MAY 2004 NUMBER 717 - Part II

Solar-Geophysical Data comprehensive reports

Data for November 2003 and Miscellaneous
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

NEW DATA:
ACE Solar Wind, Interplanetary Magnetic Field and Particles -- Monthly Plots

NGDC On-Line Addresses:

World-Wide Web	http://www.ngdc.noaa.gov
Gopher	gopher.ngdc.noaa.gov
Anonymous FTP:	ftp.ngdc.noaa.gov

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE / NATIONAL GEOPHYSICAL DATA CENTER / BOULDER, COLORADO

U.S. DEPARTMENT OF COMMERCE
Donald L. Evans, Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Vice Admiral Conrad C. Lautenbacher, Jr., Under Secretary/Administrator

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
Gregory W. Withee, Assistant Administrator

MAY 2004 NUMBER 717 - Part II

Solar-Geophysical Data comprehensive reports

Data for November 2003 and Late Data

International Standard Serial Number: 0038-0911
Library of Congress Catalog Number: 79-640375 //r81

NATIONAL GEOPHYSICAL DATA CENTER
Christopher G. Fox, Acting Director
Boulder, Colorado

Subscription information is on the inside back cover.

SOLAR-GEOPHYSICAL DATA

Number 717

(Issued in Two Parts)

Editor: Helen E. Coffey

Chief: Herbert W. Kroehl
Solar-Terrestrial Physics Division

Staff: Edward H. Erwin

CONTENTS

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

CODE	KIND OF OBSERVATION	SEP 03	OCT	NOV	DEC	JAN 04	FEB	MAR	APR
A.	SOLAR AND INTERPLANETARY								
A.1	Sunspot Drawings	711A 50	712A 44	713A 52	714A 46	715 44A	716A 46	717A 44	
A.2aa	International Sunspot Numbers	710A 24	711A 25	712A 24	713A 27	714A 26	715A 25	716A 25	717A 22
A.2c	American Sunspot Numbers	710A 24	711A 25	712A 24	713A 27	714A 26	715A 25	716A 25	717A 22
A.3a	Mt. Wilson Magnetograms	711A 50	712A 44	713A 52	714A 46	715A 44	716A 46	717A 44	
A.3b	Sunspot Mag Class and Regions	711A 88	712A 81	713A 87	714A 83	715A 81	716A 80	717A 81	
A.3c	Kitt Peak Magnetograms	711A 50	712A 44	713A 52	714A 46	715A 44	716A 46	717A 44	
A.3d	Mean Solar Magnetic Field (Stanford)	710A 32	711A 40	712A 34	713A 36	714A 36	715A 34	716A 36	717A 34
A.3e	Stanford Magnetograms	711A 50	712A 44	713A 52	714A 46	715A 44	716A 46	717A 44	
A.4	H-alpha Filtergrams	711A 50	712A 44	713A 52	714A 46	715A 44	716A 46	717A 44	
A.5d	PhotometricCa IIFaculaeSanFernando	Jan 92-Dec 96 - 631B 22; 1997-1998 in 663B 66							
A.6c	Stanford Solar Mag Field Synoptic Map	711A 44	712A 38	713A 40	714A 40	715A 38	716A 40	717A 38	
A.6d	Kitt Peak Solar Mag Field SynopticMap	711A 49	712A 43	713A	714A	715A	716A	717A 43	
A.6f	Active Prominences and Filaments	715B 25	716B 53	717B 36					
A.6g	Sac Peak Coronal Line Synoptic Maps	711A 46	712A 40	713A 44	714A 42	715A 40	716A 42	717A 40	
A.6h	Photometric White Light SanFernando	Jul-Dec 96 630B 32; 1997-1998 in 663B 51							
A.7h	Coronal Line Emission (Sac Peak)	711A 50	712A 44	713A 52	714A 46	715A 44	716A 46	717A 44	
A.7j	Coronal Hole Daily Maps (NSO/KP)	711A 80	----------	----------	----------	----------	----------	----------	
A.7k	Coronal Index (Slovak Academy)	1939-1996 -644B 28							
A.7m	Coronal Mass Ejections (CSPSW)			717B 38					
A.8aa	2800 MHz- Solar Flux (Penticton)	710A 24	711A 25	712A 24	713A 27	714A 26	715A 25	716A 25	717A 22
A.8ac	2800 MHz- Adj. Solar Flux (Penticton)	710A 24	711A 25	712A 24	713A 27	714A 26	715A 25	716A 25	717A 22
A.8g	Adjusted Daily Solar Fluxes Sagamore	710A 24	711A 25	712A 24	713A 27	714A 26	715A 25	716A 25	717A 22
A.10g	Nancay Radioheliograph-164&327MHz	711A112	----------	----------	----------	----------	----------	717A112	
A.10h	Nobeyama Radioheliograph -17 GHz	711A 83	712A 75	713A 82	714A 77	715A 75	716A 75	717A 75	
A.11g	Solar X-ray GOES (graphs/event table)	715B 17	716B 44	717B 28					
A.11k	Solar UV NOAA-9	May 86-Dec 88 in 566B 84							
A.11l	Solar UV NIMBUS7	Nov 78-Oct 84 in 542B 82							
A.11m	Solar UV SOLSTICE (UARS)	Oct 91-Sep 94 in 607B 46							
A.11o	Solar UV SUSIM (UARS)	Oct 91-Jan 97 in 629B 30							
A.11p	Solar UV Mg II Daily Index	715B 26	716B 54	717B 37					
A.12g	Solar Particles (GOES)	710A 4	711A 4	712A 4	713A 4	714A 4	715A 4	716A 4	717A 4
A.12i	Interplanetary Particles (ACE)	715B	716B	717B 42					
A.13g	Solar Plasma (ACE)	715B	716B	717B 41					
A.16c	ERBS, NOAA-9 & -10 Solar Irradiance	ERBS Oct 84-Jun 00 in 671B 36							
A.16d	UARS Solar Irradiance	Oct 91-May 2001 684B 26 – Complete Mission							
A.16e	VIRGO/SOHO Solar Irradiance	Jan 96-Sep 00 in 678B 46							
A.17c	Inferred Interplanetary Mag Field	1984-1988 data in 542A168; 1989-Jan 94 in 611A118							
A.17d	ACE Interplanetary Mag Field	715B	716B	717B 40					
C.	SOLAR FLARE-ASSOCIATED EVENT								
C.1a	H-alpha Flares	710A 27	711A 28	712A 27	713A 30	714A 29	715A 28	716A 30	717A 27
C.1ba	H-alpha Flare Groups	715B 4	716B 4	717B 4					
C.1d	Flare Patrol Observations	715B 9	716B 14	717B 9					
C.1h	H-alpha Flare Index (ImpxDur)	Jan 76-Dec 85 in 639B 26; Jan 86-Oct 96 in 635B 24; Jan 96-Dec 98 in 665B 63							
C.3	Radio Bursts Fixed Frequency	715B 11	716B 16	717B 11					
C.3	Radio Bursts Fixed Frequency Select	710A 31	711A 35	712A 32	713A 34	714A 33	715A 32	716A 35	717A 32
C.4	Radio Bursts Spectral	711A102	712A 98	713A101	714A 96	715A 89	716A 91	717A 94	
C.6	Sudden Ionospheric Disturbances	711A100	712A 94	713A 98	714A 94	715A 87	716A 89	717A 92	
D.	GEOMAGNETIC EVENTS								
D.1a	Geomagnetic Indices	711A119	712A120	713A122	714A112	715A112	716A114	717A120	
D.1ba	27-day Chart of Kp Indices	711A121	712A122	713A124	714A114	715A114	716A116	717A122	
D.1cb	Monthly Mean aa Indices	711A122	712A123	713A125	714A115	715A115	716A117	717A123	
D.1d	Principal Magnetic Storms	711A126	712A127	713A129	714A119	715A121	716A121	717A127	
D.1f	Sudden Commencements/FlareEffects	711A127	712A128	713A130	714A120	715A122	716A122	717A128	
D.1g	Equatorial Indices Dst	711A124	712A125	713A127	714A117	715A119	716A119	717A125	
D.1l	Polar Cap (PC) Index	711A125	712A126	713A128	714A118	715A120	716A120	717A126	
F.	COSMIC RAYS								
F.1b	Cosmic Ray Neutron Cts (Climax)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1h	Cosmic Ray Neutron Cts (Thule)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1l	Cosmic Ray Neutron Cts (Kiel)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1n	Cosmic Ray Neutron Cts (Beijing)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1m	Cosmic Ray Neutron Cts (Haleakala)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1o	Cosmic Ray Neutron Cts (Moscow)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
F.1p	Cosmic Ray Neutron Cts (Calgary)	711A114	712A115	713A117	714A104	715A104	716A106	717A114	
H.	MISCELLANEOUS								
H.60	ISES Alert Periods	710A 20	711A 20	712A 19	713A 20	714A 20	715A 19	716A 20	717A 19

The entry "711A 50" under Sep 03, for example, means that the sunspot drawings for Sep 03 appear in SOLAR-GEOPHYSICAL DATA No. 711, Part I, and that they begin on page 50. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

CONTENTS

Comprehensive Reports — Number 717 Part II

DATA FOR **NOVEMBER 2003**

Hα SOLAR FLARES

NOVEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0001	LEAR	01	0127	0128	0137	N13	W47	10488	10	28.6	10	SF		3	E		23		F
0002	LEAR	01	0419	0422	0425	S17	W40	10486	10	29.2	6	SF		3	E		54		FH
0003	LEAR	01	0457	0457	0500	N09	W47	10488	10	28.8	3	SF		3	E		28		F
0004	LEAR	01	0502	0502	0508	S14	W33	10486	10	29.8	6	SF		3	E		39		F
0005	LEAR	01	0518	0530	0546	S14	W38	10486	10	29.4	28	SF		3	E		36		F
0006	LEAR	01	0808	0817	0826	S13	W41	10486	10	29.3	18	SF		3	E		26		F
		01	0955		1021	No Flare Patrol													
		01	1041		1339	No Flare Patrol													
		01	1512		1521	No Flare Patrol													
0007	HOLL	01	1552	1554	1609	S16	W45	10486	10	29.3	17	SF		3	E		28		F
0008	HOLL	01	1648	1717	1737	N08	W49	10488	10	29.1	49	SF		3	E		25		
0009	HOLL	01	1738	1750	1808	N09	W50	10488	10	29.1	30	SF		3	E		82		F
0010	HOLL	01	1915	1915	1920	N06	W55	10488	10	28.8	5	SF		3	E		13		
0011	HOLL	01	2228	2234	2312	S12	W60	10486	10	28.5	44	1N		3	E		203		FU
0012	LEAR	01	2236E	2248U	2310D	S13	W59	10486	10	28.6	34D	SF		1	E		79		FU
		02	0004		0224	No Flare Patrol													
		02	0302		0615	No Flare Patrol													
		02	0637		0757	No Flare Patrol													
0013	LEAR	02	0718E	0800U	0856D	S17	W55	10486	10	29.2	98D	SF		2	E		48		F
		02	0812		1340	No Flare Patrol													
0014	HOLL	02	1539	1612	1642	S14	W55	10486	10	29.6	63	SF		3	E		37		F
0015	HOLL	02	1704	1717	1954	S14	W56	10486	10	29.6	170	2B		3	E		365		UZ
0016	HOLL	02	1716	1717	1719	N06	W62	10488	10	29.2	3	SF		3	E		18		
0017	HOLL	02	1735	1736	1741	N08	W69	10488	10	28.6	6	SF		3	E		15		
0018	HOLL	02	2022	2025	2032	N08	W63	10488	10	29.2	10	SF		3	E		68		
0019	HOLL	02	2026	2026	2033	S19	W53	10486	10	29.9	7	SF		3	E		17		
0020	HOLL	02	2034	2037	2039	S20	W53	10486	10	29.9	5	SF		3	E		13		
0021	LEAR	03	0029	0029	0033	S20	W63	10486	10	29.3	4	SF		3	E		22		
0022	LEAR	03	0106	0131	0237	N10	W83	10488	10	27.9	91	2B		3	E		262		EF
0023	LEAR	03	0450	0452	0500	S21	W70	10486	10	28.9	10	SF		3	E		44		F
0024	LEAR	03	0537	0538	0541	S21	W71	10486	10	28.9	4	SF		3	E		38		
0025	LEAR	03	0948	0949	1006D	N08	W77	10488	10	28.7	18D	2F		2	E		269		F
		03	0957		1020	No Flare Patrol													
0026	SVTO	03	1021E	1053	1109	N09	W79	10488	10	28.6	48D	SF		3	E		46		F
0027	HOLL	03	1530	1530	1543	S15	W79	10486	10	28.8	13	SF		3	E		25		
0028	HOLL	03	1544	1547	1554	S15	W79	10486	10	28.8	10	SF		3	E		22		
		03	1811		1844	No Flare Patrol													
		03	1915		2249	No Flare Patrol													

NOVEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		04	0508		0604	No Flare Patrol													
		04	0957		1007	No Flare Patrol													
		04	1029		1050	No Flare Patrol													
0029	HOLL	04	1932	1957	2049	S19	W83	10486	10	29.6	77	3B		3	E		857		FZ
0030	HOLL	04	2049	2049	2054	S18	W81	10486	10	29.8	5	SF		3	E		20		
0031	LEAR	05	0238	0241	0250	S19	W89	10486	10	29.4	12	SF		3	E		95		Y
		05	0957		1010	No Flare Patrol													
		05	1023		1029	No Flare Patrol													
0032	SVTO	05	1051	1051	1058	S16	W90	10486	10	29.7	7	SF		3	E		42		
		05	1520		1557	No Flare Patrol													
		06	0956		1012	No Flare Patrol													
		06	1220		1342	No Flare Patrol													
		06	1501		1739	No Flare Patrol													
		07	0134		0447	No Flare Patrol													
		07	0956		1124	No Flare Patrol													
		07	1209		1245	No Flare Patrol													
		08	1202		1210	No Flare Patrol													
		09	1026		1126	No Flare Patrol													
		09	1138		1223	No Flare Patrol													
		09	1229		1309	No Flare Patrol													
		09	1321		1414	No Flare Patrol													
		09	1418		1423	No Flare Patrol													
		10	0148		0216	No Flare Patrol													
		10	1859		1946	No Flare Patrol													
0033	HOLL	10	2013E	2015U	2018	S10	W38	10500	11	8.0	5D	SF		3	E		28		
		10	2034		2042	No Flare Patrol													
		10	2140		2207	No Flare Patrol													
0034	LEAR	10	2317	2317	2321	N00	W51	10498	11	7.2	4	SF		3	E		27		
0035	SVTO	11	1335	1347	1426	S03	W61	10498	11	7.0	51	SF		3	E		82		FH
		11	1506		1958	No Flare Patrol													
		11	2009		2235	No Flare Patrol													
		11	2317		2331	No Flare Patrol													
		12	0048		2400	No Flare Patrol													
		13	0000		0449	No Flare Patrol													
		13	1407		2227	No Flare Patrol													
		14	0209		0328	No Flare Patrol													
		14	0652		0718	No Flare Patrol													
		14	0723		0750	No Flare Patrol													
		14	1516		2235	No Flare Patrol													
		15	0527		0556	No Flare Patrol													
		15	1004		1411	No Flare Patrol													
		15	1432		1456	No Flare Patrol													
		15	1500		1841	No Flare Patrol													
0036	HOLL	15	1858	1909	1924	N02	E38	10501	11	18.6	26	SF		3	E		41		F
		15	2353		2400	No Flare Patrol													
		16	0000		0102	No Flare Patrol													
		16	0112		0128	No Flare Patrol													
		16	0142		0227	No Flare Patrol													
0037	SVTO	16	1018E	1020U	1034	N01	E44	10501	11	19.7	16D	SF		3	E		20		
		16	1218		1225	No Flare Patrol													
		16	1331		1337	No Flare Patrol													
		16	1448		1523	No Flare Patrol													
0038	HOLL	16	1538	1539	1546	N04	E22	10502	11	18.3	8	SF		3	E		23		FH

Hα SOLAR FLARES

NOVEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Mo	CMP Day	Dur (Min)	Imp Opt	Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0039	HOLL	16	1811	1814	1838	N01	E39	10501	11	19.7	27	SF		3	E		62		F
		16	2326		2339	No Flare Patrol													
		17	0248		0254	No Flare Patrol													
		17	0402		0411	No Flare Patrol													
		17	0452		0502	No Flare Patrol													
		17	0636		0708	No Flare Patrol													
0040	LEAR	17	0859	0903	1004D	S01	E33	10501	11	19.8	65D	1N		3	E		185		FH
0041	SVTO	17	0901E	0915U	1047D	N00	E31	10501	11	19.7	106D	1F		2	E		160		FH
		17	1005		1017	No Flare Patrol													
		17	1022		1044	No Flare Patrol													
		17	1048		1211	No Flare Patrol													
		17	1229		1310	No Flare Patrol													
		17	1316		1352	No Flare Patrol													
		17	1503		1619	No Flare Patrol													
		17	2226		2242	No Flare Patrol													
		17	2351		2400	No Flare Patrol													
		18	0000		0007	No Flare Patrol													
		18	0046		0204	No Flare Patrol													
		18	0422		0515	No Flare Patrol													
		18	0606		0657	No Flare Patrol													
0042		18	0716*	0754	0928	N00	E18	10501	11	19.6	132	2N					247		FHU
	LEAR	18	0716	0754	0955	N00	E18	10501	11	19.6	159	2N		3	E		270		UF
	SVTO	18	0729	0748U	0902	N00	E19	10501	11	19.7	93	1F		2	E		224		FH
		18	1005		1353	No Flare Patrol													
		18	1507		1550	No Flare Patrol													
0043	HOLL	18	2148	2148	2151	N10	E90	10507	11	25.7	3	SF		3	E		13		
0044	HOLL	18	2311	2313	2320	S02	E10	10501	11	19.7	9	SF		3	E		20		F
0045	LEAR	19	0358	0402	0419	N01	E06	10501	11	19.6	21	1N		2	E		153		EF
		19	0501		0823	No Flare Patrol													
0046	SVTO	19	0819E	0819U	0902	N03	E01	10501	11	19.4	43D	1F		3	E		195		FU
		19	0849		0853	No Flare Patrol													
		19	0925		0942	No Flare Patrol													
		19	1005		1318	No Flare Patrol													
		19	1330		1356	No Flare Patrol													
0047	HOLL	19	1447	1512	1611	N03	W03	10501	11	19.4	84	SF		3	E		62		
		19	1710		1750	No Flare Patrol													
		20	0000		0434	No Flare Patrol													
0048	LEAR	20	0148	0152	0238	N03	W08	10501	11	19.5	50	1N		3	E		110		F
		20	0437		0447	No Flare Patrol													
0049	LEAR	20	0448E	0449U	0452	S17	E73	10508	11	25.7	4D	SF		3	E		17		F
0050	LEAR	20	0727	0728	0735	N03	W12	10501	11	19.4	8	SF		3	E		97		F
0051	LEAR	20	0738	0740	0836	N01	W08	10501	11	19.7	58	2B		3	E		371		FH
		20	1006		1355	No Flare Patrol													
0052	HOLL	20	1437	1440	1457	N09	E59	10507	11	25.0	20	SF		3	E		26		
		20	1541		1616	No Flare Patrol													
		20	1954		2036	No Flare Patrol													

NOVEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Mo	CMP Day	Dur (Min)	Imp	Opt Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0053	LEAR	20	2346	2354	2431	N02	W17	10501	11	19.7	45	2B		3	E		279		F
0054	LEAR	21	0436	0436	0446	N12	E46	10507	11	24.6	10	SF		3	E		11		
0055	LEAR	21	0521	0528	0548	N13	E45	10507	11	24.6	27	SF		4	E		45		FH
0056	LEAR	21	0940	0944	0948	S23	E36	10506	11	24.2	8	SF		3	E		15		
		21	1006		1357	No Flare Patrol													
		21	1455		1517	No Flare Patrol													
		21	1524		1529	No Flare Patrol													
		21	1541		1557	No Flare Patrol													
0057	LEAR	22	0145	0150	0156	N05	W31	10501	11	19.7	11	SF		3	E		18		F
0058	LEAR	22	0526	0526	0528	N03	W37	10501	11	19.5	2	SF		3	E		14		F
		22	1006		1121	No Flare Patrol													
		22	1143		1405	No Flare Patrol													
0059	HOLL	22	1836	1837	1839	N07	E26	10507	11	24.7	3	SF		3	E		23		
		22	1957		2239	No Flare Patrol													
		23	0533		0656	No Flare Patrol													
0060	LEAR	23	0716	0717	0721	S15	E26	10508	11	25.3	5	SF		3	E		13		F
0061	SVTO	23	0856E	0857U	0908	N00	W51	10501	11	19.6	12D	SF		3	E		16		
		23	1023		1036	No Flare Patrol													
		23	1125		1137	No Flare Patrol													
0062	HOLL	23	1602	1602	1610	S21	E12	10506	11	24.6	8	SF		3	E		27		F
0063	LEAR	23	2341	2342	2357	S13	E12	10508	11	24.9	16	SF		3	E		20		F
0064	LEAR	24	0046	0048	0051	S19	E14	10508	11	25.1	5	SF		2	E		26		F
		24	1009		1104	No Flare Patrol													
		24	1120		1132	No Flare Patrol													
		24	1141		1358	No Flare Patrol													
0065	HOLL	24	1852	1852	1900	S08	E59	10509	11	29.2	8	SF		3	E		34		
0066	LEAR	25	0558	0600	0610	S14	W05	10508	11	24.9	12	SF		3	E		52		F
		25	1101		1717	No Flare Patrol													
		25	1755		2154	No Flare Patrol													
		26	1006		1359	No Flare Patrol													
		26	1424		1429	No Flare Patrol													
0067	HOLL	26	1617	1618	1625	S13	W14	10508	11	25.6	8	SF		3	E		38		F
0068	HOLL	26	1714	1716	1718	S19	W18	10508	11	25.3	4	SF		3	E		16		
		26	2103		2113	No Flare Patrol													
0069	LEAR	27	0026	0029	0036	S12	E26	10509	11	29.0	10	SF		3	E		72		
0070	LEAR	27	0636	0646	0651	S15	W23	10508	11	25.5	15	SF		3	E		39		
0071	LEAR	27	0803	0812	0910	S14	W27	10508	11	25.3	67	SF		3	E		96		F
0072	SVTO	27	0808E	0826	0859	S13	W30	10508	11	25.1	51D	1F		3	E		144		FH
0073	LEAR	27	0834	0834	0843	S14	W37	10514	11	24.6	9	SF		3	E		10		F
		27	0929		1135	No Flare Patrol													
		27	1146		1158	No Flare Patrol													
		27	1215		1222	No Flare Patrol													

Hα SOLAR FLARES

NOVEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		27	1326		1359	No Flare Patrol														
0074	HOLL	27	1841	1844	1854	S14	W34	10508	11	25.2	13	SF			3	E		33		F
0075	LEAR	28	0146	0147	0156	S14	W36	10508	11	25.3	10	SF			3	E		16		F
		28	1011		1052	No Flare Patrol														
		28	1158		1208	No Flare Patrol														
		28	1219		1337	No Flare Patrol														
		28	1350		1400	No Flare Patrol														
		28	1735		1753	No Flare Patrol														
		28	1801		1809	No Flare Patrol														
		28	1953		2006	No Flare Patrol														
		28	2019		2059	No Flare Patrol														
		28	2203		2207	No Flare Patrol														
0076	LEAR	29	0330	0331U	0338	S20	E05	10510	11	29.5	8	SF			3	E		21		FH
		29	1019		1300	No Flare Patrol														
0077	HOLL	29	1801	1803	1821	S23	E02	10510	11	29.9	20	SF			3	E		31		F
0078	HOLL	29	2106	2107	2119	S25	E00	10510	11	29.9	13	1F			3	E		102		F
		30	1013		1206	No Flare Patrol														
		30	1212		1401	No Flare Patrol														

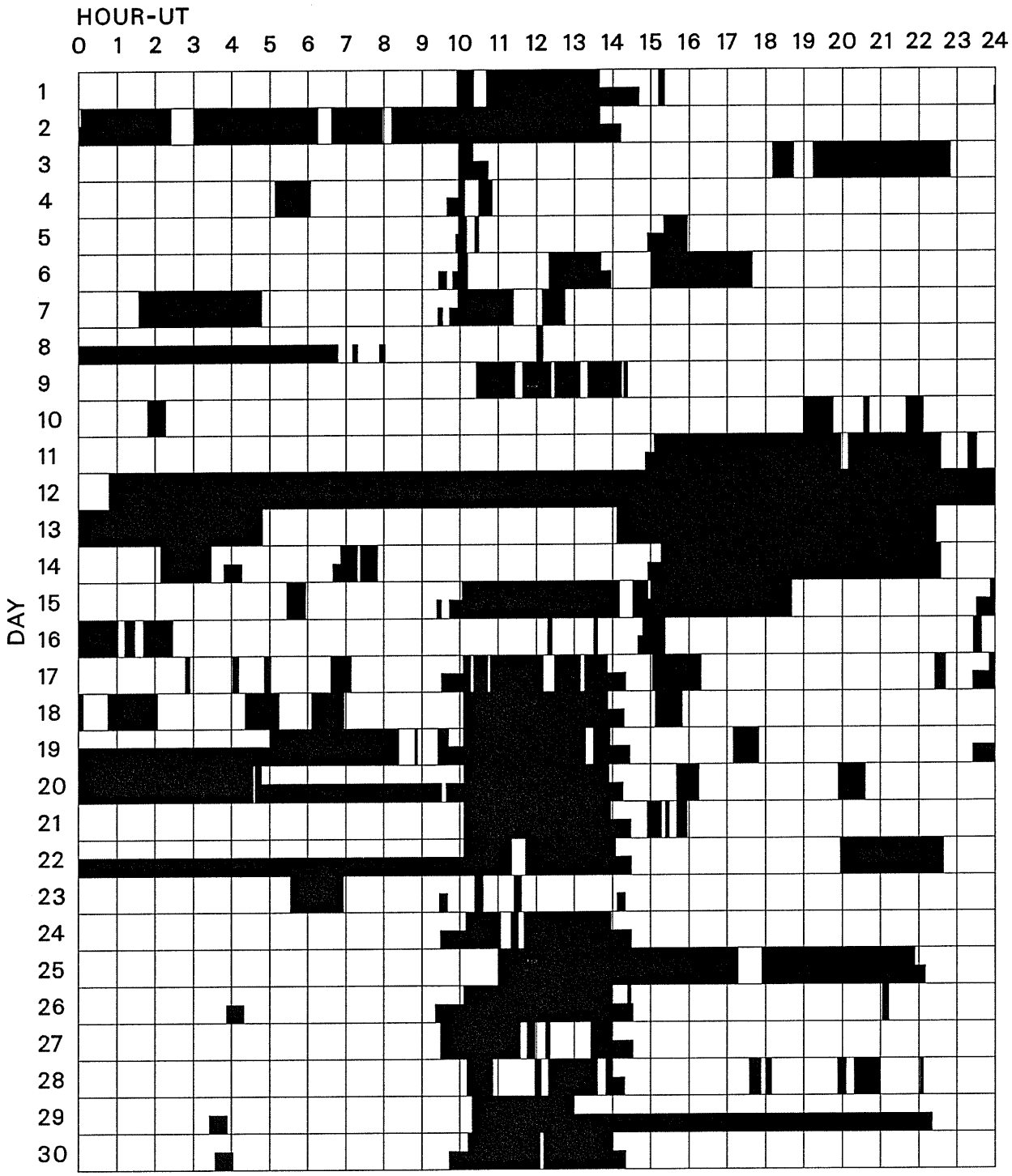
"Remarks"

A = Eruptive prominence whose base is less than 90 degrees from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by high-speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the H and K lines of Ca II.
P = Flare shows Helium D3 in emission.
Q = Flare shows Balmer continuum in emission.
R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
S = Brightness follows disappearance of filament in same position.
T = Region active all day.
U = Two bright branches, parallel or converging.
V = Occurrence of an explosive phase; important, expansion within roughly 1 minute that often includes a significant intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide H-alpha line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Observation Type: C=Cinematographic, E=Electronic, P=Photographic, V=Visual

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

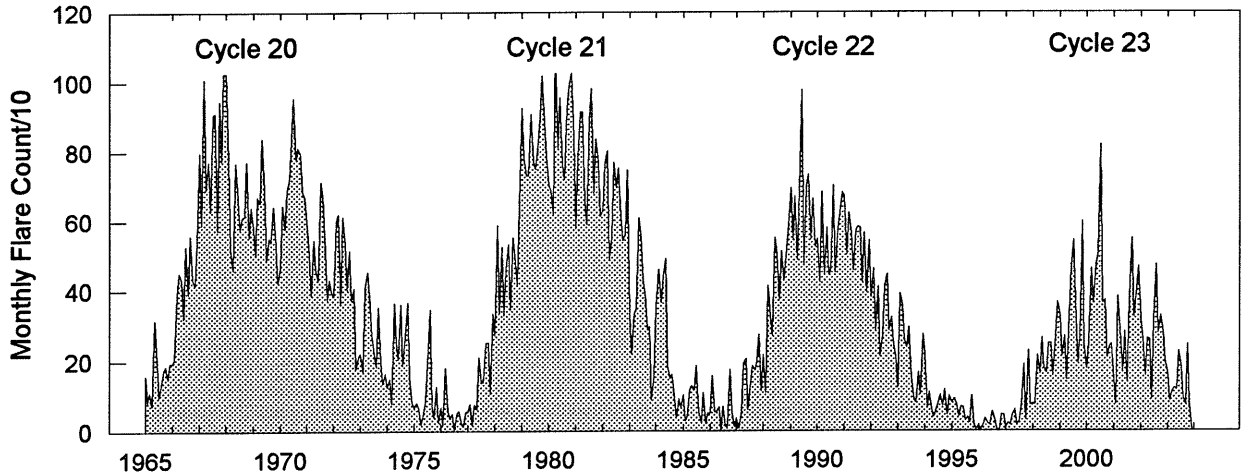
NOVEMBER 2003



Times of no flare patrol, shown here as shaded areas, combine reports from the stations listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind (neither visual or cinematographic): portions of a panel with only the bottom half shaded mark times of only visual patrol.

Holloman Learmonth San Vito

Monthly Counts of Grouped Solar Flares
Jan 1965 - Nov 2003



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1965	158	85	110	74	315	231	99	127	173	184	150	193	1899
1966	194	205	390	449	429	323	528	391	558	432	417	543	4859
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	551	502	375	513	429	518	587	4816
1989	695	544	672	488	691	977	474	699	733	547	665	526	7711
1990	550	424	684	442	580	445	454	703	449	574	623	682	6610
1991	672	503	625	570	458	574	582	581	425	565	396	544	6495
1992	380	462	287	412	214	271	413	447	287	325	248	206	3952
1993	123	392	357	262	237	296	154	92	82	167	104	275	2541
1994	217	67	111	60	40	56	81	101	72	117	45	99	1066
1995	82	95	77	42	69	66	29	37	23	99	14	6	639
1996	14	3	15	34	21	16	54	31	3	0	44	45	280
1997	8	22	18	43	59	18	26	75	188	31	228	74	790
1998	78	76	216	161	264	177	164	248	249	155	268	367	2423
1999	330	212	271	145	330	466	544	368	192	264	598	243	3963
2000	175	248	462	362	473	505	818	364	372	208	241	246	4474
2001	147	77	383	284	164	282	137	376	549	325	405	468	3597
2002	318	261	155	263	259	91	318	474	280	329	279	196	3223
2003	164	87	112	122	117	226	181	94	73	245	78		1499

The term 'grouped' means observations of the same event by different sites were lumped together and counted as one.

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	127	TORN	44	NS	0630.0E		350.0D		65.0		V=1
	204	IZMI	44	NS	0700.0E		100.0D		95.0		
	204	IZMI	44	NS	0840.0E		200.0D		30.0		
	245	SGMR	43	NS	1153.0	2044.0	536.0	280.0			QL=4 ST=2 TYP=1
	410	SGMR	43	NS	1158.0	1202.0	191.0	110.0			QL=4 ST=2 TYP=1
	245	PALE	43	NS	1713.0	1754.0	595.0	250.0			QL=4 ST=2 TYP=1
	245	LEAR	43	NS	2157.0	2238.0	718.0	270.0			QL=4 ST=2 TYP=1
	410	LEAR	43	NS	2354.0	2359.0	24.0	69.0			QL=4 ST=2 TYP=1
	410	LEAR	8	S	0108.0	0108.0	U	90.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0108.0	0108.0	U	69.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	0110.0	0111.0	1.0	20.0			
	500	HIRA	8	S	0127.0	0129.0	2.0	35.0			
	2804	VORO	42	SER	0129.2	0148.0	18.8	30.8			
	2804	VORO	42	SER	0129.2	0130.4	3.0	6.8			
	2840	PEKG	5	S	0145.0	0148.1	9.0	27.0			
	500	HIRA	8	S	0208.0	0209.0	2.0	25.0			
	500	HIRA	8	S	0234.0	0234.0	1.0	75.0			
	245	LEAR	49	GB	0304.0	0304.0	U	1300.0			QL=2 ST=2 TYP=6
	245	PALE	49	GB	0304.0	0304.0	U	2000.0			QL=4 ST=2 TYP=6
	245	LEAR	8	S	0426.0	0427.0	1.0	100.0			QL=4 ST=2 TYP=3
	2840	PEKG	5	S	0433.0	0436.2	6.0	12.5			
	2840	PEKG	1	S	0625.0	0628.5	8.0	8.3			
	245	SVTO	48	C	0708.0	0711.0	3.0	80.0			QL=2 ST=2 TYP=8
	15400	LEAR	8	S	0709.0	0709.0	U	160.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	0709.0	0709.0	U	150.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0711.0	0711.0	U	73.0			QL=2 ST=2 TYP=3
	245	LEAR	8	S	0739.0	0739.0	U	85.0			QL=2 ST=2 TYP=3
	245	SVTO	8	S	0743.0	0743.0	U	100.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	0841.0	0843.0	10.0	84.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0843.0	0843.0	2.0	150.0			QL=4 ST=2 TYP=3
	15400	LEAR	8	S	0843.0	0843.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0843.0	0843.0	8.0	130.0			QL=4 ST=2 TYP=3
	15400	SVTO	4	S/F	0843.0	0843.0	8.0	140.0			QL=4 ST=2 TYP=3
	3000	IZMI	22	GRF	0843.4	0853.0	16.0	14.0	7.4		
	3000	IZMI	20	GRF	0922.3	0923.3	1.9	12.0	5.2		
	3000	IZMI	7	C	1138.0	1140.1	2.6	25.0	11.0		
	4995	SVTO	8	S	1139.0	1139.0	1.0	66.0			QL=4 ST=2 TYP=3
	3000	IZMI	7	C	1144.0	1145.2	1.6	13.0	6.0		
	245	SGMR	8	S	1149.0	1149.0	2.0	64.0			QL=2 ST=2 TYP=3
	15400	SGMR	8	S	1150.0	1150.0	2.0	110.0			QL=2 ST=2 TYP=3
	8800	SVTO	8	S	1150.0	1150.0	U	53.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	1150.0	1150.0	1.0	180.0			QL=4 ST=2 TYP=3
	204	IZMI	25	R	1151.6		8.4D		130.0		
	410	SGMR	8	S	1152.0	1152.0	U	50.0			QL=2 ST=2 TYP=3
	245	SGMR	8	S	1236.0	1236.0	U	390.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	1404.8	1405.8	3.1	25.0	12.0		
	410	SGMR	48	C	1415.0	1415.0	U	160.0			QL=4 ST=2 TYP=8
	245	SGMR	8	S	1647.0	1647.0	U	400.0			QL=4 ST=2 TYP=3
	2800	PENT	21	GRF	1733.0	1750.0	115.0	22.0			
	9500	CUBA	4	S/F	1743.2	1744.8	10.2	40.0	20.0		
	4995	SGMR	4	S/F	1744.0	1750.0	7.0	53.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1744.0	1750.0	6.0	69.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1744.0	1744.0	8.0	56.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	1758.0	1758.0	1.0	1400.0			QL=4 ST=2 TYP=6
	245	SGMR	49	GB	1758.0	1758.0	U	1200.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	1801.0	1801.0	1.0	710.0			QL=4 ST=2 TYP=6
	245	SGMR	49	GB	1801.0	1801.0	U	600.0			QL=4 ST=2 TYP=6
	245	PALE	8	S	1810.0	1811.0	1.0	300.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2035.0	2035.0	U	330.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	2045.0	2045.0	U	570.0			QL=4 ST=2 TYP=6
	245	PALE	8	S	2123.0	2124.0	1.0	410.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	2214.0	2214.0	U	530.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	2221.0	2222.0	1.0	720.0			QL=4 ST=2 TYP=6
	8800	LEAR	49	GB	2228.0	2230.0	14.0	560.0			QL=4 ST=2 TYP=6
	2695	LEAR	4	S/F	2228.0	2232.0	16.0	91.0			QL=4 ST=2 TYP=3
	4995	LEAR	4	S/F	2228.0	2230.0	16.0	330.0			QL=4 ST=2 TYP=3
	2800	HIRA	7	C	2228.0	2232.0	32.0	85.0			
	15400	LEAR	4	S/F	2229.0	2233.0	13.0	170.0			QL=4 ST=2 TYP=3
	4995	PALE	48	C	2229.0	2230.0	10.0	370.0			QL=4 ST=2 TYP=8

