DSC# 787

VOYAGER 1
1-HR SOLAR WIND PLASMA DATA
INTERPLANETARY SEDR EPHEMERIS - ASCII
77-084A-06N
77-084A-00G

VOYAGER 2
1-HR SOLAR WIND PLASMA DATA
INTERPLANETARY SEDR EPHEMERIS - ASCII
77-076A-06S
77-076A-00I

| | | |
|---|---|---|
| 787 | 77-076A-00I | XXNO-00496 |
| 787 | 77-076A-06S | SPHE-00487 |
| 787 | 77-084A-00G | XXNO-00428 |
| 787 | 77-084A-06N | SPHE-00192 |

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## 1. INTRODUCTION:

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

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

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

2. ERRATA/CHANGE LOG:

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

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

| Version | Date | Person | Page | Description of Change |
|---|---|---|---|---|
| 01 | | | | |
| 02 | | | | |

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

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

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

4. CATALOG MATERIALS:

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

b. Core Catalog Materials

VOYAGER 1

1-HR SOLAR WIND PLASMA DATA

77-084A-06N SPHE-00192

THIS DATASET CONSISTS OF 1 MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250 BPI, WRITTEN IN ASCII. CREATED ON A VAX COMPUTER WITH A LABEL NAME OF "VG1SW". THE TAPE WAS DOWNLOADED FROM THE ANON_DIR:[COHO.VY1PLA.HOUR] DIRECTORY. THE D AND C NUMBER ALONG WITH ITS TIMESPAN IS LISTED BELOW.

| D# | C# | FILES | TIMESPAN |
|---|---|---|---|
| D-108534 | C-032485 | 7 | 09/07/77-12/31/80 |

Directory of D108534

COHO_VY1PLA_HOUR.LIS;1 V1_KEY_1977.ASC;1 V1_KEY_1978.ASC;1
/1_KEY_1979.ASC;1 V1_KEY_1980.ASC;1 VOYPLA.TXT;2 VY1PLA_KEY.TXT;2

Total of 7 files.

MM-084A-06N

The key parameter file has the format
year day hour speed density width Vr Vt Vn alpha
where
year day hour of the data. For hourly averages hour is an integer.
If data is for individual spectra hour will have a fractional part.
All parameters are from nonlinear fit calculation.
speed is of protons in Km/Sec
density is of protons in #/cc
width is in Km/Sec for protons, and temperature T(eV) = 0.0052(width)**2
Vr radial component proton velocity
Vt tangential component proton velocity
Vr normal component proton velocity

alpha (if present) is density of alpha in #/cc
el (if present) is sum of currents for electrons E1.

MY-084 A-06N

Document file from MIT Plasma Group Web site for Voyager 1 and 2 plasma data
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This directory and its subdirectories contain Voyager data.
The subdirectories v1 and v2 contain data relevant
to Voyager 1 and Voyager 2, respectively.
In each directory that has data, the README file
contains a description of that data and its format.
The names of the directories indicates the type of data
(e.g. sedr [Supplementary Experimental Data Records] or trajectory,
ha [Hourly Averages]).
Note that there may be additional layers of subdirectories.
For example, in the ha directory, key gives the data in
the 'Key Parameter' format.
The file name also gives similar information.
The formae of the name is usually of a form similar to
sc_type_start_end_dis.suff
where any of these may be missing.

| | |
|---|---|
| sc | is Space Craft v1 or v2 |
| type | is type of data, usually the same as the directory name, (e.g. sedr h |
| start | start time year.day.hour ( day and hour may be missing) |
| end | end time year.day.hour ( day and hour may be missing) |
| dis | descriptor, if any addition processing is needed, (e.g. filt implies |
| suff | suffix, Z, gz implies the type of compression etc. |

The formats may describe more fields that the data sets contain.
In that case, the fields in the description should just be ignored.
In some cases, 00000 is used as a fill, and implies the that data
is unavailable. Common sense is required to distinguish missing data
from true zeros.

VOYAGER 2

INTERPLANETARY SEDR EPHEMRIS DATA, ASCII

77-076A-00I XXNO-00496

THIS DATASET CONSISTS OF 1 MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250, ASCII. CREATED ON A VAX COMPUTER WITH A LABEL NAME OF "2SEDR". THE TAPE WAS UNLOADED FROM THE [COHO.VY2PLA.SEDR] ANON_DIR. THE D AND C NUMBER ALONG WITH ITS TIME SPAN IS LISTED BELOW.

| D# | C# | FILES | TIMESPAN |
|---|---|---|---|
| D-108535 | C-032486 | 57 | 08/20/77-12/29/2030 |

City, State: Cambridge, MA

Dataset Contact:
Type: CO
Title: Prof.
First & middle initial: John W.
Last name: Belcher
Current affl: Massachusetts Institute of Technology
City, State: Cambridge, MA

Brief Description:

This ASCII data set contains selected Voyager 2 interplanetary ephemeris parameters extracted by the MIT Plasma Science (PLS) experiment team from the binary Spacecraft Experimenter Data Record (SEDR) files provided to all Voyager experiment teams by the Voyager Project at the NASA Jet Propulsion Laboratory. Each ASCII file of filename V2_SEDR_yyyy.ASC, where yyyy is the year, includes one year of data at varying intervals from hours to days. The files give the coordinates of the spacecraft in the following column order: year, day, hour, minute, second, millisecond, x, y, z, xx, yy, zz, r, latitude, longitude, and time. The parameters are defined as follows: x, y, z are Solar ECliptic (SEC) cartesian coordinates in AU units; xx, yy, zz are Solar EQuatorial (SEQ) cartesian coordinates in AU units; r, latitude, longitude are the Solar EQuatorial (SEQ) spherical radius and angles in AU and degrees; time is in years since 1900. These data have been obtained from the MIT Plasma Group's anonymous FTP site at mit.space.edu/ pub/plasma. The SEDR data can be accessed on-line locally from NSSDC's Coordinated Heliospheric Observations (COHO) data base at nssdca.gsfc.nasa.gov/anon_dir: [coho.vy2pla.sedr] via anonymous FTP login, nssdca::anon_dir:[coho] via DECnet, or at http://nssdc.gsfc.nasa.gov/htbin/htdir/anon_dir/coho/?/anon_dir/ via the World Wide Web.

Acknowledgements:

"the Voyager project office at the NASA Jet Propulsion Laboratory."

Archive Plan Flag: A
Archiving status flag: C
Archiving Planning/Status:
These are predict ephemeris data and may be updated with actual ephemeris data later. The date coverage of this data set extends well beyond the presently expected end of Voyager 2 spacecraft operations.
Archiving Location: NSSDC
Archiving Organization: NASA
Archive Type: P
Documentation Status Flag: C

Materials for Distribution:

Hardcopies of brief description, and all *.txt and *.lis files in this data set.

Bibliographic References:

Sequence Number:
TRF ID:

From: NCF::POST 21-DEC-1995 06:20:01.85
To: MYERS
CC:
Subj: And here's some more

From: NCF::JCOOPER 20-DEC-1995 18:36:10.82
To: POST BANDERSON
CC: JCOOPER
Subj: New Voyager 2 SEDR ephemeris data set for archive and RSIRS

Ralph and Betty:

This new data set includes selected SEDR ephemeris parameters in ASCII format from the Voyager 2 spacecraft as provided by the MIT Plasma Group. The location of the data files in the COHO FTP site is given in the brief description. Please download all data files to the off-line archive and enter the following information into RSIRS.

John

**********

Dataset ID: 77-076A-00I

Name (short): Interplan SEDR Ephemeris, ASCII

Type Code: 3

Contact: BELCHER

Acq. Agent: JFC

NASA HQ Discipline Code: SPHE

NASA HQ Interest Code: 6A

Avail Code: A

First date of data: 1977-08-20

Last date of data: 2030-12-29

Change of available date: 1995-11-15

Long Name: Voyager 2 Interplanetary SEDR Ephemeris Data, ASCII

Dfqdat;
Date:
Form: DD
Quantity: 1

Personnel info;
Type: SO
Title: Prof.
First & middle initial: John W.
Last name: Belcher
Current affl: Massachusetts Institute of Technology

DD108535
DC032486

Km2003/16269
DC2267/150107

label=
2SEDR
57 files
3
171

Bytes read
size_updates
1482448
cover sheet --
2sedr.cvr

NSSDC Master Catalog Display: Data Set

# Voyager 2 Interplanetary SEDR Ephemeris Data, ASCII

**NSSDC ID:**XXNO-00496

## Other ID(s)

77-076A-00I

**Availability:** At NSSDC, Ready for Offline Distribution (or Staging if Digital)
**Time Span:** 1977-08-20 to 2030-12-29 (as determined by NSSDC)

## Description

This ASCII data set contains selected Voyager 2 interplanetary ephemeris parameters extracted by the MIT Plasma Science (PLS) experiment team from the binary Spacecraft Experimenter Data Record (SEDR) files provided to all Voyager experiment teams by the Voyager Project at the NASA Jet Propulsion Laboratory. Each ASCII file of filename V2_SEDR_yyyy.ASC, where yyyy is the year, includes one year of data at varying intervals from hours to days. The files give the coordinates of the spacecraft in the following column order: year, day, hour, minute, second, millisecond, x, y, z, xx, yy, zz, r, latitude, longitude, and time. The parameters are defined as follows: x, y, z are Solar ECliptic (SEC) cartesian coordinates in AU units; xx, yy, zz are Solar EQuatorial (SEQ) cartesian coordinates in AU units; r, latitude, longitude are the Solar EQuatorial (SEQ) spherical radius and angles in AU and degrees; time is in years since 1900. These data have been obtained from the MIT Plasma Group's anonymous FTP site at mit.space.edu/pub/plasma.

