DATA SET CATALOG # 35A

OLD Radiation Model environments

CORRENV 2 tapes

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

GERMAN GEOMAGNETIC KP INDICES

KP, AP AND CP INDICES

GG-61B

THIS DATA SET CONSISTS OF ONE MAGNETIC TAPE. THE TAPE IS 9-TRACK 6250 BPI, WRITTEN IN EBCDIC, AND HAS 1 FILE OF DATA WITH A STANDARD LABEL. THE TAPE WAS CREATED ON THE IBM 360 COMPUTER. THE LABEL NAME ON THE TAPE IS "MAI.TAPE". THE TAPE SHOULD BE RELEASED AS UPDATED VERSIONS ARE RECIEVED. THE D AND C NUMBER ALONG WITH THE TIMESPAN CAN BE FOUND BELOW. A COPY SHOULD BE SENT TO:

ALAN E. HEDIN - CODE 914.0, BLDG 22, ROOM G 58

D#	C#	TIMESPAN
D-001487	C-023206	01/01/1932-10/31/93

ANNEX 1:

A. TAPE FORMAT

The Magnetic Activity Tape has the following format specifications:

- EBCDIC Code
- 1600 bytes per inch (9 tracks) density
- Standard labelling
- Formatted records (see B)
- Record length: 80 bytes
- Blocked with blocksize: 80 bytes

B. RECORD CONTENTS

FIRST RECORD OF DATA

Columns	Format	Variable	Description
1- 5	I5	M1	Year (starting date)
6-10	I5	M2	Month (starting date)
11-15	I5	M3	Day (starting date)
16-20	I5	M4	Year (end date)
21-25	I5	M5	Month (end date)
26-30	I5	M6	Day (end date)
31-80	50X	Spare columns	

REMAINING RECORDS OF DATA

(Each record contains the information of one day)

Columns	Format	Variable	Description
1- 2	I2	N1	Year (- 1900)
3- 4	I2	N2	Month
5- 6	I2	N3	Day
7-10	I4	N4	Sun rotation number
11-12	I2	N5	Cycle day number
13-14	I2	N6(1)	KP value 1
15-16	I2	N6(2)	KP value 2
17-18	I2	N6(3)	KP value 3
19-20	I2	N6(4)	KP value 4
21-22	I2	N6(5)	KP value 5
23-24	I2	N6(6)	KP value 6
25-26	I2	N6(7)	KP value 7
27-28	I2	N6(8)	KP value 8
29-31	I3	N7	Sum of KP
32-34	I3	N8(1)	3-H-AP Value 1
35-37	I3	N8(2)	3-H-AP Value 2
38-40	I3	N8(3)	3-H-AP Value 3
41-43	I3	N8(4)	3-H-AP Value 4
44-46	I3	N8(5)	3-H-AP Value 5
47-49	I3	N8(6)	3-H-AP Value 6
50-52	I3	N8(7)	3-H-AP Value 7
53-55	I3	N8(8)	3-H-AP Value 8
56-58	I3	N9	AP
59-61	F3.1	A10	CP
62-	I1	N11	C9
63-65	I3	N12	Sun spot number
66-70	F5.1	A13	10.7 cm flux
71-	I1	N14	Code of flux
72-80	9X	Spare columns	

GG-61B
Replaces D01487

european space agency
agence spatiale européenne

european space operations centre
europäisches operationszentrum der esa

darmstadt 25 February 1983

your ref:

our ref: ECD/DPD/CM/BH/19

telephone:

Dr. James I. Vette
Director World Data Center
for Rockets and Satellites
Code 601
Goddard Space Flight Center
Greenbelt, Maryland 20771
U.S.A.

Dear Sirs,

With reference to my letter of 19th May 1982, I am glad to inform you that, after a long interruption due to a man-power shortage and change of computers, we are now able to provide again the magnetic and solar indices service.

Every quarter you will receive a tape containing the whole database, i.e. data from 1.1.1932 to date. The format of the tape and the content of the records are specified in Annex 1 to this letter.

