NASA TN D-1641

NASA TN D-1641

TECHNICAL NOTE

D-1641

CROSS SECTIONS OF TEMPERATURE, PRESSURE, AND DENSITY NEAR THE 80TH MERIDIAN WEST

By Orvel E. Smith, William M. McMurray, and Harold L. Crutcher

George C. Marshall Space Flight Center
Huntsville, Alabama

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON
May 1963

Page intentionally left blank

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF ILLUSTRATIONS (Cont'd)

LIST OF TABLES

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

LIST OF TABLES (Cont'd)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

TECHNICAL NOTE D-1641

CROSS SECTIONS OF TEMPERATURE, PRESSURE, AND DENSITY NEAR THE 80TH MERIDIAN WEST

By

Orvel E. Smith, William M. McMurray, and Harold L. Crutcher*

SUMMARY

This report provides monthly and annual temperature, pressure, and density analyses along the 80th Meridian West from the surface to 31 km. These parameters are furnished at constant altitudes and are based on three years of data, 1957-1960. The information is given in mean and standard deviation values for each element.

SECTION I. INTRODUCTION

The rapid development of space vehicles and missiles has created urgent demand for more information about the earth's atmosphere from sea level to suborbital altitudes. It cannot be assumed at this time that future re-entry vehicles will be restricted to land (impact) at known or specific geographical areas. Therefore, there is a need at present to establish, in as much detail as the state of the art permits, detailed information on the means and variances of atmospheric temperature, pressure, density, and wind, not only as a function of altitude but for all geographical coordinates.

Quantitative values of the means and variances of these atmospheric parameters are prerequisite to establishing design criteria for space vehicles and to assess the feasibility of a design concept through theoretical studies. This approach serves a very practical purpose in detecting potential problem areas relative to vehicle limitations and restrictions in the early stages of the engineering development.

In an earlier publication by Smith and Chenoweth [15] the range of ambient density from sea level to 120 km altitude was prepared to satisfy a specific need for vehicle design information. This report [15] was based on limited information and treated only one atmospheric parameter, namely, density. It is the purpose of this report to establish the variability of three atmospheric variables

*William M. McMurray and Harold L. Crutcher are with U. S. Weather Bureau, National Weather Records Center, Asheville, North Carolina

pressure, temperature, and density for the first 30 km altitude for North Pole to South Pole along the 70-80° W.meridian heretofore not available. This pole-to-pole cross section then will serve as basic information for further study and it is expected to lead to a better understanding of the atmospheric variables.

ACKNOWLEDGEMENTS

The authors are particularly indebted to Mr. W. W. Vaughan, Chief, Aerophysics and Astrophysics Branch, who recognized the need for and promoted this study. His comments have been most helpful in the preparation of this report.

Acknowledgement is made to Mr. David Matthews, Mr. Richard Davis, Miss Dorothy H. Goodman, Mrs. Mary Browning and Mrs. Alma Abernathy, National Weather Records Center (USWB), for their work in the preparation of this publication.

SECTION II. DATA

A. SOURCES

Primary data sources were punched cards, derived from original radiosonde records on file at the National Weather Records Center, Asheville, North Carolina. Soundings on International Geophysical Year microcards, and in the Daily Weather Report of the Falkland Islands and Dependencies Meteorological Service, were also converted to punched card form. Only 1200 GMT observations were used.

A list of stations with World Meteorological Organization block and index numbers, names, latitudes, longitudes, heights in meters above mean sea level, and periods of record, is shown in Table I.

B. PROCESSING AND COMPUTATION

All data were subjected to a checking program using electronic data processing equipment. If individual observations fell outside predetermined limits, these were indicated and the original records re-examined.

Basic data were available as temperature, relative humidity, and geopotential heights, as functions of standard pressure levels. Geopotential heights for each observation were converted to geometric heights using the following equation [13, 16]:

$$H = \frac{r^*}{\frac{r'}{\Phi} - 1} \qquad (1)$$

where H is geometric height (m), Φ is geopotential height (m'), and r* and r' are parameters that are a function of latitude only. Here, r* is equal to twice the acceleration of gravity, g_o, at a given latitude divided by the partial derivative of the acceleration of gravity with respect to height evaluated at the height zero, $\left(\frac{\partial g}{\partial z}\right)_{z=0}$,

and r' is r* times the acceleration of gravity divided by the standard unit of geopotential, 9.8 m^2 sec^{-2}. [16].

After this conversion was made, temperature, relative humidity and logarithm of pressure were linearly interpolated as functions of geometric height at 1-km intervals. The pressure was interpolated according to the following equation:

$$\text{"P"} = \text{anti ln} \left[\frac{H - H_1}{H_2 - H_1} (\ln P_2 - \ln P_1) \right] + \ln P_1 \qquad (2)$$

where H is the height of the value to be interpolated ("P"), H_1 is the height of the lower level observation, H_2 is the height of the upper level observation, P_1 is the pressure at the lower level, and P_2 is the pressure at the upper level.

Similar equations were used in the interpolation of temperature and relative humidity by substituting these parameters.

From these values, densities at the 1-km intervals were computed as follows [4]:

$$\text{density} = \frac{0.3486 \cdot (P - 0.377\ e_s\ RH)}{T} \qquad (3)$$

where P is the pressure, T is temperature, RH is relative humidity, and e_s is saturation vapor pressure.

In Equation (3) the following equation was used for saturation vapor pressure [5]:

$$e_s = \text{anti ln} \left[1.80910 + \frac{(17.269425\ t)}{237.3\ t} \right] \qquad (4)$$

where t is the temperature in degrees Celsius.

Following these interpolations of individual radiosonde observations for geometric height, means and standard deviations of pressure, temperature, and density were computed as follows:

$$\text{Mean} = \frac{\Sigma X}{N} \qquad (5)$$

where X is the variable, ΣX is the sum of X, and N is the number of observations.

$$\text{Standard Deviation} = \left[\frac{N \Sigma X^2 - (\Sigma X)^2}{N(N-1)} \right]^{\frac{1}{2}} \qquad (6)$$

where X is the variable, ΣX^2 is the sum of squares of X, ΣX is the sum of X and N is the number of observations.

C. PRESENTATION

Monthly and annual means and standard deviations for temperature (°K), pressure (kp m^{-2})*, and density (kg m^{-3}) are presented in analyzed form, from pole to pole and from 0 to 31 km above mean sea level.

The Northern Hemisphere portion presents an analysis through the atmosphere along the line of observation points shown in Figure 1 and listed in Table I. Due to the proximity of these stations to the 80° W meridian, the analysis can reasonably be interpreted as that along this longitude and, therefore, the topography on the base map outlines the physical features intersected by the 80° W meridian.

Because of the scarcity of data and the irregular arrangement of the observation points in the Southern Hemisphere, this analysis was constructed on the station-to-station line and then projected onto the 70° W meridian. This topography then is linear with respect to latitude rather than linear in terms of actual distances between stations.

The requirement to extrapolate through the thickness of 2800 m of Antarctic terrain, so that base line initial conditions could be established, required arbitrary decisions for the presentation of purely fictitious analyses. In view of the ultimate uses and purposes of these charts, and because the surface and 3 km observations at the pole are so heavily influenced by radiation cooling, the poleward analyses in the Southern Hemisphere are extrapolations of adjacent analyses based on Ellsworth data and the 4 km data at Amundsen-Scott. It should be emphasized that the analyses shown from 0 to 4 km in the region of Antarctic are presented solely for reasons of completeness which is a particular requirement for the pruposes of these charts. These analyses are not based on observational data, but are extrapolations of the nearby atmospheric analyses extended through the Antarctic Continent.

SECTION III. ANALYSIS

A. CHART ANALYSIS

The object of the analysis was to present best-fit patterns of the chosen parameters for the entire area from pole to pole, and from 0 to 31 km, regardless of the number of observations available (from a maximum of 93 to a minimum of zero on the monthly charts).

This gives the impression of uniform analysis confidence over the entire area, while in reality this confidence varied in degree as the observations varied in number. In general, observations were more plentiful in the Northern than in the Southern Hemisphere, and less plentiful at higher latitudes and altitudes in both hemispheres. Naturally this reduces the precision of analysis of the mean values. The analysis shown should be considered an estimate of what is hoped to be the true or theoretical mean. The bounds within which the true mean

*kp is kilogram force, 1 kp = 10.197 mb.

will actually be found are a function of the computed variance and the number of independent observations. However, the observations used here cannot be said to be independent for they are in most cases sequential, i.e., daily observations following each other. This problem will be discussed later with regard to statistical analysis and the use of the analyzed data.

These data limitations were well recognized during the analysis. The number of observations was available for each 1-km interval and was used as an integral part of the analysis of all data above 20 km. Analysts engaged in this project benefited by the experience gained in the analysis of temperature fields for similar sections for the International Geophysical Year period, both on a daily [18] and monthly [19] basis.

Most types of synoptic data lend themselves to analysis with isopleths presented in ordered, sequential and equal intervals. The analytical presentation of these data could not be made in this fashion, however, without having either too few or too many lines in some regions. For this reason, and to permit the placement of mean and standard deviation analyses on the same chart, the interval of analysis from 0 to 31 km may vary. In addition, where the gradient was slight, smaller interval isopleths were inserted to permit the user to make a better linear interpolation.

Conventional subjective analysis techniques of continuity, extrapolation and interpolation were supplemented with internal consistency checks of the main parameters. In areas of few observations, computations were made to check the values as read from the analysis.

Sea level pressures were determined mainly by a subjective microanalysis of computed mean surface pressures, in the first kilometer of height, plotted on a chart whose vertical scale had been expanded 16 times. Also, by construction of such charts, it was possible to include surface pressures from other than radiosonde stations. Analyses were spot checked by methods outlined in AWS Manual 105-15 [20].

The availability of the original records of the observations permitted a check of the time array of observations when the total number was limited. As an example, the entire period of record for Eureka was examined to determine what biases were introduced when the few observations were all concentrated within a short period of time. Special attention was given to the period of "explosive warming" in January 1958 [17].

The standard deviation analyses are shown as dashed lines on all charts except where the number of available observations was less than 30. In these areas the analyses are shown by crossed dashes on the monthly charts. The limited number of observations at times resulted in data at isolated points on both the means and standard deviations for which it would have been difficult to draw smooth isopleths. At these points the data were adjusted within narrow limits determined from the computed standard deviation and the number of observations. For this reason these charts are considered to be as representative as can be produced for the period 1957-1960.

B. STATISTICAL ANALYSIS

In some problems the serial correlation between consecutive meteorological observations is quite important. Persistence is an inherent factor in meteorology. As such, it plays a very important role in the development of forecasting procedures and vehicle design data. A knowledge of the persistence of certain phenomena is indispensable to the climatologist and meteorologist. However, due to the paucity of data and to the time involved, it is often difficult to assess the underlying distribution of any meteorological element and to obtain information as to the actual mean and variance of data sets.

For this publication, values of the means and standard deviations have been computed from all data available. Thus, serial correlation is present to some extent. Therefore, information extracted from this publication should be used with the idea that such information is only an estimate of what may be encountered at a future date.

The use of the standard deviation and the assumption of the normality of the distribution to obtain an idea as to the variability of the mean requires that the data from one observation to the next be uncorrelated. The existence of serial correlation in general permits the computation of a variance too small for a sample of data which would be collected over a longer period of time and within which sample data are truly uncorrelated. Information extracted from this publication, therefore, should be expected to provide underestimates of the variability. That is, values of the standard deviation should be considered to be minimum values.

One way in which the above problem can be met is to select a random sample from observations available for each day of the entire period. From this sample, mean and variance would be computed which would provide better estimates of the mean and standard deviation. However, data have not been and are not now available to this extent. Therefore, all data have been used. The study of the extent of and the removal of the serial correlation from these or similar data must be a separate investigation.

In the meantime, the following discussion is given, so that the information extracted from this publication may be modified for particular problems.

The elimination of the serial correlation effect from sets of consecutive data had been the subject of several investigations. Brooks and Carruthers [5] discuss this problem. They introduce a persistence factor, "s", which may be defined as $1 + r_1 + r_2 + r_3 + \ldots$ where r_1, r_2, and $r_3 \ldots$ are serial correlations of lag 1, 2, 3,... Thus, they show that the standard error of the mean of n consecutive observations roughly may be set equivalent to

$$\sigma_n = \sigma \left[\frac{(2s - 1)}{n} \right]^{\frac{1}{2}}$$

where σ is the computed standard deviation and "s" is the persistence factor. It is this value of σ which is to be read from the charts and tables of this

publication. The value of "s" is desirable, but little is known about it for the various atmospheric elements presented here. For surface elements [5] in temperate latitudes, the values which have been used range from about 1.5 to 2.5. However, the few investigations on upper air data indicate that the values to be used are much larger, perhaps by as much as an order of magnitude. Studies by Panofsky, Kravitz, and Julian [10] show that weather systems at 100 mb persist for much longer periods than those at 500 mb. An unpublished spectrum analysis of wind studies by Crutcher and Charles [7] indicates that presistence acts over quite long periods in the upper atmosphere. Charles [6] has shown for upper winds that values of "s" range from about 2 near the surface to 6 at 15 km. Winds are believed to be more erratic, i.e., less persistent than any one of the elements presented in this publication, so the value of "s" for densities, pressures, and temperatures could be greater. For example, McClain [8] shows that a value of 10.5 may be used for temperatures in the Arctic at altitudes of 15 km. If it is assumed that densities will exhibit the same or more conservative properties at 15 km and that, with altitude, "s" is still greater, then perhaps a conservative increase of "s" by 1 for each 3 km increase of altitude would not be out of order. For example, the spectrum analysis studies of winds [7] at 30 mb over Norfolk, Virginia, indicate that with few exceptions wind regimes persist 10 days or more. A large majority of these wind regimes persist 20 days or more. Smith [14] shows that for maximum winds in the 10-15 km layer, "s" is approximately 8. The same phenomena are exhibited on the west coast of North America and in Alaska [7]. Thus, with an initial value for "s" of 2 at the surface, and permitting an orderly increase of 1 in the value of "s" for every 3 km increase of altitude, then a value of 12 for "s" at 30 km is considered to be conservative for the elements presented in this publication.

The sum total of the above arguments is to place in the hands of the user a tool by which he can modify the values shown in this publication. For example, suppose 10 is obtained as a monthly value of a standard deviation deduced from this report; then a total of 90 observations would yield $10/(90)^{1/2}$, or approximately 1.05. This was the procedure used to permit smoothing of values during the analysis. However, using a value of 6 for "s" at 12 km, $(2s - 1)^{1/2} \approx 3.3$, the modified standard error would be 3.5. With this new value then, and using the idea of the normal distribution, an estimate can be made that, 95 percent of the time, values of a mean computed from another set of data should lie within ±6.9, i.e., 1.96 x 3.5 units of the mean extracted from this publication. Thus, one can say that for future work confidence intervals can be placed on the mean values extracted from this publication in the manner described above.

C. COMPARISONS

Previous studies have been concerned with the establishment of standard atmospheric and standard density profiles. Two of these standards are the U. S. Standard Atmosphere-1962 [21] and the Patrick Reference Atmospheres [13]. The first is a standard to be used for all latitudes, months seasons and years, but it is most representative of conditions of 45° latitude.

It is known that the use of such a standard atmosphere is a first approximation to actual conditions and is a model from which departures must be expected.

The present publication serves well as a more refined model in that it presents for the first time density values on a pole-to-pole cross section from the surface to 30 km, using monthly and annual information processed from data gathered during the intensive observational period which includes the International Geophysical Year - International Geophysical Co-operation period.

The present publication will serve as an excellent guide, particularly with regard to densities, until more data are collected. At that time an extended and more detailed study can be made on a Northern Hemisphere basis and perhaps on a world-wide basis.

To illustrate the point made above, let us consider previous studies [1.2, 3, 12]. Examination of these studies shows that departures from the U. S. Standard Atmosphere-1962 for densities, range as shown below in Tables II and III. Table II is believed to provide a fair geographical representation of data. In Table II, the maximum percentage deviations of the median value of the density distributions from the U.S. Standard, for six stations, are tabulated against the altitude. The six stations are: Thule,Greenland; Fairbanks, Alaska; Wiesbaden, Germany; Patrick Air Force Base, Florida; El Pasco, Texas; and Tripoli, Libya. In addition to the median value, as a measure of the range, the 2.28 percentile and 97.72 percentile maximum deviations are shown.

In Table III the same procedure for the mean value has been followed for 23 selected stations used in the preparation of the present publication. This second group represents a north-to-south section and is composed of the following stations: Eureka, Hall Lake, Coral Harbor, Port Harrison, Moosonee, Buffalo, Pittsburgh, Greensboro, Charleston, Cape Canaveral, Miami, Roberts Field,Albrook Field, Guayaquil, Limatambo, Antofogasta, Quintero, Puerto Montt, Comodoro Rivadavia, Usuhaia, Argentine Island, Ellsworth and Amundsen-Scott.

From an examination of Tables II and III, it may be seen that deviations in the mean value for any month may be expected to range up to 24 percent. It appears that the largest deviations are those at polar or equatorial stations or in hot, dry areas. This is not an unexpected result as the U.S. Standard-1962 has been prepared for temperate latitudes. It does point up the very large probable deviations which must be considered if the U.S. Standard is used.

It should be mentioned here that more extreme deviations were noted at the Amundsen-Scott stations. One deviation was -27 percent at the 24 km level. However, these large deviations are considered to be doubtful since an examination of the records indicates that groupings of the observations and serial correlation do not permit the obtainment of a good representative value. This is mentioned so that further studies may consider examining this region for possible extreme deviations which may confirm the large deviations for Amundsen-Scott found in this short-period study.

The present publication presents data on an individual monthly basis. It permits a much closer evaluation of the actual density distribution in both space and time up to 31 km and over the year. Since it is presented as a pole-to-pole

cross section, it provides a facility for interpolation where no data are available. Comparison of Tables II and III reveals that the range of deviations in the latter is equal to or slightly greater that the former.

Suppose the variation of the mean density extracted from this publication did range up to 4 percent of the density value itself. The reduction of percentage variation of mean density from 27 percent to 4 percent is a very significant improvement. Very likely, the reduction is even greater than this. The variability as shown by a comparison of the standard deviation charts indicates that a variation in the mean value of about 2 percent might be expected.

The more refined techniques of statistical analysis cannot be adequately discussed here and must be reserved for future investigation. Such an investigation should determine whether the mean values of density from one period to another are significantly different and should determine whether the values extracted from this publication would be different from the data which were computed and used in the analysis. Sessenwine and others [12] indicate that for a particular station, the means of five year periods and ten year periods are not significantly different; that is the difference is less than two percent. The small plate size required for the present publication precludes reading of density values to an accuracy greater than two decimal places. For this reason, values have been read from the original analyzed charts, and the reduced charts are printed here for reference. Even the reading of these values from the original analyzed charts is difficult in the third decimal place. These difficulties can only be resolved by computations of more data in time and space, and by plotting and analyzing such data on a much smaller scale than is now possible. Perhaps in five to ten years, sufficient data will be available to make such a presentation feasible.

As indicated above, the reduction in variation from the U.S. Standard-atmosphere-1962 to the present cross sections is quite significant. The difference between the U.S. Standard and individual stations has been investigated by Sessenwine and others [12] in their excellent study, "Behavior of Atmospheric Density Profiles." Therefore, where detailed data not provided by the mean model are needed, the present publication can be used as a model.

This publication represents the first attempt to establish, on a broad scale (pole-to-pole cross section), means and standard deviations of three atmospheric parameters -- temperature, pressure, and density -- from uniformly consistent basic data sources. The extensive tabulations and illustrations of the atmospheric statistics should prove useful in establishing design criteria for space re-entry vehicles and for extracting information for flight mechanical studies. A potential application of these data is that they could be used as a model for the first 30 km altitude from which extrapolations to the higher altitudes could be made.

Table III shows that the mean density along the 70-80° W. meridians can be 24 percent higher than the U.S. Standard Atmosphere-1962 and 13 percent lower. Very large probable density deviations must be considered if a standard model is used for world-wide re-entry studies.

The publication of these data is in no way intended to belittle the standard atmospheric models. Such models are quite important and will continue to be our first approximation to problems involving temperatures, pressures and densities. Model atmospheres will be modified from time to time as more experience is gained in the establishment of model atmospheres.

SECTION IV. CONCLUSIONS AND RECOMMENDATIONS

The increasing use of electronic computing machines permits the consideration of computing density at selected special grid locations. Temperature, moisture and pressure arguments could be read from their respective analyses and entered into appropriate equations. There is some feeling that the densities are not distributed normally [12, 13]. Coupled with this is the fact that from the charts of this publication only mean values of data are available. Entry of these mean data into equations will not produce a mean value of density. This is due to the fact that the mean of the temperature and moisture arguments is a mean of reciprocals which is not an arithmetic mean. This problem deserves special attention beyond the scope of the present paper. It is the opinion of the authors that the results should be acceptable estimates, but there is no proof immediately accessible. Therefore, this problem is reserved for future investigation.

Based on the information presented in this report, no significant changes in the range of density, as given in reference 15, are recommended at this time.

TABLE I

STATION LIST - POLE TO POLE CROSS-SECTION

Blk-Index	Name	Latitude-Longitude	Height Above MSL	Period of Record*
72 917	Eureka	80°00' N 85°56' W	7m	7/57 - 6/60
74 081	Hall Lake	68 47 81 15	10	8/57 - 6/60
72 915	Coral Harbour	64 12 83 22	62	7/57 - 6/60
72 907	Port Harrison	58 27 78 08	17	7/57 - 6/60
72 836	Moosonee	51 16 80 39	10	7/57 - 6/60
72 528	Buffalo	43 07 78 55	182	7/57 - 6/60
72 520	Pittsburgh	40 30 80 13	353	7/57 - 6/60
72 317	Greensboro	36 05 79 57	273	7/57 - 6/60
72 208	Charleston	32 54 80 02	13	7/57 - 6/60
74 795	Cocoa	28 14 80 36	5	7/57 - 4/60
72 202	Miami	25 49 80 17	4	7/57 - 6/60
78 383	Roberts Field	19 19 81 21	3	7/57 - 1/60
78 806	Albrook	08 58 79 33	66	7/57 - 6/60
84 129	Guayaquil	02 10 S 79 53 W	4	7/57 - 6/60
84 631	Limatambo	12 06 77 02	137	10/57 - 6/60
85 442	Antofagasta	23 28 70 26	137	7/57 - 6/60
85 543	Quintero	32 47 71 32	7	7/57 - 6/60
85 801	Puerto Montt	41 27 72 50	6	8/57 - 6/60
87 860	Comodoro Rivadavia	45 47 67 30	62	10/57 -10/59
87 938	Usuhaia	54 48 68 19	6	9/57 - 5/58
88 952	Argentine Is.	65 15 64 16	11	7/57 - 6/60
89 043	Ellsworth	77 43 41 07	42	7/57 -12/58
89 009	Amundsen-Scott	90 00	2800	7/57 - 6/60

*These dates are by month and are not meant to imply that data are available for every observation during the period

TABLE II

Maximum percentage density deviations from the U.S. Standard Atmosphere-1962 for six selected stations, based on 1950-1957 monthly data. The station which has the largest mean deviation is shown beside the mean value. Positive deviations mean larger actual quantities than the corresponding U.S. Standard Atmosphere-1962 quantities.

Altitude Geometric km	Distribution Percentile 2.28	50.0	97.72
32	6	8 (Tripoli)	12
28	-12	- 9 (Thule)	12
24	-23	-12 (Thule)	9
20	-21	-11 (Thule)	12
16	-17	17 (El Paso)	19
12	-17	-14 (Thule)	9
8	-10	- 3 (Thule)	4
4	- 4	4 (Thule)	7
0	11	17 (Thule)	29

TABLE III

Maximum monthly percentage mean density deviation from the U.S. Standard Atmosphere-1962 for twenty-three stations along the 70-80 meridians based on 1957-1960 data. The station which has the largest mean deviation is shown beside the mean value. Positive deviations mean larger actual quantities than the corresponding U.S. Standard Atmosphere-1962 quantities.

Altitude Geometric km	Mean	Station
28	11	Eureka, NWT
24	-12	Eureka, NWT
20	-11	Eureka, NWT
16	+20	Lima, Peru
12	-13	Eureka, NWT
8	- 4	Eureka, NWT
4	5	Eureka, NWT
0	+24	Eureka, NWT

FIGURE 1. STATION LOCATIONS POLE-TO-POLE CROSS SECTION

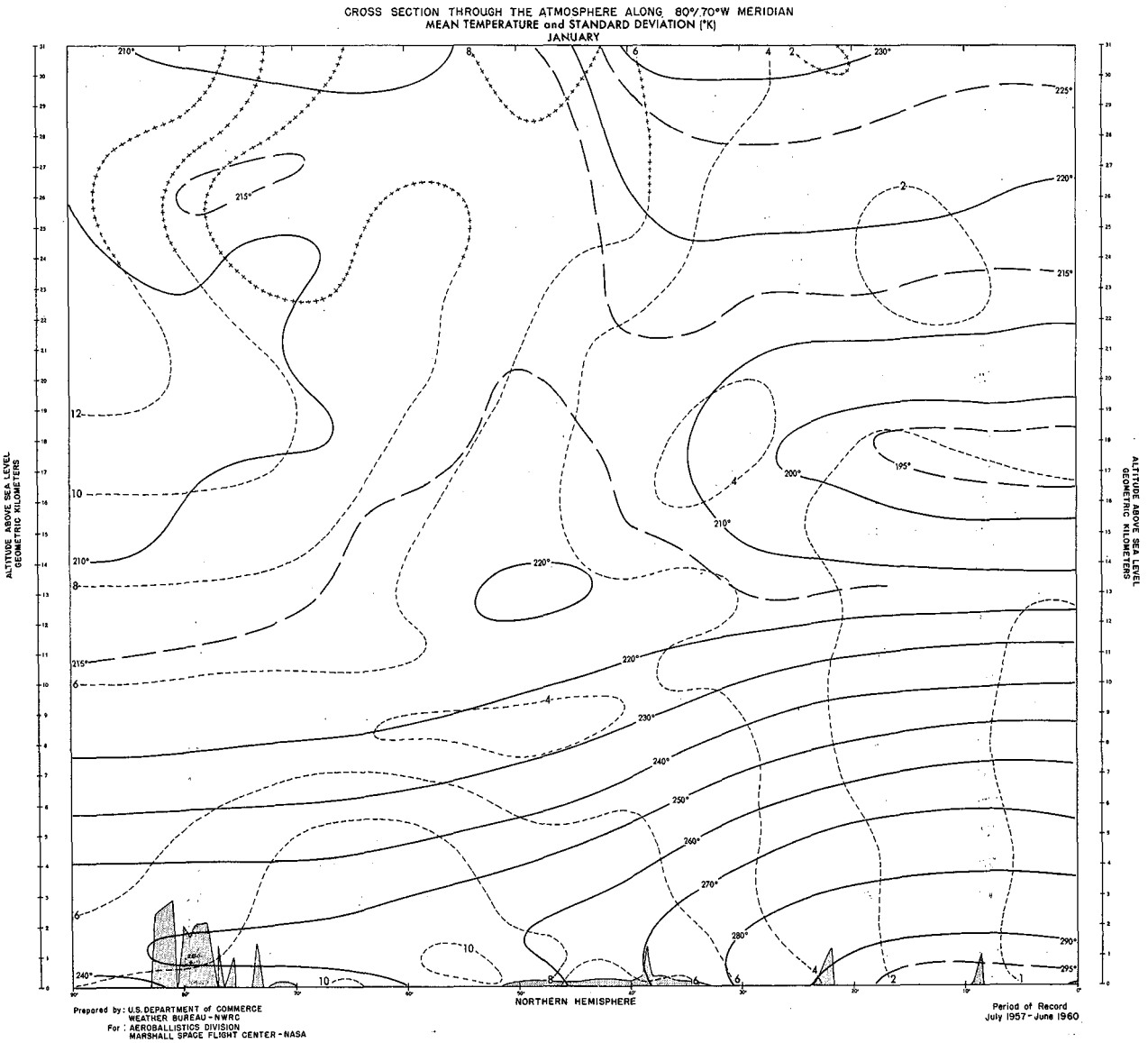

FIGURE 2. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JANUARY - NORTHERN HEMISPHERE)

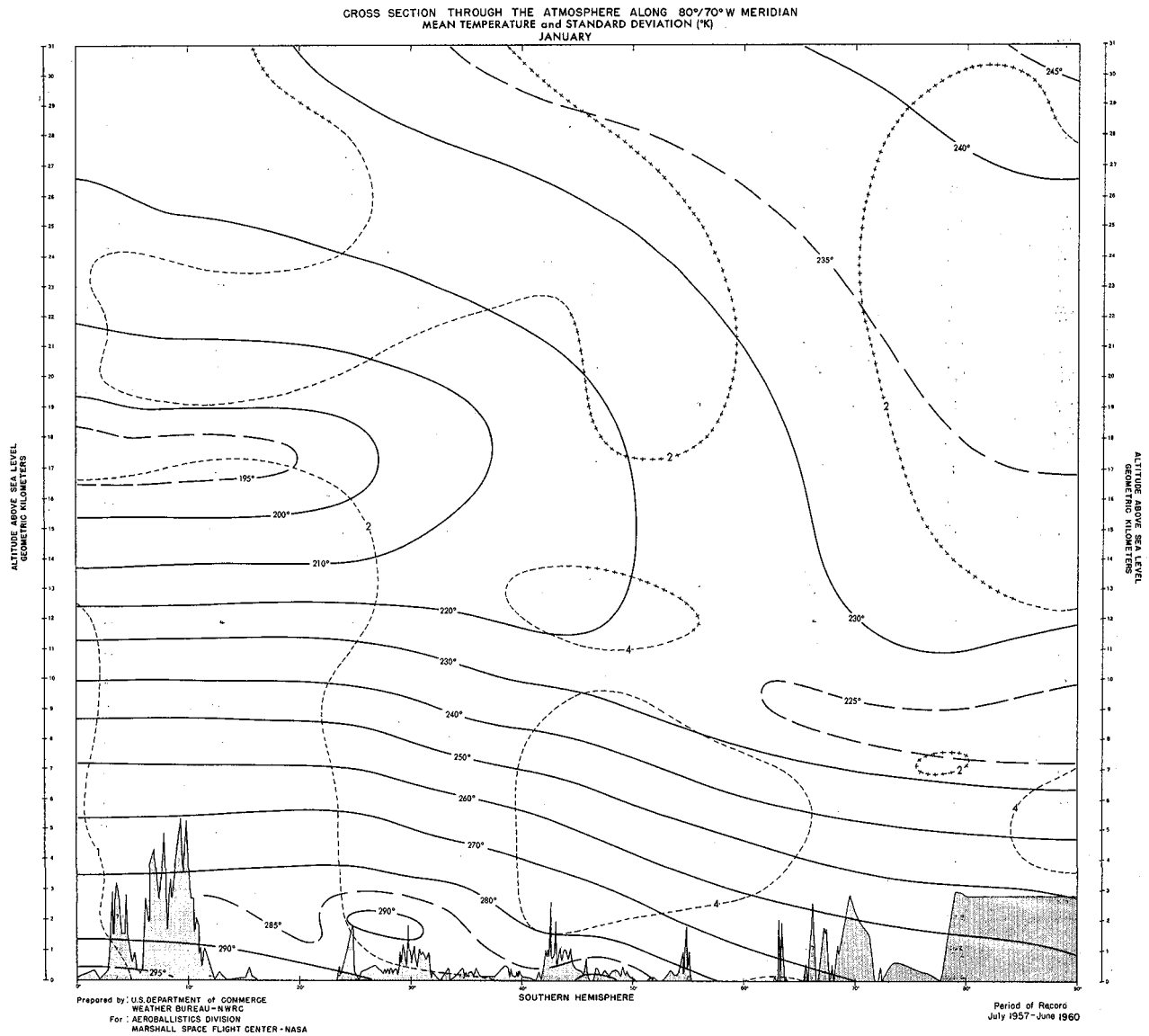

FIGURE 3. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JANUARY - SOUTHERN HEMISPHERE

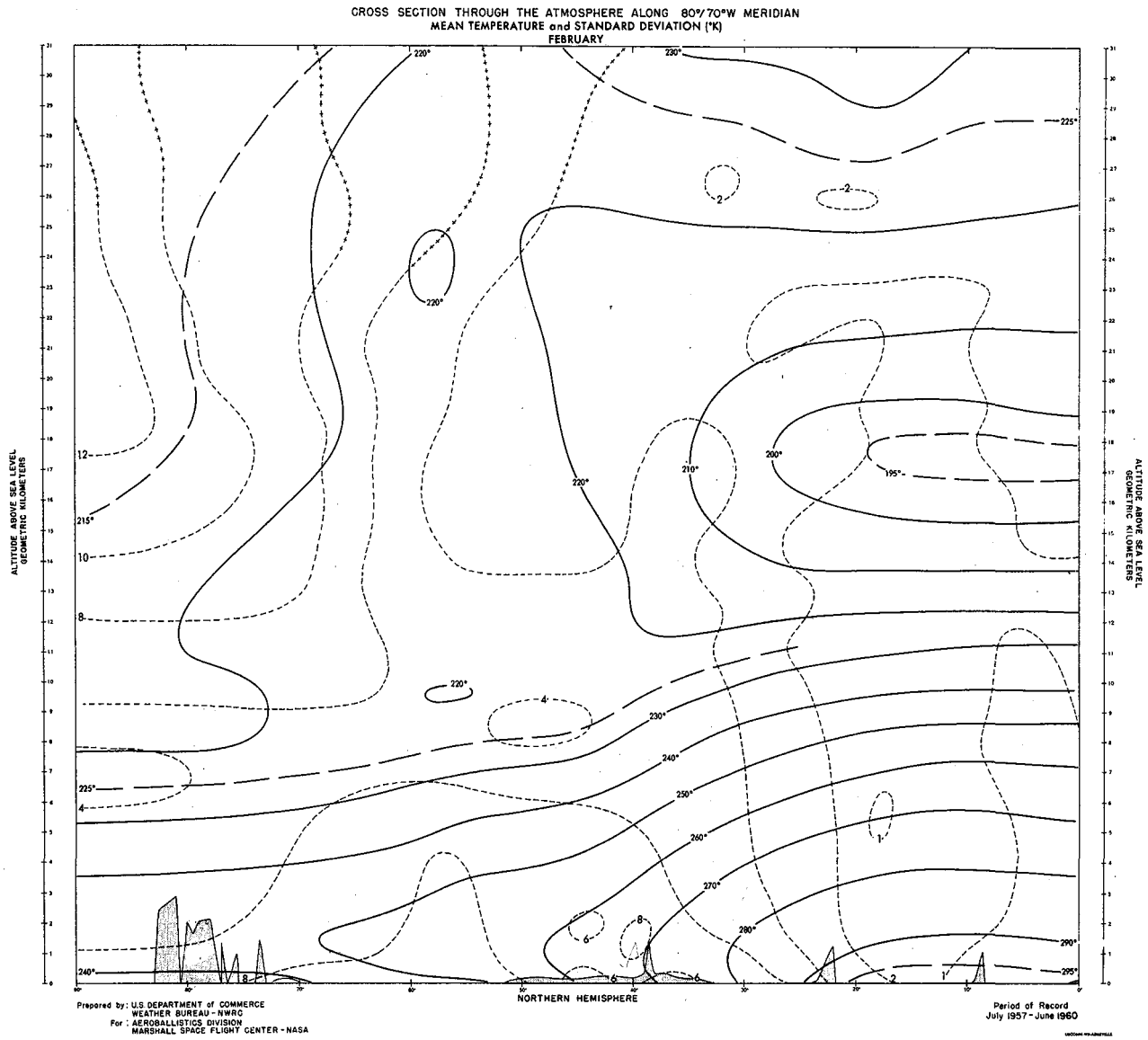

FIGURE 4. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (FEBRUARY - NORTHERN HEMISPHERE)

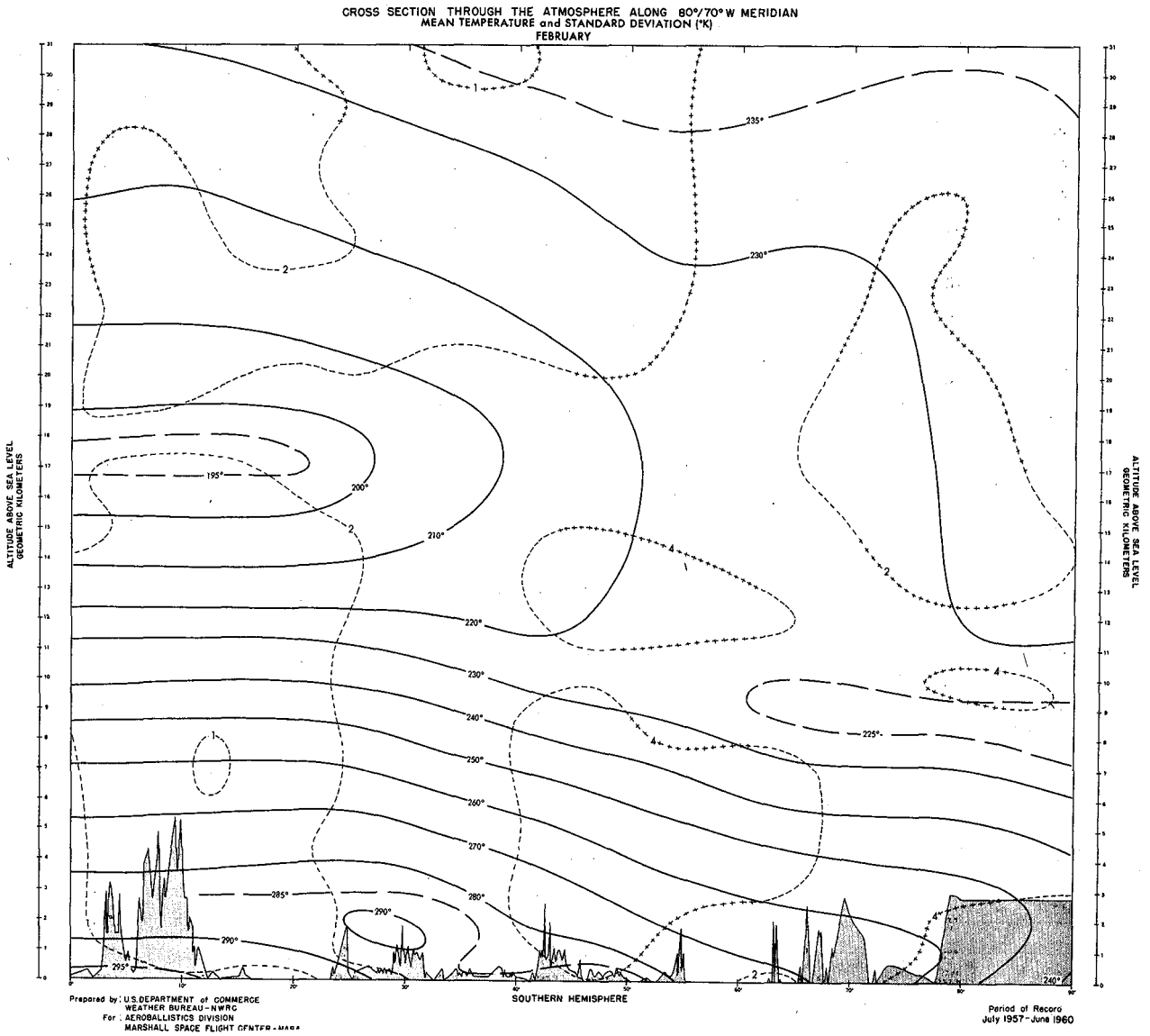

FIGURE 5. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (FEBRUARY - SOUTHERN HEMISPHERE)

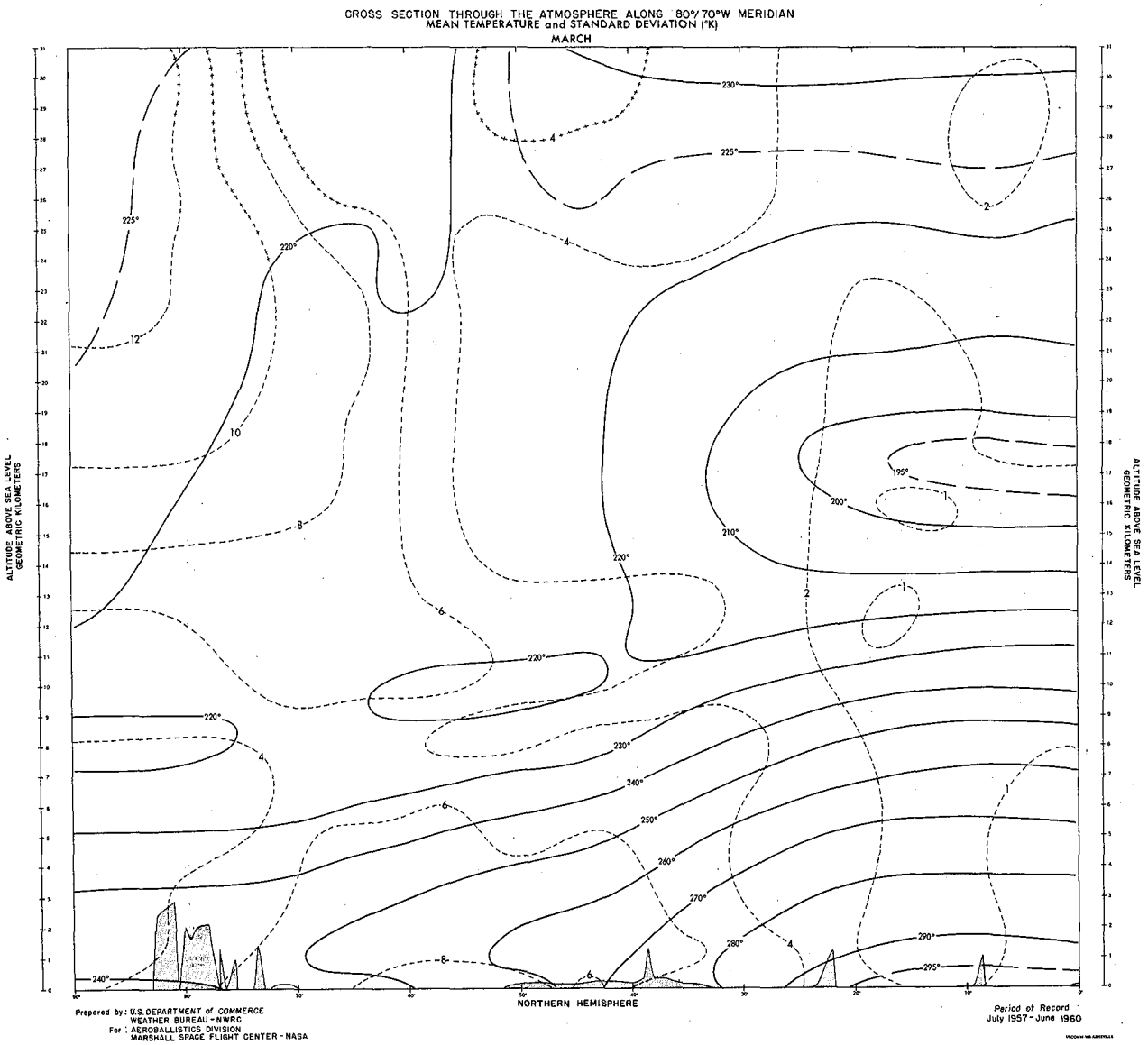

FIGURE 6. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (MARCH - NORTHERN HEMISPHERE)

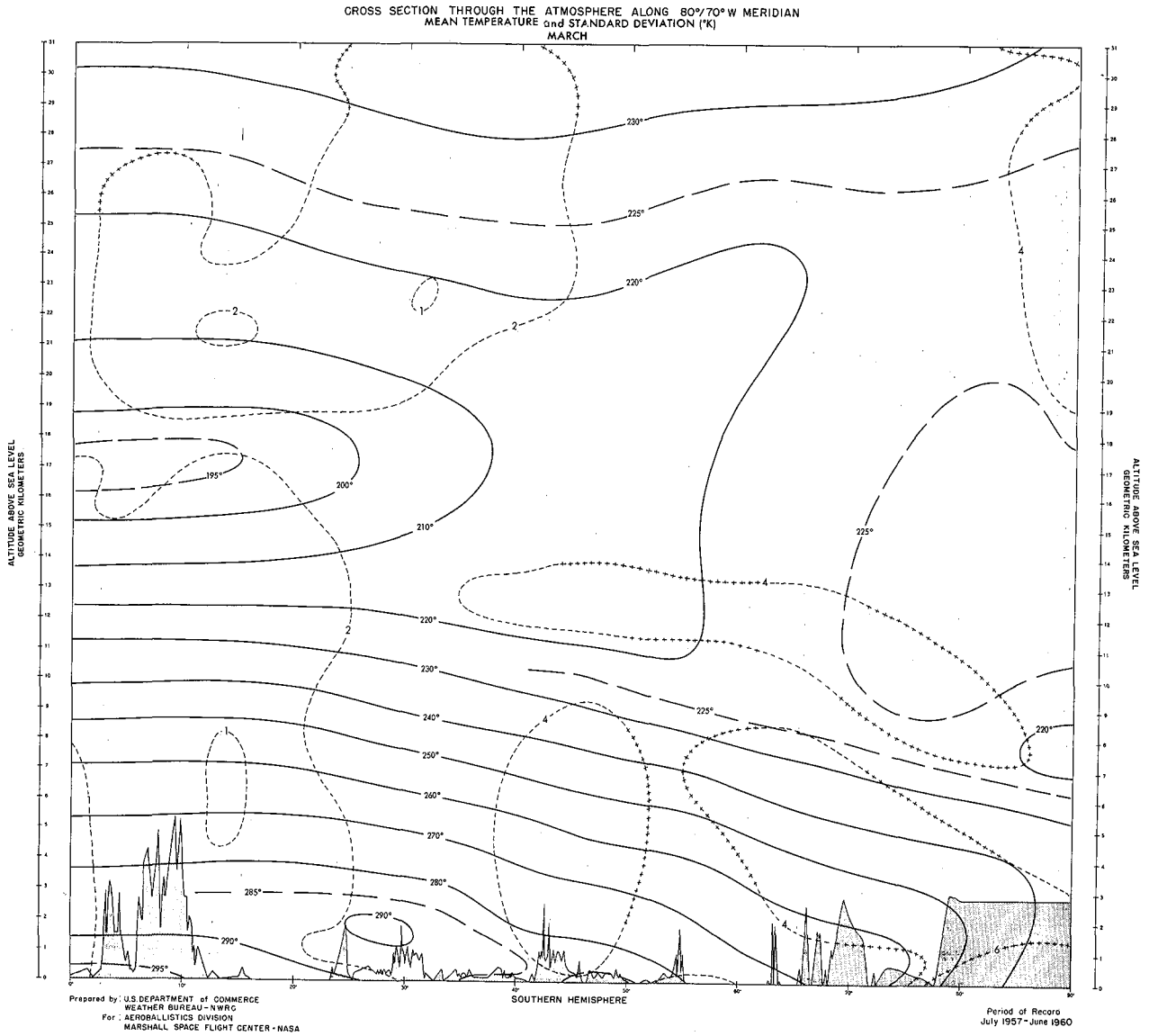

FIGURE 7. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (MARCH - SOUTHERN HEMISPHERE)

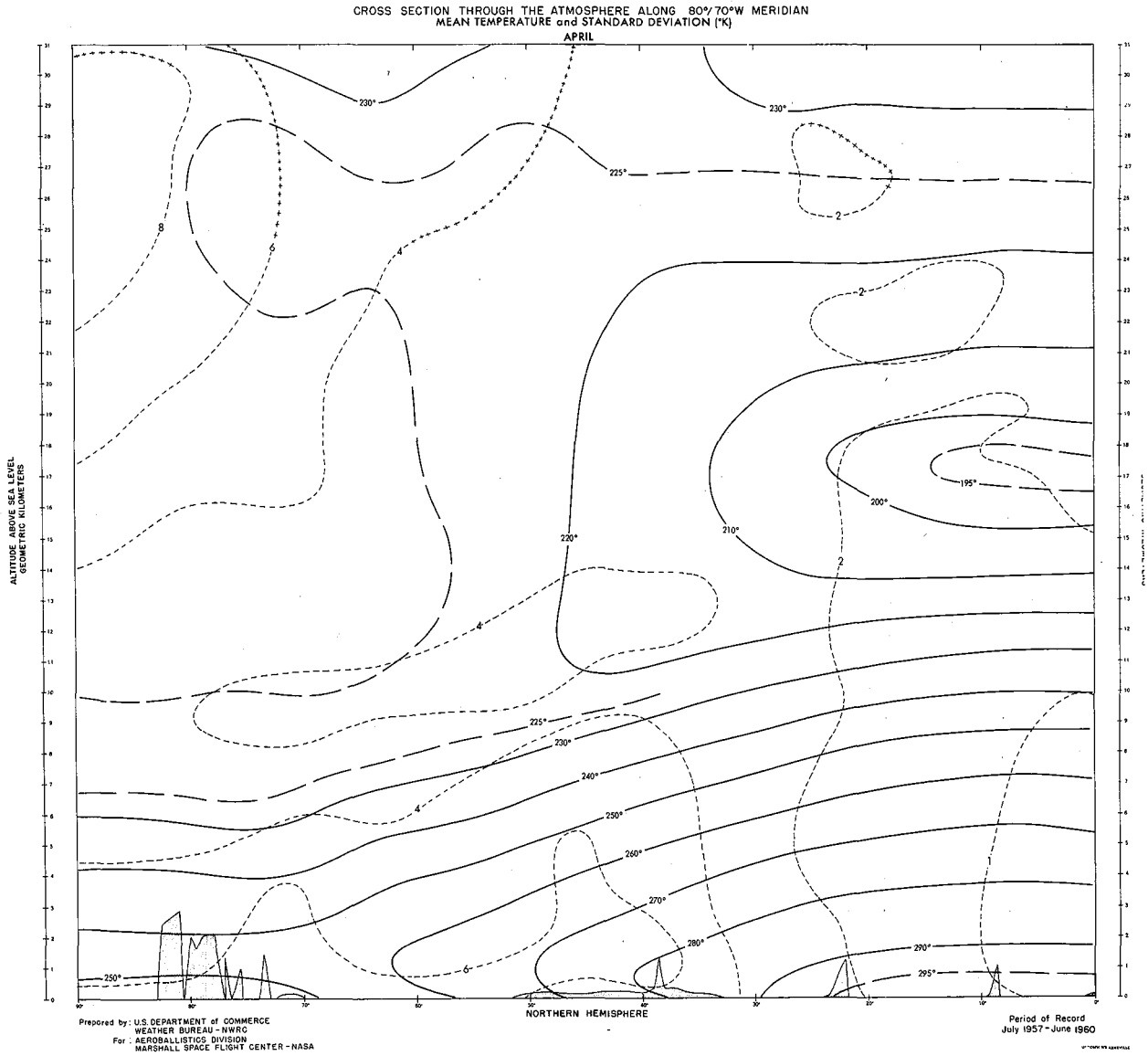

FIGURE 8. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (APRIL - NORTHERN HEMISPHERE)

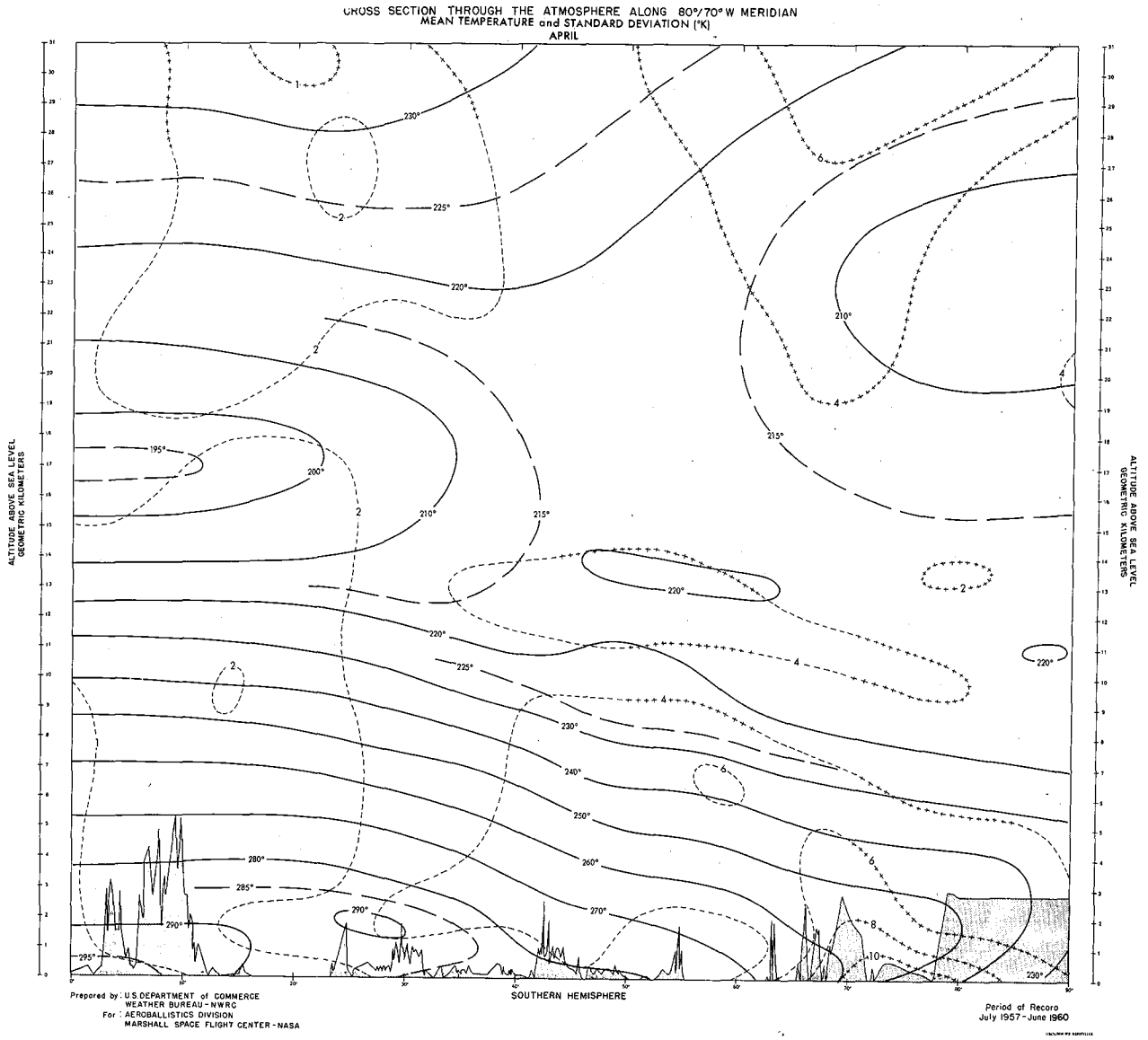

FIGURE 9. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (APRIL - SOUTHERN HEMISPHERE)

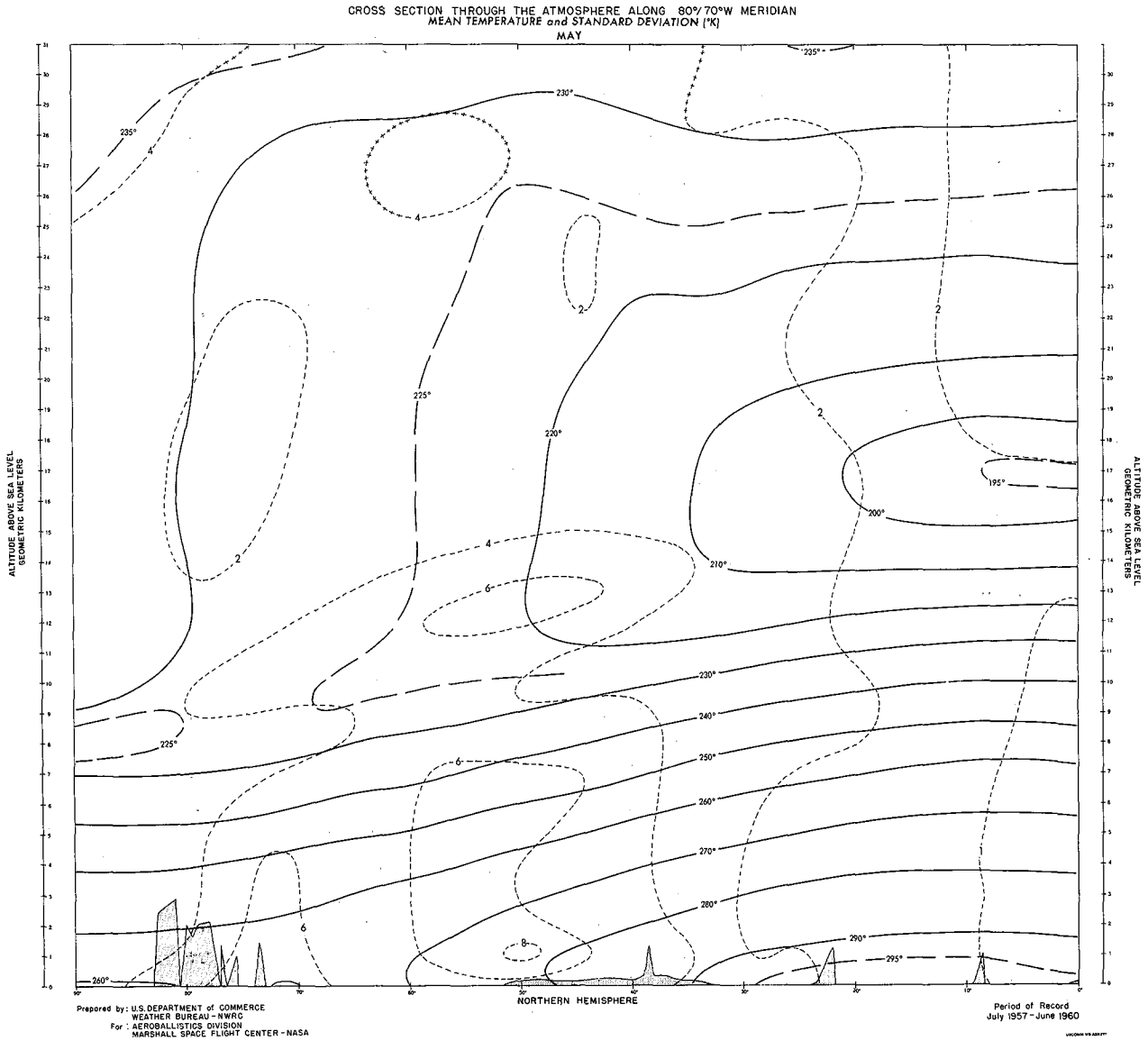

FIGURE 10. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (MAY - NORTHERN HEMISPHERE)

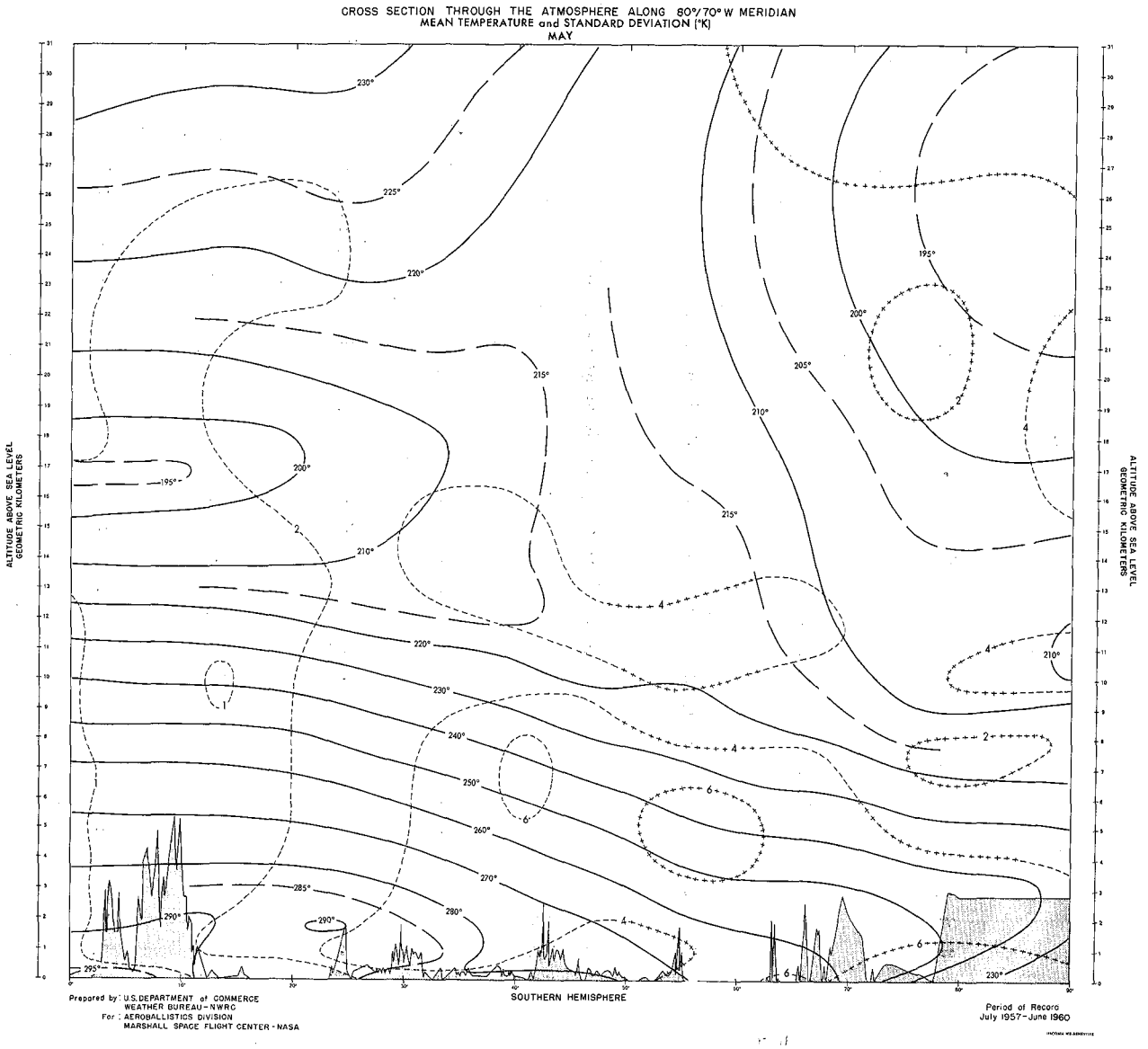

FIGURE 11. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (MAY - SOUTHERN HEMISPHERE)

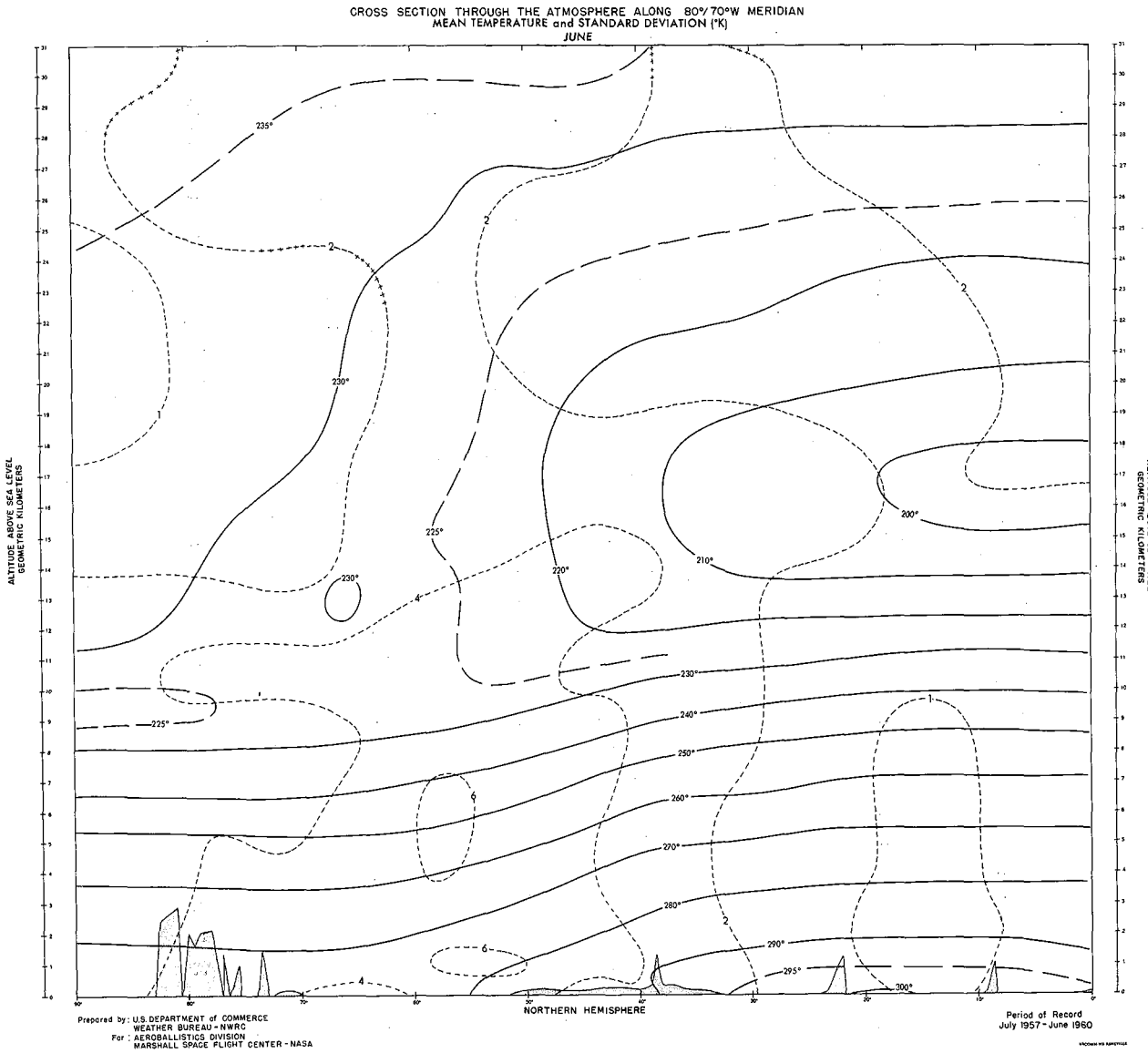

FIGURE 12. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JUNE - NORTHERN HEMISPHERE)

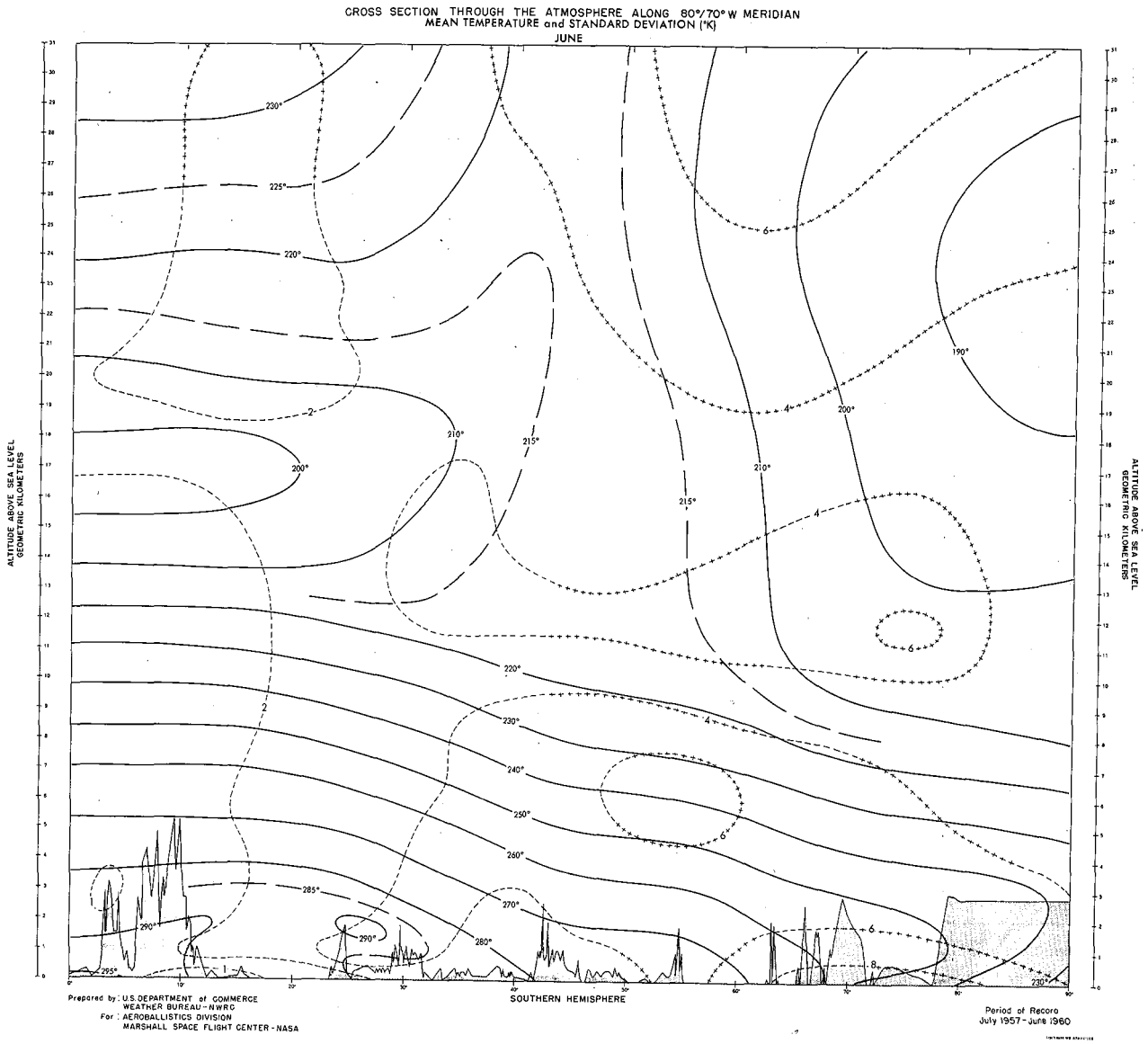

FIGURE 13. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JUNE - SOUTHERN HEMISPHERE)

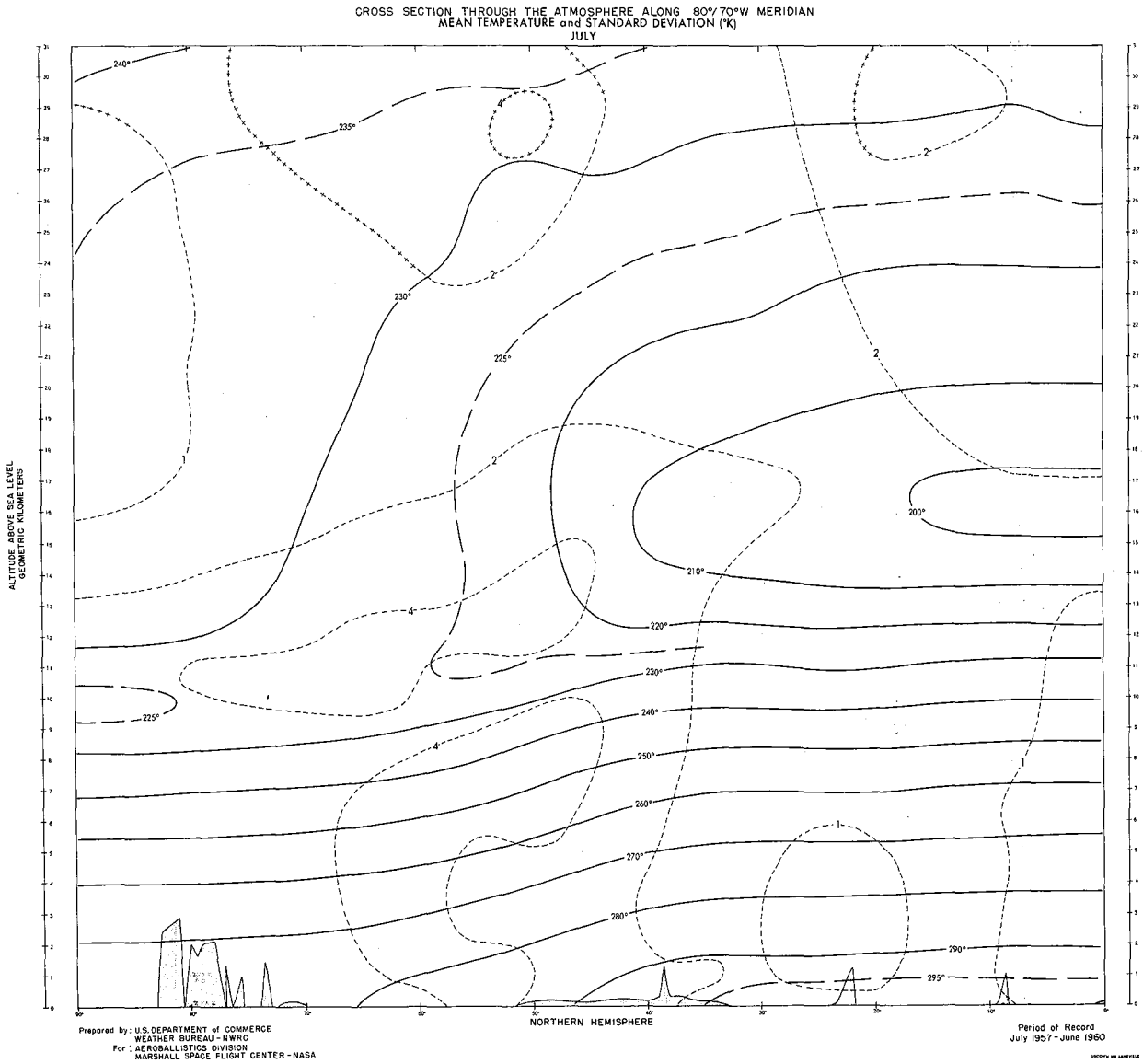

FIGURE 14. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JULY - NORTHERN HEMISPHERE)

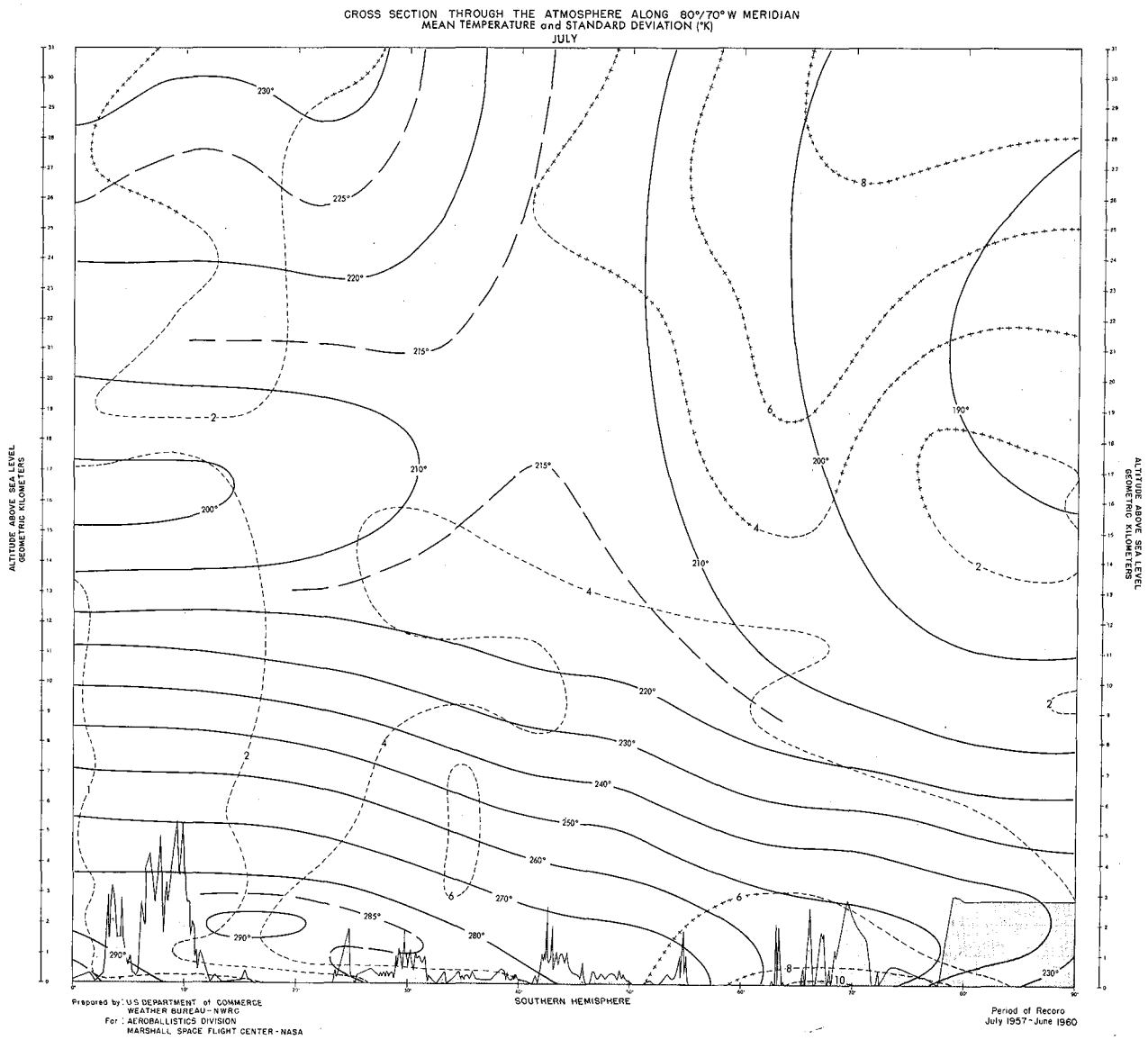

FIGURE 15. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (JULY - SOUTHERN HEMISPHERE)

