VOYAGER 1

#510

LOW ENERGY CHARGED PARTICLE S-AVERAGED
77-084A-07A
LOW ENERGY CHARGED PARTICLE T-AVERAGED
77-084A-07B

VOYAGER 2

LOW ENERGY CHARGED PARTICLE S-AVERAGED
77-076A-07A
LOW ENERGY CHARGED PARTICLE T-AVERAGED
77-076A-07B

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

VOYAGER 1

LOW ENERGY SECTOR AVG FLUX

77-084A-07A PSFP-00174

THIS DATA SET HAS BEEN RESTORED. THERE WERE ORIGINALLY 10 9-TRACK, 1600 BPI TAPES, WRITTEN IN BINARY. THERE ARE FOUR RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE TAPES WERE CREATED ON AN IBM 360 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND TIME SPANS ARE AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN
DR03840	DS03840	D42082	1	02/24/79 - 03/04/79
		D42083	2	03/04/79 - 03/05/79
		D42084	3	03/05/79 - 03/07/79
DR03841	DS03841	D42085	1	03/07/79 - 03/09/79
DR03842	DS03842	D42086	1	03/09/79 - 03/11/79
		D42087	2	03/11/79 - 03/12/79
		D42088	3	03/12/79 - 03/14/79
DR03843	DS03843	D42089	1	03/14/79 - 03/16/79
		D42090	2	03/16/79 - 03/20/79
		D42091	3	03/20/79 - 03/21/79

VOYAGER 1

LOW-ENERGY TIME-AVERAGED FLUX, TAPE

77-084A-07B PSFP-00247

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED EIGHT 9-TRACK, 1600 BPI TAPES, WRITTEN IN BINARY, TWO OF THESE TAPES (D042101 AND D042237 WERE REPLACED BY D042236). THERE ARE TWO RESTORED TAPES. THE DR TAPES ARE 3480 CARTRIDGES AND THE DS TAPES ARE 9-TRACK, 6250 BPI. THE ORIGINAL TAPES WERE CREATED ON A PDP 11 COMPUTER AND THEY WERE RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBERS AND THE TIME SPANS ARE AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR003990	DS003990	D042098	1	09/07/77 - 12/31/77
		D042099	2	01/01/78 - 07/19/78
		D042100	3	07/20/78 - 12/31/78
		D042236	4	01/01/79 - 08/01/79
DR003991	DS03991	D042235	1	08/04/79 - 10/17/79
		D042234	2	10/17/79 - 12/30/79

VOYAGER 2

LOW-ENERGY SECTOR-AVG. FLUX, TAPE

77-076A-07A PSFP-00098

This data set has been restored. There were originally six 9-track, 1600 BPI tapes written in Binary. There are two restored tapes. The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI. The original tapes were created on a PDP11 computer and the restored tapes were created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR004564	DS004564	D042092	1	07/03/79 - 07/08/79
		D042093	2	07/08/79 - 07/11/79
		D042094	3	07/11/79 - 07/14/79
DR004565	DS004565	D042095	1	07/14/79 - 07/16/79
		D042096	2	07/16/79 - 07/21/79
		D042097	3	07/21/79 - 07/25/79

VOYAGER 2

LOW-ENERGY TIME-AVGD. FLUX, TAPE

77-076A-07B PSFP-00181

This data set has been restored. There were originally two 9-track, 1600 BPI tapes written in Binary. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tapes were created on a PDP11 computer and the restored tapes were created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

DR#	DS#	D#	FILES	TIME SPAN
DR005067	DS005067	D042102	1	06/09/79 - 07/03/79
		D042233	2	07/05/79 - 07/23/79

REQ. AGENT	RD#	ACQ. AGENT
GLS	V0109	RWV

VOYAGER 1

LOW ENERGY CHARGED PARTICLE S-AVERAGED
77-084A-07A

LOW ENERGY CHARGED PARTICLE T-AVERAGED
77-084A-07B

VOYAGER 2

LOW ENERGY CHARGED PARTICLE S-AVERAGED
77-076A-07A

LOW ENERGY CHARGED PARTICLE T-AVERAGED
77-076A-07B

This data set catalog contains 4 data sets from Voyager 1 & 2 satellites. Each satellite has 2 data sets: Low Energy Charged Particle Sector-Averaged and Low Energy Charged Particle Time-Averaged. The data sets are on 9 track, 1600 BPI, binary magnetic tapes, with one file of data per tape. They were created on the PDP 11 computer. There are 26 tapes in the data set catalog. The following list gives the D&C numbers and the time span of each tape.

VOYAGER 1
LOW ENERGY CHARGED PARTICLE S-AVERAGED 77-084A-07A

D#	C#	TIME SPAN
D-42082	C-21961	02/24/79 - 03/04/79
D-42083	C-21962	03/04/79 - 03/05/79
D-42084	C-21963	03/05/79 - 03/07/79
D-42085	C-21964	03/07/79 - 03/10/79
D-42086	C-21965,66	03/10/79 - 03/11/79 & 03/11/79
D-42087	C-21967	03/11/79 - 03/12/79
D-42088	C-21968	03/12/79 - 03/14/79
D-42089	C-21969	03/14/79 - 03/16/79
D-42090	C-21670	03/16/79 - 03/20/79
D-42091	C-21971	03/20/79 - 03/21/79

VOYAGER 1
LOW ENERGY CHARGED PARTICLE T-AVERAGED 77-084A-07B

D#	C#	TIME SPAN
D-42098	C-21941	09/07/77 - 12/31/77
D-42099	C-21942	01/01/78 - 07/19/78
D-42100	C-21943	07/20/78 - 12/31/78
D-42101	C-21944	01/30/79 - 02/24/79
D-42234	C-23654	10/17/79 - 12/30/79
D-42235	C-23655	08/03/79 - 10/17/79
*D-42236		
D-42237	C-23656	01/01/79 - 03/05/79

*D-42236 is a bad tape we are waiting for a replacement.

VOYAGER 2
LOW ENERGY CHARGED PARTICLE S-AVERAGED 77-076A-07A

D#	C#	TIME SPAN
D-42092	C-21947	07/03/79 - 07/08/79
D-42093	C-21948	07/08/79 - 07/11/79
D-42094	C-21949	07/11/79 - 07/14/79
D-42095	C-21950	07/14/79 - 07/16/79
D-42096	C-21951	07/16/79 - 07/21/79
D-42097	C-21952	07/21/79 - 07/25/79

VOYAGER 2
LOW ENERGY CHARGED PARTICLE T-AVERAGED 77-076A-07B

D#	C#	TIME SPAN
D-42102	C-21953	06/09/79 - 07/03/79
D-42233	C-23657	07/05/79 - 07/23/79

*Please note that these tapes were created on the PDP 11 computer. The first two and last two characters of each word are reversed when converting to decimal. One exception is tape D-42093 or C-21948, the characters are not reversed in each word when converting to decimal.

07

THE JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
Johns Hopkins Road, Laurel, Maryland 20810
Telephone: (301) 953-7100 and 792-7800

77-084A-07A+B
77-076A-07A+B

October 31, 1980

Mr. Robert Vostray, Code 601
National Space Science Data Center
NASA/GSFC
Greenbelt, Maryland 20771

Dear Mr. Vostray:

Please accept 21 tapes containing Voyager 1 and 2 Low Energy Charged Particle (LECP) data for the NSSDC. Enclosed are listings of the time intervals for the 21 tapes and an explanation of our tape nomenclature. We have not as yet had the opportunity to make copies of the full set of LECP tapes nor have we finalized documentation for them. In addition, several of the tape copies contain large data gaps which will have to be filled in. We intend to remedy these difficulties within the next few weeks. This set of tapes represents the first installment of the LECP contribution.

Sincerely,

S. M. Krimigis

S. M. Krimigis
Principal Investigator, LECP
301-953-7100
x 3252

Enclosures
SMK:JFC:klb

cc: M. A. Mitz, Code SL, NASA Hdqtrs.
E. C. Stone, JPL
C. H. Stembridge, JPL
R. H. Steinbacher, JPL
T. P. Armstrong, U. of Kansas

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November 11, 1980

Mr. Bob Vostrey
National Space Science Data Center
Goddard Space Flight Center
Greenbelt, Maryland 20771

Dear Bob:

This letter includes material describing the Voyager LECP data which has been submitted to the Center. The enclosed memo describes the tape formats for the LECP "Averages" (15 minute and 1 hour) which are used for synoptic studies of cruise and encounter. This memo is based on our latest understanding of the flight performance of the instrument and of the operation of our ground software. In major outline we believe all this information to be accurate. However, we have not had either the manpower or time to digest and validate completely all of the details and thus reserve the right to revise this description of the data if further studies of it warrant. Also, we will send more complete descriptions of some items as they become available.

Sincerely,

Thomas P. Armstrong

Thomas P. Armstrong
on behalf of the Voyager LECP Team,
S. M. Krimigis, Principal Investigator

Enclosures: Table 1 - List of LECP Average Tape Items, VKA Tapes
Table 2 - Passbands and Geometrical Factors for VGR1
Table 3 - Passbands and Geometrical Factors for VGR2
Table 4 - Ion Responses for Detector Alpha, VGR 1 & 2
Reprint of Voyager LECP Instrument Articles from
Space Science Reveiws

cc: LECP Team Members
S1P Group Files

FAT tapes contain LECP data which have been sector-averaged. Time resolution in these files depends on the LECP step rate and can vary from 6 seconds to 6 minutes.

FAV or SAT tapes contain LECP data which have been time-averaged and binned according to sector. The time resolution in these files is usually 15 minutes or 1 hour.

