DSC#769

90-090B-03B

ULYSSES

HOURLY SPIN-AVG COUNTING RATES

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

ULYSSES

HOURLY SPIN-AVERAGE COUNTING RATE

90-090B-03B SPHE-00488

THIS DATA SET CONSISTS OF 1 MAGNETIC TAPE. THE TAPE IS 9-TRACK, 6250 BPI. CREATED ON VAX COMPUTER, WRITTEN IN ASCII, WITH A LABEL NAME OF "ULYHIS". A DIRECTORY OF THE TAPE AS WELL AS A COPY OF THE SUPPORT DOCUMENTATIONS, AND FORMATS HAVE BEEN INCLUDED IN THE CATALOG.

THE D AND C NUMBER ALONG WITH IT'S TIME SPAN IS LISTED BELOW.

D#	C#	FILES	TIMESPAN
D-108355	C-032390	165	11/14/90-10/22/95

Directory 1MUA1:[]

TEMP.TXT;1	TEST.TXT;1	ULYHSC_DE.90D;1	ULYHSC_DE.91A;1
ULYHSC_DE.91B;1	ULYHSC_DE.91C;1	ULYHSC_DE.91D;1	ULYHSC_DE.92A;1
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ULYHSC_WWW.DOC;5			

Total of 165 files.

Directory MKC500:[]

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Total of 195 files.

Ulysses www. Doc

Ulysses www. Doc

File: ANON_DIR/[COHO.ULYSSES.PARTICLE.HISCALE.HOUR.SPINAVG_1H]AAREADME.DOC
Version: 4/8/98 JFC

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ULYSSES HOURLY AVERAGE INTERPLANETARY AND JOVIAN ENERGETIC PARTICLE DATA FROM HISCALE: UNIVERSITY OF KANSAS SPIN-AVERAGED DATA SET ON WWW

Data Set Coverage (yyy-mm-dd): 1990-11-14 to 1997-03-31

Note: this coverage includes the Jovian encounter interval from 1992-02-02 to 1992-02-16.

Satellite: Ulysses

Experiment: HISCALE (Heliosphere Instrument for Spectra, Composition and Anisotropy at Low Energies)

Principal Investigator: Dr. Louis J. Lanzerotti, AT&T Bell Laboratories

Data Set Contact: Prof. Thomas P. Armstrong, University of Kansas

Data Set Description:

This ASCII data set was provided via Wide World Web by the HISCALE team at the University of Kansas and includes spin-averaged hourly counting rates from the five sensors of the HISCALE instrument during the interplanetary phase of the Ulysses mission, also including the Jovian encounter from 1992-02-02 to 1992-02-16. The sensors include the two Low-Energy Foil Spectrometers (LEFS60 and LEFS150) at 60 and 150 degrees to the spacecraft spin axis, the two Low-Energy Magnetic Spectrometers (LEMS30 and LEMS120) at 30 and 120 degrees, and the Composition Aperture (CA 60), also called WARTD, at 60 degrees. The HISCALE experiment and data channels used in this data set are described in Lanzerotti et al, Astron. Astrophy. Suppl. Ser. 92, 349, 1992. Further details about the instrumentation and data set processing can be found in the HISCALE Data Analysis Handbook, available in hardcopy form from NSSDC. This data set is available on-line in the NSSDC Anonymous FTP directory as part of the Coordinated Heliospheric Observations (COHO) data base. See NSSDC's Ulysses flight project page under URL http://nssdc.gsfc.nasa.gov/space/space_physics_home.html for further details and updates.

Datatypes:

LEFS60 - Low Energy Foil Spectrometer measurements at 60 degrees to spacecraft spin axis for 42 - 290 electrons and 546 keV - 4.974 MeV ions.

LEFS150 - Low Energy Foil Spectrometer measurements at 150 degrees to spacecraft spin axis for 40 - 280 keV electrons and 540 keV - 4.942 MeV ions.

LEMS30 - Low Energy Magnetic Spectrometer measurements at 30 degrees to spacecraft spin axis for 56 keV - 5.0 MeV ions.

LEMS120 - Low Energy Magnetic Spectrometer measurements at 120 degrees to spacecraft spin axis for 61 keV - 4.752 MeV ions.

DE - Deflected Electron measurements using special logic of LEMS30 sensor at 30 degrees to spacecraft spin axis for 30 - 300 keV electrons.

W - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axis for 0.480 - 1.204 MeV protons, 0.380 - 6.984 MeV/nuc. alphas, 0.465 - 19.107 MeV/nuc. CNO ions, and 0.239 - 92.663 MeV/nuc. Fe group ions.