We dispatch to you now, a tape with the data from 1.1.1932 to 1.12.1982. The sunspot numbers from October 1982 onwards are provisional. Should you notice any anomalies in these data, please inform us, since the programs have been entirely rewritten.

Best regards.

Yours faithfully,

Carlo Mazza

dr. Carlo Mazza
Head of Data Processing Division
ESA Computer Department

PROGRAMS AVAILABLE

PROGRAM I: (ESRO serial number 209)

This program can be used to obtain printouts of individual dates from the magnetic activity tape. It is mainly envisaged to serve checking purposes.

PROGRAM II: (ESRO serial number 210)

This program produces a printout of the magnetic activity tape. Either the whole tape or a certain part (defined by input) will be printed.

PROGRAM III: (ESRO serial number 213)

This program computes from input cards the necessary information to be stored on the magnetic activity tape. It is important for updating the tape.

PROGRAM IV: (ESRO serial number 218)

This program corrects the 3-hour planetary range index Kp and the values derived on the magnetic activity tape. A new corrected tape is produced.

PROGRAM V: (ESRO serial number 219)

This is the main program for magnetic activity tape updating. It is assumed that new information to be put on tape already exists on data cards prepared by Program III.

SUBROUTINES AVAILABLE

SUBROUTINE I: (ESRO serial number 211)

This subroutine reads in an effective way the magnetic activity tape and transfers the information to the calling program.

SUBROUTINE II: (ESRO serial number 212)

This subroutine can be used to convert the conventional code for the planetary 3-hour range indices Kp to the decimal code and vice versa.

SUBROUTINE III: (ESRO serial number 214)

This subroutine computes, from the 3-hourly planetary amplitudes ap, the daily planetary amplitude Ap and the sum of ap.

SUBROUTINE IV: (ESRO serial number 215)

This subroutine converts the planetary character figure Cp to the daily character figure C9.

SUBROUTINE V: (ESRO serial number 216)

This subroutine converts the sum of the three-hour planetary amplitudes ap to the daily planetary character figure Cp.

SUBROUTINE VI: (ESRO serial number 217)

This subroutine converts the planetary 3-hour range index Kp to the 3-hour planetary amplitude ap.

KP, AP, CP, Indices
GG-61B
D-001487 | C-023206
1/1/1932 - 10/31/93

Replacement Tape

EBCDIC LIST OF km2005

FILE 1 RECORD 1 80 BYTES

VOL18001530

EBCDIC LIST OF km2005

FILE 1 RECORD 3 80 BYTES

HDR2F0008000080301WJOBXX /LTJCL A B 81793

EBCDIC LIST OF km2005

FILE 2 RECORD 1 80 BYTES

1932 1 1 1993 10 31

EBCDIC LIST OF km2005

FILE 2 RECORD 22586 80 BYTES

93103121882210 3201717302323143 4 2 7 6 6 15 9 9 70.42 25 90.10

EBCDIC LIST OF km2005

FILE 3 RECORD 1 80 BYTES

EOF1IW.MAI.TAPE 80015300010001 933280000000022586IBM OS/VS 370

EBCDIC LIST OF km2005

FILE 3 RECORD 2 80 BYTES

EOF2F0008000008030IWJOBXX /LTJCL A B 81793

Radiation Model Environments Tape

File No.	Model Name	Deck Description
1	AP-1	Omnidirectional Flux Map. (Old Format)
2	AP-1	Exponential Spectral Parameter E_o. (Old Format)
3	AP-2	Omnidirectional Flux Map. (Old Format)
4	AP-2	Exponential Spectral Parameter E_o. (Old Format)
5	AP-3	Omnidirectional Flux Map. (Old Format)
6	AP-3	Exponential Spectral Parameter E_o. (Old Format)
7	AP-4	Omnidirectional Flux Map. (Old Format)
8	AP-4	Exponential Spectral Parameter E_o. (Old Format)
9	AP-5	Omnidirectional Flux Map.
10	AP-5	Exponential Spectral Parameter E_o.
11	AE-2	Omnidirectional Flux Map.
12	AE-2	Exponential Spectral Parameter E_o.
13	AE-1	Omnidirectional Flux Map. (Old Format)
14	1968 Projected Electrons	Omnidirectional Flux Map.
15	1968 Projected Electrons	Exponential Spectral Parameter E_o.
16	AP-1	Unidirectional Flux Map. (Old Format)
17	AP-2	Unidirectional Flux Map. (Old Format)
18	AP-3	Unidirectional Flux Map. (Old Format)
19	AP-4	Unidirectional Flux Map. (Old Format)
20	AP-5	Unidirectional Flux Map.
21	AP-5	Power Spectral Parameter P.
22	AE-2	Perpendicular Flux Map.
23	AE-1	Unidirectional Flux Map. (Old Format)
24	AP-6	Omnidirectional Proton Map.
25	AP-6	Power Spectral Parameter P.
26	AP-6	Perpendicular Proton Map.