F2

VG1 FAT COPIES

TAPE	START TIME	END TIME	COMMENTS
FAT19055	79-055-2324	79-063-0003	3 day gap
FAT19063	79-063-0000	79-064-1010	
FAT19064	79-064-1010	79-066-0414	
FAT19066	79-066-0414	79-068-0835	
FAT19068	79-068-0835	79-070-0735	
FAT19070	79-070-0735	79-071-2307	
FAT19071	79-071-2307	79-073-1817	
FAT19073	79-073-1817	79-075-1057	
FAT19075	79-075-1057	79-079-0302	
FAT19079	79-079-0302	79-080-1355	

F3

VG1 SAT COPIES

TAPE	START TIME	END TIME	COMMENTS
FAV17250	77-250-0000	77-365-1457	hr avgs 2 day-gaps
FAV18001	78-001-0027	78-200-1809	hr avgs 5 day-gaps
FAV18201	78-201-1509	78-365-2257	hr avgs 6 day-gaps
FAV19030	79-030-0000	79-055-2314	15 min avgs 1 day-gap

A "day-gap" is a data gap of 24 hours or longer.

F4

VG2 FAT COPIES

TAPE	START TIME	STOP TIME	COMMENTS
FAT29184	79-184-1701	79-189-0538	Partial gap listing only
FAT29189	79-189-0544	79-192-0803	No gap listing
FAT29192	79-192-1526	79-195-0819	
FAT29195	79-195-0819	79-197-0959	
FAT29197	79-197-0950	79-202-1620	1 day-gap
FAT29202	79-202-1620	79-206-0907	

f5

VG2 SAT COPIES

TAPE	START TIME	STOP TIME	COMMENTS
FAV29160	79-160-2312	79-184-2359	15 min avgs

Provisional
To be Revised ≈ 12/31/80

AVGWTP: FLUX AVERAGE TAPE FILE DEFINITION. THIS TAPE IS WRITTEN AS 1600 BPI 9 TRACK NRZI IN FIXED LENGTH RECORDS BLOCKED 1:1. EACH RECORD IS 4800 16 BIT WORDS IN LENGTH. MOST ARE INTEGER. ONLY THE COUNT RATES AND FLUXES ARE 32 BIT FLOATING POINT IN ~~NANOCOMP~~ STANDARD BINARY. THE LIST BELOW GIVES THE DEFINITIONS OF THE PDP 11 ITEMS ON EACH RECORD.

REV: 3/21/79 D/D

ITEM	NAME	TYPE	DESCRIPTION	WORD
1	SCID	I*2	SPACECRAFT IDENTIFICATION/MODE LEFT BYTE IS S/C ID. 0=VGR 2 1=VGR 1 RIGHT BYTE IS MODE(HEX) A=GS3, 7=CR1, 1=CR2, 2=CR3,5=CR6,8=NE	1
2	SPARE	I*2		2
3	ST01	I*2	FIRST OCCURENCE OF STATUS WORD 1	3
4	ST01	I*2	LAST OCCURENCE OF STATUS WORD 1	4
5	ST02	I*2	FIRST OCCURENCE OF STATUS WORD 2	5
6	ST02	I*2	LAST OCCURENCE OF STATUS WORD 2	6
7	ST03	I*2	FIRST OCCURENCE OF STATUS WORD 3	7
8	ST03	I*2	LAST OCCURENCE OF STATUS WORD 3	8
9	ST04	I*2	FIRST OCCURENCE OF STATUS WORD 4	9
10	ST04	I*2	LAST OCCURENCE OF STATUS WORD 4	10
11	ST05	I*2	FIRST OCCURENCE OF STATUS WORD 5	11
12	ST05	I*2	LAST OCCURENCE OF STATUS WORD 5	12
13	ST06	I*2	FIRST OCCURENCE OF STATUS WORD 6	13
14	ST06	I*2	LAST OCCURENCE OF STATUS WORD 6	14
15	SPARE	I*2		15
16	SPARE	I*2		16
17	SPARE	I*2		17
18	TIMUNT	I*2	BASIC ACCUM. TIME UNIT IN SECONDS FROM MRT	18
19	SPARE	I*2		19
20	SPARE	I*2		20
21	SPARE	I*2		21
22	AVGINC	I*2	100*AVERAGING INCREMENT IN HOURS.	22
23	AVYEAR	I*2	AVG. WINDOW YEAR AT START	23
24	AVDAY	I*2	AVG. WINDOW DAY AT START	24
25	AVHOUR	I*2	AVG. WINDOW HOUR AT START	25
26	AVSEC	I*2	AVG. WINDOW SECONDS AT START	26
27-29	SPARES	I*2		27-29
30	ITALP	I*2	TIME CONSTANT FOR P-ALPHA COR.(NANOSECS.)	30
31	ITALB	I*2	TIME CONSTANT FOR E BETA COR.(NANOSECS.)	31
32-34	SPARES	I*2		32-34
35	SECST	I*2	16*AVG BEGIN TIME IN SECONDS(OFFSET)	35
36	SECSP	I*2	16*AVG END TIME IN SECONDS (OFFSET)	36
37	M60F	I*2	VALUE OF MOD 60 AT FIRST APPEARANCE	37
38	M60L	I*2	VALUE OF MOD 60 AT LAST APPEARANCE	38
39	M16F	I*2	VALUE OF MOD 2**16 AT FIRST APPEARANCE	39
40	M16L	I*2	VALUE OF MOD 2**16 AT LAST APPEARANCE	40
41	SCETHS	I*2	SPACECRAFT EVENT TIME HOUR AT START	41
42	SCETHE	I*2	SPACECRAFT EVENT TIME HOUR AT END	42
43	SCETSS	I*2	SPACECRAFT EVENT TIME SECOND AT START	43
44	SCETSE	I*2	SPACECRAFT EVENT TIME SECOND AT END	44

Header

Dead time } contact experimenter for
Dead time } details before using this field.

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 45   SCETMS I*2   SPACECRAFT EVENT TIME MILLISECOND START    45
 46   SCETME I*2   SPACECRAFT EVENT TIME MILLISECOND END      46
 47   SCETYS I*2   SPACECRAFT EVENT TIME YEAR AT START        47
 48   SCETYE I*2   SPACECRAFT EVENT TIME YEAR AT END          48
 49-100  SPARES I*2                                           49-100

THE FOLLOWING 1000 ITEMS, FLOATING POINT, ARE THE COUNT RATES
OF 100 DATA CHANNELS IN 10 SECTOR POSITIONS.
THE SUBSCRIPTING OF THE RATES(I,J) ARRAY IS: FIRST INDEX IS CHANNEL
NUMBER AND SECOND INDEX IS SECTOR (1-8 AS USUAL, 9 = SPARE    AND
10 = SCAN AVERAGE).  THE 100 CHANNELS ARE DESCRIBED BELOW:

NUM.    NAME    SPECIES    ENERGY(MEV/NUCLEON)   DETECTOR
                           (NOMINAL-DO NOT USE
                            THIS WITHOUT CHECKING  MEANS THAT THE GAIN
                            THE PASSBAND LIST!     STATE MUST BE CHECKED
 1      EB01    ELECTRON   0.015 TO 0.037        BETA *
 2      EBD1    ELECTRON   0.015 TO 0.200        BETA PRIME *
 3      EB02    ELECTRON   0.037 TO 0.061        BETA
 4      EBD2    ELECTRON   0.037 TO 0.200        BETA PRIME
 5      EB03    ELECTRON   0.070 TO 0.112        BETA
 9      EB05    ELECTRON   0.20   & UP           BETA
10      EBD5    ELECTRON   0.20   & UP           BETA PRIME
11      EG06    ELECTRON   0.20   & UP           GAMMA
12      EG07    ELECTRON   0.40   & UP           GAMMA
13      EG08    ELECTRON   0.70   & UP           GAMMA
14      EG09    ELECTRON   1.50   & UP           GAMMA
15        44    ELECTRON   0.35  TO 1.50         E4(E5A)(E3)(E2)
16        45    ELECTRON   2.5    & UP           E4 E3A (E3C)(E5A)(E2)
17        37    ELECTRON   6.0    & UP           E4 (E4A)E3C(E5A)(E2)

18      PL01    Z.GE.1     0.030 TO 0.053 (Z=1)  A1(A2) *
19      PL02    Z.GE.1     0.053 TO 0.085 (Z=1)  A2(A3)
20      PL03    Z.GE.1     0.085 TO 0.139 (Z=1)  A3(A4)
21      PL04    Z.GE.1     0.139 TO 0.200 (Z=1)  A4(A5)
22      PL05    Z.GE.1     0.200 TO 0.550 (Z=1)  A5(A6)
23      PL06    Z.GE.1     0.540 TO 1.05  (Z=1)  A6(A7)
24      PL07    Z.GE.1     1.05  TO 2.03  (Z=1)  A7(A8)
25      PL08    Z.GE.1     2.03  TO 4.01  (Z=1)  A8(A9)

26        32    PROTONS    0.27  TO 0.70         E0 E2 (E3)
27         1    PROTONS    0.48  TO 1.40         E1 E2 (E3) (L12A)
28        10    PROTONS    4.10  TO 10.0         E2 E3 (E4)
29        11    PROTONS    10.0  TO 22.0         E2 E3 (E4)
30        16    PROTONS    3.0   TO 19.0         E5 E4 (E3)
31        23    PROTONS    19.0  TO 31.0         E5 E4 E3 (E2)
32        27    PROTONS    31.0  TO 150.0        E5 E4 E3 E2
33        31    PROTONS    240.  &  UP           E4 E3