These data can be accessed on-line from NSSDC's Anonymous FTP data base at nssdcftp.gsfc.nasa.gov in directory spacecraft_data/voyager/voyager2/plasma/sedr or via the World Wide Web at the following URL address:

ftp://nssdcftp.gsfc.nasa.gov/spacecraft_data/voyager/voyager2/plasma/sedr/

## Mission Name(s)

Voyager 2

## Discipline(s)

Ephemeris: None assigned

## Archive Locations

National Aeronautics and Space Administration (National Space Scie

## Media Information

1 Digital Magnetic Tape

Personnel Information

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Experiment Information
Mission Information

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NSSDC home page

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*For questions about this dataset, please contact:*
*Dr. John F. Cooper*
*GSFC-Code 632*
*NASA Goddard Space Flight Center, Greenbelt, MD 20771*
*301-286-1193*
*jfcooper@pop600.gsfc.nasa.gov*

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**NSSDC Security and Privacy Statement**

**NASA Official: D. M. Sawyer, Acting Head, NSSDC (Donald.M.Sawyer@nasa.gov)**
**Last Updated: 2002-04-24**
**Output Generated: 2003-12-10**
**Programming by: Harold Felder(Harold.Felder@gsfc.nasa.gov)**

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2030 | 1 | 23 | 59 | 59 | 1 | 41.4105 | -112.3960 | -97.4576 | -99.258 | -78.811 | -88.217 | 154.420 | -34.84 | -141.55 | 130.00548 |
| 2030 | 3 | 23 | 59 | 59 | 1 | 41.4152 | -112.4068 | -97.4707 | -99.268 | -78.820 | -88.229 | 154.438 | -34.84 | -141.55 | 130.01096 |
| 2030 | 5 | 23 | 59 | 59 | 1 | 41.4200 | -112.4176 | -97.4837 | -99.277 | -78.829 | -88.241 | 154.455 | -34.84 | -141.55 | 130.01644 |
| 2030 | 7 | 23 | 59 | 59 | 1 | 41.4247 | -112.4285 | -97.4968 | -99.286 | -78.838 | -88.253 | 154.473 | -34.84 | -141.55 | 130.02192 |
| 2030 | 9 | 23 | 59 | 59 | 1 | 41.4294 | -112.4393 | -97.5098 | -99.296 | -78.847 | -88.265 | 154.490 | -34.84 | -141.55 | 130.02740 |
| 2030 | 11 | 23 | 59 | 59 | 1 | 41.4341 | -112.4501 | -97.5229 | -99.305 | -78.855 | -88.277 | 154.507 | -34.84 | -141.55 | 130.03288 |
| 2030 | 13 | 23 | 59 | 59 | 1 | 41.4389 | -112.4610 | -97.5359 | -99.315 | -78.864 | -88.289 | 154.525 | -34.85 | -141.55 | 130.03836 |
| 2030 | 15 | 23 | 59 | 59 | 1 | 41.4436 | -112.4718 | -97.5490 | -99.324 | -78.873 | -88.301 | 154.542 | -34.85 | -141.55 | 130.04384 |
| 2030 | 17 | 23 | 59 | 59 | 1 | 41.4483 | -112.4826 | -97.5620 | -99.333 | -78.882 | -88.313 | 154.560 | -34.85 | -141.55 | 130.04932 |
| 2030 | 19 | 23 | 59 | 59 | 1 | 41.4531 | -112.4934 | -97.5751 | -99.343 | -78.890 | -88.325 | 154.577 | -34.85 | -141.55 | 130.05479 |
| 2030 | 21 | 23 | 59 | 59 | 1 | 41.4578 | -112.5043 | -97.5881 | -99.352 | -78.899 | -88.337 | 154.594 | -34.85 | -141.55 | 130.06027 |
| 2030 | 23 | 23 | 59 | 59 | 1 | 41.4625 | -112.5151 | -97.6012 | -99.361 | -78.908 | -88.349 | 154.612 | -34.85 | -141.55 | 130.06575 |
| 2030 | 25 | 23 | 59 | 59 | 1 | 41.4673 | -112.5259 | -97.6143 | -99.371 | -78.917 | -88.362 | 154.629 | -34.85 | -141.54 | 130.07123 |
| 2030 | 27 | 23 | 59 | 59 | 1 | 41.4720 | -112.5368 | -97.6273 | -99.380 | -78.925 | -88.374 | 154.646 | -34.85 | -141.54 | 130.07671 |
| 2030 | 29 | 23 | 59 | 59 | 1 | 41.4767 | -112.5476 | -97.6403 | -99.390 | -78.934 | -88.386 | 154.664 | -34.85 | -141.54 | 130.08219 |
| 2030 | 31 | 23 | 59 | 59 | 1 | 41.4815 | -112.5584 | -97.6534 | -99.399 | -78.943 | -88.398 | 154.681 | -34.85 | -141.54 | 130.08767 |
| 2030 | 33 | 23 | 59 | 59 | 0 | 41.4862 | -112.5692 | -97.6665 | -99.408 | -78.952 | -88.410 | 154.699 | -34.85 | -141.54 | 130.09315 |
| 2030 | 35 | 23 | 59 | 59 | 0 | 41.4909 | -112.5801 | -97.6795 | -99.418 | -78.961 | -88.422 | 154.716 | -34.86 | -141.54 | 130.09863 |
| 2030 | 37 | 23 | 59 | 59 | 0 | 41.4957 | -112.5909 | -97.6926 | -99.427 | -78.969 | -88.434 | 154.733 | -34.86 | -141.54 | 130.10411 |
| 2030 | 39 | 23 | 59 | 59 | 0 | 41.5004 | -112.6017 | -97.7056 | -99.437 | -78.978 | -88.446 | 154.751 | -34.86 | -141.54 | 130.10959 |
| 2030 | 41 | 23 | 59 | 59 | 0 | 41.5051 | -112.6125 | -97.7186 | -99.446 | -78.987 | -88.458 | 154.768 | -34.86 | -141.54 | 130.11507 |
| 2030 | 43 | 23 | 59 | 59 | 0 | 41.5099 | -112.6234 | -97.7317 | -99.455 | -78.996 | -88.470 | 154.786 | -34.86 | -141.54 | 130.12055 |
| 2030 | 45 | 23 | 59 | 59 | 0 | 41.5146 | -112.6342 | -97.7448 | -99.465 | -79.004 | -88.482 | 154.803 | -34.86 | -141.54 | 130.12603 |
| 2030 | 47 | 23 | 59 | 59 | 0 | 41.5193 | -112.6450 | -97.7578 | -99.474 | -79.013 | -88.494 | 154.820 | -34.86 | -141.54 | 130.13151 |
| 2030 | 49 | 23 | 59 | 59 | 0 | 41.5241 | -112.6559 | -97.7709 | -99.483 | -79.022 | -88.506 | 154.838 | -34.86 | -141.54 | 130.13699 |
| 2030 | 51 | 23 | 59 | 59 | 0 | 41.5288 | -112.6667 | -97.7839 | -99.493 | -79.031 | -88.518 | 154.855 | -34.86 | -141.54 | 130.14247 |
| 2030 | 53 | 23 | 59 | 59 | 0 | 41.5335 | -112.6775 | -97.7970 | -99.502 | -79.039 | -88.530 | 154.873 | -34.86 | -141.54 | 130.14795 |
| 2030 | 55 | 23 | 59 | 59 | 0 | 41.5383 | -112.6883 | -97.8100 | -99.512 | -79.048 | -88.542 | 154.890 | -34.87 | -141.54 | 130.15342 |
| 2030 | 57 | 23 | 59 | 59 | 0 | 41.5430 | -112.6991 | -97.8231 | -99.521 | -79.057 | -88.554 | 154.907 | -34.87 | -141.54 | 130.15890 |
| 2030 | 59 | 23 | 59 | 59 | 0 | 41.5477 | -112.7100 | -97.8361 | -99.530 | -79.066 | -88.566 | 154.925 | -34.87 | -141.54 | 130.16438 |
| 2030 | 61 | 23 | 59 | 59 | 0 | 41.5525 | -112.7208 | -97.8492 | -99.540 | -79.075 | -88.578 | 154.942 | -34.87 | -141.54 | 130.16986 |
| 2030 | 63 | 23 | 59 | 59 | 0 | 41.5572 | -112.7316 | -97.8622 | -99.549 | -79.083 | -88.590 | 154.959 | -34.87 | -141.54 | 130.17534 |
| 2030 | 65 | 23 | 59 | 59 | 0 | 41.5619 | -112.7425 | -97.8753 | -99.558 | -79.092 | -88.602 | 154.977 | -34.87 | -141.54 | 130.18082 |
| 2030 | 67 | 23 | 59 | 59 | 0 | 41.5667 | -112.7533 | -97.8883 | -99.568 | -79.101 | -88.614 | 154.994 | -34.87 | -141.53 | 130.18630 |
| 2030 | 69 | 23 | 59 | 59 | 0 | 41.5714 | -112.7641 | -97.9014 | -99.577 | -79.110 | -88.626 | 155.012 | -34.87 | -141.53 | 130.19178 |
| 2030 | 71 | 23 | 59 | 59 | 0 | 41.5761 | -112.7749 | -97.9144 | -99.587 | -79.118 | -88.638 | 155.029 | -34.87 | -141.53 | 130.19726 |
| 2030 | 73 | 23 | 59 | 59 | 0 | 41.5809 | -112.7858 | -97.9275 | -99.596 | -79.127 | -88.650 | 155.046 | -34.87 | -141.53 | 130.20274 |
| 2030 | 75 | 23 | 59 | 59 | 0 | 41.5856 | -112.7966 | -97.9405 | -99.605 | -79.136 | -88.663 | 155.064 | -34.87 | -141.53 | 130.20822 |
| 2030 | 77 | 23 | 59 | 59 | 0 | 41.5903 | -112.8074 | -97.9536 | -99.615 | -79.145 | -88.675 | 155.081 | -34.88 | -141.53 | 130.21370 |
| 2030 | 79 | 23 | 59 | 59 | 0 | 41.5951 | -112.8182 | -97.9666 | -99.624 | -79.154 | -88.687 | 155.099 | -34.88 | -141.53 | 130.21918 |
