#357

IMP-J

HOURLY AVERAGED MAGNETIC FIELD VECTORS

73-078A-01B

Table of Contents

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

HOURLY AVERAGE MAGNETIC FIELD VECTORS

73-078A-01B SPHE-0036

This data set has been restored. Originally there were two tapes, one of which was created on an IBM 360 computer, 9 track, 1600 BPI, written in binary.

The other a VAX created, 6250 BPI, 9 track, with 36 files, written in ASCII, was converted to EBCDIC. This tape have not been assigned a DD number. A compilation of another 4 tapes, with a total of another 36 files, submitted for the OMNI tape updating, was added to this tape. All of these hourly data are available from the OMNI tape and the user should be encouraged to used the OMNI tape in place of these data. The DR and DS numbers along with their corresponding D number and time span are as follows:

DR#	DS#	DD#	FILES	TIME SPAN	
DR-003425	DS-003425	DD-025184	1	01/02/74 - 05/20/75	(BIN)
DR-006196	DS-006196		72	04/09/86 - 07/01/94	(EBC)

An additional tape is added to this data set, the original is 6250 BPI, 9 track, written in ASCII. The DC is 3480 cartridge. The DD and DC number and time span is as follows:

DD#	DC#	FILES	TIME SPAN
DD-108653	DC-032784	19	01/01/95 - 07/31/96

TAPE FORMAT

This binary tape was created on an IBM/360 computer with the characteristics: RECFM=VBS,LRECL=72,BLKSIZE=1444,DEN=3. The tape is unlabelled. The data words of each record are as follows:

1.	I*4	Year (74,75)
2.	I*4	Day (Jan 1=Day 0)
3.	I*4	Hour (0,1,...23)
4.	I*4	Spacecraft (43=IMPI,50=IMP J)
5.	I*4	Number of fine time scale points in hour
6.	R*4	Averaged field magnitude $\frac{1}{N}\sum_i B_i$
7.	R*4	Magnitude of average vector $(\overline{B_x}^2 + \overline{B_y}^2 + \overline{B_z}^2)^{\frac{1}{2}}$
8.	R*4	Field latitude angle θ
9.	R*4	Field longitude angle ϕ
10.	R*4	Average field X component
11.	R*4	Average field Y component
12.	R*4	Average field Z component
13.	R*4	Standard deviation for word 6
14.	R*4	$[\sigma\overline{B_x}^2 + \sigma\overline{B_y}^2 + \sigma\overline{B_z}^2]^{\frac{1}{2}}$
15.	R*4	Standard deviation for word 10
16.	R*4	Standard deviation for word 11
17.	R*4	Standard deviation for word 12

The units of field magnitudes, components, and standard deviations are gammas, and of the angles are degrees. The coordinate system for components and angles is solar ecliptic.

IMP EYE H OR J HOURLY AVERAGE CARDS
PHASE II DATA DISPLAYS

Nomenclature used:

[Note: Hourly averages are based on 15.36 sec averages and time designation refers to start of hourly average (see item 8).

Order of Item	Card Format	Symbol	Definition
1	I2	ORB	Orbit #
2	F5.1	R	Position of S/C in R_E = 6,378 km in Earth Centered coordinates (see item #13 below), where $R = \sqrt{X^2 + Y^2 + Z^2}$
3	F5.1	X	
4	F5.1	Y	
5	F5.1	Z	
6	I2	YR	Year of data
7	I3	DY	Decimal day of data (January 1 = 0)
8	I2	HR	Hour of data, i.e., at start of average.
9	F5.1	Fl	Field magnitude, defined as = $\sum_{i}^{N} F_i/N$ in γ's (see item 12)
10	F5.0	θ	Field inclination angle $\theta = \sin^{-1}(B_z/F)$ - in degrees. (F is defined in item 19)
11	F5.0	φ	Field azimuthal angle $\varphi = \tan^{-1}(B_y/B_x)$ - in degrees.
12	I4	N	Number of 15.36 sec averages in the hourly average.
13	A2	Coord.	Coordinates: SE = Solar Ecliptic, SM = Solar Magnetospheric. Applies to both the field data and S/C position
14	F4.0	Geo. Lat.	Earth centered latitude of Sun's position in geomag. coords (deg.)
15	F5.1	σ_F	RMS of Fl (see item #9)
16	F5.1	σ_x	RMS of B_x
17	F5.1	σ_y	RMS of B_y
18	F5.1	σ_z	RMS of B_z
			All in γ's
19	F5.1	F	Field magnitude, defined as = $\sqrt{\langle B_x \rangle^2 + \langle B_y \rangle^2 + \langle B_z \rangle^2}$
20	A1	S/C	I or H or J

