[redacted]

#588

ISEE 1
1 MINUTE AVERAGED MAGNETIC FIELD DATA
77-102A-04Q

ISEE 2
1 MINUTE AVERAGED MAGNETIC FIELD DATA
77-102B-04M

ISEE 1 & 2
MAGNETOMETER
MAGNETOSPHERIC B-FIELD WITH IMF, N, V, T
77-102A-04U & 77-102B-04Q

[redacted]

Table of Contents

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

ISEE 1

77-102A-04Q SPMS-00191

ONE-MINUTE AVERAGED MAGNETIC FLD

THIS DATA SET HAS BEEN RESTORED. ORGINALLY THERE WERE 61 9-TRACK, 1600 BPI TAPES WRITTEN IN ASCII. THERE IS ONE RESTORED TAPE. THE DR AND DS TAPES ARE A DLT. THERE ARE 6 DIFFERENT DATA SETS ON THIS DR/DS TAPE, FOR A TOTAL OF 6,712 FILES. ONLY FILES 1-600 ARE THIS DATA SET. ALL INPUT TAPES CONTAINED 10 FILES. D074786 WAS A BAD TAPE AND WAS NOT RESTORED. THE DR AND DS NUMBER ALONG WITH THE D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN	
DR006264	DS006264	DD074238	1-10	01/13/80 - 02/06/80	
		DD074239	11-20	02/06/80 - 03/01/80	
		DD074240	21-30	03/01/80 - 03/24/80	
		DD074241	31-40	03/24/80 - 04/17/80	
		DD074242	41-50	04/17/80 - 05/11/80	
		DD074243	51-60	05/11/80 - 06/04/80	
		DD074244	61-70	06/04/80 - 06/28/80	(a)
		DD074245	71-80	06/28/80 - 07/22/80	
		DD074246	81-90	07/22/80 - 08/15/80	
		DD074247	91-100	08/15/80 - 09/08/80	
		DD074248	101-110	09/08/80 - 10/02/80	
		DD074249	111-120	10/02/80 - 10/26/80	
		DD074250	121-130	10/26/80 - 11/18/80	(b)
		DD074251	131-140	11/18/80 - 12/12/80	
		DD074252	141-150	12/12/80 - 01/05/81	
		DD074253	151-160	01/05/81 - 01/29/81	
		DD074254	161-170	01/29/81 - 02/22/81	
		DD074255	171-180	02/22/81 - 03/18/81	
		DD074256	181-190	03/18/81 - 04/11/81	
		DD074257	191-200	04/11/81 - 05/05/81	
		DD074258	201-210	05/05/81 - 05/29/81	
		DD074259	211-220	05/29/81 - 06/22/81	
		DD074260	221-230	06/22/81 - 07/15/81	
		DD074261	231-240	07/15/81 - 08/08/81	
		DD074262	241-250	08/08/81 - 09/01/81	
		DD074263	251-260	09/01/81 - 09/25/81	
		DD074264	261-270	09/25/81 - 10/19/81	
		DD074265	271-280	10/19/81 - 11/12/81	
		DD074266	281-290	11/12/81 - 12/06/81	
		DD074267	291-300	12/06/81 - 12/30/81	
		DD074773	301-310	12/30/81 - 01/23/82	
		DD074774	311-320	01/23/82 - 02/16/82	(c)
		DD074775	321-330	02/16/82 - 03/11/82	
		DD074776	331-340	03/11/82 - 04/04/82	
		DD074777	341-350	04/04/82 - 04/28/82	
		DD074778	351-360	04/28/82 - 05/22/82	(d)
		DD074779	361-370	05/22/82 - 06/15/82	
		DD074780	371-380	06/15/82 - 07/09/82	

DR#	DS#	DD#	FILES	TIME SPAN	
DR006264	DS006264	DD074781	381-390	07/09/82 - 08/02/82	
		DD074782	391-400	08/02/82 - 08/26/82	
		DD074783	401-410	08/26/82 - 09/19/82	
		DD074784	411-420	09/19/82 - 10/13/82	(e)
		DD074785	421-430	10/13/82 - 11/05/82	
		DD074787	431-440	11/29/82 - 12/23/82	
		DD074788	441-450	12/23/82 - 01/16/83	
		DD074789	451-460	01/16/83 - 02/09/83	(f)
		DD074790	461-470	02/09/83 - 03/05/83	(g)
		DD074791	471-480	03/05/83 - 03/29/83	
		DD074792	481-490	03/29/83 - 04/22/83	
		DD074793	491-500	04/22/83 - 05/16/83	
		DD074794	501-510	05/16/83 - 06/09/83	
		DD074795	511-520	06/09/83 - 07/02/83	
		DD074796	521-530	07/02/83 - 07/26/83	(h)
		DD074882	531-540	07/26/83 - 08/19/83	
		DD074883	541-550	08/19/83 - 09/12/83	
		DD074884	551-560	09/12/83 - 10/06/83	(i)
		DD074885	561-570	10/06/83 - 10/30/83	(j)
		DD074886	571-580	10/30/83 - 11/23/83	(k)
		DD074887	581-590	11/23/83 - 12/17/83	(l)
		DD074888	591-600	12/17/83 - 01/10/84	(m)

(a) DD074244 ERROR ON FILE 10, RECORD 345
(b) DD074250 ERROR ON FILE 10, RECORD 294, 296, 301, 302, 304, 305
(c) DD074774 ERROR ON FILE 7, RECORD 341; FILE 8, RECORD 104, 137, 222, 224, 282
(d) DD074778 ERROR ON FILE 1, RECORD 282, 283
(e) DD074784 ERROR ON FILE 1, RECORD 268, 269; FILE 4, RECORD 315
(f) DD074789 ERROR ON FILE 7, RECORD 164, 188; FILE 8, REC 80, 133, 134; FILE 9, RECORD 4, 10, 13, 18, 20, 22, 25, 34, 38, 129, 325; FILE 10, RECORD 24, 30, 34, 38, 46, 93, 135
(g) DD074790 ERROR ON FILE 10, RECORD 139
(h) DD074796 ERROR ON FILE 8, RECORD 46, 176
(i) DD074884 ERROR ON FILE 10, RECORD 61, 64
(j) DD074885 ERROR ON FILE 8, RECORD 72; FILE 10, RECORD 336, 341
(k) DD074886 ERROR ON FILE 4, RECORDS 153; FILE 6, RECORDS 51, 53; FILE 7, RECORDS 44, 56, 98, 109, 115, 119; FILE 8, RECORDS 16, 39, 42, 62, 72
(l) DD074887 ERROR ON FILE 9, RECORDS 13, 51, 338; FILE 10, RECORDS 117
(m) DD074888 ERROR ON FILE 10, RECORD 47

REQ AGENT	RAND NO.	ACQ. AGENT
GWM	V0355	HKH
GWM	V0365	HKH

ISEE-1

FLUXGATE MAGNETOMETER ONE-MINUTE AVERAGED MAGNETIC FIELD DATA

77-102A-04Q

THIS DATA SET CONSISTS OF 61 MAGNETIC TAPES. THE TAPES ARE ASCII, 1600 BPI, AND 9-TRACK. ALL TAPES CONTAIN 10 FILES. THE D AND C TAPE NUMBERS ARE AS FOLLOWS:

D#	C#	TIME SPAN
D-74238	C-26317	01/13/80 - 02/06/80
D-74239	C-29189	02/06/80 - 03/01/80
D-74240	C-29190	03/01/80 - 03/24/80
D-74241	C-26318	03/24/80 - 04/17/80
D-74242	C-29191	04/17/80 - 05/11/80
D-74243	C-29192	05/11/80 - 06/04/80
D-74244	C-26319	06/04/80 - 06/28/80
D-74245	C-29193	06/28/80 - 07/22/80
D-74246	C-29194	07/22/80 - 08/15/80
D-74247	C-26320	08/15/80 - 09/08/80
D-74248	C-29195	09/08/80 - 10/02/80
D-74249	C-29196	10/02/80 - 10/26/80
D-74250	C-26321	10/26/80 - 11/18/80
D-74251	C-29197	11/18/80 - 12/12/80
D-74252	C-29198	12/12/80 - 01/05/81
D-74253	C-26322	01/05/81 - 01/29/81
D-74254	C-29199	01/29/81 - 02/22/81
D-74255	C-29200	02/22/81 - 03/18/81
D-74256	C-26323	03/18/81 - 04/11/81
D-74257	C-29201	04/11/81 - 05/05/81
D-74258	C-29221	05/05/81 - 05/29/81
D-74259	C-26324	05/29/81 - 06/22/81
D-74260	C-29222	06/22/81 - 07/15/81
D-74261	C-29223	07/15/81 - 08/08/81
D-74262	C-26325	08/08/81 - 09/01/81
D-74263	C-29224	09/01/81 - 09/25/81
D-74264	C-29225	09/25/81 - 10/19/81
D-74265	C-26326	10/19/81 - 11/12/81
D-74266	C-29226	11/12/81 - 12/06/81
D-74267	C-29227	12/06/81 - 12/30/81

D#	C#	TIME SPAN
D-74773	C-26448	12/30/81 - 01/23/82
D-74774	C-26449	01/23/82 - 02/16/82
D-74775	C-26467	02/16/82 - 03/11/82
D-74776	C-26468	03/11/82 - 04/04/82
D-74777	C-26469	04/04/82 - 04/28/82
D-74778	C-26470	04/28/82 - 05/22/82
D-74779	C-26471	05/22/82 - 06/15/82
D-74780	C-26472	06/15/82 - 07/09/82
D-74781	C-26473	07/09/82 - 08/02/82
D-74782	C-26474	08/02/82 - 08/26/82
D-74783	C-26475	08/26/82 - 09/19/82
D-74784	C-26476	09/19/82 - 10/13/82
D-74785	C-26477	10/13/82 - 11/05/82
*D-74786		11/05/82 - 11/29/82
D-74787	C-26487	11/29/82 - 12/23/82
D-74788	C-26478	12/23/82 - 01/16/83
D-74789	C-26479	01/16/83 - 02/09/83
D-74790	C-26480	02/09/83 - 03/05/83
D-74791	C-26481	03/05/83 - 03/29/83
D-74792	C-26482	03/29/83 - 04/22/83
D-74793	C-26483	04/22/83 - 05/16/83
D-74794	C-26484	05/16/83 - 06/09/83
D-74795	C-26485	06/09/83 - 07/02/83
D-74796	C-26486	07/02/83 - 07/26/83
D-74882	C-26577	07/26/83 - 08/19/83
D-74883	C-26578	08/19/83 - 09/12/83
D-74884	C-26579	09/12/83 - 10/06/83
D-74885	C-26580	10/06/83 - 10/30/83
D-74886	C-26581	10/30/83 - 11/23/83
D-74887	C-26582	11/23/83 - 12/17/83
D-74888	C-26583	12/17/83 - 01/10/84

*BAD TAPE..NEEDS REPLACEMENT..

INTERNATIONAL SUN-EARTH EXPLORER MAGNETOMETER SUMMARY TAPE FORMAT AND CONTENTS

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MAY 6, 1986

GENERAL DESCRIPTION

This document describes the format used by the ISEE-1 and ISEE-2 magnetometer group for the submission of its data to the National Space Science Data Center (NSSDC).

The overall specification is that all data will be coded into text (ASCII) data format, and written onto standard 1/2 inch 1600-bpi 9-track magnetic tapes. The logical record length will be fixed for all tapes at 1,000 bytes. The physical blocksize for all tapes will be fixed at 10,000 bytes. Each physical block contains ten logical records. Each magnetic tape contains 10 files of data seperated by a single end-of-file mark. The end-of-data is indicated by two successive end-of-file marks at the end of the tenth data file.

Each tape file contains magnetometer data and associated ephemeris data from one of the spacecraft for one orbit, an orbit being measured from perigee to perigee. Each magnetic tape contains 10 orbits of data. The data provided are one minute averages centered on each minute.

The external labels on the magnetic tape contain the following information: Name of the spacecraft and experiment; start and stop dates of the data on this tape; the density (1600-bpi) and number of tracks (9) at which the tape was recorded; the physical blocksize and the logical record length used in writing the tape; an estimate of the amount of tape used; the production date of the tape; and, a name and telephone number of the individual responsible for the tape.

The submission format is self-defining in the sense that the first three records in each tape file define the data parameters, value representations, and missing data (fill) indicators. The first logical record of each tape file defines the order in which the variables appear in the subsequent data records. The second logical record of each tape file will contain a FORTRAN-compatible format list describing the field sizes and representations of each data value in the order defined in record 1. This format may be used to decode all subsequent records in the tape file. The third logical record of each tape file defines a unique value associated with filler (missing) data for all variable fields. It is formatted according to the format used in record 2, and is immediately followed by the start of actual data records (record 4 and beyond). The last physical block of each tape file may contain one or more logical records of fill values so that all physical blocks are of the same size.

Note: Appendix 2 contains an example of a simple program to read this tape using ANSI standard FORTRAN 77.

