

#481

ISEE- 1 and 2  
PROTON FLUID PARAM 6 RE-BOM  
77-102A-01I  
77-102B-01F

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## Table of Contents

1. Introduction
2. Errata/Change Log
3. LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM
4. Catalog Materials
  - a. Associated Documents
  - b. Core Catalog Materials

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

Proton Fluid Param 6 Re-Bow Shock

77-102A-01I SPMS-00149

This data set has been restored. There was originally 1 9-track, 1600 BPI tape written in BCD. There is one restored tape written in EBCDIC. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The tape was created on a 360 computer. The DR and DS numbers along with the corresponding D number and the time span is as follows:

DR#	DS#	DD#	FILES	TIME SPAN
DR03701	DS03701	D042231	19	10/29/77 - 01/19/79

REQ. AGENT

VPL

SATC

RAND NO.

V0066

10354

ACQ. AGENT

HKH

HCH

ISEE-1 & 2

PROTON FLUID PARAM 6 RE-BOW SHOCK

77-102A-01I

77-102B-01F

This data set catalog consists of 1 ISEE-1 and 1 ISEE-2 data tape. The tapes are 1600 BPI, 9 track, EBCDIC and both tapes contain 19 files of data. The tapes were created on an IBM 360 computer.

THE TIME SPAN IS AS FOLLOWS:

ISEE-1

D#  
D-42231

C#  
C-21321

TIME SPAN  
10/29/77-1/19/79

ISEE-2

D-42232

C-21309

10/27/77-1/19/79

ISEE 2

PROTON FLUID PARAM. 6 RE-BOW SHOCK

77-102B-01F SPHE-00154

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 9-TRACK, 1600 BPI TAPE WRITTEN IN ebcdic ~~BINARY~~. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN IBM 360 COMPUTER AND WAS RESTORED ON THE MRS SYSTEM. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBER AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005280	DS005280	D042232	1-19	10/27/77 - 01/19/79



MAX-PLANCK-INSTITUT FÜR PHYSIK UND ASTROPHYSIK  
INSTITUT FÜR EXTRATERRESTRISCHE PHYSIK

DR. N. SCKOPKE

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July 7, 1986

Re: Data from the Los Alamos National Laboratory / Max-Planck-Institut Garching Fast Plasma Experiments on ISEE-1 and -2.

Dear Dr. Green,

In 1980, the two PI's of the Los Alamos / MPE Garching Fast Plasma Experiments on ISEE-1 and -2, S.J. Bame at LANL, and G. Paschmann at Garching, agreed that our group would prepare, and send to the NSSDC/WDC A, two tapes containing proton fluid parameters from regions essentially inside of the bow shock, and outside of  $6 R_E$  geocentric distance, covering the period between launch of the two spacecraft (October, 1977), and mid-January, 1979, when the FPE on ISEE 1 failed.

Some time ago, we were informed by one of the users of this data set (N.U. Crooker of UCLA) about some inconsistency. This inconsistency turned out to result from a fatal error in our original production code which invalidated two of the parameters completely (the bulk flow components  $v_x$  and  $v_y$ ).

We have now re-processed the entire data set, and enclose two tapes whose contents is to replace the original set. To allow an unambiguous distinction of the new data, we have slightly altered the file header record text; see the enclosed documents. Otherwise, and apart from the correction, the new data set has the same contents and format as the original one, albeit a slightly reduced UT coverage.

Please note that we have sent a copy of the corrected data set directly to UCLA so that this group need not be contacted by your office.

Finally, we should like to apologize for any inconvenience we might be causing.

Sincerely yours,



Norbert Sckopke

cc: S.J. Bame

G. Paschmann

encl.s

Tapes with proton fluid parameters from the LANL/MPE  
Fast Plasma Experiments (FPE) on ISEE-1 and -2

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**IMPORTANT NOTICE:**

The enclosed two tapes are to replace two others originally supplied by our group to the NSSDC in 1980. These earlier tapes contain erroneous data and are to be destroyed.

Principal Investigators:

ISEE 1: S.J. Bame, MS D438, Los Alamos National Laboratory, Los Alamos, NM 87545, USA

ISEE 2: G. Paschmann, Max-Planck-Institut für Physik und Astrophysik, Institut für extraterrestrische Physik, 8046 Garching, W-Germany

Brief Description of the Data:

The data are provided at a temporal resolution of  $\approx 60$  seconds. They represent moments of individual two-dimensional (2D) distributions obtained in  $\approx 3$  or  $\approx 6$  seconds (see below). No time averaging over longer intervals is involved; instead, the temporal resolution of the full data set ( $\approx 3 / 6 / 12$  s) was reduced to  $\approx 60$  s. The UT given indicates the start of the respective sampling interval. For a description of the instrument see Bame et al., 1978 (IEEE Transact. Geosci. Electron. GE-16, 216); remarks about the computation of the moments may be found in Paschmann et al., 1978 (Space Sci. Rev. 22, 717).

Data Selection:

- (a) Particle Species: Although the FPE's measure both, positive ions and electrons, only the ion fluid parameters are given on the tapes. Electron parameters were excluded since they have not been corrected yet for photo electron effects.

Since the FPE involves an electrostatic analyzer, no differentiation between ions of different mass is possible (except under very favourable circumstances). The fluid parameters given on the tapes were computed under the assumption that all ions are protons.

- (b) Coverage of Physical Space: The full set of FPE fluid parameters was inspected to select only data from the following region:

From  $R \lesssim 6 R_E$  out to (but excluding) the bow shock.

Exceptions: a few brief ( $\leq 3$  min) intervals of solar wind data may be present;

magnetosheath data of less than  $\approx 1$  hr duration in-between bow shock crossings may be missing.

The reasons for this selection are:

- (i) Solar wind ion distributions are too cold to be adequately resolved by the FPE instruments (note that there are special solar-wind ion instruments on both ISEE-1 and -2);
  - (ii) Inside  $R \approx 6 R_E$  the FPE data would be contaminated by the energetic particle background. Usually, the instruments are turned off inside  $6 R_E$ .
- (c) UT Coverage: The tapes contain all the available data between initial turn-on of the instruments (end of October, 1977), and 19 January, 1979. On the enclosed, re-generated tapes the UT coverage is slightly lower than on the earlier tapes. For details see enclosure A.

Accuracy of the Data:

Efficiency variations due to gain changes have not been accounted for. They may be responsible for differences between the ISEE-1 and -2 density (for example) even for periods when the spacecraft separation was small. Uncertainties of the absolute values for the density are estimated to be better than + 50%.

Description of the Tapes:

2 tapes, labelled on the outside

ISEE 1 / FPE 2D IONS  
27 OCT 77 - 19 JAN 79  
Re-generated SEPT 1985

ISEE 2 / FPE 2D IONS  
29 OCT 77 - 19 JAN 79  
Re-generated SEPT 1985

Each tape contains 19 no-label files.

Each file contains data from up to 10 ISEE orbits; see enclosure B or the file header records for the approximate UT coverage.

Organization of Files:

record # 1: file header record } same length, but  
records 2 ff: data records } different  
READ statements,  
see below

Records:

formatted;  
logical record length: 88 bytes  
physical " " : 4400 bytes

File Header Records (and FORTRAN format):

KTEXT, IOS, IOE, IYRS, IDAYS, SECS, IYRE, IDAYE, SECE  
12A4 , 2I4 , 2(I5, I4, F7.0)

Data Records (and FORTRAN format):

IYR, IDAY, SEC, IORB, GSEX/Y/Z, LH, DEN, ENDEN, IFLAG, VX, VY, T  
2I4 , F8.1,I4, 3F8.3, I2, F8.3,E9.2, I2, 2F7.1, E9.2

Description of Items:

(a) File Header Record:

KTEXT = text to identify the data, cf. enclosure B <sup>x)</sup>

IOS } = number of first and last ISEE orbit  
IOE } covered by this file

IYRS } = year  
IDAYS } = day of year (day 1 = Jan 1) } approx. UT  
SECS } = seconds of day } of  
start of file

IYRE } =  
IDAYE } } end of file  
SECE }

(b) Data Record:

IYR } = UT defining start of data sampling; end = UT+3(6) sec.  
IDAY } = (6 sec for ISEE-1 after Jan 27, 1978,  
SEC } during low rate of data transmission)

IORB = orbit number

GSEX } = spacecraft position in solar ecliptic coordinates  
GSEY } = (units = earth radii)  
GSEZ }

LH = flag indicating the energy range covered  
by the instrument;  
LH=0: energy range =  $\approx 50$  eV to 20 keV per charge  
LH=1: " " =  $\approx 70$  eV to 40 keV per charge

DEN = number density (units =  $\text{cm}^{-3}$ )

ENDEN = energy density ( $\text{erg cm}^{-3}$ )

IFLAG = 0 for  $\text{DEN} \geq 0.1 \text{ cm}^{-3}$   
= 1 for  $\text{DEN} < 0.1 \text{ cm}^{-3}$

For IFLAG = 1, errors in the following parameters (VX, VY, T) may be larger than normal because the counting statistics may be bad.

x) Note: A slightly different text has been chosen to distinguish the re-generated tapes for the earlier versions.

VX } = components of the 2D bulk velocity  
VY } = in spacecraft coordinates (units = km s<sup>-1</sup>)

Note: Spacecraft coordinate axes normally differ by no more than a few degrees from the respective GSE axes.

