#266

OGO-4

67-073A-14A

OZONE DATA

Table of Contents

---

1. INTRODUCTION:

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

When printing, special settings may be required to make the text box appear on the printed output.

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM:

http://nssdc.gsfc.nasa.gov/nmc/

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

a. Associated Documents To find associated documents you will need to know the document ID number and then click here. http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/

b. Core Catalog Materials

OGO 4

OZONE PROFILES, TAPE

67-073A-14A SPIO-00159

This data set has been restored. There was originally one 7-track, 556 BPI tape written in BCD. There is one restored tape written in ASCII. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tape was created on an IBM 7094 computer and the restored tape was created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D number are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR005365	DS005365	D014012	1	08/30/67 - 02/29/68

o D014012: Read error occurred in record 336.

REQ. AGENT	RAND NO.	ACQ. AGENT
DLB	RC0020	RNH

OGO-4

67-073A-14A

OZONE DATA

This data set contains 1 OGO-4 Ozone data tape which was created on an IBM 7094 computer. The tape is 556 BPI, 7 track, ~~BCD~~ ASCII.

The time span for the tape is:

D#	C#	TIME SPAN
D-14012	C-11263	8/30/67 - 2/29/68

OGO-4 OZONE DATA TAPE

This tape contains five months of data on five files, one for each month.

For September 1967 there are 995 data sets

For October 1967 there are 1508 data sets

For November 1967 there are 647 data sets

For December 1967 there are 514 data sets

For January 1968 there are 381 data sets

The seven track tape is written in 556 even parity, card image format. Each data set consists of 5 records or card images of the format given below. Thus, the number of records in each file is five times the data set number. The format is as follows:

CARD #1 - LASP tape #, LASP record #, date (month, day, year), Greenwich time (hours, minutes seconds), local time (hours, minutes, seconds) height (km), latitude (degrees), longitude (degrees), sun azimuth angle (degrees), sun zenith angle (degrees),

FORMAT (A10,4I7,5F6.1, 12X)

CARD #2 - #5 16 pair of values of pressure (millibars) and corresponding mixing ratios (gm/gm)

FORMAT (8E 10.3), 4 pair per card image.

A description of the data acquisition and reduction techniques can be found in Anderson (1969), Anderson et al. (1969), Barth and Mackey (1969).

REFERENCES

Anderson, G. P., "The Vertical Distribution of Ozone Between 35 and 55 KM as Determined from Satellite Ultraviolet Measurements", Masters Thesis, University of Colorado, 1969.

Anderson, G. P., C. A. Barth, F. Cayla, J. London, "Satellite Observations of the Vertical Ozone Distribution in the Upper Stratosphere," Ann. Geophys. 25, 341-345, 1969.

Barth, C. A. and E. F. Mackey, "OGO-4 Ultraviolet Spectrometer", IEEE, Trans. Geosci., GE-7, 114-119, 1969.

OGO 4 Hourly Average Data

Card Format

Column	Information
1	6 or H or D, averaging identifier
2	last digit of year 67.-68
3-4	month
5-6	day of month
7-8	hour of day
9-17	hourly average in ergs/cm^2/sec for 0.5 to 3 A band
18-25	standard deviation of 0.5 to 3 A band hourly average
26-34	hourly average, 1 to 8 A band
35-42	standard deviation, 1 to 8 A band
43-51	hourly average, 8 to 20 A band
52-59	standard deviation, 8 to 20 A band
60-68	hourly average, 44 to 60 A band
69-76	standard deviation, 44 to 60 A band
77-80	satellite identifier, OGO D

Comments

1. Two methods were used to calculate the hourly averages (distinguished by a 6 or H or D in the first column of each data card). Both methods were designed to eliminate data contaminated by trapped particle interference with the detectors.

