

DATA SET CATALOG #91

OGO 1 #3

Electron Spectrometer

64-054A-21C

11 tapes

66-049A-22C

18 tapes

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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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

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REDUCED COUNT DATA, CONDENSED TAPES

64-054A-21C

SPME-00546

This data set has been restored. There were originally 11 Binary 9-Track, 1600 BPI tapes. There are two restored tapes. The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI. The tapes were created on an IBM 7094 computer. The DR and DS numbers along with the corresponding D numbers and the time spans are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR03126	DS03126	D01939	1	09/07/64 - 11/10/64
		D05001	2	11/10/64 - 01/03/65
		D05002	3	02/09/65 - 04/20/65
		D05003	4	04/20/65 - 06/04/65
		D05004	5	06/04/65 - 06/20/65
		D05005	6	08/09/65 - 10/26/65
DR03127	DS03127	D05006	1	10/26/65 - 12/15/65
		D05007	2	01/06/66 - 05/27/66
		D05008	3	08/31/66 - 12/12/66
		D05009	4	03/03/67 - 06/05/67
		D05010	5	09/03/67 - 12/06/67

OGO-3

ELECTRON SPECTROMETER COUNTS, CONDENSED TAPES

66-049A-22C

SPHE 00626

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 18 7-TRACK, 556 BPI TAPES WRITTEN IN BINARY. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE TAPES WERE CREATED ON A 7094 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR03362	DS03362	D05018	1	06/09/66 - 07/14/66
		D05020	2	06/09/66 - 07/23/66
		D05019	3	07/14/66 - 07/23/66
		D05021	4	08/02/66 - 09/24/66
		D05022	5	09/24/66 - 10/27/66
		D05023	6	10/27/66 - 11/20/66
		D05024	7	11/20/66 - 12/26/66
		D05025	8	12/26/66 - 12/31/66
		D05026	9	01/01/67 - 02/03/67
		D05027	10	02/03/67 - 04/09/67
		D05028	11	04/09/67 - 06/18/67
		D05029	12	06/18/67 - 08/15/67
		D05030	13	08/16/67 - 10/16/67
		D05031	14	10/16/67 - 12/21/67
		D05032	15	12/21/67 - 01/01/68
		D05033	16	01/01/68 - 03/31/68
		D05034	17	03/31/68 - 04/08/68
		D05035	18	04/08/68 - 05/03/68

OGO I, ELECTRON SPECTROMETER

64-054A-21C

556 BINARY, 7 TRACK, 1 FILE, IBM 7094

<u>D-NUMBER</u>	<u>C-NUMBER</u>	<u>TIME SPAN</u>
D-01939	C-01193	09/09/64 - 11/10/64
D-05001	C-02674	11/10/64 - 01/03/65
D-05002	C-02675	02/09/65 - 04/20/65
D-05003	C-02676	04/20/65 - 06/04/65
D-05004	C-02677	06/04/65 - 06/20/65
D-05005	C-02678	08/09/65 - 10/26/65
D-05006	C-02679	10/26/65 - 12/15/65
D-05007	C-02680	01/06/66 - 05/27/66
D-05008	C-02681	08/31/66 - 12/12/66
D-05009	C-02682	03/03/67 - 06/05/67
D-05010	C-02683	09/03/67 - 12/06/67

PA-054A-21C

CGO I ELECTRON SPECTROMETER

THE ORIGINAL TAPES WERE PRODUCED WITH 48 BIT WORDS ON A MACHINE OTHER THAN AN IBM 7094 SINCE THE 7094 MUST WORK WITH A 36 BIT WORD, THE TII I (TAPE WORD INCOMPLETE) SWITCH WAS USED DURING THE OPERATING PROCESS.

THIS DATA SET CONSISTS OF 16 MAGNETIC TAPES EACH TAPES IS PACKED AT A LENGTH OF 556 BPI, BINARY MODE, 10 BIT PARITY, AND HAS ONE FILE. THERE ARE NO PROBLEM TAPES. INDIVIDUAL TAPE TIME SPANS ARE AS FOLLOWS

SEPT 7, 1964 - NOV 10, 1964

NOV 10, 1964 - JAN 3, 1965

FEB 9, 1965 - APR 20, 1965

APR 20, 1965 - JUNE 4, 1965

JUNE 4, 1965 - JUNE 20, 1965

AUG 5, 1965 - OCT 26, 1965

OCT 26, 1965 - DEC 19, 1965

JAN 6, 1966 - JAN 27, 1966

AUG 31, 1966 - DEC 12, 1966

MAR 5, 1967 - JUNE 1, 1967

SEPT 3, 1967 - DEC 5, 1967

TWE 2000 EN J. Chino

THE QCG FORMAT FOR CONDENSED TAPES

The many thousand OCG-I and OCG-III data tapes have been processed and a set of approximately 70 condensed tapes have been generated. The electron spectrometer and the ion chamber data are on a separate set of condensed tapes. These tapes are written in binary parity at 200 wpm. The data on these tapes are in approximate time order. Real time and spacecraft tape recorder data has been merged together on the same tape except from June 9, 1966 until July 23, 1967 on OCG-III (period prior to attitude control failure). During the period prior to the failure of the attitude control system there is a large amount of overlap between the real time data and the spacecraft tape recorder data and therefore separate real time and playback condensed tapes have been generated.

