

FACILITY FORM 802

N66-23642
(ACCESSION NUMBER)

164
(PAGES)

CR-74329
(NASA CR OR TMX OR AD NUMBER)

(THRU)

(CODE)

13
(CATEGORY)

**DENSITY-ALTITUDE DATA
FROM 150 ROCKET FLIGHTS AND 26 SEARCHLIGHT PROBINGS,
1947 THROUGH 1964**

R. A. MINZNER

S. M. JACOBSON

GPO PRICE \$ _____

CFSTI PRICE(S) \$ _____

Hard copy (HC) 5.00

Microfiche (MF) 1.00



Bedford, Massachusetts

ff 653 July 65

L
CONTRACT NO. NASW-1225

PREPARED FOR
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
HEADQUARTERS
WASHINGTON, D. C.

JANUARY 1966

GCA Technical Report No. 66-4-N

DENSITY-ALTITUDE DATA
FROM 150 ROCKET FLIGHTS AND 26 SEARCHLIGHT PROBINGS, 1947 THROUGH 1964

R. A. Minzner
S. M. Jacobson

Contract No. NASW-1225

January 1966

GCA CORPORATION
GCA TECHNOLOGY DIVISION
Bedford, Massachusetts

Prepared for
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
Headquarters
Washington, D.C.

DENSITY-ALTITUDE DATA

FROM 150 ROCKET FLIGHTS AND 26 SEARCHLIGHT PROBINGS, 1947 THROUGH 1964

by

R. A. Minzner

S. M. Jacobson

GCA Corporation, GCA Technology Division
Bedford, Massachusetts

SUMMARY

2364/2

Tabulations of 217 density-altitude profiles measured in the altitude region between about 20 km and 220 km are presented. Three of these profiles consist of a single density-altitude value. One consists of 167 such values. Many of the profiles contain about 50 density-altitude values. These density altitude profiles have been measured at eleven land-based sites and at seven ship sites at sea over a period of about eighteen years, i.e., from March 1947 to February 1965. These tabulations generally do not include the results of the meteorological-rocket-network flights which are published elsewhere. A complete list of references indicates the origin of all the data.

INTRODUCTION

A knowledge of diurnal seasonal and latitudinal variation in atmospheric properties above 30 km (about 100,000 feet) altitude is becoming increasingly important for various flight and space-probe operations. The basic means of obtaining such knowledge is to study the atmospheric data gathered at various times and locations about the earth. Of the three observed thermodynamic properties of the atmosphere: temperature, pressure, and density, the density (mass density or number density) is commonly the more directly observed property, particularly at altitudes above 100 km (about 300,000 feet). In addition, it is the atmospheric property which most directly influences certain space operations such as reentry of a space vehicle. Consequently, the study of the variability of atmospheric density is of prime importance. To this end, the density data deduced from observations made during 150 rocket flights and 26 searchlight probing operations have been collected and are listed in this data report.

These data have been arranged chronologically in accordance with Greenwich Mean Time (GMT) of the rocket launch, or in accordance with the GMT of the midpoint of each searchlight probe operation. In many cases, a rocket flight yielded two or three density-altitude profiles in which case the several profiles are designated by the letters A, B, C, etc. after the minutes of the listed value of GMT, i.e., 06/06/61 21 48A. Such multiple

density-altitude profiles for the same rocket flight result most frequently from independent up-leg and down-leg observations. In other cases, the multiple density-altitude profiles result from two or more independent types of density sensors or from a combination of up and down-leg observations and two or more types of density sensors.

The listing of each density-altitude profile includes the following additional information: (1) the name of the location of the rocket launching facility or site, (2) the name of the measuring technique and (3) a reference number indicating the source of the data.

In a few instances a symbol (*, /, \$, or =) precedes the reference number to indicate the application of certain operations between the basic source and the data listed in this report. For example, in the data of 01/22/48 20 13, the symbol / preceding the reference number 12 indicates that the values presented graphically in the original reference were transferred to tabular data by the compilers of this document. A table immediately preceding the references at the end of this document lists the significance of each such symbol.

The densities in this report are given to only three significant figures even though the original data presented in the various references are, in some instances, given to 4 or more significant figures. The three-significant-figure format had been established on the basis of the first data listed on the punch cards and was retained when the other data was punched later. This is not a serious limitation since, at most, the error introduced by chopping the density data after three significant figures is 1.0 percent for a density value like $0.100 \text{ E-03 kg m}^{-3}$, and it may be as small as 0.1 percent for a density value like $0.999 \text{ E-03 kg m}^{-3}$. The uncertainty of observation in all probability is as great or greater. (The so-called E format employed in the listing of the density data is in keeping with digital-computer language where E-03, for example, indicates that the preceding digits are multiplied by 10^{-3}).

The altitudes are given in kilometers to the same number of significant figures as listed in the reference source. In some instances these altitude values were given to the nearest hundredth of a kilometer, as in the case of the data for 05/15-52 01 16, for which flight the greatest altitude of reported density data is 67.15 km. If such altitude values were to be chopped to the nearest tenth of a km, the uncertainties introduced into the density-altitude profile by this operation could be as large as about 1.4 percent which is slightly greater than the uncertainty introduced by chopping the density values to three significant figures.

The density-altitude data listed in this report are in some instances at variance with the data reported for the same observations in an earlier summary publications of density-altitude data by Quiroz [30] (containing only 69 density-altitude profiles). These differences result because in a number of instances, the principal investigators originally associated with the measurements have reworked the observations and have revised the resulting density-altitude values since the Quiroz publication.

In the case of 18 density-altitude profiles resulting from the work of Elterman, the originally published data are for particle number density versus altitude rather than for mass density versus altitude. The values published in this data report are for mass-density data, however, and are the values calculated by Quiroz [30] from the originally published number-density data. For these data, the altitudes are given to the nearest 0.1 km as in the listing of Quiroz rather than to the nearest 0.01 km after the manner of the basic data by Elterman.

Three different sets of data are given for each of the following times:

11/04/63 10 00

11/04/63 24 00

2/18/64 21 50

2/19/64 21 50

The sets labeled A and B are for the up-leg and down-leg data as reported graphically by Champion and Faire [3] in 1964 in the form of distinct points. The sets labeled C are for some sort of smoothed data for the same flights as presented by Champion [3a] in 1965, in a line graph where the distinction between up- and down-leg data has been eliminated and where other gross changes in the data have been made. No tabular values for these flights have been made available by Champion.

All data presented in this report are being analyzed for seasonal and latitudinal variations.

A significant part of the effort expended in gathering and in key punching the data, proof reading and correcting the master cards and programming the printout of the data has been supported by Contract NAS8-20098.

TABULATION
OF
DENSITY ALTITUDE DATA

GREENWICH MEAN TIME
DATE 03/07/47 HRS MIN 18 23

GREENWICH MEAN TIME
DATE 08/06/48 HRS MIN 01 37

LOCATION WHITE SANDS TECHNIQUE GAUGE REFERENCE 12

LOCATION WHITE SANDS TECHNIQUE GAUGE REFERENCE 12

ALTITUDE KM	DENSITY KG PER CUBIC M
156.	.200E-08
79.	.350E-04
78.	.420E-04
76.	.570E-04
75.	.630E-04
73.	.900E-04
71.	.114E-03
70.	.129E-03
69.	.151E-03

ALTITUDE KM	DENSITY KG PER CUBIC M
69.	.140E-03
68.	.170E-03
67.	.190E-03
66.	.210E-03
65.	.240E-03
64.	.260E-03
62.	.350E-03
61.	.390E-03

GREENWICH MEAN TIME
DATE 09/29/49 HRS MIN 16 58

LOCATION WHITE SANDS TECHNIQUE GAUGE REFERENCE * 12

GREENWICH MEAN TIME
DATE 01/22/48 HRS MIN 20 13

LOCATION WHITE SANDS TECHNIQUE GAUGE REFERENCE / 12

ALTITUDE KM	DENSITY KG PER CUBIC M
89.	.300E-05
85.	.700E-05
82.	.100E-04

ALTITUDE KM	DENSITY KG PER CUBIC M
158.	.140E-08
157.	.176E-08
150.	.100E-08
147.	.250E-08
146.	.100E-08
136.	.238E-08
124.	.128E-07
110.	.201E-06

GREENWICH MEAN TIME
DATE 05/11/50 HRS MIN 23 00

LOCATION WHITE SANDS TECHNIQUE GAUGE REFERENCE 12

ALTITUDE KM	DENSITY KG PER CUBIC M
66.	.200E-03
46.	.200E-02
43.	.250E-02
39.	.590E-02

GREENWICH MEAN TIME
DATE 06/20/50 HRS MIN 15 40

GREENWICH MEAN TIME
DATE 08/20/50 HRS MIN 07 00

LOCATION HOLLOMAN TECHNIQUE GAUGE REFERENCE \$ 04
ALBUQUERQUE LT SCATTER = 05

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
72.	.625E-04	58.60	.480E-03
70.	.883E-04	56.00	.673E-03
68.	.122E-03	51.00	.105E-02
66.	.166E-03	45.90	.206E-02
64.	.213E-03	41.50	.355E-02
62.	.274E-03	37.90	.576E-02
60.	.350E-03	34.10	.115E-01
58.	.449E-03	31.90	.163E-01
56.	.573E-03	29.70	.221E-01
54.	.731E-03	27.40	.331E-01
52.	.932E-03	24.40	.528E-01
50.	.119E-02	22.30	.769E-01
48.	.153E-02	20.50	.961E-01
46.	.196E-02	18.80	.129E 00
44.	.252E-02	17.40	.158E 00
42.	.327E-02	15.90	.192E 00
40.	.422E-02	14.60	.230E 00
38.	.423E-02	13.30	.274E 00
36.	.747E-02	11.90	.317E 00
34.	.103E-01	10.70	.370E 00
32.	.138E-01	9.30	.461E 00
30.	.186E-01		

GREENWICH MEAN TIME
 DATE HRS MIN
 09/08/50 07 00

GREENWICH MEAN TIME
 DATE HRS MIN
 09/10/50 07 00

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER = 05

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER = 05

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.326E-03
58.60	.480E-03
56.00	.673E-03
51.00	.105E-02
45.90	.201E-02
41.50	.375E-02
37.90	.576E-02
34.10	.100E-01
31.90	.139E-01
29.70	.197E-01
27.40	.293E-01
24.40	.471E-01
22.30	.673E-01
20.50	.100E 00
18.80	.129E 00
17.40	.168E 00
15.90	.206E 00
14.60	.254E 00
13.30	.288E 00
11.90	.346E 00
10.70	.394E 00
9.30	.442E 00

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.360E-03
58.60	.528E-03
56.00	.721E-03
51.00	.120E-02
45.90	.211E-02
41.50	.355E-02
37.90	.528E-02
34.10	.100E-01
31.90	.149E-01
29.70	.235E-01
27.40	.312E-01
24.40	.528E-01
22.30	.673E-01
20.50	.961E-01
18.80	.125E 00
17.40	.158E 00
15.90	.206E 00
14.60	.264E 00
13.30	.298E 00
11.90	.346E 00
10.70	.403E 00
9.30	.466E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 09/13/50 07 00

GREENWICH MEAN TIME
 DATE HRS MIN
 09/14/50 07 00

LOCATION TECHNIQUE REFERENCE LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER = 05 ALBUQUERQUE LT SCATTER = 05

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.240E-03
58.60	.341E-03
56.00	.437E-03
51.00	.817E-03
45.90	.144E-02
41.50	.283E-02
37.90	.528E-02
34.10	.865E-02
31.90	.134E-01
29.70	.177E-01
27.40	.269E-01
24.40	.451E-01
22.30	.625E-01
20.50	.865E-01
18.80	.115E 00
17.40	.158E 00
15.90	.225E 00
14.60	.269E 00
13.30	.326E 00
11.90	.394E 00
10.70	.456E 00
9.30	.528E 00

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.302E-03
58.60	.456E-03
51.00	.961E-03
45.90	.201E-02
41.50	.370E-02
37.90	.576E-02
34.10	.100E-01
31.90	.153E-01
29.70	.211E-01
27.40	.322E-01
24.40	.528E 00
22.30	.769E 00
20.50	.100E 01
18.80	.129E 01
17.40	.158E 01
15.90	.206E 01
14.60	.245E 01
13.30	.298E 01
11.90	.370E 01
10.70	.442E 01
9.30	.528E 00

GREENWICH MEAN TIME
DATE HRS MIN
10/12/50 07 00

GREENWICH MEAN TIME
DATE HRS MIN
10/14/50 07 00

LOCATION TECHNIQUE REFERENCE LOCATION TECHNIQUE REFERENCE
ALBUQUERQUE LT SCATTER = 05 ALBUQUERQUE LT SCATTER = 05

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.298E-03
58.60	.447E-03
56.00	.576E-03
51.00	.100E-02
45.90	.182E-02
41.50	.307E-02
37.90	.466E-02
34.10	.769E-02
31.90	.120E-01
29.70	.177E-01
27.40	.264E-01
24.40	.447E-01
22.30	.673E-01
20.50	.913E-01
18.80	.115E 00
17.40	.158E 00
15.90	.201E 00
14.60	.240E 00
13.30	.283E 00
11.90	.336E 00
10.70	.389E 00
9.30	.475E 00

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.331E-03
58.60	.480E-03
56.00	.625E-03
51.00	.961E-03
45.90	.158E-02
41.50	.254E-02
37.90	.384E-02
34.10	.769E-02
31.90	.110E-01
29.70	.158E-01
27.40	.235E-01
24.40	.408E-01
22.30	.625E-01
20.50	.817E-01
18.80	.120E 00
17.40	.144E 00
15.90	.192E 00
14.60	.235E 00
13.30	.288E 00
11.90	.355E 00
10.70	.403E 00
9.30	.475E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 11/16/50 07 00

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER = 05

ALTITUDE KM	DENSITY KG PER CUBIC M
61.80	.225E-03
58.60	.365E-03
56.00	.576E-03
51.00	.961E-03
45.90	.149E-02
41.50	.245E-02
37.90	.365E-02
34.10	.576E-02
31.90	.865E-02
29.70	.120E-01
27.40	.187E-01
24.40	.365E-01
22.30	.528E-01
20.50	.721E-01
18.80	.961E-01
17.40	.129E 00
15.90	.177E 00
14.60	.216E 00
13.30	.264E 00
11.90	.317E 00
10.70	.350E 00
9.30	.399E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 11/21/50 17 18

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS GAUGE / 12

ALTITUDE KM	DENSITY KG PER CUBIC M
110.	.129E-06

GREENWICH MEAN TIME
 DATE HRS MIN
 08/07/51 18 00

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS GAUGE 14

ALTITUDE KM	DENSITY KG PER CUBIC M
220.	.900E-10
210.	.110E-09
200.	.140E-09
190.	.180E-09
180.	.230E-09
170.	.300E-09
160.	.430E-09
150.	.660E-09
140.	.120E-08
130.	.330E-08
120.	.120E-07
110.	.500E-07
100.	.250E-06

GREENWICH MEAN TIME
 DATE HRS MIN
 09/13/51 11 37

LOCATION TECHNIQUE REFERENCE
 HOLLOMAN GAUGE \$ 04

ALTITUDE KM	DENSITY KG PER CUBIC M
60.	.365E-03
58.	.466E-03
56.	.594E-03
54.	.755E-03
52.	.960E-03
50.	.121E-02
48.	.153E-02
46.	.195E-02
44.	.246E-02
42.	.313E-02
40.	.403E-02
38.	.521E-02
36.	.723E-02
34.	.104E-01
32.	.142E-01
30.	.191E-01

GREENWICH MEAN TIME
DATE HRS MIN
05/15/52 01 16

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
67.15	.190E-03	57.62	.444E-03
66.97	.412E-03	57.35	.434E-03
66.78	.293E-03	57.08	.429E-03
66.59	.287E-03	56.81	.572E-03
66.40	.170E-03	56.54	.567E-03
66.21	.164E-03	56.27	.655E-03
66.02	.541E-04	56.00	.511E-03
65.82	.154E-03	55.72	.644E-03
65.62	.515E-04	55.45	.639E-03
65.42	.145E-03	55.17	.680E-03
65.01	.469E-04	54.89	.675E-03
64.80	.133E-03	54.62	.670E-03
64.59	.213E-03	54.34	.758E-03
64.37	.296E-03	54.06	.706E-03
64.16	.287E-03	53.78	.747E-03
63.94	.369E-03	53.50	.778E-03
63.72	.358E-03	53.22	.819E-03
63.50	.270E-03	52.93	.819E-03
63.28	.264E-03	52.65	.814E-03
63.05	.260E-03	52.37	.861E-03
62.83	.256E-03	52.08	.897E-03
62.60	.248E-03	51.80	.938E-03
62.37	.244E-03	51.51	.984E-03
62.13	.241E-03	51.23	.103E-02
61.90	.236E-03	50.94	.107E-02
61.66	.165E-03	50.66	.111E-02
61.42	.225E-03	50.38	.116E-02
61.18	.289E-03		
60.94	.405E-03		
60.69	.463E-03		
60.44	.394E-03		
60.19	.446E-03		
59.95	.380E-03		
59.69	.434E-03		
59.44	.370E-03		
59.18	.365E-03		
58.93	.360E-03		
58.67	.412E-03		
58.41	.459E-03		
58.15	.454E-03		
57.88	.449E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 05/30/52 08 22

GREENWICH MEAN TIME
 DATE HRS MIN
 06/14/52 05 42

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.203E-03
64.0	.232E-03
60.7	.335E-03
57.9	.538E-03
55.3	.624E-03
50.8	.960E-03
45.5	.189E-02
41.3	.372E-02
37.9	.471E-02
34.2	.965E-02
31.9	.139E-01
29.8	.192E-01
27.5	.275E-01
26.0	.354E-01
24.6	.455E-01
22.5	.614E-01
20.7	.806E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.143E-03
64.0	.288E-03
60.7	.359E-03
57.9	.442E-03
55.3	.590E-03
50.8	.108E-02
45.5	.190E-02
41.3	.318E-02
37.9	.477E-02
34.2	.907E-02
31.9	.132E-01
29.8	.179E-01
27.5	.261E-01
26.0	.337E-01
24.6	.422E-01
22.5	.605E-01
20.7	.888E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 06/16/52 06 45

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.162E-03
64.0	.242E-03
60.7	.323E-03
57.9	.453E-03
55.3	.595E-03
50.8	.955E-03
45.5	.177E-02
41.3	.387E-02
37.9	.571E-02
34.2	.912E-02
31.9	.131E-01
29.8	.178E-01
27.5	.252E-01
26.0	.323E-01
24.6	.406E-01
22.5	.571E-01
20.7	.922E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 06/22/52 06 00

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.145E-03
64.0	.171E-03
60.7	.308E-03
57.9	.445E-03
55.3	.552E-03
50.8	.859E-03
45.5	.171E-02
41.3	.348E-02
37.9	.533E-02
34.2	.902E-02
31.9	.132E-01
29.8	.182E-01
27.5	.263E-01
26.0	.344E-01
24.6	.432E-01
22.5	.586E-01
20.7	.864E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 06/23/52 06 00

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.139E-03
64.0	.194E-03
60.7	.235E-03
57.9	.381E-03
55.3	.652E-03
50.8	.941E-03
45.5	.192E-02
41.3	.334E-02
37.9	.518E-02
34.2	.931E-02
31.9	.129E-01
29.8	.176E-01
27.5	.261E-01
26.0	.342E-01
24.6	.450E-01
22.5	.614E-01
20.7	.854E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 08/03/52 10 17

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.219E-03
64.0	.282E-03
60.7	.387E-03
57.9	.456E-03
55.3	.562E-03
50.8	.998E-03
45.5	.175E-02
41.3	.310E-02
37.9	.514E-02
34.2	.902E-02
31.9	.129E-01
29.8	.175E-01
27.5	.258E-01
26.0	.332E-01
24.6	.422E-01
22.5	.595E-01
20.7	.821E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 09/18/52 04 32

GREENWICH MEAN TIME
 DATE HRS MIN
 09/19/52 06 47

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.200E-03
64.0	.229E-03
60.7	.334E-03
57.9	.412E-03
55.3	.643E-03
50.8	.888E-03
45.5	.188E-02
41.3	.323E-02
37.9	.528E-02
34.2	.907E-02
31.9	.130E-01
29.8	.179E-01
27.5	.258E-01
26.0	.331E-01
24.6	.421E-01
22.5	.590E-01
20.7	.845E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.168E-03
64.0	.170E-03
60.7	.342E-03
57.9	.468E-03
55.3	.576E-03
50.8	.979E-03
45.5	.190E-02
41.3	.212E-02
37.9	.595E-02
34.2	.979E-02
31.9	.137E-01
29.8	.189E-01
27.5	.271E-01
26.0	.352E-01
24.6	.441E-01
22.5	.605E-01
20.7	.950E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 09/25/52 06 07

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.990E-04
64.0	.157E-03
60.7	.257E-03
57.9	.387E-03
55.3	.485E-03
50.8	.859E-03
45.5	.165E-02
41.3	.321E-02
37.9	.504E-02
34.2	.893E-02
31.9	.133E-01
29.8	.184E-01
27.5	.269E-01
26.0	.339E-01
24.6	.418E-01
22.5	.586E-01
20.7	.864E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 09/26/52 06 35

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.158E-03
64.0	.213E-03
60.7	.315E-03
57.9	.406E-03
55.3	.533E-03
50.8	.912E-03
45.5	.174E-02
41.3	.320E-02
37.9	.514E-02
34.2	.907E-02
31.9	.130E-01
29.8	.182E-01
27.5	.265E-01
26.0	.346E-01
24.6	.433E-01
22.5	.619E-01
20.7	.888E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 9/27/52 07 35

GREENWICH MEAN TIME
 DATE HRS MIN
 10/11/52 03 35

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.192E-03
64.0	.230E-03
60.7	.299E-03
57.9	.406E-03
55.3	.590E-03
50.8	.926E-03
45.5	.184E-02
41.3	.308E-02
37.9	.504E-02
34.2	.888E-02
31.9	.128E-01
29.8	.172E-01
27.5	.258E-01
26.0	.328E-01
24.6	.423E-01
22.5	.605E-01
20.7	.826E-01

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.272E-03
64.0	.348E-03
60.7	.474E-03
57.9	.523E-03
55.3	.710E-03
50.8	.106E-02
45.5	.197E-02
41.3	.340E-02
37.9	.590E-02
34.2	.974E-02
31.9	.135E-01
29.8	.182E-01
27.5	.269E-01
26.0	.346E-01
24.6	.434E-01
22.5	.600E-01
20.7	.907E-01

GREENWICH MEAN TIME
DATE HRS MIN
10/12/52 03 00

GREENWICH MEAN TIME
DATE HRS MIN
10/17/52 04 30

LOCATION TECHNIQUE REFERENCE
ALBUQUERQUE LT SCATTER \$ 06

LOCATION TECHNIQUE REFERENCE
ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.214E-03
64.0	.303E-03
60.7	.542E-03
57.9	.614E-03
55.3	.687E-03
50.8	.111E-02
45.5	.202E-02
41.3	.371E-02
37.9	.600E-02
34.2	.984E-02
31.9	.139E-01
29.8	.187E-01
27.5	.270E-01
26.0	.354E-01
24.6	.452E-01
22.5	.619E-01
20.7	.893E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.164E-03
64.0	.276E-03
60.7	.273E-03
57.9	.385E-03
55.3	.423E-03
50.8	.878E-03
45.5	.172E-02
41.3	.312E-02
37.9	.533E-02
34.2	.922E-02
31.9	.129E-01
29.8	.185E-01
27.5	.262E-01
26.0	.343E-01
24.6	.434E-01
22.5	.605E-01
20.7	.893E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 10/19/52 03 40

GREENWICH MEAN TIME
 DATE HRS MIN
 10/22/52 09 55

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.132E-03
64.0	.217E-03
60.7	.381E-03
57.9	.457E-03
55.3	.653E-03
50.8	.946E-03
45.5	.200E-02
41.3	.339E-02
37.9	.538E-02
34.2	.926E-02
31.9	.132E-01
29.8	.182E-01
27.5	.268E-01
26.0	.345E-01
24.6	.423E-01
22.5	.595E-01
20.7	.874E-01

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.6	.143E-03
64.0	.192E-03
60.7	.269E-03
57.9	.444E-03
55.3	.581E-03
50.8	.912E-03
45.5	.178E-02
41.3	.326E-02
37.9	.518E-02
34.2	.902E-02
31.9	.129E-01
29.8	.178E-01
27.5	.253E-01
26.0	.327E-01
24.6	.413E-01
22.5	.581E-01
20.7	.878E-01

GREENWICH MEAN TIME
DATE HRS MIN
10/22/52 14 21

10/22/52 14 21 (Continued)

LOCATION TECHNIQUE REFERENCE
HOLLOMAN GAUGE 28

ALTITUDE DENSITY
KM KG PER CUBIC M
49.04 .100E-02
48.07 .192E-02
47.03 .129E-02
46.12 .144E-02
45.11 .162E-02

ALTITUDE DENSITY
KM KG PER CUBIC M
89.73 .310E-05
89.46 .350E-05
88.51 .450E-05
87.81 .560E-05
87.42 .560E-05
86.44 .700E-05
86.01 .730E-05
85.71 .730E-05
85.31 .800E-05
84.92 .870E-05
83.75 .120E-04
82.45 .130E-04
81.30 .150E-04
80.95 .170E-04
78.00 .260E-04
77.00 .310E-04
76.00 .350E-04
75.00 .410E-04
74.00 .460E-04
73.25 .520E-04
72.60 .580E-04
70.00 .820E-04
68.00 .107E-03
67.00 .123E-03
66.00 .137E-03
65.00 .152E-03
64.25 .176E-03
63.40 .186E-03
62.00 .218E-03
61.20 .244E-03
60.01 .277E-03
59.00 .312E-03
58.00 .359E-03
57.00 .410E-03
56.02 .419E-03
55.05 .512E-03
54.28 .558E-03
53.00 .629E-03
52.09 .709E-03
51.03 .783E-03
50.11 .890E-03

GREENWICH MEAN TIME
DATE HRS MIN
10/23/52 05 30

LOCATION TECHNIQUE REFERENCE
ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE DENSITY
KM KG PER CUBIC M
67.6 .204E-03
64.0 .256E-03
60.7 .346E-03
57.9 .444E-03
55.3 .566E-03
50.8 .100E-02
45.5 .186E-02
41.3 .334E-02
37.9 .538E-02
34.2 .926E-02
31.9 .132E-01
29.8 .179E-01
27.5 .262E-01
26.0 .337E-01
24.6 .420E-01
22.5 .590E-01
20.7 .864E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 12/11/52 23 47

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG 19

GREENWICH MEAN TIME
 DATE HRS MIN
 10/24/52 05 35

LOCATION TECHNIQUE REFERENCE
 ALBUQUERQUE LT SCATTER \$ 06

ALTITUDE KM	DENSITY KG PER CUBIC M
67.6	.168E-03
64.0	.266E-03
60.7	.396E-03
57.9	.469E-03
55.3	.619E-03
50.8	.107E-02
45.5	.192E-02
41.3	.343E-02
37.9	.552E-02
34.2	.955E-02
31.9	.135E-01
29.8	.186E-01
27.5	.270E-01
26.0	.350E-01
24.6	.437E-01
22.5	.610E-01
20.7	.893E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
75.39	.435E-04
75.02	.572E-05
74.64	.562E-05
74.26	.221E-04
72.33	.207E-04
71.94	.727E-04
71.54	.107E-03
71.14	.141E-03
70.74	.157E-03
70.34	.122E-03
69.94	.861E-04
69.53	.136E-03
69.13	.169E-03
68.72	.116E-03
68.31	.691E-04
67.90	.840E-04
67.48	.131E-03
67.07	.147E-03
66.65	.128E-03
66.23	.127E-03
65.81	.142E-03
65.39	.804E-04
64.11	.184E-04
63.67	.460E-04
63.24	.460E-04
62.80	.104E-03
62.37	.220E-03
61.93	.278E-03
61.48	.263E-03
61.04	.230E-03
60.60	.274E-03
60.16	.384E-03
59.71	.442E-03
59.27	.457E-03
58.83	.458E-03
58.38	.488E-03
57.94	.588E-03
57.50	.588E-03
57.06	.541E-03
56.62	.521E-03
56.17	.465E-03