FORMAT OF THE DATA RECORDS

Record 1: The FORTRAN format used is (I4,100(1X,A8),A96) where the I4 is the number of data items in each record (always equal to 100); the 100(1X,A8) are the name and order of the variables that appear in the subsequent records; the A96 contains source institution and creation date information. See appendix 1 for a description of each data variable. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD1/
1' 100',
2' YR.DOY   SEC      ORBIT    CRAFT    BT       BX SC    ',
3' BY SC    BZ SC    SDX      SDY      SDZ      SDT      ',
4' SDC      BX GSM   BY GSM   BZ GSM   BX DIP   BY DIP   ',
5' BZ DIP   B        B/BO     BINT     BXIM GSM BYIM GSM',
6' BZIM GSM BINTEXT  BXIE GSM BYIE GSM BZIE GSM NLAT GEO',
7' NLON GEO SLAT GEO SLON GEO LONG GEO LAT GEO  R        ',
8' X GSE    Y GSE    Z GSE    X GSM    Y GSM    Z GSM    ',
9' ZNS GSM  TILT     L        LT       MLAT     SES      ',
X' PHI      SPIN     SLNG GSM SLT GSM  SLNG GSE SLT GSE ',
1' VX GSM   VY GSM   VZ GSM   V        DVX GSM  DVY GSM  ',
2' DVZ GSM  DV       DX GSM   DY GSM   DZ GSM   DX GSE   ',
3' DY GSE   DZ GSE   DR       NMPX GSE NMPY GSE NMPZ GSE',
4' MPS      NSX GSE  NSY GSE  NSZ GSE  SS       EM22     ',
5' EM23     EM32     EM33     IE11     IE12     IE13     ',
6' IE21     IE22     IE23     IE31     IE32     IE33     ',
7' SE11     SE12     SE13     SE21     SE22     SE23     ',
8' SE31     SE32     SE33     QUAL                       ',
9' ISEE MAGNETOMETER SUMMARY TAPE FROM UCLA-IGPP        ',
X' CREATED - DD MMM YYYY  '/
```

Record 2: This record contains the format in which all succeeding records are written. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD2/
1'(58F10.2,4F10.5,7F10.2,2(3F10.5,F10.2),23F10.5)                ',
2'                                                               ',
3'                                                               ',
4'                                                               ',
5'                                                               ',
6'                                                               ',
7'                                                               ',
8'                                                               ',
9'                                                               ',
X'                                                               ',
1'                                                               ',
2'                                                               ',
3'                                                               ',
4'                                                               ',
5'                                                               ',
6'                                                               ',
7'                                                  '/
```

Record 3: This record contains a fill value in each data value location. This value will be used by any program reading the data to identify fill data in subsequent input records. NOTE: The value for seconds of the day will be set to the fill value (0.00) at the start of each new day, only when the value for YR.DOY is set to the fill value (0.00) should the time value be considered flagged. The following is the FORTRAN-DATA statement that creates this record:

```
 DATA RECORD3/
1'      0.00      0.00      0.00      0.00 999999.00 999999.00',
2' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
3' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
4' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
5' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
6' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
7' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
8' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
9' 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00',
X' 999999.00 999999.00 999999.00 999999.00 999.00000 999.00000',
1' 999.00000 999.00000 999999.00 999999.00 999999.00 999999.00',
2' 999999.00 999999.00 999999.00 999.00000 999.00000 999.00000',
3' 999999.00 999.00000 999.00000 999.00000 999999.00 999.00000',
4' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
5' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
6' 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000',
7' 999.00000 999.00000 999.00000 999.00000'/
```

Record 4 to n : These records contain the date, time, orbit, spacecraft number and data values. This data is centered on each whole minute. As can be inferred from the following example, the date is coded as YEAR, DAY OF YEAR (1-366) with 19 included in the year. The time is in seconds of the day, orbit number and spacecraft (1 or 2) are self-explanatory. The following is a sample data record for ISEE-2, orbit 91, day of year 145 (May 25), year 1978, second of day 71460.00 (19:51:00.000):

```
---------1---------2---------3---------4---------5---------6
1978145.00  71460.00     91.00      2.00    255.71     20.73
   -254.81      5.43       .33       .03       .03       .02
       .33     20.44   -242.33    -79.03     17.19      5.73
      8.09    236.76      -.01    229.26      -.87   -216.04
    -76.73    246.89     13.88   -228.72    -91.93     65.57
    312.31 999999.00 999999.00    -30.62     36.33      5.91
      1.42      5.27      2.27      1.42      4.11      3.99
      -.85     28.33     -1.00     18.60     45.15     76.14
     44.16      3.03    -98.57     70.28    155.08     86.82
     -1.12      2.74      2.67      3.99   -.02493   -.05716
   -.05778    .08501   -417.56    833.88    786.10   -417.56
   1059.10    437.75   1219.70    .55012    .76698    .33033
    727.20    .69543    .65999    .28425    533.04    .93449
   -.35600    .35600    .93449    .43464    .82627    .35829
   -.90060    .39876    .17292   0.00000   -.39784    .91746
    .99874   0.00000   -.05027    .00118    .99973    .02335
    .05026   -.02338    .99846   1.00000
```

ACKNOWLEDGEMENTS

This tape format and document are modifications of the following document: "PIONEER VENUS MISSION, INSTRUCTIONS FOR DATA SUBMISSIONS TO THE NATIONAL SPACE SCIENCE DATA CENTER, A COMMITTEE REPORT", from Roger A. Craig at NASA Ames Research Center, August 11, 1983.

APPENDIX 1 - DATA VARIABLE DESCRIPTIONS

###	NAME	UNITS	DESCRIPTION
001	YR.DOY		(19xx * 1000.0) + Day Of Year
002	SEC		Seconds of the day
003	ORBIT		ISEE orbit number
004	CRAFT		ISEE spacecraft number (1 or 2)
005	BT	GAMMAS	60 second average of total field
006	BX SC	GAMMAS	60 second average of Bx in spacecraft coordinates
007	BY SC	GAMMAS	60 second average of By in spacecraft coordinates
008	BZ SC	GAMMAS	60 second average of Bz in spacecraft coordinates
009	SDX	GAMMAS	Standard deviation of Bx values
010	SDY	GAMMAS	Standard deviation of By values
011	SDZ	GAMMAS	Standard deviation of Bz values
012	SDT	GAMMAS	Standard deviation of total field
013	SDC	GAMMAS	SQRT(SDx**2 + SDy**2 + SDz**2 - SDt**2)
014	BX GSM	GAMMAS	Bx in GSM coordinates
015	BY GSM	GAMMAS	By in GSM coordinates
016	BZ GSM	GAMMAS	Bz in GSM coordinates
017	BX DIP	GAMMAS	Bx minus model(IGRF 75+OP 77) in dipole coord.
018	BY DIP	GAMMAS	By minus model(IGRF 75+OP 77) in dipole coord.
019	BZ DIP	GAMMAS	Bz minus model(IGRF 75+OP 77) in dipole coord.
020	B	GAMMAS	Total field (model)
021	B/BO	GAMMAS	Ratio of local total field to model field at equator
022	BINT	GAMMAS	Model internal field - total
023	BXIM GSM	GAMMAS	Model internal field - Bx in GSM coordinates
024	BYIM GSM	GAMMAS	Model internal field - By in GSM coordinates
025	BZIM GSM	GAMMAS	Model internal field - Bz in GSM coordinates
026	BINTEXT	GAMMAS	Model internal+external field - total
027	BXIE GSM	GAMMAS	Model internal+external field - Bx in GSM coord.
028	BYIE GSM	GAMMAS	Model internal+external field - By in GSM coord.
029	BZIE GSM	GAMMAS	Model internal+external field - Bz in GSM coord.
030	NLAT GEO	DEGREES	North geographic latitude of field intercept
031	NLON GEO	DEGREES	North geographic longitude of field intercept
032	SLAT GEO	DEGREES	South geographic latitude of field intercept
033	SLON GEO	DEGREES	South geographic longitude of field intercept
034	LONG GEO	DEGREES	Sub-spacecraft geographic longitude
035	LAT GEO	DEGREES	Sub-spacecraft geographic latitude
036	R	RE	Radial distance to spacecraft (geocentric)
037	X GSE	RE	GSE X position (Re)
038	Y GSE	RE	GSE Y position (Re)
039	Z GSE	RE	GSE Z position (Re)
040	X GSM	RE	GSM X position (Re)
041	Y GSM	RE	GSM Y position (Re)
042	Z GSM	RE	GSM Z position (Re)
043	ZNS GSM	RE	Z position of nominal Russell/Brody neutral sheet
044	TILT	DEGREES	Dipole tilt angle
045	L		L parameter
046	LT	HR	Local time of spacecraft
047	MLAT	DEGREES	latitude of spacecraft from magnetic equator
048	SES	DEGREES	Sun-Earth-Satellite angle
049	PHI	DEGREES	Clock angle from Y GSM axis (positive toward +Z GSM)
050	SPIN	SEC	Spin period of spacecraft
051	SLNG GSM	DEGREES	spacecraft longitude in GSM
052	SLT GSM	DEGREES	spacecraft latitude in GSM
053	SLNG GSE	DEGREES	spacecraft longitude in GSE
054	SLT GSE	DEGREES	spacecraft latitude in GSE
055	VX GSM	KM/SEC	X component of velocity in GSM (km/s)
056	VY GSM	KM/SEC	Y component of velocity in GSM (km/s)
057	VZ GSM	KM/SEC	Z component of velocity in GSM (km/s)
058	V	KM/SEC	Total velocity

###	NAME	UNITS	DESCRIPTION
059	DVX GSM	KM/SEC	X component of vel. in GSM relative to other craft
060	DVY GSM	KM/SEC	Y component of vel. in GSM relative to other craft
061	DVZ GSM	KM/SEC	Z component of vel. in GSM relative to other craft
062	DV	KM/SEC	Total relative velocity
063	DX GSM	KM	Separation of craft in X GSM (ISEE-2 to ISEE-1)
064	DY GSM	KM	Separation of craft in Y GSM (ISEE-2 to ISEE-1)
065	DZ GSM	KM	Separation of craft in Z GSM (ISEE-2 to ISEE-1)
066	DX GSE	KM	Separation of craft in X GSE (ISEE-2 to ISEE-1)
067	DY GSE	KM	Separation of craft in Y GSE (ISEE-2 to ISEE-1)
068	DZ GSE	KM	Separation of craft in Z GSE (ISEE-2 to ISEE-1)
069	DR	KM	Total separation of spacecraft
070	NMPX GSE		X component GSE of model normal to magnetopause
071	NMPY GSE		Y component GSE of model normal to magnetopause
072	NMPZ GSE		Z component GSE of model normal to magnetopause
073	MPS	KM	Component of separation vector along this normal
074	NSX GSE		X component GSE of model normal to bow shock
075	NSY GSE		Y component GSE of model normal to bow shock
076	NSZ GSE		Z component GSE of model normal to bow shock
077	SS	KM	Component of separation vector along this normal
078	EM22		Rotation matrix from GSE to GSM
079	EM23		(1 0 0)
080	EM32		(0 EM22 EM23)
081	EM33		(0 EM32 EM33)
082	IE11		
083	IE12		Rotation matrix from geocentric inertial (GEI)
084	IE13		to geocentric solar ecliptic (GSE)
085	IE21		
086	IE22		(IE11 IE12 IE13)
087	IE23		(IE21 IE22 IE23)
088	IE31		(IE31 IE32 IE33)
089	IE32		
090	IE33		
091	SE11		
092	SE12		Rotation matrix from spacecraft coordinates to GSE
093	SE13		
094	SE21		(SE11 SE12 SE13)
095	SE22		(SE21 SE22 SE23)
096	SE23		(SE31 SE32 SE33)
097	SE31		
098	SE32		
099	SE33		
100	QUAL		Quality flag

```
FTN77
      PROGRAM TAPE
C-----------------------------------------------------------------------
C  Purpose:     Sample program to read the ISEE summary data tape.
C  Source:      UCLA - Institute of Geophysics and Planetary Physics.
C  From:        Richard Elphic (213-825-5097)
C  Programmer:  Harry Herbert (213-206-6073)
C  Date:        May 6, 1986
C-----------------------------------------------------------------------
      CHARACTER*1000 RECORD(10)
      CHARACTER*8    LABEL(100)
      CHARACTER*1000 FORM
      REAL*4         FLAG(100)
      REAL*4         DATA(100)
      INTEGER*2      ITEMS
      INTEGER*2      IBLOCK
      INTEGER*2      TAPELU
      LOGICAL        FIRST
      LOGICAL        BADT
C
C  BE SURE TO PROPERLY DEFINE THE MAGNETIC TAPE LU.
C
      TAPELU=8
      IBLOCK=0
      FIRST=.TRUE.
   10 IBLOCK=IBLOCK+1
      READ(UNIT=TAPELU,FMT=20,ERR=10,END=100) RECORD
   20 FORMAT(10A1000)
      K=1
C
      IF(FIRST) THEN
        READ(UNIT=RECORD(1),FMT=30) ITEMS,LABEL,COMMENT
   30   FORMAT(I4,100(1X,A8),A96)
        FORM=RECORD(2)
        READ(UNIT=RECORD(3),FMT=FORM) FLAG
        K=4
        FIRST=.FALSE.
      ENDIF
C
      DO 90 I=K,10
        READ(UNIT=RECORD(I),FMT=FORM) DATA
        BADT=.FALSE.
        IF(DATA(1).EQ.FLAG(1)) BADT=.TRUE.
        IF(DATA(3).EQ.FLAG(3)) BADT=.TRUE.
        IF(DATA(4).EQ.FLAG(4)) BADT=.TRUE.
        IF(BADT) THEN
          WRITE(UNIT=1,FMT=60) I,IBLOCK
   60     FORMAT('BAD TIME AT RECORD',I3,' BLOCK',I5)
          GO TO 90
        ENDIF
        DO 70 J=5,100
          IF(DATA(J).EQ.FLAG(J)) WRITE(UNIT=1,FMT=80) LABEL(J),I,IBLOCK
   70   CONTINUE
   80   FORMAT(1A8,' HAS A FLAGGED VALUE AT RECORD',I3,' BLOCK',I5)
   90 CONTINUE
C
      GO TO 10
  100 STOP
      END
```

