

#392

AE-C, E

EUV ABSORPTION DATA

73-101A-06B

75-107A-06B

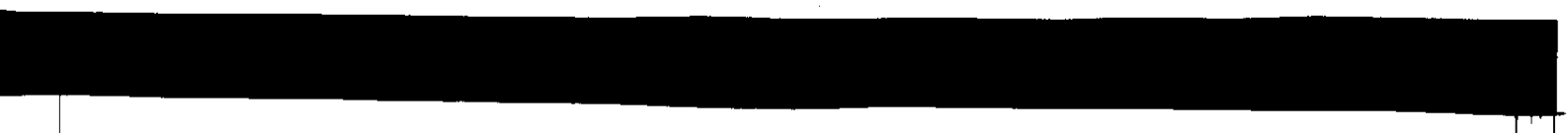


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1. INTRODUCTION:

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

AE-C

EUV ABSORPTION DATA, TAPE

73-101A-06B SOUV-00061

This data set has been restored. There was originally one 9-track, 1600 BPI tape written in Binary. There is one restored tape. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tape was created on a 930 computer and the restored tape was created on an IBM 9021 computer. The DR and DS numbers along with the corresponding D number are as follows:

DR#	DS#	D#	FILES	TIME SPAN
-----	-----	-----	-----	-----
DR004808	DS004808	D029636	1 - 9	02/01/74 - 02/28/74

NAME=*FEB74

11*FEB74' START OF FILE *****

AE
FILE 1 OF D-29636

71-101A-06B

* EUV ABSORPTION RESULTS FOR FEBRUARY 1974

* *****

* FROM OBSERVATIONS BY EUVS EXPERIMENT ON AE-C

* PRINCIPAL INVESTIGATOR: H.E.HINTEREGGER

* FILES '0FEB74:1'-'0FEB74:4' PREPARED FOR NSSDC (AND WDC-A);
* RELEASED FOR PUBLIC USE BY EXPERIMENTER 15 JAN 77

* (RECORDS OF ALL FILES ON NSSDC TAPE CORRESPOND TO ONE
* PRINTABLE LINE OF NO MORE THAN 128 CHARACTERS PER RECORD)

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* *****

* '0FEB74' INTRODUCTION AND REFERENCES

* *****

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* 3	PUBLISHED PRELIMINARY RESULTS ON ABSORPTION
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* 5	"QU FILES" OF EUVS ABSORPTION DATA
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* 10	HISTORY OF CREATION OF PRESENT DATA AND COPIES
* 10	OF PROCESS-CONTROLLING REFERENCE FILES
* 10	PROGRAMS CREATING "RESULT OUTPUTS"
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* 15	REFERENCE FILE USED TO CREATE PRESENT '0FEB74:3'

* '0FEB74:1' "0,N2" RESULTS FROM 175 AND 584 A OBSERVATIONS
* FOR "CHIREGION Z = 1", I.E. COS(SZA) > 0.1

* '0FEB74:2' "0,N2" RESULTS FROM 175 AND 584 A OBSERVATIONS
* FOR "CHIREGION Z = 3", I.E. SZA > 95 DEGREES
* (SUNRISE-SUNSET OBSERVATIONS, WITH ALL RESULTS
* REFERRING TO POINT "Q" OF MINIMUM RAY HEIGHT)

* '0FEB74:3' "02" RESULTS FROM 1609 A OBSERVATIONS
* (SUNRISE-SUNSET OBSERVATIONS ONLY)

* '0FEB74:4' COPIES OF PROGRAMS USED IN TRANSITION FROM
* MEASUREMENTS TO VARIOUS LEVELS OF STANDARDIZED
* SCIENTIFIC RESULTS

