.93	2.7428	0.0303	0.0	0.0	0.0	9.82E-06	2.36E-04	2.14E-03
8	6	44	45	15775.39	2	3646.01	2.7427	0.0303	0.0	7.30E-06	2.06E-04	1.35E-03	4.34E-03	9.36E-03
5	3	73	74	16539.45	1	3646.07	2.7427	0.0303	0.0	1.71E-04	5.81E-03	4.27E-02	1.48E-01	3.35E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	13	26	25	26915.45	1	3646.22	2.7426	0.0418	0.0	0.0	2.10E-05	6.85E-04	6.41E-03	2.97E-02
13	11	102	101	39302.44	1	3646.27	2.7425	0.0303	0.0	0.0	0.0	2.44E-06	7.49E-05	8.10E-04
3	1	77	78	13107.35	2	3646.34	2.7425	0.0303	0.0	1.44E-05	2.15E-04	9.61E-04	2.39E-03	4.28E-03
4	2	71	72	13499.99	2	3647.09	2.7419	0.0303	0.0	1.90E-05	3.10E-04	1.47E-03	3.79E-03	6.99E-03
15	13	65	64	32762.48	1	3647.09	2.7419	0.0303	0.0	0.0	0.0	7.28E-05	1.19E-03	8.25E-03
14	12	4	3	24006.64	1	3647.22	2.7418	0.0611	0.0	0.0	2.02E-05	4.35E-04	3.08E-03	1.17E-02
11	9	30	31	20086.64	1	3647.64	2.7415	0.0335	0.0	1.66E-05	1.32E-03	1.61E-02	7.84E-02	2.27E-01
15	13	27	26	27003.18	1	3647.67	2.7415	0.0398	0.0	0.0	2.05E-05	6.79E-04	6.41E-03	2.98E-02
13	11	9	10	22320.67	1	3647.89	2.7413	0.0624	0.0	0.0	1.36E-04	2.29E-03	1.38E-02	4.66E-02
15	13	64	63	32551.91	1	3648.53	2.7408	0.0303	0.0	0.0	1.09E-06	8.04E-05	1.29E-03	8.80E-03
3	1	84	85	15739.73	1	3648.65	2.7407	0.0303	0.0	1.18E-04	3.31E-03	2.17E-02	6.95E-02	1.49E-01
6	4	58	59	14437.11	2	3648.87	2.7406	0.0303	0.0	1.70E-05	3.47E-04	1.88E-03	5.31E-03	1.04E-02
7	5	51	52	15025.29	2	3649.04	2.7404	0.0303	0.0	1.25E-05	2.94E-04	1.73E-03	5.17E-03	1.06E-02
15	13	28	27	27094.25	1	3649.06	2.7404	0.0379	0.0	0.0	2.00E-05	6.72E-04	6.39E-03	2.99E-02
14	12	87	86	36457.07	1	3649.20	2.7403	0.0303	0.0	0.0	0.0	1.14E-05	2.66E-04	2.36E-03
12	10	20	21	21055.10	1	3649.31	2.7402	0.0515	0.0	5.64E-06	5.66E-04	7.96E-03	4.25E-02	1.31E-01
15	13	63	62	32344.45	1	3649.90	2.7398	0.0303	0.0	0.0	1.24E-06	8.87E-05	1.40E-03	9.38E-03
14	12	5	4	24020.34	1	3650.30	2.7395	0.0614	0.0	0.0	2.52E-05	5.42E-04	3.85E-03	1.46E-02
15	13	29	28	27188.66	1	3650.37	2.7394	0.0359	0.0	0.0	1.95E-05	6.62E-04	6.36E-03	3.00E-02
9	7	46	47	18478.84	1	3650.39	2.7394	0.0303	0.0	7.08E-05	3.83E-03	3.72E-02	1.55E-01	4.02E-01
7	5	60	61	17304.39	1	3650.67	2.7392	0.0303	0.0	1.52E-04	6.21E-03	5.09E-02	1.89E-01	4.53E-01
13	11	101	100	38978.30	1	3650.67	2.7392	0.0303	0.0	0.0	0.0	2.89E-06	8.61E-05	9.11E-04
15	13	62	61	32140.09	1	3651.19	2.7388	0.0303	0.0	0.0	1.41E-06	9.75E-05	1.51E-03	9.97E-03
10	8	38	39	19174.33	1	3651.28	2.7388	0.0303	0.0	3.93E-05	2.52E-03	2.70E-02	1.20E-01	3.27E-01
15	13	30	29	27286.39	1	3651.60	2.7385	0.0340	0.0	0.0	1.89E-05	6.50E-04	6.30E-03	2.99E-02
2	0	89	90	15332.04	1	3651.70	2.7385	0.0303	0.0	5.94E-05	1.51E-03	9.34E-03	2.88E-02	6.02E-02
13	11	8	9	22286.09	1	3651.97	2.7382	0.0624	0.0	0.0	1.26E-04	2.11E-03	1.27E-02	4.27E-02
2	0	82	83	12540.93	2	3651.97	2.7382	0.0303	0.0	8.51E-06	1.11E-04	4.56E-04	1.07E-03	1.85E-03
8	6	43	44	15620.85	2	3652.23	2.7381	0.0303	0.0	8.31E-06	2.26E-04	1.46E-03	4.59E-03	9.79E-03
8	6	53	54	17807.68	1	3652.23	2.7381	0.0303	0.0	1.15E-04	5.32E-03	4.69E-02	1.83E-01	4.54E-01
14	12	86	85	36178.12	1	3652.39	2.7379	0.0303	0.0	0.0	0.0	1.31E-05	2.99E-04	2.61E-03
15	13	61	60	31938.83	1	3652.40	2.7379	0.0303	0.0	0.0	1.59E-06	1.07E-04	1.62E-03	1.06E-02
15	13	31	30	27387.45	1	3652.76	2.7377	0.0335	0.0	0.0	1.82E-05	6.37E-04	6.24E-03	2.98E-02
4	2	78	79	15943.20	1	3652.78	2.7376	0.0303	0.0	1.88E-04	5.53E-03	3.73E-02	1.22E-01	2.66E-01
5	3	64	65	13783.34	2	3653.09	2.7374	0.0303	0.0	2.26E-05	3.95E-04	1.95E-03	5.16E-03	9.71E-03
11	9	29	30	19977.94	1	3653.19	2.7373	0.0340	0.0	1.79E-05	1.38E-03	1.67E-02	8.03E-02	2.31E-01
14	12	6	5	24037.46	1	3653.30	2.7373	0.0617	0.0	0.0	3.00E-05	6.48E-04	4.60E-03	1.75E-02
15	13	60	59	31740.70	1	3653.53	2.7371	0.0303	0.0	0.0	1.79E-06	1.17E-04	1.74E-03	1.12E-02
6	4	66	67	16726.89	1	3653.82	2.7369	0.0303	0.0	2.01E-04	7.15E-03	5.40E-02	1.90E-01	4.37E-01
15	13	32	31	27491.84	1	3653.85	2.7368	0.0331	0.0	0.0	1.76E-05	6.23E-04	6.17E-03	2.97E-02
12	10	19	20	20981.92	1	3654.17	2.7366	0.0535	0.0	5.79E-06	5.71E-04	7.94E-03	4.21E-02	1.30E-01
5	3	72	73	16272.68	1	3654.51	2.7363	0.0303	0.0	2.18E-04	6.97E-03	4.92E-02	1.66E-01	3.70E-01
15	13	59	58	31545.70	1	3654.58	2.7363	0.0303	0.0	0.0	2.02E-06	1.28E-04	1.87E-03	1.19E-02
3	1	76	77	12833.86	2	3654.51	2.7363	0.0303	0.0	1.86E-05	2.59E-04	1.11E-03	2.70E-03	4.75E-03
15	13	33	32	27599.54	1	3654.86	2.7361	0.0326	0.0	0.0	1.69E-05	6.08E-04	6.08E-03	2.95E-02
13	11	100	99	38656.87	1	3654.99	2.7360	0.0303	0.0	0.0	0.0	3.43E-06	9.89E-05	1.02E-03
4	2	70	71	13248.44	2	3654.99	2.7360	0.0303	0.0	2.39E-05	3.68E-04	1.68E-03	4.23E-03	7.66E-03
14	12	85	84	35902.06	1	3655.50	2.7356	0.0303	0.0	0.0	0.0	1.51E-05	3.36E-04	2.87E-03
15	13	58	57	31353.83	1	3655.55	2.7356	0.0303	0.0	0.0	2.27E-06	1.40E-04	2.01E-03	1.26E-02
7	5	50	51	14845.80	2	3655.71	2.7354	0.0303	0.0	1.46E-05	3.29E-04	1.89E-03	5.55E-03	1.12E-02
15	13	34	33	27710.55	1	3655.80	2.7354	0.0321	0.0	0.0	1.61E-05	5.91E-04	5.97E-03	2.92E-02
6	4	57	58	14232.57	2	3655.98	2.7352	0.0303	0.0	2.04E-05	3.97E-04	2.09E-03	5.79E-03	1.12E-02
13	11	7	8	22254.96	1	3655.99	2.7352	0.0623	0.0	0.0	1.15E-04	1.92E-03	1.15E-02	3.87E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	12	7	6	24058.02	1	3656.24	2.7351	0.0620	0.0	0.0	3.47E-05	7.51E-04	5.35E-03	2.03E-02
15	13	57	56	31165.11	1	3656.45	2.7349	0.0303	0.0	0.0	2.54E-06	1.53E-04	2.15E-03	1.33E-02
15	13	35	34	27824.87	1	3656.66	2.7347	0.0317	0.0	0.0	1.54E-05	5.73E-04	5.85E-03	2.88E-02
9	7	45	46	18312.18	1	3657.05	2.7344	0.0303	0.0	8.16E-05	4.25E-03	4.03E-02	1.65E-01	4.24E-01
15	13	56	55	30979.55	1	3657.26	2.7343	0.0303	0.0	0.0	2.84E-06	1.67E-04	2.30E-03	1.41E-02
10	8	37	38	19036.74	1	3657.39	2.7342	0.0303	0.0	4.39E-05	2.72E-03	2.86E-02	1.26E-01	3.39E-01
15	13	36	35	27942.50	1	3657.45	2.7341	0.0312	0.0	0.0	1.46E-05	5.54E-04	5.72E-03	2.84E-02
3	1	83	84	15431.03	1	3657.81	2.7339	0.0303	0.0	1.57E-04	4.10E-03	2.57E-02	7.99E-02	1.68E-01
15	13	55	54	30797.15	1	3658.00	2.7337	0.0303	0.0	0.0	3.17E-06	1.81E-04	2.46E-03	1.48E-02
15	13	37	36	28063.42	1	3658.16	2.7336	0.0308	0.0	0.0	1.39E-05	5.34E-04	5.58E-03	2.79E-02
7	5	59	60	17086.11	1	3658.27	2.7335	0.0303	0.0	1.85E-04	7.16E-03	5.69E-02	2.07E-01	4.89E-01
8	6	42	43	15469.65	2	3658.39	2.7334	0.0303	0.0	9.42E-06	2.47E-04	1.55E-03	4.85E-03	1.02E-02
14	12	84	83	35628.90	1	3658.52	2.7333	0.0303	0.0	0.0	0.0	1.74E-05	3.76E-04	3.16E-03
15	13	54	53	30617.92	1	3658.67	2.7332	0.0303	0.0	0.0	3.52E-06	1.96E-04	2.62E-03	1.56E-02
11	9	28	29	19872.69	1	3658.68	2.7332	0.0359	0.0	1.92E-05	1.45E-03	1.72E-02	8.20E-02	2.34E-01
15	13	38	37	28187.63	1	3658.80	2.7331	0.0303	0.0	0.0	1.31E-05	5.14E-04	5.43E-03	2.74E-02
12	10	18	19	20912.20	1	3658.96	2.7330	0.0552	0.0	5.90E-06	5.73E-04	7.89E-03	4.15E-02	1.27E-01
14	12	8	7	24081.99	1	3659.10	2.7329	0.0623	0.0	0.0	3.92E-05	8.51E-04	6.07E-03	2.31E-02
13	11	99	98	38338.18	1	3659.22	2.7328	0.0303	0.0	0.0	0.0	4.05E-06	1.13E-04	1.15E-03
15	13	53	52	30441.87	1	3659.25	2.7328	0.0303	0.0	0.0	3.90E-06	2.12E-04	2.78E-03	1.64E-02
8	6	52	53	17615.26	1	3659.36	2.7327	0.0303	0.0	1.37E-04	6.03E-03	5.17E-02	1.98E-01	4.85E-01
15	13	39	38	28315.13	1	3659.36	2.7327	0.0303	0.0	0.0	1.23E-05	4.93E-04	5.27E-03	2.69E-02
15	13	52	51	30269.01	1	3659.76	2.7324	0.0303	0.0	0.0	4.31E-06	2.28E-04	2.95E-03	1.72E-02
15	13	40	39	28445.91	1	3659.85	2.7324	0.0303	0.0	0.0	1.16E-05	4.71E-04	5.11E-03	2.63E-02
13	11	6	7	22227.29	1	3659.93	2.7323	0.0620	0.0	0.0	1.03E-04	1.72E-03	1.02E-02	3.44E-02
15	13	51	50	30099.34	1	3660.19	2.7321	0.0303	0.0	0.0	4.76E-06	2.46E-04	3.12E-03	1.80E-02
15	13	41	40	28579.97	1	3660.26	2.7320	0.0303	0.0	0.0	1.08E-05	4.50E-04	4.94E-03	2.56E-02
15	13	50	49	29932.87	1	3660.54	2.7318	0.0303	0.0	0.0	5.23E-06	2.64E-04	3.30E-03	1.88E-02
2	0	81	82	12248.70	2	3660.55	2.7318	0.0303	0.0	1.12E-05	1.35E-04	5.35E-04	1.23E-03	2.07E-03
5	3	63	64	13556.96	2	3660.57	2.7318	0.0303	0.0	2.77E-05	4.59E-04	2.19E-03	5.68E-03	1.05E-02
15	13	42	41	28717.30	1	3660.60	2.7318	0.0303	0.0	0.0	1.01E-05	4.28E-04	4.76E-03	2.49E-02
15	13	49	48	29769.62	1	3660.81	2.7316	0.0303	0.0	0.0	5.74E-06	2.83E-04	3.48E-03	1.96E-02
15	13	43	42	28857.89	1	3660.86	2.7316	0.0303	0.0	0.0	9.40E-06	4.06E-04	4.58E-03	2.42E-02
15	13	48	47	29609.58	1	3661.01	2.7315	0.0303	0.0	0.0	6.27E-06	3.02E-04	3.66E-03	2.04E-02
15	13	44	43	29001.74	1	3661.04	2.7315	0.0303	0.0	0.0	8.72E-06	3.85E-04	4.40E-03	2.35E-02
15	13	47	46	29452.77	1	3661.13	2.7314	0.0303	0.0	0.0	6.84E-06	3.22E-04	3.85E-03	2.12E-02
15	13	45	44	29148.84	1	3661.15	2.7314	0.0303	0.0	0.0	8.06E-06	3.63E-04	4.22E-03	2.27E-02
2	0	88	89	15003.98	1	3661.17	2.7314	0.0303	0.0	8.08E-05	1.90E-03	1.12E-02	3.34E-02	6.84E-02
15	13	46	45	29299.19	1	3661.18	2.7314	0.0303	0.0	0.0	7.44E-06	3.43E-04	4.03E-03	2.20E-02
14	12	83	82	35358.64	1	3661.46	2.7312	0.0303	0.0	0.0	0.0	2.00E-05	4.21E-04	3.47E-03
4	2	77	78	15657.13	1	3661.55	2.7311	0.0303	0.0	2.45E-04	6.73E-03	4.35E-02	1.38E-01	2.96E-01
6	4	65	66	16486.06	1	3661.81	2.7309	0.0303	0.0	2.50E-04	8.40E-03	6.12E-02	2.11E-01	4.77E-01
14	12	9	8	24109.38	1	3661.89	2.7308	0.0624	0.0	0.0	4.34E-05	9.48E-04	6.78E-03	2.59E-02
7	5	49	50	14669.65	2	3662.31	2.7305	0.0303	0.0	1.70E-05	3.68E-04	2.06E-03	5.95E-03	1.19E-02
3	1	75	76	12563.62	2	3662.83	2.7301	0.0303	0.0	2.38E-05	3.12E-04	1.29E-03	3.04E-03	5.26E-03
4	2	69	70	13000.15	2	3662.84	2.7301	0.0303	0.0	2.99E-05	4.35E-04	1.92E-03	4.71E-03	8.40E-03
5	3	71	72	16009.24	1	3662.89	2.7301	0.0303	0.0	2.78E-04	8.33E-03	5.67E-02	1.86E-01	4.09E-01
6	4	56	57	14031.34	2	3663.02	2.7300	0.0303	0.0	2.44E-05	4.53E-04	2.32E-03	6.29E-03	1.20E-02
13	11	96	97	38022.23	1	3663.38	2.7297	0.0303	0.0	0.0	0.0	4.78E-06	1.30E-04	1.29E-03
10	8	36	37	18902.61	1	3663.44	2.7297	0.0308	0.0	4.88E-05	2.92E-03	3.02E-02	1.31E-01	3.50E-01
9	7	44	45	18148.97	1	3663.64	2.7295	0.0303	0.0	9.37E-05	4.69E-03	4.34E-02	1.75E-01	4.45E-01
12	10	17	18	20845.96	1	3663.69	2.7295	0.0568	0.0	5.99E-06	5.72E-04	7.81E-03	4.08E-02	1.25E-01
13	11	5	6	22203.07	1	3663.81	2.7294	0.0617	0.0	0.0	9.02E-05	1.50E-03	8.92E-03	2.99E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	27	28	19770.91	1	3664.11	2.7292	0.0379	0.0	2.05E-05	1.52E-03	1.77E-02	8.36E-02	2.37E-01
14	12	82	81	35091.32	1	3664.32	2.7290	0.0303	0.0	0.0	0.0	2.29E-05	4.71E-04	3.81E-03
8	6	41	42	15321.80	2	3664.49	2.7289	0.0303	0.0	1.06E-05	2.70E-04	1.66E-03	5.10E-03	1.07E-02
14	12	10	9	24140.20	1	3664.62	2.7288	0.0624	0.0	0.0	4.74E-05	1.04E-03	7.46E-03	2.85E-02
7	5	58	59	16871.22	1	3665.80	2.7279	0.0303	0.0	2.24E-04	8.25E-03	6.36E-02	2.27E-01	5.28E-01
8	6	51	52	17426.27	1	3666.42	2.7275	0.0303	0.0	1.62E-04	6.80E-03	5.68E-02	2.14E-01	5.17E-01
3	1	82	83	15125.61	1	3666.90	2.7271	0.0303	0.0	2.09E-04	5.07E-03	3.04E-02	9.18E-02	1.89E-01
14	12	81	80	34826.92	1	3667.10	2.7269	0.0303	0.0	0.0	0.0	2.63E-05	5.25E-04	4.18E-03
14	12	11	10	24174.43	1	3667.27	2.7268	0.0625	0.0	0.0	5.12E-05	1.13E-03	8.11E-03	3.11E-02
13	11	97	96	37709.03	1	3667.44	2.7267	0.0303	0.0	0.0	0.0	5.63E-06	1.48E-04	1.44E-03
13	11	4	5	22182.32	1	3667.62	2.7266	0.0614	0.0	0.0	7.66E-05	1.27E-03	7.54E-03	2.52E-02
5	3	62	63	13333.88	2	3667.99	2.7263	0.0303	0.0	3.38E-05	5.32E-04	2.46E-03	6.25E-03	1.14E-02
12	10	16	17	20783.18	1	3668.35	2.7260	0.0585	0.0	6.03E-06	5.68E-04	7.68E-03	3.99E-02	1.21E-01
7	5	48	49	14496.84	2	3668.86	2.7256	0.0303	0.0	1.97E-05	4.10E-04	2.24E-03	6.36E-03	1.26E-02
2	0	80	81	11959.70	2	3669.07	2.7255	0.0303	0.0	1.46E-05	1.65E-04	6.27E-04	1.40E-03	2.32E-03
10	8	35	36	18771.94	1	3669.42	2.7252	0.0312	0.0	5.40E-05	3.14E-03	3.18E-02	1.36E-01	3.61E-01
11	9	26	27	19672.59	1	3669.47	2.7252	0.0398	0.0	2.19E-05	1.58E-03	1.82E-02	8.50E-02	2.39E-01
6	4	64	65	16248.61	1	3669.74	2.7250	0.0303	0.0	3.10E-04	9.84E-03	6.93E-02	2.33E-01	5.20E-01
14	12	80	79	34565.47	1	3669.79	2.7250	0.0303	0.0	0.0	0.0	3.00E-05	5.85E-04	4.57E-03
14	12	12	11	24212.08	1	3669.85	2.7249	0.0617	0.0	0.0	5.46E-05	1.21E-03	8.74E-03	3.36E-02
6	4	55	56	13833.44	2	3670.01	2.7248	0.0303	0.0	2.91E-05	5.16E-04	2.56E-03	6.83E-03	1.29E-02
9	7	43	44	17989.20	1	3670.16	2.7247	0.0303	0.0	1.07E-04	5.16E-03	4.67E-02	1.86E-01	4.67E-01
4	2	76	77	15374.38	1	3670.26	2.7246	0.0303	0.0	3.17E-04	8.17E-03	5.08E-02	1.57E-01	3.30E-01
8	6	40	41	15177.32	2	3670.53	2.7244	0.0303	0.0	1.20E-05	2.93E-04	1.77E-03	5.36E-03	1.11E-02
2	0	87	88	14679.17	1	3670.59	2.7244	0.0303	0.0	1.09E-04	2.38E-03	1.34E-02	3.88E-02	7.76E-02
4	2	68	69	12755.13	2	3670.64	2.7243	0.0303	0.0	3.74E-05	5.13E-04	2.18E-03	5.24E-03	9.18E-03
3	1	74	75	12296.62	2	3670.99	2.7241	0.0303	0.0	3.05E-05	3.74E-04	1.49E-03	3.42E-03	5.81E-03
5	3	70	71	15749.16	1	3671.22	2.7239	0.0303	0.0	3.53E-04	9.93E-03	6.51E-02	2.09E-01	4.50E-01
13	11	3	4	22165.02	1	3671.35	2.7238	0.0611	0.0	0.0	6.23E-05	1.03E-03	6.11E-03	2.04E-02
13	11	96	95	37398.61	1	3671.43	2.7237	0.0303	0.0	0.0	0.0	6.62E-06	1.69E-04	1.61E-03
14	12	13	12	24253.14	1	3672.35	2.7231	0.0610	0.0	0.0	5.77E-05	1.29E-03	9.33E-03	3.60E-02
14	12	79	78	34306.98	1	3672.41	2.7230	0.0303	0.0	0.0	0.0	3.42E-05	6.51E-04	5.00E-03
12	10	15	16	20723.88	1	3672.94	2.7226	0.0591	0.0	6.04E-06	5.60E-04	7.51E-03	3.89E-02	1.18E-01
7	5	57	58	16659.74	1	3673.27	2.7224	0.0303	0.0	2.71E-04	9.49E-03	7.09E-02	2.48E-01	5.69E-01
8	6	50	51	17240.70	1	3673.42	2.7223	0.0303	0.0	1.90E-04	7.65E-03	6.22E-02	2.30E-01	5.49E-01
11	9	25	26	19577.75	1	3674.76	2.7213	0.0418	0.0	2.32E-05	1.63E-03	1.86E-02	8.61E-02	2.41E-01
14	12	14	13	24297.62	1	3674.79	2.7212	0.0604	0.0	0.0	6.05E-05	1.36E-03	9.89E-03	3.82E-02
14	12	78	77	34051.46	1	3674.94	2.7211	0.0303	0.0	0.0	0.0	3.89E-05	7.22E-04	5.45E-03
13	11	2	3	22151.18	1	3675.02	2.7211	0.0609	0.0	0.0	4.74E-05	7.81E-04	4.63E-03	1.55E-02
10	8	34	35	18644.73	1	3675.33	2.7208	0.0317	0.0	5.95E-05	3.35E-03	3.33E-02	1.41E-01	3.71E-01
13	11	95	94	37090.97	1	3675.33	2.7208	0.0303	0.0	0.0	0.0	7.77E-06	1.93E-04	1.79E-03
7	5	47	48	14327.37	2	3675.35	2.7208	0.0303	0.0	2.28E-05	4.55E-04	2.43E-03	6.79E-03	1.33E-02
5	3	61	62	13114.11	2	3675.36	2.7208	0.0303	0.0	4.12E-05	6.15E-04	2.75E-03	6.85E-03	1.23E-02
3	1	81	82	14823.48	1	3675.94	2.7204	0.0303	0.0	2.77E-04	6.24E-03	3.58E-02	1.45E-01	2.13E-01
8	6	39	40	15036.20	2	3676.52	2.7200	0.0303	0.0	1.34E-05	3.18E-04	1.88E-03	5.62E-03	1.15E-02
9	7	42	43	17832.88	1	3676.63	2.7199	0.0303	0.0	1.22E-04	5.67E-03	5.02E-02	1.97E-01	4.88E-01
6	4	54	55	13638.86	2	3676.94	2.7197	0.0303	0.0	3.46E-05	5.85E-04	2.83E-03	7.40E-03	1.38E-02
14	12	15	14	24345.52	1	3677.15	2.7195	0.0597	0.0	0.0	6.29E-05	1.42E-03	1.04E-02	4.04E-02
14	12	77	76	33798.93	1	3677.39	2.7193	0.0303	0.0	0.0	0.0	4.42E-05	8.01E-04	5.94E-03
12	10	14	15	20668.05	1	3677.47	2.7193	0.0597	0.0	6.00E-06	5.49E-04	7.31E-03	3.76E-02	1.13E-01
2	0	79	80	11673.92	2	3677.54	2.7192	0.0303	0.0	1.90E-05	2.01E-04	7.32E-04	1.69E-03	2.58E-03
6	4	63	64	16014.55	1	3677.61	2.7192	0.0303	0.0	3.83E-04	1.15E-02	7.83E-02	2.58E-01	5.65E-01
12	10	107	106	39279.59	1	3678.10	2.7188	0.0303	0.0	0.0	0.0	2.27E-06	6.95E-05	7.50E-04

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	INTEGRATED ABSORPTION COEFFICIENT CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	67	68	12513.40	2	3678.37	2.7186	0.0303	0.0	4.66E-05	6.03E-04	2.48E-03	5.82E-03	1.00E-02
13	11	1	2	22140.79	1	3678.62	2.7184	0.0606	0.0	0.0	3.20E-05	5.26E-04	3.12E-03	1.04E-02
4	2	75	76	15094.96	1	3678.92	2.7182	0.0303	0.0	4.11E-04	9.89E-03	5.90E-02	1.78E-01	3.66E-01
3	1	73	74	12032.87	2	3679.09	2.7181	0.0303	0.0	3.88E-05	4.47E-04	1.71E-03	3.85E-03	6.41E-03
13	11	94	93	36786.14	1	3679.15	2.7180	0.0303	0.0	0.0	0.0	9.10E-06	2.20E-04	2.00E-03
14	12	16	15	24396.82	1	3679.44	2.7178	0.0591	0.0	0.0	6.50E-05	1.48E-03	1.09E-02	4.24E-02
5	3	69	70	15492.44	1	3679.48	2.7178	0.0303	0.0	4.46E-04	1.18E-02	7.46E-02	2.34E-01	4.95E-01
14	12	76	75	33549.38	1	3679.77	2.7176	0.0303	0.0	0.0	0.0	5.01E-05	8.86E-04	6.46E-03
2	0	86	87	14357.63	1	3679.95	2.7174	0.0303	0.0	1.48E-04	2.98E-03	1.60E-02	4.49E-02	8.79E-02
11	9	24	25	19486.39	1	3679.99	2.7174	0.0437	0.0	2.44E-05	1.69E-03	1.89E-02	8.69E-02	2.42E-01
8	6	49	50	17058.57	1	3680.36	2.7171	0.0303	0.0	2.23E-04	8.59E-03	6.80E-02	2.47E-01	5.83E-01
7	5	56	57	16451.68	1	3680.68	2.7169	0.0303	0.0	3.26E-04	1.09E-02	7.89E-02	2.71E-01	6.12E-01
10	8	33	34	18521.00	1	3681.19	2.7165	0.0321	0.0	6.53E-05	3.57E-03	3.49E-02	1.46E-01	3.81E-01
14	12	17	16	24451.53	1	3681.66	2.7162	0.0585	0.0	0.0	6.67E-05	1.53E-03	1.13E-02	4.43E-02
7	5	46	47	14161.26	2	3681.78	2.7161	0.0303	0.0	2.63E-05	5.05E-04	2.63E-03	7.23E-03	1.40E-02
12	10	13	14	20615.70	1	3681.92	2.7160	0.0604	0.0	5.91E-06	5.35E-04	7.06E-03	3.61E-02	1.09E-01
14	12	75	74	33302.84	1	3682.06	2.7159	0.0303	0.0	0.0	0.0	5.66E-05	9.79E-04	7.02E-03
13	11	0	1	22133.87	1	3682.15	2.7158	0.0603	0.0	0.0	1.61E-05	2.65E-04	1.57E-03	5.23E-03
8	6	38	39	14898.44	2	3682.44	2.7156	0.0303	0.0	1.50E-05	3.43E-04	1.99E-03	5.87E-03	1.19E-02
5	3	60	61	12897.64	2	3682.67	2.7154	0.0303	0.0	5.00E-05	7.08E-04	3.08E-03	7.50E-03	1.33E-02
13	11	93	92	36484.12	1	3682.88	2.7153	0.0303	0.0	0.0	0.0	1.06E-05	2.50E-04	2.23E-03
12	10	106	105	38938.42	1	3682.89	2.7153	0.0303	0.0	0.0	0.0	2.72E-06	8.06E-05	8.51E-04
9	7	41	42	17680.03	1	3683.03	2.7152	0.0303	0.0	1.39E-04	6.20E-03	5.37E-02	2.08E-01	5.10E-01
14	12	18	17	24509.65	1	3683.81	2.7146	0.0568	0.0	0.0	6.81E-05	1.58E-03	1.17E-02	4.60E-02
6	4	53	54	13447.62	2	3683.82	2.7146	0.0303	0.0	4.09E-05	6.62E-04	3.11E-03	8.00E-03	1.47E-02
14	12	74	73	33059.32	1	3684.27	2.7142	0.0303	0.0	0.0	0.0	6.39E-05	1.08E-03	7.61E-03
3	1	80	81	14524.67	1	3684.92	2.7138	0.0303	0.0	3.65E-04	7.67E-03	4.22E-02	1.20E-01	2.38E-01
11	9	23	24	19398.52	1	3685.15	2.7136	0.0457	0.0	2.56E-05	1.73E-03	1.92E-02	8.75E-02	2.42E-01
6	4	62	63	15783.89	1	3685.42	2.7134	0.0303	0.0	4.72E-04	1.34E-02	8.83E-02	2.84E-01	6.14E-01
14	12	19	18	24571.17	1	3685.89	2.7130	0.0552	0.0	0.0	6.91E-05	1.61E-03	1.21E-02	4.76E-02
2	0	78	79	11391.37	2	3685.95	2.7130	0.0303	0.0	2.47E-05	2.44E-04	8.54E-04	1.80E-03	2.87E-03
4	2	66	67	12274.96	2	3686.06	2.7129	0.0303	0.0	5.79E-05	7.07E-04	2.81E-03	6.45E-03	1.09E-02
12	10	12	13	20566.83	1	3686.31	2.7127	0.0610	0.0	5.78E-06	5.16E-04	6.77E-03	3.45E-02	1.03E-01
14	12	73	72	32818.82	1	3686.40	2.7127	0.0303	0.0	0.0	0.0	7.20E-05	1.19E-03	8.24E-03
13	11	92	91	36184.92	1	3686.53	2.7126	0.0303	0.0	0.0	0.0	1.24E-05	2.83E-04	2.47E-03
10	8	32	33	18400.75	1	3686.97	2.7123	0.0326	0.0	7.13E-05	3.79E-03	3.64E-02	1.51E-01	3.90E-01
3	1	72	73	11772.40	2	3687.14	2.7121	0.0303	0.0	4.93E-05	5.34E-04	1.97E-03	4.31E-03	7.07E-03
8	6	48	49	16879.89	1	3687.24	2.7121	0.0303	0.0	2.60E-04	9.61E-03	7.42E-02	2.65E-01	6.18E-01
4	2	74	75	14818.89	1	3687.51	2.7119	0.0303	0.0	5.30E-04	1.19E-02	6.85E-02	2.01E-01	4.06E-01
12	10	105	104	38599.92	1	3687.60	2.7118	0.0303	0.0	0.0	0.0	3.25E-06	9.34E-05	9.63E-04
5	3	68	69	15239.10	1	3687.69	2.7117	0.0303	0.0	5.62E-04	1.40E-02	8.54E-02	2.61E-01	5.43E-01
14	12	20	19	24636.09	1	3687.89	2.7116	0.0535	0.0	0.0	6.98E-05	1.64E-03	1.24E-02	4.90E-02
7	5	55	56	16247.05	1	3688.02	2.7115	0.0303	0.0	3.92E-04	1.24E-02	8.76E-02	2.95E-01	6.58E-01
7	5	45	46	13998.51	2	3688.15	2.7114	0.0303	0.0	3.02E-05	5.57E-04	2.84E-03	7.68E-03	1.47E-02
8	6	37	38	14764.06	2	3688.30	2.7113	0.0303	0.0	1.67E-05	3.70E-04	2.10E-03	6.13E-03	1.23E-02
14	12	72	71	32581.36	1	3688.45	2.7112	0.0303	0.0	0.0	1.10E-06	8.10E-05	1.31E-03	8.91E-03
13	11	1	0	22130.41	1	3689.01	2.7108	0.0603	0.0	0.0	1.63E-05	2.68E-04	1.59E-03	5.30E-03
2	0	85	86	14039.36	1	3689.26	2.7106	0.0303	0.0	1.99E-04	3.72E-03	1.91E-02	5.19E-02	9.95E-02
9	7	40	41	17530.64	1	3689.36	2.7105	0.0303	0.0	1.57E-04	6.77E-03	5.74E-02	2.18E-01	5.32E-01
14	12	21	20	24704.41	1	3689.82	2.7102	0.0515	0.0	0.0	7.01E-05	1.67E-03	1.26E-02	5.03E-02
5	3	59	60	12684.50	2	3689.92	2.7101	0.0303	0.0	6.04E-05	8.14E-04	3.43E-03	8.19E-03	1.43E-02
13	11	91	90	35888.57	1	3690.10	2.7100	0.0303	0.0	0.0	0.0	1.45E-05	3.21E-04	2.74E-03
11	9	22	23	19314.13	1	3690.25	2.7098	0.0476	0.0	2.68E-05	1.77E-03	1.94E-02	8.77E-02	2.41E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	12	71	70	32346.95	1	3690.42	2.7097	0.0303	0.0	0.0	1.27E-06	9.09E-05	1.43E-03	9.62E-03
6	4	52	53	13259.72	2	3690.63	2.7096	0.0303	0.0	4.83E-05	7.47E-04	3.42E-03	8.63E-03	1.57E-02
12	10	11	12	20521.44	1	3690.63	2.7096	0.0617	0.0	5.59E-06	4.95E-04	6.45E-03	3.27E-02	9.77E-02
14	12	22	21	24776.12	1	3691.68	2.7088	0.0496	0.0	0.0	7.00E-05	1.68E-03	1.28E-02	5.14E-02
12	10	104	103	38264.10	1	3692.23	2.7084	0.0303	0.0	0.0	0.0	3.89E-06	1.08E-04	1.09E-03
14	12	70	69	32115.60	1	3692.31	2.7083	0.0303	0.0	0.0	1.47E-06	1.02E-04	1.57E-03	1.04E-02
13	11	2	1	22133.87	1	3692.33	2.7083	0.0606	0.0	0.0	3.28E-05	5.38E-04	3.19E-03	1.06E-02
10	8	31	32	18283.98	1	3692.69	2.7081	0.0331	0.0	7.76E-05	4.02E-03	3.79E-02	1.55E-01	3.98E-01
6	4	61	62	15856.63	1	3693.17	2.7077	0.0303	0.0	5.79E-04	1.56E-02	9.93E-02	3.13E-01	6.65E-01
14	12	23	22	24851.22	1	3693.46	2.7075	0.0476	0.0	0.0	6.97E-05	1.69E-03	1.30E-02	5.23E-02
13	11	90	89	35595.07	1	3693.58	2.7074	0.0303	0.0	0.0	0.0	1.68E-05	3.63E-04	3.04E-03
4	2	65	66	12039.83	2	3693.68	2.7073	0.0303	0.0	7.17E-05	8.27E-04	3.18E-03	7.13E-03	1.19E-02
3	1	79	80	14229.17	1	3693.85	2.7072	0.0303	0.0	4.81E-04	9.40E-03	4.96E-02	1.38E-01	2.67E-01
8	6	47	48	16704.66	1	3694.06	2.7070	0.0303	0.0	3.03E-04	1.07E-02	8.07E-02	2.84E-01	6.53E-01
8	6	36	37	14633.06	2	3694.10	2.7070	0.0308	0.0	1.85E-05	3.97E-04	2.22E-03	6.38E-03	1.27E-02
14	12	69	68	31887.32	1	3694.12	2.7070	0.0303	0.0	0.0	1.70E-06	1.14E-04	1.72E-03	1.12E-02
2	0	77	78	11112.08	2	3694.31	2.7069	0.0303	0.0	3.20E-05	2.96E-04	9.93E-04	2.04E-03	3.20E-03
7	5	44	45	13839.13	2	3694.47	2.7067	0.0303	0.0	3.45E-05	6.14E-04	3.05E-03	8.15E-03	1.54E-02
12	10	10	11	20479.54	1	3694.89	2.7064	0.0625	0.0	5.36E-06	4.69E-04	6.08E-03	3.07E-02	9.16E-02
3	1	71	72	11515.21	2	3695.14	2.7063	0.0303	0.0	6.24E-05	6.35E-04	2.26E-03	4.83E-03	7.77E-03
14	12	24	23	24929.71	1	3695.17	2.7062	0.0457	0.0	0.0	6.90E-05	1.70E-03	1.31E-02	5.31E-02
11	9	21	22	19233.23	1	3695.28	2.7062	0.0496	0.0	2.78E-05	1.81E-03	1.96E-02	8.77E-02	2.40E-01
7	5	54	55	16045.84	1	3695.31	2.7061	0.0303	0.0	4.69E-04	1.42E-02	9.71E-02	3.21E-01	7.05E-01
13	11	3	2	22140.79	1	3695.58	2.7059	0.0609	0.0	0.0	4.92E-05	8.09E-04	4.79E-03	1.60E-02
9	7	39	40	17384.73	1	3695.64	2.7059	0.0303	0.0	1.77E-04	7.36E-03	6.11E-02	2.30E-01	5.53E-01
5	3	67	68	14989.13	1	3695.84	2.7057	0.0303	0.0	7.06E-04	1.66E-02	9.75E-02	2.91E-01	5.95E-01
14	12	68	67	31662.11	1	3695.85	2.7057	0.0303	0.0	0.0	1.96E-06	1.27E-04	1.87E-03	1.20E-02
4	2	73	74	14546.17	1	3696.05	2.7056	0.0303	1.07E-06	6.81E-04	1.44E-02	7.93E-02	2.27E-01	4.50E-01
12	10	103	102	37930.99	1	3696.77	2.7051	0.0303	0.0	0.0	0.0	4.63E-06	1.25E-04	1.23E-03
14	12	25	24	25011.59	1	3696.81	2.7050	0.0437	0.0	0.0	6.81E-05	1.69E-03	1.32E-02	5.37E-02
13	11	89	88	35304.45	1	3696.98	2.7049	0.0303	0.0	0.0	0.0	1.96E-05	4.10E-04	3.37E-03
5	3	58	59	12474.70	2	3697.11	2.7048	0.0303	0.0	7.30E-05	9.35E-04	3.82E-03	8.95E-03	1.54E-02
6	4	51	52	13075.18	2	3697.39	2.7046	0.0303	0.0	5.68E-05	8.41E-04	3.75E-03	9.29E-03	1.67E-02
14	12	67	66	31439.99	1	3697.50	2.7045	0.0303	0.0	0.0	2.25E-06	1.41E-04	2.04E-03	1.29E-02
10	8	30	31	18170.69	1	3698.35	2.7039	0.0335	0.0	8.41E-05	4.23E-03	3.94E-02	1.59E-01	4.05E-01
14	12	26	25	25096.85	1	3698.37	2.7039	0.0418	0.0	0.0	6.69E-05	1.69E-03	1.33E-02	5.42E-02
2	0	84	85	13724.39	1	3698.51	2.7038	0.0303	0.0	2.67E-04	4.62E-03	2.27E-02	5.99E-02	1.12E-01
13	11	4	3	22151.18	1	3698.76	2.7036	0.0611	0.0	0.0	6.54E-05	1.08E-03	6.40E-03	2.14E-02
14	12	66	65	31220.98	1	3699.07	2.7034	0.0303	0.0	0.0	2.58E-06	1.57E-04	2.22E-03	1.38E-02
12	10	9	10	20441.12	1	3699.07	2.7034	0.0624	0.0	5.08E-06	4.41E-04	5.68E-03	2.86E-02	8.49E-02
8	6	35	36	14505.45	2	3699.84	2.7028	0.0312	0.0	2.04E-05	4.25E-04	2.33E-03	6.63E-03	1.31E-02
14	12	27	26	25185.49	1	3699.86	2.7028	0.0398	0.0	0.0	6.55E-05	1.67E-03	1.33E-02	5.45E-02
11	9	20	21	19155.82	1	3700.24	2.7025	0.0515	0.0	2.87E-05	1.83E-03	1.96E-02	8.73E-02	2.38E-01
13	11	88	87	35016.70	1	3700.30	2.7025	0.0303	0.0	0.0	0.0	2.27E-05	4.63E-04	3.74E-03
14	12	65	64	31005.07	1	3700.56	2.7023	0.0303	0.0	0.0	2.95E-06	1.74E-04	2.41E-03	1.48E-02
7	5	43	44	13683.11	2	3700.72	2.7022	0.0303	0.0	3.94E-05	6.74E-04	3.28E-03	8.62E-03	1.61E-02
8	6	46	47	16532.89	1	3700.81	2.7021	0.0303	0.0	3.51E-04	1.19E-02	8.76E-02	3.03E-01	6.89E-01
6	4	60	61	15332.79	1	3700.86	2.7021	0.0303	0.0	7.07E-04	1.80E-02	1.11E-01	3.44E-01	7.20E-01
12	10	102	101	37600.60	1	3701.23	2.7018	0.0303	0.0	0.0	0.0	5.52E-06	1.44E-04	1.39E-03
4	2	64	65	11808.00	2	3701.25	2.7018	0.0303	0.0	8.84E-05	9.65E-04	3.58E-03	7.87E-03	1.29E-02
14	12	28	27	25277.50	1	3701.28	2.7018	0.0379	0.0	0.0	6.39E-05	1.65E-03	1.32E-02	5.47E-02
9	7	38	39	17242.29	1	3701.85	2.7014	0.0303	0.0	1.98E-04	7.98E-03	6.49E-02	2.41E-01	5.74E-01
13	11	5	4	22165.02	1	3701.87	2.7013	0.0614	0.0	0.0	8.14E-05	1.34E-03	7.99E-03	2.67E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	12	64	63	30792.28	1	3701.97	2.7013	0.0303	0.0	0.0	3.36E-06	1.92E-04	2.61E-03	1.58E-02
7	5	53	54	15848.09	1	3702.53	2.7009	0.0303	0.0	5.59E-04	1.61E-02	1.07E-01	3.48E-01	7.54E-01
2	0	76	77	10836.05	2	3702.62	2.7008	0.0303	0.0	4.13E-05	3.57E-04	1.15E-03	2.31E-03	3.55E-03
14	12	29	28	25372.88	1	3702.62	2.7008	0.0359	0.0	0.0	6.20E-05	1.63E-03	1.31E-02	5.47E-02
3	1	78	79	13937.00	1	3702.71	2.7007	0.0303	1.33E-06	6.30E-04	1.15E-02	5.81E-02	1.57E-01	2.98E-01
3	1	70	71	11261.30	2	3703.08	2.7005	0.0303	0.0	7.87E-05	7.54E-04	2.59E-03	5.40E-03	8.54E-03
12	10	8	9	20406.19	1	3703.19	2.7004	0.0624	0.0	4.75E-06	4.08E-04	5.24E-03	2.63E-02	7.79E-02
14	12	63	62	30582.61	1	3703.30	2.7003	0.0303	0.0	0.0	3.82E-06	2.12E-04	2.82E-03	1.68E-02
13	11	87	86	34731.85	1	3703.54	2.7001	0.0303	0.0	0.0	0.0	2.64E-05	5.23E-04	4.14E-03
14	12	30	29	25471.62	1	3703.89	2.6999	0.0340	0.0	0.0	6.00E-05	1.60E-03	1.30E-02	5.46E-02
5	3	66	67	14742.56	1	3703.92	2.6998	0.0303	1.27E-06	8.83E-04	1.96E-02	1.11E-01	3.24E-01	6.51E-01
10	8	29	30	18060.90	1	3703.94	2.6998	0.0340	0.0	9.07E-05	4.45E-03	4.07E-02	1.63E-01	4.12E-01
6	4	50	51	12893.99	2	3704.09	2.6997	0.0303	0.0	6.66E-05	9.43E-04	4.10E-03	9.99E-03	1.77E-02
5	3	57	58	12268.22	2	3704.25	2.6996	0.0303	0.0	8.79E-05	1.07E-03	4.25E-03	9.76E-03	1.66E-02
4	2	72	73	14276.81	1	3704.53	2.6994	0.0303	1.56E-06	8.72E-04	1.73E-02	9.17E-02	2.56E-01	4.98E-01
14	12	62	61	30376.09	1	3704.56	2.6994	0.0303	0.0	0.0	4.34E-06	2.34E-04	3.05E-03	1.79E-02
13	11	6	5	22182.32	1	3704.91	2.6991	0.0617	0.0	0.0	9.70E-05	1.61E-03	9.56E-03	3.20E-02
14	12	31	30	25573.73	1	3705.09	2.6990	0.0335	0.0	0.0	5.80E-05	1.56E-03	1.29E-02	5.44E-02
11	9	19	20	19081.91	1	3705.14	2.6990	0.0535	0.0	2.95E-05	1.85E-03	1.96E-02	8.66E-02	2.34E-01
8	6	34	35	14381.22	2	3705.52	2.6987	0.0317	0.0	2.24E-05	4.54E-04	2.44E-03	6.86E-03	1.34E-02
12	10	101	100	37272.94	1	3705.60	2.6986	0.0303	0.0	0.0	0.0	6.56E-06	1.66E-04	1.56E-03
14	12	61	60	30172.71	1	3705.73	2.6985	0.0303	0.0	0.0	4.91E-06	2.57E-04	3.29E-03	1.90E-02
14	12	32	31	25679.20	1	3706.21	2.6982	0.0331	0.0	0.0	5.58E-05	1.53E-03	1.27E-02	5.41E-02
13	11	86	85	34449.91	1	3706.69	2.6978	0.0303	0.0	0.0	0.0	3.05E-05	5.89E-04	4.57E-03
14	12	60	59	29972.48	1	3706.83	2.6977	0.0303	0.0	0.0	5.54E-06	2.81E-04	3.54E-03	2.02E-02
7	5	42	43	13530.48	2	3706.91	2.6977	0.0303	0.0	4.47E-05	7.38E-04	3.51E-03	9.11E-03	1.68E-02
12	10	7	8	20374.75	1	3707.24	2.6974	0.0623	0.0	4.37E-06	3.73E-04	4.76E-03	2.38E-02	7.05E-02
14	12	33	32	25788.01	1	3707.25	2.6974	0.0326	0.0	0.0	5.36E-05	1.49E-03	1.25E-02	5.37E-02
8	6	45	46	16364.60	1	3707.50	2.6972	0.0303	0.0	4.05E-04	1.32E-02	9.49E-02	3.23E-01	7.26E-01
2	0	83	84	13412.71	1	3707.70	2.6971	0.0303	0.0	3.57E-04	5.74E-03	2.69E-02	6.90E-02	1.27E-01
14	12	59	58	29775.43	1	3707.85	2.6970	0.0303	0.0	0.0	6.25E-06	3.08E-04	3.80E-03	2.14E-02
13	11	7	6	22203.07	1	3707.88	2.6970	0.0620	0.0	0.0	1.12E-04	1.86E-03	1.11E-02	3.72E-02
9	7	37	38	17103.34	1	3707.99	2.6969	0.0303	0.0	2.21E-04	8.63E-03	6.88E-02	2.52E-01	5.95E-01
14	12	34	33	25900.18	1	3708.23	2.6967	0.0321	0.0	0.0	5.12E-05	1.45E-03	1.23E-02	5.32E-02
6	4	59	60	15112.37	1	3708.49	2.6965	0.0303	1.03E-06	8.61E-04	2.08E-02	1.25E-01	3.77E-01	7.77E-01
4	2	63	64	11579.50	2	3708.76	2.6963	0.0303	0.0	1.09E-04	1.12E-03	4.04E-03	8.68E-03	1.40E-02
14	12	58	57	29581.54	1	3708.79	2.6963	0.0303	0.0	0.0	7.03E-06	3.37E-04	4.08E-03	2.27E-02
14	12	35	34	26015.68	1	3709.12	2.6961	0.0317	0.0	0.0	4.88E-05	1.40E-03	1.21E-02	5.25E-02
10	8	28	29	17954.60	1	3709.47	2.6958	0.0359	0.0	9.76E-05	4.67E-03	4.21E-02	1.67E-01	4.18E-01
14	12	57	56	29390.83	1	3709.65	2.6957	0.0303	0.0	0.0	7.89E-06	3.68E-04	4.38E-03	2.40E-02
7	5	52	53	15653.78	1	3709.69	2.6956	0.0303	0.0	6.63E-04	1.83E-02	1.18E-01	3.76E-01	8.06E-01
13	11	85	84	34170.88	1	3709.77	2.6956	0.0303	0.0	0.0	0.0	3.52E-05	6.62E-04	5.04E-03
12	10	100	99	36948.03	1	3709.89	2.6955	0.0303	0.0	0.0	0.0	7.78E-06	1.91E-04	1.76E-03
14	12	36	35	26134.53	1	3709.94	2.6955	0.0312	0.0	0.0	4.64E-05	1.36E-03	1.18E-02	5.17E-02
11	9	18	19	19011.50	1	3709.97	2.6954	0.0552	0.0	3.01E-05	1.86E-03	1.95E-02	8.55E-02	2.30E-01
14	12	56	55	29203.32	1	3710.43	2.6951	0.0303	0.0	0.0	8.82E-06	4.01E-04	4.68E-03	2.54E-02
14	12	37	36	26256.71	1	3710.69	2.6949	0.0308	0.0	0.0	4.39E-05	1.31E-03	1.15E-02	5.09E-02
6	4	49	50	12716.17	2	3710.73	2.6949	0.0303	0.0	7.77E-05	1.06E-03	4.47E-03	1.07E-02	1.87E-02
13	11	8	7	22227.29	1	3710.77	2.6949	0.0623	0.0	0.0	1.27E-04	2.11E-03	1.26E-02	4.24E-02
2	0	75	76	10563.28	2	3710.87	2.6948	0.0303	0.0	5.31E-05	4.30E-04	1.34E-03	2.61E-03	3.93E-03
3	1	69	70	11010.69	2	3710.96	2.6947	0.0303	0.0	9.90E-05	8.93E-04	2.96E-03	6.02E-03	9.36E-03
14	12	55	54	29019.00	1	3711.14	2.6946	0.0303	0.0	0.0	9.85E-06	4.36E-04	5.00E-03	2.67E-02
8	6	33	34	14260.39	2	3711.14	2.6946	0.0321	0.0	2.45E-05	4.83E-04	2.55E-03	7.09E-03	1.38E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	10	6	7	20346.80	1	3711.22	2.6945	0.0620	0.0	3.94E-06	3.34E-04	4.25E-03	2.12E-02	6.27E-02
5	3	56	57	12065.10	2	3711.33	2.6945	0.0303	0.0	1.05E-04	1.22E-03	4.72E-03	1.06E-02	1.78E-02
14	12	38	37	26382.21	1	3711.36	2.6944	0.0303	0.0	0.0	4.14E-05	1.26E-03	1.12E-02	4.99E-02
3	1	77	78	13648.17	1	3711.52	2.6943	0.0303	1.99E-06	8.23E-04	1.40E-02	6.80E-02	1.78E-01	3.33E-01
14	12	54	53	28837.89	1	3711.77	2.6941	0.0303	0.0	0.0	1.10E-05	4.73E-04	5.33E-03	2.82E-02
5	3	65	66	14499.39	1	3711.95	2.6940	0.0303	1.77E-06	1.10E-03	2.30E-02	1.26E-01	3.59E-01	7.11E-01
14	12	39	38	26511.04	1	3711.96	2.6940	0.0303	0.0	0.0	3.90E-05	1.20E-03	1.08E-02	4.89E-02
14	12	53	52	28659.99	1	3712.32	2.6937	0.0303	0.0	0.0	1.22E-05	5.12E-04	5.67E-03	2.96E-02
14	12	40	39	26643.18	1	3712.48	2.6936	0.0303	0.0	0.0	3.66E-05	1.15E-03	1.05E-02	4.77E-02
13	11	84	83	33894.79	1	3712.76	2.6934	0.0303	0.0	0.0	0.0	4.06E-05	7.43E-04	5.55E-03
14	12	52	51	28485.31	1	3712.79	2.6934	0.0303	0.0	0.0	1.35E-05	5.52E-04	6.02E-03	3.10E-02
14	12	41	40	26778.63	1	3712.92	2.6933	0.0303	0.0	0.0	3.42E-05	1.10E-03	1.01E-02	4.65E-02
4	2	71	72	14010.82	1	3712.95	2.6933	0.0303	2.27E-06	1.11E-03	2.07E-02	1.06E-01	2.87E-01	5.50E-01
7	5	41	42	13381.23	2	3713.05	2.6932	0.0303	0.0	5.06E-05	8.06E-04	3.75E-03	9.59E-03	1.76E-02
14	12	51	50	28313.87	1	3713.19	2.6931	0.0303	0.0	0.0	1.49E-05	5.95E-04	6.38E-03	3.25E-02
14	12	42	41	26917.39	1	3713.29	2.6930	0.0303	0.0	0.0	3.19E-05	1.04E-03	9.78E-03	4.53E-02
11	9	111	110	38976.29	1	3713.45	2.6929	0.0303	0.0	0.0	0.0	2.39E-06	7.13E-05	7.55E-04
14	12	50	49	28145.66	1	3713.51	2.6929	0.0303	0.0	0.0	1.64E-05	6.39E-04	6.74E-03	3.40E-02
14	12	43	42	27059.45	1	3713.59	2.6928	0.0303	0.0	0.0	2.96E-05	9.90E-04	9.40E-03	4.40E-02
13	11	9	8	22254.96	1	3713.60	2.6928	0.0624	0.0	1.05E-06	1.40E-04	2.35E-03	1.41E-02	4.74E-02
14	12	49	48	27980.70	1	3713.75	2.6927	0.0303	0.0	0.0	1.80E-05	6.85E-04	7.11E-03	3.54E-02
14	12	44	43	27204.80	1	3713.81	2.6927	0.0303	0.0	0.0	2.75E-05	9.37E-04	9.02E-03	4.26E-02
14	12	48	47	27818.98	1	3713.91	2.6926	0.0303	0.0	0.0	1.97E-05	7.33E-04	7.49E-03	3.69E-02
14	12	45	44	27353.43	1	3713.95	2.6926	0.0303	0.0	0.0	2.54E-05	8.84E-04	8.64E-03	4.12E-02
14	12	47	46	27660.53	1	3714.00	2.6925	0.0303	0.0	0.0	2.15E-05	7.82E-04	7.87E-03	3.84E-02
14	12	46	45	27505.34	1	3714.01	2.6925	0.0303	0.0	0.0	2.34E-05	8.33E-04	8.26E-03	3.98E-02
9	7	36	37	16967.88	1	3714.07	2.6925	0.0308	0.0	2.46E-04	9.29E-03	7.27E-02	2.62E-01	6.15E-01
12	10	99	98	36625.89	1	3714.09	2.6924	0.0303	0.0	0.0	0.0	9.21E-06	2.19E-04	1.97E-03
8	6	44	45	16199.77	1	3714.12	2.6924	0.0303	0.0	4.66E-04	1.46E-02	1.02E-01	3.44E-01	7.64E-01
11	9	17	18	18944.59	1	3714.73	2.6920	0.0568	0.0	3.06E-05	1.85E-03	1.93E-02	8.41E-02	2.25E-01
10	8	27	28	17851.80	1	3714.93	2.6918	0.0379	0.0	1.05E-04	4.88E-03	4.33E-02	1.70E-01	4.24E-01
12	10	5	6	20322.34	1	3715.13	2.6917	0.0617	0.0	3.47E-06	2.93E-04	3.71E-03	1.85E-02	5.45E-02
13	11	83	82	33621.65	1	3715.66	2.6913	0.0303	0.0	0.0	0.0	4.67E-05	8.33E-04	6.11E-03
6	4	58	59	14895.39	1	3716.05	2.6910	0.0303	1.40E-06	1.05E-03	2.41E-02	1.40E-01	4.13E-01	8.40E-01
4	2	62	63	11354.33	2	3716.22	2.6909	0.0303	0.0	1.33E-04	1.30E-03	4.54E-03	9.55E-03	1.52E-02
13	11	10	9	22286.09	1	3716.36	2.6908	0.0624	0.0	1.13E-06	1.53E-04	2.58E-03	1.55E-02	5.23E-02
8	6	32	33	14142.96	2	3716.70	2.6906	0.0326	0.0	2.67E-05	5.11E-04	2.66E-03	7.31E-03	1.41E-02
7	5	51	52	15462.93	1	3716.79	2.6905	0.0303	0.0	7.85E-04	2.06E-02	1.30E-01	4.06E-01	8.59E-01
2	0	82	83	13104.36	1	3716.83	2.6905	0.0303	1.49E-06	4.75E-04	7.10E-03	3.19E-02	7.94E-02	1.43E-01
6	4	48	49	12541.73	2	3717.31	2.6901	0.0303	0.0	9.04E-05	1.18E-03	4.86E-03	1.15E-02	1.98E-02
12	10	98	97	36306.52	1	3718.21	2.6895	0.0303	0.0	0.0	0.0	1.09E-05	2.51E-04	2.21E-03
5	3	55	56	11865.33	2	3718.35	2.6894	0.0303	0.0	1.26E-04	1.39E-03	5.23E-03	1.15E-02	1.90E-02
13	11	82	81	33351.46	1	3718.49	2.6893	0.0303	0.0	0.0	0.0	5.36E-05	9.32E-04	6.71E-03
11	9	110	109	38620.75	1	3718.56	2.6892	0.0303	0.0	0.0	0.0	2.90E-06	8.34E-05	8.61E-04
3	1	68	69	10763.38	2	3718.79	2.6890	0.0303	1.20E-06	1.24E-04	1.05E-03	3.37E-03	6.70E-03	1.03E-02
12	10	4	5	20301.37	1	3718.97	2.6889	0.0614	0.0	2.96E-06	2.49E-04	3.14E-03	1.56E-02	4.60E-02
13	11	11	10	22320.67	1	3719.04	2.6889	0.0625	0.0	1.21E-06	1.65E-04	2.79E-03	1.69E-02	5.70E-02
2	0	74	75	10293.79	2	3719.06	2.6889	0.0303	0.0	6.80E-05	5.17E-04	1.54E-03	2.94E-03	4.35E-03
7	5	40	41	13235.37	2	3719.12	2.6888	0.0303	0.0	5.70E-05	8.77E-04	4.00E-03	1.01E-02	1.83E-02
11	9	16	17	18881.18	1	3719.42	2.6886	0.0585	0.0	3.08E-05	1.84E-03	1.90E-02	8.22E-02	2.20E-01
5	3	64	65	14259.63	1	3719.92	2.6882	0.0303	2.47E-06	1.37E-03	2.70E-02	1.43E-01	3.98E-01	7.75E-01
9	7	35	36	16835.92	1	3720.09	2.6881	0.0312	0.0	2.73E-04	9.98E-03	7.66E-02	2.73E-01	6.34E-01
3	1	76	77	13362.69	1	3720.27	2.6880	0.0303	2.98E-06	1.07E-03	1.70E-02	7.94E-02	2.03E-01	3.71E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	8	26	27	17752.52	1	3720.33	2.6879	0.0398	0.0	1.11E-04	5.08E-03	4.45E-02	1.73E-01	4.28E-01
8	6	43	44	16038.43	1	3720.69	2.6877	0.0303	0.0	5.34E-04	1.61E-02	1.10E-01	3.65E-01	8.01E-01
13	11	81	80	33084.24	1	3721.23	2.6873	0.0303	0.0	0.0	0.0	6.15E-05	1.04E-03	7.36E-03
4	2	70	71	13748.23	1	3721.31	2.6872	0.0303	3.27E-06	1.42E-03	2.47E-02	1.22E-01	3.22E-01	6.06E-01
13	11	12	11	22358.71	1	3721.66	2.6870	0.0617	0.0	1.28E-06	1.76E-04	3.00E-03	1.82E-02	6.15E-02
8	6	31	32	14028.93	2	3722.20	2.6866	0.0331	0.0	2.90E-05	5.40E-04	2.76E-03	7.52E-03	1.44E-02
12	10	97	96	35989.95	1	3722.24	2.6866	0.0303	0.0	0.0	0.0	1.29E-05	2.88E-04	2.48E-03
12	10	3	4	20283.89	1	3722.75	2.6862	0.0611	0.0	2.42E-06	2.02E-04	2.55E-03	1.27E-02	3.72E-02
6	4	57	58	14681.85	1	3723.56	2.6856	0.0303	1.87E-06	1.27E-03	2.77E-02	1.56E-01	4.52E-01	9.06E-01
11	9	109	108	38267.86	1	3723.58	2.6856	0.0303	0.0	0.0	0.0	3.50E-06	9.74E-05	9.82E-04
4	2	61	62	11132.49	2	3723.62	2.6856	0.0303	1.32E-06	1.62E-04	1.51E-03	5.09E-03	1.05E-02	1.64E-02
7	5	50	51	15275.54	1	3723.83	2.6854	0.0303	1.03E-06	9.25E-04	2.33E-02	1.43E-01	4.38E-01	9.14E-01
6	4	47	48	12370.66	2	3723.83	2.6854	0.0303	0.0	1.05E-04	1.31E-03	5.28E-03	1.22E-02	2.09E-02
13	11	80	79	32820.01	1	3723.90	2.6854	0.0303	0.0	0.0	0.0	7.03E-05	1.16E-03	8.06E-03
11	9	15	16	18821.29	1	3724.05	2.6852	0.0591	0.0	3.09E-05	1.82E-03	1.86E-02	8.00E-02	2.13E-01
13	11	13	12	22400.19	1	3724.20	2.6851	0.0610	0.0	1.34E-06	1.87E-04	3.19E-03	1.94E-02	6.59E-02
7	5	39	40	13092.91	2	3725.14	2.6845	0.0303	0.0	6.40E-05	9.52E-04	4.26E-03	1.06E-02	1.90E-02
5	3	54	55	11668.92	2	3725.32	2.6843	0.0303	0.0	1.50E-04	1.58E-03	5.77E-03	1.25E-02	2.04E-02
10	8	25	26	17656.73	1	3725.66	2.6841	0.0418	0.0	1.18E-04	5.26E-03	4.55E-02	1.75E-01	4.31E-01
2	0	81	82	12799.33	1	3725.91	2.6839	0.0303	2.30E-06	6.31E-04	8.77E-03	3.77E-02	9.11E-02	1.61E-01
9	7	34	35	16707.46	1	3726.04	2.6838	0.0317	0.0	3.01E-04	1.07E-02	8.05E-02	2.83E-01	6.52E-01
12	10	96	95	35676.18	1	3726.19	2.6837	0.0303	0.0	0.0	0.0	1.51E-05	3.29E-04	2.78E-03
12	10	2	3	20269.91	1	3726.45	2.6835	0.0609	0.0	1.85E-06	1.54E-04	1.94E-03	9.60E-03	2.82E-02
13	11	79	78	32558.77	1	3726.48	2.6835	0.0303	0.0	0.0	1.09E-06	8.03E-05	1.29E-03	8.82E-03
3	1	67	68	10519.39	2	3726.56	2.6834	0.0303	1.69E-06	1.55E-04	1.24E-03	3.84E-03	7.45E-03	1.12E-02
13	11	14	13	22445.13	1	3726.67	2.6834	0.0604	0.0	1.39E-06	1.95E-04	3.36E-03	2.05E-02	7.00E-02
8	6	42	43	15880.58	1	3727.19	2.6830	0.0303	0.0	6.09E-04	1.77E-02	1.19E-01	3.86E-01	8.39E-01
2	0	73	74	10027.60	2	3727.20	2.6830	0.0303	1.20E-06	8.69E-05	6.20E-04	1.78E-03	3.30E-03	4.80E-03
8	6	30	31	13918.32	2	3727.64	2.6827	0.0335	0.0	3.14E-05	5.69E-04	2.86E-03	7.71E-03	1.46E-02
5	3	63	64	14023.30	1	3727.82	2.6825	0.0303	3.43E-06	1.70E-03	3.16E-02	1.62E-01	4.40E-01	8.44E-01
11	9	108	107	37917.62	1	3728.51	2.6820	0.0303	0.0	0.0	0.0	4.21E-06	1.13E-04	1.12E-03
11	9	14	15	18764.90	1	3728.61	2.6820	0.0597	0.0	3.07E-05	1.78E-03	1.81E-02	7.75E-02	2.05E-01
3	1	75	76	13080.58	1	3728.97	2.6817	0.0303	4.42E-06	1.39E-03	2.07E-02	9.24E-02	2.30E-01	4.13E-01
13	11	78	77	32300.53	1	3728.98	2.6817	0.0303	0.0	0.0	1.29E-06	9.15E-05	1.44E-03	9.63E-03
13	11	15	14	22493.51	1	3729.07	2.6816	0.0597	0.0	1.43E-06	2.03E-04	3.52E-03	2.16E-02	7.39E-02
4	2	69	70	13489.02	1	3729.61	2.6812	0.0303	4.69E-06	1.80E-03	2.94E-02	1.40E-01	3.61E-01	6.67E-01
12	10	95	94	35365.23	1	3730.06	2.6809	0.0303	0.0	0.0	0.0	1.78E-05	3.75E-04	3.10E-03
12	10	1	2	20259.43	1	3730.09	2.6809	0.0606	0.0	1.25E-06	1.04E-04	1.31E-03	6.46E-03	1.90E-02
6	4	46	47	12202.98	2	3730.30	2.6807	0.0303	0.0	1.21E-04	1.45E-03	5.72E-03	1.31E-02	2.20E-02
7	5	49	50	15091.63	1	3730.81	2.6804	0.0303	1.32E-06	1.09E-03	2.62E-02	1.56E-01	4.71E-01	9.71E-01
10	8	24	25	17564.47	1	3730.92	2.6803	0.0437	0.0	1.25E-04	5.44E-03	4.64E-02	1.77E-01	4.33E-01
4	2	60	61	10914.00	2	3730.96	2.6803	0.0303	1.78E-06	1.97E-04	1.74E-03	5.69E-03	1.15E-02	1.78E-02
6	4	56	57	14471.76	1	3731.00	2.6802	0.0303	2.50E-06	1.53E-03	3.18E-02	1.74E-01	4.94E-01	9.75E-01
7	5	38	39	12953.84	2	3731.09	2.6802	0.0303	0.0	7.16E-05	1.03E-03	4.51E-03	1.11E-02	1.97E-02
13	11	16	15	22545.34	1	3731.39	2.6800	0.0591	0.0	1.46E-06	2.10E-04	3.67E-03	2.26E-02	7.76E-02
13	11	77	76	32045.30	1	3731.40	2.6800	0.0303	0.0	0.0	1.52E-06	1.04E-04	1.60E-03	1.05E-02
9	7	33	34	16582.50	1	3731.93	2.6796	0.0321	0.0	3.31E-04	1.14E-02	8.43E-02	2.93E-01	6.70E-01
5	3	53	54	11475.88	2	3732.22	2.6794	0.0303	1.23E-06	1.78E-04	1.80E-03	6.36E-03	1.35E-02	2.18E-02
8	6	29	30	13811.11	2	3733.02	2.6788	0.0340	0.0	3.38E-05	5.97E-04	2.96E-03	7.88E-03	1.49E-02
11	9	13	14	18712.02	1	3733.10	2.6787	0.0604	0.0	3.03E-05	1.74E-03	1.75E-02	7.45E-02	1.97E-01
11	9	107	106	37570.06	1	3733.36	2.6786	0.0303	0.0	0.0	0.0	5.07E-06	1.32E-04	1.27E-03
8	6	41	42	15726.23	1	3733.62	2.6784	0.0303	0.0	6.93E-04	1.94E-02	1.27E-01	4.08E-01	8.77E-01
12	10	0	1	20252.43	1	3733.65	2.6783	0.0603	0.0	0.0	5.24E-05	6.58E-04	3.26E-03	9.55E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

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13	11	17	16	22600.61	1	3733.65	2.6783	0.0585	0.0	1.48E-06	2.15E-04	3.79E-03	2.35E-02	8.10E-02
13	11	76	75	31793.11	1	3733.74	2.6783	0.0303	0.0	0.0	1.79E-06	1.18E-04	1.77E-03	1.14E-02
12	10	94	93	35057.12	1	3733.85	2.6782	0.0303	0.0	0.0	0.0	2.09E-05	4.28E-04	3.46E-03
3	1	66	67	10278.73	2	3734.28	2.6779	0.0303	2.36E-06	1.93E-04	1.46E-03	4.35E-03	8.26E-03	1.22E-02
2	0	80	81	12497.64	1	3734.93	2.6774	0.0303	3.51E-06	8.35E-04	1.08E-02	4.44E-02	1.04E-01	1.80E-01
2	0	72	73	9764.71	2	3735.28	2.6772	0.0303	1.73E-06	1.11E-04	7.41E-04	2.05E-03	3.71E-03	5.30E-03
5	3	62	63	13790.39	1	3735.67	2.6769	0.0303	4.73E-06	2.09E-03	3.69E-02	1.83E-01	4.86E-01	9.17E-01
13	11	18	17	22659.31	1	3735.83	2.6768	0.0568	0.0	1.49E-06	2.20E-04	3.90E-03	2.43E-02	8.42E-02
13	11	75	74	31543.96	1	3736.00	2.6767	0.0303	0.0	0.0	2.10E-06	1.34E-04	1.95E-03	1.24E-02
10	8	23	24	17475.72	1	3736.12	2.6766	0.0457	0.0	1.31E-04	5.59E-03	4.71E-02	1.78E-01	4.33E-01
6	4	45	46	12038.69	2	3736.70	2.6762	0.0303	0.0	1.39E-04	1.61E-03	6.18E-03	1.39E-02	2.32E-02
7	5	37	38	12818.19	2	3736.99	2.6760	0.0303	0.0	7.97E-05	1.11E-03	4.77E-03	1.16E-02	2.04E-02
11	9	12	13	18662.66	1	3737.53	2.6756	0.0610	0.0	2.96E-05	1.68E-03	1.68E-02	7.12E-02	1.87E-01
12	10	93	92	34751.86	1	3737.55	2.6755	0.0303	0.0	0.0	0.0	2.45E-05	4.87E-04	3.86E-03
3	1	74	75	12801.85	1	3737.60	2.6755	0.0303	6.53E-06	1.80E-03	2.50E-02	1.07E-01	2.60E-01	4.58E-01
7	5	48	49	14911.20	1	3737.72	2.6754	0.0303	1.68E-06	1.27E-03	2.93E-02	1.71E-01	5.06E-01	1.03E 00
9	7	32	33	16461.06	1	3737.75	2.6754	0.0326	0.0	3.62E-04	1.21E-02	8.81E-02	3.03E-01	6.86E-01
4	2	68	69	13233.23	1	3737.86	2.6753	0.0303	6.70E-06	2.27E-03	3.50E-02	1.60E-01	4.04E-01	7.33E-01
13	11	19	18	22721.46	1	3737.94	2.6753	0.0552	0.0	1.49E-06	2.23E-04	3.99E-03	2.50E-02	8.70E-02
11	9	106	105	37225.20	1	3738.12	2.6751	0.0303	0.0	0.0	0.0	6.09E-06	1.54E-04	1.44E-03
13	11	74	73	31297.86	1	3738.18	2.6751	0.0303	0.0	0.0	2.46E-06	1.51E-04	2.16E-03	1.35E-02
4	2	59	60	10698.87	2	3738.25	2.6750	0.0303	2.39E-06	2.39E-04	2.01E-03	6.35E-03	1.26E-02	1.91E-02
8	6	28	29	13707.32	2	3738.33	2.6750	0.0359	0.0	3.62E-05	6.25E-04	3.05E-03	8.05E-03	1.51E-02
6	4	55	56	14265.13	1	3738.39	2.6749	0.0303	3.32E-06	1.84E-03	3.64E-02	1.93E-01	5.39E-01	1.05E 00
5	3	52	53	11286.22	2	3739.07	2.6745	0.0303	1.59E-06	2.10E-04	2.03E-03	7.00E-03	1.46E-02	2.32E-02
13	11	20	19	22787.05	1	3739.98	2.6738	0.0535	0.0	1.48E-06	2.25E-04	4.07E-03	2.57E-02	8.96E-02
8	6	40	41	15575.37	1	3740.00	2.6738	0.0303	0.0	7.84E-04	2.12E-02	1.36E-01	4.29E-01	9.15E-01
13	11	73	72	31054.82	1	3740.27	2.6736	0.0303	0.0	0.0	2.87E-06	1.71E-04	2.38E-03	1.46E-02
12	10	1	0	20248.94	1	3740.57	2.6734	0.0603	0.0	0.0	5.31E-05	6.66E-04	3.29E-03	9.67E-03
12	10	92	91	34449.46	1	3741.17	2.6730	0.0303	0.0	0.0	0.0	2.86E-05	5.53E-04	4.29E-03
10	8	22	23	17390.49	1	3741.25	2.6729	0.0476	0.0	1.37E-04	5.73E-03	4.76E-02	1.79E-01	4.32E-01
11	9	11	12	18616.82	1	3741.88	2.6725	0.0617	0.0	2.87E-05	1.61E-03	1.60E-02	6.75E-02	1.77E-01
13	11	21	20	22856.06	1	3741.94	2.6724	0.0515	0.0	1.46E-06	2.26E-04	4.12E-03	2.62E-02	9.19E-02
3	1	65	66	10041.41	2	3741.94	2.6724	0.0303	3.27E-06	2.39E-04	1.71E-03	4.93E-03	9.15E-03	1.33E-02
13	11	72	71	30814.84	1	3742.29	2.6722	0.0303	0.0	0.0	3.35E-06	1.92E-04	2.62E-03	1.58E-02
11	9	105	104	36883.04	1	3742.80	2.6718	0.0303	0.0	0.0	0.0	7.30E-06	1.78E-04	1.63E-03
7	5	36	37	12685.95	2	3742.82	2.6718	0.0308	0.0	8.84E-05	1.19E-03	5.03E-03	1.20E-02	2.10E-02
6	4	44	45	11877.80	2	3743.05	2.6716	0.0303	0.0	1.59E-04	1.77E-03	6.66E-03	1.47E-02	2.43E-02
2	0	71	72	9505.12	2	3743.31	2.6714	0.0303	2.49E-06	1.40E-04	8.83E-04	2.36E-03	4.16E-03	5.84E-03
5	3	61	62	13560.93	1	3743.45	2.6713	0.0303	6.49E-06	2.57E-03	4.29E-02	2.06E-01	5.36E-01	9.94E-01
9	7	31	32	16343.14	1	3743.51	2.6713	0.0331	0.0	3.94E-04	1.28E-02	9.18E-02	3.12E-01	7.01E-01
8	6	27	28	13606.95	2	3743.59	2.6712	0.0379	0.0	3.87E-05	6.52E-04	3.14E-03	8.20E-03	1.53E-02
13	11	22	21	22928.51	1	3743.83	2.6711	0.0496	0.0	1.43E-06	2.26E-04	4.16E-03	2.66E-02	9.39E-02
2	0	79	80	12199.31	1	3743.89	2.6710	0.0303	5.34E-06	1.10E-03	1.33E-02	5.23E-02	1.19E-01	2.02E-01
12	10	2	1	20252.43	1	3743.93	2.6710	0.0606	0.0	1.28E-06	1.06E-04	1.34E-03	6.62E-03	1.94E-02
13	11	71	70	30577.96	1	3744.23	2.6708	0.0303	0.0	0.0	3.89E-06	2.16E-04	2.87E-03	1.71E-02
7	5	47	48	14734.27	1	3744.57	2.6705	0.0303	2.13E-06	1.48E-03	3.27E-02	1.86E-01	5.42E-01	1.09E 00
12	10	91	90	34149.94	1	3744.70	2.6704	0.0303	0.0	0.0	0.0	3.34E-05	6.27E-04	4.77E-03
4	2	58	59	10487.10	2	3745.48	2.6699	0.0303	3.20E-06	2.90E-04	2.31E-03	7.09E-03	1.37E-02	2.06E-02
13	11	23	22	23004.38	1	3745.65	2.6698	0.0476	0.0	1.40E-06	2.24E-04	4.19E-03	2.70E-02	9.57E-02
6	4	54	55	14061.97	1	3745.71	2.6697	0.0303	4.39E-06	2.21E-03	4.16E-02	2.14E-01	5.86E-01	1.12E 00
5	3	51	52	11099.95	2	3745.86	2.6696	0.0303	2.04E-06	2.48E-04	2.29E-03	7.68E-03	1.58E-02	2.47E-02
4	2	67	68	12980.85	1	3746.04	2.6695	0.0303	9.52E-06	2.86E-03	4.15E-02	1.83E-01	4.51E-01	8.04E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	11	70	69	30344.16	1	3746.08	2.6695	0.0303	0.0	0.0	4.51E-06	2.42E-04	3.15E-03	1.85E-02
11	9	10	11	18574.50	1	3746.17	2.6694	0.0625	0.0	2.75E-05	1.53E-03	1.51E-02	6.34E-02	1.66E-01
3	1	73	74	12526.50	1	3746.17	2.6694	0.0303	9.61E-06	2.32E-03	3.02E-02	1.25E-01	2.94E-01	5.08E-01
10	8	21	22	17308.79	1	3746.31	2.6693	0.0496	0.0	1.42E-04	5.84E-03	4.80E-02	1.79E-01	4.30E-01
8	6	39	40	15428.02	1	3746.31	2.6693	0.0303	0.0	8.85E-04	2.31E-02	1.45E-01	4.51E-01	9.52E-01
12	10	3	2	20259.43	1	3747.21	2.6687	0.0609	0.0	1.92E-06	1.60E-04	2.01E-03	9.95E-03	2.92E-02
11	9	104	103	36543.60	1	3747.39	2.6685	0.0303	0.0	0.0	0.0	8.74E-06	2.06E-04	1.85E-03
13	11	24	23	23083.67	1	3747.40	2.6685	0.0457	0.0	1.36E-06	2.22E-04	4.19E-03	2.72E-02	9.71E-02
10	8	115	114	38719.96	1	3747.83	2.6682	0.0303	0.0	0.0	0.0	2.41E-06	7.02E-05	7.30E-04
13	11	69	68	30113.47	1	3747.86	2.6682	0.0303	0.0	0.0	5.22E-06	2.71E-04	3.45E-03	1.99E-02
12	10	90	89	33853.30	1	3748.15	2.6680	0.0303	0.0	0.0	0.0	3.89E-05	7.10E-04	5.29E-03
7	5	35	36	12557.12	2	3748.60	2.6677	0.0312	0.0	9.77E-05	1.28E-03	5.30E-03	1.25F-02	2.17F-02
8	6	26	27	13510.01	2	3748.78	2.6675	0.0398	0.0	4.12F-05	6.77F-04	3.22E-03	8.33E-03	1.54F-02
13	11	25	24	23166.39	1	3749.07	2.6673	0.0437	0.0	1.31E-06	2.19E-04	4.19F-03	2.74F-02	9.82E-02
9	7	30	31	16228.73	1	3749.20	2.6672	0.0335	0.0	4.28E-04	1.35E-02	9.53E-02	3.21E-01	7.14F-01
6	4	43	44	11720.32	2	3749.33	2.6671	0.0303	1.11E-06	1.82E-04	1.95E-03	7.16F-03	1.56E-02	2.55E-02
3	1	64	65	9807.43	2	3749.54	2.6670	0.0303	4.53E-06	2.95E-04	2.00E-03	5.57E-03	1.01E-02	1.45E-02
13	11	68	67	29885.90	1	3749.55	2.6670	0.0303	0.0	0.0	6.02E-06	3.02E-04	3.77E-03	2.14E-02
11	9	9	10	18535.70	1	3750.39	2.6664	0.0624	0.0	2.60E-05	1.43E-03	1.41E-02	5.90F-02	1.54F-01
12	10	4	3	20269.91	1	3750.43	2.6664	0.0611	0.0	2.55E-06	2.13E-04	2.68E-03	1.33E-02	3.90E-02
13	11	26	25	23252.52	1	3750.67	2.6662	0.0418	0.0	1.26E-06	2.15E-04	4.16E-03	2.75E-02	9.90E-02
13	11	67	66	29661.45	1	3751.17	2.6658	0.0303	0.0	0.0	6.92E-06	3.37E-04	4.11E-03	2.30F-02
5	3	60	61	13334.93	1	3751.18	2.6658	0.0303	8.86E-06	3.15E-03	4.98E-02	2.31E-01	5.89E-01	1.08F 00
2	0	70	71	9248.86	2	3751.29	2.6657	0.0303	3.56E-06	1.78E-04	1.05E-03	2.70F-03	4.65F-03	6.42E-03
10	8	20	21	17230.61	1	3751.31	2.6657	0.0515	0.0	1.47E-04	5.92E-03	4.82E-02	1.78E-01	4.26F-01
7	5	46	47	14560.82	1	3751.36	2.6657	0.0303	2.69E-06	1.72E-03	3.65E-02	2.02F-01	5.79F-01	1.15E 00
12	10	89	88	33559.57	1	3751.52	2.6656	0.0303	0.0	0.0	0.0	4.53E-05	8.04E-04	5.87F-03
11	9	103	102	36206.90	1	3751.90	2.6653	0.0303	0.0	0.0	0.0	1.04E-05	2.39F-04	2.09E-03
13	11	27	26	23342.06	1	3752.19	2.6651	0.0398	0.0	1.21E-06	2.11E-04	4.12E-03	2.75E-02	9.96E-02
8	6	38	39	15284.19	1	3752.55	2.6649	0.0303	1.10E-06	9.94F-04	2.51F-02	1.54E-01	4.74F-01	9.89E-01
5	3	50	51	10917.06	2	3752.59	2.6648	0.0303	2.62E-06	2.91E-04	2.57E-03	8.40E-03	1.70E-02	2.62E-02
4	2	57	58	10278.70	2	3752.65	2.6648	0.0303	4.27E-06	3.49E-04	2.65E-03	7.90E-03	1.50E-02	2.22E-02
13	11	66	65	29440.12	1	3752.71	2.6647	0.0303	0.0	0.0	7.95E-06	3.74F-04	4.47E-03	2.46E-02
2	0	78	79	11904.34	1	3752.79	2.6647	0.0303	8.09E-06	1.45E-03	1.62E-02	6.14E-02	1.36F-01	2.26F-01
6	4	53	54	13862.29	1	3752.97	2.6646	0.0303	5.76E-06	2.64F-03	4.73E-02	2.37E-01	6.36F-01	1.20F 00
10	8	114	113	38350.04	1	3753.25	2.6644	0.0303	0.0	0.0	0.0	2.94E-06	8.26F-05	8.38F-04
12	10	5	4	20283.89	1	3753.57	2.6641	0.0614	0.0	3.16E-06	2.65E-04	3.34F-03	1.66E-02	4.88F-02
13	11	28	27	23435.02	1	3753.64	2.6641	0.0379	0.0	1.15E-06	2.05E-04	4.07F-03	2.74F-02	9.99F-02
8	6	25	26	13416.50	2	3753.91	2.6639	0.0418	0.0	4.36E-05	7.01E-04	3.29F-03	8.44E-03	1.55E-02
4	2	66	67	12731.90	1	3754.16	2.6637	0.0303	1.35E-05	3.58E-03	4.90E-02	2.09F-01	5.02F-01	8.80E-01
13	11	65	64	29221.95	1	3754.17	2.6637	0.0303	0.0	0.0	9.10E-06	4.15E-04	4.86E-03	2.64E-02
7	5	34	35	12431.72	2	3754.31	2.6636	0.0317	0.0	1.08E-04	1.37E-03	5.55F-03	1.30F-02	2.23F-02
11	9	8	9	18500.42	1	3754.55	2.6634	0.0624	0.0	2.43E-05	1.33F-03	1.30E-02	5.43F-02	1.41E-01
3	1	72	73	12254.55	1	3754.69	2.6633	0.0303	1.41E-05	2.98E-03	3.63E-02	1.44E-01	3.32F-01	5.63E-01
12	10	88	87	33268.76	1	3754.81	2.6632	0.0303	0.0	0.0	0.0	5.27E-05	9.10F-04	6.52E-03
9	7	29	30	16117.86	1	3754.83	2.6632	0.0340	0.0	4.62E-04	1.42E-02	9.86F-02	3.28E-01	7.26F-01
13	11	29	28	23531.37	1	3755.02	2.6631	0.0359	0.0	1.09E-06	1.99E-04	4.01F-03	2.72E-02	9.99E-02
13	11	64	63	29006.93	1	3755.55	2.6627	0.0303	0.0	0.0	1.04E-05	4.60E-04	5.27E-03	2.82E-02
6	4	42	43	11566.25	2	3755.56	2.6627	0.0303	1.36E-06	2.07E-04	2.14E-03	7.67E-03	1.65F-02	2.67F-02
10	8	19	20	17155.96	1	3756.24	2.6622	0.0535	0.0	1.51E-04	5.98E-03	4.81E-02	1.77E-01	4.20E-01
13	11	30	29	23631.13	1	3756.32	2.6622	0.0340	0.0	1.03E-06	1.93E-04	3.93E-03	2.69E-02	9.96F-02
11	9	102	101	35872.95	1	3756.33	2.6622	0.0303	0.0	0.0	0.0	1.25E-05	2.76E-04	2.36E-03
12	10	6	5	20301.37	1	3756.65	2.6619	0.0617	0.0	3.75F-06	3.15E-04	3.99E-03	1.98E-02	5.84E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	11	63	62	28795.07	1	3756.85	2.6618	0.0303	0.0	0.0	1.18E-05	5.08E-04	5.71E-03	3.01E-02
3	1	63	64	9576.80	2	3757.09	2.6616	0.0303	6.23E-06	3.64E-04	2.33E-03	6.28E-03	1.12E-02	1.57E-02
13	11	31	30	23734.29	1	3757.55	2.6613	0.0335	0.0	0.0	1.86E-04	3.85E-03	2.66E-02	9.93E-02
12	10	87	86	32980.87	1	3758.01	2.6610	0.0303	0.0	0.0	0.0	6.12E-05	1.03E-03	7.22E-03
13	11	62	61	28586.38	1	3758.07	2.6609	0.0303	0.0	0.0	1.35E-05	5.60E-04	6.17E-03	3.21E-02
7	5	45	46	14390.88	1	3758.09	2.6609	0.0303	3.37E-06	1.99E-03	4.05E-02	2.19E-01	6.17E-01	1.21E 00
10	8	113	112	37982.73	1	3758.58	2.6606	0.0303	0.0	0.0	0.0	3.58E-06	9.72E-05	9.61E-04
11	9	7	8	18468.66	1	3758.63	2.6605	0.0623	0.0	2.24E-05	1.21E-03	1.18E-02	4.92E-02	1.28E-01
13	11	32	31	23840.83	1	3758.71	2.6605	0.0331	0.0	0.0	1.79E-04	3.77E-03	2.63E-02	9.87E-02
8	6	37	38	15143.88	1	3758.73	2.6605	0.0303	1.31E-06	1.11E-03	2.71E-02	1.63E-01	4.96E-01	1.03E 00
5	3	59	60	13112.37	1	3758.84	2.6604	0.0303	1.20E-05	3.84E-03	5.76E-02	2.59E-01	6.47E-01	1.16E 00
8	6	24	25	13326.42	2	3758.98	2.6603	0.0437	0.0	4.60E-05	7.23E-04	3.35E-03	8.51E-03	1.55E-02
2	0	69	70	8995.93	2	3759.21	2.6601	0.0303	5.06E-06	2.24E-04	1.25E-03	3.09E-03	5.19E-03	7.05E-03
13	11	61	60	28380.87	1	3759.21	2.6601	0.0303	0.0	0.0	1.52E-05	6.16E-04	6.66E-03	3.41E-02
5	3	49	50	10737.57	2	3759.27	2.6601	0.0303	3.34E-06	3.40E-04	2.88E-03	9.17E-03	1.82E-02	2.78E-02
12	10	7	6	20322.34	1	3759.65	2.6598	0.0620	0.0	4.31E-06	3.64E-04	4.62E-03	2.30E-02	6.80E-02
4	2	56	57	10073.68	2	3759.76	2.6597	0.0303	5.66E-06	4.20E-04	3.03E-03	8.78E-03	1.63E-02	2.39E-02
13	11	33	32	23950.76	1	3759.79	2.6597	0.0326	0.0	0.0	1.72E-04	3.67E-03	2.59E-02	9.79E-02
7	5	33	34	12309.75	2	3759.97	2.6596	0.0321	0.0	1.18E-04	1.45E-03	5.81E-03	1.34E-02	2.28E-02
6	4	52	53	13666.09	1	3760.17	2.6595	0.0303	7.53E-06	3.14E-03	5.37E-02	2.62E-01	6.89E-01	1.29E 00
13	11	60	59	28178.56	1	3760.27	2.6594	0.0303	0.0	0.0	1.72E-05	6.77E-04	7.17E-03	3.62E-02
9	7	28	29	16010.51	1	3760.39	2.6593	0.0359	0.0	4.98E-04	1.49E-02	1.02E-01	3.36E-01	7.38E-01
11	9	101	100	35541.77	1	3760.67	2.6591	0.0303	0.0	0.0	0.0	1.48E-05	3.18E-04	2.67E-03
13	11	34	33	24064.08	1	3760.79	2.6590	0.0321	0.0	0.0	1.64E-04	3.56E-03	2.54E-02	9.69E-02
10	8	18	19	17084.85	1	3761.11	2.6588	0.0552	0.0	1.55E-04	6.01E-03	4.78E-02	1.75E-01	4.13E-01
12	10	86	85	32695.94	1	3761.13	2.6588	0.0303	0.0	0.0	0.0	7.10E-05	1.16E-03	7.98E-03
13	11	59	58	27979.44	1	3761.26	2.6587	0.0303	0.0	0.0	1.95E-05	7.43E-04	7.72E-03	3.85E-02
2	0	77	78	11612.75	1	3761.64	2.6584	0.0303	1.22E-05	1.90E-03	1.98E-02	7.19E-02	1.55E-01	2.53E-01
13	11	35	34	24180.77	1	3761.72	2.6584	0.0317	0.0	0.0	1.56E-04	3.45E-03	2.49E-02	9.57E-02
6	4	41	42	11415.59	2	3761.73	2.6584	0.0303	1.66E-06	2.35E-04	2.33E-03	8.21E-03	1.74E-02	2.78E-02
13	11	58	57	27783.53	1	3762.16	2.6580	0.0303	0.0	0.0	2.19E-05	8.13E-04	8.29E-03	4.08E-02
4	2	65	66	12486.39	1	3762.23	2.6580	0.0303	1.89E-05	4.48E-03	5.78E-02	2.37E-01	5.58E-01	9.62E-01
12	10	8	7	20346.80	1	3762.58	2.6578	0.0623	0.0	4.84E-06	4.11E-04	5.24E-03	2.62E-02	7.73E-02
13	11	36	35	24300.84	1	3762.58	2.6578	0.0312	0.0	0.0	1.48E-04	3.33E-03	2.43E-02	9.42E-02
11	9	6	7	18440.43	1	3762.64	2.6577	0.0620	0.0	2.02E-05	1.09E-03	1.05E-02	4.38E-02	1.14E-01
13	11	57	56	27590.84	1	3762.99	2.6575	0.0303	0.0	0.0	2.46E-05	8.89E-04	8.90E-03	4.32E-02
3	1	71	72	11986.02	1	3763.15	2.6573	0.0303	2.05E-05	3.81E-03	4.36E-02	1.67E-01	3.73E-01	6.22E-01
13	11	37	36	24424.27	1	3763.36	2.6572	0.0308	0.0	0.0	1.40E-04	3.21E-03	2.37E-02	9.26E-02
13	11	56	55	27401.37	1	3763.74	2.6569	0.0303	0.0	0.0	2.76E-05	9.69E-04	9.53E-03	4.57E-02
10	8	112	111	37618.05	1	3763.83	2.6569	0.0303	0.0	0.0	0.0	4.36E-06	1.14E-04	1.10E-03
8	6	23	24	13239.77	2	3763.99	2.6568	0.0457	0.0	4.82E-05	7.43E-04	3.40E-03	8.57E-03	1.55E-02
13	11	38	37	24551.07	1	3764.06	2.6567	0.0303	0.0	0.0	1.32E-04	3.08E-03	2.30E-02	9.08E-02
12	10	85	84	32413.95	1	3764.17	2.6566	0.0303	0.0	0.0	1.14E-06	8.21E-05	1.30E-03	8.81E-03
13	11	55	54	27215.13	1	3764.42	2.6565	0.0303	0.0	0.0	3.08E-05	1.05E-03	1.02E-02	4.82E-02
3	1	62	63	9349.53	2	3764.58	2.6563	0.0303	8.52E-06	4.46E-04	2.71E-03	7.07E-03	1.23E-02	1.71E-02
13	11	39	38	24681.22	1	3764.69	2.6563	0.0303	0.0	0.0	1.24E-04	2.95E-03	2.23E-02	8.69E-02
7	5	44	45	14224.45	1	3764.75	2.6562	0.0303	4.20E-06	2.29E-03	4.48E-02	2.37E-01	6.57E-01	1.28E 00
8	6	36	37	15007.09	1	3764.85	2.6561	0.0308	1.56E-06	1.24E-03	2.93E-02	1.73E-01	5.17E-01	1.06E 00
11	9	100	99	35213.38	1	3764.92	2.6561	0.0303	0.0	0.0	0.0	1.76E-05	3.67E-04	3.00E-03
13	11	54	53	27032.14	1	3765.01	2.6560	0.0303	0.0	0.0	3.44E-05	1.14E-03	1.09E-02	5.07E-02
13	11	40	39	24814.72	1	3765.25	2.6559	0.0303	0.0	0.0	1.16E-04	2.82E-03	2.16E-02	8.68E-02
12	10	9	8	20374.75	1	3765.45	2.6557	0.0624	0.0	5.33E-06	4.56E-04	5.83E-03	2.92E-02	8.65E-02
13	11	53	52	26852.39	1	3765.53	2.6557	0.0303	0.0	0.0	3.82E-05	1.24E-03	1.16E-02	5.33E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	32	33	12191.21	2	3765.56	2.6556	0.0326	0.0	1.29E-04	1.54E-03	6.06E-03	1.38E-02	2.33E-02
13	11	41	40	24951.57	1	3765.73	2.6555	0.0303	0.0	0.0	1.09E-04	2.69E-03	2.09E-02	8.46E-02
5	3	48	49	10561.49	2	3765.88	2.6554	0.0303	4.23E-06	3.96E-04	3.21E-03	9.99E-03	1.95E-02	2.94E-02
9	7	27	28	15906.70	1	3765.89	2.6554	0.0379	0.0	5.33E-04	1.56E-02	1.05E-01	3.43E-01	7.48E-01
10	8	17	18	17017.28	1	3765.90	2.6554	0.0568	0.0	1.57E-04	6.01E-03	4.74E-02	1.72E-01	4.04E-01
13	11	52	51	26675.90	1	3765.97	2.6554	0.0303	0.0	0.0	4.23E-05	1.34E-03	1.23E-02	5.60E-02
13	11	42	41	25091.76	1	3766.13	2.6552	0.0303	0.0	0.0	1.01E-04	2.55E-03	2.01E-02	8.22E-02
13	11	51	50	26502.68	1	3766.33	2.6551	0.0303	0.0	0.0	4.68E-05	1.44E-03	1.30E-02	5.87E-02
5	3	58	59	12893.29	1	3766.45	2.6550	0.0303	1.63E-05	4.69E-03	6.67E-02	2.90E-01	7.10E-01	1.26E 00
13	11	43	42	25235.28	1	3766.46	2.6550	0.0303	0.0	0.0	9.40E-05	2.42E-03	1.93E-02	7.98E-02
11	9	5	6	18415.73	1	3766.59	2.6549	0.0617	0.0	1.78E-05	9.54E-04	9.20E-03	3.82E-02	9.89E-02
13	11	50	49	26332.73	1	3766.61	2.6549	0.0303	0.0	0.0	5.16E-05	1.55E-03	1.38E-02	6.14E-02
13	11	44	43	25382.13	1	3766.71	2.6548	0.0303	0.0	0.0	8.71E-05	2.29E-03	1.85E-02	7.73E-02
13	11	49	48	26166.05	1	3766.82	2.6548	0.0303	0.0	0.0	5.67E-05	1.67E-03	1.46E-02	6.41E-02
4	2	55	56	9872.04	2	3766.82	2.6548	0.0303	7.46E-06	5.02E-04	3.46E-03	9.73E-03	1.78E-02	2.56E-02
13	11	45	44	25532.30	1	3766.89	2.6547	0.0303	0.0	0.0	8.04E-05	2.16E-03	1.77E-02	7.47E-02
13	11	48	47	26002.67	1	3766.95	2.6547	0.0303	0.0	0.0	6.21E-05	1.78E-03	1.53E-02	6.68E-02
13	11	46	45	25685.79	1	3766.99	2.6546	0.0303	0.0	0.0	7.40E-05	2.03E-03	1.69E-02	7.21E-02
13	11	47	46	25842.57	1	3767.01	2.6546	0.0303	0.0	0.0	6.79E-05	1.91E-03	1.61E-02	6.95E-02
2	0	68	69	8746.33	2	3767.07	2.6546	0.0303	7.16E-06	2.81E-04	1.47E-03	3.53E-03	5.79E-03	7.72E-03
12	10	84	83	32134.93	1	3767.13	2.6545	0.0303	0.0	0.0	1.36E-06	9.48E-05	1.47E-03	9.72E-03
6	4	51	52	13473.39	1	3767.31	2.6544	0.0303	9.79E-06	3.72E-03	6.08E-02	2.88E-01	7.45E-01	1.37E 00
6	4	40	41	11268.36	2	3767.84	2.6540	0.0303	2.01E-06	2.65E-04	2.54E-03	8.76E-03	1.83E-02	2.90E-02
12	10	10	9	20406.19	1	3768.24	2.6538	0.0624	0.0	5.78E-06	4.98E-04	6.40E-03	3.22E-02	9.54E-02
8	6	22	23	13156.57	2	3768.93	2.6533	0.0476	0.0	5.03E-05	7.60E-04	3.43E-03	8.59E-03	1.55E-02
10	8	111	110	37256.02	1	3768.98	2.6532	0.0303	0.0	0.0	0.0	5.29E-06	1.34E-04	1.26E-03
11	9	99	98	34887.79	1	3769.09	2.6532	0.0303	0.0	0.0	0.0	2.09E-05	4.22E-04	3.38E-03
12	10	83	82	31858.89	1	3770.01	2.6525	0.0303	0.0	0.0	1.64E-06	1.09E-04	1.65E-03	1.07E-02
4	2	64	65	12244.32	1	3770.23	2.6524	0.0303	2.65E-05	5.58E-03	6.79E-02	2.70E-01	6.19E-01	1.05E 00
2	0	76	77	11324.54	1	3770.42	2.6522	0.0303	1.83E-05	2.48E-03	2.42E-02	8.41E-02	1.77E-01	2.82E-01
11	9	4	5	18394.55	1	3770.47	2.6522	0.0614	0.0	1.52E-05	8.10E-04	7.79E-03	3.23E-02	8.35E-02
10	8	16	17	16953.25	1	3770.63	2.6521	0.0585	0.0	1.58E-04	5.97E-03	4.66E-02	1.68E-01	3.94E-01
8	6	35	36	14873.83	1	3770.90	2.6519	0.0312	1.85E-06	1.37E-03	3.14E-02	1.82E-01	5.39E-01	1.09E 00
12	10	11	10	20441.12	1	3770.96	2.6518	0.0625	0.0	6.18E-06	5.37E-04	6.94E-03	3.50E-02	1.04E-01
7	5	31	32	12076.10	2	3771.09	2.6518	0.0331	0.0	1.40E-04	1.63E-03	6.30E-03	1.42E-02	2.38E-02
9	7	26	27	15806.43	1	3771.32	2.6516	0.0398	0.0	5.69E-04	1.63E-02	1.08E-01	3.49E-01	7.55E-01
7	5	43	44	14061.54	1	3771.35	2.6516	0.0303	5.22E-06	2.63E-03	4.95E-02	2.55E-01	6.98E-01	1.34E 00
3	1	70	71	11720.90	1	3771.54	2.6514	0.0303	2.96E-05	4.86E-03	5.22E-02	1.92E-01	4.19E-01	6.87E-01
3	1	61	62	9125.64	2	3772.01	2.6511	0.0303	1.16E-05	5.46E-04	3.14E-03	7.94E-03	1.35E-02	1.85E-02
5	3	47	48	10388.82	2	3772.44	2.6508	0.0303	5.33E-06	4.60E-04	3.58E-03	1.09E-02	2.08E-02	3.11E-02
12	10	82	81	31585.85	1	3772.80	2.6506	0.0303	0.0	0.0	1.96E-06	1.26E-04	1.84E-03	1.18E-02
11	9	98	97	34565.00	1	3773.18	2.6503	0.0303	0.0	0.0	0.0	2.48E-05	4.84E-04	3.79E-03
12	10	12	11	20479.54	1	3773.61	2.6500	0.0617	0.0	6.53E-06	5.73E-04	7.44E-03	3.77E-02	1.12E-01
8	6	21	22	13076.80	2	3773.81	2.6498	0.0496	0.0	5.22E-05	7.73E-04	3.45E-03	8.58E-03	1.54E-02
4	2	54	55	9673.80	2	3773.82	2.6498	0.0303	9.79E-06	5.99E-04	3.93E-03	1.08E-02	1.93E-02	2.74E-02
6	4	39	40	11124.55	2	3773.89	2.6498	0.0303	2.42E-06	2.98E-04	2.76E-03	9.32E-03	1.92E-02	3.01E-02
5	3	57	58	12677.69	1	3773.99	2.6497	0.0303	2.19E-05	5.69E-03	7.69E-02	3.25E-01	7.78E-01	1.36E 00
10	8	110	109	36896.64	1	3774.06	2.6497	0.0303	0.0	0.0	0.0	6.41E-06	1.57E-04	1.44E-03
11	9	3	4	18376.90	1	3774.28	2.6495	0.0611	0.0	1.24E-05	6.59E-04	6.33E-03	2.62E-02	6.76E-02
6	4	50	51	13284.19	1	3774.38	2.6494	0.0303	1.27E-05	4.39E-03	6.86E-02	3.16E-01	8.03E-01	1.46E 00
2	0	67	68	8500.09	2	3774.87	2.6491	0.0303	1.01E-05	3.52E-04	1.74E-03	4.02E-03	6.44E-03	8.45E-03
10	8	15	16	16892.75	1	3775.30	2.6488	0.0591	0.0	1.59E-04	5.89E-03	4.57E-02	1.64E-01	3.82E-01
12	10	81	80	31315.80	1	3775.51	2.6486	0.0303	0.0	0.0	2.33E-06	1.44E-04	2.06E-03	1.29E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	10	13	12	20521.44	1	3776.18	2.6482	0.0610	0.0	6.83E-06	6.06E-04	7.91E-03	4.02E-02	1.20E-01
7	5	30	31	11964.44	2	3776.56	2.6479	0.0335	0.0	1.51E-04	1.72E-03	6.54E-03	1.46E-02	2.43E-02
9	7	25	26	15709.71	1	3776.69	2.6478	0.0418	0.0	6.04E-04	1.69E-02	1.10E-01	3.54E-01	7.61E-01
8	6	34	35	14744.11	1	3776.89	2.6477	0.0317	2.17E-06	1.52E-03	3.37E-02	1.92E-01	5.59E-01	1.13E 00
11	9	97	96	34245.04	1	3777.18	2.6475	0.0303	0.0	0.0	0.0	2.93E-05	5.55E-04	4.25E-03
7	5	42	43	13902.14	1	3777.88	2.6470	0.0303	6.43E-06	3.00E-03	5.45E-02	2.74E-01	7.39E-01	1.40E 00
11	9	2	3	18362.78	1	3778.02	2.6469	0.0609	0.0	9.50E-06	5.02E-04	4.80E-03	1.98E-02	5.12E-02
12	10	80	79	31048.78	1	3778.14	2.6468	0.0303	0.0	0.0	2.78E-06	1.65E-04	2.30E-03	1.42E-02
4	2	63	64	12005.71	1	3778.17	2.6468	0.0303	3.68E-05	6.92E-03	7.96E-02	3.05E-01	6.86E-01	1.14E 00
8	6	20	21	13000.48	2	3778.63	2.6465	0.0515	0.0	5.38E-05	7.84E-04	3.46E-03	8.54E-03	1.52E-02
12	10	14	13	20566.83	1	3778.69	2.6464	0.0604	0.0	7.08E-06	6.35E-04	8.34E-03	4.26E-02	1.28E-01
5	3	46	47	10219.57	2	3778.94	2.6462	0.0303	6.69E-06	5.32E-04	3.98E-03	1.18E-02	2.22E-02	3.28E-02
10	8	109	108	36539.95	1	3779.04	2.6462	0.0303	0.0	0.0	0.0	7.76E-06	1.83E-04	1.64E-03
2	0	75	76	11039.74	1	3779.15	2.6461	0.0303	2.72E-05	3.22E-03	2.94E-02	9.81E-02	2.01E-01	3.14E-01
3	1	60	61	8905.12	2	3779.39	2.6459	0.0303	1.57E-05	6.65E-04	3.63E-03	8.89E-03	1.48E-02	2.00E-02
3	1	69	70	11459.21	1	3779.88	2.6456	0.0303	4.27E-05	6.17E-03	6.23E-02	2.21E-01	4.70E-01	7.56E-01
6	4	38	39	10984.19	2	3779.88	2.6456	0.0303	2.90E-06	3.33E-04	2.99E-03	9.89E-03	2.01E-02	3.13E-02
10	8	14	15	16835.81	1	3779.89	2.6456	0.0597	0.0	1.58E-04	5.78E-03	4.45E-02	1.59E-01	3.69E-01
12	10	79	78	30784.78	1	3780.69	2.6450	0.0303	0.0	0.0	3.30E-06	1.89E-04	2.57E-03	1.55E-02
4	2	53	54	9478.96	2	3780.76	2.6450	0.0303	1.28E-05	7.13E-04	4.46E-03	1.19E-02	2.09E-02	2.93E-02
11	9	96	95	33927.93	1	3781.10	2.6447	0.0303	0.0	0.0	0.0	3.46E-05	6.36E-04	4.77E-03
12	10	15	14	20615.70	1	3781.12	2.6447	0.0597	0.0	7.28E-06	6.60E-04	8.74E-03	4.49E-02	1.35E-01
6	4	49	50	13098.50	1	3781.39	2.6445	0.0303	1.63E-05	5.17E-03	7.72E-02	3.47E-01	8.65E-01	1.56E 00
5	3	56	57	12465.57	1	3781.47	2.6445	0.0303	2.94E-05	6.88E-03	8.94E-02	3.62E-01	8.50E-01	1.47E 00
11	9	1	2	18352.19	1	3781.69	2.6443	0.0606	0.0	6.42E-06	3.38E-04	3.24E-03	1.34E-02	3.44E-02
7	5	29	30	11856.22	2	3781.97	2.6441	0.0340	0.0	1.63E-04	1.80E-03	6.76E-03	1.49E-02	2.46E-02
9	7	24	25	15616.54	1	3781.98	2.6441	0.0437	0.0	6.39E-04	1.75E-02	1.13E-01	3.58E-01	7.65E-01
2	0	66	67	8257.20	2	3782.62	2.6437	0.0303	1.41E-05	4.39E-04	2.05E-03	4.57E-03	7.16E-03	9.23E-03
8	6	33	34	14617.93	1	3782.81	2.6435	0.0321	2.54E-06	1.67E-03	3.60E-02	2.01E-01	5.80E-01	1.16E 00
12	10	78	77	30523.82	1	3783.16	2.6433	0.0303	0.0	0.0	3.91E-06	2.15E-04	2.86E-03	1.70E-02
8	6	19	20	12927.62	2	3783.39	2.6431	0.0535	0.0	5.52E-05	7.91E-04	3.46E-03	8.47E-03	1.50E-02
12	10	16	15	20668.05	1	3783.48	2.6431	0.0591	0.0	7.42E-06	6.81E-04	9.09E-03	4.68E-02	1.42E-01
10	8	108	107	36185.95	1	3783.94	2.6427	0.0303	0.0	0.0	0.0	9.37E-06	2.14E-04	1.87E-03
7	5	41	42	13746.29	1	3784.36	2.6425	0.0303	7.89E-06	3.42E-03	5.97E-02	2.94E-01	7.81E-01	1.47E 00
10	8	13	14	16782.41	1	3784.42	2.6424	0.0604	0.0	1.56E-04	5.64E-03	4.30E-02	1.53E-01	3.53E-01
11	9	95	94	33613.67	1	3784.94	2.6420	0.0303	0.0	0.0	0.0	4.07E-05	7.27E-04	5.33E-03
11	9	0	1	18345.12	1	3785.29	2.6418	0.0603	0.0	3.25E-06	1.71E-04	1.63E-03	6.73E-03	1.73E-02
5	3	45	46	10053.75	2	3785.38	2.6417	0.0303	8.34E-06	6.13E-04	4.40E-03	1.27E-02	2.37E-02	3.45E-02
12	10	77	76	30265.92	1	3785.55	2.6416	0.0303	0.0	0.0	4.62E-06	2.45E-04	3.17E-03	1.85E-02
12	10	17	16	20723.88	1	3785.77	2.6415	0.0585	0.0	7.51E-06	6.99E-04	9.40E-03	4.87E-02	1.48E-01
6	4	37	38	10847.26	2	3785.80	2.6414	0.0303	3.46E-06	3.72E-04	3.23E-03	1.05E-02	2.10E-02	3.24E-02
4	2	62	63	11770.57	1	3786.06	2.6413	0.0303	5.09E-05	8.56E-03	9.31E-02	3.45E-01	7.58E-01	1.25E 00
3	1	59	60	8687.99	2	3786.71	2.6408	0.0303	2.12E-05	8.08E-04	4.18E-03	9.94E-03	1.62E-02	2.15E-02
9	7	118	117	38126.84	1	3786.96	2.6406	0.0303	0.0	0.0	0.0	2.84E-06	7.81E-05	7.80E-04
9	7	23	24	15526.91	1	3787.22	2.6405	0.0457	0.0	6.72E-04	1.80E-02	1.14E-01	3.60E-01	7.66E-01
7	5	28	29	11751.45	2	3787.32	2.6404	0.0359	1.06E-06	1.75E-04	1.99E-03	6.98E-03	1.53E-02	2.50E-02
4	2	52	53	9287.54	2	3787.64	2.6402	0.0303	1.66E-05	8.44E-04	5.05E-03	1.31E-02	2.26E-02	3.13E-02
2	0	74	75	10758.35	1	3787.82	2.6400	0.0303	4.04E-05	4.18E-03	3.56E-02	1.14E-01	2.28E-01	3.49E-01
12	10	76	75	30011.07	1	3787.85	2.6400	0.0303	0.0	0.0	5.45E-06	2.79E-04	3.52E-03	2.02E-02
12	10	18	17	20783.18	1	3787.99	2.6399	0.0568	0.0	7.55E-06	7.13E-04	9.67E-03	5.04E-02	1.53E-01
8	6	18	19	12858.20	2	3788.09	2.6399	0.0552	0.0	5.64E-05	7.94E-04	3.43E-03	8.36E-03	1.48E-02
3	1	68	69	11200.97	1	3788.16	2.6398	0.0303	6.11E-05	7.81E-03	7.41E-02	2.53E-01	5.27E-01	8.32E-01
6	4	48	49	12916.32	1	3788.34	2.6397	0.0303	2.08E-05	6.06E-03	8.67E-02	3.79E-01	9.29E-01	1.65E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	32	33	14495.30	1	3788.67	2.6394	0.0326	2.95E-06	1.83E-03	3.83E-02	2.10E-01	5.99E-01	1.19E 00
11	9	94	93	33302.29	1	3788.69	2.6394	0.0303	0.0	0.0	0.0	4.79E-05	8.29E-04	5.96E-03
10	8	107	106	35834.66	1	3788.76	2.6394	0.0303	0.0	0.0	0.0	1.13E-05	2.50E-04	2.13E-03
10	8	12	13	16732.56	1	3788.88	2.6393	0.0610	0.0	1.52E-04	5.45E-03	4.13E-02	1.46E-01	3.37E-01
5	3	55	56	12256.95	1	3788.89	2.6393	0.0303	3.91E-05	8.30E-03	1.01E-01	4.03E-01	9.28E-01	1.58E 00
12	10	75	74	29759.31	1	3790.08	2.6385	0.0303	0.0	0.0	6.41E-06	3.16E-04	3.90E-03	2.20E-02
12	10	19	18	20845.96	1	3790.13	2.6384	0.0552	0.0	7.54E-06	7.23E-04	9.89E-03	5.19E-02	1.59E-01
2	0	65	66	8017.69	2	3790.32	2.6383	0.0303	1.97E-05	5.45E-04	2.40E-03	5.19E-03	7.93E-03	1.01E-02
7	5	40	41	13593.96	1	3790.77	2.6380	0.0303	9.63E-06	3.88E-03	6.53E-02	3.15E-01	8.24E-01	1.53E 00
6	4	36	37	10713.77	2	3791.67	2.6374	0.0308	4.09E-06	4.13E-04	3.47E-03	1.10E-02	2.19E-02	3.34E-02
5	3	44	45	9891.36	2	3791.76	2.6373	0.0303	1.03E-05	7.03E-04	4.86E-03	1.37E-02	2.51E-02	3.63E-02
12	10	20	19	20912.20	1	3792.20	2.6370	0.0535	0.0	7.48E-06	7.29E-04	1.01E-02	5.32E-02	1.63E-01
12	10	74	73	29510.62	1	3792.22	2.6370	0.0303	0.0	0.0	7.52E-06	3.58E-04	4.31E-03	2.39E-02
11	9	1	0	18341.60	1	3792.28	2.6369	0.0603	0.0	3.29E-06	1.73E-04	1.65E-03	6.81E-03	1.76E-02
11	9	93	92	32993.78	1	3792.36	2.6369	0.0303	0.0	0.0	0.0	5.62E-05	9.45E-04	6.64E-03
9	7	22	23	15440.84	1	3792.38	2.6369	0.0476	0.0	7.02E-04	1.84E-02	1.16E-01	3.62E-01	7.64E-01
9	7	117	116	37745.10	1	3792.60	2.6367	0.0303	0.0	0.0	0.0	3.49E-06	9.25E-05	9.01E-04
7	5	27	28	11650.14	2	3792.61	2.6367	0.0379	1.18E-06	1.87E-04	1.97E-03	7.18E-03	1.56E-02	2.53E-02
8	6	17	18	12792.23	2	3792.72	2.6366	0.0568	0.0	5.72E-05	7.92E-04	3.40E-03	8.22E-03	1.45E-02
10	8	11	12	16686.27	1	3793.27	2.6362	0.0617	0.0	1.48E-04	5.22E-03	3.93E-02	1.38E-01	3.18E-01
10	8	106	105	35486.10	1	3793.49	2.6361	0.0303	0.0	0.0	0.0	1.36E-05	2.91E-04	2.42E-03
4	2	61	62	11538.91	1	3793.88	2.6358	0.0303	7.01E-05	1.05E-02	1.08E-01	3.89E-01	8.36E-01	1.35E 00
3	1	58	59	8474.25	2	3793.97	2.6358	0.0303	2.84E-05	9.80E-04	4.82E-03	1.11E-02	1.78E-02	2.33E-02
12	10	21	20	20981.92	1	3794.20	2.6356	0.0515	0.0	7.39E-06	7.31E-04	1.02E-02	5.43E-02	1.68E-01
12	10	73	72	29265.04	1	3794.29	2.6355	0.0303	0.0	0.0	8.79E-06	4.04E-04	4.75E-03	2.59E-02
4	2	51	52	9099.53	2	3794.46	2.6354	0.0303	2.14E-05	9.96E-04	5.69E-03	1.44E-02	2.44E-02	3.33E-02
8	6	31	32	14376.23	1	3794.46	2.6354	0.0331	3.41E-06	2.00E-03	4.06E-02	2.19E-01	6.17E-01	1.21E 00
6	4	47	48	12737.67	1	3795.23	2.6349	0.0303	2.65E-05	7.07E-03	9.70E-02	4.13E-01	9.96E-01	1.75E 00
11	9	2	1	18345.12	1	3795.67	2.6346	0.0606	0.0	6.59E-06	3.47E-04	3.32E-03	1.37E-02	3.53E-02
11	9	92	91	32688.18	1	3795.94	2.6344	0.0303	0.0	0.0	0.0	6.58E-05	1.07E-03	7.40E-03
12	10	22	21	21055.10	1	3796.13	2.6343	0.0496	0.0	7.25E-06	7.31E-04	1.03E-02	5.52E-02	1.71E-01
5	3	54	55	12051.84	1	3796.25	2.6342	0.0303	5.18E-05	9.96E-03	1.16E-01	4.48E-01	1.01E 00	1.69E 00
12	10	72	71	29022.55	1	3796.27	2.6342	0.0303	0.0	0.0	1.03E-05	4.56E-04	5.24E-03	2.81E-02
3	1	67	68	10946.18	1	3796.38	2.6341	0.0303	8.71E-05	9.86E-03	8.80E-02	2.90E-01	5.89E-01	9.14E-01
2	0	73	74	10480.37	1	3796.43	2.6341	0.0303	5.96E-05	5.40E-03	4.31E-02	1.33E-01	2.68E-01	3.87E-01
7	5	39	40	13445.18	1	3797.11	2.6336	0.0303	1.17E-05	4.38E-03	7.12E-02	3.36E-01	8.67E-01	1.60E 00
8	6	16	17	12729.73	2	3797.29	2.6335	0.0585	0.0	5.76E-05	7.86E-04	3.34E-03	8.04E-03	1.41E-02
9	7	21	22	15358.34	1	3797.48	2.6333	0.0496	0.0	7.31E-04	1.88E-02	1.17E-01	3.62E-01	7.60E-01
6	4	35	36	10583.74	2	3797.48	2.6333	0.0312	4.82E-06	4.57E-04	3.73E-03	1.16E-02	2.28E-02	3.44E-02
10	8	10	11	16643.52	1	3797.60	2.6332	0.0625	0.0	1.42E-04	4.96E-03	3.71E-02	1.30E-01	2.98E-01
7	5	26	27	11552.28	2	3797.83	2.6331	0.0398	1.32E-06	1.99E-04	2.05E-03	7.36E-03	1.58E-02	2.56E-02
2	0	64	65	7781.55	2	3797.96	2.6330	0.0303	2.73E-05	6.75E-04	2.81E-03	5.87E-03	8.78E-03	1.10E-02
12	10	23	22	21131.74	1	3797.98	2.6330	0.0476	0.0	7.07E-06	7.26E-04	1.04E-02	5.59E-02	1.74E-01
5	3	43	44	9732.40	2	3798.08	2.6329	0.0303	1.28E-05	8.04E-04	5.35E-03	1.48E-02	2.66E-02	3.80E-02
10	8	105	104	35140.28	1	3798.14	2.6329	0.0303	0.0	0.0	0.0	1.63E-05	3.38E-04	2.75E-03
9	7	116	115	37365.96	1	3798.16	2.6329	0.0303	0.0	0.0	0.0	4.28E-06	1.09E-04	1.04E-03
12	10	71	70	28783.19	1	3798.17	2.6328	0.0303	0.0	0.0	1.20E-05	5.13E-04	5.76E-03	3.04E-02
11	9	3	2	18352.19	1	3798.99	2.6323	0.0609	0.0	9.88E-06	5.21E-04	4.98E-03	2.06E-02	5.31E-02
11	9	91	90	32385.48	1	3799.44	2.6320	0.0303	0.0	0.0	1.07E-06	7.69E-05	1.22E-03	8.23E-03
12	10	24	23	21211.84	1	3799.76	2.6317	0.0457	0.0	6.87E-06	7.19E-04	1.04E-02	5.64E-02	1.77E-01
12	10	70	69	28546.96	1	3800.00	2.6316	0.0303	0.0	0.0	1.39E-05	5.76E-04	6.32E-03	3.28E-02
8	6	30	31	14260.70	1	3800.19	2.6314	0.0335	3.91E-06	2.17E-03	4.29E-02	2.28E-01	6.34E-01	1.24E 00
3	1	57	58	8263.93	2	3801.17	2.6308	0.0303	3.80E-05	1.18E-03	5.54E-03	1.24E-02	1.94E-02	2.50E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	50	51	8914.94	2	3801.23	2.6307	0.0303	2.75E-05	1.17E-03	6.41E-03	1.57E-02	2.63E-02	3.54E-02
12	10	25	24	21295.39	1	3801.46	2.6306	0.0437	0.0	6.63E-06	7.08E-04	1.03E-02	5.67E-02	1.79E-01
4	2	60	61	11310.73	1	3801.64	2.6304	0.0303	9.61E-05	1.29E-02	1.26E-01	4.38E-01	9.21E-01	1.47E 00
12	10	69	68	28313.86	1	3801.74	2.6304	0.0303	0.0	0.0	1.61E-05	6.45E-04	6.92E-03	3.53E-02
8	6	15	16	12670.68	2	3801.80	2.6303	0.0591	0.0	5.76E-05	7.76E-04	3.27E-03	7.82E-03	1.37E-02
10	8	9	10	16604.34	1	3801.85	2.6303	0.0624	0.0	1.34E-04	4.66E-03	3.47E-02	1.21E-01	2.77E-01
6	4	46	47	12562.54	1	3802.05	2.6302	0.0303	3.35E-05	8.22E-03	1.08E-01	4.50E-01	1.07E 00	1.85E 00
11	9	4	3	18362.78	1	3802.24	2.6300	0.0611	0.0	1.31E-05	6.93E-04	6.64E-03	2.75E-02	7.09E-02
9	7	20	21	15279.39	1	3802.52	2.6298	0.0515	0.0	7.56E-04	1.91E-02	1.17E-01	3.61E-01	7.54E-01
10	8	104	103	34797.22	1	3802.70	2.6297	0.0303	0.0	0.0	0.0	1.96E-05	3.92E-04	3.12E-03
11	9	90	89	32085.71	1	3802.86	2.6296	0.0303	0.0	0.0	1.30E-06	8.97E-05	1.38E-03	9.14E-03
7	5	25	26	11457.88	2	3803.00	2.6295	0.0418	1.47E-06	2.11E-04	2.13E-03	7.53E-03	1.60E-02	2.57E-02
12	10	26	25	21382.39	1	3803.10	2.6294	0.0418	0.0	6.38E-06	6.95E-04	1.03E-02	5.68E-02	1.80E-01
6	4	34	35	10457.16	2	3803.23	2.6293	0.0317	5.64E-06	5.03E-04	3.98E-03	1.22E-02	2.36E-02	3.54E-02
7	5	38	39	13299.95	1	3803.39	2.6292	0.0303	1.41E-05	4.93E-03	7.74E-02	3.58E-01	9.10E-01	1.66E 00
12	10	68	67	28083.91	1	3803.40	2.6292	0.0303	0.0	0.0	1.86E-05	7.21E-04	7.57E-03	3.81E-02
5	3	53	54	11850.23	1	3803.55	2.6291	0.0303	6.83E-05	1.19E-02	1.32E-01	4.96E-01	1.10E 00	1.81E 00
9	7	115	114	36989.44	1	3803.63	2.6291	0.0303	0.0	0.0	0.0	5.24E-06	1.29E-04	1.20E-03
5	3	42	43	9576.89	2	3804.34	2.6286	0.0303	1.57E-05	9.16E-04	5.87E-03	1.59E-02	2.82E-02	3.98E-02
3	1	66	67	10694.85	1	3804.54	2.6284	0.0303	1.24E-04	1.24E-02	1.04E-01	3.31E-01	6.56E-01	1.00E 00
12	10	27	26	21472.84	1	3804.66	2.6284	0.0398	0.0	6.10E-06	6.80E-04	1.02E-02	5.68E-02	1.81E-01
2	0	72	73	10205.84	1	3804.98	2.6281	0.0303	8.76E-05	6.95E-03	5.19E-02	1.54E-01	2.91E-01	4.29E-01
12	10	67	66	27857.12	1	3804.99	2.6281	0.0303	0.0	0.0	2.14E-05	8.04E-04	8.27E-03	4.09E-02
11	9	5	4	18376.90	1	3805.42	2.6278	0.0614	0.0	1.63E-05	8.63E-04	8.28E-03	3.43E-02	8.86E-02
2	0	63	64	7548.79	2	3805.54	2.6277	0.0303	3.77E-05	8.33E-04	3.29E-03	6.63E-03	9.70E-03	1.19E-02
8	6	29	30	14148.75	1	3805.86	2.6275	0.0340	4.46E-06	2.34E-03	4.51E-02	2.36E-01	5.50E-01	1.26E 00
10	8	8	9	16568.71	1	3806.04	2.6274	0.0624	0.0	1.26E-04	4.32E-03	3.20E-02	1.11E-01	2.54E-01
12	10	28	27	21566.74	1	3806.14	2.6273	0.0379	0.0	5.81E-06	6.62E-04	1.01E-02	5.65E-02	1.82E-01
11	9	89	88	31788.87	1	3806.20	2.6273	0.0303	0.0	0.0	1.58E-06	1.05E-04	1.57E-03	1.02E-02
8	6	14	15	12615.09	2	3806.24	2.6273	0.0597	0.0	5.73E-05	7.61E-04	3.18E-03	7.57E-03	1.32E-02
12	10	66	65	27633.50	1	3806.49	2.6271	0.0303	0.0	0.0	2.46E-05	8.96E-04	9.01E-03	4.39E-02
10	8	103	102	34456.93	1	3807.17	2.6266	0.0303	0.0	0.0	0.0	2.35E-05	4.54E-04	3.53E-03
9	7	19	20	15204.01	1	3807.48	2.6264	0.0535	0.0	7.78E-04	1.93E-02	1.17E-01	3.58E-01	7.44E-01
12	10	29	28	21664.07	1	3807.55	2.6264	0.0359	0.0	5.50E-06	6.42E-04	9.89E-03	5.61E-02	1.82E-01
12	10	65	64	27413.06	1	3807.92	2.6261	0.0303	0.0	0.0	2.82E-05	9.05E-04	9.82E-03	4.70E-02
4	2	49	50	8733.79	2	3807.94	2.6261	0.0303	3.51E-05	1.37E-03	7.18E-03	1.72E-02	2.82E-02	3.76E-02
7	5	24	25	11366.95	2	3808.10	2.6260	0.0437	1.61E-06	2.23E-04	2.19E-03	7.67E-03	1.62E-02	2.58E-02
3	1	56	57	8057.01	2	3808.32	2.6258	0.0303	5.05E-05	1.43E-03	6.35E-03	1.38E-02	2.12E-02	2.69E-02
11	9	6	5	18394.55	1	3808.53	2.6257	0.0617	0.0	1.93E-05	1.03E-03	9.89E-03	4.10E-02	1.06E-01
6	4	45	46	12390.96	1	3808.81	2.6255	0.0303	4.21E-05	9.52E-03	1.20E-01	4.88E-01	1.14E 00	1.95E 00
12	10	30	29	21764.84	1	3808.89	2.6254	0.0340	0.0	5.19E-06	6.21E-04	9.70E-03	5.56E-02	1.81E-01
6	4	33	34	10334.05	2	3808.92	2.6254	0.0321	6.56E-06	5.52E-04	4.24E-03	1.28E-02	2.44E-02	3.63E-02
9	7	114	113	36615.54	1	3809.01	2.6254	0.0303	0.0	0.0	0.0	6.41E-06	1.53E-04	1.38E-03
12	10	64	63	27195.80	1	3809.26	2.6252	0.0303	0.0	0.0	3.23E-05	1.10E-03	1.06E-02	5.03E-02
4	2	59	60	11086.05	1	3809.34	2.6251	0.0303	1.31E-04	1.58E-02	1.46E-01	4.92E-01	1.01E 00	1.59E 00
11	9	88	87	31495.00	1	3809.45	2.6251	0.0303	0.0	0.0	1.93E-06	1.22E-04	1.78E-03	1.13E-02
7	5	37	38	13158.27	1	3809.61	2.6249	0.0303	1.69E-05	5.52E-03	8.38E-02	3.80E-01	9.53E-01	1.72E 00
12	10	31	30	21869.04	1	3810.15	2.6246	0.0335	0.0	4.89E-06	5.99E-04	9.50E-03	5.50E-02	1.81E-01
10	8	7	8	16536.64	1	3810.16	2.6246	0.0623	0.0	1.16E-04	3.95E-03	2.91E-02	1.01E-01	2.30E-01
12	10	63	62	26981.75	1	3810.53	2.6243	0.0303	0.0	0.0	3.68E-05	1.22E-03	1.15E-02	5.37E-02
5	3	41	42	9424.83	2	3810.54	2.6243	0.0303	1.91E-05	1.04E-03	6.42E-03	1.70E-02	2.97E-02	4.16E-02
8	6	13	14	12562.97	2	3810.62	2.6242	0.0604	0.0	5.65E-05	7.41E-04	3.08E-03	7.28E-03	1.26E-02
5	3	52	53	11652.14	1	3810.78	2.6241	0.0303	8.95E-05	1.42E-02	1.50E-01	5.48E-01	1.19E 00	1.94E 00