Exception: before 1 Nov, 1977, VY (ISEE-2) ≈ VZ (GSE)

The 2D bulk velocity essentially represents the projection of the true velocity onto the symmetry plane of the analyzers, i.e. approximately (with the above exception) the ecliptic plane.

T = (T<sub>xx</sub> + T<sub>yy</sub>)/2. = average 2D temperature (units = Kelvin).







ISEE-1 FPE (LASL/MPE, S.-J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR DEC 1977

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT	
1																											
2		97	100	97	75					80	100	98	100	100	102	98	100	92	100	100						98	
3																											
4						25	100	98	98		98	100	90	50					43	98	100	100	100	100	98		
5	102	98	98	100	100																						
6																											
7				68	98	97	100	98	100		92	100	100	102	100	100	48	98	98	62	40	100	98	100			
8																			53	100	8						
9	98	98	100	100	95	100	50							67	98	98	100	98	100		88	40	45	57	63	92	100
10	87	100	100	97	100	13																				25	
11																											
12	100	100	100	97	100	87	100	100	97		93	92	57	67	100	97	100	95					32	65	98		
13																											
14	98	48							87	100	100	98	100	93	97	98	100	63	8	50	100	98	100	100	100		
15	17	100	42																	23	27	75	97	97	98		
16		3		65	100	100	100	97	98		83	93	2														
17	50	98	100	98	98	102	98	97	100		100	100	100	100	92	100	73		47	100	98	98	97	100	93	98	
18					50	100	50		75		57	90	100	100	98	100	100	100	102								
19		23	100	100	97	93	100	93	95		98	98	100	100	100	73	100	100	8	98	98	100					
20																											
21	100	98	100	102	8	95	48													33	100	93	87	100	97		
22	95	100	100	98	95	95	97	97	95		100	75	88	98	100	100	92	97	95	98	98	50			47		
23											67	98	98	98	97	95	52										
24	100	100	100	100	100	98	98	100	100		100	50										35	100	98	98		
25																											
26	100	50					98	95	100		100	100	100	92	97	100	102	100	100								
27	92	100	58	100	65																						
28	100	73	25	100	100	97	100	100	100		98	50							33	102	100	95	88	70	90	93	
29	100	98	90	95	98	98	100	58											88	95	100	98	97	93	97	37	78
30									65		102	100	100	100	100	100	100	100	100								
31	53	98	97	100	102	98	98	100	100		100	102	100	93	98	98	98	100	100	100	100	98	100	100	95		

ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR JAN 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT	
1		52	97	100	100	8	25	25												17	80	40	65	97	97		
2		98	98	17	40	100	57				13	100	100	100	102	98	100	100	100	100	100	100	100	100	100	97	
3		100	100	100	100	97	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	100	50		100		
4		98	100	98	98	100	97	100	97	95	92	100	100	100	100	93					25	98		97	100	98	
5		100	102	100	100	98	100	100	100	100	97	93	100	100	100	100	85	100	100	100	100	100	72	47	100	100	
6		100			50	98	27		67	100	93	98	98	102	100	100	95	82	90	82	98	100	67	27	7		
7						37	98	100	98	100	87				53	100	98	100	100	100	98	102	77	98	100		
8		98	100	100	100	100	33							42	100	33	47	100	98	98	100	98	98	97	98		
9		98	100	100	100	100	98	98	98	50					8	100	100	100	98	90	63	100	95	100	100		
10		100	87	97	95	88	100	92	100	98	100	100	100	100	100	98	98	100	100	100	97	93	100	85	15		
11		100	75																								
12																											
13																											
14																											
15		58	87	97	98	100	100	100	100	100	102	100	100	102	98	100	100	100	100	100	100	100	100	100	98	100	
16		27	100	87	98	100	102	100	98	98	100	100	98	53						95	100	100	100	98	77		
17		100	92	92	93	100	100	98	98	100	100	100	100	100	92	100	100	98	47	95	92	100	98	100	100		
18		98	100	100	97	93	98	100	58	95	98	95	100	98	98	100	100	97	100	100	97	100	100	95	10		
19					60	83	92	83	75	92	100	98	100	97	97	100	100	93	93	98	100	93	58	35	100		
20		100	77	100	100	100	98	100	95	102	100	100	100	90	100	100	100	98	98	100	100	98	97	100	100		
21		82	63	100	98	95	97	100	50					27	98	98	98	97	97	98	102	98	100	92	100		
22		100	100	100	100	98	100	100	100	98	102	95	98	98	102	100	100	100	100	100	100	97	100	100	87		
23		100	100	100	100	100	100	98	100	102	100	98	100	100	100	100	100	75						48	100		
24		98	100	97	100	98	100	100	102	98	100	102	92	100	100	100	97	98	95	90	97	98	98	98	47		
25		48	90	93	97	98	100	100	98	100	100	100	100	100	102	100	98	90	88	97	88	93	98	63	12		
26		98	27						57	100	100	97	98	100	100	100	98	97	100	100	98	92	22	100	100		
27		100	98	95	100	102	97	100	93	100	98	102	100	100	98	100	100	93	100	95	100	100	98	98	63		
28		77	98	98	92	93	82	90	90	95	100	98	87	52				12	97	93	88	92	93	93	100		
29		97	102	95	97	98	100	97	97	97	100	98	100	100	100	98	95	73	88	93	97	95	92	100	100		
30		100	100	100	100	87	100	93	100	100	102	98	100	98	100	100	100	100	100	100	100	100	100	87			
31				78		5	98	100	100	100	37	100	100	100	100	100	100	100	98	100	97	100	97	90	100		

ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR FEB 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24 UT	
1		102	87	30	53	100	100		100	98	98	100	102	100	100	98	100	100	100	100	90	98	90	93	28	
2		58	57	98	83	72	95						38	100	98	100	100	100	100	100	80	100	100	98	102	
3		100	98	100	100	100	2	45	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
4		97	102	100	100	98	100	102	100	100	100	100	100	100	100	100	100	100	100	100	102	97	85	95	100	97
5		100	98	102	98	98	97	100	98	98	100	98	98	100	100	98	100	100	100	100	42	55	100	98	90	92
6		82	93	98	98	100	98	97	98	98	100	100	100	100	98	100	98	100	98	100	98	90	98	100	97	
7								60	98	100	88	102	95	100	100	100	98	100	100	97	97			17	100	
8		97	100	97	97	87	98	100	100	100	98	95	100	100	100	100	88	100	100	100	100	98	98	100	100	
9		100	98	95	100	97	98	95	98	97	100	100					50	100	100	100	100	100	100	100	97	
10		87	95	98	100	100	98	102	98	98	100	98	100	100	98	100	100	100	87	100	100	100	100	100	98	
11		85	82	97	75	100	63		52	100	100	70		57	100	100	98	98	98	98	100	73				
12																										
13																										
14																										
15																										
16																										
17		83	98	95	100	100	100	68	30	92	97	97	7	57	98	27	78	100	100			85	30		83	
18		63	97	100	92			100	98		100	100	100	100	98	98	100	100	100	100	100	95	93	98	42	
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																					52	143	37	167	165	167



ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR APR 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT
1				50	98	100	100	100	100	100	98	100	100	98	100	100	100	100	8	92	70	32				
2	73	100	98	102	98	100	100	100	100	100	100	27	100	98	98	100	97	100	98	97						
3														17	95	98	97	100	98	98	100	100	100	100	95	
4	100	100	100	100	100	100	100	100	100	98	100	100	98	100	100	97	97	93	90	100	98	100	100	100	100	
5	92																28	98	100	100	85	100	98	100		
6	100	100	98	98	100	98	98	100	100	97	100	100	87	92	97	98	98	70	100	100	100	85	95	100		
7	100	100	100	100	100	100	98	95	100	100	77	58	100	100	100	100	100	100	98	17						
8								42	100	100	100	100	100	100	100	100	100			95	100	95	100	93		
9	100	100	100	98	100	100	100	100	98	100	100	15	95	93	100	98	43				85	92	52			
10																	7	100	100	98	98	35	58	92		
11	100	100	98	98	102	100	100	98	100	100	98	100	97	100	100	100	98	100	72	100	98	98	95			
12	97	88	98	98	100	98	100	98	28	100	98	28	85	92	93	77	100	100	98	100	100	100	97	97		
13			57	100	98	100	100	97	98	100	97	98	100	92	100	85	92	93	77	100	100	98	100	100		
14	100	98	97	58	50	100	97	92	50	100	100	100	98	98	58	97	100	63	97	100	63	100	97	97		
15														17	100	100	98	98	100	100	98	100	82	100		
16	72	100	77		80	100	100	100	100	100	100	102	88	90	88	98	100	100	100	92	100	95	100	100		
17	100	100	98	3											92	8	95	55	87	97	100	98	82	98		
18	68	65	53	82	98	97	75	73	93	93	97	100	98	100	100	100	100	50	73	85	98	80	100	100		
19	98	100	98	100	98	60	100	97	98	97	97	98	98	98	43	100	23	97	48							
20							80	98	100	100	100	100	98	102	100	98	63	93	100	100	15	92	100	100		
21	100	100	100	100	100	100	100	100	100	100	100	37	100	98	100	100	97	100	43	33	100	100	25	25		
22	100	67															27	97	100	100	100	87	97	82		
23	67	100	88	100	80	67	100	100	100	100	100	100	100	100	100	100	97	67	67	100	100	100	100	100		
24	100	100	100	100	100	100	100	13																		
25		82	98	100	100	100	100	100	95	98	98	82	100	95	100	98	88	100	98	100	100	98	102	97		
26	100	100	95	98	85	100	100	100	100	48	42	100	100	95												
27																			82	98	100	98	100	100		
28	100	100	100	88	100	100	20	27	100	80	100	100	102	95	55		63	63	22	102	100	98	98	97		
29	98	58											8	100	98	100	98	100	100	58	83	100	98	98		
30	78	98	92	78	100	40	93	70	98	90	95	93	97	95	95	98	87	95	100	100	100	77	100	98		

ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR MAY 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT		
1	100	100	100	98	97	100	70	30	27	98	97	97	93	98	93	97	27	57										
2						77	100	98	98	97	98	98	57	98	85	88	25	92	92	73				102	100			
3	100	95	100	100	98	100	57	40	18	98	98	53	27	100	98	97	98	73										
4																			42	100	100	100	98	100	98			
5	98	100	100	98	100	97	100	33	87	98	100	100	98	100	23	63	42				55	100	98	100	100	100		
6	95	87	100	88	100	95																				10		
7	100	98	100	100	100	100	95	100	97	100	98	100	100	100	63	60	3	2	98	100	100			27	100	82		
8	42	68	98	98	100	95	88	98	100	80	88	100	62	40														
9										80	100	100	100	100	97				43	102	100	97	98	100	98			
10	93	100	100	100	98	100	98	100	52	95	92	98	100	88	100	52					52	95	97	100	102	98		
11	33																									23	100	
12	97	40	92	93	98	100	98	100	100	98	100	93	100	98	100	40										10		
13	65	83	97	95	52	8	98	100	100	95																		
14					83	92	97	100	100	95	85	98	100	98	100	95	97	43										
15																												
16															43	100	98	55	70	67	77	82	67	58	58			
17	98	100	82	98	98	80	98	40	32	78	98	100	100	93	100	100	100	98	100	95	87	95	100	77				
18		20	92	75	62																					25	50	
19	55	100	100	100	100	100	100	100	57	100	100	100	100	98	100	93	65	100	100	95	98	100	100	100	100			
20	93	47		72	98	60	100	97	98	100	100	100	100	88														
21									90	98	100	92	93	98	82	100	100	100	100	100	100	100	100	100	92	83		
22	100	100	98	100	100	100	100	88	100	100	100	100	98	100	100	98	100	68	98	67	47	100	98	32				
23												3	92	97	95	88	28	98	100	82	47	93	97	98	98			
24	98	100	98	98	97	98	100	92	102	97	82	100	58	53	97	100	97	98	95	90	100	98	100	100				
25	10	88	98	100	100	100	77	73	93	100	97	95	98	98	10													
26			30	100	98	100	100	100	100	100	100	100	98	93	100	100	30	92	98	98	98	100	102	100				
27	98	100	100	100	95	102	100	100	100	97	100	95	100	98	100	95	100	83	12									
28														73	100	100	100	100	100	100	100	100	100	100	100			
29	98	100	100	100	100	100	100	100	100	100	100	100	100	90	92	100	100	100	98	100	100	98	95	100				
30	98	102	100	47																						65	100	97
31	98	100	100	98	100	98	100	98	57	100	98	100	98	72	100	100	73	100	100	100	100	100	98	100	100			







ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR AUG 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

CAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT	
1	100	8																									
2			48	78	100	100	100	98	100	95	100	98	62				75	100	100	100	100	95					
3			18	100	95															73	98	98	63	95	95		
4																											
5	80	95	98	97	98	93	100	78						7	100	100	102	97	92								
6																											
7				50	100	100	55	98	20	50	97	68	53	77	98	50										92	
8	100	100	98	100	98	60	67																				
9												12	102	100	100	98	100	98	88	100	33	38	98	100			
10	93							37	58				62	25													
11																											
12				8	100	100	98	100	98	93	93											65	62	90	98		
13	100																										
14											33	100	95	78	100	100	98	100	93	88	28						
15		33	102	98	100	55	65	57	100	65	100	100	40														
16																						58	32	73	100		
17	75	100	73	72	33	97						25	87	97	52	98	97	85									
18																											
19			65	100	100	100	100	100	98	98	98	75	50	100								63	100	100	100		
20	98	87	98	50																							
21																		85	98	98	100	98	93	100	100		
22	50							100	100	100	98	100	47														
23																											
24		50	100	100	100	98	90	100	98	67	70						80	100	100	98	45						
25																											
26									48	93	42				3	20	67	97	93	52	100	3					
27	20	73	98	25																							
28																						92	100	100	100		
29	100	100	97	97	98	38					62	100	100	100	100	17											
30																											
31								75	97	98	93	12	100								93	100	98	100	100		

ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D IONS

DATA COVERAGE (%) FOR SEP 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT	
1	100	25																									
2																											
3						27		42	97	100	98	37					92	100		100	100	100	98	50			
4																											
5	50	100	97	100	100	95		95	100	100	50				2	87	92	97	98		78						
6																											
7																											
8	80	100	90	37	73	52							8	43	73	57	42	92	50								
9																											
10	85	98	98	72							37	82	68	77	22									93	98		
11																											
12									63	93	32																
13	67	100	80																		88	20	98	88	77	98	
14																											
15				7	100	100		67	98	97	40						92	98	98		98	100	98	100			
16																											
17		33	98	97	82	92		93	97	28				20	100	97	97	100	100		17						
18																											
19										50					52	98	25	5	33								
20		75	100	98	67																				90	88	
21																											
22	3	97	95					27	98		77	100	95	97	17						<del>58</del>	<del>100</del>	<del>73</del>	<del>97</del>	<del>95</del>		
23																											
24																											
25																											
26																											
27			37	100	80	80		15																			
28																											
29		67	97		48	72		67	15																		
30	55	98	100	22								50	100	100	92		97	98	100		100	68	75	93	98	98	



ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 20 IONS

DATA COVERAGE (%) FOR NOV 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

CAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT
1													17	100	50	100	100	98	50					13	62	
2			58	18		25																				
3																										
4		42	62	95	80					65	48	15	80	102	100	100	83	100	98							67
5																				92						
6									32	100	100	100	100						47	95	35	12	43	37	100	
7	100	65	75																							
8																										
9					60	50		48	53	100	100	93		5						50	47		80			
10																										
11														70	98	5	2	100	100		50					
12																										
13									47	100	78				82										95	97
14		63		3	100	100			60	100	100	100	8			62	100	60	100		25			72	20	98
15		67	62			98		2				3	43	75	52	18	100	98	98	100	100	100	67	73	98	
16		98	85	10					32	27	100	100	100	97	100											
17																	25	98								
18																			32	35	100	87		2	58	
19																										
20																					48	100	82	28		
21			52	60	42	98	92	18	100	100	3	93	42													
22																										
23		67	42	98	87	43	65						83	100	100	100	38		92	100	3		77	45	77	
24																										
25												100		77		93	97	2				43	47	67	100	
26		77			72	100	100	100	58																	
27																										
28		33	47					68		83	100	100	95	77						33	75	50	98	98	23	
29																			13	92						
30				20	40	42	80	100	57		50						73	15	87	40	83	100	55			

ISEE-1 FPE (LASL/MPE, S.J. BAME, P.I.) 2D ICAS

DATA COVERAGE (%) FOR DEC 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT	
1		22																									
2																											
3				75	42	35				97	100	100	100	100	25			12	100	100	100						
4																											
5			43			95					10	85	12		45			95	68		37		93	33			
6																											
7										50	17		23	100	98	100						17		53	98	17	
8		98	100	70			8	100	82	12	25																
9																										52	
10		18				17	63	98			28	50	100	100	100	100	100	53	53	53	63	10	42				
11																											
12				57	15		98	100	100	25	55				2	95		98	100	100		57	97	100	95	82	
13										102	98	98	100														
14															67												
15					100	100	100	100	102	100	92	48	100	97	75												
16																										33	98
17		100	73	92	100	13					87	10	12	100	100	100	102	100	62		97	75					
18			90	33																							
19								92	100	98	102	100	100	50							92	100	98	30	87	23	
20			77			92	100	98	100	88																	
21															25	100	100	97	100		100	100	98	98	83		
22					65	27	75	100	98	98	80			95	100	100	98	102	98		98	100	97	100	8		
23																						97	98	98	98	100	
24		100	93	73	12	53	100	83	10						98	98	100	80	102		98	32	37	97	98	95	
25			8	72	100	48																					
26								83	100	25	50	98	100	100	100	100	98	50								12	
27		100	87	8	98	98	100	98	100	100	100	100	100	100	68	100	98	100		100	98	100	98	92	95		
28			58			17	98	100	27											50	98	97	98	100	98	80	48
29			32	70	15				23	77	100	98	98	100	100	102	100	97	100		98	100	100	100	100	100	
30			73	20	87	100	75																			57	
31		97	30	53	100	98	95	93	98	100	98	100	98	27					27	75	95	57	45	98	62	88	