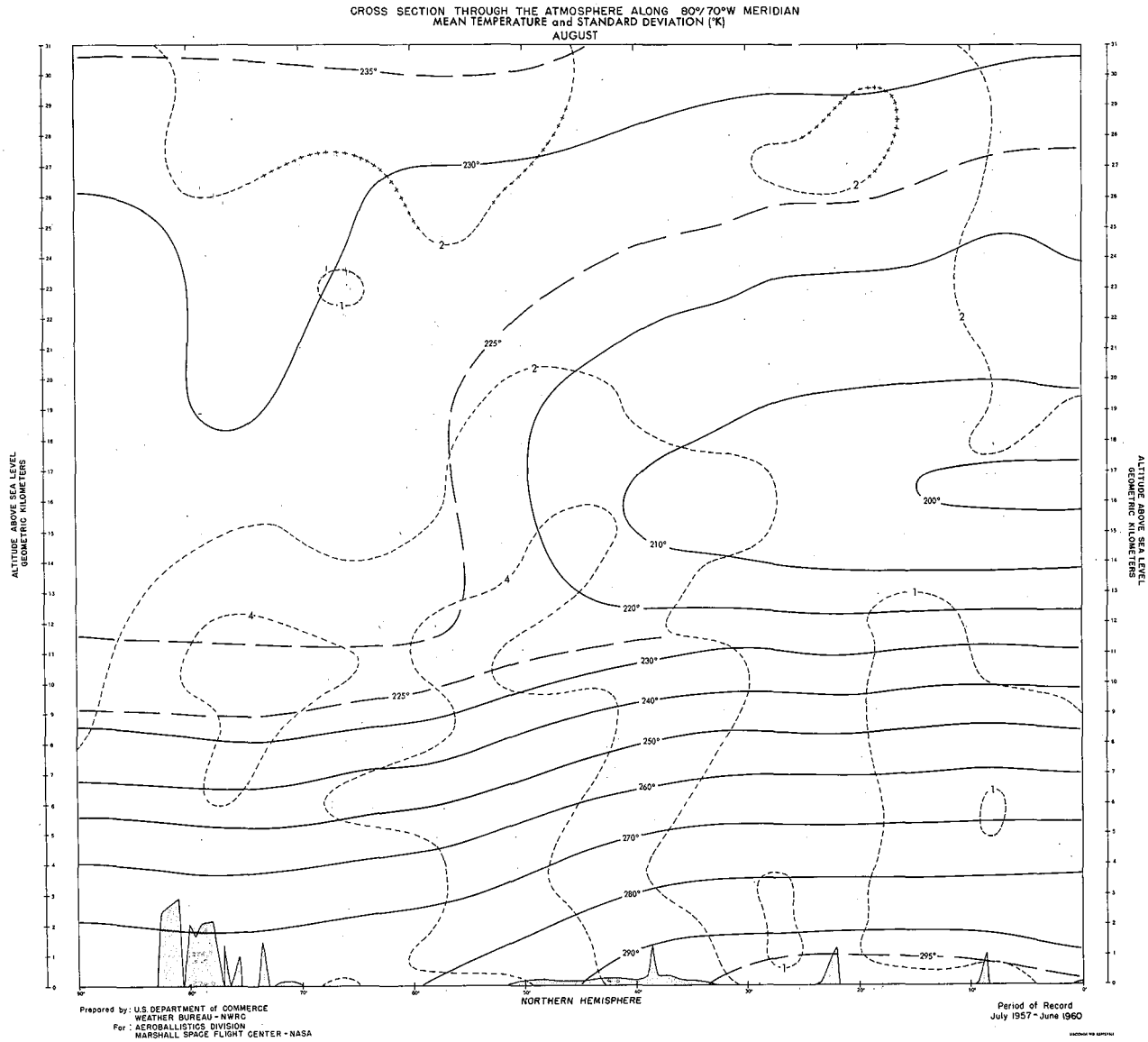

FIGURE 16. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (AUGUST - NORTHERN HEMISPHERE)

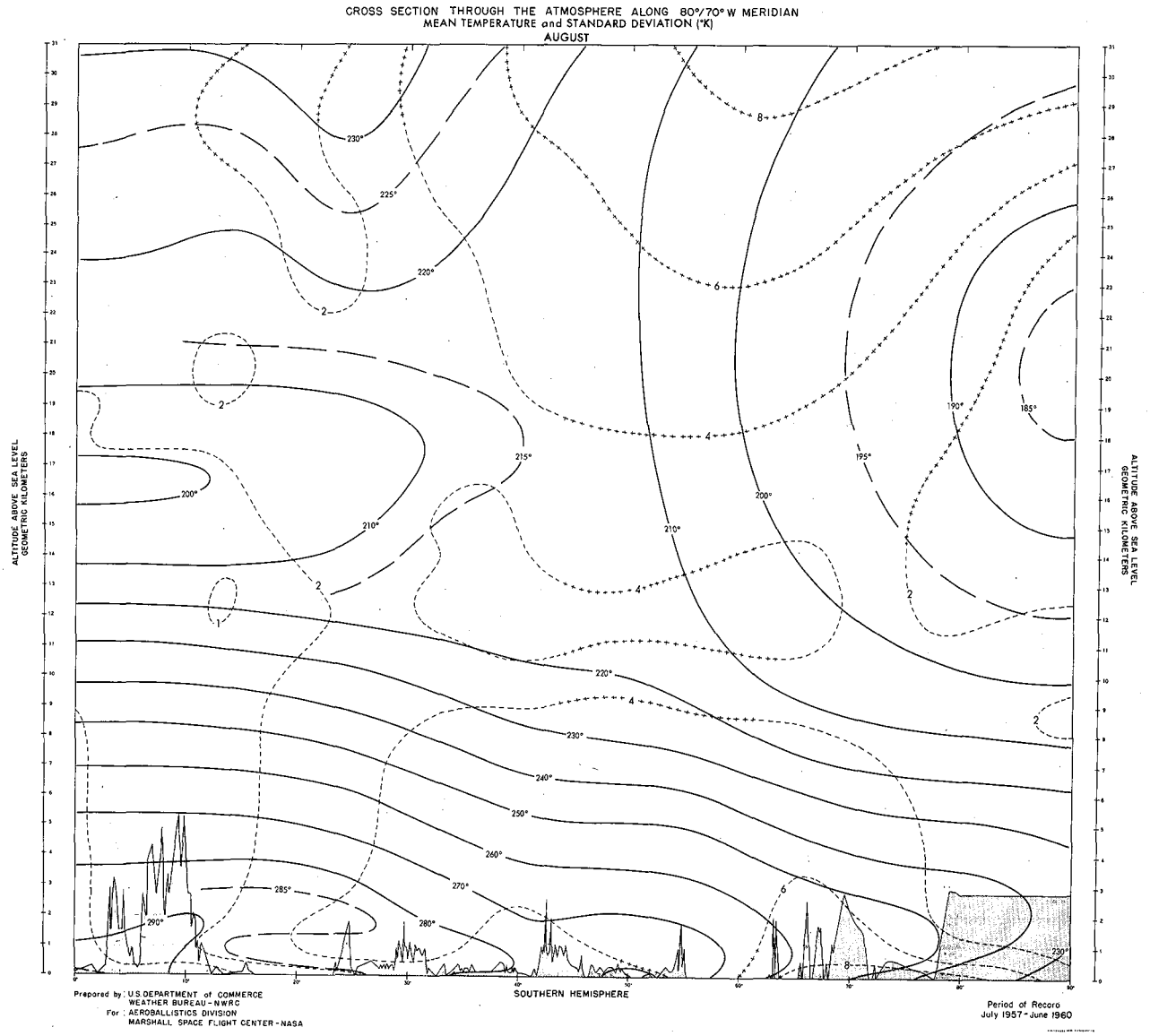

FIGURE 17. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION(°K) (AUGUST - SOUTHERN HEMISPHERE)

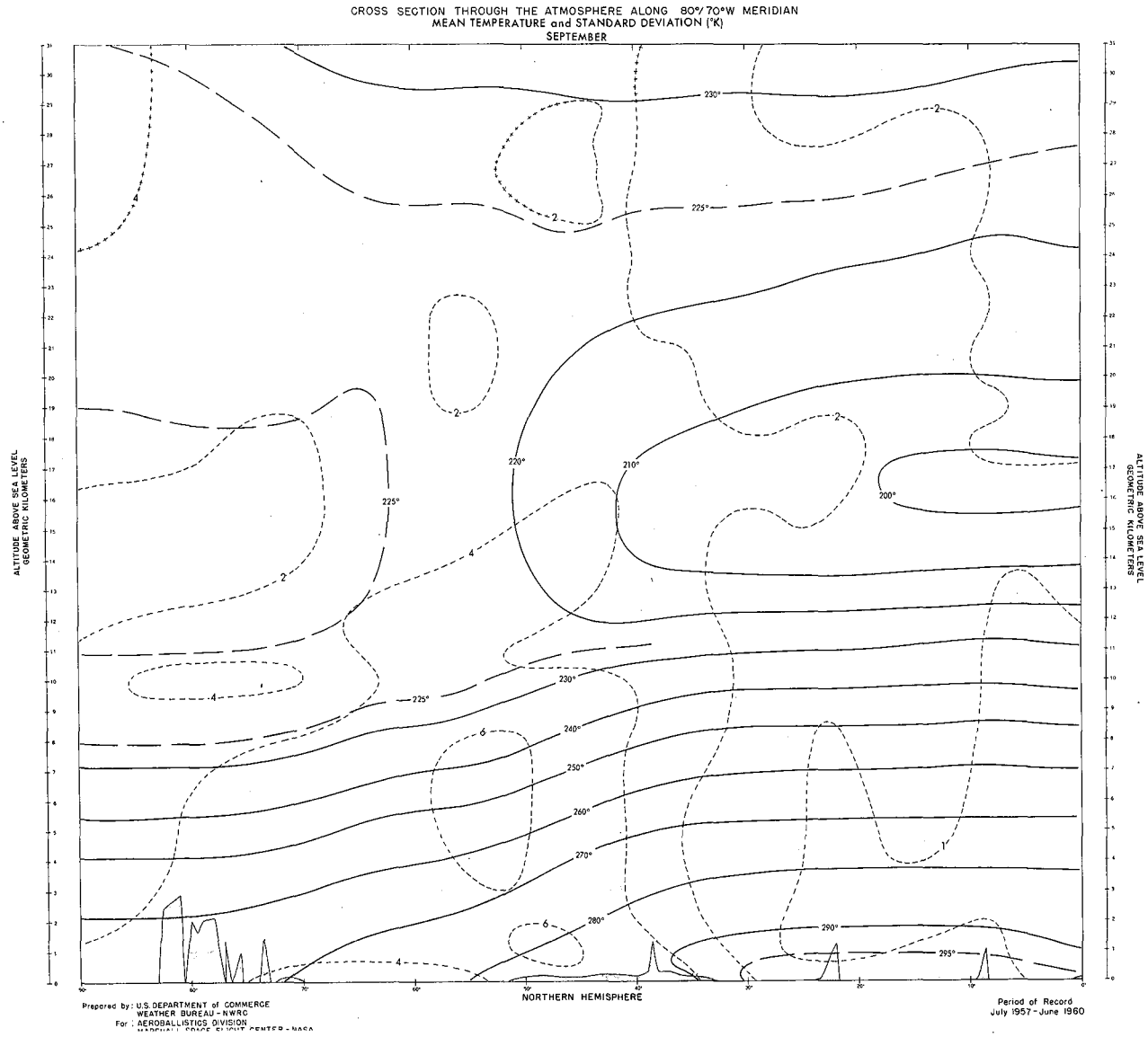

FIGURE 18. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (SEPTEMBER - NORTHERN HEMISPHERE)

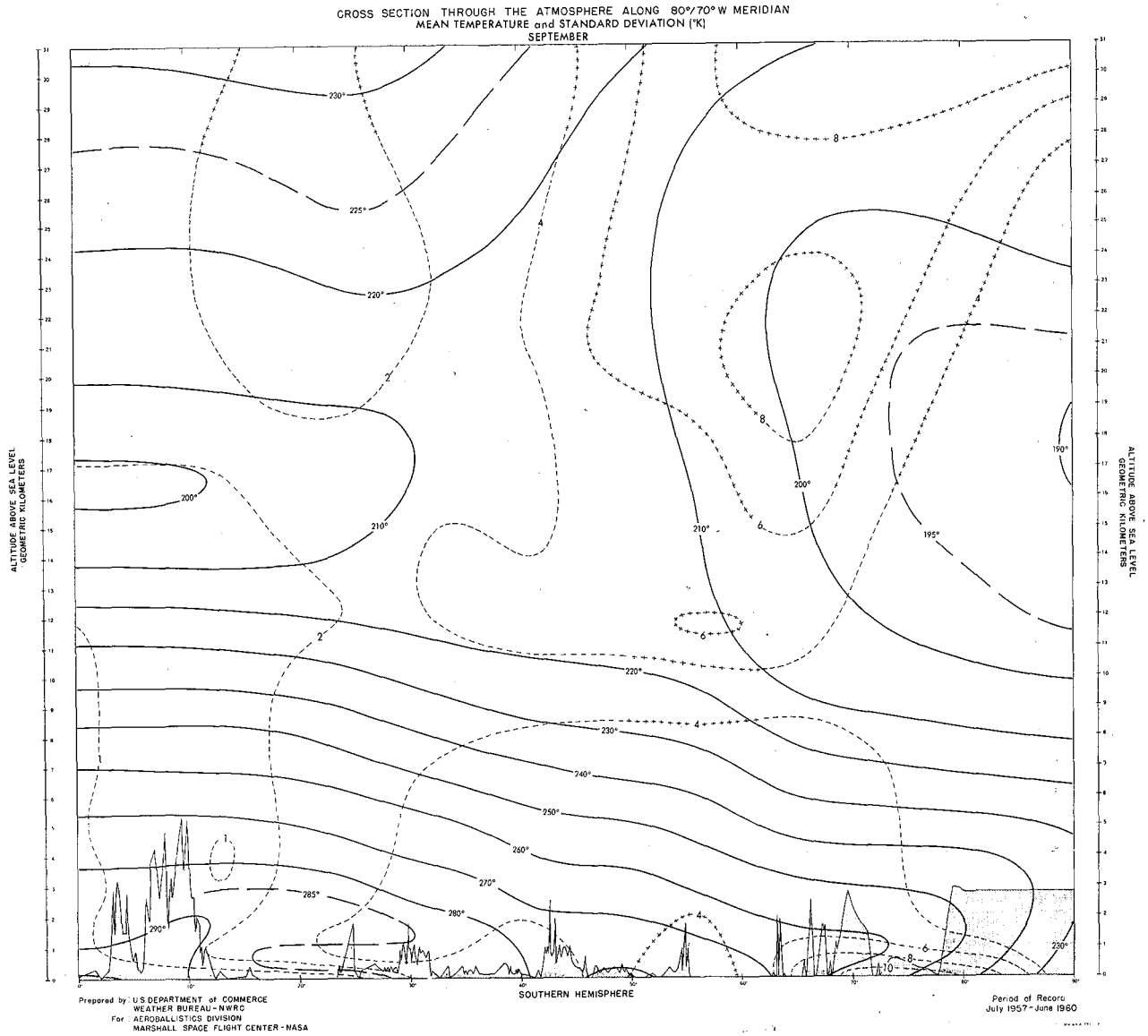

FIGURE 19. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (SEPTEMBER - SOUTHERN HEMISPHERE)

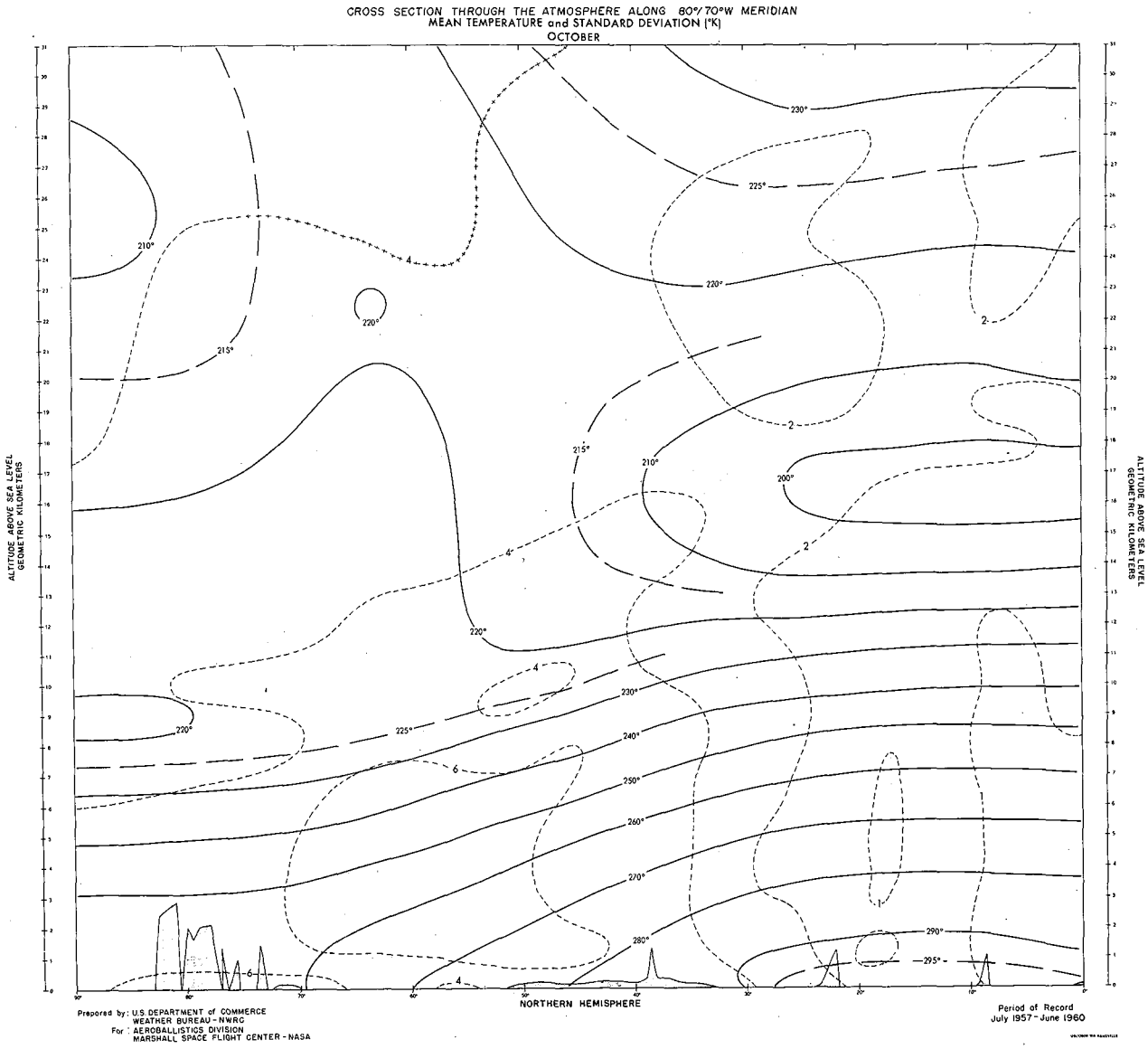

FIGURE 20. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (OCTOBER - NORTHERN HEMISPHERE)

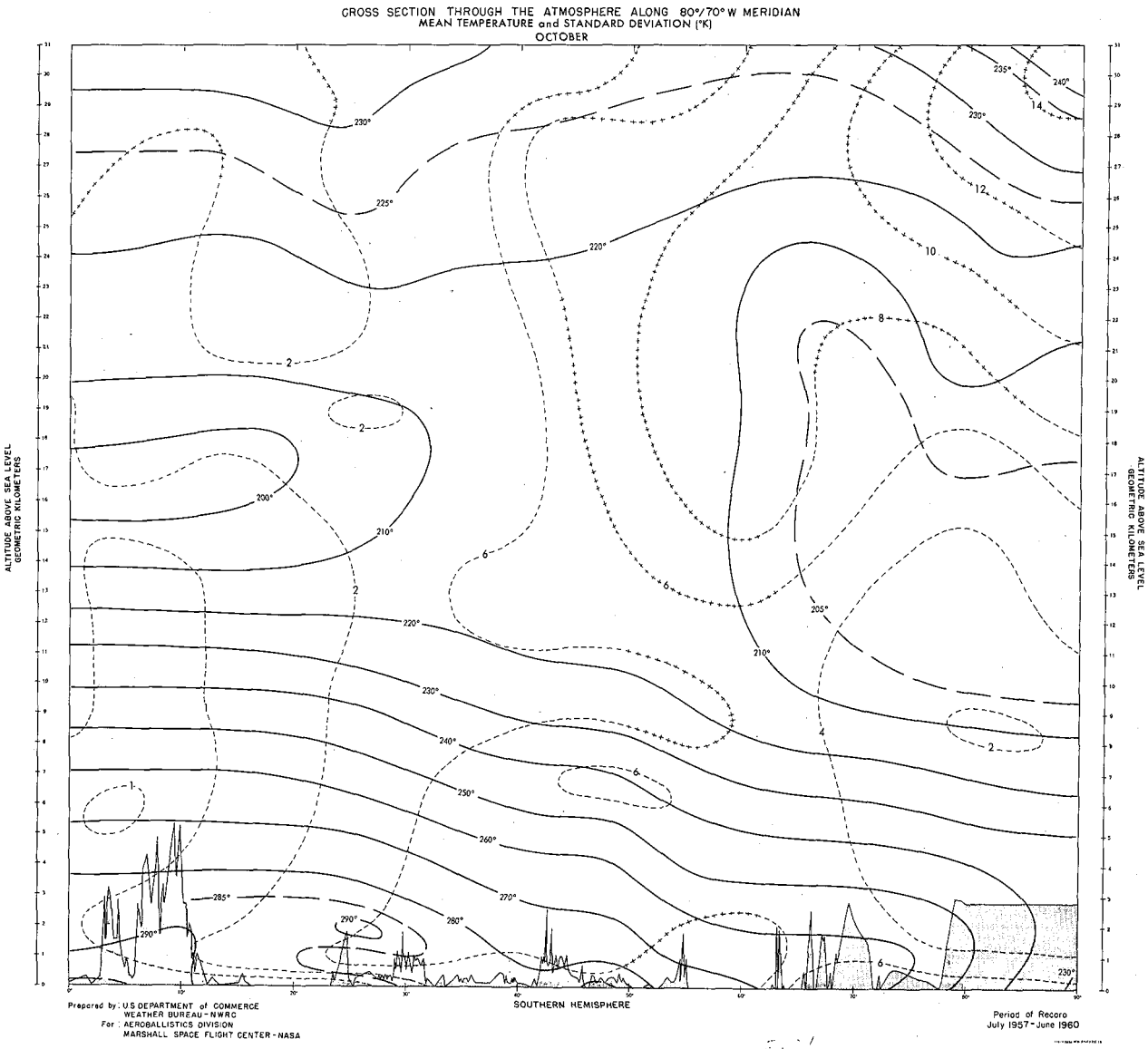

FIGURE 21. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (OCTOBER - SOUTHERN HEMISPHERE)

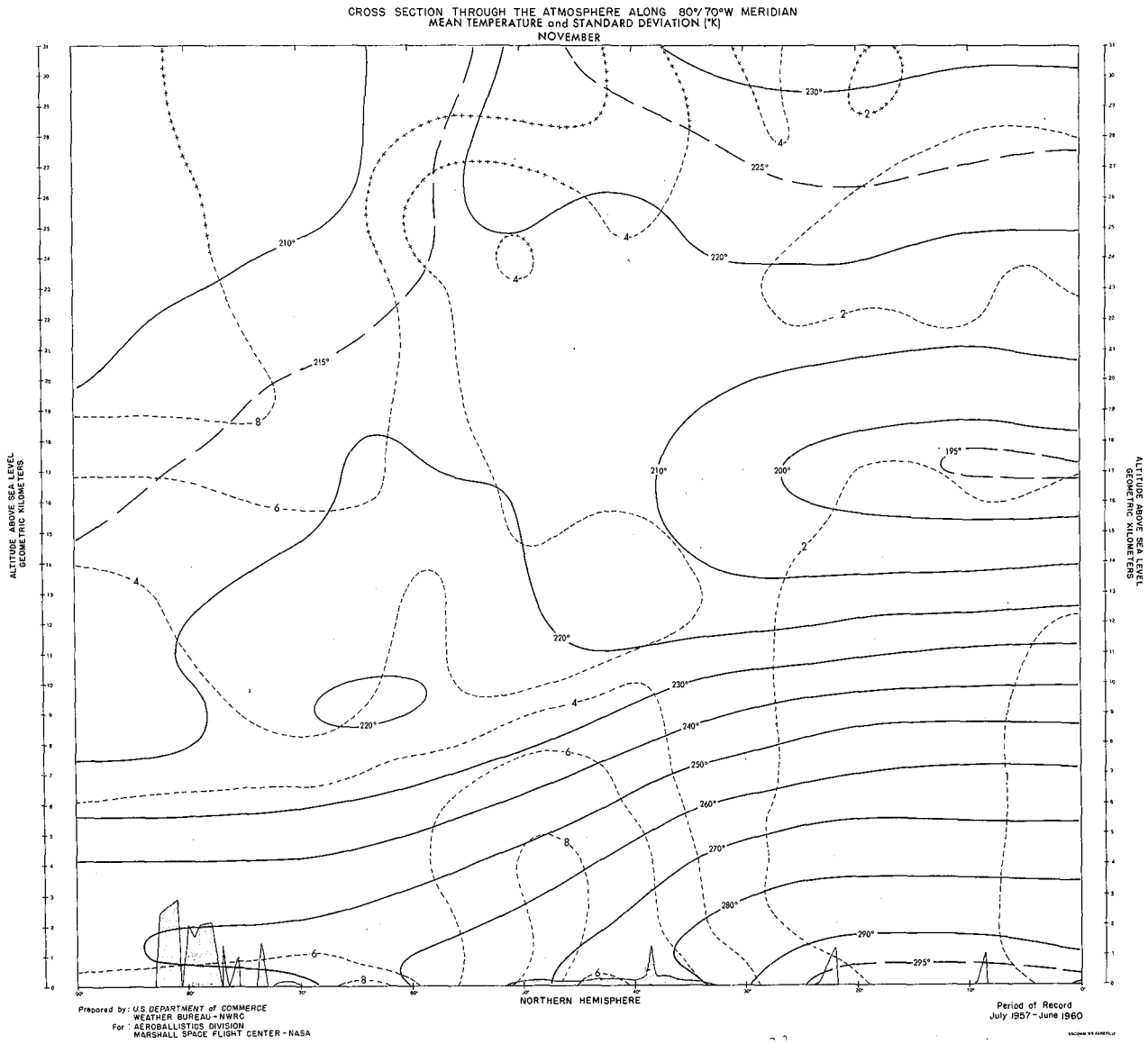

FIGURE 22. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (NOVEMBER - NORTHERN HEMISPHERE)

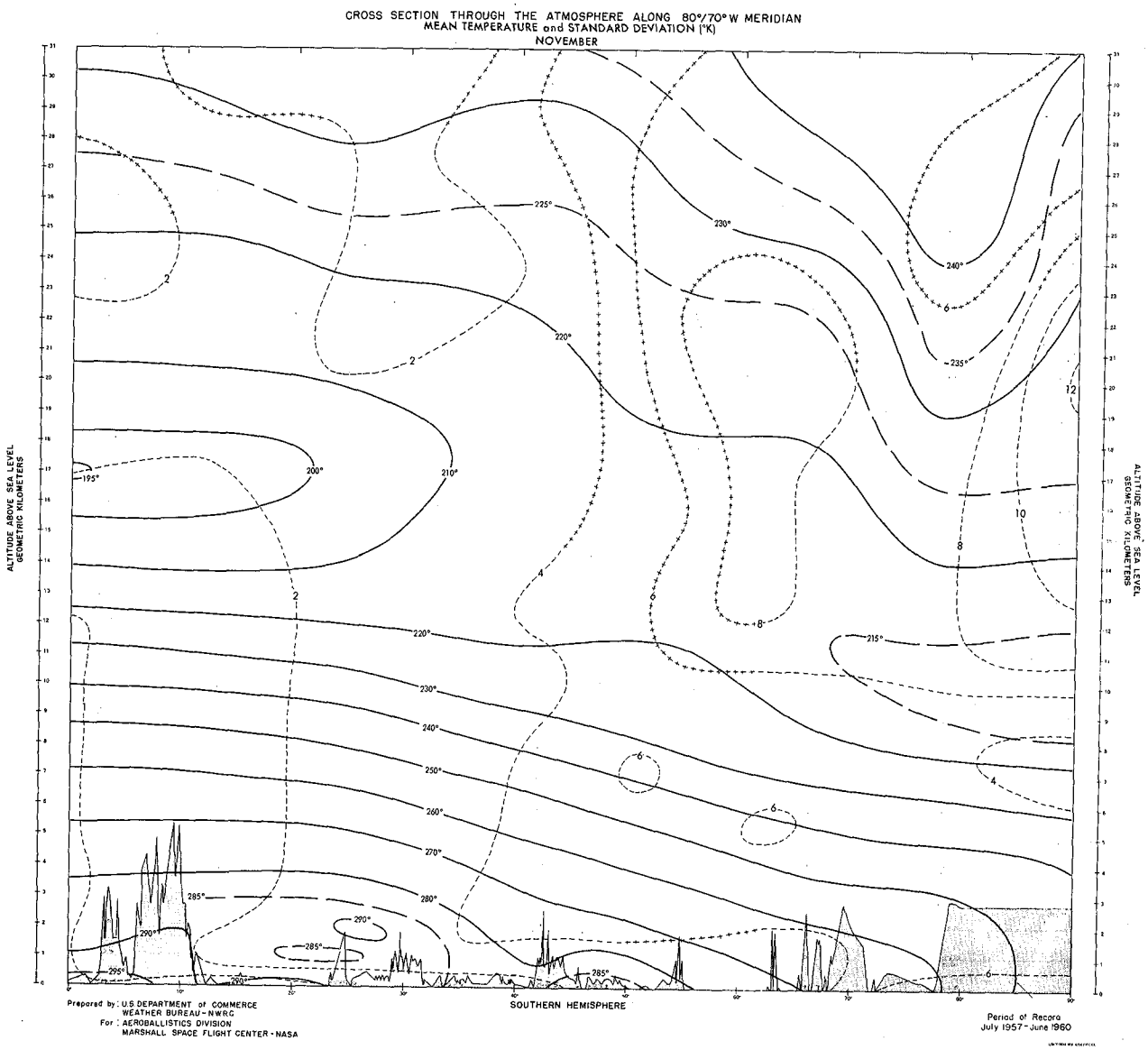

FIGURE 23. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (NOVEMBER - SOUTHERN HEMISPHERE)

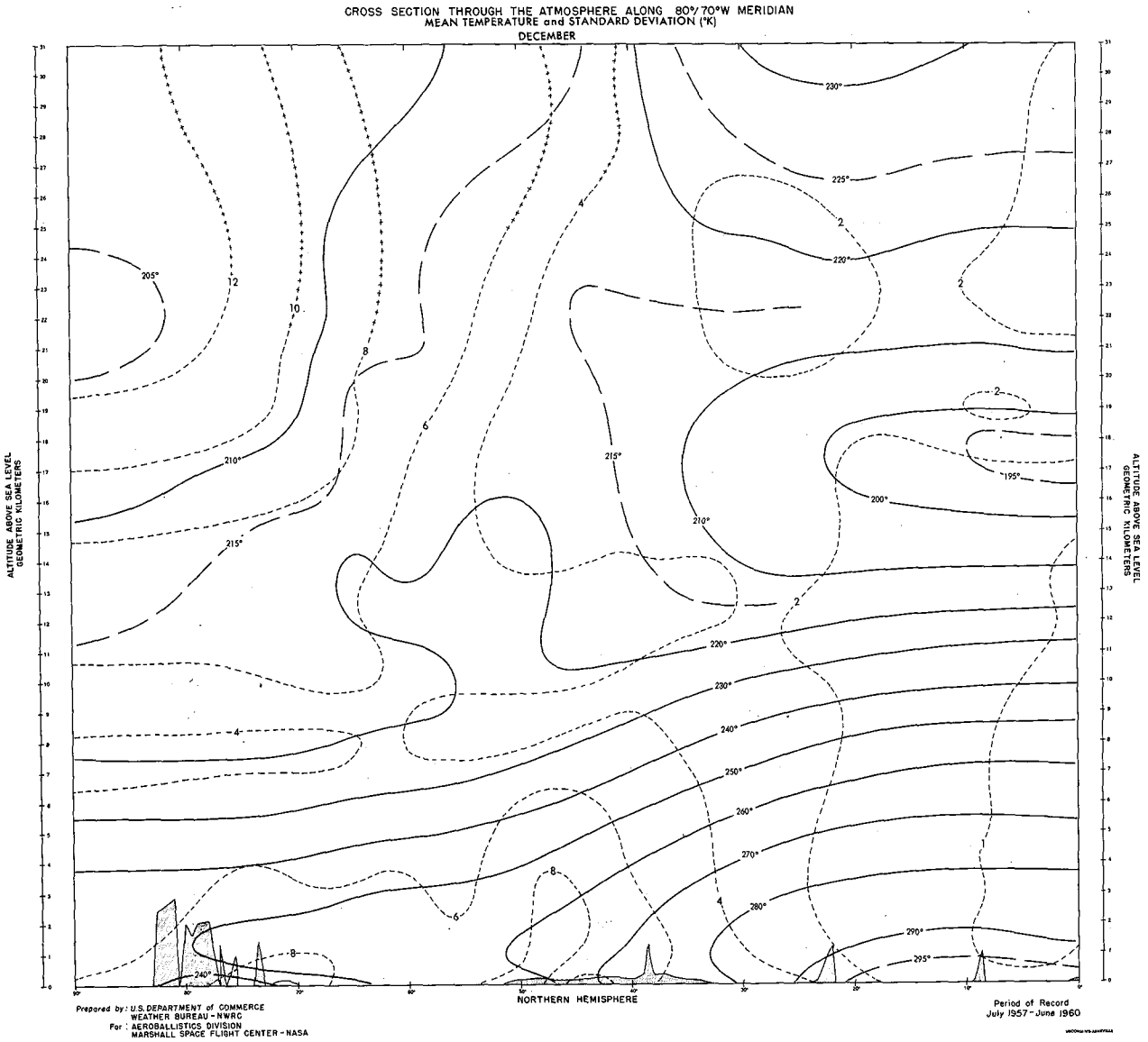

FIGURE 24. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (DECEMBER - NORTHERN HEMISPHERE)

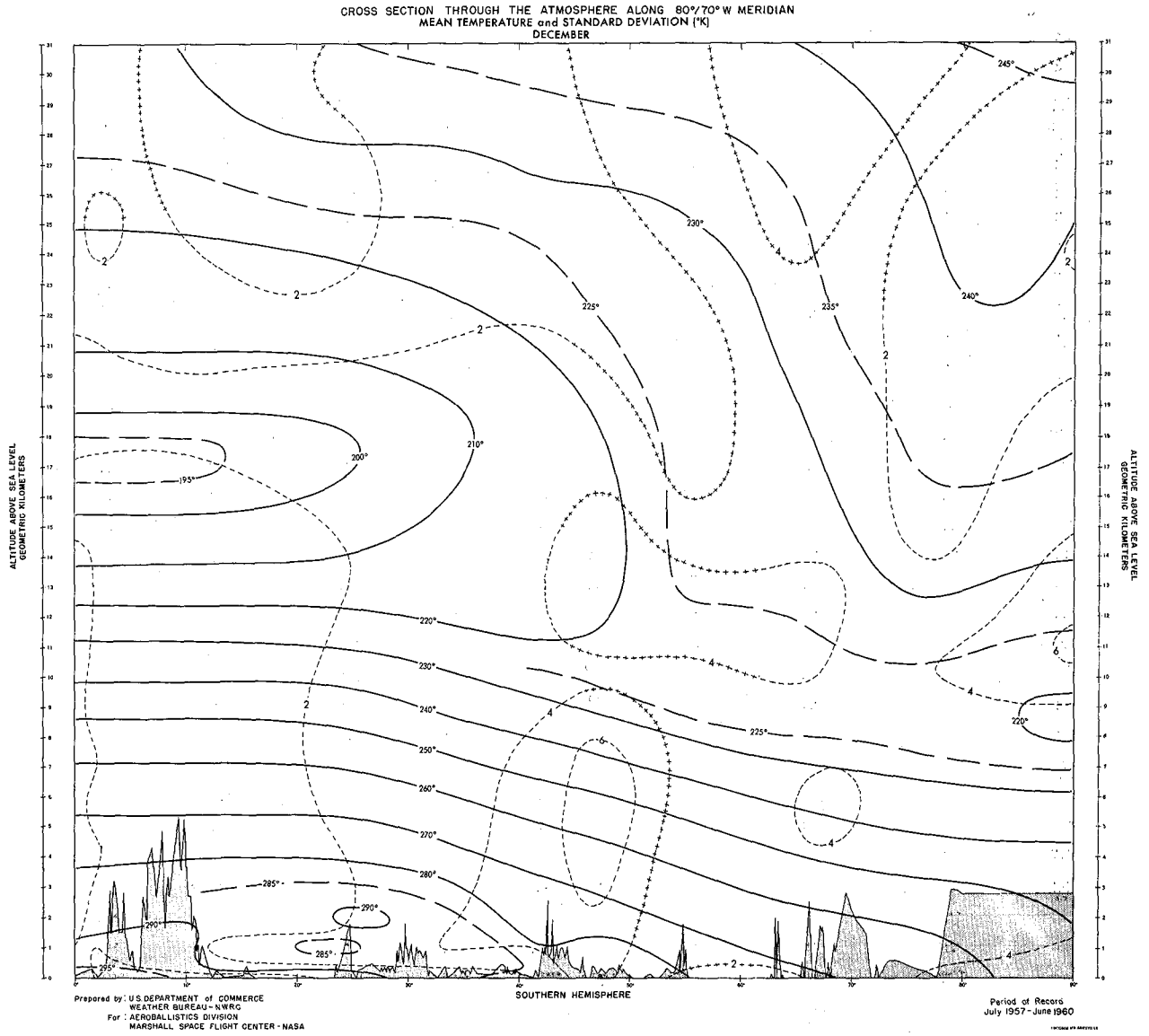

FIGURE 25. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (DECEMBER - SOUTHERN HEMISPHERE)

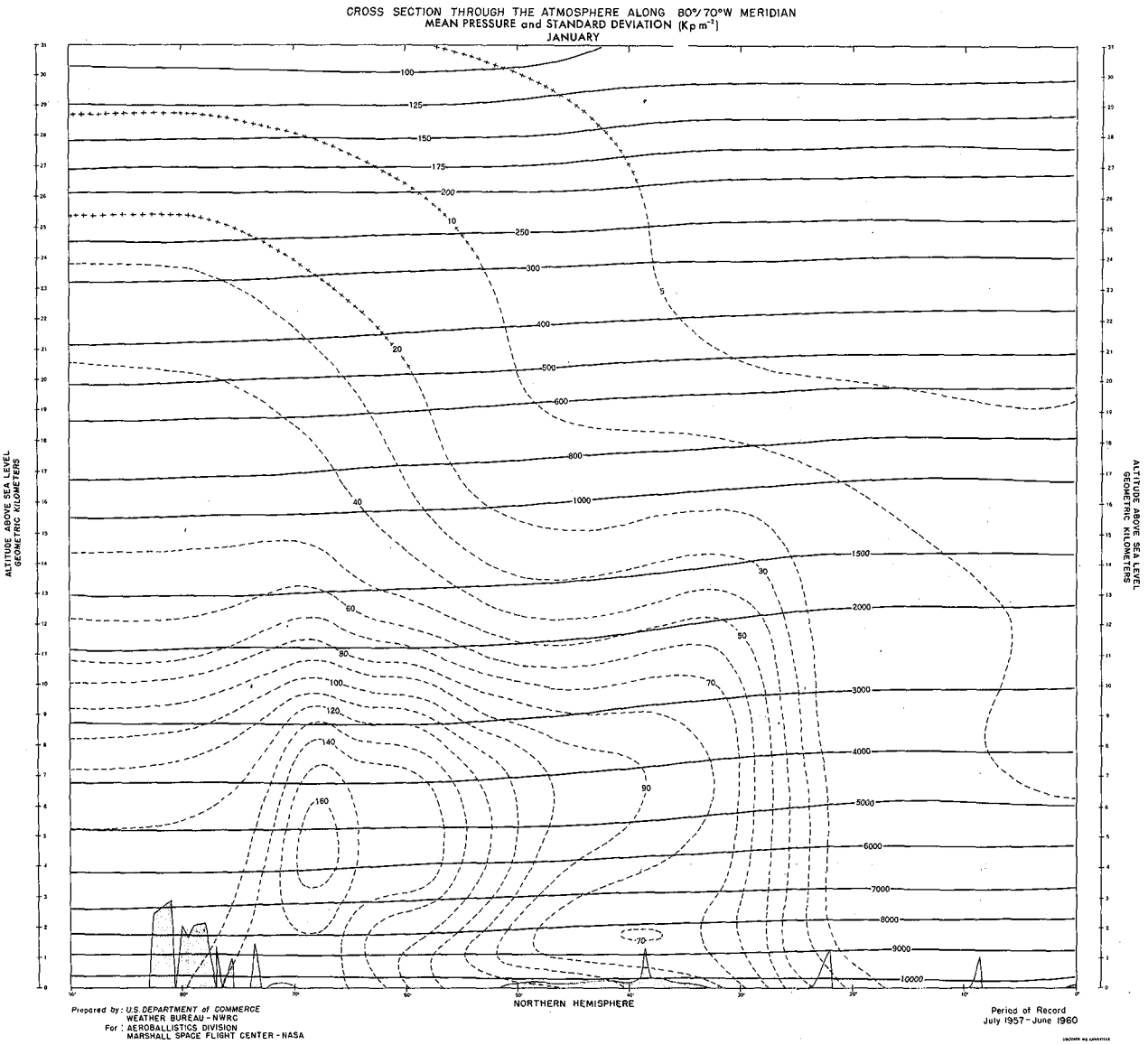

FIGURE 26. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (JANUARY - NORTHERN HEMISPHERE)

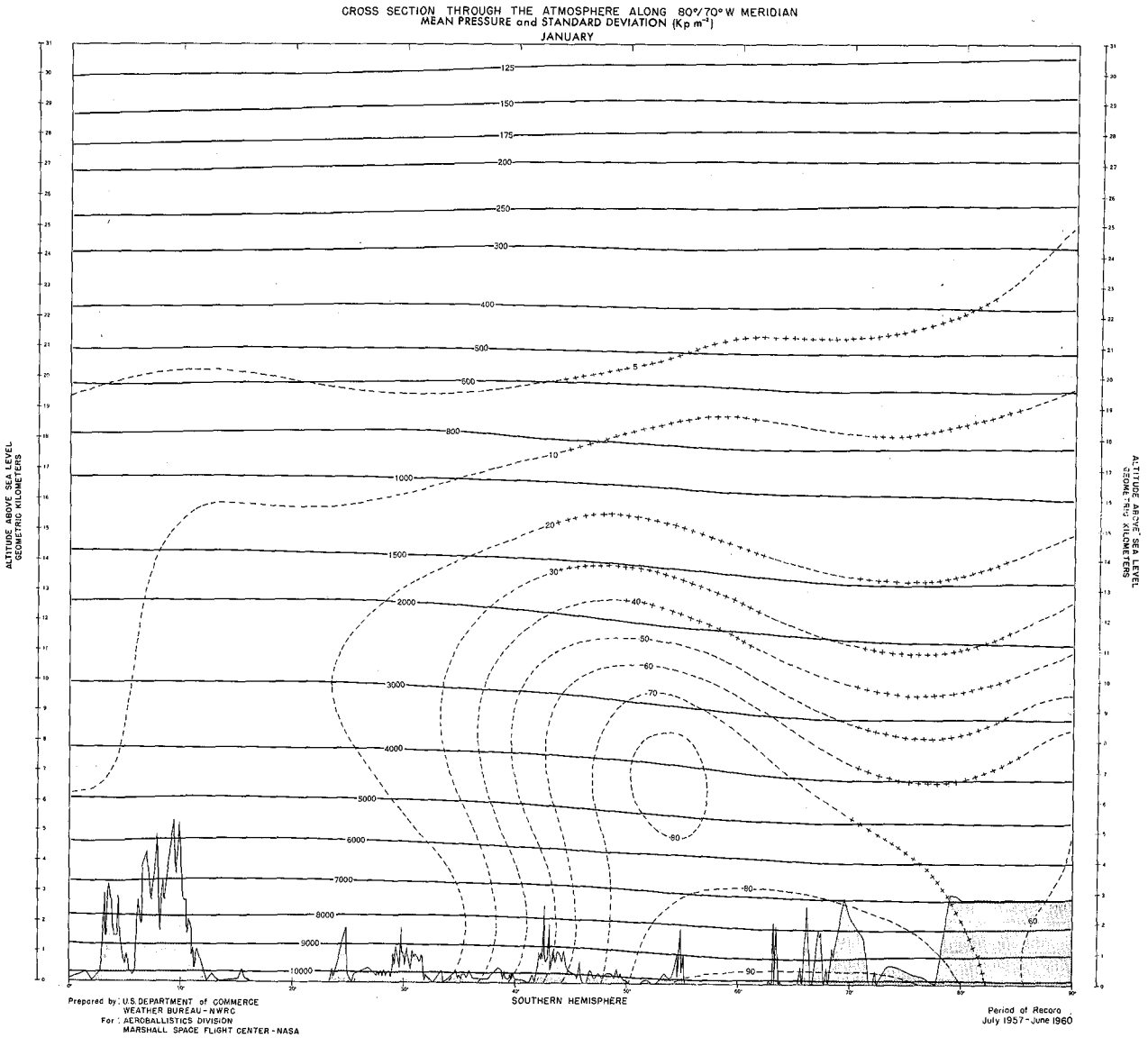

FIGURE 27. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (JANUARY - SOUTHERN HEMISPHERE)

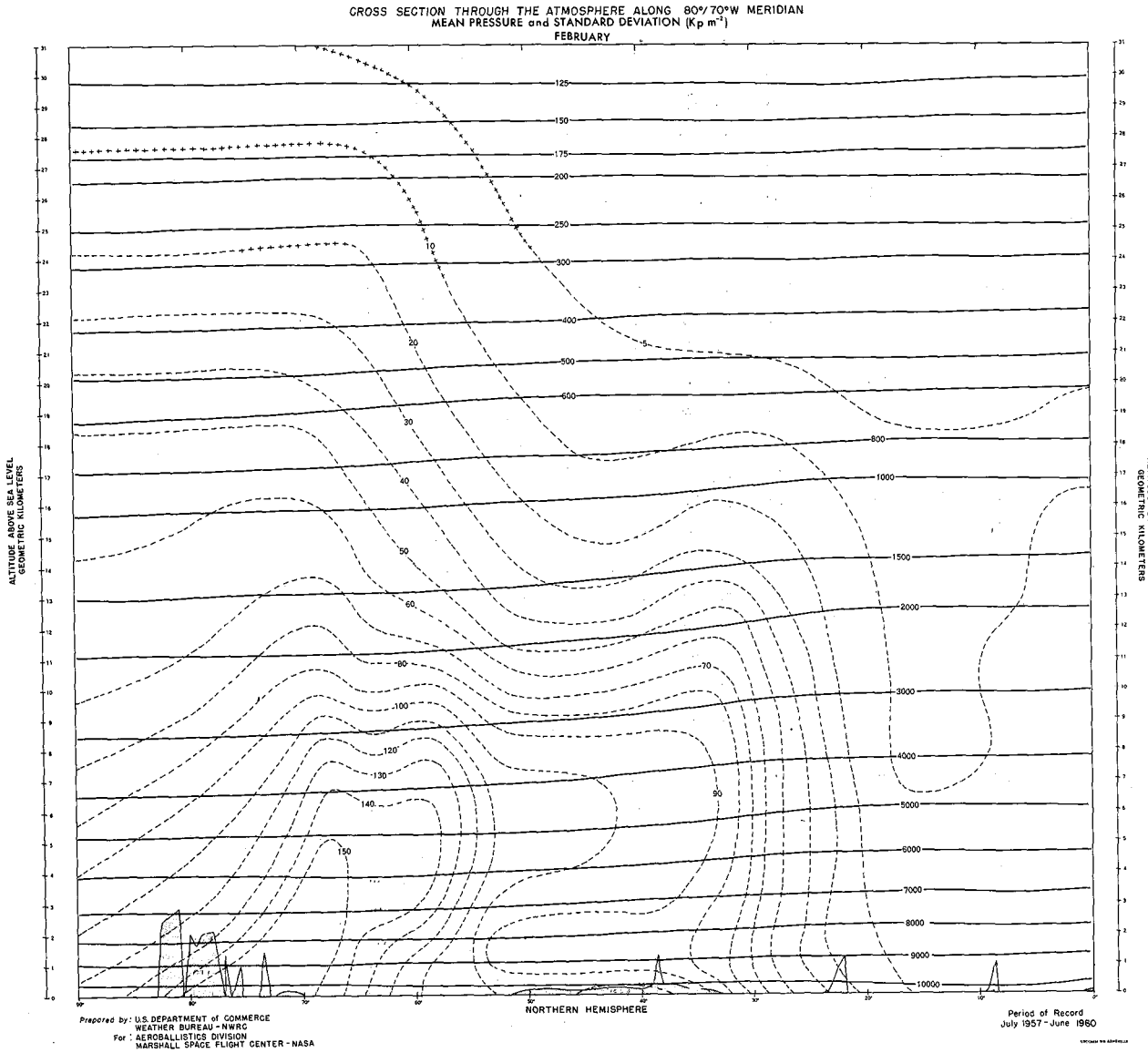

FIGURE 28. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (FEBRUARY - NORTHERN HEMISPHERE)

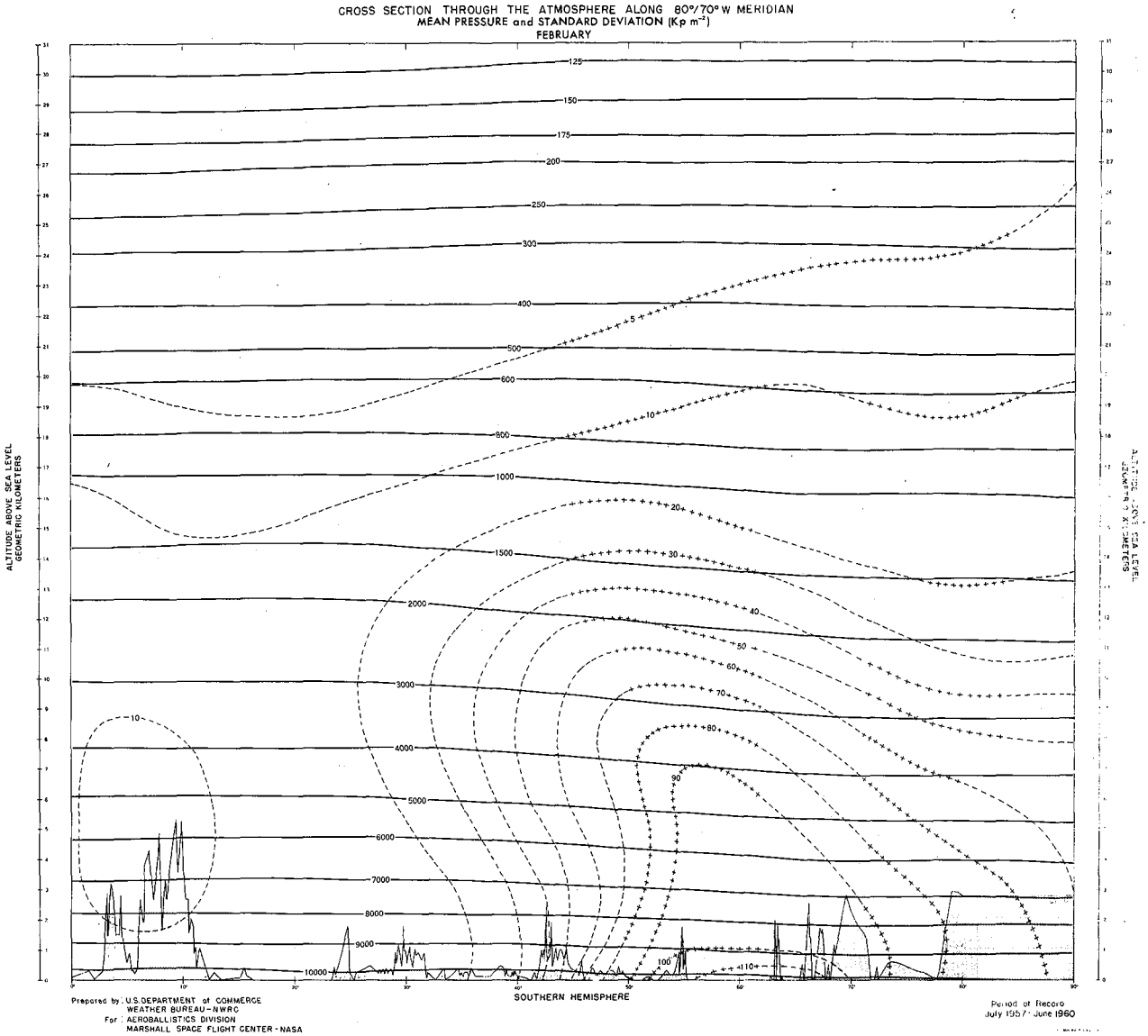

FIGURE 29. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (FEBRUARY - SOUTHERN HEMISPHERE)

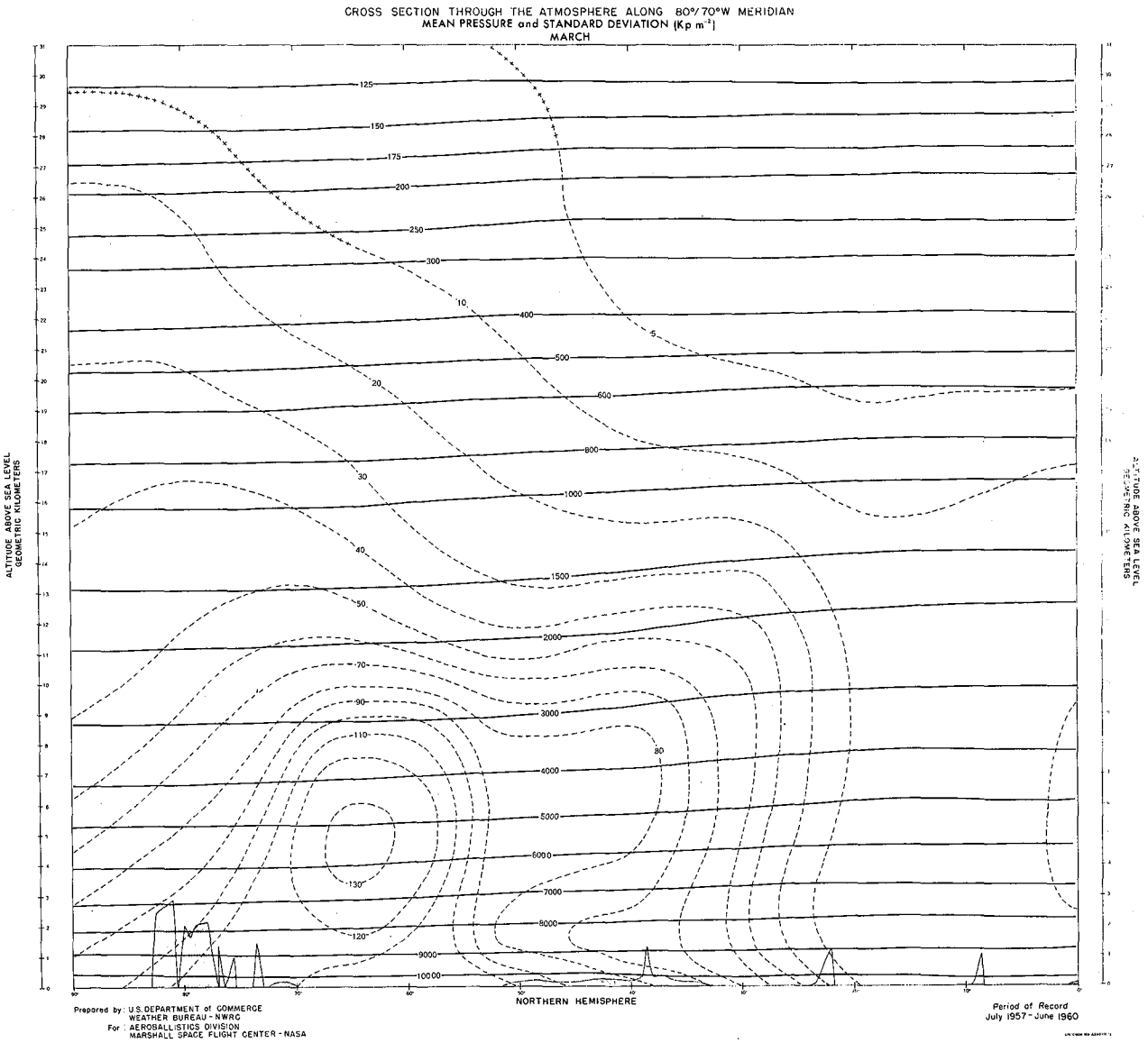

FIGURE 30. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (MARCH - NORTHERN HEMISPHERE)

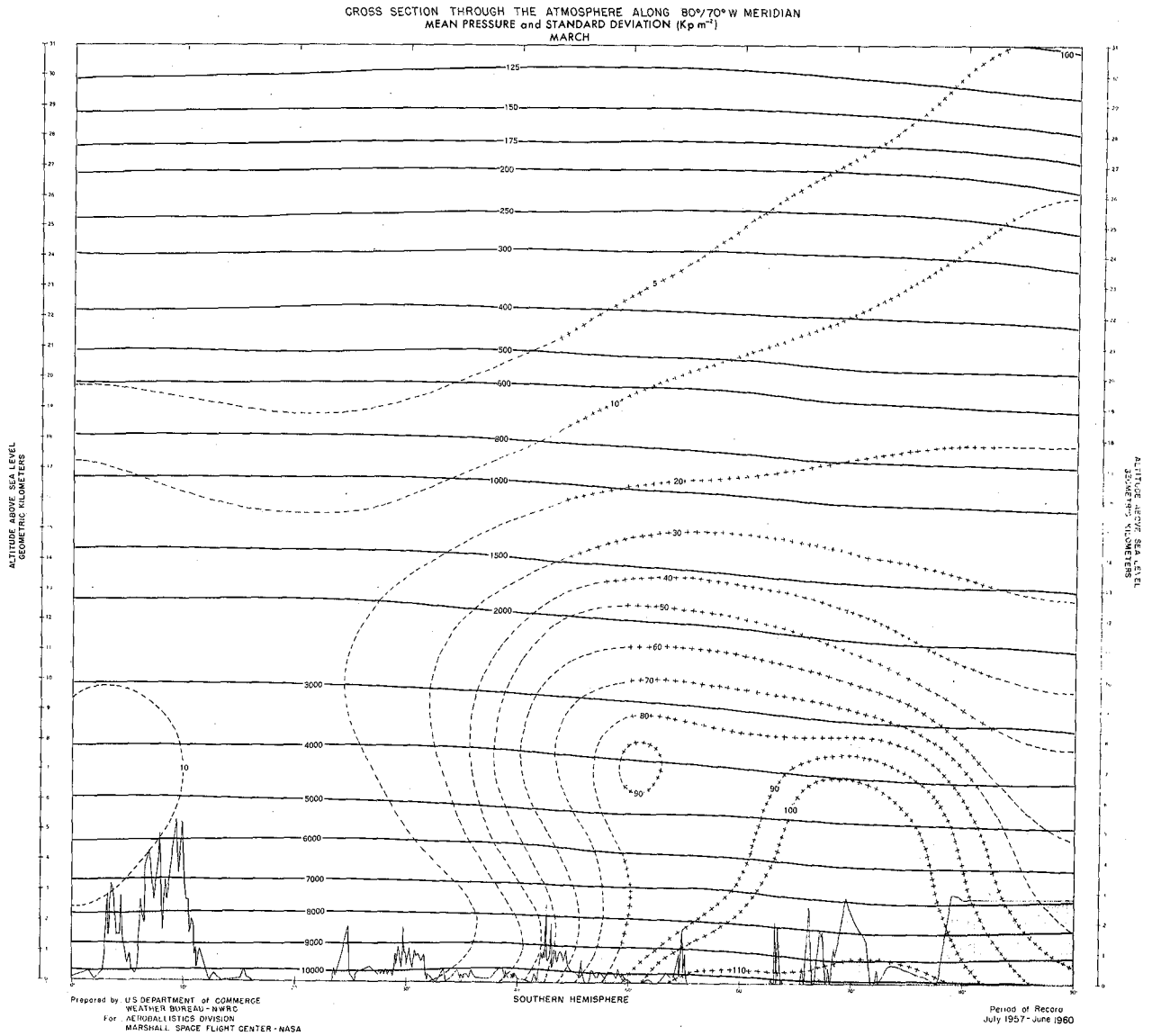

FIGURE 31. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (MARCH - SOUTHERN HEMISPHERE)

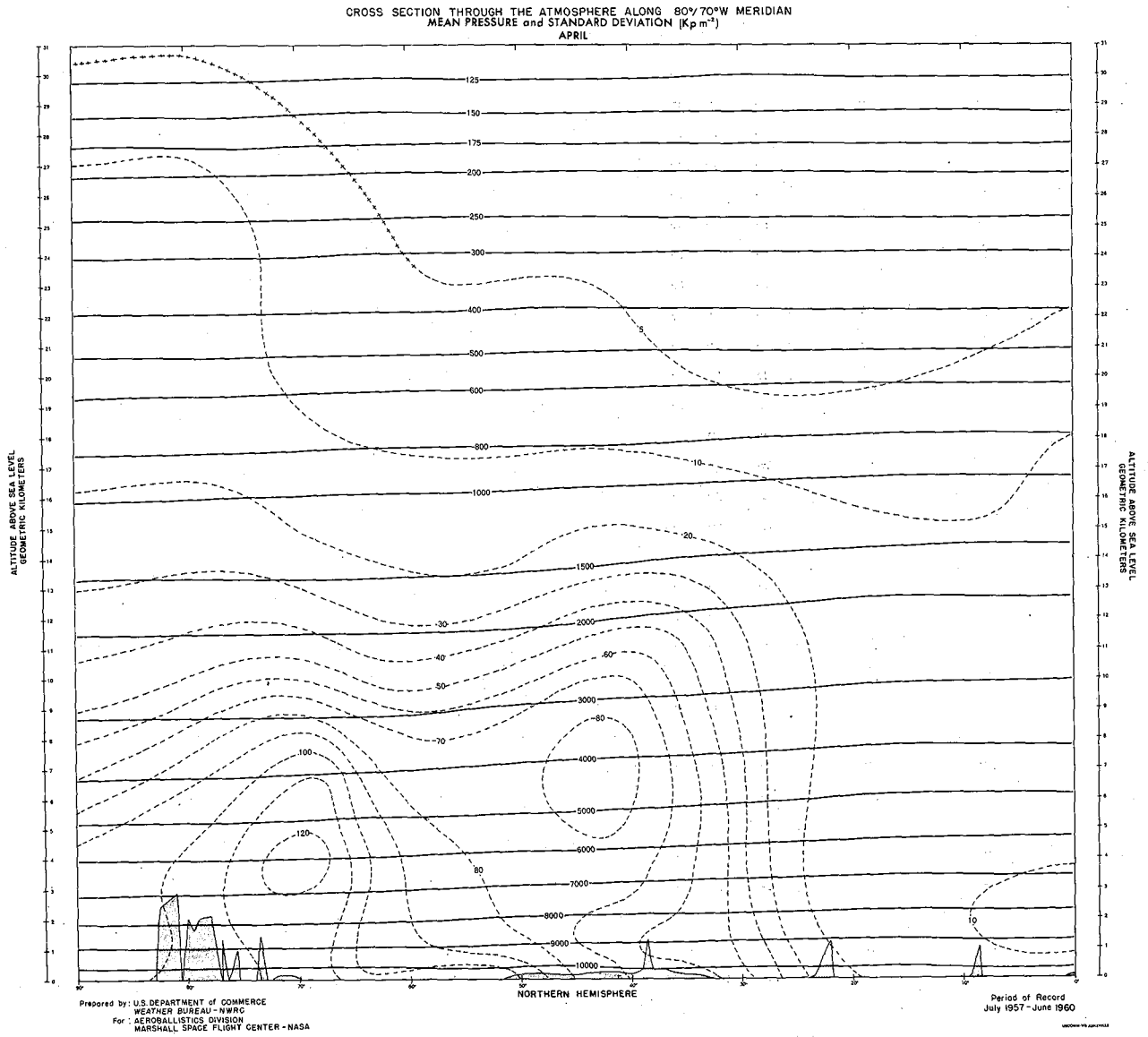

FIGURE 32. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (APRIL - NORTHERN HEMISPHERE)

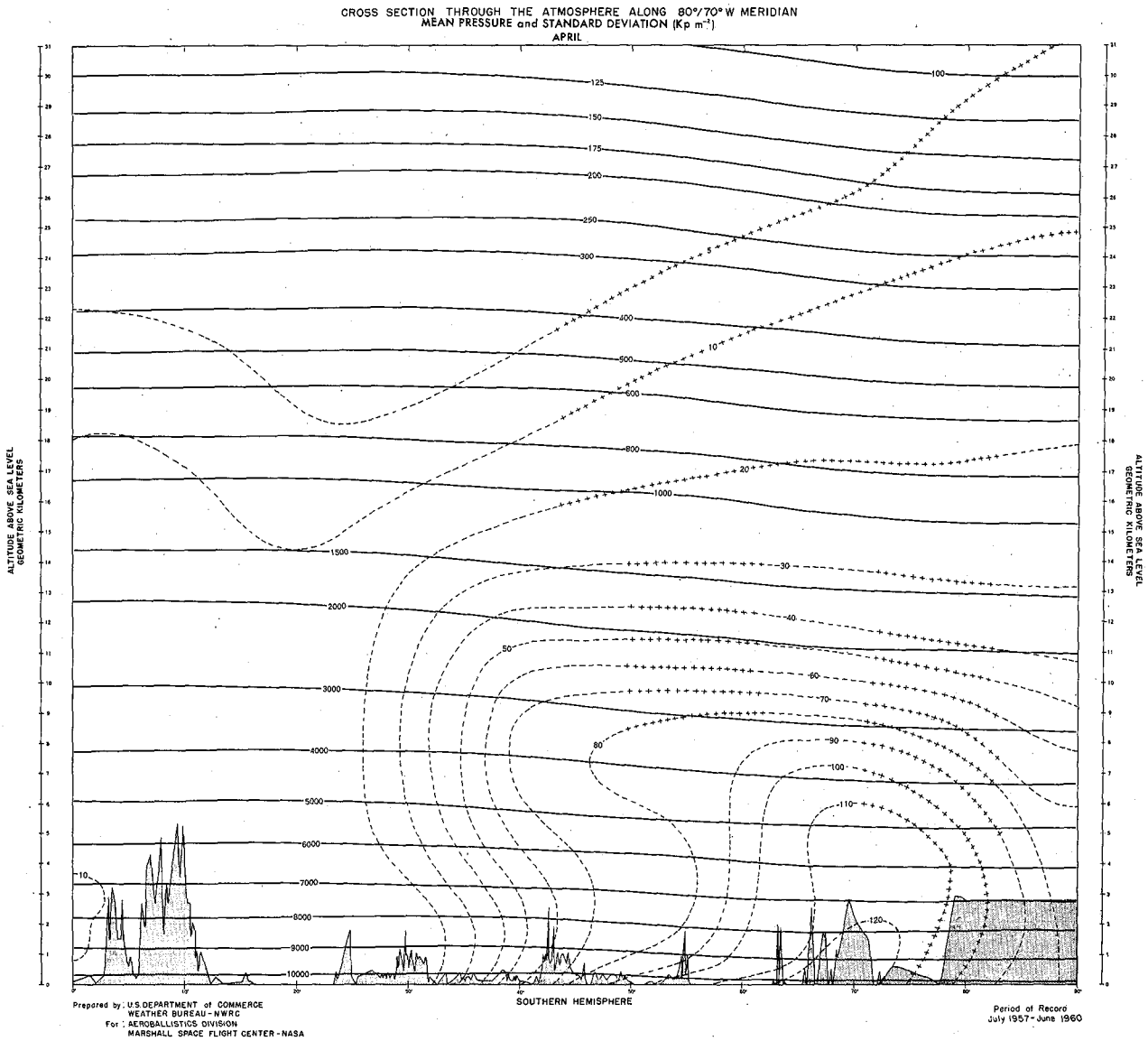

FIGURE 33. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (APRIL - SOUTHERN HEMISPHERE)

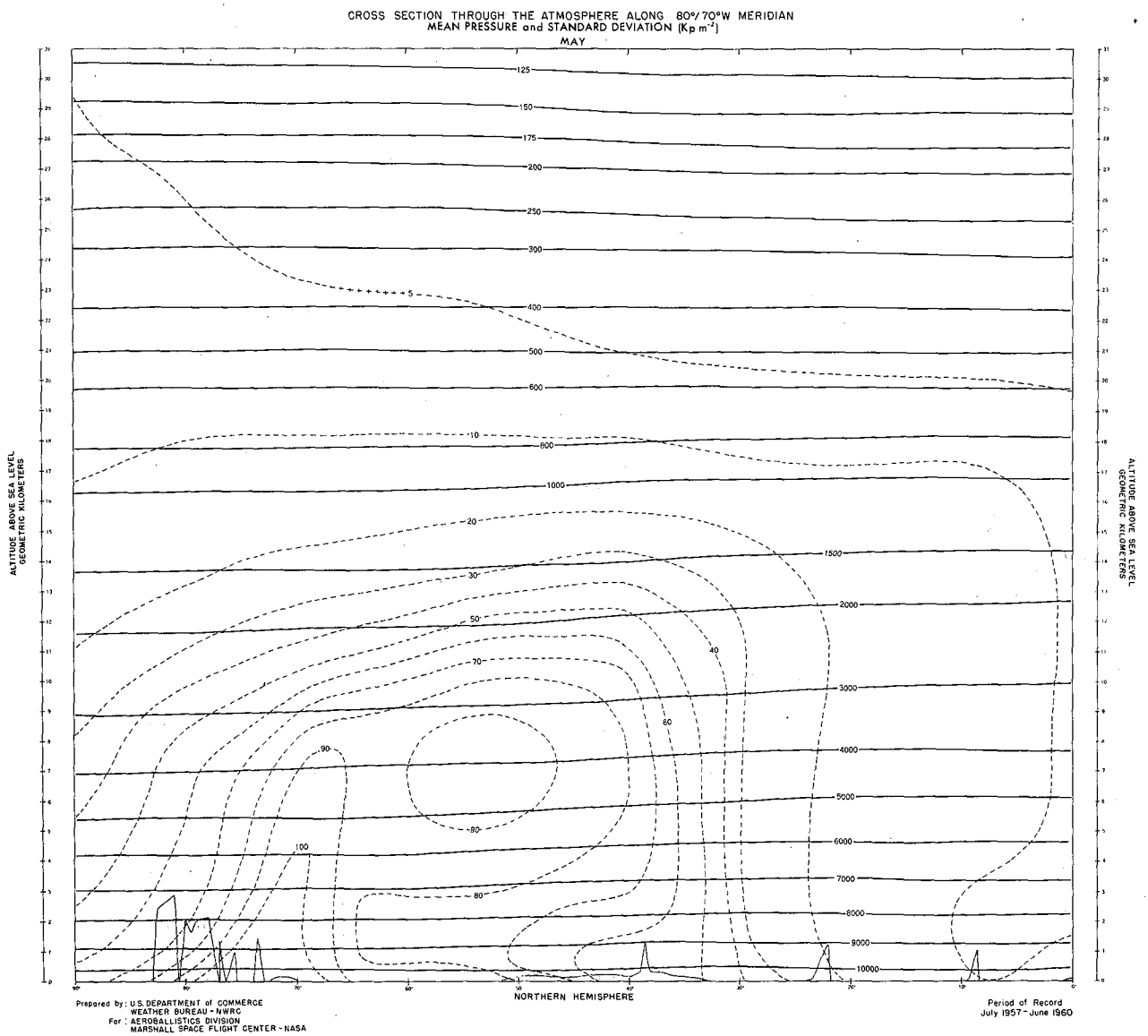

FIGURE 34. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (MAY - NORTHERN HEMISPHERE)

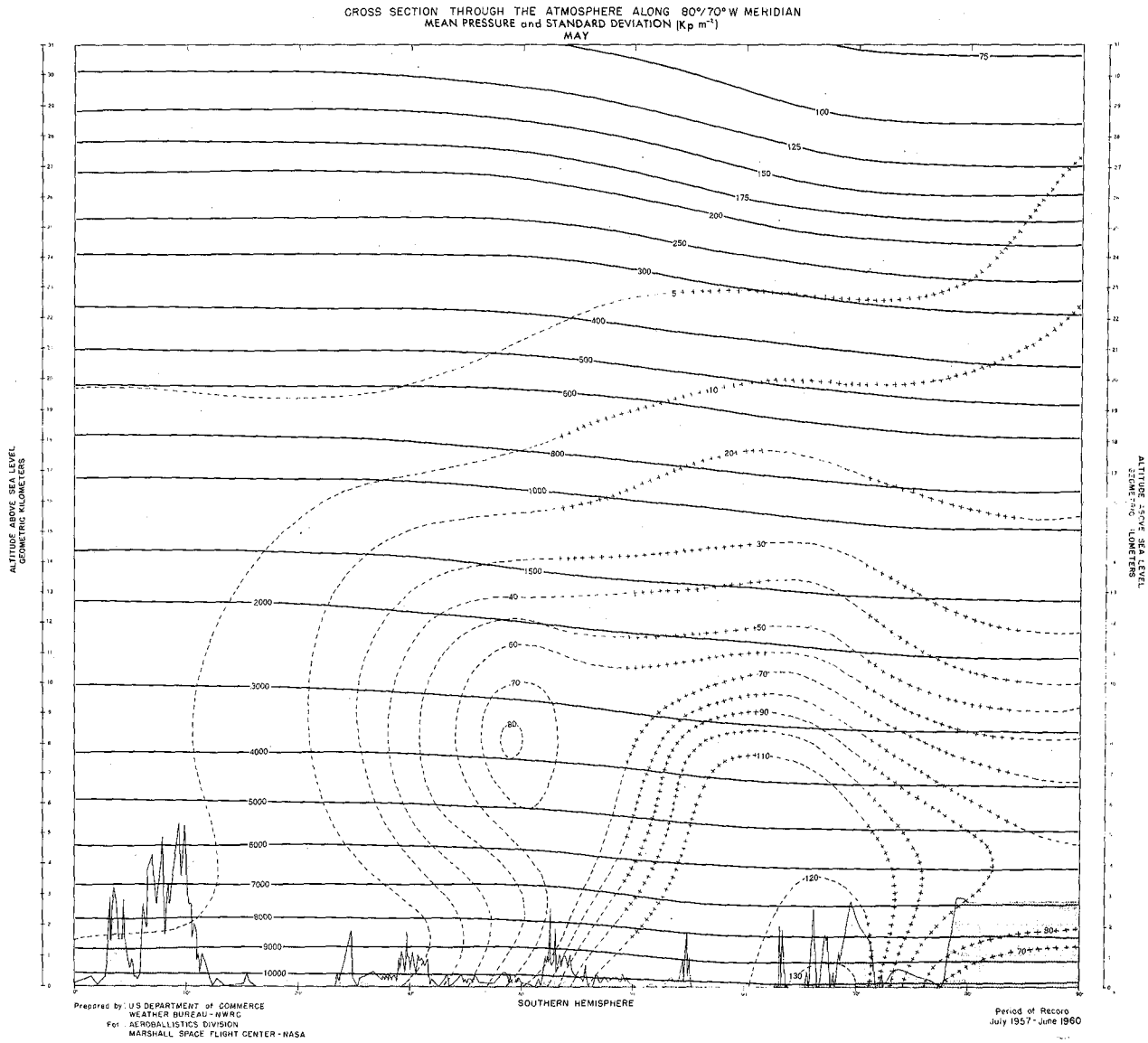

FIGURE 35. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (MAY - SOUTHERN HEMISPHERE)

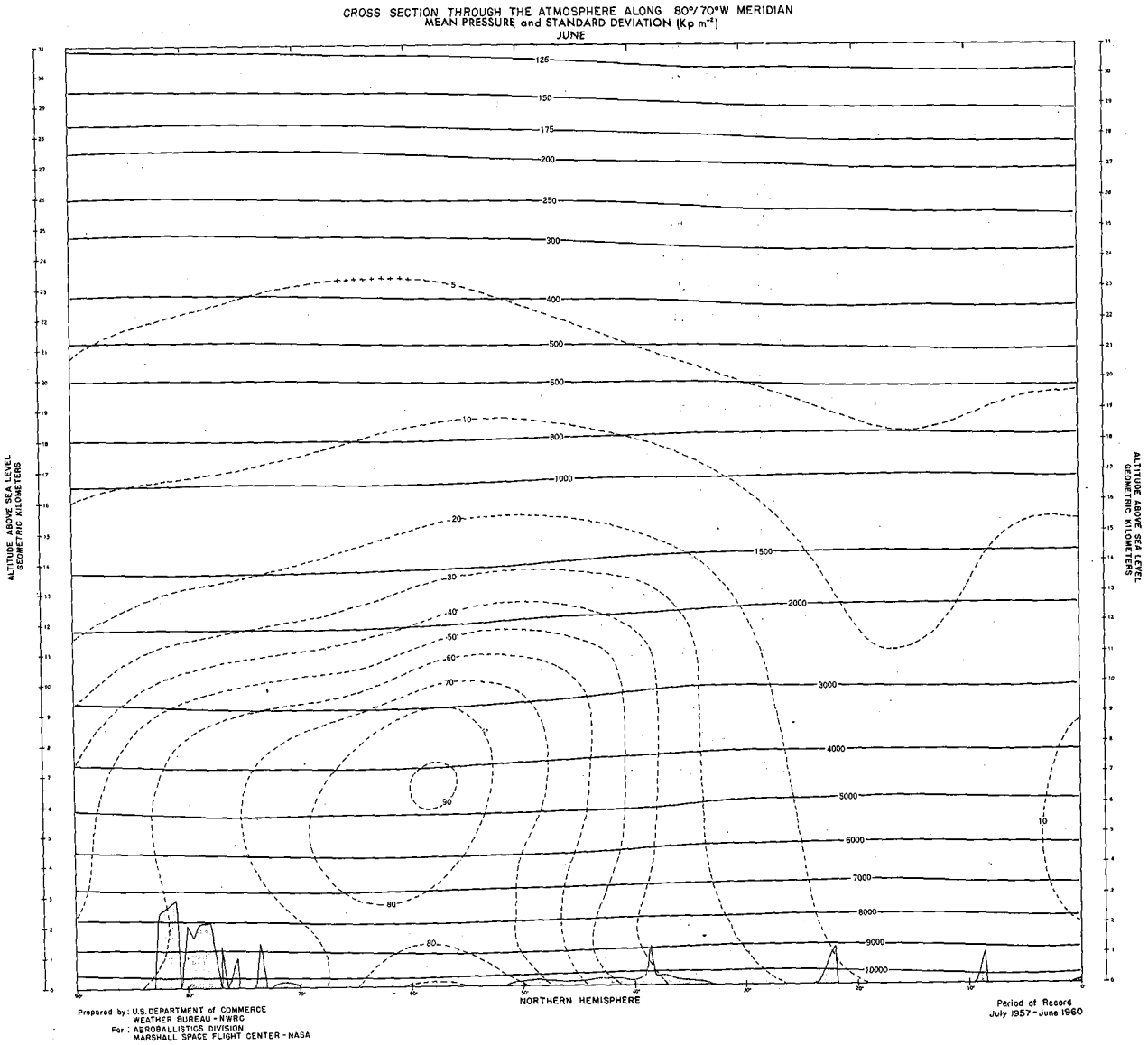

FIGURE 36. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (JUNE - NORTHERN HEMISPHERE)