FATAR DETAIL REPORT

```
 BLOCK  LNGTH/  MESSAGE/                    1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80
 NUMBER DISPL   BLOCK TYPE                  (COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)

      4    80  PRINT REQUESTED              cy 32.2 -1.6-26.9-17.794 5916  5.9  36. 120. 235se  4.  2.3  1.5  1.1  1.4  5.3j
      5    80  PRINT REQUESTED              cy 32.3 -0.8-26.9-17.894 5917  5.7  -5. 151. 235se  4.  1.7  0.6  1.1  1.1  5.4j
* * * * * * *  END OF FILE     69  -- FILE CONTAINED     511 BLOCKS
* * * * * * *  START FILE      70
      1    80  PRINT REQUESTED              cy 36.2  8.4 29.4 19.594 91 0  5.6  17. 116.   2se -2.  0.2  0.1  0.1  0.1  5.6j
      2    80  PRINT REQUESTED              cy 36.2  8.4 29.4 19.594 91 1  5.5   3. 125. 235se -2.  2.4  0.9  1.0  2.0  5.0j
      3    80  PRINT REQUESTED              cy 36.2  7.7 29.5 19.494 91 2  5.5  14. 149. 231se -5.  2.7  1.2  1.3  2.0  4.8j
      4    80  PRINT REQUESTED              cy 36.1  7.0 29.7 19.394 91 3  5.7 -10. 119. 222se -6.  1.7  1.3  0.8  0.8  5.4j
      5    80  PRINT REQUESTED              cy 36.1  6.3 29.9 19.194 91 4  5.9 -13. 133. 209se -7.  1.6  1.2  0.9  0.7  5.6j
* * * * * * *  END OF FILE     70  -- FILE CONTAINED     511 BLOCKS
* * * * * * *  START FILE      71
      1    80  PRINT REQUESTED              cn 31.8-14.7-23.5-15.69412112 22.3 -80.  25.   2se 22.  0.8  0.1  0.7  0.5 21.3j
      2    80  PRINT REQUESTED              cn 31.8-14.7-23.5-15.69412113 19.8 -74.  14. 226se 22. 11.7  4.5  5.1  9.5 16.2j
      3    80  PRINT REQUESTED              cn 31.9-14.1-24.0-15.49412114 21.2 -52.  21. 233se 24. 12.0  5.5  8.1  6.9 17.7j
      4    80  PRINT REQUESTED              cn 31.9-13.6-24.6-15.29412115 17.7 -60.  14. 227se 26. 13.5  3.8  8.3 10.0 13.9j
      5    80  PRINT REQUESTED              cn 32.0-12.9-25.1-15.09412116 14.3  10. 330. 222se 27.  6.7  2.1  2.7  5.7 12.5j
* * * * * * *  END OF FILE     71  -- FILE CONTAINED     556 BLOCKS
* * * * * * *  START FILE      72
      1    80  PRINT REQUESTED              cy 37.7 30.3 11.6 19.29415123  5.5  -8.  24.   6se 17.  1.1  0.4  0.5  0.9  5.3j
      2    80  PRINT REQUESTED              cy 37.7 30.3 11.6 19.294152 0  5.1  -1.   4. 227se 17.  3.0  1.2  1.8  2.0  4.2j
      3    80  PRINT REQUESTED              cy 37.6 30.0 12.2 19.094152 1  5.0   9. 339. 230se 15.  2.9  0.8  1.5  2.4  3.9j
      4    80  PRINT REQUESTED              cy 37.5 29.8 12.8 18.894152 2  5.1   3. 329. 235se 13.  2.5  0.9  1.1  2.0  4.4j
      5    80  PRINT REQUESTED              cy 37.4 29.5 13.4 18.694152 3  5.0 -38. 310. 204se 11.  2.7  1.1  1.3  2.0  4.2j
* * * * * * *  END OF FILE     72  -- FILE CONTAINED     514 BLOCKS
* * * * * * *  START FILE      73                                          Year 94 day 152
* * * * * * *  END OF FILE     73  -- FILE CONTAINED       0 BLOCKS
```