34        39    ALPHAS     0.075 TO 0.150        E0 (E2)
```

NON-FUNCTIONAL ON VGR 1.

TABLE 1
(Page . f 7 Pages)

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[illegible]   33   ALPHAS     0.150 TO 0.430   E0 E2 (E3)
36    D1F1   ALPHAS     0.150 TO 1.10    E1
37      3    ALPHAS     0.39  TO 1.50    E1 E2 (E3) L12A (L12B)
38      4    ALPHAS     1.50  TO 3.70    E1 E2 (E3) L12A (L12B)
39     12    ALPHAS     4.20  TO 8.90    E2 E3 (E4) (L23A)
40     13    ALPHAS     8.90  TO 21.0    E2 E3 (E4) (L23A)
41     17    ALPHAS     3.0   TO 21.0    E5 E4 (E3) L54A (L54B)
42     24    ALPHAS     21.0  TO 31.0    E5 E4 E3 (E2)
43     28    ALPHAS     34.0  TO 64.0    E5 E4 E3 E2
44    AL01   Z.GE.2     0.98  TO 1.77    A9(A10)
45    AL02   Z.GE.2     1.77  TO 4.22    A10

46     34    ALPHAS     0.23  TO 0.44    E0 E2 (E3)
47      5    L-NUCLEI   0.60  TO 4.20    E1 E2 (E3) L12B (L12C)
48     14    L-NUCLEI   5.50  TO 33.0    E2 E3 (E4) L23A (L23B)
49     18    L-NUCLEI   4.0   TO 21.0    E5 E4 (E3) L54B (L54C)

50     38    M-NUCLEI   0.047 TO 0.125   E0 (E2)
51     35    M-NUCLEI   0.125 TO 0.260   E0 E2 (E3)
52    D1F2   M-NUCLEI   0.130 TO 10.     E1
53      6    M-NUCLEI   0.440 TO 2.90    E1 E2 (E3)
54      7    M-NUCLEI   2.90  TO 7.80    E1 E2 (E3)
55     15    M-NUCLEI   7.80  TO 40.0    E2 E3 (E4) L23B (L23C)
56     19    M-NUCLEI   6.30  TO 10.0    E5 E4 (E3) L54C (L54D)
57     20    M-NUCLEI   10.0  TO 42.0    E5 E4 (E3) L54C (L54D)
58     25    M-NUCLEI   42.0  TO 64.0    E5 E4 E3 (E2)
59     29    M-NUCLEI   64.0  TO 200.    E5 E4 E3 E2

60     36    H-NUCLEI   0.062 TO 0.105   E0 E2 (E3)
61      8    H-NUCLEI   0.250 TO 2.00    E1 E2 (E3)
62      9    H-NUCLEI   2.00  TO 13.0    E1 E2 (E3)
63     43    H-NUCLEI   13.0  TO 74.0    E2 E3 (E4) L23C
64     21    H-NUCLEI   8.60  TO 21.0    E5 E4 (E3) L54D
65     22    H-NUCLEI   21.0  TO 86.0    E5 E4 (E3) L54D
66     26    H-NUCLEI   86.0  TO 125.    E5 E4 E3 (E2)
67     30    H-NUCLEI   125.0  & UP      E5 E4 E3 E2

68     42    MISC. SINGLES              AR
69     42    MISC. SINGLES              E0
70     42    MISC. SINGLES              E1
71     42    MISC. SINGLES              E2
72     42    MISC. SINGLES              E3
73     42    MISC. SINGLES              E4
74     42    MISC. SINGLES              E5
75     42    MISC. SINGLES              AL
76     41    MISC. COINCIDENCE          AL AR

C NEAR ENCOUNTER ONLY DATA CHANNELS(ONLY USED AT V1 JUPITER PERIAPSIS)

77    ESA0   ELECTRONS 2.5 & UP         A SINGLES
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        ESB0    ELECTRONS 8.5 & UP                B SIN...ES
  79    AB10    ELECTRONS  8.5 & UP               A1 B0 COINC.
  80    DP09    IONS       0.285 TO 5.02          DELTA '
  81    DP10    IONS       0.480 TO 2.58          DELTA '
  82    DP11    IONS       0.725 TO 1.64          DELTA '
  83    PD09    IONS       0.285 TO 5.25          DELTA
  84    PD10    IONS       0.480 TO 2.72          DELTA
  85    PD11    IONS       0.725 TO 1.72          DELTA
  86    AB12    IONS       54.0 TO 87.3           A1 B2 COINC.
  87    AB13    IONS       87.3 TO 152.           A1 B3 COINC.
  88    PSA1    IONS       15.8 TO 158.           A1 SINGLES
  89    PSA2    IONS       15.8 TO 49.0           A2 SINGLES
  90    PSA3    IONS       16.3 TO 26.2           A3 SINGLES
  91    PSB1    IONS       54.0 TO 174.           B1 SINGLES
  92    PSB2    IONS       54.0 TO 87.3           B2 SINGLES
  93    PSB3    IONS       54.0 TO 59.0           B3 SINGLES
  94    DA03    IONS Z.GE.2 0.480 TO 2.45         DELTA '
  95    DA04    IONS Z.GE.2 0.780 TO 1.41         DELTA '
  96    DZ01    IONS Z.GT.2 0.405 TO 18.8         DELTA '
  97    AD03    IONS Z.GE.2 0.480 TO 2.58         DELTA
  98    AD04    IONS Z.GE.2 0.780 TO 1.48         DELTA
  99    ZD01    IONS Z.GT.2 0.400 TO 19.8         DELTA
 100          SPARE

 1001-2000 I*2    UNCERTAINTIES OF ITEMS 1-1000,SAME SUBSCRIPTING
                 IN UNITS OF 64*PERCENT

 2001-3000 I*2    NUMBER OF SAMPLES OF ITEMS 1-1000,SAME SUBSCRIPTING,
                 IN UNITS OF BASIC ACCUM. TIME FOR MODE
                 !!!!YOU MUST CHECK THIS ITEM FOR GT.0 BEFORE USING
                     ANY OF THE COUNT RATE OR FLUX DATA.

 701-800 R*4   FLUXES CORRESPONDING TO ITEMS 1-100 ABOVE
               DIFFERENTIAL FLUXES EVALUATED AT STANDARD VALUES OF THE
               ENERGY AND CORRECTED FOR FINITE PASSBAND WIDTHS AND
               CONTAMINATION BY UNDESIRED SPECIES.

 801-900 I*2   FLUX UNCS. IN UNITS OF 64*PERCENT
               BY EXPRESSING THE UNCERTAINTY IN UNITS OF 64*PERCENT
               WE CAN USED AN INTEGER VARIABLE HERE.  THIS HAS TWO ADVAN-
               TAGES: ONE, IT SAVES SPACE IN THE RECORD, AND TWO, REAL
               NUMBERS HAVE TO BE CONVERTED INTO  MACHINE-DEPENDENT
               FORM OF INTERNAL BINARY WORD.


*****************************************************************************
*****************************************************************************

THE ABOVE RECORD CAN BE REFERENCED IN FORTRAN WITH THE FOLLOWING
SEQUENCE OF VARIABLES:
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IHEAD(100)    HEADER INFORMATION
RATES(100,10)  COUNT RATES IN 100 CHANNELS FOR 10 SECTORS
IUNCS(100,10)  UNCERTAINTIES OF ABOVE COUNT RATES IN UNITS
               OF 64*PERCENT
NSAMP(100,10)  NUMBER OF SAMPLES FOR EACH COUNT RATE IN UNITS
               OF THE BASIC ACCUMULATION INTERVAL. THIS MUST
               BE GREATER THAN ZERO FOR VALID DATA TO EXIST.
IFIL(400)      SPARES.
FLUXES(100)    ESTIMATED SCAN AVERAGED FLUXES FOR EACH OF THE
               100 DATA CHANNELS.  THESE ARE USUALLY DIFFERENTIAL
               FLUXES EVALUATED AT THE STANDARD ENERGIES GIVEN
               IN THE PASSBAND TABLE--SOME ARE INTEGRAL.  IT
               IS OBVIOUS FROM THE TABLE WHICH IS WHICH.
               THERE ARE MANY INSTRUMENTAL EFFECTS WHICH INFLUENCE
               THE ESTIMATES OF FLUXES OF THE VARIOUS PARTICLE
               TYPES AND IT IS IMPOSSIBLE TO COMPLETELY DESCRIBE
               THE ACCURACY OF THE ESTIMATES FOR ALL CHANNELS
               IN ALL OF THE FLIGHT SITUATIONS.  WE HAVE ATTEMPTED
               TO CORRECT FOR DETECTOR DEAD TIME, GEOMETRICAL
               FACTORS, AND PASSBAND.  HOWEVER, IF YOU NEED
               HIGH PRECISION ESTIMATES OF FLUXES, YOU SHOULD
               CHECK WITH S.M.KRIMIGIS OR T.P.ARMSTRONG BEFORE
               USING THIS DATA.
               THIS FOLLOWING IS A BRIEF SYNPOSIS OF THE
               LECP INSTRUMENTAL PERFORMANCE AT JUPITER ENCOUNTER.
               ***VOYAGER 1****
               LEMPA
                 ALPHA--CHANNELS PL06,PL07,PL08,AL01,AL02 ARE
                        NOMINAL THROUGHOUT.
                        CHANNELS PL01,PL02,PL03,PL04,PL05 HAVE
                        A BACKGROUND FROM OMNIDIRECTIONALLY
                        PENETRATING ELECTRONS WHICH BECOMES
                        SIGNIFICANT AT ABOUT 10 RJ. WITHIN ABOUT
                        8 RJ PL01 AND PL02 HAVE A VERY SEVERE
                        BACKGROUND AND MUST NOT BE USED AS NOMINAL!
                        CHANNELS PL01,PL02,PL03,PL04,PL05 HAVE
                        AND AMPLITUDE AND PULSE SHAPE DEPENDENT
                        DEAD TIME WHICH BECAME VERY IMPORTANT
                        WITHIN 10 RJ.  CORRECTIONS FOR THIS EFFECT
                        HAVE BEEN APPLIED.  THIS PRECISION OF
                        THE CORRECTED DATA IS DIFFICULT TO ESTIMATE
                        AND IT VARIES WITH THE INPUT RATES.
                        MY "GUESTIMATES" OF THE SYSTEMATIC UNCERT-
                        TAINTY OF THE CORRECTED RATES OF PL05,4,3,2,1
                        WITHIN 10 RJ ARE 15%,30%,60%,120%,AND 240%.
                        USE OF THIS DATA MUST BE GUIDED BY THE LARGE
                        SYSTEMATIC UNCERTAINTY OF THE DEAD TIME CORRECT-
                        ION.
                 BETA---CHANNELS EB01,2,3,4,5 HAVE BEEN DEAD TIME COR-
                        RECTED AND ARE RELIABLE THROUGHOUT THE ENCOUNTER
```

```
                    TO A PRECISION OF ABOUT 30% (WORST CASE). THESE
                    CHANNELS HAVE A SIGNIFICANT OMNIDIRECTIONAL
                    ELECTRON BACKGROUND WHICH CAN BE ASSESSED BY
                    COMPARING SECTOR 8 (BACKGROUND) WITH THE FORE-
                    GROUND RATES.  WITHIN ABOUT 7 RJ THESE CHANNELS
                    SHOULD NOT BE USED.
              BETA'--SAME COMMENTS APPLY AS FOR BETA, ABOVE.  ALSO
                    THE LOOK ANGLES AND DIRECTIONS OF THIS DETECTOR
                    ARE COMPLEX.  CONFER WITH C. MACLENNAN OR L.
                    LANZEROTTI ABOUT LOOK DIRECTIONS FOR BETA AND
                    BETA '.
              GAMMA--THIS DETECTOR IS NON-FUNCTIONAL ON VOYAGER 1.
              DELTA--THIS DETECTOR SYSTEM  OPERATED IN THE NEAR
                    ENCOUNTER MODE.  THERE WAS SOME INSTRUMENTAL
                    INTERFERENCE IN THIS DETECTOR SYSTEM WHICH
                    HAS BEEN REMOVED BY SUBTRACTING SECTOR 8 (BACK-
                    GROUND PLUS INSTRUMENTAL NOISE) FROM ALL FOREGROUNW
                    SECTORS AND THE SECTOR AVERAGE.  THE GEOMETRIC
                    FACTORS AND PASSBANDS FOR THIS DETECTOR DIFFERED
                    IN THE FLIGHT DATA FROM THOSE IN THE LATEST AVAIL-
                    ABLE LABORATORY CALIBRATION.  THE VALUES LISTED
                    IN THE PASSBAND TABLE ARE THE BEST AVAILABLE
                    VALUES WHICH YIELD FLUXES CONSISTENT WITH THOSE
                    OF THE ALPHA DETECTOR.  THERE IS NO SIGNIFICANT
                    DEAD TIME CORRECTION NECESSARY FOR THIS DETECTOR.
              DELTA'-THE SAME COMMENTS AS FOR DELTA ABOVE APPLY HERE.
                    ALSO, THE LOOK ANGLES FOR THIS DETECTOR ARE
                    COMPLICATED.  CHECK WITH C. MACLENNAN OR L. LAN-
                    ZEROTTI FOR FURTHER INFORMATION.
              AB-----THIS DETECTOR SYSTEM HAD NO DEAD TIME EFFECTS.
                    PASSBANDS AND GEOMETRIC FACTORS ARE NEAR THE
                    NOMINAL VALUES GIVEN IN THE TABLE.  MOST OF THE
                    RESPONSE OF THIS SYSTEM IS DOMINATED BY PENETRATINZ
                    ELECTRONS.  PSA3 IS AN EXCEPTION--IT RESPONDS TO
                    16 TO 20 MEV IONS (Z.GE.1).
          LEPT      THIS SYSTEM WAS PROGRESSIVELY SHUT DOWN DURING
                    JUIPTER ENCOUNTER BECAUSE OF ITS HIGH SENSITIVITY
                    AND LONG TIME CONSTANTS.  IT WAS NOT OPERATED AT
                    ALL DURING THE NEAR ENCOUNTER PHASE.  MEASUREMENTS
                    IN THE OUTER MAGNETOSPHERE CAN BE USED, PROVIDED
                    THE DUE CARE IS TAKEN TO ESTABLISHED THAT ALL
                    LOGICAL COMPONENTS OF EACH CHANNEL WERE OPERATING
                    IN A NON-SATURATED CONDITION AT THE TIME THE
                    DATA WAS ACQUIRED.
*****************************************************************************=
*****************************************************************************=
     SECTORING AND DATA SAMPLING:
     1.  WHEN THE SPACECRAFT IS IN GS3 MODE AND LECP IS STEPPING AT 6 SECOND
         INTERVALS, NOT ALL OF THE COUNT RATE CHANNELS ARE SAMPLED WITHIN A
         GIVEN STEP.  THE RESULT OF THIS IS THAT SOME OF THE CHANNELS HAVE
```

```
301          READINGS FROM SEVERAL SECTORS COMBINED.  EXT. IE CARE SHOULD BE TAKEN
302          IN NOT USING DATA FROM CHANNEL NUMBER 22 OR GREATER IN ANGULAR
303          DISTRIBUTION STUDES AT TIMES WHEN THE INSTRUMENT WAS STEPPING AT
304          6 SECOND INTERVALS IN THE GS3 MODE.  THE VOYAGER 1 SPACECRAFT
305   some   EXPERIENCED ~~FROM~~ DIFFICULTIES WITH FDS TIMING WHICH CAUSE SOME
306          MINOR MISALIGNMENTS OF THE STEPPING TIMES AND DATA AVERAG ING TIMES.
307          THIS OCCURRED GENERALLY IN THE DAY 64 07:00 TO 15:00 INTERVAL.
308          THIS HAS ONLY A MINOR EFFECT ON THE FOREGR OUND RATES BUT IS
309          CAN BE SEEN AS ANOMALOUSLY LARGE RATES IN SECTOR 8 (BACKGROUND)
310          WHICH HAVE A PECULIAR STAIRSTEP APPEARANCE.
311
TOTAL RECORDS WRITTEN =    71
EXIT
$$
$EOJ
$$
```

