

546

HELIOS 1 and 2

74-097A-09A

76-003A-09A

HOURLY AVERAGED PLASMA DATA

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 This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system.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

DSC-
546

HELIOS-A & B

HOURLY AVERAGE PLASMA DATA

74-097A-09A

SPHE-00687

76-003A-09A

THIS DATA HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 9-TRACK, 1600 BPI TAPE WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. FILE ONE IS HELIOS-A DATA AND FILE 2 IS HELIOS-B DATA. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN IBM 360 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBER AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR005306	DS005306	D047237	1	12/12/74 - 12/31/80
			2	01/17/76 - 03/07/80

REQ. AGENT
DEW

RAND NO.
V0147

ACQ. AGENT
HKH

HELIOS 1 & 2

74-097A-09A

76-003A-09A

HOURLY AVERAGED PLASMA DATA

This data set catalog consists of 1 data tape. The tape is 1600 BPI, 9-track, it has 2 files of data and was created on an IBM 360 computer. The D and C numbers along with the time spans are as follows:

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-47237	C-22439	FILE 1 12/12/74 - 12/31/80 HELIOS 1
		FILE 2 01/17/76 - 03/08/80 HELIOS 2

MAX-PLANCK-INSTITUT FÜR AERONOMIE

Dr. Rainer Schwenn

76-003A-09A

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09 66627 AERLI D

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KREISSPARKASSE NORTHEIM
ZWEIGSTELLE LINDAU
NR. 41 104449

IHR ZEICHEN

IHRE NACHRICHT VOM

UNSER ZEICHEN

RS/sp

DURCHWAHL

(055 58) 41 337

DATUM

Jan. 7, 1982

Dear Dr. Vette,

today I can finally send you our HELIOS plasma data. Please excuse the long delay which was caused by a series of unexpected problems.

Here are a few more details on the tape:

- ⁶²⁵⁰~~1600~~ BPI
- 9 tracks
- No label
- IBM binary float (single precision)
- 80 Bytes logical record length
- 8000 Bytes blocksize.

There are two files on the tape:

- file 1: HELIOS 1 from 74 : 346 to 80 : 366
- file 2: HELIOS 2 from 76 : 17 to 80 : 068

All data are 1 hour averages. The time tag on the tape refers to the begin of the averaging interval. The orbit data refer to the time of the first measurement within the averaging interval.

The data words have the following meaning

- 1 year ("+" for HELIOS 1, "-1" for HELIOS 2)
- 2 day
- 3 hour begin of averaging interval (in GMT)
- 4 angle earth-sun-HELIOS (in degrees)

MAX-PLANCK-INSTITUT FÜR AERONOMIE

ZUM SCHREIBEN AN: Dr. J.I. Vette, World Data Center A, GSFC, Greenbelt,

BLATT: 2

Jan. 7, 1982

- 5 distance sun-HELIOS (in AU)
- 6 Carrington longitude of HELIOS (in degrees)
- 7 Solar-ecliptical latitude of HELIOS (in degrees)
- 8 Number of Carrington rotation
- 9 proton bulk speed (in kms^{-1})
- 10 proton temperature, radial component (in K)
- 11 proton density (in cm^{-3})
- 12 proton flow angle in elevation (in degrees)
"+" means northward flow
- 13 proton flow angle in azimuth (in degrees)
"+" means eastward flow
- 14 Standard deviation of word 9
- 15 " " " " 10
- 16 " " " " 11
- 17 " " " " 12
- 18 " " " " 13
- 19 Number of measurements used for word 9, 10, 11
- 20 " " " " " word 12, 13.

For your convenience I include a little printout showing the content of the first and the last data block for both files.

Note that words 19 and 20 need not be identical, since the flow angles cannot always be determined. This occurs mainly for large values of these angles, since the 3D data transmission is limited, especially at low telemetry bitrates.

Further information on our instruments and on data evaluation can be found in some articles (e.g. Schwenn et al., *Raumfahrtforschung* 19, 226, 1975 and Rosenbauer et al., *J. Geophys.* 42, 561, 1977) or can be obtained directly from us.

In case of any problems with the tape, the data on it or anything else please contact us anytime.