77-1028-04M

ISEE 2

1-MIN AVGD MAG. FLD.(INCLD PROMIS)

77-102B-04M SPMS-00253

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 90 9-TRACK, 1600 BPI TAPES, WRITTEN IN ASCII, WITH THE EXCEPTION OF D074297, WHICH WAS 6250 BPI. ALL OF THE ORIGINAL TAPES CONTAINED 10 FILES, EXCEPT D074297, WHICH HAD 40 FILES, D074047 WHICH HAD 9 FILES AND D079660 WHICH HAD 7 FILES. ACCORDING TO THE ORIGINAL COVERSHEET, D073497 AND D074041 ARE THE SAME DATA. BOTH OF THESE TAPES WERE RESTORED. D074065 WAS A BAD TAPE AND WAS NOT RESTORED. THERE IS ONE RESTORED TAPE. THE DR AND DS TAPES ARE A DLT. THERE ARE 6 DIFFERENT DATA SETS ON THIS DR/DS TAPE, FOR A TOTAL OF 6,712 FILES. ONLY FILES 601-1516 ARE THIS DATA SET. THE ORIGINAL TAPES WERE CREATED ON AN IBM 3081 COMPUTER AND WERE RESTORED ON THE MRB. THE DR AND DS NUMBER ALONG WITH THE D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN	
DR006264	DS006264	DD065441	601-610	10/22/77 - 11/15/77	
		DD073061	611-620	11/15/77 - 12/09/77	
		DD073062	621-630	12/09/77 - 01/02/78	
		DD073063	631-640	01/02/78 - 01/26/78	
		DD073064	641-650	01/26/78 - 02/19/78	
		DD073065	651-660	02/19/78 - 03/15/78	
		DD073066	661-670	03/15/78 - 04/07/78	
		DD073067	671-680	04/07/78 - 05/01/78	
		DD073068	681-690	05/01/78 - 05/25/78	
		DD073069	691-700	05/25/78 - 06/18/78	
		DD073070	701-710	06/18/78 - 07/12/78	
		DD073071	711-720	07/12/78 - 08/05/78	
		DD073072	721-730	08/05/78 - 08/29/78	
		DD073073	731-740	08/29/78 - 09/22/78	
		DD073074	741-750	09/22/78 - 10/16/78	
		DD073075	751-760	10/16/78 - 11/09/78	
		DD073076	761-770	11/09/78 - 12/02/78	
		DD073077	771-780	12/02/78 - 12/26/78	
		DD074025	781-790	12/26/78 - 01/19/79	
		DD074026	791-800	01/19/79 - 02/12/79	
		DD074027	801-810	02/12/79 - 03/08/79	
		DD074028	811-820	03/08/79 - 04/01/79	
		DD074029	821-830	04/01/79 - 04/25/79	
		DD074030	831-840	04/25/79 - 05/19/79	
		DD074031	841-850	05/19/79 - 06/12/79	
		DD074032	851-860	06/12/79 - 07/06/79	
		DD074033	861-870	07/06/79 - 07/29/79	
		DD074034	871-880	07/29/79 - 08/22/79	
		DD074035	881-890	08/22/79 - 09/15/79	
		DD074036	891-900	09/15/79 - 10/09/79	
		DD074037	901-910	10/09/79 - 11/02/79	
		DD074038	911-920	11/02/79 - 11/26/79	(a)
		DD074039	921-930	11/26/79 - 12/20/79	
		DD074040	931-940	12/20/79 - 01/13/80	
		DD073482	941-950	01/10/84 - 02/03/84	
		DD073483	951-960	02/03/84 - 02/26/84	

DR#	DS#	DD#	FILES	TIME SPAN	
		DD073484	961-970	02/26/84 - 03/21/84	
		DD073485	971-980	03/21/84 - 04/14/84	
		DD073486	981-990	04/14/84 - 05/08/84	
		DD073487	991-1000	05/08/84 - 06/01/84	
		DD073488	1001-1010	06/01/84 - 06/25/84	
		DD073489	1011-1020	06/25/84 - 07/19/84	
		DD073490	1021-1030	07/19/84 - 08/12/84	
		DD073491	1031-1040	08/12/84 - 09/05/84	
		DD073492	1041-1050	09/05/84 - 09/29/84	
		DD073493	1051-1060	09/29/84 - 10/22/84	
		DD073494	1061-1070	10/22/84 - 11/15/84	
		DD073495	1071-1080	11/15/84 - 12/09/84	
		DD073496	1081-1090	12/09/84 - 01/02/85	
		DD073497	1091-1100	01/02/85 - 01/26/85	
		DD074041	1101-1110	01/02/85 - 01/26/85	
		DD074042	1111-1120	01/26/85 - 02/19/85	
		DD074043	1121-1130	02/19/85 - 03/14/85	
		DD074044	1131-1140	03/14/85 - 04/07/85	
		DD074045	1141-1150	04/07/85 - 05/01/85	
		DD074046	1151-1160	05/01/85 - 05/25/85	
		DD074047	1161-1169	05/25/85 - 06/19/85	
		DD074048	1170-1179	06/19/85 - 07/12/85	
		DD074049	1180-1189	07/12/85 - 08/05/85	
		DD074050	1190-1199	08/05/85 - 08/29/85	
		DD074051	1200-1209	08/25/85 - 09/22/85	(b)
		DD074052	1210-1219	09/22/85 - 10/16/85	
		DD074053	1220-1229	10/16/85 - 11/09/85	
		DD074054	1230-1239	11/09/85 - 12/03/85	
		DD074055	1240-1249	12/03/85 - 12/27/85	
		DD074056	1250-1259	12/27/85 - 01/20/86	
		DD073060	1260-1269	01/20/86 - 02/13/86	
		DD075291	1270-1279	02/13/86 - 03/08/86	
		DD074297	1280-1319	03/08/86 - 06/12/86	
		DD074298	1320-1329	06/12/86 - 07/06/86	
		DD078806	1330-1339	07/06/86 - 07/30/86	
		DD078807	1340-1349	07/30/86 - 08/23/86	
		DD078808	1350-1359	08/23/86 - 09/16/86	
		DD078809	1360-1369	09/16/86 - 10/10/86	
		DD078810	1370-1379	10/10/86 - 11/02/86	
		DD078811	1380-1389	11/02/86 - 11/26/86	
		DD078812	1390-1399	11/26/86 - 12/20/86	
		DD078813	1400-1409	12/20/86 - 01/13/87	
		DD078814	1410-1419	01/13/87 - 02/06/87	
		DD079651	1420-1429	02/06/87 - 03/02/87	
		DD079652	1430-1439	03/02/87 - 03/26/87	
		DD079653	1440-1449	03/26/87 - 04/19/87	
		DD079654	1450-1459	04/19/87 - 05/13/87	
		DD079655	1460-1469	05/13/87 - 06/05/87	
		DD079656	1470-1479	06/05/87 - 06/29/87	
		DD079657	1480-1489	06/29/87 - 07/23/87	
		DD079658	1490-1499	07/23/87 - 08/16/87	
		DD079659	1500-1509	08/16/87 - 09/09/87	
		DD079660	1510-1516	09/09/87 - 09/26/87	

(a) DD074038 - I/O ERROR ON FILE 1, RECORD 36

REQ. AGENT	RAND NO.	ACQ. AGENT
GLS	V0285	HKH
SAR	V0351	HKH
GWM	V0361	HKH

ISEE 2

1 MINUTE AVERAGED MAGNETIC FIELD DATA

77-102B-04M

THIS DATA SET CATALOG CONSISTS OF 70 MAGNETIC TAPES. THE TAPES ARE 1600 BPI, 9 TRACK, ASCII FORMATTED AND CONTAIN 10 FILES EACH OF DATA, WITH THE EXCEPTION OF D-74297, WHICH CONTAINS 40 FILES OF DATA. THE TAPES WERE CREATED ON AN IBM 3081 COMPUTER. THE D AND C NUMBERS ALONG WITH THE TIME SPANS ARE AS FOLLOWS:

D#	C#	TIME SPAN
D-65441	C-24677	10/22/77 - 11/15/77
D-73061	C-26265	11/15/77 - 12/09/77
D-73062	C-26266	12/09/77 - 01/02/78
D-73063	C-26267	01/02/78 - 01/26/78
D-73064	C-26268	01/26/78 - 02/19/78
D-73065	C-26269	02/19/78 - 03/15/78
D-73066	C-26270	03/15/78 - 04/07/78
D-73067	C-26271	04/07/78 - 05/01/78
D-73068	C-26272	05/01/78 - 05/25/78
D-73069	C-26273	05/25/78 - 06/18/78
D-73070	C-26274	06/18/78 - 07/12/78
D-73071	C-26275	07/12/78 - 08/05/78
D-73072	C-26276	08/05/78 - 08/29/78
D-73073	C-26277	08/29/78 - 09/22/78
D-73074	C-26278	09/22/78 - 10/16/78
D-73075	C-26279	10/16/78 - 11/09/78
D-73076	C-26280	11/09/78 - 12/02/78
D-73077	C-26281	12/02/78 - 12/26/78

D#	C#	TIME SPAN
D-74025	C-26509	12/26/78 - 01/19/79
D-74026	C-26510	01/19/79 - 02/12/79
D-74027	C-26511	02/12/79 - 03/08/79
D-74028	C-26512	03/08/79 - 04/01/79
D-74029	C-26513	04/01/79 - 04/25/79
D-74030	C-26514	04/25/79 - 05/19/79
D-74031	C-26515	05/19/79 - 06/12/79
D-74032	C-26516	06/12/79 - 07/06/79
D-74033	C-26517	07/06/79 - 07/29/79
D-74034	C-26518	07/29/79 - 08/22/79
D-74035	C-26519	08/22/79 - 09/15/79
D-74036	C-26520	09/15/79 - 10/09/79
D-74037	C-26521	10/09/79 - 11/02/79
D-74038	C-26522	11/02/79 - 11/26/79
D-74039	C-26523	11/26/79 - 12/20/79
D-74040	C-26524	12/20/79 - 01/13/80
D-73482	C-26525	01/10/84 - 02/03/84
D-73483	C-26526	02/03/84 - 02/26/84
D-73484	C-26527	02/26/84 - 03/21/84
D-73485	C-26528	03/21/84 - 04/14/84
D-73486	C-26529	04/14/84 - 05/08/84
D-73487	C-26530	05/08/84 - 06/01/84
D-73488	C-26531	06/01/84 - 06/25/84
D-73489	C-26532	06/25/84 - 07/19/84
D-73490	C-26533	07/19/84 - 08/12/84
D-73491	C-26534	08/12/84 - 09/05/84
D-73492	C-26535	09/05/84 - 09/29/84
D-73493	C-26536	09/29/84 - 10/22/84
D-73494	C-26537	10/22/84 - 11/15/84
D-73495	C-26538	11/15/84 - 12/09/84
D-73496	C-26539	12/09/84 - 01/02/85
D-73497	C-26540	01/02/85 - 01/26/85
*D-74041	C-26541	01/02/85 - 01/26/85
D-74042	C-26542	01/26/85 - 02/19/85
D-74043	C-26543	02/19/85 - 03/15/85
D-74044	C-26544	03/15/85 - 04/08/85
D-74045	C-26545	04/08/85 - 05/02/85
D-74046	C-26546	05/01/85 - 05/25/85
D-74047	C-26547	05/25/85 - 06/19/85
D-74048	C-26548	06/19/85 - 07/12/85
D-74049	C-26549	07/12/85 - 08/05/85
D-74050	C-26550	08/05/85 - 08/29/85
D-74051	C-26551	08/29/85 - 09/22/85
D-74052	C-26552	09/22/85 - 10/16/85
D-74053	C-26553	10/16/85 - 11/09/85
D-74054	C-26554	11/09/85 - 12/03/85
D-74055	C-26555	12/03/85 - 12/27/85
D-74056	C-26556	12/27/85 - 01/20/86
D-73060	C-26264	01/20/86 - 02/13/86
D-75291	C-26488	02/13/86 - 03/08/86
★ D-74297	C-26316	03/08/86 - 06/12/86
D-74298	C-26282	06/12/86 - 07/06/86

*DUPLICATE TAPE..SAME AS D-73497..

