ISEE 3

78-079A-02E

HIGH RESOLUTION DATA

ISEE 3

HI-RES. REDUCED B-FIELD DATA (RDR)

78-079A-02E

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 9-TRACK, 1600 BPI TAPE WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON A SEL32 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
DR005283	DS005283	D047394	1-4	01/01/81 - 01/04/81

REQ AGENT	REQ NO	ACQ AGENT
DEW	V0147	HKH

ISEE 3

78-079A-02E

HIGH RESOLUTION DATA

This data set catalog consists of 1 tape. The tape has 4 files of data, one for each day. The tape is 1600 bpi, 9 track, and binary. It was created on a SEL32 computer. The D and C numbers are as follows:

D#	C#	TIME SPAN
D-47394	C-22440	01/01/81-01/04/81

78-074A-02E
047394

Reduced Data Record Tape Format (ISEE-3)

These tapes, known as RDR tapes, contain high-resolution reduced data from the ISEE-3 Vector Helium Magnetometer. They are 9-track 1600 bpi tapes, written in binary form by an SEL 32 computer. (If these tapes are to be read by an IBM 360, negative real numbers must be converted from the two's complement form used by SEL to the sign-and-magnitude representation employed by IBM.)

There is one file per day, and there may be any number of files on a single tape. All records are 780 words (3120 bytes) in length.

The first record of each file is a header record. All other records are data records.

Structure of Header Record

Word 1	INTEGER*4	Last two digits of year.
Word 2	INTEGER*4	Day of year (Jan. 1 = Day 1).
Word 3	4 ASCII characters	Spacecraft ID (G = Pioneer 11), followed by 3 blanks.
Words 4-8	20 ASCII characters	Program version identification.
Word 9	4 ASCII characters	Coordinate system identification.
Word 10	INTEGER*4	Date of reduction (YYMMDD).

Words 11-524 are now filled with zeros.

Structure of Data Record

Word 1	INTEGER*4	0
Word 2	INTEGER*4	Number of data points (NPTS).
Word 3	INTEGER*4	Spacecraft clock.
Word 4	INTEGER*4	Avg frame period in microseconds.
Word 5	INTEGER*4	Frame counter.
Word 6	INTEGER*4	Fill flag.
Word 7	INTEGER*4	Bit rate flag.
Word 8	INTEGER*4	Time quality flag.
Word 9	REAL*4	Position of spacecraft (X) in GSE.
Word 10	REAL*4	Position of spacecraft (Y) in GSE.
Word 11	REAL*4	Position of spacecraft (Z) in GSE.
Word 12	INTEGER*4	Spacecraft position flag.
	(For a fuller description of Words 3-12, see format description of ISEE-3 Decom tapes.)	
Word 13	INTEGER*4	Ground received time (ms).
Word 14	REAL*4	X component of magnetic field.
Word 15	REAL*4	Y component of magnetic field.
Word 16	REAL*4	z component of magnetic field

Repeat Words 13-16 for each data point.

If NPTS < 192, the remainder of the data record is filled with zeros.

SEL Representation of Floating-Point Numbers *

The SEL single precision floating-point representation of a number (REAL*4) uses one word of 32 bits, or 4 bytes.

Consider the leftmost bit to be Bit 0, and the rightmost to be Bit 31.

Bit 0 is the sign bit; 0 for positive and 1 for negative.

Bits 1-7 contain 64 (binary 1000000) + the base 16 exponent of the number.

Bits 8-31 contain the fraction; the binary point is considered to be just to the left of Bit 8.

For example, consider the number 192.0, which is equal to (1/2 + 1/4) * 16**2. The SEL REAL*4 representation of 192.0 is 01000010110000000000000000000000, or hexadecimal 42C00000.

To represent a negative real number, take the two's complement of the 32-bit representation of the positive number; for example, the SEL representation of -192.0 is the two's complement of the number above, which is 10111101010000000000000000000000, or hex BD400000.

* Same as IBM 360/370 floating point

0 47394
ISEE-3
01/01/81 - 01/04/81

DUMP OF TAPE D03

INPUT TAPE D03 ON MT2
DATA INPUT HY NF 4 FL 4 1 0

FILE 1 RECORD 1 LENGTH 31200 BYTES

(0)	00000051	00000001	33202020	50524F47	52414D2	49433120	56455220	32203920	49205320	00005049
(40)	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020
(80)	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	00000000
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

(2320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(3000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(3040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(3080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	2622	2622	3120	0	0	0	0	0	0

FILE 2 RECORD 1 LENGTH 3120BYTES

(0)	00000051	00000002	33202020	50524F47	52414D20	49433120	5645522[illegible]	322E3920	492C5320	00C5D49[illegible]
(40)	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020
(80)	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	20202020	00000000
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000