12/11/52 23 47 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
55.74	.407E-03
55.29	.421E-03
54.85	.464E-03
54.41	.492E-03
53.97	.508E-03
53.53	.521E-03
53.09	.598E-03
52.65	.655E-03
52.21	.758E-03
51.78	.897E-03
51.34	.794E-03
50.91	.680E-03
50.48	.783E-03
50.05	.850E-03
49.62	.979E-03
49.19	.964E-03
48.77	.804E-03
48.35	.107E-02
47.93	.141E-02
47.52	.154E-02
47.10	.163E-02
46.70	.162E-02
46.30	.156E-02
45.91	.148E-02
45.51	.144E-02
45.13	.169E-02
44.74	.217E-02
44.36	.235E-02
43.99	.221E-02
43.63	.209E-02
43.27	.213E-02
42.92	.210E-02
42.57	.222E-02
42.22	.264E-02
41.88	.290E-02
41.55	.279E-02
41.22	.271E-02
40.90	.312E-02
40.59	.364E-02
40.29	.391E-02

ALTITUDE KM	DENSITY KG PER CUBIC M
39.99	.377E-02
39.70	.341E-02
39.41	.341E-02
39.13	.372E-02
38.86	.412E-02
38.59	.466E-02
38.33	.497E-02
38.08	.536E-02
37.84	.582E-02
37.60	.567E-02
37.37	.521E-02
37.14	.526E-02
36.92	.577E-02
36.71	.613E-02
36.50	.588E-02
36.30	.644E-02
36.10	.747E-02
35.91	.732E-02
35.72	.722E-02
35.53	.763E-02
35.35	.825E-02
35.18	.902E-02
35.01	.953E-02
34.84	.102E-01
34.68	.104E-01
34.52	.102E-01
34.37	.102E-01
34.22	.104E-01
34.07	.984E-02

GREENWICH MEAN TIME
DATE HRS MIN
04/23/53 19 33

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
80.84	.321E-04
80.39	.475E-04
79.94	.171E-04
79.03	.313E-04
78.57	.168E-04
77.64	.588E-04
76.23	.747E-04
75.75	.102E-03
75.28	.430E-04
74.32	.164E-04
73.84	.123E-03
73.35	.546E-04
72.87	.294E-04
72.38	.412E-04
71.89	.660E-04
71.39	.118E-03
70.90	.105E-03
70.40	.655E-04
69.90	.644E-04
69.40	.639E-04
68.90	.125E-03
68.40	.138E-03
67.89	.758E-04
67.39	.111E-03
66.88	.159E-03
66.36	.147E-03
65.85	.121E-03
65.34	.850E-04
64.82	.722E-04
64.31	.177E-03
63.73	.271E-03
63.27	.258E-03
62.75	.258E-03
62.22	.269E-03
61.71	.291E-03
61.19	.269E-03
60.66	.208E-03
60.14	.256E-03
59.62	.300E-03
59.09	.311E-03
58.57	.389E-03

ALTITUDE KM	DENSITY KG PER CUBIC M
58.04	.424E-03
57.52	.403E-03
57.00	.447E-03
56.47	.472E-03
55.95	.462E-03
55.43	.567E-03
54.91	.639E-03
54.39	.701E-03
53.87	.768E-03
53.36	.655E-03
52.85	.624E-03
52.34	.783E-03
51.83	.892E-03
51.33	.866E-03
50.83	.912E-03
50.33	.104E-02
49.83	.105E-02
49.34	.108E-02
48.86	.130E-02
48.38	.137E-02
47.90	.133E-02
47.43	.147E-02
46.96	.164E-02
46.51	.157E-02
46.05	.170E-02
45.60	.176E-02
45.17	.162E-02
44.73	.183E-02
44.30	.199E-02
43.88	.200E-02
43.46	.224E-02
43.05	.244E-02
42.65	.249E-02
42.25	.251E-02
41.87	.270E-02
41.49	.303E-02
41.11	.326E-02
40.75	.333E-02
40.40	.338E-02
40.05	.333E-02
39.72	.338E-02
39.39	.368E-02
39.06	.399E-02
38.75	.403E-02
38.44	.420E-02
38.15	.457E-02
37.86	.477E-02
37.58	.490E-02
37.30	.521E-02
37.04	.515E-02
36.78	.526E-02

GREENWICH MEAN TIME
DATE HRS MIN
09/29/53 20 50A

GREENWICH MEAN TIME
DATE HRS MIN
8/05/53 21 54

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG 19

LOCATION SHIP	TECHNIQUE GAUGE	REFERENCE 20	ALTITUDE KM	DENSITY KG PER CUBIC M
			53.63	.423E-03
			53.47	.768E-03
			53.32	.103E-02
			53.16	.835E-03
			53.00	.500E-03
			52.83	.979E-03
			52.66	.171E-02
			52.48	.180E-02
			52.30	.102E-02
			52.12	.335E-03
			51.93	.402E-03
			51.74	.701E-03
			51.55	.110E-02
			51.35	.137E-02
			51.15	.100E-02
			50.94	.789E-03
			50.72	.876E-03
			50.51	.923E-03
			50.29	.126E-02
			50.06	.141E-02
			49.82	.110E-02
			49.58	.923E-03
			49.33	.876E-03
			49.08	.112E-02
			48.82	.148E-02
			48.55	.140E-02
			48.28	.143E-02
			48.00	.147E-02
			47.70	.136E-02
			47.40	.150E-02
			47.09	.160E-02
			46.76	.144E-02
			46.42	.159E-02

LOCATION SHIP	TECHNIQUE GAUGE	REFERENCE 20	ALTITUDE KM	DENSITY KG PER CUBIC M
			44.	.252E-02
			40.	.430E-02
			36.	.760E-02
			32.	.139E-01
			28.	.262E-01
			24.	.483E-01
			20.	.880E-01

GREENWICH MEAN TIME
DATE HRS MIN
08/11/53 17 09

GREENWICH MEAN TIME
DATE HRS MIN
09/29/53 20 50B

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
53.15	.809E-03	46.38	.138E-02
53.01	.464E-03	46.21	.196E-02
52.86	.371E-03	46.04	.208E-02
52.71	.125E-02	45.87	.185E-02
52.56	.116E-02	45.70	.244E-02
52.40	.778E-03	45.53	.237E-02
52.25	.103E-02	45.36	.234E-02
52.10	.142E-02	45.20	.270E-02
51.94	.107E-02	45.03	.259E-02
51.78	.381E-03	44.87	.303E-02
51.62	.866E-03	44.70	.287E-02
51.46	.116E-02	44.54	.160E-02
51.30	.546E-03	44.38	.222E-02
51.14	.118E-02	44.22	.296E-02
50.97	.188E-02	44.06	.245E-02
50.81	.112E-02	43.90	.305E-02
50.65	.109E-02	43.74	.326E-02
50.48	.165E-02	43.58	.259E-02
50.31	.160E-02	43.42	.301E-02
50.15	.907E-03	43.27	.305E-02
49.98	.598E-03	43.11	.259E-02
49.81	.132E-02	42.96	.320E-02
49.64	.128E-02	42.81	.352E-02
49.47	.105E-02	42.66	.269E-02
49.30	.186E-02	42.50	.226E-02
49.12	.191E-02	42.35	.282E-02
48.95	.126E-02	42.20	.293E-02
48.78	.141E-02	42.05	.354E-02
48.61	.194E-02	41.90	.416E-02
48.44	.182E-02	41.75	.344E-02
48.27	.105E-02	41.61	.277E-02
48.10	.112E-02	41.46	.314E-02
47.92	.162E-02	41.32	.352E-02
47.75	.150E-02	41.17	.344E-02
47.58	.157E-02	41.03	.348E-02
47.40	.218E-02	40.88	.326E-02
47.23	.231E-02	40.74	.336E-02
47.06	.187E-02	40.60	.349E-02
46.89	.195E-02	40.46	.365E-02
46.72	.229E-02	40.32	.415E-02
46.55	.190E-02		

09/29/53 20 50B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
40.18	.410E-02	35.32	.804E-02
40.04	.414E-02	35.22	.758E-02
39.90	.403E-02	35.11	.835E-02
39.76	.388E-02	35.01	.933E-02
39.63	.442E-02	34.91	.964E-02
39.49	.441E-02	34.81	.912E-02
39.36	.450E-02	34.71	.794E-02
39.22	.466E-02	34.61	.665E-02
39.09	.432E-02	34.52	.727E-02
38.96	.479E-02	34.41	.108E-01
38.83	.572E-02	34.31	.134E-01
38.70	.536E-02	34.22	.118E-01
38.58	.428E-02	34.12	.881E-02
38.45	.376E-02	34.03	.830E-02
38.32	.417E-02	33.94	.995E-02
38.19	.577E-02	33.84	.108E-01
38.07	.562E-02	33.75	.840E-02
37.95	.443E-02	33.66	.902E-02
37.82	.546E-02	33.56	.118E-01
37.70	.613E-02	33.47	.109E-01
37.58	.562E-02	33.38	.113E-01
37.46	.593E-02	33.29	.132E-01
37.34	.608E-02	33.20	.129E-01
37.22	.428E-02	33.11	.122E-01
37.10	.634E-02	33.03	.964E-02
36.98	.680E-02	32.94	.959E-02
36.87	.618E-02	32.85	.137E-01
36.75	.655E-02	32.76	.149E-01
36.64	.588E-02	32.68	.132E-01
36.52	.608E-02	32.59	.126E-01
36.41	.696E-02	32.51	.128E-01
36.30	.691E-02	32.42	.144E-01
36.18	.680E-02	32.34	.164E-01
36.07	.716E-02	32.26	.138E-01
35.96	.727E-02	32.18	.127E-01
35.85	.722E-02	32.10	.148E-01
35.75	.722E-02	32.02	.152E-01
35.64	.716E-02	31.93	.145E-01
35.53	.747E-02	31.85	.155E-01
35.43	.819E-02	31.78	.159E-01
		31.70	.145E-01
		31.62	.151E-01
		31.54	.157E-01
		31.46	.155E-01
		31.39	.157E-01
		31.31	.162E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 07/19/54 16 00A

LOCATION TECHNIQUE REFERENCE
 SHIP GAUGE * 20

ALTITUDE	DENSITY
KM	KG PER CUBIC M
42.70	.290E-02
39.90	.410E-02
38.60	.510E-02
32.10	.130E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 07/19/54 16 00B

LOCATION TECHNIQUE REFERENCE
 SHIP GAUGE * 20

ALTITUDE	DENSITY
KM	KG PER CUBIC M
41.30	.330E-02
36.80	.640E-02
35.60	.780E-02
34.10	.960E-02
32.80	.120E-01
31.70	.140E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 07/25/54 18 45A

LOCATION TECHNIQUE REFERENCE
 SHIP GAUGE * 20

ALTITUDE	DENSITY
KM	KG PER CUBIC M
38.80	.540E-02
36.90	.670E-02
27.90	.250E-01
26.10	.340E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 07/25/54 18 45B

LOCATION TECHNIQUE REFERENCE
 SHIP GAUGE * 20

ALTITUDE	DENSITY
KM	KG PER CUBIC M
34.70	.900E-02
33.00	.120E-01
31.60	.140E-01
26.90	.290E-01
24.90	.420E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 06/24/55 18 04A

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
79.50	.224E-04
79.02	.253E-04
78.55	.249E-04
78.08	.265E-04
77.58	.294E-04
77.08	.274E-04
76.56	.319E-04
76.12	.347E-04
75.61	.342E-04
75.08	.387E-04
74.59	.414E-04
74.07	.456E-04
73.54	.515E-04
73.01	.526E-04
71.97	.680E-04
71.44	.747E-04
70.90	.727E-04
70.36	.819E-04
69.83	.886E-04
69.26	.964E-04
68.69	.100E-03
68.14	.118E-03
67.58	.115E-03
67.06	.125E-03
66.47	.145E-03
65.90	.140E-03
65.31	.157E-03
64.74	.173E-03
64.15	.187E-03
63.56	.198E-03
62.96	.219E-03
62.35	.213E-03
61.76	.279E-03
61.14	.298E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 06/24/55 18 04B

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
78.27	.247E-04	54.88	.572E-03
77.82	.302E-04	54.25	.644E-03
77.34	.234E-04	53.62	.665E-03
76.89	.301E-04	52.99	.758E-03
76.42	.390E-04	52.35	.825E-03
75.91	.279E-04	51.71	.984E-03
75.45	.434E-04	51.07	.979E-03
74.96	.349E-04	50.41	.101E-02
74.48	.403E-04	49.75	.123E-02
73.98	.504E-04	49.11	.132E-02
73.49	.541E-04	48.47	.151E-02
72.98	.567E-04	47.80	.137E-02
72.49	.716E-04	47.14	.150E-02
71.96	.557E-04	45.82	.207E-02
71.46	.665E-04	45.15	.197E-02
70.94	.742E-04	44.50	.222E-02
70.43	.716E-04	43.80	.233E-02
69.36	.866E-04	43.13	.276E-02
68.83	.101E-03	42.48	.338E-02
67.77	.118E-03	41.79	.281E-02
67.21	.123E-03	41.13	.320E-02
66.65	.129E-03	40.46	.350E-02
66.11	.151E-03	39.81	.475E-02
65.55	.164E-03	39.11	.498E-02
64.98	.162E-03	38.44	.446E-02
64.43	.178E-03	37.78	.551E-02
63.86	.209E-03	37.13	.670E-02
63.29	.206E-03	36.49	.644E-02
62.72	.239E-03	35.22	.902E-02
62.14	.251E-03	33.99	.969E-02
61.54	.255E-03	32.79	.111E-01
60.91	.318E-03	32.22	.122E-01
60.37	.300E-03	31.07	.164E-01
59.77	.331E-03	30.52	.180E-01
59.18	.385E-03		
58.56	.384E-03		
57.96	.417E-03		
57.35	.456E-03		
56.74	.485E-03		
56.12	.521E-03		
55.50	.551E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 07/06/56 18 00A

GREENWICH MEAN TIME
 DATE HRS MIN
 7/06/56 18 00B

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
WALLOPS	DRAG	19	WALLOPS	DRAG	19

ALTITUDE	DENSITY
KM	KG PER CUBIC M
86.67	.836E-05
85.20	.880E-05
82.03	.249E-04
81.26	.239E-04
80.49	.207E-04
79.71	.188E-04
78.10	.292E-04
77.26	.394E-04
76.44	.431E-04
74.79	.505E-04
73.94	.699E-04
73.13	.631E-04
72.25	.823E-04
71.39	.110E-03
70.52	.138E-03
69.62	.191E-03
68.79	.119E-03
67.93	.761E-04
67.01	.174E-03
65.20	.201E-03
64.29	.165E-03
62.42	.312E-03
61.47	.247E-03

ALTITUDE	DENSITY
KM	KG PER CUBIC M
72.90	.839E-04
72.06	.800E-04
70.41	.105E-03
68.73	.125E-03
67.90	.135E-03
67.04	.161E-03
66.20	.178E-03
65.34	.203E-03
64.48	.231E-03
63.62	.251E-03
62.75	.305E-03
61.87	.326E-03
61.00	.367E-03
60.11	.407E-03
58.32	.479E-03
57.43	.615E-03
56.52	.675E-03
55.61	.691E-03
52.82	.941E-03
50.93	.121E-02
49.03	.148E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 10/23/56 08 40

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
62.60	.178E-03
61.47	.208E-03
60.32	.243E-03
59.17	.287E-03
58.01	.336E-03
56.84	.392E-03
55.66	.471E-03
54.47	.555E-03
53.27	.644E-03
52.05	.759E-03
50.84	.898E-03
49.60	.106E-02
48.37	.126E-02
47.12	.148E-02
45.86	.176E-02
44.59	.210E-02
43.31	.256E-02
42.02	.311E-02
40.72	.381E-02
39.41	.461E-02
38.10	.563E-02
36.77	.679E-02
35.43	.829E-02
34.08	.100E-01
32.72	.123E-01
31.35	.149E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/02/56 18 40A

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
81.39	.203E-04
80.57	.152E-04
79.69	.236E-04
75.24	.365E-04
71.45	.449E-04
64.45	.940E-04

GREENWICH MEAN TIME
 DATE HRS MIN
 11/02/56 18 40B

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
75.12	.355E-04
72.44	.708E-04
71.52	.486E-04
70.59	.392E-04
68.76	.642E-04
67.84	.772E-04
65.96	.111E-03
65.01	.122E-03
64.03	.174E-03
63.09	.186E-03
62.10	.190E-03
61.12	.207E-03
59.13	.288E-03
58.13	.293E-03
57.11	.337E-03
56.11	.383E-03
55.09	.423E-03
54.08	.492E-03
53.05	.580E-03
52.00	.705E-03
50.96	.789E-03
49.90	.923E-03

11/02/56 18 40B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
48.85	.106E-02
46.73	.137E-02
45.65	.158E-02
44.58	.185E-02
43.51	.218E-02
42.44	.256E-02
41.36	.294E-02
40.30	.344E-02
39.25	.401E-02
38.17	.470E-02
37.12	.551E-02
36.06	.656E-02
35.02	.770E-02
33.99	.904E-02
32.98	.107E-01
31.97	.124E-01
30.99	.144E-01
30.04	.174E-01
29.10	.200E-01
26.48	.306E-01
25.70	.348E-01
24.96	.401E-01
24.28	.445E-01
23.65	.487E-01
23.05	.545E-01
22.48	.621E-01
21.93	.664E-01
20.96	.800E-01
20.52	.861E-01
20.13	.922E-01
19.76	.100E 00
19.42	.106E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 11/04/56 18 54A

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
90.23	.285E-05
89.02	.510E-05
87.90	.470E-05
86.78	.389E-05
85.58	.544E-05
84.37	.597E-05
83.23	.527E-05
81.95	.852E-05
80.77	.827E-05
79.50	.126E-04

GREENWICH MEAN TIME
 DATE HRS MIN
 11/04/56 18 54B

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
87.77	.470E-05
85.79	.520E-05
84.78	.538E-05
82.76	.536E-05
81.79	.863E-05
79.74	.160E-04
78.54	.152E-04
76.18	.186E-04
75.03	.254E-04
73.87	.256E-04
72.74	.459E-04
71.57	.463E-04
70.39	.490E-04
68.06	.703E-04
66.87	.797E-04
65.71	.870E-04
64.52	.131E-03
63.33	.158E-03

11/04/56 18 54B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
62.13	.179E-03
60.92	.184E-03
59.72	.205E-03
58.51	.307E-03
57.31	.318E-03
56.09	.396E-03
54.87	.571E-03
53.63	.488E-03
52.38	.578E-03
51.16	.684E-03
49.94	.775E-03
48.74	.934E-03
47.52	.114E-02
46.28	.135E-02
45.07	.160E-02
43.85	.189E-02
42.64	.229E-02
41.42	.261E-02
40.22	.318E-02
39.00	.394E-02
37.79	.488E-02
36.60	.592E-02
34.28	.857E-02
31.97	.124E-01
30.89	.156E-01
29.80	.190E-01
28.78	.212E-01
27.81	.247E-01
26.85	.304E-01
21.14	.856E-01
20.67	.922E-01
20.24	.994E-01
19.84	.105E 00
19.48	.111E 00
19.14	.117E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 11/10/56 15 17A

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
79.12	.142E-04
77.91	.180E-04
76.68	.152E-04
75.45	.232E-04
74.19	.312E-04
71.68	.431E-04
69.10	.535E-04
67.77	.638E-04
66.44	.788E-04
65.06	.119E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 11/10/56 15 17B

LOCATION TECHNIQUE REFERENCE
 SHIP DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
89.96	.742E-05
86.85	.812E-05
85.80	.848E-05
84.70	.611E-05
83.75	.167E-04
81.60	.207E-04
80.49	.217E-04
79.37	.208E-04
77.09	.186E-04
75.97	.287E-04
74.80	.242E-04
73.59	.282E-04
72.50	.382E-04
71.33	.398E-04
66.61	.812E-04
65.41	.955E-04
64.18	.109E-03
62.97	.120E-03
59.29	.211E-03

11/10/56 15 17B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
58.04	.245E-03
55.53	.311E-03
54.25	.396E-03
52.99	.452E-03
51.70	.548E-03
50.41	.668E-03
49.11	.774E-03
47.80	.965E-03
46.46	.122E-02
45.15	.140E-02
43.81	.172E-02
42.48	.211E-02
41.17	.252E-02
39.84	.308E-02
38.54	.369E-02
37.22	.455E-02
35.93	.564E-02
34.68	.664E-02
33.44	.835E-02
32.20	.104E-01
30.96	.128E-01
29.75	.158E-01
28.60	.190E-01
26.52	.270E-01
22.91	.485E-01
20.28	.753E-01
19.76	.840E-01
19.27	.913E-01
18.82	.978E-01
18.41	.106E 00
18.05	.111E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 11/12/56 11 57

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
59.	.261E-03
58.	.294E-03
57.	.326E-03
56.	.361E-03
55.	.403E-03
54.	.453E-03
53.	.521E-03
52.	.601E-03
51.	.692E-03
50.	.792E-03
49.	.892E-03
48.	.102E-02
47.	.117E-02
46.	.135E-02
45.	.156E-02
44.	.180E-02
43.	.208E-02
42.	.240E-02
41.	.278E-02
40.	.321E-02
39.	.377E-02
38.	.444E-02
37.	.524E-02
36.	.609E-02
35.	.706E-02
34.	.826E-02
33.	.985E-02
32.	.115E-01
31.	.136E-01
30.	.160E-01
29.	.189E-01
28.	.223E-01
27.	.265E-01
26.	.311E-01
25.	.365E-01
24.	.427E-01
23.	.500E-01
22.	.586E-01
21.	.685E-01
20.	.802E-01
19.	.937E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/17/56 16 48A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 01

ALTITUDE KM	DENSITY KG PER CUBIC M
39.	.428E-02
38.	.500E-02
36.	.678E-02
34.	.924E-02
32.	.126E-01
30.	.172E-01
28.	.236E-01
26.	.321E-01
24.	.437E-01
22.	.595E-01
20.	.811E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/17/56 16 48B

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 20A

ALTITUDE KM	DENSITY KG PER CUBIC M
195.	.400E-09

GREENWICH MEAN TIME
 DATE HRS MIN
 11/21/56 05 21

LOCATION TECHNIQUE REFERENCE
 CHURCHILL MASS SPEC / 21

ALTITUDE KM	DENSITY KG PER CUBIC M
210.	.310E-10
205.	.320E-10
200.	.350E-10
195.	.370E-10
190.	.410E-10
185.	.460E-10
180.	.540E-10
175.	.640E-10
170.	.850E-10
165.	.120E-09
160.	.190E-09
155.	.300E-09
150.	.500E-09
140.	.160E-08
135.	.290E-08
130.	.600E-08
120.	.290E-07
110.	.100E-06

GREENWICH MEAN TIME
DATE HRS MIN
7/22/57 04 16

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
83.	.142E-04
82.	.170E-04
81.	.202E-04
80.	.240E-04
79.	.284E-04
78.	.336E-04
77.	.397E-04
76.	.466E-04
75.	.546E-04
74.	.638E-04
73.	.743E-04
72.	.863E-04
71.	.999E-04
70.	.114E-03
69.	.131E-03
68.	.150E-03
67.	.171E-03
66.	.195E-03
65.	.220E-03
64.	.247E-03
63.	.277E-03
62.	.312E-03
61.	.351E-03
60.	.395E-03
59.	.444E-03
58.	.499E-03
57.	.559E-03
56.	.627E-03
55.	.705E-03
54.	.793E-03
53.	.892E-03
52.	.100E-02
51.	.112E-02
50.	.126E-02
49.	.141E-02
48.	.159E-02
47.	.180E-02
46.	.204E-02
45.	.232E-02
44.	.264E-02
43.	.301E-02

7/22/57 04 16 (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
42.	.344E-02
41.	.393E-02
40.	.451E-02
39.	.517E-02
38.	.594E-02
37.	.684E-02
36.	.789E-02
35.	.912E-02
34.	.105E-01
33.	.123E-01
32.	.143E-01
31.	.167E-01
30.	.194E-01
29.	.227E-01
28.	.264E-01
27.	.308E-01
26.	.359E-01
25.	.420E-01
24.	.490E-01

GREENWICH MEAN TIME
DATE HRS MIN
7/24/57 05 29

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE	DENSITY
KM	KG PER CUBIC M
82.	.179E-04
81.	.213E-04
80.	.252E-04
79.	.298E-04
78.	.350E-04
77.	.410E-04
76.	.477E-04
75.	.553E-04
74.	.637E-04
73.	.733E-04
72.	.840E-04
71.	.961E-04
70.	.109E-03
69.	.124E-03
68.	.140E-03
67.	.158E-03
66.	.179E-03
65.	.203E-03
64.	.230E-03
63.	.260E-03
62.	.294E-03
61.	.331E-03
60.	.373E-03
59.	.421E-03
58.	.475E-03
57.	.535E-03
56.	.601E-03
55.	.675E-03
54.	.758E-03
53.	.850E-03
52.	.956E-03
51.	.108E-02
50.	.122E-02
49.	.139E-02
48.	.158E-02
47.	.179E-02
46.	.204E-02
45.	.233E-02
44.	.266E-02
43.	.306E-02
42.	.351E-02

7/24/57 05 29 (continued)

ALTITUDE	DENSITY
KM	KG PER CUBIC M
41.	.404E-02
40.	.461E-02
39.	.525E-02
38.	.598E-02
37.	.684E-02
36.	.786E-02
35.	.902E-02
34.	.103E-01
33.	.120E-01
32.	.139E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 7/29/57 22 00A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 01

ALTITUDE KM	DENSITY KG PER CUBIC M
82.	.157E-04
80.	.215E-04
78.	.290E-04
76.	.405E-04
74.	.571E-04
72.	.764E-04
70.	.984E-04
69.	.113E-03
68.	.134E-03
67.	.152E-03
66.	.177E-03
65.	.199E-03
64.	.227E-03
62.	.298E-03
61.	.337E-03
60.	.385E-03
58.	.485E-03
56.	.607E-03
54.	.760E-03
52.	.958E-03
50.	.125E-02
48.	.163E-02
46.	.206E-02
44.	.265E-02
43.	.307E-02
42.	.344E-02
40.	.450E-02
39.	.532E-02
38.	.599E-02
36.	.804E-02
34.	.109E-01
32.	.147E-01
30.	.198E-01
28.	.267E-01
26.	.364E-01
24.	.490E-01
22.	.666E-01
20.	.912E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 07/29/57 22 00B

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 15

ALTITUDE KM	DENSITY KG PER CUBIC M
210.	.620E-09
200.	.700E-09
190.	.790E-09
180.	.890E-09
170.	.110E-08
160.	.140E-08
150.	.190E-08
140.	.300E-08
130.	.640E-08
120.	.260E-07
110.	.130E-06
100.	.720E-06

GREENWICH MEAN TIME
DATE HRS MIN
8/12/57 16 00

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE	DENSITY
KM	KG PER CUBIC M
64.	.218E-03
63.	.248E-03
62.	.281E-03
61.	.319E-03
60.	.361E-03
59.	.408E-03
58.	.461E-03
57.	.523E-03
56.	.591E-03
55.	.664E-03
54.	.745E-03
53.	.839E-03
52.	.946E-03
51.	.107E-02
50.	.121E-02
49.	.136E-02
48.	.154E-02
47.	.174E-02
46.	.195E-02
45.	.220E-02
44.	.251E-02
43.	.289E-02
42.	.333E-02
41.	.385E-02
40.	.443E-02
39.	.509E-02
38.	.586E-02
37.	.675E-02
36.	.780E-02
35.	.903E-02
34.	.104E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 08/20/57 02 30