TAPE NUMBER D-00669 or C-00307

F(B, L) is comprised of a partitioned subset of cards; each subset corresponds to a fixed L value. At the head of each subset there is a header or title card followed by the data cards for that L value. Thus an entire deck of cards covering all L values is ordered so that the first card is a header card which is followed by its data cards; then the same sequence is repeated at each L value. The formats of the header card and data card are given below.

Header Card Format

Columns 1 - 60	Used to describe the data in alpha numeric symbols.
Columns 61 - 66	Not used at present.
Column 67	A zero (0) indicates that the data does not cover the whole range of B values. A one (1) indicates a complete set of data which spans from the equator to the atmospheric cutoff.
Columns 68 - 69	Give the number of data cards behind the header card.
Column 70	Not used.
Column 71	Denotes the type of data with the following code: 0 - Extrapolated data 1 - Omnidirectional flux 2 - Unidirectional flux 3 - Unidirectional flux perpendicular to field line, $j_\perp$ 4 - Counting rate, omnidirectional 5 - Counting rate, unidirectional 6 - Counting rate, perpendicular 7 - Composite environment, omnidirectional flux 8 - Composite environment, unidirectional flux 9 - Other The composite environment refers to those produced in this program such as AE1, AP1, etc.
Column 72	Denotes the particle and approximate energy threshold with the following code: 0 - Protons <0.1 MeV 1 - Protons 0.1 - 1.0 MeV 2 - Protons 1 - 4 MeV 3 - Protons 4 - 30 MeV 4 - Protons >30 MeV 5 - Electrons <30 keV 6 - Electrons 30 - 300 keV 7 - Electrons 0.3 - 1.0 MeV 8 - Electrons >1.0 MeV 9 - Unspecified at present

Columns 73 - 75 Identification of the source of the data. The first digit gives the experimental group or groups and the last two digits will index their data. The code for the experimental groups is:

000 - 099 - Aerospace Corporation
100 - 199 - Air Force Cambridge Research Laboratory
200 - 299 - Bell Telephone Laboratories
300 - 399 - Goddard Space Flight Center
400 - 499 - Lockheed Missile and Space Company
500 - 599 - University of California at San Diego
600 - 699 - State University of Iowa
700 - 749 - Applied Physics Laboratory, Johns Hopkins University
750 - 799 - Rice University
800 - 899 - Composite environment
900 - 949 - University of Minnesota
950 - 999 - University of California (including Lawrence Radiation Laboratory)

Of course as other groups begin to contribute data, new assignments of numbers will be made.

Columns 76 - 79 Give the L value as x.x.

Column 80 Not used.

An example of a header card is shown in Figure 2.

Data Card Format

Columns 1 - 60 Contain four pairs of values of the form (B, F) for a fixed L value. Each pair has a field of fifteen columns; the first six columns are for B and the last nine are for F. The format B is xxxxx and the format for F is either .xxxEyy or .xxxE+yy. The exponent is understood to be positive when it is not punched.

Columns 61 - 70 Not used at present.

Columns 71 - 78 Are same as header card.

Columns 79 - 80 Used for indexing the data cards behind the header card.

Two examples of data cards are shown in Figure 2.