Yours truly



(Dr. Rainer Schwenn)

Enclosures

cc: Dr. Rosenbauer, MP Ae
Dr. Porsche, DFVLR
K.H. Mühlhäuser, MPE

FILE NR.: 1 READ TEST RECL= 80

74.000000	346.000000	1.00000000	359.435547	.984511554	188.001953	-.575749636
1621.00000	630.413574	132143.937	4.67009735	1.14802637	2.63317585	.0
.0	.0	.0	.0	1.00000000	1.00000000	
ANZAHL DER BLÖCKE: 42554						
80.0000000	366.000000	21.0000000	270.243408	.589824021	66.2575836	6.54832040
1703.00000	394.121582	46545.0898	12.5732660	-3.40109730	1.86184406	15.2759667
11745.6680	1.31485176	1.44150352	1.60011864	44.0000000	37.0000000	

*** END OF FILE **

FILE NR.: 2 READ TEST RECL= 80

-76.0000000	17.0000000	2.00000000	359.368652	.983245969	295.915039	-4.63857365
1636.00000	385.460937	73293.5625	4.41342735	-2.77574253	2.17902851	2.43650246
2416.04614	.256699860	.850223303E-01	1.36264896	7.00000000	3.00000000	
ANZAHL DER BLÖCKE: 26578						
-80.0000000	68.0000000	16.0000000	325.989990	.918480098	100.021515	-6.09540749
1692.00000	361.861572	70208.8125	4.62856293	-3.83339787	1.59603882	11.8033905
22442.5664	.318320572	2.54090118	1.07395554	39.0000000	30.0000000	