WARTD - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axisof Z > 1 ions above 0.7 MeV, Z > 5 ions above 2.5 MeV, Z > 7 ions above 7.5 MeV, and Z > 10 ions above 9.0 MeV .

Data Set Files:

Note: The suffix fields "yy" and "[A-D]" refer respectively to the 2-digit year and quarter (A > Jan.- Mar., B > Apr. - Jun., C > Jul. - Sept., D > Oct. - Dec.) of data included in the files listed below.

AAREADME.DOC	- main data set document file
ULYHSC_LEFS60.FMT	- format file for LEFS60 datatype
ULYHSC_LEFS60.yy[A-D]	- quarterly data files for LEFS60 datatype
ULYHSC_LEFS60.JUP	- LEFS60 Jupiter encounter data for Feb. 2 - 16
ULYHSC_LEFS150.FMT	- format file for LEFS150 datatype
ULYHSC_LEFS150.yy[A-D]	- quarterly data files for LEFS150 datatype
ULYHSC_LEFS150.JUP	- LEFS150 Jupiter encounter data for Feb. 2 - 16
ULYHSC_LEMS30.FMT	- format file for LEMS30 datatype
ULYHSC_LEMS30.yy[A-D]	- quarterly data files for LEMS30 datatype
ULYHSC_LEMS30.JUP	- LEMS30 Jupiter encounter data for Feb. 2 - 16
ULYHSC_LEMS120.FMT	- format file for LEMS120 datatype
ULYHSC_LEMS120.yy[A-D]	- quarterly data files for LEMS120 datatype
ULYHSC_LEMS120.JUP	- LEMS120 Jupiter encounter data for Feb. 2 - 16
ULYHSC_DE.FMT	- format file for DE datatype
ULYHSC_DE.yy[A-D]	- quarterly data files for DE datatype
ULYHSC_DE.JUP	- DE Jupiter encounter data for Feb. 2 - 16
ULYHSC_W.FMT	- format file for W datatype
ULYHSC_W.yy[A-D]	- quarterly data files for W datatype
ULYHSC_W.JUP	- W Jupiter encounter data for Feb. 2 - 16
ULYHSC_WARTD.FMT	- format file for WARTD datatype
ULYHSC_WARTD.yy[A-D]	- quarterly data files for WARTD datatype
ULYHSC_WARTD.JUP	- WARTD Jupiter encounter data for Feb. 2 - 16

Parameter Format for Data Files:

Each data file consists of ASCII listings of year (yyyy), day (ddd), hour (hh), minute (mm), and seconds (ss) of start time for hour interval, followe by a list of parameters defined in the corresponding format file for that HISCALE datatype. Headings are listed at the top of each data file for each parameter.

NSSDC Data Set ID: 90-090B-03B

Related Information and Data:

Further details on the spacecraft, experiment, data sets at NSSDC, and related WWW sites can be found on the Ulysses flight project page under

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

Hour averages of the interplanetary solar wind data from, and hourly heliocentr coordinates of, Ulysses and other interplanetary spacecraft may be also be accessed and plotted on-line through the COHOWeb service based at the same WWW site as above.

Ulysses data on NDADS (NASA's Data Archive and Distribution Service) may be located on the WWW via the SPyCAT service at the above URL or an e-mail message to ARMS (Automated Retrieval Mail System) at archives@ndadsa.gsfc.nasa.gov with "HOLDINGS" on the subject line.

Acknowledgement:

Use of these data in publications should be accompanied at minimum by acknowledgements of the National Space Science Data Center and the responsible Principal Investigator defined in the experiment documentation provided here. Citation of NSSDC's Coordinated Heliospheric Observations (COHO) data base would also be appreciated, so that other potential users will be made aware of this service.

HI-SCALE

The Heliosphere Instrument for Spectra, Composition, and Anisotropy at Low Energies is designed to make measurements of interplanetary ions and electrons throughout the entire Ulysses mission.

The ions (Ei > 50 keV) and electrons (Ee > 30 keV) are identified uniquely and detected by five separate solid-state detector telescopes that are oriented to give nearly complete pitch-angle coverage from the spinning spacecraft.

Ion elemental abundances are determined by a del E vs E telescope using a thin 5 micrometer front solid state detector element in a three element telescope. Experiment operation is controlled by a microprocessor-based data system.

Inflight calibration is provided by radioactive sources mounted on telescope covers which can be closed for calibration purposes and for radiation protection during the course of the mission.

