

GSFC OPERATIONS CONTROL CENTER SATELLITE SITUATION REPORT

VOL. 6, NO.14

JULY 31, 1966

GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

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GSFC OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 6, NO. 14

JULY 31, 1966

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED
BY THE GODDARD SPACE FLIGHT CENTER, NORAD, AND THE SMITHSONIAN
ASTROPHYSICAL OBSERVATORY AS OF 1200Z ON JULY 31, 1966

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1958 LAUNCHES									
ALPHA 1	EXPLORER 1	004	US	1 FEB	103.5	33.18	1504	339	
BETA 1	ROCKET BODY	016	US	17 MAR	138.4	34.26	4313	654	
BETA 2	VANGUARD 1	005	US	17 MAR	134.0	34.23	3938	650	
BETA 3		1576	US	17 MAR	132.6	34.24	3875	596	
1959 LAUNCHES									
ALPHA 1	VANGUARD 2	011	US	17 FEB	125.4	32.87	3285	555	
ALPHA 2	ROCKET BODY	012	US	17 FEB	129.6	32.90	3652	559	
ETA 1	VANGUARD 3	020	US	18 SEP	129.8	33.32	3713	513	
MU 1	LUNIK 1	112	USSR	2 JAN	HELIOCENTRIC ORBIT				
NU 1	PIONEER 4	113	US	3 MAR	HELIOCENTRIC ORBIT				
IOTA 1	EXPLORER 7	022	US	13 DEC	101.1	50.29	1071	553	
IOTA 2	ROCKET BODY	023	US	13 OCT	100.9	50.30	1047	552	
1960 LAUNCHES									
ALPHA 1	PIONEER 5	027	US	11 MAR	HELIOCENTRIC ORBIT				
BETA 1	ROCKET BODY	028	US	1 APR	99.1	48.37	738	692	
BETA 2	TIROS 1	029	US	1 APR	99.2	48.37	743	695	
BETA 3	NONE	101	US	1 APR	97.9	48.49	695	616	
BETA 4	NONE	115	US	1 APR	99.9	48.16	803	701	
GAMMA 2	TRANSIT 1B	031	US	13 APR	93.2	51.22	524	338	
GAMMA 4	NONE	099	US	13 APR	96.7	51.24	721	478	
ZETA 1	MIDAS 2	043	US	24 MAY	94.2	33.02	489	471	
ETA 1	TRANSIT 2A	045	US	22 JUN	101.6	66.69	1053	618	
ETA 2	GREB	046	US	22 JUN	101.6	66.69	1050	618	
ETA 3	ROCKET BODY	047	US	22 JUN	101.4	66.69	1035	615	
ETA 4		840	US	22 JUN	101.5	66.69	1045	618	
ETA 5		841	US	22 JUN	101.5	66.68	1043	616	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1960 LAUNCHES (CONT'D)									
IOTA 1	ECHO 1	049	US	12 AUG	112.6	47.23	1614	1079	
IOTA 2	ROCKET BODY	050	US	12 AUG	118.1	47.23	1683	1503	
IOTA 3	METAL OBJECT	051	US	12 AUG	118.2	47.23	1680	1523	
IOTA 4	METAL OBJECT	052	US	12 AUG	CURRENT ELEMENTS NOT MAINTAINED				
IOTA 5	METAL OBJECT	053	US	12 AUG	118.4	47.33	1686	1534	
NU 1	COURIER 1B	058	US	4 OCT	107.0	28.31	1208	966	
NU 2	ROCKET BODY	059	US	4 OCT	106.6	28.22	1212	919	
XI 1	EXPLORER 8	060	US	3 NOV	112.2	49.93	2238	416	
XI 2	ROCKET BODY	062	US	3 NOV	111.6	49.93	2185	418	
XI 3	NONE	069	US	3 NOV	108.1	49.38	1874	396	
XI 4	NONE	105	US	3 NOV	109.8	50.49	2008	421	
PI 1	TIROS 2	063	US	23 NOV	98.2	48.51	728	619	
PI 2	ROCKET BODY	064	US	23 NOV	98.1	48.50	719	612	
PI 3	NONE	074	US	23 NOV	98.1	48.52	719	619	
PI 4	NONE	075	US	23 NOV	98.3	48.51	732	620	
1961 LAUNCHES									
ALPHA 1	SAMOS 2	070	US	31 JAN	94.6	97.37	540	465	
ALPHA 2	METAL OBJECT	079	US	31 JAN	94.5	97.38	534	460	
GAMMA 1	VENUS PROBE	080	USSR	12 FEB	HELIOCENTRIC ORBIT				
DELTA 2	ROCKET BODY	082	US	16 FEB	118.5	38.84	2591	635	
DELTA 3	NONE	085	US	15 FEB	CURRENT ELEMENTS NOT MAINTAINED				
KAPPA 1	EXPLORER 10	098	US	25 MAR	POSITION UNCERTAIN				
NU 1	EXPLORER 11	107	US	27 APR	107.9	28.79	1771	486	
OMICRON 1	TRANSIT 4A	116	US	29 JUN	103.8	66.80	994	885	
OMICRON 2	INJUN-SR-3	117	US	29 JUN	103.8	66.82	998	882	
OMICRON 3-212**	METAL OBJECTS		US	29 JUN					\$54\$324\$150\$400
RHO 1	TIROS 3	162	US	12 JUL	100.4	47.88	815	739	
RHO 2	ROCKET BODY	165	US	12 JUL	100.3	47.89	809	738	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD .MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1961 LAUNCHES (CONT'D)										
RHO 3	METAL OBJECT	166	US	12 JUL	98.8	47.93	791	613		
RHO 4	METAL OBJECT	167	US	12 JUL	102.0	47.85	933	773		
SIGMA 1	MIDAS 3	163	US	12 JUL	161.5	91.23	3544	3347		
SIGMA 3	METAL OBJECT	188	US	12 JUL	161.1	91.21	3541	3323		
SIGMA 4	METAL OBJECT	196	US	12 JUL	161.9	91.22	3571	3353		
UPSILON 1	EXPLORER 12	170	US	16 AUG	CURRENT ELEMENTS NOT MAINTAINED					
A DELTA 1	MIDAS 4	192	US	21 OCT	166.0	95.88	3752	3501		
A DELTA 3	METAL OBJECT	194	US	21 OCT	165.6	95.86	3745	3476		
A DELTA 4	METAL OBJECT	195	US	21 OCT	166.4	95.88	3809	3478		
A DELTA 5		2009	US	21 OCT	165.7	95.86	3734	3500		
A DELTA 6		2371	US	21 OCT	165.7	95.39	4134	3095		
A ETA 1	TRANSIT 4B	202	US	15 NOV	105.8	32.42	1109	950		
A ETA 2	TRAAC	205	US	15 NOV	105.8	32.43	1108	952		
A ETA 3	ROCKET BODY	204	US	15 NOV	105.6	32.42	1099	946		
1962 LAUNCHES										
ALPHA 1	RANGER 3	221	US	26 JAN	HELIOCENTRIC ORBIT					
ALPHA 2	ROCKET BODY	222	US	26 JAN	HELIOCENTRIC ORBIT					
BETA 1	TIROS 4	226	US	8 FEB	100.4	48.30	839	712		
BETA 2	ROCKET BODY	227	US	8 FEB	101.3	48.13	944	700		
BETA 3	METAL OBJECT	228	US	8 FEB	99.5	48.41	761	703		
BETA 4	METAL OBJECT	229	US	8 FEB	100.3	48.29	834	709		
ZETA 1	ORB.SOL.OBS. 1	255	US	7 MAR	96.0	32.83	582	549		
ZETA 2	ROCKET BODY	257	US	7 MAR	95.9	32.83	582	541		
KAPPA 1		271	US	9 APR	153.0	86.65	3408	2789		
KAPPA 3		273	US	9 APR	152.6	86.66	3370	2795		
KAPPA 4		274	US	9 APR	153.3	86.64	3423	2802		
MU 2	ROCKET BODY	282	US	23 APR	HELIOCENTRIC ORBIT					
OMICRON 1	ARIEL	285	US/UK	26 APR	100.3	53.86	1153	388		
OMICRON 2	ROCKET BODY	288	US	26 APR	100.0	53.83	1136	385		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD M.UTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1962 LAUNCHES (CONT'D)										
A ALPHA 1	TIROS 5	309	US	19 JUN	100.5	58.14	963	599		
A ALPHA 2	ROCKET BODY	311	US	19 JUN	100.4	58.11	955	596		
A ALPHA 3	METAL OBJECT	312	US	19 JUN	101.7	58.20	1083	598		
A ALPHA 4	METAL OBJECT	313	US	19 JUN	99.1	57.99	849	580		
A EPSILON 1	TELSTAR 1	340	US	10 JUL	157.8	44.78	5644	943		
A EPSILON 2	ROCKET BODY	341	US	10 JUL	157.6	44.79	5630	944		
A OMICRON 1		369	US	23 AUG	99.5	98.69	855	619		
A OMICRON 2		370	US	23 AUG	98.2	98.59	746	601		
A OMICRON 3		378	US	23 AUG	100.8	98.78	971	621		
A OMICRON 4		388	US	23 AUG	99.5	98.69	853	619		
A RHO 1	MARINER 2	374	US	27 AUG	HELIOCENTRIC ORBIT					
A RHO 2	ROCKET BODY	375	US	27 AUG	HELIOCENTRIC ORBIT					
A PSI 1	TIROS 6	397	US	18 SEP	98.7	58.30	713	683		
A PSI 2	ROCKET BODY	398	US	18 SEP	98.6	58.30	706	681		
A PSI 3	METAL OBJECT	399	US	18 SEP	99.4	58.44	775	682		
A PSI 4	METAL OBJECT	400	US	18 SEP	98.0	58.19	689	638		
B ALPHA 1	ALOUETTE	424	CANADA	29 SEP	105.5	80.46	1035	1000	\$136.591\$136.078	
B ALPHA 2	ROCKET BODY	426	US	29 SEP	105.4	80.47	1028	1003		
B ALPHA 3	METAL OBJECT	510	US	29 SEP	105.4	80.51	1029	995		
B ALPHA 4	METAL OBJECT	511	US	29 SEP	105.5	80.46	1040	995		
B GAMMA 1	EXPLORER 14	432	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED					
B GAMMA 2#	ROCKET BODY	NNA	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED					
B ETA 1	RANGER 5	439	US	18 OCT	HELIOCENTRIC ORBIT					
B ETA 2	ROCKET BODY	440	US	18 OCT	HELIOCENTRIC ORBIT					
B KAPPA 1		444	US	26 OCT	116.9	71.33	2882	198		
B LAMBDA 1	EXPLORER 15	445	US	27 OCT	CURRENT ELEMENTS NOT MAINTAINED					
B LAMBDA 2#	ROCKET BODY	NNA	US	27 OCT	INSUFFICIENT OBSERVATIONS					
B MU 1	ANNA 1B	446	US	31 OCT	107.9	50.13	1182	1077	\$162\$324	
B MU 2	ROCKET BODY	447	US	31 OCT	107.6	50.17	1161	1072		
B NU 3		450	USSR	1 NOV	HELIOCENTRIC ORBIT					