★ 40 Files and 6250 BPI

D#	C#	TIME SPAN
78806	27301	07/06/86 - 07/30/86
78807	27302	07/30/86 - 08/23/86
78808	27303	08/23/86 - 09/16/86
78809	27304	09/16/86 - 10/10/86
78810	27305	10/10/86 - 11/02/86
78811	27306	11/02/86 - 11/26/86
78812	27307	11/26/86 - 12/20/86
78813	27308	12/20/86 - 01/13/87
78814	27309	01/13/87 - 02/06/87
79651	27310	02/06/87 - 03/02/87
79652	27311	03/02/87 - 03/26/87
79653	27312	03/26/87 - 04/19/87
79654	27313	04/19/87 - 05/13/87
79655	27314	05/13/87 - 06/05/87
79656	27315	06/05/87 - 06/29/87
79657	27316	06/29/87 - 07/23/87
79658	27317	07/23/87 - 08/16/87
79659	27318	08/16/87 - 09/09/87
79660	27319	09/09/87 - 09/26/87

77-102B-04M
Document: see 77-102A-04Q

```
$NOP
$NOP
$NOP**********LIST OF GOUT1**********
$EXE TPLIST BS

INPUT PARAMETERS ARE:  AS FL=2=2 10

 TAPE NO.    1              FILE NO.    1
 RECORD    1                LENGTH    1000
 100 YR.DOY    SEC          ORBIT     CRAFT     BT        BX SC     BY SC     BZ SC     SDX       SDY       SDZ
     SDT       SDC          BX GSM    BY GSM    BZ GSM    BX DIP    BY DIP    BZ DIP    B         B/BO      BINT
     BXIM GSM  BYIM GSM     BZIM GSM  BINTEXT   BXIE GSM  BYIE GSM  BZIE GSM  NLAT GEO  NLON GEO  SLAT GEO  SLON
  GEO LONG GEO  LAT GEO      R         X GSE     Y GSE     Z GSE     X GSM     Y GSM     Z GSM     ZNS GSM   TILT
     L         LT           MLAT      SES       PHI       SPIN      SLNG GSM  SLT GSM   SLNG GSE  SLT GSE   VX G
SM   VY GSM    VZ GSM       V         DVX GSM   DVY GSM   DVZ GSM   DV        DX GSM    DY GSM    DZ GSM    DX G
SE   DY GSE    DZ GSE       DR        NMPX GSE  NMPY GSE  NMPZ GSE  MPS       NSX GSE   NSY GSE   NSZ GSE   SS
     EM22      EM23         EM32      EM33      IE11      IE12      IE13      IE21      IE22      IE23      IE31
     IE32      IE33         SE11      SE12      SE13      SE21      SE22      SE23      SE31      SE32      SE33
     QUAL                   ISEE MAGNETOMETER SUMMARY TAPE FROM UCLA-IGPP              CREATED - 16
MARCH 1985(58F10.2,4F10.5,7F10.2,2(3F10.5,F10.2),23F10.5)

                                0.00      0.00      0.00      0.00 999999.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
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999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.000001977295.00  53340.00      1.00      2.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00  45526.64      3.83  45758.97 -44635.63   9879.83   1983.00  45757.21 -44635
.50   9879.55   1947.41     40.90    120.00    -23.21    120.42    120.53    -21.09      1.05
-.86       .41      -.44      -.86       .18      -.57      -.52      -.26      1.38     23.21     -
32.71    145.19   -72.39 999999.00 999999.00 999999.00 999999.00 999999.00     -4.31     -9.22
  3.31     10.70   -.00953   -.00111   -.00185    .00977     8.12      7.80      .22      8.12
  6.96      3.54     11.26   -.59362    .54801   -.58933     -3.09   -.20748    .66615   -.71638
    .41    .90399    .42755   -.42755    .90399   -.87378   -.44617   -.19347    .48632   -.80166
 -.34762   0.00000   -.39784    .91746 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.000001977295.00  53400.00      1.00      2.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00  43831.49      3.21  44070.70 -43380.02   4955.38   5987.01  44065
.65 -43379.87   4955.24   5951.27     39.10    125.76    -21.59    125.60    125.76    -19.13
1.05       -.90       .31       -.44       -.90       .09       -.54       -.49       -.24      1.32
25.60    -30.50    148.74    -80.08 999999.00 999999.00 999999.00 999999.00 999999.00     -3.86
 -9.29      3.58     10.68   -.00901   -.00192   -.00114    .00929     7.57      7.71       .14
   7.57      6.91      3.42     10.80   -.65916    .43334   -.61459     -4.09   -.28593    .55219
 -.78315   -1.02     .90434    .42680   -.42680    .90434   -.87378   -.44618   -.19348    .48633
  -.80165   -.34762   0.00000   -.39784    .91746 999.00000 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53460.00      1.00      2.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00  41401.16      2.71  41638.80 -40462.40    716.61    9801
.57  41630.16 -40462.23    716.60   9765.66     39.10    125.76    -21.59    125.60    130.80     -1
7.03      1.06      -.93       .22      -.45      -.93       .01      -.50      -.46      -.22
  1.27     23.97    -28.08    151.70    -89.25 999999.00 999999.00 999999.00 999999.00 999999.00
 -3.39     -9.32      3.84     10.64   -.00835   -.00259   -.00044    .00875     7.04      7.57
```

D-65441
10/22/77 - 11/15/77

```
    .10       7.04       6.81       3.32      10.34    -.71181     .30757    -.63145      -5.01    -.35576
  .40925    -.84021      -2.51     .90470     .42605    -.42605     .90470    -.87377    -.44619    -.19348
   .48634    -.80165    -.34762    0.00000    -.39784     .91746 999.00000 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53520.00       1.00       2.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  38442.21       2.31  38670.77 -36285.56  -2585
.05  13118.84  38658.34 -36285.39  -2584.95  13082.74      39.10     125.76     -21.59     125.60     13
5.61     -14.85       1.07       -.96        .12       -.45       -.96       -.08       -.46       -.43
  -.20       1.23        .32     -25.50     153.88     -99.87 999999.00 999999.00 999999.00 999999.00 999
999.00     -2.93      -9.30       4.07      10.57    -.00757    -.00312     .00022     .00819       6.57
    7.40       .10       6.57       6.66       3.24       9.89    -.74919     .17479    -.63888      -5.82
  -.41005     .24069    -.87973      -3.94     .90505     .42530    -.42530     .90505    -.87376    -.44620
   -.19349     .48635    -.80164    -.34762    0.00000    -.39784     .91746 999.00000 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53580.00       1.0
0       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  35172.41       1.99  35385.05 -31326
.92  -4840.43  15725.67  35368.73 -31326.75  -4840.24  15689.38      39.10     125.76     -21.59     12
5.60     140.19     -12.62       1.09       -.99        .03       -.46       -.99       -.17       -.42
  -.39       -.18       1.21        .64     -22.83     155.15    -111.54 999999.00 999999.00 999999.00 999
999.00 999999.00      -2.47      -9.25       4.27      10.48    -.00671    -.00349     .00082     .00761
    6.14       7.20        .14       6.14       6.46       3.18       9.46    -.77012     .03982    -.63666
   -6.49    -.44252     .05597    -.89501      -5.20     .90541     .42455    -.42455     .90541    -.87376
   -.44621    -.19349     .48636    -.80164    -.34761    0.00000    -.39784     .91746 999.00000 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.00  53640.0
0       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  31800.09       1.73  31991
.16 -26069.88  -6079.53  17516.72  31971.00 -26069.73  -6079.28  17480.22      39.10     125.76      -2
1.59     125.60     144.52     -10.38       1.11       -1.01       -.07       -.46       -1.01       -.25
  -.38       -.35       -.16       1.19        .94     -20.12     155.44    -123.49 999999.00 999999.00 999
999.00 999999.00 999999.00      -2.03      -9.16       4.44      10.38    -.00582    -.00372     .00133
   .00703       5.76       6.98        .21       5.76       6.24       3.15       9.06    -.77481    -.09254
   -.62539      -7.01    -.45002    -.13072    -.88340      -6.19     .90576     .42379    -.42379     .90576
   -.87375    -.44622    -.19350     .48637    -.80163    -.34761    0.00000    -.39784     .91746 999.00000
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.000001977295.0
0  53700.00       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  28500.62       1
.53  28667.56 -20933.43  -6445.49  18495.31  28643.70 -20933.29  -6445.19  18458.61      39.10     12
5.76     -21.59     125.60     148.61      -8.17       1.13       -1.02       -.16       -.45       -1.02
  -.34       -.34       -.31       -.15       1.19       1.22     -17.43     154.82    -134.81 999999.00 999
999.00 999999.00 999999.00 999999.00      -1.60      -9.04       4.59      10.26    -.00493    -.00381
   .00176     .00648       5.44       6.76        .31       5.44       5.99       3.14       8.68    -.76471
   -.21812    -.60634      -7.37    -.43397    -.30496    -.84774      -6.85     .90611     .42304    -.42304
    .90611    -.87375    -.44623    -.19350     .48638    -.80163    -.34761    0.00000    -.39784     .91746
 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
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 TAPE NO.   1              FILE NO.   1
 RECORD   2                LENGTH   10000
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0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00  25402.
24       1.38  25545.00 -16222.23  -6145.12  18751.63  25517.73 -16222.12  -6144.80  18714.71      39
.10     125.76     -21.59     125.60     152.45      -6.02       1.16       -1.04       -.26       -.45       -
1.04       -.42       -.30       -.27       -.13       1.19       1.48     -14.78     153.47    -144.85 9999
99.00 999999.00 999999.00 999999.00 999999.00      -1.20      -8.89       4.71      10.13    -.00408    -
.00378     .00211     .00595       5.17       6.53        .43       5.17       5.74       3.15       8.34
  -.74214    -.33386    -.58117      -7.58    -.39947    -.45664    -.79492      -7.19     .90647     .42228
   -.42228     .90647    -.87374    -.44624    -.19350     .48639    -.80162    -.34761    0.00000    -.39784
    .91746 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000 999.00000
 999.000001977295.00  53820.00       1.00       2.00 999999.00 999999.00 999999.00 999999.00 999999.0
0 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.00 999999.
00  22582.46       1.25  22702.55 -12113.79  -5397.33  18426.36  22672.27 -12113.70  -5397.00  18389
.22      39.10     125.76     -21.59     125.60     156.07      -3.95       1.19       -1.05       -.35
  -.44       -1.05       -.51       -.25       -.23       -.11       1.20       1.72     -12.21     151.59    -1
53.37 999999.00 999999.00 999999.00 999999.00 999999.00      -.82      -8.73       4.80       9.99    -
.00328    -.00367     .00236     .00546       4.95       6.31        .57       4.95       5.48       3.17
   8.04    -.70984    -.43793    -.55167      -7.66    -.35301    -.58171    -.73280      -7.26     .90682
```

77-102A-044
77-102B-044

REQ AGENT	ACQ. AGENT
BMW	SK

ISEE 1 & 2
MAGNETOMETER
MAGNETOSPHERIC B-FIELD WITH IMF,N,V,T

77-102A-04U SPMS-00113
77-102B-04Q

This data set catalog for Magnetospheric Modeling consist of one tape. This tape is 9 track, 1600 BPI, EBCDIC with 1 file of data. This tape was created on an IBM 360 Computer.

D#	C#	TIME SPAN
D-80279	C-27580	10/24/77 - 12/28/81

UQ 1

77-102A-04U
77-102B-04Q

ISEE-I AND -2 DATA TAPE FOR MAGNETOSPHERIC MODELING

Nikolai A. Tsyganenko
Institute of Physics, Leningrad University

Mikhail V. Malkov
Polar Geophysical Institute, Apatity

December I4, I989

GENERAL INFORMATION

The tape contains average values of the magnetospheric magnetic field measured during the period October 22, I977 - December 30, I98I by the ISEE-I and -2 spacecraft, tagged (when available) with the corresponding values of the solar wind parameters taken from the Interplanetary Medium Data Tape (Couzens and King, I986). The tape has been generated from 64 summary tapes containing ISEE-I and -2 I-min averaged magnetic field data (Elphic and Herbert, I986).

The procedure of generating the tape included the following stages:

I. A crude selection and elimination of intervals when the spacecraft were outside the magnetosphere ~~or too close to the Earth (r<4Re)~~.

2. Subtraction of the internal geomagnetic field contribution from the total measured I-min averaged values.

3. Plotting the graphs of the external field GSM components and coordinates of the spacecraft along the selected segments of their orbits. A more accurate selection of intra-magnetospheric measurements by a visual inspection of the plots.

4. Averaging of the I-min data over ~0.5Re orbit segments.

5. Tagging of the average magnetospheric magnetic field values with the hourly averaged solar wind data and geomagnetic indices values for the corresponding time intervals.

The total number of records ('data points') on the tape is 3I,375.

Acknowledgement: The Summary ISEE Data Tapes with I-min magnetic field averages were provided by the World Data Center A for Rockets and Satellites.

References:

I. Couzens, D.A. and J.H. King. Interplanetary Medium Data Book, Supplement 3A, I977-I985, NSSDC/WDC-A-R&S 86-04a, I986.

2. Elphic, R.C. and H. Herbert. International Sun-Earth Explorer Magnetometer Summary Tape. Format and Contents. UCLA IGPP publication, May 6, I986.