ISEE-2 FPE (LASL/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR FEB 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT
1	100	100	100	52	102	100	100	90	92	97	93	97	98	100	97	98	98	97	85	23	52	95	93	28		
2	22	100	98	100	95	100	50				57	98	100	100	33	87	80	100	97	97	100					
3	100	100	100	100	100	97	100	100	93	100	100	100	95	100	100	100	98	97	100	100	97	98	100	100		
4	100	100	98	100	98	100	100	98	100	100	100	98	97	100	102	67								72	97	
5	100	100	100	98	100	100	100	102	98	100	102	97	100	102	22	98	100	100	100	88	100	75	100	95		
6	98	98	100	100	98	38	98	102	98	98	98	100	100	95	100	102	97	95	100	98	98	95	100	97		
7	82						90	100	100	97	100	102	100	98	100	97	98	98	100	97	100	100	100	100		
8	97	100	100	100	98	100	100	102	100	98	100	100	100	100	97	98	100	98	98	97	97	97	100	100		
9	100	83	100	100	100	97	100	100	100	97	97					50	40	98	100	100	98	97	100	102		
10	88	98	100	98	100	98	100	98	100	98	98	100	100	100	100	98	100	100	72	55	22	27	88	87		
11	100	100	100	97	97	98	98		40	98	98	98	100	98	100	97	100	98	100	98	62					
12			10	100	100	98	100	95	100	95	98	98	100	98	98	100	100	98	98	100	97	48	7	102		
13	100	98	98	100	100	100	98	100	87	100	100	100	90	100	100	100	100	100	97	98	98	93	95	98		
14	100	95	100	100	100	100					73	100	100	102	95	100	97	98	98	97	100	100	100	100		
15	102	100	100	98	100	100	100	100	98	98	100	100	98	95	98	100	98	100	97	97	100	95	98	100		
16	97	100	98	100	100	98	98	100	97	100	97	98	100	98	87	33				33		67	100	100		
17	100	100	100	100	100	98	100	93	95	98	100	100	97	100	97	92	100	98	98	98	100	100	87	100		
18	100	98	98	97	98	100	100	100	98	102	100	100	100	100	100	98	100	100	98	100	100	100	100	63		
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																					13	73	98	100	100	



ISEE-2 FPE (LASL/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR APR 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT
1						98	98	98	100	100	100	93	100	97	100	98	100	100	100	98	88	95	98	95	100	
2	100	100	100	100	100	100	98	100	100	100	100	27	97	97	100	98	97	72	63				98	100	100	
3															90	100	97	98								
4	100	7	73		97	100	97	100	98	98	98	100	100	100	97	50	98	98	95	98	100	100	97	100	100	
5	100	80																45	2	13	47	92	95	98	100	
6	100	100	100	100	100	98	97	97	100	100	98	98	100	98	100	100	100	100	90	93	93	93	100	100	100	
7	100	100	100	100	100	100	100	100	93	100	100	100	97	100	100	45		58	98	95						
8										93	100	98	100	100	98	97	100	100	98	100	5	95	95	100	100	100
9	100	100	100		97	98	100	100	100	98	100	100	15	92	92	98	97	42			3	100	100	20	100	100
10																		18	98	100	95	100	100	98	100	
11		97	100	100	100	100	100	100	97	97	100	100	98	100	97	95	100	98	100	95	100	100	100	75	65	
12		97	88	98	98	100	100	100	100	100	98	100	100	97	100	100					68	93	95	97	98	
13	100	100	98	100	98	100	100	97	98	98	90	92	100	85	95	90	75	98	100	98	98	100	100	97	97	
14		97	93	82	97	100	100	93	98	100	100	98	100	100	98	93	98	27	18							
15														87	100	100	98	100	100	100	95	95	98	100	97	
16		98	65	90	100	100	100	98	98	100	100	100	97	88	90	100	100	98	100	95	85	100	100	98	100	
17		100	100	65											3	23		3		45	100	98	100	83	100	
18		100	88	100	92	10	17	97	98	98	97	53	100	98	98	93	58	30	33	82	98	98	82	100	98	
19		52	87	100	95	100	73	58	48	85	93	100	95	100	100	100	93	20	98	98						
20						28	100	98	100	100	100	100	100	100	98	98	98	98	65	95	100	100	97	98	100	100
21		100	100	100	100	100	100	98	100	98	100	95	35	98	97	97	100	97	98	43	33	100	100	98	100	
22		100	100	17												20	52	100	100	100	98	98	98	100	98	
23		100	100	100	100	43	87	98	100	100	100	100	98	100	100	98	100	95	88	100	100	98	100	100	100	
24		83	67	100	100	83	100	72																		
25		17	100	100	100	100	98	100	100	72	98	100	90	100	95	100	97	90	97	98	98	100	97	100	98	
26		100	100	97	97	83	100	98	100	98	97	100	100	98	100	98	7									
27											17	100	100	100	75			97	97	100	98	98	100	95	98	
28		92	97	100	58	100	100	18	27	100	80	88	98	100	97	57		63	63	25	98	98	100	100	100	
29		95	68													43	53	42	87	100	100	100	100	100	100	
30		98	98	98	95	100	92	43	67	93	73	87	100	100	98	98	90	95	97	100	100	98	100	100	98	



ISEE-2 FPE (IASI/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR JUN 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24 UT	
1		98	100	100	100	100	95	100	100	98	100	98	100	98	100											
2									73	100	100	92	98	98	97	52										
3		82	97	98	98	100	100	100	100	100	100	98	95	100	98	97					98	98	100	98	100	
4																										
5		100	100	100	100	100	98	98	97	100	98	100	100	67	100	98	82	93	97	98	100	97	100	100	98	
6		77	100	98	100	100	98	95	80			58	13	53		5										
7		98	70	98	100	100	90	100	98	98	100	97	100	100	68	82	97	100	90	100	100	98	93	92	82	
8		98	100	100	98	100	98	100	58			92	100	98	98	93	73	57	98	98	97	83	95	92		
9																										
10		100	95	98	98	100	100	97	98	98	98	100	97	100	100	100	100	100	100	98	60	98	100	100	100	
11																										
12		97	93	100	100	100	98	78	47							73	85	100	100	100	100	12	25	95	100	
13		100	100	98	100	98	98	100	98	100	98	98	100	98	42	40	100	95	100	98	98	100	100	100	100	
14		100	98	100	98	100	100	100	98	100	98	95	100	100	72		75	100	100	100	100	98	100	100	100	
15		100	95	100	100	98	100	100	97	97	98	100	98	100	98	77	50	98	100	97	77	100	95	100	63	
16			28	100	38							73	100	85	45		42	95	67	83	98	70	100	97	100	
17		100	100	100	98	95	95	98	98	100	98	98	98	100	58	63	100	100	100	98	100	100	100	97	97	
18		100	93	97	100	98	85	97	70			97	92	82	97	17										
19		98	93	88	100	100	65	100	100	100	100	98	98	95	67	62	95	100	100	100	100	98	97	95	100	100
20		7	13	48	25	23	100	75	100	92	100	98	98	100	53	62	38	97	93	97	25	33	100			
21																										
22				12	100	93	98	100	97	98	100	98	98	55	77	47					40	35	95	100	98	73
23		95	100	100	92	88	88	98	98	95	98	97	97	100	92	100	62	98	100	98	25	97	100	98	100	
24		100	100	98	47	100	37	80									20		93	97	82	25	93	100	100	
25		100	100	98	97	100	100	100	97	97	100	100	98	98	88	98	95	100	100	100	95	100	98	100	98	
26		78	92	42	100	98	97	93	92	97	98	95	100	98	100	92	70									
27		98	97			75	98	95	98	98	100	100	97	73	100	7	73	80	73	93	98	95	100	88	25	
28			90	100	98	100	73		77	95	100	100	98	100	97	93				98	100	98	92	92	97	
29		98										40	83	85	43	35	23	12	2			63	58	72	82	
30		95	100	97	73	93	97	92	98	98	92	100	48			35	100	98	100	100	98	97	98	77	92	
		55	98	100	100				27	77	97	97	85								37	67		77	33	



ISEE-2 FPE (LASL/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR JUL 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT
1	100	82	100	97	97	97	98	98	93	97	98	98	97	97	35	97	67		65	92	87	97	98	7		
2	100	95	100	98	100	53	77	85	75	72	43	28	100	98	85	53										
3		38	100	50		80	7	62	98	85	5															
4							92	97	32		47	98	55	23	85	95	97	42						27	98	
5	90	98	98	93	60	100	52					23	37	65	25	90	93	47	30		83	98	20	42		
6		23	52	68	100	53	25		33	93	97	73	97	48										63	98	
7		17	98	98	98	85	22	100	98	100	100	100	100	93	95	2					40	98	97	98		
8	98	98	100	88	57	95	58	37	38	40	55	28														
9						50	100	100	98	95	87	93	93	97	45	50	42	23			40	98				
10											100	17	45	68	7	12	7	68	63	40	98	60				
11	63		48	25	27	77	58			38	72	48	83	58	100	8	77	2	98	25					70	
12	38	97	93	78		78		68	98							60	72			22	10		3	18		
13																		15	80	55		82	55	50		
14		17	97	93	100	98	100	100	47	30	28	22	45	17		67	98	3	30							
15		45	98		87	98	100	95	98	100	30				25		85	100	100	100	98	90	35	33		
16								93	93	87	83	85	100	23		93	72				37	33	100	77		
17	50	100	75	38						58	5	42	97	72	67	100	75	100				98	25			
18																					92	45	50	23		
19	75	100	97	100	100	100	98	100	98	100	95	100	98	98	18					92	100	100	78	98		
20	100	100	100	98	98	97	85	65	95	98	75	98	70	100	75		68	92				85	100	100		
21	100	100	98	100	93	98	87	95	98	95	98	93	67	37	10	93	95	5			88	100	75			
22					23	93	52	67	68	3	98	73	8	60		93	3	92	92		97	97				
23					70		75	75	65	75	60	65	40		33	63	82	50	95	100	92	100	55	5		
24	33	98	98	97	97	92	53	88	95	22				22	63	97	88	37	67	23	97	53	67	70		
25			62		25	98	87	62	35	87	98	100	38	68		43	87	93	8	50	100	98	100	58		
26	98	97	98	97	98	95	97	100	98	98	98	80	98	35	95	100	97	100	55					95		
27	97	100	95	98	100	100	100	98	97																	
28															92	100	98	98	100	5	87	97	92	100		
29	93	100	50					27		100	20		65	98	72											
30				48	83					17	97	98	100	98	100	95	87	100	98	62	93	98	92	95		
31	100	98	100	100	98	98	97	98	100	98	45	8	98	20				30	97	98	100	100	100	100		