OBJECTS IN ORBIT

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1962 LAUNCHES (CONT'D)									
B TAU 1		502	US	13 DEC	99.1	70.30	1213	220	
B TAU 2	INJUN 3	504	US	13 DEC	107.8	70.31	2014	236	
B TAU 5		513	US	13 DEC	99.0	70.24	1195	220	
B TAU 6		520	US	13 DEC	106.3	70.30	1874	234	
B UPSILON 1	RELAY 1	503	US	13 DEC	185.1	47.60	7419	1339	\$136.140;136.6
B UPSILON 2	ROCKET BODY	515	US	13 DEC	184.8	47.53	7416	1325	
B CHI 1	EXPLORER 16	506	US	16 DEC	104.4	52.01	1181	748	
B PSI 1	TRANSIT 5A	509	US	19 DEC	99.0	90.66	731	698	
B PSI 2		514	US	19 DEC	97.5	90.75	715	567	
B PSI 3		519	US	19 DEC	99.0	90.68	731	697	
B PSI 4		523	US	19 DEC	100.1	90.51	832	702	
1963 LAUNCHES									
1963 03A		527	US	16 JAN	94.3	81.90	513	457	
1963 04A	SYNCOM 1	553	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 04B	ROCKET BODY	532	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 05A		533	US	19 FEB	97.6	100.46	791	501	
1963 05B		534	US	19 FEB	97.7	100.47	794	502	
1963 05C		535	US	19 FEB	96.7	100.44	734	467	
1963 05D		536	US	19 FEB	98.2	100.51	828	524	
1963 08B		566	USSR	2 APR	BARYCENTRIC ORBIT				
1963 09A	EXPLORER 17	564	US	3 APR	91.6	57.60	468	239	
1963 13A	TELSTAR 2	573	US	7 MAY	225.3	42.74	10799	974	
1963 13B	ROCKET BODY	575	US	7 MAY	225.1	42.74	10783	973	
1963 14A		574	US	9 MAY	166.4	87.61	3649	3642	
1963 14B		579	US	9 MAY	166.4	87.24	4310	2978	
1963 14C		608	US	9 MAY	166.4	87.32	3705	3586	
1963 14D		589	US	9 MAY	CURRENT ELEMENTS NOT MAINTAINED				
1963 14E		602	US	9 MAY	166.1	87.33	3662	3600	