See also N. A. Tsyganenko, Planet. Space Sci. 37, 1, 5-20, 1989 "A magnetospheric B field model with a warped tail current sheet"

UQ 3

The tape is single file, unlabelled, 9 track, Den=I600 bpi. The FORTRAN format is (80(22A4)), and the blocksize is 7040 bytes. Each record has the following structure:

Revised, as per Feb. 15, 1990 letter.

Word	Type	Meaning	Comments
I	R*4	YEAR	YEAR=77,78,79,80,8I (last two digits only)
2	R*4	DAY	Jan I = Day I
3	R*4	HOUR	HOUR=OO,OI,...,23
4	R*4	FLAG	The same meaning as in the King's tape
5	R*4	KP	Standard coding (for example, 23 corresponds to Kp=2+ and 37 to Kp=4-)
6	R*4	DST	Dst index in nanotesla
7	R*4	O.	Reserved for AE index values
8	R*4	O.	Reserved for AL index values
9	R*4	BXGSM	IMF Bx-component in GSM coord.
I0	R*4	BYGSM	IMF By-component in GSM coord.
II	R*4	BZGSM	IMF Bz-component in GSM coord.
I2	R*4	SIGMA	IMF vector standard deviation in nanotesla
I3	R*4	TEMP	Solar wind temperature in Kelvin degrees
I4	R*4	DEN	Solar wind density in cm-3
I5	R*4	VEL	Solar wind velocity in km/sec
I6	R*4	XSM	Average SM (solar magnetic) X coord.of spacecraft
I7	R*4	YSM	Average SM (solar magnetic) Y coord.of spacecraft
I8	R*4	ZSM	Average SM (solar magnetic) Z coord.of spacecraft
I9	R*4	TILT	Geodipole tilt angle in degrees
20	R*4	BXSM	Average magnetospheric BX (SM coord.), in nanotesla
2I	R*4	BYSM	Average magnetospheric BY (SM coord.), in nanotesla
22	R*4	BZSM	Average magnetospheric BZ (SM coord.), in nanotesla

Note:

I.The last physical block in the file contains several logical records of fill values (9999.), so that the block be of the same size as preceding ones.

2. The words No.4-6 and 9-I5 are copied directly from the King's tape (Couzens and King, I986).

See also: Fairfield, D.H., An evaluation of the Tsyganenko magnetic field model, JGR, 96, 1481-1494, Feb. 1, 1991

ISEE 1 & 2

77-102A-04L

77-102B-04B

ZSEE 1+2 77-102A-04Q
77-102B-04Q

D-80279 C-27580
10/24/77 - 12/28/81

DUMP OF TAPE REDIN

INPUT TAPE REDIN ON HT1
DATA INPUT FS NF=1 SR=1 1 2 SR=1 LA T 2

FILE 1 RECORD 77 297 LENGTH 7 [illegible] BYTES

(0)	4240[illegible]	4312900[illegible]	42[illegible]	411[illegible]	41[illegible]	[illegible]	[illegible]	[illegible]	40170A3D	41191EB8
(40)	C0E147AE	41270A3D	44[illegible]	41500000	43151000	41ABEAC5	4 D40FA0	41474[illegible]	C110BAD0	41177583
(80)	40CF8A5B	4215294C	424[illegible]	4312900[illegible]	4213[illegible]	4120[illegible]	41D00000	C21D[illegible]	00000000	[illegible]
(120)	C12 A3D7	41256B85	4115 7[illegible]4	4110999A	44774700	41[illegible]33333	43154800	4144A[illegible]	40ED7FFD	41[illegible]EEE6
(160)	C12749CE	4125F6C	4021C00C	42175[illegible]F	[illegible]	[illegible]29[illegible]	4213[illegible]	41[illegible]	41[illegible]	C210[illegible]
(200)	00000000	00000000	C120A3D7	4120B85	4115704A4	4110999A	4477A700	41533333	43154800	41E4AB1
(240)	411[illegible]5E[illegible]F	41388214	C1318[illegible]4	412274[illegible]C	C[illegible]	413A210	424D0000	43129[illegible]	42140000	41900000
(280)	41D[illegible]	C2190[illegible]	[illegible]	[illegible]	C11A7D71	41[illegible]8FEC	40BAE148	40E1A7[illegible]7	44898C[illegible]	41533333
(320)	43154666	41990173	4111A[illegible]9	41371[illegible]	C1347A93	[illegible]	C05EAEAE	42118[illegible]	424D[illegible]	43129[illegible]
(360)	42140000	41200000	41000[illegible]0	C2190000	00000000	[illegible]0000	C12A3D71	412E8F[illegible]	40BAE148	40[illegible]A3D7
(400)	44898C00	41533333	43154666	41511381	4113A47B	4[illegible]0E57	C1487FF6	C0C3F[illegible]	4052CEE5	41F9528E
(440)	424D0000	43129000	4214[illegible]	412[illegible]	41[illegible]	C219[illegible]	[illegible]	[illegible]	C12A3D71	41[illegible]8F5C
(480)	40BAE148	40B0A3D7	44898C[illegible]	41533333	43154666	41BA3254	41156014	412E91[illegible]	C154D208	C0[illegible]
(520)	40A27808	41DEEDDC	424D[illegible]	43128000	4210000[illegible]	41100000	42110000	C2160[illegible]	00000000	00000000
(560)	C11547AE	413A6666	C[illegible]	411[illegible]9	44[illegible]	41[illegible]6666	4315[illegible]	4183[illegible]	411721F[illegible]	41[illegible]B6A6
(600)	C160FF07	C1215091	41010[illegible]9	410[illegible]05	424D0000	43129000	4215[illegible]	4110[illegible]	4211[illegible]	C210[illegible]
(640)	00000000	00000000	C11547AE	413A6666	C0[illegible]5C29	41135029	4483[illegible]00	415E66A6	4315500[illegible]	41702F15
(680)	4118E143	4121E951	C1[illegible]09707	C120[illegible]7	C[illegible]1EA77A	41F5DDF6	424D0000	43129[illegible]	42150000	41100000
(720)	42110000	C2160[illegible]	[illegible]	[illegible]	C11547AE	41[illegible]A6666	C0[illegible]F5C29	41135C29	4483[illegible]B00	41[illegible]E6666
(760)	43155000	4174EC85	411A800A	41106962	C179F315	C1053957	C0BC5FA4	41B42014	424D0000	43129000
(800)	42160000	41100000	4211[illegible]	C21[illegible]	[illegible]	[illegible]0000	4099999A	410E3071	C117851F	4115147B
(840)	4451470[illegible]	41766666	4315F[illegible]	41607967	41100370	41192287	C1802021	C1238[illegible]9	C114E711	41840434
(880)	424D0000	43129000	4216[illegible]	411[illegible]	4211[illegible]	C214[illegible]	[illegible]	[illegible]	4099999A	410[illegible]D71
(920)	C117851F	411E147B	44[illegible]147[illegible]	41766666	4315F000	41663866	41108FA9	41154[illegible]	C191A8[illegible]	C1137921
(960)	C112AEF5	41604966F	424D[illegible]	43129[illegible]	421[illegible]	41100000	42110000	C2140[illegible]	00000000	00000000
(1000)	4099999A	412E3071	C11781[illegible]F	4115147B	4451470[illegible]	41766666	4315F000	41FED1F9	411ED87D	41114857
(1040)	C19CB5FC	401A72E6	C0[illegible]5	41304000	424[illegible]	43129000	4216[illegible]	411[illegible]	4211[illegible]	C21[illegible]
(1080)	00000000	00000000	4099999A	412E7D71	C117851F	411E147B	44514700	41766666	4315F000	41176075
(1120)	411FF9B1	40E554B5	C1474[illegible]9E	411[illegible]5DA	C1119[illegible]	[illegible]71DC4	424D000[illegible]	43129[illegible]	4217000[illegible]	411[illegible]
(1160)	4211000[illegible]	C210[illegible]	[illegible]	[illegible]	40CF5C29	41191EB8	C1[illegible]C28F	411D7[illegible]	4066EB[illegible]	41[illegible]3333
(1200)	43155000	414F661A	412[illegible]247	40B[illegible]873	C1[illegible]901	41389428	40603176	C14A0[illegible]1	424D0000	43129000
(1240)	42170000	41100000	4211[illegible]0	C2120000	00000000	[illegible]0000	40CF5C29	41191EB8	C0B5C28F	411D70A4
(1280)	4456EB[illegible]	41B63333	4315[illegible]	41474934	4111AE11	4[illegible]	C1BED418	41F[illegible]	411A5E51	C1[illegible]87DAE
(1320)	424D0000	43129000	4217[illegible]	411[illegible]	4211[illegible]	C212[illegible]	[illegible]	[illegible]	40CF5C29	41191EB8
(1360)	C0B5C28F	411D70A4	4456[illegible]	41B63333	4315F000	41FAD2C	41228E5	40568C[illegible]	C1053F62	41[illegible]2198
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(1440)	BFCCCCCD	C1140[illegible]	40D47AE1	4111EB85	44[illegible]	40[illegible]3333	4315D[illegible]	41109714	C14[illegible]EEE	41168840
(1480)	C213D004	401E79DC	C100[illegible]0	C2180EE6	424D0000	4312A000	4120[illegible]	4110[illegible]	42110000	C18[illegible]
(1520)	00000000	00000000	BFCCCCCD	C114[illegible]	40D47AE1	4111EB85	44[illegible]	42123333	4315D000	4116CDF7
(1560)	C145962A	411937DC	C2147[illegible]	41187D1	C1906E7E	C1100CAE	424D0000	4312A[illegible]	4120000	411[illegible]
(1600)	42110000	C180[illegible]	[illegible]	[illegible]	BFCCCCCD	C114[illegible]	40D47AE1	4111EB85	444[illegible]	42123333
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(1760)	424D0000	4312A000	41[illegible]	411[illegible]	41[illegible]	C1[illegible]	[illegible]	[illegible]	[illegible]	C1[illegible]333
(1800)	C019999A	407851EC	44[illegible]D7[illegible]	42124CCD	431[illegible]	410839F1	C1527[illegible]9	41212[illegible]	C2156F4A	41CF8[illegible]
(1840)	4142AC42	415D698B	424D[illegible]	4312A[illegible]	41[illegible]	41100000	41[illegible]	C190[illegible]	00000000	00000000
(1880)	[illegible]	C1233333	C019999A	407851EC	44[illegible]D7[illegible]	4124CCD	4315E[illegible]	41[illegible]	C1061790	410[illegible]D241
(1920)	C215CEDE	41201AF3	412[illegible]	418[illegible]DF	424[illegible]	4312A[illegible]	41300000	411[illegible]	41300000	C1[illegible]0000
(1960)	00000000	00000000	00000000	C1233333	C019999A	407851EC	443D7000	42124CCD	4315E000	41398440
(2000)	C15947A8	41268[illegible]FB	C2[illegible]2	41[illegible]	[illegible]	[illegible]	[illegible]	431[illegible]	413[illegible]	41[illegible]
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(2080)	4315E000	4140716	C18015[illegible]3	41[illegible]716	C21[illegible]2	41[illegible]A6F[illegible]	C03[illegible]F6[illegible]	41080[illegible]	424D0000	4312A000
(2120)	414[illegible]	411[illegible]	41[illegible]	C1[illegible]	[illegible]	[illegible]0000	C04[illegible]	C1380[illegible]	40C7AE14	41F5C28F
(2160)	443D7[illegible]	421[illegible]E666	4315D[illegible]	4148[illegible]9	C1[illegible]1	41[illegible]F961	C016E[illegible]2	414F3E[illegible]5	C111A4D5	41FCCC51
(2200)	424D0000	4312A000	414[illegible]	4110[illegible]	413[illegible]	C1800000	00000[illegible]	C00[illegible]	C1400[illegible]	C138[illegible]
(2240)	40C7AE14	40F5C28F	443D7[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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(  2280)  C124D237  4211C4F5  4048[illegible]  431[illegible]  414[illegible]  41[illegible]  C1[illegible]  413[illegible]  C1[illegible]  [illegible]
(  2320)  C[illegible]  C138[illegible]  4[illegible]  41F[illegible]  44[illegible]  4[illegible]  41[illegible]  43[illegible]  41[illegible]  C1e29[illegible]  4171C151
(  2360)  C2172389  41612D22  C1[illegible]  421[illegible]  424[illegible]  4712A0[illegible]  414[illegible]  411[illegible]  413[illegible]  C1[illegible]
(  2400)  [illegible]  [illegible]  [illegible]  C13[illegible]  44[illegible]  4[illegible]  43[illegible]  421[illegible]  431[illegible]  41[illegible]
(  2440)  C165E4AD  41345435  C217[illegible]  417[illegible]  C151[illegible]  41[illegible]  42[illegible]  431[illegible]  41[illegible]
(  2480)  413[illegible]  C1A[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  4[illegible]
(  2520)  4313A000  416B[illegible]  C1[illegible]  413A2F[illegible]  C2174F[illegible]  41[illegible]  C175[illegible]  4213E[illegible]  4[illegible]
(  2560)  415[illegible]  411[illegible]  [illegible]  C1A[illegible]  [illegible]  40428F[illegible]  C13A1[illegible]  41117[illegible]  4113C70A
(  2600)  4445528[illegible]  4211999A  43[illegible]  4171[illegible]  C1664[illegible]  [illegible]  C17[illegible]  414F[illegible]  C15C17[illegible]  4[illegible]
(  2640)  4240[illegible]  4312A[illegible]  41[illegible]  411[illegible]  417[illegible]  C1[illegible]  [illegible]  41[illegible]  4[illegible]
(  2680)  41123D71  48D9999A  44[illegible]  42111[illegible]  431[illegible]  41[illegible]  C16[illegible]  41477[illegible]  C216AC[illegible]  41[illegible]
(  2720)  4117AF88  4219A[illegible]  42[illegible]  43[illegible]  41[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
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(  2800)  C217E[illegible]  4214C[illegible]  C1[illegible]  42[illegible]  42[illegible]  43[illegible]  41[illegible]  41[illegible]  4[illegible]
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(  3160)  417CA5BC  42297283  424[illegible]  4312C[illegible]  417[illegible]  414[illegible]  4[illegible]  C179[illegible]  [illegible]
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(  3521)  4240[illegible]  4312C000  41[illegible]  414[illegible]  [illegible]  41[illegible]  [illegible]  [illegible]  [illegible]  [illegible]
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(  3601)  41543[illegible]  42[illegible]  [illegible]  4312C[illegible]  41[illegible]  41[illegible]  42210[illegible]  41[illegible]  [illegible]  [illegible]
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(  4121)  C16[illegible]A7E[illegible]  [illegible]  4211F[illegible]  421[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
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(  4201)  C15[illegible]829  416[illegible]F2F  C1[illegible]  40[illegible]  C[illegible]  [illegible]  [illegible]  4312C[illegible]  41E[illegible]  [illegible]
(  4240)  42390[illegible]  C24B[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
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(  4321)  41F[illegible]  414[illegible]  42[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4361)  [illegible]  [illegible]  43[illegible]  415[illegible]  C1e[illegible]  41[illegible]  C12F789  42161[illegible]  [illegible]  [illegible]
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(  4441)  [illegible]  [illegible]  [illegible]  [illegible]  4[illegible]  [illegible]  +1[illegible]  C16B[illegible]  416B13[illegible]  C12B[illegible]  41[illegible]
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(  4561)  C12[illegible]DCE  +181B[illegible]  C2[illegible]  C21[illegible]  [illegible]  [illegible]  4312C[illegible]  421[illegible]  414[illegible]  [illegible]  [illegible]
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(  4641)  C17[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4681)  42320[illegible]  C266[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4721)  43173E[illegible]  +16C1DF7  C1[illegible]  417[illegible]  C11[illegible]  41[illegible]  C23[illegible]  C1[illegible]  424[illegible]  43120[illegible]
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(  4841)  424D[illegible]  4312C[illegible]  4212[illegible]  415[illegible]  424[illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
(  4881)  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]
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FILE 1 RECORD 392 LENGTH 2176 BYTES

