# 372

IMP-I,H,J
SOLAR WIND DATA
71-019A-11C
72-073A-10A
73-078A-10A

IMP-H,J
2-MINUTE SOLAR WIND PLASMA DATA
72-073A-10C
73-078A-10F

IMP-I
2 MINUTE PLASMA
71-019A-11D

Table of Contents

1. Introduction

2. Errata/Change Log

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

4. Catalog Materials

    a. Associated Documents

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

IMP-H/J

2-MINUTE PLASMA

IMP-H (72-073A-10C) SPMS-00203

IMP-J (73-078A-10F) SPMS-00629

The tapes in these 2 datasets are 6250 bpi, ASCII, written in VAX-labelled format. Dataset 72-073A-10C (IMP-H) consists of one tape; dataset 73-078A-10F (IMP-J) consists of five tapes. Data records prior to April, 1986 contain 16 words. The rest contain 19 words. The data are written in unblocked, variable length records. Separate format statements for each set follow this sheet. The 'D' and 'C' numbers, time spans, VAX labels and number of data files follow:

72-073A-10C (IMP-H)

| D# | C# | VAX LABEL | # FILES | TIME SPAN |
|---|---|---|---|---|
| D-079736 | C-027273 | IMPH72 | 72 | 10/06/72 - 10/17/78 |

73-078A-10F (IMP-J)

| D# | C# | VAX LABEL | # FILES | TIME SPAN |
|---|---|---|---|---|
| D-079737 | C-027274 | IMPJ73 | 116 | 11/04/73 - 12/31/83 |
| D-079738 | C-027275 | IMPJ84 | 60 | 01/01/84 - 12/24/88 |
| D-086840 | C-029407 | 89EPH | 12 | 01/02/89 - 12/31/89 |
| D-086832 | C-029406 | IMPEPH | 24 | 01/02/90 - 12/31/91 |
| D-101540 | C-031126 | M92IMP | 12 | 01/04/92 - 12/29/92 |

72-073A-10C
73-078A-10F

# FORMAT FOR IMPH/J 2 MINUTE PLASMA DATA
(Prior to April, 1986)

FILE ORGANIZATION: Sequential

RECORD FORMAT: Variable length, maximum 90 bytes

RECORD ATTRIBUTES: Fortran carriage control

| Word | Format | Name | Description | Units |
|---|---|---|---|---|
| 1 | A4 | BIRD ID | IMP6,IMP7,IMP8 | |
| 2 | I6 | IYYMMDD | | |
| 3 | F8.1 | SECONDS | | |
| 4 | F8.1 | UTIME | HHMMSS | |
| 5 | PE11.4 | DENSITY | PROTON DENSITY | $cm^{-3}$ |
| 6 | PE11.4 | FLOW SPEED | PROTON FLOW SPEED | km/sec |
| 7 | PE11.4 | FLOW AZIMUTH | PROTON FLOW AZIMUTH | deg |
| 8 | PE11.4 | TPAR (MAX) | PROTON TEMP (MAX) | K |
| 9 | PE11.4 | TPER (MIN) | PROTON TEMP (MIN) | K |
| 10 | PE11.4 | PSIT | AZIMUTH ANGLE OF PRESSURE TENSOR SYMMETRY AXIS | deg |
| 11 | PE11.4 | ALPHA/PROTON | FLUX RATIO | |
| 12 | PE11.4 | FLOW SPEED AP | RELATIVE FLOW SPEED | km/sec |
| 13 | PE11.4 | FLOW AZIMUTH AP | AZIMUTH ANGLE OF RELATIVE FLOW | deg |
| 14 | PE11.4 | TRATIO | ALPHA TEMP/PROTON TEMP | |
| 15 | PE11.4 | TEMP | ALPHA TEMP ANISOTROPY | |
| 16 | PE11.4 | PSIT | AZIMUTH ANGLE OF ALPHA PARTICLE PRESSURE TENSOR SYMMETRY AXIS | deg |

FORMAT:

```
2000    FORMAT(1X,A4,1X,I6,1X,2(F8.1,1X),5(1PE11.4,1X),/,
     1         6(1PE11.4,1X),1PE11.4)
```

READ:

```
        READ (2,2000)BIRD,IYYMMDD,SEC,UTIME,(PLASMA(I),I=5,16)
```

FORMAT FOR IMP J 2 MINUTE PLASMA DATA
(April, 1986 and After)

73-078A-10F

FILE ORGANIZATION: Sequential

RECORD FORMAT: Variable length, maximum 90 bytes

RECORD ATTRIBUTES: Fortran carriage control

| Word | Format | Name | Description | Units |
|---|---|---|---|---|
| 1 | A4 | BIRD ID | IMP6,IMP7,IMP8 | |
| 2 | I6 | IYYMMDD | | |
| 3 | F8.1 | SECONDS | | |
| 4 | F8.1 | UTIME | HHMMSS | |
| 5 | PE11.4 | RADIUS | SPACECRAFT RADIAL DISTANCE | Re |
| 6 | PE11.4 | SELAT | SPACECRAFT LATITUDE, SE | Deg |
| 7 | PE11.4 | SELON | SPACECRAFT LONGITUDE, SE | Deg |
| 8 | PE11.4 | DENSITY | PROTON DENSITY | $cm^{-3}$ |
| 9 | PE11.4 | FLOW SPEED | PROTON FLOW SPEED | km/sec |
| 10 | PE11.4 | FLOW AZIMUTH | PROTON FLOW AZIMUTH | deg |
| 11 | PE11.4 | TPAR (MAX) | PROTON TEMP (MAX) | K |
| 12 | PE11.4 | TPER (MIN) | PROTON TEMP (MIN) | K |
| 13 | PE11.4 | PSIT | AZIMUTH ANGLE OF PRESSURE TENSOR SYMMETRY AXIS | deg |
| 14 | PE11.4 | ALPHA/PROTON | FLUX RATIO | |
| 15 | PE11.4 | FLOW SPEED AP | RELATIVE FLOW SPEED | km/sec |
| 16 | PE11.4 | FLOW AZIMUTH AP | AZIMUTH ANGLE OF RELATIVE FLOW | deg |
| 17 | PE11.4 | TRATIO | ALPHA TEMP/PROTON TEMP | |
| 18 | PE11.4 | TEMP | ALPHA TEMP ANISOTROPY | |
| 19 | PE11.4 | PSIT | AZIMUTH ANGLE OF ALPHA PARTICLE PRESSURE TENSOR SYMMETRY AXIS | deg |

FORMAT:

```
2000    FORMAT(1X,A4,1X,I6,1X,2(F8.1,1X),3(1PE11.4,1X),/,
     1          2(1PE11.4,1X,1PE11.4,4(1PE11.4,1X)) )
```