   Method H (or 6): The data for each detector were considered in hourly blocks, and average values and standard deviations

for the hour were calculated. Any data points in the hourly block which differed from the calculated hourly average by more than + 2.5 sigma or - 3.0 sigma were discarded, and hourly averages and standard deviations were calculated a second time. Any data points which differed from these hourly averages by more than + 2.0 or - 2.5 sigma were discarded. Hourly averages and standard deviations were calculated a third time and data points differing by more than + 1.5 or - 2.0 sigma were discarded. A fourth calculation was then made, and data points differing by more than + 1.0 or - 1.5 sigma were discarded. Those data points which survived the quadruple filtering process were then used to calculate the hourly averages and standard deviations which appear on the data cards. This method eliminated data for small flares and data contamination from trapped particles in the Van Allen belts but did not eliminate data for large flares or contamination caused by trapped particles in the South Atlantic Anomaly.

Method D: The data for each detector were considered in daily blocks and a daily average and standard deviation were calculated. The quadruple filtering process described above was then applied to the daily average data. The data points which survived the filtering were then considered in hourly blocks to obtain the hourly averages and standard deviations which appear on the data cards. This method eliminated almost all data from flares and data contaminated by trapped particles in the Van Allen Belts and South Atlantic Anomaly, and tended to produce an average background level of the solar output in the various X-ray bands.

2. In designating the hour the digit (s) designate the starting hour of the data sample averaged. An hourly indicator of 12 signifies that data collected between 1200 and 1300 UT were used to form the averages. An hourly indicator of 25 indicates that the data on the card are <u>daily</u> averages based on all data points which survived the filtering process.

3. All detector currents were converted to X-ray energy flux values based upon a grey-body solar emission spectrum. For the 0.5 to 3 A band, a 10^7 K color temperature was used; for the 1 to 8 A and 8 to 20 A bands, a 2×10^6 K color temperature was used; and for the 44 to 60 A band, a 0.5×10^6 K color temperature was used.

EOF-PARITY-ERROR TAPE CHECK RUN BEGINS. D-14012

AN END-OF-FILE HAS BEEN ENCOUNTERED ON PHYSICAL RECORD NO. 20226 OF FILE NO. 1

AN END-OF-FILE HAS BEEN ENCOUNTERED ON PHYSICAL RECORD NO. 1 OF FILE NO. 2

AN END-OF-FILE HAS BEEN ENCOUNTERED ON PHYSICAL RECORD NO. 1 OF FILE NO. 3

AN END-OF-FILE HAS BEEN ENCOUNTERED ON PHYSICAL RECORD NO. 1 OF FILE NO. 4

AN END-OF-FILE HAS BEEN ENCOUNTERED ON PHYSICAL RECORD NO. 1 OF FILE NO. 5

INPUT TAPE HAS 1519.94 FEET OF DATA

EOF-PARITY-ERROR TAPE CHECK RUN HAS ENDED.

