

#666

AMPTE\_CCE

6.4 MIN MASS ENERGY SPECTRA (HPCE) ✓

84-088A-01B

6.4 MIN MASS ENERGY SPECTRA (MEPA)

84-088A-02B

CHARGE ENERGY MASS SPECTROMETER

84-088A-03B

62 SECOND AVERAGE AND PEAK VALUES

84-088A-04B

MAGNETIC FIELD VECTORS

84-088A-05B

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

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## **1. INTRODUCTION:**

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

## 2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

*When printing, special settings may be required to make the text box appear on the printed output.*

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC  
INFORMATION SYSTEM:

<http://nssdc.gsfc.nasa.gov/nmc/>

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

- a. Associated Documents      To find associated documents you will need to know the document ID number and then click here.  
<http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/>

- b. Core Catalog Materials

REQ. AGENT

RAND NO.

ACC. AGENT

DHG

RF

AMFTE-CCE

6.4 MIN MASS ENERGY SPECTRA (HPCE)  
84-088A-01B SPMS-00171

6.4 MIN MASS ENERGY SPECTRA (MEPA)  
84-088A-02B SPMS-00414

CHARGE ENERGY MASS SPECTROMETER  
84-088A-03B SPMS-00442

62 SECOND AVERAGE AND PEAK VALUES  
84-088A-04B SPMS-00609

MAGNETIC FIELD VECTORS  
84-088A-05B SPMS-00424

THIS DATA SET CATALOG CONTAINS 87 TAPES. THEY ARE ALL 9 TRACK, 6250 BPI, BIN, IN SFDU FORMAT (STANDARD FORMATTED DATA UNITS). EACH TAPE HAS A VOLUME HEADER FILE, AND EACH DATA FILE HAS A FILE HEADER BLOCK WRITTEN IN ASCII AND DESCRIBING THE STRUCTURE OF THE DATA. THE D AND C NUMBERS AND TIME SPANS FOLLOW:

84-088A-01B:	D#	C#	FILES	TIME SPANS
	--	--	----	-----
	D-78524	C-27384	64	08/16/84 - 10/05/84
	D-78525	C-27385	53	10/05/84 - 11/14/84
	D-78526	C-27386	58	11/14/84 - 12/30/84
	D-78727	C-27387	46	01/01/85 - 02/08/85
	D-78728	C-27388	53	02/08/85 - 03/20/85
	D-78729	C-27389	64	03/20/85 - 04/29/85
	D-78730	C-27390	44	04/29/85 - 06/08/85
	D-78731	C-27391	44	06/08/85 - 07/18/85
	D-78732	C-27392	45	07/18/85 - 08/27/85
	D-78733	C-27393	111	08/27/85 - 10/07/85
	D-78734	C-27394	67	10/07/85 - 11/15/85
	D-78735	C-27395	52	11/15/85 - 12/31/85
	D-78736	C-27396	45	01/01/86 - 02/08/86
	D-78737	C-27397	42	02/08/86 - 03/20/86
	D-78738	C-27398	44	03/20/86 - 04/29/86
	D-78739	C-27399	44	04/29/86 - 06/08/86
	D-78740	C-27400	44	06/08/86 - 07/18/86
	D-79286	C-27401	45	07/18/86 - 08/27/86
	D-79287	C-27402	44	08/27/86 - 10/26/86

84-088A-01B (CONT):

D#	C#	FILES	TIME SPANS
--	--	----	-----
D-79288	C-27403	45	10/06/86 - 11/15/86
D-79289	C-27404	50	11/15/86 - 12/31/86
D-79765	C-27405	43	01/01/87 - 02/08/87
D-79766	C-27406	44	02/08/87 - 03/20/87
D-79767	C-27407	45	03/20/87 - 04/29/87
D-79768	C-27408	44	04/29/87 - 06/08/87
D-79769	C-27409	44	06/08/87 - 07/18/87
D-80300	C-27628	44	07/18/87 - 08/27/87
D-80301	C-27629	44	08/27/87 - 10/06/87
D-80302	C-27630	44	10/06/87 - 11/15/87
D-80303	C-27631	50	11/15/87 - 12/31/87
D-82524	C-28082	122	01/01/88 - 02/08/88
D-82525	C-28083	44	02/09/88 - 03/11/88
D-82526	C-28084	43	03/20/88 - 04/28/88
D-82527	C-28085	48	04/29/88 - 06/07/88
D-82528	C-28086	45	06/08/88 - 07/17/88

84-088A-02B:

D-78527	C-27411	50	08/21/84 - 10/05/84
D-78528	C-27412	43	10/06/84 - 11/14/84
D-78529	C-27513	40	11/14/84 - 12/30/84
D-78741	C-27413	30	01/01/85 - 02/08/85
D-78742	C-27414	34	02/08/85 - 03/20/85
D-78743	C-27514	34	03/20/85 - 04/29/85
D-78744	C-27415	31	04/29/85 - 06/08/85
D-78745	C-27515	34	06/08/85 - 07/18/85
D-78746	C-27416	29	07/18/85 - 08/26/85
D-78747	C-27417	25	09/04/85 - 10/07/85
D-78748	C-27418	33	10/07/85 - 11/15/85
D-78749	C-27516	35	11/15/85 - 12/24/85

84-088A-03B:

D-77765	C-26805✓	34	08/27/84 - 09/25/84
D-77766	C-26806	90	09/26/84 - 12/30/84
D-78750	C-27437	90	01/01/85 - 03/29/85
D-78751	C-27438	94	03/30/85 - 06/27/85
D-78752	C-27439	95	06/28/85 - 09/26/85
D-78753	C-27440	102	09/26/85 - 12/31/85
D-78754	C-27441	91	01/01/86 - 03/30/86
D-78755	C-27442	94	03/30/86 - 06/28/86
D-79290	C-27443	77	06/28/86 - 09/10/86
D-79291	C-27444	87	10/10/86 - 12/31/86
D-79770	C-27445	93	01/01/87 - 03/30/87
D-79771	C-27446	94	03/30/87 - 06/28/87
D-80304	C-27632	94	06/28/87 - 09/26/87
D-80305	C-27633	94	09/26/87 - 12/31/87
D-82529	C-28087	94	01/01/88 - 03/29/88
D-82530	C-28088	93	03/30/88 - 06/27/88

## 84-088A-04B (CONT):

D#	C#	FILES	TIME SPANS
---	---	-----	-----
D-75344	C-26807	13	08/18/84 - 12/30/84
D-78756	C-27447	120	01/01/85 - 04/29/85
D-78757	C-27448	125	04/29/85 - 08/27/85
D-78758	C-27449	132	08/27/85 - 12/31/85
D-78759	C-27450	121	01/01/86 - 04/29/86
D-78760	C-27451	124	04/29/86 - 08/27/86
D-79292	C-27452	130	08/27/86 - 12/31/86
D-79772	C-27453	123	01/01/87 - 04/29/87
D-79773	C-27454	124	04/29/87 - 08/27/87
D-80306	C-27634	130	08/27/87 - 12/31/87
D-82531	C-28089	124	01/01/88 - 04/28/88
D-82532	C-28090	123	04/29/88 - 08/26/88

## 84-088A-05B:

D-77767	C-26808	138	08/18/84 - 12/29/84
D-78761	C-27455	120	01/01/85 - 04/29/85
D-78762	C-27456	124	04/29/85 - 08/27/85
D-78763	C-27457	132	08/27/85 - 12/31/85
D-78764	C-27458	121	01/01/86 - 04/29/86
D-78765	C-27459	124	04/29/86 - 08/27/86
D-79293	C-27460	130	08/27/86 - 12/31/86
D-79774	C-27461	123	01/01/87 - 04/29/87
D-79775	C-27462	124	04/29/87 - 08/27/87
D-80307	C-27635	130	08/27/87 - 12/31/87
D-82533	C-28091	124	01/01/88 - 04/28/88
D-82534	C-28092	122	04/29/88 - 08/26/88



84-088A-01B

84-088A - 01B  
01B

Received  
March 84

DSC#660

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DUMP OF AMPTE CCE Science Data Center SFDU Tape H001A for HPCE Instrument  
Physical Volume Header File, Block # 1

CCSD1Z000001	00028652
ZZZZ1D00L001	00000946

ADI: ZZZZ001  
 CLASS: S  
 DATE: 05 Feb 87  
 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION  
 DESCRIPTION: Describes the content categories of a physical volume header used for exchanging data on magnetic tape.  
 ORIGINATOR: Stuart Nylund  
 The Johns Hopkins University Applied Physics Laboratory  
 Johns Hopkins Road  
 Laurel, MD 20707  
 USA  
 DDL: English/ASCII  
 OBJECT DESCRIPTION: The value field is divided into three categories called 'Volume Contents', 'Physical Format' and 'Volume Directory.' The entries under these categories are self explanatory. Line feed and carriage control character pairs are used to provide display format control.