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1963 LAUNCHES (CONT'D)									
1963 14F		628	US	9 MAY	166.8	87.31	3665	3656	
1963 14G		629	US	9 MAY	166.4	87.32	3727	3562	
1963 14H		702	US	9 MAY	166.4	87.32	3687	3603	
1963 14J		2359	US	9 MAY	166.4	87.31	3786	3505	
1963 14K		2360	US	9 MAY	165.9	86.97	4863	2384	
1963 14L		2361	US	9 MAY	166.4	87.31	3882	3406	
1963 14M		2362	US	9 MAY	166.2	87.14	4494	2777	
1963 14N		2363	US	9 MAY	166.1	87.17	4560	2703	
1963 14P		2364	US	9 MAY	166.4	87.29	4020	3267	
1963 14Q		2365	US	9 MAY	166.4	87.26	4118	3172	
1963 14R		2366	US	9 MAY	166.1	87.09	4693	2575	
1963 14S		2367	US	9 MAY	166.0	87.04	4710	2545	
1963 14T		2372	US	9 MAY	166.4	87.30	4002	3288	
1963 14U		2373	US	9 MAY	165.9	87.06	4685	2567	
1963 14V		2374	US	9 MAY	166.1	87.07	4670	2588	
1963 14W		2375	US	9 MAY	166.1	87.15	4491	2769	
1963 14X		2377	US	9 MAY	166.3	87.25	4212	3071	
1963 22A		594	US	16 JUN	99.7	90.01	762	727	\$150 \$400
1963 22B		603	US	16 JUN	99.7	90.00	757	731	
1963 22C		610	US	16 JUN	101.2	90.20	888	744	
1963 22D		611	US	16 JUN	98.0	89.82	766	565	
1963 24A	TIROS 7	604	US	19 JUN	97.4	58.21	652	618	\$136.233\$136.924
1963 24B	ROCKET BODY	605	US	19 JUN	97.3	58.21	645	614	
1963 24C	METAL OBJECT	606	US	19 JUN	97.9	58.35	682	631	
1963 24D	METAL OBJECT	607	US	19 JUN	96.8	58.08	645	570	
1963 25B		614	US	27 JUN	131.9	82.14	4070	341	
1963 26A	RESEARCH SATELLITE FOR GEOPHYSICS	612	US	28 JUN	101.9	49.72	1286	414	
1963 27A		613	US	29 JUN	94.5	32.32	519	478	
1963 30A		622	US	18 JUL	167.8	88.43	3736	3669	

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1963 LAUNCHES (CONT'D)									
1963 30B		635	US	18 JUL	167.9	88.44	3741	3664	
1963 30C		630	US	18 JUL	167.5	88.43	3727	3649	
1963 30D		624	US	18 JUL	167.3	87.78	4713	2647	
1963 30E		631	US	18 JUL	168.3	88.44	3788	3651	\$136.467\$136.980
1963 31A	SYNCOM 2	634	US	26 JUL	1436.4	31.04	35824	35760	\$1814.069 \$1815.794 \$1820.177
ROCKET BODY									
1963 31B		625	US	26 JUL	CURRENT	ELEMENTS	NOT MAINTAINED		
1963 38A		669	US	28 SEP	107.1	89.91	1114	1073	
1963 38B		670	US	28 SEP	107.4	89.90	1136	1076	
1963 38C		671	US	28 SEP	107.3	89.91	1138	1072	
1963 38D		672	US	28 SEP	107.3	89.94	1147	1061	
1963 38E		745	US	28 SEP	107.1	89.90	1108	1077	
1963 38F		2097	US	28 SEP	107.3	89.92	1133	1075	
1963 39A		674	US	17 OCT	6484.8	37.69	117941	99687	
1963 39B		675	US	17 OCT	CURRENT	ELEMENTS	NOT MAINTAINED		
1963 39C		692	US	17 OCT	6513.9	36.59	115287	103030	
1963 43A	POLYOT 1	683	USSR	1 NOV	102.1	58.88	1385	334	
1963 43B		684	USSR	1 NOV	95.5	58.62	760	315	
1963 43D		686	USSR	1 NOV	96.0	59.82	796	328	
1963 46A	EXPLORER 18	693	US	27 NOV	CURRENT	ELEMENTS	NOT MAINTAINED		
1963 47A	CENTAUR 2	694	US	27 NOV	107.8	30.35	1770	476	
1963 47B		696	US	27 NOV	107.2	30.06	1597	593	
1963 47C		697	US	27 NOV	107.4	30.05	1626	583	
1963 47D		698	US	27 NOV	108.0	29.91	1656	611	
1963 47E		699	US	27 NOV	108.6	30.42	1736	583	
1963 47F		700	US	27 NOV	108.6	30.45	1753	571	
1963 47G		701	US	27 NOV	107.8	30.00	1641	608	
1963 47H		739	US	27 NOV	105.9	30.41	1576	493	

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1963 LAUNCHES (CONT'D)									
1963 47J		1994	US	27 NOV	108.8	30.51	1764	573	
1963 49A		703	US	5 DEC	106.8	89.95	1092	1068	
1963 49B		704	US	5 DEC	107.1	89.93	1124	1066	\$150\$400
1963 49C		705	US	5 DEC	107.1	89.95	1121	1067	
1963 49D		706	US	5 DEC	107.0	89.93	1113	1070	
1963 49E		715	US	5 DEC	107.1	89.94	1117	1068	
1963 49F		753	US	5 DEC	107.1	89.98	1115	1073	
1963 53A	EXPLORER 19	714	US	19 DEC	114.9	78.67	2245	656	
1963 53B		721	US	19 DEC	115.8	78.60	2399	591	
1963 53C		722	US	19 DEC	115.8	78.62	2374	611	
1963 53D		723	US	19 DEC	115.8	78.59	2379	606	
1963 53E		724	US	19 DEC	115.9	78.63	2382	610	
1963 53F		725	US	19 DEC	115.7	78.59	2374	602	
1963 53G		726	US	19 DEC	115.7	78.61	2382	599	
1963 53H		732	US	19 DEC	115.7	78.63	2362	618	
1963 54A	TIROS 8	716	US	21 DEC	99.4	58.48	755	700	\$136.231\$136.924
1963 54B		717	US	21 DEC	99.3	58.53	743	705	
1963 54C		720	US	21 DEC	101.1	58.47	921	698	
1963 54D		736	US	21 DEC	97.6	58.51	711	582	
1964 LAUNCHES									
1964 01A		727	US	11 JAN	103.4	69.90	933	912	
1964 01B	GGSE	728	US	11 JAN	103.4	69.91	931	913	
1964 01C	EGRS 1	729	US	11 JAN	103.4	69.91	935	909	
1964 01D	SOLAR RAD.	730	US	11 JAN	103.4	69.92	933	913	
1964 01E		731	US	11 JAN	103.5	69.92	932	913	
1964 02A		733	US	19 JAN	101.3	99.14	847	794	
1964 02B		734	US	19 JAN	101.3	99.08	831	808	
1964 02C		735	US	19 JAN	101.3	99.15	835	808	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLINATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1964 LAUNCHES (CONT'D)										
1964 03A	RELAY 2	737	US	21 JAN	194.7	46.31	7423	2077	136.620\$136.142	
1964 03B		738	US	21 JAN	194.8	46.32	7434	2072		
1964 04A	ECHO 2	740	US	25 JAN	107.8	81.50	1202	1044	136.019;136.170	
1964 04B		741	US	25 JAN	108.9	81.49	1310	1046		
1964 04C		742	US	25 JAN	108.8	81.51	1308	1041		
1964 04D		743	US	25 JAN	108.8	81.51	1309	1039		
1964 06A	ELEKTRON 1	746	USSR	30 JAN	169.2	60.91	7107	405		
1964 06B	ELEKTRON 2	748	USSR	30 JAN	1356.4	58.32	66149	2278		
1964 06C		750	USSR	30 JAN	167.7	60.87	6988	406		
1964 06D		751	USSR	30 JAN	1384.0	58.35	67175	2346		
1964 11A		759	US	28 FEB	94.5	82.06	500	487		
1964 15A	ARIEL 2	771	US/UK	27 MAR	98.4	51.63	1079	283		
1964 15B		775	US	27 MAR	97.1	51.67	953	279		
1964 15C		847	US	27 MAR	102.4	51.36	1375	367		
1964 16D		785	USSR	2 APR	HELIOCENTRIC ORBIT					
1964 26A		801	US	4 JUN	103.1	90.51	950	860	\$150\$400	
1964 26B		805	US	4 JUN	103.8	90.25	1004	878		
1964 26C		806	US	4 JUN	102.3	90.87	942	794		
1964 26D		809	US	4 JUN	103.1	90.52	951	859		
1964 31A		812	US	13 JUN	101.6	99.73	839	829		
1964 31B		813	US	18 JUN	101.6	99.76	845	825		
1964 31C		815	US	18 JUN	101.6	99.83	942	825		
1964 35A		824	US	2 JUL	94.7	82.08	522	491		
1964 38A	ELEKTRON 3	829	USSR	10 JUL	168.1	60.85	7015	405		
1964 38B	ELEKTRON 4	830	USSR	10 JUL	1313.8	58.86	65286	1431		
1964 38C		831	USSR	10 JUL	168.2	60.62	7014	417		
1964 38D		832	USSR	10 JUL	1341.3	58.92	66374	1448		
1964 40A		836	US	17 JUL	6025.9	38.69	103875	102754		
1964 40B		837	US	17 JUL	6006.3	40.37	116677	89475		
1964 40C		838	US	17 JUL	CURRENT ELEMENTS NOT MAINTAINED					