Day 362 12/28/81

FILL

IMP-F

REDUCED COUNT RATES ON TAPE

67-051A-01A SPHE-00244

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 33 7-TRACK, 800 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR AND DS TAPES ARE DLT AND WERE REPACKED DURING THE RESTORATION PROCESS. THERE ARE 6 DIFFERENT DATA SETS ON THIS DR/DS TAPE, FOR A TOTAL OF 6,712 FILES. ONLY FILES 1517-1615 ARE THIS DATA SET. THE ORIGINAL TAPES WERE CREATED ON A GE/635 COMPUTER. EACH TAPE CONTAINS A HEADER AND TRAILER FILE PLUS A FILE ON TELEMETRY AND ORBITAL INFORMATION. EACH LOGICAL RECORD IS EITHER A 21 WORD ORBITAL RECORD OR AN 11 WORD TELEMETRY RECORD. THE DR AND DS NUMBER ALONG WITH THE D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN	
DR006264	DS006264	DD005809	1517-1519	05/24/67 - 06/14/67	
		DD005810	1520-1522	06/14/67 - 07/06/67	
		DD005811	1523-1525	07/06/67 - 07/28/67	
		DD005812	1526-1528	07/28/67 - 08/19/67	
		DD005813	1529-1531	08/19/67 - 09/09/67	(a)
		DD005814	1532-1534	09/09/67 - 10/01/67	(b)
		DD005815	1535-1537	10/01/67 - 10/23/67	(c)
		DD005816	1538-1540	10/23/67 - 11/13/67	
		DD005817	1541-1543	11/13/67 - 12/01/67	(d)
		DD005818	1544-1546	12/01/67 - 12/22/67	
		DD005819	1547-1549	12/22/67 - 01/09/68	
		DD005820	1550-1552	01/08/68 - 02/03/68	
		DD005821	1553-1555	02/03/68 - 02/27/68	
		DD005822	1556-1558	02/25/68 - 03/22/68	
		DD005823	1559-1561	03/22/68 - 04/13/68	(e)
		DD005824	1562-1564	04/13/68 - 05/04/68	(f)
		DD005825	1565-1567	05/04/68 - 05/26/68	(g)
		DD005826	1568-1570	05/26/68 - 06/12/68	
		DD005827	1571-1573	06/12/68 - 07/04/68	
		DD005828	1574-1576	07/04/68 - 07/26/68	(h)
		DD005829	1577-1579	07/26/68 - 08/16/68	
		DD005830	1580-1582	08/16/68 - 09/07/68	(i)
		DD005831	1583-1585	09/07/68 - 09/28/68	(j)
		DD005832	1586-1588	09/28/68 - 10/20/68	(k)
		DD005833	1589-1591	10/20/68 - 11/11/68	
		DD005834	1592-1594	11/11/68 - 12/02/68	(l)
		DD005835	1595-1597	12/02/68 - 12/24/68	(m)
		DD005836	1598-1600	12/24/68 - 01/15/69	(n)
		DD005837	1601-1603	01/15/69 - 02/05/69	(o)
		DD005838	1604-1606	02/05/69 - 02/27/69	
		DD005839	1607-1609	02/27/69 - 03/21/69	
		DD005840	1610-1612	03/21/69 - 04/11/69	
		DD005841	1613-1615	04/11/69 - 05/03/69	

(a) DD005813 - FILE 2, RECORDS 428,432,1637
(b) DD005814 - FILE 2, RECORD 111
(c) DD005815 - FILE 2, RECORDS 15, 68, 4954, 5006

(d) DD005817 - FILE 2, RECORDS 381, 382
(e) DD005823 - FILE 2, RECORD 5173
(f) DD005824 - FILE 2, RECORD 223
(g) DD005825 - FILE 2, RECORDS 68, 446
(h) DD005828 - FILE 2, RECORDS 134, 135, 136, 1152
(i) DD005830 - FILE 2, RECORD 432
(j) DD005831 - FILE 2, RECORD 433
(k) DD005832 - FILE 2, RECORD 393
(l) DD005834 - FILE 2, RECORDS 240, 241, 396, 397, 5127, 5132
(m) DD005835 - FILE 2, RECORDS 419, 4210, 511, 512, 532, 533, 1257, 1258, 1264, 1265
(n) DD005836 - FILE 2, RECORDS 10, 18, 19, 21
(o) DD005837 - FILE 2, RECORDS 3, 18

Explorer 34 Low Energy Telescope 'A'
33 Tapes 800 BPI, BINARY, 7 track, GE/635
Each tape has 1 header file, a file of telemetry and orbital information,
and 1 trailer file totalling 3 files

D#	C#	START	STOP
D-05809	C-04571	05/24/67	06/14/67
D-05810	C-04572	06/14/67	07/06/67
D-05811	C-04573	07/06/67	07/28/67
D-05812	C-04574	07/28/67	08/19/67
D-05813	C-04575	09/19/67	09/09/67
D-05814	C-04576	09/09/67	10/01/67
D-05815	C-04577	10/01/67	10/23/67
D-05816	C-04578	10/23/67	11/13/67
D-05817	C-04579	11/13/67	12/01/67
D-05818	C-04580	12/01/67	12/22/67
D-05819	C-04581	12/33/67	01/09/68
D-05820	C-04582	01/08/68	02/03/68
D-05821	C-04583	02/03/68	02/27/68
D-05822	C-04584	02/25/68	03/22/68
D-05823	C-04585	03/22/68	04/13/68
D-05824	C-04586	04/13/68	05/04/68
D-05825	C-04587	05/04/68	05/26/68
D-05826	C-04588	05/26/68	06/12/68
D-05827	C-04589	06/12/68	07/04/68
D-05828	C-04590	07/04/68	07/26/68
D-05829	C-04591	07/26/68	08/16/68
D-05830	C-04592	08/16/68	09/07/68
D-05831	C-04593	09/07/68	09/28/68
D-05832	C-04594	09/28/68	10/20/68
D-05833	C-04595	10/20/68	11/11/68
D-05834	C-04596	11/11/68	12/02/68
D-05835	C-04597	12/02/68	12/24/68
D-05836	C-04598	12/24/68	01/15/69
D-05837	C-04599	01/15/69	03/05/69
D-05838	C-04600	03/05/69	02/27/69
D-05839	C-04601	02/27/69	03/21/69
D-05840	C-04602	03/31/69	04/11/69
D-05841	C-04603	04/11/69	05/03/69

67-051A-01A

EXPLORER 34 LOW ENERGY TELESCOPE 'A'

This data set consists of 33 Binary, 800 BPI, 7 track tapes. These tapes were created on a GE/635 computer.

Each tape contains a header and a trailer file plus a file of telemetry and orbital information. Each logical record is either a 21 word orbital record or an 11 word telemetry record.

A program has been run on these tapes which changes all the floating point numbers in the orbital records from GE/635 to 7094 format. This program also eliminated the header and trailer files.

The 'D' tapes are in GE format and the 'C' tapes are all in 7094 format. Included in ths catalog are octal dumps of both the 'D' and 'C' tapes showing the change in format.

The time spans for the tapes are:

D#	C#	START	STOP
D-05809	C-04571	05/24/67	06/14/67
D-05810	C-04572	06/14/67	07/06/67
D-05811	C-04573	07/06/67	07/28/67
D-05812	C-04574	07/28/67	08/19/67
D-05813	C-04575	08/19/67	09/09/67
D-05814	C-04576	09/09/67	10/01/67
D-05815	C-04577	10/01/67	10/23/67
D-05816	C-04578	10/23/67	11/13/67
D-05817	C-04579	11/13/67	12/01/67
D-05818	C-04580	12/01/67	12/22/67
D-05819	C-04581	12/22/67	01/09/68
D-05820	C-04582	01/09/68	02/03/68
D-05821	C-04583	02/03/68	02/27/68
D-05822	C-04584	02/27/68	03/22/68
D-05823	C-04585	03/22/68	04/13/68
D-05824	C-04586	04/13/68	05/04/68
D-05825	C-04587	05/04/68	05/26/68
D-05826	C-04588	05/26/68	06/12/68
D-05827	C-04589	06/12/68	07/04/68
D-05828	C-04590	07/04/68	07/26/68
D-05829	C-04591	07/26/68	08/16/68
D-05830	C-04592	08/16/68	09/07/68
D-05831	C-04593	09/07/68	09/28/68
D-05832	C-04594	09/28/68	10/20/68
D-05833	C-04595	10/20/68	11/11/68
D-05834	C-04596	11/11/68	12/02/68
D-05835	C-04597	12/02/68	12/24/68
D-05836	C-04598	12/24/68	01/15/69
D-05837	C-04599	01/15/69	02/05/69
D-05838	C-04600	02/05/69	02/27/69
D-05839	C-04601	02/27/69	03/21/69
D-05840	C-04602	03/31/69	04/11/69
D-05841	C-04603	04/11/69	05/03/69