ENERGY SPECTRUM

We have found it useful to represent the differential energy omnidirectional flux, J(E, B, L), as a product of two functions

$$J(E, B, L) = F(B, L) \left[\frac{n(E, B, L)}{\int_{E_1} n(E', B, L)\, dE'} \right] . \tag{13}$$

curves shown in Figure 27. The fluxes have been increased in the outer zone to represent the solar maximum conditions. This estimated environment is for the time period December 1968. Our present understanding is that the outer zone fluxes decrease during times of magnetic quiet. Because magnetic activity increases during solar maximum, the average fluxes are expected to be larger. However, the peak fluxes may be the same as those measured in 1962-64. This would be the case if instabilities in the outer zone due to field line loading impose limitations on the amount of trapped radiation. The orbital integrations for this case have been computed and the results presented in Table 7 (pages 73 through 88). Plots showing the comparison of the orbital fluxes above 0.5 MeV for the two time periods are given in Figures 37 through 40

PUNCHED CARD FORMAT

Some minor modifications in the punched card format described in Reference 1 were found necessary. The header card format now uses columns 77 through 80 to give the L value as X.XX instead of using columns 76, 77 and 78 to give it as X.X, otherwise the format is identical to the previous description.

The data card format for the flux distribution function is the same as before for the first sixty columns. These columns contain all the data and in Fortran notation the format is written as 4(F6.5, 1x, E7.3, 1x). The last twenty columns of these cards are only used for bookkeeping purposes; in fact all this information can be obtained from the header cards. Starting with the AE2 environment columns 68 and 69 are used for indexing the data cards and columns 77 through 80 are used for giving the L value as X.XX. Columns 71 through 75 give the same information about the data as previously described.

The electron spectrum data card shown in Figure 13 contains data in the first seventy-two columns. In Fortran notation the format is written as 3(F5.2, 1x, E8.2, 1x, E8.2, 1x). Columns 73, 74 and 75 are used to give a three digit identification number and columns 77 through 80 to give the L value.

DISCUSSION

The AE2 environment has been carried out to L = 6.0 using the B, L coordinate system calculated from surface magnetic measurements. Starting around 5 to 6 earth radii, the data does not order well in this coordinate system. It is clear that the distorted magnetosphere must be taken into account at higher altitudes. Frank (Reference 5) has reported a diurnal variation in the > 1.6 MeV electron fluxes of a factor of 50 at the synchronous altitude. Therefore extrapolations of AE2 to higher L values should be interpreted with caution and only used for order of magnitude estimates. It is planned to make a separate map for the synchronous region in the near future using a more appropriate coordinate system.

A more detailed representation of the time variability of outer zone fluxes will be done when there is enough data available. As indicated earlier, a time averaged flux and energy spectrum

The environmental model maps on the converted tape (environmental model tape #2) have the format 4 (F6.5, 1X, E7.3, 1X) for the first 60 characters, and the same information contained in the header cards for the next 20 characters (except that the 67th character is blank). This should always be used unless a specified request is made for a deck with an old format.