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1964 LAUNCHES (CONT'D)										
1964 41B		843	US	28 JUL	BARYCENTRIC ORBIT					
1964 45B		851	US	14 AUG	125.4	95.67	3574	271	\$136.470\$136.980	
1964 47A	SYNCOM 3	858	US	19 AUG	1436.7	.77	35804	35790	\$1820.177 \$1815.794 \$1814.931	
1964 47B		862	US	19 AUG	CURRENT ELEMENTS NOT MAINTAINED					
1964 49D	COSMOS 41	869	USSR	22 AUG	698.8	67.49	37952	1094		
1964 49E		898	USSR	22 AUG	717.9	68.45	39328	1040		
1964 51A	EXPLORER 20	870	US	25 AUG	103.9	79.91	1022	868		
1964 51B		871	US	25 AUG	103.8	79.90	1016	867		
1964 51C		873	US	25 AUG	103.0	79.82	952	847		
1964 51D		874	US	25 AUG	103.1	79.82	962	848		
1964 51E		875	US	25 AUG	103.1	79.84	984	825		
1964 52A	NIMBUS 1	872	US	28 AUG	98.2	98.70	917	429		
1964 52B		878	US	28 AUG	98.2	98.72	918	431		
1964 53A	COSMOS 44	876	USSR	28 AUG	99.5	65.06	853	618		
1964 53B		877	USSR	28 AUG	99.6	65.08	797	682		
1964 54A	OGO 1	879	US	5 SEP	3842.1	49.03	137681	12082	\$136.200\$400.250 \$400.850	
1964 60A	EXPLORER 21	889	US	4 OCT	CURRENT ELEMENTS NOT MAINTAINED					
1964 63A		893	US	6 OCT	106.3	89.89	1079	1036		
1964 63B		897	US	6 OCT	106.6	89.90	1079	1061		
1964 63C		900	US	6 OCT	106.6	89.89	1082	1055		
1964 63D		901	US	6 OCT	106.6	89.88	1086	1057		
1964 63E		902	US	6 OCT	106.6	89.90	1086	1055		
1964 63F		903	US	6 OCT	106.6	89.91	1078	1064	\$136.171\$162\$324 \$20\$40\$41\$360	
1964 64A	EXPLORER 22	899	US	10 OCT	104.8	79.70	1080	886		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1964 LAUNCHES (CONT'D)										
1964 64B		907	US	10 OCT	104.7	79.69	1079	889		
1964 64C		976	US	10 OCT	104.0	79.34	1062	840		
1964 64D		977	US	10 OCT	105.5	80.08	1130	907		
1964 72A		922	US	4 NOV	94.9	82.04	518	508		
1964 72B		925	US	4 NOV	94.6	82.02	503	493		
1964 73A	MARINER 3	923	US	5 NOV	HELIOCENTRIC ORBIT					
1964 74A	EXPLORER 23	924	US	6 NOV	99.2	51.95	973	465	136.709	
1964 76A	EXPLORER 24	931	US	21 NOV	115.1	81.51	2361	564	\$136.292\$136.860	
1964 76B	EXPLORER 25	932	US	21 NOV	116.2	81.35	2493	529		
1964 76C		933	US	21 NOV	116.2	81.35	2493	532		
1964 76D		934	US	21 NOV	116.3	81.27	2474	554		
1964 76E		935	US	21 NOV	116.1	81.39	2485	530		
1964 76F		936	US	21 NOV	114.9	81.29	2327	578		
1964 76G		937	US	21 NOV	116.0	81.36	2485	517		
1964 76H		939	US	21 NOV	114.5	81.32	2295	569		
1964 76I		940	US	21 NOV	116.0	81.30	2472	530		
1964 76J		941	US	21 NOV	116.1	81.21	2474	543		
1964 76K		960	US	21 NOV	116.5	81.47	2448	605		
1964 76L		1411	US	21 NOV	116.3	81.42	2479	550		
1964 77A	MARINER 4	938	US	28 NOV	HELIOCENTRIC ORBIT					
1964 77B		942	US	28 NOV	HELIOCENTRIC ORBIT					
1964 78C	ZOND 2	945	USSR	30 NOV	HELIOCENTRIC ORBIT					
1964 83A		953	US	13 DEC	106.0	89.96	1070	1016		
1964 83B		956	US	13 DEC	106.3	90.00	1089	1023		
1964 83C		959	US	13 DEC	106.3	89.97	1091	1023		
1964 83D		965	US	13 DEC	106.3	89.97	1091	1023		
1964 83E		966	US	13 DEC	106.3	89.96	1086	1028		
1964 83F		967	US	13 DEC	106.3	89.98	1088	1024		
1964 83G		1099	US	13 DEC	106.3	89.99	1088	1026		
1964 83H		1528	US	13 DEC	107.3	89.93	1142	1064	\$150\$400	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1964 LAUNCHES (CONT'D)										
1964 83J		1608	US	13 DEC	106.3	89.97	1089	1024		
1964 86A	EXPLORER 26	963	US	21 DEC	505.9	20.04	28575	819	136.273	
1965 LAUNCHES										
1965 03A		973	US	19 JAN	97.6	98.71	829	458		
1965 04A	TIROS 9	978	US	22 JAN	119.2	96.42	2583	706	\$136.234\$136.198	
1965 04B		979	US	22 JAN	119.3	96.44	2594	706		
1965 04C		1312	US	22 JAN	118.0	96.37	2513	674		
1965 04D		1313	US	22 JAN	120.4	96.37	2674	724		
1965 06A	COSMOS 53	983	USSR	30 JAN	90.2	48.69	361	190		
1965 07A	ORB. SOL. OBS. 2	987	US	3 FEB	96.5	32.85	626	549	\$136.713	
1965 07B		988	US	3 FEB	96.5	32.86	632	548		
1965 08A		1000	US	11 FEB	145.6	32.13	2799	2780		
1965 08B		1001	US	11 FEB	145.4	32.13	2790	2766		
1965 08C		1002	US	11 FEB	145.7	32.12	2807	2778		
1965 09A	PEGASUS 1	1085	US	16 FEB	97.0	31.75	723	499	\$136.410;136.890	
1965 09B		1088	US	16 FEB	97.1	31.75	732	499		
1965 10B		1087	US	17 FEB	BARYCENTRIC ORBIT					
1965 11A	COSMOS 54	1089	USSR	21 FEB	102.7	56.06	1513	262		
1965 11B	COSMOS 55	1090	USSR	21 FEB	102.5	56.04	1488	264		
1965 11C	COSMOS 56	1091	USSR	21 FEB	101.2	56.08	1374	260		
1965 11D		1092	USSR	21 FEB	104.9	56.06	1712	270		
1965 14A	COSMOS 58	1097	USSR	26 FEB	96.8	65.02	626	583		
1965 14B		1098	USSR	26 FEB	96.8	65.03	706	511		
1965 16A	GREB	1271	US	9 MAR	103.5	70.08	942	908		
1965 16B	GRAVITY GRADIENT II	1244	US	9 MAR	103.5	70.08	942	908		
1965 16C	GRAVITY GRADIENT III	1292	US	9 MAR	103.5	70.09	942	907		
1965 16D	SOLAR RAD.	1291	US	9 MAR	103.5	70.08	943	907		
1965 16E	EGRS III	1208	US	9 MAR	103.5	70.08	940	909	136.840	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1965 LAUNCHES (CONT'D)										
1965 16F	OSCAR III	1293	US	9 MAR	103.5	70.09	940	908		
1965 16G	SURCAL	1310	US	9 MAR	103.4	70.09	939	904		
1965 16H	DODECAHEDRON	1272	US	9 MAR	103.5	70.08	941	908		
1965 16J	ROCKET BODY	1245	US	9 MAR	103.5	70.10	944	903		
1965 17B	EGRS II	1250	US	11 MAR	96.6	89.98	916	281		
1965 17C		1228	US	11 MAR	96.2	89.98	869	277		
1965 17D		1248	US	11 MAR	96.1	90.00	858	281		
1965 20A	COSMOS 61	1267	USSR	15 MAR	102.1	56.04	1457	263		
1965 20B	COSMOS 62	1268	USSR	15 MAR	102.7	56.07	1511	262		
1965 20C	COSMOS 63	1269	USSR	15 MAR	101.2	56.06	1371	261		
1965 20D-20EJ***			USSR	15 MAR						
1965 21A		1273	US	18 MAR	97.5	98.98	756	527		
1965 21C		1289	US	18 MAR	97.5	98.98	755	527		
1965 21E		1376	US	18 MAR	96.4	98.98	651	520		
1965 21F		1463	US	18 MAR	98.6	99.01*	857	529		
1965 23B		1298	US	21 MAR	BARYCENTRIC ORBIT					
1965 27A		1314	US	3 APR	111.5	90.20	1321	1274		
1965 27B	EGRS IV	1315	US	3 APR	111.4	90.21	1318	1271		
1965 27C		1316	US	3 APR	111.5	90.23	1325	1267		
1965 27D		1389	US	3 APR	111.5	90.21	1320	1274		
1965 27E		1399	US	3 APR	111.5	90.18	1319	1276		
1965 28A	EARLY BIRD	1317	US	6 APR	1437.3	.13	36596	35025		
1965 28B	ROCKET BODY	1318	US	6 APR	CURRENT ELEMENTS NOT MAINTAINED					
1965 30A	MOLNIA 1	1324	USSR	23 APR	720.4	65.86	39470	991		
1965 30D		1967	USSR	23 APR	702.6	65.23	38603	999		
1965 31B		1329	US	28 APR	95.0	95.19	544	498		
1965 32A	EXPLORER 27	1328	US	29 APR	107.8	41.18	1314	937	\$136.740\$162\$324 \$20\$40\$41\$360	
1965 32B		1358	US	29 APR	107.8	41.18	1317	934		
1965 32C		1995	US	29 APR	106.7	41.08	1303	841		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1965 LAUNCHES (CONT'D)										
1965 32D		2011	US	29 APR	109.0	41.18	1294	1066		
1965 34A		1359	US	6 MAY	157.0	32.11	3740	2782		
1965 34B		1360	US	6 MAY	309.9	32.21	14798	2784		
1965 34C		1361	US	6 MAY	145.6	32.14	2800	2775		
1965 38A		1377	US	20 MAY	100.0	98.57	965	554		
1965 38B		1378	US	20 MAY	100.0	98.57	966	553		
1965 38C		1379	US	20 MAY	99.9	98.59	955	558		
1965 38E		1461	US	20 MAY	100.9	98.63	1053	556		
1965 38F		1462	US	20 MAY	98.9	98.55	864	552		
1965 38G		1475	US	20 MAY	100.1	98.55	978	553		
1965 39A	PEGASUS 2	1381	US	25 MAY	97.1	31.75	732	506	\$136.410;136.889	
1965 39B	ROCKET BODY	1385	US	25 MAY	97.2	31.76	732	513		
1965 42A	EXPLORER 28	1388	US	29 MAY	8558.8	33.86	264247	196	136.125	
1965 44A	LUNIK 6	1393	USSR	8 JUN	HELIOCENTRIC ORBIT					
1965 48A		1420	US	24 JUN	106.9	89.98	1142	1029		
1965 48B		1425	US	24 JUN	106.9	89.97	1138	1030		
1965 48C		1428	US	24 JUN	106.6	89.97	1110	1030		
1965 48D		1435	US	24 JUN	106.9	90.00	1141	1030		
1965 50A		1422	US	25 JUN	94.5	107.64	502	491		
1965 51A		1430	US	2 JUL	100.7	98.59	837	744	\$136.232\$136.924	
1965 51B	TIROS 10	1433	US	2 JUL	100.7	98.63	846	741		
1965 51C		1440	US	2 JUL	99.3	98.49	839	617		
1965 51D		1529	US	2 JUL	102.0	98.71	889	823		
1965 52A	COSMOS 70	1431	USSR	2 JUL	94.4	48.74	755	214		
1965 53A	COSMOS 71	1441	USSR	16 JUL	95.2	56.05	542	516		
1965 53B	COSMOS 72	1442	USSR	16 JUL	95.9	56.06	586	537		
1965 53C	COSMOS 73	1443	USSR	16 JUL	95.6	56.06	555	536		
1965 53D	COSMOS 74	1444	USSR	16 JUL	96.2	56.03	616	539		
1965 53E	COSMOS 75	1445	USSR	16 JUL	96.5	56.04	642	539		
1965 53F		1448	USSR	16 JUL	96.6	56.07	646	542		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1965 LAUNCHES (CONT'D)										
1965 53G		1449	USSR	16 JUL	94.8	56.04	522	492		
1965 53H		1473	USSR	16 JUL	96.6	56.03	654	537		
1965 53J		2338	USSR	16 JUL	95.2	56.09	546	511		
1965 55A		1447	US	17 JUL	94.3	70.17	506	466		
1965 56A	ZOND 3	1454	USSR	18 JUL	HELIOCENTRIC ORBIT					
1965 58A		1458	US	20 JUL	6709.8	34.70	117344	105583		
1965 58B		1459	US	20 JUL	6723.9	34.44	123142	100116		
1965 58C		1460	US	20 JUL	CURRENT ELEMENTS NOT MAINTAINED					
1965 60A	PEGASUS 3	1467	US	30 JUL	95.1	28.86	530	512	\$136.410;136.590	
1965 60B		1468	US	30 JUL	95.2	28.87	536	514		
1965 62B		1472	US	3 AUG	94.6	107.36	502	497		
1965 63A	EGRS 5	1506	US	10 AUG	122.2	69.23	2428	1134	136.840	
1965 63B		1502	US	10 AUG	122.2	69.23	2426	1137		
1965 64A	CENTAUR 6	1503	US	11 AUG	HELIOCENTRIC ORBIT					
1965 65A		1504	US	13 AUG	108.1	90.03	1190	1090		
1965 65B		1508	US	13 AUG	107.9	90.00	1159	1102		
1965 65C		1510	US	13 AUG	108.1	90.01	1194	1082		
1965 65D		1511	US	13 AUG	108.1	90.03	1193	1087		
1965 65E		1512	US	13 AUG	108.1	90.01	1197	1085		
1965 65F		1514	US	13 AUG	108.1	90.02	1198	1086		
1965 65G		1515	US	13 AUG	108.1	90.00	1188	1088		
1965 65H		1520	US	13 AUG	108.1	90.01	1194	1088		
1965 65J		1521	US	13 AUG	108.1	90.02	1195	1086		
1965 65K		1522	US	13 AUG	108.1	90.01	1197	1086		
1965 65L		1577	US	13 AUG	108.1	90.04	1196	1087		
1965 65M		2335	US	13 AUG	108.1	90.02	1199	1081		
1965 70A	COSMOS 80	1570	USSR	3 SEP	115.0	56.10	1549	1360		
1965 70B	COSMOS 81	1571	USSR	3 SEP	115.3	56.09	1553	1388		
1965 70C	COSMOS 82	1572	USSR	3 SEP	115.7	56.08	1564	1409		
1965 70D	COSMOS 83	1573	USSR	3 SEP	116.1	56.07	1566	1441		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PER IGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1965 LAUNCHES (CONT'D)										
1965 70E	COSMOS 84	1574	USSR	3 SEP	116.4	56.08	1571	1470		
1965 70F		1575	USSR	3 SEP	114.6	56.16	1518	1356		
1965 72A		1580	US	10 SEP	101.9	98.63	1054	649		
1965 72B		1581	US	10 SEP	100.4	98.91	947	610		
1965 72C		1582	US	10 SEP	100.8	98.85	973	615		
1965 72D		1583	US	10 SEP	101.9	98.63	1051	653		
1965 72E		1931	US	10 SEP	103.3	98.63	1189	645		
1965 72F		1932	US	10 SEP	100.7	98.62	935	650		
1965 73A	COSMOS 86	1584	USSR	18 SEP	115.1	56.10	1632	1285		
1965 73B	COSMOS 87	1585	USSR	18 SEP	115.5	56.04	1649	1304		
1965 73C	COSMOS 88	1586	USSR	18 SEP	115.8	56.10	1661	1326		
1965 73D	COSMOS 89	1587	USSR	18 SEP	116.2	56.08	1673	1351		
1965 73E	COSMOS 90	1588	USSR	18 SEP	116.7	56.09	1683	1379		
1965 73F		1589	USSR	18 SEP	116.8	56.05	1699	1376		
1965 73G		1590	USSR	18 SEP	116.5	56.07	1680	1368		
1965 73H		1591	USSR	18 SEP	116.7	56.03	1689	1375		
1965 73J		1617	USSR	18 SEP	117.5	56.11	1762	1376		
1965 73K		1618	USSR	18 SEP	117.7	56.17	1766	1389		
1965 78A		1613	US	5 OCT	125.6	144.30	3452	408		
1965 78B		1616	US	5 OCT	125.6	144.29	3443	412		
1965 80A	2nd MOLNIYA I	1621	USSR	13 OCT	716.6	64.93	39735	560	\$136.200\$400.250	
1965 81A	OGO 2	1620	US	14 OCT	104.3	87.36	1510	416	\$400.850	
1965 81B		1625	US	14 OCT	104.3	87.37	1503	418		
1965 82A	TITAN 3 C-4	1624	US	15 OCT	99.9	32.31	782	727		
1965 82B-82KE****			US	15 OCT						
1965 84E		2098	USSR	19 OCT	93.8	48.43	511	409	\$136.830\$162	
1965 89A	EXPLORER 29	1726	US	6 NOV	120.3	59.38	2272	1120	\$324\$972	
1965 89B		1729	US	6 NOV	120.3	59.40	2270	1120		
1965 91A	VENERA 2	1730	USSR	12 NOV	HELIOCENTRIC ORBIT					