| 2030 | 81 | 23 | 59 | 59 | 0 | 41.5998 | -112.8291 | -97.9797 | -99.634 | -79.162 | -88.699 | 155.116 | -34.88 | -141.53 | 130.22466 |
| 2030 | 83 | 23 | 59 | 59 | 0 | 41.6045 | -112.8399 | -97.9927 | -99.643 | -79.171 | -88.711 | 155.133 | -34.88 | -141.53 | 130.23014 |
| 2030 | 85 | 23 | 59 | 59 | 0 | 41.6093 | -112.8507 | -98.0058 | -99.652 | -79.180 | -88.723 | 155.151 | -34.88 | -141.53 | 130.23562 |
| 2030 | 87 | 23 | 59 | 59 | 0 | 41.6140 | -112.8616 | -98.0188 | -99.662 | -79.189 | -88.735 | 155.168 | -34.88 | -141.53 | 130.24110 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2030 | 89 | 23 | 59 | 59 | 0 | 41.6187 | -112.8724 | -98.0319 | -99.671 | -79.197 | -88.747 | 155.185 | -34.88 | -141.53 | 130.24658 |
| 2030 | 91 | 23 | 59 | 59 | 0 | 41.6235 | -112.8832 | -98.0449 | -99.680 | -79.206 | -88.759 | 155.203 | -34.88 | -141.53 | 130.25205 |
| 2030 | 93 | 23 | 59 | 59 | 0 | 41.6282 | -112.8940 | -98.0580 | -99.690 | -79.215 | -88.771 | 155.220 | -34.88 | -141.53 | 130.25753 |
| 2030 | 95 | 23 | 59 | 59 | 0 | 41.6329 | -112.9048 | -98.0710 | -99.699 | -79.224 | -88.783 | 155.238 | -34.88 | -141.53 | 130.26301 |
| 2030 | 97 | 23 | 59 | 59 | 0 | 41.6377 | -112.9157 | -98.0841 | -99.709 | -79.232 | -88.795 | 155.255 | -34.88 | -141.53 | 130.26849 |
| 2030 | 99 | 23 | 59 | 59 | 0 | 41.6424 | -112.9265 | -98.0971 | -99.718 | -79.241 | -88.807 | 155.272 | -34.89 | -141.53 | 130.27397 |
| 2030 | 101 | 23 | 59 | 59 | 0 | 41.6471 | -112.9373 | -98.1102 | -99.727 | -79.250 | -88.819 | 155.290 | -34.89 | -141.53 | 130.27945 |
| 2030 | 103 | 23 | 59 | 59 | 0 | 41.6519 | -112.9482 | -98.1232 | -99.737 | -79.259 | -88.831 | 155.307 | -34.89 | -141.53 | 130.28493 |
| 2030 | 105 | 23 | 59 | 59 | 0 | 41.6566 | -112.9590 | -98.1363 | -99.746 | -79.268 | -88.843 | 155.325 | -34.89 | -141.53 | 130.29041 |
| 2030 | 107 | 23 | 59 | 59 | 0 | 41.6613 | -112.9698 | -98.1493 | -99.756 | -79.276 | -88.855 | 155.342 | -34.89 | -141.53 | 130.29589 |
| 2030 | 109 | 23 | 59 | 59 | 0 | 41.6661 | -112.9806 | -98.1624 | -99.765 | -79.285 | -88.867 | 155.359 | -34.89 | -141.53 | 130.30137 |
| 2030 | 111 | 23 | 59 | 59 | 0 | 41.6708 | -112.9914 | -98.1755 | -99.774 | -79.294 | -88.879 | 155.377 | -34.89 | -141.52 | 130.30685 |
| 2030 | 113 | 23 | 59 | 59 | 0 | 41.6755 | -113.0023 | -98.1885 | -99.784 | -79.303 | -88.891 | 155.394 | -34.89 | -141.52 | 130.31233 |
| 2030 | 115 | 23 | 59 | 59 | 0 | 41.6803 | -113.0131 | -98.2015 | -99.793 | -79.311 | -88.903 | 155.412 | -34.89 | -141.52 | 130.31781 |
| 2030 | 117 | 23 | 59 | 59 | 0 | 41.6850 | -113.0239 | -98.2146 | -99.802 | -79.320 | -88.915 | 155.429 | -34.89 | -141.52 | 130.32329 |
| 2030 | 119 | 23 | 59 | 59 | 0 | 41.6897 | -113.0347 | -98.2276 | -99.812 | -79.329 | -88.927 | 155.446 | -34.90 | -141.52 | 130.32877 |
| 2030 | 121 | 23 | 59 | 59 | 0 | 41.6945 | -113.0456 | -98.2407 | -99.821 | -79.338 | -88.939 | 155.464 | -34.90 | -141.52 | 130.33425 |
| 2030 | 123 | 23 | 59 | 59 | 0 | 41.6992 | -113.0564 | -98.2537 | -99.831 | -79.346 | -88.951 | 155.481 | -34.90 | -141.52 | 130.33973 |
| 2030 | 125 | 23 | 59 | 59 | 0 | 41.7039 | -113.0672 | -98.2668 | -99.840 | -79.355 | -88.964 | 155.498 | -34.90 | -141.52 | 130.34521 |
| 2030 | 127 | 23 | 59 | 59 | 0 | 41.7087 | -113.0780 | -98.2799 | -99.849 | -79.364 | -88.976 | 155.516 | -34.90 | -141.52 | 130.35068 |
| 2030 | 129 | 23 | 59 | 59 | 0 | 41.7134 | -113.0889 | -98.2929 | -99.859 | -79.373 | -88.988 | 155.533 | -34.90 | -141.52 | 130.35616 |
| 2030 | 131 | 23 | 59 | 59 | 0 | 41.7181 | -113.0997 | -98.3059 | -99.868 | -79.382 | -89.000 | 155.551 | -34.90 | -141.52 | 130.36164 |
| 2030 | 133 | 23 | 59 | 59 | 0 | 41.7229 | -113.1105 | -98.3190 | -99.877 | -79.390 | -89.012 | 155.568 | -34.90 | -141.52 | 130.36712 |
| 2030 | 135 | 23 | 59 | 59 | 0 | 41.7276 | -113.1213 | -98.3320 | -99.887 | -79.399 | -89.024 | 155.585 | -34.90 | -141.52 | 130.37260 |
| 2030 | 137 | 23 | 59 | 59 | 0 | 41.7323 | -113.1321 | -98.3451 | -99.896 | -79.408 | -89.036 | 155.603 | -34.90 | -141.52 | 130.37808 |
| 2030 | 139 | 23 | 59 | 59 | 0 | 41.7371 | -113.1430 | -98.3582 | -99.906 | -79.417 | -89.048 | 155.620 | -34.90 | -141.52 | 130.38356 |
| 2030 | 141 | 23 | 59 | 59 | 0 | 41.7418 | -113.1538 | -98.3712 | -99.915 | -79.425 | -89.060 | 155.638 | -34.91 | -141.52 | 130.38904 |
| 2030 | 143 | 23 | 59 | 59 | 0 | 41.7465 | -113.1646 | -98.3842 | -99.924 | -79.434 | -89.072 | 155.655 | -34.91 | -141.52 | 130.39452 |
| 2030 | 145 | 23 | 59 | 59 | 0 | 41.7513 | -113.1755 | -98.3973 | -99.934 | -79.443 | -89.084 | 155.672 | -34.91 | -141.52 | 130.40000 |
| 2030 | 147 | 23 | 59 | 59 | 0 | 41.7560 | -113.1863 | -98.4103 | -99.943 | -79.452 | -89.096 | 155.690 | -34.91 | -141.52 | 130.40548 |
| 2030 | 149 | 23 | 59 | 59 | 0 | 41.7607 | -113.1971 | -98.4234 | -99.953 | -79.460 | -89.108 | 155.707 | -34.91 | -141.52 | 130.41096 |
| 2030 | 151 | 23 | 59 | 59 | 0 | 41.7655 | -113.2079 | -98.4364 | -99.962 | -79.469 | -89.120 | 155.725 | -34.91 | -141.52 | 130.41644 |
| 2030 | 153 | 23 | 59 | 59 | 0 | 41.7702 | -113.2188 | -98.4495 | -99.971 | -79.478 | -89.132 | 155.742 | -34.91 | -141.52 | 130.42192 |
| 2030 | 155 | 23 | 59 | 59 | 0 | 41.7749 | -113.2296 | -98.4626 | -99.981 | -79.487 | -89.144 | 155.759 | -34.91 | -141.51 | 130.42740 |
| 2030 | 157 | 23 | 59 | 59 | 1 | 41.7797 | -113.2404 | -98.4756 | -99.990 | -79.496 | -89.156 | 155.777 | -34.91 | -141.51 | 130.43288 |
| 2030 | 159 | 23 | 59 | 59 | 1 | 41.7844 | -113.2512 | -98.4886 | -99.999 | -79.504 | -89.168 | 155.794 | -34.91 | -141.51 | 130.43836 |
| 2030 | 161 | 23 | 59 | 59 | 1 | 41.7891 | -113.2620 | -98.5017 | -100.00 | -79.513 | -89.180 | 155.811 | -34.91 | -141.51 | 130.44384 |
| 2030 | 163 | 23 | 59 | 59 | 1 | 41.7939 | -113.2729 | -98.5147 | -100.01 | -79.522 | -89.192 | 155.829 | -34.92 | -141.51 | 130.44932 |
| 2030 | 165 | 23 | 59 | 59 | 1 | 41.7986 | -113.2837 | -98.5278 | -100.02 | -79.531 | -89.204 | 155.846 | -34.92 | -141.51 | 130.45479 |
| 2030 | 167 | 23 | 59 | 59 | 1 | 41.8033 | -113.2945 | -98.5408 | -100.03 | -79.539 | -89.216 | 155.864 | -34.92 | -141.51 | 130.46027 |
| 2030 | 169 | 23 | 59 | 59 | 1 | 41.8081 | -113.3053 | -98.5539 | -100.04 | -79.548 | -89.228 | 155.881 | -34.92 | -141.51 | 130.46575 |
| 2030 | 171 | 23 | 59 | 59 | 1 | 41.8128 | -113.3162 | -98.5669 | -100.05 | -79.557 | -89.240 | 155.898 | -34.92 | -141.51 | 130.47123 |
| 2030 | 173 | 23 | 59 | 59 | 1 | 41.8175 | -113.3270 | -98.5800 | -100.06 | -79.566 | -89.252 | 155.916 | -34.92 | -141.51 | 130.47671 |
| 2030 | 175 | 23 | 59 | 59 | 1 | 41.8223 | -113.3378 | -98.5930 | -100.07 | -79.574 | -89.265 | 155.933 | -34.92 | -141.51 | 130.48219 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2030 | 265 | 23 | 59 | 59 | 3 | 42.0353 | -113.8247 | -99.1802 | -100.49 | -79.969 | -89.806 | 156.716 | -34.96 | -141.49 | 130.72877 |