FATAR DETAIL REPORT Year 96 day 100

BLOCK NUMBER	LNGTH/ DISPL	MESSAGE/ BLOCK TYPE	1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80 (COLUMN GRID IS VALID ONLY FOR CHARACTER FORMATTED DATA)
	+00880		75 36.2 31.6-12.2 12.786100 20 6.3 22. 249. 233SE 15. 0.1 0.9 0.2 0.5 6.2J
	+00960		75 36.3 32.0-11.7 12.68610021 6.3 19. 258. 232SE 12. 0.4 1.1 0.5 1.0 6.1J
	+01040		75 36.3 32.3-11.1 12.48610022 6.6 15. 262. 235SE 9. 0.2 1.4 0.4 0.5 6.4J
	+01120		75 36.4 32.7-10.5 12.28610023 7.1 15. 243. 235SE 6. 0.2 1.1 0.6 0.8 6.9J
	+01200		75 36.4 33.0 -9.9 12.086101 0 6.9 6. 257. 233SE 3. 0.3 0.6 0.3 0.5 6.8J
	+01280		75 36.5 33.3 -9.3 11.886101 1 7.1 10. 239. 235SE 0. 0.2 0.4 0.2 0.2 7.0J
	+01360		75 36.5 33.5 -8.9 11.686101 2 7.1 9. 240. 63SE -1. 0.1 0.2 0.1 0.2 7.1J
	+01440		75 36.6 33.9 -7.8 11.286101 3 6.3 1. 245. 17SE -3. 0.2 3.2 1.9 0.2 5.2J
	+01520		75 36.6 34.0 -7.5 11.186101 4 6.2 -9. 228. 168SE -3. 0.2 1.0 1.0 1.1 6.0J
	+01600		75 36.7 34.4 -6.7 10.886101 5 6.7 -30. 225. 105SE -3. 0.2 1.4 0.8 0.8 6.5J
	+01680		75 36.7 34.6 -6.2 10.786101 6 6.8 0. 232. 234SE -2. 0.6 0.7 1.6 3.1 5.8J
	+01760		75 36.7 34.8 -5.6 10.486101 7 8.0 -5. 237. 220SE -0. 0.2 1.7 0.6 1.7 7.5J
	+01840		75 36.8 35.0 -5.0 10.286101 8 8.0 -4. 246. 234SE 2. 1.1 1.1 2.7 4.6 6.0J
	+01920		75 36.8 35.2 -4.4 9.986101 9 9.4 15. 251. 233SE 5. 0.2 0.6 0.2 1.1 9.3J
3	3200	PRINT REQUESTED	75 37.5 36.2 9.2 3.886102 7 5.2 26. 233. 226SE 0. 0.5 0.7 1.3 2.3 4.5J
	+00080		75 37.5 36.0 9.9 3.586102 8 6.5 22. 235. 235SE 3. 0.1 0.4 0.4 0.5 6.4J
	+00160		75 37.6 35.9 10.5 3.286102 9 6.6 4. 229. 229SE 5. 0.2 0.3 0.3 0.5 6.6J
	+00240		75 37.6 35.8 11.0 2.98610210 6.7 -6. 225. 234SE 8. 0.2 0.4 0.2 0.6 6.6J
	+00320		75 37.6 35.7 11.6 2.68610211 5.7 -22. 219. 235SE 12. 0.5 0.7 0.6 0.9 5.6J
	+00400		75 37.6 35.5 12.3 2.28610212 5.1 -16. 224. 163SE 15. 0.2 0.3 0.5 0.8 5.0J
	+00480		75 37.6 35.3 12.8 1.98610213 4.9 -19. 230. 235SE 17. 0.1 0.2 0.1 0.3 4.9J
	+00560		75 37.6 35.1 13.4 1.68610214 4.1 -20. 227. 226SE 19. 0.7 0.4 0.6 0.6 4.0J
	+00640		75 37.7 35.0 13.9 1.38610215 3.5 7. 216. 231SE 20. 0.4 0.2 0.7 0.9 3.3J
	+00720		75 37.7 34.7 14.5 1.08610216 3.9 -5. 222. 221SE 21. 0.1 0.2 0.2 0.6 3.9J