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	8800	PALE	48	C	2229.0	2230.0	10.0	510.0			QL=4 ST=2 TYP=8
	500	HIRA	7	C	2229.0	2248.0	53.0	45.0			
	2695	PALE	4	S/F	2230.0	2232.0	4.0	95.0			QL=4 ST=2 TYP=3
	1415	LEAR	4	S/F	2230.0	2233.0	14.0	49.0			QL=4 ST=2 TYP=3
	15400	PALE	48	C	2230.0	2233.0	10.0	160.0			QL=4 ST=2 TYP=8
	245	LEAR	49	GB	2233.0	2235.0	3.0	62000.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	2234.0	2235.0	6.0	90000.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	2236.0	2237.0	1.0	230.0			QL=4 ST=2 TYP=3
	410	PALE	48	C	2237.0	2237.0	5.0	400.0			QL=4 ST=2 TYP=8
	2804	VORO	4	S/F	2255.0	2255.8	5.0	21.1			
	245	PALE	49	GB	2307.0	2309.0	2.0	10000.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	2315.0	2315.0	U	1100.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	2319.0	2319.0	U	1600.0			QL=4 ST=2 TYP=6
	500	HIRA	7	C	2337.0	2402.0	45.0	85.0			
	2804	VORO	8	S	2340.8	2341.2	0.6	11.7			
	2804	VORO	46	C	2343.8	2347.5	5.0	14.0			
	610	LEAR	48	C	2345.0	2351.0	9.0	160.0			QL=4 ST=2 TYP=8
	1415	LEAR	8	S	2348.0	2348.0	U	84.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	2351.0	2352.0	2.0	68.0			QL=4 ST=2 TYP=3
02	410	PALE	43	NS	0007.0	0007.0	11.0	61.0			QL=4 ST=2 TYP=1
	127	TORN	44	NS	0630.0E		510.0D	190.0	42.0		V=1
	204	IZMI	44	NS	0700.0E		300.0D		45.0		
	410	SGMR	43	NS	1139.0	1847.0	438.0	350.0			QL=4 ST=2 TYP=1
	245	SGMR	43	NS	1139.0	1806.0U	435.0	340.0			QL=4 ST=2 TYP=1
	245	SVTO	43	NS	1146.0	1321.0	218.0	250.0			QL=4 ST=2 TYP=1
	410	SVTO	43	NS	1146.0	1312.0	218.0	180.0			QL=4 ST=2 TYP=1
	610	SGMR	43	NS	1216.0	1217.0	52.0	57.0			QL=4 ST=2 TYP=1
	610	SGMR	43	NS	1840.0	1846.0	16.0	73.0			QL=4 ST=2 TYP=1
	245	PALE	43	NS	1840.0	1852.0	108.0	300.0			QL=4 ST=2 TYP=1
	410	PALE	43	NS	1840.0	1847.0	108.0	230.0			QL=4 ST=2 TYP=1
	610	PALE	43	NS	1840.0	1847.0	108.0	86.0			QL=4 ST=2 TYP=1
	2840	PEKG	1	S	0247.0	0250.9	9.0	6.2			
	245	LEAR	8	S	0250.0	0250.0	2.0	180.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	0251.0	0251.0	1.0	20.0			
	245	PALE	8	S	0251.0	0251.0	U	220.0			QL=4 ST=2 TYP=3
	2840	PEKG	20	GRF	0713.0	0728.0	52.0	10.9			
	8800	LEAR	4	S/F	0859.0	0900.0	5.0	440.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0859.0	0900.0	5.0	450.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0900.0	0900.0	1.0	310.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0900.0	0900.0	2.0	74.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0900.0	0900.0	1.0	65.0			QL=4 ST=2 TYP=3
	4995	LEAR	8	S	0900.0	0900.0	2.0	180.0			QL=4 ST=2 TYP=3
	610	LEAR	4	S/F	0900.0	0900.0	3.0	160.0			QL=4 ST=2 TYP=3
	15400	LEAR	4	S/F	0900.0	0900.0	3.0	390.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0900.0	0900.0	2.0	84.0			QL=4 ST=2 TYP=3
	1415	SVTO	4	S/F	0900.0	0900.0	3.0	69.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	0900.0	0900.0	4.0	240.0			QL=4 ST=2 TYP=3
	15400	SVTO	4	S/F	0900.0	0900.0	3.0	360.0			QL=4 ST=2 TYP=3
	410	LEAR	4	S/F	0900.0	0900.0	12.0	430.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0900.2	0900.8	1.3	197.0			
	204	IZMI	42	SER	0902.4	0903.7	4.0	102.0			
	33	UPIC	46	C	0919.0	0921.5	10.0				
	204	IZMI	7	C	0942.5	0942.6	0.2	39.0			
	204	IZMI	41	F	1122.8	1123.2	0.6	85.0			
	204	IZMI	41	F	1128.4	1129.2	1.1	98.0			
	204	IZMI	41	F	1131.3	1131.7	1.0	76.0			
	4995	SGMR	48	C	1232.0	1247.0	688.0	160.0			QL=4 ST=3 TYP=8
	8800	SGMR	48	C	1233.0	1247.0	687.0	210.0			QL=4 ST=3 TYP=8
	15400	SVTO	4	S/F	1235.0	1238.0	7.0	150.0			QL=2 ST=2 TYP=3
	15400	SGMR	48	C	1235.0	1238.0	14.0	170.0			QL=4 ST=3 TYP=8
	15400	SGMR	48	C	1236.0	1238.0	19.0	170.0			QL=4 ST=2 TYP=8
	4995	SVTO	4	S/F	1237.0	1238.0	4.0	57.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	1237.0	1238.0	5.0	100.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	1238.0	1238.0	1.0	22.0			QL=2 ST=2 TYP=3
	4995	SVTO	4	S/F	1244.0	1247.0	5.0	95.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	1246.0	1246.0	1.0	24.0			QL=2 ST=2 TYP=3
	8800	SVTO	8	S	1246.0	1247.0	1.0	65.0			QL=2 ST=2 TYP=3
	15400	SGMR	8	S	1439.0	1439.0	U	100.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
02	8800	SVTO	8	S	1439.0	1439.0	1.0	63.0			QL=2 ST=2 TYP=3
	15400	SVTO	8	S	1439.0	1439.0	1.0	78.0			QL=2 ST=2 TYP=3
	610	SGMR	4	S/F	1539.0	1544.0	9.0	56.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1539.0	1544.0	10.0	140.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1541.0	1544.0	8.0	120.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1542.0	1545.0	7.0	75.0			QL=4 ST=2 TYP=3
	2800	PENT	47	GB	1645.0		129.0U				
	2695	PALE	48	C	1703.0	1717.0	55.0	10000.0			QL=4 ST=2 TYP=8
	4995	PALE	48	C	1703.0	1722.0	60.0	12000.0			QL=4 ST=2 TYP=8
	8800	PALE	48	C	1703.0	1719.0	66.0	17000.0			QL=4 ST=2 TYP=8
	15400	PALE	48	C	1703.0	1719.0	87.0	42000.0			QL=4 ST=2 TYP=8
	8800	SGMR	48	C	1704.0	1721.0	74.0	20000.0			QL=4 ST=2 TYP=8
	4995	SGMR	48	C	1704.0	1721.0	87.0	11000.0			QL=4 ST=2 TYP=8
	15400	SGMR	48	C	1705.0	1716.0	72.0	30000.0			QL=4 ST=2 TYP=8
	2695	SGMR	48	C	1706.0	1717.0	75.0	7700.0			QL=4 ST=2 TYP=8
	410	SGMR	48	C	1711.0	1715.0	85.0	12000.0			QL=4 ST=2 TYP=8
	1415	SGMR	48	C	1711.0	1720.0	85.0	9400.0			QL=4 ST=2 TYP=8
	410	PALE	48	C	1712.0	1715.0	81.0	7400.0			QL=4 ST=2 TYP=8
	610	SGMR	48	C	1712.0	1718.0	84.0	7100.0			QL=4 ST=2 TYP=8
	610	PALE	4	S/F	1712.0	1715.0	408.0	380.0			QL=4 ST=1 TYP=3
	1415	PALE	48	C	1713.0	1720.0	56.0	7000.0			QL=4 ST=2 TYP=8
	245	SGMR	48	C	1713.0	1715.0	83.0	24000.0			QL=4 ST=2 TYP=8
	245	PALE	48	C	1714.0	1715.0	81.0	25000.0			QL=4 ST=2 TYP=8
	610	PALE	48	C	1829.0	1831.0	8.0	170.0			QL=4 ST=2 TYP=8
	245	PALE	8	S	2040.0	2040.0	U	260.0			QL=4 ST=2 TYP=3
03	127	TORN	44	NS	0630.0E		510.0D		120.0		V=1
	204	IZMI	44	NS	0700.0E		300.0D		50.0		
	2840	PEKG	3	S	0055.0	0121.4	57.0	320.0			
	610	LEAR	48	C	0058.0	0122.0	39.0	430.0			QL=4 ST=2 TYP=8
	500	HIRA	7	C	0058.0	0148.0	56.0	175.0			
	2804	VORO	46	C	0058.0	0121.6	67.0	300.4			
	610	PALE	48	C	0059.0	0059.0	17.0	270.0			QL=4 ST=2 TYP=8
	2800	HIRA	7	C	0059.0	0124.0	51.0	315.0			
	610	PALE	48	C	0059.0	0122.0	52.0	580.0			QL=4 ST=2 TYP=8
	4995	PALE	48	C	0059.0	0121.0	50.0	440.0			QL=4 ST=2 TYP=8
	1415	LEAR	48	C	0100.0	0103.0	12.0	180.0			QL=4 ST=2 TYP=8
	1415	LEAR	48	C	0100.0	0103.0	27.0	180.0			QL=4 ST=2 TYP=8
	1415	PALE	48	C	0101.0	0103.0	11.0	190.0			QL=4 ST=2 TYP=8
	1415	PALE	48	C	0101.0	0103.0	25.0	190.0			QL=4 ST=2 TYP=8
	8800	PALE	48	C	0101.0	0121.0	46.0	520.0			QL=4 ST=2 TYP=8
	15400	LEAR	48	C	0101.0	0121.0	61.0	590.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0102.0	0121.0	35.0	500.0			QL=4 ST=2 TYP=8
	15400	PALE	48	C	0102.0	0121.0	50.0	520.0			QL=4 ST=2 TYP=8
	2695	PALE	4	S/F	0103.0	0112.0	12.0	83.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	0103.0	0121.0	31.0	320.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	0105.0	0105.0	6.0	1200.0			QL=4 ST=2 TYP=6
	245	PALE	48	C	0105.0	0105.0	56.0	1200.0			QL=4 ST=2 TYP=8
	4995	LEAR	4	S/F	0110.0	0121.0	23.0	300.0			QL=4 ST=2 TYP=3
	410	PALE	48	C	0117.0	0148.0	31.0	450.0			QL=4 ST=2 TYP=8
	2695	LEAR	4	S/F	0118.0	0121.0	10.0	240.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0120.0	0120.0	U	100.0			QL=4 ST=2 TYP=3
	410	LEAR	48	C	0120.0	0147.0	28.0	250.0			QL=4 ST=2 TYP=8
	245	LEAR	48	C	0121.0	0158.0	39.0	100.0			QL=4 ST=2 TYP=8
	410	PALE	8	S	0234.0	0234.0	U	64.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0235.0	0236.0	2.0	150.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	0242.0	0245.0	8.0	110.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0247.0	0248.0	1.0	100.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0324.0	0324.0	1.0	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0501.0	0501.0	1.0	54.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	0551.0	0553.0	3.0	75.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0556.0	0556.0	1.0	68.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0646.0	0646.0	U	74.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0646.0	0646.0	U	77.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0730.0	0731.0	1.0	140.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0730.0	0731.0	1.0	120.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	0738.0	0738.0	U	52.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0742.0	0742.0	U	71.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0742.0	0742.0	U	71.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	245	LEAR	8	S	0746.0	0746.0	U	56.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0750.0	0750.0	U	57.0			QL=4 ST=2 TYP=3
	8800	SVTO	48	C	0946.0	1006.0	89.0	15000.0			QL=4 ST=2 TYP=8
	15400	SVTO	48	C	0946.0	1006.0	100.0	17000.0			QL=4 ST=2 TYP=8
	15400	LEAR	48	C	0947.0	1006.0	42.0	16000.0			QL=4 ST=2 TYP=8
	2695	SVTO	48	C	0947.0	1006.0	99.0	4400.0			QL=4 ST=2 TYP=8
	4995	SVTO	48	C	0947.0	1006.0	99.0	10000.0			QL=4 ST=2 TYP=8
	3000	IZMI	46	C	0947.5	1006.8	104.3	3805.0			
	2695	LEAR	48	C	0948.0	1027.0	43.0	6100.0			QL=4 ST=2 TYP=8
	4995	LEAR	48	C	0948.0	1006.0	43.0	7500.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0948.0	1007.0	43.0	19000.0			QL=4 ST=2 TYP=8
	610	SVTO	48	C	0948.0	0957.0	99.0	820.0			QL=2 ST=2 TYP=8
	1415	SVTO	48	C	0948.0	1000.0	98.0	1400.0			QL=4 ST=2 TYP=8
	410	SVTO	49	GB	0948.0	0952.0	97.0	56000.0			QL=2 ST=2 TYP=6
	33	UPIC	47	GB	0948.5	0951.5	47.5				
	204	IZMI	42	SER	0948.8	0949.5	1.1	2668.0			
	245	LEAR	48	C	0949.0	0954.0	23.0	3500.0			QL=4 ST=2 TYP=8
	410	LEAR	49	GB	0949.0	0952.0	23.0	52000.0			QL=4 ST=2 TYP=6
	1415	LEAR	48	C	0949.0	1027.0	42.0	2900.0			QL=4 ST=2 TYP=8
	245	SVTO	48	C	0949.0	0953.0	91.0	3900.0			QL=4 ST=2 TYP=8
	127	TORN	49	GB	0949.2	0952.7	46.0	8400.0	660.0		
	610	LEAR	48	C	0950.0	0957.0	19.0	730.0			QL=4 ST=2 TYP=8
	204	IZMI	42	SER	0950.2	0951.8	2.7	21278.0			
	204	IZMI	42	SER	0953.1	0954.7	3.1	536.0			
	204	IZMI	46	C	0956.2	0959.4	19.6	365.0			
	610	SVTO	8	S	1226.0	1226.0	1.0	74.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1233.0	1238.0	5.0	87.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1245.0	1247.0	7.0	57.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1252.0	1252.0	U	63.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1447.0	1447.0	U	68.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1447.0	1447.0	U	54.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1455.0	1456.0	1.0	84.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1456.0	1456.0	U	57.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1458.0	1458.0	U	53.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1517.0	1517.0	U	100.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1517.0	1517.0	1.0	82.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1527.0	1527.0	14.0	55.0			QL=4 ST=2 TYP=3
	15400	SGMR	49	GB	1528.0	1531.0	13.0	1400.0			QL=4 ST=2 TYP=6
	8800	SGMR	49	GB	1529.0	1531.0	12.0	1000.0			QL=4 ST=2 TYP=6
	4995	SGMR	49	GB	1530.0	1531.0	11.0	590.0			QL=4 ST=2 TYP=6
	2695	SGMR	4	S/F	1530.0	1531.0	11.0	210.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1534.0	1534.0	7.0	180.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1558.0	1558.0	U	140.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1613.0	1613.0	U	53.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1740.0	1740.0	U	51.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1809.0	1809.0	U	60.0			QL=4 ST=2 TYP=3
	245	PALE	48	C	1810.0	1810.0	4.0	100.0			QL=4 ST=2 TYP=8
	245	SGMR	8	S	1813.0	1813.0	U	66.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1901.0	1902.0	1.0	67.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1901.0	1901.0	U	52.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1934.0	1934.0	U	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1934.0	1934.0	U	75.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1937.0	1937.0	U	73.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1937.0	1937.0	U	55.0			QL=4 ST=2 TYP=3
	9500	CUBA	21	GRF	2004.0U	2022.0	47.0D	85.0	42.0		
	9500	CUBA	2	S/F	2030.0	2033.3	6.4	66.0	33.0		
	15400	PALE	8	S	2033.0	2033.0	U	55.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	2116.0	2122.0	12.0	3.0			
04	245	PALE	43	NS	0134.0	0208.0	87.0	130.0			QL=4 ST=2 TYP=1
	245	LEAR	43	NS	0143.0	0530.0	493.0	210.0			QL=4 ST=2 TYP=1
	410	LEAR	43	NS	0426.0	0518.0	1174.0	120.0			QL=4 ST=2 TYP=1
	127	TORN	44	NS	0630.0E		490.0D		16.0		V=2
	204	IZMI	44	NS	0700.0E		300.0D		50.0		
	245	SGMR	43	NS	1141.0	1144.0U	561.0	170.0			QL=4 ST=2 TYP=1
	245	PALE	43	NS	1653.0	1810.0	252.0	110.0			QL=4 ST=2 TYP=1
	245	PALE	8	S	0014.0	0014.0	1.0	78.0			QL=4 ST=2 TYP=3
	2840	PEKG	3	S	0039.0	0045.0	11.0	23.0			
	2800	HIRA	1	S	0042.0	0045.0	6.0	25.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	2804	VORO	2	S/F	0042.2	0044.6	8.1	23.9			
	245	PALE	8	S	0043.0	0044.0	1.0	100.0			QL=4 ST=2 TYP=3
	2840	PEKG	1	S	0400.0	0404.8	8.0	6.1			
	15400	LEAR	8	S	0404.0	0404.0	1.0	80.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0505.0	0505.0	1.0	310.0			QL=2 ST=2 TYP=3
	500	HIRA	42	SER	0513.0	0554.0	44.0	30.0			
	2840	PEKG	5	S	0519.0	0521.2	9.0	15.6			
	2840	PEKG	45	C	0540.0	0553.6	31.0	78.0			
	2800	HIRA	7	C	0545.0	0554.0	14.0	70.0			
	8800	LEAR	48	C	0545.0	0549.0	14.0	1100.0			QL=4 ST=2 TYP=8
	15400	LEAR	48	C	0545.0	0549.0	14.0	1300.0			QL=4 ST=2 TYP=8
	8800	SVTO	4	S/F	0546.0	0548.0	3.0	460.0			QL=2 ST=2 TYP=3
	4995	LEAR	48	C	0546.0	0554.0	11.0	360.0			QL=4 ST=2 TYP=8
	4995	SVTO	8	S	0548.0	0548.0	U	49.0			QL=2 ST=2 TYP=3
	2695	LEAR	4	S/F	0549.0	0553.0	5.0	59.0			QL=4 ST=2 TYP=3
	4995	SVTO	48	C	0552.0	0553.0	6.0	260.0			QL=2 ST=2 TYP=8
	8800	SVTO	48	C	0552.0	0553.0	6.0	700.0			QL=2 ST=2 TYP=8
	204	IZMI	25	R	1005.0		115.0D		160.0		
	15400	SVTO	8	S	1117.0	1117.0	1.0	100.0			QL=4 ST=2 TYP=3
	33	UPIC	46	C	1146.0	1158.0	13.5				UNCERTN
	4995	SGMR	4	S/F	1344.0	1345.0	4.0	140.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1344.0	1345.0	8.0	310.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1344.0	1345.0	3.0	190.0			QL=4 ST=2 TYP=3
	15400	SVTO	4	S/F	1344.0	1345.0	3.0	240.0			QL=4 ST=2 TYP=3
	9500	CUBA	22	GRF	1440.0	1446.0	21.0	17.0	8.0		
	9500	CUBA	1	S	1601.8	1602.2	1.2	21.0	10.0		
	9500	CUBA	20	GRF	1641.0	1645.0	16.0	16.0	8.0		
	9500	CUBA	2	S/F	1717.0	1719.7	7.0	24.0	12.0		
	4995	PALE	8	S	1811.0	1813.0	2.0	53.0			QL=4 ST=2 TYP=3
	9500	CUBA	31	ABS	1913.5U	1925.1	14.0D	-22.0	-11.0		
	2800	PENT	47	GB	1925.0		239.0U				
	9500	CUBA	28	PRE	1927.5	1930.1	5.3	80.0	40.0		
	8800	SGMR	8	S	1929.0	1929.0	2.0	60.0			QL=4 ST=2 TYP=3
	2695	SGMR	48	C	1931.0	1941.0	12.0	7500.0			QL=4 ST=2 TYP=8
	4995	SGMR	48	C	1931.0	1942.0	12.0	10000.0			QL=4 ST=2 TYP=8
	245	SGMR	49	GB	1931.0	1934.0	12.0	2200.0			QL=4 ST=2 TYP=6
	8800	SGMR	49	GB	1931.0	1942.0	12.0	13000.0			QL=4 ST=2 TYP=6
	245	PALE	48	C	1932.0	1941.0	28.0	4800.0			QL=4 ST=2 TYP=8
	4995	SGMR	48	C	1932.0E	1942.0	51.0D	10000.0			QL=4 ST=3 TYP=8
	8800	SGMR	48	C	1932.0E	1942.0	51.0D	13000.0			QL=4 ST=3 TYP=8
	9500	CUBA	49	GB	1932.8	1955.2	41.4	3699.0	1849.0		
	9500	CUBA	49	GB	1932.8	1945.8	41.4	4837.0	2418.0		
	410	SGMR	48	C	1933.0	1933.0	7.0	610.0			QL=4 ST=2 TYP=8
	245	SGMR	49	GB	1933.0	1934.0	1.0	2200.0			QL=4 ST=2 TYP=6
	245	SGMR	49	GB	1933.0	1934.0	7.0	2200.0			QL=4 ST=2 TYP=6
	410	SGMR	49	GB	1933.0	1933.0	1.0	610.0			QL=4 ST=2 TYP=6
	410	SGMR	48	C	1933.0E	1942.0	10.0D	3000.0			QL=4 ST=3 TYP=8
	15400	SGMR	49	GB	1933.0E	1943.0	10.0D	22000.0			QL=4 ST=3 TYP=6
	2695	SGMR	48	C	1933.0E	1941.0	49.0D	7500.0			QL=4 ST=3 TYP=8
	1415	SGMR	49	GB	1933.0E	1943.0	46.0D	4900.0			QL=4 ST=3 TYP=6
	610	SGMR	48	C	1933.0E	1943.0	50.0D	6800.0			QL=4 ST=3 TYP=8
	8800	PALE	48	C	1933.0	1946.0	85.0	30000.0			QL=4 ST=2 TYP=8
	610	PALE	49	GB	1933.0	1944.0	88.0	32000.0			QL=4 ST=2 TYP=6
	1415	PALE	49	GB	1933.0	1944.0	89.0	8000.0			QL=4 ST=2 TYP=6
	4995	PALE	48	C	1933.0	1945.0	100.0	23000.0			QL=4 ST=2 TYP=8
	15400	PALE	48	C	1933.0	1945.0	108.0	60000.0			QL=4 ST=2 TYP=8
	2695	PALE	49	GB	1933.0	1946.0	103.0	20000.0			QL=4 ST=2 TYP=6
	245	SGMR	48	C	1934.0E	1934.0	9.0D	2200.0			QL=4 ST=3 TYP=8
	9500	CUBA	30	PBI	2014.2	2014.2	97.8	197.0	98.0		
	9500	CUBA	4	S/F	2016.2	2017.0	6.3	210.0	105.0		
05	127	TORN	44	NS	0640.0E		470.0D		7.0		V=0
	8800	PALE	8	S	0240.0	0240.0	U	150.0			QL=4 ST=2 TYP=3
	15400	PALE	8	S	0240.0	0240.0	U	260.0			QL=4 ST=2 TYP=3
	15400	SVTO	49	GB	1049.0	1049.0	1.0	590.0			QL=4 ST=2 TYP=6
	3000	IZMI	7	C	1049.4	1049.6	1.0	19.0	8.8		
	4995	SVTO	8	S	1050.0E	1050.0U	U	47.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1050.0E	1050.0U	U	140.0			QL=4 ST=2 TYP=3
	2800	PENT	29	PBI	1630.0	1641.0	40.0	7.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	9500	CUBA	1	S	1641.2	1641.3	1.6	15.0	7.0		
06	127	TORN	44	NS	0640.0E		360.0D		6.0		V=0
	2840	PEKG	1	S	0352.0	0354.5	7.0	6.2			
	2804	VORO	1	S	0353.4	0354.9	2.0	7.9			
	500	HIRA	8	S	0354.0	0355.0	2.0	20.0			0
07	127	TORN	44	NS	0900.0E		330.0D		8.0		V=1
08	127	TORN	44	NS	0640.0E		470.0D		9.0		V=0
09	204	IZMI	7	C	0714.5	0714.6	0.1	7.0			
10	204	IZMI	42	SER	0930.8	0930.9	0.4	74.0			
	410	SGMR	8	S	1350.0	1350.0	U	62.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1350.0	1350.0	U	61.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1856.0	1859.0	3.0	200.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1906.0	1907.0	1.0	100.0			QL=4 ST=2 TYP=3
	410	SGMR	48	C	2012.0	2012.0	2.0	340.0			QL=4 ST=2 TYP=8
	245	PALE	8	S	2100.0	2100.0	U	75.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2100.0	2100.0	U	140.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	2244.0	2244.0	1.0	20.0			0
	245	LEAR	8	S	2316.0	2316.0	1.0	260.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	2317.0	2317.0	1.0	20.0			0
	2804	VORO	4	S/F	2327.8	2328.2	5.0	27.1			
	2800	HIRA	7	C	2328.0	2328.0	5.0	30.0			0
11	610	SVTO	43	NS	1452.0	1502.0	22.0	60.0			QL=4 ST=2 TYP=1
	610	SGMR	43	NS	1453.0	1502.0	112.0	78.0			QL=4 ST=2 TYP=1
	500	HIRA	7	C	0519.0	0523.0	13.0	20.0			0
	2840	PEKG	3	S	0525.0	0529.4	14.0	37.6			
	2804	VORO	2	S/F	0527.5	0529.6	4.7	20.0			
	245	LEAR	48	C	0528.0	0531.0	5.0	520.0			QL=4 ST=2 TYP=8
	2800	HIRA	1	S	0529.0	0530.0	3.0	20.0			0
	245	LEAR	8	S	0536.0	0536.0	U	66.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1246.0	1246.0	U	64.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1256.0	1300.0	4.0	53.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1300.0	1300.0	U	85.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	1326.0	1338.0	23.0	200.0			QL=4 ST=2 TYP=8
	245	SGMR	48	C	1329.0	1333.0	19.0	230.0			QL=4 ST=2 TYP=8
	610	SGMR	48	C	1330.0	1334.0	48.0	350.0			QL=4 ST=2 TYP=8
	1415	SGMR	48	C	1330.0	1348.0	44.0	430.0			QL=4 ST=2 TYP=8
	2695	SGMR	48	C	1330.0	1345.0	49.0	1100.0			QL=4 ST=2 TYP=8
	410	SGMR	48	C	1331.0	1337.0	46.0	230.0			QL=4 ST=2 TYP=8
	4995	SGMR	48	C	1331.0	1339.0	48.0	1500.0			QL=4 ST=2 TYP=8
	8800	SGMR	49	GB	1331.0	1339.0	48.0	1600.0			QL=4 ST=2 TYP=6
	1415	SVTO	48	C	1331.0	1348.0	43.0	400.0			QL=4 ST=2 TYP=8
	410	SVTO	48	C	1331.0	1337.0	51.0	230.0			QL=2 ST=2 TYP=8
	610	SVTO	48	C	1331.0	1334.0	51.0	310.0			QL=2 ST=2 TYP=8
	2695	SVTO	48	C	1331.0	1345.0	51.0	1300.0			QL=4 ST=2 TYP=8
	4995	SVTO	48	C	1331.0	1339.0	50.0	1400.0			QL=4 ST=2 TYP=8
	8800	SVTO	48	C	1332.0	1339.0	34.0	1200.0			QL=4 ST=2 TYP=8
	15400	SVTO	49	GB	1332.0	1339.0	33.0	840.0			QL=4 ST=2 TYP=6
	15400	SGMR	49	GB	1332.0	1339.0	47.0	930.0			QL=4 ST=2 TYP=6
	9500	CUBA	20	GRF	1412.0E	1412.0	40.0D	36.0	18.0		
	610	SGMR	48	C	1421.0	1436.0	15.0	170.0			QL=4 ST=2 TYP=8
	410	SGMR	4	S/F	1422.0	1425.0	8.0	59.0			QL=4 ST=2 TYP=3
	610	SVTO	4	S/F	1422.0	1423.0	9.0	92.0			QL=4 ST=2 TYP=3
	410	SVTO	4	S/F	1422.0	1423.0	10.0	49.0			QL=4 ST=2 TYP=3
	610	SVTO	4	S/F	1434.0	1436.0	5.0	150.0			QL=4 ST=2 TYP=3
	610	SGMR	48	C	1436.0	1445.0	13.0	140.0			QL=4 ST=2 TYP=8
	610	SVTO	4	S/F	1444.0	1446.0	3.0	110.0			QL=4 ST=2 TYP=3
	610	SGMR	48	C	1547.0	1548.0	10.0	500.0			QL=4 ST=2 TYP=8
	610	SGMR	48	C	1603.0	1607.0	12.0	190.0			QL=4 ST=2 TYP=8
	2800	PENT	45	C	1614.0	1643.0	69.0	25.0			
	610	SGMR	4	S/F	1638.0	1643.0	7.0	140.0			QL=4 ST=2 TYP=3
12	2840	PEKG	1	S	0109.0	0111.5	6.0	4.3			
	2804	VORO	1	S	0110.6	0111.3	1.8	4.7			