ISEE-2 FPE (LASL/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR AUG 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT				
1	98	8																												
2		58	100		80	100	100	100	95	100	82	88	92	55	60	23	55	98	100											
3					70	67														70	98	98		98	100	97				
4																82	100	100	98	50										
5	63	95	100		100	97	92		97	82																				
6																														
7		50	98		100	100	98	93	90	22	50	98	68	52		58	48									83				
8	98	100	98		98	97	60	58												5	87	98		95	95	100				
9																														
10	73								37	75	100	100	90	62	67															
11																														
12					8	97	98	98	100	92	92								57	100	98	7	100		10	57	100			
13	88																													
14													80		45	53	48	95	100	97	78	18								
15		40	90		33	73		65	57	63	60	92	92	32												73	75	25		
16																														
17	70	63	57			60	97	50						17	97	80	88	85	75											
18																														
19					98	98	97	100	100	100	97	100	72	48	97	43										57	62	98	100	
20	100	82	97		50																									
21																				90	98	100	55	68		48	97	95		
22	67	20					27	82	95	100	97	98	42																	
23																														
24		50	100		83	100	58	78	98	95	95	62							47	98	100	100	50							
25																														
26										58	98	42				2	98	93	100	90	92	93								
27	35	92	100		27																					48	100	100	98	
28	75	92	72		57																									
29	98	43	33		100	100	27					80	100	82	100	97	33													
30																														
31									75	100	98	95		52												98	92	97	100	100





ISEE-2 FPE (LASL/MPE, G. PASCHMANN, PI) 2D IONS

DATA COVERAGE (%) FOR NOV 1978

(1 MIN. RESOLUTION, SOLAR WIND AND INNER MAGNETOSPHERE EXCLUDED)

DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	UT			
1																													
2		8	97	8	68	98	43							35	43			73	72					5	73	47			
3																													
4																													
5									22	87		13	57	38				42		50	50								
6																													
7																			15	8	5	58	62						
8																													
9															75	67				90									
10																						72	100		45				
11																													
12					<del>50</del>	<del>98</del>		<del>75</del>					<del>78</del>		<del>97</del>	<del>100</del>	<del>100</del>		<del>93</del>	<del>98</del>	<del>75</del>								
13																													
14		37	10	68								60	98	67				75											
15						90		98	3			83	63	98	82	75		100	100	98			17	50	93	2			
16		72								25		32	52	100	100	100	98		98	72			32	63	78	53			
17								15	47	82		38	45			47								97	33	72			
18																													
19								22	63																				
20																													
21		20	45	82		7	53																						
22								5	95	100		98	100	17															
23		32	72				17																		17	8	17		
24												2	98	98		2	25	87		77	100								
25			98	98		27	50								42	100		78	75	50					85				
26								92	100																				
27																													
28																													
29						30		58	50	88		57	75	98		40	98	100		95	100	83			13	98	95	100	57
30			2		55	95																							
								5	93	47						80		53	52	20		62	70	60		18		93	





(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 1 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 4 10 1977 302 82200. 1977 319 32400.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1977 302 82221.0 4 3.266 -7.875 2.769 1 1.362 8.70E-09 0 27.1 11.6 4.63E+07  
 2 1977 302 82280.9 4 3.286 -7.893 2.781 1 1.331 7.95E-09 0 -14.9 -17.2 4.33E+07  
 3 1977 302 82340.9 4 3.302 -7.907 2.790 1 1.284 8.20E-09 0 -5.7 -8.3 4.62E+07  
 4 1977 302 82400.9 4 3.322 -7.924 2.802 1 1.240 7.82E-09 0 19.8 2.1 4.57E+07

4677 1977 319 32349.3 10

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 2 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 11 20 1977 319 57000. 1977 343 23400.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1977 319 57001.1 11 0.369 -7.686 2.475 1 0.850 3.68E-09 0 16.1 -17.6 3.14E+07  
 2 1977 319 57061.0 11 0.382 -7.710 2.487 1 0.774 2.45E-09 0 16.7 7.5 2.30E+07  
 3 1977 319 57121.0 11 0.396 -7.734 2.499 1 0.781 2.03E-09 0 -0.2 32.3 2.72E+07  
 4 1977 319 57181.0 11 0.410 -7.757 2.511 1 0.871 4.71E-09 0 -0.7 32.1 3.92E+07

9886 1977 343 23385.7 20

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 3 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 21 30 1977 343 44400. 1978 2 20100.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1977 343 44446.5 21 -2.935 -4.970 1.659 1 1.565 4.35E-09 0 4.0 21.9 2.01E+07  
 2 1977 343 44506.5 21 -2.935 -5.006 1.674 1 1.536 4.39E-09 0 6.5 7.7 2.07E+07  
 3 1977 343 44566.5 21 -2.935 -5.034 1.686 1 1.599 4.06E-09 0 -2.2 8.0 1.84E+07  
 4 1977 343 44626.4 21 -2.935 -5.070 1.701 1 1.398 3.94E-09 0 25.6 22.6 2.04E+07

16081 1978 2 20046.8 30

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 4 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 31 40 1978 2 35400. 1978 26 4800.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1978 2 35546.7 31 -4.670 -3.353 1.738 1 0.979 1.86E-09 0 6.6 -16.2 1.37E+07  
 2 1978 2 35606.7 31 -4.684 -3.386 1.753 1 0.958 1.80E-09 0 -13.0 5.4 1.36E+07  
 3 1978 2 35666.7 31 -4.699 -3.419 1.768 1 1.019 1.73E-09 0 -1.6 13.4 1.23E+07  
 4 1978 2 35726.6 31 -4.713 -3.452 1.784 1 1.039 1.76E-09 0 -9.2 15.0 1.23E+07

24101 1978 26 4745.3 40

B1  
 PRINTOUT OF  
 FILE-INDEXER  
 +  
 FIRST 4 DATA } RECORDS, ISEE1



(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 5 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 41 50 1978 26 26700. 1978 49 86400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 26 26843.9	41	-5.660	-1.241	1.845 1	0.050	4.11E-11 1	-33.2	-58.9	5.74E+06
2	1978 26 26903.9	41	-5.686	-1.266	1.860 1	0.022	1.77E-11 1	28.8	-46.5	5.64E+06
3	1978 26 26963.9	41	-5.706	-1.284	1.872 1	0.056	3.47E-11 1	-75.5	7.6	4.13E+06
4	1978 26 27023.8	41	-5.733	-1.308	1.887 1	0.041	2.66E-11 1	-97.9	59.0	3.95E+06

23031 1978 49 86366.5 50

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 6 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 55 60 1978 59 67200. 1978 73 80700.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 59 67308.6	55	-5.329	1.934	2.028 1	0.270	4.25E-09 0	-208.4	-80.4	1.11E+08
2	1978 59 67344.6	55	-5.349	1.930	2.037 1	0.312	5.30E-09 0	130.1	64.9	1.22E+08
3	1978 59 67380.6	55	-5.369	1.926	2.045 1	0.226	2.94E-09 0	-32.0	-15.7	9.39E+07
4	1978 59 67416.6	55	-5.389	1.922	2.054 1	0.280	4.79E-09 0	-242.0	3.2	1.20E+08

5119 1978 73 80686.6 60

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 7 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 65 70 1978 83 59700. 1978 97 69000.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 83 59886.8	65	-4.625	3.892	2.346 1	0.853	1.49E-09 0	13.9	-13.7	1.27E+07
2	1978 83 59946.8	65	-4.657	3.898	2.359 1	0.739	1.41E-09 0	36.3	15.9	1.38E+07
3	1978 83 60006.8	65	-4.689	3.904	2.373 1	0.722	1.44E-09 0	8.9	-2.6	1.45E+07
4	1978 83 60066.7	65	-4.720	3.910	2.386 1	0.679	1.29E-09 0	1.3	17.8	1.37E+07

12634 1978 97 68977.1 70

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 8 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 71 80 1978 98 27300. 1978 121 64800.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 98 27344.2	71	-12.002	6.854	5.820 1	0.114	5.00E-10 0	2.3	59.8	3.15E+07
2	1978 98 27404.2	71	-12.017	6.855	5.825 1	0.092	5.01E-10 1	-16.6	-22.2	3.96E+07
3	1978 98 27464.2	71	-12.033	6.856	5.831 1	0.081	4.12E-10 1	-25.1	-108.6	3.59E+07
4	1978 98 27524.2	71	-12.048	6.857	5.836 1	0.095	5.65E-10 1	-102.4	-71.4	4.20E+07