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	10	32	31	21976.67	1	3811.34	2.6237	0.0331	0.0	4.58E-06	5.76E-04	9.28E-03	5.43F-02	1.79F-01
8	6	28	29	14040.35	1	3811.45	2.6237	0.0359	5.06E-06	2.53F-03	4.74E-02	2.44E-01	6.66F-01	1.28E 00
11	9	7	6	18415.73	1	3811.57	2.6236	0.0620	0.0	2.22E-05	1.19F-03	1.15E-02	4.77F-02	1.23E-01
10	8	102	101	34119.43	1	3811.57	2.6236	0.0303	0.0	0.0	0.0	2.80E-05	5.26F-04	3.99F-03
12	10	62	61	26770.90	1	3811.72	2.6235	0.0303	0.0	0.0	4.19E-05	1.35F-03	1.25E-02	5.73E-02
9	7	18	19	15132.20	1	3812.38	2.6230	0.0552	0.0	7.95F-04	1.94E-02	1.17E-01	3.54E-01	7.32F-01
12	10	33	32	22087.72	1	3812.46	2.6230	0.0326	0.0	4.27E-06	5.52F-04	9.03E-03	5.34F-02	1.78E-01
11	9	87	86	31204.08	1	3812.63	2.6229	0.0303	0.0	0.0	2.34E-06	1.42F-04	2.01F-03	1.25E-02
3	1	65	66	10446.99	1	3812.64	2.6229	0.0303	1.74E-04	1.55F-02	1.23E-01	3.77F-01	7.30E-01	1.10E 00
12	10	61	60	26563.26	1	3812.82	2.6227	0.0303	0.0	0.0	4.76F-05	1.48E-03	1.35E-02	6.10E-02
2	0	62	63	7319.43	2	3813.06	2.6226	0.0303	5.17E-05	1.02F-03	3.82E-03	7.47E-03	1.07F-02	1.29E-02
7	5	23	24	11279.49	2	3813.14	2.6225	0.0457	1.77F-06	2.34F-04	2.25F-03	7.78E-03	1.63F-02	2.59E-02
2	0	71	72	9934.75	1	3813.48	2.6223	0.0303	1.28F-04	8.92E-03	6.25F-02	1.78E-01	3.28F-01	4.75F-01
12	10	34	33	22202.19	1	3813.50	2.6223	0.0321	0.0	3.97F-06	5.27E-04	8.77F-03	5.24E-02	1.76E-01
12	10	60	59	26358.85	1	3813.85	2.6220	0.0303	0.0	0.0	5.38E-05	1.63F-03	1.45F-02	6.48E-02
10	8	6	7	16508.13	1	3814.21	2.6218	0.0620	0.0	1.05E-04	3.54E-03	2.60E-02	9.00F-02	2.05F-01
9	7	113	112	36244.30	1	3814.31	2.6217	0.0303	0.0	0.0	0.0	7.82E-06	1.80F-04	1.58E-03
12	10	35	34	22320.07	1	3814.46	2.6216	0.0317	0.0	3.67E-06	5.01E-04	8.49E-03	5.13E-02	1.74F-01
11	9	8	7	18440.43	1	3814.53	2.6216	0.0623	0.0	2.49F-05	1.34F-03	1.30E-02	5.41E-02	1.40E-01
6	4	32	33	10214.39	2	3814.54	2.6215	0.0326	7.59E-06	6.03E-04	4.51F-03	1.33E-02	2.52F-02	3.72F-02
4	2	48	49	8556.07	2	3814.59	2.6215	0.0303	4.46F-05	1.60F-03	8.04E-03	1.87E-02	3.02E-02	3.98F-02
12	10	59	58	26157.68	1	3814.81	2.6214	0.0303	0.0	0.0	6.09E-05	1.79F-03	1.56E-02	6.89F-02
8	6	12	13	12514.32	2	3814.94	2.6213	0.0610	0.0	5.52E-05	7.16E-04	2.95E-03	6.95E-03	1.20F-02
12	10	36	35	22441.36	1	3815.35	2.6210	0.0312	0.0	3.38E-06	4.75E-04	8.19E-03	5.01E-02	1.71F-01
3	1	55	56	7853.51	2	3815.41	2.6209	0.0303	6.68F-05	1.71E-03	7.25E-03	1.53E-02	2.30F-02	2.89E-02
6	4	44	45	12222.92	1	3815.51	2.6209	0.0303	5.26E-05	1.10E-02	1.33F-01	5.28E-01	1.21F 00	2.05E 00
12	10	58	57	25959.75	1	3815.68	2.6208	0.0303	0.0	0.0	6.87E-05	1.96E-03	1.68F-02	7.31E-02
11	9	86	85	30916.14	1	3815.71	2.6207	0.0303	0.0	0.0	2.83E-06	1.65E-04	2.27E-03	1.39E-02
7	5	36	37	13020.16	1	3815.76	2.6207	0.0308	2.01F-05	6.16F-03	9.04E-02	4.02E-01	9.95E-01	1.78F 00
10	8	101	100	33784.73	1	3815.87	2.6206	0.0303	0.0	0.0	0.0	3.35E-05	6.07F-04	4.51F-03
12	10	37	36	22566.05	1	3816.17	2.6204	0.0308	0.0	3.10F-06	4.49E-04	7.88E-03	4.88E-02	1.68E-01
12	10	57	56	25765.06	1	3816.47	2.6202	0.0303	0.0	0.0	7.73E-05	2.15E-03	1.81F-02	7.74F-02
5	3	40	41	9276.23	2	3816.68	2.6201	0.0303	2.32E-05	1.17E-03	7.01E-03	1.81E-02	3.13E-02	4.33F-02
12	10	38	37	22694.13	1	3816.91	2.6199	0.0303	0.0	2.83F-06	4.23E-04	7.56E-03	4.74E-02	1.65F-01
4	2	58	59	10864.87	1	3816.98	2.6199	0.0303	1.78E-04	1.93E-02	1.69F-01	5.52E-01	1.11F 00	1.72E 00
8	6	27	28	13935.53	1	3816.99	2.6199	0.0379	5.71E-06	2.71F-03	4.96E-02	2.51F-01	6.80E-01	1.30F 00
12	10	56	55	25573.64	1	3817.19	2.6197	0.0303	0.0	0.0	8.67E-05	2.34E-03	1.94F-02	8.19F-02
9	7	17	18	15063.96	1	3817.22	2.6197	0.0568	0.0	8.08F-04	1.94E-02	1.16E-01	3.48E-01	7.17E-01
11	9	9	8	18468.66	1	3817.43	2.6196	0.0624	0.0	2.74E-05	1.49E-03	1.45E-02	6.04E-02	1.57E-01
12	10	39	38	22825.61	1	3817.57	2.6195	0.0303	0.0	2.58E-06	3.98E-04	7.24E-03	4.59F-02	1.61F-01
12	10	55	54	25385.48	1	3817.83	2.6193	0.0303	0.0	0.0	9.70E-05	2.55E-03	2.07F-02	8.65E-02
5	3	51	52	11457.59	1	3817.95	2.6192	0.0303	1.17E-04	1.69E-02	1.70E-01	6.04E-01	1.29F 00	2.07F 00
7	5	22	23	11195.50	2	3818.12	2.6191	0.0476	1.92E-06	2.44E-04	2.31E-03	7.87E-03	1.63E-02	2.58E-02
12	10	40	39	22960.48	1	3818.16	2.6191	0.0303	0.0	2.34E-06	3.72E-04	6.91F-03	4.44E-02	1.57E-01
10	8	5	6	16483.18	1	3818.19	2.6190	0.0617	0.0	9.22E-05	3.11F-03	2.27E-02	7.84E-02	1.78E-01
12	10	54	53	25200.61	1	3818.39	2.6189	0.0303	0.0	0.0	1.08F-04	2.77F-03	2.21F-02	9.12E-02
12	10	41	40	23098.72	1	3818.67	2.6187	0.0303	0.0	2.11E-06	3.47F-04	6.58E-03	4.29E-02	1.53F-01
11	9	85	84	30631.19	1	3818.72	2.6187	0.0303	0.0	0.0	3.41F-06	1.91E-04	2.56E-03	1.53F-02
12	10	53	52	25019.01	1	3818.88	2.6186	0.0303	0.0	0.0	1.20F-04	3.01E-03	2.35F-02	9.59F-02
12	10	42	41	23240.34	1	3819.11	2.6184	0.0303	0.0	1.90E-06	3.23E-04	6.25E-03	4.13E-02	1.49E-01
8	6	11	12	12469.13	2	3819.19	2.6184	0.0617	0.0	5.34E-05	6.86E-04	2.81E-03	6.59F-03	1.14F-02
12	10	52	51	24840.71	1	3819.28	2.6183	0.0303	0.0	0.0	1.34E-04	3.25E-03	2.50E-02	1.01E-01
12	10	43	42	23385.33	1	3819.47	2.6182	0.0303	0.0	1.70E-06	3.00E-04	5.92E-03	3.96F-02	1.44E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	7	112	111	35875.71	1	3819.53	2.6181	0.0303	0.0	0.0	0.0	9.53E-06	2.11E-04	1.81E-03
12	10	51	50	24665.70	1	3819.61	2.6181	0.0303	0.0	0.0	1.48E-04	3.51E-03	2.66E-02	1.06E-01
8	6	122	121	37951.65	1	3819.67	2.6180	0.0303	0.0	0.0	0.0	2.60E-06	7.04E-05	6.95E-04
12	10	44	43	23533.68	1	3819.76	2.6180	0.0303	0.0	1.52E-06	2.77E-04	5.59E-03	3.80E-02	1.40E-01
12	10	50	49	24494.01	1	3819.86	2.6179	0.0303	0.0	0.0	1.63E-04	3.78E-03	2.81E-02	1.11E-01
12	10	45	44	23685.38	1	3819.96	2.6178	0.0303	0.0	1.35E-06	2.56E-04	5.27E-03	3.63E-02	1.35E-01
12	10	49	48	24325.62	1	3820.04	2.6178	0.0303	0.0	0.0	1.80E-04	4.06E-03	2.97E-02	1.15E-01
10	8	100	99	33452.85	1	3820.10	2.6177	0.0303	0.0	0.0	0.0	3.98E-05	7.01E-04	5.09E-03
12	10	46	45	23840.43	1	3820.10	2.6177	0.0303	0.0	1.20E-06	2.35E-04	4.96E-03	3.47E-02	1.30E-01
6	4	31	32	10098.21	2	3820.11	2.6177	0.0331	8.73E-06	6.56E-04	4.77E-03	1.39E-02	2.59E-02	3.80E-02
12	10	48	47	24160.56	1	3820.13	2.6177	0.0303	0.0	0.0	1.97E-04	4.35E-03	3.14E-02	1.20E-01
12	10	47	46	23998.83	1	3820.15	2.6177	0.0303	0.0	1.06E-06	2.16E-04	4.65E-03	3.30E-02	1.25E-01
11	9	10	9	18500.42	1	3820.26	2.6176	0.0624	0.0	2.97E-05	1.62E-03	1.59E-02	6.65E-02	1.73E-01
2	0	61	62	7093.47	2	3820.53	2.6174	0.0303	7.06E-05	1.26E-03	4.44E-03	8.39E-03	1.18E-02	1.40E-02
3	1	64	65	10202.62	1	3820.68	2.6173	0.0303	2.45E-04	1.94E-02	1.45E-01	4.29E-01	8.11E-01	1.20E 00
4	2	47	48	8381.80	2	3821.18	2.6170	0.0303	5.64E-05	1.86E-03	8.96E-03	2.04E-02	3.23E-02	4.21E-02
11	9	84	83	30349.24	1	3821.65	2.6167	0.0303	0.0	0.0	4.11E-06	2.21E-04	2.88E-03	1.69E-02
7	5	35	36	12885.61	1	3821.85	2.6165	0.0312	2.38E-05	6.84E-03	9.73E-02	4.24E-01	1.04E 00	1.84E 00
2	0	70	71	9667.11	1	3821.91	2.6165	0.0303	1.86E-04	1.14E-02	7.49E-02	2.05E-01	3.69E-01	5.25E-01
9	7	16	17	14999.30	1	3821.98	2.6164	0.0585	1.03E-06	8.16E-04	1.93E-02	1.14E-01	3.41E-01	6.99E-01
10	8	4	5	16461.79	1	3822.10	2.6164	0.0614	0.0	7.87E-05	2.64E-03	1.92E-02	6.63E-02	1.50E-01
6	4	43	44	12058.43	1	3822.15	2.6163	0.0303	6.54E-05	1.26E-02	1.47E-01	5.70E-01	1.29E 00	2.16E 00
3	1	54	55	7653.44	2	3822.44	2.6161	0.0303	8.79E-05	2.04E-03	8.26E-03	1.69E-02	2.50E-02	3.10E-02
8	6	26	27	13834.28	1	3822.45	2.6161	0.0398	6.41E-06	2.90E-03	5.17E-02	2.58E-01	6.92E-01	1.31E 00
5	3	39	40	9131.08	2	3822.76	2.6159	0.0303	2.80E-05	1.32E-03	7.62E-03	1.93E-02	3.29E-02	4.51E-02
11	9	11	10	18535.70	1	3823.01	2.6157	0.0625	0.0	3.18E-05	1.75E-03	1.72E-02	7.23E-02	1.89E-01
7	5	21	22	11114.98	2	3823.03	2.6157	0.0496	2.07E-06	2.53E-04	2.35E-03	7.92E-03	1.63E-02	2.56E-02
8	6	10	11	12427.41	2	3823.38	2.6155	0.0625	0.0	5.12E-05	6.51E-04	2.65E-03	6.19E-03	1.06E-02
10	8	99	98	33123.80	1	3824.23	2.6149	0.0303	0.0	0.0	0.0	4.74E-05	8.07E-04	5.73E-03
11	9	83	82	30070.30	1	3824.49	2.6147	0.0303	0.0	0.0	4.93E-06	2.55E-04	3.24E-03	1.87E-02
4	2	57	58	10647.20	1	3824.56	2.6147	0.0303	2.40E-04	2.35E-02	1.96E-01	6.18E-01	1.22E 00	1.86E 00
9	7	111	110	35509.81	1	3824.65	2.6146	0.0303	0.0	0.0	0.0	1.16E-05	2.48E-04	2.08E-03
5	3	50	51	11266.57	1	3825.06	2.6143	0.0303	1.51E-04	2.00E-02	1.92E-01	6.65E-01	1.39E 00	2.21E 00
6	4	30	31	9985.50	2	3825.61	2.6140	0.0335	9.98E-06	7.11E-04	5.03E-03	1.44E-02	2.66E-02	3.87E-02
8	6	121	120	37555.49	1	3825.63	2.6139	0.0303	0.0	0.0	0.0	3.21E-06	8.37E-05	8.05E-04
11	9	12	11	18574.50	1	3825.69	2.6139	0.0617	0.0	3.36E-05	1.87E-03	1.84E-02	7.78E-02	2.04E-01
10	8	3	4	16443.96	1	3825.95	2.6137	0.0611	0.0	6.43E-05	2.15E-03	1.56E-02	5.37E-02	1.22E-01
9	7	15	16	14938.22	1	3826.68	2.6132	0.0591	1.07E-06	8.18E-04	1.90E-02	1.11E-01	3.32E-01	6.78E-01
11	9	82	81	29794.40	1	3827.25	2.6128	0.0303	0.0	0.0	5.91E-06	2.94E-04	3.63E-03	2.05E-02
8	6	9	10	12389.16	2	3827.51	2.6127	0.0624	0.0	4.85E-05	6.11E-04	2.47E-03	5.76E-03	9.87E-03
4	2	46	47	8210.98	2	3827.71	2.6125	0.0303	7.09E-05	2.16E-03	9.97E-03	2.21E-02	3.45E-02	4.44E-02
8	6	25	26	13736.61	1	3827.85	2.6124	0.0418	7.13E-06	3.08E-03	5.37E-02	2.65E-01	7.02E-01	1.32E 00
7	5	34	35	12754.63	1	3827.87	2.6124	0.0317	2.81E-05	7.57E-03	1.04E-01	4.46E-01	1.08E 00	1.90E 00
7	5	20	21	11037.95	2	3827.89	2.6124	0.0515	2.22E-06	2.62E-04	2.38E-03	7.95E-03	1.63E-02	2.54E-02
2	0	60	61	6870.93	2	3827.94	2.6124	0.0303	9.60E-05	1.53E-03	5.14E-03	9.42E-03	1.29E-02	1.52E-02
10	8	98	97	32797.60	1	3828.29	2.6121	0.0303	0.0	0.0	0.0	5.62E-05	9.28E-04	6.44E-03
11	9	13	12	18616.82	1	3828.30	2.6121	0.0610	0.0	3.51E-05	1.97E-03	1.96E-02	8.31E-02	2.18E-01
3	1	63	64	9961.74	1	3828.66	2.6119	0.0303	3.42E-04	2.41E-02	1.70E-01	4.87E-01	9.00E-01	1.31E 00
6	4	42	43	11897.51	1	3828.72	2.6118	0.0303	8.09E-05	1.45E-02	1.62E-01	6.14E-01	1.36E 00	2.26E 00
5	3	38	39	8989.41	2	3828.79	2.6118	0.0303	3.36E-05	1.48E-03	8.26E-03	2.05E-02	3.45E-02	4.68E-02
3	1	53	54	7456.80	2	3829.42	2.6114	0.0303	1.15E-04	2.43E-03	9.39E-03	1.87E-02	2.71E-02	3.32E-02
9	7	110	109	35146.60	1	3829.69	2.6112	0.0303	0.0	0.0	0.0	1.41E-05	2.91E-04	2.38E-03
10	8	2	3	16429.71	1	3829.72	2.6112	0.0609	0.0	4.91E-05	1.63E-03	1.19E-02	4.08E-02	9.22E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	81	80	29521.54	1	3829.93	2.6110	0.0303	0.0	0.0	7.07E-06	3.37E-04	4.07E-03	2.26E-02
2	0	69	70	9402.94	1	3830.29	2.6108	0.0303	2.69E-04	1.45E-02	8.96E-02	2.37E-01	4.14E-01	5.79E-01
11	9	14	13	18662.66	1	3830.84	2.6104	0.0604	0.0	3.63E-05	2.07E-03	2.07E-02	8.80E-02	2.32E-01
6	4	29	30	9876.27	2	3831.06	2.6102	0.0340	1.13E-05	7.66E-04	5.28E-03	1.49E-02	2.73E-02	3.93E-02
9	7	14	15	14880.71	1	3831.31	2.6101	0.0597	1.09E-06	8.14E-04	1.87E-02	1.09E-01	3.22E-01	6.54E-01
8	6	120	119	37161.89	1	3831.51	2.6099	0.0303	0.0	0.0	0.0	3.96E-06	9.95E-05	9.32E-04
8	6	8	9	12354.38	2	3831.57	2.6099	0.0624	0.0	4.54E-05	5.66E-04	2.28E-03	5.30E-03	9.06E-03
4	2	56	57	10433.05	1	3832.08	2.6095	0.0303	3.22E-04	2.85E-02	2.25E-01	6.90E-01	1.33E 00	2.00E 00
5	3	49	50	11079.09	1	3832.11	2.6095	0.0303	1.95E-04	2.35E-02	2.17E-01	7.29E-01	1.50E 00	2.35E 00
10	8	97	96	32474.26	1	3832.26	2.6094	0.0303	0.0	0.0	0.0	6.66E-05	1.07E-03	7.24E-03
11	9	80	79	29251.72	1	3832.53	2.6092	0.0303	0.0	0.0	8.43E-06	3.87E-04	4.55E-03	2.48E-02
7	5	19	20	10964.39	2	3832.68	2.6091	0.0535	2.36E-06	2.69E-04	2.41E-03	7.94E-03	1.61E-02	2.51E-02
8	6	24	25	13642.53	1	3833.19	2.6088	0.0437	7.89E-06	3.26E-03	5.56E-02	2.70E-01	7.10E-01	1.33E 00
11	9	15	14	18712.02	1	3833.31	2.6087	0.0597	0.0	3.73E-05	2.15E-03	2.16E-02	9.26E-02	2.45E-01
10	8	1	2	16419.01	1	3833.42	2.6086	0.0606	0.0	3.32E-05	1.10E-03	7.99E-03	2.74E-02	6.20E-02
7	5	33	34	12627.23	1	3833.83	2.6084	0.0321	3.29E-05	8.34E-03	1.12E-01	4.68E-01	1.12E 00	1.95E 00
4	2	45	46	8043.62	2	3834.18	2.6081	0.0303	8.87E-05	2.49E-03	1.10E-02	2.39E-02	3.68E-02	4.68E-02
9	7	109	108	34786.11	1	3834.65	2.6078	0.0303	0.0	0.0	0.0	1.71E-05	3.41E-04	2.72E-03
5	3	37	38	8851.20	2	3834.75	2.6077	0.0303	4.01E-05	1.65E-03	8.92E-03	2.17E-02	3.60E-02	4.84E-02
11	9	79	78	28984.96	1	3835.04	2.6075	0.0303	0.0	0.0	1.00E-05	4.43E-04	5.08E-03	2.72E-02
6	4	41	42	11740.14	1	3835.23	2.6074	0.0303	9.95E-05	1.65E-02	1.78E-01	6.59E-01	1.44E 00	2.37E 00
2	0	59	60	6651.80	2	3835.29	2.6074	0.0303	1.30E-04	1.87E-03	5.94E-03	1.05E-02	1.42E-02	1.64E-02
8	6	7	8	12323.08	2	3835.57	2.6072	0.0623	0.0	4.17E-05	5.17E-04	2.08E-03	4.80E-03	8.19E-03
11	9	16	15	18764.90	1	3835.71	2.6071	0.0591	0.0	3.81E-05	2.22E-03	2.25E-02	9.68E-02	2.57E-01
9	7	13	14	14826.79	1	3835.87	2.6070	0.0604	1.10E-06	8.04E-04	1.82E-02	1.05E-01	3.09E-01	6.27E-01
10	8	96	95	32153.80	1	3836.15	2.6068	0.0303	0.0	0.0	1.13E-06	7.87E-05	1.22E-03	8.12E-03
3	1	52	53	7263.61	2	3836.33	2.6067	0.0303	1.50E-04	2.89E-03	1.06E-02	2.06E-02	2.94E-02	3.54E-02
6	4	28	29	9770.52	2	3836.44	2.6066	0.0359	1.28E-05	8.24E-04	5.54E-03	1.54E-02	2.79E-02	3.99E-02
3	1	62	63	9724.36	1	3836.58	2.6065	0.0303	4.74E-04	2.99E-02	1.99E-01	5.51E-01	9.96E-01	1.42E 00
10	8	0	1	16411.88	1	3837.06	2.6062	0.0603	0.0	1.68E-05	5.57E-04	4.03E-03	1.38E-02	3.12E-02
8	6	119	118	36770.87	1	3837.29	2.6060	0.0303	0.0	0.0	0.0	4.90E-06	1.18E-04	1.08E-03
7	5	18	19	10894.32	2	3837.41	2.6059	0.0552	2.49E-06	2.75E-04	2.42E-03	7.89E-03	1.59E-02	2.46E-02
11	9	78	77	28721.29	1	3837.48	2.6059	0.0303	0.0	0.0	1.19E-05	5.07E-04	5.66E-03	2.97E-02
11	9	17	16	18821.29	1	3838.03	2.6055	0.0585	0.0	3.85E-05	2.27E-03	2.33E-02	1.01E-01	2.68E-01
8	6	23	24	13552.03	1	3838.46	2.6052	0.0457	8.68E-06	3.43E-03	5.72E-02	2.75E-01	7.16E-01	1.33E 00
2	0	68	69	9142.25	1	3838.60	2.6051	0.0303	3.87E-04	1.84E-02	1.07E-01	2.72E-01	4.64E-01	6.38E-01
5	3	48	49	10895.17	1	3839.10	2.6048	0.0303	2.50E-04	2.76E-02	2.44E-01	7.98E-01	1.61E 00	2.50E 00
8	6	6	7	12295.25	2	3839.50	2.6045	0.0620	0.0	3.77E-05	4.64E-04	1.85E-03	4.28E-03	7.29E-03
9	7	108	107	34428.34	1	3839.52	2.6045	0.0303	0.0	0.0	0.0	2.07E-05	3.99E-04	3.10E-03
4	2	55	56	10222.44	1	3839.53	2.6045	0.0303	4.30E-04	3.45E-02	2.59E-01	7.69E-01	1.46E 00	2.15E 00
7	5	32	33	12503.41	1	3839.73	2.6043	0.0326	3.83E-05	9.15E-03	1.19E-01	4.90E-01	1.16E 00	2.00E 00
11	9	77	76	28460.70	1	3839.83	2.6043	0.0303	0.0	0.0	1.41E-05	5.78E-04	6.29E-03	3.25E-02
10	8	95	94	31836.23	1	3839.95	2.6042	0.0303	0.0	0.0	1.39E-06	9.28E-05	1.40E-03	9.09E-03
11	9	18	17	18881.18	1	3840.28	2.6040	0.0568	0.0	3.87E-05	2.32E-03	2.39E-02	1.04E-01	2.79E-01
9	7	12	13	14776.45	1	3840.37	2.6039	0.0610	1.11E-06	7.87E-04	1.76E-02	1.01E-01	2.96E-01	5.98E-01
4	2	44	45	7879.72	2	3840.59	2.6038	0.0303	1.10E-04	2.86E-03	1.22E-02	2.59E-02	3.91E-02	4.92E-02
5	3	36	37	8716.48	2	3840.65	2.6037	0.0308	4.75E-05	1.84E-03	9.61E-03	2.29E-02	3.76E-02	5.01E-02
6	4	40	41	11586.35	1	3841.67	2.6030	0.0303	1.22E-04	1.87E-02	1.95E-01	7.06E-01	1.52E 00	2.47E 00
6	4	27	28	9668.25	2	3841.76	2.6030	0.0379	1.44E-05	8.83E-04	5.79E-03	1.59E-02	2.84E-02	4.05E-02
7	5	17	18	10827.74	2	3842.07	2.6028	0.0568	2.61E-06	2.79E-04	2.41E-03	7.81E-03	1.57E-02	2.41E-02
11	9	76	75	28203.20	1	3842.10	2.6027	0.0303	0.0	0.0	1.66E-05	6.57E-04	6.99E-03	3.54E-02
11	9	19	18	18944.59	1	3842.46	2.6025	0.0552	0.0	3.86E-05	2.35E-03	2.45E-02	1.07E-01	2.88E-01
2	0	58	59	6436.11	2	3842.59	2.6024	0.0303	1.75E-04	2.27E-03	6.85E-03	1.18E-02	1.55E-02	1.77E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	118	117	36382.44	1	3842.99	2.6021	0.0303	0.0	0.0	0.0	6.04E-06	1.41E-04	1.25E-03
3	1	51	52	7073.87	2	3843.19	2.6020	0.0303	1.94E-04	3.41E-03	1.20E-02	2.27E-02	3.17E-02	3.77E-02
8	6	5	6	12270.90	2	3843.37	2.6019	0.0617	0.0	3.32E-05	4.07E-04	1.62E-03	3.73E-03	6.34E-03
8	6	22	23	13465.12	1	3843.66	2.6017	0.0476	9.47E-06	3.59E-03	5.87E-02	2.78E-01	7.19E-01	1.33E 00
10	8	94	93	31521.56	1	3843.67	2.6017	0.0303	0.0	0.0	1.72E-06	1.09E-04	1.60E-03	1.02E-02
10	8	1	0	16408.32	1	3844.12	2.6014	0.0603	0.0	1.70E-05	5.64E-04	4.08E-03	1.40E-02	3.16E-02
9	7	107	106	34073.32	1	3844.30	2.6013	0.0303	0.0	0.0	0.0	2.50E-05	4.66E-04	3.53E-03
11	9	75	74	27948.82	1	3844.30	2.6013	0.0303	0.0	0.0	1.96E-05	7.47E-04	7.75E-03	3.86E-02
3	1	61	62	9490.49	1	3844.44	2.6012	0.0303	6.55E-04	3.69E-02	2.33E-01	6.22E-01	1.10E 00	1.55E 00
11	9	20	19	19011.50	1	3844.56	2.6011	0.0535	0.0	3.83E-05	2.37E-03	2.49E-02	1.10E-01	2.96E-01
9	7	11	12	14729.70	1	3844.80	2.6009	0.0617	1.10E-06	7.64E-04	1.69E-02	9.61E-02	2.81E-01	5.65E-01
7	5	31	32	12383.18	1	3845.56	2.6004	0.0331	4.43E-05	9.99E-03	1.26E-01	5.11E-01	1.19E 00	2.04E 00
5	3	47	48	10714.80	1	3846.02	2.6001	0.0303	3.19E-04	3.23E-02	2.73E-01	8.71E-01	1.73E 00	2.65E 00
11	9	74	73	27697.55	1	3846.41	2.5998	0.0303	0.0	0.0	2.30E-05	8.46E-04	8.57E-03	4.20E-02
5	3	35	36	8585.23	2	3846.49	2.5998	0.0312	5.60E-05	2.04E-03	1.03E-02	2.42E-02	3.91E-02	5.16E-02
11	9	21	20	19081.91	1	3846.60	2.5997	0.0515	0.0	3.78E-05	2.38E-03	2.53E-02	1.12E-01	3.04E-01
7	5	16	17	10764.64	2	3846.68	2.5996	0.0585	2.71E-06	2.81E-04	2.40E-03	7.69E-03	1.53E-02	2.35E-02
2	0	67	68	8885.04	1	3846.86	2.5995	0.0303	5.53E-04	2.33E-02	1.27E-01	3.12E-01	5.20E-01	7.01E-01
4	2	54	55	10015.37	1	3846.93	2.5995	0.0303	5.72E-04	4.15E-02	2.96E-01	8.55E-01	1.59E 00	2.32E 00
4	2	43	44	7719.30	2	3846.95	2.5995	0.0303	1.36E-04	3.27E-03	1.35E-02	2.78E-02	4.14E-02	5.16E-02
6	4	26	27	9569.48	2	3847.02	2.5994	0.0398	1.61E-05	9.41E-04	6.03E-03	1.63E-02	2.89E-02	4.09E-02
8	6	4	5	12250.03	2	3847.17	2.5993	0.0614	0.0	2.84E-05	3.45E-04	1.37E-03	3.15E-03	5.35E-03
10	8	93	92	31209.82	1	3847.30	2.5992	0.0303	0.0	0.0	2.11E-06	1.29E-04	1.82E-03	1.14E-02
10	8	2	1	16411.88	1	3847.55	2.5991	0.0606	0.0	3.41E-05	1.13E-03	8.19E-03	2.81E-02	6.35E-02
6	4	39	40	11436.14	1	3848.05	2.5987	0.0303	1.48E-04	2.12E-02	2.13E-01	7.54E-01	1.60E 00	2.58E 00
11	9	73	72	27449.42	1	3848.44	2.5985	0.0303	0.0	0.0	2.70E-05	9.58E-04	9.47E-03	4.56E-02
11	9	22	21	19155.82	1	3848.56	2.5984	0.0496	0.0	3.71E-05	2.37E-03	2.55E-02	1.14E-01	3.10E-01
8	6	117	116	35996.63	1	3848.60	2.5983	0.0303	0.0	0.0	0.0	7.44E-06	1.67E-04	1.45E-03
8	6	21	22	13381.82	1	3848.79	2.5982	0.0496	1.03E-05	3.74E-03	5.99E-02	2.80E-01	7.20E-01	1.32E 00
9	7	106	105	33721.07	1	3849.00	2.5981	0.0303	0.0	0.0	0.0	3.01E-05	5.44E-04	4.02E-03
9	7	10	11	14686.54	1	3849.16	2.5980	0.0625	1.08E-06	7.33E-04	1.61E-02	9.07E-02	2.64E-01	5.30E-01
2	0	57	58	6223.85	2	3849.83	2.5975	0.0303	2.34E-04	2.74E-03	7.89E-03	1.32E-02	1.70E-02	1.91E-02
3	1	50	51	6887.58	2	3849.99	2.5974	0.0303	2.49E-04	4.02E-03	1.35E-02	2.49E-02	3.42E-02	4.02E-02
11	9	72	71	27204.43	1	3850.39	2.5971	0.0303	0.0	0.0	3.16E-05	1.08E-03	1.04E-02	4.94E-02
11	9	23	22	19233.23	1	3850.44	2.5971	0.0476	0.0	3.61E-05	2.36E-03	2.56E-02	1.15E-01	3.16E-01
10	8	92	91	30901.00	1	3850.86	2.5968	0.0303	0.0	0.0	2.59E-06	1.51E-04	2.08E-03	1.27E-02
10	8	3	2	16419.01	1	3850.90	2.5968	0.0609	0.0	5.11E-05	1.70E-03	1.23E-02	4.23E-02	9.56E-02
8	6	3	4	12232.63	2	3850.91	2.5968	0.0611	0.0	2.32E-05	2.81E-04	1.11E-03	2.56E-03	4.33E-03
7	5	15	16	10705.04	2	3851.22	2.5966	0.0591	2.80E-06	2.81E-04	2.37E-03	7.53E-03	1.49E-02	2.28E-02
7	5	30	31	12266.54	1	3851.32	2.5965	0.0335	5.09E-05	1.09E-02	1.33E-01	5.32E-01	1.23E 00	2.09E 00
6	4	25	26	9474.20	2	3852.21	2.5959	0.0418	1.79E-05	9.98E-04	6.25E-03	1.66E-02	2.93E-02	4.12E-02
3	1	60	61	9260.14	1	3852.24	2.5959	0.0303	9.00E-04	4.54E-02	2.71E-01	7.01E-01	1.21E 00	1.68E 00
11	9	24	23	19314.13	1	3852.26	2.5959	0.0457	0.0	3.51E-05	2.33E-03	2.56E-02	1.16E-01	3.20E-01
11	9	71	70	26962.59	1	3852.26	2.5959	0.0303	0.0	0.0	3.68E-05	1.22E-03	1.15E-02	5.35E-02
5	3	34	35	8457.48	2	3852.27	2.5959	0.0317	6.57E-05	2.25E-03	1.10E-02	2.54E-02	4.06E-02	5.31E-02
5	3	46	47	10538.00	1	3852.88	2.5955	0.0303	4.04E-04	3.76E-02	3.05E-01	9.48E-01	1.85E 00	2.80E 00
4	2	42	43	7562.35	2	3853.24	2.5952	0.0303	1.68E-04	3.73E-03	1.48E-02	2.99E-02	4.39E-02	5.40E-02
9	7	9	10	14646.97	1	3853.45	2.5951	0.0624	1.04E-06	6.95E-04	1.51E-02	8.48E-02	2.46E-01	4.92E-01
9	7	105	104	33371.58	1	3853.61	2.5950	0.0303	0.0	0.0	0.0	3.63E-05	6.33E-04	4.57E-03
8	6	20	21	13302.10	1	3853.86	2.5948	0.0515	1.10E-05	3.87E-03	6.08E-02	2.82E-01	7.18E-01	1.31E 00
11	9	25	24	19398.52	1	3854.00	2.5947	0.0437	0.0	3.39E-05	2.30E-03	2.56E-02	1.17E-01	3.24E-01
11	9	70	69	26723.91	1	3854.05	2.5947	0.0303	0.0	0.0	4.29E-05	1.37E-03	1.26E-02	5.79E-02
8	6	116	115	35613.45	1	3854.13	2.5946	0.0303	0.0	0.0	0.0	9.15E-06	1.98E-04	1.67E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	8	4	3	16429.71	1	3854.19	2.5946	0.0611	0.0	6.79E-05	2.26E-03	1.64E-02	5.64E-02	1.28E-01
4	2	53	54	9811.84	1	3854.26	2.5945	0.0303	7.56E-04	4.97E-02	3.38E-01	9.48E-01	1.73E 00	2.48E 00
10	8	91	90	30595.13	1	3854.33	2.5945	0.0303	0.0	0.0	3.17E-06	1.77E-04	2.36E-03	1.41E-02
6	4	38	39	11289.51	1	3854.37	2.5945	0.0303	1.79E-04	2.39E-02	2.32E-01	8.03E-01	1.69E 00	2.68E 00
8	6	2	3	12218.71	2	3854.59	2.5943	0.0609	0.0	1.77E-05	2.14E-04	8.46E-04	1.94E-03	3.28E-03
2	0	66	67	8631.33	1	3855.06	2.5940	0.0303	7.87E-04	2.94E-02	1.51E-01	3.57E-01	5.80E-01	7.69E-01
11	9	26	25	19486.39	1	3855.67	2.5936	0.0418	0.0	3.25E-05	2.25E-03	2.54E-02	1.17E-01	3.27E-01
7	5	14	15	10648.93	2	3855.69	2.5936	0.0597	2.86E-06	2.80E-04	2.32E-03	7.32E-03	1.44E-02	2.20E-02
11	9	69	68	26488.41	1	3855.76	2.5935	0.0303	0.0	0.0	4.97E-05	1.54E-03	1.39E-02	6.25E-02
3	1	49	50	6704.76	2	3856.73	2.5929	0.0303	3.19E-04	4.72E-03	1.52E-02	2.72E-02	3.67E-02	4.26E-02
2	0	56	57	6015.03	2	3857.01	2.5927	0.0303	3.12E-04	3.31E-03	9.05E-03	1.47E-02	1.85E-02	2.05E-02
7	5	29	30	12153.49	1	3857.02	2.5927	0.0340	5.82E-05	1.18E-02	1.40E-01	5.51E-01	1.26E 00	2.12E 00
11	9	27	26	19577.75	1	3857.26	2.5925	0.0398	0.0	3.11E-05	2.20E-03	2.51E-02	1.17E-01	3.28E-01
6	4	24	25	9382.42	2	3857.35	2.5925	0.0437	1.97E-05	1.05E-03	6.45E-03	1.70E-02	2.96E-02	4.13E-02
11	9	68	67	26256.09	1	3857.39	2.5924	0.0303	0.0	0.0	5.76E-05	1.72E-03	1.52E-02	6.73E-02
10	8	5	4	16443.96	1	3857.40	2.5924	0.0614	0.0	8.42E-05	2.81E-03	2.05E-02	7.04E-02	1.60E-01
9	7	8	9	14610.99	1	3857.67	2.5922	0.0624	0.0	6.50E-04	1.40E-02	7.83E-02	2.26E-01	4.52E-01
10	8	90	89	30292.22	1	3857.71	2.5922	0.0303	0.0	0.0	3.87E-06	2.06E-04	2.68E-03	1.57E-02
5	3	33	34	8333.21	2	3857.99	2.5920	0.0321	7.66E-05	2.47E-03	1.18E-02	2.66E-02	4.20E-02	5.45E-02
9	7	104	103	33024.89	1	3858.14	2.5919	0.0303	0.0	0.0	0.0	4.36E-05	7.36E-04	5.19E-03
8	6	1	2	12208.27	2	3858.20	2.5919	0.0606	0.0	1.20E-05	1.44E-04	5.70E-04	1.30E-03	2.21E-03
11	9	28	27	19672.59	1	3858.78	2.5915	0.0379	0.0	2.96E-05	2.14E-03	2.48E-02	1.16E-01	3.29E-01
8	6	19	20	13225.99	1	3858.86	2.5914	0.0535	1.18E-05	3.98E-03	6.15E-02	2.82E-01	7.12E-01	1.29E 00
11	9	67	66	26026.96	1	3858.94	2.5914	0.0303	0.0	0.0	6.65E-05	1.92E-03	1.66E-02	7.24E-02
4	2	41	42	7408.88	2	3859.48	2.5910	0.0303	2.05E-04	4.24E-03	1.62E-02	3.21E-02	4.63E-02	5.64E-02
8	6	115	114	35232.91	1	3859.57	2.5910	0.0303	0.0	0.0	0.0	1.12E-05	2.35E-04	1.92E-03
5	3	45	46	10364.77	1	3859.68	2.5909	0.0303	5.09E-04	4.36E-02	3.39E-01	1.03E 00	1.98E 00	2.96E 00
3	1	59	60	9033.32	1	3859.97	2.5907	0.0303	1.23E-03	5.57E-02	3.15E-01	7.88E-01	1.33E 00	1.82E 00
7	5	13	14	10596.32	2	3860.11	2.5906	0.0604	2.89E-06	2.76E-04	2.26E-03	7.08E-03	1.39E-02	2.11E-02
11	9	29	28	19770.91	1	3860.22	2.5905	0.0359	0.0	2.80E-05	2.08E-03	2.44E-02	1.16E-01	3.29E-01
11	9	66	65	25801.04	1	3860.41	2.5904	0.0303	0.0	0.0	7.65E-05	2.14E-03	1.81E-02	7.78E-02
10	8	6	5	16461.79	1	3860.54	2.5903	0.0617	0.0	9.99E-05	3.35E-03	2.44E-02	8.43E-02	1.91E-01
6	4	37	38	11146.46	1	3860.62	2.5903	0.0303	2.15E-04	2.68E-02	2.51E-01	8.53E-01	1.77E 00	2.78E 00
10	8	89	88	29992.29	1	3861.02	2.5900	0.0303	0.0	0.0	4.72E-06	2.41E-04	3.05E-03	1.75E-02
4	2	52	53	9611.86	1	3861.53	2.5896	0.0303	9.93E-04	5.93E-02	3.85E-01	1.05E 00	1.88E 00	2.66E 00
11	9	30	29	19872.69	1	3861.60	2.5896	0.0340	0.0	2.64E-05	2.01E-03	2.39E-02	1.14E-01	3.28E-01
8	6	0	1	12201.31	2	3861.74	2.5895	0.0603	0.0	6.05E-06	7.28E-05	2.87E-04	6.57E-04	1.11E-03
11	9	65	64	25578.32	1	3861.80	2.5895	0.0303	0.0	0.0	8.79E-05	2.38E-03	1.97E-02	8.34E-02
9	7	7	8	14578.61	1	3861.82	2.5895	0.0623	0.0	5.99E-04	1.28E-02	7.12E-02	2.05E-01	4.09E-01
6	4	23	24	9294.14	2	3862.42	2.5891	0.0457	2.16E-05	1.11E-03	6.64E-03	1.72E-02	2.98E-02	4.14E-02
9	7	103	102	32681.01	1	3862.59	2.5889	0.0303	0.0	0.0	0.0	5.23E-05	8.54E-04	5.89E-03
7	5	28	29	12044.05	1	3862.65	2.5889	0.0359	6.62E-05	1.27E-02	1.48E-01	5.71E-01	1.29E 00	2.16E 00
11	9	31	30	19977.94	1	3862.89	2.5887	0.0335	0.0	2.48E-05	1.93E-03	2.34E-02	1.13E-01	3.26E-01
11	9	64	63	25358.84	1	3863.12	2.5886	0.0303	0.0	0.0	1.01E-04	2.64E-03	2.14E-02	8.93E-02
2	0	65	66	8381.13	1	3863.19	2.5885	0.0303	1.11E-03	3.69E-02	1.78E-01	4.07E-01	6.46E-01	8.43E-01
3	1	48	49	6525.41	2	3863.42	2.5884	0.0303	4.07E-04	5.51E-03	1.70E-02	2.97E-02	3.94E-02	4.52E-02
10	8	7	6	16483.18	1	3863.62	2.5882	0.0620	0.0	1.15E-04	3.87E-03	2.83E-02	9.79E-02	2.22E-01
5	3	32	33	8212.45	2	3863.65	2.5882	0.0326	8.88E-05	2.70E-03	1.25E-02	2.78E-02	4.34E-02	5.59E-02
8	6	18	19	13153.48	1	3863.80	2.5881	0.0552	1.25E-05	4.08E-03	6.19E-02	2.81E-01	7.04E-01	1.27E 00
7	5	124	123	37006.34	1	3863.85	2.5881	0.0303	0.0	0.0	0.0	3.48E-06	8.60E-05	7.98E-04
11	9	32	31	20086.64	1	3864.12	2.5879	0.0331	0.0	2.32E-05	1.86E-03	2.28E-02	1.12E-01	3.24E-01
2	0	55	56	5809.67	2	3864.13	2.5879	0.0303	4.14E-04	3.98E-03	1.04E-02	1.63E-02	2.02E-02	2.20E-02
10	8	88	87	29695.34	1	3864.24	2.5878	0.0303	0.0	0.0	5.75E-06	2.82E-04	3.46E-03	1.94E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	63	62	25142.58	1	3864.35	2.5878	0.0303	0.0	0.0	1.15E-04	2.93E-03	2.32E-02	9.54E-02
7	5	12	13	10547.20	2	3864.46	2.5877	0.0610	2.89E-06	2.70E-04	2.19E-03	6.80E-03	1.33E-02	2.01E-02
8	6	114	113	34855.04	1	3864.92	2.5874	0.0303	0.0	0.0	0.0	1.38E-05	2.77E-04	2.22E-03
11	9	33	32	20198.81	1	3865.26	2.5871	0.0326	0.0	2.16E-05	1.78E-03	2.22E-02	1.10E-01	3.21E-01
11	9	62	61	24929.57	1	3865.50	2.5870	0.0303	0.0	0.0	1.31E-04	3.23E-03	2.51E-02	1.02E-01
4	2	40	41	7258.90	2	3865.65	2.5869	0.0303	2.49E-04	4.80E-03	1.77E-02	3.43E-02	4.88E-02	5.89E-02
9	7	6	7	14549.82	1	3865.91	2.5867	0.0620	0.0	5.41E-04	1.15E-02	6.36E-02	1.83E-01	3.64E-01
11	9	34	33	20314.43	1	3866.34	2.5864	0.0321	0.0	2.01E-05	1.70E-03	2.16E-02	1.08E-01	3.18E-01
5	3	44	45	10195.12	1	3866.41	2.5864	0.0303	6.38E-04	5.04E-02	3.77E-01	1.12E 00	2.11E 00	3.11E 00
11	9	61	60	24719.80	1	3866.58	2.5863	0.0303	0.0	0.0	1.49E-04	3.57E-03	2.71E-02	1.08E-01
10	8	8	7	16508.13	1	3866.62	2.5862	0.0623	0.0	1.29E-04	4.37E-03	3.21E-02	1.11E-01	2.53E-01
6	4	36	37	11007.02	1	3866.81	2.5861	0.0308	2.56E-04	2.99E-02	2.71E-01	9.03E-01	1.85E 00	2.88E 00
9	7	102	101	32339.95	1	3866.94	2.5860	0.0303	0.0	0.0	0.0	6.26E-05	9.90E-04	6.67E-03
11	9	35	34	20433.50	1	3867.34	2.5858	0.0317	0.0	1.86E-05	1.61E-03	2.09E-02	1.05E-01	3.14E-01
10	8	87	86	29401.38	1	3867.38	2.5857	0.0303	0.0	0.0	6.99E-06	3.28E-04	3.92E-03	2.16E-02
6	4	22	23	9209.37	2	3867.43	2.5857	0.0476	2.35E-05	1.16E-03	6.79E-03	1.74E-02	2.99E-02	4.13E-02
11	9	60	59	24513.30	1	3867.58	2.5856	0.0303	0.0	0.0	1.69E-04	3.92E-03	2.93E-02	1.15E-01
3	1	58	59	8810.04	1	3867.65	2.5855	0.0303	1.68E-03	6.81E-02	3.65E-01	8.86E-01	1.47E 00	1.97E 00
7	5	27	28	11938.21	1	3868.22	2.5852	0.0379	7.48E-05	1.36E-02	1.55E-01	5.89E-01	1.32E 00	2.19E 00
11	9	36	35	20556.01	1	3868.26	2.5851	0.0312	0.0	1.71E-05	1.53E-03	2.01E-02	1.03E-01	3.09E-01
11	9	59	58	24310.07	1	3868.49	2.5850	0.0303	0.0	0.0	1.91E-04	4.31E-03	3.16E-02	1.23E-01
8	6	1	0	12197.83	2	3868.64	2.5849	0.0603	0.0	6.13E-06	7.38E-05	2.91E-04	6.66E-04	1.13E-03
8	6	17	18	13084.58	1	3868.67	2.5849	0.0568	1.31E-05	4.15E-03	6.19E-02	2.78E-01	6.93E-01	1.25E 00
7	5	11	12	10501.59	2	3868.74	2.5848	0.0617	2.86E-06	2.61E-04	2.09E-03	6.47E-03	1.26E-02	1.90E-02
4	2	51	52	9415.45	1	3868.74	2.5848	0.0303	1.30E-03	7.06E-02	4.37E-01	1.16E 00	2.03E 00	2.84E 00
11	9	37	36	20681.96	1	3869.11	2.5846	0.0308	0.0	1.56E-05	1.44E-03	1.93E-02	1.00E-01	3.03E-01
5	3	31	32	8095.19	2	3869.25	2.5845	0.0331	1.02E-04	2.94E-03	1.32E-02	2.89E-02	4.47E-02	5.71E-02
11	9	58	57	24110.11	1	3869.33	2.5844	0.0303	0.0	1.03E-06	2.16E-04	4.73E-03	3.40E-02	1.30E-01
10	8	9	8	16536.64	1	3869.55	2.5843	0.0624	0.0	1.42E-04	4.84E-03	3.57E-02	1.24E-01	2.83E-01
11	9	38	37	20811.34	1	3869.88	2.5841	0.0303	0.0	1.43E-05	1.36E-03	1.86E-02	9.71E-02	2.97E-01
9	7	5	6	14524.62	1	3869.93	2.5840	0.0617	0.0	4.77E-04	1.01E-02	5.56E-02	1.59E-01	3.16E-01
7	5	123	122	36600.82	1	3869.95	2.5840	0.0303	0.0	0.0	0.0	4.32E-06	1.03E-04	9.28E-04
3	1	47	48	6349.53	2	3870.04	2.5840	0.0303	5.15E-04	6.42E-03	1.90E-02	3.23E-02	4.22E-02	4.78E-02
11	9	57	56	23913.44	1	3870.09	2.5839	0.0303	0.0	1.21E-06	2.43E-04	5.19E-03	3.65E-02	1.38E-01
8	6	113	112	34479.86	1	3870.18	2.5839	0.0303	0.0	0.0	0.0	1.68E-05	3.27E-04	2.55E-03
10	8	86	85	29110.45	1	3870.43	2.5837	0.0303	0.0	0.0	8.47E-06	3.82E-04	4.43E-03	2.39E-02
11	9	39	38	20944.14	1	3870.58	2.5836	0.0303	0.0	1.30E-05	1.28E-03	1.78E-02	9.41E-02	2.90E-01
11	9	56	55	23720.06	1	3870.78	2.5835	0.0303	0.0	1.43E-06	2.73E-04	5.67E-03	3.92E-02	1.46E-01
2	0	54	55	5607.77	2	3871.20	2.5832	0.0303	5.46E-04	4.76E-03	1.18E-02	1.81E-02	2.20E-02	2.36E-02
11	9	40	39	21080.37	1	3871.21	2.5832	0.0303	0.0	1.18E-05	1.19E-03	1.69E-02	9.10E-02	2.83E-01
9	7	101	100	32001.73	1	3871.22	2.5832	0.0303	0.0	0.0	1.10E-06	7.48E-05	1.15E-03	7.54E-03
2	0	64	65	8134.45	1	3871.27	2.5831	0.0303	1.57E-03	4.62E-02	2.10E-01	4.63E-01	7.19E-01	9.22E-01
11	9	55	54	23529.98	1	3871.38	2.5831	0.0303	0.0	1.67E-06	3.06E-04	6.18E-03	4.20E-02	1.55E-01
11	9	41	40	21220.01	1	3871.75	2.5828	0.0303	0.0	1.06E-05	1.11E-03	1.61E-02	8.77E-02	2.76E-01
4	2	39	40	7112.42	2	3871.77	2.5828	0.0303	3.01E-04	5.41E-03	1.92E-02	3.65E-02	5.13E-02	6.13E-02
11	9	54	53	23343.22	1	3871.91	2.5827	0.0303	0.0	1.96E-06	3.42E-04	6.72E-03	4.48E-02	1.63E-01
8	6	2	1	12201.31	2	3871.99	2.5827	0.0606	0.0	1.23E-05	1.48E-04	5.84E-04	1.34E-03	2.26E-03
11	9	42	41	21363.06	1	3872.22	2.5825	0.0303	0.0	9.52E-06	1.03E-03	1.53E-02	8.44E-02	2.68E-01
11	9	53	52	23159.78	1	3872.36	2.5824	0.0303	0.0	2.28E-06	3.81E-04	7.29E-03	4.78E-02	1.72E-01
5	4	21	22	9128.10	2	3872.38	2.5824	0.0496	2.54E-05	1.20E-03	6.93E-03	1.76E-02	2.99E-02	4.10E-02
10	8	10	9	16568.71	1	3872.41	2.5824	0.0624	0.0	1.54E-04	5.29E-03	3.92E-02	1.37E-01	3.12E-01
11	9	43	42	21509.51	1	3872.62	2.5822	0.0303	0.0	8.52E-06	9.59E-04	1.45E-02	8.10E-02	2.60E-01
11	9	52	51	22979.66	1	3872.73	2.5822	0.0303	0.0	2.64E-06	4.23E-04	7.89E-03	5.09E-02	1.80E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	9	44	43	21659.36	1	3872.94	2.5820	0.0303	0.0	7.59E-06	8.86E-04	1.37E-02	7.76E-02	2.51E-01
6	4	35	36	10871.18	1	3872.94	2.5820	0.0312	3.04E-04	3.33E-02	2.92E-01	9.54E-01	1.93E 00	2.98E 00
7	5	10	11	10459.48	2	3872.97	2.5820	0.0625	2.80E-06	2.51E-04	1.99E-03	6.11E-03	1.18E-02	1.78E-02
11	9	51	50	22802.87	1	3873.03	2.5820	0.0303	0.0	3.05E-06	4.59E-04	8.52E-03	5.40E-02	1.89E-01
5	3	43	44	10029.06	1	3873.08	2.5819	0.0303	7.96E-04	5.81E-02	4.17E-01	1.21E 00	2.24E 00	3.28E 00
11	9	45	44	21812.60	1	3873.18	2.5819	0.0303	0.0	6.74E-06	8.16E-04	1.29E-02	7.42E-02	2.43E-01
11	9	50	49	22629.43	1	3873.25	2.5818	0.0303	0.0	3.52E-06	5.18E-04	9.18E-03	5.72E-02	1.98E-01
11	9	46	45	21969.23	1	3873.35	2.5817	0.0303	0.0	5.96E-06	7.50E-04	1.21E-02	7.07E-02	2.34E-01
11	9	49	48	22459.34	1	3873.39	2.5817	0.0303	0.0	4.04E-06	5.71E-04	9.87E-03	6.05E-02	2.07E-01
10	8	85	84	28822.53	1	3873.41	2.5817	0.0303	0.0	0.0	1.02E-05	4.43E-04	5.00E-03	2.64E-02
11	9	47	46	22129.23	1	3873.44	2.5817	0.0303	0.0	5.26E-06	6.87E-04	1.13E-02	6.73E-02	2.25E-01
11	9	48	47	22292.60	1	3873.45	2.5817	0.0303	0.0	4.61E-06	6.27E-04	1.06E-02	6.39E-02	2.16E-01
8	6	16	17	13019.29	1	3873.47	2.5817	0.0585	1.37E-05	4.19E-03	6.16E-02	2.74E-01	6.79E-01	1.22E 00
7	5	26	27	11835.99	1	3873.72	2.5815	0.0398	8.40E-05	1.46E-02	1.61E-01	6.05E-01	1.34E 00	2.21E 00
9	7	4	5	14503.03	1	3873.87	2.5814	0.0614	0.0	4.08E-04	8.56E-03	4.71E-02	1.35E-01	2.67E-01
5	3	30	31	7981.43	2	3874.79	2.5808	0.0335	1.17E-04	3.19E-03	1.40E-02	3.01E-02	4.59E-02	5.82E-02
10	8	11	10	16604.34	1	3875.20	2.5805	0.0625	0.0	1.64E-04	5.70E-03	4.25E-02	1.49E-01	3.40E-01
3	1	57	58	8590.31	1	3875.26	2.5805	0.0303	2.27E-03	8.31E-02	4.22E-01	9.93E-01	1.61E 00	2.13E 00
8	6	3	2	12208.27	2	3875.27	2.5805	0.0609	0.0	1.84E-05	2.22E-04	8.78E-04	2.01E-03	3.41E-03
8	6	112	111	34107.37	1	3875.36	2.5804	0.0303	0.0	0.0	0.0	2.06E-05	3.86E-04	2.93E-03
9	7	100	99	31666.36	1	3875.41	2.5804	0.0303	0.0	0.0	1.37E-06	8.93E-05	1.32E-03	8.51E-03
4	2	50	51	9222.61	1	3875.89	2.5801	0.0303	1.69E-03	8.37E-02	4.95E-01	1.27E 00	2.20E 00	3.03E 00
7	5	122	121	36197.86	1	3875.97	2.5800	0.0303	0.0	0.0	0.0	5.36E-06	1.23E-04	1.08E-03
10	8	84	83	28537.65	1	3876.30	2.5798	0.0303	0.0	0.0	1.24E-05	5.13E-04	5.63E-03	2.92E-02
3	1	46	47	6177.14	2	3876.61	2.5796	0.0303	6.49E-04	7.45E-03	2.12E-02	3.51E-02	4.51E-02	5.05E-02
7	5	9	10	10420.87	2	3877.12	2.5792	0.0624	2.71E-06	2.37E-04	1.87E-03	5.70E-03	1.10E-02	1.65E-02
6	4	20	21	9050.34	2	3877.27	2.5791	0.0515	2.73E-05	1.24E-03	7.03E-03	1.76E-02	2.98E-02	4.07E-02
9	7	3	4	14485.03	1	3877.75	2.5788	0.0611	0.0	3.33E-04	6.97E-03	3.83E-02	1.09E-01	2.16E-01
4	2	38	39	6969.43	2	3877.82	2.5788	0.0303	3.62E-04	6.08E-03	2.09E-02	3.88E-02	5.38E-02	6.36E-02
10	8	12	11	16643.52	1	3877.92	2.5787	0.0617	0.0	1.73E-04	6.08E-03	4.56E-02	1.60E-01	3.67E-01
8	6	15	16	12957.61	1	3878.20	2.5785	0.0591	1.41E-05	4.20E-03	6.09E-02	2.68E-01	6.62E-01	1.18E 00
2	0	53	54	5409.33	2	3878.21	2.5785	0.0303	7.16E-04	5.68E-03	1.34E-02	2.00E-02	2.38E-02	2.53E-02
8	6	4	3	12218.71	2	3878.49	2.5783	0.0611	0.0	2.45E-05	2.96E-04	1.17E-03	2.69E-03	4.55E-03
6	4	34	35	10738.94	1	3879.00	2.5780	0.0317	3.59E-04	3.69E-02	3.14E-01	1.00E 00	2.00E 00	3.07E 00
10	8	83	82	28255.82	1	3879.11	2.5779	0.0303	0.0	0.0	1.49E-05	5.93E-04	6.34E-03	3.23E-02
7	5	25	26	11737.38	1	3879.16	2.5779	0.0418	9.37E-05	1.55E-02	1.68E-01	6.20E-01	1.36E 00	2.23E 00
2	0	63	64	7891.29	1	3879.28	2.5778	0.0303	2.20E-03	5.76E-02	2.47E-01	5.26E-01	7.98E-01	1.01E 00
9	7	99	98	31333.86	1	3879.52	2.5776	0.0303	0.0	0.0	1.71E-06	1.06E-04	1.53E-03	9.60E-03
5	3	42	43	9866.59	1	3879.69	2.5775	0.0303	9.86E-04	6.66E-02	4.60E-01	1.30E 00	2.38E 00	3.44E 00
5	3	29	30	7871.18	2	3880.27	2.5771	0.0340	1.33E-04	3.44E-03	1.47E-02	3.11E-02	4.70E-02	5.92E-02
8	6	111	110	33737.59	1	3880.46	2.5770	0.0303	0.0	0.0	0.0	2.51E-05	4.54E-04	3.36E-03
10	8	13	12	16686.27	1	3880.56	2.5769	0.0610	0.0	1.81E-04	6.42E-03	4.84E-02	1.71E-01	3.93E-01
7	5	8	9	10385.77	2	3881.22	2.5765	0.0624	2.57E-06	2.22E-04	1.73E-03	5.26E-03	1.01E-02	1.51E-02
9	7	2	3	14470.63	1	3881.56	2.5763	0.0609	0.0	2.55E-04	5.30E-03	2.91E-02	8.28E-02	1.64E-01
8	6	5	4	12232.63	2	3881.64	2.5762	0.0614	0.0	3.03E-05	3.69E-04	1.46E-03	3.35E-03	5.69E-03
10	8	82	81	27977.05	1	3881.84	2.5761	0.0303	0.0	0.0	1.79E-05	6.84E-04	7.12E-03	3.56E-02
7	5	121	120	35797.48	1	3881.90	2.5761	0.0303	0.0	0.0	0.0	6.65E-06	1.46E-04	1.25E-03
6	4	19	20	8976.10	2	3882.10	2.5759	0.0535	2.91E-05	1.28E-03	7.10E-03	1.76E-02	2.96E-02	4.02E-02
3	1	56	57	8374.14	1	3882.82	2.5754	0.0303	3.06E-03	1.01E-01	4.87E-01	1.11E 00	1.76E 00	2.30E 00
8	6	14	15	12899.54	1	3882.87	2.5754	0.0597	1.45E-05	4.19E-03	5.98E-02	2.62E-01	6.41E-01	1.14E 00
4	2	49	50	9033.35	1	3882.97	2.5753	0.0303	2.18E-03	9.88E-02	5.58E-01	1.40E 00	2.37E 00	3.23E 00
3	1	45	46	6008.24	2	3883.11	2.5753	0.0303	8.14E-04	8.61E-03	2.35E-02	3.80E-02	4.81E-02	5.32E-02
10	8	14	13	16732.56	1	3883.14	2.5752	0.0604	0.0	1.88E-04	6.73E-03	5.11E-02	1.81E-01	4.18E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	7	98	97	31004.25	1	3883.54	2.5750	0.0303	0.0	0.0	2.14E-06	1.26E-04	1.76E-03	1.08E-02
4	2	37	38	6829.95	2	3883.82	2.5748	0.0303	4.33E-04	6.79E-03	2.26E-02	4.12E-02	5.63E-02	6.59E-02
10	8	81	80	27701.36	1	3884.48	2.5743	0.0303	0.0	0.0	2.14E-05	7.87E-04	7.98E-03	3.91E-02
7	5	24	25	11642.38	1	3884.53	2.5743	0.0437	1.04E-04	1.64E-02	1.74E-01	6.33E-01	1.38E 00	2.25E 00
8	6	6	5	12250.03	2	3884.73	2.5742	0.0617	0.0	3.60E-05	4.39E-04	1.75E-03	4.02E-03	6.82E-03
6	4	33	34	10610.31	1	3884.99	2.5740	0.0321	4.21E-04	4.07E-02	3.36E-01	1.06E 00	2.08E 00	3.16E 00
2	0	62	63	5214.37	2	3885.16	2.5739	0.0303	9.35E-04	6.76E-03	1.52E-02	2.20E-02	2.58E-02	2.71E-02
7	5	7	8	10354.17	2	3885.25	2.5738	0.0623	2.40E-06	2.04E-04	1.58E-03	4.79E-03	9.18E-03	1.37E-02
9	7	1	2	14459.83	1	3885.30	2.5738	0.0606	0.0	1.72E-04	3.58E-03	1.06E-02	5.58E-02	1.10E-01
8	6	110	109	33370.55	1	3885.47	2.5737	0.0303	0.0	0.0	0.0	3.05E-05	5.33E-04	3.85E-03
10	8	15	14	16782.41	1	3885.64	2.5736	0.0597	0.0	1.93E-04	6.99E-03	5.34E-02	1.90E-01	4.41E-01
5	3	28	29	7764.45	2	3885.68	2.5736	0.0359	1.51E-04	3.71E-03	1.54E-02	3.22E-02	4.81E-02	6.01E-02
5	3	41	42	9707.73	1	3886.24	2.5732	0.0303	1.21E-03	7.60E-02	5.05E-01	1.40E 00	2.52E 00	3.60E 00
6	4	18	19	8905.38	2	3886.86	2.5728	0.0552	3.07E-05	1.30E-03	7.13E-03	1.75E-02	2.92E-02	3.95E-02
10	8	80	79	27428.76	1	3887.05	2.5726	0.0303	0.0	0.0	2.56E-05	9.04E-04	8.94E-03	4.30E-02
2	0	62	63	7651.67	1	3887.24	2.5725	0.0303	3.06E-03	7.15E-02	2.90E-01	5.97E-01	8.84E-01	1.10E 00
8	6	13	14	12845.10	1	3887.47	2.5724	0.0604	1.47E-05	4.14E-03	5.83E-02	2.53E-01	6.17E-01	1.09E 00
9	7	97	96	30677.52	1	3887.48	2.5724	0.0303	0.0	0.0	2.66E-06	1.50E-04	2.02E-03	1.22E-02
8	6	7	6	12270.90	2	3887.74	2.5722	0.0620	0.0	4.14E-05	5.08E-04	2.02E-03	4.67E-03	7.94E-03
7	5	120	119	35399.70	1	3887.74	2.5722	0.0303	0.0	0.0	0.0	8.22E-06	1.74E-04	1.45E-03
10	8	16	15	16835.81	1	3888.07	2.5720	0.0591	0.0	1.96E-04	7.21E-03	5.56E-02	1.99E-01	4.63E-01
9	7	0	1	14452.63	1	3888.97	2.5714	0.0603	0.0	8.71E-05	1.81E-03	9.98E-03	2.81E-02	5.56E-02
7	5	6	7	10326.08	2	3889.22	2.5712	0.0620	2.20E-06	1.85E-04	1.42E-03	4.28E-03	8.18E-03	1.22E-02
10	8	79	78	27159.25	1	3889.53	2.5710	0.0303	0.0	0.0	3.05E-05	1.04E-03	9.99E-03	4.72E-02
3	1	44	45	5842.84	2	3889.56	2.5710	0.0303	1.01E-03	9.91E-03	2.60E-02	4.11E-02	5.12E-02	5.60E-02
4	2	36	37	6693.98	2	3889.76	2.5709	0.0308	5.15E-04	7.57E-03	2.43E-02	4.35E-02	5.87E-02	6.82E-02
7	5	23	24	11551.01	1	3889.83	2.5708	0.0457	1.14E-04	1.73E-02	1.79E-01	6.44E-01	1.39E 00	2.25E 00
4	2	48	49	8847.68	1	3889.99	2.5707	0.0303	2.80E-03	1.16E-01	6.28E-01	1.53E 00	2.55E 00	3.43E 00
3	1	55	56	8161.53	1	3890.31	2.5705	0.0303	4.10E-03	1.22E-01	5.60E-01	1.24E 00	1.93E 00	2.48E 00
8	6	109	108	33006.25	1	3890.39	2.5704	0.0303	0.0	0.0	0.0	3.71E-05	6.26E-04	4.41E-03
10	8	17	16	16892.75	1	3890.43	2.5704	0.0585	0.0	1.99E-04	7.30E-03	5.74E-02	2.07E-01	4.83E-01
8	6	8	7	12295.25	2	3890.70	2.5702	0.0623	0.0	4.65E-05	5.74E-04	2.30E-03	5.30E-03	9.04E-03
6	4	32	33	10485.30	1	3890.92	2.5701	0.0326	4.91E-04	4.46E-02	3.58E-01	1.11E 00	2.15E 00	3.24E 00
5	3	27	28	7661.24	2	3891.04	2.5700	0.0379	1.70E-04	3.98E-03	1.61E-02	3.31E-02	4.91E-02	6.09E-02
9	7	96	95	30353.71	1	3891.33	2.5698	0.0303	0.0	0.0	3.30E-06	1.78E-04	2.32E-03	1.37E-02
6	4	17	18	8838.17	2	3891.56	2.5697	0.0568	3.22E-05	1.32E-03	7.13E-03	1.73E-02	2.88E-02	3.87E-02
10	8	78	77	26892.85	1	3891.93	2.5694	0.0303	0.0	0.0	3.62E-05	1.19E-03	1.11E-02	5.17E-02
8	6	12	13	12794.27	1	3892.00	2.5694	0.0610	1.47E-05	4.05E-03	5.65E-02	2.43E-01	5.90E-01	1.04E 00
2	0	51	52	5022.89	2	3892.05	2.5693	0.0303	1.21E-03	8.00E-03	1.72E-02	2.42E-02	2.79E-02	2.89E-02
10	8	18	17	16953.25	1	3892.71	2.5689	0.0568	0.0	1.99E-04	7.54E-03	5.91E-02	2.14E-01	5.01E-01
5	3	40	41	9552.46	1	3892.72	2.5689	0.0303	1.49E-03	8.65E-02	5.54E-01	1.50E 00	2.66E 00	3.76E 00
7	5	5	6	10301.50	2	3893.12	2.5686	0.0617	1.96E-06	1.63E-04	1.24E-03	3.74E-03	7.13E-03	1.06E-02
7	5	119	118	35004.53	1	3893.49	2.5684	0.0303	0.0	0.0	0.0	1.02E-05	2.09E-04	1.68E-03
8	6	9	8	12323.08	2	3893.59	2.5683	0.0624	0.0	5.13E-05	6.36E-04	2.56E-03	5.92E-03	1.01E-02
10	8	77	76	26629.57	1	3894.25	2.5679	0.0303	0.0	0.0	4.30E-05	1.36E-03	1.24E-02	5.65E-02
10	8	19	18	17017.28	1	3894.93	2.5674	0.0552	0.0	1.99E-04	7.64E-03	6.04E-02	2.20E-01	5.18E-01
7	5	22	23	11463.27	1	3895.07	2.5673	0.0476	1.25E-04	1.81E-02	1.84E-01	6.53E-01	1.40E 00	2.25E 00
9	7	95	94	30032.83	1	3895.10	2.5673	0.0303	0.0	0.0	4.08E-06	2.10E-04	2.66E-03	1.53E-02
2	0	61	62	7415.60	1	3895.13	2.5673	0.0303	4.24E-03	8.85E-02	3.40E-01	6.75E-01	9.78E-01	1.19E 00
8	6	108	107	32644.72	1	3895.23	2.5672	0.0303	0.0	0.0	0.0	4.50E-05	7.33E-04	5.04E-03
4	2	35	36	6561.53	2	3895.63	2.5670	0.0312	6.08E-04	8.39E-03	2.62E-02	4.59E-02	6.12E-02	7.04E-02
3	1	43	44	5680.94	2	3895.95	2.5668	0.0303	1.26E-03	1.14E-02	2.87E-02	4.43E-02	5.43E-02	5.88E-02
9	7	1	0	14449.03	1	3896.10	2.5667	0.0603	0.0	8.83E-05	1.83E-03	1.00E-02	2.85E-02	5.63E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	16	17	8774.49	2	3896.19	2.5666	0.0585	3.35E-05	1.34E-03	7.08E-03	1.71E-02	2.81E-02	3.77E-02
5	3	26	27	7561.55	2	3896.33	2.5665	0.0398	1.90E-04	4.24E-03	1.68E-02	3.40E-02	4.99E-02	6.15E-02
8	6	10	9	12354.38	2	3896.41	2.5665	0.0624	0.0	5.56E-05	6.95E-04	2.81E-03	6.52E-03	1.12E-02
8	6	11	12	12747.07	1	3896.46	2.5664	0.0617	1.46E-05	3.93E-03	5.42E-02	2.32E-01	5.60E-01	9.86E-01
10	8	76	75	26369.43	1	3896.49	2.5664	0.0303	0.0	0.0	5.09E-05	1.55E-03	1.38E-02	6.17E-02
6	4	31	32	10363.92	1	3896.79	2.5662	0.0331	5.69E-04	4.88E-02	3.80E-01	1.15E 00	2.22E 00	3.31E 00
4	2	47	48	8665.59	1	3896.95	2.5661	0.0303	3.58E-03	1.36E-01	7.05E-01	1.68E 00	2.74E 00	3.64E 00
7	5	4	5	10280.43	2	3896.95	2.5661	0.0614	1.69E-06	1.39E-04	1.06E-03	3.17E-03	6.03E-03	8.95E-03
10	8	20	19	17084.85	1	3897.07	2.5660	0.0535	0.0	1.97E-04	7.70E-03	6.15E-02	2.25E-01	5.33E-01
3	1	54	55	7952.49	1	3897.74	2.5656	0.0303	5.46E-03	1.47E-01	6.43E-01	1.38E 00	2.10E 00	2.67E 00
10	8	75	74	26112.42	1	3898.65	2.5650	0.0303	0.0	0.0	6.00E-05	1.76E-03	1.53E-02	6.73E-02
9	7	94	93	29714.89	1	3898.79	2.5649	0.0303	0.0	0.0	5.04E-06	2.48E-04	3.05E-03	1.71E-02
2	0	50	51	4834.91	2	3898.88	2.5648	0.0303	1.57E-03	9.44E-03	1.95E-02	2.66E-02	3.01E-02	3.07E-02
10	8	21	20	17155.96	1	3899.13	2.5647	0.0515	0.0	1.95E-04	7.72E-03	6.23E-02	2.30E-01	5.47E-01
5	3	39	40	9400.82	1	3899.13	2.5647	0.0303	1.81E-03	9.80E-02	6.05E-01	1.60E 00	2.81E 00	3.92E 00
7	5	118	117	34611.99	1	3899.16	2.5647	0.0303	0.0	0.0	0.0	1.26E-05	2.48E-04	1.95E-03
8	6	11	10	12389.16	2	3899.16	2.5647	0.0625	0.0	5.95E-05	7.50E-04	3.04E-03	7.09E-03	1.22E-02
9	7	2	1	14452.63	1	3899.56	2.5644	0.0606	0.0	1.77E-04	3.67E-03	2.01E-02	5.72E-02	1.13E-01
8	6	107	106	32285.97	1	3899.98	2.5641	0.0303	0.0	0.0	0.0	5.45E-05	8.57E-04	5.75E-03
7	5	21	22	11379.15	1	3900.24	2.5639	0.0496	1.35E-04	1.89E-02	1.88E-01	6.59E-01	1.40E 00	2.24E 00
8	6	88	87	25188.84	2	3900.45	2.5638	0.0303	0.0	0.0	0.0	2.43E-05	1.93E-04	7.96E-04
7	5	3	4	10262.87	2	3900.73	2.5636	0.0611	1.40E-06	1.14E-04	8.61E-04	2.57E-03	4.89E-03	7.25E-03
10	8	74	73	25858.57	1	3900.73	2.5636	0.0303	0.0	0.0	7.07E-05	1.99E-03	1.70E-02	7.33E-02
6	4	15	16	8714.33	2	3900.76	2.5636	0.0591	3.46E-05	1.34E-03	7.00E-03	1.67E-02	2.74E-02	3.66E-02
8	6	10	11	12703.48	1	3900.85	2.5635	0.0625	1.43E-05	3.77E-03	5.15E-02	2.19E-01	5.27E-01	9.24E-01
10	8	22	21	17230.61	1	3901.13	2.5634	0.0496	0.0	1.91E-04	7.70E-03	6.28E-02	2.33E-01	5.58E-01
4	2	34	35	6432.60	2	3901.45	2.5631	0.0317	7.15E-04	9.27E-03	2.80E-02	4.82E-02	6.35E-02	7.25E-02
5	3	25	26	7465.39	2	3901.56	2.5631	0.0418	2.12E-04	4.50E-03	1.74E-02	3.48E-02	5.07E-02	6.20E-02
6	4	127	126	36479.76	1	3901.61	2.5630	0.0303	0.0	0.0	0.0	3.53E-06	8.32E-05	7.44E-04
8	6	12	11	12427.41	2	3901.85	2.5629	0.0617	0.0	6.29E-05	8.01E-04	3.27E-03	7.64E-03	1.31E-02
3	1	42	43	5522.55	2	3902.28	2.5626	0.0303	1.55E-03	1.30E-02	3.16E-02	4.77E-02	5.75E-02	6.16E-02
9	7	93	92	29399.89	1	3902.39	2.5625	0.0303	0.0	0.0	6.20E-06	2.92E-04	3.48E-03	1.92E-02
6	4	30	31	10246.16	1	3902.59	2.5624	0.0335	6.56E-04	5.31E-02	4.02E-01	1.20E 00	2.28E 00	3.38E 00
10	8	73	72	25607.89	1	3902.73	2.5623	0.0303	0.0	0.0	8.30E-05	2.26E-03	1.87E-02	7.96E-02
9	7	3	2	14459.83	1	3902.95	2.5622	0.0609	0.0	2.65E-04	5.51E-03	3.02E-02	8.60E-02	1.70E-01
2	0	60	61	7183.08	1	3902.97	2.5622	0.0303	5.85E-03	1.09E-01	3.96E-01	7.61E-01	1.08E 00	1.30E 00
10	8	23	22	17308.79	1	3903.05	2.5621	0.0476	0.0	1.86E-04	7.65E-03	6.31E-02	2.36E-01	5.68E-01
8	6	87	86	24900.92	2	3903.23	2.5620	0.0303	0.0	0.0	1.15E-06	2.82E-05	2.18E-04	8.81E-04
4	2	46	47	8487.11	1	3903.85	2.5616	0.0303	4.55E-03	1.59E-01	7.88E-01	1.83E 00	2.93E 00	3.86E 00
7	5	2	3	10248.82	2	3904.43	2.5612	0.0609	1.07E-06	8.67E-05	6.55E-04	1.95E-03	3.71E-03	5.49E-03
8	6	13	12	12469.13	2	3904.47	2.5612	0.0610	0.0	6.58E-05	8.46E-04	3.47E-03	8.16E-03	1.41E-02
10	8	72	71	25360.39	1	3904.65	2.5610	0.0303	0.0	0.0	9.72E-05	2.55E-03	2.07E-02	8.64E-02
8	6	106	105	31930.02	1	3904.65	2.5610	0.0303	0.0	0.0	0.0	6.58E-05	1.00E-03	6.56E-03
7	5	117	116	34222.09	1	3904.74	2.5610	0.0303	0.0	0.0	0.0	1.55E-05	2.95E-04	2.26E-03
10	8	24	23	17390.49	1	3904.90	2.5609	0.0457	0.0	1.80E-04	7.56E-03	6.31E-02	2.38E-01	5.76E-01
3	1	53	54	7747.04	1	3905.11	2.5607	0.0303	7.23E-03	1.77E-01	7.35E-01	1.53E 00	2.29E 00	2.86E 00
8	6	9	10	12663.53	1	3905.18	2.5607	0.0624	1.39E-05	3.58E-03	4.84E-02	2.05E-01	4.91E-01	8.58E-01
6	4	14	15	8657.70	2	3905.27	2.5606	0.0597	3.53E-05	1.33E-03	6.86E-03	1.63E-02	2.65E-02	3.53E-02
7	5	20	21	11298.67	1	3905.35	2.5606	0.0515	1.46E-04	1.96E-02	1.91E-01	6.62E-01	1.39E 00	2.22E 00
5	3	38	39	9252.79	1	3905.49	2.5605	0.0303	2.20E-03	1.11E-01	6.59E-01	1.71E 00	2.95E 00	4.08E 00
2	0	49	50	4650.41	2	3905.66	2.5604	0.0303	2.01E-03	1.11E-02	2.19E-02	2.92E-02	3.24E-02	3.27E-02
9	7	92	91	29087.87	1	3905.91	2.5602	0.0303	0.0	0.0	7.63E-06	3.43E-04	3.97E-03	2.14E-02
8	6	86	85	24615.98	2	3905.93	2.5602	0.0303	0.0	0.0	1.38E-06	3.26E-05	2.46E-04	9.74E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	7	4	3	14470.63	1	3906.27	2.5600	0.0611	0.0	3.52E-04	7.34E-03	4.02E-02	1.15E-01	2.27E-01
10	8	71	70	25116.07	1	3906.48	2.5598	0.0303	0.0	0.0	1.14E-04	2.88E-03	2.28E-02	9.37E-02
10	8	25	24	17475.72	1	3906.67	2.5597	0.0437	0.0	1.74E-04	7.44E-03	6.29E-02	2.39E-01	5.82E-01
5	3	24	25	7372.76	2	3906.73	2.5597	0.0437	2.34E-04	4.76E-03	1.80E-02	3.55E-02	5.12E-02	6.23E-02
8	6	14	13	12514.32	2	3907.02	2.5595	0.0604	0.0	6.82E-05	8.87E-04	3.66E-03	8.65E-03	1.50E-02
4	2	33	34	6307.19	2	3907.20	2.5594	0.0321	8.34E-04	1.02E-02	2.99E-02	5.06E-02	6.58E-02	7.44E-02
6	4	126	125	36062.28	1	3907.95	2.5589	0.0303	0.0	0.0	0.0	4.42E-06	1.00E-04	8.70E-04
7	5	1	2	10238.29	2	3908.08	2.5588	0.0606	0.0	5.87E-05	4.42E-04	1.32E-03	2.50E-03	3.70E-03
10	8	70	69	24874.95	1	3908.24	2.5587	0.0303	0.0	0.0	1.32E-04	3.24E-03	2.51E-02	1.01E-01
6	4	29	30	10132.03	1	3908.32	2.5586	0.0340	7.50E-04	5.76E-02	4.24E-01	1.25E 00	2.34E 00	3.45E 00
10	8	26	25	17564.47	1	3908.37	2.5586	0.0418	0.0	1.67E-04	7.30E-03	6.25E-02	2.40E-01	5.87E-01
3	1	41	42	5367.68	2	3908.54	2.5585	0.0303	1.90E-03	1.48E-02	3.46E-02	5.11E-02	6.08E-02	6.44E-02
8	6	85	84	24334.02	2	3908.56	2.5585	0.0303	0.0	0.0	1.67E-06	3.77E-05	2.77E-04	1.08E-03
8	6	105	104	31576.87	1	3909.23	2.5580	0.0303	0.0	0.0	1.24E-06	7.94E-05	1.17E-03	7.47E-03
9	7	91	90	28778.82	1	3909.35	2.5580	0.0303	0.0	0.0	9.35E-06	4.02E-04	4.52E-03	2.39E-02
8	6	8	9	12627.20	1	3909.44	2.5579	0.0624	1.32E-05	3.35E-03	4.49E-02	1.89E-01	4.51E-01	7.89E-01
8	6	15	14	12562.97	2	3909.51	2.5579	0.0597	0.0	7.02E-05	9.23E-04	3.84E-03	9.10E-03	1.58E-02
9	7	5	4	14485.03	1	3909.52	2.5579	0.0614	0.0	4.37E-04	9.13E-03	5.02E-02	1.43E-01	2.84E-01
6	4	13	14	8604.60	2	3909.72	2.5577	0.0604	3.57E-05	1.31E-03	6.69E-03	1.57E-02	2.55E-02	3.38E-02
10	8	69	68	24637.04	1	3909.92	2.5576	0.0303	0.0	0.0	1.54E-04	3.64E-03	2.75E-02	1.09E-01
10	8	27	26	17656.73	1	3910.00	2.5575	0.0398	0.0	1.59E-04	7.13E-03	6.18E-02	2.39E-01	5.90E-01
7	5	116	115	33834.87	1	3910.23	2.5574	0.0303	0.0	0.0	0.0	1.91E-05	3.50E-04	2.61E-03
7	5	19	20	11221.82	1	3910.38	2.5573	0.0535	1.56E-04	2.02E-02	1.93E-01	6.63E-01	1.38E 00	2.19E 00
4	2	45	46	8312.24	1	3910.68	2.5571	0.0303	5.76E-03	1.85E-01	8.78E-01	1.99E 00	3.14E 00	4.07E 00
2	0	59	60	6954.12	1	3910.74	2.5571	0.0303	8.02E-03	1.34E-01	4.61E-01	8.57E-01	1.19E 00	1.41E 00
8	6	84	83	24055.05	2	3911.10	2.5568	0.0303	0.0	0.0	2.00E-06	4.35E-05	3.11E-04	1.19E-03
10	8	68	67	24402.34	1	3911.52	2.5566	0.0303	0.0	0.0	1.78E-04	4.08E-03	3.02E-02	1.18E-01
10	8	28	27	17752.52	1	3911.56	2.5565	0.0379	0.0	1.51E-04	6.93E-03	6.10E-02	2.38E-01	5.91E-01
7	5	0	1	10231.26	2	3911.66	2.5565	0.0603	0.0	2.97E-05	2.23E-04	6.63E-04	1.26E-03	1.86E-03
5	3	37	38	9108.38	1	3911.78	2.5564	0.0303	2.64E-03	1.24E-01	7.15E-01	1.81E 00	3.09E 00	4.24E 00
5	3	23	24	7283.66	2	3911.83	2.5563	0.0457	2.56E-04	5.00E-03	1.85E-02	3.61E-02	5.16E-02	6.24E-02
8	6	16	15	12615.09	2	3911.92	2.5563	0.0591	0.0	7.16E-05	9.53E-04	4.00E-03	9.52E-03	1.66E-02
2	0	48	49	4469.43	2	3912.37	2.5560	0.0303	2.57E-03	1.30E-02	2.45E-02	3.19E-02	3.48E-02	3.47E-02
3	1	52	53	7545.17	1	3912.42	2.5560	0.0303	9.53E-03	2.12E-01	8.38E-01	1.70E 00	2.49E 00	3.07E 00
9	7	90	89	28472.78	1	3912.70	2.5558	0.0303	0.0	0.0	1.14E-05	4.70E-04	5.14E-03	2.66E-02
9	7	6	5	14503.03	1	3912.70	2.5558	0.0617	0.0	5.18E-04	1.09E-02	5.99E-02	1.71E-01	3.40E-01
4	2	32	33	6185.32	2	3912.89	2.5557	0.0326	9.69E-04	1.12E-02	3.18E-02	5.29E-02	6.80E-02	7.63E-02
10	8	67	66	24170.88	1	3913.03	2.5556	0.0303	0.0	0.0	2.06E-04	4.57E-03	3.30E-02	1.27E-01
10	8	29	28	17851.80	1	3913.04	2.5556	0.0359	0.0	1.43E-04	6.72E-03	5.99E-02	2.36E-01	5.90E-01
8	6	83	82	23779.10	2	3913.58	2.5552	0.0303	0.0	0.0	2.40E-06	5.01E-05	3.48E-04	1.30E-03
8	6	7	8	12594.50	1	3913.63	2.5552	0.0623	1.24E-05	3.09E-03	4.11E-02	1.72E-01	4.10E-01	7.13E-01
8	6	104	103	31226.56	1	3913.72	2.5551	0.0303	0.0	0.0	1.56E-06	9.56E-05	1.36E-03	8.49E-03
6	4	28	29	10021.54	1	3913.99	2.5549	0.0359	8.55E-04	6.22E-02	4.46E-01	1.29E 00	2.40E 00	3.51E 00
6	4	12	13	8555.02	2	3914.10	2.5549	0.0610	3.58E-05	1.29E-03	6.47E-03	1.51E-02	2.44E-02	3.22E-02
6	4	125	124	35647.34	1	3914.19	2.5548	0.0303	0.0	0.0	0.0	5.53E-06	1.20E-04	1.02E-03
8	6	17	16	12670.68	2	3914.27	2.5548	0.0585	0.0	7.25E-05	9.79E-04	4.13E-03	9.91E-03	1.73E-02
10	8	30	29	17954.60	1	3914.44	2.5546	0.0340	0.0	1.35E-04	6.48E-03	5.87E-02	2.34E-01	5.88E-01
10	8	66	65	23942.65	1	3914.47	2.5546	0.0303	0.0	1.18E-06	2.38E-04	5.10E-03	3.61E-02	1.37E-01
3	1	40	41	5216.33	2	3914.75	2.5544	0.0303	2.31E-03	1.67E-02	3.78E-02	5.47E-02	6.41E-02	6.73E-02
7	5	18	19	11148.61	1	3915.35	2.5540	0.0552	1.65E-04	2.07E-02	1.94E-01	6.60E-01	1.37E 00	2.16E 00
7	5	115	114	33450.32	1	3915.64	2.5539	0.0303	0.0	0.0	0.0	2.36E-05	4.15E-04	3.02E-03
10	8	31	30	18060.90	1	3915.77	2.5538	0.0335	0.0	1.27E-04	6.25E-03	5.74E-02	2.31E-01	5.86E-01
9	7	7	6	14524.62	1	3915.81	2.5538	0.0620	0.0	5.95E-04	1.26E-02	6.95E-02	1.99E-01	3.96E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	8	65	64	23717.67	1	3915.83	2.5537	0.0303	0.0	1.43E-06	2.73E-04	5.67E-03	3.93E-02	1.47E-01
8	6	82	81	23506.16	2	3915.97	2.5536	0.0303	0.0	0.0	2.87E-06	5.76E-05	3.90E-04	1.43E-03
9	7	89	88	28169.73	1	3915.97	2.5536	0.0303	0.0	0.0	1.40E-05	5.51E-04	5.85E-03	2.96E-02
8	6	18	17	12729.73	2	3916.56	2.5533	0.0568	0.0	7.29E-05	9.98E-04	4.25E-03	1.03E-02	1.80E-02
5	3	22	23	7198.11	2	3916.88	2.5531	0.0476	2.79E-04	5.23E-03	1.90E-02	3.65E-02	5.18E-02	6.23E-02
10	8	32	31	18170.69	1	3917.03	2.5530	0.0331	0.0	1.19E-04	6.00E-03	5.60E-02	2.28E-01	5.82E-01
10	8	64	63	23495.95	1	3917.11	2.5529	0.0303	0.0	1.73E-06	3.14E-04	6.31E-03	4.27E-02	1.57E-01
4	2	44	45	8140.98	1	3917.45	2.5527	0.0303	7.23E-03	2.14E-01	9.76E-01	2.15E 00	3.35E 00	4.30E 00
8	6	6	7	12565.43	1	3917.75	2.5525	0.0620	1.13E-05	2.79E-03	3.69E-02	1.54E-01	3.65E-01	6.35E-01
5	3	36	37	8967.61	1	3918.00	2.5523	0.0308	3.16E-03	1.39E-01	7.74E-01	1.92E 00	3.23E 00	4.40E 00
8	6	103	102	30879.08	1	3918.14	2.5522	0.0303	0.0	0.0	1.98E-06	1.15E-04	1.58E-03	9.64E-03
10	8	33	32	18283.98	1	3918.21	2.5522	0.0326	0.0	1.10E-04	5.74E-03	5.45E-02	2.24E-01	5.76E-01
8	6	81	80	23236.26	2	3918.29	2.5521	0.0303	0.0	0.0	3.42E-06	6.61E-05	4.36E-04	1.57E-03
10	8	63	62	23277.50	1	3918.31	2.5521	0.0303	0.0	2.08E-06	3.59E-04	6.99E-03	4.64E-02	1.68E-01
6	4	11	12	8508.98	2	3918.42	2.5520	0.0617	3.55E-05	1.25E-03	6.20E-03	1.44E-02	2.32E-02	3.05E-02
2	0	58	59	6728.75	1	3918.45	2.5520	0.0303	1.10E-02	1.64E-01	5.35E-01	9.64E-01	1.31E 00	1.52E 00
4	2	31	32	6066.97	2	3918.53	2.5520	0.0331	1.12E-03	1.22E-02	3.37E-02	5.51E-02	7.01E-02	7.80E-02
7	5	1	0	10227.75	2	3918.62	2.5519	0.0603	0.0	3.01E-05	2.26E-04	6.72E-04	1.27E-03	1.89E-03
8	6	19	18	12792.23	2	3918.77	2.5518	0.0552	0.0	7.29E-05	1.01E-03	4.36E-03	1.06E-02	1.86E-02
9	7	8	7	14549.82	1	3918.84	2.5518	0.0623	1.05E-06	6.68E-04	1.42E-02	7.87E-02	2.26E-01	4.50E-01
2	0	47	48	4291.95	2	3919.03	2.5517	0.0303	3.26E-03	1.52E-02	2.74E-02	3.47E-02	3.72E-02	3.67E-02
9	7	88	87	27869.71	1	3919.16	2.5516	0.0303	0.0	0.0	1.71E-05	6.44E-04	6.64E-03	3.30E-02
10	8	34	33	18400.75	1	3919.32	2.5515	0.0321	0.0	1.02E-04	5.47E-03	5.28E-02	2.20E-01	5.70E-01
10	8	62	61	23062.32	1	3919.43	2.5514	0.0303	0.0	2.50E-06	4.09E-04	7.73E-03	5.03E-02	1.79E-01
6	4	27	28	9914.69	1	3919.59	2.5513	0.0379	9.68E-04	6.69E-02	4.68E-01	1.33E 00	2.45E 00	3.56E 00
3	1	51	52	7346.91	1	3919.66	2.5512	0.0303	1.25E-02	2.52E-01	9.52E-01	1.87E 00	2.70E 00	3.28E 00
7	5	17	18	11079.05	1	3920.26	2.5509	0.0568	1.74E-04	2.10E-02	1.94E-01	6.54E-01	1.35E 00	2.12E 00
10	8	35	34	18521.00	1	3920.35	2.5508	0.0317	0.0	9.44E-05	5.20E-03	5.11E-02	2.15E-01	5.62E-01
6	4	124	123	35234.96	1	3920.35	2.5508	0.0303	0.0	0.0	0.0	6.90E-06	1.44E-04	1.19E-03
10	8	61	60	22850.43	1	3920.47	2.5507	0.0303	0.0	3.00E-06	4.66E-04	8.54E-03	5.44E-02	1.91E-01
8	6	80	79	22969.40	2	3920.53	2.5507	0.0303	0.0	0.0	4.07E-06	7.56E-05	4.87E-04	1.72E-03
3	1	39	40	5068.50	2	3920.90	2.5504	0.0303	2.80E-03	1.89E-02	4.12E-02	5.83E-02	6.74E-02	7.00E-02
8	6	20	19	12858.20	2	3920.92	2.5504	0.0535	0.0	7.24E-05	1.02E-03	4.44E-03	1.08E-02	1.92E-02
7	5	114	113	33068.48	1	3920.96	2.5504	0.0303	0.0	0.0	0.0	2.89E-05	4.91E-04	3.48E-03
10	8	36	35	18644.73	1	3921.31	2.5502	0.0312	0.0	8.68E-05	4.92E-03	4.92E-02	2.10E-01	5.53E-01
10	8	60	59	22641.83	1	3921.43	2.5501	0.0303	0.0	3.58E-06	5.29E-04	9.40E-03	5.87E-02	2.04E-01
8	6	5	6	12539.99	1	3921.80	2.5498	0.0617	1.01E-05	2.46E-03	3.23E-02	1.34E-01	3.18E-01	5.52E-01
9	7	9	8	14578.61	1	3921.81	2.5498	0.0624	1.13E-06	7.35E-04	1.57E-02	8.76E-02	2.52E-01	5.04E-01
5	3	21	22	7116.09	2	3921.86	2.5498	0.0496	3.02E-04	5.44E-03	1.94E-02	3.68E-02	5.18E-02	6.20E-02
7	5	2	1	10231.26	2	3922.00	2.5497	0.0606	0.0	6.03E-05	4.54E-04	1.35E-03	2.56E-03	3.79E-03
10	8	37	36	18771.94	1	3922.19	2.5496	0.0308	0.0	7.94E-05	4.64E-03	4.73E-02	2.04E-01	5.42E-01
9	7	87	86	27572.73	1	3922.27	2.5495	0.0303	0.0	0.0	2.08E-05	7.52E-04	7.54E-03	3.66E-02
10	8	59	58	22436.54	1	3922.32	2.5495	0.0303	0.0	4.26E-06	6.00E-04	1.04E-02	6.34E-02	2.17E-01
8	6	102	101	30534.46	1	3922.46	2.5494	0.0303	0.0	0.0	2.49E-06	1.38E-04	1.84E-03	1.09E-02
6	4	10	11	8466.48	2	3922.68	2.5493	0.0625	3.48E-05	1.20E-03	5.89E-03	1.36E-02	2.18E-02	2.86E-02
8	6	79	78	22705.59	2	3922.70	2.5493	0.0303	0.0	0.0	4.83E-06	8.64E-05	5.42E-04	1.89E-03
8	6	21	20	12927.62	2	3923.00	2.5491	0.0515	0.0	7.15E-05	1.03E-03	4.50E-03	1.11E-02	1.97E-02
10	8	38	37	18902.61	1	3923.00	2.5491	0.0303	0.0	7.24E-05	4.37E-03	4.54E-02	1.98E-01	5.31E-01
10	8	58	57	22234.55	1	3923.13	2.5490	0.0303	0.0	5.06E-06	6.78E-04	1.14E-02	6.83E-02	2.30E-01
10	8	39	38	19036.74	1	3923.73	2.5486	0.0303	0.0	6.57E-05	4.10E-03	4.34E-02	1.92E-01	5.19E-01
10	8	57	56	22035.89	1	3923.85	2.5485	0.0303	0.0	5.98E-06	7.65E-04	1.25E-02	7.35E-02	2.44E-01
4	2	30	31	5952.17	2	3924.10	2.5484	0.0335	1.28E-03	1.32E-02	3.56E-02	5.72E-02	7.20E-02	7.95E-02
5	3	35	36	8830.47	1	3924.16	2.5483	0.0312	3.76E-03	1.55E-01	8.34E-01	2.03E 00	3.38E 00	4.54E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	43	44	7973.35	1	3924.16	2.5483	0.0303	9.04E-03	2.46E-01	1.08E 00	2.33E 00	3.56E 00	4.52E 00
10	8	40	39	19174.33	1	3924.39	2.5482	0.0303	0.0	5.95E-05	3.83E-03	4.13E-02	1.85E-01	5.06E-01
10	8	56	55	21840.56	1	3924.50	2.5481	0.0303	0.0	7.05E-06	8.61E-04	1.36E-02	7.80E-02	2.59E-01
9	7	10	9	14610.99	1	3924.71	2.5480	0.0624	1.21E-06	7.96E-04	1.72E-02	9.61E-02	2.78E-01	5.56E-01
8	6	78	77	22444.85	2	3924.79	2.5479	0.0303	0.0	0.0	5.72E-06	9.86E-05	6.03E-04	2.06E-03
10	8	41	40	19315.37	1	3924.97	2.5478	0.0303	0.0	5.35E-05	3.57E-03	3.93E-02	1.78E-01	4.93E-01
8	6	22	21	13000.48	2	3925.01	2.5478	0.0496	0.0	7.02E-05	1.03E-03	4.55E-03	1.12E-02	2.01E-02
10	8	55	54	21648.56	1	3925.08	2.5477	0.0303	0.0	8.28E-06	9.66E-04	1.49E-02	8.45E-02	2.74E-01
7	5	16	17	11013.12	1	3925.09	2.5477	0.0585	1.81E-04	2.13E-02	1.93E-01	6.45E-01	1.32E 00	2.06E 00
6	4	26	27	9811.48	1	3925.13	2.5477	0.0398	1.09E-03	7.16E-02	4.88E-01	1.37E 00	2.50E 00	3.60E 00
9	7	86	85	27278.79	1	3925.29	2.5476	0.0303	0.0	0.0	2.53E-05	8.76E-04	8.53E-03	4.07E-02
7	5	3	2	10238.29	2	3925.31	2.5476	0.0609	1.12E-06	9.04E-05	6.81E-04	2.03E-03	3.85E-03	5.70E-03
10	8	42	41	19459.85	1	3925.48	2.5475	0.0303	0.0	4.80E-05	3.31E-03	3.73E-02	1.72E-01	4.78E-01
10	8	54	53	21459.91	1	3925.57	2.5474	0.0303	0.0	9.70E-06	1.08E-03	1.62E-02	9.04E-02	2.89E-01
2	0	46	47	4117.99	2	3925.63	2.5474	0.0303	4.12E-03	1.76E-02	3.06E-02	3.77E-02	3.98E-02	3.88E-02
8	6	4	5	12518.18	1	3925.78	2.5473	0.0614	8.73E-06	2.11E-03	2.75E-02	1.14E-01	2.69E-01	4.67E-01
10	8	43	42	19607.77	1	3925.91	2.5472	0.0303	0.0	4.29E-05	3.07E-03	3.52E-02	1.65E-01	4.64E-01
10	8	53	52	21274.62	1	3925.99	2.5471	0.0303	0.0	1.13E-05	1.21E-03	1.76E-02	9.64E-02	3.04E-01
2	0	57	58	6506.95	1	3926.11	2.5471	0.0303	1.49E-02	2.01E-01	6.20E-01	1.09E 00	1.44E 00	1.65E 00
7	5	113	112	32689.35	1	3926.20	2.5470	0.0303	0.0	0.0	0.0	3.55E-05	5.81E-04	4.01E-03
10	8	44	43	19759.12	1	3926.26	2.5470	0.0303	0.0	3.82E-05	2.93E-03	3.32E-02	1.58E-01	4.48E-01
10	8	52	51	21092.69	1	3926.32	2.5469	0.0303	0.0	1.31E-05	1.34E-03	1.91E-02	1.03E-01	3.20E-01
6	4	123	122	34825.16	1	3926.42	2.5468	0.0303	0.0	0.0	0.0	8.69E-06	1.73E-04	1.38E-03
10	8	45	44	19913.90	1	3926.54	2.5468	0.0303	0.0	3.39E-05	2.61E-03	3.13E-02	1.50E-01	4.33E-01
10	8	51	50	20914.12	1	3926.59	2.5467	0.0303	0.0	1.52E-05	1.49E-03	2.06E-02	1.09E-01	3.36E-01
8	6	101	100	30192.72	1	3926.70	2.5467	0.0303	0.0	0.0	3.13E-06	1.65E-04	2.13E-03	1.24E-02
10	8	46	45	20072.09	1	3926.74	2.5466	0.0303	0.0	2.99E-05	2.39E-03	2.94E-02	1.43E-01	4.17E-01
10	8	50	49	20738.93	1	3926.77	2.5466	0.0303	0.0	1.75E-05	1.64E-03	2.22E-02	1.16E-01	3.52E-01
5	3	20	21	7037.61	2	3926.78	2.5466	0.0515	3.24E-04	5.63E-03	1.97E-02	3.70E-02	5.16E-02	6.14E-02
8	6	77	76	22187.18	2	3926.81	2.5466	0.0303	0.0	0.0	6.75E-06	1.12E-04	6.70E-04	2.25E-03
3	1	50	51	7152.25	1	3926.84	2.5466	0.0303	1.63E-02	2.99E-01	1.08E 00	2.07E 00	2.92E 00	3.50E 00
10	8	47	46	20233.70	1	3926.86	2.5466	0.0303	0.0	2.63E-05	2.19E-03	2.75E-02	1.36E-01	4.01E-01
6	4	9	10	8427.51	2	3926.87	2.5466	0.0624	3.36E-05	1.13E-03	5.53E-03	1.27E-02	2.03E-02	2.65E-02
10	8	49	48	20567.13	1	3926.88	2.5466	0.0303	0.0	2.02E-05	1.81E-03	2.39E-02	1.22E-01	3.68E-01
10	8	48	47	20398.72	1	3926.91	2.5465	0.0303	0.0	2.31E-05	1.99E-03	2.57E-02	1.29E-01	3.85E-01
8	6	23	22	13076.80	2	3926.95	2.5465	0.0476	0.0	6.85E-05	1.02E-03	4.57E-03	1.14E-02	2.05E-02
3	1	38	39	4924.21	2	3926.99	2.5465	0.0303	3.37E-03	2.12E-02	4.48E-02	6.21E-02	7.07E-02	7.28E-02
9	7	11	10	14646.97	1	3927.53	2.5461	0.0625	1.27E-06	8.51E-04	1.85E-02	1.04E-01	3.02E-01	6.06E-01
9	7	85	84	26987.90	1	3928.23	2.5457	0.0303	0.0	0.0	3.06E-05	1.02E-03	9.65E-03	4.50E-02
7	5	4	3	10248.82	2	3928.56	2.5455	0.0611	1.48E-06	1.20E-04	9.07E-04	2.71E-03	5.14E-03	7.62E-03
8	6	76	75	21932.59	2	3928.75	2.5453	0.0303	0.0	0.0	7.95E-06	1.27E-04	7.43E-04	2.45E-03
8	6	24	23	13156.57	2	3928.83	2.5453	0.0457	0.0	6.66E-05	1.01E-03	4.58E-03	1.15E-02	2.08E-02
4	2	29	30	5840.91	2	3929.61	2.5448	0.0340	1.46E-03	1.43E-02	3.75E-02	5.93E-02	7.39E-02	8.09E-02
8	6	3	4	12500.01	1	3929.70	2.5447	0.0611	7.20E-06	1.72E-03	2.24E-02	9.25E-02	2.19E-01	3.78E-01
7	5	15	16	10950.85	1	3929.86	2.5446	0.0591	1.88E-04	2.13E-02	1.91E-01	6.33E-01	1.29E 00	2.00E 00
5	3	34	35	8696.97	1	3930.26	2.5444	0.0317	4.45E-03	1.72E-01	8.96E-01	2.14E 00	3.61E 00	4.69E 00
9	7	12	11	14686.54	1	3930.28	2.5443	0.0617	1.32E-06	8.98E-04	1.97E-02	1.12E-01	3.25E-01	6.54E-01
6	4	25	26	9711.93	1	3930.60	2.5441	0.0418	1.22E-03	7.63E-02	5.08E-01	1.41E 00	2.54E 00	3.63E 00
8	6	75	74	21681.10	2	3930.61	2.5441	0.0303	0.0	0.0	9.35E-06	1.44E-04	8.22E-04	2.67E-03
8	6	25	24	13239.77	2	3930.64	2.5441	0.0437	0.0	6.44E-05	9.96E-04	4.57E-03	1.16E-02	2.10E-02
4	2	42	43	7809.34	1	3930.80	2.5440	0.0303	1.12E-02	2.83E-01	1.19E 00	2.51E 00	3.79E 00	4.75E 00
8	6	100	99	29853.86	1	3930.86	2.5440	0.0303	0.0	0.0	3.93E-06	1.97E-04	2.46E-03	1.40E-02
6	4	8	9	8392.08	2	3931.00	2.5439	0.0624	3.19E-05	1.06E-03	5.13E-03	1.17E-02	1.86E-02	2.43E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	7	84	83	26700.09	1	3931.09	2.5438	0.0303	0.0	0.0	3.70E-05	1.18E-03	1.09E-02	4.98E-02
7	5	112	111	32312.95	1	3931.34	2.5437	0.0303	0.0	0.0	0.0	4.34E-05	6.86E-04	4.61E-03
5	3	19	20	6962.68	2	3931.64	2.5435	0.0535	3.46E-04	5.79E-03	1.99E-02	3.70E-02	5.13E-02	6.07E-02
7	5	5	4	10262.87	2	3931.75	2.5434	0.0614	1.83E-06	1.49E-04	1.13E-03	3.38E-03	6.42E-03	9.53E-03
2	0	45	46	3947.55	2	3932.17	2.5431	0.0303	5.17E-03	2.04E-02	3.40E-02	4.09E-02	4.25E-02	4.09E-02
8	6	26	25	13326.42	2	3932.37	2.5430	0.0418	0.0	6.19E-05	9.78E-04	4.55E-03	1.16E-02	2.12E-02
8	6	74	73	21432.71	2	3932.40	2.5430	0.0303	0.0	0.0	1.10E-05	1.63E-04	9.08E-04	2.89E-03
6	4	122	121	34417.95	1	3932.41	2.5430	0.0303	0.0	0.0	0.0	1.07E-05	2.07E-04	1.61E-03
9	7	13	12	14729.70	1	3932.96	2.5426	0.0610	1.35E-06	9.39E-04	2.08E-02	1.19E-01	3.47E-01	7.00E-01
3	1	37	38	4783.45	2	3933.02	2.5426	0.0303	4.04E-03	2.38E-02	4.85E-02	6.58E-02	7.41E-02	7.55E-02
8	6	2	3	12485.47	1	3933.54	2.5422	0.0609	5.54E-06	1.32E-03	1.70E-02	7.03E-02	1.66E-01	2.87E-01
2	0	56	57	6288.75	1	3933.70	2.5421	0.0303	2.01E-02	2.44E-01	7.16E-01	1.21E 00	1.58E 00	1.78E 00
9	7	83	82	26415.37	1	3933.87	2.5420	0.0303	0.0	0.0	4.47E-05	1.37E-03	1.23E-02	5.51E-02
3	1	49	50	6961.20	1	3933.96	2.5420	0.0303	2.11E-02	3.54E-01	1.22E 00	2.27E 00	3.15E 00	3.73E 00
8	6	27	26	13416.50	2	3934.04	2.5419	0.0398	0.0	5.93E-05	9.57E-04	4.50E-03	1.16E-02	2.14E-02
8	6	73	72	21187.44	2	3934.12	2.5419	0.0303	0.0	0.0	1.28E-05	1.84E-04	1.00E-03	3.14E-03
7	5	14	15	10892.23	1	3934.56	2.5416	0.0597	1.92E-04	2.13E-02	1.88E-01	6.17E-01	1.25E 00	1.93E 00
7	5	6	5	10280.43	2	3934.87	2.5414	0.0617	2.15E-06	1.77E-04	1.35E-03	4.03E-03	7.69E-03	1.14E-02
8	6	99	98	29517.91	1	3934.94	2.5413	0.0303	0.0	0.0	4.92E-06	2.35E-04	2.84E-03	1.58E-02
6	4	7	8	8360.19	2	3935.06	2.5413	0.0623	2.99E-05	9.77E-04	4.69E-03	1.07E-02	1.69E-02	2.20E-02
4	2	28	29	5733.20	2	3935.06	2.5413	0.0359	1.66E-03	1.54E-02	3.94E-02	6.13E-02	7.56E-02	8.22E-02
9	7	14	13	14776.45	1	3935.57	2.5409	0.0604	1.36E-06	9.72E-04	2.18E-02	1.25E-01	3.67E-01	7.43E-01
8	6	28	27	13510.01	2	3935.64	2.5409	0.0379	0.0	5.65E-05	9.33E-04	4.45E-03	1.16E-02	2.14E-02
8	6	72	71	20945.30	2	3935.76	2.5408	0.0303	0.0	0.0	1.49E-05	2.08E-04	1.10E-03	3.40E-03
6	4	24	25	9616.03	1	3936.01	2.5406	0.0437	1.35E-03	8.08E-02	5.26E-01	1.44E 00	2.57E 00	3.65E 00
5	3	33	34	8567.12	1	3936.29	2.5405	0.0321	5.23E-03	1.90E-01	9.60E-01	2.25E 00	3.65E 00	4.82E 00
7	5	111	110	31939.30	1	3936.41	2.5404	0.0303	0.0	0.0	0.0	5.30E-05	8.08E-04	5.30E-03
5	3	18	19	6891.30	2	3936.43	2.5404	0.0552	3.66E-04	5.92E-03	2.00E-02	3.68E-02	5.07E-02	5.97E-02
9	7	82	81	26133.74	1	3936.56	2.5403	0.0303	0.0	0.0	5.37E-05	1.58E-03	1.38E-02	6.08E-02
8	6	29	28	13606.95	2	3937.17	2.5399	0.0359	0.0	5.35E-05	9.05E-04	4.38E-03	1.15E-02	2.14E-02
8	6	1	2	12474.57	1	3937.31	2.5398	0.0606	3.77E-06	8.90E-04	1.15E-02	4.73E-02	1.12E-01	1.93E-01
8	6	71	70	20706.29	2	3937.32	2.5398	0.0303	0.0	0.0	1.74E-05	2.34E-04	1.21E-03	3.67E-03
4	2	41	42	7648.97	1	3937.38	2.5398	0.0303	1.39E-02	3.24E-01	1.31E 00	2.70E 00	4.01E 00	4.98E 00
7	5	7	6	10301.50	2	3937.92	2.5394	0.0620	2.45E-06	2.03E-04	1.56E-03	4.68E-03	8.93E-03	1.33E-02
9	7	15	14	14826.79	1	3938.11	2.5393	0.0597	1.37E-06	9.97E-04	2.27E-02	1.31E-01	3.86E-01	7.84E-01
7	5	93	92	24842.27	2	3938.29	2.5392	0.0303	0.0	0.0	0.0	2.42E-05	1.87E-04	7.52E-04
6	4	121	120	34013.35	1	3938.30	2.5392	0.0303	0.0	0.0	0.0	1.33E-05	2.47E-04	1.87E-03
8	6	30	29	13707.32	2	3938.63	2.5390	0.0340	0.0	5.06E-05	8.76E-04	4.30E-03	1.14E-02	2.14E-02
2	0	44	45	3780.65	2	3938.65	2.5389	0.0303	6.46E-03	2.35E-02	3.76E-02	4.43E-02	4.53E-02	4.31E-02
8	6	70	69	20470.42	2	3938.81	2.5388	0.0303	0.0	0.0	2.02E-05	2.62E-04	1.33E-03	3.96E-03
8	6	98	97	29184.87	1	3938.93	2.5388	0.0303	0.0	0.0	6.15E-06	2.80E-04	3.28E-03	1.78E-02
3	1	36	37	4646.24	2	3938.99	2.5387	0.0308	4.81E-03	2.65E-02	5.23E-02	6.97E-02	7.74E-02	7.81E-02
6	4	6	7	8331.84	2	3939.06	2.5387	0.0620	2.73E-05	8.82E-04	4.21E-03	9.53E-03	1.51E-02	1.96E-02
9	7	81	80	25855.22	1	3939.18	2.5386	0.0303	0.0	0.0	6.45E-05	1.82E-03	1.55E-02	6.69E-02
7	5	13	14	10837.26	1	3939.20	2.5386	0.0604	1.95E-04	2.10E-02	1.83E-01	5.97E-01	1.20E 00	1.86E 00
8	6	31	30	13811.11	2	3940.03	2.5381	0.0335	0.0	4.76E-05	8.45E-04	4.21E-03	1.13E-02	2.13E-02
8	6	69	68	20237.70	2	3940.23	2.5379	0.0303	0.0	0.0	2.34E-05	2.93E-04	1.45E-03	4.27E-03
4	2	27	28	5629.04	2	3940.44	2.5378	0.0379	1.87E-03	1.65E-02	4.12E-02	6.32E-02	7.72E-02	8.33E-02
9	7	16	15	14880.71	1	3940.57	2.5377	0.0591	1.36E-06	1.02E-03	2.34E-02	1.36E-01	4.04E-01	8.23E-01
7	5	8	7	10326.08	2	3940.90	2.5375	0.0623	2.72E-06	2.28E-04	1.76E-03	5.30E-03	1.02E-02	1.51E-02
3	1	48	49	6773.78	1	3941.02	2.5374	0.0303	2.72E-02	4.17E-01	1.37E 00	2.49E 00	3.40E 00	3.97E 00
8	6	0	1	12467.30	1	3941.02	2.5374	0.0603	1.91E-06	4.50E-04	5.80E-03	2.39E-02	5.62E-02	9.71E-02
5	3	17	18	6823.48	2	3941.17	2.5373	0.0568	3.84E-04	6.01E-03	2.00E-02	3.64E-02	4.99E-02	5.84E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	55	56	6074.14	1	3941.22	2.5373	0.0303	2.70E-02	2.96E-01	8.25E-01	1.35E 00	1.73E 00	1.92E 00
6	4	23	24	9523.78	1	3941.35	2.5372	0.0457	1.49E-03	8.52E-02	5.43E-01	1.46E 00	2.60E 00	3.66E 00
8	6	32	31	13918.32	2	3941.35	2.5372	0.0331	0.0	4.46E-05	8.13E-04	4.11E-03	1.11E-02	2.12E-02
7	5	110	109	31568.43	1	3941.38	2.5372	0.0303	0.0	0.0	1.01E-06	6.47E-05	9.51E-04	6.08E-03
7	5	92	91	24536.65	2	3941.42	2.5372	0.0303	0.0	0.0	1.22E-06	2.84E-05	2.12E-04	8.38E-04
8	6	68	67	20008.15	2	3941.57	2.5371	0.0303	0.0	0.0	2.70E-05	3.28E-04	1.59E-03	4.60E-03
9	7	80	79	25579.82	1	3941.71	2.5370	0.0303	0.0	0.0	7.72E-05	2.10E-03	1.74E-02	7.36E-02
5	3	32	33	8440.93	1	3942.25	2.5366	0.0326	6.11E-03	2.08E-01	1.02E 00	2.36E 00	3.78E 00	4.95E 00
8	6	33	32	14028.93	2	3942.60	2.5364	0.0326	0.0	4.17E-05	7.80E-04	4.01E-03	1.09E-02	2.10E-02
8	6	97	96	28854.77	1	3942.83	2.5362	0.0303	0.0	0.0	7.66E-06	3.33E-04	3.78E-03	2.01E-02
8	6	67	66	19781.77	2	3942.84	2.5362	0.0303	0.0	0.0	3.11E-05	3.66E-04	1.73E-03	4.94E-03
9	7	17	16	14938.22	1	3942.96	2.5362	0.0585	1.33E-06	1.03E-03	2.40E-02	1.41E-01	4.20E-01	8.59E-01
6	4	5	6	8307.03	2	3942.99	2.5361	0.0617	2.44E-05	7.78E-04	3.69E-03	8.33E-03	1.31E-02	1.70E-02
7	5	12	13	10785.94	1	3943.76	2.5357	0.0610	1.96E-04	2.06E-02	1.78E-01	5.74E-01	1.15E 00	1.77E 00
8	6	34	33	14142.96	2	3943.78	2.5356	0.0321	0.0	3.87E-05	7.45E-04	3.89E-03	1.07E-02	2.08E-02
7	5	9	8	10354.17	2	3943.82	2.5356	0.0624	2.95E-06	2.51E-04	1.95E-03	5.90E-03	1.13E-02	1.69E-02
4	2	40	41	7492.24	1	3943.90	2.5356	0.0303	1.70E-02	3.69E-01	1.44E 00	2.90E 00	4.24E 00	5.21E 00
8	6	66	65	19558.57	2	3944.03	2.5355	0.0303	0.0	0.0	3.57E-05	4.07E-04	1.89E-03	5.30E-03
6	4	120	119	33611.38	1	3944.11	2.5354	0.0303	0.0	0.0	0.0	1.65E-05	2.95E-04	2.17E-03
9	7	79	78	25307.56	1	3944.16	2.5354	0.0303	0.0	0.0	9.22E-05	2.41E-03	1.94E-02	8.09E-02
7	5	91	90	24233.98	2	3944.48	2.5352	0.0303	0.0	0.0	1.49E-06	3.32E-05	2.41E-04	9.31E-04
8	6	35	34	14260.39	2	3944.90	2.5349	0.0317	0.0	3.59E-05	7.09E-04	3.77E-03	1.05E-02	2.05E-02
3	1	35	36	4512.58	2	3944.90	2.5349	0.0312	5.70E-03	2.94E-02	5.62E-02	7.35E-02	8.06E-02	8.06E-02
2	0	43	44	3617.28	2	3945.07	2.5348	0.0303	8.02E-03	2.70E-02	4.16E-02	4.78E-02	4.81E-02	4.52E-02
8	6	65	64	19338.57	2	3945.15	2.5348	0.0303	0.0	0.0	4.09E-05	4.51E-04	2.05E-03	5.67E-03
9	7	18	17	14999.30	1	3945.28	2.5347	0.0568	1.30E-06	1.03E-03	2.44E-02	1.45E-01	4.34E-01	8.91E-01
5	3	129	128	35546.66	1	3945.48	2.5345	0.0303	0.0	0.0	0.0	4.17E-06	8.98E-05	7.54E-04
4	2	26	27	5528.43	2	3945.77	2.5344	0.0398	2.10E-03	1.76E-02	4.30E-02	6.50E-02	7.85E-02	8.43E-02
5	3	16	17	6759.20	2	3945.83	2.5343	0.0585	4.00E-04	6.07E-03	1.99E-02	3.59E-02	4.88E-02	5.70E-02
8	6	36	35	14381.22	2	3945.94	2.5343	0.0312	0.0	3.31E-05	6.73E-04	3.64E-03	1.03E-02	2.02E-02
8	6	64	63	19121.76	2	3946.19	2.5341	0.0303	0.0	0.0	4.67E-05	5.00E-04	2.23E-03	6.06E-03
7	5	109	108	31200.33	1	3946.27	2.5340	0.0303	0.0	0.0	1.29E-06	7.87E-05	1.12E-03	6.97E-03
9	7	78	77	25038.44	1	3946.53	2.5339	0.0303	0.0	0.0	1.10E-04	2.76E-03	2.17E-02	8.87E-02
6	4	22	23	9435.20	1	3946.62	2.5338	0.0476	1.63E-03	8.94E-02	5.57E-01	1.48E 00	2.61E 00	3.66E 00
8	6	96	95	28527.61	1	3946.65	2.5338	0.0303	0.0	0.0	9.53E-06	3.95E-04	4.34E-03	2.26E-02
7	5	10	9	10385.77	2	3946.68	2.5338	0.0624	3.15E-06	2.73E-04	2.13E-03	6.48E-03	1.25E-02	1.87E-02
6	4	4	5	8285.77	2	3946.86	2.5337	0.0614	2.11E-05	6.65E-04	3.14E-03	7.06E-03	1.11E-02	1.44E-02
8	6	37	36	14505.45	2	3946.91	2.5336	0.0308	0.0	3.04E-05	6.37E-04	3.51E-03	1.00E-02	1.99E-02
8	6	63	62	18908.16	2	3947.16	2.5335	0.0303	0.0	0.0	5.33E-05	5.53E-04	2.41E-03	6.47E-03
7	5	90	89	23934.27	2	3947.46	2.5333	0.0303	0.0	0.0	1.81E-06	3.87E-05	2.73E-04	1.03E-03
9	7	19	18	15063.96	1	3947.53	2.5332	0.0552	1.26E-06	1.03E-03	2.47E-02	1.48E-01	4.46E-01	9.21E-01
8	6	38	37	14633.06	2	3947.82	2.5330	0.0303	0.0	2.78E-05	6.01E-04	3.37E-03	9.75E-03	1.95E-02
3	1	47	48	6589.98	1	3948.02	2.5329	0.0303	3.48E-02	4.89E-01	1.54E 00	2.72E 00	3.65E 00	4.22E 00
8	6	62	61	18697.77	2	3948.06	2.5329	0.0303	0.0	1.06E-06	6.06E-05	6.10E-04	2.61E-03	6.89E-03
5	3	31	32	8318.38	1	3948.15	2.5328	0.0331	7.09E-03	2.28E-01	1.09E 00	2.47E 00	3.90E 00	5.07E 00
8	6	1	0	12463.66	1	3948.22	2.5328	0.0603	1.94E-06	4.56E-04	5.88E-03	2.42E-02	5.69E-02	9.83E-02
7	5	11	12	10738.28	1	3948.26	2.5328	0.0617	1.95E-04	2.00E-02	1.70E-01	5.47E-01	1.09E 00	1.67E 00
8	6	39	38	14764.06	2	3948.65	2.5325	0.0303	0.0	2.53E-05	5.64E-04	3.23E-03	9.45E-03	1.91E-02
2	0	54	55	5863.14	1	3948.69	2.5325	0.0303	3.61E-02	3.58E-01	9.48E-01	1.51E 00	1.89E 00	2.07E 00
9	7	77	76	24772.47	1	3948.82	2.5324	0.0303	0.0	0.0	1.31E-04	3.15E-03	2.42E-02	9.71E-02
8	6	61	60	18490.61	2	3948.88	2.5324	0.0303	0.0	1.26E-06	6.87E-05	6.71E-04	2.81E-03	7.33E-03
8	6	40	39	14898.44	2	3949.41	2.5320	0.0303	0.0	2.29E-05	5.29E-04	3.08E-03	9.15E-03	1.87E-02
7	5	11	10	10420.87	2	3949.46	2.5320	0.0625	3.32E-06	2.92E-04	2.30E-03	7.03E-03	1.36E-02	2.04E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	60	59	18286.68	2	3949.63	2.5319	0.0303	0.0	1.49E-06	7.77E-05	7.37E-04	3.03E-03	7.78E-03
9	7	20	19	15132.20	1	3949.71	2.5318	0.0535	1.21E-06	1.02E-03	2.49E-02	1.50E-01	4.57E-01	9.48E-01
6	4	119	118	33212.05	1	3949.83	2.5318	0.0303	0.0	0.0	0.0	2.04E-05	3.52E-04	2.52E-03
8	6	41	40	15036.20	2	3950.10	2.5316	0.0303	0.0	2.07E-05	4.94E-04	2.94E-03	8.83E-03	1.82E-02
8	6	59	58	18085.99	2	3950.31	2.5314	0.0303	0.0	1.77E-06	8.78E-05	8.09E-04	3.26E-03	8.27E-03
4	2	39	40	7339.16	1	3950.35	2.5314	0.0303	2.08E-02	4.18E-01	1.58E 00	3.10E 00	4.47E 00	5.43E 00
7	5	89	88	23637.53	2	3950.36	2.5314	0.0303	0.0	0.0	2.20E-06	4.51E-05	3.10E-04	1.15E-03
8	6	95	94	28203.41	1	3950.39	2.5314	0.0303	0.0	0.0	1.18E-05	4.68E-04	4.99E-03	2.53E-02
5	3	15	16	6698.49	2	3950.44	2.5314	0.0591	4.13E-04	6.09E-03	1.96E-02	3.52E-02	4.76E-02	5.53E-02
6	4	3	4	8268.04	2	3950.67	2.5312	0.0611	1.74E-05	5.43E-04	2.55E-03	5.73E-03	9.01E-03	1.17E-02
8	6	42	41	15177.32	2	3950.72	2.5312	0.0303	0.0	1.87E-05	4.60E-04	2.79E-03	8.51E-03	1.77E-02
3	1	34	35	4382.47	2	3950.75	2.5312	0.0317	6.71E-03	3.26E-02	6.03E-02	7.74E-02	8.38E-02	8.31E-02
8	6	58	57	17888.55	2	3950.91	2.5311	0.0303	0.0	2.10E-06	9.89E-05	8.86E-04	3.51E-03	8.77E-03
9	7	76	75	24509.67	1	3951.02	2.5310	0.0303	0.0	0.0	1.55E-04	3.60E-03	2.69E-02	1.06E-01
4	2	25	26	5431.39	2	3951.03	2.5310	0.0418	2.33E-03	1.87E-02	4.46E-02	6.66E-02	7.97E-02	8.49E-02
7	5	108	107	30835.03	1	3951.08	2.5310	0.0303	0.0	0.0	1.66E-06	9.57E-05	1.31E-03	7.98E-03
8	6	43	42	15321.80	2	3951.27	2.5308	0.0303	0.0	1.67E-05	4.27E-04	2.64E-03	8.18E-03	1.72E-02
8	6	57	56	17694.37	2	3951.44	2.5307	0.0303	0.0	2.47E-06	1.11E-04	9.69E-04	3.76E-03	9.29E-03
2	0	42	43	3457.45	2	3951.44	2.5307	0.0303	9.91E-03	3.09E-02	4.58E-02	5.14E-02	5.10E-02	4.74E-02
8	6	2	1	12467.30	1	3951.71	2.5306	0.0606	3.89E-06	9.15E-04	1.18E-02	4.86E-02	1.14E-01	1.98E-01
8	6	44	43	15469.65	2	3951.75	2.5305	0.0303	0.0	1.50E-05	3.95E-04	2.50E-03	7.84E-03	1.66E-02
9	7	21	20	15204.01	1	3951.81	2.5305	0.0515	1.15E-06	1.00E-03	2.50E-02	1.52E-01	4.66E-01	9.71E-01
6	4	21	22	9350.27	1	3951.83	2.5305	0.0496	1.77E-03	9.32E-02	5.70E-01	1.50E 00	2.61E 00	3.65E 00
8	6	56	55	17503.45	2	3951.90	2.5304	0.0303	0.0	2.90E-06	1.25E-04	1.06E-03	4.03E-03	9.82E-03
5	3	128	127	35119.70	1	3951.96	2.5304	0.0303	0.0	0.0	0.0	5.25E-06	1.09E-04	8.85E-04
8	6	45	44	15620.85	2	3952.16	2.5303	0.0303	0.0	1.33E-05	3.65E-04	2.36E-03	7.50E-03	1.61E-02
7	5	12	11	10459.48	2	3952.18	2.5302	0.0617	3.44E-06	3.08E-04	2.45E-03	7.54E-03	1.46E-02	2.20E-02
8	6	55	54	17315.80	2	3952.29	2.5302	0.0303	0.0	3.39E-06	1.39E-04	1.15E-03	4.31E-03	1.04E-02
8	6	46	45	15775.39	2	3952.49	2.5301	0.0303	0.0	1.18E-05	3.36E-04	2.22E-03	7.17E-03	1.55E-02
8	6	54	53	17131.43	2	3952.60	2.5300	0.0303	0.0	3.95E-06	1.55E-04	1.25E-03	4.59E-03	1.09E-02
7	5	10	11	10694.28	1	3952.69	2.5299	0.0625	1.91E-04	1.92E-02	1.62E-01	5.17E-01	1.03E 00	1.57E 00
8	6	47	46	15933.27	2	3952.76	2.5299	0.0303	0.0	1.04E-05	3.08E-04	2.08E-03	6.83E-03	1.49E-02
8	6	53	52	16950.35	2	3952.84	2.5298	0.0303	0.0	4.58E-06	1.73E-04	1.35E-03	4.89E-03	1.15E-02
8	6	48	47	16094.49	2	3952.95	2.5298	0.0303	0.0	9.17E-06	2.82E-04	1.95E-03	6.49E-03	1.44E-02
8	6	52	51	16772.57	2	3953.00	2.5297	0.0303	0.0	5.30E-06	1.92E-04	1.46E-03	5.20E-03	1.20E-02
8	6	49	48	16259.04	2	3953.07	2.5297	0.0303	0.0	8.04E-06	2.57E-04	1.82E-03	6.16E-03	1.38E-02
8	6	51	50	16598.08	2	3953.10	2.5297	0.0303	0.0	6.12E-06	2.12E-04	1.58E-03	5.51E-03	1.26E-02
8	6	50	49	16426.90	2	3953.12	2.5296	0.0303	0.0	7.03E-06	2.34E-04	1.70E-03	5.83E-03	1.32E-02
9	7	75	74	24250.05	1	3953.15	2.5296	0.0303	0.0	0.0	1.83E-04	4.10E-03	2.99E-02	1.16E-01
7	5	88	87	23343.78	2	3953.18	2.5296	0.0303	0.0	0.0	2.67E-06	5.25E-05	3.51E-04	1.28E-03
9	7	22	21	15279.39	1	3953.84	2.5292	0.0496	1.08E-06	9.83E-04	2.49E-02	1.54E-01	4.73E-01	9.92E-01
5	3	30	31	8199.50	1	3953.99	2.5291	0.0335	8.18E-03	2.49E-01	1.15E 00	2.57E 00	4.02E 00	5.18E 00
8	6	94	93	27882.18	1	3954.05	2.5291	0.0303	0.0	0.0	1.46E-05	5.53E-04	5.72E-03	2.84E-02
6	4	2	3	8253.86	2	3954.41	2.5288	0.0609	1.33E-05	4.15E-04	1.94E-03	4.35E-03	6.94E-03	8.84E-03
7	5	13	12	10501.59	2	3954.83	2.5286	0.0610	3.53E-06	3.23E-04	2.59E-03	8.02E-03	1.56E-02	2.36E-02
3	1	46	47	6409.82	1	3954.95	2.5285	0.0303	4.44E-02	5.72E-01	1.73E 00	2.97E 00	3.92E 00	4.47E 00
5	3	14	15	6641.34	2	3954.98	2.5285	0.0597	4.22E-04	6.06E-03	1.93E-02	3.43E-02	4.61E-02	5.33E-02
8	6	3	2	12474.57	1	3955.14	2.5284	0.0600	5.80E-06	1.37E-03	1.77E-02	7.30E-02	1.72E-01	2.97E-01
9	7	74	73	23993.62	1	3955.20	2.5283	0.0303	0.0	1.05E-06	2.16E-04	4.66E-03	3.32E-02	1.26E-01
6	4	118	117	32815.40	1	3955.47	2.5281	0.0303	0.0	0.0	0.0	2.53E-05	4.20E-04	2.93E-03
9	7	23	22	15358.34	1	3955.79	2.5279	0.0476	1.02E-06	9.57E-04	2.47E-02	1.54E-01	4.79E-01	1.01E 00
7	5	107	106	30472.55	1	3955.80	2.5279	0.0303	0.0	0.0	2.12E-06	1.16E-04	1.54E-03	9.12E-03
7	5	87	86	23053.02	2	3955.93	2.5279	0.0303	0.0	0.0	3.24E-06	6.11E-05	3.96E-04	1.41E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	53	54	5655.77	1	3956.10	2.5277	0.0303	4.80E-02	4.31E-01	1.09E 00	1.68E 00	2.05E 00	2.23E 00
4	2	24	25	5337.91	2	3956.23	2.5277	0.0437	2.58E-03	1.98E-02	4.61E-02	6.79E-02	8.06E-02	8.54E-02
3	1	33	34	4255.91	2	3956.53	2.5275	0.0321	7.84E-03	3.58E-02	6.44E-02	8.12E-02	8.68E-02	8.54E-02
4	2	38	39	7189.73	1	3956.74	2.5273	0.0303	2.52E-02	4.72E-01	1.72E 00	3.31E 00	4.70E 00	5.66E 00
6	4	20	21	9269.02	1	3956.97	2.5272	0.0515	1.90E-03	9.67E-02	5.79E-01	1.51E 00	2.61E 00	3.62E 00
7	5	9	10	10653.94	1	3957.05	2.5271	0.0624	1.85E-04	1.82E-02	1.52E-01	4.83E-01	9.56E-01	1.46E 00
9	7	73	72	23740.39	1	3957.16	2.5271	0.0303	0.0	1.32E-06	2.54E-04	5.29E-03	3.67E-02	1.37E-01
7	5	14	13	10547.20	2	3957.42	2.5269	0.0604	3.58E-06	3.34E-04	2.71E-03	8.46E-03	1.65E-02	2.50E-02
8	6	93	92	27563.95	1	3957.62	2.5268	0.0303	0.0	0.0	1.81E-05	6.53E-04	6.54E-03	3.18E-02
9	7	24	23	15440.84	1	3957.68	2.5267	0.0457	0.0	9.28E-04	2.44E-02	1.54E-01	4.83E-01	1.02E 00
2	0	41	42	3301.17	2	3957.74	2.5267	0.0303	1.22E-02	3.52E-02	5.03E-02	5.52E-02	5.39E-02	4.96E-02
6	4	1	2	8243.23	2	3958.09	2.5265	0.0606	9.07E-06	2.81E-04	1.31E-03	2.93E-03	4.60E-03	5.95E-03
5	3	127	126	34695.28	1	3958.35	2.5263	0.0303	0.0	0.0	0.0	6.60E-06	1.31E-04	1.04E-03
8	6	4	3	12485.47	1	3958.49	2.5262	0.0611	7.66E-06	1.82E-03	2.36E-02	9.73E-02	2.30E-01	3.97E-01
7	5	86	85	22765.26	2	3958.60	2.5261	0.0303	0.0	0.0	3.92E-06	7.08E-05	4.47E-04	1.56E-03
9	7	72	71	23490.38	1	3959.04	2.5259	0.0303	0.0	1.64E-06	2.98E-04	5.99E-03	4.06E-02	1.49E-01
5	3	13	14	6587.74	2	3959.46	2.5256	0.0604	4.28E-04	5.98E-03	1.88E-02	3.31E-02	4.43E-02	5.12E-02
9	7	25	24	15526.91	1	3959.48	2.5256	0.0437	0.0	8.94E-04	2.40E-02	1.54E-01	4.85E-01	1.03E 00
5	3	29	30	8084.29	1	3959.76	2.5254	0.0340	9.38E-03	2.70E-01	1.22E 00	2.67E 00	4.12E 00	5.28E 00
7	5	15	14	10596.32	2	3959.94	2.5253	0.0597	3.59E-06	3.44E-04	2.82E-03	8.86E-03	1.74E-02	2.64E-02
7	5	106	105	30112.89	1	3960.43	2.5250	0.0303	0.0	0.0	2.70E-06	1.41E-04	1.80E-03	1.04E-02
9	7	71	70	23243.58	1	3960.85	2.5247	0.0303	0.0	2.04E-06	3.48E-04	6.76E-03	4.48E-02	1.62E-01
6	4	117	116	32421.43	1	3961.02	2.5246	0.0303	0.0	0.0	0.0	3.13E-05	5.00E-04	3.39E-03
8	6	92	91	27248.71	1	3961.10	2.5246	0.0303	0.0	0.0	2.23E-05	7.68E-04	7.47E-03	3.55E-02
7	5	85	84	22480.53	2	3961.20	2.5245	0.0303	0.0	0.0	4.73E-06	8.20E-05	5.04E-04	1.73E-03
9	7	26	25	15616.54	1	3961.22	2.5245	0.0418	0.0	8.58E-04	2.35E-02	1.52E-01	4.86E-01	1.04E 00
7	5	8	9	10617.26	1	3961.34	2.5244	0.0624	1.76E-04	1.71E-02	1.42E-01	4.46E-01	8.80E-01	1.34E 00
4	2	23	24	5247.99	2	3961.37	2.5244	0.0457	2.83E-03	2.08E-02	4.75E-02	6.90E-02	8.13E-02	8.55E-02
6	4	0	1	8236.14	2	3961.70	2.5242	0.0603	4.60E-06	1.42E-04	6.62E-04	1.48E-03	2.32E-03	3.00E-03
8	6	5	4	12500.01	1	3961.78	2.5241	0.0614	9.43E-06	2.26E-03	2.93E-02	1.21E-01	2.87E-01	4.07E-01
3	1	45	46	6233.30	1	3961.82	2.5241	0.0303	5.63E-02	6.66E-01	1.93E 00	3.24E 00	4.19E 00	4.72E 00
6	4	19	20	9191.44	1	3962.04	2.5240	0.0535	2.04E-03	9.97E-02	5.87E-01	1.51E 00	2.59E 00	3.58E 00
3	1	32	33	4132.93	2	3962.26	2.5238	0.0326	9.12E-03	3.93E-02	6.86E-02	8.49E-02	8.98E-02	8.75E-02
7	5	16	15	10648.93	2	3962.39	2.5237	0.0591	3.57E-06	3.50E-04	2.92E-03	9.22E-03	1.82E-02	2.78E-02
9	7	70	69	23000.01	1	3962.57	2.5236	0.0303	0.0	2.52E-06	4.07E-04	7.62E-03	4.93E-02	1.75E-01
9	7	27	26	15709.71	1	3962.88	2.5234	0.0398	0.0	8.18E-04	2.30E-02	1.51E-01	4.85E-01	1.05E 00
4	2	37	38	7043.96	1	3963.06	2.5233	0.0303	3.04E-02	5.31E-01	1.87E 00	3.52E 00	4.93E 00	5.88E 00
2	0	52	53	5452.01	1	3963.44	2.5231	0.0303	6.35E-02	5.17E-01	1.24E 00	1.86E 00	2.23E 00	2.39E 00
7	5	84	83	22198.82	2	3963.71	2.5229	0.0303	0.0	0.0	5.69E-06	9.48E-05	5.67E-04	1.91E-03
5	3	12	13	6537.71	2	3963.88	2.5228	0.0610	4.29E-04	5.86E-03	1.82E-02	3.18E-02	4.24E-02	4.88E-02
2	0	40	41	3148.44	2	3963.98	2.5227	0.0303	1.49E-02	3.99E-02	5.50E-02	5.91E-02	5.69E-02	5.18E-02
9	7	69	68	22759.69	1	3964.22	2.5226	0.0303	0.0	3.11E-06	4.73E-04	8.57E-03	5.43E-02	1.89E-01
9	7	28	27	15806.43	1	3964.47	2.5224	0.0379	0.0	7.77E-04	2.23E-02	1.49E-01	4.82E-01	1.05E 00
8	6	91	90	26936.49	1	3964.61	2.5224	0.0303	0.0	0.0	2.74E-05	9.03E-04	8.52E-03	3.97E-02
5	3	126	125	34273.40	1	3964.65	2.5223	0.0303	0.0	0.0	0.0	9.28E-06	1.59E-04	1.22E-03
7	5	17	16	10705.04	2	3964.77	2.5222	0.0585	3.52E-06	3.55E-04	2.99E-03	9.54E-03	1.89E-02	2.90E-02
7	5	105	104	29756.08	1	3964.98	2.5221	0.0303	0.0	0.0	3.43E-06	1.70E-04	2.10E-03	1.19E-02
8	6	6	5	12518.18	1	3964.99	2.5221	0.0617	1.11E-05	2.68E-03	3.50E-02	1.45E-01	3.43E-01	5.95E-01
5	3	28	29	7972.75	1	3965.46	2.5218	0.0359	1.07E-02	2.92E-01	1.28E 00	2.76E 00	4.23E 00	5.37E 00
7	5	7	8	10584.25	1	3965.57	2.5217	0.0623	1.65E-04	1.58E-02	1.29E-01	4.06E-01	7.99E-01	1.21E 00
9	7	68	67	22522.63	1	3965.78	2.5216	0.0303	0.0	3.92E-06	5.50E-04	9.62E-03	5.94E-02	2.05E-01
9	7	29	28	15906.70	1	3965.98	2.5214	0.0359	0.0	7.35E-04	2.16E-02	1.46E-01	4.78E-01	1.05E 00
7	5	83	82	21920.16	2	3966.15	2.5213	0.0303	0.0	0.0	6.83E-06	1.09E-04	6.37E-04	2.10E-03

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	22	23	5161.65	2	3966.45	2.5211	0.0476	3.09E-03	2.18E-02	4.87E-02	6.99E-02	8.16E-02	8.54E-02
6	4	116	115	32030.15	1	3966.48	2.5211	0.0303	0.0	0.0	0.0	3.87E-05	5.95E-04	3.93E-03
6	4	18	19	9117.53	1	3967.04	2.5208	0.0552	2.16E-03	1.02E-01	5.91E-01	1.50E 00	2.57E 00	3.52E 00
7	5	18	17	10764.64	2	3967.09	2.5207	0.0568	3.44E-06	3.57E-04	3.05E-03	9.81E-03	1.96E-02	3.01E-02
9	7	67	66	22288.82	1	3967.26	2.5206	0.0303	0.0	4.68E-06	6.37E-04	1.08E-02	6.51E-02	2.20E-01
9	7	30	29	16010.51	1	3967.42	2.5205	0.0340	0.0	6.91E-04	2.09E-02	1.43E-01	4.73E-01	1.04E 00
8	6	90	89	26627.30	1	3967.83	2.5203	0.0303	0.0	0.0	3.35E-05	1.06E-03	9.70E-03	4.42E-02
3	1	31	32	4013.51	2	3967.93	2.5202	0.0331	1.05E-02	4.29E-02	7.27E-02	8.85E-02	9.26E-02	8.95E-02
8	6	7	6	12539.99	1	3968.14	2.5201	0.0620	1.26E-05	3.08E-03	4.04E-02	1.68E-01	3.99E-01	6.92E-01
5	3	11	12	6491.25	2	3968.23	2.5200	0.0617	4.25E-04	5.68E-03	1.74E-02	3.03E-02	4.02E-02	4.61E-02
7	5	82	81	21644.55	2	3968.52	2.5198	0.0303	0.0	0.0	8.18E-06	1.26E-04	7.14E-04	2.31E-03
3	1	44	45	6060.43	1	3968.63	2.5198	0.0303	7.09E-02	7.72E-01	2.14E 00	3.51E 00	4.48E 00	4.99E 00
9	7	66	65	22058.29	1	3968.67	2.5197	0.0303	0.0	5.71E-06	7.35E-04	1.20E-02	7.11E-02	2.37E-01
6	4	1	0	8232.59	2	3968.72	2.5197	0.0603	4.68E-06	1.44E-04	6.71E-04	1.50E-03	2.35E-03	3.03E-03
9	7	31	30	16117.86	1	3968.79	2.5197	0.0335	0.0	6.49E-04	2.01E-02	1.40E-01	4.68E-01	1.04E 00
4	2	36	37	6901.85	1	3969.33	2.5193	0.0308	3.65E-02	5.95E-01	2.02E 00	3.74E 00	5.16E 00	6.10E 00
7	5	19	18	10827.74	2	3969.34	2.5193	0.0552	3.33E-06	3.56E-04	3.10E-03	1.00E-02	2.02E-02	3.11E-02
7	5	104	103	29402.14	1	3969.45	2.5192	0.0303	0.0	0.0	4.36E-06	2.05E-04	2.45E-03	1.35E-02
7	5	6	7	10554.90	1	3969.72	2.5191	0.0620	1.51E-04	1.42E-02	1.16E-01	3.63E-01	7.12E-01	1.08E 00
9	7	65	64	21831.04	1	3969.99	2.5189	0.0303	0.0	6.95E-06	8.47E-04	1.34E-02	7.76E-02	2.55E-01
9	7	32	31	16228.73	1	3970.08	2.5188	0.0331	0.0	6.06E-04	1.93E-02	1.36E-01	4.61E-01	1.03E 00
2	0	39	40	2999.27	2	3970.16	2.5188	0.0303	1.80E-02	4.51E-02	6.00E-02	6.31E-02	5.99E-02	5.40E-02
2	0	51	52	5251.89	1	3970.72	2.5184	0.0303	8.34E-02	6.17E-01	1.41E 00	2.06E 00	2.43E 00	2.56E 00
7	5	81	80	21372.00	2	3970.81	2.5184	0.0303	0.0	0.0	9.77E-06	1.45E-04	7.99E-04	2.54E-03
5	3	125	124	33854.11	1	3970.87	2.5183	0.0303	0.0	0.0	0.0	1.04E-05	1.90E-04	1.42E-03
8	6	89	88	26321.15	1	3971.07	2.5182	0.0303	0.0	0.0	4.11E-05	1.24E-03	1.11E-02	4.93E-02
5	3	27	28	7964.89	1	3971.10	2.5182	0.0379	1.21E-02	3.14E-01	1.34E 00	2.86E 00	4.33E 00	5.45E 00
8	6	8	7	12565.43	1	3971.21	2.5181	0.0623	1.40E-05	3.45E-03	4.56E-02	1.90E-01	4.53E-01	7.88E-01
9	7	64	63	21607.08	1	3971.24	2.5181	0.0303	0.0	8.42E-06	9.73E-04	1.49E-02	8.45E-02	2.73E-01
9	7	33	32	16343.14	1	3971.30	2.5181	0.0326	0.0	5.64E-04	1.84E-02	1.33E-01	4.53E-01	1.02E 00
4	2	21	22	5078.88	2	3971.47	2.5180	0.0496	3.35E-03	2.27E-02	4.97E-02	7.05E-02	8.17E-02	8.50E-02
7	5	20	19	10894.32	2	3971.51	2.5179	0.0535	3.21E-06	3.54E-04	3.12E-03	1.02E-02	2.07E-02	3.21E-02
6	4	115	114	31641.59	1	3971.85	2.5177	0.0303	0.0	0.0	0.0	4.77E-05	7.07E-04	4.55E-03
6	4	17	18	9047.30	1	3971.98	2.5176	0.0568	2.28E-03	1.04E-01	5.92E-01	1.49E 00	2.53E 00	3.46E 00
6	4	2	1	8236.14	2	3972.14	2.5175	0.0606	9.36E-06	2.89E-04	1.35E-03	3.01E-03	4.72E-03	6.10E-03
9	7	63	62	21386.43	1	3972.41	2.5174	0.0303	0.0	1.02E-05	1.12E-03	1.66E-02	9.18E-02	2.92E-01
9	7	34	33	16461.06	1	3972.44	2.5173	0.0321	0.0	5.22E-04	1.76E-02	1.28E-01	4.44E-01	1.01E 00
5	3	10	11	6448.35	2	3972.52	2.5173	0.0625	4.17E-04	5.45E-03	1.66E-02	2.86E-02	3.78E-02	4.32E-02
7	5	80	79	21102.53	2	3973.02	2.5170	0.0303	0.0	0.0	1.16E-05	1.66E-04	8.93E-04	2.79E-03
9	7	62	61	21169.09	1	3973.49	2.5167	0.0303	0.0	1.23E-05	1.27E-03	1.83E-02	9.96E-02	3.12E-01
9	7	35	34	16582.50	1	3973.51	2.5167	0.0317	0.0	4.81E-04	1.67E-02	1.24E-01	4.34E-01	9.94E-01
3	1	30	31	3897.66	2	3973.53	2.5167	0.0335	1.21E-02	4.66E-02	7.69E-02	9.21E-02	9.52E-02	9.14E-02
7	5	21	20	10964.39	2	3973.63	2.5166	0.0515	3.06E-06	3.49E-04	3.13E-03	1.04E-02	2.11E-02	3.29E-02
7	5	5	6	10529.21	1	3973.81	2.5165	0.0617	1.35E-04	1.26E-02	1.02E-01	3.17E-01	6.21E-01	9.40E-01
7	5	103	102	29051.07	1	3973.92	2.5165	0.0303	0.0	0.0	5.52E-06	2.47E-04	2.85E-03	1.54E-02
8	6	9	8	12594.50	1	3974.21	2.5162	0.0624	1.52E-05	3.80E-03	5.05E-02	2.12E-01	5.05E-01	8.81E-01
8	6	88	87	26018.06	1	3974.22	2.5162	0.0303	0.0	0.0	5.03E-05	1.45E-03	1.26E-02	5.50E-02
9	7	36	35	16707.46	1	3974.50	2.5160	0.0312	0.0	4.42E-04	1.58E-02	1.20E-01	4.23E-01	9.77E-01
9	7	61	60	20955.06	1	3974.50	2.5160	0.0303	0.0	1.47E-05	1.45E-03	2.03E-02	1.08E-01	3.33E-01
7	5	79	78	20836.14	2	3975.16	2.5156	0.0303	0.0	0.0	1.38E-05	1.90E-04	9.96E-04	3.05E-03
3	1	43	44	5891.22	1	3975.37	2.5155	0.0303	8.87E-02	8.92E-01	2.38E 00	3.80E 00	4.77E 00	5.25E 00
9	7	37	36	16835.92	1	3975.42	2.5155	0.0308	0.0	4.04E-04	1.49E-02	1.15E-01	4.11E-01	9.59E-01
9	7	60	59	20744.37	1	3975.43	2.5155	0.0303	0.0	1.76E-05	1.65E-03	2.24E-02	1.17E-01	3.55E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	3	2	8243.23	2	3975.48	2.5154	0.0609	1.40E-05	4.33E-04	2.02E-03	4.53E-03	7.10E-03	9.18E-03
4	2	35	36	6763.42	1	3975.52	2.5154	0.0312	4.35E-02	6.64E-01	2.18E 00	3.96E 00	5.39E 00	6.31E 00
7	5	22	21	11037.95	2	3975.67	2.5153	0.0496	2.90E-06	3.43E-04	3.13E-03	1.05E-02	2.15E-02	3.36E-02
9	7	38	37	16967.88	1	3976.26	2.5149	0.0303	0.0	3.68E-04	1.40E-02	1.10E-01	3.99E-01	9.39E-01
9	7	59	58	20537.02	1	3976.28	2.5149	0.0303	0.0	2.10E-05	1.87E-03	2.46E-02	1.26E-01	3.78E-01
2	0	38	39	2853.67	2	3976.29	2.5149	0.0303	2.18E-02	5.08E-02	6.52E-02	6.72E-02	6.29E-02	5.62E-02
4	2	20	21	4999.68	2	3976.42	2.5148	0.0515	3.60E-03	2.35E-02	5.05E-02	7.09E-02	8.14E-02	8.43E-02
5	3	26	27	7760.70	1	3976.67	2.5147	0.0398	1.37E-02	3.37E-01	1.41E 00	2.94E 00	4.41E 00	5.52E 00
5	3	9	10	6409.02	2	3976.74	2.5146	0.0624	4.03E-04	5.17E-03	1.56E-02	2.68E-02	3.52E-02	4.02E-02
6	4	16	17	8980.75	1	3976.86	2.5145	0.0585	2.38E-03	1.05E-01	5.89E-01	1.47E 00	2.48E 00	3.37E 00
5	3	124	123	33437.40	1	3976.99	2.5145	0.0303	0.0	0.0	0.0	1.30E-05	2.29E-04	1.66E-03
9	7	39	38	17103.34	1	3977.02	2.5144	0.0303	0.0	3.34E-04	1.31E-02	1.05E-01	3.86E-01	9.17E-01
9	7	58	57	20333.01	1	3977.06	2.5144	0.0303	0.0	2.49E-05	2.12E-03	2.71E-02	1.36E-01	4.02E-01
6	4	114	113	31255.77	1	3977.14	2.5144	0.0303	0.0	0.0	0.0	5.87E-05	8.39E-04	5.25E-03
8	6	10	9	12627.20	1	3977.14	2.5144	0.0624	1.62E-05	4.11E-03	5.51E-02	2.32E-01	5.56E-01	9.71E-01
7	5	78	77	20572.85	2	3977.22	2.5143	0.0303	0.0	0.0	1.64E-05	2.17E-04	1.11E-03	3.34E-03
8	6	87	86	25718.04	1	3977.30	2.5143	0.0303	0.0	0.0	6.14E-05	1.70E-03	1.43E-02	6.12E-02
7	5	23	22	11114.98	2	3977.65	2.5140	0.0476	2.73E-06	3.34E-04	3.11E-03	1.05E-02	2.18E-02	3.42E-02
9	7	40	39	17242.29	1	3977.71	2.5140	0.0303	0.0	3.01E-04	1.22E-02	1.00E-01	3.73E-01	8.94E-01
9	7	57	56	20132.36	1	3977.75	2.5140	0.0303	0.0	2.96E-05	2.40E-03	2.97E-02	1.46E-01	4.27E-01
7	5	4	5	10507.20	1	3977.83	2.5139	0.0614	1.17E-04	1.07E-02	8.67E-02	2.69E-01	5.26E-01	7.94E-01
2	0	50	51	5055.41	1	3977.94	2.5139	0.0303	1.09E-01	7.34E-01	1.60E 00	2.27E 00	2.63E 00	2.73E 00
6	4	97	96	24250.88	2	3978.11	2.5138	0.0303	0.0	0.0	1.17E-06	2.61E-05	1.90E-04	7.37E-04
7	5	102	101	28702.89	1	3978.12	2.5138	0.0303	0.0	0.0	6.97E-06	2.97E-04	3.32E-03	1.74E-02
9	7	41	40	17384.73	1	3978.33	2.5136	0.0303	0.0	2.71E-04	1.14E-02	9.51E-02	3.59E-01	8.69E-01
9	7	56	55	19935.07	1	3978.37	2.5136	0.0303	0.0	3.49E-05	2.70E-03	3.26E-02	1.57E-01	4.53E-01
6	4	4	3	8253.86	2	3978.77	2.5133	0.0611	1.85E-05	5.75E-04	2.69E-03	6.04E-03	9.48E-03	1.23E-02
9	7	42	41	17530.64	1	3978.87	2.5133	0.0303	0.0	2.43E-04	1.06E-02	9.01E-02	3.45E-01	8.44E-01
9	7	55	54	19741.15	1	3978.91	2.5133	0.0303	0.0	4.11E-05	3.03E-03	3.56E-02	1.68E-01	4.79E-01
3	1	29	30	3785.38	2	3979.07	2.5131	0.0340	1.38E-02	5.04E-02	8.10E-02	9.54E-02	9.76E-02	9.30E-02
7	5	77	76	20312.67	2	3979.20	2.5131	0.0303	0.0	0.0	1.94E-05	2.47E-04	1.23E-03	3.64E-03
9	7	43	42	17680.03	1	3979.33	2.5130	0.0303	0.0	2.17E-04	9.77E-03	8.52E-02	3.31E-01	8.17E-01
9	7	54	53	19550.62	1	3979.37	2.5130	0.0303	0.0	4.82E-05	3.40E-03	3.88E-02	1.80E-01	5.06E-01
7	5	24	23	11195.50	2	3979.55	2.5128	0.0457	2.55E-06	3.25E-04	3.08E-03	1.05E-02	2.20E-02	3.47E-02
9	7	44	43	17832.88	1	3979.72	2.5127	0.0303	0.0	1.93E-04	9.01E-03	8.03E-02	3.16E-01	7.90E-01
9	7	53	52	19363.47	1	3979.75	2.5127	0.0303	0.0	5.63E-05	3.80E-03	4.22E-02	1.92E-01	5.34E-01
8	6	11	10	12663.53	1	3980.00	2.5126	0.0625	1.70E-05	4.39E-03	5.94E-02	2.52E-01	6.04E-01	1.06E 00
9	7	45	44	17989.20	1	3980.03	2.5125	0.0303	0.0	1.71E-04	8.28E-03	7.55E-02	3.02E-01	7.62E-01
9	7	52	51	19179.72	1	3980.05	2.5125	0.0303	0.0	6.55E-05	4.23E-03	4.57E-02	2.05E-01	5.62E-01
9	7	46	45	18148.97	1	3980.26	2.5124	0.0303	0.0	1.51E-04	7.59E-03	7.08E-02	2.88E-01	7.34E-01
9	7	51	50	18999.38	1	3980.28	2.5124	0.0303	0.0	7.59E-05	4.69E-03	4.95E-02	2.18E-01	5.90E-01
8	6	86	85	25421.09	1	3980.29	2.5124	0.0303	0.0	0.0	7.47E-05	1.98E-03	1.62E-02	6.80E-02
9	7	47	46	18312.18	1	3980.42	2.5123	0.0303	0.0	1.32E-04	6.94E-03	6.62E-02	2.73E-01	7.05E-01
9	7	50	49	18822.44	1	3980.43	2.5123	0.0303	0.0	8.77E-05	5.20E-03	5.34E-02	2.32E-01	6.19E-01
9	7	48	47	18478.84	1	3980.50	2.5122	0.0303	0.0	1.16E-04	6.32E-03	6.18E-02	2.59E-01	6.76E-01
9	7	49	48	18648.93	1	3980.51	2.5122	0.0303	0.0	1.01E-04	5.74E-03	5.75E-02	2.45E-01	6.47E-01
5	3	8	9	6373.27	2	3980.90	2.5120	0.0624	3.83E-04	4.84E-03	1.45E-02	2.47E-02	3.24E-02	3.69E-02
7	5	76	75	20055.60	2	3981.11	2.5119	0.0303	0.0	0.0	2.29E-05	2.81E-04	1.37E-03	3.97E-03
4	2	19	20	4924.07	2	3981.31	2.5117	0.0535	3.84E-03	2.42E-02	5.11E-02	7.09E-02	8.09E-02	8.33E-02
7	5	25	24	11279.49	2	3981.39	2.5117	0.0437	2.36E-06	3.14E-04	3.04E-03	1.05E-02	2.21E-02	3.52E-02
6	4	96	95	23930.47	2	3981.53	2.5116	0.0303	0.0	0.0	1.44E-06	3.09E-05	2.18E-04	8.26E-04
4	2	34	35	6628.66	1	3981.65	2.5115	0.0317	5.15E-02	7.38E-01	2.35E 00	4.17E 00	5.62E 00	6.51E 00
6	4	15	16	8917.88	1	3981.66	2.5115	0.0591	2.47E-03	1.06E-01	5.83E-01	1.44E 00	2.42E 00	3.27E 00

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	3	4	10488.85	1	3981.78	2.5114	0.0611	9.64E-05	8.79E-03	7.06E-02	2.19E-01	4.26E-01	6.43E-01
6	4	5	4	8268.04	2	3981.98	2.5113	0.0614	2.28E-05	7.13E-04	3.35E-03	7.53E-03	1.18E-02	1.53E-02
3	1	42	43	5725.68	1	3982.05	2.5113	0.0303	1.11E-01	1.03E 00	2.63E 00	4.11E 00	5.07E 00	5.52E 00
5	3	25	26	7660.20	1	3982.18	2.5112	0.0418	1.53E-02	3.59E-01	1.46E 00	3.02E 00	4.48E 00	5.57E 00
7	5	101	100	28357.62	1	3982.33	2.5111	0.0303	0.0	0.0	8.79E-06	3.56E-04	3.85E-03	1.98E-02
6	4	113	112	30872.70	1	3982.35	2.5111	0.0303	0.0	0.0	1.24E-06	7.22E-05	9.94E-04	6.06E-03
2	0	37	38	2711.64	2	3982.35	2.5111	0.0303	2.61E-02	5.69E-02	7.07E-02	7.14E-02	6.59E-02	5.83E-02
8	6	12	11	12703.48	1	3982.78	2.5108	0.0617	1.76E-05	4.64E-03	6.33E-02	2.70E-01	6.50E-01	1.14E 00
7	5	75	74	19801.66	2	3982.95	2.5107	0.0303	0.0	0.0	2.70E-05	3.19E-04	1.52E-03	4.33E-03
5	3	123	122	33023.30	1	3983.03	2.5107	0.0303	0.0	0.0	0.0	1.62E-05	2.74E-04	1.94E-03
7	5	26	25	11366.95	2	3983.16	2.5106	0.0418	2.18E-06	3.01E-04	2.98E-03	1.05E-02	2.21E-02	3.55E-02
8	6	85	84	25127.25	1	3983.20	2.5105	0.0303	0.0	0.0	9.07E-05	2.31E-03	1.83E-02	7.54E-02
3	1	28	29	3676.69	2	3984.56	2.5097	0.0359	1.57E-02	5.44E-02	8.51E-02	9.88E-02	1.00E-01	9.46E-02
7	5	74	73	19550.86	2	3984.70	2.5096	0.0303	0.0	0.0	3.17E-05	3.61E-04	1.68E-03	4.70E-03
7	5	27	26	11457.88	2	3984.86	2.5095	0.0398	1.99E-06	2.88E-04	2.91E-03	1.04E-02	2.21E-02	3.56E-02
6	4	95	94	23612.99	2	3984.86	2.5095	0.0303	0.0	0.0	1.78E-06	3.64E-05	2.49E-04	9.24E-04
5	3	7	8	6341.08	2	3985.00	2.5094	0.0623	3.59E-04	4.46E-03	1.32E-02	2.25E-02	2.94E-02	3.34E-02
2	0	49	50	4862.58	1	3985.10	2.5093	0.0303	1.42E-01	8.69E-01	1.81E 00	2.50E 00	2.84E 00	2.91E 00
6	4	6	5	8285.77	2	3985.14	2.5093	0.0617	2.68E-05	8.46E-04	4.00E-03	9.00E-03	1.42E-02	1.84E-02
8	6	13	12	12747.07	1	3985.50	2.5091	0.0610	1.80E-05	4.84E-03	6.69E-02	2.87E-01	6.94E-01	1.22E 00
7	5	2	3	10474.17	1	3985.66	2.5090	0.0609	7.42E-05	6.71E-03	5.37E-02	1.66E-01	3.23E-01	4.88E-01
8	6	84	83	24836.50	1	3986.02	2.5088	0.0303	0.0	0.0	1.10E-04	2.68E-03	2.07E-02	8.35E-02
4	2	18	19	4852.04	2	3986.14	2.5087	0.0552	4.07E-03	2.48E-02	5.14E-02	7.06E-02	8.00E-02	8.20E-02
7	5	73	72	19303.21	2	3986.39	2.5085	0.0303	0.0	0.0	3.71E-05	4.08E-04	1.85E-03	5.10E-03
6	4	14	15	8858.70	1	3986.40	2.5085	0.0597	2.53E-03	1.05E-01	5.73E-01	1.40E 00	2.34E 00	3.16E 00
7	5	100	99	28015.28	1	3986.46	2.5085	0.0303	0.0	0.0	1.11E-05	4.27E-04	4.47E-03	2.24E-02
7	5	28	27	11552.28	2	3986.49	2.5085	0.0379	1.81E-06	2.74E-04	2.84E-03	1.02E-02	2.20E-02	3.57E-02
6	4	112	111	30492.39	1	3987.46	2.5079	0.0303	0.0	0.0	1.61E-06	8.85E-05	1.18E-03	6.99E-03
5	3	24	25	7563.39	1	3987.62	2.5078	0.0437	1.70E-02	3.81E-01	1.52E 00	3.08E 00	4.54E 00	5.61E 00
4	2	33	34	6497.59	1	3987.72	2.5077	0.0321	6.07E-02	8.16E-01	2.52E 00	4.39E 00	5.84E 00	6.70E 00
7	5	72	71	19058.71	2	3988.00	2.5075	0.0303	0.0	0.0	4.34E-05	4.60E-04	2.04E-03	5.53E-03
7	5	29	28	11650.14	2	3988.06	2.5075	0.0359	1.64E-06	2.60E-04	2.75E-03	1.01E-02	2.19E-02	3.57E-02
6	4	94	93	23298.45	2	3988.12	2.5074	0.0303	0.0	0.0	2.19E-06	4.28E-05	2.85E-04	1.03E-03
8	6	14	13	12794.27	1	3988.14	2.5074	0.0604	1.82E-05	5.01E-03	7.00E-02	3.02E-01	7.35E-01	1.30E 00
6	4	7	6	8307.03	2	3988.22	2.5074	0.0620	3.05E-05	9.73E-04	4.62E-03	1.04E-02	1.65E-02	2.14E-02
2	0	36	37	2573.18	2	3988.35	2.5073	0.0308	3.12E-02	6.36E-02	7.63E-02	7.56E-02	6.88E-02	6.04E-02
3	1	41	42	5563.80	1	3988.67	2.5071	0.0303	1.37E-01	1.18E 00	2.90E 00	4.42E 00	5.37E 00	5.79E 00
8	6	83	82	24548.88	1	3988.77	2.5070	0.0303	0.0	0.0	1.33E-04	3.11E-03	2.34E-02	9.24E-02
5	3	122	121	32611.84	1	3988.98	2.5069	0.0303	0.0	0.0	0.0	2.02E-05	3.29E-04	2.26E-03
5	3	6	7	6312.47	2	3989.03	2.5069	0.0620	3.29E-04	4.03E-03	1.19E-02	2.01E-02	2.62E-02	2.97E-02
4	2	131	130	34615.31	1	3989.25	2.5067	0.0303	0.0	0.0	0.0	4.41E-06	8.70E-05	6.86E-04
7	5	1	2	10463.16	1	3989.47	2.5066	0.0606	5.04E-05	4.54E-03	3.63E-02	1.12E-01	2.18E-01	3.28E-01
7	5	71	70	18817.38	2	3989.53	2.5066	0.0303	0.0	0.0	5.06E-05	5.18E-04	2.24E-03	5.98E-03
7	5	30	29	11751.45	2	3989.55	2.5065	0.0340	1.47E-06	2.45E-04	2.66E-03	9.87E-03	2.17E-02	3.56E-02
3	1	27	28	3571.58	2	3989.98	2.5063	0.0379	1.77E-02	5.84E-02	8.92E-02	1.02E-01	1.02E-01	9.59E-02
7	5	99	98	27675.87	1	3990.50	2.5060	0.0303	0.0	0.0	1.39E-05	5.10E-04	5.17E-03	2.53E-02
8	6	15	14	12845.10	1	3990.71	2.5058	0.0597	1.82E-05	5.14E-03	7.27E-02	3.16E-01	7.73E-01	1.37E 00
4	2	17	18	4783.59	2	3990.90	2.5057	0.0568	4.28E-03	2.52E-02	5.14E-02	6.99E-02	7.87E-02	8.03E-02
7	5	31	30	11856.22	2	3990.97	2.5057	0.0335	1.32E-06	2.31E-04	2.57E-03	9.67E-03	2.15E-02	3.55E-02
7	5	70	69	18579.22	2	3990.99	2.5056	0.0303	0.0	1.05E-06	5.88E-05	5.82E-04	2.46E-03	6.46E-03
6	4	13	14	8803.20	1	3991.07	2.5056	0.0604	2.57E-03	1.04E-01	5.60E-01	1.36E 00	2.26E 00	3.03E 00
6	4	8	7	8331.84	2	3991.24	2.5055	0.0623	3.38E-05	1.09E-03	5.22E-03	1.18E-02	1.87E-02	2.44E-02
6	4	93	92	22986.86	2	3991.30	2.5054	0.0303	0.0	0.0	2.69E-06	5.03E-05	3.25E-04	1.15E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	82	81	24264.39	1	3991.43	2.5054	0.0303	0.0	0.0	1.60E-04	3.60E-03	2.63E-02	1.02E-01
2	0	48	49	4673.40	1	3992.19	2.5049	0.0303	1.83E-01	1.03E 00	2.04E 00	2.74E 00	3.06E 00	3.10E 00
7	5	32	31	11964.44	2	3992.33	2.5048	0.0331	1.17E-06	2.16E-04	2.47E-03	9.44E-03	2.12E-02	3.53E-02
7	5	69	68	18344.26	2	3992.37	2.5048	0.0303	0.0	1.29E-06	6.81E-05	6.52E-04	2.70E-03	6.97E-03
6	4	111	110	30114.87	1	3992.49	2.5047	0.0303	0.0	0.0	2.08E-06	1.08E-04	1.39E-03	8.04E-03
5	3	23	24	7470.27	1	3993.00	2.5044	0.0457	1.87E-02	4.02E-01	1.56E 00	3.14E 00	4.58E 00	5.63E 00
5	3	5	6	6287.43	2	3993.00	2.5044	0.0617	2.93E-04	3.55E-03	1.04E-02	1.76E-02	2.29E-02	2.58E-02
8	6	16	15	12899.54	1	3993.21	2.5043	0.0591	1.81E-05	5.23E-03	7.50E-02	3.29E-01	8.07E-01	1.44E 00
7	5	0	1	10455.82	1	3993.21	2.5043	0.0603	2.56E-05	2.30E-03	1.83E-02	5.65E-02	1.10E-01	1.65E-01
7	5	33	32	12076.10	2	3993.61	2.5040	0.0326	1.04E-06	2.02E-04	2.37E-03	9.19E-03	2.08E-02	3.50E-02
7	5	68	67	18112.48	2	3993.68	2.5040	0.0303	0.0	1.58E-06	7.88E-05	7.30E-04	2.95E-03	7.50E-03
4	2	32	33	6370.20	1	3993.72	2.5039	0.0326	7.10E-02	8.98E-01	2.69E 00	4.60E 00	6.05E 00	6.88E 00
8	6	81	80	23983.04	1	3994.01	2.5037	0.0303	0.0	0.0	1.92E-04	4.16E-03	2.96E-02	1.13E-01
6	4	9	8	8360.19	2	3994.19	2.5036	0.0624	3.67E-05	1.20E-03	5.79E-03	1.32E-02	2.09E-02	2.73E-02
2	0	35	36	2438.31	2	3994.29	2.5036	0.0312	3.70E-02	7.07E-02	8.22E-02	7.98E-02	7.18E-02	6.24E-02
6	4	92	91	22678.24	2	3994.41	2.5035	0.0303	0.0	0.0	3.30E-06	5.90E-05	3.70E-04	1.29E-03
7	5	98	97	27339.41	1	3994.45	2.5035	0.0303	0.0	0.0	1.74E-05	6.08E-04	5.97E-03	2.86E-02
7	5	34	33	12191.21	2	3994.83	2.5032	0.0321	0.0	1.87E-04	2.26E-03	8.92E-03	2.05E-02	3.47E-02
5	3	121	120	32203.01	1	3994.85	2.5032	0.0303	0.0	0.0	0.0	2.51E-05	3.94E-04	2.63E-03
7	5	67	66	17883.92	2	3994.92	2.5032	0.0303	0.0	1.93E-06	9.09E-05	8.15E-04	3.22E-03	8.07E-03
3	1	40	41	5405.60	1	3995.22	2.5030	0.0303	1.68E-01	1.34E 00	3.18E 00	4.75E 00	5.68E 00	6.06E 00
3	1	26	27	3470.06	2	3995.34	2.5029	0.0398	1.99E-02	6.25E-02	9.30E-02	1.05E-01	1.04E-01	9.70E-02
4	2	16	17	4718.72	2	3995.61	2.5027	0.0585	4.46E-03	2.54E-02	5.11E-02	6.89E-02	7.71E-02	7.83E-02
8	6	17	16	12957.61	1	3995.64	2.5027	0.0585	1.78E-05	5.29E-03	7.68E-02	3.40E-01	8.39E-01	1.50E 00
6	4	12	13	8751.40	1	3995.67	2.5027	0.0610	2.58E-03	1.02E-01	5.42E-01	1.31E 00	2.16E 00	2.89E 00
4	2	130	129	34178.80	1	3995.88	2.5026	0.0303	0.0	0.0	0.0	5.59E-06	1.06E-04	8.09E-04
7	5	35	34	12309.75	2	3995.97	2.5025	0.0317	0.0	1.73E-04	2.15E-03	8.64E-03	2.00E-02	3.42E-02
7	5	66	65	17658.56	2	3996.08	2.5025	0.0303	0.0	2.34E-06	1.05E-04	9.07E-04	3.51E-03	8.66E-03
8	6	80	79	23704.85	1	3996.51	2.5022	0.0303	0.0	1.21E-06	2.31E-04	4.79E-03	3.32E-02	1.24E-01
5	3	4	5	6265.97	2	3996.90	2.5019	0.0614	2.53E-04	3.04E-03	8.84E-03	1.49E-02	1.93E-02	2.18E-02
7	5	36	35	12431.72	2	3997.05	2.5018	0.0312	0.0	1.60E-04	2.04E-03	8.34E-03	1.96E-02	3.37E-02
6	4	10	9	8392.08	2	3997.08	2.5018	0.0624	3.92E-05	1.30E-03	6.32E-03	1.45E-02	2.30E-02	3.01E-02
7	5	65	64	17436.43	2	3997.17	2.5018	0.0303	0.0	2.83E-06	1.20E-04	1.01E-03	3.82E-03	9.28E-03
6	4	91	90	22372.60	2	3997.43	2.5016	0.0303	0.0	0.0	4.04E-06	6.90E-05	4.20E-04	1.43E-03
6	4	110	109	29740.16	1	3997.44	2.5016	0.0303	0.0	0.0	2.68E-06	1.32E-04	1.64E-03	9.24E-03
8	6	18	17	13019.29	1	3997.99	2.5013	0.0568	1.73E-05	5.31E-03	7.82E-02	3.49E-01	8.67E-01	1.56E 00
7	5	37	36	12557.12	2	3998.05	2.5012	0.0308	0.0	1.46E-04	1.93E-03	8.02E-03	1.90E-02	3.31E-02
7	5	64	63	17217.54	2	3998.18	2.5011	0.0303	0.0	3.41E-06	1.37E-04	1.12E-03	4.15E-03	9.93E-03
5	3	22	23	7380.84	1	3998.31	2.5011	0.0476	2.05E-02	4.22E-01	1.61E 00	3.19E 00	4.61E 00	5.63E 00
7	5	97	96	27005.92	1	3998.33	2.5010	0.0303	0.0	0.0	2.17E-05	7.24E-04	6.89E-03	3.22E-02
8	6	79	78	23429.83	1	3998.93	2.5007	0.0303	0.0	1.54E-06	2.76E-04	5.51E-03	3.72E-02	1.36E-01
7	5	38	37	12685.95	2	3998.99	2.5006	0.0303	0.0	1.34E-04	1.82E-03	7.70E-03	1.85E-02	3.25E-02
7	5	63	62	17001.87	2	3999.12	2.5005	0.0303	0.0	4.10E-06	1.57E-04	1.24E-03	4.50E-03	1.06E-02
2	0	47	48	4487.89	1	3999.22	2.5005	0.0303	2.35E-01	1.21E 00	2.30E 00	3.00E 00	3.29E 00	3.30E 00
4	2	31	32	6246.50	1	3999.66	2.5002	0.0331	8.25E-02	9.84E-01	2.86E 00	4.81E 00	6.25E 00	7.05E 00
7	5	39	38	12818.19	2	3999.85	2.5001	0.0303	0.0	1.22E-04	1.70E-03	7.37E-03	1.79E-02	3.17E-02
6	4	11	10	8427.51	2	3999.89	2.5001	0.0625	4.12E-05	1.39E-03	6.82E-03	1.57E-02	2.50E-02	3.28E-02
7	5	62	61	16789.46	2	3999.99	2.5000	0.0303	0.0	4.91E-06	1.78E-04	1.37E-03	4.87E-03	1.13E-02
2	0	34	35	2307.02	2	4000.18	2.4999	0.0317	4.36E-02	7.83E-02	8.82E-02	8.40E-02	7.46E-02	6.43E-02
6	4	11	12	8703.29	1	4000.20	2.4999	0.0617	2.57E-03	9.94E-02	5.21E-01	1.25E 00	2.05E 00	2.74E 00
4	2	15	16	4657.45	2	4000.25	2.4998	0.0591	4.60E-03	2.55E-02	5.05E-02	6.75E-02	7.51E-02	7.60E-02
8	6	19	18	13084.58	1	4000.27	2.4998	0.0552	1.67E-05	5.29E-03	7.92E-02	3.57E-01	8.92E-01	1.61E 00
6	4	90	89	22069.95	2	4000.38	2.4998	0.0303	0.0	0.0	4.92E-06	8.06E-05	4.77E-04	1.59E-03

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	1	0	10452.15	1	4000.48	2.4997	0.0603	2.60E-05	2.33E-03	1.86E-02	5.72E-02	1.11E-01	1.67E-01
3	1	25	26	3372.13	2	4000.63	2.4996	0.0418	2.22E-02	6.64E-02	9.67E-02	1.07E-01	1.06E-01	9.78E-02
5	3	120	119	31796.86	1	4000.63	2.4996	0.0303	0.0	0.0	0.0	3.12E-05	4.70E-04	3.06E-03
7	5	40	39	12953.84	2	4000.65	2.4996	0.0303	0.0	1.10E-04	1.60E-03	7.04E-03	1.74E-02	3.10E-02
5	3	3	4	6248.08	2	4000.74	2.4995	0.0611	2.09E-04	2.48E-03	7.20E-03	1.21E-02	1.57E-02	1.77E-02
7	5	61	60	16580.31	2	4000.78	2.4995	0.0303	0.0	5.86E-06	2.03E-04	1.51E-03	5.26E-03	1.20E-02
8	6	78	77	23157.98	1	4001.26	2.4992	0.0303	0.0	1.97E-06	3.30E-04	6.32E-03	4.16E-02	1.50E-01
7	5	41	40	13092.91	2	4001.37	2.4991	0.0303	0.0	9.95E-05	1.49E-03	6.70E-03	1.67E-02	3.02E-02
7	5	60	59	16374.42	2	4001.50	2.4991	0.0303	0.0	6.98E-06	2.29E-04	1.65E-03	5.66E-03	1.28E-02
3	1	39	40	5251.08	1	4001.71	2.4989	0.0303	2.06E-01	1.52E 00	3.49E 00	5.09E 00	6.00E 00	6.33E 00
7	5	42	41	13235.37	2	4002.02	2.4987	0.0303	0.0	8.95E-05	1.39E-03	6.36E-03	1.61E-02	2.94E-02
7	5	96	95	26675.41	1	4002.12	2.4987	0.0303	0.0	0.0	2.71E-05	8.61E-04	7.93E-03	3.63E-02
7	5	59	58	16171.80	2	4002.14	2.4987	0.0303	0.0	8.29E-06	2.60E-04	1.82E-03	6.11E-03	1.36E-02
6	4	109	108	29368.25	1	4002.29	2.4986	0.0303	0.0	0.0	3.45E-06	1.62E-04	1.93E-03	1.06E-02
4	2	129	128	33744.82	1	4002.41	2.4985	0.0303	0.0	0.0	0.0	7.07E-06	1.28E-04	9.53E-04
8	6	20	19	13153.48	1	4002.48	2.4985	0.0535	1.60E-05	5.24E-03	7.98E-02	3.63E-01	9.13E-01	1.65E 00
7	5	43	42	13381.23	2	4002.60	2.4984	0.0303	0.0	8.01E-05	1.29E-03	6.03E-03	1.55E-02	2.85E-02
6	4	12	11	8466.48	2	4002.65	2.4983	0.0617	4.28E-05	1.47E-03	7.27E-03	1.68E-02	2.70E-02	3.54E-02
7	5	58	57	15972.47	2	4002.72	2.4983	0.0303	0.0	9.81E-06	2.93E-04	1.99E-03	6.57E-03	1.44E-02
7	5	44	43	13530.48	2	4003.11	2.4981	0.0303	0.0	7.15E-05	1.19E-03	5.70E-03	1.48E-02	2.76E-02
7	5	57	56	15776.43	2	4003.21	2.4980	0.0303	0.0	1.16E-05	3.30E-04	2.18E-03	7.06E-03	1.53E-02
6	4	89	88	21770.31	2	4003.25	2.4980	0.0303	0.0	0.0	6.01E-06	9.42E-05	5.41E-04	1.77E-03
8	6	77	76	22889.33	1	4003.52	2.4978	0.0303	0.0	2.50E-06	3.93E-04	7.24E-03	4.64E-02	1.64E-01
7	5	45	44	13683.11	2	4003.55	2.4978	0.0303	0.0	6.36E-05	1.10E-03	5.37E-03	1.42E-02	2.66E-02
5	3	21	22	7295.12	1	4003.55	2.4978	0.0496	2.23E-02	4.40E-01	1.64E 00	3.22E 00	4.62E 00	5.61E 00
7	5	56	55	15583.68	2	4003.64	2.4977	0.0303	0.0	1.36E-05	3.70E-04	2.38E-03	7.56E-03	1.62E-02
7	5	46	45	13839.13	2	4003.92	2.4976	0.0303	0.0	5.63E-05	1.01E-03	5.05E-03	1.35E-02	2.57E-02
7	5	55	54	15394.23	2	4003.99	2.4975	0.0303	0.0	1.59E-05	4.14E-04	2.60E-03	8.09E-03	1.71E-02
7	5	2	1	10455.82	1	4004.01	2.4975	0.0606	5.20E-05	4.67E-03	3.73E-02	1.15E-01	2.23E-01	3.37E-01
7	5	47	46	13998.51	2	4004.21	2.4974	0.0303	0.0	4.96E-05	9.23E-04	4.73E-03	1.29E-02	2.47E-02
7	5	54	53	15208.11	2	4004.27	2.4973	0.0303	0.0	1.86E-05	4.62E-04	2.82E-03	8.64E-03	1.80E-02
7	5	48	47	14161.26	2	4004.44	2.4972	0.0303	0.0	4.36E-05	8.44E-04	4.43E-03	1.23E-02	2.38E-02
7	5	53	52	15025.29	2	4004.48	2.4972	0.0303	0.0	2.16E-05	5.15E-04	3.06E-03	9.20E-03	1.89E-02
5	3	2	3	6233.77	2	4004.51	2.4972	0.0609	1.61E-04	1.90E-03	5.48E-03	9.19E-03	1.19E-02	1.34E-02
7	5	49	48	14327.37	2	4004.59	2.4971	0.0303	0.0	3.82E-05	7.69E-04	4.13E-03	1.16E-02	2.28E-02
8	6	21	20	13225.99	1	4004.62	2.4971	0.0515	1.52E-05	5.16E-03	7.99E-02	3.67E-01	9.31E-01	1.70E 00
7	5	52	51	14845.80	2	4004.62	2.4971	0.0303	0.0	2.51E-05	5.72E-04	3.31E-03	9.78E-03	1.99E-02
6	4	10	11	8658.86	1	4004.66	2.4971	0.0625	2.52E-03	9.55E-02	4.95E-01	1.18E 00	1.93E 00	2.57E 00
7	5	50	49	14496.84	2	4004.67	2.4971	0.0303	0.0	3.33E-05	6.98E-04	3.85E-03	1.10E-02	2.18E-02
7	5	51	50	14669.65	2	4004.68	2.4971	0.0303	0.0	2.90E-05	6.33E-04	3.57E-03	1.04E-02	2.09E-02
4	2	14	15	4599.77	2	4004.82	2.4970	0.0597	4.71E-03	2.54E-02	4.96E-02	6.58E-02	7.28E-02	7.34E-02
6	4	13	12	8508.98	2	4005.33	2.4967	0.0610	4.38E-05	1.54E-03	7.69E-03	1.79E-02	2.88E-02	3.79E-02
4	2	30	31	6126.50	1	4005.53	2.4965	0.0335	9.54E-02	1.07E 00	3.03E 00	5.02E 00	6.44E 00	7.21E 00
8	6	76	75	22623.88	1	4005.69	2.4964	0.0303	0.0	3.16E-06	4.66E-04	8.28E-03	5.17E-02	1.79E-01
7	5	95	94	26347.89	1	4005.82	2.4964	0.0303	0.0	0.0	3.36E-05	1.02E-03	9.12E-03	4.08E-02
3	1	24	25	3277.80	2	4005.87	2.4963	0.0437	2.46E-02	7.03E-02	1.00E-01	1.10E-01	1.07E-01	9.84E-02
2	0	33	34	2179.32	2	4006.00	2.4963	0.0321	5.11E-02	8.63E-02	9.43E-02	8.82E-02	7.74E-02	6.61E-02
6	4	88	87	21473.68	2	4006.05	2.4962	0.0303	0.0	0.0	7.31E-06	1.10E-04	6.14E-04	1.96E-03
2	0	46	47	4306.05	1	4006.19	2.4961	0.0303	3.00E-01	1.41E 00	2.58E 00	3.28E 00	3.54E 00	3.49E 00
5	3	119	118	31393.38	1	4006.32	2.4961	0.0303	0.0	0.0	0.0	3.89E-05	5.63E-04	3.56E-03
8	6	22	21	13302.10	1	4006.68	2.4958	0.0496	1.44E-05	5.05E-03	7.97E-02	3.70E-01	9.45E-01	1.73E 00
6	4	108	107	28999.19	1	4007.07	2.4956	0.0303	0.0	0.0	4.43E-06	1.97E-04	2.27E-03	1.22E-02
7	5	3	2	10463.16	1	4007.47	2.4953	0.0609	7.77E-05	7.00E-03	5.59E-02	1.73E-01	3.36E-01	5.06E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	75	74	22361.64	1	4007.79	2.4951	0.0303	0.0	3.98E-06	5.52E-04	9.44E-03	5.75E-02	1.96E-01
6	4	14	13	8555.02	2	4007.95	2.4950	0.0604	4.44E-05	1.60E-03	8.05E-03	1.89E-02	3.05E-02	4.03E-02
3	1	38	39	5100.25	1	4008.13	2.4949	0.0303	2.50E-01	1.72E 00	3.80E 00	5.43E 00	6.32E 00	6.59E 00
5	3	1	2	6223.04	2	4008.22	2.4949	0.0606	1.09E-04	1.28E-03	3.70E-03	6.19E-03	8.01E-03	9.02E-03
8	6	23	22	13381.82	1	4008.67	2.4946	0.0476	1.35E-05	4.92E-03	7.91E-02	3.72E-01	9.56E-01	1.76E 00
5	3	20	21	7213.10	1	4008.72	2.4946	0.0515	2.41E-02	4.57E-01	1.67E 00	3.24E 00	4.61E 00	5.57E 00
6	4	87	86	21180.08	2	4008.76	2.4945	0.0303	0.0	0.0	8.88E-06	1.28E-04	6.95E-04	2.18E-03
4	2	128	127	33313.39	1	4008.86	2.4945	0.0303	0.0	0.0	0.0	8.92E-06	1.55E-04	1.12E-03
6	4	9	10	8618.14	1	4009.06	2.4943	0.0624	2.44E-03	9.07E-02	4.66E-01	1.10E 00	1.80E 00	2.39E 00
4	2	13	14	4545.69	2	4009.33	2.4942	0.0604	4.78E-03	2.51E-02	4.84E-02	6.37E-02	7.01E-02	7.04E-02
7	5	94	93	26023.39	1	4009.44	2.4941	0.0303	0.0	0.0	4.17E-05	1.21E-03	1.05E-02	4.58E-02
8	6	74	73	22102.62	1	4009.80	2.4939	0.0303	0.0	5.01E-06	6.52E-04	1.07E-02	6.39E-02	2.14E-01
6	4	15	14	8604.60	2	4010.50	2.4935	0.0597	4.46E-05	1.64E-03	8.37E-03	1.98E-02	3.21E-02	4.26E-02
8	6	24	23	13465.12	1	4010.59	2.4934	0.0457	1.25E-05	4.76E-03	7.81E-02	3.71E-01	9.64E-01	1.78E 00
7	5	4	3	10474.17	1	4010.86	2.4932	0.0611	1.03E-04	9.29E-03	7.44E-02	2.30E-01	4.48E-01	6.76E-01
3	1	23	24	3187.07	2	4011.04	2.4931	0.0457	2.70E-02	7.41E-02	1.03E-01	1.12E-01	1.08E-01	9.86E-02
4	2	29	30	6010.21	1	4011.33	2.4929	0.0340	1.10E-01	1.17E 00	3.20E 00	5.21E 00	6.61E 00	7.35E 00
6	4	86	85	20889.52	2	4011.40	2.4929	0.0303	0.0	0.0	1.08E-05	1.49E-04	7.85E-04	2.41E-03
8	6	73	72	21846.84	1	4011.73	2.4927	0.0303	0.0	6.29E-06	7.69E-04	1.22E-02	7.08E-02	2.33E-01
6	4	107	106	28632.97	1	4011.76	2.4927	0.0303	0.0	0.0	5.67E-06	2.39E-04	2.66E-03	1.39E-02
2	0	32	33	2055.22	2	4011.76	2.4927	0.0326	5.95E-02	9.47E-02	1.00E-01	9.24E-02	8.01E-02	6.78E-02
5	3	0	1	6215.88	2	4011.87	2.4926	0.0603	5.54E-05	6.49E-04	1.87E-03	3.12E-03	4.04E-03	4.55E-03
5	3	118	117	30992.61	1	4011.92	2.4926	0.0303	0.0	0.0	0.0	4.83E-05	6.73E-04	4.14E-03
8	6	25	24	13552.03	1	4012.43	2.4923	0.0437	1.16E-05	4.58E-03	7.68E-02	3.70E-01	9.68E-01	1.80E 00
6	4	16	15	8657.70	2	4012.98	2.4919	0.0591	4.43E-05	1.67E-03	8.65E-03	2.06E-02	3.36E-02	4.47E-02
7	5	93	92	25701.90	1	4012.98	2.4919	0.0303	0.0	0.0	5.16E-05	1.43E-03	1.20E-02	5.13E-02
2	0	45	46	4127.89	1	4013.10	2.4918	0.0303	3.81E-01	1.65E 00	2.88E 00	3.57E 00	3.79E 00	3.70E 00
6	4	8	9	8581.11	1	4013.39	2.4917	0.0624	2.33E-03	8.50E-02	4.33E-01	1.02E 00	1.65E 00	2.19E 00
8	6	72	71	21594.31	1	4013.58	2.4915	0.0303	0.0	7.84E-06	9.03E-04	1.38E-02	7.83E-02	2.53E-01
4	2	12	13	4495.20	2	4013.78	2.4914	0.0610	4.79E-03	2.46E-02	4.69E-02	6.12E-02	6.71E-02	6.71E-02
5	3	19	20	7134.78	1	4013.83	2.4914	0.0535	2.58E-02	4.72E-01	1.70E 00	3.24E 00	4.59E 00	5.51E 00
6	4	85	84	20602.01	2	4013.97	2.4913	0.0303	0.0	0.0	1.30E-05	1.72E-04	8.86E-04	2.67E-03
7	5	5	4	10488.85	1	4014.18	2.4912	0.0614	1.26E-04	1.15E-02	9.26E-02	2.87E-01	5.60E-01	8.46E-01
8	6	26	25	13642.53	1	4014.20	2.4912	0.0418	1.06E-05	4.39E-03	7.52E-02	3.67E-01	9.69E-01	1.82E 00
3	1	37	38	4953.12	1	4014.49	2.4910	0.0303	3.03E-01	1.94E 00	4.14E 00	5.78E 00	6.63E 00	6.86E 00
4	2	127	126	32884.54	1	4015.22	2.4905	0.0303	0.0	0.0	0.0	1.12E-05	1.88E-04	1.32E-03
8	6	71	70	21345.04	1	4015.35	2.4904	0.0303	0.0	9.75E-06	1.06E-03	1.57E-02	8.65E-02	2.75E-01
6	4	17	16	8714.33	2	4015.40	2.4904	0.0585	4.36E-05	1.69E-03	8.87E-03	2.13E-02	3.49E-02	4.66E-02
8	6	27	26	13736.61	1	4015.90	2.4901	0.0398	9.67E-06	4.19E-03	7.34E-02	3.63E-01	9.67E-01	1.82E 00
3	1	22	23	3099.94	2	4016.15	2.4899	0.0476	2.95E-02	7.76E-02	1.06E-01	1.13E-01	1.08E-01	9.85E-02
6	4	106	105	28269.62	1	4016.36	2.4898	0.0303	0.0	0.0	7.25E-06	2.90E-04	3.12E-03	1.59E-02
7	5	92	91	25383.46	1	4016.44	2.4898	0.0303	0.0	0.0	6.38E-05	1.68E-03	1.37E-02	5.75E-02
6	4	84	83	20317.56	2	4016.45	2.4898	0.0303	0.0	0.0	1.57E-05	2.00E-04	9.97E-04	2.95E-03
8	6	70	69	21099.03	1	4017.04	2.4894	0.0303	0.0	1.21E-05	1.24E-03	1.77E-02	9.57E-02	2.98E-01
4	2	28	29	5897.62	1	4017.07	2.4894	0.0359	1.25E-01	1.26E 00	3.38E 00	5.41E 00	6.79E 00	7.48E 00
7	5	6	5	10507.20	1	4017.42	2.4892	0.0617	1.49E-04	1.37E-02	1.10E-01	3.43E-01	6.70E-01	1.01E 00
5	3	117	116	30594.55	1	4017.44	2.4891	0.0303	0.0	0.0	1.07E-06	5.99E-05	8.03E-04	4.81E-03
2	0	31	32	1934.72	2	4017.46	2.4891	0.0331	6.89E-02	1.03E-01	1.07E-01	9.64E-02	8.26E-02	6.94E-02
8	6	28	27	13834.28	1	4017.52	2.4891	0.0379	8.76E-06	3.97E-03	7.13E-02	3.58E-01	9.61E-01	1.83E 00
6	4	7	8	8547.78	1	4017.65	2.4890	0.0623	2.18E-03	7.84E-02	3.96E-01	9.28E-01	1.50E 00	1.99E 00
6	4	18	17	8774.49	2	4017.75	2.4890	0.0568	4.26E-05	1.70E-03	9.04E-03	2.19E-02	3.61E-02	4.85E-02
4	2	11	12	4448.31	2	4018.17	2.4887	0.0617	4.76E-03	2.39E-02	4.50E-02	5.83E-02	6.36E-02	6.35E-02
8	6	69	68	20856.30	1	4018.65	2.4884	0.0303	0.0	1.49E-05	1.44E-03	1.99E-02	1.05E-01	3.22E-01