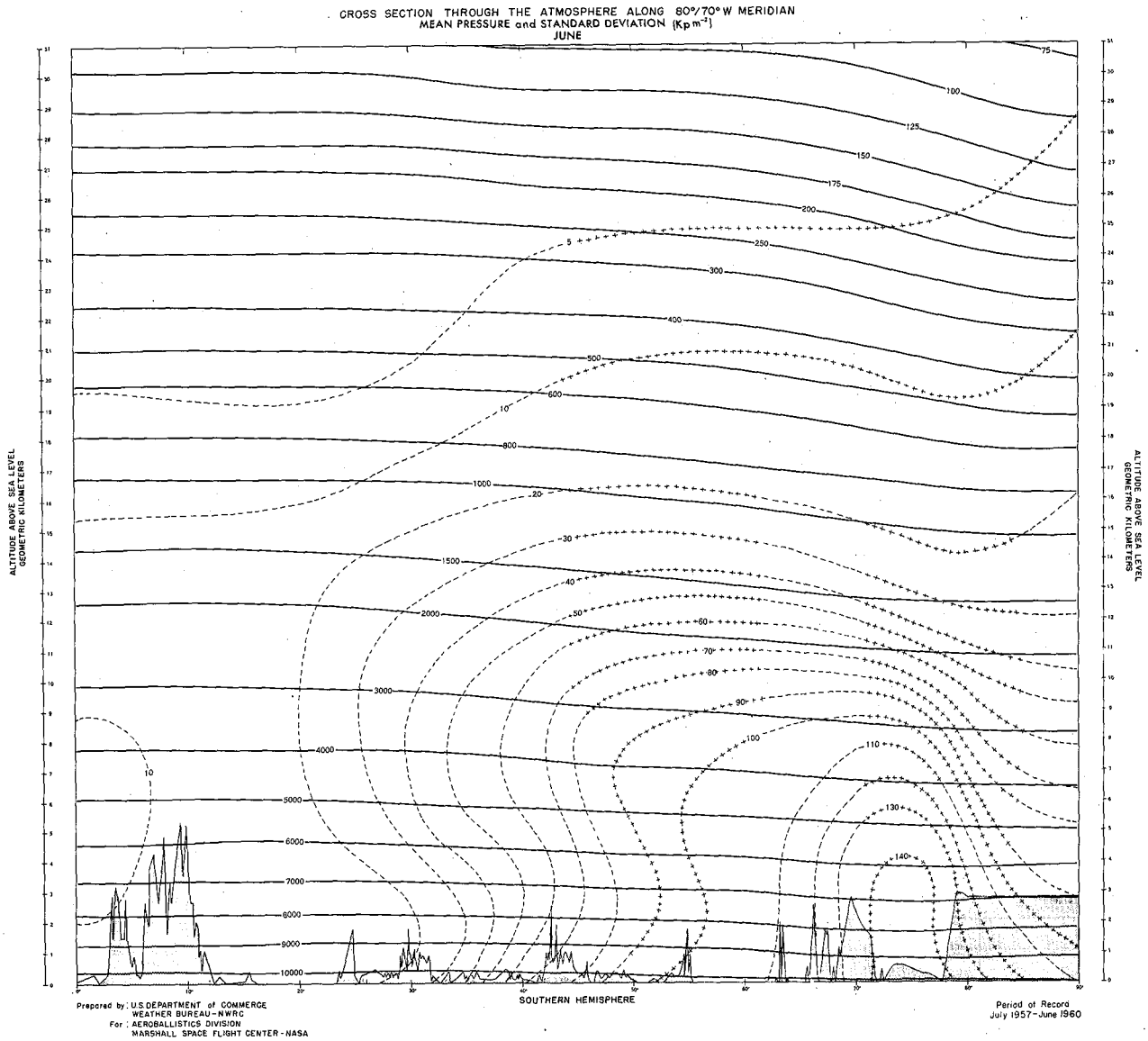

FIGURE 37. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION ($Kp\ m^{-2}$) (JUNE - SOUTHERN HEMISPHERE)

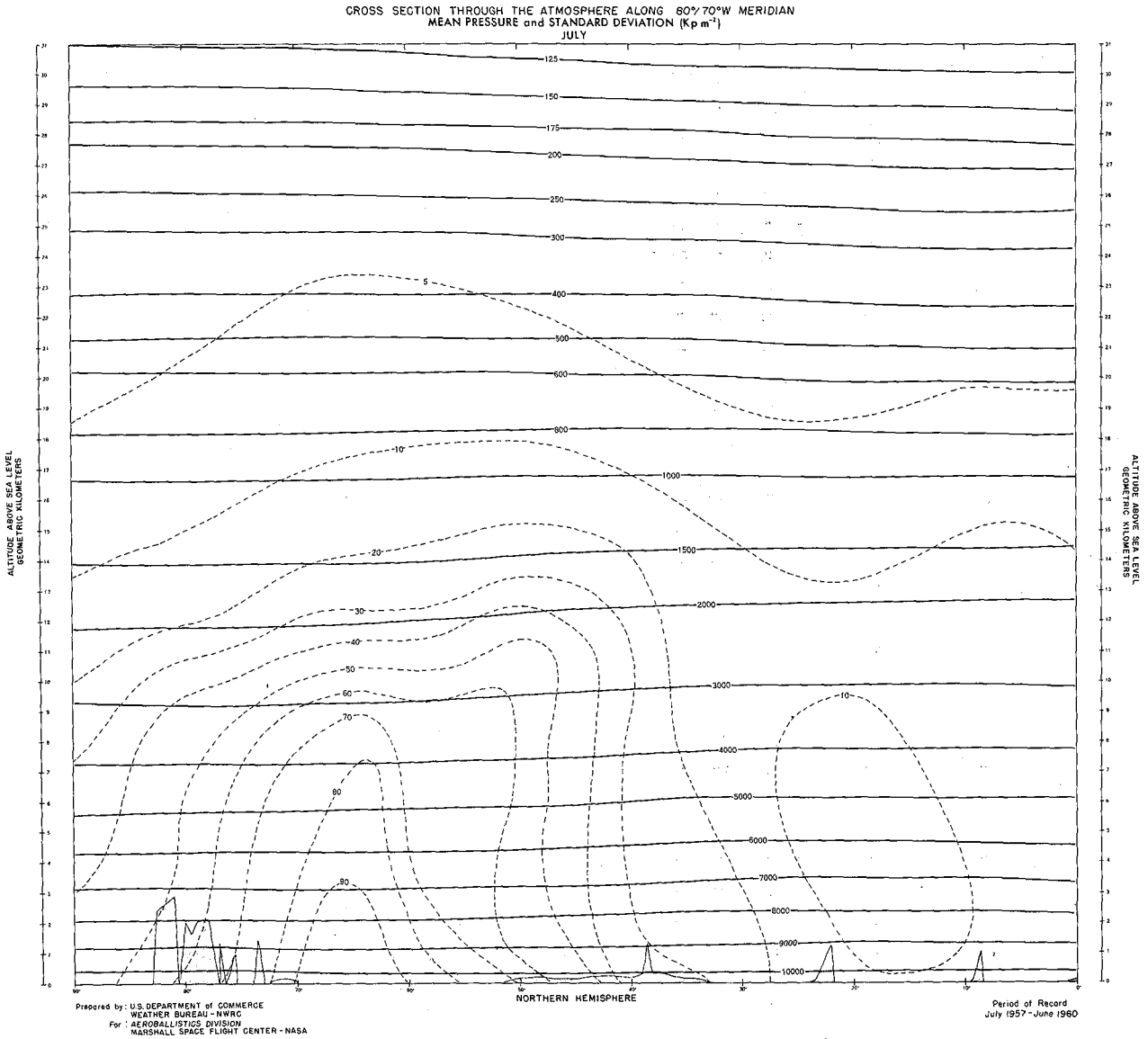

FIGURE 38. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (JULY - NORTHERN HEMISPHERE)

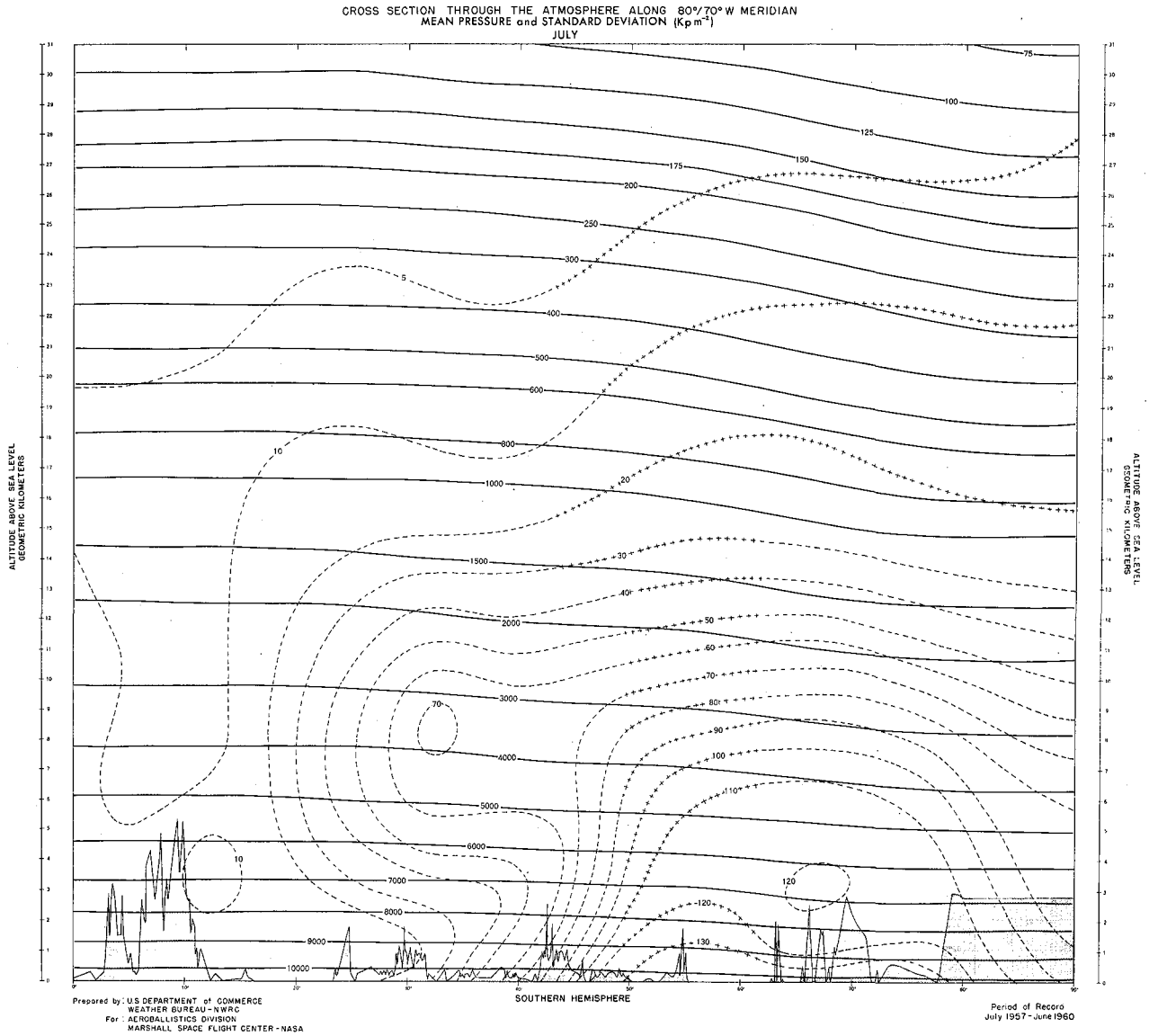

FIGURE 39. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (JULY - SOUTHERN HEMISPHERE)

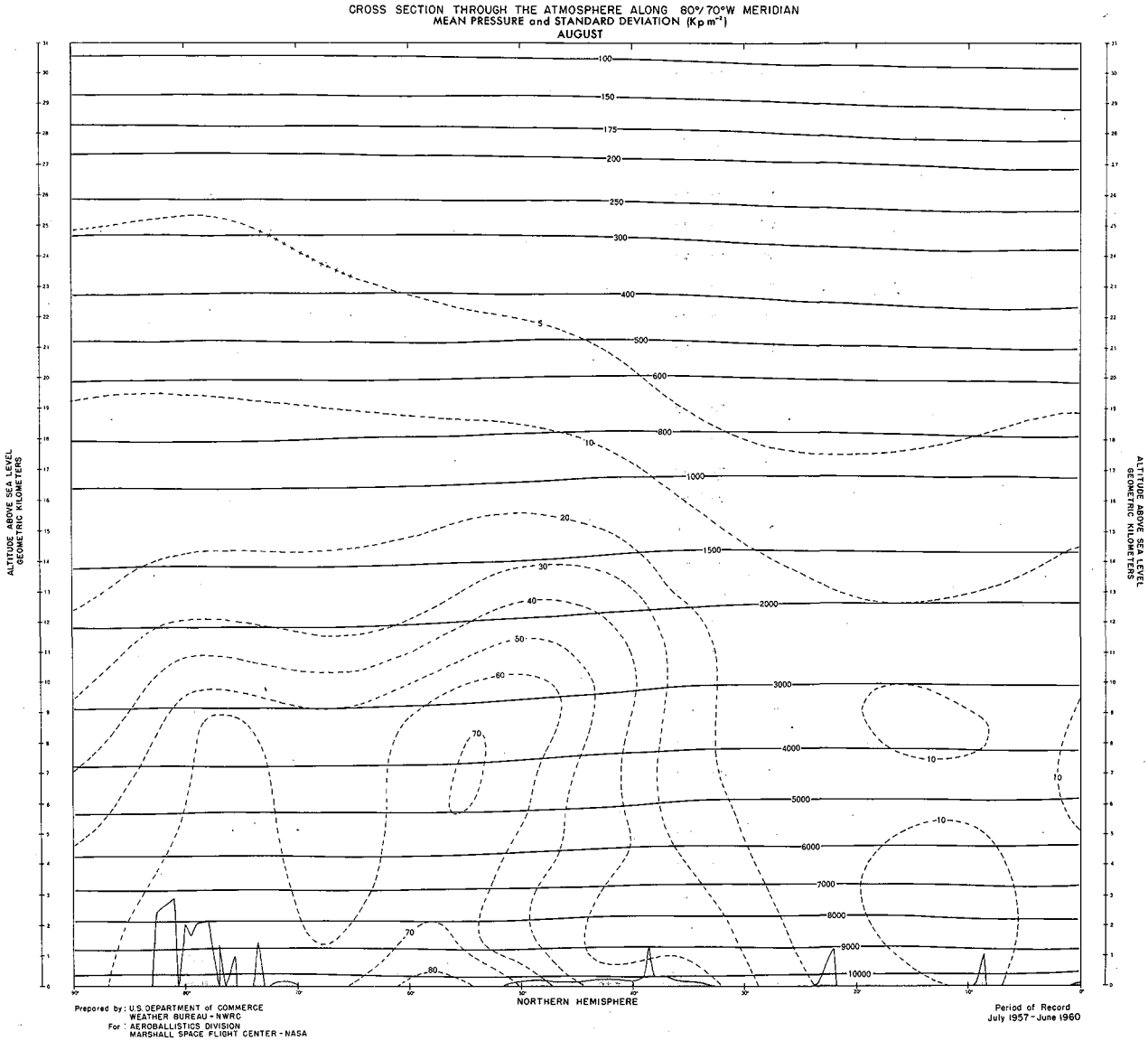

FIGURE 40. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (AUGUST - NORTHERN HEMISPHERE)

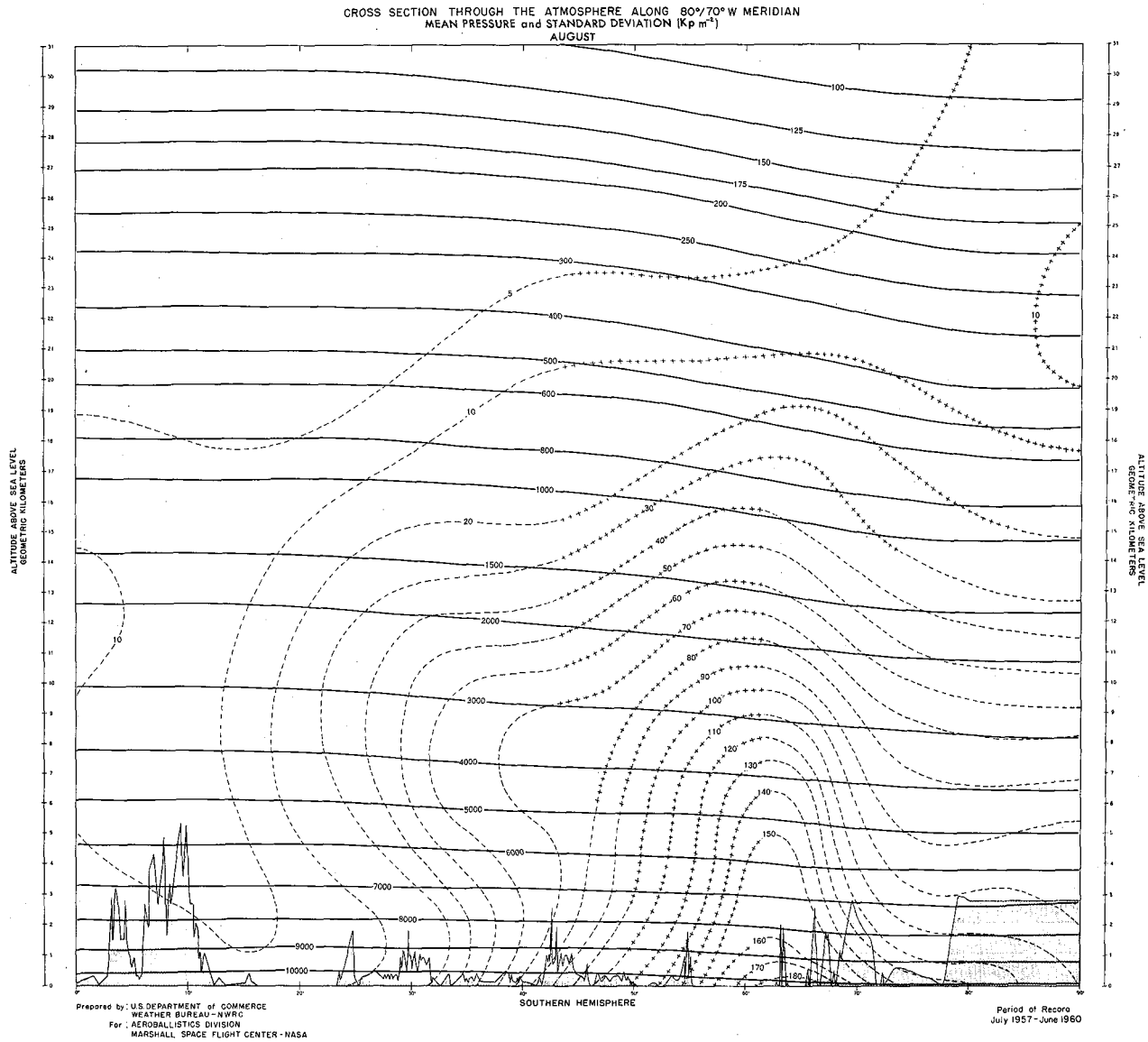

FIGURE 41. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (AUGUST - SOUTHERN HEMISPHERE)

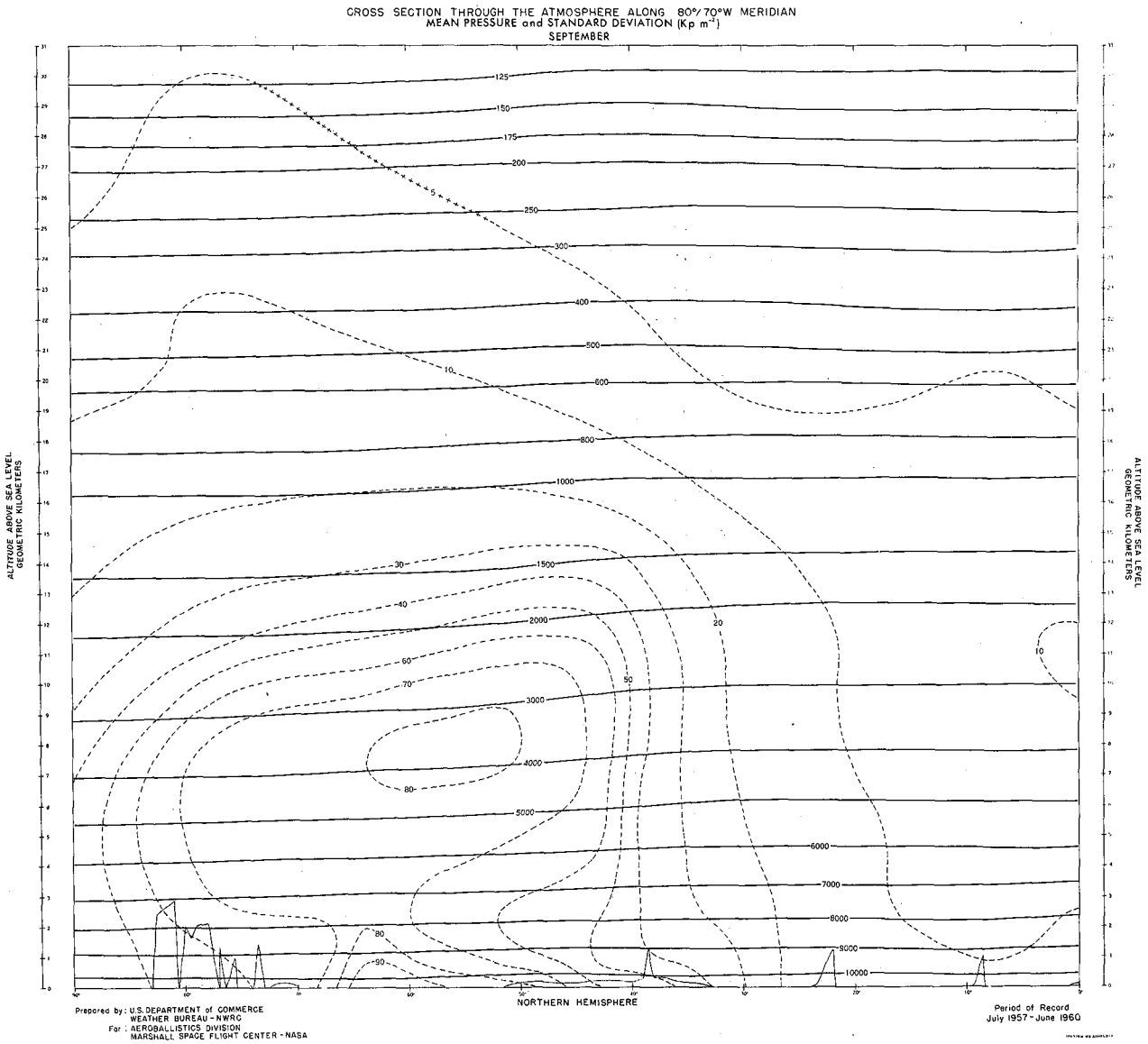

FIGURE 42. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (SEPTEMBER - NORTHERN HEMISPHERE)

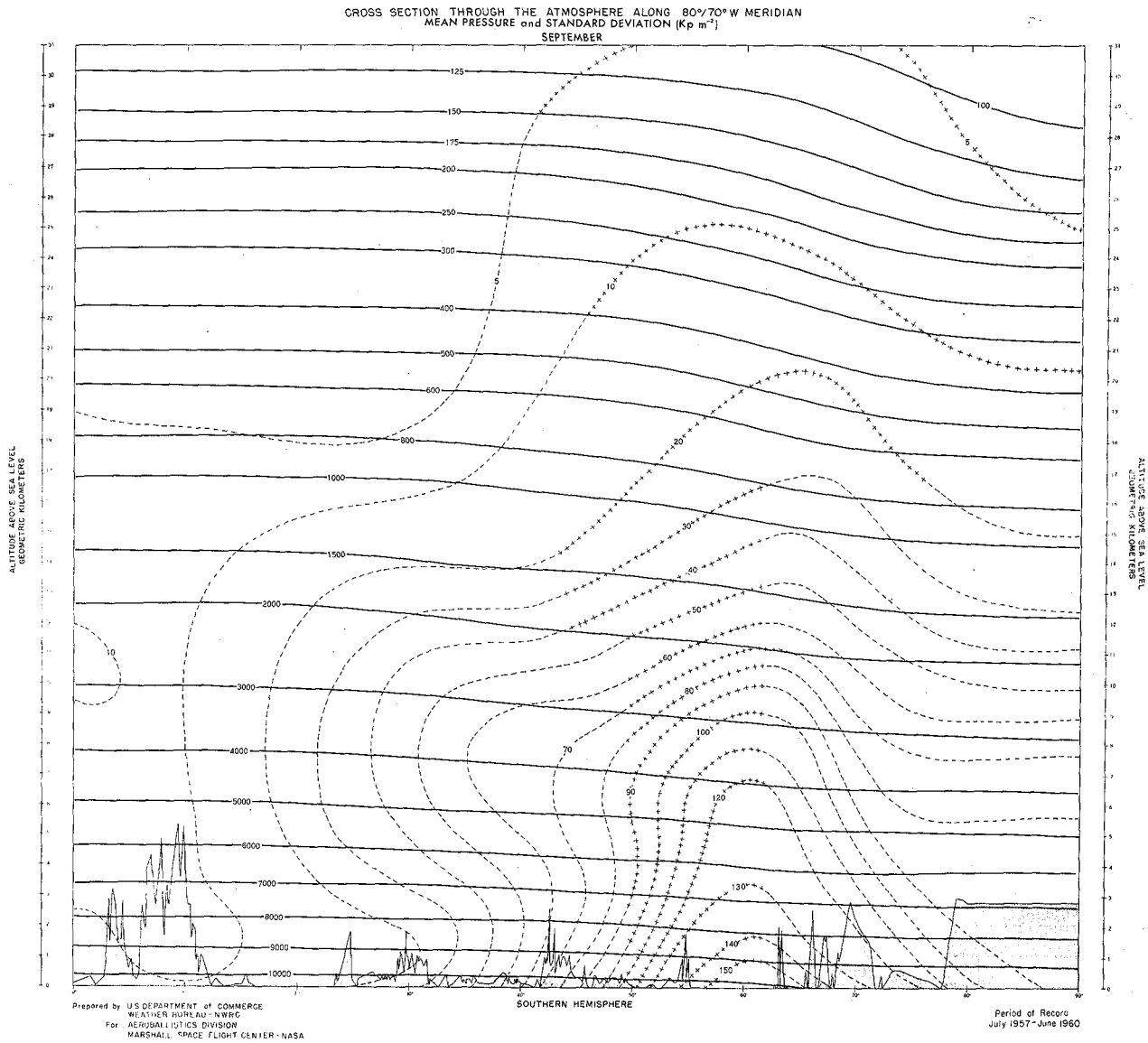

FIGURE 43. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (SEPTEMBER - SOUTHERN HEMISPHERE)

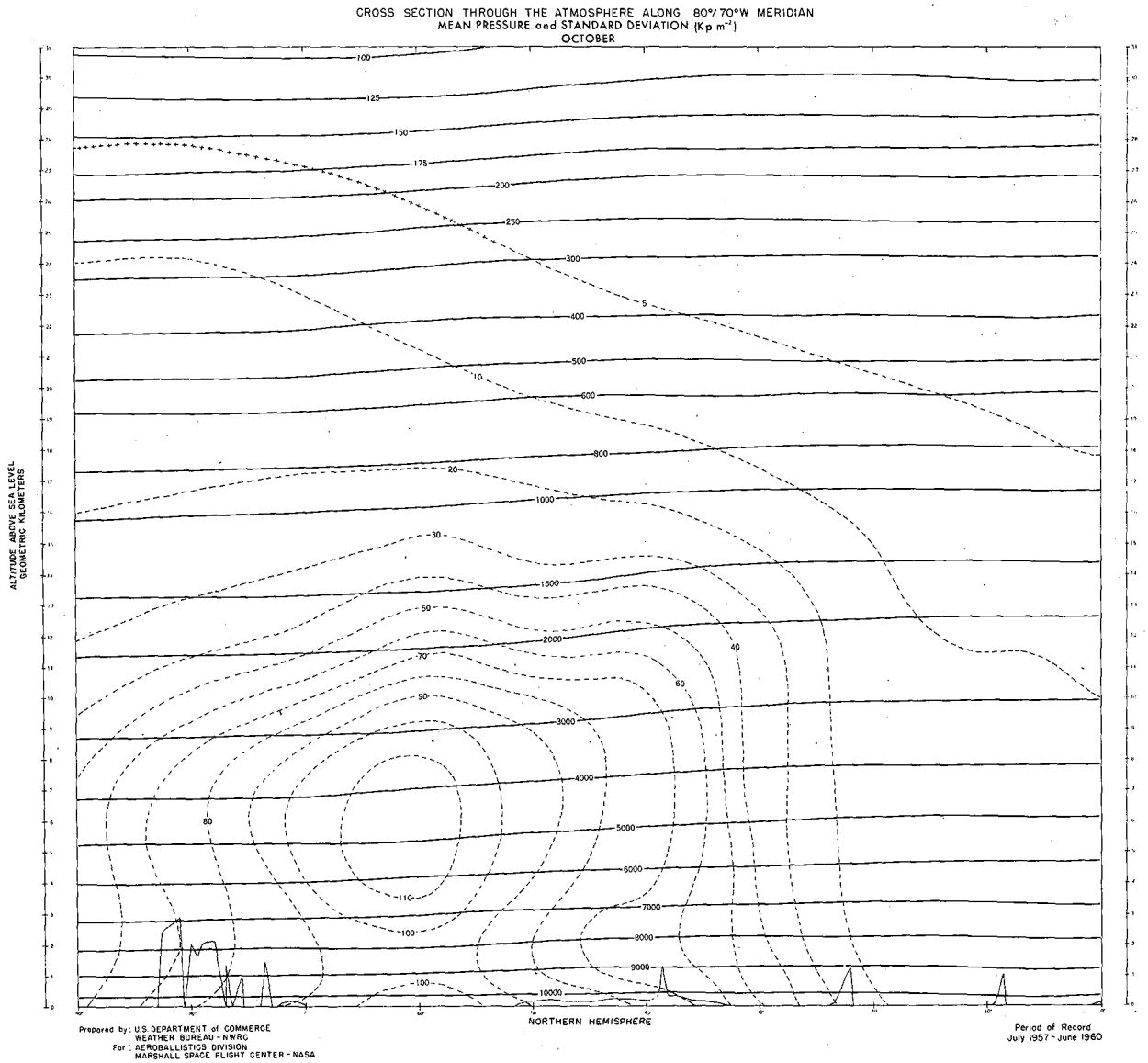

FIGURE 44. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (OCTOBER - NORTHERN HEMISPHERE)

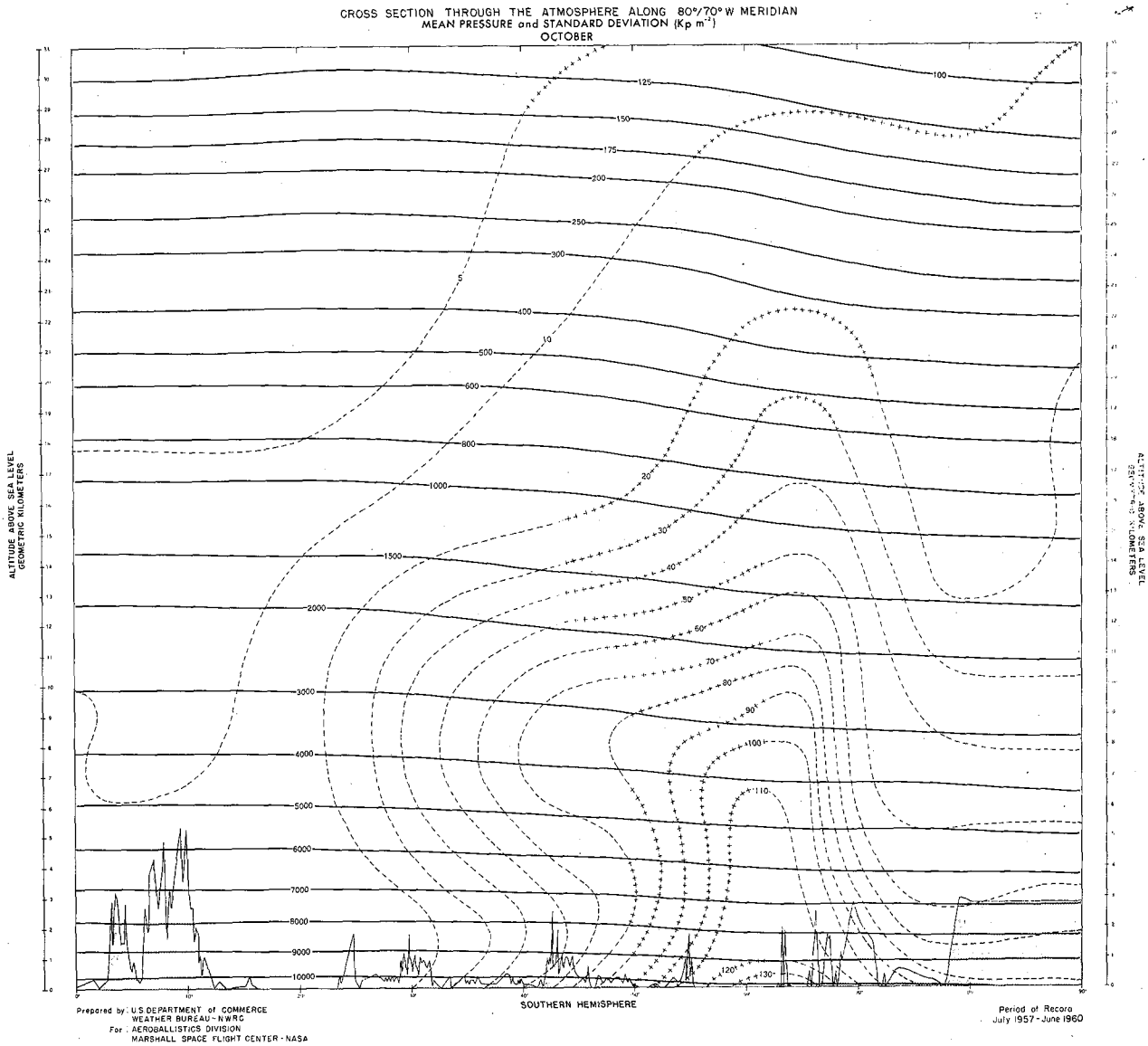

FIGURE 45. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (OCTOBER - SOUTHERN HEMISPHERE)

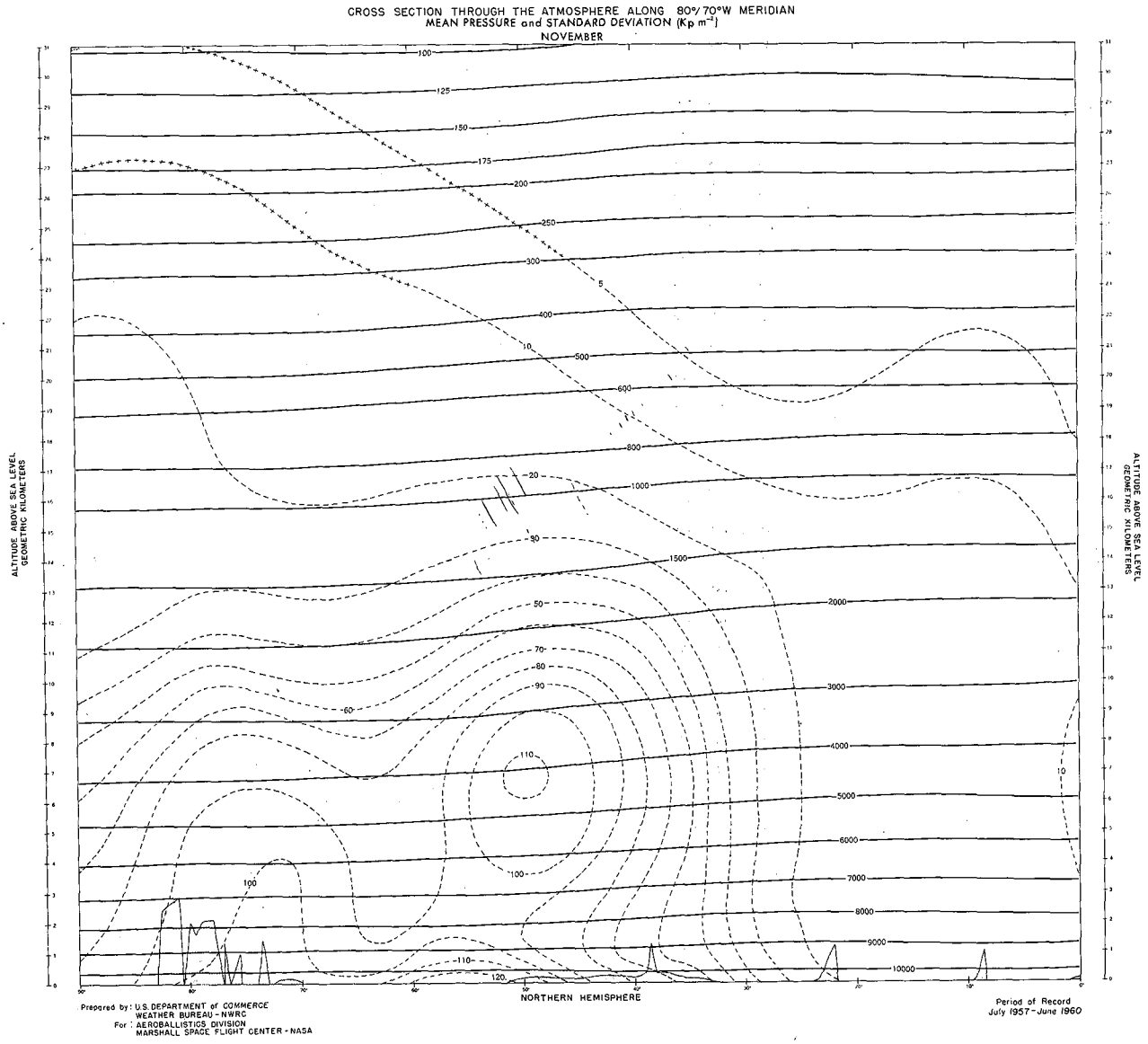

FIGURE 46. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (NOVEMBER - NORTHERN HEMISPHERE)

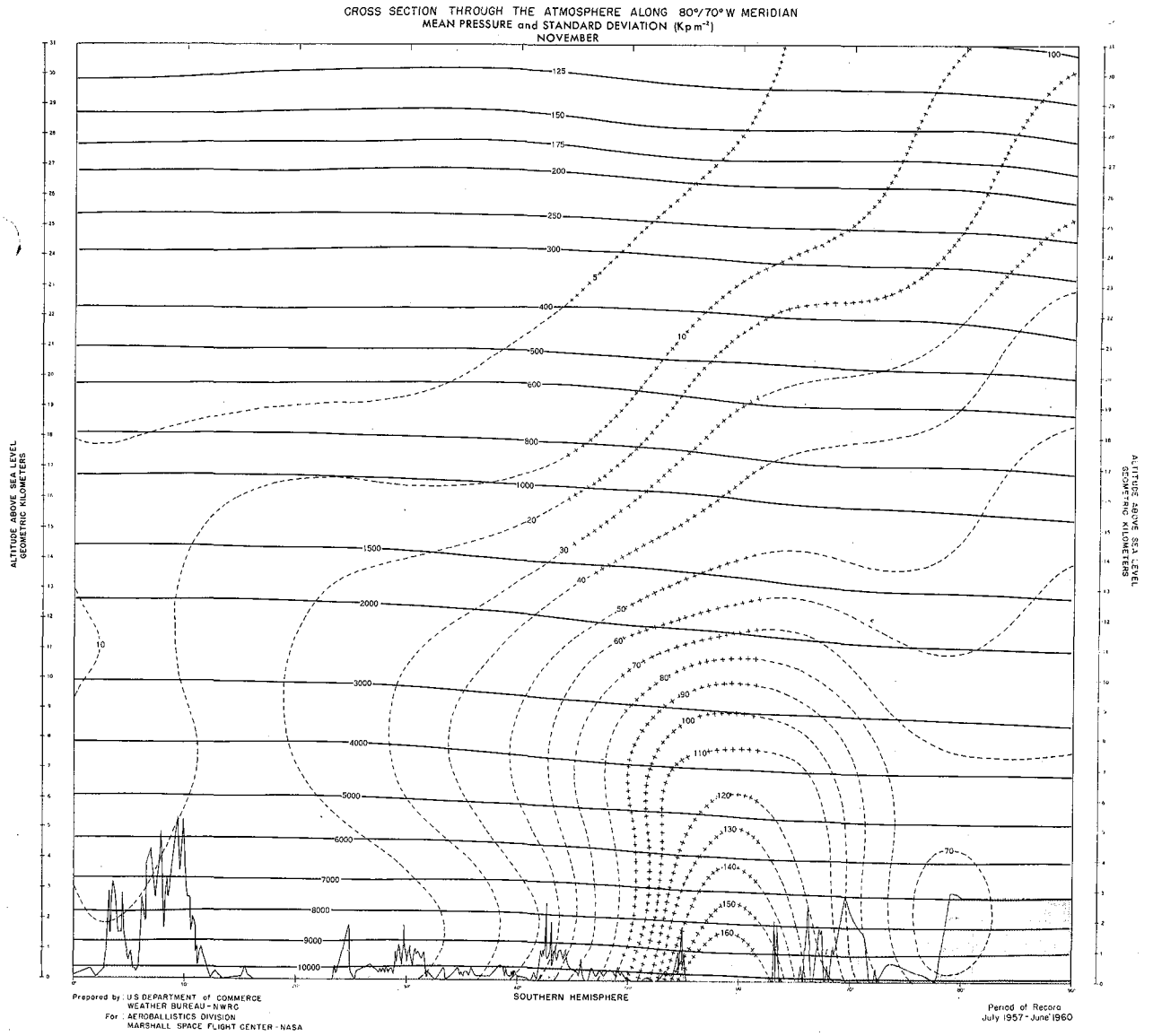

FIGURE 47. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (NOVEMBER - SOUTHERN HEMISPHERE)

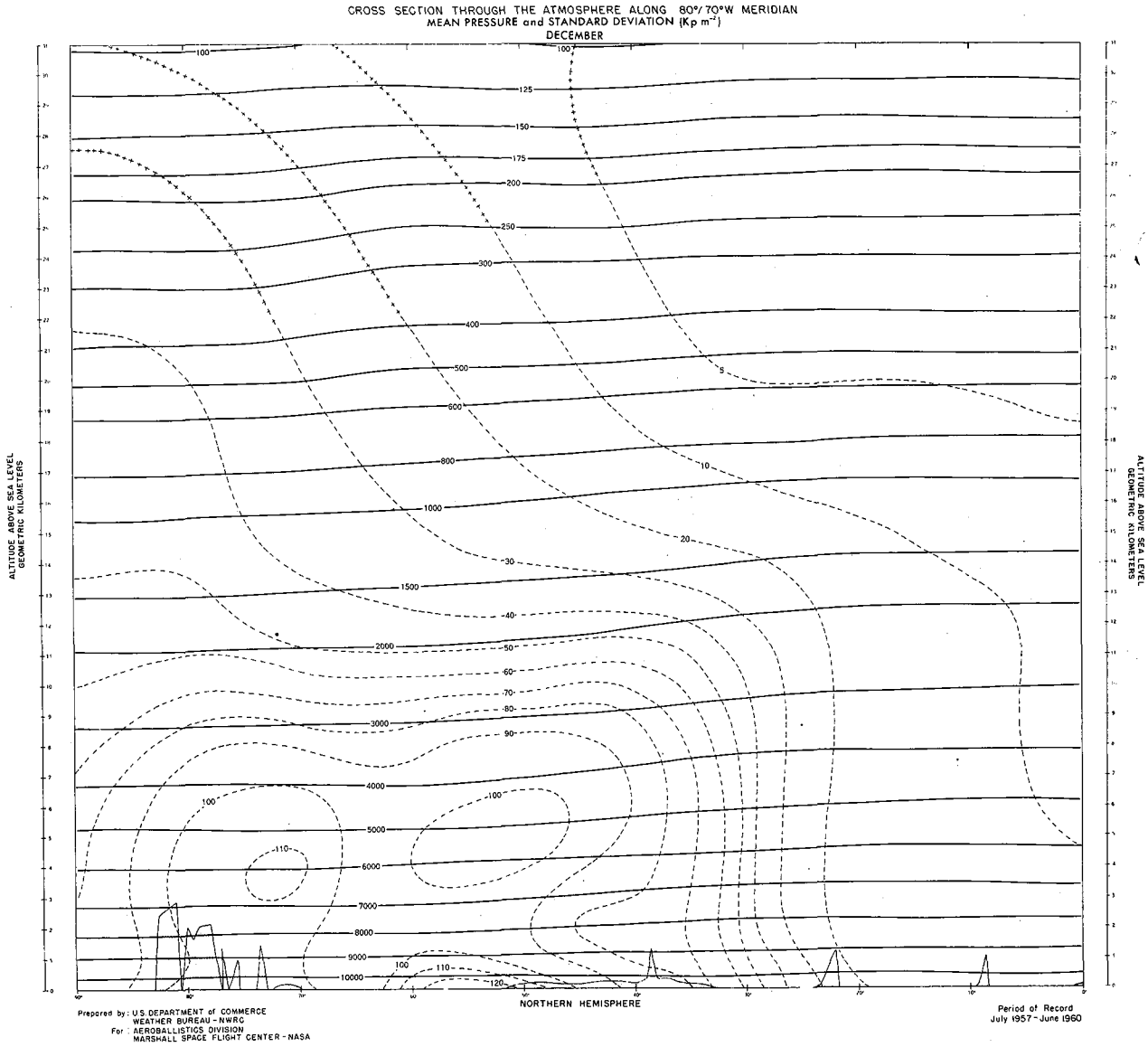

FIGURE 48. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (DECEMBER - NORTHERN HEMISPHERE)

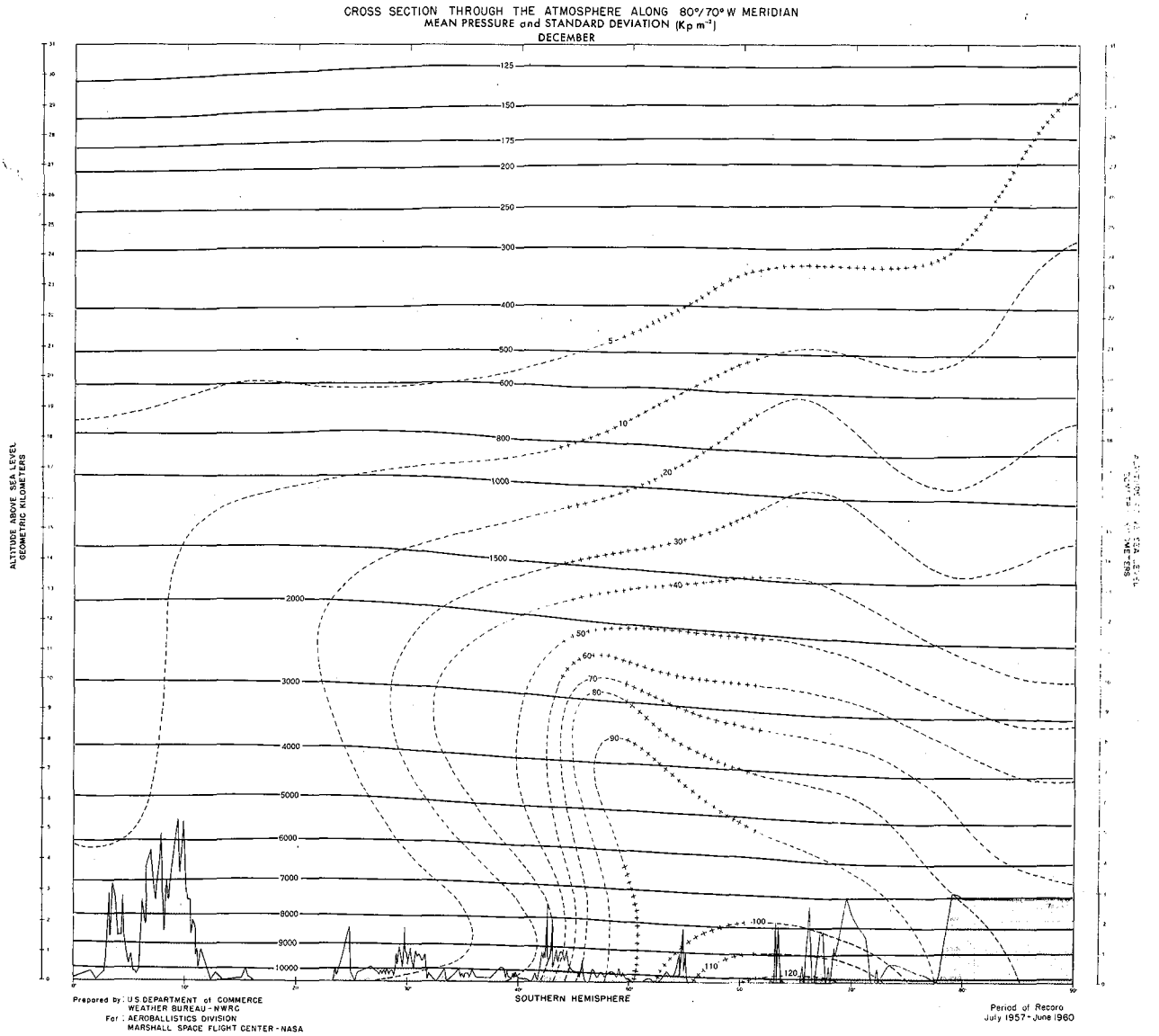

FIGURE 49. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (DECEMBER - SOUTHERN HEMISPHERE)

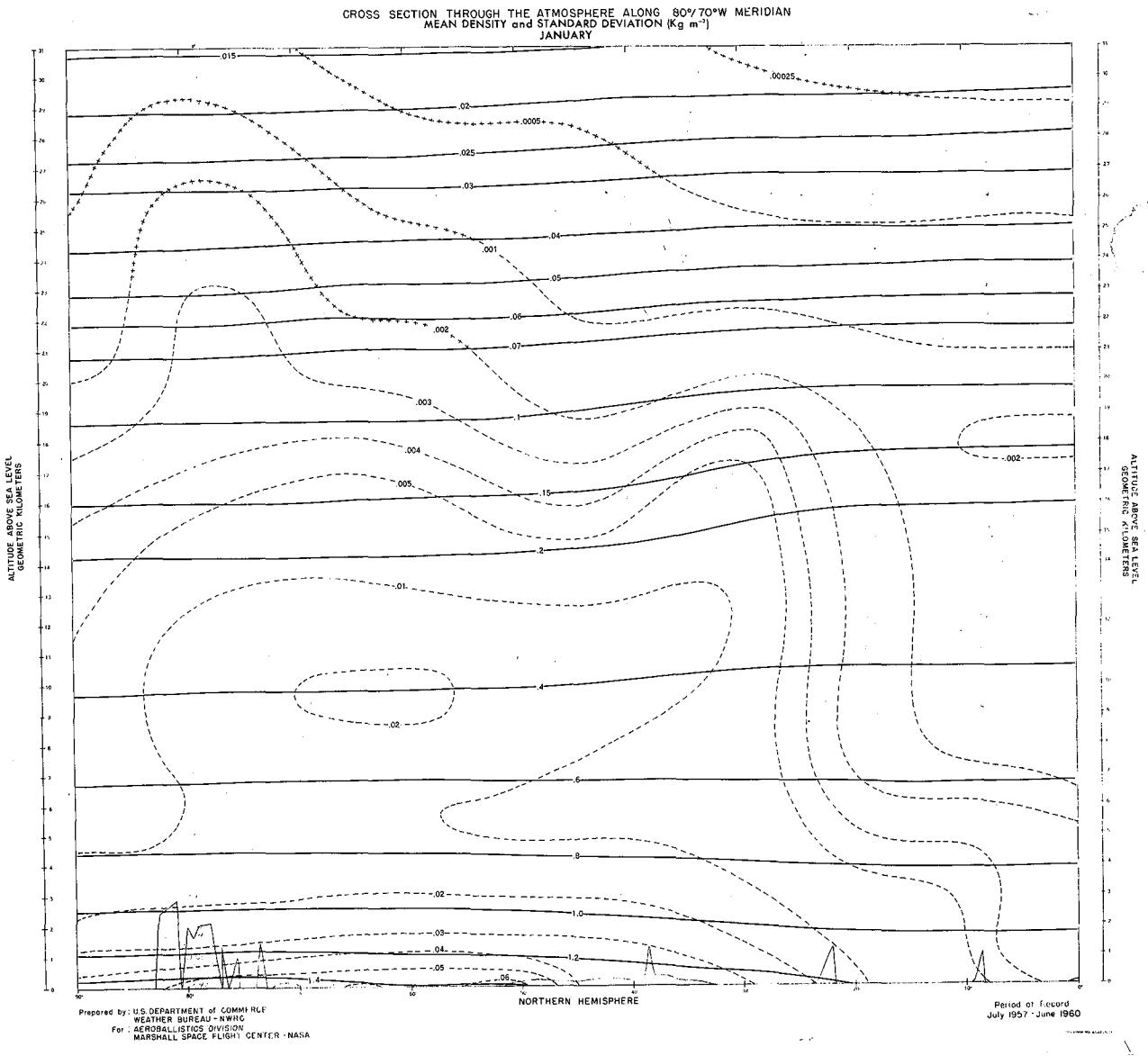

FIGURE 50. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JANUARY - NORTHERN HEMISPHERE)

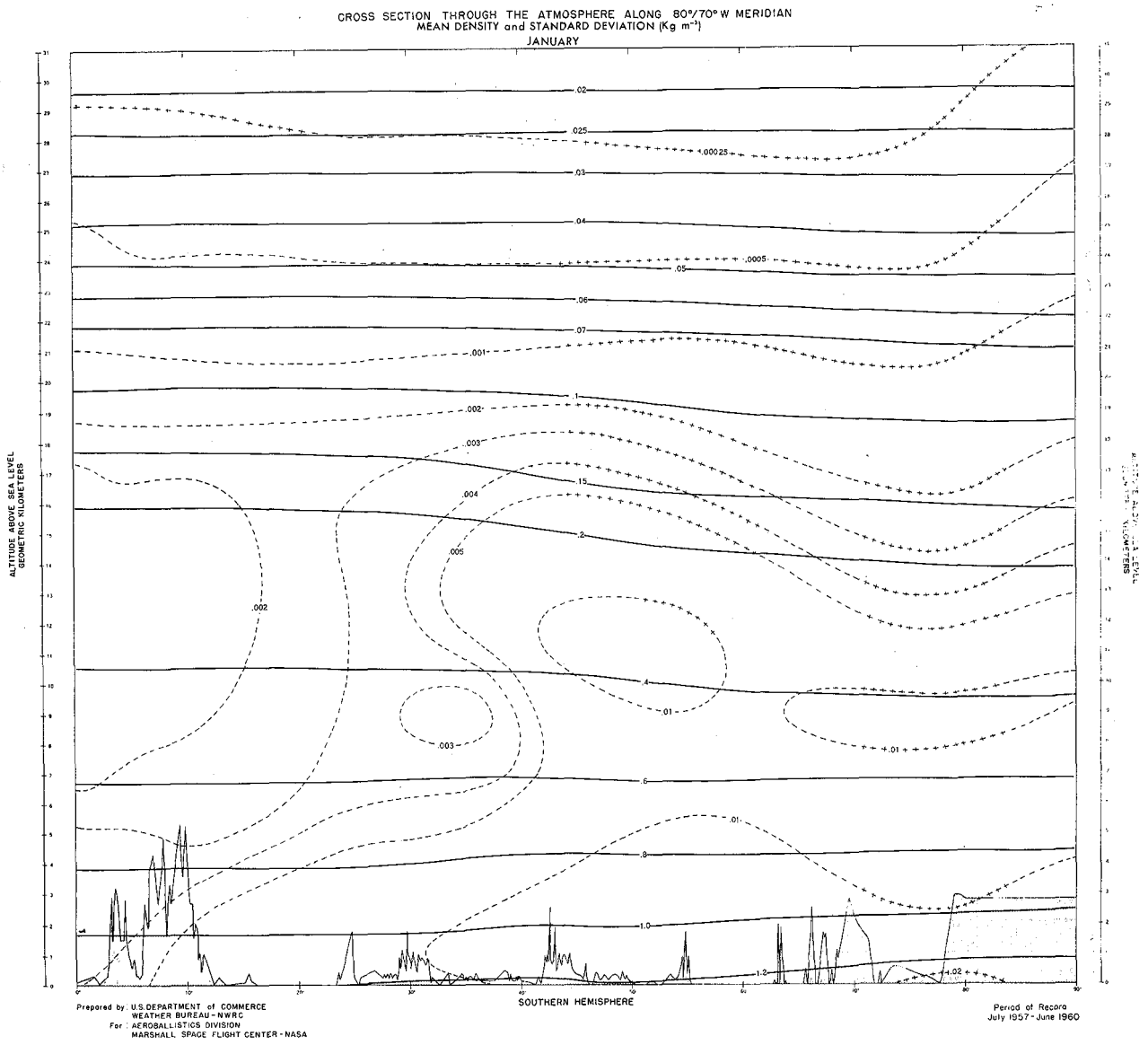

FIGURE 51. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JANUARY - SOUTHERN HEMISPHERE)

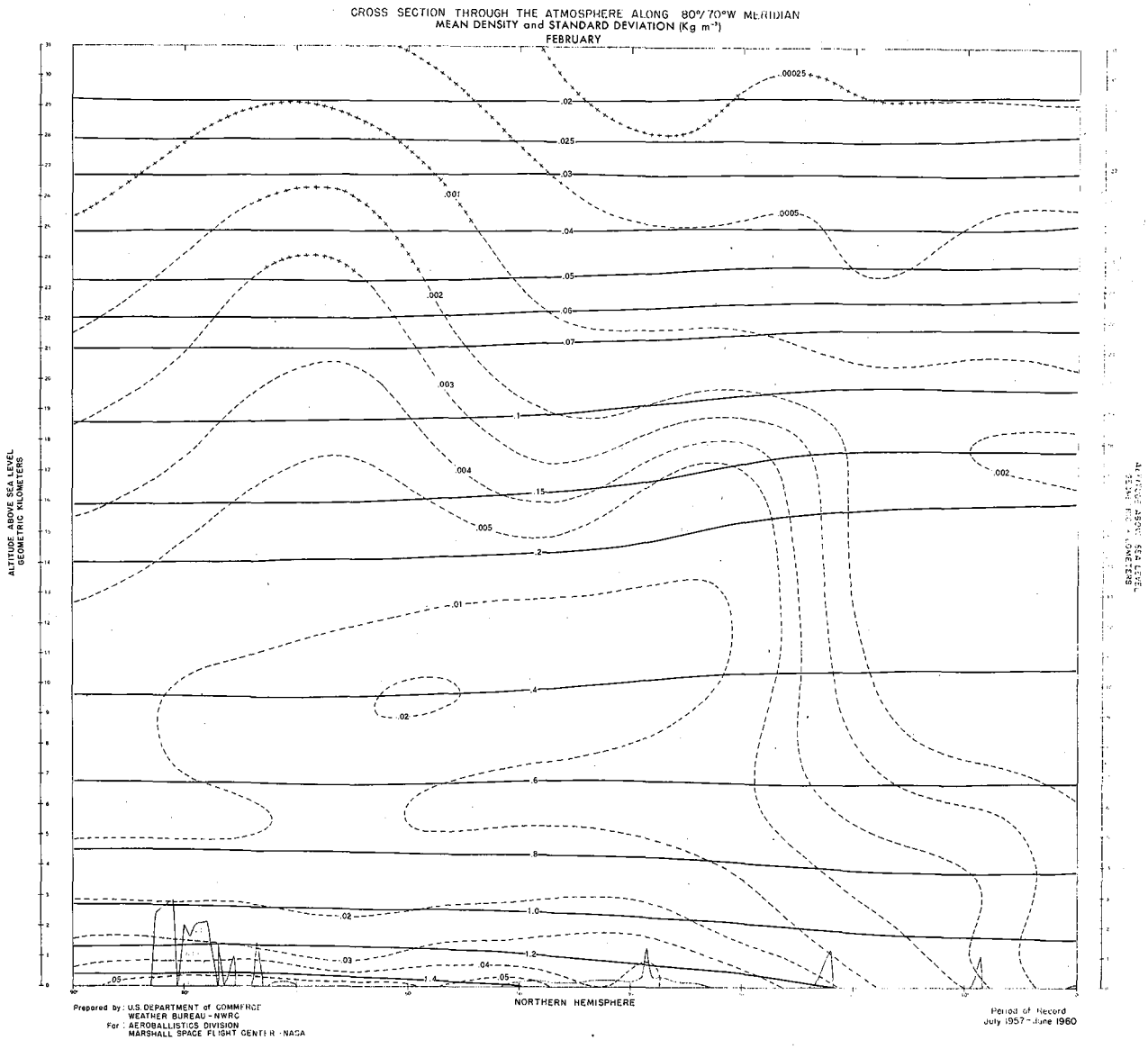

FIGURE 52. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (FEBRUARY - NORTHERN HEMISPHERE)

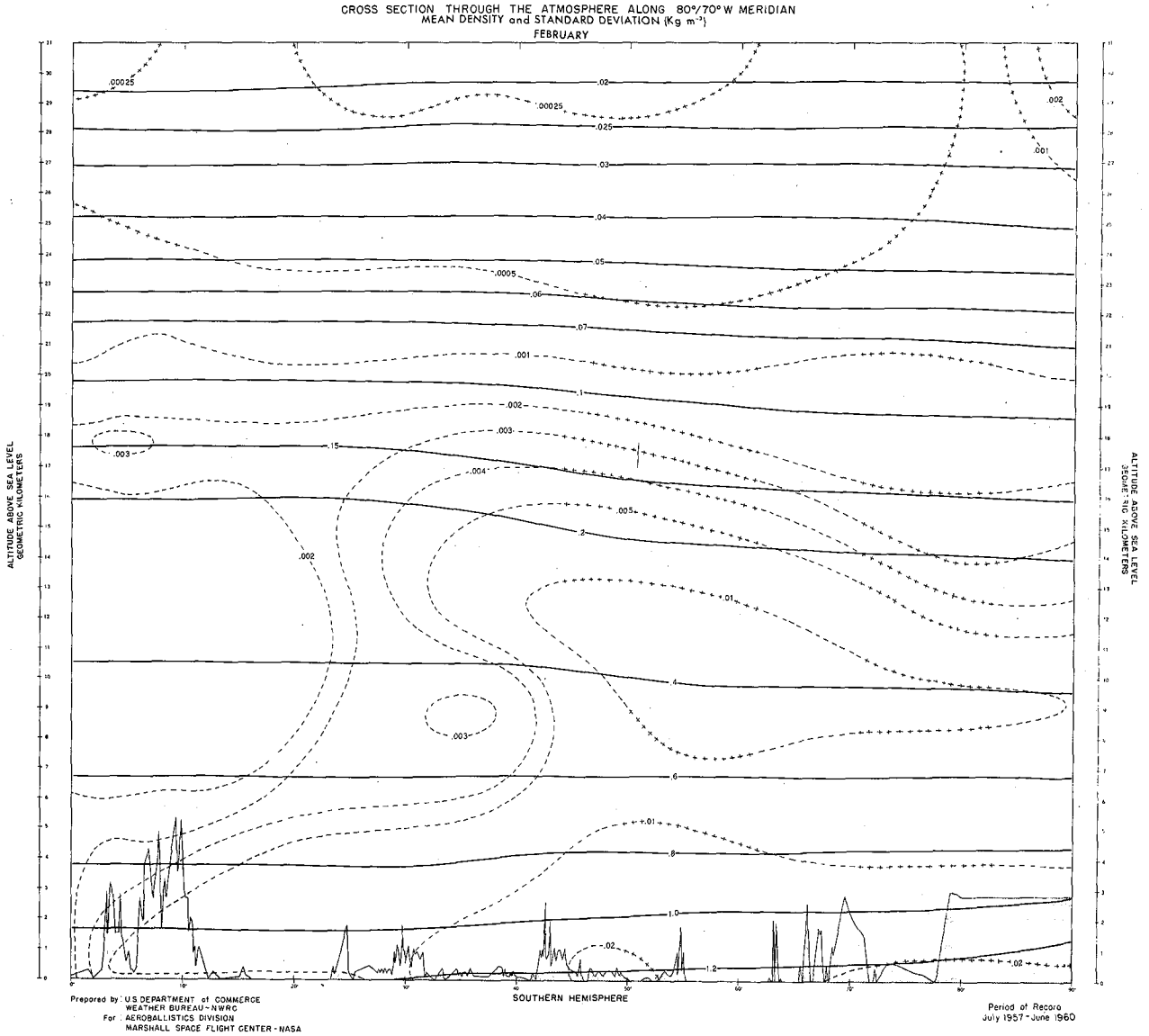

FIGURE 53. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (FEBRUARY - SOUTHERN HEMISPHERE)

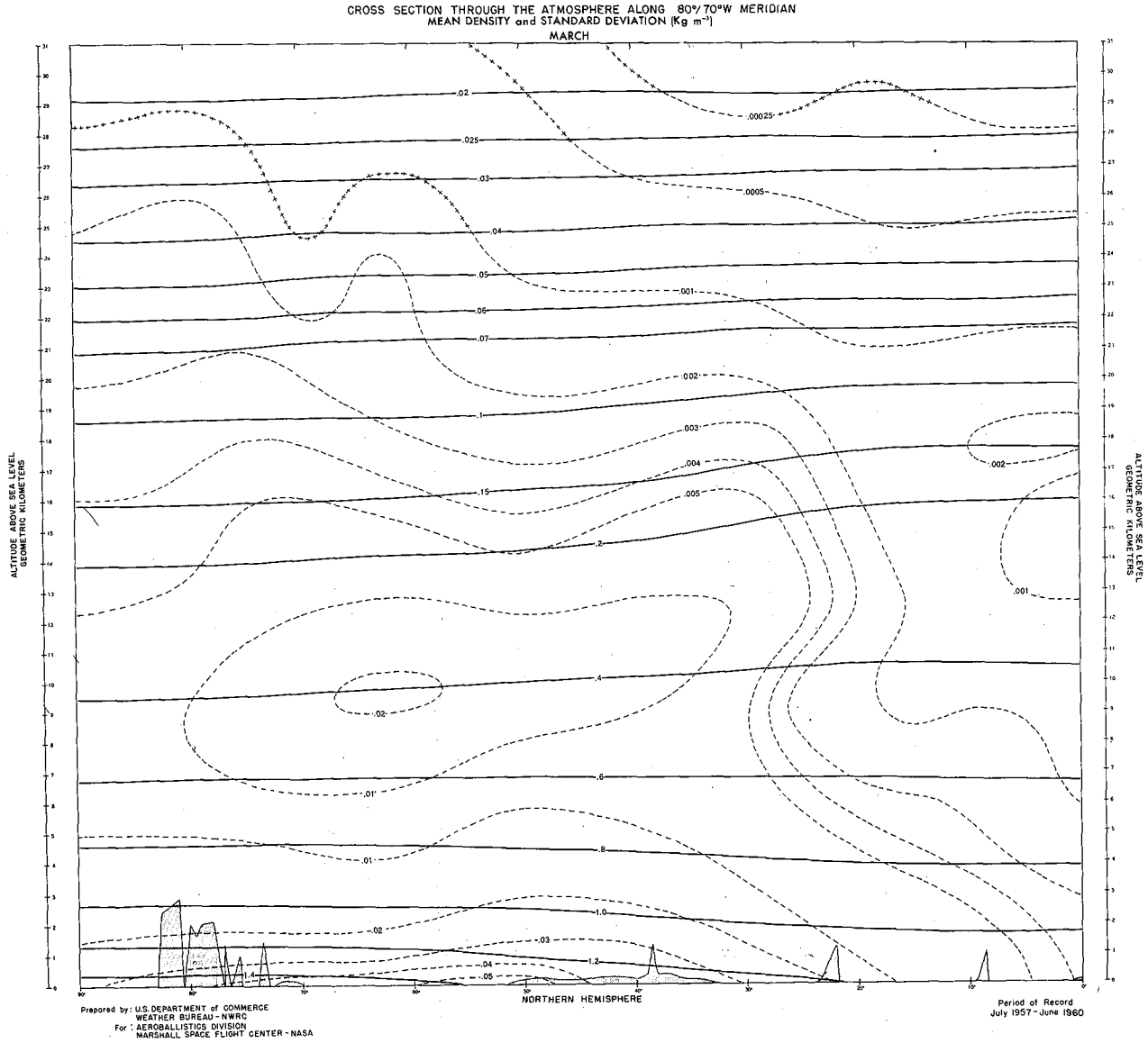

FIGURE 54. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (MARCH - NORTHERN HEMISPHERE)

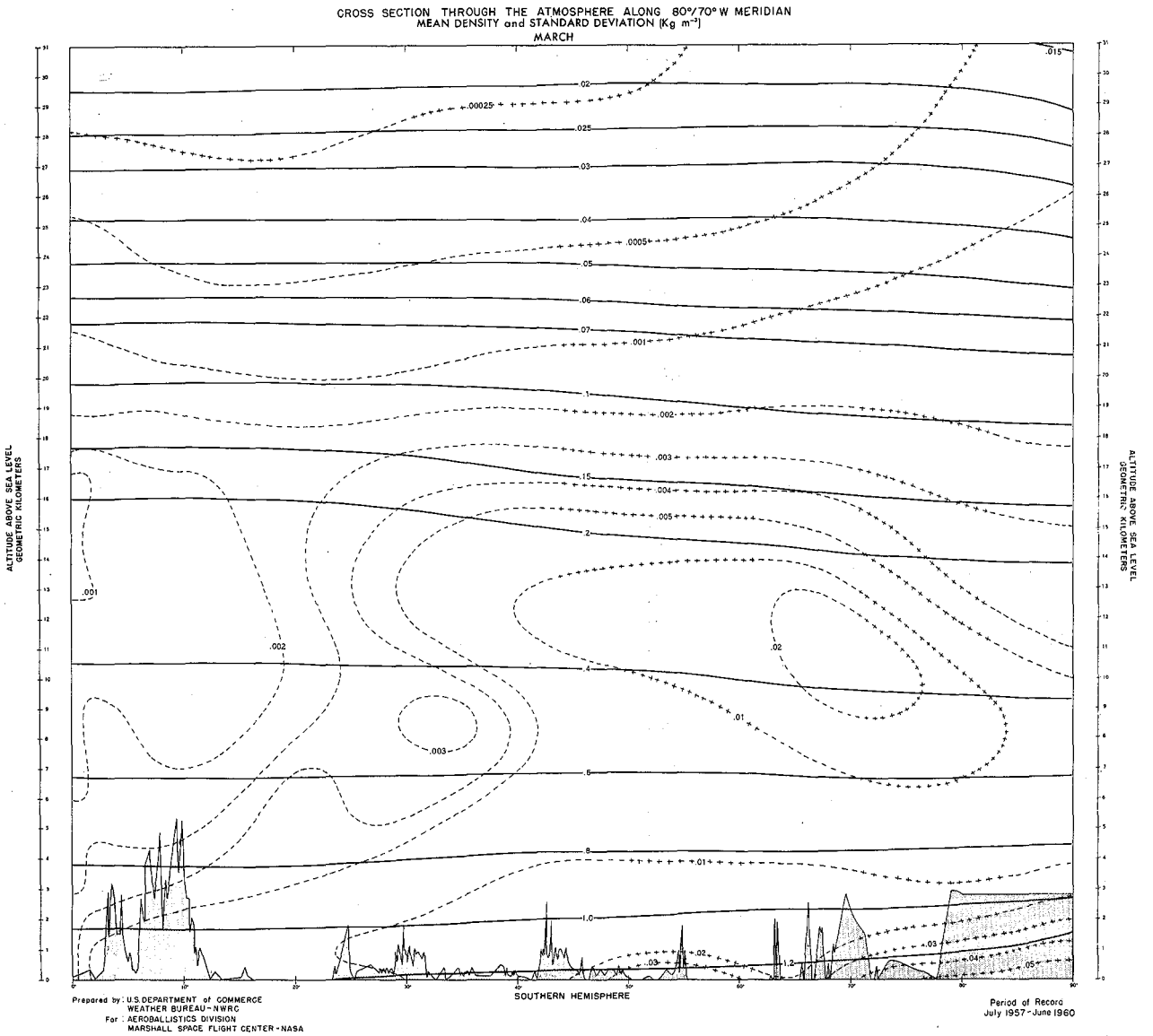

FIGURE 55. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (MARCH - SOUTHERN HEMISPHERE)

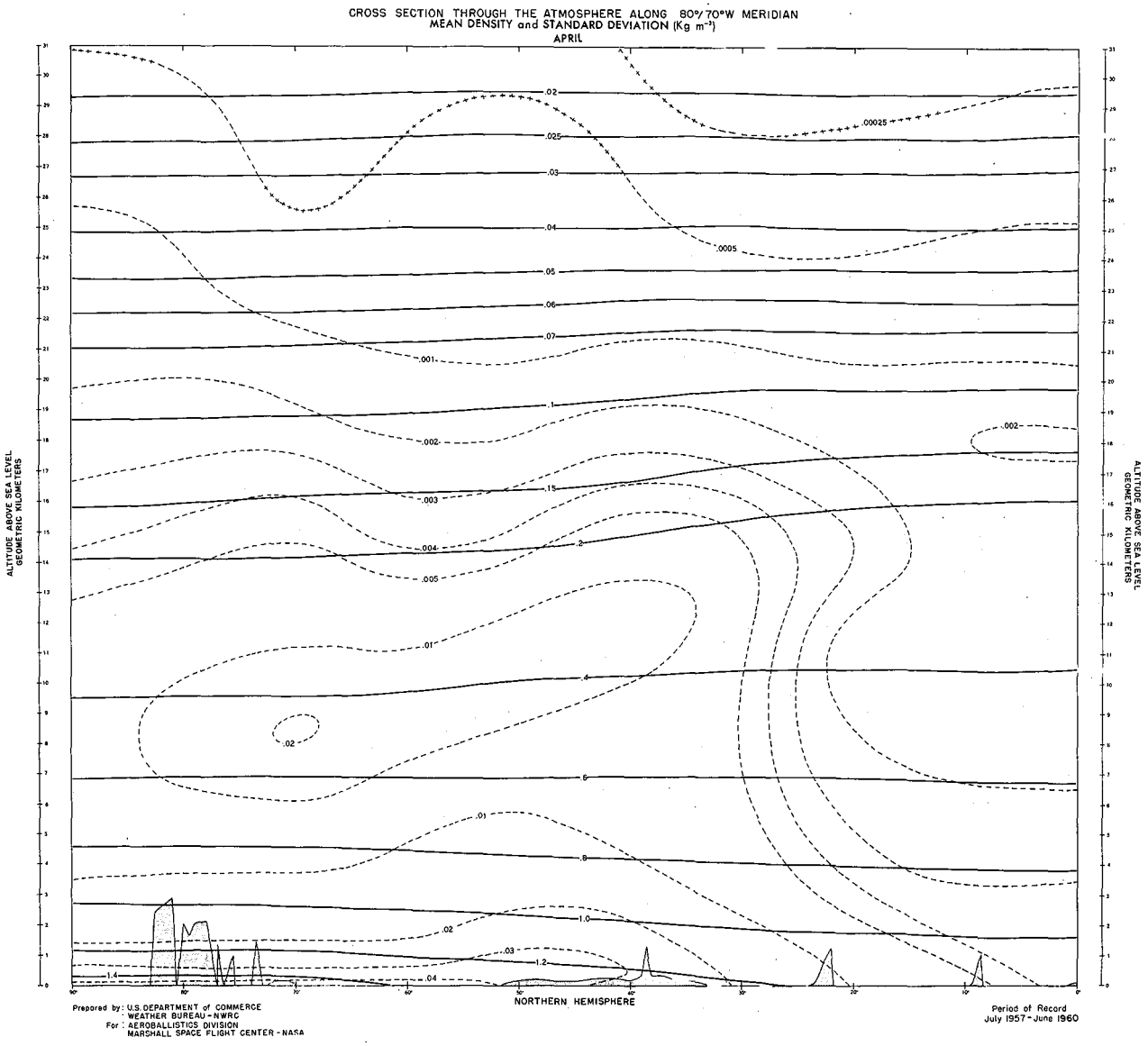

FIGURE 56. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (APRIL - NORTHERN HEMISPHERE)