* *****

FILE 2

• **花**

***** BY
***** 1.00E-26
***** TO REFLECT
***** THE STANDARD UNITS OF KILOGRAMS PER CUBIC METER

***** BUT REFLECT THE ASSUMPTION THAT ALL PARTICLES HAVE THE
***** SAME CROSS SECTION OF 3.51 MEGABARN (BELIEVED TO APPLY TO
***** ATOMIC OXYGEN WITH AN ESTIMATED ACCURACY OF 30-80 PERCENT
***** PESSIMISTICALLY; ABOUT 10-15 PERCENT, IF ONE ADOPTS THE
***** THE VALUE OF 13.0 MEGABARN FOR O-ABSORPTION AT 584 Å AND
***** CONSIDERS THE FACT THAT OUR VALUE FOR 175 Å HAS RESULTED
***** FROM AN EVALUATION OF SIMULTANEOUS OBSERVATIONS OF 175 Å
***** AND 584 Å WITH ZENITH ANGLES GREATER THAN 95 DEGREES, I.E.
***** ALLOWING COMPARISONS FOR ALTITUDES HIGH ENOUGH TO ASSURE
***** THAT CORRECTIONS FOR N₂-CONTRIBUTIONS WERE QUITE MINOR,
***** WITH REMAINING UNCERTAINTIES OF THAT PROCEDURE BEING NO
***** GREATER THAN 5 PERCENT).

• **3**

MAT=1 LGROUP= 18 CHIREGION= 1 REFERENCE FILE 750924 0

CMC# 1 175 ANG BKGR= 1.517 SO= 465.270 METHOD: CPT2 HQ= 344.42

HQREF	SCLHT	TAU	401N25 #/M3	GLAT	QLONG	QLOC	GMT	MLAT	SZA	MN%	MXX	AVX	ST. DEV	#PT	AO	AI
200.00	35.04	.067	.54565E 16	51.7	-167.7	13:10:13	2076531	48.8	70.2	18	24	21	.556E-01	6	.301E 01	-.285E-01
180.00	30.01	.121	.11487E 17	48.4	-164.2	13:24:54	2130741	46.2	67.9	8	24	16	.476E-01	11	.389E 01	-.333E-01
170.00	26.49	.166	.17866E 17	46.1	-162.2	13:33:46	2167114	44.4	66.3	9	23	14	.302E-01	9	.462E 01	-.377E-01
160.00	30.85	.239	.22058E 17	42.4	-159.3	13:46: 2	2222945	41.5	64.1	8	12	10	.187E-01	6	.375E 01	-.324E-01
ENC# 3 584 ANG BKGR= .464 SO= 1949.172 METHOD: CPT2 HQ= 449.8 1 HQREF SCLHT TAU 4MAS85 #/M3 GLAT QLONG QLOC GMT MLAT SZA MN% MXX AVX ST. DEV #PT AO AI																

AE-E

EUV PRELIMINARY FLUX DATA

75-107A-06B SOUV-00050

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 9-TRACK, 1600 BPI TAPE WRITTEN IN EBCDIC. THERE IS ONE RESTORED TAPE WRITTEN IN ASCII. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON A 930 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBER AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR003768	DS003768	D042353	1-5	12/27/76 - 12/30/79

REQ. AGENT
CMP

RAND NO.
RC7836

ACQ. AGENT
RNH

AE-C, E

EUV ABSORPTION DATA

71-101A-06B

75-107A-06B

This data set consists of 2 tapes. They are 9-track, 1600 BPI, EBCDIC, and multi-filed. The tapes were created on the XDS 930 computer. This catalog also contains the dump sent us with descriptions from the experimenter.

The D and C numbers along with the time spans are as follows:

AE-C

<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>TIME SPAN</u>
D-29636	C-19247	8	February 1974

AE-E

<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>TIME SPAN</u>
D-42353	C-21213	18	12/27/76 - 12/30/79

SUPERSEDES 1#EUVFLUX1 FILE ISSUED 12 SEP 79

RW 8826 A

FILE 5

PRELIMINARY FLUX DATA FOR 7 EUV LINES (OR LINE GROUPS)

FROM AE=E EUVS OBSERVATIONS FROM JUNE 1977 TO 30 DEC 1979

THE 7 WAVELENGTHS COVERED IN THIS DATA SET ARE

1	H LYMAN ALPHA	1216 A
2	BETA	1026 A
3	HE I	584 A
4	HE II	304 A
5	O IV GROUP	554 A
6	FE X BLEND	175 A (NOM.)
7	MG X	609 A

IT MUST BE EMPHASIZED THAT "ABSOLUTE" VALUES REFLECT ESTIMATES.