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	83	82	20036.19	2	4018.86	2.4883	0.0303	0.0	0.0	1.89E-05	2.30E-04	1.12E-03	3.25E-03
5	3	18	19	7060.17	1	4018.87	2.4883	0.0552	2.75E-02	4.84E-01	1.71E 00	3.23E 00	4.54E 00	5.42E 00
5	3	1	0	6212.30	2	4018.96	2.4882	0.0603	5.63E-05	6.58E-04	1.89E-03	3.17E-03	4.09E-03	4.60E-03
8	6	29	28	13935.53	1	4019.07	2.4881	0.0359	7.88E-06	3.75E-03	6.90E-02	3.51E-01	9.53E-01	1.82E 00
7	5	91	90	25068.06	1	4019.81	2.4877	0.0303	0.0	0.0	7.85E-05	1.98E-03	1.57E-02	6.42E-02
2	0	44	45	3953.41	1	4019.94	2.4876	0.0303	4.82E-01	1.91E 00	3.21E 00	3.88E 00	4.05E 00	3.91E 00
6	4	19	18	8838.17	2	4020.03	2.4875	0.0552	4.12E-05	1.70E-03	9.17E-03	2.24E-02	3.72E-02	5.01E-02
8	6	68	67	20616.86	1	4020.18	2.4875	0.0303	0.0	1.84E-05	1.68E-03	2.24E-02	1.15E-01	3.48E-01
8	6	30	29	14040.35	1	4020.55	2.4872	0.0340	7.04E-06	3.53E-03	6.65E-02	3.44E-01	9.42E-01	1.82E 00
7	5	7	6	10529.21	1	4020.60	2.4872	0.0620	1.69E-04	1.57E-02	1.27E-01	3.98E-01	7.78E-01	1.18E 00
5	3	100	99	23371.00	2	4020.76	2.4871	0.0303	0.0	0.0	1.54E-06	3.04E-05	2.04E-04	7.43E-04
3	1	36	37	4809.68	1	4020.79	2.4871	0.0308	3.64E-01	2.18E 00	4.49E 00	6.14E 00	6.95E 00	7.11E 00
6	4	105	104	27909.14	1	4020.87	2.4870	0.0303	0.0	0.0	9.25E-06	3.52E-04	3.65E-03	1.82E-02
3	1	21	22	3016.41	2	4021.20	2.4868	0.0496	3.20E-02	8.08E-02	1.08E-01	1.14E-01	1.08E-01	9.81E-02
6	4	82	81	19757.90	2	4021.20	2.4868	0.0303	0.0	0.0	2.26E-05	2.66E-04	1.26E-03	3.58E-03
4	2	126	125	32458.27	1	4021.49	2.4866	0.0303	0.0	0.0	0.0	1.41E-05	2.27E-04	1.54E-03
8	6	67	66	20380.71	1	4021.63	2.4866	0.0303	0.0	2.26E-05	1.95E-03	2.51E-02	1.26E-01	3.75E-01
6	4	6	7	8518.15	1	4021.84	2.4864	0.0620	2.00E-03	7.09E-02	3.55E-01	8.30E-01	1.34E 00	1.77E 00
8	6	31	30	14148.75	1	4021.95	2.4864	0.0335	6.27E-06	3.31E-03	6.40E-02	3.36E-01	9.31E-01	1.81E 00
6	4	20	19	8905.38	2	4022.24	2.4862	0.0535	3.96E-05	1.69E-03	9.25E-03	2.28E-02	3.81E-02	5.16E-02
5	3	2	1	6215.88	2	4022.40	2.4861	0.0606	1.13E-04	1.32E-03	3.80E-03	6.36E-03	8.22E-03	9.26E-03
4	2	10	11	4405.02	2	4022.49	2.4860	0.0625	4.66E-03	2.29E-02	4.27E-02	5.51E-02	5.99E-02	5.95E-02
4	2	27	28	5788.74	1	4022.75	2.4859	0.0379	1.42E-01	1.36E 00	3.55E 00	5.59E 00	6.95E 00	7.60E 00
5	3	116	115	30199.23	1	4022.87	2.4858	0.0303	0.0	0.0	1.40E-06	7.41E-05	9.57E-04	5.58E-03
8	6	66	65	20147.87	1	4023.01	2.4857	0.0303	0.0	2.76E-05	2.25E-03	2.80E-02	1.38E-01	4.04E-01
2	0	30	31	1817.82	2	4023.09	2.4857	0.0335	7.92E-02	1.13E-01	1.13E-01	1.00E-01	8.50E-02	7.08E-02
7	5	90	89	24755.73	1	4023.10	2.4856	0.0303	0.0	0.0	9.65E-05	2.33E-03	1.79E-02	7.17E-02
8	6	32	31	14260.70	1	4023.27	2.4855	0.0331	5.55E-06	3.09E-03	6.14E-02	3.27E-01	9.17E-01	1.79E 00
6	4	81	80	19482.71	2	4023.45	2.4854	0.0303	0.0	0.0	2.71E-05	3.06E-04	1.41E-03	3.94E-03
7	5	8	7	10554.90	1	4023.71	2.4853	0.0623	1.87E-04	1.76E-02	1.44E-01	4.50E-01	8.84E-01	1.34E 00
5	3	17	18	6989.28	1	4023.85	2.4852	0.0568	2.89E-02	4.93E-01	1.71E 00	3.21E 00	4.47E 00	5.32E 00
8	6	65	64	19918.36	1	4024.30	2.4849	0.0303	0.0	3.37E-05	2.60E-03	3.13E-02	1.51E-01	4.35E-01
6	4	21	20	8976.10	2	4024.38	2.4849	0.0515	3.78E-05	1.66E-03	9.28E-03	2.31E-02	3.89E-02	5.29E-02
5	3	99	98	23038.65	2	4024.38	2.4849	0.0303	0.0	0.0	1.92E-06	3.62E-05	2.35E-04	8.37E-04
8	6	33	32	14376.23	1	4024.52	2.4848	0.0326	4.88E-06	2.87E-03	5.86E-02	3.18E-01	9.00E-01	1.77E 00
6	4	104	103	27551.57	1	4025.31	2.4843	0.0303	0.0	0.0	1.18E-05	4.25E-04	4.26E-03	2.07E-02
8	6	64	63	19692.16	1	4025.51	2.4842	0.0303	0.0	4.09E-05	2.99E-03	3.49E-02	1.64E-01	4.66E-01
6	4	80	79	19210.62	2	4025.64	2.4841	0.0303	0.0	0.0	3.23E-05	3.51E-04	1.58E-03	4.33E-03
8	6	34	33	14495.30	1	4025.70	2.4840	0.0321	4.26E-06	2.65E-03	5.58E-02	3.08E-01	8.82E-01	1.75E 00
5	3	3	2	6223.04	2	4025.78	2.4840	0.0609	1.68E-04	1.98E-03	5.71E-03	9.56E-03	1.24E-02	1.39E-02
6	4	5	6	8492.22	1	4025.96	2.4839	0.0617	1.79E-03	6.26E-02	3.12E-01	7.25E-01	1.17E 00	1.54E 00
3	1	20	21	2936.50	2	4026.19	2.4837	0.0515	3.45E-02	8.37E-02	1.10E-01	1.15E-01	1.08E-01	9.73E-02
7	5	89	88	24446.47	1	4026.30	2.4837	0.0303	0.0	0.0	1.19E-04	2.74E-03	2.04E-02	8.01E-02
6	4	22	21	9050.34	2	4026.46	2.4836	0.0496	3.58E-05	1.63E-03	9.26E-03	2.33E-02	3.95E-02	5.41E-02
8	6	63	62	19469.31	1	4026.64	2.4835	0.0303	0.0	4.95E-05	3.43E-03	3.87E-02	1.79E-01	5.00E-01
2	0	43	44	3782.62	1	4026.72	2.4834	0.0303	6.05E-01	2.21E 00	3.56E 00	4.21E 00	4.31E 00	4.12E 00
7	5	9	8	10584.25	1	4026.74	2.4834	0.0624	2.03E-04	1.94E-02	1.59E-01	5.01E-01	9.87E-01	1.50E 00
4	2	9	10	4365.34	2	4026.75	2.4834	0.0624	4.51E-03	2.17E-02	4.02E-02	5.15E-02	5.58E-02	5.53E-02
8	6	35	34	14617.93	1	4026.80	2.4834	0.0317	3.70E-06	2.45E-03	5.29E-02	2.97E-01	8.62E-01	1.73E 00
3	1	35	36	4669.95	1	4027.02	2.4832	0.0312	4.34E-01	2.43E 00	4.85E 00	6.51E 00	7.26E 00	7.36E 00
4	2	125	124	32034.61	1	4027.68	2.4828	0.0303	0.0	0.0	0.0	1.78E-05	2.74E-04	1.81E-03
8	6	62	61	19249.80	1	4027.70	2.4828	0.0303	0.0	5.97E-05	3.93E-03	4.29E-02	1.94E-01	5.34E-01
6	4	79	78	18941.66	2	4027.74	2.4828	0.0303	0.0	0.0	3.85E-05	4.02E-04	1.76E-03	4.75E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	36	35	14744.11	1	4027.83	2.4827	0.0312	3.19E-06	2.24E-03	5.00E-02	2.86E-01	8.40E-01	1.70E 00
5	3	98	97	22709.22	2	4027.92	2.4827	0.0303	0.0	0.0	2.39E-06	4.39E-05	2.70E-04	9.42E-04
5	3	115	114	29806.66	1	4028.21	2.4825	0.0303	0.0	0.0	1.83E-06	9.16E-05	1.14E-03	6.47E-03
4	2	26	27	5683.57	1	4028.36	2.4824	0.0398	1.60E-01	1.46E 00	3.71E 00	5.76E 00	7.00E 00	7.70E 00
6	4	23	22	9128.10	2	4028.47	2.4823	0.0476	3.36E-05	1.59E-03	9.21E-03	2.34E-02	4.00E-02	5.50E-02
2	0	29	30	1704.53	2	4028.67	2.4822	0.0340	9.06E-02	1.22E-01	1.19E-01	1.04E-01	8.73E-02	7.21E-02
8	6	61	60	19033.64	1	4028.67	2.4822	0.0303	0.0	7.18E-05	4.48E-03	4.75E-02	2.10E-01	5.71E-01
5	3	16	17	6922.10	1	4028.76	2.4822	0.0585	3.03E-02	4.99E-01	1.71E 00	3.17E 00	4.39E 00	5.19E 00
8	6	37	36	14873.83	1	4028.78	2.4821	0.0308	2.74E-06	2.05E-03	4.72E-02	2.75E-01	8.16E-01	1.67E 00
5	3	4	3	6233.77	2	4029.10	2.4819	0.0611	2.22E-04	2.63E-03	7.60E-03	1.28E-02	1.65E-02	1.86E-02
7	5	88	87	24140.31	1	4029.43	2.4817	0.0303	0.0	0.0	1.45E-04	3.21E-03	2.32E-02	8.93E-02
8	6	60	59	18820.86	1	4029.57	2.4817	0.0303	0.0	8.60E-05	5.10E-03	5.24E-02	2.27E-01	6.08E-01
8	6	38	37	15007.09	1	4029.65	2.4816	0.0303	2.34E-06	1.86E-03	4.43E-02	2.63E-01	7.91E-01	1.63E 00
6	4	103	102	27196.90	1	4029.65	2.4816	0.0303	0.0	0.0	1.49E-05	5.13E-04	4.97E-03	2.36E-02
7	5	10	9	10617.26	1	4029.71	2.4816	0.0624	2.16E-04	2.10E-02	1.74E-01	5.50E-01	1.09E 00	1.65E 00
6	4	78	77	18675.82	2	4029.77	2.4815	0.0303	0.0	0.0	4.58E-05	4.60E-04	1.96E-03	5.19E-03
6	4	4	5	8470.00	1	4030.01	2.4814	0.0614	1.54E-03	5.35E-02	2.65E-01	6.15E-01	9.99E-01	1.30E 00
8	6	59	58	18611.44	1	4030.39	2.4811	0.0303	0.0	1.03E-04	5.80E-03	5.79E-02	2.46E-01	6.48E-01
6	4	24	23	9209.37	2	4030.40	2.4811	0.0457	3.14E-05	1.54E-03	9.11E-03	2.34E-02	4.04E-02	5.58E-02
8	6	39	38	15143.88	1	4030.45	2.4811	0.0303	1.98E-06	1.69E-03	4.14E-02	2.51E-01	7.66E-01	1.59E 00
4	2	8	9	4329.25	2	4030.94	2.4808	0.0624	4.30E-03	2.04E-02	3.73E-02	4.76E-02	5.13E-02	5.08E-02
3	1	19	20	2860.19	2	4031.11	2.4807	0.0535	3.68E-02	8.63E-02	1.11E-01	1.15E-01	1.07E-01	9.62E-02
8	6	58	57	18405.41	1	4031.13	2.4807	0.0303	0.0	1.23E-04	6.58E-03	6.37E-02	2.66E-01	6.99E-01
8	6	40	39	15284.19	1	4031.18	2.4807	0.0303	1.67E-06	1.52E-03	3.87E-02	2.39E-01	7.39E-01	1.55E 00
5	3	97	96	22382.73	2	4031.38	2.4805	0.0303	0.0	0.0	2.97E-06	5.10E-05	3.11E-04	1.06E-03
6	4	77	76	18413.12	2	4031.73	2.4803	0.0303	0.0	1.01E-06	5.42E-05	5.25E-04	2.19E-03	5.68E-03
8	6	57	56	18202.77	1	4031.79	2.4803	0.0303	0.0	1.46E-04	7.44E-03	7.00E-02	2.86E-01	7.33E-01
8	6	41	40	15428.02	1	4031.83	2.4803	0.0303	1.40E-06	1.37E-03	3.60E-02	2.27E-01	7.11E-01	1.51E 00
6	4	25	24	9294.14	2	4032.27	2.4800	0.0437	2.91E-05	1.49E-03	8.97E-03	2.34E-02	4.06E-02	5.65E-02
5	3	5	4	6248.08	2	4032.35	2.4799	0.0614	2.74E-04	3.26E-03	9.46E-03	1.59E-02	2.06E-02	2.33E-02
8	6	56	55	18003.52	1	4032.37	2.4799	0.0303	0.0	1.72E-04	8.39E-03	7.67E-02	3.08E-01	7.78E-01
8	6	42	41	15575.37	1	4032.40	2.4799	0.0303	1.17E-06	1.22E-03	3.33E-02	2.15E-01	6.83E-01	1.46E 00
7	5	87	86	23837.25	1	4032.47	2.4799	0.0303	0.0	0.0	1.78E-04	3.76E-03	2.64E-02	9.95E-02
7	5	11	10	10653.94	1	4032.60	2.4798	0.0625	2.27E-04	2.24E-02	1.87E-01	5.95E-01	1.18E 00	1.80E 00
8	6	55	54	17807.68	1	4032.87	2.4796	0.0303	0.0	2.03E-04	9.44E-03	8.39E-02	3.30E-01	8.24E-01
8	6	43	42	15726.23	1	4032.90	2.4796	0.0303	0.0	1.09E-03	3.08E-02	2.03E-01	6.54E-01	1.42E 00
3	1	34	35	4533.94	1	4033.19	2.4794	0.0317	5.16E-01	2.71E 00	5.22E 00	6.87E 00	7.57E 00	7.60E 00
8	6	54	53	17615.26	1	4033.30	2.4794	0.0303	0.0	2.38E-04	1.06E-02	9.15E-02	3.54E-01	8.71E-01
8	6	44	43	15880.58	1	4033.32	2.4793	0.0303	0.0	9.68E-04	2.84E-02	1.91E-01	6.26E-01	1.37E 00
2	0	42	43	3615.54	1	4033.43	2.4793	0.0303	7.54E-01	2.55E 00	3.94E 00	4.55E 00	4.59E 00	4.33E 00
5	3	114	113	29416.86	1	4033.46	2.4793	0.0303	0.0	0.0	2.39E-06	1.13E-04	1.35E-03	7.48E-03
5	3	15	16	6858.63	1	4033.59	2.4792	0.0591	3.14E-02	5.02E-01	1.69E 00	3.11E 00	4.28E 00	5.04E 00
6	4	76	75	18153.57	2	4033.60	2.4792	0.0303	0.0	1.27E-06	6.41E-05	5.98E-04	2.43E-03	6.20E-03
8	6	53	52	17426.27	1	4033.65	2.4791	0.0303	0.0	2.79E-04	1.18E-02	9.96E-02	3.78E-01	9.19E-01
8	6	45	44	16038.43	1	4033.66	2.4791	0.0303	0.0	8.56E-04	2.61E-02	1.80E-01	5.97E-01	1.32E 00
4	2	124	123	31613.57	1	4033.77	2.4791	0.0303	0.0	0.0	0.0	2.23E-05	3.30E-04	2.12E-03
4	2	25	26	5582.12	1	4033.90	2.4790	0.0418	1.80E-01	1.56E 00	3.86E 00	5.91E 00	7.20E 00	7.78E 00
8	6	52	51	17240.70	1	4033.92	2.4790	0.0303	0.0	3.25E-04	1.32E-02	1.08E-01	4.03E-01	9.67E-01
6	4	102	101	26845.17	1	4033.92	2.4790	0.0303	0.0	0.0	1.89E-05	6.18E-04	5.79E-03	2.68E-02
8	6	46	45	16199.77	1	4033.93	2.4790	0.0303	0.0	7.54E-04	2.39E-02	1.68E-01	5.68E-01	1.27E 00
6	4	3	4	8451.48	1	4034.00	2.4789	0.0611	1.28E-03	4.38E-02	2.16E-01	5.02E-01	8.02E-01	1.05E 00
6	4	26	25	9382.42	2	4034.08	2.4789	0.0418	2.68E-05	1.43E-03	8.80E-03	2.32E-02	4.07E-02	5.69E-02
8	6	47	46	16364.60	1	4034.12	2.4789	0.0303	0.0	6.62E-04	2.18E-02	1.57E-01	5.39E-01	1.22E 00

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	6	51	50	17058.57	1	4034.12	2.4789	0.0303	0.0	3.78E-04	1.47E-02	1.17E-01	4.29E-01	1.02E 00
2	0	28	29	1594.85	2	4034.19	2.4788	0.0359	1.03E-01	1.32E-01	1.25E-01	1.08E-01	8.94E-02	7.34E-02
8	6	50	49	16879.89	1	4034.23	2.4788	0.0303	0.0	4.37E-04	1.63E-02	1.27E-01	4.56E-01	1.07E 00
8	6	48	47	16532.89	1	4034.23	2.4788	0.0303	0.0	5.79E-04	1.98E-02	1.47E-01	5.11E-01	1.17E 00
8	6	49	48	16704.66	1	4034.27	2.4788	0.0303	0.0	5.04E-04	1.80E-02	1.36E-01	4.83E-01	1.12E 00
5	3	96	95	22059.18	2	4034.76	2.4785	0.0303	0.0	0.0	3.69E-06	6.03E-05	3.56E-04	1.19E-03
4	2	7	8	4296.77	2	4035.07	2.4783	0.0623	4.02E-03	1.88E-02	3.41E-02	4.33E-02	4.66E-02	4.60E-02
6	4	75	74	17897.18	2	4035.41	2.4781	0.0303	0.0	1.59E-06	7.56E-05	6.79E-04	2.69E-03	6.75E-03
7	5	12	11	10694.28	1	4035.42	2.4781	0.0617	2.35E-04	2.37E-02	2.00E-01	6.38E-01	1.27E 00	1.95E 00
7	5	86	85	23537.30	1	4035.43	2.4781	0.0303	0.0	1.18E-06	2.17E-04	4.39E-03	3.00E-02	1.11E-01
5	3	6	5	6265.97	2	4035.53	2.4780	0.0617	3.23E-04	3.87E-03	1.13E-02	1.90E-02	2.47E-02	2.79E-02
6	4	27	26	9474.20	2	4035.81	2.4778	0.0398	2.45E-05	1.37E-03	8.60E-03	2.30E-02	4.07E-02	5.72E-02
3	1	18	19	2787.51	2	4035.97	2.4777	0.0552	3.90E-02	8.83E-02	1.12E-01	1.14E-01	1.06E-01	9.47E-02
6	4	74	73	17643.96	2	4037.14	2.4770	0.0303	0.0	1.99E-06	8.89E-05	7.71E-04	2.98E-03	7.35E-03
6	4	28	27	9569.48	2	4037.47	2.4768	0.0379	2.22E-05	1.30E-03	8.37E-03	2.27E-02	4.05E-02	5.74E-02
6	4	2	3	8436.66	1	4037.91	2.4765	0.0609	9.81E-04	3.35E-02	1.65E-01	3.80E-01	6.09E-01	7.99E-01
5	3	95	94	21738.60	2	4038.07	2.4764	0.0303	0.0	0.0	4.56E-06	7.12E-05	4.08E-04	1.33E-03
6	4	101	100	26496.37	1	4038.09	2.4764	0.0303	0.0	0.0	2.39E-05	7.43E-04	6.73E-03	3.04E-02
7	5	13	12	10738.28	1	4038.17	2.4764	0.0610	2.40E-04	2.47E-02	2.11E-01	6.78E-01	1.35E 00	2.08E 00
7	5	85	84	23240.48	1	4038.30	2.4763	0.0303	0.0	1.54E-06	2.64E-04	5.12E-03	3.40E-02	1.23E-01
5	3	14	15	6798.89	1	4038.37	2.4762	0.0597	3.22E-02	5.01E-01	1.66E 00	3.03E 00	4.15E 00	4.87E 00
5	3	113	112	29029.84	1	4038.64	2.4761	0.0303	0.0	0.0	3.11E-06	1.39E-04	1.61E-03	8.65E-03
5	3	7	6	6287.43	2	4038.65	2.4761	0.0620	3.67E-04	4.45E-03	1.30E-02	2.20E-02	2.87E-02	3.25E-02
6	4	73	72	17393.93	2	4038.79	2.4760	0.0303	0.0	2.48E-06	1.04E-04	8.72E-04	3.29E-03	7.98E-03
6	4	29	28	9668.25	2	4039.07	2.4758	0.0359	2.01E-05	1.23E-03	8.12E-03	2.23E-02	4.02E-02	5.74E-02
4	2	6	7	4267.90	2	4039.13	2.4758	0.0620	3.68E-03	1.70E-02	3.06E-02	3.87E-02	4.15E-02	4.09E-02
3	1	33	34	4401.64	1	4039.29	2.4757	0.0321	6.08E-01	3.00E 00	5.60E 00	7.23E 00	7.87E 00	7.83E 00
4	2	24	25	5484.40	1	4039.38	2.4756	0.0437	2.00E-01	1.65E 00	4.01E 00	6.05E 00	7.30E 00	7.83E 00
2	0	27	28	1488.80	2	4039.64	2.4755	0.0379	1.17E-01	1.42E-01	1.31E-01	1.11E-01	9.14E-02	7.45E-02
4	2	123	122	31195.18	1	4039.78	2.4754	0.0303	0.0	0.0	0.0	2.79E-05	3.96E-04	2.47E-03
2	0	41	42	3452.15	1	4040.09	2.4752	0.0303	9.36E-01	2.92E 00	4.35E 00	4.90E 00	4.87E 00	4.54E 00
6	4	72	71	17147.08	2	4040.37	2.4750	0.0303	0.0	3.08E-06	1.22E-04	9.85E-04	3.63E-03	8.66E-03
6	4	30	29	9770.52	2	4040.59	2.4749	0.0340	1.80E-05	1.16E-03	7.84E-03	2.19E-02	3.98E-02	5.72E-02
3	1	17	18	2718.44	2	4040.77	2.4748	0.0568	4.11E-02	8.99E-02	1.12E-01	1.13E-01	1.05E-01	9.28E-02
7	5	14	13	10785.94	1	4040.85	2.4747	0.0604	2.43E-04	2.56E-02	2.21E-01	7.14E-01	1.43E 00	2.21E 00
7	5	84	83	22946.81	1	4041.09	2.4746	0.0303	0.0	2.01E-06	3.20E-04	5.96E-03	3.84E-02	1.36E-01
5	3	94	93	21420.99	2	4041.30	2.4745	0.0303	0.0	0.0	5.63E-06	8.40E-05	4.67E-04	1.49E-03
5	3	8	7	6312.47	2	4041.70	2.4742	0.0623	4.07E-04	4.99E-03	1.47E-02	2.50E-02	3.26E-02	3.70E-02
6	4	1	2	8425.54	1	4041.76	2.4742	0.0606	6.68E-04	2.27E-02	1.11E-01	2.56E-01	4.10E-01	5.38E-01
6	4	71	70	16903.43	2	4041.87	2.4741	0.0303	0.0	3.81E-06	1.43E-04	1.11E-03	4.00E-03	9.37E-03
6	4	31	30	9876.27	2	4042.05	2.4740	0.0335	1.61E-05	1.09E-03	7.56E-03	2.14E-02	3.94E-02	5.70E-02
6	4	100	99	26150.54	1	4042.19	2.4739	0.0303	0.0	0.0	3.02E-05	8.91E-04	7.81E-03	3.45E-02
5	3	13	14	6742.87	1	4043.07	2.4734	0.0604	3.27E-02	4.96E-01	1.62E 00	2.94E 00	4.00E 00	4.68E 00
4	2	5	6	4242.63	2	4043.13	2.4733	0.0617	3.29E-03	1.50E-02	2.68E-02	3.38E-02	3.62E-02	3.56E-02
6	4	70	69	16662.99	2	4043.30	2.4732	0.0303	0.0	4.70E-06	1.66E-04	1.25E-03	4.40E-03	1.01E-02
6	4	32	31	9985.50	2	4043.44	2.4731	0.0331	1.43E-05	1.02E-03	7.27E-03	2.09E-02	3.88E-02	5.66E-02
7	5	15	14	10837.26	1	4043.46	2.4731	0.0597	2.43E-04	2.62E-02	2.29E-01	7.47E-01	1.51E 00	2.33E 00
5	3	112	111	28645.63	1	4043.72	2.4730	0.0303	0.0	0.0	4.04E-06	1.71E-04	1.99E-03	9.98E-03
7	5	83	82	22656.29	1	4043.81	2.4729	0.0303	0.0	2.60E-06	3.88E-04	6.92E-03	4.34E-02	1.51E-01
5	3	93	92	21106.37	2	4044.45	2.4725	0.0303	0.0	0.0	6.93E-06	9.88E-05	5.33E-04	1.67E-03
6	4	69	68	16425.77	2	4044.65	2.4724	0.0303	0.0	5.78E-06	1.93E-04	1.40E-03	4.83E-03	1.09E-02
5	3	9	8	6341.08	2	4044.69	2.4724	0.0624	4.42E-04	5.50E-03	1.63E-02	2.78E-02	3.64E-02	4.14E-02
6	4	33	32	10098.21	2	4044.75	2.4723	0.0326	1.26E-05	9.52E-04	6.96E-03	2.04E-02	3.82E-02	5.61E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	23	24	5390.41	1	4044.79	2.4723	0.0457	2.21E-01	1.75E 00	4.14E 00	6.16E 00	7.38E 00	7.86E 00
2	0	26	27	1386.36	2	4045.03	2.4722	0.0398	1.31E-01	1.51E-01	1.37E-01	1.14E-01	9.31E-02	7.53E-02
3	1	32	33	4273.06	1	4045.33	2.4720	0.0326	7.13E-01	3.30E 00	5.98E 00	7.59E 00	8.16E 00	8.05E 00
3	1	16	17	2652.99	2	4045.51	2.4719	0.0585	4.28E-02	9.09E-02	1.11E-01	1.12E-01	1.03E-01	9.05E-02
6	4	0	1	8418.13	1	4045.53	2.4719	0.0603	3.39E-04	1.15E-02	5.61E-02	1.29E-01	2.07E-01	2.71E-01
4	2	122	121	30779.46	1	4045.70	2.4718	0.0303	0.0	0.0	0.0	3.48E-05	4.76E-04	2.89E-03
6	4	68	67	16191.77	2	4045.93	2.4716	0.0303	0.0	7.08E-06	2.23E-04	1.57E-03	5.28E-03	1.18E-02
7	5	16	15	10892.23	1	4045.99	2.4716	0.0591	2.41E-04	2.67E-02	2.36E-01	7.77E-01	1.58E 00	2.45E 00
6	4	34	33	10214.39	2	4046.00	2.4716	0.0321	1.11E-05	8.84E-04	6.64E-03	1.98E-02	3.75E-02	5.55E-02
6	4	99	98	25807.67	1	4046.20	2.4715	0.0303	0.0	0.0	3.80E-05	1.07E-03	9.05E-03	3.91E-02
3	1	131	130	32796.18	1	4046.39	2.4713	0.0303	0.0	0.0	0.0	6.29E-06	1.04E-04	7.27E-04
7	5	82	81	22368.93	1	4046.44	2.4713	0.0303	0.0	3.37E-06	4.68E-04	8.02E-03	4.89E-02	1.67E-01
2	0	40	41	3292.48	1	4046.68	2.4712	0.0303	1.15E 00	3.34E 00	4.78E 00	5.27E 00	5.16E 00	4.76E 00
4	2	4	5	4220.97	2	4047.07	2.4709	0.0614	2.84E-03	1.28E-02	2.28E-02	2.87E-02	3.06E-02	3.01E-02
6	4	67	66	15961.02	2	4047.13	2.4709	0.0303	0.0	8.65E-06	2.58E-04	1.75E-03	5.78E-03	1.27E-02
6	4	35	34	10334.05	2	4047.18	2.4709	0.0317	9.67E-06	8.16E-04	6.31E-03	1.91E-02	3.67E-02	5.48E-02
5	3	92	91	20794.75	2	4047.52	2.4706	0.0303	0.0	0.0	8.51E-06	1.16E-04	6.08E-04	1.86E-03
5	3	10	9	6373.27	2	4047.60	2.4706	0.0624	4.72E-04	5.96E-03	1.78E-02	3.05E-02	4.01E-02	4.56E-02
5	3	12	13	6690.57	1	4047.71	2.4705	0.0610	3.29E-02	4.86E-01	1.57E 00	2.83E 00	3.83E 00	4.46E 00
6	4	66	65	15733.51	2	4048.26	2.4702	0.0303	0.0	1.05E-05	2.97E-04	1.96E-03	6.30E-03	1.36E-02
6	4	36	35	10457.16	2	4048.28	2.4702	0.0312	8.39E-06	7.51E-04	5.98E-03	1.84E-02	3.58E-02	5.39E-02
7	5	17	16	10950.85	1	4048.45	2.4701	0.0585	2.36E-04	2.69E-02	2.42E-01	8.02E-01	1.64E 00	2.55E 00
5	3	111	110	28264.23	1	4048.72	2.4699	0.0303	0.0	0.0	5.24E-06	2.10E-04	2.25E-03	1.15E-02
7	5	81	80	22084.76	1	4048.98	2.4698	0.0303	0.0	4.35E-06	5.64E-04	9.28E-03	5.51E-02	1.84E-01
6	4	37	36	10583.74	2	4049.32	2.4696	0.0308	7.23E-06	6.88E-04	5.65E-03	1.77E-02	3.49E-02	5.30E-02
6	4	65	64	15509.25	2	4049.32	2.4696	0.0303	0.0	1.28E-05	3.41E-04	2.18E-03	6.86E-03	1.46E-02
6	4	98	97	25467.79	1	4050.12	2.4691	0.0303	0.0	0.0	4.76E-05	1.28E-03	1.05E-02	4.42E-02
4	2	22	23	5300.14	1	4050.13	2.4691	0.0476	2.42E-01	1.84E 00	4.26E 00	6.26E 00	7.42E 00	7.86E 00
3	1	15	16	2591.16	2	4050.18	2.4690	0.0591	4.43E-02	9.12E-02	1.10E-01	1.09E-01	1.00E-01	8.79E-02
6	4	38	37	10713.77	2	4050.29	2.4690	0.0303	6.20E-06	6.28E-04	5.32E-03	1.70E-02	3.39E-02	5.19E-02
6	4	64	63	15288.27	2	4050.30	2.4690	0.0303	0.0	1.54E-05	3.91E-04	2.42E-03	7.46E-03	1.56E-02
2	0	25	26	1287.55	2	4050.36	2.4689	0.0418	1.46E-01	1.61E-01	1.42E-01	1.17E-01	9.46E-02	7.60E-02
5	3	11	10	6409.02	2	4050.45	2.4689	0.0625	4.96E-04	6.37E-03	1.92E-02	3.31E-02	4.36E-02	4.98E-02
5	3	91	90	20486.14	2	4050.52	2.4688	0.0303	0.0	0.0	1.04E-05	1.36E-04	6.91E-04	2.07E-03
7	5	18	17	11013.12	1	4050.84	2.4686	0.0568	2.30E-04	2.70E-02	2.46E-01	8.24E-01	1.69E 00	2.65E 00
4	2	3	4	4202.92	2	4050.94	2.4686	0.0611	2.34E-03	1.05E-02	1.86E-02	2.33E-02	2.48E-02	2.44E-02
6	4	39	38	10847.26	2	4051.18	2.4684	0.0303	5.29E-06	5.71E-04	4.99E-03	1.63E-02	3.28E-02	5.08E-02
6	4	63	62	15070.55	2	4051.21	2.4684	0.0303	0.0	1.86E-05	4.47E-04	2.68E-03	8.09E-03	1.67E-02
3	1	31	32	4148.21	1	4051.30	2.4683	0.0331	8.31E-01	3.62E 00	6.37E 00	7.94E 00	8.43E 00	8.25E 00
7	5	80	79	21803.77	1	4051.45	2.4683	0.0303	0.0	5.59E-06	6.78E-04	1.07E-02	6.19E-02	2.03E-01
4	2	121	120	30366.41	1	4051.53	2.4682	0.0303	0.0	0.0	0.0	4.35E-05	5.71E-04	3.37E-03
6	4	40	39	10984.19	2	4052.01	2.4679	0.0303	4.48E-06	5.17E-04	4.67E-03	1.55E-02	3.17E-02	4.95E-02
6	4	62	61	14856.11	2	4052.04	2.4679	0.0303	0.0	2.23E-05	5.10E-04	2.96E-03	8.76E-03	1.78E-02
5	3	11	12	6642.00	1	4052.28	2.4677	0.0617	3.28E-02	4.72E-01	1.51E 00	2.70E 00	3.64E 00	4.22E 00
6	4	41	40	11124.55	2	4052.76	2.4675	0.0303	3.78E-06	4.66E-04	4.35E-03	1.48E-02	3.06E-02	4.82E-02
6	4	61	60	14644.96	2	4052.80	2.4674	0.0303	0.0	2.66E-05	5.79E-04	3.26E-03	9.47E-03	1.90E-02
6	4	1	0	8414.43	1	4052.87	2.4674	0.0603	3.44E-04	1.16E-02	5.69E-02	1.31E-01	2.09E-01	2.74E-01
3	1	130	129	32355.13	1	4052.99	2.4673	0.0303	0.0	0.0	0.0	7.99E-06	1.27E-04	8.58E-04
7	5	19	18	11079.05	1	4053.16	2.4672	0.0552	2.22E-04	2.69E-02	2.49E-01	8.42E-01	1.74E 00	2.74E 00
2	0	39	40	3136.53	1	4053.20	2.4672	0.0303	1.42E 00	3.80E 00	5.24E 00	5.65E 00	5.45E 00	4.97E 00
5	3	12	11	6448.35	2	4053.24	2.4672	0.0617	5.14E-04	6.73E-03	2.05E-02	3.55E-02	4.70E-02	5.37E-02
5	3	90	89	20180.55	2	4053.43	2.4670	0.0303	0.0	0.0	1.27E-05	1.59E-04	7.85E-04	2.30E-03
6	4	42	41	11268.36	2	4053.45	2.4670	0.0303	3.17E-06	4.18E-04	4.05E-03	1.40E-02	2.94E-02	4.69E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	60	59	14437.11	2	4053.49	2.4670	0.0303	0.0	3.18E-05	6.57E-04	3.59E-03	1.02E-02	2.02E-02
5	3	110	109	27885.68	1	4053.63	2.4669	0.0303	0.0	0.0	6.78E-06	2.57E-04	2.66E-03	1.32E-02
7	5	79	78	21525.99	1	4053.83	2.4668	0.0303	0.0	7.16E-06	8.13E-04	1.23E-02	6.94E-02	2.23E-01
6	4	97	96	25130.91	1	4053.96	2.4667	0.0303	0.0	0.0	5.97E-05	1.52E-03	1.21E-02	4.98E-02
6	4	43	42	11415.59	2	4054.06	2.4667	0.0303	2.64E-06	3.74E-04	3.75E-03	1.33E-02	2.83E-02	4.55E-02
6	4	59	58	14232.57	2	4054.11	2.4666	0.0303	0.0	3.78E-05	7.44E-04	3.95E-03	1.10E-02	2.15E-02
6	4	44	43	11566.25	2	4054.60	2.4663	0.0303	2.19E-06	3.34E-04	3.47E-03	1.25E-02	2.71E-02	4.40E-02
6	4	58	57	14031.34	2	4054.65	2.4663	0.0303	0.0	4.48E-05	8.41E-04	4.33E-03	1.19E-02	2.28E-02
4	2	2	3	4188.48	2	4054.75	2.4662	0.0609	1.80E-03	7.99E-03	1.42E-02	1.77E-02	1.89E-02	1.85E-02
3	1	14	15	2532.96	2	4054.79	2.4662	0.0597	4.54E-02	9.09E-02	1.08E-01	1.07E-01	9.69E-02	8.48E-02
6	4	45	44	11720.32	2	4055.07	2.4660	0.0303	1.80E-06	2.96E-04	3.19E-03	1.18E-02	2.59E-02	4.25E-02
6	4	57	56	13833.44	2	4055.11	2.4660	0.0303	0.0	5.30E-05	9.48E-04	4.75E-03	1.28E-02	2.42E-02
7	5	20	19	11148.61	1	4055.40	2.4658	0.0535	2.13E-04	2.66E-02	2.51E-01	8.56E-01	1.78E 00	2.82E 00
4	2	21	22	5213.61	1	4055.41	2.4658	0.0496	2.64E-01	1.92E 00	4.36E 00	6.33E 00	7.44E 00	7.84E 00
6	4	46	45	11877.80	2	4055.47	2.4658	0.0303	1.48E-06	2.62E-04	2.93E-03	1.11E-02	2.47E-02	4.10E-02
6	4	56	55	13638.86	2	4055.51	2.4658	0.0303	0.0	6.24E-05	1.07E-03	5.19E-03	1.37E-02	2.56E-02
2	0	24	25	1192.36	2	4055.63	2.4657	0.0437	1.62E-01	1.71E-01	1.48E-01	1.20E-01	9.58E-02	7.65E-02
6	4	47	46	12038.69	2	4055.80	2.4656	0.0303	1.21E-06	2.31E-04	2.68E-03	1.04E-02	2.35E-02	3.94E-02
6	4	55	54	13447.62	2	4055.83	2.4656	0.0303	0.0	7.32E-05	1.19E-03	5.66E-03	1.46E-02	2.71E-02
5	3	13	12	6491.25	2	4055.96	2.4655	0.0610	5.27E-04	7.04E-03	2.17E-02	3.77E-02	5.01E-02	5.75E-02
6	4	48	47	12202.98	2	4056.06	2.4654	0.0303	0.0	2.02E-04	2.45E-03	9.71E-03	2.23E-02	3.79E-02
6	4	54	53	13259.72	2	4056.08	2.4654	0.0303	0.0	8.55E-05	1.33E-03	6.15E-03	1.56E-02	2.86E-02
7	5	78	77	21251.42	1	4056.14	2.4654	0.0303	0.0	9.14E-06	9.72E-04	1.42E-02	7.77E-02	2.46E-01
6	4	49	48	12370.66	2	4056.24	2.4653	0.0303	0.0	1.77E-04	2.23E-03	9.05E-03	2.11E-02	3.63E-02
6	4	53	52	13075.18	2	4056.26	2.4653	0.0303	0.0	9.97E-05	1.49E-03	6.68E-03	1.67E-02	3.01E-02
5	3	89	88	19878.00	2	4056.27	2.4653	0.0303	0.0	0.0	1.56E-05	1.86E-04	8.93E-04	2.57E-03
6	4	50	49	12541.73	2	4056.35	2.4653	0.0303	0.0	1.54E-04	2.02E-03	8.42E-03	2.00E-02	3.47E-02
6	4	52	51	12893.99	2	4056.36	2.4653	0.0303	0.0	1.16E-04	1.65E-03	7.23E-03	1.78E-02	3.16E-02
6	4	51	50	12716.17	2	4056.39	2.4652	0.0303	0.0	1.34E-04	1.83E-03	7.81E-03	1.89E-02	3.32E-02
6	4	2	1	8418.13	1	4056.44	2.4652	0.0606	6.89E-04	2.33E-02	1.14E-01	2.63E-01	4.21E-01	5.52E-01
5	3	10	11	6597.16	1	4056.78	2.4650	0.0625	3.22E-02	4.54E-01	1.44E 00	2.55E 00	3.42E 00	3.96E 00
3	1	30	31	4027.09	1	4057.21	2.4647	0.0335	9.61E-01	3.96E 00	6.76E 00	8.28E 00	8.69E 00	8.44E 00
4	2	120	119	29956.07	1	4057.28	2.4647	0.0303	0.0	0.0	1.06E-06	5.41E-05	6.84E-04	3.92E-03
7	5	21	20	11221.82	1	4057.57	2.4645	0.0515	2.02E-04	2.62E-02	2.51E-01	8.67E-01	1.81E 00	2.88E 00
6	4	96	95	24797.05	1	4057.72	2.4644	0.0303	0.0	0.0	7.45E-05	1.81E-03	1.39E-02	5.62E-02
7	5	77	76	20980.08	1	4058.36	2.4640	0.0303	0.0	1.16E-05	1.16E-03	1.63E-02	8.69E-02	2.69E-01
5	3	109	108	27509.97	1	4058.46	2.4640	0.0303	0.0	0.0	8.74E-06	3.14E-04	3.14E-03	1.52E-02
4	2	1	2	4177.65	2	4058.49	2.4640	0.0606	1.23E-03	5.41E-03	9.56E-03	1.19E-02	1.27E-02	1.24E-02
5	3	14	13	6537.71	2	4058.61	2.4639	0.0604	5.33E-04	7.29E-03	2.27E-02	3.98E-02	5.31E-02	6.12E-02
5	3	88	87	19578.50	2	4059.04	2.4636	0.0303	0.0	0.0	1.90E-05	2.18E-04	1.01E-03	2.85E-03
3	1	13	14	2478.38	2	4059.33	2.4635	0.0604	4.60E-02	8.99E-02	1.06E-01	1.03E-01	9.34E-02	8.14E-02
3	1	129	128	31916.65	1	4059.49	2.4634	0.0303	0.0	0.0	0.0	1.01E-05	1.54E-04	1.01E-03
2	0	38	39	2984.30	1	4059.66	2.4633	0.0303	1.72E 00	4.31E 00	5.73E 00	6.04E 00	5.74E 00	5.19E 00
7	5	22	21	11298.67	1	4059.67	2.4633	0.0496	1.90E-04	2.56E-02	2.51E-01	8.73E-01	1.84E 00	2.94E 00
6	4	3	2	8425.54	1	4059.93	2.4631	0.0609	1.03E-03	3.49E-02	1.71E-01	3.95E-01	6.33E-01	8.30E-01
7	5	76	75	20711.97	1	4060.50	2.4628	0.0303	0.0	1.48E-05	1.38E-03	1.86E-02	9.69E-02	2.95E-01
4	2	20	21	5130.82	1	4060.62	2.4627	0.0515	2.85E-01	1.99E 00	4.44E 00	6.37E 00	7.43E 00	7.78E 00
2	0	23	24	1100.81	2	4060.84	2.4625	0.0457	1.79E-01	1.80E-01	1.52E-01	1.22E-01	9.66E-02	7.67E-02
5	3	15	14	6587.74	2	4061.19	2.4623	0.0597	5.35E-04	7.49E-03	2.36E-02	4.17E-02	5.59E-02	6.46E-02
5	3	9	10	6556.05	1	4061.21	2.4623	0.0624	3.12E-02	4.32E-01	1.35E 00	2.38E 00	3.19E 00	3.68E 00
6	4	95	94	24466.21	1	4061.39	2.4622	0.0303	0.0	0.0	9.29E-05	2.15E-03	1.61E-02	6.32E-02
7	5	23	22	11379.15	1	4061.69	2.4620	0.0476	1.78E-04	2.49E-02	2.48E-01	8.76E-01	1.86E 00	2.99E 00
5	3	87	86	19282.05	2	4061.72	2.4620	0.0303	0.0	0.0	2.31E-05	2.54E-04	1.15E-03	3.17E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	0	1	4170.43	2	4062.16	2.4617	0.0603	6.23E-04	2.74E-03	4.83E-03	6.02E-03	6.40E-03	6.27E-03
7	5	75	74	20447.11	1	4062.56	2.4615	0.0303	0.0	1.87E-05	1.64E-03	2.13E-02	1.08E-01	3.23E-01
4	2	119	118	29548.44	1	4062.94	2.4613	0.0303	0.0	0.0	1.40E-06	6.75E-05	8.20E-04	4.57E-03
3	1	29	30	3909.71	1	4063.05	2.4612	0.0340	1.11E 00	4.30E 00	7.15E 00	8.61E 00	8.94E 00	8.61E 00
5	3	108	107	27137.13	1	4063.20	2.4611	0.0303	0.0	0.0	1.13E-05	3.83E-04	3.69E-03	1.75E-02
6	4	4	3	8436.66	1	4063.36	2.4610	0.0611	1.36E-03	4.64E-02	2.28E-01	5.27E-01	8.44E-01	1.11E 00
7	5	24	23	11463.27	1	4063.65	2.4608	0.0457	1.66E-04	2.41E-02	2.45E-01	8.76E-01	1.88E 00	3.03E 00
5	3	16	15	6641.34	2	4063.70	2.4608	0.0591	5.31E-04	7.63E-03	2.44E-02	4.34E-02	5.84E-02	6.78E-02
3	1	12	13	2427.44	2	4063.81	2.4607	0.0610	4.62E-02	8.81E-02	1.02E-01	9.93E-02	8.93E-02	7.76E-02
5	3	86	85	18988.68	2	4064.33	2.4604	0.0303	0.0	0.0	2.81E-05	2.95E-04	1.30E-03	3.51E-03
7	5	74	73	20185.51	1	4064.54	2.4603	0.0303	0.0	2.35E-05	1.94E-03	2.42E-02	1.20E-01	3.52E-01
6	4	94	93	24138.43	1	4064.98	2.4600	0.0303	0.0	0.0	1.15E-04	2.55E-03	1.85E-02	7.11E-02
7	5	25	24	11551.01	1	4065.52	2.4597	0.0437	1.53E-04	2.32F-02	2.41E-01	8.72E-01	1.88E 00	3.06E 00
5	3	8	9	6518.68	1	4065.57	2.4597	0.0624	2.98E-02	4.05E-01	1.26E 00	2.20E 00	2.94E 00	3.38E 00
4	2	19	20	5051.77	1	4065.76	2.4596	0.0535	3.06E-01	2.06E 00	4.50E 00	6.38E 00	7.39E 00	7.70E 00
3	1	128	127	31480.76	1	4065.91	2.4595	0.0303	0.0	0.0	0.0	1.28E-05	1.87E-04	1.19E-03
2	0	22	23	1012.90	2	4065.98	2.4594	0.0476	1.95E-01	1.89E-01	1.56E-01	1.24E-01	9.72E-02	7.66E-02
2	0	37	38	2835.80	1	4066.06	2.4594	0.0303	2.09E 00	4.86E 00	6.24E 00	6.44E 00	6.03E 00	5.40E 00
5	3	17	16	6698.49	2	4066.15	2.4593	0.0585	5.23E-04	7.72E-03	2.50E-02	4.48E-02	6.08E-02	7.07E-02
7	5	73	72	19927.18	1	4066.44	2.4592	0.0303	0.0	2.95E-05	2.29E-03	2.76E-02	1.33E-01	3.84E-01
6	4	5	4	8451.48	1	4066.71	2.4590	0.0614	1.67E-03	5.75E-02	2.84E-01	6.57E-01	1.05E 00	1.39E 00
4	2	102	101	22167.28	2	4066.83	2.4589	0.0303	0.0	0.0	2.27E-06	3.77E-05	2.25E-04	7.57E-04
5	3	85	84	18698.40	2	4066.86	2.4589	0.0303	0.0	0.0	3.40E-05	3.43E-04	1.47E-03	3.89E-03
7	5	26	25	11642.38	1	4067.33	2.4586	0.0418	1.40E-04	2.22E-02	2.36E-01	8.65E-01	1.89E 00	3.08E 00
5	3	107	106	26767.18	1	4067.85	2.4583	0.0303	0.0	0.0	1.45E-05	4.67E-04	4.34E-03	2.00E-02
3	1	11	12	2380.12	2	4068.23	2.4581	0.0617	4.59E-02	8.55E-02	9.82E-02	9.47E-02	8.48E-02	7.35E-02
7	5	72	71	19672.14	1	4068.26	2.4581	0.0303	0.0	3.70E-05	2.69E-03	3.13E-02	1.47E-01	4.18E-01
6	4	93	92	23813.70	1	4068.49	2.4579	0.0303	0.0	0.0	1.43E-04	3.02E-03	2.12E-02	7.98E-02
4	2	118	117	29143.55	1	4068.51	2.4579	0.0303	0.0	0.0	1.85E-06	8.40E-05	9.82E-04	5.33E-03
5	3	18	17	6759.20	2	4068.53	2.4579	0.0568	5.10E-04	7.76E-03	2.55E-02	4.61E-02	6.28E-02	7.35E-02
3	1	28	29	3796.07	1	4068.82	2.4577	0.0359	1.27E 00	4.66E 00	7.54E 00	8.94E 00	9.18E 00	8.77E 00
7	5	27	26	11737.38	1	4069.06	2.4576	0.0398	1.28E-04	2.12E-02	2.30E-01	8.55E-01	1.88E 00	3.10E 00
4	2	1	0	4166.82	2	4069.32	2.4574	0.0603	6.33E-04	2.78E-03	4.89E-03	6.10E-03	6.49E-03	6.35E-03
5	3	84	83	18411.21	2	4069.32	2.4574	0.0303	0.0	0.0	4.10E-05	3.97E-04	1.66E-03	4.30E-03
5	3	7	8	6485.03	1	4069.87	2.4571	0.0623	2.79E-02	3.73E-01	1.15E 00	2.01E 00	2.67E 00	3.07E 00
6	4	6	5	8470.00	1	4069.99	2.4570	0.0617	1.97E-03	6.82E-02	3.38E-01	7.85E-01	1.26E 00	1.66E 00
7	5	71	70	19420.38	1	4069.99	2.4570	0.0303	0.0	4.61E-05	3.16E-03	3.54E-02	1.63E-01	4.54E-01
4	2	101	100	21825.82	2	4070.58	2.4567	0.0303	0.0	0.0	2.85E-06	4.51E-05	2.61E-04	8.56E-04
7	5	28	27	11835.99	1	4070.71	2.4566	0.0379	1.15E-04	2.01E-02	2.23E-01	8.42E-01	1.87E 00	3.10E 00
5	3	19	18	6823.48	2	4070.84	2.4565	0.0552	4.93E-04	7.74E-03	2.58E-02	4.72E-02	6.47E-02	7.60E-02
4	2	18	19	4976.46	1	4070.84	2.4565	0.0552	3.25E-01	2.11E 00	4.53E 00	6.37E 00	7.32E 00	7.59E 00
2	0	21	22	928.62	2	4071.06	2.4564	0.0496	2.12E-01	1.97E-01	1.60E-01	1.25E-01	9.73E-02	7.63E-02
7	5	70	69	19171.93	1	4071.65	2.4560	0.0303	0.0	5.73E-05	3.70E-03	4.01E-02	1.80E-01	4.93E-01
5	3	83	82	18127.12	2	4071.70	2.4560	0.0303	0.0	0.0	4.95E-05	4.60E-04	1.86E-03	4.75E-03
6	4	92	91	23492.04	1	4071.91	2.4558	0.0303	0.0	0.0	1.77E-04	3.57E-03	2.43E-02	8.94E-02
3	1	127	126	31047.46	1	4072.24	2.4557	0.0303	0.0	0.0	0.0	1.62E-05	2.27E-04	1.40E-03
7	5	29	28	11938.21	1	4072.30	2.4556	0.0359	1.04E-04	1.90E-02	2.16E-01	8.26E-01	1.85E 00	3.09E 00
2	0	36	37	2691.03	1	4072.39	2.4556	0.0308	2.52E 00	5.46E 00	6.77E 00	6.84E 00	6.32E 00	5.60E 00
5	3	106	105	26400.13	1	4072.42	2.4555	0.0303	0.0	0.0	1.85E-05	5.68E-04	5.10E-03	2.29E-02
3	1	10	11	2336.44	2	4072.59	2.4554	0.0625	4.50E-02	8.21E-02	9.33E-02	8.95E-02	7.98E-02	6.89E-02
4	2	2	1	4170.43	2	4072.80	2.4553	0.0606	1.27E-03	5.57E-03	9.82E-03	1.23E-02	1.30E-02	1.28E-02
5	3	20	19	6891.30	2	4073.09	2.4551	0.0535	4.74E-04	7.68E-03	2.60E-02	4.80E-02	6.63E-02	7.82E-02
6	4	7	6	8492.22	1	4073.21	2.4551	0.0620	2.23E-03	7.83E-02	3.91E-01	9.09E-01	1.47E 00	1.93E 00

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	5	69	68	18926.79	1	4073.23	2.4551	0.0303	0.0	7.10E-05	4.32E-03	4.52E-02	1.98E-01	5.34E-01
7	5	30	29	12044.05	1	4073.81	2.4547	0.0340	9.25E-05	1.78E-02	2.08E-01	8.08E-01	1.83E 00	3.08E 00
4	2	117	116	28741.41	1	4073.99	2.4546	0.0303	0.0	0.0	2.43E-06	1.04E-04	1.17E-03	6.20E-03
5	3	82	81	17846.16	2	4074.00	2.4546	0.0303	0.0	1.27E-06	5.94E-05	5.31E-04	2.10E-03	5.24E-03
5	3	6	7	6455.12	1	4074.09	2.4545	0.0620	2.56E-02	3.38E-01	1.03E 00	1.80E 00	2.38E 00	2.73E 00
4	2	100	99	21487.30	2	4074.25	2.4544	0.0303	0.0	0.0	3.57E-06	5.39E-05	3.02E-04	9.68E-04
3	1	27	28	3686.17	1	4074.53	2.4543	0.0379	1.44E 00	5.03E 00	7.93E 00	9.24E 00	9.40E 00	8.91E 00
7	5	68	67	18684.96	1	4074.73	2.4542	0.0303	0.0	8.76E-05	5.03E-03	5.08E-02	2.18E-01	5.77E-01
7	5	31	30	12153.49	1	4075.24	2.4538	0.0335	8.22E-05	1.67E-02	2.00E-01	7.89E-01	1.81E 00	3.06E 00
6	4	91	90	23173.46	1	4075.25	2.4538	0.0303	0.0	1.30E-06	2.19E-04	4.21E-03	2.77E-02	1.00E-01
5	3	21	20	6962.68	2	4075.27	2.4538	0.0515	4.51E-04	7.57E-03	2.61E-02	4.86E-02	6.76E-02	8.02E-02
4	2	17	18	4904.90	1	4075.85	2.4535	0.0568	3.43E-01	2.15E 00	4.55E 00	6.32E 00	7.22E 00	7.44E 00
2	0	20	21	847.99	2	4076.08	2.4533	0.0515	2.28E-01	2.04E-01	1.62E-01	1.26E-01	9.71E-02	7.58E-02
7	5	67	66	18446.48	1	4076.14	2.4533	0.0303	0.0	1.08E-04	5.85E-03	5.70E-02	2.39E-01	6.23E-01
4	2	3	2	4177.65	2	4076.21	2.4533	0.0609	1.89E-03	8.35E-03	1.48E-02	1.84E-02	1.96E-02	1.92E-02
5	3	81	80	17568.32	2	4076.23	2.4532	0.0303	0.0	1.63E-06	7.13E-05	6.11E-04	2.35E-03	5.77E-03
6	4	8	7	8518.15	1	4076.35	2.4532	0.0623	2.47E-03	8.78E-02	4.41E-01	1.03E 00	1.66E 00	2.20E 00
7	5	32	31	12266.54	1	4076.60	2.4530	0.0331	7.26E-05	1.56E-02	1.92E-01	7.69E-01	1.78E 00	3.04E 00
3	1	9	10	2296.39	2	4076.88	2.4529	0.0624	4.36E-02	7.80E-02	8.78E-02	8.37E-02	7.43E-02	6.40E-02
5	3	105	104	26035.98	1	4076.91	2.4528	0.0303	0.0	0.0	2.37E-05	6.89E-04	5.97E-03	2.62E-02
5	3	22	21	7037.61	2	4077.37	2.4526	0.0496	4.27E-04	7.42E-03	2.60E-02	4.91E-02	6.87E-02	8.19E-02
7	5	66	65	18211.34	1	4077.48	2.4525	0.0303	0.0	1.32E-04	6.78E-03	6.39E-02	2.62E-01	6.71E-01
4	2	99	98	21151.72	2	4077.83	2.4523	0.0303	0.0	0.0	4.47E-06	6.42E-05	3.48E-04	1.09E-03
7	5	33	32	12383.18	1	4077.88	2.4523	0.0326	6.38E-05	1.44E-02	1.83E-01	7.46E-01	1.75E 00	3.01E 00
5	3	5	6	6428.95	1	4078.25	2.4520	0.0617	2.29E-02	2.98E-01	9.07E-01	1.57E 00	2.08E 00	2.38E 00
5	3	80	79	17293.62	2	4078.38	2.4520	0.0303	0.0	2.08E-06	8.53E-05	7.03E-04	2.63E-03	6.34E-03
3	1	126	125	30616.80	1	4078.48	2.4519	0.0303	0.0	0.0	0.0	2.04E-05	2.75E-04	1.65E-03
6	4	90	89	22857.99	1	4078.50	2.4519	0.0303	0.0	1.72E-06	2.69E-04	4.95E-03	3.17E-02	1.12E-01
2	0	35	36	2550.01	1	4078.66	2.4518	0.0312	3.01E 00	6.10E 00	7.32E 00	7.25E 00	6.61E 00	5.80E 00
7	5	65	64	17979.55	1	4078.74	2.4517	0.0303	0.0	1.61E-04	7.83E-03	7.14E-02	2.86E-01	7.22E-01
7	5	34	33	12503.41	1	4079.09	2.4515	0.0321	5.56E-05	1.33E-02	1.74E-01	7.22E-01	1.71E 00	2.97E 00
4	2	116	115	28342.04	1	4079.39	2.4513	0.0303	0.0	0.0	3.20E-06	1.30E-04	1.40E-03	7.20E-03
5	3	23	22	7116.09	2	4079.41	2.4513	0.0476	4.01E-04	7.23E-03	2.59E-02	4.93E-02	6.96E-02	8.34E-02
6	4	9	8	8547.78	1	4079.42	2.4513	0.0624	2.68E-03	9.66E-02	4.88E-01	1.15E 00	1.86E 00	2.46E 00
4	2	4	3	4188.48	2	4079.56	2.4512	0.0611	2.50E-03	1.11E-02	1.96E-02	2.46E-02	2.62E-02	2.57E-02
7	5	64	63	17751.12	1	4079.92	2.4510	0.0303	0.0	1.96E-04	9.02E-03	7.96E-02	3.12E-01	7.76E-01
3	1	26	27	3580.03	1	4080.18	2.4509	0.0398	1.63E 00	5.40E 00	8.30E 00	9.53E 00	9.59E 00	9.03E 00
7	5	35	34	12627.23	1	4080.23	2.4508	0.0317	4.82E-05	1.23E-02	1.65E-01	6.97E-01	1.67E 00	2.92E 00
5	3	79	78	17022.07	2	4080.46	2.4507	0.0303	0.0	2.64E-06	1.02E-04	8.07E-04	2.94E-03	6.95E-03
4	2	16	17	4837.09	1	4080.79	2.4505	0.0585	3.59E-01	2.18E 00	4.53E 00	6.24E 00	7.08E 00	7.27E 00
7	5	63	62	17526.07	1	4081.02	2.4504	0.0303	0.0	2.38E-04	1.04E-02	8.86E-02	3.40E-01	8.32E-01
2	0	19	20	771.00	2	4081.04	2.4504	0.0535	2.44E-01	2.10E-01	1.64E-01	1.26E-01	9.65E-02	7.49E-02
3	1	8	9	2259.98	2	4081.10	2.4503	0.0624	4.15E-02	7.30E-02	8.15E-02	7.73E-02	6.84E-02	5.88E-02
7	5	36	35	12754.63	1	4081.29	2.4502	0.0312	4.16E-05	1.13E-02	1.56E-01	6.71E-01	1.63E 00	2.87E 00
5	3	104	103	25674.78	1	4081.31	2.4502	0.0303	0.0	0.0	3.02E-05	8.34E-04	6.99E-03	2.99E-02
4	2	98	97	20819.09	2	4081.34	2.4502	0.0303	0.0	0.0	5.58E-06	7.64E-05	4.01E-04	1.23E-03
5	3	24	23	7198.11	2	4081.38	2.4502	0.0457	3.73E-04	7.01E-03	2.56E-02	4.93E-02	7.02E-02	8.46E-02
6	4	89	88	22545.62	1	4081.68	2.4500	0.0303	0.0	2.29E-06	3.32E-04	5.83E-03	3.62E-02	1.25E-01
7	5	62	61	17304.39	1	4082.04	2.4498	0.0303	0.0	2.88E-04	1.19E-02	9.84E-02	3.69E-01	8.90E-01
7	5	37	36	12885.61	1	4082.28	2.4496	0.0308	3.56E-05	1.03E-02	1.47E-01	6.43E-01	1.58E 00	2.82E 00
5	3	4	5	6406.52	1	4082.34	2.4496	0.0614	1.98E-02	2.55E-01	7.72E-01	1.33E 00	1.76E 00	2.01E 00
6	4	10	9	8581.11	1	4082.42	2.4495	0.0624	2.86E-03	1.05E-01	5.33E-01	1.26E 00	2.04E 00	2.71E 00
5	3	78	77	16753.69	2	4082.45	2.4495	0.0303	0.0	3.36E-06	1.21E-04	9.24E-04	3.29E-03	7.62E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	5	4	4202.92	2	4082.84	2.4493	0.0614	3.08E-03	1.37E-02	2.45E-02	3.07E-02	3.27E-02	3.21E-02
7	5	61	60	17086.11	1	4082.98	2.4492	0.0303	0.0	3.47F-04	1.36E-02	1.09E-01	4.00F-01	9.51F-01
7	5	38	37	13020.16	1	4083.19	2.4491	0.0303	3.03E-05	9.33E-03	1.38E-01	6.16E-01	1.53F 00	2.76F 00
5	3	25	24	7283.66	2	4083.29	2.4490	0.0437	3.46E-04	6.76F-03	2.52E-02	4.92E-02	7.05F-02	8.55F-02
7	5	60	59	16871.22	1	4083.84	2.4487	0.0303	0.0	4.16E-04	1.55E-02	1.20E-01	4.33F-01	1.01E 00
7	5	39	38	13158.27	1	4084.02	2.4486	0.0303	2.57E-05	8.44E-03	1.29E-01	5.87E-01	1.48F 00	2.69F 00
5	3	77	76	16488.47	2	4084.38	2.4484	0.0303	0.0	4.25E-06	1.44E-04	1.06E-03	3.66E-03	8.34E-03
7	5	59	58	16659.74	1	4084.63	2.4482	0.0303	0.0	4.99E-04	1.76E-02	1.33F-01	4.69F-01	1.08F 00
3	1	125	124	30188.78	1	4084.63	2.4482	0.0303	0.0	0.0	0.0	2.57E-05	3.32F-04	1.94F-03
4	2	115	114	27945.45	1	4084.70	2.4482	0.0303	0.0	0.0	4.19E-06	1.60E-04	1.67F-03	8.36F-03
6	4	88	87	22236.39	1	4084.77	2.4481	0.0303	0.0	3.02E-06	4.07E-04	6.85E-03	4.13E-02	1.40E-01
7	5	40	39	13299.95	1	4084.78	2.4481	0.0303	2.16E-05	7.60E-03	1.20E-01	5.59E-01	1.43E 00	2.62E 00
4	2	97	96	20489.43	2	4084.78	2.4481	0.0303	0.0	0.0	6.95E-06	9.08E-05	4.62E-04	1.38F-03
2	0	34	35	2412.73	1	4084.86	2.4481	0.0317	3.58F 00	6.80E 00	7.89F 00	7.66E 00	6.90E 00	6.00E 00
5	3	26	25	7372.76	2	4085.12	2.4479	0.0418	3.18E-04	6.49F-03	2.47E-02	4.89E-02	7.07E-02	8.62E-02
3	1	7	8	2227.21	2	4085.26	2.4478	0.0623	3.89E-02	6.73E-02	7.46E-02	7.04E-02	6.21E-02	5.33E-02
7	5	58	57	16451.68	1	4085.33	2.4478	0.0303	0.0	5.95E-04	2.00E-02	1.47E-01	5.07F-01	1.15E 00
6	4	11	10	8618.14	1	4085.34	2.4478	0.0625	3.00E-03	1.12F-01	5.74E-01	1.36E 00	2.22E 00	2.95F 00
7	5	41	40	13445.18	1	4085.46	2.4477	0.0303	1.81E-05	6.82F-03	1.12E-01	5.30F-01	1.37E 00	2.54F 00
5	3	103	102	25316.52	1	4085.62	2.4476	0.0303	0.0	0.0	3.85E-05	1.01E-03	8.17F-03	3.41F-02
4	2	15	16	4773.03	1	4085.67	2.4476	0.0591	3.73E-01	2.20E 00	4.49E 00	6.12E 00	6.91E 00	7.06E 00
3	1	25	26	3477.63	1	4085.76	2.4475	0.0418	1.82E 00	5.77E 00	8.65E 00	9.79E 00	9.76F 00	9.13E 00
2	0	18	19	697.65	2	4085.93	2.4474	0.0552	2.59F-01	2.16E-01	1.65E-01	1.25E-01	9.55E-02	7.38E-02
7	5	57	56	16247.05	1	4085.96	2.4474	0.0303	0.0	7.08F-04	2.27E-02	1.61E-01	5.47F-01	1.23E 00
4	2	6	5	4220.97	2	4086.06	2.4473	0.0617	3.62E-03	1.63E-02	2.91E-02	3.66E-02	3.92E-02	3.85F-02
7	5	42	41	13593.96	1	4086.07	2.4473	0.0303	1.51E-05	6.10E-03	1.03E-01	5.02E-01	1.32E 00	2.47E 00
5	3	76	75	16226.44	2	4086.23	2.4472	0.0303	0.0	5.35E-06	1.70E-04	1.20E-03	4.07E-03	9.11F-03
5	3	3	4	6387.82	1	4086.35	2.4472	0.0611	1.63E-02	2.09E-01	6.29E-01	1.08E 00	1.43E 00	1.63E 00
7	5	56	55	16045.84	1	4086.51	2.4471	0.0303	0.0	8.39E-04	2.56F-02	1.77E-01	5.89F-01	1.30F 00
7	5	43	42	13746.29	1	4086.60	2.4470	0.0303	1.25E-05	5.43E-03	9.54E-02	4.73E-01	1.26E 00	2.39F 00
5	3	27	26	7465.39	2	4086.89	2.4468	0.0398	2.90E-04	6.20E-03	2.41E-02	4.84E-02	7.06E-02	8.66E-02
7	5	55	54	15848.09	1	4086.98	2.4468	0.0303	0.0	9.91E-04	2.88E-02	1.94E-01	6.32E-01	1.38F 00
7	5	44	43	13902.14	1	4087.05	2.4468	0.0303	1.02E-05	4.81F-03	8.78E-02	4.45E-01	1.21E 00	2.31F 00
7	5	54	53	15653.78	1	4087.38	2.4466	0.0303	1.07E-06	1.17E-03	3.24E-02	2.11E-01	6.77F-01	1.46F 00
7	5	45	44	14061.54	1	4087.43	2.4465	0.0303	8.38F-06	4.25F-03	8.06E-02	4.18E-01	1.15F 00	2.22F 00
7	5	53	52	15462.93	1	4087.69	2.4464	0.0303	1.38E-06	1.37E-03	3.63E-02	2.30F-01	7.25F-01	1.54F 00
7	5	46	45	14224.45	1	4087.73	2.4463	0.0303	6.82E-06	3.74E-03	7.37E-02	3.92E-01	1.09F 00	2.14E 00
6	4	87	86	21930.29	1	4087.78	2.4463	0.0303	0.0	3.99E-06	4.99E-04	8.04E-03	4.70E-02	1.56F-01
7	5	52	51	15275.54	1	4087.93	2.4462	0.0303	1.76E-06	1.60E-03	4.05E-02	2.50E-01	7.74E-01	1.62F 00
7	5	47	46	14390.88	1	4087.96	2.4462	0.0303	5.52E-06	3.27E-03	6.72E-02	3.66E-01	1.04E 00	2.05E 00
5	3	75	74	15967.60	2	4088.00	2.4462	0.0303	0.0	6.73E-06	2.01E-04	1.37E-03	4.52E-03	9.93E-03
7	5	51	50	15091.63	1	4088.09	2.4461	0.0303	2.24E-06	1.86E-03	4.51E-02	2.71E-01	8.24E-01	1.71E 00
7	5	48	47	14560.82	1	4088.11	2.4461	0.0303	4.44E-06	2.86E-03	6.11E-02	3.41E-01	9.83F-01	1.96E 00
4	2	96	95	20162.75	2	4088.13	2.4461	0.0303	0.0	0.0	8.64E-06	1.08E-04	5.31E-04	1.56E-03
7	5	50	49	14911.20	1	4088.17	2.4461	0.0303	2.83E-06	2.15E-03	5.00E-02	2.93E-01	8.76E-01	1.79E 00
7	5	49	48	14734.27	1	4088.18	2.4461	0.0303	3.55E-06	2.48E-03	5.54E-02	3.17E-01	9.29E-01	1.88E 00
6	4	12	11	8658.86	1	4088.20	2.4461	0.0617	3.10E-03	1.18E-01	6.12E-01	1.46E 00	2.39E 00	3.19E 00
5	3	28	27	7561.55	2	4088.58	2.4458	0.0379	2.64E-04	5.89E-03	2.35E-02	4.77E-02	7.03E-02	8.68E-02
4	2	7	6	4242.63	2	4089.21	2.4455	0.0620	4.12E-03	1.88E-02	3.37E-02	4.25E-02	4.55E-02	4.48E-02
3	1	6	7	2198.07	2	4089.36	2.4454	0.0620	3.57E-02	6.09E-02	6.70E-02	6.29E-02	5.54E-02	4.74E-02
5	3	74	73	15711.97	2	4089.70	2.4452	0.0303	0.0	8.43E-06	2.37E-04	1.56E-03	5.01E-03	1.08E-02
5	3	102	101	24961.22	1	4089.85	2.4451	0.0303	0.0	0.0	4.89E-05	1.22E-03	9.53E-03	3.88E-02
4	2	114	113	27551.67	1	4089.93	2.4450	0.0303	0.0	0.0	5.49E-06	1.98E-04	1.99E-03	9.69E-03

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	3	29	28	7661.24	2	4090.21	2.4449	0.0359	2.38E-04	5.58E-03	2.27E-02	4.69E-02	6.97E-02	8.68E-02
5	3	2	3	6372.86	1	4090.30	2.4448	0.0609	1.26E-02	1.60E-01	4.79E-01	8.22E-01	1.08E 00	1.23E 00
4	2	14	15	4712.73	1	4090.48	2.4447	0.0597	3.83E-01	2.19E 00	4.42E 00	5.98E 00	6.71E 00	6.83E 00
3	1	124	123	29763.41	1	4090.69	2.4446	0.0303	0.0	0.0	0.0	3.23E-05	4.01E-04	2.27E-03
6	4	86	85	21627.34	1	4090.70	2.4446	0.0303	0.0	5.24E-06	6.10E-04	9.40E-03	5.35E-02	1.73E-01
2	0	17	18	627.96	2	4090.77	2.4445	0.0568	2.73E-01	2.20E-01	1.66E-01	1.24E-01	9.41E-02	7.23E-02
6	4	13	12	8703.29	1	4090.99	2.4444	0.0610	3.17E-03	1.23E-01	6.45E-01	1.55E 00	2.55E 00	3.41E 00
2	0	33	34	2279.20	1	4091.00	2.4444	0.0321	4.23E 00	7.53E 00	8.47E 00	8.07E 00	7.17E 00	6.18E 00
3	1	24	25	3379.00	1	4091.27	2.4442	0.0437	2.03E 00	6.13E 00	8.98E 00	1.00E 01	9.90E 00	9.19E 00
5	3	73	72	15459.54	2	4091.32	2.4442	0.0303	0.0	1.05E-05	2.78E-04	1.76E-03	5.54E-03	1.18E-02
4	2	95	94	19839.07	2	4091.40	2.4442	0.0303	0.0	0.0	1.07E-05	1.27E-04	6.09E-04	1.74E-03
5	3	30	29	7764.45	2	4091.77	2.4439	0.0340	2.13E-04	5.25E-03	2.19E-02	4.60E-02	6.90E-02	8.65E-02
4	2	8	7	4267.90	2	4092.29	2.4436	0.0623	4.57E-03	2.11E-02	3.80E-02	4.82E-02	5.17E-02	5.10E-02
5	3	72	71	15210.34	2	4092.86	2.4433	0.0303	0.0	1.31E-05	3.26E-04	1.99E-03	6.12E-03	1.28E-02
5	3	31	30	7871.18	2	4093.25	2.4430	0.0335	1.90E-04	4.93E-03	2.12E-02	4.50E-02	6.82E-02	8.61E-02
3	1	5	6	2172.57	2	4093.40	2.4430	0.0617	3.19E-02	5.37E-02	5.87E-02	5.50E-02	4.83E-02	4.13E-02
6	4	85	84	21327.55	1	4093.54	2.4429	0.0303	0.0	6.87E-06	7.44E-04	1.10E-02	6.07E-02	1.93E-01
6	4	14	13	8751.40	1	4093.70	2.4428	0.0604	3.20E-03	1.27E-01	6.75E-01	1.63E 00	2.70E 00	3.62E 00
5	3	101	100	24608.89	1	4094.00	2.4426	0.0303	0.0	0.0	6.19E-05	1.47E-03	1.11E-02	4.41E-02
5	3	1	2	6361.64	1	4094.18	2.4425	0.0606	8.56E-03	1.08E-01	3.23E-01	5.54E-01	7.29E-01	8.31E-01
5	3	71	70	14964.37	2	4094.34	2.4424	0.0303	0.0	1.62E-05	3.81E-04	2.25E-03	6.74E-03	1.38E-02
4	2	94	93	19518.39	2	4094.60	2.4422	0.0303	0.0	0.0	1.32E-05	1.50E-04	6.97E-04	1.95E-03
5	3	32	31	7981.43	2	4094.67	2.4422	0.0331	1.69E-04	4.61E-03	2.03E-02	4.39E-02	6.73E-02	8.56E-02
4	2	113	112	27160.71	1	4095.06	2.4420	0.0303	0.0	0.0	7.16E-06	2.45E-04	2.37E-03	1.12E-02
4	2	13	14	4656.18	1	4095.21	2.4419	0.0604	3.90E-01	2.17E 00	4.32E 00	5.79E 00	6.46E 00	6.56E 00
4	2	9	8	4296.77	2	4095.31	2.4418	0.0624	4.96E-03	2.32E-02	4.22E-02	5.36E-02	5.77E-02	5.71E-02
2	0	16	17	561.92	2	4095.53	2.4417	0.0585	2.85E-01	2.22E-01	1.65E-01	1.23E-01	9.23E-02	7.06E-02
5	3	70	69	14721.64	2	4095.73	2.4416	0.0303	0.0	2.01E-05	4.45E-04	2.53E-03	7.42E-03	1.50E-02
5	3	33	32	8095.19	2	4096.02	2.4414	0.0326	1.49E-04	4.30E-03	1.94E-02	4.27E-02	6.62E-02	8.48E-02
6	4	84	83	21030.94	1	4096.30	2.4412	0.0303	0.0	8.97E-06	9.05E-04	1.28E-02	6.87E-02	2.14E-01
6	4	15	14	8803.20	1	4096.34	2.4412	0.0597	3.20E-03	1.30E-01	7.01E-01	1.71E 00	2.84E 00	3.82E 00
3	1	123	122	29340.73	1	4096.67	2.4410	0.0303	0.0	0.0	0.0	4.05E-05	4.83E-04	2.66E-03
3	1	23	24	3284.13	1	4096.71	2.4410	0.0457	2.25E 00	6.49E 00	9.28E 00	1.02E 01	1.00E 01	9.23E 00
5	3	69	68	14482.17	2	4097.05	2.4408	0.0303	0.0	2.47E-05	5.17E-04	2.85E-03	8.15E-03	1.62E-02
2	0	32	33	2149.44	1	4097.07	2.4408	0.0326	4.97E 00	8.32E 00	9.06E 00	8.48E 00	7.44E 00	6.35E 00
5	3	34	33	8212.45	2	4097.30	2.4406	0.0321	1.30E-04	3.98E-03	1.85E-02	4.14E-02	6.49E-02	8.39E-02
3	1	4	5	2150.72	2	4097.36	2.4406	0.0614	2.75E-02	4.59E-02	5.00E-02	4.67E-02	4.09E-02	3.49E-02
4	2	93	92	19200.73	2	4097.72	2.4404	0.0303	0.0	0.0	1.63E-05	1.77E-04	7.97E-04	2.19E-03
5	3	0	1	6354.16	1	4097.99	2.4402	0.0603	4.35E-03	5.47E-02	1.63E-01	2.80E-01	3.67E-01	4.19E-01
5	3	100	99	24259.57	1	4098.06	2.4402	0.0303	0.0	0.0	7.83E-05	1.76E-03	1.29E-02	5.01E-02
4	2	10	9	4329.25	2	4098.26	2.4401	0.0624	5.29E-03	2.51E-02	4.61E-02	5.88E-02	6.36E-02	6.29E-02
5	3	68	67	14245.95	2	4098.30	2.4400	0.0303	0.0	3.03E-05	6.00E-04	3.19E-03	8.93E-03	1.74E-02
5	3	35	34	8333.21	2	4098.51	2.4399	0.0317	1.14E-04	3.68E-03	1.76E-02	4.00E-02	6.35E-02	8.27E-02
6	4	16	15	8858.70	1	4098.91	2.4397	0.0591	3.17E-03	1.33E-01	7.23E-01	1.77E 00	2.96E 00	4.01E 00
6	4	83	82	20737.52	1	4098.98	2.4396	0.0303	0.0	1.17E-05	1.10E-03	1.49E-02	7.77E-02	2.37E-01
5	3	67	66	14013.01	2	4099.48	2.4393	0.0303	0.0	3.71E-05	6.94E-04	3.57E-03	9.77E-03	1.88E-02
5	3	36	35	8457.48	2	4099.65	2.4392	0.0312	9.83E-05	3.38E-03	1.67E-02	3.86E-02	6.10E-02	8.14E-02
4	2	12	13	4603.40	1	4099.89	2.4391	0.0610	3.93E-01	2.13E 00	4.19E 00	5.57E 00	6.19E 00	6.25E 00
4	2	112	111	26772.58	1	4100.12	2.4390	0.0303	0.0	0.0	9.33E-06	3.02E-04	2.81E-03	1.30E-02
2	0	15	16	499.54	2	4100.24	2.4389	0.0591	2.95E-01	2.23E-01	1.63E-01	1.20E-01	9.00E-02	6.85E-02
5	3	66	65	13783.34	2	4100.57	2.4387	0.0303	0.0	4.53E-05	8.01E-04	3.99E-03	1.07E-02	2.02E-02
5	3	37	36	8585.23	2	4100.72	2.4386	0.0308	8.47E-05	3.09E-03	1.57E-02	3.71E-02	6.07E-02	7.99E-02
4	2	92	91	18886.10	2	4100.76	2.4386	0.0303	0.0	0.0	2.01E-05	2.09E-04	9.10E-04	2.44E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	11	10	4365.34	2	4101.14	2.4383	0.0625	5.56E-03	2.68E-02	4.97E-02	6.38E-02	6.91E-02	6.86E-02
3	1	3	4	2132.50	2	4101.27	2.4383	0.0611	2.27E-02	3.76E-02	4.07E-02	3.79E-02	3.32E-02	2.83E-02
6	4	17	16	8917.88	1	4101.40	2.4382	0.0585	3.11E-03	1.34E-01	7.40E-01	1.83E 00	3.08E 00	4.18E 00
6	4	82	81	20447.30	1	4101.58	2.4381	0.0303	0.0	1.51E-05	1.33E-03	1.73E-02	8.78E-02	2.63E-01
5	3	65	64	13556.96	2	4101.60	2.4381	0.0303	0.0	5.50E-05	9.22E-04	4.44E-03	1.16E-02	2.17E-02
5	3	38	37	8716.48	2	4101.72	2.4380	0.0303	7.25E-05	2.82E-03	1.48E-02	3.56E-02	5.85E-02	7.83E-02
5	3	99	98	23913.24	1	4102.03	2.4378	0.0303	0.0	0.0	9.87E-05	2.11E-03	1.50E-02	5.68E-02
3	1	22	23	3193.03	1	4102.09	2.4378	0.0476	2.47E 00	6.82E 00	9.55E 00	1.04E 01	1.01E 01	9.24E 00
5	3	64	63	13333.88	2	4102.55	2.4375	0.0303	0.0	6.66E-05	1.06E-03	4.94E-03	1.27E-02	2.32E-02
3	1	122	121	28920.75	1	4102.56	2.4375	0.0303	0.0	0.0	1.15E-06	5.08E-05	5.81E-04	3.11E-03
5	3	39	38	8851.20	2	4102.64	2.4375	0.0303	6.17E-05	2.56E-03	1.39E-02	3.40E-02	5.67E-02	7.65E-02
2	0	31	32	2023.43	1	4103.08	2.4372	0.0331	5.80E 00	9.14E 00	9.66E 00	8.88E 00	7.70E 00	6.52E 00
5	3	63	62	13114.11	2	4103.43	2.4370	0.0303	0.0	8.03E-05	1.21E-03	5.47E-03	1.37E-02	2.48E-02
5	3	40	39	8989.41	2	4103.50	2.4369	0.0303	5.22E-05	2.31E-03	1.30E-02	3.24E-02	5.48E-02	7.46E-02
4	2	91	90	18574.52	2	4103.73	2.4368	0.0303	0.0	0.0	2.47E-05	2.45E-04	1.04E-03	2.72E-03
6	4	18	17	8980.75	1	4103.83	2.4367	0.0568	3.03E-03	1.34E-01	7.53E-01	1.88E 00	3.18E 00	4.34E 00
4	2	12	11	4405.02	2	4103.96	2.4367	0.0617	5.76E-03	2.84E-02	5.30E-02	6.84E-02	7.44E-02	7.41E-02
6	4	81	80	20160.30	1	4104.09	2.4366	0.0303	0.0	1.96E-05	1.60E-03	2.00E-02	9.89E-02	2.90E-01
5	3	62	61	12897.64	2	4104.23	2.4365	0.0303	0.0	9.66E-05	1.38E-03	6.06E-03	1.49E-02	2.65E-02
5	3	41	40	9131.08	2	4104.29	2.4365	0.0303	4.39E-05	2.08E-03	1.21E-02	3.08E-02	5.28E-02	7.26E-02
4	2	11	12	4554.37	1	4104.49	2.4364	0.0617	3.91E-01	2.07E 00	4.02E 00	5.32E 00	5.88E 00	5.92E 00
2	0	14	15	440.81	2	4104.88	2.4361	0.0597	3.03E-01	2.22E-01	1.61E-01	1.17E-01	8.72E-02	6.62E-02
5	3	61	60	12684.50	2	4104.96	2.4361	0.0303	0.0	1.16E-04	1.57E-03	6.69E-03	1.61E-02	2.83E-02
5	3	42	41	9276.23	2	4105.00	2.4361	0.0303	3.67E-05	1.87E-03	1.12E-02	2.92E-02	5.08E-02	7.06E-02
4	2	111	110	26387.31	1	4105.08	2.4360	0.0303	0.0	0.0	1.21E-05	3.71E-04	3.33E-03	1.50E-02
3	1	2	3	2117.93	2	4105.11	2.4360	0.0609	1.75E-02	2.87E-02	3.10E-02	2.88E-02	2.52E-02	2.14E-02
5	3	1	0	6350.41	1	4105.40	2.4358	0.0603	4.42E-03	5.54E-02	1.66E-01	2.83E-01	3.72E-01	4.24E-01
5	3	60	59	12474.70	2	4105.62	2.4357	0.0303	0.0	1.38E-04	1.79E-03	7.37E-03	1.74E-02	3.01E-02
5	3	43	42	9424.83	2	4105.65	2.4357	0.0303	3.06E-05	1.67E-03	1.04E-02	2.76E-02	4.87E-02	6.84E-02
5	3	98	97	23569.94	1	4105.93	2.4355	0.0303	0.0	0.0	1.24E-04	2.53E-03	1.73E-02	6.43E-02
6	4	19	18	9047.30	1	4106.18	2.4354	0.0552	2.92E-03	1.34E-01	7.62E-01	1.92E 00	3.27E 00	4.48E 00
5	3	59	58	12268.22	2	4106.20	2.4353	0.0303	0.0	1.65E-04	2.03E-03	9.11E-03	1.88E-02	3.20E-02
5	3	44	43	9576.89	2	4106.22	2.4353	0.0303	2.53E-05	1.49E-03	9.60E-03	2.61E-02	4.66E-02	6.62E-02
6	4	80	79	19876.52	1	4106.53	2.4351	0.0303	0.0	2.52E-05	1.93E-03	2.32E-02	1.11E-01	3.20E-01
4	2	90	89	18265.99	2	4106.61	2.4351	0.0303	0.0	0.0	3.02E-05	2.87E-04	1.18E-03	3.03E-03
5	3	58	57	12065.10	2	4106.71	2.4350	0.0303	1.01E-06	1.96E-04	2.29E-03	8.92E-03	2.02E-02	3.40E-02
4	2	13	12	4448.31	2	4106.71	2.4350	0.0610	5.90E-03	2.96E-02	5.60E-02	7.27E-02	7.95E-02	7.94E-02
5	3	45	44	9732.40	2	4106.72	2.4350	0.0303	2.08E-05	1.32E-03	8.83E-03	2.45E-02	4.45E-02	6.39E-02
5	3	57	56	11865.33	2	4107.14	2.4348	0.0303	1.31E-06	2.32E-04	2.59E-03	9.78E-03	2.18E-02	3.61E-02
5	3	46	45	9891.36	2	4107.15	2.4348	0.0303	1.70E-05	1.16E-03	8.10E-03	2.30E-02	4.24E-02	6.15E-02
3	1	21	22	3105.69	1	4107.41	2.4346	0.0496	2.69E 00	7.13E 00	9.78E 00	1.05E 01	1.01E 01	9.21E 00
5	3	56	55	11668.92	2	4107.51	2.4346	0.0303	1.70E-06	2.73E-04	2.91E-03	1.07E-02	2.34E-02	3.83E-02
5	3	47	46	10053.75	2	4107.51	2.4346	0.0303	1.39E-05	1.02E-03	7.41E-03	2.16E-02	4.04E-02	5.92E-02
5	3	48	47	10219.57	2	4107.80	2.4344	0.0303	1.12E-05	8.97E-04	6.76E-03	2.01E-02	3.83E-02	5.68E-02
5	3	55	54	11475.88	2	4107.80	2.4344	0.0303	2.20E-06	3.21E-04	3.27E-03	1.17E-02	2.50E-02	4.05E-02
5	3	54	53	11286.22	2	4108.02	2.4343	0.0303	2.82E-06	3.76E-04	3.66E-03	1.27E-02	2.68E-02	4.27E-02
5	3	49	48	10388.82	2	4108.02	2.4343	0.0303	9.03E-06	7.83E-04	6.14E-03	1.88E-02	3.63E-02	5.44E-02
5	3	50	49	10561.49	2	4108.16	2.4342	0.0303	7.23E-06	6.81E-04	5.57E-03	1.74E-02	3.43E-02	5.20E-02
5	3	53	52	11099.95	2	4108.16	2.4342	0.0303	3.59E-06	4.39E-04	4.08E-03	1.38E-02	2.86E-02	4.50E-02
5	3	52	51	10917.06	2	4108.23	2.4341	0.0303	4.56E-06	5.10E-04	4.54E-03	1.50E-02	3.04E-02	4.73E-02
5	3	51	50	10737.57	2	4108.23	2.4341	0.0303	5.76E-06	5.90E-04	5.03E-03	1.62E-02	3.23E-02	4.97E-02
3	1	121	120	28503.48	1	4108.36	2.4341	0.0303	0.0	0.0	1.53E-06	6.35E-05	6.98E-04	3.63E-03
6	4	20	19	9117.53	1	4108.46	2.4340	0.0535	2.79E-03	1.32E-01	7.66E-01	1.95E 00	3.35E 00	4.61E 00

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	79	78	19595.97	1	4108.88	2.4338	0.0303	0.0	3.24E-05	2.32E-03	2.67E-02	1.25E-01	3.53E-01
3	1	1	2	2107.00	2	4108.88	2.4338	0.0606	1.19E-02	1.94E-02	2.09E-02	1.94E-02	1.70E-02	1.44E-02
5	3	2	1	6354.16	1	4109.00	2.4337	0.0606	8.84E-03	1.11E-01	3.32E-01	5.69E-01	7.48E-01	8.52E-01
2	0	30	31	1901.19	1	4109.02	2.4337	0.0335	6.72E 00	9.99E 00	1.03E 01	9.27E 00	7.94E 00	6.67E 00
4	2	10	11	4509.11	1	4109.03	2.4337	0.0625	3.84E-01	1.99E 00	3.83E 00	5.03E 00	5.54E 00	5.56E 00
4	2	14	13	4495.20	2	4109.39	2.4335	0.0604	5.97E-03	3.07E-02	5.86E-02	7.67E-02	8.42E-02	8.43E-02
4	2	89	88	17960.53	2	4109.42	2.4334	0.0303	0.0	0.0	3.70E-05	3.36E-04	1.34E-03	3.38E-03
2	0	13	14	385.75	2	4109.46	2.4334	0.0604	3.07E-01	2.20E-01	1.57E-01	1.14E-01	8.40E-02	6.36E-02
5	3	97	96	23229.68	1	4109.73	2.4333	0.0303	0.0	0.0	1.56E-04	3.03E-03	2.01E-02	7.27E-02
4	2	110	109	26004.91	1	4109.96	2.4331	0.0303	0.0	0.0	1.57E-05	4.55E-04	3.94E-03	1.72E-02
6	4	21	20	9191.44	1	4110.66	2.4327	0.0515	2.65E-03	1.30E-01	7.67E-01	1.98E 00	3.41E 00	4.72E 00
6	4	78	77	19318.68	1	4111.15	2.4324	0.0303	0.0	4.15E-05	2.78E-03	3.07E-02	1.40E-01	3.88E-01
4	2	15	14	4545.69	2	4112.01	2.4319	0.0597	5.99E-03	3.15E-02	6.09E-02	8.03E-02	8.86E-02	8.90E-02
4	2	88	87	17658.15	2	4112.16	2.4318	0.0303	0.0	1.01E-06	4.52E-05	3.93E-04	1.53E-03	3.77E-03
5	3	3	2	6361.64	1	4112.53	2.4316	0.0609	1.32E-02	1.67E-01	4.99E-01	8.56E-01	1.13E 00	1.28E 00
3	1	0	1	2099.72	2	4112.59	2.4316	0.0603	6.04E-03	9.83E-03	1.06E-02	9.80E-03	8.55E-03	7.27E-03
3	1	20	21	3022.13	1	4112.65	2.4315	0.0515	2.91E 00	7.42E 00	9.97E 00	1.06E 01	1.01E 01	9.16E 00
6	4	22	21	9269.02	1	4112.79	2.4314	0.0496	2.50E-03	1.27E-01	7.64E-01	1.99E 00	3.46E 00	4.82E 00
6	4	77	76	19044.64	1	4113.34	2.4311	0.0303	0.0	5.30E-05	3.32E-03	3.53E-02	1.57E-01	4.26E-01
5	3	96	95	22892.46	1	4113.46	2.4310	0.0303	0.0	1.24E-06	1.95E-04	3.61E-03	2.32E-02	8.20E-02
4	2	9	10	4467.62	1	4113.49	2.4310	0.0624	3.72E-01	1.90E 00	3.60E 00	4.71E 00	5.16E 00	5.17E 00
2	0	12	13	334.34	2	4113.97	2.4307	0.0610	3.09E-01	2.16E-01	1.52E-01	1.09E-01	8.04E-02	6.06E-02
3	1	120	119	28088.95	1	4114.07	2.4307	0.0303	0.0	0.0	2.03E-06	7.92E-05	8.37E-04	4.23E-03
4	2	16	15	4599.77	2	4114.56	2.4304	0.0591	5.94E-03	3.21E-02	6.28E-02	8.35E-02	9.26E-02	9.34E-02
4	2	109	108	25625.40	1	4114.76	2.4303	0.0303	0.0	0.0	2.03E-05	5.57E-04	4.65E-03	1.98E-02
4	2	87	86	17358.87	2	4114.81	2.4302	0.0303	0.0	1.32E-06	5.51E-05	4.59E-04	1.73E-03	4.19E-03
6	4	23	22	9350.27	1	4114.85	2.4302	0.0476	2.34E-03	1.24E-01	7.58E-01	2.00E 00	3.50E 00	4.90E 00
2	0	29	30	1782.72	1	4114.90	2.4302	0.0340	7.74E 00	1.09E 01	1.09E 01	9.64E 00	8.17E 00	6.81E 00
6	4	76	75	18773.88	1	4115.45	2.4299	0.0303	0.0	6.74E-05	3.96E-03	4.05E-02	1.75E-01	4.67E-01
5	3	4	3	6372.86	1	4115.99	2.4295	0.0611	1.74E-02	2.21E-01	6.64E-01	1.14E 00	1.50E 00	1.71E 00
2	0	129	128	30062.09	1	4116.71	2.4291	0.0303	0.0	0.0	0.0	9.83E-06	1.26E-04	7.26E-04
3	1	103	102	20612.63	2	4116.72	2.4291	0.0303	0.0	0.0	3.52E-06	4.68E-05	2.41E-04	7.29E-04
6	4	24	23	9435.20	1	4116.84	2.4290	0.0457	2.17E-03	1.19E-01	7.48E-01	2.00E 00	3.52E 00	4.96E 00
4	2	17	16	4657.45	2	4117.04	2.4289	0.0585	5.84E-03	3.25E-02	6.44E-02	8.63E-02	9.63E-02	9.75E-02
5	3	95	94	22558.31	1	4117.10	2.4289	0.0303	0.0	1.67E-06	2.44E-04	4.30E-03	2.67E-02	9.24E-02
4	2	86	85	17062.69	2	4117.39	2.4287	0.0303	0.0	1.72E-06	6.70E-05	5.35E-04	1.96E-03	4.65E-03
6	4	75	74	18506.41	1	4117.47	2.4287	0.0303	0.0	8.54E-05	4.70E-03	4.63E-02	1.95E-01	5.12E-01
3	1	19	20	2942.34	1	4117.83	2.4285	0.0535	3.13E 00	7.67E 00	1.01E 01	1.06E 01	1.00E 01	9.06E 00
4	2	8	9	4429.89	1	4117.89	2.4284	0.0624	3.56E-01	1.78E 00	3.35E 00	4.35E 00	4.75E 00	4.75E 00
2	0	11	12	286.60	2	4118.42	2.4281	0.0617	3.07E-01	2.10E-01	1.46E-01	1.04E-01	7.64E-02	5.74E-02
6	4	25	24	9523.78	1	4118.75	2.4279	0.0437	2.00E-03	1.15E-01	7.35E-01	1.99E 00	3.54E 00	5.01E 00
5	3	5	4	6387.82	1	4119.38	2.4276	0.0614	2.15E-02	2.74E-01	8.26E-01	1.42E 00	1.88E 00	2.14E 00
6	4	74	73	18242.22	1	4119.42	2.4275	0.0303	0.0	1.08E-04	5.58E-03	5.29E-02	2.17E-01	5.59E-01
4	2	18	17	4718.72	2	4119.45	2.4275	0.0568	5.70E-03	3.26E-02	6.56E-02	8.87E-02	9.95E-02	1.01E-01
4	2	108	107	25248.79	1	4119.46	2.4275	0.0303	0.0	0.0	2.62E-05	6.82E-04	5.49E-03	2.28E-02
3	1	119	118	27677.16	1	4119.70	2.4274	0.0303	0.0	0.0	2.69E-06	9.90E-05	1.01E-03	4.94E-03
3	1	1	0	2096.07	2	4119.81	2.4273	0.0603	6.14E-03	9.98E-03	1.07E-02	9.93E-03	8.66E-03	7.37E-03
4	2	85	84	16769.63	2	4119.89	2.4273	0.0303	0.0	2.25E-06	8.13E-05	6.23E-04	2.22E-03	5.16E-03
3	1	102	101	20264.94	2	4120.51	2.4269	0.0303	0.0	0.0	4.44E-06	5.62E-05	2.80E-04	8.27E-04
6	4	26	25	9616.03	1	4120.59	2.4268	0.0418	1.83E-03	1.10E-01	7.19E-01	1.97E 00	3.54E 00	5.04E 00
5	3	94	93	22227.24	1	4120.66	2.4268	0.0303	0.0	2.26E-06	3.04E-04	5.11E-03	3.08E-02	1.04E-01
2	0	28	29	1668.03	1	4120.71	2.4268	0.0359	8.88E 00	1.18E 01	1.15E 01	1.00E 01	8.40E 00	6.94E 00
6	4	73	72	17981.34	1	4121.28	2.4264	0.0303	0.0	1.36E-04	6.59E-03	6.02E-02	2.41E-01	6.10E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	19	18	4783.59	2	4121.79	2.4261	0.0552	5.51E-03	3.25E-02	6.65E-02	9.07E-02	1.02E-01	1.05E-01
4	2	7	8	4395.93	1	4122.22	2.4259	0.0623	3.34E-01	1.64E 00	3.07E 00	3.96E 00	4.32E 00	4.30E 00
4	2	84	83	16479.69	2	4122.32	2.4258	0.0303	0.0	2.91E-06	9.84E-05	7.23E-04	2.51E-03	5.71E-03
6	4	27	26	9711.93	1	4122.35	2.4258	0.0398	1.66E-03	1.05E-01	7.00E-01	1.94E 00	3.53E 00	5.06E 00
5	3	6	5	6406.52	1	4122.70	2.4256	0.0617	2.52E-02	3.25E-01	9.84E-01	1.70E 00	2.25E 00	2.57E 00
2	0	10	11	242.53	2	4122.81	2.4255	0.0625	3.01E-01	2.01E-01	1.39E-01	9.84E-02	7.19E-02	5.38E-02
3	1	18	19	2866.33	1	4122.95	2.4254	0.0552	3.33E 00	7.87E 00	1.02E 01	1.06E 01	9.95E 00	8.93E 00
6	4	72	71	17723.78	1	4123.07	2.4254	0.0303	0.0	1.70E-04	7.78E-03	6.84E-02	2.68E-01	6.65E-01
2	0	128	127	29621.73	1	4123.09	2.4254	0.0303	0.0	0.0	0.0	1.25E-05	1.53E-04	8.57E-04
3	1	2	1	2099.72	2	4123.32	2.4252	0.0606	1.23E-02	2.00E-02	2.15E-02	2.00E-02	1.74E-02	1.48E-02
6	4	28	27	9811.48	1	4124.04	2.4248	0.0379	1.50E-03	9.92E-02	6.79E-01	1.91E 00	3.51E 00	5.06E 00
4	2	20	19	4852.04	2	4124.07	2.4248	0.0535	5.28E-03	3.22E-02	6.70E-02	9.24E-02	1.05E-01	1.08E-01
4	2	107	106	24875.10	1	4124.09	2.4248	0.0303	0.0	0.0	3.38E-05	8.32E-04	6.46E-03	2.62E-02
5	3	93	92	21899.26	1	4124.13	2.4248	0.0303	0.0	3.04E-06	3.77E-04	6.06E-03	3.53E-02	1.17E-01
3	1	101	100	19920.19	2	4124.22	2.4247	0.0303	0.0	0.0	5.59E-06	6.74E-05	3.25E-04	9.37E-04
4	2	83	82	16192.90	2	4124.67	2.4244	0.0303	0.0	3.77E-06	1.19E-04	8.37E-04	2.82E-03	6.31E-03
6	4	71	70	17469.54	1	4124.77	2.4244	0.0303	0.0	2.13E-04	9.15E-03	7.76E-02	2.96E-01	7.23E-01
3	1	118	117	27268.14	1	4125.24	2.4241	0.0303	0.0	0.0	3.56E-06	1.24E-04	1.21E-03	5.77E-03
6	4	29	28	9914.69	1	4125.66	2.4239	0.0359	1.35E-03	9.35E-02	6.57E-01	1.88E 00	3.47E 00	5.05E 00
5	3	7	6	6428.95	1	4125.95	2.4237	0.0620	2.87E-02	3.74E-01	1.14E 00	1.97E 00	2.61E 00	2.99E 00
4	2	21	20	4924.07	2	4126.28	2.4235	0.0515	5.03E-03	3.18E-02	6.72E-02	9.36E-02	1.07E-01	1.10E-01
6	4	70	69	17218.64	1	4126.40	2.4234	0.0303	0.0	2.65E-04	1.07E-02	8.78E-02	3.27E-01	7.85E-01
2	0	27	28	1557.12	1	4126.46	2.4234	0.0379	1.01E 01	1.27E 01	1.21E 01	1.04E 01	8.60E 00	7.06E 00
4	2	6	7	4365.74	1	4126.48	2.4234	0.0620	3.06E-01	1.48E 00	2.76E 00	3.55E 00	3.85E 00	3.83E 00
3	1	3	2	2107.00	2	4126.77	2.4232	0.0609	1.84E-02	3.00E-02	3.23E-02	3.00E-02	2.62E-02	2.23E-02
4	2	82	81	15909.25	2	4126.94	2.4231	0.0303	0.0	4.85E-06	1.43E-04	9.68E-04	3.18E-03	6.96E-03
2	0	9	10	202.12	2	4127.14	2.4230	0.0624	2.92E-01	1.91E-01	1.30E-01	9.21E-02	6.70E-02	5.00E-02
6	4	30	29	10021.54	1	4127.20	2.4229	0.0340	1.20E-03	8.77E-02	6.32E-01	1.84E 00	3.43E 00	5.03E 00
5	3	92	91	21574.38	1	4127.52	2.4228	0.0303	0.0	4.07E-06	4.68E-04	7.17E-03	4.06E-02	1.31E-01
3	1	100	99	19578.40	2	4127.86	2.4226	0.0303	0.0	0.0	7.03E-06	8.06E-05	3.76E-04	1.06E-03
6	4	69	68	16971.09	1	4127.94	2.4225	0.0303	0.0	3.29E-04	1.26E-02	9.91E-02	3.61E-01	8.51E-01
3	1	17	18	2794.11	1	4127.99	2.4225	0.0568	3.52E 00	8.04E 00	1.02E 01	1.05E 01	9.82E 00	8.77E 00
4	2	22	21	4999.68	2	4128.42	2.4222	0.0496	4.75E-03	3.11E-02	6.70E-02	9.44E-02	1.09E-01	1.13E-01
4	2	106	105	24504.34	1	4128.63	2.4221	0.0303	0.0	0.0	4.34E-05	1.01E-03	7.60E-03	3.00E-02
6	4	31	30	10132.03	1	4128.67	2.4221	0.0335	1.07E-03	8.21E-02	6.07E-01	1.79E 00	3.39E 00	5.00E 00
5	3	8	7	6455.12	1	4129.12	2.4218	0.0623	3.17E-02	4.19E-01	1.28E 00	2.23E 00	2.96E 00	3.40E 00
4	2	81	80	15628.77	2	4129.14	2.4218	0.0303	0.0	6.24E-06	1.72E-04	1.12E-03	3.57E-03	7.67E-03
2	0	127	126	29184.00	1	4129.39	2.4217	0.0303	0.0	0.0	0.0	1.58E-05	1.85E-04	1.01E-03
6	4	68	67	16726.89	1	4129.41	2.4217	0.0303	0.0	4.07E-04	1.46E-02	1.12E-01	3.97E-01	9.21E-01
6	4	32	31	10246.16	1	4130.07	2.4213	0.0331	9.40E-04	7.65E-02	5.82E-01	1.75E 00	3.33E 00	4.96E 00
3	1	4	3	2117.93	2	4130.15	2.4212	0.0611	2.42E-02	3.98E-02	4.30E-02	4.00E-02	3.50E-02	2.98E-02
4	2	23	22	5078.88	2	4130.49	2.4210	0.0476	4.46E-03	3.03E-02	6.66E-02	9.48E-02	1.10E-01	1.15E-01
4	2	5	6	4339.32	1	4130.67	2.4209	0.0617	2.74E-01	1.31E 00	2.42E 00	3.10E 00	3.36E 00	3.34E 00
3	1	117	116	26861.92	1	4130.69	2.4209	0.0303	0.0	0.0	4.70E-06	1.54E-04	1.45E-03	6.72E-03
6	4	67	66	16486.06	1	4130.79	2.4208	0.0303	0.0	5.02E-04	1.70E-02	1.26E-01	4.35E-01	9.95E-01
5	3	91	90	21252.63	1	4130.83	2.4208	0.0303	0.0	5.44E-06	5.79E-04	8.46E-03	4.64E-02	1.47E-01
4	2	80	79	15351.45	2	4131.26	2.4206	0.0303	0.0	7.99E-06	2.06E-04	1.29E-03	4.00E-03	8.44E-03
2	0	8	9	165.38	2	4131.39	2.4205	0.0624	2.78E-01	1.79E-01	1.21E-01	8.51E-02	6.17E-02	4.60E-02
6	4	33	32	10363.92	1	4131.39	2.4205	0.0326	8.24E-04	7.09E-02	5.55E-01	1.69E 00	3.27E 00	4.91E 00
3	1	99	98	19239.58	2	4131.42	2.4205	0.0303	0.0	0.0	8.81E-06	9.63E-05	4.35E-04	1.20E-03
6	4	66	65	16248.61	1	4132.10	2.4201	0.0303	0.0	6.17E-04	1.98E-02	1.41E-01	4.78E-01	1.07E 00
2	0	26	27	1449.99	1	4132.14	2.4201	0.0398	1.14E 01	1.37E 01	1.26E 01	1.07E 01	8.78E 00	7.15E 00
5	3	9	8	6485.03	1	4132.23	2.4200	0.0624	3.44E-02	4.61E-01	1.42E 00	2.48E 00	3.30E 00	3.80E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	24	23	5161.65	2	4132.49	2.4198	0.0457	4.15E-03	2.94E-02	6.58E-02	9.48E-02	1.11E-01	1.16E-01
6	4	34	33	10485.30	1	4132.63	2.4198	0.0321	7.18E-04	6.55E-02	5.27E-01	1.64E 00	3.20E 00	4.84E 00
3	1	16	17	2725.67	1	4132.97	2.4196	0.0585	3.69E 00	9.15E 00	1.02E 01	1.04E 01	9.63E 00	8.56E 00
4	2	105	104	24136.54	1	4133.08	2.4195	0.0303	0.0	0.0	5.57E-05	1.23E-03	8.92E-03	3.44E-02
4	2	79	78	15077.32	2	4133.30	2.4194	0.0303	0.0	1.02E-05	2.46E-04	1.48E-03	4.48E-03	9.27E-03
6	4	65	64	16014.55	1	4133.32	2.4194	0.0303	0.0	7.55E-04	2.29E-02	1.58E-01	5.23E-01	1.16E 00
3	1	5	4	2132.50	2	4133.47	2.4193	0.0614	2.99E-02	4.94E-02	5.36E-02	4.99E-02	4.37E-02	3.73E-02
6	4	35	34	10610.31	1	4133.80	2.4191	0.0317	6.22E-04	6.02E-02	5.00E-01	1.58E 00	3.12E 00	4.77E 00
5	3	90	89	20934.01	1	4134.05	2.4189	0.0303	0.0	7.24E-06	7.14E-04	9.97E-03	5.31E-02	1.64E-01
4	2	25	24	5247.99	2	4134.43	2.4187	0.0437	3.84E-03	2.83E-02	6.48E-02	9.45E-02	1.12E-01	1.18E-01
6	4	64	63	15783.89	1	4134.47	2.4187	0.0303	0.0	9.21E-04	2.64E-02	1.76E-01	5.71E-01	1.24E 00
4	2	4	5	4316.68	1	4134.80	2.4185	0.0614	2.37E-01	1.12E 00	2.06E 00	2.63E 00	2.85E 00	2.82E 00
6	4	36	35	10738.94	1	4134.89	2.4184	0.0312	5.35E-04	5.51E-02	4.72E-01	1.52E 00	3.04E 00	4.68E 00
3	1	98	97	18903.75	2	4134.90	2.4184	0.0303	0.0	0.0	1.10E-05	1.15E-04	5.02E-04	1.35E-03
5	3	10	9	6518.68	1	4135.26	2.4182	0.0624	3.66E-02	4.99E-01	1.55E 00	2.72E 00	3.63E 00	4.19E 00
4	2	78	77	14806.39	2	4135.27	2.4182	0.0303	0.0	1.30E-05	2.94E-04	1.69E-03	5.00E-03	1.02E-02
6	4	63	62	15556.63	1	4135.53	2.4181	0.0303	1.08E-06	1.12E-03	3.04E-02	1.96E-01	6.23E-01	1.33E 00
2	0	7	8	132.31	2	4135.59	2.4180	0.0623	2.61E-01	1.66E-01	1.11E-01	7.75E-02	5.60E-02	4.16E-02
2	0	126	125	28748.94	1	4135.60	2.4180	0.0303	0.0	0.0	0.0	2.00E-05	2.25E-04	1.19E-03
6	4	37	36	10871.18	1	4135.91	2.4178	0.0308	4.57E-04	5.02E-02	4.44E-01	1.46E 00	2.95E 00	4.59E 00
3	1	116	115	26458.50	1	4136.05	2.4178	0.0303	0.0	0.0	6.19E-06	1.91E-04	1.73E-03	7.92E-03
4	2	26	25	5337.91	2	4136.29	2.4176	0.0418	3.53E-03	2.72E-02	6.35E-02	9.39E-02	1.12E-01	1.19E-01
6	4	62	61	15332.79	1	4136.52	2.4175	0.0303	1.45E-06	1.36E-03	3.49E-02	2.18E-01	6.77E-01	1.43E 00
3	1	6	5	2150.72	2	4136.71	2.4174	0.0617	3.51E-02	5.87E-02	6.38E-02	5.97E-02	5.23E-02	4.47E-02
6	4	38	37	11007.02	1	4136.86	2.4173	0.0303	3.89E-04	4.56E-02	4.16E-01	1.39E 00	2.86E 00	4.48E 00
4	2	77	76	14538.66	2	4137.16	2.4171	0.0303	0.0	1.64E-05	3.49E-04	1.94E-03	5.59E-03	1.11E-02
5	3	89	88	20618.54	1	4137.19	2.4171	0.0303	0.0	9.64E-06	8.81E-04	1.18E-02	6.07E-02	1.84E-01
6	4	61	60	15112.37	1	4137.43	2.4170	0.0303	1.95E-06	1.64E-03	3.99E-02	2.41E-01	7.35E-01	1.53E 00
4	2	104	103	23771.70	1	4137.45	2.4169	0.0303	0.0	0.0	7.12E-05	1.60E-03	1.05E-02	3.93E-02
6	4	39	38	11146.46	1	4137.72	2.4168	0.0303	3.29E-04	4.12E-02	3.89E-01	1.33E 00	2.76E 00	4.37E 00
2	0	25	26	1346.66	1	4137.75	2.4168	0.0418	1.29E 01	1.46E 01	1.32E 01	1.10E 01	8.94E 00	7.23E 00
3	1	15	16	2661.01	1	4137.88	2.4167	0.0591	3.83E 00	8.20E 00	1.01E 01	1.02E 01	9.41E 00	8.32E 00
4	2	27	26	5431.39	2	4138.09	2.4166	0.0398	3.22E-03	2.59E-02	6.20E-02	9.28E-02	1.12E-01	1.19E-01
5	3	11	10	6556.05	1	4138.23	2.4165	0.0625	3.84E-02	5.32E-01	1.67E 00	2.95E 00	3.95E 00	4.57E 00
6	4	60	59	14895.39	1	4138.26	2.4165	0.0303	2.60E-06	1.97E-03	4.56E-02	2.67E-01	7.96E-01	1.63E 00
3	1	97	96	18570.92	2	4138.30	2.4165	0.0303	0.0	0.0	1.38E-05	1.37E-04	5.79E-04	1.52E-03
6	4	40	39	11289.51	1	4138.52	2.4163	0.0303	2.76E-04	3.71E-02	3.62E-01	1.26E 00	2.66E 00	4.26E 00
4	2	3	4	4297.80	1	4138.85	2.4161	0.0611	1.96E-01	9.18E-01	1.68E 00	2.14E 00	2.31E 00	2.29E 00
4	2	76	75	14274.14	2	4138.98	2.4161	0.0303	0.0	2.08E-05	4.14E-04	2.21E-03	6.21E-03	1.22E-02
6	4	59	58	14681.85	1	4139.01	2.4160	0.0303	3.46E-06	2.36E-03	5.20E-02	2.95E-01	9.63E-01	1.74E 00
6	4	41	40	11436.14	1	4139.23	2.4159	0.0303	2.31E-04	3.32E-02	3.36E-01	1.20E 00	2.56E 00	4.14E 00
6	4	58	57	14471.76	1	4139.68	2.4156	0.0303	4.57E-06	2.82E-03	5.91E-02	3.26E-01	9.33E-01	1.86E 00
2	0	6	7	102.91	2	4139.72	2.4156	0.0620	2.39E-01	1.49E-01	9.96E-02	6.93E-02	5.00E-02	3.71E-02
4	2	28	27	5528.43	2	4139.82	2.4156	0.0379	2.92E-03	2.46E-02	6.02E-02	9.15E-02	1.11E-01	1.19E-01
6	4	42	41	11586.35	1	4139.87	2.4155	0.0303	1.92E-04	2.96E-02	3.11E-01	1.13E 00	2.46E 00	4.01E 00
3	1	7	6	2172.57	2	4139.90	2.4155	0.0620	4.00E-02	6.74E-02	7.38E-02	6.92E-02	6.08E-02	5.20E-02
5	3	88	87	20306.23	1	4140.25	2.4153	0.0303	0.0	1.28E-05	1.08E-03	1.38E-02	6.94E-02	2.06E-01
6	4	57	56	14265.13	1	4140.28	2.4153	0.0303	6.02E-06	3.36E-03	6.70E-02	3.59E-01	1.01E 00	1.97E 00
6	4	43	42	11740.14	1	4140.44	2.4152	0.0303	1.58E-04	2.64E-02	2.87E-01	1.07E 00	2.35E 00	3.88E 00
4	2	75	74	14012.86	2	4140.72	2.4150	0.0303	0.0	2.62E-05	4.90E-04	2.52E-03	6.91E-03	1.33E-02
6	4	56	55	14061.97	1	4140.79	2.4150	0.0303	7.87E-06	3.99E-03	7.58E-02	3.94E-01	1.09E 00	2.10E 00
6	4	44	43	11897.51	1	4140.93	2.4149	0.0303	1.30E-04	2.33E-02	2.64E-01	1.00E 00	2.24E 00	3.74E 00
5	3	12	11	6597.16	1	4141.12	2.4148	0.0617	3.97E-02	5.61E-01	1.78E 00	3.16E 00	4.25E 00	4.93E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	4	55	54	13862.29	1	4141.23	2.4147	0.0303	1.02E-05	4.72E-03	8.55E-02	4.32E-01	1.17E 00	2.22E 00
3	1	115	114	26057.89	1	4141.33	2.4147	0.0303	0.0	0.0	8.13E-06	2.37E-04	2.07E-03	9.09E-03
6	4	45	44	12058.43	1	4141.34	2.4147	0.0303	1.06E-04	2.06E-02	2.42E-01	9.41E-01	2.14E 00	3.60E 00
4	2	29	28	5629.04	2	4141.48	2.4146	0.0359	2.63E-03	2.33E-02	5.83E-02	8.99E-02	1.10E-01	1.19E-01
6	4	54	53	13666.09	1	4141.59	2.4145	0.0303	1.33E-05	5.57E-03	9.61E-02	4.72E-01	1.25E 00	2.35E 00
3	1	96	95	18241.11	2	4141.62	2.4145	0.0303	0.0	0.0	1.71E-05	1.62E-04	6.66E-04	1.71E-03
6	4	46	45	12222.92	1	4141.68	2.4145	0.0303	8.61E-05	1.81E-02	2.21E-01	8.81E-01	2.03E 00	3.46E 00
2	0	125	124	28316.55	1	4141.72	2.4145	0.0303	0.0	0.0	0.0	2.52E-05	2.72E-04	1.40E-03
4	2	103	102	23409.84	1	4141.73	2.4145	0.0303	0.0	0.0	9.09E-05	1.81E-03	1.22E-02	4.49E-02
6	4	53	52	13473.39	1	4141.87	2.4144	0.0303	1.71E-05	6.54E-03	1.08E-01	5.15E-01	1.34E 00	2.49E 00
6	4	47	46	12390.96	1	4141.93	2.4143	0.0303	6.95E-05	1.58E-02	2.01E-01	8.22E-01	1.93E 00	3.32E 00
6	4	52	51	13284.19	1	4142.07	2.4143	0.0303	2.19E-05	7.65E-03	1.20E-01	5.60E-01	1.43E 00	2.62E 00
6	4	48	47	12562.54	1	4142.12	2.4142	0.0303	5.68E-05	1.38E-02	1.83E-01	7.65E-01	1.82E 00	3.18E 00
6	4	51	50	13098.50	1	4142.20	2.4142	0.0303	2.79E-05	8.91E-03	1.34E-01	6.07E-01	1.53E 00	2.76E 00
6	4	49	48	12737.67	1	4142.22	2.4142	0.0303	4.45E-05	1.20E-02	1.65E-01	7.10E-01	1.72E 00	3.04E 00
6	4	50	49	12916.32	1	4142.25	2.4141	0.0303	3.53E-05	1.03E-02	1.49E-01	6.58E-01	1.62E 00	2.90E 00
4	2	74	73	13754.80	2	4142.38	2.4141	0.0303	0.0	3.29E-05	5.78E-04	2.87E-03	7.66E-03	1.45E-02
3	1	14	15	2600.15	1	4142.72	2.4139	0.0597	3.94E 00	8.20E 00	9.96E 00	9.95E 00	9.13E 00	8.05E 00
4	2	2	3	4282.70	1	4142.84	2.4138	0.0609	1.51E-01	7.02E-01	1.28E 00	1.63E 00	1.75E 00	1.73E 00
3	1	8	7	2198.07	2	4143.01	2.4137	0.0623	4.43E-02	7.57E-02	8.33E-02	7.84E-02	6.91E-02	5.92E-02
4	2	30	29	5733.20	2	4143.07	2.4137	0.0340	2.35E-03	2.19E-02	5.63E-02	8.81E-02	1.09E-01	1.19E-01
5	3	87	86	19997.09	1	4143.22	2.4136	0.0303	0.0	1.69E-05	1.33E-03	1.63E-02	7.91E-02	2.30E-01
2	0	24	25	1247.11	1	4143.30	2.4135	0.0437	1.43E 01	1.56E 01	1.37E 01	1.13E 01	9.07E 00	7.29E 00
2	0	5	6	77.19	2	4143.79	2.4132	0.0617	2.14E-01	1.32E-01	8.74E-02	6.06E-02	4.36E-02	3.23E-02
5	3	13	12	6642.00	1	4143.94	2.4132	0.0610	4.06E-02	5.86E-01	1.88E 00	3.36E 00	4.53E 00	5.27E 00
4	2	73	72	13499.99	2	4143.97	2.4131	0.0303	0.0	4.11E-05	6.81E-04	3.26E-03	8.48E-03	1.58E-02
4	2	31	30	5840.91	2	4144.59	2.4128	0.0335	2.10E-03	2.06E-02	5.42E-02	8.61E-02	1.08E-01	1.18E-01
3	1	95	94	17914.32	2	4144.87	2.4126	0.0303	0.0	0.0	2.13E-05	1.92E-04	7.65E-04	1.92E-03
4	2	72	71	13248.44	2	4145.49	2.4123	0.0303	0.0	5.13E-05	7.99E-04	3.69E-03	9.38E-03	1.71E-02
4	2	102	101	23050.98	1	4145.93	2.4120	0.0303	0.0	0.0	1.16E-04	2.19E-03	1.43E-02	5.12E-02
4	2	32	31	5952.17	2	4146.04	2.4119	0.0331	1.86E-03	1.92E-02	5.20E-02	8.40E-02	1.06E-01	1.18E-01
3	1	9	8	2227.21	2	4146.06	2.4119	0.0624	4.81E-02	8.33E-02	9.24E-02	8.73E-02	7.71E-02	6.62E-02
5	3	86	85	19691.13	1	4146.11	2.4119	0.0303	0.0	2.23E-05	1.63E-03	1.91E-02	9.01E-02	2.56E-01
3	1	114	113	25660.13	1	4146.53	2.4117	0.0303	0.0	0.0	1.07E-05	2.94E-04	2.47E-03	1.05E-02
5	3	14	13	6690.57	1	4146.68	2.4116	0.0604	4.10E-02	6.06E-01	1.96E 00	3.53E 00	4.80E 00	5.60E 00
4	2	1	2	4271.38	1	4146.75	2.4115	0.0606	1.03E-01	4.75E-01	8.63E-01	1.10E 00	1.18E 00	1.17E 00
4	2	71	70	13000.15	2	4146.93	2.4114	0.0303	0.0	6.37E-05	9.36E-04	4.17E-03	1.03E-02	1.86E-02
4	2	33	32	6066.97	2	4147.42	2.4111	0.0326	1.63E-03	1.79E-02	4.97E-02	8.17E-02	1.04E-01	1.16E-01
3	1	13	14	2543.08	1	4147.50	2.4111	0.0604	4.01E 00	8.12E 00	9.74E 00	9.65E 00	8.80E 00	7.73E 00
2	0	124	123	27886.86	1	4147.75	2.4109	0.0303	0.0	0.0	0.0	3.17E-05	3.29E-04	1.64E-03
2	0	4	5	55.14	2	4147.79	2.4109	0.0614	1.85E-01	1.13E-01	7.44E-02	5.14E-02	3.69E-02	2.73E-02
3	1	94	93	17590.57	2	4148.03	2.4108	0.0303	0.0	0.0	2.64E-05	2.27E-04	8.77E-04	2.16E-03
4	2	70	69	12755.13	2	4148.30	2.4106	0.0303	0.0	7.89E-05	1.00E-03	4.70E-03	1.14E-02	2.01E-02
4	2	34	33	6185.32	2	4148.73	2.4104	0.0321	1.43E-03	1.65E-02	4.74E-02	7.92E-02	1.02E-01	1.15E-01
2	0	23	24	1151.37	1	4148.78	2.4103	0.0457	1.59E 01	1.65E 01	1.42E 01	1.15E 01	9.17E 00	7.32E 00
5	3	85	84	19388.37	1	4148.92	2.4103	0.0303	0.0	2.93E-05	1.99E-03	2.23E-02	1.02E-01	2.85E-01
3	1	10	9	2259.98	2	4149.04	2.4102	0.0624	5.13E-02	9.02E-02	1.01E-01	9.58E-02	8.49E-02	7.30E-02
5	3	15	14	6742.87	1	4149.36	2.4100	0.0597	4.09E-02	6.21E-01	2.04E 00	3.70E 00	5.04E 00	5.91E 00
4	2	69	68	12513.40	2	4149.59	2.4099	0.0303	0.0	9.74E-05	1.27E-03	5.28E-03	1.25E-02	2.18E-02
4	2	35	34	6307.19	2	4149.97	2.4097	0.0317	1.24E-03	1.53E-02	4.50E-02	7.65E-02	1.00E-01	1.14E-01
4	2	101	100	22695.13	1	4150.04	2.4096	0.0303	0.0	0.0	1.47E-04	2.64E-03	1.67E-02	5.82E-02
4	2	0	1	4263.83	1	4150.60	2.4093	0.0603	5.21E-02	2.41E-01	4.36E-01	5.53E-01	5.95E-01	5.88E-01
4	2	68	67	12274.96	2	4150.80	2.4092	0.0303	0.0	1.20E-04	1.48E-03	5.93E-03	1.37E-02	2.35E-02

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	93	92	17269.87	2	4151.12	2.4090	0.0303	0.0	0.0	3.26E-05	2.68E-04	1.00E-03	2.41E-03
4	2	36	35	6432.60	2	4151.14	2.4090	0.0312	1.08E-03	1.40E-02	4.26E-02	7.37E-02	9.75E-02	1.12E-01
3	1	113	112	25265.22	1	4151.63	2.4087	0.0303	0.0	0.0	1.40E-05	3.64E-04	2.94E-03	1.22E-02
5	3	84	83	19088.83	1	4151.65	2.4087	0.0303	0.0	3.83E-05	2.43E-03	2.60E-02	1.16E-01	3.17E-01
2	0	3	4	36.76	2	4151.72	2.4086	0.0611	1.52E-01	9.24E-02	6.06E-02	4.18E-02	2.99E-02	2.21E-02
4	2	67	66	12039.83	2	4151.95	2.4085	0.0303	0.0	1.47E-04	1.71E-03	6.64E-03	1.50E-02	2.53E-02
3	1	11	10	2296.39	2	4151.96	2.4085	0.0625	5.38E-02	9.64E-02	1.09E-01	1.04E-01	9.23E-02	7.96E-02
5	3	16	15	6798.89	1	4151.96	2.4085	0.0591	4.05E-02	6.31E-01	2.10E 00	3.84E 00	5.27E 00	6.19E 00
3	1	12	13	2489.80	1	4152.20	2.4084	0.0610	4.04E 00	7.98E 00	9.45E 00	9.29E 00	8.43E 00	7.38E 00
4	2	37	36	6561.53	2	4152.24	2.4083	0.0308	9.25E-04	1.28E-02	4.02E-02	7.08E-02	9.49E-02	1.10E-01
4	2	66	65	11808.00	2	4153.01	2.4079	0.0303	1.05E-06	1.79E-04	1.98E-03	7.42E-03	1.64E-02	2.72E-02
4	2	38	37	6693.98	2	4153.27	2.4077	0.0303	7.90E-04	1.17E-02	3.78E-02	6.79E-02	9.21E-02	1.07E-01
2	0	123	122	27459.88	1	4153.69	2.4075	0.0303	0.0	0.0	1.12E-06	3.99E-05	3.98E-04	1.92E-03
4	2	65	64	11579.50	2	4154.01	2.4073	0.0303	1.42E-06	2.18E-04	2.28E-03	8.28E-03	1.79E-02	2.92E-02
4	2	100	99	22342.30	1	4154.07	2.4073	0.0303	0.0	1.35E-06	1.86E-04	3.19E-03	1.94E-02	6.62E-02
3	1	92	91	16952.23	2	4154.14	2.4072	0.0303	0.0	1.06E-06	4.02E-05	3.16E-04	1.15E-03	2.70E-03
2	0	22	23	1059.42	1	4154.19	2.4072	0.0476	1.75E 01	1.74E 01	1.46E 01	1.17E 01	9.24E 00	7.33E 00
4	2	39	38	6829.95	2	4154.23	2.4072	0.0303	6.71E-04	1.06E-02	3.54E-02	6.48E-02	8.91E-02	1.05E-01
5	3	83	82	18792.51	1	4154.30	2.4071	0.0303	0.0	5.00E-05	2.95E-03	3.03E-02	1.32E-01	3.52E-01
5	3	17	16	6858.63	1	4154.49	2.4070	0.0585	3.97E-02	6.37E-01	2.15E 00	3.96E 00	5.47E 00	6.46E 00
3	1	12	11	2336.44	2	4154.81	2.4068	0.0617	5.58E-02	1.02E-01	1.16E-01	1.11E-01	9.94E-02	8.60E-02
4	2	64	63	11354.33	2	4154.93	2.4068	0.0303	1.92E-06	2.65E-04	2.62E-03	9.21E-03	1.95E-02	3.13E-02
4	2	40	39	6969.43	2	4155.12	2.4067	0.0303	5.67E-04	9.55E-03	3.30E-02	6.18E-02	8.60E-02	1.02E-01
2	0	2	3	22.06	2	4155.60	2.4064	0.0609	1.17E-01	7.06E-02	4.61E-02	3.18E-02	2.27E-02	1.68E-02
4	2	63	62	11132.49	2	4155.77	2.4063	0.0303	2.58E-06	3.20E-04	3.00E-03	1.02E-02	2.12E-02	3.36E-02
4	2	41	40	7112.42	2	4155.94	2.4062	0.0303	4.76E-04	8.59E-03	3.08E-02	5.87E-02	8.29E-02	9.94E-02
4	2	62	61	10914.00	2	4156.55	2.4058	0.0303	3.45E-06	3.86E-04	3.43E-03	1.13E-02	2.30E-02	3.59E-02
3	1	112	111	24873.19	1	4156.65	2.4058	0.0303	0.0	0.0	1.82E-05	4.49E-04	3.49E-03	1.42E-02
4	2	42	41	7258.90	2	4156.69	2.4058	0.0303	3.98E-04	7.70E-03	2.85E-02	5.56E-02	7.97E-02	9.65E-02
3	1	11	12	2440.32	1	4156.84	2.4057	0.0617	4.03E 00	7.76E 00	9.08E 00	8.87E 00	8.01E 00	6.99E 00
5	3	82	81	18499.43	1	4156.86	2.4057	0.0303	0.0	6.51E-05	3.58E-03	3.53E-02	1.49E-01	3.90E-01
5	3	18	17	6922.10	1	4156.95	2.4056	0.0568	3.86E-02	6.38E-01	2.19E 00	4.07E 00	5.65E 00	6.70E 00
3	1	91	90	16637.68	2	4157.07	2.4055	0.0303	0.0	1.41E-06	4.95E-05	3.72E-04	1.31E-03	3.02E-03
4	2	61	60	10698.87	2	4157.24	2.4054	0.0303	4.59E-06	4.63E-04	3.91E-03	1.25E-02	2.49E-02	3.82E-02
4	2	43	42	7408.88	2	4157.36	2.4054	0.0303	3.30E-04	6.87E-03	2.64E-02	5.26E-02	7.64E-02	9.35E-02
3	1	13	12	2380.12	2	4157.59	2.4052	0.0610	5.71E-02	1.06E-01	1.22E-01	1.18E-01	1.06E-01	9.21E-02
4	2	60	59	10487.10	2	4157.87	2.4051	0.0303	6.08E-06	5.54E-04	4.45E-03	1.38E-02	2.69E-02	4.07E-02
4	2	44	43	7562.35	2	4157.97	2.4050	0.0303	2.73E-04	6.11E-03	2.43E-02	4.96E-02	7.31E-02	9.04E-02
4	2	99	98	21992.52	1	4158.01	2.4050	0.0303	0.0	1.85E-06	2.35E-04	3.83E-03	2.26E-02	7.51E-02
4	2	1	0	4260.05	1	4158.08	2.4050	0.0603	5.30E-02	2.44E-01	4.42E-01	5.61E-01	6.03E-01	5.96E-01
4	2	59	58	10278.70	2	4158.42	2.4048	0.0303	8.03E-06	6.61E-04	5.06E-03	1.52E-02	2.91E-02	4.34E-02
4	2	45	44	7719.30	2	4158.50	2.4047	0.0303	2.24E-04	5.41E-03	2.24E-02	4.66E-02	6.98E-02	8.73E-02
4	2	58	57	10073.68	2	4158.90	2.4045	0.0303	1.05E-05	7.87E-04	5.73E-03	1.67E-02	3.14E-02	4.62E-02
4	2	46	45	7879.72	2	4158.97	2.4044	0.0303	1.83E-04	4.77E-03	2.05E-02	4.37E-02	6.65E-02	8.40E-02
4	2	57	56	9872.04	2	4159.30	2.4043	0.0303	1.38E-05	9.33E-04	6.47E-03	1.84E-02	3.38E-02	4.90E-02
5	3	81	80	18209.59	1	4159.34	2.4042	0.0303	0.0	8.44E-05	4.33E-03	4.09E-02	1.68E-01	4.31E-01
5	3	19	18	6989.28	1	4159.34	2.4042	0.0552	3.72E-02	6.35E-01	2.21E 00	4.16E 00	5.81E 00	6.92E 00
4	2	47	46	8043.62	2	4159.36	2.4042	0.0303	1.49E-04	4.19E-03	1.87E-02	4.09E-02	6.32E-02	8.08E-02
2	0	1	2	11.03	2	4159.40	2.4042	0.0606	7.98E-02	4.78E-02	3.12E-02	2.14E-02	1.53E-02	1.13E-02
2	0	21	22	971.28	1	4159.54	2.4041	0.0496	1.91E 01	1.82E 01	1.49E 01	1.18E 01	9.27E 00	7.31E 00
2	0	122	121	27035.63	1	4159.55	2.4041	0.0303	0.0	0.0	1.49E-06	5.01E-05	4.79E-04	2.25E-03
4	2	56	55	9673.80	2	4159.63	2.4041	0.0303	1.79E-05	1.10E-03	7.29E-03	2.01E-02	3.63E-02	5.19E-02
4	2	48	47	8210.98	2	4159.68	2.4040	0.0303	1.20E-04	3.67E-03	1.71E-02	3.82E-02	5.99E-02	7.75E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	55	54	9478.96	2	4159.89	2.4039	0.0303	2.31E-05	1.30E-03	8.19E-03	2.20E-02	3.90E-02	5.50E-02
4	2	49	48	8381.80	2	4159.92	2.4039	0.0303	9.64E-05	3.20E-03	1.55E-02	3.55E-02	5.67E-02	7.42E-02
3	1	90	89	16326.21	2	4159.93	2.4039	0.0303	0.0	1.86E-06	6.07E-05	4.36E-04	1.49E-03	3.36E-03
4	2	54	53	9287.54	2	4160.08	2.4038	0.0303	2.97E-05	1.52E-03	9.18E-03	2.40E-02	4.17E-02	5.80E-02
4	2	50	49	8556.07	2	4160.10	2.4038	0.0303	7.70E-05	2.78E-03	1.40E-02	3.30E-02	5.35E-02	7.09E-02
4	2	53	52	9099.53	2	4160.19	2.4037	0.0303	3.80E-05	1.78E-03	1.03E-02	2.60E-02	4.45E-02	6.12E-02
4	2	51	50	8733.79	2	4160.20	2.4037	0.0303	6.12E-05	2.40E-03	1.27E-02	3.06E-02	5.04E-02	6.76E-02
4	2	52	51	8914.94	2	4160.23	2.4037	0.0303	4.84E-05	2.07E-03	1.14E-02	2.83E-02	4.74E-02	6.44E-02
3	1	14	13	2427.44	2	4160.31	2.4037	0.0604	5.78E-02	1.10E-01	1.28E-01	1.25E-01	1.12E-01	9.78E-02
3	1	10	11	2394.64	1	4161.41	2.4030	0.0625	3.96E 00	7.47E 00	8.65E 00	8.39E 00	7.55E 00	6.56E 00
3	1	111	110	24484.04	1	4161.59	2.4029	0.0303	0.0	0.0	2.38E-05	5.54E-04	4.14E-03	1.64E-02
5	3	20	19	7060.17	1	4161.65	2.4029	0.0535	3.56E-02	6.28E-01	2.22E 00	4.22E 00	5.94E 00	7.11E 00
4	2	2	1	4263.83	1	4161.71	2.4029	0.0606	1.06E-01	4.90E-01	8.87E-01	1.13E 00	1.21E 00	1.20E 00
5	3	80	79	17923.02	1	4161.74	2.4028	0.0303	0.0	1.09E-04	5.23E-03	4.74E-02	1.89E-01	4.76E-01
4	2	98	97	21645.80	1	4161.87	2.4028	0.0303	0.0	2.53E-06	2.97E-04	4.59E-03	2.62E-02	8.52E-02
3	1	89	88	16017.84	2	4162.70	2.4023	0.0303	0.0	2.46E-06	7.45E-05	5.12E-04	1.70E-03	3.75E-03
3	1	15	14	2478.38	2	4162.95	2.4021	0.0597	5.78E-02	1.13E-01	1.33E-01	1.31E-01	1.18E-01	1.03E-01
2	0	0	1	3.68	2	4163.14	2.4020	0.0603	4.05E-02	2.42E-02	1.57E-02	1.08E-02	7.72E-03	5.69E-03
5	3	21	20	7134.78	1	4163.89	2.4016	0.0515	3.37E-02	6.17E-01	2.23E 00	4.27E 00	6.06E 00	7.28E 00
5	3	79	78	17639.71	1	4164.06	2.4015	0.0303	0.0	1.40E-04	6.29E-03	5.47E-02	2.13E-01	5.25E-01
2	0	20	21	886.95	1	4164.83	2.4011	0.0515	2.07E 01	1.89E 01	1.52E 01	1.19E 01	9.27E 00	7.27E 00
4	2	3	2	4271.38	1	4165.28	2.4008	0.0609	1.58E-01	7.34E-01	1.33E 00	1.69E 00	1.82E 00	1.80E 00
2	0	121	120	26614.14	1	4165.32	2.4008	0.0303	0.0	0.0	1.99E-06	6.28E-05	5.77E-04	2.64E-03
3	1	88	87	15712.59	2	4165.41	2.4007	0.0303	0.0	3.24E-06	9.12E-05	6.00E-04	1.93E-03	4.18E-03
3	1	16	15	2532.96	2	4165.53	2.4007	0.0591	5.74E-02	1.15E-01	1.37E-01	1.36E-01	1.24E-01	1.08E-01
4	2	97	96	21302.14	1	4165.65	2.4006	0.0303	0.0	3.46E-06	3.73E-04	5.50E-03	3.03E-02	9.64E-02
3	1	9	10	2352.76	1	4165.92	2.4004	0.0624	3.85E 00	7.10E 00	8.14E 00	7.85E 00	7.04E 00	6.10E 00
5	3	22	21	7213.10	1	4166.05	2.4004	0.0496	3.17E-02	6.03E-01	2.22E 00	4.30E 00	6.14E 00	7.43E 00
5	3	78	77	17359.69	1	4166.30	2.4002	0.0303	0.0	1.80E-04	7.55E-03	6.31E-02	2.39E-01	5.78E-01
3	1	110	109	24097.80	1	4166.43	2.4001	0.0303	0.0	0.0	3.09E-05	6.81E-04	4.91E-03	1.89E-02
3	1	87	86	15410.46	2	4168.03	2.3992	0.0303	0.0	4.26E-06	1.11E-04	7.02E-04	2.20E-03	4.66E-03
3	1	17	16	2591.16	2	4168.05	2.3992	0.0585	5.64E-02	1.16E-01	1.41E-01	1.40E-01	1.28E-01	1.13E-01
5	3	23	22	7295.12	1	4168.15	2.3991	0.0476	2.96E-02	5.86E-01	2.20E 00	4.31E 00	6.21E 00	7.55E 00
5	3	77	76	17082.96	1	4168.46	2.3990	0.0303	0.0	2.31E-04	9.04E-03	7.26E-02	2.67E-01	6.36E-01
4	2	4	3	4282.70	1	4168.77	2.3988	0.0611	2.09E-01	9.74E-01	1.77E 00	2.26E 00	2.43E 00	2.41E 00
4	2	96	95	20961.57	1	4169.34	2.3985	0.0303	0.0	4.71E-06	4.68E-04	6.57E-03	3.51E-02	1.09E-01
2	0	19	20	806.42	1	4170.04	2.3981	0.0535	2.22E 01	1.96E 01	1.55E 01	1.19E 01	9.23E 00	7.20E 00
5	3	24	23	7380.84	1	4170.17	2.3980	0.0457	2.75E-02	5.66E-01	2.17E 00	4.31E 00	6.25E 00	7.65E 00
3	1	8	9	2314.69	1	4170.35	2.3979	0.0624	3.67E 00	6.66E 00	7.57E 00	7.26E 00	6.48E 00	5.61E 00
2	0	1	0	-0.0	2	4170.43	2.3978	0.0603	4.12E-02	2.45E-02	1.60E-02	1.10E-02	7.82E-03	5.76E-03
3	1	18	17	2652.99	2	4170.49	2.3978	0.0568	5.49E-02	1.17E-01	1.43E-01	1.44E-01	1.33E-01	1.17E-01
5	3	76	75	16809.55	1	4170.53	2.3978	0.0303	0.0	2.94E-04	1.08E-02	8.33E-02	2.99E-01	6.98E-01
3	1	86	85	15111.48	2	4170.58	2.3977	0.0303	0.0	5.57E-06	1.36E-04	8.20E-04	2.49E-03	5.18E-03
2	0	120	119	26195.41	1	4171.00	2.3975	0.0303	0.0	0.0	2.64E-06	7.86E-05	6.93E-04	3.08E-03
3	1	109	108	23714.48	1	4171.20	2.3974	0.0303	0.0	0.0	4.01E-05	8.36E-04	5.81E-03	2.18E-02
5	3	25	24	7470.27	1	4172.11	2.3969	0.0437	2.53E-02	5.44E-01	2.13E 00	4.28E 00	6.27E 00	7.72E 00
4	2	5	4	4297.80	1	4172.19	2.3968	0.0614	2.57E-01	1.21E 00	2.21E 00	2.82E 00	3.04E 00	3.01E 00
5	3	75	74	16539.45	1	4172.52	2.3966	0.0303	0.0	3.73E-04	1.29E-02	9.55E-02	3.34E-01	7.64E-01
3	1	19	18	2718.44	2	4172.87	2.3964	0.0552	5.31E-02	1.16E-01	1.45E-01	1.47E-01	1.37E-01	1.21E-01
4	2	95	94	20624.10	1	4172.95	2.3964	0.0303	0.0	6.40E-06	5.86E-04	7.84E-03	4.05E-02	1.23E-01
3	1	85	84	14815.63	2	4173.05	2.3963	0.0303	0.0	7.27E-06	1.65E-04	9.55E-04	2.82E-03	5.74E-03
2	0	2	1	3.68	2	4173.98	2.3958	0.0606	8.25E-02	4.92E-02	3.21E-02	2.20E-02	1.57E-02	1.16E-02
5	3	26	25	7563.39	1	4173.99	2.3958	0.0418	2.31E-02	5.20E-01	2.08E 00	4.25E 00	6.27E 00	7.77E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	3	74	73	16272.68	1	4174.44	2.3955	0.0303	0.0	4.73E-04	1.53E-02	1.09E-01	3.72E-01	8.36E-01
3	1	7	8	2280.41	1	4174.71	2.3954	0.0623	3.45E 00	6.15E 00	6.93E 00	6.62E 00	5.89E 00	5.08E 00
3	1	20	19	2787.51	2	4175.18	2.3951	0.0535	5.09E-02	1.15E-01	1.46E-01	1.50E-01	1.40E-01	1.25E-01
2	0	18	19	729.71	1	4175.19	2.3951	0.0552	2.37E 01	2.01E 01	1.56E 01	1.19E 01	9.15E 00	7.10E 00
3	1	84	83	14522.95	2	4175.45	2.3950	0.0303	0.0	9.46E-06	2.00E-04	1.11E-03	3.19E-03	6.36E-03
4	2	6	5	4316.68	1	4175.55	2.3949	0.0617	3.02E-01	1.43E 00	2.63E 00	3.36E 00	3.64E 00	3.61E 00
5	3	27	26	7660.20	1	4175.79	2.3948	0.0398	2.10E-02	4.95E-01	2.02E 00	4.19E 00	6.25E 00	7.80E 00
3	1	108	107	23334.10	1	4175.87	2.3947	0.0303	0.0	0.0	5.19E-05	1.02E-03	6.87E-03	2.51E-02
5	3	73	72	16009.24	1	4176.27	2.3945	0.0303	0.0	5.97E-04	1.81E-02	1.24E-01	4.13E-01	9.13E-01
4	2	94	93	20289.75	1	4176.47	2.3944	0.0303	0.0	8.66E-06	7.32E-04	9.33E-03	4.67E-02	1.38E-01
2	0	119	118	25779.47	1	4176.60	2.3943	0.0303	0.0	0.0	3.51E-06	9.84E-05	8.35E-04	3.60E-03
3	1	21	20	2860.19	2	4177.42	2.3938	0.0515	4.84E-02	1.14E-01	1.47E-01	1.52E-01	1.43E-01	1.28E-01
2	0	3	2	11.03	2	4177.45	2.3938	0.0609	1.23E-01	7.38E-02	4.81E-02	3.31E-02	2.37E-02	1.75E-02
5	3	28	27	7760.70	1	4177.51	2.3938	0.0379	1.89E-02	4.68E-01	1.96E 00	4.12E 00	6.21E 00	7.80E 00
3	1	83	82	14233.45	2	4177.76	2.3936	0.0303	0.0	1.23E-05	2.42E-04	1.29E-03	3.60E-03	7.04E-03
5	3	72	71	15749.16	1	4178.02	2.3935	0.0303	0.0	7.50E-04	2.14E-02	1.42E-01	4.59E-01	9.96E-01
4	2	7	6	4339.32	1	4178.83	2.3930	0.0620	3.43E-01	1.64E 00	3.04E 00	3.90E 00	4.23E 00	4.20E 00
3	1	6	7	2249.94	1	4179.01	2.3929	0.0620	3.17E 00	5.57E 00	6.23E 00	5.92E 00	5.26E 00	4.53E 00
5	3	29	28	7864.89	1	4179.16	2.3928	0.0359	1.70E-02	4.41E-01	1.90E 00	4.04E 00	6.15E 00	7.78E 00
3	1	22	21	2936.50	2	4179.59	2.3926	0.0496	4.57E-02	1.11E-01	1.46E-01	1.53E-01	1.46E-01	1.31E-01
5	3	71	70	15492.44	1	4179.69	2.3925	0.0303	0.0	9.40E-04	2.52E-02	1.61E-01	5.08E-01	1.08E 00
4	2	93	92	19958.52	1	4179.91	2.3924	0.0303	0.0	1.17E-05	9.12E-04	1.11E-02	5.38E-02	1.56E-01
3	1	82	81	13947.12	2	4180.00	2.3923	0.0303	0.0	1.58E-05	2.92E-04	1.49E-03	4.06E-03	7.78E-03
2	0	17	18	656.82	1	4180.27	2.3922	0.0568	2.51E 01	2.05E 01	1.57E 01	1.19E 01	9.03E 00	6.97E 00
3	1	107	106	22956.67	1	4180.46	2.3921	0.0303	0.0	0.0	6.70E-05	1.25E-03	8.10E-03	2.88E-02
5	3	30	29	7972.75	1	4180.74	2.3919	0.0340	1.51E-02	4.14E-01	1.82E 00	3.95E 00	6.07E 00	7.74E 00
2	0	4	3	22.06	2	4180.87	2.3918	0.0611	1.63E-01	9.80E-02	6.41E-02	4.41E-02	3.16E-02	2.33E-02
5	3	70	69	15239.10	1	4181.28	2.3916	0.0303	1.32E-06	1.17E-03	2.96E-02	1.82E-01	5.62E-01	1.18E 00
2	0	100	99	17644.22	2	4181.61	2.3914	0.0303	0.0	0.0	9.40E-06	8.17E-05	3.17E-04	7.82E-04
3	1	23	22	3016.41	2	4181.70	2.3914	0.0476	4.28E-02	1.08E-01	1.45E-01	1.54E-01	1.47E-01	1.33E-01
4	2	8	7	4365.74	1	4182.04	2.3912	0.0623	3.80E-01	1.84E 00	3.43E 00	4.41E 00	4.80E 00	4.78E 00
2	0	118	117	25366.34	1	4182.10	2.3911	0.0303	0.0	0.0	4.65E-06	1.23E-04	1.00E-03	4.21E-03
3	1	81	80	13663.99	2	4182.17	2.3911	0.0303	0.0	2.04E-05	3.51E-04	1.72E-03	4.56E-03	8.58E-03
5	3	31	30	8084.29	1	4182.24	2.3911	0.0335	1.34E-02	3.87E-01	1.75E 00	3.86E 00	5.99E 00	7.69E 00
5	3	69	68	14989.13	1	4182.80	2.3907	0.0303	1.84E-06	1.46E-03	3.47E-02	2.06E-01	6.21E-01	1.28E 00
3	1	5	6	2223.28	1	4183.24	2.3905	0.0617	2.84E 00	4.92E 00	5.47E 00	5.18E 00	4.59E 00	3.94E 00
4	2	92	91	19630.43	1	4183.27	2.3905	0.0303	0.0	1.57E-05	1.13E-03	1.31E-02	6.18E-02	1.75E-01
5	3	32	31	8199.50	1	4183.67	2.3902	0.0331	1.18E-02	3.60E-01	1.68E 00	3.75E 00	5.89E 00	7.63E 00
3	1	24	23	3099.94	2	4183.73	2.3902	0.0457	3.98E-02	1.05E-01	1.43E-01	1.54E-01	1.48E-01	1.35E-01
2	0	5	4	36.76	2	4184.22	2.3899	0.0614	2.01E-01	1.22E-01	7.98E-02	5.51E-02	3.95E-02	2.92E-02
5	3	68	67	14742.56	1	4184.23	2.3899	0.0303	2.57E-06	1.81E-03	4.05E-02	2.32E-01	6.84E-01	1.39E 00
3	1	80	79	13384.06	2	4184.26	2.3899	0.0303	0.0	2.62E-05	4.22E-04	1.99E-03	5.12E-03	9.45E-03
3	1	106	105	22582.21	1	4184.97	2.3895	0.0303	0.0	0.0	8.63E-05	1.53E-03	9.54E-03	3.31E-02
5	3	33	32	8318.38	1	4185.02	2.3895	0.0326	1.03E-02	3.33E-01	1.60E 00	3.64E 00	5.78E 00	7.54E 00
2	0	99	98	17302.17	2	4185.13	2.3894	0.0303	0.0	0.0	1.18E-05	9.77E-05	3.67E-04	8.85E-04
4	2	9	8	4395.93	1	4185.18	2.3894	0.0624	4.12E-01	2.03E 00	3.79E 00	4.91E 00	5.36E 00	5.34E 00
2	0	16	17	587.75	1	4185.28	2.3893	0.0585	2.63E 01	2.08E 01	1.56E 01	1.17E 01	8.86E 00	6.81E 00
5	3	67	66	14499.39	1	4185.58	2.3892	0.0303	3.57E-06	2.24E-03	4.72E-02	2.62E-01	7.52E-01	1.50E 00
3	1	25	24	3187.07	2	4185.70	2.3891	0.0437	3.68E-02	1.01E-01	1.41E-01	1.53E-01	1.49E-01	1.36E-01
3	1	79	78	13107.35	2	4186.27	2.3888	0.0303	0.0	3.35E-05	5.05E-04	2.29E-03	5.74E-03	1.04E-02
5	3	34	33	8440.93	1	4186.30	2.3887	0.0321	8.98E-03	3.08E-01	1.52E 00	3.52E 00	5.65E 00	7.44E 00
4	2	91	90	19305.50	1	4186.54	2.3886	0.0303	0.0	2.10E-05	1.41E-03	1.55E-02	7.08E-02	1.96E-01
5	3	66	65	14259.63	1	4186.85	2.3884	0.0303	4.93E-06	2.75E-03	5.49E-02	2.94E-01	8.25E-01	1.62E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	4	5	2200.42	1	4187.40	2.3881	0.0614	2.45E 00	4.21E 00	4.66E 00	4.40E 00	3.88E 00	3.33E 00
2	0	6	5	55.14	2	4187.50	2.3881	0.0617	2.36E-01	1.44E-01	9.51E-02	6.58E-02	4.72E-02	3.50E-02
5	3	35	34	8567.12	1	4187.51	2.3881	0.0317	7.76E-03	2.82E-01	1.44E 00	3.39E 00	5.52E 00	7.32E 00
2	0	117	116	24956.02	1	4187.52	2.3880	0.0303	0.0	0.0	6.16E-06	1.54E-04	1.20E-03	4.91E-03
3	1	26	25	3277.80	2	4187.60	2.3880	0.0418	3.37E-02	9.68E-02	1.38E-01	1.52E-01	1.49E-01	1.37E-01
5	3	65	64	14023.30	1	4188.04	2.3878	0.0303	6.78E-06	3.38E-03	6.36E-02	3.29E-01	9.03E-01	1.74E 00
3	1	78	77	12833.86	2	4188.21	2.3877	0.0303	0.0	4.27E-05	6.03E-04	2.62E-03	6.42E-03	1.14E-02
4	2	10	9	4429.89	1	4188.25	2.3876	0.0624	4.38E-01	2.19E 00	4.14E 00	5.38E 00	5.89E 00	5.89E 00
2	0	98	97	16963.14	2	4188.58	2.3874	0.0303	0.0	0.0	1.48E-05	1.17E-04	4.24E-04	1.00E-03
5	3	36	35	8696.97	1	4188.64	2.3874	0.0312	6.67E-03	2.58E-01	1.36E 00	3.26E 00	5.37E 00	7.19E 00
5	3	64	63	13790.39	1	4189.15	2.3871	0.0303	9.27E-06	4.13E-03	7.35E-02	3.68E-01	9.87E-01	1.87E 00
3	1	105	104	22210.73	1	4189.39	2.3870	0.0303	0.0	0.0	1.11E-04	1.86E-03	1.12E-02	3.79E-02
3	1	27	26	3372.13	2	4189.43	2.3870	0.0398	3.08E-02	9.24E-02	1.35E-01	1.50E-01	1.48E-01	1.38E-01
5	3	37	36	8830.47	1	4189.69	2.3868	0.0308	5.69E-03	2.35E-01	1.27E 00	3.12E 00	5.21E 00	7.04E 00
4	2	90	89	18983.73	1	4189.73	2.3868	0.0303	0.0	2.81E-05	1.74E-03	1.84E-02	8.11E-02	2.20E-01
3	1	77	76	12563.62	2	4190.07	2.3866	0.0303	0.0	5.43E-05	7.19E-04	3.01E-03	7.17E-03	1.25E-02
5	3	63	62	13560.93	1	4190.19	2.3865	0.0303	1.26E-05	5.03E-03	8.47E-02	4.10E-01	1.08E 00	2.01E 00
2	0	15	16	522.50	1	4190.23	2.3865	0.0591	2.73E 01	2.10E 01	1.55E 01	1.15E 01	8.65E 00	6.62E 00
5	3	38	37	8967.61	1	4190.67	2.3863	0.0303	4.83E-03	2.13E-01	1.19E 00	2.98E 00	5.04E 00	6.88E 00
2	0	7	6	77.19	2	4190.71	2.3862	0.0620	2.68E-01	1.66E-01	1.10E-01	7.63E-02	5.49E-02	4.07E-02
5	3	62	61	13334.93	1	4191.14	2.3860	0.0303	1.70E-05	6.10E-03	9.74E-02	4.56E-01	1.17E 00	2.16E 00
3	1	28	27	3470.06	2	4191.19	2.3860	0.0379	2.79E-02	8.77E-02	1.31E-01	1.48E-01	1.48E-01	1.38E-01
4	2	11	10	4467.62	1	4191.25	2.3859	0.0625	4.59E-01	2.34E 00	4.46E 00	5.83E 00	6.40E 00	6.42E 00
3	1	3	4	2181.37	1	4191.48	2.3858	0.0611	2.03E 00	3.45E 00	3.80E 00	3.57E 00	3.15E 00	2.70E 00
5	3	39	38	9108.38	1	4191.57	2.3857	0.0303	4.08E-03	1.92E-01	1.11E 00	2.84E 00	4.87E 00	6.71E 00
3	1	76	75	12296.62	2	4191.86	2.3856	0.0303	0.0	6.88E-05	8.54E-04	3.44E-03	7.99E-03	1.37E-02
2	0	97	96	16627.14	2	4191.95	2.3855	0.0303	0.0	0.0	1.85E-05	1.39E-04	4.89E-04	1.13E-03
5	3	61	60	13112.37	1	4192.01	2.3855	0.0303	2.29E-05	7.37E-03	1.12E-01	5.06E-01	1.27E 00	2.31E 00
5	3	40	39	9252.79	1	4192.40	2.3853	0.0303	3.42E-03	1.73E-01	1.04E 00	2.70E 00	4.69E 00	6.53E 00
5	3	60	59	12893.29	1	4192.81	2.3850	0.0303	3.07E-05	8.88E-03	1.28E-01	5.61E-01	1.38E 00	2.47E 00
4	2	89	88	18665.15	1	4192.84	2.3850	0.0303	0.0	3.75E-05	2.15E-03	2.17E-02	9.29E-02	2.46E-01
2	0	116	115	24548.55	1	4192.86	2.3850	0.0303	0.0	0.0	8.14E-06	1.92E-04	1.44E-03	5.73E-03
3	1	29	28	3571.58	2	4192.88	2.3850	0.0359	2.51E-02	8.28E-02	1.27E-01	1.46E-01	1.46E-01	1.38E-01
5	3	41	40	9400.82	1	4193.15	2.3848	0.0303	2.85E-03	1.55E-01	9.62E-01	2.56E 00	4.51E 00	6.34E 00
5	3	59	58	12677.69	1	4193.53	2.3846	0.0303	4.09E-05	1.07E-02	1.46E-01	6.21E-01	1.50E 00	2.64E 00
3	1	75	74	12032.87	2	4193.57	2.3846	0.0303	0.0	8.68E-05	1.01E-03	3.92E-03	8.89E-03	1.49E-02
3	1	104	103	21842.26	1	4193.72	2.3845	0.0303	0.0	1.16E-06	1.42E-04	2.27E-03	1.32E-02	4.34E-02
5	3	42	41	9552.46	1	4193.82	2.3845	0.0303	2.36E-03	1.38E-01	8.89E-01	2.42E 00	4.32E 00	6.14E 00
2	0	8	7	102.91	2	4193.86	2.3844	0.0623	2.97E-01	1.86E-01	1.24E-01	8.65E-02	6.24E-02	4.63E-02
4	2	12	11	4509.11	1	4194.17	2.3843	0.0617	4.75E-01	2.47E 00	4.75E 00	6.25E 00	6.89E 00	6.93E 00
5	3	58	57	12465.57	1	4194.17	2.3843	0.0303	5.42E-05	1.28E-02	1.66E-01	6.86E-01	1.62E 00	2.81E 00
5	3	43	42	9707.73	1	4194.42	2.3841	0.0303	1.95E-03	1.22E-01	8.19E-01	2.28E 00	4.13E 00	5.93E 00
3	1	30	29	3676.69	2	4194.50	2.3841	0.0340	2.24E-02	7.78E-02	1.22E-01	1.42E-01	1.45E-01	1.37E-01
5	3	57	56	12256.95	1	4194.73	2.3839	0.0303	7.16E-05	1.53E-02	1.88E-01	7.56E-01	1.75E 00	3.00E 00
5	3	44	43	9866.59	1	4194.94	2.3838	0.0303	1.59E-03	1.08E-01	7.52E-01	2.14E 00	3.94E 00	5.72E 00
2	0	14	15	461.08	1	4195.11	2.3837	0.0597	2.81E 01	2.10E 01	1.53E 01	1.12E 01	8.40E 00	6.40E 00
3	1	74	73	11772.40	2	4195.20	2.3837	0.0303	0.0	1.09E-04	1.20E-03	4.47E-03	9.87E-03	1.63E-02
5	3	56	55	12051.84	1	4195.21	2.3837	0.0303	9.39E-05	1.82E-02	2.13E-01	8.31E-01	1.80E 00	3.19E 00
2	0	96	95	16294.18	2	4195.25	2.3836	0.0303	0.0	0.0	2.31E-05	1.65E-04	5.64E-04	1.27E-03
5	3	45	44	10029.06	1	4195.39	2.3836	0.0303	1.30E-03	9.53E-02	6.89E-01	2.01E 00	3.76E 00	5.51E 00
3	1	2	3	2166.13	1	4195.50	2.3835	0.0609	1.56E 00	2.64E 00	2.89E 00	2.72E 00	2.39E 00	2.05E 00
5	3	55	54	11850.23	1	4195.61	2.3834	0.0303	1.23E-04	2.15E-02	2.41E-01	9.12E-01	2.07E 00	3.38E 00
5	3	46	45	10195.12	1	4195.76	2.3834	0.0303	1.05E-03	8.36E-02	6.29E-01	1.88E 00	3.57E 00	5.29E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES

CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	88	87	18349.76	1	4195.87	2.3833	0.0303	0.0	4.99E-05	2.65E-03	2.56E-02	1.06E-01	2.76E-01
5	3	54	53	11652.14	1	4195.94	2.3833	0.0303	1.59E-04	2.54E-02	2.71E-01	9.98E-01	2.18E 00	3.58E 00
3	1	31	30	3785.38	2	4196.05	2.3832	0.0335	1.99E-02	7.30E-02	1.18E-01	1.39E-01	1.43E-01	1.37E-01
5	3	47	46	10364.77	1	4196.05	2.3832	0.0303	8.47E-04	7.30E-02	5.72E-01	1.75E 00	3.38E 00	5.08E 00
5	3	53	52	11457.59	1	4196.19	2.3831	0.0303	2.05E-04	2.99E-02	3.04E-01	1.09E 00	2.34E 00	3.78E 00
5	3	48	47	10538.00	1	4196.27	2.3831	0.0303	6.79E-04	6.35E-02	5.19E-01	1.63E 00	3.20E 00	4.86E 00
5	3	52	51	11266.57	1	4196.36	2.3830	0.0303	2.64E-04	3.50E-02	3.41E-01	1.19E 00	2.50E 00	3.99E 00
5	3	49	48	10714.80	1	4196.40	2.3830	0.0303	5.40E-04	5.51E-02	4.69E-01	1.51E 00	3.02E 00	4.64E 00
5	3	51	50	11079.09	1	4196.45	2.3830	0.0303	3.37E-04	4.09E-02	3.80E-01	1.29E 00	2.67E 00	4.21E 00
5	3	50	49	10895.17	1	4196.47	2.3830	0.0303	4.28E-04	4.76E-02	4.23E-01	1.40E 00	2.84E 00	4.42E 00
3	1	73	72	11515.21	2	4196.76	2.3828	0.0303	0.0	1.37E-04	1.41E-03	5.08E-03	1.09E-02	1.78E-02
2	0	9	8	132.31	2	4196.94	2.3827	0.0624	3.23E-01	2.05E-01	1.38E-01	9.62E-02	6.96E-02	5.18E-02
4	2	13	12	4554.37	1	4197.02	2.3826	0.0610	4.85E-01	2.58E 00	5.01E 00	6.63E 00	7.35E 00	7.41E 00
3	1	32	31	3897.66	2	4197.53	2.3824	0.0331	1.76E-02	6.81E-02	1.13E-01	1.36E-01	1.41E-01	1.36E-01
3	1	103	102	21476.80	1	4197.97	2.3821	0.0303	0.0	1.62E-06	1.82E-04	2.75E-03	1.54E-02	4.97E-02
2	0	115	114	24143.93	1	4198.10	2.3820	0.0303	0.0	0.0	1.07E-05	2.38E-04	1.73E-03	6.67E-03
3	1	72	71	11261.30	2	4198.25	2.3819	0.0303	1.30E-06	1.71E-04	1.66E-03	5.75E-03	1.21E-02	1.93E-02
2	0	95	94	15964.29	2	4198.46	2.3818	0.0303	0.0	0.0	2.88E-05	1.96E-04	6.49E-04	1.43E-03
4	2	87	86	18037.58	1	4198.81	2.3816	0.0303	0.0	6.62E-05	3.26E-03	3.01E-02	1.21E-01	3.08E-01
3	1	33	32	4013.51	2	4198.95	2.3815	0.0326	1.55E-02	6.33E-02	1.08E-01	1.32E-01	1.39E-01	1.35E-01
3	1	1	2	2154.70	1	4199.45	2.3813	0.0606	1.06E 00	1.79E 00	1.95E 00	1.83E 00	1.61E 00	1.38E 00
3	1	71	70	11010.69	2	4199.66	2.3811	0.0303	1.82E-06	2.13E-04	1.94E-03	6.51E-03	1.34E-02	2.10E-02
4	2	14	13	4603.40	1	4199.81	2.3811	0.0604	4.89E-01	2.66E 00	5.24E 00	6.99E 00	7.77E 00	7.87E 00
2	0	13	14	403.48	1	4199.92	2.3810	0.0604	2.87E 01	2.08E 01	1.50E 01	1.09E 01	8.11E 00	6.15E 00
2	0	10	9	165.38	2	4199.96	2.3810	0.0624	3.44E-01	2.22E-01	1.50E-01	1.06E-01	7.66E-02	5.72E-02
3	1	34	33	4132.93	2	4200.29	2.3808	0.0321	1.36E-02	5.86E-02	1.03E-01	1.28E-01	1.36E-01	1.33E-01
3	1	70	69	10763.38	2	4200.99	2.3804	0.0303	2.54E-06	2.65E-04	2.27E-03	7.35E-03	1.47E-02	2.27E-02
3	1	35	34	4255.91	2	4201.56	2.3801	0.0317	1.18E-02	5.40E-02	9.75E-02	1.23E-01	1.33E-01	1.31E-01
2	0	94	93	15637.47	2	4201.60	2.3800	0.0303	0.0	1.29E-06	3.57E-05	2.33E-04	7.45E-04	1.60E-03
4	2	86	85	17728.62	1	4201.67	2.3800	0.0303	0.0	8.75E-05	4.01E-03	3.53E-02	1.38E-01	3.44E-01
3	1	102	101	21114.38	1	4202.14	2.3797	0.0303	0.0	2.25E-06	2.32E-04	3.33E-03	1.81E-02	5.67E-02
3	1	69	68	10519.39	2	4202.25	2.3797	0.0303	3.54E-06	3.27E-04	2.65E-03	8.28E-03	1.62E-02	2.46E-02
4	2	15	14	4656.18	1	4202.52	2.3795	0.0597	4.89E-01	2.73E 00	5.43E 00	7.31E 00	8.17E 00	8.30E 00
3	1	36	35	4382.47	2	4202.76	2.3794	0.0312	1.02E-02	4.95E-02	9.22E-02	1.19E-01	1.29E-01	1.29E-01
2	0	11	10	202.12	2	4202.91	2.3793	0.0625	3.61E-01	2.37E-01	1.62E-01	1.14E-01	8.33E-02	6.23E-02
2	0	114	113	23742.18	1	4203.27	2.3791	0.0303	0.0	0.0	1.41E-05	2.96E-04	2.06E-03	7.75E-03
3	1	0	1	2147.08	1	4203.33	2.3791	0.0603	5.40E-01	9.04E-01	9.87E-01	9.25E-01	8.13E-01	6.95E-01
3	1	68	67	10278.73	2	4203.44	2.3790	0.0303	4.89E-06	4.03E-04	3.09E-03	9.30E-03	1.78E-02	2.66E-02
3	1	37	36	4512.58	2	4203.90	2.3787	0.0308	8.72E-03	4.52E-02	8.69E-02	1.14E-01	1.26E-01	1.26E-01
4	2	85	84	17422.89	1	4204.45	2.3784	0.0303	0.0	1.15E-04	4.90E-03	4.14E-02	1.57E-01	3.84E-01
3	1	67	66	10041.41	2	4204.55	2.3784	0.0303	6.74E-06	4.95E-04	3.58E-03	1.04E-02	1.95E-02	2.87E-02
2	0	12	13	349.72	1	4204.66	2.3783	0.0610	2.89E 01	2.04E 01	1.45E 01	1.05E 01	7.77E 00	5.87E 00
2	0	93	92	15313.73	2	4204.66	2.3783	0.0303	0.0	1.73E-06	4.42E-05	2.75E-04	8.54E-04	1.80E-03
3	1	38	37	4646.24	2	4204.96	2.3781	0.0303	7.44E-03	4.12E-02	8.16E-02	1.09E-01	1.22E-01	1.24E-01
4	2	16	15	4712.73	1	4205.15	2.3780	0.0591	4.83E-01	2.77E 00	5.60E 00	7.59E 00	8.53E 00	8.70E 00
3	1	66	65	9807.43	2	4205.58	2.3778	0.0303	9.22E-06	6.06E-04	4.15E-03	1.17E-02	2.14E-02	3.08E-02
2	0	12	11	242.53	2	4205.79	2.3777	0.0617	3.74E-01	2.50E-01	1.73E-01	1.23E-01	8.97E-02	6.73E-02
3	1	39	38	4783.45	2	4205.95	2.3776	0.0303	6.31E-03	3.73E-02	7.64E-02	1.04E-01	1.18E-01	1.21E-01
3	1	101	100	20755.00	1	4206.22	2.3774	0.0303	0.0	3.12E-06	2.96E-04	4.03E-03	2.11E-02	6.46E-02
3	1	65	64	9576.80	2	4206.55	2.3772	0.0303	1.26E-05	7.40E-04	4.78E-03	1.30E-02	2.33E-02	3.32E-02
3	1	40	39	4924.21	2	4206.87	2.3771	0.0303	5.32E-03	3.36E-02	7.13E-02	9.94E-02	1.14E-01	1.18E-01
4	2	84	83	17120.41	1	4207.14	2.3769	0.0303	0.0	1.51E-04	5.99E-03	4.84E-02	1.79E-01	4.27E-01
3	1	64	63	9349.53	2	4207.43	2.3767	0.0303	1.70E-05	8.99E-04	5.51E-03	1.45E-02	2.54E-02	3.56E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH HZ	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	92	91	14993.09	2	4207.64	2.3766	0.0303	0.0	2.31E-05	5.47E-05	7.35E-04	9.77E-04	9.91E-03
3	1	41	40	5068.50	2	4207.72	2.3766	0.0303	4.46E-03	3.02E-02	6.67E-02	9.44E-02	1.17E-01	1.14E-01
4	2	17	16	4773.03	1	4207.72	2.3766	0.0585	4.74E-01	2.79E 00	5.77E 00	7.83E 00	9.96E 00	9.07E 00
3	1	63	62	9125.64	2	4208.25	2.3763	0.0303	2.30E-05	1.09E-03	6.32E-03	1.61E-02	2.77E-02	3.81E-02
2	0	113	112	23343.33	1	4208.34	2.3762	0.0303	0.0	0.0	1.85E-05	3.67E-04	2.46E-03	9.00E-03
3	1	42	41	5216.33	2	4208.50	2.3761	0.0303	3.72E-03	2.70E-02	6.15E-02	8.94E-02	1.05E-01	1.11E-01
2	0	13	12	286.60	2	4208.60	2.3761	0.0610	3.92E-01	2.61E-01	1.82E-01	1.32E-01	9.69E-02	7.05E-02
3	1	62	61	8905.12	2	4208.99	2.3759	0.0303	3.08E-05	1.31E-03	7.27E-03	1.70E-02	3.03E-02	4.38E-02
3	1	43	42	5367.68	2	4209.21	2.3757	0.0303	3.08E-03	2.41E-02	5.60E-02	8.44E-02	1.01E-01	1.08E-01
2	0	11	12	299.78	1	4209.33	2.3757	0.0617	2.89E 01	1.90E 01	1.40E 01	1.03E 01	7.49E 00	5.54E 00
3	1	61	60	8687.99	2	4209.66	2.3755	0.0303	4.11E-05	1.58E-03	8.25E-03	1.98E-02	3.25E-02	4.38E-02
4	2	83	82	16821.19	1	4209.75	2.3754	0.0303	0.0	1.98E-04	7.30E-03	5.65E-02	2.03E-01	4.70E-01
3	1	44	43	5522.55	2	4209.85	2.3754	0.0303	2.54E-03	2.14E-02	5.23E-02	7.96E-02	9.46E-02	1.04E-01
4	2	18	17	4837.09	1	4210.21	2.3752	0.0568	4.60E-01	2.80E 00	5.82E 00	8.04E 00	9.15E 00	9.41E 00
3	1	100	99	20398.68	1	4210.22	2.3752	0.0303	0.0	4.32E-06	3.76E-04	4.96E-03	2.46E-02	7.38E-02
3	1	60	59	8474.25	2	4210.25	2.3752	0.0303	5.45E-05	1.89E-03	9.30E-03	2.18E-02	3.52E-02	4.68E-02
3	1	45	44	5680.94	2	4210.41	2.3751	0.0303	2.08E-03	1.89E-02	4.81E-02	7.49E-02	9.21E-02	1.00E-01
2	0	91	90	14675.56	2	4210.54	2.3750	0.0303	0.0	3.07E-06	6.74E-05	3.82E-04	1.12E-03	2.85E-03
3	1	59	58	8263.93	2	4210.77	2.3749	0.0303	7.22E-05	2.26E-03	1.07E-02	2.41E-02	3.80E-02	4.94E-02
3	1	1	0	2143.27	1	4210.88	2.3749	0.0603	5.49E-01	9.17E-01	1.00E 00	9.37E-01	8.24E-01	7.05E-01
3	1	46	45	5842.84	2	4210.91	2.3748	0.0303	1.70E-03	1.67E-02	4.40E-02	7.01E-02	8.77E-02	9.65E-02
3	1	58	57	8057.61	2	4211.02	2.3746	0.0303	8.50E-05	2.70E-03	1.21E-02	2.65E-02	4.11E-02	5.24E-02
3	1	47	46	6008.24	2	4211.33	2.3745	0.0303	1.37E-03	1.45E-02	4.02E-02	6.55E-02	8.33E-02	9.27E-02
2	0	14	13	334.34	2	4211.35	2.3745	0.0604	3.87E-01	2.71E-01	1.91E-01	1.37E-01	1.01E-01	7.65E-02
3	1	57	56	7853.51	2	4211.59	2.3744	0.0303	1.24E-04	3.21E-03	1.37E-02	2.99E-02	4.37E-02	5.50E-02
3	1	48	47	6177.14	2	4211.68	2.3743	0.0303	1.11E-03	1.28E-02	3.66E-02	6.11E-02	7.90E-02	8.89E-02
3	1	56	55	7653.44	2	4211.89	2.3742	0.0303	1.62E-04	3.79E-03	1.55E-02	3.20E-02	4.74E-02	5.93E-02
3	1	49	48	6349.53	2	4211.96	2.3742	0.0303	8.88E-04	1.11E-02	3.32E-02	5.68E-02	7.46E-02	8.50E-02
3	1	55	54	7456.80	2	4212.12	2.3741	0.0303	2.17E-04	4.47E-03	1.74E-02	3.40E-02	5.11E-02	6.28E-02
3	1	50	49	6525.41	2	4212.17	2.3741	0.0303	7.08E-04	9.64E-03	3.02E-02	5.27E-02	7.04E-02	8.12E-02
3	1	54	53	7263.61	2	4212.27	2.3740	0.0303	2.71E-04	5.26E-03	1.95E-02	3.81E-02	5.47E-02	6.67E-02
4	2	82	81	16525.24	1	4212.28	2.3740	0.0303	0.0	2.58E-04	8.96E-03	6.57E-02	2.30E-01	5.26E-01
3	1	51	50	6704.76	2	4212.30	2.3740	0.0303	5.61E-04	8.33E-03	2.71E-02	4.88E-02	6.63E-02	7.76E-02
3	1	53	52	7073.87	2	4212.35	2.3740	0.0303	3.47E-04	6.15E-03	2.18E-02	4.15E-02	5.84E-02	7.00E-02
3	1	52	51	6887.58	2	4212.36	2.3740	0.0303	4.42E-04	7.17E-03	2.43E-02	4.50E-02	6.27E-02	7.37E-02
4	2	19	18	4904.90	1	4212.63	2.3739	0.0552	4.43E-01	2.78E 00	5.80E 00	8.21E 00	9.42E 00	9.71E 00
2	0	112	111	22947.38	1	4213.33	2.3734	0.0303	0.0	0.0	2.42E-05	4.54E-04	2.97E-03	1.04E-02
2	0	90	89	14361.15	2	4213.37	2.3734	0.0303	0.0	4.07E-06	9.20E-05	4.49E-04	1.27E-03	2.51E-03
2	0	10	11	253.68	1	4213.94	2.3731	0.0525	2.94E 01	1.92E 01	1.32E 01	9.49E 00	6.96E 00	5.27E 00
2	0	15	14	385.75	2	4214.03	2.3730	0.0597	3.97E-01	2.78E-01	1.99E-01	1.44E-01	1.07E-01	8.08E-02
3	1	99	98	20045.44	1	4214.13	2.3730	0.0303	0.0	5.96E-04	4.76E-04	5.86E-03	2.97E-02	8.36E-02
3	1	2	1	2147.08	1	4214.55	2.3727	0.0606	1.10E 00	1.94E 00	2.01E 00	1.88E 00	1.66E 00	1.42E 00
4	2	81	80	16232.57	1	4214.73	2.3726	0.0303	0.0	3.36E-04	1.07E-02	7.64E-02	2.59E-01	5.82E-01
4	2	20	19	4976.46	1	4214.99	2.3725	0.0535	4.23E-01	2.75E 00	5.82E 00	8.34E 00	9.62E 00	9.90E 00
2	0	89	88	14049.67	2	4216.11	2.3719	0.0303	0.0	5.30E-06	1.02E-04	5.29E-04	1.46E-03	2.81E-03
2	0	16	15	440.81	2	4216.64	2.3716	0.0591	3.84E-01	2.82E-01	2.08E-01	1.52E-01	1.11E-01	8.08E-02
4	2	80	79	15943.20	1	4217.10	2.3713	0.0303	0.0	4.35E-04	1.30E-02	8.86E-02	2.97E-01	6.68E-01
4	2	21	20	5051.77	1	4217.25	2.3712	0.0515	4.01E-01	2.70E 00	5.92E 00	8.63E 00	9.79E 00	1.02E 01
3	1	98	97	19695.29	1	4217.96	2.3708	0.0303	0.0	8.19E-06	6.01E-04	7.84E-03	3.37E-02	9.40E-02
3	1	3	2	2154.70	1	4218.15	2.3707	0.0609	1.64E 00	2.76E 00	3.02E 00	2.83E 00	2.40E 00	2.13E 00
2	0	111	110	22554.35	1	4218.23	2.3707	0.0303	0.0	0.0	3.17E-05	5.60E-04	3.40E-03	1.31E-02
2	0	9	10	211.42	1	4218.48	2.3705	0.0624	2.76E 01	1.92E 01	1.25E 01	8.88E 00	6.40E 00	4.86E 00
2	0	88	87	13741.75	2	4218.79	2.3703	0.0303	0.0	7.12E-06	1.28E-04	6.23E-04	1.66E-03	3.13E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	17	16	499.54	2	4219.19	2.3701	0.0585	3.77E-01	2.85E-01	2.09E-01	1.55E-01	1.16E-01	8.84E-02
4	2	79	78	15657.13	1	4219.39	2.3700	0.0303	0.0	5.62E-04	1.57E-02	1.03E-01	3.29E-01	7.11E-01
4	2	22	21	5130.82	1	4219.45	2.3700	0.0496	3.77E-01	2.64E 00	5.89E 00	8.49E 00	9.93E 00	1.04E 01
2	0	87	86	13436.77	2	4221.38	2.3689	0.0303	0.0	9.38E-06	1.53E-04	7.27E-04	1.99E-03	3.49E-03
4	2	23	22	5213.61	1	4221.58	2.3688	0.0476	3.51E-01	2.56E 00	5.84E 00	8.51E 00	1.00E 01	1.06E 01
4	2	78	77	15374.38	1	4221.59	2.3688	0.0303	0.0	7.23E-04	1.88E-02	1.18E-01	3.70E-01	7.84E-01
2	0	18	17	561.92	2	4221.67	2.3687	0.0568	3.67E-01	2.86E-01	2.13E-01	1.50E-01	1.02E-01	9.18E-02
3	1	4	3	2166.13	1	4221.68	2.3687	0.0511	2.17E 00	3.66E 00	4.02E 00	3.77E 00	3.32E 00	2.85E 00
3	1	97	96	19348.24	1	4221.70	2.3687	0.0303	0.0	1.12E-05	7.58E-04	8.45E-03	3.87E-02	1.08E-01
2	0	8	9	172.99	1	4222.94	2.3680	0.0624	2.63E 01	1.71E 01	1.16E 01	8.22E 00	5.98E 00	4.47E 00
2	0	110	109	22164.27	1	4223.04	2.3680	0.0303	0.0	0.0	4.13E-05	6.90E-04	4.14E-03	1.40E-02
4	2	24	23	5300.14	1	4223.64	2.3676	0.0457	3.26E-01	2.47E 00	5.75E 00	8.48E 00	1.01E 01	1.07E 01
4	2	77	76	15094.96	1	4223.71	2.3676	0.0303	1.11E-06	9.27E-04	2.26E-02	1.36E-01	4.15E-01	8.62E-01
2	0	86	85	13134.97	2	4223.90	2.3675	0.0303	0.0	1.23E-05	1.87E-04	8.53E-04	2.14E-03	3.88E-03
2	0	19	18	627.96	2	4224.07	2.3674	0.0552	3.54E-01	2.85E-01	2.16E-01	1.52E-01	1.23E-01	9.49E-02
3	1	5	4	2181.37	1	4225.14	2.3668	0.0614	2.66E 00	4.54E 00	5.03E 00	4.71E 00	4.15E 00	3.56E 00
3	1	96	95	19004.32	1	4225.35	2.3667	0.0303	0.0	1.53E-05	9.54E-04	1.01E-02	4.48E-02	1.22E-01
4	2	25	24	5390.41	1	4225.62	2.3665	0.0437	2.90E-01	2.39E 00	5.65E 00	8.44E 00	1.01E 01	1.08E 01
4	2	76	75	14816.69	1	4225.75	2.3664	0.0303	1.62E-06	1.18E-03	2.70E-02	1.57E-01	4.65E-01	9.48E-01
2	0	85	84	12836.35	2	4226.34	2.3661	0.0303	0.0	1.61E-05	2.28E-04	9.91E-04	2.47E-03	4.31E-03
2	0	20	19	697.65	2	4226.42	2.3661	0.0535	3.39E-01	2.82E-01	2.17E-01	1.65E-01	1.26E-01	9.76E-02
2	0	7	8	138.40	1	4227.35	2.3655	0.0623	2.47E 01	1.58E 01	1.07E 01	7.49E 00	5.43E 00	4.05E 00
4	2	26	25	5484.40	1	4227.53	2.3654	0.0418	2.73E-01	2.27E 00	5.52E 00	8.36E 00	1.01E 01	1.09E 01
4	2	75	74	14546.17	1	4227.72	2.3653	0.0303	2.35E-06	1.51E-03	3.22E-02	1.80E-01	5.19E-01	1.04E 00
2	0	109	108	21777.14	1	4227.77	2.3653	0.0303	0.0	0.0	5.38E-05	8.49E-04	4.91E-03	1.61E-02
3	1	6	5	2200.42	1	4228.53	2.3649	0.0617	3.13E 00	5.38E 00	5.95E 00	5.62E 00	4.97E 00	4.27E 00
2	0	21	20	771.00	2	4228.69	2.3648	0.0515	3.22E-01	2.78E-01	2.18E-01	1.67E-01	1.20E-01	1.00E-01
2	0	84	83	12540.93	2	4228.70	2.3648	0.0303	0.0	2.10E-05	2.76E-04	1.15E-03	2.75E-03	4.70E-03
3	1	95	94	18663.53	1	4228.93	2.3647	0.0303	0.0	2.09E-05	1.20E-03	1.21E-02	6.18E-02	1.37E-01
4	2	27	26	5582.12	1	4229.36	2.3644	0.0398	2.48E-01	2.16E 00	5.37E 00	8.25E 00	1.01E 01	1.09E 01
4	2	74	73	14276.81	1	4229.60	2.3643	0.0303	3.40E-06	1.91E-03	3.83E-02	2.06E-01	6.79E-01	1.14E 00
2	0	22	21	847.99	2	4230.90	2.3636	0.0496	3.04E-01	2.72E-01	2.17E-01	1.68E-01	1.31E-01	1.02E-01
2	0	83	82	12248.70	2	4230.90	2.3635	0.0303	0.0	2.73E-05	3.35E-04	1.34E-03	3.10E-03	5.30E-03
4	2	28	27	5683.57	1	4231.12	2.3634	0.0379	2.23E-01	2.04E 00	5.20E 00	8.12E 00	1.00E 01	1.09E 01
4	2	73	72	14010.82	1	4231.39	2.3633	0.0303	4.89E-06	2.42E-03	4.55E-02	2.35E-01	6.45E-01	1.24E 00
2	0	6	7	107.65	1	4231.68	2.3631	0.0620	2.27E 01	1.43E 01	9.59E 00	6.70E 00	4.85E 00	3.61E 00
3	1	7	6	2223.28	1	4231.85	2.3630	0.0620	3.56E 00	6.18E 00	6.87E 00	6.52E 00	5.77E 00	4.97E 00
2	0	108	107	21392.93	1	4232.42	2.3627	0.0303	0.0	0.0	6.98E-05	1.04E-03	5.81E-03	1.86E-02
3	1	94	93	18325.69	1	4232.42	2.3627	0.0303	0.0	2.83E-05	1.50E-03	1.44E-02	5.99E-02	1.55E-01
4	2	29	28	5798.74	1	4232.90	2.3625	0.0359	2.00E-01	1.92E 00	5.02E 00	7.95E 00	9.92E 00	1.09E 01
2	0	23	22	928.62	2	4233.03	2.3624	0.0476	2.84E-01	2.65E-01	2.15E-01	1.69E-01	1.32E-01	1.04E-01
4	2	72	71	13748.23	1	4233.11	2.3623	0.0303	6.99E-06	3.05E-03	5.38E-02	2.68E-01	7.17E-01	1.36E 00
2	0	82	81	11959.70	2	4233.20	2.3623	0.0303	0.0	3.53E-05	4.05E-04	1.55E-03	3.50E-03	5.86E-03
4	2	30	29	5897.62	1	4234.42	2.3616	0.0340	1.78E-01	1.80E 00	4.83E 00	7.77E 00	9.70E 00	1.09E 01
4	2	71	70	13489.02	1	4234.75	2.3614	0.0303	9.93E-06	3.83E-03	6.35E-02	3.05E-01	7.95E-01	1.48E 00
3	1	8	7	2249.54	1	4235.09	2.3612	0.0623	3.94E 00	6.93E 00	7.76E 00	7.39E 00	6.56E 00	5.65E 00
2	0	24	23	1012.90	2	4235.10	2.3612	0.0457	2.64E-01	2.56E-01	2.17E-01	1.69E-01	1.37E-01	1.05E-01
2	0	81	80	11673.92	2	4235.33	2.3611	0.0303	0.0	4.56E-05	4.88E-04	1.80E-03	3.94E-03	6.47E-03
3	1	93	92	17991.41	1	4235.83	2.3608	0.0303	0.0	3.83E-05	1.87E-03	1.71E-02	6.89E-02	1.75E-01
2	0	5	6	80.74	1	4235.94	2.3608	0.0617	2.03E 01	1.27E 01	8.42E 00	5.87E 00	4.23E 00	3.14E 00
4	2	31	30	6010.21	1	4235.95	2.3607	0.0335	1.57E-01	1.69E 00	4.64E 00	7.59E 00	9.66E 00	1.09E 01
4	2	70	69	13233.23	1	4236.31	2.3605	0.0303	1.40E-05	4.79E-03	7.48E-02	3.46E-01	8.80E-01	1.61E 00
2	0	107	106	21011.81	1	4236.99	2.3602	0.0303	0.0	0.0	9.03E-05	1.28E-03	6.97E-03	2.14E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	25	24	1100.81	2	4237.10	2.3601	0.0437	2.44E-01	2.47E-01	2.00E-01	1.68E-01	1.34E-01	1.06E-01
2	0	80	79	11391.37	2	4237.39	2.3599	0.0303	0.0	5.87E-05	5.97E-04	2.08E-03	4.43E-03	7.13E-03
4	2	32	31	6126.50	1	4237.41	2.3599	0.0331	1.38E-01	1.56E 00	4.43E 00	7.37E 00	9.40E 00	1.07E 01
4	2	69	68	12980.85	1	4237.79	2.3597	0.0303	1.98E-05	5.98E-03	8.78E-02	3.01E-01	9.73E-01	1.75E 00
3	1	9	8	2280.41	1	4238.27	2.3595	0.0524	4.26E 00	7.61E 00	8.59E 00	9.31E 00	7.33E 00	5.32E 00
4	2	33	32	6246.50	1	4238.80	2.3592	0.0326	1.21E-01	1.45E 00	4.22E 00	7.14E 00	9.31E 00	1.05E 01
2	0	26	25	1192.36	2	4239.03	2.3590	0.0418	2.24E-01	2.36E-01	2.05E-01	1.67E-01	1.38E-01	1.07E-01
3	1	92	91	17660.10	1	4239.16	2.3590	0.0303	0.0	5.17E-05	2.73E-03	2.04E-02	7.93E-02	1.96E-01
4	2	68	67	12731.90	1	4239.18	2.3589	0.0303	2.77E-05	7.43E-03	1.03E-01	4.40E-01	1.07E 00	1.93E 00
2	0	79	78	11112.08	2	4239.37	2.3589	0.0303	0.0	7.53E-05	7.04E-04	2.30E-03	4.97E-03	7.85E-03
4	2	34	33	6370.20	1	4240.11	2.3584	0.0321	1.05E-01	1.33E 00	4.01E 00	6.93E 00	9.10E 00	1.04E 01
2	0	4	5	57.67	1	4240.13	2.3584	0.0614	1.76E 01	1.08E 01	7.17E 00	4.28E 00	3.58E 00	2.66E 00
4	2	67	66	12486.39	1	4240.60	2.3582	0.0303	3.86E-05	9.20E-03	1.20E-01	4.98E-01	1.19E 00	2.05E 00
2	0	27	26	1287.55	2	4240.89	2.3580	0.0398	2.04E-01	2.25E-01	2.02E-01	1.65E-01	1.36E-01	1.08E-01
2	0	78	77	10836.05	2	4241.28	2.3578	0.0303	0.0	9.63E-05	8.43E-04	2.75E-03	5.55E-03	8.63E-03
4	2	35	34	6497.59	1	4241.35	2.3577	0.0317	9.06E-02	1.22E 00	3.70E 00	6.65E 00	8.85E 00	1.02E 01
3	1	10	9	2314.69	1	4241.37	2.3577	0.0624	4.54E 00	8.24E 00	9.37E 00	9.02E 00	6.95E 00	6.96E 00
2	0	106	105	20633.65	1	4241.45	2.3577	0.0303	0.0	1.27E-06	1.17E-04	1.56E-03	9.10E-03	2.46E-02
4	2	66	65	12244.32	1	4241.74	2.3575	0.0303	5.34E-05	1.13E-02	1.40E-01	5.63E-01	1.32E 00	2.22E 00
3	1	91	90	17331.98	1	4242.40	2.3572	0.0303	0.0	6.95E-05	2.89E-03	2.41E-02	9.11E-02	2.21E-01
4	2	36	35	6628.66	1	4242.52	2.3571	0.0312	7.77E-02	1.12E 00	3.57E 00	6.32E 00	8.63E 00	1.00E 01
2	0	28	27	1386.36	2	4242.68	2.3570	0.0379	1.84E-01	2.14E-01	1.94E-01	1.63E-01	1.33E-01	1.08E-01
4	2	65	64	12005.71	1	4242.90	2.3569	0.0303	7.36E-05	1.39E-02	1.62E-01	6.28E-01	1.42E 00	2.30E 00
2	0	77	76	10563.28	2	4243.11	2.3568	0.0303	1.30E-06	1.23E-04	1.01E-03	3.16E-03	6.22E-03	9.47E-03
4	2	37	36	6763.42	1	4243.60	2.3565	0.0308	6.62E-02	1.02E 00	3.36E 00	6.11E 00	8.38E 00	9.82E 00
4	2	64	63	11770.57	1	4243.98	2.3563	0.0303	1.01E-04	1.71E-02	1.88E-01	7.02E-01	1.56E 00	2.57E 00
2	0	3	4	38.45	1	4244.26	2.3561	0.0611	1.46E 01	8.87E 00	5.85E 00	4.06E 00	2.91E 00	2.15E 00
3	1	11	10	2352.76	1	4244.40	2.3560	0.0625	4.75E 00	8.70E 00	1.01E 01	9.75E 00	8.74E 00	7.50E 00
2	0	29	28	1488.80	2	4244.40	2.3560	0.0359	1.66E-01	2.02E-01	1.88E-01	1.62E-01	1.32E-01	1.08E-01
4	2	38	37	6901.85	1	4244.61	2.3559	0.0303	5.61E-02	9.19E-01	3.14E 00	5.84E 00	8.10E 00	9.61E 00
2	0	76	75	10293.79	2	4244.87	2.3558	0.0303	1.97E-06	1.56E-04	1.20E-03	3.62E-03	6.94E-03	1.04E-02
4	2	63	62	11538.91	1	4244.93	2.3557	0.0303	1.38E-04	2.08E-02	2.17E-01	7.94E-01	1.70E 00	2.77E 00
4	2	39	38	7043.96	1	4245.56	2.3554	0.0303	4.72E-02	8.29E-01	2.02E 00	5.56E 00	7.83E 00	9.36E 00
3	1	90	89	17007.07	1	4245.56	2.3554	0.0303	0.0	9.30E-05	3.50E-03	2.85E-02	1.04E-01	2.47E-01
2	0	105	104	20258.50	1	4245.84	2.3552	0.0303	0.0	1.70E-06	1.50E-04	1.91E-03	9.54E-03	2.83E-02
4	2	62	61	11310.73	1	4245.90	2.3552	0.0303	1.87E-04	2.53E-02	2.40E-01	8.74E-01	1.95E 00	2.97E 00
2	0	30	29	1594.85	2	4246.06	2.3551	0.0340	1.48E-01	1.89E-01	1.81E-01	1.56E-01	1.30E-01	1.07E-01
4	2	40	39	7189.73	1	4246.41	2.3549	0.0303	3.95E-02	7.44E-01	2.72E 00	5.28E 00	7.53E 00	9.10E 00
2	0	75	74	10027.60	2	4246.55	2.3549	0.0303	2.69E-06	1.97E-04	1.42E-03	4.13E-03	7.73E-03	1.13E-02
4	2	61	60	11086.05	1	4246.74	2.3547	0.0303	2.52E-04	3.07E-02	2.96E-01	9.71E-01	2.01E 00	3.19E 00
4	2	41	40	7339.16	1	4247.20	2.3545	0.0303	3.29E-02	6.65E-01	2.52E 00	5.02E 00	7.23E 00	8.83E 00
3	1	12	11	2394.64	1	4247.36	2.3544	0.0617	4.91E 00	8.27E 00	1.07E 01	1.04E 01	9.41E 00	8.19E 00
4	2	60	59	10864.87	1	4247.50	2.3543	0.0303	3.38E-04	3.70E-02	3.27E-01	1.08E 00	2.19E 00	3.40E 00
2	0	31	30	1704.53	2	4247.64	2.3542	0.0335	1.31E-01	1.77E-01	1.74E-01	1.53E-01	1.29E-01	1.07E-01
4	2	42	41	7492.24	1	4247.90	2.3541	0.0303	2.72E-02	5.92E-01	2.33E 00	4.72E 00	6.93E 00	8.55E 00
2	0	74	73	9764.71	2	4248.15	2.3540	0.0303	3.85E-06	2.48E-04	1.68E-03	4.71E-03	8.52E-03	1.24E-02
4	2	59	58	10647.20	1	4248.19	2.3539	0.0303	4.52E-04	4.46E-02	3.74E-01	1.10E 00	2.37E 00	3.63E 00
2	0	2	3	23.07	1	4248.31	2.3539	0.0609	1.12E 01	6.79E 00	4.46E 00	3.08E 00	2.21E 00	1.63E 00
4	2	43	42	7648.97	1	4248.54	2.3538	0.0303	2.24E-02	5.25E-01	2.15E 00	4.44E 00	6.62E 00	8.26E 00
3	1	89	88	16685.38	1	4248.63	2.3537	0.0303	0.0	1.25E-04	6.45E-03	3.38E-02	1.23E-01	2.78E-01
4	2	58	57	10433.05	1	4248.79	2.3536	0.0303	6.01E-04	5.36E-02	4.27E-01	1.32E 00	2.67E 00	3.88E 00
4	2	44	43	7809.34	1	4249.09	2.3534	0.0303	1.83E-02	4.53E-01	1.97E 00	4.17E 00	6.32E 00	7.97E 00
2	0	32	31	1817.82	2	4249.16	2.3534	0.0331	1.16E-01	1.65E-01	1.67E-01	1.49E-01	1.27E-01	1.06E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH HZ	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM/GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	2	57	56	10222.44	1	4249.32	2.3533	0.0303	7.96E-04	6.41E-02	4.86E-01	1.46E 00	2.78E 00	4.14E 00
4	2	45	44	7973.35	1	4249.57	2.3532	0.0303	1.49E-02	4.07E-01	1.80E 00	3.92E 00	6.01E 00	7.66E 00
2	0	73	72	9505.12	2	4249.68	2.3531	0.0303	5.49E-06	3.12E-04	1.09E-03	5.36E-03	9.54E-03	1.35E-02
4	2	56	55	10015.37	1	4249.77	2.3531	0.0303	1.05E-03	7.64E-02	5.51E-01	1.60E 00	3.00E 00	4.40E 00
4	2	46	45	8140.98	1	4249.98	2.3530	0.0303	1.20E-02	3.57E-01	1.64E 00	3.65E 00	6.70E 00	7.36E 00
2	0	104	103	19886.39	1	4250.14	2.3529	0.0303	0.0	2.51E-06	1.93E-04	2.33E-03	1.12E-02	3.24E-02
4	2	55	54	9811.84	1	4250.14	2.3529	0.0303	1.37E-03	9.07E-02	6.27E-01	1.76E 00	3.23E 00	4.67E 00
3	1	13	12	2440.32	1	4250.25	2.3528	0.0610	5.01E 00	9.66E 00	1.13E 01	1.11E 01	1.00E 01	8.76E 00
4	2	47	46	8312.24	1	4250.30	2.3528	0.0303	9.66E-03	3.11E-01	1.49E 00	3.40E 00	5.49E 00	7.05E 00
4	2	54	53	9611.66	1	4250.43	2.3527	0.0303	1.78E-03	1.07E-01	7.02E-01	1.93E 00	3.47E 00	4.95E 00
4	2	48	47	8487.11	1	4250.55	2.3526	0.0303	7.72E-03	2.71E-01	1.35E 00	3.16E 00	5.19E 00	6.74E 00
2	0	33	32	1934.72	2	4250.60	2.3526	0.0326	1.02E-01	1.54E-01	1.60E-01	1.44E-01	1.24E-01	1.05E-01
4	2	53	52	9415.45	1	4250.64	2.3526	0.0303	2.31E-03	1.26E-01	7.89E-01	2.10E 00	3.72E 00	5.24E 00
4	2	49	48	8665.59	1	4250.73	2.3525	0.0303	6.13E-03	2.34E-01	1.22E 00	2.93E 00	4.81E 00	6.44E 00
4	2	52	51	9222.61	1	4250.79	2.3525	0.0303	2.97E-03	1.48E-01	8.84E-01	2.29E 00	3.98E 00	5.53E 00
4	2	50	49	8847.68	1	4250.82	2.3525	0.0303	4.84E-03	2.02E-01	1.10E 00	2.73E 00	4.53E 00	6.13E 00
4	2	51	50	9033.35	1	4250.84	2.3525	0.0303	3.80E-03	1.73E-01	9.87E-01	2.49E 00	4.25E 00	5.83E 00
2	0	72	71	9248.86	2	4251.13	2.3523	0.0303	7.77E-06	3.91E-04	2.34E-03	6.28E-03	1.06E-02	1.47E-02
3	1	88	87	16366.91	1	4251.62	2.3520	0.0303	0.0	1.66E-04	5.50E-03	3.99E-02	1.37E-01	3.11E-01
2	0	34	33	2055.22	2	4251.98	2.3518	0.0321	8.89E-02	1.42E-01	1.51E-01	1.43E-01	1.22E-01	1.03E-01
2	0	1	2	11.54	1	4252.33	2.3517	0.0606	7.64E 00	4.60E 00	3.01E 00	2.38E 00	1.48E 00	1.16E 00
2	0	71	70	8995.93	2	4252.51	2.3516	0.0303	1.09E-05	4.88E-04	2.79E-03	6.89E-03	1.17E-02	1.60E-02
3	1	14	13	2489.80	1	4253.07	2.3512	0.0604	5.06E 00	9.98E 00	1.18E 01	1.17E 01	1.06E 01	9.30E 00
2	0	35	34	2179.32	2	4253.29	2.3511	0.0317	7.71E-02	1.31E-01	1.44E-01	1.35E-01	1.19E-01	1.02E-01
2	0	70	69	8746.33	2	4253.91	2.3508	0.0303	1.53E-05	6.07E-04	3.22E-03	7.79E-03	1.29E-02	1.73E-02
2	0	103	102	19517.34	1	4254.36	2.3505	0.0303	0.0	3.52E-06	2.48E-04	2.83E-03	1.32E-02	3.71E-02
2	0	36	35	2307.02	2	4254.52	2.3504	0.0312	6.64E-02	1.20E-01	1.36E-01	1.30E-01	1.16E-01	1.00E-01
3	1	87	86	16051.69	1	4254.53	2.3504	0.0303	0.0	2.21E-04	6.78E-03	4.72E-02	1.57E-01	3.08E-01
2	0	69	68	8500.09	2	4255.04	2.3502	0.0303	2.14E-05	7.52E-04	3.76E-03	8.78E-03	1.42E-02	1.88E-02
2	0	37	36	2438.31	2	4255.68	2.3499	0.0309	5.69E-02	1.09E-01	1.28E-01	1.25E-01	1.13E-01	9.83E-02
3	1	15	14	2543.08	1	4255.31	2.3497	0.0597	5.05E 00	1.02E 01	1.23E 01	1.22E 01	1.13E 01	9.91E 00
2	0	68	67	8257.20	2	4256.20	2.3495	0.0303	2.97E-05	9.29E-04	4.38E-03	9.88E-03	1.56E-02	2.03E-02
2	0	0	1	3.85	1	4256.21	2.3495	0.0603	3.88E 00	2.33E 00	1.52E 00	1.05E 00	7.51E-01	5.55E-01
2	0	38	37	2573.18	2	4256.77	2.3492	0.0303	4.85E-02	9.93E-02	1.20E-01	1.19E-01	1.09E-01	9.62E-02
2	0	67	66	8017.69	2	4257.28	2.3489	0.0303	4.10E-05	1.14E-03	5.09E-03	1.11E-02	1.71E-02	2.19E-02
3	1	86	85	15739.73	1	4257.36	2.3489	0.0303	0.0	2.93E-04	8.34E-03	5.53E-02	1.79E-01	3.89E-01
2	0	39	38	2711.64	2	4257.80	2.3486	0.0303	4.11E-02	9.99E-02	1.12E-01	1.14E-01	1.06E-01	9.30E-02
2	0	66	65	7781.55	2	4258.28	2.3484	0.0303	5.63E-05	1.40E-03	5.90E-03	1.24E-02	1.87E-02	2.36E-02
3	1	16	15	2600.15	1	4258.48	2.3483	0.0591	4.99E 00	1.06E 01	1.27E 01	1.27E 01	1.16E 01	1.03E 01
2	0	102	101	19151.35	1	4258.49	2.3483	0.0303	0.0	4.92E-06	3.17E-04	3.44E-03	1.54E-02	4.24E-02
2	0	40	39	2853.67	2	4258.75	2.3481	0.0303	3.46E-02	8.10E-02	1.05E-01	1.08E-01	1.02E-01	9.15E-02
2	0	65	64	7548.79	2	4259.21	2.3479	0.0303	7.69E-05	1.71E-03	6.82E-03	1.39E-02	2.05E-02	2.54E-02
2	0	41	40	2999.27	2	4259.63	2.3476	0.0303	2.89E-02	7.27E-02	9.72E-02	1.03E-01	9.81E-02	8.89E-02
2	0	64	63	7319.43	2	4260.07	2.3474	0.0303	1.05E-04	2.09E-03	7.36E-03	1.55E-02	2.24E-02	2.72E-02
3	1	85	84	15431.03	1	4260.10	2.3474	0.0303	0.0	3.87E-04	1.02E-02	6.49E-02	2.04E-01	4.34E-01
2	0	42	41	3148.44	2	4260.44	2.3472	0.0303	2.41E-02	6.50E-02	9.00E-02	9.73E-02	9.42E-02	8.62E-02
2	0	63	62	7093.47	2	4260.85	2.3470	0.0303	1.41E-04	2.53E-03	9.04E-03	1.72E-02	2.43E-02	2.92E-02
3	1	17	16	2661.01	1	4261.08	2.3468	0.0585	4.88E 00	1.05E 01	1.20E 01	1.31E 01	1.21E 01	1.07E 01
2	0	43	42	3301.17	2	4261.18	2.3468	0.0303	1.99E-02	5.78E-02	8.31E-02	9.19E-02	9.02E-02	8.35E-02
2	0	62	61	6870.93	2	4261.56	2.3466	0.0303	1.90E-04	3.06E-03	1.04E-02	1.91E-02	2.64E-02	3.13E-02
2	0	44	43	3457.45	2	4261.85	2.3464	0.0303	1.64E-02	5.13E-02	7.65E-02	8.65E-02	8.62E-02	8.06E-02
2	0	61	60	6651.80	2	4262.20	2.3462	0.0303	2.54E-04	3.69E-03	1.19E-02	2.12E-02	2.87E-02	3.34E-02
2	0	45	44	3617.23	2	4262.45	2.3461	0.0303	1.34E-02	4.53E-02	7.02E-02	8.12E-02	8.22E-02	7.77E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH HP	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	101	100	18788.44	1	4262.54	2.3460	0.0303	0.0	6.85E-06	4.05E-04	4.16E-03	1.81E-02	4.84E-02
2	0	60	59	6436.11	2	4262.76	2.3459	0.0303	3.30E-04	4.42E-03	1.35E-02	2.34E-02	3.10E-02	3.86E-02
3	1	84	83	15125.61	1	4262.77	2.3459	0.0303	0.0	5.10E-04	1.25E-02	7.60E-02	2.32E-01	4.84E-01
2	0	46	45	3780.65	2	4262.98	2.3458	0.0303	1.09E-02	3.98E-02	6.42E-02	7.61E-02	7.92E-02	7.48E-02
2	0	59	58	6223.85	2	4263.25	2.3456	0.0303	4.49E-04	5.30E-03	1.54E-02	2.50E-02	3.36E-02	3.80E-02
2	0	47	46	3947.55	2	4263.43	2.3455	0.0303	8.81E-03	3.49E-02	5.86E-02	7.10E-02	7.42E-02	7.12E-02
3	1	18	17	2725.67	1	4263.61	2.3454	0.0568	4.74E 00	1.05E 01	1.32E 01	1.34E 01	1.25E 01	1.11E 01
2	0	58	57	6015.03	2	4263.66	2.3454	0.0303	5.93E-04	5.33E-03	1.75E-02	2.85E-02	3.63E-02	4.05E-02
2	0	48	47	4117.99	2	4263.81	2.3453	0.0303	7.08E-03	3.04E-02	5.32E-02	6.62E-02	7.07E-02	6.88E-02
2	0	1	0	-0.0	1	4263.83	2.3453	0.0603	3.95E 00	2.36E 00	1.54E 00	1.06E 00	7.61E-01	5.62E-01
2	0	57	56	5809.67	2	4264.01	2.3452	0.0303	7.79E-04	7.53E-03	1.98E-02	3.13E-02	3.91E-02	4.30E-02
2	0	49	48	4291.95	2	4264.12	2.3452	0.0303	5.67E-03	2.65E-02	4.83E-02	6.15E-02	6.64E-02	6.58E-02
2	0	56	55	5607.77	2	4264.27	2.3451	0.0303	1.02E-03	8.93E-03	2.23E-02	3.44E-02	4.21E-02	4.57E-02
2	0	50	49	4469.43	2	4264.36	2.3450	0.0303	4.51E-03	2.29E-02	4.36E-02	5.70E-02	6.26E-02	6.28E-02
2	0	55	54	5409.33	2	4264.47	2.3450	0.0303	1.32E-03	1.05E-02	2.51E-02	3.76E-02	4.52E-02	4.84E-02
2	0	51	50	4650.41	2	4264.53	2.3449	0.0303	3.56E-03	1.98E-02	3.93E-02	5.27E-02	5.89E-02	5.98E-02
2	0	54	53	5214.37	2	4264.59	2.3449	0.0303	1.71E-03	1.24E-02	2.82E-02	4.11E-02	4.85E-02	5.11E-02
2	0	52	51	4834.91	2	4264.62	2.3449	0.0303	2.90E-03	1.70E-02	3.53E-02	4.87E-02	5.52E-02	5.69E-02
2	0	53	52	5022.89	2	4264.64	2.3449	0.0303	2.19E-03	1.46E-02	3.16E-02	4.48E-02	5.19E-02	5.40E-02
3	1	83	82	14823.48	1	4265.35	2.3445	0.0303	0.0	6.69E-04	1.53E-02	8.88E-02	2.64E-01	5.78E-01
3	1	19	18	2794.11	1	4266.07	2.3441	0.0552	4.56E 00	1.04E 01	1.37E 01	1.37E 01	1.28E 01	1.15E 01
2	0	100	99	18428.62	1	4266.50	2.3438	0.0303	0.0	9.50E-06	5.16E-04	5.03E-03	2.11E-02	3.51E-02
2	0	2	1	3.85	1	4267.54	2.3433	0.0606	7.90E 00	4.74E 00	3.10E 00	2.13E 00	1.53E 00	1.13E 00
3	1	82	81	14524.67	1	4267.94	2.3431	0.0303	1.38E-06	9.74E-04	1.86E-02	1.04E-01	2.30E-01	5.97E-01
3	1	20	19	2866.33	1	4268.45	2.3428	0.0535	4.38E 00	1.03E 01	1.34E 01	1.39E 01	1.31E 01	1.18E 01
3	1	81	80	14229.17	1	4270.26	2.3418	0.0303	2.07E-06	1.14E-03	2.26E-02	1.21E-01	3.38E-01	6.62E-01
2	0	99	98	18071.92	1	4270.38	2.3417	0.0303	0.0	1.31E-05	6.54E-04	6.07E-03	2.46E-02	4.27E-02
3	1	21	20	2942.34	1	4270.76	2.3415	0.0515	4.12E 00	1.01E 01	1.34E 01	1.41E 01	1.34E 01	1.21E 01
2	0	3	2	11.54	1	4271.17	2.3413	0.0609	1.19E 01	7.10E 00	4.65E 00	3.21E 00	2.30E 00	1.70E 00
3	1	80	79	13937.00	1	4272.60	2.3405	0.0303	3.09E-06	1.48E-03	2.74E-02	1.40E-01	3.82E-01	7.33E-01
3	1	22	21	3022.13	1	4272.99	2.3403	0.0496	3.87E 00	9.86E 00	1.37E 01	1.41E 01	1.35E 01	1.23E 01
2	0	98	97	17718.34	1	4274.18	2.3396	0.0303	0.0	1.81E-05	8.29E-04	7.31E-03	2.87E-02	7.13E-02
2	0	4	3	23.07	1	4274.74	2.3393	0.0611	1.56E 01	9.42E 00	6.19E 00	4.28E 00	3.07E 00	2.27E 00
3	1	79	78	13648.17	1	4274.95	2.3393	0.0303	4.63E-06	1.92E-03	3.30E-02	1.62E-01	4.30E-01	8.10E-01
3	1	23	22	3105.69	1	4275.16	2.3391	0.0476	3.60E 00	9.56E 00	1.32E 01	1.42E 01	1.37E 01	1.25E 01
3	1	78	77	13362.69	1	4277.32	2.3381	0.0303	6.80E-06	2.47E-03	3.98E-02	1.88E-01	4.94E-01	8.94E-01
3	1	24	23	3193.03	1	4277.24	2.3380	0.0457	3.33E 00	9.23E 00	1.30E 01	1.41E 01	1.38E 01	1.27E 01
2	0	97	96	17367.91	1	4277.89	2.3376	0.0303	0.0	2.49E-05	1.05E-03	8.79E-03	3.33E-02	8.09E-02
2	0	5	4	38.45	1	4278.23	2.3374	0.0514	1.92E 01	1.17E 01	7.70E 00	5.34E 00	3.84E 00	2.84E 00
3	1	77	76	13080.58	1	4279.11	2.3369	0.0303	1.00E-05	3.19E-03	4.78E-02	2.16E-01	5.44E-01	9.84E-01
3	1	25	24	3284.13	1	4279.26	2.3369	0.0437	3.06E 00	9.96E 00	1.27E 01	1.41E 01	1.38E 01	1.28E 01
3	1	76	75	12801.85	1	4281.12	2.3358	0.0303	1.47E-05	4.07E-03	5.73E-02	2.40E-01	6.08E-01	1.08E 00
3	1	26	25	3379.00	1	4281.23	2.3358	0.0412	2.79E 00	9.45E 00	1.24E 01	1.39E 01	1.38E 01	1.28E 01
2	0	96	95	17020.62	1	4281.52	2.3356	0.0303	0.0	3.41E-05	1.32E-03	1.05E-02	3.86E-02	9.17E-02
2	0	6	5	57.67	1	4281.65	2.3355	0.0617	2.25E 01	1.38E 01	9.17E 00	6.37E 00	4.59E 00	3.41E 00
3	1	75	74	12526.50	1	4283.05	2.3348	0.0303	2.14E-05	5.20E-03	6.85E-02	2.86E-01	6.82E-01	1.19E 00
3	1	27	26	3477.63	1	4283.07	2.3348	0.0398	2.53E 00	9.03E 00	1.21E 01	1.37E 01	1.37E 01	1.29E 01
3	1	28	27	3580.03	1	4284.86	2.3338	0.0379	2.28E 00	7.59E 00	1.17E 01	1.35E 01	1.36E 01	1.29E 01
3	1	74	73	12254.55	1	4284.89	2.3338	0.0303	3.10E-05	6.61E-03	8.16E-02	3.38E-01	7.61E-01	1.30E 00
2	0	7	6	80.74	1	4285.00	2.3337	0.0620	2.56E 01	1.59E 01	1.06E 01	7.30E 00	5.37E 00	3.96E 00
2	0	95	94	16676.52	1	4285.06	2.3337	0.0303	0.0	4.66E-05	1.66E-03	1.06E-02	4.48E-02	1.04E-01
3	1	29	28	3686.17	1	4286.54	2.3329	0.0359	2.03E 00	7.14E 00	1.17E 01	1.32E 01	1.36E 01	1.28E 01
3	1	73	72	11980.02	1	4286.66	2.3328	0.0303	4.45E-05	8.38E-03	9.70E-02	3.75E-01	8.40E-01	1.43E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	30	29	3796.07	1	4288.23	2.3320	0.0340	1.81E 00	6.68E 00	1.08E 01	1.29E 01	1.37E 01	1.28E 01
2	0	8	7	107.65	1	4288.28	2.3319	0.0623	2.83E 01	1.78E 01	1.20E 01	8.37E 00	6.06E 00	4.51E 00
3	1	72	71	11720.90	1	4288.34	2.3319	0.0303	6.40E-05	1.06E-02	1.15E-01	4.28E-01	9.44E-01	1.56E 00
2	0	94	93	16335.59	1	4288.52	2.3318	0.0303	0.0	6.35E-05	2.08E-02	1.51E-02	5.17E-02	1.17E-01
3	1	31	30	3909.71	1	4289.80	2.3311	0.0335	1.60E 00	6.23E 00	1.04E 01	1.26E 01	1.31E 01	1.27E 01
3	1	71	70	11459.21	1	4289.95	2.3310	0.0303	9.14E-05	1.33E-02	1.36E-01	4.87E-01	1.05E 00	1.70E 00
3	1	32	31	4027.09	1	4291.30	2.3303	0.0331	1.40E 00	5.79E 00	9.94E 00	1.22E 01	1.28E 01	1.26E 01
3	1	70	69	11200.97	1	4291.47	2.3302	0.0303	1.30E-04	1.67E-02	1.60E-01	5.54E-01	1.16E 00	1.85E 00
2	0	9	8	138.40	1	4291.49	2.3302	0.0624	3.06E 01	1.96E 01	1.32E 01	9.30E 00	6.76E 00	5.04E 00
2	0	93	92	15997.85	1	4291.89	2.3300	0.0303	0.0	8.61E-05	2.61E-03	1.80E-02	5.97E-02	1.32E-01
3	1	33	32	4148.21	1	4292.72	2.3295	0.0326	1.22E 00	5.35E 00	9.46E 00	1.18E 01	1.26E 01	1.24E 01
3	1	69	68	10946.18	1	4292.92	2.3294	0.0303	1.83E-04	2.09E-02	1.88E-01	6.27E-01	1.28E 00	2.01E 00
3	1	34	33	4273.06	1	4294.05	2.3288	0.0321	1.06E 00	4.93E 00	8.98E 00	1.14E 01	1.24E 01	1.22E 01
3	1	68	67	10694.65	1	4294.28	2.3287	0.0303	2.57E-04	2.60E-02	2.21E-01	7.10E-01	1.42E 00	2.18E 00
2	0	10	9	172.99	1	4294.63	2.3285	0.0624	3.26E 01	2.12E 01	1.44E 01	1.02E 01	7.43E 00	5.56E 00
2	0	92	91	15663.33	1	4295.18	2.3282	0.0303	0.0	1.16E-04	3.26E-03	2.14E-02	6.88E-02	1.40E-01
3	1	35	34	4401.64	1	4295.34	2.3281	0.0317	9.14E-01	4.52E 00	8.48E 00	1.10E 01	1.20E 01	1.20E 01
3	1	67	66	10446.99	1	4295.57	2.3280	0.0303	3.60E-04	3.23E-02	2.58E-01	8.01E-01	1.56E 00	2.36E 00
3	1	36	35	4533.94	1	4296.53	2.3275	0.0312	7.82E-01	4.12E 00	7.99E 00	1.06E 01	1.17E 01	1.18E 01
3	1	66	65	10202.62	1	4296.77	2.3273	0.0303	5.00E-04	3.99E-02	3.01E-01	9.01E-01	1.72E 00	2.56E 00
3	1	37	36	4669.95	1	4297.66	2.3268	0.0308	6.66E-01	3.74E 00	7.50E 00	1.01E 01	1.13E 01	1.16E 01
2	0	11	10	211.42	1	4297.70	2.3268	0.0625	3.41E 01	2.26E 01	1.55E 01	1.10E 01	8.08E 00	6.06E 00
3	1	65	64	9961.74	1	4297.90	2.3267	0.0303	6.91E-04	4.92E-02	3.50E-01	1.01E 00	1.89E 00	2.76E 00
2	0	91	90	15332.04	1	4298.39	2.3265	0.0303	0.0	1.57E-04	4.05E-03	2.56E-02	7.91E-02	1.67E-01
3	1	38	37	4809.68	1	4298.70	2.3263	0.0303	5.63E-01	3.38E 00	7.01E 00	9.65E 00	1.10E 01	1.13E 01
3	1	64	63	9724.36	1	4298.94	2.3262	0.0303	9.50E-04	6.03E-02	4.06E-01	1.13E 00	2.07E 00	2.97E 00
3	1	39	38	4953.12	1	4299.67	2.3258	0.0303	4.73E-01	3.05E 00	6.53E 00	9.18E 00	1.06E 01	1.10E 01
3	1	63	62	9490.49	1	4299.91	2.3256	0.0303	1.30E-03	7.38E-02	4.69E-01	1.27E 00	2.26E 00	3.20E 00
3	1	40	39	5100.25	1	4300.57	2.3253	0.0303	3.95E-01	2.73E 00	6.07E 00	8.71E 00	1.02E 01	1.07E 01
2	0	12	11	253.68	1	4300.69	2.3252	0.0617	3.52E 01	2.38E 01	1.65E 01	1.18E 01	8.69E 00	6.54E 00
3	1	62	61	9260.14	1	4300.80	2.3252	0.0303	1.77E-03	8.98E-02	5.41E-01	1.41E 00	2.46E 00	3.43E 00
3	1	41	40	5251.08	1	4301.38	2.3248	0.0303	3.28E-01	2.44E 00	5.62E 00	8.24E 00	9.78E 00	1.04E 01
2	0	90	89	15003.98	1	4301.52	2.3248	0.0303	0.0	2.11E-04	5.03E-03	3.01E-02	9.03E-02	1.88E-01
3	1	61	60	9033.32	1	4301.60	2.3247	0.0303	2.39E-03	1.09E-01	6.22E-01	1.57E 00	2.68E 00	3.68E 00
3	1	42	41	5405.60	1	4302.13	2.3244	0.0303	2.71E-01	2.17E 00	5.18E 00	7.78E 00	9.36E 00	1.00E 01
3	1	60	59	8810.04	1	4302.33	2.3243	0.0303	3.22E-03	1.32E-01	7.13E-01	1.74E 00	2.91E 00	3.94E 00
3	1	43	42	5563.60	1	4302.79	2.3241	0.0303	2.22E-01	1.92E 00	4.77E 00	7.32E 00	8.94E 00	9.68E 00
3	1	59	58	8590.31	1	4302.98	2.3240	0.0303	4.32E-03	1.59E-01	8.16E-01	1.94E 00	3.16E 00	4.21E 00
3	1	44	43	5725.68	1	4303.38	2.3238	0.0303	1.82E-01	1.69E 00	4.37E 00	6.86E 00	8.52E 00	9.33E 00
3	1	58	57	8374.14	1	4303.55	2.3237	0.0303	5.76E-03	1.91E-01	9.32E-01	2.14E 00	3.43E 00	4.50E 00
2	0	13	12	299.78	1	4303.62	2.3236	0.0610	3.59E 01	2.48E 01	1.74E 01	1.26E 01	9.26E 00	6.99E 00
3	1	45	44	5891.22	1	4303.90	2.3235	0.0303	1.47E-01	1.49E 00	3.99E 00	6.42E 00	8.10E 00	8.97E 00
3	1	57	56	8161.53	1	4304.05	2.3234	0.0303	7.65E-03	2.29E-01	1.06E 00	2.37E 00	3.71E 00	4.80E 00
3	1	46	45	6060.43	1	4304.34	2.3232	0.0303	1.19E-01	1.30E 00	3.64E 00	5.90E 00	7.69E 00	8.61E 00
3	1	56	55	7952.49	1	4304.46	2.3232	0.0303	1.01E-02	2.74E-01	1.21E 00	2.61E 00	4.01E 00	5.11E 00
2	0	89	88	14679.17	1	4304.56	2.3231	0.0303	0.0	2.83E-04	6.25E-03	3.56E-02	1.04E-01	2.11E-01
3	1	47	46	6233.30	1	4304.70	2.3230	0.0303	9.52E-02	1.13E 00	3.30E 00	5.58E 00	7.27E 00	8.24E 00
3	1	55	54	7747.04	1	4304.90	2.3230	0.0303	1.32E-02	3.26E-01	1.36E 00	2.97E 00	4.32E 00	5.43E 00
3	1	48	47	6409.82	1	4304.98	2.3229	0.0303	7.50E-02	9.83E-01	2.98E 00	5.18E 00	6.87E 00	7.88E 00
3	1	54	53	7545.17	1	4305.06	2.3228	0.0303	1.73E-02	3.86E-01	1.54E 00	3.14E 00	4.66E 00	5.76E 00
3	1	49	48	6589.96	1	4305.19	2.3228	0.0303	6.01E-02	8.49E-01	2.70E 00	4.90E 00	6.47E 00	7.51E 00
3	1	53	52	7346.91	1	4305.24	2.3228	0.0303	2.24E-02	4.55E-01	1.73E 00	3.44E 00	4.99E 00	6.12E 00
3	1	50	49	6773.78	1	4305.32	2.3227	0.0303	4.74E-02	7.31E-01	2.47E 00	4.43E 00	6.38E 00	7.15E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH HZ	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	1	52	51	7152.25	1	4305.34	2.3227	0.0303	2.89E-02	5.35E-01	1.94E 00	3.75E 00	5.34E 00	6.44E 00
3	1	51	50	6961.20	1	4305.37	2.3227	0.0303	3.71E-02	6.27E-01	2.17E 00	4.08E 00	5.72E 00	6.79E 00
2	0	14	13	349.72	1	4306.47	2.3221	0.0604	3.62E 01	2.57E 01	1.82E 01	1.32E 01	9.83E 00	7.42E 00
2	0	88	87	14357.63	1	4307.52	2.3215	0.0303	0.0	3.70E-04	7.75E-03	4.21E-02	1.20E-01	2.37E-01
2	0	15	14	403.48	1	4309.25	2.3206	0.0597	3.61E 01	2.63E 01	1.89E 01	1.38E 01	1.03E 01	7.83E 00
2	0	87	86	14039.36	1	4310.40	2.3200	0.0303	1.00E-06	5.05E-04	9.57E-03	4.98E-02	1.37E-01	2.65E-01
2	0	16	15	461.08	1	4311.95	2.3191	0.0591	3.57E 01	2.67E 01	1.95E 01	1.43E 01	1.07E 01	8.20E 00
2	0	86	85	13724.39	1	4313.19	2.3185	0.0303	1.55E-06	6.72E-04	1.10E-02	5.86E-02	1.57E-01	2.97E-01
2	0	17	16	522.50	1	4314.59	2.3177	0.0585	3.49E 01	2.69E 01	1.99E 01	1.48E 01	1.12E 01	8.55E 00
2	0	85	84	13412.71	1	4315.93	2.3170	0.0303	2.39E-06	8.90E-04	1.45E-02	6.99E-02	1.79E-01	3.32E-01
2	0	18	17	587.75	1	4317.15	2.3163	0.0569	3.39E 01	2.69E 01	2.02E 01	1.52E 01	1.15E 01	8.86E 00
2	0	84	83	13104.36	1	4318.53	2.3156	0.0303	3.66E-06	1.17E-03	1.78E-02	8.08E-02	2.04E-01	3.70E-01
2	0	19	18	656.82	1	4319.64	2.3150	0.0552	3.25E 01	2.67E 01	2.04E 01	1.55E 01	1.19E 01	9.15E 00
2	0	83	82	12799.33	1	4321.08	2.3142	0.0303	5.57E-06	1.55E-03	2.18E-02	9.46E-02	2.32E-01	4.12E-01
2	0	20	19	729.71	1	4322.06	2.3137	0.0535	3.10E 01	2.64E 01	2.05E 01	1.57E 01	1.21E 01	9.40E 00
2	0	82	81	12497.64	1	4323.54	2.3129	0.0303	8.44E-06	2.03E-03	2.65E-02	1.11E-01	2.63E-01	4.58E-01
2	0	21	20	806.42	1	4324.40	2.3125	0.0515	2.93E 01	2.59E 01	2.05E 01	1.59E 01	1.23E 01	9.62E 00
2	0	81	80	12199.31	1	4325.93	2.3116	0.0303	1.27E-05	2.65E-03	3.23E-02	1.29E-01	2.98E-01	5.09E-01
2	0	22	21	886.95	1	4326.67	2.3112	0.0496	2.75E 01	2.52E 01	2.04E 01	1.60E 01	1.25E 01	9.81E 00
2	0	80	79	11904.34	1	4328.23	2.3104	0.0303	1.91E-05	3.45E-03	3.92E-02	1.50E-01	3.37E-01	5.63E-01
2	0	23	22	971.28	1	4328.87	2.3101	0.0476	2.56E 01	2.45E 01	2.02E 01	1.60E 01	1.26E 01	9.96E 00
2	0	79	78	11612.75	1	4330.45	2.3092	0.0303	2.85E-05	4.48E-03	4.74E-02	1.74E-01	3.90E-01	6.23E-01
2	0	24	23	1059.42	1	4330.99	2.3089	0.0457	2.37E 01	2.36E 01	1.99E 01	1.60E 01	1.27E 01	1.01E 01
2	0	78	77	11324.54	1	4332.59	2.3081	0.0303	4.23E-05	5.79E-03	5.72E-02	2.01E-01	4.29E-01	6.88E-01
2	0	25	24	1151.37	1	4333.04	2.3078	0.0437	2.17E 01	2.26E 01	1.95E 01	1.59E 01	1.27E 01	1.02E 01
2	0	77	76	11039.74	1	4334.64	2.3070	0.0303	6.25E-05	7.46E-03	6.89E-02	2.33E-01	4.81E-01	7.58E-01
2	0	26	25	1247.11	1	4335.02	2.3068	0.0419	1.92E 01	2.16E 01	1.90E 01	1.57E 01	1.27E 01	1.02E 01
2	0	76	75	10758.35	1	4336.62	2.3059	0.0303	9.19E-05	9.58E-03	8.27E-02	2.68E-01	5.40E-01	8.35E-01
2	0	27	26	1346.66	1	4336.92	2.3058	0.0398	1.79E 01	2.05E 01	1.85E 01	1.55E 01	1.26E 01	1.02E 01
2	0	75	74	10480.37	1	4338.51	2.3049	0.0303	1.34E-04	1.23E-02	9.95E-02	3.09E-01	6.05E-01	9.17E-01
2	0	28	27	1449.99	1	4338.75	2.3048	0.0379	1.61E 01	1.93E 01	1.79E 01	1.52E 01	1.25E 01	1.02E 01
2	0	74	73	10205.84	1	4340.33	2.3040	0.0303	1.95E-04	1.56E-02	1.18E-01	3.54E-01	6.76E-01	1.01E 00
2	0	29	28	1557.12	1	4340.50	2.3039	0.0359	1.44E 01	1.82E 01	1.73E 01	1.49E 01	1.24E 01	1.02E 01
2	0	73	72	9934.75	1	4342.06	2.3031	0.0303	2.83E-04	1.99E-02	1.41E-01	4.06E-01	7.55E-01	1.10E 00
2	0	30	29	1668.03	1	4342.18	2.3030	0.0340	1.27E 01	1.70E 01	1.66E 01	1.45E 01	1.22E 01	1.01E 01
2	0	72	71	9667.11	1	4343.71	2.3022	0.0303	4.07E-04	2.52E-02	1.67E-01	4.64E-01	8.40E-01	1.21E 00
2	0	31	30	1782.72	1	4343.79	2.3021	0.0335	1.12E 01	1.58E 01	1.59E 01	1.42E 01	1.21E 01	1.01E 01
2	0	71	70	9402.94	1	4345.28	2.3013	0.0303	5.83E-04	3.18E-02	1.98E-01	5.28E-01	9.34E-01	1.32E 00
2	0	32	31	1901.19	1	4345.32	2.3013	0.0331	9.84E 00	1.47E 01	1.52E 01	1.39E 01	1.18E 01	9.98E 00
2	0	33	32	2023.43	1	4346.77	2.3006	0.0326	8.59E 00	1.36E 01	1.44E 01	1.33E 01	1.16E 01	9.86E 00
2	0	70	69	9142.25	1	4346.78	2.3006	0.0303	8.31E-04	3.99E-02	2.34E-01	6.01E-01	1.04E 00	1.43E 00
2	0	34	33	2149.44	1	4348.15	2.2998	0.0321	7.43E 00	1.25E 01	1.37E 01	1.29E 01	1.13E 01	9.71E 00
2	0	69	68	8885.04	1	4348.19	2.2998	0.0303	1.18E-03	5.00E-02	2.75E-01	6.82E-01	1.15E 00	1.56E 00
2	0	35	34	2279.20	1	4349.46	2.2991	0.0317	6.39E 00	1.14E 01	1.29E 01	1.24E 01	1.10E 01	9.55E 00
2	0	68	67	8631.33	1	4349.52	2.2991	0.0303	1.66E-03	6.24E-02	3.23E-01	7.72E-01	1.27E 00	1.69E 00
2	0	36	35	2412.73	1	4350.69	2.2985	0.0312	5.47E 00	1.04E 01	1.22E 01	1.19E 01	1.07E 01	9.36E 00
2	0	67	66	8381.13	1	4350.77	2.2984	0.0303	2.33E-03	7.76E-02	3.79E-01	8.73E-01	1.40E 00	1.84E 00
2	0	37	36	2550.01	1	4351.85	2.2979	0.0308	4.64E 00	9.45E 00	1.14E 01	1.13E 01	1.04E 01	9.16E 00
2	0	66	65	8134.45	1	4351.94	2.2978	0.0303	3.24E-03	9.61E-02	4.42E-01	9.83E-01	1.54E 00	1.99E 00
2	0	38	37	2691.03	1	4352.93	2.2973	0.0303	3.92E 00	8.54E 00	1.06E 01	1.08E 01	1.00E 01	8.94E 00
2	0	65	64	7891.29	1	4353.03	2.2973	0.0303	4.50E-03	1.19E-01	5.15E-01	1.11E 00	1.60E 00	2.15E 00
2	0	39	38	2835.80	1	4353.93	2.2968	0.0303	3.29E 00	7.68E 00	9.91E 00	1.03E 01	9.69E 00	8.70E 00
2	0	64	63	7651.67	1	4354.04	2.2967	0.0303	6.21E-03	1.46E-01	5.98E-01	1.24E 00	1.85E 00	2.32E 00

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
2	0	40	39	2984.30	1	4354.86	2.2963	0.0303	2.74E 00	6.87E 00	9.20E 00	9.75E 00	9.31E 00	8.46E 00
2	0	63	62	7415.60	1	4354.98	2.2962	0.0303	8.51E-03	1.79E-01	6.92E-01	1.39E 00	2.03E 00	2.49E 00
2	0	41	40	3136.53	1	4355.71	2.2958	0.0303	2.27E 00	6.13E 00	8.51E 00	9.22E 00	8.94E 00	8.20E 00
2	0	62	61	7183.08	1	4355.83	2.2958	0.0303	1.16E-02	2.18E-01	7.99E-01	1.55E 00	2.21E 00	2.69E 00
2	0	42	41	3292.48	1	4356.49	2.2954	0.0303	1.87E 00	5.44E 00	7.84E 00	8.69E 00	8.55E 00	7.93E 00
2	0	61	60	6954.12	1	4356.61	2.2954	0.0303	1.58E-02	2.65E-01	9.20E-01	1.73E 00	2.41E 00	2.88E 00
2	0	43	42	3452.15	1	4357.19	2.2951	0.0303	1.53E 00	4.81E 00	7.21E 00	8.17E 00	8.16E 00	7.65E 00
2	0	60	59	6728.75	1	4357.30	2.2950	0.0303	2.13E-02	3.21E-01	1.06E 00	1.92E 00	2.62E 00	3.08E 00
2	0	44	43	3615.54	1	4357.81	2.2947	0.0303	1.25E 00	4.24E 00	6.60E 00	7.66E 00	7.77E 00	7.37E 00
2	0	59	58	6506.95	1	4357.92	2.2947	0.0303	2.86E-02	3.89E-01	1.21E 00	2.13E 00	2.85E 00	3.30E 00
2	0	45	44	3782.62	1	4358.36	2.2944	0.0303	1.01E 00	3.72E 00	6.02E 00	7.16E 00	7.39E 00	7.08E 00
2	0	58	57	6288.75	1	4358.46	2.2944	0.0303	3.83E-02	4.68E-01	1.38E 00	2.36E 00	3.10E 00	3.53E 00
2	0	46	45	3953.41	1	4358.93	2.2942	0.0303	8.13E-01	3.25E 00	5.49E 00	6.68E 00	7.00E 00	6.79E 00
2	0	57	56	6074.14	1	4359.02	2.2941	0.0303	5.10E-02	5.62E-01	1.58E 00	2.61E 00	3.35E 00	3.76E 00
2	0	47	46	4127.69	1	4359.23	2.2940	0.0303	6.51E-01	2.92E 00	4.97E 00	6.21E 00	6.62E 00	6.50E 00
2	0	56	55	5863.14	1	4359.30	2.2939	0.0303	6.74E-02	6.72E-01	1.80E 00	2.89E 00	3.63E 00	4.01E 00
2	0	48	47	4306.05	1	4359.54	2.2938	0.0303	5.18E-01	2.45E 00	4.49E 00	5.76E 00	6.25E 00	6.21E 00
2	0	55	54	5655.77	1	4359.60	2.2938	0.0303	8.97E-02	8.01E-01	2.03E 00	3.17E 00	3.91E 00	4.26E 00
2	0	49	48	4487.09	1	4359.78	2.2937	0.0303	4.09E-01	2.11E 00	4.06E 00	5.33E 00	5.89E 00	5.92E 00
2	0	54	53	5452.01	1	4359.83	2.2937	0.0303	1.16E-01	9.51E-01	2.30E 00	3.48E 00	4.21E 00	4.52E 00
2	0	50	49	4673.40	1	4359.95	2.2936	0.0303	3.22E-01	1.81E 00	3.64E 00	4.92E 00	5.53E 00	5.63E 00
2	0	53	52	5251.89	1	4359.97	2.2936	0.0303	1.51E-01	1.12E 00	2.59E 00	3.81E 00	4.52E 00	4.79E 00
2	0	51	50	4862.58	1	4360.03	2.2936	0.0303	2.52E-01	1.55E 00	3.26E 00	4.53E 00	5.18E 00	5.35E 00
2	0	52	51	5055.41	1	4360.04	2.2936	0.0303	1.96E-01	1.32E 00	2.91E 00	4.16E 00	4.84E 00	5.07E 00

Table 9—Second overtone band of CO, T = 1000-3500°K. The total number of lines included is 4571. For temperatures less than 3500°K, the line intensities were set equal to zero for intensities less than approximately 4×10^{-8}. The line intensities correspond to a mass absorption coefficient.

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	92	93	41818.97	1	4520.36	2.2122	0.0303	0.0	0.0	0.0	0.0	5.30E-07	6.89E-06
16	13	97	98	41685.60	1	4530.37	2.2073	0.0303	0.0	0.0	0.0	0.0	4.70E-07	6.07E-06
17	14	91	92	41526.67	1	4532.69	2.2062	0.0303	0.0	0.0	0.0	0.0	6.02E-07	7.68E-06
16	13	96	97	41376.48	1	4543.15	2.2011	0.0303	0.0	0.0	0.0	0.0	5.40E-07	6.82E-06
17	14	90	91	41237.09	1	4544.92	2.2003	0.0303	0.0	0.0	0.0	0.0	6.84E-07	8.55E-06
15	12	101	102	41301.83	1	4551.27	2.1972	0.0303	0.0	0.0	0.0	0.0	4.57E-07	5.74E-06
16	13	95	96	41070.04	1	4555.91	2.1950	0.0303	0.0	0.0	0.0	0.0	6.18E-07	7.65E-06
17	14	89	90	40950.24	1	4557.07	2.1944	0.0303	0.0	0.0	0.0	0.0	7.75E-07	9.51E-06
15	12	100	101	40978.54	1	4564.48	2.1908	0.0303	0.0	0.0	0.0	0.0	5.28E-07	6.50E-06
16	13	94	95	40766.30	1	4566.55	2.1889	0.0303	0.0	0.0	0.0	0.0	7.07E-07	8.57E-06
17	14	88	89	40666.15	1	4569.12	2.1886	0.0303	0.0	0.0	0.0	0.0	8.82E-07	1.06E-05
14	11	105	106	40963.32	1	4570.64	2.1879	0.0303	0.0	0.0	0.0	0.0	4.26E-07	5.23E-06
15	12	99	100	40657.92	1	4577.60	2.1846	0.0303	0.0	0.0	0.0	0.0	6.10E-07	7.34E-06
16	13	93	94	40465.28	1	4581.09	2.1829	0.0303	0.0	0.0	0.0	0.0	8.08E-07	9.60E-06
17	14	87	88	40384.82	1	4581.09	2.1829	0.0303	0.0	0.0	0.0	0.0	1.00E-06	1.18E-05
14	11	104	105	40625.84	1	4584.24	2.1814	0.0303	0.0	0.0	0.0	0.0	4.96E-07	5.96E-06
13	10	109	110	40670.70	1	4588.50	2.1794	0.0303	0.0	0.0	0.0	0.0	3.79E-07	4.57E-06
15	12	98	99	40339.98	1	4590.63	2.1784	0.0303	0.0	0.0	0.0	0.0	7.03E-07	8.28E-06
17	14	86	87	40106.27	1	4592.96	2.1772	0.0303	0.0	0.0	0.0	0.0	1.14E-06	1.32E-05
16	13	92	93	40167.00	1	4593.55	2.1770	0.0303	0.0	0.0	0.0	0.0	9.22E-07	1.07E-05
14	11	103	104	40290.99	1	4597.76	2.1750	0.0303	0.0	0.0	0.0	0.0	5.77E-07	6.77E-06
13	10	108	109	40319.00	1	4602.49	2.1727	0.0303	0.0	0.0	0.0	0.0	4.45E-07	5.24E-06
15	12	97	98	40024.73	1	4603.57	2.1722	0.0303	0.0	0.0	0.0	0.0	8.10E-07	9.33E-06
17	14	85	86	39830.51	1	4604.74	2.1717	0.0303	0.0	0.0	0.0	0.0	1.29E-06	1.46E-05
16	13	91	92	39871.45	1	4605.91	2.1711	0.0303	0.0	0.0	0.0	0.0	1.05E-06	1.20E-05
14	11	102	103	39958.80	1	4611.18	2.1686	0.0303	0.0	0.0	0.0	0.0	6.71E-07	7.69E-06
13	10	107	108	39969.90	1	4616.40	2.1662	0.0303	0.0	0.0	0.0	0.0	5.22E-07	6.00E-06
15	12	96	97	39712.19	1	4616.42	2.1662	0.0303	0.0	0.0	0.0	0.0	9.31E-07	1.05E-05
17	14	84	85	39557.56	1	4616.43	2.1662	0.0303	0.0	0.0	0.0	4.54E-08	1.45E-06	1.62E-05
16	13	90	91	39578.67	1	4618.18	2.1654	0.0303	0.0	0.0	0.0	0.0	1.19E-06	1.34E-05
12	9	112	113	40058.61	1	4619.24	2.1649	0.0303	0.0	0.0	0.0	0.0	3.81E-07	4.40E-06
14	11	101	102	39629.28	1	4624.52	2.1624	0.0303	0.0	0.0	0.0	0.0	7.78E-07	8.73E-06
17	14	83	84	39287.42	1	4628.03	2.1607	0.0303	0.0	0.0	0.0	5.26E-08	1.64E-06	1.80E-05
15	12	95	96	39402.37	1	4629.19	2.1602	0.0303	0.0	0.0	0.0	0.0	1.07E-06	1.18E-05
13	10	106	107	39623.43	1	4630.22	2.1597	0.0303	0.0	0.0	0.0	0.0	6.11E-07	6.85E-06
16	13	89	90	39288.66	1	4630.37	2.1597	0.0303	0.0	0.0	0.0	4.35E-08	1.36E-06	1.49E-05
12	9	111	112	39695.24	1	4633.53	2.1582	0.0303	0.0	0.0	0.0	0.0	4.50E-07	5.07E-06
14	11	100	101	39302.44	1	4637.77	2.1562	0.0303	0.0	0.0	0.0	0.0	9.01E-07	9.89E-06
17	14	82	83	39020.11	1	4639.54	2.1554	0.0303	0.0	0.0	0.0	6.08E-08	1.85E-06	1.99E-05
15	12	94	95	39055.29	1	4641.86	2.1543	0.0303	0.0	0.0	0.0	0.0	1.22E-06	1.33E-05
16	13	88	89	39001.43	1	4642.46	2.1540	0.0303	0.0	0.0	0.0	5.09E-08	1.55E-06	1.66E-05
13	10	105	106	39279.59	1	4643.95	2.1533	0.0303	0.0	0.0	0.0	0.0	7.14E-07	7.83E-06
12	9	110	111	39334.46	1	4647.74	2.1516	0.0303	0.0	0.0	0.0	0.0	5.31E-07	5.84E-06
11	8	115	116	39467.57	1	4649.16	2.1509	0.0303	0.0	0.0	0.0	0.0	3.68E-07	4.09E-06
14	11	99	100	38978.30	1	4650.93	2.1501	0.0303	0.0	0.0	0.0	0.0	1.04E-06	1.12E-05
17	14	81	82	38755.64	1	4650.95	2.1501	0.0303	0.0	0.0	0.0	7.02E-08	2.08E-06	2.20E-05
15	12	93	94	38790.96	1	4654.44	2.1485	0.0303	0.0	0.0	0.0	4.71E-08	1.40E-06	1.49E-05
16	13	87	88	38717.00	1	4654.46	2.1485	0.0303	0.0	0.0	0.0	5.95E-08	1.76E-06	1.85E-05
13	10	104	105	38938.42	1	4657.59	2.1470	0.0303	0.0	0.0	0.0	0.0	8.34E-07	8.93E-06
12	9	109	110	38976.29	1	4661.86	2.1451	0.0303	0.0	0.0	0.0	0.0	6.25E-07	6.71E-06
17	14	80	81	38494.02	1	4662.27	2.1449	0.0303	0.0	0.0	0.0	8.09E-08	2.34E-06	2.43E-05
11	8	114	115	39092.48	1	4663.76	2.1442	0.0303	0.0	0.0	0.0	0.0	4.37E-07	4.73E-06
14	11	98	99	38656.87	1	4664.00	2.1441	0.0303	0.0	0.0	0.0	4.10E-08	1.20E-06	1.26E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	13	86	87	38435.39	1	4666.37	2.1430	0.0303	0.0	0.0	0.0	6.94E-08	2.00E-06	2.07E-05
15	12	92	93	38489.41	1	4666.93	2.1427	0.0303	0.0	0.0	0.0	5.54E-08	1.60E-06	1.66E-05
13	10	103	104	38599.92	1	4671.14	2.1408	0.0303	0.0	0.0	0.0	0.0	9.72E-07	1.02E-05
17	14	79	80	38235.27	1	4673.50	2.1397	0.0303	0.0	0.0	0.0	9.31E-08	2.63E-06	2.68E-05
12	9	108	109	38620.75	1	4675.89	2.1386	0.0303	0.0	0.0	0.0	0.0	7.35E-07	7.71E-06
14	11	97	98	38338.18	1	4676.98	2.1381	0.0303	0.0	0.0	0.0	4.87E-08	1.39E-06	1.43E-05
16	13	85	86	38156.60	1	4678.19	2.1376	0.0303	0.0	0.0	0.0	8.09E-08	2.27E-06	2.30E-05
11	8	113	114	38719.96	1	4678.26	2.1375	0.0303	0.0	0.0	0.0	0.0	5.19E-07	5.48E-06
10	7	118	119	38898.02	1	4678.28	2.1375	0.0303	0.0	0.0	0.0	0.0	3.56E-07	3.81E-06
15	12	91	92	38190.62	1	4679.34	2.1371	0.0303	0.0	0.0	0.0	6.50E-08	1.83E-06	1.86E-05
13	10	102	103	38264.10	1	4684.60	2.1347	0.0303	0.0	0.0	0.0	0.0	1.13E-06	1.16E-05
17	14	78	79	37979.39	1	4684.64	2.1346	0.0303	0.0	0.0	0.0	1.07E-07	2.94E-06	2.95E-05
12	9	107	108	38267.86	1	4689.83	2.1323	0.0303	0.0	0.0	0.0	0.0	8.64E-07	8.84E-06
14	11	96	97	38022.23	1	4689.87	2.1323	0.0303	0.0	0.0	0.0	5.78E-08	1.60E-06	1.61E-05
16	13	84	85	37880.65	1	4689.92	2.1322	0.0303	0.0	0.0	0.0	9.40E-08	2.57E-06	2.56E-05
15	12	90	91	37894.64	1	4691.65	2.1314	0.0303	0.0	0.0	0.0	7.62E-08	2.08E-06	2.08E-05
11	8	112	113	38350.04	1	4692.68	2.1310	0.0303	0.0	0.0	0.0	0.0	6.15E-07	6.33E-06
10	7	117	118	38511.15	1	4693.17	2.1308	0.0303	0.0	0.0	0.0	0.0	4.26E-07	4.43E-06
17	14	77	78	37726.41	1	4695.69	2.1296	0.0303	0.0	0.0	0.0	1.22E-07	3.29E-06	3.25E-05
13	10	101	102	37930.99	1	4697.98	2.1286	0.0303	0.0	0.0	0.0	4.79E-08	1.32E-06	1.31E-05
16	13	83	84	37607.55	1	4701.55	2.1270	0.0303	0.0	0.0	0.0	1.09E-07	2.90E-06	2.84E-05
14	11	95	96	37709.03	1	4702.67	2.1265	0.0303	0.0	0.0	0.0	6.85E-08	1.84E-06	1.81E-05
12	9	106	107	37917.62	1	4703.69	2.1260	0.0303	0.0	0.0	0.0	0.0	1.01E-06	1.01E-05
15	12	89	90	37601.46	1	4703.87	2.1259	0.0303	0.0	0.0	0.0	8.92E-08	2.37E-06	2.32E-05
17	14	76	77	37476.32	1	4706.64	2.1247	0.0303	0.0	0.0	0.0	1.40E-07	3.68E-06	3.56E-05
11	8	111	112	37982.73	1	4707.02	2.1245	0.0303	0.0	0.0	0.0	0.0	7.28E-07	7.31E-06
10	7	116	117	38126.84	1	4707.98	2.1241	0.0303	0.0	0.0	0.0	0.0	5.09E-07	5.16E-06
13	10	100	101	37600.60	1	4711.26	2.1226	0.0303	0.0	0.0	0.0	5.74E-08	1.53E-06	1.49E-05
16	13	82	83	37337.31	1	4713.10	2.1217	0.0303	0.0	0.0	0.0	1.26E-07	3.28E-06	3.15E-05
14	11	94	95	37398.61	1	4715.38	2.1207	0.0303	0.0	0.0	0.0	8.10E-08	2.11E-06	2.04E-05
15	12	88	89	37311.09	1	4716.00	2.1204	0.0303	0.0	0.0	0.0	1.05E-07	2.70E-06	2.59E-05
12	9	105	106	37570.06	1	4717.46	2.1198	0.0303	0.0	0.0	0.0	4.48E-08	1.19E-06	1.16E-05
17	14	75	76	37229.15	1	4717.50	2.1198	0.0303	0.0	0.0	0.0	1.60E-07	4.10E-06	3.91E-05
11	8	110	111	37618.05	1	4721.26	2.1181	0.0303	0.0	0.0	0.0	0.0	8.61E-07	8.42E-06
9	6	120	121	37951.65	1	4721.78	2.1178	0.0303	0.0	0.0	0.0	0.0	3.61E-07	3.62E-06
10	7	115	116	37745.10	1	4722.70	2.1174	0.0303	0.0	0.0	0.0	0.0	6.07E-07	5.99E-06
13	10	99	100	37272.94	1	4724.46	2.1166	0.0303	0.0	0.0	0.0	6.87E-08	1.77E-06	1.69E-05
16	13	81	82	37069.95	1	4724.55	2.1166	0.0303	0.0	0.0	0.0	1.46E-07	3.69E-06	3.48E-05
14	11	93	94	37090.97	1	4728.00	2.1151	0.0303	0.0	0.0	0.0	9.56E-08	2.42E-06	2.29E-05
15	12	87	88	37023.57	1	4728.04	2.1150	0.0303	0.0	0.0	0.0	1.23E-07	3.08E-06	2.90E-05
17	14	74	75	36984.90	1	4728.27	2.1149	0.0303	0.0	0.0	0.0	1.82E-07	4.56E-06	4.28E-05
12	9	104	105	37225.20	1	4731.14	2.1137	0.0303	0.0	0.0	0.0	5.41E-08	1.39E-06	1.32E-05
11	8	109	110	37256.02	1	4735.42	2.1117	0.0303	0.0	0.0	0.0	0.0	1.02E-06	9.70E-06
16	13	80	81	36805.48	1	4735.91	2.1115	0.0303	0.0	0.0	0.0	1.69E-07	4.16E-06	3.85E-05
9	6	119	120	37555.49	1	4736.88	2.1111	0.0303	0.0	0.0	0.0	0.0	4.31E-07	4.21E-06
10	7	114	115	37365.96	1	4737.33	2.1109	0.0303	0.0	0.0	0.0	0.0	7.23E-07	6.96E-06
13	10	98	99	36948.03	1	4737.57	2.1108	0.0303	0.0	0.0	0.0	8.20E-08	2.05E-06	1.91E-05
17	14	73	74	36743.59	1	4738.94	2.1102	0.0303	0.0	0.0	0.0	2.07E-07	5.07E-06	4.68E-05
15	12	86	87	36738.89	1	4739.99	2.1097	0.0303	0.0	0.0	0.0	1.43E-07	3.51E-06	3.23E-05
14	11	92	93	36786.14	1	4740.53	2.1095	0.0303	0.0	0.0	0.0	1.13E-07	2.77E-06	2.56E-05
12	9	103	104	36883.04	1	4744.73	2.1076	0.0303	0.0	0.0	0.0	6.53E-08	1.62E-06	1.51E-05
16	13	79	80	36543.91	1	4747.18	2.1065	0.0303	0.0	0.0	0.0	1.94E-07	4.67E-06	4.25E-05
11	8	108	109	36896.64	1	4749.49	2.1055	0.0303	0.0	0.0	0.0	4.82E-08	1.20E-06	1.12E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	72	73	36505.22	1	4749.53	2.1055	0.0303	0.0	0.0	0.0	2.35E-07	5.63E-06	5.11E-05
13	10	97	98	36625.89	1	4750.59	2.1050	0.0303	0.0	0.0	0.0	9.77E-08	2.37E-06	2.16E-05
15	12	85	86	36457.07	1	4751.85	2.1044	0.0303	0.0	0.0	0.0	1.67E-07	3.98E-06	3.60E-05
10	7	113	114	36989.44	1	4751.88	2.1044	0.0303	0.0	0.0	0.0	0.0	8.60E-07	8.06E-06
9	6	118	119	37161.89	1	4751.90	2.1044	0.0303	0.0	0.0	0.0	0.0	5.18E-07	4.91E-06
14	11	91	92	36484.12	1	4752.97	2.1039	0.0303	0.0	0.0	0.0	1.33E-07	3.17E-06	2.87E-05
12	9	102	103	36543.60	1	4758.23	2.1016	0.0303	0.0	0.0	0.0	7.87E-08	1.89E-06	1.72E-05
16	13	78	79	36285.25	1	4758.36	2.1016	0.0303	0.0	0.0	0.0	2.24E-07	5.24E-06	4.69E-05
17	14	71	72	36269.81	1	4760.01	2.1008	0.0303	0.0	0.0	0.0	2.66E-07	6.23E-06	5.57E-05
11	8	107	108	36539.95	1	4763.47	2.0993	0.0303	0.0	0.0	0.0	5.87E-08	1.41E-06	1.28E-05
13	10	96	97	36306.52	1	4763.52	2.0993	0.0303	0.0	0.0	0.0	1.16E-07	2.73E-06	2.44E-05
15	12	84	85	36178.12	1	4763.61	2.0992	0.0303	0.0	0.0	0.0	1.95E-07	4.52E-06	4.01E-05
8	5	122	123	37006.34	1	4764.99	2.0986	0.0303	0.0	0.0	0.0	0.0	3.67E-07	3.45E-06
14	11	90	91	36184.92	1	4765.32	2.0985	0.0303	0.0	0.0	0.0	1.56E-07	3.62E-06	3.21E-05
10	7	112	113	36615.54	1	4766.33	2.0981	0.0303	0.0	0.0	0.0	4.22E-08	1.02E-06	9.34E-06
9	6	117	118	36770.87	1	4766.83	2.0978	0.0303	0.0	0.0	0.0	0.0	6.20E-07	5.73E-06
16	13	77	78	36029.51	1	4769.44	2.0967	0.0303	0.0	0.0	0.0	2.57E-07	5.87E-06	5.16E-05
17	14	70	71	36037.37	1	4770.41	2.0963	0.0303	0.0	0.0	0.0	3.01E-07	6.89E-06	6.06E-05
12	9	101	102	36206.90	1	4771.64	2.0957	0.0303	0.0	0.0	0.0	9.46E-08	2.20E-06	1.96E-05
15	12	83	84	35902.06	1	4775.28	2.0941	0.0303	0.0	0.0	0.0	2.27E-07	5.12E-06	4.46E-05
13	10	95	96	35969.95	1	4776.36	2.0936	0.0303	0.0	0.0	0.0	1.38E-07	3.14E-06	2.76E-05
11	8	106	107	36185.95	1	4777.37	2.0932	0.0303	0.0	0.0	0.0	7.13E-08	1.66E-06	1.47E-05
14	11	89	90	35888.57	1	4777.58	2.0931	0.0303	0.0	0.0	0.0	1.83E-07	4.12E-06	3.59E-05
8	5	121	122	36600.82	1	4780.30	2.0919	0.0303	0.0	0.0	0.0	0.0	4.40E-07	4.02E-06
16	13	76	77	35776.71	1	4780.43	2.0919	0.0303	0.0	0.0	0.0	2.94E-07	6.57E-06	5.67E-05
10	7	111	112	36244.30	1	4780.71	2.0917	0.0303	0.0	0.0	0.0	5.18E-08	1.21E-06	1.08E-05
17	14	69	70	35807.91	1	4780.71	2.0917	0.0303	0.0	0.0	0.0	3.40E-07	7.61E-06	6.59E-05
9	6	116	117	36382.44	1	4781.68	2.0913	0.0303	0.0	0.0	0.0	0.0	7.42E-07	6.68E-06
12	9	100	101	35872.95	1	4784.97	2.0899	0.0303	0.0	0.0	0.0	1.14E-07	2.56E-06	2.23E-05
15	12	82	83	35628.90	1	4786.87	2.0890	0.0303	0.0	0.0	0.0	2.63E-07	5.79E-06	4.95E-05
13	10	94	95	35676.18	1	4789.10	2.0881	0.0303	0.0	0.0	0.0	1.64E-07	3.62E-06	3.10E-05
14	11	88	89	35555.07	1	4789.75	2.0878	0.0303	0.0	0.0	0.0	2.15E-07	4.71E-06	4.02E-05
17	14	68	69	35581.43	1	4790.91	2.0873	0.0303	0.0	0.0	0.0	3.83E-07	8.39E-06	7.15E-05
11	8	105	106	35834.66	1	4791.17	2.0872	0.0303	0.0	0.0	0.0	8.65E-08	1.94E-06	1.69E-05
16	13	75	76	35526.85	1	4791.33	2.0871	0.0303	0.0	0.0	0.0	3.36E-07	7.33E-06	6.23E-05
10	7	110	111	35875.71	1	4794.99	2.0855	0.0303	0.0	0.0	0.0	6.36E-08	1.43E-06	1.25E-05
8	5	120	121	36197.86	1	4795.53	2.0853	0.0303	0.0	0.0	0.0	0.0	5.27E-07	4.69E-06
9	6	115	116	35956.63	1	4796.44	2.0849	0.0303	0.0	0.0	0.0	0.0	8.87E-07	7.78E-06
12	9	99	100	35541.77	1	4798.20	2.0841	0.0303	0.0	0.0	0.0	1.36E-07	2.97E-06	2.53E-05
15	12	81	82	35356.64	1	4798.36	2.0840	0.0303	0.0	0.0	0.0	3.05E-07	6.54E-06	5.49E-05
17	14	67	68	35357.96	1	4801.03	2.0829	0.0303	0.0	0.0	0.0	4.30E-07	9.23E-06	7.75E-05
13	10	93	94	35365.23	1	4801.76	2.0826	0.0303	0.0	0.0	0.0	1.93E-07	4.16E-06	3.49E-05
14	11	87	88	35304.45	1	4801.83	2.0825	0.0303	0.0	0.0	0.0	2.52E-07	5.38E-06	4.50E-05
16	13	74	75	35279.96	1	4802.13	2.0824	0.0303	0.0	0.0	0.0	3.84E-07	8.18E-06	6.83E-05
11	8	104	105	35466.10	1	4804.89	2.0812	0.0303	0.0	0.0	0.0	1.05E-07	2.28E-06	1.93E-05
7	4	124	125	36062.28	1	4807.90	2.0799	0.0303	0.0	0.0	0.0	0.0	3.48E-07	3.07E-06
10	7	109	110	35509.81	1	4809.19	2.0794	0.0303	0.0	0.0	0.0	7.79E-08	1.70E-06	1.44E-05
15	12	80	81	35091.32	1	4809.75	2.0791	0.0303	0.0	0.0	0.0	3.52E-07	7.37E-06	6.07E-05
8	5	119	120	35797.48	1	4810.68	2.0787	0.0303	0.0	0.0	0.0	0.0	6.31E-07	5.46E-06
17	14	66	67	35137.49	1	4811.04	2.0786	0.0303	0.0	0.0	0.0	4.83E-07	1.01E-05	8.38E-05
9	6	114	115	35613.45	1	4811.11	2.0785	0.0303	0.0	0.0	0.0	4.81E-08	1.06E-06	9.05E-06
12	9	98	99	35213.38	1	4811.35	2.0784	0.0303	0.0	0.0	0.0	1.63E-07	3.45E-06	2.86E-05
16	13	73	74	35036.03	1	4812.84	2.0778	0.0303	0.0	0.0	0.0	4.37E-07	9.10E-06	7.47E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	11	86	87	35016.70	1	4813.81	2.0774	0.0303	0.0	0.0	0.0	2.95E-07	6.13E-06	5.03E-05
13	10	92	93	35057.12	1	4814.33	2.0771	0.0303	0.0	0.0	0.0	2.29E-07	4.77E-06	3.92E-05
11	8	103	104	35140.28	1	4818.52	2.0753	0.0303	0.0	0.0	0.0	1.27E-07	2.67E-06	2.20E-05
17	14	65	66	34920.04	1	4820.97	2.0743	0.0303	0.0	0.0	0.0	5.40E-07	1.11E-05	9.06E-05
15	12	79	80	34826.92	1	4821.06	2.0742	0.0303	0.0	0.0	0.0	4.07E-07	8.30E-06	6.72E-05
10	7	108	109	35146.60	1	4823.30	2.0733	0.0303	0.0	0.0	0.0	9.52E-08	2.00E-06	1.66E-05
7	4	123	124	35647.34	1	4823.43	2.0732	0.0303	0.0	0.0	0.0	0.0	4.20E-07	3.60E-06
16	13	72	73	34795.09	1	4823.46	2.0732	0.0303	0.0	0.0	0.0	4.97E-07	1.01E-05	8.17E-05
12	9	97	98	34867.79	1	4824.40	2.0728	0.0303	0.0	0.0	0.0	1.94E-07	3.99E-06	3.24E-05
9	6	113	114	35232.91	1	4825.69	2.0722	0.0303	0.0	0.0	0.0	5.95E-08	1.26E-06	1.05E-05
14	11	85	86	34731.85	1	4825.71	2.0722	0.0303	0.0	0.0	0.0	3.45E-07	6.98E-06	5.61E-05
8	5	118	119	35399.70	1	4825.73	2.0722	0.0303	0.0	0.0	0.0	0.0	7.59E-07	6.39E-06
13	10	91	92	34751.86	1	4826.81	2.0718	0.0303	0.0	0.0	0.0	2.69E-07	5.46E-06	4.40E-05
17	14	64	65	34705.62	1	4830.80	2.0701	0.0303	0.0	0.0	0.0	6.04E-07	1.22E-05	9.78E-05
11	8	102	103	34797.22	1	4832.06	2.0695	0.0303	0.0	0.0	0.0	1.53E-07	3.11E-06	2.52E-05
15	12	78	79	34565.47	1	4832.27	2.0694	0.0303	0.0	0.0	0.0	4.68E-07	9.32E-06	7.41E-05
16	13	71	72	34557.13	1	4833.95	2.0687	0.0303	0.0	0.0	0.0	5.64E-07	1.12E-05	8.92E-05
10	7	107	108	34786.11	1	4837.32	2.0673	0.0303	0.0	0.0	0.0	1.16E-07	2.36E-06	1.91E-05
12	9	96	97	34565.00	1	4837.37	2.0672	0.0303	0.0	0.0	0.0	2.32E-07	4.61E-06	3.67E-05
14	11	84	85	34449.91	1	4837.51	2.0672	0.0303	0.0	0.0	0.0	4.03E-07	7.93E-06	6.26E-05
7	4	122	123	35234.96	1	4838.87	2.0666	0.0303	0.0	0.0	0.0	0.0	5.06E-07	4.21E-06
13	10	90	91	34449.46	1	4839.20	2.0665	0.0303	0.0	0.0	0.0	3.17E-07	6.24E-06	4.92E-05
9	6	112	113	34855.04	1	4840.19	2.0660	0.0303	0.0	0.0	0.0	7.34E-08	1.50E-06	1.22E-05
17	14	63	64	34494.25	1	4840.53	2.0659	0.0303	0.0	0.0	0.0	6.73E-07	1.33E-05	1.05E-04
8	5	117	118	35004.53	1	4840.70	2.0658	0.0303	0.0	0.0	0.0	4.39E-08	9.11E-07	7.47E-06
15	12	77	78	34306.98	1	4843.40	2.0647	0.0303	0.0	0.0	0.0	5.39E-07	1.05E-05	8.17E-05
16	13	70	71	34322.18	1	4844.42	2.0642	0.0303	0.0	0.0	0.0	6.39E-07	1.24E-05	9.72E-05
11	8	101	102	34456.93	1	4845.51	2.0638	0.0303	0.0	0.0	0.0	1.85E-07	3.63E-06	2.87E-05
14	11	83	84	34170.88	1	4849.22	2.0622	0.0303	0.0	0.0	0.0	4.69E-07	9.00E-06	6.97E-05
17	14	62	63	34285.92	1	4850.17	2.0618	0.0303	0.0	0.0	0.0	7.49E-07	1.45E-05	1.13E-04
12	9	95	96	34245.04	1	4850.25	2.0617	0.0303	0.0	0.0	0.0	2.76E-07	5.32E-06	4.14E-05
10	7	106	107	34428.34	1	4851.25	2.0613	0.0303	0.0	0.0	0.0	1.42E-07	2.78E-06	2.19E-05
13	10	89	90	34149.94	1	4851.50	2.0612	0.0303	0.0	0.0	0.0	3.72E-07	7.12E-06	5.51E-05
7	4	121	122	34825.16	1	4854.22	2.0601	0.0303	0.0	0.0	0.0	0.0	6.08E-07	4.92E-06
15	12	76	77	34051.46	1	4854.42	2.0600	0.0303	0.0	0.0	0.0	6.18E-07	1.17E-05	9.00E-05
9	6	111	112	34479.86	1	4854.60	2.0599	0.0303	0.0	0.0	0.0	9.04E-08	1.79E-06	1.41E-05
16	13	69	70	34090.25	1	4854.76	2.0598	0.0303	0.0	0.0	0.0	7.22E-07	1.37E-05	1.06E-04
8	5	116	117	34611.99	1	4855.59	2.0595	0.0303	0.0	0.0	0.0	5.47E-08	1.09E-06	8.72E-06
11	8	100	101	34119.43	1	4858.88	2.0581	0.0303	0.0	0.0	0.0	2.22E-07	4.23E-06	3.27E-05
17	14	61	62	34080.64	1	4859.72	2.0577	0.0303	0.0	0.0	0.0	8.32E-07	1.58E-05	1.22E-04
14	11	82	83	33894.79	1	4860.84	2.0573	0.0303	0.0	0.0	0.0	5.46E-07	1.02E-05	7.74E-05
12	9	94	95	33927.93	1	4863.04	2.0563	0.0303	0.0	0.0	0.0	3.28E-07	6.14E-06	4.67E-05
13	10	88	89	33853.30	1	4863.70	2.0560	0.0303	0.0	0.0	0.0	4.39E-07	8.16E-06	6.18E-05
16	13	68	69	33861.33	1	4865.00	2.0555	0.0303	0.0	0.0	0.0	8.15E-07	1.52E-05	1.15E-04
10	7	105	106	34073.32	1	4865.10	2.0555	0.0303	0.0	0.0	0.0	1.72E-07	3.27E-06	2.52E-05
15	12	75	76	33798.93	1	4865.36	2.0553	0.0303	0.0	0.0	0.0	7.08E-07	1.31E-05	9.89E-05
6	3	125	126	34695.28	1	4866.26	2.0550	0.0303	0.0	0.0	0.0	0.0	3.65E-07	2.93E-06
9	6	110	111	34107.37	1	4868.93	2.0538	0.0303	0.0	0.0	0.0	1.11E-07	2.12E-06	1.63E-05
17	14	60	61	33878.44	1	4869.17	2.0537	0.0303	0.0	0.0	0.0	9.22E-07	1.72E-05	1.30E-04
7	4	120	121	34417.95	1	4869.49	2.0536	0.0303	0.0	0.0	0.0	0.0	7.30E-07	5.75E-06
8	5	115	116	34222.09	1	4870.39	2.0532	0.0303	0.0	0.0	0.0	6.80E-08	1.31E-06	1.02E-05
11	8	99	100	33784.73	1	4872.15	2.0525	0.0303	0.0	0.0	0.0	2.67E-07	4.93E-06	3.72E-05
14	11	81	82	33621.65	1	4872.37	2.0524	0.0303	0.0	0.0	0.0	6.34E-07	1.15E-05	8.60E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	13	67	68	33635.45	1	4875.15	2.0512	0.0303	0.0	0.0	0.0	9.17E-07	1.67E-05	1.25E-04
12	9	93	94	33613.67	1	4875.73	2.0510	0.0303	0.0	0.0	0.0	3.88E-07	7.06E-06	5.26E-05
13	10	87	88	33559.57	1	4875.82	2.0509	0.0303	0.0	0.0	0.0	5.16E-07	9.33E-06	6.93E-05
15	12	74	75	33549.38	1	4876.20	2.0508	0.0303	0.0	0.0	0.0	8.10E-07	1.46E-05	1.09E-04
17	14	59	60	33679.31	1	4878.52	2.0498	0.0303	0.0	0.0	0.0	1.02E-06	1.87E-05	1.40E-04
10	7	104	105	33721.07	1	4878.85	2.0497	0.0303	0.0	0.0	0.0	2.09E-07	3.84E-06	2.89E-05
6	3	124	125	34273.40	1	4881.91	2.0484	0.0303	0.0	0.0	0.0	0.0	4.41E-07	3.44E-06
9	6	109	110	33737.59	1	4883.16	2.0479	0.0303	0.0	0.0	0.0	1.37E-07	2.51E-06	1.89E-05
14	11	80	81	33351.46	1	4883.80	2.0476	0.0303	0.0	0.0	0.0	7.34E-07	1.30E-05	9.53E-05
7	4	119	120	34013.35	1	4884.67	2.0472	0.0303	0.0	0.0	0.0	4.63E-08	8.75E-07	6.70E-06
8	5	114	115	33834.87	1	4885.10	2.0470	0.0303	0.0	0.0	0.0	8.43E-08	1.57E-06	1.19E-05
16	13	66	67	33412.62	1	4885.20	2.0470	0.0303	0.0	0.0	0.0	1.03E-06	1.84E-05	1.35E-04
11	8	98	99	33452.85	1	4885.33	2.0469	0.0303	0.0	0.0	0.0	3.20E-07	5.72E-06	4.22E-05
15	12	73	74	33302.84	1	4886.95	2.0463	0.0303	0.0	0.0	0.0	9.24E-07	1.63E-05	1.19E-04
17	14	58	59	33483.27	1	4887.78	2.0459	0.0303	0.0	0.0	0.0	1.13E-06	2.03E-05	1.50E-04
13	10	86	87	33268.76	1	4887.84	2.0459	0.0303	0.0	0.0	0.0	6.06E-07	1.07E-05	7.76E-05
12	9	92	93	33302.29	1	4888.34	2.0457	0.0303	0.0	0.0	0.0	4.60E-07	8.11E-06	5.92E-05
10	7	103	104	33371.58	1	4892.52	2.0439	0.0303	0.0	0.0	0.0	2.54E-07	4.50E-06	3.30E-05
14	11	79	80	33084.24	1	4895.15	2.0428	0.0303	0.0	0.0	0.0	8.49E-07	1.47E-05	1.05E-04
16	13	65	66	33192.84	1	4895.17	2.0428	0.0303	0.0	0.0	0.0	1.16E-06	2.02E-05	1.46E-04
17	14	57	58	33290.32	1	4896.94	2.0421	0.0303	0.0	0.0	0.0	1.25E-06	2.20E-05	1.61E-04
9	6	108	109	33370.55	1	4897.31	2.0419	0.0303	0.0	0.0	0.0	1.67E-07	2.97E-06	2.18E-05
6	3	123	124	33854.11	1	4897.48	2.0419	0.0303	0.0	0.0	0.0	0.0	5.33E-07	4.04E-06
15	12	72	73	33059.32	1	4897.61	2.0418	0.0303	0.0	0.0	0.0	1.05E-06	1.81E-05	1.30E-04
11	8	97	98	33123.80	1	4898.43	2.0415	0.0303	0.0	0.0	0.0	3.83E-07	6.64E-06	4.79E-05
8	5	113	114	33450.32	1	4899.72	2.0409	0.0303	0.0	0.0	0.0	1.04E-07	1.87E-06	1.38E-05
13	10	85	86	32980.87	1	4899.77	2.0409	0.0303	0.0	0.0	0.0	7.10E-07	1.21E-05	8.67E-05
7	4	118	119	33611.38	1	4899.77	2.0409	0.0303	0.0	0.0	0.0	5.80E-08	1.05E-06	7.86E-06
12	9	91	92	32993.78	1	4900.86	2.0405	0.0303	0.0	0.0	0.0	5.43E-07	9.31E-06	6.65E-05
16	13	64	65	32976.12	1	4905.03	2.0387	0.0303	0.0	0.0	0.0	1.29E-06	2.21E-05	1.58E-04
17	14	56	57	33100.48	1	4906.01	2.0383	0.0303	0.0	0.0	0.0	1.38E-06	2.39E-05	1.72E-04
10	7	102	103	33024.89	1	4906.10	2.0383	0.0303	0.0	0.0	0.0	3.07E-07	5.27E-06	3.78E-05
14	11	78	79	32820.01	1	4906.40	2.0382	0.0303	0.0	0.0	0.0	9.80E-07	1.65E-05	1.17E-04
15	12	71	72	32818.82	1	4908.17	2.0374	0.0303	0.0	0.0	0.0	1.20E-06	2.01E-05	1.42E-04
9	6	107	108	33006.25	1	4911.37	2.0361	0.0303	0.0	0.0	0.0	2.05E-07	3.51E-06	2.51E-05
11	8	96	97	32797.60	1	4911.43	2.0361	0.0303	0.0	0.0	0.0	4.57E-07	7.69E-06	5.42E-05
13	10	84	85	32695.94	1	4911.61	2.0360	0.0303	0.0	0.0	0.0	8.30E-07	1.38E-05	9.68E-05
6	3	122	123	33437.40	1	4912.96	2.0354	0.0303	0.0	0.0	0.0	0.0	6.44E-07	4.74E-06
12	9	90	91	32668.18	1	4913.28	2.0353	0.0303	0.0	0.0	0.0	6.41E-07	1.07E-05	7.46E-05
8	5	112	113	33068.48	1	4914.26	2.0349	0.0303	0.0	0.0	0.0	1.29E-07	2.23E-06	1.60E-05
7	4	117	118	33212.05	1	4914.78	2.0347	0.0303	0.0	0.0	0.0	7.25E-08	1.27E-06	9.21E-06
16	13	63	64	32762.48	1	4914.80	2.0347	0.0303	0.0	0.0	0.0	1.44E-06	2.42E-05	1.70E-04
17	14	55	56	32913.75	1	4914.98	2.0346	0.0303	0.0	0.0	0.0	1.52E-06	2.58E-05	1.83E-04
14	11	77	78	32558.77	1	4917.56	2.0335	0.0303	0.0	0.0	0.0	1.13E-06	1.85E-05	1.29E-04
15	12	70	71	32581.36	1	4918.64	2.0331	0.0303	0.0	0.0	0.0	1.36E-06	2.23E-05	1.55E-04
10	7	101	102	32681.01	1	4919.59	2.0327	0.0303	0.0	0.0	0.0	3.71E-07	6.17E-06	4.31E-05
13	10	83	84	32413.95	1	4923.36	2.0311	0.0303	0.0	0.0	0.0	9.69E-07	1.57E-05	1.08E-04
17	14	54	55	32730.14	1	4923.86	2.0309	0.0303	0.0	0.0	0.0	1.67E-06	2.78E-05	1.96E-04
11	8	95	96	32474.26	1	4924.35	2.0307	0.0303	0.0	0.0	0.0	5.45E-07	8.89E-06	6.13E-05
16	13	62	63	32551.91	1	4924.48	2.0307	0.0303	0.0	0.0	0.0	1.61E-06	2.64E-05	1.83E-04
9	6	106	107	32644.72	1	4925.34	2.0303	0.0303	0.0	0.0	0.0	2.50E-07	4.14E-06	2.89E-05
12	9	89	90	32385.48	1	4925.62	2.0302	0.0303	0.0	0.0	0.0	7.54E-07	1.22E-05	8.36E-05
6	3	121	122	33023.30	1	4928.35	2.0291	0.0303	0.0	0.0	0.0	4.51E-08	7.75E-07	5.56E-06