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
81.	.189E-04
80.	.223E-04
79.	.264E-04
78.	.310E-04
77.	.363E-04
76.	.424E-04
75.	.494E-04
74.	.574E-04
73.	.664E-04
72.	.767E-04
71.	.883E-04
70.	.100E-03
69.	.113E-03
68.	.128E-03
67.	.144E-03
66.	.164E-03
65.	.185E-03
64.	.209E-03
63.	.235E-03
62.	.266E-03
61.	.302E-03
60.	.343E-03
59.	.388E-03
58.	.437E-03
57.	.491E-03
56.	.551E-03
55.	.619E-03
54.	.694E-03
53.	.777E-03
52.	.877E-03
51.	.990E-03
50.	.111E-02
49.	.127E-02
48.	.145E-02
47.	.166E-02
46.	.190E-02
45.	.217E-02
44.	.248E-02
43.	.283E-02
42.	.323E-02
41.	.371E-02

08/20/57 02 30 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
40.	.425E-02
39.	.488E-02
38.	.566E-02
37.	.659E-02
36.	.768E-02
35.	.886E-02
34.	.102E-01
33.	.118E-01
32.	.136E-01

GREENWICH MEAN TIME
DATE HRS MIN
08/25/57 14 08

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
88.	.443E-05
87.	.530E-05
86.	.632E-05
85.	.759E-05
84.	.913E-05
83.	.109E-04
82.	.132E-04
81.	.158E-04
80.	.189E-04
79.	.225E-04
78.	.267E-04
77.	.316E-04
76.	.374E-04
75.	.440E-04
74.	.515E-04
73.	.602E-04
72.	.701E-04
71.	.808E-04
70.	.925E-04
69.	.105E-03
68.	.120E-03
67.	.136E-03
66.	.153E-03
65.	.173E-03
64.	.194E-03
63.	.218E-03
62.	.246E-03
61.	.280E-03
60.	.317E-03
59.	.359E-03
58.	.407E-03
57.	.461E-03
56.	.522E-03
55.	.591E-03
54.	.670E-03
53.	.758E-03
52.	.858E-03
51.	.973E-03
50.	.110E-02
49.	.125E-02
48.	.142E-02

08/25/57 14 08 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
47.	.161E-02
46.	.183E-02
45.	.210E-02
44.	.240E-02
43.	.276E-02
42.	.317E-02
41.	.364E-02
40.	.421E-02
39.	.486E-02
38.	.563E-02
37.	.653E-02
36.	.756E-02
35.	.876E-02
34.	.101E-01
33.	.117E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 09/01/57 22 28

GREENWICH MEAN TIME
 DATE HRS MIN
 11/13/57 11 52

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
CHURCHILL	GAUGE	29	WOOMERA	SOUND	9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
71.09	.742E-04
69.80	.934E-04
68.50	.117E-03
67.18	.144E-03
65.86	.178E-03
64.53	.216E-03
63.18	.264E-03
61.83	.314E-03
60.47	.380E-03

ALTITUDE	DENSITY
KM	KG PER CUBIC M
68.7	.119E-03
66.9	.145E-03
65.1	.179E-03
59.2	.361E-03
51.0	.954E-03
49.0	.122E-02
42.2	.297E-02
40.5	.371E-02

GREENWICH MEAN TIME
DATE HRS MIN
12/12/57 04 00

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
76.	.231E-04
75.	.260E-04
74.	.291E-04
73.	.309E-04
72.	.327E-04
71.	.374E-04
70.	.432E-04
69.	.501E-04
68.	.574E-04
67.	.658E-04
66.	.755E-04
65.	.873E-04
64.	.101E-03
63.	.117E-03
62.	.135E-03
61.	.157E-03
60.	.182E-03
59.	.210E-03
58.	.242E-03
57.	.279E-03
56.	.317E-03
55.	.360E-03
54.	.408E-03
53.	.461E-03
52.	.521E-03
51.	.595E-03
50.	.679E-03
49.	.775E-03
48.	.885E-03
47.	.101E-02
46.	.115E-02
45.	.131E-02
44.	.150E-02
43.	.175E-02
42.	.204E-02
41.	.238E-02
40.	.279E-02
39.	.328E-02
38.	.387E-02
37.	.456E-02
36.	.537E-02

12/12/57 04 00 (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
35.	.634E-02
34.	.751E-02
33.	.890E-02
32.	.105E-01
31.	.125E-01
30.	.150E-01
29.	.179E-01
28.	.215E-01
27.	.255E-01
26.	.303E-01
25.	.359E-01
24.	.423E-01
23.	.498E-01
22.	.585E-01
21.	.686E-01

GREENWICH MEAN TIME
DATE HRS MIN
12/14/57 21 00

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
86.	.468E-05
85.	.544E-05
84.	.633E-05
83.	.735E-05
82.	.852E-05
81.	.987E-05
80.	.114E-04
79.	.132E-04
78.	.152E-04
77.	.175E-04
76.	.202E-04
75.	.232E-04
74.	.266E-04
73.	.305E-04
72.	.349E-04
71.	.398E-04
70.	.454E-04
69.	.517E-04
68.	.590E-04
67.	.673E-04
66.	.766E-04
65.	.875E-04
64.	.102E-03
63.	.120E-03
62.	.142E-03
61.	.165E-03
60.	.187E-03
59.	.212E-03
58.	.240E-03
57.	.272E-03
56.	.309E-03
55.	.349E-03
54.	.395E-03
53.	.449E-03
52.	.509E-03
51.	.577E-03
50.	.660E-03
49.	.758E-03
48.	.872E-03
47.	.100E-02
46.	.116E-02

12/14/57 21 00 (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
45.	.134E-02
44.	.155E-02
43.	.181E-02
42.	.213E-02
41.	.250E-02
40.	.295E-02
39.	.347E-02
38.	.408E-02
37.	.480E-02
36.	.566E-02
35.	.668E-02
34.	.789E-02
33.	.934E-02
32.	.110E-01
31.	.131E-01
30.	.156E-01

GREENWICH MEAN TIME

DATE

HRS MIN

01/25/58

19 12B

LOCATION	TECHNIQUE	REFERENCE
CHURCHILL	DRAG	19

ALTITUDE KM	DENSITY KG PER CUBIC M
90.13	.364E-05
89.04	.432E-05
87.87	.337E-05
86.84	.605E-05
85.72	.647E-05
84.56	.554E-05
83.49	.914E-05
82.35	.101E-04
81.17	.913E-05
80.01	.128E-04
78.84	.148E-04
77.64	.158E-04
76.48	.229E-04
75.25	.241E-04
74.03	.276E-04
72.82	.381E-04
71.60	.418E-04
70.35	.474E-04
69.12	.621E-04
66.60	.779E-04
65.33	.979E-04
64.04	.106E-03
62.75	.128E-03
61.44	.153E-03
60.10	.174E-03
58.80	.211E-03
57.47	.247E-03
56.15	.287E-03
54.80	.344E-03
53.44	.430E-03
52.09	.535E-03
50.68	.652E-03
49.29	.792E-03
47.90	.908E-03
46.50	.115E-02
45.07	.140E-02
43.66	.176E-02
42.33	.220E-02
40.86	.278E-02
39.46	.352E-02
38.04	.434E-02

01/25/58 19 12B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
36.64	.552E-02
35.25	.693E-02
33.89	.895E-02
31.24	.141E-01
29.97	.176E-01
28.75	.220E-01
24.54	.422E-01
23.67	.481E-01
22.86	.543E-01
21.44	.684E-01
20.83	.736E-01
20.27	.827E-01
19.27	.101E 00
18.84	.106E 00
18.44	.113E 00

GREENWICH MEAN TIME

DATE

HRS MIN

01/25/58

19 12A

LOCATION	TECHNIQUE	REFERENCE
CHURCHILL	DRAG	19

ALTITUDE KM	DENSITY KG PER CUBIC M
97.46	.335E-05
86.26	.517E-05
85.10	.604E-05
83.88	.780E-05
82.75	.739E-05
81.56	.982E-05
80.38	.106E-04
79.19	.128E-04
77.94	.168E-04
75.50	.245E-04
74.25	.321E-04
71.75	.409E-04
70.49	.514E-04
69.23	.550E-04
67.95	.681E-04
65.36	.946E-04
64.05	.110E-03
61.38	.152E-03
60.02	.181E-03
57.28	.243E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 01/27/58 06 04

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
86.	.555E-05
85.	.632E-05
84.	.719E-05
83.	.815E-05
82.	.925E-05
81.	.104E-04
80.	.118E-04
79.	.134E-04
78.	.156E-04
77.	.181E-04
76.	.212E-04
75.	.247E-04
74.	.286E-04
73.	.331E-04
72.	.384E-04
71.	.439E-04
70.	.501E-04
69.	.572E-04
68.	.653E-04
67.	.746E-04
66.	.851E-04
65.	.971E-04
64.	.110E-03
63.	.126E-03
62.	.144E-03
61.	.164E-03
60.	.187E-03
59.	.214E-03
58.	.244E-03
57.	.279E-03
56.	.318E-03
55.	.362E-03
54.	.413E-03
53.	.473E-03
52.	.542E-03
51.	.622E-03
50.	.714E-03
49.	.823E-03
48.	.949E-03
47.	.109E-02
46.	.126E-02

01/27/58 06 04 (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
45.	.146E-02
44.	.170E-02
43.	.200E-02
42.	.234E-02
41.	.276E-02
40.	.325E-02
39.	.384E-02
38.	.454E-02
37.	.538E-02
36.	.638E-02
35.	.759E-02
34.	.905E-02
33.	.107E-01
32.	.127E-01
31.	.149E-01
30.	.176E-01
29.	.207E-01
28.	.244E-01
27.	.289E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 01/27/58 18 48A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
87.	.557E-05
86.	.634E-05
85.	.720E-05
84.	.815E-05
83.	.920E-05
82.	.103E-04
81.	.116E-04
80.	.133E-04
79.	.153E-04
78.	.176E-04
77.	.203E-04
76.	.237E-04
75.	.277E-04
74.	.326E-04
73.	.374E-04
72.	.428E-04
71.	.489E-04
70.	.558E-04
69.	.636E-04
68.	.725E-04
67.	.824E-04
66.	.930E-04
65.	.104E-03
64.	.117E-03
63.	.132E-03
62.	.150E-03
61.	.171E-03
60.	.194E-03
59.	.221E-03
58.	.252E-03
57.	.287E-03
56.	.326E-03
55.	.372E-03
54.	.425E-03
53.	.485E-03
52.	.555E-03
51.	.634E-03
50.	.725E-03
49.	.830E-03
48.	.951E-03
47.	.109E-02

01/27/58 18 48A (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
46.	.126E-02
45.	.147E-02
44.	.170E-02
43.	.198E-02
42.	.230E-02
41.	.271E-02
40.	.320E-02
39.	.379E-02
38.	.452E-02
37.	.539E-02
36.	.642E-02
35.	.766E-02
34.	.916E-02
33.	.109E-01
32.	.129E-01
31.	.152E-01
30.	.178E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 01/27/58 18 48B

01/27/58 18 48B (Continued)

LOCATION TECHNIQUE REFERENCE
 CHURCHILL DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
90.33	.172E-05
89.20	.215E-05
88.07	.321E-05
86.96	.421E-05
85.80	.454E-05
84.62	.461E-05
83.46	.526E-05
81.11	.852E-05
79.90	.988E-05
78.68	.109E-04
77.45	.121E-04
76.20	.140E-04
74.96	.172E-04
73.70	.229E-04
72.43	.293E-04
71.13	.342E-04
69.84	.394E-04
67.20	.591E-04
65.85	.709E-04
64.51	.894E-04
63.13	.101E-03
60.39	.141E-03
58.98	.175E-03
53.30	.364E-03
51.85	.450E-03
50.41	.550E-03
48.94	.683E-03
47.46	.799E-03
45.99	.997E-03
44.50	.123E-02
42.99	.147E-02
41.49	.182E-02
39.99	.222E-02
36.99	.379E-02
35.50	.474E-02
34.02	.665E-02
32.54	.835E-02
29.71	.128E-01
27.06	.246E-01
25.83	.294E-01
24.69	.377E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
23.62	.451E-01
22.66	.546E-01
21.00	.797E-01
20.31	.995E-01
19.70	.904E-01
19.16	.108E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 1/27/58 19 18

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
69.5	.610E-04
68.0	.770E-04
67.5	.850E-04
65.5	.120E-03
64.5	.124E-03
63.5	.140E-03
62.5	.150E-03
61.5	.200E-03
59.0	.270E-03
57.5	.320E-03

GREENWICH MEAN TIME
DATE HRS MIN
01/29/58 19 06B

LOCATION TECHNIQUE REFERENCE
CHURCHILL DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
99.77	.225E-05
98.50	.220E-05
97.29	.341E-05
93.37	.414E-05
90.68	.380E-05
89.35	.509E-05
88.05	.799E-05
86.66	.798E-05
85.27	.860E-05
82.50	.119E-04
81.07	.142E-04
79.68	.228E-04
78.23	.267E-04
76.78	.297E-04
75.31	.334E-04
73.84	.414E-04
72.34	.529E-04
70.86	.706E-04
69.35	.902E-04
64.74	.172E-03
63.17	.203E-03
61.60	.241E-03
60.03	.297E-03
58.42	.376E-03
56.83	.479E-03
55.22	.585E-03
53.59	.712E-03
51.98	.849E-03
50.33	.978E-03
48.68	.118E-02
47.04	.140E-02
45.38	.169E-02
43.74	.205E-02
42.09	.252E-02
40.44	.299E-02
38.81	.368E-02
37.18	.473E-02
33.97	.848E-02
32.42	.112E-01
30.90	.150E-01
29.44	.185E-01

01/29/58 19 06B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
28.06	.247E-01
26.76	.316E-01
24.44	.442E-01
22.52	.569E-01
21.69	.646E-01
20.94	.721E-01
19.66	.870E-01
19.12	.969E-01
18.63	.103E 00
18.18	.106E 00

GREENWICH MEAN TIME
DATE HRS MIN
01/29/58 19 06A

LOCATION TECHNIQUE REFERENCE
CHURCHILL DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
86.69	.727E-05
85.21	.776E-05
82.16	.124E-04
77.54	.237E-04
74.38	.474E-04
69.59	.845E-04

GREENWICH MEAN TIME
 DATE HRS MIN
 02/22/58 02 02

LOCATION TECHNIQUE REFERENCE
 CHURCHILL MASS SPEC / 21

ALTITUDE KM	DENSITY KG PER CUBIC M
215.	.970E-10
210.	.120E-09
205.	.140E-09
200.	.150E-09
195.	.180E-09
190.	.195E-09
185.	.220E-09
180.	.280E-09
175.	.340E-09
170.	.420E-09
165.	.580E-09
160.	.800E-09
155.	.120E-08
150.	.190E-08
145.	.310E-08
140.	.500E-08
135.	.800E-08
130.	.130E-07
125.	.290E-07
120.	.400E-07
115.	.450E-07

GREENWICH MEAN TIME
 DATE HRS MIN
 02/24/58 07 00

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 20A

ALTITUDE KM	DENSITY KG PER CUBIC M
202.	.190E-09

GREENWICH MEAN TIME
 DATE HRS MIN
 02/24/58 07 35

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
89.68	.131E-04
88.65	.140E-04
87.61	.144E-04
86.57	.151E-04
85.51	.170E-04
84.44	.191E-04
83.36	.212E-04
82.28	.236E-04
81.18	.267E-04
80.08	.295E-04
78.96	.331E-04
77.84	.371E-04
76.70	.415E-04
75.56	.470E-04
74.41	.526E-04
73.25	.599E-04
72.07	.674E-04
70.89	.769E-04
69.70	.875E-04
68.50	.199E-03
67.29	.114E-03
66.07	.132E-03
64.84	.153E-03
63.60	.173E-03
62.35	.203E-03
61.09	.234E-03
59.82	.273E-03
58.54	.317E-03
57.25	.371E-03
55.95	.444E-03
54.64	.505E-03
53.33	.592E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 03/04/58 19 30A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
85.16	.745E-05
82.23	.126E-04
79.25	.172E-04
76.43	.220E-04
73.32	.372E-04
70.18	.571E-04
68.58	.691E-04
65.38	.114E-03
63.76	.144E-03
62.15	.181E-03
60.49	.220E-03
58.83	.277E-03
57.15	.348E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 03/04/58 19 30B

LOCATION TECHNIQUE REFERENCE
 CHURCHILL DRAG 19

ALTITUDE KM	DENSITY KG PER CUBIC M
90.79	.425E-05
89.36	.306E-05
88.14	.875E-05
86.75	.714E-05
85.40	.108E-04
83.97	.983E-05
82.58	.127E-04
81.13	.113E-04
78.30	.184E-04
75.41	.311E-04
73.94	.347E-04
72.44	.362E-04
69.48	.643E-04
67.97	.834E-04
66.44	.101E-03
64.91	.130E-03
63.38	.162E-03
58.68	.293E-03
57.08	.365E-03
55.50	.448E-03
53.89	.564E-03
52.29	.686E-03
50.69	.835E-03
49.06	.103E-02
47.44	.126E-02
45.81	.156E-02
44.17	.194E-02
42.55	.242E-02
40.92	.305E-02
39.31	.413E-02
37.70	.494E-02
36.10	.650E-02
34.55	.835E-02
33.01	.104E-01
31.52	.131E-01
28.71	.209E-01
27.40	.261E-01
25.03	.369E-01
23.98	.440E-01
23.00	.513E-01
22.14	.579E-01

03/04/58 19 30B (continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
20.62	.714E-01
19.97	.787E-01
19.39	.893E-01
18.86	.962E-01
17.94	.125E 00

GREENWICH MEAN TIME
 DATE HRS MIN
 03/23/58 18 07

LOCATION TECHNIQUE REFERENCE
 CHURCHILL MASS SPEC / 21

ALTITUDE KM	DENSITY KG PER CUBIC M
180.	.150E-09
175.	.175E-09
170.	.200E-09
165.	.250E-09
160.	.300E-09
155.	.400E-09
150.	.550E-09
145.	.850E-09
140.	.130E-08
135.	.220E-08
130.	.400E-08
125.	.650E-08
120.	.120E-07
115.	.240E-07
110.	.450E-07

GREENWICH MEAN TIME
 DATE HRS MIN
 3/24/58 22 00

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
90.69	.663E-05
89.72	.726E-05
88.73	.799E-05
87.74	.881E-05
86.74	.963E-05
85.73	.107E-04
84.71	.119E-04
83.67	.132E-04
82.64	.149E-04
81.59	.167E-04
80.53	.187E-04
79.46	.211E-04
78.38	.242E-04
77.29	.275E-04
76.19	.315E-04
75.09	.360E-04
73.97	.411E-04
72.84	.468E-04
71.70	.535E-04
70.56	.622E-04
69.40	.699E-04
68.24	.800E-04
67.06	.921E-04
65.88	.106E-03
64.69	.123E-03
63.48	.141E-03
62.27	.165E-03
61.04	.194E-03
59.81	.223E-03
58.57	.262E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 04/17/58 10 57

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
83.5	.888E-05
74.3	.429E-04
71.1	.687E-04
64.5	.167E-03
57.5	.414E-03
54.0	.646E-03
50.2	.103E-02
45.9	.175E-02
42.4	.283E-02
38.3	.514E-02
31.6	.142E-01
29.2	.203E-01
25.5	.361E-01

GREENWICH MEAN TIME
DATE HRS MIN
07/15/58 20 08

GREENWICH MEAN TIME
DATE HRS MIN
10/15/58 01 05

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
CHURCHILL	GAUGE	29	CHURCHILL	GAUGE	29

ALTITUDE	DENSITY
KM	KG PER CUBIC M
85.34	.132E-04
84.46	.151E-04
83.57	.173E-04
82.67	.204E-04
81.76	.228E-04
80.84	.263E-04
79.91	.300E-04
78.98	.345E-04
78.03	.394E-04
77.07	.453E-04
76.11	.520E-04
75.13	.579E-04
74.15	.679E-04
73.15	.790E-04
72.15	.910E-04
71.13	.103E-03
70.11	.118E-03
69.07	.134E-03
68.03	.150E-03
66.98	.165E-03
65.91	.192E-03
64.84	.223E-03
63.76	.257E-03
62.67	.299E-03
61.56	.345E-03
60.45	.391E-03
59.33	.450E-03
58.20	.519E-03
57.05	.591E-03
55.90	.672E-03
54.74	.776E-03
53.57	.890E-03
52.39	.102E-02
51.20	.118E-02
49.99	.138E-02
48.78	.161E-02
47.56	.188E-02
46.33	.219E-02
45.09	.259E-02
43.83	.311E-02
42.57	.370E-02
41.29	.454E-02
40.01	.563E-02
38.71	.718E-02

ALTITUDE	DENSITY
KM	KG PER CUBIC M
98.66	.960E-06
96.56	.130E-05
94.42	.170E-05
92.25	.225E-05
90.04	.301E-05
87.79	.415E-05
85.50	.590E-05
83.17	.910E-05
82.00	.119E-04
80.81	.143E-04
79.61	.169E-04
78.41	.202E-04
77.19	.243E-04
75.96	.295E-04
74.73	.357E-04
73.49	.435E-04
72.23	.514E-04
70.97	.605E-04
69.69	.706E-04
68.41	.840E-04
67.12	.102E-03
65.82	.126E-03
64.51	.155E-03
63.18	.189E-03
61.85	.227E-03
60.51	.277E-03
59.16	.335E-03
57.80	.403E-03
56.43	.482E-03
55.05	.575E-03
53.66	.683E-03
52.27	.808E-03
50.86	.966E-03
49.44	.117E-02
48.01	.137E-02
46.58	.163E-02
45.13	.193E-02
43.67	.228E-02
42.21	.271E-02
40.74	.319E-02
39.25	.379E-02
37.76	.450E-02
36.26	.537E-02
34.75	.645E-02
33.25	.800E-02
31.75	.981E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 10/31/58 19 59A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 01

GREENWICH MEAN TIME
 DATE HRS MIN
 10/20/58 22 01

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
71.93	.441E-04
70.88	.526E-04
69.81	.599E-04
68.73	.690E-04
67.64	.808E-04
66.55	.930E-04
65.44	.109E-03
64.33	.128E-03
63.20	.150E-03
62.06	.180E-03
60.92	.213E-03
59.76	.262E-03
58.60	.315E-03
57.24	.374E-03
56.24	.450E-03
55.04	.549E-03
53.84	.645E-03

ALTITUDE KM	DENSITY KG PER CUBIC M
110.	.154E-06
105.	.320E-06
100.	.686E-06
98.	.948E-06
96.	.130E-05
94.	.180E-05
92.	.249E-05
90.	.338E-05
88.	.453E-05
86.	.597E-05
84.	.779E-05
82.	.102E-04
80.	.136E-04
78.	.186E-04
76.	.251E-04
74.	.345E-04
72.	.463E-04
70.	.605E-04
68.	.780E-04
66.	.100E-03
64.	.129E-03
62.	.164E-03
60.	.207E-03
58.	.267E-03
56.	.344E-03
54.	.455E-03
52.	.607E-03
50.	.790E-03
48.	.105E-02
46.	.146E-02
44.	.200E-02
42.	.273E-02
40.	.372E-02
38.	.502E-02
36.	.675E-02
34.	.920E-02
32.	.127E-01
30.	.172E-01
28.	.231E-01
26.	.312E-01
24.	.434E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/12/58 11 40

GREENWICH MEAN TIME
 DATE HRS MIN
 10/31/58 19 59B

LOCATION TECHNIQUE REFERENCE
 GUAM SOUND 02

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 16

ALTITUDE KM	DENSITY KG PER CUBIC M
188.	.520E-09
180.	.640E-09
175.	.750E-09
170.	.860E-09
165.	.104E-08
160.	.120E-08
155.	.150E-08
150.	.180E-08
145.	.240E-08
140.	.300E-08
135.	.440E-08
130.	.670E-08
120.	.250E-07
110.	.110E-06
109.07	.125E-06
107.84	.145E-06
106.77	.175E-06
106.00	.190E-06
105.07	.220E-06
104.30	.270E-06
103.08	.310E-06
102.31	.370E-06
101.69	.410E-06
100.31	.490E-06

ALTITUDE KM	DENSITY KG PER CUBIC M
58.	.394E-03
57.	.443E-03
56.	.497E-03
55.	.557E-03
54.	.624E-03
53.	.707E-03
52.	.804E-03
51.	.915E-03
50.	.104E-02
49.	.118E-02
48.	.135E-02
47.	.154E-02
46.	.175E-02
45.	.200E-02
44.	.229E-02
43.	.261E-02
42.	.301E-02
41.	.346E-02
40.	.399E-02
39.	.461E-02
38.	.532E-02
37.	.616E-02
36.	.714E-02
35.	.828E-02
34.	.963E-02
33.	.112E-01
32.	.130E-01
31.	.152E-01
30.	.178E-01
29.	.208E-01
28.	.245E-01

GREENWICH MEAN TIME
DATE HRS MIN
11/14/58 11 10

GREENWICH MEAN TIME
DATE HRS MIN
11/19/58 18 02

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
GUAM	SOUND	02	GUAM	SOUND	02

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.	.129E-03
66.	.147E-03
65.	.168E-03
64.	.192E-03
63.	.218E-03
62.	.247E-03
61.	.280E-03
60.	.316E-03
59.	.356E-03
58.	.402E-03
57.	.457E-03
56.	.519E-03
55.	.589E-03
54.	.669E-03
53.	.757E-03
52.	.855E-03
51.	.964E-03
50.	.108E-02
49.	.122E-02
48.	.138E-02
47.	.157E-02
46.	.178E-02
45.	.202E-02
44.	.229E-02
43.	.263E-02
42.	.302E-02
41.	.347E-02
40.	.400E-02
39.	.461E-02
38.	.532E-02
37.	.616E-02
36.	.713E-02
35.	.825E-02
34.	.957E-02
33.	.111E-01
32.	.129E-01
31.	.150E-01
30.	.175E-01
29.	.204E-01

ALTITUDE	DENSITY
KM	KG PER CUBIC M
67.	.129E-03
66.	.149E-03
65.	.171E-03
64.	.196E-03
63.	.224E-03
62.	.254E-03
61.	.289E-03
60.	.326E-03
59.	.367E-03
58.	.412E-03
57.	.462E-03
56.	.517E-03
55.	.584E-03
54.	.660E-03
53.	.746E-03
52.	.842E-03
51.	.950E-03
50.	.107E-02
49.	.121E-02
48.	.136E-02
47.	.154E-02
46.	.175E-02
45.	.200E-02
44.	.230E-02
43.	.264E-02
42.	.304E-02
41.	.350E-02
40.	.403E-02
39.	.466E-02
38.	.539E-02
37.	.625E-02
36.	.725E-02
35.	.841E-02
34.	.976E-02
33.	.113E-01
32.	.132E-01
31.	.153E-01
30.	.179E-01
29.	.209E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/20/58 14 39

LOCATION TECHNIQUE REFERENCE
 GUAM SOUND 02

ALTITUDE	DENSITY
KM	KG PER CUBIC M
63.	.217E-03
62.	.247E-03
61.	.280E-03
60.	.319E-03
59.	.362E-03
58.	.410E-03
57.	.464E-03
56.	.524E-03
55.	.592E-03
54.	.667E-03
53.	.753E-03
52.	.849E-03
51.	.955E-03
50.	.107E-02
49.	.120E-02
48.	.135E-02
47.	.154E-02
46.	.176E-02
45.	.201E-02
44.	.230E-02
43.	.264E-02
42.	.303E-02
41.	.348E-02
40.	.400E-02
39.	.461E-02
38.	.533E-02
37.	.616E-02
36.	.714E-02
35.	.828E-02
34.	.961E-02
33.	.111E-01
32.	.130E-01
31.	.152E-01
30.	.177E-01
29.	.208E-01
28.	.244E-01