READ:

```
        READ (2,2000)BIRD,IYYMMDD,SEC,UTIME,(PLASMA(I),I=5,19)
```

Directory MKA100:[]

| | | | |
|---|---|---|---|
| IMP7_APR73.NSS;1 | IMP7_APR74.NSS;1 | IMP7_APR75.NSS;1 | IMP7_APR76.NSS; |
| IMP7_APR77.NSS;1 | IMP7_APR78.NSS;1 | IMP7_AUG73.NSS;1 | IMP7_AUG74.NSS; |
| IMP7_AUG75.NSS;1 | IMP7_AUG76.NSS;1 | IMP7_AUG77.NSS;1 | IMP7_AUG78.NSS; |
| IMP7_DEC72.NSS;1 | IMP7_DEC73.NSS;1 | IMP7_DEC74.NSS;1 | IMP7_DEC75.NSS; |
| IMP7_DEC76.NSS;1 | IMP7_DEC77.NSS;1 | IMP7_FEB73.NSS;1 | IMP7_FEB74.NSS; |
| IMP7_FEB75.NSS;1 | IMP7_FEB76.NSS;1 | IMP7_FEB77.NSS;1 | IMP7_FEB78.NSS; |
| IMP7_JAN73.NSS;1 | IMP7_JAN74.NSS;1 | IMP7_JAN75.NSS;1 | IMP7_JAN76.NSS; |
| IMP7_JAN77.NSS;1 | IMP7_JAN78.NSS;1 | IMP7_JUL73.NSS;1 | IMP7_JUL74.NSS; |
| IMP7_JUL75.NSS;1 | IMP7_JUL76.NSS;1 | IMP7_JUL77.NSS;1 | IMP7_JUL78.NSS; |
| IMP7_JUN73.NSS;1 | IMP7_JUN74.NSS;1 | IMP7_JUN75.NSS;1 | IMP7_JUN76.NSS; |
| IMP7_JUN77.NSS;1 | IMP7_JUN78.NSS;1 | IMP7_MAR73.NSS;1 | IMP7_MAR74.NSS; |
| IMP7_MAR75.NSS;1 | IMP7_MAR76.NSS;1 | IMP7_MAR77.NSS;1 | IMP7_MAR78.NSS; |
| IMP7_MAY73.NSS;1 | IMP7_MAY74.NSS;1 | IMP7_MAY75.NSS;1 | IMP7_MAY76.NSS; |
| IMP7_MAY77.NSS;1 | IMP7_MAY78.NSS;1 | IMP7_NOV72.NSS;1 | IMP7_NOV73.NSS; |
| IMP7_NOV74.NSS;1 | IMP7_NOV75.NSS;1 | IMP7_NOV76.NSS;1 | IMP7_NOV77.NSS; |
| IMP7_OCT72.NSS;1 | IMP7_OCT73.NSS;1 | IMP7_OCT74.NSS;1 | IMP7_OCT75.NSS; |
| IMP7_OCT76.NSS;1 | IMP7_OCT77.NSS;1 | IMP7_SEP73.NSS;1 | IMP7_SEP74.NSS; |
| IMP7_SEP75.NSS;1 | IMP7_SEP76.NSS;1 | IMP7_SEP77.NSS;1 | IMP7_SEP78.NSS; |

Total of 72 files.

Directory of D-079737 (C-027274)

| | | | |
|---|---|---|---|
| IMP8_APR74.NSS;1 | IMP8_APR75.NSS;1 | IMP8_APR76.NSS;1 | IMP8_APR77.NSS; |
| IMP8_APR78.NSS;1 | IMP8_APR79.NSS;1 | IMP8_APR80.NSS;1 | IMP8_APR81.NSS; |
| IMP8_APR82.NSS;1 | IMP8_APR83.NSS;1 | IMP8_AUG74.NSS;1 | IMP8_AUG75.NSS; |
| IMP8_AUG76.NSS;1 | IMP8_AUG77.NSS;1 | IMP8_AUG78.NSS;1 | IMP8_AUG79.NSS; |
| IMP8_AUG80.NSS;1 | IMP8_AUG81.NSS;1 | IMP8_AUG82.NSS;1 | IMP8_AUG83.NSS; |
| IMP8_DEC73.NSS;1 | IMP8_DEC74.NSS;1 | IMP8_DEC76.NSS;1 | IMP8_DEC77.NSS; |
| IMP8_DEC78.NSS;1 | IMP8_DEC79.NSS;1 | IMP8_DEC80.NSS;1 | IMP8_DEC81.NSS; |
| IMP8_DEC83.NSS;1 | IMP8_FEB74.NSS;1 | IMP8_FEB75.NSS;1 | IMP8_FEB76.NSS; |
| IMP8_FEB77.NSS;1 | IMP8_FEB78.NSS;1 | IMP8_FEB79.NSS;1 | IMP8_FEB80.NSS; |
| IMP8_FEB81.NSS;1 | IMP8_FEB82.NSS;1 | IMP8_FEB83.NSS;1 | IMP8_JAN74.NSS; |
| IMP8_JAN75.NSS;1 | IMP8_JAN76.NSS;1 | IMP8_JAN77.NSS;1 | IMP8_JAN78.NSS; |
| IMP8_JAN79.NSS;1 | IMP8_JAN81.NSS;1 | IMP8_JAN82.NSS;1 | IMP8_JUL74.NSS; |
| IMP8_JUL75.NSS;1 | IMP8_JUL76.NSS;1 | IMP8_JUL77.NSS;1 | IMP8_JUL78.NSS; |
| IMP8_JUL79.NSS;1 | IMP8_JUL80.NSS;1 | IMP8_JUL81.NSS;1 | IMP8_JUL82.NSS; |
| IMP8_JUL83.NSS;1 | IMP8_JUN74.NSS;1 | IMP8_JUN75.NSS;1 | IMP8_JUN76.NSS; |
| IMP8_JUN77.NSS;1 | IMP8_JUN78.NSS;1 | IMP8_JUN79.NSS;1 | IMP8_JUN80.NSS; |
| IMP8_JUN81.NSS;1 | IMP8_JUN82.NSS;1 | IMP8_JUN83.NSS;1 | IMP8_MAR74.NSS; |
| IMP8_MAR75.NSS;1 | IMP8_MAR76.NSS;1 | IMP8_MAR77.NSS;1 | IMP8_MAR78.NSS; |
| IMP8_MAR79.NSS;1 | IMP8_MAR80.NSS;1 | IMP8_MAR81.NSS;1 | IMP8_MAR82.NSS; |
| IMP8_MAR83.NSS;1 | IMP8_MAY74.NSS;1 | IMP8_MAY75.NSS;1 | IMP8_MAY76.NSS; |
| IMP8_MAY77.NSS;1 | IMP8_MAY78.NSS;1 | IMP8_MAY79.NSS;1 | IMP8_MAY80.NSS; |
| IMP8_MAY81.NSS;1 | IMP8_MAY82.NSS;1 | IMP8_MAY83.NSS;1 | IMP8_NOV73.NSS; |
| IMP8_NOV74.NSS;1 | IMP8_NOV75.NSS;1 | IMP8_NOV76.NSS;1 | IMP8_NOV77.NSS; |
| IMP8_NOV78.NSS;1 | IMP8_NOV79.NSS;1 | IMP8_NOV80.NSS;1 | IMP8_NOV81.NSS; |
| IMP8_NOV83.NSS;1 | IMP8_OCT74.NSS;1 | IMP8_OCT75.NSS;1 | IMP8_OCT76.NSS; |
| IMP8_OCT77.NSS;1 | IMP8_OCT78.NSS;1 | IMP8_OCT79.NSS;1 | IMP8_OCT80.NSS; |
| IMP8_OCT81.NSS;1 | IMP8_OCT83.NSS;1 | IMP8_SEP74.NSS;1 | IMP8_SEP75.NSS; |
| IMP8_SEP76.NSS;1 | IMP8_SEP77.NSS;1 | IMP8_SEP78.NSS;1 | IMP8_SEP79.NSS; |
| IMP8_SEP80.NSS;1 | IMP8_SEP81.NSS;1 | IMP8_SEP82.NSS;1 | IMP8_SEP83.NSS; |

Total of 116 files.