TABLE 2
(Page 1 of 5 Pages)

```
C PASSBANDS,BACKGROUNDS,AND GEOMETRIC FACTORS FOR FU2 VOYAGER I
C FEBRUARY 19,1979:3/19/79, DELTA GF, DEF,SECTORS CORRECTED
C        THRESHOLDS  3/21/79 D-D' SUBCOM CORRECTED
FAT  NAME     LOW     HIGH     MEAN    ~~OKORHD~~     G.F.     TEXT
 #          (MEV/N) (MEV/N) (MEV/N) ~~(C/SEC.)~~ (CMSQSR)
 1.  EB01 0.0150  0.0370  0.0200 0.0000000 0.006000 1 0 0 0 2   — TWO GAIN STATES.
 2.  EBD1 0.0150  0.5000  0.0200 0.0000000 0.000120 1 4 0 0 2
    *S ** 0.93 1.09 1.24 1.18 1.00 0.43 0.20
 3.  EB02 0.0370  0.0610  0.0450 0.0000000 0.006000 1 0 0 0 2
 4.  EBD2 0.0370  0.5000  0.0450 0.0000000 0.000120 1 4 0 0 2
    *S ** 0.93 1.09 1.24 1.18 1.00 0.43 0.20
 5.  EB03 0.0700  0.1120  0.0900 0.0000000 0.006000 1 0 0 0 2
 6.  EBD3 0.0700  0.5000  0.0900 0.0000000 0.000120 1 4 0 0 2
    *S ** 0.93 1.09 1.24 1.18 1.00 0.43 0.20
 7.  EB04 0.1300  0.1830  0.1200 0.0000000 0.006000 1 0 0 0 3
 8.  EBD4 0.1300  0.5000  0.1200 0.0000000 0.000120 1 4 0 0 3
    *S ** 0.93 1.09 1.24 1.18 1.00 0.43 0.20
 9.  EB05 0.2000  0.5000  0.2000 0.0000000 0.006000 1 0 0 0 4
10.  EBD5 0.2000  0.5000  0.2000 0.0000000 0.000120 1 4 0 0 4
    *S ** 0.93 1.09 1.24 1.18 1.00 0.43 0.20
11.  EG06 0.2520  2.0000  0.2500 0.0000000 0.002000 1 0 0 0 5
12.  EG07 0.4800  2.0000  0.5000 0.0000000 0.002000 1 0 0 0 5   NON-FUNCTIONAL ON VGR1
13.  EG08 0.8530  2.0000  0.9000 0.0000000 0.002000 1 0 0 0 6
14.  EG09 2.1000  5.0000  2.0000 0.0000000 0.002000 1 0 0 0 7
15.  E 44 0.3500  1.5000  0.5000 0.0000000 1.310000 1 0 0 035
16.  E 45 2.5000  100.00  2.0000 0.0000000 1.310000 1 0 0 035
17.  E 37 6.0000  100.00  6.0000 0.0000000 1.310000 1 0 0 035
18.  PL01 0.0300  0.0530  0.0250 0.0000000 0.040200 1 0 0 0 9
19.  PL02 0.0530  0.0850  0.0500 0.0000000 0.040200 1 0 0 0 9
20.  PL03 0.0850  0.1390  0.1000 0.0000000 0.040200 1 0 0 0 9
21.  PL04 0.1390  0.2000  0.1500 0.0000000 0.040200 1 1 21110
    *A ** 0.0343  0.0538
22.  PL05 0.2000  0.5500  0.2500 0.0000000 0.040200 1 1 21211   see TABLE 4 for full
    *A ** 0.0538  0.1500                                        description
23.  PL06 0.5400  1.0500  0.6000 0.0000000 0.040200 1 1 31312
    *A ** 0.1500  0.2700
24.  PL07 1.0500  2.0300  1.0000 0.0000000 0.040200 1 1 31413
    *A ** 0.2700  0.5100
25.  PL08 2.0300  4.0100  2.5000 0.0000000 0.040200 1 1 41414
    *A ** 0.5100  0.9800
26.  P 32 0.3100  0.6100  0.3500 0.0000000 0.097500 1 0 0 042 E0E2(E3)  → LOW EFFICIENCY.
27.  P  1 0.5700  0.8900  0.6000 0.0000000 0.441000 1 0 0 016 E1E2(E3)
28.  P 10 4.4000  9.2000  5.0000 0.0000000 0.539000 1 0 0 017 E2E3(E4)
29.  P 11 9.2000  21.000  12.000 0.0000000 0.539000 1 0 0 017 E2E3(E4)
30.  P 16 3.4000  17.600  5.0000 0.0000000 1.500000 1 0 0 018 E5E4(E3)
31.  P 23 22.000  31.000  25.000 0.0000000 1.310000 1 0 0 018 E5E4E3(E2)
32.  P 27 34.000  71.500  50.000 0.0000000 1.200000 1 0 0 018 E5E4E3E2
33.  P 31 211.00  1000.0  250.00 0.0000000 1.310000 1 0 0 036 E4E3 CA
34.  A 39 0.1000  0.2030  0.1000 0.0000000 0.097500 1 2122620 E0(E2)
   * M ** 0.0250  0.0720
```