GREENWICH MEAN TIME
DATE 11/22/58 HRS MIN 09 58

LOCATION GUAM TECHNIQUE SOUND REFERENCE 02

11/22/58 09 58 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
76.	.381E-04
75.	.440E-04
74.	.506E-04
73.	.579E-04
72.	.660E-04
71.	.750E-04
70.	.851E-04
69.	.979E-04
68.	.112E-03
67.	.128E-03
66.	.147E-03
65.	.168E-03
64.	.192E-03
63.	.219E-03
62.	.249E-03
61.	.282E-03
60.	.319E-03
59.	.361E-03
58.	.407E-03
57.	.458E-03
56.	.518E-03
55.	.586E-03
54.	.662E-03
53.	.748E-03
52.	.844E-03
51.	.954E-03
50.	.107E-02
49.	.122E-02
48.	.138E-02
47.	.156E-02
46.	.176E-02
45.	.201E-02
44.	.230E-02
43.	.264E-02
42.	.303E-02
41.	.349E-02
40.	.402E-02
39.	.464E-02
38.	.536E-02
37.	.620E-02
36.	.717E-02

ALTITUDE KM	DENSITY KG PER CUBIC M
35.	.832E-02
34.	.966E-02
33.	.112E-01
32.	.130E-01
31.	.152E-01
30.	.178E-01
29.	.208E-01
28.	.244E-01
27.	.287E-01

GREENWICH MEAN TIME
DATE 11/22/58 HRS MIN 17 06

LOCATION GUAM TECHNIQUE SOUND REFERENCE 30

ALTITUDE KM	DENSITY KG PER CUBIC M
58.60	.360E-03
57.60	.409E-03
55.60	.538E-03
53.60	.700E-03
51.60	.904E-03
49.60	.116E-02
47.60	.148E-02
45.60	.188E-02
43.60	.239E-02
41.60	.308E-02
39.60	.404E-02
37.60	.534E-02
35.60	.711E-02
33.60	.954E-02
31.60	.129E-01
29.60	.176E-01
27.60	.241E-01
25.60	.334E-01
23.60	.467E-01
22.10	.659E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/23/58 22 02

LOCATION TECHNIQUE REFERENCE
 CHURCHILL GAUGE 29

ALTITUDE KM	DENSITY KG PER CUBIC M
103.06	.922E-06
102.33	.989E-06
101.60	.105E-05
100.85	.112E-05
100.10	.119E-05
99.33	.128E-05
98.56	.139E-05
97.78	.154E-05
96.98	.172E-05
96.18	.189E-05
95.37	.210E-05
94.55	.229E-05
93.72	.249E-05
92.88	.266E-05
92.03	.282E-05
91.17	.306E-05
90.30	.336E-05
89.42	.370E-05
88.53	.421E-05
87.63	.504E-05
86.73	.597E-05
85.81	.664E-05
84.88	.725E-05
83.95	.797E-05
83.00	.891E-05
82.04	.986E-05
81.09	.109E-04
80.10	.125E-04
78.13	.187E-04
77.12	.211E-04
76.11	.232E-04
75.09	.261E-04
74.05	.308E-04
73.01	.376E-04
71.96	.467E-04
70.90	.577E-04
69.83	.693E-04
68.75	.806E-04
67.60	.933E-04
66.56	.108E-03
65.45	.123E-03

11/23/58 22 02 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
64.33	.143E-03
63.20	.164E-03
62.06	.190E-03
60.92	.221E-03
59.76	.257E-03
58.59	.303E-03
57.42	.355E-03
56.23	.419E-03
55.03	.497E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 11/24/58 17 27

LOCATION TECHNIQUE REFERENCE
 GUAM SOUND 02

ALTITUDE KM	DENSITY KG PER CUBIC M
74.	.420E-04
73.	.497E-04
72.	.588E-04
71.	.698E-04
70.	.815E-04
69.	.950E-04
68.	.110E-03
67.	.128E-03
66.	.145E-03
65.	.164E-03
64.	.186E-03
63.	.211E-03
62.	.238E-03
61.	.269E-03
60.	.304E-03
59.	.342E-03
58.	.386E-03
57.	.437E-03
56.	.495E-03
55.	.560E-03
54.	.633E-03
53.	.715E-03
52.	.809E-03
51.	.919E-03
50.	.104E-02
49.	.118E-02
48.	.134E-02
47.	.154E-02
46.	.176E-02
45.	.202E-02
44.	.232E-02
43.	.267E-02
42.	.307E-02
41.	.354E-02
40.	.408E-02
39.	.470E-02
38.	.544E-02
37.	.629E-02
36.	.728E-02
35.	.844E-02
34.	.980E-02

11/24/58 17 27 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
33.	.113E-01
32.	.132E-01
31.	.154E-01
30.	.180E-01
29.	.210E-01
28.	.245E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 11/30/59 12 35

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

GREENWICH MEAN TIME
 DATE HRS MIN
 11/30/59 09 58

LOCATION TECHNIQUE REFERENCE
 WOOMERA DIFFUSION 25

ALTITUDE DENSITY
 KM KG PER CUBIC M
 85.8 .681E-05
 81.5 .144E-04
 74.2 .461E-04
 61.5 .274E-03
 48.4 .135E-02
 48.2 .138E-02

ALTITUDE DENSITY
 KM KG PER CUBIC M
 140. .210E-08
 135. .260E-08
 130. .330E-08
 125. .455E-08
 120. .760E-08
 117. .155E-07

GREENWICH MEAN TIME
 DATE HRS MIN
 12/01/59 11 36

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE DENSITY
 KM KG PER CUBIC M
 53.7 .703E-03
 48.6 .129E-02
 41.2 .335E-02
 40.8 .353E-02

GREENWICH MEAN TIME
DATE HRS MIN
07/09/60 03 59

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

07/09/60 03 59 (Continued)

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
81.43	.161E-04	40.43	.410E-02
80.43	.187E-04	39.43	.471E-02
79.43	.219E-04	38.43	.543E-02
78.43	.257E-04	37.43	.626E-02
77.43	.300E-04	36.43	.723E-02
76.43	.351E-04	35.43	.836E-02
75.43	.410E-04	34.43	.967E-02
74.43	.479E-04	33.43	.112E-01
73.43	.559E-04	32.43	.130E-01
72.43	.651E-04	31.43	.151E-01
71.43	.759E-04	30.43	.175E-01
70.43	.883E-04	29.43	.205E-01
69.43	.101E-03	28.43	.239E-01
68.43	.116E-03	27.43	.279E-01
67.43	.134E-03	26.43	.327E-01
66.43	.153E-03	25.43	.383E-01
65.43	.175E-03		
64.43	.200E-03		
63.43	.228E-03		
62.43	.259E-03		
61.43	.294E-03		
60.43	.334E-03		
59.43	.377E-03		
58.43	.426E-03		
57.43	.479E-03		
56.43	.539E-03		
55.43	.607E-03		
54.43	.684E-03		
53.43	.771E-03		
52.43	.867E-03		
51.43	.978E-03		
50.43	.110E-02		
49.43	.124E-02		
48.43	.140E-02		
47.43	.158E-02		
46.43	.181E-02		
45.43	.206E-02		
44.43	.236E-02		
43.43	.271E-02		
42.43	.311E-02		
41.43	.357E-02		

GREENWICH MEAN TIME
DATE HRS MIN
08/10/60 10 35

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
73.7	.388E-04
68.4	.871E-04
63.0	.183E-03

GREENWICH MEAN TIME
DATE HRS MIN
10/17/60 21 04

GREENWICH MEAN TIME
DATE HRS MIN
11/17/60 10 06

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
CHURCHILL	GAUGE	/ 17	WOOMERA	DIFFUSION	09

ALTITUDE KM	DENSITY KG PER CUBIC M
92.50	.212E-05
90.50	.250E-05
88.70	.360E-05
86.70	.475E-05
80.50	.133E-04
78.40	.186E-04
76.50	.280E-04
74.30	.390E-04
72.30	.910E-04
65.00	.125E-03
62.50	.169E-03
60.00	.223E-03
57.60	.278E-03
55.50	.413E-03
52.80	.618E-03
51.60	.730E-03
50.40	.830E-03
49.10	.103E-02
47.60	.122E-02
46.50	.145E-02
45.20	.171E-02
42.50	.224E-02
41.00	.288E-02
39.40	.355E-02
38.30	.440E-02
36.70	.530E-02
35.40	.670E-02
33.70	.860E-02
32.50	.112E-01
30.10	.142E-01
29.50	.180E-01
28.20	.230E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
157.	.291E-08
132.	.983E-08

GREENWICH MEAN TIME
DATE HRS MIN
02/13/61 13 58

LOCATION	TECHNIQUE	REFERENCE
WOOMERA	SOUND	9A

ALTITUDE KM	DENSITY KG PER CUBIC M
77.9	.280E-04
76.8	.334E-04
75.7	.392E-04
74.5	.458E-04
73.4	.534E-04
71.1	.764E-04
68.6	.107E-03
66.1	.148E-03
63.7	.205E-03
62.4	.243E-03
61.1	.289E-03
59.9	.337E-03
58.6	.393E-03
57.4	.459E-03
53.5	.723E-03
49.7	.112E-02
44.3	.222E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 02/14/61 23 50

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

ALTITUDE DENSITY
 KM KG PER CUBIC M

73.45	.460E-04
72.45	.533E-04
71.45	.618E-04
70.45	.718E-04
69.45	.835E-04
68.45	.971E-04
67.45	.113E-03
66.45	.131E-03
65.45	.152E-03
64.45	.177E-03
63.45	.205E-03
62.45	.238E-03
61.45	.277E-03
60.45	.314E-03
59.45	.350E-03
58.45	.389E-03
57.45	.432E-03
56.45	.477E-03
55.45	.526E-03
54.45	.588E-03
53.45	.674E-03
52.45	.774E-03
51.45	.890E-03
50.45	.102E-02
49.45	.118E-02
48.45	.135E-02
47.45	.154E-02
46.45	.176E-02
45.45	.201E-02
44.45	.231E-02
43.45	.264E-02
42.45	.302E-02
41.45	.347E-02
40.45	.400E-02
39.45	.462E-02
38.45	.534E-02
37.45	.617E-02
36.45	.715E-02
35.45	.829E-02
34.45	.962E-02
33.45	.111E-01

02/14/61 23 50 (Continued)

ALTITUDE	DENSITY
KM	KG PER CUBIC M
32.45	.130E-01
31.45	.151E-01
30.45	.177E-01

GREENWICH MEAN TIME
DATE HRS MIN
02/17/61 02 26

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M
77.45	.244E-04
76.45	.286E-04
75.45	.336E-04
74.45	.396E-04
73.45	.469E-04
72.45	.556E-04
71.45	.661E-04
70.45	.780E-04
69.45	.865E-04
68.45	.953E-04
67.45	.104E-03
66.45	.121E-03
65.45	.143E-03
64.45	.168E-03
63.45	.199E-03
62.45	.231E-03
61.45	.265E-03
60.45	.303E-03
59.45	.347E-03
58.45	.396E-03
57.45	.450E-03
56.45	.508E-03
55.45	.573E-03
54.45	.645E-03
53.45	.724E-03
52.45	.815E-03
51.45	.924E-03
50.45	.104E-02
49.45	.118E-02
48.45	.133E-02
47.45	.151E-02
46.45	.171E-02
45.45	.194E-02
44.45	.220E-02
43.45	.250E-02
42.45	.291E-02
41.45	.339E-02
40.45	.396E-02
39.45	.464E-02
38.45	.537E-02
37.45	.621E-02

02/17/61 02 26 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
36.45	.720E-02
35.45	.835E-02
34.45	.969E-02
33.45	.112E-01
32.45	.130E-01
31.45	.152E-01
30.45	.177E-01

GREENWICH MEAN TIME
DATE HRS MIN
3/06/61 09 56

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
85.9	.679E-05
84.2	.924E-05
82.6	.122E-04
80.9	.159E-04
79.3	.201E-04
75.9	.336E-04
72.5	.556E-04
70.7	.731E-04
69.0	.933E-04
67.2	.119E-03
65.5	.150E-03
61.9	.237E-03
60.1	.302E-03
58.4	.387E-03
52.9	.769E-03
47.4	.143E-02
41.8	.323E-02

GREENWICH MEAN TIME
DATE HRS MIN
04/05/61 10 56

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
86.1	.636E-05
81.3	.139E-04
75.0	.403E-04
71.2	.714E-04
65.9	.143E-03
60.4	.287E-03
54.8	.568E-03
49.1	.117E-02
44.6	.209E-02

GREENWICH MEAN TIME
DATE HRS MIN
04/05/61 12 57

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M
75.77	.606E-04
74.77	.825E-04
73.77	.851E-04
72.77	.871E-04
71.77	.887E-04
70.77	.901E-04
69.77	.913E-04
68.77	.102E-03
67.77	.117E-03
66.77	.135E-03
65.77	.155E-03
64.77	.178E-03
63.77	.205E-03
62.77	.235E-03
61.77	.270E-03
60.77	.303E-03
59.77	.339E-03
58.77	.379E-03
57.77	.423E-03
56.77	.471E-03
55.77	.527E-03

04/05/61 12 57 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
54.77	.598E-03
53.77	.679E-03
52.77	.771E-03
51.77	.876E-03
50.77	.997E-03
49.77	.113E-02
48.77	.129E-02
47.77	.148E-02
46.77	.169E-02
45.77	.193E-02
44.77	.221E-02
43.77	.253E-02
42.77	.291E-02
41.77	.335E-02
40.77	.386E-02
39.77	.445E-02
38.77	.514E-02
37.77	.594E-02
36.77	.688E-02
35.77	.797E-02
34.77	.925E-02
33.77	.107E-01
32.77	.125E-01
31.77	.145E-01
30.77	.170E-01
29.77	.198E-01
28.77	.232E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 5/05/61 23 00

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M
81.16	.143E-04
80.16	.190E-04
79.16	.265E-04
78.16	.340E-04
77.16	.391E-04
76.16	.447E-04
75.16	.493E-04
74.16	.531E-04
73.16	.570E-04
72.16	.648E-04
71.16	.767E-04
70.16	.910E-04
69.16	.108E-03
68.16	.123E-03
67.16	.140E-03
66.16	.159E-03
65.16	.180E-03
64.16	.206E-03
63.16	.241E-03
62.16	.282E-03
61.16	.331E-03
60.16	.390E-03
59.16	.461E-03
58.16	.517E-03
57.16	.578E-03
56.16	.644E-03
55.16	.715E-03
54.16	.791E-03
53.16	.873E-03
52.16	.961E-03
51.16	.105E-02
50.16	.119E-02
49.16	.134E-02
48.16	.151E-02
47.16	.170E-02
46.16	.192E-02
45.16	.217E-02
44.16	.245E-02
43.16	.279E-02
42.16	.319E-02
41.16	.365E-02

5/05/61 23 00 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
40.16	.418E-02
39.16	.480E-02
38.16	.551E-02
37.16	.633E-02
36.16	.729E-02
35.16	.840E-02
34.16	.970E-02
33.16	.112E-01
32.16	.130E-01
31.16	.150E-01
30.16	.175E-01
29.16	.203E-01
28.16	.237E-01
27.16	.277E-01
26.16	.325E-01
25.16	.381E-01
24.16	.447E-01
23.16	.526E-01
22.16	.621E-01

GREENWICH MEAN TIME
DATE HRS MIN
05/06/61 04 54

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

05/05/61 04 54 (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
87.16	.602E-05
86.16	.731E-05
85.16	.889E-05
84.16	.108E-04
83.16	.131E-04
82.16	.158E-04
81.16	.188E-04
80.16	.225E-04
79.16	.268E-04
78.16	.319E-04
77.16	.379E-04
76.16	.442E-04
75.16	.510E-04
74.16	.587E-04
73.16	.673E-04
72.16	.786E-04
71.16	.916E-04
70.16	.106E-03
69.16	.124E-03
68.16	.142E-03
67.16	.161E-03
66.16	.182E-03
65.16	.205E-03
64.16	.229E-03
63.16	.256E-03
62.16	.289E-03
61.16	.325E-03
60.16	.366E-03
59.16	.412E-03
58.16	.463E-03
57.16	.519E-03
56.16	.586E-03
55.16	.661E-03
54.16	.747E-03
53.16	.842E-03
52.16	.950E-03
51.16	.107E-02
50.16	.122E-02
49.16	.138E-02
48.16	.157E-02
47.16	.178E-02

ALTITUDE KM	DENSITY KG PER CUBIC M
46.16	.201E-02
45.16	.225E-02
44.16	.253E-02
43.16	.284E-02
42.16	.322E-02
41.16	.367E-02
40.16	.420E-02
39.16	.481E-02
38.16	.552E-02
37.16	.634E-02
36.16	.729E-02
35.16	.840E-02
34.16	.970E-02
33.16	.112E-01
32.16	.129E-01
31.16	.150E-01
30.16	.174E-01
29.16	.203E-01
28.16	.237E-01
27.16	.277E-01
26.16	.324E-01
25.16	.380E-01
24.16	.447E-01
23.16	.526E-01
22.16	.621E-01

GREENWICH MEAN TIME
 DATE HRS MIN
 06/06/61 21 48A

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 24

ALTITUDE KM	DENSITY KG PER CUBIC M
92.52	.550E-05
91.70	.631E-05
90.93	.623E-05
90.24	.737E-05
89.52	.848E-05
88.68	.760E-05
87.84	.122E-04
85.65	.115E-04
85.17	.138E-04
81.58	.202E-04
81.21	.231E-04
80.77	.229E-04
80.35	.281E-04
79.94	.328E-04
79.51	.250E-04
79.11	.340E-04
78.37	.366E-04
77.90	.354E-04
77.48	.444E-04
77.09	.423E-04
76.66	.470E-04
76.24	.458E-04
75.70	.457E-04
74.98	.580E-04
74.49	.656E-04
74.13	.651E-04
73.77	.677E-04
72.30	.813E-04
71.45	.842E-04
70.65	.973E-04
70.22	.102E-03
69.94	.109E-03
69.42	.110E-03
68.93	.125E-03
68.50	.125E-03
68.02	.125E-03
67.65	.146E-03
67.29	.146E-03
66.65	.155E-03
65.36	.179E-03
64.90	.195E-03

06/06/61 21 48A (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
64.46	.202E-03
62.10	.267E-03
61.75	.289E-03
60.48	.336E-03
60.01	.351E-03
59.29	.359E-03
58.96	.388E-03
58.52	.426E-03
57.99	.451E-03
57.54	.555E-03
56.61	.537E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 06/06/61 21 48B

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 24

ALTITUDE KM	DENSITY KG PER CUBIC M
91.18	.828E-05
90.42	.625E-05
89.69	.829E-05
88.17	.886E-05
86.71	.123E-04
85.49	.155E-04
83.91	.185E-04
83.15	.154E-04
81.89	.213E-04
81.46	.201E-04
80.97	.186E-04
80.32	.265E-04
79.92	.242E-04
79.48	.239E-04
79.15	.307E-04
78.69	.321E-04
78.30	.328E-04
77.77	.298E-04
77.06	.414E-04
76.61	.385E-04
76.21	.383E-04
75.32	.538E-04
74.94	.578E-04
74.53	.521E-04
74.10	.599E-04
73.74	.678E-04
72.45	.631E-04
71.95	.663E-04
71.56	.666E-04
71.15	.845E-04
69.83	.119E-03
69.24	.106E-03
68.82	.120E-03
68.53	.131E-03
68.10	.138E-03
67.15	.150E-03
66.85	.152E-03
66.31	.170E-03
65.43	.172E-03
64.96	.187E-03
64.52	.201E-03

06/06/61 21 48B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
64.09	.210E-03
63.67	.227E-03
63.32	.232E-03
62.69	.252E-03
62.27	.271E-03
61.85	.277E-03
61.41	.295E-03
60.96	.314E-03
60.45	.326E-03
59.65	.365E-03
59.02	.389E-03
58.57	.422E-03
58.06	.450E-03
57.58	.460E-03
57.20	.487E-03
56.91	.535E-03
55.88	.584E-03
55.43	.621E-03
54.93	.677E-03
54.47	.724E-03
53.93	.763E-03
53.52	.783E-03
52.06	.894E-03
51.46	.947E-03
49.33	.143E-02
48.77	.137E-02
48.32	.153E-02
45.96	.181E-02

GREENWICH MEAN TIME
DATE HRS MIN
06/06/61 21 48C

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 24

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
110.	.400E-07	69.	.150E-03
109.	.300E-07	68.	.144E-03
108.	.900E-07	67.	.187E-03
107.	.180E-06	66.	.188E-03
106.	.160E-06	65.	.211E-03
105.	.140E-06	64.	.209E-03
104.	.170E-06	63.	.261E-03
103.	.150E-06	62.	.262E-03
102.	.220E-06	61.	.329E-03
101.	.260E-06	60.	.327E-03
100.	.370E-06	59.	.384E-03
99.	.550E-06	58.	.437E-03
98.	.770E-06	57.	.507E-03
97.	.880E-06	56.	.579E-03
96.	.106E-05	55.	.635E-03
95.	.132E-05	54.	.692E-03
94.	.155E-05	53.	.772E-03
93.	.175E-05	52.	.876E-03
92.	.213E-05	51.	.100E-02
91.	.283E-05	50.	.117E-02
90.	.360E-05	49.	.129E-02
89.	.399E-05	48.	.144E-02
88.	.588E-05	47.	.164E-02
87.	.756E-05	46.	.185E-02
86.	.834E-05	45.	.215E-02
85.	.876E-05	44.	.243E-02
84.	.101E-04	43.	.273E-02
83.	.119E-04	42.	.316E-02
82.	.151E-04	41.	.361E-02
81.	.189E-04	40.	.418E-02
80.	.226E-04	39.	.503E-02
79.	.284E-04	38.	.629E-02
78.	.328E-04	37.	.930E-02
77.	.377E-04	36.	.146E-01
76.	.468E-04	35.	.177E-01
75.	.540E-04	34.	.190E-01
74.	.618E-04	33.	.206E-01
73.	.673E-04		
72.	.867E-04		
71.	.970E-04		
70.	.119E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 07/04/61 10 23

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
69.3	.798E-04
66.3	.122E-03
64.7	.152E-03
63.2	.184E-03
59.5	.289E-03
57.3	.375E-03
54.8	.501E-03
52.1	.699E-03
49.7	.942E-03
47.1	.132E-02
44.3	.196E-02
42.0	.287E-02
37.8	.540E-02
35.0	.823E-02
31.8	.134E-01
27.2	.269E-01

GREENWICH MEAN TIME
DATE HRS MIN
07/13/61 22 07

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
87.78	.376E-05	46.78	.167E-02
86.78	.464E-05	45.78	.190E-02
85.78	.587E-05	44.78	.218E-02
84.78	.755E-05	43.78	.251E-02
83.78	.976E-05	42.78	.291E-02
82.78	.117E-04	41.78	.339E-02
81.78	.140E-04	40.78	.394E-02
80.78	.167E-04	39.78	.461E-02
79.78	.199E-04	38.78	.533E-02
78.78	.235E-04	37.78	.616E-02
77.78	.276E-04	36.78	.712E-02
76.78	.323E-04	35.78	.823E-02
75.78	.378E-04	34.78	.953E-02
74.78	.447E-04	33.78	.110E-01
73.78	.531E-04	32.78	.128E-01
72.78	.629E-04	31.78	.148E-01
71.78	.745E-04	30.78	.172E-01
70.78	.879E-04	29.78	.200E-01
69.78	.102E-03	28.78	.233E-01
68.78	.119E-03	27.78	.272E-01
67.78	.138E-03	26.78	.317E-01
66.78	.160E-03	25.78	.370E-01
65.78	.184E-03		
64.78	.208E-03		
63.78	.234E-03		
62.78	.263E-03		
61.78	.294E-03		
60.78	.328E-03		
59.78	.367E-03		
58.78	.409E-03		
57.78	.456E-03		
56.78	.507E-03		
55.78	.563E-03		
54.78	.626E-03		
53.78	.704E-03		
52.78	.792E-03		
51.78	.892E-03		
50.78	.100E-02		
49.78	.113E-02		
48.78	.129E-02		
47.78	.146E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 07/14/61 16 02

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
76.20	.323E-04	35.20	.885E-02
75.20	.379E-04	34.20	.102E-01
74.20	.451E-04	33.20	.118E-01
73.20	.537E-04	32.20	.137E-01
72.20	.639E-04	31.20	.160E-01
71.20	.761E-04	30.20	.186E-01
70.20	.896E-04	29.20	.217E-01
69.20	.102E-03	28.20	.253E-01
68.20	.116E-03	27.20	.295E-01
67.20	.131E-03	26.20	.345E-01
66.20	.148E-03	25.20	.404E-01
65.20	.171E-03		
64.20	.198E-03		
63.20	.228E-03		
62.20	.262E-03		
61.20	.296E-03		
60.20	.334E-03		
59.20	.376E-03		
58.20	.421E-03		
57.20	.472E-03		
56.20	.536E-03		
55.20	.609E-03		
54.20	.691E-03		
53.20	.785E-03		
52.20	.890E-03		
51.20	.100E-02		
50.20	.112E-02		
49.20	.126E-02		
48.20	.142E-02		
47.20	.163E-02		
46.20	.188E-02		
45.20	.217E-02		
44.20	.251E-02		
43.20	.289E-02		
42.20	.331E-02		
41.20	.379E-02		
40.20	.435E-02		
39.20	.499E-02		
38.20	.574E-02		
37.20	.663E-02		
36.20	.765E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 07/20/61 10 30

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
84.46	.570E-05	43.46	.241E-02
83.46	.728E-05	42.46	.262E-02
82.46	.973E-05	41.46	.308E-02
81.46	.132E-04	40.46	.365E-02
80.46	.182E-04	39.46	.435E-02
79.46	.209E-04	38.46	.524E-02
78.46	.236E-04	37.46	.637E-02
77.46	.264E-04	36.46	.742E-02
76.46	.304E-04	35.46	.860E-02
75.46	.370E-04	34.46	.996E-02
74.46	.452E-04	33.46	.115E-01
73.46	.552E-04	32.46	.133E-01
72.46	.675E-04	31.46	.154E-01
71.46	.783E-04	30.46	.179E-01
70.46	.903E-04	29.46	.207E-01
69.46	.103E-03	28.46	.240E-01
68.46	.118E-03		
67.46	.134E-03		
66.46	.151E-03		
65.46	.170E-03		
64.46	.190E-03		
63.46	.212E-03		
62.46	.234E-03		
61.46	.258E-03		
60.46	.283E-03		
59.46	.310E-03		
58.46	.338E-03		
57.46	.370E-03		
56.46	.417E-03		
55.46	.471E-03		
54.46	.531E-03		
53.46	.600E-03		
52.46	.679E-03		
51.46	.814E-03		
50.46	.996E-03		
49.46	.123E-02		
48.46	.157E-02		
47.46	.185E-02		
46.46	.199E-02		
45.46	.213E-02		
44.46	.227E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 09/16/61 23 55

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

GREENWICH MEAN TIME		ALTITUDE	DENSITY
DATE	HRS MIN	KM	KG PER CUBIC M
08/23/61	17 03	61.42	.252E-03
		60.42	.285E-03
		59.42	.321E-03
		58.42	.362E-03
		57.42	.407E-03
		56.42	.464E-03
		55.42	.529E-03
		54.42	.603E-03
		53.42	.687E-03
		52.42	.783E-03
		51.42	.892E-03
		50.42	.101E-02
		49.42	.115E-02
		48.42	.131E-02
		47.42	.149E-02
		46.42	.170E-02
		45.42	.194E-02
		44.42	.222E-02
		43.42	.256E-02
		42.42	.296E-02
		41.42	.342E-02
		40.42	.396E-02
		39.42	.459E-02
		38.42	.533E-02
		37.42	.619E-02
		36.42	.721E-02
		35.42	.841E-02
		34.42	.982E-02
		33.42	.114E-01
		32.42	.133E-01
		31.42	.155E-01
		30.42	.179E-01
		29.42	.208E-01
		28.42	.242E-01