ZZZZ1S000001	00006966
--------------	----------

PHYSICAL VOLUME HEADER

Volume Contents:  
 The volume contains data files for the AMPTE CCE Hot-Plasma Composition Experiment (HPCE) which consists of an energetic ion-mass spectrometer and an electron background-environment monitor (EBEM), and ephemeris, attitude, and events data for the AMPTE CCE spacecraft. The mass spectrometer covers the entire mass per charge range from below 1 to >150 amu/e and the energy per charge range from 0 eV/e (spacecraft potential) to 17 keV/e. The EBEM measures electrons between 50 eV and 25 keV in eight broad energy bands.

Investigators:  
 Drs. E. G. Shelley and D. M. Klumpar  
 Lockheed Palo Alto Research Laboratories  
 Palo Alto, CA 94304  
 USA

Reference:  
 E. G. Shelly, A. Ghielmetti, E. Hertzberg, S. J. Battel, K. Altwegg-Von Burg, and H. Balsiger, The AMPTE/CCE Hot-Plasma Composition Experiment (HPCE), IEEE Trans. Geosci., Vol GE-25, pp 241-245, May 1985.

Physical Format:  
 Tape Format: 9 Track  
 Density: 6250 bpi  
 Physical Block Size: 28672 bytes  
 Volume Creation Date: 20-NOV-1987  
 Volume Sequence Number: AMPTE-H001a  
 Access Method to Data Blocks: Sequential  
 SFDU-to-physical Block Relations: 1:1  
 Volume Format Map:  
 Physical Volume Header  
 EOF marker  
 Ephemeris Data File  
 Data File Format:  
 File Header SFDU  
 Data Block 1 SFDU  
 Data Block 2 SFDU  
 Data Block 3 SFDU  
 .  
 .  
 Data Block N SFDU  
 File Trailer SFDU  
 EOF marker  
 Attitude Data File

D.

84-088A-02B

\$NOP  
\$NCF \*\*\*\*\* JPBI \*\*\*\*\*  
\$EXE TPLIST ES

INPUT PARAMETERS ARE: AS SR=1=1 1 1 1

TAPE NO. 1 FILE NO. 1  
RECCRC 1 LENGTH 28672  
CCSC12CCCC1CCCC286E522221CCCC001CCCC094E ACI: ZZZZ0001 CLASS: S DATE:  
5 Feb 87 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION DESCRIPTION: Des  
cribes the content categories of a physical volume header used for exchanging d  
ata on magnetic tape. CRIGINATOR: Stuart Aylunc The Johns Hopkins Unive  
rsity Applied Physics Laboratory Johns Hopkins Rcac Laurel,  
MD 20707 USA DDL: English/ASCII OBJECT DESCRIPTION: The va  
lue field is divided into three categories called 'Volume Contents', 'Phys  
ical Format' arc 'Volume Directory.' The entries under these  
categories are self explanatory. Line feed arc carriage c  
ontrol character pairs are used to provide display format control. ZZZZ  
ISCCCC10000E9E6P FY S I C A I VOLUME HEADER Volume Contents: The volume con  
tains data files for the AMPTE CCE Hot-Plasma Composition Experiment (HPCE) which consists of a  
n energetic ion-mass spectrometer and an electron background environment monitor (EEM),  
and ephemeric, attitude, and events data for the AMPTE CCE spacecraft. The mass s  
pectrometer covers the entire mass per charge range from below 1 to >150 amu/e and the energy p  
er charge range from 0 eV/e (spacecraft potential) to 17 keV/e. The EEM measures electrons be  
tween 50 eV and 25 keV in eight broad energy bands. Investigators: Drs. E. G. Shelle  
y and C. M. Klumpar Lockheed Palo Alto Research Laboratories Falc Alto, CA 94304  
USA Reference: E. G. Shelly, A. Ghelmetti, E. Hertzberg, S. J. Battel, K. Alt  
wegg-Vcr Burg, arc H. Balsiger, The AMPTE/CCE Hot-Plasma Composition Experiment (HPCE), IEEE  
Trans. Geosci., Vol GE-25, pp 241-245, May 1985. Physical Format: Tape Format:  
5 Track Density: 625 bpi Physical Block Size:  
28672 bytes Volume Creator Date: 20-NCV-1987 Volume Sequence Number  
: AMPTE-H001a Access Methcc to Data Blocks: Sequential SFCL-to-physical Blc  
ck Relations: 1:1 Volume Format Map: Physical Volume Header EOF marker Ephem  
eris Data File Data File Format: File Header SFCL Data Block 1 SFDU  
Data Block 2 SFCL Data Block N SFCL File Trailer SFDU EOF marker  
Attitude Data File Data File Format: File Header SFDU Data Block 1  
SFDU Data Block 2 SFDU Data Block 3 SFCL  
Events Data File Data File Format: File Header SFDU Data Block  
1 SFCL Data Block 2 SFDU Data Block 3 SFDU  
er HPCE Instrument Data File 1 Data File Format: File Header SFCL  
Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFDU  
ECF marker HPCE Instrument Data File 2 ECF marker HPCE Instrument Data File  
3 ECF marker EOF marker HPCE Instrument Data File N  
ECF marker EOF marker Formats, Notations and Conventions: Time Format:  
year-of-century (two digits), day-of-year (up to 3 digits), secrc-of-day (up to 5  
digits). Numeric Value Representation Notations: A\*r is r-byte ASCII character string  
I\*2 is 2-byte, 2's complement, binary integer I\*4 is 4-byte, 2's complement, binary  
integer R\*4 is 4-byte, DEC VAX compatible, floating point datum R\*E is E-byte, DEC  
VAX compatible, floating point datum Termination Character: To arc a line of ASCII te  
xt: ASCII line feed character and carriage return character. Fill Characters:  
ASCII fill character: ASCII blank. Binary fill character: Binary 0. Mathematical  
notation: Exponentiation is represented by two asterisks. Subscripts are enclosed w  
ith the angle bracket characters "<" arc ">". Storage order of array elements: A one-d  
imensional array is written with its first element in the first storage location and its la  
st element in the last storage location of the sequence. A multidimensional array i  
s stored so that the leftmost subscripts vary most rapidly. Volume Directory (Time spars  
): Data File 1: 84 229 58288 to 84 230 15 Data File 2: 84 230 26 to 84 231 7  
Data File 3: 84 231 14 to 84 232 7 Data File 4: 84 232 12 to 84 233 5 Data  
File 5: 84 233 11 to 84 234 3 Data File 6: 84 234 9 to 84 235 2 Data File  
7: 84 235 7 to 84 236 5 Data File 8: 84 236 5 to 84 236 86398 Data File 9:  
84 237 4 to 84 237 15358 Data File 10: 84 237 15358 to 84 237 16892 Data File 11: 84 2  
37 16892 to 84 237 67145 Data File 12: 84 237 67195 to 84 237 69116 Data File 13: 84 237 69

C 27384  
(DD 78524)