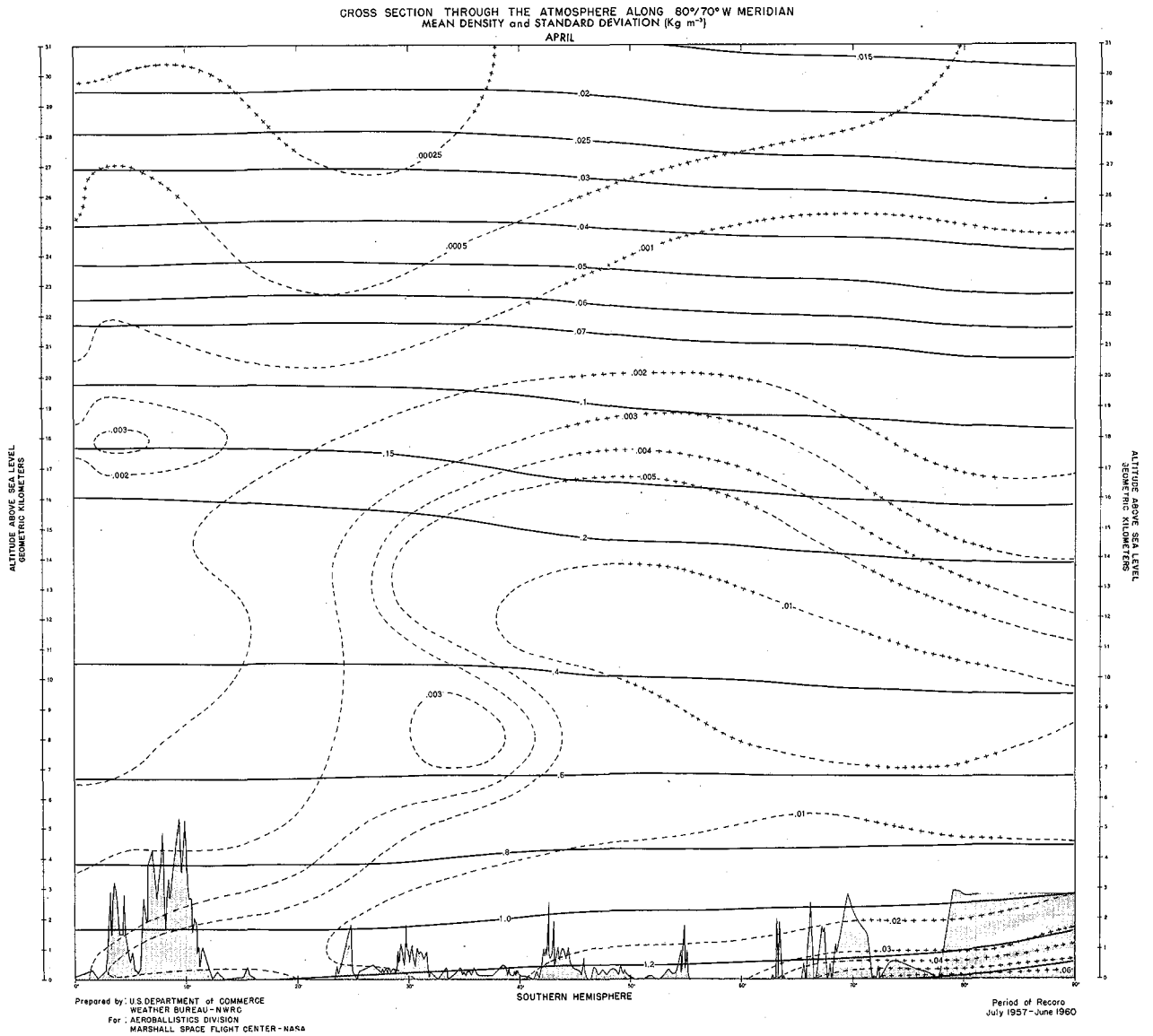

FIGURE 57. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (APRIL - SOUTHERN HEMSIPHERE)

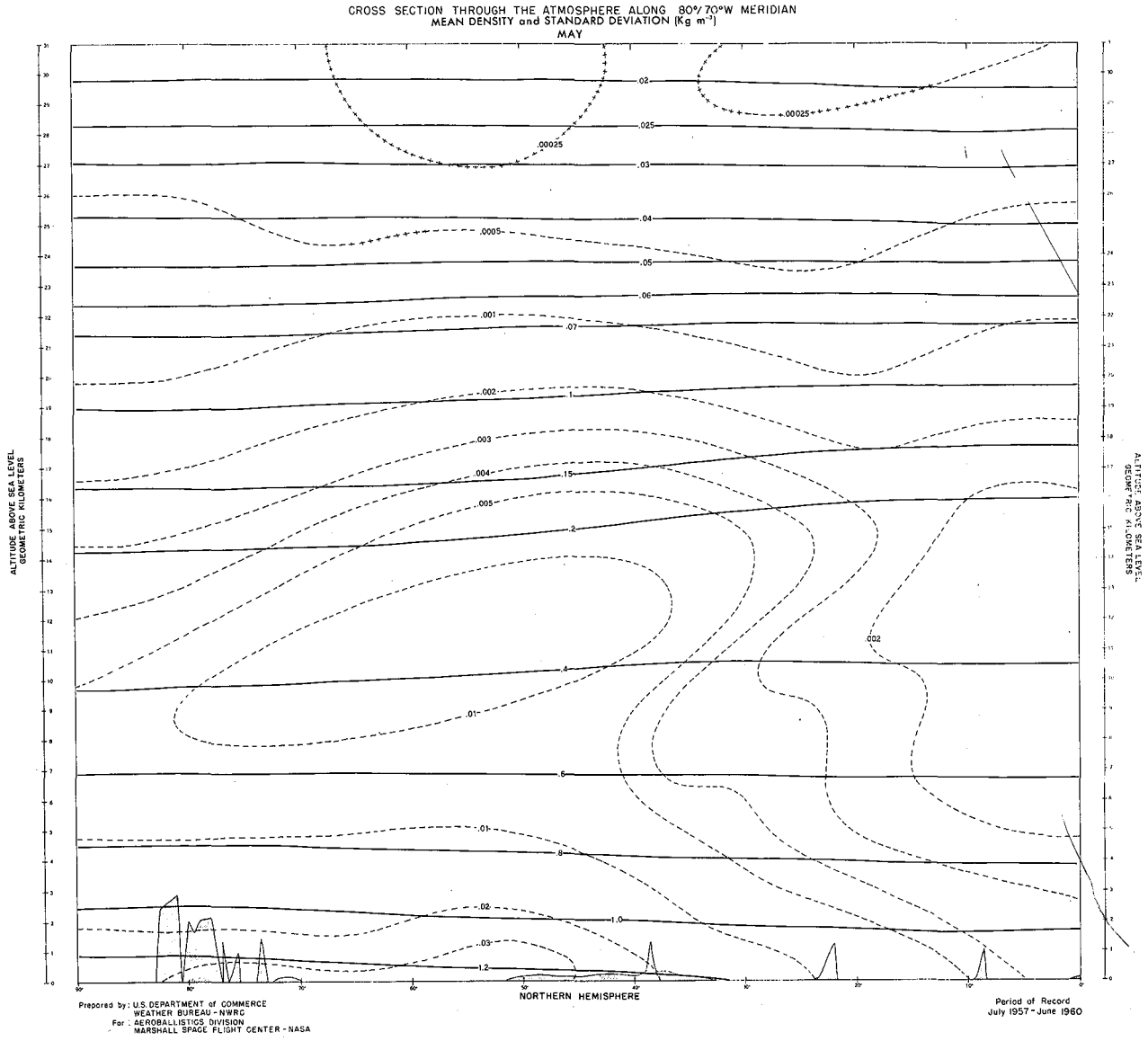

FIGURE 58. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (MAY - NORTHERN HEMISPHERE)

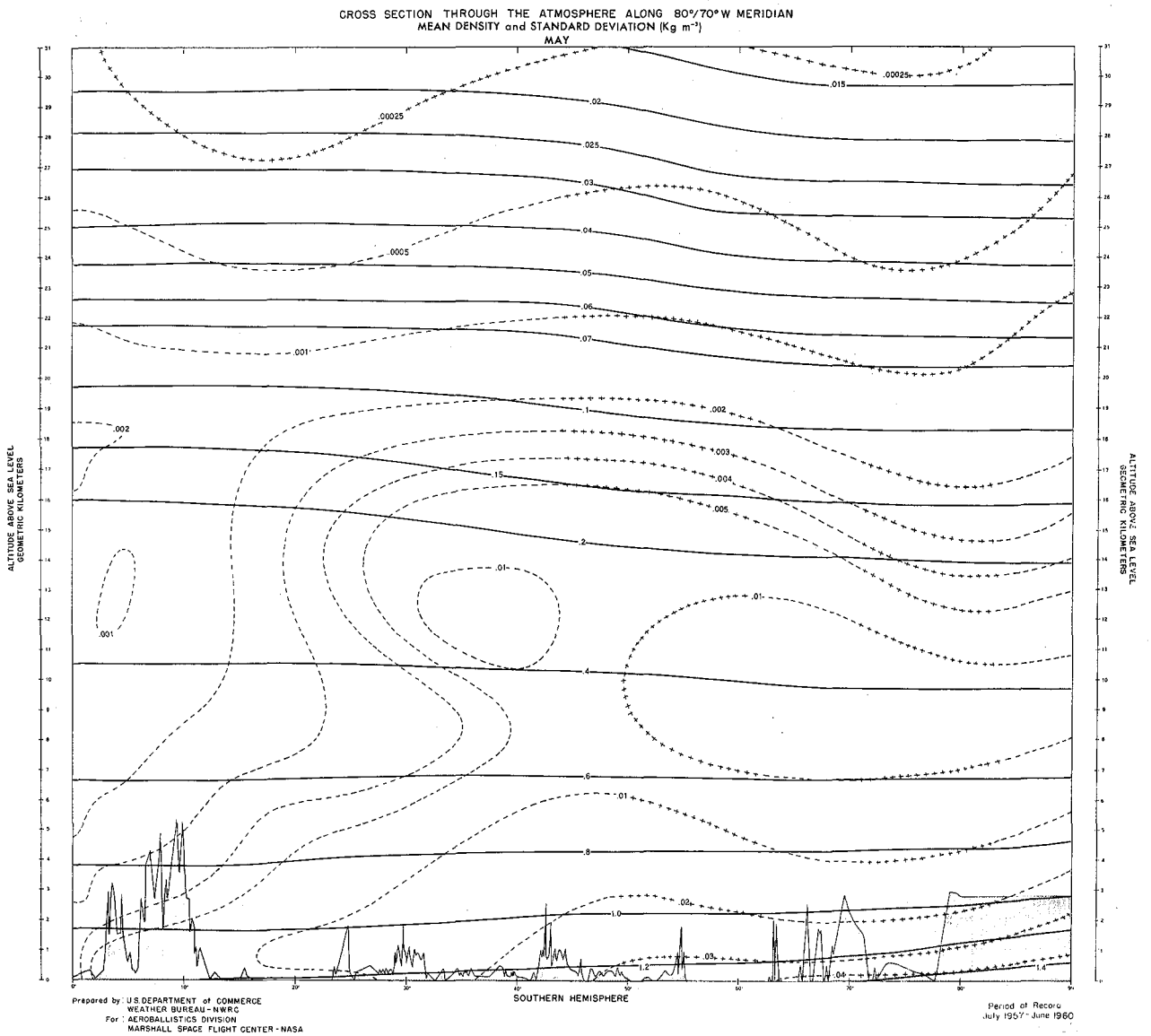

FIGURE 59. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (MAY - SOUTHERN HEMISPHERE)

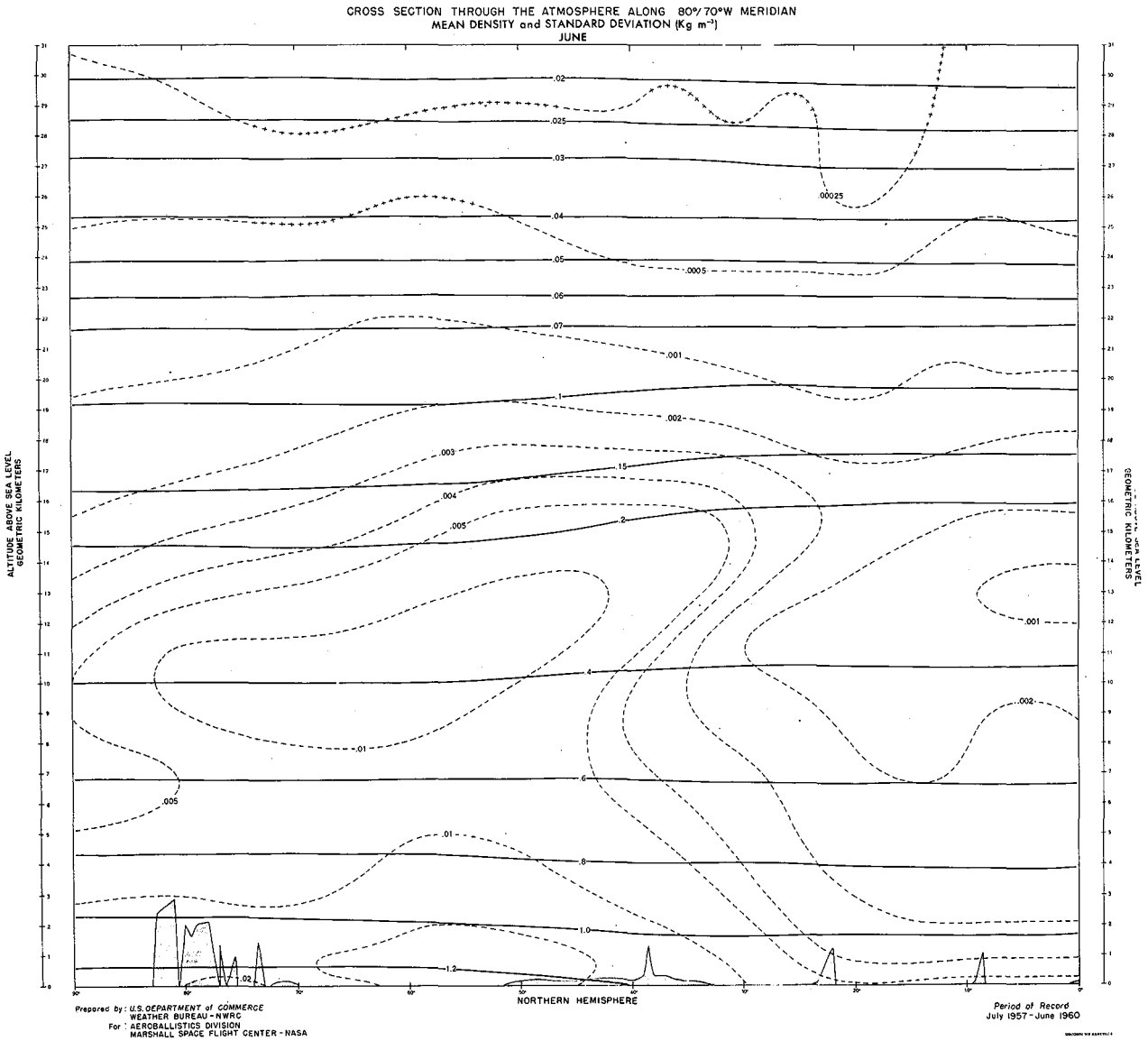

FIGURE 60. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JUNE - NORTHERN HEMISPHERE)

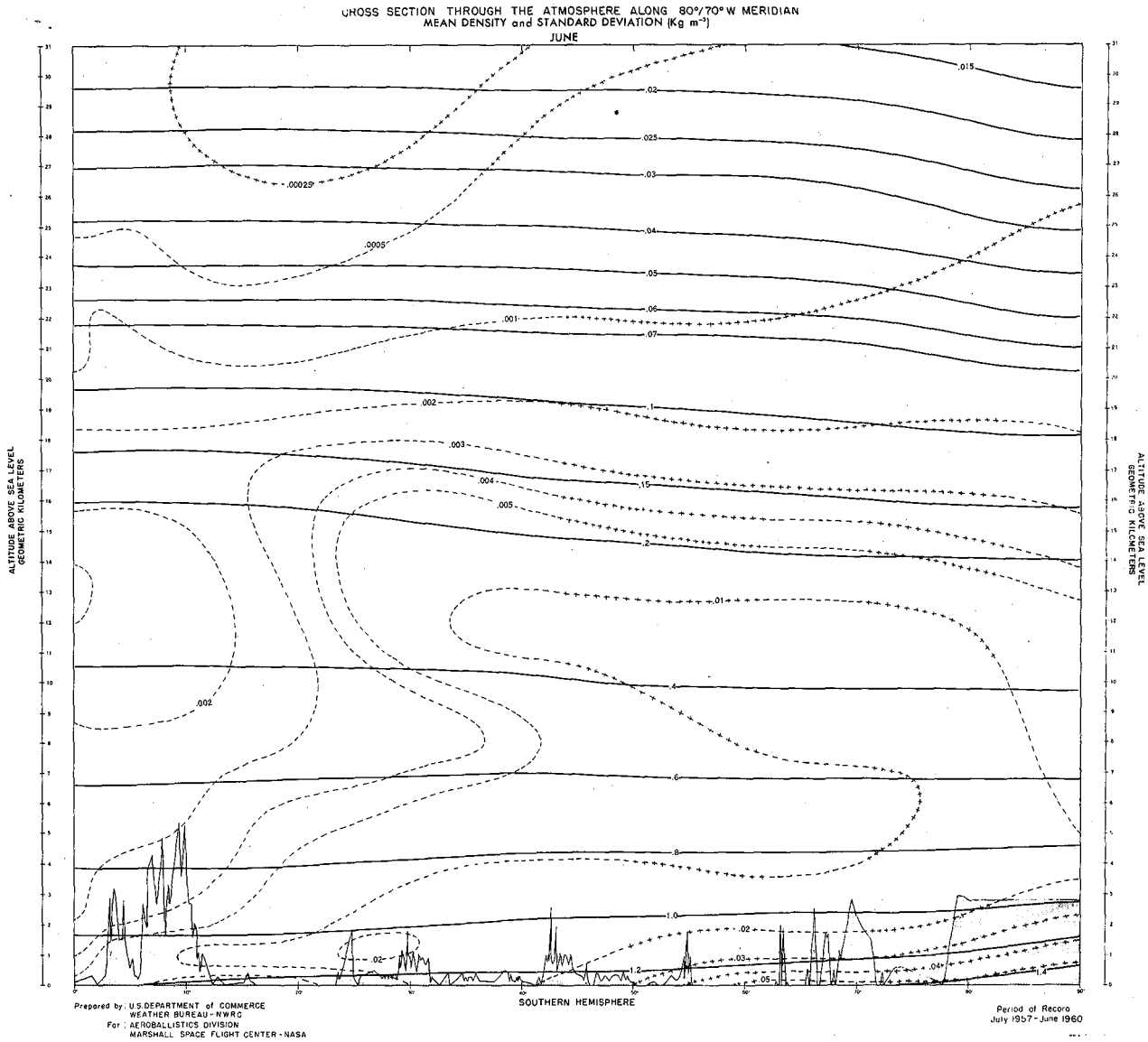

FIGURE 61. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JUNE - SOUTHERN HEMISPHERE)

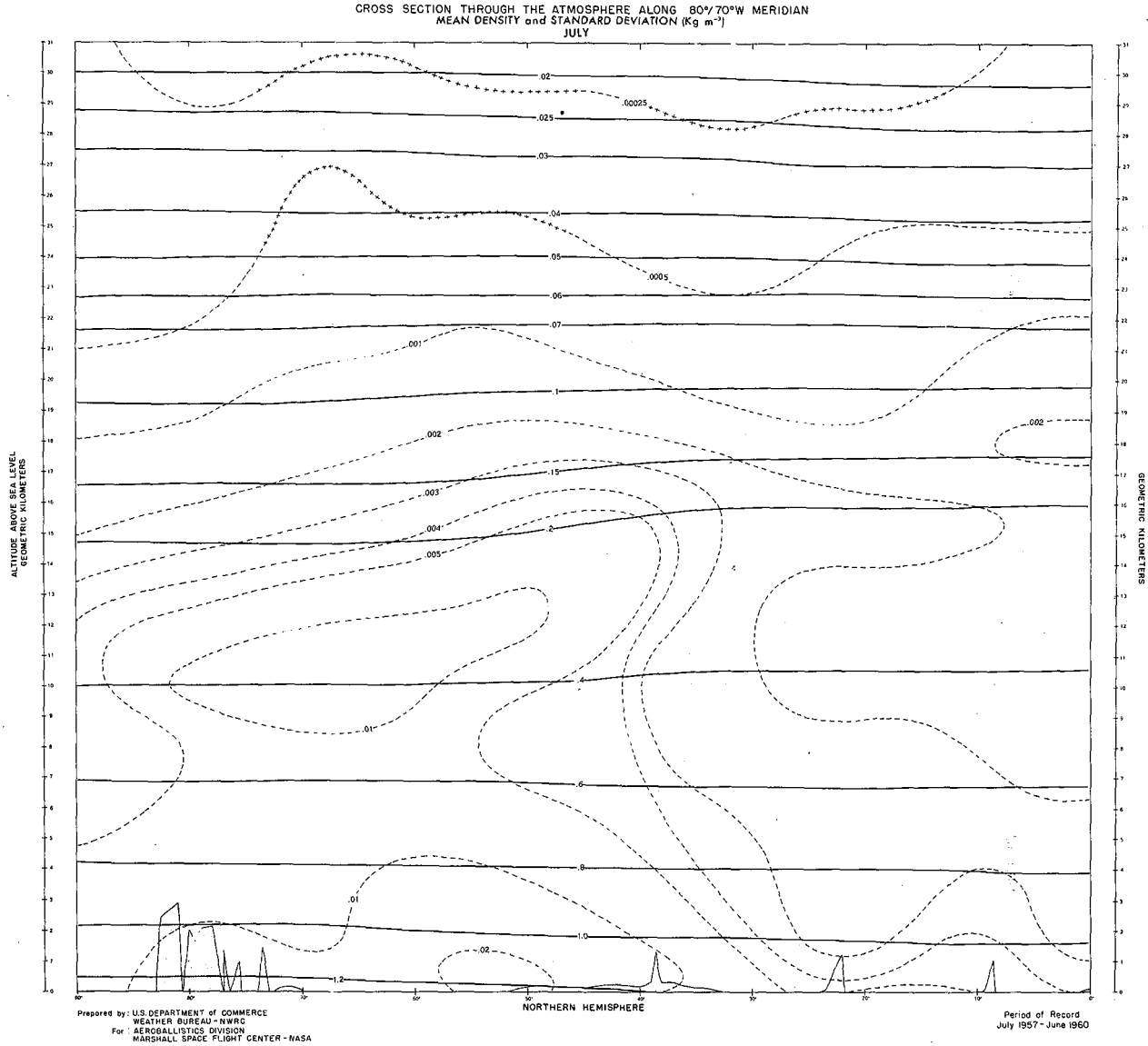

FIGURE 62. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JULY - NORTHERN HEMISPHERE)

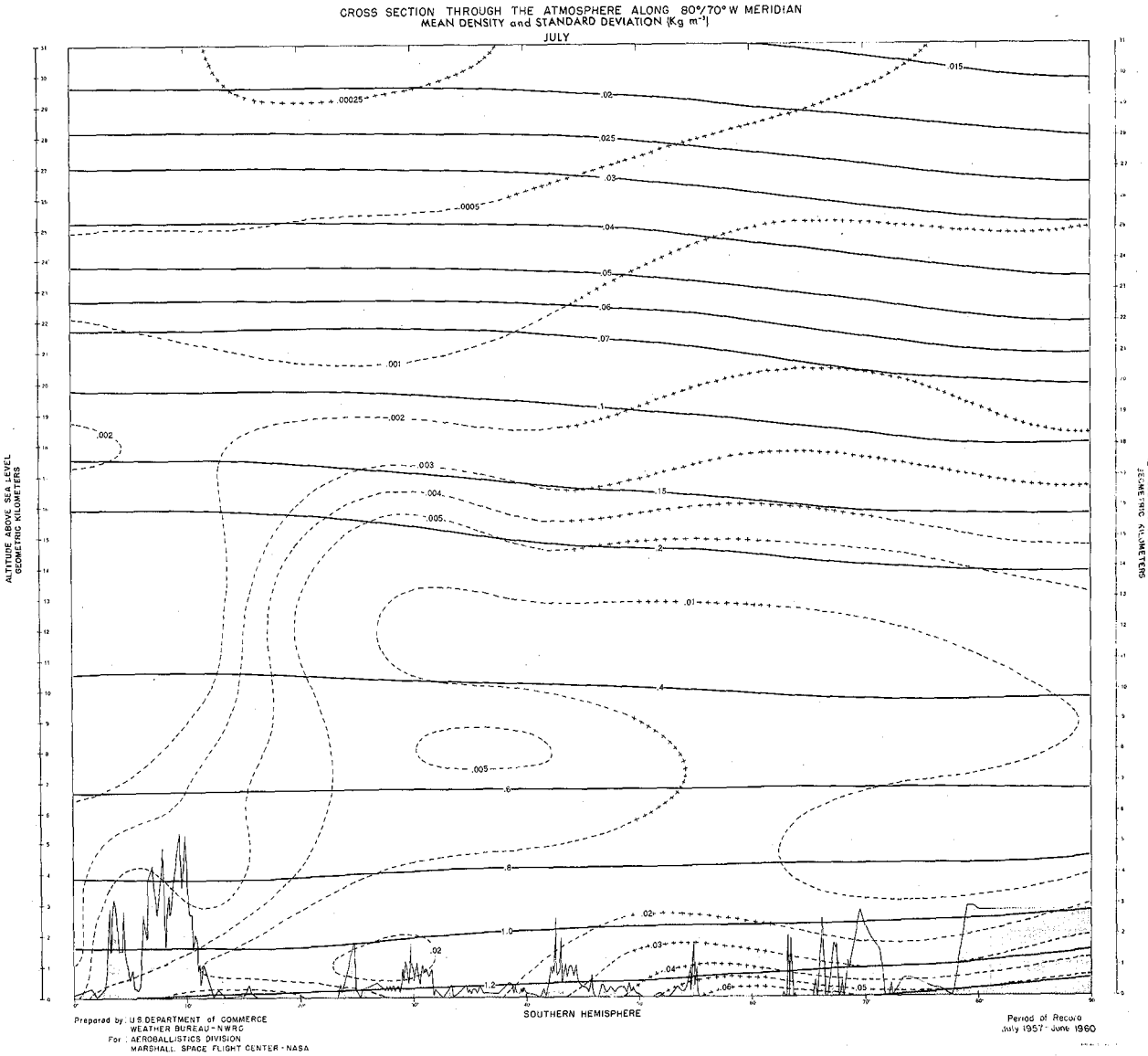

FIGURE 63. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70° W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (JULY - SOUTHERN HEMISPHERE)

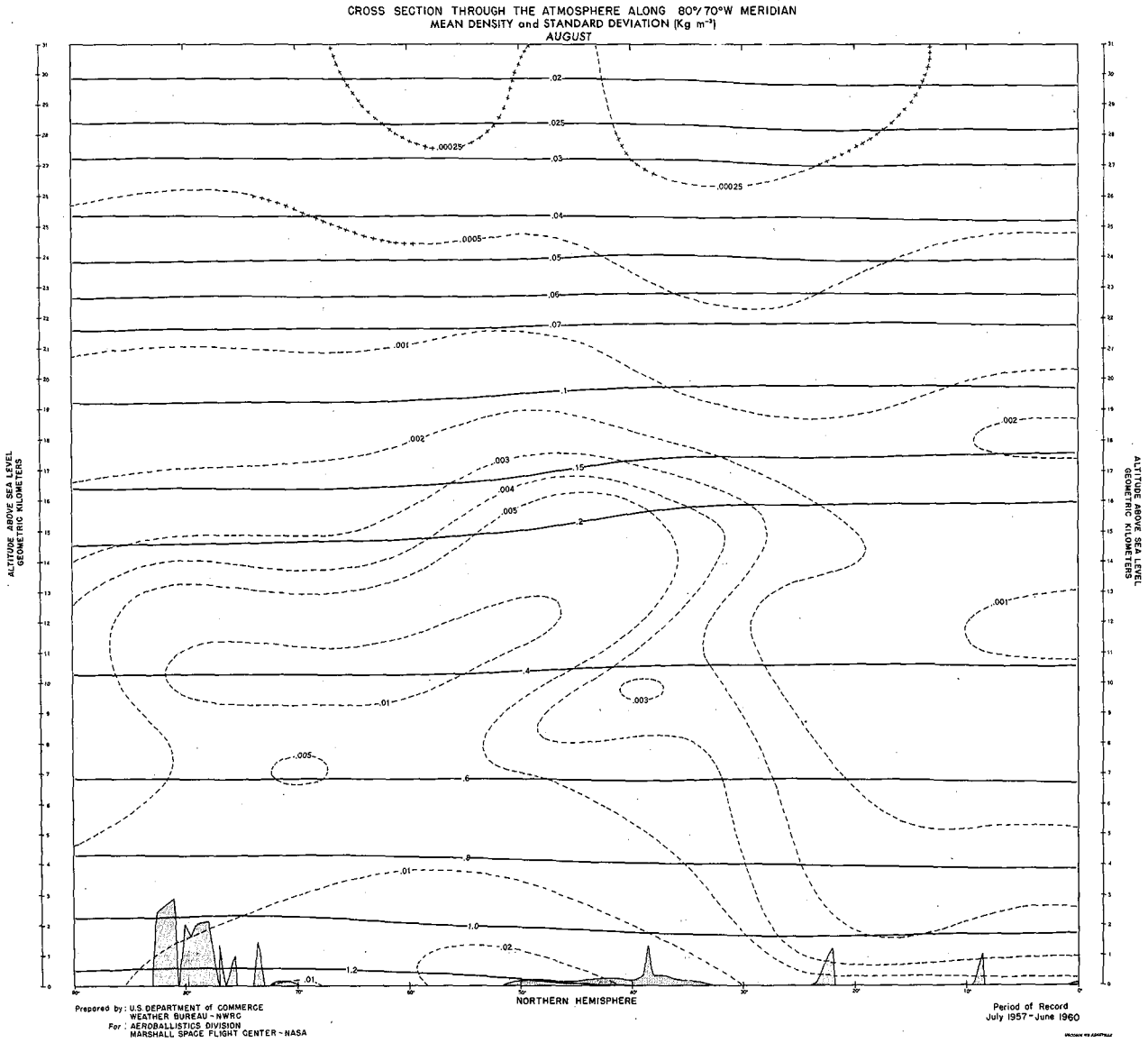

FIGURE 64. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (AUGUST - NORTHERN HEMISPHERE)

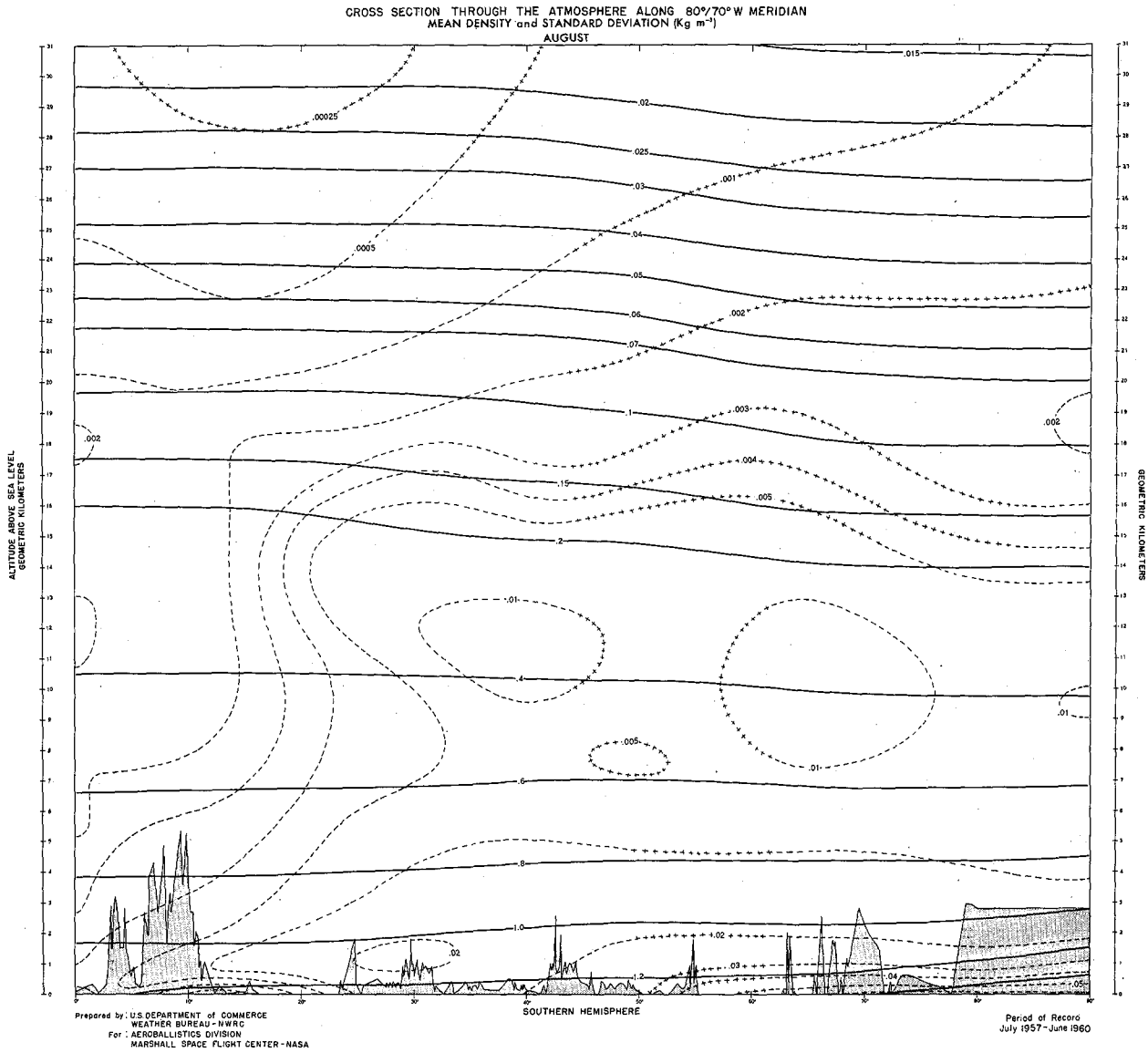

FIGURE 65. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (AUGUST - SOUTHERN HEMISPHERE)

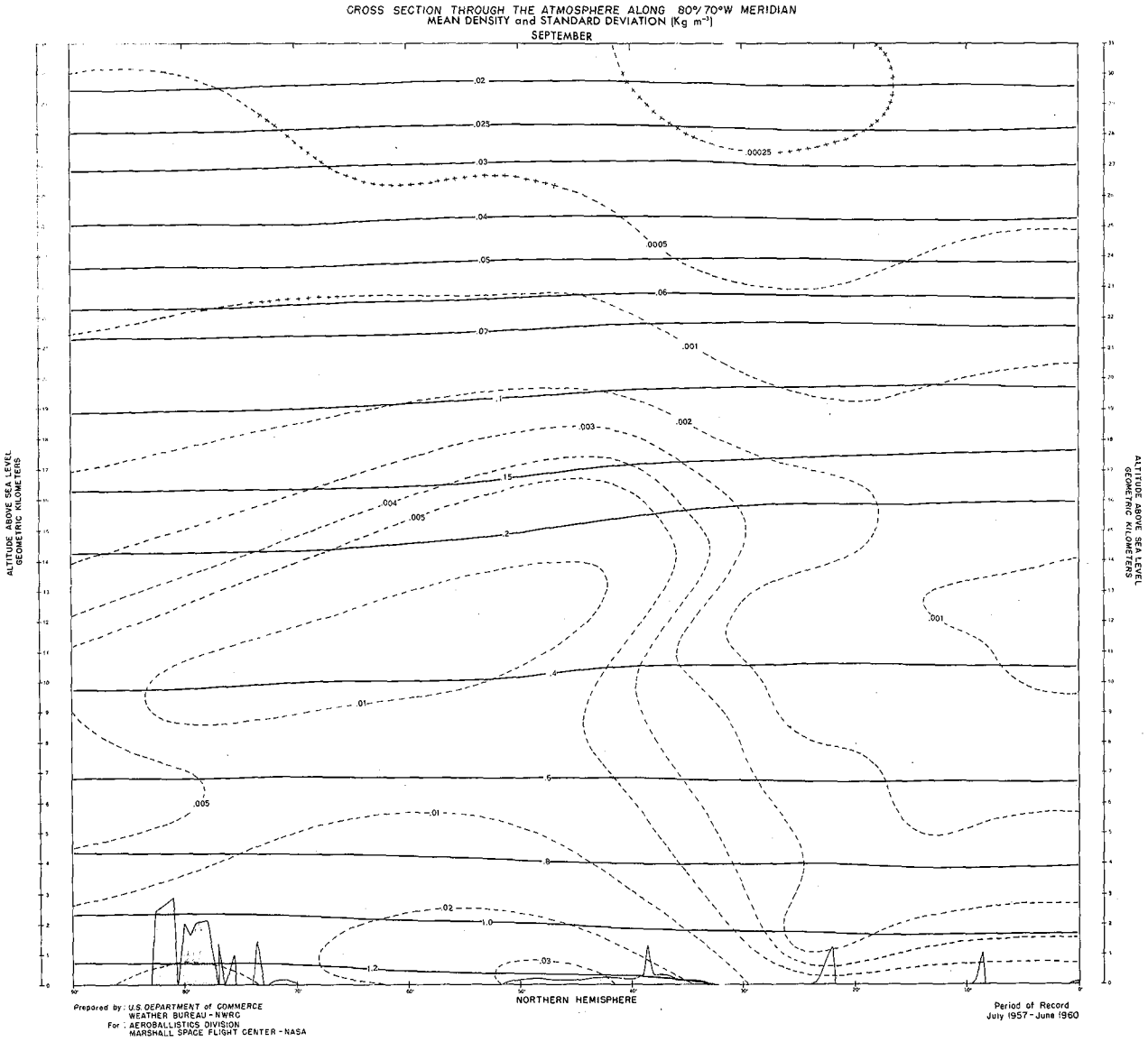

FIGURE 66. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (SEPTEMBER - NORTHERN HEMISPHERE)

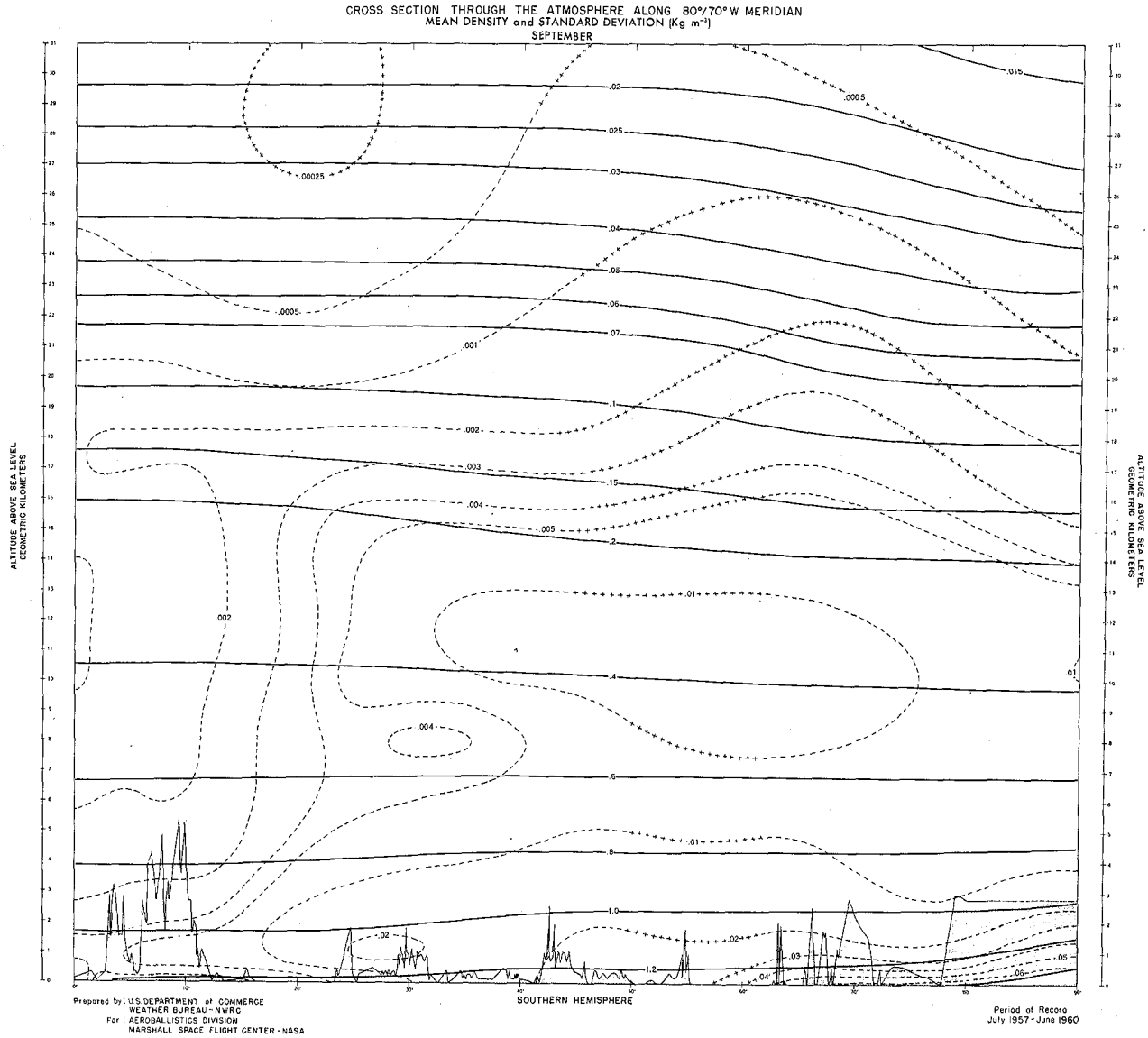

FIGURE 67. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (SEPTEMBER - SOUTHERN HEMISPHERE)

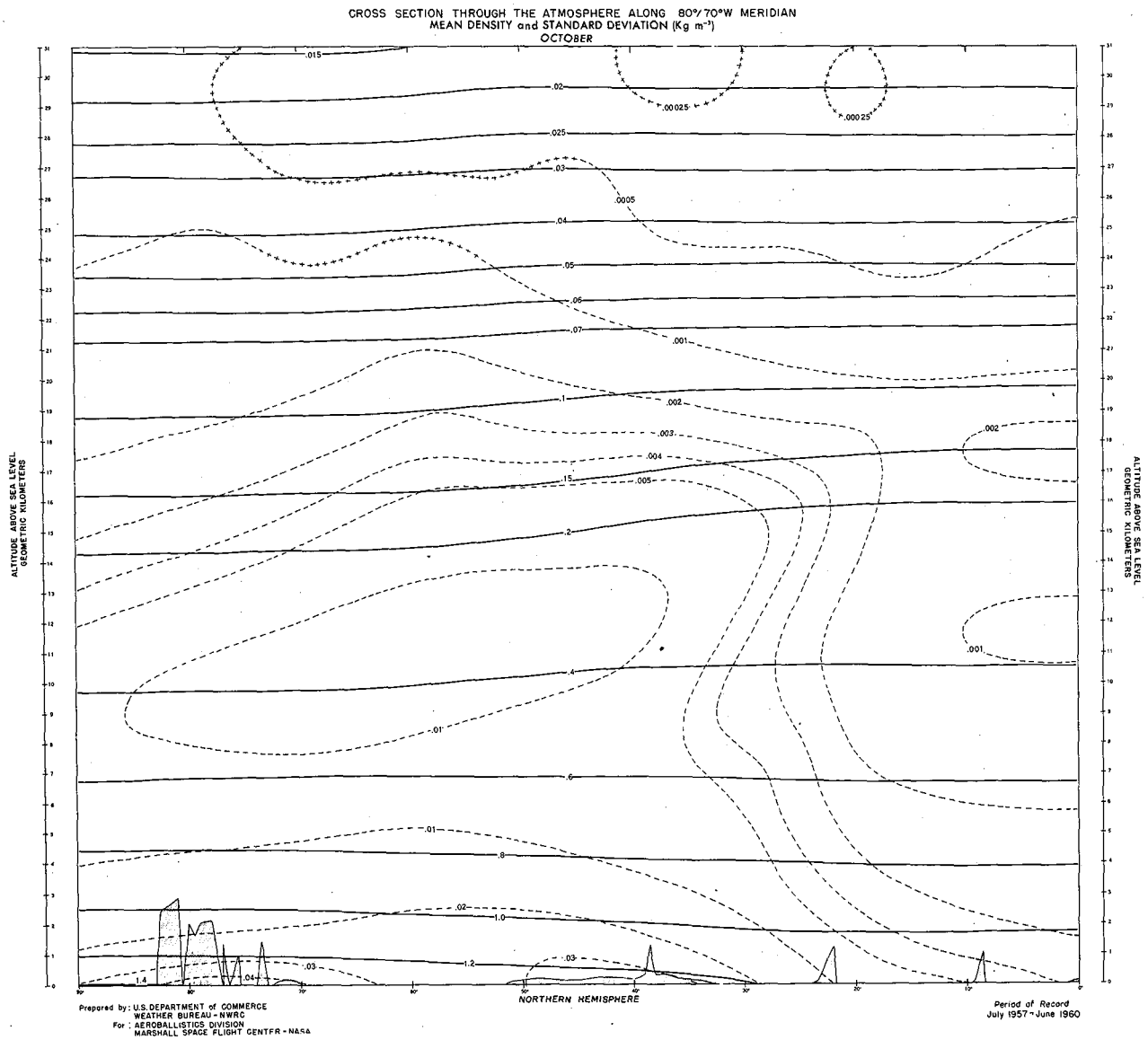

FIGURE 68. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (OCTOBER - NORTHERN HEMISPHERE)

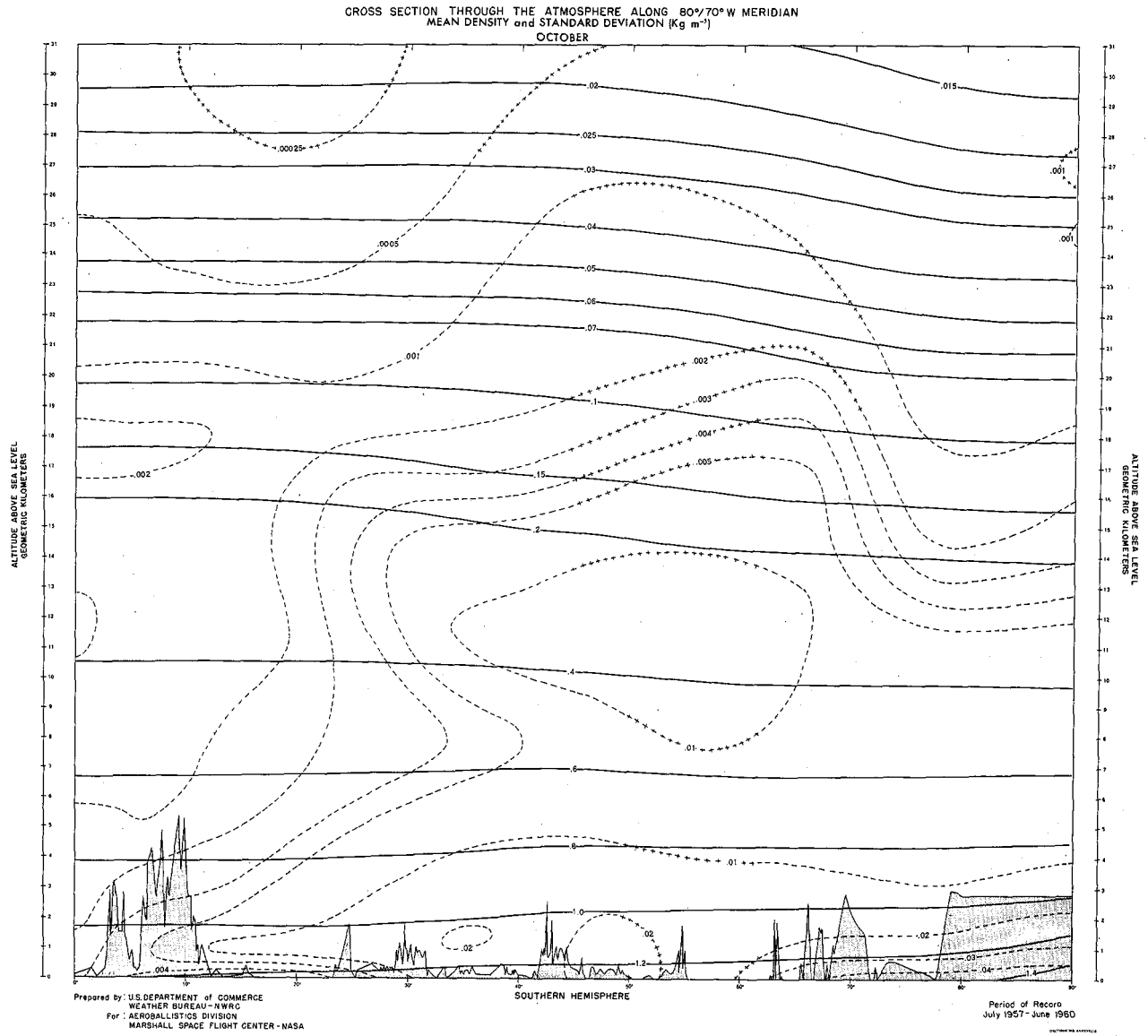

FIGURE 69. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (OCTOBER - SOUTHERN HEMISPHERE)

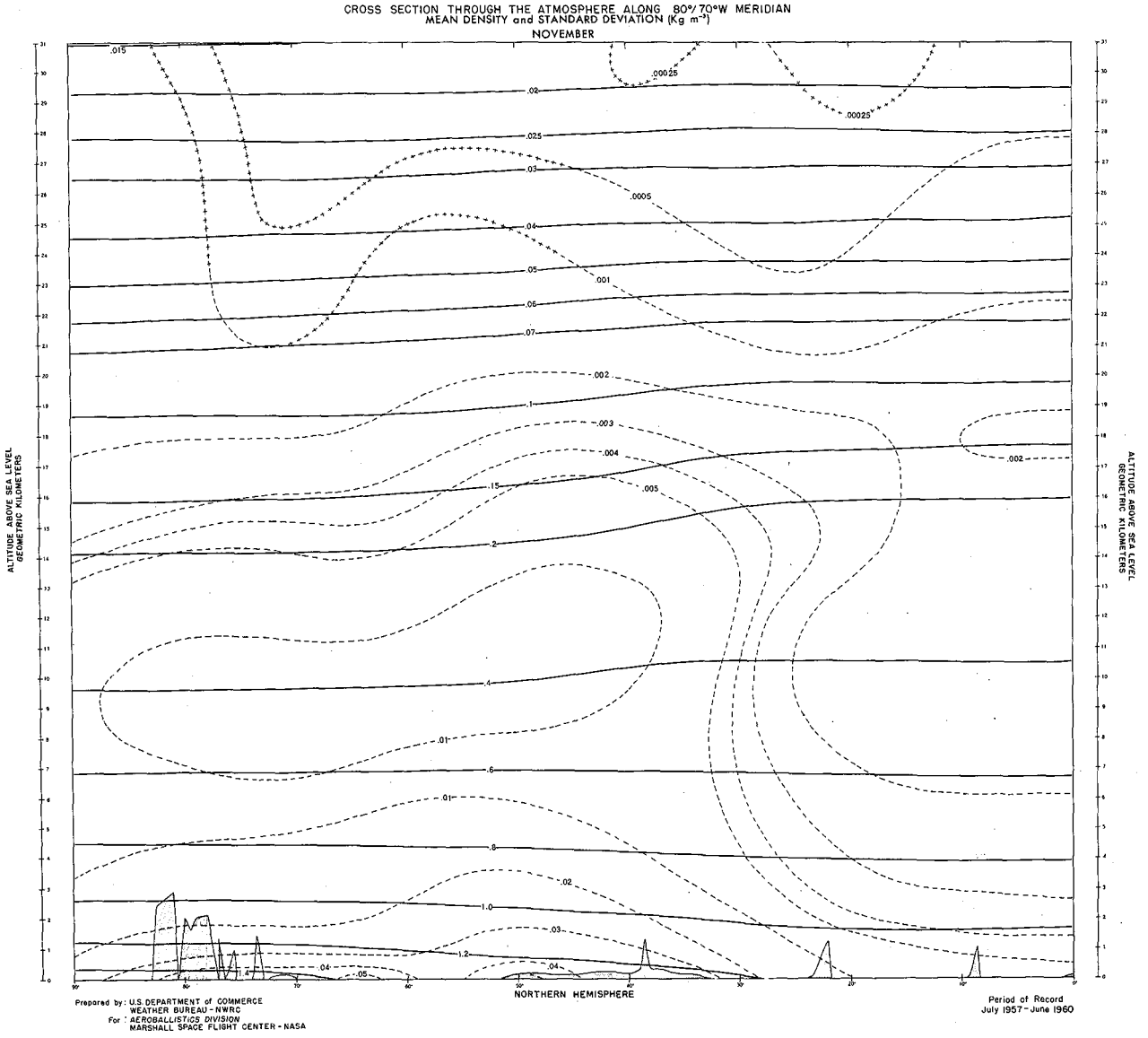

FIGURE 70. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (NOVEMBER - NORTHERN HEMISPHERE)

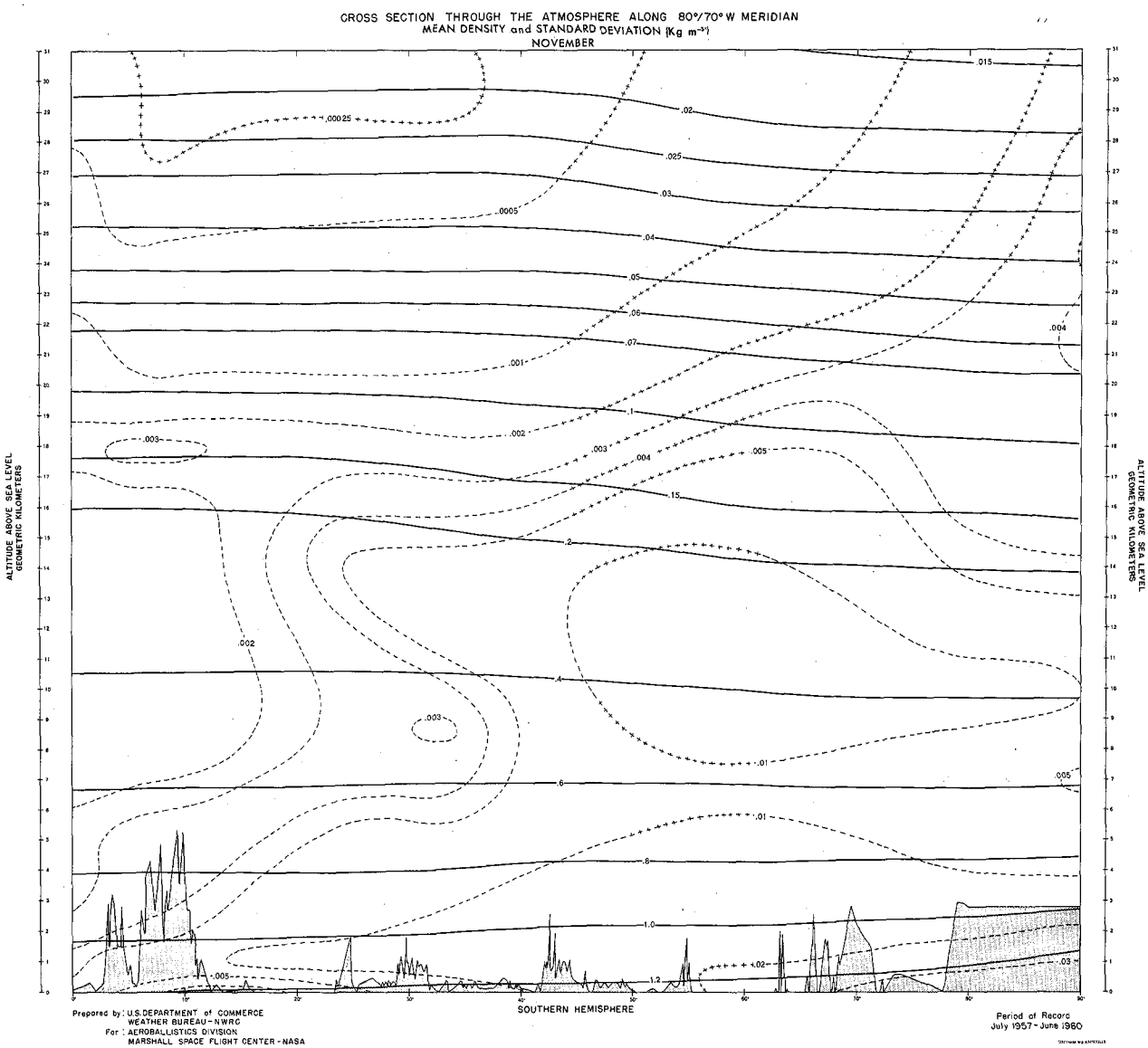

FIGURE 71. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (NOVEMBER - SOUTHERN HEMISPHERE)

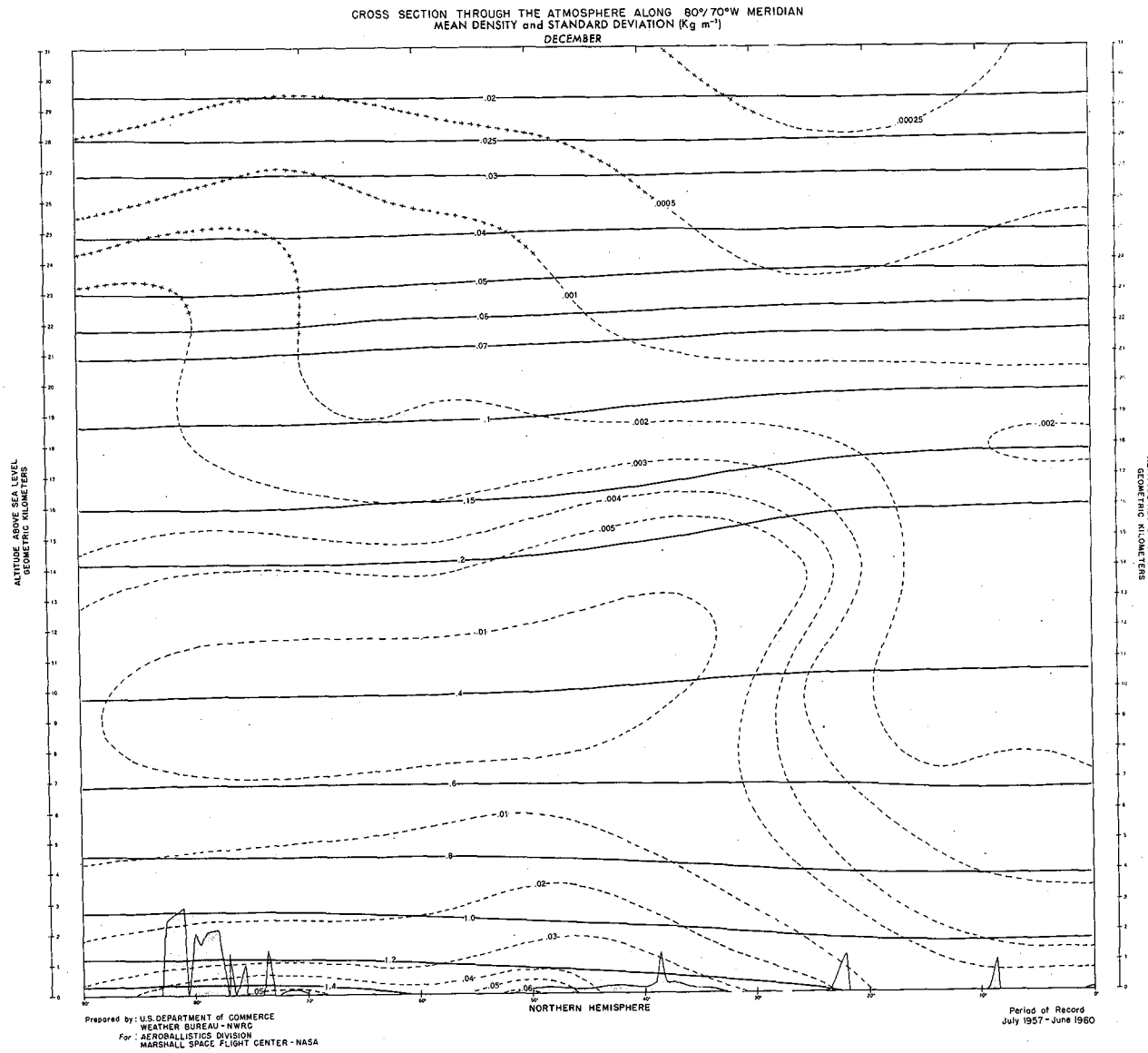

FIGURE 72. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (DECEMBER - NORTHERN HEMISPHERE)

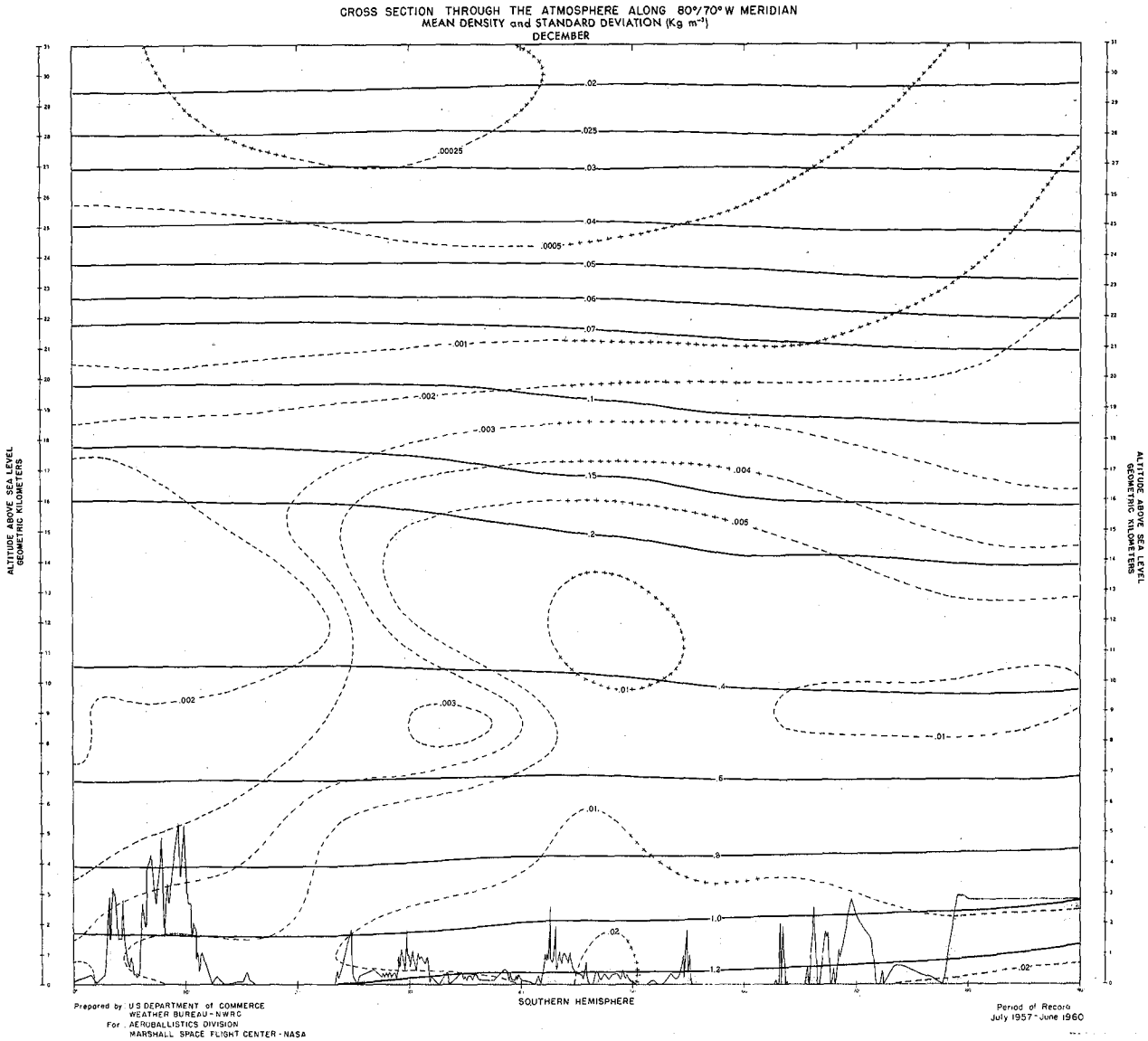

FIGURE 73. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (DECEMBER - SOUTHERN HEMISPHERE)

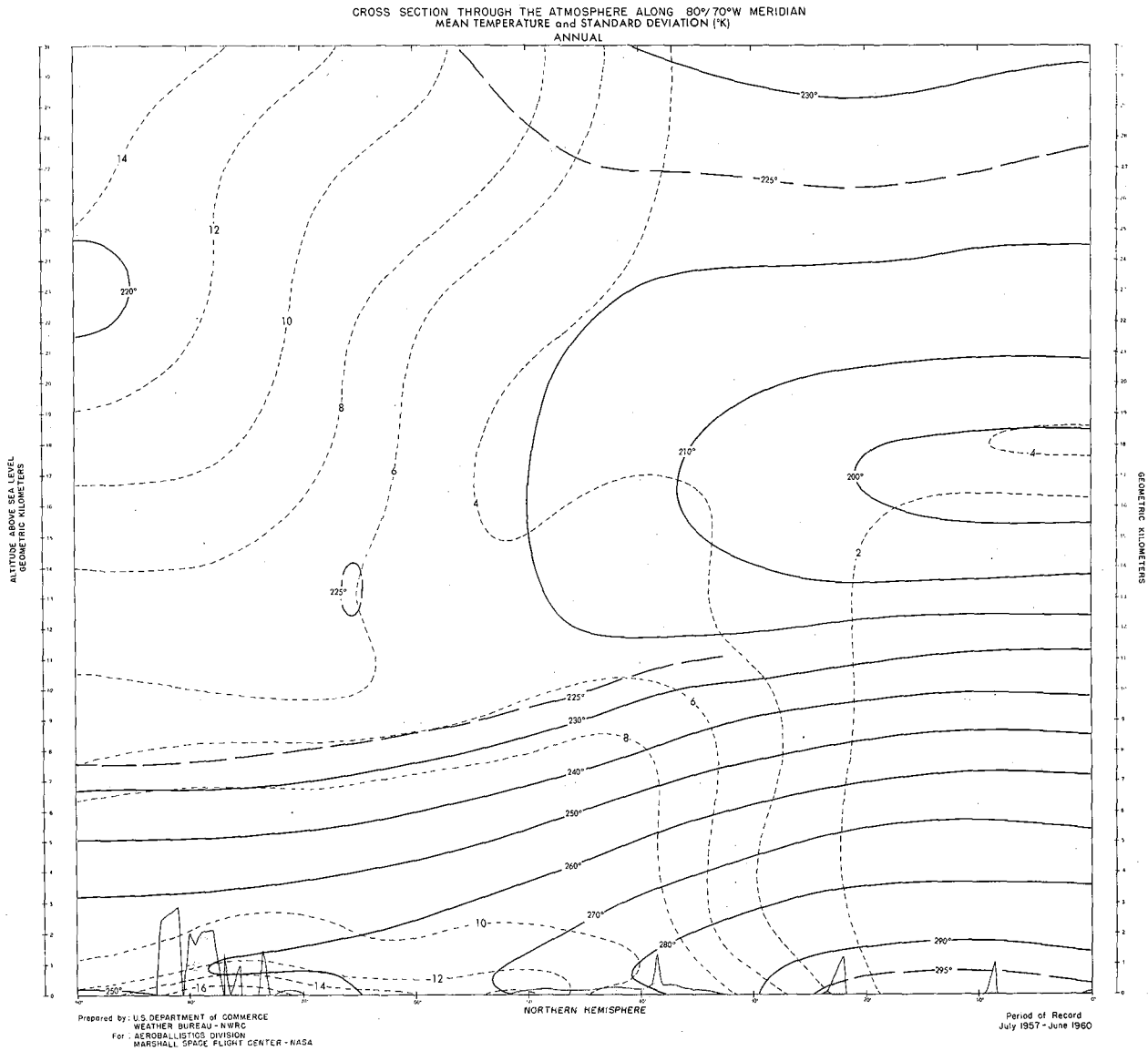

FIGURE 74. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (ANNUAL - NORTHERN HEMISPHERE)

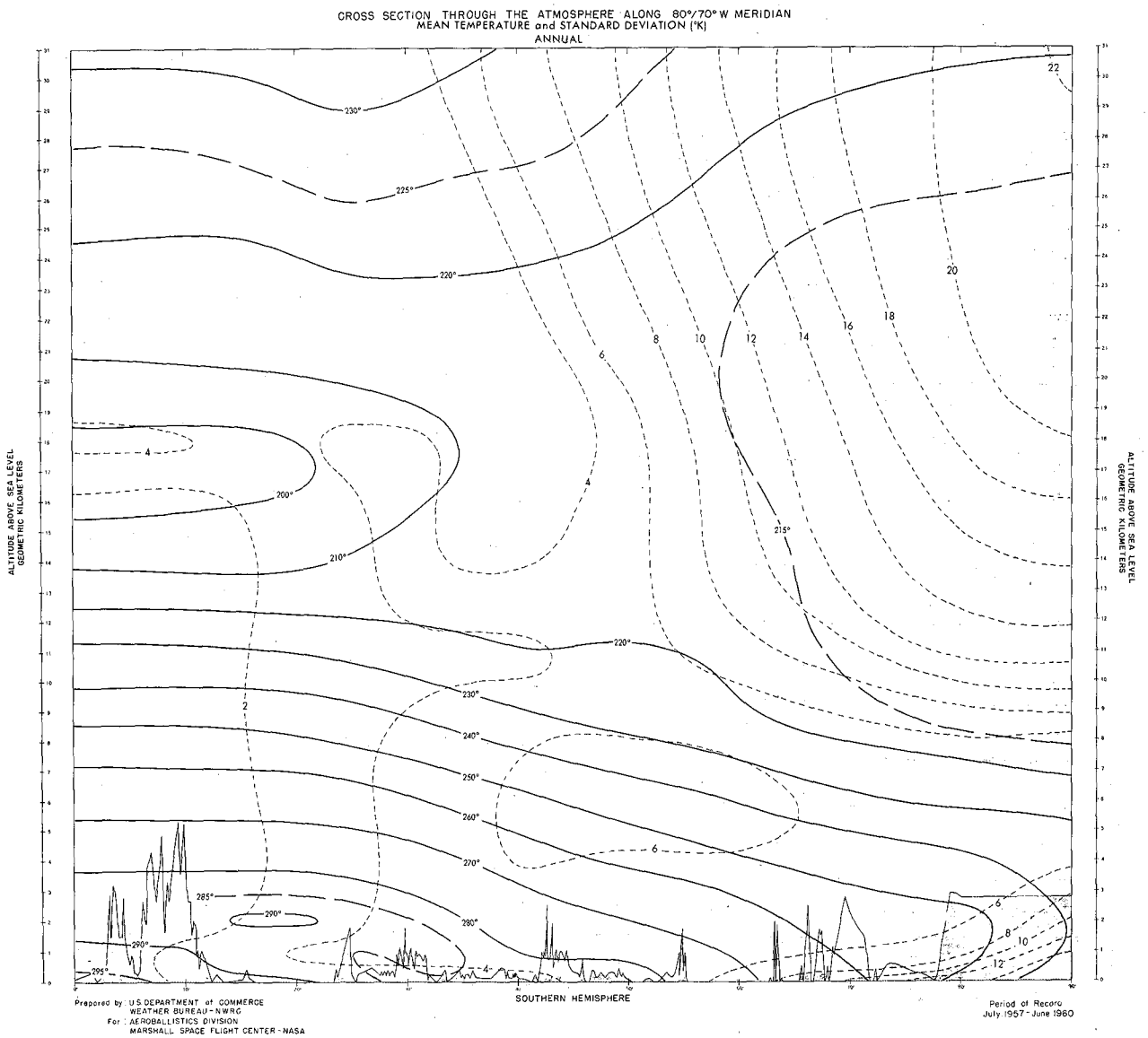

FIGURE 75. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN TEMPERATURE AND STANDARD DEVIATION (°K) (ANNUAL - SOUTHERN HEMISPHERE)

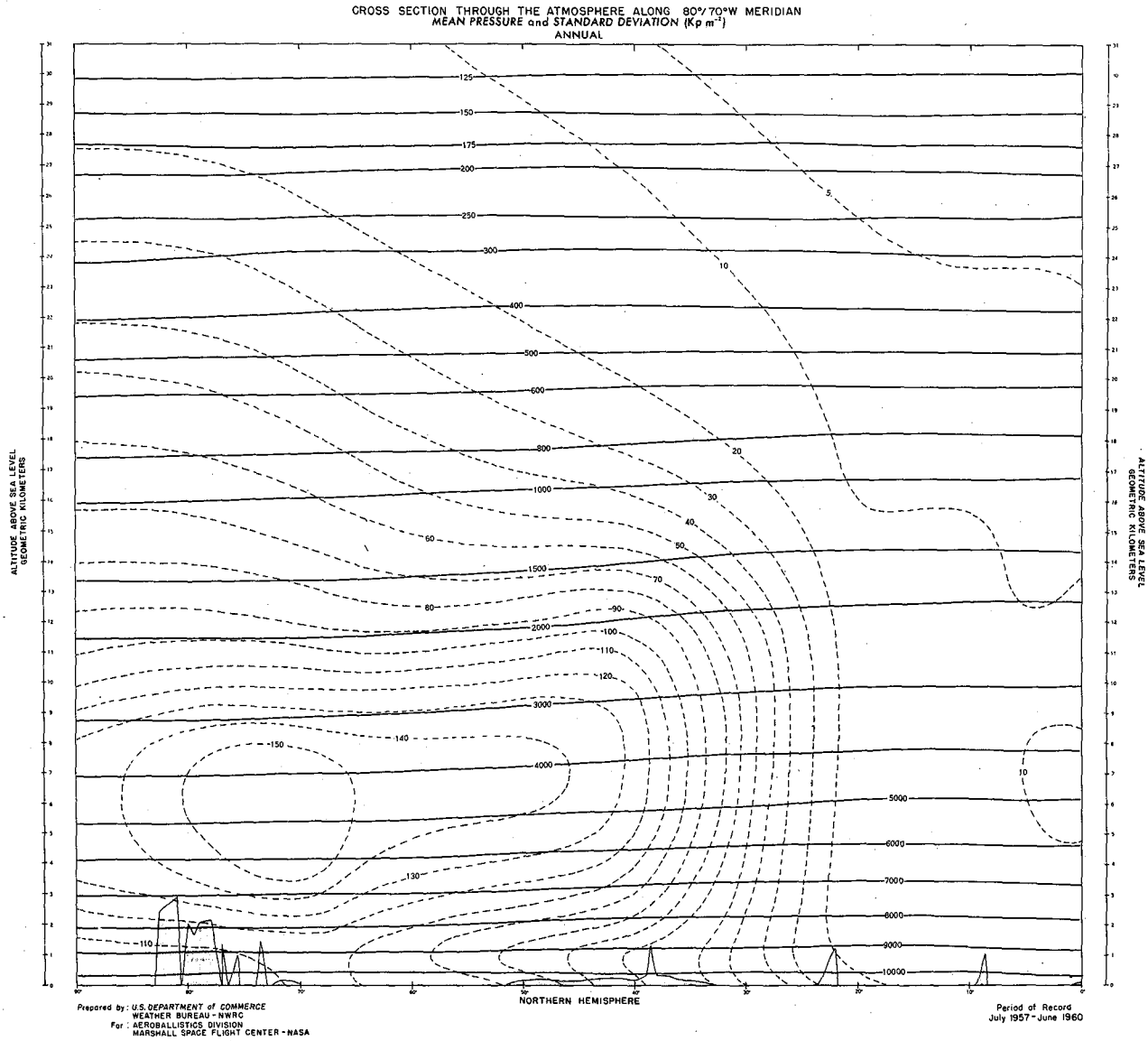

FIGURE 76. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (ANNUAL - NORTHERN HEMISPHERE)