*** END OF FILE **

(2320)	424A0000	4315B000	41E00000	43166F35	40FBEOA0	42A747C7	C0B46C2C	43655000	43279F4F	4546123C
(2360)	4148F349	412460C2	C11034B2	42177B14	447C37EF	407AEACE	411EF1C1	411732ED	42520000	42520000
(2400)	424A0000	4315B000	41F00000	43166F03	40FDF3F3	42A6E073	C0B548E0	43655000	43270C9E	454747AE
(2440)	41473402	4115CF7D	C1252D72	42148D93	446E3FAB	4040DFC8	41235E1U	41193F16	42550000	42550000
(2480)	424A0000	4315B000	421J0000	43166E0D	40FBDDCC	42A6DE50	C0B62C0A	43655000	43286288	4540871D
(2520)	413C3E30	41113055	C11E72BC	41D18130	44CCE04A	404789E3	4115A7D6	411C88AD	42520000	42520000
(2560)	424A0000	4315B000	42110000	43166E96	40FBDC5D	42A5A262	C0B70EB5	43655000	432A163C	453CA9E5
(2600)	4137A900	4120C909	C111082C	42196CA6	4464EA1B	4052AA71	412002C0	4117329D	42550000	42550000
(2640)	424A0000	4315B000	42120000	43166E5F	40FBDDAD	42A5112B	C0B7F325	43655000	432AE26F	453E05A0
(2680)	413988AA	412B0547	C1270205	421085F4	448F16FD	40502913	4126B34F	411F2F3A	424F0000	424F0000
(2720)	424A0000	4315B000	42130000	43166E29	40FB0953	42A47EFC	C0B8DC20	43655000	432B4EA9	45408EBA
(2760)	413B5EC5	40BDBD1F	C13DB1DB	41FD0070	4489B0D5	40386774	41232176	41244322	42590000	42590000
(2800)	424A0000	4315B000	42140000	43166D73	40FB0703	42A3F10F	C0B9BCDA	43655000	432B1765	4535002E
(2840)	41371BC4	411F789C	C12444D3	42179709	446A2C36	4032FD8C	411866E1	41279125	42540000	42540000
(2880)	424A0000	4315B000	42150000	43166D0C	40FB06B2	42A3883E	C0BA64DF	43655000	4329D57A	45303348
(2920)	4135E7FC	C04C478D	C1466369	4186FD60	44532B1C	40309CF0	408BCF3B7	411B0631	42220000	42220000
(2960)	424A0000	4315B000	42160000	43166D6D	40FB049B	42A2C7C8	C0BB98B1	43655000	432A649F	452CE048
(3000)	4135A829	4085131F	C1521329	4189C4D2	443234C7	402063A4	40FACF72	40F47CDD	42140000	42140000
(3040)	424A0000	4315C000	41100000	43166CDE	40FB0007	42A12C4D	C0BE2808	43655000	43298995	4520E672
(3080)	412D07A1	4098D969	C06D9E8A	41A4CF81	44391ADF	40201D15	41122486	40847F9C	42330000	42330000
(3120)	424A0000	4315C000	41200000	43166C91	40FBCE09	42A07D53	C0BF3F2E	43655000	4329466F	45109FB7
(3160)	412E5DE5	C0ECA2E4	C028F1A9	41729318	44211402	402136F2	407C1C39	406F4865	42160000	42160000
(3200)	424A0000	4315C000	41300000	43166C75	40FBCCA6	42A0048B	C0BF7FFF	43655000	432A446D	451C2EC4
(3240)	4128F7AD	C110E21C	C0AE5A0A	42123293	444B75D1	4030CD2B	40A99929	411042B7	42370000	42370000
(3280)	424A0000	4315C000	41400000	43166C39	40FB7AFC	429F75E4	C0C0E345	43655000	432861A8	4519C803
(3320)	4128C2EA	C083D804	4936C4C8	412ECCD5	44317FC6	40299403	41141FDF	40BF5050	421F0000	421F0000
(3360)	424A0000	4315C000	41500000	43166C07	40FB0931	429E0D02	C0C1D6CD	43655000	43261379	451AE520
(3400)	412C62A7	C03CD418	C110EB9A	41A7CDDA	443FEB73	403801C3	411AAD58	4117147E	421C0000	421C0000
(3440)	424A0000	4315C000	41600000	43166B03	40FB07A7	429E50B5	C0C2A53B	43655000	432540C6	4519A9CF
(3480)	412DB492	C062599F	C117F949	412AF089	4435C17B	4025945D	40893F3B	4111928E	42170000	42170000
(3520)	424A0000	4315C000	41700000	43166B78	40FB0543	429D949B	C0C3E1E3	43655000	4324D900	451A4FC7
(3560)	412D4AEA	41124361	C0DA4F12	41575AE1	44401718	402E8004	411A0131	4099496F	42100000	42100000
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(3640)	412B1A8C	4044AB04	C110E082	41413148	443CF16A	402F80Y2	41112475	4113FE6C	424E0000	424E0000
(3680)	424A0000	4315C000	41900000	43166B30	40FB0270	429CAD6D	C0C55304	43655000	43242CC1	45184154
(3720)	41283945	C051FAC6	C0E915D7	41B05206	446D0E2E	4044B0C0	4115FD64	411218A9	423F0000	423F0000
(3760)	424A0000	4315C000	41A00000	43166AF8	40FB0087	429C1339	C0C64861	43655000	43230481	45150AD2
(3800)	4120E826	4115D04A	C0557C11	41659545	44962A5D	40400B5E	40422350	40679B5A	42270000	42270000
(3840)	424A0000	4315C000	41B00000	43166AC2	40FB0E9C	429B790C	C0C73DC2	43655000	432287A2	451452B3
(3880)	4123212A	4110CD0A	C09AD5F7	41488B8D	445E2DCA	40218653	405F5576	4087873C	42340000	42340000
(3920)	424A0000	4315C000	41C00000	43166ARD	40FB0CEE	429AF553	C0C81092	43655000	43226365	451692E0
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(4120)	4123F590	4129AB2B	C012A8C8	413A3352	4463336F	403120FD	40DF115D	40DD7071	42580000	42580000
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(4200)	41255A63	412D649A	403A435A	414650D5	4457CB9E	402E7811	411075D6	4098D0CF	42590000	42590000
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(4280)	412B3E86	4127FC49	406FE954	4138260D	44447A93	403EC514	40FEAD47	4086BCF6	421E0000	421E0000
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(4600)	412BAACB	40885FD2	4075F756	414F8A28	442EBFB5	404EF918	4079CA36	40R2D546	42570000	42570000
(4640)	424A0000	4315C000	42150000	431668A4	40FB0AC7	4296083E	C0CFE8B4	43655000	4320F958	4514EADB
(4680)	412EAF6D	41154E30	411DEB7B	414DDE6B	4440CE55	4135FECC	40C7FD89	40DD9B34	42240000	42240000
(4720)	424A0000	4315D000	00000000	431667CF	40FBA4C5	4293F5B0	C0D33934	43655000	43213B04	44F1D268
(4760)	4133A1FE	41227D24	4110F51B	413F6CD1	4414A8F3	402A84F3	404410F3	403DD026	41600000	41600000
(4800)	424A0000	4315D000	41100000	431667CB	40FBA39D	4293A58B	C0D3B92F	43655000	43200365	451223BB
(4840)	41314A25	4119D0C7	C06391B7	42111889	442E7831	4061993F	40B88AD7	40E57D5A	42550000	42550000
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(4920)	412DD351	40E2CF6F	C02204FA	416389FD	4439269E	40386CA6	40BBD333	40D2F4A5	42530000	42530000