GREENWICH MEAN TIME		ALTITUDE	DENSITY
DATE	HRS MIN	KM	KG PER CUBIC M
08/23/61	17 03	220.	.260E-09
		200.	.390E-09
		180.	.730E-09
		160.	.130E-08
		140.	.300E-08
		120.	.170E-07

LOCATION	TECHNIQUE	REFERENCE
WHITE SANDS	RAD ABSORP	/ 13

GREENWICH MEAN TIME
DATE HRS MIN
12/07/61 23 15

LOCATION TECHNIQUE REFERENCE
EGLIN FIELD DRAG 08

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
132.20	.385E-08	103.87	.259E-06
131.19	.421E-08	103.14	.305E-06
130.49	.460E-08	102.38	.360E-06
129.88	.502E-08	101.68	.425E-06
129.24	.547E-08	100.88	.504E-06
128.59	.596E-08	100.16	.594E-06
127.92	.649E-08	99.36	.701E-06
127.28	.709E-08	98.60	.825E-06
126.68	.775E-08	97.80	.970E-06
125.90	.849E-08		
125.30	.933E-08		
124.62	.102E-07		
123.99	.114E-07		
123.32	.127E-07		
122.65	.141E-07		
121.92	.156E-07		
121.28	.173E-07		
120.58	.190E-07		
119.85	.209E-07		
119.18	.231E-07		
118.51	.254E-07		
117.77	.279E-07		
117.10	.306E-07		
116.46	.336E-07		
115.76	.369E-07		
115.03	.405E-07		
114.33	.445E-07		
113.66	.490E-07		
113.02	.540E-07		
112.29	.596E-07		
111.65	.658E-07		
110.86	.727E-07		
110.22	.803E-07		
109.55	.889E-07		
108.84	.987E-07		
108.14	.110E-06		
107.44	.123E-06		
106.70	.140E-06		
106.04	.162E-06		
105.28	.188E-06		
104.61	.220E-06		

GREENWICH MEAN TIME
DATE HRS MIN
03/01/62 18 07B

LOCATION TECHNIQUE REFERENCE
EGLIN FIELD DRAG 07

GREENWICH MEAN TIME
DATE HRS MIN
03/01/62 18 07A

LOCATION TECHNIQUE REFERENCE
EGLIN FIELD DRAG 07

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
96.58	.104E-05	94.57	.154E-05
93.70	.176E-05	93.60	.184E-05
92.72	.206E-05	92.62	.217E-05
91.73	.249E-05	91.63	.259E-05
90.73	.295E-05	90.63	.311E-05
89.72	.349E-05	87.57	.544E-05
88.70	.415E-05	85.48	.794E-05
87.67	.496E-05	84.42	.946E-05
86.63	.619E-05	83.35	.117E-04
85.58	.648E-05	82.27	.141E-04
84.54	.870E-05	80.09	.199E-04
83.45	.101E-04	78.99	.269E-04
82.37	.126E-04	77.88	.281E-04
81.29	.154E-04	76.76	.354E-04
80.20	.184E-04	75.63	.397E-04
79.10	.215E-04	74.49	.494E-04
77.99	.265E-04	73.34	.555E-04
76.87	.347E-04	72.18	.659E-04
75.74	.368E-04	71.01	.732E-04
74.60	.462E-04	68.64	.109E-03
73.45	.519E-04	67.44	.136E-03
72.29	.594E-04	66.23	.151E-03
69.94	.855E-04	63.80	.208E-03
68.75	.974E-04	62.57	.240E-03
66.34	.156E-03	61.33	.285E-03
66.55	.128E-03	58.82	.392E-03
65.12	.167E-03	57.55	.455E-03
63.89	.202E-03	56.28	.543E-03
62.65	.228E-03	55.00	.641E-03
61.40	.263E-03	53.71	.755E-03
60.14	.314E-03	52.42	.882E-03
		51.12	.104E-02
		49.82	.123E-02
		48.51	.146E-02
		47.20	.172E-02
		45.89	.205E-02
		44.58	.242E-02
		43.27	.292E-02
		40.66	.421E-02
		38.08	.613E-02
		35.56	.908E-02

GREENWICH MEAN TIME
DATE HRS MIN
03/02/62 00 05

ATION TECHNIQUE REFERENCE
LOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
81.30	.186E-04	40.30	.354E-02
80.30	.205E-04	39.30	.396E-02
79.30	.225E-04	38.30	.462E-02
78.30	.246E-04	37.30	.542E-02
77.30	.276E-04	36.30	.639E-02
76.30	.317E-04	35.30	.757E-02
75.30	.365E-04	34.30	.901E-02
74.30	.419E-04	33.30	.106E-01
73.30	.477E-04	32.30	.123E-01
72.30	.542E-04	31.30	.144E-01
71.30	.615E-04	30.30	.168E-01
70.30	.696E-04	29.30	.197E-01
69.30	.796E-04	28.30	.230E-01
68.30	.930E-04	27.30	.269E-01
67.30	.108E-03	26.30	.316E-01
66.30	.127E-03		
65.30	.150E-03		
64.30	.172E-03		
63.30	.194E-03		
62.30	.219E-03		
61.30	.245E-03		
60.30	.275E-03		
59.30	.311E-03		
58.30	.354E-03		
57.30	.402E-03		
56.30	.456E-03		
55.30	.517E-03		
54.30	.586E-03		
53.30	.666E-03		
52.30	.756E-03		
51.30	.858E-03		
50.30	.973E-03		
49.30	.110E-02		
48.30	.126E-02		
47.30	.145E-02		
46.30	.168E-02		
45.30	.194E-02		
44.30	.223E-02		
43.30	.251E-02		
42.30	.281E-02		
41.30	.316E-02		

GREENWICH MEAN TIME
DATE HRS MIN
03/02/62 11 15

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
84.78	.861E-05	43.78	.223E-02
83.78	.731E-05	42.78	.259E-02
82.78	.645E-05	41.78	.301E-02
81.78	.651E-05	40.78	.351E-02
80.78	.851E-05	39.78	.407E-02
79.78	.117E-04	38.78	.472E-02
78.78	.176E-04	37.78	.548E-02
77.78	.226E-04	36.78	.636E-02
76.78	.271E-04	35.78	.740E-02
75.78	.326E-04	34.78	.861E-02
74.78	.391E-04	33.78	.100E-01
73.78	.457E-04	32.78	.117E-01
72.78	.525E-04	31.78	.136E-01
71.78	.599E-04	30.78	.159E-01
70.78	.681E-04	29.78	.187E-01
69.78	.770E-04	28.78	.219E-01
68.78	.868E-04	27.78	.257E-01
67.78	.974E-04	26.78	.302E-01
66.78	.111E-03	25.78	.355E-01
65.78	.127E-03	24.78	.419E-01
64.78	.145E-03		
63.78	.165E-03		
62.78	.188E-03		
61.78	.214E-03		
60.78	.243E-03		
59.78	.278E-03		
58.78	.326E-03		
57.78	.383E-03		
56.78	.452E-03		
55.78	.535E-03		
54.78	.626E-03		
53.78	.678E-03		
52.78	.732E-03		
51.78	.786E-03		
50.78	.841E-03		
49.78	.955E-03		
48.78	.109E-02		
47.78	.125E-02		
46.78	.144E-02		
45.78	.167E-02		
44.78	.192E-02		

GREENWICH MEAN TIME
DATE HRS MIN
03/06/62 12 35

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
80.5	.185E-04
75.2	.419E-04
69.9	.876E-04
64.3	.181E-03
58.5	.387E-03
52.6	.797E-03
48.1	.137E-02
42.0	.307E-02
37.2	.612E-02
34.1	.961E-02

GREENWICH MEAN TIME
DATE HRS MIN
03/23/62 23 54

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
87.42	.561E-05	46.42	.162E-02
86.42	.625E-05	45.42	.185E-02
85.42	.692E-05	44.42	.212E-02
84.42	.761E-05	43.42	.243E-02
83.42	.832E-05	42.42	.279E-02
82.42	.905E-05	41.42	.320E-02
81.42	.107E-04	40.42	.369E-02
80.42	.131E-04	39.42	.426E-02
79.42	.163E-04	38.42	.493E-02
78.42	.205E-04	37.42	.571E-02
77.42	.263E-04	36.42	.663E-02
76.42	.315E-04	35.42	.769E-02
75.42	.355E-04	34.42	.894E-02
74.42	.398E-04	33.42	.104E-01
73.42	.443E-04	32.42	.121E-01
72.42	.491E-04	31.42	.141E-01
71.42	.570E-04	30.42	.165E-01
70.42	.664E-04	29.42	.193E-01
69.42	.774E-04	28.42	.226E-01
68.42	.903E-04	27.42	.265E-01
67.42	.105E-03		
66.42	.119E-03		
65.42	.135E-03		
64.42	.153E-03		
63.42	.173E-03		
62.42	.196E-03		
61.42	.222E-03		
60.42	.254E-03		
59.42	.291E-03		
58.42	.333E-03		
57.42	.381E-03		
56.42	.434E-03		
55.42	.491E-03		
54.42	.554E-03		
53.42	.625E-03		
52.42	.703E-03		
51.42	.803E-03		
50.42	.923E-03		
49.42	.106E-02		
48.42	.122E-02		
47.42	.141E-02		

GREENWICH MEAN TIME
DATE HRS MIN
03/28/62 00 04

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
90.92	.276E-05	49.92	.103E-02
89.92	.351E-05	48.92	.118E-02
88.92	.454E-05	47.92	.134E-02
87.92	.599E-05	46.92	.153E-02
86.92	.750E-05	45.92	.173E-02
85.92	.839E-05	44.92	.197E-02
84.92	.930E-05	43.92	.224E-02
83.92	.102E-04	42.92	.254E-02
82.92	.113E-04	41.92	.292E-02
81.92	.131E-04	40.92	.336E-02
80.92	.153E-04	39.92	.387E-02
79.92	.179E-04	38.92	.447E-02
78.92	.208E-04	37.92	.517E-02
77.92	.241E-04	36.92	.598E-02
76.92	.277E-04	35.92	.694E-02
75.92	.319E-04	34.92	.806E-02
74.92	.366E-04	33.92	.937E-02
73.92	.420E-04	32.92	.109E-01
72.92	.487E-04	31.92	.127E-01
71.92	.565E-04	30.92	.149E-01
70.92	.656E-04	29.92	.174E-01
69.92	.761E-04	28.92	.204E-01
68.92	.883E-04	27.92	.240E-01
67.92	.102E-03	26.92	.283E-01
66.92	.118E-03		
65.92	.136E-03		
64.92	.158E-03		
63.92	.182E-03		
62.92	.208E-03		
61.92	.235E-03		
60.92	.264E-03		
59.92	.297E-03		
58.92	.333E-03		
57.92	.373E-03		
56.92	.423E-03		
55.92	.479E-03		
54.92	.542E-03		
53.92	.613E-03		
52.92	.698E-03		
51.92	.796E-03		
50.92	.908E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 03/29/62 11 04
 LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

GREENWICH MEAN TIME
 DATE HRS MIN
 04/05/62 15 47
 LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
87.0	.562E-05
82.5	.126E-04
76.6	.318E-04
71.7	.636E-04
66.6	.132E-03
61.3	.256E-03
57.7	.414E-03
55.9	.534E-03
50.3	.105E-02
45.9	.183E-02
39.9	.415E-02
35.3	.821E-02
32.1	.131E-01

ALTITUDE KM	DENSITY KG PER CUBIC M
84.5	.935E-05
77.8	.263E-04
74.4	.429E-04
69.2	.900E-04
64.0	.182E-03
58.6	.350E-03
53.2	.706E-03
47.7	.142E-02
44.0	.232E-02
43.3	.253E-02

GREENWICH MEAN TIME
DATE HRS MIN
04/17/62 09 29

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
90.11	.232E-05	49.11	.114E-02
89.11	.297E-05	48.11	.130E-02
88.11	.392E-05	47.11	.147E-02
87.11	.542E-05	46.11	.167E-02
86.11	.735E-05	45.11	.190E-02
85.11	.860E-05	44.11	.216E-02
84.11	.100E-04	43.11	.246E-02
83.11	.115E-04	42.11	.283E-02
82.11	.133E-04	41.11	.326E-02
81.11	.156E-04	40.11	.376E-02
80.11	.183E-04	39.11	.435E-02
79.11	.214E-04	38.11	.503E-02
78.11	.251E-04	37.11	.583E-02
77.11	.292E-04	36.11	.676E-02
76.11	.337E-04	35.11	.786E-02
75.11	.387E-04	34.11	.915E-02
74.11	.444E-04	33.11	.106E-01
73.11	.508E-04	32.11	.124E-01
72.11	.583E-04	31.11	.146E-01
71.11	.671E-04	30.11	.171E-01
70.11	.773E-04	29.11	.201E-01
69.11	.889E-04		
68.11	.102E-03		
67.11	.117E-03		
66.11	.134E-03		
65.11	.154E-03		
64.11	.176E-03		
63.11	.202E-03		
62.11	.230E-03		
61.11	.258E-03		
60.11	.290E-03		
59.11	.324E-03		
58.11	.362E-03		
57.11	.405E-03		
56.11	.462E-03		
55.11	.529E-03		
54.11	.605E-03		
53.11	.693E-03		
52.11	.788E-03		
51.11	.893E-03		
50.11	.101E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 05/18/62 18 02

GREENWICH MEAN TIME
 DATE HRS MIN
 06/05/62 12 45

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
WALLOPS	MASS SPEC	/ 26	WHITE SANDS	RAD ABSORP	= 10

ALTITUDE	DENSITY
KM	KG PER CUBIC M
132.41	.400E-08
126.97	.838E-08
122.87	.128E-07
111.3	.950E-07
108.	.187E-06

ALTITUDE	DENSITY
KM	KG PER CUBIC M
210.	.134E-09
190.	.277E-09
170.	.592E-09

GREENWICH MEAN TIME
DATE HRS MIN
06/06/62 23 40

LOCATION TECHNIQUE REFERENCE
WALLOPS GAUGE 18

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
94.	.149E-05	53.	.827E-03
93.	.185E-05	52.	.926E-03
92.	.226E-05	51.	.104E-02
91.	.275E-05	50.	.118E-02
90.	.332E-05	49.	.132E-02
89.	.394E-05	48.	.149E-02
88.	.469E-05	47.	.168E-02
87.	.551E-05	46.	.190E-02
86.	.650E-05	45.	.214E-02
85.	.772E-05	44.	.243E-02
84.	.929E-05	43.	.278E-02
83.	.112E-04	42.	.319E-02
82.	.134E-04	41.	.366E-02
81.	.160E-04	40.	.420E-02
80.	.188E-04	39.	.485E-02
79.	.220E-04	38.	.559E-02
78.	.257E-04	37.	.650E-02
77.	.304E-04	36.	.761E-02
76.	.371E-04	35.	.893E-02
75.	.449E-04	34.	.106E-01
74.	.531E-04	33.	.127E-01
73.	.617E-04	32.	.154E-01
72.	.720E-04	31.	.190E-01
71.	.834E-04		
70.	.959E-04		
69.	.110E-03		
68.	.125E-03		
67.	.142E-03		
66.	.162E-03		
65.	.185E-03		
64.	.209E-03		
63.	.236E-03		
62.	.268E-03		
61.	.300E-03		
60.	.342E-03		
59.	.389E-03		
58.	.442E-03		
57.	.501E-03		
56.	.571E-03		
55.	.647E-03		
54.	.733E-03		

GREENWICH MEAN TIME
DATE HRS MIN
06/07/62 00 10

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 24

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
110.	.900E-07	69.	.140E-03
109.	.110E-06	68.	.117E-03
108.	.100E-06	67.	.157E-03
107.	.700E-07	66.	.169E-03
106.	.120E-06	65.	.210E-03
105.	.130E-06	64.	.212E-03
104.	.190E-06	63.	.245E-03
103.	.440E-06	62.	.269E-03
102.	.340E-06	61.	.297E-03
101.	.400E-06	60.	.325E-03
100.	.470E-06	59.	.385E-03
99.	.520E-06	58.	.403E-03
98.	.550E-06	57.	.474E-03
97.	.570E-06	56.	.526E-03
96.	.920E-06	55.	.603E-03
95.	.125E-05	54.	.666E-03
94.	.150E-05	53.	.744E-03
93.	.177E-05	52.	.835E-03
92.	.234E-05	51.	.932E-03
91.	.287E-05	50.	.110E-02
90.	.362E-05	49.	.120E-02
89.	.387E-05	48.	.138E-02
88.	.557E-05	47.	.152E-02
87.	.708E-05	46.	.174E-02
86.	.793E-05	45.	.193E-02
85.	.989E-05	44.	.222E-02
84.	.114E-04	43.	.258E-02
83.	.130E-04	42.	.300E-02
82.	.161E-04	41.	.335E-02
81.	.180E-04	40.	.379E-02
80.	.200E-04	39.	.443E-02
79.	.218E-04	38.	.508E-02
78.	.268E-04	37.	.578E-02
77.	.352E-04	36.	.677E-02
76.	.404E-04	35.	.801E-02
75.	.503E-04	34.	.945E-02
74.	.620E-04	33.	.115E-01
73.	.675E-04	32.	.130E-01
72.	.732E-04	31.	.155E-01
71.	.889E-04	30.	.218E-01
70.	.113E-03		

GREENWICH MEAN TIME
DATE HRS MIN
06/07/62 01 05

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
93.82	.168E-05	52.82	.816E-03
92.82	.195E-05	51.82	.929E-03
91.82	.233E-05	50.82	.105E-02
90.82	.277E-05	49.82	.118E-02
89.82	.328E-05	48.82	.134E-02
88.82	.396E-05	47.82	.151E-02
87.82	.476E-05	46.82	.171E-02
86.82	.571E-05	45.82	.193E-02
85.82	.686E-05	44.82	.220E-02
84.82	.836E-05	43.82	.252E-02
83.82	.102E-04	42.82	.289E-02
82.82	.124E-04	41.82	.331E-02
81.82	.152E-04	40.82	.380E-02
80.82	.184E-04	39.82	.437E-02
79.82	.216E-04	38.82	.502E-02
78.82	.395E-04	37.82	.579E-02
78.82	.253E-04	36.82	.667E-02
77.82	.294E-04	35.82	.771E-02
76.82	.342E-04	34.82	.891E-02
74.82	.463E-04	33.82	.103E-01
73.82	.543E-04	32.82	.119E-01
72.82	.635E-04	31.82	.138E-01
71.82	.742E-04	30.82	.161E-01
70.82	.866E-04	29.82	.188E-01
69.82	.101E-03	28.82	.219E-01
68.82	.116E-03	27.82	.256E-01
67.82	.132E-03		
66.82	.151E-03		
65.82	.171E-03		
64.82	.194E-03		
63.82	.219E-03		
62.82	.247E-03		
61.82	.279E-03		
60.82	.313E-03		
59.82	.352E-03		
58.82	.394E-03		
57.82	.440E-03		
56.82	.491E-03		
55.82	.556E-03		
54.82	.632E-03		
53.82	.718E-03		

GREENWICH MEAN TIME
DATE HRS MIN
06/08/62 01 53

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
90.28	.296E-05	49.28	.115E-02
89.28	.373E-05	48.28	.131E-02
88.28	.471E-05	47.28	.149E-02
87.28	.597E-05	46.28	.171E-02
86.28	.708E-05	45.28	.196E-02
85.28	.808E-05	44.28	.224E-02
84.28	.914E-05	43.28	.258E-02
83.28	.102E-04	42.28	.296E-02
82.28	.120E-04	41.28	.341E-02
81.28	.145E-04	40.28	.392E-02
80.28	.176E-04	39.28	.453E-02
79.28	.213E-04	38.28	.523E-02
78.28	.258E-04	37.28	.605E-02
77.28	.301E-04	36.28	.701E-02
76.28	.350E-04	35.28	.814E-02
75.28	.405E-04	34.28	.945E-02
74.28	.467E-04	33.28	.110E-01
73.28	.538E-04	32.28	.128E-01
72.28	.622E-04	31.28	.149E-01
71.28	.719E-04		
70.28	.829E-04		
69.28	.954E-04		
68.28	.109E-03		
67.28	.126E-03		
66.28	.145E-03		
65.28	.167E-03		
64.28	.191E-03		
63.28	.220E-03		
62.28	.249E-03		
61.28	.282E-03		
60.28	.318E-03		
59.28	.358E-03		
58.28	.402E-03		
57.28	.452E-03		
56.28	.510E-03		
55.28	.574E-03		
54.28	.645E-03		
53.28	.725E-03		
52.28	.816E-03		
51.28	.917E-03		
50.28	.103E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 07/05/62 03 46

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
84.4	.928E-05
80.0	.157E-04
77.7	.216E-04
74.7	.345E-04
72.4	.457E-04
69.7	.651E-04
66.3	.118E-03
60.8	.252E-03
57.9	.356E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 11/28/62 10 17

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
83.7	.110E-04
77.3	.335E-04
74.0	.546E-04
69.0	.107E-03
63.9	.209E-03
58.6	.408E-03
53.2	.757E-03
47.7	.145E-02
42.2	.288E-02
40.3	.380E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 10/25/62 23 30

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS RAD ABSORP = 10

ALTITUDE KM	DENSITY KG PER CUBIC M
210.	.208E-09
190.	.382E-09
170.	.689E-09

GREENWICH MEAN TIME
DATE HRS MIN
12/01/62 20 34

LOCATION TECHNIQUE REFERENCE
WALLOPS GAUGE 18

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
107.	.309E-06	66.	.108E-03
106.	.360E-06	65.	.122E-03
105.	.433E-06	64.	.136E-03
104.	.519E-06	63.	.154E-03
103.	.621E-06	62.	.175E-03
102.	.733E-06	61.	.197E-03
101.	.854E-06	60.	.221E-03
100.	.100E-05	59.	.249E-03
99.	.117E-05	58.	.277E-03
98.	.137E-05	57.	.313E-03
97.	.160E-05	56.	.354E-03
96.	.186E-05	55.	.403E-03
95.	.217E-05	54.	.459E-03
94.	.249E-05	53.	.528E-03
93.	.284E-05	52.	.611E-03
92.	.322E-05	51.	.702E-03
91.	.367E-05	50.	.800E-03
90.	.416E-05	49.	.903E-03
89.	.473E-05	48.	.101E-02
88.	.537E-05	47.	.113E-02
87.	.607E-05	46.	.127E-02
86.	.689E-05	45.	.143E-02
85.	.781E-05	44.	.164E-02
84.	.888E-05	43.	.193E-02
83.	.103E-04	42.	.234E-02
82.	.120E-04	41.	.278E-02
81.	.142E-04	40.	.329E-02
80.	.167E-04	39.	.384E-02
79.	.195E-04	38.	.441E-02
78.	.228E-04	37.	.481E-02
77.	.261E-04	36.	.523E-02
76.	.292E-04	35.	.624E-02
75.	.322E-04	34.	.845E-02
74.	.361E-04	33.	.105E-01
73.	.409E-04		
72.	.467E-04		
71.	.535E-04		
70.	.612E-04		
69.	.711E-04		
68.	.823E-04		
67.	.950E-04		

GREENWICH MEAN TIME
DATE HRS MIN
12/01/62 21 25

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
90.89	.209E-05	49.89	.940E-03
89.89	.258E-05	48.89	.106E-02
88.89	.326E-05	47.89	.121E-02
87.89	.423E-05	46.89	.138E-02
86.89	.566E-05	45.89	.157E-02
85.89	.640E-05	44.89	.181E-02
84.89	.706E-05	43.89	.208E-02
83.89	.773E-05	42.89	.240E-02
82.89	.842E-05	41.89	.278E-02
81.89	.971E-05	40.89	.322E-02
80.89	.117E-04	39.89	.373E-02
79.89	.143E-04	38.89	.432E-02
78.89	.176E-04	37.89	.502E-02
77.89	.219E-04	36.89	.584E-02
76.89	.264E-04	35.89	.680E-02
75.89	.305E-04	34.89	.793E-02
74.89	.351E-04	33.89	.926E-02
73.89	.402E-04	32.89	.108E-01
72.89	.460E-04	31.89	.126E-01
71.89	.526E-04	30.89	.148E-01
70.89	.605E-04	29.89	.175E-01
69.89	.694E-04	28.89	.206E-01
68.89	.796E-04		
67.89	.911E-04		
66.89	.104E-03		
65.89	.119E-03		
64.89	.136E-03		
63.89	.156E-03		
62.89	.178E-03		
61.89	.203E-03		
60.89	.231E-03		
59.89	.263E-03		
58.89	.298E-03		
57.89	.338E-03		
56.89	.383E-03		
55.89	.433E-03		
54.89	.492E-03		
53.89	.560E-03		
52.89	.638E-03		
51.89	.726E-03		
50.89	.826E-03		

GREENWICH MEAN TIME
DATE HRS MIN
12/04/62 07 05

12/04/62 07 05 (Continued)

LOCATION	TECHNIQUE	REFERENCE	ALTITUDE	DENSITY
CHURCHILL	SOUND	27	KM	KG PER CUBIC M

ALTITUDE	DENSITY
KM	KG PER CUBIC M

86.64	.437E-05
85.64	.514E-05
84.64	.605E-05
83.64	.713E-05
82.64	.838E-05
81.64	.984E-05
80.64	.115E-04
79.64	.135E-04
78.64	.159E-04
77.64	.186E-04
76.64	.218E-04
75.64	.255E-04
74.64	.297E-04
73.64	.345E-04
72.64	.401E-04
71.64	.465E-04
70.64	.538E-04
69.64	.618E-04
68.64	.706E-04
67.64	.805E-04
66.64	.916E-04
65.64	.104E-03
64.64	.117E-03
63.64	.133E-03
62.64	.151E-03
61.64	.171E-03
60.64	.192E-03
59.64	.218E-03
58.64	.248E-03
57.64	.281E-03
56.64	.319E-03
55.64	.362E-03
54.64	.411E-03
53.64	.466E-03
52.64	.528E-03
51.64	.598E-03
50.64	.692E-03
49.64	.804E-03
48.64	.936E-03
47.64	.109E-02
46.64	.128E-02

GREENWICH MEAN TIME
DATE HRS MIN
12/04/62 07 26

LOCATION	TECHNIQUE	REFERENCE
WOOMERA	SOUND	9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
58.9	.399E-03
55.3	.601E-03
52.5	.821E-03
48.6	.128E-02
44.6	.215E-02
39.3	.443E-02
36.0	.705E-02
32.6	.117E-01
29.2	.204E-01

GREENWICH MEAN TIME
DATE HRS MIN
12/06/62 05 32

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
86.04	.232E-05	45.04	.173E-02
85.04	.326E-05	44.04	.201E-02
84.04	.504E-05	43.04	.233E-02
83.04	.924E-05	42.04	.270E-02
82.04	.149E-04	41.04	.312E-02
81.04	.168E-04	40.04	.362E-02
80.04	.187E-04	39.04	.420E-02
79.04	.206E-04	38.04	.488E-02
78.04	.224E-04	37.04	.568E-02
77.04	.255E-04	36.04	.661E-02
76.04	.292E-04	35.04	.770E-02
75.04	.334E-04	34.04	.899E-02
74.04	.380E-04	33.04	.105E-01
73.04	.431E-04	32.04	.122E-01
72.04	.503E-04	31.04	.144E-01
71.04	.592E-04	30.04	.168E-01
70.04	.696E-04	29.04	.198E-01
69.04	.821E-04	28.04	.233E-01
68.04	.962E-04	27.04	.274E-01
67.04	.107E-03	26.04	.323E-01
66.04	.119E-03		
65.04	.132E-03		
64.04	.145E-03		
63.04	.160E-03		
62.04	.180E-03		
61.04	.208E-03		
60.04	.239E-03		
59.04	.276E-03		
58.04	.320E-03		
57.04	.366E-03		
56.04	.412E-03		
55.04	.462E-03		
54.04	.518E-03		
53.04	.580E-03		
52.04	.661E-03		
51.04	.755E-03		
50.04	.862E-03		
49.04	.986E-03		
48.04	.113E-02		
47.04	.130E-02		
46.04	.150E-02		

