

#403

COMPOSITE INTERPLANETARY

MAGNETIC FIELD TAPE

SM-43A

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

REQ. AGENT
VJP

RAND NO.
RC8140

ACC. AGENT
JHK

COMPOSITE INTERPLANETARY

MAGNETIC FIELD TAPE

SM-43A

This data set catalog consists of 1 Composite Interplanetary Magnetic Field Tape. The tape is 1600 BPI, 9 track, Binary, with 1 file of data. The tape was created on the IBM 360 computer.

The time span is as follows:

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-30414	C-19380	11/27/63 - 10/28/75

COMPOSITE INTERPLANETARY MAGNETIC FIELD TAPE

This tape contains hourly averaged IMF data from 9 IMP/AIMP spacecraft (courtesy of N. F. Ness and colleagues) and from 2 HEOS spacecraft (courtesy of P. C. Hedgecock). There are data from up to 3 different spacecraft per record (ie, per hour). Units are tenths of earth radii for spacecraft ephemeris words, tenths of gammas for field magnitudes and components and for standard deviations, and degrees for field direction angles. Geocentric solar ecliptic coordinates are used for all parameters.

There is no record for an hour with no data. Words with no data are filled with zeroes. All data words are I*2. The tape is single file, unlabelled, 9 track, created in binary on an IBM 360/75 computer

DCB=(RECFM=VBS,LRECL=144,BLKSIZE=28804,DEN=3)

<u>WORD</u>	<u>MEANING</u>	<u>COMMENT</u>
1	Number of spacecraft with data for the hour	
2	Year	63,64,65 etc
3	Decimal day	Jan 1 = Day 0
4	Hour	0,1,2...23
5	Bartels solar rotation number	Given as 0 for many spacecraft
6	Spacecraft radial distance	= 0 for HEOS
7	Spacecraft X position	For HEOS, hourly averaged Θ_B given here
8	Spacecraft Y position	For HEOS, hourly averaged Φ_B given here
9	Spacecraft Z position	= 0 for HEOS

<u>WORD</u>	<u>MEANING</u>	<u>COMMENT</u>
10	Average field magnitude, \bar{B}	$\frac{1}{N} \sum B_i $
11	Magnitude of average field vector, F	$(\bar{B}_x^2 + \bar{B}_y^2 + \bar{B}_z^2)^{\frac{1}{2}}$
12	Polar angle of average field vector	-90 to +90
13	Azimuthal angle of average field vector	0 to 360
14	\bar{B}_x	
15	\bar{B}_y	
16	\bar{B}_z	
17	$\sigma B $	rms standard deviation in average field magnitude (word 10)
18	$\sigma\bar{B}$	$= (\sigma\bar{B}_x^2 + \sigma\bar{B}_y^2 + \sigma\bar{B}_z^2)^{\frac{1}{2}}$ for IMP, AIMP; $= (\sigma B ^2 + \bar{B}^2 - F^2)^{\frac{1}{2}}$ for HEOS
19	$\sigma\bar{B}_x$	rms std dev in word 14
20	$\sigma\bar{B}_y$	rms std dev in word 15
21	$\sigma\bar{B}_z$	rms std dev in word 16
22	Number of line scale points in hour	= 0 for Explorers 33, 34, 35
23	Geomagnetic latitude of sun	Explorers 41, 43, 47 and 50 only
24	Spacecraft ID	See below
25-47	Same as 2-24, for second spacecraft	
48-70	Same as 2-24, for third spacecraft	
Spacecraft ID's	18 Explorer 18 (IMP 1)	
	28 Explorer 28 (IMP 3)	
	33 Explorer 33 (AIMP 1)	
	34 Explorer 34 (IMP 4)	
	35 Explorer 35 (AIMP 2)	
	41 Explorer 41 (IMP 5)	
	43 Explorer 43 (IMP 6)	
	47 Explorer 47 (IMP 7)	
	50 Explorer 50 (IMP 8)	
	1 HEOS 1/HEOS 2	