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
12	500	HIRA	7	C	0111.0	0111.0	9.0	15.0			0
	245	LEAR	8	S	0750.0	0750.0	U	52.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1315.0	1320.0	5.0	110.0			QL=4 ST=2 TYP=3
	9500	CUBA	21	GRF	1331.0E	1332.0	45.0D	11.0	5.0		
	9500	CUBA	2	S/F	1349.0	1350.7	4.9	37.0	18.0		
	245	SVTO	8	S	1428.0	1428.0	U	110.0			QL=4 ST=2 TYP=3
	245	SGMR	20	GRF	1752.0	1800.0	25.0	84.0			QL=4 ST=2 TYP=2
	410	SGMR	4	S/F	1759.0	1801.0	6.0	39.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1759.0	1810.0	30.0	110.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1801.0	1802.0	2.0	65.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1804.0	1819.0	25.0	100.0			QL=4 ST=2 TYP=3
	9500	CUBA	22	GRF	1804.0	1818.0	68.0	72.0	36.0		
	1415	SGMR	20	GRF	1805.0	1816.0	21.0	47.0			QL=4 ST=2 TYP=2
	4995	PALE	20	GRF	1807.0	1819.0	22.0	120.0			QL=4 ST=2 TYP=2
	8800	SGMR	20	GRF	1807.0	1819.0	22.0	64.0			QL=4 ST=2 TYP=2
	2695	PALE	48	C	1809.0	1820.0	22.0	110.0			QL=4 ST=2 TYP=8
	15400	SGMR	4	S/F	1813.0	1819.0	12.0	40.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1822.0	1822.0	1.0	29.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1841.0	1841.0	1.0	70.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1849.0	1849.0	U	55.0			QL=4 ST=2 TYP=3
	2840	PEKG	45	C	2348.0	2352.3	9.0	4.2			
	2804	VORO	45	C	2351.6	2352.0	5.0	5.6			
13	127	TORN	44	NS	0700.0E		230.0D		20.0		V=1
	245	PALE	8	S	0049.0	0049.0	U	53.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0125.0	0125.0	U	80.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0127.0	0127.0	U	86.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0136.0	0136.0	U	92.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	0136.0	0137.0	3.0	140.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0141.0	0141.0	2.0	66.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0143.0	0143.0	2.0	88.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0150.0	0150.0	U	120.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0151.0	0151.0	U	180.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0204.0	0205.0	1.0	260.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0205.0	0205.0	U	280.0			QL=4 ST=2 TYP=3
	2840	PEKG	3	S	0448.0	0458.6	33.0	126.8			
	2804	VORO	46	C	0456.5	0458.8	23.5	113.7			
	2695	LEAR	8	S	0457.0	0458.0	2.0	100.0			QL=4 ST=2 TYP=3
	2800	HIRA	7	C	0457.0	0459.0	12.0	10.0			0
	4995	LEAR	48	C	0457.0	0458.0	10.0	160.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0457.0	0458.0	10.0	240.0			QL=4 ST=2 TYP=8
	15400	LEAR	4	S/F	0457.0	0458.0	10.0	280.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0508.0	0508.0	U	160.0			QL=4 ST=2 TYP=3
	2840	PEKG	5	S	0640.0	0642.6	7.0	11.7			
	3000	IZMI	45	C	0906.1	0915.8	27.0	107.0	37.7		
	204	IZMI	25	R	0906.4		41.9		80.0		
	1415	SVTO	4	S/F	0907.0	0915.0	25.0	100.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0907.0	0915.0	31.0	130.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	0907.0	0915.0	32.0	90.0			QL=4 ST=2 TYP=3
	410	SVTO	4	S/F	0908.0	0913.0	21.0	42.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0908.9	0909.2	2.3	26.0			
	610	LEAR	8	S	0909.0	0910.0	1.0	130.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	0909.0	0928.0	23.0	450.0			QL=4 ST=2 TYP=8
	1415	LEAR	4	S/F	0910.0	0915.0	8.0	110.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0910.0	0915.0	10.0	120.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0910.0	0933.0	28.0	49.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0913.8	0915.8	2.5	51.0	30.6		
	4995	LEAR	4	S/F	0915.0	0916.0	3.0	74.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0916.0	0916.0	1.0	51.0			QL=4 ST=2 TYP=3
	127	TORN	45	C	0916.0	0919.3	4.0	590.0	190.0		
	245	LEAR	8	S	0917.0	0917.0	U	63.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0921.3	0928.5	13.7	168.0			
	33	UPIC	49	GB	0924.0	0926.0	10.5				
	127	TORN	27	RF	0926.0		25.0		125.0		
	33	UPIC	29	PBI	0934.5	0938.5	43.0				
	410	SVTO	48	C	1132.0	1139.0	29.0	560.0			QL=4 ST=2 TYP=8
	410	SGMR	4	S/F	1153.0E	1153.0U	8.0D	120.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1327.0	1327.0	U	140.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1327.0	1327.0	U	140.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
13	610	SVTO	8	S	1332.0	1332.0	U	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1508.0	1508.0	U	54.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1545.0	1546.0	3.0	79.0			QL=4 ST=2 TYP=3
14	127	TORN	44	NS	0700.0E		210.0D		4.0		V=1,DISTURBED
	204	IZMI	43	NS	0951.0		129.0D		10.0		
	2840	PEKG	1	S	0045.0	0047.0	5.0	6.0			
	2804	VORO	1	S	0045.8	0046.8	2.5	5.5			
	2840	PEKG	1	S	0221.0	0224.6	9.0	7.5			
	2804	VORO	2	S/F	0223.4	0224.4	4.0	7.2			
	204	IZMI	42	SER	0935.6	0935.9	0.5	19.0	8.3		
	204	IZMI	42	SER	0943.6	0943.8	0.3	18.0			
	245	SVTO	8	S	1036.0	1036.0	1.0	260.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	1036.8	1038.8	2.4	30.0			
	33	UPIC	4	S/F	1252.0	1252.2	1.0				
	4995	SVTO	8	S	1253.0	1254.0	1.0	55.0			QL=4 ST=2 TYP=3
	4995	SGMR	8	S	1254.0	1254.0	U	50.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1254.0	1254.0	U	29.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1254.0	1254.0	U	35.0			QL=4 ST=2 TYP=3
	2800	PENT	29	PBI	1705.0	1711.0	21.0	2.0			
	2800	PENT	1	S	1839.0	1842.0	7.0	2.0			
15	127	TORN	44	NS	0700.0E	0817.5	450.0D	90.0	20.0		V=2
	2804	VORO	1	S	0255.0	0255.8	1.9	4.2			
	204	IZMI	42	SER	0850.7	0851.2	2.0	280.0			
	245	SVTO	8	S	1054.0	1054.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1403.0	1403.0	U	86.0			QL=4 ST=2 TYP=3
	2800	PENT	41	F	1647.0	1718.0	45.0U	5.0			
	245	SGMR	8	S	1833.0	1833.0	U	62.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1834.0	1834.0	U	67.0			QL=4 ST=2 TYP=3
	2800	PENT	21	GRF	1849.0	1858.0	43.0U	5.0			
16	204	IZMI	44	NS	0700.0E		300.0D		30.0		
	127	TORN	44	NS	0700.0E		450.0D		130.0		V=2
	245	LEAR	43	NS	2353.0	0008.0	75.0	140.0			QL=4 ST=2 TYP=1
	2840	PEKG	1	S	0627.0	0627.4	5.0	5.0			
	204	IZMI	41	F	0717.5	0717.8	0.7	98.0			
	15400	LEAR	8	S	0752.0	0752.0	U	63.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0752.0	0752.0	1.0	34.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	0752.0	0752.0	1.0	53.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0806.0	0806.0	U	61.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0810.5	0810.6	0.3	132.0			
	204	IZMI	42	SER	0817.2	0819.0	1.9	27.0			
	204	IZMI	42	SER	0831.9	0833.6	4.8	121.0			
	204	IZMI	42	SER	0855.7	0906.7	11.3	66.0			
	204	IZMI	42	SER	0912.7	0912.9	0.6	28.0			
	204	IZMI	42	SER	0936.9	0939.6	3.0	130.0			
	204	IZMI	7	C	1001.4	1001.5	0.3	171.0			
	8800	SVTO	4	S/F	1012.0	1019.0	9.0	95.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	1015.0	1019.0	6.0	87.0			QL=4 ST=2 TYP=3
	3000	IZMI	45	C	1015.8	1020.1	5.6	47.0	17.4		
	2695	SVTO	4	S/F	1017.0	1020.0	5.0	51.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	1018.0	1019.0	2.0	42.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	1033.0	1038.0	10.0	100.0			QL=4 ST=2 TYP=3
	3000	IZMI	45	C	1033.4	1038.4	7.7	53.0	17.9		
	410	SVTO	8	S	1034.0	1035.0	1.0	90.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1034.0	1038.0	7.0	50.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1034.0	1035.0	7.0	170.0			QL=4 ST=2 TYP=3
	15400	SVTO	4	S/F	1034.0	1035.0	4.0	150.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1038.0	1038.0	U	26.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	1038.5	1038.6	0.8	66.0			
	33	UPIC	46	C	1125.0	1126.0	2.0				
	9500	CUBA	4	S/F	1810.0U	1813.9	10.5D	59.0	29.0		
	8800	SGMR	4	S/F	1812.0	1813.0	3.0	73.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1813.0	1813.0	U	56.0			QL=4 ST=2 TYP=3
	9500	CUBA	2	S/F	1852.2	1852.9	4.6	52.0	26.0		
	2800	PENT	1	S	2250.0	2256.0	12.0	6.0			
	500	HIRA	4	S/F	2253.0	2257.0	5.0	20.0			WR
	245	LEAR	48	C	2254.0	2256.0	3.0	150.0			QL=4 ST=2 TYP=8