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 92D		1736	USSR	16 NOV	HELIOCENTRIC ORBIT				
1965 93A	EXPLORER 30	1738	US	19 NOV	100.8	59.73	910	681	136.530
1965 93B		1739	US	19 NOV	100.8	59.71	881	708	
1965 93C		2013	US	19 NOV	100.3	59.67	849	696	
1965 93D		2088	US	19 NOV	101.4	59.74	924	726	
1965 95A	COSMOS 97	1777	USSR	26 NOV	103.7	48.47	1651	212	
1965 95B		1779	USSR	26 NOV	102.4	48.48	1520	214	
1965 96A	A-1	1778	FRENCH	26 NOV	108.7	34.24	1797	531	
1965 96B		1805	FRENCH	26 NOV	108.8	34.25	1809	526	
1965 96C		1938	FRENCH	26 NOV	105.1	34.23	1465	524	
1965 96D		1996	FRENCH	26 NOV	108.6	34.24	1793	527	
1965 98A	ALOUETTE	1804	CANADA	29 NOV	121.4	79.83	2983	508	\$136.080\$136.590 \$136.980
1965 98B	EXPLORER 31	1806	US	29 NOV	121.3	79.83	2968	508	\$136.380
1965 98C		1807	US	29 NOV	121.3	79.85	2976	508	
1965 98D		1808	US	29 NOV	121.3	79.84	2972	508	
1965 98E		1944	US	29 NOV	121.4	79.84	2985	507	
1965 98F		1948	US	29 NOV	121.4	79.90	2977	511	
1965 98G		1951	US	29 NOV	121.2	79.77	2969	505	
1965 98H		2092	US	29 NOV	121.4	79.85	2981	507	
1965 98J		2153	US	29 NOV	121.3	79.80	2979	501	
1965 101A	FR-1	1814	FRENCH	6 DEC	99.9	75.87	761	747	\$136.350;136.800
1965 101B		1815	US	6 DEC	100.0	75.90	767	754	
1965 101C		1934	US	6 DEC	99.9	76.47	781	731	
1965 101D		1935	US	6 DEC	99.5	75.26	777	698	
1965 105A	PIONEER 6	1841	US	16 DEC	HELIOCENTRIC ORBIT				
1965 105B		1842	US	16 DEC	99.5	30.17	1195	270	
1965 106A	COSMOS 100	1843	USSR	17 DEC	97.6	65.00	655	632	
1965 106B		1844	USSR	17 DEC	97.7	65.00	729	572	
1965 108A	TITAN 3 C-8	1863	US	21 DEC	CURRENT ELEMENTS NOT MAINTAINED				