Directory D-079738 (C-027275)

| | | | |
|---|---|---|---|
| IMP8_APR84.NSS;1 | IMP8_APR85.NSS;1 | IMP8_APR86.NSS;1 | IMP8_APR87.NSS; |
| IMP8_APR88.NSS;1 | IMP8_AUG84.NSS;1 | IMP8_AUG85.NSS;1 | IMP8_AUG86.NSS; |
| IMP8_AUG87.NSS;1 | IMP8_AUG88.NSS;1 | IMP8_DEC84.NSS;1 | IMP8_DEC85.NSS; |
| IMP8_DEC86.NSS;1 | IMP8_DEC87.NSS;1 | IMP8_DEC88.NSS;1 | IMP8_FEB84.NSS; |
| IMP8_FEB85.NSS;1 | IMP8_FEB86.NSS;1 | IMP8_FEB87.NSS;1 | IMP8_FEB88.NSS; |
| IMP8_JAN84.NSS;1 | IMP8_JAN85.NSS;1 | IMP8_JAN86.NSS;1 | IMP8_JAN87.NSS; |
| IMP8_JAN88.NSS;1 | IMP8_JUL84.NSS;1 | IMP8_JUL85.NSS;1 | IMP8_JUL86.NSS; |
| IMP8_JUL87.NSS;1 | IMP8_JUL88.NSS;1 | IMP8_JUN84.NSS;1 | IMP8_JUN85.NSS; |
| IMP8_JUN86.NSS;1 | IMP8_JUN87.NSS;1 | IMP8_JUN88.NSS;1 | IMP8_MAR84.NSS; |
| IMP8_MAR85.NSS;1 | IMP8_MAR86.NSS;1 | IMP8_MAR87.NSS;1 | IMP8_MAR88.NSS; |
| IMP8_MAY84.NSS;1 | IMP8_MAY85.NSS;1 | IMP8_MAY86.NSS;1 | IMP8_MAY87.NSS; |
| IMP8_MAY88.NSS;1 | IMP8_NOV84.NSS;1 | IMP8_NOV85.NSS;1 | IMP8_NOV86.NSS; |
| IMP8_NOV87.NSS;1 | IMP8_NOV88.NSS;1 | IMP8_OCT84.NSS;1 | IMP8_OCT85.NSS; |
| IMP8_OCT86.NSS;1 | IMP8_OCT87.NSS;1 | IMP8_OCT88.NSS;1 | IMP8_SEP84.NSS; |
| IMP8_SEP85.NSS;1 | IMP8_SEP86.NSS;1 | IMP8_SEP87.NSS;1 | IMP8_SEP88.NSS; |

Total of 60 files.

Directory of D-086840 (C-029407)

| | | | |
|---|---|---|---|
| IMP8_APR89.NSS;1 | IMP8_AUG89.NSS;1 | IMP8_DEC89.NSS;1 | IMP8_FEB89.NSS; |
| IMP8_JAN89.NSS;1 | IMP8_JUL89.NSS;1 | IMP8_JUN89.NSS;1 | IMP8_MAR89.NSS; |
| IMP8_MAY89.NSS;1 | IMP8_NOV89.NSS;1 | IMP8_OCT89.NSS;1 | IMP8_SEP89.NSS; |

Total of 12 files.

Directory D-086832 (C-029406)

| | | | |
|---|---|---|---|
| IMP8_JAN90.NSS;1 | IMP8_FEB90.NSS;1 | IMP8_MAR90.NSS;1 | IMP8_APR90.NSS; |
| IMP8_MAY90.NSS;1 | IMP8_JUN90.NSS;1 | IMP8_JUL90.NSS;1 | IMP8_AUG90.NSS; |
| IMP8_SEP90.NSS;1 | IMP8_OCT90.NSS;1 | IMP8_NOV90.NSS;1 | IMP8_DEC90.NSS; |
| IMP8_JAN91.NSS;1 | IMP8_FEB91.NSS;1 | IMP8_MAR91.NSS;1 | IMP8_APR91.NSS; |
| IMP8_MAY91.NSS;1 | IMP8_JUN91.NSS;1 | IMP8_JUL91.NSS;1 | IMP8_AUG91.NSS; |
| IMP8_SEP91.NSS;1 | IMP8_OCT91.NSS;1 | IMP8_NOV91.NSS;2 | IMP8_DEC91.NSS; |

Total of 24 files.

Directory of D-101540 (C-031126)

| | | | |
|---|---|---|---|
| IMP8_9201.NSS;1 | IMP8_9202.NSS;1 | IMP8_9203.NSS;1 | IMP8_9204.NSS;1 |
| IMP8_9205.NSS;1 | IMP8_9206.NSS;1 | IMP8_9207.NSS;1 | IMP8_9208.NSS;1 |
| IMP8_9209.NSS;1 | IMP8_9210.NSS;1 | IMP8_9211.NSS;1 | IMP8_9212.NSS;1 |

Total of 12 files.