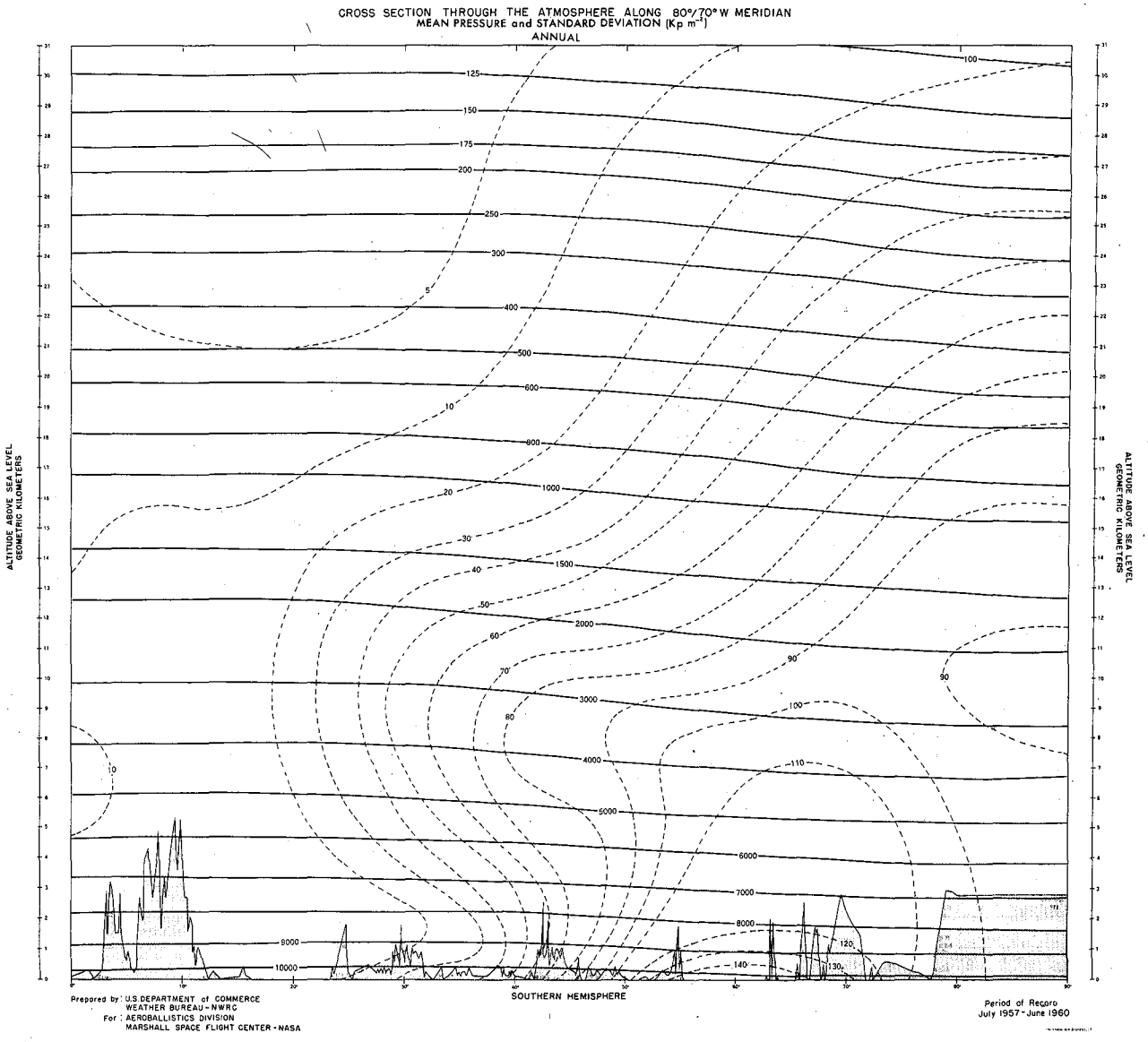

FIGURE 77. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN PRESSURE AND STANDARD DEVIATION (Kp m^{-2}) (ANNUAL - SOUTHERN HEMISPHERE)

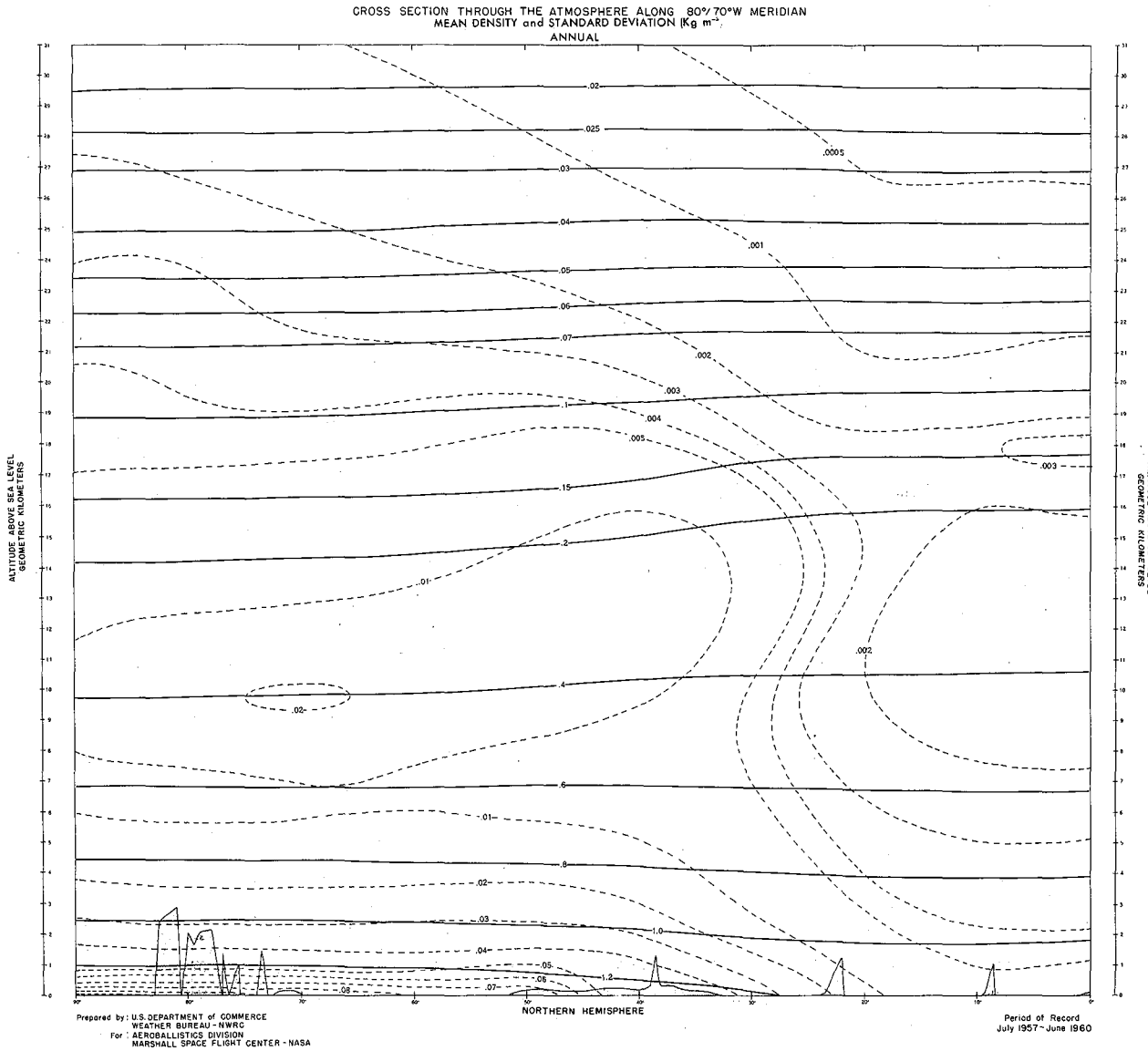

FIGURE 78. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (ANNUAL - NORTHERN HEMISPHERE)

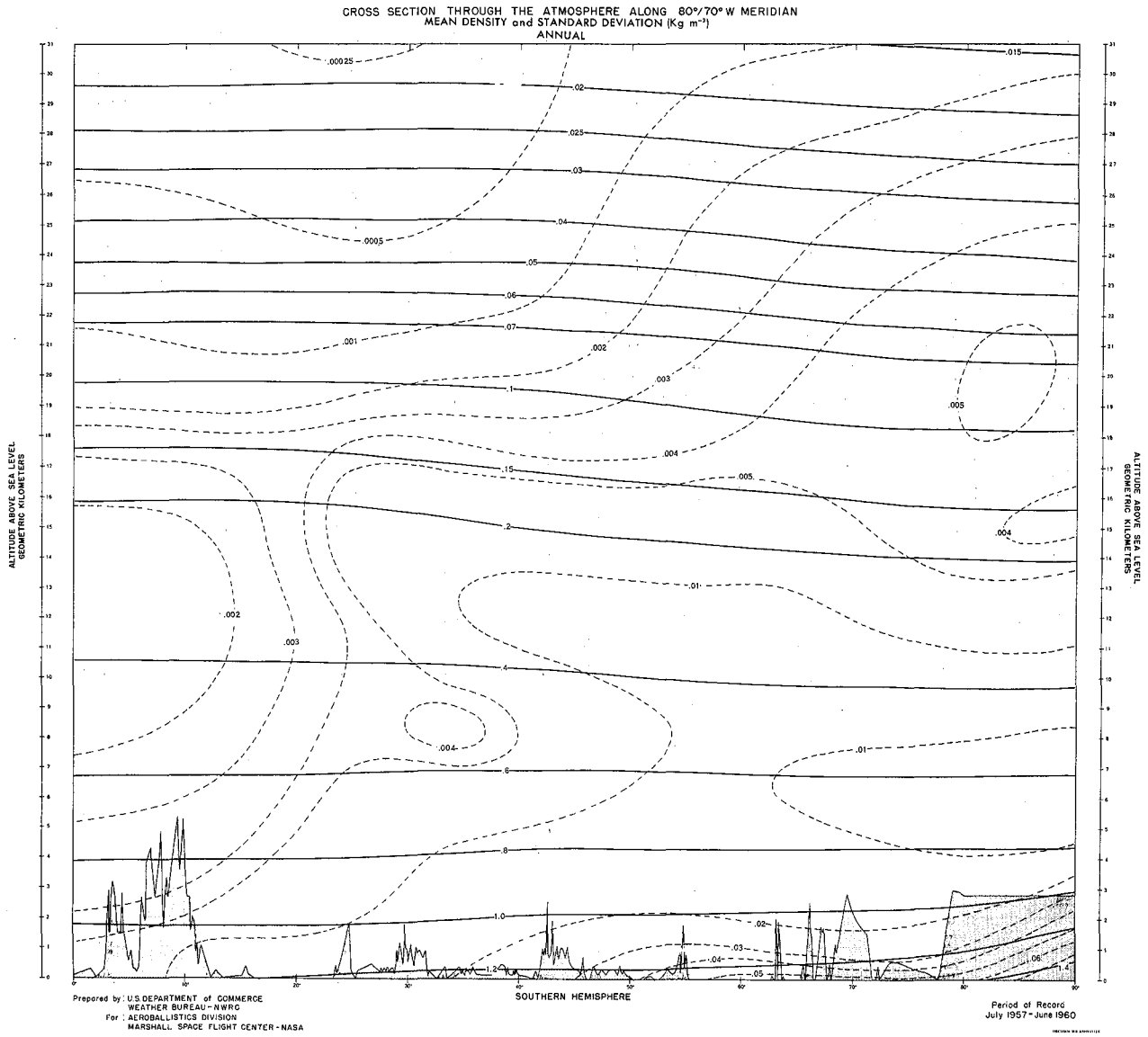

FIGURE 79. CROSS SECTION THROUGH THE ATMOSPHERE ALONG 80°/70°W MERIDIAN MEAN DENSITY AND STANDARD DEVIATION (Kg m^{-3}) (ANNUAL - SOUTHERN HEMISPHERE)

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 1a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JANUARY

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2970	8	10316	15	11600	385	2972	13	10290	17	11800	600	2958	30	10356	28	12000	1250	2810	60	10393	72	12600	3005	2678	58	10380	89	13200	3650
1	2930	8	9200	14	10600	373	2928	12	9200	17	10700	502	2903	28	9225	19	10800	900	2812	52	9150	62	11200	2300	2688	70	9125	76	11650	3225
2	2883	8	8200	14	9700	362	2875	13	8200	17	9750	498	2858	25	8200	18	9800	750	2788	48	8175	59	10000	1680	2668	68	8050	71	10350	2500
3	2825	8	7275	13	8750	350	2828	13	7255	16	8750	475	2815	25	7250	18	8850	630	2735	44	7200	61	9000	1150	2623	67	7100	77	9250	1910
4	2780	8	6449	12	7900	330	2786	13	6400	15	7900	425	2760	25	6450	18	7950	495	2694	43	6350	65	8050	870	2571	64	6200	83	8200	1400
5	2738	8	5700	11	7200	308	2736	13	5700	14	7150	368	2718	22	5700	18	7200	408	2625	44	5600	68	7300	750	2514	62	5350	88	7350	995
6	2688	8	5000	10	6450	240	2681	12	5075	12	6450	300	2655	20	5040	18	6500	350	2570	44	4800	70	6600	700	2452	59	4700	92	6600	800
7	2613	7	4400	9	5800	193	2608	12	4400	11	5800	222	2570	19	4400	18	5850	300	2499	43	4300	70	5850	700	2385	50	4150	91	5900	810
8	2540	7	3850	9	5300	182	2540	11	3875	11	5300	191	2500	18	3850	18	5300	285	2425	41	3750	70	5300	700	2320	45	3600	87	5200	992
9	2455	7	3375	9	4750	180	2468	11	3375	11	4750	185	2432	18	3400	18	4750	285	2360	40	3275	67	4750	750	2275	41	3100	80	4600	1100
10	2382	8	2950	9	4250	180	2387	12	2900	11	4200	175	2358	18	2900	17	4200	287	2298	38	2800	61	4200	780	2225	50	2650	70	4050	1250
11	2306	8	2550	9	3800	180	2304	12	2550	12	3800	175	2288	18	2550	17	3800	293	2238	33	2450	55	3700	820	2192	50	2250	59	3500	1250
12	2218	9	2200	9	3400	175	2220	13	2225	11	3400	175	2208	19	2200	16	3300	296	2175	38	2075	47	3250	950	2180	55	1900	45	3000	1100
13	2157	11	1875	8	2970	175	2158	14	1850	11	2970	175	2151	19	1850	16	2950	295	2149	39	1800	39	2830	910	2180	44	1650	35	2600	990
14	2088	14	1600	8	2630	175	2086	14	1600	10	2650	175	2098	18	1600	15	2600	292	2118	37	1500	32	2450	760	2175	38	1400	28	2250	750
15	2025	16	1350	7	2300	175	2023	15	1350	9	2290	175	2046	17	1350	13	2250	288	2091	35	1300	24	2100	690	2158	35	1225	22	1900	575
16	1970	18	1160	7	1980	180	1971	17	1125	8	1900	175	2006	18	1115	10	1900	275	2060	38	1100	18	1800	600	2140	35	1030	18	1650	432
17	1930	21	950	6	1700	195	1938	19	965	7	1650	190	1970	19	955	9	1650	260	2055	41	920	14	1550	540	2138	35	875	14	1400	350
18	1935	22	815	6	1420	225	1939	21	805	6	1410	200	1960	21	805	8	1400	227	2060	43	785	10	1300	430	2132	35	755	11	1200	275
19	1990	22	685	5	1160	190	1993	22	685	5	1170	182	2000	22	685	6	1150	190	2070	43	670	8	1100	300	2132	35	640	8	1030	197
20	2035	22	580	4	955	142	2045	23	570	4	950	135	2044	23	572	5	950	155	2091	40	565	6	925	205	2139	35	550	8	870	165
21	2074	22	490	4	825	99	2087	22	490	4	810	100	2089	23	485	4	815	127	2110	36	480	4	790	160	2143	38	465	7	750	128
22	2108	22	422	3	675	82	2110	20	420	3	680	85	2125	22	415	3	665	95	2141	35	408	4	660	118	2154	40	390	7	630	98
23	2132	22	360	3	575	77	2140	19	360	3	575	76	2157	21	360	3	565	70	2158	35	350	4	560	82	2160	48	340	6	535	82
24	2158	22	300	3	480	65	2166	19	305	3	475	63	2185	21	300	3	475	63	2179	35	295	3	470	70	2175	55	290	6	465	78
25	2183	22	262	2	405	53	2193	20	260	3	400	53	2200	21	260	3	400	51	2202	35	260	3	400	59	2180	61	249	6	390	68
26	2210	23	225	2	345	45	2210	21	222	2	345	43	2216	21	223	2	345	43	2220	36	220	3	345	45	2200	62	215	6	335	61
27	2219	23	191	2	290	39	2226	22	190	2	290	37	2230	24	190	2	290	38	2235	37	188	3	295	39	2212	63	184	5	280	55
28	2224	24	166	2	255	32	2237	23	168	2	250	32	2247	25	165	2	248	32	2257	40	162	2	245	35	2230	63	158	4	240	48
29	2242	25	135	2	211	26	2245	24	143	2	210	27	2265	23	142	2	212	28	2280	41	140	2	210	32	2250	65	137	4	210	39
30	2255	26	124	2	184	22	2257	25	123	2	182	23	2291	21	122	2	181	24	2301	43	121	2	180	27	2269	65	120	4	170	37
31	2270	27	106	2	157	18	2270	26	105	2	155	18	2309	21	105	2	155	20	2326	44	104	2	154	24	2302	64	103	3	150	32

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 1b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JANUARY

	50°N						60°N						70°N						80°N						90°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2575	93	10368	101	14000	6050	2500	95	10333	121	14050	5700	2465	93	10352	145	14400	5500	2408	83	10407	130	14600	5100	2390	80	10407	126	14350	4250
1	2590	90	9100	86	12000	4000	2575	95	9100	118	12150	4225	2515	91	9050	147	12300	4000	2506	78	9150	129	12300	3500	2420	72	9125	125	12250	3300
2	2592	79	7900	88	10550	2750	2538	95	7800	125	10700	2820	2504	88	7775	150	10800	2650	2495	70	7725	128	10800	2480	2450	63	7725	124	10750	2250
3	2548	74	7000	99	9400	1998	2500	90	6850	138	9500	2005	2458	84	6800	155	9500	1990	2445	67	6725	125	9500	1995	2432	58	6775	123	9500	1700
4	2499	69	6100	107	8350	1400	2455	85	6000	144	8450	1600	2407	82	5875	160	8450	1800	2407	65	5825	124	8400	1350	2403	55	5825	122	8450	1230
5	2432	63	5250	110	7550	990	2388	81	5200	144	7500	1250	2352	80	5150	158	7500	1500	2348	61	5175	122	7500	1150	2344	52	5150	121	7550	950
6	2375	59	4600	110	6650	850	2325	73	4500	144	6650	1250	2300	70	4450	151	6650	1250	2295	58	4450	117	6600	1000	2290	50	4450	116	6600	850
7	2312	45	3950	107	5850	1075	2278	60	3850	141	5850	1500	2250	60	3800	145	5800	1300	2236	52	3800	112	5800	1075	2228	50	3800	111	5800	850
8	2268	38	3450	100	5200	1400	2228	41	3350	129	5700	1800	2205	52	3300	135	5150	1800	2191	50	3300	105	5150	1200	2187	50	3350	101	5150	800
9	2217	38	2850	85	4500	1500	2190	40	2800	112	4500	2100	2180	50	2800	120	4450	1950	2177	52	2800	94	4450	1250	2177	55	2800	91	4400	750
10	2191	50	2500	71	3900	1600	2185	53	2450	93	3850	2200	2173	58	2450	101	3850	1998	2162	59	2400	82	3850	1250	2161	60	2275	80	3800	650
11	2195	50	2175	55	3350	1500	2180	61	2095	74	3300	1800	2168	63	2050	85	3250	1750	2153	65	2050	68	3230	1200	2144	67	2050	68	3200	550
12	2199	50	1800	43	2850	1215	2175	60	1785	59	2800	1410	2156	70	1750	71	2775	1450	2140	72	1750	61	2750	1050	2129	72	1750	61	2750	492
13	2205	50	1575	33	2450	900	2175	58	1520	48	2400	1007	2143	75	1495	61	2380	1150	2125	78	1479	56	2400	820	2115	78	1500	56	2350	475
14	2199	48	1325	27	2100	680	2171	60	1300	42	2060	820	2140	80	1300	54	2040	910	2115	83	1275	52	2075	710	2102	86	1295	51	2075	450
15	2194	48	1150	22	1800	499	2163	63	1115	37	1770	700	2128	85	1100	48	1750	750	2108	92	1080	48	1750	560	2090	92	1100	48	1750	410
16	2183	48	980	18	1550	408	2152	68	950	32	1520	590	2119	92	930	45	1500	610	2101	98	920	47	1495	460	2080	97	910	47	1495	375
17	2174	50	840	15	1350	345	2140	72	820	29	1300	470	2109	96	790	43	1300	475	2095	105	785	45	1280	402	2078	105	765	46	1300	327
18	2167	52	720	13	1130	280	2136	75	700	26	1120	390	2091	100	675	41	1100	400	2080	110	665	43	1100	360	2078	113	660	44	1100	278
19	2161	55	610	11	970	225	2131	80	595	25	940	325	2090	100	575	38	930	350	2073	115	570	42	925	330	2075	120	565	43	930	245
20	2153	59	520	10	835	195	2125	82	515	21	825	275	2099	99	500	35	805	310	2067	118	490	41	810	310	2078	122	480	41	790	200
21	2142	60	445	10	710	165	2125	83	435	19	700	232	2103	95	425	32	690	288	2080	118	415	37	680	307	2078	125	415	38	680	190
22	2135	62	380	9	605	145	2125	84	375	18	600	200	2102	85	370	29	600	260	2083	113	360	34	580	303	2080	125	355	35	585	180
23	2134	67	330	9	520	118	2125	87	329	16	520	165	2097	78	310	24	500	230	2102	107	315	32	485	290	2085	124	300	32	485	150
24	2131	70	280	8	440	98	2120	87	280	14	440	145	2095	72	275	20	435	205	2118	100	268	28	420	265	2089	123	268	28	420	132
25	2130	72	245	8	380	82	2120	85	240	12	375	107	2108	70	242	18	375	192	2137	93	225	22	365	245	2097	122	235	22	365	115
26	2130	74	205	8	330	75	2120	81	205	11	330	88	2132	70	205	15	325	155	2152	93	203	18	320	218	2101	122	204	18	314	98
27	2131	75	175	7	270	62	2120	78	176	9	270	75	2152	73	170	12	275	123	2140	100	170	15	260	181	2103	122	170	15	260	90
28	2132	78	149	7	239	57	2115	75	148	8	230	61	2132	77	149	10	230	95	2128	111	147	12	225	147	2110	123	145	12	225	85
29	2135	81	130	6	205	48	2108	75	125	7	195	49	2115	83	125	9	195	79	2118	121	125	9	198	110	2115	125	124	9	195	80
30	2138	82	110	5	170	40	2098	75	103	6	165	42	2096	90	106	8	175	63	2105	124	109	8	170	85	2115	128	108	7	170	78
31	2140	83	90	4	148	38	2080	75	87	6	147	40	2083	93	87	7	146	52	2090	128	89	7	146	78	2115	132	90	7	144	75

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 2a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

FEBRUARY

ALT	T	s	P 0°	s	D	s	T	s	P 10°N	s	D	s	T	s	P 20°N	s	D	s	T	s	P 30°N	s	D	s	T	s	P 40°N	s	D	s
0	2970	7	10315	15	11600	280	2975	8	10295	17	11600	500	2953	30	10360	28	11900	1600	2808	65	10370	68	12500	3280	2685	70	10368	103	13300	4200
1	2920	8	9350	15	10500	275	2927	10	9180	17	10600	410	2902	20	9220	24	10800	882	2818	60	9200	59	11200	2500	2690	81	9125	88	11800	3700
2	2875	8	8175	15	9600	275	2880	11	8175	17	9700	420	2862	19	8230	22	9900	690	2790	50	8115	60	10100	1710	2658	80	8000	85	10400	2800
3	2825	8	7230	15	8600	280	2831	12	7270	16	8700	420	2818	18	7225	20	8800	500	2740	46	7225	64	9000	1250	2610	70	7040	92	9200	1990
4	2775	8	6440	15	7900	255	2788	12	6440	15	7900	396	2767	15	6490	20	7900	453	2693	43	6350	67	8100	890	2568	66	6180	95	8200	1480
5	2718	8	5700	14	7150	230	2729	12	5690	13	7100	348	2710	14	5700	19	7150	409	2628	42	5570	70	7250	690	2509	61	5350	97	7400	1000
6	2660	8	5000	14	6450	202	2685	12	5015	12	6450	300	2650	15	5010	19	6500	369	2570	41	4920	70	6500	610	2450	57	4715	97	6600	850
7	2608	8	4325	14	5800	190	2614	11	4395	10	5800	229	2590	16	4410	18	5800	328	2503	40	4297	70	5850	580	2388	54	4100	96	5900	780
8	2530	9	3875	13	5250	183	2545	11	3870	9	5200	192	2513	16	3850	16	5300	301	2440	39	3800	68	5250	580	2325	48	3625	92	5200	1000
9	2460	10	3390	13	4750	180	2465	11	3380	9	4700	180	2430	16	3320	16	4700	278	2372	38	3215	64	4700	700	2265	45	3050	83	4650	1200
10	2382	11	2950	13	4250	170	2385	11	2945	10	4200	170	2353	17	2950	15	4200	253	2299	35	2885	60	4150	780	2235	45	2680	71	4050	1500
11	2311	12	2585	13	3800	170	2307	12	2550	10	3800	170	2288	17	2525	14	3800	230	2240	32	2420	54	3700	890	2218	50	2285	59	3550	1500
12	2218	15	2180	12	3400	170	2225	12	2175	9	3400	160	2215	17	2175	13	3300	210	2195	34	2060	48	3250	920	2201	50	1925	45	2990	1300
13	2150	17	1850	12	2990	170	2150	14	1875	8	2980	160	2147	17	1868	12	2950	199	2150	34	1780	40	2830	800	2198	45	1650	35	2550	1030
14	2080	19	1570	12	2640	170	2080	15	1580	8	2620	170	2082	17	1580	11	2590	197	2110	30	1501	30	2410	750	2191	43	1420	27	2210	790
15	2020	21	1350	11	2300	180	2019	16	1320	8	2280	180	2028	18	1345	10	2260	197	2089	32	1285	24	2100	680	2175	41	1225	19	1900	630
16	1973	21	1125	11	1990	193	1974	18	1127	7	1970	183	1987	19	1130	9	1940	197	2053	35	1085	19	1810	620	2165	40	1040	15	1650	503
17	1935	22	960	9	1710	210	1940	18	970	7	1690	192	1962	20	971	8	1670	197	2045	38	930	15	1570	500	2155	39	885	12	1400	400
18	1955	23	810	7	1420	208	1942	19	808	6	1420	198	1962	21	805	6	1410	195	2050	37	793	11	1290	400	2150	38	762	9	1200	300
19	2008	23	685	6	1180	168	1985	19	683	4	1170	163	1991	21	682	5	1160	169	2065	31	660	8	1090	275	2150	35	645	8	1030	200
20	2048	24	570	5	950	112	2030	19	575	4	960	128	2040	21	568	4	960	128	2092	28	568	6	920	187	2150	30	552	7	880	159
21	2075	24	492	4	810	92	2070	20	483	3	800	97	2088	22	485	4	790	92	2115	21	487	5	770	132	2155	28	483	5	750	128
22	2110	23	420	4	670	78	2107	19	413	3	670	81	2122	20	415	3	665	77	2130	22	410	4	650	92	2160	28	405	4	643	95
23	2130	23	363	3	575	75	2140	19	355	3	560	72	2150	19	355	3	560	61	2160	23	352	3	550	78	2170	28	348	4	540	77
24	2159	24	301	3	480	64	2165	21	300	3	475	62	2175	23	300	3	475	49	2175	25	300	3	470	66	2183	29	298	3	460	67
25	2178	25	258	3	408	59	2192	22	255	2	400	50	2203	23	255	2	400	47	2200	23	255	3	400	53	2192	31	255	3	400	55
26	2206	26	221	2	350	49	2212	24	222	2	340	47	2225	19	222	2	340	45	2218	21	221	2	340	47	2210	32	221	3	340	45
27	2222	27	191	2	292	42	2227	25	189	2	290	39	2245	22	190	2	291	37	2231	21	189	2	289	37	2225	32	187	3	287	35
28	2240	27	168	2	251	32	2241	27	163	2	248	32	2272	25	163	2	249	32	2245	22	161	2	248	31	2232	33	160	2	248	26
29	2257	27	142	2	213	26	2265	27	141	2	212	26	2296	26	140	2	211	27	2260	23	138	2	211	26	2245	35	139	2	210	24
30	2272	27	123	2	183	23	2281	27	123	2	182	24	2315	27	122	2	181	24	2285	24	122	2	180	24	2261	37	122	2	180	22
31	2275	27	105	2	155	21	2300	27	104	2	155	22	2325	27	103	2	155	23	2308	25	104	2	154	23	2277	39	105	2	154	20

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 2b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

FEBRUARY

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2548	81	10348	98	14000	5200	2488	88	10332	111	14300	5030	2395	85	10342	152	14700	5300	2367	75	10375	151	15000	5400	2350	75	10378	122	15000	4480
1	2575	73	9050	87	12100	3580	2530	85	9050	115	12500	3300	2460	77	9000	154	12500	3000	2479	62	9000	135	12500	3750	2450	62	9010	117	12500	3680
2	2560	72	7910	86	10600	2610	2530	81	7885	127	10700	2410	2460	70	7885	155	10800	2225	2472	58	7798	125	10900	2580	2460	55	7820	110	10900	2700
3	2532	70	6950	95	9400	1950	2480	79	6885	140	9500	1880	2445	66	6830	152	9500	1900	2438	53	6830	117	9600	1910	2430	51	6835	105	9600	1950
4	2488	70	6000	102	8300	1500	2432	76	5950	143	8400	1450	2400	63	5950	148	8400	1400	2386	48	5960	112	8500	1370	2375	48	5955	100	8500	1350
5	2432	65	5225	106	7400	1100	2380	71	5120	143	7450	1100	2345	60	5120	140	7500	1150	2325	46	5115	107	7500	994	2312	43	5115	94	7500	995
6	2375	61	4575	106	6600	890	2330	66	4500	141	6600	1000	2290	57	4490	133	6650	1150	2272	42	4420	102	6700	920	2262	39	4420	88	6700	850
7	2300	50	3950	102	5900	920	2272	58	3890	135	5800	1260	2245	55	3800	126	5850	1300	2225	40	3775	95	5800	1000	2225	37	3775	82	5850	880
8	2253	39	3410	93	5200	1250	2235	52	3350	125	5100	1700	2225	57	3290	117	5100	1500	2190	49	3195	88	5100	1200	2193	43	3195	78	5050	880
9	2225	38	2930	82	4500	1500	2218	55	2890	109	4400	2060	2215	60	2875	107	4300	1500	2185	59	2785	81	4350	1200	2185	58	2785	73	4400	880
10	2225	44	2510	66	3950	1600	2218	57	2460	92	3800	2030	2218	67	2450	96	3700	1300	2188	67	2400	75	3700	1050	2185	67	2395	69	3700	770
11	2225	50	2160	53	3350	1500	2220	57	2100	78	3200	1500	2220	72	2055	87	3200	1090	2201	73	2025	70	3200	820	2187	73	2010	67	3200	710
12	2225	50	1850	42	2830	1200	2225	53	1800	66	2720	1150	2225	76	1790	80	2700	910	2203	80	1750	68	2710	750	2187	79	1750	65	2710	600
13	2225	45	1590	35	2430	900	2225	50	1540	57	2360	890	2220	80	1510	73	2330	810	2196	89	1500	65	2330	680	2175	90	1495	63	2330	490
14	2220	38	1360	29	2090	680	2225	48	1345	50	2030	760	2218	81	1295	68	2010	750	2185	95	1275	63	2000	580	2167	99	1275	61	2000	458
15	2220	37	1175	24	1800	488	2225	46	1135	46	1750	620	2212	85	1125	64	1730	680	2175	102	1100	61	1720	488	2153	107	1085	58	1720	411
16	2218	35	1010	20	1580	400	2225	42	980	41	1500	550	2203	85	965	61	1490	610	2166	108	935	58	1480	450	2142	113	930	56	1480	387
17	2218	35	865	16	1330	330	2220	42	843	37	1290	471	2192	85	822	56	1280	520	2160	110	810	55	1270	413	2140	117	801	53	1270	350
18	2215	35	748	13	1140	275	2220	48	731	32	1110	429	2185	86	695	52	1090	470	2152	113	688	52	1090	381	2138	122	675	51	1090	311
19	2215	35	638	11	980	225	2220	50	629	28	950	398	2183	83	600	46	940	439	2148	110	588	47	930	352	2135	124	578	47	930	287
20	2210	35	548	9	850	188	2218	50	535	24	820	350	2185	80	519	40	810	410	2148	107	506	41	800	329	2135	124	505	42	800	258
21	2208	35	475	8	720	150	2215	51	460	21	700	312	2190	80	450	35	700	382	2150	103	445	36	700	299	2135	123	438	36	700	217
22	2205	37	399	7	619	128	2208	53	395	18	604	282	2192	80	391	31	600	350	2152	102	389	31	600	267	2135	123	388	30	600	192
23	2202	38	345	6	538	100	2200	55	339	16	530	241	2194	83	335	26	520	329	2151	99	332	26	520	231	2135	122	331	25	520	166
24	2200	40	293	6	455	88	2200	61	292	13	451	205	2195	85	292	22	451	300	2149	98	292	21	451	201	2130	122	289	21	451	145
25	2201	45	252	5	393	77	2208	67	253	11	391	173	2194	85	251	18	391	253	2146	97	250	17	390	172	2130	121	249	18	390	111
26	2210	48	222	4	330	67	2218	69	221	10	330	145	2192	85	220	15	330	210	2141	97	218	14	330	150	2127	121	217	15	330	90
27	2219	50	187	4	287	58	2220	70	187	9	288	109	2180	84	186	13	288	174	2138	97	184	11	287	125	2125	121	183	12	287	82
28	2224	52	159	4	248	48	2220	70	158	7	249	90	2175	83	158	9	249	143	2135	97	156	9	249	99	2120	120	156	9	249	80
29	2225	54	138	3	209	39	2218	69	138	6	207	75	2164	83	137	8	205	105	2130	95	135	8	205	87	2115	118	135	8	205	75
30	2232	54	122	3	180	30	2207	68	122	5	180	63	2148	83	122	6	180	82	2125	95	122	7	180	80	2110	115	122	7	180	70
31	2235	55	105	3	153	28	2193	68	104	4	153	49	2135	82	104	5	152	78	2123	93	104	6	152	75	2108	112	104	7	152	67

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 3a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MARCH

ALT	0° T	s	P	s	D	s	10°N T	s	P	s	D	s	20°N T	s	P	s	D	s	30°N T	s	P	s	D	s	40°N T	s	P	s	D	s
0	2965	7	10312	13	11600	390	2975	12	10293	15	11600	720	2951	28	10355	21	11900	1500	2828	48	10370	60	12500	2970	2726	60	10405	82	13000	3650
1	2923	7	9210	12	10600	362	2928	12	9185	14	10600	680	2903	21	9200	18	10800	970	2827	53	9175	48	11100	2200	2701	70	9155	68	11700	3180
2	2875	7	8160	11	9600	329	2882	12	8175	14	9600	560	2857	21	8200	18	9800	820	2788	45	8150	43	9998	1580	2656	70	8075	67	10300	2450
3	2825	6	7170	9	8700	295	2830	12	7170	13	8700	450	2812	23	7270	17	8800	700	2738	39	7185	45	9000	1100	2620	67	7085	72	9300	1880
4	2775	6	6430	9	7900	263	2782	12	6430	13	7900	362	2767	24	6450	18	7950	570	2690	38	6335	48	8050	900	2565	63	6220	78	8300	1400
5	2720	6	5700	9	7050	220	2728	12	5685	13	7100	307	2709	24	5700	19	7200	430	2627	37	5550	50	7300	750	2510	58	5450	82	7400	1020
6	2660	7	5010	9	6400	198	2671	13	5015	13	6400	278	2649	24	5005	19	6500	350	2565	40	4900	52	6600	630	2450	55	4720	83	6600	750
7	2601	9	4410	9	5750	190	2610	13	4420	13	5800	250	2578	23	4410	20	5850	288	2497	43	4285	53	5900	580	2382	48	4100	83	5900	680
8	2545	11	3880	9	5200	185	2550	13	3905	14	5200	229	2510	22	3890	20	5300	251	2425	43	3697	54	5300	520	2303	44	3545	82	5300	800
9	2465	12	3380	10	4700	180	2475	13	3378	14	4700	200	2432	19	3365	20	4700	230	2351	40	3230	54	4700	510	2257	38	3060	76	4700	1010
10	2382	12	2940	11	4200	150	2385	15	2940	14	4225	175	2350	17	2930	20	4225	229	2290	35	2850	52	4200	620	2225	38	2625	66	4100	1300
11	2313	13	2550	12	3775	135	2307	15	2550	14	3800	150	2275	12	2525	19	3800	259	2222	33	2385	47	3750	750	2200	43	2230	54	3500	1400
12	2225	13	2225	13	3350	112	2223	13	2200	13	3400	150	2200	11	2170	19	3400	293	2175	35	2030	41	3300	830	2200	52	1920	43	2990	1200
13	2150	15	1875	13	2995	93	2150	13	1873	13	2980	145	2135	13	1845	18	2940	300	2144	35	1750	34	2740	780	2200	44	1655	33	2560	950
14	2078	16	1575	13	2630	80	2075	12	1575	12	2630	141	2081	15	1568	15	2590	289	2113	32	1500	28	2420	750	2190	38	1410	26	2200	750
15	2010	17	1365	12	2300	75	2008	11	1365	11	2300	139	2032	13	1350	12	2250	248	2093	31	1275	22	2060	620	2181	37	1210	21	1880	590
16	1959	18	1130	11	1990	88	1963	11	1138	10	1970	150	1997	13	1128	9	1940	201	2072	30	1100	17	1775	510	2173	35	1050	17	1620	445
17	1930	19	955	10	1690	130	1940	16	955	9	1690	188	1975	14	950	8	1660	192	2072	30	920	11	1510	424	2175	31	890	13	1390	352
18	1960	21	803	8	1400	230	1949	18	805	7	1410	197	1980	16	801	7	1400	185	2075	30	793	8	1280	335	2175	30	760	10	1190	289
19	2008	22	682	6	1160	192	2000	17	680	6	1160	169	2018	18	675	6	1150	160	2093	30	660	7	1080	263	2177	29	650	9	1010	231
20	2050	23	575	5	960	155	2048	19	577	4	960	142	2062	18	575	4	940	138	2110	30	565	6	900	199	2185	30	555	7	870	192
21	2095	23	492	4	800	118	2089	20	492	4	800	109	2104	18	485	4	790	100	2140	30	482	4	760	157	2190	30	475	6	740	153
22	2118	23	410	4	665	93	2122	22	412	3	665	88	2129	19	412	3	666	85	2159	31	410	4	665	113	2203	32	408	5	630	127
23	2148	23	360	3	565	81	2150	23	360	3	560	75	2150	20	355	3	560	75	2173	33	351	3	550	93	2211	35	349	4	545	98
24	2168	23	302	3	470	70	2183	25	301	3	470	63	2175	22	300	3	470	63	2198	36	300	3	470	77	2222	41	300	4	460	77
25	2192	23	260	2	409	59	2208	23	260	3	400	51	2194	23	260	3	400	52	2213	40	260	3	400	65	2231	43	260	4	398	70
26	2217	22	225	2	350	45	2227	20	224	2	340	45	2216	27	223	2	340	47	2225	42	221	3	338	52	2242	45	221	3	338	59
27	2240	22	194	2	293	34	2250	18	194	2	291	35	2240	31	192	2	290	39	2241	43	190	2	290	40	2253	43	189	3	288	48
28	2260	22	166	2	250	26	2268	19	166	2	249	27	2258	31	165	2	248	31	2259	45	164	2	248	28	2264	42	164	3	247	38
29	2275	22	141	2	218	24	2277	19	141	2	215	24	2278	32	141	2	212	28	2281	45	140	2	212	24	2278	40	140	3	213	33
30	2295	22	123	2	183	22	2300	21	123	2	182	22	2304	32	123	2	181	24	2305	45	123	2	181	22	2298	38	123	2	181	26
31	2315	23	106	2	157	20	2313	23	106	2	156	21	2320	32	106	2	155	22	2315	45	106	2	156	20	2312	36	106	2	156	24

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $°K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $°K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 3b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MARCH

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2580	86	10412	99	13500	5300	2498	88	10423	105	14200	4992	2450	70	10423	110	14800	4400	2385	52	10424	111	15200	3720	2378	38	10426	94	15200	2720
1	2620	77	9135	83	11900	3500	2570	79	9085	107	12200	3000	2490	67	9020	113	12400	2850	2450	47	9025	105	12500	2650	2430	37	9090	90	12500	2300
2	2601	72	8020	77	10600	2580	2540	74	7995	113	10700	2009	2471	64	7935	118	10900	1910	2450	45	7887	98	10900	1950	2450	35	7885	85	10900	1880
3	2552	68	7038	80	9400	1990	2500	70	6991	121	9550	1580	2430	61	6885	120	9600	1500	2418	43	6850	91	9700	1580	2415	35	6795	78	9700	1590
4	2502	62	6195	85	8400	1580	2447	67	6025	125	8500	1111	2382	59	5978	121	8500	1120	2365	39	5950	87	8500	1270	2362	32	5950	72	8500	1230
5	2441	57	5332	87	7500	1270	2389	63	5230	128	7600	850	2327	53	5180	120	7600	860	2307	35	5150	81	7600	998	2310	27	5150	67	7600	1000
6	2380	51	4625	88	6700	950	2328	59	4545	125	6700	860	2281	48	4460	115	6700	920	2260	32	4425	76	6700	800	2263	30	4425	61	6700	850
7	2310	45	4000	87	5925	850	2275	48	3985	121	5925	1111	2250	47	3830	107	5900	1200	2212	34	3785	71	5890	850	2211	33	3785	57	5850	800
8	2258	39	3430	81	5200	998	2235	43	3390	111	5200	1595	2225	49	3325	97	5100	1510	2185	38	3250	67	5100	1000	2175	38	3250	53	5100	750
9	2205	37	2965	73	4600	1220	2198	52	2899	97	4500	1992	2220	58	2880	83	4400	1700	2200	47	2800	60	4300	1010	2199	45	2800	50	4250	750
10	2175	50	2530	61	4000	1600	2188	62	2485	77	3850	2100	2225	62	2475	73	3700	1680	2220	52	2400	56	3700	910	2222	49	2400	48	3650	700
11	2205	53	2170	48	3400	1300	2211	65	2115	60	3300	1800	2225	67	2100	64	3200	1450	2220	55	2045	52	3100	820	2222	53	2020	47	3100	690
12	2225	52	1865	38	2860	1070	2221	63	1810	49	2790	1280	2225	69	1780	56	2720	1060	2218	60	1750	49	2700	710	2200	58	1750	46	2700	540
13	2225	44	1590	31	2440	770	2222	61	1550	41	2385	950	2230	73	1510	51	2330	860	2215	67	1501	47	2320	580	2190	66	1504	43	2320	483
14	2223	38	1370	27	2090	590	2223	60	1299	36	2050	730	2230	75	1285	47	2000	750	2208	74	1285	45	1990	485	2185	75	1285	42	1980	458
15	2223	36	1180	24	1800	433	2225	59	1150	31	1750	530	2230	79	1120	42	1720	630	2205	83	1105	43	1710	461	2180	85	1105	40	1710	432
16	2223	33	1025	21	1560	368	2225	58	980	28	1505	429	2225	85	970	39	1490	510	2202	91	950	41	1470	430	2177	93	955	39	1470	400
17	2225	33	870	19	1330	308	2225	58	850	25	1300	368	2225	87	829	35	1270	446	2198	97	815	39	1260	400	2172	98	815	37	1260	371
18	2230	33	750	16	1140	267	2230	58	720	23	1120	305	2221	90	700	31	1110	394	2190	103	695	35	1080	369	2169	106	695	35	1070	348
19	2230	33	635	13	980	220	2225	59	615	21	960	264	2220	93	599	28	940	343	2185	108	595	33	930	347	2162	110	593	33	920	320
20	2230	33	548	11	840	185	2222	60	539	18	830	245	2218	94	528	21	810	300	2183	111	515	31	800	312	2153	113	510	31	790	295
21	2230	34	472	10	720	153	2215	60	465	16	710	218	2215	96	448	19	705	253	2180	113	440	28	695	287	2148	119	435	29	690	271
22	2230	35	407	9	625	130	2206	60	397	13	618	206	2210	97	389	16	608	200	2175	116	378	26	595	272	2140	122	375	27	591	260
23	2230	36	345	8	530	105	2190	60	339	11	528	200	2210	96	331	13	520	168	2173	118	330	23	500	250	2135	123	330	26	500	241
24	2230	37	297	7	450	93	2190	60	290	9	450	185	2207	92	284	11	450	129	2172	118	273	22	430	231	2133	125	270	24	428	215
25	2235	39	255	7	391	82	2190	57	247	9	385	154	2195	85	245	10	385	98	2170	119	239	20	370	222	2130	125	237	23	368	197
26	2241	43	218	7	330	76	2185	55	212	8	330	127	2182	79	208	9	328	90	2170	120	205	18	320	198	2125	126	202	21	315	166
27	2248	43	187	6	282	69	2185	51	181	8	280	94	2175	67	178	8	278	84	2165	119	177	15	275	163	2125	125	176	18	273	142
28	2250	39	163	6	246	62	2182	49	161	7	245	82	2175	59	159	8	239	80	2163	117	155	12	238	129	2122	125	155	14	237	110
29	2251	37	138	6	211	54	2182	47	137	7	210	73	2175	57	135	8	208	78	2162	119	133	10	205	98	2121	125	132	11	205	90
30	2253	37	123	5	181	49	2182	47	122	7	179	66	2173	55	121	8	175	76	2158	120	121	9	175	82	2120	125	120	9	175	80
31	2253	36	107	4	155	43	2180	47	106	6	154	63	2170	55	105	7	153	75	2148	116	104	8	153	78	2115	124	104	8	153	76

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 4a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

APRIL

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2970	8	10312	11	11600	375	2975	11	10293	13	11600	570	2963	20	10343	21	11800	995	2897	36	10379	53	12100	1920	2788	57	10368	70	12700	2750
1	2932	8	9160	10	10600	365	2937	10	9160	11	10600	442	2923	19	9220	19	10700	770	2865	35	9220	48	10900	1550	2800	65	9190	62	11200	2680
2	2883	7	8150	8	9600	347	2884	10	8160	10	9600	365	2870	18	8200	18	9700	530	2822	34	8180	45	9900	1150	2750	65	8125	65	10100	2070
3	2826	6	7250	9	8700	312	2835	10	7250	11	8700	311	2822	17	7260	17	8800	430	2780	32	7230	43	8100	820	2700	58	7175	72	9100	1590
4	2778	6	6450	10	7900	280	2780	10	6445	12	7900	275	2765	17	6430	17	7950	365	2713	30	6385	42	8000	730	2640	53	6200	75	8200	1100
5	2713	6	5775	11	7100	246	2727	11	5775	12	7100	248	2702	17	5680	17	7200	303	2652	29	5550	42	7200	630	2590	52	5435	79	7300	880
6	2662	7	5010	12	6400	213	2670	11	5025	13	6400	223	2640	17	5000	17	6500	271	2588	28	4895	42	6500	540	2512	49	4785	81	6600	700
7	2600	7	4410	12	5800	190	2605	12	4410	13	5800	197	2577	17	4405	18	5850	248	2513	28	4300	41	5900	510	2445	48	4195	81	5900	650
8	2538	8	3880	12	5200	180	2539	12	3880	13	5200	180	2510	18	3850	18	5250	210	2445	30	3775	40	5300	498	2375	45	3660	80	5300	700
9	2472	9	3400	12	4700	170	2470	13	3390	13	4700	170	2438	18	3375	18	4700	192	2369	30	3215	38	4700	498	2300	41	3150	75	4700	850
10	2393	10	2950	12	4175	160	2391	14	2950	12	4200	160	2359	19	2900	18	4200	188	2300	30	2835	36	4200	505	2235	35	2715	70	4200	1000
11	2315	12	2580	12	3800	150	2310	14	2580	12	3800	170	2288	18	2535	17	3800	188	2240	32	2477	32	3700	530	2195	37	2330	58	3600	1300
12	2230	14	2225	12	3400	150	2235	14	2225	12	3400	170	2210	18	2180	17	3300	197	2185	32	2100	29	3300	590	2175	55	2000	45	3200	1500
13	2158	16	1880	12	2980	160	2151	15	1882	11	2980	170	2143	18	1860	15	2960	248	2149	33	1760	25	2850	620	2170	55	1700	34	2700	1100
14	2087	17	1600	12	2630	160	2075	16	1600	11	2630	170	2085	19	1575	13	2590	300	2110	33	1510	20	2450	600	2165	39	1450	26	2300	820
15	2017	20	1375	11	2320	170	2020	17	1370	10	2300	170	2047	19	1340	11	2250	299	2091	32	1300	17	2143	493	2160	35	1250	20	1980	610
16	1970	21	1130	11	2000	180	1975	18	1130	9	1998	170	2010	19	1125	10	1930	250	2072	30	1100	12	1800	405	2155	35	1070	16	1690	450
17	1935	22	960	11	1710	193	1940	19	960	8	1690	180	1985	19	950	8	1640	210	2072	29	932	10	1550	311	2155	32	900	12	1440	358
18	1971	22	805	10	1430	215	1951	20	806	7	1420	193	1985	19	802	7	1390	174	2075	28	793	8	1310	248	2160	30	775	9	1230	271
19	2016	22	685	8	1160	175	2003	19	685	6	1160	169	2026	21	678	6	1150	148	2091	27	669	6	1100	192	2165	30	660	8	1050	207
20	2057	22	575	7	960	125	2050	21	575	5	960	125	2075	21	580	4	950	119	2111	26	573	4	930	145	2170	28	565	7	890	160
21	2098	22	492	6	800	94	2094	21	491	4	800	94	2110	19	490	4	790	93	2132	26	490	4	780	104	2175	28	490	6	760	111
22	2127	22	415	5	670	82	2132	20	415	4	670	80	2148	18	415	3	660	79	2160	25	418	3	660	87	2185	28	417	5	650	90
23	2165	22	358	4	560	73	2168	19	357	3	560	68	2172	20	357	3	565	65	2175	25	357	3	565	69	2196	28	355	4	550	78
24	2192	22	303	4	470	67	2192	20	303	3	470	61	2202	22	303	3	470	51	2202	25	304	3	470	54	2210	28	302	4	470	67
25	2218	22	263	3	400	52	2215	21	262	3	400	49	2222	21	262	3	400	43	2222	25	262	3	400	46	2225	28	262	4	400	61
26	2239	25	225	3	340	47	2239	22	225	3	340	43	2239	19	225	2	340	37	2235	23	225	2	350	38	2238	30	225	3	340	53
27	2260	25	192	3	295	39	2260	23	192	3	292	37	2260	19	194	2	293	32	2253	23	194	2	295	30	2253	32	193	3	294	49
28	2280	27	165	2	251	32	2278	24	165	2	249	32	2278	21	165	2	250	27	2278	23	165	2	251	25	2268	33	165	3	250	39
29	2302	28	142	2	213	28	2302	25	143	2	213	25	2300	23	144	2	213	24	2299	24	143	2	214	23	2275	33	143	2	215	31
30	2317	29	124	2	183	24	2315	26	124	2	183	23	2312	25	124	2	184	22	2311	27	125	2	185	21	2278	34	123	2	184	26
31	2325	30	108	2	158	22	2323	28	108	2	158	21	2322	27	108	2	159	20	2318	28	110	2	159	19	2278	34	108	2	159	24

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 4b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

APRIL

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2675	58	10345	100	13200	3750	2585	70	10362	103	13600	4300	2495	72	10400	115	14500	4300	2430	68	10412	103	14800	4150	2450	64	10415	97	14800	4100
1	2695	65	9110	85	11600	3070	2620	58	9100	93	11900	2600	2540	65	9085	115	12200	2580	2512	58	9050	102	12300	2500	2525	57	9075	96	12300	2600
2	2665	58	8070	78	10300	2300	2598	55	7985	90	10600	1880	2518	63	7930	116	10700	1770	2508	53	7925	103	10800	1750	2515	52	7925	95	10800	1750
3	2620	57	7050	77	9200	1830	2548	52	7000	89	9450	1500	2468	61	6910	120	9550	1280	2453	48	6900	104	9600	1300	2465	47	6885	93	9600	1240
4	2565	57	6150	77	8300	1480	2497	47	6095	88	8400	1240	2408	58	6000	124	8500	1930	2403	43	5999	102	8500	950	2409	42	5999	91	8500	920
5	2500	55	5380	78	7400	1200	2428	44	5300	85	7500	950	2350	48	5180	119	7500	780	2340	38	5175	98	7600	750	2355	38	5175	86	7500	800
6	2430	50	4695	78	6600	920	2369	41	4578	80	6600	750	2298	40	4498	113	6700	990	2280	32	4450	92	6700	900	2299	35	4445	77	6600	750
7	2365	48	4090	78	5900	750	2301	35	3975	75	5900	850	2249	35	3890	105	5900	1500	2235	32	3855	84	5900	1120	2238	32	3840	68	5900	750
8	2299	42	3510	74	5200	890	2250	33	3408	70	5200	1111	2235	38	3390	93	5100	2000	2222	35	3300	74	5100	1300	2225	32	3300	59	5000	800
9	2247	35	3040	68	4600	1100	2222	38	2915	59	4500	1500	2238	45	2890	77	4400	1990	2231	39	2885	62	4300	1180	2237	32	2885	50	4275	800
10	2225	50	2610	56	4025	1500	2222	48	2510	46	3875	1350	2252	45	2498	60	3700	1470	2252	38	2480	50	3700	1010	2252	30	2480	43	3700	770
11	2215	55	2225	45	3400	1300	2242	42	2180	37	3300	1010	2265	38	2120	47	3200	1020	2265	35	2100	43	3200	880	2261	30	2100	38	3200	730
12	2210	50	1900	34	2960	1100	2253	37	1863	28	2810	770	2270	35	1815	38	2730	850	2270	30	1800	38	2710	740	2268	32	1800	34	2710	600
13	2215	40	1635	26	2500	800	2260	32	1580	23	2410	600	2275	33	1565	30	2350	710	2275	30	1550	32	2330	590	2275	35	1545	30	2330	489
14	2216	37	1395	20	2180	530	2261	31	1375	19	2080	444	2275	33	1350	25	2020	590	2275	32	1330	28	2010	491	2276	40	1330	27	2010	423
15	2217	35	1210	17	1850	422	2260	30	1185	16	1790	369	2275	35	1175	20	1750	473	2275	33	1150	25	1720	432	2277	46	1140	23	1710	374
16	2218	30	1035	13	1590	335	2258	31	1020	13	1540	302	2275	39	1000	17	1510	402	2275	40	995	22	1490	375	2278	52	979	21	1430	330
17	2218	30	890	11	1380	269	2253	32	885	11	1320	251	2275	43	865	13	1300	330	2277	46	850	19	1280	319	2280	57	845	19	1270	289
18	2220	30	765	9	1180	210	2251	32	750	9	1130	200	2275	43	748	12	1120	268	2275	52	735	18	1100	278	2278	63	730	18	1090	260
19	2220	30	652	8	1010	165	2250	32	695	8	980	161	2275	43	635	10	960	207	2275	55	630	15	950	238	2277	68	625	18	945	228
20	2220	30	561	8	870	127	2249	33	557	8	845	128	2270	45	550	9	828	168	2272	59	545	15	825	200	2275	72	545	17	825	195
21	2220	30	485	7	740	97	2248	33	478	7	730	98	2263	48	475	8	710	127	2265	63	470	14	700	170	2275	76	470	16	700	178
22	2220	30	415	6	640	88	2242	34	410	6	630	89	2252	51	408	8	620	97	2262	67	403	14	610	142	2270	81	403	15	610	163
23	2221	30	355	5	550	81	2238	35	350	6	540	78	2240	53	349	8	530	80	2260	71	345	13	520	115	2270	83	345	14	520	145
24	2222	30	302	4	470	77	2238	37	302	5	460	72	2235	54	300	8	460	71	2255	73	298	13	450	101	2270	88	298	13	450	129
25	2222	35	262	4	400	73	2238	41	262	5	400	68	2230	55	259	8	395	58	2251	75	255	12	390	91	2270	90	255	12	390	109
26	2228	37	225	4	340	68	2241	45	225	4	340	61	2235	56	222	8	340	49	2250	76	220	11	335	78	2270	92	218	11	330	96
27	2235	40	193	3	294	63	2256	47	193	4	292	57	2240	57	190	7	285	47	2250	77	189	10	285	74	2270	92	188	10	281	82
28	2243	41	165	3	251	59	2275	48	165	4	250	51	2250	57	163	6	248	43	2257	78	163	9	247	63	2273	93	163	9	247	77
29	2261	42	142	3	216	52	2290	49	143	3	216	46	2275	58	141	5	213	39	2268	80	140	7	212	58	2275	92	140	7	210	65
30	2278	43	123	2	185	47	2308	50	124	3	185	38	2300	57	123	4	182	37	2278	80	121	6	181	50	2278	84	121	6	181	60
31	2281	44	108	2	158	40	2315	49	109	3	157	33	2313	57	109	3	156	35	2295	72	108	5	156	47	2280	78	108	4	156	49

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 5a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MAY

ALT	0° T	s	P	s	D	s	10°N T	s	P	s	D	s	20°N T	s	P	s	D	s	30°N T	s	P	s	D	s	40°N T	s	P	s	D	s
0	2960	8	10315	12	11600	370	2980	11	10294	11	11600	500	2975	17	10331	19	11700	800	2938	30	10370	41	11900	1480	2855	49	10368	57	12200	2227
1	2922	8	9180	11	10600	350	2947	11	9180	10	10600	430	2930	17	9200	18	10700	750	2900	21	9230	39	10800	1100	2840	52	9225	57	11000	1995
2	2878	8	8175	9	9600	318	2880	11	8175	9	9600	375	2875	16	8215	18	9700	503	2850	19	8220	35	9800	780	2798	48	8170	64	10000	1500
3	2828	8	7250	8	8700	290	2832	11	7250	10	8700	325	2830	16	7265	17	8800	418	2800	19	7265	32	8900	610	2739	45	7225	70	9000	1100
4	2780	8	6430	8	7900	235	2785	11	6440	11	7900	271	2772	16	6450	17	7950	350	2735	20	6430	31	8000	490	2687	43	6360	73	8100	850
5	2725	8	5700	9	7100	195	2730	11	5700	12	7100	218	2712	16	5700	17	7200	297	2675	22	5685	31	7200	432	2625	45	5600	76	7300	670
6	2675	8	5010	9	6400	182	2675	12	5017	13	6400	191	2653	17	5015	17	6500	273	2618	24	4995	31	6500	403	2557	47	4900	80	6600	520
7	2609	8	4350	9	5800	175	2613	12	4350	13	5800	181	2591	18	4380	17	5800	268	2552	28	4350	31	5900	374	2482	47	4275	80	5900	470
8	2533	8	3875	9	5200	170	2549	13	3880	13	5200	175	2518	20	3875	17	5200	268	2480	30	3825	32	5300	350	2415	46	3700	79	5300	468
9	2468	8	3380	9	4700	170	2470	14	3375	13	4700	176	2442	21	3365	18	4700	265	2401	32	3310	33	4700	350	2350	42	3200	75	4700	508
10	2400	8	2950	9	4200	170	2400	14	2945	13	4200	170	2370	21	2920	18	4200	248	2328	32	2850	33	4250	340	2275	37	2770	71	4200	770
11	2322	9	2600	9	3800	170	2318	14	2585	13	3800	165	2299	19	2575	18	3800	220	2250	32	2499	32	3850	385	2210	35	2400	60	3750	1010
12	2235	9	2200	9	3400	170	2232	14	2190	13	3400	165	2210	18	2175	18	3300	246	2175	33	2135	30	3300	472	2170	41	2046	51	3200	1300
13	2160	10	1875	9	2990	175	2151	14	1875	13	2990	175	2140	18	1872	18	2970	288	2135	33	1825	27	2910	590	2150	52	1750	42	2800	1300
14	2081	13	1595	9	2640	180	2075	15	1595	13	2640	185	2080	19	1587	16	2610	328	2089	34	1548	23	2530	610	2145	48	1498	32	2400	990
15	2017	15	1350	9	2310	185	2008	16	1350	12	2300	193	2032	20	1345	15	2270	330	2068	33	1330	20	2150	500	2145	39	1280	24	2050	730
16	1962	17	1140	9	1990	197	1975	17	1140	11	1980	203	2000	21	1138	13	1940	291	2070	32	1115	15	1840	407	2145	32	1100	18	1740	510
17	1945	19	965	8	1680	220	1962	18	968	10	1680	225	1995	20	965	10	1650	234	2070	30	950	11	1570	331	2150	30	932	14	1490	409
18	1977	21	806	7	1400	220	1980	20	807	8	1400	208	2011	19	805	8	1370	187	2082	28	801	9	1320	263	2155	27	795	10	1260	315
19	2022	22	690	6	1150	190	2020	21	690	7	1150	183	2050	18	690	7	1140	146	2100	27	682	7	1110	195	2160	27	680	8	1080	239
20	2068	23	575	5	950	154	2069	21	575	5	950	144	2096	18	576	5	950	100	2125	27	578	6	930	139	2170	25	578	7	910	180
21	2108	23	496	4	800	125	2110	22	495	4	800	107	2125	17	496	4	790	87	2150	24	497	4	790	99	2178	25	496	5	780	126
22	2142	23	420	4	670	98	2145	22	421	4	670	90	2150	17	422	4	670	74	2169	24	422	4	670	77	2193	25	422	4	660	92
23	2171	23	358	3	555	81	2168	21	358	3	560	76	2178	18	362	3	570	59	2200	24	362	3	570	61	2209	25	365	4	560	74
24	2208	23	302	3	480	73	2200	21	306	3	480	65	2207	18	311	3	480	49	2224	25	312	3	480	49	2228	23	312	3	480	57
25	2225	23	263	2	400	60	2226	21	263	3	410	52	2230	20	265	3	415	44	2245	25	270	3	415	42	2240	23	270	3	415	48
26	2247	23	227	2	340	49	2251	21	227	2	340	47	2258	20	229	3	350	38	2262	25	230	3	350	38	2261	24	233	3	350	38
27	2268	23	195	2	295	43	2275	21	195	2	293	39	2277	20	195	2	295	33	2280	24	196	2	299	33	2275	25	200	3	300	35
28	2288	23	168	2	253	38	2295	21	168	2	251	34	2299	19	170	2	253	28	2302	22	172	2	257	27	2289	25	173	2	257	30
29	2310	23	144	2	215	33	2311	21	145	2	215	29	2312	18	144	2	217	25	2315	18	144	2	219	24	2302	25	147	2	222	29
30	2317	23	126	2	184	29	2322	21	125	2	184	25	2335	17	127	2	188	23	2328	17	127	2	188	23	2315	25	128	2	189	27
31	2325	23	109	2	158	27	2327	21	109	2	158	23	2350	17	112	2	162	21	2335	16	112	2	163	23	2325	25	113	2	163	27

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 5b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MAY

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2775	58	10350	80	12700	3300	2700	55	10338	86	13000	3250	2650	65	10368	103	13500	3200	2610	55	10392	94	13600	3150	2585	35	10398	65	13700	2500
1	2760	83	9175	68	11300	3150	2692	58	9100	78	11500	2700	2650	63	9100	101	11800	2500	2640	45	9100	78	11900	2550	2630	33	9100	58	11900	2280
2	2730	68	8100	72	10000	2250	2660	60	8065	76	10200	2010	2620	61	8020	101	10400	1880	2598	38	8030	69	10600	1900	2587	32	8005	52	10500	1910
3	2685	59	7200	79	9100	1690	2624	60	7070	81	9200	1680	2570	60	7075	102	9300	1570	2545	37	7002	66	9400	1520	2535	30	7000	48	9350	1580
4	2628	60	6270	84	8200	1300	2570	60	6190	85	8250	1300	2522	59	6190	101	8350	1250	2488	37	6150	63	8400	1250	2485	30	6130	45	8400	1200
5	2567	65	5485	88	7300	997	2502	60	5375	88	7400	1000	2465	55	5320	96	7450	995	2425	36	5320	60	7500	990	2419	30	5320	42	7485	980
6	2500	67	4775	92	6600	800	2438	58	4689	89	6600	800	2398	50	4650	93	6650	800	2360	35	4612	59	6700	800	2358	30	4608	38	6700	850
7	2430	62	4170	93	5900	750	2372	55	4100	90	5900	800	2331	43	4020	90	5900	880	2300	32	3989	57	5900	850	2290	30	3975	35	5900	800
8	2368	52	3610	92	5200	800	2318	52	3540	88	5200	930	2280	35	3495	80	5200	1050	2260	33	3420	52	5200	995	2235	32	3420	31	5200	730
9	2300	45	3115	88	4700	950	2273	50	3095	81	4600	1150	2261	38	2995	68	4600	1500	2255	40	2940	46	4500	1080	2295	33	2925	27	4450	620
10	2252	40	2693	80	4125	1150	2242	50	2665	70	4000	1600	2263	55	2615	53	3900	1500	2275	38	2533	38	3800	880	2310	32	2533	24	3750	490
11	2225	50	2315	66	3600	1600	2235	55	2275	55	3450	1600	2268	55	2225	42	3300	1200	2295	32	2190	30	3200	620	2315	30	2190	20	3150	446
12	2204	62	1985	52	3125	1500	2243	57	1930	42	2945	1200	2271	40	1904	34	2835	900	2302	28	1883	25	2790	468	2315	30	1883	18	2780	400
13	2203	63	1690	40	2630	1250	2251	48	1665	32	2520	1000	2275	32	1635	27	2440	610	2302	22	1630	20	2410	402	2315	30	1628	17	2400	361
14	2206	50	1460	28	2250	995	2252	39	1427	25	2160	750	2275	30	1415	22	2110	455	2300	19	1399	18	2080	350	2315	30	1399	15	2060	319
15	2208	38	1252	22	1940	730	2252	35	1231	20	1860	500	2275	27	1220	18	1820	393	2298	18	1215	16	1790	294	2315	30	1215	13	1790	272
16	2210	33	1075	17	1670	500	2252	32	1048	16	1600	410	2275	25	1045	15	1570	305	2298	18	1040	14	1550	246	2315	30	1030	11	1550	225
17	2211	30	920	14	1420	398	2252	30	905	13	1380	325	2275	24	900	13	1350	252	2298	18	895	12	1350	200	2315	30	895	10	1350	189
18	2212	30	785	10	1230	303	2252	30	782	11	1190	259	2275	22	778	10	1160	207	2300	19	775	10	1150	168	2315	30	775	9	1150	152
19	2215	27	675	8	1040	230	2252	30	672	9	1020	203	2275	20	670	9	1000	168	2301	20	670	9	990	132	2320	30	663	9	995	123
20	2220	27	575	7	890	178	2255	30	576	8	870	168	2277	20	576	8	860	135	2302	21	575	8	850	100	2320	30	572	8	850	97
21	2222	25	498	6	770	139	2256	30	499	7	750	129	2278	19	500	7	740	103	2302	22	498	8	740	90	2325	30	497	8	740	88
22	2226	25	422	5	660	100	2257	30	422	6	650	98	2280	20	422	6	640	87	2302	24	422	7	630	82	2326	32	422	8	630	78
23	2228	25	367	4	560	76	2262	30	368	5	560	76	2280	22	368	5	550	72	2302	27	369	7	550	75	2328	33	369	7	550	73
24	2233	30	315	4	480	61	2265	34	315	4	480	60	2282	28	317	4	480	58	2305	29	320	6	470	68	2331	35	318	7	470	65
25	2238	32	272	4	418	49	2270	38	272	4	410	49	2285	30	273	4	410	48	2308	32	273	6	410	61	2339	39	273	7	410	60
26	2248	35	235	3	350	35	2275	45	237	4	350	34	2280	30	237	4	350	40	2312	33	237	5	350	49	2350	43	235	7	350	50
27	2262	38	202	3	300	26	2280	50	204	3	300	27	2291	30	205	4	310	37	2322	35	205	4	300	46	2357	48	205	6	300	48
28	2278	38	175	3	258	24	2290	45	176	3	258	24	2299	30	176	3	258	32	2327	37	176	4	258	39	2362	50	176	6	258	45
29	2292	35	151	2	225	23	2308	37	153	3	225	23	2315	30	153	3	225	31	2340	39	154	4	225	38	2368	51	155	5	225	42
30	2310	32	129	2	192	21	2325	35	131	2	193	21	2338	35	132	3	193	29	2352	42	132	3	192	36	2375	52	133	5	190	39
31	2322	28	115	2	163	19	2328	30	118	2	163	19	2358	36	118	3	163	28	2365	48	119	3	162	34	2380	52	120	4	162	38

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 6a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JUNE

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	12	10317	12	11700	520	2980	10	10293	15	11600	518	3001	11	10332	21	11600	507	2960	21	10362	33	11800	1103	2888	37	10356	47	11950	1700
1	2918	12	9100	11	10600	389	2945	9	9190	14	10600	385	2945	10	9215	19	10600	390	2925	20	9220	30	10700	770	2872	41	9210	42	10900	1580
2	2872	12	8150	10	9700	302	2893	8	8177	13	9600	300	2901	9	8210	18	9700	336	2875	18	8211	28	9750	580	2822	38	8183	41	9850	1150
3	2828	12	7240	9	8700	285	2830	9	7250	13	8700	281	2830	9	7293	18	8800	298	2819	17	7285	27	8800	455	2776	35	7238	43	8900	820
4	2775	12	6440	8	7925	270	2775	10	6440	13	7900	258	2778	11	6502	17	7950	275	2758	17	6485	26	8000	399	2722	33	6350	45	8000	690
5	2721	12	5700	8	7100	253	2719	10	5710	13	7100	243	2722	11	5725	17	7200	253	2700	17	5698	26	7200	369	2668	32	5530	47	7250	570
6	2668	12	5008	8	6400	242	2669	10	5019	13	6400	228	2665	11	5032	17	6500	231	2637	17	5014	25	6500	347	2604	33	4926	48	6500	475
7	2601	12	4386	8	5800	230	2601	10	4386	13	5800	206	2601	10	4419	17	5800	211	2569	19	4420	25	5800	318	2530	36	4335	48	5900	430
8	2530	12	3865	9	5200	212	2538	10	3870	13	5200	195	2529	11	3878	16	5200	195	2508	20	3878	25	5200	288	2462	37	3750	48	5200	394
9	2460	12	3382	10	4700	192	2470	11	3378	12	4700	188	2459	11	3380	15	4700	185	2431	21	3370	24	4700	252	2390	38	3285	48	4700	389
10	2383	13	2940	11	4200	165	2394	12	2940	12	4200	157	2391	12	2942	13	4200	175	2350	21	2953	23	4200	229	2308	37	2897	47	4180	420
11	2302	14	2543	12	3800	138	2313	13	2543	11	3800	138	2300	13	2545	11	3800	164	2278	21	2525	22	3800	208	2250	32	2450	44	3700	580
12	2225	15	2189	13	3400	95	2229	14	2188	11	3400	118	2217	15	2185	10	3400	172	2208	21	2162	20	3350	261	2195	36	2100	38	3300	750
13	2149	16	1875	12	2995	80	2150	15	1875	10	2990	112	2147	16	1875	9	2980	187	2141	21	1860	18	2950	350	2165	41	1794	32	2850	850
14	2080	17	1600	11	2640	110	2070	17	1596	9	2640	149	2089	18	1596	9	2620	215	2092	25	1595	15	2570	439	2138	43	1532	26	2460	800
15	2019	18	1372	10	2300	170	2006	18	1372	9	2300	182	2035	20	1368	8	2280	250	2070	30	1350	13	2220	450	2131	40	1300	20	2100	620
16	1975	19	1139	9	1970	215	1975	19	1139	8	1970	218	2018	21	1140	8	1940	250	2070	30	1135	11	1890	393	2122	35	1115	16	1790	475
17	1970	20	942	8	1660	275	1972	20	959	7	1660	218	2015	21	961	7	1650	210	2070	28	959	9	1600	329	2125	29	950	13	1530	368
18	2000	21	810	7	1380	210	2001	20	808	6	1380	190	2038	20	813	6	1380	167	2075	25	811	8	1345	230	2129	25	805	10	1300	270
19	2040	22	690	6	1130	169	2049	19	689	5	1140	150	2070	18	692	5	1150	111	2100	21	692	6	1130	161	2150	20	692	8	1100	193
20	2082	22	577	5	950	110	2085	19	578	4	950	112	2105	18	579	4	960	90	2129	19	583	5	960	107	2170	19	592	6	930	145
21	2113	22	497	4	800	90	2112	19	494	4	800	92	2130	18	500	4	800	78	2167	18	503	4	800	82	2192	18	503	5	790	100
22	2140	22	421	4	673	78	2148	20	421	3	670	78	2160	16	423	3	670	65	2193	17	432	4	670	73	2210	17	435	4	672	77
23	2175	23	365	3	565	68	2170	20	362	3	570	68	2183	16	365	3	570	56	2218	16	373	3	570	60	2227	16	374	4	570	62
24	2205	23	311	3	480	60	2199	21	308	3	480	63	2209	18	311	3	480	43	2231	16	316	3	485	48	2243	16	320	3	490	49
25	2228	25	265	3	410	49	2227	23	265	2	410	52	2238	19	269	2	410	30	2250	17	273	3	415	42	2262	17	276	3	420	43
26	2252	25	226	2	350	47	2256	24	227	2	350	46	2259	20	232	2	350	24	2265	18	232	2	360	37	2275	18	237	3	362	38
27	2272	26	196	2	294	43	2275	25	196	2	294	37	2275	21	198	2	298	23	2278	18	201	2	310	32	2288	19	205	2	315	32
28	2293	27	169	2	255	39	2292	26	169	2	253	34	2293	22	171	2	256	23	2296	18	174	2	261	27	2307	20	176	2	263	29
29	2309	27	144	2	217	37	2309	27	148	2	216	31	2310	23	148	2	222	23	2312	18	150	2	225	24	2328	21	153	2	226	25
30	2315	28	127	2	183	35	2315	28	126	2	185	29	2325	24	128	2	190	21	2326	19	128	2	192	23	2340	22	132	2	194	23
31	2330	29	109	2	159	32	2330	29	109	2	160	27	2335	25	112	2	163	20	2335	20	113	2	165	21	2355	22	115	2	166	21

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 6b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JUNE

	50°N						60°N						70°N						80°N						90°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2830	50	10328	80	12500	2800	2765	41	10308	91	12600	2350	2750	40	10335	68	12900	1750	2777	43	10362	63	12900	2000	2782	37	10370	55	12900	1500
1	2805	59	9110	70	11000	2300	2743	55	9110	82	11400	2300	2725	42	9185	68	11400	1800	2728	42	9190	62	11400	1680	2735	36	9195	54	11400	1380
2	2755	55	8090	68	9999	1880	2700	54	8026	78	10100	1930	2675	44	8042	69	10200	1380	2680	41	8110	62	10300	1300	2693	36	8230	51	10300	1220
3	2705	50	7150	68	9000	1470	2646	56	7100	80	9100	1510	2571	44	7053	73	9200	910	2630	40	7092	62	9200	1000	2630	35	7118	49	9200	930
4	2648	50	6225	69	8100	1100	2590	58	6220	84	8200	1225	2506	42	6200	77	8200	800	2575	39	6220	63	8200	830	2588	35	6315	48	8200	710
5	2585	51	5485	72	7300	880	2517	59	5450	86	7350	950	2438	40	5392	78	7400	750	2512	39	5435	63	7400	680	2518	34	5596	46	7400	510
6	2513	51	4820	73	6500	750	2463	59	4775	89	6600	800	2367	38	4725	78	6600	800	2443	38	4725	64	6600	550	2450	32	4887	43	6600	470
7	2450	51	4192	75	5900	750	2399	58	4108	89	5900	810	2304	37	4108	76	5900	880	2371	37	4115	63	5900	520	2375	30	4209	41	5900	470
8	2382	50	3635	74	5200	750	2333	52	3540	85	5200	1000	2262	36	3499	72	5200	1030	2301	35	3536	60	5200	700	2301	32	3684	37	5200	488
9	2315	48	3146	72	4700	820	2285	52	3065	80	4600	1250	2262	38	3050	62	4600	1310	2249	38	3060	53	4600	1000	2248	35	3128	32	4600	507
10	2261	46	2745	67	4080	1000	2275	49	2651	64	4000	1600	2277	44	2622	52	4000	1580	2250	43	2624	43	4000	1200	2250	36	2683	27	4000	500
11	2238	46	2322	58	3600	1200	2272	47	2298	50	3450	1350	2281	44	2256	40	3400	1150	2275	42	2257	33	3400	1080	2282	32	2257	22	3400	462
12	2223	44	2020	47	3100	1400	2270	43	1955	38	2945	1110	2281	33	1940	30	2890	800	2289	34	1940	26	2890	700	2306	29	1940	19	2890	397
13	2222	42	1720	36	2660	1150	2270	39	1683	30	2510	800	2285	24	1675	24	2485	560	2298	25	1675	20	2485	450	2312	23	1678	17	2485	335
14	2219	41	1488	28	2280	850	2268	33	1452	25	2170	590	2285	19	1427	19	2150	429	2303	19	1423	17	2150	365	2315	19	1425	15	2150	275
15	2213	38	1270	23	1960	650	2260	30	1253	20	1870	445	2288	19	1245	17	1850	350	2309	17	1245	14	1850	295	2319	17	1245	13	1850	229
16	2210	35	1089	18	1680	465	2263	28	1076	16	1610	368	2296	18	1076	14	1600	291	2310	15	1074	12	1590	237	2322	14	1074	10	1590	189
17	2210	30	937	15	1450	370	2265	27	931	14	1390	307	2305	18	925	11	1380	236	2312	13	925	10	1370	188	2323	11	925	9	1370	163
18	2216	25	800	13	1240	290	2270	24	798	11	1200	251	2312	17	798	9	1190	191	2315	13	799	9	1180	155	2324	9	800	8	1180	147
19	2222	22	689	9	1055	211	2274	23	687	9	1045	198	2315	17	685	8	1020	154	2318	12	685	8	1020	131	2326	8	685	7	1020	111
20	2227	20	592	8	900	168	2275	23	592	8	890	167	2315	16	597	8	880	135	2321	11	597	7	880	100	2329	7	597	6	880	92
21	2235	19	505	7	780	123	2277	23	506	7	760	132	2318	16	513	7	760	100	2325	11	517	6	760	87	2333	6	517	5	760	83
22	2242	18	439	6	670	92	2279	25	438	6	660	100	2318	17	442	6	655	87	2329	11	445	5	658	77	2338	6	445	4	655	76
23	2253	18	375	5	570	76	2281	23	378	5	570	83	2320	17	383	5	570	75	2332	12	385	4	570	71	2340	7	383	4	570	68
24	2265	18	325	4	490	62	2291	23	329	4	490	72	2328	19	331	4	490	63	2335	16	332	4	490	63	2347	8	331	3	490	62
25	2275	18	279	4	420	51	2307	24	281	4	420	62	2325	21	283	4	420	50	2343	21	286	3	420	52	2355	9	284	3	420	50
26	2283	19	241	3	364	47	2313	25	243	3	362	50	2328	23	247	3	360	40	2348	22	250	3	360	47	2361	13	248	3	360	47
27	2300	22	208	3	310	38	2320	25	213	3	310	38	2335	23	213	3	310	31	2353	23	213	3	310	37	2369	15	211	2	310	39
28	2321	24	178	2	265	31	2327	26	183	3	265	28	2339	24	183	3	267	25	2362	23	184	2	268	29	2372	16	184	2	268	34
29	2339	26	155	2	226	25	2338	28	159	2	227	24	2350	25	159	2	228	23	2368	22	160	2	229	26	2375	15	160	2	229	30
30	2356	27	135	2	198	23	2351	29	137	2	196	22	2360	27	138	2	198	21	2374	21	139	2	198	24	2379	14	139	2	197	27
31	2370	28	118	2	166	21	2365	30	120	2	165	20	2370	28	122	2	167	19	2385	21	123	2	168	20	2385	12	124	2	165	24