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 108B	LES 4	1870	US	21 DEC	585.1	26.50	33520	216	
1965 108C	OSCAR IV	1902	US	21 DEC	CURRENT ELEMENTS NOT MAINTAINED				
1965 108D	LES 3	1941	US	21 DEC	365.6	26.27	16378	202	
1965 109A		1864	US	22 DEC	105.0	89.11	1086	908	
1965 109B		1865	US	22 DEC	105.0	89.11	1080	914	
1965 109C		2086	US	22 DEC	103.7	89.22	979	896	
1965 109D		2226	US	22 DEC	107.4	89.09	1308	905	
1965 109E		2353	US	22 DEC	105.5	89.38	1140	895	
1965 112A	COSMOS 103	1868	USSR	28 DEC	97.0	56.04	636	593	
1965 112B-112Q****			USSR	28 DEC					
1966 LAUNCHES									
1966 04A		1949	USSR	25 JAN	91.8	48.38	449	272	
1966 05A	COSMOS 106	1952	US	28 JAN	105.9	89.71	1216	862	
1966 05B		1953	US	28 JAN	105.9	89.70	1215	862	
1966 05C		2140	US	28 JAN	107.9	89.92	1395	865	
1966 05D		2141	US	28 JAN	104.5	89.75	1087	854	
1966 06D		2001	USSR	31 JAN	BARYCENTRIC ORBIT				
1966 08A	ESSA - 1	1982	US	3 FEB	100.3	97.91	845	702	\$136.230\$136.
1966 08B		1983	US	3 FEB	100.5	97.91	868	704	
1966 08C		2085	US	3 FEB	99.2	97.77	759	688	
1966 08D		2118	US	3 FEB	101.4	98.05	952	696	
1966 08E		2154	US	3 FEB	100.3	97.85	830	717	
1966 09A		1997	US.	9 FEB	94.7	82.08	510	505	
1966 09B		2003	US	9 FEB	94.0	82.07	472	470	
1966 09C		2004	US	9 FEB	94.0	82.10	472	469	
1966 11A	COSMOS 108	2002	USSR	11 FEB	93.0	48.85	623	213	
1966 13A	D-1A	2016	FRENCH	17 FEB	118.6	34.06	2734	503	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PER IGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 LAUNCHES (CONT'D)									
1966 13B		2017	FRENCH	17 FEB	118.7	34.05	2743	501	
1966 13C		2018	FRENCH	17 FEB	118.2	34.06	2685	504	
1966 13D		2020	FRENCH	17 FEB	116.2	34.08	2549	460	
1966 13E		2021	FRENCH	17 FEB	117.4	34.07	2624	498	
1966 13F		2023	FRENCH	17 FEB	117.7	34.02	2665	489	
1966 13G		2161	FRENCH	17 FEB	119.5	34.12	2811	506	
1966 16A	ESSA 2	2091	US	28 FEB	113.5	100.96	1417	1358	\$136.770
1966 16B		2096	US	28 FEB	113.5	100.96	1422	1355	\$137.500
1966 16C		2223	US	28 FEB	111.9	100.93	1384	1249	
1966 16D		2224	US	28 FEB	115.1	101.05	1572	1348	
1966 19A	GEMINI AGENA TARGET VEHICLE	2104	US	16 MAR	92.5	28.87	397	393	
1966 24A		2119	US	26 MAR	105.3	89.72	1123	897	
1966 24B		2120	US	26 MAR	105.3	89.74	1123	898	
1966 26A	OV1-4	2121	US	30 MAR	104.1	144.53	1012	888	
1966 25B	OV1-5	2122	US	30 MAR	105.6	144.66	1059	987	
1966 25C		2123	US	30 MAR	105.6	144.67	1061	984	
1966 25D		2124	US	30 MAR	104.1	144.53	1008	890	
1966 26A		2125	US	31 MAR	100.5	98.60	939	628	
1966 26B		2129	US	31 MAR	100.5	98.60	939	629	
1966 26C		2162	US	31 MAR	99.6	98.52	837	640	
1966 26D		2177	US	31 MAR	102.4	98.60	1116	828	
1966 26E		2178	US	31 MAR	98.7	98.61	768	630	
1966 26F		2179	US	31 MAR	98.7	98.64	906	635	
1966 27A	LUNA 10	2126	USSR	31 MAR	SELENOCENTRIC ORBIT				
1966 27D		2130	USSR	31 MAR	HELIOCENTRIC ORBIT				
1966 27E		2131	USSR	31 MAR	BARYCENTRIC ORBIT				
1966 27F		2132	USSR	31 MAR	BARYCENTRIC ORBIT				
1966 31A	OA0 1	2142	US	8 APR	100.9	35.03	804	792	136.440
									\$400.550