Sample of file IMP7_APR73.NSS on Tape D-079736

```
IMP7 730401  25638.0  70718.0  8.9990E+00  4.2770E+02 -2.5570E+00  3.2750E+04  1.5020E+04
6.8670E+01 -9.9990E+02  4.2840E+02 -8.7899E+01 -9.9990E+02 -9.9990E+02 -9.9990E+02
IMP7 730401  25905.0  71145.0  9.8100E+00  4.2770E+02 -2.6990E+00  2.5870E+04  1.3740E+04
7.0460E+01  2.4351E-02  4.2600E+00  3.1985E+01  4.5505E+00  1.6160E+00  1.2370E+02
IMP7 730401  26171.0  71611.0  7.8860E+00  4.3060E+02 -2.0880E+00  4.3190E+04  1.7030E+04
6.7520E+01  3.5962E-02  4.3288E+00  7.6797E+01  2.8972E+00  3.7170E+00  1.4190E+02
IMP7 730401  26437.0  72037.0  6.9280E+00  4.3050E+02 -2.0360E+00  3.9580E+04  1.5960E+04
6.9570E+01  2.9500E-02  6.6736E+00  9.4061E+00  1.8774E+00  2.5610E+00  1.2530E+02
IMP7 730401  26703.0  72503.0  5.8810E+00  4.2720E+02 -2.1500E+00  6.7250E+04  2.3070E+04
7.3620E+01  9.1504E-03  8.0880E+01  1.7035E+01  9.2656E-01  3.8310E+00  7.8350E+01
IMP7 730401  26902.0  72822.0  6.1590E+00  4.3000E+02 -2.6250E+00  8.0590E+04  2.9150E+04
6.9940E+01  5.1656E-02  5.9469E+00 -3.6867E+01  3.7789E+00  2.1680E+00  5.8240E+01
IMP7 730401  27103.0  73143.0  6.0210E+00  4.3090E+02 -1.1100E+00  6.1420E+04  2.0590E+04
7.4440E+01  5.5299E-02  1.6016E+00  3.4724E+01  3.0873E+00  6.2340E+00  7.8930E+01
IMP7 730401  27302.0  73502.0  5.3860E+00  4.2740E+02 -1.6700E+00  5.9790E+04  2.0230E+04
7.2310E+01  5.9439E-02  1.2204E+01 -1.5451E+01  5.1035E+00  1.9250E+00  1.5430E+02
IMP7 730401  27502.0  73822.0  6.7240E+00  4.3300E+02 -2.3050E-01  2.6200E+04  9.2010E+03
7.8780E+01  7.8036E-02  1.8076E+01  2.8702E+00  3.3152E+00  1.9910E+00  9.4520E+01
IMP7 730401  27768.0  74248.0  6.8210E+00  4.3080E+02 -9.1540E-01  3.2630E+04  1.2320E+04
7.4260E+01  1.4934E-02  2.8997E+01  2.7807E+01  1.0241E+00  1.2280E+00  7.1430E+01
IMP7 730401  28034.0  74714.0  7.2390E+00  4.3060E+02 -8.1530E-01  3.3460E+04  1.1200E+04
7.2700E+01  1.4278E-02  2.4699E+01  2.2896E+01  5.6240E-01  9.1300E+00  7.8430E+01
IMP7 730401  28233.0  75033.0  4.2030E+00  4.3260E+02 -1.2880E+00  5.4770E+04  1.4660E+04
7.7640E+01  3.7820E-02  1.2771E+01  7.4129E+00  2.6753E+00  2.8610E+00  8.3240E+01
IMP7 730401  28500.0  75500.0  4.8420E+00  4.2990E+02 -2.1250E+00  5.6790E+04  1.4340E+04
7.6660E+01 -9.9990E+02  4.3080E+02 -8.8450E+01 -9.9990E+02 -9.9990E+02 -9.9990E+02
IMP7 730401  28700.0  75820.0  7.5350E+00  4.3040E+02 -1.6440E+00  5.4480E+04  1.8910E+04
7.2330E+01  1.4118E-02  1.3514E+01  4.7722E+01  1.0532E+01  1.3180E+00  1.0950E+02
IMP7 730401  29032.0  80352.0  6.7950E+00  4.2680E+02 -2.5950E+00  3.6630E+04  1.5080E+04
7.8220E+01  4.1456E-02  6.0169E+00  5.2289E+01  4.3962E+00  3.4610E+00  1.1670E+01
IMP7 730401  29431.0  81031.0  8.3360E+00  4.3160E+02 -1.8430E+00  6.8910E+04  2.3290E+04
7.8350E+01  4.4053E-02  4.4593E+00  4.3968E+01  3.9599E+00  2.1720E+00  4.7980E+01
IMP7 730401  29632.0  81352.0  7.1040E+00  4.3260E+02 -7.9960E-01  7.2160E+04  2.5390E+04
7.6010E+01  2.5948E-02  1.1016E+01  9.8604E+00  3.9005E+00  1.6600E+00  7.1730E+01
IMP7 730401  29897.0  81817.0  7.4470E+00  4.3140E+02 -1.1080E+00  8.3840E+04  2.5450E+04
7.4270E+01  3.3026E-02  7.1990E+00 -6.5745E+01  6.7756E+00  2.5960E+00  4.9920E+01
IMP7 730401  30230.0  82350.0  8.2160E+00  4.3040E+02 -1.5080E+00  6.2810E+04  2.4260E+04
7.2610E+01  7.6660E-02  1.0971E+01 -2.1105E+01  4.9784E+00  1.6710E+00  9.5490E+01
IMP7 730401  30429.0  82709.0  5.9430E+00  4.2580E+02 -6.2810E-01  5.9460E+04  2.3430E+04
7.6800E+01  3.7723E-02  7.1894E+00  1.6511E+01  3.0786E+00  1.4460E+00  3.0310E+01
IMP7 730401  30629.0  83029.0  6.2170E+00  4.2600E+02 -1.8090E+00  4.8140E+04  1.7470E+04
7.8100E+01  5.1794E-02  2.1565E+00 -4.6011E+01  4.1634E+00  1.0720E+00  5.2850E+01
IMP7 730401  30829.0  83349.0  6.9400E+00  4.2940E+02 -6.6800E-01  4.3600E+04  1.6680E+04
7.5440E+01  3.8639E-02  1.0795E+01 -3.8780E+01  3.6960E+00  2.3070E+00  1.6570E+02
IMP7 730401  31029.0  83709.0  4.8750E+00  4.2740E+02 -1.2150E+00  5.2220E+04  1.7000E+04
7.2430E+01  4.5455E-02  6.7416E+00 -4.1399E+01  5.9772E+00  4.0560E+00  4.5410E+01
IMP7 730401  31228.0  84028.0  6.8140E+00  4.3450E+02 -1.0420E-01  7.8530E+04  3.2020E+04
6.6250E+01  4.7551E-02  8.0584E+00 -4.7173E+01  4.8137E+00  1.4990E+00  6.8200E+01
IMP7 730401  31428.0  84348.0  4.7640E+00  4.2960E+02 -2.5270E-01  6.9040E+04  2.9130E+04
7.5470E+01  3.4165E-02  1.4338E+01 -1.8085E+00  3.2248E+00  1.8340E+00  8.9040E+01
IMP7 730401  31627.0  84707.0  9.2930E+00  4.3180E+02  1.9290E+00  4.4300E+04  2.3000E+04
8.1180E+01  5.2742E-02  1.2450E+01 -2.1191E+00  3.1388E+00  1.7890E+00  3.5940E+02
IMP7 730401  31827.0  85027.0  4.6030E+00  4.3340E+02  1.9730E-01  9.6830E+04  3.7860E+04
7.1970E+01  7.8100E-02  1.2149E+01  6.4137E+01  6.2950E+00  2.2120E+00  1.3660E+02
IMP7 730401  32094.0  85454.0  4.9480E+00  4.3160E+02  4.4830E-01  1.1240E+05  4.4600E+04
7.1750E+01  7.4331E-02  1.2259E+01  4.3565E+01  6.6428E+00  1.4490E+00  1.4130E+02
IMP7 730401  32293.0  85813.0  6.5640E+00  4.3080E+02  6.7530E-01  7.6010E+04  4.0790E+04
7.4460E+01  9.8164E-02  5.4987E+01  2.7472E+01  2.4032E+01  4.4960E+00  7.5670E+01
IMP7 730401  32494.0  90134.0  5.0980E+00  4.2930E+02  6.3910E-01  1.0400E+05  4.0140E+04
6.9640E+01  7.1672E-02  1.1777E+01  4.1752E+01  7.0235E+00  1.2150E+00  1.6630E+02
IMP7 730401  32695.0  90455.0  5.9830E+00  4.3230E+02  9.6000E-01  7.1870E+04  3.8660E+04
7.3130E+01  4.2734E-02  1.6438E+00 -3.9615E-01  4.1263E+00  1.5420E+00  7.8770E+01
IMP7 730401  32894.0  90814.0  5.1230E+00  4.2480E+02  6.8100E-01  9.1480E+04  3.9580E+04
```