GREENWICH MEAN TIME
DATE HRS MIN
12/06/62 05 43

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
88.60	.262E-05	47.60	.906E-03
87.60	.305E-05	46.60	.105E-02
86.60	.355E-05	45.60	.123E-02
85.60	.411E-05	44.60	.145E-02
84.60	.489E-05	43.60	.170E-02
83.60	.590E-05	42.60	.200E-02
82.60	.715E-05	41.60	.235E-02
81.60	.871E-05	40.60	.275E-02
80.60	.104E-04	39.60	.320E-02
79.60	.121E-04	38.60	.374E-02
78.60	.140E-04	37.60	.436E-02
77.60	.162E-04	36.60	.510E-02
76.60	.186E-04	35.60	.595E-02
75.60	.215E-04	34.60	.696E-02
74.60	.249E-04	33.60	.813E-02
73.60	.288E-04	32.60	.950E-02
72.60	.332E-04	31.60	.111E-01
71.60	.382E-04	30.60	.130E-01
70.60	.438E-04	29.60	.152E-01
69.60	.500E-04	28.60	.178E-01
68.60	.571E-04	27.60	.208E-01
67.60	.650E-04		
66.60	.740E-04		
65.60	.837E-04		
64.60	.943E-04		
63.60	.106E-03		
62.60	.119E-03		
61.60	.133E-03		
60.60	.150E-03		
59.60	.170E-03		
58.60	.193E-03		
57.60	.219E-03		
56.60	.249E-03		
55.60	.286E-03		
54.60	.329E-03		
53.60	.379E-03		
52.60	.438E-03		
51.60	.506E-03		
50.60	.584E-03		
49.60	.675E-03		
48.60	.782E-03		

GREENWICH MEAN TIME
DATE HRS MIN
02/14/63 00 30

LOCATION TECHNIQUE REFERENCE
EGLIN FIELD DRAG 08A

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
155.	.780E-09	114.	.254E-07
154.	.921E-09	113.	.280E-07
153.	.120E-08	112.	.309E-07
152.	.141E-08	111.	.344E-07
151.	.149E-08	110.	.385E-07
150.	.183E-08	109.	.439E-07
149.	.197E-08	108.	.509E-07
148.	.217E-08	107.	.606E-07
147.	.238E-08	106.	.756E-07
146.	.265E-08	105.	.988E-07
145.	.279E-08	104.	.130E-06
144.	.307E-08	103.	.164E-06
143.	.343E-08	102.	.200E-06
142.	.364E-08	101.	.245E-06
141.	.392E-08	100.	.295E-06
140.	.420E-08	99.	.350E-06
139.	.441E-08	98.	.413E-06
138.	.483E-08	97.	.483E-06
137.	.505E-08	96.	.553E-06
136.	.554E-08	95.	.634E-06
135.	.583E-08		
134.	.623E-08		
133.	.673E-08		
132.	.706E-08		
131.	.760E-08		
130.	.817E-08		
129.	.861E-08		
128.	.922E-08		
127.	.987E-08		
126.	.106E-07		
125.	.113E-07		
124.	.120E-07		
123.	.128E-07		
122.	.138E-07		
121.	.147E-07		
120.	.158E-07		
119.	.170E-07		
118.	.184E-07		
117.	.199E-07		
116.	.214E-07		
115.	.231E-07		

GREENWICH MEAN TIME
 DATE HRS MIN
 02/20/63 23 34

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
78.07	.160E-04	37.07	.554E-02
77.07	.184E-04	36.07	.648E-02
76.07	.211E-04	35.07	.759E-02
75.07	.242E-04	34.07	.891E-02
74.07	.276E-04	33.07	.104E-01
73.07	.315E-04	32.07	.122E-01
72.07	.361E-04	31.07	.144E-01
71.07	.419E-04	30.07	.170E-01
70.07	.486E-04	29.07	.200E-01
69.07	.564E-04		
68.07	.656E-04		
67.07	.763E-04		
66.07	.879E-04		
65.07	.101E-03		
64.07	.116E-03		
63.07	.133E-03		
62.07	.153E-03		
61.07	.175E-03		
60.07	.199E-03		
59.07	.227E-03		
58.07	.258E-03		
57.07	.294E-03		
56.07	.339E-03		
55.07	.391E-03		
54.07	.452E-03		
53.07	.522E-03		
52.07	.600E-03		
51.07	.688E-03		
50.07	.788E-03		
49.07	.902E-03		
48.07	.103E-02		
47.07	.119E-02		
46.07	.139E-02		
45.07	.161E-02		
44.07	.188E-02		
43.07	.219E-02		
42.07	.256E-02		
41.07	.298E-02		
40.07	.347E-02		
39.07	.405E-02		
38.07	.474E-02		

GREENWICH MEAN TIME
DATE HRS MIN
02/20/63 23 47

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
84.05	.952E-05	43.05	.236E-02
83.05	.113E-04	42.05	.271E-02
82.05	.135E-04	41.05	.311E-02
81.05	.162E-04	40.05	.358E-02
80.05	.191E-04	39.05	.413E-02
79.05	.213E-04	38.05	.478E-02
78.05	.236E-04	37.05	.553E-02
77.05	.261E-04	36.05	.642E-02
76.05	.287E-04	35.05	.747E-02
75.05	.339E-04	34.05	.871E-02
74.05	.405E-04	33.05	.101E-01
73.05	.489E-04	32.05	.119E-01
72.05	.594E-04	31.05	.139E-01
71.05	.711E-04	30.05	.164E-01
70.05	.791E-04	29.05	.194E-01
69.05	.874E-04	28.05	.230E-01
68.05	.962E-04	27.05	.273E-01
67.05	.105E-03		
66.05	.120E-03		
65.05	.139E-03		
64.05	.163E-03		
63.05	.190E-03		
62.05	.223E-03		
61.05	.260E-03		
60.05	.304E-03		
59.05	.355E-03		
58.05	.416E-03		
57.05	.487E-03		
56.05	.555E-03		
55.05	.613E-03		
54.05	.673E-03		
53.05	.736E-03		
52.05	.809E-03		
51.05	.904E-03		
50.05	.101E-02		
49.05	.112E-02		
48.05	.125E-02		
47.05	.142E-02		
46.05	.161E-02		
45.05	.183E-02		
44.05	.208E-02		

GREENWICH MEAN TIME
DATE HRS MIN
02/28/63 21 48

LOCATION TECHNIQUE REFERENCE
CHURCHILL SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
88.36	.434E-05	47.36	.118E-02
87.36	.518E-05	46.36	.136E-02
86.36	.588E-05	45.36	.156E-02
85.36	.663E-05	44.36	.179E-02
84.36	.743E-05	43.36	.205E-02
83.36	.828E-05	42.36	.236E-02
82.36	.953E-05	41.36	.275E-02
81.36	.111E-04	40.36	.321E-02
80.36	.131E-04	39.36	.375E-02
79.36	.154E-04	38.36	.439E-02
78.36	.181E-04	37.36	.515E-02
77.36	.210E-04	36.36	.606E-02
76.36	.243E-04	35.36	.714E-02
75.36	.281E-04	34.36	.842E-02
74.36	.325E-04	33.36	.997E-02
73.36	.375E-04		
72.36	.428E-04		
71.36	.488E-04		
70.36	.555E-04		
69.36	.630E-04		
68.36	.714E-04		
67.36	.809E-04		
66.36	.920E-04		
65.36	.104E-03		
64.36	.118E-03		
63.36	.134E-03		
62.36	.152E-03		
61.36	.172E-03		
60.36	.194E-03		
59.36	.219E-03		
58.36	.247E-03		
57.36	.279E-03		
56.36	.321E-03		
55.36	.369E-03		
54.36	.425E-03		
53.36	.491E-03		
52.36	.567E-03		
51.36	.656E-03		
50.36	.761E-03		
49.36	.884E-03		
48.36	.102E-02		

GREENWICH MEAN TIME
DATE HRS MIN
02/28/63 22 11

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
80.38	.131E-04	39.38	.441E-02
79.38	.180E-04	38.38	.497E-02
78.38	.257E-04	37.38	.559E-02
77.38	.377E-04	36.38	.641E-02
76.38	.438E-04	35.38	.741E-02
75.38	.422E-04	34.38	.857E-02
74.38	.410E-04	33.38	.994E-02
73.38	.400E-04	32.38	.115E-01
72.38	.483E-04	31.38	.134E-01
71.38	.596E-04	30.38	.156E-01
70.38	.746E-04	29.38	.183E-01
69.38	.949E-04	28.38	.214E-01
68.38	.113E-03	27.38	.251E-01
67.38	.131E-03	26.38	.295E-01
66.38	.151E-03	25.38	.348E-01
65.38	.173E-03	24.38	.411E-01
64.38	.197E-03		
63.38	.224E-03		
62.38	.255E-03		
61.38	.285E-03		
60.38	.318E-03		
59.38	.353E-03		
58.38	.392E-03		
57.38	.432E-03		
56.38	.476E-03		
55.38	.523E-03		
54.38	.595E-03		
53.38	.686E-03		
52.38	.793E-03		
51.38	.900E-03		
50.38	.107E-02		
49.38	.116E-02		
48.38	.126E-02		
47.38	.136E-02		
46.38	.147E-02		
45.38	.171E-02		
44.38	.204E-02		
43.38	.245E-02		
42.38	.298E-02		
41.38	.345E-02		
40.38	.391E-02		

GREENWICH MEAN TIME
 DATE HRS MIN
 03/09/63 00 01A

LOCATION TECHNIQUE REFERENCE
 CHURCHILL SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
91.36	.238E-05	50.36	.791E-03
90.36	.289E-05	49.36	.901E-03
89.36	.355E-05	48.36	.102E-02
88.36	.440E-05	47.36	.117E-02
87.36	.539E-05	46.36	.134E-02
86.36	.625E-05	45.36	.154E-02
85.36	.722E-05	44.36	.177E-02
84.36	.831E-05	43.36	.203E-02
83.36	.952E-05	42.36	.233E-02
82.36	.110E-04	41.36	.271E-02
81.36	.127E-04	40.36	.316E-02
80.36	.147E-04	39.36	.370E-02
79.36	.170E-04	38.36	.433E-02
78.36	.196E-04	37.36	.509E-02
77.36	.225E-04	36.36	.599E-02
76.36	.259E-04	35.36	.708E-02
75.36	.298E-04	34.36	.839E-02
74.36	.342E-04	33.36	.997E-02
73.36	.391E-04		
72.36	.451E-04		
71.36	.520E-04		
70.36	.600E-04		
69.36	.692E-04		
68.36	.797E-04		
67.36	.916E-04		
66.36	.103E-03		
65.36	.117E-03		
64.36	.132E-03		
63.36	.148E-03		
62.36	.166E-03		
61.36	.189E-03		
60.36	.215E-03		
59.36	.244E-03		
58.36	.278E-03		
57.36	.316E-03		
56.36	.360E-03		
55.36	.411E-03		
54.36	.468E-03		
53.36	.534E-03		
52.36	.609E-03		
51.36	.694E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 03/09/63 00 01B

LOCATION TECHNIQUE REFERENCE
 WALLOPS SOUND 27

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
88.61	.378E-05	47.61	.144E-02
87.61	.459E-05	46.61	.164E-02
86.61	.563E-05	45.61	.186E-02
85.61	.697E-05	44.61	.211E-02
84.61	.851E-05	43.61	.239E-02
83.61	.100E-04	42.61	.272E-02
82.61	.118E-04	41.61	.308E-02
81.61	.138E-04	40.61	.353E-02
80.61	.162E-04	39.61	.406E-02
79.61	.188E-04	38.61	.467E-02
78.61	.218E-04	37.61	.540E-02
77.61	.252E-04	36.61	.624E-02
76.61	.291E-04	35.61	.723E-02
75.61	.338E-04	34.61	.839E-02
74.61	.392E-04	33.61	.976E-02
73.61	.456E-04	32.61	.113E-01
72.61	.529E-04	31.61	.132E-01
71.61	.614E-04	30.61	.155E-01
70.61	.713E-04	29.61	.182E-01
69.61	.830E-04	28.61	.214E-01
68.61	.965E-04		
67.61	.112E-03		
66.61	.130E-03		
65.61	.150E-03		
64.61	.173E-03		
63.61	.199E-03		
62.61	.229E-03		
61.61	.262E-03		
60.61	.301E-03		
59.61	.345E-03		
58.61	.395E-03		
57.61	.453E-03		
56.61	.518E-03		
55.61	.592E-03		
54.61	.658E-03		
53.61	.729E-03		
52.61	.804E-03		
51.61	.885E-03		
50.61	.989E-03		
49.61	.112E-02		
48.61	.127E-02		

GREENWICH MEAN TIME
DATE HRS MIN
03/29/63 02 57A

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

03/29/63 02 57B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
120.03	.338E-07
119.01	.362E-07
117.98	.388E-07
116.99	.415E-07
115.98	.445E-07
115.02	.487E-07
113.98	.563E-07
112.99	.666E-07
111.99	.788E-07
110.98	.922E-07
110.02	.105E-06
108.96	.120E-06
107.98	.138E-06
106.98	.167E-06
106.04	.209E-06
105.01	.273E-06
103.97	.347E-06
102.99	.412E-06
102.00	.481E-06
101.00	.578E-06
99.97	.727E-06

GREENWICH MEAN TIME
DATE HRS MIN
03/29/63 02 57B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
101.97	.388E-06
101.02	.420E-06
100.05	.558E-06
99.04	.847E-06
97.98	.107E-05
97.05	.124E-05
95.96	.143E-05
95.02	.178E-05

ALTITUDE KM	DENSITY KG PER CUBIC M
93.98	.213E-05
93.00	.263E-05
92.04	.300E-05
90.94	.345E-05
90.05	.390E-05
89.02	.471E-05
88.00	.590E-05
87.05	.726E-05
86.03	.840E-05
85.03	.100E-04
83.99	.116E-04
82.95	.142E-04
82.01	.166E-04
80.98	.197E-04
79.99	.232E-04
79.01	.283E-04
78.03	.353E-04
77.03	.442E-04
76.00	.517E-04
74.99	.600E-04
74.01	.673E-04
73.00	.794E-04
72.01	.985E-04
71.00	.119E-03
69.99	.132E-03
69.01	.155E-03
68.00	.177E-03
67.00	.198E-03
66.00	.215E-03
65.00	.237E-03
64.00	.267E-03
63.00	.301E-03
62.01	.374E-03
60.99	.494E-03
60.00	.635E-03
59.00	.753E-03
58.00	.845E-03
57.01	.978E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 04/17/63 09 23

GREENWICH MEAN TIME
 DATE HRS MIN
 06/06/63 14 30

LOCATION TECHNIQUE REFERENCE
 WOOMERA SOUND 9A

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS MASS SPEC 22

ALTITUDE	DENSITY
KM	KG PER CUBIC M
84.5	.764E-05
81.0	.143E-04
75.5	.341E-04
69.8	.809E-04
62.1	.239E-03
58.1	.376E-03
52.1	.784E-03

ALTITUDE	DENSITY
KM	KG PER CUBIC M
210.	.144E-09
200.	.172E-09
190.	.230E-09
180.	.310E-09
170.	.460E-09
160.	.700E-09
150.	.114E-08
140.	.207E-08
130.	.440E-08
120.	.119E-07
110.	.410E-07

GREENWICH MEAN TIME
 DATE HRS MIN
 06/18/63 03 28B

LOCATION TECHNIQUE REFERENCE
 KWAJALEIN DRAG 23

GREENWICH MEAN TIME			ALTITUDE	DENSITY
DATE	HRS	MIN	KM	KG PER CUBIC M
06/18/63	03	28A	102.06	.514E-06
			101.01	.581E-06
			99.98	.615E-06
			98.96	.572E-06
			98.04	.622E-06
			97.05	.823E-06
			95.96	.114E-05
			95.01	.124E-05
			94.01	.138E-05
			92.99	.146E-05
			91.96	.211E-05
			91.03	.267E-05
			90.05	.383E-05
			88.98	.498E-05
			87.94	.615E-05
			86.98	.671E-05
			86.03	.737E-05
			84.99	.789E-05
			83.96	.994E-05
			82.99	.118E-04
			82.00	.146E-04
			81.04	.170E-04
			79.98	.205E-04
			79.00	.258E-04
			77.96	.295E-04
			76.99	.364E-04
			76.03	.433E-04
			75.02	.533E-04
			73.98	.583E-04
			73.00	.597E-04
			44.00	.228E-02
			43.00	.273E-02
			42.00	.325E-02
			41.00	.370E-02
			40.00	.433E-02
			39.00	.513E-02
			38.00	.593E-02
			37.00	.704E-02
			36.00	.797E-02
			35.00	.891E-02
			34.00	.104E-01
			33.00	.143E-01

LOCATION	TECHNIQUE	REFERENCE
KWAJALEIN	DRAG	23

ALTITUDE	DENSITY
KM	KG PER CUBIC M
120.01	.227E-07
119.01	.257E-07
117.98	.300E-07
117.03	.336E-07
115.97	.377E-07
114.98	.414E-07
113.98	.463E-07
112.97	.516E-07
112.03	.569E-07
110.97	.652E-07
110.01	.753E-07
109.02	.890E-07
108.02	.106E-06
107.02	.128E-06
105.99	.151E-06
105.05	.175E-06
104.01	.202E-06
102.95	.233E-06
101.97	.261E-06
101.00	.300E-06
100.01	.360E-06
99.00	.454E-06

GREENWICH MEAN TIME
DATE HRS MIN
06/20/63 03 00A

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
110.04	.782E-07
108.97	.106E-06
107.98	.134E-06
106.99	.163E-06
105.98	.191E-06
104.96	.220E-06
104.03	.248E-06

GREENWICH MEAN TIME
DATE HRS MIN
06/20/63 03 00B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
98.01	.512E-06
97.05	.741E-06
96.07	.107E-05
94.99	.156E-05
94.02	.206E-05
93.06	.253E-05
91.98	.299E-05
91.02	.332E-05
89.94	.390E-05
89.04	.466E-05
88.01	.566E-05
86.98	.647E-05
85.95	.728E-05
84.98	.810E-05
83.96	.924E-05
83.02	.107E-04
82.02	.131E-04
81.02	.165E-04
79.96	.209E-04
79.03	.254E-04
78.03	.304E-04
77.03	.341E-04
75.97	.413E-04

06/20/63 03 00B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
75.01	.508E-04
74.00	.626E-04
73.00	.709E-04
71.99	.756E-04
71.01	.894E-04
69.99	.112E-03
68.99	.127E-03
68.00	.142E-03
67.00	.161E-03
66.01	.182E-03
65.00	.202E-03
64.01	.229E-03
63.01	.261E-03
61.98	.302E-03
61.00	.331E-03
60.01	.370E-03
59.00	.411E-03
58.01	.457E-03
57.00	.504E-03
56.00	.544E-03
55.00	.624E-03
54.00	.702E-03
53.00	.793E-03
52.00	.885E-03
51.00	.984E-03
50.01	.110E-02
49.00	.127E-02
48.00	.145E-02
47.00	.164E-02
46.00	.180E-02
45.00	.202E-02
44.00	.233E-02
43.00	.272E-02
42.00	.322E-02
41.00	.386E-02
40.00	.447E-02
39.00	.493E-02
38.00	.566E-02
37.00	.665E-02
36.00	.788E-02
35.00	.879E-02
34.00	.101E-01
33.00	.121E-01

GREENWICH MEAN TIME
DATE HRS MIN
07/10/63 17 04

GREENWICH MEAN TIME
DATE HRS MIN
10/15/63 09 51

LOCATION TECHNIQUE REFERENCE
WHITE SANDS RAD ABSORP = 11

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
220.	.101E-09
210.	.145E-09
200.	.201E-09
190.	.284E-09
180.	.404E-09
170.	.596E-09
160.	.101E-08
150.	.117E-08

ALTITUDE KM	DENSITY KG PER CUBIC M
82.6	.116E-04
76.6	.315E-04
72.1	.615E-04
68.9	.959E-04
65.7	.147E-03
62.6	.224E-03
57.6	.417E-03
54.3	.626E-03
50.9	.955E-03
45.8	.181E-02
42.3	.295E-02
38.8	.495E-02
33.5	.109E-01

GREENWICH MEAN TIME
DATE HRS MIN
08/02/63 23 33

GREENWICH MEAN TIME
DATE HRS MIN
10/15/63 11 48

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 23

LOCATION TECHNIQUE REFERENCE
WOOMERA SOUND 9A

ALTITUDE KM	DENSITY KG PER CUBIC M
102.01	.403E-06
101.00	.468E-06
99.98	.530E-06
99.01	.595E-06
97.99	.686E-06
96.99	.818E-06
96.00	.997E-06
95.01	.123E-05
94.01	.153E-05
93.02	.186E-05
91.99	.226E-05
91.03	.270E-05
90.03	.324E-05
89.00	.388E-05

ALTITUDE KM	DENSITY KG PER CUBIC M
83.8	.978E-05
77.5	.283E-04
74.2	.464E-04
70.9	.740E-04
66.3	.137E-03
62.7	.220E-03
59.1	.347E-03
55.4	.544E-03
51.6	.863E-03
47.6	.143E-02
43.6	.247E-02
39.4	.448E-02
35.2	.832E-02
30.9	.162E-01
26.6	.316E-01
22.2	.633E-01

GREENWICH MEAN TIME
DATE HRS MIN
10/15/63 15 09

GREENWICH MEAN TIME
DATE HRS MIN
11/04/63 10 00A

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
WOOMERA	SOUND	9A	WHITE SANDS	DRAG	/ 03

ALTITUDE	DENSITY
KM	KG PER CUBIC M
80.8	.180E-04
74.6	.444E-04
71.5	.688E-04
63.9	.186E-03
60.5	.287E-03
57.1	.439E-03
53.5	.682E-03
49.8	.109E-02
45.9	.179E-02
42.1	.304E-02
38.0	.551E-02
34.0	.101E-01
29.8	.191E-01
25.7	.362E-01
21.5	.710E-01

GREENWICH MEAN TIME
DATE HRS MIN
10/15/63 19 22

LOCATION	TECHNIQUE	REFERENCE
WOOMERA	SOUND	9A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
79.8	.193E-04
77.0	.311E-04
73.9	.487E-04
70.9	.701E-04
67.7	.105E-03
63.1	.200E-03
60.0	.306E-03
56.7	.461E-03
48.6	.125E-02
45.1	.201E-02
41.7	.320E-02
36.6	.681E-02
33.2	.112E-01
25.0	.406E-01

ALTITUDE	DENSITY
KM	KG PER CUBIC M
108.9	.270E-06
106.8	.398E-06
106.4	.447E-06
104.6	.852E-06
103.7	.692E-06
103.0	.490E-06
98.6	.129E-05
97.1	.148E-05
96.4	.224E-05
96.1	.120E-05
95.7	.234E-05
91.6	.224E-05
90.3	.269E-05
88.7	.480E-05
87.8	.604E-05
87.7	.525E-05
86.2	.760E-05
85.0	.810E-05
83.7	.115E-04
83.6	.129E-04
82.7	.110E-04
81.0	.160E-04
80.1	.199E-04
78.7	.230E-04
77.6	.263E-04

GREENWICH MEAN TIME
 DATE HRS MIN
 11/04/63 10 00B

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 03

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
114.1	.214E-06	60.4	.309E-03
113.2	.436E-07	59.2	.363E-03
112.1	.550E-06	58.2	.407E-03
110.6	.209E-06	57.2	.468E-03
108.1	.480E-06	56.1	.525E-03
106.0	.214E-06	54.9	.590E-03
105.6	.135E-06	54.1	.661E-03
103.8	.317E-06	53.0	.777E-03
101.3	.676E-06	52.0	.852E-03
100.7	.317E-06	51.0	.980E-03
99.7	.123E-05	50.0	.110E-02
95.1	.126E-05	48.8	.126E-02
95.0	.190E-05	46.7	.162E-02
93.6	.204E-05	45.8	.182E-02
93.5	.309E-05	44.9	.209E-02
92.7	.814E-06	43.8	.214E-02
92.1	.240E-05	40.7	.363E-02
90.4	.426E-05	37.8	.550E-02
89.2	.550E-05	36.8	.604E-02
88.1	.770E-05	36.0	.694E-02
87.9	.742E-05	35.2	.834E-02
86.3	.760E-05		
82.5	.151E-04		
81.1	.218E-04		
80.1	.257E-04		
78.8	.288E-04		
77.7	.390E-04		
76.6	.398E-04		
75.6	.467E-04		
74.3	.530E-04		
71.9	.725E-04		
71.0	.852E-04		
69.8	.980E-04		
68.8	.110E-03		
67.8	.126E-03		
66.5	.151E-03		
65.7	.148E-03		
64.5	.186E-03		
63.5	.214E-03		
62.4	.234E-03		
61.4	.269E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 11/04/63 10 00 C

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
115.54	.728E-07
112.80	.105E-06
110.05	.157E-06
107.65	.223E-06
104.91	.339E-06
102.62	.481E-06
100.00	.736E-06
96.68	.126E-05
94.97	.169E-05
93.60	.211E-05
92.11	.268E-05
90.74	.337E-05
89.82	.392E-05
88.22	.518E-05
85.94	.781E-05
84.91	.930E-05
84.00	.109E-04
83.20	.124E-04
81.82	.155E-04
80.11	.209E-04
78.17	.286E-04
74.05	.535E-04
70.17	.918E-04
66.05	.156E-03
62.28	.248E-03
59.20	.363E-03
56.91	.475E-03
54.28	.646E-03
51.77	.889E-03
49.14	.122E-02
46.97	.158E-02
44.57	.215E-02
41.94	.310E-02
40.00	.401E-02

GREENWICH MEAN TIME
DATE HRS MIN
11/04/63 10 31

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
45.	.186E-02
44.	.215E-02
43.	.254E-02
42.	.303E-02
41.	.355E-02
40.	.424E-02

GREENWICH MEAN TIME
DATE HRS MIN
11/04/63 12 27

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
45.	.195E-02
44.	.216E-02
43.	.248E-02
42.	.291E-02
41.	.340E-02
40.	.393E-02
39.	.437E-02
38.	.495E-02
37.	.565E-02
36.	.697E-02
35.	.850E-02
34.	.103E-01
33.	.126E-01
32.	.158E-01

GREENWICH MEAN TIME
DATE HRS MIN
11/04/63 24 00A

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG / 03

ALTITUDE KM	DENSITY KG PER CUBIC M
109.4	.680E-07
106.8	.210E-06
105.0	.400E-06
103.5	.660E-06
102.0	.710E-06
100.8	.910E-06
99.4	.126E-05
98.1	.155E-05
97.2	.138E-05
97.1	.204E-05
95.9	.950E-06
95.0	.190E-05
94.5	.132E-05
93.6	.204E-05
92.5	.240E-05
91.4	.380E-05
90.5	.420E-05
89.5	.400E-05
88.5	.407E-05
87.4	.490E-05
86.4	.620E-05
85.4	.650E-05
84.7	.660E-05
83.8	.110E-04
83.1	.126E-04
82.1	.132E-04
82.0	.175E-04
81.3	.155E-04
80.6	.209E-04
79.4	.186E-04
78.7	.209E-04
78.0	.275E-04
77.3	.263E-04
77.1	.224E-04
76.4	.288E-04
75.5	.316E-04
75.0	.390E-04
73.9	.337E-04