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
16	610	LEAR	8	S	2256.0	2256.0	U	130.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	2316.0	2316.0	U	65.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2316.0	2316.0	U	57.0			QL=4 ST=2 TYP=3
	2804	VORO	21	GRF	2325.0	2350.0	72.0	6.3			
	245	LEAR	8	S	2326.0	2326.0	U	76.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2326.0	2326.0	U	75.0			QL=4 ST=2 TYP=3
	245	LEAR	48	C	2330.0	2336.0	11.0	200.0			QL=4 ST=2 TYP=8
	245	PALE	48	C	2330.0	2336.0	11.0	210.0			QL=4 ST=2 TYP=8
	500	HIRA	7	C	2331.0	2340.0	11.0	80.0			MR
	2804	VORO	40	F	2336.8	2340.3	3.7	5.3			
	410	LEAR	8	S	2338.0	2339.0	1.0	120.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	2338.0	2339.0	1.0	130.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2338.0	2339.0	1.0	140.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2338.0	2339.0	1.0	120.0			QL=4 ST=2 TYP=3
	500	HIRA	7	C	2354.0	2358.0	18.0	10.0			0
17	245	PALE	43	NS	0000.0	0007.0	67.0	130.0			QL=4 ST=2 TYP=1
	204	IZMI	44	NS	0700.0E		300.0D		90.0		
	127	TORN	44	NS	0700.0E		450.0D		180.0		V=1
	33	UPIC	43	NS	0859.0	0901.5	275.0				
	245	SGMR	43	NS	1326.0	1743.0	365.0	87.0			QL=4 ST=2 TYP=1
	235	CUBA	44	NS	1700.0E		305.0D		23.0		
	280	CUBA	44	NS	1700.0E		305.0D		40.0		
	2840	PEKG	3	S	0129.0	0132.3	10.0	71.2			
	2804	VORO	4	S/F	0130.6	0136.3	12.0	62.1			
	2800	HIRA	3	S	0131.0	0133.0	5.0	65.0			0
	610	LEAR	8	S	0131.0	0131.0	U	180.0			QL=4 ST=2 TYP=3
	4995	LEAR	8	S	0131.0	0132.0	1.0	66.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	0131.0	0131.0	U	140.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	0131.0	0132.0	1.0	82.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0132.0	0132.0	U	64.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0132.0	0132.0	U	61.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0132.0	0132.0	U	67.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0206.0	0206.0	U	55.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	0220.0	0221.0	2.0	530.0			QL=4 ST=2 TYP=6
	2840	PEKG	1	S	0715.0	0719.0	9.0	6.0			
	15400	LEAR	8	S	0720.0	0720.0	U	67.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0803.3	0803.4	0.3	145.0			
	1415	LEAR	48	C	0858.0	0901.0	7.0	350.0			QL=4 ST=2 TYP=8
	2695	LEAR	48	C	0858.0	0901.0	14.0	650.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0858.0	0901.0	17.0	2200.0			QL=4 ST=2 TYP=8
	15400	LEAR	48	C	0858.0	0901.0	14.0	2100.0			QL=4 ST=2 TYP=8
	610	SVTO	48	C	0858.0	0924.0	39.0	370.0			QL=4 ST=2 TYP=8
	2695	SVTO	48	C	0858.0	0901.0	33.0	700.0			QL=4 ST=2 TYP=8
	4995	SVTO	48	C	0858.0	0901.0	37.0	1500.0			QL=4 ST=2 TYP=8
	8800	SVTO	48	C	0858.0	0901.0	33.0	2100.0			QL=4 ST=2 TYP=8
	15400	SVTO	48	C	0858.0	0901.0	34.0	2100.0			QL=4 ST=2 TYP=8
	1415	SVTO	48	C	0858.0	0902.0	41.0	320.0			QL=4 ST=2 TYP=8
	3000	IZMI	46	C	0858.0	0858.8	15.4	520.0			
	610	LEAR	48	C	0859.0	0902.0	6.0	200.0			QL=4 ST=2 TYP=8
	610	LEAR	8	S	0859.0	0859.0	U	100.0			QL=4 ST=2 TYP=3
	245	LEAR	48	C	0859.0	0859.0	16.0	7000.0			QL=4 ST=2 TYP=8
	410	LEAR	48	C	0859.0	0859.0	12.0	1500.0			QL=4 ST=2 TYP=8
	245	SVTO	48	C	0859.0	0859.0	41.0	6900.0			QL=4 ST=2 TYP=8
	410	SVTO	48	C	0859.0	0859.0	40.0	3600.0			QL=4 ST=2 TYP=8
	33	UPIC	47	GB	0859.0	0901.5	13.5				
	204	IZMI	46	C	0859.1	0859.3	1.5	31153.0			
	127	TORN	47	GB	0900.0U	0902.2	12.0D	2500.0	850.0		DISTURBED
	245	LEAR	4	S/F	0920.0	0925.0	5.0	58.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	0922.0	0924.0	2.0	220.0			QL=4 ST=2 TYP=3
	204	IZMI	25	R	0922.6		25.2		90.0		
	3000	IZMI	22	GRF	0922.6	0923.4	4.9	11.0	5.8		
	2695	LEAR	8	S	0923.0	0923.0	U	60.0			QL=4 ST=2 TYP=3
	245	LEAR	4	S/F	0935.0	0937.0	8.0	150.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	0937.0	0937.0	U	60.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0939.0	0939.0	U	63.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	0956.0	0956.0	U	54.0			QL=4 ST=2 TYP=3
	1415	SVTO	8	S	0959.0	0959.0	U	53.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1008.0	1008.0	U	59.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	610	SVTO	8	S	1024.0	1024.0	U	88.0			QL=4 ST=2 TYP=3
	410	SVTO	4	S/F	1118.0	1123.0	8.0	79.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1123.0	1124.0	2.0	72.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1128.0	1130.0	2.0	170.0			QL=4 ST=2 TYP=3
┌	410	SVTO	8	S	1134.0	1134.0	2.0	86.0			QL=4 ST=2 TYP=3
└	204	IZMI	25	R	1136.8		23.2D		105.0		
┌	245	SGMR	8	S	1233.0	1233.0	U	72.0			QL=4 ST=2 TYP=3
└	245	SVTO	8	S	1233.0	1233.0	U	58.0			QL=4 ST=2 TYP=3
┌	245	SGMR	8	S	1317.0	1317.0	U	57.0			QL=4 ST=2 TYP=3
└	245	SVTO	8	S	1317.0	1317.0	U	53.0			QL=4 ST=2 TYP=3
┌	245	LEAR	8	S	2331.0	2331.0	1.0	100.0			QL=4 ST=2 TYP=3
└	500	HIRA	8	S	2332.0	2332.0	1.0	15.0			WR
18	204	IZMI	44	NS	0700.0E		300.0D		95.0		
├	127	TORN	44	NS	0700.0E		450.0D		330.0		V=1
├	245	SVTO	43	NS	1018.0	1223.0U	252.0	170.0			QL=4 ST=2 TYP=1
├	245	SGMR	43	NS	1201.0	1223.0	149.0	200.0			QL=4 ST=2 TYP=1
├	245	SGMR	43	NS	1509.0	1640.0	234.0	92.0			QL=4 ST=2 TYP=1
├	235	CUBA	44	NS	1530.0E		210.0D		29.0		
├	280	CUBA	44	NS	1530.0E		210.0D		29.0		
└	245	PALE	43	NS	1758.0	2331.0	574.0	120.0			QL=4 ST=2 TYP=1
┌	2840	PEKG	1	S	0118.0	0119.3	3.0	2.3			
└	2804	VORO	8	S	0118.9	0119.1	0.9	3.9			
	410	LEAR	8	S	0124.0	0124.0	U	130.0			QL=4 ST=2 TYP=3
┌	2840	PEKG	3	S	0130.0	0136.1	19.0	196.8			
├	410	LEAR	49	GB	0133.0	0136.0	4.0	2200.0			QL=4 ST=2 TYP=6
├	610	LEAR	49	GB	0134.0	0136.0	3.0	1600.0			QL=4 ST=2 TYP=6
├	410	PALE	49	GB	0134.0	0136.0	4.0	2100.0			QL=4 ST=2 TYP=6
├	610	PALE	49	GB	0134.0	0136.0	4.0	1300.0			QL=4 ST=2 TYP=6
├	2800	HIRA	7	C	0134.0	0136.0	16.0	155.0			0
├	500	HIRA	47	GB	0134.0	0136.0	19.0	1625.0			SR
├	2804	VORO	4	S/F	0134.7	0136.0	3.3	143.7			
├	245	LEAR	49	GB	0135.0	0136.0	1.0	720.0			QL=4 ST=2 TYP=6
├	2695	LEAR	8	S	0135.0	0136.0	1.0	76.0			QL=4 ST=2 TYP=3
├	2695	LEAR	8	S	0135.0	0136.0	1.0	100.0			QL=4 ST=2 TYP=3
├	4995	LEAR	8	S	0135.0	0136.0	1.0	220.0			QL=4 ST=2 TYP=3
├	8800	LEAR	8	S	0135.0	0136.0	1.0	160.0			QL=4 ST=2 TYP=3
├	15400	LEAR	8	S	0135.0	0136.0	2.0	270.0			QL=4 ST=2 TYP=3
├	245	PALE	49	GB	0136.0	0136.0	1.0	840.0			QL=4 ST=2 TYP=6
├	8800	PALE	49	GB	0136.0	0136.0	2.0	520.0			QL=4 ST=2 TYP=6
├	2695	PALE	8	S	0136.0	0136.0	1.0	120.0			QL=4 ST=2 TYP=3
├	4995	PALE	8	S	0136.0	0136.0	1.0	440.0			QL=4 ST=2 TYP=3
├	15400	PALE	8	S	0136.0	0136.0	2.0	260.0			QL=4 ST=2 TYP=3
└	2804	VORO	29	PBI	0138.1	0138.7	11.0	10.4			
┌	2840	PEKG	3	S	0526.0	0528.2	10.0	36.6			
├	500	HIRA	42	SER	0527.0	0528.0	6.0	170.0			0
├	410	LEAR	49	GB	0527.0	0528.0	4.0	2500.0			QL=4 ST=2 TYP=6
├	610	LEAR	8	S	0527.0	0527.0	1.0	79.0			QL=4 ST=2 TYP=3
├	2804	VORO	40	F	0527.6	0528.2	4.3	25.7			
├	2800	HIRA	4	S/F	0528.0	0528.0	9.0	30.0			0
├	4995	LEAR	8	S	0528.0	0528.0	U	58.0			QL=4 ST=2 TYP=3
└	8800	LEAR	8	S	0528.0	0528.0	U	54.0			QL=4 ST=2 TYP=3
┌	2840	PEKG	47	GB	0713.0	0742.3	81.0	1186.3			
└	33	UPIC	42	SER	0714.0	0816.5	82.0				
┌	1415	SVTO	48	C	0725.0	0826.0	80.0	10000.0			QL=4 ST=2 TYP=8
├	245	LEAR	48	C	0726.0	0726.0	9.0	220.0			QL=4 ST=2 TYP=8
├	1415	LEAR	48	C	0726.0	0729.0	7.0	470.0			QL=4 ST=2 TYP=8
├	245	SVTO	48	C	0726.0	0742.0	89.0	1400.0			QL=4 ST=2 TYP=8
├	127	TORN	49	GB	0726.3	0808.0	60.0	2100.0	600.0		
├	204	IZMI	46	C	0726.6	0726.8	1.1	396.0			
├	410	LEAR	8	S	0728.0	0728.0	1.0	93.0			QL=4 ST=2 TYP=3
├	410	SVTO	48	C	0728.0	0827.0	84.0	11000.0			QL=4 ST=2 TYP=8
├	2695	SVTO	48	C	0728.0	0825.0	84.0	1900.0			QL=4 ST=2 TYP=8
├	4995	SVTO	48	C	0728.0	0742.0	85.0	1500.0			QL=4 ST=2 TYP=8
├	8800	SVTO	48	C	0728.0	0742.0	84.0	1200.0			QL=4 ST=2 TYP=8
├	3000	IZMI	45	C	0728.3	0729.4	7.8	373.0	86.5		
├	204	IZMI	46	C	0728.5	0728.5	1.8	330.0			
├	15400	LEAR	8	S	0729.0	0729.0	1.0	120.0			QL=4 ST=2 TYP=3
├	15400	SVTO	48	C	0729.0	0742.0	83.0	530.0			QL=4 ST=2 TYP=8

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
18	610	LEAR	4	S/F	0732.0	0733.0	3.0	81.0			QL=4 ST=2 TYP=3
	610	SVTO	48	C	0732.0	0826.0	73.0	14000.0			QL=4 ST=2 TYP=8
	610	LEAR	48	C	0738.0	0825.0	66.0	13000.0			QL=4 ST=3 TYP=8
	245	LEAR	48	C	0738.0	0742.0	71.0	1600.0			QL=4 ST=2 TYP=8
	204	IZMI	42	SER	0738.1	0738.4	0.9	182.0			
	3000	IZMI	46	C	0738.4	0742.1	21.9	1365.0			
	4995	LEAR	48	C	0739.0	0742.0	54.0	1200.0			QL=4 ST=2 TYP=8
	1415	LEAR	48	C	0739.0	0825.0	62.0	11000.0			QL=4 ST=2 TYP=8
	410	LEAR	48	C	0740.0	0828.0	69.0	10000.0			QL=4 ST=2 TYP=8
	2695	LEAR	48	C	0740.0	0825.0	60.0	1400.0			QL=4 ST=2 TYP=8
	204	IZMI	46	C	0740.1	0742.3	19.5	553.0			
	8800	LEAR	48	C	0741.0	0742.0	29.0	950.0			QL=4 ST=2 TYP=8
	15400	LEAR	48	C	0741.0	0742.0	43.0	540.0			QL=4 ST=2 TYP=8
	204	IZMI	42	SER	0743.4	0743.6	0.4	671.0			
	3000	IZMI	46	C	0806.8	0809.0	33.3	490.0			
	204	IZMI	46	C	0810.7	0816.8	22.8	457.0			
	3000	IZMI	42	SER	0822.9	0824.9	4.2	1228.0			
	204	IZMI	25	R	0933.0		147.0D		15.0		
	245	LEAR	48	C	0933.0	0937.0	31.0	120.0			QL=4 ST=2 TYP=8
	245	SVTO	8	S	0937.0	0937.0	U	74.0			QL=4 ST=2 TYP=3
	4995	LEAR	48	C	0938.0	0956.0	26.0	260.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0938.0	0956.0	26.0	220.0			QL=4 ST=2 TYP=8
	2695	LEAR	4	S/F	0939.0	0956.0	25.0	110.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	0940.0	0955.0	38.0	230.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0943.0	0955.0	34.0	160.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	0944.0	1009.0	34.0	220.0			QL=4 ST=3 TYP=8
	2695	SVTO	20	GRF	0945.0	0956.0	28.0	98.0			QL=4 ST=2 TYP=2
	15400	SVTO	4	S/F	0954.0	0955.0	4.0	58.0			QL=4 ST=2 TYP=3
	33	UPIC	45	C	0955.0	0956.0	2.0				
	4995	SGMR	8	S	1217.0	1217.0	1.0	53.0			QL=4 ST=2 TYP=3
	33	UPIC	8	S	1223.8	1224.0	0.7				
19	204	IZMI	44	NS	0700.0E		300.0D		40.0		
	127	TORN	43	NS	0726.3	0808.0	60.0		46.0		V=2,DISTURBED
	245	LEAR	43	NS	0833.0	0856.0	33.0	67.0			QL=4 ST=2 TYP=1
	235	CUBA	44	NS	1300.0E		530.0D		18.0		
	280	CUBA	44	NS	1300.0E		530.0D		39.0		
	2804	VORO	40	F	0016.2	0019.4	4.0	9.1			
	500	HIRA	8	S	0017.0	0017.0	3.0	15.0			0
	2840	PEKG	3	S	0354.0	0400.8	20.0	186.3			
	2804	VORO	46	C	0357.0	0400.8	14.0	152.0			
	2800	HIRA	7	C	0358.0	0401.0	11.0	140.0			0
	410	LEAR	8	S	0359.0	0359.0	U	79.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0359.0	0400.0	2.0	130.0			QL=4 ST=2 TYP=3
	4995	LEAR	8	S	0359.0	0400.0	2.0	220.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0359.0	0400.0	3.0	320.0			QL=4 ST=2 TYP=3
	15400	LEAR	4	S/F	0359.0	0400.0	3.0	260.0			QL=4 ST=2 TYP=3
	500	HIRA	7	C	0400.0	0401.0	8.0	55.0			0
	610	LEAR	8	S	0400.0	0400.0	U	71.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0400.0	0400.0	1.0	68.0			QL=4 ST=2 TYP=3
	2840	PEKG	20	GRF	0758.0	0822.0	32.0	31.8			
	1415	LEAR	8	S	0802.0	0802.0	U	73.0			QL=4 ST=2 TYP=3
	1415	SVTO	4	S/F	0802.0	0802.0	3.0	57.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0802.0	0802.0	4.0	25.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	0803.0	0804.0	4.0	24.0			QL=4 ST=2 TYP=3
	204	IZMI	25	R	0804.0		87.0		56.0		
	204	IZMI	42	SER	0828.4	0830.7	6.4	382.0			
	245	LEAR	8	S	0829.0	0830.0	1.0	170.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0830.0	0830.0	U	110.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0833.0	0833.0	U	62.0			QL=4 ST=2 TYP=3
	3000	IZMI	20	GRF	0929.0	0930.3	2.9	7.0	2.6		
	3000	IZMI	42	SER	0941.3	0942.9	2.0	17.0			
	410	SVTO	48	C	1147.0	1150.0	6.0	330.0			QL=4 ST=2 TYP=8
	245	SVTO	8	S	1152.0	1152.0	U	24.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1352.0	1352.0	U	71.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	1415.0	1415.3	0.7	12.0	6.0		
	280	CUBA	6	S	1432.2	1437.0	9.7	74.0	37.0		
	9500	CUBA	21	GRF	1440.0	1508.0	123.0	16.0	8.0		
	610	SGMR	8	S	1455.0	1456.0	2.0	55.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
19	245	SGMR	4	S/F	1455.0	1455.0	6.0	65.0			QL=4 ST=2 TYP=3
	1415	SGMR	4	S/F	1455.0	1457.0	3.0	85.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1455.0	1456.0	1.0	56.0			QL=4 ST=2 TYP=3
	1415	SVTO	8	S	1455.0	1457.0	2.0	78.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1455.0	1455.0	545.0	65.0			QL=4 ST=2 TYP=3
	610	SGMR	4	S/F	1455.0	1456.0	545.0	55.0			QL=4 ST=2 TYP=3
	235	CUBA	6	S	1455.0	1456.3	3.9	34.0	17.0		
	280	CUBA	6	S	1455.0	1456.3	3.9	74.0	37.0		
	410	SGMR	8	S	1456.0	1456.0	U	42.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1456.0	1457.0	5.0	160.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1456.0	1457.0	5.0	110.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1456.0	1457.0	2.0	150.0			QL=4 ST=2 TYP=3
	4995	SVTO	8	S	1456.0	1457.0	2.0	72.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1456.0	1456.0	U	30.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1456.0	1456.0	544.0	42.0			QL=4 ST=2 TYP=3
	9500	CUBA	2	S/F	1456.0	1457.9	6.8	46.0	23.0		
	8800	SGMR	8	S	1459.0	1459.0	U	22.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1509.0	1511.0	6.0	160.0			QL=4 ST=2 TYP=3
	9500	CUBA	4	S/F	1509.2	1511.4	8.8	50.0	25.0		
	8800	SGMR	8	S	1510.0	1511.0	2.0	73.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1510.0	1511.0	4.0	120.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1510.0	1512.0	5.0	43.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1614.0	1615.0	1.0	140.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1650.0	1650.0	1.0	74.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	1755.2	1755.6	1.2	22.0	11.0		
	245	SGMR	8	S	1759.0	1759.0	U	54.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1819.0	1820.0	1.0	73.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1820.0	1820.0	U	82.0			QL=4 ST=2 TYP=3
20	204	IZMI	44	NS	0700.0E		300.0D		30.0		
	127	TORN	43	NS	0750.0		170.0		22.0		V=1,DISTURBED
	2840	PEKG	1	S	0115.0	0116.9	5.0	6.8			
	2804	VORO	28	PRE	0116.4	0116.9	31.0	13.1			
	500	HIRA	7	C	0147.0	0153.0	10.0	35.0			
	2840	PEKG	3	S	0147.0	0153.1	39.0	207.0			
	2804	VORO	4	S/F	0147.3	0153.0	10.5	192.8			
	1415	LEAR	48	C	0150.0	0157.0	8.0	490.0			QL=4 ST=2 TYP=8
	2800	HIRA	3	S	0150.0	0153.0	10.0	210.0			
	2695	LEAR	4	S/F	0151.0	0152.0	4.0	190.0			QL=4 ST=2 TYP=3
	4995	LEAR	4	S/F	0151.0	0153.0	6.0	260.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	0152.0	0152.0	1.0	64.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0152.0	0153.0	4.0	160.0			QL=4 ST=2 TYP=3
	15400	LEAR	4	S/F	0152.0	0153.0	4.0	98.0			QL=4 ST=2 TYP=3
	2804	VORO	29	PBI	0200.3	0211.7	40.9	12.1			
	500	HIRA	8	S	0259.0	0259.0	1.0	30.0			
	500	HIRA	8	S	0400.0	0400.0	1.0	10.0			
	2840	PEKG	1	S	0509.0	0510.8	4.0	5.6			
	2840	PEKG	47	GB	0707.0	0739.5	63.0	2532.0			
	2950	GORK	46	C	0711.1	0712.1	2.1	12.0			
	2950	GORK	46	C	0711.1	0712.3		16.0			
	204	IZMI	42	SER	0712.2	0712.5	0.7	107.0			
	245	SVTO	8	S	0718.0	0720.0	2.0	190.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0718.7	0720.3	1.8	141.0			
	245	LEAR	8	S	0720.0	0720.0	U	230.0			QL=4 ST=2 TYP=3
	610	LEAR	49	GB	0726.0	0726.0	U	510.0			QL=4 ST=2 TYP=6
	4995	LEAR	49	GB	0726.0	0726.0	2.0	560.0			QL=4 ST=2 TYP=6
	8800	LEAR	49	GB	0726.0	0726.0	1.0	990.0			QL=4 ST=2 TYP=6
	15400	LEAR	49	GB	0726.0	0726.0	1.0	820.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0726.0	0726.0	U	70.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0726.0	0726.0	1.0	160.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0726.0	0726.0	1.0	400.0			QL=4 ST=2 TYP=3
	4995	SVTO	49	GB	0726.0	0726.0	4.0	550.0			QL=4 ST=2 TYP=6
	8800	SVTO	49	GB	0726.0	0726.0	5.0	980.0			QL=4 ST=2 TYP=6
	15400	SVTO	49	GB	0726.0	0726.0	2.0	700.0			QL=4 ST=2 TYP=6
	410	SVTO	8	S	0726.0	0726.0	U	66.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	0726.0	0726.0	1.0	470.0			QL=4 ST=2 TYP=3
	1415	SVTO	8	S	0726.0	0726.0	2.0	140.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0726.0	0726.0	4.0	480.0			QL=4 ST=2 TYP=3
	2950	GORK	21	GRF	0726.4	0913.0	165.0D	9.4			