TABLE 2
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```
 51  35.  A 33 0.2000  0.5100  0.3500 0.0000000 0.097500 1 0 0 021 E0E2(E3)
 52  36.  A 46 0.1470  2.00007 0.6000 0.0000000 0.441000 1 0 0 021 D1F1.CA
 53  37.  A  3 0.4600  1.8000  0.6000 0.0000000 0.441000 1 0 0 022 E1E2(E3)
 54  38.  A  4 1.9000  4.0000  2.5000 0.0000000 0.441000 1 0 0 022 E1E2(E3L12
 55  39.  A 12 4.2000  7.8000  5.0000 0.0000000 0.539000 1 0 0 024 E2E3(E4L23
 56  40.  A 13 7.8000  21.000  15.000 0.0000000 0.539000 1 0 0 024 E2E3(E4L23
 57  41.  A 17 3.3000  69.000  5.0000 0.0000000 1.500000 1 2183025 E5E4(E3L54
 58      *M ** 127.00  1000.0                                     CONTAMINANT
 59  42.  A 24 22.000  31.000  25.000 0.0000000 1.310000 1 0 0 025 E5E4E3(E2
 60  43.  A 28 33.000  62.000  50.000 0.0000000 1.200000 1 2183025 E5E4E3E2
 61      *M ** 341.00  1000.0                                     CONTAMINAN
 62  44.  AL01 0.9800  1.7700  1.0000 0.0000000 0.040200 1 2142819 CALC.
 63      *M ** 0.2700  0.4700                                     CONTAMINAN
 64  45.  AL02 1.7700  4.2200  2.5000 0.0000000 0.040200 1 2142819 CALC.
 65      *M ** 0.4700  1000.0                                     CONTAMINAN
 66  46.  M 34 0.1500  0.1800  0.2000 0.000000  0.097500 1 0 0 021 E0 E2 CALC
 67  47.  L  5 0.4700  5.6000  1.5000 0.000000  0.441000 1 0 0 043 E1E2(E3L12
 68  48.  L 14 5.8000  28.000  6.0000 0.000000  0.539000 1 0 0 043 E2E3(E4L23
 69  49.  L 18 6.8000  28.000  5.0000 0.000000  1.500000 1 0 0 043 E5E4(E3L54
 70  50.  M 38 0.0720  0.1500  0.1000 0.000000  0.097500 1 3203126 E0(E2)
 71      *H ** 0.0200  0.0770                                     CONTAMINAN
 72  51.  M 35 0.1800  0.2800  0.2500 0.000000  0.097500 1 3203126 E0 E2(E3)
 73      *N ** 0.1390  0.2600                                     CONTAMINAN
 74  52.  M 47 0.1240  14.300? 0.2500 0.000000  0.441000 1 3203127 D1F2 CALC
 75      *H ** 0.0310  768.00?                                    CONTAMINAN
 76  53.  M  6 0.5300  5.6000  0.5000 0.000000  0.441000 1 3213228 E1E2(E3L12
 77      *N ** 0.5100  4.6000                                     CONTAMINAN
 78  54.  M  7 6.1700  8.6000  6.0000 0.000000  0.441000 1 0 0 028 E1E2(E3L12
 79  55.  M 15 9.5000  46.000  15.000 0.000000  0.539000 1 3233329 E2E3(E4L23
 80      *N ** 10.000  51.000
 81  56.  M 19 6.8000  10.400  6.0000 0.000000  1.500000 1 3243430 E5E4(E3L54
 82      *N ** 7.1000  10.400                                     CONTAMINAN
 83  57.  M 20 10.400  40.000  15.000 0.000000  1.500000 1 3243430 E5E4(E3L54
 84      *N ** 10.000  34.000                                     CONTAMINAN
 85  58.  M 25 48.000  64.000  50.000 0.000000  1.310000 1 3243430 E5E4E3(E2)
 86      *N ** 65.000  74.000                                     CONTAMINAN
 87  59.  M 29 68.000  270.00  70.000 0.000000  1.200000 1 3243430 E5E4E3 E2
 88      *N ** 78.000  730.00                                     CONTAMINAN
 89  60.  H 36 0.0990  0.1400??0.1000 0.000000  0.097500 1 0 0 031 E0(E2) CAL
 90  61.  H  8 0.3100  2.2000  0.3500 0.000000  0.441000 1 0 0 032 E1E2(E3 CA
 91  62.  H  9 2.3000  12.000  2.0000 0.000000  0.441000 1 0 0 032 E1E2(E3 CA
 92  63.  H 43 13.000  82.000  15.000 0.000000  0.539000 1 0 0 033 E2E3(E4 CA
 93  64.  H 21 9.5000  18.000  10.000 0.000000  1.500000 1 0 0 034 E5E4(E3L54
 94  65.  H 22 19.000  78.000  25.000 0.000000  1.500000 1 0 0 034 E5E4(E3L54
 95  66.  H 26 82.000  120.00  100.00 0.000000  1.310000 1 0 0 034 E5E4E3 CAL
 96  67.  H 30 127.00  850.00  150.00 0.000000  1.200000 1 0 0 034 E5E4E3E2 C
 97  68.  S AR
 98  69.  S E0
 99  70.  S E1
100  71.  S E2
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TABLE 2
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```
101  72.  S F3
102  73.  S F4
103  74.  S F5
104  75.  S A1
105  76.  ALAR
106  77.  ESA0 2.5000  99.999  2.5000 0.000000  0.493500 1 0 0 043 A 2-PI SR
107  78.  ESB0 8.5000  99.999  8.5000 0.000000  0.946200 1 0 0 043 B 4-PI SR
108  79.  AB10 8.5000  99.999  8.5000 0.000000  0.050400 1 0 0 043 A-B COINC.
109  80.  DP09 0.2850  5.0200  0.2500 0.000000  0.000840 1 4 0 035 DELTA'
110      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
111  81.  DP10 0.4800  2.5800  0.6000 0.000000  0.000840 1 4 0 035 DELTA'
112      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
113  82.  DP11 0.7250  1.6400  1.0000 0.000000  0.000840 1 4 0 036 DELTA'
114      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
115  83.  PD09 0.2850  5.2500  0.2500 0.000000  0.002600 1 0 0 038 DELTA
116  84.  PD10 0.4800  2.7200  0.6000 0.000000  0.002600 1 0 0 038 DELTA
117  85.  PD11 0.7250  1.5800  1.0000 0.000000  0.002600 1 0 0 039 DELTA
118  86.  AB12 54.000  87.300  50.000 0.000000  0.050400 1 0 0 042 A-B COINC.
119  87.  AB13 87.300  152.00  100.00 0.000000  0.050400 1 0 0 042 A-B COINC.
120  88.  PSA1 15.800  158.00  15.000 0.000000  0.493500 1 0 0 043 A 2-PI SR.
121  89.  PSA2 15.800  49.000  25.000 0.000000  0.493500 1 0 0 042 A 2 PI SR.
122  90.  PSA3 16.300  26.200  25.000 0.000000  0.493500 1 0 0 042 A 2 PI SR.
123  91.  PSB1 54.000  174.00  50.000 0.000000  0.946200 1 0 0 043 B 4 PI SR.
124  92.  PSB2 54.000  87.300  50.000 0.000000  0.946200 1 0 0 042 B 4 PI SR.
125  93.  PSB3 54.000  59.000  50.000 0.000000  0.946200 1 0 0 042 B 4 PI SR.
126  94.  DA03 0.4800  2.4500  0.6000 0.000000  0.000840 1 4 0 043 DELTA'
127      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
128  95.  DA04 0.7800  1.4100  1.0000 0.000000  0.000840 1 4 0 043 DELTA'
129      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
130  96.  DZ01 0.4050  18.800  0.6000 0.000000  0.000840 1 4 0 043 DELTA'
131      *S ** 0.92 0.80 0.98 1.00 0.98 0.93 0.85
132  97.  AD03 0.4800  2.5800  0.6000 0.000000  0.002600 1 0 0 043 DELTA
133  98.  AD04 0.7800  1.4800  1.0000 0.000000  0.002600 1 0 0 043 DELTA
134  99.  ZD01 0.4000  19.800  0.6000 0.000000  0.002600 1 0 0 043 DELTA
135  00. SPARE
```

TABLE 2
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```
 31.  P 23 22.000  30.000  25.000 0.0000000 1.310000 1 0 0 018 E5E4E3(E2)
 32.  P 27 37.000  89.000  50.000 0.0000000 1.200000 1 0 0 018 E5E4E3E2
 33.  P 31 212.60  1000.0  250.00 0.0000000 1.310000 1 0 0 036 E4E3 CA
 34.  A 39 0.0910  0.2330  0.1000 0.0000000 0.097500 1 2122620 E0(E2)
    * M ** 0.0240  0.0530
 35.  A 33 0.2300  0.4800  0.3500 0.0000000 0.097500 1 0 0 021 E0E2(E3)
 36.  A 46 0.1470  2.0000  0.6000 0.0000000 0.441000 1 0 0 021 D1F1.CA
 37.  A  3 0.4200  1.7000  0.6000 0.0000000 0.441000 1 0 0 022 E1E2(E3)
 38.  A  4 1.8000  4.0000  2.5000 0.0000000 0.441000 1 0 0 023 E1E2(E3L12
 39.  A 12 4.2000  7.8000  5.0000 0.0000000 0.539000 1 0 0 024 E2E3(E4L23
 40.  A 13 7.8000  20.000  15.000 0.0000000 0.539000 1 0 0 024 E2E3(E4L23
 41.  A 17 3.0000  58.000  5.0000 0.0000000 1.500000 1 2183025 E5E4(E3L54
     *M ** 176.00  1000.0                                     CONTAMINANT
 42.  A 24 22.000  30.000  25.000 0.0000000 1.310000 1 0 0 025 E5E4E3(E2
 43.  A 28 31.000  56.000  50.000 0.0000000 1.200000 1 2183025 E5E4E3E2
     *M ** 270.00  1000.0                                      CONTAMINAN
 44.  AL01 1.0400  1.8500  1.0000 0.0000000 0.120000 1 2142819 CALC.
     *M ** 0.2700  0.4800                                      CONTAMINAN
 45.  AL02 1.8500  3.7000  2.5000 0.0000000 0.120000 1 2142819 CALC.
     *M ** 0.5100  1000.0                                      CONTAMINAN
 46.  A 34 0.2300  0.4400  0.2000 0.000000  0.097500 1 0 0 021 E0 E2 CALC
 47.  L  5 0.7100  5.6000  1.5000 0.000000  0.441000 1 0 0 036 E1E2(E3L12
 48.  L 14 5.8000  28.000  6.0000 0.000000  0.539000 1 0 0 036 E2E3(E4L23
 49.  L 18 3.9000  20.000  5.0000 0.000000  1.500000 1 0 0 036 E5E4(E3L54
 50.  M 38 0.0600  0.2000  0.1000 0.000000  0.097500 1 3203126 E0(E2)
     *H ** 0.0150  0.0900                                      CONTAMINAN
 51.  M 35 0.2000  0.3400  0.2500 0.000000  0.097500 1 3203126 E0 E2(E3)
     *N ** 0.1600  0.2800                                      CONTAMINAN
 52.  M 47 0.1240  14.300  0.2500 0.000000  0.441000 1 3203127 D1F2 CALC
     *H ** 0.0310  768.00                                      CONTAMINAN
 53.  M  6 0.4700  5.2000  0.5000 0.000000  0.441000 1 3213228 E1E2(E3L12
     *N ** 0.4300  4.0000                                      CONTAMINAN
 54.  M  7 5.2000  8.2000  6.0000 0.000000  0.441000 1 0 0 028 E1E2(E3L12
 55.  M 15 8.6000  40.000  15.000 0.000000  0.539000 1 3233329 E2E3(E4L23
     *N ** 9.9000  44.000                                      CONTAMINAN
 56.  M 19 6.0000  9.2000  6.0000 0.000000  1.500000 1 3243430 E5E4(E3L54
     *N ** 6.6000  8.6000                                      CONTAMINAN
 57.  M 20 9.6000  42.000  15.000 0.000000  1.500000 1 3243430 E5E4(E3L54
     *N ** 9.2000  36.000                                      CONTAMINAN
 58.  M 25 44.000  61.000  50.000 0.000000  1.310000 1 3243430 E5E4E3(E2)
     *N ** 61.700  74.000                                      CONTAMINAN
 59.  M 29 69.000  270.00  70.000 0.000000  1.200000 1 3243430 E5E4E3 E2
     *N ** 101.00  1000.0                                      CONTAMINAN
 60.  H 36 0.0990  0.1400  0.1000 0.000000  0.097500 1 0 0 031 E0(E2) CAL
 61.  H  8 0.2800  1.9000  0.3500 0.000000  0.441000 1 0 0 032 E1E2(E3 CA
 62.  H  9 2.0000  12.000  2.0000 0.000000  0.441000 1 0 0 032 E1E2(E3 CA
 63.  H 43 11.800  74.000  15.000 0.000000  0.539000 1 0 0 033 E2E3(E4 CA
 64.  H 21 8.2000  17.000  10.000 0.000000  1.500000 1 0 0 034 E5E4(E3L54
 65.  H 22 18.000  82.000  25.000 0.000000  1.500000 1 0 0 034 E5E4(E3L54
 66.  H 26 86.000  120.00  100.00 0.000000  1.310000 1 0 0 034 E5E4E3 CAL
```