84-088A-01B

08/16/84-10/05/84

116 to 84 237 86397 Data File 14: 84 238 2 to 84 238 48384 Data File 15: 84 238 48384 t  
o 84 238 86395 Data File 16: 84 239 1 to 84 239 86334 Data File 17: 84 239 86399 to 84  
240 86392 Data File 18: 84 240 86397 to 84 241 66022 Data File 19: 84 241 86396 to 84 242 8  
6385 Data File 20: 84 242 86385 to 84 243 86387 Data File 21: 84 243 86393 to 84 244 68351  
Data File 22: 84 244 86351 to 84 244 73340 Data File 23: 84 244 73340 to 84 244 86388 Da  
ta File 24: 84 244 86391 to 84 245 86384 Data File 25: 84 245 86390 to 84 246 86383 Data Fi  
le 26: 84 247 266 to 84 248 259 Data File 27: 84 248 26 to 84 249 9 Data File 2  
8: 84 249 25 to 84 250 13 Data File 29: 84 250 23 to 84 251 6 Data File 30: 84  
250 86382 to 84 251 86375 Data File 31: 84 251 86380 to 84 252 86373 Data File 32: 84 252  
86379 to 84 253 86372 Data File 33: 84 253 86377 to 84 254 86370 Data File 34: 84 255 15  
to 84 256 8 Data File 35: 84 256 14 to 84 257 7 Data File 36: 84 256 86368 to 8  
4 257 86365 Data File 37: 84 257 86371 to 84 258 86364 Data File 38: 84 258 86365 to 84 259  
86362 Data File 39: 84 259 86368 to 84 260 86361 Data File 40: 84 260 86366 to 84 261 8635  
9 Data File 41: 84 261 86365 to 84 262 86358 Data File 42: 84 262 86363 to 84 263 86356  
Data File 43: 84 264 1 to 84 264 86394 Data File 44: 84 264 86360 to 84 265 86353 Data  
File 45: 84 265 86355 to 84 266 86352 Data File 46: 84 266 86357 to 84 267 86350 Data File  
47: 84 268 78332 to 84 269 8 Data File 48: 84 269 23 to 84 270 3 Data File 49:  
84 270 12 to 84 271 5 Data File 50: 84 271 10 to 84 272 3 Data File 51: 84 27  
2 9 to 84 273 2 Data File 52: 84 273 7 to 84 274 6 Data File 53: 84 274  
6 to 84 274 86399 Data File 54: 84 275 4 to 84 275 86397 Data File 55: 84 276 3 to  
84 276 72958 Data File 56: 84 276 72958 to 84 276 86396 Data File 57: 84 277 1 to 84 2  
77 86394 Data File 58: 84 278 0 to 84 278 86392 Data File 59: 84 278 86398 to 84 279 32  
638 Data File 60: 84 279 32638 to 84 279 86391 ZZZZ1FC0L003000200E0

84-088A-02B

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DUMP OF AMPTE CCE Science Data Center SFDU Tape M001A for MEPA Instrument  
Physical Volume Header File, Block # 1

Received  
March 84

PSC # 666

C S D 1 Z 0 0 0 0 0 1	0 0 0 2 2 5 0 8
Z Z Z Z 1 D 0 0 L 0 0 1	0 0 0 0 0 9 4 6

ADI: ZZZZ0001  
 CLASS: S  
 DATE: 05 Feb 87  
 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION  
 DESCRIPTION: Describes the content categories of a physical volume header used for exchanging data on magnetic tape.  
 ORIGINATOR: Stuart Nylund  
 The Johns Hopkins University Applied Physics Laboratory  
 Johns Hopkins Road  
 Laurel, MD 20707  
 USA  
 DDL: English/ASCII  
 OBJECT DESCRIPTION: The value field is divided into three categories called 'Volume Contents', 'Physical Format' and 'Volume Directory.' The entries under these categories are self explanatory. Line feed and carriage control character pairs are used to provide display format control.

Z Z Z Z 1 S 0 0 0 0 0 1	0 0 0 0 6 8 4 2
-------------------------	-----------------

PHYSICAL VOLUME HEADER

Volume Contents:

The volume contains files of averaged data for the AMPTE CCE medium-energy particle analyzer (MEPA), which is designed to measure the spectra and composition of magnetospheric particle populations from 10 keV per nucleon (for oxygen) to more than 8 Mev, and ephemeris, attitude, and events data for the AMPTE CCE spacecraft. The instrument provides for high background rejection and a geometry factor large enough ( $10^{+2}$  cm<sup>2</sup> sr) to be sensitive to rare natural species and tracer ions beyond geosynchronous orbit, while having the ability to operate in the very high flux regions of the inner magnetosphere. The MEPA telescope measures time of flight and thus velocity of energetic ions from a thin front foil to a rear solid-state total-energy detector, determining the incident ion mass. The telescope is capable of isotropic resolution of hydrogen and helium, of elemental resolution up through oxygen, and can resolve major species and groups to beyond iron with 32-sector angular resolution and temporal resolution of 0.2 - 24 s.

Investigators:

Drs. R. W. McEntire and A. T. Y. Lui  
 Applied Physics Laboratory  
 The Johns Hopkins University  
 Laurel, MD 20707  
 USA

Reference:

R. W. McEntire, E. P. Keath, D. E. Fort, A. T. Y. Lui,  
 and S. M. Krimigis, The Medium-Energy Particle Analyzer  
 (MEPA) on the AMPTE CCE Spacecraft,  
 IEEE Trans. Geosci., Vol GE-25, pp 230-233, May 1985.

Physical Format:

Density: 6250 bpi  
 Physical Block Size: 22528 bytes  
 Volume Creation Date: 05-JAN-1988  
 Volume Sequence Number: AMPTE-M001A  
 Access Method to Data Blocks: Sequential  
 SFDU-to-physical Block Relations: 1:1

Volume Format Map:

Physical Volume Header  
 EOF marker  
 Ephemeris Data File  
 Data File Format:  
 File Header SFDU  
 Data Block 1 SFDU  
 Data Block 2 SFDU  
 Data Block 3 SFDU

84-088A-03B

\$NCF  
\$NOP  
\$NOP  
\$NCF \*\*\*\*\* LIST OF B4OUT \*\*\*\*\*  
\$EXE TFLIST ES

DD 78741  
84-089A-02B  
01/01/85  
02/08/85

INPUT PARAMETERS ARE: AS SR=1=1 1 1 1

TAPE NO. 1 FILE NO. 1  
RECCRC 1 LENGTH 22528  
CCSC1Z000010002250EZZZZ1D00L0C10000946 ACI: ZZZZ0001 CLASS: S DATE:  
05 Feb 87 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION DESCRIPTION: Des  
cribes the content categories of a physical volume header used for exchanging d  
ata on magnetic tape. CRIGINATOR: Stuart Nylurc The Johns Hopkins Unive  
rsity Applied Physics Laboratory Johns Hopkins Reac Laurel,  
MD 20707 USA DDL: English/ASCII OBJECT DESCRIPTION: The va  
lue field is divided into three categories called 'Volume Contents', 'Phys  
ical Format' arc 'Volume Directory.' The entries under these  
categories are self explanatory. Line feed arc carriage c  
ontrol character pairs are used to provide display format control. ZZZZ  
IS0000100005512F F Y S I C A L V O L U M E H E A D E R Volume Contents: The volume con  
tains files of averaged data for the AMPTE CCE medium-energy particle analyzer (MEPA), which  
is designed to measure the spectra arc composition of magnetospheric particle populations f  
rom 10 keV per nucleon (for oxygen) to more than 6 Mev, and ephemeris, attitude, and events d  
ata for the AMPTE CCE spacecraft. The instrument provides for high background rejection a  
nd a geometry factor large enough (10\*\*2 cm\*\*2 sr) to be sensitive to rare natural s  
pecies and tracer ions beyond geosynchronous orbit, while having the ability to operate in the  
very high flux regions of the inner magnetosphere. The MEPA telescope measures time of flig  
ht arc thus velocity of energetic ions from a thin front foil to a rear solid-state total-er  
ergy detector, determining the incident ion mass. The telescope is capable of isotropic res  
olution of hydrogen and helium, of elemental resolution up through oxygen, and can resolve  
major species and groups to beyond iron with 32-sector angular resolution arc temporal res  
olution of 0.2 - 24 s. Investigators: Drs. R. W. McEntire and A. T. Y. Lui A  
Applied Physics Laboratory The Johns Hopkins University Laurel, MD 20707 USA  
Reference: R. W. McEntire, E. P. Keath, D. E. Fort, A. T. Y. Lui, and S. M. Krimigi  
s, The Medium-Energy Particle Analyzer (MEPA) on the AMPTE CCE Spacecraft, IEEE Trans.  
Geosci., Vol GE-25, pp 231-233, May 1985. Physical Format: Density:  
6250 bpi Physical Block Size: 22528 bytes Volume Creation Date:  
01-MAR-1988 Volume Sequence Number: AMPTE-M004A Access Method to Data Blocks:  
Sequential SFDU-to-physical Block Relations: 1:1 Volume Format Map: Physical Vol  
ume Header ECF marker Ephemeris Data File Data File Format: File Hea  
der SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFDU  
File Trailer SFDU EOF marker Attitude Data File Data File Format: Fil  
e Header SFDU Data Block 1 SFDL Data Block 2 SFDL Data Block 3 SF  
DU File Trailer SFDL EOF marker Events Data File Data File Format:  
File Header SFDL Data Block 1 SFDL Data Block 2 SFDL Data Block 3  
SFDL File Trailer SFDL EOF marker MEPA Instrument Data File 1 Data File Forma  
t: File Header SFDL Data Block 1 SFDL Data Block 2 SFDL  
Data Block 3 SFDL File Trailer SFDU EOF marker MEPA Instrument Data File 2  
Data Block 1 SFDU EOF marker MEPA Instrument Data File 3 EOF marker ECF  
marker MEPA Instrument Data File N EOF marker EOF marker EOF marker EOF marker  
Formats, Notations and  
Conventions: Time Format: year-of-century (two digits), day-of-year (up to 3 c  
igits), second-of-day (up to 5 digits). Numeric Value Representations:  
A\*n is n-byte ASCII character string I\*2 is 2-byte, 2's complement, binary integer  
I\*4 is 4-byte, 2's complement, binary integer R\*4 is 4-byte, DEC VAX compatible, floating  
point datum R\*8 is 8-byte, DEC VAX compatible, floating point datum Terminator Chara  
cter: To end a line of ASCII text: ASCII line feed character and carriage return  
character. Fill Characters: ASCII fill character: ASCII blank. Binary fill c  
haracter: Binary 0. Mathematical notation: Exponentiation is represented by two aster  
isks. Subscripts are enclosed with the angle bracket characters "<" arc ">". Storage c  
order of array elements: A one-dimensional array is written with its first element i  
n the first storage location arc its last element in the last storage location of the secu