| 2030 | 267 | 23 | 59 | 59 | 3 | 42.0400 | -113.8356 | -99.1933 | -100.50 | -79.978 | -89.818 | 156.733 | -34.96 | -141.49 | 130.73425 |
| 2030 | 269 | 23 | 59 | 59 | 3 | 42.0448 | -113.8464 | -99.2063 | -100.51 | -79.987 | -89.830 | 156.750 | -34.97 | -141.49 | 130.73973 |
| 2030 | 271 | 23 | 59 | 59 | 3 | 42.0495 | -113.8572 | -99.2194 | -100.52 | -79.995 | -89.842 | 156.768 | -34.97 | -141.49 | 130.74521 |
| 2030 | 273 | 23 | 59 | 59 | 3 | 42.0542 | -113.8680 | -99.2324 | -100.53 | -80.004 | -89.854 | 156.785 | -34.97 | -141.49 | 130.75068 |
| 2030 | 275 | 23 | 59 | 59 | 3 | 42.0590 | -113.8788 | -99.2455 | -100.54 | -80.013 | -89.866 | 156.802 | -34.97 | -141.49 | 130.75616 |
| 2030 | 277 | 23 | 59 | 59 | 3 | 42.0637 | -113.8897 | -99.2585 | -100.55 | -80.022 | -89.878 | 156.820 | -34.97 | -141.49 | 130.76164 |
| 2030 | 279 | 23 | 59 | 59 | 3 | 42.0684 | -113.9005 | -99.2716 | -100.56 | -80.031 | -89.890 | 156.837 | -34.97 | -141.49 | 130.76712 |
| 2030 | 281 | 23 | 59 | 59 | 3 | 42.0732 | -113.9113 | -99.2846 | -100.57 | -80.039 | -89.903 | 156.855 | -34.97 | -141.49 | 130.77260 |
| 2030 | 283 | 23 | 59 | 59 | 3 | 42.0779 | -113.9221 | -99.2977 | -100.58 | -80.048 | -89.915 | 156.872 | -34.97 | -141.49 | 130.77808 |
| 2030 | 285 | 23 | 59 | 59 | 3 | 42.0826 | -113.9330 | -99.3107 | -100.59 | -80.057 | -89.927 | 156.889 | -34.97 | -141.48 | 130.78356 |
| 2030 | 287 | 23 | 59 | 59 | 3 | 42.0874 | -113.9438 | -99.3238 | -100.60 | -80.066 | -89.939 | 156.907 | -34.97 | -141.48 | 130.78904 |
| 2030 | 289 | 23 | 59 | 59 | 3 | 42.0921 | -113.9546 | -99.3368 | -100.60 | -80.074 | -89.951 | 156.924 | -34.97 | -141.48 | 130.79452 |
| 2030 | 291 | 23 | 59 | 59 | 3 | 42.0968 | -113.9654 | -99.3498 | -100.61 | -80.083 | -89.963 | 156.942 | -34.98 | -141.48 | 130.80000 |
| 2030 | 293 | 23 | 59 | 59 | 3 | 42.1016 | -113.9762 | -99.3629 | -100.62 | -80.092 | -89.975 | 156.959 | -34.98 | -141.48 | 130.80548 |
| 2030 | 295 | 23 | 59 | 59 | 3 | 42.1063 | -113.9871 | -99.3759 | -100.63 | -80.101 | -89.987 | 156.976 | -34.98 | -141.48 | 130.81096 |
| 2030 | 297 | 23 | 59 | 59 | 3 | 42.1110 | -113.9979 | -99.3890 | -100.64 | -80.109 | -89.999 | 156.994 | -34.98 | -141.48 | 130.81644 |
| 2030 | 299 | 23 | 59 | 59 | 3 | 42.1158 | -114.0087 | -99.4021 | -100.65 | -80.118 | -90.011 | 157.011 | -34.98 | -141.48 | 130.82192 |
| 2030 | 301 | 23 | 59 | 59 | 3 | 42.1205 | -114.0195 | -99.4151 | -100.66 | -80.127 | -90.023 | 157.028 | -34.98 | -141.48 | 130.82740 |
| 2030 | 303 | 23 | 59 | 59 | 3 | 42.1252 | -114.0303 | -99.4282 | -100.67 | -80.136 | -90.035 | 157.046 | -34.98 | -141.48 | 130.83288 |
| 2030 | 305 | 23 | 59 | 59 | 3 | 42.1300 | -114.0411 | -99.4412 | -100.68 | -80.144 | -90.047 | 157.063 | -34.98 | -141.48 | 130.83836 |
| 2030 | 307 | 23 | 59 | 59 | 3 | 42.1347 | -114.0520 | -99.4542 | -100.69 | -80.153 | -90.059 | 157.081 | -34.98 | -141.48 | 130.84384 |
| 2030 | 309 | 23 | 59 | 59 | 3 | 42.1394 | -114.0628 | -99.4673 | -100.70 | -80.162 | -90.071 | 157.098 | -34.98 | -141.48 | 130.84932 |
| 2030 | 311 | 23 | 59 | 59 | 3 | 42.1442 | -114.0736 | -99.4803 | -100.71 | -80.171 | -90.083 | 157.115 | -34.98 | -141.48 | 130.85479 |
| 2030 | 313 | 23 | 59 | 59 | 3 | 42.1489 | -114.0844 | -99.4934 | -100.72 | -80.180 | -90.095 | 157.133 | -34.99 | -141.48 | 130.86027 |
| 2030 | 315 | 23 | 59 | 59 | 3 | 42.1536 | -114.0952 | -99.5064 | -100.73 | -80.188 | -90.107 | 157.150 | -34.99 | -141.48 | 130.86575 |
| 2030 | 317 | 23 | 59 | 59 | 3 | 42.1584 | -114.1060 | -99.5195 | -100.74 | -80.197 | -90.119 | 157.168 | -34.99 | -141.48 | 130.87123 |
| 2030 | 319 | 23 | 59 | 59 | 3 | 42.1631 | -114.1169 | -99.5325 | -100.75 | -80.206 | -90.131 | 157.185 | -34.99 | -141.48 | 130.87671 |
| 2030 | 321 | 23 | 59 | 59 | 3 | 42.1679 | -114.1277 | -99.5456 | -100.75 | -80.215 | -90.143 | 157.202 | -34.99 | -141.48 | 130.88219 |
| 2030 | 323 | 23 | 59 | 59 | 2 | 42.1726 | -114.1385 | -99.5586 | -100.76 | -80.223 | -90.155 | 157.220 | -34.99 | -141.48 | 130.88767 |
| 2030 | 325 | 23 | 59 | 59 | 2 | 42.1773 | -114.1493 | -99.5717 | -100.77 | -80.232 | -90.167 | 157.237 | -34.99 | -141.48 | 130.89315 |
| 2030 | 327 | 23 | 59 | 59 | 2 | 42.1820 | -114.1601 | -99.5847 | -100.78 | -80.241 | -90.179 | 157.255 | -34.99 | -141.48 | 130.89863 |
| 2030 | 329 | 23 | 59 | 59 | 2 | 42.1868 | -114.1710 | -99.5978 | -100.79 | -80.250 | -90.191 | 157.272 | -34.99 | -141.47 | 130.90411 |
| 2030 | 331 | 23 | 59 | 59 | 2 | 42.1915 | -114.1818 | -99.6108 | -100.80 | -80.259 | -90.203 | 157.289 | -34.99 | -141.47 | 130.90959 |
| 2030 | 333 | 23 | 59 | 59 | 2 | 42.1962 | -114.1926 | -99.6239 | -100.81 | -80.267 | -90.215 | 157.307 | -34.99 | -141.47 | 130.91507 |
| 2030 | 335 | 23 | 59 | 59 | 2 | 42.2010 | -114.2034 | -99.6369 | -100.82 | -80.276 | -90.228 | 157.324 | -35.00 | -141.47 | 130.92055 |
| 2030 | 337 | 23 | 59 | 59 | 2 | 42.2057 | -114.2142 | -99.6500 | -100.83 | -80.285 | -90.240 | 157.341 | -35.00 | -141.47 | 130.92603 |
| 2030 | 339 | 23 | 59 | 59 | 2 | 42.2105 | -114.2250 | -99.6630 | -100.84 | -80.294 | -90.252 | 157.359 | -35.00 | -141.47 | 130.93151 |
| 2030 | 341 | 23 | 59 | 59 | 2 | 42.2152 | -114.2359 | -99.6761 | -100.85 | -80.302 | -90.264 | 157.376 | -35.00 | -141.47 | 130.93699 |
| 2030 | 343 | 23 | 59 | 59 | 2 | 42.2199 | -114.2467 | -99.6891 | -100.86 | -80.311 | -90.276 | 157.394 | -35.00 | -141.47 | 130.94247 |
| 2030 | 345 | 23 | 59 | 59 | 2 | 42.2246 | -114.2575 | -99.7021 | -100.87 | -80.320 | -90.288 | 157.411 | -35.00 | -141.47 | 130.94795 |
| 2030 | 347 | 23 | 59 | 59 | 2 | 42.2294 | -114.2683 | -99.7152 | -100.88 | -80.329 | -90.300 | 157.428 | -35.00 | -141.47 | 130.95342 |
| 2030 | 349 | 23 | 59 | 59 | 2 | 42.2341 | -114.2791 | -99.7282 | -100.89 | -80.337 | -90.312 | 157.446 | -35.00 | -141.47 | 130.95890 |
| 2030 | 351 | 23 | 59 | 59 | 2 | 42.2389 | -114.2900 | -99.7413 | -100.90 | -80.346 | -90.324 | 157.463 | -35.00 | -141.47 | 130.96438 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2030 | 353 | 23 | 59 | 59 | 2 | 42.2436 | -114.3008 | -99.7543 | -100.90 | -80.355 | -90.336 | 157.481 | -35.00 | -141.47 | 130.96986 |
| 2030 | 355 | 23 | 59 | 59 | 2 | 42.2483 | -114.3116 | -99.7674 | -100.91 | -80.364 | -90.348 | 157.498 | -35.00 | -141.47 | 130.97534 |
| 2030 | 357 | 23 | 59 | 59 | 2 | 42.2531 | -114.3224 | -99.7804 | -100.92 | -80.373 | -90.360 | 157.515 | -35.01 | -141.47 | 130.98082 |
| 2030 | 359 | 23 | 59 | 59 | 2 | 42.2578 | -114.3332 | -99.7935 | -100.93 | -80.381 | -90.372 | 157.533 | -35.01 | -141.47 | 130.98630 |
| 2030 | 361 | 23 | 59 | 59 | 2 | 42.2625 | -114.3440 | -99.8065 | -100.94 | -80.390 | -90.384 | 157.550 | -35.01 | -141.47 | 130.99178 |
| 2030 | 363 | 23 | 59 | 59 | 1 | 42.2672 | -114.3548 | -99.8195 | -100.95 | -80.399 | -90.396 | 157.567 | -35.01 | -141.47 | 130.99726 |