22269 1978 121 64587.8 80

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
9 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 81 90 1978 122 18600. 1978 145 51000.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 122	18892.8 81	-8.401	10.991	5.811 1	0.875	5.11E-10 0	3.7	1.6	4.23E+06
2	1978 122	18952.8 81	-8.415	10.998	5.816 1	0.819	5.33E-10 0	-6.5	-8.8	4.71E+06
3	1978 122	19012.8 81	-8.429	11.004	5.821 1	0.895	4.91E-10 0	8.7	-13.9	3.96E+06
4	1978 122	19072.7 81	-8.443	11.011	5.827 1	0.752	5.45E-10 0	5.0	14.3	5.24E+06

18916 1978 145 50751.3 90

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
10 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 91 100 1978 146 9600. 1978 169 46800.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 146	9814.0 91	-3.350	13.311	5.732 1	0.091	1.66E-10 1	49.5	21.2	1.29E+07
2	1978 146	9874.0 91	-3.362	13.323	5.737 1	0.016	5.02E-11 1	-10.3	45.0	2.32E+07
3	1978 146	9934.0 91	-3.370	13.333	5.741 1	0.112	1.15E-10 0	-104.2	11.6	6.73E+06
4	1978 146	9993.9 91	-3.381	13.345	5.747 1	0.089	1.10E-10 1	-113.0	79.0	7.78E+06

24859 1978 169 46745.0 100

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
11 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 101 110 1978 169 65700. 1978 193 36000.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 169	65726.2 101	3.426	6.087	3.025 1	0.624	3.78E-09 0	-14.7	-6.5	4.38E+07
2	1978 169	65786.2 101	3.426	6.118	3.037 1	0.640	3.30E-09 0	15.7	-6.5	3.74E+07
3	1978 169	65846.2 101	3.425	6.149	3.049 1	0.596	2.89E-09 0	7.7	9.9	3.51E+07
4	1978 169	65906.1 101	3.425	6.173	3.058 1	0.628	2.86E-09 0	21.2	-11.8	3.30E+07

21114 1978 193 35994.9 110

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
12 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 111 120 1978 193 52800. 1978 217 28200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 193	53010.9 111	4.783	2.768	2.379 1	0.583	4.78E-09 0	20.3	-6.0	5.95E+07
2	1978 193	53070.8 111	4.795	2.792	2.390 1	0.611	4.61E-09 0	-42.9	29.0	5.45E+07
3	1978 193	53130.8 111	4.812	2.825	2.404 1	0.403	4.79E-09 0	34.5	43.2	8.60E+07
4	1978 193	53190.8 111	4.828	2.857	2.419 1	0.600	4.56E-09 0	-3.2	15.9	5.51E+07

16794 1978 217 27972.7 120

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 13 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 121 130 1978 217 46500. 1978 241 19500.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 217	46563.7 121	6.574	1.756	2.985 1	0.498	4.09E-09 0	32.8	-32.7	5.94E+07
2	1978 217	46623.7 121	6.595	1.778	2.986 1	0.440	3.86E-09 0	52.5	14.1	6.33E+07
3	1978 217	46683.6 121	6.616	1.799	3.007 1	0.546	4.47E-09 0	2.3	-22.6	5.92E+07
4	1978 217	46743.6 121	6.637	1.820	3.018 1	0.489	4.11E-09 0	-32.0	-17.8	6.07E+07

8343 1978 241 19427.2 130

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 14 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 131 140 1978 241 37200. 1978 265 10800.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 241	37358.7 131	6.463	-0.951	2.932 1	0.753	3.34E-09 0	-19.0	-28.4	3.21E+07
2	1978 241	37418.7 131	6.492	-0.939	2.943 1	0.831	3.14E-09 0	10.5	-18.3	2.73E+07
3	1978 241	37478.6 131	6.520	-0.927	2.954 1	0.784	3.56E-09 0	9.0	-31.1	3.28E+07
4	1978 241	37538.6 131	6.549	-0.916	2.966 1	0.387	3.00E-09 0	-17.6	-33.1	5.61E+07

IFY218I VSIOS : I/O ERROR, FILE FT10F001, DMSVT120S INPUT ERROR 003 ON FT10F001..  
 STANDARD CORRECTIVE ACTION TAKEN. EXECUTION CONTINUING.

I/O ERROR: INPUT FILE / DS: 165 212

5881 1978 265 10778.6 140

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 15 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 141 150 1978 265 27600. 1978 289 1200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 265	27889.0 141	4.960	-3.286	2.763 1	0.340	1.86E-09 0	29.3	123.1	3.86E+07
2	1978 265	27949.0 141	4.992	-3.288	2.775 1	0.508	2.97E-09 0	3.3	18.4	4.24E+07
3	1978 265	28008.9 141	5.025	-3.289	2.787 1	0.478	2.65E-09 0	56.3	33.0	3.99E+07
4	1978 265	28068.9 141	5.057	-3.290	2.799 1	0.419	2.52E-09 0	-10.9	19.3	4.36E+07

4595 1978 289 1130.0 150

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 16 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 151 160 1978 289 27900. 1978 312 79200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 289	28146.1 151	6.898	-6.291	4.097 1	0.569	4.61E-09 0	2.7	-1.6	5.87E+07
2	1978 289	28206.0 151	6.921	-6.297	4.104 1	0.399	4.32E-09 0	33.3	19.5	7.84E+07
3	1978 289	28266.0 151	6.944	-6.304	4.111 1	0.559	4.66E-09 0	15.2	19.9	6.04E+07
4	1978 289	28326.0 151	6.966	-6.310	4.119 1	0.448	4.90E-09 0	-5.9	13.8	7.93E+07

5126 1978 312 79087.1 160

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 17 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 161 170 1978 313 15600. 1978 336 68400.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1978 313 15918.7 161 2.440 -7.430 3.572 1 0.732 4.90E-09 0 61.1 19.1 4.83E+07  
 2 1978 313 15978.7 161 2.460 -7.448 3.580 1 0.774 4.78E-09 0 -9.5 -7.0 4.48E+07  
 3 1978 313 16038.8 161 2.480 -7.467 3.589 1 0.622 4.48E-09 0 31.2 27.6 5.21E+07  
 4 1978 313 16098.6 161 2.500 -7.486 3.597 1 0.737 4.55E-09 0 31.5 1.9 4.47E+07

6391 1978 336 68345.2 170

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 18 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 171 180 1978 337 8100. 1978 360 61200.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1978 337 8114.9 171 -0.820 -8.013 3.640 1 1.556 6.87E-09 0 6.4 19.7 3.20E+07  
 2 1978 337 8174.9 171 -0.810 -8.038 3.648 1 1.308 6.58E-09 0 -15.7 -0.3 3.65E+07  
 3 1978 337 8234.9 171 -0.799 -8.062 3.656 1 1.410 7.07E-09 0 -5.0 15.2 3.63E+07  
 4 1978 337 8294.9 171 -0.788 -8.087 3.664 1 1.511 7.24E-09 0 14.4 -4.7 3.47E+07

8998 1978 360 61092.9 180

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 19 ISEE1 FPE 2D IONS 85. LANL/MPE, S.J. BAME, PI 181 190 1978 360 85800. 1979 19 54300.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
 1 1978 360 85961.9 181 -4.084 -7.026 3.651 1 0.710 3.92E-09 0 44.6 -21.9 3.98E+07  
 2 1978 360 86021.9 181 -4.084 -7.053 3.659 1 0.602 3.36E-09 0 17.4 43.2 4.02E+07  
 3 1978 360 86081.9 181 -4.085 -7.080 3.667 1 0.642 2.88E-09 0 47.2 -16.2 3.23E+07  
 4 1978 360 86141.8 181 -4.085 -7.106 3.675 1 0.625 3.86E-09 0 -0.4 -10.0 4.48E+07

11665 1979 19 54197.5 190

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MESSAGE SUMMARY: MESSAGE NUMBER -- COUNT

218 1

B-2

Printout of  
FILE-HEADER  
+  
FIRST 4 DATA } RECORDS, Page 2

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
1 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 2 10 1977 300 10800. 1977 319 32400.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
1 1977 300 10800.4 2 11.401 -1.270 5.251 0 79.567 2.94E-08 0 -104.4 72.7 1.69E+06  
2 1977 300 10869.4 2 11.385 -1.260 5.242 0 86.860 3.05E-08 0 -117.0 56.3 1.52E+06  
3 1977 300 10929.4 2 11.370 -1.250 5.234 0 83.632 2.91E-08 0 -112.5 60.5 1.53E+06  
4 1977 300 10989.4 2 11.354 -1.240 5.226 0 84.128 2.98E-08 0 -130.9 50.2 1.37E+06

4233 1977 319 32383.3 10

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
2 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 11 20 1977 319 51000. 1977 343 20700.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
1 1977 319 52770.2 11 -0.602 -5.792 1.571 1 1.232 3.47E-09 0 10.2 8.2 2.04E+07  
2 1977 319 52830.2 11 -0.589 -5.824 1.585 1 1.070 4.92E-09 0 -0.6 53.8 3.31E+07  
3 1977 319 52890.2 11 -0.575 -5.855 1.599 1 0.909 3.71E-09 0 -30.0 2.5 2.95E+07  
4 1977 319 52950.2 11 -0.562 -5.886 1.613 1 0.866 3.45E-09 0 11.2 -28.0 2.89E+07

9312 1977 343 20641.0 20

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
3 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 21 30 1977 343 45900. 1978 2 19800.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
1 1977 343 46004.1 21 -2.919 -5.965 2.082 1 0.872 2.74E-09 0 1.0 -11.4 2.28E+07  
2 1977 343 46064.1 21 -2.918 -5.990 2.092 1 0.896 3.13E-09 0 -4.3 9.5 2.53E+07  
3 1977 343 46124.1 21 -2.916 -6.023 2.106 1 0.931 2.96E-09 0 11.5 4.6 2.30E+07  
4 1977 343 46184.1 21 -2.914 -6.055 2.120 1 0.947 3.19E-09 0 7.9 5.0 2.44E+07

15872 1978 2 19628.4 30

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
4 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 31 40 1978 2 35100. 1978 26 6300.