THESE ESTIMATES ARE BASED ON THE FOLLOWING WORKING ASSUMPTIONS:

- (A) ADOPTING AERONOMICAL REF. SPECTRUM (F74113) (HEROUX AND HINTEREGGER, 1978) FOR ABSOLUTE VALUES ON 23 APRIL 1974.
- (B) EXTRAPOLATING AE=C EUVS OBSERVATIONS FROM 1974 THROUGH JULY 1976 TO ESTABLISH ESTIMATED REFERENCE FLUXES FOR JULY 1976 (F76REF) ADOPTED AS (CALIBRATION) OF THE AE=E INSTRUMENT. THE LATTER APPEARS TO HAVE BECOME VERY STABLE BY THEN. F76REF WAS THEN ATTACHED TO OUR BASIC OBSERVATIONAL AE=E REFERENCE DATA SET FOR JULY 1976
- WHICH REPRESENTS AVERAGES OF CAREFULLY SELECTED AE=E OBSERVATIONS AT ALL WAVELENGTHS (INCLUDING ALL GOOD OBSERVATIONS OF DATE RANGE 76195-76210 UNDER SOLAR CONDITIONS OF A SPOTLESS DISK, NO VISIBLE ACTIVE REGIONS, AND NO SIGNIFICANT DAY-TO-DAY VARIATIONS).
- (C) ASSUMING THAT THE AE=E INSTRUMENT SENSITIVITIES HAVE NOT DEGRADED, I.E. REMAINED CONSTANT THROUGH 1977-1979.

THE PRESENT RESULTS ALSO INCLUDE 14 AUGUST, 1979, I.E. THE DATE OF A ROCKET EXPERIMENT MEASURING SOLAR EUV IN PARTS OF THE SPECTRUM; RESULTS FROM THE LATTER WILL BE VERY DIFFICULT TO REDUCE TO UNATTENUATED VALUES, BECAUSE OF THE UNFORTUNATELY HIGH OPTICAL DEPTHS AT THE RATHER MODEST PEAK ALTITUDE OF 175 KM REACHED BY THE ROCKET. HENCE, A REASONABLY ACCURATE UPDATING OF ABSOLUTE AE=E MONOCHROMATOR SENSITIVITIES WITH PROPERLY CORRECTED RESULTS FROM THIS ROCKET EXPERIMENT WILL NOT BE COMPLETED FOR SOME TIME.

THE "RELATIVE PRECISION"

RELATIVE COMPARISONS OF FLUXES FOR DIFFERENT DATES ARE ALREADY VERY GOOD FOR THE PERIOD FROM LATE 1978 THROUGHOUT 1979, BECAUSE OF PRACTICALLY INSIGNIFICANT RESIDUAL ATMOSPHERIC ABSORPTION (ONLY MEASUREMENTS MADE UNDER SUFFICIENTLY SMALL SOLAR ZENITH ANGLES ARE INCLUDED IN THE PRESENT DATA SET). THE PRESENT DATA SET DOES NOT YET INCLUDE CORRECTIONS FOR ATMOSPHERIC ABSORPTION. THESE WILL BE MORE OR LESS SIGNIFICANT DEPENDING ON WAVELENGTHS AND ON THE SATELLITE ORBITS. IN PARTICULAR, THE DATA FROM 1977 AND MUCH OF 1978 WILL BE AFFECTED.

A f
E E
E E



DATA Files
are 5, 8, 11,
14, 17
D-42353
C-21213
12/20/76 - 12/30/79

* HOWEVER, THE MAGNITUDE OF THESE FUTURE CORRECTIONS WILL BE
 * RELATIVELY MODEST FOR MOST WAVELENGTHS AND COMPLETELY NEGLIGIBLE
 * FOR WAVELENGTHS 1 AND 2. UPON COMPLETION OF THESE CORRECTIONS,
 * A REVISED DATA SET WILL BE RELEASED.