	+00800		75 37.7 34.5 15.1 0.78610217 3.9 3. 219. 235SE 21. 0.1 0.1 0.1 0.2 3.9J
	+00880		75 37.7 34.3 15.6 0.48610218 4.1 2. 222. 228SE 19. 0.1 0.5 0.4 0.4 4.0J
	+00960		75 37.7 34.1 16.2 0.18610219 4.5 -2. 228. 231SE 18. 0.2 0.6 0.7 1.2 4.2J
	+01040		75 37.7 33.8 16.7 -0.28610220 4.8 -3. 223. 225SE 15. 0.2 0.4 0.2 0.9 4.7J
	+01120		75 37.7 33.5 17.3 -0.68610221 5.0 -9. 219. 217SE 12. 0.3 0.3 0.3 0.3 5.0J
	+01200		75 37.7 33.3 17.8 -0.98610222 5.3 -6. 214. 235SE 9. 0.1 0.1 0.2 0.3 5.2J
	+01280		75 37.8 33.0 18.3 -1.28610223 5.1 -8. 218. 224SE 6. 0.2 0.4 0.4 0.3 5.0J
	+01360		75 37.8 32.7 18.9 -1.586103 0 5.2 -5. 219. 212SE 4. 0.2 0.3 0.6 0.3 5.1J
	+01440		75 37.8 29.8 22.9 -4.086103 8 5.3 -7. 243. 117SE 4. 0.2 0.3 0.3 0.3 5.2J
	+01520		75 37.8 29.5 23.3 -4.386103 9 5.3 -3. 253. 235SE 6. 0.1 0.5 0.1 0.4 5.3J
	+01600		75 37.8 29.1 23.7 -4.68610310 5.1 -7. 257. 228SE 9. 0.2 0.6 0.3 0.2 5.1J
	+01680		75 37.8 28.7 24.2 -4.98610311 5.0 -2. 252. 234SE 12. 0.1 0.4 0.2 0.3 4.9J
	+01760		75 37.8 28.3 24.6 -5.28610312 5.0 -3. 249. 233SE 15. 0.1 0.2 0.1 0.2 4.9J
	+01840		75 37.8 27.8 25.0 -5.58610313 4.6 -3. 254. 230SE 17. 0.1 0.3 0.1 0.1 4.6J
	+01920		75 37.8 27.5 25.3 -5.78610314 4.6 -18. 236. 83SE 19. 0.1 0.2 0.4 0.5 4.5J
4	3200	PRINT REQUESTED	75 37.5 13.6 32.8-12.18610415 6.2 49. 87. 195SE 21. 1.3 3.0 2.0 4.2 3.0J
	+00080		75 37.5 13.0 33.0-12.38610416 8.2 42. 5. 184SE 22. 1.3 1.1 4.0 2.0 6.9J
	+00160		75 37.5 12.3 33.1-12.58610417 9.2 51. 26. 221SE 21. 0.5 1.8 2.0 0.9 8.8J
	+00240		75 37.4 11.7 33.2-12.78610418 8.6 31. 347. 217SE 20. 0.9 1.4 3.7 3.5 6.9J
	+00320		75 37.4 11.0 33.4-12.98610419 9.4 37. 73. 235SE 18. 0.7 1.6 1.0 1.6 9.1J
	+00400		75 37.4 10.4 33.5-13.18610420 9.1 24. 83. 230SE 16. 0.7 1.5 1.3 2.9 8.4J
	+00480		75 37.4 9.8 33.6-13.28610421 8.1 41. 62. 154SE 14. 1.0 2.1 1.8 2.4 7.3J
	+00560		75 37.3 8.9 33.7-13.48610422 7.5 -41. 189. 120SE 9. 1.6 1.8 1.1 1.1 7.3J
	+00640		75 37.3 8.4 33.7-13.68610423 7.7 -34. 177. 234SE 7. 0.7 1.5 1.4 0.7 7.4J
	+00720		75 37.3 7.8 33.8-13.786105 0 6.9 -23. 160. 235SE 4. 0.2 0.4 0.9 1.1 6.8J
	+00800		75 37.3 7.1 33.8-13.986105 1 6.9 -20. 156. 235SE 2. 0.2 0.3 0.6 0.9 6.8J