nce. A multidimensional array is stored so that the leftmost subscripts vary most rapidly. Volume Directory (Time spans): Data File 1: 85 1 17 to 85 1 86246 Data File  
2: 85 1 86271 to 85 2 86249 Data File 3: 85 2 86251 to 85 3 86228 Data File  
4: 85 3 86253 to 85 4 86231 Data File 5: 85 4 86257 to 85 5 86235 Data File 6: 85  
5 86261 to 85 6 86238 Data File 7: 85 6 86264 to 85 7 86242 Data File 8: 85 8  
86246 to 85 9 86224 Data File 9: 85 9 86249 to 85 10 62175 Data File 10: 85 11 11306  
to 85 11 11901 Data File 11: 85 16 61849 to 85 16 86223 Data File 12: 85 16 86248 to 8  
5 17 86201 Data File 13: 85 17 86227 to 85 18 86155 Data File 14: 85 19 873 to 85 19  
86208 Data File 15: 85 19 86234 to 85 20 86212 Data File 16: 85 20 86237 to 85 21 8621  
5 Data File 17: 85 21 86265 to 85 22 86194 Data File 18: 85 22 86219 to 85 23 86197  
Data File 19: 85 23 86222 to 85 24 86200 Data File 20: 85 24 86226 to 85 25 86204 Data  
File 21: 85 25 86229 to 85 26 86217 Data File 22: 85 26 86232 to 85 27 86186 Data File  
23: 85 27 86211 to 85 28 86189 Data File 24: 85 28 86214 to 85 29 86208 Data File 25:  
85 38 87547 to 85 38 86187 Data File 26: 85 38 86212 to 85 39 86166 22221F00L00300015600

CCSD1Z000001 | 00020460 |

ZZZZ1D00L001 | 00000946 |

ADI: ZZZZ0001  
CLASS: S  
DATE: 05 Feb 87  
TITLE: PHYSICAL VOLUME HEADER DESCRIPTION  
DESCRIPTION: Describes the content categories of a physical volume header used for exchanging data on magnetic tape.  
ORIGINATOR: Stuart Nylund  
The Johns Hopkins University Applied Physics Laboratory  
Johns Hopkins Road  
Laurel, MD 20707  
USA  
DDL: English/ASCII  
OBJECT DESCRIPTION: The value field is divided into three categories called 'Volume Contents', 'Physical Format' and 'Volume Directory.' The entries under these categories are self explanatory. Line feed and carriage control character pairs are used to provide display format control.

ZZZZ1S000001 | 00005692 |

PHYSICAL VOLUME HEADER

Volume Contents:

The volume contains files of averaged data for the AMPTE CCE Charge-Energy-Mass (CHEM) Spectrometer which is designed to measure the mass and charge-state compositions as well as the energy spectra and pitch-angle distributions of all major ions from H through Fe with energies from 0.3 to 300 keV/charge and a time resolution of less than 1 minute in the Earth's magnetosphere and magnetosheath. The volume also contains and ephemeris, attitude, and events data for the AMPTE CCE spacecraft.

Investigators:

Drs. G. Gloeckler, F. M. Ipavich, D. C. Hamilton  
Department of Physics and Astronomy  
University of Maryland  
College Park, MD 20742  
USA

Reference:

G. Gloeckler, F. M. Ipavich, W. Studemann, B. Wilken, D. C. Hamilton,  
G. Kremser, D. Hovestadt, F. Gliem, R. A. Lundgren, W. Rieck,  
E. O. Tums, J. C. Cain, L. S. Masung, W. Weiss, and P. Winterhof,  
The Charge-Energy-Mass Spectrometer for 0.3-300 keV/e Ions on the  
AMPTE CCE, IEEE Trans. Geosci., Vol GE-25, pp 234-240, May 1985.

Physical Format:

Tape Format: 9 Track  
Density: 6250 bpi  
Physical Block Size: 20480 bytes  
Volume Creation Date: 10-SEP-1987  
Volume Sequence Number: AMPTE-C001A  
Access Method to Data Blocks: Sequential  
SFDU-to-physical Block Relations: 1:1

Volume Format Map:

Physical Volume Header  
EOF marker

Ephemeris Data File

Data File Format:

File Header SFDU  
Data Block 1 SFDU  
Data Block 2 SFDU  
Data Block 3 SFDU

Data Block N SFDU

File Trailer SFDU

EOF marker

84-088A-04B

1

\$NOP  
\$NOP

\$NOP \*\*\*\*\* D3OUT \*\*\*\*\*

\$EXE TFLIST ES

D 77765  
8/27/84 - 9/25/84

INPUT PARAMETERS ARE: AS SR=1=1 1 1

TAPE NO. 1 FILE NO. 1  
RECORD 1 LENGTH 20480  
CCSD1Z000010002(460Z2ZZ1D00L00100000946 ADI: ZZZZ0001 CLASS: S DATE:  
15 Feb 87 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION DESCRIPTION: Des  
cribes the content categories of a physical volume header used for exchanging d  
ata on magnetic tape. ORIGINATOR: Stuart Nylund The Johns Hopkins Unive  
rsity Applied Physics Laboratory Johns Hopkins Road Laurel,  
MD 20707 USA DCL: English/ASCII OBJECT DESCRIPTION: The va  
lue field is divided into three categories called 'Volume Contents', 'Phys  
ical Format' and 'Volume Directory.' The entries under these  
categories are self explanatory. Line feed and carriage r  
ontrol character pairs are used to provide display format control. ZZZZ  
1S00000100005692P H Y S I C A L V O L U M E H E A D E R Volume Contents: The volume con  
tains files of averaged data for the AMPTE CCE Charge- Energy-Mass (CHEM) Spectrometer which is  
designed to measure the mass and charge-state compositions as well as the energy spectra and pi  
tch- angle distributions of all major ions from H through Fe with energies from 0.3 to 300 k  
eV/charge and a time resolution of less than 1 minute in the Earth's magnetosphere and magnet  
osheath. The volume also contains and ephemeris, attitude, arc events data for the AMPTE  
CCE spacecraft. Investigators: Drs. G. Gloeckler, F. M. Ipavich, D. C. Hamilton  
Department of Physics and Astronomy University of Maryland College Park, MD 2074  
2 USA Reference: G. Gloeckler, F. M. Ipavich, W. Studemann, B. Wilken, D. C. Hamil  
ton, G. Krewser, D. Hovestadt, F. Gliem, R. A. Lunggren, W. Rieck, E. O. Tums, J. C. Ca  
in, L. S. Masung, W. Weiss, and P. Witterhof, The Charge-Energy-Mass Spectrometer for 0.3-300  
keV/e Ions on the AMPTE CCE, IEEE Trans. Geosci., Vol GE-25, pp 234-240, May 1985. Physic  
al Format: Tape Format: 9 Track Density: 62  
50 bpi Physical Block Size: 20480 bytes Volume Creation Date: 10  
-SEP-1987 Volume Sequence Number: AMPTE-C001A Access Method to Data Blocks:  
Sequential SFDU-to-physical Block Relations: 1:1 Volume Format Map: Physical Volume  
Header ECF marker Ephemeris Data File Data File Format: File Header  
SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFDU  
Data Block N SFDU File  
Trailer SFDU EOF marker Attitude Data File Data File Format: File He  
ader SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFDU  
Data Block N SFDU File  
File Trailer SFDU EOF marker Events Data File Data File Format: File  
Header SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFD  
Data Block N SFDU  
File Trailer SFDU EOF marker CHEM Instrument Data File 1 Data File Format: Da  
ta Block 3 SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block N  
SFDU File Trailer SFDU EOF marker CHEM Instrument Data File 2 EOF mar  
ker CHEM Instrument Data File 3 EOF marker  
CHEM Instrument Data File N EOF marker EOF marker Formats, Notations and Co  
ventions: Time Format: year-of-century (two digits), day-of-year (up to 3 dig  
its), second-of-day (up to 5 digits). Numeric Value Representation Notations:  
A\*n is n-byte ASCII character string I\*2 is 2-byte, 2's complement, binary integer  
I\*4 is 4-byte, 2's complement, binary integer R\*4 is 4-byte, DEC VAX compatible, floating p  
oint datum R\*8 is 8-byte, DEC VAX compatible, floating point datum Termination Charact  
er: To end a line of ASCII text: ASCII line feed character and carriage return ch  
aracter. Fill Characters: ASCII fill character: ASCII blank. Binary fill cha  
racter: Binary 0. Mathematical notation: Exponentiation is represented by two asteris  
ks. Subscripts are enclosed with the angle bracket characters "<" and ">". Storage ord  
er of array elements: A one-dimensional array is written with its first  
element in the first storage location and its last element in the last storage location of the sequenc  
e. A multidimensional array is stored so that the leftmost subscripts vary most rap  
idly. Volume Directory (Time spans): Data File 1: 84 240 79453 to 84 240 85708 Data File  
2: 84 241 58 to 84 241 65567 Data File 3: 84 242 183 to 84 242 85767 Data File 4:  
84 243 124 to 84 243 85712 Data File 5: 84 244 77 to 84 244 85844 Data File 6: 84 2  
45 202 to 84 245 85805 Data File 7: 84 246 162 to 84 246 85760 Data File 8: 84 247

PRINTED IN USA

307 to 84 247 85911 Data File 9: 84 248 79 to 84 248 85683 Data File 10: 84 249 230 t  
o 84 249 85651 Data File 11: 84 250 204 to 84 250 85996 Data File 12: 84 251 171 to 84  
251 85776 Data File 13: 84 252 141 to 84 252 85744 Data File 14: 84 253 108 to 84 253 8  
5149 Data File 15: 84 254 75 to 84 254 85685 Data File 16: 84 255 50 to 84 255 85845  
Data File 17: 84 256 207 to 84 256 86006 Data File 18: 84 257 174 to 84 257 85792 Da  
ta File 19: 84 258 149 to 84 258 85766 Data File 20: 84 259 123 to 84 259 85742 Data Fi  
le 21: 84 260 100 to 84 260 85910 Data File 22: 84 261 78 to 84 261 85885 Data File 2  
3: 84 262 53 to 84 262 85866 Data File 24: 84 263 34 to 84 263 85653 Data File 25: 84  
264 200 to 84 264 85823 Data File 26: 84 264 86202 to 84 265 85797 Data File 27: 84 266  
155 to 84 266 85588 Data File 28: 84 267 135 to 84 267 85751 Data File 29: 84 268 109  
to 84 268 85730 Data File 30: 84 269 88 to 84 269 85891 ZZZZ1F00L003C0013762

84-088A-04B

DUMP OF AMPTE CCE Science Data Center SFDU Tape for PWE Instrument  
Absolute block # 1

DSC # 666

CCSD1Z000001 | 00012268 |

ZZZZ1D00L001 | 00000946 |

ADI: ZZZZ0001  
 CLASS: S  
 DATE: 05 Feb 87  
 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION  
 DESCRIPTION: Describes the content categories of a physical volume header used for exchanging data on magnetic tape.  
 ORIGINATOR: Stuart Nylund  
 The Johns Hopkins University Applied Physics Laboratory  
 Johns Hopkins Road  
 Laurel, MD 20707  
 USA  
 DDL: English/ASCII  
 OBJECT DESCRIPTION: The value field is divided into three categories called 'Volume Contents', 'Physical Format' and 'Volume Directory.' The entries under these categories are self explanatory. Line feed and carriage control character pairs are used to provide display format control.

ZZZZ1S000001 | 00009986 |

PHYSICAL VOLUME HEADER

Volume Contents:

The volume contains data files for the AMPTE CCE Plasma Wave Experiment, which has five plasma center frequencies of 100 Hz, 730 Hz, 5.4 kHz, 30 kHz and 178 kHz, and ephemeris, attitude, and events data for the AMPTE CCE spacecraft.

Investigator:

Dr. F. L. Scarf  
 TRW Space and Technology Group  
 Redondo Beach, CA 90278  
 USA

Reference:

F. L. Scarf, The AMPTE CCE Plasma Wave Investigation,  
 IEEE Trans. Geosci., Vol GE-25, pp 250-252, May 1985.

Physical Format:

Tape Format: 9 Track  
 Density: 6250 bpi  
 Physical Block Size: 12288 bytes  
 Volume Creation Date: 08-SEP-1987  
 Volume Sequence Number: AMPTE-P001B  
 Access Method to Data Blocks: Sequential  
 SFDU-to-physical Block Relations: 1:1

Volume Format Map:

Physical Volume Header  
 EOF marker  
 Ephemeris Data File  
 Data File Format:  
 File Header SFDU  
 Data Block 1 SFDU  
 Data Block 2 SFDU  
 Data Block 3 SFDU  
 .  
 .  
 Data Block N SFDU  
 File Trailer SFDU  
 EOF marker  
 Attitude Data File  
 Data File Format:  
 File Header SFDU  
 Data Block 1 SFDU  
 Data Block 2 SFDU  
 Data Block 3 SFDU  
 .  
 .