GREENWICH MEAN TIME
DATE HRS MIN
11/04/63 24 00B

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG / 03

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
110.	.100E-06	64.1	.191E-03
107.9	.380E-06	63.5	.209E-03
106.2	.340E-06	62.7	.200E-03
104.7	.630E-06	62.6	.251E-03
103.5	.105E-05	61.5	.257E-03
100.3	.540E-06	60.4	.282E-03
98.7	.760E-06	59.8	.309E-03
97.3	.141E-05	59.3	.339E-03
96.6	.219E-05	58.5	.363E-03
95.4	.219E-05	57.7	.416E-03
94.3	.170E-05	57.0	.436E-03
92.0	.295E-05	56.1	.468E-03
90.0	.330E-05	55.7	.514E-03
89.0	.450E-05	54.9	.590E-03
88.2	.560E-05	54.1	.632E-03
87.0	.630E-05	53.4	.694E-03
86.0	.680E-05	52.7	.760E-03
85.3	.810E-05	52.0	.852E-03
84.7	.112E-04	51.1	.914E-03
83.6	.141E-04	50.6	.100E-02
82.5	.178E-04	49.1	.117E-02
81.1	.174E-04	47.8	.135E-02
80.2	.200E-04	46.9	.152E-02
78.7	.234E-04	45.7	.190E-02
77.7	.275E-04	45.1	.209E-02
77.0	.330E-04	44.2	.224E-02
76.2	.370E-04	43.4	.234E-02
74.4	.410E-04	42.7	.269E-02
74.0	.540E-04	41.8	.288E-02
73.0	.580E-04	41.1	.316E-02
72.4	.630E-04	40.4	.347E-02
71.5	.710E-04	40.0	.398E-02
70.9	.780E-04	39.3	.407E-02
70.0	.930E-04	38.6	.468E-02
69.4	.935E-04	38.1	.501E-02
68.7	.102E-03	37.3	.564E-02
67.9	.112E-03	36.5	.631E-02
67.3	.126E-03	35.3	.778E-02
66.4	.144E-03		
65.7	.151E-03		
64.9	.162E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 11/04/63 24 00 C

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
109.48	.163E-06
108.68	.188E-06
108.00	.213E-06
105.71	.309E-06
103.77	.437E-06
101.82	.610E-06
99.77	.853E-06
96.68	.140E-05
94.85	.190E-05
93.02	.255E-05
91.42	.332E-05
90.40	.392E-05
89.14	.474E-05
87.54	.603E-05
85.71	.819E-05
84.57	.984E-05
82.85	.128E-04
80.91	.172E-04
79.77	.203E-04
77.48	.287E-04
73.82	.490E-04
70.05	.842E-04
66.05	.141E-03
64.00	.180E-03
59.88	.299E-03
58.28	.361E-03
54.97	.545E-03
52.11	.774E-03
49.82	.101E-02
47.88	.131E-02
46.17	.164E-02
43.20	.241E-02
40.00	.369E-02

GREENWICH MEAN TIME
 DATE 11/09/63 HRS MIN 16 26A

LOCATION KWAJALEIN TECHNIQUE DRAG REFERENCE 23

ALTITUDE KM	DENSITY KG PER CUBIC M
119.98	.218E-07
119.03	.227E-07
118.00	.243E-07
117.02	.262E-07
116.01	.294E-07
114.98	.334E-07
114.01	.398E-07
113.00	.501E-07
111.98	.638E-07
111.02	.779E-07
110.04	.930E-07
108.97	.112E-06
108.03	.134E-06
107.00	.164E-06

GREENWICH MEAN TIME
 DATE 11/09/63 HRS MIN 16 26B

LOCATION KWAJALEIN TECHNIQUE DRAG REFERENCE 23

ALTITUDE KM	DENSITY KG PER CUBIC M
103.04	.296E-06
102.03	.318E-06
101.03	.392E-06
100.01	.527E-06
98.99	.621E-06
98.03	.734E-06
96.98	.100E-05
96.03	.127E-05
94.96	.155E-05
93.98	.173E-05
93.00	.200E-05
92.03	.233E-05
90.98	.287E-05
89.99	.350E-05
89.02	.435E-05
88.04	.532E-05
87.00	.650E-05

11/09/63 16 26B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
85.98	.756E-05
84.98	.853E-05
84.00	.961E-05
82.96	.112E-04
81.98	.130E-04
81.01	.148E-04
80.02	.170E-04
79.02	.203E-04
77.99	.246E-04
77.01	.284E-04
75.99	.329E-04
75.02	.398E-04
73.99	.497E-04
73.01	.599E-04
71.99	.714E-04
70.99	.829E-04
69.99	.105E-03
68.99	.114E-03
68.01	.135E-03
66.99	.150E-03
65.99	.170E-03
65.00	.193E-03
64.00	.213E-03
63.00	.240E-03
62.00	.265E-03
61.00	.299E-03
60.00	.333E-03
59.00	.374E-03
58.00	.415E-03
57.00	.459E-03
56.00	.509E-03
55.00	.569E-03
54.00	.631E-03
53.00	.703E-03
52.00	.789E-03
51.00	.899E-03
50.00	.101E-02
49.00	.112E-02
48.00	.123E-02
47.00	.136E-02
46.00	.156E-02
45.00	.180E-02
44.00	.211E-02
43.00	.239E-02
42.00	.273E-02
41.00	.319E-02
40.00	.371E-02
39.00	.427E-02
38.00	.493E-02
37.00	.601E-02

GREENWICH MEAN TIME
DATE HRS MIN
11/14/63 14 58A

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

11/14/63 14 58B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
120.01	.239E-07
118.98	.266E-07
118.02	.289E-07
116.99	.314E-07
116.01	.349E-07
114.98	.411E-07
114.01	.484E-07
112.99	.571E-07
111.98	.673E-07
111.01	.801E-07
110.00	.967E-07
109.01	.115E-06
108.00	.136E-06
107.02	.158E-06
106.02	.184E-06
104.99	.220E-06
103.99	.262E-06

GREENWICH MEAN TIME
DATE HRS MIN
11/14/63 14 58B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
109.02	.940E-07
108.03	.140E-06
106.99	.191E-06
106.00	.244E-06
104.99	.271E-06
103.97	.314E-06
102.97	.323E-06
101.98	.366E-06
101.01	.436E-06
99.98	.571E-06
99.00	.708E-06
97.98	.787E-06
96.97	.925E-06

ALTITUDE KM	DENSITY KG PER CUBIC M
96.03	.107E-05
94.99	.135E-05
94.01	.169E-05
93.04	.214E-05
91.97	.277E-05
90.99	.342E-05
90.00	.408E-05
89.02	.474E-05
87.96	.551E-05
86.99	.638E-05
86.04	.737E-05
85.02	.861E-05
84.02	.999E-05
82.98	.118E-04
81.98	.141E-04
81.01	.166E-04
80.02	.195E-04
79.03	.228E-04
77.98	.266E-04
77.02	.306E-04
75.99	.349E-04
75.00	.386E-04
74.02	.437E-04
73.00	.526E-04
72.01	.657E-04
70.99	.824E-04
70.00	.103E-03
68.99	.116E-03
68.01	.133E-03
67.01	.152E-03
66.01	.172E-03
65.00	.193E-03
64.00	.212E-03
38.00	.482E-02
37.00	.616E-02
36.00	.708E-02
35.00	.815E-02
34.00	.886E-02
33.00	.110E-01
32.00	.136E-01

GREENWICH MEAN TIME
DATE HRS MIN
11/26/63 18 44A

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
114.01	.431E-07
112.99	.517E-07
112.00	.635E-07
110.99	.776E-07
109.99	.954E-07
109.03	.113E-06
107.98	.145E-06
107.02	.168E-06
105.98	.197E-06
105.00	.235E-06
104.02	.271E-06
103.00	.332E-06
101.99	.399E-06
100.97	.487E-06
100.02	.598E-06
99.02	.728E-06
98.03	.891E-06
96.97	.108E-05
96.01	.126E-05
95.03	.147E-05
94.01	.168E-05
92.99	.193E-05
92.00	.228E-05
91.01	.279E-05
90.00	.338E-05

GREENWICH MEAN TIME
DATE HRS MIN
11/26/63 18 44B

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
82.97	.121E-04
81.96	.142E-04
80.97	.167E-04
80.04	.182E-04
79.01	.213E-04
77.98	.255E-04

11/26/63 18 44B (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
77.01	.333E-04
75.99	.396E-04
75.01	.467E-04
73.99	.520E-04
72.98	.527E-04
72.00	.600E-04
71.00	.747E-04
70.00	.864E-04
69.00	.880E-04
68.00	.104E-03
67.00	.128E-03
65.98	.137E-03
65.00	.157E-03
64.01	.174E-03
62.99	.199E-03
62.00	.228E-03
61.00	.265E-03
59.99	.310E-03
59.00	.338E-03
58.00	.386E-03
57.01	.423E-03
55.99	.490E-03
55.01	.543E-03
53.99	.621E-03
52.99	.689E-03
51.99	.775E-03
51.01	.864E-03
50.00	.965E-03
48.99	.110E-02
48.01	.123E-02
47.00	.141E-02
45.99	.156E-02
45.01	.177E-02
44.01	.199E-02
43.00	.231E-02
42.00	.261E-02
41.01	.298E-02
40.00	.343E-02
39.00	.407E-02
38.01	.479E-02
36.99	.580E-02
36.00	.692E-02
35.00	.818E-02
34.00	.945E-02
33.01	.111E-01
32.01	.134E-01

GREENWICH MEAN TIME
DATE HRS MIN
12/07/63 13 11A

12/07/63 13 11A (Continued)

LOCATION TECHNIQUE REFERENCE
WALLOPS SOUND 27

ALTITUDE DENSITY
KM KG PER CUBIC M
36.71 .564E-02
35.71 .666E-02
34.71 .789E-02
33.71 .895E-02

ALTITUDE DENSITY
KM KG PER CUBIC M

77.71 .195E-04
76.71 .224E-04
75.71 .256E-04
74.71 .292E-04
73.71 .333E-04
72.71 .385E-04
71.71 .453E-04
70.71 .535E-04
69.71 .634E-04
68.71 .753E-04
67.71 .868E-04
66.71 .988E-04
65.71 .112E-03
64.71 .127E-03
63.71 .143E-03
62.71 .163E-03
61.71 .186E-03
60.71 .212E-03
59.71 .242E-03
58.71 .275E-03
57.71 .314E-03
56.71 .362E-03
55.71 .418E-03
54.71 .483E-03
53.71 .559E-03
52.71 .645E-03
51.71 .730E-03
50.71 .825E-03
49.71 .930E-03
48.71 .104E-02
47.71 .117E-02
46.71 .136E-02
45.71 .157E-02
44.71 .182E-02
43.71 .211E-02
42.71 .244E-02
41.71 .278E-02
40.71 .316E-02
39.71 .360E-02
38.71 .410E-02
37.71 .480E-02

GREENWICH MEAN TIME
DATE HRS MIN
12/07/63 13 11B

LOCATION TECHNIQUE REFERENCE
WALLOPS DRAG 23

ALTITUDE DENSITY
KM KG PER CUBIC M
88.01 .413E-05
87.01 .458E-05
86.01 .599E-05
84.98 .710E-05
84.01 .763E-05
82.98 .927E-05
81.98 .121E-04
81.00 .160E-04
79.99 .176E-04
79.01 .198E-04
77.98 .229E-04
76.99 .279E-04
76.00 .305E-04
75.00 .314E-04
74.00 .331E-04
72.99 .382E-04
72.01 .456E-04
71.00 .544E-04
70.00 .749E-04
68.99 .895E-04
68.00 .105E-03
67.00 .119E-03
66.01 .137E-03
65.00 .157E-03
63.99 .171E-03
63.00 .191E-03
62.01 .211E-03
61.00 .239E-03
60.00 .280E-03
59.01 .302E-03
58.00 .332E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 12/07/63 13 43

LOCATION TECHNIQUE REFERENCE
 WALLOPS GAUGE 18

ALTITUDE	DENSITY
KM	KG PER CUBIC M
79.	.177E-04
78.	.199E-04
77.	.227E-04
76.	.250E-04
75.	.280E-04
74.	.326E-04
73.	.372E-04
72.	.450E-04
71.	.532E-04
70.	.622E-04
69.	.722E-04
68.	.829E-04
67.	.954E-04
66.	.113E-03
65.	.126E-03
64.	.140E-03
63.	.152E-03
62.	.171E-03
61.	.202E-03
60.	.236E-03
59.	.266E-03
58.	.305E-03
57.	.341E-03
56.	.399E-03
55.	.472E-03
54.	.544E-03
53.	.622E-03
52.	.691E-03
51.	.778E-03
50.	.879E-03
49.	.101E-02
48.	.113E-02
47.	.127E-02
46.	.146E-02
45.	.167E-02
44.	.193E-02
43.	.228E-02
42.	.265E-02
41.	.302E-02
40.	.348E-02
39.	.398E-02
38.	.450E-02
37.	.511E-02
36.	.582E-02

GREENWICH MEAN TIME
DATE HRS MIN
01/23/64 18 25

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
97.99	.763E-06	57.00	.456E-03
96.95	.106E-05	56.00	.519E-03
96.02	.148E-05	55.00	.567E-03
95.01	.200E-05	54.00	.638E-03
93.95	.247E-05	53.00	.704E-03
93.06	.256E-05	51.99	.792E-03
92.03	.278E-05	51.00	.907E-03
91.01	.314E-05	50.00	.102E-02
89.94	.378E-05	49.00	.117E-02
88.99	.453E-05	47.99	.125E-02
88.01	.551E-05	47.00	.145E-02
87.05	.677E-05	46.00	.162E-02
86.00	.806E-05	45.00	.188E-02
84.96	.942E-05	44.00	.213E-02
83.98	.108E-04	43.00	.249E-02
83.01	.128E-04	42.00	.295E-02
82.00	.154E-04	41.00	.337E-02
80.97	.182E-04	40.00	.375E-02
79.98	.208E-04	39.00	.429E-02
79.03	.231E-04	38.00	.517E-02
78.02	.274E-04	37.00	.614E-02
76.98	.331E-04	36.01	.723E-02
76.02	.385E-04	35.00	.835E-02
75.00	.442E-04	34.00	.990E-02
73.99	.516E-04	33.00	.113E-01
72.99	.575E-04		
72.01	.664E-04		
71.01	.781E-04		
70.01	.992E-04		
69.01	.113E-03		
68.00	.134E-03		
67.00	.153E-03		
66.00	.173E-03		
65.00	.193E-03		
64.00	.209E-03		
63.00	.239E-03		
62.00	.264E-03		
61.00	.303E-03		
59.99	.326E-03		
59.00	.358E-03		
58.00	.408E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 02/04/64 01 35

LOCATION TECHNIQUE REFERENCE
 ASCENSION GAUGE 18

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
106.	.335E-06	65.	.152E-03
105.	.380E-06	64.	.172E-03
104.	.440E-06	63.	.195E-03
103.	.500E-06	62.	.218E-03
102.	.580E-06	61.	.250E-03
101.	.670E-06	60.	.283E-03
100.	.765E-06	59.	.320E-03
99.	.880E-06	58.	.365E-03
98.	.102E-05	57.	.410E-03
97.	.118E-05	56.	.465E-03
96.	.136E-05	55.	.530E-03
95.	.158E-05	54.	.595E-03
94.	.184E-05	53.	.670E-03
93.	.215E-05	52.	.750E-03
92.	.250E-05	51.	.840E-03
91.	.290E-05	50.	.935E-03
90.	.340E-05	49.	.104E-02
89.	.400E-05	48.	.117E-02
88.	.470E-05	47.	.130E-02
87.	.550E-05	46.	.148E-02
86.	.660E-05	45.	.170E-02
85.	.780E-05	44.	.195E-02
84.	.920E-05	43.	.225E-02
83.	.108E-04	42.	.258E-02
82.	.128E-04	41.	.300E-02
81.	.152E-04	40.	.348E-02
80.	.177E-04	39.	.405E-02
79.	.207E-04	38.	.474E-02
78.	.238E-04	37.	.552E-02
77.	.275E-04	36.	.639E-02
76.	.320E-04	35.	.739E-02
75.	.370E-04		
74.	.430E-04		
73.	.500E-04		
72.	.570E-04		
71.	.660E-04		
70.	.770E-04		
69.	.900E-04		
68.	.103E-03		
67.	.118E-03		
66.	.134E-03		

GREENWICH MEAN TIME
DATE HRS MIN
02/18/64 21 50A

GREENWICH MEAN TIME
DATE HRS MIN
02/18/64 21 50B

LOCATION	TECHNIQUE	REFERENCE	LOCATION	TECHNIQUE	REFERENCE
WHITE SANDS	DRAG	/ 03	WHITE SANDS	DRAG	/ 03

ALTITUDE KM	DENSITY KG PER CUBIC M
113.9	.129E-06
110.6	.151E-06
107.4	.540E-07
104.0	.174E-06
99.5	.390E-06
97.5	.100E-05
93.2	.202E-05
91.7	.209E-05
86.8	.646E-05
85.7	.851E-05
84.4	.100E-04
83.6	.126E-04
82.5	.145E-04
81.4	.174E-04
80.5	.191E-04
79.2	.199E-04
76.8	.263E-04
76.2	.263E-04
74.0	.324E-04
73.3	.467E-04
72.2	.435E-04
71.2	.693E-04
70.3	.693E-04
69.3	.955E-04
68.2	.100E-03
67.7	.115E-03
66.6	.132E-03
65.6	.158E-03
64.8	.178E-03
63.8	.200E-03
62.8	.214E-03
61.9	.234E-03
61.0	.269E-03
60.0	.282E-03
59.0	.316E-03
58.0	.364E-03
57.2	.479E-03
56.5	.407E-03

ALTITUDE KM	DENSITY KG PER CUBIC M
111.1	.389E-07
107.2	.676E-07
103.8	.132E-06
101.5	.380E-06
99.6	.575E-06
97.8	.777E-06
95.0	.100E-05
91.7	.276E-05
90.2	.331E-05
88.9	.214E-05
87.4	.229E-05
86.5	.742E-05
85.4	.913E-05
82.8	.129E-04
81.5	.123E-04
80.7	.158E-04
79.6	.186E-04
78.5	.229E-04
77.5	.269E-04
76.2	.309E-04
75.4	.371E-04
73.2	.380E-04
72.3	.407E-04
67.1	.119E-03
65.3	.135E-03
64.3	.151E-03
63.4	.174E-03
62.4	.120E-03
61.5	.138E-03
60.5	.219E-03
51.6	.407E-03
49.6	.872E-03
46.9	.872E-03
45.1	.162E-02
42.2	.191E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 02/18/64 21 50C

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
109.71	.924E-07
107.31	.136E-06
103.08	.280E-06
100.57	.443E-06
98.40	.654E-06
95.08	.121E-05
93.25	.171E-05
91.77	.230E-05
90.17	.317E-05
88.22	.457E-05
84.91	.846E-05
83.54	.104E-04
82.28	.126E-04
81.25	.149E-04
80.00	.179E-04
78.17	.235E-04
75.77	.329E-04
72.00	.559E-04
68.80	.879E-04
66.05	.127E-03
64.91	.151E-03
63.77	.179E-03
60.80	.260E-03
58.40	.354E-03
55.88	.485E-03
54.17	.593E-03
52.00	.783E-03
50.05	.968E-03
48.11	.124E-02
46.05	.160E-02
44.11	.206E-02
42.28	.258E-02
40.00	.359E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 02/19/64 21 30A

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 03

ALTITUDE KM	DENSITY KG PER CUBIC M
114.4	.646E-07
112.0	.123E-06
109.6	.777E-07
105.8	.166E-06
100.9	.525E-06
97.2	.115E-05
96.1	.148E-05
94.6	.182E-05
91.7	.245E-05
90.6	.490E-05
89.7	.436E-05
87.4	.675E-05
86.5	.795E-05
84.7	.115E-04
84.0	.126E-04
83.0	.145E-04
82.3	.152E-04
80.6	.199E-04
80.0	.212E-04
79.1	.251E-04
78.2	.275E-04
76.7	.331E-04
76.9	.389E-04
75.1	.426E-04
74.3	.491E-04
73.7	.537E-04
73.1	.590E-04
72.4	.677E-04
72.0	.708E-04
71.5	.760E-04
70.8	.832E-04
70.4	.892E-04
69.8	.978E-04
69.0	.109E-03
68.3	.115E-03
67.7	.123E-03
66.6	.151E-03
65.4	.170E-03
64.7	.209E-03
63.9	.217E-03
63.2	.234E-03
62.6	.224E-03
61.3	.282E-03

GREENWICH MEAN TIME
DATE HRS MIN
02/19/64 21 30B

LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG / 03

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
104.3	.276E-06	55.8	.513E-03
102.6	.263E-06	55.2	.576E-03
101.1	.854E-06	54.9	.616E-03
99.7	.854E-06	53.9	.646E-03
98.5	.135E-05	54.2	.709E-03
91.3	.893E-06	52.3	.795E-03
90.7	.436E-05	51.7	.872E-03
89.7	.436E-05	51.1	.935E-03
88.8	.662E-05	50.2	.105E-02
88.2	.632E-05	49.7	.110E-02
85.8	.100E-04	49.1	.117E-02
84.8	.100E-04	48.1	.132E-02
83.8	.132E-04	47.6	.141E-02
83.0	.132E-04	46.8	.158E-02
81.5	.170E-04	46.0	.170E-02
77.8	.282E-04	45.3	.190E-02
76.8	.302E-04	43.8	.229E-02
75.3	.389E-04	42.8	.251E-02
74.7	.436E-04	42.3	.276E-02
73.6	.478E-04	41.7	.316E-02
73.0	.563E-04	41.1	.347E-02
72.2	.632E-04	40.0	.324E-02
71.4	.708E-04	39.6	.417E-02
70.7	.796E-04	38.2	.537E-02
69.8	.872E-04	37.5	.590E-02
69.2	.935E-04	36.7	.646E-02
68.4	.103E-03	35.5	.815E-02
67.7	.117E-03	34.8	.913E-02
66.0	.145E-03	33.7	.105E-02
65.3	.162E-03	33.0	.115E-02
64.8	.178E-03	31.8	.153E-02
64.1	.190E-03	31.0	.157E-02
63.3	.214E-03	30.2	.182E-02
62.4	.234E-03		
61.9	.263E-03		
61.1	.275E-03		
60.3	.295E-03		
59.7	.324E-03		
58.9	.363E-03		
57.3	.416E-03		
56.7	.469E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 02/19/64 21 30G

LOCATION TECHNIQUE REFERENCE
 WHITE SANDS DRAG / 3A

ALTITUDE	DENSITY
KM	KG PER CUBIC M
109.37	.121E-06
106.40	.194E-06
104.11	.283E-06
101.82	.433E-06
100.34	.583E-06
99.20	.729E-06
97.82	.950E-06
96.91	.112E-05
95.42	.149E-05
93.71	.206E-05
92.45	.256E-05
90.28	.379E-05
88.91	.478E-05
87.31	.628E-05
85.60	.838E-05
84.91	.929E-05
84.00	.107E-04
82.74	.131E-04
81.71	.153E-04
80.57	.183E-04
80.11	.196E-04
79.08	.226E-04
76.34	.343E-04
73.94	.485E-04
72.11	.634E-04
70.51	.799E-04
68.34	.108E-03
66.62	.137E-03
65.14	.167E-03
62.05	.243E-03
60.57	.288E-03
58.74	.356E-03
56.11	.485E-03
55.31	.533E-03
53.71	.647E-03
52.11	.786E-03
50.05	.102E-02
48.11	.131E-02
44.34	.215E-02
43.20	.249E-02
41.14	.334E-02
40.00	.399E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 03/13/64 18 20A

LOCATION TECHNIQUE REFERENCE
 KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
120.00	.249E-07
118.99	.274E-07
118.01	.300E-07
117.01	.336E-07
115.98	.381E-07
114.98	.435E-07
114.02	.489E-07
112.98	.561E-07
111.97	.649E-07
111.02	.764E-07
109.97	.942E-07
108.98	.117E-06
108.04	.143E-06
107.00	.173E-06
106.02	.202E-06
105.03	.240E-06
104.01	.294E-06
102.98	.377E-06
102.01	.482E-06
101.02	.615E-06
100.02	.757E-06
98.99	.900E-06

GREENWICH MEAN TIME
DATE HRS MIN
03/13/64 18 20B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
104.00	.160E-06	63.00	.229E-03
102.96	.214E-06	62.00	.247E-03
102.05	.285E-06	61.00	.285E-03
101.03	.361E-06	59.99	.314E-03
99.97	.482E-06	59.00	.354E-03
99.05	.584E-06	58.00	.391E-03
98.01	.725E-06	57.01	.439E-03
96.95	.997E-06	56.01	.488E-03
96.03	.126E-05	55.00	.541E-03
94.96	.151E-05	54.00	.597E-03
94.03	.178E-05	53.00	.673E-03
93.00	.206E-05	52.00	.760E-03
92.05	.238E-05	51.00	.861E-03
91.02	.284E-05	50.00	.971E-03
89.98	.343E-05	49.00	.109E-02
89.05	.413E-05	48.00	.121E-02
87.96	.518E-05	47.00	.135E-02
87.04	.598E-05	46.00	.151E-02
85.97	.701E-05	45.00	.174E-02
85.00	.798E-05	44.00	.208E-02
83.97	.937E-05	43.00	.242E-02
82.97	.110E-04	42.00	.276E-02
81.98	.132E-04	41.00	.305E-02
80.99	.157E-04	40.00	.357E-02
79.99	.196E-04	39.00	.416E-02
79.02	.228E-04	38.00	.470E-02
78.01	.281E-04	37.00	.548E-02
77.01	.320E-04	36.00	.646E-02
76.03	.386E-04	35.00	.778E-02
75.02	.428E-04	34.00	.898E-02
74.02	.512E-04	33.00	.104E-01
73.00	.574E-04	32.00	.118E-01
71.98	.694E-04		
70.99	.783E-04		
69.99	.990E-04		
68.99	.111E-03		
68.00	.127E-03		
66.99	.144E-03		
66.00	.161E-03		
65.00	.183E-03		
64.01	.200E-03		

GREENWICH MEAN TIME
DATE HRS MIN
04/15/64 01 22

LOCATION TECHNIQUE REFERENCE
ASCENSION GAUGE 18

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
97.	.118E-05	56.	.551E-03
96.	.139E-05	55.	.620E-03
95.	.161E-05	54.	.681E-03
94.	.185E-05	53.	.737E-03
93.	.213E-05	52.	.830E-03
92.	.249E-05	51.	.944E-03
91.	.287E-05	50.	.108E-02
90.	.350E-05	49.	.124E-02
89.	.424E-05	48.	.143E-02
88.	.501E-05	47.	.165E-02
87.	.591E-05	46.	.191E-02
86.	.698E-05	45.	.221E-02
85.	.845E-05	44.	.251E-02
84.	.106E-04	43.	.287E-02
83.	.127E-04	42.	.325E-02
82.	.149E-04	41.	.370E-02
81.	.171E-04	40.	.424E-02
80.	.196E-04	39.	.490E-02
79.	.227E-04	38.	.568E-02
78.	.263E-04	37.	.651E-02
77.	.310E-04	36.	.747E-02
76.	.364E-04	35.	.849E-02
75.	.433E-04	34.	.959E-02
74.	.529E-04	33.	.109E-01
73.	.611E-04	32.	.126E-01
72.	.693E-04		
71.	.783E-04		
70.	.893E-04		
69.	.101E-03		
68.	.118E-03		
67.	.136E-03		
66.	.155E-03		
65.	.181E-03		
64.	.209E-03		
63.	.243E-03		
62.	.270E-03		
61.	.302E-03		
60.	.337E-03		
59.	.381E-03		
58.	.432E-03		
57.	.480E-03		