On the original environmental map tape, the maps with the old format have been indicated in the data set catalog. The format for these is basically the same as the above mentioned tape except the characters 61-70 are not used and 79-80 are used for indexing the data cards behind the header card. To run an old deck with TRECO, the variable NAGE, described in TRECO document, must be set to 1 (one).

```
OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963          1 1 748011.0
.001   .100E01 .100   .100E01 .200   .100E01 .31165 .100E01          048011.0 1
OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963          1 3 748011.1
.140   .135E05 .150   .920E04 .160   .378E04 .170   .148E04          048011.1 1
.180   .740E03 .190   .120E03 .200   .130E02 .210   .100E01          048011.1 2
.220   .100E01 .250   .100E01 .300   .100E01 .35159 .100E01          048011.1 3
OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963          112 748011.2
.120   .238E05 .130   .180E05 .140   .119E05 .150   .860E04          048011.2 1
.160   .470E04 .170   .250E04                                        048011.2 2
.18035 .148E04 .182   .140E04 .184   .129E04 .186   .118E04          748011.2 1
.188   .106E04 .190   .960E03 .192   .855E03 .194   .750E03          748011.2 2
.196   .660E03 .198   .575E03 .200   .500E03 .202   .430E03          748011.2 3
.204   .370E03 .206   .317E03 .208   .2.2E03 .210   .230E03          748011.2 4
.212   .193E03 .214   .161E03 .216   .133E03 .218   .109E03          748011.2 5
.220   .890E02 .222   .685E02 .224   .500E02 .226   .360E02          748011.2 6
.228   .232E02 .230   .141E02 .232   .800E01 .234   .380E01          748011.2 7
.236   .100E01 .238   .100E01 .240   .100E01 .242   .100E01          748011.2 8
.244   .100E01 .246   .100E01 .248   .100E01 .250   .100E01          748011.2 9
.260   .100E01 .280   .100E01 .300   .100E01 .38170 .100E01          048011.2 3
OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963          111 748011.3
.100   .500E05 .110   .286E05 .120   .187E05 .130   .144E05          048011.3 1
.14185 .103E05 .145   .950E04 .150   .800E04 .155   .680E04          748011.3 1
.160   .580E04 .165   .490E04 .170   .420E04 .175   .350E04          748011.3 2
.180   .292E04 .185   .241E04 .190   .204E04 .195   .170E04          748011.3 3
.200   .141E04 .205   .115E04 .210   .920E03 .212   .820E03          748011.3 4
.214   .740E03 .216   .660E03 .218   .585E03 .220   .505E03          748011.3 5
.222   .440E03 .224   .370E03 .226   .304E03 .228   .250E03          748011.3 6
.230   .200E03 .232   .156E03 .234   .120E03 .236   .880E02          748011.3 7
.238   .630E02 .240   .436E02 .242   .290E02 .244   .182E02          748011.3 8
.246   .116E02 .248   .700E01 .250   .380E01 .252   .100E01          748011.3 9
.253   .100E01 .300   .100E01 .350   .100E01 .40543 .100E01          048011.3 2
OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963          111 748011.4
```

FILE #7

1 1 748011.0	REC	1.	LENGTH	84
048011.0 1	REC	2.	LENGTH	84
1 3 748011.1	REC	3.	LENGTH	84
048011.1 1	REC	4.	LENGTH	84
048011.1 2	REC	5.	LENGTH	84
048011.1 3	REC	6.	LENGTH	84
112 748011.2	REC	7.	LENGTH	84
048011.2 1	REC	8.	LENGTH	84
048011.2 2	REC	9.	LENGTH	84
748011.2 1	REC	10.	LENGTH	84
748011.2 2	REC	11.	LENGTH	84
748011.2 3	REC	12.	LENGTH	84
748011.2 4	REC	13.	LENGTH	84
748011.2 5	REC	14.	LENGTH	84
748011.2 6	REC	15.	LENGTH	84
748011.2 7	REC	16.	LENGTH	84
748011.2 8	REC	17.	LENGTH	84
748011.2 9	REC	18.	LENGTH	84
048011.2 3	REC	19.	LENGTH	84
111 748011.3	REC	20.	LENGTH	84
048011.3 1	REC	21.	LENGTH	84
748011.3 1	REC	22.	LENGTH	84
748011.3 2	REC	23.	LENGTH	84
748011.3 3	REC	24.	LENGTH	84
748011.3 4	REC	25.	LENGTH	84
748011.3 5	REC	26.	LENGTH	84
748011.3 6	REC	27.	LENGTH	84
748011.3 7	REC	28.	LENGTH	84
748011.3 8	REC	29.	LENGTH	84
748011.3 9	REC	30.	LENGTH	84
048011.3 2	REC	31.	LENGTH	84
111 748011.4	REC	32.	LENGTH	84