(DR#) YR DAY SEC ORB GSE-X GSE-Y GSE-Z E DEN ENDEN F VX VY T  
1 1978 2 35184.1 31 -4.681 -3.356 1.742 1 0.686 1.62E-09 0 3.9 11.0 1.71E+07  
2 1978 2 35244.1 31 -4.695 -3.390 1.758 1 0.755 1.52E-09 0 -4.3 -8.4 1.46E+07  
3 1978 2 35304.1 31 -4.710 -3.423 1.773 1 0.581 1.40E-09 0 -21.9 12.8 1.74E+07  
4 1978 2 35364.1 31 -4.721 -3.448 1.784 1 0.764 1.38E-09 0 8.5 15.9 1.31E+07

28227 1978 26 6240.6 40

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
5 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 41 50 1978 26 27000. 1978 49 85200.

(DR#)	YR DAY	SEC	ORB	GSE-X	GSE-Y	GSE-Z	E	DEN	ENDEN F	VX	VY	T		
1	1978	26	27164.7	41	-5.987	-1.539	2.032	1	0.067	1.06E-10	1	-79.6	46.9	1.09E+07
2	1978	26	27404.7	41	-6.079	-1.629	2.086	1	0.203	6.22E-10	0	19.4	17.1	2.22E+07
3	1978	26	27464.7	41	-6.097	-1.647	2.097	1	2.723	1.37E-09	0	8.5	-177.2	1.74E+06
4	1978	26	27524.7	41	-6.121	-1.671	2.111	1	0.131	4.55E-10	0	-1.8	19.5	2.52E+07

29586 1978 49 85137.5 50

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
6 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 55 60 1978 59 71400. 1978 73 81000.

(DR#)	YR DAY	SEC	ORB	GSE-X	GSE-Y	GSE-Z	E	DEN	ENDEN F	VX	VY	T		
1	1978	59	71568.2	55	-7.705	1.340	3.062	1	0.037	2.71E-11	1	33.6	17.7	5.18E+06
2	1978	59	71628.2	55	-7.730	1.332	3.073	1	0.033	2.74E-11	1	-7.8	9.4	6.02E+06
3	1978	59	71688.2	55	-7.756	1.324	3.084	1	0.038	2.76E-11	1	15.4	-22.8	5.15E+06
4	1978	59	71748.2	55	-7.781	1.316	3.095	1	0.033	1.84E-11	1	-27.4	-69.5	3.74E+06

5571 1978 73 80937.4 60

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
7 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 65 70 1978 83 61800. 1978 97 68400.

(DR#)	YR DAY	SEC	ORB	GSE-X	GSE-Y	GSE-Z	E	DEN	ENDEN F	VX	VY	T		
1	1978	83	61992.3	65	-6.009	4.110	2.932	1	0.037	1.94E-11	1	-27.3	-55.7	3.58E+06
2	1978	83	62052.3	65	-6.039	4.113	2.945	1	0.054	3.07E-11	1	45.2	10.1	4.01E+06
3	1978	83	62112.3	65	-6.062	4.116	2.954	1	0.010	1.44E-11	1	-23.6	12.8	1.07E+07
4	1978	83	62172.3	65	-6.091	4.119	2.966	1	0.033	1.38E-11	1	57.6	47.6	2.70E+06

11993 1978 97 68167.1 70

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
8 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 71 80 1978 98 28800. 1978 121 64800.

(DR#)	YR DAY	SEC	ORB	GSE-X	GSE-Y	GSE-Z	E	DEN	ENDEN F	VX	VY	T		
1	1978	98	29043.7	71	-12.533	6.895	6.018	1	0.087	1.39E-10	1	-50.0	25.5	1.13E+07
2	1978	98	29103.7	71	-12.547	6.895	6.024	1	0.060	1.63E-10	1	-66.3	11.2	1.95E+07
3	1978	98	29163.7	71	-12.562	6.896	6.029	1	0.072	1.91E-10	1	-26.6	-31.0	1.91E+07
4	1978	98	29223.7	71	-12.577	6.896	6.034	1	0.101	1.69E-10	0	3.1	-30.0	1.22E+07

23700 1978 121 64513.0 80

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 9 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 81 90 1978 122 15900. 1978 145 54000.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 122 15919.9	81	-7.891	10.655	5.554 1	0.752	5.61E-10 0	-8.5	-1.1	5.40E+06
2	1978 122 15979.0	81	-7.705	10.863	5.560 1	0.618	5.31E-10 0	12.1	4.8	6.21E+06
3	1978 122 16039.9	81	-7.720	10.671	5.565 1	0.634	4.70E-10 0	-2.8	1.3	5.38E+06
4	1978 122 16099.9	81	-7.735	10.678	5.571 1	0.668	5.30E-10 0	-11.8	-6.5	5.73E+06

20557 1978 145 53967.1 90

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 10 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 91 100 1978 146 10800. 1978 169 47400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 146 10875.0	91	-3.459	13.462	5.804 1	0.057	1.21E-10 1	9.3	-22.9	1.53E+07
2	1978 146 10935.0	91	-3.468	13.471	5.808 1	0.034	1.20E-10 1	22.8	-60.2	2.55E+07
3	1978 146 10995.0	91	-3.479	13.484	5.813 1	0.063	7.96E-11 1	8.1	29.0	9.05E+06
4	1978 146 11055.0	91	-3.490	13.496	5.818 1	0.049	1.22E-10 1	-38.8	88.1	1.74E+07

25289 1978 169 47399.5 100

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 11 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 101 110 1978 169 69000. 1978 193 32400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 169 69044.1	101	3.386	7.296	3.494 1	0.621	4.03E-09 0	-6.5	2.7	4.70E+07
2	1978 169 69104.1	101	3.384	7.324	3.505 1	0.641	4.52E-09 0	22.3	-1.8	5.10E+07
3	1978 169 69164.1	101	3.382	7.352	3.515 1	0.580	4.07E-09 0	14.0	-4.5	5.08E+07
4	1978 169 69224.1	101	3.380	7.373	3.523 1	0.657	4.56E-09 0	-10.5	-2.5	5.03E+07

17261 1978 193 32390.3 110

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 12 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 111 120 1978 193 55200. 1978 217 28200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 193 55329.4	111	5.175	3.558	2.732 1	0.337	3.75E-09 0	-2.5	-40.6	8.06E+07
2	1978 193 55389.4	111	5.188	3.589	2.745 1	0.363	3.62E-09 0	26.9	-11.6	7.22E+07
3	1978 193 55509.5	111	5.212	3.642	2.768 1	0.395	3.69E-09 0	-6.6	22.8	6.77E+07
4	1978 193 55569.5	111	5.226	3.673	2.780 1	0.411	3.71E-09 0	12.6	-12.7	6.54E+07

15602 1978 217 28174.2 120

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 13 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 121 130 1978 217 50700. 1978 241 19200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 217	50943.7 121	7.877	3.175	3.689 1	15.563	1.30E-08 0	-50.2	156.5	4.42E+06
2	1978 217	51003.7 121	7.893	3.194	3.698 1	20.792	1.77E-08 0	-31.1	143.9	4.86E+06
3	1978 217	51063.7 121	7.909	3.214	3.707 1	15.698	1.15E-08 0	-11.7	165.4	3.66E+06
4	1978 217	51123.7 121	7.925	3.233	3.716 1	15.592	1.45E-08 0	-77.4	166.7	4.69E+06

8061 1978 241 18938.4 130

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 14 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 131 140 1978 241 36600. 1978 265 9600.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 241	36627.1 131	8.324	-1.019	2.882 1	0.670	3.35E-09 0	17.0	8.6	3.63E+07
2	1978 241	36687.1 131	8.353	-1.008	2.893 1	0.536	3.51E-09 0	-4.1	-1.1	4.74E+07
3	1978 241	36747.1 131	8.382	-0.996	2.905 1	0.522	3.46E-09 0	26.4	-10.0	4.80E+07
4	1978 241	36807.1 131	8.411	-0.985	2.916 1	0.538	3.27E-09 0	-12.8	-31.3	4.40E+07

6116 1978 265 9402.9 140

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 15 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 141 150 1978 265 34200. 1978 288 86400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 265	34202.3 141	8.390	-3.164	3.954 1	0.307	3.02E-09 0	6.3	-15.9	7.12E+07
2	1978 265	34262.3 141	8.414	-3.162	3.962 1	0.313	2.72E-09 0	-23.3	-5.1	6.30E+07
3	1978 265	34322.3 141	8.438	-3.159	3.970 1	0.323	2.74E-09 0	26.8	-10.9	6.15E+07
4	1978 265	34382.3 141	8.463	-3.156	3.977 1	0.349	3.02E-09 0	36.7	25.2	6.26E+07