GREENWICH MEAN TIME
DATE HRS MIN
04/15/64 15 56

LOCATION TECHNIQUE REFERENCE
ASCENSION GAUGE 18

ALTITUDE	DENSITY	ALTITUDE	DENSITY
KM	KG PER CUBIC M	KM	KG PER CUBIC M
100.	.465E-06	59.	.374E-03
99.	.603E-06	58.	.408E-03
98.	.766E-06	57.	.469E-03
97.	.962E-06	56.	.534E-03
96.	.117E-05	55.	.589E-03
95.	.140E-05	54.	.658E-03
94.	.164E-05	53.	.746E-03
93.	.193E-05	52.	.835E-03
92.	.226E-05	51.	.932E-03
91.	.269E-05	50.	.106E-02
90.	.319E-05	49.	.118E-02
89.	.373E-05	48.	.133E-02
88.	.441E-05	47.	.150E-02
87.	.525E-05	46.	.172E-02
86.	.621E-05	45.	.192E-02
85.	.718E-05	44.	.214E-02
84.	.806E-05	43.	.251E-02
83.	.896E-05	42.	.284E-02
82.	.104E-04	41.	.326E-02
81.	.127E-04	40.	.368E-02
80.	.164E-04	39.	.432E-02
79.	.209E-04	38.	.498E-02
78.	.257E-04	37.	.564E-02
77.	.304E-04	36.	.647E-02
76.	.349E-04	35.	.754E-02
75.	.399E-04	34.	.879E-02
74.	.473E-04	33.	.102E-01
73.	.536E-04	32.	.117E-01
72.	.613E-04		
71.	.711E-04		
70.	.830E-04		
69.	.986E-04		
68.	.115E-03		
67.	.132E-03		
66.	.151E-03		
65.	.166E-03		
64.	.193E-03		
63.	.235E-03		
62.	.281E-03		
61.	.326E-03		
60.	.360E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 05/12/64 11 25A

LOCATION TECHNIQUE REFERENCE
 KWAJALEIN DRAG 23

GREENWICH MEAN TIME
 DATE HRS MIN
 05/07/64 02 31

LOCATION TECHNIQUE REFERENCE
 POINT MUGU DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
110.01	.546E-07
109.02	.673E-07
107.96	.797E-07
107.04	.987E-07
106.00	.119E-06
105.02	.167E-06
103.97	.209E-06
102.96	.265E-06
101.98	.314E-06
101.00	.421E-06
100.03	.514E-06
99.01	.603E-06
98.05	.704E-06

ALTITUDE KM	DENSITY KG PER CUBIC M
119.99	.167E-07
118.97	.200E-07
118.00	.231E-07
117.01	.267E-07
116.01	.305E-07
114.98	.368E-07
114.02	.445E-07
113.03	.550E-07
112.03	.677E-07
111.01	.825E-07
109.97	.101E-06
109.00	.120E-06
108.02	.143E-06
107.02	.168E-06
106.00	.196E-06
104.97	.225E-06
104.01	.262E-06
103.04	.309E-06
101.96	.376E-06
100.96	.450E-06
100.04	.532E-06
99.01	.657E-06
97.96	.818E-06
96.99	.101E-05
96.02	.124E-05

GREENWICH MEAN TIME
DATE HRS MIN
05/12/64 11 258

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
107.00	.138E-06	66.01	.179E-03
106.02	.154E-06	65.00	.205E-03
105.00	.172E-06	64.01	.230E-03
103.98	.204E-06	63.01	.257E-03
103.02	.261E-06	61.99	.286E-03
101.98	.385E-06	61.00	.319E-03
101.02	.515E-06	59.99	.357E-03
100.04	.589E-06	59.00	.392E-03
98.96	.689E-06	58.01	.434E-03
97.97	.897E-06	57.00	.476E-03
96.98	.116E-05	56.00	.540E-03
95.97	.137E-05	55.00	.612E-03
94.96	.161E-05	54.00	.698E-03
93.96	.186E-05	53.00	.794E-03
92.96	.222E-05	52.00	.885E-03
92.03	.254E-05	51.00	.986E-03
91.03	.297E-05	50.00	.110E-02
90.03	.349E-05	49.00	.125E-02
89.03	.408E-05	48.00	.138E-02
88.04	.471E-05	47.00	.160E-02
86.96	.560E-05	46.00	.178E-02
86.00	.638E-05	45.00	.205E-02
84.96	.734E-05	44.00	.236E-02
84.03	.828E-05	43.00	.262E-02
83.03	.991E-05	42.00	.325E-02
81.99	.127E-04	41.00	.362E-02
80.97	.160E-04	40.00	.423E-02
80.01	.196E-04	39.00	.469E-02
79.03	.235E-04	38.00	.568E-02
77.98	.290E-04	37.00	.675E-02
77.01	.346E-04		
75.99	.408E-04		
75.00	.472E-04		
74.02	.538E-04		
72.98	.606E-04		
71.99	.691E-04		
70.99	.857E-04		
69.99	.107E-03		
69.01	.121E-03		
67.99	.140E-03		
66.99	.158E-03		

GREENWICH MEAN TIME
DATE HRS MIN
06/17/64 01 01A

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
120.01	.142E-07
119.00	.157E-07
118.00	.190E-07
117.03	.240E-07
116.01	.305E-07
114.99	.371E-07
113.98	.445E-07
112.97	.534E-07
112.02	.629E-07
111.02	.746E-07
109.99	.877E-07
109.01	.102E-06
108.01	.117E-06
106.99	.135E-06
106.00	.158E-06
104.96	.191E-06
104.01	.229E-06
103.04	.268E-06
101.96	.309E-06

GREENWICH MEAN TIME
DATE HRS MIN
06/17/64 01 01B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
102.04	.262E-06	61.00	.309E-03
100.99	.359E-06	60.00	.338E-03
100.02	.439E-06	59.00	.381E-03
98.98	.583E-06	57.99	.428E-03
98.02	.642E-06	57.01	.485E-03
96.99	.808E-06	56.00	.537E-03
96.01	.940E-06	55.00	.583E-03
94.98	.119E-05	54.00	.646E-03
93.99	.151E-05	53.00	.722E-03
93.01	.188E-05	52.00	.812E-03
92.04	.246E-05	51.00	.934E-03
90.97	.309E-05	50.00	.106E-02
89.98	.370E-05	49.00	.121E-02
89.01	.430E-05	48.00	.136E-02
87.97	.502E-05	47.00	.152E-02
87.02	.569E-05	46.00	.175E-02
85.98	.642E-05	45.00	.193E-02
84.98	.737E-05	44.00	.223E-02
83.99	.860E-05	43.00	.243E-02
83.01	.103E-04	42.00	.283E-02
81.99	.126E-04	41.00	.317E-02
81.01	.155E-04	40.00	.376E-02
80.01	.197E-04	39.00	.437E-02
78.99	.241E-04	38.00	.515E-02
78.00	.292E-04	37.00	.619E-02
76.98	.351E-04	36.00	.707E-02
76.02	.424E-04	35.00	.813E-02
75.00	.490E-04	34.00	.937E-02
74.00	.557E-04	33.00	.116E-01
73.00	.620E-04	32.00	.141E-01
72.01	.683E-04		
70.99	.864E-04		
70.00	.103E-03		
69.01	.124E-03		
68.01	.143E-03		
67.00	.153E-03		
66.01	.169E-03		
65.00	.191E-03		
64.00	.219E-03		
63.00	.254E-03		
61.99	.277E-03		

GREENWICH MEAN TIME
DATE HRS MIN
06/18/64 02 19A

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
119.97	.174E-07
118.98	.181E-07
118.01	.201E-07
117.02	.235E-07
115.98	.284E-07
114.96	.340E-07
113.99	.399E-07
112.99	.456E-07
112.00	.509E-07
111.00	.568E-07
110.04	.648E-07
109.02	.782E-07
107.97	.968E-07
106.98	.121E-06
106.00	.153E-06
104.98	.195E-06
103.97	.244E-06
103.04	.290E-06
101.98	.347E-06
101.04	.412E-06
99.96	.518E-06

GREENWICH MEAN TIME
DATE HRS MIN
06/18/64 02 19B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
98.00	.774E-06	56.99	.510E-03
97.02	.836E-06	56.00	.559E-03
95.98	.109E-05	54.99	.622E-03
95.01	.149E-05	54.00	.689E-03
94.05	.179E-05	53.01	.774E-03
92.97	.213E-05	52.00	.861E-03
92.00	.267E-05	51.00	.948E-03
91.05	.311E-05	49.99	.107E-02
90.02	.364E-05	49.00	.121E-02
89.04	.413E-05	48.00	.139E-02
88.01	.477E-05	47.00	.154E-02
86.98	.546E-05	46.00	.178E-02
85.96	.638E-05	45.00	.203E-02
84.99	.776E-05	44.00	.238E-02
84.02	.986E-05	43.00	.275E-02
83.00	.123E-04	42.00	.315E-02
81.99	.147E-04	41.00	.367E-02
80.98	.179E-04	40.00	.402E-02
80.03	.216E-04	39.00	.490E-02
79.02	.256E-04	38.00	.572E-02
78.02	.290E-04	37.00	.654E-02
76.97	.344E-04	36.00	.712E-02
76.01	.424E-04	35.00	.837E-02
75.00	.504E-04	34.00	.111E-01
73.99	.567E-04		
72.99	.606E-04		
72.01	.721E-04		
71.00	.907E-04		
70.00	.111E-03		
69.01	.123E-03		
68.00	.143E-03		
67.00	.174E-03		
66.00	.192E-03		
64.99	.214E-03		
64.00	.236E-03		
63.00	.260E-03		
62.01	.290E-03		
60.99	.322E-03		
60.00	.355E-03		
59.00	.397E-03		
58.00	.450E-03		

GREENWICH MEAN TIME
 DATE HRS MIN
 06/18/64 16 30A

LOCATION TECHNIQUE REFERENCE
 KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
120.00	.178E-07
118.97	.187E-07
117.97	.198E-07
116.99	.217E-07
116.02	.241E-07
115.01	.276E-07
113.98	.313E-07
112.96	.355E-07
112.00	.411E-07
111.01	.497E-07
110.03	.617E-07
108.96	.772E-07
108.02	.920E-07
106.97	.110E-06
106.04	.130E-06
104.98	.159E-06
103.98	.196E-06
103.02	.236E-06
102.02	.283E-06

GREENWICH MEAN TIME
DATE HRS MIN
06/18/64 16 30B

LOCATION TECHNIQUE REFERENCE
KWAJALEIN DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M	ALTITUDE KM	DENSITY KG PER CUBIC M
99.96	.519E-06	59.00	.366E-03
98.96	.475E-06	58.00	.416E-03
97.99	.575E-06	57.00	.475E-03
97.04	.696E-06	56.00	.529E-03
95.97	.953E-06	54.99	.586E-03
95.02	.117E-05	54.00	.638E-03
94.04	.158E-05	53.00	.699E-03
92.97	.210E-05	52.00	.779E-03
92.04	.240E-05	51.00	.845E-03
91.02	.282E-05	50.00	.949E-03
89.96	.336E-05	49.00	.107E-02
89.03	.406E-05	48.00	.126E-02
87.98	.474E-05	47.00	.143E-02
87.03	.527E-05	46.00	.164E-02
85.98	.594E-05	45.00	.185E-02
84.99	.713E-05	44.00	.214E-02
83.96	.886E-05	43.00	.252E-02
83.04	.107E-04	42.00	.284E-02
82.04	.127E-04	41.00	.329E-02
80.98	.143E-04	40.00	.380E-02
79.99	.168E-04	39.00	.423E-02
78.98	.196E-04	38.00	.502E-02
78.00	.228E-04	37.00	.582E-02
77.01	.293E-04	36.00	.710E-02
76.01	.372E-04	35.00	.777E-02
75.00	.435E-04	34.00	.874E-02
74.00	.492E-04	33.01	.104E-01
73.00	.538E-04	32.00	.126E-01
72.01	.678E-04		
70.99	.747E-04		
69.99	.986E-04		
69.00	.116E-03		
68.00	.134E-03		
67.00	.151E-03		
66.00	.175E-03		
65.01	.191E-03		
64.00	.218E-03		
63.00	.242E-03		
62.00	.275E-03		
60.99	.298E-03		
60.00	.329E-03		

GREENWICH MEAN TIME
DATE HRS MIN
07/28/64 20 06

GREENWICH MEAN TIME
DATE HRS MIN
7/29/64 9 30

LOCATION TECHNIQUE REFERENCE LOCATION TECHNIQUE REFERENCE
WHITE SANDS DRAG / 3A WHITE SANDS DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
108.11	.138E-06
105.71	.201E-06
103.88	.273E-06
102.05	.375E-06
100.57	.482E-06
95.77	.112E-05
93.82	.164E-05
91.88	.234E-05
89.82	.350E-05
86.97	.579E-05
84.11	.944E-05
82.85	.115E-04
81.25	.147E-04
80.00	.180E-04
79.20	.205E-04
78.40	.233E-04
76.34	.323E-04
72.91	.530E-04
70.62	.733E-04
68.91	.926E-04
67.31	.115E-03
65.82	.140E-03
65.02	.156E-03
63.88	.181E-03
61.94	.227E-03
60.11	.287E-03
58.28	.360E-03
55.54	.506E-03
53.94	.612E-03
51.65	.821E-03
49.82	.100E-02
48.00	.126E-02
45.71	.168E-02
44.11	.207E-02
42.05	.267E-02
40.00	.359E-02

ALTITUDE KM	DENSITY KG PER CUBIC M
109.82	.861E-07
109.37	.936E-07
108.00	.118E-06
107.20	.139E-06
106.40	.161E-06
104.00	.257E-06
102.05	.373E-06
99.65	.603E-06
97.82	.866E-06
95.88	.126E-05
91.77	.277E-05
88.91	.465E-05
86.62	.698E-05
85.48	.858E-05
84.11	.105E-04
83.42	.119E-04
81.14	.172E-04
80.00	.200E-04
76.11	.352E-04
71.77	.680E-04
69.48	.918E-04
65.82	.149E-03
64.00	.190E-03
62.17	.235E-03
60.57	.288E-03
58.97	.350E-03
57.94	.390E-03
55.20	.545E-03
53.02	.709E-03
49.71	.108E-02
46.62	.160E-02
46.28	.166E-02
45.71	.179E-02
41.94	.283E-02
40.00	.371E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 11/03/64 10 02

LOCATION TECHNIQUE REFERENCE
 EGLIN FIELD DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
107.08	.187E-06
102.85	.360E-06
99.77	.604E-06
96.68	.100E-05
95.42	.123E-05
93.02	.185E-05
91.42	.246E-05
89.71	.334E-05
85.82	.657E-05
82.51	.116E-04
80.00	.180E-04
75.08	.381E-04
71.77	.623E-04
68.57	.975E-04
64.11	.176E-03
61.25	.253E-03
56.80	.453E-03
55.20	.554E-03
51.54	.897E-03
50.17	.107E-02
48.34	.135E-02
46.17	.181E-02
43.88	.250E-02
41.60	.346E-02
40.00	.437E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 11/17/64 21 10A

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 23

11/17/64 21 10A (Continued)

ALTITUDE KM	DENSITY KG PER CUBIC M
117.01	.177E-07
115.99	.243E-07
115.03	.313E-07
113.99	.371E-07
113.00	.437E-07
112.02	.504E-07
111.00	.627E-07
109.98	.768E-07
109.03	.889E-07
107.98	.102E-06
107.01	.115E-06
106.01	.137E-06
105.02	.163E-06
104.00	.209E-06
102.98	.277E-06
102.04	.364E-06
100.99	.470E-06
100.03	.584E-06
99.05	.716E-06
97.96	.824E-06
97.05	.942E-06
96.03	.110E-05

ALTITUDE KM	DENSITY KG PER CUBIC M
94.96	.163E-05
93.99	.177E-05
93.02	.200E-05
92.04	.226E-05
90.97	.272E-05
90.01	.317E-05
89.00	.368E-05
88.02	.441E-05
86.96	.570E-05
86.03	.725E-05
84.96	.932E-05
84.05	.107E-04
82.98	.114E-04
82.02	.124E-04
80.99	.146E-04
80.01	.179E-04
79.00	.217E-04
77.97	.247E-04
77.00	.287E-04
75.99	.343E-04
74.99	.407E-04
73.99	.484E-04
72.99	.561E-04
71.99	.655E-04
71.01	.725E-04
70.01	.784E-04
69.00	.915E-04
68.01	.103E-03
66.99	.117E-03
65.99	.132E-03
64.99	.154E-03
64.01	.172E-03
63.00	.199E-03
61.99	.231E-03
61.01	.270E-03
59.99	.315E-03
58.99	.355E-03
58.01	.395E-03
56.99	.442E-03
56.00	.491E-03
55.01	.541E-03
54.00	.599E-03
53.00	.670E-03

GREENWICH MEAN TIME
 DATE HRS MIN
 11/17/64 21 10B

LOCATION TECHNIQUE REFERENCE
 WALLOPS DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
101.02	.478E-06
99.96	.553E-06
99.04	.697E-06
97.97	.952E-06
97.00	.123E-05
95.97	.143E-05

GREENWICH MEAN TIME
DATE HRS MIN
12/17/64 19 54B

LOCATION TECHNIQUE REFERENCE
POINT MUGU DRAG 23

GREENWICH MEAN TIME
DATE HRS MIN
12/17/64 19 54A

LOCATION TECHNIQUE REFERENCE
POINT MUGU DRAG 23

ALTITUDE KM	DENSITY KG PER CUBIC M
108.96	.957E-07
108.00	.128E-06
106.96	.157E-06
105.97	.170E-06
104.98	.213E-06
103.96	.243E-06
103.93	.296E-06
101.99	.316E-06
101.90	.398E-06
99.97	.440E-06
99.92	.499E-06
98.92	.569E-06

ALTITUDE KM	DENSITY KG PER CUBIC M
62.00	.212E-03
60.99	.256E-03
60.01	.303E-03
59.00	.359E-03
57.99	.396E-03
57.01	.459E-03
55.99	.473E-03
55.00	.558E-03
54.01	.587E-03
53.01	.633E-03
52.00	.700E-03
51.00	.752E-03
50.00	.877E-03
49.01	.943E-03
47.99	.110E-02
47.02	.123E-02
46.00	.143E-02
45.01	.162E-02
44.00	.183E-02
43.00	.208E-02
41.99	.239E-02
41.00	.289E-02
40.02	.348E-02
38.99	.416E-02
38.00	.476E-02
36.98	.563E-02
36.00	.673E-02
35.00	.793E-02
33.99	.923E-02
33.03	.107E-01

GREENWICH MEAN TIME
DATE HRS MIN
2/23/65 17 15

GREENWICH MEAN TIME
DATE HRS MIN
02/26/65 12 12

LOCATION TECHNIQUE REFERENCE LOCATION TECHNIQUE REFERENCE
EGLIN FIELD DRAG / 3A EGLIN FIELD DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
117.48	.531E-07
115.88	.644E-07
114.17	.795E-07
112.45	.991E-07
110.62	.127E-06
110.05	.138E-06
103.88	.348E-06
100.34	.625E-06
96.68	.116E-05
93.60	.199E-05
91.54	.285E-05
90.51	.346E-05
86.85	.666E-05
82.97	.126E-04
80.45	.192E-04
77.71	.282E-04
74.05	.466E-04
71.77	.640E-04
69.71	.870E-04
66.28	.139E-03
62.28	.232E-03
60.11	.305E-03
58.28	.381E-03
54.85	.575E-03
51.65	.851E-03
49.82	.106E-02
47.77	.136E-02
46.51	.159E-02
45.60	.176E-02
44.34	.206E-02
43.20	.239E-02
41.82	.289E-02
40.68	.343E-02
40.00	.382E-02

ALTITUDE KM	DENSITY KG PER CUBIC M
109.48	.840E-07
107.42	.126E-06
105.94	.170E-06
104.34	.230E-06
102.97	.302E-06
98.62	.698E-06
95.54	.127E-05
91.65	.267E-05
89.60	.387E-05
87.54	.548E-05
85.82	.745E-05
81.48	.154E-04
80.11	.190E-04
77.82	.267E-04
73.71	.494E-04
71.20	.717E-04
69.48	.916E-04
68.11	.110E-03
66.85	.131E-03
64.91	.170E-03
63.54	.204E-03
62.05	.247E-03
58.40	.394E-03
55.54	.564E-03
53.25	.743E-03
51.42	.922E-03
49.14	.122E-02
45.71	.193E-02
43.42	.262E-02
40.91	.371E-02
40.00	.420E-02

GREENWICH MEAN TIME
 DATE HRS MIN
 2/27/65 21 00

LOCATION TECHNIQUE REFERENCE
 EGLIN FIELD DRAG / 3A

ALTITUDE KM	DENSITY KG PER CUBIC M
109.82	.126E-06
109.14	.140E-06
106.40	.215E-06
104.34	.302E-06
101.94	.447E-06
100.11	.610E-06
96.68	.107E-05
93.94	.171E-05
91.88	.245E-05
89.71	.358E-05
87.42	.532E-05
84.68	.842E-05
83.54	.101E-04
81.60	.139E-04
80.00	.180E-04
78.62	.223E-04
74.62	.398E-04
71.08	.684E-04
70.17	.783E-04
66.74	.129E-03
64.91	.167E-03
63.08	.212E-03
60.11	.313E-03
57.94	.416E-03
54.62	.628E-03
52.80	.780E-03
51.77	.889E-03
48.57	.131E-02
46.85	.162E-02
43.54	.253E-02
42.40	.292E-02
41.82	.317E-02
40.00	.402E-02

SIGNIFICANCE OF CODE SYMBOLS IN THE COLUMN ENTITLED
NUMBER OF DENSITY POINTS AND CODE

- * Graphical data read by Quiroz (Reference 30)
- / Graphical data read by Minzner
- \$ Mass density computed from pressure + temperature or
from number density and molecular weight by Quiroz
(reference 30)
- = Mass density computed from number density and molecular
weight by Minzner

REFERENCES

1. Ainsworth, J. E., D. F. Fox, and H. E. LaGow, "Upper Atmosphere Structure Measurement Using the Pitot-Static Tube," J. Geophys. Res. 66 (10) 3191-3212, 1961.
2. Bandeen, W. R., Private Communication, June 2, 1965.
3. Champion, K.S.W. and A. C. Faire, "Falling Sphere Measurements of Atmospheric Density Temperature and Pressure up to 115 km." AFCRL-64-554, July 1964.
- 3a. Champion, K.S.W., "U.S. Supplementary Atmospheres, 1965," Air Force Cambridge Research Laboratories, Bedford, Mass., 14 October 1965.
4. Dow, W. G. and N. W. Spencer, "The Measurement of Ambient Pressure Temperature of the Upper Atmosphere," University of Michigan, Engineering Research Institute, Contract AF19(122)-55, Final Report, August 1953.
5. Elterman, L., "The Measurement of Stratospheric Density Distribution with the Searchlight Technique." J. Geophys. Research 56 (4) 509-520, December 1951; Geophys. Res. Papers #10, December 1951.
6. Elterman, L., "Seasonal Trends of Temperature, Density and Pressure in the Stratosphere obtained with the Searchlight-Probing Technique," U. S. AFCRC, Geophysical Research Papers, No.29, July 1954.
7. Faire, A. C., Private Communication, 1963.
8. Faucher, G. A., R. W. Procunier, and F. S. Sherman, "Upper-atmosphere Density Obtained from Measurements of Drag on a Falling Sphere," J. Geophys. Res. 68, 3437-3450, 1963.
- 8a. Faucher, G. A., Private Communication, 1964.
9. Groves, G. V., Private Communications, 22 March 1963.
- 9a. Groves, G. V., "Seasonal Variations of Temperature, Pressure, Density, and Winds to 80 km altitude at Woomera, 1957-1963," Department of Physics, University College, London, March 1965.
10. Hall, L. A., W. Schweizer, and H. E. Hinteregger, "Diurnal Variation of the atmosphere around 190 km Derived from Solar Extreme Ultraviolet Absorption Measurements," J. Geophys. Res. 68 (24) 6413-6417, 1963.
11. Hall, L. A., W. Schweitzer, and H. E. Hinteregger, "Improved Extreme Ultraviolet Absorption Measurements in the Upper Atmosphere," J. Geophys. Res. 70, 105-112, January 1965.

12. Havens, R. J., R. T. Koll, and H. E. LaGow, "The Pressure, Density, and Temperature of the Earth's Atmosphere to 160 km", J. Geophys. Research, 57 (1): 59-72, March 1952.
13. Hinteregger, H. E., "Absorption Spectrometric Analysis of the Upper Atmosphere in the E.U.V. Region", J. of Atmos. Sci. 19 , 351-368, September 1962.
14. Horowitz, R. and H. E. LaGow, "Upper Air Pressure and Density Measurements from 90 to 220 km with the Viking 7 Rocket", J. Geophys. Research, 62 (1): 57-78, March 1957.
15. Horowitz, R. and H. E. LaGow, "Summer-day auroral-zone Atmospheric-Structure Measurements from 100 to 210 km", J. Geophys. Research, 63(4): 757-773, December 1958.
16. Horowitz, R., H. E. LaGow, and J. F. Giuliani, "Fall-day Auroral-Zone Atmospheric Structure Measurements from 100 to 188 km", J. Geophys. Research, 64(12): 2287-2295, December 1959.
17. Horvath, J. J., R. W. Simmons and L. H. Brace, "Theory and Implementation of the Pitot-Static Technique for Upper Atmosphere Measurements", Scientific Report NS-1 of U. of Mich. Contract NASr-54(01) AF19 (604)-6124, March 1962.
18. Horvath, J. J. Private Communication, January 28, 1965.
19. Jones, L. M., and J. W. Peterson, "Upper Air Densities and Temperatures Measured by the Falling Sphere Method - Results from 13 flights between 1952 and 1958. Reviewed and Summarized in 1961 U. of Michigan 03558-5-T, Contract AF19(604)-6185, AFCRL-803, February 1961.
20. LaGow, H. E. and J. Ainsworth, "Arctic Upper Atmosphere Pressure and Density Measurements with Rockets", J. Geophys. Research, 61(1): 77-92, March 1956.
- 20a. LaGow, H. E., R. Horowitz, and J. Ainsworth, "Rocket Measurements of the Arctic Upper Atmos., IGY Rocket Report Series No. 1, National Academy of Sci., 30 July 1958.
21. Meadows, E. B. and J. W. Townsend, Jr., "IGY Rocket Measurements of Arctic Atmospheric Composition Above 100 km", in: Kallman, H., Ed., P. 175-198, Space Research, Proceedings of the First International Space Science Symposium, Nice, France, H. K. Kallman, Ed., North-Holland Publishing Company, Amsterdam, 1960.
22. Nier, A. O., J. H. Hoffman, C. Y. Johnson, and J. C. Holmes, "Neutral Composition of the Atmosphere in the 100 to 200 kilometer range", J. Geophys. Res. 69(5) 979-989, March 1964.

23. Peterson, J. W., Private Communication, 19 January 1965.
24. Peterson, J. W., and K. D. McWatters, "The Measurement of Upper-Air Density and Temperature by two Radar-Tracked Falling Spheres", NASA CR-29 (U. of Michigan Contract NASw-138) Washington, D. C., April 1964.
25. Rees, J. A., "Diffusion Coefficients Determined from Sodium Vapors Trails" Planet. Space Sci., 8 35-42, 1961.
26. Schaefer, E. J. and M. H. Nichols, "Upper Air Neutral Composition Measurements by a Mass Spectrometer", J. Geophys. Res. 69 (21) 4649-4660, Nov. 1964.
27. Smith, W., L. Katchen, P. Sacher, P. Swartz, and J. Theon, "Temperature, Pressure, Density and Wind Measurements with the Rocket Grenade Experiment 1960-1963". NASA TR R-211 Goddard, Greenbelt, Md., October 1964.
28. Spencer, N. W., "Research in the Measurement of Ambient Pressure, Temperature and Density of the Upper Atmosphere by Means of Rockets", AFRCR TR-58-264, June 1958, U. of Michigan, Final Report, Contract AF19(604)-545.
29. Spencer, N. W., R. L. Buggess, and D. R. Taeusch, "Seasonal Variation of Density and Temperature over Churchill, Canada, during Solar Maximum", J. Geophys. Res. 69 (7) 1367-1380, April 1964.
30. Quiroz, R. S., "Air Density Profiles for the Atmosphere Between 30 and 80 Kilometers," Air Weather Service Technical Report 150, January 1961.