Sample of file IMP8_JAN92.NSS

Data file: 1 Record: 1 IMP8_9201.NNS D-101540
Start date: 01/04/92

D-101540

```
IMP8 920104  70424.0 193344.0  4.0480E+01 -2.6310E+01  5.6890E+01
6.1980E+00  4.2470E+02  1.0980E+00  7.9130E+04  6.0390E+04  9.7110E+01
-9.9990E+02  4.2380E+02  8.8852E+01 -9.9990E+02 -9.9990E+02 -9.9990E+02
IMP8 920104  70645.0 193725.0  4.0480E+01 -2.6300E+01  5.6950E+01
6.0450E+00  4.4260E+02 -1.2440E+00  8.0360E+04  7.8190E+04  4.6110E+01
7.1503E-02  1.2061E+01 -2.1510E+01  1.6449E+01  4.8570E+00  1.7100E+02
IMP8 920104  70798.0 193958.0  4.0470E+01 -2.6290E+01  5.6990E+01
5.7560E+00  4.3580E+02 -2.0560E+00  8.2090E+04  7.1340E+04  5.7340E+01
5.3128E-02  2.9575E+01  5.8521E+01  8.4007E+00  1.2630E+00  4.5160E+01
IMP8 920104  70954.0 194234.0  4.0470E+01 -2.6280E+01  5.7030E+01
6.8500E+00  4.6280E+02 -3.6400E+00  1.1200E+05  7.9430E+04  5.8330E+01
3.1338E-02  2.9759E+01  3.2218E+01  6.5733E+00  2.4970E+00  6.2500E+01
IMP8 920104  71189.0 194629.0  4.0470E+01 -2.6270E+01  5.7090E+01
7.2350E+00  4.7400E+02 -1.9380E+00  1.0530E+05  8.0560E+04  5.4950E+01
4.2171E-02  2.0767E+01  1.3718E+01  7.8849E+00  1.4400E+00  6.7010E+01
IMP8 920104  71409.0 195009.0  4.0470E+01 -2.6260E+01  5.7150E+01
5.8270E+00  4.6730E+02 -3.3950E+00  1.2530E+05  6.8060E+04  5.9890E+01
4.1363E-02  2.6333E+01  1.7795E+01  4.7210E+00  2.2590E+00  7.2720E+01
IMP8 920104  71562.0 195242.0  4.0460E+01 -2.6250E+01  5.7190E+01
7.4510E+00  4.6570E+02 -3.0500E+00  1.0910E+05  8.3970E+04  4.9570E+01
4.3218E-02  2.6689E+01  2.7867E+01  6.1967E+00  2.1880E+00  4.4470E+01
IMP8 920104  71742.0 195542.0  4.0460E+01 -2.6240E+01  5.7240E+01
7.6270E+00  4.5280E+02 -2.8770E+00  1.0700E+05  9.5590E+04  4.3810E+01
3.9726E-02  3.4199E+01  3.8462E+01  5.8114E+00  1.2840E+00  4.3180E+01
IMP8 920104  71901.0 195821.0  4.0460E+01 -2.6230E+01  5.7280E+01
6.9620E+00  4.4910E+02 -4.7830E+00  1.3180E+05  7.6010E+04  5.9060E+01
-9.9990E+02  4.3990E+02 -8.3894E+01 -9.9990E+02 -9.9990E+02 -9.9990E+02
IMP8 920104  72052.0 200052.0  4.0460E+01 -2.6220E+01  5.7320E+01
7.4420E+00  4.5990E+02 -3.0280E+00  1.3710E+05  9.8000E+04  5.6260E+01
2.9965E-02  4.2425E+01  4.0796E+01  3.6335E+00  2.2660E+00  7.2740E+01
IMP8 920104  72278.0 200438.0  4.0450E+01 -2.6210E+01  5.7380E+01
7.4910E+00  4.6380E+02 -2.3730E+00  1.4560E+05  9.8670E+04  5.6510E+01
4.4716E-02  3.5743E+01  2.2552E+01  6.0953E+00  1.3570E+00  4.8500E+01
IMP8 920104  72430.0 200710.0  4.0450E+01 -2.6200E+01  5.7420E+01
7.6690E+00  4.6550E+02 -3.2190E+00  1.4360E+05  9.9380E+04  5.6190E+01
3.9496E-02  5.2635E+01  2.8915E+01  4.9086E+00  1.8870E+00  6.4620E+01
IMP8 920104  72658.0 201058.0  4.0450E+01 -2.6190E+01  5.7480E+01
6.9190E+00  4.5600E+02 -3.0300E+00  1.4280E+05  9.9690E+04  5.3250E+01
3.6187E-02  5.0824E+01  3.1715E+01  4.1958E+00  2.3080E+00  5.8460E+01
IMP8 920104  72889.0 201449.0  4.0450E+01 -2.6180E+01  5.7540E+01
7.0550E+00  4.6440E+02 -3.0040E+00  1.2750E+05  9.1030E+04  4.9640E+01
4.8587E-02  4.3729E+01  1.9805E+01  6.7346E+00  1.1630E+00  6.8970E+01
IMP8 920104  73047.0 201727.0  4.0450E+01 -2.6170E+01  5.7580E+01
7.2080E+00  4.6720E+02 -3.5530E+00  1.2980E+05  9.4560E+04  5.2190E+01
3.9171E-02  4.3595E+01  2.6323E+01  5.1966E+00  1.7990E+00  8.0780E+01
```

IMP-H, IMP-I, IMP-J

Merged IMP I,H,J 3 Hr Plasma Parm

71-019A-11C (IMP-I) SPMS-00202

72-073A-10A (IMP-H)

73-078A-10A (IMP-J)

This data set has been restored. There was originally 1 9-track, 800 BPI tape written in EBCDIC. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The tape was created on a 360 computer. The DR and DS number along with the corresponding D number and the time spans is as follows:

| DR# | DS# | D# | FILES | TIME SPAN |
|---|---|---|---|---|
| DR03651 | DS03651 | D28815 | 1 | 03/18/71 - 12/31/74 |

| REQ. AGENT | RAND NO. | ACQ. AGENT |
|---|---|---|
| DBN | RC7192 | DJH |

IMP I,H,J

SOLAR WIND DATA

71-019A-11C

72-073A-10A

73-078A-10A

This data set consists of 1 tape. The tape is 1 file, 800 BPI, EBCDIC, 9-track and was created on an IBM 360 computer.

Each physical record will contain 4 logical records. Also each physical record will contain 20 bytes of padding at the end.

These data tapes contain merged IMP data, with no indication as to which space-craft the data is from. According to Feldom, (Bame) IMP I desity may be 20 percent high.

| D# | C# | TIME SPAN |
|---|---|---|
| D-28815 | C-18684 | 03/18/71 - 12/31/74 |

71-019A-11C
72-073A-10A
73-078A-10A

Format For

IMP I,H,J

| DISCRIPTION | BYTES | FORMAT | UNITS |
|---|---|---|---|
| BLANKS | 1-2 | | |
| YEAR | 3-4 | | |
| MONTH | 5-6 | | |
| DAY | 7-8 | | |
| AVG. COUNT * | 9 | | |
| BLANK | 10 | | |
| DENS. | 11-15 | F5.2 | $CM^{-3}$ |
| BLANK | 16 | | |
| VELOC. | 17-21 | F5.1 | KM/SEC |
| BLANK | 22 | | |
| TEMP. | 23-29 | | °K |

* (3*N)=HR. OF DAY (N=AVG. COUNT)

JULY 1973 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

# *Memorandum*

TO : 71-019A-11

DATE: December 7, 1976

FROM : J. King

SUBJECT: Normalization of Ion Density Values

According to Bill Feldman on December 3, 1976, the LASL IMP 6 plasma density values must be increased by 20% to bring them into line with IMP 7 and 8 plasma density values. This is true of the IMP 6 hourly values we have received from LASL for 1971-1973. We will have to determine whether their yet-to-be-submitted 1974 density values have already been increased by 20%. This 20% correction will have been made in a composite IMP 6/7/8 3-hour-average data tape now being provided for incorporation into the master NSSDC composite plasma data set.

*Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan*

REQ. AGENT
BMW

ACQ. AGENT
SK

IMP-I

2-MINUTE PROTON ALPHA SOLAR WIND MOMENTS

71-019A-11D SPMS-00638

This data set consists of one magnetic tape. The tape is 6250 bpi, 9-track, binary, with 90 files (VAX back-up format, 30 data & label files). It was created on a VAX computer. The D and C numbers and time span are as follows:

| D# | C# | FILES | TIME SPAN |
|---|---|---|---|
| D-79704 | C-27526 | 90 | 03/18/71 - 08/03/74 |

71-019A-11D

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: July 14, 1989
IN REPLY REFER TO: ESS-8:89-52-719
MAIL STOP: D438
TELEPHONE: (505)667-5389

Dr. Sumant Krishnaswamy
Code 633
NSSDC
NASA/Goddard Space Flight Center
Greenbelt, MD 20771

Dear Sumant,

Under separate cover I am sending you one magnetic tape containing high temporal resolution solar wind ion moments derived from measurements obtained by the Los Alamos plasma experiment on IMP 6. The tape contains 30 files, one for each month when IMP 6 was in the solar wind from March 1971 through atmospheric entry in August 1974. The temporal resolution of these data is approximately 126 seconds. Each data record in these files contains:

1) the s/c ID,
2) the date yymmdd,
3) the time in seconds,
4) UT time (hhmmss),
5) proton density ($cm^{-3}$),
6) flow speed (km/sec),
7) flow azimuth (degrees),
8) proton temperature max. (K),
9) proton temperature min. (K),
10) angle of pressure tensor symmetry axis (degrees),
11) alpha particle abundance ratio (relative to protons),
12) relative alpha-proton flow speed (km/s),
13) azimuth of the relative flow speed (degrees),
14) alpha/proton temperature ratio,
15) alpha temperature anisotropy ($T_{max}/T_{min}$),
16) angle of alpha particle pressure tensor symmetry axis (degrees).