GOES 6

X-RAY MONITOR DATA

83-041A-03A SOXR-00059

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY THERE WERE 56 9-TRACK, 1600 BPI TAPES WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR AND DS TAPE IS A DLT. THERE ARE 6 DIFFERENT DATA SETS ON THIS DR/DS TAPE, FOR A TOTAL OF 6,712 FILES. ONLY FILES 1616-1670 ARE THIS DATA SET. D080271 WAS A BAD TAPE AND WAS NOT RESTORED. THE ORIGINAL TAPES WERE CREATED ON A CDC 6600 COMPUTER AND WERE RESTORED ON THE MRS. THE DR AND DS NUMBER ALONG WITH THE D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN
DR006264	DS006264	DD065362	1616	06/01/83 - 06/30/83
		DD065363	1617	08/01/83 - 08/31/83
		DD065364	1618	09/01/83 - 09/30/83
		DD065365	1619	10/01/83 - 10/31/83
		DD065366	1620	11/01/83 - 11/30/83
		DD066232	1621	12/01/84 - 12/31/84
		DD079233	1622	01/01/85 - 01/31/85
		DD079234	1623	02/01/85 - 02/28/85
		DD079235	1624	03/01/85 - 03/31/85
		DD079236	1625	04/01/85 - 04/30/85
		DD079237	1626	05/01/85 - 05/31/85
		DD079238	1627	06/01/85 - 06/30/85
		DD079239	1628	07/01/85 - 07/31/85
		DD079240	1629	08/01/85 - 08/31/85
		DD079241	1630	09/01/85 - 09/30/85
		DD079242	1631	10/01/85 - 10/31/85
		DD079243	1632	11/01/85 - 11/30/85
		DD079244	1633	12/01/85 - 12/31/85
		DD079245	1634	01/01/86 - 01/31/86
		DD079246	1635	02/01/86 - 02/28/86
		DD079247	1636	03/01/86 - 03/31/86
		DD079248	1637	04/01/86 - 04/30/86
		DD079249	1638	05/01/86 - 05/31/86
		DD079250	1639	06/01/86 - 06/30/86
		DD079251	1640	07/01/86 - 07/31/86
		DD079252	1641	08/01/86 - 08/31/86
		DD079253	1642	09/01/86 - 09/30/86
		DD079254	1643	10/01/86 - 10/31/86
		DD079255	1644	11/01/86 - 11/30/86
		DD079256	1645	12/01/86 - 12/31/86
		DD079257	1646	01/01/87 - 01/31/87
		DD079258	1647	02/01/87 - 02/28/87
		DD079259	1648	03/01/87 - 03/31/87
		DD079260	1649	04/01/87 - 04/30/87
		DD079261	1650	05/01/87 - 05/31/87
		DD079262	1651	06/01/87 - 06/30/87
		DD079273	1652	07/01/87 - 07/31/87
		DD079274	1653	08/01/87 - 08/31/87
		DD079275	1654	09/01/87 - 09/30/87

83-041A-03A

DR#	DS#	DD#	FILES	TIME SPAN
DR006264	DS006264	DD079276	1655	10/01/87 - 10/31/87
		DD079277	1656	11/01/87 - 11/30/87
		DD079278	1657	12/01/87 - 12/31/87
		DD079279	1658	01/01/88 - 01/31/88
		DD079280	1659	02/01/88 - 02/28/88
		DD079281	1660	03/01/88 - 03/31/88
		DD079282	1661	04/01/88 - 04/30/88
		DD079283	1662	05/01/88 - 05/31/88
		DD079284	1663	06/01/88 - 06/30/88
		DD079285	1664	09/01/88 - 09/30/88
		DD080265	1665	07/01/88 - 07/31/88
		DD080266	1666	08/01/88 - 08/31/88
		DD080267	1667	10/01/88 - 10/31/88
		DD080268	1668	11/01/88 - 11/30/88
		DD080269	1669	12/01/88 - 12/31/88
		DD080270	1670	03/01/89 - 03/31/89

PIONEER VENUS 1

12-S B & E FIELD PERIAPSIS (OEFD)

78-051A-12F, 13E PSFP-00055

THIS DATASET HAS BEEN RESTORED. ORIGINALLY THERE WERE ELEVEN 9-TRACK TAPES. FOUR OF THESE WERE 1600 BPI AND THE OTHER SEVEN WERE 6250 BPI. ALL WERE WRITTEN IN ASCII. THERE ARE 6 DIFFERENT DATA SETS ON THIS DR/DS TAPE, FOR A TOTAL OF 6,712 FILES. ONLY FILES 1671-6712 ARE THIS DATA SET. THE ORIGINAL TAPES WERE CREATED ON A CDC 6600 COMPUTER AND WERE RESTORED ON THE MRS. THE DR AND DS NUMBER ALONG WITH THE D NUMBERS AND TIME SPANS ARE AS FOLLOW:

DR#	DS#	DD#	FILES	TIME SPAN
DR006264	DS006264	DD 066729	1671-2170	12/05/78 - 04/18/80
		DD 066730	2171-2670	04/19/80 - 09/01/81
		DD 074127	2671-3170	09/02/81 - 01/14/83
		DD 074128	3171-3670	01/15/83 - 05/28/84
		DD 083252	3671-4270	05/27/84 - 01/17/86
		DD 098900	4271-4658	01/30/86 - 02/22/87
		DD 098901	4659-5208	02/22/87 - 08/25/88
		DD 101566	5209-5260	08/26/88 - 10/16/88
		DD 101567	5261-5858	10/17/88 - 06/06/90
		DD 101568	5859-6257	06/07/90 - 07/11/91
		DD 101569	6258-6712	07/12/91 - 10/08/92

PIONEER VENUS 1

12 SECOND B & E FIELD DATA 1 HOUR AROUND PERIAPSIS

78-051A-12F
78-051A-13E

This dataset consists of eleven 9-track tapes. 4 tapes are 1600 BPI,while the other seven are 6250 BPI.The tapes are ASCII and were created on the IBM computer.
Each file contains 8 physical records(or blocks) which are 6080 bytes long. Each physical record contains 38 logical records which are 160 bytes long. The logical records are arranged as follows:

Record 1: Data headers
Record 2: Fortran Format
Record 3: Data Fill examples
Record 4: Time, Orbit, T-Peri, Data

Each file contains data for one orbit, one hour about periapsis(i.e. 2 hours of data within the nomianl Venusian ionoshpere). The data are 24 second averages taken 12 seconds apart.
The "D" and "C" numbers along with there times spans are as follows:

D#	C#	TIME SPAN	FILES	ORBIT #
D-66729	C-24987	12/05/78 - 04/18/80	500	1- 500
D-66730	C-24988	04/19/80 - 09/01/81	500	501-1000
D-74127	C-26131	09/02/81 - 01/14/83	500	1001-1500
D-74128	C-26132	01/15/83 - 05/28/83	500	1501-2000
D-83252	C-29214	05/28/84 - 01/17/86	600	2001-2600
D-98900	C-29873	01/30/86 - 02/22/87	388	2613-3000
D-98901	C-29874	02/22/87 - 08/25/88	550	3001-3550
D-101566	C-031192	08/26/88 - 10/16/88	52	3551-3602
D-101567	C-031193	10/17/88 - 06/06/90	598	3603-4200
D-101568	C-031194	06/07/90 - 07/11/91	399	4201-4600
D-101569	C-031195	07/12/91 - 10/08/92	455	4601-5055

PIONEER VENUS ORBITER
MAGNETOMETER AND ELECTRIC FIELD DETECTOR
LOW-FREQUENCY DATA SUBMISSION TO
NATIONAL SPACE SCIENCE DATA CENTER

Parameters on NSSDC Low-frequency Data Tape

The tapes contain 24 second overlapped averages, every 12 seconds of both the PVO magnetometer (OMAG) and electric field data (OEFD), for an hour centered around the periapsis of each orbit for orbits 3551-3602. The time epochs were provided by the Pioneer Project at Ames Research Center.

The OMAG data consists of the averages of the total field and the components of the field vector in Venus Solar Orbital (VSO) coordinates. This coordinate system is analogous to the terrestrial GSE or Geocentric Solar Ecliptic coordinate system. The VSO X-direction points toward the sun; the Z-direction is normal to the orbital plane of Venus, and the Y-direction is in the orbital plane pointing opposite to the direction of orbital motion. Also included are the standard deviations of the total field and the components, the latter being the square root of the sum of the variances of the components.

The OEFD data consists of the 24 second maximum and average from each of the four OEFD channels, in units of volts per meter per square root hertz. The four frequency bands are centered around 100 Hz, 730 Hz, 5.4kHz and 30kHz.

Tape Format

These tapes were created using the ASCII format described in "Pioneer Venus Mission Instructions for Data Submissions to the National Space Science Data Center". This document should be referenced for general tape information.

The tapes are standard 1/2 inch, 9 track, 1600 bpi, unlabeled, ASCII, with fixed length blocked records. The record length is 160 bytes, in blocks of 38, for a blocksize of 6080 bytes. There is a record for each 12 second interval for an hour about periapsis, resulting in 301 data records per orbit. With 3 header records there are then 304 records per orbit, which fill 8 complete blocks. There is a tape mark after the last record of each orbit, which splits the tape into 52 files with a double tape mark after the last file.

****

PVO OMAG & OEFD LOW-FREQUENCY DATA TAPE

As specified in the "Pioneer Venus Mission Instructions for Data Submissions to the NSSDC" the first three records are information on the format of the data.

Record #1: Format: (I3,14(1x,A4)) Gives the number of data columns in each data record (14), and 4 character descriptors for each.
Record #2: Format: (A160) Gives the Fortran format to be used in reading each data record.
Record #3: Fortran format is given in record #2. Contains the fill values which occur when no data is available.
Record #4-end: Time, orbit, seconds from periapsis, data.

****

ITEM	CONTENTS	FORMAT	EXAMPLE (b=blank)	FILL
1	YEAR * 1000 + DAY OF YEAR	I8	b1984001	0
2	MILLISECONDS OF DAY	I9	b86400000	0
3	ORBIT NUMBER	I5	b1901	0
4	SECONDS FROM PERIAPSIS	I6	-43200	0
5	BX AVERAGE (GAMMAS IN VSO	F7.2	b-10.10	b999.00
6	BY AVERAGE COORDS)	"	"	"
7	BZ AVERAGE	"	"	"
8	BT AVERAGE	"	"	"
9	SD OF COMPONENTS	"	"	"
10	SD OF TOTAL	"	"	"
11	100 HZ ELEC MAX (V/(M*HZ**.5))	E10.3	b0.333E-07	1.0E+32
12	100 HZ ELEC AVERAGE	"	"	"
13	730 HZ ELEC MAX	"	"	"
14	730 HZ ELEC AVE	"	"	"

15	5.4 KHZ ELEC MAX	"	"	"
16	5.4 KHZ ELEC AVE	"	"	"
17	30 KHZ ELEC MAX	"	"	"
18	30 KHZ ELEC AVE	"	"	"
19	BLANK FILL	10X		
	TOTAL CHARACTERS =	160		

****

SAMPLE UADS FILE FOR ORBITS 3551-3602

```
DATA  = u3551.ffd
DATE =  90 054 FEB 23  10:03:27      UPDATE = 90 054 FEB 23  10:03:35
RECL =   269
NCOLS =    20
NROWS =        301
OPSYS = SUN/UNIX
  # NAME       UNITS      SOURCE                      FORMAT
001 UT         YR MON DY HR MN SC MS                  6I3.2,I4.3
002 BX VSO     NT         PVO OMAG                    G13.5
003 BY VSO     NT         PVO OMAG                    G13.5
004 BZ VSO     NT         PVO OMAG                    G13.5
005 BT         NT         PVO OMAG                    G13.5
006 VSOX       RV         PVO SEDR/UCLA               G13.5
007 VSOY       RV         PVO SEDR/UCLA               G13.5
008 VSOZ       RV         PVO SEDR/UCLA               G13.5
009 PLAT       DEG        PVO SEDR/UCLA               G13.5
010 PLON       DEG        PVO SEDR/UCLA               G13.5
011 DBTR       NT         PVO SD OF B COMPONENTS      G13.5
012 DBTL       NT         PVO SD OF B TOTAL           G13.5
013 E100 MAX   V/M/RTHZ   PVO OEFD 100HZ CHANNEL      G13.5
014 E100 AVG   V/M/RTHZ   PVO OEFD 100 HZ CHANNEL     G13.5
015 E730 MAX   V/M/RTHZ   PVO OEFD 730 HZ CHANNEL     G13.5
016 E730 AVG   V/M/RTHZ   PVO OEFD 730 HZ CHANNEL     G13.5
017 E5.4KMAX   V/M/RTHZ   PVO OEFD 5.4K HZ CHANNEL    G13.5
018 E5.4KAVG   V/M/RTHZ   PVO OEFD 5.4K HZ CHANNEL    G13.5
019 E30K MAX   V/M/RTHZ   PVO OEFD 30K HZ CHANNEL     G13.5
020 E30K AVG   V/M/RTHZ   PVO OEFD 30K HZ CHANNEL     G13.5
ABSTRACT
FIRST TIME          =  88 239 AUG 26  02:17:25.415
LAST TIME           =  88 239 AUG 26  03:17:25.415
OWNER               = GORDON
MISSING DATA FLAG   =  1.000000E+32
ORBIT NUMBER(S)     =   3551
ORBIT      START TIME                NREC
PVO UADS DATA - 12 SEC AVERAGES 1 HOUR ABOUT PERIAPSIS
Periapsis time: 88 239 AUG 26  02:47:25.415
DSFF:  90 052 FEB 21  18:55:42.330
  PVO OETP data received Jan 02, 1990 via SPAN mail.
FFMERGE:  90 053 FEB 22  08:28:56
  Data columns extracted from DISK$SCRATCH:[GORDON.OETP]OETP0.FFH;1
FFMERGE:  90 054 FEB 23  10:03:28
  Files A & B merged (nearest points from B)
  File A: QSA2:[PVO.UADS]Y3551.FFH;1
  File B: DISK$SCRATCH:[GORDON.OETP]OETP.FFH;1
  A columns:  1 - 20
  B columns: 21 - 23
END
FORTRAN FORMAT:
(6I3.2,I4.3,19G13.5)
MISSING DATA FLAGS:
 00 00 00 00 00 00 000  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000
E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
DATA:
 88 08 26 02 17 25 415   11.929      -6.4944      -5.6719       14.863       0.52416       0.50853
       1.9389       68.706       67.441       2.2697       0.89698      0.15350E-03  0.53216E-04
 0.12478E-04  0.80742E-05  0.14739E-05  0.12898E-05  0.32623E-04  0.71307E-05
 88 08 26 02 17 37 415   12.287      -6.6868      -5.1625       15.090       0.53274       0.50735
       1.9291       68.494       66.851       2.5602       1.0308       0.47323E-03  0.72020E-04
 0.13479E-04  0.83521E-05  0.18433E-05  0.13380E-05  0.32623E-04  0.53662E-05
 88 08 26 02 17 49 415   12.144      -7.4500      -4.6707       15.274       0.54131       0.50615
       1.9192       68.280       66.267       3.2585       1.3915      0.60776E-03  0.10911E-03
 0.16347E-04  0.90034E-05  0.67950E-05  0.16462E-05  0.22435E-04  0.31645E-05
 88 08 26 02 18 01 415   12.165      -7.3945      -4.7181       15.371       0.54987       0.50494
       1.9092       68.061       65.691       3.8349       1.7655      0.60776E-03  0.11919E-03
 0.19825E-04  0.93375E-05  0.17909E-04  0.21872E-05  0.22435E-04  0.33034E-05
 88 08 26 02 18 13 415   12.356      -7.0215      -4.5552       15.291       0.55842       0.50372
       1.8993       67.840       65.121       3.8544       1.8782      0.45390E-03  0.10301E-03
 0.19825E-04  0.88679E-05  0.17909E-04  0.21072E-05  0.22435E-04  0.38103E-05
 88 08 26 02 18 25 415   11.840      -7.6666      -3.3047       14.889       0.56695       0.50248
       1.8892       67.614       64.558       3.8173       1.5850      0.41758E-03  0.10939E-03
 0.14560E-04  0.84276E-05  0.54332E-05  0.17172E-05  0.20052E-04  0.43844E-05
 88 08 26 02 18 37 415   11.524      -7.9920      -2.3347       14.549       0.57546       0.50123
       1.8792       67.385       64.002       3.4306       1.4183      0.41758E-03  0.12777E-03
 0.19825E-04  0.86016E-05  0.15429E-04  0.21001E-05  0.19315E-04  0.38766E-05
```