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	11	76	77	32300.53	1	4928.62	2.0290	0.0303	0.0	0.0	0.0	1.30E-06	2.08E-05	1.42E-04
8	5	111	112	32689.35	1	4928.71	2.0289	0.0303	0.0	0.0	0.0	1.60E-07	2.66E-06	1.86E-05
15	12	69	70	32346.95	1	4929.01	2.0288	0.0303	0.0	0.0	0.0	1.54E-06	2.47E-05	1.69E-04
7	4	116	117	32615.40	1	4929.70	2.0285	0.0303	0.0	0.0	0.0	9.05E-08	1.53E-06	1.08E-05
17	14	53	54	32549.66	1	4932.63	2.0273	0.0303	0.0	0.0	0.0	1.83E-06	3.00E-05	2.08E-04
10	7	100	101	32339.95	1	4932.99	2.0272	0.0303	0.0	0.0	0.0	4.47E-07	7.20E-06	4.92E-05
16	13	61	62	32344.45	1	4934.06	2.0267	0.0303	0.0	0.0	0.0	1.79E-06	2.88E-05	1.97E-04
13	10	82	83	32134.93	1	4935.02	2.0263	0.0303	0.0	0.0	0.0	1.13E-06	1.78E-05	1.20E-04
11	8	94	95	32153.80	1	4937.17	2.0255	0.0303	0.0	0.0	0.0	6.49E-07	1.03E-05	6.93E-05
12	9	88	89	32065.71	1	4937.86	2.0252	0.0303	0.0	0.0	0.0	8.90E-07	1.40E-05	9.40E-05
9	6	105	106	32285.97	1	4939.22	2.0246	0.0303	0.0	0.0	0.0	3.05E-07	4.88E-06	3.33E-05
15	12	68	69	32115.60	1	4939.29	2.0246	0.0303	0.0	0.0	0.0	1.74E-06	2.73E-05	1.84E-04
14	11	75	76	32045.30	1	4939.60	2.0245	0.0303	0.0	0.0	0.0	1.49E-06	2.33E-05	1.56E-04
5	2	125	126	32864.54	1	4940.44	2.0241	0.0303	0.0	0.0	0.0	0.0	4.08E-07	2.90E-06
17	14	52	53	32372.31	1	4941.32	2.0238	0.0303	0.0	0.0	0.0	2.00E-06	3.23E-05	2.21E-04
8	5	110	111	32312.95	1	4943.07	2.0230	0.0303	0.0	0.0	0.0	1.97E-07	3.16E-06	2.16E-05
16	13	60	61	32140.09	1	4943.55	2.0228	0.0303	0.0	0.0	0.0	1.99E-06	3.14E-05	2.12E-04
6	3	120	121	32611.84	1	4943.66	2.0228	0.0303	0.0	0.0	0.0	5.65E-08	9.33E-07	6.50E-06
7	4	115	116	32421.43	1	4944.54	2.0224	0.0303	0.0	0.0	0.0	1.13E-07	1.83E-06	1.26E-05
10	7	99	100	32001.73	1	4946.30	2.0217	0.0303	0.0	0.0	0.0	5.38E-07	8.39E-06	5.61E-05
13	10	81	82	31858.89	1	4946.59	2.0216	0.0303	0.0	0.0	0.0	1.31E-06	2.02E-05	1.34E-04
15	12	67	68	31867.32	1	4949.48	2.0204	0.0303	0.0	0.0	0.0	1.96E-06	3.02E-05	2.00E-04
17	14	51	52	32198.11	1	4949.90	2.0202	0.0303	0.0	0.0	0.0	2.18E-06	3.46E-05	2.35E-04
11	8	93	94	31836.23	1	4949.91	2.0202	0.0303	0.0	0.0	0.0	7.71E-07	1.18E-05	7.82E-05
12	9	87	88	31788.87	1	4950.01	2.0202	0.0303	0.0	0.0	0.0	1.05E-06	1.60E-05	1.06E-04
14	11	74	75	31793.11	1	4950.48	2.0200	0.0303	0.0	0.0	0.0	1.70E-06	2.60E-05	1.72E-04
16	13	59	60	31938.83	1	4952.94	2.0190	0.0303	0.0	0.0	0.0	2.20E-06	3.41E-05	2.27E-04
9	6	104	105	31930.02	1	4953.02	2.0190	0.0303	0.0	0.0	0.0	3.71E-07	5.75E-06	3.82E-05
5	2	124	125	32458.27	1	4956.13	2.0177	0.0303	0.0	0.0	0.0	0.0	4.95E-07	3.41E-06
8	5	109	110	31939.30	1	4957.34	2.0172	0.0303	0.0	0.0	0.0	2.42E-07	3.75E-06	2.50E-05
13	10	80	81	31585.85	1	4958.06	2.0169	0.0303	0.0	0.0	0.0	1.52E-06	2.28E-05	1.48E-04
17	14	50	51	32027.05	1	4958.39	2.0168	0.0303	0.0	0.0	0.0	2.37E-06	3.71E-05	2.48E-04
6	3	119	120	32203.01	1	4958.88	2.0166	0.0303	0.0	0.0	0.0	7.06E-08	1.12E-06	7.60E-06
7	4	114	115	32030.15	1	4959.29	2.0164	0.0303	0.0	0.0	0.0	1.40E-07	2.19E-06	1.47E-05
10	7	98	99	31666.36	1	4959.52	2.0163	0.0303	0.0	0.0	0.0	6.47E-07	9.76E-06	6.38E-05
15	12	66	67	31662.11	1	4959.57	2.0163	0.0303	0.0	0.0	0.0	2.20E-06	3.32E-05	2.17E-04
14	11	73	74	31543.96	1	4961.26	2.0156	0.0303	0.0	0.0	0.0	1.95E-06	2.91E-05	1.88E-04
12	9	86	87	31495.00	1	4962.08	2.0153	0.0303	0.0	0.0	0.0	1.23E-06	1.83E-05	1.18E-04
16	13	58	59	31740.70	1	4962.24	2.0152	0.0303	0.0	0.0	0.0	2.44E-06	3.71E-05	2.44E-04
11	8	92	93	31521.56	1	4962.55	2.0151	0.0303	0.0	0.0	0.0	9.15E-07	1.36E-05	8.81E-05
9	6	103	104	31576.87	1	4966.72	2.0134	0.0303	0.0	0.0	0.0	4.51E-07	6.75E-06	4.38E-05
17	14	49	50	31859.17	1	4966.79	2.0134	0.0303	0.0	0.0	0.0	2.58E-06	3.97E-05	2.62E-04
13	10	79	80	31315.80	1	4969.44	2.0123	0.0303	0.0	0.0	0.0	1.76E-06	2.58E-05	1.64E-04
15	12	65	66	31439.99	1	4969.57	2.0122	0.0303	0.0	0.0	0.0	2.47E-06	3.65E-05	2.35E-04
16	13	57	58	31545.70	1	4971.44	2.0115	0.0303	0.0	0.0	4.14E-08	2.70E-06	4.03E-05	2.61E-04
8	5	108	109	31568.43	1	4971.53	2.0115	0.0303	0.0	0.0	0.0	2.97E-07	4.45E-06	2.89E-05
5	2	123	124	32034.61	1	4971.73	2.0114	0.0303	0.0	0.0	0.0	0.0	5.99E-07	4.01E-06
14	11	72	73	31297.86	1	4971.96	2.0113	0.0303	0.0	0.0	0.0	2.22E-06	3.24E-05	2.06E-04
10	7	97	98	31333.86	1	4972.66	2.0110	0.0303	0.0	0.0	0.0	7.76E-07	1.13E-05	7.24E-05
7	4	113	114	31641.59	1	4973.95	2.0105	0.0303	0.0	0.0	0.0	1.74E-07	2.63E-06	1.71E-05
6	3	118	119	31796.86	1	4974.01	2.0105	0.0303	0.0	0.0	0.0	8.86E-08	1.35E-06	8.93E-06
12	9	85	86	31204.08	1	4974.05	2.0104	0.0303	0.0	0.0	0.0	1.45E-06	2.09E-05	1.32E-04
17	14	48	49	31694.45	1	4975.08	2.0100	0.0303	0.0	0.0	4.20E-08	2.80E-06	4.23E-05	2.77E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	8	91	92	31209.82	1	4975.11	2.0100	0.0303	0.0	0.0	0.0	1.08E-06	1.57E-05	9.91E-05
15	12	64	65	31220.98	1	4979.47	2.0082	0.0303	0.0	0.0	4.45E-08	2.77E-06	4.01E-05	2.54E-04
9	6	102	103	31226.56	1	4980.34	2.0079	0.0303	0.0	0.0	0.0	5.47E-07	7.92E-06	5.02E-05
16	13	56	57	31353.83	1	4980.54	2.0078	0.0303	0.0	0.0	4.71E-08	2.99E-06	4.38E-05	2.80E-04
13	10	78	79	31048.78	1	4980.72	2.0077	0.0303	0.0	0.0	0.0	2.04E-06	2.90E-05	1.82E-04
14	11	71	72	31054.82	1	4982.55	2.0070	0.0303	0.0	0.0	4.16E-08	2.53E-06	3.60E-05	2.26E-04
17	14	47	48	31532.90	1	4983.28	2.0067	0.0303	0.0	0.0	4.64E-08	3.02E-06	4.51E-05	2.92E-04
8	5	107	108	31200.33	1	4985.62	2.0058	0.0303	0.0	0.0	0.0	3.65E-07	5.27E-06	3.33E-05
10	7	96	97	31004.25	1	4985.70	2.0057	0.0303	0.0	0.0	0.0	9.29E-07	1.32E-05	8.22E-05
12	9	84	85	30916.14	1	4985.92	2.0056	0.0303	0.0	0.0	0.0	1.70E-06	2.38E-05	1.48E-04
5	2	122	123	31613.57	1	4987.25	2.0051	0.0303	0.0	0.0	0.0	4.82E-08	7.25E-07	4.72E-06
11	8	90	91	30901.00	1	4987.57	2.0050	0.0303	0.0	0.0	0.0	1.28E-06	1.80E-05	1.11E-04
7	4	112	113	31255.77	1	4988.53	2.0046	0.0303	0.0	0.0	0.0	2.16E-07	3.14E-06	1.99E-05
6	3	117	118	31393.38	1	4989.06	2.0044	0.0303	0.0	0.0	0.0	1.11E-07	1.63E-06	1.05E-05
15	12	63	64	31005.07	1	4989.28	2.0043	0.0303	0.0	0.0	5.14E-08	3.10E-06	4.39E-05	2.74E-04
16	13	55	56	31165.11	1	4989.55	2.0042	0.0303	0.0	0.0	5.33E-08	3.29E-06	4.74E-05	2.99E-04
17	14	46	47	31374.53	1	4991.38	2.0035	0.0303	0.0	0.0	5.13E-08	3.26E-06	4.79E-05	3.07E-04
13	10	77	78	30784.78	1	4991.93	2.0032	0.0303	0.0	0.0	4.03E-08	2.35E-06	3.27E-05	2.01E-04
14	11	70	71	30814.84	1	4993.06	2.0028	0.0303	0.0	0.0	4.90E-08	2.88E-06	4.00E-05	2.47E-04
9	6	101	102	30879.08	1	4993.87	2.0025	0.0303	0.0	0.0	0.0	6.62E-07	9.28E-06	5.74E-05
12	9	83	84	30631.19	1	4997.71	2.0009	0.0303	0.0	0.0	0.0	1.98E-06	2.71E-05	1.65E-04
16	13	54	55	30979.55	1	4998.46	2.0006	0.0303	0.0	0.0	6.02E-08	3.62E-06	5.12E-05	3.19E-04
10	7	95	96	30677.52	1	4998.65	2.0005	0.0303	0.0	0.0	0.0	1.11E-06	1.53E-05	9.31E-05
15	12	62	63	30792.28	1	4999.00	2.0004	0.0303	0.0	0.0	5.91E-08	3.46E-06	4.81E-05	2.96E-04
17	14	45	46	31219.36	1	4999.38	2.0002	0.0303	0.0	0.0	5.64E-08	3.51E-06	5.08E-05	3.22E-04
8	5	106	107	30835.03	1	4999.63	2.0001	0.0303	0.0	0.0	0.0	4.47E-07	6.23E-06	3.85E-05
11	8	89	90	30595.13	1	4999.94	2.0000	0.0303	0.0	0.0	0.0	1.51E-06	2.06E-05	1.25E-04
5	2	121	122	31195.18	1	5002.68	1.9989	0.0303	0.0	0.0	0.0	6.07E-08	8.76E-07	5.54E-06
7	4	111	112	30872.70	1	5003.01	1.9988	0.0303	0.0	0.0	0.0	2.68E-07	3.75E-06	2.32E-05
13	10	76	77	30523.82	1	5003.03	1.9988	0.0303	0.0	0.0	4.81E-08	2.71E-06	3.67E-05	2.22E-04
14	11	69	70	30577.96	1	5003.47	1.9986	0.0303	0.0	0.0	5.75E-08	3.26E-06	4.44E-05	2.69E-04
6	3	116	117	30952.61	1	5004.02	1.9984	0.0303	0.0	0.0	0.0	1.39E-07	1.97E-06	1.23E-05
16	13	53	54	30797.15	1	5007.28	1.9971	0.0303	0.0	0.0	6.78E-08	3.97E-06	5.52E-05	3.40E-04
17	14	44	45	31067.38	1	5007.29	1.9971	0.0303	0.0	0.0	6.19E-08	3.77E-06	5.38E-05	3.37E-04
9	6	100	101	30534.46	1	5007.31	1.9971	0.0303	0.0	0.0	0.0	8.01E-07	1.08E-05	6.56E-05
15	12	61	62	30582.61	1	5008.61	1.9966	0.0303	0.0	0.0	6.78E-08	3.85E-06	5.25E-05	3.18E-04
12	9	82	83	30349.24	1	5009.41	1.9962	0.0303	0.0	0.0	4.22E-08	2.32E-06	3.08E-05	1.84E-04
10	7	94	95	30353.71	1	5011.52	1.9954	0.0303	0.0	0.0	0.0	1.32E-06	1.76E-05	1.05E-04
11	8	88	89	30292.22	1	5012.23	1.9951	0.0303	0.0	0.0	0.0	1.79E-06	2.36E-05	1.41E-04
8	5	105	106	30472.55	1	5013.56	1.9946	0.0303	0.0	0.0	0.0	5.46E-07	7.36E-06	4.43E-05
14	11	68	69	30344.16	1	5013.79	1.9945	0.0303	0.0	0.0	6.72E-08	3.69E-06	4.91E-05	2.93E-04
13	10	75	76	30265.92	1	5014.04	1.9944	0.0303	0.0	0.0	5.74E-08	3.12E-06	4.12E-05	2.44E-04
17	14	43	44	30518.60	1	5015.10	1.9940	0.0303	0.0	0.0	6.78E-08	4.04E-06	5.68E-05	3.53E-04
16	13	52	53	30617.92	1	5015.99	1.9936	0.0303	0.0	0.0	7.62E-08	4.35E-06	5.94E-05	3.62E-04
7	4	110	111	30452.39	1	5017.41	1.9931	0.0303	0.0	0.0	0.0	3.31E-07	4.47E-06	2.69E-05
5	2	120	121	30779.46	1	5018.02	1.9928	0.0303	0.0	0.0	0.0	7.61E-08	1.06E-06	6.50E-06
15	12	60	61	30376.09	1	5018.14	1.9928	0.0303	0.0	0.0	7.77E-08	4.28E-06	5.72E-05	3.42E-04
6	3	115	116	30594.55	1	5018.90	1.9925	0.0303	0.0	0.0	0.0	1.74E-07	2.37E-06	1.44E-05
9	6	99	100	30192.72	1	5020.66	1.9918	0.0303	0.0	0.0	0.0	9.66E-07	1.27E-05	7.49E-05
12	9	81	82	30070.30	1	5021.01	1.9916	0.0303	0.0	0.0	5.11E-08	2.70E-06	3.50E-05	2.05E-04
17	14	42	43	30773.04	1	5022.81	1.9909	0.0303	0.0	0.0	7.39E-08	4.32E-06	5.99E-05	3.68E-04
14	11	67	68	30113.47	1	5024.01	1.9904	0.0303	0.0	0.0	7.85E-08	4.17E-06	5.43E-05	3.19E-04
10	7	93	94	30032.83	1	5024.29	1.9903	0.0303	0.0	0.0	0.0	1.58E-06	2.04E-05	1.19E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	8	87	88	29992.29	1	5024.42	1.9903	0.0303	0.0	0.0	4.04E-08	2.11E-06	2.71E-05	1.58E-04
16	13	51	52	30441.87	1	5024.62	1.9902	0.0303	0.0	0.0	8.54E-08	4.75E-06	6.39E-05	3.84E-04
13	10	74	75	30011.07	1	5024.96	1.9901	0.0303	0.0	0.0	6.83E-08	3.58E-06	4.61E-05	2.69E-04
8	5	104	105	30112.89	1	5027.39	1.9891	0.0303	0.0	0.0	0.0	6.66E-07	8.67E-06	5.10E-05
15	12	59	60	30172.71	1	5027.57	1.9890	0.0303	0.0	0.0	8.87E-08	4.75E-06	6.22E-05	3.67E-04
17	14	41	42	30630.69	1	5030.42	1.9879	0.0303	0.0	0.0	8.05E-08	4.60E-06	6.30E-05	3.84E-04
4	1	124	125	30616.80	1	5030.54	1.9879	0.0303	0.0	0.0	0.0	0.0	4.49E-07	2.73E-06
7	4	109	110	30114.87	1	5031.73	1.9874	0.0303	0.0	0.0	0.0	4.08E-07	5.32E-06	3.12E-05
12	9	80	81	29754.40	1	5032.52	1.9871	0.0303	0.0	0.0	6.19E-08	3.14E-06	3.96E-05	2.28E-04
16	13	50	51	30269.01	1	5033.14	1.9868	0.0303	0.0	0.0	9.54E-08	5.18E-06	6.85E-05	4.07E-04
5	2	119	120	30366.41	1	5033.28	1.9868	0.0303	0.0	0.0	0.0	9.54E-08	1.27E-06	7.61E-06
6	3	114	115	30199.23	1	5033.68	1.9866	0.0303	0.0	0.0	0.0	2.17E-07	2.84E-06	1.68E-05
9	6	98	99	29853.86	1	5033.92	1.9865	0.0303	0.0	0.0	0.0	1.16E-06	1.48E-05	8.53E-05
14	11	66	67	29885.90	1	5034.14	1.9864	0.0303	0.0	0.0	9.14E-08	4.70E-06	5.98E-05	3.46E-04
13	10	73	74	29759.31	1	5035.78	1.9858	0.0303	0.0	0.0	8.11E-08	4.09E-06	5.15E-05	2.96E-04
11	8	86	87	29695.34	1	5036.52	1.9855	0.0303	0.0	0.0	4.97E-08	2.48E-06	3.11E-05	1.78E-04
15	12	58	59	29972.48	1	5036.90	1.9853	0.0303	0.0	0.0	1.01E-07	5.28E-06	6.78E-05	3.95E-04
10	7	92	93	29714.89	1	5036.97	1.9853	0.0303	0.0	0.0	0.0	1.87E-06	2.35E-05	1.34E-04
17	14	40	41	30451.56	1	5037.93	1.9849	0.0303	0.0	0.0	8.73E-08	4.90E-06	6.61E-05	3.99E-04
8	5	103	104	29756.08	1	5041.13	1.9837	0.0303	0.0	0.0	0.0	8.11E-07	1.02E-05	5.86E-05
16	13	49	50	30099.34	1	5041.57	1.9835	0.0303	0.0	0.0	1.06E-07	5.64E-06	7.33E-05	4.30E-04
12	9	79	80	29521.54	1	5043.94	1.9826	0.0303	0.0	0.0	7.47E-08	3.64E-06	4.48E-05	2.53E-04
14	11	65	66	29661.45	1	5044.18	1.9825	0.0303	0.0	0.0	1.06E-07	5.28E-06	6.59E-05	3.75E-04
17	14	39	40	30355.66	1	5045.35	1.9820	0.0303	0.0	0.0	9.44E-08	5.19E-06	6.92E-05	4.14E-04
7	4	108	109	29740.16	1	5045.95	1.9818	0.0303	0.0	0.0	0.0	5.03E-07	6.32E-06	3.62E-05
15	12	57	58	29775.43	1	5046.13	1.9817	0.0303	0.0	0.0	1.16E-07	5.85E-06	7.38E-05	4.24E-04
4	1	123	124	30188.78	1	5046.19	1.9817	0.0303	0.0	0.0	0.0	4.15E-08	5.45E-07	3.22E-06
13	10	72	73	29510.62	1	5046.51	1.9816	0.0303	0.0	0.0	9.61E-08	4.68E-06	5.75E-05	3.24E-04
9	6	97	98	29517.91	1	5047.09	1.9813	0.0303	0.0	0.0	0.0	1.40E-06	1.72E-05	9.71E-05
6	3	113	114	29806.66	1	5048.39	1.9808	0.0303	0.0	0.0	0.0	2.70E-07	3.41E-06	1.96E-05
5	2	118	119	29956.07	1	5048.46	1.9808	0.0303	0.0	0.0	0.0	1.20E-07	1.54E-06	8.96E-06
11	8	85	86	29401.38	1	5048.52	1.9808	0.0303	0.0	0.0	6.09E-08	2.92E-06	3.55E-05	1.99E-04
10	7	91	92	29359.89	1	5049.56	1.9804	0.0303	0.0	0.0	4.64E-08	2.22E-06	2.70E-05	1.51E-04
16	13	48	49	29932.87	1	5049.90	1.9802	0.0303	0.0	0.0	1.18E-07	6.12E-06	7.83E-05	4.55E-04
17	14	38	39	30223.00	1	5052.67	1.9792	0.0303	0.0	0.0	1.02E-07	5.50E-06	7.23E-05	4.29E-04
14	11	64	65	29440.12	1	5054.12	1.9786	0.0303	0.0	0.0	1.23E-07	5.93E-06	7.24E-05	4.07E-04
8	5	102	103	29402.14	1	5054.79	1.9783	0.0303	0.0	0.0	0.0	9.86E-07	1.20E-05	6.72E-05
12	9	78	79	29251.72	1	5055.27	1.9781	0.0303	0.0	0.0	8.99E-08	4.22E-06	5.06E-05	2.80E-04
15	12	56	57	29581.54	1	5055.28	1.9781	0.0303	0.0	0.0	1.32E-07	6.47E-06	8.01E-05	4.54E-04
13	10	71	72	29265.04	1	5057.15	1.9774	0.0303	0.0	0.0	1.13E-07	5.34E-06	6.41E-05	3.55E-04
16	13	47	48	29769.62	1	5058.14	1.9770	0.0303	0.0	0.0	1.31E-07	6.62E-06	8.35E-05	4.79E-04
17	14	37	38	30093.57	1	5059.89	1.9763	0.0303	0.0	0.0	1.10E-07	5.80E-06	7.54E-05	4.43E-04
7	4	107	108	29368.25	1	5060.09	1.9762	0.0303	0.0	0.0	0.0	6.18E-07	7.49E-06	4.19E-05
9	6	96	97	29184.87	1	5060.17	1.9762	0.0303	0.0	0.0	0.0	1.68E-06	2.00E-05	1.10E-04
11	8	84	85	29110.45	1	5060.44	1.9761	0.0303	0.0	0.0	7.46E-08	3.43E-06	4.06E-05	2.23E-04
4	1	122	123	29763.41	1	5061.74	1.9756	0.0303	0.0	0.0	0.0	5.24E-08	6.60E-07	3.79E-06
10	7	90	91	29087.87	1	5062.07	1.9755	0.0303	0.0	0.0	5.75E-08	2.63E-06	3.11E-05	1.70E-04
6	3	112	113	29416.86	1	5063.00	1.9751	0.0303	0.0	0.0	0.0	3.35E-07	4.09E-06	2.29E-05
5	2	117	118	29548.44	1	5063.55	1.9749	0.0303	0.0	0.0	0.0	1.51E-07	1.86E-06	1.05E-05
14	11	63	64	29221.95	1	5063.97	1.9747	0.0303	0.0	0.0	1.42E-07	6.64E-06	7.94E-05	4.39E-04
15	12	55	56	29390.83	1	5064.32	1.9746	0.0303	0.0	0.0	1.49E-07	7.15E-06	8.68E-05	4.86E-04
16	13	46	47	29609.58	1	5066.28	1.9738	0.0303	0.0	0.0	1.45E-07	7.16E-06	8.88E-05	5.04E-04
12	9	77	78	28984.96	1	5066.50	1.9737	0.0303	0.0	0.0	1.08E-07	4.88E-06	5.70E-05	3.10E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	36	37	29967.39	1	5067.01	1.9736	0.0308	0.0	0.0	1.17E-07	6.11E-06	7.85E-05	4.57E-04
13	10	70	71	29022.55	1	5067.69	1.9733	0.0303	0.0	0.0	1.34E-07	6.07E-06	7.12E-05	3.89E-04
8	5	101	102	25051.07	1	5068.36	1.9730	0.0303	0.0	0.0	0.0	1.20E-06	1.41E-05	7.70E-05
11	8	83	84	28822.53	1	5072.27	1.9715	0.0303	0.0	0.0	9.11E-08	4.02E-06	4.63E-05	2.49E-04
9	6	95	96	26854.77	1	5073.16	1.9712	0.0303	0.0	0.0	4.53E-08	2.01E-06	2.32E-05	1.25E-04
15	12	54	55	29203.32	1	5073.27	1.9711	0.0303	0.0	0.0	1.69E-07	7.87E-06	9.40E-05	5.19E-04
14	11	62	63	29006.93	1	5073.72	1.9709	0.0303	0.0	0.0	1.64E-07	7.43E-06	8.70E-05	4.74E-04
17	14	35	36	29844.47	1	5074.03	1.9708	0.0312	0.0	0.0	1.25E-07	6.41E-06	8.14E-05	4.70E-04
7	4	106	107	26999.19	1	5074.14	1.9708	0.0303	0.0	0.0	0.0	7.59E-07	8.88E-06	4.84E-05
16	13	45	46	29452.77	1	5074.32	1.9707	0.0303	0.0	0.0	1.60E-07	7.71E-06	9.43E-05	5.30E-04
10	7	89	90	28778.82	1	5074.48	1.9706	0.0303	0.0	0.0	7.10E-08	3.11E-06	3.57E-05	1.91E-04
4	1	121	122	29340.73	1	5077.21	1.9696	0.0303	0.0	0.0	0.0	6.61E-08	8.00E-07	4.46E-06
6	3	111	112	29029.84	1	5077.53	1.9695	0.0303	0.0	0.0	0.0	4.16E-07	4.89E-06	2.67E-05
12	9	76	77	28721.29	1	5077.64	1.9694	0.0303	0.0	0.0	1.29E-07	5.63E-06	6.41E-05	3.43E-04
13	10	69	70	28763.19	1	5078.14	1.9692	0.0303	0.0	0.0	1.57E-07	6.90E-06	7.91E-05	4.25E-04
5	2	116	117	29143.55	1	5078.55	1.9691	0.0303	0.0	0.0	0.0	1.89E-07	2.25E-06	1.24E-05
17	14	34	35	29724.80	1	5080.95	1.9681	0.0317	0.0	0.0	1.34E-07	6.72E-06	8.43E-05	4.83E-04
8	5	100	101	28702.89	1	5081.83	1.9678	0.0303	0.0	0.0	0.0	1.45E-06	1.65E-05	8.81E-05
15	12	53	54	29019.00	1	5082.12	1.9677	0.0303	0.0	0.0	1.90E-07	8.65E-06	1.01E-04	5.53E-04
16	13	44	45	29299.19	1	5082.26	1.9676	0.0303	0.0	0.0	1.75E-07	8.29E-06	9.99E-05	5.56E-04
14	11	61	62	28795.07	1	5083.37	1.9672	0.0303	0.0	0.0	1.88E-07	8.28E-06	9.51E-05	5.11E-04
11	8	82	83	28537.65	1	5084.00	1.9670	0.0303	0.0	0.0	1.11E-07	4.70E-06	5.27E-05	2.78E-04
9	6	94	95	28527.61	1	5086.07	1.9662	0.0303	0.0	0.0	5.68E-08	2.40E-06	2.69E-05	1.42E-04
10	7	88	89	28472.78	1	5086.80	1.9659	0.0303	0.0	0.0	8.79E-08	3.69E-06	4.11E-05	2.16E-04
17	14	33	34	29608.40	1	5087.77	1.9655	0.0321	0.0	0.0	1.42E-07	7.02E-06	8.71E-05	4.95E-04
7	4	105	106	26632.97	1	5088.10	1.9654	0.0303	0.0	0.0	0.0	9.29E-07	1.05E-05	5.58E-05
17	14	94	93	41818.97	1	5088.16	1.9653	0.0303	0.0	0.0	0.0	5.88E-08	2.35E-06	3.09E-05
13	10	68	69	28546.96	1	5088.50	1.9652	0.0303	0.0	0.0	1.84E-07	7.82E-06	8.77E-05	4.63E-04
12	9	75	76	28460.70	1	5088.69	1.9651	0.0303	0.0	0.0	1.55E-07	6.48E-06	7.21E-05	3.78E-04
16	13	43	44	29148.84	1	5090.10	1.9646	0.0303	0.0	0.0	1.92E-07	8.89E-06	1.06E-04	5.81E-04
15	12	52	53	28837.89	1	5090.88	1.9643	0.0303	0.0	0.0	2.14E-07	9.48E-06	1.09E-04	5.89E-04
6	3	110	111	28645.63	1	5091.97	1.9639	0.0303	0.0	0.0	0.0	5.16E-07	5.84E-06	3.10E-05
4	1	120	121	28920.75	1	5092.60	1.9636	0.0303	0.0	0.0	0.0	8.32E-08	9.67E-07	5.24E-06
14	11	60	61	28586.38	1	5092.93	1.9635	0.0303	0.0	0.0	2.16E-07	9.22E-06	1.04E-04	5.50E-04
5	2	115	116	28741.41	1	5093.46	1.9633	0.0303	0.0	0.0	0.0	2.37E-07	2.71E-06	1.45E-05
17	14	32	33	29495.27	1	5094.49	1.9629	0.0326	0.0	0.0	1.50E-07	7.31E-06	8.97E-05	5.06E-04
8	5	99	100	28357.62	1	5095.22	1.9626	0.0303	0.0	0.0	4.25E-08	1.75E-06	1.93E-05	1.01E-04
17	14	93	92	41526.67	1	5095.26	1.9626	0.0303	0.0	0.0	0.0	6.78E-08	2.64E-06	3.39E-05
11	8	81	82	28255.82	1	5095.64	1.9625	0.0303	0.0	0.0	1.35E-07	5.49E-06	5.98E-05	3.10E-04
16	13	42	43	29001.74	1	5097.85	1.9616	0.0303	0.0	0.0	2.10E-07	9.51E-06	1.11E-04	6.07E-04
13	10	67	68	28313.86	1	5098.76	1.9613	0.0303	0.0	0.0	2.16E-07	8.84E-06	9.70E-05	5.04E-04
9	6	93	94	28203.41	1	5098.88	1.9612	0.0303	0.0	0.0	7.10E-08	2.87E-06	3.11E-05	1.61E-04
10	7	87	88	28169.73	1	5099.03	1.9612	0.0303	0.0	0.0	1.09E-07	4.37E-06	4.72E-05	2.43E-04
15	12	51	52	28659.99	1	5099.54	1.9610	0.0303	0.0	0.0	2.41E-07	1.04E-05	1.18E-04	6.26E-04
12	9	74	75	28203.20	1	5099.64	1.9609	0.0303	0.0	0.0	1.84E-07	7.45E-06	8.08E-05	4.17E-04
17	14	31	32	29385.40	1	5101.11	1.9604	0.0331	0.0	0.0	1.58E-07	7.59E-06	9.22E-05	5.16E-04
7	4	104	105	28269.62	1	5101.97	1.9600	0.0303	0.0	0.0	0.0	1.14E-06	1.24E-05	6.43E-05
17	14	92	91	41237.09	1	5102.25	1.9599	0.0303	0.0	0.0	0.0	7.80E-08	2.96E-06	3.73E-05
14	11	59	60	28380.87	1	5102.40	1.9599	0.0303	0.0	0.0	2.47E-07	1.02E-05	1.13E-04	5.91E-04
16	13	41	42	28857.89	1	5105.50	1.9587	0.0303	0.0	0.0	2.29E-07	1.02E-05	1.17E-04	6.33E-04
6	3	109	110	28264.23	1	5106.32	1.9584	0.0303	0.0	0.0	0.0	6.38E-07	6.96E-06	3.61E-05
11	8	80	81	27977.05	1	5107.19	1.9580	0.0303	0.0	0.0	1.64E-07	6.39E-06	6.79E-05	3.45E-04
17	14	30	31	29278.82	1	5107.64	1.9579	0.0335	0.0	0.0	1.67E-07	7.86E-06	9.45E-05	5.25E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	119	120	28503.48	1	5107.90	1.9578	0.0303	0.0	0.0	0.0	1.04E-07	1.17E-06	6.15E-06
15	12	50	51	28485.31	1	5108.10	1.9577	0.0303	0.0	0.0	2.69E-07	1.13E-05	1.26E-04	6.64E-04
5	2	114	115	28342.04	1	5108.29	1.9576	0.0303	0.0	0.0	0.0	2.97E-07	3.26E-06	1.70E-05
8	5	98	99	28015.28	1	5108.52	1.9575	0.0303	0.0	0.0	5.38E-08	2.12E-06	2.26E-05	1.15E-04
13	10	66	67	28083.91	1	5108.92	1.9574	0.0303	0.0	0.0	2.51E-07	9.98E-06	1.07E-04	5.48E-04
17	14	91	90	40950.24	1	5109.11	1.9573	0.0303	0.0	0.0	0.0	8.96E-08	3.30E-06	4.08E-05
12	9	73	74	27948.82	1	5110.50	1.9568	0.0303	0.0	0.0	2.19E-07	8.54E-06	9.04E-05	4.59E-04
10	7	86	87	27869.71	1	5111.16	1.9565	0.0303	0.0	0.0	1.34E-07	5.15E-06	5.42E-05	2.73E-04
9	6	92	93	27882.18	1	5111.60	1.9563	0.0303	0.0	0.0	8.86E-08	3.42E-06	3.59E-05	1.81E-04
14	11	56	55	28178.56	1	5111.77	1.9563	0.0303	0.0	0.0	2.83E-07	1.14E-05	1.23E-04	6.36E-04
16	13	40	41	28717.30	1	5113.05	1.9558	0.0303	0.0	0.0	2.49E-07	1.08E-05	1.23E-04	6.59E-04
17	14	29	30	29175.52	1	5114.06	1.9554	0.0340	0.0	0.0	1.75E-07	8.11E-06	9.66E-05	5.33E-04
7	4	103	104	27909.14	1	5115.75	1.9547	0.0303	0.0	0.0	0.0	1.39E-06	1.46E-05	7.40E-05
17	14	90	89	40666.15	1	5115.86	1.9547	0.0303	0.0	0.0	0.0	1.03E-07	3.69E-06	4.47E-05
15	12	49	50	28313.87	1	5116.57	1.9544	0.0303	0.0	0.0	3.00E-07	1.23E-05	1.35E-04	7.03E-04
11	8	79	80	27701.36	1	5118.65	1.9536	0.0303	0.0	0.0	1.98E-07	7.43E-06	7.69E-05	3.83E-04
13	10	65	66	27857.12	1	5119.00	1.9535	0.0303	0.0	0.0	2.93E-07	1.12E-05	1.18E-04	5.95E-04
17	14	28	29	29075.50	1	5120.38	1.9530	0.0359	0.0	0.0	1.83E-07	8.38E-06	9.89E-05	5.42E-04
16	13	39	40	28579.97	1	5120.50	1.9529	0.0303	0.0	0.0	2.69E-07	1.15E-05	1.29E-04	6.84E-04
6	3	108	109	27885.68	1	5120.58	1.9529	0.0303	0.0	0.0	0.0	7.87E-07	8.29E-06	4.19E-05
14	11	57	56	27979.44	1	5121.04	1.9527	0.0303	0.0	0.0	3.23E-07	1.27E-05	1.34E-04	6.83E-04
12	9	72	73	27697.55	1	5121.27	1.9526	0.0303	0.0	0.0	2.60E-07	9.78E-06	1.01E-04	5.04E-04
8	5	97	98	27675.87	1	5121.73	1.9525	0.0303	0.0	0.0	6.81E-08	2.55E-06	2.63E-05	1.31E-04
17	14	89	88	40384.82	1	5122.49	1.9522	0.0303	0.0	0.0	0.0	1.18E-07	4.14E-06	4.92E-05
5	2	113	114	27945.45	1	5123.03	1.9520	0.0303	0.0	0.0	0.0	3.70E-07	3.92E-06	1.99E-05
4	1	118	119	28088.95	1	5123.11	1.9519	0.0303	0.0	0.0	0.0	1.32E-07	1.42E-06	7.25E-06
10	7	85	86	27572.73	1	5123.21	1.9519	0.0303	0.0	0.0	1.65E-07	6.08E-06	6.21E-05	3.07E-04
9	6	91	92	27563.95	1	5124.23	1.9515	0.0303	0.0	0.0	1.10E-07	4.06E-06	4.15E-05	2.05E-04
15	12	48	49	28145.66	1	5124.93	1.9512	0.0303	0.0	0.0	3.34E-07	1.34E-05	1.45E-04	7.44E-04
17	14	27	28	28978.78	1	5126.61	1.9506	0.0379	0.0	0.0	1.91E-07	8.63E-06	1.01E-04	5.49E-04
16	13	38	39	28445.91	1	5127.85	1.9501	0.0303	0.0	0.0	2.91E-07	1.22E-05	1.35E-04	7.09E-04
13	10	64	65	27633.50	1	5128.97	1.9497	0.0303	0.0	0.0	3.40E-07	1.26E-05	1.30E-04	6.45E-04
17	14	86	87	40106.27	1	5129.00	1.9497	0.0303	0.0	0.0	0.0	1.36E-07	4.63E-06	5.41E-05
7	4	102	103	27551.57	1	5129.44	1.9495	0.0303	0.0	0.0	4.60E-08	1.69E-06	1.72E-05	8.51E-05
11	8	78	79	27428.76	1	5130.01	1.9493	0.0303	0.0	0.0	2.39E-07	8.63E-06	8.69E-05	4.26E-04
14	11	56	57	27783.53	1	5130.22	1.9492	0.0303	0.0	0.0	3.68E-07	1.40E-05	1.46E-04	7.33E-04
16	13	99	98	41685.60	1	5130.74	1.9490	0.0303	0.0	0.0	0.0	5.81E-08	2.30E-06	2.99E-05
12	9	71	72	27449.42	1	5131.95	1.9486	0.0303	0.0	0.0	3.08E-07	1.12E-05	1.13E-04	5.53E-04
17	14	26	27	28865.35	1	5132.73	1.9483	0.0398	0.0	0.0	1.99E-07	8.85E-06	1.03E-04	5.55E-04
15	12	47	48	27980.70	1	5133.21	1.9481	0.0303	0.0	0.0	3.71E-07	1.45E-05	1.54E-04	7.85E-04
6	3	107	108	27509.97	1	5134.75	1.9475	0.0303	0.0	0.0	0.0	9.70E-07	9.86E-06	4.85E-05
8	5	96	97	27339.41	1	5134.85	1.9475	0.0303	0.0	0.0	8.59E-08	3.07E-06	3.06E-05	1.49E-04
16	13	37	38	28315.13	1	5135.11	1.9474	0.0303	0.0	0.0	3.13E-07	1.28E-05	1.41E-04	7.33E-04
10	7	84	85	27278.79	1	5135.16	1.9474	0.0303	0.0	0.0	2.02E-07	7.15E-06	7.10E-05	3.44E-04
17	14	87	86	39830.51	1	5135.40	1.9473	0.0303	0.0	0.0	0.0	1.56E-07	5.18E-06	5.93E-05
9	6	90	91	27248.71	1	5136.77	1.9467	0.0303	0.0	0.0	1.37E-07	4.82E-06	4.77E-05	2.31E-04
5	2	112	113	27551.67	1	5137.68	1.9464	0.0303	0.0	0.0	0.0	4.62E-07	4.71E-06	2.32E-05
4	1	117	118	27677.16	1	5138.24	1.9462	0.0303	0.0	0.0	0.0	1.66E-07	1.72E-06	8.54E-06
16	13	98	97	41376.48	1	5138.40	1.9461	0.0303	0.0	0.0	0.0	6.78E-08	2.60E-06	3.31E-05
17	14	25	26	28795.22	1	5138.75	1.9460	0.0418	0.0	0.0	2.06E-07	9.06E-06	1.04E-04	5.60E-04
13	10	63	64	27413.06	1	5138.86	1.9460	0.0303	0.0	0.0	3.93E-07	1.42E-05	1.43E-04	6.98E-04
14	11	55	56	27550.84	1	5139.30	1.9458	0.0303	0.0	0.0	4.19E-07	1.55E-05	1.59E-04	7.85E-04
11	8	77	78	27159.25	1	5141.28	1.9450	0.0303	0.0	0.0	2.87E-07	9.99E-06	9.81E-05	4.72E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	46	47	27818.98	1	5141.38	1.9450	0.0303	0.0	0.0	4.11E-07	1.57E-05	1.64E-04	8.26E-04
17	14	86	85	39557.56	1	5141.68	1.9449	0.0303	0.0	0.0	0.0	1.79E-07	5.79E-06	6.50E-05
16	13	36	37	28187.63	1	5142.26	1.9447	0.0308	0.0	0.0	3.36E-07	1.35E-05	1.47E-04	7.57E-04
12	9	70	71	27204.43	1	5142.53	1.9446	0.0303	0.0	0.0	3.64E-07	1.27E-05	1.26E-04	6.05E-04
7	4	101	102	27196.90	1	5143.05	1.9444	0.0303	0.0	0.0	5.88E-08	2.06E-06	2.03E-05	9.77E-05
17	14	24	25	26708.40	1	5144.67	1.9438	0.0437	0.0	0.0	2.12E-07	9.23E-06	1.05E-04	5.62E-04
16	13	97	96	41070.04	1	5145.94	1.9433	0.0303	0.0	0.0	0.0	7.89E-08	2.94E-06	3.67E-05
10	7	83	84	26567.90	1	5147.03	1.9429	0.0303	0.0	0.0	2.47E-07	8.39E-06	8.11E-05	3.85E-04
17	14	85	84	39287.42	1	5147.84	1.9426	0.0303	0.0	0.0	0.0	2.05E-07	6.45E-06	7.12E-05
8	5	95	96	27005.92	1	5147.88	1.9425	0.0303	0.0	0.0	1.08E-07	3.68E-06	3.56E-05	1.70E-04
14	11	54	55	27401.37	1	5148.25	1.9424	0.0303	0.0	0.0	4.74E-07	1.71E-05	1.72E-04	8.39E-04
13	10	62	63	27195.80	1	5148.64	1.9423	0.0303	0.0	0.0	4.54E-07	1.59E-05	1.57E-04	7.54E-04
6	3	106	107	27137.13	1	5148.84	1.9422	0.0303	0.0	0.0	0.0	1.19E-06	1.17E-05	5.62E-05
9	6	89	90	26936.49	1	5149.22	1.9420	0.0303	0.0	0.0	1.69E-07	5.71E-06	5.49E-05	2.60E-04
16	13	35	36	26063.42	1	5149.32	1.9420	0.0312	0.0	0.0	3.59E-07	1.42E-05	1.52E-04	7.80E-04
15	12	45	46	27660.53	1	5149.46	1.9420	0.0303	0.0	0.0	4.53E-07	1.69E-05	1.75E-04	8.69E-04
17	14	23	24	28624.89	1	5150.49	1.9416	0.0457	0.0	0.0	2.18E-07	9.38E-06	1.06E-04	5.64E-04
5	2	111	112	27160.71	1	5152.25	1.9409	0.0303	0.0	0.0	0.0	5.74E-07	5.64E-06	2.71E-05
11	8	76	77	26892.85	1	5152.46	1.9408	0.0303	0.0	0.0	3.45E-07	1.15E-05	1.11E-04	5.22E-04
12	9	69	70	26962.59	1	5153.01	1.9406	0.0303	0.0	0.0	4.28E-07	1.45E-05	1.40E-04	6.62E-04
4	1	116	117	27268.14	1	5153.28	1.9405	0.0303	0.0	0.0	0.0	2.09E-07	2.08E-06	1.01E-05
16	13	96	95	40766.30	1	5153.36	1.9405	0.0303	0.0	0.0	0.0	9.17E-08	3.32E-06	4.06E-05
17	14	84	83	39020.11	1	5153.88	1.9403	0.0303	0.0	0.0	0.0	2.34E-07	7.18E-06	7.78E-05
8	5	88	89	23934.27	2	5155.02	1.9399	0.0303	0.0	0.0	0.0	2.10E-07	1.51E-06	5.83E-06
17	14	22	23	28544.68	1	5156.21	1.9394	0.0476	0.0	0.0	2.24E-07	9.49E-06	1.06E-04	5.63E-04
16	13	34	35	27942.50	1	5156.28	1.9394	0.0317	0.0	0.0	3.83E-07	1.49E-05	1.58E-04	8.01E-04
7	4	100	101	26845.17	1	5156.57	1.9393	0.0303	0.0	0.0	7.51E-08	2.50E-06	2.38E-05	1.12E-04
14	11	53	54	27215.13	1	5157.18	1.9390	0.0303	0.0	0.0	5.36E-07	1.88E-05	1.86E-04	8.96E-04
15	12	44	45	27505.34	1	5157.44	1.9389	0.0303	0.0	0.0	4.99E-07	1.82E-05	1.85E-04	9.12E-04
13	10	61	62	26981.75	1	5158.34	1.9386	0.0303	0.0	0.0	5.23E-07	1.77E-05	1.71E-04	8.14E-04
10	7	82	83	26700.09	1	5158.80	1.9384	0.0303	0.0	0.0	3.02E-07	9.83E-06	9.24E-05	4.31E-04
17	14	83	82	38755.64	1	5159.81	1.9381	0.0303	0.0	0.0	0.0	2.67E-07	7.98E-06	8.49E-05
16	13	95	94	40465.28	1	5160.67	1.9377	0.0303	0.0	0.0	0.0	1.06E-07	3.75E-06	4.48E-05
8	5	94	95	26675.41	1	5160.82	1.9377	0.0303	0.0	0.0	1.36E-07	4.41E-06	4.14E-05	1.92E-04
9	6	88	89	26627.30	1	5161.57	1.9374	0.0303	0.0	0.0	2.10E-07	6.78E-06	6.33E-05	2.93E-04
17	14	21	22	28467.79	1	5161.83	1.9373	0.0496	0.0	0.0	2.28E-07	9.57E-06	1.07E-04	5.60E-04
6	3	105	106	26767.18	1	5162.84	1.9369	0.0303	0.0	0.0	4.46E-08	1.47E-06	1.39E-05	6.49E-05
16	13	33	34	27824.87	1	5163.14	1.9368	0.0321	0.0	0.0	4.07E-07	1.56E-05	1.63E-04	8.21E-04
12	9	68	69	26723.91	1	5163.41	1.9367	0.0303	0.0	0.0	5.03E-07	1.64E-05	1.55E-04	7.23E-04
11	8	75	76	26629.57	1	5163.54	1.9367	0.0303	0.0	0.0	4.13E-07	1.33E-05	1.24E-04	5.77E-04
15	12	43	44	27353.43	1	5165.32	1.9360	0.0303	0.0	0.0	5.47E-07	1.96E-05	1.96E-04	9.55E-04
17	14	82	81	38494.02	1	5165.62	1.9359	0.0303	0.0	0.0	0.0	3.04E-07	8.85E-06	9.25E-05
14	11	52	53	27032.14	1	5165.97	1.9357	0.0303	0.0	0.0	6.04E-07	2.06E-05	2.00E-04	9.55E-04
8	5	87	88	23637.53	2	5166.62	1.9355	0.0303	0.0	0.0	0.0	2.48E-07	1.74E-06	6.55E-06
5	2	110	111	26772.58	1	5166.72	1.9355	0.0303	0.0	0.0	0.0	7.13E-07	6.75E-06	3.16E-05
17	14	20	21	28394.22	1	5167.35	1.9352	0.0515	0.0	0.0	2.31E-07	9.61E-06	1.06E-04	5.56E-04
3	0	120	121	27035.63	1	5167.38	1.9352	0.0303	0.0	0.0	0.0	5.77E-08	5.60E-07	2.67E-06
16	13	94	93	40167.00	1	5167.85	1.9350	0.0303	0.0	0.0	0.0	1.23E-07	4.22E-06	4.94E-05
13	10	60	61	26770.90	1	5167.93	1.9350	0.0303	0.0	0.0	6.01E-07	1.98E-05	1.87E-04	8.76E-04
4	1	115	116	26861.92	1	5168.23	1.9349	0.0303	0.0	0.0	0.0	2.63E-07	2.51E-06	1.18E-05
16	13	32	33	27710.55	1	5169.90	1.9343	0.0326	0.0	0.0	4.31E-07	1.62E-05	1.68E-04	8.40E-04
7	4	99	100	26496.37	1	5169.99	1.9342	0.0303	0.0	0.0	9.57E-08	3.03E-06	2.79E-05	1.28E-04
10	7	81	82	26415.37	1	5170.48	1.9341	0.0303	0.0	0.0	3.68E-07	1.15E-05	1.05E-04	4.81E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	61	80	38235.27	1	5171.32	1.9337	0.0303	0.0	0.0	0.0	3.45E-07	9.80E-06	1.01E-04
17	14	19	20	28323.98	1	5172.76	1.9332	0.0535	0.0	0.0	2.34E-07	9.61E-06	1.06E-04	5.50E-04
15	12	42	43	27204.80	1	5173.10	1.9331	0.0303	0.0	0.0	5.99E-07	2.10E-05	2.07E-04	9.98E-04
8	5	93	94	26347.89	1	5173.67	1.9329	0.0303	0.0	0.0	1.70E-07	5.28E-06	4.80E-05	2.18E-04
12	9	67	68	26468.41	1	5173.70	1.9329	0.0303	0.0	0.0	5.90E-07	1.86E-05	1.72E-04	7.88E-04
9	6	87	88	26321.15	1	5173.84	1.9328	0.0303	0.0	0.0	2.61E-07	8.04E-06	7.29E-05	3.31E-04
11	8	74	75	26369.43	1	5174.54	1.9325	0.0303	0.0	0.0	4.94E-07	1.53E-05	1.40E-04	6.36E-04
14	11	51	52	26852.39	1	5174.66	1.9325	0.0303	0.0	0.0	6.79E-07	2.26E-05	2.16E-04	1.02E-03
16	13	53	52	35871.45	1	5174.92	1.9324	0.0303	0.0	0.0	0.0	1.42E-07	4.74E-06	5.44E-05
16	13	31	32	27599.54	1	5176.55	1.9318	0.0331	0.0	0.0	4.56E-07	1.69E-05	1.73E-04	8.58E-04
6	3	104	105	26400.13	1	5176.75	1.9317	0.0303	0.0	0.0	5.76E-08	1.80E-06	1.64E-05	7.49E-05
17	14	80	79	37979.39	1	5176.90	1.9317	0.0303	0.0	0.0	0.0	3.90E-07	1.08E-05	1.09E-04
13	10	59	60	26563.26	1	5177.44	1.9315	0.0303	0.0	0.0	6.89E-07	2.20E-05	2.04E-04	9.42E-04
17	14	18	19	28257.05	1	5178.08	1.9312	0.0552	0.0	0.0	2.35E-07	9.56E-06	1.04E-04	5.41E-04
8	5	86	87	23343.78	2	5178.13	1.9312	0.0303	0.0	0.0	0.0	2.92E-07	1.99E-06	7.35E-06
15	12	103	102	41301.83	1	5179.09	1.9308	0.0303	0.0	0.0	0.0	6.35E-08	2.42E-06	3.07E-05
15	12	41	42	27059.45	1	5180.78	1.9302	0.0303	0.0	0.0	6.53E-07	2.24E-05	2.18E-04	1.04E-03
5	2	109	110.	26387.31	1	5181.11	1.9301	0.0303	0.0	0.0	0.0	8.84E-07	8.07E-06	3.68E-05
16	13	92	91	39578.67	1	5181.87	1.9298	0.0303	0.0	0.0	0.0	1.64E-07	5.31E-06	5.98E-05
10	7	80	81	26133.74	1	5182.06	1.9297	0.0303	0.0	0.0	4.47E-07	1.34E-05	1.20E-04	5.36E-04
17	14	79	78	37726.41	1	5182.36	1.9296	0.0303	0.0	0.0	0.0	4.41E-07	1.20E-05	1.19E-04
3	0	119	120	26614.14	1	5182.72	1.9295	0.0303	0.0	0.0	0.0	7.26E-08	6.77E-07	3.14E-06
4	1	114	115	26458.50	1	5183.10	1.9293	0.0303	0.0	0.0	0.0	3.29E-07	3.03E-06	1.39E-05
16	13	30	31	27491.84	1	5183.11	1.9293	0.0335	0.0	0.0	4.80E-07	1.75E-05	1.78E-04	8.74E-04
14	11	50	51	26675.90	1	5183.26	1.9293	0.0303	0.0	0.0	7.61E-07	2.47E-05	2.32E-04	1.08E-03
17	14	17	18	28193.46	1	5183.29	1.9293	0.0568	0.0	0.0	2.35E-07	9.47E-06	1.03E-04	5.30E-04
7	4	98	99	26150.54	1	5183.33	1.9293	0.0303	0.0	0.0	1.22E-07	3.66E-06	3.27E-05	1.47E-04
12	9	66	67	26256.09	1	5183.91	1.9290	0.0303	0.0	0.0	6.89E-07	2.11E-05	1.90E-04	8.58E-04
11	8	73	74	26112.42	1	5185.43	1.9285	0.0303	0.0	0.0	5.89E-07	1.76E-05	1.57E-04	7.01E-04
9	6	86	87	26018.06	1	5186.02	1.9283	0.0303	0.0	0.0	3.22E-07	9.51E-06	8.38E-05	3.73E-04
8	5	92	93	26023.39	1	5186.43	1.9281	0.0303	0.0	0.0	2.13E-07	6.30E-06	5.55E-05	2.47E-04
13	10	58	59	26358.85	1	5186.84	1.9280	0.0303	0.0	0.0	7.90E-07	2.45E-05	2.23E-04	1.02E-03
15	12	102	101	40978.54	1	5187.19	1.9278	0.0303	0.0	0.0	0.0	7.48E-08	2.77E-06	3.43E-05
17	14	78	77	37476.32	1	5187.71	1.9276	0.0303	0.0	0.0	0.0	4.98E-07	1.32E-05	1.28E-04
15	12	40	41	26917.39	1	5188.37	1.9274	0.0303	0.0	0.0	7.11E-07	2.39E-05	2.29E-04	1.08E-03
17	14	16	17	28133.20	1	5188.40	1.9274	0.0585	0.0	0.0	2.33E-07	9.33E-06	1.01E-04	5.18E-04
16	13	91	90	39288.66	1	5188.70	1.9273	0.0303	0.0	0.0	0.0	1.89E-07	5.95E-06	6.56E-05
8	5	85	86	23053.02	2	5189.55	1.9270	0.0303	0.0	0.0	0.0	3.43E-07	2.27E-06	8.23E-06
16	13	29	30	27387.45	1	5189.57	1.9269	0.0340	0.0	0.0	5.03E-07	1.81E-05	1.82E-04	8.87E-04
6	3	103	104	26035.98	1	5190.57	1.9266	0.0303	0.0	0.0	7.43E-08	2.20E-06	1.94E-05	8.64E-05
7	4	91	92	22966.86	2	5191.60	1.9262	0.0303	0.0	0.0	0.0	2.21E-07	1.45E-06	5.24E-06
14	11	49	50	26502.68	1	5191.77	1.9261	0.0303	0.0	0.0	8.51E-07	2.69E-05	2.49E-04	1.14E-03
17	14	77	76	37229.15	1	5192.95	1.9257	0.0303	0.0	0.0	0.0	5.61E-07	1.45E-05	1.39E-04
17	14	15	16	28076.27	1	5193.41	1.9255	0.0591	0.0	0.0	2.30E-07	9.15E-06	9.82E-05	5.03E-04
10	7	79	80	25855.22	1	5193.56	1.9255	0.0303	0.0	0.0	5.42E-07	1.56E-05	1.36E-04	5.96E-04
12	9	65	66	26026.96	1	5194.02	1.9253	0.0303	0.0	0.0	8.04E-07	2.38E-05	2.10E-04	9.33E-04
15	12	101	100	40657.92	1	5195.18	1.9249	0.0303	0.0	0.0	0.0	8.79E-08	3.15E-06	3.83E-05
5	2	108	109	26004.91	1	5195.41	1.9248	0.0303	0.0	0.0	0.0	1.09E-06	9.63E-06	4.28E-05
16	13	90	89	39001.43	1	5195.42	1.9248	0.0303	0.0	0.0	0.0	2.17E-07	6.64E-06	7.19E-05
15	12	39	40	26778.63	1	5195.86	1.9246	0.0303	0.0	0.0	7.71E-07	2.54E-05	2.41E-04	1.13E-03
16	13	28	29	27286.39	1	5195.93	1.9246	0.0359	0.0	0.0	5.27E-07	1.87E-05	1.86E-04	9.02E-04
13	10	57	58	26157.68	1	5196.15	1.9245	0.0303	0.0	0.0	9.04E-07	2.72E-05	2.43E-04	1.09E-03
11	8	72	73	25858.57	1	5196.24	1.9245	0.0303	0.0	0.0	7.00E-07	2.02E-05	1.75E-04	7.71E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	97	98	25807.67	1	5196.58	1.9243	0.0303	0.0	0.0	1.54E-07	4.42E-06	3.82E-05	1.67E-04
4	1	113	114	26057.89	1	5197.87	1.9239	0.0303	0.0	0.0	0.0	4.12E-07	3.65E-06	1.63E-05
3	0	118	119	26195.41	1	5197.97	1.9238	0.0303	0.0	0.0	0.0	9.19E-08	8.24E-07	3.71E-06
17	14	76	75	36584.90	1	5198.06	1.9238	0.0303	0.0	0.0	0.0	6.30E-07	1.59E-05	1.50E-04
9	6	85	86	25718.04	1	5198.10	1.9238	0.0303	0.0	0.0	3.97E-07	1.12E-05	9.61E-05	4.19E-04
17	14	14	15	26022.67	1	5198.32	1.9237	0.0597	0.0	0.0	2.26E-07	8.91E-06	9.52E-05	4.86E-04
8	5	91	92	25701.90	1	5199.10	1.9234	0.0303	0.0	0.0	2.66E-07	7.50E-06	6.41E-05	2.79E-04
14	11	48	49	26332.73	1	5200.17	1.9230	0.0303	0.0	0.0	9.48E-07	2.93E-05	2.66E-04	1.21E-03
8	5	84	85	22765.26	2	5200.89	1.9227	0.0303	0.0	0.0	0.0	4.02E-07	2.59E-06	9.21E-06
16	13	89	88	38717.00	1	5202.02	1.9223	0.0303	0.0	0.0	0.0	2.51E-07	7.46E-06	7.93E-05
16	13	27	28	27188.66	1	5202.19	1.9223	0.0379	0.0	0.0	5.51E-07	1.93E-05	1.90E-04	9.15E-04
15	12	100	99	40339.98	1	5203.04	1.9220	0.0303	0.0	0.0	0.0	1.03E-07	3.59E-06	4.26E-05
17	14	75	74	36743.59	1	5203.06	1.9219	0.0303	0.0	0.0	0.0	7.07E-07	1.74E-05	1.62E-04
17	14	13	14	27972.41	1	5203.12	1.9219	0.0604	0.0	0.0	2.21E-07	8.63E-06	9.17E-05	4.66E-04
15	12	38	39	26643.18	1	5203.25	1.9219	0.0303	0.0	0.0	8.33E-07	2.69E-05	2.52E-04	1.17E-03
7	4	90	91	22678.24	2	5203.49	1.9218	0.0303	0.0	0.0	0.0	2.61E-07	1.67E-06	5.89E-06
12	9	64	65	25801.04	1	5204.03	1.9216	0.0303	0.0	0.0	9.35E-07	2.68E-05	2.31E-04	1.01E-03
6	3	102	103	25674.78	1	5204.30	1.9215	0.0303	0.0	0.0	9.55E-08	2.69E-06	2.29E-05	9.95E-05
10	7	78	79	25579.82	1	5204.96	1.9212	0.0303	0.0	0.0	6.55E-07	1.82E-05	1.54E-04	6.63E-04
13	10	56	57	25959.75	1	5205.37	1.9211	0.0303	0.0	0.0	1.03E-06	3.02E-05	2.65E-04	1.17E-03
11	8	71	72	25607.89	1	5206.95	1.9205	0.0303	0.0	0.0	8.30E-07	2.31E-05	1.96E-04	8.47E-04
17	14	12	13	27925.50	1	5207.82	1.9202	0.0610	0.0	0.0	2.13E-07	8.30E-06	8.78E-05	4.45E-04
17	14	74	73	36505.22	1	5207.95	1.9201	0.0303	0.0	0.0	0.0	7.92E-07	1.91E-05	1.74E-04
16	13	26	27	27094.25	1	5208.35	1.9200	0.0398	0.0	0.0	5.74E-07	1.98E-05	1.93E-04	9.26E-04
14	11	47	48	26166.05	1	5208.48	1.9199	0.0303	0.0	0.0	1.05E-06	3.18E-05	2.84E-04	1.28E-03
16	13	88	87	38435.39	1	5208.50	1.9199	0.0303	0.0	0.0	0.0	2.89E-07	8.37E-06	8.72E-05
5	2	107	108	25625.40	1	5209.63	1.9195	0.0303	0.0	0.0	4.84E-08	1.35E-06	1.15E-05	4.97E-05
7	4	96	97	25467.79	1	5209.74	1.9195	0.0303	0.0	0.0	1.95E-07	5.33E-06	4.45E-05	1.91E-04
9	6	84	85	25421.09	1	5210.09	1.9194	0.0303	0.0	0.0	4.88E-07	1.32E-05	1.10E-04	4.70E-04
15	12	37	38	26511.04	1	5210.54	1.9192	0.0303	0.0	0.0	8.98E-07	2.85E-05	2.63E-04	1.21E-03
15	12	99	98	40024.73	1	5210.79	1.9191	0.0303	0.0	0.0	0.0	1.21E-07	4.08E-06	4.74E-05
8	5	90	91	25383.46	1	5211.67	1.9188	0.0303	0.0	0.0	3.31E-07	8.92E-06	7.40E-05	3.15E-04
8	5	83	84	22480.53	2	5212.15	1.9186	0.0303	0.0	0.0	0.0	4.71E-07	2.95E-06	1.03E-05
17	14	11	12	27881.92	1	5212.42	1.9185	0.0617	0.0	0.0	2.05E-07	7.91E-06	8.34E-05	4.21E-04
4	1	112	113	25660.13	1	5212.57	1.9184	0.0303	0.0	0.0	0.0	5.15E-07	4.38E-06	1.90E-05
17	14	73	72	36269.81	1	5212.72	1.9184	0.0303	0.0	0.0	0.0	8.84E-07	2.08E-05	1.87E-04
3	0	117	118	25779.47	1	5213.14	1.9182	0.0303	0.0	0.0	0.0	1.16E-07	1.00E-06	4.38E-06
12	9	63	64	25578.32	1	5213.95	1.9179	0.0303	0.0	0.0	1.08E-06	3.01E-05	2.54E-04	1.10E-03
16	13	25	26	27003.18	1	5214.41	1.9178	0.0418	0.0	0.0	5.95E-07	2.03E-05	1.96E-04	9.34E-04
13	10	55	56	25765.06	1	5214.49	1.9177	0.0303	0.0	0.0	1.17E-06	3.34E-05	2.88E-04	1.26E-03
16	13	87	86	38156.60	1	5214.86	1.9176	0.0303	0.0	0.0	0.0	3.32E-07	9.38E-06	9.58E-05
7	4	89	90	22372.60	2	5215.29	1.9174	0.0303	0.0	0.0	0.0	3.08E-07	1.91E-06	6.61E-06
10	7	77	78	25307.56	1	5216.27	1.9171	0.0303	0.0	0.0	7.91E-07	2.11E-05	1.74E-04	7.35E-04
14	11	46	47	26002.67	1	5216.69	1.9169	0.0303	0.0	0.0	1.17E-06	3.44E-05	3.03E-04	1.35E-03
17	14	10	11	27841.70	1	5216.92	1.9168	0.0625	0.0	0.0	1.95E-07	7.48E-06	7.85E-05	3.96E-04
17	14	72	71	36037.37	1	5217.38	1.9167	0.0303	0.0	0.0	0.0	9.86E-07	2.27E-05	2.01E-04
11	8	70	71	25360.39	1	5217.57	1.9166	0.0303	0.0	0.0	9.82E-07	2.64E-05	2.18E-04	9.29E-04
15	12	36	37	26382.21	1	5217.73	1.9165	0.0308	0.0	0.0	9.65E-07	3.00E-05	2.74E-04	1.25E-03
6	3	101	102	25316.52	1	5217.95	1.9165	0.0303	0.0	0.0	1.23E-07	3.27E-06	2.70E-05	1.14E-04
15	12	98	97	39712.19	1	5218.42	1.9163	0.0303	0.0	0.0	0.0	1.41E-07	4.63E-06	5.26E-05
16	13	24	25	26915.45	1	5220.36	1.9156	0.0437	0.0	0.0	6.15E-07	2.07E-05	1.98E-04	9.39E-04
16	13	86	85	37880.65	1	5221.11	1.9153	0.0303	0.0	0.0	0.0	3.81E-07	1.05E-05	1.05E-04
17	14	9	10	27804.81	1	5221.31	1.9152	0.0624	0.0	0.0	1.83E-07	7.00E-06	7.32E-05	3.68E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	71	70	35807.91	1	5221.92	1.9150	0.0303	0.0	0.0	0.0	1.10E-06	2.47E-05	2.15E-04
9	6	83	84	25127.25	1	5221.99	1.9150	0.0303	0.0	0.0	5.99E-07	1.56E-05	1.26E-04	5.27E-04
7	4	95	96	25130.91	1	5222.80	1.9147	0.0303	0.0	0.0	2.47E-07	6.41E-06	5.19E-05	2.17E-04
8	5	82	83	22198.82	2	5223.31	1.9145	0.0303	0.0	0.0	0.0	5.50E-07	3.35E-06	1.15E-05
13	10	54	55	25573.64	1	5223.51	1.9144	0.0303	0.0	0.0	1.33E-06	3.69E-05	3.12E-04	1.35E-03
5	2	106	107	25248.79	1	5223.75	1.9143	0.0303	0.0	0.0	6.30E-08	1.67E-06	1.36E-05	5.76E-05
12	9	62	63	25358.84	1	5223.78	1.9143	0.0303	0.0	0.0	1.25E-06	3.37E-05	2.79E-04	1.19E-03
8	5	89	90	25068.06	1	5224.16	1.9142	0.0303	0.0	0.0	4.11E-07	1.06E-05	8.52E-05	3.55E-04
14	11	45	46	25842.57	1	5224.80	1.9139	0.0303	0.0	0.0	1.29E-06	3.72E-05	3.22E-04	1.42E-03
15	12	35	36	26256.71	1	5224.82	1.9139	0.0312	0.0	0.0	1.03E-06	3.16E-05	2.85E-04	1.29E-03
17	14	8	9	27771.27	1	5225.60	1.9137	0.0624	0.0	0.0	1.70E-07	6.47E-06	6.74E-05	3.38E-04
15	12	97	96	39402.37	1	5225.93	1.9135	0.0303	0.0	0.0	0.0	1.65E-07	5.24E-06	5.84E-05
14	11	107	106	40963.32	1	5225.99	1.9135	0.0303	0.0	0.0	0.0	6.62E-08	2.45E-06	3.03E-05
16	13	23	24	26831.07	1	5226.22	1.9134	0.0457	0.0	0.0	6.33E-07	2.10E-05	2.00E-04	9.42E-04
17	14	70	69	35581.43	1	5226.35	1.9134	0.0303	0.0	0.0	0.0	1.22E-06	2.68E-05	2.30E-04
7	4	88	89	22069.95	2	5227.01	1.9131	0.0303	0.0	0.0	0.0	3.65E-07	2.20E-06	7.45E-06
4	1	111	112	25265.22	1	5227.17	1.9131	0.0303	0.0	0.0	0.0	6.42E-07	5.27E-06	2.23E-05
16	13	85	84	37607.55	1	5227.24	1.9131	0.0303	0.0	0.0	0.0	4.37E-07	1.17E-05	1.15E-04
10	7	76	77	25038.44	1	5227.48	1.9130	0.0303	0.0	0.0	9.51E-07	2.44E-05	1.96E-04	8.15E-04
11	8	69	70	25116.07	1	5228.09	1.9127	0.0303	0.0	0.0	1.16E-06	3.01E-05	2.43E-04	1.02E-03
3	0	116	117	25366.34	1	5228.21	1.9127	0.0303	0.0	0.0	0.0	1.47E-07	1.21E-06	5.16E-06
17	14	7	8	27741.09	1	5229.79	1.9121	0.0623	0.0	0.0	1.56E-07	5.89E-06	6.13E-05	3.07E-04
17	14	69	68	35357.96	1	5230.66	1.9118	0.0303	0.0	0.0	0.0	1.35E-06	2.91E-05	2.46E-04
6	3	100	101	24961.22	1	5231.50	1.9115	0.0303	0.0	0.0	1.57E-07	3.98E-06	3.17E-05	1.31E-04
15	12	34	35	26134.53	1	5231.82	1.9114	0.0317	0.0	0.0	1.10E-06	3.31E-05	2.95E-04	1.32E-03
16	13	22	23	26750.03	1	5231.98	1.9113	0.0476	0.0	0.0	6.48E-07	2.13E-05	2.01E-04	9.41E-04
13	10	53	54	25365.48	1	5232.44	1.9112	0.0303	0.0	0.0	1.51E-06	4.07E-05	3.38E-04	1.44E-03
14	11	44	45	25665.79	1	5232.82	1.9110	0.0303	0.0	0.0	1.42E-06	4.01E-05	3.42E-04	1.49E-03
16	13	84	83	37337.31	1	5233.25	1.9109	0.0303	0.0	0.0	0.0	5.00E-07	1.30E-05	1.26E-04
15	12	96	95	39095.29	1	5233.32	1.9108	0.0303	0.0	0.0	0.0	1.92E-07	5.93E-06	6.46E-05
12	9	61	62	25142.58	1	5233.51	1.9108	0.0303	0.0	0.0	1.45E-06	3.77E-05	3.06E-04	1.28E-03
9	6	82	83	24836.50	1	5233.80	1.9107	0.0303	0.0	0.0	7.33E-07	1.83E-05	1.44E-04	5.90E-04
17	14	6	7	27714.25	1	5233.87	1.9106	0.0620	0.0	0.0	1.40E-07	5.27E-06	5.47E-05	2.73E-04
8	5	81	82	21920.16	2	5234.39	1.9104	0.0303	0.0	0.0	0.0	6.41E-07	3.81E-06	1.28E-05
14	11	106	105	40625.84	1	5234.54	1.9104	0.0303	0.0	0.0	0.0	7.87E-08	2.82E-06	3.41E-05
17	14	68	67	35137.49	1	5234.86	1.9103	0.0303	0.0	0.0	0.0	1.49E-06	3.15E-05	2.62E-04
7	4	94	95	24797.05	1	5235.78	1.9099	0.0303	0.0	0.0	3.11E-07	7.70E-06	6.03E-05	2.47E-04
8	5	88	89	24755.73	1	5236.56	1.9097	0.0303	0.0	0.0	5.12E-07	1.26E-05	9.84E-05	4.02E-04
16	13	21	22	26672.34	1	5237.63	1.9093	0.0496	0.0	0.0	6.61E-07	2.15E-05	2.01E-04	9.37E-04
5	2	105	106	24675.10	1	5237.79	1.9092	0.0303	0.0	0.0	8.19E-08	2.05E-06	1.62E-05	6.67E-05
17	14	5	6	27690.77	1	5237.85	1.9092	0.0617	0.0	0.0	1.23E-07	4.61E-06	4.78E-05	2.38E-04
11	8	68	69	24674.95	1	5238.52	1.9089	0.0303	0.0	0.0	1.36E-06	3.42E-05	2.70E-04	1.11E-03
10	7	75	76	24772.47	1	5238.61	1.9089	0.0303	0.0	0.0	1.14E-06	2.82E-05	2.21E-04	9.02E-04
7	4	87	88	21770.31	2	5238.64	1.9089	0.0303	0.0	0.0	0.0	4.31E-07	2.52E-06	8.38E-06
15	12	33	34	26015.68	1	5238.71	1.9089	0.0321	0.0	0.0	1.17E-06	3.47E-05	3.06E-04	1.36E-03
17	14	67	66	34920.04	1	5238.94	1.9088	0.0303	0.0	0.0	0.0	1.64E-06	3.40E-05	2.79E-04
16	13	83	82	37069.95	1	5239.15	1.9087	0.0303	0.0	0.0	0.0	5.70E-07	1.45E-05	1.38E-04
6	3	93	94	21738.60	2	5239.56	1.9086	0.0303	0.0	0.0	0.0	2.49E-07	1.46E-06	4.82E-06
15	12	95	94	38790.96	1	5240.59	1.9082	0.0303	0.0	0.0	0.0	2.23E-07	6.69E-06	7.15E-05
14	11	43	44	25532.30	1	5240.74	1.9081	0.0303	0.0	0.0	1.56E-06	4.31E-05	3.62E-04	1.56E-03
13	10	52	53	25200.61	1	5241.26	1.9079	0.0303	0.0	0.0	1.70E-06	4.47E-05	3.65E-04	1.53E-03
4	1	110	111	24873.19	1	5241.69	1.9078	0.0303	0.0	0.0	0.0	8.00E-07	6.32E-06	2.60E-05
17	14	4	5	27670.64	1	5241.73	1.9078	0.0614	0.0	0.0	1.05E-07	3.92E-06	4.05E-05	2.02E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	66	65	34705.62	1	5242.91	1.9073	0.0303	0.0	0.0	0.0	1.81E-06	3.67E-05	2.96E-04
14	11	105	104	40290.99	1	5242.97	1.9073	0.0303	0.0	0.0	0.0	9.35E-08	3.24E-06	3.83E-05
12	9	60	61	24929.57	1	5243.14	1.9073	0.0303	0.0	0.0	1.67E-06	4.21E-05	3.34E-04	1.38E-03
16	13	20	21	26598.00	1	5243.18	1.9072	0.0515	0.0	0.0	6.71E-07	2.16E-05	2.01E-04	9.30E-04
3	0	115	116	24956.02	1	5243.21	1.9072	0.0303	0.0	0.0	0.0	1.85E-07	1.47E-06	6.08E-06
16	13	82	81	36805.48	1	5244.93	1.9066	0.0303	0.0	0.0	0.0	6.49E-07	1.61E-05	1.50E-04
6	3	99	100	24608.89	1	5244.97	1.9066	0.0303	0.0	0.0	2.01E-07	4.84E-06	3.73E-05	1.51E-04
8	5	80	81	21644.55	2	5245.38	1.9064	0.0303	0.0	0.0	4.74E-08	7.46E-07	4.31E-06	1.42E-05
17	14	3	4	27653.86	1	5245.50	1.9064	0.0611	0.0	0.0	8.52E-08	3.19E-06	3.29E-05	1.64E-04
15	12	32	33	25900.18	1	5245.51	1.9064	0.0326	0.0	0.0	1.24E-06	3.62E-05	3.15E-04	1.39E-03
9	6	81	82	24548.88	1	5245.52	1.9064	0.0303	0.0	0.0	8.95E-07	2.14E-05	1.64E-04	6.60E-04
17	14	65	64	34494.25	1	5246.76	1.9059	0.0303	0.0	0.0	0.0	1.99E-06	3.95E-05	3.14E-04
15	12	94	93	38489.41	1	5247.75	1.9056	0.0303	0.0	0.0	0.0	2.59E-07	7.54E-06	7.89E-05
14	11	42	43	25382.13	1	5248.56	1.9053	0.0303	0.0	0.0	1.71E-06	4.62E-05	3.83E-04	1.63E-03
16	13	19	20	26527.02	1	5248.63	1.9053	0.0535	0.0	0.0	6.78E-07	2.16E-05	2.00E-04	9.20E-04
7	4	93	94	24466.21	1	5248.67	1.9052	0.0303	0.0	0.0	3.90E-07	9.23E-06	7.01E-05	2.80E-04
8	5	87	88	24446.47	1	5248.86	1.9052	0.0303	0.0	0.0	6.35E-07	1.50E-05	1.14E-04	4.54E-04
11	8	67	68	24637.04	1	5248.86	1.9052	0.0303	0.0	0.0	1.60E-06	3.88E-05	3.00E-04	1.21E-03
17	14	2	3	27640.44	1	5249.17	1.9051	0.0609	0.0	0.0	6.50E-08	2.43E-06	2.50E-05	1.24E-04
10	7	74	75	24509.67	1	5249.63	1.9049	0.0303	0.0	0.0	1.37E-06	3.25E-05	2.48E-04	9.96E-04
13	10	51	52	25019.01	1	5250.00	1.9048	0.0303	0.0	0.0	1.92E-06	4.91E-05	3.93E-04	1.63E-03
7	4	86	87	21473.68	2	5250.18	1.9047	0.0303	0.0	0.0	0.0	5.08E-07	2.89E-06	9.41E-06
17	14	64	63	34285.92	1	5250.51	1.9046	0.0303	0.0	0.0	0.0	2.18E-06	4.24E-05	3.33E-04
16	13	81	80	36543.91	1	5250.60	1.9045	0.0303	0.0	0.0	0.0	7.38E-07	1.79E-05	1.64E-04
14	11	104	103	39558.80	1	5251.28	1.9043	0.0303	0.0	0.0	0.0	1.11E-07	3.72E-06	4.30E-05
6	3	92	93	21420.99	2	5251.66	1.9042	0.0303	0.0	0.0	0.0	2.96E-07	1.68E-06	5.45E-06
5	2	104	105	24504.34	1	5251.74	1.9041	0.0303	0.0	0.0	1.06E-07	2.52E-06	1.92E-05	7.71E-05
15	12	31	32	25788.01	1	5252.20	1.9040	0.0331	0.0	0.0	1.32E-06	3.76E-05	3.24E-04	1.42E-03
12	9	59	60	24719.80	1	5252.68	1.9038	0.0303	0.0	0.0	1.91E-06	4.69E-05	3.65E-04	1.49E-03
17	14	1	2	27630.37	1	5252.74	1.9038	0.0606	0.0	0.0	4.40E-08	1.64E-06	1.69E-05	8.38E-05
16	13	18	19	26459.40	1	5253.98	1.9033	0.0552	0.0	0.0	6.82E-07	2.15E-05	1.98E-04	9.06E-04
17	14	63	62	34080.64	1	5254.13	1.9033	0.0303	0.0	0.0	0.0	2.38E-06	4.55E-05	3.52E-04
15	12	93	92	38190.62	1	5254.78	1.9030	0.0303	0.0	0.0	0.0	2.99E-07	8.49E-06	8.70E-05
4	1	109	110	24484.04	1	5256.11	1.9025	0.0303	0.0	0.0	4.19E-08	9.94E-07	7.56E-06	3.03E-05
16	13	80	79	36285.25	1	5256.15	1.9025	0.0303	0.0	0.0	0.0	8.38E-07	1.98E-05	1.78E-04
17	14	0	1	27623.66	1	5256.20	1.9025	0.0603	0.0	0.0	0.0	8.28E-07	8.51E-06	4.23E-05
14	11	41	42	25235.28	1	5256.26	1.9025	0.0303	0.0	0.0	1.87E-06	4.94E-05	4.04E-04	1.70E-03
8	5	79	80	21372.00	2	5256.29	1.9025	0.0303	0.0	0.0	5.73E-08	8.66E-07	4.88E-06	1.56E-05
9	6	80	81	24264.39	1	5257.14	1.9022	0.0303	0.0	0.0	1.09E-06	2.50E-05	1.87E-04	7.36E-04
17	14	62	61	33878.44	1	5257.65	1.9020	0.0303	0.0	0.0	0.0	2.60E-06	4.86E-05	3.71E-04
3	0	114	115	24546.55	1	5258.11	1.9018	0.0303	0.0	0.0	0.0	2.32E-07	1.78E-06	7.15E-06
6	3	98	99	24259.57	1	5258.34	1.9017	0.0303	0.0	0.0	2.56E-07	5.87E-06	4.37E-05	1.72E-04
13	10	50	51	24840.71	1	5258.63	1.9016	0.0303	0.0	0.0	2.15E-06	5.37E-05	4.23E-04	1.74E-03
15	12	30	31	25679.20	1	5258.80	1.9016	0.0335	0.0	0.0	1.39E-06	3.90E-05	3.33E-04	1.45E-03
11	8	66	67	24402.34	1	5259.10	1.9015	0.0303	0.0	0.0	1.88E-06	4.39E-05	3.32E-04	1.32E-03
16	13	17	18	26395.14	1	5259.23	1.9014	0.0568	0.0	0.0	6.82E-07	2.13E-05	1.95E-04	8.89E-04
14	11	103	102	39629.28	1	5259.47	1.9013	0.0303	0.0	0.0	0.0	1.31E-07	4.26E-06	4.82E-05
10	7	73	74	24250.05	1	5260.57	1.9009	0.0303	0.0	0.0	1.63E-06	3.74E-05	2.79E-04	1.10E-03
17	14	61	60	33679.31	1	5261.05	1.9008	0.0303	0.0	0.0	0.0	2.83E-06	5.19E-05	3.91E-04
8	5	86	87	24140.31	1	5261.08	1.9008	0.0303	0.0	0.0	7.87E-07	1.77E-05	1.31E-04	5.12E-04
7	4	92	93	24138.43	1	5261.47	1.9006	0.0303	0.0	0.0	4.89E-07	1.10E-05	8.12E-05	3.18E-04
16	13	79	78	36029.51	1	5261.58	1.9006	0.0303	0.0	0.0	0.0	9.49E-07	2.18E-05	1.93E-04
7	4	85	86	21180.08	2	5261.64	1.9005	0.0303	0.0	0.0	4.07E-08	5.98E-07	3.31E-06	1.06E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	92	91	37894.64	1	5261.70	1.9005	0.0303	0.0	0.0	0.0	3.46E-07	9.53E-06	9.57E-05
12	9	58	59	24513.30	1	5262.12	1.9004	0.0303	0.0	0.0	2.20E-06	5.23E-05	3.99E-04	1.60E-03
17	14	1	0	27620.30	1	5262.80	1.9001	0.0603	0.0	0.0	0.0	8.44E-07	8.68E-06	4.31E-05
6	3	91	92	21106.37	2	5263.67	1.8998	0.0303	0.0	0.0	0.0	3.52E-07	1.93E-06	6.14E-06
14	11	40	41	25091.76	1	5263.90	1.8997	0.0303	0.0	0.0	2.04E-06	5.27E-05	4.25E-04	1.78E-03
17	14	60	59	33483.27	1	5264.33	1.8996	0.0303	0.0	0.0	0.0	3.07E-06	5.53E-05	4.11E-04
16	13	16	17	26334.25	1	5264.38	1.8996	0.0585	0.0	0.0	6.79E-07	2.10E-05	1.91E-04	8.68E-04
15	12	29	30	25573.73	1	5265.29	1.8992	0.0340	0.0	0.0	1.46E-06	4.03E-05	3.41E-04	1.47E-03
5	2	103	104	24136.54	1	5265.60	1.8991	0.0303	0.0	0.0	1.37E-07	3.09E-06	2.28E-05	8.91E-05
17	14	2	1	27623.66	1	5265.95	1.8990	0.0606	0.0	0.0	4.57E-08	1.70E-06	1.75E-05	8.70E-05
16	13	78	77	35776.71	1	5266.89	1.8987	0.0303	0.0	0.0	0.0	1.07E-06	2.41E-05	2.09E-04
8	5	76	79	21102.53	2	5267.11	1.8986	0.0303	0.0	0.0	6.90E-08	1.00E-06	5.51E-06	1.75E-05
13	10	49	50	24665.70	1	5267.17	1.8986	0.0303	0.0	0.0	2.41E-06	5.86E-05	4.54E-04	1.84E-03
17	14	59	58	33290.32	1	5267.51	1.8984	0.0303	0.0	0.0	0.0	3.34E-06	5.92E-05	4.34E-04
14	11	102	101	39302.44	1	5267.54	1.8984	0.0303	0.0	0.0	0.0	1.54E-07	4.87E-06	5.39E-05
15	12	91	90	37601.46	1	5268.51	1.8981	0.0303	0.0	0.0	0.0	3.99E-07	1.07E-05	1.05E-04
9	6	79	80	23983.04	1	5268.67	1.8980	0.0303	0.0	0.0	1.33E-06	2.92E-05	2.12E-04	8.21E-04
17	14	3	2	27630.37	1	5268.99	1.8979	0.0609	0.0	0.0	6.90E-08	2.57E-06	2.65E-05	1.32E-04
11	8	65	66	24170.88	1	5269.25	1.8978	0.0303	0.0	0.0	2.19E-06	4.97E-05	3.67E-04	1.44E-03
16	13	15	16	26276.73	1	5269.42	1.8977	0.0591	0.0	0.0	6.71E-07	2.06E-05	1.86E-04	8.43E-04
4	1	108	109	24097.80	1	5270.46	1.8974	0.0303	0.0	0.0	5.50E-08	1.23E-06	9.04E-06	3.53E-05
17	14	56	57	33100.48	1	5270.57	1.8973	0.0303	0.0	0.0	4.44E-08	3.63E-06	6.32E-05	4.57E-04
10	7	72	73	23993.62	1	5271.41	1.8970	0.0303	0.0	0.0	1.95E-06	4.30E-05	3.12E-04	1.21E-03
14	11	39	40	24951.57	1	5271.42	1.8970	0.0303	0.0	0.0	2.21E-06	5.61E-05	4.46E-04	1.85E-03
13	10	111	110	40670.70	1	5271.43	1.8970	0.0303	0.0	0.0	0.0	6.58E-08	2.37E-06	2.87E-05
12	9	57	58	24310.07	1	5271.47	1.8970	0.0303	0.0	0.0	2.52E-06	5.82E-05	4.36E-04	1.73E-03
6	3	97	98	23913.24	1	5271.63	1.8969	0.0303	0.0	0.0	3.25E-07	7.10E-06	5.12E-05	1.97E-04
15	12	28	29	25471.62	1	5271.69	1.8969	0.0359	0.0	0.0	1.53E-06	4.17E-05	3.49E-04	1.50E-03
17	14	4	3	27640.44	1	5271.93	1.8968	0.0611	0.0	0.0	9.23E-08	3.44E-06	3.55E-05	1.77E-04
16	13	77	76	35526.85	1	5272.09	1.8968	0.0303	0.0	0.0	0.0	1.21E-06	2.65E-05	2.27E-04
3	0	113	114	24143.93	1	5272.93	1.8965	0.0303	0.0	0.0	0.0	2.91E-07	2.14E-06	8.40E-06
7	4	84	85	20889.52	2	5273.02	1.8964	0.0303	0.0	0.0	4.98E-08	7.02E-07	3.78E-06	1.18E-05
8	5	85	86	23837.25	1	5273.20	1.8964	0.0303	0.0	0.0	9.72E-07	2.10E-05	1.50E-04	5.76E-04
17	14	57	56	32913.75	1	5273.52	1.8963	0.0303	0.0	0.0	4.95E-08	3.94E-06	6.74E-05	4.81E-04
7	4	91	92	23813.70	1	5274.17	1.8960	0.0303	0.0	0.0	6.12E-07	1.32E-05	9.40E-05	3.60E-04
16	13	14	15	26222.57	1	5274.36	1.8960	0.0597	0.0	0.0	6.59E-07	2.01E-05	1.80E-04	8.15E-04
17	14	5	4	27653.86	1	5274.76	1.8958	0.0614	0.0	0.0	1.15E-07	4.32E-06	4.45E-05	2.22E-04
15	12	90	89	37311.09	1	5275.19	1.8957	0.0303	0.0	0.0	0.0	4.59E-07	1.20E-05	1.15E-04
14	11	101	100	38978.30	1	5275.50	1.8956	0.0303	0.0	0.0	0.0	1.82E-07	5.56E-06	6.02E-05
6	3	90	91	20794.75	2	5275.59	1.8955	0.0303	0.0	0.0	0.0	4.17E-07	2.23E-06	6.92E-06
13	10	48	49	24454.01	1	5275.61	1.8955	0.0303	0.0	0.0	2.69E-06	6.38E-05	4.86E-04	1.95E-03
17	14	56	55	32730.14	1	5276.35	1.8953	0.0303	0.0	0.0	5.50E-08	4.27E-06	7.17E-05	5.05E-04
16	13	76	75	35279.96	1	5277.18	1.8950	0.0303	0.0	0.0	0.0	1.36E-06	2.92E-05	2.45E-04
17	14	6	5	27670.64	1	5277.49	1.8948	0.0617	0.0	0.0	1.38E-07	5.18E-06	5.35E-05	2.67E-04
8	5	77	78	20836.14	2	5277.84	1.8947	0.0303	0.0	0.0	8.29E-08	1.16E-06	6.22E-06	1.94E-05
15	12	27	28	25372.88	1	5277.98	1.8947	0.0379	0.0	0.0	1.60E-06	4.31E-05	3.57E-04	1.52E-03
14	11	38	39	24814.72	1	5278.85	1.8944	0.0303	0.0	0.0	2.39E-06	5.95E-05	4.68E-04	1.92E-03
17	14	55	54	32549.66	1	5279.08	1.8943	0.0303	0.0	0.0	6.09E-08	4.61E-06	7.61E-05	5.30E-04
16	13	13	14	26171.80	1	5279.20	1.8942	0.0604	0.0	0.0	6.43E-07	1.94E-05	1.74E-04	7.83E-04
11	8	64	65	23942.65	1	5279.30	1.8942	0.0303	0.0	0.0	2.55E-06	5.60E-05	4.05E-04	1.56E-03
5	2	102	103	23771.70	1	5279.37	1.8942	0.0303	0.0	0.0	1.77E-07	3.79E-06	2.69E-05	1.03E-04
9	6	78	79	23704.85	1	5280.11	1.8939	0.0303	0.0	0.0	1.61E-06	3.40E-05	2.40E-04	9.14E-04
17	14	7	6	27650.77	1	5280.11	1.8939	0.0620	0.0	0.0	1.61E-07	6.04E-06	6.25E-05	3.12E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	10	110	109	40319.00	1	5280.43	1.8938	0.0303	0.0	0.0	0.0	7.90E-08	2.75E-06	3.26E-05
12	9	56	57	24110.11	1	5280.72	1.8937	0.0303	0.0	0.0	2.88E-06	6.47E-05	4.75E-04	1.86E-03
17	14	54	53	32372.31	1	5281.69	1.8933	0.0303	0.0	0.0	6.74E-08	4.97E-06	8.06E-05	5.55E-04
15	12	89	88	37023.57	1	5281.76	1.8933	0.0303	0.0	0.0	0.0	5.31E-07	1.34E-05	1.27E-04
16	13	75	74	35036.03	1	5282.15	1.8932	0.0303	0.0	0.0	0.0	1.53E-06	3.20E-05	2.64E-04
10	7	71	72	23740.39	1	5282.16	1.8932	0.0303	0.0	0.0	2.31E-06	4.93E-05	3.49E-04	1.33E-03
17	14	8	7	27714.25	1	5282.62	1.8930	0.0623	0.0	0.0	1.82E-07	6.87E-06	7.13E-05	3.57E-04
14	11	100	99	38656.87	1	5283.33	1.8927	0.0303	0.0	0.0	0.0	2.14E-07	6.34E-06	6.71E-05
16	13	12	13	26124.39	1	5283.94	1.8925	0.0610	0.0	0.0	6.23E-07	1.87E-05	1.67E-04	7.47E-04
13	10	47	48	24325.62	1	5283.96	1.8925	0.0303	0.0	0.0	2.99E-06	6.94E-05	5.20E-04	2.06E-03
17	14	53	52	32198.11	1	5284.18	1.8924	0.0303	0.0	0.0	7.43E-08	5.34E-06	8.52E-05	5.79E-04
15	12	26	27	25277.50	1	5284.18	1.8924	0.0398	0.0	0.0	1.67E-06	4.43E-05	3.64E-04	1.54E-03
7	4	83	84	20602.01	2	5284.30	1.8924	0.0303	0.0	0.0	6.08E-08	8.23E-07	4.31E-06	1.32E-05
4	1	107	108	23714.48	1	5284.71	1.8923	0.0303	0.0	0.0	7.20E-08	1.53E-06	1.08E-05	4.11E-05
6	3	96	97	23569.94	1	5284.83	1.8922	0.0303	0.0	0.0	4.13E-07	8.58E-06	5.98E-05	2.25E-04
17	14	9	8	27741.09	1	5285.03	1.8921	0.0624	0.0	0.0	2.03E-07	7.69E-06	8.00E-05	4.01E-04
8	5	84	85	23537.30	1	5285.23	1.8921	0.0303	0.0	0.0	1.20E-06	2.48E-05	1.72E-04	6.48E-04
14	11	37	38	24681.22	1	5286.18	1.8917	0.0303	0.0	0.0	2.58E-06	6.30E-05	4.89E-04	1.99E-03
17	14	52	51	32027.05	1	5286.57	1.8916	0.0303	0.0	0.0	8.16E-08	5.73E-06	8.99E-05	6.04E-04
7	4	90	91	23492.04	1	5286.79	1.8915	0.0303	0.0	0.0	7.64E-07	1.57E-05	1.09E-04	4.07E-04
16	13	74	73	34795.09	1	5287.00	1.8914	0.0303	0.0	0.0	0.0	1.71E-06	3.51E-05	2.85E-04
17	14	10	9	27771.27	1	5287.34	1.8913	0.0624	0.0	0.0	2.23E-07	8.48E-06	8.85E-05	4.44E-04
6	3	89	90	20486.14	2	5287.43	1.8913	0.0303	0.0	0.0	0.0	4.93E-07	2.56E-06	7.78E-06
3	0	112	113	23742.18	1	5287.66	1.8912	0.0303	0.0	0.0	0.0	3.65E-07	2.59E-06	9.85E-06
15	12	88	87	36738.89	1	5288.21	1.8910	0.0303	0.0	0.0	0.0	6.12E-07	1.51E-05	1.40E-04
8	5	76	77	20572.85	2	5288.49	1.8909	0.0303	0.0	0.0	9.94E-08	1.34E-06	7.00E-06	2.14E-05
16	13	11	12	26060.36	1	5288.57	1.8909	0.0617	0.0	0.0	5.98E-07	1.78E-05	1.58E-04	7.08E-04
17	14	51	50	31859.17	1	5288.84	1.8908	0.0303	0.0	0.0	8.95E-08	6.13E-06	9.47E-05	6.29E-04
11	8	63	64	23717.67	1	5289.26	1.8906	0.0303	0.0	0.0	2.97E-06	6.30E-05	4.46E-04	1.70E-03
13	10	109	108	39969.90	1	5289.31	1.8906	0.0303	0.0	0.0	0.0	9.46E-08	3.18E-06	3.68E-05
17	14	11	10	27804.81	1	5289.53	1.8905	0.0625	0.0	0.0	2.42E-07	9.24E-06	9.67E-05	4.87E-04
12	9	55	56	23913.44	1	5289.88	1.8904	0.0303	0.0	0.0	3.28E-06	7.17E-05	5.17E-04	1.99E-03
15	12	25	26	25165.49	1	5290.27	1.8903	0.0418	0.0	0.0	1.73E-06	4.53E-05	3.69E-04	1.55E-03
17	14	50	49	31694.45	1	5291.00	1.8900	0.0303	0.0	0.0	9.79E-08	6.55E-06	9.96E-05	6.54E-04
14	11	99	98	38338.18	1	5291.05	1.8900	0.0303	0.0	0.0	0.0	2.51E-07	7.22E-06	7.48E-05
9	6	77	78	23429.83	1	5291.46	1.8898	0.0303	0.0	0.0	1.94E-06	3.96E-05	2.72E-04	1.02E-03
17	14	12	11	27841.70	1	5291.63	1.8898	0.0617	0.0	0.0	2.59E-07	9.96E-06	1.05E-04	5.28E-04
16	13	73	72	34557.13	1	5291.74	1.8897	0.0303	0.0	0.0	0.0	1.92E-06	3.83E-05	3.06E-04
13	10	46	47	24160.56	1	5292.21	1.8896	0.0303	0.0	0.0	3.32E-06	7.52E-05	5.55E-04	2.18E-03
10	7	70	71	23490.38	1	5292.82	1.8894	0.0303	0.0	0.0	2.74E-06	5.64E-05	3.90E-04	1.46E-03
5	2	101	102	23409.84	1	5293.05	1.8893	0.0303	0.0	0.0	2.28E-07	4.63E-06	3.18E-05	1.18E-04
17	14	49	48	31532.90	1	5293.05	1.8893	0.0303	0.0	0.0	1.07E-07	6.98E-06	1.04E-04	6.79E-04
16	13	10	11	26039.71	1	5293.11	1.8892	0.0625	0.0	0.0	5.69E-07	1.69E-05	1.49E-04	6.65E-04
14	11	36	37	24551.07	1	5293.40	1.8891	0.0308	0.0	0.0	2.78E-06	6.65E-05	5.10E-04	2.05E-03
17	14	13	12	27681.92	1	5293.61	1.8891	0.0610	0.0	0.0	2.75E-07	1.06E-05	1.12E-04	5.68E-04
15	12	87	86	36457.07	1	5294.54	1.8887	0.0303	0.0	0.0	0.0	7.06E-07	1.69E-05	1.54E-04
17	14	48	47	31374.53	1	5294.99	1.8886	0.0303	0.0	0.0	1.16E-07	7.41E-06	1.09E-04	7.03E-04
17	14	14	13	27925.50	1	5295.49	1.8884	0.0604	0.0	0.0	2.90E-07	1.13E-05	1.19E-04	6.06E-04
7	4	82	83	20317.56	2	5295.51	1.8884	0.0303	0.0	0.0	7.41E-08	9.63E-07	4.91E-06	1.48E-05
15	12	24	25	25096.85	1	5296.26	1.8881	0.0437	0.0	0.0	1.79E-06	4.63E-05	3.74E-04	1.56E-03
16	13	72	71	34322.18	1	5296.37	1.8881	0.0303	0.0	0.0	0.0	2.14E-06	4.18E-05	3.29E-04
17	14	47	46	31219.36	1	5296.82	1.8879	0.0303	0.0	0.0	1.26E-07	7.86E-06	1.14E-04	7.26E-04
8	5	83	84	23240.48	1	5297.17	1.8878	0.0303	0.0	0.0	1.47E-06	2.92E-05	1.98E-04	7.27E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	15	14	27972.41	1	5297.26	1.8878	0.0597	0.0	0.0	3.03E-07	1.19E-05	1.26E-04	6.43E-04
16	13	9	10	26002.45	1	5297.53	1.8877	0.0624	0.0	0.0	5.35E-07	1.58E-05	1.39E-04	6.18E-04
6	3	95	96	23229.68	1	5297.93	1.8875	0.0303	0.0	0.0	5.23E-07	1.03E-05	6.98E-05	2.57E-04
13	10	108	107	39623.43	1	5298.06	1.8875	0.0303	0.0	0.0	0.0	1.13E-07	3.68E-06	4.16E-05
17	14	46	45	31067.38	1	5298.54	1.8873	0.0303	0.0	0.0	1.36E-07	8.31E-06	1.19E-04	7.49E-04
14	11	98	97	38022.23	1	5298.65	1.8873	0.0303	0.0	0.0	0.0	2.94E-07	8.20E-06	8.31E-05
4	1	106	107	23334.10	1	5298.87	1.8872	0.0303	0.0	0.0	9.39E-08	1.89E-06	1.29E-05	4.77E-05
17	14	16	15	28022.67	1	5298.93	1.8872	0.0591	0.0	0.0	3.15E-07	1.24E-05	1.33E-04	6.78E-04
12	9	54	55	23720.06	1	5298.94	1.8872	0.0303	0.0	0.0	3.73E-06	7.93E-05	5.61E-04	2.13E-03
8	5	75	76	20312.67	2	5299.05	1.8871	0.0303	0.0	0.0	1.19E-07	1.54E-06	7.87E-06	2.37E-05
11	8	62	63	23495.95	1	5299.12	1.8871	0.0303	0.0	0.0	3.44E-06	7.08E-05	4.90E-04	1.84E-03
6	3	88	89	20180.55	2	5299.18	1.8871	0.0303	0.0	0.0	4.59E-08	5.85E-07	2.94E-06	8.78E-06
7	4	89	90	23173.46	1	5299.31	1.8870	0.0303	0.0	0.0	9.51E-07	1.87E-05	1.25E-04	4.60E-04
5	2	94	95	20162.75	2	5299.54	1.8870	0.0303	0.0	0.0	0.0	2.94E-07	1.48E-06	4.40E-06
17	14	45	44	30918.60	1	5300.14	1.8867	0.0303	0.0	0.0	1.47E-07	8.77E-06	1.24E-04	7.71E-04
13	10	45	46	23998.83	1	5300.36	1.8867	0.0303	0.0	0.0	3.68E-06	8.13E-05	5.91E-04	2.29E-03
17	14	17	16	28076.27	1	5300.49	1.8866	0.0585	0.0	0.0	3.25E-07	1.29E-05	1.39E-04	7.11E-04
14	11	35	36	24424.27	1	5300.53	1.8866	0.0312	0.0	0.0	2.98E-06	7.00E-05	5.30E-04	2.12E-03
15	12	86	85	36178.12	1	5300.75	1.8865	0.0303	0.0	0.0	0.0	8.11E-07	1.90E-05	1.69E-04
16	13	71	70	34090.25	1	5300.88	1.8865	0.0303	0.0	0.0	0.0	2.38E-06	4.56E-05	3.53E-04
17	14	44	43	30773.04	1	5301.63	1.8862	0.0303	0.0	0.0	1.58E-07	9.23E-06	1.28E-04	7.93E-04
16	13	8	9	25968.57	1	5301.86	1.8861	0.0624	0.0	0.0	4.97E-07	1.46E-05	1.28E-04	5.69E-04
17	14	18	17	28133.20	1	5301.94	1.8861	0.0568	0.0	0.0	3.33E-07	1.33E-05	1.44E-04	7.42E-04
15	12	23	24	25011.59	1	5302.15	1.8860	0.0457	0.0	0.0	1.84E-06	4.71E-05	3.77E-04	1.57E-03
3	0	111	112	23343.33	1	5302.30	1.8860	0.0303	0.0	0.0	0.0	4.56E-07	3.11E-06	1.15E-05
9	6	76	77	23157.98	1	5302.71	1.8858	0.0303	0.0	0.0	2.34E-06	4.59E-05	3.08E-04	1.13E-03
17	14	43	42	30630.69	1	5303.01	1.8857	0.0303	0.0	0.0	1.69E-07	9.69E-06	1.33E-04	8.13E-04
17	14	19	18	28193.46	1	5303.28	1.8856	0.0552	0.0	0.0	3.39E-07	1.37E-05	1.49E-04	7.71E-04
10	7	69	70	23243.58	1	5303.38	1.8856	0.0303	0.0	0.0	3.24E-06	6.43E-05	4.35E-04	1.60E-03
17	14	42	41	30491.56	1	5304.29	1.8853	0.0303	0.0	0.0	1.80E-07	1.01E-05	1.37E-04	8.32E-04
17	14	20	19	28257.05	1	5304.52	1.8852	0.0535	0.0	0.0	3.44E-07	1.40E-05	1.54E-04	7.97E-04
16	13	70	69	33861.33	1	5305.27	1.8849	0.0303	0.0	0.0	0.0	2.65E-06	4.96E-05	3.78E-04
17	14	41	40	30355.66	1	5305.45	1.8849	0.0303	0.0	0.0	1.92E-07	1.06E-05	1.42E-04	8.50E-04
17	14	21	20	28323.98	1	5305.65	1.8848	0.0515	0.0	0.0	3.47E-07	1.43E-05	1.58E-04	8.22E-04
16	13	7	8	25938.07	1	5306.08	1.8846	0.0623	0.0	0.0	4.55E-07	1.33E-05	1.16E-04	5.16E-04
14	11	97	96	37709.03	1	5306.12	1.8846	0.0303	0.0	0.0	0.0	3.44E-07	9.31E-06	9.23E-05
17	14	40	39	30223.00	1	5306.50	1.8845	0.0303	0.0	0.0	2.04E-07	1.10E-05	1.46E-04	8.66E-04
7	4	81	82	20036.19	2	5306.62	1.8844	0.0303	0.0	0.0	9.02E-08	1.13E-06	5.58E-06	1.65E-05
5	2	100	101	23050.98	1	5306.65	1.8844	0.0303	0.0	0.0	2.93E-07	5.64E-06	3.75E-05	1.36E-04
17	14	22	21	28394.22	1	5306.67	1.8844	0.0496	0.0	0.0	3.49E-07	1.45E-05	1.61E-04	8.43E-04
13	10	107	106	35279.59	1	5306.70	1.8844	0.0303	0.0	0.0	0.0	1.35E-07	4.25E-06	4.70E-05
15	12	85	84	35902.06	1	5306.85	1.8844	0.0303	0.0	0.0	0.0	9.31E-07	2.12E-05	1.86E-04
17	14	39	38	30093.57	1	5307.44	1.8841	0.0303	0.0	0.0	2.16E-07	1.15E-05	1.50E-04	8.81E-04
14	11	34	35	24300.84	1	5307.56	1.8841	0.0317	0.0	0.0	3.18E-06	7.35E-05	5.50E-04	2.18E-03
17	14	23	22	28467.79	1	5307.59	1.8841	0.0476	0.0	0.0	3.49E-07	1.47E-05	1.64E-04	8.63E-04
12	9	53	54	23529.98	1	5307.90	1.8840	0.0303	0.0	0.0	4.23E-06	8.75E-05	6.08E-04	2.28E-03
15	12	22	23	24929.71	1	5307.94	1.8840	0.0476	0.0	0.0	1.89E-06	4.77E-05	3.79E-04	1.57E-03
17	14	38	37	29967.39	1	5308.27	1.8839	0.0303	0.0	0.0	2.28E-07	1.19E-05	1.53E-04	8.94E-04
17	14	24	23	28544.68	1	5308.39	1.8838	0.0457	0.0	0.0	3.47E-07	1.48E-05	1.66E-04	8.79E-04
13	10	44	45	23840.43	1	5308.41	1.8838	0.0303	0.0	0.0	4.06E-06	8.77E-05	6.28E-04	2.41E-03
11	6	61	62	23277.50	1	5308.88	1.8836	0.0303	0.0	0.0	3.98E-06	7.93E-05	5.38E-04	1.98E-03
17	14	37	36	29844.47	1	5308.99	1.8836	0.0308	0.0	0.0	2.40E-07	1.23E-05	1.56E-04	9.06E-04
8	5	82	83	22546.81	1	5309.01	1.8836	0.0303	0.0	0.0	1.81E-06	3.44E-05	2.26E-04	8.15E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
17	14	25	24	28624.89	1	5309.09	1.8836	0.0437	0.0	0.0	3.44E-07	1.48E-05	1.68E-04	8.94E-04
8	5	74	75	20055.60	2	5309.52	1.8834	0.0303	0.0	0.0	1.42E-07	1.78E-06	8.83E-06	2.61E-05
16	13	69	68	33635.45	1	5309.55	1.8834	0.0303	0.0	0.0	0.0	2.94E-06	5.38E-05	4.04E-04
17	14	36	35	29724.80	1	5309.60	1.8834	0.0312	0.0	0.0	2.51E-07	1.27E-05	1.59E-04	9.15E-04
17	14	26	25	28708.40	1	5309.68	1.8834	0.0418	0.0	0.0	3.40E-07	1.48E-05	1.69E-04	9.05E-04
17	14	35	34	29608.40	1	5310.10	1.8832	0.0317	0.0	0.0	2.63E-07	1.30E-05	1.62E-04	9.23E-04
17	14	27	26	28795.22	1	5310.16	1.8832	0.0398	0.0	0.0	3.34E-07	1.47E-05	1.70E-04	9.15E-04
16	13	6	7	25910.95	1	5310.20	1.8832	0.0620	0.0	0.0	4.09E-07	1.19E-05	1.04E-04	4.60E-04
17	14	34	33	29495.27	1	5310.49	1.8831	0.0321	0.0	0.0	2.73E-07	1.33E-05	1.64E-04	9.28E-04
17	14	28	27	28885.35	1	5310.53	1.8831	0.0379	0.0	0.0	3.28E-07	1.46E-05	1.70E-04	9.21E-04
17	14	33	32	29385.40	1	5310.77	1.8830	0.0326	0.0	0.0	2.84E-07	1.36E-05	1.66E-04	9.31E-04
17	14	29	28	28978.78	1	5310.80	1.8830	0.0359	0.0	0.0	3.20E-07	1.45E-05	1.70E-04	9.26E-04
6	3	87	88	19878.00	2	5310.85	1.8829	0.0303	0.0	0.0	5.68E-08	6.93E-07	3.39E-06	9.89E-06
17	14	32	31	29278.82	1	5310.94	1.8829	0.0331	0.0	0.0	2.94E-07	1.39E-05	1.67E-04	9.32E-04
17	14	30	29	29075.50	1	5310.95	1.8829	0.0340	0.0	0.0	3.11E-07	1.43E-05	1.69E-04	9.27E-04
6	3	94	95	22892.46	1	5310.95	1.8829	0.0303	0.0	0.0	6.60E-07	1.24E-05	8.14E-05	2.93E-04
17	14	31	30	29175.52	1	5311.00	1.8829	0.0335	0.0	0.0	3.03E-07	1.41E-05	1.68E-04	9.31E-04
7	4	88	89	22857.99	1	5311.75	1.8826	0.0303	0.0	0.0	1.19E-06	2.23E-05	1.45E-04	5.21E-04
5	2	93	94	19839.07	2	5311.75	1.8826	0.0303	0.0	0.0	0.0	3.51E-07	1.71E-06	4.99E-06
15	12	84	83	35628.90	1	5312.83	1.8822	0.0303	0.0	0.0	0.0	1.07E-06	2.37E-05	2.04E-04
4	1	108	106	22956.67	1	5312.95	1.8822	0.0303	0.0	0.0	1.22E-07	2.33E-06	1.53E-05	5.53E-05
14	11	96	95	37398.61	1	5313.40	1.8820	0.0303	0.0	0.0	0.0	4.01E-07	1.05E-05	1.02E-04
15	12	21	22	24851.22	1	5313.63	1.8820	0.0496	0.0	0.0	1.93E-06	4.82E-05	3.80E-04	1.56E-03
16	13	68	67	33412.62	1	5313.72	1.8819	0.0303	0.0	0.0	0.0	3.25E-06	5.83E-05	4.31E-04
10	7	68	69	23000.01	1	5313.85	1.8819	0.0303	0.0	0.0	3.83E-06	7.33E-05	4.84E-04	1.75E-03
9	6	75	76	22889.33	1	5313.87	1.8819	0.0303	0.0	0.0	2.82E-06	5.31E-05	3.47E-04	1.25E-03
16	13	5	6	25887.22	1	5314.22	1.8817	0.0617	0.0	0.0	3.59E-07	1.04E-05	9.08E-05	4.01E-04
14	11	33	34	24180.77	1	5314.49	1.8816	0.0321	0.0	0.0	3.39E-06	7.70E-05	5.70E-04	2.24E-03
13	10	106	105	38538.42	1	5315.22	1.8814	0.0303	0.0	0.0	0.0	1.61E-07	4.90E-06	5.29E-05
13	10	43	44	23685.38	1	5316.36	1.8810	0.0303	0.0	0.0	4.46E-06	9.44E-05	6.66E-04	2.53E-03
12	9	52	53	23343.22	1	5316.77	1.8808	0.0303	0.0	0.0	4.78E-06	9.63E-05	6.57E-04	2.44E-03
3	0	110	111	22947.38	1	5316.86	1.8808	0.0303	0.0	0.0	0.0	5.69E-07	3.74E-06	1.35E-05
7	4	80	81	19757.90	2	5317.65	1.8805	0.0303	0.0	0.0	1.09E-07	1.31E-06	6.34E-06	1.84E-05
16	13	67	66	33192.84	1	5317.77	1.8805	0.0303	0.0	0.0	4.32E-08	3.59E-06	6.30E-05	4.59E-04
16	13	4	5	25866.88	1	5318.13	1.8804	0.0614	0.0	0.0	3.06E-07	8.85E-06	7.70E-05	3.39E-04
11	8	60	61	23062.32	1	5318.56	1.8802	0.0303	0.0	0.0	4.58E-06	8.86E-05	5.89E-04	2.14E-03
15	12	83	82	35358.64	1	5318.70	1.8802	0.0303	0.0	0.0	0.0	1.22E-06	2.63E-05	2.23E-04
15	12	20	21	24776.12	1	5319.22	1.8800	0.0515	0.0	0.0	1.96E-06	4.84E-05	3.79E-04	1.55E-03
8	5	73	74	19801.66	2	5319.90	1.8797	0.0303	0.0	0.0	1.69E-07	2.04E-06	9.89E-06	2.87E-05
5	2	99	100	22695.13	1	5320.15	1.8796	0.0303	0.0	0.0	3.75E-07	6.87E-06	4.41E-05	1.56E-04
14	11	95	94	37090.97	1	5320.73	1.8794	0.0303	0.0	0.0	0.0	4.67E-07	1.19E-05	1.13E-04
8	5	81	82	22656.29	1	5320.77	1.8794	0.0303	0.0	0.0	2.21E-06	4.04E-05	2.58E-04	9.13E-04
14	11	32	33	24064.08	1	5321.32	1.8792	0.0326	0.0	0.0	3.60E-06	8.04E-05	5.88E-04	2.29E-03
16	13	66	65	32976.12	1	5321.70	1.8791	0.0303	0.0	0.0	4.91E-08	3.95E-06	6.80E-05	4.88E-04
16	13	3	4	25849.93	1	5321.94	1.8790	0.0611	0.0	0.0	2.50E-07	7.20E-06	6.25E-05	2.75E-04
6	3	86	87	19578.50	2	5322.43	1.8788	0.0303	0.0	0.0	7.00E-08	8.18E-07	3.89E-06	1.11E-05
13	10	105	104	38599.92	1	5323.62	1.8784	0.0303	0.0	0.0	0.0	1.91E-07	5.64E-06	5.95E-05
6	3	93	94	22558.31	1	5323.87	1.8783	0.0303	0.0	0.0	8.32E-07	1.50E-05	9.47E-05	3.33E-04
5	2	92	93	19518.39	2	5323.88	1.8783	0.0303	0.0	0.0	0.0	4.19E-07	1.98E-06	5.64E-06
7	4	87	88	22545.62	1	5324.09	1.8783	0.0303	0.0	0.0	1.48E-06	2.65E-05	1.68E-04	5.89E-04
13	10	42	43	23533.68	1	5324.22	1.8782	0.0303	0.0	0.0	4.90E-06	1.01E-04	7.04E-04	2.65E-03
10	7	67	68	22759.69	1	5324.22	1.8782	0.0303	0.0	0.0	4.50E-06	8.33E-05	5.38E-04	1.92E-03
15	12	82	81	35091.32	1	5324.45	1.8781	0.0303	0.0	0.0	0.0	1.39E-06	2.93E-05	2.43E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	19	20	24704.41	1	5324.71	1.8780	0.0535	0.0	0.0	1.98E-06	4.85E-05	3.77E-04	1.53E-03
12	9	114	113	40058.61	1	5324.85	1.8780	0.0303	0.0	0.0	0.0	7.52E-08	2.55E-06	2.97E-05
9	6	74	75	22623.88	1	5324.94	1.8780	0.0303	0.0	0.0	3.38E-06	6.14E-05	3.91E-04	1.38E-03
16	13	65	64	32762.48	1	5325.53	1.8777	0.0303	0.0	0.0	5.57E-08	4.35E-06	7.33E-05	5.18E-04
12	9	51	52	23159.78	1	5325.54	1.8777	0.0303	0.0	0.0	5.39E-06	1.06E-04	7.09E-04	2.60E-03
16	13	2	3	25836.37	1	5325.64	1.8777	0.0609	0.0	0.0	1.90E-07	5.48E-06	4.76E-05	2.09E-04
4	1	104	105	22582.21	1	5326.93	1.8773	0.0303	0.0	0.0	1.59E-07	2.87E-06	1.82E-05	6.41E-05
14	11	94	93	36786.14	1	5327.85	1.8769	0.0303	0.0	0.0	0.0	5.42E-07	1.34E-05	1.25E-04
14	11	31	32	23950.76	1	5328.05	1.8769	0.0331	0.0	0.0	3.81E-06	8.37E-05	6.06E-04	2.34E-03
11	8	59	60	22850.43	1	5328.13	1.8768	0.0303	0.0	0.0	5.27E-06	9.89E-05	6.44E-04	2.31E-03
7	4	79	80	19482.71	2	5328.59	1.8767	0.0303	0.0	0.0	1.32E-07	1.53E-06	7.18E-06	2.04E-05
16	13	64	63	32551.91	1	5329.23	1.8764	0.0303	0.0	0.0	6.30E-08	4.77E-06	7.88E-05	5.49E-04
16	13	1	2	25826.20	1	5329.24	1.8764	0.0606	0.0	0.0	1.29E-07	3.70E-06	3.21E-05	1.41E-04
15	12	81	80	34826.92	1	5330.08	1.8761	0.0303	0.0	0.0	0.0	1.58E-06	3.25E-05	2.65E-04
15	12	18	19	24636.09	1	5330.10	1.8761	0.0552	0.0	0.0	1.99E-06	4.83E-05	3.73E-04	1.51E-03
8	5	72	73	19550.86	2	5330.20	1.8761	0.0303	0.0	0.0	2.00E-07	2.33E-06	1.11E-05	3.16E-05
3	0	109	110	22554.35	1	5331.32	1.8757	0.0303	0.0	0.0	0.0	7.09E-07	4.49E-06	1.58E-05
13	10	104	103	38264.10	1	5331.90	1.8755	0.0303	0.0	0.0	0.0	2.27E-07	6.48E-06	6.69E-05
13	10	41	42	23365.33	1	5331.97	1.8755	0.0303	0.0	0.0	5.35E-06	1.08E-04	7.43E-04	2.77E-03
8	5	80	81	22368.93	1	5332.43	1.8753	0.0303	0.0	0.0	2.70E-06	4.73E-05	2.94E-04	1.02E-03
16	13	0	1	25819.42	1	5332.73	1.8752	0.0603	0.0	0.0	6.51E-08	1.87E-06	1.62E-05	7.12E-05
16	13	63	62	32344.45	1	5332.83	1.8752	0.0303	0.0	0.0	7.10E-08	5.22E-06	8.45E-05	5.81E-04
5	2	98	99	22342.30	1	5333.56	1.8749	0.0303	0.0	0.0	4.79E-07	8.35E-06	5.18E-05	1.79E-04
6	3	85	86	19282.05	2	5333.92	1.8748	0.0303	0.0	0.0	8.62E-08	9.65E-07	4.46E-06	1.25E-05
12	9	113	112	39695.24	1	5334.18	1.8747	0.0303	0.0	0.0	0.0	9.09E-08	2.98E-06	3.39E-05
12	9	50	51	22979.66	1	5334.21	1.8747	0.0303	0.0	0.0	6.06E-06	1.16E-04	7.64E-04	2.76E-03
10	7	66	67	22522.63	1	5334.50	1.8746	0.0303	0.0	0.0	5.28E-06	9.45E-05	5.96E-04	2.09E-03
14	11	30	31	23840.83	1	5334.69	1.8745	0.0335	0.0	0.0	4.02E-06	8.69E-05	6.22E-04	2.39E-03
14	11	93	92	36484.12	1	5334.86	1.8745	0.0303	0.0	0.0	0.0	6.29E-07	1.51E-05	1.38E-04
15	12	17	18	24571.17	1	5335.38	1.8743	0.0568	0.0	0.0	1.99E-06	4.79E-05	3.68E-04	1.48E-03
15	12	80	79	34565.47	1	5335.60	1.8742	0.0303	0.0	0.0	0.0	1.80E-06	3.60E-05	2.88E-04
9	6	73	74	22361.64	1	5335.91	1.8741	0.0303	0.0	0.0	4.05E-06	7.07E-05	4.40E-04	1.52E-03
5	2	91	92	19200.73	2	5335.92	1.8741	0.0303	0.0	0.0	4.50E-08	4.98E-07	2.28E-06	6.37E-06
16	13	62	61	32140.09	1	5336.31	1.8740	0.0303	0.0	0.0	7.99E-08	5.70E-06	9.05E-05	6.13E-04
7	4	86	87	22236.39	1	5336.34	1.8739	0.0303	0.0	0.0	1.83E-06	3.15E-05	1.93E-04	6.65E-04
6	3	92	93	22227.24	1	5336.71	1.8738	0.0303	0.0	0.0	1.05E-06	1.79E-05	1.10E-04	3.78E-04
11	8	58	59	22641.83	1	5337.61	1.8735	0.0303	0.0	4.01E-08	6.07E-06	1.10E-04	7.05E-04	2.49E-03
16	13	1	0	25816.03	1	5339.41	1.8729	0.0603	0.0	0.0	6.65E-08	1.91E-06	1.65E-05	7.26E-05
7	4	78	79	19210.62	2	5339.44	1.8729	0.0303	0.0	0.0	1.60E-07	1.77E-06	8.12E-06	2.27E-05
13	10	40	41	23240.34	1	5339.63	1.8728	0.0303	0.0	0.0	5.84E-06	1.16E-04	7.83E-04	2.88E-03
16	13	61	60	31938.83	1	5339.68	1.8728	0.0303	0.0	0.0	8.96E-08	6.21E-06	9.67E-05	6.47E-04
13	10	103	102	37930.99	1	5340.06	1.8726	0.0303	0.0	0.0	0.0	2.69E-07	7.44E-06	7.50E-05
8	5	71	72	19303.21	2	5340.40	1.8725	0.0303	0.0	0.0	2.37E-07	2.67E-06	1.23E-05	3.47E-05
15	12	16	17	24509.65	1	5340.56	1.8725	0.0585	0.0	0.0	1.98E-06	4.72E-05	3.61E-04	1.45E-03
4	1	103	104	22210.73	1	5340.83	1.8724	0.0303	0.0	0.0	2.06E-07	3.53E-06	2.16E-05	7.42E-05
15	12	79	78	34306.98	1	5341.00	1.8723	0.0303	0.0	0.0	0.0	2.04E-06	3.99E-05	3.14E-04
14	11	29	30	23734.29	1	5341.22	1.8722	0.0340	0.0	0.0	4.22E-06	8.99E-05	6.37E-04	2.43E-03
14	11	92	91	36184.92	1	5341.74	1.8720	0.0303	0.0	0.0	0.0	7.28E-07	1.70E-05	1.52E-04
16	13	2	1	25819.42	1	5342.59	1.8718	0.0606	0.0	0.0	1.34E-07	3.85E-06	3.34E-05	1.47E-04
12	9	49	50	22602.87	1	5342.79	1.8717	0.0303	0.0	4.33E-08	6.80E-06	1.27E-04	8.21E-04	2.93E-03
16	13	60	59	31740.70	1	5342.93	1.8716	0.0303	0.0	0.0	1.00E-07	6.75E-06	1.03E-04	6.80E-04
12	9	112	111	39334.46	1	5343.39	1.8715	0.0303	0.0	0.0	0.0	1.10E-07	3.47E-06	3.85E-05
8	5	79	80	22084.76	1	5344.00	1.8713	0.0303	0.0	0.0	3.29E-06	5.53E-05	3.35E-04	1.14E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GN-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	7	65	66	22288.82	1	5344.68	1.8710	0.0303	0.0	4.45E-08	6.18E-06	1.07E-04	6.60E-04	2.28E-03
6	3	84	85	18988.68	2	5345.33	1.8708	0.0303	0.0	0.0	1.06E-07	1.14E-06	5.10E-06	1.40E-05
15	12	15	16	24451.53	1	5345.64	1.8707	0.0591	0.0	0.0	1.96E-06	4.64E-05	3.52E-04	1.41E-03
16	13	3	2	25826.20	1	5345.67	1.8707	0.0609	0.0	0.0	2.02E-07	5.82E-06	5.04E-05	2.22E-04
3	0	108	109	22164.27	1	5345.70	1.8707	0.0303	0.0	0.0	5.19E-08	8.82E-07	5.38E-06	1.84E-05
16	13	59	58	31545.70	1	5346.08	1.8705	0.0303	0.0	0.0	1.12E-07	7.36E-06	1.10E-04	7.19E-04
15	12	78	77	34051.46	1	5346.28	1.8705	0.0303	0.0	0.0	0.0	2.31E-06	4.40E-05	3.40E-04
9	6	72	73	22102.62	1	5346.79	1.8703	0.0303	0.0	0.0	4.83E-06	8.14E-05	4.93E-04	1.68E-03
5	2	97	98	21992.52	1	5346.85	1.8702	0.0303	0.0	0.0	6.11E-07	1.01E-05	6.08E-05	2.05E-04
11	8	57	58	22436.54	1	5347.00	1.8702	0.0303	0.0	4.84E-08	6.97E-06	1.23E-04	7.71E-04	2.69E-03
13	10	39	40	23098.72	1	5347.15	1.8701	0.0303	0.0	0.0	6.35E-06	1.23E-04	8.23E-04	3.00E-03
14	11	28	29	23631.13	1	5347.65	1.8700	0.0359	0.0	0.0	4.44E-06	9.31E-05	6.54E-04	2.47E-03
5	2	90	91	18886.10	2	5347.88	1.8699	0.0303	0.0	0.0	5.59E-08	5.92E-07	2.63E-06	7.18E-06
13	10	102	101	37600.60	1	5348.11	1.8698	0.0303	0.0	0.0	0.0	3.18E-07	8.53E-06	8.40E-05
7	4	85	86	21930.29	1	5348.50	1.8697	0.0303	0.0	0.0	2.27E-06	3.73E-05	2.23E-04	7.50E-04
14	11	91	90	35888.57	1	5348.52	1.8697	0.0303	0.0	0.0	0.0	8.40E-07	1.91E-05	1.68E-04
16	13	4	3	25836.37	1	5348.64	1.8696	0.0611	0.0	0.0	2.70E-07	7.79E-06	6.76E-05	2.97E-04
16	13	58	57	31353.83	1	5349.10	1.8695	0.0303	0.0	0.0	1.26E-07	8.02E-06	1.18E-04	7.58E-04
6	3	91	92	21899.26	1	5349.45	1.8694	0.0303	0.0	0.0	1.31E-06	2.14E-05	1.28E-04	4.28E-04
7	4	77	78	18941.66	2	5350.21	1.8691	0.0303	0.0	0.0	1.92E-07	2.05E-06	9.18E-06	2.52E-05
8	5	70	71	19058.71	2	5350.52	1.8690	0.0303	0.0	0.0	2.80E-07	3.04E-06	1.38E-05	3.80E-05
15	12	14	15	24396.82	1	5350.62	1.8689	0.0597	0.0	0.0	1.93E-06	4.52E-05	3.42E-04	1.36E-03
12	9	48	49	22629.43	1	5351.26	1.8687	0.0303	0.0	5.04E-08	7.60E-06	1.38E-04	8.81E-04	3.11E-03
15	12	77	76	33798.93	1	5351.45	1.8687	0.0303	0.0	0.0	0.0	2.61E-06	4.85E-05	3.69E-04
16	13	5	4	25849.93	1	5351.51	1.8686	0.0614	0.0	0.0	3.38E-07	9.77E-06	8.48E-05	3.74E-04
16	13	57	56	31165.11	1	5352.02	1.8685	0.0303	0.0	0.0	1.40E-07	8.71E-06	1.26E-04	7.98E-04
12	9	111	110	36976.29	1	5352.47	1.8683	0.0303	0.0	0.0	0.0	1.32E-07	4.04E-06	4.38E-05
14	11	27	28	23531.37	1	5353.98	1.8678	0.0379	0.0	0.0	4.64E-06	9.61E-05	6.68E-04	2.51E-03
16	13	6	5	25866.88	1	5354.27	1.8677	0.0617	0.0	0.0	4.05E-07	1.17E-05	1.02E-04	4.50E-04
4	1	102	103	21842.26	1	5354.64	1.8675	0.0303	0.0	0.0	2.67E-07	4.33E-06	2.56E-05	8.57E-05
13	10	38	39	22960.48	1	5354.66	1.8675	0.0303	0.0	4.21E-08	6.88E-06	1.31E-04	8.63E-04	3.12E-03
10	7	64	65	22058.29	1	5354.77	1.8675	0.0303	0.0	5.49E-08	7.22E-06	1.21E-04	7.29E-04	2.48E-03
16	13	56	55	30979.55	1	5354.82	1.8675	0.0303	0.0	0.0	1.56E-07	9.43E-06	1.34E-04	8.39E-04
14	11	90	89	35595.07	1	5355.17	1.8674	0.0303	0.0	0.0	0.0	9.69E-07	2.14E-05	1.84E-04
8	5	78	79	21803.77	1	5355.47	1.8672	0.0303	0.0	0.0	4.00E-06	6.45E-05	3.80E-04	1.27E-03
15	12	13	14	24345.52	1	5355.49	1.8672	0.0604	0.0	0.0	1.88E-06	4.38E-05	3.29E-04	1.31E-03
13	10	101	100	37272.94	1	5356.03	1.8671	0.0303	0.0	0.0	0.0	3.75E-07	9.75E-06	9.40E-05
11	8	56	57	22234.55	1	5356.29	1.8670	0.0303	0.0	5.82E-08	7.98E-06	1.37E-04	8.41E-04	2.89E-03
15	12	76	75	33549.38	1	5356.50	1.8669	0.0303	0.0	0.0	0.0	2.94E-06	5.34E-05	3.99E-04
6	3	83	84	18698.40	2	5356.65	1.8668	0.0303	0.0	0.0	1.30E-07	1.33E-06	5.83E-06	1.57E-05
16	13	7	6	25887.22	1	5356.92	1.8667	0.0620	0.0	0.0	4.70E-07	1.37E-05	1.19E-04	5.26E-04
16	13	55	54	30797.15	1	5357.51	1.8665	0.0303	0.0	0.0	1.73E-07	1.02E-05	1.42E-04	8.80E-04
9	6	71	72	21846.84	1	5357.58	1.8665	0.0303	0.0	4.60E-08	5.76E-06	9.34E-05	5.53E-04	1.85E-03
16	13	8	7	25910.95	1	5359.47	1.8659	0.0623	0.0	0.0	5.34E-07	1.56E-05	1.36E-04	6.01E-04
12	9	47	48	22459.34	1	5359.65	1.8658	0.0303	0.0	5.85E-08	8.47E-06	1.50E-04	9.43E-04	3.29E-03
5	2	89	90	18574.52	2	5359.76	1.8658	0.0303	0.0	0.0	6.93E-08	7.01E-07	3.03E-06	8.09E-06
3	0	107	108	21777.14	1	5359.99	1.8657	0.0303	0.0	0.0	6.81E-08	1.09E-06	6.43E-06	2.14E-05
16	13	54	53	30617.92	1	5360.09	1.8656	0.0303	0.0	0.0	1.92E-07	1.10E-05	1.51E-04	9.22E-04
5	2	96	97	21645.80	1	5360.12	1.8656	0.0303	0.0	0.0	7.77E-07	1.23E-05	7.12E-05	2.35E-04
14	11	26	27	23435.02	1	5360.21	1.8656	0.0398	0.0	0.0	4.84E-06	9.85E-05	6.81E-04	2.54E-03
15	12	12	13	24297.62	1	5360.26	1.8656	0.0610	0.0	0.0	1.82E-06	4.22E-05	3.15E-04	1.25E-03
8	5	69	70	18817.38	2	5360.55	1.8655	0.0303	0.0	0.0	3.30E-07	3.46E-06	1.53E-05	4.16E-05
7	4	84	85	21627.34	1	5360.57	1.8655	0.0303	0.0	0.0	2.81E-06	4.42E-05	2.56E-04	8.44E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GN-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	76	77	18675.82	2	5360.89	1.8654	0.0303	0.0	0.0	2.31E-07	2.37E-06	1.03E-05	2.78E-05
15	12	75	74	33302.84	1	5361.44	1.8652	0.0303	0.0	0.0	0.0	3.31E-06	5.87E-05	4.31E-04
12	9	110	109	38620.75	1	5361.44	1.8652	0.0303	0.0	0.0	0.0	1.59E-07	4.70E-06	4.96E-05
14	11	89	88	35304.45	1	5361.70	1.8651	0.0303	0.0	0.0	0.0	1.12E-06	2.41E-05	2.03E-04
16	13	9	8	25938.07	1	5361.92	1.8650	0.0624	0.0	0.0	5.95E-07	1.74E-05	1.52E-04	6.76E-04
13	10	37	38	22825.61	1	5362.02	1.8650	0.0303	0.0	4.70E-08	7.43E-06	1.39E-04	9.03E-04	3.23E-03
6	3	90	91	21574.38	1	5362.11	1.8649	0.0303	0.0	0.0	1.64E-06	2.56E-05	1.48E-04	4.85E-04
16	13	53	52	30441.87	1	5362.55	1.8648	0.0303	0.0	0.0	2.12E-07	1.18E-05	1.60E-04	9.64E-04
13	10	100	99	36948.03	1	5363.83	1.8643	0.0303	0.0	0.0	0.0	4.42E-07	1.11E-05	1.05E-04
16	13	10	9	25968.57	1	5364.26	1.8642	0.0624	0.0	0.0	6.53E-07	1.92E-05	1.69E-04	7.49E-04
10	7	63	64	21831.04	1	5364.77	1.8640	0.0303	0.0	6.75E-08	8.40E-06	1.36E-04	8.04E-04	2.69E-03
16	13	52	51	30269.01	1	5364.91	1.8640	0.0303	0.0	0.0	2.33E-07	1.27E-05	1.69E-04	1.01E-03
15	12	11	12	24253.14	1	5364.93	1.8640	0.0617	0.0	0.0	1.75E-06	4.02E-05	3.00E-04	1.18E-03
11	8	55	56	22035.89	1	5365.48	1.8638	0.0303	0.0	6.97E-08	9.11E-06	1.52E-04	9.16E-04	3.11E-03
15	12	74	73	33059.32	1	5366.26	1.8635	0.0303	0.0	0.0	4.55E-08	3.71E-06	6.44E-05	4.65E-04
14	11	25	26	23342.06	1	5366.34	1.8635	0.0418	0.0	0.0	5.03E-06	1.01E-04	6.92E-04	2.57E-03
16	13	11	10	26002.45	1	5366.49	1.8634	0.0625	0.0	0.0	7.08E-07	2.09E-05	1.84E-04	8.20E-04
8	5	77	78	21525.99	1	5366.86	1.8633	0.0303	0.0	4.19E-08	4.84E-06	7.51E-05	4.31E-04	1.41E-03
16	13	51	50	30099.34	1	5367.15	1.8632	0.0303	0.0	0.0	2.56E-07	1.36E-05	1.78E-04	1.05E-03
6	3	82	83	18411.21	2	5367.89	1.8629	0.0303	0.0	0.0	1.58E-07	1.56E-06	6.65E-06	1.76E-05
12	9	46	47	22292.60	1	5367.93	1.8629	0.0303	0.0	6.77E-08	9.42E-06	1.63E-04	1.01E-03	3.48E-03
14	11	88	87	35016.70	1	5368.12	1.8629	0.0303	0.0	0.0	0.0	1.30E-06	2.71E-05	2.24E-04
9	6	70	71	21594.31	1	5368.27	1.8628	0.0303	0.0	5.81E-08	6.84E-06	1.07E-04	6.18E-04	2.04E-03
4	1	101	102	21476.80	1	5368.36	1.8628	0.0303	0.0	0.0	3.44E-07	5.30E-06	3.03E-05	9.89E-05
16	13	12	11	26039.71	1	5368.62	1.8627	0.0617	0.0	0.0	7.59E-07	2.25E-05	1.99E-04	8.90E-04
13	10	36	37	22694.13	1	5369.28	1.8624	0.0308	0.0	5.22E-08	8.00E-06	1.47E-04	9.42E-04	3.34E-03
16	13	50	49	29932.87	1	5369.28	1.8624	0.0303	0.0	0.0	2.80E-07	1.46E-05	1.87E-04	1.09E-03
15	12	10	11	24212.08	1	5369.50	1.8624	0.0625	0.0	0.0	1.67E-06	3.81E-05	2.83E-04	1.11E-03
12	9	109	108	38267.86	1	5370.29	1.8621	0.0303	0.0	0.0	0.0	1.91E-07	5.45E-06	5.62E-05
8	5	68	69	18579.22	2	5370.50	1.8620	0.0303	0.0	0.0	3.88E-07	3.93E-06	1.70E-05	4.54E-05
16	13	13	12	26060.36	1	5370.63	1.8620	0.0610	0.0	0.0	8.06E-07	2.41E-05	2.14E-04	9.57E-04
15	12	73	72	32818.82	1	5370.97	1.8619	0.0303	0.0	0.0	5.28E-08	4.16E-06	7.04E-05	5.00E-04
16	13	49	48	29769.62	1	5371.29	1.8617	0.0303	0.0	0.0	3.06E-07	1.55E-05	1.96E-04	1.13E-03
7	4	75	76	18413.12	2	5371.49	1.8617	0.0303	0.0	0.0	2.77E-07	2.74E-06	1.16E-05	3.08E-05
13	10	99	98	36625.89	1	5371.52	1.8617	0.0303	0.0	0.0	0.0	5.20E-07	1.27E-05	1.17E-04
5	2	88	89	18265.99	2	5371.54	1.8617	0.0303	0.0	0.0	8.60E-08	8.33E-07	3.49E-06	9.14E-06
14	11	24	25	23252.52	1	5372.37	1.8614	0.0437	0.0	0.0	5.21E-06	1.04E-04	7.01E-04	2.59E-03
7	4	83	84	21327.55	1	5372.54	1.8613	0.0303	0.0	0.0	3.46E-06	5.22E-05	2.94E-04	9.49E-04
16	13	14	13	26124.39	1	5372.55	1.8613	0.0604	0.0	0.0	8.49E-07	2.55E-05	2.28E-04	1.02E-03
16	13	48	47	29609.58	1	5373.20	1.8611	0.0303	0.0	0.0	3.33E-07	1.65E-05	2.06E-04	1.17E-03
5	2	95	96	21302.14	1	5373.27	1.8611	0.0303	0.0	0.0	9.87E-07	1.48E-05	8.32E-05	2.69E-04
15	12	9	10	24174.43	1	5373.96	1.8608	0.0624	0.0	0.0	1.57E-06	3.56E-05	2.64E-04	1.04E-03
3	0	106	107	21392.98	1	5374.20	1.8607	0.0303	0.0	0.0	8.92E-08	1.36E-06	7.69E-06	2.50E-05
16	13	15	14	26171.80	1	5374.35	1.8607	0.0597	0.0	0.0	8.87E-07	2.68E-05	2.41E-04	1.08E-03
14	11	87	86	34731.85	1	5374.42	1.8607	0.0303	0.0	0.0	0.0	1.50E-06	3.05E-05	2.47E-04
11	8	54	55	21840.56	1	5374.57	1.8606	0.0303	0.0	8.31E-08	1.04E-05	1.68E-04	9.96E-04	3.33E-03
10	7	62	63	21607.08	1	5374.66	1.8606	0.0303	0.0	8.27E-08	9.75E-06	1.53E-04	8.85E-04	2.92E-03
6	3	89	90	21252.63	1	5374.67	1.8606	0.0303	0.0	0.0	2.05E-06	3.05E-05	1.71E-04	5.49E-04
16	13	47	46	29452.77	1	5374.99	1.8605	0.0303	0.0	0.0	3.61E-07	1.75E-05	2.15E-04	1.21E-03
15	12	72	71	32581.36	1	5375.56	1.8603	0.0303	0.0	0.0	6.10E-08	4.64E-06	7.70E-05	5.38E-04
16	13	16	15	26222.57	1	5376.05	1.8601	0.0591	0.0	0.0	9.21E-07	2.81E-05	2.53E-04	1.14E-03
12	9	45	46	22129.23	1	5376.11	1.8601	0.0303	0.0	7.80E-08	1.04E-05	1.76E-04	1.07E-03	3.66E-03
13	10	35	36	22566.05	1	5376.45	1.8600	0.0312	0.0	5.78E-08	8.59E-06	1.55E-04	9.81E-04	3.45E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	13	46	45	29299.19	1	5376.67	1.8599	0.0303	0.0	0.0	3.91E-07	1.85E-05	2.24E-04	1.25E-03
11	8	117	116	39467.57	1	5377.57	1.8596	0.0303	0.0	0.0	0.0	8.25E-08	2.65E-06	2.96E-05
16	13	17	16	26276.73	1	5377.65	1.8595	0.0585	0.0	0.0	9.50E-07	2.92E-05	2.64E-04	1.20E-03
8	5	76	77	21251.42	1	5378.15	1.8594	0.0303	0.0	5.40E-08	5.86E-06	8.73E-05	4.88E-04	1.57E-03
16	13	45	44	29148.84	1	5378.24	1.8593	0.0303	0.0	0.0	4.21E-07	1.96E-05	2.33E-04	1.29E-03
14	11	23	24	23166.39	1	5378.29	1.8593	0.0457	0.0	0.0	5.37E-06	1.05E-04	7.08E-04	2.60E-03
15	12	8	9	24140.20	1	5378.33	1.8593	0.0624	0.0	0.0	1.46E-06	3.30E-05	2.43E-04	9.53E-04
9	6	69	70	21345.04	1	5378.87	1.8591	0.0303	0.0	7.31E-08	8.10E-06	1.22E-04	6.90E-04	2.23E-03
12	9	108	107	37917.62	1	5379.02	1.8591	0.0303	0.0	0.0	0.0	2.28E-07	6.32E-06	6.36E-05
6	3	81	82	18127.12	2	5379.04	1.8591	0.0303	0.0	0.0	1.93E-07	1.83E-06	7.57E-06	1.96E-05
13	10	98	97	36306.52	1	5379.08	1.8591	0.0303	0.0	0.0	0.0	6.10E-07	1.44E-05	1.30E-04
16	13	18	17	26334.25	1	5379.13	1.8590	0.0568	0.0	0.0	9.74E-07	3.02E-05	2.74E-04	1.25E-03
16	13	44	43	29001.74	1	5379.70	1.8588	0.0303	0.0	0.0	4.53E-07	2.06E-05	2.42E-04	1.33E-03
15	12	71	70	32346.95	1	5380.04	1.8587	0.0303	0.0	0.0	7.04E-08	5.18E-06	8.39E-05	5.77E-04
8	5	67	68	18344.26	2	5380.35	1.8586	0.0303	0.0	0.0	4.55E-07	4.46E-06	1.88E-05	4.95E-05
16	13	19	18	26395.14	1	5380.51	1.8586	0.0552	0.0	0.0	9.92E-07	3.10E-05	2.84E-04	1.30E-03
14	11	86	85	34449.91	1	5380.61	1.8585	0.0303	0.0	0.0	0.0	1.72E-06	3.42E-05	2.71E-04
16	13	43	42	28857.89	1	5381.05	1.8584	0.0303	0.0	0.0	4.86E-07	2.17E-05	2.51E-04	1.36E-03
16	13	20	19	26459.40	1	5381.78	1.8581	0.0535	0.0	0.0	1.01E-06	3.17E-05	2.92E-04	1.34E-03
4	1	100	101	21114.38	1	5381.99	1.8580	0.0303	0.0	0.0	4.43E-07	6.48E-06	3.58E-05	1.14E-04
7	4	74	75	18153.57	2	5381.99	1.8580	0.0303	0.0	0.0	3.31E-07	3.15E-06	1.31E-05	3.40E-05
16	13	42	41	28717.30	1	5382.29	1.8579	0.0303	0.0	0.0	5.20E-07	2.27E-05	2.60E-04	1.39E-03
15	12	7	8	24109.38	1	5382.58	1.8578	0.0623	0.0	0.0	1.34E-06	3.00E-05	2.21E-04	8.64E-04
16	13	21	20	26527.02	1	5382.95	1.8577	0.0515	0.0	0.0	1.02E-06	3.23E-05	3.00E-04	1.38E-03
5	2	87	88	17960.53	2	5383.25	1.8576	0.0303	0.0	0.0	1.07E-07	9.88E-07	4.02E-06	1.03E-05
16	13	41	40	28579.97	1	5383.42	1.8576	0.0303	0.0	0.0	5.54E-07	2.37E-05	2.68E-04	1.42E-03
13	10	34	35	22441.36	1	5383.51	1.8575	0.0317	0.0	6.37E-08	9.19E-06	1.63E-04	1.02E-03	3.55E-03
11	8	53	54	21648.56	1	5383.57	1.8575	0.0303	0.0	9.88E-08	1.18E-05	1.86E-04	1.08E-03	3.57E-03
16	13	22	21	26598.00	1	5384.00	1.8574	0.0496	0.0	0.0	1.02E-06	3.28E-05	3.06E-04	1.42E-03
14	11	22	23	23083.67	1	5384.12	1.8573	0.0476	0.0	0.0	5.51E-06	1.07E-04	7.12E-04	2.60E-03
12	9	44	45	21969.23	1	5384.20	1.8573	0.0303	0.0	8.96E-08	1.15E-05	1.91E-04	1.14E-03	3.85E-03
15	12	70	69	32115.60	1	5384.40	1.8572	0.0303	0.0	0.0	8.10E-08	5.76E-06	9.14E-05	6.18E-04
7	4	82	83	21030.94	1	5384.43	1.8572	0.0303	0.0	4.14E-08	4.26E-06	6.15E-05	3.36E-04	1.07E-03
16	13	40	39	28445.91	1	5384.44	1.8572	0.0303	0.0	0.0	5.89E-07	2.47E-05	2.76E-04	1.45E-03
10	7	61	62	21386.43	1	5384.47	1.8572	0.0303	0.0	1.01E-07	1.13E-05	1.72E-04	9.72E-04	3.16E-03
16	13	23	22	26672.34	1	5384.95	1.8570	0.0476	0.0	0.0	1.02E-06	3.31E-05	3.11E-04	1.45E-03
16	13	39	38	28315.13	1	5385.34	1.8569	0.0303	0.0	0.0	6.24E-07	2.57E-05	2.83E-04	1.48E-03
16	13	24	23	26750.03	1	5385.79	1.8567	0.0457	0.0	0.0	1.01E-06	3.33E-05	3.16E-04	1.48E-03
16	13	38	37	28187.63	1	5386.14	1.8566	0.0303	0.0	0.0	6.59E-07	2.67E-05	2.90E-04	1.50E-03
5	2	94	95	20961.57	1	5386.32	1.8566	0.0303	0.0	0.0	1.25E-06	1.79E-05	9.72E-05	3.06E-04
16	13	25	24	26831.07	1	5386.52	1.8565	0.0437	0.0	0.0	1.00E-06	3.34E-05	3.19E-04	1.50E-03
13	10	97	96	35989.95	1	5386.53	1.8565	0.0303	0.0	0.0	0.0	7.14E-07	1.64E-05	1.45E-04
14	11	85	84	34170.88	1	5386.67	1.8564	0.0303	0.0	0.0	0.0	1.98E-06	3.82E-05	2.98E-04
15	12	6	7	24081.99	1	5386.74	1.8564	0.0620	0.0	0.0	1.20E-06	2.69E-05	1.97E-04	7.71E-04
16	13	37	36	28063.42	1	5386.83	1.8564	0.0308	0.0	0.0	6.94E-07	2.76E-05	2.96E-04	1.52E-03
6	3	88	89	20934.01	1	5387.14	1.8563	0.0303	0.0	0.0	2.56E-06	3.65E-05	1.98E-04	6.22E-04
16	13	26	25	26915.45	1	5387.15	1.8563	0.0418	0.0	0.0	9.91E-07	3.34E-05	3.21E-04	1.52E-03
11	8	116	115	39092.48	1	5387.23	1.8562	0.0303	0.0	0.0	0.0	1.00E-07	3.11E-06	3.39E-05
16	13	36	35	27942.50	1	5387.40	1.8562	0.0312	0.0	0.0	7.28E-07	2.84E-05	3.02E-04	1.54E-03
12	9	107	106	37570.06	1	5387.63	1.8561	0.0303	0.0	0.0	0.0	2.73E-07	7.31E-06	7.19E-05
16	13	27	26	27003.18	1	5387.66	1.8561	0.0398	0.0	0.0	9.74E-07	3.32E-05	3.23E-04	1.54E-03
16	13	35	34	27824.87	1	5387.87	1.8560	0.0317	0.0	0.0	7.61E-07	2.92E-05	3.07E-04	1.55E-03
16	13	28	27	27094.25	1	5388.07	1.8560	0.0379	0.0	0.0	9.54E-07	3.30E-05	3.23E-04	1.55E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
16	13	34	33	27710.55	1	5388.22	1.8559	0.0321	0.0	0.0	7.93E-07	3.00E-05	3.11E-04	1.56E-03
3	0	105	106	21011.81	1	5388.31	1.8559	0.0303	0.0	0.0	1.16E-07	1.68E-06	9.17E-06	2.90E-05
16	13	29	28	27188.66	1	5388.37	1.8558	0.0359	0.0	0.0	9.31E-07	3.26E-05	3.22E-04	1.56E-03
16	13	33	32	27599.54	1	5388.47	1.8558	0.0326	0.0	0.0	8.24E-07	3.06E-05	3.15E-04	1.56E-03
16	13	30	29	27286.39	1	5388.56	1.8558	0.0340	0.0	0.0	9.04E-07	3.21E-05	3.20E-04	1.56E-03
16	13	32	31	27491.84	1	5388.61	1.8558	0.0331	0.0	0.0	8.53E-07	3.12E-05	3.18E-04	1.57E-03
16	13	31	30	27387.45	1	5388.64	1.8558	0.0335	0.0	0.0	8.80E-07	3.17E-05	3.19E-04	1.56E-03
15	12	69	68	31887.32	1	5388.65	1.8558	0.0303	0.0	0.0	9.29E-08	6.40E-06	9.93E-05	6.61E-04
8	5	75	76	20980.08	1	5389.35	1.8555	0.0303	0.0	6.95E-08	7.06E-06	1.01E-04	5.51E-04	1.74E-03
9	6	68	69	21099.03	1	5389.38	1.8555	0.0303	0.0	9.16E-08	9.57E-06	1.40E-04	7.69E-04	2.45E-03
14	11	21	22	23004.38	1	5389.85	1.8553	0.0496	0.0	0.0	5.63E-06	1.08E-04	7.14E-04	2.59E-03
6	3	80	81	17846.16	2	5390.10	1.8553	0.0303	0.0	0.0	2.34E-07	2.14E-06	8.60E-06	2.19E-05
8	5	66	67	18112.48	2	5390.12	1.8552	0.0303	0.0	0.0	5.32E-07	5.04E-06	2.08E-05	5.40E-05
13	10	33	34	22320.07	1	5390.48	1.8551	0.0321	0.0	7.00E-08	9.80E-06	1.70E-04	1.06E-03	3.65E-03
15	12	5	6	24058.02	1	5390.79	1.8550	0.0617	0.0	0.0	1.06E-06	2.36E-05	1.72E-04	6.72E-04
12	9	43	44	21812.60	1	5392.19	1.8545	0.0303	0.0	1.02E-07	1.27E-05	2.05E-04	1.21E-03	4.05E-03
7	4	73	74	17897.18	2	5392.41	1.8545	0.0303	0.0	0.0	3.95E-07	3.63E-06	1.47E-05	3.75E-05
11	8	52	53	21459.91	1	5392.48	1.8544	0.0303	0.0	1.17E-07	1.33E-05	2.05E-04	1.17E-03	3.81E-03
14	11	84	83	33894.79	1	5392.62	1.8544	0.0303	0.0	0.0	0.0	2.27E-06	4.27E-05	3.27E-04
15	12	68	67	31662.11	1	5392.78	1.8543	0.0303	0.0	0.0	1.06E-07	7.09E-06	1.08E-04	7.06E-04
13	10	96	95	35676.18	1	5393.86	1.8540	0.0303	0.0	0.0	0.0	8.35E-07	1.86E-05	1.61E-04
10	7	60	61	21169.09	1	5394.18	1.8538	0.0303	0.0	1.23E-07	1.30E-05	1.92E-04	1.07E-03	3.41E-03
15	12	4	5	24037.46	1	5394.73	1.8537	0.0614	0.0	0.0	8.99E-07	2.00E-05	1.46E-04	5.69E-04
5	2	86	87	17658.15	2	5394.86	1.8536	0.0303	0.0	0.0	1.32E-07	1.17E-06	4.63E-06	1.16E-05
14	11	20	21	22928.51	1	5395.47	1.8534	0.0515	0.0	0.0	5.72E-06	1.09E-04	7.13E-04	2.57E-03
4	1	99	100	20755.00	1	5395.54	1.8534	0.0303	0.0	0.0	5.70E-07	7.91E-06	4.22E-05	1.31E-04
12	9	106	105	37225.20	1	5396.12	1.8532	0.0303	0.0	0.0	0.0	3.26E-07	8.44E-06	8.11E-05
7	4	81	82	20737.52	1	5396.22	1.8531	0.0303	0.0	5.45E-08	5.22E-06	7.23E-05	3.85E-04	1.19E-03
4	1	92	93	17590.57	2	5396.30	1.8531	0.0303	0.0	0.0	5.45E-08	4.79E-07	1.88E-06	4.71E-06
11	8	115	114	38719.96	1	5396.77	1.8530	0.0303	0.0	0.0	0.0	1.22E-07	3.65E-06	3.88E-05
15	12	67	66	31439.99	1	5396.80	1.8530	0.0303	0.0	0.0	1.21E-07	7.84E-06	1.17E-04	7.53E-04
13	10	32	33	22202.19	1	5397.35	1.8528	0.0326	0.0	7.65E-08	1.04E-05	1.78E-04	1.09E-03	3.74E-03
14	11	83	82	33621.65	1	5398.46	1.8524	0.0303	0.0	0.0	0.0	2.60E-06	4.77E-05	3.58E-04
15	12	3	4	24020.34	1	5398.58	1.8523	0.0611	0.0	0.0	7.34E-07	1.63E-05	1.19E-04	4.62E-04
5	2	93	94	20624.10	1	5399.28	1.8521	0.0303	0.0	0.0	1.58E-06	2.15E-05	1.13E-04	3.49E-04
6	3	87	88	20618.54	1	5399.52	1.8520	0.0303	0.0	0.0	3.20E-06	4.35E-05	2.29E-04	7.05E-04
9	6	67	68	20856.30	1	5399.79	1.8519	0.0303	0.0	1.14E-07	1.13E-05	1.59E-04	8.56E-04	2.68E-03
8	5	65	66	17883.92	2	5399.80	1.8519	0.0303	0.0	0.0	6.21E-07	5.69E-06	2.30E-05	5.87E-05
12	9	42	43	21659.36	1	5400.09	1.8518	0.0303	0.0	1.17E-07	1.40E-05	2.21E-04	1.28E-03	4.24E-03
8	5	74	75	20711.97	1	5400.45	1.8517	0.0303	0.0	8.91E-08	8.49E-06	1.17E-04	6.22E-04	1.93E-03
15	12	66	65	31220.98	1	5400.71	1.8516	0.0303	0.0	0.0	1.38E-07	8.65E-06	1.26E-04	8.01E-04
14	11	19	20	22856.06	1	5400.99	1.8515	0.0535	0.0	0.0	5.79E-06	1.09E-04	7.09E-04	2.55E-03
13	10	95	94	35365.23	1	5401.07	1.8515	0.0303	0.0	0.0	0.0	9.74E-07	2.11E-05	1.78E-04
6	3	79	80	17568.32	2	5401.08	1.8515	0.0303	0.0	0.0	2.84E-07	2.49E-06	9.76E-06	2.44E-05
11	8	51	52	21274.62	1	5401.28	1.8514	0.0303	0.0	1.38E-07	1.51E-05	2.25E-04	1.26E-03	4.07E-03
15	12	2	3	24006.64	1	5402.32	1.8511	0.0609	0.0	0.0	5.60E-07	1.24E-05	9.03E-05	3.51E-04
3	0	104	105	20633.65	1	5402.34	1.8510	0.0303	0.0	0.0	1.52E-07	2.07E-06	1.09E-05	3.37E-05
7	4	72	73	17643.96	2	5402.74	1.8509	0.0303	0.0	0.0	4.70E-07	4.16E-06	1.64E-05	4.12E-05
10	7	59	60	20955.06	1	5403.79	1.8506	0.0303	0.0	1.49E-07	1.50E-05	2.15E-04	1.17E-03	3.68E-03
13	10	31	32	22087.72	1	5404.11	1.8504	0.0331	0.0	8.32E-08	1.10E-05	1.85E-04	1.12E-03	3.83E-03
14	11	82	81	33351.46	1	5404.17	1.8504	0.0303	0.0	0.0	0.0	2.97E-06	5.31E-05	3.91E-04
12	9	105	104	36863.04	1	5404.49	1.8503	0.0303	0.0	0.0	0.0	3.89E-07	9.73E-06	9.14E-05
16	12	65	64	31005.07	1	5404.50	1.8503	0.0303	0.0	0.0	1.57E-07	9.52E-06	1.36E-04	8.51E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	1	2	23996.36	1	5405.95	1.8498	0.0606	0.0	0.0	3.79E-07	8.38E-06	6.10E-05	2.37E-04
11	8	114	113	38350.04	1	5406.19	1.8497	0.0303	0.0	0.0	0.0	1.48E-07	4.27E-06	4.44E-05
5	2	85	86	17358.87	2	5406.39	1.8497	0.0303	0.0	0.0	1.63E-07	1.38E-06	5.31E-06	1.31E-05
14	11	18	19	22787.05	1	5406.41	1.8497	0.0552	0.0	0.0	5.83E-06	1.08E-04	7.02E-04	2.51E-03
12	9	41	42	21509.51	1	5407.88	1.8492	0.0303	0.0	1.32E-07	1.53E-05	2.36E-04	1.36E-03	4.44E-03
7	4	80	81	20447.30	1	5407.92	1.8491	0.0303	0.0	7.15E-08	6.39E-06	8.49E-05	4.39E-04	1.34E-03
13	10	54	93	35057.12	1	5408.16	1.8491	0.0303	0.0	0.0	0.0	1.13E-06	2.38E-05	1.97E-04
15	12	64	63	30792.28	1	5408.17	1.8491	0.0303	0.0	0.0	1.78E-07	1.05E-05	1.46E-04	9.03E-04
4	1	91	92	17269.87	2	5408.37	1.8490	0.0303	0.0	0.0	6.81E-08	5.71E-07	2.18E-06	5.33E-06
4	1	98	99	20398.68	1	5408.99	1.8488	0.0303	0.0	0.0	7.30E-07	9.63E-06	4.96E-05	1.51E-04
8	5	64	65	17658.56	2	5409.38	1.8486	0.0303	0.0	0.0	7.22E-07	6.41E-06	2.54E-05	6.37E-05
15	12	0	1	23989.51	1	5409.48	1.8486	0.0603	0.0	0.0	1.92E-07	4.24E-06	3.08E-05	1.20E-04
14	11	81	80	33084.24	1	5409.77	1.8485	0.0303	0.0	0.0	4.14E-08	3.39E-06	5.90E-05	4.27E-04
11	8	50	51	21092.69	1	5409.99	1.8484	0.0303	0.0	1.63E-07	1.70E-05	2.47E-04	1.36E-03	4.33E-03
9	6	66	67	20616.86	1	5410.10	1.8484	0.0303	0.0	1.42E-07	1.33E-05	1.81E-04	9.50E-04	2.93E-03
13	10	30	31	21976.67	1	5410.78	1.8482	0.0335	0.0	9.02E-08	1.16E-05	1.93E-04	1.16E-03	3.90E-03
8	5	73	74	20447.11	1	5411.46	1.8479	0.0303	0.0	1.14E-07	1.02E-05	1.35E-04	7.00E-04	2.13E-03
14	11	17	18	22721.46	1	5411.73	1.8478	0.0568	0.0	0.0	5.84E-06	1.08E-04	6.93E-04	2.46E-03
15	12	63	62	30582.61	1	5411.73	1.8478	0.0303	0.0	0.0	2.01E-07	1.15E-05	1.57E-04	9.56E-04
6	3	86	87	20306.23	1	5411.81	1.8478	0.0303	0.0	4.60E-08	3.98E-06	5.18E-05	2.64E-04	7.97E-04
6	3	78	79	17293.62	2	5411.97	1.8478	0.0303	0.0	0.0	3.44E-07	2.90E-06	1.11E-05	2.71E-05
5	2	92	93	20289.75	1	5412.16	1.8477	0.0303	0.0	0.0	1.99E-06	2.58E-05	1.32E-04	3.97E-04
12	9	104	103	36543.60	1	5412.73	1.8475	0.0303	0.0	0.0	0.0	4.62E-07	1.12E-05	1.03E-04
7	4	71	72	17393.93	2	5412.98	1.8474	0.0303	0.0	0.0	5.57E-07	4.76E-06	1.84E-05	4.53E-05
10	7	58	59	20744.37	1	5413.31	1.8473	0.0303	0.0	1.81E-07	1.73E-05	2.40E-04	1.28E-03	3.98E-03
13	10	93	92	34751.86	1	5415.14	1.8467	0.0303	0.0	0.0	0.0	1.32E-06	2.69E-05	2.18E-04
15	12	62	61	30376.09	1	5415.18	1.8467	0.0303	0.0	0.0	2.26E-07	1.25E-05	1.68E-04	1.01E-03
14	11	80	79	32820.01	1	5415.26	1.8466	0.0303	0.0	0.0	4.90E-08	3.86E-06	6.55E-05	4.65E-04
11	8	113	112	37982.73	1	5415.49	1.8466	0.0303	0.0	0.0	0.0	1.80E-07	5.00E-06	5.06E-05
12	9	40	41	21363.06	1	5415.58	1.8465	0.0303	0.0	1.50E-07	1.67E-05	2.53E-04	1.43E-03	4.63E-03
15	12	1	0	23986.09	1	5416.23	1.8463	0.0603	0.0	0.0	1.96E-07	4.32E-06	3.14E-05	1.22E-04
3	0	103	104	20258.50	1	5416.27	1.8463	0.0303	0.0	0.0	1.97E-07	2.55E-06	1.30E-05	3.90E-05
14	11	16	17	22659.31	1	5416.95	1.8461	0.0585	0.0	0.0	5.81E-06	1.06E-04	6.80E-04	2.41E-03
13	10	29	30	21869.04	1	5417.35	1.8459	0.0340	0.0	9.74E-08	1.22E-05	2.00E-04	1.18E-03	3.97E-03
5	2	84	85	17062.69	2	5417.84	1.8458	0.0303	0.0	0.0	2.00E-07	1.63E-06	6.09E-06	1.47E-05
15	12	61	60	30172.71	1	5418.52	1.8455	0.0303	0.0	0.0	2.54E-07	1.37E-05	1.80E-04	1.07E-03
11	8	49	50	20914.12	1	5418.60	1.8455	0.0303	0.0	1.90E-07	1.90E-05	2.71E-04	1.46E-03	4.60E-03
8	5	63	64	17436.43	2	5418.88	1.8454	0.0303	0.0	0.0	8.38E-07	7.21E-06	2.79E-05	6.91E-05
15	12	2	1	23989.51	1	5419.44	1.8452	0.0606	0.0	0.0	3.94E-07	8.72E-06	6.34E-05	2.46E-04
7	4	79	80	20160.30	1	5419.53	1.8452	0.0303	0.0	9.34E-08	7.80E-06	9.94E-05	5.01E-04	1.49E-03
9	6	65	66	20380.71	1	5420.32	1.8449	0.0303	0.0	1.77E-07	1.56E-05	2.05E-04	1.05E-03	3.19E-03
4	1	90	91	16952.23	2	5420.37	1.8449	0.0303	0.0	0.0	8.48E-08	6.80E-07	2.51E-06	6.02E-06
14	11	79	78	32558.77	1	5420.63	1.8448	0.0303	0.0	0.0	5.78E-08	4.38E-06	7.25E-05	5.06E-04
12	9	103	102	36206.90	1	5420.86	1.8447	0.0303	0.0	0.0	0.0	5.49E-07	1.29E-05	1.15E-04
15	12	60	59	29972.48	1	5421.74	1.8444	0.0303	0.0	0.0	2.84E-07	1.49E-05	1.92E-04	1.12E-03
13	10	92	91	34449.46	1	5421.99	1.8443	0.0303	0.0	0.0	0.0	1.53E-06	3.03E-05	2.41E-04
14	11	15	16	22600.61	1	5422.07	1.8443	0.0591	0.0	0.0	5.76E-06	1.04E-04	6.64E-04	2.34E-03
4	1	97	98	20045.44	1	5422.35	1.8442	0.0303	0.0	0.0	9.34E-07	1.17E-05	5.83E-05	1.73E-04
8	5	72	73	20185.51	1	5422.38	1.8442	0.0303	0.0	1.45E-07	1.22E-05	1.56E-04	7.87E-04	2.35E-03
15	12	3	2	23996.36	1	5422.55	1.8442	0.0609	0.0	0.0	5.95E-07	1.32E-05	9.59E-05	3.72E-04
10	7	57	58	20537.02	1	5422.73	1.8441	0.0303	0.0	2.18E-07	1.99E-05	2.68E-04	1.40E-03	4.29E-03
6	3	77	78	17022.07	2	5422.77	1.8441	0.0303	0.0	0.0	4.15E-07	3.36E-06	1.25E-05	3.01E-05
7	4	70	71	17147.08	2	5423.14	1.8440	0.0303	0.0	0.0	6.60E-07	5.44E-06	2.05E-05	4.97E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	9	39	40	21220.01	1	5423.17	1.8439	0.0303	0.0	1.69E-07	1.82E-05	2.70E-04	1.50E-03	4.82E-03
13	10	28	29	21764.84	1	5423.82	1.8437	0.0359	0.0	1.05E-07	1.29E-05	2.07E-04	1.21E-03	4.05E-03
6	3	85	86	19997.09	1	5424.01	1.8437	0.0303	0.0	6.16E-08	4.94E-06	6.15E-05	3.05E-04	9.01E-04
11	8	112	111	37618.05	1	5424.67	1.8434	0.0303	0.0	0.0	0.0	2.17E-07	5.84E-06	5.77E-05
15	12	59	58	29775.43	1	5424.85	1.8434	0.0303	0.0	0.0	3.19E-07	1.62E-05	2.06E-04	1.19E-03
5	2	91	92	19958.52	1	5424.94	1.8433	0.0303	0.0	0.0	2.50E-06	3.10E-05	1.53E-04	4.51E-04
15	12	4	3	24006.64	1	5425.56	1.8431	0.0611	0.0	0.0	7.96E-07	1.77E-05	1.29E-04	5.00E-04
14	11	78	77	32300.53	1	5425.88	1.8430	0.0303	0.0	0.0	6.79E-08	4.97E-06	8.02E-05	5.50E-04
14	11	14	15	22545.34	1	5427.08	1.8426	0.0597	0.0	0.0	5.66E-06	1.02E-04	6.44E-04	2.26E-03
11	8	48	49	20738.93	1	5427.12	1.8426	0.0303	0.0	2.22E-07	2.13E-05	2.95E-04	1.57E-03	4.89E-03
15	12	58	57	29581.54	1	5427.85	1.8424	0.0303	0.0	0.0	3.58E-07	1.77E-05	2.20E-04	1.25E-03
8	5	62	63	17217.54	2	5428.29	1.8422	0.0303	0.0	0.0	9.70E-07	8.08E-06	3.07E-05	7.47E-05
15	12	5	4	24020.34	1	5428.46	1.8421	0.0614	0.0	0.0	9.96E-07	2.21E-05	1.61E-04	6.28E-04
13	10	51	90	34149.94	1	5428.73	1.8421	0.0303	0.0	0.0	0.0	1.77E-06	3.40E-05	2.65E-04
12	9	102	101	35872.95	1	5428.88	1.8420	0.0303	0.0	0.0	0.0	6.50E-07	1.48E-05	1.30E-04
5	2	83	84	16769.63	2	5429.20	1.8419	0.0303	0.0	0.0	2.45E-07	1.92E-06	6.97E-06	1.65E-05
10	7	120	119	38898.02	1	5429.59	1.8418	0.0303	0.0	0.0	0.0	9.07E-08	2.76E-06	2.97E-05
3	0	102	103	19886.39	1	5430.12	1.8416	0.0303	0.0	0.0	2.56E-07	3.14E-06	1.54E-05	4.51E-05
13	10	27	28	21664.07	1	5430.16	1.8416	0.0379	0.0	1.13E-07	1.35E-05	2.14E-04	1.24E-03	4.11E-03
9	6	64	65	20147.87	1	5430.45	1.8415	0.0303	0.0	2.19E-07	1.82E-05	2.32E-04	1.16E-03	3.48E-03
12	9	38	39	21080.37	1	5430.67	1.8414	0.0303	0.0	1.89E-07	1.97E-05	2.87E-04	1.58E-03	5.01E-03
15	12	57	56	29390.83	1	5430.73	1.8414	0.0303	0.0	0.0	4.00E-07	1.92E-05	2.35E-04	1.32E-03
14	11	77	76	32045.30	1	5431.02	1.8413	0.0303	0.0	0.0	7.97E-08	5.62E-06	8.85E-05	5.96E-04
7	4	78	79	19876.52	1	5431.04	1.8413	0.0303	0.0	1.22E-07	9.50E-06	1.16E-04	5.70E-04	1.67E-03
15	12	6	5	24037.46	1	5431.26	1.8412	0.0617	0.0	0.0	1.19E-06	2.66E-05	1.94E-04	7.56E-04
14	11	13	14	22493.51	1	5431.99	1.8409	0.0604	0.0	0.0	5.53E-06	9.86E-05	6.21E-04	2.18E-03
10	7	56	57	20333.01	1	5432.05	1.8409	0.0303	0.0	2.63E-07	2.29E-05	2.99E-04	1.53E-03	4.62E-03
4	1	89	90	16637.68	2	5432.28	1.8408	0.0303	0.0	0.0	1.05E-07	8.07E-07	2.90E-06	6.78E-06
7	4	69	70	16903.43	2	5433.20	1.8405	0.0303	0.0	0.0	7.79E-07	6.20E-06	2.28E-05	5.45E-05
8	5	71	72	19927.18	1	5433.20	1.8405	0.0303	0.0	1.84E-07	1.45E-05	1.79E-04	8.83E-04	2.59E-03
6	3	76	77	16753.69	2	5433.49	1.8404	0.0303	0.0	0.0	5.00E-07	3.89E-06	1.41E-05	3.34E-05
15	12	56	55	29203.32	1	5433.50	1.8404	0.0303	0.0	0.0	4.45E-07	2.09E-05	2.50E-04	1.39E-03
11	8	111	110	37256.02	1	5433.73	1.8404	0.0303	0.0	0.0	0.0	2.62E-07	6.81E-06	6.56E-05
15	12	7	6	24058.02	1	5433.95	1.8403	0.0620	0.0	0.0	1.39E-06	3.09E-05	2.27E-04	8.84E-04
13	10	90	89	33853.30	1	5435.35	1.8398	0.0303	0.0	0.0	0.0	2.04E-06	3.82E-05	2.91E-04
11	8	47	48	20567.13	1	5435.54	1.8397	0.0303	0.0	2.59E-07	2.38E-05	3.22E-04	1.69E-03	5.17E-03
4	1	96	97	19695.29	1	5435.62	1.8397	0.0303	0.0	0.0	1.19E-06	1.42E-05	6.85E-05	1.98E-04
14	11	76	75	31793.11	1	5436.04	1.8396	0.0303	0.0	0.0	9.33E-08	6.34E-06	9.75E-05	6.46E-04
6	3	84	85	19691.13	1	5436.11	1.8396	0.0303	0.0	8.21E-08	6.12E-06	7.29E-05	3.51E-04	1.02E-03
15	12	55	54	29019.00	1	5436.15	1.8395	0.0303	0.0	0.0	4.95E-07	2.26E-05	2.66E-04	1.46E-03
13	10	26	27	21566.74	1	5436.45	1.8394	0.0398	0.0	1.20E-07	1.41E-05	2.20E-04	1.27E-03	4.17E-03
15	12	8	7	24081.99	1	5436.53	1.8394	0.0623	0.0	0.0	1.57E-06	3.52E-05	2.59E-04	1.01E-03
12	9	101	100	35541.77	1	5436.77	1.8393	0.0303	0.0	0.0	0.0	7.69E-07	1.69E-05	1.45E-04
14	11	12	13	22445.13	1	5436.80	1.8393	0.0610	0.0	0.0	5.36E-06	9.49E-05	5.95E-04	2.08E-03
8	5	61	62	17001.87	2	5437.62	1.8390	0.0303	0.0	0.0	1.12E-06	9.05E-06	3.36E-05	8.07E-05
5	2	90	91	19630.43	1	5437.63	1.8390	0.0303	0.0	4.27E-08	3.14E-06	3.71E-05	1.78E-04	5.11E-04
12	9	37	38	20944.14	1	5438.07	1.8389	0.0303	0.0	2.11E-07	2.13E-05	3.04E-04	1.65E-03	5.20E-03
15	12	54	53	28637.89	1	5438.70	1.8387	0.0303	0.0	0.0	5.49E-07	2.44E-05	2.82E-04	1.53E-03
15	12	9	8	24109.38	1	5439.01	1.8386	0.0624	0.0	0.0	1.75E-06	3.94E-05	2.90E-04	1.14E-03
10	7	119	118	38511.15	1	5439.59	1.8384	0.0303	0.0	0.0	0.0	1.11E-07	3.26E-06	3.42E-05
5	2	82	83	16479.69	2	5440.47	1.8381	0.0303	0.0	0.0	3.01E-07	2.25E-06	7.96E-06	1.84E-05
9	6	63	64	19918.36	1	5440.48	1.8381	0.0303	0.0	2.69E-07	2.12E-05	2.61E-04	1.29E-03	3.78E-03
14	11	75	74	31543.96	1	5440.94	1.8379	0.0303	0.0	0.0	1.09E-07	7.14E-06	1.07E-04	6.98E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	53	52	28659.99	1	5441.13	1.8379	0.0303	0.0	0.0	6.06E-07	2.63E-05	2.99E-04	1.60E-03
10	7	55	56	20132.36	1	5441.28	1.8378	0.0303	0.0	3.15E-07	2.62E-05	3.32E-04	1.67E-03	4.97E-03
15	12	10	9	24140.20	1	5441.38	1.8378	0.0624	0.0	0.0	1.92E-06	4.35E-05	3.21E-04	1.26E-03
14	11	11	12	22400.19	1	5441.50	1.8377	0.0617	0.0	0.0	5.15E-06	9.07E-05	5.66E-04	1.97E-03
13	10	89	88	33559.57	1	5441.86	1.8376	0.0303	0.0	0.0	0.0	2.36E-06	4.31E-05	3.22E-04
7	4	77	78	19595.97	1	5442.46	1.8374	0.0303	0.0	1.58E-07	1.15E-05	1.36E-04	6.47E-04	1.86E-03
13	10	25	26	21472.84	1	5442.61	1.8374	0.0418	0.0	1.28E-07	1.47E-05	2.26E-04	1.29E-03	4.21E-03
11	8	110	109	36896.64	1	5442.67	1.8373	0.0303	0.0	0.0	0.0	3.16E-07	7.93E-06	7.45E-05
7	4	68	69	16662.99	2	5443.18	1.8372	0.0303	0.0	0.0	9.17E-07	7.05E-06	2.54E-05	5.96E-05
15	12	52	51	28485.31	1	5443.45	1.8371	0.0303	0.0	0.0	6.68E-07	2.82E-05	3.16E-04	1.67E-03
15	12	11	10	24174.43	1	5443.65	1.8370	0.0625	0.0	0.0	2.08E-06	4.73E-05	3.51E-04	1.38E-03
11	8	46	47	20398.72	1	5443.86	1.8369	0.0303	0.0	3.00E-07	2.65E-05	3.50E-04	1.80E-03	5.47E-03
3	0	101	102	19517.34	1	5443.88	1.8369	0.0303	0.0	0.0	3.32E-07	3.86E-06	1.83E-05	5.22E-05
8	5	70	71	19672.14	1	5443.93	1.8369	0.0303	0.0	2.33E-07	1.73E-05	2.06E-04	9.89E-04	2.86E-03
4	1	88	89	16326.21	2	5444.10	1.8369	0.0303	0.0	0.0	1.31E-07	9.61E-07	3.35E-06	7.68E-06
6	3	75	76	16488.47	2	5444.12	1.8368	0.0303	0.0	0.0	6.00E-07	4.50E-06	1.59E-05	3.69E-05
12	9	100	99	35213.38	1	5444.54	1.8367	0.0303	0.0	0.0	0.0	9.08E-07	1.94E-05	1.62E-04
12	9	36	37	20811.34	1	5445.37	1.8364	0.0308	0.0	2.35E-07	2.30E-05	3.22E-04	1.72E-03	5.38E-03
15	12	51	50	28313.87	1	5445.66	1.8363	0.0303	0.0	0.0	7.34E-07	3.03E-05	3.33E-04	1.74E-03
14	11	74	73	31297.86	1	5445.73	1.8363	0.0303	0.0	0.0	1.27E-07	8.03E-06	1.18E-04	7.54E-04
15	12	12	11	24212.08	1	5445.81	1.8363	0.0617	0.0	0.0	2.23E-06	5.10E-05	3.79E-04	1.49E-03
14	11	10	11	22358.71	1	5446.10	1.8362	0.0625	0.0	0.0	4.90E-06	8.58E-05	5.34E-04	1.85E-03
8	5	60	61	16789.46	2	5446.85	1.8359	0.0303	0.0	0.0	1.29E-06	1.01E-05	3.68E-05	8.71E-05
15	12	50	49	28145.66	1	5447.75	1.8356	0.0303	0.0	0.0	8.05E-07	3.24E-05	3.51E-04	1.81E-03
15	12	13	12	24253.14	1	5447.87	1.8356	0.0610	0.0	0.0	2.37E-06	5.45E-05	4.07E-04	1.61E-03
6	3	83	84	19388.37	1	5448.13	1.8355	0.0303	0.0	1.09E-07	7.56E-06	8.63E-05	4.04E-04	1.14E-03
13	10	88	87	33268.76	1	5448.24	1.8355	0.0303	0.0	0.0	0.0	2.74E-06	4.85E-05	3.56E-04
13	10	24	25	21382.39	1	5448.68	1.8353	0.0437	0.0	1.36E-07	1.52E-05	2.31E-04	1.31E-03	4.24E-03
4	1	95	96	19348.24	1	5448.81	1.8353	0.0303	0.0	0.0	1.52E-06	1.72E-05	8.02E-05	2.27E-04
10	7	118	117	38126.84	1	5449.46	1.8350	0.0303	0.0	0.0	0.0	1.36E-07	3.85E-06	3.93E-05
15	12	49	48	27980.70	1	5449.74	1.8350	0.0303	0.0	0.0	8.79E-07	3.45E-05	3.69E-04	1.88E-03
15	12	14	13	24297.62	1	5449.81	1.8349	0.0604	0.0	0.0	2.50E-06	5.78E-05	4.33E-04	1.72E-03
5	2	89	90	19305.50	1	5450.23	1.8348	0.0303	0.0	5.78E-08	3.93E-06	4.43E-05	2.06E-04	5.79E-04
14	11	73	72	31054.82	1	5450.41	1.8347	0.0303	0.0	0.0	1.47E-07	9.00E-06	1.29E-04	8.12E-04
10	7	54	55	19935.07	1	5450.42	1.8347	0.0303	0.0	3.77E-07	2.98E-05	3.68E-04	1.82E-03	5.34E-03
9	6	62	63	19692.16	1	5450.42	1.8347	0.0303	0.0	3.31E-07	2.47E-05	2.94E-04	1.42E-03	4.10E-03
14	11	9	10	22320.67	1	5450.60	1.8347	0.0624	0.0	0.0	4.62E-06	8.04E-05	4.98E-04	1.72E-03
11	8	109	108	36539.95	1	5451.49	1.8344	0.0303	0.0	0.0	0.0	3.80E-07	9.22E-06	8.46E-05
15	12	48	47	27818.98	1	5451.61	1.8343	0.0303	0.0	0.0	9.58E-07	3.68E-05	3.86E-04	1.95E-03
5	2	81	82	16192.90	2	5451.65	1.8343	0.0303	0.0	0.0	3.67E-07	2.64E-06	9.08E-06	2.06E-05
15	12	15	14	24345.52	1	5451.65	1.8343	0.0597	0.0	0.0	2.61E-06	6.08E-05	4.58E-04	1.82E-03
11	8	45	46	20233.70	1	5452.06	1.8342	0.0303	0.0	3.46E-07	2.94E-05	3.79E-04	1.92E-03	5.77E-03
12	9	59	58	34867.79	1	5452.19	1.8341	0.0303	0.0	0.0	0.0	1.07E-06	2.21E-05	1.81E-04
12	9	35	36	20681.96	1	5452.57	1.8340	0.0312	0.0	2.61E-07	2.47E-05	3.39E-04	1.80E-03	5.56E-03
7	4	67	68	16425.77	2	5453.07	1.8338	0.0303	0.0	0.0	1.08E-06	8.01E-06	2.82E-05	6.50E-05
15	12	47	46	27660.53	1	5453.37	1.8337	0.0303	0.0	0.0	1.04E-06	3.91E-05	4.04E-04	2.02E-03
15	12	16	15	24396.82	1	5453.39	1.8337	0.0591	0.0	0.0	2.71E-06	6.36E-05	4.81E-04	1.92E-03
7	4	76	77	19318.68	1	5453.79	1.8336	0.0303	0.0	2.05E-07	1.40E-05	1.58E-04	7.34E-04	2.07E-03
13	10	87	86	32980.87	1	5454.51	1.8333	0.0303	0.0	0.0	0.0	3.17E-06	5.46E-05	3.92E-04
8	5	69	70	19420.38	1	5454.57	1.8333	0.0303	0.0	2.94E-07	2.06E-05	2.36E-04	1.11E-03	3.14E-03
13	10	23	24	21295.39	1	5454.64	1.8333	0.0457	0.0	1.43E-07	1.56E-05	2.35E-04	1.32E-03	4.26E-03
6	3	74	75	16226.44	2	5454.66	1.8333	0.0303	0.0	0.0	7.19E-07	5.19E-06	1.79E-05	4.08E-05
14	11	72	71	30814.84	1	5454.97	1.8332	0.0303	0.0	0.0	1.71E-07	1.01E-05	1.41E-04	8.74E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	11	8	9	22286.09	1	5455.00	1.8332	0.0624	0.0	0.0	4.29E-06	7.43E-05	4.59E-04	1.59E-03
15	12	46	45	27505.34	1	5455.02	1.8332	0.0303	0.0	0.0	1.13E-06	4.14E-05	4.22E-04	2.08E-03
15	12	17	16	24451.53	1	5455.02	1.8332	0.0585	0.0	0.0	2.79E-06	6.60E-05	5.02E-04	2.01E-03
4	1	87	88	16017.84	2	5455.84	1.8329	0.0303	0.0	0.0	1.63E-07	1.14E-06	3.86E-06	8.68E-06
8	5	59	60	16580.31	2	5455.99	1.8328	0.0303	0.0	4.20E-08	1.48E-06	1.13E-05	4.02E-05	9.38E-05
15	12	18	17	24509.65	1	5456.54	1.8327	0.0568	0.0	0.0	2.86E-06	6.83E-05	5.22E-04	2.10E-03
15	12	45	44	27353.43	1	5456.56	1.8327	0.0303	0.0	0.0	1.22E-06	4.37E-05	4.39E-04	2.15E-03
3	0	100	101	19191.35	1	5457.55	1.8323	0.0303	0.0	0.0	4.28E-07	4.72E-06	2.16E-05	6.02E-05
15	12	19	18	24571.17	1	5457.95	1.8322	0.0552	0.0	0.0	2.92E-06	7.02E-05	5.40E-04	2.18E-03
15	12	44	43	27204.80	1	5457.98	1.8322	0.0303	0.0	0.0	1.31E-06	4.61E-05	4.56E-04	2.21E-03
10	7	117	116	37745.10	1	5459.22	1.8318	0.0303	0.0	0.0	0.0	1.67E-07	4.54E-06	4.52E-05
15	12	20	19	24636.09	1	5459.25	1.8318	0.0535	0.0	0.0	2.96E-06	7.18E-05	5.56E-04	2.26E-03
14	11	7	8	22254.96	1	5459.29	1.8317	0.0623	0.0	0.0	3.93E-06	6.78E-05	4.18E-04	1.44E-03
15	12	43	42	27059.45	1	5459.30	1.8317	0.0303	0.0	0.0	1.41E-06	4.84E-05	4.73E-04	2.27E-03
14	11	71	70	30577.96	1	5459.41	1.8317	0.0303	0.0	0.0	1.97E-07	1.13E-05	1.54E-04	9.39E-04
10	7	53	54	19741.15	1	5459.45	1.8317	0.0303	0.0	4.49E-07	3.39E-05	4.07E-04	1.97E-03	5.72E-03
12	9	34	35	20556.01	1	5459.67	1.8316	0.0317	0.0	2.88E-07	2.64E-05	3.57E-04	1.87E-03	5.73E-03
12	9	98	97	34565.00	1	5459.73	1.8316	0.0303	0.0	0.0	0.0	1.26E-06	2.52E-05	2.02E-04
6	3	82	83	19088.83	1	5460.05	1.8315	0.0303	0.0	1.44E-07	9.32E-06	1.02E-04	4.63E-04	1.29E-03
11	8	108	107	36185.95	1	5460.18	1.8314	0.0303	0.0	0.0	0.0	4.57E-07	1.07E-05	9.58E-05
11	8	44	45	20072.09	1	5460.21	1.8314	0.0303	0.0	3.98E-07	3.25E-05	4.10E-04	2.05E-03	6.08E-03
9	6	61	62	19469.31	1	5460.26	1.8314	0.0303	0.0	4.05E-07	2.86E-05	3.31E-04	1.56E-03	4.44E-03
15	12	21	20	24704.41	1	5460.45	1.8314	0.0515	0.0	0.0	2.98E-06	7.31E-05	5.70E-04	2.32E-03
15	12	42	41	26917.39	1	5460.50	1.8313	0.0303	0.0	0.0	1.51E-06	5.08E-05	4.89E-04	2.32E-03
13	10	22	23	21211.84	1	5460.50	1.8313	0.0476	0.0	1.50E-07	1.61E-05	2.38E-04	1.33E-03	4.27E-03
13	10	86	85	32695.94	1	5460.67	1.8313	0.0303	0.0	0.0	4.72E-08	3.65E-06	6.12E-05	4.32E-04
15	12	22	21	24776.12	1	5461.54	1.8310	0.0496	0.0	0.0	2.99E-06	7.42E-05	5.82E-04	2.38E-03
15	12	41	40	26778.63	1	5461.60	1.8310	0.0303	0.0	0.0	1.61E-06	5.31E-05	5.05E-04	2.37E-03
4	1	94	95	19004.32	1	5461.90	1.8309	0.0303	0.0	0.0	1.93E-06	2.08E-05	9.38E-05	2.59E-04
15	12	23	22	24851.22	1	5462.52	1.8307	0.0476	0.0	0.0	2.99E-06	7.49E-05	5.92E-04	2.44E-03
15	12	40	39	26643.18	1	5462.58	1.8306	0.0303	0.0	0.0	1.71E-06	5.54E-05	5.20E-04	2.42E-03
5	2	88	89	18983.73	1	5462.74	1.8306	0.0303	0.0	7.82E-08	4.93E-06	5.30E-05	2.39E-04	6.58E-04
5	2	80	81	15909.25	2	5462.75	1.8306	0.0303	0.0	0.0	4.47E-07	3.09E-06	1.03E-05	2.30E-05
7	4	66	67	16191.77	2	5462.87	1.8305	0.0303	0.0	0.0	1.26E-06	9.07E-06	3.12E-05	7.09E-05
15	12	24	23	24929.71	1	5463.40	1.8304	0.0457	0.0	0.0	2.97E-06	7.53E-05	6.00E-04	2.48E-03
15	12	39	38	26511.04	1	5463.46	1.8303	0.0303	0.0	0.0	1.81E-06	5.77E-05	5.34E-04	2.47E-03
14	11	6	7	22227.29	1	5463.48	1.8303	0.0620	0.0	0.0	3.54E-06	6.07E-05	3.73E-04	1.28E-03
14	11	70	69	30344.16	1	5463.74	1.8302	0.0303	0.0	0.0	2.27E-07	1.25E-05	1.68E-04	1.01E-03
15	12	25	24	25011.59	1	5464.16	1.8301	0.0437	0.0	0.0	2.95E-06	7.55E-05	6.06E-04	2.52E-03
15	12	38	37	26382.21	1	5464.22	1.8301	0.0303	0.0	0.0	1.92E-06	5.98E-05	5.48E-04	2.50E-03
15	12	26	25	25096.85	1	5464.82	1.8299	0.0418	0.0	0.0	2.91E-06	7.54E-05	6.10E-04	2.55E-03
15	12	37	36	26256.71	1	5464.87	1.8299	0.0308	0.0	0.0	2.02E-06	6.19E-05	5.60E-04	2.54E-03
7	4	75	76	19044.64	1	5465.03	1.8298	0.0303	0.0	2.64E-07	1.69E-05	1.83E-04	8.30E-04	2.30E-03
8	5	58	59	16374.42	2	5465.04	1.8298	0.0303	0.0	5.07E-08	1.70E-06	1.26E-05	4.40E-05	1.01E-04
6	3	73	74	15967.60	2	5465.11	1.8298	0.0303	0.0	0.0	8.59E-07	5.98E-06	2.01E-05	4.51E-05
8	5	68	69	19171.93	1	5465.11	1.8298	0.0303	0.0	3.69E-07	2.43E-05	2.69E-04	1.23E-03	3.44E-03
15	12	27	26	25165.49	1	5465.37	1.8297	0.0398	0.0	0.0	2.85E-06	7.50E-05	6.12E-04	2.58E-03
15	12	36	35	26134.53	1	5465.41	1.8297	0.0312	0.0	0.0	2.12E-06	6.39E-05	5.71E-04	2.57E-03
15	12	28	27	25277.50	1	5465.81	1.8296	0.0379	0.0	0.0	2.79E-06	7.44E-05	6.12E-04	2.60E-03
15	12	35	34	26015.68	1	5465.85	1.8295	0.0317	0.0	0.0	2.22E-06	6.57E-05	5.81E-04	2.59E-03
15	12	29	28	25372.88	1	5466.14	1.8294	0.0359	0.0	0.0	2.72E-06	7.35E-05	6.11E-04	2.61E-03
15	12	34	33	25900.18	1	5466.17	1.8294	0.0321	0.0	0.0	2.31E-06	6.74E-05	5.89E-04	2.61E-03
13	10	21	22	21131.74	1	5466.26	1.8294	0.0496	0.0	1.56E-07	1.64E-05	2.41E-04	1.33E-03	4.26E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
15	12	30	29	25471.62	1	5466.37	1.8294	0.0340	0.0	0.0	2.64E-06	7.24E-05	6.08E-04	2.61E-03
15	12	33	32	25788.01	1	5466.38	1.8294	0.0326	0.0	0.0	2.41E-06	6.89E-05	5.96E-04	2.62E-03
15	12	31	30	25573.73	1	5466.48	1.8293	0.0335	0.0	0.0	2.57E-06	7.15E-05	6.05E-04	2.62E-03
15	12	32	31	25679.20	1	5466.49	1.8293	0.0331	0.0	0.0	2.49E-06	7.03E-05	6.02E-04	2.62E-03
12	9	33	34	20433.50	1	5466.68	1.8293	0.0321	0.0	3.16E-07	2.82E-05	3.74E-04	1.94E-03	5.89E-03
13	10	85	84	32413.95	1	5466.70	1.8293	0.0303	0.0	0.0	5.65E-08	4.20E-06	6.86E-05	4.75E-04
12	9	97	96	34245.04	1	5467.14	1.8291	0.0303	0.0	0.0	0.0	1.47E-06	2.87E-05	2.25E-04
4	1	86	87	15712.59	2	5467.49	1.8290	0.0303	0.0	0.0	2.02E-07	1.35E-06	4.45E-06	9.79E-06
14	11	5	6	22203.07	1	5467.56	1.8290	0.0617	0.0	0.0	3.11E-06	5.32E-05	3.26E-04	1.12E-03
14	11	69	68	30113.47	1	5467.96	1.8288	0.0303	0.0	0.0	2.61E-07	1.39E-05	1.83E-04	1.08E-03
11	8	43	44	19913.90	1	5468.23	1.8287	0.0303	0.0	4.56E-07	3.59E-05	4.42E-04	2.17E-03	6.38E-03
10	7	52	53	19550.62	1	5468.39	1.8287	0.0303	0.0	5.33E-07	3.85E-05	4.50E-04	2.14E-03	6.12E-03
11	8	107	106	35834.66	1	5468.76	1.8286	0.0303	0.0	0.0	0.0	5.47E-07	1.24E-05	1.08E-04
10	7	116	115	37365.96	1	5468.85	1.8285	0.0303	0.0	0.0	0.0	2.03E-07	5.34E-06	5.18E-05
9	6	60	61	19249.80	1	5470.00	1.8282	0.0303	0.0	4.94E-07	3.31E-05	3.71E-04	1.71E-03	4.81E-03
3	0	99	100	18788.44	1	5471.13	1.8278	0.0303	0.0	0.0	5.52E-07	5.78E-06	2.55E-05	6.94E-05
14	11	4	5	22182.32	1	5471.55	1.8276	0.0614	0.0	0.0	2.65E-06	4.52E-05	2.77E-04	9.49E-04
6	3	81	82	18792.51	1	5471.88	1.8275	0.0303	0.0	1.91E-07	1.15E-05	1.20E-04	5.31E-04	1.44E-03
13	10	20	21	21055.10	1	5471.92	1.8275	0.0515	0.0	1.62E-07	1.67E-05	2.43E-04	1.33E-03	4.23E-03
14	11	68	67	25885.90	1	5472.06	1.8275	0.0303	0.0	0.0	2.99E-07	1.55E-05	1.98E-04	1.15E-03
7	4	65	66	15961.02	2	5472.58	1.8273	0.0303	0.0	4.85E-08	1.47E-06	1.03E-05	3.45E-05	7.72E-05
13	10	84	83	32134.93	1	5472.62	1.8273	0.0303	0.0	0.0	6.76E-08	4.83E-06	7.68E-05	5.21E-04
12	9	32	33	20314.43	1	5473.58	1.8270	0.0326	0.0	3.46E-07	3.00E-05	3.91E-04	2.00E-03	6.04E-03
5	2	79	80	15628.77	2	5473.76	1.8269	0.0303	0.0	0.0	5.44E-07	3.61E-06	1.17E-05	2.57E-05
8	5	57	58	16171.80	2	5474.00	1.8268	0.0303	0.0	6.10E-08	1.95E-06	1.40E-05	4.81E-05	1.09E-04
12	9	96	95	33527.93	1	5474.44	1.8267	0.0303	0.0	0.0	0.0	1.73E-06	3.26E-05	2.50E-04
4	1	93	94	18663.53	1	5474.90	1.8265	0.0303	0.0	4.18E-08	2.44E-06	2.51E-05	1.10E-04	2.95E-04
5	2	87	88	18665.15	1	5475.16	1.8264	0.0303	0.0	1.06E-07	6.16E-06	6.34E-05	2.77E-04	7.46E-04
14	11	3	4	22165.02	1	5475.42	1.8263	0.0611	0.0	0.0	2.16E-06	3.68E-05	2.25E-04	7.70E-04
6	3	72	73	15711.97	2	5475.48	1.8263	0.0303	0.0	0.0	1.02E-06	6.87E-06	2.26E-05	4.96E-05
8	5	67	68	18926.79	1	5475.56	1.8263	0.0303	0.0	4.63E-07	2.87E-05	3.07E-04	1.37E-03	3.77E-03
14	11	67	66	29661.45	1	5476.04	1.8261	0.0303	0.0	0.0	3.42E-07	1.71E-05	2.15E-04	1.23E-03
11	8	42	43	19759.12	1	5476.16	1.8261	0.0303	0.0	5.20E-07	3.95E-05	4.75E-04	2.30E-03	6.70E-03
7	4	74	75	18773.88	1	5476.17	1.8261	0.0303	0.0	3.40E-07	2.03E-05	2.13E-04	9.38E-04	2.55E-03
11	8	106	105	35486.10	1	5477.22	1.8257	0.0303	0.0	0.0	0.0	6.55E-07	1.43E-05	1.22E-04
10	7	51	52	19363.47	1	5477.24	1.8257	0.0303	0.0	6.31E-07	4.35E-05	4.95E-04	2.31E-03	6.54E-03
13	10	19	20	20981.92	1	5477.48	1.8257	0.0535	0.0	1.67E-07	1.69E-05	2.43E-04	1.33E-03	4.19E-03
10	7	115	114	36989.44	1	5478.36	1.8254	0.0303	0.0	0.0	0.0	2.48E-07	6.28E-06	5.94E-05
13	10	83	82	31858.89	1	5478.42	1.8253	0.0303	0.0	0.0	8.07E-08	5.54E-06	8.57E-05	5.71E-04
4	1	85	86	15410.46	2	5479.06	1.8251	0.0303	0.0	0.0	2.49E-07	1.60E-06	5.12E-06	1.10E-05
14	11	2	3	22151.18	1	5479.20	1.8251	0.0609	0.0	0.0	1.65E-06	2.80E-05	1.71E-04	5.86E-04
9	6	59	60	19033.64	1	5479.65	1.8249	0.0303	0.0	6.00E-07	3.82E-05	4.15E-04	1.88E-03	5.19E-03
14	11	66	65	29440.12	1	5479.92	1.8248	0.0303	0.0	0.0	3.90E-07	1.89E-05	2.32E-04	1.31E-03
12	9	31	32	20198.81	1	5480.38	1.8247	0.0331	0.0	3.78E-07	3.18E-05	4.08E-04	2.06E-03	6.18E-03
12	9	95	94	33613.67	1	5481.62	1.8243	0.0303	0.0	0.0	0.0	2.02E-06	3.69E-05	2.77E-04
7	4	64	65	15733.51	2	5482.21	1.8241	0.0303	0.0	5.96E-08	1.72E-06	1.16E-05	3.81E-05	8.39E-05
14	11	1	2	22140.79	1	5482.87	1.8239	0.0606	0.0	0.0	1.12E-06	1.89E-05	1.15E-04	3.95E-04
8	5	56	57	15972.47	2	5482.88	1.8239	0.0303	0.0	7.32E-08	2.23E-06	1.56E-05	5.24E-05	1.17E-04
13	10	18	19	20912.20	1	5482.94	1.8238	0.0552	0.0	1.71E-07	1.71E-05	2.43E-04	1.31E-03	4.13E-03
6	3	80	81	18499.43	1	5483.62	1.8236	0.0303	0.0	2.51E-07	1.41E-05	1.41E-04	6.07E-04	1.62E-03
14	11	65	64	29221.95	1	5483.67	1.8236	0.0303	0.0	0.0	4.44E-07	2.08E-05	2.51E-04	1.39E-03
11	8	41	42	19607.77	1	5483.99	1.8235	0.0303	0.0	5.92E-07	4.33E-05	5.10E-04	2.44E-03	7.01E-03
13	10	82	81	31565.85	1	5484.11	1.8235	0.0303	0.0	0.0	9.60E-08	6.34E-06	9.56E-05	6.25E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	98	99	18428.62	1	5484.62	1.8233	0.0303	0.0	0.0	7.09E-07	7.05E-06	3.01E-05	7.99E-05
5	2	78	79	15351.45	2	5484.69	1.8233	0.0303	0.0	0.0	6.59E-07	4.20E-06	1.33E-05	2.86E-05
11	8	105	104	35140.28	1	5485.56	1.8230	0.0303	0.0	0.0	0.0	7.82E-07	1.66E-05	1.38E-04
6	3	71	72	15459.54	2	5485.75	1.8229	0.0303	0.0	4.51E-08	1.22E-06	7.88E-06	2.53E-05	5.46E-05
8	5	66	67	18684.96	1	5485.91	1.8229	0.0303	0.0	5.77E-07	3.39E-05	3.49E-04	1.53E-03	4.13E-03
10	7	50	51	19179.72	1	5485.98	1.8228	0.0303	0.0	7.43E-07	4.91E-05	5.44E-04	2.49E-03	6.97E-03
14	11	0	1	22133.87	1	5486.43	1.8227	0.0603	0.0	0.0	5.65E-07	9.58E-06	5.83E-05	1.99E-04
12	9	30	31	20086.64	1	5487.08	1.8225	0.0335	0.0	4.10E-07	3.36E-05	4.24E-04	2.12E-03	6.31E-03
7	4	73	74	18506.41	1	5487.22	1.8224	0.0303	0.0	4.35E-07	2.45E-05	2.46E-04	1.06E-03	2.82E-03
14	11	64	63	29006.93	1	5487.32	1.8224	0.0303	0.0	0.0	5.03E-07	2.29E-05	2.70E-04	1.48E-03
5	2	86	87	18349.76	1	5487.49	1.8223	0.0303	0.0	1.42E-07	7.69E-06	7.56E-05	3.20E-04	8.45E-04
10	7	114	113	36615.54	1	5487.75	1.8222	0.0303	0.0	0.0	0.0	3.02E-07	7.37E-06	6.80E-05
4	1	92	93	18325.89	1	5487.81	1.8222	0.0303	0.0	5.73E-08	3.08E-06	3.02E-05	1.28E-04	3.36E-04
13	10	17	18	20845.96	1	5488.29	1.8221	0.0568	0.0	1.74E-07	1.71E-05	2.41E-04	1.30E-03	4.06E-03
12	9	54	53	33302.29	1	5488.68	1.8219	0.0303	0.0	0.0	0.0	2.35E-06	4.18E-05	3.07E-04
9	6	58	59	18820.86	1	5489.21	1.8218	0.0303	0.0	7.29E-07	4.42E-05	4.65E-04	2.06E-03	5.62E-03
13	10	81	80	31315.80	1	5489.67	1.8216	0.0303	0.0	0.0	1.14E-07	7.24E-06	1.06E-04	6.83E-04
4	1	84	85	15111.48	2	5490.54	1.8213	0.0303	0.0	0.0	3.08E-07	1.89E-06	5.88E-06	1.24E-05
14	11	63	62	28795.07	1	5490.85	1.8212	0.0303	0.0	0.0	5.69E-07	2.51E-05	2.90E-04	1.57E-03
9	6	122	121	37951.65	1	5491.24	1.8211	0.0303	0.0	0.0	0.0	1.08E-07	3.01E-06	3.04E-05
8	5	55	56	15776.43	2	5491.66	1.8209	0.0303	0.0	8.75E-08	2.55E-06	1.73E-05	5.70E-05	1.26E-04
11	8	40	41	19459.85	1	5491.72	1.8209	0.0303	0.0	6.70E-07	4.73E-05	5.46E-04	2.57E-03	7.32E-03
7	4	63	64	15509.25	2	5491.74	1.8209	0.0303	0.0	7.32E-08	2.00E-06	1.30E-05	4.20E-05	9.11E-05
14	11	1	0	22130.41	1	5493.25	1.8204	0.0603	0.0	0.0	5.77E-07	9.78E-06	5.95E-05	2.04E-04
13	10	16	17	20783.18	1	5493.55	1.8203	0.0585	0.0	1.76E-07	1.70E-05	2.38E-04	1.27E-03	3.97E-03
12	9	29	30	19977.94	1	5493.69	1.8203	0.0340	0.0	4.43E-07	3.54E-05	4.40E-04	2.18E-03	6.43E-03
11	8	104	103	34797.22	1	5493.77	1.8202	0.0303	0.0	0.0	0.0	9.31E-07	1.91E-05	1.56E-04
14	11	62	61	28586.38	1	5494.26	1.8201	0.0303	0.0	0.0	6.42E-07	2.75E-05	3.11E-04	1.66E-03
10	7	49	50	18999.38	1	5494.63	1.8200	0.0303	0.0	8.73E-07	5.52E-05	5.96E-04	2.69E-03	7.41E-03
13	10	80	79	31048.78	1	5495.13	1.8198	0.0303	0.0	0.0	1.35E-07	8.25E-06	1.18E-04	7.45E-04
6	3	79	80	18209.59	1	5495.26	1.8198	0.0303	0.0	3.29E-07	1.72E-05	1.66E-04	6.93E-04	1.81E-03
5	2	77	78	15077.32	2	5495.53	1.8197	0.0303	0.0	0.0	7.97E-07	4.88E-06	1.51E-05	3.18E-05
12	9	93	92	32993.78	1	5495.63	1.8196	0.0303	0.0	0.0	0.0	2.74E-06	4.72E-05	3.40E-04
6	3	70	71	15210.34	2	5495.94	1.8195	0.0303	0.0	5.68E-08	1.44E-06	9.01E-06	2.82E-05	6.00E-05
8	5	65	66	18446.48	1	5496.17	1.8194	0.0303	0.0	7.18E-07	3.98E-05	3.97E-04	1.70E-03	4.51E-03
14	11	2	1	22133.87	1	5496.50	1.8193	0.0606	0.0	0.0	1.16E-06	1.97E-05	1.20E-04	4.11E-04
10	7	113	112	36244.30	1	5497.02	1.8192	0.0303	0.0	0.0	0.0	3.66E-07	8.63E-06	7.77E-05
14	11	61	60	28360.87	1	5497.57	1.8190	0.0303	0.0	0.0	7.22E-07	3.00E-05	3.33E-04	1.75E-03
3	0	97	98	18071.92	1	5498.02	1.8188	0.0303	0.0	0.0	9.10E-07	8.59E-06	3.55E-05	9.18E-05
7	4	72	73	18242.22	1	5498.17	1.8188	0.0303	0.0	5.56E-07	2.93E-05	2.84E-04	1.19E-03	3.12E-03
9	6	57	58	18611.44	1	5498.67	1.8186	0.0303	0.0	8.84E-07	5.09E-05	5.20E-04	2.26E-03	6.07E-03
13	10	15	16	20723.88	1	5498.70	1.8186	0.0591	0.0	1.77E-07	1.69E-05	2.34E-04	1.24E-03	3.86E-03
11	8	39	40	19315.37	1	5499.36	1.8184	0.0303	0.0	7.56E-07	5.15E-05	5.82E-04	2.71E-03	7.63E-03
14	11	3	2	22140.79	1	5499.65	1.8183	0.0609	0.0	0.0	1.76E-06	2.98E-05	1.82E-04	6.22E-04
5	2	85	86	18037.58	1	5499.72	1.8183	0.0303	0.0	1.91E-07	9.57E-06	9.00E-05	3.70E-04	9.56E-04
12	9	28	29	19872.69	1	5500.19	1.8181	0.0359	0.0	4.78E-07	3.73E-05	4.56E-04	2.24E-03	6.55E-03
8	5	54	55	15583.68	2	5500.35	1.8181	0.0303	0.0	1.04E-07	2.90E-06	1.91E-05	6.20E-05	1.35E-04
13	10	79	78	30784.78	1	5500.46	1.8180	0.0303	0.0	0.0	1.59E-07	9.38E-06	1.31E-04	8.11E-04
4	1	91	92	17991.41	1	5500.63	1.8180	0.0303	0.0	7.83E-08	3.89E-06	3.63E-05	1.49E-04	3.83E-04
14	11	60	59	28178.56	1	5500.76	1.8179	0.0303	0.0	0.0	8.09E-07	3.27E-05	3.56E-04	1.84E-03
7	4	62	63	15288.27	2	5501.19	1.8178	0.0303	0.0	8.94E-08	2.32E-06	1.46E-05	4.62E-05	9.87E-05
9	6	121	120	37555.49	1	5501.45	1.8177	0.0303	0.0	0.0	0.0	1.33E-07	3.55E-06	3.49E-05
11	8	103	102	34456.93	1	5501.87	1.8176	0.0303	0.0	0.0	0.0	1.11E-06	2.20E-05	1.75E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	83	84	14815.63	2	5501.93	1.8175	0.0303	0.0	0.0	3.78E-07	2.23E-06	6.73E-06	1.39E-05
12	9	92	91	32668.18	1	5502.45	1.8174	0.0303	0.0	0.0	4.11E-08	3.18E-06	5.33E-05	3.76E-04
14	11	4	3	22151.18	1	5502.69	1.8173	0.0611	0.0	0.0	2.35E-06	3.99E-05	2.44E-04	8.35E-04
10	7	48	49	18822.44	1	5503.18	1.8171	0.0303	0.0	1.02E-06	6.19E-05	6.51E-04	2.89E-03	7.87E-03
13	10	14	15	20668.05	1	5503.74	1.8169	0.0597	0.0	1.76E-07	1.66E-05	2.28E-04	1.21E-03	3.73E-03
14	11	59	58	27979.44	1	5503.83	1.8169	0.0303	0.0	0.0	9.10E-07	3.58E-05	3.82E-04	1.95E-03
14	11	5	4	22165.02	1	5505.62	1.8163	0.0614	0.0	0.0	2.94E-06	5.01E-05	3.06E-04	1.05E-03
13	10	78	77	30523.82	1	5505.68	1.8163	0.0303	0.0	0.0	1.88E-07	1.07E-05	1.45E-04	8.82E-04
6	3	69	70	14964.37	2	5506.04	1.8162	0.0303	0.0	7.12E-08	1.71E-06	1.03E-05	3.15E-05	6.58E-05
10	7	112	111	35875.71	1	5506.17	1.8161	0.0303	0.0	0.0	0.0	4.44E-07	1.01E-05	8.86E-05
5	2	76	77	14806.39	2	5506.28	1.8161	0.0303	0.0	4.17E-08	9.62E-07	5.67E-06	1.71E-05	3.53E-05
8	5	64	65	18211.34	1	5506.33	1.8161	0.0303	0.0	8.90E-07	4.66E-05	4.49E-04	1.88E-03	4.91E-03
12	9	27	28	19770.91	1	5506.59	1.8160	0.0379	0.0	5.14E-07	3.91E-05	4.72E-04	2.29E-03	6.66E-03
14	11	58	57	27783.53	1	5506.79	1.8159	0.0303	0.0	0.0	1.02E-06	3.90E-05	4.09E-04	2.06E-03
6	3	78	79	17923.02	1	5506.81	1.8159	0.0303	0.0	4.30E-07	2.10E-05	1.94E-04	7.90E-04	2.02E-03
11	8	38	39	19174.33	1	5506.89	1.8159	0.0303	0.0	8.49E-07	5.60E-05	6.20E-04	2.84E-03	7.94E-03
9	6	56	57	18405.41	1	5508.03	1.8155	0.0303	0.0	1.07E-06	5.85E-05	5.80E-04	2.47E-03	6.54E-03
14	11	6	5	22182.32	1	5508.45	1.8154	0.0617	0.0	0.0	3.52E-06	6.01E-05	3.68E-04	1.26E-03
13	10	13	14	20615.70	1	5508.69	1.8153	0.0604	0.0	1.74E-07	1.62E-05	2.21E-04	1.16E-03	3.59E-03
8	5	53	54	15394.23	2	5508.95	1.8152	0.0303	0.0	1.24E-07	3.28E-06	2.11E-05	6.72E-05	1.45E-04
7	4	71	72	17961.34	1	5509.03	1.8152	0.0303	0.0	7.08E-07	3.51E-05	3.27E-04	1.34E-03	3.44E-03
12	9	91	90	32385.48	1	5509.16	1.8152	0.0303	0.0	0.0	4.97E-08	3.68E-06	6.00E-05	4.14E-04
14	11	57	56	27590.84	1	5509.64	1.8150	0.0303	0.0	0.0	1.14E-06	4.25E-05	4.37E-04	2.17E-03
11	8	102	101	34119.43	1	5509.85	1.8149	0.0303	0.0	0.0	0.0	1.32E-06	2.53E-05	1.97E-04
7	4	61	62	15070.55	2	5510.54	1.8147	0.0303	0.0	1.09E-07	2.68E-06	1.64E-05	5.07E-05	1.07E-04
13	10	77	76	30265.92	1	5510.79	1.8146	0.0303	0.0	0.0	2.21E-07	1.21E-05	1.60E-04	9.57E-04
14	11	7	6	22203.07	1	5511.18	1.8145	0.0620	0.0	0.0	4.09E-06	7.00E-05	4.29E-04	1.48E-03
3	0	96	97	17718.34	1	5511.33	1.8144	0.0303	0.0	0.0	1.16E-06	1.05E-05	4.17E-05	1.05E-04
9	6	120	119	37161.89	1	5511.54	1.8144	0.0303	0.0	0.0	0.0	1.62E-07	4.17E-06	3.99E-05
10	7	47	48	18648.93	1	5511.64	1.8143	0.0303	0.0	1.19E-06	6.92E-05	7.10E-04	3.10E-03	8.34E-03
5	2	84	85	17728.62	1	5511.87	1.8143	0.0303	0.0	2.55E-07	1.19E-05	1.07E-04	4.27E-04	1.09E-03
14	11	56	55	27401.37	1	5512.38	1.8141	0.0303	0.0	0.0	1.27E-06	4.61E-05	4.66E-04	2.29E-03
12	9	26	27	19672.59	1	5512.89	1.8139	0.0398	0.0	5.50E-07	4.08E-05	4.86E-04	2.34E-03	6.76E-03
4	1	82	83	14522.95	2	5513.24	1.8138	0.0303	0.0	0.0	4.64E-07	2.63E-06	7.71E-06	1.56E-05
4	1	90	91	17660.10	1	5513.36	1.8138	0.0303	0.0	1.07E-07	4.89E-06	4.35E-05	1.73E-04	4.35E-04
13	10	12	13	20566.83	1	5513.53	1.8137	0.0610	0.0	1.71E-07	1.57E-05	2.13E-04	1.12E-03	3.43E-03
14	11	8	7	22227.29	1	5513.80	1.8136	0.0623	0.0	0.0	4.64E-06	7.97E-05	4.90E-04	1.69E-03
11	8	37	38	19036.74	1	5514.33	1.8135	0.0303	0.0	9.50E-07	6.06E-05	6.58E-04	2.98E-03	8.24E-03
14	11	55	54	27215.13	1	5515.01	1.8132	0.0303	0.0	0.0	1.42E-06	4.99E-05	4.95E-04	2.40E-03
10	7	111	110	35509.81	1	5515.19	1.8132	0.0303	0.0	0.0	0.0	5.37E-07	1.18E-05	1.01E-04
12	9	90	89	32085.71	1	5515.75	1.8130	0.0303	0.0	0.0	6.00E-08	4.26E-06	6.74E-05	4.56E-04
13	10	76	75	30011.07	1	5515.78	1.8130	0.0303	0.0	0.0	2.59E-07	1.36E-05	1.77E-04	1.04E-03
6	3	68	69	14721.64	2	5516.06	1.8129	0.0303	0.0	8.91E-08	2.01E-06	1.17E-05	3.50E-05	7.21E-05
14	11	9	8	22254.96	1	5516.31	1.8128	0.0624	0.0	0.0	5.17E-06	8.92E-05	5.50E-04	1.90E-03
8	5	63	64	17979.55	1	5516.40	1.8128	0.0303	0.0	1.10E-06	5.45E-05	5.08E-04	2.08E-03	5.35E-03
5	2	75	76	14536.66	2	5516.94	1.8126	0.0303	0.0	5.35E-08	1.16E-06	6.56E-06	1.93E-05	3.91E-05
9	6	55	56	18202.77	1	5517.29	1.8125	0.0303	0.0	1.28E-06	6.70E-05	6.45E-04	2.70E-03	7.05E-03
8	5	52	53	15208.11	2	5517.46	1.8124	0.0303	0.0	1.46E-07	3.72E-06	2.32E-05	7.27E-05	1.54E-04
14	11	54	53	27032.14	1	5517.52	1.8124	0.0303	0.0	0.0	1.57E-06	5.40E-05	5.26E-04	2.52E-03
11	8	101	100	33784.73	1	5517.71	1.8123	0.0303	0.0	0.0	0.0	1.56E-06	2.90E-05	2.21E-04
6	3	77	78	17639.71	1	5518.27	1.8122	0.0303	0.0	5.60E-07	2.55E-05	2.27E-04	8.98E-04	2.26E-03
13	10	11	12	20521.44	1	5518.27	1.8122	0.0617	0.0	1.66E-07	1.51E-05	2.03E-04	1.06E-03	3.25E-03
14	11	10	9	22286.09	1	5518.72	1.8120	0.0624	0.0	4.08E-08	5.68E-06	9.84E-05	6.08E-04	2.10E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	9	25	26	19577.75	1	5519.10	1.8119	0.0418	0.0	5.85E-07	4.25E-05	4.99E-04	2.38E-03	6.83E-03
7	4	70	71	17723.78	1	5519.80	1.8117	0.0303	0.0	8.98E-07	4.18E-05	3.76E-04	1.50E-03	3.80E-03
7	4	60	61	14856.11	2	5519.81	1.8117	0.0303	0.0	1.32E-07	3.09E-06	1.83E-05	5.55E-05	1.15E-04
14	11	53	52	26852.39	1	5519.92	1.8116	0.0303	0.0	0.0	1.74E-06	5.82E-05	5.58E-04	2.64E-03
10	7	46	47	18478.84	1	5519.99	1.8116	0.0303	0.0	1.38E-06	7.71E-05	7.72E-04	3.31E-03	8.83E-03
13	10	75	74	29759.31	1	5520.65	1.8114	0.0303	0.0	0.0	3.03E-07	1.54E-05	1.95E-04	1.12E-03
14	11	11	10	22320.67	1	5521.02	1.8113	0.0625	0.0	4.39E-08	6.15E-06	1.07E-04	6.65E-04	2.30E-03
9	6	119	118	36770.87	1	5521.51	1.8111	0.0303	0.0	0.0	0.0	1.99E-07	4.94E-06	4.61E-05
11	8	36	37	18902.61	1	5521.66	1.8111	0.0308	0.0	1.06E-06	6.54E-05	6.97E-04	3.11E-03	8.54E-03
14	11	52	51	26675.90	1	5522.20	1.8109	0.0303	0.0	0.0	1.92E-06	6.26E-05	5.90E-04	2.75E-03
12	9	89	88	31788.87	1	5522.22	1.8109	0.0303	0.0	0.0	7.28E-08	4.95E-06	7.61E-05	5.05E-04
13	10	10	11	20479.54	1	5522.91	1.8106	0.0625	0.0	1.60E-07	1.44E-05	1.93E-04	1.00E-03	3.06E-03
14	11	12	11	22358.71	1	5523.22	1.8105	0.0617	0.0	4.66E-08	6.59E-06	1.15E-04	7.19E-04	2.50E-03
5	2	83	84	17422.89	1	5523.92	1.8103	0.0303	0.0	3.40E-07	1.47E-05	1.27E-04	4.92E-04	1.22E-03
10	7	110	109	35146.60	1	5524.10	1.8103	0.0303	0.0	0.0	0.0	6.48E-07	1.38E-05	1.15E-04
14	11	51	50	26502.68	1	5524.38	1.8102	0.0303	0.0	0.0	2.11E-06	6.72E-05	6.23E-04	2.87E-03
4	1	81	82	14233.45	2	5524.46	1.8101	0.0303	0.0	0.0	5.69E-07	3.09E-06	8.80E-06	1.75E-05
3	0	95	96	17367.91	1	5524.55	1.8101	0.0303	0.0	0.0	1.49E-06	1.27E-05	4.89E-05	1.21E-04
12	9	24	25	19486.39	1	5525.20	1.8099	0.0437	0.0	6.20E-07	4.41E-05	5.10E-04	2.41E-03	6.89E-03
14	11	13	12	22400.19	1	5525.30	1.8099	0.0610	0.0	4.90E-08	7.00E-06	1.23E-04	7.71E-04	2.69E-03
13	10	74	73	29510.62	1	5525.41	1.8098	0.0303	0.0	0.0	3.53E-07	1.73E-05	2.14E-04	1.21E-03
11	8	100	99	33452.85	1	5525.45	1.8098	0.0303	0.0	0.0	0.0	1.84E-06	3.32E-05	2.47E-04
8	5	51	52	15025.29	2	5525.88	1.8097	0.0303	0.0	1.72E-07	4.19E-06	2.55E-05	7.84E-05	1.65E-04
6	3	67	68	14482.17	2	5525.98	1.8096	0.0303	0.0	1.11E-07	2.37E-06	1.33E-05	3.89E-05	7.88E-05
4	1	89	90	17331.98	1	5526.00	1.8096	0.0303	0.0	1.45E-07	6.13E-06	5.21E-05	2.00E-04	4.93E-04
8	5	62	63	17751.12	1	5526.38	1.8095	0.0303	0.0	1.35E-06	6.35E-05	5.73E-04	2.29E-03	5.81E-03
14	11	50	49	26332.73	1	5526.44	1.8095	0.0303	0.0	0.0	2.32E-06	7.19E-05	6.56E-04	2.99E-03
9	6	54	55	18003.52	1	5526.46	1.8095	0.0303	0.0	1.54E-06	7.66E-05	7.16E-04	2.94E-03	7.57E-03
14	11	14	13	22445.13	1	5527.29	1.8092	0.0604	0.0	5.10E-08	7.37E-06	1.31E-04	8.21E-04	2.87E-03
13	10	9	10	20441.12	1	5527.45	1.8092	0.0624	0.0	1.52E-07	1.36E-05	1.80E-04	9.35E-04	2.85E-03
5	2	74	75	14274.14	2	5527.52	1.8091	0.0303	0.0	6.84E-08	1.39E-06	7.58E-06	2.17E-05	4.33E-05
10	7	45	46	18312.18	1	5528.25	1.8089	0.0303	0.0	1.60E-06	8.57E-05	8.38E-04	3.54E-03	9.32E-03
14	11	49	48	26166.05	1	5528.39	1.8088	0.0303	0.0	0.0	2.54E-06	7.68E-05	6.89E-04	3.11E-03
12	9	88	87	31495.00	1	5528.57	1.8088	0.0303	0.0	0.0	8.81E-08	5.74E-06	8.59E-05	5.58E-04
3	0	87	88	14049.87	2	5528.62	1.8088	0.0303	0.0	0.0	1.58E-07	8.38E-07	2.35E-06	4.61E-06
11	8	35	36	18771.94	1	5528.90	1.8087	0.0312	0.0	1.18E-06	7.04E-05	7.36E-04	3.25E-03	8.82E-03
7	4	59	60	14644.96	2	5528.99	1.8086	0.0303	0.0	1.60E-07	3.55E-06	2.05E-05	6.07E-05	1.24E-04
14	11	15	14	22493.51	1	5529.16	1.8086	0.0597	0.0	5.27E-08	7.70E-06	1.38E-04	8.67E-04	3.04E-03
6	3	76	77	17359.69	1	5529.64	1.8084	0.0303	0.0	7.27E-07	3.10E-05	2.65E-04	1.02E-03	2.52E-03
13	10	73	72	29265.04	1	5530.05	1.8083	0.0303	0.0	0.0	4.11E-07	1.94E-05	2.35E-04	1.31E-03
14	11	48	47	26002.67	1	5530.23	1.8082	0.0303	0.0	0.0	2.77E-06	8.19E-05	7.23E-04	3.22E-03
7	4	69	70	17469.54	1	5530.47	1.8082	0.0303	0.0	1.14E-06	4.98E-05	4.31E-04	1.68E-03	4.18E-03
14	11	16	15	22545.34	1	5530.93	1.8080	0.0591	0.0	5.40E-08	7.99E-06	1.44E-04	9.11E-04	3.21E-03
12	9	23	24	19358.52	1	5531.19	1.8079	0.0457	0.0	6.54E-07	4.55E-05	5.20E-04	2.44E-03	6.92E-03
9	6	118	117	36382.44	1	5531.35	1.8079	0.0303	0.0	0.0	0.0	2.44E-07	5.84E-06	5.31E-05
13	10	8	9	20406.19	1	5531.88	1.8077	0.0624	0.0	1.43E-07	1.26E-05	1.67E-04	8.63E-04	2.62E-03
14	11	47	46	25842.57	1	5531.96	1.8077	0.0303	0.0	0.0	3.01E-06	8.70E-05	7.57E-04	3.34E-03
14	11	17	16	22600.61	1	5532.59	1.8075	0.0585	0.0	5.49E-08	8.24E-06	1.49E-04	9.52E-04	3.36E-03
10	7	109	108	34766.11	1	5532.89	1.8074	0.0303	0.0	0.0	0.0	7.82E-07	1.60E-05	1.31E-04
11	6	99	98	33123.80	1	5533.08	1.8073	0.0303	0.0	0.0	0.0	2.17E-06	3.80E-05	2.76E-04
14	11	46	45	25685.79	1	5533.57	1.8072	0.0303	0.0	0.0	3.26E-06	9.22E-05	7.90E-04	3.45E-03
14	11	18	17	22659.31	1	5534.15	1.8070	0.0568	0.0	5.55E-08	8.44E-06	1.54E-04	9.89E-04	3.51E-03
8	5	50	51	14845.80	2	5534.21	1.8069	0.0303	0.0	2.02E-07	4.71E-06	2.79E-05	8.45E-05	1.75E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	10	72	71	29022.55	1	5534.58	1.8068	0.0303	0.0	0.0	4.77E-07	2.18E-05	2.57E-04	1.41E-03
12	9	87	86	31204.08	1	5534.81	1.8067	0.0303	0.0	0.0	1.06E-07	6.65E-06	9.67E-05	6.16E-04
14	11	45	44	28532.30	1	5535.08	1.8067	0.0303	0.0	0.0	3.53E-06	9.76E-05	8.24E-04	3.56E-03
9	6	53	54	17807.68	1	5535.54	1.8065	0.0303	0.0	1.83E-06	8.72E-05	7.94E-04	3.19E-03	8.12E-03
14	11	19	18	22721.46	1	5535.59	1.8065	0.0552	0.0	5.57E-08	8.60E-06	1.59E-04	1.02E-03	3.64E-03
4	1	80	81	13947.12	2	5535.59	1.8065	0.0303	0.0	0.0	6.94E-07	3.62E-06	1.00E-05	1.96E-05
6	3	66	67	14245.95	2	5535.82	1.8064	0.0303	0.0	1.38E-07	2.78E-06	1.51E-05	4.32E-05	8.60E-05
5	2	82	83	17120.41	1	5535.88	1.8064	0.0303	0.0	4.51E-07	1.82E-05	1.50E-04	5.65E-04	1.37E-03
11	8	34	35	18644.73	1	5536.04	1.8063	0.0317	0.0	1.30E-06	7.55E-05	7.75E-04	3.38E-03	9.10E-03
13	10	7	8	20374.75	1	5536.20	1.8063	0.0623	0.0	1.32E-07	1.16E-05	1.52E-04	7.85E-04	2.38E-03
8	5	61	62	17526.07	1	5536.25	1.8063	0.0303	0.0	1.66E-06	7.38E-05	6.45E-04	2.53E-03	6.30E-03
10	7	44	45	18148.97	1	5536.41	1.8062	0.0303	0.0	1.84E-06	9.49E-05	9.07E-04	3.77E-03	9.82E-03
14	11	44	43	25382.13	1	5536.47	1.8062	0.0303	0.0	0.0	3.80E-06	1.03E-04	8.56E-04	3.66E-03
14	11	20	19	22787.05	1	5536.93	1.8061	0.0535	0.0	5.55E-08	8.71E-06	1.62E-04	1.05E-03	3.77E-03
12	9	22	23	19314.13	1	5537.09	1.8060	0.0476	0.0	6.85E-07	4.67E-05	5.28E-04	2.46E-03	6.93E-03
3	0	94	95	17020.62	1	5537.68	1.8058	0.0303	0.0	4.81E-08	1.89E-06	1.54E-05	5.73E-05	1.38E-04
14	11	43	42	25235.28	1	5537.75	1.8058	0.0303	0.0	0.0	4.09E-06	1.08E-04	8.88E-04	3.76E-03
5	2	73	74	14012.86	2	5538.00	1.8057	0.0303	0.0	8.71E-08	1.66E-06	8.75E-06	2.44E-05	4.79E-05
7	4	58	59	14437.11	2	5538.07	1.8057	0.0303	0.0	1.94E-07	4.09E-06	2.29E-05	6.65E-05	1.34E-04
14	11	21	20	22856.06	1	5538.16	1.8057	0.0515	0.0	5.51E-08	8.78E-06	1.65E-04	1.08E-03	3.88E-03
4	1	88	89	17007.07	1	5538.55	1.8055	0.0303	0.0	1.97E-07	7.71E-06	6.25E-05	2.33E-04	5.61E-04
14	11	42	41	25091.76	1	5538.93	1.8054	0.0303	0.0	0.0	4.38E-06	1.14E-04	9.20E-04	3.85E-03
13	10	71	70	28763.19	1	5538.99	1.8054	0.0303	0.0	0.0	5.52E-07	2.44E-05	2.81E-04	1.52E-03
14	11	22	21	22928.51	1	5539.29	1.8053	0.0496	0.0	5.43E-08	8.81E-06	1.67E-04	1.10E-03	3.98E-03
14	11	41	40	24951.57	1	5539.99	1.8051	0.0303	0.0	0.0	4.68E-06	1.19E-04	9.50E-04	3.94E-03
14	11	23	22	23004.38	1	5540.30	1.8050	0.0476	0.0	5.32E-08	8.80E-06	1.69E-04	1.12E-03	4.07E-03
3	0	86	87	13741.75	2	5540.31	1.8050	0.0303	0.0	0.0	1.97E-07	9.95E-07	2.71E-06	5.21E-06
13	10	6	7	20346.80	1	5540.43	1.8049	0.0620	0.0	1.19E-07	1.04E-05	1.37E-04	7.01E-04	2.12E-03
11	8	98	97	32797.60	1	5540.58	1.8049	0.0303	0.0	0.0	0.0	2.56E-06	4.34E-05	3.08E-04
6	3	75	76	17082.96	1	5540.91	1.8048	0.0303	0.0	9.40E-07	3.76E-05	3.08E-04	1.16E-03	2.80E-03
12	9	86	85	30916.14	1	5540.93	1.8048	0.0303	0.0	0.0	1.28E-07	7.68E-06	1.09E-04	6.79E-04
14	11	40	39	24814.72	1	5540.94	1.8047	0.0303	0.0	0.0	4.98E-06	1.24E-04	9.78E-04	4.02E-03
7	4	68	69	17218.64	1	5541.05	1.8047	0.0303	0.0	1.43E-06	5.90E-05	4.94E-04	1.88E-03	4.59E-03
9	6	117	116	35996.63	1	5541.07	1.8047	0.0303	0.0	0.0	0.0	3.00E-07	6.90E-06	6.11E-05
14	11	24	23	23063.67	1	5541.21	1.8047	0.0457	0.0	5.19E-08	8.75E-06	1.70E-04	1.14E-03	4.15E-03
10	7	108	107	34428.34	1	5541.55	1.8046	0.0303	0.0	0.0	0.0	9.41E-07	1.86E-05	1.48E-04
14	11	39	38	24661.22	1	5541.78	1.8045	0.0303	0.0	0.0	5.28E-06	1.29E-04	1.01E-03	4.10E-03
14	11	25	24	23166.39	1	5542.01	1.8044	0.0437	0.0	5.04E-08	8.66E-06	1.70E-04	1.15E-03	4.21E-03
8	5	49	50	14669.65	2	5542.45	1.8043	0.0303	0.0	2.37E-07	5.29E-06	3.06E-05	9.09E-05	1.86E-04
14	11	38	37	24551.07	1	5542.51	1.8042	0.0303	0.0	0.0	5.59E-06	1.34E-04	1.03E-03	4.16E-03
14	11	26	25	23252.52	1	5542.70	1.8042	0.0418	0.0	4.87E-08	8.54E-06	1.70E-04	1.15E-03	4.26E-03
12	9	21	22	19233.23	1	5542.89	1.8041	0.0496	0.0	7.15E-07	4.78E-05	5.34E-04	2.47E-03	6.92E-03
11	8	33	34	18521.00	1	5543.08	1.8041	0.0321	0.0	1.43E-06	8.06E-05	8.13E-04	3.50E-03	9.36E-03
14	11	37	36	24424.27	1	5543.12	1.8040	0.0308	0.0	0.0	5.89E-06	1.39E-04	1.05E-03	4.22E-03
13	10	70	69	28546.96	1	5543.29	1.8040	0.0303	0.0	0.0	6.37E-07	2.72E-05	3.06E-04	1.63E-03
14	11	27	26	23342.06	1	5543.29	1.8040	0.0398	0.0	4.68E-08	8.38E-06	1.69E-04	1.16E-03	4.30E-03
14	11	36	35	24300.84	1	5543.63	1.8039	0.0312	0.0	0.0	6.19E-06	1.43E-04	1.08E-03	4.27E-03
14	11	28	27	23435.02	1	5543.76	1.8038	0.0379	0.0	4.47E-08	8.20E-06	1.68E-04	1.16E-03	4.33E-03
14	11	35	34	24160.77	1	5544.03	1.8037	0.0317	0.0	0.0	6.48E-06	1.48E-04	1.09E-03	4.31E-03
14	11	29	28	23531.37	1	5544.13	1.8037	0.0359	0.0	4.26E-08	7.99E-06	1.66E-04	1.15E-03	4.35E-03
14	11	34	33	24064.08	1	5544.32	1.8036	0.0321	0.0	0.0	6.77E-06	1.51E-04	1.11E-03	4.34E-03
14	11	30	29	23631.13	1	5544.35	1.8036	0.0340	0.0	4.04E-08	7.75E-06	1.63E-04	1.15E-03	4.35E-03
10	7	43	44	17969.20	1	5544.48	1.8036	0.0303	0.0	2.11E-06	1.05E-04	9.79E-04	4.01E-03	1.03E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
14	11	33	32	23950.76	1	5544.50	1.8036	0.0326	0.0	0.0	7.04E-06	1.55E-04	1.12E-03	4.36E-03
9	6	52	53	17615.26	1	5544.51	1.8036	0.0303	0.0	2.18E-06	9.91E-05	8.77E-04	3.46E-03	8.70E-03
14	11	31	30	23734.29	1	5544.53	1.8036	0.0335	0.0	0.0	7.53E-06	1.61E-04	1.14E-03	4.36E-03
13	10	5	6	20322.34	1	5544.55	1.8036	0.0617	0.0	1.05E-07	9.16E-06	1.20E-04	6.13E-04	1.85E-03
14	11	32	31	23840.83	1	5544.57	1.8036	0.0331	0.0	0.0	7.30E-06	1.58E-04	1.14E-03	4.37E-03
6	3	65	66	14013.01	2	5545.56	1.8032	0.0303	0.0	1.71E-07	3.26E-06	1.71E-05	4.78E-05	9.37E-05
8	5	60	61	17304.39	1	5546.04	1.8031	0.0303	0.0	2.03E-06	8.55E-05	7.24E-04	2.78E-03	6.82E-03
4	1	79	80	13663.99	2	5546.64	1.8029	0.0303	0.0	4.82E-08	8.46E-07	4.23E-06	1.14E-05	2.19E-05
12	9	85	84	30631.19	1	5546.94	1.8028	0.0303	0.0	0.0	1.54E-07	8.86E-06	1.22E-04	7.47E-04
7	4	57	58	14232.57	2	5547.07	1.8028	0.0303	0.0	2.34E-07	4.70E-06	2.55E-05	7.28E-05	1.45E-04
13	10	69	68	28313.86	1	5547.47	1.8026	0.0303	0.0	0.0	7.33E-07	3.03E-05	3.34E-04	1.74E-03
5	2	81	82	16621.19	1	5547.75	1.8025	0.0303	0.0	5.98E-07	2.24E-05	1.77E-04	6.48E-04	1.54E-03
11	8	97	96	32474.26	1	5547.97	1.8025	0.0303	0.0	0.0	4.01E-08	3.01E-06	4.95E-05	3.44E-04
5	2	72	73	13754.80	2	5548.40	1.8023	0.0303	0.0	1.11E-07	1.99E-06	1.01E-05	2.74E-05	5.28E-05
13	10	4	5	20301.37	1	5548.57	1.8023	0.0614	0.0	9.03E-08	7.81E-06	1.02E-04	5.20E-04	1.57E-03
12	9	20	21	19155.82	1	5548.59	1.8023	0.0515	0.0	7.42E-07	4.87E-05	5.38E-04	2.47E-03	6.88E-03
11	8	32	33	18400.75	1	5550.02	1.8018	0.0326	0.0	1.57E-06	8.59E-05	8.51E-04	3.63E-03	9.61E-03
10	7	107	106	34073.32	1	5550.10	1.8018	0.0303	0.0	0.0	0.0	1.13E-06	2.16E-05	1.68E-04
8	5	48	49	14496.84	2	5550.60	1.8016	0.0303	0.0	2.76E-07	5.91E-06	3.33E-05	9.75E-05	1.98E-04
9	6	116	115	35613.45	1	5550.67	1.8016	0.0303	0.0	0.0	0.0	3.67E-07	8.14E-06	7.02E-05
3	0	93	94	16676.52	1	5550.72	1.8016	0.0303	0.0	6.63E-08	2.40E-06	1.86E-05	6.71E-05	1.58E-04
4	1	87	88	16685.38	1	5551.01	1.8015	0.0303	0.0	2.66E-07	9.67E-06	7.49E-05	2.71E-04	6.38E-04
7	4	67	68	16971.09	1	5551.54	1.8013	0.0303	0.0	1.80E-06	6.99E-05	5.64E-04	2.09E-03	5.03E-03
13	10	68	67	28083.91	1	5551.54	1.8013	0.0303	0.0	0.0	8.42E-07	3.36E-05	3.62E-04	1.86E-03
3	0	85	86	13436.77	2	5551.91	1.8012	0.0303	0.0	0.0	2.44E-07	1.18E-06	3.12E-06	5.88E-06
6	3	74	75	16809.55	1	5552.09	1.8011	0.0303	0.0	1.21E-06	4.54E-05	3.58E-04	1.31E-03	3.11E-03
10	7	42	43	17832.88	1	5552.44	1.8010	0.0303	0.0	2.41E-06	1.15E-04	1.05E-03	4.26E-03	1.08E-02
13	10	3	4	20283.89	1	5552.48	1.8010	0.0611	0.0	7.40E-08	6.37E-06	8.28E-05	4.23E-04	1.27E-03
8	5	124	123	37006.34	1	5552.74	1.8009	0.0303	0.0	0.0	0.0	1.29E-07	3.28E-06	3.11E-05
12	9	84	83	30349.24	1	5552.82	1.8009	0.0303	0.0	0.0	1.84E-07	1.02E-05	1.37E-04	8.21E-04
9	6	51	52	17426.27	1	5553.39	1.8007	0.0303	0.0	2.59E-06	1.12E-04	9.67E-04	3.75E-03	9.30E-03
12	9	19	20	19081.91	1	5554.18	1.8004	0.0535	0.0	7.65E-07	4.94E-05	5.40E-04	2.45E-03	6.82E-03
6	3	64	65	13783.34	2	5555.22	1.8001	0.0303	0.0	2.10E-07	3.80E-06	1.94E-05	5.29E-05	1.02E-04
11	8	96	95	32153.80	1	5555.23	1.8001	0.0303	0.0	0.0	4.92E-08	3.53E-06	5.63E-05	3.83E-04
13	10	67	66	27657.12	1	5555.49	1.8000	0.0303	0.0	0.0	9.64E-07	3.72E-05	3.93E-04	1.99E-03
8	5	59	60	17086.11	1	5555.72	1.7999	0.0303	0.0	2.47E-06	9.88E-05	8.11E-04	3.05E-03	7.38E-03
7	4	56	57	14031.34	2	5555.98	1.7999	0.0303	0.0	2.81E-07	5.38E-06	2.84E-05	7.95E-05	1.56E-04
13	10	2	3	20269.91	1	5556.29	1.7998	0.0609	0.0	5.67E-08	4.87E-06	6.31E-05	3.22E-04	9.69E-04
11	8	31	32	18283.98	1	5556.85	1.7996	0.0331	0.0	1.71E-06	9.11E-05	8.88E-04	3.74E-03	9.84E-03
4	1	78	79	13384.06	2	5557.60	1.7993	0.0303	0.0	6.26E-08	1.03E-06	4.94E-06	1.30E-05	2.44E-05
10	7	106	105	33721.07	1	5558.53	1.7990	0.0303	0.0	0.0	0.0	1.35E-06	2.51E-05	1.90E-04
12	9	83	82	30070.30	1	5558.59	1.7990	0.0303	0.0	0.0	2.20E-07	1.17E-05	1.53E-04	9.01E-04
8	5	47	48	14327.37	2	5558.66	1.7990	0.0303	0.0	3.20E-07	6.59E-06	3.63E-05	1.04E-04	2.09E-04
5	2	71	72	13499.99	2	5558.72	1.7990	0.0303	0.0	1.40E-07	2.37E-06	1.16E-05	3.07E-05	5.82E-05
13	10	66	65	27633.50	1	5559.33	1.7988	0.0303	0.0	0.0	1.10E-06	4.12E-05	4.25E-04	2.12E-03
5	2	80	81	16525.24	1	5559.52	1.7987	0.0303	0.0	7.89E-07	2.76E-05	2.09E-04	7.43E-04	1.73E-03
12	9	18	19	19011.50	1	5559.67	1.7987	0.0552	0.0	7.85E-07	4.98E-05	5.39E-04	2.43E-03	6.73E-03
13	10	1	2	20259.43	1	5559.99	1.7986	0.0606	0.0	0.0	3.29E-06	4.26E-05	2.17E-04	6.54E-04
9	6	115	114	35232.91	1	5560.15	1.7985	0.0303	0.0	0.0	0.0	4.48E-07	9.59E-06	8.05E-05
10	7	41	42	17680.03	1	5560.31	1.7985	0.0303	0.0	2.75E-06	1.27E-04	1.13E-03	4.50E-03	1.14E-02
7	4	66	67	16726.89	1	5561.93	1.7979	0.0303	0.0	2.25E-06	8.25E-05	6.42E-04	2.33E-03	5.51E-03
9	6	50	51	17240.70	1	5562.18	1.7979	0.0303	0.0	3.05E-06	1.27E-04	1.06E-03	4.05E-03	9.92E-03
11	8	95	94	31836.23	1	5562.38	1.7978	0.0303	0.0	0.0	6.03E-08	4.13E-06	6.39E-05	4.25E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*CM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	10	65	64	27413.06	1	5563.06	1.7976	0.0303	0.0	0.0	1.25E-06	4.54E-05	4.60E-04	2.26E-03
8	5	123	122	36600.82	1	5563.16	1.7975	0.0303	0.0	0.0	0.0	1.59E-07	3.88E-06	3.58E-05
6	3	73	74	16539.45	1	5563.18	1.7975	0.0303	0.0	1.56E-06	5.47E-05	4.14E-04	1.48E-03	3.45E-03
4	1	86	87	16366.91	1	5563.37	1.7975	0.0303	0.0	3.60E-07	1.21E-05	8.95E-05	3.14E-04	7.24E-04
3	0	84	85	13134.97	2	5563.43	1.7975	0.0303	0.0	0.0	3.01E-07	1.40E-06	3.59E-06	6.62E-06
11	8	30	31	18170.69	1	5563.59	1.7974	0.0335	0.0	1.86E-06	9.64E-05	9.24E-04	3.85E-03	1.01E-02
13	10	0	1	20252.43	1	5563.59	1.7974	0.0603	0.0	0.0	1.67E-06	2.16E-05	1.10E-04	3.30E-04
3	0	92	93	16335.59	1	5563.67	1.7974	0.0303	0.0	9.11E-08	3.04E-06	2.24E-05	7.83E-05	1.80E-04
12	9	82	81	29794.40	1	5564.25	1.7972	0.0303	0.0	0.0	2.63E-07	1.34E-05	1.71E-04	9.87E-04
7	4	55	56	13833.44	2	5564.79	1.7970	0.0303	0.0	3.36E-07	6.15E-06	3.15E-05	8.66E-05	1.68E-04
6	3	63	64	13556.96	2	5564.79	1.7970	0.0303	0.0	2.59E-07	4.43E-06	2.18E-05	5.83E-05	1.11E-04
12	9	17	18	18944.59	1	5565.06	1.7969	0.0568	0.0	7.99E-07	4.99E-05	5.35E-04	2.40E-03	6.61E-03
8	5	58	59	16871.22	1	5565.31	1.7968	0.0303	0.0	3.01E-06	1.14E-04	9.10E-04	3.35E-03	7.99E-03
8	5	46	47	14161.26	2	5566.62	1.7964	0.0303	0.0	3.71E-07	7.33E-06	3.94E-05	1.12E-04	2.21E-04
13	10	64	63	27195.80	1	5566.67	1.7964	0.0303	0.0	0.0	1.42E-06	5.00E-05	4.96E-04	2.40E-03
10	7	105	104	33371.58	1	5566.84	1.7964	0.0303	0.0	0.0	0.0	1.62E-06	2.90E-05	2.15E-04
10	7	40	41	17530.64	1	5568.08	1.7960	0.0303	0.0	3.12E-06	1.39E-04	1.21E-03	4.76E-03	1.19E-02
4	1	77	78	13107.35	2	5568.47	1.7958	0.0303	0.0	8.11E-08	1.25E-06	5.75E-06	1.47E-05	2.71E-05
5	2	70	71	13248.44	2	5568.94	1.7957	0.0303	0.0	1.77E-07	2.81E-06	1.32E-05	3.44E-05	6.40E-05
11	8	94	93	31521.56	1	5569.41	1.7955	0.0303	0.0	0.0	7.37E-08	4.83E-06	7.24E-05	4.72E-04
9	6	114	113	34855.04	1	5569.51	1.7955	0.0303	0.0	0.0	0.0	5.46E-07	1.13E-05	9.22E-05
12	9	81	80	29521.54	1	5569.78	1.7954	0.0303	0.0	0.0	3.13E-07	1.53E-05	1.90E-04	1.08E-03
13	10	63	62	26581.75	1	5570.17	1.7953	0.0303	0.0	0.0	1.61E-06	5.49E-05	5.33E-04	2.54E-03
11	8	29	30	18060.90	1	5570.23	1.7953	0.0340	0.0	2.01E-06	1.02E-04	9.59E-04	3.96E-03	1.02E-02
12	9	16	17	18881.18	1	5570.35	1.7952	0.0585	0.0	8.09E-07	4.98E-05	5.29E-04	2.36E-03	6.46E-03
13	10	1	0	20248.94	1	5570.48	1.7952	0.0603	0.0	0.0	1.70E-06	2.20E-05	1.12E-04	3.37E-04
9	6	49	50	17058.57	1	5570.86	1.7951	0.0303	0.0	3.59E-06	1.43E-04	1.17E-03	4.37E-03	1.06E-02
5	2	79	80	16232.57	1	5571.20	1.7949	0.0303	0.0	1.04E-06	3.38E-05	2.45E-04	8.49E-04	1.94E-03
7	4	65	66	16486.06	1	5572.22	1.7946	0.0303	0.0	2.80E-06	9.71E-05	7.31E-04	2.59E-03	6.02E-03
8	5	122	121	36197.86	1	5573.46	1.7942	0.0303	0.0	0.0	0.0	1.95E-07	4.58E-06	4.11E-05
7	4	54	55	13638.86	2	5573.52	1.7942	0.0303	0.0	4.01E-07	7.00E-06	3.49E-05	9.41E-05	1.80E-04
13	10	62	61	26770.90	1	5573.55	1.7942	0.0303	0.0	0.0	1.82E-06	6.02E-05	5.73E-04	2.69E-03
13	10	2	1	20252.43	1	5573.76	1.7941	0.0606	0.0	4.02E-08	3.44E-06	4.45E-05	2.26E-04	6.81E-04
6	3	72	73	16272.68	1	5574.17	1.7940	0.0303	0.0	2.00E-06	6.57E-05	4.79E-04	1.67E-03	3.82E-03
6	3	62	63	13333.88	2	5574.27	1.7940	0.0303	0.0	3.17E-07	5.14E-06	2.45E-05	6.42E-05	1.20E-04
8	5	45	46	13998.51	2	5574.50	1.7939	0.0303	0.0	4.27E-07	8.12E-06	4.27E-05	1.19E-04	2.33E-04
8	5	57	58	16659.74	1	5574.81	1.7938	0.0303	0.0	3.66E-06	1.32E-04	1.02E-03	3.67E-03	8.65E-03
3	0	83	84	12836.35	2	5574.86	1.7938	0.0303	0.0	0.0	3.71E-07	1.65E-06	4.12E-06	7.45E-06
10	7	104	103	33024.89	1	5575.02	1.7937	0.0303	0.0	0.0	0.0	1.93E-06	3.35E-05	2.42E-04
12	9	80	79	29251.72	1	5575.20	1.7937	0.0303	0.0	0.0	3.71E-07	1.75E-05	2.11E-04	1.18E-03
12	9	15	16	18821.29	1	5575.54	1.7935	0.0591	0.0	8.14E-07	4.93E-05	5.20E-04	2.31E-03	6.29E-03
4	1	85	86	16051.69	1	5575.64	1.7935	0.0303	0.0	4.84E-07	1.51E-05	1.07E-04	3.63E-04	8.20E-04
10	7	39	40	17384.73	1	5575.75	1.7935	0.0303	0.0	3.52E-06	1.51E-04	1.30E-03	5.01E-03	1.24E-02
11	8	93	92	31209.82	1	5576.32	1.7933	0.0303	0.0	0.0	8.99E-08	5.63E-06	8.19E-05	5.22E-04
3	0	91	92	15997.85	1	5576.53	1.7932	0.0303	0.0	1.25E-07	3.85E-06	2.70E-05	9.14E-05	2.05E-04
11	8	28	29	17954.60	1	5576.77	1.7932	0.0359	0.0	2.17E-06	1.07E-04	9.95E-04	4.06E-03	1.04E-02
13	10	61	60	26563.26	1	5576.82	1.7931	0.0303	0.0	0.0	2.05E-06	6.58E-05	6.13E-04	2.84E-03
13	10	3	2	20259.43	1	5576.95	1.7931	0.0609	0.0	6.06E-08	5.18E-06	6.72E-05	3.42E-04	1.03E-03
9	6	113	112	34479.86	1	5578.75	1.7925	0.0303	0.0	0.0	0.0	6.64E-07	1.32E-05	1.06E-04
5	2	69	70	13000.15	2	5579.06	1.7924	0.0303	0.0	2.22E-07	3.33E-06	1.52E-05	3.84E-05	7.03E-05
4	1	76	77	12833.86	2	5579.26	1.7924	0.0303	0.0	1.05E-07	1.51E-06	6.69E-06	1.67E-05	3.02E-05
9	6	48	49	16879.89	1	5579.45	1.7923	0.0303	0.0	4.21E-06	1.60E-04	1.28E-03	4.70E-03	1.12E-02
13	10	60	59	26358.85	1	5579.98	1.7921	0.0303	0.0	0.0	2.30E-06	7.17E-05	6.56E-04	3.00E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
13	10	4	3	20269.91	1	5580.02	1.7921	0.0611	0.0	8.08E-08	6.94E-06	9.00E-05	4.59E-04	1.38E-03
12	9	79	78	28984.96	1	5580.51	1.7920	0.0303	0.0	0.0	4.39E-07	2.00E-05	2.35E-04	1.28E-03
12	9	14	15	16764.90	1	5580.62	1.7919	0.0597	0.0	8.12E-07	4.86E-05	5.08E-04	2.24E-03	6.09E-03
7	4	53	54	13447.62	2	5582.16	1.7914	0.0303	0.0	4.77E-07	7.96E-06	3.86E-05	1.02E-04	1.93E-04
8	5	44	45	13839.13	2	5582.28	1.7914	0.0303	0.0	4.90E-07	8.98E-06	4.61E-05	1.27E-04	2.45E-04
7	4	64	65	16248.61	1	5582.42	1.7913	0.0303	0.0	3.48E-06	1.14E-04	8.29E-04	2.87E-03	6.57E-03
5	2	78	79	15943.20	1	5582.79	1.7912	0.0303	0.0	1.36E-06	4.13E-05	2.88E-04	9.69E-04	2.17E-03
13	10	5	4	20263.89	1	5582.99	1.7912	0.0614	0.0	1.01E-07	8.68E-06	1.13E-04	5.76E-04	1.74E-03
13	10	59	58	26157.68	1	5583.02	1.7911	0.0303	0.0	0.0	2.59E-06	7.85E-05	7.04E-04	3.18E-03
10	7	103	102	32681.01	1	5583.09	1.7911	0.0303	0.0	0.0	0.0	2.31E-06	3.87E-05	2.73E-04
11	8	92	91	30901.00	1	5583.12	1.7911	0.0303	0.0	0.0	1.09E-07	6.54E-06	9.25E-05	5.78E-04
11	8	27	28	17851.80	1	5583.21	1.7911	0.0379	0.0	2.34E-06	1.12E-04	1.03E-03	4.16E-03	1.06E-02
10	7	38	39	17242.29	1	5583.32	1.7910	0.0303	0.0	3.97E-06	1.65E-04	1.38E-03	5.27E-03	1.29E-02
8	5	121	120	35797.48	1	5583.64	1.7909	0.0303	0.0	0.0	0.0	2.39E-07	5.41E-06	4.72E-05
6	3	61	62	13114.11	2	5583.66	1.7909	0.0303	0.0	3.87E-07	5.96E-06	2.79E-05	7.06E-05	1.30E-04
8	5	56	57	16451.68	1	5584.21	1.7908	0.0303	0.0	4.42E-06	1.52E-04	1.14E-03	4.02E-03	9.33E-03
6	3	71	72	16009.24	1	5585.07	1.7905	0.0303	0.0	2.55E-06	7.87E-05	5.53E-04	1.87E-03	4.22E-03
12	9	13	14	18712.02	1	5585.60	1.7903	0.0604	0.0	8.04E-07	4.75E-05	4.93E-04	2.16E-03	5.86E-03
12	9	78	77	28721.29	1	5585.70	1.7903	0.0303	0.0	0.0	5.18E-07	2.27E-05	2.60E-04	1.40E-03
13	10	6	5	20301.37	1	5585.86	1.7902	0.0617	0.0	1.20E-07	1.04E-05	1.35E-04	6.93E-04	2.09E-03
13	10	58	57	25959.75	1	5585.95	1.7902	0.0303	0.0	0.0	2.91E-06	8.57E-05	7.55E-04	3.36E-03
3	0	82	83	12540.93	2	5586.20	1.7901	0.0303	0.0	0.0	4.57E-07	1.95E-06	4.72E-06	8.37E-06
4	1	84	85	15739.73	1	5587.83	1.7896	0.0303	0.0	6.49E-07	1.88E-05	1.27E-04	4.20E-04	9.27E-04
9	6	112	111	34107.37	1	5587.87	1.7896	0.0303	0.0	0.0	0.0	8.07E-07	1.55E-05	1.21E-04
9	6	47	48	16704.66	1	5587.94	1.7896	0.0303	0.0	4.92E-06	1.79E-04	1.39E-03	5.05E-03	1.19E-02
13	10	7	6	20322.34	1	5588.62	1.7894	0.0620	0.0	1.39E-07	1.21E-05	1.58E-04	8.09E-04	2.45E-03
13	10	57	56	25765.06	1	5588.77	1.7893	0.0303	0.0	0.0	3.26E-06	9.34E-05	8.07E-04	3.54E-03
5	2	68	69	12755.13	2	5589.13	1.7892	0.0303	0.0	2.79E-07	3.94E-06	1.73E-05	4.28E-05	7.70E-05
3	0	90	91	15663.33	1	5589.30	1.7891	0.0303	0.0	1.71E-07	4.85E-06	3.24E-05	1.06E-04	2.34E-04
11	8	26	27	17752.52	1	5589.55	1.7891	0.0398	0.0	2.51E-06	1.18E-04	1.06E-03	4.25E-03	1.08E-02
11	8	91	90	30595.13	1	5589.79	1.7890	0.0303	0.0	0.0	1.33E-07	7.60E-06	1.04E-04	6.38E-04
4	1	75	76	12563.62	2	5589.96	1.7889	0.0303	0.0	1.35E-07	1.82E-06	7.76E-06	1.89E-05	3.35E-05
8	5	43	44	13683.11	2	5589.97	1.7889	0.0303	0.0	5.61E-07	9.90E-06	4.97E-05	1.34E-04	2.58E-04
12	9	12	13	18662.66	1	5590.48	1.7888	0.0610	0.0	7.90E-07	4.61E-05	4.75E-04	2.07E-03	5.60E-03
7	4	52	53	13259.72	2	5590.70	1.7887	0.0303	0.0	5.66E-07	9.01E-06	4.26E-05	1.11E-04	2.06E-04
12	9	77	76	28460.70	1	5590.77	1.7887	0.0303	0.0	0.0	6.10E-07	2.57E-05	2.88E-04	1.52E-03
10	7	37	38	17103.34	1	5590.79	1.7887	0.0303	0.0	4.44E-06	1.78E-04	1.47E-03	5.53E-03	1.34E-02
10	7	102	101	32339.95	1	5591.04	1.7886	0.0303	0.0	0.0	0.0	2.74E-06	4.45E-05	3.07E-04
13	10	8	7	20346.80	1	5591.27	1.7885	0.0623	0.0	1.57E-07	1.37E-05	1.80E-04	9.24E-04	2.80E-03
13	10	56	55	25573.64	1	5591.47	1.7884	0.0303	0.0	0.0	3.65E-06	1.02E-04	8.61E-04	3.73E-03
7	4	63	64	16014.55	1	5592.53	1.7881	0.0303	0.0	4.31E-06	1.33E-04	9.38E-04	3.18E-03	7.16E-03
6	3	60	61	12897.64	2	5592.96	1.7880	0.0303	0.0	4.71E-07	6.88E-06	3.08E-05	7.74E-05	1.41E-04
8	5	55	56	16247.05	1	5593.51	1.7878	0.0303	0.0	5.33E-06	1.74E-04	1.27E-03	4.40E-03	1.01E-02
8	5	120	119	35399.70	1	5593.70	1.7877	0.0303	0.0	0.0	0.0	2.93E-07	6.37E-06	5.41E-05
13	10	9	8	20374.75	1	5593.82	1.7877	0.0624	0.0	1.73E-07	1.53E-05	2.01E-04	1.04E-03	3.14E-03
13	10	55	54	25365.48	1	5594.06	1.7876	0.0303	0.0	0.0	4.06E-06	1.10E-04	9.17E-04	3.92E-03
5	2	77	78	15657.13	1	5594.29	1.7875	0.0303	0.0	1.78E-06	5.04E-05	3.37E-04	1.10E-03	2.43E-03
12	9	11	12	18616.82	1	5595.25	1.7872	0.0617	0.0	7.68E-07	4.43E-05	4.54E-04	1.97E-03	5.31E-03
12	9	76	75	28203.20	1	5595.73	1.7871	0.0303	0.0	0.0	7.17E-07	2.91E-05	3.18E-04	1.65E-03
11	8	25	26	17656.73	1	5595.78	1.7871	0.0418	0.0	2.67E-06	1.22E-04	1.09E-03	4.33E-03	1.09E-02
6	3	70	71	15749.16	1	5595.87	1.7870	0.0303	0.0	3.24E-06	9.41E-05	6.37E-04	2.11E-03	4.65E-03
13	10	10	9	20406.19	1	5596.26	1.7869	0.0624	0.0	1.89E-07	1.68E-05	2.22E-04	1.15E-03	3.48E-03
9	6	46	47	16532.89	1	5596.33	1.7869	0.0303	0.0	5.72E-06	2.00E-04	1.52E-03	5.41E-03	1.26E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	8	90	89	30292.22	1	5596.35	1.7869	0.0303	0.0	0.0	1.60E-07	8.80E-06	1.17E-04	7.03E-04
13	10	54	53	28200.61	1	5596.54	1.7868	0.0303	0.0	0.0	4.51E-06	1.19E-04	9.75E-04	4.12E-03
9	6	111	110	33737.59	1	5596.87	1.7867	0.0303	0.0	0.0	0.0	9.78E-07	1.82E-05	1.38E-04
3	0	81	82	12248.70	2	5597.45	1.7865	0.0303	0.0	4.48E-08	5.61E-07	2.29E-06	5.40E-06	9.38E-06
8	5	42	43	13530.48	2	5597.57	1.7865	0.0303	0.0	6.39E-07	1.09E-05	5.34E-05	1.42E-04	2.70E-04
10	7	36	37	16967.88	1	5598.16	1.7863	0.0308	0.0	4.96E-06	1.93E-04	1.56E-03	5.78E-03	1.39E-02
13	10	11	10	20441.12	1	5598.60	1.7862	0.0625	0.0	2.03E-07	1.82E-05	2.41E-04	1.25E-03	3.82E-03
10	7	101	100	32001.73	1	5598.87	1.7861	0.0303	0.0	0.0	4.64E-08	3.25E-06	5.11E-05	3.44E-04
13	10	53	52	25019.01	1	5598.91	1.7861	0.0303	0.0	0.0	5.00E-06	1.29E-04	1.03E-03	4.31E-03
5	2	67	68	12513.40	2	5599.08	1.7860	0.0303	0.0	3.48E-07	4.64E-06	1.97E-05	4.77E-05	8.43E-05
7	4	51	52	13075.18	2	5599.16	1.7860	0.0303	0.0	6.68E-07	1.02E-05	4.68E-05	1.20E-04	2.20E-04
4	1	83	84	15431.03	1	5599.92	1.7857	0.0303	0.0	8.68E-07	2.33E-05	1.51E-04	4.84E-04	1.05E-03
12	9	10	11	18574.50	1	5599.93	1.7857	0.0625	0.0	7.39E-07	4.23E-05	4.30E-04	1.86E-03	5.00E-03
4	1	74	75	12296.62	2	5600.57	1.7855	0.0303	0.0	1.73E-07	2.18E-06	8.98E-06	2.13E-05	3.71E-05
12	9	75	74	27948.82	1	5600.57	1.7855	0.0303	0.0	0.0	8.40E-07	3.29E-05	3.50E-04	1.79E-03
13	10	12	11	20479.54	1	5600.83	1.7854	0.0617	0.0	2.16E-07	1.95E-05	2.60E-04	1.35E-03	4.14E-03
13	10	52	51	24840.71	1	5601.16	1.7853	0.0303	0.0	0.0	5.52E-06	1.38E-04	1.09E-03	4.51E-03
11	8	24	25	17564.47	1	5601.92	1.7851	0.0437	0.0	2.83E-06	1.27E-04	1.12E-03	4.40E-03	1.10E-02
3	0	89	90	15332.04	1	5601.98	1.7851	0.0303	0.0	2.32E-07	6.10E-06	3.89E-05	1.24E-04	2.66E-04
6	3	59	60	12684.50	2	5602.17	1.7850	0.0303	0.0	5.71E-07	7.93E-06	3.45E-05	8.48E-05	1.52E-04
7	4	62	63	15763.89	1	5602.54	1.7849	0.0303	0.0	5.32E-06	1.56E-04	1.06E-03	3.52E-03	7.79E-03
8	5	54	55	16045.84	1	5602.72	1.7848	0.0303	0.0	6.40E-06	2.00E-04	1.41E-03	4.80E-03	1.08E-02
11	8	89	88	29992.29	1	5602.79	1.7848	0.0303	0.0	0.0	1.95E-07	1.02E-05	1.33E-04	7.79E-04
13	10	13	12	20521.44	1	5602.95	1.7848	0.0610	0.0	2.27E-07	2.07E-05	2.78E-04	1.45E-03	4.45E-03
13	10	51	50	24665.70	1	5603.30	1.7847	0.0303	0.0	0.0	6.09E-06	1.49E-04	1.16E-03	4.71E-03
8	5	119	118	35004.53	1	5603.63	1.7846	0.0303	0.0	0.0	0.0	3.61E-07	7.56E-06	6.25E-05
12	9	9	10	18535.70	1	5604.50	1.7843	0.0624	0.0	7.03E-07	3.98E-05	4.03E-04	1.74E-03	4.65E-03
9	6	45	46	16364.60	1	5604.63	1.7842	0.0303	0.0	6.62E-06	2.23E-04	1.65E-03	5.78E-03	1.33E-02
13	10	14	13	20566.83	1	5604.97	1.7841	0.0604	0.0	2.36E-07	2.18E-05	2.95E-04	1.55E-03	4.75E-03
8	5	41	42	13381.23	2	5605.07	1.7841	0.0303	0.0	7.26E-07	1.19E-05	5.73E-05	1.51E-04	2.83E-04
12	9	74	73	27697.55	1	5605.29	1.7840	0.0303	0.0	0.0	9.81E-07	3.71E-05	3.85E-04	1.93E-03
13	10	50	49	24494.01	1	5605.33	1.7840	0.0303	0.0	0.0	6.68E-06	1.59E-04	1.22E-03	4.90E-03
10	7	35	36	16635.92	1	5605.44	1.7840	0.0312	0.0	5.51E-06	2.08E-04	1.64E-03	6.03E-03	1.44E-02
5	2	76	77	15374.38	1	5605.69	1.7839	0.0303	0.0	2.31E-06	6.14E-05	3.94E-04	1.26E-03	2.71E-03
9	6	110	109	33370.55	1	5605.74	1.7839	0.0303	0.0	0.0	0.0	1.18E-06	2.12E-05	1.57E-04
10	7	100	99	31666.36	1	5606.58	1.7836	0.0303	0.0	0.0	5.77E-08	3.86E-06	5.87E-05	3.86E-04
6	3	69	70	15492.44	1	5606.59	1.7836	0.0303	0.0	4.11E-06	1.12E-04	7.32E-04	2.36E-03	5.13E-03
13	10	15	14	20615.70	1	5606.87	1.7835	0.0597	0.0	2.44E-07	2.27E-05	3.10E-04	1.63E-03	5.04E-03
13	10	49	48	24325.62	1	5607.25	1.7834	0.0303	0.0	0.0	7.32E-06	1.70E-04	1.28E-03	5.10E-03
7	4	50	51	12693.99	2	5607.52	1.7833	0.0303	0.0	7.85E-07	1.15E-05	5.14E-05	1.29E-04	2.34E-04
11	8	23	24	17475.72	1	5607.96	1.7832	0.0457	0.0	2.99E-06	1.31E-04	1.14E-03	4.45E-03	1.11E-02
3	0	80	81	11959.70	2	5608.62	1.7830	0.0303	0.0	5.88E-08	6.86E-07	2.69E-06	6.17E-06	1.05E-05
13	10	16	15	20668.05	1	5608.68	1.7830	0.0591	0.0	2.50E-07	2.36E-05	3.24E-04	1.72E-03	5.32E-03
5	2	66	67	12274.96	2	5608.95	1.7829	0.0303	0.0	4.34E-07	5.46E-06	2.24E-05	5.29E-05	9.21E-05
12	9	8	9	18500.42	1	5608.96	1.7829	0.0624	0.0	6.60E-07	3.71E-05	3.73E-04	1.61E-03	4.29E-03
13	10	48	47	24160.56	1	5609.06	1.7828	0.0303	0.0	0.0	7.99E-06	1.82E-04	1.34E-03	5.29E-03
11	8	88	87	29695.34	1	5609.11	1.7828	0.0303	0.0	0.0	2.36E-07	1.19E-05	1.50E-04	8.62E-04
12	9	73	72	27449.42	1	5609.90	1.7826	0.0303	0.0	0.0	1.14E-06	4.17E-05	4.23E-04	2.09E-03
13	10	17	16	20723.88	1	5610.37	1.7824	0.0585	0.0	2.54E-07	2.43E-05	3.36E-04	1.79E-03	5.57E-03
13	10	47	46	23998.83	1	5610.75	1.7823	0.0303	0.0	4.15E-08	8.70E-06	1.93E-04	1.41E-03	5.48E-03
4	1	73	74	12032.87	2	5611.09	1.7822	0.0303	0.0	2.21E-07	2.62E-06	1.04E-05	2.40E-05	4.10E-05
6	3	58	59	12474.70	2	5611.30	1.7821	0.0303	0.0	6.93E-07	9.14E-06	3.86E-05	9.31E-05	1.64E-04
8	5	53	54	15848.09	1	5611.83	1.7819	0.0303	0.0	7.66E-06	2.28E-04	1.56E-03	5.22E-03	1.16E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	82	83	15125.61	1	5611.91	1.7819	0.0303	0.0	1.16E-06	2.89E-05	1.79E-04	5.57E-04	1.18E-03
13	10	18	17	20783.18	1	5611.96	1.7819	0.0568	0.0	2.56E-07	2.49E-05	3.47E-04	1.86E-03	5.81E-03
13	10	46	45	23840.43	1	5612.33	1.7818	0.0303	0.0	4.67E-08	9.45E-06	2.05E-04	1.47E-03	5.67E-03
7	4	61	62	15556.63	1	5612.46	1.7818	0.0303	0.0	6.54E-06	1.81E-04	1.19E-03	3.88E-03	8.46E-03
8	5	40	41	13235.37	2	5612.48	1.7817	0.0303	0.0	8.21E-07	1.30E-05	6.12E-05	1.59E-04	2.95E-04
10	7	34	35	16707.46	1	5612.61	1.7817	0.0317	0.0	6.10E-06	2.23E-04	1.73E-03	6.28E-03	1.48E-02
9	6	44	45	16199.77	1	5612.83	1.7816	0.0303	0.0	7.65E-06	2.47E-04	1.79E-03	6.17E-03	1.41E-02
12	9	7	8	18468.66	1	5613.33	1.7815	0.0623	0.0	6.10E-07	3.40E-05	3.40E-04	1.46E-03	3.89E-03
13	10	19	18	20845.96	1	5613.44	1.7814	0.0552	0.0	2.57E-07	2.53E-05	3.57E-04	1.92E-03	6.04E-03
8	5	118	117	34611.99	1	5613.45	1.7814	0.0303	0.0	0.0	0.0	4.44E-07	8.96E-06	7.21E-05
13	10	45	44	23685.38	1	5613.81	1.7813	0.0303	0.0	5.25E-08	1.02E-05	2.17E-04	1.53E-03	5.85E-03
11	8	22	23	17390.49	1	5613.89	1.7813	0.0476	0.0	3.14E-06	1.35E-04	1.16E-03	4.48E-03	1.11E-02
7	4	126	125	36062.28	1	5614.07	1.7812	0.0303	0.0	0.0	0.0	1.44E-07	3.33E-06	2.96E-05
10	7	99	98	31333.86	1	5614.17	1.7812	0.0303	0.0	0.0	7.15E-08	4.56E-06	6.72E-05	4.32E-04
12	9	72	71	27204.43	1	5614.40	1.7811	0.0303	0.0	0.0	1.33E-06	4.68E-05	4.64E-04	2.25E-03
9	6	109	108	33006.25	1	5614.50	1.7811	0.0303	0.0	0.0	0.0	1.43E-06	2.47E-05	1.78E-04
3	0	88	89	15003.98	1	5614.56	1.7811	0.0303	0.0	3.17E-07	7.69E-06	4.68E-05	1.44E-04	3.03E-04
13	10	20	19	20912.20	1	5614.82	1.7810	0.0535	0.0	2.56E-07	2.57E-05	3.65E-04	1.98E-03	6.24E-03
13	10	44	43	23533.68	1	5615.17	1.7809	0.0303	0.0	5.87E-08	1.10E-05	2.29E-04	1.60E-03	6.02E-03
11	8	87	86	29401.38	1	5615.32	1.7808	0.0303	0.0	0.0	2.86E-07	1.38E-05	1.69E-04	9.53E-04
7	4	49	50	12716.17	2	5615.79	1.7807	0.0303	0.0	9.21E-07	1.29E-05	5.63E-05	1.39E-04	2.49E-04
13	10	21	20	20981.92	1	5616.08	1.7806	0.0515	0.0	2.54E-07	2.59E-05	3.72E-04	2.03E-03	6.43E-03
13	10	43	42	23385.33	1	5616.42	1.7805	0.0303	0.0	6.55E-08	1.19E-05	2.41E-04	1.66E-03	6.19E-03
5	2	75	76	15094.96	1	5617.00	1.7803	0.0303	0.0	3.00E-06	7.45E-05	4.59E-04	1.43E-03	3.01E-03
6	3	68	69	16239.10	1	5617.20	1.7802	0.0303	0.0	5.19E-06	1.38E-04	8.39E-04	2.64E-03	5.64E-03
13	10	22	21	21055.10	1	5617.24	1.7802	0.0496	0.0	2.50E-07	2.59E-05	3.77E-04	2.07E-03	6.59E-03
13	10	42	41	23240.34	1	5617.55	1.7801	0.0303	0.0	7.27E-08	1.27E-05	2.53E-04	1.72E-03	6.34E-03
12	9	6	7	18440.43	1	5617.58	1.7801	0.0620	0.0	5.52E-07	3.06E-05	3.05E-04	1.31E-03	3.47E-03
13	10	23	22	21131.74	1	5618.29	1.7799	0.0476	0.0	2.45E-07	2.59E-05	3.80E-04	2.11E-03	6.74E-03
13	10	41	40	23058.72	1	5618.58	1.7798	0.0303	0.0	8.04E-08	1.36E-05	2.65E-04	1.77E-03	6.49E-03
5	2	65	66	12039.83	2	5618.74	1.7798	0.0303	0.0	5.38E-07	6.40E-06	2.54E-05	5.87E-05	1.01E-04
12	9	71	70	26962.59	1	5618.78	1.7797	0.0303	0.0	0.0	1.54E-06	5.24E-05	5.08E-04	2.42E-03
13	10	24	23	21211.84	1	5619.23	1.7796	0.0457	0.0	2.39E-07	2.57E-05	3.82E-04	2.13E-03	6.86E-03
13	10	40	39	22960.48	1	5619.50	1.7795	0.0303	0.0	8.85E-08	1.45E-05	2.77E-04	1.83E-03	6.63E-03
10	7	33	34	16582.50	1	5619.68	1.7795	0.0321	0.0	6.73E-06	2.38E-04	1.82E-03	6.52E-03	1.53E-02
3	0	79	80	11673.92	2	5619.70	1.7795	0.0303	0.0	7.68E-08	8.37E-07	3.15E-06	7.03E-06	1.18E-05
11	8	21	22	17308.79	1	5619.72	1.7794	0.0496	0.0	3.28E-06	1.38E-04	1.17E-03	4.50E-03	1.11E-02
8	5	39	40	13092.91	2	5619.81	1.7794	0.0303	0.0	9.25E-07	1.42E-05	6.53E-05	1.67E-04	3.08E-04
13	10	25	24	21295.39	1	5620.07	1.7793	0.0437	0.0	2.32E-07	2.54E-05	3.83E-04	2.15E-03	6.97E-03
13	10	39	38	22825.61	1	5620.30	1.7793	0.0303	0.0	9.71E-08	1.54E-05	2.88E-04	1.88E-03	6.75E-03
6	3	57	58	12268.22	2	5620.33	1.7793	0.0303	0.0	8.37E-07	1.05E-05	4.31E-05	1.02E-04	1.77E-04
13	10	26	25	21382.39	1	5620.79	1.7791	0.0418	0.0	2.24E-07	2.51E-05	3.82E-04	2.17E-03	7.05E-03
8	5	52	53	15653.78	1	5620.84	1.7791	0.0303	0.0	9.13E-06	2.59E-04	1.73E-03	5.67E-03	1.25E-02
9	6	43	44	16038.43	1	5620.93	1.7791	0.0303	0.0	8.79E-06	2.73E-04	1.93E-03	6.56E-03	1.48E-02
13	10	38	37	22654.13	1	5621.00	1.7790	0.0303	0.0	1.06E-07	1.63E-05	3.00E-04	1.93E-03	6.86E-03
13	10	27	26	21472.84	1	5621.41	1.7789	0.0398	0.0	2.15E-07	2.46E-05	3.80E-04	2.17E-03	7.12E-03
11	8	86	85	29110.45	1	5621.41	1.7789	0.0303	0.0	0.0	3.45E-07	1.60E-05	1.90E-04	1.05E-03
4	1	72	73	11772.40	2	5621.53	1.7789	0.0303	0.0	2.81E-07	3.13E-06	1.20E-05	2.70E-05	4.53E-05
13	10	37	36	22566.05	1	5621.59	1.7789	0.0308	0.0	1.15E-07	1.72E-05	3.10E-04	1.97E-03	6.96E-03
10	7	98	97	31004.25	1	5621.64	1.7788	0.0303	0.0	0.0	8.85E-08	5.38E-06	7.68E-05	4.83E-04
12	9	5	6	18415.73	1	5621.74	1.7788	0.0617	0.0	4.89E-07	2.69E-05	2.67E-04	1.14E-03	3.03E-03
13	10	28	27	21566.74	1	5621.92	1.7788	0.0379	0.0	2.05E-07	2.41E-05	3.76E-04	2.17E-03	7.16E-03
13	10	36	35	22441.36	1	5622.06	1.7787	0.0312	0.0	1.25E-07	1.81E-05	3.21E-04	2.01E-03	7.05E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	60	61	15332.79	1	5622.28	1.7786	0.0303	0.0	8.02E-06	2.11E-04	1.34E-03	4.27E-03	9.17E-03
13	10	29	28	21664.07	1	5622.32	1.7786	0.0359	0.0	1.95E-07	2.34E-05	3.72E-04	2.17E-03	7.19E-03
13	10	35	34	22320.07	1	5622.43	1.7786	0.0317	0.0	1.35E-07	1.89E-05	3.30E-04	2.05E-03	7.11E-03
13	10	30	29	21764.84	1	5622.61	1.7785	0.0340	0.0	1.85E-07	2.27E-05	3.66E-04	2.15E-03	7.19E-03
13	10	34	33	22202.19	1	5622.68	1.7785	0.0321	0.0	1.45E-07	1.98E-05	3.39E-04	2.08E-03	7.17E-03
13	10	31	30	21869.04	1	5622.79	1.7785	0.0335	0.0	1.75E-07	2.21E-05	3.61E-04	2.14E-03	7.21E-03
13	10	33	32	22087.72	1	5622.83	1.7785	0.0326	0.0	1.55E-07	2.06E-05	3.47E-04	2.11E-03	7.20E-03
13	10	32	31	21976.67	1	5622.87	1.7785	0.0331	0.0	1.65E-07	2.14E-05	3.54E-04	2.13E-03	7.22E-03
12	9	70	69	26723.91	1	5623.04	1.7784	0.0303	0.0	0.0	1.78E-06	5.85E-05	5.54E-04	2.60E-03
9	6	108	107	32644.72	1	5623.13	1.7784	0.0303	0.0	0.0	0.0	1.72E-06	2.88E-05	2.03E-04
8	5	117	116	34222.09	1	5623.14	1.7784	0.0303	0.0	0.0	0.0	5.45E-07	1.06E-05	8.31E-05
4	1	81	82	14823.48	1	5623.82	1.7782	0.0303	0.0	1.54E-06	3.57E-05	2.12E-04	6.41E-04	1.33E-03
7	4	48	49	12541.73	2	5623.98	1.7781	0.0303	0.0	1.07E-06	1.44E-05	6.15E-05	1.49E-04	2.65E-04
7	4	125	124	35647.34	1	5624.71	1.7779	0.0303	0.0	0.0	0.0	1.78E-07	3.96E-06	3.43E-05
11	8	20	21	17230.61	1	5625.45	1.7776	0.0515	0.0	3.40E-06	1.41E-04	1.18E-03	4.50E-03	1.10E-02
12	9	4	5	16394.55	1	5625.79	1.7775	0.0614	0.0	4.19E-07	2.29E-05	2.27E-04	9.69E-04	2.57E-03
10	7	32	33	16461.06	1	5626.66	1.7773	0.0326	0.0	7.38E-06	2.54E-04	1.91E-03	6.75E-03	1.57E-02
8	5	38	39	12953.84	2	5627.03	1.7771	0.0303	0.0	1.04E-06	1.54E-05	6.95E-05	1.76E-04	3.20E-04
3	0	87	88	14679.17	1	5627.06	1.7771	0.0303	0.0	4.30E-07	9.67E-06	5.62E-05	1.68E-04	3.44E-04
12	9	69	68	26488.41	1	5627.20	1.7771	0.0303	0.0	0.0	2.05E-06	6.52E-05	6.04E-04	2.79E-03
11	8	85	84	28822.53	1	5627.38	1.7770	0.0303	0.0	0.0	4.15E-07	1.85E-05	2.14E-04	1.16E-03
6	3	67	68	14989.13	1	5627.72	1.7769	0.0303	0.0	6.53E-06	1.58E-04	9.60E-04	2.95E-03	6.19E-03
5	2	74	75	14818.89	1	5628.22	1.7768	0.0303	0.0	3.88E-06	9.01E-05	5.34E-04	1.62E-03	3.35E-03
5	2	64	65	11808.00	2	5628.43	1.7767	0.0303	0.0	6.65E-07	7.49E-06	2.87E-05	6.49E-05	1.10E-04
9	6	42	43	15880.58	1	5628.93	1.7765	0.0303	0.0	1.01E-05	3.02E-04	2.08E-03	6.97E-03	1.56E-02
10	7	97	96	30677.52	1	5629.00	1.7765	0.0303	0.0	0.0	1.09E-07	6.33E-06	8.77E-05	5.39E-04
6	3	56	57	12065.10	2	5629.27	1.7764	0.0303	0.0	1.01E-06	1.21E-05	4.80E-05	1.11E-04	1.91E-04
12	9	3	4	18376.90	1	5629.74	1.7763	0.0611	0.0	3.43E-07	1.87E-05	1.85E-04	7.88E-04	2.09E-03
8	5	51	52	15462.93	1	5629.76	1.7763	0.0303	0.0	1.08E-05	2.94E-04	1.91E-03	6.15E-03	1.33E-02
3	0	78	79	11391.37	2	5630.70	1.7760	0.0303	0.0	1.00E-07	1.02E-06	3.68E-06	8.00E-06	1.31E-05
11	8	19	20	17155.96	1	5631.08	1.7759	0.0535	0.0	3.51E-06	1.43E-04	1.19E-03	4.49E-03	1.09E-02
12	9	68	67	26256.09	1	5631.23	1.7758	0.0303	0.0	0.0	2.36E-06	7.25E-05	6.57E-04	2.99E-03
9	6	107	106	32285.97	1	5631.65	1.7757	0.0303	0.0	0.0	0.0	2.07E-06	3.35E-05	2.30E-04
4	1	71	72	11515.21	2	5631.87	1.7756	0.0303	0.0	3.57E-07	3.74E-06	1.38E-05	3.03E-05	5.00E-05
7	4	59	60	15112.37	1	5632.00	1.7756	0.0303	0.0	9.78E-06	2.44E-04	1.51E-03	4.69E-03	9.93E-03
7	4	47	48	12370.66	2	5632.07	1.7755	0.0303	0.0	1.25E-06	1.61E-05	6.70E-05	1.60E-04	2.80E-04
8	5	116	115	33834.87	1	5632.71	1.7753	0.0303	0.0	0.0	0.0	6.69E-07	1.25E-05	9.57E-05
11	8	84	83	28537.65	1	5633.23	1.7752	0.0303	0.0	0.0	4.99E-07	2.13E-05	2.40E-04	1.27E-03
10	7	31	32	16343.14	1	5633.53	1.7751	0.0331	0.0	8.07E-06	2.70E-04	1.99E-03	6.98E-03	1.61E-02
12	9	2	3	18362.78	1	5633.58	1.7751	0.0609	0.0	2.63E-07	1.43E-05	1.41E-04	5.99E-04	1.59E-03
8	5	37	38	12818.19	2	5634.17	1.7749	0.0303	0.0	1.16E-06	1.66E-05	7.37E-05	1.84E-04	3.32E-04
12	9	67	66	26026.96	1	5635.15	1.7746	0.0303	0.0	0.0	2.71E-06	8.05E-05	7.13E-04	3.19E-03
7	4	124	123	35234.96	1	5635.22	1.7746	0.0303	0.0	0.0	0.0	2.20E-07	4.71E-06	3.96E-05
4	1	80	81	14524.67	1	5635.63	1.7744	0.0303	0.0	2.03E-06	4.40E-05	2.50E-04	7.35E-04	1.49E-03
10	7	96	95	30353.71	1	5636.23	1.7742	0.0303	0.0	0.0	1.34E-07	7.44E-06	9.99E-05	6.01E-04
11	8	18	19	17084.85	1	5636.61	1.7741	0.0552	0.0	3.60E-06	1.44E-04	1.18E-03	4.45E-03	1.08E-02
9	6	41	42	15726.23	1	5636.83	1.7740	0.0303	0.0	1.15E-05	3.32E-04	2.24E-03	7.39E-03	1.63E-02
12	9	1	2	18352.19	1	5637.32	1.7739	0.0606	0.0	1.79E-07	9.68E-06	9.54E-05	4.05E-04	1.07E-03
5	2	63	64	11579.50	2	5638.03	1.7737	0.0303	0.0	8.20E-07	8.73E-06	3.24E-05	7.17E-05	1.19E-04
6	3	55	56	11865.33	2	5638.12	1.7736	0.0303	0.0	1.21E-06	1.38E-05	5.34E-05	1.22E-04	2.06E-04
6	3	66	67	14742.56	1	5638.15	1.7736	0.0303	0.0	8.20E-06	1.87E-04	1.10E-03	3.29E-03	6.79E-03
8	5	50	51	15275.54	1	5638.58	1.7735	0.0303	0.0	1.28E-05	3.33E-04	2.10E-03	6.65E-03	1.42E-02
12	9	66	65	25801.04	1	5638.96	1.7734	0.0303	0.0	0.0	3.10E-06	8.91E-05	7.73E-04	3.40E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	8	83	82	28255.82	1	5638.97	1.7734	0.0303	0.0	0.0	5.97E-07	2.45E-05	2.69E-04	1.40E-03
5	2	73	74	14546.17	1	5639.35	1.7733	0.0303	0.0	5.00E-06	1.09E-04	6.20E-04	1.83E-03	3.72E-03
3	0	86	87	14357.63	1	5639.46	1.7732	0.0303	0.0	5.83E-07	1.21E-05	6.73E-05	1.95E-04	3.91E-04
9	6	106	105	31930.02	1	5640.05	1.7730	0.0303	0.0	0.0	0.0	2.49E-06	3.89E-05	2.61E-04
7	4	46	47	12202.98	2	5640.07	1.7730	0.0303	0.0	1.45E-06	1.79E-05	7.28E-05	1.71E-04	2.96E-04
10	7	30	31	16228.73	1	5640.31	1.7730	0.0335	0.0	8.78E-06	2.86E-04	2.08E-03	7.19E-03	1.64E-02
12	9	0	1	18345.12	1	5640.96	1.7727	0.0603	0.0	9.06E-08	4.90E-06	4.82E-05	2.05E-04	5.41E-04
8	5	36	37	12685.95	2	5641.21	1.7727	0.0308	0.0	1.29E-06	1.79E-05	7.80E-05	1.92E-04	3.44E-04
3	0	77	78	11112.08	2	5641.61	1.7725	0.0303	0.0	1.30E-07	1.24E-06	4.30E-06	9.09E-06	1.46E-05
7	4	58	59	14895.39	1	5641.63	1.7725	0.0303	0.0	1.19E-05	2.83E-04	1.69E-03	5.16E-03	1.08E-02
11	8	17	18	17017.28	1	5642.04	1.7724	0.0568	0.0	3.68E-06	1.45E-04	1.18E-03	4.39E-03	1.06E-02
4	1	70	71	11261.30	2	5642.13	1.7724	0.0303	0.0	4.51E-07	4.45E-06	1.58E-05	3.39E-05	5.51E-05
8	5	115	114	33450.32	1	5642.16	1.7724	0.0303	0.0	0.0	0.0	8.18E-07	1.48E-05	1.10E-04
12	9	65	64	25578.32	1	5642.65	1.7722	0.0303	0.0	0.0	3.53E-06	9.84E-05	8.36E-04	3.62E-03
10	7	95	94	30032.83	1	5643.35	1.7720	0.0303	0.0	0.0	1.65E-07	8.73E-06	1.14E-04	6.69E-04
11	8	82	81	27977.05	1	5644.59	1.7716	0.0303	0.0	0.0	7.14E-07	2.81E-05	3.00E-04	1.53E-03
9	6	40	41	15575.37	1	5644.64	1.7716	0.0303	0.0	1.30E-05	3.63E-04	2.40E-03	7.81E-03	1.71E-02
7	4	123	122	34825.16	1	5645.62	1.7713	0.0303	0.0	0.0	0.0	2.71E-07	5.59E-06	4.57E-05
12	9	64	63	25358.84	1	5646.23	1.7711	0.0303	0.0	0.0	4.02E-06	1.08E-04	9.02E-04	3.85E-03
6	3	54	55	11668.92	2	5646.88	1.7709	0.0303	0.0	1.45E-06	1.58E-05	5.92E-05	1.32E-04	2.21E-04
10	7	29	30	16117.86	1	5646.98	1.7709	0.0340	0.0	9.51E-06	3.02E-04	2.15E-03	7.38E-03	1.67E-02
8	5	49	50	15091.63	1	5647.30	1.7708	0.0303	0.0	1.51E-05	3.75E-04	2.31E-03	7.18E-03	1.52E-02
4	1	79	80	14229.17	1	5647.35	1.7707	0.0303	0.0	2.68E-06	5.41E-05	2.94E-04	8.42E-04	1.68E-03
11	8	16	17	16953.25	1	5647.36	1.7707	0.0585	0.0	3.72E-06	1.44E-04	1.16E-03	4.32E-03	1.04E-02
5	2	62	63	11354.33	2	5647.55	1.7707	0.0303	0.0	1.01E-06	1.02E-05	3.65E-05	7.91E-05	1.29E-04
12	9	1	0	18341.60	1	5647.91	1.7706	0.0603	0.0	9.26E-08	5.01E-06	4.93E-05	2.09E-04	5.52E-04
7	4	45	46	12038.69	2	5647.97	1.7705	0.0303	0.0	1.67E-06	1.99E-05	7.89E-05	1.83E-04	3.13E-04
8	5	35	36	12557.12	2	5648.16	1.7705	0.0312	0.0	1.43E-06	1.93E-05	8.23E-05	2.00E-04	3.56E-04
9	6	105	104	31576.87	1	5648.32	1.7704	0.0303	0.0	0.0	4.52E-08	2.99E-06	4.51E-05	2.95E-04
6	3	65	66	14499.39	1	5648.48	1.7704	0.0303	0.0	1.02E-05	2.20E-04	1.25E-03	3.66E-03	7.43E-03
12	9	63	62	25142.58	1	5649.70	1.7700	0.0303	0.0	0.0	4.56E-06	1.19E-04	9.71E-04	4.09E-03
11	8	81	80	27701.36	1	5650.10	1.7699	0.0303	0.0	0.0	8.51E-07	3.22E-05	3.35E-04	1.68E-03
10	7	94	93	29714.89	1	5650.35	1.7698	0.0303	0.0	0.0	2.02E-07	1.02E-05	1.29E-04	7.43E-04
5	2	72	73	14276.81	1	5650.38	1.7698	0.0303	0.0	6.42E-06	1.31E-04	7.18E-04	2.06E-03	4.13E-03
7	4	57	58	14681.85	1	5651.16	1.7695	0.0303	0.0	1.45E-05	3.27E-04	1.90E-03	5.67E-03	1.17E-02
12	9	2	1	18345.12	1	5651.24	1.7695	0.0606	0.0	1.87E-07	1.01E-05	9.95E-05	4.22E-04	1.12E-03
8	5	114	113	33068.48	1	5651.49	1.7694	0.0303	0.0	0.0	0.0	1.00E-06	1.74E-05	1.26E-04
3	0	85	86	14039.36	1	5651.77	1.7694	0.0303	0.0	7.87E-07	1.52E-05	8.04E-05	2.26E-04	4.44E-04
4	1	69	70	11010.69	2	5652.30	1.7692	0.0303	0.0	5.69E-07	5.29E-06	1.81E-05	3.79E-05	6.06E-05
9	6	39	40	15428.02	1	5652.34	1.7692	0.0303	0.0	1.48E-05	3.97E-04	2.57E-03	8.23E-03	1.78E-02
3	0	76	77	10836.05	2	5652.43	1.7691	0.0303	0.0	1.68E-07	1.50E-06	5.00E-06	1.03E-05	1.63E-05
11	8	15	16	16892.75	1	5652.58	1.7691	0.0591	0.0	3.75E-06	1.43E-04	1.14E-03	4.22E-03	1.01E-02
12	9	62	61	24929.57	1	5653.05	1.7690	0.0303	0.0	0.0	5.15E-06	1.31E-04	1.04E-03	4.33E-03
10	7	28	29	16010.51	1	5653.56	1.7688	0.0359	0.0	1.03E-05	3.18E-04	2.24E-03	7.59E-03	1.71E-02
12	9	3	2	18352.19	1	5654.45	1.7685	0.0609	0.0	2.81E-07	1.53E-05	1.50E-04	6.38E-04	1.69E-03
8	5	34	35	12431.72	2	5655.02	1.7683	0.0317	0.0	1.58E-06	2.07E-05	8.66E-05	2.08E-04	3.67E-04
11	8	80	79	27428.76	1	5655.49	1.7682	0.0303	0.0	0.0	1.01E-06	3.68E-05	3.73E-04	1.84E-03
6	3	53	54	11475.88	2	5655.55	1.7682	0.0303	0.0	1.72E-06	1.79E-05	6.56E-05	1.44E-04	2.37E-04
7	4	44	45	11877.80	2	5655.79	1.7681	0.0303	0.0	1.92E-06	2.20E-05	8.54E-05	1.94E-04	3.30E-04
7	4	122	121	34417.95	1	5655.89	1.7681	0.0303	0.0	0.0	0.0	3.34E-07	6.62E-06	5.26E-05
8	5	48	49	14911.20	1	5655.93	1.7681	0.0303	0.0	1.78E-05	4.22E-04	2.53E-03	7.73E-03	1.61E-02
12	9	61	60	24719.80	1	5656.28	1.7679	0.0303	0.0	0.0	5.81E-06	1.43E-04	1.12E-03	4.58E-03
9	6	104	103	31226.56	1	5656.48	1.7679	0.0303	0.0	0.0	5.69E-08	3.57E-06	5.22E-05	3.33E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	61	62	11132.49	2	5656.97	1.7677	0.0303	0.0	1.23E-06	1.18E-05	4.10E-05	8.70E-05	1.40E-04
10	7	93	92	29399.89	1	5657.23	1.7677	0.0303	0.0	0.0	2.47E-07	1.19E-05	1.46E-04	8.24E-04
12	9	4	3	18362.78	1	5657.56	1.7675	0.0611	0.0	3.76E-07	2.04E-05	2.01E-04	8.56E-04	2.27E-03
11	8	14	15	16635.81	1	5657.70	1.7675	0.0597	0.0	3.74E-06	1.41E-04	1.12E-03	4.10E-03	9.78E-03
6	3	64	65	14259.63	1	5658.72	1.7672	0.0303	0.0	1.28E-05	2.59E-04	1.42E-03	4.07E-03	8.12E-03
4	1	78	79	13937.00	1	5658.98	1.7671	0.0303	0.0	3.53E-06	6.63E-05	3.46E-04	9.62E-04	1.88E-03
12	9	60	59	24513.30	1	5659.41	1.7670	0.0303	0.0	0.0	6.54E-06	1.56E-04	1.20E-03	4.83E-03
9	6	38	39	15284.19	1	5659.95	1.7668	0.0303	0.0	1.66E-05	4.32E-04	2.74E-03	8.66E-03	1.86E-02
10	7	27	28	15906.70	1	5660.03	1.7668	0.0379	0.0	1.11E-05	3.34E-04	2.32E-03	7.78E-03	1.74E-02
12	9	5	4	18376.90	1	5660.57	1.7666	0.0614	0.0	4.68E-07	2.55E-05	2.53E-04	1.08E-03	2.85E-03
7	4	56	57	14471.76	1	5660.60	1.7666	0.0303	0.0	1.76E-05	3.77E-04	2.12E-03	6.22E-03	1.26E-02
8	5	113	112	32689.35	1	5660.69	1.7666	0.0303	0.0	0.0	0.0	1.22E-06	2.05E-05	1.45E-04
11	8	79	78	27159.25	1	5660.76	1.7665	0.0303	0.0	0.0	1.20E-06	4.20E-05	4.15E-04	2.00E-03
5	2	71	72	14010.82	1	5661.31	1.7664	0.0303	0.0	8.22E-06	1.57E-04	8.30E-04	2.32E-03	4.57E-03
8	5	33	34	12309.75	2	5661.79	1.7662	0.0321	0.0	1.74E-06	2.21E-05	9.09E-05	2.16E-04	3.77E-04
4	1	68	69	10763.38	2	5662.39	1.7660	0.0303	0.0	7.15E-07	6.26E-06	2.07E-05	4.23E-05	6.65E-05
12	9	59	58	24310.07	1	5662.42	1.7660	0.0303	0.0	0.0	7.37E-06	1.71E-04	1.29E-03	5.12E-03
11	8	13	14	16782.41	1	5662.72	1.7659	0.0604	0.0	3.71E-06	1.38E-04	1.09E-03	3.96E-03	9.41E-03
3	0	75	76	10563.28	2	5663.16	1.7658	0.0303	0.0	2.17E-07	1.81E-06	5.81E-06	1.17E-05	1.81E-05
12	9	6	5	18394.55	1	5663.47	1.7657	0.0617	0.0	5.59E-07	3.06E-05	3.03E-04	1.29E-03	3.43E-03
7	4	43	44	11720.32	2	5663.51	1.7657	0.0303	0.0	2.21E-06	2.43E-05	9.21E-05	2.07E-04	3.47E-04
3	0	84	85	13724.39	1	5663.99	1.7655	0.0303	0.0	1.06E-06	1.89E-05	9.59E-05	2.61E-04	5.03E-04
10	7	92	91	29087.87	1	5663.99	1.7655	0.0303	0.0	0.0	3.01E-07	1.39E-05	1.65E-04	9.12E-04
6	3	52	53	11286.22	2	5664.13	1.7655	0.0303	0.0	2.05E-06	2.03E-05	7.24E-05	1.56E-04	2.54E-04
8	5	47	48	14734.27	1	5664.45	1.7654	0.0303	0.0	2.08E-05	4.73E-04	2.77E-03	8.31E-03	1.71E-02
9	6	103	102	30879.08	1	5664.52	1.7654	0.0303	0.0	0.0	7.14E-08	4.27E-06	6.03E-05	3.76E-04
12	9	58	57	24110.11	1	5665.32	1.7651	0.0303	0.0	0.0	8.29E-06	1.87E-04	1.38E-03	5.42E-03
11	8	78	77	26892.85	1	5665.92	1.7649	0.0303	0.0	0.0	1.42E-06	4.78E-05	4.60E-04	2.18E-03
7	4	121	120	34013.35	1	5666.03	1.7649	0.0303	0.0	0.0	0.0	4.10E-07	7.82E-06	6.05E-05
12	9	7	6	18415.73	1	5666.26	1.7648	0.0620	0.0	6.46E-07	3.55E-05	3.53E-04	1.51E-03	4.01E-03
5	2	60	61	10914.00	2	5666.31	1.7648	0.0303	0.0	1.50E-06	1.36E-05	4.60E-05	9.56E-05	1.52E-04
10	7	26	27	15806.43	1	5666.41	1.7648	0.0398	0.0	1.19E-05	3.50E-04	2.39E-03	7.96E-03	1.77E-02
9	6	37	38	15143.88	1	5667.46	1.7645	0.0303	0.0	1.87E-05	4.69E-04	2.91E-03	9.09E-03	1.93E-02
11	8	12	13	16732.56	1	5667.63	1.7644	0.0610	0.0	3.64E-06	1.34E-04	1.05E-03	3.80E-03	9.00E-03
12	9	57	56	23913.44	1	5668.10	1.7643	0.0303	0.0	4.52E-06	9.30E-06	2.04E-04	1.48E-03	5.72E-03
8	5	32	33	12191.21	2	5668.46	1.7641	0.0326	0.0	1.90E-06	2.35E-05	9.51E-05	2.23E-04	3.87E-04
6	3	63	64	14023.30	1	5668.86	1.7640	0.0303	0.0	1.58E-05	3.04E-04	1.61E-03	4.51E-03	8.86E-03
12	9	8	7	18440.43	1	5668.95	1.7640	0.0623	0.0	7.28E-07	4.03E-05	4.03E-04	1.72E-03	4.59E-03
8	5	112	111	32312.95	1	5669.78	1.7637	0.0303	0.0	0.0	0.0	1.48E-06	2.41E-05	1.66E-04
7	4	55	56	14265.13	1	5669.94	1.7637	0.0303	0.0	2.13E-05	4.33E-04	2.37E-03	6.80E-03	1.36E-02
4	1	77	78	13648.17	1	5670.51	1.7635	0.0303	0.0	4.62E-06	8.11E-05	4.06E-04	1.10E-03	2.10E-03
10	7	91	90	28778.82	1	5670.63	1.7635	0.0303	0.0	0.0	3.66E-07	1.62E-05	1.87E-04	1.01E-03
12	9	56	55	23720.06	1	5670.77	1.7634	0.0303	0.0	5.30E-08	1.04E-05	2.22E-04	1.58E-03	6.03E-03
11	8	77	76	26629.57	1	5670.96	1.7634	0.0303	0.0	0.0	1.67E-06	5.43E-05	5.10E-04	2.38E-03
7	4	42	43	11566.25	2	5671.14	1.7633	0.0303	0.0	2.52E-06	2.67E-05	9.91E-05	2.19E-04	3.64E-04
12	9	9	8	18468.66	1	5671.53	1.7632	0.0624	0.0	8.06E-07	4.49E-05	4.50E-04	1.93E-03	5.16E-03
5	2	70	71	13748.23	1	5672.15	1.7630	0.0303	0.0	1.05E-05	1.88E-04	9.58E-04	2.62E-03	5.05E-03
4	1	67	68	10519.39	2	5672.38	1.7629	0.0303	0.0	8.95E-07	7.40E-06	2.36E-05	4.72E-05	7.28E-05
9	6	102	101	30534.46	1	5672.43	1.7629	0.0303	0.0	0.0	8.94E-08	5.09E-06	6.95E-05	4.23E-04
11	8	11	12	16686.27	1	5672.44	1.7629	0.0617	0.0	3.55E-06	1.29E-04	1.00E-03	3.62E-03	8.54E-03
6	3	51	52	11099.95	2	5672.62	1.7629	0.0303	0.0	2.42E-06	2.30E-05	7.97E-05	1.69E-04	2.71E-04
10	7	25	26	15709.71	1	5672.68	1.7628	0.0418	0.0	1.27E-05	3.65E-04	2.46E-03	8.11E-03	1.79E-02
8	5	46	47	14560.82	1	5672.88	1.7628	0.0303	0.0	2.42E-05	5.29E-04	3.02E-03	8.91E-03	1.82E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	9	55	54	23529.98	1	5673.33	1.7626	0.0303	0.0	6.19E-08	1.16E-05	2.41E-04	1.68E-03	6.34E-03
3	0	74	75	10293.79	2	5673.81	1.7625	0.0303	0.0	2.79E-07	2.19E-06	6.74E-06	1.32E-05	2.01E-05
12	9	10	9	18500.42	1	5674.01	1.7624	0.0624	0.0	8.78E-07	4.93E-05	4.97E-04	2.14E-03	5.71E-03
9	6	36	37	15007.09	1	5674.87	1.7622	0.0308	0.0	2.09E-05	5.07E-04	3.09E-03	9.52E-03	2.00E-02
8	5	31	32	12076.10	2	5675.03	1.7621	0.0331	0.0	2.07E-06	2.49E-05	9.92E-05	2.31E-04	3.96E-04
5	2	59	60	10698.87	2	5675.55	1.7619	0.0303	0.0	1.82E-06	1.57E-05	5.15E-05	1.05E-04	1.64E-04
12	9	54	53	23343.22	1	5675.78	1.7619	0.0303	0.0	7.20E-08	1.29E-05	2.61E-04	1.79E-03	6.66E-03
11	8	76	75	26369.43	1	5675.88	1.7618	0.0303	0.0	0.0	1.97E-06	6.15E-05	5.64E-04	2.58E-03
7	4	120	119	33611.38	1	5676.06	1.7618	0.0303	0.0	0.0	0.0	5.03E-07	9.23E-06	6.95E-05
3	0	83	84	13412.71	1	5676.12	1.7618	0.0303	0.0	1.42E-06	2.36E-05	1.14E-04	3.02E-04	5.69E-04
12	9	11	10	18535.70	1	5676.38	1.7617	0.0625	0.0	9.43E-07	5.34E-05	5.41E-04	2.34E-03	6.26E-03
11	8	10	11	16643.52	1	5677.15	1.7614	0.0625	0.0	3.42E-06	1.23E-04	9.48E-04	3.42E-03	8.04E-03
10	7	90	89	28472.78	1	5677.16	1.7614	0.0303	0.0	0.0	4.43E-07	1.87E-05	2.10E-04	1.11E-03
12	9	53	52	23159.78	1	5678.11	1.7611	0.0303	0.0	8.34E-08	1.43E-05	2.82E-04	1.90E-03	6.98E-03
12	9	12	11	18574.50	1	5678.64	1.7610	0.0617	0.0	1.00E-06	5.73E-05	5.83E-04	2.53E-03	6.79E-03
7	4	41	42	11415.59	2	5678.68	1.7610	0.0303	0.0	2.86E-06	2.93E-05	1.06E-04	2.32E-04	3.81E-04
8	5	111	110	31939.30	1	5678.75	1.7610	0.0303	0.0	0.0	0.0	1.80E-06	2.82E-05	1.89E-04
10	7	24	25	15616.54	1	5678.85	1.7609	0.0437	0.0	1.35E-05	3.79E-04	2.52E-03	8.23E-03	1.81E-02
6	3	62	63	13750.39	1	5678.91	1.7609	0.0303	4.35E-08	1.96E-05	3.56E-04	1.82E-03	4.99E-03	9.65E-03
7	4	54	55	14061.97	1	5679.18	1.7608	0.0303	4.99E-08	2.56E-05	4.97E-04	2.64E-03	7.43E-03	1.46E-02
9	6	101	100	30192.72	1	5680.23	1.7605	0.0303	0.0	0.0	1.12E-07	6.05E-06	8.00E-05	4.76E-04
12	9	52	51	22979.66	1	5680.33	1.7605	0.0303	0.0	9.63E-08	1.58E-05	3.04E-04	2.01E-03	7.31E-03
11	8	75	74	26112.42	1	5680.69	1.7604	0.0303	0.0	0.0	2.31E-06	6.96E-05	6.22E-04	2.80E-03
12	9	13	12	18616.82	1	5680.80	1.7603	0.0610	0.0	1.05E-06	6.08E-05	6.23E-04	2.71E-03	7.30E-03
6	3	50	51	10917.06	2	5681.02	1.7602	0.0303	0.0	2.85E-06	2.60E-05	8.76E-05	1.82E-04	2.89E-04
8	5	45	46	14390.88	1	5681.22	1.7602	0.0303	4.67E-08	2.81E-05	5.89E-04	3.28E-03	9.54E-03	1.92E-02
8	5	30	31	11964.44	2	5681.52	1.7601	0.0335	0.0	2.25E-06	2.63E-05	1.03E-04	2.37E-04	4.05E-04
11	8	9	10	16604.34	1	5681.75	1.7600	0.0624	0.0	3.25E-06	1.16E-04	8.89E-04	3.19E-03	7.49E-03
4	1	76	77	13362.69	1	5681.95	1.7600	0.0303	0.0	6.03E-06	9.89E-05	4.75E-04	1.25E-03	2.35E-03
9	6	35	36	14873.83	1	5682.18	1.7599	0.0312	0.0	2.32E-05	5.47E-04	3.27E-03	9.94E-03	2.07E-02
4	1	66	67	10278.73	2	5682.28	1.7599	0.0303	0.0	1.12E-06	8.71E-06	2.68E-05	5.25E-05	7.97E-05
12	9	51	50	22802.87	1	5682.44	1.7598	0.0303	0.0	1.11E-07	1.75E-05	3.27E-04	2.13E-03	7.63E-03
12	9	14	13	18662.66	1	5682.85	1.7597	0.0604	0.0	1.10E-06	6.40E-05	6.60E-04	2.89E-03	7.80E-03
5	2	69	70	13489.02	1	5682.90	1.7597	0.0303	0.0	1.33E-05	2.25E-04	1.10E-03	2.94E-03	5.57E-03
10	7	89	88	28169.73	1	5683.57	1.7595	0.0303	0.0	0.0	5.40E-07	2.19E-05	2.38E-04	1.23E-03
3	0	73	74	10027.60	2	5684.37	1.7592	0.0303	0.0	3.58E-07	2.63E-06	7.80E-06	1.49E-05	2.22E-05
12	9	50	49	22629.43	1	5684.44	1.7592	0.0303	0.0	1.27E-07	1.92E-05	3.50E-04	2.24E-03	7.95E-03
5	2	58	59	10487.10	2	5684.71	1.7591	0.0303	0.0	2.22E-06	1.82E-05	5.77E-05	1.15E-04	1.77E-04
12	9	15	14	18712.02	1	5684.80	1.7591	0.0597	0.0	1.13E-06	6.68E-05	6.94E-04	3.05E-03	8.27E-03
10	7	23	24	15526.91	1	5684.92	1.7590	0.0457	0.0	1.42E-05	3.92E-04	2.57E-03	8.33E-03	1.82E-02
11	8	74	73	25858.57	1	5685.39	1.7589	0.0303	0.0	0.0	2.70E-06	7.85E-05	6.85E-04	3.03E-03
7	4	119	118	33212.05	1	5685.97	1.7587	0.0303	0.0	0.0	0.0	6.22E-07	1.10E-05	8.04E-05
6	3	127	126	34695.28	1	5686.10	1.7587	0.0303	0.0	0.0	0.0	1.81E-07	3.70E-06	2.99E-05
7	4	40	41	11268.36	2	5686.13	1.7587	0.0303	0.0	3.24E-06	3.21E-05	1.14E-04	2.45E-04	3.98E-04
11	8	8	9	16568.71	1	5686.26	1.7586	0.0624	0.0	3.05E-06	1.08E-04	8.23E-04	2.95E-03	6.90E-03
12	9	49	48	22459.34	1	5686.32	1.7586	0.0303	0.0	1.45E-07	2.11E-05	3.75E-04	2.36E-03	8.27E-03
12	9	16	15	18764.90	1	5686.63	1.7585	0.0591	0.0	1.16E-06	6.93E-05	7.25E-04	3.20E-03	8.72E-03
8	5	110	109	31568.43	1	5687.59	1.7582	0.0303	0.0	0.0	0.0	2.19E-06	3.30E-05	2.16E-04
9	6	100	99	29853.86	1	5687.91	1.7581	0.0303	0.0	0.0	1.39E-07	7.18E-06	9.19E-05	5.35E-04
8	5	29	30	11856.22	2	5687.91	1.7581	0.0340	0.0	2.43E-06	2.77E-05	1.07E-04	2.43E-04	4.12E-04
12	9	48	47	22292.60	1	5688.09	1.7581	0.0303	0.0	1.65E-07	2.30E-05	4.00E-04	2.48E-03	8.59E-03
3	0	82	83	13104.36	1	5688.15	1.7580	0.0303	0.0	1.90E-06	2.93E-05	1.36E-04	3.48E-04	6.43E-04
7	4	53	54	13862.29	1	5688.33	1.7580	0.0303	6.58E-08	3.07E-05	5.68E-04	2.93E-03	8.10E-03	1.57E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	9	17	16	16821.29	1	5688.36	1.7580	0.0585	0.0	1.18E-06	7.14E-05	7.53E-04	3.35E-03	9.14E-03
6	3	61	62	13560.93	1	5688.86	1.7578	0.0303	5.98E-08	2.41E-05	4.15E-04	2.05E-03	5.51E-03	1.05E-02
6	3	49	50	10737.57	2	5689.33	1.7577	0.0303	0.0	3.35E-06	2.92E-05	9.60E-05	1.96E-04	3.08E-04
9	6	34	35	14744.11	1	5689.39	1.7577	0.0317	0.0	2.58E-05	5.88E-04	3.45E-03	1.04E-02	2.14E-02
8	5	44	45	14224.45	1	5689.45	1.7576	0.0303	5.85E-08	3.25E-05	6.54E-04	3.56E-03	1.02E-02	2.03E-02
12	9	47	46	22129.23	1	5689.75	1.7575	0.0303	0.0	1.87E-07	2.51E-05	4.26E-04	2.60E-03	8.91E-03
10	7	88	87	27869.71	1	5689.86	1.7575	0.0303	0.0	0.0	6.56E-07	2.54E-05	2.69E-04	1.37E-03
11	8	73	72	25607.89	1	5689.96	1.7575	0.0303	0.0	0.0	3.16E-06	8.84E-05	7.53E-04	3.27E-03
12	9	18	17	18881.18	1	5689.99	1.7575	0.0568	0.0	1.19E-06	7.31E-05	7.78E-04	3.47E-03	9.53E-03
11	8	7	8	16536.64	1	5690.65	1.7573	0.0623	0.0	2.82E-06	9.90E-05	7.51E-04	2.68E-03	6.26E-03
10	7	22	23	15440.84	1	5690.89	1.7572	0.0476	0.0	1.50E-05	4.03E-04	2.62E-03	8.40E-03	1.82E-02
12	9	46	45	21969.23	1	5691.30	1.7571	0.0303	0.0	2.11E-07	2.73E-05	4.52E-04	2.72E-03	9.21E-03
12	9	19	18	18944.59	1	5691.50	1.7570	0.0552	0.0	1.19E-06	7.44E-05	7.99E-04	3.59E-03	9.89E-03
4	1	65	66	10041.41	2	5692.10	1.7568	0.0303	0.0	1.39E-06	1.02E-05	3.06E-05	5.82E-05	8.71E-05
12	9	45	44	21812.60	1	5692.74	1.7566	0.0303	0.0	2.38E-07	2.95E-05	4.79E-04	2.84E-03	9.51E-03
12	9	20	19	19011.50	1	5692.91	1.7566	0.0535	0.0	1.19E-06	7.54E-05	8.17E-04	3.70E-03	1.02E-02
4	1	75	76	13080.58	1	5693.30	1.7565	0.0303	0.0	7.85E-06	1.20E-04	5.55E-04	1.42E-03	2.62E-03
7	4	39	40	11124.55	2	5693.49	1.7564	0.0303	0.0	3.66E-06	3.50E-05	1.22E-04	2.58E-04	4.15E-04
5	2	66	69	13233.23	1	5693.56	1.7564	0.0303	4.89E-08	1.69E-05	2.68E-04	1.27E-03	3.29E-03	6.13E-03
5	2	57	58	10278.70	2	5693.78	1.7563	0.0303	0.0	2.69E-06	2.10E-05	6.46E-05	1.26E-04	1.92E-04
12	9	44	43	21659.36	1	5694.07	1.7562	0.0303	0.0	2.66E-07	3.19E-05	5.06E-04	2.95E-03	9.79E-03
8	5	28	29	11751.45	2	5694.20	1.7562	0.0359	0.0	2.63E-06	2.92E-05	1.11E-04	2.50E-04	4.21E-04
12	9	21	20	19081.91	1	5694.21	1.7562	0.0515	0.0	1.18E-06	7.59E-05	8.31E-04	3.79E-03	1.05E-02
11	8	72	71	25360.39	1	5694.43	1.7561	0.0303	0.0	0.0	3.68E-06	9.93E-05	8.26E-04	3.53E-03
3	0	72	73	9764.71	2	5694.84	1.7560	0.0303	0.0	4.57E-07	3.15E-06	9.01E-06	1.68E-05	2.46E-05
11	8	6	7	16508.13	1	5694.95	1.7559	0.0620	0.0	2.56E-06	8.91E-05	6.74E-04	2.40E-03	5.59E-03
12	9	43	42	21509.51	1	5695.28	1.7558	0.0303	0.0	2.97E-07	3.43E-05	5.33E-04	3.07E-03	1.01E-02
12	9	22	21	19155.82	1	5695.40	1.7558	0.0496	0.0	1.16E-06	7.61E-05	8.42E-04	3.86E-03	1.08E-02
9	6	99	98	29517.91	1	5695.47	1.7558	0.0303	0.0	0.0	1.73E-07	8.51E-06	1.05E-04	5.99E-04
7	4	118	117	32815.40	1	5695.75	1.7557	0.0303	0.0	0.0	0.0	7.67E-07	1.30E-05	9.29E-05
10	7	87	86	27572.73	1	5696.03	1.7556	0.0303	0.0	0.0	7.96E-07	2.96E-05	3.04E-04	1.51E-03
8	5	109	108	31200.33	1	5696.32	1.7555	0.0303	0.0	0.0	4.23E-08	2.65E-06	3.86E-05	2.46E-04
12	9	42	41	21363.06	1	5696.39	1.7555	0.0303	0.0	3.30E-07	3.69E-05	5.60E-04	3.18E-03	1.03E-02
12	9	23	22	19233.23	1	5696.49	1.7555	0.0476	0.0	1.13E-06	7.60E-05	8.50E-04	3.93E-03	1.10E-02
9	6	33	34	14617.93	1	5696.50	1.7555	0.0321	4.24E-08	2.84E-05	6.30E-04	3.63E-03	1.08E-02	2.20E-02
10	7	21	22	15358.34	1	5696.76	1.7554	0.0496	0.0	1.56E-05	4.13E-04	2.65E-03	8.44E-03	1.82E-02
6	3	126	125	34273.40	1	5696.82	1.7554	0.0303	0.0	0.0	0.0	2.26E-07	4.42E-06	3.48E-05
12	9	41	40	21220.01	1	5697.38	1.7552	0.0303	0.0	3.66E-07	3.94E-05	5.87E-04	3.28E-03	1.06E-02
7	4	52	53	13666.09	1	5697.38	1.7552	0.0303	8.64E-08	3.67E-05	6.47E-04	3.25E-03	8.80E-03	1.69E-02
12	9	24	23	19314.13	1	5697.46	1.7552	0.0457	0.0	1.10E-06	7.54E-05	8.54E-04	3.98E-03	1.12E-02
6	3	48	49	10561.49	2	5697.54	1.7551	0.0303	4.11E-08	3.92E-06	3.27E-05	1.05E-04	2.11E-04	3.27E-04
8	5	43	44	14061.54	1	5697.59	1.7551	0.0303	7.28E-08	3.74E-05	7.25E-04	3.85E-03	1.08E-02	2.14E-02
12	9	40	39	21080.37	1	5698.27	1.7549	0.0303	0.0	4.03E-07	4.21E-05	6.14E-04	3.39E-03	1.08E-02
12	9	25	24	19398.52	1	5698.33	1.7549	0.0437	0.0	1.07E-06	7.46E-05	8.55E-04	4.02E-03	1.14E-02
6	3	60	61	13334.93	1	5698.72	1.7548	0.0303	8.18E-08	2.96E-05	4.83E-04	2.31E-03	6.07E-03	1.14E-02
11	8	71	70	25116.07	1	5698.77	1.7548	0.0303	0.0	0.0	4.27E-06	1.11E-04	9.05E-04	3.81E-03
12	9	39	38	20944.14	1	5699.04	1.7547	0.0303	0.0	4.43E-07	4.47E-05	6.40E-04	3.49E-03	1.10E-02
12	9	26	25	19466.39	1	5699.09	1.7547	0.0418	0.0	1.03E-06	7.35E-05	8.53E-04	4.04E-03	1.15E-02
11	8	5	6	16483.18	1	5699.14	1.7547	0.0617	0.0	2.26E-06	7.84E-05	5.91E-04	2.10E-03	4.88E-03
12	9	38	37	20811.34	1	5699.70	1.7545	0.0303	0.0	4.84E-07	4.74E-05	6.65E-04	3.58E-03	1.12E-02
12	9	27	26	19577.75	1	5699.74	1.7545	0.0398	0.0	9.91E-07	7.21E-05	8.48E-04	4.05E-03	1.17E-02
3	0	81	82	12799.33	1	5700.10	1.7544	0.0303	0.0	2.53E-06	3.62E-05	1.61E-04	4.01E-04	7.24E-04
12	9	37	36	20681.96	1	5700.25	1.7543	0.0308	0.0	5.28E-07	5.00E-05	6.89E-04	3.66E-03	1.14E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
12	9	28	27	19672.59	1	5700.28	1.7543	0.0379	0.0	9.46E-07	7.04E-05	8.40E-04	4.05E-03	1.17E-02
8	5	27	28	11650.14	2	5700.40	1.7543	0.0379	0.0	2.83E-06	3.06E-05	1.15E-04	2.56E-04	4.28E-04
12	9	36	35	20556.01	1	5700.70	1.7542	0.0312	0.0	5.72E-07	5.26E-05	7.13E-04	3.74E-03	1.15E-02
12	9	29	28	19770.91	1	5700.72	1.7542	0.0359	0.0	8.99E-07	6.85E-05	8.29E-04	4.03E-03	1.18E-02
7	4	38	39	10984.19	2	5700.75	1.7542	0.0303	0.0	4.11E-06	3.80E-05	1.29E-04	2.71E-04	4.32E-04
12	9	35	34	20433.50	1	5701.03	1.7541	0.0317	0.0	6.18E-07	5.52E-05	7.34E-04	3.81E-03	1.16E-02
12	9	30	29	19872.69	1	5701.04	1.7541	0.0340	0.0	8.51E-07	6.65E-05	8.15E-04	4.01E-03	1.18E-02
12	9	34	33	20314.43	1	5701.25	1.7540	0.0321	0.0	6.65E-07	5.77E-05	7.55E-04	3.87E-03	1.17E-02
12	9	31	30	19977.94	1	5701.26	1.7540	0.0335	0.0	8.05E-07	6.45E-05	8.04E-04	3.99E-03	1.18E-02
12	9	33	32	20198.81	1	5701.36	1.7540	0.0326	0.0	7.12E-07	6.01E-05	7.73E-04	3.92E-03	1.18E-02
12	9	32	31	20086.64	1	5701.37	1.7540	0.0331	0.0	7.59E-07	6.24E-05	7.89E-04	3.96E-03	1.18E-02
4	1	64	65	9807.43	2	5701.83	1.7538	0.0303	0.0	1.72E-06	1.20E-05	3.45E-05	6.45E-05	9.49E-05
10	7	86	85	27278.79	1	5702.09	1.7537	0.0303	0.0	0.0	9.62E-07	3.43E-05	3.43E-04	1.67E-03
10	7	20	21	15279.39	1	5702.53	1.7536	0.0515	0.0	1.62E-05	4.22E-04	2.67E-03	8.45E-03	1.81E-02
5	2	56	57	10073.68	2	5702.75	1.7535	0.0303	4.29E-08	3.24E-06	2.41E-05	7.21E-05	1.38E-04	2.07E-04
9	6	98	97	25184.87	1	5702.91	1.7535	0.0303	0.0	0.0	2.15E-07	1.01E-05	1.21E-04	6.71E-04
11	8	70	69	24874.95	1	5703.01	1.7535	0.0303	0.0	0.0	4.94E-06	1.25E-04	9.89E-04	4.09E-03
11	8	4	5	16461.79	1	5703.23	1.7534	0.0614	0.0	1.94E-06	6.69E-05	5.02E-04	1.78E-03	4.14E-03
9	6	32	33	14495.30	1	5703.51	1.7533	0.0326	4.94E-08	3.12E-05	6.72E-04	3.80E-03	1.12E-02	2.27E-02
5	2	67	68	12980.85	1	5704.12	1.7531	0.0303	6.97E-08	2.13E-05	3.19E-04	1.45E-03	3.68E-03	6.74E-03
4	1	74	75	12801.85	1	5704.56	1.7530	0.0303	0.0	1.02E-05	1.46E-04	6.47E-04	1.61E-03	2.92E-03
8	5	108	107	30635.03	1	5704.92	1.7529	0.0303	0.0	0.0	5.39E-08	3.20E-06	4.50E-05	2.80E-04
3	0	71	72	9505.12	2	5705.22	1.7528	0.0303	0.0	5.81E-07	3.77E-06	1.04E-05	1.88E-05	2.72E-05
7	4	117	116	32421.43	1	5705.41	1.7527	0.0303	0.0	0.0	0.0	9.44E-07	1.55E-05	1.07E-04
8	5	42	43	13902.14	1	5705.62	1.7527	0.0303	9.02E-08	4.29E-05	8.00E-04	4.16E-03	1.15E-02	2.25E-02
6	3	47	48	10388.82	2	5705.67	1.7526	0.0303	5.20E-08	4.57E-06	3.66E-05	1.15E-04	2.26E-04	3.47E-04
7	4	51	52	13473.39	1	5706.33	1.7524	0.0303	1.13E-07	4.37E-05	7.35E-04	3.59E-03	9.55E-03	1.81E-02
8	5	26	27	11552.28	2	5706.51	1.7524	0.0398	0.0	3.02E-06	3.20E-05	1.18E-04	2.62E-04	4.34E-04
11	8	69	68	24637.04	1	5707.13	1.7522	0.0303	0.0	0.0	5.71E-06	1.39E-04	1.08E-03	4.39E-03
11	8	3	4	16443.96	1	5707.21	1.7522	0.0611	0.0	1.59E-06	5.46E-05	4.09E-04	1.45E-03	3.36E-03
6	3	125	124	33854.11	1	5707.43	1.7521	0.0303	0.0	0.0	0.0	2.80E-07	5.27E-06	4.03E-05
7	4	37	38	10847.26	2	5707.92	1.7520	0.0303	4.20E-08	4.60E-06	4.11E-05	1.38E-04	2.84E-04	4.49E-04
10	7	85	84	26587.90	1	5708.03	1.7519	0.0303	0.0	0.0	1.16E-06	3.96E-05	3.86E-04	1.84E-03
10	7	19	20	15204.01	1	5708.19	1.7519	0.0535	0.0	1.68E-05	4.28E-04	2.68E-03	8.42E-03	1.80E-02
6	3	59	60	13112.37	1	5708.48	1.7518	0.0303	1.11E-07	3.63E-05	5.60E-04	2.60E-03	6.68E-03	1.23E-02
9	6	97	96	28854.77	1	5710.23	1.7512	0.0303	0.0	0.0	2.65E-07	1.19E-05	1.38E-04	7.50E-04
9	6	31	32	14376.23	1	5710.42	1.7512	0.0331	5.72E-08	3.42E-05	7.14E-04	3.98E-03	1.15E-02	2.32E-02
11	8	2	3	16429.71	1	5711.09	1.7510	0.0609	0.0	1.22E-06	4.17E-05	3.12E-04	1.10E-03	2.56E-03
11	8	68	67	24402.34	1	5711.13	1.7510	0.0303	0.0	0.0	6.58E-06	1.55E-04	1.18E-03	4.71E-03
4	1	63	64	9576.80	2	5711.47	1.7509	0.0303	0.0	2.13E-06	1.40E-05	3.90E-05	7.14E-05	1.03E-04
5	2	55	56	9872.04	2	5711.64	1.7508	0.0303	5.69E-08	3.90E-06	2.76E-05	8.02E-05	1.51E-04	2.23E-04
3	0	80	81	12497.64	1	5711.95	1.7507	0.0303	0.0	3.36E-06	4.48E-05	1.90E-04	4.60E-04	8.16E-04
8	5	25	26	11457.88	2	5712.52	1.7505	0.0418	0.0	3.22E-06	3.34E-05	1.22E-04	2.67E-04	4.39E-04
8	5	107	106	30472.55	1	5713.41	1.7503	0.0303	0.0	0.0	6.84E-08	3.86E-06	5.24E-05	3.18E-04
8	5	41	42	13746.29	1	5713.56	1.7502	0.0303	1.11E-07	4.90E-05	8.81E-04	4.48E-03	1.22E-02	2.36E-02
6	3	46	47	10219.57	2	5713.70	1.7502	0.0303	6.54E-08	5.30E-06	4.08E-05	1.25E-04	2.42E-04	3.67E-04
10	7	18	19	15132.20	1	5713.76	1.7502	0.0552	0.0	1.72E-05	4.32E-04	2.68E-03	8.36E-03	1.77E-02
10	7	84	83	26700.09	1	5713.85	1.7501	0.0303	0.0	0.0	1.40E-06	4.58E-05	4.33E-04	2.03E-03
5	2	66	67	12731.90	1	5714.58	1.7499	0.0303	9.87E-08	2.68E-05	3.78E-04	1.66E-03	4.11E-03	7.40E-03
11	8	1	2	16419.01	1	5714.86	1.7498	0.0606	0.0	8.28E-07	2.82E-05	2.11E-04	7.44E-04	1.73E-03
7	4	116	115	32030.15	1	5714.95	1.7498	0.0303	0.0	0.0	0.0	1.16E-06	1.83E-05	1.24E-04
7	4	36	37	10713.77	2	5715.00	1.7498	0.0308	4.99E-08	5.13E-06	4.44E-05	1.46E-04	2.97E-04	4.65E-04
11	8	67	66	24170.88	1	5715.02	1.7498	0.0303	0.0	0.0	7.55E-06	1.72E-04	1.28E-03	5.03E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	50	51	13284.19	1	5715.19	1.7497	0.0303	1.46E-07	5.18E-05	8.33E-04	3.96E-03	1.03E-02	1.93E-02
3	0	70	71	9248.86	2	5715.51	1.7496	0.0303	0.0	7.37E-07	4.49E-06	1.19E-05	2.11E-05	2.99E-05
4	1	73	74	12526.50	1	5715.72	1.7496	0.0303	5.35E-08	1.32E-05	1.76E-04	7.52E-04	1.83E-03	3.25E-03
9	6	30	31	14260.70	1	5717.23	1.7491	0.0335	6.59E-08	3.72E-05	7.57E-04	4.14E-03	1.19E-02	2.38E-02
9	6	96	95	28527.61	1	5717.44	1.7490	0.0303	0.0	0.0	3.28E-07	1.40E-05	1.57E-04	8.36E-04
6	3	124	123	33437.40	1	5717.92	1.7489	0.0303	0.0	0.0	0.0	3.47E-07	6.27E-06	4.66E-05
6	3	58	59	12893.29	1	5718.15	1.7488	0.0303	1.51E-07	4.44E-05	6.50E-04	2.92E-03	7.36E-03	1.34E-02
8	5	24	25	11366.95	2	5718.44	1.7487	0.0437	0.0	3.41E-06	3.46E-05	1.29E-04	2.71E-04	4.43E-04
11	8	0	1	16411.88	1	5718.53	1.7487	0.0603	0.0	4.20E-07	1.43E-05	1.07E-04	3.76E-04	8.72E-04
11	8	66	65	23942.65	1	5718.79	1.7486	0.0303	0.0	4.17E-08	8.65E-06	1.91E-04	1.39E-03	5.37E-03
10	7	17	18	15063.96	1	5719.22	1.7485	0.0568	0.0	1.76E-05	4.34E-04	2.67E-03	8.26E-03	1.74E-02
10	7	83	82	26415.37	1	5719.56	1.7484	0.0303	0.0	0.0	1.68E-06	5.27E-05	4.86E-04	2.23E-03
5	2	54	55	9673.80	2	5720.43	1.7481	0.0303	7.49E-08	4.67E-06	3.16E-05	8.91E-05	1.64E-04	2.40E-04
4	1	62	63	9349.53	2	5721.02	1.7479	0.0303	4.90E-08	2.62E-06	1.63E-05	4.40E-05	7.88E-05	1.12E-04
8	5	40	41	13593.96	1	5721.40	1.7478	0.0303	1.36E-07	5.58E-05	9.66E-04	4.81E-03	1.29E-02	2.47E-02
6	3	45	46	10053.75	2	5721.64	1.7478	0.0303	8.19E-08	6.13E-06	4.54E-05	1.35E-04	2.59E-04	3.88E-04
8	5	106	105	30112.89	1	5721.77	1.7477	0.0303	0.0	0.0	8.67E-08	4.64E-06	6.10E-05	3.61E-04
7	4	35	36	10583.74	2	5721.98	1.7476	0.0312	5.90E-08	5.69E-06	4.78E-05	1.54E-04	3.10E-04	4.81E-04
11	8	65	64	23717.67	1	5722.45	1.7475	0.0303	0.0	5.03E-08	9.88E-06	2.11E-04	1.50E-03	5.73E-03
3	0	79	80	12199.31	1	5723.70	1.7471	0.0303	0.0	4.44E-06	5.51E-05	2.24E-04	5.28E-04	9.17E-04
9	6	29	30	14148.75	1	5723.94	1.7470	0.0340	7.54E-08	4.04E-05	7.99E-04	4.30E-03	1.22E-02	2.42E-02
7	4	49	50	13098.50	1	5723.95	1.7470	0.0303	1.89E-07	6.11E-05	9.41E-04	4.36E-03	1.12E-02	2.06E-02
8	5	23	24	11279.49	2	5724.27	1.7469	0.0457	0.0	3.60E-06	3.57E-05	1.27E-04	2.74E-04	4.45E-04
7	4	115	114	31641.59	1	5724.37	1.7469	0.0303	0.0	0.0	0.0	1.42E-06	2.16E-05	1.42E-04
9	6	95	94	28203.41	1	5724.52	1.7469	0.0303	0.0	0.0	4.03E-07	1.64E-05	1.79E-04	9.32E-04
10	7	16	17	14999.30	1	5724.58	1.7469	0.0585	0.0	1.78E-05	4.33E-04	2.64E-03	8.12E-03	1.71E-02
5	2	65	66	12466.39	1	5724.95	1.7467	0.0303	1.39E-07	3.36E-05	4.46E-04	1.89E-03	4.58E-03	8.11E-03
10	7	82	81	26133.74	1	5725.15	1.7467	0.0303	0.0	0.0	2.01E-06	6.06E-05	5.43E-04	2.45E-03
11	8	1	0	16408.32	1	5725.56	1.7466	0.0603	0.0	4.30E-07	1.46E-05	1.09E-04	3.85E-04	8.91E-04
3	0	69	70	8995.93	2	5725.72	1.7465	0.0303	0.0	9.31E-07	5.35E-06	1.37E-05	2.37E-05	3.30E-05
11	8	64	63	23495.95	1	5726.00	1.7464	0.0303	0.0	6.04E-08	1.13E-05	2.33E-04	1.62E-03	6.09E-03
4	1	72	73	12254.55	1	5726.79	1.7462	0.0303	7.85E-08	1.69E-05	2.13E-04	8.73E-04	2.07E-03	3.60E-03
6	3	57	58	12677.69	1	5727.72	1.7459	0.0303	2.05E-07	5.42E-05	7.53E-04	3.28E-03	8.10E-03	1.45E-02
6	3	123	122	33023.30	1	5728.28	1.7457	0.0303	0.0	0.0	0.0	4.29E-07	7.45E-06	5.39E-05
7	4	34	35	10457.16	2	5728.87	1.7455	0.0317	6.93E-08	6.29E-06	5.13E-05	1.62E-04	3.22E-04	4.96E-04
11	8	2	1	16411.88	1	5728.91	1.7455	0.0606	0.0	8.67E-07	2.95E-05	2.20E-04	7.77E-04	1.80E-03
5	2	53	54	9478.96	2	5729.14	1.7455	0.0303	9.82E-08	5.58E-06	3.60E-05	9.87E-05	1.79E-04	2.57E-04
8	5	39	40	13445.18	1	5729.15	1.7455	0.0303	1.65E-07	6.32E-05	1.06E-03	5.15E-03	1.37E-02	2.58E-02
11	8	63	62	23277.50	1	5729.43	1.7454	0.0303	0.0	7.24E-08	1.28E-05	2.56E-04	1.75E-03	6.47E-03
6	3	44	45	9891.36	2	5729.49	1.7454	0.0303	1.02E-07	7.07E-06	5.03E-05	1.46E-04	2.76E-04	4.09E-04
10	7	15	16	14938.22	1	5729.83	1.7453	0.0591	0.0	1.80E-05	4.30E-04	2.59E-03	7.94E-03	1.66E-02
8	5	22	23	11195.50	2	5730.00	1.7452	0.0476	0.0	3.78E-06	3.67E-05	1.29E-04	2.76E-04	4.46E-04
8	5	105	104	29756.08	1	5730.02	1.7452	0.0303	0.0	0.0	1.10E-07	5.58E-06	7.08E-05	4.09E-04
4	1	61	62	9125.64	2	5730.48	1.7451	0.0303	6.69E-08	3.21E-06	1.90E-05	4.96E-05	8.68E-05	1.22E-04
9	6	28	29	14040.35	1	5730.55	1.7450	0.0359	8.61E-08	4.38E-05	8.44E-04	4.48E-03	1.26E-02	2.48E-02
10	7	81	80	25855.22	1	5730.62	1.7450	0.0303	0.0	0.0	2.40E-06	6.96E-05	6.07E-04	2.69E-03
9	6	94	93	27882.18	1	5731.49	1.7447	0.0303	0.0	0.0	4.95E-07	1.92E-05	2.04E-04	1.04E-03
11	8	3	2	16419.01	1	5732.16	1.7445	0.0609	0.0	1.31E-06	4.46E-05	3.33E-04	1.17E-03	2.72E-03
7	4	48	49	12916.32	1	5732.61	1.7444	0.0303	2.43E-07	7.19E-05	1.06E-03	4.78E-03	1.21E-02	2.20E-02
11	8	62	61	23062.32	1	5732.75	1.7444	0.0303	0.0	8.63E-08	1.45E-05	2.81E-04	1.88E-03	6.86E-03
7	4	114	113	31255.77	1	5733.67	1.7441	0.0303	0.0	0.0	0.0	1.74E-06	2.55E-05	1.64E-04
8	5	90	89	23934.27	2	5733.95	1.7440	0.0303	0.0	0.0	5.17E-08	1.14E-06	8.23E-06	3.19E-05
10	7	14	15	14880 71	1	5734.99	1.7437	0.0597	0.0	1.80E-05	4.24E-04	2.54E-03	7.73E-03	1.61E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	64	65	12244.32	1	5735.23	1.7436	0.0303	1.95E-07	4.19E-05	5.26E-04	2.15E-03	5.09E-03	8.87E-03
11	8	4	3	16429.71	1	5735.31	1.7436	0.0611	0.0	1.74E-06	5.96E-05	4.46E-04	1.58E-03	3.66E-03
3	0	78	79	11904.34	1	5735.37	1.7436	0.0303	0.0	5.86E-06	6.77E-05	2.64E-04	6.05E-04	1.03E-03
8	5	21	22	11114.98	2	5735.63	1.7435	0.0496	0.0	3.94E-06	3.76E-05	1.31E-04	2.77E-04	4.46E-04
7	4	33	34	10334.05	2	5735.67	1.7435	0.0321	8.09E-08	6.93E-06	5.48E-05	1.70E-04	3.35E-04	5.11E-04
3	0	68	69	8746.33	2	5735.84	1.7434	0.0303	0.0	1.17E-06	6.34E-06	1.57E-05	2.65E-05	3.62E-05
11	8	61	60	22850.43	1	5735.96	1.7434	0.0303	0.0	1.03E-07	1.64E-05	3.08E-04	2.02E-03	7.26E-03
10	7	80	79	25579.62	1	5735.98	1.7434	0.0303	0.0	0.0	2.85E-06	7.96E-05	6.77E-04	2.94E-03
8	5	38	39	13299.95	1	5736.79	1.7431	0.0303	2.00E-07	7.13E-05	1.15E-03	5.49E-03	1.44E-02	2.69E-02
9	6	27	28	13935.53	1	5737.06	1.7431	0.0379	9.77E-08	4.72E-05	8.88E-04	4.64E-03	1.29E-02	2.52E-02
6	3	56	57	12465.57	1	5737.19	1.7430	0.0303	2.75E-07	6.58E-05	8.70E-04	3.68E-03	8.89E-03	1.57E-02
6	3	43	44	9732.40	2	5737.25	1.7430	0.0303	1.26E-07	8.11E-06	5.56E-05	1.58E-04	2.94E-04	4.30E-04
5	2	52	53	9287.54	2	5737.75	1.7428	0.0303	1.28E-07	6.64E-06	4.09E-05	1.09E-04	1.94E-04	2.76E-04
4	1	71	72	11986.02	1	5737.76	1.7428	0.0303	1.15E-07	2.17E-05	2.56E-04	1.01E-03	2.33E-03	3.99E-03
8	5	104	103	29402.14	1	5738.14	1.7427	0.0303	0.0	0.0	1.38E-07	6.69E-06	8.20E-05	4.63E-04
9	6	93	92	27563.95	1	5738.34	1.7427	0.0303	0.0	0.0	6.06E-07	2.25E-05	2.31E-04	1.15E-03
11	8	5	4	16443.96	1	5738.35	1.7427	0.0614	0.0	2.17E-06	7.46E-05	5.59E-04	1.98E-03	4.60E-03
6	3	122	121	32611.84	1	5738.52	1.7426	0.0303	0.0	0.0	0.0	5.30E-07	8.84E-06	6.22E-05
11	8	60	59	22641.83	1	5739.05	1.7424	0.0303	0.0	1.21E-07	1.84E-05	3.37E-04	2.16E-03	7.67E-03
8	5	89	88	23637.53	2	5739.79	1.7422	0.0303	0.0	0.0	6.27E-08	1.32E-06	9.30E-06	3.53E-05
4	1	60	61	8905.12	2	5739.85	1.7422	0.0303	9.09E-08	3.92E-06	2.20E-05	5.57E-05	9.54E-05	1.32E-04
10	7	13	14	14826.79	1	5740.04	1.7421	0.0604	0.0	1.78E-05	4.15E-04	2.46E-03	7.47E-03	1.55E-02
8	5	20	21	11037.95	2	5741.17	1.7418	0.0515	0.0	4.09E-06	3.83E-05	1.32E-04	2.77E-04	4.44E-04
7	4	47	48	12737.67	1	5741.17	1.7418	0.0303	3.10E-07	8.43E-05	1.19E-03	5.23E-03	1.30E-02	2.34E-02
10	7	79	78	25307.56	1	5741.22	1.7418	0.0303	0.0	0.0	3.39E-06	9.10E-05	7.53E-04	3.21E-03
11	8	6	5	16461.79	1	5741.28	1.7418	0.0617	0.0	2.59E-06	8.94E-05	6.72E-04	2.38E-03	5.54E-03
11	8	59	58	22436.54	1	5742.02	1.7415	0.0303	0.0	1.44E-07	2.08E-05	3.69E-04	2.32E-03	8.13E-03
7	4	32	33	10214.39	2	5742.37	1.7414	0.0326	9.39E-08	7.59E-06	5.84E-05	1.78E-04	3.46E-04	5.24E-04
7	4	113	112	30872.70	1	5742.84	1.7413	0.0303	0.0	0.0	0.0	2.13E-06	3.01E-05	1.88E-04
9	6	26	27	13834.28	1	5743.47	1.7411	0.0398	1.10E-07	5.07E-05	9.30E-04	4.79E-03	1.32E-02	2.56E-02
11	8	7	6	16483.18	1	5744.11	1.7409	0.0620	0.0	3.00E-06	1.04E-04	7.83E-04	2.78E-03	6.47E-03
8	5	37	38	13158.27	1	5744.33	1.7408	0.0303	2.41E-07	8.02E-05	1.25E-03	5.85E-03	1.51E-02	2.80E-02
11	8	58	57	22234.55	1	5744.89	1.7407	0.0303	0.0	1.70E-07	2.34E-05	4.04E-04	2.49E-03	8.60E-03
6	3	42	43	9576.89	2	5744.92	1.7407	0.0303	1.56E-07	9.28E-06	6.12E-05	1.70E-04	3.12E-04	4.52E-04
10	7	12	13	14776.45	1	5744.99	1.7406	0.0610	0.0	1.75E-05	4.03E-04	2.38E-03	7.17E-03	1.48E-02
9	6	92	91	27248.71	1	5745.07	1.7406	0.0303	0.0	0.0	7.40E-07	2.63E-05	2.62E-04	1.28E-03
5	2	63	64	12005.71	1	5745.41	1.7405	0.0303	2.72E-07	5.22E-05	6.18E-04	2.44E-03	5.65E-03	9.69E-03
8	5	88	87	23343.78	2	5745.52	1.7405	0.0303	0.0	0.0	7.58E-08	1.53E-06	1.05E-05	3.90E-05
3	0	67	68	8500.09	2	5745.87	1.7404	0.0303	4.14E-08	1.47E-06	7.50E-06	1.79E-05	2.95E-05	3.97E-05
8	5	103	102	29051.07	1	5746.15	1.7403	0.0303	0.0	0.0	1.74E-07	8.00E-06	9.49E-05	5.23E-04
5	2	51	52	9099.53	2	5746.28	1.7403	0.0303	1.66E-07	7.87E-06	4.63E-05	1.20E-04	2.10E-04	2.95E-04
10	7	78	77	25038.44	1	5746.35	1.7402	0.0303	0.0	0.0	4.02E-06	1.04E-04	8.37E-04	3.50E-03
6	3	55	56	12256.95	1	5746.57	1.7402	0.0303	3.69E-07	7.96E-05	1.00E-03	4.11E-03	9.74E-03	1.70E-02
8	5	19	20	10964.39	2	5746.62	1.7402	0.0535	0.0	4.22E-06	3.89E-05	1.32E-04	2.76E-04	4.40E-04
11	8	8	7	16508.13	1	5746.84	1.7401	0.0623	0.0	3.38E-06	1.18E-04	8.92E-04	3.17E-03	7.41E-03
3	0	77	78	11612.75	1	5746.94	1.7401	0.0303	4.85E-08	7.70E-06	8.30E-05	3.10E-04	6.91E-04	1.15E-03
11	8	57	56	22035.89	1	5747.64	1.7398	0.0303	0.0	2.01E-07	2.63E-05	4.41E-04	2.67E-03	9.09E-03
6	3	121	120	32203.01	1	5748.64	1.7395	0.0303	0.0	0.0	0.0	6.53E-07	1.05E-05	7.16E-05
4	1	70	71	11720.90	1	5748.64	1.7395	0.0303	1.66E-07	2.78E-05	3.08E-04	1.17E-03	2.63E-03	4.42E-03
7	4	31	32	10098.21	2	5748.99	1.7394	0.0331	1.08E-07	8.29E-06	6.20E-05	1.86E-04	3.58E-04	5.37E-04
4	1	59	60	8687.99	2	5749.13	1.7394	0.0303	1.23E-07	4.77E-06	2.55E-05	6.24E-05	1.05E-04	1.43E-04
11	8	9	8	16536.64	1	5749.45	1.7393	0.0624	0.0	3.74E-06	1.31E-04	9.97E-04	3.56E-03	8.32E-03
7	4	46	47	12562.54	1	5749.64	1.7392	0.0303	3.93E-07	9.84E-05	1.33E-03	5.71E-03	1.39E-02	2.48E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	6	25	26	13736.61	1	5749.78	1.7392	0.0418	1.23E-07	5.41E-05	9.71E-04	4.93E-03	1.35E-02	2.60E-02
10	7	11	12	14729.70	1	5749.83	1.7392	0.0617	0.0	1.71E-05	3.88E-04	2.27E-03	6.82E-03	1.41E-02
11	8	56	55	21840.56	1	5750.28	1.7390	0.0303	0.0	2.35E-07	2.95E-05	4.80E-04	2.85E-03	9.59E-03
8	5	67	66	23053.02	2	5751.14	1.7388	0.0303	0.0	0.0	9.15E-08	1.77E-06	1.18E-05	4.30E-05
10	7	77	76	24772.47	1	5751.35	1.7387	0.0303	0.0	0.0	4.75E-06	1.18E-04	9.28E-04	3.81E-03
9	6	91	90	26936.49	1	5751.68	1.7386	0.0303	0.0	0.0	9.02E-07	3.06E-05	2.96E-04	1.41E-03
8	5	36	37	13020.16	1	5751.78	1.7386	0.0308	2.88E-07	8.98E-05	1.36E-03	6.21E-03	1.58E-02	2.91E-02
7	4	112	111	30492.39	1	5751.90	1.7386	0.0303	0.0	0.0	4.59E-08	2.60E-06	3.54E-05	2.15E-04
8	5	18	19	10894.32	2	5751.96	1.7385	0.0552	0.0	4.33E-06	3.92E-05	1.32E-04	2.74E-04	4.34E-04
11	8	10	9	16568.71	1	5751.97	1.7385	0.0624	0.0	4.07E-06	1.44E-04	1.10E-03	3.94E-03	9.23E-03
6	3	41	42	9424.83	2	5752.49	1.7384	0.0303	1.91E-07	1.06E-05	6.72E-05	1.83E-04	3.30E-04	4.73E-04
11	8	55	54	21648.56	1	5752.80	1.7383	0.0303	0.0	2.75E-07	3.29E-05	5.22E-04	3.04E-03	1.01E-02
8	5	102	101	28702.89	1	5754.04	1.7379	0.0303	0.0	0.0	2.18E-07	9.55E-06	1.10E-04	5.89E-04
11	8	11	10	16604.34	1	5754.37	1.7378	0.0625	0.0	4.38E-06	1.56E-04	1.20E-03	4.30E-03	1.01E-02
10	7	10	11	14686.54	1	5754.58	1.7377	0.0625	0.0	1.64E-05	3.70E-04	2.15E-03	6.44E-03	1.33E-02
5	2	50	51	8914.94	2	5754.71	1.7377	0.0303	2.14E-07	9.29E-06	5.23E-05	1.32E-04	2.27E-04	3.15E-04
11	8	54	53	21459.91	1	5755.22	1.7376	0.0303	0.0	3.21E-07	3.67E-05	5.66E-04	3.24E-03	1.06E-02
5	2	62	63	11770.57	1	5755.49	1.7375	0.0303	3.78E-07	6.47E-05	7.24E-04	2.77E-03	6.26E-03	1.06E-02
7	4	30	31	9985.50	2	5755.50	1.7375	0.0335	1.24E-07	9.01E-06	6.56E-05	1.94E-04	3.68E-04	5.49E-04
3	0	66	67	8257.20	2	5755.81	1.7374	0.0303	5.82E-08	1.84E-06	8.86E-06	2.04E-05	3.29E-05	4.35E-05
6	3	54	55	12051.84	1	5755.85	1.7374	0.0303	4.90E-07	9.61E-05	1.15E-03	4.58E-03	1.06E-02	1.83E-02
9	6	24	25	13642.53	1	5755.99	1.7373	0.0437	1.37E-07	5.75E-05	1.01E-03	5.06E-03	1.37E-02	2.62E-02
10	7	76	75	24509.67	1	5756.25	1.7372	0.0303	0.0	0.0	5.60E-06	1.34E-04	1.03E-03	4.15E-03
8	5	86	85	22765.26	2	5756.64	1.7371	0.0303	0.0	0.0	1.10E-07	2.04E-06	1.33E-05	4.74E-05
11	8	12	11	16643.52	1	5756.67	1.7371	0.0617	0.0	4.65E-06	1.67E-04	1.29E-03	4.66E-03	1.10E-02
8	5	17	18	10827.74	2	5757.22	1.7369	0.0568	4.07E-08	4.42E-06	3.93E-05	1.31E-04	2.70E-04	4.27E-04
11	8	53	52	21274.62	1	5757.52	1.7369	0.0303	0.0	3.72E-07	4.07E-05	6.12E-04	3.44E-03	1.11E-02
7	4	45	46	12390.96	1	5758.01	1.7367	0.0303	4.96E-07	1.14E-04	1.49E-03	6.22E-03	1.49E-02	2.62E-02
9	6	90	89	26627.30	1	5758.18	1.7367	0.0303	0.0	0.0	1.10E-06	3.55E-05	3.34E-04	1.56E-03
4	1	58	59	8474.25	2	5758.32	1.7366	0.0303	1.66E-07	5.82E-06	2.95E-05	7.00E-05	1.15E-04	1.55E-04
3	0	76	77	11324.54	1	5758.42	1.7366	0.0303	7.30E-08	1.01E-05	1.01E-04	3.64E-04	7.89E-04	1.29E-03
6	3	120	119	31796.86	1	5758.63	1.7365	0.0303	0.0	0.0	0.0	8.02E-07	1.24E-05	8.24E-05
11	8	13	12	16686.27	1	5758.86	1.7365	0.0610	0.0	4.88E-06	1.78E-04	1.38E-03	4.99E-03	1.18E-02
8	5	35	36	12885.61	1	5759.13	1.7364	0.0312	3.43E-07	1.00E-04	1.46E-03	6.58E-03	1.65E-02	3.01E-02
10	7	9	10	14646.97	1	5759.22	1.7363	0.0624	0.0	1.56E-05	3.49E-04	2.02E-03	6.02E-03	1.24E-02
4	1	69	70	11459.21	1	5759.43	1.7363	0.0303	2.40E-07	3.54E-05	3.68E-04	1.35E-03	2.96E-03	4.88E-03
11	8	52	51	21092.69	1	5759.71	1.7362	0.0303	0.0	4.31E-07	4.51E-05	6.60E-04	3.65E-03	1.17E-02
6	3	40	41	9276.23	2	5759.97	1.7361	0.0303	2.32E-07	1.20E-05	7.36E-05	1.96E-04	3.49E-04	4.95E-04
7	4	111	110	30114.87	1	5760.84	1.7359	0.0303	0.0	0.0	5.90E-08	3.16E-06	4.16E-05	2.46E-04
11	8	14	13	16732.56	1	5760.95	1.7358	0.0604	0.0	5.08E-06	1.87E-04	1.46E-03	5.31E-03	1.26E-02
10	7	75	74	24250.05	1	5761.02	1.7358	0.0303	0.0	0.0	6.58E-06	1.52E-04	1.14E-03	4.50E-03
11	8	51	50	20914.12	1	5761.78	1.7356	0.0303	0.0	4.96E-07	4.98E-05	7.10E-04	3.86E-03	1.22E-02
8	5	101	100	28357.62	1	5761.80	1.7356	0.0303	0.0	0.0	2.74E-07	1.14E-05	1.26E-04	6.64E-04
7	4	29	30	9876.27	2	5761.93	1.7355	0.0340	1.42E-07	9.75E-06	6.91E-05	2.01E-04	3.78E-04	5.60E-04
8	5	85	84	22480.53	2	5762.04	1.7355	0.0303	0.0	0.0	1.32E-07	2.36E-06	1.49E-05	5.21E-05
9	6	23	24	13552.03	1	5762.10	1.7355	0.0457	1.51E-07	6.09E-05	1.04E-03	5.16E-03	1.39E-02	2.64E-02
8	5	16	17	10764.64	2	5762.38	1.7354	0.0585	4.25E-08	4.47E-06	3.92E-05	1.30E-04	2.66E-04	4.18E-04
11	8	15	14	16782.41	1	5762.92	1.7352	0.0597	0.0	5.24E-06	1.95E-04	1.54E-03	5.62E-03	1.33E-02
5	2	49	50	8733.79	2	5763.05	1.7352	0.0303	2.75E-07	1.09E-05	5.89E-05	1.45E-04	2.45E-04	3.35E-04
11	8	50	49	20738.93	1	5763.74	1.7350	0.0303	0.0	5.70E-07	5.48E-05	7.62E-04	4.07E-03	1.27E-02
10	7	8	9	14610.99	1	5763.76	1.7350	0.0624	0.0	1.47E-05	3.25E-04	1.87E-03	5.56E-03	1.14E-02
9	6	89	88	26321.15	1	5764.55	1.7347	0.0303	0.0	0.0	1.34E-06	4.15E-05	3.79E-04	1.73E-03
11	8	16	15	16835.81	1	5764.80	1.7347	0.0591	0.0	5.36E-06	2.02E-04	1.60E-03	5.90E-03	1.41E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	53	54	11850.23	1	5765.03	1.7346	0.0303	6.49E-07	1.15E-04	1.32E-03	5.10E-03	1.16E-02	1.97E-02
5	2	61	62	11538.91	1	5765.48	1.7345	0.0303	5.22E-07	7.99E-05	8.46E-04	3.13E-03	6.92E-03	1.15E-02
11	8	49	48	20567.13	1	5765.60	1.7344	0.0303	0.0	6.52E-07	6.02E-05	8.16E-04	4.29E-03	1.32E-02
3	0	65	66	8017.69	2	5765.66	1.7344	0.0303	8.14E-08	2.30E-06	1.04E-05	2.32E-05	3.66E-05	4.76E-05
10	7	74	73	23993.62	1	5765.69	1.7344	0.0303	0.0	0.0	7.72E-06	1.71E-04	1.25E-03	4.88E-03
7	4	44	45	12222.92	1	5766.28	1.7342	0.0303	6.23E-07	1.32E-04	1.65E-03	6.75E-03	1.59E-02	2.77E-02
8	5	34	35	12754.63	1	5766.37	1.7342	0.0317	4.05E-07	1.11E-04	1.57E-03	6.94E-03	1.73E-02	3.11E-02
11	8	17	16	16892.75	1	5766.56	1.7341	0.0585	0.0	5.45E-06	2.08E-04	1.67E-03	6.16E-03	1.47E-02
8	5	84	83	22198.82	2	5767.33	1.7339	0.0303	0.0	0.0	1.58E-07	2.71E-06	1.66E-05	5.73E-05
11	8	48	47	20398.72	1	5767.34	1.7339	0.0303	0.0	7.43E-07	6.58E-05	8.72E-04	4.51E-03	1.37E-02
6	3	39	40	9131.08	2	5767.36	1.7339	0.0303	2.81E-07	1.35E-05	8.03E-05	2.10E-04	3.68E-04	5.17E-04
4	1	57	58	8263.93	2	5767.42	1.7339	0.0303	2.23E-07	7.06E-06	3.40E-05	7.84E-05	1.27E-04	1.68E-04
8	5	15	16	10705.04	2	5767.44	1.7339	0.0591	4.40E-08	4.50E-06	3.89E-05	1.28E-04	2.60E-04	4.07E-04
9	6	22	23	13465.12	1	5768.10	1.7337	0.0476	1.66E-07	6.40E-05	1.08E-03	5.25E-03	1.40E-02	2.65E-02
10	7	7	8	14578.61	1	5768.19	1.7336	0.0623	0.0	1.36E-05	2.98E-04	1.71E-03	5.06E-03	1.03E-02
11	8	18	17	16953.25	1	5768.22	1.7336	0.0568	0.0	5.50E-06	2.13E-04	1.72E-03	6.39E-03	1.54E-02
7	4	28	29	9770.62	2	5768.25	1.7336	0.0359	1.61E-07	1.05E-05	7.29E-05	2.09E-04	3.89E-04	5.71E-04
6	3	119	118	31393.38	1	5768.51	1.7336	0.0303	0.0	0.0	0.0	9.94E-07	1.48E-05	9.55E-05
11	8	47	46	20233.70	1	5768.96	1.7334	0.0303	0.0	8.43E-07	7.18E-05	9.29E-04	4.73E-03	1.42E-02
5	2	127	126	32884.54	1	5769.09	1.7334	0.0303	0.0	0.0	0.0	2.53E-07	4.33E-06	3.10E-05
8	5	100	99	28015.28	1	5769.45	1.7333	0.0303	0.0	0.0	3.42E-07	1.35E-05	1.45E-04	7.46E-04
7	4	110	109	29740.16	1	5769.65	1.7332	0.0303	0.0	0.0	7.57E-08	3.84E-06	4.87E-05	2.81E-04
11	8	19	18	17017.28	1	5769.77	1.7332	0.0552	0.0	5.51E-06	2.17E-04	1.77E-03	6.61E-03	1.60E-02
3	0	75	76	11039.74	1	5769.81	1.7332	0.0303	1.09E-07	1.32E-05	1.24E-04	4.26E-04	8.98E-04	1.44E-03
4	1	68	69	11200.97	1	5770.12	1.7331	0.0303	3.45E-07	4.50E-05	4.39E-04	1.55E-03	3.32E-03	5.38E-03
10	7	73	72	23740.39	1	5770.23	1.7330	0.0303	0.0	4.57E-08	9.02E-06	1.93E-04	1.38E-03	5.28E-03
11	8	46	45	20072.09	1	5770.48	1.7330	0.0303	0.0	9.53E-07	7.81E-05	9.87E-04	4.95E-03	1.47E-02
9	6	66	67	26018.06	1	5770.81	1.7329	0.0303	0.0	0.0	1.63E-06	4.84E-05	4.29E-04	1.92E-03
11	8	20	19	17084.85	1	5771.21	1.7327	0.0535	0.0	5.49E-06	2.20E-04	1.81E-03	6.80E-03	1.65E-02
5	2	48	49	8556.07	2	5771.30	1.7327	0.0303	3.51E-07	1.28E-05	6.62E-05	1.59E-04	2.64E-04	3.57E-04
11	8	45	44	19913.90	1	5771.88	1.7325	0.0303	0.0	1.07E-06	8.47E-05	1.05E-03	5.17E-03	1.52E-02
8	5	14	15	10648.93	2	5772.40	1.7324	0.0597	4.51E-08	4.49E-06	3.83E-05	1.25E-04	2.53E-04	3.94E-04
8	5	83	82	21920.16	2	5772.51	1.7323	0.0303	0.0	0.0	1.89E-07	3.11E-06	1.86E-05	6.28E-05
10	7	6	7	14549.82	1	5772.52	1.7323	0.0620	0.0	1.23E-05	2.69E-04	1.53E-03	4.53E-03	9.24E-03
11	8	21	20	17155.96	1	5772.54	1.7323	0.0515	0.0	5.43E-06	2.21E-04	1.84E-03	6.97E-03	1.70E-02
11	8	44	43	19759.12	1	5773.18	1.7321	0.0303	0.0	1.20E-06	9.16E-05	1.11E-03	5.38E-03	1.57E-02
8	5	33	34	12627.23	1	5773.52	1.7320	0.0321	4.76E-07	1.23E-04	1.69E-03	7.31E-03	1.79E-02	3.21E-02
11	8	22	21	17230.61	1	5773.77	1.7320	0.0496	0.0	5.35E-06	2.22E-04	1.86E-03	7.11E-03	1.74E-02
9	6	21	22	13381.82	1	5774.01	1.7319	0.0496	1.81E-07	6.70E-05	1.10E-03	5.32E-03	1.41E-02	2.65E-02
6	3	52	53	11652.14	1	5774.12	1.7319	0.0303	8.54E-07	1.38E-04	1.50E-03	5.66E-03	1.26E-02	2.12E-02
11	8	43	42	19607.77	1	5774.36	1.7318	0.0303	0.0	1.35E-06	9.87E-05	1.17E-03	5.59E-03	1.61E-02
7	4	43	44	12058.43	1	5774.45	1.7318	0.0303	7.78E-07	1.53E-04	1.83E-03	7.31E-03	1.70E-02	2.92E-02
7	4	27	28	9668.25	2	5774.49	1.7318	0.0379	1.82E-07	1.14E-05	7.66E-05	2.16E-04	3.99E-04	5.82E-04
10	7	72	71	23490.38	1	5774.66	1.7317	0.0303	0.0	5.66E-08	1.05E-05	2.17E-04	1.51E-03	5.70E-03
6	3	38	39	8989.41	2	5774.66	1.7317	0.0303	3.39E-07	1.52E-05	8.73E-05	2.24E-04	3.87E-04	5.38E-04
11	8	23	22	17308.79	1	5774.89	1.7316	0.0476	0.0	5.23E-06	2.21E-04	1.88E-03	7.22E-03	1.78E-02
5	2	60	61	11310.73	1	5775.37	1.7315	0.0303	7.16E-07	9.83E-05	9.86E-04	3.53E-03	7.64E-03	1.25E-02
3	0	64	65	7781.55	2	5775.42	1.7315	0.0303	1.13E-07	2.85E-06	1.22E-05	2.63E-05	4.06E-05	5.20E-05
11	8	42	41	19459.85	1	5775.43	1.7315	0.0303	0.0	1.50E-06	1.06E-04	1.23E-03	5.80E-03	1.66E-02
11	8	24	23	17390.49	1	5775.90	1.7313	0.0457	0.0	5.10E-06	2.20E-04	1.89E-03	7.31E-03	1.81E-02
11	8	41	40	19315.37	1	5776.39	1.7312	0.0303	0.0	1.66E-06	1.14E-04	1.29E-03	6.00E-03	1.70E-02
4	1	56	57	8057.01	2	5776.43	1.7312	0.0303	2.97E-07	8.54E-06	3.92E-05	8.77E-05	1.39E-04	1.81E-04
10	7	5	6	14524.62	1	5776.74	1.7311	0.0617	0.0	1.09E-05	2.37E-04	1.35E-03	3.96E-03	8.07E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
11	8	25	24	17475.72	1	5776.80	1.7311	0.0437	0.0	4.94E-06	2.17E-04	1.89E-03	7.38E-03	1.84E-02
9	6	87	86	25718.04	1	5776.96	1.7310	0.0303	0.0	0.0	1.98E-06	5.63E-05	4.85E-04	2.13E-03
8	5	99	98	27675.87	1	5776.98	1.7310	0.0303	0.0	0.0	4.26E-07	1.61E-05	1.67E-04	8.38E-04
11	8	40	39	19174.33	1	5777.24	1.7309	0.0303	0.0	1.83E-06	1.21E-04	1.35E-03	6.19E-03	1.73E-02
8	5	13	14	10596.32	2	5777.28	1.7309	0.0604	4.58E-08	4.45E-06	3.75E-05	1.21E-04	2.44E-04	3.79E-04
8	5	82	81	21644.55	2	5777.59	1.7308	0.0303	0.0	0.0	2.25E-07	3.56E-06	2.07E-05	6.87E-05
11	8	26	25	17564.47	1	5777.59	1.7308	0.0418	0.0	4.76E-06	2.14E-04	1.88E-03	7.42E-03	1.86E-02
11	8	39	38	19036.74	1	5777.98	1.7307	0.0303	0.0	2.02E-06	1.29E-04	1.40E-03	6.37E-03	1.77E-02
6	3	118	117	30992.61	1	5778.26	1.7306	0.0303	0.0	0.0	0.0	1.23E-06	1.76E-05	1.11E-04
11	8	27	26	17656.73	1	5778.28	1.7306	0.0398	0.0	4.56E-06	2.09E-04	1.87E-03	7.44E-03	1.88E-02
7	4	109	108	29368.25	1	5778.35	1.7306	0.0303	0.0	0.0	9.69E-08	4.66E-06	5.70E-05	3.21E-04
11	8	38	37	18902.61	1	5778.61	1.7305	0.0303	0.0	2.21E-06	1.37E-04	1.46E-03	6.54E-03	1.80E-02
11	8	28	27	17752.52	1	5778.86	1.7304	0.0379	0.0	4.35E-06	2.05E-04	1.85E-03	7.43E-03	1.89E-02
10	7	71	70	23243.58	1	5778.98	1.7304	0.0303	0.0	6.98E-08	1.22E-05	2.44E-04	1.66E-03	6.14E-03
11	8	37	36	18771.94	1	5779.13	1.7304	0.0308	0.0	2.41E-06	1.44E-04	1.51E-03	6.70E-03	1.83E-02
11	8	29	28	17851.80	1	5779.32	1.7303	0.0359	0.0	4.13E-06	1.99E-04	1.83E-03	7.40E-03	1.89E-02
5	2	47	48	8381.80	2	5779.46	1.7303	0.0303	4.45E-07	1.50E-05	7.41E-05	1.74E-04	2.84E-04	3.79E-04
11	8	36	35	18644.73	1	5779.54	1.7302	0.0312	0.0	2.61E-06	1.52E-04	1.57E-03	6.85E-03	1.85E-02
11	8	30	29	17954.60	1	5779.68	1.7302	0.0340	0.0	3.91E-06	1.93E-04	1.80E-03	7.35E-03	1.89E-02
5	2	126	125	32458.27	1	5779.79	1.7302	0.0303	0.0	0.0	0.0	3.15E-07	5.19E-06	3.61E-05
9	6	20	21	13302.10	1	5779.81	1.7302	0.0515	1.95E-07	6.97E-05	1.13E-03	5.37E-03	1.41E-02	2.64E-02
11	8	35	34	18521.00	1	5779.84	1.7302	0.0317	0.0	2.83E-06	1.60E-04	1.61E-03	6.98E-03	1.87E-02
11	8	31	30	18060.90	1	5779.93	1.7301	0.0335	0.0	3.70E-06	1.87E-04	1.77E-03	7.32E-03	1.90E-02
11	8	34	33	18400.75	1	5780.02	1.7301	0.0321	0.0	3.04E-06	1.67E-04	1.66E-03	7.09E-03	1.88E-02
11	8	32	31	18170.69	1	5780.07	1.7301	0.0331	0.0	3.48E-06	1.81E-04	1.74E-03	7.26E-03	1.90E-02
11	8	33	32	18283.98	1	5780.10	1.7301	0.0326	0.0	3.26E-06	1.74E-04	1.70E-03	7.18E-03	1.89E-02
8	5	32	33	12503.41	1	5780.57	1.7299	0.0326	5.55E-07	1.35E-04	1.80E-03	7.67E-03	1.86E-02	3.30E-02
7	4	26	27	9569.48	2	5780.63	1.7299	0.0398	2.05E-07	1.22E-05	8.01E-05	2.23E-04	4.08E-04	5.91E-04
4	1	67	68	10946.18	1	5780.71	1.7299	0.0303	4.94E-07	5.69E-05	5.23E-04	1.78E-03	3.72E-03	5.92E-03
10	7	4	5	14503.03	1	5780.87	1.7298	0.0614	0.0	9.36E-06	2.02E-04	1.14E-03	3.36E-03	6.84E-03
3	0	74	75	10758.35	1	5781.10	1.7298	0.0303	1.62E-07	1.71E-05	1.50E-04	4.97E-04	1.02E-03	1.61E-03
6	3	37	38	8851.20	2	5781.86	1.7295	0.0303	4.06E-07	1.71E-05	9.47E-05	2.38E-04	4.06E-04	5.59E-04
8	5	12	13	10547.20	2	5782.05	1.7295	0.0610	4.61E-08	4.37E-06	3.64E-05	1.17E-04	2.34E-04	3.63E-04
7	4	42	43	11897.51	1	5782.52	1.7293	0.0303	9.65E-07	1.76E-04	2.03E-03	7.90E-03	1.81E-02	3.08E-02
8	5	81	80	21372.00	2	5782.55	1.7293	0.0303	0.0	0.0	2.68E-07	4.07E-06	2.31E-05	7.51E-05
9	6	86	85	25421.09	1	5782.98	1.7292	0.0303	0.0	0.0	2.40E-06	6.54E-05	5.48E-04	2.35E-03
6	3	51	52	11457.59	1	5783.11	1.7292	0.0303	1.12E-06	1.65E-04	1.71E-03	6.26E-03	1.37E-02	2.27E-02
10	7	70	69	23000.01	1	5783.18	1.7292	0.0303	0.0	8.58E-08	1.42E-05	2.73E-04	1.82E-03	6.61E-03
8	5	98	97	27339.41	1	5784.39	1.7288	0.0303	0.0	0.0	5.29E-07	1.90E-05	1.92E-04	9.39E-04
10	7	3	4	14485.03	1	5784.88	1.7286	0.0611	0.0	7.68E-06	1.65E-04	9.33E-04	2.74E-03	5.56E-03
3	0	63	64	7548.79	2	5785.09	1.7286	0.0303	1.57E-07	3.53E-06	1.43E-05	2.98E-05	4.49E-05	5.67E-05
5	2	59	60	11086.05	1	5785.17	1.7286	0.0303	9.78E-07	1.21E-04	1.15E-03	3.97E-03	8.42E-03	1.35E-02
4	1	55	56	7853.51	2	5785.35	1.7285	0.0303	3.95E-07	1.03E-05	4.49E-05	9.77E-05	1.52E-04	1.95E-04
9	6	19	20	13225.99	1	5785.51	1.7285	0.0535	2.09E-07	7.21E-05	1.14E-03	5.40E-03	1.40E-02	2.62E-02
7	4	25	26	9474.20	2	5786.68	1.7281	0.0418	2.29E-07	1.30E-05	8.35E-05	2.29E-04	4.15E-04	5.98E-04
8	5	11	12	10501.59	2	5786.73	1.7281	0.0617	4.58E-08	4.25E-06	3.51E-05	1.12E-04	2.23E-04	3.44E-04
7	4	108	107	28999.19	1	5786.92	1.7280	0.0303	0.0	0.0	1.24E-07	5.65E-06	6.67E-05	3.66E-04
10	7	69	68	22759.69	1	5787.26	1.7279	0.0303	0.0	1.05E-07	1.64E-05	3.06E-04	1.98E-03	7.10E-03
8	5	80	79	21102.53	2	5787.40	1.7279	0.0303	0.0	0.0	3.18E-07	4.65E-06	2.57E-05	8.20E-05
8	5	31	32	12383.18	1	5787.51	1.7279	0.0331	6.45E-07	1.48E-04	1.92E-03	8.03E-03	1.93E-02	3.39E-02
5	2	46	47	8210.98	2	5787.53	1.7279	0.0303	5.62E-07	1.74E-05	8.27E-05	1.89E-04	3.04E-04	4.01E-04
6	3	117	116	30594.55	1	5787.89	1.7277	0.0303	0.0	0.0	0.0	1.52E-06	2.09E-05	1.28E-04
10	7	2	3	14470.63	1	5788.80	1.7275	0.0609	0.0	5.89E-06	1.26E-04	7.11E-04	2.08E-03	4.23E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VI	JU	JI	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	6	85	84	25127.25	1	5788.89	1.7274	0.0303	0.0	0.0	2.90E-06	7.58E-05	6.17E-04	2.60E-03
6	3	36	37	8716.48	2	5788.97	1.7274	0.0308	4.83E-07	1.91E-05	1.02E-04	2.52E-04	4.24E-04	5.80E-04
5	2	125	124	32034.61	1	5790.36	1.7270	0.0303	0.0	0.0	0.0	3.92E-07	6.20E-06	4.19E-05
7	4	41	42	11740.14	1	5790.50	1.7270	0.0303	1.19E-06	2.01E-04	2.23E-03	8.51E-03	1.92E-02	3.23E-02
9	6	18	19	13153.48	1	5791.11	1.7268	0.0552	2.23E-07	7.41E-05	1.16E-03	5.40E-03	1.39E-02	2.59E-02
4	1	66	67	10694.85	1	5791.22	1.7268	0.0303	7.02E-07	7.18E-05	6.21E-04	2.04E-03	4.15E-03	6.51E-03
10	7	68	67	22522.63	1	5791.24	1.7267	0.0303	0.0	1.28E-07	1.89E-05	3.41E-04	2.16E-03	7.61E-03
8	5	10	11	10459.48	2	5791.31	1.7267	0.0625	4.50E-08	4.10E-06	3.34E-05	1.06E-04	2.11E-04	3.24E-04
8	5	97	96	27005.92	1	5791.68	1.7266	0.0303	0.0	0.0	6.56E-07	2.25E-05	2.19E-04	1.05E-03
6	3	50	51	11266.57	1	5792.00	1.7265	0.0303	1.46E-06	1.96E-04	1.94E-03	6.91E-03	1.49E-02	2.43E-02
8	5	79	78	20836.14	2	5792.15	1.7265	0.0303	0.0	0.0	3.76E-07	5.29E-06	2.85E-05	8.94E-05
3	0	73	74	10480.37	1	5792.30	1.7264	0.0303	2.41E-07	2.22E-05	1.82E-04	5.80E-04	1.16E-03	1.79E-03
10	7	1	2	14459.83	1	5792.61	1.7263	0.0606	0.0	4.00E-06	8.53E-05	4.81E-04	1.41E-03	2.85E-03
7	4	24	25	9382.42	2	5792.63	1.7263	0.0437	2.54E-07	1.38E-05	8.67E-05	2.35E-04	4.22E-04	6.03E-04
7	4	93	92	22986.86	2	5793.69	1.7260	0.0303	0.0	0.0	6.79E-08	1.30E-06	8.63E-06	3.14E-05
4	1	54	55	7653.44	2	5794.18	1.7259	0.0303	5.22E-07	1.24E-05	5.14E-05	1.09E-04	1.65E-04	2.10E-04
8	5	30	31	12266.54	1	5794.36	1.7258	0.0335	7.44E-07	1.61E-04	2.04E-03	8.37E-03	1.99E-02	3.47E-02
9	6	84	83	24836.50	1	5794.68	1.7257	0.0303	0.0	0.0	3.49E-06	8.76E-05	6.94E-04	2.87E-03
3	0	62	63	7319.43	2	5794.68	1.7257	0.0303	2.16E-07	4.36E-06	1.67E-05	3.37E-05	4.96E-05	6.17E-05
5	2	58	59	10864.87	1	5794.87	1.7257	0.0303	1.33E-06	1.48E-04	1.33E-03	4.48E-03	9.29E-03	1.47E-02
10	7	67	66	22288.82	1	5795.09	1.7256	0.0303	0.0	1.56E-07	2.18E-05	3.79E-04	2.35E-03	8.15E-03
7	4	107	106	28632.97	1	5795.37	1.7255	0.0303	0.0	0.0	1.58E-07	6.82E-06	7.78E-05	4.17E-04
5	2	45	46	8043.62	2	5795.50	1.7255	0.0303	7.06E-07	2.01E-05	9.21E-05	2.06E-04	3.25E-04	4.24E-04
8	5	9	10	10420.87	2	5795.80	1.7254	0.0624	4.37E-08	3.90E-06	3.15E-05	9.91E-05	1.97E-04	3.02E-04
6	3	35	36	8585.23	2	5795.99	1.7253	0.0312	5.72E-07	2.12E-05	1.10E-04	2.66E-04	4.43E-04	6.00E-04
10	7	0	1	14452.63	1	5796.31	1.7252	0.0603	0.0	2.03E-06	4.32E-05	2.43E-04	7.12E-04	1.44E-03
9	6	17	18	13084.58	1	5796.60	1.7251	0.0568	2.35E-07	7.57E-05	1.16E-03	5.37E-03	1.38E-02	2.54E-02
8	5	78	77	20572.85	2	5796.79	1.7251	0.0303	0.0	0.0	4.43E-07	6.01E-06	3.16E-05	9.72E-05
6	3	116	115	30199.23	1	5797.40	1.7249	0.0303	0.0	0.0	0.0	1.87E-06	2.47E-05	1.47E-04
7	4	40	41	11586.35	1	5798.38	1.7246	0.0303	1.46E-06	2.29E-04	2.45E-03	9.15E-03	2.03E-02	3.39E-02
7	4	23	24	9294.14	2	5798.49	1.7246	0.0457	2.79E-07	1.45E-05	8.96E-05	2.40E-04	4.27E-04	6.07E-04
10	7	66	65	22058.29	1	5798.83	1.7245	0.0303	0.0	1.89E-07	2.50E-05	4.21E-04	2.55E-03	8.71E-03
8	5	96	95	26675.41	1	5798.85	1.7245	0.0303	0.0	0.0	8.12E-07	2.65E-05	2.51E-04	1.17E-03
7	4	92	91	22678.24	2	5799.83	1.7242	0.0303	0.0	0.0	8.25E-08	1.51E-06	9.74E-06	3.46E-05
8	5	8	9	10385.77	2	5800.18	1.7241	0.0624	4.17E-08	3.66E-06	2.93E-05	9.19E-05	1.82E-04	2.78E-04
9	6	83	82	24548.88	1	5800.36	1.7240	0.0303	0.0	0.0	4.20E-06	1.01E-04	7.79E-04	3.15E-03
6	3	49	50	11079.09	1	5800.80	1.7239	0.0303	1.88E-06	2.31E-04	2.20E-03	7.61E-03	1.61E-02	2.59E-02
5	2	124	123	31613.57	1	5800.82	1.7239	0.0303	0.0	0.0	0.0	4.87E-07	7.40E-06	4.86E-05
8	5	29	30	12153.49	1	5801.11	1.7238	0.0340	8.52E-07	1.75E-04	2.15E-03	8.71E-03	2.04E-02	3.54E-02
8	5	77	76	20312.67	2	5801.32	1.7237	0.0303	0.0	0.0	5.21E-07	6.81E-06	3.49E-05	1.06E-04
4	1	65	66	10446.99	1	5801.62	1.7237	0.0303	9.94E-07	9.02E-05	7.35E-04	2.33E-03	4.64E-03	7.14E-03
9	6	16	17	13019.29	1	5802.00	1.7235	0.0585	2.47E-07	7.68E-05	1.16E-03	5.32E-03	1.36E-02	2.49E-02
10	7	65	64	21831.04	1	5802.46	1.7234	0.0303	0.0	2.29E-07	2.86E-05	4.66E-04	2.76E-03	9.29E-03
6	3	34	35	8457.48	2	5802.92	1.7233	0.0317	6.74E-07	2.35E-05	1.18E-04	2.81E-04	4.62E-04	6.20E-04
4	1	53	54	7456.80	2	5802.92	1.7233	0.0303	6.86E-07	1.48E-05	5.87E-05	1.21E-04	1.80E-04	2.26E-04
5	2	44	45	7879.72	2	5803.39	1.7231	0.0303	8.81E-07	2.33E-05	1.02E-04	2.23E-04	3.47E-04	4.48E-04
3	0	72	73	10205.84	1	5803.40	1.7231	0.0303	3.54E-07	2.86E-05	2.20E-04	6.74E-04	1.31E-03	1.99E-03
10	7	1	0	14449.03	1	5803.41	1.7231	0.0603	0.0	2.08E-06	4.42E-05	2.49E-04	7.27E-04	1.47E-03
7	4	106	105	28269.62	1	5803.71	1.7230	0.0303	0.0	0.0	2.00E-07	8.23E-06	9.06E-05	4.73E-04
3	0	61	62	7093.47	2	5804.17	1.7229	0.0303	2.96E-07	5.35E-06	1.95E-05	3.80E-05	5.48E-05	6.70E-05
7	4	22	23	9209.37	2	5804.25	1.7229	0.0476	3.05E-07	1.53E-05	9.22E-05	2.44E-04	4.31E-04	6.09E-04
5	2	57	58	10647.20	1	5804.48	1.7228	0.0303	1.81E-06	1.81E-04	1.55E-03	5.04E-03	1.02E-02	1.60E-02
8	5	7	8	10354.17	2	5804.48	1.7228	0.0623	0.0	3.38E-06	2.69E-05	8.39E-05	1.65E-04	2.53E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	76	75	20055.60	2	5805.74	1.7224	0.0303	0.0	0.0	6.12E-07	7.70E-06	3.85E-05	1.14E-04
7	4	91	90	22372.60	2	5805.86	1.7224	0.0303	0.0	0.0	1.00E-07	1.76E-06	1.10E-05	3.82E-05
9	6	82	81	24264.39	1	5805.91	1.7224	0.0303	0.0	0.0	5.04E-06	1.16E-04	8.73E-04	3.47E-03
8	5	95	94	26347.89	1	5805.91	1.7224	0.0303	0.0	0.0	1.00E-06	3.12E-05	2.86E-04	1.31E-03
10	7	64	63	21607.08	1	5805.98	1.7224	0.0303	0.0	2.75E-07	3.26E-05	5.14E-04	2.99E-03	9.89E-03
7	4	39	40	11436.14	1	5806.16	1.7223	0.0303	1.78E-06	2.60E-04	2.69E-03	9.81E-03	2.15E-02	3.54E-02
6	3	115	114	29806.66	1	5806.79	1.7221	0.0303	0.0	0.0	4.48E-08	2.30E-06	2.93E-05	1.70E-04
10	7	2	1	14452.63	1	5806.80	1.7221	0.0606	0.0	4.19E-06	8.92E-05	5.02E-04	1.47E-03	2.98E-03
9	6	15	16	12957.61	1	5807.29	1.7220	0.0591	2.56E-07	7.74E-05	1.15E-03	5.23E-03	1.33E-02	2.43E-02
8	5	28	29	12044.05	1	5807.75	1.7218	0.0359	9.75E-07	1.90E-04	2.28E-03	9.06E-03	2.10E-02	3.62E-02
8	5	6	7	10326.08	2	5808.67	1.7216	0.0620	0.0	3.07E-06	2.42E-05	7.52E-05	1.48E-04	2.26E-04
10	7	63	62	21386.43	1	5809.38	1.7214	0.0303	0.0	3.30E-07	3.71E-05	5.67E-04	3.22E-03	1.05E-02
6	3	48	49	10895.17	1	5809.50	1.7213	0.0303	2.43E-06	2.73E-04	2.48E-03	8.36E-03	1.74E-02	2.76E-02
6	3	33	34	8333.21	2	5809.75	1.7212	0.0321	7.88E-07	2.59E-05	1.27E-04	2.95E-04	4.79E-04	6.38E-04
7	4	21	22	9128.10	2	5809.92	1.7212	0.0496	3.32E-07	1.59E-05	9.45E-05	2.47E-04	4.33E-04	6.08E-04
8	5	75	74	19801.66	2	5810.05	1.7212	0.0303	0.0	0.0	7.16E-07	8.69E-06	4.24E-05	1.24E-04
10	7	3	2	14459.83	1	5810.08	1.7211	0.0609	0.0	6.31E-06	1.35E-04	7.59E-04	2.22E-03	4.51E-03
5	2	123	122	31195.18	1	5811.15	1.7208	0.0303	0.0	0.0	0.0	6.04E-07	8.81E-06	5.62E-05
5	2	43	44	7719.30	2	5811.18	1.7208	0.0303	1.09E-06	2.67E-05	1.13E-04	2.41E-04	3.69E-04	4.71E-04
9	6	61	60	23983.04	1	5811.36	1.7208	0.0303	0.0	0.0	6.03E-06	1.34E-04	9.76E-04	3.80E-03
4	1	52	53	7263.61	2	5811.57	1.7207	0.0303	8.97E-07	1.76E-05	6.68E-05	1.33E-04	1.96E-04	2.42E-04
7	4	90	89	22069.95	2	5811.77	1.7206	0.0303	0.0	0.0	1.21E-07	2.03E-06	1.23E-05	4.21E-05
7	4	105	104	27909.14	1	5811.92	1.7206	0.0303	0.0	0.0	2.54E-07	9.90E-06	1.05E-04	5.37E-04
4	1	64	65	10202.62	1	5811.93	1.7206	0.0303	1.40E-06	1.13E-04	8.68E-04	2.65E-03	5.16E-03	7.82E-03
9	6	14	15	12899.54	1	5812.48	1.7204	0.0597	2.63E-07	7.74E-05	1.14E-03	5.12E-03	1.29E-02	2.35E-02
10	7	62	61	21169.09	1	5812.66	1.7204	0.0303	0.0	3.95E-07	4.21E-05	6.23E-04	3.47E-03	1.12E-02
8	5	5	6	10301.50	2	5812.77	1.7204	0.0617	0.0	2.72E-06	2.13E-05	6.60E-05	1.29E-04	1.97E-04
8	5	94	93	26023.39	1	5812.84	1.7203	0.0303	0.0	0.0	1.23E-06	3.67E-05	3.25E-04	1.46E-03
10	7	4	3	14470.63	1	5813.26	1.7202	0.0611	0.0	8.42E-06	1.80E-04	1.02E-03	2.98E-03	6.06E-03
3	0	60	61	6870.93	2	5813.58	1.7201	0.0303	4.03E-07	6.56E-06	2.26E-05	4.27E-05	6.03E-05	7.26E-05
7	4	38	39	11289.51	1	5813.84	1.7200	0.0303	2.16E-06	2.94E-04	2.93E-03	1.05E-02	2.26E-02	3.70E-02
5	2	56	57	10433.05	1	5813.99	1.7200	0.0303	2.44E-06	2.20E-04	1.79E-03	5.65E-03	1.12E-02	1.73E-02
8	5	74	73	19550.86	2	5814.26	1.7199	0.0303	0.0	0.0	8.36E-07	9.79E-06	4.66E-05	1.34E-04
8	5	27	28	11938.21	1	5814.30	1.7199	0.0379	1.11E-06	2.05E-04	2.40E-03	9.40E-03	2.16E-02	3.69E-02
3	0	71	72	9934.75	1	5814.41	1.7199	0.0303	5.19E-07	3.69E-05	2.66E-04	7.81E-04	1.48E-03	2.21E-03
7	4	20	21	9050.34	2	5815.49	1.7195	0.0515	3.58E-07	1.66E-05	9.63E-05	2.49E-04	4.33E-04	6.06E-04
10	7	61	60	20955.06	1	5815.83	1.7194	0.0303	0.0	4.70E-07	4.76E-05	6.83E-04	3.73E-03	1.18E-02
6	3	114	113	29416.86	1	5816.06	1.7194	0.0303	0.0	0.0	5.81E-08	2.82E-06	3.46E-05	1.96E-04
10	7	5	4	14485.03	1	5816.34	1.7193	0.0614	0.0	1.05E-05	2.26E-04	1.28E-03	3.75E-03	7.61E-03
6	3	32	33	8212.45	2	5816.48	1.7193	0.0326	9.17E-07	2.84E-05	1.35E-04	3.09E-04	4.97E-04	6.56E-04
9	6	80	79	23704.85	1	5816.68	1.7192	0.0303	0.0	0.0	7.19E-06	1.53E-04	1.09E-03	4.17E-03
8	5	4	5	10280.43	2	5816.77	1.7192	0.0614	0.0	2.33E-06	1.82E-05	5.61E-05	1.10E-04	1.67E-04
9	6	13	14	12845.10	1	5817.57	1.7189	0.0604	2.68E-07	7.68E-05	1.11E-03	4.98E-03	1.25E-02	2.27E-02
7	4	89	88	21770.31	2	5817.58	1.7189	0.0303	0.0	0.0	1.47E-07	2.37E-06	1.39E-05	4.66E-05
6	3	47	48	10714.80	1	5818.10	1.7188	0.0303	3.10E-06	3.20E-04	2.79E-03	9.16E-03	1.87E-02	2.94E-02
8	5	73	72	19303.21	2	5818.36	1.7187	0.0303	0.0	0.0	9.74E-07	1.10E-05	5.12E-05	1.45E-04
5	2	42	43	7562.35	2	5818.88	1.7185	0.0303	1.35E-06	3.06E-05	1.25E-04	2.60E-04	3.92E-04	4.96E-04
10	7	60	59	20744.37	1	5818.89	1.7185	0.0303	0.0	5.57E-07	5.37E-05	7.48E-04	4.00E-03	1.25E-02
10	7	6	5	14503.03	1	5819.31	1.7184	0.0617	0.0	1.25E-05	2.70E-04	1.53E-03	4.51E-03	9.17E-03
8	5	93	92	25701.90	1	5819.66	1.7183	0.0303	0.0	0.0	1.51E-06	4.30E-05	3.70E-04	1.62E-03
7	4	104	103	27551.57	1	5820.02	1.7182	0.0303	0.0	0.0	3.21E-07	1.19E-05	1.22E-04	6.08E-04
4	1	51	52	7073.87	2	5820.12	1.7182	0.0303	1.17E-06	2.09E-05	7.58E-05	1.47E-04	2.12E-04	2.59E-04
8	5	3	4	10262.67	2	5820.67	1.7180	0.0611	0.0	1.91E-06	1.49E-05	4.57E-05	8.94E-05	1.36E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	26	27	11835.99	1	5820.75	1.7180	0.0398	1.25E-06	2.21E-04	2.51E-03	9.71E-03	2.21E-02	3.75E-02
7	4	19	20	8976.10	2	5820.97	1.7179	0.0535	3.83E-07	1.71E-05	9.77E-05	2.50E-04	4.32E-04	6.01E-04
5	2	122	121	30779.46	1	5821.36	1.7178	0.0303	0.0	0.0	0.0	7.47E-07	1.05E-05	6.50E-05
7	4	37	38	11146.46	1	5821.42	1.7178	0.0303	2.61E-06	3.31E-04	3.19E-03	1.12E-02	2.38E-02	3.85E-02
10	7	59	58	20537.02	1	5821.84	1.7177	0.0303	0.0	6.62E-07	6.07E-05	8.21E-04	4.30E-03	1.32E-02
9	6	79	78	23429.83	1	5821.89	1.7177	0.0303	0.0	4.67E-08	8.56E-06	1.75E-04	1.21E-03	4.56E-03
4	1	63	64	9961.74	1	5822.15	1.7176	0.0303	1.96E-06	1.41E-04	1.02E-03	3.02E-03	5.74E-03	8.55E-03
10	7	7	6	14524.62	1	5822.17	1.7176	0.0620	0.0	1.45E-05	3.14E-04	1.79E-03	5.26E-03	1.07E-02
8	5	72	71	19058.71	2	5822.35	1.7175	0.0303	0.0	0.0	1.13E-06	1.23E-05	5.60E-05	1.56E-04
9	6	12	13	12794.27	1	5822.55	1.7175	0.0610	2.70E-07	7.56E-05	1.08E-03	4.80E-03	1.20E-02	2.17E-02
3	0	59	60	6651.80	2	5822.89	1.7174	0.0303	5.46E-07	8.00E-06	2.62E-05	4.79E-05	6.63E-05	7.86E-05
6	3	31	32	8095.19	2	5823.13	1.7173	0.0331	1.06E-06	3.10E-05	1.44E-04	3.23E-04	5.13E-04	6.72E-04
7	4	88	87	21473.68	2	5823.28	1.7172	0.0303	0.0	0.0	1.78E-07	2.75E-06	1.57E-05	5.16E-05
5	2	55	56	10222.44	1	5823.40	1.7172	0.0303	3.28E-06	2.67E-04	2.06E-03	6.33E-03	1.23E-02	1.87E-02
8	5	2	3	10248.82	2	5824.48	1.7169	0.0609	0.0	1.46E-06	1.14E-05	3.49E-05	6.81E-05	1.03E-04
10	7	58	57	20333.01	1	5824.67	1.7168	0.0303	0.0	7.85E-07	6.85E-05	8.99E-04	4.62E-03	1.40E-02
10	7	8	7	14549.82	1	5824.93	1.7168	0.0623	0.0	1.63E-05	3.56E-04	2.03E-03	6.01E-03	1.23E-02
6	3	113	112	29029.84	1	5825.20	1.7167	0.0303	0.0	0.0	7.52E-08	3.45E-06	4.09E-05	2.25E-04
3	0	70	71	9667.11	1	5825.33	1.7166	0.0303	7.57E-07	4.73E-05	3.20E-04	9.04E-04	1.67E-03	2.44E-03
8	5	71	70	18817.38	2	5826.23	1.7164	0.0303	0.0	0.0	1.31E-06	1.38E-05	6.13E-05	1.67E-04
7	4	18	19	8905.38	2	5826.35	1.7163	0.0552	4.07E-07	1.76E-05	9.87E-05	2.50E-04	4.29E-04	5.94E-04
8	5	92	91	25383.46	1	5826.36	1.7163	0.0303	0.0	0.0	1.85E-06	5.02E-05	4.19E-04	1.80E-03
5	2	41	42	7408.88	2	5826.49	1.7163	0.0303	1.66E-06	3.49E-05	1.37E-04	2.80E-04	4.16E-04	5.20E-04
6	3	46	47	10538.00	1	5826.60	1.7163	0.0303	3.95E-06	3.75E-04	3.12E-03	1.00E-02	2.01E-02	3.12E-02
9	6	78	77	23157.98	1	5826.98	1.7162	0.0303	0.0	5.92E-08	1.02E-05	2.00E-04	1.35E-03	4.97E-03
8	5	25	26	11737.38	1	5827.09	1.7161	0.0418	1.40E-06	2.36E-04	2.62E-03	1.00E-02	2.26E-02	3.80E-02
10	7	57	56	20132.36	1	5827.39	1.7160	0.0303	0.0	9.26E-07	7.70E-05	9.82E-04	4.96E-03	1.48E-02
9	6	11	12	12747.07	1	5827.44	1.7160	0.0617	2.69E-07	7.36E-05	1.04E-03	4.59E-03	1.14E-02	2.06E-02
10	7	9	8	14578.61	1	5827.58	1.7160	0.0624	0.0	1.81E-05	3.97E-04	2.28E-03	6.74E-03	1.38E-02
7	4	103	102	27196.90	1	5827.99	1.7159	0.0303	0.0	0.0	4.05E-07	1.43E-05	1.42E-04	6.88E-04
8	5	1	2	10238.29	2	5828.19	1.7158	0.0606	0.0	9.94E-07	7.69E-06	2.36E-05	4.60E-05	6.98E-05
4	1	50	51	6887.58	2	5828.59	1.7157	0.0303	1.51E-06	2.48E-05	8.58E-05	1.62E-04	2.30E-04	2.77E-04
7	4	87	86	21180.08	2	5828.87	1.7156	0.0303	0.0	0.0	2.15E-07	3.18E-06	1.77E-05	5.70E-05
7	4	36	37	11007.02	1	5828.90	1.7156	0.0308	3.13E-06	3.71E-04	3.46E-03	1.19E-02	2.50E-02	4.00E-02
6	3	30	31	7981.43	2	5829.68	1.7154	0.0335	1.22E-06	3.38E-05	1.52E-04	3.37E-04	5.29E-04	6.88E-04
10	7	56	55	19935.07	1	5829.99	1.7153	0.0303	0.0	1.09E-06	8.64E-05	1.07E-03	5.30E-03	1.57E-02
8	5	70	69	18579.22	2	5830.01	1.7153	0.0303	0.0	0.0	1.51E-06	1.54E-05	6.69E-05	1.80E-04
10	7	10	9	14610.99	1	5830.13	1.7152	0.0624	0.0	1.97E-05	4.36E-04	2.51E-03	7.46E-03	1.53E-02
5	2	121	120	30366.41	1	5831.45	1.7148	0.0303	0.0	0.0	0.0	9.23E-07	1.24E-05	7.50E-05
7	4	17	18	8838.17	2	5831.64	1.7148	0.0568	4.29E-07	1.79E-05	9.91E-05	2.48E-04	4.23E-04	5.84E-04
8	5	0	1	10231.26	2	5831.80	1.7147	0.0603	0.0	5.05E-07	3.90E-06	1.19E-05	2.33E-05	3.53E-05
9	6	77	76	22889.33	1	5831.96	1.7147	0.0303	0.0	7.47E-08	1.20E-05	2.28E-04	1.50E-03	5.42E-03
3	0	58	59	6436.11	2	5832.12	1.7146	0.0303	7.40E-07	9.77E-06	3.04E-05	5.39E-05	7.30E-05	8.53E-05
9	6	10	11	12703.48	1	5832.21	1.7146	0.0625	2.65E-07	7.10E-05	9.95E-04	4.36E-03	1.08E-02	1.94E-02
4	1	62	63	9724.36	1	5832.27	1.7146	0.0303	2.73E-06	1.75E-04	1.20E-03	3.42E-03	6.37E-03	9.34E-03
10	7	55	54	19741.15	1	5832.49	1.7145	0.0303	0.0	1.28E-06	9.66E-05	1.16E-03	5.66E-03	1.65E-02
10	7	11	10	14646.97	1	5832.57	1.7145	0.0625	0.0	2.11E-05	4.72E-04	2.73E-03	8.15E-03	1.67E-02
5	2	54	55	10015.37	1	5832.72	1.7145	0.0303	4.38E-06	3.23E-04	2.37E-03	7.06E-03	1.35E-02	2.02E-02
8	5	91	90	25068.06	1	5832.94	1.7144	0.0303	0.0	0.0	2.26E-06	5.86E-05	4.75E-04	1.99E-03
8	5	24	25	11642.38	1	5833.33	1.7143	0.0437	1.56E-06	2.51E-04	2.73E-03	1.03E-02	2.29E-02	3.84E-02
8	5	69	68	18344.26	2	5833.67	1.7142	0.0303	0.0	0.0	1.74E-06	1.72E-05	7.28E-05	1.93E-04
5	2	40	41	7258.90	2	5834.00	1.7141	0.0303	2.02E-06	3.97E-05	1.50E-04	3.00E-04	4.40E-04	5.44E-04
6	3	112	111	28645.63	1	5834.23	1.7140	0.0303	0.0	0.0	9.72E-08	4.22E-06	4.82E-05	2.58E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	86	85	20889.52	2	5834.34	1.7140	0.0303	0.0	0.0	2.59E-07	3.68E-06	2.00E-05	6.28E-05
10	7	54	53	19550.62	1	5834.87	1.7138	0.0303	0.0	1.49E-06	1.08E-04	1.26E-03	6.03E-03	1.73E-02
10	7	12	11	14686.54	1	5834.90	1.7138	0.0617	0.0	2.24E-05	5.06E-04	2.95E-03	8.82E-03	1.82E-02
6	3	45	46	10364.77	1	5835.00	1.7138	0.0303	5.00E-06	4.36E-04	3.49E-03	1.09E-02	2.16E-02	3.31E-02
7	4	102	101	26845.17	1	5835.85	1.7135	0.0303	0.0	0.0	5.09E-07	1.71E-05	1.64E-04	7.77E-04
6	3	29	30	7871.18	2	5836.14	1.7135	0.0340	1.39E-06	3.66E-05	1.60E-04	3.50E-04	5.44E-04	7.01E-04
3	0	69	70	9402.94	1	5836.15	1.7135	0.0303	1.10E-06	6.04E-05	3.83E-04	1.04E-03	1.88E-03	2.70E-03
7	4	35	36	10871.18	1	5836.28	1.7134	0.0312	3.72E-06	4.14E-04	3.74E-03	1.26E-02	2.61E-02	4.14E-02
9	6	76	75	22623.88	1	5836.82	1.7133	0.0303	0.0	9.40E-08	1.42E-05	2.59E-04	1.66E-03	5.90E-03
7	4	16	17	8774.49	2	5836.83	1.7133	0.0585	4.48E-07	1.82E-05	9.89E-05	2.46E-04	4.16E-04	5.72E-04
9	6	9	10	12663.53	1	5836.89	1.7132	0.0624	2.58E-07	6.77E-05	9.39E-04	4.09E-03	1.01E-02	1.81E-02
4	1	49	50	6704.76	2	5836.97	1.7132	0.0303	1.94E-06	2.92E-05	9.68E-05	1.78E-04	2.48E-04	2.95E-04
10	7	53	52	19363.47	1	5837.13	1.7132	0.0303	0.0	1.73E-06	1.20E-04	1.37E-03	6.41E-03	1.82E-02
10	7	13	12	14729.70	1	5837.13	1.7132	0.0610	0.0	2.36E-05	5.37E-04	3.15E-03	9.45E-03	1.95E-02
8	5	68	67	18112.48	2	5837.24	1.7131	0.0303	0.0	0.0	2.00E-06	1.91E-05	7.91E-05	2.06E-04
8	5	1	0	10227.75	2	5838.72	1.7127	0.0603	0.0	5.17E-07	3.99E-06	1.22E-05	2.38E-05	3.61E-05
10	7	14	13	14776.45	1	5839.25	1.7125	0.0604	0.0	2.45E-05	5.65E-04	3.33E-03	1.01E-02	2.09E-02
10	7	52	51	19179.72	1	5839.29	1.7125	0.0303	0.0	2.01E-06	1.33E-04	1.48E-03	6.80E-03	1.91E-02
8	5	90	89	24755.73	1	5839.40	1.7125	0.0303	0.0	0.0	2.75E-06	6.82E-05	5.36E-04	2.20E-03
8	5	23	24	11551.01	1	5839.48	1.7125	0.0457	1.73E-06	2.66E-04	2.83E-03	1.05E-02	2.32E-02	3.86E-02
7	4	85	84	20602.01	2	5839.71	1.7124	0.0303	0.0	0.0	3.12E-07	4.25E-06	2.24E-05	6.92E-05
8	5	67	66	17883.92	2	5840.69	1.7121	0.0303	0.0	4.74E-08	2.29E-06	2.11E-05	8.58E-05	2.20E-04
3	0	57	58	6223.85	2	5841.25	1.7120	0.0303	9.96E-07	1.19E-05	3.51E-05	6.04E-05	8.02E-05	9.25E-05
10	7	15	14	14826.79	1	5841.26	1.7120	0.0597	0.0	2.53E-05	5.89E-04	3.50E-03	1.06E-02	2.21E-02
10	7	51	50	18999.38	1	5841.33	1.7119	0.0303	0.0	2.32E-06	1.47E-04	1.59E-03	7.20E-03	1.99E-02
5	2	120	119	29956.07	1	5841.41	1.7119	0.0303	0.0	0.0	0.0	1.14E-06	1.47E-05	8.64E-05
5	2	39	40	7112.42	2	5841.43	1.7119	0.0303	2.46E-06	4.49E-05	1.64E-04	3.21E-04	4.64E-04	5.68E-04
9	6	8	9	12627.20	1	5841.46	1.7119	0.0624	2.46E-07	6.36E-05	8.75E-04	3.79E-03	9.31E-03	1.67E-02
9	6	75	74	22361.64	1	5841.56	1.7119	0.0303	0.0	1.18E-07	1.67E-05	2.94E-04	1.84E-03	6.41E-03
7	4	15	16	8714.33	2	5841.93	1.7118	0.0591	4.64E-07	1.83E-05	9.81E-05	2.42E-04	4.07E-04	5.57E-04
5	2	53	54	9811.84	1	5841.94	1.7118	0.0303	5.81E-06	3.89E-04	2.72E-03	7.87E-03	1.47E-02	2.18E-02
8	5	2	1	10231.26	2	5842.04	1.7117	0.0606	0.0	1.04E-06	8.06E-06	2.47E-05	4.81E-05	7.30E-05
4	1	61	62	9490.49	1	5842.30	1.7117	0.0303	3.78E-06	2.17E-04	1.40E-03	3.88E-03	7.05E-03	1.02E-02
6	3	28	29	7764.45	2	5842.50	1.7116	0.0359	1.58E-06	3.96E-05	1.69E-04	3.64E-04	5.59E-04	7.17E-04
6	3	111	110	28264.23	1	5843.13	1.7114	0.0303	0.0	0.0	1.25E-07	5.15E-06	5.67E-05	2.96E-04
10	7	16	15	14880.71	1	5843.17	1.7114	0.0591	0.0	2.59E-05	6.11E-04	3.66E-03	1.12E-02	2.33E-02
10	7	50	49	18822.44	1	5843.26	1.7114	0.0303	0.0	2.66E-06	1.62E-04	1.71E-03	7.61E-03	2.08E-02
6	3	44	45	10195.12	1	5843.31	1.7114	0.0303	6.30E-06	5.06E-04	3.89E-03	1.19E-02	2.31E-02	3.50E-02
7	4	34	35	10738.94	1	5843.56	1.7113	0.0317	4.41E-06	4.60E-04	4.03E-03	1.33E-02	2.73E-02	4.29E-02
7	4	101	100	26496.37	1	5843.58	1.7113	0.0303	0.0	0.0	6.39E-07	2.04E-05	1.89E-04	8.76E-04
8	5	66	65	17658.56	2	5844.04	1.7111	0.0303	0.0	5.72E-08	2.62E-06	2.34E-05	9.29E-05	2.34E-04
10	7	17	16	14938.22	1	5844.96	1.7109	0.0585	0.0	2.63E-05	6.29E-04	3.80E-03	1.17E-02	2.44E-02
7	4	84	83	20317.56	2	5844.97	1.7109	0.0303	0.0	0.0	3.74E-07	4.90E-06	2.51E-05	7.60E-05
10	7	49	48	18648.93	1	5845.08	1.7108	0.0303	0.0	3.05E-06	1.78E-04	1.83E-03	8.02E-03	2.17E-02
4	1	48	49	6525.41	2	5845.25	1.7108	0.0303	2.48E-06	3.43E-05	1.09E-04	1.96E-04	2.67E-04	3.14E-04
8	5	3	2	10238.29	2	5845.26	1.7108	0.0609	0.0	1.57E-06	1.22E-05	3.73E-05	7.28E-05	1.10E-04
8	5	22	23	11463.27	1	5845.52	1.7107	0.0476	1.90E-06	2.80E-04	2.92E-03	1.07E-02	2.35E-02	3.88E-02
8	5	69	88	24446.47	1	5845.75	1.7106	0.0303	0.0	0.0	3.36E-06	7.98E-05	6.09E-04	2.45E-03
9	6	7	8	12594.50	1	5845.93	1.7106	0.0623	2.31E-07	5.88E-05	8.03E-04	3.46E-03	8.48E-03	1.51E-02
9	6	74	73	22102.62	1	5846.19	1.7105	0.0303	0.0	1.47E-07	1.97E-05	3.33E-04	2.03E-03	6.95E-03
10	7	18	17	14999.30	1	5846.66	1.7104	0.0568	0.0	2.65E-05	6.44E-04	3.92E-03	1.21E-02	2.55E-02
10	7	48	47	18478.84	1	5846.79	1.7103	0.0303	0.0	3.48E-06	1.95E-04	1.96E-03	8.43E-03	2.25E-02
3	0	68	69	9142.25	1	5846.88	1.7103	0.0303	1.58E-06	7.69E-05	4.59E-04	1.20E-03	2.12E-03	2.98E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	14	15	8657.70	2	5846.93	1.7103	0.0597	4.76E-07	1.83E-05	9.67E-05	2.36E-04	3.96E-04	5.40E-04
8	5	65	64	17436.43	2	5847.28	1.7102	0.0303	0.0	6.87E-08	2.99E-06	2.58E-05	1.00E-04	2.49E-04
10	7	19	18	15063.96	1	5848.24	1.7099	0.0552	0.0	2.65E-05	6.55E-04	4.03E-03	1.25E-02	2.64E-02
8	5	4	3	10248.62	2	5848.38	1.7099	0.0611	0.0	2.10E-06	1.63E-05	5.01E-05	9.77E-05	1.48E-04
10	7	47	46	18312.18	1	5848.38	1.7099	0.0303	0.0	3.96E-06	2.13E-04	2.09E-03	8.85E-03	2.34E-02
5	2	38	39	6969.43	2	5848.76	1.7098	0.0303	2.97E-06	5.06E-05	1.79E-04	3.42E-04	4.88E-04	5.92E-04
6	3	27	28	7661.24	2	5848.77	1.7098	0.0379	1.79E-06	4.27E-05	1.78E-04	3.77E-04	5.74E-04	7.30E-04
10	7	20	19	15132.20	1	5849.72	1.7095	0.0535	0.0	2.64E-05	6.63E-04	4.12E-03	1.29E-02	2.73E-02
10	7	46	45	18148.97	1	5849.86	1.7094	0.0303	0.0	4.48E-06	2.32E-04	2.22E-03	9.27E-03	2.42E-02
7	4	83	82	20036.19	2	5850.12	1.7094	0.0303	0.0	0.0	4.48E-07	5.63E-06	2.81E-05	8.35E-05
3	0	56	57	6015.03	2	5850.30	1.7093	0.0303	1.33E-06	1.44E-05	4.05E-05	6.76E-05	8.80E-05	1.00E-04
9	6	6	7	12565.43	1	5850.30	1.7093	0.0620	2.13E-07	5.34E-05	7.24E-04	3.11E-03	7.59E-03	1.35E-02
8	5	64	63	17217.54	2	5850.41	1.7093	0.0303	0.0	8.23E-08	3.39E-06	2.84E-05	1.08E-04	2.65E-04
9	6	73	72	21846.84	1	5850.71	1.7092	0.0303	0.0	1.84E-07	2.30E-05	3.76E-04	2.24E-03	7.53E-03
7	4	33	34	10610.31	1	5850.75	1.7092	0.0321	5.19E-06	5.10E-04	4.32E-03	1.40E-02	2.84E-02	4.42E-02
5	2	52	53	9611.86	1	5851.07	1.7091	0.0303	7.67E-06	4.66E-04	3.11E-03	8.74E-03	1.61E-02	2.34E-02
10	7	21	20	15204.01	1	5851.08	1.7091	0.0515	0.0	2.61E-05	6.67E-04	4.19E-03	1.32E-02	2.81E-02
7	4	100	99	26150.54	1	5851.20	1.7091	0.0303	0.0	0.0	8.01E-07	2.43E-05	2.18E-04	9.86E-04
10	7	45	44	17989.20	1	5851.24	1.7090	0.0303	0.0	5.05E-06	2.51E-04	2.36E-03	9.68E-03	2.50E-02
5	2	119	118	29548.44	1	5851.26	1.7090	0.0303	0.0	0.0	0.0	1.41E-06	1.76E-05	1.00E-04
8	5	5	4	10262.87	2	5851.40	1.7090	0.0614	0.0	2.62E-06	2.04E-05	6.28E-05	1.23E-04	1.87E-04
8	5	21	22	11379.15	1	5851.46	1.7090	0.0496	2.07E-06	2.93E-04	2.99E-03	1.08E-02	2.36E-02	3.88E-02
6	3	43	44	10029.06	1	5851.52	1.7090	0.0303	7.88E-06	5.85E-04	4.32E-03	1.29E-02	2.46E-02	3.69E-02
7	4	13	14	8604.60	2	5851.83	1.7089	0.0604	4.84E-07	1.81E-05	9.47E-05	2.30E-04	3.83E-04	5.20E-04
6	3	110	109	27885.68	1	5851.92	1.7088	0.0303	0.0	0.0	1.61E-07	6.27E-06	6.66E-05	3.39E-04
8	5	88	87	24140.31	1	5851.98	1.7088	0.0303	0.0	0.0	4.11E-06	9.32E-05	6.91E-04	2.72E-03
4	1	60	61	9260.14	1	5852.23	1.7088	0.0303	5.20E-06	2.67E-04	1.64E-03	4.38E-03	7.79E-03	1.11E-02
10	7	22	21	15279.39	1	5852.35	1.7087	0.0496	0.0	2.57E-05	6.68E-04	4.24E-03	1.34E-02	2.88E-02
10	7	44	43	17832.88	1	5852.50	1.7087	0.0303	0.0	5.67E-06	2.72E-04	2.49E-03	1.01E-02	2.58E-02
8	5	63	62	17001.87	2	5853.44	1.7084	0.0303	0.0	9.82E-08	3.85E-06	3.12E-05	1.16E-04	2.81E-04
4	1	47	48	6349.53	2	5853.45	1.7084	0.0303	3.16E-06	4.01E-05	1.22E-04	2.14E-04	2.87E-04	3.34E-04
10	7	23	22	15358.34	1	5853.50	1.7084	0.0476	0.0	2.52E-05	6.66E-04	4.28E-03	1.37E-02	2.95E-02
10	7	43	42	17680.03	1	5853.64	1.7083	0.0303	0.0	6.35E-06	2.93E-04	2.63E-03	1.05E-02	2.65E-02
8	5	6	5	10280.43	2	5854.32	1.7081	0.0617	0.0	3.13E-06	2.45E-05	7.55E-05	1.48E-04	2.25E-04
10	7	24	23	15440.84	1	5854.54	1.7081	0.0457	0.0	2.45E-05	6.61E-04	4.29E-03	1.38E-02	3.00E-02
9	6	5	6	12539.99	1	5854.56	1.7081	0.0617	1.91E-07	4.73E-05	6.37E-04	2.73E-03	6.64E-03	1.18E-02
10	7	42	41	17530.64	1	5854.68	1.7080	0.0303	0.0	7.07E-06	3.15E-04	2.77E-03	1.09E-02	2.73E-02
6	3	26	27	7561.55	2	5854.94	1.7080	0.0398	2.02E-06	4.58E-05	1.86E-04	3.89E-04	5.87E-04	7.42E-04
9	6	72	71	21594.31	1	5855.11	1.7079	0.0303	0.0	2.28E-07	2.69E-05	4.24E-04	2.46E-03	8.14E-03
7	4	82	81	19757.90	2	5855.17	1.7079	0.0303	0.0	0.0	5.35E-07	6.46E-06	3.14E-05	9.15E-05
10	7	25	24	15526.91	1	5855.48	1.7078	0.0437	0.0	2.37E-05	6.53E-04	4.30E-03	1.39E-02	3.04E-02
10	7	41	40	17384.73	1	5855.61	1.7078	0.0303	0.0	7.85E-06	3.38E-04	2.90E-03	1.13E-02	2.79E-02
5	2	37	38	6829.95	2	5856.00	1.7077	0.0303	3.56E-06	5.68E-05	1.94E-04	3.64E-04	5.13E-04	6.16E-04
10	7	26	25	15616.54	1	5856.31	1.7076	0.0418	0.0	2.28E-05	6.43E-04	4.28E-03	1.40E-02	3.08E-02
8	5	62	61	16789.46	2	5856.36	1.7075	0.0303	0.0	1.17E-07	4.34E-06	3.42E-05	1.25E-04	2.97E-04
10	7	40	39	17242.29	1	5856.43	1.7075	0.0303	0.0	8.68E-06	3.61E-04	3.04E-03	1.16E-02	2.86E-02
7	4	12	13	8555.02	2	5856.64	1.7075	0.0610	4.88E-07	1.78E-05	9.20E-05	2.21E-04	3.68E-04	4.97E-04
10	7	27	26	15709.71	1	5857.03	1.7074	0.0398	0.0	2.19E-05	6.30E-04	4.25E-03	1.40E-02	3.10E-02
10	7	39	38	17103.34	1	5857.13	1.7073	0.0303	0.0	9.55E-06	3.85E-04	3.17E-03	1.20E-02	2.91E-02
8	5	7	6	10301.50	2	5857.14	1.7073	0.0620	4.29E-08	3.62E-06	2.84E-05	8.80E-05	1.73E-04	2.63E-04
8	5	20	21	11298.67	1	5857.30	1.7073	0.0515	2.24E-06	3.06E-04	3.06E-03	1.09E-02	2.37E-02	3.87E-02
3	0	67	68	8885.04	1	5857.52	1.7072	0.0303	2.27E-06	9.75E-05	5.47E-04	1.38E-03	2.37E-03	3.29E-03
10	7	28	27	15806.43	1	5857.64	1.7072	0.0379	0.0	2.08E-05	6.15E-04	4.21E-03	1.40E-02	3.12E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
10	7	38	37	16967.88	1	5857.73	1.7071	0.0303	0.0	1.05E-05	4.08E-04	3.30E-03	1.23E-02	2.96E-02
7	4	32	33	10485.30	1	5857.83	1.7071	0.0326	6.08E-06	5.62E-04	4.62E-03	1.47E-02	2.94E-02	4.55E-02
8	5	87	86	23837.25	1	5858.09	1.7070	0.0303	0.0	0.0	5.00E-06	1.09E-04	7.82E-04	3.02E-03
10	7	29	28	15906.70	1	5858.14	1.7070	0.0359	0.0	1.98E-05	5.98E-04	4.15E-03	1.40E-02	3.13E-02
10	7	37	36	16835.92	1	5858.21	1.7070	0.0308	0.0	1.14E-05	4.32E-04	3.43E-03	1.26E-02	3.01E-02
10	7	30	29	16010.51	1	5858.53	1.7069	0.0340	0.0	1.87E-05	5.79E-04	4.08E-03	1.39E-02	3.13E-02
10	7	36	35	16707.46	1	5858.59	1.7069	0.0312	0.0	1.24E-05	4.55E-04	3.54E-03	1.29E-02	3.05E-02
7	4	99	98	25807.67	1	5858.70	1.7069	0.0303	0.0	0.0	1.00E-06	2.89E-05	2.51E-04	1.11E-03
9	6	4	5	12518.18	1	5858.71	1.7069	0.0614	1.66E-07	4.06E-05	5.44E-04	2.32E-03	5.64E-03	1.00E-02
10	7	31	30	16117.86	1	5858.81	1.7068	0.0335	0.0	1.77E-05	5.61E-04	4.02E-03	1.38E-02	3.14E-02
10	7	35	34	16582.50	1	5858.85	1.7068	0.0317	0.0	1.35E-05	4.78E-04	3.66E-03	1.31E-02	3.08E-02
10	7	32	31	16228.73	1	5858.99	1.7068	0.0331	0.0	1.66E-05	5.42E-04	3.94E-03	1.37E-02	3.13E-02
10	7	34	33	16461.06	1	5859.01	1.7068	0.0321	0.0	1.45E-05	5.00E-04	3.76E-03	1.33E-02	3.11E-02
10	7	33	32	16343.14	1	5859.05	1.7068	0.0326	0.0	1.55E-05	5.22E-04	3.86E-03	1.35E-02	3.12E-02
8	5	61	60	16580.31	2	5859.18	1.7067	0.0303	0.0	1.38E-07	4.89E-06	3.74E-05	1.34E-04	3.14E-04
3	0	55	56	5809.67	2	5859.25	1.7067	0.0303	1.78E-06	1.74E-05	4.66E-05	7.55E-05	9.63E-05	1.08E-04
6	3	95	94	21738.60	2	5859.25	1.7067	0.0303	0.0	0.0	9.84E-08	1.58E-06	9.28E-06	3.10E-05
9	6	71	70	21345.04	1	5859.39	1.7067	0.0303	0.0	2.82E-07	3.14E-05	4.76E-04	2.70E-03	8.78E-03
6	3	42	43	9866.59	1	5859.63	1.7066	0.0303	9.80E-06	6.74E-04	4.78E-03	1.39E-02	2.62E-02	3.89E-02
8	5	8	7	10326.08	2	5859.87	1.7065	0.0623	4.79E-08	4.09E-06	3.23E-05	1.00E-04	1.97E-04	3.02E-04
5	2	51	52	9415.45	1	5860.09	1.7065	0.0303	1.01E-05	5.57E-04	3.55E-03	9.68E-03	1.75E-02	2.51E-02
7	4	81	80	19482.71	2	5860.10	1.7065	0.0303	0.0	0.0	6.37E-07	7.39E-06	3.50E-05	1.00E-04
6	3	109	108	27509.97	1	5860.58	1.7063	0.0303	0.0	0.0	2.07E-07	7.62E-06	7.81E-05	3.87E-04
5	2	118	117	29143.55	1	5860.98	1.7062	0.0303	0.0	0.0	0.0	1.75E-06	2.09E-05	1.16E-04
6	3	25	26	7465.39	2	5861.02	1.7062	0.0418	2.26E-06	4.89E-05	1.94E-04	4.00E-04	5.98E-04	7.51E-04
7	4	11	12	8508.98	2	5861.35	1.7061	0.0617	4.85E-07	1.73E-05	8.86E-05	2.12E-04	3.50E-04	4.72E-04
4	1	46	47	6177.14	2	5861.55	1.7060	0.0303	4.00E-06	4.67E-05	1.36E-04	2.33E-04	3.08E-04	3.54E-04
8	5	60	59	16374.42	2	5861.89	1.7059	0.0303	0.0	1.63E-07	5.50E-06	4.08E-05	1.43E-04	3.31E-04
4	1	59	60	9033.32	1	5862.07	1.7059	0.0303	7.13E-06	3.29E-04	1.91E-03	4.93E-03	8.59E-03	1.20E-02
8	5	9	8	10354.17	2	5862.49	1.7058	0.0624	5.23E-08	4.53E-06	3.60E-05	1.12E-04	2.22E-04	3.39E-04
9	6	3	4	12500.01	1	5862.77	1.7057	0.0611	1.37E-07	3.33E-05	4.44E-04	1.89E-03	4.59E-03	8.14E-03
4	1	126	125	30616.80	1	5862.96	1.7056	0.0303	0.0	0.0	0.0	3.58E-07	4.93E-06	3.03E-05
8	5	19	20	11221.82	1	5863.03	1.7056	0.0535	2.40E-06	3.16E-04	3.11E-03	1.10E-02	2.36E-02	3.84E-02
5	2	36	37	6693.98	2	5863.14	1.7056	0.0308	4.25E-06	6.35E-05	2.10E-04	3.87E-04	5.37E-04	6.39E-04
9	6	70	69	21099.03	1	5863.56	1.7054	0.0303	0.0	3.47E-07	3.64E-05	5.34E-04	2.96E-03	9.46E-03
8	5	86	85	23537.30	1	5864.08	1.7053	0.0303	0.0	0.0	6.07E-06	1.26E-04	8.84E-04	3.34E-03
8	5	59	58	16171.80	2	5864.49	1.7052	0.0303	0.0	1.93E-07	6.20E-06	4.46E-05	1.54E-04	3.51E-04
7	4	31	32	10363.92	1	5864.81	1.7051	0.0331	7.06E-06	6.16E-04	4.93E-03	1.54E-02	3.05E-02	4.67E-02
7	4	80	79	19210.62	2	5864.92	1.7051	0.0303	0.0	0.0	7.57E-07	8.44E-06	3.89E-05	1.09E-04
8	5	10	9	10385.77	2	5865.02	1.7050	0.0624	5.62E-08	4.94E-06	3.96E-05	1.24E-04	2.45E-04	3.76E-04
6	3	94	93	21420.99	2	5865.58	1.7049	0.0303	0.0	0.0	1.20E-07	1.85E-06	1.05E-05	3.44E-05
7	4	10	11	8466.48	2	5865.96	1.7048	0.0625	4.77E-07	1.67E-05	8.45E-05	2.01E-04	3.31E-04	4.44E-04
7	4	98	97	25467.79	1	5866.07	1.7047	0.0303	0.0	0.0	1.25E-06	3.42E-05	2.88E-04	1.24E-03
9	6	2	3	12485.47	1	5866.72	1.7045	0.0609	1.06E-07	2.55E-05	3.40E-04	1.44E-03	3.49E-03	6.19E-03
8	5	58	57	15972.47	2	5866.99	1.7045	0.0303	0.0	2.28E-07	6.96E-06	4.87E-05	1.65E-04	3.71E-04
6	3	24	25	7372.76	2	5867.01	1.7044	0.0437	2.51E-06	5.19E-05	2.02E-04	4.10E-04	6.08E-04	7.59E-04
8	5	11	10	10420.87	2	5867.45	1.7043	0.0625	5.94E-08	5.31E-06	4.29E-05	1.35E-04	2.68E-04	4.12E-04
9	6	69	68	20856.30	1	5867.61	1.7043	0.0303	0.0	4.26E-07	4.22E-05	5.97E-04	3.23E-03	1.02E-02
6	3	41	42	9707.73	1	5867.64	1.7043	0.0303	1.21E-05	7.72E-04	5.27E-03	1.50E-02	2.79E-02	4.09E-02
3	0	66	67	8631.33	1	5868.06	1.7041	0.0303	3.25E-06	1.23E-04	6.51E-04	1.59E-03	2.66E-03	3.62E-03
3	0	54	55	5607.77	2	5868.12	1.7041	0.0303	2.36E-06	2.09E-05	5.34E-05	8.41E-05	1.05E-04	1.16E-04
8	5	18	19	11148.61	1	5868.67	1.7040	0.0552	2.56E-06	3.26E-04	3.14E-03	1.10E-02	2.35E-02	3.80E-02
5	2	50	51	9222.61	1	5869.02	1.7039	0.0303	1.31E-05	6.63E-04	4.03E-03	1.07E-02	1.90E-02	2.69E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	108	107	27137.13	1	5869.12	1.7038	0.0303	0.0	0.0	2.65E-07	9.25E-06	9.14E-05	4.42E-04
8	5	57	56	15776.43	2	5869.38	1.7038	0.0303	0.0	2.67E-07	7.80E-06	5.31E-05	1.76E-04	3.91E-04
4	1	45	46	6008.24	2	5869.56	1.7037	0.0303	5.04E-06	5.42E-05	1.52E-04	2.54E-04	3.30E-04	3.75E-04
7	4	79	78	18941.66	2	5869.64	1.7037	0.0303	0.0	0.0	8.97E-07	9.62E-06	4.33E-05	1.19E-04
8	5	12	11	10459.48	2	5869.78	1.7036	0.0617	6.20E-08	5.64E-06	4.60E-05	1.46E-04	2.90E-04	4.48E-04
8	5	85	84	23240.48	1	5869.96	1.7036	0.0303	0.0	4.19E-08	7.35E-06	1.47E-04	9.97E-04	3.69E-03
5	2	35	36	6561.53	2	5870.19	1.7035	0.0312	5.04E-06	7.07E-05	2.26E-04	4.09E-04	5.61E-04	6.62E-04
7	4	9	10	8427.51	2	5870.48	1.7034	0.0624	4.63E-07	1.59E-05	7.97E-05	1.88E-04	3.09E-04	4.14E-04
9	6	1	2	12474.57	1	5870.56	1.7034	0.0606	7.22E-08	1.73E-05	2.30E-04	9.75E-04	2.36E-03	4.18E-03
5	2	117	116	28741.41	1	5870.58	1.7034	0.0303	0.0	0.0	4.91E-08	2.16E-06	2.49E-05	1.35E-04
9	6	68	67	20616.86	1	5871.55	1.7031	0.0303	0.0	5.22E-07	4.88E-05	6.67E-04	3.53E-03	1.09E-02
8	5	56	55	15583.68	2	5871.67	1.7031	0.0303	0.0	3.13E-07	8.72E-06	5.77E-05	1.88E-04	4.12E-04
7	4	30	31	10246.16	1	5871.70	1.7031	0.0335	8.16E-06	6.73E-04	5.23E-03	1.61E-02	3.15E-02	4.79E-02
6	3	93	92	21106.37	2	5871.80	1.7031	0.0303	0.0	0.0	1.47E-07	2.15E-06	1.19E-05	3.81E-05
4	1	88	89	8810.04	1	5871.81	1.7031	0.0303	9.76E-06	4.04E-04	2.23E-03	5.57E-03	9.49E-03	1.31E-02
8	5	13	12	10501.59	2	5872.00	1.7030	0.0610	6.39E-08	5.93E-06	4.89E-05	1.56E-04	3.12E-04	4.82E-04
6	3	23	24	7283.66	2	5872.90	1.7027	0.0457	2.76E-06	5.49E-05	2.09E-04	4.19E-04	6.16E-04	7.64E-04
7	4	97	96	25130.91	1	5873.33	1.7026	0.0303	0.0	0.0	1.55E-06	4.05E-05	3.31E-04	1.39E-03
4	1	125	124	30188.78	1	5873.51	1.7026	0.0303	0.0	0.0	0.0	4.46E-07	5.91E-06	3.52E-05
8	5	55	54	15394.23	2	5873.85	1.7025	0.0303	0.0	3.65E-07	9.72E-06	6.26E-05	2.00E-04	4.33E-04
8	5	14	13	10547.20	2	5874.13	1.7024	0.0604	6.51E-08	6.18E-06	5.15E-05	1.65E-04	3.32E-04	5.15E-04
8	5	17	18	11079.05	1	5874.20	1.7024	0.0568	2.71E-06	3.33E-04	3.16E-03	1.10E-02	2.32E-02	3.74E-02
7	4	78	77	18675.82	2	5874.25	1.7023	0.0303	0.0	0.0	1.06E-06	1.09E-05	4.80E-05	1.30E-04
9	6	0	1	12467.30	1	5874.30	1.7023	0.0603	0.0	8.80E-06	1.17E-04	4.93E-04	1.19E-03	2.11E-03
7	4	8	9	8392.08	2	5874.90	1.7022	0.0624	4.43E-07	1.49E-05	7.43E-05	1.75E-04	2.85E-04	3.82E-04
9	6	67	66	20380.71	1	5875.37	1.7020	0.0303	0.0	6.36E-07	5.62E-05	7.43E-04	3.84E-03	1.17E-02
6	3	40	41	9552.46	1	5875.56	1.7020	0.0303	1.49E-05	8.81E-04	5.80E-03	1.62E-02	2.96E-02	4.29E-02
8	5	84	83	22946.81	1	5875.72	1.7019	0.0303	0.0	5.43E-08	8.88E-06	1.70E-04	1.12E-03	4.08E-03
8	5	54	53	15208.11	2	5875.93	1.7019	0.0303	0.0	4.24E-07	1.08E-05	6.77E-05	2.13E-04	4.54E-04
8	5	15	14	10596.32	2	5876.16	1.7018	0.0597	6.57E-08	6.38E-06	5.38E-05	1.74E-04	3.51E-04	5.46E-04
3	0	53	54	5409.33	2	5876.89	1.7016	0.0303	3.11E-06	2.51E-05	6.10E-05	9.34E-05	1.15E-04	1.25E-04
5	2	34	35	6432.60	2	5877.15	1.7015	0.0317	5.94E-06	7.83E-05	2.43E-04	4.32E-04	5.85E-04	6.84E-04
4	1	44	45	5842.84	2	5877.48	1.7014	0.0303	6.30E-06	6.26E-05	1.69E-04	2.75E-04	3.52E-04	3.96E-04
6	3	107	106	26767.18	1	5877.55	1.7014	0.0303	0.0	0.0	3.38E-07	1.12E-05	1.07E-04	5.04E-04
5	2	49	50	9033.35	1	5877.85	1.7013	0.0303	1.71E-05	7.86E-04	4.57E-03	1.18E-02	2.06E-02	2.88E-02
8	5	53	52	15025.29	2	5877.90	1.7013	0.0303	0.0	4.91E-07	1.20E-05	7.31E-05	2.26E-04	4.76E-04
6	3	92	91	20794.75	2	5877.90	1.7013	0.0303	0.0	0.0	1.79E-07	2.51E-06	1.35E-05	4.21E-05
8	5	16	15	10648.93	2	5878.09	1.7012	0.0591	6.57E-08	6.54E-06	5.59E-05	1.82E-04	3.69E-04	5.76E-04
7	4	29	30	10132.03	1	5878.48	1.7011	0.0340	9.37E-06	7.31E-04	5.53E-03	1.67E-02	3.24E-02	4.89E-02
3	0	65	66	8381.13	1	5878.50	1.7011	0.0303	4.61E-06	1.55E-04	7.72E-04	1.82E-03	2.97E-03	3.97E-03
6	3	22	23	7198.11	2	5878.70	1.7011	0.0476	3.03E-06	5.77E-05	2.15E-04	4.26E-04	6.21E-04	7.66E-04
7	4	77	76	18413.12	2	5878.75	1.7010	0.0303	0.0	0.0	1.25E-06	1.24E-05	5.31E-05	1.41E-04
9	6	66	65	20147.87	1	5879.08	1.7009	0.0303	0.0	7.73E-07	6.46E-05	8.25E-04	4.17E-03	1.25E-02
7	4	7	8	8360.19	2	5879.23	1.7009	0.0623	4.15E-07	1.38E-05	6.81E-05	1.59E-04	2.60E-04	3.47E-04
8	5	16	17	11013.12	1	5879.63	1.7008	0.0585	2.84E-06	3.38E-04	3.16E-03	1.09E-02	2.28E-02	3.66E-02
8	5	52	51	14845.80	2	5879.76	1.7007	0.0303	0.0	5.66E-07	1.32E-05	7.87E-05	2.39E-04	4.97E-04
8	5	17	16	10705.04	2	5879.92	1.7007	0.0585	6.50E-08	6.66E-06	5.76E-05	1.89E-04	3.86E-04	6.05E-04
5	2	116	115	28342.04	1	5880.06	1.7007	0.0303	0.0	0.0	6.42E-08	2.67E-06	2.96E-05	1.56E-04
7	4	96	95	24797.05	1	5880.48	1.7005	0.0303	0.0	0.0	1.92E-06	4.79E-05	3.78E-04	1.56E-03
8	5	83	82	22656.29	1	5881.36	1.7003	0.0303	0.0	7.02E-08	1.07E-05	1.96E-04	1.26E-03	4.49E-03
4	1	57	58	8590.31	1	5881.45	1.7003	0.0303	1.33E-05	4.95E-04	2.59E-03	6.27E-03	1.05E-02	1.42E-02
9	6	1	0	12463.66	1	5881.47	1.7003	0.0603	0.0	9.01E-06	1.19E-04	5.05E-04	1.22E-03	2.16E-03
8	5	51	50	14669.65	2	5881.52	1.7002	0.0303	0.0	6.51E-07	1.46E-05	8.45E-05	2.52E-04	5.19E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	18	17	10764.64	2	5881.64	1.7002	0.0568	6.38E-08	6.72E-06	5.90E-05	1.95E-04	4.01E-04	6.31E-04
9	6	65	64	19918.36	1	5882.68	1.6999	0.0303	0.0	9.35E-07	7.40E-05	9.15E-04	4.53E-03	1.34E-02
7	4	76	75	18153.57	2	5883.14	1.6998	0.0303	0.0	0.0	1.47E-06	1.41E-05	5.86E-05	1.53E-04
8	5	50	49	14496.64	2	5883.18	1.6998	0.0303	0.0	7.45E-07	1.60E-05	9.06E-05	2.66E-04	5.41E-04
8	5	19	18	10827.74	2	5883.27	1.6997	0.0552	6.22E-08	6.75E-06	6.02E-05	2.01E-04	4.15E-04	6.56E-04
6	3	39	40	9400.82	1	5883.37	1.6997	0.0303	1.82E-05	1.00E-03	6.36E-03	1.73E-02	3.13E-02	4.49E-02
7	4	6	7	8331.84	2	5883.45	1.6997	0.0620	3.82E-07	1.25E-05	6.14E-05	1.43E-04	2.33E-04	3.10E-04
6	3	91	90	20486.14	2	5883.90	1.6996	0.0303	0.0	0.0	2.17E-07	2.91E-06	1.52E-05	4.65E-05
4	1	124	123	29763.41	1	5883.93	1.6995	0.0303	0.0	0.0	0.0	5.55E-07	7.06E-06	4.09E-05
5	2	33	34	6307.19	2	5884.02	1.6995	0.0321	6.96E-06	8.65E-05	2.61E-04	4.54E-04	6.08E-04	7.05E-04
6	3	21	22	7116.09	2	5884.40	1.6994	0.0496	3.29E-06	6.03E-05	2.21E-04	4.32E-04	6.25E-04	7.66E-04
8	5	49	48	14327.37	2	5884.73	1.6993	0.0303	0.0	8.50E-07	1.75E-05	9.68E-05	2.80E-04	5.62E-04
8	5	20	19	10894.32	2	5884.80	1.6993	0.0535	6.00E-08	6.73E-06	6.10E-05	2.05E-04	4.27E-04	6.78E-04
9	6	2	1	12467.30	1	5884.89	1.6993	0.0606	7.60E-08	1.82E-05	2.41E-04	1.02E-03	2.47E-03	4.37E-03
8	5	15	16	10950.85	1	5884.96	1.6992	0.0591	2.95E-06	3.41E-04	3.14E-03	1.07E-02	2.24E-02	3.57E-02
7	4	28	29	10021.54	1	5885.16	1.6992	0.0359	1.07E-05	7.95E-04	5.85E-03	1.74E-02	3.34E-02	5.00E-02
4	1	43	44	5680.94	2	5885.30	1.6991	0.0303	7.84E-06	7.21E-05	1.87E-04	2.98E-04	3.76E-04	4.17E-04
3	0	52	53	5214.37	2	5885.57	1.6991	0.0303	4.08E-06	3.00E-05	6.95E-05	1.04E-04	1.25E-04	1.34E-04
6	3	106	105	26400.13	1	5885.85	1.6990	0.0303	0.0	0.0	4.30E-07	1.35E-05	1.25E-04	5.73E-04
9	6	64	63	19692.16	1	5886.16	1.6989	0.0303	0.0	1.13E-06	8.45E-05	1.01E-03	4.90E-03	1.42E-02
8	5	48	47	14161.26	2	5886.18	1.6989	0.0303	0.0	9.66E-07	1.91E-05	1.03E-04	2.94E-04	5.83E-04
8	5	21	20	10964.39	2	5886.22	1.6989	0.0515	5.76E-08	6.67E-06	6.15E-05	2.09E-04	4.38E-04	6.99E-04
5	2	48	49	8847.68	1	5886.59	1.6988	0.0303	2.20E-05	9.28E-04	5.16E-03	1.30E-02	2.22E-02	3.07E-02
8	5	82	81	22368.93	1	5886.89	1.6987	0.0303	0.0	9.04E-08	1.29E-05	2.26E-04	1.42E-03	4.94E-03
7	4	75	74	17897.18	2	5887.42	1.6985	0.0303	0.0	0.0	1.72E-06	1.59E-05	6.47E-05	1.66E-04
7	4	95	94	24466.21	1	5887.50	1.6985	0.0303	0.0	0.0	2.37E-06	5.65E-05	4.32E-04	1.74E-03
8	5	47	46	13998.51	2	5887.52	1.6985	0.0303	0.0	1.09E-06	2.08E-05	1.10E-04	3.07E-04	6.04E-04
8	5	22	21	11037.95	2	5887.55	1.6985	0.0496	5.48E-08	6.58E-06	6.17E-05	2.12E-04	4.47E-04	7.17E-04
7	4	5	6	8307.03	2	5887.59	1.6985	0.0617	3.42E-07	1.11E-05	5.40E-05	1.26E-04	2.04E-04	2.71E-04
9	6	3	2	12474.57	1	5888.21	1.6983	0.0609	1.14E-07	2.74E-05	3.63E-04	1.54E-03	3.73E-03	6.61E-03
8	5	46	45	13839.13	2	5888.76	1.6982	0.0303	0.0	1.23E-06	2.26E-05	1.17E-04	3.21E-04	6.24E-04
8	5	23	22	11114.98	2	5888.77	1.6981	0.0476	5.18E-08	6.45E-06	6.16E-05	2.14E-04	4.55E-04	7.34E-04
3	0	64	65	8134.45	1	5888.85	1.6981	0.0303	6.51E-06	1.95E-04	9.13E-04	2.07E-03	3.31E-03	4.36E-03
5	2	115	114	27945.45	1	5889.42	1.6980	0.0303	0.0	0.0	8.38E-08	3.29E-06	3.51E-05	1.80E-04
9	6	63	62	19469.31	1	5889.53	1.6979	0.0303	0.0	1.36E-06	9.62E-05	1.12E-03	5.29E-03	1.51E-02
6	3	90	89	20180.55	2	5889.79	1.6979	0.0303	0.0	0.0	2.63E-07	3.38E-06	1.71E-05	5.13E-05
8	5	45	44	13683.11	2	5889.89	1.6978	0.0303	0.0	1.38E-06	2.45E-05	1.23E-04	3.35E-04	6.44E-04
8	5	24	23	11195.50	2	5889.90	1.6978	0.0457	4.86E-08	6.29E-06	6.12E-05	2.16E-04	4.61E-04	7.48E-04
6	3	20	21	7037.61	2	5890.00	1.6978	0.0515	3.56E-06	6.27E-05	2.25E-04	4.36E-04	6.26E-04	7.63E-04
8	5	14	15	10892.23	1	5890.18	1.6977	0.0597	3.04E-06	3.41E-04	3.10E-03	1.05E-02	2.18E-02	3.46E-02
5	2	32	33	6185.32	2	5890.79	1.6976	0.0326	8.11E-06	9.50E-05	2.78E-04	4.76E-04	6.30E-04	7.25E-04
8	5	44	43	13530.48	2	5890.92	1.6975	0.0303	0.0	1.55E-06	2.64E-05	1.30E-04	3.48E-04	6.63E-04
8	5	25	24	11279.49	2	5890.92	1.6975	0.0437	4.52E-08	6.10E-06	6.06E-05	2.16E-04	4.66E-04	7.60E-04
4	1	56	57	8374.14	1	5891.00	1.6975	0.0303	1.80E-05	6.04E-04	3.00E-03	7.05E-03	1.15E-02	1.54E-02
6	3	38	39	9252.79	1	5891.09	1.6975	0.0303	2.22E-05	1.13E-03	6.95E-03	1.85E-02	3.30E-02	4.69E-02
9	6	4	3	12485.47	1	5891.43	1.6974	0.0611	1.52E-07	3.66E-05	4.87E-04	2.07E-03	5.01E-03	8.88E-03
7	4	74	73	17643.96	2	5891.60	1.6973	0.0303	0.0	4.40E-08	2.01E-06	1.79E-05	7.12E-05	1.80E-04
7	4	4	5	8285.77	2	5891.62	1.6973	0.0614	2.97E-07	9.52E-06	4.61E-05	1.07E-04	1.73E-04	2.30E-04
7	4	27	28	9914.69	1	5891.74	1.6973	0.0379	1.22E-05	8.59E-04	6.17E-03	1.81E-02	3.43E-02	5.10E-02
8	5	26	25	11366.95	2	5891.84	1.6973	0.0418	4.19E-08	5.89E-06	5.97E-05	2.16E-04	4.69E-04	7.69E-04
8	5	43	42	13381.23	2	5891.85	1.6973	0.0303	0.0	1.73E-06	2.84E-05	1.37E-04	3.61E-04	6.81E-04
8	5	81	80	22084.76	1	5892.30	1.6971	0.0303	0.0	1.16E-07	1.54E-05	2.61E-04	1.59E-03	5.43E-03
8	5	27	26	11457.88	2	5892.66	1.6970	0.0398	0.0	5.66E-06	5.87E-05	2.14E-04	4.70E-04	7.77E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	42	41	13235.37	2	5892.67	1.6970	0.0303	0.0	1.92E-06	3.05E-05	1.44E-04	3.74E-04	6.98E-04
9	6	62	61	19249.80	1	5892.78	1.6970	0.0303	0.0	1.62E-06	1.09E-04	1.23E-03	5.70E-03	1.61E-02
4	1	42	43	5622.55	2	5893.04	1.6969	0.0303	9.71E-06	8.27E-05	2.07E-04	3.22E-04	3.99E-04	4.39E-04
8	5	28	27	11552.28	2	5893.37	1.6968	0.0379	0.0	5.41E-06	5.74E-05	2.13E-04	4.71E-04	7.82E-04
8	5	41	40	13092.91	2	5893.39	1.6968	0.0303	0.0	2.12E-06	3.26E-05	1.51E-04	3.86E-04	7.14E-04
8	5	29	28	11650.14	2	5893.99	1.6966	0.0359	0.0	5.14E-06	5.59E-05	2.10E-04	4.69E-04	7.85E-04
8	5	40	39	12953.84	2	5894.01	1.6966	0.0303	0.0	2.34E-06	3.47E-05	1.57E-04	3.98E-04	7.28E-04
6	3	105	104	26035.98	1	5894.03	1.6966	0.0303	0.0	0.0	5.47E-07	1.63E-05	1.45E-04	6.51E-04
3	0	51	52	5022.89	2	5894.17	1.6966	0.0303	5.32E-06	3.57E-05	7.90E-05	1.14E-04	1.35E-04	1.44E-04
4	1	123	122	29340.73	1	5894.23	1.6966	0.0303	0.0	0.0	0.0	6.90E-07	8.43E-06	4.74E-05
7	4	94	93	24138.43	1	5894.40	1.6965	0.0303	0.0	0.0	2.93E-06	6.65E-05	4.93E-04	1.94E-03
8	5	30	29	11751.45	2	5894.50	1.6965	0.0340	0.0	4.87E-06	5.42E-05	2.07E-04	4.67E-04	7.86E-04
8	5	39	38	12818.19	2	5894.52	1.6965	0.0303	0.0	2.56E-06	3.68E-05	1.64E-04	4.09E-04	7.42E-04
9	6	5	4	12500.01	1	5894.54	1.6965	0.0614	1.88E-07	4.56E-05	6.09E-04	2.59E-03	6.29E-03	1.12E-02
8	5	31	30	11856.22	2	5894.92	1.6964	0.0335	0.0	4.62E-06	5.27E-05	2.04E-04	4.65E-04	7.89E-04
8	5	38	37	12685.95	2	5894.93	1.6964	0.0303	0.0	2.80E-06	3.90E-05	1.70E-04	4.20E-04	7.54E-04
8	5	32	31	11964.44	2	5895.23	1.6963	0.0331	0.0	4.36E-06	5.10E-05	2.01E-04	4.62E-04	7.89E-04
5	2	47	48	8665.59	1	5895.23	1.6963	0.0303	2.83E-05	1.09E-03	5.81E-03	1.42E-02	2.39E-02	3.27E-02
8	5	37	36	12557.12	2	5895.24	1.6963	0.0308	0.0	3.05E-06	4.11E-05	1.76E-04	4.29E-04	7.64E-04
8	5	13	14	10837.26	1	5895.31	1.6963	0.0604	3.10E-06	3.39E-04	3.04E-03	1.02E-02	2.11E-02	3.34E-02
8	5	33	32	12076.10	2	5895.43	1.6962	0.0326	0.0	4.09E-06	4.92E-05	1.97E-04	4.53E-04	7.88E-04
8	5	36	35	12431.72	2	5895.44	1.6962	0.0312	0.0	3.30E-06	4.32E-05	1.82E-04	4.38E-04	7.73E-04
6	3	19	20	6962.68	2	5895.52	1.6962	0.0535	3.81E-06	6.48E-05	2.29E-04	4.38E-04	6.24E-04	7.57E-04
8	5	34	33	12191.21	2	5895.54	1.6962	0.0321	0.0	3.82E-06	4.73E-05	1.92E-04	4.52E-04	7.85E-04
8	5	35	34	12309.75	2	5895.54	1.6962	0.0317	0.0	3.56E-06	4.53E-05	1.87E-04	4.46E-04	7.80E-04
6	3	89	88	19878.00	2	5895.56	1.6962	0.0303	0.0	0.0	3.20E-07	3.93E-06	1.94E-05	5.69E-05
7	4	3	4	8268.04	2	5895.56	1.6962	0.0611	2.46E-07	7.81E-06	3.77E-05	8.71E-05	1.41E-04	1.87E-04
7	4	73	72	17393.93	2	5895.67	1.6962	0.0303	0.0	5.45E-08	2.35E-06	2.02E-05	7.82E-05	1.94E-04
9	6	61	60	19033.64	1	5895.92	1.6961	0.0303	0.0	1.94E-06	1.24E-04	1.35E-03	6.13E-03	1.70E-02
5	2	31	32	6066.97	2	5897.47	1.6956	0.0331	9.39E-06	1.04E-04	2.96E-04	4.98E-04	6.52E-04	7.44E-04
9	6	6	5	12518.18	1	5897.54	1.6956	0.0617	2.22E-07	5.44E-05	7.30E-04	3.11E-03	7.57E-03	1.35E-02
8	5	80	79	21803.77	1	5897.59	1.6956	0.0303	0.0	1.48E-07	1.84E-05	2.99E-04	1.77E-03	5.95E-03
7	4	26	27	9811.48	1	5898.23	1.6954	0.0398	1.38E-05	9.25E-04	6.48E-03	1.87E-02	3.51E-02	5.19E-02
5	2	114	113	27551.67	1	5898.65	1.6953	0.0303	0.0	0.0	1.09E-07	4.05E-06	4.16E-05	2.07E-04
6	3	37	38	9108.38	1	5898.71	1.6953	0.0303	2.68E-05	1.28E-03	7.57E-03	1.98E-02	3.47E-02	4.88E-02
9	6	60	59	18820.86	1	5898.95	1.6952	0.0303	0.0	2.30E-06	1.40E-04	1.48E-03	6.58E-03	1.80E-02
3	0	63	64	7891.29	1	5899.10	1.6952	0.0303	9.15E-06	2.44E-04	1.08E-03	2.36E-03	3.69E-03	4.77E-03
7	4	2	3	8253.86	2	5899.39	1.6951	0.0609	1.90E-07	5.99E-06	2.88E-05	6.64E-05	1.07E-04	1.42E-04
7	4	72	71	17147.08	2	5899.63	1.6950	0.0303	0.0	6.73E-08	2.73E-06	2.26E-05	8.57E-05	2.09E-04
8	5	12	13	10785.94	1	5900.33	1.6948	0.0610	3.12E-06	3.34E-04	2.95E-03	9.82E-03	2.02E-02	3.19E-02
9	6	7	6	12539.99	1	5900.44	1.6948	0.0620	2.54E-07	6.29E-05	8.48E-04	3.63E-03	8.84E-03	1.57E-02
4	1	55	56	8161.53	1	5900.45	1.6948	0.0303	2.42E-05	7.35E-04	3.46E-03	7.90E-03	1.27E-02	1.67E-02
4	1	41	42	5367.68	2	5900.68	1.6947	0.0303	1.19E-05	9.45E-05	2.28E-04	3.46E-04	4.24E-04	4.61E-04
6	3	18	19	6891.30	2	5900.93	1.6946	0.0552	4.05E-06	6.66E-05	2.31E-04	4.38E-04	6.20E-04	7.49E-04
7	4	93	92	23813.70	1	5901.19	1.6946	0.0303	0.0	0.0	3.60E-06	7.80E-05	5.61E-04	2.16E-03
6	3	88	87	19576.50	2	5901.23	1.6946	0.0303	0.0	0.0	3.89E-07	4.58E-06	2.19E-05	6.30E-05
9	6	59	58	18611.44	1	5901.86	1.6944	0.0303	0.0	2.74E-06	1.58E-04	1.62E-03	7.08E-03	1.91E-02
6	3	104	103	25674.78	1	5902.10	1.6943	0.0303	0.0	0.0	6.93E-07	1.96E-05	1.69E-04	7.39E-04
3	0	50	51	4834.91	2	5902.67	1.6941	0.0303	6.89E-06	4.23E-05	8.96E-05	1.26E-04	1.47E-04	1.54E-04
8	5	79	78	21525.99	1	5902.77	1.6941	0.0303	0.0	1.89E-07	2.20E-05	3.43E-04	1.98E-03	6.52E-03
7	4	1	2	8243.23	2	5903.13	1.6940	0.0606	1.29E-07	4.07E-06	1.95E-05	4.49E-05	7.24E-05	9.59E-05
9	6	8	7	12565.43	1	5903.23	1.6940	0.0623	2.83E-07	7.09E-05	9.62E-04	4.13E-03	1.01E-02	1.80E-02
7	4	71	70	16903.43	2	5903.48	1.6939	0.0303	0.0	8.28E-08	3.17E-06	2.54E-05	9.38E-05	2.25E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	46	47	8487.11	1	5903.77	1.6938	0.0303	3.61E-05	1.28E-03	6.52E-03	1.56E-02	2.58E-02	3.47E-02
5	2	30	31	5952.17	2	5904.05	1.6938	0.0335	1.08E-05	1.13E-04	3.14E-04	5.19E-04	6.72E-04	7.61E-04
4	1	122	121	28920.75	1	5904.41	1.6937	0.0303	0.0	0.0	0.0	8.56E-07	1.00E-05	5.49E-05
7	4	25	26	9711.93	1	5904.61	1.6936	0.0418	1.55E-05	9.90E-04	6.77E-03	1.93E-02	3.59E-02	5.26E-02
9	6	58	57	18405.41	1	5904.66	1.6936	0.0303	0.0	3.25E-06	1.79E-04	1.78E-03	7.62E-03	2.03E-02
8	5	11	12	10738.28	1	5905.24	1.6934	0.0617	3.12E-06	3.25E-04	2.85E-03	9.40E-03	1.93E-02	3.03E-02
9	6	9	8	12594.50	1	5905.92	1.6932	0.0624	3.09E-07	7.85E-05	1.07E-03	4.62E-03	1.13E-02	2.02E-02
6	3	36	37	8967.61	1	5906.22	1.6931	0.0308	3.22E-05	1.44E-03	8.22E-03	2.10E-02	3.64E-02	5.08E-02
6	3	17	18	6823.48	2	5906.25	1.6931	0.0568	4.27E-06	6.80E-05	2.32E-04	4.36E-04	6.13E-04	7.37E-04
7	4	0	1	8236.14	2	5906.78	1.6930	0.0603	6.59E-08	2.06E-06	9.89E-06	2.27E-05	3.66E-05	4.85E-05
6	3	87	86	19282.05	2	5906.79	1.6930	0.0303	0.0	0.0	4.71E-07	5.31E-06	2.47E-05	6.97E-05
7	4	70	69	16662.99	2	5907.23	1.6928	0.0303	0.0	1.01E-07	3.67E-06	2.83E-05	1.02E-04	2.42E-04
9	6	57	56	18202.77	1	5907.34	1.6928	0.0303	0.0	3.84E-06	2.01E-04	1.95E-03	8.17E-03	2.14E-02
5	2	113	112	27160.71	1	5907.77	1.6927	0.0303	0.0	0.0	1.42E-07	4.97E-06	4.92E-05	2.39E-04
8	5	78	77	21251.42	1	5907.83	1.6927	0.0303	0.0	2.40E-07	2.61E-05	3.92E-04	2.20E-03	7.12E-03
7	4	92	91	23492.04	1	5907.86	1.6927	0.0303	0.0	0.0	4.42E-06	9.14E-05	6.37E-04	2.40E-03
4	1	40	41	5216.33	2	5908.23	1.6926	0.0303	1.46E-05	1.08E-04	2.50E-04	3.72E-04	4.49E-04	4.83E-04
9	6	10	9	12627.20	1	5908.50	1.6925	0.0624	3.31E-07	8.54E-05	1.18E-03	5.10E-03	1.25E-02	2.24E-02
3	0	62	63	7651.67	1	5909.26	1.6923	0.0303	1.28E-05	3.04E-04	1.27E-03	2.68E-03	4.09E-03	5.21E-03
4	1	54	55	7952.49	1	5909.80	1.6921	0.0303	3.24E-05	8.90E-04	3.99E-03	8.83E-03	1.39E-02	1.80E-02
9	6	56	55	18003.52	1	5909.92	1.6921	0.0303	0.0	4.53E-06	2.26E-04	2.12E-03	8.75E-03	2.26E-02
6	3	103	102	25316.52	1	5910.04	1.6920	0.0303	0.0	0.0	8.77E-07	2.36E-05	1.96E-04	8.37E-04
8	5	10	11	10694.28	1	5910.06	1.6920	0.0625	3.07E-06	3.14E-04	2.72E-03	8.92E-03	1.82E-02	2.86E-02
5	2	29	30	5840.91	2	5910.54	1.6919	0.0340	1.24E-05	1.23E-04	3.31E-04	5.40E-04	6.91E-04	7.77E-04
7	4	69	68	16425.77	2	5910.86	1.6918	0.0303	0.0	1.24E-07	4.23E-06	3.16E-05	1.12E-04	2.59E-04
7	4	24	25	9616.03	1	5910.89	1.6918	0.0437	1.73E-05	1.05E-03	7.05E-03	1.98E-02	3.65E-02	5.32E-02
9	6	11	10	12663.53	1	5910.97	1.6918	0.0625	3.49E-07	9.17E-05	1.27E-03	5.55E-03	1.37E-02	2.46E-02
3	0	49	50	4650.41	2	5911.08	1.6917	0.0303	8.89E-06	4.99E-05	1.01E-04	1.39E-04	1.59E-04	1.64E-04
6	3	16	17	6759.20	2	5911.48	1.6916	0.0585	4.47E-06	6.90E-05	2.32E-04	4.31E-04	6.03E-04	7.22E-04
5	2	45	46	8312.24	1	5912.21	1.6914	0.0303	4.58E-05	1.49E-03	7.30E-03	1.70E-02	2.77E-02	3.68E-02
6	3	86	85	18988.68	2	5912.24	1.6914	0.0303	0.0	0.0	5.69E-07	6.15E-06	2.78E-05	7.69E-05
9	6	55	54	17807.68	1	5912.38	1.6914	0.0303	0.0	5.31E-06	2.53E-04	2.31E-03	9.35E-03	2.39E-02
8	5	77	76	20980.08	1	5912.77	1.6913	0.0303	0.0	3.04E-07	3.10E-05	4.47E-04	2.45E-03	7.77E-03
9	6	12	11	12703.48	1	5913.34	1.6911	0.0617	3.63E-07	9.74E-05	1.36E-03	5.98E-03	1.48E-02	2.67E-02
6	3	35	36	8830.47	1	5913.64	1.6910	0.0312	3.84E-05	1.61E-03	8.89E-03	2.23E-02	3.81E-02	5.27E-02
7	4	1	0	8232.59	2	5913.77	1.6910	0.0603	6.76E-08	2.12E-06	1.01E-05	2.33E-05	3.75E-05	4.96E-05
7	4	68	67	16191.77	2	5914.40	1.6908	0.0303	0.0	1.51E-07	4.87E-06	3.52E-05	1.21E-04	2.77E-04
7	4	91	90	23173.46	1	5914.41	1.6908	0.0303	0.0	0.0	5.40E-06	1.07E-04	7.22E-04	2.66E-03
4	1	121	120	28503.48	1	5914.47	1.6908	0.0303	0.0	0.0	0.0	1.06E-06	1.19E-05	6.35E-05
9	6	54	53	17615.26	1	5914.72	1.6907	0.0303	0.0	6.21E-06	2.83E-04	2.51E-03	9.97E-03	2.51E-02
8	5	9	10	10653.94	1	5914.77	1.6907	0.0624	2.98E-06	2.99E-04	2.57E-03	8.37E-03	1.70E-02	2.66E-02
9	6	13	12	12747.07	1	5915.60	1.6904	0.0610	3.74E-07	1.02E-04	1.45E-03	6.39E-03	1.59E-02	2.87E-02
4	1	39	40	5068.50	2	5915.68	1.6904	0.0303	1.78E-05	1.22E-04	2.73E-04	3.98E-04	4.74E-04	5.05E-04
6	3	15	16	6698.49	2	5916.61	1.6902	0.0591	4.64E-06	6.95E-05	2.30E-04	4.24E-04	5.90E-04	7.03E-04
5	2	112	111	26772.58	1	5916.76	1.6901	0.0303	0.0	0.0	1.83E-07	6.09E-06	5.81E-05	2.74E-04
5	2	28	29	5733.20	2	5916.94	1.6901	0.0359	1.41E-05	1.33E-04	3.50E-04	5.62E-04	7.12E-04	7.94E-04
9	6	53	52	17426.27	1	5916.96	1.6901	0.0303	0.0	7.23E-06	3.15E-04	2.72E-03	1.06E-02	2.64E-02
7	4	23	24	9523.78	1	5917.06	1.6900	0.0457	1.92E-05	1.12E-03	7.31E-03	2.03E-02	3.70E-02	5.36E-02
7	4	2	1	8236.14	2	5917.12	1.6900	0.0606	1.36E-07	4.27E-06	2.04E-05	4.70E-05	7.58E-05	1.00E-04
6	3	85	84	18698.40	2	5917.58	1.6899	0.0303	0.0	0.0	6.86E-07	7.11E-06	3.13E-05	8.48E-05
8	5	76	75	20711.97	1	5917.60	1.6899	0.0303	0.0	3.84E-07	3.67E-05	5.09E-04	2.72E-03	8.47E-03
9	6	14	13	12794.27	1	5917.75	1.6898	0.0604	3.80E-07	1.06E-04	1.52E-03	6.76E-03	1.69E-02	3.06E-02
7	4	67	66	15961.02	2	5917.82	1.6898	0.0303	0.0	1.83E-07	5.58E-06	3.90E-05	1.32E-04	2.96E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	102	101	24961.22	1	5917.86	1.6898	0.0303	0.0	0.0	1.11E-06	2.83E-05	2.27E-04	9.47E-04
4	1	53	54	7747.04	1	5919.06	1.6895	0.0303	4.32E-05	1.07E-03	4.58E-03	9.85E-03	1.52E-02	1.94E-02
9	6	52	51	17240.70	1	5919.08	1.6895	0.0303	0.0	8.40E-06	3.49E-04	2.94E-03	1.13E-02	2.77E-02
3	0	61	62	7415.60	1	5919.33	1.6894	0.0303	1.78E-05	3.77E-04	1.49E-03	3.04E-03	4.54E-03	5.69E-03
8	5	8	9	10617.26	1	5919.38	1.6894	0.0624	2.86E-06	2.81E-04	2.39E-03	7.76E-03	1.57E-02	2.46E-02
3	0	48	49	4469.43	2	5919.40	1.6894	0.0303	1.14E-05	5.87E-05	1.14E-04	1.52E-04	1.71E-04	1.75E-04
9	6	15	14	12845.10	1	5919.80	1.6892	0.0597	3.82E-07	1.10E-04	1.59E-03	7.11E-03	1.79E-02	3.25E-02
7	4	3	2	8243.23	2	5920.37	1.6891	0.0609	2.05E-07	6.44E-06	3.09E-05	7.11E-05	1.15E-04	1.52E-04
5	2	44	45	8140.98	1	5920.55	1.6890	0.0303	5.78E-05	1.74E-03	8.15E-03	1.85E-02	2.96E-02	3.90E-02
7	4	90	89	22857.99	1	5920.84	1.6889	0.0303	0.0	4.12E-08	6.59E-06	1.25E-04	8.17E-04	2.95E-03
6	3	34	35	8696.97	1	5920.96	1.6889	0.0317	4.56E-05	1.79E-03	9.59E-03	2.36E-02	3.98E-02	5.45E-02
9	6	51	50	17058.57	1	5921.09	1.6889	0.0303	0.0	9.71E-06	3.87E-04	3.17E-03	1.19E-02	2.89E-02
7	4	66	65	15733.51	2	5921.14	1.6889	0.0303	0.0	2.21E-07	6.39E-06	4.32E-05	1.43E-04	3.16E-04
6	3	14	15	6641.34	2	5921.64	1.6887	0.0597	4.77E-06	6.95E-05	2.27E-04	4.15E-04	5.74E-04	6.82E-04
9	6	16	15	12899.54	1	5921.74	1.6887	0.0591	3.81E-07	1.12E-04	1.65E-03	7.43E-03	1.87E-02	3.42E-02
8	5	75	74	20447.11	1	5922.31	1.6885	0.0303	0.0	4.82E-07	4.33E-05	5.78E-04	3.01E-03	9.21E-03
6	3	84	83	18411.21	2	5922.81	1.6884	0.0303	0.0	0.0	8.25E-07	8.20E-06	3.51E-05	9.33E-05
9	6	50	49	16879.89	1	5922.99	1.6883	0.0303	0.0	1.12E-05	4.27E-04	3.41E-03	1.26E-02	3.02E-02
4	1	38	39	4924.21	2	5923.05	1.6883	0.0303	2.15E-05	1.38E-04	2.98E-04	4.25E-04	4.99E-04	5.27E-04
7	4	22	23	9435.20	1	5923.14	1.6883	0.0476	2.11E-05	1.18E-03	7.54E-03	2.07E-02	3.74E-02	5.38E-02
5	2	27	28	5629.04	2	5923.24	1.6883	0.0379	1.60E-05	1.44E-04	3.68E-04	5.82E-04	7.31E-04	8.09E-04
7	4	4	3	8253.86	2	5923.52	1.6882	0.0611	2.72E-07	8.60E-06	4.14E-05	9.54E-05	1.54E-04	2.04E-04
9	6	17	16	12957.61	1	5923.58	1.6882	0.0585	3.76E-07	1.14E-04	1.70E-03	7.71E-03	1.96E-02	3.59E-02
8	5	7	8	10584.25	1	5923.88	1.6881	0.0623	2.69E-06	2.60E-04	2.20E-03	7.10E-03	1.43E-02	2.23E-02
7	4	65	64	15509.25	2	5924.35	1.6879	0.0303	0.0	2.66E-07	7.29E-06	4.77E-05	1.55E-04	3.37E-04
4	1	120	119	28088.95	1	5924.40	1.6879	0.0303	0.0	0.0	0.0	1.31E-06	1.42E-05	7.32E-05
9	6	49	48	16704.66	1	5924.77	1.6878	0.0303	0.0	1.28E-05	4.69E-04	3.66E-03	1.33E-02	3.15E-02
9	6	18	17	13019.29	1	5925.30	1.6877	0.0568	3.68E-07	1.15E-04	1.74E-03	7.96E-03	2.03E-02	3.74E-02
6	3	101	100	24608.89	1	5925.57	1.6876	0.0303	0.0	0.0	1.39E-06	3.38E-05	2.63E-04	1.07E-03
5	2	111	110	26387.31	1	5925.64	1.6876	0.0303	0.0	0.0	2.37E-07	7.44E-06	6.85E-05	3.15E-04
9	6	48	47	16532.89	1	5926.44	1.6874	0.0303	0.0	1.47E-05	5.15E-04	3.91E-03	1.40E-02	3.28E-02
6	3	13	14	6587.74	2	5926.57	1.6873	0.0604	4.85E-06	6.89E-05	2.22E-04	4.04E-04	5.55E-04	6.57E-04
7	4	5	4	8268.04	2	5926.58	1.6873	0.0614	3.38E-07	1.07E-05	5.18E-05	1.20E-04	1.94E-04	2.57E-04
8	5	74	73	20185.51	1	5926.91	1.6872	0.0303	0.0	6.04E-07	5.09E-05	6.55E-04	3.33E-03	1.00E-02
9	6	19	18	13084.58	1	5926.92	1.6872	0.0552	3.57E-07	1.15E-04	1.76E-03	8.17E-03	2.10E-02	3.88E-02
7	4	89	88	22545.62	1	5927.15	1.6872	0.0303	0.0	5.44E-08	8.08E-06	1.46E-04	9.29E-04	3.28E-03
7	4	64	63	15288.27	2	5927.45	1.6871	0.0303	0.0	3.19E-07	8.29E-06	5.26E-05	1.67E-04	3.58E-04
3	0	47	48	4291.95	2	5927.62	1.6870	0.0303	1.46E-05	6.88E-05	1.28E-04	1.67E-04	1.84E-04	1.86E-04
6	3	83	82	18127.12	2	5927.93	1.6869	0.0303	0.0	0.0	9.89E-07	9.44E-06	3.93E-05	1.02E-04
9	6	47	46	16364.60	1	5928.01	1.6869	0.0303	0.0	1.67E-05	5.63E-04	4.18E-03	1.47E-02	3.40E-02
6	3	33	34	8567.12	1	5928.18	1.6869	0.0321	5.38E-05	1.98E-03	1.03E-02	2.49E-02	4.15E-02	5.63E-02
4	1	52	53	7545.17	1	5928.22	1.6868	0.0303	5.72E-05	1.29E-03	5.25E-03	1.10E-02	1.65E-02	2.09E-02
8	5	6	7	10554.90	1	5928.28	1.6868	0.0620	2.47E-06	2.36E-04	1.98E-03	6.37E-03	1.28E-02	2.00E-02
9	6	20	19	13153.48	1	5928.43	1.6868	0.0535	3.44E-07	1.14E-04	1.79E-03	8.35E-03	2.16E-02	4.01E-02
5	2	43	44	7973.35	1	5928.80	1.6867	0.0303	7.25E-05	2.01E-03	9.06E-03	2.01E-02	3.16E-02	4.12E-02
7	4	21	22	9350.27	1	5929.12	1.6866	0.0496	2.30E-05	1.24E-03	7.75E-03	2.10E-02	3.77E-02	5.39E-02
3	0	60	61	7183.08	1	5929.30	1.6865	0.0303	2.46E-05	4.66E-04	1.74E-03	3.44E-03	5.02E-03	6.20E-03
5	2	26	27	5528.43	2	5929.45	1.6865	0.0398	1.81E-05	1.54E-04	3.86E-04	6.02E-04	7.48E-04	8.23E-04
9	6	46	45	16199.77	1	5929.46	1.6865	0.0303	0.0	1.89E-05	6.13E-04	4.45E-03	1.54E-02	3.52E-02
7	4	6	5	8285.77	2	5929.53	1.6865	0.0617	4.00E-07	1.28E-05	6.21E-05	1.44E-04	2.33E-04	3.10E-04
9	6	21	20	13225.99	1	5929.83	1.6864	0.0515	3.29E-07	1.13E-04	1.80E-03	8.49E-03	2.21E-02	4.13E-02
4	1	37	38	4783.45	2	5930.32	1.6862	0.0303	2.59E-05	1.55E-04	3.24E-04	4.53E-04	5.24E-04	5.48E-04
7	4	63	62	15070.55	2	5930.45	1.6862	0.0303	0.0	3.81E-07	9.41E-06	5.78E-05	1.80E-04	3.80E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-I T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
9	6	45	44	16038.43	1	5930.79	1.6861	0.0303	0.0	2.14E-05	6.66E-04	4.72E-03	1.61E-02	3.64E-02
9	6	22	21	13302.10	1	5931.13	1.6860	0.0496	3.11E-07	1.11E-04	1.80E-03	8.60E-03	2.26E-02	4.23E-02
5	2	96	95	20162.75	2	5931.20	1.6860	0.0303	0.0	0.0	1.54E-07	1.97E-06	9.94E-06	2.98E-05
8	5	73	72	19927.18	1	5931.39	1.6859	0.0303	0.0	7.54E-07	5.98E-05	7.41E-04	3.67E-03	1.08E-02
6	3	12	13	6537.71	2	5931.42	1.6859	0.0610	4.89E-06	6.78E-05	2.16E-04	3.89E-04	5.33E-04	6.29E-04
9	6	44	43	15880.58	1	5932.02	1.6858	0.0303	0.0	2.40E-05	7.22E-04	5.00E-03	1.68E-02	3.76E-02
9	6	23	22	13381.82	1	5932.31	1.6857	0.0476	2.93E-07	1.09E-04	1.79E-03	8.67E-03	2.29E-02	4.32E-02
7	4	7	6	8307.03	2	5932.39	1.6857	0.0620	4.57E-07	1.48E-05	7.23E-05	1.68E-04	2.72E-04	3.63E-04
8	5	5	6	10529.21	1	5932.58	1.6856	0.0617	2.22E-06	2.09E-04	1.74E-03	5.59E-03	1.12E-02	1.74E-02
6	3	82	81	17846.16	2	5932.94	1.6855	0.0303	0.0	0.0	1.18E-06	1.08E-05	4.39E-05	1.12E-04
9	6	43	42	15726.23	1	5933.14	1.6854	0.0303	0.0	2.69E-05	7.79E-04	5.28E-03	1.75E-02	3.87E-02
6	3	100	99	24259.57	1	5933.15	1.6854	0.0303	0.0	0.0	1.75E-06	4.04E-05	3.03E-04	1.20E-03
7	4	62	61	14856.11	2	5933.34	1.6854	0.0303	0.0	4.54E-07	1.06E-05	6.35E-05	1.93E-04	4.02E-04
7	4	88	87	22236.39	1	5933.35	1.6854	0.0303	0.0	7.17E-08	9.88E-06	1.71E-04	1.06E-03	3.65E-03
9	6	24	23	13465.12	1	5933.39	1.6854	0.0457	2.74E-07	1.06E-04	1.78E-03	8.70E-03	2.32E-02	4.40E-02
9	6	42	41	15575.37	1	5934.14	1.6852	0.0303	0.0	3.00E-05	8.38E-04	5.56E-03	1.81E-02	3.97E-02
4	1	119	118	27677.16	1	5934.22	1.6851	0.0303	0.0	0.0	4.31E-08	1.63E-06	1.70E-05	8.51E-05
9	6	25	24	13552.03	1	5934.36	1.6851	0.0437	2.54E-07	1.02E-04	1.76E-03	8.70E-03	2.34E-02	4.46E-02
5	2	110	109	26004.91	1	5934.39	1.6851	0.0303	0.0	0.0	3.06E-07	9.08E-06	8.06E-05	3.61E-04
7	4	20	21	9269.02	1	5934.99	1.6849	0.0515	2.50E-05	1.29E-03	7.92E-03	2.12E-02	3.78E-02	5.37E-02
9	6	41	40	15428.02	1	5935.03	1.6849	0.0303	0.0	3.34E-05	8.99E-04	5.83E-03	1.89E-02	4.07E-02
7	4	8	7	8331.84	2	5935.14	1.6849	0.0623	5.10E-07	1.67E-05	8.21E-05	1.91E-04	3.11E-04	4.15E-04
9	6	26	25	13642.53	1	5935.23	1.6849	0.0418	2.34E-07	9.84E-05	1.73E-03	8.67E-03	2.35E-02	4.51E-02
6	3	32	33	8440.93	1	5935.30	1.6848	0.0326	6.30E-05	2.19E-03	1.10E-02	2.62E-02	4.31E-02	5.79E-02
5	2	25	26	5431.39	2	5935.56	1.6848	0.0418	2.02E-05	1.65E-04	4.03E-04	6.20E-04	7.63E-04	8.34E-04
3	0	46	47	4117.99	2	5935.76	1.6847	0.0303	1.85E-05	8.03E-05	1.43E-04	1.82E-04	1.98E-04	1.98E-04
8	5	72	71	19672.14	1	5935.76	1.6847	0.0303	0.0	9.38E-07	6.99E-05	8.36E-04	4.04E-03	1.17E-02
9	6	40	39	15284.19	1	5935.82	1.6847	0.0303	0.0	3.69E-05	9.62E-04	6.11E-03	1.94E-02	4.17E-02
9	6	27	26	13736.61	1	5935.98	1.6846	0.0398	2.14E-07	9.42E-05	1.69E-03	8.61E-03	2.35E-02	4.55E-02
7	4	61	60	14644.96	2	5936.13	1.6846	0.0303	0.0	5.39E-07	1.20E-05	6.94E-05	2.07E-04	4.25E-04
6	3	11	12	6491.25	2	5936.16	1.6846	0.0617	4.87E-06	6.61E-05	2.08E-04	3.73E-04	5.08E-04	5.97E-04
9	6	39	38	15143.88	1	5936.49	1.6845	0.0303	4.71E-08	4.07E-05	1.02E-03	6.38E-03	2.00E-02	4.25E-02
9	6	28	27	13834.28	1	5936.62	1.6845	0.0379	1.95E-07	8.98E-05	1.65E-03	8.51E-03	2.35E-02	4.57E-02
8	5	4	5	10507.20	1	5936.77	1.6844	0.0614	1.92E-06	1.80E-04	1.49E-03	4.76E-03	9.55E-03	1.48E-02
5	2	42	43	7809.34	1	5936.95	1.6844	0.0303	9.04E-05	2.32E-03	1.00E-02	2.18E-02	3.37E-02	4.34E-02
9	6	38	37	15007.09	1	5937.05	1.6843	0.0303	5.52E-08	4.47E-05	1.09E-03	6.65E-03	2.05E-02	4.33E-02
9	6	29	28	13935.53	1	5937.16	1.6843	0.0359	1.76E-07	8.51E-05	1.60E-03	8.39E-03	2.34E-02	4.58E-02
4	1	51	52	7346.91	1	5937.28	1.6843	0.0303	7.53E-05	1.54E-03	5.99E-03	1.22E-02	1.80E-02	2.25E-02
4	1	36	37	4646.24	2	5937.50	1.6842	0.0308	3.09E-05	1.73E-04	3.51E-04	4.81E-04	5.50E-04	5.69E-04
9	6	37	36	14873.83	1	5937.50	1.6842	0.0308	6.44E-08	4.88E-05	1.15E-03	6.90E-03	2.10E-02	4.40E-02
9	6	30	29	14040.35	1	5937.58	1.6842	0.0340	1.58E-07	8.03E-05	1.55E-03	8.24E-03	2.32E-02	4.58E-02
5	2	95	94	19839.07	2	5937.60	1.6842	0.0303	0.0	0.0	1.89E-07	2.31E-06	1.13E-05	3.32E-05
7	4	9	8	8360.19	2	5937.80	1.6841	0.0624	5.58E-07	1.85E-05	9.15E-05	2.14E-04	3.49E-04	4.67E-04
6	3	81	80	17568.32	2	5937.84	1.6841	0.0303	0.0	0.0	1.41E-06	1.24E-05	4.90E-05	1.23E-04
9	6	36	35	14744.11	1	5937.84	1.6841	0.0312	7.45E-08	5.31E-05	1.22E-03	7.14E-03	2.15E-02	4.46E-02
9	6	31	30	14148.75	1	5937.90	1.6841	0.0335	1.42E-07	7.58E-05	1.50E-03	8.12E-03	2.31E-02	4.59E-02
9	6	35	34	14617.93	1	5938.08	1.6840	0.0317	8.58E-08	5.76E-05	1.28E-03	7.37E-03	2.19E-02	4.51E-02
9	6	32	31	14260.70	1	5938.11	1.6840	0.0331	1.26E-07	7.13E-05	1.45E-03	7.96E-03	2.29E-02	4.59E-02
9	6	34	33	14495.30	1	5938.20	1.6840	0.0321	9.81E-08	6.21E-05	1.34E-03	7.59E-03	2.23E-02	4.54E-02
9	6	33	32	14376.23	1	5938.21	1.6840	0.0326	1.12E-07	6.67E-05	1.40E-03	7.78E-03	2.26E-02	4.57E-02
7	4	60	59	14437.11	2	5938.80	1.6838	0.0303	0.0	6.37E-07	1.35E-05	7.58E-05	2.21E-04	4.49E-04
3	0	59	60	6954.12	1	5939.17	1.6837	0.0303	3.38E-05	5.74E-04	2.03E-03	3.89E-03	5.55E-03	6.73E-03
7	4	87	86	21930.29	1	5939.43	1.6837	0.0303	0.0	9.41E-08	1.21E-05	1.99E-04	1.20E-03	4.05E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	71	70	19420.38	1	5940.01	1.6835	0.0303	0.0	1.16E-06	8.16E-05	9.41E-04	4.44E-03	1.27E-02
7	4	10	9	8392.08	2	5940.36	1.6834	0.0624	5.99E-07	2.02E-05	1.00E-04	2.36E-04	3.87E-04	5.18E-04
6	3	99	98	23913.24	1	5940.62	1.6833	0.0303	0.0	0.0	2.19E-06	4.81E-05	3.49E-04	1.36E-03
7	4	19	20	9191.44	1	5940.76	1.6833	0.0535	2.68E-05	1.33E-03	8.06E-03	2.13E-02	3.77E-02	5.34E-02
6	3	10	11	6448.35	2	5940.81	1.6833	0.0625	4.79E-06	6.37E-05	1.99E-04	3.54E-04	4.80E-04	5.62E-04
8	5	3	4	10488.85	1	5940.86	1.6833	0.0611	1.59E-06	1.48E-04	1.22E-03	3.88E-03	7.77E-03	1.20E-02
7	4	59	58	14232.57	2	5941.38	1.6831	0.0303	0.0	7.55E-07	1.52E-05	8.31E-05	2.38E-04	4.75E-04
5	2	24	25	5337.91	2	5941.58	1.6831	0.0437	2.25E-05	1.75E-04	4.19E-04	6.36E-04	7.76E-04	8.43E-04
6	3	31	32	8318.38	1	5942.32	1.6828	0.0331	7.34E-05	2.40E-03	1.18E-02	2.74E-02	4.46E-02	5.95E-02
6	3	80	79	17293.62	2	5942.64	1.6828	0.0303	0.0	0.0	1.68E-06	1.42E-05	5.46E-05	1.35E-04
7	4	11	10	8427.51	2	5942.82	1.6827	0.0625	6.33E-07	2.17E-05	1.09E-04	2.58E-04	4.23E-04	5.68E-04
5	2	109	108	25625.40	1	5943.02	1.6826	0.0303	0.0	0.0	3.93E-07	1.11E-05	9.47E-05	4.13E-04
3	0	45	46	3947.55	2	5943.80	1.6824	0.0303	2.33E-05	9.33E-05	1.60E-04	1.98E-04	2.12E-04	2.09E-04
7	4	58	57	14031.34	2	5943.84	1.6824	0.0303	0.0	8.92E-07	1.71E-05	9.08E-05	2.55E-04	5.03E-04
5	2	94	93	19518.39	2	5943.90	1.6824	0.0303	0.0	0.0	2.32E-07	2.70E-06	1.29E-05	3.69E-05
4	1	118	117	27268.14	1	5943.91	1.6824	0.0303	0.0	0.0	5.67E-08	2.02E-06	2.02E-05	9.89E-05
8	5	70	69	19171.93	1	5944.14	1.6823	0.0303	0.0	1.44E-06	9.50E-05	1.06E-03	4.87E-03	1.36E-02
4	1	35	36	4512.58	2	5944.59	1.6822	0.0312	3.67E-05	1.93E-04	3.79E-04	5.10E-04	5.75E-04	5.90E-04
8	5	2	3	10474.17	1	5944.84	1.6821	0.0609	1.23E-06	1.13E-04	9.30E-04	2.96E-03	5.92E-03	9.15E-03
5	2	41	42	7648.97	1	5944.99	1.6821	0.0303	1.12E-04	2.66E-03	1.11E-02	2.35E-02	3.59E-02	4.57E-02
7	4	12	11	8466.48	2	5945.18	1.6820	0.0617	6.60E-07	2.31E-05	1.17E-04	2.78E-04	4.58E-04	6.16E-04
6	3	9	10	6409.02	2	5945.36	1.6820	0.0624	4.65E-06	6.07E-05	1.88E-04	3.32E-04	4.49E-04	5.24E-04
7	4	66	65	21627.34	1	5945.39	1.6820	0.0303	0.0	1.23E-07	1.47E-05	2.32E-04	1.35E-03	4.49E-03
7	4	57	56	13833.44	2	5946.21	1.6817	0.0303	0.0	1.05E-06	1.92E-05	9.90E-05	2.73E-04	5.31E-04
4	1	50	51	7152.25	1	5946.25	1.6817	0.0303	9.85E-05	1.84E-03	6.82E-03	1.35E-02	1.96E-02	2.41E-02
7	4	18	19	9117.53	1	5946.43	1.6817	0.0552	2.86E-05	1.37E-03	8.15E-03	2.13E-02	3.75E-02	5.28E-02
6	3	79	78	17022.07	2	5947.33	1.6814	0.0303	0.0	5.06E-08	1.99E-06	1.62E-05	6.08E-05	1.47E-04
7	4	13	12	8508.98	2	5947.44	1.6814	0.0610	6.80E-07	2.43E-05	1.24E-04	2.97E-04	4.92E-04	6.63E-04
5	2	23	24	5247.99	2	5947.51	1.6814	0.0457	2.48E-05	1.86E-04	4.34E-04	6.50E-04	7.86E-04	8.49E-04
6	3	98	97	23569.94	1	5947.97	1.6812	0.0303	0.0	0.0	2.73E-06	5.72E-05	4.02E-04	1.52E-03
8	5	69	68	18926.79	1	5948.17	1.6812	0.0303	0.0	1.77E-06	1.10E-04	1.18E-03	5.33E-03	1.47E-02
7	4	56	55	13638.86	2	5948.46	1.6811	0.0303	0.0	1.23E-06	2.15E-05	1.08E-04	2.92E-04	5.59E-04
8	5	1	2	10463.16	1	5948.72	1.6810	0.0606	8.41E-07	7.69E-05	6.30E-04	2.00E-03	4.00E-03	6.18E-03
3	0	58	59	6728.75	1	5948.94	1.6810	0.0303	4.64E-05	7.07E-04	2.37E-03	4.39E-03	6.14E-03	7.34E-03
6	3	30	31	8199.50	1	5949.24	1.6809	0.0335	8.50E-05	2.63E-03	1.25E-02	2.87E-02	4.61E-02	6.10E-02
7	4	14	13	8555.02	2	5949.60	1.6808	0.0604	6.93E-07	2.53E-05	1.31E-04	3.15E-04	5.23E-04	7.09E-04
6	3	8	9	6373.27	2	5949.81	1.6807	0.0624	4.45E-06	5.70E-05	1.75E-04	3.08E-04	4.15E-04	4.83E-04
5	2	93	92	19200.73	2	5950.09	1.6806	0.0303	0.0	0.0	2.83E-07	3.16E-06	1.46E-05	4.09E-05
7	4	55	54	13447.62	2	5950.61	1.6805	0.0303	0.0	1.44E-06	2.40E-05	1.17E-04	3.11E-04	5.88E-04
7	4	85	84	21327.55	1	5951.23	1.6803	0.0303	0.0	1.61E-07	1.78E-05	2.70E-04	1.53E-03	4.97E-03
5	2	108	107	25248.79	1	5951.54	1.6802	0.0303	0.0	0.0	5.05E-07	1.35E-05	1.11E-04	4.72E-04
4	1	34	35	4382.47	2	5951.58	1.6802	0.0317	4.34E-05	2.14E-04	4.07E-04	5.38E-04	5.99E-04	6.10E-04
7	4	15	14	8604.60	2	5951.66	1.6802	0.0597	6.98E-07	2.61E-05	1.37E-04	3.32E-04	5.54E-04	7.52E-04
3	0	44	45	3780.65	2	5951.76	1.6802	0.0303	2.92E-05	1.08E-04	1.78E-04	2.16E-04	2.27E-04	2.21E-04
6	3	78	77	16753.69	2	5951.90	1.6801	0.0303	0.0	6.39E-08	2.36E-06	1.85E-05	6.75E-05	1.60E-04
7	4	17	18	9047.30	1	5952.00	1.6801	0.0568	3.03E-05	1.41E-03	8.21E-03	2.13E-02	3.71E-02	5.20E-02
8	5	68	67	18684.96	1	5952.07	1.6801	0.0303	0.0	2.17E-06	1.28E-04	1.32E-03	5.82E-03	1.58E-02
8	5	0	1	10455.82	1	5952.49	1.6800	0.0603	4.28E-07	3.90E-05	3.19E-04	1.01E-03	2.02E-03	3.12E-03
7	4	54	53	13259.72	2	5952.66	1.6799	0.0303	0.0	1.67E-06	2.67E-05	1.27E-04	3.31E-04	6.18E-04
5	2	40	41	7492.24	1	5952.94	1.6798	0.0303	1.38E-04	3.04E-03	1.22E-02	2.53E-02	3.81E-02	4.80E-02
5	2	22	23	5161.65	2	5953.34	1.6797	0.0475	2.72E-05	1.95E-04	4.48E-04	6.62E-04	7.94E-04	8.52E-04
4	1	117	116	26661.92	1	5953.48	1.6797	0.0303	0.0	0.0	7.45E-08	2.51E-06	2.41E-05	1.15E-04
7	4	16	15	8657.70	2	5953.62	1.6797	0.0591	6.98E-07	2.68E-05	1.42E-04	3.47E-04	5.82E-04	7.93E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	7	8	6341.06	2	5954.17	1.6795	0.0623	4.18E-06	5.28E-05	1.60E-04	2.81E-04	3.78E-04	4.39E-04
7	4	53	52	13075.18	2	5954.60	1.6794	0.0303	0.0	1.94E-06	2.96E-05	1.37E-04	3.51E-04	6.47E-04
4	1	49	50	6961.20	1	5955.12	1.6792	0.0303	1.28E-04	2.19E-03	7.74E-03	1.49E-02	2.12E-02	2.58E-02
6	3	97	96	23229.68	1	5955.20	1.6792	0.0303	0.0	0.0	3.40E-06	6.79E-05	4.61E-04	1.71E-03
7	4	17	16	8714.33	2	5955.48	1.6791	0.0585	6.90E-07	2.72E-05	1.46E-04	3.60E-04	6.08E-04	8.32E-04
8	5	67	66	18446.48	1	5955.86	1.6790	0.0303	0.0	2.65E-06	1.47E-04	1.47E-03	6.34E-03	1.69E-02
6	3	29	30	8084.29	1	5956.06	1.6790	0.0340	9.78E-05	2.86E-03	1.32E-02	2.99E-02	4.75E-02	6.24E-02
5	2	92	91	18886.10	2	5956.17	1.6789	0.0303	0.0	0.0	3.46E-07	3.68E-06	1.65E-05	4.53E-05
6	3	77	76	16488.47	2	5956.37	1.6789	0.0303	0.0	8.04E-08	2.79E-06	2.10E-05	7.48E-05	1.74E-04
7	4	52	51	12893.99	2	5956.43	1.6789	0.0303	0.0	2.24E-06	3.28E-05	1.47E-04	3.72E-04	6.77E-04
7	4	84	83	21030.94	1	5956.96	1.6787	0.0303	0.0	2.09E-07	2.15E-05	3.13E-04	1.72E-03	5.49E-03
7	4	18	17	8774.49	2	5957.24	1.6786	0.0568	6.77E-07	2.75E-05	1.50E-04	3.72E-04	6.32E-04	8.69E-04
7	4	16	17	8980.75	1	5957.47	1.6786	0.0585	3.18E-05	1.43E-03	8.21E-03	2.11E-02	3.65E-02	5.10E-02
7	4	51	50	12716.17	2	5958.16	1.6784	0.0303	0.0	2.58E-06	3.62E-05	1.59E-04	3.93E-04	7.07E-04
6	3	6	7	6312.47	2	5958.43	1.6783	0.0620	3.84E-06	4.79E-05	1.45E-04	2.52E-04	3.38E-04	3.93E-04
4	1	33	34	4255.91	2	5958.48	1.6783	0.0321	5.10E-05	2.37E-04	4.37E-04	5.67E-04	6.24E-04	6.29E-04
3	0	57	58	6506.95	1	5958.62	1.6782	0.0303	6.33E-05	8.69E-04	2.76E-03	4.96E-03	6.78E-03	7.98E-03
7	4	19	18	8838.17	2	5958.90	1.6782	0.0552	6.59E-07	2.76E-05	1.53E-04	3.83E-04	6.54E-04	9.02E-04
5	2	21	22	5078.88	2	5959.07	1.6781	0.0496	2.96E-05	2.04E-04	4.59E-04	6.71E-04	7.99E-04	8.52E-04
8	5	66	65	18211.34	1	5959.54	1.6780	0.0303	0.0	3.22E-06	1.69E-04	1.64E-03	6.89E-03	1.81E-02
3	0	43	44	3617.28	2	5959.62	1.6780	0.0303	3.65E-05	1.25E-04	1.97E-04	2.34E-04	2.42E-04	2.33E-04
8	5	1	0	10452.15	1	5959.73	1.6779	0.0603	4.39E-07	4.00E-05	3.27E-04	1.04E-03	2.07E-03	3.19E-03
7	4	50	49	12541.73	2	5959.79	1.6779	0.0303	0.0	2.96E-06	3.98E-05	1.70E-04	4.14E-04	7.37E-04
5	2	107	106	24875.10	1	5959.93	1.6779	0.0303	0.0	0.0	6.46E-07	1.63E-05	1.30E-04	5.39E-04
7	4	20	19	8905.38	2	5960.46	1.6777	0.0535	6.36E-07	2.75E-05	1.55E-04	3.92E-04	6.73E-04	9.33E-04
6	3	76	75	16226.44	2	5960.73	1.6776	0.0303	0.0	1.01E-07	3.28E-06	2.38E-05	8.27E-05	1.89E-04
5	2	39	40	7339.16	1	5960.80	1.6776	0.0303	1.69E-04	3.46E-03	1.34E-02	2.72E-02	4.03E-02	5.02E-02
7	4	49	48	12370.66	2	5961.31	1.6775	0.0303	0.0	3.38E-06	4.36E-05	1.82E-04	4.36E-04	7.67E-04
7	4	21	20	8976.10	2	5961.92	1.6773	0.0515	6.09E-07	2.72E-05	1.56E-04	3.99E-04	6.90E-04	9.62E-04
5	2	91	90	18574.52	2	5962.14	1.6773	0.0303	0.0	0.0	4.21E-07	4.29E-06	1.86E-05	5.01E-05
6	3	96	95	22892.46	1	5962.31	1.6772	0.0303	0.0	0.0	4.23E-06	8.03E-05	5.29E-04	1.91E-03
7	4	63	62	20737.52	1	5962.57	1.6771	0.0303	0.0	2.70E-07	2.60E-05	3.62E-04	1.94E-03	6.06E-03
6	3	5	6	6287.43	2	5962.60	1.6771	0.0617	3.45E-06	4.24E-05	1.27E-04	2.21E-04	2.96E-04	3.43E-04
7	4	48	47	12202.98	2	5962.72	1.6771	0.0303	0.0	3.84E-06	4.77E-05	1.94E-04	4.58E-04	7.96E-04
6	3	28	29	7972.75	1	5962.78	1.6771	0.0359	1.12E-04	3.11E-03	1.40E-02	3.11E-02	4.90E-02	6.38E-02
7	4	15	16	8917.68	1	5962.83	1.6771	0.0591	3.31E-05	1.44E-03	8.16E-03	2.08E-02	3.58E-02	4.97E-02
4	1	116	115	26458.50	1	5962.93	1.6770	0.0303	0.0	0.0	9.77E-08	3.10E-06	2.87E-05	1.33E-04
8	5	65	64	17979.55	1	5963.10	1.6770	0.0303	0.0	3.91E-06	1.94E-04	1.82E-03	7.48E-03	1.93E-02
8	5	2	1	10455.82	1	5963.19	1.6770	0.0606	8.85E-07	8.07E-05	6.60E-04	2.09E-03	4.18E-03	6.46E-03
7	4	22	21	9050.34	2	5963.27	1.6769	0.0496	5.79E-07	2.68E-05	1.56E-04	4.04E-04	7.05E-04	9.87E-04
4	1	48	49	6773.78	1	5963.89	1.6768	0.0303	1.66E-04	2.59E-03	8.76E-03	1.64E-02	2.30E-02	2.75E-02
7	4	47	46	12038.69	2	5964.04	1.6767	0.0303	0.0	4.36E-06	5.20E-05	2.07E-04	4.80E-04	8.24E-04
7	4	23	22	9128.10	2	5964.53	1.6766	0.0476	5.47E-07	2.63E-05	1.56E-04	4.08E-04	7.17E-04	1.01E-03
5	2	20	21	4999.68	2	5964.71	1.6765	0.0515	3.21E-05	2.13E-04	4.69E-04	6.77E-04	8.01E-04	8.50E-04
6	3	75	74	15967.60	2	5964.99	1.6764	0.0303	0.0	1.26E-07	3.85E-06	2.70E-05	9.13E-05	2.05E-04
7	4	46	45	11877.80	2	5965.24	1.6764	0.0303	0.0	4.92E-06	5.64E-05	2.19E-04	5.01E-04	8.52E-04
4	1	32	33	4132.93	2	5965.28	1.6764	0.0326	5.95E-05	2.61E-04	4.67E-04	5.95E-04	6.47E-04	6.47E-04
7	4	24	23	9209.37	2	5965.68	1.6763	0.0457	5.13E-07	2.56E-05	1.55E-04	4.10E-04	7.26E-04	1.03E-03
7	4	45	44	11720.32	2	5966.35	1.6761	0.0303	0.0	5.53E-06	6.11E-05	2.32E-04	5.23E-04	8.80E-04
8	5	3	2	10463.18	1	5966.55	1.6760	0.0609	1.33E-06	1.22E-04	9.97E-04	3.17E-03	6.33E-03	9.78E-03
8	5	64	63	17751.12	1	5966.55	1.6760	0.0303	0.0	4.73E-06	2.22E-04	2.02E-03	8.11E-03	2.06E-02
6	3	4	5	6265.97	2	5966.66	1.6760	0.0614	2.99E-06	3.64E-05	1.09E-04	1.88E-04	2.51E-04	2.91E-04
7	4	25	24	9294.14	2	5966.74	1.6760	0.0437	4.77E-07	2.48E-05	1.53E-04	4.11E-04	7.33E-04	1.04E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	44	43	11566.25	2	5967.34	1.6758	0.0303	4.01E-08	6.20E-06	6.60E-05	2.45E-04	5.44E-04	9.06E-04
3	0	42	43	3457.45	2	5967.38	1.6758	0.0303	4.52E-05	1.43E-04	2.18E-04	2.52E-04	2.57E-04	2.46E-04
7	4	26	25	9382.42	2	5967.69	1.6757	0.0418	4.41E-07	2.40E-05	1.51E-04	4.10E-04	7.38E-04	1.06E-03
5	2	90	89	18265.99	2	5967.99	1.6756	0.0303	0.0	0.0	5.11E-07	4.98E-06	2.10E-05	5.53E-05
7	4	82	81	20447.30	1	5968.07	1.6756	0.0303	0.0	3.49E-07	3.13E-05	4.19E-04	2.18E-03	6.67E-03
7	4	14	15	8858.70	1	5968.09	1.6756	0.0597	3.41E-05	1.45E-03	8.06E-03	2.03E-02	3.48E-02	4.82E-02
5	2	106	105	24504.34	1	5968.20	1.6755	0.0303	0.0	0.0	8.25E-07	1.98E-05	1.52E-04	6.14E-04
3	0	56	57	6288.75	1	5968.21	1.6755	0.0303	8.60E-05	1.06E-03	3.20E-03	5.58E-03	7.47E-03	8.67E-03
7	4	43	42	11415.59	2	5968.24	1.6755	0.0303	4.81E-08	6.92E-06	7.11E-05	2.58E-04	5.65E-04	9.31E-04
7	4	27	26	9474.20	2	5968.54	1.6755	0.0398	4.05E-07	2.30E-05	1.48E-04	4.08E-04	7.40E-04	1.07E-03
5	2	38	39	7189.73	1	5968.55	1.6754	0.0303	2.06E-04	3.93E-03	1.47E-02	2.91E-02	4.25E-02	5.25E-02
7	4	42	41	11268.36	2	5969.03	1.6753	0.0303	5.73E-08	7.69E-06	7.63E-05	2.71E-04	5.85E-04	9.55E-04
6	3	74	73	15711.97	2	5969.13	1.6753	0.0303	0.0	1.57E-07	4.51E-06	3.04E-05	1.01E-04	2.22E-04
7	4	28	27	9569.48	2	5969.29	1.6752	0.0379	3.70E-07	2.20E-05	1.45E-04	4.04E-04	7.40E-04	1.07E-03
6	3	95	94	22558.31	1	5969.30	1.6752	0.0303	0.0	0.0	5.24E-06	9.49E-05	6.05E-04	2.14E-03
6	3	27	28	7864.89	1	5969.39	1.6752	0.0379	1.28E-04	3.37E-03	1.48E-02	3.23E-02	5.04E-02	6.52E-02
7	4	41	40	11124.55	2	5969.72	1.6751	0.0303	6.80E-08	8.52E-06	8.16E-05	2.84E-04	6.05E-04	9.77E-04
8	5	4	3	10474.17	1	5969.80	1.6751	0.0611	1.77E-06	1.62E-04	1.33E-03	4.25E-03	8.50E-03	1.31E-02
8	5	63	62	17526.07	1	5969.89	1.6751	0.0303	0.0	5.69E-06	2.54E-04	2.23E-03	8.76E-03	2.20E-02
7	4	29	28	9668.25	2	5969.94	1.6751	0.0359	3.35E-07	2.09E-05	1.41E-04	3.99E-04	7.38E-04	1.08E-03
5	2	19	20	4924.07	2	5970.25	1.6750	0.0535	3.44E-05	2.20E-04	4.77E-04	6.81E-04	7.99E-04	8.44E-04
7	4	40	39	10984.19	2	5970.30	1.6750	0.0303	8.02E-08	9.39E-06	8.70E-05	2.97E-04	6.24E-04	9.97E-04
7	4	30	29	9770.52	2	5970.48	1.6749	0.0340	3.02E-07	1.98E-05	1.37E-04	3.93E-04	7.33E-04	1.08E-03
6	3	3	4	6248.08	2	5970.63	1.6749	0.0611	2.47E-06	2.99E-05	8.89E-05	1.54E-04	2.05E-04	2.37E-04
7	4	39	38	10847.26	2	5970.78	1.6748	0.0303	9.41E-08	1.03E-05	9.24E-05	3.10E-04	6.41E-04	1.02E-03
7	4	31	30	9876.27	2	5970.93	1.6748	0.0335	2.72E-07	1.87E-05	1.33E-04	3.87E-04	7.31E-04	1.08E-03
7	4	38	37	10713.77	2	5971.16	1.6747	0.0303	1.10E-07	1.13E-05	9.79E-05	3.22E-04	6.58E-04	1.03E-03
7	4	32	31	9985.50	2	5971.27	1.6747	0.0331	2.43E-07	1.76E-05	1.29E-04	3.81E-04	7.26E-04	1.08E-03
7	4	37	36	10583.74	2	5971.44	1.6746	0.0308	1.27E-07	1.23E-05	1.03E-04	3.33E-04	6.73E-04	1.05E-03
7	4	33	32	10098.21	2	5971.51	1.6746	0.0326	2.16E-07	1.66E-05	1.24E-04	3.73E-04	7.19E-04	1.08E-03
7	4	36	35	10457.16	2	5971.61	1.6746	0.0312	1.47E-07	1.33E-05	1.09E-04	3.44E-04	6.87E-04	1.06E-03
7	4	34	33	10214.39	2	5971.64	1.6746	0.0321	1.91E-07	1.55E-05	1.19E-04	3.64E-04	7.10E-04	1.08E-03
7	4	35	34	10334.05	2	5971.68	1.6746	0.0317	1.68E-07	1.44E-05	1.14E-04	3.55E-04	6.99E-04	1.07E-03
4	1	31	32	4013.51	2	5971.99	1.6745	0.0331	6.90E-05	2.85E-04	4.97E-04	6.23E-04	6.70E-04	6.64E-04
4	1	115	114	26057.89	1	5972.25	1.6744	0.0303	0.0	0.0	1.28E-07	3.83E-06	3.41E-05	1.54E-04
4	1	47	48	6589.98	1	5972.56	1.6743	0.0303	2.14E-04	3.05E-03	9.88E-03	1.80E-02	2.48E-02	2.94E-02
8	5	5	4	10488.85	1	5972.94	1.6742	0.0614	2.19E-06	2.03E-04	1.67E-03	5.33E-03	1.07E-02	1.65E-02
8	5	62	61	17304.39	1	5973.11	1.6742	0.0303	0.0	6.83E-06	2.89E-04	2.45E-03	9.45E-03	2.33E-02
6	3	73	72	15459.54	2	5973.17	1.6742	0.0303	0.0	1.95E-07	5.27E-06	3.43E-05	1.11E-04	2.40E-04
7	4	13	14	8803.20	1	5973.25	1.6741	0.0604	3.48E-05	1.44E-03	7.90E-03	1.98E-02	3.37E-02	4.65E-02
7	4	81	80	20160.30	1	5973.44	1.6741	0.0303	0.0	4.49E-07	3.76E-05	4.82E-04	2.44E-03	7.34E-03
5	2	89	88	17960.53	2	5973.74	1.6740	0.0303	0.0	0.0	6.23E-07	5.81E-06	2.38E-05	6.14E-05
6	3	2	3	6233.77	2	5974.50	1.6738	0.0609	1.91E-06	2.29E-05	6.79E-05	1.17E-04	1.56E-04	1.80E-04
3	0	41	42	3301.17	2	5975.06	1.6736	0.0303	5.58E-05	1.64E-04	2.41E-04	2.72E-04	2.73E-04	2.58E-04
5	2	18	19	4852.04	2	5975.70	1.6734	0.0552	3.66E-05	2.26E-04	4.82E-04	6.81E-04	7.94E-04	8.34E-04
6	3	26	27	7760.70	1	5975.91	1.6734	0.0398	1.45E-04	3.63E-03	1.56E-02	3.35E-02	5.17E-02	6.63E-02
8	5	6	5	10507.20	1	5975.98	1.6734	0.0617	2.59E-06	2.42E-04	2.00E-03	6.40E-03	1.28E-02	1.99E-02
6	3	94	93	22227.24	1	5976.17	1.6733	0.0303	0.0	4.71E-08	6.48E-06	1.12E-04	6.91E-04	2.39E-03
5	2	37	38	7043.96	1	5976.20	1.6733	0.0303	2.50E-04	4.44E-03	1.60E-02	3.11E-02	4.48E-02	5.48E-02
8	5	61	60	17086.11	1	5976.21	1.6733	0.0303	0.0	8.16E-06	3.27E-04	2.70E-03	1.02E-02	2.47E-02
5	2	105	104	24136.54	1	5976.35	1.6733	0.0303	0.0	0.0	1.05E-06	2.39E-05	1.77E-04	6.99E-04
6	3	72	71	15210.34	2	5977.10	1.6731	0.0303	0.0	2.41E-07	6.14E-06	3.86E-05	1.21E-04	2.59E-04
3	0	55	56	6074.14	1	5977.70	1.6729	0.0303	1.16E-04	1.29E-03	3.70E-03	6.26E-03	8.21E-03	9.39E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	1	2	6223.04	2	5978.28	1.6727	0.0606	1.30E-06	1.56E-05	4.60E-05	7.93E-05	1.05E-04	1.22E-04
7	4	12	13	8751.40	1	5978.30	1.6727	0.0610	3.51E-05	1.41E-03	7.69E-03	1.91E-02	3.24E-02	4.45E-02
4	1	30	31	3897.66	2	5978.61	1.6726	0.0335	7.96E-05	3.11E-04	5.27E-04	6.50E-04	6.91E-04	6.80E-04
7	4	80	79	19876.52	1	5978.71	1.6726	0.0303	0.0	5.76E-07	4.51E-05	5.55E-04	2.74E-03	8.06E-03
8	5	7	6	10529.21	1	5978.91	1.6725	0.0620	2.96E-06	2.79E-04	2.33E-03	7.46E-03	1.50E-02	2.33E-02
8	5	60	59	16871.22	1	5979.21	1.6725	0.0303	0.0	9.71E-06	3.70E-04	2.96E-03	1.09E-02	2.62E-02
5	2	88	87	17658.15	2	5979.38	1.6724	0.0303	0.0	0.0	7.58E-07	6.77E-06	2.69E-05	6.80E-05
6	3	71	70	14964.37	2	5980.92	1.6720	0.0303	0.0	2.97E-07	7.13E-06	4.32E-05	1.33E-04	2.79E-04
5	2	17	18	4783.59	2	5981.06	1.6719	0.0568	3.87E-05	2.31E-04	4.84E-04	6.78E-04	7.85E-04	8.21E-04
4	1	46	47	6409.82	1	5981.14	1.6719	0.0303	2.74E-04	3.58E-03	1.11E-02	1.97E-02	2.67E-02	3.12E-02
4	1	114	113	25660.13	1	5981.46	1.6718	0.0303	0.0	0.0	1.67E-07	4.72E-06	4.05E-05	1.77E-04
8	5	8	7	10554.90	1	5981.74	1.6718	0.0623	3.29E-06	3.15E-04	2.64E-03	8.50E-03	1.71E-02	2.66E-02
6	3	0	1	6215.88	2	5981.95	1.6717	0.0603	6.65E-07	7.90E-06	2.33E-05	4.02E-05	5.33E-05	6.15E-05
8	5	59	58	16659.74	1	5982.09	1.6717	0.0303	0.0	1.16E-05	4.20E-04	3.25E-03	1.18E-02	2.78E-02
6	3	25	26	7660.20	1	5982.33	1.6716	0.0418	1.63E-04	3.89E-03	1.63E-02	3.45E-02	5.28E-02	6.73E-02
3	0	40	41	3148.44	2	5982.64	1.6715	0.0303	6.84E-05	1.87E-04	2.64E-04	2.93E-04	2.89E-04	2.71E-04
6	3	93	92	21899.26	1	5982.92	1.6714	0.0303	0.0	6.28E-08	7.98E-06	1.31E-04	7.87E-04	2.66E-03
7	4	11	12	8703.29	1	5983.26	1.6713	0.0617	3.51E-05	1.38E-03	7.42E-03	1.83E-02	3.09E-02	4.23E-02
5	2	36	37	6901.85	1	5983.76	1.6712	0.0308	3.01E-04	4.99E-03	1.74E-02	3.31E-02	4.71E-02	5.70E-02
7	4	79	78	19595.97	1	5983.85	1.6712	0.0303	0.0	7.35E-07	5.39E-05	6.37E-04	3.06E-03	8.83E-03
5	2	104	103	23771.70	1	5984.39	1.6710	0.0303	0.0	0.0	1.34E-06	2.88E-05	2.06E-04	7.94E-04
8	5	9	8	10584.25	1	5984.46	1.6710	0.0624	3.59E-06	3.48E-04	2.94E-03	9.50E-03	1.92E-02	2.99E-02
6	3	70	69	14721.64	2	5984.64	1.6709	0.0303	0.0	3.64E-07	8.27E-06	4.84E-05	1.45E-04	3.00E-04
8	5	58	57	16451.68	1	5984.85	1.6709	0.0303	0.0	1.38E-05	4.75E-04	3.57E-03	1.27E-02	2.95E-02
5	2	87	86	17358.87	2	5984.91	1.6709	0.0303	0.0	0.0	9.20E-07	7.86E-06	3.04E-05	7.53E-05
4	1	29	30	3785.38	2	5985.14	1.6708	0.0340	9.12E-05	3.38E-04	5.57E-04	6.76E-04	7.11E-04	6.95E-04
5	2	16	17	4718.72	2	5986.31	1.6705	0.0585	4.05E-05	2.35E-04	4.84E-04	6.72E-04	7.73E-04	8.05E-04
8	5	10	9	10617.26	1	5987.08	1.6703	0.0624	3.85E-06	3.79E-04	3.23E-03	1.05E-02	2.13E-02	3.32E-02
3	0	54	55	5863.14	1	5987.09	1.6703	0.0303	1.56E-04	1.57E-03	4.27E-03	7.01E-03	9.01E-03	1.02E-02
8	5	57	56	16247.05	1	5987.51	1.6701	0.0303	0.0	1.63E-05	5.35E-04	3.91E-03	1.36E-02	3.13E-02
3	0	122	121	27035.63	1	5987.67	1.6701	0.0303	0.0	0.0	0.0	6.22E-07	6.10E-06	2.93E-05
7	4	10	11	8658.86	1	5988.11	1.6700	0.0625	3.46E-05	1.33E-03	7.08E-03	1.74E-02	2.92E-02	3.99E-02
6	3	69	68	14482.17	2	5988.25	1.6699	0.0303	0.0	4.46E-07	9.55E-06	5.40E-05	1.59E-04	3.22E-04
6	3	24	25	7563.39	1	5988.64	1.6698	0.0437	1.82E-04	4.15E-03	1.70E-02	3.55E-02	5.37E-02	6.81E-02
7	4	78	77	19318.68	1	5988.88	1.6698	0.0303	0.0	9.37E-07	6.42E-05	7.29E-04	3.41E-03	9.66E-03
6	3	1	0	6212.30	2	5989.01	1.6697	0.0603	6.83E-07	8.10E-06	2.39E-05	4.11E-05	5.46E-05	6.30E-05
6	3	92	91	21574.38	1	5989.56	1.6696	0.0303	0.0	8.34E-08	9.82E-06	1.54E-04	8.95E-04	2.96E-03
8	5	11	10	10653.94	1	5989.58	1.6696	0.0625	4.06E-06	4.07E-04	3.49E-03	1.14E-02	2.32E-02	3.64E-02
4	1	45	46	6233.30	1	5989.62	1.6696	0.0303	3.48E-04	4.19E-03	1.24E-02	2.15E-02	2.87E-02	3.32E-02
8	5	56	55	16045.84	1	5990.05	1.6694	0.0303	0.0	1.93E-05	6.02E-04	4.27E-03	1.46E-02	3.30E-02
3	0	39	40	2999.27	2	5990.13	1.6694	0.0303	8.34E-05	2.12E-04	2.89E-04	3.14E-04	3.06E-04	2.83E-04
5	2	86	85	17062.69	2	5990.33	1.6694	0.0303	0.0	0.0	1.11E-06	9.12E-06	3.43E-05	8.32E-05
4	1	113	112	25265.22	1	5990.55	1.6693	0.0303	0.0	0.0	2.17E-07	5.80E-06	4.80E-05	2.05E-04
5	2	35	36	6763.42	1	5991.21	1.6691	0.0312	3.60E-04	5.59E-03	1.89E-02	3.52E-02	4.93E-02	5.91E-02
5	2	15	16	4657.45	2	5991.48	1.6690	0.0591	4.20E-05	2.37E-04	4.81E-04	6.62E-04	7.57E-04	7.85E-04
4	1	28	29	3676.69	2	5991.57	1.6690	0.0359	1.04E-04	3.67E-04	5.89E-04	7.04E-04	7.33E-04	7.11E-04
6	3	68	67	14245.95	2	5991.75	1.6690	0.0303	0.0	5.44E-07	1.10E-05	6.01E-05	1.73E-04	3.45E-04
8	5	12	11	10694.28	1	5991.99	1.6689	0.0617	4.23E-06	4.32E-04	3.74E-03	1.23E-02	2.51E-02	3.95E-02
5	2	103	102	23409.84	1	5992.30	1.6688	0.0303	0.0	0.0	1.69E-06	3.47E-05	2.40E-04	9.00E-04
6	3	2	1	6215.88	2	5992.39	1.6688	0.0606	1.38E-06	1.64E-05	4.83E-05	8.31E-05	1.10E-04	1.27E-04
8	5	55	54	15848.09	1	5992.47	1.6688	0.0303	0.0	2.26E-05	6.75E-04	4.65E-03	1.56E-02	3.48E-02
7	4	9	10	8618.14	1	5992.85	1.6687	0.0624	3.36E-05	1.27E-03	6.69E-03	1.63E-02	2.73E-02	3.72E-02
7	4	77	76	19044.64	1	5993.79	1.6684	0.0303	0.0	1.19E-06	7.63E-05	8.33E-04	3.79E-03	1.06E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
8	5	13	12	10738.28	1	5994.28	1.6683	0.0610	4.35E-06	4.54E-04	3.97E-03	1.31E-02	2.70E-02	4.24E-02
8	5	54	53	15653.78	1	5994.79	1.6681	0.0303	0.0	2.65E-05	7.54E-04	5.06E-03	1.66E-02	3.67E-02
6	3	23	24	7470.27	1	5994.86	1.6681	0.0457	2.02E-04	4.40E-03	1.76E-02	3.63E-02	5.45E-02	6.86E-02
6	3	67	66	14013.01	2	5995.14	1.6680	0.0303	0.0	6.60E-07	1.26E-05	6.68E-05	1.88E-04	3.69E-04
5	2	85	84	16769.63	2	5995.64	1.6679	0.0303	0.0	0.0	1.34E-06	1.06E-05	3.86E-05	9.18E-05
6	3	3	2	6223.04	2	5995.67	1.6679	0.0609	2.07E-06	2.47E-05	7.30E-05	1.26E-04	1.67E-04	1.93E-04
6	3	91	90	21252.63	1	5996.08	1.6678	0.0303	0.0	1.10E-07	1.20E-05	1.81E-04	1.02E-03	3.29E-03
3	0	53	54	5655.77	1	5996.38	1.6677	0.0303	2.08E-04	1.90E-03	4.92E-03	7.83E-03	9.87E-03	1.10E-02
8	5	14	13	10785.94	1	5996.47	1.6676	0.0604	4.42E-06	4.72E-04	4.18E-03	1.39E-02	2.87E-02	4.53E-02
5	2	14	15	4599.77	2	5996.54	1.6676	0.0597	4.33E-05	2.37E-04	4.75E-04	6.48E-04	7.37E-04	7.61E-04
8	5	53	52	15462.93	1	5996.99	1.6675	0.0303	0.0	3.09E-05	8.41E-04	5.48E-03	1.77E-02	3.86E-02
7	4	8	9	8581.11	1	5997.50	1.6674	0.0624	3.22E-05	1.20E-03	6.24E-03	1.51E-02	2.52E-02	3.43E-02
3	0	36	39	2853.67	2	5997.53	1.6674	0.0303	1.01E-04	2.40E-04	3.16E-04	3.35E-04	3.23E-04	2.96E-04
3	0	121	120	26614.14	1	5997.70	1.6673	0.0303	0.0	0.0	0.0	7.72E-07	7.27E-06	3.40E-05
4	1	27	28	3571.58	2	5997.90	1.6673	0.0379	1.19E-04	3.97E-04	6.21E-04	7.31E-04	7.53E-04	7.25E-04
4	1	44	45	6060.43	1	5998.00	1.6672	0.0303	4.40E-04	4.88E-03	1.39E-02	2.35E-02	3.07E-02	3.51E-02
6	3	66	65	13783.34	2	5998.43	1.6671	0.0303	0.0	8.00E-07	1.45E-05	7.41E-05	2.03E-04	3.94E-04
8	5	15	14	10837.26	1	5998.55	1.6671	0.0597	4.44E-06	4.86E-04	4.36E-03	1.46E-02	3.03E-02	4.80E-02
5	2	34	35	6628.66	1	5998.57	1.6671	0.0317	4.28E-04	6.23E-03	2.03E-02	3.72E-02	5.15E-02	6.13E-02
7	4	76	75	18773.88	1	5998.59	1.6671	0.0303	0.0	1.50E-06	9.04E-05	9.49E-04	4.21E-03	1.15E-02
6	3	4	3	6233.77	2	5998.86	1.6670	0.0611	2.75E-06	3.30E-05	9.78E-05	1.69E-04	2.24E-04	2.59E-04
8	5	52	51	15275.54	1	5999.08	1.6669	0.0303	0.0	3.59E-05	9.34E-04	5.93E-03	1.88E-02	4.04E-02
4	1	112	111	24873.19	1	5999.51	1.6668	0.0303	0.0	0.0	2.82E-07	7.13E-06	5.68E-05	2.35E-04
5	2	102	101	23050.98	1	6000.09	1.6666	0.0303	0.0	0.0	2.14E-06	4.16E-05	2.79E-04	1.02E-03
8	5	16	15	10892.23	1	6000.53	1.6665	0.0591	4.42E-06	4.97E-04	4.52E-03	1.53E-02	3.18E-02	5.06E-02
5	2	84	83	16479.69	2	6000.84	1.6664	0.0303	0.0	4.68E-08	1.62E-06	1.22E-05	4.34E-05	1.01E-04
6	3	22	23	7380.84	1	6000.97	1.6664	0.0476	2.23E-04	4.64E-03	1.82E-02	3.71E-02	5.51E-02	6.90E-02
8	5	51	50	15091.63	1	6001.05	1.6664	0.0303	4.94E-08	4.16E-05	1.04E-03	6.40E-03	2.00E-02	4.23E-02
5	2	13	14	4545.69	2	6001.51	1.6662	0.0604	4.41E-05	2.35E-04	4.65E-04	6.30E-04	7.13E-04	7.34E-04
6	3	65	64	13556.96	2	6001.61	1.6662	0.0303	0.0	9.64E-07	1.66E-05	8.19E-05	2.20E-04	4.20E-04
6	3	5	4	6248.08	2	6001.95	1.6661	0.0614	3.41E-06	4.12E-05	1.22E-04	2.12E-04	2.82E-04	3.26E-04
7	4	7	8	8547.78	1	6002.03	1.6661	0.0623	3.03E-05	1.11E-03	5.73E-03	1.38E-02	2.30E-02	3.12E-02
8	5	17	16	10950.85	1	6002.39	1.6660	0.0585	4.36E-06	5.05E-04	4.65E-03	1.58E-02	3.32E-02	5.30E-02
6	3	90	89	20934.01	1	6002.48	1.6660	0.0303	0.0	1.46E-07	1.47E-05	2.11E-04	1.15E-03	3.65E-03
8	5	50	49	14911.20	1	6002.92	1.6659	0.0303	6.21E-08	4.80E-05	1.14E-03	6.89E-03	2.11E-02	4.42E-02
7	4	75	74	18506.41	1	6003.27	1.6658	0.0303	0.0	1.89E-06	1.07E-04	1.08E-03	4.67E-03	1.25E-02
4	1	26	27	3470.06	2	6004.15	1.6655	0.0398	1.34E-04	4.26E-04	6.52E-04	7.55E-04	7.71E-04	7.37E-04
8	5	18	17	11013.12	1	6004.15	1.6655	0.0568	4.27E-06	5.08E-04	4.75E-03	1.64E-02	3.45E-02	5.53E-02
8	5	49	48	14734.27	1	6004.67	1.6654	0.0303	7.77E-08	5.52E-05	1.26E-03	7.40E-03	2.23E-02	4.61E-02
6	3	64	63	13333.88	2	6004.68	1.6654	0.0303	0.0	1.16E-06	1.89E-05	9.04E-05	2.38E-04	4.47E-04
3	0	37	38	2711.64	2	6004.84	1.6653	0.0303	1.22E-04	2.70E-04	3.44E-04	3.57E-04	3.39E-04	3.08E-04
6	3	6	5	6265.97	2	6004.93	1.6653	0.0617	4.03E-06	4.91E-05	1.47E-04	2.55E-04	3.40E-04	3.93E-04
3	0	52	53	5452.01	1	6005.58	1.6651	0.0303	2.77E-04	2.29E-03	5.64E-03	8.72E-03	1.08E-02	1.18E-02
8	5	19	18	11079.05	1	6005.81	1.6651	0.0552	4.14E-06	5.09E-04	4.83E-03	1.68E-02	3.56E-02	5.74E-02
5	2	33	34	6497.59	1	6005.82	1.6651	0.0321	5.06E-04	6.91E-03	2.19E-02	3.93E-02	5.37E-02	6.33E-02
5	2	83	82	16192.90	2	6005.93	1.6650	0.0303	0.0	6.02E-08	1.94E-06	1.41E-05	4.87E-05	1.11E-04
4	1	43	44	5891.22	1	6006.28	1.6649	0.0303	5.54E-04	5.66E-03	1.55E-02	2.55E-02	3.29E-02	3.71E-02
8	5	48	47	14560.82	1	6006.31	1.6649	0.0303	9.67E-08	6.31E-05	1.38E-03	7.92E-03	2.35E-02	4.80E-02
5	2	12	13	4495.20	2	6006.39	1.6649	0.0610	4.44E-05	2.31E-04	4.52E-04	6.08E-04	6.85E-04	7.02E-04
7	4	6	7	8518.15	1	6006.47	1.6649	0.0620	2.79E-05	1.01E-03	5.17E-03	1.24E-02	2.06E-02	2.79E-02
6	3	21	22	7295.12	1	6006.98	1.6647	0.0496	2.43E-04	4.87E-03	1.87E-02	3.76E-02	5.55E-02	6.91E-02
8	5	20	19	11148.61	1	6007.35	1.6646	0.0535	3.98E-06	5.06E-04	4.89E-03	1.71E-02	3.66E-02	5.93E-02
3	0	120	119	26195.41	1	6007.60	1.6646	0.0303	0.0	0.0	0.0	9.56E-07	8.64E-06	3.92E-05