84-088A-05B

\$NCF  
\$NOP  
\$NOP  
\$NCF \*\*\*\*\* O2OUT \*\*\*\*\*  
\$EXE TPLIST ES

D 75344  
8/28/84 - 12/30/84

INPUT PARAMETERS ARE: AS SR=1=1 1 1

TAPE NO. 1 FILE NO. 1  
RECCRC 1 LENGTH 12288  
CCSD1Z0000010001226EZZZ1DC00010000546 ADI: ZZZZ0001 CLASS: S DATE:  
5 Feb 87 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION DESCRIPTION: Des  
cribes the content categories of a physical volume header used for exchanging d  
ata on magnetic tape. CRIGINATOR: Stuart Nylund The Johns Hopkins Unive  
rsity Applied Physics Laboratory Johns Hopkins Road Laurel,  
MD 20707 USA DDL: English/ASCII OBJECT DESCRIPTION: The va  
lue field is divided into three categories called 'Volume Contents', 'Phys  
ical Format' and 'Volume Directory'. The entries under these  
categories are self explanatory. Line feed and carriage c  
ontrol character pairs are used to provide display format control. ZZZZ  
IS00000100005986P F Y S I C A L V O L U M E H E A D E R Volume Contents: The volume conta  
ins data files for the AMPTE CCE Plasma Wave Experiment, which has five plasma center freque  
ncies of 100 Hz, 730 Hz, 5.4 kHz, 30 kHz and 178 kHz, and ephemeris, attitude, and events da  
ta for the AMPTE CCE spacecraft. Investigator: Dr. F. L. Scarf TRW Space and  
Technology Group Redondo Beach, CA 90278 USA Reference: F. L. Scarf, The A  
MPTE CCE Plasma Wave Investigation, IEEE Trans. Geosci., Vol GE-25, pp 250-252, May 1985.  
Physical Format: Tape Format: 9 Track Density:  
6250 bpi Physical Block Size: 12288 bytes Volume Creator Date:  
(8-SEP-1987 Volume Sequence Number: AMPTE-P001B Access Method to Data Blocks:  
Sequential SFDU-to-physical Block Relations: 1:1 Volume Format Map: Physical V  
olume Header EOF marker Ephemeris Data File Data File Format: File H  
eader SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3 SFDU  
File Trailer SFDU EOF marker Attitude Data File Data File Format: F  
ile Header SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block 3  
SFDU File Trailer SFDU EOF marker Events Data File Data File Format:  
3 SFDU Data Block 1 SFDU Data Block 2 SFDU Data Block  
File Trailer SFDU EOF marker PWE Instrument Data File 1 Data File Form  
at: File Header SFDU Data Block 1 SFDU Data Block 2 SFDU  
Data Block 3 SFDU File Trailer SFDU EOF marker PWE Instrument Data File 2 Data BL  
ock N SFDU PWE Instrument Data File 3 EOF marker  
Conventions: Time Format: year-of-century (two digits), day-of-year (up to 3 dig  
its), secrc-cf-day (up to 5 digits). Numeric Value Representation Notations:  
A\*n is n-byte ASCII character string I\*2 is 2-byte, 2's complement, binary integer  
I\*4 is 4-byte, 2's complement, binary integer R\*4 is 4-byte, DEC VAX compatible, floating p  
oint datum R\*8 is 8-byte, DEC VAX compatible, floating point datum Termination Charact  
er: To end a line of ASCII text: ASCII line feed character and carriage return ch  
aracter. Fill Characters: ASCII fill character: ASCII blank. Binary fill cha  
racter: Binary 0. Mathematical notation: Exponentiation is represented by two asteris  
ks. Subscripts are enclosed with the angle bracket characters "<" and ">". Storage org  
er of array elements: A one-dimensional array is written with its first element in  
the first storage location and its last element in the last storage location of the sequenc  
e. A multidimensional array is stored so that the leftmost subscripts vary most rap  
idly. Volume Directory (Time spars): Data File 1: 84 230 15 to 84 231 5 Data File  
2: 84 231 9 to 84 232 7 Data File 3: 84 232 7 to 84 233 5 Data File 4:  
84 233 6 to 84 234 3 Data File 5: 84 234 4 to 84 235 2 Data File 6: 84 2  
35 2 to 84 236 0 Data File 7: 84 236 0 to 84 236 86358 Data File 8: 84 236 86  
359 to 84 237 86397 Data File 9: 84 237 86397 to 84 238 86395 Data File 10: 84 238 86396 t  
o 84 239 86334 Data File 11: 84 239 86394 to 84 240 86392 Data File 12: 84 240 86392 to 84  
241 66026 Data File 13: 84 241 86391 to 84 242 86389 Data File 14: 84 242 86389 to 84 243 8  
6387 Data File 15: 84 243 86388 to 84 244 86386 Data File 16: 84 244 86386 to 84 245 86384  
Data File 17: 84 245 86385 to 84 246 86383 Data File 18: 84 247 261 to 84 248 259 Ca



ta File 19: 84 248 21 to 84 249 13 Data File 20: 84 249 20 to 84 250 16 Data Fi  
le 21: 84 250 18 to 84 251 9 Data File 22: 84 250 86377 to 84 251 86375 Data File 2  
3: 84 251 86375 to 84 252 86373 Data File 24: 84 252 86374 to 84 253 86372 Data File 25: 84  
253 86372 to 84 254 86370 Data File 26: 84 255 10 to 84 256 6 Data File 27: 84 256  
9 to 84 257 7 Data File 28: 84 256 86368 to 84 257 86365 Data File 29: 84 257 86366  
to 84 258 86364 Data File 30: 84 258 86365 to 84 259 86362 Data File 31: 84 259 86363 to 8  
4 261 86361 Data File 32: 84 261 86361 to 84 261 86355 Data File 33: 84 261 86360 to 84 262  
86358 Data File 34: 84 262 86358 to 84 263 86356 Data File 35: 84 263 86397 to 84 264 8639  
4 Data File 36: 84 264 86355 to 84 265 86353 Data File 37: 84 265 86354 to 84 266 86352  
Data File 38: 84 266 86352 to 84 267 86350 Data File 39: 84 268 10 to 84 269 8 Data  
File 40: 84 269 10 to 84 270 6 Data File 41: 84 270 7 to 84 271 5 Data File  
42: 84 271 5 to 84 272 3 Data File 43: 84 272 4 to 84 273 2 Data File 44:  
84 273 2 to 84 274 0 Data File 45: 84 274 1 to 84 274 86399 Data File 46: 84 27  
4 86399 to 84 275 86397 Data File 47: 84 275 86398 to 84 276 86396 Data File 48: 84 276 863  
96 to 84 277 86394 Data File 49: 84 277 86395 to 84 278 86392 Data File 50: 84 278 86393 to  
84 279 86391 Data File 51: 84 279 86392 to 84 280 86389 Data File 52: 84 280 86390 to 84 2  
81 86388 Data File 53: 84 281 86388 to 84 282 86386 Data File 54: 84 282 86387 to 84 283 86  
385 Data File 55: 84 283 86385 to 84 284 86383 Data File 56: 84 284 86384 to 84 285 86382  
Data File 57: 84 286 2 to 84 286 86380 Data File 58: 84 287 100 to 84 287 84623 Dat  
a File 59: 84 288 13747 to 84 288 86377 Data File 60: 84 288 86378 to 84 289 68789 Data Fil  
e 61: 84 290 8776 to 84 290 86374 Data File 62: 84 290 86315 to 84 291 86313 Data File 63  
: 84 291 86313 to 84 292 86311 Data File 64: 84 292 86371 to 84 293 86369 Data File 65: 84  
293 86370 to 84 294 86368 Data File 66: 84 294 86368 to 84 295 86366 Data File 67: 84 295 8  
6367 to 84 296 86339 Data File 68: 84 297 6516 to 84 297 86363 Data File 69: 84 297 86367  
to 84 298 86362 Data File 70: 84 298 86362 to 84 299 86360 Data File 71: 84 299 86361 to 84  
300 75798 Data File 72: 84 301 17772 to 84 301 82425 Data File 73: 84 301 82426 to 84 302  
82424 Data File 74: 84 302 82424 to 84 303 82422 Data File 75: 84 303 82423 to 84 304 82421  
Data File 76: 84 304 82421 to 84 305 82419 Data File 77: 84 305 82420 to 84 306 82418 D  
ata File 78: 84 306 82418 to 84 307 82416 Data File 79: 84 307 82417 to 84 308 82415 Data F  
ile 80: 84 308 82415 to 84 309 82413 Data File 81: 84 309 82414 to 84 310 82411 Data File  
82: 84 310 82412 to 84 311 82410 Data File 83: 84 311 82411 to 84 312 82408 Data File 84: 8  
4 312 82409 to 84 313 82407 Data File 85: 84 313 82407 to 84 314 82405 Data File 86: 84 314  
84944 to 84 315 82404 Data File 87: 84 315 82404 to 84 316 82402 Data File 88: 84 316 8240  
3 to 84 317 86333 Data File 89: 84 317 86333 to 84 318 86331 Data File 90: 84 318 86332 to  
84 319 86329 Data File 91: 84 319 86330 to 84 320 86328 Data File 92: 84 320 86329 to 84 32  
1 86326 Data File 93: 84 321 86327 to 84 322 24666 Data File 94: 84 323 71500 to 84 323 863  
23 Data File 95: 84 323 86325 to 84 324 86321 Data File 96: 84 324 86329 to 84 325 86319  
Data File 97: 84 325 86320 to 84 326 79512 Data File 98: 84 326 86318 to 84 327 86316 Data  
File 99: 84 327 86316 to 84 328 86314 Data File 100: 84 328 86314 to 84 329 86312 Data File  
101: 84 329 86312 to 84 330 86310 Data File 102: 84 330 86311 to 84 331 86309 Data File 103:  
84 331 86309 to 84 332 86307 Data File 104: 84 332 86308 to 84 333 86306 Data File 105: 84 3  
34 86305 to 84 335 86302 Data File 106: 84 335 86303 to 84 336 86301 Data File 107: 84 336 86  
302 to 84 337 86299 Data File 108: 84 337 86300 to 84 338 86298 Data File 109: 84 338 86298 t  
o 84 339 86296 Data File 110: 84 339 86297 to 84 340 86295 Data File 111: 84 340 86236 to 84  
341 86234 Data File 112: 84 341 86294 to 84 342 86292 Data File 113: 84 343 86291 to 84 344 8  
6288 Data File 114: 84 344 86230 to 84 345 86227 Data File 115: 84 345 86288 to 84 346 86285  
Data File 116: 84 346 86286 to 84 347 86284 Data File 117: 84 347 86285 to 84 348 86282 Da  
ta File 118: 84 348 86283 to 84 349 86281 Data File 119: 84 349 86284 to 84 350 86279 Data Fi  
le 120: 84 350 86284 to 84 351 86277 Data File 121: 84 351 86283 to 84 352 86275 Data File 12  
2: 84 352 86276 to 84 353 86273 Data File 123: 84 353 86274 to 84 354 86271 Data File 124: 84  
354 86272 to 84 355 86270 Data File 125: 84 355 86270 to 84 356 86268 Data File 126: 84 356  
86269 to 84 357 86266 Data File 127: 84 357 86267 to 84 358 86265 Data File 128: 84 358 86266  
to 84 359 86263 Data File 129: 84 359 86264 to 84 360 86262 Data File 130: 84 360 86262 to 8  
4 361 86260 Data File 131: 84 361 86264 to 84 362 86259 Data File 132: 84 362 86259 to 84 363  
86257 Data File 133: 84 363 86258 to 84 364 86256 Data File 134: 84 364 86256 to 84 365 5402  
1 ZZZZ1FOOL00300001276