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 7a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JULY

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2980	7	10312	12	11600	390	2985	11	10285	11	11620	495	2996	11	10356	11	11700	510	2978	14	10381	25	11800	630	2925	24	10372	38	12110	1250
1	2943	6	9200	12	10600	300	2944	10	9200	10	10600	446	2943	9	9250	10	10750	325	2936	11	9250	23	10700	495	2910	22	9200	34	10850	1180
2	2889	7	8200	12	9600	278	2890	10	8250	10	9600	397	2887	8	8300	9	9700	290	2875	10	8250	21	9700	400	2855	20	8225	31	9800	900
3	2828	7	7250	12	8850	265	2835	10	7300	10	8750	339	2825	8	7300	9	8800	268	2823	10	7300	20	8800	358	2803	19	7250	30	8850	740
4	2780	7	6400	12	7900	247	2783	11	6450	10	7900	298	2769	8	6500	8	7950	258	2768	11	6500	18	7950	331	2742	19	6400	29	8000	580
5	2719	7	5650	12	7150	229	2719	11	5700	11	7150	267	2709	9	5700	8	7200	252	2711	12	5750	16	7200	302	2693	23	5650	29	7200	468
6	2667	6	5050	12	6450	207	2670	11	5050	11	6400	237	2650	11	5050	8	6500	245	2658	12	5100	15	6500	288	2632	24	4950	29	6500	431
7	2606	7	4400	12	5800	190	2604	11	4400	11	5800	215	2592	12	4450	9	5800	231	2594	13	4400	14	5800	265	2570	26	4350	29	5800	403
8	2528	8	3800	12	5250	180	2531	12	3850	12	5200	197	2513	12	3800	9	5300	212	2523	15	3800	14	5250	248	2500	29	3750	29	5250	369
9	2459	8	3300	12	4700	170	2460	12	3350	12	4700	185	2448	13	3300	9	4750	197	2447	16	3350	14	4750	229	2425	32	3300	30	4700	328
10	2391	8	2900	12	4200	160	2391	12	2900	12	4200	175	2369	14	2900	11	4250	185	2379	16	2900	15	4250	210	2350	30	2850	31	4200	309
11	2309	8	2600	11	3800	160	2307	12	2600	12	3800	170	2291	15	2550	11	3800	170	2300	16	2500	15	3800	203	2277	28	2450	30	3800	350
12	2225	8	2250	11	3400	160	2226	12	2200	11	3400	170	2210	15	2200	11	3400	170	2220	16	2200	13	3400	203	2206	28	2200	28	3320	447
13	2148	9	1875	11	3000	170	2145	13	1875	11	2990	175	2135	16	1850	10	3000	185	2150	17	1850	12	2970	227	2162	30	1830	24	2920	570
14	2068	14	1600	10	2650	170	2065	13	1590	11	2630	190	2072	16	1580	9	2610	205	2093	18	1590	10	2600	250	2111	32	1560	20	2530	610
15	2004	19	1340	9	2300	180	2007	15	1350	10	2290	210	2039	17	1340	8	2250	230	2059	19	1350	9	2250	270	2093	34	1320	17	2180	580
16	1980	27	1130	8	1950	188	1986	17	1125	9	1950	196	2026	16	1130	7	1900	209	2050	21	1150	8	1910	258	2092	30	1150	12	1840	412
17	1990	21	955	8	1650	195	1992	19	960	8	1650	180	2026	17	960	6	1620	167	2061	21	970	7	1610	215	2101	26	960	10	1550	315
18	2019	21	815	7	1350	210	2023	21	810	7	1350	183	2039	17	820	6	1350	129	2085	19	820	6	1350	152	2125	23	820	8	1320	218
19	2065	23	685	6	1140	195	2065	21	690	6	1140	175	2078	18	700	5	1140	96	2109	18	710	5	1140	99	2150	19	710	7	1120	153
20	2098	24	580	5	950	168	2099	22	580	5	940	130	2111	19	580	4	950	82	2143	15	595	4	950	82	2174	18	605	6	940	104
21	2120	26	495	4	720	132	2127	22	495	4	800	103	2141	20	500	4	800	77	2169	16	515	4	800	73	2193	17	520	5	800	82
22	2150	28	425	4	665	105	2152	23	420	4	670	88	2161	20	430	3	680	72	2190	16	435	4	680	61	2215	16	445	4	680	69
23	2175	29	365	3	565	78	2180	23	365	3	575	76	2185	21	365	3	580	67	2213	17	375	3	580	49	2229	15	380	4	575	58
24	2205	28	315	3	485	62	2203	24	310	3	480	63	2210	22	320	3	485	57	2230	17	325	3	495	45	2243	16	325	3	495	49
25	2227	27	265	3	420	50	2226	25	265	3	415	50	2234	22	270	3	415	49	2250	17	278	3	420	39	2261	16	280	3	420	43
26	2253	25	230	2	355	46	2252	24	230	2	355	45	2255	23	235	2	360	39	2265	18	240	2	365	35	2281	17	240	3	370	38
27	2272	24	195	2	295	40	2272	23	197	2	300	38	2270	21	199	2	300	34	2279	18	205	2	310	30	2293	17	215	2	320	32
28	2290	23	168	2	255	37	2293	21	170	2	255	32	2292	19	171	2	265	28	2292	18	177	2	265	27	2308	18	182	2	270	28
29	2313	22	146	2	220	32	2312	19	147	2	225	28	2316	19	148	2	225	25	2312	19	151	2	230	24	2320	18	155	2	230	25
30	2328	23	126	2	180	30	2331	19	127	2	185	25	2324	19	128	2	185	23	2316	19	131	2	195	22	2338	18	135	2	195	23
31	2352	24	108	2	158	29	2345	22	110	2	161	23	2331	21	114	2	164	21	2330	19	114	2	168	19	2351	17	116	2	169	21

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 7b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JULY

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2876	38	10320	70	12275	2250	2809	39	10282	90	12400	1800	2775	35	10287	91	11550	1500	2792	34	10329	62	12600	1400	2790	30	10335	46	12600	830
1	2850	40	9200	59	10950	2000	2800	42	9150	85	11150	1820	2750	36	9150	88	11250	1111	2770	34	9150	59	11300	1250	2750	31	9230	44	11300	800
2	2800	38	8200	56	9900	1550	2750	45	8100	80	10000	1600	2710	37	8050	84	10100	920	2706	34	8100	56	10200	1020	2706	31	8155	42	10200	750
3	2749	34	7200	55	8900	1200	2698	43	7100	76	9000	1390	2663	37	7075	80	9100	850	2656	34	7100	54	9150	850	2656	33	7150	40	9150	650
4	2691	34	6300	55	8010	910	2630	43	6250	71	8150	1100	2601	38	6250	78	8100	800	2598	32	6250	52	8200	750	2598	34	6200	38	8200	580
5	2625	39	5600	56	7200	750	2568	43	5500	70	7300	880	2530	38	5450	76	7300	750	2525	31	5450	51	7300	650	2525	34	5400	36	7350	495
6	2560	42	4850	58	6550	600	2505	45	4800	69	6500	750	2470	38	4750	75	6510	750	2460	30	4750	50	6650	610	2460	34	4700	33	6650	484
7	2501	44	4200	59	5900	490	2430	44	4250	69	5900	750	2401	37	4175	72	5900	820	2392	33	4150	48	5900	540	2390	34	4200	31	5950	472
8	2432	43	3700	59	5200	473	2365	41	3600	68	5200	850	2328	35	3600	68	5200	930	2320	35	3600	46	5250	530	2315	33	3650	28	5300	465
9	2365	42	3250	59	4700	481	2300	36	3150	62	4650	950	2290	38	3100	60	4600	1150	2265	37	3100	42	4650	800	2255	33	3150	24	4650	443
10	2289	37	2800	56	4100	600	2275	38	2700	53	4000	1120	2260	42	2700	50	4000	1500	2252	39	2650	35	4000	1100	2240	34	2700	20	4000	460
11	2254	38	2450	52	3620	790	2257	42	2350	43	3510	1250	2270	42	2300	39	3400	1210	2274	40	2300	27	3400	900	2275	30	2200	18	3400	450
12	2235	42	2075	43	3120	1111	2263	44	1995	33	2980	1111	2280	37	1925	30	2910	960	2303	33	1950	19	2910	630	2306	27	1920	15	2910	405
13	2227	44	1760	33	2700	1040	2265	38	1750	26	2570	780	2290	31	1675	23	2510	620	2307	25	1690	16	2510	439	2307	22	1680	11	2510	331
14	2220	42	1520	26	2320	760	2268	33	1500	22	2200	520	2292	24	1475	18	2170	418	2308	19	1470	13	2160	335	2308	17	1470	9	2160	268
15	2220	36	1300	21	2000	570	2265	27	1300	18	1920	392	2294	20	1275	15	1870	315	2309	16	1290	10	1860	255	2309	13	1290	8	1870	197
16	2219	30	1115	16	1700	418	2265	22	1100	15	1650	308	2301	18	1100	12	1620	247	2312	13	1100	9	1610	197	2318	9	1100	7	1620	164
17	2219	26	955	13	1450	327	2265	18	950	12	1420	249	2307	17	950	10	1390	198	2317	11	940	8	1380	158	2320	8	935	6	1400	139
18	2220	22	820	10	1270	246	2270	17	820	9	1240	200	2312	15	820	9	1200	167	2323	10	810	7	1190	125	2325	7	815	6	1190	101
19	2222	18	715	8	1090	189	2275	16	710	8	1050	165	2315	14	710	8	1040	139	2324	9	700	6	1030	90	2327	7	700	5	1030	85
20	2226	17	605	7	930	146	2278	15	610	8	900	135	2316	14	610	7	882	109	2325	10	610	5	864	76	2329	6	615	4	890	65
21	2240	15	520	6	800	111	2280	16	520	7	800	104	2319	14	520	6	770	90	2326	9	520	5	760	59	2332	6	520	4	770	50
22	2352	16	445	5	675	90	2285	17	450	6	675	89	2320	15	450	6	665	77	2327	9	445	4	665	49	2335	6	445	3	660	48
23	2262	17	385	4	580	76	2295	18	385	5	580	76	2322	15	385	5	575	67	2328	9	385	4	570	46	2340	6	380	3	568	45
24	2269	19	330	4	494	63	2310	21	335	4	500	62	2324	16	335	4	495	63	2332	10	335	3	490	43	2348	5	335	3	495	41
25	2278	23	282	3	419	52	2315	24	290	4	425	53	2327	17	290	4	430	61	2335	11	290	3	425	39	2355	6	290	3	430	39
26	2284	30	244	3	363	48	2320	27	248	3	370	47	2333	18	250	3	370	57	2339	12	253	2	370	37	2363	7	255	2	375	36
27	2293	36	215	3	308	38	2325	30	219	3	325	39	2339	21	220	3	325	48	2347	13	222	2	325	33	2370	8	225	2	325	32
28	2320	44	185	2	265	33	2332	32	185	3	275	34	2350	22	188	3	275	38	2357	14	185	2	280	28	2380	9	185	2	280	31
29	2339	44	157	2	235	27	2343	32	160	2	235	29	2362	23	167	2	235	30	2374	16	160	2	240	25	2390	10	163	2	235	29
30	2358	35	132	2	195	24	2361	31	137	2	200	26	2370	22	137	2	200	26	2385	17	142	2	200	23	2401	12	142	2	200	27
31	2370	28	118	2	169	22	2367	31	120	2	174	23	2380	22	123	2	175	23	2400	17	124	2	175	20	2413	13	125	2	180	27

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 8a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

AUGUST

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2955	9	10318	11	11600	620	2975	13	10290	9	11600	620	2991	14	10341	16	11700	650	2960	18	10360	33	11800	1000	2920	35	10357	46	12000	1850
1	2903	8	9180	11	10600	395	2943	9	9180	9	10600	377	2946	10	9220	14	10600	361	2923	14	9240	30	10700	680	2902	36	9233	39	10800	1480
2	2860	6	8150	11	9600	329	2883	8	8175	8	9600	300	2882	11	8220	11	9600	295	2878	13	8225	27	9600	478	2850	36	8215	37	9800	1000
3	2824	5	7150	11	8700	285	2824	7	7150	8	8700	268	2827	11	7297	11	8700	270	2825	12	7285	24	8800	432	2800	24	7275	37	8900	770
4	2778	6	6400	11	7800	243	2777	8	6400	9	7900	237	2771	11	6400	11	7950	250	2772	13	6420	22	8000	402	2757	21	6433	39	8000	630
5	2719	7	5720	10	7100	204	2722	9	5695	10	7100	202	2712	12	5700	12	7200	232	2714	14	5710	20	7200	381	2688	24	5675	40	7200	530
6	2657	7	5032	9	6400	187	2662	9	5015	11	6400	185	2650	12	5027	12	6500	207	2655	16	5028	19	6500	375	2622	31	4993	38	6500	476
7	2599	8	4409	9	5800	165	2601	7	4409	11	5800	171	2588	11	4420	11	5800	193	2588	17	4421	18	5800	358	2557	36	4378	37	5800	445
8	2525	9	3895	9	5200	142	2532	5	3892	9	5200	152	2521	11	3895	11	5200	181	2523	18	3895	17	5200	329	2489	38	3823	38	5200	408
9	2453	10	3394	10	4700	135	2470	7	3392	10	4700	139	2420	11	3377	10	4700	170	2450	19	3375	17	4700	298	2410	38	3330	40	4700	338
10	2379	11	2930	11	4200	113	2382	8	2930	11	4200	123	2358	11	2933	11	4200	165	2376	21	2933	17	4200	258	2342	38	2886	41	4200	300
11	2301	12	2553	11	3800	92	2310	10	2552	11	3800	107	2288	11	2538	11	3800	164	2304	19	2534	17	3800	230	2272	29	2491	40	3800	410
12	2225	13	2183	11	3400	85	2225	11	2183	11	3400	102	2212	11	2178	11	3400	165	2226	17	2175	16	3350	218	2229	26	2139	35	3300	550
13	2150	14	1870	11	2980	100	2149	13	1870	10	2980	125	2148	12	1870	10	2980	181	2165	18	1863	14	2965	282	2180	30	1810	30	2900	680
14	2027	15	1591	10	2630	121	2081	14	1591	9	2630	145	2083	13	1590	9	2610	203	2100	19	1593	12	2595	335	2141	34	1572	23	2525	700
15	1977	16	1350	9	2285	149	2037	15	1350	8	2280	152	2071	14	1352	8	2260	200	2075	23	1353	9	2245	350	2100	37	1331	18	2180	630
16	1982	17	1132	8	1960	188	1980	17	1132	7	1950	168	2022	15	1135	7	1920	178	2052	24	1143	8	1910	300	2098	34	1131	13	1840	489
17	1982	18	959	7	1660	191	1998	19	959	6	1640	181	2026	15	963	6	1630	153	2065	22	971	6	1615	207	2106	26	968	10	1560	325
18	2025	19	802	6	1380	215	2027	20	803	5	1370	192	2050	15	811	4	1360	128	2087	19	821	5	1350	150	2132	23	821	8	1320	221
19	2075	20	695	5	1150	187	2071	19	687	4	1140	145	2081	15	700	4	1140	97	2106	18	710	4	1140	99	2151	19	713	7	1110	158
20	2106	21	585	4	930	111	2101	18	590	4	950	98	2107	16	591	3	955	83	2133	17	600	4	955	82	2175	18	600	5	940	110
21	2126	23	498	4	800	88	2127	19	500	3	800	83	2119	16	500	3	800	74	2156	16	511	3	800	67	2195	17	515	4	800	89
22	2150	24	419	3	675	77	2150	21	418	3	680	75	2162	16	429	3	680	63	2181	15	442	3	680	53	2210	17	445	4	680	71
23	2175	25	363	3	570	67	2173	22	363	3	570	64	2188	16	367	3	575	56	2207	16	381	3	580	47	2225	16	385	4	580	59
24	2203	24	312	3	490	59	2192	21	311	3	490	58	2213	17	315	2	490	48	2222	17	320	2	497	38	2245	15	327	3	500	47
25	2213	24	266	2	410	49	2213	20	266	2	410	49	2234	18	270	2	415	39	2241	17	275	2	420	33	2258	15	278	3	423	38
26	2225	23	228	2	350	45	2227	19	228	2	350	43	2254	19	232	2	350	32	2260	18	237	2	360	26	2264	15	241	3	360	33
27	2232	23	195	2	300	42	2247	18	197	2	300	37	2269	22	200	2	300	27	2271	19	203	2	307	24	2282	16	207	2	310	26
28	2258	22	169	2	255	39	2264	17	169	2	255	34	2285	24	173	2	254	24	2284	19	176	2	263	22	2297	17	177	2	266	24
29	2275	22	145	2	218	37	2280	17	146	2	218	31	2296	21	149	2	219	22	2297	18	152	2	224	21	2316	18	154	2	227	23
30	2289	23	127	2	188	34	2298	18	127	2	188	29	2310	17	128	2	189	20	2311	16	131	2	193	19	2322	18	132	2	195	23
31	2302	24	106	2	160	32	2312	23	109	2	161	28	2323	15	111	2	164	18	2323	15	115	2	168	17	2338	17	117	2	169	21

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 8b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

AUGUST

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2852	39	10336	69	12400	2300	2795	34	10288	82	12450	1930	2753	21	10327	67	12700	950	2726	23	10350	65	12700	1300	2715	25	10352	57	12650	850
1	2823	42	9159	57	11111	2050	2760	41	9110	74	11200	1940	2725	22	9115	63	11300	1200	2714	25	9115	65	11400	1150	2708	26	9110	57	11350	810
2	2777	44	8183	52	9980	1550	2725	39	8108	69	10000	1660	2700	24	8100	61	10200	1200	2682	27	8072	64	10300	920	2702	27	8072	56	10250	750
3	2727	43	7160	53	9000	1180	2675	38	7100	66	9000	1270	2645	28	7098	59	9100	1000	2632	29	7093	63	9200	780	2651	29	7093	53	9200	670
4	2675	43	6315	56	8075	900	2620	38	6200	64	8100	970	2584	31	6200	58	8150	820	2577	31	6210	62	8150	730	2600	30	6203	52	8150	570
5	2620	43	5520	59	7300	750	2551	40	5435	63	7300	800	2511	32	5418	58	7300	740	2519	37	5418	61	7400	650	2533	31	5410	48	7400	493
6	2557	44	4850	62	6500	610	2482	43	4850	63	6500	700	2452	33	4850	57	6600	610	2421	38	4795	60	6600	620	2462	26	4785	45	6600	486
7	2477	44	4232	63	5800	500	2416	41	4150	63	5900	650	2377	31	4125	56	5900	480	2375	38	4125	59	5900	530	2381	24	4125	40	5900	474
8	2421	45	3691	64	5200	448	2347	39	3594	62	5200	700	2313	35	3575	55	5200	650	2316	35	3565	58	5200	580	2325	20	3565	36	5200	465
9	2349	42	3195	64	4700	475	2282	38	3082	59	4700	900	2251	40	3061	51	4700	950	2249	35	3050	53	4700	780	2259	19	3039	31	4700	448
10	2280	39	2775	61	4150	680	2237	39	2680	49	4100	1120	2225	44	2637	42	4100	1200	2221	41	2632	46	4100	1090	2228	19	2632	28	4100	432
11	2244	39	2372	52	3600	995	2242	40	2299	40	3500	1120	2247	43	2235	34	3500	1030	2241	40	2226	38	3500	1000	2233	19	2225	25	3500	440
12	2230	43	2032	45	3125	1100	2258	38	1978	30	2985	850	2258	38	1949	28	2935	750	2259	32	1931	30	2930	770	2256	18	1931	21	2930	418
13	2218	43	1745	36	2670	930	2261	30	1719	26	2550	610	2261	30	1682	24	2515	492	2262	26	1675	25	2510	520	2260	18	1671	19	2510	371
14	2221	40	1499	28	2300	750	2264	23	1485	22	2208	438	2270	23	1462	21	2155	370	2268	22	1462	21	2150	400	2267	17	1453	18	2150	300
15	2220	37	1275	23	2000	610	2263	20	1252	19	1895	350	2275	20	1247	18	1855	293	2272	19	1239	18	1850	293	2271	17	1239	17	1850	265
16	2218	32	1105	18	1700	458	2263	18	1079	17	1635	292	2280	18	1068	16	1600	248	2280	17	1068	16	1590	242	2275	16	1068	15	1590	225
17	2212	29	945	14	1465	346	2263	18	931	14	1400	239	2284	17	918	14	1390	209	2287	16	918	14	1380	200	2276	16	918	14	1380	191
18	2215	27	813	11	1250	255	2268	17	800	12	1210	198	2288	16	798	12	1190	177	2290	16	793	13	1180	175	2277	16	793	12	1180	167
19	2222	24	696	9	1080	198	2268	16	690	10	1035	170	2294	15	685	10	1030	148	2299	16	685	11	1020	150	2278	14	685	10	1020	139
20	2227	21	598	8	910	157	2268	16	595	8	895	136	2297	14	595	9	880	122	2300	15	595	9	880	128	2280	15	592	9	880	119
21	2239	17	513	6	785	119	2273	15	508	7	770	102	2299	13	508	8	760	98	2299	15	510	8	760	100	2280	15	509	8	760	96
22	2249	16	445	5	670	91	2276	14	441	6	660	87	2304	12	439	7	660	81	2299	16	439	8	655	88	2282	16	438	8	650	83
23	2260	17	385	4	570	75	2279	14	385	5	570	71	2305	11	385	6	570	73	2300	16	385	7	570	77	2285	16	380	7	565	76
24	2271	17	329	4	490	62	2282	17	329	4	490	58	2307	13	329	5	490	65	2301	17	327	6	490	71	2288	17	327	6	485	70
25	2277	18	279	3	425	49	2289	19	281	4	425	46	2311	15	280	4	421	57	2303	18	280	5	420	62	2296	17	280	5	420	60
26	2288	19	242	3	360	39	2292	21	242	3	360	37	2318	17	242	4	360	48	2307	20	242	4	360	52	2299	17	242	4	360	49
27	2297	20	210	3	310	33	2301	22	210	3	310	32	2323	19	211	3	310	40	2313	21	211	4	310	47	2311	18	210	4	310	47
28	2313	21	179	2	267	28	2319	23	179	3	266	25	2325	21	179	3	266	37	2325	21	179	3	266	43	2322	18	179	3	266	43
29	2328	22	157	2	230	26	2332	24	156	2	230	23	2334	23	157	3	230	34	2338	21	157	3	230	39	2332	17	157	3	230	39
30	2348	23	133	2	197	25	2350	25	133	2	198	22	2345	25	134	2	198	30	2342	21	135	2	198	37	2344	17	135	2	198	35
31	2358	22	117	2	170	24	2360	24	118	2	170	20	2357	27	117	2	170	29	2354	23	117	2	170	32	2355	18	117	2	170	33

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 9a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

SEPTEMBER

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2952	7	10315	11	11600	780	2970	14	10287	11	11600	780	2982	16	10328	15	11700	800	2957	23	10360	31	11900	1070	2870	47	10375	56	12200	2750
1	2899	7	9200	11	10600	460	2933	12	9181	10	10600	445	2941	9	9220	14	10600	348	2925	17	9235	29	10700	660	2871	49	9225	44	10900	2010
2	2863	7	8225	11	9600	355	2887	9	8175	9	9600	338	2883	8	8198	13	9700	285	2876	16	8210	26	9750	455	2829	40	8200	42	9880	1500
3	2825	6	7310	10	8700	288	2826	7	7264	8	8700	277	2833	8	7258	13	8800	265	2825	15	7287	24	8800	407	2780	39	7268	42	8900	1015
4	2775	6	6437	9	7900	250	2774	8	6437	8	7900	238	2775	8	6445	13	7950	254	2774	15	6440	22	7990	389	2731	38	6389	43	8000	770
5	2720	7	5699	9	7200	219	2721	9	5718	8	7200	200	2720	9	5720	13	7200	246	2716	15	5720	21	7200	365	2680	38	5661	43	7200	610
6	2658	7	5002	8	6500	189	2661	9	5009	8	6500	186	2659	9	5010	11	6500	229	2658	16	5010	20	6500	338	2612	38	4979	44	6500	500
7	2598	7	4409	8	5800	165	2601	10	4409	8	5800	169	2597	10	4417	10	5800	213	2588	17	4420	19	5800	312	2550	38	4302	46	5900	467
8	2525	7	3861	8	5200	142	2532	11	3861	8	5200	150	2522	11	3872	9	5200	196	2523	18	3865	19	5200	298	2476	39	3810	49	5200	435
9	2457	7	3380	9	4700	115	2456	11	3370	8	4700	139	2450	12	3370	9	4700	175	2450	18	3370	18	4700	267	2401	41	3312	50	4700	412
10	2374	8	2930	11	4200	93	2383	11	2930	8	4200	127	2375	12	2930	9	4200	165	2372	19	2928	18	4200	232	2323	39	2867	49	4200	407
11	2301	9	2537	11	3800	80	2317	11	2537	8	3800	110	2298	14	2537	9	3800	150	2287	19	2532	18	3800	197	2260	34	2471	46	3800	462
12	2225	11	2183	10	3300	80	2232	11	2183	8	3300	92	2221	15	2182	9	3400	147	2212	19	2173	17	3400	196	2195	34	2118	41	3300	600
13	2150	13	1875	9	2980	82	2148	12	1875	8	2980	96	2137	16	1880	9	2980	168	2137	18	1875	16	2975	241	2150	36	1811	35	2908	750
14	2080	14	1618	8	2650	100	2075	13	1592	8	2630	112	2078	17	1590	8	2620	197	2090	18	1585	14	2600	298	2102	37	1543	30	2510	760
15	2025	16	1348	8	2300	115	2023	15	1348	8	2290	148	2045	18	1347	8	2270	212	2058	18	1343	11	2240	315	2088	38	1311	22	2160	640
16	1978	18	1138	7	1970	120	1983	17	1138	7	1960	152	2008	19	1139	7	1930	210	2050	22	1136	9	1910	289	2088	38	1115	17	1820	520
17	1984	19	960	7	1680	130	1983	19	958	7	1650	150	2011	21	960	7	1630	183	2073	24	961	8	1610	238	2095	37	952	13	1540	410
18	2032	23	803	6	1390	120	2025	19	803	6	1370	139	2033	21	811	6	1370	147	2080	21	814	7	1340	192	2117	28	807	10	1300	309
19	2072	23	685	5	1130	115	2070	18	685	6	1140	118	2071	19	690	5	1140	106	2101	17	692	6	1130	141	2140	27	688	8	1100	219
20	2106	24	585	4	930	106	2100	19	585	5	950	100	2105	18	588	4	950	88	2131	16	593	4	945	101	2161	24	592	7	930	176
21	2124	24	499	4	800	92	2117	19	495	4	800	87	2131	17	499	4	800	76	2158	16	502	4	800	87	2182	22	504	6	790	135
22	2147	23	423	4	670	78	2144	18	423	4	670	76	2156	16	425	3	680	63	2183	14	435	4	680	70	2203	20	442	5	670	102
23	2170	23	369	3	565	72	2167	18	369	4	570	67	2183	16	369	3	570	53	2206	13	374	3	575	51	2217	19	372	4	575	81
24	2197	24	313	3	480	62	2188	19	309	3	480	58	2207	17	312	3	490	47	2210	13	318	3	490	46	2228	20	320	4	490	63
25	2211	24	270	3	415	50	2211	18	270	3	410	49	2227	16	269	3	410	39	2238	13	271	3	420	38	2243	20	273	4	420	50
26	2225	23	234	2	350	47	2230	18	236	3	350	44	2250	17	236	2	350	34	2259	15	237	2	355	33	2260	20	235	3	360	47
27	2239	23	198	2	300	43	2254	18	198	2	299	38	2267	18	200	2	300	29	2271	17	203	2	300	27	2271	20	203	3	308	37
28	2261	24	171	2	257	39	2267	19	170	2	255	36	2283	20	172	2	256	25	2282	18	174	2	259	24	2281	20	175	3	261	32
29	2275	25	143	2	221	37	2273	21	146	2	219	34	2294	22	146	2	219	24	2293	19	150	2	222	23	2298	20	152	2	225	26
30	2282	25	127	2	187	35	2304	23	127	2	187	34	2305	24	127	2	188	23	2309	19	127	2	192	21	2310	20	128	2	193	25
31	2310	25	109	2	161	33	2317	25	109	2	161	32	2321	25	110	2	161	23	2325	18	111	2	164	19	2326	21	114	2	166	23

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 9b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

SEPTEMBER

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2818	51	10340	81	12500	3200	2763	29	10290	93	12600	2150	2711	31	10302	67	12900	1750	2660	49	10312	53	13200	2700	2631	43	10315	47	13200	1680
1	2799	61	9160	63	11200	2900	2727	42	9110	80	11350	2450	2675	44	9089	66	11550	1850	2632	48	9072	56	11700	1930	2624	41	9085	47	11700	1500
2	2751	57	8113	58	10000	2180	2697	48	8060	71	10100	2120	2631	47	8000	68	10300	1720	2607	46	7985	60	10400	1490	2604	39	7999	46	10400	1170
3	2704	57	7150	60	9000	1750	2647	52	7065	71	9100	1850	2599	48	7002	72	9200	1480	2561	46	6987	65	9300	1180	2554	38	6899	46	9300	900
4	2651	60	6285	66	8025	1420	2588	53	6215	73	8170	1480	2527	49	6128	74	8200	1250	2504	44	6092	68	8300	890	2505	37	6020	46	8300	625
5	2585	61	5511	70	7300	1040	2527	56	5482	75	7300	1160	2472	49	5329	75	7400	1000	2422	42	5299	70	7400	610	2423	36	5272	45	7400	488
6	2525	61	4832	75	6500	820	2470	58	4726	78	6600	930	2399	48	4662	76	6600	850	2372	41	4599	71	6600	491	2371	35	4589	43	6600	467
7	2451	61	4200	78	5900	750	2394	58	4098	82	5900	750	2328	46	4000	76	5900	700	2305	38	3978	70	5900	497	2306	36	3978	40	5900	468
8	2377	60	3652	80	5200	700	2326	57	3575	83	5200	750	2272	42	3482	74	5200	850	2248	31	3423	65	5200	800	2248	36	3392	36	5200	483
9	2325	53	3158	79	4700	750	2267	48	3057	77	4600	900	2238	31	3000	71	4600	1010	2228	37	2937	57	4500	1100	2222	35	2908	31	4500	500
10	2267	43	2719	73	4080	890	2240	42	2645	70	4000	1120	2230	40	2582	62	4000	1350	2231	49	2518	47	3900	1180	2236	35	2500	28	3900	570
11	2232	39	2336	66	3600	1111	2237	42	2283	58	3450	1400	2244	37	2195	51	3400	1250	2257	35	2163	38	3300	910	2257	24	2142	26	3300	513
12	2222	43	2000	54	3100	1350	2238	43	1932	47	2970	1220	2257	32	1893	40	2850	980	2268	24	1860	32	2800	615	2261	19	1855	23	2800	415
13	2209	47	1716	43	2668	1200	2238	41	1670	37	2530	998	2259	25	1630	33	2450	710	2272	18	1605	28	2410	447	2268	17	1605	20	2410	359
14	2201	44	1471	34	2310	980	2239	38	1427	30	2180	755	2267	19	1402	28	2110	495	2275	16	1395	24	2080	363	2272	16	1395	18	2080	298
15	2196	41	1260	27	1980	750	2242	33	1232	26	1870	532	2267	18	1205	24	1830	388	2277	16	1186	21	1790	300	2275	17	1186	17	1790	267
16	2196	37	1125	22	1690	580	2242	27	1070	21	1610	400	2265	18	1037	20	1570	312	2276	18	1020	19	1540	265	2270	19	1020	15	1530	235
17	2197	32	925	18	1450	415	2242	25	909	18	1380	325	2260	18	895	18	1340	268	2263	20	877	17	1330	228	2265	22	877	13	1330	199
18	2199	28	796	14	1240	318	2242	24	775	16	1190	265	2253	19	770	16	1160	222	2257	22	760	15	1150	197	2258	24	760	12	1130	175
19	2203	24	680	11	1060	247	2244	22	662	13	1020	207	2248	23	657	14	1000	192	2245	23	649	13	990	171	2248	26	640	10	985	154
20	2210	22	585	9	900	193	2240	22	569	12	875	187	2243	24	569	13	858	169	2239	27	562	12	850	147	2241	28	562	9	845	134
21	2218	21	500	8	770	152	2235	22	493	10	760	148	2237	25	489	12	740	142	2234	29	478	11	730	125	2236	32	473	8	725	109
22	2223	22	433	7	660	125	2230	22	419	9	650	119	2236	26	418	10	635	115	2230	32	415	10	630	103	2231	34	411	8	625	93
23	2232	23	370	6	570	97	2234	22	365	8	560	93	2236	26	359	9	550	95	2225	34	353	9	540	92	2228	36	353	7	535	88
24	2238	23	318	6	490	79	2240	24	311	7	482	78	2241	28	305	8	470	83	2223	35	303	8	470	86	2224	39	301	6	470	82
25	2247	22	272	5	420	72	2246	25	269	6	410	67	2245	29	265	8	400	73	2221	36	260	8	400	78	2224	41	260	5	400	78
26	2261	19	233	4	360	61	2257	25	228	6	350	56	2247	30	227	7	348	64	2227	37	225	7	340	74	2228	42	225	4	340	74
27	2272	18	202	4	304	49	2270	25	200	5	300	48	2249	32	193	6	298	57	2231	37	191	7	293	69	2232	43	191	4	292	70
28	2280	19	174	3	262	41	2281	25	171	4	262	43	2258	32	171	6	257	49	2237	37	169	6	252	65	2237	44	169	4	251	65
29	2291	21	149	3	226	37	2292	24	143	4	224	40	2275	34	141	5	221	46	2242	37	141	6	215	59	2242	44	141	3	215	60
30	2307	22	125	2	193	33	2307	24	123	3	191	36	2287	34	122	4	187	42	2251	37	121	5	184	50	2247	45	121	3	184	50
31	2320	23	112	2	166	32	2322	25	109	2	165	34	2305	35	107	3	163	39	2272	36	106	4	160	47	2249	45	106	2	159	47

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 10a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

OCTOBER

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2957	6	10325	15	11500	382	2978	12	10287	16	11600	500	2983	17	10325	22	11700	832	2904	42	10358	51	12100	2150	2828	54	10386	78	12400	3300
1	2911	5	9180	15	10700	325	2925	10	9180	16	10600	391	2928	9	9235	20	10600	537	2891	34	9250	46	10800	1590	2810	54	9225	68	11200	2600
2	2863	5	8150	14	9700	288	2886	10	8173	16	9600	318	2882	13	8210	19	9700	431	2844	33	8250	42	9800	1060	2775	53	8187	64	10000	1880
3	2825	5	7250	14	8700	269	2833	11	7261	16	8800	283	2830	12	7284	18	8800	369	2801	25	7262	40	8900	770	2724	48	7206	66	9000	1287
4	2775	6	6435	13	7900	244	2778	12	6434	16	7900	256	2777	12	6447	18	7950	317	2747	24	6415	39	8000	640	2679	46	6353	72	8050	976
5	2722	6	5685	13	7100	215	2724	12	5685	15	7100	225	2724	11	5685	18	7100	281	2689	25	5275	39	7200	552	2620	48	5583	73	7300	821
6	2659	6	5015	12	6400	193	2672	12	5021	14	6400	198	2662	12	5018	18	6400	253	2626	28	4992	38	6500	476	2557	49	4895	74	6500	752
7	2598	7	4427	12	5800	173	2607	11	4427	14	5800	176	2600	13	4417	18	5800	224	2565	31	4382	37	5850	437	2483	52	4275	74	5900	700
8	2526	9	3895	11	5200	150	2541	11	3895	13	5200	158	2526	15	3895	17	5200	196	2491	33	3836	36	5250	389	2410	53	3714	74	5300	730
9	2461	11	3415	11	4700	135	2472	12	3392	12	4700	137	2450	16	3377	17	4700	190	2421	34	3341	36	4700	367	2349	48	3225	73	4700	759
10	2380	11	2950	10	4200	111	2383	12	2950	12	4200	122	2379	17	2950	17	4200	183	2347	30	2895	36	4200	369	2275	46	2762	71	4200	895
11	2321	12	2539	9	3800	91	2312	11	2539	11	3800	104	2301	17	2539	16	3800	178	2275	28	2501	36	3800	399	2228	39	2398	62	3700	1020
12	2231	13	2185	9	3400	88	2230	12	2185	9	3400	102	2221	16	2180	15	3400	181	2208	24	2130	34	3300	458	2184	39	2050	53	3200	1150
13	2157	14	1872	8	2980	107	2150	13	1872	9	2980	115	2143	16	1863	14	2950	194	2148	23	1841	29	2890	532	2162	41	1751	44	2780	1160
14	2082	14	1590	8	2630	137	2074	14	1592	8	2630	140	2076	17	1591	12	2630	211	2107	28	1565	23	2550	612	2141	43	1500	35	2400	968
15	2031	15	1350	7	2310	161	2011	16	1355	8	2300	159	2021	18	1350	10	2280	242	2068	33	1323	19	2200	623	2122	44	1275	27	2070	759
16	1976	16	1138	7	1970	189	1977	17	1137	7	1970	178	1979	20	1135	9	1960	250	2044	37	1121	15	1890	500	2115	41	1084	21	1760	615
17	1974	17	958	6	1670	207	1977	19	958	7	1660	192	1979	23	958	8	1650	249	2045	30	955	11	1590	400	2116	36	923	16	1490	451
18	2019	18	810	5	1380	210	2002	23	807	6	1380	197	2018	23	811	7	1370	218	2061	26	803	9	1320	280	2125	31	791	13	1270	326
19	2057	19	700	4	1140	175	2045	21	693	5	1140	150	2060	20	684	6	1140	160	2096	19	681	8	1020	192	2138	25	675	10	1070	233
20	2103	21	590	4	950	110	2082	22	579	4	950	100	2097	17	579	5	950	102	2116	18	575	7	930	139	2154	24	575	8	910	175
21	2125	23	495	4	800	91	2113	23	493	4	800	86	2124	17	494	4	790	83	2146	17	495	6	790	96	2163	23	497	7	780	128
22	2150	24	421	3	670	80	2142	21	420	4	670	73	2150	17	422	4	670	73	2169	16	422	4	670	78	2178	22	420	6	660	95
23	2174	23	368	3	570	73	2169	21	365	3	570	61	2175	19	365	3	570	61	2197	15	365	4	570	69	2194	23	362	5	560	77
24	2198	22	310	3	480	64	2190	21	308	3	480	49	2204	21	310	3	480	49	2214	15	310	4	480	52	2210	24	309	4	480	65
25	2212	21	263	2	410	53	2214	22	263	3	410	46	2218	22	264	3	410	45	2229	16	267	3	410	48	2222	24	267	4	410	53
26	2226	18	227	2	350	48	2232	20	227	2	350	43	2237	21	229	2	350	38	2248	17	229	3	350	41	2227	25	227	3	350	49
27	2241	15	195	2	299	45	2254	19	195	2	298	39	2262	19	195	2	297	33	2263	19	196	3	297	36	2241	27	195	3	298	40
28	2268	16	170	2	250	42	2273	20	168	2	250	36	2280	19	170	2	251	27	2278	24	170	2	252	32	2251	28	169	3	253	35
29	2289	17	145	2	216	40	2289	21	145	2	216	34	2300	23	146	2	216	24	2292	27	147	2	217	28	2263	31	145	2	218	27
30	2308	18	125	2	187	37	2308	22	125	2	188	32	2313	25	127	2	188	23	2310	29	127	2	188	26	2274	35	124	2	188	24
31	2321	19	106	2	159	35	2321	23	108	2	159	33	2324	27	110	2	159	25	2318	33	109	2	161	25	2282	37	105	2	161	24

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 10b.

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

OCTOBER

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2758	52	10365	90	12900	2956	2699	43	10315	107	13000	2758	2598	65	10290	93	13600	4000	2553	68	10300	79	14000	4250	2537	58	10306	59	14200	3010
1	2737	61	9157	82	11500	2810	2662	59	9055	98	11700	2613	2597	52	9026	88	11950	2750	2550	58	9000	74	12000	2720	2526	54	9000	58	12000	2185
2	2700	63	8052	80	10200	2196	2625	67	7916	97	10450	2182	2553	61	7917	88	10550	2000	2523	57	7879	72	10600	1910	2517	52	7822	57	10600	1730
3	2650	62	7105	84	9200	1755	2578	69	6992	105	9250	1810	2512	62	6889	91	9400	1635	2506	56	6880	72	9400	1500	2503	50	6824	56	9400	1360
4	2601	62	6240	89	8200	1286	2524	70	6115	112	8300	1464	2470	61	6000	100	8300	1268	2450	50	5994	75	8300	1120	2447	48	5994	55	8300	997
5	2542	62	5460	93	7400	938	2468	68	5310	114	7400	1023	2409	60	5225	103	7400	967	2396	47	5205	76	7400	880	2384	44	5200	55	7400	895
6	2478	63	4699	95	6600	779	2402	65	4627	115	6600	825	2350	55	4500	103	6600	759	2327	43	4501	77	6600	730	2323	40	4501	54	6600	800
7	2408	61	4132	95	5900	750	2332	62	4000	114	5900	786	2284	45	3892	102	5900	897	2273	38	3882	75	5800	875	2265	37	3882	52	5750	800
8	2343	50	3589	93	5300	786	2275	57	3482	110	5240	954	2247	39	3327	94	5200	1093	2223	36	3322	71	5100	1000	2217	36	3322	48	5100	832
9	2275	41	3092	89	4700	952	2241	49	2957	102	4550	1130	2240	41	2895	82	4500	1431	2199	38	2855	61	4400	1300	2185	37	2855	42	4400	831
10	2228	38	2657	80	4100	1130	2233	47	2570	90	3950	1526	2228	44	2485	69	3800	1528	2206	42	2445	52	3800	1186	2206	37	2445	38	3800	761
11	2203	44	2278	65	3500	1502	2223	45	2215	74	3350	1611	2226	41	2132	54	3300	1254	2224	39	2125	42	3200	932	2219	37	2115	34	3200	657
12	2190	54	1950	52	3000	1487	2217	43	1867	60	2870	1321	2226	38	1819	43	2780	998	2232	38	1800	36	2760	731	2224	36	1800	30	2760	493
13	2181	47	1673	42	2600	1158	2217	41	1612	48	2470	1054	2225	37	1565	36	2390	752	2227	36	1550	31	2370	505	2224	35	1545	27	2370	400
14	2182	42	1430	33	2230	963	2217	37	1375	39	2120	888	2221	36	1338	31	2050	588	2219	36	1330	27	2040	419	2218	37	1330	25	2040	348
15	2179	38	1242	27	1920	752	2217	36	1193	31	1820	699	2217	36	1160	27	1770	450	2210	36	1135	24	1760	351	2209	37	1122	23	1760	291
16	2177	36	1044	23	1640	564	2213	35	1015	26	1570	507	2210	36	998	24	1530	380	2203	37	973	22	1510	298	2196	38	969	20	1510	255
17	2178	34	899	20	1400	429	2209	32	873	22	1340	425	2207	36	851	21	1320	303	2190	37	833	19	1300	258	2183	39	825	19	1300	211
18	2178	32	770	15	1200	331	2207	30	748	18	1160	348	2203	35	735	18	1140	262	2177	37	712	18	1120	213	2175	41	705	18	1120	190
19	2178	32	660	12	1040	267	2205	32	643	15	995	283	2196	36	625	16	960	212	2166	37	610	17	960	187	2167	42	611	17	960	178
20	2173	32	565	9	880	209	2200	34	551	13	860	242	2193	36	533	14	838	192	2154	38	521	15	830	181	2152	42	519	15	830	166
21	2182	33	485	8	760	167	2193	35	469	11	735	198	2175	37	458	13	720	168	2142	38	445	14	710	165	2137	43	445	14	710	148
22	2184	34	417	7	650	139	2185	37	408	9	630	167	2174	37	392	12	618	143	2134	38	381	13	614	148	2123	43	380	13	614	131
23	2185	36	354	6	555	103	2180	38	348	8	538	141	2163	38	333	10	530	119	2125	39	325	12	520	132	2106	44	322	12	520	116
24	2187	35	302	5	480	88	2182	41	295	7	460	117	2160	38	279	9	450	98	2121	39	276	10	450	113	2091	44	276	10	450	97
25	2189	37	262	4	410	75	2184	43	255	6	397	93	2160	39	243	7	390	77	2120	40	241	9	380	100	2080	44	240	9	380	87
26	2194	37	223	4	350	61	2187	45	218	5	335	68	2160	43	205	6	330	61	2122	43	201	7	330	82	2075	45	200	7	330	81
27	2199	37	187	4	298	50	2191	47	179	4	290	49	2164	44	175	5	279	48	2120	44	173	6	278	74	2083	45	172	6	278	76
28	2213	38	161	3	252	46	2193	47	158	4	247	44	2165	45	155	4	244	45	2125	45	151	5	243	68	2091	46	151	5	243	74
29	2219	39	137	3	217	39	2194	48	132	3	210	38	2167	47	131	4	208	42	2130	47	130	4	203	62	2109	47	132	4	203	74
30	2228	41	120	2	188	36	2195	50	113	3	177	37	2168	49	112	3	174	40	2135	49	111	4	173	62	2113	48	112	4	173	76
31	2239	44	103	2	161	33	2196	52	97	2	150	38	2169	50	95	3	145	43	2140	51	95	3	145	68	2200	52	96	3	147	76

Pr

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 11a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

NOVEMBER

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	7	10321	12	11600	620	2968	13	10280	14	11600	680	2970	21	10343	19	11800	1000	2898	45	10388	45	12100	2450	2750	61	10381	78	12600	3620
1	2901	6	9200	12	10700	430	2927	12	9176	14	10600	465	2927	18	9225	18	10600	640	2870	38	9225	37	10900	1600	2752	68	9191	67	11400	3055
2	2856	6	8150	11	9700	341	2878	12	8168	14	9600	357	2878	17	8210	18	9700	421	2828	30	8200	33	9850	1085	2717	68	8095	67	10200	2180
3	2818	6	7235	10	8700	291	2820	11	7255	13	8700	295	2825	17	7287	18	8800	350	2792	28	7250	32	8850	750	2688	67	7151	71	9100	1670
4	2771	6	6425	10	7900	259	2775	11	6425	13	7900	261	2775	17	6456	18	7900	300	2741	28	6395	34	8000	540	2631	67	6290	78	8200	1184
5	2720	7	5623	9	7100	229	2721	12	5679	13	7100	232	2722	17	5702	17	7100	265	2679	28	5613	35	7200	459	2589	62	5516	82	7300	900
6	2665	7	5000	9	6400	200	2664	12	5032	13	6400	203	2660	17	5035	17	6400	237	2608	28	4958	35	6500	410	2511	57	4824	85	6600	782
7	2604	7	4410	9	5800	188	2606	11	4402	13	5800	187	2597	17	4417	17	5800	206	2547	28	4328	34	5900	395	2450	54	4215	85	5900	751
8	2531	6	3857	9	5200	175	2542	11	3857	13	5200	179	2525	17	3869	17	5200	190	2473	27	3795	33	5300	385	2383	50	3653	82	5300	810
9	2470	6	3385	10	4700	170	2473	11	3367	13	4700	170	2450	17	3350	17	4700	185	2400	27	3292	32	4700	374	2309	45	3128	77	4700	937
10	2387	7	2913	11	4200	170	2384	12	2910	13	4200	165	2369	17	2908	16	4200	180	2319	26	2850	30	4200	394	2258	39	2715	70	4100	1076
11	2310	8	2535	11	3800	170	2303	12	2535	13	3800	165	2281	17	2533	16	3800	180	2249	29	2480	28	3800	431	2203	40	2334	61	3600	1135
12	2230	9	2180	11	3300	170	2220	12	2180	13	3300	165	2201	18	2176	15	3400	187	2176	29	2125	25	3300	475	2177	49	1999	51	3200	1148
13	2153	12	1867	10	2980	175	2142	13	1867	12	2980	170	2134	18	1861	15	2980	198	2125	30	1800	23	2900	506	2154	53	1732	41	2720	1047
14	2090	14	1589	9	2620	180	2081	16	1589	12	2620	173	2079	18	1582	13	2610	244	2087	32	1550	19	2530	495	2144	47	1457	32	2330	890
15	2024	17	1346	8	2280	182	2021	18	1346	11	2280	175	2035	19	1343	12	2270	260	2054	32	1315	15	2190	450	2138	43	1248	24	1980	732
16	1977	18	1135	7	1980	188	1977	19	1135	11	1970	180	1992	19	1134	10	1950	259	2040	30	1110	12	1860	383	2124	38	1058	19	1710	564
17	1930	21	954	6	1680	198	1947	23	954	9	1670	192	1984	21	957	8	1650	248	2043	30	942	10	1580	307	2120	37	902	15	1460	431
18	1988	25	814	5	1410	218	1972	25	805	8	1400	198	1996	27	805	7	1380	219	2050	30	792	8	1330	256	2119	32	768	12	1240	329
19	2032	29	675	4	1150	195	2018	27	677	7	1150	175	2031	28	681	6	1150	188	2075	27	673	6	1110	201	2120	29	655	10	1050	250
20	2075	29	572	4	960	167	2059	24	573	6	950	150	2077	27	578	4	950	131	2103	25	572	4	925	150	2125	25	561	8	890	193
21	2106	27	492	4	790	141	2099	22	497	6	790	128	2108	24	491	4	740	95	2124	24	488	4	790	103	2135	27	478	6	760	157
22	2132	24	418	4	680	115	2173	19	415	4	670	100	2146	22	419	4	670	77	2152	23	416	4	660	82	2150	31	410	5	650	119
23	2157	19	358	3	565	92	2151	17	354	4	560	88	2175	17	358	3	560	62	2177	22	356	3	560	65	2165	33	349	4	550	96
24	2182	17	305	3	475	83	2180	16	305	3	470	76	2206	15	307	3	470	51	2206	27	305	3	470	50	2175	36	298	4	465	77
25	2203	14	261	3	410	76	2206	14	259	3	410	68	2221	17	259	3	405	48	2221	28	261	3	400	47	2187	47	256	4	400	62
26	2219	15	226	2	350	69	2229	16	226	3	340	61	2243	19	226	2	350	40	2233	31	225	2	340	42	2199	48	219	3	340	51
27	2239	17	195	2	293	61	2249	18	191	2	291	50	2262	24	193	2	295	35	2246	36	194	2	295	38	2218	49	188	3	291	47
28	2261	21	165	2	250	50	2268	19	165	2	250	48	2277	24	167	2	251	28	2267	37	167	2	252	33	2238	52	161	3	250	36
29	2277	23	142	2	214	46	2279	23	143	2	214	36	2289	19	144	2	216	24	2283	38	144	2	216	29	2249	54	139	2	211	28
30	2294	25	123	2	184	39	2295	25	124	2	184	32	2309	19	125	2	185	22	2307	39	125	2	186	28	2270	55	122	2	182	24
31	2308	27	103	2	158	38	2308	27	106	2	158	28	2313	24	108	2	158	19	2310	43	108	2	159	27	2280	53	103	2	157	23

PERIOD of RECORD
JULY 1957 - JUNE 1960

TABLE 11b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

NOVEMBER

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2677	84	10315	117	13200	5200	2601	66	10288	121	13400	4225	2492	74	10325	103	14200	4750	2487	70	10362	103	14700	4352	2473	68	10368	83	14700	2492
1	2683	72	9085	95	11700	3580	2600	56	9052	100	11995	2910	2528	61	9020	101	12200	2880	2512	58	9018	97	12300	2750	2475	58	9005	79	12300	1958
2	2621	72	7985	90	10400	2810	2555	55	7925	90	10600	2280	2509	57	7925	100	10700	1932	2499	55	7882	94	10800	1920	2472	54	7825	76	10800	1580
3	2580	76	6995	96	9300	2270	2507	57	6925	87	9450	1920	2461	55	6910	100	9540	1627	2450	52	6885	93	9540	1515	2438	51	6820	73	9500	1130
4	2525	78	6115	102	8300	1800	2456	58	6027	87	8400	1560	2407	53	6000	98	8500	1248	2403	47	5998	92	8500	1182	2404	47	5923	69	8500	926
5	2478	75	5325	106	7400	1315	2399	58	5283	86	7450	1250	2350	47	5127	93	7500	992	2339	45	5127	90	7500	913	2342	43	5127	65	7500	875
6	2410	68	4650	110	6600	987	2323	57	4527	85	6600	990	2295	43	4465	90	6600	856	2283	42	4452	86	6600	876	2276	41	4428	60	6600	782
7	2350	63	4003	112	5900	750	2281	45	3926	83	5900	872	2258	36	3885	84	5900	1063	2232	37	3826	82	5900	995	2224	38	3823	56	5900	872
8	2285	55	3485	105	5200	985	2265	37	3392	78	5200	1056	2225	38	3327	77	5100	1382	2198	32	3327	75	5100	1200	2196	36	3327	50	5100	885
9	2272	37	2995	100	4500	1150	2200	31	2872	68	4500	1500	2210	42	2865	64	4400	1657	2193	33	2820	65	4400	1320	2178	35	2820	42	4400	900
10	2224	43	2554	85	3950	1600	2198	33	2475	56	3800	1500	2216	44	2410	50	3700	1297	2193	37	2400	54	3700	1280	2179	36	2400	36	3700	891
11	2212	45	2189	70	3400	1650	2214	35	2110	46	3250	1120	2220	47	2052	41	3200	1031	2205	40	2045	43	3200	1068	2180	37	2045	29	3200	783
12	2206	49	1876	56	2900	1320	2225	37	1815	38	2850	913	2217	50	1763	34	2730	882	2200	43	1760	35	2730	872	2177	38	1760	28	2730	695
13	2203	47	1625	43	2480	1085	2247	39	1555	32	2400	726	2210	52	1518	28	2350	645	2191	44	1510	30	2350	697	2168	39	1505	27	2350	521
14	2201	42	1375	35	2150	890	2236	45	1337	27	2050	538	2204	55	1300	25	2015	505	2183	47	1290	28	2015	521	2159	42	1290	27	2015	375
15	2200	39	1192	28	1830	710	2227	50	1150	24	1770	435	2197	57	1115	23	1730	408	2170	51	1110	25	1730	390	2147	48	1108	26	1730	288
16	2198	38	1009	23	1570	535	2213	55	975	21	1500	350	2184	63	951	20	1490	301	2165	57	945	24	1490	278	2138	55	942	26	1490	250
17	2196	37	867	19	1350	428	2227	56	835	19	1310	293	2183	67	810	19	1280	250	2159	64	803	22	1280	236	2128	62	801	25	1280	209
18	2191	37	745	16	1160	324	2197	57	721	17	1110	241	2174	73	700	17	1100	199	2147	73	693	21	1090	198	2116	71	685	24	1090	193
19	2187	35	640	13	995	261	2186	58	620	15	970	200	2163	77	599	16	950	160	2135	81	585	21	950	179	2109	81	579	23	950	188
20	2185	33	548	12	850	200	2175	58	531	14	830	175	2156	78	512	15	810	131	2125	85	503	20	800	148	2099	83	500	22	780	185
21	2186	35	469	10	730	175	2163	58	448	13	710	162	2134	73	435	14	700	104	2117	85	432	19	685	132	2098	85	429	21	670	173
22	2182	37	399	8	620	150	2157	58	385	12	605	147	2126	73	369	13	595	88	2109	84	365	17	587	125	2085	87	365	20	581	150
23	2185	39	342	7	530	132	2148	57	331	10	520	131	2118	72	320	12	508	75	2097	83	315	16	500	123	2084	87	312	18	495	150
24	2192	44	291	6	450	113	2137	44	276	9	440	117	2105	71	269	11	435	62	2095	82	269	14	435	118	2083	87	268	16	435	148
25	2207	38	250	5	392	97	2128	39	238	7	381	99	2098	70	235	10	380	50	2092	82	229	13	373	115	2081	86	229	14	370	147
26	2210	35	217	4	330	75	2128	42	208	6	320	74	2097	69	205	9	320	47	2085	81	204	12	320	111	2079	86	204	12	320	145
27	2209	40	179	4	282	54	2126	50	175	5	278	50	2096	70	172	8	275	45	2083	80	172	10	276	109	2078	85	172	10	277	145
28	2218	55	158	4	247	48	2125	59	155	4	245	47	2095	69	151	7	243	44	2081	79	150	9	245	106	2078	85	151	9	246	136
29	2216	61	137	3	210	43	2123	62	135	4	209	42	2095	70	134	6	209	43	2079	78	133	8	209	100	2077	84	134	8	209	130
30	2218	63	118	3	180	37	2120	64	115	3	178	39	2093	71	113	4	178	42	2077	78	113	6	180	87	2075	84	113	7	178	129
31	2230	65	98	2	157	34	2120	65	96	3	153	38	2092	73	96	4	150	40	2075	77	97	5	149	77	2073	85	97	6	149	128

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 12a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

DECEMBER

	0°						10°N						20°N						30°N						40°N					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2973	12	10318	13	11700	620	2977	13	10286	16	11600	620	2956	27	10352	21	11900	1000	2807	49	10408	59	12500	2930	2721	70	10421	88	13100	3650
1	2916	10	9220	13	10700	455	2932	11	9182	15	10600	470	2912	18	9230	19	10700	800	2825	41	9225	50	11100	2000	2704	69	9184	79	11600	3120
2	2875	8	8175	12	9650	370	2881	11	8173	15	9600	385	2863	17	8208	18	9800	580	2806	38	8215	47	9995	1290	2682	69	8075	76	10300	2500
3	2825	6	7296	12	8700	322	2833	12	7295	14	8700	330	2823	17	7284	18	8800	440	2761	38	7255	45	8900	900	2642	63	7118	80	9200	1888
4	2778	6	6434	11	7900	283	2784	11	6434	14	7900	296	2773	17	6450	18	7925	378	2702	38	6392	46	8050	720	2595	59	6245	84	8200	1280
5	2721	6	5700	10	7100	260	2725	12	5700	13	7100	268	2707	17	5700	18	7200	342	2639	37	5627	48	7300	600	2530	58	5466	88	7400	950
6	2670	6	5010	9	6400	229	2674	12	5017	13	6400	239	2653	18	5000	18	6500	305	2575	34	4980	48	6550	498	2462	56	4768	90	6600	750
7	2604	6	4412	9	5800	205	2604	12	4412	13	5800	210	2582	19	4407	18	5850	267	2501	33	4382	47	5900	475	2397	52	4135	88	5950	750
8	2532	6	3915	9	5200	190	2534	12	3915	12	5200	193	2507	19	3892	18	5300	235	2430	32	3827	46	5300	465	2327	46	3590	83	5300	820
9	2468	7	3382	9	4700	180	2456	12	3375	12	4700	180	2425	19	3360	18	4700	213	2372	31	3285	43	4700	468	2284	40	3072	79	4700	1080
10	2383	7	2952	9	4200	170	2381	12	2934	12	4200	170	2350	18	2917	18	4200	208	2300	28	2841	40	4200	490	2221	37	2656	68	4050	1300
11	2312	8	2539	8	3800	170	2304	13	2535	12	3800	170	2277	18	2517	18	3800	215	2221	30	2445	36	3700	600	2191	44	2285	56	3600	1400
12	2218	9	2185	8	3400	170	2212	13	2183	11	3400	170	2203	18	2164	17	3400	256	2168	38	2082	31	3250	720	2178	53	1943	43	3100	1300
13	2150	8	1871	8	2980	170	2145	13	1871	10	2980	170	2125	18	1850	16	2970	285	2130	39	1760	26	2850	750	2168	48	1672	33	2630	1000
14	2082	9	1598	8	2620	170	2083	13	1593	10	2620	170	2083	19	1572	14	2600	295	2098	38	1500	21	2450	690	2163	42	1410	27	2240	750
15	2025	12	1350	8	2300	170	2025	14	1350	9	2280	170	2023	19	1330	11	2240	281	2095	34	1285	17	2100	550	2150	38	1247	21	1920	580
16	1968	16	1140	7	1990	180	1986	16	1140	8	1970	180	2006	19	1125	9	1920	250	2075	32	1100	12	1780	401	2148	35	1045	17	1650	425
17	1938	18	961	6	1680	190	1963	18	962	7	1680	190	1987	19	962	8	1630	218	2061	31	930	9	1530	313	2147	32	880	14	1410	330
18	1950	24	815	6	1430	210	1953	24	815	6	1420	193	1988	21	802	7	1370	190	2063	27	785	8	1300	247	2146	30	761	11	1200	250
19	2016	23	683	5	1170	175	2004	20	679	6	1160	165	2015	24	671	6	1150	150	2087	25	662	7	1090	182	2135	30	641	9	1030	188
20	2062	22	580	4	960	123	2054	24	578	4	960	115	2073	22	575	5	950	116	2104	21	568	5	910	131	2132	30	546	8	880	145
21	2107	21	490	4	820	93	2097	22	490	4	800	92	2104	19	491	4	790	92	2123	18	485	4	770	92	2136	30	457	7	750	108
22	2130	18	415	3	680	82	2123	21	415	3	670	78	2142	17	415	4	660	75	2147	17	415	4	650	76	2138	30	398	6	640	90
23	2155	16	357	3	560	72	2148	19	355	3	560	70	2173	17	355	3	560	61	2167	17	350	4	550	62	2148	31	342	6	540	79
24	2187	17	302	3	480	63	2185	21	300	3	480	61	2203	18	300	3	470	48	2185	17	300	3	470	49	2152	31	290	5	460	70
25	2205	17	262	2	400	57	2206	22	260	2	400	49	2218	21	260	3	400	42	2209	17	258	3	400	45	2161	32	250	4	400	63
26	2219	18	226	2	340	49	2226	22	226	2	340	40	2239	22	226	2	340	36	2217	18	221	3	340	38	2186	35	215	4	340	54
27	2240	18	192	2	292	42	2245	23	192	2	292	37	2257	25	193	2	293	32	2239	22	188	3	292	33	2188	38	181	4	290	48
28	2261	18	167	2	250	39	2261	23	168	2	250	32	2275	27	167	2	250	25	2253	24	163	3	249	29	2190	39	158	3	248	42
29	2271	18	139	2	214	34	2274	23	142	2	214	27	2284	29	143	2	214	24	2268	28	139	2	212	25	2184	39	135	3	212	35
30	2279	18	122	2	183	32	2287	24	123	2	183	24	2304	30	122	2	183	23	2286	31	121	2	183	24	2188	39	117	3	183	30
31	2284	19	105	2	157	30	2301	24	106	2	157	23	2323	32	106	2	157	22	2298	35	105	2	157	23	2193	39	99	3	157	27

USCOMM-WB-ASHEVILLE

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 12b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

DECEMBER

ALT	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2583	89	10368	117	13800	6050	2531	70	10310	115	13900	4500	2488	85	10322	102	14400	5075	2383	75	10355	103	14900	4500	2438	62	10360	85	14900	3250
1	2604	79	9095	96	11900	3750	2565	72	9052	101	12200	2950	2526	81	9018	100	12200	3008	2482	68	9010	100	12300	2995	2441	58	9000	84	12300	2600
2	2584	78	7996	91	10500	2820	2524	68	7900	95	10600	2350	2512	72	7900	103	10700	2250	2483	63	7853	102	10800	2200	2437	55	7792	82	10800	1993
3	2538	73	6985	95	9400	2280	2507	63	6827	97	9450	1880	2468	63	6828	108	9500	1750	2431	57	6820	103	9600	1680	2414	52	6820	80	9600	1580
4	2488	70	6110	101	8400	1800	2448	58	6016	100	8400	1490	2407	57	5985	111	8400	1333	2389	52	5950	102	8500	1227	2386	49	5950	79	8550	1080
5	2421	65	5283	103	7500	1330	2388	56	5195	99	7500	1111	2349	52	5150	107	7500	1000	2331	47	5160	101	7500	910	2325	45	5160	77	7550	880
6	2367	60	4589	102	6600	990	2324	48	4492	96	6600	880	2289	47	4462	103	6600	780	2275	43	4425	98	6600	820	2275	42	4418	75	6600	800
7	2307	47	3965	97	5950	850	2273	45	3827	92	5950	880	2241	40	3835	97	5950	995	2221	38	3835	92	5950	950	2225	38	3820	70	5950	820
8	2283	37	3413	92	5200	1080	2225	39	3345	86	5200	1200	2195	37	3310	89	5100	1200	2191	38	3254	85	5100	1200	2194	39	3254	67	5100	850
9	2250	35	2956	81	4500	1400	2193	42	2883	76	4500	1500	2177	48	2850	76	4400	1600	2181	46	2781	76	4400	1400	2180	47	2781	63	4400	900
10	2224	42	2514	66	3950	1500	2187	52	2452	63	3800	1500	2177	61	2405	64	3800	1500	2175	56	2375	67	3800	1300	2168	55	2375	60	3800	850
11	2216	47	2150	53	3300	1300	2195	57	2085	50	3300	1200	2178	63	2075	52	3200	1200	2163	62	2040	60	3200	1100	2154	63	2020	57	3200	770
12	2217	48	1847	42	2840	1020	2212	56	1798	43	2790	880	2180	64	1758	46	2750	900	2158	66	1732	55	2750	850	2141	67	1729	54	2750	610
13	2215	42	1583	35	2440	770	2207	55	1535	37	2380	650	2180	65	1500	42	2360	650	2150	72	1478	52	2350	620	2130	72	1478	52	2350	488
14	2213	39	1325	30	2100	610	2195	57	1320	34	2060	475	2177	68	1275	39	2020	495	2132	75	1262	49	2020	490	2119	77	1260	49	2020	427
15	2208	37	1175	26	1800	450	2180	57	1126	32	1770	382	2168	75	1080	37	1750	400	2120	80	1065	46	1730	410	2106	84	1050	48	1730	393
16	2200	37	999	23	1550	355	2177	58	963	29	1515	300	2146	81	942	35	1490	325	2109	88	915	44	1480	362	2091	92	908	47	1490	382
17	2193	37	857	20	1340	289	2173	61	832	27	1310	271	2126	88	800	34	1280	277	2095	96	785	43	1270	328	2080	100	779	46	1270	378
18	2184	38	732	18	1140	237	2170	66	705	25	1120	232	2109	91	681	33	1100	248	2081	103	663	42	1090	300	2070	107	663	44	1080	365
19	2177	38	627	16	985	200	2167	69	610	24	960	204	2099	95	583	32	950	213	2072	112	564	41	930	291	2059	117	564	43	930	350
20	2175	39	535	14	840	175	2158	71	527	23	830	187	2095	97	492	30	810	200	2065	118	483	40	800	291	2049	123	481	42	800	342
21	2167	43	455	13	720	157	2146	74	451	22	710	178	2088	98	429	29	700	198	2058	123	405	38	680	300	2041	127	400	41	680	331
22	2164	47	392	12	620	133	2138	76	387	20	610	150	2088	99	362	27	590	198	2054	125	348	36	575	301	2030	133	348	39	575	320
23	2160	50	338	11	530	118	2139	77	331	18	520	142	2089	101	315	26	500	199	2055	128	298	34	490	293	2035	135	300	37	500	305
24	2161	53	286	10	450	108	2139	77	283	16	450	129	2090	102	272	25	440	195	2057	131	259	33	430	250	2045	138	259	36	430	218
25	2163	59	248	9	395	93	2137	77	250	15	385	111	2092	103	230	23	380	182	2064	128	225	32	380	200	2052	138	227	34	385	139
26	2168	61	214	8	340	78	2124	77	214	14	340	93	2094	102	198	22	340	145	2067	126	187	30	340	125	2053	137	192	33	340	89
27	2157	62	178	8	290	65	2118	77	182	12	290	77	2093	101	173	20	290	100	2073	124	168	28	290	85	2055	135	168	31	290	69
28	2138	64	159	7	248	51	2107	76	157	11	249	62	2092	98	153	18	249	77	2075	121	150	25	249	67	2057	134	147	28	250	51
29	2132	63	135	7	212	47	2099	75	137	10	213	49	2086	98	135	16	213	59	2067	118	133	23	213	50	2062	133	133	26	214	46
30	2127	62	118	7	183	41	2098	75	121	9	183	45	2083	95	119	14	183	47	2065	117	115	20	183	46	2068	129	113	23	183	42
31	2125	62	101	6	157	38	2097	74	103	8	157	40	2080	93	99	12	157	42	2063	117	96	18	157	39	2072	128	96	22	157	35

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 13a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

ANNUAL

	0°						10°N						20°N						30°N						40°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	12	10200	13	11700	630	2978	12	10250	13	11600	590	2965	25	10340	23	11700	1300	2895	71	10350	50	12100	3600	2795	98	10340	72	12400	4650
1	2922	11	9150	12	10700	505	2936	11	9200	12	10600	495	2928	20	9225	17	10700	870	2868	57	9230	46	10900	2450	2801	100	9200	68	11200	4100
2	2870	11	8150	11	9700	410	2886	11	8180	11	9600	413	2875	19	8200	16	9700	670	2831	48	8200	49	9800	1500	2753	92	8150	85	10100	2999
3	2820	11	7250	11	8800	370	2838	11	7260	11	8700	368	2823	18	7280	16	8800	480	2785	42	7300	55	8900	940	2708	87	7175	100	9100	2000
4	2755	11	6450	11	7900	330	2785	11	6450	11	7900	332	2770	17	6460	16	7900	400	2723	41	6400	59	8000	780	2652	85	6300	111	8100	1500
5	2718	11	5700	10	7100	300	2729	12	5710	11	7100	300	2718	17	5710	16	7200	355	2665	42	5650	62	7200	630	2600	83	5550	120	7300	1010
6	2665	12	5040	9	6400	262	2681	12	5050	11	6400	265	2658	17	5030	16	6500	319	2608	46	4960	65	6500	550	2538	83	4860	124	6600	800
7	2604	12	4410	9	5800	218	2610	13	4420	11	5800	221	2596	18	4410	16	5800	280	2540	49	4350	67	5900	500	2469	83	4240	125	5900	670
8	2530	12	3860	9	5200	190	2545	13	3870	11	5200	192	2515	19	3870	16	5200	250	2469	49	3800	68	5300	469	2397	81	3690	125	5300	680
9	2458	12	3380	10	4700	180	2465	14	3380	11	4700	180	2445	19	3370	17	4700	235	2400	47	3310	68	4700	469	2328	72	3190	123	4700	890
10	2382	13	2940	11	4200	170	2395	14	2950	11	4200	160	2369	19	2930	17	4200	210	2318	44	2850	65	4200	498	2275	62	2750	116	4150	1200
11	2312	13	2540	11	3800	140	2310	14	2540	11	3800	140	2289	19	2530	17	3800	203	2252	38	2460	62	3800	630	2226	55	2360	105	3600	1500
12	2229	14	2190	11	3400	120	2230	15	2180	11	3400	120	2213	19	2170	16	3400	228	2195	35	2100	56	3300	770	2190	52	2010	93	3200	1700
13	2150	15	1870	10	2980	130	2150	16	1870	11	2980	130	2139	19	1860	16	2970	269	2140	34	1810	47	2910	820	2165	50	1740	79	2750	1600
14	2082	17	1590	9	2630	160	2075	17	1590	11	2630	160	2081	19	1580	15	2610	298	2101	34	1540	38	2500	820	2149	48	1495	64	2380	1400
15	2025	18	1350	9	2300	180	2015	18	1350	11	2290	180	2042	21	1340	13	2260	299	2075	35	1310	32	2150	770	2130	46	1270	51	2000	1200
16	1975	19	1140	8	1985	220	1975	19	1140	10	1972	210	2013	23	1135	10	1935	275	2060	35	1110	26	1850	630	2128	45	1080	40	1738	950
17	1960	31	970	8	1680	285	1962	27	960	9	1672	260	1998	25	960	9	1645	250	2060	34	940	22	1570	469	2129	40	920	33	1482	740
18	1975	43	810	7	1398	320	1980	38	810	8	1396	250	2011	35	810	9	1380	225	2070	33	800	18	1322	335	2135	32	790	27	1250	520
19	2025	34	690	7	1151	195	2025	33	680	7	1151	182	2050	34	680	8	1145	175	2088	30	680	17	1112	250	2148	28	670	23	1068	400
20	2069	31	575	6	955	155	2070	31	575	7	954	137	2085	32	580	8	952	138	2110	29	580	15	932	198	2163	28	575	19	908	310
21	2105	29	490	6	798	120	2104	29	490	7	797	100	2110	28	492	7	795	100	2130	28	493	13	785	175	2169	30	493	17	773	250
22	2134	28	415	6	670	93	2133	27	418	6	670	87	2149	25	420	7	669	95	2160	27	421	11	664	150	2185	33	421	16	657	202
23	2160	27	357	5	572	85	2160	27	357	6	566	78	2175	23	360	6	566	81	2183	27	361	10	564	138	2198	35	361	15	559	170
24	2182	25	301	4	482	75	2192	27	300	5	482	75	2203	23	307	6	482	76	2206	26	310	9	480	118	2210	38	310	13	478	149
25	2208	24	263	4	415	67	2211	27	262	4	406	67	2220	23	264	5	407	65	2226	26	266	8	408	95	2222	42	265	12	408	122
26	2225	23	227	3	348	55	2232	26	227	4	345	54	2241	23	228	5	347	55	2242	26	228	7	349	81	2237	44	227	11	349	105
27	2240	23	194	3	295	45	2252	26	194	3	295	47	2260	25	195	4	295	49	2257	27	196	6	298	71	2252	47	199	10	298	95
28	2255	23	168	2	253	43	2269	25	167	2	251	43	2278	25	168	4	253	45	2275	28	169	5	254	61	2263	49	166	8	254	83
29	2275	23	142	2	216	40	2284	25	144	2	216	38	2295	25	145	3	216	41	2291	29	145	5	218	53	2276	50	145	7	218	74
30	2294	23	126	2	184	35	2301	25	125	2	184	32	2312	25	125	2	185	35	2308	30	125	4	187	47	2286	50	125	6	186	68
31	2307	22	107	2	158	29	2312	25	107	2	158	30	2325	25	109	2	159	33	2320	30	109	4	161	41	2302	51	109	6	161	63

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $°K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $°K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 13b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

ANNUAL

	50°N						60°N						70°N						80°N						90°N					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2712	141	10340	96	13100	7500	2645	140	10310	106	13200	7900	2570	155	10310	111	13700	8500	2538	176	10300	105	13900	9700	2495	125	10300	105	13800	10100
1	2712	118	9150	87	11500	5000	2650	112	9125	103	11800	4690	2605	118	9060	115	11900	4800	2590	119	9075	105	12000	4900	2540	105	9060	105	12000	4850
2	2675	103	8050	99	10300	3350	2618	99	7990	111	10400	3720	2578	106	7940	125	10500	3350	2550	101	7940	119	10500	3200	2550	97	7940	115	10500	3650
3	2632	97	7070	115	9200	2500	2569	95	7000	124	9300	3250	2532	98	7000	143	9400	2400	2512	95	6950	133	9400	2300	2506	92	6950	126	9400	2600
4	2585	95	6200	128	8200	1770	2515	91	6110	134	8300	1850	2480	93	6060	153	8400	1750	2466	92	6050	143	8400	1700	2459	89	6030	134	8400	1900
5	2525	93	5420	136	7400	1320	2462	88	5300	141	7400	1410	2419	89	5270	155	7400	1340	2402	88	5250	148	7500	1200	2400	86	5240	135	7500	1390
6	2456	88	4720	142	6600	960	2400	84	4640	145	6600	1000	2357	83	4570	157	6600	980	2342	86	4550	151	6600	860	2340	82	4550	135	6600	995
7	2390	83	4100	143	5900	790	2335	81	4010	146	5900	960	2299	78	3995	155	5900	1080	2282	76	3930	150	5900	850	2281	68	3930	134	5900	840
8	2325	79	3550	141	5200	920	2276	68	3470	141	5200	1200	2250	62	3400	147	5200	1500	2236	61	3380	143	5200	1200	2242	57	3385	130	5200	1008
9	2270	66	3060	133	4600	1300	2240	57	2980	130	4500	1400	2232	55	2920	132	4500	1900	2214	52	2900	131	4500	1700	2231	50	2900	120	4500	1500
10	2238	58	2630	121	4000	1700	2220	57	2560	116	3900	1600	2231	62	2500	116	3900	2100	2218	60	2480	116	3800	1700	2220	56	2480	108	3800	1500
11	2220	55	2250	106	3500	1800	2220	57	2200	100	3400	1600	2232	65	2140	102	3300	1600	2231	64	2130	103	3300	1400	2220	62	2130	99	3300	1200
12	2215	51	1930	90	2980	1700	2230	52	1880	85	2870	1300	2235	67	1840	89	2800	1280	2240	71	1830	93	2790	1100	2220	70	1830	92	2790	960
13	2208	48	1660	76	2570	1400	2230	52	1610	74	2460	1100	2238	70	1580	81	2410	950	2239	75	1570	86	2400	880	2220	73	1570	88	2400	870
14	2202	43	1425	64	2200	1100	2230	53	1385	66	2110	920	2238	72	1360	73	2060	810	2235	80	1350	79	2050	780	2220	80	1350	80	2030	760
15	2200	41	1220	54	1887	980	2230	53	1190	59	1823	790	2235	75	1170	66	1780	750	2230	88	1160	73	1773	710	2220	88	1150	73	1770	710
16	2199	37	1050	46	1621	770	2230	54	1020	52	1572	710	2230	80	1000	61	1533	620	2228	92	995	68	1525	600	2218	94	993	68	1523	600
17	2200	37	890	39	1395	640	2230	55	880	47	1350	590	2230	84	870	56	1323	530	2226	100	860	62	1312	510	2213	103	850	64	1312	500
18	2203	37	770	34	1205	530	2230	56	750	41	1158	482	2230	88	740	51	1125	459	2221	107	730	58	1125	465	2210	112	720	59	1125	470
19	2206	37	660	29	1025	450	2230	56	650	36	1000	420	2230	91	640	46	982	400	2219	112	630	53	971	420	2208	119	625	54	971	440
20	2210	38	565	25	879	365	2230	58	560	32	858	365	2228	93	550	40	842	360	2220	114	542	49	832	383	2204	126	540	51	830	420
21	2212	42	489	23	753	300	2230	60	485	29	739	315	2225	95	478	36	725	328	2217	119	470	44	710	365	2202	130	462	45	709	384
22	2215	47	420	20	640	252	2230	63	417	26	635	269	2225	96	410	33	628	290	2210	121	399	38	617	340	2198	135	398	39	615	358
23	2218	51	358	18	549	219	2230	69	356	23	538	241	2224	98	353	29	532	265	2210	121	345	35	528	324	2198	136	342	35	527	329
24	2222	54	308	16	475	190	2230	78	307	20	468	210	2220	100	307	26	462	234	2212	123	299	31	456	290	2199	138	295	32	456	298
25	2225	59	263	14	405	161	2225	83	262	18	400	194	2214	102	258	23	398	212	2217	124	255	27	394	255	2201	139	255	28	394	278
26	2229	66	227	13	346	143	2222	86	225	16	343	168	2216	105	222	20	342	190	2217	124	220	24	340	220	2203	144	220	24	339	241
27	2235	73	198	12	295	125	2226	91	193	16	294	149	2221	107	191	19	293	179	2216	128	190	21	291	193	2207	146	189	22	290	215
28	2244	80	170	11	254	102	2231	96	166	13	253	132	2221	113	165	15	252	150	2216	129	164	17	252	175	2210	148	163	18	252	190
29	2252	83	144	10	218	91	2236	102	143	12	217	119	2226	115	143	14	216	139	2217	135	142	15	215	165	2215	149	142	16	215	170
30	2263	85	124	9	187	88	2241	104	123	11	185	100	2231	124	123	12	184	122	2220	140	123	13	185	140	2219	151	123	14	184	150
31	2270	85	108	8	160	80	2243	107	107	11	159	88	2234	127	107	12	158	115	2226	147	107	13	158	130	2228	151	107	14	158	130