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	63	62	13114.11	2	6007.65	1.6645	0.0303	0.0	1.39E-06	2.14E-05	9.95E-05	2.56E-04	4.74E-04
5	2	101	100	22695.13	1	6007.76	1.6645	0.0303	0.0	0.0	2.70E-06	4.99E-05	3.23E-04	1.15E-03
6	3	7	6	6287.43	2	6007.82	1.6645	0.0620	4.62E-06	5.68E-05	1.71E-04	2.97E-04	3.97E-04	4.61E-04
7	4	74	73	18242.22	1	6007.83	1.6645	0.0303	0.0	2.38E-06	1.26E-04	1.23E-03	5.17E-03	1.36E-02
8	5	47	46	14390.88	1	6007.84	1.6645	0.0303	1.20E-07	7.20E-05	1.51E-03	8.46E-03	2.47E-02	4.99E-02
4	1	111	110	24484.04	1	6008.35	1.6644	0.0303	0.0	0.0	3.66E-07	8.74E-06	6.70E-05	2.71E-04
6	3	89	88	20618.54	1	6008.76	1.6642	0.0303	0.0	1.93E-07	1.81E-05	2.48E-04	1.31E-03	4.07E-03
8	5	21	20	11221.82	1	6008.79	1.6642	0.0515	3.80E-06	5.00E-04	4.92E-03	1.74E-02	3.75E-02	6.10E-02
8	5	46	45	14224.45	1	6009.25	1.6641	0.0303	1.47E-07	8.17E-05	1.65E-03	9.01E-03	2.58E-02	5.17E-02
8	5	22	21	11298.67	1	6010.12	1.6639	0.0496	3.60E-06	4.92E-04	4.92E-03	1.76E-02	3.82E-02	6.26E-02
4	1	25	26	3372.13	2	6010.29	1.6638	0.0418	1.50E-04	4.56E-04	6.81E-04	7.79E-04	7.87E-04	7.48E-04
6	3	62	61	12897.64	2	6010.51	1.6638	0.0303	0.0	1.66E-06	2.43E-05	1.09E-04	2.76E-04	5.03E-04
8	5	45	44	14061.54	1	6010.56	1.6637	0.0303	1.80E-07	9.24E-05	1.80E-03	9.57E-03	2.70E-02	5.35E-02
6	3	8	7	6312.47	2	6010.61	1.6637	0.0623	5.15E-06	6.42E-05	1.94E-04	3.38E-04	4.54E-04	5.27E-04
7	4	5	6	8492.22	1	6010.80	1.6637	0.0617	2.51E-05	8.91E-04	4.55E-03	1.09E-02	1.80E-02	2.44E-02
5	2	82	81	15909.25	2	6010.91	1.6636	0.0303	0.0	7.72E-08	2.33E-06	1.62E-05	5.45E-05	1.22E-04
5	2	11	12	4448.31	2	6011.16	1.6636	0.0617	4.43E-05	2.26E-04	4.36E-04	5.82E-04	6.53E-04	6.67E-04
8	5	23	22	11379.15	1	6011.34	1.6635	0.0476	3.38E-06	4.80E-04	4.90E-03	1.78E-02	3.88E-02	6.39E-02
8	5	44	43	13902.14	1	6011.75	1.6634	0.0303	2.19E-07	1.04E-04	1.95E-03	1.01E-02	2.82E-02	5.52E-02
3	0	36	37	2573.18	2	6012.05	1.6633	0.0308	1.46E-04	3.02E-04	3.73E-04	3.80E-04	3.56E-04	3.20E-04
7	4	73	72	17981.34	1	6012.28	1.6633	0.0303	0.0	2.98E-06	1.48E-04	1.39E-03	5.71E-03	1.48E-02
8	5	24	23	11463.27	1	6012.45	1.6632	0.0457	3.16E-06	4.67E-04	4.86E-03	1.78E-02	3.93E-02	6.50E-02
8	5	43	42	13746.29	1	6012.84	1.6631	0.0303	2.64E-07	1.17E-04	2.10E-03	1.07E-02	2.94E-02	5.68E-02
6	3	20	21	7213.10	1	6012.89	1.6631	0.0515	2.64E-04	5.08E-03	1.91E-02	3.81E-02	5.57E-02	6.89E-02
5	2	32	33	6370.20	1	6012.98	1.6631	0.0326	5.94E-04	7.64E-03	2.35E-02	4.14E-02	5.59E-02	6.52E-02
6	3	61	60	12684.50	2	6013.26	1.6630	0.0303	0.0	1.97E-06	2.74E-05	1.20E-04	2.96E-04	5.32E-04
6	3	9	8	6341.08	2	6013.30	1.6630	0.0624	5.63E-06	7.11E-05	2.16E-04	3.79E-04	5.10E-04	5.93E-04
8	5	25	24	11551.01	1	6013.46	1.6629	0.0437	2.93E-06	4.51E-04	4.80E-03	1.78E-02	3.96E-02	6.59E-02
8	5	42	41	13593.96	1	6013.81	1.6628	0.0303	3.18E-07	1.30E-04	2.27E-03	1.13E-02	3.05E-02	5.84E-02
8	5	26	25	11642.38	1	6014.35	1.6627	0.0418	2.69E-06	4.34E-04	4.72E-03	1.78E-02	3.98E-02	6.67E-02
4	1	42	43	5725.68	1	6014.47	1.6627	0.0303	6.92E-04	6.53E-03	1.72E-02	2.76E-02	3.51E-02	3.92E-02
8	5	41	40	13445.18	1	6014.67	1.6626	0.0303	3.80E-07	1.45E-04	2.43E-03	1.19E-02	3.16E-02	5.99E-02
3	0	51	52	5251.89	1	6014.68	1.6626	0.0303	3.65E-04	2.75E-03	6.45E-03	9.69E-03	1.18E-02	1.27E-02
6	3	88	87	20306.23	1	6014.93	1.6625	0.0303	0.0	2.55E-07	2.22E-05	2.90E-04	1.49E-03	4.53E-03
7	4	4	5	8470.00	1	6015.03	1.6625	0.0614	2.18E-05	7.65E-04	3.89E-03	9.28E-03	1.53E-02	2.07E-02
8	5	27	26	11737.38	1	6015.14	1.6625	0.0398	2.46E-06	4.15E-04	4.62E-03	1.76E-02	3.98E-02	6.72E-02
5	2	100	99	22342.30	1	6015.32	1.6624	0.0303	0.0	0.0	3.40E-06	5.97E-05	3.73E-04	1.30E-03
8	5	40	39	13299.95	1	6015.42	1.6624	0.0303	4.51E-07	1.61E-04	2.60E-03	1.24E-02	3.27E-02	6.13E-02
5	2	61	60	15628.77	2	6015.78	1.6623	0.0303	0.0	9.87E-08	2.79E-06	1.86E-05	6.09E-05	1.34E-04
8	5	28	27	11835.99	1	6015.82	1.6623	0.0379	2.24E-06	3.95E-04	4.50E-03	1.74E-02	3.98E-02	6.75E-02
5	2	10	11	4405.02	2	6015.85	1.6623	0.0625	4.36E-05	2.18E-04	4.16E-04	5.52E-04	6.17E-04	6.29E-04
6	3	10	9	6373.27	2	6015.89	1.6623	0.0624	6.04E-06	7.74E-05	2.37E-04	4.18E-04	5.64E-04	6.58E-04
6	3	60	59	12474.70	2	6015.91	1.6623	0.0303	0.0	2.33E-06	3.09E-05	1.31E-04	3.17E-04	5.61E-04
8	5	39	38	13158.27	1	6016.06	1.6622	0.0303	5.32E-07	1.77E-04	2.78E-03	1.30E-02	3.37E-02	6.26E-02
4	1	24	25	3277.80	2	6016.35	1.6621	0.0437	1.67E-04	4.86E-04	7.09E-04	7.99E-04	8.01E-04	7.56E-04
8	5	29	28	11938.21	1	6016.39	1.6621	0.0359	2.02E-06	3.74E-04	4.37E-03	1.72E-02	3.96E-02	6.77E-02
8	5	38	37	13020.16	1	6016.58	1.6621	0.0303	6.25E-07	1.95E-04	2.95E-03	1.35E-02	3.46E-02	6.38E-02
7	4	72	71	17723.78	1	6016.62	1.6621	0.0303	0.0	3.71E-06	1.73E-04	1.57E-03	6.29E-03	1.60E-02
8	5	30	29	12044.05	1	6016.85	1.6620	0.0340	1.81E-06	3.53E-04	4.23E-03	1.69E-02	3.93E-02	6.76E-02
8	5	37	36	12885.61	1	6017.00	1.6620	0.0308	7.29E-07	2.13E-04	3.13E-03	1.41E-02	3.55E-02	6.48E-02
4	1	110	109	24097.80	1	6017.08	1.6619	0.0303	0.0	0.0	4.73E-07	1.07E-05	7.90E-05	3.11E-04
8	5	31	30	12153.49	1	6017.20	1.6619	0.0335	1.62E-06	3.33E-04	4.10E-03	1.66E-02	3.90E-02	6.77E-02
8	5	36	35	12754.63	1	6017.31	1.6619	0.0312	8.46E-07	2.32E-04	3.30E-03	1.46E-02	3.63E-02	6.57E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	119	118	25779.47	1	6017.38	1.6619	0.0303	0.0	0.0	4.14E-08	1.19E-06	1.04E-05	4.57E-05
8	5	32	31	12266.54	1	6017.44	1.6618	0.0331	1.44E-06	3.13E-04	3.95E-03	1.63E-02	3.87E-02	6.77E-02
8	5	35	34	12627.23	1	6017.51	1.6618	0.0317	9.75E-07	2.52E-04	3.47E-03	1.51E-02	3.71E-02	6.64E-02
8	5	33	32	12383.18	1	6017.57	1.6618	0.0326	1.27E-06	2.92E-04	3.80E-03	1.59E-02	3.82E-02	6.74E-02
8	5	34	33	12503.41	1	6017.59	1.6618	0.0321	1.12E-06	2.72E-04	3.64E-03	1.55E-02	3.77E-02	6.70E-02
6	3	11	10	6409.02	2	6018.38	1.6616	0.0625	6.38E-06	8.33E-05	2.57E-04	4.56E-04	6.17E-04	7.21E-04
6	3	59	58	12268.22	2	6018.45	1.6616	0.0303	0.0	2.77E-06	3.49E-05	1.43E-04	3.41E-04	5.95E-04
6	3	19	20	7134.78	1	6018.70	1.6615	0.0535	2.84E-04	5.27E-03	1.95E-02	3.83E-02	5.57E-02	6.85E-02
7	4	3	4	8451.48	1	6019.15	1.6614	0.0611	1.80E-05	6.29E-04	3.18E-03	7.57E-03	1.25E-02	1.68E-02
3	0	35	36	2438.31	2	6019.17	1.6614	0.0312	1.74E-04	3.38E-04	4.03E-04	4.03E-04	3.73E-04	3.32E-04
5	2	31	32	6246.50	1	6020.03	1.6611	0.0331	6.93E-04	8.40E-03	2.50E-02	4.34E-02	5.79E-02	6.71E-02
5	2	9	10	4365.34	2	6020.43	1.6610	0.0624	4.24E-05	2.08E-04	3.93E-04	5.19E-04	5.77E-04	5.87E-04
5	2	80	79	15351.45	2	6020.55	1.6610	0.0303	0.0	1.26E-07	3.32E-06	2.13E-05	6.79E-05	1.47E-04
6	3	12	11	6448.35	2	6020.78	1.6609	0.0617	6.65E-06	8.85E-05	2.76E-04	4.92E-04	6.68E-04	7.83E-04
7	4	71	70	17469.54	1	6020.83	1.6609	0.0303	0.0	4.61E-06	2.03E-04	1.77E-03	6.92E-03	1.73E-02
6	3	58	57	12065.10	2	6020.89	1.6609	0.0303	0.0	3.27E-06	3.93E-05	1.57E-04	3.66E-04	6.30E-04
6	3	87	86	19997.09	1	6020.98	1.6609	0.0303	0.0	3.36E-07	2.71E-05	3.39E-04	1.69E-03	5.03E-03
4	1	23	24	3187.07	2	6022.30	1.6605	0.0457	1.85E-04	5.14E-04	7.34E-04	8.18E-04	8.12E-04	7.62E-04
4	1	94	93	17590.57	2	6022.42	1.6605	0.0303	0.0	0.0	3.63E-07	3.21E-06	1.27E-05	3.19E-05
4	1	41	42	5563.80	1	6022.55	1.6604	0.0303	8.61E-04	7.51E-03	1.90E-02	2.99E-02	3.73E-02	4.13E-02
5	2	99	98	21992.52	1	6022.75	1.6604	0.0303	0.0	0.0	4.27E-06	7.13E-05	4.31E-04	1.47E-03
6	3	13	12	6491.25	2	6023.07	1.6603	0.0610	6.85E-06	9.30E-05	2.93E-04	5.25E-04	7.17E-04	8.43E-04
7	4	2	3	8436.66	1	6023.17	1.6603	0.0609	1.39E-05	4.82E-04	2.43E-03	5.77E-03	9.51E-03	1.28E-02
6	3	57	56	11865.33	2	6023.22	1.6602	0.0303	0.0	3.86E-06	4.42E-05	1.71E-04	3.91E-04	6.65E-04
3	0	50	51	5055.41	1	6023.68	1.6601	0.0303	4.80E-04	3.28E-03	7.36E-03	1.07E-02	1.28E-02	1.36E-02
6	3	18	19	7060.17	1	6024.41	1.6599	0.0552	3.04E-04	5.44E-03	1.97E-02	3.84E-02	5.54E-02	6.78E-02
5	2	8	9	4329.25	2	6024.92	1.6598	0.0624	4.06E-05	1.95E-04	3.67E-04	4.81E-04	5.33E-04	5.41E-04
7	4	70	69	17218.64	1	6024.94	1.6598	0.0303	0.0	5.71E-06	2.36E-04	1.99E-03	7.59E-03	1.86E-02
5	2	79	78	15077.32	2	6025.20	1.6597	0.0303	0.0	1.60E-07	3.95E-06	2.43E-05	7.56E-05	1.60E-04
6	3	14	13	6537.71	2	6025.26	1.6597	0.0604	6.98E-06	9.68E-05	3.09E-04	5.57E-04	7.63E-04	9.01E-04
6	3	56	55	11668.92	2	6025.45	1.6596	0.0303	0.0	4.53E-06	4.95E-05	1.87E-04	4.18E-04	7.02E-04
4	1	109	108	23714.48	1	6025.68	1.6596	0.0303	0.0	0.0	6.10E-07	1.30E-05	9.30E-05	3.56E-04
3	0	34	35	2307.02	2	6026.20	1.6594	0.0317	2.06E-04	3.75E-04	4.34E-04	4.26E-04	3.89E-04	3.43E-04
6	3	86	85	19691.13	1	6026.91	1.6592	0.0303	0.0	4.41E-07	3.30E-05	3.96E-04	1.92E-03	5.58E-03
5	2	30	31	6126.50	1	6026.99	1.6592	0.0335	8.04E-04	9.20E-03	2.66E-02	4.54E-02	5.99E-02	6.88E-02
3	0	118	117	25366.34	1	6027.05	1.6592	0.0303	0.0	0.0	5.47E-08	1.48E-06	1.24E-05	5.32E-05
7	4	1	2	8425.54	1	6027.09	1.6592	0.0606	9.52E-06	3.28E-04	1.65E-03	3.91E-03	6.43E-03	8.64E-03
6	3	15	14	6587.74	2	6027.35	1.6591	0.0597	7.03E-06	1.00E-04	3.23E-04	5.86E-04	8.07E-04	9.56E-04
6	3	55	54	11475.88	2	6027.57	1.6590	0.0303	0.0	5.30E-06	5.53E-05	2.03E-04	4.46E-04	7.39E-04
4	1	22	23	3099.94	2	6028.17	1.6589	0.0476	2.03E-04	5.42E-04	7.58E-04	8.33E-04	8.21E-04	7.65E-04
4	1	93	92	17269.87	2	6028.58	1.6588	0.0303	0.0	0.0	4.45E-07	3.76E-06	1.44E-05	3.55E-05
7	4	69	68	16971.09	1	6028.93	1.6587	0.0303	0.0	7.04E-06	2.75E-04	2.23E-03	8.32E-03	2.01E-02
5	2	7	8	4296.77	2	6029.31	1.6586	0.0623	3.81E-05	1.81E-04	3.37E-04	4.40E-04	4.86E-04	4.92E-04
6	3	16	15	6641.34	2	6029.35	1.6586	0.0591	7.02E-06	1.02E-04	3.35E-04	6.13E-04	8.48E-04	1.01E-03
6	3	54	53	11286.22	2	6029.58	1.6585	0.0303	4.57E-08	6.18E-06	6.15E-05	2.20E-04	4.75E-04	7.76E-04
5	2	78	77	14806.39	2	6029.75	1.6584	0.0303	0.0	2.02E-07	4.68E-06	2.77E-05	8.40E-05	1.75E-04
6	3	17	18	6989.28	1	6030.01	1.6584	0.0568	3.22E-04	5.57E-03	1.98E-02	3.83E-02	5.48E-02	6.68E-02
5	2	98	97	21645.80	1	6030.07	1.6584	0.0303	0.0	4.46E-08	5.34E-06	8.49E-05	4.96E-04	1.65E-03
4	1	40	41	5405.60	1	6030.54	1.6582	0.0303	1.06E-03	8.61E-03	2.10E-02	3.22E-02	3.97E-02	4.34E-02
7	4	0	1	8418.13	1	6030.90	1.6581	0.0603	4.85E-06	1.66E-04	8.35E-04	1.98E-03	3.25E-03	4.37E-03
6	3	17	16	6698.49	2	6031.24	1.6580	0.0585	6.94E-06	1.04E-04	3.45E-04	6.37E-04	8.86E-04	1.06E-03
6	3	53	52	11099.95	2	6031.49	1.6580	0.0303	5.80E-08	7.18E-06	6.84E-05	2.38E-04	5.04E-04	8.14E-04
3	0	49	50	4862.58	1	6032.59	1.6577	0.0303	6.26E-04	3.91E-03	8.36E-03	1.19E-02	1.39E-02	1.46E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER-STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	65	84	19388.37	1	6032.72	1.6576	0.0303	0.0	5.76E-07	4.02E-05	4.61E-04	2.17E-03	6.19E-03
4	68	67	16726.89	1	6032.80	1.6576	0.0303	0.0	8.65E-06	3.18E-04	2.49E-03	9.09E-03	2.16E-02
3	18	17	6759.20	2	6033.03	1.6575	0.0568	6.81E-06	1.05E-04	3.53E-04	6.58E-04	9.21E-04	1.10E-03
0	33	34	2179.32	2	6033.13	1.6575	0.0321	2.42E-04	4.15E-04	4.66E-04	4.49E-04	4.05E-04	3.54E-04
3	52	51	10917.06	2	6033.29	1.6575	0.0303	7.32E-08	8.30E-06	7.57E-05	2.56E-04	5.35E-04	8.52E-04
2	6	7	4267.90	2	6033.60	1.6574	0.0620	3.51E-05	1.64E-04	3.03E-04	3.95E-04	4.35E-04	4.40E-04
2	29	30	6010.21	1	6033.84	1.6573	0.0340	9.27E-04	1.00E-02	2.82E-02	4.73E-02	6.17E-02	7.03E-02
1	21	22	3016.41	2	6033.94	1.6573	0.0496	2.21E-04	5.67E-04	7.78E-04	8.45E-04	8.26E-04	7.66E-04
1	108	107	23334.10	1	6034.16	1.6572	0.0303	0.0	0.0	7.85E-07	1.59E-05	1.09E-04	4.08E-04
2	77	76	14538.66	2	6034.19	1.6572	0.0303	0.0	2.55E-07	5.54E-06	3.16E-05	9.32E-05	1.90E-04
1	92	91	16952.23	2	6034.63	1.6571	0.0303	0.0	0.0	5.44E-07	4.39E-06	1.63E-05	3.93E-05
3	19	18	6823.48	2	6034.72	1.6571	0.0552	6.62E-06	1.05E-04	3.60E-04	6.76E-04	9.53E-04	1.15E-03
3	51	50	10737.57	2	6034.99	1.6570	0.0303	9.20E-08	9.57E-06	8.36E-05	2.76E-04	5.66E-04	8.90E-04
3	16	17	6922.10	1	6035.51	1.6569	0.0585	3.38E-04	5.66E-03	1.99E-02	3.79E-02	5.40E-02	6.55E-02
3	20	19	6891.30	2	6036.31	1.6566	0.0535	6.38E-06	1.05E-04	3.65E-04	6.92E-04	9.81E-04	1.19E-03
4	67	66	16486.06	1	6036.56	1.6566	0.0303	0.0	1.06E-05	3.68E-04	2.78E-03	9.92E-03	2.32E-02
0	117	116	24956.02	1	6036.59	1.6566	0.0303	0.0	0.0	7.21E-08	1.84E-06	1.48E-05	6.18E-05
3	50	49	10561.49	2	6036.59	1.6566	0.0303	1.15E-07	1.10E-05	9.20E-05	2.96E-04	5.97E-04	9.28E-04
2	97	96	21302.14	1	6037.27	1.6564	0.0303	0.0	6.05E-08	6.67E-06	1.01E-04	5.71E-04	1.85E-03
2	5	6	4242.63	2	6037.80	1.6562	0.0617	3.15E-05	1.45E-04	2.67E-04	3.47E-04	3.81E-04	3.84E-04
3	21	20	6962.68	2	6037.80	1.6562	0.0515	6.11E-06	1.04E-04	3.67E-04	7.04E-04	1.01E-03	1.22E-03
3	49	48	10388.82	2	6038.08	1.6562	0.0303	1.43E-07	1.26E-05	1.01E-04	3.17E-04	6.28E-04	9.66E-04
4	1	0	8414.43	1	6038.20	1.6561	0.0603	4.98E-06	1.71E-04	8.55E-04	2.02E-03	3.33E-03	4.47E-03
3	84	83	19088.83	1	6038.41	1.6561	0.0303	0.0	7.51E-07	4.87E-05	5.36E-04	2.45E-03	6.84E-03
1	39	40	5251.08	1	6038.43	1.6561	0.0303	1.31E-03	9.82E-03	2.31E-02	3.46E-02	4.20E-02	4.54E-02
2	76	75	14274.14	2	6038.52	1.6560	0.0303	0.0	3.20E-07	6.53E-06	3.58E-05	1.03E-04	2.07E-04
3	22	21	7037.61	2	6039.19	1.6559	0.0496	5.81E-06	1.02E-04	3.68E-04	7.14E-04	1.03E-03	1.25E-03
3	48	47	10219.57	2	6039.46	1.6558	0.0303	1.77E-07	1.43E-05	1.10E-04	3.38E-04	6.60E-04	1.00E-03
1	20	21	2936.50	2	6039.61	1.6557	0.0515	2.40E-04	5.91E-04	7.95E-04	8.54E-04	8.29E-04	7.64E-04
0	32	33	2055.22	2	6039.97	1.6556	0.0326	2.83E-04	4.58E-04	4.98E-04	4.71E-04	4.20E-04	3.65E-04
4	66	65	16248.61	1	6040.21	1.6556	0.0303	0.0	1.29E-05	4.24E-04	3.10E-03	1.08E-02	2.48E-02
3	23	22	7116.09	2	6040.48	1.6555	0.0476	5.48E-06	1.00E-04	3.68E-04	7.20E-04	1.04E-03	1.28E-03
1	91	90	16637.68	2	6040.57	1.6555	0.0303	0.0	0.0	6.63E-07	5.11E-06	1.85E-05	4.35E-05
2	28	29	5897.62	1	6040.60	1.6555	0.0359	1.07E-03	1.09E-02	2.99E-02	4.94E-02	6.37E-02	7.20E-02
3	47	46	10053.75	2	6040.74	1.6554	0.0303	2.17E-07	1.63E-05	1.21E-04	3.60E-04	6.92E-04	1.04E-03
3	15	16	6858.63	1	6040.91	1.6554	0.0591	3.52E-04	5.72E-03	1.98E-02	3.74E-02	5.29E-02	6.39E-02
0	48	49	4673.40	1	6041.40	1.6552	0.0303	8.13E-04	4.63E-03	9.47E-03	1.31E-02	1.50E-02	1.56E-02
3	24	23	7198.11	2	6041.67	1.6552	0.0457	5.13E-06	9.77E-05	3.65E-04	7.24E-04	1.06E-03	1.31E-03
4	2	1	8418.13	1	6041.70	1.6552	0.0606	1.00E-05	3.44E-04	1.73E-03	4.09E-03	6.73E-03	9.04E-03
2	4	5	4220.97	2	6041.90	1.6551	0.0614	2.73E-05	1.25E-04	2.28E-04	2.95E-04	3.24E-04	3.26E-04
3	46	45	9891.36	2	6041.92	1.6551	0.0303	2.65E-07	1.84E-05	1.31E-04	3.83E-04	7.24E-04	1.08E-03
1	107	106	22956.67	1	6042.52	1.6549	0.0303	0.0	0.0	1.01E-06	1.93E-05	1.28E-04	4.66E-04
3	25	24	7283.66	2	6042.75	1.6549	0.0437	4.77E-06	9.47E-05	3.61E-04	7.25E-04	1.07E-03	1.33E-03
2	75	74	14012.86	2	6042.75	1.6549	0.0303	0.0	4.01E-07	7.68E-06	4.06E-05	1.14E-04	2.25E-04
3	45	44	9732.40	2	6042.99	1.6548	0.0303	3.22E-07	2.07E-05	1.42E-04	4.06E-04	7.56E-04	1.11E-03
4	65	64	16014.55	1	6043.74	1.6546	0.0303	0.0	1.57E-05	4.87E-04	3.44E-03	1.17E-02	2.65E-02
3	26	25	7372.76	2	6043.74	1.6546	0.0418	4.40E-06	9.12E-05	3.56E-04	7.23E-04	1.07E-03	1.34E-03
3	44	43	9576.89	2	6043.96	1.6545	0.0303	3.90E-07	2.32E-05	1.54E-04	4.29E-04	7.87E-04	1.14E-03
3	83	82	18792.51	1	6043.99	1.6545	0.0303	0.0	9.75E-07	5.89E-05	6.21E-04	2.76E-03	7.56E-03
2	96	95	20961.57	1	6044.35	1.6544	0.0303	0.0	8.17E-08	8.31E-06	1.20E-04	6.55E-04	2.08E-03
3	27	26	7465.39	2	6044.62	1.6544	0.0398	4.04E-06	8.75E-05	3.49E-04	7.19E-04	1.08E-03	1.35E-03
3	43	42	9424.83	2	6044.82	1.6543	0.0303	4.68E-07	2.60E-05	1.65E-04	4.52E-04	8.17E-04	1.18E-03
4	3	2	8425.54	1	6045.09	1.6542	0.0609	1.51E-05	5.19E-04	2.61E-03	6.19E-03	1.02E-02	1.37E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	19	20	2860.19	2	6045.19	1.6542	0.0535	2.57E-04	6.12E-04	8.08E-04	8.59E-04	8.27E-04	7.59E-04
6	3	28	27	7561.55	2	6045.40	1.6542	0.0379	3.68E-06	8.35E-05	3.41E-04	7.12E-04	1.08E-03	1.36E-03
6	3	42	41	9276.23	2	6045.58	1.6541	0.0303	5.60E-07	2.89E-05	1.78E-04	4.75E-04	8.47E-04	1.21E-03
5	2	3	4	4202.92	2	6045.90	1.6540	0.0611	2.26E-05	1.02E-04	1.87E-04	2.41E-04	2.64E-04	2.65E-04
3	0	116	115	24548.55	1	6046.00	1.6540	0.0303	0.0	0.0	9.47E-08	2.29E-06	1.77E-05	7.16E-05
6	3	29	28	7661.24	2	6046.08	1.6540	0.0359	3.34E-06	7.94E-05	3.32E-04	7.03E-04	1.07E-03	1.37E-03
4	1	38	39	5100.25	1	6046.21	1.6539	0.0303	1.60E-03	1.12E-02	2.53E-02	3.71E-02	4.44E-02	4.75E-02
6	3	14	15	6798.89	1	6046.21	1.6539	0.0597	3.63E-04	5.73E-03	1.95E-02	3.66E-02	5.16E-02	6.20E-02
6	3	41	40	9131.08	2	6046.24	1.6539	0.0303	6.65E-07	3.20E-05	1.90E-04	4.98E-04	8.76E-04	1.23E-03
4	1	90	89	16326.21	2	6046.39	1.6539	0.0303	0.0	0.0	8.06E-07	5.95E-06	2.08E-05	4.81E-05
6	3	30	29	7764.45	2	6046.66	1.6538	0.0340	3.00E-06	7.51E-05	3.21E-04	6.91E-04	1.07E-03	1.37E-03
3	0	31	32	1934.72	2	6046.72	1.6538	0.0331	3.29E-04	5.02E-04	5.31E-04	4.94E-04	4.35E-04	3.75E-04
6	3	40	39	8989.41	2	6046.79	1.6538	0.0303	7.86E-07	3.53E-05	2.03E-04	5.21E-04	9.03E-04	1.26E-03
5	2	74	73	13754.80	2	6046.86	1.6538	0.0303	0.0	5.00E-07	9.01E-06	4.59E-05	1.26E-04	2.43E-04
6	3	31	30	7871.18	2	6047.13	1.6537	0.0335	2.70E-06	7.10E-05	3.12E-04	6.82E-04	1.06E-03	1.37E-03
7	4	64	63	15783.89	1	6047.15	1.6537	0.0303	0.0	1.90E-05	5.59E-04	3.82E-03	1.27E-02	2.83E-02
6	3	39	38	8851.20	2	6047.24	1.6536	0.0303	9.23E-07	3.89E-05	2.16E-04	5.43E-04	9.29E-04	1.29E-03
5	2	27	28	5788.74	1	6047.25	1.6536	0.0379	1.22E-03	1.18E-02	3.16E-02	5.13E-02	6.56E-02	7.36E-02
6	3	32	31	7981.43	2	6047.50	1.6536	0.0331	2.41E-06	6.69E-05	3.02E-04	6.70E-04	1.05E-03	1.37E-03
6	3	38	37	8716.48	2	6047.59	1.6536	0.0303	1.08E-06	4.25E-05	2.29E-04	5.65E-04	9.54E-04	1.31E-03
6	3	33	32	8095.19	2	6047.77	1.6535	0.0326	2.14E-06	6.27E-05	2.91E-04	6.56E-04	1.04E-03	1.37E-03
6	3	37	36	8585.23	2	6047.83	1.6535	0.0308	1.25E-06	4.64E-05	2.42E-04	5.85E-04	9.76E-04	1.33E-03
6	3	34	33	8212.45	2	6047.94	1.6535	0.0321	1.89E-06	5.85E-05	2.79E-04	6.40E-04	1.03E-03	1.36E-03
6	3	36	35	8457.48	2	6047.97	1.6534	0.0312	1.44E-06	5.03E-05	2.54E-04	6.05E-04	9.97E-04	1.34E-03
6	3	35	34	8333.21	2	6048.01	1.6534	0.0317	1.66E-06	5.44E-05	2.67E-04	6.23E-04	1.02E-03	1.35E-03
7	4	4	3	8436.66	1	6048.37	1.6533	0.0611	2.00E-05	6.93E-04	3.49E-03	8.30E-03	1.37E-02	1.84E-02
6	3	82	81	18499.43	1	6049.46	1.6530	0.0303	0.0	1.26E-06	7.11E-05	7.18E-04	3.11E-03	8.33E-03
5	2	2	3	4188.48	2	6049.80	1.6529	0.0609	1.75E-05	7.86E-05	1.43E-04	1.84E-04	2.01E-04	2.02E-04
3	0	47	48	4487.89	1	6050.11	1.6529	0.0303	1.05E-03	5.47E-03	1.07E-02	1.44E-02	1.62E-02	1.67E-02
7	4	63	62	15556.63	1	6050.45	1.6528	0.0303	0.0	2.29E-05	6.38E-04	4.22E-03	1.38E-02	3.02E-02
4	1	18	19	2787.51	2	6050.67	1.6527	0.0552	2.74E-04	6.30E-04	8.18E-04	8.60E-04	8.23E-04	7.51E-04
4	1	106	105	22582.21	1	6050.76	1.6527	0.0303	0.0	0.0	1.29E-06	2.34E-05	1.50E-04	5.32E-04
5	2	73	72	13499.99	2	6050.87	1.6527	0.0303	0.0	6.22E-07	1.05E-05	5.18E-05	1.38E-04	2.63E-04
5	2	95	94	20624.10	1	6051.31	1.6525	0.0303	0.0	1.10E-07	1.03E-05	1.42E-04	7.50E-04	2.33E-03
6	3	13	14	6742.87	1	6051.40	1.6525	0.0604	3.71E-04	5.70E-03	1.92E-02	3.57E-02	4.99E-02	5.98E-02
7	4	5	4	8451.48	1	6051.55	1.6525	0.0614	2.48E-05	8.64E-04	4.37E-03	1.04E-02	1.72E-02	2.31E-02
4	1	89	88	16017.84	2	6052.11	1.6523	0.0303	0.0	0.0	9.85E-07	6.95E-06	2.37E-05	5.35E-05
3	0	30	31	1817.62	2	6053.37	1.6520	0.0335	3.80E-04	5.48E-04	5.64E-04	5.16E-04	4.50E-04	3.84E-04
5	2	1	2	4177.65	2	6053.61	1.6519	0.0606	1.19E-05	5.34E-05	9.67E-05	1.24E-04	1.36E-04	1.36E-04
7	4	62	61	15332.79	1	6053.64	1.6519	0.0303	0.0	2.76E-05	7.27E-04	4.66E-03	1.49E-02	3.21E-02
5	2	26	27	5683.57	1	6053.81	1.6519	0.0398	1.38E-03	1.28E-02	3.33E-02	5.32E-02	6.73E-02	7.49E-02
4	1	37	38	4953.12	1	6053.90	1.6518	0.0303	1.94E-03	1.26E-02	2.76E-02	3.97E-02	4.68E-02	4.96E-02
7	4	6	5	8470.00	1	6054.62	1.6516	0.0617	2.93E-05	1.03E-03	5.24E-03	1.25E-02	2.07E-02	2.79E-02
5	2	72	71	13248.44	2	6054.77	1.6516	0.0303	0.0	7.71E-07	1.23E-05	5.83E-05	1.52E-04	2.84E-04
6	3	81	80	18209.59	1	6054.80	1.6516	0.0303	0.0	1.63E-06	8.56E-05	8.29E-04	3.49E-03	9.17E-03
3	0	115	114	24143.93	1	6055.30	1.6514	0.0303	0.0	0.0	1.24E-07	2.83E-06	2.10E-05	8.30E-05
4	1	17	18	2718.44	2	6056.06	1.6512	0.0568	2.90E-04	6.45E-04	8.23E-04	8.57E-04	8.14E-04	7.40E-04
6	3	12	13	6690.57	1	6056.49	1.6511	0.0610	3.75E-04	5.62E-03	1.86E-02	3.45E-02	4.80E-02	5.73E-02
7	4	61	60	15112.37	1	6056.72	1.6511	0.0303	0.0	3.30E-05	8.25E-04	5.12E-03	1.60E-02	3.40E-02
5	2	0	1	4170.43	2	6057.32	1.6509	0.0603	6.08E-06	2.71E-05	4.90E-05	6.29E-05	6.87E-05	6.90E-05
7	4	7	6	8492.22	1	6057.59	1.6508	0.0620	3.35E-05	1.19E-03	6.09E-03	1.46E-02	2.41E-02	3.26E-02
4	1	88	87	15712.59	2	6057.72	1.6508	0.0303	0.0	4.17E-08	1.20E-06	8.11E-06	2.68E-05	5.93E-05
5	2	94	93	20289.75	1	6058.15	1.6507	0.0303	0.0	1.48E-07	1.28E-05	1.67E-04	8.58E-04	2.60E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	71	70	13000.15	2	6058.56	1.6506	0.0303	0.0	9.53E-07	1.43E-05	6.54E-05	1.67E-04	3.06E-04
3	0	46	47	4306.05	1	6058.72	1.6505	0.0303	1.35E-03	6.43E-03	1.20E-02	1.58E-02	1.75E-02	1.77E-02
4	1	105	104	22210.73	1	6058.88	1.6505	0.0303	0.0	0.0	1.65E-06	2.84E-05	1.75E-04	6.06E-04
7	4	60	59	14895.39	1	6059.68	1.6503	0.0303	5.13E-08	3.94E-05	9.34E-04	5.62E-03	1.72E-02	3.60E-02
3	0	29	30	1704.53	2	6059.93	1.6502	0.0340	4.36E-04	5.96E-04	5.97E-04	5.37E-04	4.63E-04	3.92E-04
6	3	80	79	17923.02	1	6060.03	1.6502	0.0303	0.0	2.09E-06	1.03E-04	9.55E-04	3.91E-03	1.01E-02
5	2	25	26	5582.12	1	6060.26	1.6501	0.0418	1.56E-03	1.37E-02	3.48E-02	5.49E-02	6.88E-02	7.61E-02
7	4	8	7	8518.15	1	6060.45	1.6500	0.0623	3.73E-05	1.34E-03	6.91E-03	1.66E-02	2.76E-02	3.73E-02
4	1	16	17	2652.99	2	6061.35	1.6498	0.0585	3.04E-04	6.55E-04	8.23E-04	8.49E-04	8.02E-04	7.25E-04
6	3	11	12	6642.00	1	6061.48	1.6498	0.0617	3.75E-04	5.49E-03	1.80E-02	3.30E-02	4.58E-02	5.45E-02
4	1	36	37	4809.68	1	6061.50	1.6498	0.0308	2.34E-03	1.42E-02	3.00E-02	4.23E-02	4.92E-02	5.17E-02
5	2	70	69	12755.13	2	6062.25	1.6496	0.0303	0.0	1.17E-06	1.66E-05	7.33E-05	1.82E-04	3.30E-04
7	4	59	58	14681.85	1	6062.52	1.6495	0.0303	6.80E-08	4.71E-05	1.06E-03	6.19E-03	1.86E-02	3.83E-02
7	4	9	8	8547.78	1	6063.21	1.6493	0.0624	4.07E-05	1.49E-03	7.70E-03	1.86E-02	3.09E-02	4.20E-02
4	1	87	86	15410.46	2	6063.22	1.6493	0.0303	0.0	5.45E-08	1.46E-06	9.44E-06	3.03E-05	6.57E-05
5	2	1	0	4166.82	2	6064.44	1.6490	0.0603	6.25E-06	2.78E-05	5.03E-05	6.45E-05	7.04E-05	7.06E-05
3	0	114	113	23742.18	1	6064.47	1.6489	0.0303	0.0	0.0	1.63E-07	3.49E-06	2.50E-05	9.60E-05
5	2	93	92	19958.52	1	6064.87	1.6488	0.0303	0.0	1.98E-07	1.58E-05	1.97E-04	9.79E-04	2.90E-03
6	3	79	78	17639.71	1	6065.14	1.6488	0.0303	0.0	2.68E-06	1.23E-04	1.10E-03	4.37E-03	1.11E-02
7	4	58	57	14471.76	1	6065.26	1.6487	0.0303	8.96E-08	5.61E-05	1.20E-03	6.80E-03	2.00E-02	4.07E-02
5	2	69	68	12513.40	2	6065.82	1.6486	0.0303	0.0	1.44E-06	1.92E-05	8.19E-05	1.99E-04	3.54E-04
7	4	10	9	8581.11	1	6065.86	1.6486	0.0624	4.36E-05	1.62E-03	8.45E-03	2.05E-02	3.42E-02	4.65E-02
6	3	10	11	6597.16	1	6066.36	1.6484	0.0625	3.70E-04	5.30E-03	1.72E-02	3.14E-02	4.33E-02	5.14E-02
3	0	28	29	1594.85	2	6066.39	1.6484	0.0359	5.00E-04	6.48E-04	6.32E-04	5.60E-04	4.77E-04	4.02E-04
4	1	15	16	2591.16	2	6066.54	1.6484	0.0591	3.16E-04	6.61E-04	8.18E-04	8.37E-04	7.85E-04	7.07E-04
5	2	24	25	5484.40	1	6066.61	1.6484	0.0437	1.74E-03	1.46E-02	3.63E-02	5.65E-02	7.01E-02	7.70E-02
4	1	104	103	21842.26	1	6066.88	1.6483	0.0303	0.0	0.0	2.10E-06	3.43E-05	2.04E-04	6.89E-04
3	0	45	46	4127.89	1	6067.24	1.6482	0.0303	1.72E-03	7.53E-03	1.35E-02	1.73E-02	1.88E-02	1.89E-02
5	2	2	1	4170.43	2	6067.86	1.6480	0.0606	1.26E-05	5.62E-05	1.02E-04	1.30E-04	1.42E-04	1.43E-04
7	4	57	56	14265.13	1	6067.88	1.6480	0.0303	1.17E-07	6.65E-05	1.36E-03	7.46E-03	2.15E-02	4.31E-02
7	4	11	10	8618.14	1	6068.40	1.6479	0.0625	4.60E-05	1.74E-03	9.15E-03	2.23E-02	3.74E-02	5.10E-02
4	1	86	85	15111.48	2	6068.61	1.6478	0.0303	0.0	7.11E-08	1.77E-06	1.10E-05	3.42E-05	7.27E-05
4	1	35	36	4669.95	1	6068.99	1.6477	0.0312	2.80E-03	1.59E-02	3.26E-02	4.50E-02	5.16E-02	5.37E-02
5	2	68	67	12274.96	2	6069.29	1.6476	0.0303	0.0	1.76E-06	2.22E-05	9.13E-05	2.17E-04	3.80E-04
6	3	78	77	17359.69	1	6070.14	1.6474	0.0303	0.0	3.42E-06	1.47E-04	1.26E-03	4.88E-03	1.21E-02
7	4	56	55	14061.97	1	6070.38	1.6473	0.0303	1.53E-07	7.86E-05	1.53E-03	8.15E-03	2.30E-02	4.56E-02
7	4	12	11	8658.86	1	6070.84	1.6472	0.0617	4.78E-05	1.84E-03	9.80E-03	2.40E-02	4.05E-02	5.53E-02
6	3	9	10	6556.05	1	6071.14	1.6471	0.0624	3.60E-04	5.06E-03	1.63E-02	2.95E-02	4.05E-02	4.79E-02
5	2	3	2	4177.65	2	6071.17	1.6471	0.0609	1.89E-05	8.47E-05	1.54E-04	1.97E-04	2.16E-04	2.17E-04
5	2	92	91	19630.43	1	6071.47	1.6470	0.0303	0.0	2.63E-07	1.95E-05	2.31E-04	1.12E-03	3.23E-03
4	1	14	15	2532.96	2	6071.64	1.6470	0.0597	3.25E-04	6.62E-04	8.08E-04	8.19E-04	7.65E-04	6.86E-04
5	2	67	66	12039.83	2	6072.66	1.6467	0.0303	0.0	2.14E-06	2.55E-05	1.02E-04	2.36E-04	4.06E-04
3	0	27	28	1488.80	2	6072.76	1.6467	0.0379	5.69E-04	7.01E-04	6.66E-04	5.81E-04	4.91E-04	4.10E-04
7	4	55	54	13862.29	1	6072.78	1.6467	0.0303	1.98E-07	9.26E-05	1.72E-03	8.90E-03	2.47E-02	4.81E-02
5	2	23	24	5390.41	1	6072.86	1.6467	0.0457	1.93E-03	1.55E-02	3.77E-02	5.78E-02	7.11E-02	7.77E-02
7	4	13	12	8703.29	1	6073.17	1.6466	0.0610	4.91E-05	1.93E-03	1.04E-02	2.57E-02	4.34E-02	5.95E-02
3	0	113	112	23343.33	1	6073.53	1.6465	0.0303	0.0	0.0	2.12E-07	4.31E-06	2.97E-05	1.11E-04
4	1	85	84	14815.63	2	6073.89	1.6464	0.0303	0.0	9.23E-08	2.14E-06	1.27E-05	3.86E-05	8.03E-05
5	2	4	3	4188.48	2	6074.39	1.6463	0.0611	2.52E-05	1.13E-04	2.06E-04	2.65E-04	2.90E-04	2.91E-04
4	1	103	102	21476.80	1	6074.76	1.6462	0.0303	0.0	0.0	2.67E-06	4.14E-05	2.38E-04	7.83E-04
6	3	77	76	17082.96	1	6075.02	1.6461	0.0303	0.0	4.36E-06	1.75E-04	1.44E-03	5.44E-03	1.32E-02
7	4	54	53	13666.09	1	6075.06	1.6461	0.0303	2.55E-07	1.09E-04	1.92E-03	9.68E-03	2.63E-02	5.07E-02
7	4	14	13	8751.40	1	6075.39	1.6460	0.0604	4.99E-05	2.01E-03	1.09E-02	2.72E-02	4.62E-02	6.35E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	44	45	3953.41	1	6075.65	1.6459	0.0303	2.18E-03	8.79E-03	1.51E-02	1.89E-02	2.02E-02	2.00E-02
6	3	8	9	6518.68	1	6075.82	1.6459	0.0624	3.45E-04	4.76E-03	1.52E-02	2.73E-02	3.75E-02	4.42E-02
5	2	66	65	11808.00	2	6075.91	1.6458	0.0303	0.0	2.59E-06	2.93E-05	1.13E-04	2.56E-04	4.34E-04
4	1	34	35	4533.94	1	6076.38	1.6457	0.0317	3.34E-03	1.78E-02	3.52E-02	4.77E-02	5.40E-02	5.56E-02
4	1	13	14	2478.38	2	6076.64	1.6456	0.0604	3.32E-04	6.57E-04	7.92E-04	7.97E-04	7.40E-04	6.62E-04
7	4	53	52	13473.39	1	6077.23	1.6455	0.0303	3.27E-07	1.27E-04	2.14E-03	1.05E-02	2.81E-02	5.33E-02
7	4	15	14	8803.20	1	6077.51	1.6454	0.0597	5.02E-05	2.07E-03	1.14E-02	2.86E-02	4.88E-02	6.73E-02
5	2	5	4	4202.92	2	6077.51	1.6454	0.0614	3.12E-05	1.41E-04	2.58E-04	3.32E-04	3.64E-04	3.66E-04
5	2	91	90	19305.50	1	6077.96	1.6453	0.0303	0.0	3.50E-07	2.39E-05	2.71E-04	1.27E-03	3.59E-03
5	2	22	23	5300.14	1	6079.01	1.6450	0.0476	2.13E-03	1.64E-02	3.90E-02	5.90E-02	7.20E-02	7.82E-02
3	0	26	27	1386.36	2	6079.03	1.6450	0.0398	6.43E-04	7.54E-04	7.00E-04	6.02E-04	5.03E-04	4.17E-04
5	2	65	64	11579.50	2	6079.06	1.6450	0.0303	0.0	3.13E-06	3.35E-05	1.25E-04	2.78E-04	4.63E-04
4	1	84	83	14522.95	2	6079.06	1.6450	0.0303	0.0	1.19E-07	2.59E-06	1.47E-05	4.34E-05	8.86E-05
7	4	52	51	13284.19	1	6079.28	1.6449	0.0303	4.17E-07	1.48E-04	2.38E-03	1.14E-02	2.98E-02	5.60E-02
7	4	16	15	8858.70	1	6079.52	1.6449	0.0591	4.99E-05	2.12E-03	1.18E-02	2.98E-02	5.12E-02	7.09E-02
6	3	76	75	16809.55	1	6079.78	1.6448	0.0303	0.0	5.52E-06	2.07E-04	1.64E-03	6.05E-03	1.44E-02
6	3	7	8	6485.03	1	6080.40	1.6446	0.0623	3.25E-04	4.41E-03	1.39E-02	2.50E-02	3.42E-02	4.02E-02
5	2	6	5	4220.97	2	6080.53	1.6446	0.0617	3.69E-05	1.69E-04	3.09E-04	3.99E-04	4.39E-04	4.42E-04
7	4	51	50	13098.50	1	6081.23	1.6444	0.0303	5.29E-07	1.71E-04	2.64E-03	1.23E-02	3.17E-02	5.86E-02
7	4	17	16	8917.88	1	6081.42	1.6444	0.0585	4.92E-05	2.15E-03	1.22E-02	3.10E-02	5.34E-02	7.43E-02
4	1	12	13	2427.44	2	6081.55	1.6443	0.0610	3.35E-04	6.47E-04	7.71E-04	7.70E-04	7.12E-04	6.34E-04
5	2	64	63	11354.33	2	6082.11	1.6442	0.0303	0.0	3.77E-06	3.82E-05	1.38E-04	3.00E-04	4.93E-04
3	0	112	111	22947.38	1	6082.46	1.6441	0.0303	0.0	0.0	2.77E-07	5.30E-06	3.51E-05	1.28E-04
4	1	102	101	21114.38	1	6082.53	1.6441	0.0303	0.0	0.0	3.38E-06	4.98E-05	2.77E-04	8.88E-04
7	4	50	49	12916.32	1	6083.06	1.6439	0.0303	6.67E-07	1.98E-04	2.92E-03	1.32E-02	3.35E-02	6.13E-02
7	4	18	17	8980.75	1	6083.21	1.6439	0.0568	4.81E-05	2.16E-03	1.24E-02	3.19E-02	5.55E-02	7.75E-02
5	2	7	6	4242.63	2	6083.45	1.6438	0.0620	4.23E-05	1.95E-04	3.59E-04	4.66E-04	5.13E-04	5.17E-04
4	1	33	34	4401.64	1	6083.67	1.6437	0.0321	3.95E-03	1.98E-02	3.79E-02	5.03E-02	5.63E-02	5.75E-02
3	0	43	44	3782.62	1	6083.97	1.6437	0.0303	2.75E-03	1.02E-02	1.69E-02	2.05E-02	2.16E-02	2.12E-02
4	1	83	82	14233.45	2	6084.12	1.6436	0.0303	0.0	1.54E-07	3.11E-06	1.70E-05	4.88E-05	9.75E-05
5	2	90	89	18983.73	1	6084.33	1.6436	0.0303	0.0	4.63E-07	2.93E-05	3.17E-04	1.44E-03	3.99E-03
6	3	75	74	16539.45	1	6084.43	1.6435	0.0303	0.0	6.98E-06	2.46E-04	1.87E-03	6.71E-03	1.57E-02
7	4	49	48	12737.67	1	6084.78	1.6434	0.0303	8.36E-07	2.28E-04	3.22E-03	1.42E-02	3.54E-02	6.40E-02
6	3	6	7	6455.12	1	6084.87	1.6434	0.0620	2.99E-04	4.01E-03	1.26E-02	2.25E-02	3.06E-02	3.60E-02
7	4	19	18	9047.30	1	6084.90	1.6434	0.0552	4.66E-05	2.16E-03	1.26E-02	3.28E-02	5.73E-02	8.04E-02
5	2	63	62	11132.49	2	6085.04	1.6434	0.0303	0.0	4.53E-06	4.35E-05	1.52E-04	3.24E-04	5.24E-04
5	2	21	22	5213.61	1	6085.05	1.6434	0.0496	2.34E-03	1.72E-02	4.01E-02	6.00E-02	7.25E-02	7.83E-02
3	0	25	26	1287.55	2	6085.22	1.6433	0.0418	7.22E-04	8.08E-04	7.32E-04	6.20E-04	5.14E-04	4.24E-04
5	2	8	7	4267.90	2	6086.27	1.6430	0.0623	4.72E-05	2.20E-04	4.08E-04	5.31E-04	5.86E-04	5.92E-04
4	1	11	12	2380.12	2	6086.36	1.6430	0.0617	3.34E-04	6.31E-04	7.43E-04	7.37E-04	6.79E-04	6.03E-04
7	4	48	47	12562.54	1	6086.38	1.6430	0.0303	1.04E-06	2.61E-04	3.54E-03	1.52E-02	3.73E-02	6.66E-02
7	4	20	19	9117.53	1	6086.48	1.6430	0.0535	4.48E-05	2.15E-03	1.28E-02	3.35E-02	5.89E-02	8.31E-02
5	2	62	61	10914.00	2	6087.87	1.6426	0.0303	4.78E-08	5.41E-06	4.93E-05	1.67E-04	3.48E-04	5.55E-04
7	4	47	46	12390.96	1	6087.88	1.6426	0.0303	1.29E-06	2.98E-04	3.88E-03	1.63E-02	3.92E-02	6.92E-02
7	4	21	20	9191.44	1	6087.95	1.6426	0.0515	4.27E-05	2.13E-03	1.29E-02	3.40E-02	6.03E-02	8.55E-02
6	3	74	73	16272.68	1	6088.96	1.6423	0.0303	0.0	8.78E-06	2.90E-04	2.13E-03	7.43E-03	1.71E-02
5	2	9	8	4296.77	2	6088.99	1.6423	0.0624	5.15E-05	2.44E-04	4.55E-04	5.95E-04	6.58E-04	6.66E-04
4	1	82	81	13947.12	2	6089.07	1.6423	0.0303	0.0	1.98E-07	3.74E-06	1.96E-05	5.46E-05	1.07E-04
6	3	5	6	6428.95	1	6089.23	1.6422	0.0617	2.69E-04	3.55E-03	1.11E-02	1.97E-02	2.68E-02	3.14E-02
7	4	46	45	12222.92	1	6089.26	1.6422	0.0303	1.59E-06	3.39E-04	4.24E-03	1.74E-02	4.11E-02	7.18E-02
7	4	22	21	9269.02	1	6089.31	1.6422	0.0496	4.04E-05	2.09E-03	1.29E-02	3.44E-02	6.15E-02	8.76E-02
4	1	101	100	20755.00	1	6090.17	1.6420	0.0303	0.0	4.42E-08	4.28E-06	5.98E-05	3.21E-04	1.01E-03
7	4	45	44	12058.43	1	6090.53	1.6419	0.0303	1.95E-06	3.84E-04	4.62E-03	1.85E-02	4.31E-02	7.43E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
7	4	23	22	9350.27	1	6090.57	1.6419	0.0476	3.80E-05	2.04E-03	1.28E-02	3.47E-02	6.24E-02	8.94E-02
5	2	89	88	18665.15	1	6090.58	1.6419	0.0303	0.0	6.15E-07	3.61E-05	3.73E-04	1.64E-03	4.45E-03
5	2	61	60	10698.87	2	6090.60	1.6419	0.0303	6.31E-08	6.44E-06	5.58E-05	1.83E-04	3.74E-04	5.88E-04
4	1	32	33	4273.06	1	6090.86	1.6418	0.0326	4.65E-03	2.19E-02	4.06E-02	5.30E-02	5.86E-02	5.93E-02
5	2	20	21	5130.82	1	6091.00	1.6418	0.0515	2.54E-03	1.80E-02	4.11E-02	6.07E-02	7.28E-02	7.82E-02
4	1	10	11	2336.44	2	6091.08	1.6417	0.0625	3.29E-04	6.09E-04	7.10E-04	7.00E-04	6.41E-04	5.68E-04
3	0	111	110	22554.35	1	6091.27	1.6417	0.0303	0.0	0.0	3.60E-07	6.51E-06	4.16E-05	1.47E-04
3	0	24	25	1192.36	2	6091.30	1.6417	0.0437	8.05E-04	8.61E-04	7.62E-04	6.37E-04	5.24E-04	4.29E-04
5	2	10	9	4329.25	2	6091.62	1.6416	0.0624	5.53E-05	2.66E-04	5.00E-04	6.56E-04	7.28E-04	7.39E-04
7	4	44	43	11897.51	1	6091.69	1.6416	0.0303	2.38E-06	4.33E-04	5.01E-03	1.96E-02	4.50E-02	7.67E-02
7	4	24	23	9435.20	1	6091.72	1.6416	0.0457	3.54E-05	1.98E-03	1.27E-02	3.48E-02	6.31E-02	9.10E-02
3	0	42	43	3615.54	1	6092.19	1.6414	0.0303	3.44E-03	1.18E-02	1.88E-02	2.23E-02	2.31E-02	2.24E-02
7	4	43	42	11740.14	1	6092.74	1.6413	0.0303	2.88E-06	4.86E-04	5.42E-03	2.07E-02	4.68E-02	7.91E-02
7	4	25	24	9523.76	1	6092.75	1.6413	0.0437	3.28E-05	1.91E-03	1.25E-02	3.48E-02	6.36E-02	9.23E-02
5	2	60	59	10487.10	2	6093.21	1.6412	0.0303	8.28E-08	7.64E-06	6.29E-05	2.00E-04	4.01E-04	6.21E-04
6	3	73	72	16009.24	1	6093.38	1.6411	0.0303	0.0	1.10E-05	3.42E-04	2.41E-03	8.22E-03	1.86E-02
6	3	4	5	6406.52	1	6093.50	1.6411	0.0614	2.33E-04	3.05E-03	9.47E-03	1.68E-02	2.28E-02	2.67E-02
7	4	42	41	11586.35	1	6093.68	1.6410	0.0303	3.47E-06	5.44E-04	5.84E-03	2.18E-02	4.87E-02	8.13E-02
7	4	26	25	9616.03	1	6093.68	1.6410	0.0418	3.01E-05	1.84E-03	1.23E-02	3.46E-02	6.39E-02	9.33E-02
4	1	61	60	13663.99	2	6093.91	1.6410	0.0303	0.0	2.54E-07	4.47E-06	2.25E-05	6.11E-05	1.18E-04
5	2	11	10	4365.34	2	6094.14	1.6409	0.0625	5.84E-05	2.86E-04	5.42E-04	7.15E-04	7.97E-04	8.10E-04
7	4	27	26	9711.93	1	6094.51	1.6408	0.0398	2.75E-05	1.76E-03	1.20E-02	3.44E-02	6.40E-02	9.40E-02
7	4	41	40	11436.14	1	6094.51	1.6408	0.0303	4.15E-06	6.06E-04	6.28E-03	2.30E-02	5.05E-02	8.34E-02
7	4	28	27	9811.48	1	6095.22	1.6406	0.0379	2.50E-05	1.67E-03	1.17E-02	3.40E-02	6.38E-02	9.44E-02
7	4	40	39	11289.51	1	6095.22	1.6406	0.0303	4.94E-06	6.72E-04	6.72E-03	2.41E-02	5.22E-02	8.54E-02
4	1	9	10	2296.39	2	6095.69	1.6405	0.0624	3.20E-04	5.81E-04	6.71E-04	6.58E-04	6.00E-04	5.30E-04
5	2	59	58	10278.70	2	6095.73	1.6405	0.0303	1.09E-07	9.09E-06	7.11E-05	2.20E-04	4.32E-04	6.59E-04
7	4	29	28	9914.69	1	6095.82	1.6405	0.0359	2.25E-05	1.58E-03	1.14E-02	3.34E-02	6.35E-02	9.46E-02
7	4	39	38	11146.46	1	6095.83	1.6405	0.0303	5.85E-06	7.43E-04	7.18E-03	2.52E-02	5.38E-02	8.72E-02
7	4	30	29	10021.54	1	6096.32	1.6403	0.0340	2.01E-05	1.49E-03	1.10E-02	3.28E-02	6.30E-02	9.45E-02
7	4	38	37	11007.02	1	6096.32	1.6403	0.0303	6.88E-06	8.17E-04	7.63E-03	2.63E-02	5.54E-02	8.89E-02
5	2	12	11	4405.02	2	6096.57	1.6403	0.0617	6.09E-05	3.04E-04	5.81E-04	7.72E-04	8.62E-04	8.80E-04
7	4	31	30	10132.03	1	6096.70	1.6402	0.0335	1.80E-05	1.41E-03	1.06E-02	3.23E-02	6.26E-02	9.47E-02
7	4	37	36	10871.18	1	6096.71	1.6402	0.0308	8.04E-06	8.95E-04	8.09E-03	2.73E-02	5.68E-02	9.03E-02
5	2	88	87	18349.76	1	6096.71	1.6402	0.0303	0.0	8.15E-07	4.43E-05	4.38E-04	1.87E-03	4.96E-03
5	2	19	20	5051.77	1	6096.84	1.6402	0.0535	2.74E-03	1.87E-02	4.19E-02	6.11E-02	7.28E-02	7.77E-02
7	4	32	31	10246.16	1	6096.98	1.6402	0.0331	1.60E-05	1.32E-03	1.03E-02	3.16E-02	6.20E-02	9.45E-02
7	4	36	35	10738.94	1	6096.98	1.6402	0.0312	9.34E-06	9.76E-04	8.55E-03	2.83E-02	5.81E-02	9.16E-02
7	4	35	34	10610.31	1	6097.14	1.6401	0.0317	1.08E-05	1.06E-03	9.00E-03	2.92E-02	5.93E-02	9.27E-02
7	4	33	32	10363.92	1	6097.14	1.6401	0.0326	1.41E-05	1.23E-03	9.86E-03	3.09E-02	6.13E-02	9.42E-02
7	4	34	33	10485.30	1	6097.20	1.6401	0.0321	1.24E-05	1.14E-03	9.44E-03	3.01E-02	6.04E-02	9.35E-02
3	0	23	24	1100.81	2	6097.29	1.6401	0.0457	8.92E-04	9.13E-04	7.91E-04	6.53E-04	5.31E-04	4.32E-04
6	3	3	4	6387.82	1	6097.66	1.6400	0.0611	1.94E-04	2.51E-03	7.74E-03	1.37E-02	1.85E-02	2.17E-02
6	3	72	71	15749.16	1	6097.68	1.6400	0.0303	0.0	1.38E-05	4.01E-04	2.73E-03	9.07E-03	2.01E-02
4	1	100	99	20398.68	1	6097.69	1.6400	0.0303	0.0	6.07E-08	5.39E-06	7.16E-05	3.72E-04	1.14E-03
4	1	31	32	4148.21	1	6097.95	1.6399	0.0331	5.44E-03	2.41E-02	4.34E-02	5.57E-02	6.08E-02	6.10E-02
5	2	58	57	10073.68	2	6098.13	1.6398	0.0303	1.42E-07	1.08E-05	8.03E-05	2.41E-04	4.64E-04	6.98E-04
4	1	80	79	13384.06	2	6098.65	1.6397	0.0303	0.0	3.24E-07	5.34E-06	2.58E-05	6.83E-05	1.29E-04
5	2	13	12	4448.31	2	6098.89	1.6396	0.0610	6.27E-05	3.19E-04	6.17E-04	8.25E-04	9.26E-04	9.47E-04
3	0	110	109	22164.27	1	6099.97	1.6394	0.0303	0.0	0.0	4.66E-07	7.98E-06	4.91E-05	1.69E-04
4	1	6	9	2259.98	2	6100.21	1.6393	0.0624	3.07E-04	5.47E-04	6.26E-04	6.10E-04	5.55E-04	4.89E-04
3	0	41	42	3452.15	1	6100.31	1.6393	0.0303	4.29E-03	1.36E-02	2.08E-02	2.41E-02	2.46E-02	2.36E-02
5	2	57	56	9872.04	2	6100.43	1.6392	0.0303	1.85E-07	1.27E-05	9.03E-05	2.63E-04	4.97E-04	7.37E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULFS
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	14	13	4495.20	2	6101.11	1.6390	0.0604	6.38E-05	3.32E-04	6.50E-04	8.74E-04	9.86E-04	1.01E-03
6	3	2	3	6372.86	1	6101.71	1.6389	0.0609	1.50E-04	1.93E-03	5.92E-03	1.05E-02	1.41E-02	1.65E-02
6	3	71	70	15492.44	1	6101.87	1.6388	0.0303	0.0	1.71E-05	4.70E-04	3.08E-03	9.98E-03	2.18E-02
5	2	18	19	4976.46	1	6102.58	1.6387	0.0552	2.93E-03	1.93E-02	4.24E-02	6.13E-02	7.25E-02	7.70E-02
5	2	56	55	9673.80	2	6102.63	1.6386	0.0303	2.39E-07	1.50E-05	1.01E-04	2.87E-04	5.32E-04	7.78E-04
5	2	67	66	18037.58	1	6102.73	1.6386	0.0303	0.0	1.08E-06	5.43E-05	5.13E-04	2.12E-03	5.52E-03
3	0	22	23	1012.90	2	6103.19	1.6385	0.0476	9.81E-04	9.62E-04	8.16E-04	6.65E-04	5.37E-04	4.34E-04
5	2	15	14	4545.69	2	6103.24	1.6385	0.0597	6.43E-05	3.43E-04	6.79E-04	9.20E-04	1.04E-03	1.07E-03
4	1	79	78	13107.35	2	6103.28	1.6385	0.0303	0.0	4.13E-07	6.36E-06	2.95E-05	7.61E-05	1.41E-04
4	1	7	6	2227.21	2	6104.64	1.6381	0.0623	2.88E-04	5.06E-04	5.75E-04	5.58E-04	5.06E-04	4.45E-04
5	2	55	54	9478.96	2	6104.71	1.6381	0.0303	3.08E-07	1.75E-05	1.13E-04	3.12E-04	5.67E-04	8.20E-04
4	1	30	31	4027.09	1	6104.94	1.6380	0.0335	6.32E-03	2.64E-02	4.63E-02	5.83E-02	6.29E-02	6.26E-02
4	1	99	98	20045.44	1	6105.10	1.6380	0.0303	0.0	8.31E-08	6.79E-06	8.57E-05	4.30E-04	1.28E-03
5	2	16	15	4599.77	2	6105.26	1.6379	0.0591	6.41E-05	3.51E-04	7.04E-04	9.62E-04	1.10E-03	1.13E-03
6	3	1	2	6361.64	1	6105.66	1.6378	0.0606	1.02E-04	1.31E-03	4.01E-03	7.08E-03	9.56E-03	1.12E-02
6	3	70	69	15239.10	1	6105.94	1.6377	0.0303	0.0	2.13E-05	5.48E-04	3.47E-03	1.10E-02	2.35E-02
5	2	54	53	9287.54	2	6106.70	1.6375	0.0303	3.94E-07	2.05E-05	1.26E-04	3.38E-04	6.04E-04	8.62E-04
5	2	17	16	4657.45	2	6107.19	1.6374	0.0585	6.34E-05	3.57E-04	7.26E-04	9.99E-04	1.14E-03	1.19E-03
4	1	78	77	12833.86	2	6107.79	1.6373	0.0303	0.0	5.23E-07	7.56E-06	3.37E-05	8.47E-05	1.54E-04
5	2	17	18	4904.90	1	6108.22	1.6371	0.0568	3.11E-03	1.98E-02	4.28E-02	6.11E-02	7.18E-02	7.59E-02
3	0	40	41	3292.48	1	6108.34	1.6371	0.0303	5.31E-03	1.56E-02	2.29E-02	2.60E-02	2.62E-02	2.48E-02
3	0	109	108	21777.14	1	6108.54	1.6371	0.0303	0.0	0.0	6.03E-07	9.76E-06	5.78E-05	1.94E-04
5	2	53	52	9099.53	2	6108.58	1.6370	0.0303	5.02E-07	2.38E-05	1.40E-04	3.66E-04	6.42E-04	9.04E-04
5	2	86	85	17728.62	1	6108.63	1.6370	0.0303	0.0	1.42E-06	6.63E-05	6.00E-04	2.41E-03	6.13E-03
4	1	6	7	2198.07	2	6108.96	1.6369	0.0620	2.66E-04	4.60E-04	5.18E-04	5.01E-04	4.53E-04	3.98E-04
3	0	21	22	928.62	2	6108.99	1.6369	0.0496	1.07E-03	1.01E-03	8.39E-04	6.76E-04	5.41E-04	4.35E-04
5	2	18	17	4718.72	2	6109.01	1.6369	0.0568	6.21E-05	3.60E-04	7.43E-04	1.03E-03	1.19E-03	1.24E-03
6	3	0	1	6354.16	1	6109.50	1.6368	0.0603	5.21E-05	6.65E-04	2.03E-03	3.58E-03	4.84E-03	5.65E-03
6	3	69	68	14989.13	1	6109.90	1.6367	0.0303	0.0	2.63E-05	6.38E-04	3.89E-03	1.20E-02	2.54E-02
5	2	52	51	8914.94	2	6110.35	1.6366	0.0303	6.35E-07	2.76E-05	1.56E-04	3.95E-04	6.81E-04	9.47E-04
5	2	19	18	4783.59	2	6110.74	1.6365	0.0552	6.03E-05	3.61E-04	7.57E-04	1.06E-03	1.23E-03	1.29E-03
4	1	29	30	3909.71	1	6111.84	1.6362	0.0340	7.29E-03	2.88E-02	4.91E-02	6.08E-02	6.49E-02	6.41E-02
5	2	51	50	8733.79	2	6112.02	1.6361	0.0303	8.00E-07	3.18E-05	1.72E-04	4.26E-04	7.21E-04	9.90E-04
4	1	77	76	12563.62	2	6112.20	1.6361	0.0303	0.0	6.61E-07	8.95E-06	3.85E-05	9.40E-05	1.68E-04
5	2	20	19	4852.04	2	6112.36	1.6360	0.0535	5.82E-05	3.60E-04	7.66E-04	1.08E-03	1.27E-03	1.33E-03
4	1	98	97	19695.29	1	6112.38	1.6360	0.0303	0.0	1.13E-07	8.51E-06	1.02E-04	4.96E-04	1.44E-03
4	1	5	6	2172.57	2	6113.19	1.6358	0.0617	2.38E-04	4.08E-04	4.57E-04	4.40E-04	3.97E-04	3.48E-04
5	2	50	49	8556.07	2	6113.58	1.6357	0.0303	1.00E-06	3.66E-05	1.90E-04	4.57E-04	7.61E-04	1.03E-03
6	3	66	67	14742.56	1	6113.74	1.6357	0.0303	4.54E-08	3.24E-05	7.41E-04	4.36E-03	1.32E-02	2.73E-02
5	2	16	17	4837.09	1	6113.76	1.6357	0.0585	3.27E-03	2.01E-02	4.28E-02	6.06E-02	7.08E-02	7.45E-02
5	2	21	20	4924.07	2	6113.88	1.6356	0.0515	5.56E-05	3.56E-04	7.72E-04	1.10E-03	1.30E-03	1.37E-03
5	2	85	84	17422.89	1	6114.41	1.6355	0.0303	0.0	1.86E-06	8.08E-05	7.00E-04	2.73E-03	6.80E-03
3	0	20	21	847.99	2	6114.70	1.6354	0.0515	1.16E-03	1.05E-03	8.58E-04	6.83E-04	5.43E-04	4.34E-04
5	2	49	48	8381.80	2	6115.04	1.6353	0.0303	1.25E-06	4.19E-05	2.08E-04	4.90E-04	8.02E-04	1.08E-03
5	2	22	21	4999.68	2	6115.30	1.6352	0.0496	5.28E-05	3.51E-04	7.74E-04	1.12E-03	1.32E-03	1.41E-03
3	0	39	40	3136.53	1	6116.26	1.6350	0.0303	6.54E-03	1.78E-02	2.53E-02	2.80E-02	2.77E-02	2.60E-02
5	2	48	47	8210.98	2	6116.39	1.6350	0.0303	1.55E-06	4.79E-05	2.28E-04	5.24E-04	8.44E-04	1.12E-03
4	1	76	75	12296.62	2	6116.50	1.6349	0.0303	0.0	8.33E-07	1.06E-05	4.37E-05	1.04E-04	1.83E-04
5	2	23	22	5078.88	2	6116.62	1.6349	0.0476	4.98E-05	3.43E-04	7.72E-04	1.13E-03	1.35E-03	1.44E-03
6	3	1	0	6350.41	1	6116.88	1.6348	0.0603	5.35E-05	6.81E-04	2.08E-03	3.67E-03	4.95E-03	5.78E-03
3	0	108	107	21392.98	1	6116.99	1.6348	0.0303	0.0	0.0	7.78E-07	1.19E-05	6.81E-05	2.23E-04
4	1	4	5	2150.72	2	6117.33	1.6347	0.0614	2.07E-04	3.50E-04	3.90E-04	3.75E-04	3.37E-04	2.95E-04
6	3	67	66	14499.39	1	6117.47	1.6347	0.0303	6.26E-08	3.97E-05	8.58E-04	4.88E-03	1.44E-02	2.93E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	47	46	8043.62	2	6117.64	1.6346	0.0303	1.90E-06	5.44E-05	2.49E-04	5.58E-04	8.85E-04	1.16E-03
5	2	24	23	5161.65	2	6117.84	1.6346	0.0457	4.65E-05	3.34E-04	7.66E-04	1.13E-03	1.36E-03	1.47E-03
4	1	28	29	3796.07	1	6118.63	1.6344	0.0359	8.40E-03	3.14E-02	5.21E-02	6.35E-02	6.70E-02	6.57E-02
5	2	46	45	7879.72	2	6118.79	1.6343	0.0303	2.33E-06	6.16E-05	2.71E-04	5.94E-04	9.26E-04	1.20E-03
5	2	25	24	5247.99	2	6118.96	1.6343	0.0437	4.32E-05	3.23E-04	7.58E-04	1.14E-03	1.38E-03	1.49E-03
5	2	15	16	4773.03	1	6119.20	1.6342	0.0591	3.40E-03	2.03E-02	4.26E-02	5.98E-02	6.94E-02	7.27E-02
4	1	97	96	19348.24	1	6119.55	1.6341	0.0303	0.0	1.54E-07	1.07E-05	1.22E-04	5.71E-04	1.62E-03
5	2	45	44	7719.30	2	6119.83	1.6340	0.0303	2.84E-06	6.95E-05	2.94E-04	6.30E-04	9.67E-04	1.24E-03
5	2	26	25	5337.91	2	6119.97	1.6340	0.0418	3.99E-05	3.12E-04	7.46E-04	1.13E-03	1.38E-03	1.51E-03
5	2	84	83	17120.41	1	6120.07	1.6340	0.0303	0.0	2.43E-06	9.82E-05	8.14E-04	3.09E-03	7.53E-03
3	0	19	20	771.00	2	6120.31	1.6339	0.0535	1.25E-03	1.09E-03	8.73E-04	6.87E-04	5.42E-04	4.31E-04
6	3	2	1	6354.16	1	6120.41	1.6339	0.0606	1.08E-04	1.38E-03	4.21E-03	7.42E-03	1.00E-02	1.17E-02
4	1	75	74	12032.87	2	6120.70	1.6338	0.0303	0.0	1.05E-06	1.25E-05	4.96E-05	1.15E-04	1.98E-04
5	2	44	43	7562.35	2	6120.76	1.6338	0.0303	3.44E-06	7.80E-05	3.18E-04	6.66E-04	1.01E-03	1.28E-03
5	2	27	26	5431.39	2	6120.89	1.6337	0.0398	3.66E-05	2.99E-04	7.31E-04	1.13E-03	1.39E-03	1.52E-03
6	3	66	65	14259.63	1	6121.08	1.6337	0.0303	8.59E-08	4.86E-05	9.90E-04	5.44E-03	1.57E-02	3.14E-02
4	1	3	4	2132.50	2	6121.36	1.6336	0.0611	1.71E-04	2.88E-04	3.19E-04	3.06E-04	2.75E-04	2.40E-04
5	2	43	42	7408.88	2	6121.60	1.6336	0.0303	4.14E-06	8.73E-05	3.43E-04	7.02E-04	1.05E-03	1.31E-03
5	2	28	27	5528.43	2	6121.70	1.6335	0.0379	3.33E-05	2.85E-04	7.14E-04	1.11E-03	1.39E-03	1.53E-03
5	2	42	41	7258.90	2	6122.33	1.6334	0.0303	4.96E-06	9.73E-05	3.69E-04	7.39E-04	1.09E-03	1.35E-03
5	2	29	28	5629.04	2	6122.41	1.6333	0.0359	3.01E-05	2.70E-04	6.94E-04	1.10E-03	1.38E-03	1.53E-03
5	2	41	40	7112.42	2	6122.95	1.6332	0.0303	5.90E-06	1.08E-04	3.95E-04	7.75E-04	1.12E-03	1.38E-03
5	2	30	29	5733.20	2	6123.02	1.6332	0.0340	2.71E-05	2.56E-04	6.73E-04	1.08E-03	1.37E-03	1.53E-03
5	2	40	39	6969.43	2	6123.47	1.6331	0.0303	6.98E-06	1.19E-04	4.22E-04	8.11E-04	1.16E-03	1.41E-03
5	2	31	30	5840.91	2	6123.53	1.6330	0.0335	2.43E-05	2.42E-04	6.53E-04	1.07E-03	1.37E-03	1.54E-03
6	3	3	2	6361.64	1	6123.84	1.6330	0.0609	1.62E-04	2.07E-03	6.36E-03	1.12E-02	1.52E-02	1.77E-02
5	2	39	38	6829.95	2	6123.89	1.6329	0.0303	8.22E-06	1.31E-04	4.49E-04	8.46E-04	1.19E-03	1.44E-03
5	2	32	31	5952.17	2	6123.93	1.6329	0.0331	2.17E-05	2.27E-04	6.31E-04	1.05E-03	1.36E-03	1.54E-03
3	0	38	39	2984.30	1	6124.09	1.6329	0.0303	8.01E-03	2.03E-02	2.77E-02	3.00E-02	2.93E-02	2.72E-02
5	2	38	37	6693.98	2	6124.21	1.6329	0.0303	9.61E-06	1.44E-04	4.77E-04	8.80E-04	1.22E-03	1.46E-03
5	2	33	32	6066.97	2	6124.24	1.6329	0.0326	1.92E-05	2.13E-04	6.07E-04	1.02E-03	1.34E-03	1.54E-03
5	2	37	36	6561.53	2	6124.42	1.6328	0.0308	1.12E-05	1.57E-04	5.04E-04	9.12E-04	1.25E-03	1.48E-03
5	2	34	33	6185.32	2	6124.43	1.6328	0.0321	1.69E-05	1.99E-04	5.83E-04	1.00E-03	1.33E-03	1.53E-03
5	2	36	35	6432.60	2	6124.53	1.6328	0.0312	1.29E-05	1.71E-04	5.31E-04	9.43E-04	1.28E-03	1.50E-03
5	2	35	34	6307.19	2	6124.53	1.6328	0.0317	1.48E-05	1.84E-04	5.57E-04	9.73E-04	1.31E-03	1.52E-03
5	2	14	15	4712.73	1	6124.53	1.6328	0.0597	3.52E-03	2.04E-02	4.22E-02	5.86E-02	6.76E-02	7.06E-02
6	3	65	64	14023.30	1	6124.58	1.6328	0.0303	1.17E-07	5.91E-05	1.14E-03	6.05E-03	1.70E-02	3.36E-02
4	1	74	73	11772.40	2	6124.78	1.6327	0.0303	0.0	1.31E-06	1.46E-05	5.61E-05	1.27E-04	2.15E-04
4	1	2	3	2117.93	2	6125.30	1.6326	0.0609	1.32E-04	2.21E-04	2.44E-04	2.33E-04	2.09E-04	1.83E-04
4	1	27	28	3686.17	1	6125.32	1.6326	0.0379	9.61E-03	3.41E-02	5.51E-02	6.61E-02	6.90E-02	6.72E-02
3	0	107	106	21011.81	1	6125.32	1.6326	0.0303	0.0	0.0	1.00E-06	1.45E-05	8.00E-05	2.55E-04
5	2	83	82	16821.19	1	6125.62	1.6325	0.0303	0.0	3.16E-06	1.19E-04	9.45E-04	3.48E-03	8.33E-03
3	0	18	19	697.65	2	6125.83	1.6324	0.0552	1.33E-03	1.12E-03	8.84E-04	6.89E-04	5.40E-04	4.27E-04
4	1	96	95	19004.32	1	6126.59	1.6322	0.0303	0.0	2.09E-07	1.33E-05	1.45E-04	6.57E-04	1.82E-03
6	3	4	3	6372.86	1	6127.16	1.6321	0.0611	2.15E-04	2.77E-03	8.52E-03	1.50E-02	2.03E-02	2.38E-02
6	3	64	63	13790.39	1	6127.96	1.6319	0.0303	1.59E-07	7.18E-05	1.31E-03	6.71E-03	1.85E-02	3.59E-02
4	1	73	72	11515.21	2	6128.76	1.6317	0.0303	0.0	1.63E-06	1.72E-05	6.34E-05	1.40E-04	2.33E-04
4	1	1	2	2107.00	2	6129.14	1.6316	0.0606	9.05E-05	1.50E-04	1.66E-04	1.58E-04	1.42E-04	1.23E-04
5	2	13	14	4656.18	1	6129.76	1.6314	0.0604	3.59E-03	2.03E-02	4.14E-02	5.71E-02	6.55E-02	6.81E-02
6	3	5	4	6387.82	1	6130.37	1.6312	0.0614	2.67E-04	3.46E-03	1.07E-02	1.89E-02	2.56E-02	2.99E-02
3	0	89	88	14049.87	2	6130.68	1.6311	0.0303	0.0	5.14E-08	9.94E-07	5.28E-06	1.49E-05	2.94E-05
5	2	82	81	16525.24	1	6131.05	1.6310	0.0303	0.0	4.10E-06	1.44E-04	1.10E-03	3.92E-03	9.19E-03
6	3	63	62	13560.93	1	6131.23	1.6310	0.0303	2.14E-07	8.67E-05	1.50E-03	7.43E-03	2.00E-02	3.83E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	17	18	627.96	2	6131.25	1.6310	0.0568	1.41E-03	1.15E-03	8.90E-04	6.86E-04	5.34E-04	4.21E-04
3	0	37	38	2835.80	1	6131.81	1.6308	0.0303	9.74E-03	2.30E-02	3.03E-02	3.21E-02	3.10E-02	2.84E-02
4	1	26	27	3580.03	1	6131.90	1.6308	0.0398	1.09E-02	3.68E-02	5.80E-02	6.85E-02	7.09E-02	6.84E-02
4	1	72	71	11261.30	2	6132.63	1.6306	0.0303	0.0	2.02E-06	2.01E-05	7.14E-05	1.54E-04	2.52E-04
4	1	0	1	2099.72	2	6132.88	1.6306	0.0603	4.61E-05	7.62E-05	8.39E-05	8.00E-05	7.17E-05	6.25E-05
6	3	6	5	6406.52	1	6133.48	1.6304	0.0617	3.15E-04	4.12E-03	1.28E-02	2.27E-02	3.08E-02	3.61E-02
4	1	95	94	18663.53	1	6133.52	1.6304	0.0303	0.0	2.82E-07	1.66E-05	1.71E-04	7.53E-04	2.04E-03
3	0	106	105	20633.65	1	6133.53	1.6304	0.0303	0.0	0.0	1.28E-06	1.77E-05	9.38E-05	2.91E-04
6	3	62	61	13334.93	1	6134.38	1.6302	0.0303	2.88E-07	1.04E-04	1.71E-03	8.20E-03	2.16E-02	4.07E-02
5	2	12	13	4603.40	1	6134.88	1.6300	0.0610	3.64E-03	2.00E-02	4.03E-02	5.52E-02	6.30E-02	6.52E-02
3	0	88	87	13741.75	2	6136.25	1.6297	0.0303	0.0	6.76E-08	1.21E-06	6.18E-06	1.69E-05	3.27E-05
5	2	81	80	16232.57	1	6136.36	1.6296	0.0303	0.0	5.30E-06	1.74E-04	1.27E-03	4.41E-03	1.01E-02
4	1	71	70	11010.69	2	6136.39	1.6296	0.0303	0.0	2.51E-06	2.34E-05	8.03E-05	1.69E-04	2.72E-04
6	3	7	6	6428.95	1	6136.48	1.6296	0.0620	3.60E-04	4.76E-03	1.49E-02	2.64E-02	3.60E-02	4.22E-02
3	0	16	17	561.92	2	6136.57	1.6296	0.0585	1.48E-03	1.17E-03	8.91E-04	6.81E-04	5.26E-04	4.13E-04
6	3	61	60	13112.37	1	6137.42	1.6293	0.0303	3.84E-07	1.25E-04	1.94E-03	9.04E-03	2.33E-02	4.33E-02
4	1	25	26	3477.63	1	6138.39	1.6291	0.0418	1.23E-02	3.96E-02	6.08E-02	7.08E-02	7.25E-02	6.95E-02
6	3	8	7	6455.12	1	6139.38	1.6288	0.0623	4.01E-04	5.37E-03	1.69E-02	3.01E-02	4.11E-02	4.83E-02
3	0	36	37	2691.03	1	6139.44	1.6288	0.0308	1.18E-02	2.59E-02	3.30E-02	3.43E-02	3.26E-02	2.96E-02
5	2	11	12	4554.37	1	6139.91	1.6287	0.0617	3.64E-03	1.96E-02	3.89E-02	5.29E-02	6.01E-02	6.21E-02
4	1	70	69	10763.38	2	6140.05	1.6287	0.0303	0.0	3.09E-06	2.72E-05	9.01E-05	1.85E-04	2.92E-04
4	1	1	0	2096.07	2	6140.07	1.6286	0.0603	4.74E-05	7.82E-05	8.60E-05	8.20E-05	7.34E-05	6.40E-05
4	1	94	93	18325.89	1	6140.33	1.6286	0.0303	0.0	3.80E-07	2.06E-05	2.03E-04	8.63E-04	2.29E-03
6	3	60	59	12893.29	1	6140.35	1.6286	0.0303	5.10E-07	1.50E-04	2.20E-03	9.93E-03	2.51E-02	4.59E-02
5	2	80	79	15943.20	1	6141.56	1.6283	0.0303	0.0	6.84E-06	2.09E-04	1.46E-03	4.95E-03	1.11E-02
3	0	105	104	20258.50	1	6141.62	1.6282	0.0303	0.0	0.0	1.65E-06	2.14E-05	1.10E-04	3.32E-04
3	0	87	86	13436.77	2	6141.72	1.6282	0.0303	0.0	8.86E-08	1.48E-06	7.20E-06	1.91E-05	3.63E-05
3	0	15	16	499.54	2	6141.80	1.6282	0.0591	1.54E-03	1.18E-03	8.86E-04	6.71E-04	5.16E-04	4.03E-04
6	3	9	8	6485.03	1	6142.17	1.6281	0.0624	4.37E-04	5.94E-03	1.88E-02	3.37E-02	4.61E-02	5.43E-02
6	3	59	58	12677.69	1	6143.17	1.6278	0.0303	6.77E-07	1.79E-04	2.50E-03	1.09E-02	2.71E-02	4.88E-02
4	1	2	1	2099.72	2	6143.51	1.6277	0.0606	9.56E-05	1.58E-04	1.74E-04	1.66E-04	1.49E-04	1.30E-04
4	1	69	68	10519.39	2	6143.59	1.6277	0.0303	4.05E-08	3.80E-06	3.15E-05	1.01E-04	2.03E-04	3.14E-04
4	1	24	25	3379.00	1	6144.78	1.6274	0.0437	1.38E-02	4.23E-02	6.35E-02	7.29E-02	7.40E-02	7.04E-02
5	2	10	11	4509.11	1	6144.83	1.6274	0.0625	3.59E-03	1.89E-02	3.72E-02	5.03E-02	5.69E-02	5.85E-02
6	3	10	9	6518.68	1	6144.85	1.6274	0.0624	4.68E-04	6.47E-03	2.06E-02	3.72E-02	5.10E-02	6.02E-02
6	3	58	57	12465.57	1	6145.87	1.6271	0.0303	8.94E-07	2.14E-04	2.84E-03	1.20E-02	2.92E-02	5.18E-02
5	2	79	78	15657.13	1	6146.64	1.6269	0.0303	0.0	8.78E-06	2.50E-04	1.68E-03	5.54E-03	1.22E-02
4	1	3	2	2107.00	2	6146.86	1.6268	0.0609	1.44E-04	2.38E-04	2.63E-04	2.51E-04	2.25E-04	1.96E-04
3	0	14	15	440.81	2	6146.93	1.6268	0.0597	1.59E-03	1.18E-03	8.76E-04	6.58E-04	5.03E-04	3.91E-04
3	0	35	36	2550.01	1	6146.97	1.6268	0.0312	1.41E-02	2.91E-02	3.58E-02	3.65E-02	3.42E-02	3.08E-02
4	1	93	92	17991.41	1	6147.02	1.6268	0.0303	0.0	5.10E-07	2.55E-05	2.39E-04	9.86E-04	2.56E-03
4	1	68	67	10278.73	2	6147.03	1.6268	0.0303	5.57E-08	4.65E-06	3.64E-05	1.13E-04	2.21E-04	3.37E-04
3	0	86	85	13134.97	2	6147.08	1.6268	0.0303	0.0	1.16E-07	1.80E-06	8.38E-06	2.16E-05	4.02E-05
6	3	11	10	6556.05	1	6147.43	1.6267	0.0625	4.94E-04	6.94E-03	2.23E-02	4.05E-02	5.57E-02	6.60E-02
6	3	57	56	12256.95	1	6148.45	1.6264	0.0303	1.18E-06	2.54E-04	3.21E-03	1.32E-02	3.14E-02	5.50E-02
3	0	104	103	19886.39	1	6149.59	1.6261	0.0303	0.0	0.0	2.10E-06	2.59E-05	1.28E-04	3.79E-04
5	2	9	10	4467.62	1	6149.64	1.6261	0.0624	3.50E-03	1.81E-02	3.52E-02	4.73E-02	5.32E-02	5.46E-02
6	3	12	11	6597.16	1	6149.90	1.6260	0.0617	5.14E-04	7.36E-03	2.39E-02	4.36E-02	6.03E-02	7.16E-02
4	1	4	3	2117.93	2	6150.11	1.6260	0.0611	1.91E-04	3.19E-04	3.52E-04	3.37E-04	3.02E-04	2.64E-04
4	1	67	66	10041.41	2	6150.37	1.6259	0.0303	7.61E-08	5.67E-06	4.19E-05	1.25E-04	2.41E-04	3.61E-04
6	3	56	55	12051.84	1	6150.93	1.6258	0.0303	1.54E-06	3.01E-04	3.62E-03	1.45E-02	3.37E-02	5.82E-02
4	1	23	24	3284.13	1	6151.07	1.6257	0.0457	1.54E-02	4.50E-02	6.60E-02	7.47E-02	7.51E-02	7.11E-02
5	2	78	77	15374.38	1	6151.61	1.6256	0.0303	0.0	1.12E-05	2.99E-04	1.93E-03	6.19E-03	1.34E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	13	14	385.75	2	6151.97	1.6255	0.0604	1.62E-03	1.18E-03	8.59E-04	6.40E-04	4.87E-04	3.77E-04
6	3	13	12	6642.00	1	6152.26	1.6254	0.0610	5.27E-04	7.73E-03	2.54E-02	4.66E-02	6.46E-02	7.70E-02
3	0	85	84	12836.35	2	6152.33	1.6254	0.0303	0.0	1.51E-07	2.18E-06	9.73E-06	2.44E-05	4.44E-05
4	1	5	4	2132.50	2	6153.26	1.6252	0.0614	2.37E-04	3.98E-04	4.41E-04	4.23E-04	3.80E-04	3.32E-04
6	3	55	54	11850.23	1	6153.29	1.6251	0.0303	2.00E-06	3.55E-04	4.06E-03	1.58E-02	3.61E-02	6.15E-02
4	1	66	65	9807.43	2	6153.59	1.6251	0.0303	1.03E-07	6.89E-06	4.82E-05	1.39E-04	2.61E-04	3.86E-04
4	1	92	91	17660.10	1	6153.60	1.6251	0.0303	0.0	6.82E-07	3.14E-05	2.82E-04	1.12E-03	2.85E-03
5	2	8	9	4429.89	1	6154.36	1.6249	0.0624	3.36E-03	1.70E-02	3.28E-02	4.39E-02	4.93E-02	5.04E-02
3	0	34	35	2412.73	1	6154.40	1.6249	0.0317	1.69E-02	3.25E-02	3.87E-02	3.87E-02	3.58E-02	3.19E-02
6	3	14	13	6690.57	1	6154.52	1.6248	0.0604	5.36E-04	8.03E-03	2.67E-02	4.93E-02	6.87E-02	8.21E-02
6	3	54	53	11652.14	1	6155.54	1.6246	0.0303	2.58E-06	4.17E-04	4.55E-03	1.72E-02	3.86E-02	6.48E-02
4	1	6	5	2150.72	2	6156.32	1.6243	0.0617	2.80E-04	4.75E-04	5.29E-04	5.08E-04	4.58E-04	4.01E-04
5	2	77	76	15094.96	1	6156.45	1.6243	0.0303	0.0	1.43E-05	3.57E-04	2.21E-03	6.91E-03	1.47E-02
6	3	15	14	6742.87	1	6156.67	1.6243	0.0597	5.38E-04	8.27E-03	2.78E-02	5.18E-02	7.26E-02	8.71E-02
4	1	65	64	9576.80	2	6156.71	1.6242	0.0303	1.40E-07	8.34E-06	5.52E-05	1.54E-04	2.83E-04	4.12E-04
3	0	12	13	334.34	2	6156.91	1.6242	0.0610	1.64E-03	1.16E-03	8.36E-04	6.18E-04	4.68E-04	3.61E-04
4	1	22	23	3193.03	1	6157.25	1.6241	0.0476	1.70E-02	4.76E-02	6.82E-02	7.63E-02	7.61E-02	7.15E-02
3	0	103	102	19517.34	1	6157.44	1.6241	0.0303	0.0	0.0	2.68E-06	3.13E-05	1.50E-04	4.31E-04
3	0	84	83	12540.93	2	6157.47	1.6240	0.0303	0.0	1.95E-07	2.63E-06	1.13E-05	2.75E-05	4.90E-05
6	3	53	52	11457.59	1	6157.67	1.6240	0.0303	3.31E-06	4.89E-04	5.09E-03	1.87E-02	4.12E-02	6.82E-02
6	3	16	15	6798.89	1	6158.72	1.6237	0.0591	5.35E-04	8.45E-03	2.88E-02	5.41E-02	7.62E-02	9.18E-02
5	2	7	8	4395.93	1	6158.97	1.6236	0.0623	3.16E-03	1.58E-02	3.02E-02	4.01E-02	4.49E-02	4.59E-02
4	1	7	6	2172.57	2	6159.27	1.6236	0.0620	3.21E-04	5.49E-04	6.16E-04	5.93E-04	5.35E-04	4.69E-04
6	3	52	51	11266.57	1	6159.70	1.6235	0.0303	4.23E-06	5.70E-04	5.67E-03	2.02E-02	4.38E-02	7.16E-02
4	1	64	63	9349.53	2	6159.72	1.6235	0.0303	1.88E-07	1.01E-05	6.31E-05	1.71E-04	3.07E-04	4.39E-04
4	1	91	90	17331.98	1	6160.05	1.6234	0.0303	0.0	9.08E-07	3.87E-05	3.31E-04	1.28E-03	3.17E-03
6	3	17	16	6858.63	1	6160.65	1.6232	0.0585	5.27E-04	8.57E-03	2.96E-02	5.61E-02	7.95E-02	9.62E-02
5	2	76	75	14818.89	1	6161.19	1.6231	0.0303	0.0	1.82E-05	4.25E-04	2.53E-03	7.69E-03	1.60E-02
6	3	51	50	11079.09	1	6161.61	1.6230	0.0303	5.38E-06	6.62E-04	6.29E-03	2.19E-02	4.65E-02	7.51E-02
3	0	33	34	2279.20	1	6161.72	1.6229	0.0321	2.00E-02	3.62E-02	4.18E-02	4.09E-02	3.74E-02	3.30E-02
3	0	11	12	286.60	2	6161.75	1.6229	0.0617	1.63E-03	1.13E-03	8.07E-04	5.93E-04	4.47E-04	3.44E-04
4	1	8	7	2198.07	2	6162.12	1.6228	0.0623	3.58E-04	6.20E-04	6.99E-04	6.76E-04	6.12E-04	5.37E-04
6	3	18	17	6922.10	1	6162.48	1.6227	0.0568	5.15E-04	8.63E-03	3.03E-02	5.79E-02	8.25E-02	1.00E-01
3	0	83	82	12248.70	2	6162.50	1.6227	0.0303	0.0	2.53E-07	3.17E-06	1.30E-05	3.09E-05	5.40E-05
4	1	63	62	9125.64	2	6162.63	1.6227	0.0303	2.52E-07	1.21E-05	7.18E-05	1.88E-04	3.31E-04	4.67E-04
4	1	21	22	3105.69	1	6163.33	1.6225	0.0496	1.86E-02	5.00E-02	7.03E-02	7.76E-02	7.67E-02	7.17E-02
6	3	50	49	10895.17	1	6163.40	1.6225	0.0303	6.80E-06	7.66E-04	6.97E-03	2.36E-02	4.93E-02	7.85E-02
5	2	6	7	4365.74	1	6163.47	1.6225	0.0620	2.92E-03	1.43E-02	2.73E-02	3.61E-02	4.02E-02	4.10E-02
6	3	19	18	6989.28	1	6164.20	1.6223	0.0552	4.99E-04	8.63E-03	3.08E-02	5.94E-02	8.53E-02	1.04E-01
4	1	9	8	2227.21	2	6164.88	1.6221	0.0624	3.91E-04	6.87E-04	7.80E-04	7.57E-04	6.87E-04	6.04E-04
6	3	49	48	10714.80	1	6165.09	1.6220	0.0303	8.54E-06	8.82E-04	7.69E-03	2.54E-02	5.21E-02	8.20E-02
3	0	102	101	19151.35	1	6165.17	1.6220	0.0303	0.0	5.16E-08	3.40E-06	3.78E-05	1.74E-04	4.89E-04
4	1	62	61	8905.12	2	6165.43	1.6219	0.0303	3.35E-07	1.45E-05	8.16E-05	2.07E-04	3.57E-04	4.96E-04
5	2	75	74	14546.17	1	6165.80	1.6219	0.0303	0.0	2.31E-05	5.04E-04	2.88E-03	8.54E-03	1.75E-02
6	3	20	19	7060.17	1	6165.82	1.6218	0.0535	4.79E-04	8.57E-03	3.11E-02	6.07E-02	8.76E-02	1.07E-01
4	1	90	89	17007.07	1	6166.39	1.6217	0.0303	0.0	1.21E-06	4.75E-05	3.88E-04	1.45E-03	3.52E-03
3	0	10	11	242.53	2	6166.50	1.6217	0.0625	1.61E-03	1.09E-03	7.71E-04	5.63E-04	4.22E-04	3.24E-04
6	3	48	47	10538.00	1	6166.66	1.6216	0.0303	1.07E-05	1.01E-03	8.46E-03	2.72E-02	5.49E-02	8.54E-02
6	3	21	20	7134.78	1	6167.32	1.6215	0.0515	4.56E-04	8.46E-03	3.13E-02	6.16E-02	8.97E-02	1.11E-01
3	0	82	81	11959.70	2	6167.43	1.6214	0.0303	0.0	3.26E-07	3.82E-06	1.50E-05	3.47E-05	5.95E-05
4	1	10	9	2259.98	2	6167.53	1.6214	0.0624	4.19E-04	7.48E-04	8.56E-04	8.36E-04	7.61E-04	6.70E-04
5	2	5	6	4339.32	1	6167.87	1.6213	0.0617	2.62E-03	1.27E-02	2.40E-02	3.17E-02	3.53E-02	3.59E-02
4	1	61	60	8687.99	2	6168.12	1.6212	0.0303	4.44E-07	1.73E-05	9.24E-05	2.27E-04	3.83E-04	5.25E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
6	3	47	46	10364.77	1	6168.12	1.6212	0.0303	1.33E-05	1.16E-03	9.28E-03	2.91E-02	5.78E-02	8.88E-02
6	3	22	21	7213.10	1	6168.72	1.6211	0.0496	4.31E-04	8.31E-03	3.13E-02	6.23E-02	9.14E-02	1.13E-01
3	0	32	33	2149.44	1	6168.95	1.6210	0.0326	2.36E-02	4.01E-02	4.49E-02	4.32E-02	3.89E-02	3.41E-02
4	1	20	21	3022.13	1	6169.31	1.6209	0.0515	2.03E-02	5.23E-02	7.20E-02	7.86E-02	7.71E-02	7.16E-02
6	3	46	45	10195.12	1	6169.47	1.6209	0.0303	1.64E-05	1.32E-03	1.01E-02	3.11E-02	6.06E-02	9.21E-02
6	3	23	22	7295.12	1	6170.01	1.6207	0.0476	4.05E-04	8.11E-03	3.11E-02	6.28E-02	9.28E-02	1.16E-01
4	1	11	10	2296.39	2	6170.09	1.6207	0.0625	4.43E-04	8.04E-04	9.29E-04	9.11E-04	8.32E-04	7.35E-04
5	2	74	73	14276.81	1	6170.30	1.6207	0.0303	5.10E-08	2.91E-05	5.96E-04	3.28E-03	9.47E-03	1.90E-02
4	1	60	59	8474.25	2	6170.71	1.6206	0.0303	5.84E-07	2.05E-05	1.04E-04	2.49E-04	4.11E-04	5.55E-04
6	3	45	44	10029.06	1	6170.71	1.6206	0.0303	2.01E-05	1.50E-03	1.11E-02	3.31E-02	6.35E-02	9.54E-02
3	0	9	10	202.12	2	6171.15	1.6204	0.0624	1.57E-03	1.04E-03	7.29E-04	5.29E-04	3.95E-04	3.03E-04
6	3	24	23	7380.84	1	6171.19	1.6204	0.0457	3.77E-04	7.87E-03	3.08E-02	6.30E-02	9.39E-02	1.18E-01
6	3	44	43	9866.59	1	6171.84	1.6203	0.0303	2.46E-05	1.69E-03	1.20E-02	3.51E-02	6.63E-02	9.86E-02
5	2	4	5	4316.68	1	6172.17	1.6202	0.0614	2.28E-03	1.09E-02	2.05E-02	2.70E-02	3.00E-02	3.04E-02
3	0	81	80	11673.92	2	6172.24	1.6202	0.0303	0.0	4.19E-07	4.58E-06	1.73E-05	3.89E-05	6.53E-05
6	3	25	24	7470.27	1	6172.26	1.6202	0.0437	3.49E-04	7.60E-03	3.04E-02	6.29E-02	9.46E-02	1.19E-01
4	1	12	11	2336.44	2	6172.55	1.6201	0.0617	4.61E-04	8.54E-04	9.96E-04	9.82E-04	9.01E-04	7.98E-04
4	1	89	88	16685.38	1	6172.61	1.6201	0.0303	0.0	1.61E-06	5.86E-05	4.57E-04	1.66E-03	3.94E-03
3	0	101	100	18788.44	1	6172.78	1.6200	0.0303	0.0	7.14E-08	4.31E-06	4.55E-05	2.02E-04	5.54E-04
6	3	43	42	9707.73	1	6172.86	1.6200	0.0303	2.98E-05	1.90E-03	1.30E-02	3.71E-02	6.91E-02	1.02E-01
4	1	59	58	8263.93	2	6173.19	1.6199	0.0303	7.70E-07	2.45E-05	1.18E-04	2.73E-04	4.43E-04	5.89E-04
6	3	26	25	7563.39	1	6173.23	1.6199	0.0418	3.20E-04	7.30E-03	2.99E-02	6.26E-02	9.50E-02	1.21E-01
6	3	42	41	9552.46	1	6173.76	1.6198	0.0303	3.60E-05	2.13E-03	1.40E-02	3.92E-02	7.19E-02	1.05E-01
6	3	27	26	7660.20	1	6174.08	1.6197	0.0398	2.92E-04	6.97E-03	2.92E-02	6.21E-02	9.50E-02	1.21E-01
6	3	41	40	9400.82	1	6174.55	1.6196	0.0303	4.31E-05	2.37E-03	1.51E-02	4.12E-02	7.46E-02	1.07E-01
5	2	73	72	14010.82	1	6174.69	1.6195	0.0303	7.29E-08	3.66E-05	7.03E-04	3.73E-03	1.05E-02	2.07E-02
6	3	28	27	7760.70	1	6174.83	1.6195	0.0379	2.65E-04	6.63E-03	2.84E-02	6.14E-02	9.48E-02	1.22E-01
4	1	13	12	2380.12	2	6174.90	1.6195	0.0610	4.75E-04	8.98E-04	1.06E-03	1.05E-03	9.67E-04	8.59E-04
4	1	19	20	2942.34	1	6175.19	1.6194	0.0535	2.19E-02	5.43E-02	7.34E-02	7.92E-02	7.71E-02	7.13E-02
6	3	40	39	9252.79	1	6175.24	1.6194	0.0303	5.14E-05	2.64E-03	1.62E-02	4.33E-02	7.71E-02	1.10E-01
6	3	29	28	7864.89	1	6175.46	1.6193	0.0359	2.38E-04	6.27E-03	2.76E-02	6.04E-02	9.43E-02	1.22E-01
4	1	58	57	8057.01	2	6175.56	1.6193	0.0303	1.01E-06	2.90E-05	1.33E-04	3.00E-04	4.76E-04	6.24E-04
3	0	8	9	165.38	2	6175.70	1.6192	0.0624	1.50E-03	9.82E-04	6.80E-04	4.91E-04	3.66E-04	2.79E-04
6	3	39	38	9108.38	1	6175.81	1.6192	0.0303	6.10E-05	2.91E-03	1.73E-02	4.53E-02	7.96E-02	1.12E-01
6	3	30	29	7972.75	1	6175.99	1.6192	0.0340	2.13E-04	5.90E-03	2.66E-02	5.93E-02	9.35E-02	1.22E-01
3	0	31	32	2023.43	1	6176.08	1.6192	0.0331	2.77E-02	4.43E-02	4.80E-02	4.54E-02	4.04E-02	3.51E-02
6	3	38	37	8967.61	1	6176.27	1.6191	0.0303	7.18E-05	3.21E-03	1.84E-02	4.72E-02	8.19E-02	1.14E-01
5	2	3	4	4297.80	1	6176.37	1.6191	0.0611	1.89E-03	8.98E-03	1.68E-02	2.20E-02	2.44E-02	2.48E-02
6	3	31	30	8084.29	1	6176.41	1.6191	0.0335	1.90E-04	5.56E-03	2.58E-02	5.83E-02	9.29E-02	1.22E-01
6	3	37	36	8830.47	1	6176.62	1.6190	0.0308	8.41E-05	3.52E-03	1.95E-02	4.91E-02	8.41E-02	1.16E-01
6	3	32	31	8199.50	1	6176.72	1.6190	0.0331	1.69E-04	5.21E-03	2.48E-02	5.71E-02	9.20E-02	1.22E-01
6	3	36	35	8696.97	1	6176.86	1.6189	0.0312	9.79E-05	3.84E-03	2.06E-02	5.09E-02	8.61E-02	1.18E-01
6	3	33	32	8318.38	1	6176.92	1.6189	0.0326	1.49E-04	4.86E-03	2.38E-02	5.57E-02	9.09E-02	1.21E-01
3	0	80	79	11391.37	2	6176.95	1.6189	0.0303	0.0	5.36E-07	5.48E-06	1.99E-05	4.35E-05	7.16E-05
6	3	35	34	8567.12	1	6176.99	1.6189	0.0317	1.13E-04	4.17E-03	2.17E-02	5.26E-02	8.79E-02	1.19E-01
6	3	34	33	8440.93	1	6177.01	1.6189	0.0321	1.30E-04	4.51E-03	2.28E-02	5.43E-02	8.95E-02	1.21E-01
4	1	14	13	2427.44	2	6177.16	1.6189	0.0604	4.83E-04	9.34E-04	1.11E-03	1.11E-03	1.03E-03	9.18E-04
4	1	57	56	7853.51	2	6177.83	1.6187	0.0303	1.32E-06	3.43E-05	1.50E-04	3.28E-04	5.11E-04	6.60E-04
4	1	88	87	16366.91	1	6178.71	1.6185	0.0303	0.0	2.14E-06	7.22E-05	5.37E-04	1.90E-03	4.40E-03
5	2	72	71	13748.23	1	6178.96	1.6184	0.0303	1.04E-07	4.58E-05	8.26E-04	4.22E-03	1.16E-02	2.24E-02
4	1	15	14	2478.38	2	6179.32	1.6183	0.0597	4.87E-04	9.64E-04	1.16E-03	1.17E-03	1.09E-03	9.74E-04
4	1	56	55	7653.44	2	6180.00	1.6181	0.0303	1.71E-06	4.05E-05	1.69E-04	3.58E-04	5.47E-04	6.97E-04
3	0	7	8	132.31	2	6180.16	1.6181	0.0623	1.41E-03	9.10E-04	6.25E-04	4.49E-04	3.33E-04	2.54E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	100	99	18428.62	1	6180.27	1.6181	0.0303	0.0	9.84E-08	5.45E-06	5.46E-05	2.35E-04	6.27E-04
5	2	2	3	4282.70	1	6180.46	1.6180	0.0609	1.46E-03	6.89E-03	1.29E-02	1.68E-02	1.86E-02	1.89E-02
4	1	18	19	2866.33	1	6180.97	1.6179	0.0552	2.34E-02	5.61E-02	7.45E-02	7.94E-02	7.68E-02	7.06E-02
4	1	16	15	2532.96	2	6181.38	1.6178	0.0591	4.85E-04	9.87E-04	1.21E-03	1.22E-03	1.14E-03	1.03E-03
3	0	79	78	11112.08	2	6181.54	1.6177	0.0303	0.0	6.83E-07	6.54E-06	2.28E-05	4.85E-05	7.84E-05
4	1	55	54	7456.80	2	6182.06	1.6176	0.0303	2.20E-06	4.75E-05	1.89E-04	3.89E-04	5.84E-04	7.35E-04
3	0	30	31	1901.19	1	6183.11	1.6173	0.0335	3.22E-02	4.86E-02	5.12E-02	4.75E-02	4.19E-02	3.60E-02
5	2	71	70	13489.02	1	6183.11	1.6173	0.0303	1.46E-07	5.72E-05	9.69E-04	4.77E-03	1.28E-02	2.43E-02
4	1	17	16	2591.16	2	6183.33	1.6173	0.0585	4.79E-04	1.00E-03	1.24E-03	1.27E-03	1.20E-03	1.08E-03
4	1	54	53	7263.61	2	6184.01	1.6171	0.0303	2.82E-06	5.55E-05	2.11E-04	4.23E-04	6.22E-04	7.73E-04
5	2	1	2	4271.38	1	6184.44	1.6170	0.0606	9.98E-04	4.69E-03	8.71E-03	1.14E-02	1.26E-02	1.27E-02
3	0	6	7	102.91	2	6184.52	1.6169	0.0620	1.30E-03	8.27E-04	5.64E-04	4.04E-04	2.99E-04	2.27E-04
4	1	87	86	16051.69	1	6184.69	1.6169	0.0303	0.0	2.83E-06	8.86E-05	6.30E-04	2.16E-03	4.90E-03
4	1	18	17	2652.99	2	6185.19	1.6168	0.0568	4.69E-04	1.01E-03	1.27E-03	1.31E-03	1.24E-03	1.12E-03
4	1	53	52	7073.87	2	6185.85	1.6166	0.0303	3.60E-06	6.47E-05	2.35E-04	4.58E-04	6.62E-04	8.11E-04
3	0	78	77	10836.05	2	6186.03	1.6165	0.0303	0.0	8.69E-07	7.78E-06	2.61E-05	5.40E-05	8.57E-05
4	1	17	18	2794.11	1	6186.65	1.6164	0.0568	2.49E-02	5.76E-02	7.51E-02	7.93E-02	7.61E-02	6.96E-02
4	1	19	18	2718.44	2	6186.94	1.6163	0.0552	4.56E-04	1.01E-03	1.29E-03	1.35E-03	1.28E-03	1.17E-03
5	2	70	69	13233.23	1	6187.15	1.6163	0.0303	2.06E-07	7.11E-05	1.13E-03	5.37E-03	1.40E-02	2.63E-02
4	1	52	51	6887.58	2	6187.60	1.6161	0.0303	4.57E-06	7.51E-05	2.61E-04	4.95E-04	7.02E-04	8.50E-04
3	0	99	98	18071.92	1	6187.65	1.6161	0.0303	0.0	1.35E-07	6.88E-06	6.54E-05	2.72E-04	7.09E-04
5	2	0	1	4263.83	1	6188.32	1.6159	0.0603	5.09E-04	2.38E-03	4.42E-03	5.76E-03	6.37E-03	6.45E-03
4	1	20	19	2787.51	2	6188.60	1.6159	0.0535	4.39E-04	1.01E-03	1.31E-03	1.38E-03	1.32E-03	1.21E-03
3	0	5	6	77.19	2	6188.78	1.6158	0.0617	1.17E-03	7.33E-04	4.97E-04	3.54E-04	2.62E-04	1.99E-04
4	1	51	50	6704.76	2	6189.23	1.6157	0.0303	5.77E-06	8.68E-05	2.88E-04	5.33E-04	7.44E-04	8.89E-04
3	0	29	30	1782.72	1	6190.03	1.6155	0.0340	3.73E-02	5.31E-02	5.43E-02	4.96E-02	4.32E-02	3.69E-02
4	1	21	20	2860.19	2	6190.15	1.6155	0.0515	4.19E-04	9.98E-04	1.32E-03	1.40E-03	1.35E-03	1.24E-03
3	0	77	76	10563.28	2	6190.41	1.6154	0.0303	0.0	1.10E-06	9.23E-06	2.97E-05	6.01E-05	9.35E-05
4	1	86	85	15739.73	1	6190.56	1.6154	0.0303	0.0	3.73E-06	1.08E-04	7.38E-04	2.45E-03	5.45E-03
4	1	50	49	6525.41	2	6190.77	1.6153	0.0303	7.24E-06	9.99E-05	3.18E-04	5.73E-04	7.86E-04	9.28E-04
5	2	69	68	12980.85	1	6191.07	1.6152	0.0303	2.88E-07	8.81E-05	1.32E-03	6.04E-03	1.54E-02	2.84E-02
4	1	22	21	2936.50	2	6191.61	1.6151	0.0496	3.98E-04	9.82E-04	1.32E-03	1.42E-03	1.38E-03	1.28E-03
4	1	49	48	6349.53	2	6192.19	1.6149	0.0303	9.04E-06	1.15E-04	3.50E-04	6.15E-04	8.29E-04	9.67E-04
4	1	16	17	2725.67	1	6192.22	1.6149	0.0585	2.62E-02	5.86E-02	7.53E-02	7.87E-02	7.50E-02	6.84E-02
3	0	4	5	55.14	2	6192.95	1.6147	0.0614	1.02E-03	6.30E-04	4.25E-04	3.02E-04	2.23E-04	1.69E-04
4	1	23	22	3016.41	2	6192.96	1.6147	0.0476	3.75E-04	9.61E-04	1.32E-03	1.43E-03	1.40E-03	1.30E-03
4	1	48	47	6177.14	2	6193.52	1.6146	0.0303	1.12E-05	1.31E-04	3.84E-04	6.58E-04	8.72E-04	1.01E-03
4	1	24	23	3099.94	2	6194.21	1.6144	0.0457	3.50E-04	9.35E-04	1.31E-03	1.44E-03	1.42E-03	1.33E-03
3	0	76	75	10293.79	2	6194.68	1.6143	0.0303	0.0	1.39E-06	1.09E-05	3.39E-05	6.66E-05	1.02E-04
4	1	47	46	6008.24	2	6194.73	1.6143	0.0303	1.38E-05	1.49E-04	4.19E-04	7.02E-04	9.15E-04	1.04E-03
5	2	68	67	12731.90	1	6194.88	1.6142	0.0303	4.00E-07	1.09E-04	1.54E-03	6.78E-03	1.69E-02	3.05E-02
3	0	98	97	17718.34	1	6194.90	1.6142	0.0303	0.0	1.85E-07	8.65E-06	7.82E-05	3.14E-04	8.00E-04
4	1	25	24	3187.07	2	6195.36	1.6141	0.0437	3.25E-04	9.05E-04	1.29E-03	1.44E-03	1.44E-03	1.35E-03
5	2	1	0	4260.05	1	6195.77	1.6140	0.0603	5.23E-04	2.44E-03	4.53E-03	5.90E-03	6.52E-03	6.60E-03
4	1	46	45	5842.84	2	6195.85	1.6140	0.0303	1.70E-05	1.69E-04	4.57E-04	7.46E-04	9.58E-04	1.08E-03
4	1	85	84	15431.03	1	6196.31	1.6139	0.0303	0.0	4.90E-06	1.32E-04	8.62E-04	2.78E-03	6.05E-03
4	1	26	25	3277.80	2	6196.41	1.6138	0.0418	3.00E-04	8.71E-04	1.27E-03	1.44E-03	1.44E-03	1.36E-03
4	1	45	44	5680.94	2	6196.86	1.6137	0.0303	2.07E-05	1.91E-04	4.96E-04	7.92E-04	1.00E-03	1.12E-03
3	0	28	29	1668.03	1	6196.86	1.6137	0.0359	4.30E-02	5.80E-02	5.77E-02	5.18E-02	4.47E-02	3.79E-02
3	0	3	4	36.76	2	6197.01	1.6137	0.0611	8.43E-04	5.18E-04	3.48E-04	2.46E-04	1.81E-04	1.37E-04
4	1	27	26	3372.13	2	6197.35	1.6136	0.0398	2.74E-04	8.34E-04	1.25E-03	1.43E-03	1.45E-03	1.38E-03
4	1	15	16	2661.01	1	6197.69	1.6135	0.0591	2.73E-02	5.93E-02	7.50E-02	7.77E-02	7.36E-02	6.68E-02
4	1	44	43	5522.55	2	6197.76	1.6135	0.0303	2.51E-05	2.15E-04	5.37E-04	8.38E-04	1.04E-03	1.15E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	28	27	3470.06	2	6198.20	1.6134	0.0379	2.49E-04	7.95E-04	1.22E-03	1.41E-03	1.45E-03	1.38E-03
4	1	43	42	5367.68	2	6198.56	1.6133	0.0303	3.03E-05	2.40E-04	5.80E-04	8.85E-04	1.09E-03	1.18E-03
5	2	67	66	12486.39	1	6198.58	1.6133	0.0303	5.53E-07	1.34E-04	1.78E-03	7.59E-03	1.85E-02	3.28E-02
3	0	75	74	10027.60	2	6198.84	1.6132	0.0303	0.0	1.75E-06	1.29E-05	3.85E-05	7.38E-05	1.11E-04
4	1	29	28	3571.58	2	6198.94	1.6132	0.0359	2.25E-04	7.54E-04	1.18E-03	1.39E-03	1.44E-03	1.39E-03
4	1	42	41	5216.33	2	6199.26	1.6131	0.0303	3.64E-05	2.68E-04	6.24E-04	9.31E-04	1.13E-03	1.22E-03
5	2	2	1	4263.83	1	6199.33	1.6131	0.0606	1.05E-03	4.93E-03	9.15E-03	1.19E-02	1.32E-02	1.34E-02
4	1	30	29	3676.69	2	6199.58	1.6130	0.0340	2.02E-04	7.12E-04	1.15E-03	1.37E-03	1.43E-03	1.39E-03
4	1	41	40	5068.50	2	6199.86	1.6129	0.0303	4.34E-05	2.98E-04	6.69E-04	9.77E-04	1.17E-03	1.25E-03
4	1	31	30	3785.38	2	6200.12	1.6129	0.0335	1.81E-04	6.73E-04	1.11E-03	1.35E-03	1.42E-03	1.39E-03
4	1	40	39	4924.21	2	6200.35	1.6128	0.0303	5.15E-05	3.29E-04	7.15E-04	1.02E-03	1.20E-03	1.27E-03
4	1	32	31	3897.66	2	6200.55	1.6128	0.0331	1.62E-04	6.33E-04	1.07E-03	1.33E-03	1.41E-03	1.39E-03
4	1	39	38	4783.45	2	6200.73	1.6127	0.0303	6.06E-05	3.63E-04	7.61E-04	1.07E-03	1.24E-03	1.30E-03
4	1	33	32	4013.51	2	6200.89	1.6127	0.0326	1.43E-04	5.93E-04	1.03E-03	1.30E-03	1.40E-03	1.39E-03
3	0	2	3	22.06	2	6200.98	1.6126	0.0609	6.51E-04	3.97E-04	2.66E-04	1.88E-04	1.38E-04	1.05E-04
4	1	38	37	4646.24	2	6201.02	1.6126	0.0303	7.10E-05	3.98E-04	8.08E-04	1.11E-03	1.27E-03	1.32E-03
4	1	34	33	4132.93	2	6201.12	1.6126	0.0321	1.26E-04	5.52E-04	9.90E-04	1.27E-03	1.38E-03	1.38E-03
4	1	37	36	4512.58	2	6201.20	1.6126	0.0308	8.27E-05	4.35E-04	8.55E-04	1.15E-03	1.30E-03	1.34E-03
4	1	35	34	4255.91	2	6201.25	1.6126	0.0317	1.10E-04	5.12E-04	9.46E-04	1.23E-03	1.36E-03	1.37E-03
4	1	36	35	4382.47	2	6201.27	1.6126	0.0312	9.58E-05	4.73E-04	9.01E-04	1.19E-03	1.33E-03	1.36E-03
4	1	84	83	15125.61	1	6201.94	1.6124	0.0303	0.0	6.43E-06	1.61E-04	1.00E-03	3.15E-03	6.70E-03
3	0	97	96	17367.91	1	6202.03	1.6124	0.0303	0.0	2.52E-07	1.09E-05	9.33E-05	3.62E-04	9.00E-04
5	2	66	65	12244.32	1	6202.16	1.6123	0.0303	7.61E-07	1.64E-04	2.06E-03	8.47E-03	2.01E-02	3.52E-02
5	2	3	2	4271.38	1	6202.79	1.6122	0.0609	1.58E-03	7.44E-03	1.38E-02	1.81E-02	2.00E-02	2.02E-02
3	0	74	73	9764.71	2	6202.90	1.6121	0.0303	0.0	2.19E-06	1.52E-05	4.36E-05	8.15E-05	1.20E-04
4	1	14	15	2600.15	1	6203.06	1.6121	0.0597	2.83E-02	5.96E-02	7.42E-02	7.62E-02	7.18E-02	6.49E-02
3	0	27	28	1557.12	1	6203.59	1.6120	0.0379	4.93E-02	6.30E-02	6.11E-02	5.40E-02	4.60E-02	3.87E-02
3	0	1	2	11.03	2	6204.86	1.6116	0.0606	4.45E-04	2.70E-04	1.80E-04	1.27E-04	9.35E-05	7.07E-05
5	2	65	64	12005.71	1	6205.62	1.6114	0.0303	1.04E-06	2.00E-04	2.37E-03	9.43E-03	2.19E-02	3.77E-02
5	2	4	3	4282.70	1	6206.15	1.6113	0.0611	2.10E-03	9.94E-03	1.85E-02	2.42E-02	2.68E-02	2.72E-02
3	0	73	72	9505.12	2	6206.84	1.6111	0.0303	4.75E-08	2.74E-06	1.78E-05	4.93E-05	8.99E-05	1.30E-04
4	1	83	82	14823.48	1	6207.46	1.6110	0.0303	0.0	8.39E-06	1.96E-04	1.17E-03	3.55E-03	7.42E-03
4	1	13	14	2543.08	1	6208.32	1.6107	0.0604	2.89E-02	5.93E-02	7.29E-02	7.42E-02	6.96E-02	6.26E-02
3	0	0	1	3.68	2	6208.63	1.6107	0.0603	2.27E-04	1.37E-04	9.15E-05	6.45E-05	4.73E-05	3.58E-05
5	2	64	63	11770.57	1	6208.97	1.6106	0.0303	1.42E-06	2.43E-04	2.73E-03	1.05E-02	2.38E-02	4.03E-02
3	0	96	95	17020.62	1	6209.05	1.6106	0.0303	0.0	3.43E-07	1.36E-05	1.11E-04	4.17E-04	1.01E-03
5	2	5	4	4297.80	1	6209.39	1.6105	0.0614	2.60E-03	1.24E-02	2.32E-02	3.04E-02	3.37E-02	3.42E-02
3	0	26	27	1449.99	1	6210.21	1.6103	0.0398	5.61E-02	6.81E-02	6.44E-02	5.60E-02	4.73E-02	3.95E-02
3	0	72	71	9248.86	2	6210.68	1.6101	0.0303	6.69E-08	3.41E-06	2.08E-05	5.56E-05	9.90E-05	1.41E-04
5	2	63	62	11538.91	1	6212.21	1.6097	0.0303	1.92E-06	2.94E-04	3.12E-03	1.16E-02	2.58E-02	4.30E-02
5	2	6	5	4316.68	1	6212.54	1.6096	0.0617	3.08E-03	1.48E-02	2.78E-02	3.65E-02	4.06E-02	4.13E-02
4	1	82	81	14524.67	1	6212.86	1.6096	0.0303	0.0	1.09E-05	2.37E-04	1.36E-03	4.01E-03	8.20E-03
4	1	12	13	2489.60	1	6213.48	1.6094	0.0610	2.93E-02	5.85E-02	7.10E-02	7.18E-02	6.69E-02	6.00E-02
3	0	71	70	8995.93	2	6214.42	1.6092	0.0303	9.36E-08	4.23E-06	2.43E-05	6.26E-05	1.09E-04	1.52E-04
5	2	62	61	11310.73	1	6215.33	1.6089	0.0303	2.58E-06	3.55E-04	3.57E-03	1.28E-02	2.79E-02	4.58E-02
5	2	7	6	4339.32	1	6215.57	1.6089	0.0620	3.52E-03	1.71E-02	3.23E-02	4.26E-02	4.74E-02	4.83E-02
3	0	1	0	-0.0	2	6215.88	1.6088	0.0603	2.33E-04	1.41E-04	9.38E-05	6.62E-05	4.85E-05	3.66E-05
3	0	95	94	16676.52	1	6215.95	1.6088	0.0303	0.0	4.65E-07	1.69E-05	1.32E-04	4.79E-04	1.14E-03
3	0	25	26	1346.66	1	6216.74	1.6086	0.0418	6.34E-02	7.33E-02	6.76E-02	5.80E-02	4.84E-02	4.02E-02
3	0	70	69	8746.33	2	6218.04	1.6082	0.0303	1.30E-07	5.22E-06	2.83E-05	7.03E-05	1.19E-04	1.64E-04
4	1	81	80	14229.17	1	6218.14	1.6082	0.0303	0.0	1.42E-05	2.87E-04	1.57E-03	4.51E-03	9.04E-03
5	2	61	60	11086.05	1	6218.34	1.6081	0.0303	3.46E-06	4.26E-04	4.06E-03	1.42E-02	3.01E-02	4.86E-02
5	2	8	7	4365.74	1	6218.51	1.6081	0.0623	3.92E-03	1.93E-02	3.67E-02	4.85E-02	5.42E-02	5.53E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	11	12	2440.32	1	6218.54	1.6081	0.0617	2.93E-02	5.72E-02	6.86E-02	6.89E-02	6.39E-02	5.71E-02
3	0	2	1	3.68	2	6219.36	1.6079	0.0606	4.71E-04	2.85E-04	1.90E-04	1.34E-04	9.82E-05	7.42E-05
5	2	60	59	10864.87	1	6221.24	1.6074	0.0303	4.60E-06	5.11E-04	4.61E-03	1.56E-02	3.24E-02	5.16E-02
5	2	9	8	4395.93	1	6221.33	1.6074	0.0624	4.27E-03	2.13E-02	4.08E-02	5.43E-02	6.08E-02	6.21E-02
3	0	69	68	8500.09	2	6221.56	1.6073	0.0303	1.81E-07	6.43E-06	3.29E-05	7.87E-05	1.30E-04	1.76E-04
3	0	94	93	16335.59	1	6222.72	1.6070	0.0303	0.0	6.28E-07	2.11E-05	1.56E-04	5.50E-04	1.27E-03
3	0	3	2	11.03	2	6222.74	1.6070	0.0609	7.08E-04	4.30E-04	2.87E-04	2.03E-04	1.49E-04	1.12E-04
3	0	24	25	1247.11	1	6223.16	1.6069	0.0437	7.12E-02	7.84E-02	7.06E-02	5.97E-02	4.94E-02	4.07E-02
4	1	80	79	13937.00	1	6223.30	1.6069	0.0303	0.0	1.83E-05	3.45E-04	1.81E-03	5.07E-03	9.96E-03
4	1	10	11	2394.64	1	6223.50	1.6068	0.0625	2.90E-02	5.53E-02	6.56E-02	6.54E-02	6.05E-02	5.39E-02
5	2	59	58	10647.20	1	6224.02	1.6067	0.0303	6.13E-06	6.13E-04	5.26E-03	1.72E-02	3.50E-02	5.49E-02
5	2	10	9	4429.89	1	6224.05	1.6067	0.0624	4.57E-03	2.32E-02	4.48E-02	5.99E-02	6.73E-02	6.89E-02
3	0	68	67	8257.20	2	6224.97	1.6064	0.0303	2.49E-07	7.89E-06	3.80E-05	8.80E-05	1.42E-04	1.89E-04
3	0	4	3	22.06	2	6226.03	1.6062	0.0611	9.41E-04	5.74E-04	3.84E-04	2.72E-04	2.00E-04	1.51E-04
5	2	11	10	4467.62	1	6226.66	1.6060	0.0625	4.82E-03	2.49E-02	4.85E-02	6.52E-02	7.35E-02	7.55E-02
5	2	58	57	10433.05	1	6226.69	1.6060	0.0303	8.11E-06	7.32E-04	5.97E-03	1.89E-02	3.78E-02	5.84E-02
3	0	67	66	8017.69	2	6228.27	1.6056	0.0303	3.41E-07	9.64E-06	4.39E-05	9.81E-05	1.55E-04	2.03E-04
4	1	79	78	13648.17	1	6228.35	1.6056	0.0303	5.59E-08	2.36E-05	4.15E-04	2.09E-03	5.68E-03	1.09E-02
4	1	9	10	2352.76	1	6228.35	1.6056	0.0624	2.82E-02	5.29E-02	6.21E-02	6.15E-02	5.66E-02	5.03E-02
5	2	12	11	4509.11	1	6229.17	1.6054	0.0617	5.01E-03	2.64E-02	5.20E-02	7.03E-02	7.95E-02	8.19E-02
3	0	5	4	36.76	2	6229.21	1.6053	0.0614	1.17E-03	7.17E-04	4.82E-04	3.42E-04	2.51E-04	1.90E-04
5	2	57	56	10222.44	1	6229.24	1.6053	0.0303	1.07E-05	8.72E-04	6.76E-03	2.08E-02	4.07E-02	6.20E-02
3	0	93	92	15997.85	1	6229.38	1.6053	0.0303	0.0	8.45E-07	2.62E-05	1.85E-04	6.29E-04	1.42E-03
3	0	23	24	1151.37	1	6229.48	1.6053	0.0457	7.93E-02	8.35E-02	7.35E-02	6.13E-02	5.03E-02	4.11E-02
3	0	66	65	7781.55	2	6231.46	1.6048	0.0303	4.65E-07	1.17E-05	5.05E-05	1.09E-04	1.69E-04	2.17E-04
5	2	13	12	4554.37	1	6231.57	1.6047	0.0610	5.15E-03	2.77E-02	5.51E-02	7.50E-02	8.53E-02	8.81E-02
5	2	56	55	10015.37	1	6231.68	1.6047	0.0303	1.40E-05	1.03E-03	7.63E-03	2.28E-02	4.37E-02	6.56E-02
3	0	6	5	55.14	2	6232.30	1.6045	0.0617	1.38E-03	8.56E-04	5.78E-04	4.11E-04	3.03E-04	2.30E-04
4	1	8	9	2314.69	1	6233.10	1.6043	0.0624	2.71E-02	4.98E-02	5.80E-02	5.72E-02	5.24E-02	4.64E-02
4	1	78	77	13362.69	1	6233.28	1.6043	0.0303	8.22E-08	3.02E-05	4.97E-04	2.40E-03	6.36E-03	1.20E-02
5	2	14	13	4603.40	1	6233.86	1.6041	0.0604	5.22E-03	2.88E-02	5.79E-02	7.94E-02	9.07E-02	9.40E-02
5	2	55	54	9811.84	1	6234.01	1.6041	0.0303	1.82E-05	1.22E-03	8.58E-03	2.49E-02	4.68E-02	6.94E-02
3	0	65	64	7548.79	2	6234.55	1.6040	0.0303	6.31E-07	1.42E-05	5.79E-05	1.21E-04	1.83E-04	2.32E-04
3	0	7	6	77.19	2	6235.28	1.6038	0.0620	1.58E-03	9.91E-04	6.72E-04	4.79E-04	3.54E-04	2.69E-04
3	0	22	23	1059.42	1	6235.70	1.6037	0.0476	8.78E-02	8.84E-02	7.61E-02	6.26E-02	5.09E-02	4.14E-02
3	0	92	91	15663.33	1	6235.93	1.6036	0.0303	0.0	1.13E-06	3.24E-05	2.18E-04	7.19E-04	1.59E-03
5	2	15	14	4656.18	1	6236.04	1.6036	0.0597	5.24E-03	2.96E-02	6.04E-02	8.35E-02	9.58E-02	9.97E-02
5	2	54	53	9611.86	1	6236.22	1.6035	0.0303	2.36E-05	1.44E-03	9.63E-03	2.71E-02	5.01E-02	7.32E-02
3	0	64	63	7319.43	2	6237.53	1.6032	0.0303	8.52E-07	1.72E-05	6.63E-05	1.34E-04	1.98E-04	2.47E-04
4	1	7	8	2280.41	1	6237.74	1.6031	0.0623	2.56E-02	4.62E-02	5.33E-02	5.23E-02	4.78E-02	4.23E-02
4	1	77	76	13080.58	1	6238.10	1.6031	0.0303	1.20E-07	3.86E-05	5.94E-04	2.76E-03	7.10E-03	1.32E-02
5	2	16	15	4712.73	1	6238.12	1.6030	0.0591	5.21E-03	3.03E-02	6.26E-02	8.71E-02	1.01E-01	1.05E-01
3	0	8	7	102.91	2	6238.17	1.6030	0.0623	1.76E-03	1.12E-03	7.63E-04	5.46E-04	4.05E-04	3.08E-04
5	2	53	52	9415.45	1	6238.33	1.6030	0.0303	3.05E-05	1.69E-03	1.08E-02	2.95E-02	5.35E-02	7.71E-02
5	2	17	16	4773.03	1	6240.09	1.6025	0.0585	5.13E-03	3.07E-02	6.44E-02	9.04E-02	1.05E-01	1.10E-01
5	2	52	51	9222.61	1	6240.32	1.6025	0.0303	3.90E-05	1.97E-03	1.20E-02	3.20E-02	5.69E-02	8.10E-02
3	0	63	62	7093.47	2	6240.41	1.6025	0.0303	1.14E-06	2.07E-05	7.56E-05	1.48E-04	2.14E-04	2.63E-04
3	0	9	8	132.31	2	6240.96	1.6023	0.0624	1.92E-03	1.24E-03	8.51E-04	6.12E-04	4.55E-04	3.46E-04
3	0	21	22	971.28	1	6241.82	1.6021	0.0496	9.64E-02	9.30E-02	7.84E-02	6.37E-02	5.14E-02	4.15E-02
5	2	18	17	4837.09	1	6241.96	1.6021	0.0568	5.01E-03	3.09E-02	6.58E-02	9.32E-02	1.09E-01	1.15E-01
5	2	51	50	9033.35	1	6242.19	1.6020	0.0303	4.97E-05	2.29E-03	1.34E-02	3.46E-02	6.05E-02	8.50E-02
4	1	6	7	2249.94	1	6242.28	1.6020	0.0620	2.36E-02	4.20E-02	4.81E-02	4.70E-02	4.29E-02	3.78E-02
3	0	91	90	15332.04	1	6242.35	1.6020	0.0303	0.0	1.51E-06	3.99E-05	2.56E-04	8.19E-04	1.77E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
4	1	76	75	12801.85	1	6242.80	1.6018	0.0303	1.75E-07	4.92E-05	7.08E-04	3.16E-03	7.92E-03	1.44E-02
3	0	62	61	6870.93	2	6243.18	1.6017	0.0303	1.53E-06	2.49E-05	8.60E-05	1.63E-04	2.31E-04	2.79E-04
3	0	10	9	165.38	2	6243.64	1.6016	0.0624	2.06E-03	1.35E-03	9.35E-04	6.75E-04	5.03E-04	3.84E-04
5	2	19	18	4904.90	1	6243.71	1.6016	0.0552	4.85E-03	3.09E-02	6.68E-02	9.56E-02	1.12E-01	1.19E-01
5	2	50	49	8847.68	1	6243.96	1.6015	0.0303	6.30E-05	2.66E-03	1.48E-02	3.74E-02	6.41E-02	8.89E-02
5	2	20	19	4976.46	1	6245.36	1.6012	0.0535	4.65E-03	3.07E-02	6.75E-02	9.76E-02	1.16E-01	1.23E-01
5	2	49	48	8665.59	1	6245.61	1.6011	0.0303	7.93E-05	3.07E-03	1.64E-02	4.02E-02	6.78E-02	9.29E-02
3	0	61	60	6651.80	2	6245.84	1.6011	0.0303	2.02E-06	2.97E-05	9.75E-05	1.79E-04	2.49E-04	2.96E-04
3	0	11	10	202.12	2	6246.23	1.6010	0.0625	2.18E-03	1.45E-03	1.01E-03	7.36E-04	5.50E-04	4.22E-04
4	1	5	6	2223.28	1	6246.72	1.6008	0.0617	2.12E-02	3.73E-02	4.25E-02	4.13E-02	3.76E-02	3.31E-02
5	2	21	20	5051.77	1	6246.90	1.6008	0.0515	4.43E-03	3.03E-02	6.78E-02	9.92E-02	1.18E-01	1.26E-01
5	2	48	47	8487.11	1	6247.15	1.6007	0.0303	9.93E-05	3.53E-03	1.80E-02	4.32E-02	7.16E-02	9.68E-02
4	1	75	74	12526.50	1	6247.38	1.6007	0.0303	2.54E-07	6.25E-05	8.41E-04	3.60E-03	8.81E-03	1.57E-02
3	0	20	21	886.95	1	6247.84	1.6006	0.0515	1.05E-01	9.73E-02	8.04E-02	6.46E-02	5.16E-02	4.15E-02
5	2	22	21	5130.82	1	6248.33	1.6004	0.0496	4.18E-03	2.97E-02	6.78E-02	1.03E-01	1.21E-01	1.30E-01
3	0	60	59	6436.11	2	6248.40	1.6004	0.0303	2.67E-06	3.54E-05	1.10E-04	1.96E-04	2.67E-04	3.13E-04
5	2	47	46	8312.24	1	6248.58	1.6004	0.0303	1.24E-04	4.04E-03	1.98E-02	4.62E-02	7.54E-02	1.01E-01
3	0	90	89	15003.98	1	6248.66	1.6003	0.0303	0.0	2.02E-06	4.92E-05	3.01E-04	9.32E-04	1.97E-03
3	0	12	11	242.53	2	6248.72	1.6003	0.0617	2.27E-03	1.54E-03	1.09E-03	7.94E-04	5.96E-04	4.58E-04
5	2	23	22	5213.61	1	6249.65	1.6001	0.0476	3.92E-03	2.90E-02	6.75E-02	1.01E-01	1.22E-01	1.32E-01
5	2	46	45	8140.98	1	6249.90	1.6000	0.0303	1.53E-04	4.60E-03	2.16E-02	4.94E-02	7.92E-02	1.05E-01
3	0	59	58	6223.85	2	6250.85	1.5998	0.0303	3.53E-06	4.22E-05	1.25E-04	2.16E-04	2.88E-04	3.33E-04
5	2	24	23	5300.14	1	6250.87	1.5998	0.0457	3.65E-03	2.81E-02	6.68E-02	1.01E-01	1.24E-01	1.35E-01
4	1	4	5	2200.42	1	6251.05	1.5997	0.0614	1.84E-02	3.21E-02	3.63E-02	3.52E-02	3.19E-02	2.81E-02
5	2	45	44	7973.35	1	6251.10	1.5997	0.0303	1.88E-04	5.23E-03	2.36E-02	5.26E-02	8.30E-02	1.08E-01
3	0	13	12	286.60	2	6251.11	1.5997	0.0610	2.34E-03	1.62E-03	1.15E-03	8.48E-04	6.40E-04	4.93E-04
4	1	74	73	12254.55	1	6251.85	1.5995	0.0303	3.66E-07	7.90E-05	9.97E-04	4.11E-03	9.78E-03	1.71E-02
5	2	25	24	5390.41	1	6251.98	1.5995	0.0437	3.37E-03	2.71E-02	6.59E-02	1.01E-01	1.25E-01	1.36E-01
5	2	44	43	7809.34	1	6252.20	1.5994	0.0303	2.31E-04	5.91E-03	2.57E-02	5.58E-02	8.67E-02	1.12E-01
5	2	26	25	5484.40	1	6252.97	1.5992	0.0418	3.09E-03	2.60E-02	6.47E-02	1.01E-01	1.25E-01	1.38E-01
5	2	43	42	7648.97	1	6253.18	1.5992	0.0303	2.80E-04	6.66E-03	2.78E-02	5.91E-02	9.04E-02	1.16E-01
3	0	58	57	6015.03	2	6253.19	1.5992	0.0303	4.64E-06	5.02E-05	1.41E-04	2.37E-04	3.09E-04	3.53E-04
3	0	14	13	334.34	2	6253.40	1.5991	0.0604	2.38E-03	1.68E-03	1.21E-03	8.99E-04	6.81E-04	5.26E-04
3	0	19	20	806.42	1	6253.75	1.5990	0.0535	1.14E-01	1.01E-01	8.20E-02	6.51E-02	5.17E-02	4.13E-02
5	2	27	26	5582.12	1	6253.86	1.5990	0.0398	2.82E-03	2.48E-02	6.32E-02	9.97E-02	1.25E-01	1.39E-01
5	2	42	41	7492.24	1	6254.05	1.5990	0.0303	3.39E-04	7.46E-03	3.01E-02	6.24E-02	9.41E-02	1.19E-01
5	2	28	27	5683.57	1	6254.64	1.5988	0.0379	2.55E-03	2.36E-02	6.15E-02	9.85E-02	1.25E-01	1.39E-01
5	2	41	40	7339.16	1	6254.81	1.5988	0.0303	4.07E-04	8.34E-03	3.24E-02	6.57E-02	9.76E-02	1.22E-01
3	0	89	88	14679.17	1	6254.84	1.5988	0.0303	0.0	2.69E-06	6.08E-05	3.55E-04	1.07E-03	2.20E-03
4	1	3	4	2181.37	1	6255.28	1.5986	0.0611	1.53E-02	2.64E-02	2.97E-02	2.87E-02	2.60E-02	2.29E-02
5	2	29	28	5788.74	1	6255.31	1.5986	0.0359	2.29E-03	2.23E-02	5.96E-02	9.69E-02	1.24E-01	1.40E-01
3	0	57	56	5809.67	2	6255.43	1.5986	0.0303	6.07E-06	5.94E-05	1.59E-04	2.59E-04	3.32E-04	3.74E-04
5	2	40	39	7189.73	1	6255.46	1.5986	0.0303	4.87E-04	9.27E-03	3.47E-02	6.90E-02	1.01E-01	1.25E-01
3	0	15	14	385.75	2	6255.59	1.5986	0.0597	2.39E-03	1.74E-03	1.27E-03	9.46E-04	7.20E-04	5.59E-04
5	2	30	29	5897.62	1	6255.88	1.5985	0.0340	2.04E-03	2.10E-02	5.76E-02	9.51E-02	1.23E-01	1.39E-01
5	2	39	38	7043.96	1	6256.00	1.5985	0.0303	5.78E-04	1.03E-02	3.71E-02	7.23E-02	1.04E-01	1.28E-01
4	1	73	72	11986.02	1	6256.20	1.5984	0.0303	5.24E-07	9.96E-05	1.18E-03	4.67E-03	1.08E-02	1.86E-02
5	2	31	30	6010.21	1	6256.33	1.5984	0.0335	1.82E-03	1.97E-02	5.57E-02	9.34E-02	1.22E-01	1.39E-01
5	2	38	37	6901.85	1	6256.42	1.5984	0.0303	6.82E-04	1.13E-02	3.95E-02	7.54E-02	1.07E-01	1.30E-01
5	2	32	31	6126.50	1	6256.67	1.5983	0.0331	1.62E-03	1.85E-02	5.36E-02	9.15E-02	1.21E-01	1.39E-01
5	2	37	36	6763.42	1	6256.74	1.5983	0.0308	8.00E-04	1.24E-02	4.20E-02	7.85E-02	1.10E-01	1.33E-01
5	2	33	32	6246.50	1	6256.91	1.5982	0.0326	1.42E-03	1.72E-02	5.14E-02	8.93E-02	1.19E-01	1.39E-01
5	2	36	35	6628.66	1	6256.95	1.5982	0.0312	9.32E-04	1.36E-02	4.44E-02	8.15E-02	1.13E-01	1.35E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********* INTEGRATED ** ABSORPTION ** COEFFICIENT ******** CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
5	2	34	33	6370.20	1	6257.03	1.5982	0.0321	1.24E-03	1.60E-02	4.92E-02	8.69E-02	1.18E-01	1.38E-01
5	2	35	34	6497.59	1	6257.04	1.5982	0.0317	1.08E-03	1.48E-02	4.68E-02	8.43E-02	1.15E-01	1.36E-01
3	0	56	55	5607.77	2	6257.56	1.5981	0.0303	7.89E-06	7.01E-05	1.79E-04	2.83E-04	3.56E-04	3.95E-04
3	0	16	15	440.81	2	6257.68	1.5980	0.0591	2.38E-03	1.78E-03	1.32E-03	9.89E-04	7.57E-04	5.89E-04
4	1	2	3	2166.13	1	6259.41	1.5976	0.0609	1.18E-02	2.02E-02	2.27E-02	2.19E-02	1.98E-02	1.74E-02
3	0	18	19	729.71	1	6259.56	1.5976	0.0552	1.22E-01	1.05E-01	8.33E-02	6.54E-02	5.15E-02	4.09E-02
3	0	55	54	5409.33	2	6259.59	1.5975	0.0303	1.02E-05	8.24E-05	2.01E-04	3.09E-04	3.80E-04	4.16E-04
3	0	17	16	499.54	2	6259.67	1.5975	0.0585	2.35E-03	1.80E-03	1.36E-03	1.03E-03	7.90E-04	6.18E-04
4	1	72	71	11720.90	1	6260.44	1.5973	0.0303	7.47E-07	1.25E-04	1.39E-03	5.30E-03	1.20E-02	2.02E-02
3	0	88	87	14357.63	1	6260.91	1.5972	0.0303	0.0	3.59E-06	7.50E-05	4.18E-04	1.22E-03	2.46E-03
3	0	54	53	5214.37	2	6261.51	1.5971	0.0303	1.31E-05	9.65E-05	2.25E-04	3.35E-04	4.06E-04	4.38E-04
3	0	18	17	561.92	2	6261.56	1.5970	0.0568	2.30E-03	1.82E-03	1.39E-03	1.06E-03	8.21E-04	6.45E-04
3	0	53	52	5022.89	2	6263.33	1.5966	0.0303	1.68E-05	1.13E-04	2.50E-04	3.64E-04	4.32E-04	4.60E-04
3	0	19	18	627.96	2	6263.34	1.5966	0.0552	2.23E-03	1.82E-03	1.41E-03	1.09E-03	8.49E-04	6.70E-04
4	1	1	2	2154.70	1	6263.43	1.5966	0.0606	8.09E-03	1.38E-02	1.54E-02	1.49E-02	1.34E-02	1.18E-02
4	1	71	70	11459.21	1	6264.56	1.5963	0.0303	1.06E-06	1.56E-04	1.63E-03	5.99E-03	1.32E-02	2.19E-02
3	0	20	19	697.65	2	6265.03	1.5962	0.0535	2.15E-03	1.81E-03	1.43E-03	1.11E-03	8.74E-04	6.93E-04
3	0	52	51	4834.91	2	6265.04	1.5962	0.0303	2.13E-05	1.31E-04	2.78E-04	3.93E-04	4.59E-04	4.83E-04
3	0	17	18	656.82	1	6265.27	1.5961	0.0568	1.29E-01	1.07E-01	8.40E-02	6.53E-02	5.11E-02	4.04E-02
3	0	21	20	771.00	2	6266.62	1.5958	0.0515	2.05E-03	1.79E-03	1.44E-03	1.13E-03	8.95E-04	7.13E-04
3	0	51	50	4650.41	2	6266.64	1.5958	0.0303	2.70E-05	1.52E-04	3.08E-04	4.24E-04	4.86E-04	5.05E-04
3	0	87	86	14039.36	1	6266.87	1.5957	0.0303	0.0	4.77E-06	9.22E-05	4.91E-04	1.39E-03	2.75E-03
4	1	0	1	2147.08	1	6267.34	1.5956	0.0603	4.12E-03	7.00E-03	7.82E-03	7.53E-03	6.79E-03	5.95E-03
3	0	22	21	847.99	2	6268.10	1.5954	0.0496	1.95E-03	1.76E-03	1.44E-03	1.15E-03	9.13E-04	7.31E-04
3	0	50	49	4469.43	2	6268.15	1.5954	0.0303	3.39E-05	1.75E-04	3.40E-04	4.56E-04	5.14E-04	5.27E-04
4	1	70	69	11200.97	1	6268.57	1.5953	0.0303	1.49E-06	1.95E-04	1.91E-03	6.76E-03	1.46E-02	2.37E-02
3	0	23	22	928.62	2	6269.49	1.5950	0.0476	1.83E-03	1.73E-03	1.44E-03	1.16E-03	9.28E-04	7.48E-04
3	0	49	48	4291.95	2	6269.54	1.5950	0.0303	4.24E-05	2.01E-04	3.74E-04	4.90E-04	5.42E-04	5.50E-04
3	0	24	23	1012.90	2	6270.77	1.5947	0.0457	1.71E-03	1.68E-03	1.42E-03	1.16E-03	9.40E-04	7.61E-04
3	0	48	47	4117.99	2	6270.83	1.5947	0.0303	5.28E-05	2.30E-04	4.11E-04	5.24E-04	5.71E-04	5.72E-04
3	0	16	17	587.75	1	6270.88	1.5947	0.0585	1.36E-01	1.10E-01	8.43E-02	6.48E-02	5.04E-02	3.97E-02
3	0	25	24	1100.81	2	6271.95	1.5944	0.0437	1.58E-03	1.62E-03	1.41E-03	1.16E-03	9.48E-04	7.73E-04
3	0	47	46	3947.55	2	6272.02	1.5944	0.0303	6.53E-05	2.62E-04	4.49E-04	5.59E-04	5.99E-04	5.94E-04
4	1	69	68	10946.18	1	6272.46	1.5943	0.0303	2.10E-06	2.42E-04	2.23E-03	7.62E-03	1.60E-02	2.56E-02
3	0	86	85	13724.39	1	6272.70	1.5942	0.0303	0.0	6.30E-06	1.13E-04	5.76E-04	1.58E-03	3.06E-03
3	0	26	25	1192.36	2	6273.03	1.5941	0.0418	1.46E-03	1.56E-03	1.38E-03	1.16E-03	9.53E-04	7.82E-04
3	0	46	45	3780.65	2	6273.10	1.5941	0.0303	8.03E-05	2.97E-04	4.90E-04	5.96E-04	6.28E-04	6.15E-04
3	0	27	26	1287.55	2	6274.01	1.5939	0.0398	1.33E-03	1.49E-03	1.36E-03	1.15E-03	9.55E-04	7.88E-04
3	0	45	44	3617.28	2	6274.08	1.5939	0.0303	9.82E-05	3.36E-04	5.33E-04	6.33E-04	6.57E-04	6.36E-04
4	1	1	0	2143.27	1	6274.86	1.5937	0.0603	4.24E-03	7.18E-03	8.02E-03	7.71E-03	6.96E-03	6.10E-03
3	0	28	27	1386.36	2	6274.88	1.5937	0.0379	1.21E-03	1.42E-03	1.32E-03	1.14E-03	9.54E-04	7.93E-04
3	0	44	43	3457.45	2	6274.96	1.5936	0.0303	1.19E-04	3.78E-04	5.77E-04	6.70E-04	6.85E-04	6.56E-04
3	0	29	28	1488.80	2	6275.66	1.5935	0.0359	1.09E-03	1.35E-03	1.28E-03	1.12E-03	9.50E-04	7.95E-04
3	0	43	42	3301.17	2	6275.73	1.5934	0.0303	1.44E-04	4.24E-04	6.24E-04	7.07E-04	7.12E-04	6.75E-04
4	1	68	67	10694.85	1	6276.24	1.5933	0.0303	2.92E-06	2.99E-04	2.60E-03	8.55E-03	1.75E-02	2.76E-02
3	0	30	29	1594.85	2	6276.33	1.5933	0.0340	9.81E-04	1.27E-03	1.24E-03	1.10E-03	9.43E-04	7.95E-04
3	0	42	41	3148.44	2	6276.39	1.5933	0.0303	1.73E-04	4.74E-04	6.72E-04	7.45E-04	7.39E-04	6.93E-04
3	0	15	16	522.50	1	6276.39	1.5933	0.0591	1.43E-01	1.11E-01	8.40E-02	6.40E-02	4.95E-02	3.88E-02
3	0	31	30	1704.53	2	6276.90	1.5931	0.0335	8.79E-04	1.20E-03	1.20E-03	1.09E-03	9.39E-04	7.97E-04
3	0	41	40	2999.27	2	6276.95	1.5931	0.0303	2.07E-04	5.27E-04	7.21E-04	7.83E-04	7.66E-04	7.11E-04
3	0	32	31	1817.82	2	6277.37	1.5930	0.0331	7.82E-04	1.13E-03	1.16E-03	1.07E-03	9.31E-04	7.97E-04
3	0	40	39	2853.67	2	6277.41	1.5930	0.0303	2.46E-04	5.84E-04	7.71E-04	8.20E-04	7.91E-04	7.27E-04
3	0	33	32	1934.72	2	6277.74	1.5929	0.0326	6.92E-04	1.06E-03	1.12E-03	1.04E-03	9.21E-04	7.95E-04