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 LAUNCHES (CONT'D)									
1966 31B		2144	US	8 APR	100.8	35.03	807	784	
1966 31C		2145	US	8 APR	100.9	34.02	805	790	
1966 34A	OV3-1	2150	US	22 APR	151.6	82.44	5734	351	
1966 34B		2167	US	22 APR	151.6	82.44	5725	354	
1966 34C		2208	US	22 APR	152.3	82.43	5773	369	
1966 34D		2209	US	22 APR	150.8	82.44	5680	338	
1966 35A	3rd MOLNIYA I	2151	USSR	25 APR	709.8	64.62	39250	701	
1966 36A	COSMOS 116	2152	USSR	26 APR	91.5	48.36	415	281	
1966 36B		2159	USSR	26 APR	90.3	48.36	303	257	
1966 38A	COSMOS 118	2168	USSR	11 MAY	97.1	65.01	655	588	
1966 38B		2169	USSR	11 MAY	97.0	64.99	682	550	
1966 39B		2172	US	14 MAY	95.3	109.95	555	518	
1966 40A	NIMBUS 2	2173	US	15 MAY	108.1	100.30	1179	1103	136.500\$136.950 \$137.200\$1707.5
1966 40B		2174	US	15 MAY	107.9	100.30	1171	1089	
1966 41A		2176	US	19 MAY	103.4	90.00	985	857	
1966 41B		2180	US	19 MAY	103.4	90.00	988	856	
1966 41C		2225	US	19 MAY	101.2	89.89	862	773	
1966 43A	COSMOS 119	2182	USSR	24 MAY	98.1	48.38	1113	208	
1966 44A	EXPLORER 32	2183	US	25 MAY	116.0	64.67	2719	281	\$136.320\$136.560
1966 44B		2184	US	25 MAY	115.7	64.67	2689	277	
1966 44C		2336	US	25 MAY	117.8	64.60	2825	335	
1966 45B		2187	US	30 MAY	BARYCENTRIC ORBIT				
1966 49A	OGO 3	2195	US	7 JUN	2915.2	31.39	122118	319	\$136.200\$400.250 \$400.850
1966 51A		2200	US	9 JUN	118.4	90.02	3169	176	
1966 51B	EGRS VI	2205	US	9 JUN	122.4	90.05	3391	173	136.800
1966 51C	ERS-16	2202	US	9 JUN	121.3	90.00	3264	178	&136.440
1966 52A		2201	US	10 JUN	143.2	40.83	4730	643	
1966 52B		2206	US	10 JUN	143.2	40.84	4732	643	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>	
1966 LAUNCHES (CONT'D)										
1966 53A		2207	US	16 JUN	1333.8	.17	33879	33642		
1966 53B		2215	US	16 JUN	1334.4	.02	33865	33679		
1966 53C		2216	US	16 JUN	1335.2	.04	33884	33691		
1966 53D		2217	US	16 JUN	1336.4	.01	33930	33692		
1966 53E		2218	US	16 JUN	1338.4	.01	33997	33708		
1966 53F		2219	US	16 JUN	1340.8	.06	34081	33719		
1966 53G		2220	US	16 JUN	1343.9	.10	34207	33715		
1966 53H		2221	US	16 JUN	1347.4	.04	34346	33718		
1966 53J		2222	US	16 JUN	CURRENT ELEMENTS NOT MAINTAINED					
1966 56A	PAGEOS 1	2253	US	24 JUN	181.4	87.02	4509	3967		
1966 56B	ROCKET BODY	2255	US	24 JUN	181.2	87.00	4262	4202		
1966 56C		2256	US	24 JUN	181.4	86.93	4269	4203		
1966 57A	COSMOS 122	2254	USSR	25 JUN	97.1	64.98	656	583		
1966 57B		2257	USSR	25 JUN	97.1	65.00	712	526		
1966 58A	EXPLORER 33	2258	US	1 JUL	8540.0	28.69	435425	15900	136.020	
1966 58B		2259	US	1 JUL	100.3	28.81	1350	181		
1966 58C		2260	US	1 JUL	CURRENT ELEMENTS NOT MAINTAINED					
1966 58D		2262	US	1 JUL	100.5	28.81	1186	202		
1966 58E		2263	US	1 JUL	100.8	28.76	1119	179		
1966 60A	PROTON 3	2290	USSR	6 JUL	92.2	63.49	535	185		
1966 60B		2293	USSR	6 JUL	91.4	63.47	483	177		
1966 61A	COSMOS 123	2295	USSR	8 JUL	92.1	48.78	495	257		
1966 61B		2296	USSR	8 JUL	92.0	48.82	472	252		
1966 63A	OV-8	2324	US	14 JUL	105.2	144.25	1031	971		
1966 63B		2327	US	14 JUL	105.3	144.27	1012	999		
1966 63C		2328	US	14 JUL	105.3	144.27	1015	995		
1966 63D		2329	US	14 JUL	105.5	144.27	1018	1010		
1966 63E		2337	US	14 JUL	105.3	144.25	1011	1004		
1966 65A	AGENA TARGET VEHICLE	2348	US	18 JUL	91.5	28.86	349	345		
1966 66C		2354	US	18 JUL	91.3	28.85	338	289		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 LAUNCHES (CONT'D)									
1966 66D		2355	US	18 JUL	92.4	28.88	390	386	
1966 66E		2356	US	18 JUL	92.5	28.85	386	385	
1966 66F		2357	US	18 JUL	91.4	28.87	380	298	
1966 66G		2358	US	18 JUL	90.0	28.85	279	279	
1966 67A	COSMOS 125	2351	USSR	20 JUL	88.8	65.02	207	188	
1966 68A	COSMOS 126	2368	USSR	28 JUL	90.5	51.78	344	209	
1966 68B		2369	USSR	28 JUL	89.6	51.77	311	201	
1966 69A		2376	US	28 JUL	88.5	94.09	247	159	