88 08 26 02 18 49 415 12.504 -7.0965 -3.9372 15.338 0.58396 0.49997
1.8690 67.153 63.453 4.0800 1.8275 0.41758E-03 0.14340E-03
0.34024E-04 0.94414E-05 0.15429E-04 0.24545E-05 0.20052E-04 0.30038E-05
88 08 26 02 19 01 415 12.750 -6.6224 -4.3016 15.356 0.59245 0.49870
1.8589 66.917 62.911 3.8877 2.0007 0.40053E-03 0.13108E-03
0.34024E-04 0.92763E-05 0.73209E-05 0.20780E-05 0.23291E-04 0.35882E-05
88 08 26 02 19 13 415 11.698 -7.3801 -2.2878 14.309 0.60092 0.49741
1.8486 66.677 62.375 3.3282 1.6371 0.40053E-03 0.95494E-04
0.14560E-04 0.82771E-05 0.45094E-05 0.15582E-05 0.23291E-04 0.31306E-05
88 08 26 02 19 25 415 11.537 -7.6560 -1.0969 14.117 0.60938 0.49611
1.8384 66.434 61.845 2.7907 1.1361 0.33899E-03 0.76555E-04
0.14560E-04 0.78273E-05 0.18433E-05 0.13370E-05 0.22435E-04 0.35479E-05
88 08 26 02 19 37 415 12.244 -6.0923 0.46395 14.078 0.61782 0.49480
1.8281 66.187 61.322 3.5012 1.0368 0.33899E-03 0.64168E-04
0.14560E-04 0.75403E-05 0.17759E-05 0.13016E-05 0.22435E-04 0.36478E-05
88 08 26 02 19 49 415 10.462 -5.3548 4.3894 13.669 0.62624 0.49348
1.8177 65.937 60.806 5.9408 2.2836 0.41758E-03 0.91204E-04
0.13479E-04 0.77981E-05 0.16483E-05 0.13105E-05 0.94834E-05 0.22858E-05
88 08 26 02 20 01 415 4.6609 -3.8255 10.953 14.274 0.63464 0.49214
1.8073 65.684 60.296 7.5355 2.8915 0.41758E-03 0.10492E-03
0.15133E-04 0.84071E-05 0.16483E-05 0.13449E-05 0.91349E-05 0.14342E-05

SAMPLE UADS FILE FOR ORBITS 3603-5055

```
DATA  = u3809.ffd
DATE =  91 205 JUL 24  14:22:20
RECL =   269
NCOLS =    20
NROWS =        301
OPSYS = SUN/UNIX
  # NAME       UNITS      SOURCE                      FORMAT
001 UT         YR MON DY HR MN SC MS                 6I3.2,I4.3
002 BX SC      NT         PVO                        G13.5
003 BY SC      NT         PVO                        G13.5
004 BZ SC      NT         PVO MAG Pav along Z        G13.5
005 BT         NT         PVO MAG Pav along Z        G13.5
006 VSOX       RV         PVO SEDR                   G13.5
007 VSOY       RV         PVO SEDR                   G13.5
008 VSOZ       RV         PVO SEDR                   G13.5
009 PLAT       DEG        PVO SEDR Planetary lat     G13.5
010 PLON       DEG        PVO SEDR Planetary long    G13.5
011 DBTR       NT         PVO MAG Pav along Z        G13.5
012 DBTL       NT         PVO MAG Pav along Z        G13.5
013 E100 MAX   V/M/rtHZ   PVO EFD                    G13.5
014 E100 AVG   V/M/rtHZ   PVO EFD                    G13.5
015 E730 MAX   V/M/rtHZ   PVO EFD                    G13.5
016 E730 AVG   V/M/rtHZ   PVO EFD                    G13.5
017 E5.4KMAX   V/M/rtHZ   PVO EFD MAX                G13.5
018 E5.4KAVG   V/M/rtHZ   PVO EFD                    G13.5
019 E30K MAX   V/M/rtHZ   PVO EFD                    G13.5
020 E30K AVG   V/M/rtHZ   PVO EFD                    G13.5
ABSTRACT
FIRST TIME          =  89 131 MAY 11  02:57:07.595
LAST TIME           =  89 131 MAY 11  03:57:07.595
OWNER               = debbie
MISSING DATA FLAG   =   1.00000E+32
AVERAGE INTERVAL    =     00:00:24.000
ORBIT NUMBER(S)     =   3809
PVO EDR DATA PROCESSING, VERSION 1.5, UCLA, DATE: 91 205 JUL 24
PVOFLAGCAL: 91 205 JUL 24
  Magnetic field data flagged during calibrate interval.
FFAVG:  91 205 JUL 24  14:21:48
  Input  file: hima3809.ffh...
  Output file: /scratch/debbie/uads_mag3809.ffh
  Processing options: AVG RMSDEV COUNT
  Window width(sec)=  24.000     Output res=  12.000
  Min pts= 1.00
ffcalc:  91 205 JUL 24  14:21:54
  Input file:  /scratch/debbie/uads_mag3809.ffh
  Output file: /scratch/debbie/uads_magsd3809.ffh
  out: c1;
  "BX SC" "NT" = FLAG;
  "BY SC" "NT" = FLAG;
  c2;
  "BT" "NT" = FLAG;
  "SDBZ" "NT"= sqrt((c3*c3) * c4 / (c4-1.) );
  "SDBT" "NT"= FLAG;
PVO EDR DATA PROCESSING, VERSION 1.5, UCLA, DATE: 91 205 JUL 24
ffcalc:  91 205 JUL 24  14:22:00
  Input file:  hiel3809
  Output file: /scratch/debbie/hiel_rt3809.ffh
  var: skip (c1<" 89 131 MAY 11  02:56:55.595");
  var: stop (c1>" 89 131 MAY 11  03:57:19.595");
  out: c1;
  "E100HZ" "V/M/HZ.5"=sqrt(c2);
  "E730HZ" "V/M/HZ.5"=sqrt(c3);
  "E5.4KHZ" "V/M/HZ.5"=sqrt(c4);
  "E30KHZ" "V/M/HZ.5"=sqrt(c5);
FFAVG:  91 205 JUL 24  14:22:01
  Input  file: /scratch/debbie/hiel_rt3809.ffh...
  Output file: /scratch/debbie/uads_ele3809.ffh
  Processing options: MAX AVG
  Window width(sec)=  24.000     Output res=  12.000
  Min pts= 1.00 1.00 1.00 1.00
FMERGE:  91 205 JUL 24  14:22:07
  Files A & B merged (A union B)
  File A: /scratch/debbie/uads_magsd3809.ffh
  File B: /scratch/debbie/uads_ele3809.ffh
  A columns:  1 -  7
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  B columns:  8 - 15
PVO EDR DATA PROCESSING, VERSION 1.5, UCLA, DATE: 91 205 JUL 24
EPHFLAGDUP: 91 205 JUL 24
  No duplicate ephemeris records found.
MERGE:  91 205 JUL 24  14:22:13
  Files A & B merged (quadratic interpolation of B)
  File A: /scratch/debbie/uads_magele3809.ffh
  File B: ephe3809.ffh ...
  A columns:  1 - 15
  B columns: 16 - 20
ffcalc:  91 205 JUL 24  14:22:20
  Input file:  /scratch/debbie/uads_mageleeph3809.ffh
  Output file: /prod/pvo/uads/u3809.ffh
  out: c1; c2; c3; c4; c5;
  "VSOX" "RV" = c16;
  "VSOY" "RV" = c17;
  "VSOZ" "RV" = c18;
  "PLAT" "DEG" = c19;
  "PLON" "DEG" = c20;
  "DBTR" "NT" = c6;
  "DBTL" "NT" = c7;
  "E100 MAX" "V/M/rtHZ" = c8;
  "E100 AVG" "V/M/rtHZ" = c9;
  "E730 MAX" "V/M/rtHZ" = c10;
  "E730 AVG" "V/M/rtHZ" = c11;
  "E5.4KMAX" "V/M/rtHZ" = c12;
  "E5.4KAVG" "V/M/rtHZ" = c13;
  "E30K MAX" "V/M/rtHZ" = c14;
  "E30K AVG" "V/M/rtHZ" = c15;
END
FORTRAN FORMAT:
(6I3.2,I4.3,19G13.5)
MISSING DATA FLAGS:
 00 00 00 00 00 00 000  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000
E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
DATA:
 89 05 11 02 57 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.70199     -0.11957
       1.9289       69.094       89.502       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 57 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.70611     -0.12706
       1.9189       68.881       88.905       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 57 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.71021     -0.13455
       1.9088       68.665       88.316       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 57 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.71430     -0.14204
       1.8987       68.445       87.734       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 57 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.71836     -0.14952
       1.8885       68.221       87.159       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 58 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.72241     -0.15700
       1.8783       67.994       86.591       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 58 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.72644     -0.16447
       1.8680       67.763       86.030       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 58 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.73045     -0.17194
       1.8577       67.528       85.476       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 58 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.73445     -0.17941
       1.8474       67.290       84.929       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 58 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.73842     -0.18687
       1.8370       67.048       84.389       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 59 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.74237     -0.19432
       1.8265       66.803       83.855       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 59 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.74630     -0.20177
       1.8160       66.553       83.328       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 59 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.75021     -0.20922
       1.8055       66.301       82.808       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 59 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.75411     -0.21666
       1.7949       66.044       82.294       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
 89 05 11 02 59 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.75798     -0.22409
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      1.7842        65.784        81.787       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 00 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.76182      -0.23152
      1.7735        65.521        81.286       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 00 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.76565      -0.23894
      1.7627        65.253        80.792       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 00 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.76945      -0.24635
      1.7519        64.982        80.303       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 00 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.77323      -0.25376
      1.7411        64.708        79.821       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 00 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.77699      -0.26116
      1.7302        64.429        79.345       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 01 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.78073      -0.26855
      1.7192        64.147        78.876       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 01 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.78444      -0.27593
      1.7082        63.861        78.412       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 01 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.78812      -0.28330
      1.6971        63.572        77.954       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 01 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.79179      -0.29067
      1.6860        63.279        77.501       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 01 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.79542      -0.29802
      1.6748        62.982        77.055       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 02 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.79903      -0.30537
      1.6636        62.682        76.614       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 02 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.80262      -0.31271
      1.6523        62.378        76.179       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 02 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.80618      -0.32003
      1.6410        62.070        75.749       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 02 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.80971      -0.32735
      1.6296        61.758        75.324       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 02 55 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.81322      -0.33466
      1.6182        61.443        74.905       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 03 07 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.81669      -0.34195
      1.6067        61.123        74.491       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 03 19 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.82014      -0.34923
      1.5951        60.800        74.082       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 03 31 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.82357      -0.35650
      1.5835        60.474        73.678       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
89 05 11 03 03 43 595  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.82696      -0.36376
      1.5718        60.143        73.280       0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33  0.10000E+33
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