TABLE 2
(Page 5 of 5 Pages)

```
201  67.  H 30 127.00  1000.0  150.00 0.000000  1.200000 1 0 0 034 E5E4E3E2 C
202  68.  S E0
203  69.  S E1
204  70.  S E2
205  71.  S E3
206  72.  S E4
207  73.  S E5
208  74.  S AL
209  75.  S AR
210  76.  ALAR
211  77.  SPARE
212  78.  SPARE
213  79.  SPARE
214  80.  SPARE
215  81.  SPARE
216  82.  SPARE
217  83.  SPARE
218  84.  SPARE
219  85.  SPARE
220  86.  SPARE
221  87.  SPARE
222  88.  SPARE
223  89.  SPARE
224  90.  SPARE
225  91.  SPARE
226  92.  SPARE
227  93.  SPARE
228  94.  SPARE
229  95.  SPARE
230  96.  SPARE
231  97.  SPARE
232  98.  SPARE
233  99.  SPARE
234  00.  SPARE
```

```
C PASSBANDS,BACKGROUNDS,AND GEOMETRIC FACTORS FOR PTM,VOYAGER II
C DECEMBER 27,1977
C        THRESHOLDS
FAT  NAME    LOW     HIGH     MEAN     BKGRND      G.F.     TEXT
 #         (MEV/N) (MEV/N) (MEV/N) (C/SEC.) (CMSQSR)
 1.  EB01 0.0125  0.0350  0.0200 0.0000000 0.002000 1 0 0 0 1   * TWO GAIN STATES
 2.  EBD1 0.0125  0.0350  0.0200 0.0000000 0.002000 1 4 0 0 1
    *S ** 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 3.  EB02 0.0350  0.0610  0.0450 0.0000000 0.002000 1 0 0 0 1
 4.  EBD2 0.0350  0.0610  0.0450 0.0000000 0.002000 1 4 0 0 1
    *S ** 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 5.  EB03 0.0610  0.1120  0.0900 0.0000000 0.002000 1 0 0 0 2
 6.  EBD3 0.0610  0.1120  0.0900 0.0000000 0.002000 1 4 0 0 2
    *S ** 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 7.  EB04 0.1120  0.1830  0.1200 0.0000000 0.002000 1 0 0 0 3
 8.  EBD4 0.1120  0.1830  0.1200 0.0000000 0.002000 1 4 0 0 3
    *S ** 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 9.  EB05 0.1830  0.5000  0.2000 0.0000000 0.002000 1 0 0 0 4
10.  EBD5 0.1830  0.5000  0.2000 0.0000000 0.002000 1 4 0 0 4
    *S ** 1.00 1.00 1.00 1.00 1.00 1.00 1.00
11.  EG06 0.2520  2.0000  0.2500 0.0000000 0.002000 1 0 0 0 5
12.  EG07 0.4800  2.0000  0.5000 0.0000000 0.002000 1 0 0 0 5
13.  EG08 0.8530  2.0000  0.9000 0.0000000 0.002000 1 0 0 0 6
14.  EG09 2.1000  5.0000  2.0000 0.0000000 0.002000 1 0 0 0 7
15.  E 44 0.3500  1.5000  0.5000 0.0000000 1.310000 1 0 0 035
16.  E 45 2.0000  100.00  2.0000 0.0000000 1.310000 1 0 0 035
17.  E 37 6.0000  100.00  6.0000 0.0000000 1.310000 1 0 0 035
18.  PL01 0.0235  0.0475  0.0250 0.0000000 0.120000 1 0 0 0 8
19.  PL02 0.0475  0.0795  0.0500 0.0000000 0.120000 1 0 0 0 8
20.  PL03 0.0795  0.1370  0.1000 0.0000000 0.120000 1 0 0 0 9
21.  PL04 0.1370  0.2150  0.1500 0.0000000 0.120000 1 1 21111
    *A ** 0.0343  0.0538
22.  PL05 0.2150  0.5400  0.2500 0.0000000 0.120000 1 1 21212
    *A ** 0.0538  0.1350
23.  PL06 0.5400  0.9900  0.6000 0.0000000 0.120000 1 1 31313
    *A ** 0.1350  0.2475
24.  PL07 0.9900  2.1400  1.0000 0.0000000 0.120000 1 1 31414
    *A ** 0.2475  0.5500
25.  PL08 2.1400  3.5000  2.5000 0.0000000 0.120000 1 1 41414
    *A ** 0.5500  1.0000
26.  P 32 0.3300  0.6100  0.3500 0.0000000 0.097500 1 0 0 035 E0E2(E3)
27.  P  1 0.5200  1.4500  0.6000 0.0000000 0.441000 1 0 0 016 E1E2(E3)
28.  P 10 4.4000  11.400  5.0000 0.0000000 0.539000 1 0 0 016 E2E3(E4)
29.  P 11 11.400  20.000  12.000 0.0000000 0.539000 1 0 0 017 E2E3(E4)
30.  P 16 3.0400  17.300  5.0000 0.0000000 1.500000 1 0 0 018 E5E4(E3)
```

SEE TABLE 4 for Full description.

