DATA SET CATALOG #105

Pioneer 6 & 7
30 sec. Magnetic Field Avg.

65 - 105A - 01A	5 tapes
66 - 075A - 01A	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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

PIONEER 7

30 SEC VR MAGNETIC FIELD AVERAGE TAPE

66-075A-01A

This data set has been restored. There were originally four 7-track, 556 BPI tapes written in Binary. There is one restored tape. The tapes were created on a 7094 Computer. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The DR and DS numbers along with the corresponding D numbers and the time spans are as follows:

DR#	DS#	DD#	FILES	TIME SPAN
DR03831	DS03831	D05929	1	08/17/66 - 10/01/66
		D05930	2	10/02/66 - 11/05/66
		D05931	3	11/06/66 - 01/05/67
		D05932	4	01/05/67 - 02/25/67

PIONEER 6

30 SECOND VECTOR MAGNETIC FIELD AVERAGE, TAPE

65-105A-01A

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 3 7-TRACK, 556 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 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
DR03429	DS03429	D05926	1	01/26/66 - 03/11/66
		D05927	2	03/11/66 - 04/27/66
		D05928	3	04/27/66 - 07/26/66

PIONEER 6 & 7
30 Sec. Magnetic Field Avg.
65-105A-01A & 66-075A-01A

This data set catalog consists of 3 PIONEER 6 and 4 PIONEER 7 magnetic Field Average tapes. The tapes are 556 BPI, 7-track, BINARY with 1 file per tape.

The format provided for the tapes in these data sets is incomplete. It fails to indicate that the first word of every physical record is a control word. It should also be noted that the time spans for the tapes are found by using January 1, 1965 as the first day (day 0).

The time spans for the tapes are:

D-05926	C-04850	PIONEER 6	01/26/66 - 03/11/66
D-05927	C-04851	PIONEER 6	03/11/66 - 04/27/66
D-05928	C-04852	PIONEER 6	04/27/66 - 07/26/66
D-05929	C-04853	PIONEER 7	08/17/66 - 10/01/66
D-05930	C-04854	PIONEER 7	10/02/66 - 11/05/66
D-05931	C-04855	PIONEER 7	11/06/66 - 01/04/67
D-05932	C-04856	PIONEER 7	01/05/67 - 02/25/67

Pioneer VI and VII

Data Output Tape Format

Record No. 1 - Tape Label Record

Word #	Type	Contents
0		0'777777777777' - label flag
1	I	Beginning Pass #
2	I	This tape type: =0 - data tape
3-9	I	Spare = 0

Record No. 2 - File Header

Word #	Type	Contents
0	I	This file number
1	I	Ground Initial Time of file in sec. of year
2	I	Ground Final Time of file in sec. of year
3	I	Spacecraft Initial Time in sec. of year
4-9	I	Spare=0

Record No. 3 - Data Record

Word #	Type	Contents
0	I	6 or 7 corresponding to Pioneer 6 or 7
1	I	Station Number
2	I	Pass number
3	I	Initial time of record in sec. of year(ground)
4	I	Final time of record in sec. of year (ground)
5	I	Initial time of record in sec. of year (S/C)
6	I	Final time of record in sec. of year (S/C)
7	I	Number of points in Histogram Analysis (HA)
8	A	Format (always the same for this data set)
9	I	Bit rate
10	I	Mode (real time =1)
11	I	Input tape number
12	I	File number
13	I	Date of run in seconds of year
14	F	Calibration constant in gammas
15	F	Angle in degrees between sun sensor E and fluxgate boom
16	F	Instrument offset angle
17	F	Zero level in counts
18	F	Gamma/count conversion factor
19-27	F	Rotation matrix to convert from sensor to payload cooordinates

JAN 1, 1965 = DAY 0

Word #	Type	Contents
28	I	Flag = 0 if record not overlapped = 1 if record overlapped and HA1 selected = 2 if record overlapped and HA2 selected
29	I	Number of points selected corresponding to HA selected
30	I	6 or 7
31	I	Station number
32	I	Pass number
33	A	Format
34	I	Bit rate
35	I	Mode
36	I	Input tape #
37	I	File #
38	I	Date of run in sec. of year
39	F	Calibration constant
40	F	Angle between sun sensor E and fluxgate boom
41	F	Instrument offset angle
42	F	Zero level in counts
43	F	Gamma/count conversion factor
44-52	F	Rotation matrix
53	I	Begin time of 30 sec. average (sec. of year)
54	I	Flag = 0 if record not overlapped = 1 if record overlapped but point not overlapped and point corresponds to HA1 = 2 if record overlapped but point not overlapped and point ~ to HA2 =-1 if record overlapped and point overlapped, but point selected ~ to HA1 =-2 if record overlapped and point overlapped, but point selected ~ to HA2.
55	F	Begin frame count
56	F	Number of points in 30 sec. average
57	F	Flag: blank - no error * - flip detected $ - calibrate detected
58	F	$\bar{X}$ in payload
59	F	$\bar{Y}$
60	F	$\bar{Z}$
61	F	$\bar{F} = \sqrt{\bar{X}^2 + \bar{Y}^2 + \bar{Z}^2}$
62	F	$\bar{F}' = \frac{1}{N} \Sigma F_i$; i = 1,N
63	F	SD_1
64	F	SD_2
65	F	SD_3

Word #	Type	Contents
66	F	Solar ecliptic latitude
67	F	Solar ecliptic longitude

NOTE 1: If this record was not the result of a merge (i.e. word 28 is 0), words 30-52 contain 0. If this record was the result of a merge (word 28 is non-zero), words 30-52 contain information pertaining to the record from which the least number of points were taken.

NOTE 2: Words 53-67 are repeated a maximum of 120 times to cover one hour of data. If there is not a full hour of data for this particular hour, 0 times and 0 flags are generated, and fill data (0'777777777777') is generated to fill out the remaining points of the record.

NOTE 3: Fill data was originally specified to be 0'777777777777' - but tape dumps have shown that it is either that or 0'777000000000'.