VOYAGER 1

INTERPLANETARY SEDR EPHEMRIS DATA, ASCII

77-084A-00G XXNO-00428

THIS DATASET CONSISTS OF 1 MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250, ASCII. CREATED ON A VAX COMPUTER WITH A LABEL NAME OF "1SEDR". THE TAPE WAS UNLOADED FROM THE [COHO.VY1PLA.SEDR] ANON_DIR. THE D AND C NUMBER ALONG WITH ITS TIME SPAN IS LISTED BELOW.

| D# | C# | FILES | TIMESPAN |
|---|---|---|---|
| D-108533 | C-032484 | 56 | 09/05/77-12/31/2029 |

The files give the coordinates of th Voyager Space Craft n a column format
year day hour min sec mil-sec x y z xx yy zz r lat long time
x, y, z are Sun-centered ecliptic coordinates, AU
xx, yy, zz are Solar Equatorial Coordinate, AU
r, lat, log are the Solar Equatorial Coordinate in AU and degrees
time is time in years since 1900

This directory and its subdirectories contain Voyager data.
The subdirectories v1 and v2 contain data relevant
to Voyager 1 and Voyager 2, respectively.
In each directory that has data, the README file
contains a description of that data and its format.
The names of the directories indicates the type of data
(e.g. sedr [Supplementary Experimental Data Records] or trajectory,
ha [Hourly Averages]).
Note that there may be additional layers of subdirectories.
For example, in the ha directory, key gives the data in
the 'Key Parameter' format.
The file name also gives similar information.
The formae of the name is usually of a form similar to
sc_type_start_end_dis.suff
where any of these may be missing.

| | |
|---|---|
| sc | is Space Craft v1 or v2 |
| type | is type of data, usually the same as the directory name, (e.g. sedr h |
| start | start time year.day.hour ( day and hour may be missing) |
| end | end time year.day.hour ( day and hour may be missing) |
| dis | descriptor, if any addition processing is needed, (e.g. filt implies |
| suff | suffix, Z, gz implies the type of compression etc. |

The formats may describe more fields that the data sets contain.
In that case, the fields in the description should just be ignored.
In some cases, 00000 is used as a fill, and implies the that data
is unavailable. Common sense is required to distinguish missing data
from true zeros.

From: NCF::POST 21-DEC-1995 06:19:44.20
To: MYERS
CC:
Subj: here's the rest of cooper's data

From: NCF::JCOOPER 20-DEC-1995 18:34:46.58
To: POST BANDERSON
CC: JCOOPER
Subj: New Voyager 1 SEDR ephemeris data set for archive and RSIRS

Ralph and Betty:

This new data set includes selected SEDR ephemeris parameters in ASCII format from the Voyager 1 spacecraft as provided by the MIT Plasma Group. The location of the data files in the COHO FTP site is given in the brief description. Please download all data files to the off-line archive and enter the following information into RSIRS.

John

**********

Dataset ID: 77-084A-00G

Name (short): Interplan SEDR Ephemeris, ASCII

Type Code: 3

Contact: BELCHER

Acq. Agent: JFC

NASA HQ Discipline Code: SPHE

NASA HQ Interest Code: 6A

Avail Code: A

First date of data: 1977-09-05

Last date of data: 2029-12-31

Change of available date: 1995-11-15

Long Name: Voyager 1 Interplanetary SEDR Ephemeris Data, ASCII

Dfqdat;
Date:
Form: DD
Quantity: 1

Personnel info;
Type: SO
Title: Prof.
First & middle initial: John W.
Last name: Belcher
Current affl: Massachusetts Institute of Technology

Km2002/16268
DC2266/130106

label = 1SEDR
opied Rou...

DD108533
DC032484

Byte read
1363024
size_update
CS = 1SEDR.CVR

City, State: Cambridge, MA

Dataset Contact:
Type: CO
Title: Prof.
First & middle initial: John W.
Last name: Belcher
Current affl: Massachusetts Institute of Technology
City, State: Cambridge, MA

56 files

Brief Description:

This ASCII data set contains selected Voyager 1 interplanetary ephemeris parameters extracted by the MIT Plasma Science (PLS) experiment team from the binary Spacecraft Experimenter Data Record (SEDR) files provided to all Voyager experiment teams by the Voyager Project at the NASA Jet Propulsion Laboratory. Each ASCII file of filename V1_SEDR_yyyy.ASC, where yyyy is the year, includes one year of data at varying intervals from hours to days. The files give the coordinates of the spacecraft in the following column order: year, day, hour, minute, second, millisecond, x, y, z, xx, yy, zz, r, latitude, longitude, and time. The parameters are defined as follows: x, y, z are Solar ECliptic (SEC) cartesian coordinates in AU units; xx, yy, zz are Solar EQuatorial (SEQ) cartesian coordinates in AU units; r, latitude, longitude are the Solar EQuatorial (SEQ) spherical radius and angles in AU and degrees; time is in years since 1900. These data have been obtained from the MIT Plasma Group's anonymous FTP site at mit.space.edu/ pub/plasma. The SEDR data can be accessed on-line locally from NSSDC's Coordinated Heliospheric Observations (COHO) data base at nssdca.gsfc.nasa.gov/anon_dir: [coho.vy1pla.sedr] via anonymous FTP login, nssdca::anon_dir:[coho] via DECnet, or at http://nssdc.gsfc.nasa.gov/htbin/htdir/anon_dir/coho/?/anon_dir/ via the World Wide Web.

Acknowledgements:

"the Voyager project office at the NASA Jet Propulsion Laboratory."

Archive Plan Flag: A
Archiving status flag: C
Archiving Planning/Status:
These are predict ephemeris data and may be updated with actual ephemeris data later. The date coverage of this data set extends well beyond the presently expected end of Voyager 1 spacecraft operations.
Archiving Location: NSSDC
Archiving Organization: NASA
Archive Type: P
Documentation Status Flag: C

Materials for Distribution:

Hardcopies of brief description, and all *.txt and *.lis files in this data set.