From: NCFMRB::OPERATOR 19-DEC-1996 07:40:35.82
To: NCF::ALOPEZ
CC:
Subj: dd108653 ascii listing

ASCII LIST OF DD108653

FILE 1 RECORD 1 80 BYTES

cy 39.3 3.8 35.6 16.295 1 1 2.8 -20. 112. 233se-29. 1.4 0.3 0.6 1.2 2.5j

ASCII LIST OF DD108653

FILE 1 RECORD 584 80 BYTES

cn 31.1-18.4-21.6-12.795 3121 13.9 48. 249. 116se-12. 5.4 4.0 1.8 3.2 12.7j

ASCII LIST OF DD108653

FILE 2 RECORD 1 80 BYTES

cn 31.0-16.2-22.6-13.695 32 0 7.0 33. 287. 21se-21. 6.0 3.0 3.8 3.5 4.9j

ASCII LIST OF DD108653

FILE 2 RECORD 499 80 BYTES

cy 34.2 31.6-13.0 -0.295 5923 7.8 27. 330. 232se -8. 5.0 3.9 0.9 3.0 6.0j

ASCII LIST OF DD108653

FILE 3 RECORD 1 80 BYTES

cy 34.2 31.6-13.0 -0.295 5922 8.1 46. 271. 2se -8. 9.4 9.3 0.8 0.6 4.5j

ASCII LIST OF DD108653

FILE 3 RECORD 568 80 BYTES

cn 34.9-13.1 31.9 5.095 9022 7.1 -48. 125. 166se 6. 6.7 4.3 2.8 4.4 3.1j

ASCII LIST OF DD108653

FILE 4 RECORD 1 80 BYTES

cn 34.6-14.1 31.3 4.195 9023 7.2 -11. 140. 3se 0. 0.4 0.1 0.2 0.3 7.1j

ASCII LIST OF DD108653

FILE 4 RECORD 461 80 BYTES

cy 37.4 16.2-32.3 9.49512016 4.6 47. 145. 232se 26. 3.3 1.9 2.5 1.0 3.2j

ASCII LIST OF DD108653

FILE 5 RECORD 1 80 BYTES

cy 38.5 21.0-29.6 12.995121 1 4.9 5. 125. 23se 6. 0.4 0.2 0.2 0.3 4.8j

ASCII LIST OF DD108653

FILE 5 RECORD 529 80 BYTES

cy 33.7 8.6 31.9 -6.29515123 5.7 -25. 312. 235se 20. 3.3 1.1 2.6 1.7 4.6j

ASCII LIST OF DD108653

FILE 6 RECORD 1 80 BYTES

cy 33.7 8.6 31.9 -6.29515122 5.6 21. 325. 5se 20. 1.2 0.6 0.9 0.5 5.4j

ASCII LIST OF DD108653

FILE 6 RECORD 450 80 BYTES

cn 36.5-14.4-30.5 13.99518123 20.3 -38. 226. 235se 22. 7.0 3.7 3.7 4.6 20.1j

ASCII LIST OF DD108653

FILE 7 RECORD 1 80 BYTES

cn 36.5-14.2-30.6 14.09518123 17.2 -36. 226. 122se 20. 8.3 4.6 4.4 5.4 16.9j

ASCII LIST OF DD108653

FILE 7 RECORD 446 80 BYTES

cy 29.9 23.7 14.7-10.99521222 4.7 -26. 108. 215se 20. 4.0 1.8 2.2 2.8 3.3j

ASCII LIST OF DD108653

FILE 8 RECORD 1 80 BYTES

cy 29.7 22.4 15.6-11.59521223 6.6 3. 97. 8se 14. 0.3 0.2 0.2 0.2 6.6j

ASCII LIST OF DD108653

FILE 8 RECORD 577 80 BYTES

cn 40.2-22.7-24.2 22.69524323 9.6 -13. 46. 217se 7. 7.1 3.8 3.6 4.8 6.4j

ASCII LIST OF DD108653

FILE 9 RECORD 1 80 BYTES

cn 40.2-22.5-24.4 22.69524323 9.0 -17. 35. 107se 6. 4.9 2.4 2.7 3.3 7.6j

ASCII LIST OF DD108653

FILE 9 RECORD 581 80 BYTES

cy 32.2 26.2-13.8-12.79527317 4.5 3. 324. 235se 9. 1.6 0.6 0.7 1.3 4.1j

ASCII LIST OF DD108653

FILE 10 RECORD 1 80 BYTES

cy 30.6 25.6 1.6-16.89527412 3.7 9. 305. 101se 3. 1.3 0.6 1.0 0.6 3.4j