3670 1978 288 86349.3 150

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 16 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 151 160 1978 291 18000. 1978 312 77400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 291	18057.9 151	12.308	2.032	1.216 1	22.884	1.40E-08 0	-136.3	72.7	2.99E+06
2	1978 291	18117.9 151	12.289	2.037	1.210 1	23.919	1.42E-08 0	-122.7	60.2	3.18E+06
3	1978 291	18177.9 151	12.270	2.042	1.205 1	19.325	9.59E-09 0	-122.8	26.1	2.64E+06
4	1978 291	18237.9 151	12.251	2.047	1.199 1	25.003	1.28E-08 0	-138.9	25.8	2.51E+06

3554 1978 312 77221.1 160



(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 17 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 161 170 1978 315 16200. 1978 336 66600.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 315	16251.9 161	9.622	-1.252	0.185 1	13.727	9.23E-09 0	-10.0	-35.6	4.79E+06
2	1978 315	16311.9 161	9.600	-1.239	0.179 1	15.724	1.07E-08 0	-18.1	-41.2	4.80E+06
3	1978 315	16371.9 161	9.579	-1.225	0.174 1	16.899	1.35E-08 0	-6.1	5.7	5.76E+06
4	1978 315	16431.9 161	9.557	-1.212	0.168 1	13.897	1.25E-08 0	-2.2	-25.0	6.49E+06

5748 1978 336 66507.7 170

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 18 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 171 180 1978 337 4500. 1978 360 61200.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 337	4607.6 171	-0.727	-8.258	3.731 1	0.976	6.14E-09 0	7.4	-18.6	4.56E+07
2	1978 337	4667.6 171	-0.717	-8.282	3.739 1	0.861	5.54E-09 0	-30.4	-0.2	4.66E+07
3	1978 337	4727.6 171	-0.706	-8.306	3.747 1	0.943	5.77E-09 0	-38.3	32.3	4.42E+07
4	1978 337	4787.6 171	-0.695	-8.330	3.754 1	0.867	5.80E-09 0	-7.3	-20.8	4.84E+07

7103 1978 360 60660.6 180

(FIL#) \_\_\_\_\_ TEXT \_\_\_\_\_ ORS ORE YR DAY SECS YR DAY SECE  
 19 ISEE2 FPE 2D IONS 85. LANL/MPE, G. PASCHMANN, PI 181 190 1978 360 77400. 1979 19 50400.

(DR#)	YR DAY	SEC ORB	GSE-X	GSE-Y	GSE-Z E	DEN	ENDEN F	VX	VY	T
1	1978 360	77580.3 181	-3.869	-4.273	2.785 1	0.425	4.20E-09 0	-17.8	23.8	7.15E+07
2	1978 360	77640.4 181	-3.874	-4.306	2.797 1	0.443	4.16E-09 0	3.3	-8.7	6.80E+07
3	1978 360	77700.4 181	-3.879	-4.339	2.808 1	0.408	4.56E-09 0	-3.6	9.1	6.09E+07
4	1978 360	77760.4 181	-3.884	-4.372	2.820 1	0.460	4.69E-09 0	-28.7	-19.8	7.39E+07

21807 1979 19 49997.1 190

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MESSAGE SUMMARY: MESSAGE NUMBER - COUNT

218 2



( 320)	40F3F7C5	50F1F940	F0404060	F1F84BF2	40404060	F64BF440	F14BF1F1	C54EF0F8	F1F9F7F9	4040F1F9
( 360)	40F5F3F4	F7F74BF8	40F1F9F0	404040F2	40F6F7F9	404060F5	4BF7F4F1	404060F0	4BF8F4F4	40F14040
( 400)	40F14FF4	F4F641F6	4BF3F6C5	60F0F940	F0404060	F2F84BF7	404060F2	F04BF140	F14BF0F3	C54EF0F8
( 440)	F1F9F7F9	4040F1F9	40F5F3F5	F3F74BF8	40F1F9F0	404040F2	4BF6F8F1	404060F5	4BF7F0F5	404060F0
( 480)	40F04FF8	40F14040	40F04BF4	F9F240F6	4BF3F1C5	60F0F940	F0404060	F1F54BF7	40404060	F44BF640
( 520)	F94BF2F9	C54EF0F7	F1F9F7F9	4041F1F9	40F5F3F5	F9F74BF8	40F1F9F0	404040F2	4BF6F8F2	404060F5
( 560)	4BF8F7F0	404060F0	4BF8F5F2	40F14040	40FC4BF3	F3F540F6	4BF1F1C5	60F0F940	F0404060	F2F14BF2
( 600)	40404060	F84BF04F	F14BF1F5	C54EF0F8	F1F9F7F9	4040F1F9	40F5F3F6	F5F74BF7	40F1F9F0	404040F2
( 640)	40F04FF4	404060F5	4BF6F3F4	404060F0	4BF8F5F5	40F14040	40F04BF4	F2F440F6	4BF4F6C5	60F0F940
( 680)	F1404060	F2F14BF5	40404060	F84BF340	F14BF1F1	C54EF0F8	F1F9F7F9	4040F1F9	40F5F3F7	F1F74BF2
( 720)	40F1F9F0	404040F2	4BF6F8F6	404060F5	4BF5F9F8	404060F0	4BF8F5F9	40F14040	40F04BF4	F6F940F6
( 760)	4BF3F8C5	60F0F940	F0404040	60F44BF7	40404060	F04BF440	F94BF8F5	C54EF0F7	F1F9F7F9	4040F1F9
( 800)	40F5F3F7	F7F74BF7	40F1F9F0	404040F2	4BF6F8F7	404060F5	4BF5F6F3	404060F0	4BF8F6F3	40F14040
( 840)	40F04BF4	F6F840FE	4BF7F9C5	60F0F940	F0404060	F1F14BF0	40404060	F24BF240	F84BF9F7	C54EF0F7
( 880)	F1F9F7F9	4040F1F9	40F5F3F5	F3F74BF7	40F1F9F0	404040F2	4BF6F8F9	404060F5	4BF5F2F7	404060F0
( 920)	40F04BF7	40F14040	40F04BF4	F1F640F5	4BF8F3C5	60F0F940	F0404060	F3F24BF1	404060F3	F74BF640
( 960)	F14BF0F1	C54EF0F8	F1F9F7F9	4040F1F9	40F5F3F8	F9F74BF6	40F1F9F0	404040F2	4BF6F9F0	404060F5
( 1000)	4BF4F9F0	404060F0	4BF8F7F1	40F14040	40F04BF3	F4F340F5	4BF8F0C5	60F0F940	F0404060	F3F04BF9
( 1040)	404060F2	F64BF540	F14BF2F2	C54EF0F8	F1F9F7F9	4040F1F9	40F5F3F9	F5F74BF6	40F1F9F0	404040F2
( 1080)	4BF6F9F2	404060F5	4BF4F5F4	404060F0	4BF8F7F4	40F14040	40F04BF4	F2F140F6	4BF0F0C5	60F0F940
( 1120)	F0404040	60F54BF9	40404060	F04BF640	F14BF0F3	C54EF0F8	F1F9F7F9	4040F1F9	40F5F4F0	F1F74BF6
( 1160)	40F1F9F0	404040F2	4BF6F9F3	404060F5	4BF4F1F8	404060F0	4BF8F7F8	40F14040	40F04BF3	F9F740F6
( 1200)	4BF1F6C5	60F0F940	F0404060	F2F94BF8	404060F2	F24BF940	F14BF1F2	C54EF0F8	F1F9F7F9	4040F1F9
( 1240)	40F5F4F0	F7F74BF6	40F1F9F0	404040F2	4BF6F9F5	404060F5	4BF3F8F1	404060F0	4BF8F8F2	40F14040
( 1280)	40F04BF3	F7F140F5	4BF8F0C5	60F0F940	F0404060	F1F74BF9	40404060	F64BF140	F14BF1F3	C54EF0F8
( 1320)	F1F9F7F9	4040F1F9	40F5F4F1	F3F74BF5	40F1F9F0	404040F2	4BF6F9F6	404060F5	4BF3F4F5	404060F0
( 1360)	4BF8F0F6	40F14040	40F04BF3	F8F640F5	4BF6F3C5	60F0F940	F0404060	F3F24BF1	404060F3	F54BF840
( 1400)	F14BF0F6	C54EF0F8	<del>F14BF0F6</del>	<del>4040F1F9</del>	40F5F4F1	F9F74BF5	40F1F9F0	404040F2	4BF6F9F7	404060F5
( 1440)	4BF3F0F8	404060F0	4BF8F0F9	40F14040	40F04BF3	F9F140F5	4BF9F1C5	60F0F940	F0404060	F2F44BF5
( 1480)	404060F1	F04BF940	F14BF0F9	C54EF0F8						

FILE	INPUT RECS.	DATA INPUT	RECORDS	MAX. SIZE	READ ERROR SUMMARY				INPUT RETRIES	
					PERM	ZERO	B	SHORT	UNDEF.	#RECS.
19	234	235	4400	0	0	0	0	0	0	0

EGU DUMP STOPPED AFTER FILE 19 # OF PERMANENT READ ERRORS 0  
 START TIME 01/30/81 14:03:27 STOP TIME 01/30/81 14:06:44