LOW ENERGY MAGNETOSPHERIC PARTICLE ANALYZER (LEMPA)

VOYAGER-1 Ion Passbands[1] (96.5μ)

G = 0.04 cm^2sr — Field-of-View is 45°

Channel Number	H (keV)	ε	He (keV)	ε	O (keV)	ε	S (keV)	ε
PL01 *	30-53	1.0	37-62	1.0	84-135	~ 0.45	140-210	~ 0.32
02	53-85	1.0	62-100	1.0	120-206	~ 0.52	180-280	~ 0.45
03	85-139	1.0	100-160	1.0	180-260	~ 0.8	250-350	~ 0.8
04	139-220	1.0	160-235	1.0	260-370	~ 1.0	350-450	~ 1.0
05	220-550	1.0	235-550	1.0	370-790	1.0	450-880	1.0
06	550-1050	1.0	550-1050	1.0	790-1330	1.0	880-1490	1.0
07	1050-2000	1.0	1050-2000	1.0	1330-2386	1.0	1490-2530	1.0
08	2000-4000	1.0	2000-3930	1.0	2386-4400	1.0	2530-4610	1.0

* Threshold change after 0530 UT on day 67, 1979; estimated thresholds and efficiencies are shown below

PL01	45-53	~ 0.5	52-62	~ 0.5	~ 100-135	?	~ 154-210	?

VOYAGER-2 Ion Passbands[1] (89.1μ)

G = 0.113 cm^2sr — Field-of-View is 45°

Channel Number	H (keV)	ε	He (keV)	ε	O (keV)	ε	S (keV)	ε
PL01	28-43	1.0	36-49	1.0	66-108	~ 0.3	100-155	~ 0.3
02	43-80	1.0	49-86	1.0	93-150	~ 0.6	138-200	~ 0.6
03	80-137	1.0	86-145	1.0	144-220	~ 0.8	180-270	~ 0.8
04	137-215	1.0	145-230	1.0	220-340	~ 1.0	270-394	~ 1
05	215-540	1.0	230-540	1.0	340-677	1.0	394-784	1.0
06	540-990	1.0	540-990	1.0	677-1156	1.0	784-1296	1.0
07	990-2140	1.0	990-2140	1.0	1156-2320	1.0	1296-2496	1.0
08	2140-3500	1.0	2140-4000	1.0	2320-4200	1.0	2496-4400	1.0

[1] Efficiencies quoted at 75% of maximum.

189 → Day
11BD → 24 ⟌ 4541
7/8

DR/D5004564 7/8/79 – 7/11/79

year 79

RECORD 11282 OF FILE 1
LENGTH = 2400 BYTES

000AA801	FF01FF01	8E018E01	80038003	1A001A00	6F01F101	0B032B03	06000100	D5069001	F000F000
00000000	00000000	00000000	00000000	00005F09	9F0F0000	00002570	66006600	18001900	80508050
BD11BD11	CF08FF08	43004300	4F004F00	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
2047DC54	3444F0C5	AC46609A	B543C02B	1646CC39	294310B7	1345CC7C	68422C90	A8432CB9	8F410429
84450025	6A44606A	DC4160AA	00000000	00000000	00000000	00000000	2B47F02D	3547A044	E546AC67
7B4614D7	424650A4	F244CC47	05445816	A04274D2	DE4224D5	204524D5	BA4174AA	6544F8FF	00000000
00000000	00000000	00000000	A5443C55	B142DCFF	00000000	6A4260AA	2A3EB0AA	00000000	0944F80F
7C42ACAA	00000000	00000000	1C414400	C03F0800	4E41A0AA	00000000	00000000	00000000	B243187C
814164B2	00000000	05405055	00000000	00000000	00000000	00000000	00000000	00000000	D53E5055
193F9899	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	03485415	8148F8FF	CA44946C	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
0D006200	11008A00	1A00CA00	35005901	8E007902	1C003C00	5F010019	00190019	00190900	09000B00
0E000F00	28004C00	CB00AF00	24007E01	3C000019	00190019	00193200	C3000000	F100AD11	00194E00
E8000019	00194F02	E4050202	00190019	00195D00	B5010000	00050019	00190019	00190019	00192E0B
55080019	00190019	00190019	00190000	00000000	00000000	00190700	0A002B00	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
3C003B00	3C003B00	3C003B00	3C003B00	3C003900	78007800	78007800	78007800	3C007800	78007800
78008400	84008400	7B007800	78007800	78007800	78007800	78007800	78000000	78007800	78007800
78007800	78007800	78007800	78007800	78008400	84000000	78007800	78007800	78009600	78007800
96009600	96007800	78007800	78000000	00000000	00000000	30003C00	0F008400	00000000	00000000
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D5F61AEB	32E7D2DC	A0D10000	000050FD	3DF08FF1	D6EB91E8	3DE54AE5	0000D2E5	00000000	07DDD2E6
33DD7BD7	00000000	00000AE8	7CD90000	00000000	7FDF0000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00007D18	FF7F1E01	00000000	0000FF7F
48000000	9F03E804	2000FF7F	FF7F2102	00006009	4D047703	83002600	00000000	00000000	00000000
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11002700	4B00B900	510000F8	00F80F00	13001A00	1A002400	5E00E500	00F88500	00F800F8	7907B100
D900D60B	00F800F8	00F87901	D30100F8	00F800F8	DD0400F8	00F800F8	00F800F8	00F800F8	00F800F8
00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00E700E7	00E70500	00003A00	00E700E7	FF7F5A23
5A2300E7	57002E00	362B0000	0000FF7F	00E70300	CC025A23	5A23FF7F	00E700E7	00E700E7	00E700E7
00FC00FC	00FC00FC	31004400	6500AD00	3C0100FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC
D5F6D5F6	D5F6D5F6	1AEB1AEB	32E732E7	D2DCD2DC	A0D1A0D1	00E800E8	00E800E8	00E850FD	50FD3DF0
D6EB91E8	3DE54AE5	4AE500E8	D2E5D2E5	00E800E8	00E800E8	00E8D2E6	33DD0000	7BD700E8	00E800E8
00E800E8	00E807DD	07DD33DD	00E800E8	00E80AE8	0AE80000	00E800E8	00E800E8	00E800E8	00E87FDF
00E800E8	00E800E8	00E800E8	00E80000	00000000	00000000	00E800E8	00E800E8	00000000	00000000
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00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
FC03FC03	FC03FC03	FF030004	00040004	00040004	00040004	0004FB03	00040004	00040004	00040004
F8030004	FB035703	FF030004	00040004	0004FE03	EF03FE03	B6030004	C2021501	51013301	E7020004
00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
6E4E50F1	864B18B4	D34D9877	DD4AD4F6	8C4C807A	9E490CB4	D34B68D8	2749BC05	054AD0C2	E24770FD
204C28CB	614A30F2	0347D873	A7045054	4A00C889	4300787F	02001CC0	734B3081	464BE0D7	6D4A085F
114AE863	2F497849	7C47A8E8	3C463CDD	1F44E838	0046043B	8A46442A	85411801	BE435826	50007851
51005089	34009CC6	1700D890	8548F04C	1245EC36	00000000	54433029	493EB83F	3C00E0C9	2D426000
C1405C0C	51005089	1600249B	98434864	D8400C27	7945CCF5	3000483E	1A004492	2C0050B3	E2462C03
A0446C06	00000000	7941B4E2	7300B819	700058C2	5600B43A	4F008423	7200181F	1300181E	42438012
A240C8C1	95006445	20002CD9	6F005048	6D0020F5	3E00A82D	0400F0A2	00000000	00000000	00000000

00000000	00000000	7F7FFCFF	FF7FFCFF	FF7FFCFF	FF7FFCFF	00000000	00000000	00000000	00000000
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00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
0D006200	11008A00	1A00CA00	35005901	8E007902	1C003C00	5F010019	00190019	00190900	09000B00
0E000F00	28004C00	CB00AF00	24007E01	3C000019	00190019	00193200	C300FFFF	F100AD11	00194E00
E8000019	00194F02	E4050202	00190019	00195D00	B501FFFF	00050019	00190019	00190019	00192E0B
55080019	00190019	00190019	0019FFFF	FFFFFFFF	FFFFFFFF	00190700	0A002B00	FFFFFFFF	FFFFFFFF
FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF	FFFFFFFF