Each tape contains one file of data, the file being terminated by the standard end-of-file. The file is made up of an arbitrary number of records and covers an arbitrary amount of time. The records contained in the file are of variable length. The length varies from 21-1000 48-bit words. The first twenty 48-bit words of each record constitute a header which describes the information for that record. The following is a description of the header for both the ion chamber and the spectrometer:

Word Number

- 1 Time-ID in BCD (ex. ZZ - 7367_A)
- 2 Station Number in BCD (ex. DECA_A 173) *
- 3 Reel Number in BCD (ex. REEL_A 05) *
- 4 1 X 48-bit packed word of the following form:

12 bits	16 bits	15 bits	15 bits
IG	MODE	YEAR	DAY OF YEAR

IG = spacecraft equipment group

- MODE = 0 1 KB data
- = 1 8 KB data
- = 2 64 KB data
- = 3 1 KB data

- 5 Start time of record in milliseconds of day (integer)
- 6 End time of record in milliseconds of day (integer).
- 7 Experiment code in BCD
Code = CHAMBER_A for an ion chamber record.
Code = E1_ASPEC for an electron spectrometer record.
- 8 The number of 48-bit words in this record (integer).
- 9 Record number (This should not be used since it is not correct.)
- 10 0 if this is an OGO-I record.
1 if this is an OGO-III record.
- 11 Used only if the record is an ion chamber record.
If word 11 is zero (0) then the ion chamber data within
the record is not in exact time order.
If word 11 is equal to 59111111_A in BCD code, then the
record is in exact time order.

12-20 Spaces.

If the record is an ion chamber record then each successive set of three 48-bit words (beginning with word 21) contains one 10 second average. (At low rates 10 second averages may not be possible, and the average is the smallest multiple of 10 seconds available.)

The following is a description of this three word group:

Word 21

30 bits	30 bits
	start time of the average milliseconds (integer)

Word 22 to be used, contains an arbitrary number.

Word #7	31 bits Actual live time of the average*	15 bits # of ramps in the average	2 bits KIND
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*The average may not cover the full end-start time because of noise filtering.

KIND designates the different modes of data retrieval from the spacecraft.

- KIND = 0 unfiltered ramps
- = 1 filtered ramps
- = 2 clock pulses
- = 3 analog word

Word #8 the rate in normalized pulses per second in 1604 floating point format.

If the record is a spectrometer record then the following sequence of words are found on the tape (beginning with word 21). Each word has the same format.

4 bits WORD	12 bits DATA	30 bits time in milliseconds
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0 < WORD < 40

WORD = 0 indicates the start of a new 40 word spectrometer frame.

WORD > 1 indicates the particular word of the 40 word spectrometer frame.

A 40 word spectrometer frame represents the following set of data:

Word	Type of Data
1, 11, 21, 31	Channel I data
2, 12, 22, 32	Channel II data
3, 13, 23, 33	Channel III data
4, 14, 24, 34	Channel IV data
5, 15, 25, 35	Channel V data

6, 16, 26	Channel I Background
7, 17, 27	Channel II Background
8, 18, 28	Channel III Background
9, 19, 29	Channel IV background
10, 20, 30	Channel V Background
31, 37, 38, 39, 40	Synchronization Word

WORD = 0 representing the start of a new 40 word frame will always be on the tape.

WORD ≥ 1 will not always be present. If the data for any given readout is zero counts accumulated then the zero data is indicated by the absence of that corresponding word. That is, only non-zero data will be presented. If a correct sync was found this word is also not placed on the tape. If the sync contained an error (as many as 40% sync errors could occur and yet on a proper computer reduction) the error (i.e. the actual number found) would be indicated. (If, for example, all 35 data words have zero data and the 5 sync words were properly found, then only the WORD = 0 word is present indicating the start of a frame.)

The spectrometer sends data to ground in floating point format. If this number is not properly normalized due to missing or added bits introduced by telemetry noise, the data on the condensed tape is flagged by DATA = 7777. The data has not been filtered for noise.

The last word of the record = 0.

NOTE:

All records on the condensed tapes have been ordered as to start time of the record as indicated by word 5 of the record. There may be considerable overlap in the time covered by the records.