I am enclosing a sample listing of the data with the read format indicated. Please contact me (Ph: (505)667-5389; SPAN:ESSDP1::073500) if you have any questions concerning this submission.

Sincerely,

Jack

J. T. Gosling

JTG:jlt

Enc. a/s

Cy: J. H. King, Code 633, GSFC
CRM-4(2)/A150

Documentation for IMP Proton data files submitted to NSSDC

FILE ORGANIZATION: Sequential

RECORD FORMAT: Variable length, maximum 90 bytes

RECORD ATTRIBUTES: Fortran carriage control

```
C
C DEFINITION: 16 ELEMENTS OF IMP PROTONS
C ELEMENTS:
C    1    BIRD ID          IMP6,IMP7,IMP8
C    2    IYYMMDD
C    3    SECONDS
C    4    UTIME            HHMMSS
C    5    DENSITY          PROTON NUMERICAL                          (cm-3)
C    6    FLOW SPEED       PROTON NUMERICAL                          (km/sec)
C    7    FLOW AZIMUTH     PROTON NUMERICAL                          (deg)
C    8    TPAR (MAX)       PROTON NUMERICAL                          (K)
C    9    TPER (MIN)       PROTON NUMERICAL                          (K)
C   10    PSIT             PRESSURE TENSOR SYMMETRY AXIS, AZ         (deg)
C   11    ALPHA/PROTON     FLUX RATIO
C   12    FLOW SPEED AP    RELATIVE FLOW SPEED                       (km/sec)
C   13    FLOW AZIMUTH AP  RELATIVE FLOW ANGLE                       (deg)
C   14    TRATIO           ALPHA TEMP/PROTON TEMP
C   15    TEMP             ALPHA TEMP ANISOTROPY
C   16    PSIT             ALPHA PRESSURE ASYMMETRY AXIS             (deg)
```