Bibliographic References:

Sequence Number:
TRF ID:

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The files give the coordinates of the Voyager Space Craft in a column format:

year day hour min sec mil-sec x y z xx yy zz r lat long time

x, y, z are Sun-centered ecliptic coordinates, AU (B1950.0)
xx, yy, zz are Solar Equatorial Coordinate, AU (Heliographic system)
r, lat, log are the Solar Equatorial Coordinate in AU and degrees
time is time in years since 1900

The filename format is as follows:

sc_type_start_end_dis.suff

where any of these may be missing.

| | |
|---|---|
| sc | is Space Craft v1 or v2 |
| type | is type of data, usually the same as the directory name, (e.g. sedr ha ) |
| start | start time year.day.hour ( day and hour may be missing) |
| end | end time year.day.hour ( day and hour may be missing) |
| dis | descriptor, if any addition processing is needed, (e.g. filt implies the data has been filtered, see README in that directory.) |
| suff | suffix, Z, gz implies the type of compression etc. |

The formats may describe more fields that the data sets contain. In that case, the fields in the description should just be ignored. In some cases, 00000 is used as a fill, and implies the that data is unavailable. Common sense is required to distinguish missing data from true zeros.

NSSDC Master Catalog Display: Data Set

# Voyager 1 Interplanetary SEDR Ephemeris Data, ASCII

NSSDC ID:XXNO-00428

## Other ID(s)

77-084A-00G

**Availability:** At NSSDC, Ready for Offline Distribution (or Staging if Digital)
**Time Span:** 1977-09-05 to 2029-12-31 (as determined by NSSDC)

## Description

This ASCII data set contains selected Voyager 1 interplanetary ephemeris parameters extracted by the MIT Plasma Science (PLS) experiment team from the binary Spacecraft Experimenter Data Record (SEDR) files provided to all Voyager experiment teams by the Voyager Project at the NASA Jet Propulsion Laboratory. Each ASCII file of filename V1_SEDR_yyyy.ASC, where yyyy is the year, includes one year of data at varying intervals from hours to days. The files give the coordinates of the spacecraft in the following column order: year, day, hour, minute, second, millisecond, x, y, z, xx, yy, zz, r, latitude, longitude, and time. The parameters are defined as follows: x, y, z are Solar ECliptic (SEC) cartesian coordinates in AU units; xx, yy, zz are Solar EQuatorial (SEQ) cartesian coordinates in AU units; r, latitude, longitude are the Solar EQuatorial (SEQ) spherical radius and angles in AU and degrees; time is in years since 1900. These data have been obtained from the MIT Plasma Group's anonymous FTP site at mit.space.edu/ pub/plasma.

These data can be accessed on-line from NSSDC's Anonymous FTP data base at nssdcftp.gsfc.nasa.gov in directory spacecraft_data/voyager/voyager1/plasma/sedr or via the World Wide Web at the following URL address:

ftp://nssdcftp.gsfc.nasa.gov/spacecraft_data/voyager/voyager1/plasma/sedr/

## Mission Name(s)

Voyager 1

## Discipline(s)

Ephemeris: None assigned

## Archive Locations

National Aeronautics and Space Administration (National Space Scie

## Media Information

1 Digital Magnetic Tape

Personnel Information

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Experiment Information
Mission Information

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NSSDC home page

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*For questions about this dataset, please contact:*
*Dr. John F. Cooper*
*GSFC-Code 632*
*NASA Goddard Space Flight Center, Greenbelt, MD 20771*
*301-286-1193*
*jfcooper@pop600.gsfc.nasa.gov*

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**NSSDC Security and Privacy Statement**

**NASA Official: D. M. Sawyer, Acting Head, NSSDC (Donald.M.Sawyer@nasa.gov)**
**Last Updated: 2002-04-24**
**Output Generated: 2003-12-09**
**Programming by: Harold Felder(Harold.Felder@gsfc.nasa.gov)**

Directory ANON_DIR:[COHO.VY1PLA.SEDR]

| | | | |
|---|---|---|---|
| OHO_VY1PLA_SEDR.LIS;1 | | | |
| | 0 | 16-NOV-1995 | 15:59:05.93 |
| V1_SEDR_1977.ASC;1 | 68 | 16-NOV-1995 | 15:26:20.88 |
| V1_SEDR_1978.ASC;1 | 43 | 16-NOV-1995 | 15:26:21.40 |
| V1_SEDR_1979.ASC;1 | 271 | 16-NOV-1995 | 15:26:22.19 |
| V1_SEDR_1980.ASC;1 | 33 | 16-NOV-1995 | 15:26:23.16 |
| V1_SEDR_1981.ASC;1 | 26 | 16-NOV-1995 | 15:26:23.68 |
| V1_SEDR_1982.ASC;1 | 22 | 16-NOV-1995 | 15:26:24.16 |
| V1_SEDR_1983.ASC;1 | 25 | 16-NOV-1995 | 15:26:24.67 |
| V1_SEDR_1984.ASC;1 | 23 | 16-NOV-1995 | 15:26:25.07 |
| V1_SEDR_1985.ASC;1 | 29 | 16-NOV-1995 | 15:26:25.29 |
| V1_SEDR_1986.ASC;1 | 22 | 16-NOV-1995 | 15:26:25.56 |
| V1_SEDR_1987.ASC;1 | 25 | 16-NOV-1995 | 15:26:25.84 |
| V1_SEDR_1988.ASC;1 | 22 | 16-NOV-1995 | 15:26:26.34 |
| V1_SEDR_1989.ASC;1 | 20 | 16-NOV-1995 | 15:26:26.71 |
| V1_SEDR_1990.ASC;1 | 39 | 16-NOV-1995 | 15:26:27.03 |
| V1_SEDR_1991.ASC;1 | 46 | 16-NOV-1995 | 15:26:27.25 |
| V1_SEDR_1992.ASC;1 | 46 | 16-NOV-1995 | 15:26:27.47 |
| V1_SEDR_1993.ASC;1 | 45 | 16-NOV-1995 | 15:26:27.74 |
| V1_SEDR_1994.ASC;1 | 46 | 16-NOV-1995 | 15:26:27.97 |
| V1_SEDR_1995.ASC;1 | 45 | 16-NOV-1995 | 15:26:28.21 |
| V1_SEDR_1996.ASC;1 | 46 | 16-NOV-1995 | 15:26:28.44 |
| V1_SEDR_1997.ASC;1 | 46 | 16-NOV-1995 | 15:26:28.68 |
| V1_SEDR_1998.ASC;1 | 45 | 16-NOV-1995 | 15:26:29.13 |
| V1_SEDR_1999.ASC;1 | 46 | 16-NOV-1995 | 15:26:29.33 |
| V1_SEDR_2000.ASC;1 | 46 | 16-NOV-1995 | 15:26:29.55 |
| _SEDR_2001.ASC;1 | 45 | 16-NOV-1995 | 15:26:29.77 |
| V1_SEDR_2002.ASC;1 | 46 | 16-NOV-1995 | 15:26:30.01 |
| V1_SEDR_2003.ASC;1 | 45 | 16-NOV-1995 | 15:26:30.30 |
| V1_SEDR_2004.ASC;1 | 46 | 16-NOV-1995 | 15:26:30.51 |
| V1_SEDR_2005.ASC;1 | 46 | 16-NOV-1995 | 15:26:30.72 |
| V1_SEDR_2006.ASC;1 | 45 | 16-NOV-1995 | 15:26:30.93 |
| V1_SEDR_2007.ASC;1 | 46 | 16-NOV-1995 | 15:26:31.17 |
| V1_SEDR_2008.ASC;1 | 46 | 16-NOV-1995 | 15:26:31.70 |
| V1_SEDR_2009.ASC;1 | 45 | 16-NOV-1995 | 15:26:32.00 |
| V1_SEDR_2010.ASC;1 | 46 | 16-NOV-1995 | 15:26:32.21 |
| V1_SEDR_2011.ASC;1 | 45 | 16-NOV-1995 | 15:26:32.43 |
| V1_SEDR_2012.ASC;1 | 46 | 16-NOV-1995 | 15:26:32.68 |
| V1_SEDR_2013.ASC;1 | 46 | 16-NOV-1995 | 15:26:32.91 |
| V1_SEDR_2014.ASC;1 | 45 | 16-NOV-1995 | 15:26:33.14 |
| V1_SEDR_2015.ASC;1 | 46 | 16-NOV-1995 | 15:26:33.36 |
| V1_SEDR_2016.ASC;1 | 46 | 16-NOV-1995 | 15:26:33.59 |
| V1_SEDR_2017.ASC;1 | 45 | 16-NOV-1995 | 15:26:33.82 |
| V1_SEDR_2018.ASC;1 | 46 | 16-NOV-1995 | 15:26:34.33 |
| V1_SEDR_2019.ASC;1 | 45 | 16-NOV-1995 | 15:26:34.55 |
| V1_SEDR_2020.ASC;1 | 46 | 16-NOV-1995 | 15:26:34.82 |
| V1_SEDR_2021.ASC;1 | 46 | 16-NOV-1995 | 15:26:35.05 |
| V1_SEDR_2022.ASC;1 | 45 | 16-NOV-1995 | 15:26:35.51 |
| V1_SEDR_2023.ASC;1 | 46 | 16-NOV-1995 | 15:26:36.65 |
| V1_SEDR_2024.ASC;1 | 46 | 16-NOV-1995 | 15:26:36.85 |
| V1_SEDR_2025.ASC;1 | 45 | 16-NOV-1995 | 15:26:37.08 |
| _SEDR_2026.ASC;1 | 46 | 16-NOV-1995 | 15:26:37.26 |
| _SEDR_2027.ASC;1 | 45 | 16-NOV-1995 | 15:26:37.51 |
| V1_SEDR_2028.ASC;1 | 46 | 16-NOV-1995 | 15:26:37.90 |
| V1_SEDR_2029.ASC;1 | 46 | 16-NOV-1995 | 15:26:38.10 |
| VOYPLA.TXT;1 | 3 | 16-NOV-1995 | 15:25:14.67 |

VY1PLA_SEDR.TXT;1 1 16-NOV-1995 15:01:29.37

Total of 56 files, 2452 blocks.