SOLAR RADIO EMISSION

Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	9100	GORK	21	GRF	0726.4	0948.4	165.0D	24.0			
	9100	GORK	4	S/F	0726.4	0726.7	4.4	900.0			
	2950	GORK	46	C	0726.4	0726.8	6.2	710.0			
	2950	GORK	46	C	0726.4	0726.9		640.0			
	3000	IZMI	45	C	0726.5	0726.8	3.9	520.0	92.7		
	245	LEAR	8	S	0731.0	0731.0	1.0	66.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0731.0	0731.0	2.0	58.0			QL=4 ST=3 TYP=3
	204	IZMI	42	SER	0731.1	0732.8	3.8	152.0			
	610	SVTO	48	C	0735.0	0740.0	7.0	510.0			QL=4 ST=2 TYP=8
	410	SVTO	48	C	0735.0	0743.0	10.0	260.0			QL=4 ST=2 TYP=8
	127	TORN	47	GB	0735.7	0739.7	8.3	670.0	180.0		DISTURBED
	610	LEAR	4	S/F	0736.0	0738.0	4.0	410.0			QL=4 ST=2 TYP=3
	2695	SVTO	49	GB	0736.0	0739.0	13.0	9700.0			QL=4 ST=2 TYP=6
	2950	GORK	47	GB	0736.7	0739.4	18.5	9000.0			
	410	LEAR	48	C	0737.0	0742.0	6.0	250.0			QL=4 ST=2 TYP=8
	1415	LEAR	49	GB	0737.0	0739.0	7.0	500.0			QL=4 ST=2 TYP=6
	2695	LEAR	49	GB	0737.0	0739.0	9.0	7300.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0737.0	0738.0	2.0	190.0			QL=4 ST=2 TYP=3
	1415	SVTO	4	S/F	0737.0	0738.0	8.0	460.0			QL=4 ST=2 TYP=3
	4995	LEAR	49	GB	0737.0	0739.0	10.0	2300.0			QL=4 ST=2 TYP=6
	4995	SVTO	49	GB	0737.0	0739.0	17.0	2300.0			QL=4 ST=2 TYP=6
	8800	SVTO	49	GB	0737.0	0740.0	20.0	2100.0			QL=4 ST=2 TYP=6
	3000	IZMI	46	C	0737.1	0739.5	17.3	4180.0U			
	9100	GORK	4	S/F	0737.5	0740.1	35.5	1900.0			
	245	LEAR	48	C	0738.0	0739.0	7.0	280.0			QL=4 ST=2 TYP=8
	245	SVTO	48	C	0738.0	0739.0	7.0	230.0			QL=4 ST=2 TYP=8
	8800	LEAR	49	GB	0738.0	0740.0	15.0	2100.0			QL=4 ST=2 TYP=6
	15400	LEAR	49	GB	0738.0	0740.0	15.0	1400.0			QL=4 ST=2 TYP=6
	15400	SVTO	49	GB	0738.0	0740.0	18.0	1200.0			QL=4 ST=2 TYP=6
	204	IZMI	42	SER	0738.0	0739.3	4.9	258.0			
	33	UPIC	3	S	0739.0	0739.5	1.0				
	204	IZMI	41	F	0740.7	0740.8	1.4	77.0			
	204	IZMI	42	SER	0755.3	0755.4	0.8	100.0			
	204	IZMI	42	SER	0758.3	0758.8	0.9	32.0			
	245	LEAR	48	C	0759.0	0803.0	5.0	120.0			QL=4 ST=2 TYP=8
	127	TORN	48	C	0759.5	0802.6	5.2	1000.0	370.0		DISTURBED
	245	SVTO	48	C	0800.0	0804.0	4.0	120.0			QL=4 ST=2 TYP=8
	410	SVTO	4	S/F	0800.0	0800.0	3.0	59.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0803.9	0804.2	0.5	86.0			
	245	SVTO	8	S	0810.0	0810.0	U	56.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1141.0	1141.0	U	87.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	1151.9	1152.6	2.2	129.0			
	245	SGMR	8	S	1227.0	1227.0	U	82.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1227.0	1227.0	U	81.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1334.0	1334.0	U	110.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1334.0	1334.0	U	150.0			QL=4 ST=2 TYP=3
	280	CUBA	6	S	1439.0	1440.3	10.8	41.0	20.0		
	235	CUBA	6	S	1439.0	1442.9	11.0	54.0	27.0		
	245	SGMR	8	S	1440.0	1440.0	U	240.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	1440.0	1442.0	3.0	330.0			QL=4 ST=2 TYP=8
	245	SGMR	8	S	1451.0	1451.0	U	53.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1451.0	1451.0	U	74.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1453.0	1454.0	1.0	83.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1612.0	1612.0	U	150.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1907.0	1907.0	U	56.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	1918.0	1919.0	4.0	200.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	1919.0	1919.0	1.0	58.0			QL=4 ST=2 TYP=3
	245	SGMR	48	C	1919.0	1919.0	1.0	73.0			QL=4 ST=2 TYP=8
	1415	SGMR	4	S/F	1919.0	1920.0	5.0	54.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1926.0	1928.0	2.0	65.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1926.0	1927.0	2.0	93.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1926.0	1928.0	3.0	95.0			QL=4 ST=2 TYP=3
	4995	PALE	4	S/F	1926.0	1928.0	3.0	100.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1926.0	1927.0	2.0	87.0			QL=4 ST=2 TYP=3
	9500	CUBA	2	S/F	1926.0	1928.2	5.0	21.0	10.0		
	8800	PALE	8	S	1927.0	1928.0	1.0	57.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1927.0	1928.0	1.0	76.0			QL=4 ST=2 TYP=3
	4995	SGMR	8	S	1927.0	1928.0	1.0	80.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	1928.0	1928.0	U	65.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	245	SGMR	8	S	1928.0	1928.0	U	55.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1928.0	1928.0	U	70.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1939.0	1940.0	1.0	78.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1947.0	1947.0	U	250.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1947.0	1947.0	U	240.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1950.0	1950.0	1.0	97.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1951.0	1951.0	U	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2004.0	2004.0	1.0	280.0			QL=4 ST=2 TYP=3
	2800	PENT	24	R	2036.0	2116.0	56.0U	6.0			
	2800	PENT	1	S	2240.0	2244.0	13.0	10.0			
	500	HIRA	8	S	2244.0	2244.0	1.0	30.0			0
	2840	PEKG	47	GB	2344.0	2348.8	27.0	744.5			
	245	LEAR	48	C	2345.0	2348.0	4.0	300.0			QL=4 ST=2 TYP=8
	245	LEAR	48	C	2345.0	2348.0	8.0	300.0			QL=4 ST=2 TYP=8
	2800	HIRA	47	GB	2345.0	2349.0	12.0	800.0			0
	245	PALE	48	C	2345.0	2348.0	15.0	340.0			QL=4 ST=3 TYP=8
	2804	VORO	47	GB	2345.4	2348.7	10.7	720.2			
	610	LEAR	48	C	2346.0	2347.0	5.0	270.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	2346.0	2348.0	9.0	430.0			QL=4 ST=2 TYP=8
	1415	LEAR	49	GB	2346.0	2349.0	6.0	530.0			QL=4 ST=2 TYP=6
	4995	PALE	49	GB	2346.0	2348.0	14.0	700.0			QL=4 ST=3 TYP=6
	8800	PALE	4	S/F	2346.0	2348.0	14.0	300.0			QL=4 ST=3 TYP=3
	500	HIRA	7	C	2346.0	2349.0	107.0	185.0			MR
	410	LEAR	48	C	2347.0	2348.0	6.0	160.0			QL=4 ST=2 TYP=8
	4995	LEAR	48	C	2347.0	2348.0	7.0	730.0			QL=4 ST=2 TYP=8
	2695	LEAR	49	GB	2347.0	2348.0	7.0	750.0			QL=4 ST=2 TYP=6
	610	PALE	48	C	2347.0	2348.0	4.0	240.0			QL=4 ST=2 TYP=8
	1415	PALE	49	GB	2347.0	2348.0	13.0	500.0			QL=4 ST=3 TYP=6
	2695	PALE	49	GB	2347.0	2348.0	13.0	740.0			QL=4 ST=3 TYP=6
	610	PALE	4	S/F	2347.0	2348.0	13.0	240.0			QL=4 ST=3 TYP=3
	410	PALE	4	S/F	2348.0	2348.0	12.0	210.0			QL=4 ST=3 TYP=3
	15400	PALE	4	S/F	2348.0	2348.0	12.0	100.0			QL=4 ST=3 TYP=3
	15400	LEAR	8	S	2352.0	2353.0	2.0	160.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	2358.0	2358.0	1.0	100.0			QL=4 ST=2 TYP=3
21	127	TORN	44	NS	0700.0E		420.0D		7.0		V=1
	235	CUBA	44	NS	1320.0E		340.0D		8.0		
	280	CUBA	44	NS	1320.0E		340.0D		20.0		
	2840	PEKG	3	S	0023.0	0027.1	14.0	14.3			
	2804	VORO	41	F	0024.4	0027.1	3.9	17.1			
	2804	VORO	41	F	0024.4	0025.7	1.9	9.3			
	610	LEAR	48	C	0026.0	0029.0	4.0	95.0			QL=4 ST=2 TYP=8
	410	PALE	48	C	0026.0	0030.0	4.0	98.0			QL=4 ST=2 TYP=8
	610	PALE	48	C	0026.0	0029.0	4.0	89.0			QL=4 ST=2 TYP=8
	410	LEAR	8	S	0028.0	0029.0	2.0	65.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0130.0	0131.0	1.0	450.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	0130.0	0130.0	2.0	850.0			QL=4 ST=2 TYP=6
	410	PALE	8	S	0131.0	0131.0	U	70.0			QL=4 ST=2 TYP=3
	2804	VORO	1	S	0231.3	0231.7	2.9	4.6			
	2840	PEKG	1	S	0523.0	0526.7	6.0	5.8			
	245	LEAR	8	S	0526.0	0526.0	U	97.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	0611.0	0611.0	1.0	35.0			0
	245	LEAR	8	S	0808.0	0808.0	U	370.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0808.0	0808.0	1.0	350.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	0808.0	0809.0	1.0	74.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0808.6	0809.2	0.8	25.0			
	245	LEAR	49	GB	0811.0	0811.0	1.0	1000.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0811.0	0811.0	U	150.0			QL=4 ST=2 TYP=3
	245	SVTO	49	GB	0811.0	0811.0	1.0	800.0			QL=4 ST=2 TYP=6
	410	SVTO	8	S	0811.0	0811.0	1.0	430.0			QL=4 ST=2 TYP=3
	204	IZMI	46	C	0811.3	0811.9	1.6	12130.0			
	2950	GORK	5	S	0811.4	0812.2	2.4	6.8			
	127	TORN	46	C	0811.7	0812.4	1.8	1860.0	380.0		
	2950	GORK	5	S	0821.7	0822.5	2.5	6.8			
	204	IZMI	7	C	0825.9	0825.9	0.2	62.0			
	245	LEAR	49	GB	0939.0	0939.0	1.0	1500.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0939.0	0939.0	1.0	290.0			QL=4 ST=2 TYP=3
	2950	GORK	46	C	0939.3	0940.0	5.4	25.0			
	2950	GORK	46	C	0939.3	0944.0		25.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	204	IZMI	42	SER	0939.4	0939.8	1.4	268.0			
	127	TORN	47	GB	0939.9	0940.4	1.2	700.0	350.0		DISTURBED
	610	LEAR	8	S	0940.0	0940.0	U	54.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0942.0	0943.8	2.0	117.0			
	245	LEAR	8	S	0943.0	0943.0	U	320.0			QL=4 ST=2 TYP=3
	245	SGMR	49	GB	1221.0	1221.0	U	2800.0			QL=4 ST=2 TYP=6
	410	SGMR	8	S	1221.0	1221.0	1.0	230.0			QL=4 ST=2 TYP=3
	245	SVTO	49	GB	1221.0	1221.0	1.0	2400.0			QL=4 ST=2 TYP=6
	410	SVTO	8	S	1221.0	1221.0	1.0	330.0			QL=4 ST=2 TYP=3
	127	TORN	47	GB	1221.2	1221.5	1.1	700.0U	40.0		
	8800	SGMR	49	GB	1651.0	1652.0	1.0	620.0			QL=4 ST=2 TYP=6
22	204	IZMI	44	NS	0700.0E		300.0D		30.0		
	127	TORN	44	NS	0700.0E		370.0D		9.0		V=0
	235	CUBA	44	NS	1330.0E		330.0D		10.0		
	280	CUBA	44	NS	1330.0E		330.0D		15.0		
	2804	VORO	8	S	0048.1	0048.4	0.7	4.2			
	2840	PEKG	1	S	0135.0	0137.5	7.0	7.5			
	2804	VORO	2	S/F	0136.3	0137.4	2.1	8.7			
	2840	PEKG	5	S	0249.0	0251.5	8.0	11.6			
	2804	VORO	41	F	0250.6	0256.2	5.6	3.1			
	2804	VORO	41	F	0250.6	0251.5	1.4	9.7			
	245	LEAR	8	S	0438.0	0438.0	U	400.0			QL=4 ST=2 TYP=3
	245	LEAR	48	C	0531.0	0534.0	3.0	110.0			QL=4 ST=2 TYP=8
	245	LEAR	8	S	0710.0	0710.0	U	490.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0710.0	0710.0	U	490.0			QL=4 ST=2 TYP=3
	410	SVTO	49	GB	0710.0	0710.0	U	1400.0			QL=4 ST=2 TYP=6
	245	SVTO	8	S	0710.0	0710.0	U	440.0			QL=4 ST=2 TYP=3
	127	TORN	47	GB	0710.0	0710.3	0.9	2660.0	1300.0		
	204	IZMI	46	C	0710.1	0710.4	0.7	313.0			
	9100	GORK	1	S	0738.1	0738.3	0.4	11.0			
	2950	GORK	41	F	0848.2	0853.3	9.5	9.5			
	2950	GORK	41	F	0848.2	0856.8		7.1			
	204	IZMI	41	F	0906.5	0906.8	0.6	41.0			
	127	TORN	47	GB	0958.9	0959.4	0.9	2700.0	1300.0		
	245	SVTO	8	S	1007.0	1007.0	U	68.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1007.0	1007.0	U	67.0			QL=4 ST=2 TYP=3
	204	IZMI	46	C	1058.9	1059.2	1.9	2953.0			
	245	SVTO	49	GB	1059.0	1059.0	U	760.0			QL=4 ST=2 TYP=6
	410	SVTO	8	S	1059.0	1059.0	U	150.0			QL=4 ST=2 TYP=3
	33	UPIC	3	S	1059.0	1059.5	1.0				
	235	CUBA	6	S	1512.3	1514.0	3.9	31.0	15.0		
	280	CUBA	6	S	1512.3	1514.0	6.7	33.0	17.0		
	245	SGMR	8	S	1514.0	1514.0	U	68.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1817.0	1818.0	1.0	220.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1817.0	1817.0	U	200.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	1832.0	1836.0	8.0	11.0			
	9500	CUBA	21	GRF	2058.0	2103.0	61.0	25.0	12.0		
	9500	CUBA	4	S/F	2058.5	2105.5	8.5	28.0	14.0		
	9500	CUBA	2	S/F	2140.8	2142.1	5.5	16.0	8.0		
	1415	PALE	8	S	2141.0	2145.0	4.0	58.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	2141.0	2142.0	2.0	83.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2142.0	2142.0	U	190.0			QL=4 ST=2 TYP=3
	500	HIRA	7	C	2232.0	2234.0	3.0	10.0			0
	245	LEAR	8	S	2232.0	2232.0	U	68.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2232.0	2232.0	U	85.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	2233.0	2233.0	U	61.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2233.0	2233.0	U	61.0			QL=4 ST=2 TYP=3
23	127	TORN	44	NS	0700.0E		300.0D		4.0		V=1
	235	CUBA	44	NS	1305.0E		355.0D		7.0		
	280	CUBA	44	NS	1305.0E		355.0D		22.0		
	500	HIRA	8	S	0008.0	0008.0	1.0	10.0			WL
	500	HIRA	8	S	0209.0	0209.0	1.0	20.0			0
	410	PALE	8	S	0309.0	0309.0	U	51.0			QL=4 ST=2 TYP=3
	2840	PEKG	3	S	0350.0	0354.5	18.0	20.9			
	2804	VORO	2	S/F	0353.3	0354.6	2.4	9.3			
	245	SVTO	8	S	0639.0	0640.0	1.0	38.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	0639.0	0639.0	1.0	61.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

NOVEMBER 2003

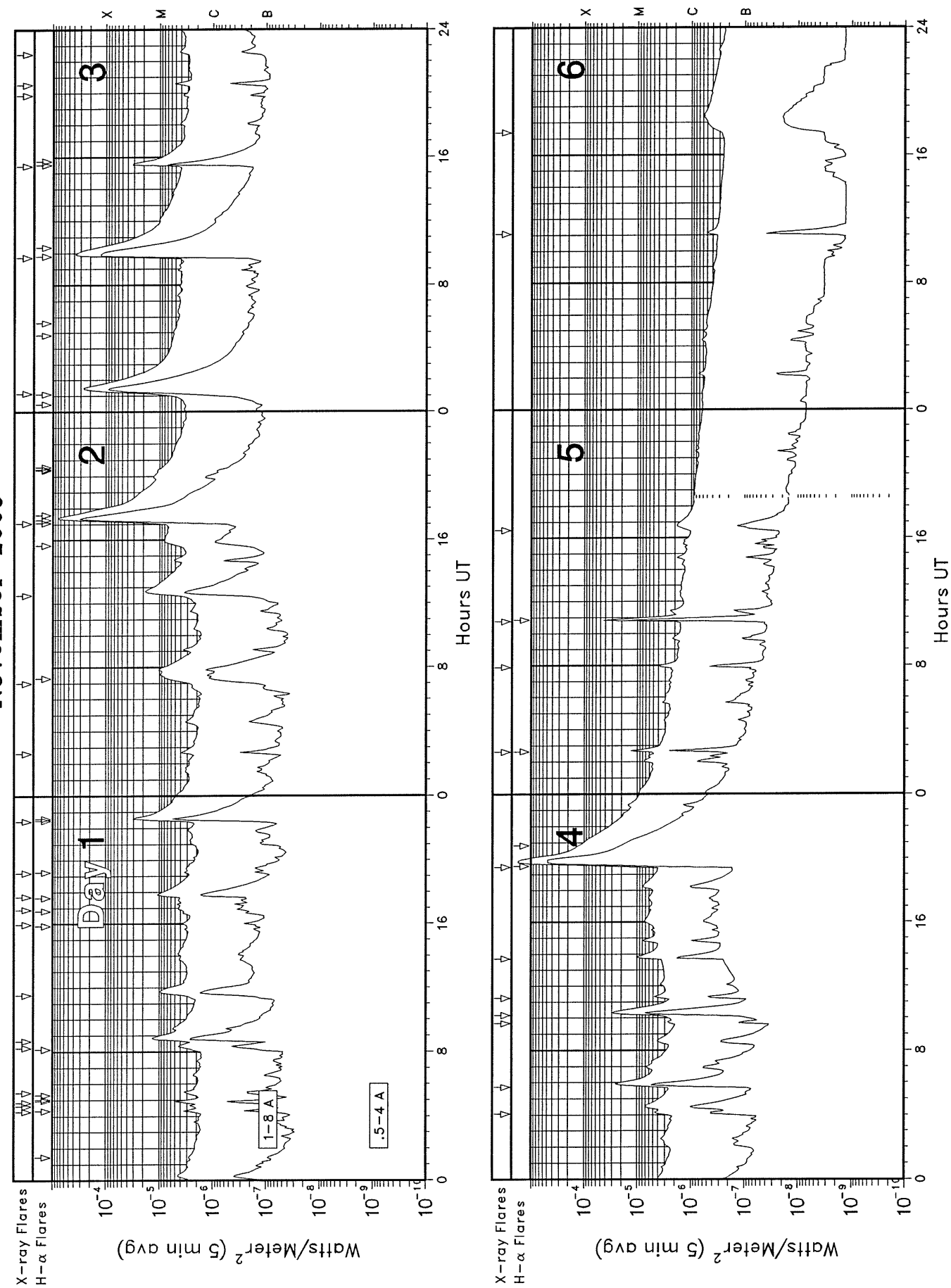
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
23	9100	GORK	46	C	0710.7	0710.9	6.2	13.0			
	9100	GORK	46	C	0710.7	0715.9		12.0			
	204	IZMI	41	F	0711.4	0711.4	0.4	41.0			
	2840	PEKG	3	S	0713.0	0715.5	13.0	25.5			
	2950	GORK	21	GRF	0713.0	0723.5	52.0	11.0			
	2950	GORK	46	C	0714.3	0715.4	4.6	20.0			
	2950	GORK	46	C	0714.3	0716.7		30.0			
	3000	IZMI	40	F	0714.8	0716.5	3.3	18.0			
	127	TORN	4	S/F	1000.6	1001.9	2.5	100.0	20.0		
	245	PALE	8	S	1715.0	1715.0	1.0	220.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	1836.0	1839.0	6.0	5.0			
	2800	PENT	1	S	2041.0	2046.0	9.0	4.0			
	2804	VORO	4	S/F	2338.0	2340.5	6.8	33.0			
	2804	VORO	30	PBI	2343.8	2345.1	78.0	13.0			
24	127	TORN	44	NS	0700.0E		360.0D		9.0		V=0
	235	CUBA	44	NS	1330.0E		330.0D		7.0		
	280	CUBA	44	NS	1330.0E		330.0D		11.0		
	2840	PEKG	1	S	0044.0	0046.3	6.0	8.2			
	2804	VORO	8	S	0045.8	0046.2	0.8	6.5			
	245	LEAR	8	S	0356.0	0356.0	1.0	300.0			QL=4 ST=2 TYP=3
	2840	PEKG	1	S	0609.0	0612.4	6.0	6.4			
	1415	LEAR	8	S	0612.0	0612.0	U	96.0			QL=4 ST=2 TYP=3
	9100	GORK	20	GRF	0823.3	0910.8	57.5	16.0			
	245	SVTO	8	S	1125.0	1125.0	U	58.0			QL=4 ST=2 TYP=3
	2800	PENT	20	GRF	1834.0	1852.0	35.0	5.0			
	2800	PENT	1	S	2056.0	2100.0	8.0	6.0			
25	127	TORN	44	NS	0700.0E		440.0D		3.0		V=1
	204	IZMI	43	NS	0900.0		180.0D		30.0		
	235	CUBA	44	NS	1400.0E		420.0D		9.0		
	280	CUBA	44	NS	1400.0E		420.0D		27.0		
	2804	VORO	4	S/F	0309.0	0313.3	8.6	17.5			
	2840	PEKG	3	S	0554.0	0558.5	16.0	19.6			
	2950	GORK	1	S	0744.0	0745.5	2.4	6.4			
	2950	GORK	1	S	0747.9	0749.9	3.4	4.2			
	245	PALE	8	S	2205.0	2206.0	1.0	160.0			QL=4 ST=2 TYP=3
26	204	IZMI	44	NS	0600.0E		300.0D		30.0		
	127	TORN	44	NS	0700.0E		430.0D		22.0		V=2
	235	CUBA	44	NS	1330.0E		210.0D		18.0		
	280	CUBA	44	NS	1330.0E		210.0D		39.0		
	245	SGMR	43	NS	1702.0	1702.0	60.0	92.0			QL=4 ST=2 TYP=1
	245	LEAR	43	NS	2210.0	0214.0	715.0	120.0			QL=4 ST=2 TYP=1
	245	LEAR	8	S	0055.0	0056.0	1.0	72.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0056.0	0056.0	U	74.0			QL=4 ST=2 TYP=3
	2804	VORO	45	C	0311.4	0312.8	2.7	11.7			
	204	IZMI	25	R	0944.0		136.0D		40.0		
	245	SGMR	8	S	1215.0	1216.0	1.0	76.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1216.0	1216.0	U	41.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1554.0	1555.0	1.0	120.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1617.0	1617.0	U	52.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1643.0	1643.0	U	62.0			QL=4 ST=2 TYP=3
	2800	PENT	29	PBI	1659.0	1714.0	33.0U	9.0			
27	245	SVTO	43	NS	0611.0	0736.0U	85.0	56.0			QL=4 ST=2 TYP=1
	204	IZMI	44	NS	0700.0E		300.0D		80.0		
	127	TORN	44	NS	0820.0E		350.0D		72.0		V=1
	245	SVTO	43	NS	0951.0	0951.0	22.0	66.0			QL=4 ST=2 TYP=1
	235	CUBA	44	NS	1320.0E		340.0D		10.0		
	280	CUBA	44	NS	1320.0E		340.0D		29.0		
	245	PALE	43	NS	2000.0	0214.0	451.0	150.0			QL=4 ST=2 TYP=1
	2840	PEKG	5	S	0157.0	0200.3	6.0	40.7			
	2804	VORO	4	S/F	0159.4	0200.2	4.1	28.5			
	2800	HIRA	8	S	0200.0	0200.0	1.0	40.0			0
	500	HIRA	7	C	0212.0	0214.0	4.0	10.0			0
	2840	PEKG	45	C	0633.0	0644.8	35.0	23.0			
	2950	GORK	46	C	0643.0	0643.6	4.4	115.0			
	2950	GORK	46	C	0643.0	0644.9		125.0			