.080	.957E05	.090	.540E05	.100	.300E05	.110	.195E05	048011.4 1
.11358	.175E05	.120	.148E05	.130	.114E05	.140	.920E04	748011.4 1
.145	.820E04	.150	.730E04	.155	.650E04	.160	.580E04	748011.4 2
.165	.515E04	.170	.460E04	.175	.410E04	.180	.367E04	748011.4 3
.185	.325E04	.190	.290E04	.195	.253E04	.200	.221E04	748011.4 4
.205	.188E04	.210	.151E04	.215	.120E04	.220	.885E03	748011.4 5
.225	.560E03	.230	.360E03	.232	.280E03	.234	.217E03	748011.4 6
.236	.162E03	.238	.121E03	.240	.900E02	.242	.645E02	748011.4 7
.244	.460E02	.246	.325E02	.248	.228E02	.250	.159E02	748011.4 8
.252	.111E02	.254	.755E01	.256	.500E01	.258	.320E01	748011.4 9
.262	.100E01	.300	.100E01	.350	.100E01	.42471	.100E01	048011.4 2

OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963 111 748011.5

.060	.560E05	.070	.802E05	.080	.438E05	.090	.270E05	048011.5 1
.09234	.242E05	.100	.180E05	.110	.132E05	.120	.105E05	748011.5 1
.130	.855E04	.140	.700E04	.150	.580E04	.160	.477E04	748011.5 2
.170	.389E04	.180	.315E04	.190	.250E04	.200	.194E04	748011.5 3
.205	.167E04	.210	.139E04	.215	.110E04	.220	.830E03	748011.5 4
.225	.560E03	.230	.350E03	.232	.290E03	.234	.239E03	748011.5 5
.236	.190E03	.238	.150E03	.240	.119E03	.242	.910E02	748011.5 6
.244	.700E02	.246	.530E02	.248	.395E02	.250	.295E02	748011.5 7
.252	.204E02	.254	.144E02	.256	.100E02	.258	.700E01	748011.5 8
.260	.475E01	.262	.300E01	.264	.100E01	.266	.100E01	748011.5 9
.268	.100E01	.300	.100E01	.400	.100E01	.44074	.100E01	048011.5 2

OMNI PROTON MAP API ENER ABOVE 34 MEV BEFORE SEPT. 23 1963 111 748011.6

.001	.100E01	.050	.745E05	.060	.480E05	.070	.313E05	048011.6 1
.07809	.239E05	.080	.200E05	.090	.136E05	.100	.980E04	748011.6 1
.110	.755E04	.120	.625E04	.130	.520E04	.140	.440E04	748011.6 2
.150	.370E04	.155	.337E04	.160	.308E04	.165	.279E04	748011.6 3
.170	.250E04	.175	.227E04	.180	.205E04	.185	.184E04	748011.6 4
.190	.164E04	.195	.144E04	.200	.126E04	.205	.107E04	748011.6 5
.210	.910E03	.215	.760E03	.220	.620E03	.225	.475E03	748011.6 6