C C S D 1 Z 0 0 0 0 0 1	0 0 0 1 2 2 6 8
Z Z Z Z 1 D 0 0 L 0 0 1	0 0 0 0 0 9 4 6

ADI: ZZZZ0001  
CLASS: S  
DATE: 05 Feb 87  
TITLE: PHYSICAL VOLUME HEADER DESCRIPTION  
DESCRIPTION: Describes the content categories of a physical volume header used for exchanging data on magnetic tape.  
ORIGINATOR: Stuart Nylund  
The Johns Hopkins University Applied Physics Laboratory  
Johns Hopkins Road  
Laurel, MD 20707  
USA  
DDL: English/ASCII  
OBJECT DESCRIPTION: The value field is divided into three categories called 'Volume Contents', 'Physical Format' and 'Volume Directory.' The entries under these categories are self explanatory. Line feed and carriage control character pairs are used to provide display format control.

Z Z Z Z 1 S 0 0 0 0 0 1	0 0 0 1 0 5 3 1
-------------------------	-----------------

PHYSICAL VOLUME HEADER

Volume Contents:  
The volume contains files of averaged data for the AMPTE CCE Magnetometer, and ephemeris, attitude, and events data for the AMPTE CCE spacecraft. The instrument has 7 automatically switchable ranges from  $\pm 16$  to  $\pm 65536$  nT (full scale) and resolutions commensurate with a 13-bit A/D converter in each range ( $\pm 0.002$  to  $\pm 8$  nT). Approximately 8.06 vector-samples/sec are acquired, with information on fluctuating fields in the 5-50-Hz range provided by a system of filters and peak detectors.

Investigators:  
Drs. T. A. Potemra and L. J. Zanetti  
Applied Physics Laboratory  
The Johns Hopkins University  
Laurel, MD 20707  
USA  
Dr. M. H. Acuna  
Laboratory for Extraterrestrial Physics  
NASA Goddard Space Flight Center  
Greenbelt, MD 20771

Reference:  
T. A. Potemra, L. J. Zanetti, and M. H. Acuna,  
The AMPTE CCE Magnetic Field Experiment,  
IEEE Trans. Geosci., Vol GE-25, pp 246-249, May 1985.

Physical Format:  
Tape Format: 9 Track  
Density: 6250 bpi  
Physical Block Size: 12288 bytes  
Volume Creation Date: 10-SEP-1987  
Volume Sequence Number: AMPTE-8001A  
Access Method to Data Blocks: Sequential  
SFDU-to-physical Block Relations: 1:1  
Volume Format Map:  
Physical Volume Header  
EOF marker  
Ephemeris Data File  
Data File Format:  
File Header SFDU  
Data Block 1 SFDU  
Data Block 2 SFDU  
Data Block 3 SFDU  
:  
:  
Data Block N SFDU  
File Trailer SFDU

\$NOP

\$NOP

\$NOP \*\*\*\*\* D1OUT \*\*\*\*\*

SEXE TPLIST BS

INPUT PARAMETERS ARE: AS SR=1=1 1 1

TAPE NO. 1 FILE NO. 1  
RECCRC 1 LENGTH 12288  
CCCC01CCCC01CCCC12288ZZZZ1000CCCC0546 ADI: ZZZZ0001 CLASS: S DATE:  
05 Feb 87 TITLE: PHYSICAL VOLUME HEADER DESCRIPTION DESCRIPTION: Des  
cribes the content categories of a physical volume header used for exchanging d  
ata on magnetic tape. CRIGINATOR: Stuart Nylund The Johns Hopkins Unive  
rsity Applied Physics Laboratory Johns Hopkins Road Laurel,  
MD 20707 USA DDL: English/ASCII OBJECT DESCRIPTION: The va  
lue field is divided into three categories called 'Volume Contents', 'Phys  
ical Format' and 'Volume Directory.' The entries under these  
categories are self explanatory. Line feed and carriage c  
ontrol character pairs are used to provide display format control. ZZZZ  
IS0000100010531P H Y S I C A L V O L U M E H E A D E R Volume Contents: The volume con  
tains files of averaged data for the AMPTE CCE Magnetometer, and ephemeris, attitude, arc eve  
nts data for the AMPTE CCE spacecraft. The instrument has 7 automatically switchable ranges f  
rom +-16 to +-65536 nT (full scale) and resolutions commensurate with a 13-bit A/D conver  
ter in each range (+-0.002 to +-8 nT). Approximately 8.06 vector-samples/sec are acquirec  
, with information on fluctuating fields in the 5-50-Hz range provided by a system of filters  
and peak detectors. Investigators: Drs. T. A. Potemra and L. J. Zanetti Applied  
Physics Laboratory The Johns Hopkins University Laurel, MD 20707 USA  
Dr. M. H. Acuna Laboratory for Extraterrestrial Physics NASA Goddard Space Flight  
Center Greenbelt, MD 20771 Reference: T. A. Potemra, L. J. Zanetti, and M. H. Acuna  
a, The AMPTE CCE Magnetic Field Experiment, IEEE Trans. Geosci., Vol GE-25, pp 246-249,  
May 1985. Physical Format: Tape Format: 9 Track Density:  
6250 bpi Physical Block Size: 12288 bytes Volume Creation Da  
te: 10-SEP-1987 Volume Sequence Number: AMPTE-B001A Access Method t  
o Data Blocks: Sequential SFDU-to-physical Block Relations: 1:1 Volume Format Map:  
Physical Volume Header ECF marker Ephemeris Data File Data File Format:  
File Header SFDU Data Block 1 SFDU Data Block 2 SFDU Data  
Block 3 SFDU File Trailer SFDU EOF marker Attitude Data File Data Block N S  
: File Header SFDU Data Block 1 SFDU Data Block 2 SFDU Data File Format  
Data Block 3 SFDU File Trailer SFDU EOF marker Events Data File Data File For  
mat: File Header SFDU Data Block 1 SFDU Data Block 2 SFDU Data B  
lock N SFDU File Trailer SFDU EOF marker Magnetometer Instrument Data File 1  
Data File Format: File Header SFDU Data Block 1 SFDU Data  
Block 2 SFDU Data Block 3 SFDU File Trailer SFDL ECF marker Magnetometer  
Instrument Data File 2 EOF marker Magnetometer Instrument Data File 3 EOF marker  
rker ECF marker Formats, Notations and Conventions: Time Format: year-of-cent  
ury (two digits), day-of-year (up to 3 digits), second-of-day (up to 5 digits).  
Numeric Value Representation Notations: \*n is n-byte ASCII character string I+2  
is 2-byte, 2's complement, binary integer I\*4 is 4-byte, 2's complement, binary integer  
R\*4 is 4-byte, DEC VAX compatible, floating point datum R\*8 is 8-byte, DEC VAX compati  
ble, floating point datum Termination Character: To end a line of ASCII text:  
ASCII line feed character and carriage return character. Fill Characters: ASCII fil  
l character: ASCII blank. Binary fill character: Binary C. Mathematical notation:  
Exponentiation is represented by two asterisks. Subscripts are enclosed with the angl  
e bracket characters "<" and ">". Storage order of array elements: A one-dimensional a  
rray is written with its first element in the first storage location and its last e  
lement in the last storage location of the sequence. A multidimensional array is stored so  
that the leftmost subscripts vary most rapidly. Volume Directory (time spans): Data F  
ile 1: 84 230 19 to 84 230 86338 Data File 2: 84 231 9 to 84 231 86328 Data File  
3: 84 232 7 to 84 232 86386 Data File 4: 84 233 6 to 84 233 86364 Data File 5: 8  
4 234 4 to 84 234 86382 Data File 6: 84 235 2 to 84 235 86321 Data File 7: 84 236  
0 to 84 236 86319 Data File 8: 84 236 86399 to 84 237 86338 Data File 9: 84 237 86319