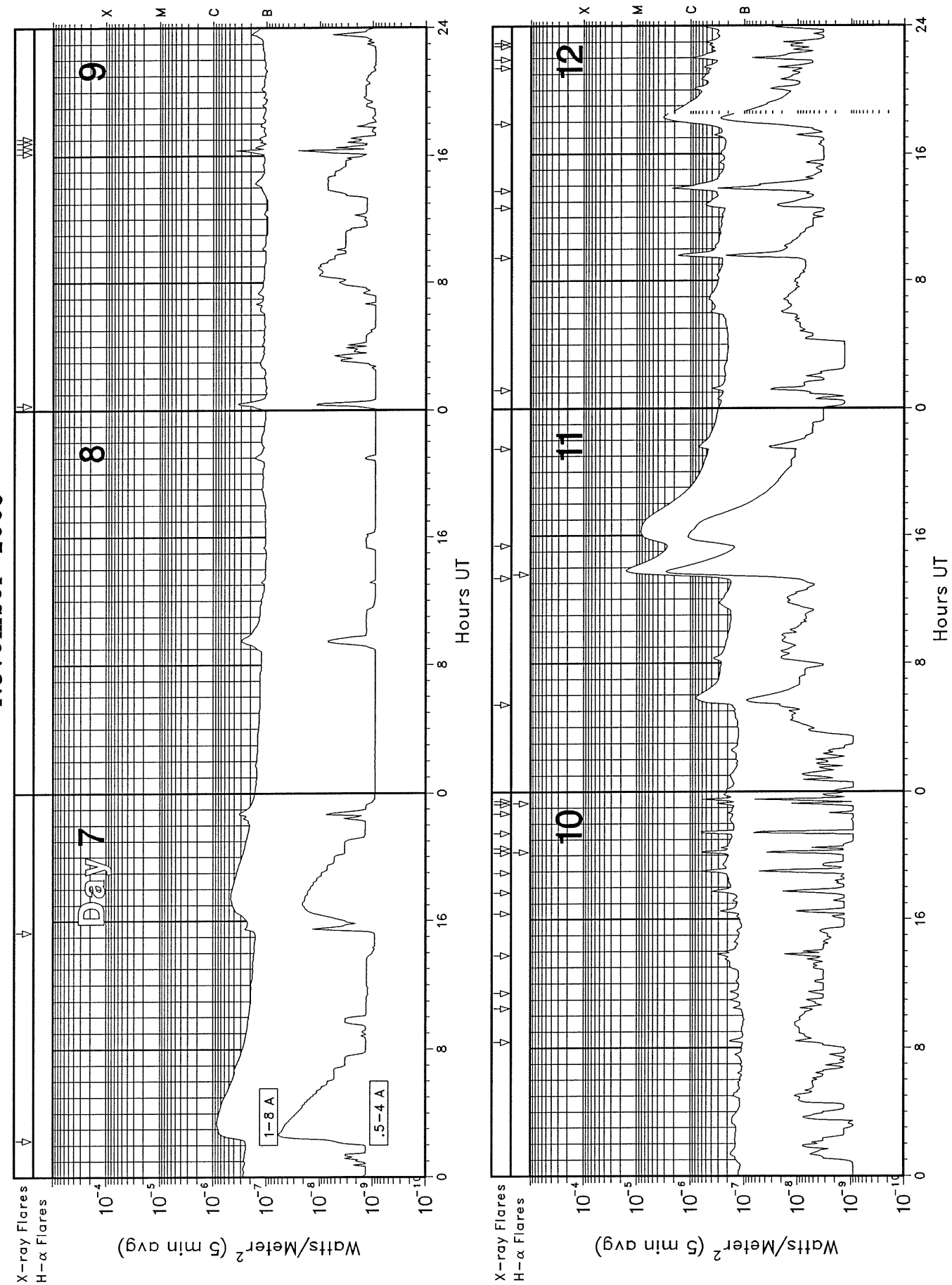
S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

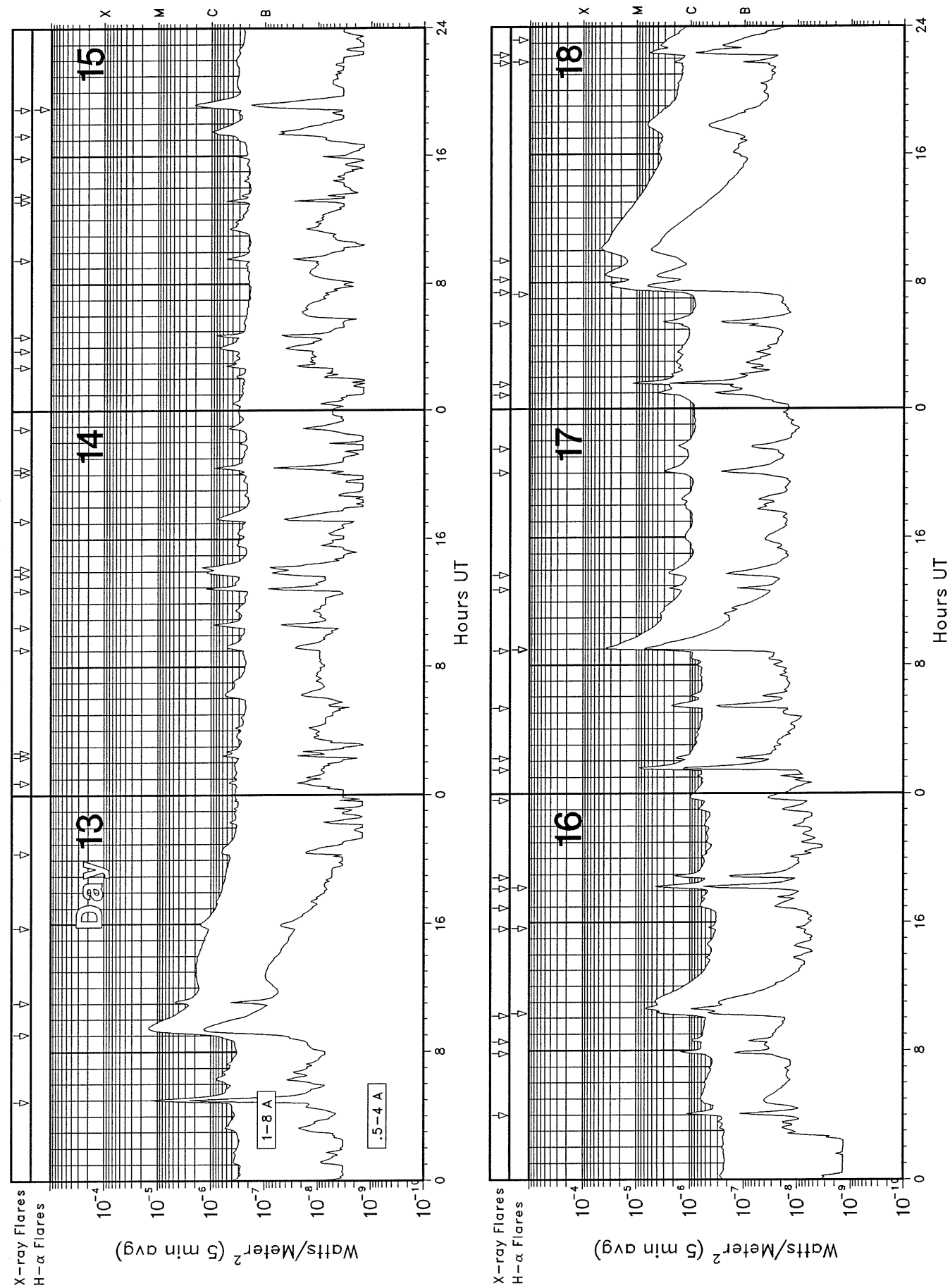
NOVEMBER 2003

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
27	500	HIRA	7	C	0644.0	0645.0	2.0	15.0			0
	2950	GORK	23	GRF	0737.6	0848.0		130.0			
	2950	GORK	23	GRF	0737.6	0822.0	202.0D	180.0			
	3000	IZMI	20	GRF	0806.6	0822.4	34.2	20.0	9.2		
	9100	GORK	20	GRF	0808.1	0942.8	172.0D	25.0			
	33	UPIC	46	C	0844.0	0844.5	12.0				UNCERTN
	245	SVTO	8	S	0903.0	0903.0	U	62.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0919.0	0919.0	U	65.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0934.7	0943.2	14.9	122.0			
	33	UPIC	46	C	0944.0	0944.5	3.0				UNCERTN
	245	SGMR	8	S	1215.0	1215.0	U	55.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1215.0	1215.0	U	58.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	1654.1	1654.9	1.2	13.0	6.0		
	2800	PENT	29	PBI	1833.0	1842.0	59.0U	13.0			
28	127	TORN	44	NS	0720.0E		280.0D		4.0		V=0
	235	CUBA	44	NS	1330.0E		270.0D		7.0		
	280	CUBA	44	NS	1330.0E		270.0D		23.0		
	2840	PEKG	3	S	0143.0	0146.5	17.0	16.4			
	2804	VORO	46	C	0144.9	0146.7	9.2	10.4			
	2840	PEKG	20	GRF	0556.0	0601.8	14.0	8.2			
	9100	GORK	20	GRF	0843.3	0912.0	98.7	18.0			
	9100	GORK	20	GRF	0843.3	0912.0	98.7	18.0			
	2950	GORK	21	GRF	0906.7	0938.3	73.5	14.0			
	2950	GORK	46	C	0908.7	0912.0		26.0			
	2950	GORK	46	C	0908.7	0910.6	6.1	37.0			
	3000	IZMI	22	GRF	0908.9	0910.7	5.0	31.0	14.1		
29	127	TORN	44	NS	0720.0E		400.0D		3.0		V=0
	235	CUBA	44	NS	1325.0E		475.0D		5.0		
	280	CUBA	44	NS	1325.0E		475.0D		22.0		
	2840	PEKG	1	S	0325.0	0327.8	9.0	6.1			
	2804	VORO	40	F	0327.3	0327.9	4.6	7.3			
	3000	IZMI	42	SER	0657.1	0657.1	0.2	18.0			
	9100	GORK	4	S/F	0748.1	0748.8	2.1	12.0			
	2950	GORK	46	C	1007.1	1009.0	7.0	11.0			
	2950	GORK	46	C	1007.1	1011.5		12.0			
	9100	GORK	46	C	1008.4	1011.5		17.0			
	9100	GORK	46	C	1008.4	1010.7	3.4	14.0			
	245	SGMR	8	S	1619.0	1619.0	U	78.0			QL=4 ST=2 TYP=3
	2800	PENT	29	PBI	2051.0	2103.0	41.0U	21.0			
	245	LEAR	8	S	2338.0	2338.0	U	70.0			QL=4 ST=2 TYP=3
30	127	TORN	44	NS	0720.0E		390.0D		9.0		V=0
	235	CUBA	44	NS	1430.0E		270.0D		7.0		
	280	CUBA	44	NS	1430.0E		270.0D		15.0		
	2840	PEKG	1	S	0344.0	0347.7	9.0	3.4			
	2800	PENT	1	S	2119.0	2122.0	6.0	3.0			

28
Nov 03

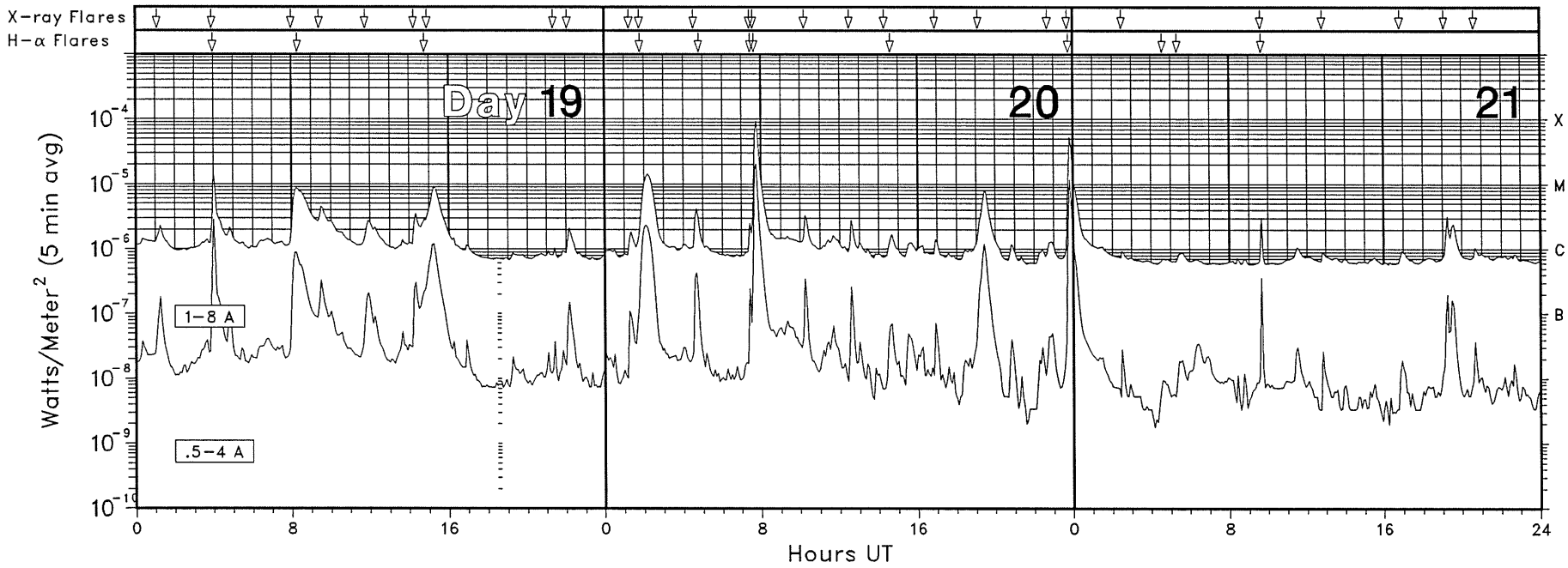

GOES X-RAY DETECTOR
November 2003
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
Day 1
1-8 A
.5-4 A
X
M
C
B
1
2
3
4
5
6

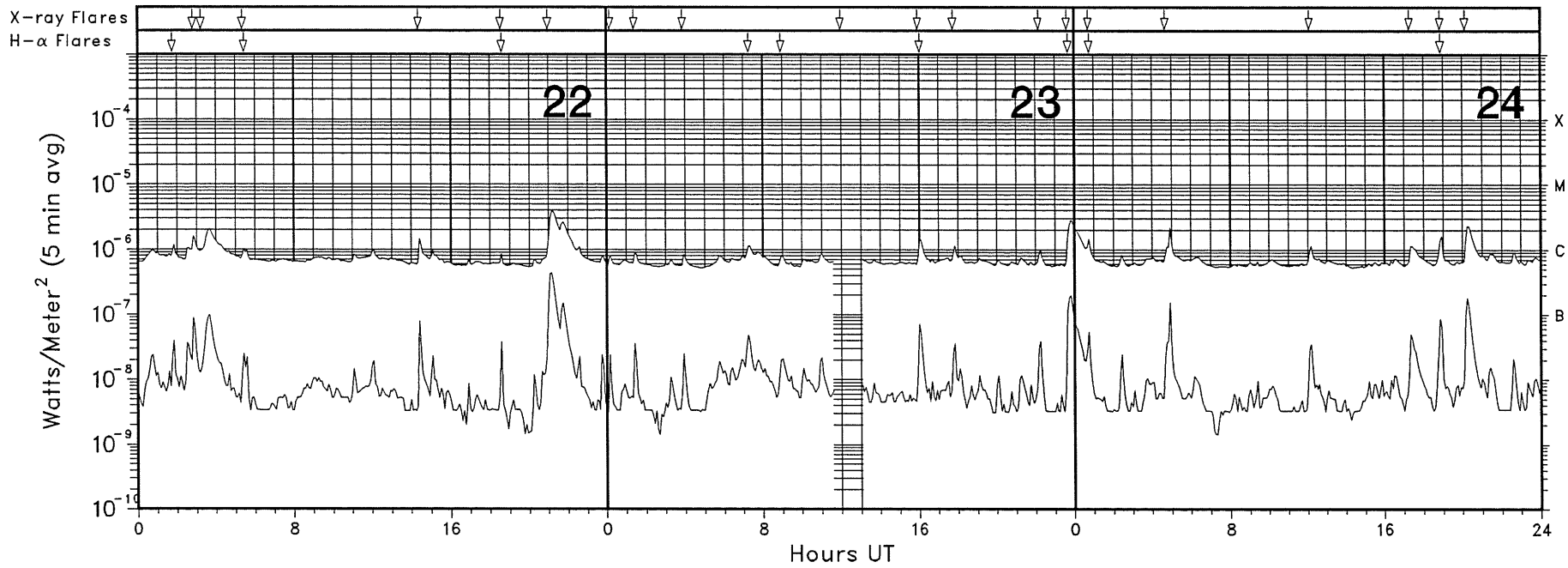

GOES X-RAY DETECTOR
November 2003
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
1-8 A
.5-4 A
Hours UT
Day 7
8
9
10
11
12
X
M
C
B