LASP tape#	LASP rec#	date	hh/mm/ss GMT	hh/mm/ss local	height	lat	long	azimuth	zenith				
LDF047	35	83067	173757	144452	736.3	-63.9	-43.1	41.5	79.2	0000		REC	1. LENGTH 84
3.701E-01	1.164E-06	7.033E-01	3.615E-06	9.227E-01	7.397E-06	1.110E&00	9.642E-060000					REC	2. LENGTH 84
1.315E&00	1.105E-05	1.553E&00	1.158E-05	1.842E&00	1.160E-05	2.199E&00	1.135E-050000					REC	3. LENGTH 84
2.648E&00	1.081E-05	3.216E&00	1.046E-05	3.936E&00	1.013E-05	4.860E&00	9.909E-060000	OGO-4				REC	4. LENGTH 84
6.108E&00	9.358E-06	8.004E&00	8.341E-06	1.132E&01	7.680E-06	2.470E&01	4.554E-060000	D-14012				REC	5. LENGTH 84
LDF047	36	83067	173911	145020	716.3	-59.5	-42.0	43.4	76.4	0000	C-11263	REC	6. LENGTH 84
3.331E-01	1.430E-06	6.620E-01	4.246E-06	8.900E-01	8.247E-06	1.091E&00	1.083E-050000					REC	7. LENGTH 84
1.309E&00	1.250E-05	1.561E&00	1.317E-05	1.864E&00	1.329E-05	2.236E&00	1.312E-050000					REC	8. LENGTH 84
2.699E&00	1.263E-05	3.279E&00	1.234E-05	4.007E&00	1.206E-05	4.932E&00	1.189E-050000					REC	9. LENGTH 84
6.176E&00	1.128E-05	8.058E&00	1.009E-05	1.134E&01	9.306E-06	2.452E&01	5.547E-060000					REC	10. LENGTH 84
LDF047	37	83067	174025	145434	695.8	-55.1	-41.3	45.3	73.7	0000		REC	11. LENGTH 84
3.510E-01	1.516E-06	7.097E-01	4.425E-06	9.645E-01	8.317E-06	1.190E&00	1.133E-050000					REC	12. LENGTH 84
1.428E&00	1.336E-05	1.697E&00	1.429E-05	2.017E&00	1.460E-05	2.404E&00	1.457E-050000					REC	13. LENGTH 84
2.882E&00	1.414E-05	3.476E&00	1.390E-05	4.218E&00	1.364E-05	5.158E&00	1.349E-050000					REC	14. LENGTH 84
6.417E&00	1.284E-05	8.319E&00	1.150E-05	1.163E&01	1.063E-05	2.492E&01	6.328E-060000					REC	15. LENGTH 84
LDF047	46	83067	175128	151331	516.9	-13.8	-39.3	67.3	53.2	0000		REC	16. LENGTH 84
3.015E-01	2.194E-06	7.480E-01	5.159E-06	1.154E&00	7.625E-06	1.558E&00	1.123E-050000					REC	17. LENGTH 84
1.948E&00	1.446E-05	2.358E&00	1.631E-05	2.823E&00	1.738E-05	3.362E&00	1.806E-050000					REC	18. LENGTH 84
4.002E&00	1.825E-05	4.766E&00	1.864E-05	5.685E&00	1.894E-05	6.811E&00	1.936E-050000					REC	19. LENGTH 84
8.276E&00	1.888E-05	1.044E&01	1.720E-05	1.413E&01	1.628E-05	2.902E&01	9.566E-060000					REC	20. LENGTH 84
LDF047	47	83067	175242	151453	500.4	-9.1	-39.3	70.8	51.8	0000		REC	21. LENGTH 84
3.401E-01	2.087E-06	8.128E-01	5.110E-06	1.225E&00	7.817E-06	1.626E&00	1.160E-050000					REC	22. LENGTH 84
2.013E&00	1.471E-05	2.429E&00	1.627E-05	2.907E&00	1.706E-05	3.472E&00	1.750E-050000					REC	23. LENGTH 84
4.148E&00	1.752E-05	4.963E&00	1.776E-05	5.950E&00	1.794E-05	7.164E&00	1.830E-050000					REC	24. LENGTH 84
8.746E&00	1.780E-05	1.110E&01	1.616E-05	1.508E&01	1.537E-05	3.151E&01	8.822E-060000					REC	25. LENGTH 84
LDF047	48	83067	175356	151613	485.1	-4.4	-39.2	74.6	50.7	0000		REC	26. LENGTH 84
3.271E-01	2.121E-06	8.034E-01	5.042E-06	1.238E&00	7.293E-06	1.678E&00	1.056E-050000					REC	27. LENGTH 84
2.109E&00	1.344E-05	2.567E&00	1.509E-05	3.085E&00	1.615E-05	3.683E&00	1.692E-050000					REC	28. LENGTH 84
4.386E&00	1.726E-05	5.218E&00	1.778E-05	6.211E&00	1.821E-05	7.418E&00	1.874E-050000					REC	29. LENGTH 84