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	39	38	2711.64	2	6277.77	1.5929	0.0303	2.90E-04	6.44E-04	8.21E-04	8.56E-04	8.15E-04	7.41E-04
3	0	34	33	2055.22	2	6278.00	1.5929	0.0321	6.08E-04	9.84E-04	1.07E-03	1.02E-03	9.09E-04	7.91E-04
3	0	38	37	2573.18	2	6278.02	1.5929	0.0303	3.41E-04	7.07E-04	8.73E-04	8.91E-04	8.37E-04	7.54E-04
3	0	35	34	2179.32	2	6278.16	1.5928	0.0317	5.31E-04	9.12E-04	1.02E-03	9.89E-04	8.94E-04	7.84E-04
3	0	37	36	2438.31	2	6278.17	1.5928	0.0308	3.97E-04	7.73E-04	9.24E-04	9.25E-04	8.58E-04	7.66E-04
3	0	36	35	2307.02	2	6278.22	1.5928	0.0312	4.61E-04	8.41E-04	9.74E-04	9.58E-04	8.77E-04	7.76E-04
3	0	85	84	13412.71	1	6278.42	1.5928	0.0303	0.0	8.31E-06	1.38E-04	6.74E-04	1.79E-03	3.40E-03
4	1	2	1	2147.08	1	6278.46	1.5927	0.0606	8.54E-03	1.45E-02	1.62E-02	1.56E-02	1.41E-02	1.23E-02
4	1	67	66	10446.99	1	6279.90	1.5924	0.0303	4.06E-06	3.69E-04	3.02E-03	9.58E-03	1.92E-02	2.97E-02
3	0	14	15	461.08	1	6281.79	1.5919	0.0597	1.48E-01	1.12E-01	8.32E-02	6.28E-02	4.83E-02	3.77E-02
4	1	3	2	2154.70	1	6281.95	1.5919	0.0609	1.28E-02	2.19E-02	2.45E-02	2.36E-02	2.13E-02	1.87E-02
4	1	66	65	10202.62	1	6283.45	1.5915	0.0303	5.60E-06	4.53E-04	3.49E-03	1.07E-02	2.09E-02	3.19E-02
3	0	84	83	13104.36	1	6284.02	1.5913	0.0303	0.0	1.09E-05	1.69E-04	7.87E-04	2.03E-03	3.77E-03
4	1	4	3	2166.13	1	6285.34	1.5910	0.0611	1.71E-02	2.92E-02	3.28E-02	3.17E-02	2.86E-02	2.51E-02
4	1	65	64	9961.74	1	6286.88	1.5906	0.0303	7.69E-06	5.54E-04	4.03E-03	1.19E-02	2.28E-02	3.42E-02
3	0	13	14	403.48	1	6287.09	1.5906	0.0604	1.51E-01	1.11E-01	8.18E-02	6.13E-02	4.68E-02	3.64E-02
4	1	5	4	2181.37	1	6288.63	1.5902	0.0614	2.11E-02	3.65E-02	4.11E-02	3.97E-02	3.60E-02	3.16E-02
3	0	83	82	12799.33	1	6289.50	1.5900	0.0303	5.09E-08	1.43E-05	2.06E-04	9.17E-04	2.30E-03	4.18E-03
4	1	64	63	9724.36	1	6290.20	1.5898	0.0303	1.05E-05	6.74E-04	4.64E-03	1.33E-02	2.48E-02	3.65E-02
4	1	6	5	2200.42	1	6291.80	1.5894	0.0617	2.50E-02	4.35E-02	4.92E-02	4.78E-02	4.34E-02	3.81E-02
3	0	12	13	349.72	1	6292.29	1.5892	0.0610	1.53E-01	1.10E-01	7.97E-02	5.93E-02	4.50E-02	3.49E-02
4	1	63	62	9490.49	1	6293.40	1.5890	0.0303	1.42E-05	8.18E-04	5.32E-03	1.47E-02	2.69E-02	3.90E-02
3	0	82	81	12497.64	1	6294.87	1.5886	0.0303	7.68E-08	1.87E-05	2.50E-04	1.07E-03	2.60E-03	4.62E-03
4	1	7	6	2223.28	1	6294.88	1.5886	0.0620	2.86E-02	5.03E-02	5.72E-02	5.57E-02	5.07E-02	4.46E-02
4	1	62	61	9260.14	1	6296.49	1.5882	0.0303	1.92E-05	9.89E-04	6.09E-03	1.63E-02	2.91E-02	4.16E-02
3	0	11	12	299.78	1	6297.38	1.5880	0.0617	1.53E-01	1.07E-01	7.71E-02	5.69E-02	4.30E-02	3.32E-02
4	1	8	7	2249.94	1	6297.84	1.5878	0.0623	3.18E-02	5.67E-02	6.49E-02	6.35E-02	5.79E-02	5.11E-02
4	1	61	60	9033.32	1	6299.47	1.5874	0.0303	2.58E-05	1.19E-03	6.94E-03	1.80E-02	3.15E-02	4.42E-02
3	0	81	80	12199.31	1	6300.12	1.5873	0.0303	1.15E-07	2.43E-05	3.02E-04	1.24E-03	2.93E-03	5.11E-03
4	1	9	8	2280.41	1	6300.70	1.5871	0.0624	3.47E-02	6.27E-02	7.23E-02	7.10E-02	6.49E-02	5.74E-02
4	1	60	59	8810.04	1	6302.33	1.5867	0.0303	3.45E-05	1.43E-03	7.89E-03	1.98E-02	3.39E-02	4.69E-02
3	0	10	11	253.68	1	6302.37	1.5867	0.0625	1.52E-01	1.04E-01	7.37E-02	5.41E-02	4.07E-02	3.14E-02
4	1	10	9	2314.69	1	6303.46	1.5864	0.0624	3.71E-02	6.82E-02	7.94E-02	7.83E-02	7.18E-02	6.37E-02
4	1	59	58	8590.31	1	6305.08	1.5860	0.0303	4.60E-05	1.72E-03	9.00E-03	2.19E-02	3.67E-02	5.00E-02
3	0	80	79	11904.34	1	6305.25	1.5860	0.0303	1.72E-07	3.14E-05	3.65E-04	1.43E-03	3.29E-03	5.63E-03
4	1	11	10	2352.76	1	6306.10	1.5858	0.0625	3.91E-02	7.32E-02	8.59E-02	8.52E-02	7.85E-02	6.98E-02
3	0	9	10	211.42	1	6307.26	1.5855	0.0624	1.48E-01	9.93E-02	6.98E-02	5.09E-02	3.82E-02	2.93E-02
4	1	58	57	8374.14	1	6307.71	1.5854	0.0303	6.12E-05	2.06E-03	1.02E-02	2.41E-02	3.96E-02	5.32E-02
4	1	12	11	2394.64	1	6308.64	1.5851	0.0617	4.06E-02	7.76E-02	9.20E-02	9.18E-02	8.49E-02	7.57E-02
4	1	57	56	8161.53	1	6310.23	1.5847	0.0303	8.08E-05	2.45E-03	1.16E-02	2.65E-02	4.27E-02	5.65E-02
3	0	79	78	11612.75	1	6310.27	1.5847	0.0303	2.55E-07	4.06E-05	4.39E-04	1.65E-03	3.69E-03	6.19E-03
4	1	13	12	2440.32	1	6311.08	1.5845	0.0610	4.17E-02	8.14E-02	9.76E-02	9.80E-02	9.11E-02	8.15E-02
3	0	8	9	172.99	1	6312.05	1.5843	0.0624	1.42E-01	9.37E-02	6.52E-02	4.73E-02	3.53E-02	2.71E-02
4	1	56	55	7952.49	1	6312.64	1.5841	0.0303	1.06E-04	2.92E-03	1.31E-02	2.91E-02	4.59E-02	5.99E-02
4	1	14	13	2489.80	1	6313.40	1.5839	0.0604	4.23E-02	8.45E-02	1.03E-01	1.04E-01	9.69E-02	8.69E-02
4	1	55	54	7747.04	1	6314.94	1.5835	0.0303	1.39E-04	3.45E-03	1.48E-02	3.18E-02	4.92E-02	6.33E-02
3	0	78	77	11324.54	1	6315.17	1.5835	0.0303	3.77E-07	5.22E-05	5.27E-04	1.90E-03	4.14E-03	6.80E-03
4	1	15	14	2543.08	1	6315.62	1.5834	0.0597	4.24E-02	8.70E-02	1.07E-01	1.09E-01	1.02E-01	9.22E-02
3	0	7	8	138.40	1	6316.73	1.5831	0.0623	1.34E-01	8.69E-02	6.00E-02	4.33E-02	3.22E-02	2.46E-02
4	1	54	53	7545.17	1	6317.12	1.5830	0.0303	1.80E-04	4.07E-03	1.66E-02	3.48E-02	5.27E-02	6.68E-02
4	1	16	15	2600.15	1	6317.73	1.5828	0.0591	4.21E-02	8.89E-02	1.11E-01	1.14E-01	1.07E-01	9.71E-02
4	1	53	52	7346.91	1	6319.19	1.5825	0.0303	2.33E-04	4.78E-03	1.86E-02	3.78E-02	5.63E-02	7.04E-02
4	1	17	16	2661.01	1	6319.74	1.5823	0.0585	4.15E-02	9.01E-02	1.14E-01	1.18E-01	1.12E-01	1.02E-01