7 to 84 238 86316 Data File 10: 84 238 86396 to 84 239 86255 Data File 11: 84 239 86394 to  
84 240 86372 Data File 12: 84 240 86352 to 84 241 86558 Data File 13: 84 241 86351 to 84 24  
2 86350 Data File 14: 84 242 86385 to 84 243 86308 Data File 15: 84 243 86388 to 84 244 863  
47 Data File 16: 84 244 86386 to 84 245 86305 Data File 17: 84 245 86385 to 84 246 86324  
Data File 18: 84 248 240 Data File 19: 84 248 240 Data File 20: 84 245 86359 Data File 21: 84 250  
File 22: 84 251 86377 to 84 251 86336 Data File 23: 84 251 86375 to 84 252 86314 Data File 24:  
84 252 86374 to 84 253 86352 Data File 25: 84 253 86372 to 84 254 86311 Data File 26: 84 25  
55 10 to 84 255 86289 Data File 27: 84 256 5 to 84 256 66328 Data File 28: 84 256 86  
368 to 84 257 66287 Data File 29: 84 257 66366 to 84 258 86345 Data File 30: 84 258 86365 t  
o 84 259 86284 Data File 31: 84 259 86363 to 84 260 86322 Data File 32: 84 260 86361 to 84  
261 86320 Data File 33: 84 261 86360 to 84 262 86279 Data File 34: 84 262 86358 to 84 263 8  
6277 Data File 35: 84 263 86357 to 84 264 86316 Data File 36: 84 264 86352 to 84 265 86274  
Data File 37: 84 265 86354 to 84 266 86273 Data File 38: 84 266 86352 to 84 267 86331 Da  
ta File 39: 84 268 10 to 84 268 86389 Data File 40: 84 269 10 to 84 269 86349 Data Fi  
le 41: 84 270 7 to 84 270 86346 Data File 42: 84 271 5 to 84 271 86364 Data File 4  
3: 84 272 4 to 84 272 86363 Data File 44: 84 273 2 to 84 273 86321 Data File 45: 84  
274 1 to 84 274 86379 Data File 46: 84 274 86399 to 84 275 86338 Data File 47: 84 275  
86398 to 84 276 86376 Data File 48: 84 276 86396 to 84 277 86315 Data File 49: 84 277 86395  
to 84 278 86372 Data File 50: 84 278 86353 to 84 279 86312 Data File 51: 84 279 86352 to 8  
4 281 86311 Data File 52: 84 281 86350 to 84 281 86325 Data File 53: 84 281 86388 to 84 282  
86327 Data File 54: 84 282 86387 to 84 283 86326 Data File 55: 84 283 86385 to 84 284 86306  
4 Data File 56: 84 284 86384 to 84 285 86323 Data File 57: 84 286 2 to 84 286 86361  
Data File 58: 84 287 10 to 84 287 84592 Data File 59: 84 288 13747 to 84 288 86345 Data  
File 60: 84 288 86378 to 84 289 86723 Data File 61: 84 290 8776 to 84 290 86315 Data File  
62: 84 290 86315 to 84 291 86293 Data File 63: 84 291 86313 to 84 292 86292 Data File 64:  
84 292 86371 to 84 293 86310 Data File 65: 84 293 86370 to 84 294 86348 Data File 66: 84 29  
4 86368 to 84 295 86287 Data File 67: 84 295 86367 to 84 296 86332 Data File 68: 84 297 65  
16 to 84 297 86321 Data File 69: 84 297 86367 to 84 298 86326 Data File 70: 84 298 86362 to  
84 299 86281 Data File 71: 84 299 86361 to 84 300 75735 Data File 72: 84 301 17172 to 84 3  
01 82400 Data File 73: 84 301 82426 to 84 302 82365 Data File 74: 84 302 82424 to 84 303 82  
363 Data File 75: 84 303 82423 to 84 304 82342 Data File 76: 84 304 82421 to 84 305 82340  
Data File 77: 84 305 82420 to 84 306 82359 Data File 78: 84 306 82418 to 84 307 82337 Dat  
a File 79: 84 307 82417 to 84 308 82356 Data File 80: 84 308 82415 to 84 309 82374 Data Fil  
e 81: 84 309 82414 to 84 310 82372 Data File 82: 84 310 82412 to 84 311 82331 Data File 83  
e 84 311 82411 to 84 312 82389 Data File 84: 84 312 82409 to 84 313 82368 Data File 85: 84  
313 82407 to 84 314 82327 Data File 86: 84 314 84944 to 84 315 82401 Data File 87: 84 315 8  
2404 to 84 316 82323 Data File 88: 84 316 82403 to 84 317 86274 Data File 89: 84 317 86333  
to 84 318 86272 Data File 90: 84 318 86332 to 84 319 86251 Data File 91: 84 321 86327 to 84 322  
32 86289 Data File 92: 84 320 86329 to 84 321 86247 Data File 93: 84 321 86325 to 84 322  
24629 Data File 94: 84 323 71500 to 84 323 86254 Data File 95: 84 323 86325 to 84 324 86304  
Data File 96: 84 324 86325 to 84 325 86317 Data File 97: 84 325 86325 to 84 326 79487 D  
ata File 98: 84 326 86318 to 84 327 86237 Data File 99: 84 327 86316 to 84 328 86294 Data F  
ile 100: 84 328 86314 to 84 329 86293 Data File 101: 84 329 86312 to 84 330 86251 Data File 1  
02: 84 330 86311 to 84 331 86230 Data File 103: 84 331 86309 to 84 332 86248 Data File 104: 8  
4 332 86308 to 84 333 86247 Data File 105: 84 334 86305 to 84 335 86262 Data File 106: 84 335  
86303 to 84 336 86262 Data File 107: 84 336 86302 to 84 337 86221 Data File 108: 84 337 8630  
0 to 84 338 86215 Data File 109: 84 338 86298 to 84 339 86237 Data File 110: 84 339 86297 to  
84 340 86216 Data File 111: 84 341 86236 to 84 341 86214 Data File 112: 84 341 86254 to 84 34  
2 86213 Data File 113: 84 343 86291 to 84 344 86210 Data File 114: 84 344 86230 to 84 345 861  
88 Data File 115: 84 345 86288 to 84 346 86207 Data File 116: 84 346 86286 to 84 347 86245  
Data File 117: 84 347 86285 to 84 348 86204 Data File 118: 84 348 86283 to 84 349 86202 Data  
File 119: 84 349 86284 to 84 350 86203 Data File 120: 84 350 86284 to 84 351 86242 Data File  
121: 84 351 86283 to 84 352 86261 Data File 122: 84 352 86276 to 84 353 86254 Data File 123:  
84 353 86274 to 84 354 86193 Data File 124: 84 354 86272 to 84 355 86191 Data File 125: 84 3  
55 86270 to 84 356 86225 Data File 126: 84 356 86265 to 84 357 86227 Data File 127: 84 357 86  
267 to 84 358 86246 Data File 128: 84 358 86266 to 84 359 86185 Data File 129: 84 359 86264 t  
o 84 360 86223 Data File 130: 84 360 86262 to 84 361 86241 Data File 131: 84 361 86264 to 84  
362 86223 Data File 132: 84 362 86259 to 84 363 86176 Data File 133: 84 363 86258 to 84 364 8  
6157 Data File 134: 84 364 86256 to 84 365 83947 22221FC0100211C1731