DECAYED OBJECTS

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1965 20CN		1542	USSR	15 MAR	31 JUL 66
1965 20CZ		1553	USSR	15 MAR	23 JUL 66
1965 20CT		1547	USSR	15 MAR	24 JUL 66
1965 20DR		1569	USSR	15 MAR	18 JUL 66
1965 55C		1455	US	17 JUL	24 JUL 66
1965 82FT		1909	US	15 OCT	19 JUL 66
1966 04B		1950	USSR	25 JAN	16 JUL 66
1966 59N		2307	US	5 JUL	19 JUL 66
1966 59Q		2309	US	5 JUL	15 JUL 66
1966 59R		2310	US	5 JUL	19 JUL 66
1966 59S		2311	US	5 JUL	16 JUL 66
1966 59T		2312	US	5 JUL	15 JUL 66
1966 59U		2313	US	5 JUL	15 JUL 66
1966 59V		2314	US	5 JUL	16 JUL 66
1966 59W		2315	US	5 JUL	16 JUL 66
1966 59X		2316	US	5 JUL	16 JUL 66
1966 59Y		2317	US	5 JUL	17 JUL 66
1966 59Z		2318	US	5 JUL	18 JUL 66
1966 59AA		2319	US	5 JUL	20 JUL 66
1966 59AB		2320	US	5 JUL	19 JUL 66
1966 59AC		2321	US	5 JUL	18 JUL 66
1966 59AD		2341	US	5 JUL	15 JUL 66
1966 59AE		2342	US	5 JUL	20 JUL 66
1966 59AF		2343	US	5 JUL	20 JUL 66
1966 59AG		2344	US	5 JUL	20 JUL 66
1966 59AH		2345	US	5 JUL	18 JUL 66
1966 59AJ		2346	US	5 JUL	19 JUL 66
1966 59AK		2347	US	5 JUL	19 JUL 66
1966 59AL		2352	US	5 JUL	22 JUL 66
1966 60C		2294	USSR	5 JUL	19 JUL 66
1966 62A		2322	US	6 JUL	19 JUL 66
				12 JUL	20 JUL 66

DECAYED OBJECTS

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1966 64A	COSMOS 124	2325	USSR	14 JUL	22 JUL 66
1966 64B		2326	USSR	14 JUL	19 JUL 66
1966 64C		2330	USSR	14 JUL	17 JUL 66
1966 64D		2331	USSR	14 JUL	16 JUL 66
1966 64E		2332	USSR	14 JUL	19 JUL 66
1966 66A	GEMINI 10	2349	US	18 JUL	21 JUL 66
1966 66B		2350	US	18 JUL	19 JUL 66
1966 68C		2370	USSR	28 JUL	30 JUL 66

FOLLOWING ARE THE INITIAL ELEMENTS OF OBJECTS WHOSE LAUNCH AND ORBIT DECAY OCCURED WITHIN THE REPORTING PERIOD:

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>PERIOD MINUTES</u>	<u>INCLI - NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 66A	GEMINI 10	2349	US	95.2	28.80	755	298	
1966 66B		2350	US	87.9	28.90	191	145	
1966 68C		2370	USSR	89.6	51.80	301	205	

* APHELION PERIOHELION IN ASTRONOMICAL UNITS, INCLINATION ECLIPTIC.
 ** TWO HUNDRED AND TEN METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961OMICRON 1 AND 1961OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
 *** ONE HUNDRED AND TWENTY SIX OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 20A, 1965 20B AND 1965 20C. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
 **** TWO HUNDRED AND FORTY FOUR OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 82A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
 ***** FOURTEEN OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 112A.
 § TRANSMITTING ON COMMAND ONLY.
 & TRANSMITTING WHEN IN SUNLIGHT ONLY.
 # NO CATALOGUE NUMBER ASSIGNED.