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

				LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	77	76	11039.74	1	6319.95	1.5823	0.0303	5.54E-07	6.69E-05	6.31E-04	2.18E-03	4.63E-03	7.46E-03
4	1	52	51	7152.25	1	6321.14	1.5820	0.0303	2.99E-04	5.59E-03	2.08E-02	4.11E-02	6.00E-02	7.41E-02
3	0	6	7	107.65	1	6321.30	1.5820	0.0620	1.24E-01	7.91E-02	5.42E-02	3.89E-02	2.89E-02	2.20E-02
4	1	18	17	2725.67	1	6321.64	1.5819	0.0568	4.05E-02	9.06E-02	1.16E-01	1.22E-01	1.16E-01	1.06E-01
4	1	51	50	6961.20	1	6322.99	1.5815	0.0303	3.82E-04	6.51E-03	2.31E-02	4.45E-02	6.37E-02	7.77E-02
4	1	19	18	2794.11	1	6323.43	1.5814	0.0552	3.91E-02	9.05E-02	1.18E-01	1.25E-01	1.20E-01	1.10E-01
3	0	76	75	10758.35	1	6324.62	1.5811	0.0303	8.10E-07	8.54E-05	7.53E-04	2.50E-03	5.16E-03	8.17E-03
4	1	50	49	6773.78	1	6324.72	1.5811	0.0303	4.84E-04	7.56E-03	2.56E-02	4.80E-02	6.76E-02	8.14E-02
4	1	20	19	2866.33	1	6325.11	1.5810	0.0535	3.75E-02	8.99E-02	1.19E-01	1.27E-01	1.23E-01	1.14E-01
3	0	5	6	80.74	1	6325.78	1.5808	0.0617	1.11E-01	7.02E-02	4.78E-02	3.42E-02	2.53E-02	1.93E-02
4	1	49	48	6589.98	1	6326.34	1.5807	0.0303	6.12E-04	8.74E-03	2.84E-02	5.17E-02	7.16E-02	8.51E-02
4	1	21	20	2942.34	1	6326.68	1.5806	0.0515	3.57E-02	8.86E-02	1.20E-01	1.29E-01	1.26E-01	1.17E-01
4	1	48	47	6409.82	1	6327.85	1.5803	0.0303	7.68E-04	1.01E-02	3.13E-02	5.56E-02	7.56E-02	8.87E-02
4	1	22	21	3022.13	1	6328.15	1.5802	0.0496	3.37E-02	8.69E-02	1.20E-01	1.31E-01	1.29E-01	1.20E-01
3	0	75	74	10480.37	1	6329.17	1.5800	0.0303	1.18E-06	1.09E-04	8.96E-04	2.86E-03	5.75E-03	8.92E-03
4	1	47	46	6233.30	1	6329.24	1.5800	0.0303	9.58E-04	1.15E-02	3.44E-02	5.96E-02	7.96E-02	9.24E-02
4	1	23	22	3105.69	1	6329.51	1.5799	0.0476	3.15E-02	8.47E-02	1.19E-01	1.32E-01	1.30E-01	1.22E-01
3	0	4	5	57.67	1	6330.14	1.5797	0.0614	9.69E-02	6.04E-02	4.09E-02	2.92E-02	2.16E-02	1.64E-02
4	1	46	45	6060.43	1	6330.53	1.5796	0.0303	1.19E-03	1.32E-02	3.76E-02	6.37E-02	8.37E-02	9.59E-02
4	1	24	23	3193.03	1	6330.76	1.5796	0.0457	2.93E-02	8.21E-02	1.18E-01	1.32E-01	1.32E-01	1.24E-01
4	1	45	44	5891.22	1	6331.70	1.5794	0.0303	1.47E-03	1.50E-02	4.11E-02	6.78E-02	8.77E-02	9.94E-02
4	1	25	24	3284.13	1	6331.90	1.5793	0.0437	2.70E-02	7.92E-02	1.16E-01	1.32E-01	1.33E-01	1.26E-01
4	1	44	43	5725.68	1	6332.76	1.5791	0.0303	1.80E-03	1.70E-02	4.47E-02	7.21E-02	9.18E-02	1.03E-01
4	1	26	25	3379.00	1	6332.93	1.5790	0.0418	2.48E-02	7.59E-02	1.14E-01	1.31E-01	1.33E-01	1.27E-01
3	0	74	73	10205.84	1	6333.61	1.5789	0.0303	1.70E-06	1.38E-04	1.06E-03	3.27E-03	6.39E-03	9.73E-03
4	1	43	42	5563.80	1	6333.71	1.5789	0.0303	2.19E-03	1.91E-02	4.85E-02	7.64E-02	9.58E-02	1.06E-01
4	1	27	26	3477.63	1	6333.85	1.5788	0.0398	2.25E-02	7.24E-02	1.11E-01	1.30E-01	1.33E-01	1.28E-01
3	0	3	4	38.45	1	6334.41	1.5787	0.0611	8.04E-02	4.97E-02	3.35E-02	2.38E-02	1.76E-02	1.33E-02
4	1	42	41	5405.60	1	6334.54	1.5786	0.0303	2.65E-03	2.15E-02	5.24E-02	8.07E-02	9.97E-02	1.09E-01
4	1	28	27	3580.03	1	6334.67	1.5786	0.0379	2.04E-02	6.87E-02	1.08E-01	1.28E-01	1.33E-01	1.29E-01
4	1	41	40	5251.08	1	6335.27	1.5785	0.0303	3.19E-03	2.40E-02	5.65E-02	8.51E-02	1.03E-01	1.12E-01
4	1	29	28	3686.17	1	6335.37	1.5784	0.0359	1.83E-02	6.49E-02	1.05E-01	1.26E-01	1.32E-01	1.29E-01
4	1	40	39	5100.25	1	6335.89	1.5783	0.0303	3.82E-03	2.67E-02	6.07E-02	8.94E-02	1.07E-01	1.15E-01
4	1	30	29	3796.07	1	6335.97	1.5783	0.0340	1.63E-02	6.10E-02	1.01E-01	1.24E-01	1.31E-01	1.28E-01
4	1	39	38	4953.12	1	6336.39	1.5782	0.0303	4.55E-03	2.96E-02	6.49E-02	9.36E-02	1.11E-01	1.18E-01
4	1	31	30	3909.71	1	6336.45	1.5782	0.0335	1.45E-02	5.74E-02	9.79E-02	1.22E-01	1.30E-01	1.29E-01
4	1	38	37	4809.68	1	6336.78	1.5781	0.0303	5.37E-03	3.27E-02	6.92E-02	9.78E-02	1.14E-01	1.20E-01
4	1	32	31	4027.09	1	6336.83	1.5781	0.0331	1.28E-02	5.37E-02	9.42E-02	1.19E-01	1.29E-01	1.28E-01
4	1	37	36	4669.95	1	6337.07	1.5780	0.0308	6.31E-03	3.59E-02	7.35E-02	1.02E-01	1.17E-01	1.22E-01
4	1	33	32	4148.21	1	6337.10	1.5780	0.0326	1.13E-02	5.00E-02	9.04E-02	1.16E-01	1.27E-01	1.28E-01
4	1	36	35	4533.94	1	6337.24	1.5780	0.0312	7.37E-03	3.93E-02	7.79E-02	1.06E-01	1.20E-01	1.24E-01
4	1	34	33	4273.06	1	6337.26	1.5780	0.0321	9.86E-03	4.64E-02	8.63E-02	1.13E-01	1.25E-01	1.27E-01
4	1	35	34	4401.64	1	6337.30	1.5780	0.0317	8.55E-03	4.28E-02	8.21E-02	1.09E-01	1.23E-01	1.26E-01
3	0	73	72	9934.75	1	6337.93	1.5778	0.0303	2.45E-06	1.74E-04	1.26E-03	3.72E-03	7.09E-03	1.06E-02
3	0	2	3	23.07	1	6338.57	1.5776	0.0609	6.23E-02	3.81E-02	2.56E-02	1.82E-02	1.34E-02	1.02E-02
3	0	72	71	9667.11	1	6342.13	1.5768	0.0303	3.50E-06	2.19E-04	1.49E-03	4.22E-03	7.85E-03	1.15E-02
3	0	1	2	11.54	1	6342.62	1.5766	0.0606	4.26E-02	2.59E-02	1.74E-02	1.23E-02	9.06E-03	6.87E-03
3	0	71	70	9402.94	1	6346.22	1.5757	0.0303	4.98E-06	2.74E-04	1.75E-03	4.78E-03	8.67E-03	1.25E-02
3	0	0	1	3.65	1	6346.57	1.5757	0.0603	2.17E-02	1.32E-02	8.82E-03	6.24E-03	4.59E-03	3.48E-03
3	0	70	69	9142.25	1	6350.19	1.5748	0.0303	7.05E-06	3.43E-04	2.05E-03	5.41E-03	9.55E-03	1.35E-02
3	0	69	68	8885.04	1	6354.05	1.5738	0.0303	9.93E-06	4.27E-04	2.40E-03	6.09E-03	1.05E-02	1.46E-02
3	0	1	0	-0.0	1	6354.16	1.5738	0.0603	2.23E-02	1.35E-02	9.05E-03	6.40E-03	4.70E-03	3.56E-03
3	0	2	1	3.85	1	6357.79	1.5729	0.0606	4.50E-02	2.73E-02	1.83E-02	1.29E-02	9.52E-03	7.21E-03

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	68	67	8631.33	1	6357.80	1.5729	0.0303	1.39E-05	5.29E-04	2.80E-03	6.85E-03	1.15E-02	1.58E-02
3	0	3	2	11.54	1	6361.32	1.5720	0.0609	6.77E-02	4.13E-02	2.76E-02	1.96E-02	1.44E-02	1.09E-02
3	0	67	66	8381.13	1	6361.43	1.5720	0.0303	1.94E-05	6.53E-04	3.26E-03	7.69E-03	1.26E-02	1.70E-02
3	0	4	3	23.07	1	6364.75	1.5712	0.0611	9.00E-02	5.51E-02	3.70E-02	2.63E-02	1.94E-02	1.47E-02
3	0	66	65	8134.45	1	6364.94	1.5711	0.0303	2.68E-05	8.03E-04	3.77E-03	8.60E-03	1.38E-02	1.83E-02
3	0	5	4	38.45	1	6368.07	1.5703	0.0614	1.11E-01	6.88E-02	4.64E-02	3.30E-02	2.44E-02	1.85E-02
3	0	65	64	7891.29	1	6368.34	1.5703	0.0303	3.69E-05	9.84E-04	4.36E-03	9.61E-03	1.51E-02	1.96E-02
3	0	6	5	57.67	1	6371.28	1.5695	0.0617	1.32E-01	8.21E-02	5.56E-02	3.97E-02	2.93E-02	2.23E-02
3	0	64	63	7651.67	1	6371.63	1.5695	0.0303	5.05E-05	1.20E-03	5.03E-03	1.07E-02	1.64E-02	2.10E-02
3	0	7	6	80.74	1	6374.38	1.5688	0.0620	1.51E-01	9.49E-02	6.46E-02	4.62E-02	3.43E-02	2.61E-02
3	0	63	62	7415.60	1	6374.80	1.5687	0.0303	6.88E-05	1.46E-03	5.78E-03	1.19E-02	1.78E-02	2.24E-02
3	0	8	7	107.65	1	6377.39	1.5680	0.0623	1.68E-01	1.07E-01	7.33E-02	5.27E-02	3.92E-02	2.99E-02
3	0	62	61	7183.08	1	6377.86	1.5679	0.0303	9.31E-05	1.77E-03	6.62E-03	1.32E-02	1.93E-02	2.39E-02
3	0	9	8	138.40	1	6380.28	1.5673	0.0624	1.83E-01	1.18E-01	8.17E-02	5.90E-02	4.39E-02	3.36E-02
3	0	61	60	6954.12	1	6380.80	1.5672	0.0303	1.25E-04	2.13E-03	7.56E-03	1.45E-02	2.08E-02	2.54E-02
3	0	10	9	172.99	1	6383.07	1.5666	0.0624	1.95E-01	1.29E-01	8.96E-02	6.50E-02	4.86E-02	3.72E-02
3	0	60	59	6728.75	1	6383.63	1.5665	0.0303	1.68E-04	2.56E-03	8.60E-03	1.60E-02	2.25E-02	2.70E-02
3	0	11	10	211.42	1	6385.75	1.5660	0.0625	2.06E-01	1.38E-01	9.71E-02	7.08E-02	5.31E-02	4.08E-02
3	0	59	58	6506.95	1	6386.34	1.5658	0.0303	2.25E-04	3.09E-03	9.82E-03	1.77E-02	2.43E-02	2.88E-02
3	0	12	11	253.68	1	6388.32	1.5654	0.0617	2.14E-01	1.46E-01	1.04E-01	7.63E-02	5.75E-02	4.43E-02
3	0	58	57	6288.75	1	6388.95	1.5652	0.0303	2.99E-04	3.70E-03	1.12E-02	1.96E-02	2.63E-02	3.06E-02
3	0	13	12	299.78	1	6390.79	1.5648	0.0610	2.19E-01	1.53E-01	1.10E-01	8.14E-02	6.16E-02	4.76E-02
3	0	57	56	6074.14	1	6391.43	1.5646	0.0303	3.97E-04	4.43E-03	1.27E-02	2.15E-02	2.83E-02	3.25E-02
3	0	14	13	349.72	1	6393.15	1.5642	0.0604	2.22E-01	1.59E-01	1.16E-01	8.62E-02	6.56E-02	5.08E-02
3	0	56	55	5863.14	1	6393.81	1.5640	0.0303	5.23E-04	5.27E-03	1.44E-02	2.36E-02	3.05E-02	3.45E-02
3	0	15	14	403.48	1	6395.41	1.5636	0.0597	2.23E-01	1.64E-01	1.21E-01	9.06E-02	6.92E-02	5.39E-02
3	0	55	54	5655.77	1	6396.07	1.5635	0.0303	6.84E-04	6.25E-03	1.62E-02	2.59E-02	3.27E-02	3.65E-02
3	0	16	15	461.08	1	6397.55	1.5631	0.0591	2.22E-01	1.67E-01	1.25E-01	9.45E-02	7.27E-02	5.68E-02
3	0	54	53	5452.01	1	6398.22	1.5629	0.0303	8.91E-04	7.38E-03	1.82E-02	2.83E-02	3.51E-02	3.86E-02
3	0	17	16	522.50	1	6399.59	1.5626	0.0585	2.18E-01	1.70E-01	1.29E-01	9.80E-02	7.58E-02	5.95E-02
3	0	53	52	5251.89	1	6400.26	1.5624	0.0303	1.15E-03	8.68E-03	2.04E-02	3.08E-02	3.75E-02	4.07E-02
3	0	18	17	587.75	1	6401.53	1.5621	0.0568	2.12E-01	1.71E-01	1.31E-01	1.01E-01	7.87E-02	6.20E-02
3	0	52	51	5055.41	1	6402.18	1.5620	0.0303	1.49E-03	1.02E-02	2.29E-02	3.35E-02	4.00E-02	4.28E-02
3	0	19	18	656.82	1	6403.35	1.5617	0.0552	2.05E-01	1.70E-01	1.33E-01	1.04E-01	8.12E-02	6.43E-02
3	0	51	50	4862.58	1	6403.99	1.5615	0.0303	1.90E-03	1.19E-02	2.55E-02	3.63E-02	4.25E-02	4.50E-02
3	0	20	19	729.71	1	6405.07	1.5613	0.0535	1.97E-01	1.69E-01	1.35E-01	1.06E-01	8.34E-02	6.64E-02
3	0	50	49	4673.40	1	6405.69	1.5611	0.0303	2.42E-03	1.38E-02	2.83E-02	3.92E-02	4.52E-02	4.71E-02
3	0	21	20	806.42	1	6406.67	1.5609	0.0515	1.87E-01	1.67E-01	1.35E-01	1.07E-01	8.53E-02	6.83E-02
3	0	49	48	4487.89	1	6407.28	1.5607	0.0303	3.06E-03	1.60E-02	3.13E-02	4.23E-02	4.78E-02	4.93E-02
3	0	22	21	886.95	1	6408.18	1.5605	0.0496	1.76E-01	1.63E-01	1.35E-01	1.09E-01	8.69E-02	7.00E-02
3	0	48	47	4306.05	1	6408.75	1.5604	0.0303	3.85E-03	1.84E-02	3.46E-02	4.55E-02	5.05E-02	5.14E-02
3	0	23	22	971.28	1	6409.57	1.5602	0.0476	1.65E-01	1.59E-01	1.34E-01	1.09E-01	8.82E-02	7.14E-02
3	0	47	46	4127.89	1	6410.11	1.5600	0.0303	4.82E-03	2.12E-02	3.80E-02	4.88E-02	5.33E-02	5.35E-02
3	0	24	23	1059.42	1	6410.85	1.5599	0.0457	1.53E-01	1.54E-01	1.33E-01	1.09E-01	8.91E-02	7.26E-02
3	0	46	45	3953.41	1	6411.36	1.5597	0.0303	5.99E-03	2.42E-02	4.17E-02	5.21E-02	5.60E-02	5.56E-02
3	0	25	24	1151.37	1	6412.03	1.5596	0.0437	1.41E-01	1.49E-01	1.31E-01	1.09E-01	8.98E-02	7.36E-02
3	0	45	44	3782.62	1	6412.50	1.5595	0.0303	7.41E-03	2.75E-02	4.56E-02	5.56E-02	5.88E-02	5.77E-02
3	0	26	25	1247.11	1	6413.09	1.5593	0.0418	1.29E-01	1.42E-01	1.28E-01	1.09E-01	9.01E-02	7.43E-02
3	0	44	43	3615.54	1	6413.53	1.5592	0.0303	9.10E-03	3.12E-02	4.97E-02	5.91E-02	6.15E-02	5.97E-02
3	0	27	26	1346.66	1	6414.05	1.5591	0.0398	1.17E-01	1.36E-01	1.25E-01	1.08E-01	9.00E-02	7.48E-02
3	0	43	42	3452.15	1	6414.44	1.5590	0.0303	1.11E-02	3.53E-02	5.39E-02	6.27E-02	6.42E-02	6.16E-02
3	0	28	27	1449.99	1	6414.90	1.5589	0.0379	1.06E-01	1.29E-01	1.22E-01	1.06E-01	8.97E-02	7.51E-02
3	0	42	41	3292.48	1	6415.25	1.5588	0.0303	1.35E-02	3.96E-02	5.84E-02	6.63E-02	6.69E-02	6.35E-02

MOLECULAR LINE PARAMETERS FOR DIATOMIC MOLECULES
CARBON MONOXIDE

VU	VL	JU	JL	LOWER STATE ENERGY	CODE	WAVE NUMBER CM-1	WAVE LENGTH MICRON	HALF WIDTH H2	********** INTEGRATED ** ABSORPTION ** COEFFICIENT ********* CM*GM-1 T = 1000	T = 1500	T = 2000	T = 2500	T = 3000	T = 3500
3	0	29	28	1557.12	1	6415.64	1.5587	0.0359	9.49E-02	1.21E-01	1.18E-01	1.04E-01	8.92E-02	7.51E-02
3	0	41	40	3136.53	1	6415.94	1.5586	0.0303	1.63E-02	4.44E-02	6.29E-02	6.99E-02	6.95E-02	6.53E-02
3	0	30	29	1668.03	1	6416.27	1.5585	0.0340	8.45E-02	1.14E-01	1.14E-01	1.02E-01	8.83E-02	7.50E-02
3	0	40	39	2984.30	1	6416.52	1.5585	0.0303	1.95E-02	4.95E-02	6.76E-02	7.35E-02	7.20E-02	6.69E-02
3	0	31	30	1782.72	1	6416.79	1.5584	0.0335	7.52E-02	1.07E-01	1.10E-01	1.00E-01	8.77E-02	7.50E-02
3	0	39	38	2835.80	1	6416.99	1.5584	0.0303	2.32E-02	5.49E-02	7.24E-02	7.71E-02	7.44E-02	6.84E-02
3	0	32	31	1901.19	1	6417.20	1.5583	0.0331	6.64E-02	1.00E-01	1.06E-01	9.83E-02	8.68E-02	7.49E-02
3	0	38	37	2691.03	1	6417.35	1.5583	0.0303	2.75E-02	6.06E-02	7.73E-02	8.05E-02	7.67E-02	6.99E-02
3	0	33	32	2023.43	1	6417.50	1.5582	0.0326	5.83E-02	9.32E-02	1.01E-01	9.58E-02	8.56E-02	7.45E-02
3	0	37	36	2550.01	1	6417.60	1.5582	0.0308	3.24E-02	6.67E-02	8.22E-02	8.39E-02	7.88E-02	7.11E-02
3	0	34	33	2149.44	1	6417.69	1.5582	0.0321	5.08E-02	8.63E-02	9.66E-02	9.32E-02	8.42E-02	7.39E-02
3	0	36	35	2412.73	1	6417.74	1.5582	0.0312	3.79E-02	7.30E-02	8.70E-02	8.72E-02	8.08E-02	7.22E-02
3	0	35	34	2279.20	1	6417.77	1.5582	0.0317	4.40E-02	7.96E-02	9.19E-02	9.02E-02	8.26E-02	7.32E-02