8.982E&00	1.833E-05	1.129E&01	1.670E-05	1.520E&01	1.590E-05	3.124E&01	9.177E-060000					REC	30. LENGTH 84
LDF047	49	83067	175509	151732	471.2	.4	-39.2	78.5	49.9	0000		REC	31. LENGTH 84
3.501E-01	2.067E-06	8.401E-01	5.039E-06	1.275E&00	7.461E-06	1.708E&00	1.087E-050000					REC	32. LENGTH 84

```
 2.132E&00 1.376E-05 2.585E&00 1.540E-05 3.098E&00 1.647E-05 3.690E&00 1.728E-050000                REC    33, LENGTH   84
 4.384E&00 1.766E-05 5.206E&00 1.820E-05 6.186E&00 1.862E-05 7.380E&00 1.914E-050000                REC    34, LENGTH   84
 8.927E&00 1.870E-05 1.122E&01 1.703E-05 1.509E&01 1.618E-05 3.099E&01 9.357E-060000                REC    35, LENGTH   84
LDF047          50  83067 175623 151852 458.8   5.2 -39.2  82.5  49.5            0000              REC    36, LENGTH   84
 2.982E-01 2.182E-06 7.782E-01 4.852E-06 1.248E&00 6.614E-06 1.735E&00 9.873E-060000                REC    37, LENGTH   84
 2.192E&00 1.324E-05 2.656E&00 1.545E-05 3.165E&00 1.684E-05 3.747E&00 1.770E-050000                REC    38, LENGTH   84
 4.431E&00 1.796E-05 5.247E&00 1.837E-05 6.227E&00 1.868E-05 7.426E&00 1.913E-050000                REC    39, LENGTH   84
 8.984E&00 1.867E-05 1.129E&01 1.700E-05 1.519E&01 1.617E-05 3.117E&01 9.359E-060000                REC    40, LENGTH   84
LDF047          51  83067 175737 152013 447.9  10.0 -39.2  86.5  49.4            0000              REC    41, LENGTH   84
 4.208E-01 1.942E-06 9.336E-01 5.147E-06 1.353E&00 8.035E-06 1.761E&00 1.155E-050000                REC    42, LENGTH   84
 2.166E&00 1.432E-05 2.606E&00 1.590E-05 3.108E&00 1.697E-05 3.687E&00 1.777E-050000                REC    43, LENGTH   84
 4.368E&00 1.809E-05 5.178E&00 1.857E-05 6.147E&00 1.893E-05 7.331E&00 1.942E-050000                REC    44, LENGTH   84
 8.868E&00 1.895E-05 1.114E&01 1.726E-05 1.500E&01 1.640E-05 3.073E&01 9.518E-060000                REC    45, LENGTH   84
LDF047          52  83067 175851 152137 438.5  14.8 -39.1  90.6  49.6            0000              REC    46, LENGTH   84
 3.113E-01 2.146E-06 7.953E-01 4.886E-06 1.255E&00 6.889E-06 1.721E&00 1.034E-050000                REC    47, LENGTH   84
 2.160E&00 1.362E-05 2.615E&00 1.557E-05 3.124E&00 1.674E-05 3.709E&00 1.755E-050000                REC    48, LENGTH   84
 4.396E&00 1.791E-05 5.209E&00 1.849E-05 6.176E&00 1.899E-05 7.348E&00 1.962E-050000                REC    49, LENGTH   84
 8.860E&00 1.927E-05 1.108E&01 1.765E-05 1.483E&01 1.681E-05 2.997E&01 9.886E-060000                REC    50, LENGTH   84
LDF047          53  83067 180004 152305 430.8  19.7 -39.1  94.5  50.1            0000              REC    51, LENGTH   84
 3.423E-01 2.003E-06 8.527E-01 4.689E-06 1.327E&00 6.656E-06 1.804E&00 1.008E-050000                REC    52, LENGTH   84
 2.246E&00 1.363E-05 2.691E&00 1.605E-05 3.176E&00 1.757E-05 3.729E&00 1.845E-050000                REC    53, LENGTH   84
 4.382E&00 1.865E-05 5.163E&00 1.897E-05 6.109E&00 1.917E-05 7.272E&00 1.951E-050000                REC    54, LENGTH   84
 8.793E&00 1.892E-05 1.106E&01 1.715E-05 1.491E&01 1.622E-05 3.076E&01 9.355E-060000                REC    55, LENGTH   84
```