\$JOB 16:38:58
 \$NOP***** HEX DUMP OF X-401 *****
 \$ASS IN MS3
 \$NOTE BOJ 16:39:22
 \$EXE DPHEX BS
 INPUT TAPE ON MS3

SM-43A
 D-30914
 11/20/63 - 10/28/75

DATA INPUT	1	1	1	LENGTH	28804 BYTES							
FILE	1	RECORD	1									
(0)	70840000	00900000	00900000	0001003F	014A000E	000000BC	008EFF98	FFBFC02D	0022FFF3	009AFFE2	000FFFF*	
(40)	0007001F	000E0015	0012000B	002C0012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014A000F	
(160)	000000C4	0097FF95	FFBE0033	00320009	00B3FFCF	00010008	0004000A	00050007	0005000B	00050012		
(200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(280)	00000000	00000000	00000000	00900000	00C1003F	014A0010	000000CC	009FFF92	FFB00034	002D002D		
(320)	008DFFE7	0014001F	0006001B	00C60016	000F000B	003A0012	00000000	00000000	00000000	00000000	00000000	
(360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	
(440)	0001003F	014A0011	000000D4	00A7FF8F	FFB00039	002E0022	00A8FFDA	0008001A	000E0025	00140010		
(480)	001A000B	003E0012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(560)	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014A0012	0000000C	00AEFF8D	
(600)	FFBC003A	0037001C	00A2FFD2	000F001A	00070016	0007000F	0010000A	003F0012	00000000	00000000	00000000	
(640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(720)	00000000	00900000	0001003F	014A0013	000000E3	00B5FF8A	FFBC0041	0039FFF0	00D2FFD1	FFE5FFF1		
(760)	00030021	000B000C	001C000B	003F0012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014A0014		
(880)	000000E9	00BCFF88	FFBC0048	0045FFD6	00BDFFCD	FFF8FFD2	00050014	00070010	0009000B	00420012		
(920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1000)	00000000	00000000	00000000	00900000	0001003F	014A0015	000000EF	00C2FF86	FFB00045	00200003		
(1040)	0086FFEA	00170002	00090041	001F0019	0034000E	00460012	00000000	00000000	00000000	00000000	00000000	
(1080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	
(1160)	0001003F	014A0016	000000F5	00C9FF85	FFB00047	00430031	004E0009	002B0032	00030018	00150008		
(1200)	0009000B	004E0012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1280)	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014A0017	000000FB	00CFFF83		
(1320)	FFB00041	002B0013	0094FFDD	0016000E	00080034	00130025	0021000B	00440012	00000000	00000000	00000000	
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1440)	00000000	00900000	0001003F	01480000	00000101	0004FF81	FFBC003F	002A002A	0062FFFC	001F001C		
(1480)	00040031	00180022	001B000B	00440012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014B0001		
(1600)	000C0106	00DAFF80	FFBC003E	00220041	01110031	FFF2001F	000E0038	00090017	0033000F	00420012		
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1720)	00000000	00000000	00000000	00900000	0001003F	014B0002	0000010A	000FFF7F	FFBC003C	003AFFC8		
(1760)	0071FFF3	001EFFD0	000A0015	00C0000D	000A000B	00340012	00000000	00000000	00000000	00000000	00000000	
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	
(1880)	0001003F	014B0003	0000010F	00F4FF7E	FFBC0042	0028FFC7	009EFFEC	0008FFDE	0012003A	0018000B		
(1920)	0034000B	003F0012	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(2000)	00000000	00000000	00000000	00000000	00000000	00900000	0001003F	014B0004	00000113	00E9FF7D		
(2040)	FFB00028	000C001B	011F0003	FFF600C6	0012002C	00150007	0026000B	002C0012	00000000	00000000	00000000	
(2080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(2160)	00000000	00900000	0001003F	014B0005	00000117	00EDFF7C	FFB0002F	0012FFFB	000F0012	0005FFFF		

(20920)	00080015	000800B4	00C30010	00000001	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(20960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001004B	01290015
(21040)	00000000	00160122	00000021	001E0017	011F0008	FFE5000C	0007000F	00070081	00000013	00000001	00000001
(21080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21160)	00000000	00000000	00000000	00900000	0001004B	012A0015	00000000	FFC20043	0000002A	0022FFAC	0022FFAC
(21200)	00500001	0003FFDE	00050019	000500F8	02EE0010	00000001	00000000	00000000	00000000	00000000	00000000
(21240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000
(21320)	0001004B	012B0015	00000000	FFFA0136	00000038	0033FFFA	01360021	FFD9FFFF	00060018	00060000	00060000
(21360)	0086000F	00000001	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21440)	00000000	00000000	00000000	00000000	00000000	00900000	0001004B	012B0016	00000000	0015012C	0015012C
(21480)	00000035	002B0016	01260011	FFDB0010	0009001F	000900DD	017E0013	00000001	00000000	00000000	00000000
(21520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21600)	00000000	00900000	0001004B	012B0017	00000000	FFEF0136	00000037	0033FFEF	0136001F	FFDBFFFF	FFDBFFFF
(21640)	00050016	00050089	00CA0010	00000001	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	0001004B	012C0000	012C0000
(21760)	00000000	FFF80120	00000043	003FFFF7	01200014	FFC4FFF6	00050016	00050081	00900011	00000001	00000001
(21800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(21880)	00000000	00000000	00000000	00900000	0001004B	012C0001	00000000	FFF5011B	00000041	0033FFF2	0033FFF2
(21920)	011C000C	FFD0FFF4	00040028	0004009A	01770013	00000001	00000000	00000000	00000000	00000000	00000000
(21960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(22000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00900000	00900000
(22040)	0001004B	01290002	00000000	FFF40123	00000044	0030FFF3	01230015	FFC9FFF2	0003001F	00030077	00030077
(22080)	00FA0012	00000001	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(22120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(22160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

FILE 1 # OF DATA RECORDS 326 # SUCCESSFUL READS 312
PERMANENT READ ERRORS 0 # ZERO BYTE ERRORS 15 # SHORT RECORDS 0 # UNDEFINED ERRORS 0
OF RECORDS RETRIED 16 TOTAL # OF RETRIES 17