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 14a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JANUARY

ALT	0° T	s	P	s	D	s	10°S T	s	P	s	D	s	20°S T	s	P	s	D	s	30°S T	s	P	s	D	s	40°S T	s	P	s	D	s
0	2970	8	10316	15	11600	385	2944	14	10330	14	11800	550	2922	16	10341	17	11850	750	2884	18	10350	18	12100	920	2867	22	10395	42	12200	1183
1	2930	8	9200	14	10600	373	2908	13	9214	14	10800	523	2877	17	9208	17	10900	742	2894	22	9208	18	10900	975	2823	32	9195	37	11100	1197
2	2883	8	8200	14	9700	362	2872	13	8195	14	9700	493	2844	18	8187	17	9700	564	2901	27	8185	18	9725	887	2797	39	8150	36	9975	1185
3	2825	8	7275	13	8750	350	2825	13	7279	13	8700	414	2825	18	7270	17	8700	478	2827	27	7260	18	8750	773	2748	41	7220	38	8975	1000
4	2780	8	6449	12	7900	330	2776	13	6450	13	7900	347	2791	18	6445	17	7900	395	2755	28	6427	19	7995	661	2700	41	6350	41	8100	775
5	2738	8	5700	11	7200	308	2724	13	5750	12	7100	287	2731	18	5750	17	7100	325	2700	28	5685	20	7200	483	2633	41	5592	45	7300	690
6	2688	8	5000	10	6450	240	2674	13	5030	12	6400	267	2675	18	5020	17	6400	283	2632	28	5000	22	6500	421	2572	41	4915	48	6500	580
7	2613	7	4400	9	5800	193	2604	13	4421	12	5800	247	2604	18	4412	17	5800	275	2563	28	4400	23	5850	361	2499	41	4372	52	5900	447
8	2540	7	3850	9	5300	182	2546	13	3876	12	5200	211	2533	18	3815	18	5200	267	2496	28	3810	25	5300	309	2422	39	3750	52	5300	398
9	2455	7	3375	9	4750	180	2475	13	3385	12	4700	189	2471	19	3380	18	4700	263	2422	28	3340	26	4700	289	2358	35	3265	51	4700	425
10	2382	8	2950	9	4250	180	2396	13	2950	12	4200	176	2394	18	2950	18	4200	249	2360	26	2916	26	4200	325	2294	30	2845	48	4150	500
11	2306	8	2550	9	3800	180	2317	13	2550	12	3800	168	2320	18	2550	18	3800	240	2297	25	2475	25	3750	367	2235	35	2400	43	3700	710
12	2218	9	2200	9	3400	175	2231	13	2194	12	3300	165	2243	18	2187	17	3300	243	2225	23	2156	22	3300	392	2190	40	2072	37	3200	810
13	2157	11	1875	8	2970	175	2154	14	1882	11	2980	160	2164	17	1880	15	2970	245	2172	25	1830	20	2880	417	2173	42	1763	30	2790	790
14	2088	14	1600	8	2630	175	2089	14	1585	11	2630	173	2093	17	1582	13	2620	250	2122	25	1540	17	2530	397	2150	37	1500	24	2390	740
15	2025	16	1350	7	2300	175	2017	16	1360	10	2300	178	2025	17	1357	11	2280	254	2074	23	1325	13	2180	375	2138	33	1320	18	2030	660
16	1970	18	1160	7	1980	180	1973	17	1147	9	1990	185	1985	18	1146	10	1970	258	2045	25	1128	10	1870	350	2125	30	1105	16	1750	495
17	1930	21	950	6	1700	195	1937	19	965	7	1700	208	1953	20	966	7	1690	263	2025	28	957	8	1620	319	2122	28	938	11	1500	404
18	1935	22	815	6	1420	225	1949	22	810	7	1420	246	1965	29	814	7	1410	225	2031	30	818	7	1370	255	2123	27	800	7	1270	322
19	1990	22	685	5	1160	190	2001	21	685	6	1160	182	2006	23	685	6	1160	177	2060	27	687	6	1140	192	2141	27	683	6	1090	213
20	2035	22	580	4	955	142	2050	17	578	5	960	143	2050	18	582	5	960	125	2097	25	583	5	950	150	2155	27	583	5	920	149
21	2074	22	490	4	825	99	2092	15	492	5	800	91	2099	16	495	5	800	93	2125	22	495	5	795	94	2183	25	493	4	780	100
22	2108	22	422	3	675	82	2120	15	418	4	680	82	2125	17	420	4	680	78	2153	18	427	4	670	80	2207	22	425	3	660	79
23	2132	22	360	3	575	77	2142	18	357	4	570	69	2154	18	360	4	570	67	2192	16	365	4	570	67	2224	19	365	3	570	69
24	2158	22	300	3	480	65	2168	21	303	4	480	53	2187	23	308	4	480	53	2214	17	311	4	480	48	2245	17	317	3	480	48
25	2183	22	262	2	405	53	2188	24	262	3	410	44	2207	25	265	3	410	45	2228	18	269	3	410	44	2268	16	273	3	410	42
26	2210	23	225	2	345	45	2210	27	225	3	350	40	2222	25	229	3	350	37	2252	18	232	3	350	37	2283	16	234	2	350	36
27	2219	23	191	2	290	39	2227	28	193	3	295	35	2241	25	195	3	296	34	2273	18	199	3	296	31	2308	17	202	2	296	32
28	2224	24	166	2	255	32	2243	27	166	2	253	32	2256	23	169	2	253	28	2296	17	172	2	253	27	2322	17	174	2	253	25
29	2242	25	135	2	211	26	2261	26	143	2	218	25	2274	20	145	2	218	23	2312	16	148	2	218	23	2338	18	150	2	218	23
30	2255	26	124	2	184	22	2272	25	125	2	188	23	2293	18	125	2	188	21	2326	15	126	2	188	21	2355	19	129	2	188	21
31	2270	27	106	2	157	18	2280	24	108	2	162	21	2302	17	110	2	162	19	2331	16	111	2	162	19	2361	21	113	2	162	19

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $°K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $°K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 14b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JANUARY

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2878	31	10220	78	12050	1280	2761	20	10088	93	12300	1687	2701	22	10058	93	12800	1875	2656	28	10105	80	13000	2238	2627	34	10130	54	13200	1725
1	2818	35	9000	76	11100	1330	2704	32	8850	87	11300	1684	2650	25	8727	86	11400	1761	2623	30	8780	75	11600	1657	2595	36	8850	53	11700	1650
2	2743	39	8000	74	9950	1280	2653	35	7850	83	10050	1475	2600	30	7695	82	10200	1227	2565	32	7695	70	10300	1225	2542	37	7732	54	10400	1300
3	2675	44	7020	72	9000	1230	2593	43	6885	80	9100	1335	2534	31	6810	78	9150	1065	2503	35	6780	69	9200	934	2492	38	6800	57	9300	1178
4	2612	47	6175	73	8100	1170	2535	45	6038	76	8100	1195	2479	33	5928	75	8100	881	2449	37	5920	67	8200	877	2429	42	5920	59	8250	1009
5	2554	54	5425	75	7300	993	2475	47	5287	77	7300	1085	2412	36	5140	71	7300	778	2393	37	5135	65	7300	778	2375	45	5135	60	7300	810
6	2483	53	4710	78	6500	860	2403	46	4630	77	6500	890	2357	35	4482	67	6500	778	2330	24	4465	62	6500	787	2323	43	4441	64	6500	590
7	2422	50	4195	79	5800	755	2342	42	3965	75	5800	757	2296	32	3850	62	5800	887	2268	20	3850	58	5800	897	2259	40	3842	63	5800	450
8	2361	46	3645	76	5200	850	2283	39	3420	71	5100	872	2249	30	3310	54	5100	1097	2237	23	3310	51	5100	1096	2224	38	3300	61	5100	700
9	2299	42	3125	71	4600	930	2261	37	2960	63	4450	881	2245	29	2882	46	4350	1154	2250	27	2850	44	4300	1202	2230	36	2830	54	4300	945
10	2272	33	2710	64	4000	1170	2258	35	2550	54	3850	887	2265	28	2462	38	3700	988	2277	30	2435	37	3700	887	2260	28	2416	46	3700	1152
11	2242	40	2330	54	3500	1249	2269	36	2195	43	3150	884	2284	28	2115	31	3100	773	2303	28	2082	30	3100	682	2285	24	2065	38	3100	807
12	2212	52	1985	44	3100	1177	2271	37	1870	34	2780	874	2298	30	1778	27	2700	509	2312	26	1760	26	2680	483	2304	21	1755	32	2660	622
13	2203	43	1710	36	2620	934	2278	36	1623	27	2390	772	2304	29	1530	22	2330	437	2318	22	1530	22	2310	394	2319	18	1540	27	2228	490
14	2198	37	1485	28	2250	823	2279	35	1382	22	2060	662	2305	28	1365	18	2000	361	2324	19	1350	19	1970	331	2323	18	1335	23	1960	429
15	2198	31	1250	22	1890	675	2280	30	1238	18	1800	447	2310	28	1170	16	1745	293	2332	19	1168	17	1710	275	2331	17	1153	20	1690	368
16	2199	26	1065	17	1660	483	2283	28	1030	16	1530	350	2315	27	1010	15	1500	238	2337	18	1005	15	1480	223	2344	17	996	17	1450	300
17	2201	22	921	14	1380	382	2287	26	885	14	1320	265	2319	26	872	13	1290	187	2343	18	875	13	1270	186	2352	17	869	15	1250	250
18	2206	18	791	10	1210	294	2289	24	762	12	1150	197	2323	26	751	10	1100	164	2351	17	751	11	1100	167	2357	16	751	13	1100	200
19	2220	17	675	8	1050	200	2290	22	662	9	985	167	2325	23	648	8	958	141	2356	17	650	9	940	143	2362	16	646	11	930	174
20	2226	17	575	6	890	157	2296	21	567	7	850	132	2328	22	561	6	830	117	2360	17	558	7	820	132	2368	16	557	10	810	150
21	2231	17	490	4	760	112	2301	21	485	6	740	109	2338	22	485	5	730	89	2364	16	485	6	710	97	2370	15	485	8	700	132
22	2249	16	422	3	650	85	2309	21	419	5	645	77	2347	21	420	5	625	77	2367	16	420	5	610	83	2373	15	419	7	600	113
23	2257	16	362	3	560	69	2318	22	360	4	550	69	2353	21	358	4	530	67	2373	16	358	4	530	72	2378	15	358	6	525	94
24	2286	15	313	3	475	49	2325	23	313	4	465	49	2357	21	317	4	455	47	2378	16	318	4	450	54	2380	16	315	5	450	80
25	2302	16	273	3	410	42	2332	23	272	3	400	43	2362	21	272	3	390	40	2384	16	274	3	390	43	2387	17	273	5	385	70
26	2319	17	235	2	350	35	2346	23	236	3	345	35	2369	21	237	3	340	32	2389	16	237	3	340	40	2392	18	237	4	340	61
27	2330	18	202	2	295	29	2356	23	203	2	295	28	2378	22	203	2	293	28	2396	16	203	2	292	35	2408	19	204	4	292	51
28	2346	21	175	2	253	24	2368	23	176	2	253	23	2383	23	176	2	253	23	2408	17	176	2	253	30	2419	21	177	3	253	47
29	2362	23	152	2	218	22	2375	25	152	2	218	21	2389	24	151	2	218	21	2422	18	153	2	218	25	2437	22	156	3	218	38
30	2369	25	132	2	188	20	2381	27	132	2	188	19	2399	25	134	2	188	19	2428	19	135	2	188	23	2454	23	136	2	188	32
31	2372	27	115	2	162	18	2388	29	115	2	162	17	2412	27	116	2	162	17	2432	23	116	2	162	21	2472	24	117	2	162	29

PERIOD of RECORD
JULY 1957 - JUNE 1960

TABLE 15a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

FEBRUARY

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

	0°						10°S						20°S						30°S						40°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2970	7	10315	15	11600	280	2961	9	10310	12	11700	490	2921	9	10322	13	11750	487	2884	19	10348	18	12000	900	2858	32	10395	30	12300	1645
1	2920	8	9350	15	10500	275	2926	13	9225	11	10700	538	2900	13	9215	13	10700	564	2899	23	9225	18	10800	865	2825	37	9220	28	11100	1568
2	2875	8	8175	15	9600	275	2874	14	8200	10	9700	527	2877	16	8170	13	9700	573	2900	26	8170	18	9700	810	2800	41	8127	30	9925	1240
3	2825	8	7230	15	8600	280	2825	15	7310	9	8700	475	2843	17	7310	13	8700	568	2841	27	7250	18	8750	750	2750	41	7180	32	9000	970
4	2775	8	6440	15	7900	255	2777	14	6450	9	7900	387	2795	18	6465	14	7900	556	2782	28	6450	19	7300	667	2701	40	6410	37	8005	810
5	2718	8	5700	14	7150	230	2722	13	5745	9	7100	279	2731	18	5750	14	7100	432	2707	28	5745	20	7150	494	2626	39	5610	42	7300	670
6	2660	8	5000	14	6450	202	2673	12	5032	9	6400	237	2676	17	5025	15	6400	354	2645	28	5000	22	6500	389	2571	40	4921	46	6500	510
7	2608	8	4325	14	5800	190	2604	11	4422	9	5800	191	2612	16	4420	15	5800	297	2571	28	4410	24	5900	376	2499	41	4300	49	5900	399
8	2530	9	3875	13	5250	183	2541	12	3877	10	5200	175	2532	16	3877	16	5200	205	2499	28	3875	25	5200	328	2421	41	3750	50	5200	369
9	2460	10	3390	13	4750	180	2461	13	3387	11	4700	164	2471	17	3380	16	4700	180	2425	28	3362	26	4700	337	2350	39	3275	50	4700	357
10	2382	11	2950	13	4250	170	2394	14	2950	12	4200	152	2393	17	2957	16	4200	170	2357	28	2920	26	4200	348	2279	36	2800	47	4200	399
11	2311	12	2585	13	3800	170	2321	14	2553	13	3800	137	2320	17	2543	16	3800	158	2284	27	2520	25	3800	379	2225	37	2432	44	3700	640
12	2218	16	2180	12	3400	170	2225	15	2195	13	3400	148	2225	16	2195	16	3300	159	2211	28	2150	23	3300	400	2193	38	2072	38	3200	830
13	2150	17	1850	12	2990	170	2147	16	1880	12	2990	157	2150	16	1880	15	2970	173	2161	27	1854	21	2890	439	2170	39	1772	31	2800	870
14	2080	19	1570	12	2640	170	2078	16	1604	11	2630	169	2084	16	1605	13	2620	185	2112	26	1583	18	2530	442	2149	39	1520	26	2400	760
15	2020	21	1350	11	2300	180	2021	17	1360	10	2300	178	2025	17	1363	10	2290	219	2072	26	1352	15	2185	423	2123	37	1280	21	2060	620
16	1973	21	1125	11	1990	193	1975	18	1147	8	1980	194	1975	20	1145	9	1990	227	2038	28	1135	11	1890	379	2112	33	1110	16	1760	474
17	1935	22	960	9	1710	210	1943	19	965	7	1700	243	1947	23	968	8	1690	250	2032	29	968	9	1630	337	2107	31	950	12	1520	398
18	1955	23	810	7	1420	208	1950	24	810	6	1420	245	1970	27	811	6	1420	218	2034	29	811	7	1380	264	2125	26	800	9	1290	218
19	2008	23	685	6	1180	168	2000	20	685	5	1170	177	2005	27	685	5	1160	175	2058	25	685	6	1140	187	2130	24	685	7	1090	199
20	2048	24	570	5	950	112	2042	18	579	5	960	142	2053	22	582	4	960	122	2099	22	582	5	950	138	2171	22	582	6	930	137
21	2075	24	492	4	810	92	2077	17	492	4	810	123	2093	18	493	4	800	89	2123	19	497	4	790	89	2189	19	498	5	780	92
22	2110	23	420	4	670	78	2108	17	420	3	680	86	2122	16	420	4	670	75	2153	17	422	4	670	75	2202	18	423	4	660	75
23	2130	23	363	3	575	75	2125	17	356	3	570	73	2147	18	356	3	570	58	2182	16	360	4	570	60	2218	17	363	4	564	57
24	2159	24	301	3	480	64	2150	18	305	3	480	54	2173	21	305	3	480	47	2204	17	312	3	480	47	2245	16	318	3	480	47
25	2178	25	258	3	408	59	2171	18	260	2	410	45	2200	23	262	3	410	42	2225	17	268	3	410	41	2263	15	274	3	410	41
26	2206	26	221	2	350	49	2194	19	225	2	350	41	2223	22	228	2	350	38	2251	16	230	3	350	37	2281	15	232	3	350	37
27	2222	27	191	2	292	42	2222	20	190	2	297	38	2242	22	195	2	297	37	2272	16	200	2	300	31	2300	14	201	3	299	33
28	2240	27	168	2	251	32	2253	21	167	2	250	34	2263	23	169	2	250	32	2293	15	172	2	256	27	2318	13	174	2	257	29
29	2257	27	142	2	213	26	2268	24	141	2	215	30	2282	24	145	2	217	28	2312	14	149	2	223	24	2338	12	151	2	224	26
30	2272	27	123	2	183	23	2283	32	124	2	183	28	2303	22	125	2	185	26	2330	13	127	2	188	22	2357	9	132	2	190	24
31	2275	27	105	2	155	21	2302	35	105	2	156	26	2312	19	108	2	157	25	2349	12	111	2	162	20	2375	8	115	2	163	22

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 15b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

FEBRUARY

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2857	38	10247	89	12400	2310	2749	20	10148	112	12600	1810	2663	31	10102	100	12800	2190	2543	52	10140	78	13400	2800	2396	55	10158	67	13800	2750
1	2797	41	9050	83	11200	1990	2698	28	8936	100	11350	1675	2648	29	8780	96	11500	1778	2574	48	8780	78	11800	1887	2425	51	8800	66	12300	1780
2	2718	43	8025	76	10000	1734	2651	35	7932	97	10200	1501	2606	31	7750	92	10200	1485	2553	43	7765	78	10300	1540	2450	44	7760	65	10900	1540
3	2669	47	7030	72	9000	1496	2596	42	6945	95	9100	1280	2558	34	6732	90	9150	1210	2521	38	6750	75	9200	1330	2441	39	6750	60	9700	1220
4	2601	51	6263	72	8100	1227	2544	47	6054	93	8100	1130	2500	37	5975	85	8150	940	2475	34	5970	70	8200	960	2405	36	5887	59	8300	890
5	2549	55	5460	73	7300	1060	2475	49	5298	92	7300	870	2430	38	5125	80	7300	840	2420	32	5120	66	7300	860	2371	33	5100	57	7300	750
6	2493	54	4735	75	6500	850	2406	48	4610	91	6500	760	2371	38	4490	75	6500	780	2360	30	4485	62	6500	770	2304	31	4430	55	6500	715
7	2423	47	4130	77	5900	730	2349	44	3980	87	5800	920	2308	38	3875	70	5800	870	2300	33	3870	57	5800	850	2253	34	3800	52	5800	765
8	2359	43	3628	76	5200	870	2291	39	3435	80	5200	1110	2262	34	3340	62	5100	970	2252	36	3340	51	5100	945	2224	36	3300	48	5000	875
9	2297	39	3110	73	4600	1000	2261	34	2964	72	4450	1200	2235	32	2870	55	4400	1220	2241	38	2830	43	4400	1250	2240	37	2830	42	4300	965
10	2271	36	2693	67	4000	1110	2260	35	2602	62	3850	1300	2255	31	2478	46	3800	1210	2266	45	2465	35	3700	910	2264	37	2440	35	3600	845
11	2247	40	2318	59	3500	1250	2258	37	2210	50	3300	1280	2269	32	2100	38	3200	960	2288	31	2092	29	3200	690	2292	31	2068	28	3100	665
12	2223	47	1989	48	3000	1270	2257	46	1878	42	2800	1100	2271	32	1800	31	2750	750	2301	24	1780	25	2710	465	2305	27	1780	25	2640	445
13	2210	49	1731	39	2580	1065	2245	42	1660	34	2450	778	2273	29	1560	25	2370	570	2302	18	1565	20	2350	375	2308	23	1538	22	2280	375
14	2203	45	1450	32	2190	855	2235	37	1389	27	2100	670	2274	24	1365	20	2030	425	2303	16	1368	18	2000	294	2312	20	1352	19	1960	325
15	2199	38	1260	25	1920	670	2235	32	1233	20	1810	462	2274	21	1200	17	1760	337	2303	14	1200	16	1740	247	2317	21	1200	17	1690	275
16	2198	35	1070	19	1630	448	2237	28	1030	17	1580	374	2275	18	1002	15	1520	248	2304	14	1002	15	1500	206	2322	22	992	16	1450	225
17	2198	31	927	15	1390	359	2237	27	889	15	1320	260	2275	16	865	14	1300	187	2304	14	865	13	1290	178	2326	23	858	15	1250	179
18	2199	27	789	12	1210	250	2243	26	771	13	1160	179	2275	16	750	13	1120	159	2305	15	752	11	1110	157	2330	23	741	13	1080	157
19	2205	23	675	9	1040	171	2250	26	651	11	995	140	2276	17	637	11	970	137	2306	16	631	10	960	137	2333	24	630	11	940	124
20	2213	20	578	7	880	112	2251	25	565	9	850	108	2278	18	553	9	820	116	2308	17	551	8	800	109	2334	24	549	10	780	96
21	2225	19	497	6	750	77	2258	24	492	7	730	78	2283	19	488	7	720	93	2312	19	483	7	708	94	2336	25	478	9	693	87
22	2253	18	428	5	645	66	2267	23	425	6	628	62	2290	21	417	7	620	78	2315	22	415	7	620	85	2337	27	410	8	605	78
23	2273	17	365	4	550	47	2289	23	365	5	538	48	2294	22	359	6	529	65	2317	22	358	6	528	76	2338	26	354	7	520	72
24	2291	17	320	4	475	43	2302	22	320	4	465	46	2299	23	317	5	460	48	2319	21	310	5	460	67	2341	25	307	6	450	77
25	2308	17	275	3	410	40	2318	22	273	4	410	41	2310	25	271	4	410	43	2320	20	269	4	400	62	2342	25	267	6	390	86
26	2316	17	232	3	350	35	2324	22	232	3	350	38	2321	26	230	3	350	41	2323	21	230	3	340	58	2344	26	230	5	335	94
27	2330	17	200	2	299	31	2323	22	200	3	299	36	2330	28	200	3	299	39	2328	23	200	3	297	55	2345	27	200	5	293	123
28	2342	17	174	2	257	27	2346	22	174	2	256	31	2338	29	174	2	256	38	2331	24	174	3	255	53	2348	28	174	4	255	175
29	2359	16	152	2	224	24	2358	23	153	2	223	27	2346	30	153	2	222	37	2336	26	153	3	222	51	2353	30	152	3	222	220
30	2368	16	133	2	191	22	2368	22	133	2	191	25	2358	29	132	2	191	36	2343	28	132	2	191	51	2357	33	132	3	191	228
31	2383	16	117	2	163	20	2383	22	117	2	163	24	2365	28	117	2	163	35	2359	30	117	2	163	52	2363	35	115	3	163	235

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 16a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MARCH

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2965	7	10312	13	11600	390	2951	13	10312	13	11700	680	2918	17	10328	16	11800	740	2877	21	10350	19	12100	1020	2843	37	10392	38	12350	1640
1	2923	7	9210	12	10600	362	2919	13	9200	13	10700	590	2892	19	9200	16	10800	820	2893	27	9200	18	10900	1130	2847	39	9210	28	11100	1530
2	2875	7	8160	11	9600	329	2883	13	8200	12	9700	530	2873	18	8200	16	9700	700	2899	28	8200	18	9700	970	2792	41	8150	30	9995	1335
3	2825	6	7170	9	8700	295	2838	13	7300	12	8700	425	2846	16	7280	15	8700	540	2825	28	7230	18	8800	780	2747	42	7200	37	9000	1170
4	2775	6	6430	9	7900	263	2784	12	6500	11	7900	347	2789	16	6485	15	7900	473	2758	28	6440	19	7950	600	2691	43	6390	45	8050	878
5	2720	6	5700	9	7050	220	2724	12	5710	11	7200	286	2724	15	5780	15	7200	442	2694	28	5710	20	7200	440	2628	44	5630	51	7300	775
6	2660	7	5010	9	6400	198	2672	12	5030	10	6400	273	2669	16	5000	16	6500	419	2623	28	4995	22	6500	375	2565	43	4889	56	6600	625
7	2601	9	4410	9	5750	190	2608	12	4420	10	5800	196	2599	17	4410	16	5800	379	2546	28	4389	24	5850	337	2485	42	4300	59	5900	478
8	2545	11	3880	9	5200	185	2533	12	3890	10	5200	187	2526	18	3892	16	5200	297	2472	29	3890	26	5300	300	2409	39	3730	59	5300	425
9	2465	12	3380	10	4700	180	2471	13	3384	11	4700	178	2463	18	3360	17	4700	241	2388	28	3320	27	4700	310	2342	35	3265	56	4700	458
10	2382	12	2940	11	4200	150	2389	13	2943	12	4200	161	2376	17	2925	17	4200	223	2325	28	2910	27	4200	360	2275	32	2830	52	4200	625
11	2313	13	2550	12	3775	135	2317	14	2550	12	3800	155	2300	16	2550	17	3800	224	2273	28	2492	25	3700	410	2224	37	2400	46	3700	872
12	2225	13	2225	13	3350	112	2230	15	2193	12	3400	150	2225	16	2175	17	3300	247	2202	29	2130	23	3300	490	2185	43	2065	38	3200	1010
13	2150	15	1875	13	2995	93	2150	16	1879	12	2980	155	2157	16	1879	16	2950	267	2161	29	1835	21	2880	510	2172	45	1765	32	2780	921
14	2078	16	1575	13	2630	80	2081	17	1600	11	2630	162	2098	16	1600	14	2590	279	2125	28	1580	18	2520	480	2150	37	1500	27	2380	779
15	2010	17	1365	12	2300	75	2018	18	1356	11	2300	176	2039	18	1352	11	2260	278	2092	28	1320	15	2170	430	2125	35	1290	22	2020	625
16	1959	18	1130	11	1990	88	1968	19	1135	10	2000	189	1987	21	1135	9	1960	269	2056	27	1127	10	1850	378	2114	32	1108	17	1740	450
17	1930	19	955	10	1690	130	1937	20	963	9	1690	206	1978	24	962	7	1650	256	2042	25	958	9	1580	324	2110	29	935	13	1490	353
18	1960	21	803	8	1400	230	1958	23	810	7	1410	221	1983	24	810	6	1400	218	2046	23	805	7	1370	252	2110	27	793	9	1260	275
19	2008	22	682	6	1160	192	2006	18	687	5	1160	192	2018	19	685	5	1150	157	2061	21	683	5	1130	175	2115	25	678	7	1110	196
20	2050	23	575	5	960	155	2050	16	580	4	960	123	2062	15	582	4	950	97	2107	18	582	5	945	112	2143	23	578	6	910	147
21	2095	23	492	4	800	118	2096	18	493	4	800	89	2103	16	493	3	800	85	2131	14	495	4	790	91	2162	21	495	5	770	97
22	2118	23	410	4	665	93	2118	18	415	3	680	74	2133	16	421	3	680	72	2157	11	425	4	670	74	2183	19	420	4	660	83
23	2148	23	360	3	565	81	2145	16	356	3	570	62	2164	15	358	3	570	51	2189	11	361	3	570	61	2213	17	361	4	560	68
24	2168	23	302	3	470	70	2168	18	308	3	480	49	2189	17	309	3	480	46	2219	12	312	3	480	48	2229	16	317	3	480	53
25	2192	23	260	2	409	59	2192	17	260	2	410	39	2219	19	263	2	410	39	2238	14	265	3	410	44	2249	17	266	3	410	45
26	2217	22	225	2	350	45	2220	17	225	2	340	34	2238	21	227	2	350	35	2261	16	230	2	350	37	2269	17	230	3	350	41
27	2240	22	194	2	293	34	2238	19	192	2	295	28	2262	22	194	2	297	28	2277	16	198	2	299	33	2284	17	198	2	298	35
28	2260	22	166	2	250	26	2267	23	165	2	250	24	2275	23	168	2	251	24	2290	17	170	2	255	28	2302	16	171	2	255	31
29	2275	22	141	2	218	24	2278	25	142	2	215	22	2289	24	145	2	218	22	2309	17	148	2	221	24	2311	16	149	2	222	25
30	2295	22	123	2	183	22	2297	29	124	2	185	20	2307	23	125	2	187	20	2315	16	127	2	188	22	2319	17	128	2	189	23
31	2315	23	106	2	157	20	2310	32	106	2	160	18	2317	25	108	2	161	18	2323	17	111	2	162	20	2327	18	113	2	163	21

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 16b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MARCH

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2855	29	10262	93	12400	3400	2753	21	10160	112	12500	3050	2650	36	10050	113	12900	3700	2475	64	10050	106	13700	5175	2375	69	10082	84	13900	5500
1	2802	35	9130	83	11100	1820	2704	28	9000	107	11300	1830	2643	37	8680	109	11600	2300	2503	53	8670	98	11900	3550	2378	63	8750	76	12900	4250
2	2750	40	8040	80	10000	1770	2671	32	7950	102	10150	1540	2593	43	7680	107	10250	1565	2503	52	7550	95	10400	1830	2382	52	7600	69	11100	2890
3	2698	42	7085	79	9000	1225	2620	37	7000	93	9050	1230	2547	47	6730	105	9150	1200	2474	48	6650	92	9250	1095	2382	39	6700	67	9500	1630
4	2627	43	6184	81	8100	998	2558	39	6030	89	8100	960	2477	50	5885	105	8100	910	2424	44	5820	90	8250	875	2354	36	5794	63	8400	950
5	2569	44	5398	83	7300	992	2498	43	5300	88	7300	873	2419	48	5130	103	7300	750	2323	40	5060	87	7300	750	2309	31	5000	59	7400	835
6	2498	44	4730	88	6600	869	2425	44	4710	88	6500	750	2357	44	4500	102	6500	885	2305	33	4398	81	6500	875	2263	33	4310	55	6500	780
7	2421	43	4192	93	5925	750	2363	44	4015	87	5900	872	2294	42	3875	96	5800	1210	2246	37	3750	71	5800	1175	2195	37	3696	52	5800	745
8	2347	41	3650	88	5300	884	2275	42	3445	81	5200	887	2247	32	3289	82	5100	1730	2228	47	3220	59	5000	1378	2182	37	3159	48	5000	745
9	2281	38	3130	78	4700	879	2243	36	3000	75	4550	1120	2230	38	2890	70	4380	2125	2251	45	2778	50	4280	1400	2218	37	2703	43	4200	678
10	2234	32	2725	69	4100	975	2218	34	2610	67	3925	1570	2247	43	2430	58	3700	2375	2255	48	2383	44	3600	1200	2238	36	2321	38	3500	489
11	2199	37	2315	61	3600	1130	2213	39	2285	58	3400	1850	2252	47	2100	49	3200	2373	2268	39	2060	38	3100	569	2257	33	1995	36	3000	397
12	2184	45	1999	53	3100	1250	2212	49	1880	50	2900	1850	2252	44	1779	42	2700	2150	2274	38	1760	35	2640	475	2263	31	1714	32	2590	378
13	2175	47	1731	43	2620	1133	2211	42	1662	41	2490	1450	2251	39	1550	36	2370	1000	2272	37	1500	32	2280	397	2268	28	1493	29	2230	353
14	2174	39	1450	35	2250	879	2212	39	1380	35	2120	960	2248	37	1332	31	2020	620	2268	34	1310	28	1960	367	2273	28	1267	27	1920	322
15	2167	36	1252	28	1940	625	2211	38	1203	29	1830	620	2247	36	1124	27	1750	450	2264	32	1118	26	1700	327	2269	32	1100	26	1670	300
16	2161	33	1067	22	1650	425	2210	37	1014	23	1580	419	2240	35	968	23	1500	375	2261	32	962	24	1450	291	2262	35	937	24	1420	259
17	2160	31	902	18	1390	332	2209	35	879	19	1350	325	2237	32	835	21	1290	297	2258	34	825	22	1260	257	2258	36	810	22	1230	227
18	2165	30	787	15	1190	252	2207	31	750	17	1130	253	2232	32	725	18	1100	241	2255	35	712	20	1090	215	2249	38	691	20	1050	194
19	2165	27	665	12	1030	187	2202	29	649	14	1000	193	2227	31	618	16	950	197	2252	36	600	18	940	187	2245	40	594	18	900	189
20	2166	26	565	9	890	145	2197	28	554	12	850	161	2223	31	519	14	830	168	2246	37	515	16	800	169	2243	42	511	17	780	173
21	2175	24	485	7	750	106	2192	28	473	10	730	125	2220	32	454	12	705	141	2237	37	450	15	690	154	2239	43	439	16	670	167
22	2186	23	415	6	640	85	2187	28	410	8	625	91	2219	32	399	10	610	117	2227	38	395	14	600	139	2233	44	382	15	580	154
23	2199	23	358	5	550	71	2187	28	352	7	538	79	2216	32	350	9	530	93	2227	38	345	12	514	122	2226	44	327	14	490	138
24	2220	23	308	4	470	58	2195	28	307	6	470	61	2218	32	300	7	460	78	2236	38	293	10	450	103	2227	44	277	13	425	129
25	2239	23	265	4	410	45	2219	28	265	5	410	49	2228	32	262	7	410	68	2240	38	256	9	400	90	2233	45	239	12	375	114
26	2264	24	231	3	350	41	2238	28	231	5	350	44	2246	32	227	6	350	55	2246	38	221	8	335	81	2240	45	206	10	315	105
27	2275	24	198	3	300	37	2264	28	197	4	300	40	2268	32	193	5	301	47	2262	38	188	7	295	73	2246	47	177	8	275	89
28	2292	23	172	2	257	30	2282	28	171	4	258	37	2282	32	169	5	258	42	2274	38	162	7	255	63	2257	46	152	7	231	84
29	2308	23	149	2	224	26	2300	28	147	3	225	33	2297	32	143	4	225	41	2288	38	137	6	220	54	2269	42	130	7	196	79
30	2317	24	128	2	190	24	2311	28	127	3	188	29	2309	32	124	4	188	39	2304	38	120	5	187	51	2281	39	113	6	170	75
31	2324	24	113	2	164	22	2320	28	111	3	162	28	2318	32	110	3	162	38	2313	39	108	4	160	48	2293	43	98	6	148	68

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 17a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

APRIL

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2970	8	10312	11	11600	375	2952	9	10310	12	11800	481	2882	18	10325	16	12000	500	2849	26	10360	19	12300	994	2820	34	10388	59	12500	1890
1	2932	8	9160	10	10600	365	2923	15	9200	12	10700	537	2875	23	9200	16	10900	820	2887	36	9250	18	10900	1190	2809	37	9225	49	11100	1795
2	2883	7	8150	8	9600	347	2881	17	8190	12	9600	456	2875	25	8195	16	9600	625	2877	42	8200	18	9750	1140	2775	41	8150	47	10000	1495
3	2826	6	7250	9	8700	312	2844	16	7280	12	8700	371	2849	19	7280	16	8700	449	2814	40	7250	19	8800	975	2719	43	7175	51	9000	1224
4	2778	6	6450	10	7900	280	2790	14	6450	12	7900	315	2792	18	6450	16	7900	376	2743	28	6430	24	7950	725	2657	42	6310	57	8100	997
5	2713	6	5775	11	7100	246	2722	14	5750	13	7100	278	2722	18	5750	17	7200	323	2675	28	5675	28	7300	469	2592	42	5520	63	7400	753
6	2662	7	5010	12	6400	213	2668	14	5032	13	6400	257	2657	17	5032	18	6500	293	2605	27	5000	30	6500	379	2525	41	4850	68	6600	563
7	2600	7	4410	12	5800	190	2603	16	4425	13	5800	229	2594	17	4425	18	5800	288	2526	27	4390	32	5900	325	2454	41	4265	71	5900	405
8	2538	8	3880	12	5200	180	2541	17	3890	14	5200	214	2518	16	3890	18	5300	274	2455	27	3825	33	5300	308	2375	40	3715	71	5300	348
9	2472	9	3400	12	4700	170	2422	18	3440	14	4700	189	2441	15	3430	18	4700	263	2379	27	3350	33	4700	318	2296	39	3210	68	4700	400
10	2393	10	2950	12	4175	160	2387	17	2940	14	4200	178	2368	15	2932	18	4200	255	2301	28	2875	31	4200	350	2239	36	2725	62	4150	503
11	2315	12	2580	12	3800	150	2316	16	2547	13	3800	176	2294	16	2515	17	3800	250	2246	28	2470	28	3800	393	2194	38	2332	52	3600	1080
12	2330	14	2225	12	3400	150	2235	16	2190	13	3400	177	2225	16	2170	15	3325	252	2177	29	2093	25	3300	497	2171	43	2000	43	3200	1125
13	2158	16	1880	12	2980	160	2157	16	1876	13	2980	182	2159	16	1845	13	2950	257	2138	29	1783	22	2880	562	2166	45	1710	35	2700	1000
14	2087	17	1600	12	2630	160	2083	17	1598	12	2650	189	2096	17	1585	11	2590	267	2119	29	1540	18	2500	558	2147	39	1469	28	2330	867
15	2017	20	1375	11	2320	170	2024	18	1350	12	2280	185	2054	17	1348	9	2250	263	2100	28	1300	15	2130	450	2140	37	1250	22	2000	687
16	1970	21	1130	11	2000	180	1975	19	1143	11	1950	175	2009	18	1135	7	1930	237	2075	26	1120	11	1820	346	2140	35	1080	18	1690	563
17	1935	22	960	11	1710	193	1940	21	962	10	1690	199	1987	19	962	7	1650	218	2071	26	931	9	1550	279	2142	33	910	14	1480	400
18	1971	22	805	10	1430	215	1975	22	808	9	1410	249	1995	23	808	6	1390	172	2075	26	800	7	1330	247	2149	30	782	10	1250	293
19	2016	22	685	8	1160	175	2023	18	683	7	1160	191	2043	28	683	5	1140	147	2095	25	681	5	1110	193	2156	28	665	7	1060	243
20	2057	22	575	7	960	125	2069	17	578	7	950	151	2085	22	579	5	945	113	2120	23	578	4	925	147	2166	26	568	6	890	189
21	2098	22	492	6	800	94	2107	16	491	6	880	100	2122	18	493	4	790	88	2145	22	497	4	780	96	2178	24	489	5	760	147
22	2127	22	415	5	670	82	2139	17	420	5	670	89	2153	17	422	4	670	70	2173	21	425	3	670	78	2187	22	417	4	660	109
23	2165	22	358	4	560	73	2163	18	361	4	570	78	2175	16	363	3	570	49	2196	19	363	3	570	57	2203	21	355	4	560	87
24	2192	22	303	4	470	67	2193	18	308	4	480	71	2206	16	310	3	480	44	2219	17	310	3	480	45	2219	21	308	3	480	69
25	2218	22	263	3	400	52	2212	19	262	3	410	58	2228	17	264	3	415	38	2237	16	265	2	415	38	2230	22	261	3	410	53
26	2239	25	225	3	340	47	2235	19	225	3	340	47	2255	18	227	2	350	32	2261	17	228	2	350	31	2246	22	227	3	340	46
27	2260	25	192	3	295	39	2266	19	193	2	293	41	2275	19	195	2	295	28	2277	17	197	2	294	25	2262	23	195	2	292	39
28	2280	27	165	2	251	32	2272	18	167	2	251	37	2296	18	167	2	253	24	2291	16	168	2	253	23	2273	23	166	2	250	33
29	2302	28	142	2	213	28	2309	18	143	2	215	34	2312	13	145	2	216	22	2309	15	146	2	217	21	2283	24	143	2	216	29
30	2317	29	124	2	183	24	2323	18	125	2	183	27	2327	8	126	2	184	20	2326	17	127	2	186	19	2295	26	125	2	185	28
31	2325	30	108	2	158	22	2337	17	105	2	155	24	2339	5	107	2	157	18	2337	19	109	2	160	17	2307	28	107	2	160	27

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 17b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

APRIL

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2806	37	10241	94	12500	2225	2709	43	10122	113	12500	2893	2584	104	10068	123	13600	5600	2407	100	10082	98	14100	6175	2287	62	10098	78	14500	6250
1	2757	38	9030	79	11200	2030	2677	36	8850	102	11300	2167	2591	90	8750	123	11700	2780	2496	70	8750	103	11950	2875	2300	56	8750	78	12500	4125
2	2701	41	8000	74	10100	1873	2635	40	7720	98	10200	1780	2573	80	7720	119	10300	1910	2501	58	7722	105	10400	1946	2349	49	7722	78	10600	2610
3	2637	44	7010	74	9100	1387	2592	45	6832	95	9150	1500	2508	70	6790	115	9250	1675	2472	52	6730	106	9300	1575	2361	45	6730	77	9700	1875
4	2571	49	6180	74	8200	1170	2517	50	6000	94	8200	1250	2443	64	5910	113	8250	1380	2413	47	5840	105	8300	1213	2357	39	5821	76	8400	1250
5	2497	52	5380	76	7400	987	2450	55	5190	94	7400	1030	2379	58	5100	112	7400	1150	2347	43	5060	99	7400	879	2313	39	5060	73	7400	875
6	2425	51	4710	80	6600	789	2393	64	4610	94	6550	820	2325	48	4490	109	6500	760	2287	38	4385	93	6500	781	2256	37	4327	68	6500	750
7	2352	52	4100	82	5900	775	2316	56	3991	92	5850	850	2257	40	3840	101	5800	997	2225	32	3750	84	5800	957	2197	33	3712	64	5800	887
8	2279	48	3540	81	5300	813	2238	45	3420	86	5200	1050	2201	34	3250	89	5100	1123	2194	34	3225	73	5100	1125	2184	30	3173	57	5000	964
9	2236	41	3000	75	4600	875	2211	37	2880	80	4400	1125	2189	33	2785	75	4400	1230	2185	38	2750	63	4300	1280	2175	33	2710	51	4300	1250
10	2219	31	2593	65	4000	1050	2163	36	2485	64	3950	1200	2183	39	2350	60	3800	1220	2181	43	2330	52	3720	1135	2187	34	2315	44	3600	875
11	2204	40	2250	54	3450	1167	2174	40	2120	53	3300	1220	2177	48	2022	48	3175	1120	2180	35	2000	42	3100	870	2198	28	1982	38	3100	563
12	2175	51	1930	44	2950	1230	2187	50	1780	42	2850	1115	2184	38	1750	38	2690	887	2176	28	1710	36	2680	562	2189	27	1696	34	2650	410
13	2199	50	1615	36	2520	1125	2210	42	1545	35	2380	997	2183	32	1500	33	2340	687	2174	20	1467	32	2310	425	2178	26	1451	29	2280	350
14	2206	43	1385	29	2170	941	2192	39	1342	30	2080	813	2175	30	1278	28	2010	487	2163	21	1253	28	1980	341	2166	28	1241	27	1960	295
15	2194	38	1202	25	1870	759	2186	37	1180	26	1800	687	2166	32	1086	25	1738	413	2154	24	1050	25	1700	283	2156	29	1050	26	1680	267
16	2183	37	1052	21	1615	618	2177	36	994	23	1570	488	2153	34	925	23	1490	343	2143	27	900	23	1460	237	2142	30	895	24	1440	238
17	2175	36	889	18	1370	463	2169	37	850	20	1310	400	2142	36	798	21	1270	280	2131	30	765	21	1250	193	2130	33	765	22	1240	193
18	2173	32	760	15	1180	360	2162	37	725	18	1140	328	2137	38	675	18	1110	225	2117	31	662	19	1070	187	2118	37	657	20	1050	182
19	2173	30	648	12	999	275	2157	38	610	15	970	267	2123	39	585	16	940	192	2106	32	565	17	910	178	2109	40	559	19	880	173
20	2175	30	550	10	860	206	2151	38	527	13	820	194	2117	43	498	15	790	179	2097	34	478	16	780	169	2098	43	476	17	780	160
21	2179	31	465	7	720	177	2150	38	448	11	705	179	2108	44	425	13	700	169	2084	35	410	14	670	151	2093	39	403	15	660	143
22	2180	31	399	6	620	152	2151	38	385	9	600	167	2099	44	362	11	595	153	2079	36	349	13	570	137	2084	36	344	14	560	137
23	2187	31	343	5	540	126	2154	39	331	7	520	138	2098	44	310	9	510	137	2077	37	297	12	480	125	2077	34	295	13	480	123
24	2193	32	298	4	470	98	2160	41	277	6	440	120	2099	45	258	7	440	122	2083	37	250	10	420	114	2076	33	249	11	410	113
25	2201	32	253	3	390	78	2170	42	237	5	380	103	2117	48	223	6	375	109	2089	38	213	9	350	102	2082	35	213	10	340	96
26	2213	33	219	3	330	59	2181	42	210	4	315	78	2134	53	188	5	310	87	2098	40	178	7	295	89	2091	36	176	9	292	87
27	2227	34	187	2	279	47	2191	43	176	3	268	62	2150	59	162	4	259	72	2119	46	159	7	251	78	2109	37	156	8	248	78
28	2238	36	161	2	242	42	2200	50	150	3	227	47	2169	67	139	3	225	56	2138	53	135	6	219	69	2125	38	135	7	216	67
29	2252	38	138	2	209	38	2219	52	128	2	195	41	2184	72	122	3	193	48	2157	60	117	5	189	63	2144	42	115	7	183	61
30	2263	39	121	2	179	35	2228	54	113	2	171	39	2196	75	107	2	169	43	2171	68	100	4	159	57	2159	51	99	6	156	57
31	2273	39	103	2	154	31	2239	57	98	2	145	38	2210	77	91	2	142	41	2182	73	87	3	139	52	2168	56	85	5	135	54

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 18a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MAY

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	8	10315	12	11600	370	2922	9	10310	12	11900	760	2868	17	10328	16	12100	890	2841	36	10370	22	12300	1250	2809	35	10384	68	12600	2250
1	2922	8	9180	11	10600	350	2917	17	9250	11	10800	640	2882	24	9250	15	10900	1075	2860	43	9250	19	11000	1385	2784	41	9250	56	11200	2030
2	2878	8	8175	9	9600	318	2904	17	8200	10	9700	487	2886	25	8185	15	9700	890	2850	43	8150	19	9850	1250	2747	47	8062	49	10000	1780
3	2828	8	7250	8	8700	290	2850	15	7250	9	8700	381	2850	22	7250	15	8800	720	2800	41	7250	23	8900	1080	2700	50	7250	50	9100	1550
4	2780	8	6430	8	7900	235	2789	15	6450	9	7900	342	2781	21	6450	16	7950	540	2725	40	6442	29	8050	873	2629	54	6380	56	8200	1330
5	2725	8	5700	9	7100	195	2725	15	5703	9	7200	295	2711	20	5720	17	7200	450	2652	39	5710	37	7300	627	2571	58	5580	63	7400	1180
6	2675	8	5010	9	6400	182	2668	14	5019	9	6600	273	2647	20	5000	17	6600	381	2589	38	4999	42	6600	475	2500	64	4837	70	6600	879
7	2609	8	4350	9	5800	175	2605	14	4350	9	5800	238	2587	20	4350	18	5850	325	2505	38	4310	45	5900	389	2433	65	4225	77	5900	670
8	2533	8	3875	9	5200	170	2534	13	3820	10	5200	212	2512	20	3820	19	5300	287	2439	38	3810	46	5300	367	2368	60	3670	80	5300	540
9	2468	8	3380	9	4700	170	2460	12	3320	10	4700	187	2434	20	3320	19	4700	284	2375	36	3295	46	4700	368	2298	45	3150	77	4700	590
10	2400	8	2950	9	4200	170	2381	12	2950	9	4200	169	2359	20	2932	19	4200	275	2294	33	2850	44	4200	389	2239	35	2718	70	4150	880
11	2322	9	2600	9	3800	170	2306	12	2541	9	3800	157	2275	19	2535	18	3800	283	2213	33	2480	40	3800	476	2183	34	2310	62	3600	1250
12	2235	9	2200	9	3400	170	2215	13	2185	9	3400	152	2193	18	2155	17	3350	305	2158	34	2100	35	3300	579	2147	43	1998	51	3125	1450
13	2160	10	1875	9	2990	175	2150	14	1871	9	2990	150	2131	17	1868	16	2950	321	2131	38	1769	30	2870	587	2144	53	1710	38	2700	1250
14	2081	13	1595	9	2640	180	2078	15	1593	8	2650	150	2095	18	1562	14	2570	325	2117	42	1518	24	2480	578	2146	47	1425	30	2300	910
15	2017	15	1350	9	2310	185	2025	16	1350	8	2280	152	2059	20	1330	11	2230	319	2099	41	1280	20	2130	567	2140	45	1250	24	1970	750
16	1962	17	1140	9	1990	197	1977	16	1140	7	1960	159	2025	24	1118	10	1890	278	2081	38	1092	14	1780	468	2135	40	1050	18	1690	610
17	1945	19	965	8	1680	220	1946	17	960	7	1670	165	1999	25	960	7	1650	250	2075	36	935	10	1570	372	2134	37	900	13	1430	437
18	1977	21	806	7	1400	220	1982	17	808	6	1400	172	2004	26	802	7	1380	217	2081	35	798	7	1290	283	2132	35	765	9	1220	323
19	2022	22	690	6	1150	190	2018	18	683	5	1150	163	2050	27	680	5	1130	175	2109	30	675	6	1100	203	2134	33	655	7	1050	224
20	2068	23	575	5	950	154	2072	18	578	5	950	138	2100	25	578	5	940	140	2133	28	575	5	920	158	2141	30	562	6	880	175
21	2108	23	496	4	800	125	2113	17	493	4	790	95	2133	23	493	4	790	93	2154	26	493	4	780	112	2153	28	481	5	750	138
22	2142	23	420	4	670	98	2155	16	420	4	670	82	2168	21	419	4	670	78	2174	24	420	4	660	89	2163	28	405	5	643	96
23	2171	23	358	3	555	81	2177	15	359	3	560	68	2181	18	359	4	560	68	2189	23	359	3	560	73	2171	27	350	4	560	84
24	2208	23	302	3	480	73	2198	16	301	3	480	54	2209	17	302	3	480	46	2213	23	301	3	475	56	2180	27	300	4	470	69
25	2225	23	263	2	400	60	2218	18	265	3	405	44	2225	17	265	3	410	40	2225	23	262	3	405	45	2189	27	255	4	400	61
26	2247	23	227	2	340	49	2236	21	226	2	350	37	2246	19	227	3	350	34	2239	23	227	3	350	41	2196	27	218	3	340	47
27	2268	23	195	2	295	43	2257	23	195	2	296	31	2268	22	197	2	296	28	2256	24	196	2	296	34	2206	28	187	3	290	41
28	2288	23	168	2	253	38	2275	27	170	2	253	25	2279	25	170	2	253	23	2269	24	168	2	252	28	2218	28	162	2	249	35
29	2310	23	144	2	215	33	2292	29	147	2	215	23	2291	27	148	2	217	21	2282	25	146	2	217	25	2225	29	137	2	210	31
30	2317	23	126	2	184	29	2309	30	126	2	185	21	2310	29	126	2	187	19	2293	26	125	2	188	23	2238	29	119	2	180	27
31	2325	23	109	2	158	27	2324	34	105	2	159	19	2329	30	105	2	161	17	2302	27	105	2	161	21	2251	29	103	2	158	23

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 18b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

MAY

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2789	35	10223	112	12700	3500	2663	48	10095	119	12800	4500	2579	62	10095	130	13800	4110	2346	74	10125	67	14300	4575	2275	67	10135	65	14500	4675
1	2725	33	9000	111	11500	2790	2629	45	8730	118	11600	2780	2575	58	8725	126	11850	2675	2448	61	8725	75	12100	3020	2293	57	8725	69	12900	3750
2	2662	40	7920	106	10200	2340	2579	50	7633	118	10300	2125	2538	55	7540	122	10400	1945	2475	54	7540	85	10600	2230	2338	50	7520	81	11700	3120
3	2602	48	6893	97	9200	1890	2524	58	6694	116	9200	1735	2504	49	6694	119	9300	1485	2433	47	6694	92	9400	1674	2350	43	6699	85	9700	2397
4	2543	55	6037	88	8200	1565	2457	64	5910	115	8200	1237	2428	47	5890	116	8300	950	2371	42	5850	93	8400	1105	2350	37	5850	82	8500	1763
5	2475	57	5330	82	7400	1227	2395	66	5072	114	7400	780	2358	45	5019	112	7400	780	2314	32	5008	90	7400	830	2300	32	5000	78	7500	1225
6	2412	56	4710	77	6600	1025	2331	61	4465	113	6500	1020	2303	42	4350	108	6500	870	2250	24	4335	81	6600	780	2243	26	4335	73	6600	930
7	2350	51	4035	73	5900	815	2283	48	3870	111	5800	1130	2239	38	3750	97	5800	1120	2188	15	3730	73	5800	1020	2187	25	3710	67	5800	870
8	2289	46	3520	70	5300	887	2244	38	3310	104	5100	1250	2188	35	3185	85	5100	1267	2133	19	3185	63	5100	1360	2147	23	3185	62	5100	1000
9	2238	37	2998	67	4700	1000	2198	32	2840	90	4450	1450	2148	30	2750	73	4400	1495	2098	32	2710	53	4400	1457	2108	32	2699	52	4400	1370
10	2194	38	2610	62	4100	1020	2183	40	2435	73	3950	1470	2122	35	2315	61	3800	1367	2084	43	2297	43	3800	1205	2100	43	2285	39	3800	1275
11	2182	44	2225	54	3400	945	2164	50	2090	59	3300	1365	2106	38	2000	50	3275	1223	2077	38	1940	36	3200	875	2110	44	1940	33	3200	885
12	2173	43	1880	46	2950	830	2160	50	1790	48	2800	1150	2094	39	1738	43	2750	998	2075	37	1655	31	2720	620	2092	38	1651	28	2690	695
13	2174	38	1590	39	2510	780	2158	41	1520	42	2400	922	2091	38	1480	37	2350	544	2067	35	1460	28	2320	438	2077	37	1400	26	2300	482
14	2174	37	1375	32	2150	750	2155	38	1298	34	2050	750	2087	36	1252	30	2000	483	2055	34	1190	25	1980	347	2068	37	1190	24	1970	399
15	2174	36	1202	27	1810	685	2150	37	1125	28	1770	590	2081	33	1040	27	1730	375	2039	34	1005	22	1690	275	2047	39	1001	22	1680	326
16	2168	36	1000	22	1580	560	2138	33	945	25	1500	447	2077	29	892	23	1470	291	2023	32	848	19	1470	225	2027	43	848	19	1470	268
17	2162	35	850	18	1350	423	2124	31	795	22	1290	348	2067	27	750	20	1260	225	2012	29	715	17	1240	191	2013	45	718	17	1240	214
18	2155	33	725	13	1140	314	2118	28	678	18	1080	253	2061	25	639	16	1070	178	1995	27	608	15	1040	158	1989	47	603	16	1040	183
19	2152	33	631	10	970	223	2107	28	589	13	930	194	2046	23	548	13	880	150	1983	22	520	13	880	137	1978	47	512	15	890	172
20	2147	33	531	8	840	176	2101	28	495	10	800	153	2030	22	463	9	780	118	1977	19	437	10	750	113	1968	46	432	13	750	147
21	2144	33	452	7	700	139	2091	28	419	7	670	122	2022	22	392	7	640	91	1967	18	368	8	640	89	1947	44	360	12	630	135
22	2140	33	389	6	605	100	2082	29	356	6	570	92	2009	23	327	6	540	78	1955	19	310	7	540	76	1940	41	306	10	535	121
23	2138	33	329	5	525	87	2075	29	300	5	491	81	1997	25	275	5	475	66	1943	22	262	5	460	67	1928	35	257	9	450	94
24	2138	34	278	4	445	75	2070	30	250	4	400	71	1991	28	229	4	385	50	1938	27	219	5	380	49	1917	32	215	7	380	81
25	2142	34	237	4	375	69	2067	32	210	4	330	63	1983	33	187	4	320	45	1933	32	179	4	320	45	1908	36	179	7	320	71
26	2144	34	200	3	310	53	2065	34	175	3	275	49	1984	38	157	3	275	41	1932	37	151	4	272	41	1904	40	152	6	272	59
27	2147	34	173	3	269	45	2067	36	150	3	238	43	1990	42	132	3	237	38	1932	41	126	3	235	38	1904	42	125	5	232	48
28	2152	35	148	2	229	41	2070	36	126	2	211	43	1994	46	112	2	199	35	1933	43	110	3	198	33	1906	45	110	5	195	43
29	2161	35	125	2	200	36	2076	39	112	2	189	34	1998	48	97	2	179	31	1939	47	93	2	180	29	1927	47	93	4	182	36
30	2173	35	112	2	172	32	2088	41	93	2	153	30	2010	50	84	2	147	26	1954	49	83	2	147	26	1933	49	83	3	147	32
31	2182	35	98	2	149	27	2096	43	87	2	141	26	2019	52	74	2	135	23	1969	50	72	2	135	24	1941	51	72	3	135	29

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 19a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JUNE

ALT	0°						10°S						20°S						30°S						40°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	12	10317	12	11700	520	2901	9	10325	13	12100	450	2871	15	10350	17	12200	470	2837	30	10385	25	12400	1050	2805	30	10385	69	12600	1850
1	2918	12	9100	11	10600	389	2903	20	9210	13	10800	1040	2874	32	9240	17	10900	1370	2877	41	9300	19	11100	1930	2777	33	9240	57	11300	1735
2	2872	12	8150	10	9700	302	2898	16	8200	13	9600	476	2875	29	8200	17	9700	890	2849	42	8180	19	9900	1753	2725	37	8090	51	10100	1500
3	2828	12	7240	9	8700	285	2841	15	7250	13	8700	389	2851	26	7250	18	8800	730	2774	41	7240	22	8900	1221	2669	40	7130	49	9200	1270
4	2775	12	6440	8	7925	270	2785	15	6465	12	7900	350	2778	26	6465	18	7950	570	2702	40	6430	28	8025	870	2610	44	6300	52	8200	1000
5	2721	12	5700	8	7100	253	2721	16	5700	12	7200	311	2709	25	5760	19	7200	680	2653	38	5695	34	7300	700	2542	48	5500	58	7400	820
6	2668	12	5008	8	6400	242	2668	17	5032	12	6500	281	2647	25	5020	19	6500	408	2579	35	4991	39	6600	500	2472	47	4875	62	6600	690
7	2601	12	4386	8	5800	230	2602	17	4418	12	5800	267	2579	24	4418	20	5900	353	2500	36	4310	41	5900	402	2399	47	4215	63	5995	520
8	2530	12	3865	9	5200	212	2525	16	3890	13	5200	243	2502	23	3890	20	5250	304	2425	35	3827	42	5300	375	2332	45	3650	64	5300	473
9	2460	12	3382	10	4700	192	2455	16	3378	13	4700	195	2424	22	3340	20	4700	281	2359	34	3265	41	4700	384	2274	42	3120	62	4700	540
10	2383	13	2940	11	4200	165	2379	15	2934	13	4200	175	2346	22	2875	20	4200	278	2291	32	2850	38	4200	452	2217	33	2670	58	4100	780
11	2302	14	2543	12	3800	138	2301	15	2540	14	3800	163	2275	23	2500	20	3800	283	2220	36	2450	35	3700	660	2191	37	2330	52	3600	1100
12	2225	15	2189	13	3400	95	2224	15	2184	15	3400	155	2201	22	2140	19	3300	300	2170	40	2069	32	3200	775	2178	46	1995	44	3100	1230
13	2149	16	1875	12	2995	80	2152	16	1870	14	2980	165	2136	23	1870	18	2950	339	2139	43	1760	28	2800	750	2167	47	1721	38	2620	1000
14	2080	17	1600	11	2640	110	2076	17	1593	13	2620	179	2092	24	1550	16	2580	356	2119	43	1508	23	2400	690	2160	40	1435	32	2250	810
15	2019	18	1372	10	2300	170	2024	18	1349	11	2280	198	2053	25	1325	12	2222	363	2102	42	1278	20	2060	600	2155	39	1250	26	1970	670
16	1975	19	1139	9	1970	215	1986	19	1139	9	1980	223	2020	26	1122	10	1920	361	2083	40	1093	15	1780	540	2152	38	1045	20	1660	452
17	1970	20	942	8	1660	275	1973	25	960	7	1660	246	1997	26	955	8	1630	328	2075	35	923	11	1470	400	2138	38	902	17	1420	347
18	2000	21	810	7	1380	210	1996	26	808	7	1400	213	2025	22	800	7	1350	267	2075	31	793	9	1290	293	2130	36	762	14	1230	271
19	2040	22	690	6	1130	169	2042	19	685	5	1140	171	2073	19	679	5	1130	187	2091	28	671	7	1090	206	2128	33	648	10	1050	211
20	2082	22	577	5	950	110	2093	17	581	5	950	137	2112	16	578	4	940	137	2119	25	572	6	920	162	2137	31	556	9	880	171
21	2113	22	497	4	800	90	2125	17	498	4	790	93	2139	15	495	4	780	89	2139	24	489	5	700	122	2139	33	482	7	750	137
22	2140	22	421	4	673	78	2158	18	421	4	670	78	2168	15	420	4	670	73	2161	24	415	4	660	89	2141	33	405	7	640	99
23	2175	23	365	3	565	68	2177	18	362	3	560	65	2181	14	360	3	560	58	2178	26	355	4	560	75	2146	34	348	6	550	89
24	2205	23	311	3	480	60	2197	18	310	3	480	47	2202	15	310	3	480	43	2191	26	307	3	480	63	2150	35	297	5	475	79
25	2228	25	265	3	410	49	2220	19	266	3	410	41	2224	16	265	2	410	36	2207	27	262	3	407	49	2167	36	250	5	400	71
26	2252	25	226	2	350	47	2239	19	228	2	350	36	2241	18	228	2	350	28	2219	27	225	3	345	38	2175	37	215	4	340	67
27	2272	26	196	2	294	43	2267	19	196	2	300	30	2267	18	196	2	300	23	2227	28	191	2	296	28	2178	38	183	3	292	57
28	2293	27	169	2	255	39	2288	19	167	2	256	25	2280	18	168	2	255	21	2239	28	165	2	253	24	2182	40	158	2	249	50
29	2309	27	144	2	217	37	2309	19	146	2	220	23	2294	17	146	2	220	19	2250	29	139	2	218	22	2187	42	134	2	213	41
30	2315	28	127	2	183	35	2321	21	126	2	187	23	2309	17	126	2	187	17	2268	30	125	2	185	20	2193	43	117	2	180	31
31	2330	29	109	2	159	32	2332	22	110	2	160	24	2322	18	110	2	160	16	2270	31	106	2	159	18	2196	44	99	2	156	24

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 19b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JUNE

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2753	37	10206	96	12600	3000	2704	66	10160	107	13000	5122	2528	94	10128	134	13800	5121	2398	86	10060	135	14200	5123	2287	62	10095	109	14700	5425
1	2721	41	9110	90	11300	2230	2675	60	9015	106	11700	2770	2575	78	8750	134	11900	2775	2475	64	8750	131	12000	3500	2331	54	8800	101	13000	4425
2	2678	46	8010	85	10200	1730	2623	55	7990	105	10350	1870	2531	59	7665	135	10425	1797	2483	55	7620	127	10500	2367	2375	47	7680	94	11200	3250
3	2622	50	7025	84	9200	1395	2561	50	7000	105	9300	1376	2488	56	6698	134	9300	1395	2442	48	6660	124	9400	1879	2381	40	6720	89	9600	2355
4	2544	56	6120	86	8300	1005	2501	55	6040	106	8300	953	2417	51	5895	133	8300	998	2382	44	5785	118	8400	1621	2332	38	5794	85	8500	1590
5	2479	60	5410	90	7400	875	2438	59	5230	105	7400	845	2351	48	5087	128	7400	887	2321	40	5000	110	7500	1470	2284	35	4996	81	7600	999
6	2418	66	4700	92	6600	813	2373	61	4620	104	6600	846	2289	47	4410	122	6600	885	2257	37	4290	101	6600	1440	2225	33	4275	72	6600	923
7	2339	63	4035	92	5900	750	2297	57	3897	103	5800	952	2223	43	3860	114	5800	997	2187	33	3695	90	5800	1370	2162	30	3670	65	5800	875
8	2275	54	3520	90	5300	815	2234	45	3495	98	5225	1030	2168	37	3285	106	5175	1390	2135	30	3150	78	5100	1330	2098	31	3100	58	5100	843
9	2225	44	3000	84	4600	883	2182	34	2940	92	4500	1115	2117	32	2815	96	4500	1455	2089	35	2695	67	4400	1250	2089	33	2650	52	4400	821
10	2193	34	2610	76	3900	1040	2151	35	2499	82	3900	1216	2089	38	2385	82	3850	1495	2069	39	2290	55	3800	1220	2060	34	2242	42	3800	795
11	2178	37	2225	64	3500	1225	2132	43	2110	69	3300	1200	2078	49	2000	65	3300	1387	2046	48	1935	42	3300	1140	2039	35	1900	36	3200	690
12	2174	45	1870	54	2900	1168	2123	48	1760	57	2875	1100	2061	52	1710	49	2800	1123	2023	52	1640	33	2780	930	2021	35	1615	30	2700	580
13	2169	40	1630	45	2550	883	2120	46	1505	45	2450	879	2057	51	1450	36	2390	875	2000	47	1375	27	2360	670	2006	35	1365	28	2350	467
14	2168	37	1380	37	2170	687	2118	42	1280	35	2090	623	2043	47	1230	27	2010	635	1989	43	1160	21	2000	470	1988	35	1140	25	1980	379
15	2168	35	1203	29	1890	487	2116	38	1150	27	1810	443	2025	44	1051	22	1750	425	1974	41	975	18	1710	375	1970	34	960	23	1670	331
16	2170	31	1000	22	1600	365	2115	33	950	20	1570	341	2018	39	890	18	1500	332	1957	38	825	16	1450	310	1948	33	810	20	1420	279
17	2170	32	865	18	1370	289	2112	32	808	18	1330	269	2008	34	760	16	1290	269	1946	36	695	15	1240	269	1927	32	676	18	1200	248
18	2168	34	731	16	1180	238	2109	37	689	15	1130	221	2001	32	639	14	1100	223	1930	32	575	13	1030	225	1906	31	566	16	1010	210
19	2168	36	635	14	1000	189	2105	41	585	14	960	178	1997	37	548	13	930	187	1925	32	500	11	880	193	1886	30	473	14	850	187
20	2165	38	539	11	860	155	2098	43	515	12	830	150	1995	40	469	11	800	161	1909	34	421	9	770	173	1881	31	394	12	720	175
21	2160	40	471	9	750	125	2088	47	445	10	740	125	1985	44	407	9	710	138	1898	37	352	8	650	152	1873	33	328	10	600	167
22	2157	42	400	7	630	98	2085	49	377	8	615	98	1975	47	339	7	590	127	1896	39	288	7	540	133	1862	35	271	9	500	147
23	2153	44	339	7	540	88	2074	52	325	7	525	89	1972	50	281	7	505	94	1895	42	248	7	460	121	1858	38	226	8	420	138
24	2149	46	282	6	460	83	2068	56	271	6	440	83	1968	53	243	6	425	87	1894	44	211	6	390	99	1855	41	189	7	350	123
25	2147	48	245	5	390	79	2062	60	239	5	380	78	1968	56	228	5	365	81	1896	47	182	5	325	93	1858	44	162	7	287	112
26	2146	50	207	4	338	74	2059	61	193	5	330	74	1973	49	182	5	318	78	1898	51	160	5	278	87	1863	47	139	6	256	97
27	2146	51	178	4	285	69	2059	63	172	4	280	69	1975	61	163	4	269	72	1908	54	137	4	245	82	1874	50	123	6	223	88
28	2145	54	155	3	247	64	2064	64	150	4	245	63	1978	63	137	4	232	69	1922	57	120	4	217	77	1898	52	107	5	195	81
29	2146	56	134	3	212	57	2073	65	129	3	210	57	1985	65	121	3	205	63	1942	59	105	3	182	64	1906	55	92	5	165	74
30	2148	56	117	2	180	52	2077	66	112	3	178	54	1995	67	105	3	175	56	1952	62	91	3	157	57	1915	57	81	4	144	63
31	2149	57	97	2	155	44	2088	67	95	2	154	51	2005	69	92	2	149	53	1967	64	83	2	144	54	1923	59	72	3	135	58

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 20a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JULY

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2980	7	10312	12	11600	390	2877	8	10325	15	12100	450	2873	15	10350	16	12200	470	2833	33	10385	24	12300	1450	2808	37	10381	70	12600	2250
1	2943	6	9200	12	10600	300	2884	23	9300	13	10900	770	2878	41	9275	15	11000	1370	2850	43	9250	19	11100	2230	2795	44	9187	56	11300	1930
2	2889	7	8200	12	9600	278	2892	17	8200	11	9600	467	2904	43	8200	16	9700	1237	2833	51	8200	24	9995	2000	2740	51	8150	49	10100	1675
3	2828	7	7250	12	8850	265	2845	16	7280	10	8700	410	2837	41	7265	17	8800	890	2773	52	7250	34	8900	1530	2675	54	7250	47	9100	1465
4	2780	7	6400	12	7900	247	2775	16	6430	10	7900	381	2765	35	6430	21	7950	520	2700	51	6390	45	8000	1125	2612	56	6275	52	8200	1195
5	2719	7	5650	12	7150	229	2718	17	5698	12	7200	348	2700	31	5700	26	7200	475	2633	50	5650	54	7300	890	2540	56	5440	57	7400	960
6	2667	6	5050	12	6450	207	2659	17	5050	10	6500	317	2634	29	5000	28	6500	467	2571	49	4920	61	6500	760	2475	54	4850	68	6600	765
7	2606	7	4400	12	5800	190	2597	16	4410	8	5800	287	2573	29	4395	30	5900	453	2493	48	4350	64	5900	625	2400	51	4190	66	5900	562
8	2528	8	3800	12	5250	180	2523	16	3875	7	5300	239	2493	28	3875	30	5300	448	2412	44	3790	66	5300	520	2336	45	3615	64	5300	440
9	2459	8	3300	12	4700	170	2450	16	3360	7	4700	198	2415	25	3350	28	4700	450	2350	38	3275	64	4700	690	2275	37	3115	62	4700	623
10	2391	8	2900	12	4200	160	2375	16	2930	6	4200	187	2345	25	2930	26	4200	457	2283	35	2820	58	4150	885	2226	35	2700	57	4100	1000
11	2309	8	2600	11	3800	160	2301	16	2535	6	3800	186	2274	25	2510	24	3700	493	2226	37	2440	49	3700	1125	2194	37	2310	48	3600	1250
12	2225	8	2250	11	3400	160	2225	16	2178	6	3400	186	2217	26	2132	21	3350	520	2191	45	2069	41	3200	1250	2187	45	1962	40	3100	1230
13	2148	9	1875	11	3000	170	2150	16	1865	7	2980	186	2150	26	1850	18	2920	490	2170	47	1762	33	2780	1090	2178	46	1715	33	2620	960
14	2068	14	1600	10	2650	170	2082	17	1588	7	2620	185	2100	27	1585	17	2570	439	2150	48	1500	25	2420	815	2169	40	1440	27	2270	690
15	2004	19	1340	9	2300	180	2023	17	1345	7	2280	184	2069	28	1323	15	2220	375	2122	46	1278	19	2070	635	2163	38	1251	20	1950	463
16	1980	27	1130	8	1950	188	1982	18	1138	7	1950	183	2050	29	1125	13	1880	300	2100	39	1092	15	1770	450	2157	36	1053	16	1670	369
17	1990	21	955	8	1650	195	1988	19	959	7	1640	181	2047	28	952	12	1610	273	2097	37	938	13	1510	339	2150	35	917	12	1420	287
18	2019	21	815	7	1350	210	2025	29	810	7	1370	178	2056	26	809	10	1330	238	2099	36	800	10	1290	253	2138	33	767	9	1240	225
19	2065	23	685	6	1140	195	2069	19	687	6	1130	167	2084	23	685	8	1120	189	2118	34	675	8	1090	193	2121	30	654	8	1050	187
20	2098	24	580	5	950	168	2111	17	585	5	950	144	2118	22	585	7	950	137	2131	28	579	7	920	142	2128	31	562	7	890	152
21	2120	26	495	4	720	132	2141	18	498	4	790	113	2143	21	498	7	790	92	2154	28	489	7	790	91	2138	33	475	6	760	125
22	2150	28	425	4	665	105	2169	19	425	4	670	91	2171	21	425	6	675	84	2169	28	421	6	675	87	2142	35	407	5	660	97
23	2175	29	365	3	565	78	2185	21	365	4	570	78	2188	21	363	5	570	75	2182	27	361	5	570	76	2146	36	349	5	555	86
24	2205	28	315	3	485	62	2203	22	312	3	480	67	2210	21	311	5	480	63	2199	27	304	5	480	67	2148	37	297	4	480	75
25	2227	27	265	3	420	50	2220	21	268	3	410	50	2230	21	268	4	410	54	2218	28	261	4	410	55	2149	38	255	4	410	63
26	2253	25	230	2	355	46	2231	18	228	3	350	46	2250	22	232	4	350	45	2225	28	227	4	350	45	2158	39	221	3	350	54
27	2272	24	195	2	295	40	2243	16	197	2	300	38	2269	22	198	3	300	41	2236	28	195	3	298	41	2167	38	187	3	295	46
28	2290	23	168	2	255	37	2262	16	168	2	254	35	2287	21	172	3	253	32	2243	28	167	3	252	34	2171	37	159	2	251	40
29	2313	22	146	2	220	32	2281	16	146	2	221	31	2301	19	148	2	219	26	2251	26	144	2	219	28	2174	36	137	2	215	34
30	2328	23	126	2	180	30	2300	17	125	2	189	28	2314	17	126	2	190	24	2269	25	124	2	190	24	2175	33	120	2	185	29
31	2352	24	108	2	158	29	2316	18	108	2	162	27	2325	13	109	2	162	22	2272	22	108	2	160	22	2177	32	102	2	157	27

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 20b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