Ion and electron spectral information is determined using both broad-energy-range rate channels and a 32 channel pulse-height analyses (channels spaced logarithmically) for more detailed spectra.

The instrument weighs 5.775 kg and uses 4.0 W of power.

File: ULYHSC_WWW.DOC 8/04/95 JFC

ULYSSES HOURLY AVERAGE INTERPLANETARY ENERGETIC PARTICLE DATA FROM HISCALE: UNIVERSITY OF KANSAS DATA SET ON WWW

Data Set Coverage (yyy-mm-dd): 1990-11-14 to 1994-12-31

Note: this coverage does not include the Jovian encounter interval from 1992-02-02 to 1992-02-16.

Satellite: Ulysses

Experiment: HISCALE (Heliosphere Instrument for Spectra, Composition and Anisotropy at Low Energies)

Principal Investigator: Dr. Louis J. Lanzerotti, AT&T Bell Laboratories

Data Set Contact: Prof. Thomas P. Armstrong, University of Kansas

Data Set Submission Date: 1995-07-17 (most recent data through 1994)

Data Set Description:

This ASCII data set was provided via Wide World Web by the HISCALE team at the University of Kansas and includes spin-averaged hourly counting rates from the five sensors of the HISCALE instrument during the interplanetary phase of the Ulysses mission, not including the Jovian encounter from 1992-02-02 to 1992-02-16. The sensors include the two Low-Energy Foil Spectrometers (LEFS60 and LEFS150) at 60 and 150 degrees to the spacecraft spin axis, the two Low-Energy Magnetic Spectrometers (LEMS30 and LEMS120) at 30 and 120 degrees, and the Composition Aperture (CA 60), also called WARTD, at 60 degrees. The HISCALE experiment and data channels used in this data set are described in Lanzerotti et al, Astron. Astrophy. Suppl. Ser. 92, 349, 1992. Further details about the instrumentation and data set processing can be found in the HISCALE Data Analysis Handbook, available in hardcopy form from NSSDC. This data set is available on-line in the NSSDC Anonymous FTP directory as part of the Coordinated Heliospheric Observations (COHO) data base. See NSSDC's Ulysses flight project page under URL http://nssdc.gsfc.nasa.gov/space/space_physics_home.html for further details and updates.

Datatypes:

LEFS60 - Low Energy Foil Spectrometer measurements at 60 degrees to spacecraft spin axis for 42 - 290 electrons and 546 keV - 4.974 MeV ions.

LEFS150 - Low Energy Foil Spectrometer measurements at 150 degrees to spacecraft spin axis for 40 - 280 keV electrons and 540 keV - 4.942 MeV ions.

LEMS30 - Low Energy Magnetic Spectrometer measurements at 30 degrees to spacecraft spin axis for 56 keV - 5.0 MeV ions.

LEMS120 - Low Energy Magnetic Spectrometer measurements at 120 degrees to

spacecraft spin axis for 61 keV - 4.752 MeV ions.

DE - Deflected Electron measurements using special logic of LEMS30 sensor at 30 degrees to spacecraft spin axis for 30 - 300 keV electrons.

W - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axis for 0.480 - 1.204 MeV protons, 0.380 - 6.984 MeV/nuc. alphas, 0.465 - 19.107 MeV/nuc. CNO ions, and 0.239 - 92.663 MeV/nuc. Fe group ions.

WARTD - Composition Aperture (CA 60) measurements at 60 degrees to spacecraft spin axisof Z > 1 ions above 0.7 MeV, Z > 5 ions above 2.5 MeV, Z > 7 ions above 7.5 MeV, and Z > 10 ions above 9.0 MeV .

Data Set Files:

Note: The fields "yy" and "[A-D]" refer respectively to the 2-digit year and quarter (A > Jan.- Mar., B > Apr. - Jun., C > Jul. - Sept., D > Oct. - Dec.) of data included in the files listed below.

ULYHSC_WWW.DOC	- main data set document file
ULYHSC_LEFS60.FMT	- format file for LEFS60 datatype
ULYHSC_LEFS60.yy[A-D]	- quarterly data files for LEFS60 datatype
ULYHSC_LEFS150.FMT	- format file for LEFS150 datatype
ULYHSC_LEFS150.yy[A-D]	- quarterly data files for LEFS150 datatype
ULYHSC_LEMS30.FMT	- format file for LEMS30 datatype
ULYHSC_LEMS30.yy[A-D]	- quarterly data files for LEMS30 datatype
ULYHSC_LEMS120.FMT	- format file for LEMS120 datatype
ULYHSC_LEMS120.yy[A-D]	- quarterly data files for LEMS120 datatype
ULYHSC_DE.FMT	- format file for DE datatype
ULYHSC_DE.yy[A-D]	- quarterly data files for DE datatype
ULYHSC_W.FMT	- format file for W datatype
ULYHSC_W.yy[A-D]	- quarterly data files for W datatype
ULYHSC_WARTD.FMT	- format file for WARTD datatype
ULYHSC_WARTD.yy[A-D]	- quarterly data files for WARTD datatype