ASCII LIST OF DD108653

FILE 10 RECORD 514 80 BYTES

cn 41.5-34.2 1.0 23.59530423 12.1 2. 119. 229se-16. 7.2 5.3 4.6 1.8 9.7j

ASCII LIST OF DD108653

FILE 11 RECORD 1 80 BYTES

cn 41.5-34.2 1.0 23.59530422 11.1 0. 118. 12se-16. 2.4 0.9 1.8 1.2 10.9j

ASCII LIST OF DD108653

FILE 11 RECORD 519 80 BYTES

cy 28.6 18.8-14.2-16.39533423 2.5 1. 171. 234se-23. 1.6 1.4 0.7 0.5 1.8j

ASCII LIST OF DD108653

FILE 12 RECORD 1 80 BYTES

cy 28.6 18.8-14.2-16.39533422 2.4 -17. 40. 14se-23. 0.2 0.1 0.1 0.1 2.4j

ASCII LIST OF DD108653

FILE 12 RECORD 578 80 BYTES

cn 39.5-20.5 26.1 21.49536522 12.3 51. 272. 98se-21. 8.2 3.6 6.6 3.2 9.7j

ASCII LIST OF DD108653

FILE 13 RECORD 1 80 BYTES

cn 39.5-21.5 25.5 21.196 1 0 12.6 55. 254. 230se-27. 4.3 3.4 2.1 1.7 11.8j

ASCII LIST OF DD108653

FILE 13 RECORD 572 80 BYTES

cy 29.1 11.2-23.5-13.096 3121 4.2 11. 207. 150se-12. 1.2 0.5 0.5 0.9 4.1j

ASCII LIST OF DD108653

FILE 14 RECORD 1 80 BYTES

cy 29.2 13.8-22.8-11.896 32 0 4.2 17. 213. 96se-22. 0.9 0.5 0.6 0.4 4.1j

ASCII LIST OF DD108653

FILE 14 RECORD 624 80 BYTES

cy 41.0 19.5 27.5 23.396 6023 3.8 13. 316. 235se -8. 0.9 0.5 0.5 0.6 3.7j

ASCII LIST OF DD108653

FILE 15 RECORD 1 80 BYTES

cy 41.0 18.6 28.2 23.196 61 1 3.7 2. 308. 207se-14. 0.9 0.6 0.6 0.5 3.6j

ASCII LIST OF DD108653

FILE 15 RECORD 659 80 BYTES

cn 31.0-17.1-22.0-13.696 92 0 12.4 -22. 195. 118se 0. 7.5 6.1 2.0 4.0 10.2j

ASCII LIST OF DD108653

FILE 16 RECORD 1 80 BYTES

```
cm 31.0-17.1-22.0-13.696 9123 11.2 -20. 177.  13se  1.  3.8  3.2  1.6  1.2 10.3j
```

ASCII LIST OF DD108653

FILE 16 RECORD 642 80 BYTES

```
cy 39.1 32.3 -3.1 21.89612122  6.0  25. 346. 235se 16.  1.2  0.7  0.8  0.6  5.8j
```

ASCII LIST OF DD108653

FILE 17 RECORD 1 80 BYTES

```
cy 39.2 32.9 -0.5 21.396122 2  4.4 -44. 161.   4se  5.  4.1  3.5  2.2  0.1  2.5j
```

ASCII LIST OF DD108653

FILE 17 RECORD 637 80 BYTES

```
cm 28.7-23.3  8.9-14.39615223 17.1  -8. 169. 223se 20.  2.4  1.5  1.9  0.2 16.9j
```

ASCII LIST OF DD108653

FILE 18 RECORD 1 80 BYTES

```
cm 28.7-24.6  6.5-13.396153 2 16.9 -10. 116.   3se 12.  3.3  3.0  1.5  0.1 16.7j
```

ASCII LIST OF DD108653

FILE 18 RECORD 531 80 BYTES

cy 40.3 21.2-27.4 20.69618219 4.7 24. 340. 225se 33. 1.3 0.8 0.6 0.9 4.6j

ASCII LIST OF DD108653

FILE 19 RECORD 1 80 BYTES

cy 40.2 25.2-25.0 18.896183 2 4.1 -22. 304. 4se 12. 0.3 0.2 0.1 0.1 4.1j

ASCII LIST OF DD108653

FILE 19 RECORD 488 80 BYTES

cn 32.2-12.2 26.9-12.79621322 11.0 -26. 153. 235se 20. 8.5 3.6 4.3 6.4 7.0j