JULY

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2750	57	10258	131	12700	4375	2647	83	10160	134	12900	6450	2535	101	10110	133	13900	5600	2375	76	10070	124	14200	5760	2275	53	10085	97	14500	5950
1	2725	56	9120	123	11400	3425	2637	73	9000	129	11700	3865	2550	75	8675	120	11950	2940	2450	42	8675	117	11200	3230	2300	49	8685	91	12800	4375
2	2700	55	8030	113	10200	2520	2583	66	7892	120	10300	2395	2522	64	7650	116	10500	1759	2465	46	7650	112	10600	2000	2375	44	7650	89	11100	2875
3	2625	54	7100	105	9200	1895	2524	59	6995	116	9250	1739	2475	58	6650	119	9300	1100	2425	50	6650	109	9400	1135	2368	40	6635	88	9700	1950
4	2557	52	6200	100	8200	1500	2460	57	6000	115	8250	1367	2425	53	5810	118	8300	840	2372	46	5750	105	8300	890	2308	37	5750	86	8500	990
5	2497	52	5320	96	7400	1215	2388	54	5225	113	7450	1250	2353	48	5020	114	7500	780	2299	44	4992	101	7500	780	2269	35	4945	82	7600	885
6	2423	50	4695	93	6600	943	2324	48	4530	111	6600	1275	2282	45	4290	111	6600	860	2225	40	4150	95	6600	840	2207	32	4150	78	6600	790
7	2356	48	4050	88	5900	850	2261	45	3987	104	5900	1289	2209	41	3695	104	5900	1080	2158	37	3630	88	5900	930	2143	28	3630	72	5800	850
8	2292	46	3550	82	5300	870	2202	42	3440	94	5200	1295	2158	38	3200	94	5100	1258	2100	33	3100	80	5100	1150	2091	24	3060	65	5100	930
9	2239	44	3025	74	4700	1010	2168	41	2950	83	4550	1310	2109	36	2750	84	4500	1460	2067	31	2680	69	4400	1310	2057	20	2640	57	4400	960
10	2196	43	2620	65	4000	1125	2140	42	2510	72	3900	1325	2089	37	2345	73	3800	1435	2035	28	2250	58	3800	1170	2025	21	2250	49	3800	930
11	2178	45	2285	55	3500	1250	2125	43	2175	61	3400	1275	2061	38	1950	61	3300	1275	2003	26	1899	48	3200	1020	1997	24	1868	42	3200	840
12	2168	42	1915	47	3100	1122	2097	39	1883	50	2900	1125	2043	37	1632	48	2780	1050	1988	24	1599	41	2740	840	1975	24	1573	35	2740	675
13	2153	39	1645	38	2580	960	2086	34	1530	42	2450	895	2023	33	1437	40	2350	840	1975	23	1360	33	2330	690	1954	22	1323	29	2330	535
14	2138	35	1392	32	2210	730	2075	37	1285	34	2080	637	2009	34	1208	32	2000	650	1959	21	1132	28	1970	486	1938	19	1110	26	1960	443
15	2130	34	1220	27	1890	475	2066	39	1135	28	1810	487	1997	35	1000	27	1720	462	1940	17	950	24	1680	400	1919	19	933	22	1680	385
16	2122	30	1021	22	1590	374	2062	43	929	25	1540	400	1995	37	850	24	1480	375	1935	15	790	20	1410	347	1894	21	783	19	1410	332
17	2119	33	872	19	1390	296	2057	46	800	23	1300	339	1980	39	723	21	1250	325	1918	14	653	18	1200	296	1888	20	652	17	1190	275
18	2112	35	742	17	1200	248	2050	51	675	20	1100	287	1978	40	605	19	1070	281	1906	18	550	17	1000	252	1881	24	542	16	1000	219
19	2108	35	638	13	1005	207	2049	54	569	18	970	243	1975	48	500	17	890	243	1897	24	469	15	850	209	1874	29	455	14	830	189
20	2107	36	533	11	850	187	2047	57	475	15	820	212	1973	55	435	15	770	210	1895	32	398	13	700	187	1865	34	385	13	690	175
21	2106	37	459	9	740	156	2041	59	415	13	690	184	1973	61	371	13	640	187	1894	37	332	12	600	175	1854	38	322	11	590	167
22	2106	38	392	7	635	139	2038	61	353	10	600	167	1970	63	325	11	550	168	1895	43	283	10	515	153	1854	43	272	9	490	148
23	2107	39	332	7	540	127	2037	62	309	9	505	139	1967	67	275	9	475	145	1898	52	248	9	440	138	1875	49	228	8	420	134
24	2108	45	279	6	460	91	2037	64	263	7	430	122	1972	70	231	7	405	125	1908	58	211	7	375	119	1883	54	198	7	365	120
25	2109	48	247	5	400	78	2037	65	227	6	370	100	1975	74	200	7	340	109	1916	64	178	6	320	98	1889	60	174	7	310	100
26	2112	51	211	5	335	69	2039	65	191	5	315	85	1977	77	173	6	292	89	1921	71	153	5	275	91	1893	67	150	6	269	93
27	2116	51	177	4	279	54	2046	67	164	5	272	65	1982	82	145	5	255	78	1925	77	134	5	241	84	1897	73	128	5	232	86
28	2119	49	151	4	248	45	2049	68	139	4	229	57	1985	84	127	4	220	64	1938	82	117	4	210	75	1907	80	113	5	200	79
29	2120	47	132	3	210	41	2051	67	124	4	200	47	1990	85	112	4	188	57	1942	84	101	4	178	63	1916	82	97	4	173	75
30	2121	44	113	3	180	36	2056	65	108	3	175	42	1995	84	97	3	168	48	1948	86	86	3	153	57	1922	85	83	4	148	69
31	2123	42	95	2	155	31	2060	64	93	3	150	38	1997	84	87	3	145	46	1952	88	76	3	137	55	1925	87	73	3	135	61

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 21a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

AUGUST

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2955	9	10318	11	11600	620	2887	8	10328	12	12100	300	2858	17	10347	16	12300	440	2825	34	10390	27	12400	1600	2789	31	10403	74	12700	2020
1	2903	8	9180	11	10600	395	2901	17	9250	11	10900	750	2839	40	9330	13	11000	1250	2825	43	9280	23	11100	2150	2775	34	9250	63	11400	1810
2	2860	6	8150	11	9600	329	2900	16	8185	10	9600	475	2864	36	8187	12	9700	1070	2804	45	8115	24	9950	1890	2704	38	8040	60	10100	1670
3	2824	5	7150	11	8700	285	2845	16	7250	9	8700	420	2838	29	7250	13	8800	560	2750	44	7250	28	9100	1475	2650	47	7139	61	9200	1485
4	2778	6	6400	11	7800	243	2788	16	6450	8	7900	373	2775	27	6450	17	7950	508	2689	43	6330	36	8000	1070	2587	53	6250	63	8100	1223
5	2719	7	5720	10	7100	204	2723	16	5695	8	7200	331	2700	28	5720	20	7200	469	2625	43	5580	43	7350	670	2525	55	5470	67	7400	1000
6	2657	7	5032	9	6400	187	2658	16	5025	8	6500	293	2638	27	5010	22	6500	421	2553	43	4950	50	6550	629	2458	54	4475	71	6700	860
7	2599	8	4409	9	5800	165	2594	16	4410	8	5800	237	2567	26	4404	24	5900	382	2484	43	4275	52	5900	494	2389	50	4150	72	5995	770
8	2525	9	3895	9	5200	142	2519	16	3863	8	5200	195	2496	25	3820	25	5300	349	2420	40	3715	52	5300	475	2325	44	3583	72	5350	740
9	2453	10	3394	10	4700	135	2450	15	3371	8	4700	188	2411	24	3320	25	4700	336	2340	36	3248	51	4700	479	2276	39	3090	69	4700	910
10	2379	11	2930	11	4200	113	2375	14	2928	8	4200	187	2339	22	2897	24	4200	336	2284	31	2795	48	4200	507	2225	36	2647	62	4200	1190
11	2301	12	2553	11	3800	92	2300	13	2533	8	3800	187	2268	19	2510	22	3800	358	2223	35	2440	43	3750	790	2192	46	2275	52	3500	1200
12	2225	13	2183	11	3400	85	2220	12	2176	8	3400	188	2197	17	2130	19	3350	410	2189	38	2045	38	3200	960	2187	52	1995	43	3000	1100
13	2150	14	1870	11	2980	100	2142	12	1865	8	2980	188	2163	19	1842	16	2920	458	2168	38	1751	31	2780	874	2181	48	1714	35	2610	930
14	2027	15	1591	10	2630	121	2083	14	1585	8	2620	188	2098	22	1562	13	2550	467	2155	38	1500	26	2370	780	2173	43	1425	28	2250	760
15	1977	16	1350	9	2285	149	2039	15	1343	7	2270	188	2076	23	1320	10	2190	425	2123	38	1281	21	2050	670	2168	40	1252	22	1930	630
16	1982	17	1132	8	1960	188	2000	17	1138	7	1970	188	2052	25	1121	8	1880	339	2105	37	1093	16	1750	500	2159	38	1045	18	1650	430
17	1982	18	959	7	1660	191	2000	19	960	6	1640	188	2049	25	955	7	1590	275	2097	37	943	12	1510	410	2150	33	900	16	1440	335
18	2025	19	802	6	1380	215	2042	23	801	5	1370	180	2057	24	800	5	1350	221	2097	35	795	9	1290	294	2149	34	762	14	1230	276
19	2075	20	695	5	1150	187	2076	22	687	5	1130	125	2091	23	685	5	1120	169	2125	31	675	7	1100	198	2152	38	653	12	1040	241
20	2106	21	585	4	930	111	2118	21	585	4	940	95	2124	23	585	4	940	119	2141	30	571	5	920	154	2158	41	552	10	880	200
21	2126	23	498	4	800	88	2150	22	498	4	790	83	2155	25	498	4	790	87	2168	30	491	5	780	113	2160	42	475	7	750	172
22	2150	24	419	3	675	77	2168	24	426	3	670	71	2170	22	424	4	665	72	2185	29	420	4	660	90	2164	43	408	6	645	137
23	2175	25	363	3	570	67	2187	25	365	3	570	54	2190	19	364	3	570	54	2197	28	360	4	565	81	2167	43	349	5	550	110
24	2203	24	312	3	490	59	2194	25	313	3	490	46	2207	18	311	3	485	45	2213	29	307	4	480	70	2174	43	300	4	470	92
25	2213	24	266	2	410	49	2207	25	268	3	413	41	2221	17	268	3	414	41	2227	30	266	3	413	60	2177	44	255	4	405	85
26	2225	23	228	2	350	45	2220	24	230	2	350	38	2244	16	230	2	350	36	2240	34	227	3	350	49	2185	51	218	3	340	79
27	2232	23	195	2	300	42	2234	23	197	2	300	34	2267	17	199	2	300	30	2254	38	198	3	297	43	2195	52	187	3	290	69
28	2258	22	169	2	255	39	2246	21	170	2	258	28	2284	18	171	2	256	27	2270	42	168	2	253	37	2209	58	161	3	250	61
29	2275	22	145	2	218	37	2268	21	147	2	222	24	2302	18	148	2	222	24	2287	43	145	2	219	32	2218	61	137	2	210	55
30	2289	23	127	2	188	34	2285	23	126	2	188	22	2306	17	126	2	188	22	2302	43	125	2	189	27	2228	62	120	2	182	50
31	2302	24	106	2	160	32	2305	25	112	2	161	20	2313	15	112	2	163	20	2304	41	108	2	163	25	2239	62	105	2	160	46

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 21b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

AUGUST

	50°S						60°S						70°S						80°S						90°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2804	37	10263	122	13000	2835	2663	60	10162	174	13200	5100	2500	87	10115	158	13900	6200	2369	84	10048	131	14300	6175	2262	48	10062	110	14700	6150
1	2757	42	9135	112	11400	2395	2675	58	9000	162	11500	2875	2546	73	8730	138	11700	2850	2450	47	8730	117	12000	2600	2299	38	8730	106	12900	3000
2	2704	45	8000	106	10200	1890	2638	57	7950	153	10200	1940	2525	62	7685	127	10200	1875	2475	38	7630	107	10500	1750	2348	36	7630	100	11200	1785
3	2628	47	7015	100	9300	1570	2574	56	6980	151	9250	1535	2486	58	6697	118	9300	1630	2425	38	6625	100	9300	1420	2346	34	6680	98	9700	1395
4	2574	48	6170	98	8200	1215	2513	53	6000	148	8200	1210	2409	52	5885	109	8200	1195	2374	37	5775	94	8300	1030	2312	31	5775	94	8400	960
5	2504	53	5470	96	7400	890	2439	51	5330	143	7400	925	2339	50	5035	105	7400	930	2308	37	4992	88	7400	920	2272	28	4980	91	7500	910
6	2425	48	4750	94	6700	700	2367	48	4660	138	6650	852	2275	47	4430	98	6600	760	2239	37	4285	82	6600	850	2210	26	4275	85	6600	870
7	2357	45	4045	92	6000	550	2287	45	3920	130	5950	885	2198	43	3716	93	5800	879	2168	34	3681	77	5800	770	2148	23	3654	77	5800	860
8	2289	43	3492	88	5350	470	2217	42	3365	120	5200	995	2137	39	3224	87	5100	1050	2102	30	3127	71	5100	830	2089	20	3030	70	5100	910
9	2241	41	3015	80	4700	640	2168	35	2920	108	4600	1080	2089	34	2778	79	4500	1125	2058	28	2658	63	4400	890	2042	18	2630	61	4400	1000
10	2200	32	2610	73	4100	810	2122	35	2488	96	4000	1100	2057	35	2330	69	3900	1250	2009	24	2248	54	3800	910	1994	22	2219	52	3800	1000
11	2169	39	2185	66	3500	870	2089	43	2092	84	3400	1090	2032	37	1987	61	3300	1110	1988	21	1893	46	3300	830	1972	25	1867	43	3200	830
12	2148	50	1870	58	2950	870	2077	47	1762	73	2850	1020	2003	37	1680	52	2800	1030	1971	18	1590	38	2760	720	1950	21	1570	35	2750	720
13	2125	39	1620	50	2550	820	2069	46	1500	62	2450	890	1982	37	1385	45	2370	870	1949	16	1327	32	2340	570	1930	18	1316	28	2340	513
14	2118	36	1375	41	2150	730	2049	41	1327	54	2060	750	1980	37	1203	38	2000	700	1938	15	1145	27	1980	465	1918	16	1103	23	1980	448
15	2110	32	1214	33	1880	650	2040	36	1130	46	1770	670	1975	34	999	32	1690	500	1925	15	935	23	1660	382	1895	15	921	19	1660	369
16	2107	33	1000	25	1590	475	2023	30	915	37	1500	540	1968	28	835	29	1440	413	1918	16	780	19	1400	311	1882	15	772	15	1410	300
17	2105	36	865	19	1380	374	2010	35	782	32	1280	437	1958	30	713	27	1210	358	1906	17	663	16	1170	283	1868	16	643	12	1180	246
18	2104	39	745	16	1200	296	2001	39	673	24	1100	361	1955	34	600	22	1000	300	1897	19	542	13	980	269	1850	16	535	9	990	170
19	2103	43	638	13	995	261	1999	43	562	18	910	305	1950	37	501	17	870	282	1896	22	455	10	840	257	1837	17	444	8	840	160
20	2102	46	520	11	850	227	1998	47	469	13	790	270	1949	40	425	13	730	263	1895	25	377	9	700	243	1829	17	375	10	700	250
21	2102	50	448	9	720	197	1997	52	402	9	650	241	1949	44	363	9	620	238	1895	28	329	8	605	235	1836	17	319	12	600	227
22	2101	53	381	7	610	177	1998	56	349	7	550	210	1949	48	310	7	535	220	1897	31	278	8	530	219	1843	18	275	13	530	215
23	2101	56	331	5	535	154	1999	61	298	5	485	183	1956	52	262	7	465	193	1905	34	245	8	465	193	1854	18	242	12	460	202
24	2104	59	279	5	458	132	2003	63	255	5	419	167	1961	57	225	6	400	175	1916	38	206	8	390	186	1870	19	202	11	385	182
25	2110	61	245	4	385	112	2009	67	222	4	350	138	1968	60	191	5	330	153	1920	43	177	8	325	161	1889	22	176	10	325	169
26	2112	62	210	4	320	96	2017	70	187	4	291	121	1970	64	165	5	278	139	1933	48	158	7	275	146	1907	32	158	9	272	153
27	2118	65	175	3	270	89	2026	74	159	3	250	99	1978	69	141	4	243	122	1939	55	135	7	238	137	1918	39	135	8	238	142
28	2120	69	150	3	230	83	2037	78	133	3	220	91	1981	73	123	3	215	97	1954	61	120	6	210	113	1932	49	117	7	210	136
29	2130	71	126	2	203	75	2047	81	119	2	190	88	1989	78	111	3	188	88	1962	68	105	6	187	100	1943	59	103	7	186	130
30	2147	73	112	2	175	67	2061	87	101	2	169	82	1994	82	97	2	165	83	1973	74	93	5	165	89	1952	64	93	6	163	112
31	2154	75	98	2	158	58	2072	92	93	2	150	77	1997	89	87	2	147	79	1975	79	78	5	145	85	1963	67	77	6	140	108

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 22a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

SEPTEMBER

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2952	7	10315	11	11600	780	2900	6	10335	10	12100	375	2858	8	10365	16	12200	475	2839	20	10387	27	12300	920	2854	31	10412	60	12600	1855
1	2899	7	9200	11	10600	460	2905	16	9225	9	10900	520	2846	30	9220	13	11100	1250	2848	42	9225	19	11100	2125	2793	36	9190	52	11300	1835
2	2863	7	8225	11	9600	355	2901	16	8187	8	9600	400	2875	32	8182	15	9700	1130	2830	45	8171	22	9950	1735	2726	41	8130	49	10200	1620
3	2825	6	7310	10	8700	288	2836	14	7310	9	8700	323	2839	24	7280	18	8800	563	2767	43	7275	29	8900	1250	2675	46	7160	51	9200	1390
4	2775	6	6437	9	7900	250	2786	15	6450	9	7900	279	2723	23	6420	20	8000	504	2693	42	6380	36	8050	930	2618	48	6290	55	8200	1090
5	2720	7	5699	9	7200	219	2725	15	5697	9	7200	246	2700	23	5675	22	7250	410	2633	41	5520	41	7300	743	2550	50	5480	61	7400	870
6	2658	7	5002	8	6500	189	2663	15	5040	10	6500	212	2639	23	5000	24	6500	368	2566	40	4925	45	6600	496	2485	47	4815	65	6600	730
7	2598	7	4409	8	5800	165	2591	15	4415	10	5800	180	2574	23	4408	26	5900	355	2492	38	4310	47	5900	437	2415	44	4150	66	5900	540
8	2525	7	3861	8	5200	142	2525	15	3865	10	5200	180	2502	23	3865	26	5300	357	2418	35	3750	47	5300	375	2341	41	3625	65	5300	485
9	2457	7	3380	9	4700	115	2458	15	3375	10	4700	180	2423	23	3350	25	4700	368	2345	30	3285	46	4700	475	2282	35	3120	61	4700	545
10	2374	8	2930	11	4200	93	2375	15	2950	10	4200	170	2342	22	2900	23	4200	359	2283	32	2840	43	4200	690	2231	34	2695	53	4100	1080
11	2301	9	2537	11	3800	80	2301	15	2540	10	3750	160	2274	19	2530	22	3700	352	2224	34	2475	38	3700	840	2197	41	2310	43	3600	1320
12	2225	11	2183	10	3300	80	2225	14	2175	9	3400	150	2201	17	2175	20	3300	348	2188	35	2083	31	3200	810	2187	47	1970	33	3100	1280
13	2150	13	1875	9	2980	82	2150	15	1870	9	2970	150	2143	18	1852	18	2920	351	2179	38	1771	25	2820	770	2173	46	1693	26	2650	996
14	2080	14	1618	8	2650	100	2085	16	1589	8	2620	150	2095	21	1565	15	2550	357	2147	38	1503	19	2420	670	2160	41	1440	19	2280	740
15	2025	16	1348	8	2300	115	2043	17	1350	8	2250	160	2083	25	1350	12	2200	342	2118	36	1278	15	2090	520	2145	37	1225	17	1950	500
16	1978	18	1138	7	1970	120	2000	18	1137	7	1950	170	2076	27	1122	8	1880	300	2103	32	1095	10	1770	387	2144	37	1060	15	1680	365
17	1984	19	960	7	1680	130	1999	19	960	6	1650	200	2075	23	960	7	1590	260	2095	28	945	8	1500	308	2143	37	900	13	1440	284
18	2032	23	803	6	1390	120	2036	25	811	5	1370	220	2082	18	810	5	1340	210	2100	26	800	6	1290	222	2143	36	771	11	1250	210
19	2072	23	685	5	1130	115	2075	25	688	5	1130	157	2095	19	685	4	1120	141	2120	24	678	5	1090	163	2145	36	660	10	1050	175
20	2106	24	585	4	930	106	2108	24	585	4	950	112	2124	17	583	4	950	93	2139	22	577	4	920	110	2148	37	564	7	880	151
21	2124	24	499	4	800	92	2131	23	498	4	790	88	2147	16	498	4	790	73	2169	19	493	4	780	88	2163	38	482	7	760	123
22	2147	23	423	4	670	78	2149	22	425	4	670	73	2171	16	425	3	665	52	2187	18	425	4	665	73	2174	39	418	7	650	100
23	2170	23	369	3	565	72	2168	21	365	3	570	50	2189	16	365	3	570	45	2204	17	362	4	570	59	2182	38	354	6	550	87
24	2197	24	313	3	480	62	2188	21	312	3	480	45	2215	16	312	3	480	41	2219	17	311	3	480	47	2189	36	301	6	475	75
25	2211	24	270	3	415	50	2217	21	267	3	410	42	2257	16	267	2	410	34	2231	18	265	3	410	41	2198	36	259	6	405	66
26	2225	23	234	2	350	47	2225	21	230	2	350	39	2244	16	231	2	350	27	2246	20	230	3	350	36	2218	35	225	5	340	58
27	2239	23	198	2	300	43	2237	22	198	2	330	35	2267	16	199	2	300	24	2261	22	200	2	300	31	2221	35	190	5	294	53
28	2261	24	171	2	257	39	2263	23	169	2	256	31	2278	16	170	2	256	22	2270	23	169	2	256	28	2227	34	167	5	256	50
29	2275	25	143	2	221	37	2278	24	146	2	219	30	2292	17	147	2	219	22	2285	23	146	2	219	27	2235	33	145	5	219	45
30	2282	25	127	2	187	35	2296	25	126	2	188	31	2308	17	127	2	188	23	2300	23	127	2	188	27	2247	33	126	4	188	44
31	2310	25	109	2	161	33	2312	27	110	2	161	33	2326	16	110	2	162	23	2310	24	110	2	162	28	2263	34	110	3	162	43

PERIOD of RECORD
JULY 1957 - JUNE 1960

TABLE 22b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

SEPTEMBER

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

	50°S						60°S						70°S						80°S						90°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2805	39	10242	117	12500	2650	2719	42	10150	154	12700	3750	2583	103	10008	133	13300	6200	2435	98	10030	104	14000	6500	2233	38	10055	89	14400	6750
1	2752	43	9030	106	11300	2250	2684	44	8885	147	11400	2430	2612	68	8750	125	11600	2675	2495	48	8670	96	11900	2748	2289	36	8670	88	12800	4680
2	2699	45	8000	96	10200	1822	2609	46	7750	137	10200	1790	2555	54	7680	120	10300	1670	2495	39	7665	89	10400	1627	2315	35	7665	87	10900	2750
3	2635	47	7000	90	9200	1579	2549	47	6850	132	9200	1520	2499	47	6720	113	9200	1250	2458	38	6680	87	9200	998	2327	33	6675	85	9500	1490
4	2575	52	6100	87	8200	1275	2483	50	5950	128	8200	1210	2423	46	5795	106	8200	940	2409	37	5809	85	8200	910	2318	32	5750	83	8300	940
5	2504	53	5330	88	7400	997	2412	47	5175	125	7400	930	2346	46	5080	98	7400	850	2324	37	5000	82	7400	830	2275	31	4958	81	7450	830
6	2429	51	4710	91	6600	822	2358	45	4496	122	6600	750	2275	45	4315	92	6600	760	2247	37	4310	77	6600	770	2221	31	4290	77	6600	770
7	2371	47	4000	89	5900	843	2289	43	3850	117	5900	890	2214	43	3710	86	5900	890	2177	36	3700	72	5800	780	2150	30	3668	72	5800	720
8	2303	43	3445	82	5300	937	2235	41	3350	108	5200	1130	2148	40	3180	80	5100	1000	2110	35	3120	66	5100	850	2089	28	3075	66	5100	835
9	2258	34	3000	73	4700	1121	2184	35	2850	100	4550	1285	2092	34	2720	72	4500	1235	2069	32	2693	57	4500	885	2042	25	2621	58	4400	960
10	2209	35	2580	62	4000	1247	2131	38	2440	87	3950	1357	2086	33	2315	64	3900	1320	2023	30	2275	50	3850	895	1994	25	2275	48	3800	1010
11	2179	43	2215	54	3450	1311	2094	52	2100	72	3350	1353	2039	36	1950	57	3300	1235	1990	30	1910	42	3300	865	1969	25	1860	41	3200	980
12	2153	52	1865	47	2980	1197	2089	59	1763	58	2850	1200	2019	38	1652	49	2880	1040	1975	31	1580	36	2780	775	1942	26	1545	32	2740	750
13	2141	51	1610	38	2520	907	2079	56	1510	50	2450	973	1996	41	1385	43	2370	872	1963	32	1327	29	2350	671	1931	26	1307	27	2320	510
14	2136	48	1375	31	2150	750	2071	56	1315	43	2070	810	1990	44	1185	38	2000	750	1946	33	1132	26	2000	540	1925	26	1093	23	1950	384
15	2132	48	1191	26	1790	561	2067	58	1113	38	1760	690	1985	50	990	35	1700	624	1943	34	943	22	1680	424	1910	27	916	19	1660	310
16	2125	48	1000	22	1590	394	2059	60	900	32	1500	500	1980	55	810	31	1430	475	1935	34	785	19	1420	350	1905	27	768	17	1380	267
17	2120	49	861	19	1350	319	2055	64	765	28	1290	394	1978	58	689	27	1210	387	1934	35	670	17	1170	297	1893	27	642	16	1160	233
18	2117	51	723	18	1170	262	2047	69	650	25	1110	343	1975	64	578	23	1000	343	1929	36	553	15	980	254	1892	28	541	15	970	187
19	2115	57	619	17	1000	201	2042	78	561	22	930	300	1973	72	498	21	850	308	1931	37	462	14	830	208	1901	28	449	13	810	158
20	2113	62	538	15	860	181	2035	84	487	19	830	241	1968	78	419	18	700	271	1938	38	389	12	670	181	1925	29	375	10	670	120
21	2112	64	469	14	740	162	2028	85	415	18	685	200	1970	84	359	16	600	228	1945	39	328	10	575	167	1944	29	321	9	560	96
22	2114	64	399	13	630	143	2026	83	352	15	580	179	1977	86	300	13	515	189	1963	45	273	9	480	134	1967	30	270	7	470	84
23	2117	63	339	12	538	124	2025	77	300	14	500	161	1980	85	252	10	440	165	1975	50	228	8	400	105	1989	32	226	7	390	75
24	2120	62	287	10	455	110	2041	75	255	12	420	138	1989	78	218	10	380	134	1989	54	193	7	340	89	2008	34	191	6	318	62
25	2125	62	245	9	390	94	2048	71	221	10	360	122	1993	74	188	9	330	110	2006	57	173	7	290	77	2025	35	168	5	272	49
26	2131	61	212	8	330	83	2059	73	189	9	315	97	2018	74	170	8	285	89	2015	62	148	6	253	68	2039	36	138	4	228	47
27	2147	60	184	7	288	77	2069	75	172	8	272	88	2030	77	150	7	250	78	2023	67	128	5	219	51	2045	37	122	4	195	45
28	2158	58	162	7	250	73	2075	78	150	7	237	77	2047	81	135	7	230	69	2039	74	115	5	192	48	2058	46	107	3	177	43
29	2177	57	139	6	215	67	2091	83	134	7	210	69	2069	87	121	6	192	52	2051	82	103	4	175	46	2069	59	91	3	161	41
30	2195	55	125	6	188	61	2109	84	121	6	184	59	2087	92	111	6	175	48	2064	87	91	4	158	44	2081	77	87	2	147	39
31	2212	53	108	5	161	54	2139	84	107	6	158	49	2098	96	98	5	155	45	2081	93	87	3	147	42	2093	89	77	2	137	37

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 23a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

OCTOBER

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2957	6	10325	15	11500	382	2914	7	10330	15	12050	350	2867	8	10360	17	12100	360	2848	17	10383	20	12400	920	2817	33	10418	50	12600	1740
1	2911	5	9180	15	10700	325	2906	17	9210	15	10900	670	2853	28	9200	17	11100	1255	2850	41	9215	19	11100	1380	2789	39	9200	42	11300	1840
2	2863	5	8150	14	9700	288	2895	14	8180	14	9700	460	2875	27	8200	17	9700	875	2850	42	8178	19	9900	1420	2743	44	8150	39	10000	1750
3	2825	5	7250	14	8700	269	2838	13	7275	14	8700	375	2842	23	7275	17	8750	685	2793	41	7250	20	8850	1120	2692	48	7115	44	9150	1520
4	2775	6	6435	13	7900	244	2735	11	6450	13	7900	321	2781	21	6440	18	7925	468	2724	40	6385	28	8000	875	2630	51	6300	51	8150	1200
5	2722	6	5685	13	7100	215	2723	9	5700	12	7100	263	2714	18	5700	18	7200	377	2657	39	5625	32	7300	690	2568	50	5530	60	7400	870
6	2659	6	5015	12	6400	193	2665	8	5027	11	6500	211	2655	17	5008	18	6500	326	2584	36	4965	38	6600	472	2493	51	4835	65	6600	720
7	2598	7	4427	12	5800	173	2604	7	4416	10	5800	190	2583	17	4410	18	5850	291	2506	34	4311	41	5900	391	2425	51	4215	70	5950	610
8	2526	9	3895	11	5200	150	2525	7	3870	9	5200	175	2512	17	3850	17	5300	275	2441	32	3810	42	5300	371	2355	43	3650	71	5300	498
9	2461	11	3415	11	4700	135	2457	8	3380	9	4700	165	2445	17	3350	17	4700	261	2373	30	3285	41	4700	382	2291	37	3150	67	4700	720
10	2380	11	2950	10	4200	111	2389	8	2940	8	4200	160	2370	17	2925	17	4200	247	2300	28	2810	39	4200	435	2247	32	2740	62	4200	998
11	2321	12	2539	9	3800	91	2307	7	2550	8	3800	155	2291	17	2535	16	3800	232	2250	28	2478	34	3750	510	2198	39	2320	54	3600	1210
12	2231	13	2185	9	3400	88	2225	7	2200	8	3400	157	2212	16	2175	14	3300	236	2200	29	2098	28	3200	630	2185	44	1998	45	3100	1210
13	2157	14	1872	8	2980	107	2147	8	1873	8	2980	160	2150	16	1847	12	2950	253	2171	30	1785	24	2820	650	2172	45	1721	35	2670	940
14	2082	14	1590	8	2630	137	2083	10	1598	7	2630	165	2095	17	1575	10	2570	264	2137	30	1547	19	2430	590	2153	43	1482	27	2290	750
15	2031	15	1350	7	2310	161	2023	13	1350	7	2290	178	2058	18	1340	9	2250	259	2118	28	1292	15	2150	469	2130	38	1253	20	1990	540
16	1976	16	1138	7	1970	189	1976	17	1140	6	1980	187	2023	19	1131	7	1910	231	2099	28	1108	12	1790	371	2127	37	1065	18	1670	400
17	1974	17	958	6	1670	207	1967	20	960	5	1670	197	2002	22	955	6	1620	199	2089	27	929	10	1550	281	2125	37	910	15	1440	300
18	2019	18	810	5	1380	210	1997	25	808	5	1380	220	2004	25	808	5	1370	171	2087	24	800	7	1290	205	2120	37	783	14	1230	241
19	2057	19	700	4	1140	175	2052	30	690	4	1140	171	2061	24	687	5	1130	133	2102	21	682	7	1100	164	2125	36	673	13	1060	189
20	2103	21	590	4	950	110	2099	25	581	4	950	122	2107	22	581	4	940	95	2125	25	581	6	930	125	2132	36	568	11	890	169
21	2125	23	495	4	800	91	2118	22	495	4	790	88	2128	18	497	4	790	81	2150	26	497	5	790	93	2150	38	489	9	760	144
22	2150	24	421	3	670	80	2137	21	422	4	670	73	2157	16	425	4	670	69	2174	25	423	5	670	84	2168	40	418	7	655	137
23	2174	23	368	3	570	73	2168	21	361	3	570	59	2177	16	365	3	570	50	2199	25	365	4	570	73	2179	44	358	7	560	123
24	2198	22	310	3	480	64	2187	22	310	3	480	47	2200	16	312	3	480	44	2218	26	312	4	480	62	2204	48	307	7	470	110
25	2212	21	263	2	410	53	2209	22	264	3	410	43	2224	17	269	3	410	38	2230	27	267	4	410	49	2217	53	262	6	400	94
26	2226	18	227	2	350	48	2224	23	227	2	350	39	2247	17	233	2	350	34	2245	29	228	3	350	43	2223	57	224	6	340	84
27	2241	15	195	2	299	45	2243	24	195	2	298	32	2269	17	198	2	299	28	2257	29	198	3	300	39	2237	58	193	6	298	73
28	2268	16	170	2	250	42	2269	21	167	2	251	29	2287	17	173	2	251	24	2272	29	173	3	251	32	2246	51	167	5	251	63
29	2289	17	145	2	216	40	2287	17	146	2	218	26	2305	17	148	2	218	22	2288	28	148	2	218	29	2269	39	143	5	219	52
30	2308	18	125	2	187	37	2312	15	124	2	185	24	2321	18	127	2	187	20	2306	26	127	2	188	27	2284	36	125	4	188	45
31	2321	19	106	2	159	35	2325	12	111	2	157	23	2332	19	113	2	160	18	2321	26	112	2	161	26	2293	33	108	4	161	41

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 23b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

OCTOBER

	50°S						60°S						70°S						80°S						90°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2828	38	10272	91	12600	2300	2706	38	10078	133	12700	2100	2627	67	10040	111	13000	4150	2477	63	10030	82	13600	4250	2292	61	10048	81	14200	4325
1	2781	41	9040	81	11300	2250	2652	35	8850	118	11400	1750	2618	58	8835	98	11600	2435	2502	44	8800	73	11800	2590	2304	40	8850	74	12700	3000
2	2698	44	8000	72	10200	2000	2593	38	7755	113	10250	1490	2575	47	7745	88	10300	1670	2500	37	7645	64	10400	1675	2318	37	7642	68	11100	2175
3	2636	47	7000	69	9200	1575	2524	43	6785	112	9200	1220	2522	42	6750	80	9200	1190	2458	35	6700	58	9200	1040	2339	34	6685	62	9700	1435
4	2577	52	6180	72	8200	1125	2469	47	5987	112	8200	960	2447	41	5820	73	8200	910	2403	33	5800	55	8200	915	2332	32	5775	56	8400	960
5	2507	57	5340	76	7400	910	2407	51	5210	112	7400	830	2379	39	5115	65	7400	850	2325	30	5045	51	7400	876	2298	29	4995	52	7500	910
6	2448	60	4720	78	6600	780	2361	53	4496	111	6500	700	2309	38	4450	60	6500	780	2261	28	4359	47	6500	843	2225	27	4285	47	6500	870
7	2381	61	4060	82	5900	790	2281	49	3899	106	5800	870	2239	38	3885	58	5800	760	2192	24	3750	43	5800	754	2169	25	3668	43	5800	790
8	2313	46	3520	83	5300	930	2219	44	3375	99	5150	1040	2175	37	3280	57	5100	830	2131	21	3195	39	5100	680	2119	24	3124	38	5100	730
9	2261	37	3000	80	4700	1040	2175	43	2892	90	4500	1130	2111	36	2765	55	4500	850	2078	18	2710	36	4500	628	2069	26	2649	35	4400	690
10	2215	34	2592	72	4000	1130	2142	43	2430	82	3900	1270	2070	36	2350	54	3800	870	2048	25	2299	31	3800	621	2038	33	2241	31	3800	670
11	2191	40	2230	62	3500	1260	2115	50	2060	79	3300	1340	2057	37	1993	52	3300	830	2035	30	1940	28	3300	590	2027	40	1894	28	3200	590
12	2183	47	1870	52	2950	1270	2104	57	1750	63	2860	1260	2046	38	1692	50	2820	730	2022	32	1640	23	2780	439	2015	43	1598	25	2710	470
13	2167	54	1615	43	2550	1140	2091	64	1500	55	2450	1110	2045	43	1440	47	2380	540	2017	35	1380	19	2350	313	2013	47	1350	24	2290	369
14	2153	59	1375	35	2180	1000	2087	74	1268	48	2060	960	2043	51	1221	42	2010	460	2021	37	1172	18	1980	225	2020	50	1139	23	1930	289
15	2142	64	1218	28	1880	810	2085	81	1103	43	1750	840	2043	58	1000	38	1720	425	2033	39	984	18	1650	181	2026	55	962	22	1620	239
16	2136	66	1000	22	1580	620	2088	84	918	38	1500	690	2043	62	867	34	1450	392	2041	47	831	18	1400	150	2038	61	815	22	1370	194
17	2136	71	868	19	1390	437	2093	85	795	33	1290	560	2043	68	736	31	1230	345	2054	53	704	18	1180	113	2045	69	689	22	1150	156
18	2138	74	745	18	1200	339	2097	85	685	30	1090	441	2044	73	628	28	1020	295	2071	58	600	17	990	97	2061	79	582	22	970	115
19	2141	77	632	17	1000	260	2098	85	567	28	920	350	2044	72	529	26	860	225	2086	67	503	17	840	92	2070	85	493	22	820	93
20	2148	79	539	16	870	199	2097	85	481	24	820	264	2045	74	448	23	730	179	2102	75	431	17	700	88	2084	90	418	21	690	88
21	2150	79	461	15	740	179	2091	85	415	22	690	196	2048	77	383	21	620	138	2110	81	365	16	580	82	2096	99	353	19	580	82
22	2179	78	395	14	638	168	2094	87	353	19	585	175	2065	80	317	19	529	110	2136	88	309	16	490	78	2124	104	300	18	480	74
23	2187	76	349	13	530	148	2100	89	308	17	495	152	2079	87	275	18	450	98	2152	96	263	15	415	75	2156	110	258	17	410	86
24	2193	74	292	11	450	128	2125	86	271	16	420	130	2100	91	238	17	385	95	2179	103	225	15	350	76	2192	117	222	16	340	94
25	2206	73	251	10	390	121	2157	84	235	15	360	115	2143	95	211	16	338	92	2201	110	195	14	310	77	2220	123	190	15	330	110
26	2218	72	215	9	330	110	2193	83	205	14	315	96	2182	99	183	14	287	89	2221	117	172	13	258	78	2258	127	167	14	250	87
27	2227	68	187	8	288	90	2215	81	176	13	272	89	2209	102	160	13	247	86	2246	123	148	12	222	81	2307	132	143	13	215	130
28	2238	63	163	7	248	83	2223	75	152	11	229	82	2225	102	137	11	209	83	2275	124	128	10	187	80	2333	137	123	12	178	92
29	2246	54	139	7	213	74	2238	68	131	9	200	75	2242	100	122	9	182	79	2302	126	112	8	165	79	2377	142	109	12	156	87
30	2268	44	123	6	187	63	2250	62	117	8	175	68	2269	95	111	8	158	75	2325	125	98	7	147	78	2412	145	96	11	142	83
31	2279	39	105	5	158	52	2268	59	102	7	155	61	2293	89	93	7	147	73	2352	123	89	7	135	76	2425	144	85	10	123	78

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 24a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

NOVEMBER

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	7	10321	12	11600	620	2918	8	10328	12	12005	350	2912	8	10350	17	12100	436	2867	15	10368	19	12300	750	2831	16	10410	42	12400	960
1	2901	6	9200	12	10700	430	2909	17	9200	12	10900	700	2841	22	9200	17	11000	1070	2875	24	9210	18	11000	1090	2850	31	9220	36	11200	1110
2	2856	6	8150	11	9700	341	2893	17	8185	11	9700	487	2875	24	8210	16	9750	890	2866	34	8210	18	9800	1040	2764	42	8150	34	10000	1170
3	2818	6	7235	10	8700	291	2833	16	7280	11	8700	400	2841	22	7260	16	8700	720	2821	32	7250	19	8800	872	2712	43	7195	37	9100	1090
4	2771	6	6425	10	7900	259	2775	15	6450	11	7900	371	2785	21	6440	17	7900	590	2740	31	6413	22	7950	750	2654	42	6348	42	8100	940
5	2720	7	5623	9	7100	229	2722	15	5700	10	7100	338	2722	21	5691	17	7200	463	2675	31	5682	27	7250	640	2596	42	5574	47	7300	810
6	2665	7	5000	9	6400	200	2669	15	5018	10	6500	302	2650	21	5011	19	6500	382	2601	30	4992	30	6500	442	2530	41	4870	51	6600	680
7	2604	7	4410	9	5800	188	2600	15	4425	9	5800	206	2582	21	4408	20	5800	339	2524	29	4350	32	5900	369	2458	41	4240	52	5900	560
8	2531	6	3857	9	5200	175	2531	15	3865	9	5200	160	2510	21	3875	21	5300	293	2459	28	3810	33	5300	321	2383	39	3715	52	5300	510
9	2470	6	3385	10	4700	170	2456	15	3375	10	4700	150	2439	21	3350	21	4700	261	2380	27	3310	32	4700	318	2308	38	3198	50	4700	515
10	2387	7	2913	11	4200	170	2331	15	2930	10	4200	155	2353	21	2902	21	4200	270	2300	27	2854	31	4200	362	2269	37	2775	47	4150	640
11	2310	8	2535	11	3800	170	2300	15	2540	11	3800	160	2275	20	2508	20	3800	284	2238	28	2467	29	3800	422	2212	38	2350	43	3650	750
12	2230	9	2180	11	3300	170	2221	16	2179	11	3400	165	2207	20	2152	19	3300	313	2193	28	2098	26	3300	580	2192	40	2037	38	3200	810
13	2153	12	1867	10	2980	175	2145	17	1863	11	2980	170	2147	21	1867	18	2960	349	2167	28	1794	23	2850	630	2175	40	1741	32	2730	840
14	2090	14	1589	9	2620	180	2081	17	1589	10	2620	170	2092	21	1572	16	2580	376	2134	28	1538	20	2470	595	2154	38	1495	26	2330	670
15	2024	17	1346	8	2280	182	2023	17	1345	9	2280	175	2050	22	1332	13	2215	359	2106	28	1301	16	2090	462	2142	37	1253	21	1990	500
16	1977	18	1135	7	1980	188	1981	17	1137	8	1980	192	2011	23	1128	11	1920	309	2087	28	1110	12	1810	371	2135	35	1080	14	1710	392
17	1930	21	954	6	1680	198	1975	19	956	7	1660	250	1990	25	957	9	1630	271	2075	27	948	8	1580	300	2127	34	913	10	1470	295
18	1988	25	814	5	1410	218	1991	24	803	5	1390	320	2008	28	803	7	1390	239	2082	27	800	7	1320	232	2138	32	789	8	1250	225
19	2032	29	675	4	1150	195	2035	27	681	5	1140	188	2050	26	682	5	1135	182	2100	25	681	5	1100	172	2146	31	673	7	1060	176
20	2075	29	572	4	960	167	2085	29	578	4	950	121	2096	23	579	4	950	123	2117	23	578	5	935	117	2157	30	575	6	900	134
21	2106	27	492	4	790	141	2118	27	492	4	790	89	2121	22	492	4	790	90	2139	19	492	4	780	91	2174	29	490	5	770	96
22	2132	24	418	4	680	115	2135	25	420	3	670	78	2147	22	419	3	670	81	2166	17	421	4	670	82	2192	24	422	5	660	87
23	2157	19	358	3	565	92	2161	23	359	3	570	70	2173	23	360	3	570	72	2192	16	361	4	570	73	2213	21	361	4	560	76
24	2182	17	305	3	475	83	2184	21	308	3	480	61	2200	23	310	3	480	66	2220	15	311	3	480	68	2225	19	310	4	480	69
25	2203	14	261	3	410	76	2209	21	263	3	410	47	2227	24	265	2	410	53	2237	16	266	3	410	57	2238	24	265	4	410	60
26	2219	15	226	2	350	69	2230	22	226	2	350	39	2256	24	228	2	350	44	2265	17	229	3	350	45	2254	29	229	3	350	49
27	2239	17	195	2	293	61	2250	23	194	2	294	29	2275	24	195	2	297	37	2278	19	198	2	299	37	2270	32	197	3	297	41
28	2261	21	165	2	250	50	2271	24	168	2	250	24	2293	23	169	2	251	30	2294	19	171	2	255	29	2285	34	171	3	255	37
29	2277	23	142	2	214	46	2287	21	144	2	219	22	2310	19	145	2	220	24	2309	18	148	2	222	23	2296	35	146	2	220	29
30	2294	25	123	2	184	39	2306	18	124	2	183	20	2324	16	126	2	187	22	2324	17	127	2	189	20	2321	32	127	2	189	28
31	2308	27	103	2	158	38	2322	17	108	2	157	20	2335	14	110	2	160	20	2338	16	109	2	162	19	2346	28	109	2	160	31

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 24b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

NOVEMBER

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2856	30	10250	102	12500	1620	2745	33	10120	164	12600	2250	2659	42	10050	107	12700	3220	2575	65	10100	73	13200	3500	2473	66	10117	76	13700	3750
1	2803	37	9100	91	11200	1600	2699	37	8889	162	11300	1960	2638	40	8800	100	11400	2145	2570	59	8800	67	11800	2540	2475	58	8850	75	12400	2930
2	2716	42	8000	87	10100	1570	2641	42	7810	154	10100	1720	2591	42	7750	98	10200	1750	2539	57	7760	66	10400	1820	2469	54	7770	75	10800	2110
3	2657	46	7062	86	9100	1490	2592	48	6950	145	9100	1530	2525	47	6789	98	9200	1500	2497	54	6750	67	9300	1370	2431	51	6755	75	9500	1480
4	2594	49	6192	86	8200	1230	2521	54	6000	137	8200	1255	2468	52	5928	98	8200	1250	2439	48	5900	69	8200	990	2396	47	5889	74	8400	960
5	2523	54	5418	88	7300	1030	2458	59	5293	129	7300	1150	2401	55	5115	98	7300	1000	2378	47	5100	72	7300	870	2343	43	5083	73	7400	750
6	2467	57	4738	91	6600	850	2389	57	4615	121	6500	950	2339	54	4470	96	6500	830	2309	45	4430	73	6500	750	2277	40	4395	72	6600	521
7	2389	64	4062	91	5900	800	2317	52	3997	114	5900	920	2274	56	3893	92	5800	840	2245	43	3820	71	5800	820	2223	35	3788	71	5800	470
8	2319	56	3563	87	5300	950	2271	50	3414	107	5200	1080	2206	57	3380	87	5100	1000	2178	43	3270	68	5100	920	2167	38	3210	69	5100	700
9	2227	51	3062	81	4650	1040	2239	54	2991	98	4550	1120	2182	58	2850	80	4500	1140	2147	54	2785	66	4400	1090	2147	50	2736	68	4400	890
10	2243	50	2660	72	4050	1090	2205	58	2532	88	3950	1370	2157	59	2450	73	3800	1290	2132	64	2379	63	3800	1150	2121	68	2328	66	3800	1000
11	2218	52	2263	64	3500	1140	2189	67	2175	76	3350	1500	2143	64	2048	67	3300	1270	2140	75	2000	59	3300	995	2136	83	1981	64	3200	860
12	2189	55	1950	54	3000	1150	2178	79	1845	65	2850	1350	2154	72	1750	61	2750	1120	2167	81	1721	57	2740	810	2155	94	1689	63	2690	690
13	2178	56	1697	47	2600	1090	2174	86	1585	56	2450	1240	2167	74	1499	54	2350	950	2179	81	1472	54	2310	630	2174	102	1442	62	2270	500
14	2167	52	1450	41	2225	1030	2166	85	1375	50	2090	1080	2181	74	1282	49	2000	870	2200	81	1259	52	1970	474	2193	105	1231	59	1920	428
15	2155	49	1241	35	1900	873	2170	84	1210	46	1760	900	2189	74	1142	47	1730	750	2239	81	1083	49	1670	414	2219	107	1055	57	1630	386
16	2169	48	1032	29	1620	677	2176	83	991	42	1495	750	2196	75	937	45	1480	670	2241	80	931	48	1450	385	2233	109	900	55	1380	372
17	2174	48	899	23	1370	455	2187	83	851	38	1290	650	2205	75	803	42	1270	520	2267	79	800	46	1210	378	2254	110	775	53	1180	361
18	2189	49	752	18	1220	342	2196	85	718	34	1130	479	2223	77	691	39	1070	469	2278	78	685	43	1030	370	2263	115	671	51	1005	362
19	2200	51	651	11	1010	239	2210	86	614	30	930	387	2236	79	599	35	910	413	2301	76	595	40	870	363	2275	119	573	48	860	375
20	2210	53	553	9	870	188	2221	87	537	26	820	281	2247	80	519	30	810	347	2327	75	512	36	750	347	2287	124	497	46	740	394
21	2220	55	481	7	750	154	2232	89	469	22	700	221	2263	80	452	26	670	285	2354	72	443	33	640	336	2294	118	418	44	625	430
22	2230	57	417	7	630	123	2243	91	401	17	600	178	2274	78	395	22	575	221	2369	63	389	29	550	315	2297	107	360	42	540	420
23	2242	58	355	6	540	98	2262	88	348	11	515	152	2289	75	338	18	500	187	2381	59	329	26	480	281	2302	103	313	39	465	395
24	2250	59	304	5	460	88	2283	81	288	9	430	124	2318	72	283	14	420	169	2400	55	279	22	410	237	2336	92	268	35	400	410
25	2267	60	258	5	390	79	2301	76	249	7	360	100	2345	70	247	10	350	148	2409	54	238	20	340	210	2341	80	229	31	340	381
26	2277	61	221	4	330	69	2323	74	214	7	300	93	2369	68	211	9	292	134	2415	55	208	18	287	192	2345	65	192	28	285	350
27	2291	60	187	4	278	63	2342	70	178	6	258	81	2393	67	178	8	250	110	2423	56	177	17	249	179	2347	57	169	26	247	337
28	2303	58	165	3	245	59	2368	67	158	5	225	78	2407	67	158	7	217	100	2431	57	158	14	211	171	2348	53	143	24	209	311
29	2325	55	138	3	210	55	2379	64	133	5	193	73	2415	68	133	7	187	98	2437	61	129	13	178	158	2350	55	125	22	178	273
30	2347	53	123	2	182	50	2396	63	117	4	173	70	2423	69	117	7	167	95	2441	63	115	12	161	143	2364	57	112	20	158	247
31	2362	50	108	2	157	49	2403	62	106	4	153	67	2435	70	105	7	148	93	2445	66	102	10	145	137	2399	59	97	18	140	234

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 25a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

DECEMBER

	0°						10°S						20°S						30°S						40°S					
ALT	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2973	12	10318	13	11700	620	2938	8	10322	14	11900	560	2908	9	10335	17	11900	840	2879	16	10354	21	12300	910	2844	18	10408	32	12400	1040
1	2916	10	9220	13	10700	455	2908	17	9200	14	10800	580	2849	25	9200	17	10900	730	2877	27	9210	18	10900	1150	2825	40	9190	27	11200	1360
2	2875	8	8175	12	9650	370	2884	17	8190	13	9725	474	2875	19	8185	17	9700	540	2881	30	8170	18	9725	1140	2775	49	8100	28	10000	1430
3	2825	6	7296	12	8700	322	2839	15	7275	13	8700	419	2855	18	7280	17	8700	489	2832	28	7275	19	8780	900	2725	47	7200	33	9000	1200
4	2778	6	6434	11	7900	283	2792	14	6450	12	7900	369	2796	18	6455	17	7900	468	2765	28	6450	20	8000	770	2675	46	6350	40	8100	890
5	2721	6	5700	10	7100	260	2725	13	5700	12	7100	319	2724	18	5730	17	7100	439	2689	28	5695	22	7200	670	2618	46	5550	47	7300	840
6	2670	6	5010	9	6400	229	2669	14	5035	12	6400	287	2663	19	5040	17	6400	394	2625	29	5000	26	6500	504	2550	45	4887	49	6500	700
7	2604	6	4412	9	5800	205	2606	14	4420	11	5800	258	2600	19	4435	17	5800	332	2554	28	4367	30	5800	387	2479	43	4215	51	5900	500
8	2532	6	3915	9	5200	190	2539	14	3875	11	5200	237	2528	19	3872	17	5200	289	2477	28	3800	32	5300	310	2401	39	3703	51	5300	415
9	2468	7	3382	9	4700	180	2456	14	3380	11	4700	214	2460	19	3370	18	4700	264	2404	28	3310	33	4700	310	2335	37	3215	49	4700	420
10	2383	7	2952	9	4200	170	2383	15	2950	11	4200	191	2382	19	2950	18	4200	225	2339	28	2875	32	4200	357	2267	36	2770	48	4200	590
11	2312	8	2539	8	3800	170	2306	15	2550	11	3800	183	2300	18	2535	18	3800	190	2270	27	2460	30	3700	400	2210	37	2375	44	3700	780
12	2218	9	2185	8	3400	170	2225	15	2189	11	3400	162	2221	18	2175	18	3300	160	2197	26	2115	28	3300	505	2187	38	2082	40	3200	870
13	2150	8	1871	8	2980	170	2150	15	1875	11	2980	160	2150	17	1878	18	2970	194	2159	25	1815	24	2880	590	2170	38	1748	32	2760	850
14	2082	9	1598	8	2620	170	2083	16	1596	11	2620	184	2091	17	1591	16	2600	250	2127	25	1552	21	2510	600	2150	38	1497	27	2370	810
15	2025	12	1350	8	2300	170	2025	17	1355	10	2290	191	2042	19	1356	13	2270	315	2097	25	1320	17	2120	530	2146	37	1261	22	2030	670
16	1968	16	1140	7	1990	180	1973	18	1141	8	1980	200	1997	21	1140	11	1970	300	2062	26	1118	13	1870	437	2145	35	1085	17	1740	480
17	1938	18	961	6	1680	190	1942	19	960	7	1690	225	1977	25	962	9	1650	273	2050	26	959	10	1590	373	2130	32	925	12	1500	415
18	1950	24	815	6	1430	210	1954	22	806	6	1410	223	1988	30	808	7	1400	244	2050	25	810	7	1350	287	2135	30	795	8	1260	329
19	2016	23	683	5	1170	175	2015	24	685	5	1150	176	2021	26	686	6	1150	199	2069	23	686	6	1140	220	2147	27	675	7	1090	250
20	2062	22	580	4	960	123	2069	20	575	5	950	119	2063	21	580	5	950	137	2106	21	582	5	950	160	2162	25	578	5	900	171
21	2107	21	490	4	820	93	2108	18	489	4	800	92	2115	17	493	4	800	95	2138	19	495	4	790	100	2191	22	495	4	780	115
22	2130	18	415	3	680	82	2128	16	418	4	670	82	2145	18	422	4	670	82	2169	16	425	4	670	84	2209	19	425	4	660	83
23	2155	16	357	3	560	72	2157	17	357	3	570	74	2170	21	361	3	570	74	2196	16	365	3	570	73	2224	17	365	4	570	72
24	2187	17	302	3	480	63	2183	19	306	3	480	68	2199	23	308	3	480	65	2219	17	312	3	480	59	2241	15	312	3	480	57
25	2205	17	262	2	400	57	2210	21	262	2	404	57	2228	32	265	2	410	52	2243	18	269	2	410	43	2265	16	269	3	410	45
26	2219	18	226	2	340	49	2231	23	227	2	340	45	2264	33	229	2	350	38	2268	18	231	2	350	34	2283	16	232	3	350	39
27	2240	18	192	2	292	42	2256	24	194	2	295	38	2278	32	197	2	297	26	2288	18	198	2	298	25	2304	17	200	2	296	35
28	2261	18	167	2	250	39	2270	25	165	2	250	31	2302	30	168	2	250	23	2307	17	172	2	253	23	2320	17	173	2	253	28
29	2271	18	139	2	214	34	2289	25	141	2	215	24	2318	26	143	2	216	21	2324	16	148	2	219	21	2339	18	150	2	221	24
30	2279	18	122	2	183	32	2295	26	123	2	183	23	2325	23	126	2	186	19	2339	16	128	2	187	19	2358	18	129	2	188	23
31	2284	19	105	2	157	30	2303	26	105	2	157	22	2343	24	108	2	159	17	2356	17	112	2	161	17	2361	18	112	2	161	25

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - $^{\circ}K \times 10^{-1}$ (T)
TEMPERATURE SIGMA - $^{\circ}K \times 10^{-1}$ (s)
PRESSURE - $Kp\ m^{-2}$ (P)
PRESSURE SIGMA - $Kp\ m^{-2}$ (s)
DENSITY - $Kg\ m^{-3} \times 10^{-4}$ (D)
DENSITY SIGMA - $Kg\ m^{-3} \times 10^{-5}$ (s)
ALTITUDE - Geometric Kilometers

TABLE 25b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

DECEMBER

ALT	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2816	35	10220	88	12400	2030	2760	17	10130	120	12500	1750	2686	28	10105	117	12800	1875	2618	44	10115	87	13000	2150	2548	48	10130	77	13300	2500
1	2804	40	9000	87	11200	2000	2700	23	8889	108	11300	1625	2649	26	8850	103	11500	1615	2598	38	8885	86	11700	1635	2520	43	8910	76	12300	1780
2	2723	47	7995	87	10000	1790	2646	27	7750	99	10100	1375	2600	28	7750	96	10200	1250	2549	36	7750	82	10500	1090	2496	39	7750	73	10900	1220
3	2664	52	7000	89	9100	1450	2594	30	6895	96	9150	1080	2539	32	6810	92	9200	998	2504	33	6800	78	9300	880	2457	37	6800	71	9500	920
4	2607	57	6218	91	8100	1190	2530	30	6047	93	8100	900	2470	36	5885	88	8200	890	2439	34	5850	74	8300	765	2419	34	5890	68	8400	810
5	2545	60	5430	92	7300	990	2474	30	5280	91	7300	820	2404	41	5150	83	7300	780	2375	35	5125	71	7400	645	2364	32	5125	65	7400	715
6	2482	63	4750	93	6500	870	2401	30	4610	86	6500	750	2349	43	4480	80	6500	790	2323	33	4450	67	6500	775	2303	34	4438	62	6500	640
7	2400	59	4110	93	5900	780	2326	31	3998	79	5800	810	2291	37	3882	74	5800	870	2257	31	3835	62	5800	880	2239	36	3818	58	5800	765
8	2328	51	3597	89	5300	790	2269	30	3485	73	5200	880	2243	33	3350	68	5100	995	2237	35	3292	57	5100	994	2195	38	3278	52	5100	885
9	2263	44	3120	81	4700	920	2238	35	2985	66	4500	890	2222	33	2815	61	4350	1150	2230	38	2800	50	4300	1135	2194	40	2799	46	4350	1000
10	2239	32	2692	66	4005	1020	2229	39	2555	58	3850	850	2239	36	2483	54	3800	996	2242	43	2420	44	3700	1010	2219	56	2396	39	3700	1000
11	2219	43	2283	56	3600	1210	2238	45	2195	52	3300	830	2256	37	2100	48	3150	820	2267	40	2070	38	3100	830	2238	65	2042	37	3100	850
12	2208	47	1987	47	3100	1200	2243	49	1845	47	2820	780	2269	38	1763	43	2720	730	2283	33	1760	35	2670	650	2269	47	1760	35	2670	671
13	2208	48	1683	40	2500	1015	2263	43	1601	42	2380	730	2280	38	1525	38	2320	620	2307	28	1525	32	2290	481	2285	49	1525	33	2270	480
14	2207	45	1421	32	2230	870	2268	36	1375	37	2010	620	2289	34	1314	35	2010	487	2319	23	1329	28	1960	433	2305	43	1329	31	1940	422
15	2208	41	1251	27	1930	690	2272	29	1211	32	1760	508	2300	30	1160	32	1740	436	2332	19	1150	25	1680	379	2320	38	1132	28	1670	371
16	2217	35	1062	22	1620	483	2272	24	1008	28	1500	450	2308	25	995	28	1480	389	2347	18	993	22	1450	337	2332	34	978	26	1430	318
17	2219	28	911	17	1410	415	2273	22	882	25	1320	393	2313	26	850	24	1270	338	2357	17	848	18	1250	291	2344	30	846	24	1250	287
18	2225	23	786	13	1210	340	2274	21	761	22	1140	325	2321	26	730	21	1090	286	2365	15	735	16	1060	267	2356	26	731	22	1060	273
19	2231	20	668	9	1020	258	2277	21	652	17	960	260	2327	26	631	17	940	243	2373	16	631	14	930	235	2364	22	632	19	920	254
20	2249	16	569	7	870	182	2282	21	558	12	840	181	2339	24	551	13	820	185	2379	15	550	12	800	215	2368	19	548	17	790	238
21	2254	15	493	5	750	109	2290	22	489	9	730	100	2352	25	479	9	700	132	2386	15	479	9	690	178	2379	15	474	15	680	224
22	2260	13	425	5	650	83	2295	24	421	7	630	86	2359	26	417	7	610	94	2390	16	417	7	600	148	2384	14	415	13	590	212
23	2269	15	365	4	560	73	2298	28	357	5	540	77	2361	27	358	6	525	85	2402	16	358	7	520	114	2391	17	355	12	515	189
24	2278	17	312	4	480	61	2308	33	311	5	460	69	2369	31	310	5	450	77	2405	16	310	5	450	96	2396	24	309	11	440	168
25	2287	19	270	3	408	59	2319	37	270	4	398	57	2371	36	270	4	390	72	2407	16	270	5	390	89	2400	19	269	9	385	143
26	2296	22	232	3	350	43	2325	39	232	4	340	49	2373	41	234	4	340	67	2409	17	234	4	340	83	2419	17	233	7	335	122
27	2319	24	200	3	296	38	2339	41	200	3	298	45	2378	43	200	3	295	58	2413	18	200	4	292	76	2422	14	201	7	287	110
28	2332	25	173	2	252	31	2355	43	174	3	250	42	2382	44	173	3	250	49	2415	19	174	3	249	71	2429	15	173	6	248	93
29	2353	26	150	2	222	31	2369	44	150	2	221	40	2392	45	150	2	217	47	2427	28	151	3	215	67	2441	17	152	5	214	81
30	2359	26	129	2	190	29	2378	45	129	2	187	38	2406	46	129	2	185	45	2439	36	130	2	182	59	2455	18	130	5	182	78
31	2367	28	112	2	162	30	2385	46	112	2	160	37	2419	47	112	2	158	43	2451	41	112	2	157	54	2467	23	112	4	157	74

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 26a

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

ANNUAL

	0°						10°S						20°S						30°S						40°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2960	12	10200	13	11700	630	2930	22	10200	16	11800	1100	2902	35	10250	18	12100	1350	2845	36	10330	31	12400	1800	2830	35	10380	54	12500	2500
1	2922	11	9150	12	10700	505	2901	22	9200	13	10800	1000	2860	41	9210	17	10800	1100	2860	42	9215	19	11100	1500	2800	46	9200	45	11300	2090
2	2870	11	8150	11	9700	410	2875	17	8200	12	9600	500	2903	31	8180	16	9600	810	2851	48	8180	18	9850	1300	2750	51	8050	46	10000	1750
3	2820	11	7250	11	8800	370	2842	15	7270	12	8700	400	2845	28	7270	16	8800	730	2799	45	7250	25	8850	1080	2705	57	7180	51	9100	1500
4	2755	11	6450	11	7900	330	2775	13	6450	12	7900	360	2778	26	6450	18	7900	580	2735	45	6400	33	8000	910	2648	61	6320	61	8150	1250
5	2718	11	5700	10	7100	300	2718	13	5700	12	7100	331	2713	25	5700	19	7200	489	2675	45	5640	39	7300	800	2590	62	5550	70	7400	995
6	2665	12	5040	9	6400	262	2665	14	5030	12	6500	300	2655	26	5020	20	6500	430	2606	45	4995	45	6600	680	2518	63	4850	75	6600	760
7	2604	12	4410	9	5800	218	2600	14	4420	12	5800	255	2597	27	4400	22	5800	391	2529	45	4330	50	5900	520	2449	61	4220	80	5900	610
8	2530	12	3860	9	5200	190	2530	14	3880	12	5200	225	2504	27	3885	24	5300	362	2455	44	3820	53	5300	400	2385	56	3675	82	5300	500
9	2458	12	3380	10	4700	180	2468	14	3380	13	4700	195	2435	27	3360	24	4700	331	2382	40	3300	53	4700	410	2300	49	3180	79	4700	590
10	2382	13	2940	11	4200	170	2389	14	2940	13	4200	182	2368	27	2940	24	4200	315	2307	37	2900	52	4200	475	2251	40	2750	73	4200	790
11	2312	13	2540	11	3800	140	2310	14	2540	13	3800	175	2298	27	2530	23	3800	302	2250	37	2430	48	3800	550	2201	37	2340	65	3600	1010
12	2229	14	2190	11	3400	120	2227	14	2190	12	3400	175	2211	27	2160	22	3300	308	2197	40	2090	43	3300	690	2180	48	2000	56	3100	1300
13	2150	15	1870	10	2980	130	2149	15	1873	12	2980	175	2145	26	1870	19	2930	342	2156	45	1780	37	2820	740	2175	48	1710	47	2690	1100
14	2082	17	1590	9	2630	160	2081	16	1595	12	2620	185	2087	26	1590	17	2570	369	2132	45	1530	30	2450	750	2175	38	1490	38	2320	870
15	2025	18	1350	9	2300	180	2031	17	1350	11	2280	196	2049	27	1340	15	2222	388	2105	45	1295	24	2110	750	2168	36	1252	30	2000	750
16	1975	19	1140	8	1985	220	1978	19	1140	10	1968	245	2007	29	1130	12	1932	385	2088	45	1100	19	1820	610	2160	36	1070	24	1699	590
17	1960	31	970	8	1680	285	1960	29	960	8	1673	298	1990	32	960	9	1632	375	2079	45	940	15	1560	500	2152	35	910	20	1455	442
18	1975	43	810	7	1398	320	1978	41	808	7	1397	310	2001	33	810	8	1372	310	2080	42	800	11	1325	400	2155	34	785	16	1245	350
19	2025	34	690	7	1151	195	2031	35	685	7	1150	189	2049	32	685	7	1141	195	2095	35	680	8	1110	260	2160	31	670	14	1065	268
20	2069	31	575	6	955	155	2083	30	580	6	952	138	2095	32	581	6	948	140	2119	33	578	7	932	180	2166	32	569	12	896	200
21	2105	29	490	6	798	120	2113	29	494	5	802	99	2125	31	495	5	793	95	2145	32	494	6	793	120	2176	35	487	10	764	150
22	2134	28	415	6	670	93	2140	28	421	4	673	87	2153	31	422	4	671	84	2170	31	422	5	668	87	2186	37	416	9	655	109
23	2160	27	357	5	572	85	2167	25	360	4	568	76	2173	28	361	4	568	71	2193	29	361	4	568	73	2195	39	357	8	559	87
24	2182	25	301	4	482	75	2182	25	308	4	481	62	2199	25	309	4	480	60	2211	28	309	4	480	59	2204	40	307	7	477	77
25	2208	24	263	4	415	67	2204	24	264	4	409	55	2219	25	266	3	411	49	2218	27	266	4	410	47	2218	48	262	7	407	69
26	2225	23	227	3	348	55	2224	23	227	3	348	50	2242	25	229	3	350	45	2247	27	229	4	350	45	2232	50	225	6	345	58
27	2240	23	194	3	295	45	2239	23	195	3	296	47	2260	26	197	3	296	41	2262	28	197	3	298	39	2250	60	193	6	295	50
28	2255	23	168	2	253	43	2258	24	167	2	253	43	2275	26	170	2	253	35	2278	30	170	3	254	35	2262	62	167	6	252	47
29	2275	23	142	2	216	40	2275	28	144	2	218	40	2295	27	146	2	218	32	2293	32	146	3	219	29	2275	66	144	5	217	42
30	2294	23	126	2	184	35	2293	30	125	2	186	35	2312	28	126	2	187	28	2312	35	126	2	188	27	2281	70	125	5	186	40
31	2307	22	107	2	158	29	2314	34	108	2	159	28	2325	30	109	2	160	23	2325	36	109	2	161	24	2291	72	108	4	160	40

PERIOD of RECORD
JULY 1957 - JUNE 1960

TEMPERATURE - °K x 10^{-1} (T)
TEMPERATURE SIGMA - °K x 10^{-1} (s)
PRESSURE - Kp m^{-2} (P)
PRESSURE SIGMA - Kp m^{-2} (s)
DENSITY - Kg m^{-3} x 10^{-4} (D)
DENSITY SIGMA - Kg m^{-3} x 10^{-5} (s)
ALTITUDE - Geometric Kilometers

TABLE 26b

MEANS AND STANDARD DEVIATIONS OF TEMPERATURE, PRESSURE AND DENSITY ALONG THE 80°/70° W MERIDIAN

ANNUAL

	50°S						60°S						70°S						80°S						90°S					
	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s	T	s	P	s	D	s
0	2820	48	10250	116	12400	3750	2715	68	10131	145	12700	5200	2612	101	10077	131	13200	5100	2473	130	10080	104	13900	5500	2361	158	10080	95	14700	7900
1	2770	48	9000	104	11300	2920	2680	57	8910	128	11400	3000	2580	60	8754	121	11600	2600	2525	77	8751	104	11900	3065	2394	135	8700	95	13100	6400
2	2700	51	8000	94	10100	2100	2629	51	7832	118	10200	1990	2545	55	7693	117	10300	1850	2525	59	7666	104	10500	2030	2396	100	7600	95	11300	4300
3	2635	53	7000	88	9100	1700	2575	55	6901	115	9150	1500	2503	55	6739	115	9200	1500	2470	55	6706	103	9300	1500	2380	75	6700	95	9800	2800
4	2575	58	6220	87	8200	1450	2503	58	6005	113	8200	1400	2450	57	5884	115	8200	1250	2408	52	5839	102	8300	1000	2366	55	5820	95	8400	1400
5	2509	63	5390	88	7400	1300	2448	65	5241	112	7300	1300	2389	57	5093	113	7350	960	2348	50	5060	100	7400	850	2305	50	5030	95	7400	940
6	2450	70	4650	89	6600	1095	2391	69	4588	110	6500	1200	2312	57	4430	112	6500	820	2285	53	4370	98	6500	810	2251	50	4370	93	6600	790
7	2385	68	4080	92	5900	900	2318	63	3947	107	5800	1200	2250	55	3819	109	5800	900	2215	55	3750	95	5800	850	2189	52	3780	91	5800	800
8	2310	60	3550	93	5300	800	2259	55	3413	102	5200	1300	2193	57	3273	104	5100	1050	2160	60	3200	93	5100	1030	2140	59	3170	88	5100	930
9	2270	55	3040	90	4700	920	2101	55	2931	96	4550	1400	2162	66	2806	100	4500	1300	2142	80	2720	90	4400	1300	2120	87	2700	86	4400	1200
10	2231	52	2641	80	4000	1120	2184	61	2511	87	3915	1500	2149	80	2391	95	3804	1500	2135	104	2330	88	3800	1250	2118	109	2310	86	3800	1200
11	2205	53	2260	71	3500	1250	2171	71	2151	80	3321	1500	2146	97	2000	93	3242	1200	2130	125	1980	90	3200	995	2120	128	1950	88	3200	1000
12	2183	55	1926	64	3011	1250	2167	80	1817	73	2845	1300	2141	112	1727	90	2762	990	2128	137	1680	93	2740	760	2121	143	1660	91	2690	760
13	2175	56	1656	56	2558	1040	2165	88	1562	68	2433	1044	2138	122	1500	85	2358	782	2125	147	1430	95	2330	560	2120	152	1420	93	2290	560
14	2170	56	1409	51	2194	800	2159	91	1335	63	2073	835	2135	129	1270	80	2008	602	2125	152	1220	95	1975	460	2222	163	1210	93	1950	450
15	2165	55	1225	42	1883	710	2157	93	1169	58	1786	679	2133	131	1084	75	1731	513	2123	161	1047	91	1689	413	2114	171	1032	92	1667	391
16	2163	53	1010	37	1610	530	2153	96	969	54	1530	601	2131	134	915	71	1481	489	2120	167	899	87	1445	418	2111	180	875	89	1419	390
17	2162	52	886	32	1378	418	2151	99	832	51	1308	472	2127	139	783	67	1262	470	2119	174	757	82	1228	462	2108	189	745	86	1210	434
18	2163	55	756	28	1192	364	2149	102	711	46	1122	410	2127	142	668	62	1071	450	2117	181	644	78	1040	500	2105	200	634	82	1027	458
19	2165	58	648	25	1010	308	2149	106	606	42	955	375	2125	146	570	57	912	445	2118	186	548	71	889	515	2102	203	538	76	873	467
20	2168	63	549	22	866	265	2148	110	519	38	827	350	2124	151	488	53	784	430	2119	191	468	65	753	514	2104	206	460	71	742	490
21	2172	66	473	19	739	220	2147	116	447	34	705	325	2126	157	422	50	671	419	2121	196	402	60	647	494	2105	209	392	65	632	485
22	2180	71	405	18	632	198	2148	119	383	30	602	301	2128	162	361	45	575	401	2124	198	344	55	554	474	2108	209	335	60	540	492
23	2186	78	347	17	542	170	2152	124	329	27	517	280	2130	164	308	42	495	365	2129	201	295	51	475	435	2114	211	287	54	462	467
24	2194	81	296	15	463	152	2160	127	282	25	438	252	2137	168	264	38	422	347	2137	203	250	46	405	411	2123	211	245	49	393	430
25	2204	88	255	14	396	136	2170	131	243	23	376	245	2147	171	229	34	362	318	2143	207	210	41	347	384	2131	211	212	42	338	403
26	2212	92	219	12	335	123	2181	135	208	20	320	219	2160	174	196	29	310	288	2149	205	188	36	296	336	2141	213	182	37	287	365
27	2223	94	187	11	286	100	2192	139	179	18	275	192	2170	178	169	25	267	242	2166	204	161	30	256	302	2152	215	157	32	248	328
28	2232	100	162	10	247	92	2203	141	154	16	237	158	2181	180	147	22	230	205	2172	205	141	26	221	255	2163	214	136	27	214	292
29	2245	101	140	9	213	89	2215	145	134	14	206	139	2191	181	128	18	198	171	2184	205	122	22	192	209	2178	217	118	25	186	245
30	2256	101	122	8	184	75	2225	145	117	12	178	115	2203	182	112	15	173	140	2195	205	106	19	166	168	2190	222	104	21	161	200
31	2265	102	106	8	158	73	2237	145	103	10	154	82	2214	186	99	13	151	100	2207	205	90	17	147	155	2203	226	85	18	143	163

PERIOD of RECORD
JULY 1957 - JUNE 1960

REFERENCES

1. Army Ballistic Missile Agency, ABMA Climatological Ringbook, "Empirical Frequency Distributions of Pressure, Temperature and Air Density at Levels of Constant Altitude," Parts VII, VIII, IX, XIII, XIV, and XVIII, Redstone Arsenal, Alabama, 1961.

2. Army Ballistic Missile Agency, ABMA Climatological Ringbook, Part One, "Ambient Temperature as a Function of Altitude for Ten Selected Stations," Report No. DA-TR-8-59, Redstone Arsenal, Alabama, 1958.

3. Army Ballistic Missile Agency, ABMA Climatological Ringbook, Part Two, "Ambient Density as a Function of Altitude for Ten Selected Stations," Redstone Arsenal, Alabama, 1959.

4. Berry, F. A., E. Bollay and N. R. Beers, "Handbook of Meteorology," McGraw-Hill, p. 343, 1945.

5. Brooks, C. E. P. and N. Carruthers, "Handbook of Statistical Methods in Meteorology," M. O. 538 Air Ministry, Her Majesty's Stationery Office, 1953.

6. Charles, B. N., "Persistence Factors in Serial Wind Records," *National Symposium on Winds for Aerospace Vehicle Design*, Laurence G. Hanscom Field, Bedford, Massachusetts, September 27-28, 1961.

7. Crutcher, H. L. and B. N. Charles, "Spectrum Analysis of Upper Winds," (Unpublished), on file at the National Weather Records Center, Asheville, North Carolina, 1960.

8. McClain, E. Paul, "A Contribution to the Climatology of the Arctic Stratosphere, "Journal of Applied Meteorology, Volume 1, Number 1, March, 1962.

9. Minzner, R. A., K. S. W. Champion and H. L. Pond, "The ARDC Model Atmosphere, 1959," Air Force Surveys in Geophysics No. 115, AFCRC-TR-59-267, Bedford, Massachusetts, August, 1959.

10. Panofsky, H. A., Lowell Krawitz and P. R. Julian, "A Study and Evaluation of Relations Between Tropospheric and Stratospheric Flow," The Pennsylvania State University, College of Mineral Industries, University Park, Pennsylvania, August 1, 1958.

11. Ratner, Benjamin, "Upper Air Climatology of the United States; Part 2, Extremes and Standard Deviations of Average Heights and Temperatures," Technical Paper No. 32, U. S. Department of Commerce, Weather Bureau, Washington, D. C., September, 1958.

12. Sissenwine, Norman, William S. Ripley and Allen E. Cole, "Behavior of Atmospheric Density Profiles," Air Force Surveys in Geophysics, No. 109, AFCRC-TN-58-627, Bedford, Massachusetts, December, 1958.

REFERENCES (Cont'd)

13. Smith, Orvel E., "A Reference Atmosphere for Patrick AFB, Florida (Annual)," NASA TN D-595, March, 1961.

14. Smith, Orvel E., "Some Sampling Problems Related to the Application of Classical Statistical Methods of Atmospheric Data," Prepared for presentation at the National Meeting of the American Meteorological Society, Tallahassee, Florida, November 14-16, 1961. MSFC, Aero Div., H'ville, Ala.

15. Smith, Orvel E. and H. B. Chenoweth, "Range of Density Variability from Surface to 120 km Altitude," MTP-AERO-61-11, February 23, 1961. (NASA TN D-612, July 1961).

16. The Smithsonian Institution, "Smithsonian Meteorological Tables," Sixth Revised Edition (First Reprint), Washington, D. C., 1958.

17. Teweles, S. and F. G. Finger, "An Abrupt Change in Stratospheric Circulation Beginning in mid-January, 1958, "Monthly Weather Review, Vol. 86, pp. 23-28, January, 1958.

18. U. S. Weather Bureau, "Daily Aerological Cross Sections Pole-to-Pole Along 80°/70° W for the IGY Period," July, 1957, to December, 1958.

19. U. S. Weather Bureau, "Monthly Mean Aerological Cross Sections Pole-to-Pole Along Meridian 75° W for the IGY Period," Washington, D. C., 1961.

20. United States Air Force, Headquarters, Air Weather Service, "Barometry," Air Weather Service Manual, 105-15, Washington, D. C., September, 1950.

21. Sissenwine, N., M. Dubin and H. Wexler, "Preliminary Note on the U.S. Standard Atmosphere, 1962," Bulletin of the American Meteorological Society, Vol. 43, No. 7, July 1962. (published December, 1962).

("U.S. Standard Atmosphere, 1962" was prepared under the sponsorship of the National Aeronautics and Space Administration, United States Air Force, and United States Weather Bureau, and is available from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C., December 1962.)