11282 RECORDS IN FILE 1 OF TAPE

DUMP OF TAPE GOUT1

02/24/79 - 03/04/79

D-42082
C-21961

INPUT TAPE GOUT1 ON MT1
DATA_INPUT H9 FL 1 1 1

083F 1343 day, hr/min. milli. second 0079 year

FILE 1 RECORD 05AB 1 LENGTH 2400BYTES

(0)	010A0100	FF03FF03	8F028F02	80028002	3A003A00	F203F203	78007800	07000100	F1009001	F0000000
(40)	00000000	00000000	00000000	00000000	00005F09	9F0F0000	000055A9	02006600	21002100	053F053F
(80)	3E053F05	AB05AB05	7203 7203	4F004F00	00000000	00000000	00000000	00000000	00000000	00000000
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(200)	6A41ACAC	00000000	D5400456	00000000	55408455	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	AF41F8FF	D53F5055	00000000	00404800	2A3F00A9	AA3FCCAA
(280)	00350000	A0350000	00000000	553F6855	95C03855	00000000	00000000	00000000	00000000	00000000
(320)	00000000	00000000	D141F8FF	5141F4FF	00000000	00000000	6A419CAA	00000000	00000000	00000000
(360)	00000000	00000000	00000000	CA3F82AA	00000000	00000000	CA40A4AA	00000000	00000000	00000000
(400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	1144F8FF	00000000	00000000
(480)	00000000	00000000	00000000	00000000	00000000	3D43FCFF	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
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(640)	00190019	00190019	00190019	00190019	00190019	00190019	DB037405	00190000	54050019	00190019
(680)	00190019	00190000	00000019	BC050019	00190019	00190000	00190019	00000019	00000000	00000019
(720)	00000000	00000000	00000000	0000D800	00000000	00000000	00000000	0000A701	00000000	00000000
(760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
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(840)	0F000C00	0C000C00	0F001000	0F000F00	18000F00	18001800	10001000	10000000	0F001800	0C000C00
(880)	0C000C00	0C000000	00001E00	1E001E00	1E000C00	0C000000	1E001E00	00001E00	00000000	00001E00
(920)	00000000	00000000	00000000	00000F00	00000000	00000000	00000000	00000C00	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
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(1040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	00000000	1500FF7F	1C000000	46005E00	00000000	46000600
(1120)	3E000000	5A00FF7F	3A000000	0C000000	00000200	00000000	00000000	00000000	00000000	00000000
(1160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1200)	94077E11	00F800F8	00F800F8	00F83028	EE2E00F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8
(1240)	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8
(1280)	00F800F8	00F800F8	00F800F8	00F800F8	00F800F8	13480000	0229FF7F	5A235A23	00E700E7	5A235A23
(1320)	5A2300E7	5A230000	362B00E7	5A2300E7	00E75A23	00E700E7	00E700E7	00E700E7	00E700E7	00E700E7
(1360)	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC	00FC00FC
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(1440)	00000000	00000000	000000E8	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)	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
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(1680)	FB030004	FD03F803	FF030004	00040004	00041600	25008302	5D000004	7E006900	5E004300	26010004
(1720)	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
(1760)	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004	00040004
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(1840)	0F044005	24044079	5904C4F5	AC03F869	694170A7	553CF4CA	00000000	E344FCB6	E843685E	1344A8FF
(1880)	4A392481	8D382409	00000000	024004E2	00000000	F702BCF1	6201CCC1	4500D8E5	21006400	4000104D
(1920)	2D000CB5	36008800	D03C700D	8F44C495	84023457	00000000	C641BC8D	0A00BC36	030094EF	0F00F4EC
(1960)	25007470	2D000CB5	6A009CB6	00000000	00000000	2A04B8F0	3340942A	2B00A827	000030CE	B40044CD
(2000)	ED00E82D	00000000	2600D460	6E00A8E3	00000000	1B00448E	00000000	00000000	00000000	FA03C427
(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)	5405FFFF	E707FFFF	2E0BFFFF	0019FFFF	0019FFFF	00190019	00190019	5A04AD11	FFFF6F0E	0019AD11
(2240)	00190019	00190019	00190019	00190019	00190019	00190019	DB037405	0019FFFF	54050019	00190019
(2280)	00190019	0019FFFF	FFFF0019	BC050019	00190019	0019FFFF	00190019	FFFF0019	FFFFFFFF	FFFF0019

55 day
24) 1343
1320
23 hr.
24 min.
60) 1451
14 milli.
60) 882

D-42082

63 day
24|1512
1512
00 hr.
3 min.
60|179

1512 daylr. 179 min.

```
(  2320)  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFD400  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFA701  FFFFFFFF  FFFFFFFF
(  2360)  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF

FILE        1  RECORD   1247%  LENGTH    2400BYTES
(     0)  010AF200  01010101  0E020F02  90019001  3A023A02  F201F300  B402CB02  06000400  F1D09001  F000F000
(    40)  00000000  00000000  00000000  00000000  00005F09  9F0F0000  00004220  66014600  15001600  D33F9D3F
(    80)  E805E805  9600B300  E403E403  4F004F00  00000000  00000000  00000000  00000000  00000000  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  894410AE  00000000  C94334DF  00000000  5C43E4C0  00000000  8C42A003  00000000  99410C56
(   240)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  96468835  76466804  254608A3
(   280)  D3457C97  00000000  00000000  00000000  AB43A033  A3424C55  1545F8FF  9B4350D5  00000000  00000000
(   320)  00000000  00000000  62419CAA  16455D05  2643A0AA  00000000  73434855  00000000  00000000  55405055
(   360)  00000000  00000000  00000000  00000000  60417800  0D415055  FA40A4AA  2A3EA4AA  00000000  C143F83F
(   400)  CE41A4AA  00000000  AA3EA4AA  00000000  2A3EA4AA  00000000  00000000  00000000  00000000  AA40A4AA
(   440)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  3F466821  69464C55  00000000
(   480)  00000000  00000000  00000000  00000000  00000000  5F434855  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)  00009D00  00000401  00005F01  00007902  00003605  00190019  00190019  00190019  00002700  2A003300
(   640)  49000000  00000000  42018602  77004A01  00000019  00000000  10067600  C4010000  76010000  00198000
(   680)  00190019  00190000  BA026F03  A5030019  0019D100  7D040000  00190019  00190019  00190019  00194006
(   720)  00190019  00190019  00190019  00193C00  37000000  00000000  00000000  00001401  00000000  00000000
(   760)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(   800)  00000F00  00000F00  00000F00  00000F00  00000C00  0F000C00  0C000C00  0C000C00  00000F00  0F000F00
(   840)  0C000000  00000000  0C000C00  0C000C00  00000C00  00000000  0C000C00  0C000000  0C000000  0C000C00
(   880)  0C000C00  0C000000  3C003C00  3C003C00  3C001800  0C000000  1E001E00  3C001E00  3C001E00  3C001E00
(   920)  1E001E00  1E003C00  3C003C00  3C000900  09000000  00000000  00000000  00001800  00000000  00000000
(   960)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  1000)  00000000  00000000  00000000  000052E8  97E009F2  00000000  00000000  0000ADED  00000000  00005CDB
(  1040)  16ED0000  00000000  0000ECE0  2ADE0000  00000000  00000000  00000000  00000000  00000000  00000000
(  1080)  00000000  00000000  00000000  00000000  00000000  8F03FD0B  0000FF05  FF7F0000  00000000  46000000
(  1120)  00000000  B201FF7F  3A002704  0C005101  00004E00  FF7FA001  FF7F5900  00000000  00000000  00000000
(  1160)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  1200)  00F800F8  00F800F8  00F800F8  00F84F00  6500BC00  00F800F8  00F800F8  00F87700  00F800F8  00F8D001
(  1240)  E50100F8  00F800F8  00F84F03  030C00E8  00F800F8  00F800F8  00F800F8  00F800F8  00F800F8  00F800F8
(  1280)  00F800F8  00F800F8  00F800F8  00F800F8  00F800F8  0C000400  00E72700  000000E7  00E700E7  5A2300E7
(  1320)  00E700E7  BF000800  362B6501  5A23FF7F  00E71600  00005A23  0000FF7F  00E700E7  00E700E7  00E700E7
(  1360)  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC  00FC00FC
(  1400)  000000E8  000000E8  000000E8  000000E8  000000E8  00E800E8  00E800E8  00E800E8  000097F0  97F097F0
(  1440)  D9F20000  00000000  00E800E8  BDED00E8  000000E8  00000000  00E85CDB  16ED0000  00E80000  00E800E8
(  1480)  00E800E8  00E80000  00E816ED  00000000  0000ECE0  ECE00000  00E800E8  00E800E8  00E800E8  00E800E8
(  1520)  00E800E8  00E800E8  00E800E8  00E800E8  00E80000  00000000  00000000  000000E8  00000000  00000000
(  1560)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  1600)  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004
(  1640)  C103B703  29032F03  67030004  00040004  00040004  00040004  0004FC03  00040004  00040004  00040004
(  1680)  F1030004  F703F803  FF030004  00040004  0004E201  6202F003  FD030004  FE033D02  1E02C101  45030004
(  1720)  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004
(  1760)  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004  00040004
(  1800)  00000000  F64D4469  00000000  C14C94E1  00000000  C04B7472  00000000  354B3469  00000000  E6498410
(  1840)  01067C0E  74056078  18056C8C  A7045054  4A00C889  18006BC4  00000000  434CA06C  A5429C6B  AF4A283F
(  1880)  3C4A9CCD  00000000  00000000  00000000  A0453092  9E458431  C3464470  68436838  00000000  03002429
(  1920)  00000000  00000000  843D9817  6A49D00D  36459490  00000000  90446C93  00000000  3C00E0C9  843E546D
(  1960)  6A00B0F2  43008C20  2400C081  00000000  2943FC4D  EC442BEC  5D40B899  643CD434  000030CE  B9469CCC
(  2000)  744440FD  00000000  5A40F4BC  5200F4D3  8D3C703B  0F001CD8  46009CB5  6700AC0A  200044A3  06454808
(  2040)  A50184EF  C7002C3F  4300202B  2A00F8CB  06002823  1D00E8C2  0500107A  FF7EFCFF  FF7FFCFF  00000000
(  2080)  00000000  00000000  00000000  00000000  00000000  FF7FFCFF  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)  FFFF9D0C  FFFF0401  FFFF5F01  FFFF7902  FFFF3605  00190019  00190019  00190019  FFFF2700  2A003300
(  2240)  4900FFFF  FFFFFFFF  42018602  77004A01  FFFF0019  FFFFFFFF  10067600  C401FFFF  7601FFFF  00198000
(  2280)  00190019  0019FFFF  BA026F03  A5030019  0019D100  7D04FFFF  00190019  00190019  00190019  00194006
(  2320)  00190019  00190019  00190019  00193C00  3700FFFF  FFFFFFFF  FFFFFFFF  FFFF1401  FFFFFFFF  FFFFFFFF
(  2360)  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF  FFFFFFFF

FILE   INPUT   DATA RECORDS   MAX.   READ ERROR SUMMARY   INPUT RETRIES
```