FORMAT:

```
2000    FORMAT (1X,A4,1X,I6,1X,2(F8.1,1X),5(1PE11.4,1X),/,7(1PE11.4,1X))
```

READ:

```
        READ (2,2000)BIRD,IYYMMDD,SEC,UTIME,(PLASMA(I),I=5,16)
```

SAMPLE:

```
 IMP6 720102  73917.0 203157.0  6.3520E+00  4.3980E+02 -2.3450E+00  9.1740E+04  6.0630E+
   04
 7.4800E+01  3.7762E-02  1.5620E+01  1.2953E+01  3.1398E+00  1.6850E+00  8.9540E+01
 IMP6 720102  74043.0 203403.0  6.9130E+00  4.4410E+02 -1.3690E+00  7.5660E+04  4.9010E+
   04
 6.7980E+01  3.8666E-02  7.0618E+00 -5.4206E+01  4.5909E+00  1.9530E+00  1.0730E+02
 IMP6 720102  74169.0 203609.0  5.4410E+00  4.2870E+02 -2.6520E+00  1.0260E+05  6.4780E+
   04
 5.5580E+01  4.7272E-02  1.0697E+01 -2.5007E+01  5.6153E+00  1.3010E+00  6.4110E+01
 IMP6 720102  74295.0 203815.0  5.2580E+00  4.2310E+02 -1.1270E+00  8.2170E+04  6.1860E+
   04
 4.5920E+01  5.1602E-02  5.2378E+00  3.8679E+01  3.7137E+00  1.4450E+00  1.8570E+01
 IMP6 720102  74421.0 204021.0  6.4190E+00  4.2500E+02 -1.5950E+00  8.0450E+04  6.7040E+
   04
 3.6020E+01  3.4329E-02  9.2325E+00  3.8060E+01  4.1087E+00  1.2080E+00  8.9800E+01
```

```
$JOB  17:46:13
$NOP******************** DUMP OF X-455 ********************
$ASS IN MS4 SI TY
$NOTE BOJ   17:46:44
$EXEC DPHEX BS
 INPUT TAPE ON MS4
 DATA INPUT     1 10 10
  FILE  1      RECORD   1      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F1F8  F34040F3  4BF2F940  F4F2F84B  F4404040  F0F7F6F0  F04040F7  F1F0F3F1  F8F44040
  (    40)   F34BF9F1  40F4F3F1  4BF54040  40F6F2F3  F4F34040  F7F1F0F3  F1F8F540  40F44BF8  F540F4F2  F54BF240
  (    80)   4040F5F0  F3F6F440  40F7F1F0  F3F1F8F6  4040F44B  F1F540F4  F1F34BF6  40404040  F2F0F7F8  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   2      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F1F8  F74040F4  4BF1F940  F4F1F84B  F6404040  F5F1F7F2  F94040F7  F1F0F3F1  F8F44040
  (    40)   F44BF5F4  40F4F0F6  4BF84040  40F5F5F3  F2F94040  F7F1F0F3  F1F9F140  40F44BF8  F440F4F0  F34BF040
  (    80)   4040F5F7  F4F2F240  40F7F1F0  F3F1F9F2  4040F54B  F0F940F4  F3F44BF3  40404040  F4F9F0F9  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   3      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F1F9  F34040F5  4BF2F140  F3F9F94B  F7404040  F6F2F2F3  F54040F7  F1F0F3F1  F9F44040
  (    40)   F54BF7F1  40F4F0F0  4BF74040  40F6F6F7  F8F84040  F7F1F0F3  F1F9F540  F1F44BF1  F64CF4F5  F34BF240
  (    80)   40F1F6F6  F0F7F840  40F7F1F0  F3F1F9F6  40F1F04B  F4F940F4  F1F74BF9  4040F1F2  F5F9F2F3  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   4      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F1F9  F74040F9  4BF7F440  F3F9F44B  F1404040  F9F2F0F3  F14040F7  F1F0F3F1  F9F84040
  (    40)   F84BF4F9  40F3F8F0  4BF44040  40F8F1F7  F4F94040  F7F1F0F3  F2F0F140  40F54BF6  F140F3F8  F54BF440
  (    80)   4040F6F1  F5F0F740  40F7F1F0  F3F2F0F2  4040F34B  F7F540F4  F0F44BF9  40404040  F3F4F1F6  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   5      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F0  F34040F5  4BF3F440  F4F3F340  F4404040  F5F4F2F3  F84040F7  F1F0F3F2  F0F44040
  (    40)   F64BF7F5  40F4F4F4  4BF24040  40F5F1F3  F0F24040  F7F1F0F3  F2F0F54C  40F54BF4  F140F4F3  F94BF240
  (    80)   4040F4F5  F6F2F840  40F7F1F0  F3F2F0F6  4040F54B  F4F540F4  F2F14BF3  40404040  F3F4F9F3  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   6      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F0  F74040F4  4BF8F140  F4F0F34B  F7404040  F4F2F7F4  F54040F7  F1F0F3F2  F0F84040
  (    40)   F44BF5F5  40F3F9F6  4BF24040  40F6F0F1  F6F34040  F7F1F0F3  F2F1F140  40F44BF6  F040F3F9  F94BF040
  (    80)   4040F8F5  F2F6F540  40F7F1F0  F3F2F1F2  4040F44B  F7F540F3  F9F74BF3  40404040  F9F0F7F3  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   7      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F1  F34040F5  4BF3F840  F3F9F84B  F9404040  F7F7F6F1  F24040F7  F1F0F3F2  F1F44040
  (    40)   F54BF1F8  40F3F7F9  4BF44040  40F8F2F6  F4F24040  F7F1F0F3  F2F1F540  40F44BF8  F347F3F5  F24BF540
  (    80)   4040F8F3  F0F4F940  40F7F1F0  F3F2F1F6  4040F54B  F5F940F3  F6F04BF6  40404040  F5F8F9F6  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   8      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F2  F44040F6  4BF0F840  F3F3F24B  F7404040  F3F2F4F9  F94040F7  F1F0F3F2  F2F54040
  (    40)   F64BF7F3  40F3F3F3  4BF64040  40F2F7F0  F4F74040  F7F1F0F3  F2F2F640  40F84BF1  F843F3F5  F44BF140
  (    80)   4040F1F9  F5F4F740  40F7F1F0  F3F2F2F7  4040F74B  F2F440F3  F2F24BF5  4040 40F1  F5F4F9F7  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   9      LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F2  F84040F9  4BF9F140  F3F1F24B  F4404040  F1F2F0F6  F14040F7  F1F0F3F2  F3F140F1
  (    40)   F44BF5F2  40F3F1F0  4BF64040  40F1F4F0  F0F14040  F7F1F0F3  F2F3F240  F2F04BF1  F140F3F1  F24BF440
  (    80)   4040F1F3  F3F6F940  40F7F1F0  F3F2F3F3  40F2F24B  F9F940F3  F1F14BF3  40404040  F6F6F0F4  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   10     LENGTH    136  BYTES
  (     0)   4040F7F1  F0F3F2F3  F440F2F2  4BF5F240  F3F1F44B  F8404040  F2F5F3F0  F84040F7  F1F0F3F2  F3F540F1
  (    40)   F24BF0F0  40F3F6F9  4BF94040  F1F0F1F3  F4F84040  F7F1F0F3  F2F3F640  F1F74BF2  F943F3F6  F04BF940
  (    80)   4040F9F2  F4F6F040  40F7F1F0  F3F2F3F7  40F1F64B  F6F840F3  F8F24BF3  4040F1F1  F6F2F6F0  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   1814   LENGTH    136  BYTES
  (     0)   4040F7F4  F1F2F2F7  F140F1F3  4BF4F140  F4F1F64B  F0404040  F4F9F4F4  F94040F7  F4F1F2F2  F7F240F2
  (    40)   F04BF3F8  40F4F5F6  4BF74040  F1F1F9F3  F1F04040  F7F4F1F2  F2F7F540  F1F74BF3  F940F5F0  F44BF840
  (    80)   40F1F8F3  F0F4F240  40F7F4F1  F2F2F7F4  40F1F24B  F5F640F5  F2F94BF0  4040F2F7  F7F8F7F4  40404040
  (   120)   40404040  40404040  40404040  40404040
  FILE  1      RECORD   1815   LENGTH    136  BYTES
  (     0)   4040F7F4  F1F2F2F7  F540F1F0  4BF7F940  F5F3F74B  F74040F2  F8F0F0F4  F6404040  F4F1F2F2  F7F64040
```

```
(   40)  F44BF3F2  50F5F7F4  4BF04040  F1F4F6F2  F9F14040  F7F4F1F2  F2F7F740  40F540F7  F84BF5F7  F740F140
(   80)  40F1F3F9  F5F5F540  40F7F4F1  F2F2F7F8  4040F44B  F2F840F5  F5F44BF9  4040F1F2  F6F9F1F7  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1816   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F2F8  F14040F8  4BF7F640  F5F3F94B  F4404040  F6F1F5F6  F14040F7  F4F1F2F2  F6F24040
(   40)  F94BF8F6  40F5F3F5  4BF94040  F1F5F1F9  F1F94040  F7F4F1F2  F2F6F340  F1F04BF1  F340F5F6  F940F640
(   80)  40F1F8F1  F1F1F340  40F7F4F1  F2F2F8F4  4040F74B  F3F240F5  F8F54BF8  4040F1F8  F0F3F6F7  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1817   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F2F8  F54040F5  4BF6F340  F5F4F74B  F34040F1  F6F6F5F1  F24040F7  F4F1F2F2  F8F64040
(   40)  F44BF6F7  40F5F4F4  4BF34040  F1F2F3F0  F5F24040  F7F4F1F2  F2F8F740  40F44BF4  F840F5F1  F24BF240
(   80)  40F1F0F8  F1F2F340  40F7F4F1  F2F2F8F8  4040F54B  F8F440F4  F7F84BF9  4040F0F8  F9F7F8F4  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1818   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F2F9  F14040F6  4BF1F540  F4F5F24B  F3404040  F6F6F2F0  F14040F7  F4F1F2F2  F9F240F1
(   40)  F04BF1F5  40F4F4F9  4BF24040  40F9F9F4  F4F54040  F7F4F1F2  F2F9F340  F1F34BF3  F540F4F6  F64BF040
(   80)  40F1F3F0  F1F9F440  40F7F4F1  F2F2F9F4  40F1F14B  F8F740F4  F6F74BF7  4040F1F0  F9F9F9F4  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1819   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F2F9  F540F1F1  4BF5F640  F4F5F34B  F1404040  F6F1F6F2  F14040F7  F4F1F2F2  F9F64040
(   40)  F94BF8F9  40F4F3F5  4BF84040  40F5F0F6  F7F64040  F7F4F1F2  F2F9F740  40F94BF4  F140F4F3  F64BF540
(   80)  4040F3F3  F4F1F840  40F7F4F1  F2F2F9F8  40F1F44B  F6F140F4  F3F54BF3  4040F0F3  F1F2F5F6  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1820   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F3F0  F14040F9  4BF9F640  F4F3F24B  F4404040  F1F8F2F3  F74040F7  F4F1F2F3  F0F240F1
(   40)  F14BF2F7  40F4F2F5  4BF34040  40F2F3F3  F0F94040  F7F4F1F2  F3F0F340  40F94BF0  F640F4F1  F64BF640
(   80)  4040F1F7  F0F5F640  40F7F4F1  F2F3F0F4  4040F94B  F2F240F4  F0F14BF5  4040F0F2  F2F8F0F9  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1821   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F3F0  F54040F9  4BF3F540  F3F9F94B  F0404040  F2F8F6F7  F74040F7  F4F1F2F3  F0F64040
(   40)  F84BF9F1  40F3F9F1  4BF34040  40F3F5F4  F3F84040  F7F4F1F2  F3F0F740  40F84BF8  F340F3F9  F94BF040
(   80)  4040F3F6  F7F8F840  40F7F4F1  F2F3F0F8  40F2F64B  F4F040F4  F1F64BF8  4040F0F6  F5F9F3F4  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1822   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F3F1  F140F1F8  4BF0F440  F4F4F14B  F74040F1  F2F7F4F4  F44040F7  F4F1F2F3  F1F240F2
(   40)  F14BF4F9  40F4F4F5  4BF54040  40F8F9F8  F2F24040  F7F4F1F2  F3F1F340  F1F640F7  F540F4F5  F44BF640
(   80)  4040F9F1  F1F6F040  40F7F4F1  F2F3F1F4  4040F94B  F5F840F4  F5F74BF8  4040F1F4  F0F0F4F7  40404040
(  120)  40404040  40404040  40404040  40404040
FILE  1     RECORD   1823   LENGTH   136  BYTES
(    0)  4040F7F4  F1F2F3F1  F540F1F2  4BF6F140  F4F2F94B  F6404040  F9F9F2F3  F74040F7  F4F1F2F3  F1F640F1
(   40)  F54BF0F9  40F4F7F6  4BF44040  F1F6F0F1  F1F54040  F7F4F1F2  F3F1F740  F1F34BF2  F940F5F1  F14BF140
(   80)  40F2F0F0  F5F9F640  40F7F4F1  F2F3F1F8  40F1F14B  F1F640F5  F0F44BF0  4040F2F0  F9F8F7F3  40404040
(  120)  40404040  40404040  40404040  40404040
FILE    1      # OF DATA RECORDS    1823     # SUCCESSFUL READS   1833
        # PERMANENT READ ERRORS    0        # ZERO BYTE ERRORS   0        # SHORT RECORDS    0        # UNDEFINED ERRORS   0
          # OF RECORDS RETRIED    0        TOTAL # OF RETRIES   0
```