Parameter Format for Data Files:

Each data file consists of ASCII listings of year (yyyy), day (ddd), hour (hh), minute (mm), and seconds (ss) of start time for hour interval, followed by a list of parameters defined in the corresponding format file for that HISCALE datatype. Headings are listed at the top of each data file for each parameter.

NSSDC Data Set ID: 90-090B-03B (tentative)

NSSDC Data Set Location:

Off-line > request via e-mail to request@nssdca.gsfc.nasa.gov

On-line > COHO directory at nssdca::anon_dir:[coho.ulyhsc.www_kansas]

Near-line > Ulysses project data set on NDADS (ingest in future)

Acknowledgement:

Please acknowledge the National Space Science Data Center and the Principal Investigator, Prof. Louis J. Lanzerotti of AT&T Bell Laboratories.

Related Information:

Other information about the Ulysses mission, experiments, and data sets at NSSDC may be obtained via World Wide Web and NSSDC's space physics page at http://nssdc.gsfc.nasa.gov/space/space_physics_home.html. Non-WWW users may access NSSDC information in the NASA Master Directory and the NSSDC Master catalog via Internet login to the NSSDC On-Line Data Information Service (NODIS) at nodis@nssdca.gsfc.nasa.gov.

Ulysses data on NDADS (NASA's Data Archive and Distribution Service) may be located via WWW as above or via an e-mail message to ARMS (Automated Retrieval Mail System) at archives@ndadsa.gsfc.nasa.gov with "HOLDINGS" on the subject line.

Ulysses Various Formats

Ulysses Various Formats

About WARTD

WARTD counts ions.

Z2 Z > 1, E > 0.7 MeV

Z2A Z > 7, E > 7.5 MeV

Z3 Z > 5, E > 2.5 MeV

Z4 Z > 10, E > 9.0 MeV

WARTD

About LEMS30

LEMS30 counts ions at 30 degrees from the space-craft spin axis .

P1 56-78 keV ions

P2 78-130 keV ions

P3 130-214 keV ions

P4 214-337 keV ions

P5 337-594 keV ions

P6 594-1073 keV ions

P7 1.073-1.802 MeV ions

P8 1.802-5.0 MeV ions

LEMS30

About LEFS60

LEFS60 counts both electron and ions at 60 degrees from the space-craft spin axis .

E1′ 42-65 keV electrons

E2′ 64-112 keV electrons

E3′ 112-178 keV electrons

E4′ 178-290 keV electrons

FP5′ 546-761 keV ions

FP6′ 761-1223 keV ions

FP7′ 1.223-4.974 MeV ions

LEFS60

About LEMS120

LEMS120 counts ions at 120 degrees from the space-craft spin axis .

P1' 61-77 keV ions

P2' 77-127 keV ions

P3' 127-207 keV ions

P4' 207-336 keV ions

P5' 336-601 keV ions

P6' 601-1123 keV ions

P7' 1.123-1.874 MeV ions

P8' 1.874-4.752 MeV ions

LEMS120

About W

W counts ions.

W1 0.480-0.966 MeV protons

W2 0.968-1.204 MeV protons

W3 0.380-1.278 MeV/nuc. alphas

W4 1.277-6.984 MeV/nuc. alphas

W5 0.465-1.709 MeV/nuc. CNO

W6 1.709-19.107 MeV/nuc. CNO

W7 0.239-0.840 MeV/nuc. Fe group

W8 0.840-92.663 MeV/nuc. Fe group

W

About LEFS150

LEFS150 counts both electron and ions at 150 degrees from the space-craft spi axis .

E1 40-65 keV electrons

E2 60-107 keV electrons

E3 107-170 keV electrons

E4 170-280 keV electrons

FP5 540-765 keV ions

FP6 765-1223 keV ions

FP7 1.223-4.942 MeV ions

LEFS150

About DE (Deflected Electrons)

The Deflected Electron measurements are made using special logic of the LEMS30 detector system.

DE1 30-50 keV electrons

DE2 50-90 keV electrons

DE3 90-165 keV electrons

DE4 165-300 keV electrons

DE