FATAR TAPE SUMMARY FOR TAPE VOLU[illegible] -K[illegible] AT DENSITY 6250 BPI [illegible]05[illegible]6

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ZMVMDCPY.R0019694 | | | | | | | | | 5 | 400 | 0 0 | 80 | 80 | 80 | 0 |
| 2 | ZMVMDCPY.R0019694 | | | | | | | | | 2 | 4096 | 0 0 | 2048 | 2048 | 2048 | 0 |
| 3 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 4 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 5 | ZMVMDCPY.R0019694 | | | | | | | | | 18 | 37K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 6 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 7 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 8 | ZMVMDCPY.R0019694 | | | | | | | | | 11 | 23K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 9 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 10 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 11 | ZMVMDCPY.R0019694 | | | | | | | | | 69 | 141K | 0 0 | 2048 | 2048 | 2048 | 4 |
| 12 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 13 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 14 | ZMVMDCPY.R0019694 | | | | | | | | | 9 | 18K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 15 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 16 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 17 | ZMVMDCPY.R0019694 | | | | | | | | | 7 | 14K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 18 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 19 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 20 | ZMVMDCPY.R0019694 | | | | | | | | | 6 | 12K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 21 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 22 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 23 | ZMVMDCPY.R0019694 | | | | | | | | | 7 | 14K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 24 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 25 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 26 | ZMVMDCPY.R0019694 | | | | | | | | | 6 | 12K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 27 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME -KM2062- AT DENSITY 6250 BPI 12/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 29 | ZMVMDCPY.R0019694 | | | | | | | | | 8 | 16K | 0 | 2048 | 2048 | 2048 | 0 |
| 30 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 31 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 32 | ZMVMDCPY.R0019694 | | | | | | | | | 6 | 12K | 0 | 2048 | 2048 | 2048 | 0 |
| 33 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 34 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 35 | ZMVMDCPY.R0019694 | | | | | | | | | 7 | 14K | 0 | 2048 | 2048 | 2048 | 0 |
| 36 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 37 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 38 | ZMVMDCPY.R0019694 | | | | | | | | | 6 | 12K | 0 | 2048 | 2048 | 2048 | 0 |
| 39 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 40 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 41 | ZMVMDCPY.R0019694 | | | | | | | | | 6 | 12K | 0 | 2048 | 2048 | 2048 | 0 |
| 42 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 43 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 44 | ZMVMDCPY.R0019694 | | | | | | | | | 10 | 20K | 0 | 2048 | 2048 | 2048 | 0 |
| 45 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 46 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 47 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 48 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 49 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 50 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 51 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 52 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 53 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 54 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME -R[illegible] AT DENSITY 6250 BPI [illegible]

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 56 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 57 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 58 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 59 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 60 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 61 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 62 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 63 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 64 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 65 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 66 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 67 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 68 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 69 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 70 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 71 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 72 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 73 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 74 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 75 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 76 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 77 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 78 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 79 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 80 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 81 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME -KM2062- AT DENSITY 6250 BPI 12/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 83 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 84 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 85 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 86 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 87 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 88 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 89 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 90 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 91 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 92 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 93 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 94 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 95 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 96 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 97 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 98 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 99 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 100 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 101 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 102 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 103 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 104 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 105 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 106 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 107 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 108 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 110 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 111 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 112 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 113 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 114 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 115 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 116 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 117 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 118 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 119 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 120 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 121 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 122 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 123 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 124 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 125 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 126 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 127 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 128 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 129 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 130 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 131 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 132 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 133 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |
| 134 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 0 | 2048 | 2048 | 2048 | 0 |
| 135 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLU.. -K..20..- AT DENSITY 6250 BPI 1. 03. 96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC- FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 137 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 138 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 139 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 140 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 141 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 142 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 143 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 144 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 145 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 146 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 147 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 148 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 149 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 150 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 151 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 152 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 153 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 154 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 155 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 156 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 157 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 158 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 159 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 160 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 161 | ZMVMDCPY.R0019694 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 162 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOL[illegible] AT DENSITY 6250 BPI [illegible]

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 163 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 164 | ZMVMDCPY.R0019694 | | | | | | | | | 1 | 2048 | 0 | 2048 | 2048 | 2048 | 0 |
| 165 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 166 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 167 | ZMVMDCPY.R0019694 | | | | | | | | | 1 | 2048 | 0 | 2048 | 2048 | 2048 | 0 |
| 168 | ZMVMDCPY.R0019694 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 169 | ZMVMDCPY.R0019694 | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | HIGHEST EXPIRATION ====> | | | | | | | TOTALS ====> | | 1097 | 1363K | 0 | | | | 4 |

FATAR TAPE SUMMARY FOR TAPE VOLUML -KM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ZMVMDCPY.R0019738 | | | | | | | | | 5 | 400 | 0 | 80 | 80 | 80 | 0 |
| 2 | ZMVMDCPY.R0019738 | | | | | | | | | 2 | 4096 | 0 | 2048 | 2048 | 2048 | 0 |
| 3 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 4 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 5 | ZMVMDCPY.R0019738 | | | | | | | | | 18 | 37K | 0 | 2048 | 2048 | 2048 | 0 |
| 6 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 7 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 8 | ZMVMDCPY.R0019738 | | | | | | | | | 16 | 33K | 0 | 2048 | 2048 | 2048 | 0 |
| 9 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 10 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 11 | ZMVMDCPY.R0019738 | | | | | | | | | 9 | 18K | 0 | 2048 | 2048 | 2048 | 0 |
| 12 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 13 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 14 | ZMVMDCPY.R0019738 | | | | | | | | | 11 | 23K | 0 | 2048 | 2048 | 2048 | 0 |
| 15 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 16 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 17 | ZMVMDCPY.R0019738 | | | | | | | | | 33 | 68K | 0 | 2048 | 2048 | 2048 | 2 |
| 18 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 19 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 20 | ZMVMDCPY.R0019738 | | | | | | | | | 6 | 12K | 0 | 2048 | 2048 | 2048 | 0 |
| 21 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 22 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 23 | ZMVMDCPY.R0019738 | | | | | | | | | 7 | 14K | 0 | 2048 | 2048 | 2048 | 0 |
| 24 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 25 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 26 | ZMVMDCPY.R0019738 | | | | | | | | | 7 | 14K | 0 | 2048 | 2048 | 2048 | 0 |
| 27 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME -KM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 29 | ZMVMDCPY.R0019738 | | | | | | | | | 11 | 23K | 0 | 2048 | 2048 | 2048 | 0 |
| 30 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 31 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 32 | ZMVMDCPY.R0019738 | | | | | | | | | 34 | 70K | 0 | 2048 | 2048 | 2048 | 2 |
| 33 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 34 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 35 | ZMVMDCPY.R0019738 | | | | | | | | | 7 | 14K | 0 | 2048 | 2048 | 2048 | 0 |
| 36 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 37 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 38 | ZMVMDCPY.R0019738 | | | | | | | | | 7 | 14K | 0 | 2048 | 2048 | 2048 | 0 |
| 39 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 40 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 41 | ZMVMDCPY.R0019738 | | | | | | | | | 46 | 94K | 0 | 2048 | 2048 | 2048 | 2 |
| 42 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 43 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 44 | ZMVMDCPY.R0019738 | | | | | | | | | 10 | 20K | 0 | 2048 | 2048 | 2048 | 0 |
| 45 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 46 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 47 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 48 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 49 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 50 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 51 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 52 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 53 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 54 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME XM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 56 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 57 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 58 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 59 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 60 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 61 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 62 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 63 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 64 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 65 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 66 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 67 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 68 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 69 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 70 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 71 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 72 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 73 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 74 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 75 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 76 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 77 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 78 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 79 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 80 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 81 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME KM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 83 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 84 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 85 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 86 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 87 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 88 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 89 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 90 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 91 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 92 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 93 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 94 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 95 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 96 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 97 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 98 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 99 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 100 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 101 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 102 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 103 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 104 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 105 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 106 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 107 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 108 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME KM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC-FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 110 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 111 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 112 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 113 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 114 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 115 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 116 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 117 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 118 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 119 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 120 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 121 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 122 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 123 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 124 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 125 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 126 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 127 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 128 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 129 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 130 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 131 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 132 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 133 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 134 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 135 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |

FATAR TAPE SUMMARY FOR TAPE VOLUME XM2003- AT DENSITY 6250 BPI 1/03/96

| PHYS FILE | DATASET NAME (LAST 17 CHARS) | FILE SERIAL | FIL# VOL# | CRDATE | EXPDATE | REC- FM | LRECL BLKSZ | CREATING JOB&STEP | SEC | BLOCKS READ | BYTES READ | PERM TEMP | ---BLOCKSIZES---- MIN | AVG | MAX | EST. FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 163 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 164 | ZMVMDCPY.R0019738 | | | | | | | | | 12 | 25K | 0 | 2048 | 2048 | 2048 | 0 |
| 165 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 166 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 167 | ZMVMDCPY.R0019738 | | | | | | | | | 1 | 2048 | 0 | 2048 | 2048 | 2048 | 0 |
| 168 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 169 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 170 | ZMVMDCPY.R0019738 | | | | | | | | | 1 | 2048 | 0 | 2048 | 2048 | 2048 | 0 |
| 171 | ZMVMDCPY.R0019738 | | | | | | | | | 4 | 320 | 0 | 80 | 80 | 80 | 0 |
| 172 | ZMVMDCPY.R0019738 | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | HIGHEST EXPIRATION ====> | | | | | | | TOTALS ====> | | 1163 | 1482K | 0 | | | | 6 |

# Voyager 2
# 1-Hr. Solar Wind Plasma Data
# 77-076A-06S

SPHE-00487

These datasets has been updated on one CD-RW, and supersedes dataset 77-076A-06F (SPAE-00487). The original datasets were written on 9trk, 6250 bpi tapes. The replacement CD-RW incubuses the data that existed previously and data that were generated since the DD and DC tapes were created. The data has been downloaded from /raid/ftp/spacecraft_data/voyager2/plasma/hour/ and written in ASCII format. The KD and KW numbers along with the time spans are as follows:

| KD # | KW # | DD # | DC # | Files | Time Span |
|---|---|---|---|---|---|
| KD022365 | KW000194 | | | | 08/22/1977-09/15/2004 |
| | | DD109276 | DC033154 | 87 | 08/22/1977-07/28/2003 |

VOYAGER 2

1-HR SOLAR WIND PLASMA DATA

77-076A-06S SPHE-00487

THIS DATASET CONSISTS OF ONE MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250 BPI, AND WRITTEN IN ASCII. THE TAPE WAS CREATED ON A VAX COMPUTER WITH A LABEL NAME OF "VG2SW". THE TAPE WAS DOWNLOADED FROM THE ANON_DIR:[COHO.VY2PLA.HOUR] DIRECTORY. THE D AND C NUMBER ALONG WITH THE TIME SPAN IS AS FOLLOWS:

| D# | C# | FILES | TIME SPAN |
|---|---|---|---|
| D109276 | C033154 | 87 | 08/22/1977 - 07/28/2003 |

RECORD COUNT OF D109276 ON MKB600:

| FILE | RECORDS | MAX SIZE | MIN SIZE | ERRORS |
|---|---|---|---|---|
| 1 | 5 | 80 | 80 | 0 |
| 2 | 59 | 2048 | 2048 | 0 |
| 3 | 4 | 80 | 80 | 0 |
| 4 | 4 | 80 | 80 | 0 |
| 5 | 160 | 2048 | 2048 | 0 |
| 6 | 4 | 80 | 80 | 0 |
| 7 | 4 | 80 | 80 | 0 |
| 8 | 157 | 2048 | 2048 | 0 |
| 9 | 4 | 80 | 80 | 0 |
| 10 | 4 | 80 | 80 | 0 |
| 11 | 163 | 2048 | 2048 | 0 |
| 12 | 4 | 80 | 80 | 0 |
| 13 | 4 | 80 | 80 | 0 |
| 14 | 175 | 2048 | 2048 | 0 |
| 15 | 4 | 80 | 80 | 0 |
| 16 | 4 | 80 | 80 | 0 |
| 17 | 137 | 2048 | 2048 | 0 |
| 18 | 4 | 80 | 80 | 0 |
| 19 | 4 | 80 | 80 | 0 |
| 20 | 117 | 2048 | 2048 | 0 |
| 21 | 4 | 80 | 80 | 0 |
| 22 | 4 | 80 | 80 | 0 |
| 23 | 101 | 2048 | 2048 | 0 |
| 24 | 4 | 80 | 80 | 0 |
| 25 | 4 | 80 | 80 | 0 |
| 26 | 125 | 2048 | 2048 | 0 |
| 27 | 4 | 80 | 80 | 0 |
| 28 | 4 | 80 | 80 | 0 |
| 29 | 139 | 2048 | 2048 | 0 |
| 30 | 4 | 80 | 80 | 0 |
| 31 | 4 | 80 | 80 | 0 |
| 32 | 149 | 2048 | 2048 | 0 |
| 33 | 4 | 80 | 80 | 0 |
| 34 | 4 | 80 | 80 | 0 |
| 35 | 172 | 2048 | 2048 | 0 |
| 36 | 4 | 80 | 80 | 0 |
| 37 | 4 | 80 | 80 | 0 |
| 38 | 166 | 2048 | 2048 | 0 |
| 39 | 4 | 80 | 80 | 0 |
| 40 | 4 | 80 | 80 | 0 |
| 41 | 120 | 2048 | 2048 | 0 |
| 42 | 4 | 80 | 80 | 0 |
| 43 | 4 | 80 | 80 | 0 |
| 44 | 153 | 2048 | 2048 | 0 |
| 45 | 4 | 80 | 80 | 0 |
| 46 | 4 | 80 | 80 | 0 |
| 47 | 129 | 2048 | 2048 | 0 |
| 48 | 4 | 80 | 80 | 0 |
| 49 | 4 | 80 | 80 | 0 |
| 50 | 139 | 2048 | 2048 | 0 |
| 51 | 4 | 80 | 80 | 0 |
| 52 | 4 | 80 | 80 | 0 |
| 53 | 142 | 2048 | 2048 | 0 |
| 54 | 4 | 80 | 80 | 0 |
| 55 | 4 | 80 | 80 | 0 |
| 56 | 177 | 2048 | 2048 | 0 |

| | | | | |
|---|---|---|---|---|
| 57 | 4 | 80 | 80 | 0 |
| 58 | 4 | 80 | 80 | 0 |
| 59 | 157 | 2048 | 2048 | 0 |
| 60 | 4 | 80 | 80 | 0 |
| 61 | 4 | 80 | 80 | 0 |
| 62 | 118 | 2048 | 2048 | 0 |
| 63 | 4 | 80 | 80 | 0 |
| 64 | 4 | 80 | 80 | 0 |
| 65 | 128 | 2048 | 2048 | 0 |
| 66 | 4 | 80 | 80 | 0 |
| 67 | 4 | 80 | 80 | 0 |
| 68 | 117 | 2048 | 2048 | 0 |
| 69 | 4 | 80 | 80 | 0 |
| 70 | 4 | 80 | 80 | 0 |
| 71 | 101 | 2048 | 2048 | 0 |
| 72 | 4 | 80 | 80 | 0 |
| 73 | 4 | 80 | 80 | 0 |
| 74 | 86 | 2048 | 2048 | 0 |
| 75 | 4 | 80 | 80 | 0 |
| 76 | 4 | 80 | 80 | 0 |
| 77 | 89 | 2048 | 2048 | 0 |
| 78 | 4 | 80 | 80 | 0 |
| 79 | 4 | 80 | 80 | 0 |
| 80 | 54 | 2048 | 2048 | 0 |
| 81 | 4 | 80 | 80 | 0 |
| 82 | 4 | 80 | 80 | 0 |
| 83 | 2 | 2048 | 2048 | 0 |
| 84 | 4 | 80 | 80 | 0 |
| 85 | 4 | 80 | 80 | 0 |
| 86 | 3 | 2048 | 2048 | 0 |
| 87 | 4 | 80 | 80 | 0 |

END OF TAPE

TOTAL RECORDS ON TAPE = 3768
TOTAL BYTES ON TAPE = 7258320
TOTAL ERRORS ON TAPE = 0

START TIME: 8-JAN-2004 12:39:35.32
END TIME: 8-JAN-2004 12:41:58.77
ELAPSED TIME: 00:02:23

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The key parameter file has the format
year day hour speed density width Vr Vt Vn alpha
where
year day hour of the data. For hourly averages hour is an integer.
If data is for individual spectra hour will have a fractional part.
All parameters are from nonlinear fit calculation.
speed is of protons in Km/Sec
density is of protons in #/cc
width is in Km/Sec for protons, and temperature T(eV) = 0.0052(width)**2
Vr radial component proton velocity
Vt tangential component proton velocity
Vr normal component proton velocity

alpha (if present) is density of alpha in #/cc
el (if present) is sum of currents for electrons E1.

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This directory and its subdirectories contain Voyager data.
The subdirectories v1 and v2 contain data relevant
to Voyager 1 and Voyager 2, respectively.
In each directory that has data, the README file
contains a description of that data and its format.
The names of the directories indicates the type of data
(e.g. sedr [Supplementary Experimental Data Records] or trajectory,
ha [Hourly Averages]).
Note that there may be additional layers of subdirectories.
For example, in the ha directory, key gives the data in
the 'Key Parameter' format.
The file name also gives similar information.
The formae of the name is usually of a form similar to
sc_type_start_end_dis.suff
where any of these may be missing.

| | |
|---|---|
| sc | is Space Craft v1 or v2 |
| type | is type of data, usually the same as the directory name, (e.g. sedr ha |
| start | start time year.day.hour ( day and hour may be missing) |
| end | end time year.day.hour ( day and hour may be missing) |
| dis | descriptor, if any addition processing is needed, (e.g. filt implies t |
| suff | suffix, Z, gz implies the type of compression etc. |

The formats may describe more fields that the data sets contain.
In that case, the fields in the description should just be ignored.
In some cases, 00000 is used as a fill, and implies the that data
is unavailable. Common sense is required to distinguish missing data
from true zeros.