SAFETY FILM

048011.4 1	REC	33.	LENGTH	84
748011.4 1	REC	34.	LENGTH	84
748011.4 2	REC	35.	LENGTH	84
748011.4 3	REC	36.	LENGTH	84
748011.4 4	REC	37.	LENGTH	84
748011.4 5	REC	38.	LENGTH	84
748011.4 6	REC	39.	LENGTH	84
748011.4 7	REC	40.	LENGTH	84
748011.4 8	REC	41.	LENGTH	84
748011.4 9	REC	42.	LENGTH	84
048011.4 2	REC	43.	LENGTH	84
111 748011.5	REC	44.	LENGTH	84
048011.5 1	REC	45.	LENGTH	84
748011.5 1	REC	46.	LENGTH	84
748011.5 2	REC	47.	LENGTH	84
748011.5 3	REC	48.	LENGTH	84
748011.5 4	REC	49.	LENGTH	84
748011.5 5	REC	50.	LENGTH	84
748011.5 6	REC	51.	LENGTH	84
748011.5 7	REC	52.	LENGTH	84
748011.5 8	REC	53.	LENGTH	84
748011.5 9	REC	54.	LENGTH	84
048011.5 2	REC	55.	LENGTH	84
111 748011.6	REC	56.	LENGTH	84
048011.6 1	REC	57.	LENGTH	84
748011.6 1	REC	58.	LENGTH	84
748011.6 2	REC	59.	LENGTH	84
748011.6 3	REC	60.	LENGTH	84
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.02500.239E 02 .03000.175E 02 .03500.132E 02 .04000.102E 02        0 3 83806 3.50
.05000.706E 01 .06000.523E 01 .07000.410E 01 .08000.347E 01        0 4 83806 3.50
.09000.291E 01 .10000.238E 01 .11000.207E 01 .12000.181E 01        0 5 83806 3.50
.13000.146E 01 .14000.125E 01 .15000.107E 01 .16000.929E 00        0 6 83806 3.50
.17000.826E 00 .18000.746E 00 .19000.666E 00 .20000.563E 00        0 7 83806 3.50
.21000.498E-00 .22000.451E-00 .23000.421E-00 .24000.422E-00        0 8 83806 3.50
.25000.398E-00 .26000.349E-00 .27000.293E-00 .30000.595E-01        0 9 83806 3.50
.35000.526E-01 .40000.433E-01 .45000.315E-01 .      .              010 83806 3.50
PERP PROTON MAP APS ENERGY ABOVE  4 MEV                             010 83806 3.60
.00653.185E 03 .00800.110E 03 .00900.734E 02 .01000.497E 02        0 1 83806 3.60
.01200.300E 02 .01400.187E 02 .01600.129E 02 .01800.968E 01        0 2 83806 3.60
.02000.742E 01 .02200.545E 01 .02400.581E 01 .02600.510E 01        0 3 83806 3.60
.02800.432E 01 .03000.364E 01 .03500.271E 01 .04000.220E 01        0 4 83806 3.60
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.01200.108E 02 .01400.736E 01 .01600.531E 01 .01800.405E 01        0 2 83806 3.70
.02000.334E 01 .02200.229E 01 .03000.160E 01 .04000.897E 00        0 3 83806 3.70
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.01800.187E 01 .02000.137E 01 .02500.863E 00 .03000.563E 00          0 3 83806 3.80
.04000.221E-00 .05000.121E-00 .06000.784E-01 .07000.780E-01          0 4 83806 3.80
.08000.777E-01 .09000.773E-01 .10000.768E-01 .11000.764E-01          0 5 83806 3.80
.12000.759E-01 .13000.754E-01 .14000.749E-01 .15000.743E-01          0 6 83806 3.80
.16000.739E-01 .17000.732E-01 .18000.725E-01 .19000.719E-01          0 7 83806 3.80
.20000.712E-01 .21000.705E-01 .22000.697E-01 .23000.690E-01          0 8 83806 3.80
.24000.682E-01 .25000.674E-01 .30000.627E-01 .32500.601E-01          0 9 83806 3.80
.35000.572E-01 .40000.504E-01 .45000.419E-01 .      .                010 83806 3.80
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.01800.726E 00 .02000.514E 00 .02500.230E-00 .03000.871E-01          0 3 83806 3.90
.04000.790E-01 .05000.787E-01 .06000.784E-01 .07000.780E-01          0 4 83806 3.90
.08000.777E-01 .09000.773E-01 .10000.768E-01 .11000.764E-01          0 5 83806 3.90
.12000.759E-01 .13000.754E-01 .14000.749E-01 .15000.743E-01          0 6 83806 3.90
.16000.739E-01 .17000.732E-01 .18000.725E-01 .19000.719E-01          0 7 83806 3.90
.20000.712E-01 .21000.705E-01 .22000.697E-01 .23000.690E-01          0 8 83806 3.90
.24000.682E-01 .25000.674E-01 .30000.627E-01 .32500.601E-01          0 9 83806 3.90
.35000.572E-01 .40000.504E-01 .45000.419E-01 .      .                010 83806 3.90
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.08000.777E-01	.09000.773E-01	.10000.769E-01	.11000.765E-01	0 5	83806 4.00
.12000.760E-01	.13000.756E-01	.14000.750E-01	.15000.745E-01	0 6	83806 4.00
.16000.740E-01	.17000.734E-01	.18000.728E-01	.19000.721E-01	0 7	83806 4.00
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