74 1833 5 12 .81 429.9 9575 7

$$
$NOTE EOJ  17:47:30

IMP-I
D-79704
71-019A-11D
3/18/71 - 8/03/74

```
$ASS IN FT
$NOP
$NOP
$NOP
$NOP ************************* LIST OF IMP-OUT ******************************
$EXE TPLIST BS

INPUT PARAMETERS ARE:  AS SR=1=1 1 1 2

 TAPE NO.   1              FILE NO.   2
 RECORD   1                LENGTH   2048
0094 IMP6 710318  26110.0  71510.0  1.7070E+00  4.1870E+02 -6.1770E-01  8.4590E+04  4.7710E+040087
4.7110E+01  6.9766E-02  2.4901E+01  2.7714E+01  3.9785E+00  1.9430E+00  5.3300E+010094 IMP6 710318
 26334.0  71854.0  2.3990E+00  4.1370E+02 -1.5220E+00  7.4080E+04  4.5790E+040087 4.3730E+01  4.541
6E-02  4.0678E+01  2.2241E+01  3.5903E+00  1.7460E+00  6.2590E+010094 IMP6 710318  26445.0  72045.0
 2.0950E+00  4.2120E+02 -1.8000E+00  7.5380E+04  6.7590E+040087 5.3070E+01  3.7649E-02  3.2257E+01
 4.7264E+00  3.3475E+00  1.4190E+00  1.1550E+020094 IMP6 710318  27226.0  73346.0  2.1780E+00  4.3
57.E+02 -2.5260E+00  7.5370E+04  3.2940E+040087 6.9720E+01  4.5650E-02  2.9817E+01  1.0983E+01  4.2
562E+00  3.4030E+00  8.1250E+010094 IMP6 710318  27338.0  73538.0  1.8110E+00  4.1070E+02  2.7790E-
02  6.7720E+04  4.4260E+040087 6.4040E+01  1.0963E-02  6.2263E+01 -4.7183E+01  1.5176E+00  1.9390E+
00  4.9960E+010094 IMP6 710318  27450.0  73730.0  2.0090E+00  4.1650E+02 -1.5020E+00  1.3640E+05  4
.6320E+040087 3.8140E+01  6.3556E-02  3.5214E+01  4.8215E+01  2.9160E+00  1.8960E+00  5.1870E+010095
4 IMP6 710318  27561.0  73921.0  2.0620E+00  4.1730E+02 -1.5390E+00  9.3520E+04  4.4230E+040087 5.1
820E+01  5.7715E-02  1.9925E+01  3.4379E+01  4.2468E+00  2.8080E+00  5.3300E+010094 IMP6 710318  27
673.0  74113.0  2.1800E+00  4.2330E+02 -1.9310E+00  6.4250E+04  5.9510E+040087 1.6140E+02  4.7286E-
02  2.8550E+01 -3.3351E+00  3.9727E+00  1.1970E+00  1.6060E+020094 IMP6 710318  27785.0  74305.0  2
.0870E+00  4.3580E+02 -2.1010E+00  7.7980E+04  5.3980E+040087 8.3460E+01  4.2387E-02  2.7769E+01  4
.0359E+00  3.1331E+00  2.1730E+00  9.2150E+010094 IMP6 710318  27896.0  74456.0  2.0810E+00  4.3960
E+02 -2.0610E+00  6.5250E+04  2.4460E+040087 8.6050E+01  9.3408E-02  1.8715E+01 -2.6193E+01  6.6380
E+00  2.3640E+00  1.3590E+020094 IMP6 710318  28007.0  74647.0  2.2910E+00  4.4570E+02 -2.0400E+00
 7.2460E+04  3.5400E+040087 8.5050E+01  5.9372E-02  1.7739E+01 -1.6215E+01  4.6657E+00  1.8130E+00
 1.3640E+02*************************************************************

***** JOB DONE.
$EXE TPLIST BS

INPUT PARAMETERS ARE:  AS SR=1=1 1 1 89

 TAPE NO.   1              FILE NO.   89
 RECORD   1                LENGTH   2048
0094 IMP6 740803  15997.0  42637.0  6.7390E+00  5.6970E+02 -1.9550E+00  4.8590E+05  3.5570E+050087
8.0800E+01 -9.9990E+02  5.6170E+02 -8.7739E+01 -9.9990E+02 -9.9990E+020094 IMP6 740803
 16134.0  42854.0  6.3330E+00  5.1040E+02  2.3570E+00  4.2800E+05  3.6560E+050087 8.8430E+01 -9.999
0E+02  4.9500E+02  8.7524E+01 -9.9990E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  16271.0  43111.0
 6.7240E+00  5.4470E+02  1.5120E+00  5.8550E+05  4.2820E+050087 1.5530E+02 -9.9990E+02  5.3240E+02
 8.8649E+01 -9.9990E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  16409.0  43329.0  5.7220E+00  5.9
180E+02  2.0080E+00  4.3910E+05  4.0700E+050087 1.2380E+02 -9.9990E+02  5.8680E+02  8.8077E+01 -9.9
990E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  16545.0  43545.0  6.3030E+00  5.8160E+02  7.0440E-
01  5.6980E+05  4.4690E+050087 1.0560E+02 -9.9990E+02  5.7790E+02  8.9744E+01 -9.9990E+02 -9.9990E+
02 -9.9990E+020094 IMP6 740803  16682.0  43802.0  5.1580E+00  5.4120E+02 -1.2920E+00  4.6210E+05  3
.2280E+050087 1.1640E+02 -9.9990E+02  5.3080E+02 -8.7825E+01 -9.9990E+02 -9.9990E+02 -9.9990E+02009
4 IMP6 740803  16820.0  44020.0  3.6300E+00  5.4950E+02 -1.4250E-01  4.0040E+05  2.4190E+050087 8.1
240E+01 -9.9990E+02  5.4290E+02 -8.9835E+01 -9.9990E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  16
957.0  44237.0  4.2770E+00  5.0410E+02  2.9900E+00  4.6200E+05  3.3030E+050087 6.0460E+01 -9.9990E+
02  4.9760E+02  8.7854E+01 -9.9990E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  17094.0  44454.0  5
.1320E+00  5.7630E+02  2.1940E+00  5.0190E+05  2.6880E+050087 7.7250E+01  2.6803E+00  3.0148E+02  8
.0370E+01  5.1298E+00  3.9590E+00  1.3750E+010094 IMP6 740803  17232.0  44712.0  4.8020E+00  5.6580
E+02  3.3100E+00  5.1500E+05  3.6060E+050087 8.0280E+01 -9.9990E+02  5.5640E+02  8.6726E+01 -9.9990
E+02 -9.9990E+02 -9.9990E+020094 IMP6 740803  17369.0  44929.0  5.5930E+00  5.6990E+02  3.8950E+00
 4.5140E+05  4.3010E+050087 1.0440E+02 -9.9990E+02  5.5910E+02  8.6385E+01 -9.9990E+02 -9.9990E+02
-9.9990E+02*************************************************************

***** JOB DONE.
$WEO LPS
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