* THE NUMERICAL VALUES OF ALL EUV FLUXES IN THE FOLLOWING LIST

* REFER TO FULL-DISK IRRADIANCE AT THE TOP OF THE EARTH'S ATMOSPHERE

* EXPRESSED IN THE SAME UNITS AS USED IN THE AERONOMICAL REFERENCE
 * SPECTRUM 'F74113' (23 APR 74) AND PRELIMINARY REFERENCE SPECTRUM
 * 'F76REF' (JULY 1976 AVG. OF DAYS WITH RZ=0 IN DATE RANGE 76195-76210),
 * I.E. IN

UNITS OF 1E 10 PHOTONS PER SECOND PER SQUARE METER

1*** ELV FLUX DATA FOR SEVEN WAVELENGTHS IDENTIFIED ABOVE

	WLG 1	WLG 2	WLG 3	WLG 4	WLG 5	WLG 6	WLG 7
76REF DATA TAKEN FROM F76REF.EUVS	294925	4375	1588	8363	799	445	633

1	START	STOP	ORBIT	WLG 1	WLG 2	WLG 3	WLG 4	WLG 5	WLG 6	WLG 7
77154	54379111	54700111	8247	384092	0	2137	0	1024	544	987
77154	54708111	55043111	8247	0	0	2196	0	1048	550	1002
77155	22411000	23219000	8258	387024	6320	2205	8678	1042	535	992
77156	22115000	22915000	8274	381160	6291	0	8788	0	0	0
77157	32627000	33401000	8292	387024	6352	2214	9234	1024	537	990
77158	21475000	22283000	8306	384092	6355	2226	9034	1036	530	1009
77160	37027000	37803000	8341	381160	6473	0	9117	0	0	0
77161	20426000	21334000	8354	378228	6385	2184	9068	1013	519	954
77163	14298000	14689000	8385	0	6057	0	8742	0	0	0
77163	14691000	15073000	8385	369432	6061	0	8723	0	0	0
77164	24650000	25035000	8403	369432	6070	0	8759	0	475	0
77164	25043000	25425000	8403	0	0	2103	0	996	468	275
77165	13498000	13890000	8417	0	0	2083	0	991	477	285
77165	13906000	14274000	8417	363568	5906	0	8591	0	0	0
77166	50690000	51074000	8440	0	5903	0	8641	0	0	0
77166	51098000	51458000	8440	357704	5808	0	8527	0	0	0
77168	1378000	1770000	8463	357704	5786	0	8349	0	508	0
77168	1794000	2154000	8463	0	0	2051	0	1012	509	931
77169	76146000	76531000	8493	0	0	2054	0	1005	541	962
77169	76562000	76915000	8493	354772	5687	0	7996	0	0	0
77170	70282000	70674000	8508	0	5652	0	8079	0	0	0
77170	70794000	71057000	8508	354772	5876	0	8073	0	0	0
77171	64426000	65210000	8523	360636	5796	2162	8246	1013	547	982
77172	58545000	59320000	8538	366500	6039	2207	8260	1026	556	989
77174	47666111	48434111	8568	378228	6258	2345	8808	1065	556	1061
77176	53250111	54020111	8601	398752	6853	2537	9198	1115	585	1122
77177	31625111	31978111	8613	398752	6975	0	9231	0	0	0
77181	10673111	11449111	8673	416344	6902	2363	8966	1070	580	1095
77182	10801111	11578111	8689	407548	6761	0	8964	0	0	0
77183	32498111	33281111	8709	398752	6518	2260	8632	1058	567	1035
77184	32585111	33614111	8725	404616	6418	2255	8529	1071	563	1052
77185	65065111	65841111	8747	407548	6382	0	8554	0	0	0
77186	32697111	33473111	8757	407548	6281	2216	8390	1050	532	1003
77187	22225111	22482111	8771	0	0	2198	0	1058	530	991
77188	11386000	11721111	8785	0	6108	0	8273	0	0	0
77190	81625000	82008000	8830	401624	5992	0	8400	0	0	0
77191	59944000	60344000	8842	0	0	2162	0	1045	489	901
77192	38200000	38873000	8854	395220	6064	0	8379	0	0	0
77194	16304111	16441111	8882	392288	6203	0	8413	0	0	0