

DATA SET CATALOG #70

Explorer 18 (IMP-1) Faraday Cup 'D'
63-046A-07D 5 tapes

Explorer 21 (IMP-2) Faraday Cup 'A'
64-060A-07A 4 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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

IMP-B

CHARGED PARTICLE FLUXES VS E & TIME, TAPE

64-060A-07A

SPHE-00051

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE FOUR 7-TRACK, 800 BPI TAPES, WRITTEN IN BCD. THERE IS ONE RESTORED TAPE, WRITTEN IN EBCDIC. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS, ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR003338	DS003338	D005560	1	10/11/64 - 12/14/64
		D005561	2	10/04/64 - 12/28/64
		D005562	3	01/01/65 - 04/10/65
		D005563	4	02/05/65 - 09/24/65

IMP-A

CHARGED PARTICLE FLUXES VS E & TIME, TAPE

63-046A-07D

SPHE - 00548

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY FIVE 7-TRACK 800 BPI TAPES, WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS, ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR003123	DS003123	D005555	1	11/27/63 - 01/16/64
		D005556	2	01/15/64 - 03/03/64
		D005557	3	02/26/64 - 04/18/64
		D005558	4	04/14/64 - 06/09/64
		D005559	5	09/25/64 - 01/13/65

63-0124-07D
EXPLORER 18 (IMP-1)
Faraday Cup 'D'

800 BPI, 7-track, BCD, 1 file, 360 IBM

<u>D#</u>	<u>C#</u>	<u>START TIME</u>	<u>STOP TIME</u>
D-05555	C-03914	11/27/63	01/16/64
D-05556	C-03915	01/15/64	03/03/64
D-05557	C-03916	02/26/64	04/18/64
D-05558	C-03917	04/14/64	06/09/64
D-05559	C-03918	09/25/64	01/13/65

64-060A-07A
EXPLORER 21 (IMP-2)
Faraday Cup 'A'

800 BPI, 7-track, BCD, 1 file, 360 IBM

<u>D#</u>	<u>C#</u>	<u>START TIME</u>	<u>STOP TIME</u>
D-05560	C-03919	10/11/64	12/14/64
D-05561	C-03920	10/04/64	12/28/64
D-05562	C-03921	01/01/65	03/10/65
D-05563	C-03922	02/05/65	09/24/65

EXPLORER 18 (IMP 1) 8

63-060A-07D

CHARGED PARTICLE FLUXES

NSSDC/DR
AUG 21 1970

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CENTER FOR SPACE RESEARCH

CAMBRIDGE, MASSACHUSETTS 02139

DD 5555 - DD 5559

DD 5560 - DD 5563

EXP/060A 21 (IMP-2)

64-060A-07A

Room 37-651
July 16, 1970

Mrs. Judith Shatten
Data Acquisition and Analysis Branch
National Space Science Data Center
Code 601
Goddard Space Flight Center
Greenbelt, Maryland 20771

Dear Judy:

As we discussed some time ago, we have prepared a set of tapes for Explorer 18 and Explorer 21 which contain all of the M.I.T. plasma measurements converted to what can best be described as "engineering units." This process essentially takes the raw data supplied by GSFC and, taking account of the instrument's nonlinear, temperature dependent transfer function, converts the data into the actual flux of charged particles (given in terms of measured current in amperes) within the specified energy window.

We wish to make these data available to others through the facilities of the NSSDC, and are enclosing herein a set of tapes for Explorer 18 and Explorer 21. Attachment #1 gives the period of time covered by each tape; and attachment #2 gives the detailed format and description of the contents of each data logical record. Although these data are not as useful to others as the data we have already deposited with the NSSDC, we feel that they offer the fullest detail available from our experiment and therefore may be of interest to some segments of the scientific community.

Sincerely yours,

Joseph Binsack
Joseph Binsack

JB:cp

Enclosures

TAPES TO BE SENT UNDER SEPARATE COVER.

M.I.T. Plasma Experiment

on

Time Periods* Covered by Tapes Supplied
to NSSDC

<u>Tape Title</u>	<u>Begin Time</u>	<u>End Time</u>
MITA - 1	November 27, 1963	January 16, 1964
MITA - 2	January 15, 1964	March 3, 1964
MITA - 3	February 26, 1964	April 18, 1964
MITA - 4	April 14, 1964	June 9, 1964
MITA - 5**	September 25, 1964	January 13, 1965

* To the greatest extent possible, the contents have been stored in chronological order, but some overlapping data still exists.

** Satellite transmission very intermittent.

M.I.T. Plasma Experiment

on

Explorer 21

Time Periods* Covered by Tapes Supplied
to NSSDC

<u>Tape Title</u>	<u>Begin Time</u>	<u>End Time</u>
MITDP - 1	October 11, 1964	December 14, 1964
MITDP - 2	October 4, 1964	December 28, 1964
MITDP - 3	January 1, 1965	March 10, 1965
MITDP - 4	February 5, 1965	September 24, 1965

* To the greatest extent possible the contents have been stored in chronological order, but some overlapping data still exists.

FORMAT AND CONTENTS OF TAPES FOR THE
M.I.T. PLASMA EXPERIMENT
ON
EXPLORER 18 AND EXPLORER 21

BCD FORMAT	DESCRIPTION	AND	COMMENT
12	Satellite ID		(74 → Explorer 18; 75 → Explorer 21)
12	Month	}	Calendar Time of receiving station records
12	Day		
11	Year		
12	Station Number	}	Receiving station identification for this data group
13	Tape Number		
13	Day	}	Universal time of data sample
12	Hour		
12	Minute		
12	Second		
13	Millisecond		
16	Sequence Number		(-1 if data no good)
11	M.I.T. Sequence No.		(1, 2, or 3)
13	1st Frame 13 Current Number		
13	2nd Frame 13 Current Number		

(the first sample is taken at the end of channel
"0" in frame 13 and each succeeding sample is
displaced by 0.10 seconds.)

Conversion between Current Number, CN, and
current in amperes, I, is

$$CN = 50(\log_{10} I) + 5$$

17th Frame 13 Current number

M	BCD FORMAT	DESCRIPTION AND COMMENT
31	I3	18th Frame 13 Current number
	A	

The energy windows used in Frame 13 were:

M.I.T. Seq. No.	Explorer 18	Explorer <u>21</u>
1	+45 to +105 eV	+40 to +90 eV
2	+220 to +640 eV	+260 to +650 eV
3	-65 to -210 eV	-130 to -265 eV

26th Frame 13 Current number

Current No. of Peak of difference between A and B half collectors within Frame 13

Polarity of difference: "0" if A<B; "1" if A>B

1st Frame 14 Current Number

2nd Frame 14 Current Number

(The first sample is taken at the end of channel "0" in Frame 14, subsequent samples are displaced 0.160 seconds.)

The energy windows used in Frame 14 were:

M.I.T. Seq. No.	Explorer 18	Explorer 21
1	+55 to +400 eV	+95 to +230 eV
2	+100 to +1800 eV	+700 to +2000 eV
3	+1100 to +5400 eV	+1800 to +5400 eV

19th Frame 14 Current Number

1. LENGTH 2604

63-046A-07D

C-03914

11/27/63 - 01/16/64

[illegible]

REC

2. LENGTH 2604

[illegible]

REC

3. LENGTH 2604

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some minor creases, discoloration, and small dark spots, characteristic of old paper. The page is set against a dark background.

[illegible]

5,	LENGTH	26.04
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[illegible]

[illegible]