GOES X-RAY DETECTOR
November 2003
X-ray Flares
H-α Flares
Day 13
14
15
16
17
18
1-8 A
.5-4 A
Watts/Meter² (5 min avg)
Hours UT
X
M
C
B

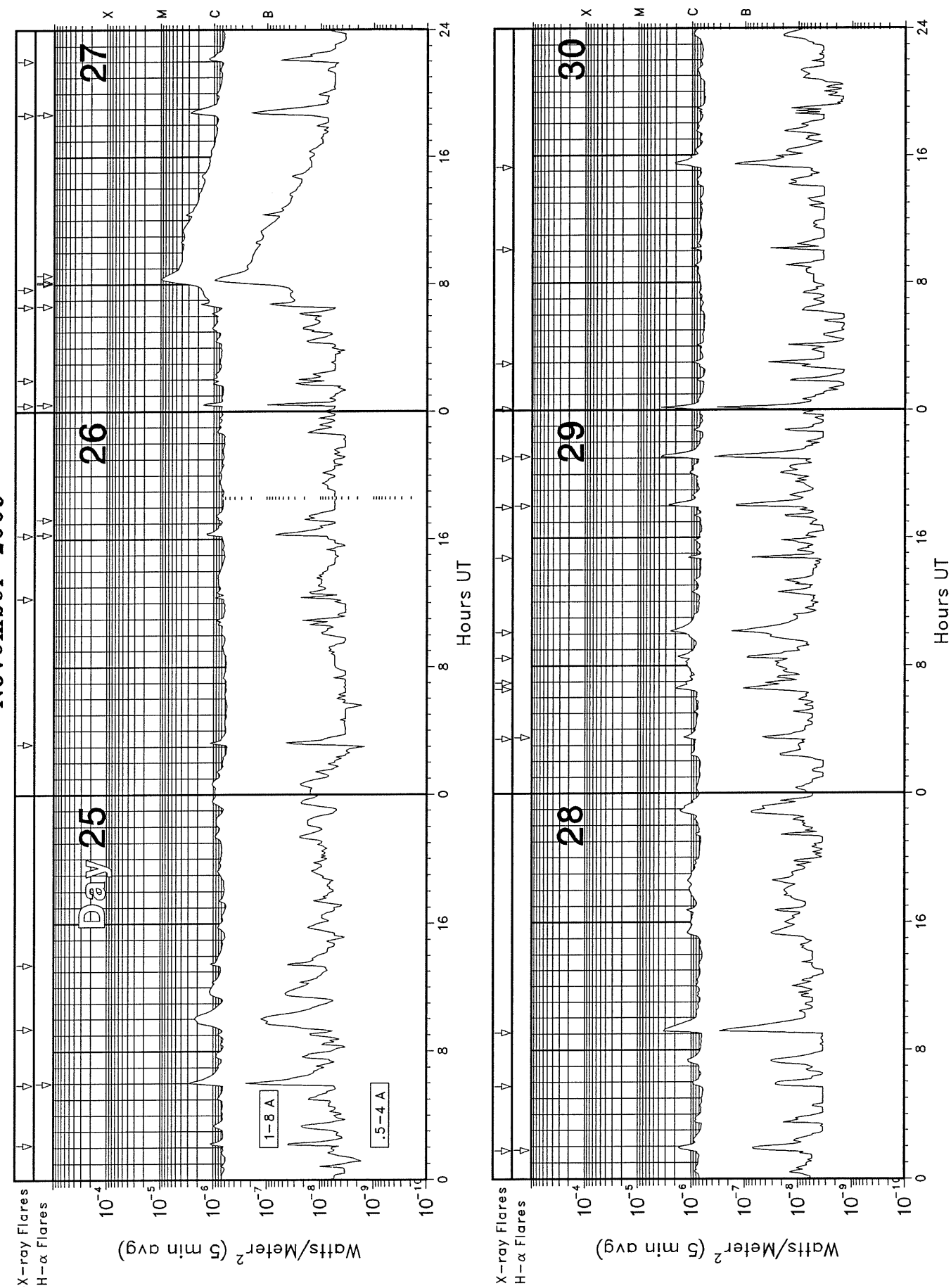
GOES X-RAY DETECTOR

November 2003





31
Nov 03


GOES X-RAY DETECTOR
November 2003
Day
25
26
27
28
29
30
1-8 A
.5-4 A
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
X
M
C
B

GOES S O L A R X-RAY F L A R E S
Preliminary Listing

November 2003

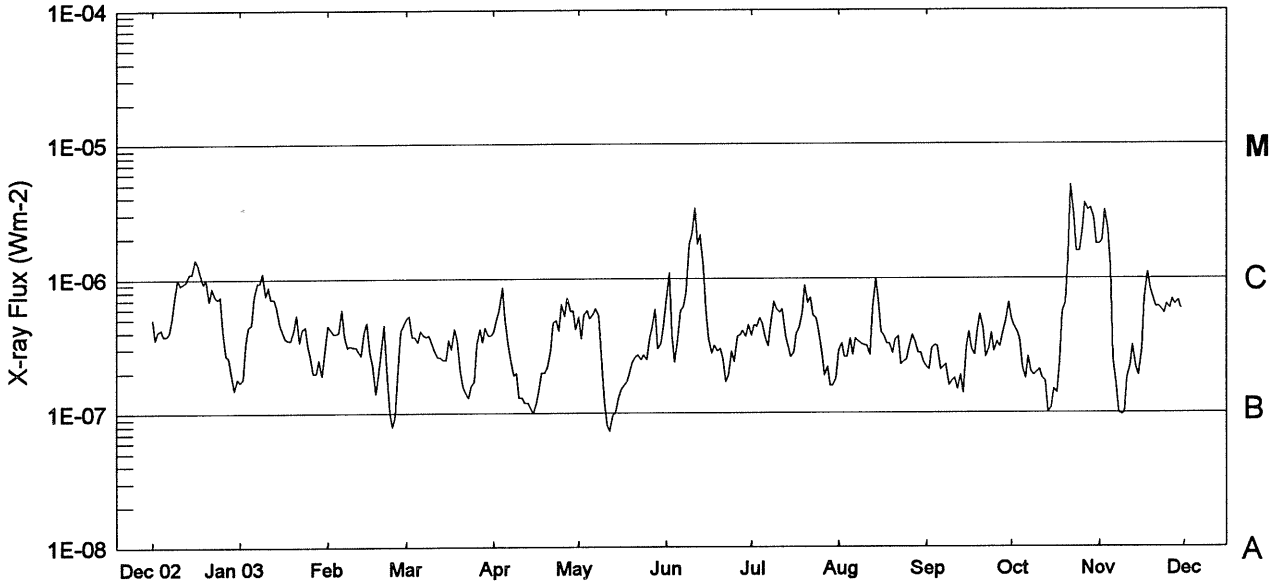
Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp	Xray	NOAA/ USAF Region	Flux
01	0417	0422	0426	S17	W40	SF	C	3.7	10486	1.6E-03
01	0436	0440	0444				C	2.8		1.2E-03
01	0450	0457	0500	N09	W47	SF	C	5.6	10488	2.6E-03
01	0526	0530	0534	S14	W38	SF	C	3.6	10486	1.6E-03
01	0814	0822	0830	S13	W41	SF	C	4.4	10486	3.7E-03
01	0839	0852	0906				M	1.3	10488	1.6E-02
01	1131	1145	1204				C	9.7	10488	1.5E-02
01	1557	1602	1605	S16	W45	SF	C	3.8	10486	1.7E-03
01	1653	1658	1701	N08	W49	SF	C	4.4	10488	2.0E-03
01	1742	1751	1808	N09	W50	SF	M	1.1	10488	1.4E-02
01	1912	1916	1918	N06	W55	SF	C	3.5	10488	1.2E-03
01	2226	2238	2249	S12	W60	1N	M	3.2	10486	2.8E-02
02	0237	0243	0248	S14	W52	SF	C	4.0	10486	2.4E-03
02	0659	0753	0812	S17	W55	SF	M	1.0	10486	3.3E-02
02	1230	1247	1312				M	1.8	10488	3.5E-02
02	1703	1725	1739	S14	W56	2B	X	8.3	10486	9.1E-01
03	0109	0130	0145	N10	W83	2B	X	2.7	10488	3.6E-01
03	0943	0955	1019	N08	W77	2F	X	3.9	10488	5.6E-01
03	1526	1532	1543	S15	W79	SF	M	3.9	10486	2.5E-02
03	1951	1954	1957				C	4.4		1.5E-03
03	2031	2037	2041				C	5.4		2.9E-03
03	2228	2236	2240				C	3.1		2.7E-03
04	0404	0411	0419				C	5.0		4.1E-03
04	0543	0556	0607				M	2.6		2.5E-02
04	0940	0943	0950				C	2.8	10486	1.6E-03
04	1011	1022	1033				M	3.0	10488	2.7E-02
04	1115	1119	1125				C	5.7	10486	2.6E-03
04	1343	1349	1401				M	1.1	10486	9.3E-03
04	1929	1950	2006	S19	W83	3B	X	28.0	10486	2.3E00
05	0237	0241	0245	S19	W89	SF	M	1.6	10486	5.2E-03
05	0754	0759	0803				C	4.7		2.1E-03
05	1046	1052	1056	S16	W90	SF	M	5.3	10486	1.7E-02
05	1629	1648	1709				C	1.9		3.8E-03
06	1105	1110	1118				B	5.2		3.8E-04
06	1724	1831	1942				B	5.8		3.9E-03
07	0217	0318	0527				B	8.4		8.0E-03
07	1517	1726	1939				B	4.7		5.6E-03
09	0018	0025	0030				B	3.8		2.2E-04
09	1609	1613	1618				B	1.9		9.0E-05
09	1629	1634	1637				B	2.0		7.7E-05
09	1650	1653	1656				B	1.7		4.9E-05
09	1705	1709	1711				B	1.8		5.2E-05
10	0823	0828	0832				B	2.1		9.3E-05
10	1029	1032	1035				B	1.9		5.4E-05
10	1126	1130	1134				B	1.9		8.1E-05
10	1346	1350	1352				B	5.0		1.2E-04
10	1623	1633	1636				B	2.9		1.7E-04
10	1742	1749	1751				B	4.3		1.8E-04
10	1856	1901	1904				B	8.0		2.4E-04
10	2011	2014	2016	S10	W38	SF	C	1.5	10500	2.7E-04
10	2028	2032	2034				B	3.2		9.1E-05
10	2125	2129	2131				C	1.9		3.3E-04
10	2239	2242	2244				B	2.2		5.7E-05
10	2314	2318	2320	N00	W51	SF	B	4.0	10498	1.0E-04
10	2325	2332	2334				B	8.3		2.3E-04
11	0526	0551	0622				B	7.8		2.1E-03
11	1321	1351	1417	S03	W61	SF	M	1.6	10498	3.2E-02
11	1523	1615	1717				C	8.5		4.6E-02
11	2129	2135	2152				B	7.1		8.9E-04
12	0110	0115	0120				B	4.1		2.2E-04
12	0928	0938	0944				C	1.8		1.1E-03
12	1238	1250	1312				B	5.2		9.0E-04
12	1342	1352	1358				C	2.3		1.3E-03
12	1754	1819	1835				C	3.2		6.0E-03
12	2124	2128	2132				B	6.1		2.7E-04
12	2156	2201	2207				C	1.0		5.4E-04
12	2246	2249	2255				B	4.9		2.4E-04
12	2258	2301	2306				B	5.7		2.5E-04
13	0454	0501	0506				M	1.6	10501	6.3E-03
13	0903	0929	1002				M	1.4	10501	3.5E-02
13	1102	1108	1114				C	5.0		3.1E-03
13	1544	1600	1615				C	1.6		2.6E-03
13	2024	2027	2052				B	6.6	10500	1.0E-03
14	0045	0048	0051				B	5.8	10501	1.7E-04
14	0220	0226	0232				B	6.3	10501	3.7E-04
14	0237	0240	0245				B	5.1	10501	2.2E-04
14	0905	0914	0928				B	5.0	10501	6.0E-04
14	1030	1042	1046				C	1.0	10501	6.2E-04
14	1248	1257	1301				C	1.4	10501	6.8E-04
14	1344	1359	1409				C	1.4	10501	1.4E-03
14	1410	1415	1419				C	1.7	10501	7.2E-04
14	1708	1715	1732				B	8.2	10501	9.0E-04
14	2002	2005	2009				B	3.4	10501	1.3E-04
14	2019	2028	2031				B	9.6	10501	4.8E-04
14	2249	2253	2255				B	6.0	10501	1.7E-04
15	0245	0250	0254				B	6.2		2.6E-04
15	0347	0357	0412				B	7.0		8.7E-04
15	0440	0444	0448				C	1.2	10501	3.7E-04
15	0930	0936	0943				B	5.4		3.3E-04
15	1307	1311	1316				B	5.6	10501	2.3E-04
15	1330	1334	1336				B	3.5	10501	1.0E-04
15	1552	1557	1600				B	3.4	10501	1.4E-04
15	1716	1732	1744				C	1.0	10501	1.3E-03
15	1855	1912	1923	N02	E38	SF	C	2.0	10501	2.4E-03
16	0400	0407	0413				C	1.1		6.7E-04
16	0749	0754	0758				C	1.9		6.9E-04
16	0834	0839	0843				C	1.0		4.9E-04
16	1010	1039	1116	N01	E44	SF	C	7.0	10501	1.6E-02
16	1537	1540	1544	N04	E22	SF	B	4.7	10502	1.8E-04
16	1656	1659	1725				B	6.5		1.1E-03
16	1808	1816	1821	N01	E39	SF	C	4.9	10501	2.3E-03
16	1850	1853	1858				C	2.6	10501	8.7E-04
16	2335	2348	0005				B	9.9	10501	3.0E-03
17	0128	0134	0139				M	1.2		4.8E-03
17	0210	0213	0217				C	2.2		7.9E-04
17	0518	0527	0537				C	2.2		2.0E-03
17	0855	0905	0919	S01	E33	1N	M	4.2	10501	3.7E-02
17	1247	1252	1257				C	2.5		1.3E-03
17	1341	1349	1401				C	2.5		2.7E-03
17	2001	2008	2016				C	3.1		2.4E-03
17	2130	2145	2154				C	1.7		2.1E-03

GOES S O L A R X-RAY F L A R E S
Preliminary Listing

November 2003

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp	Xray	NOAA/ USAF Region	Flux
18	0053	0102	0110				C4.1			3.3E-03
18	0134	0139	0142				M1.8		10501	5.6E-03
18	0525	0530	0535	S01	E20	SF	C3.8		10501	1.7E-03
18	0723	0752	0806	N00	E18	2N	M3.2		10501	5.1E-02
18	0812	0831	0859				M3.9		10501	8.4E-02
18	0923	1011	1101				M4.5			1.9E-01
18	2144	2149	2152	N10	E90	SF	C2.2		10507	9.5E-04
18	2215	2222	2237				C6.1			6.1E-03
19	0106	0116	0123				C2.4		10501	1.9E-03
19	0355	0401	0406	N01	E06	1N	M1.7		10501	6.4E-03
19	0759	0817	0849	N03	E01	1F	C8.8		10501	2.0E-02
19	0926	0933	0938				C4.9		10501	2.9E-03
19	1146	1158	1243				C2.8		10506	6.8E-03
19	1414	1419	1428				C3.9			2.5E-03
19	1455	1519	1553				C9.1		10506	1.9E-02
19	2122	2126	2128				C1.1		10506	3.6E-04
19	2205	2210	2219				C2.3		10506	1.5E-03
20	0115	0119	0128				C2.1			1.3E-03
20	0147	0212	0228	N03	W08	1N	M1.4		10501	2.4E-02
20	0432	0440	0448	S17	E73	SF	C4.3		10508	3.1E-03
20	0725	0728	0730	N03	W12	SF	C3.8		10501	8.2E-04
20	0735	0747	0753	N01	W08	2B	M9.6		10501	6.0E-02
20	1013	1018	1023				C4.1			1.8E-03
20	1231	1237	1241				C3.5			1.3E-03
20	1418	1442	1449	N09	E59	SF	C1.7		10507	2.1E-03
20	1654	1658	1702				C1.7			6.7E-04
20	1908	1929	1937				C8.6			9.2E-03
20	2242	2258	2303				C1.3			1.5E-03
20	2342	2353	2358	N02	W17	2B	M5.8		10501	2.8E-02
21	0230	0233	0237				C1.0			4.0E-04
21	0937	0943	0945	S23	E36	SF	C4.3		10506	1.1E-03
21	1249	1253	1257				C1.0			4.3E-04
21	1651	1655	1710				B9.2			9.8E-04
21	1908	1916	1921				C3.4			1.8E-03
21	2039	2043	2047				C1.1		10508	4.9E-04
22	0249	0253	0256				C2.1			6.6E-04
22	0314	0342	0354				C2.0			3.7E-03
22	0522	0525	0528	N03	W37	SF	C1.1		10501	3.6E-04
22	1422	1428	1432				C1.7		10507	7.4E-04
22	1833	1836	1838	N07	E26	SF	C1.2		10507	2.6E-04
22	2058	2113	2131				C3.9			5.8E-03
23	0010	0014	0016				C1.0			3.0E-04
23	0124	0128	0133				C1.0			4.7E-04
23	0352	0356	0404				B8.8			5.5E-04
23	1158	1209	1221				C1.2			1.5E-03
23	1556	1604	1612	S21	E12	SF	C1.5		10506	1.2E-03
23	1745	1750	1755				C1.2		10507	6.2E-04
23	2210	2215	2220				C1.0			5.5E-04
23	2337	2353	0016	S13	E12	SF	C2.8		10508	5.0E-03
24	0044	0047	0049	S19	E14	SF	C1.7		10508	4.3E-04
24	0441	0456	0459				C2.6		10501	1.5E-03
24	1206	1210	1213				C1.3		10508	4.6E-04
24	1717	1722	1742				C1.1			1.6E-03
24	1851	1854	1857	S08	E59	SF	C2.3		10509	6.6E-04
24	2008	2021	2032				C2.3		10508	2.7E-03
25	0208	0215	0220				C1.2		10509	7.4E-04
25	0554	0602	0613	S14	W05	SF	C3.0		10508	2.5E-03
25	0924	1003	1041				C2.2			7.3E-03
25	1325	1329	1333				C1.3		10508	5.4E-04
26	0310	0316	0320				C1.2		10508	6.3E-04
26	1217	1224	1227				B9.4			5.1E-04
26	1614	1618	1624	S13	W14	SF	C1.7		10508	7.9E-04
27	0023	0029	0031	S12	E26	SF	C2.2		10509	7.2E-04
27	0159	0202	0206				C1.1		10508	4.3E-04
27	0634	0646	0651	S15	W23	SF	C1.9		10508	1.4E-03
27	0741	0820	0848	S14	W27	SF	C9.6		10508	2.3E-02
27	1839	1847	1901	S14	W34	SF	C2.7		10508	3.0E-03
27	2202	2210	2222				C1.2		10510	1.3E-03
28	0145	0159	0206	S14	W36	SF	C1.7		10508	1.8E-03
28	0546	0555	0608				C1.0		10507	1.2E-03
28	0906	0913	0930				C3.6		10508	3.8E-03
29	0325	0330	0335	S20	E05	SF	C1.5		10510	7.5E-04
29	0632	0638	0646				C2.0		10508	1.5E-03
29	0656	0659	0702				C1.5		10508	5.0E-04
29	0830	0834	0841				C1.9		10507	1.1E-03
29	1006	1012	1018				C2.6		10508	1.5E-03
29	1445	1448	1451				C1.6		10508	4.5E-04
29	1757	1806	1814	S23	E02	SF	C2.7		10510	2.1E-03
29	2100	2109	2115	S25	E00	1F	C4.2		10510	2.6E-03
30	0006	0011	0014				C4.6		10517	1.3E-03
30	0256	0300	0305				C1.1		10508	5.0E-04
30	1007	1011	1013				C1.2		10508	3.7E-04
30	1515	1531	1539				C2.1		10508	2.3E-03

Preliminary GOES Satellite Daily X-Ray Background
Dec 2002 - Nov 2003



Day	Dec 02	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	B5.0	B1.7	B4.5	B5.1	B4.0	B5.2	B6.8	B3.8	B2.9	B2.2	B5.0	C1.8
2	B3.6	B1.8	B4.2	B5.3	B5.1	B3.6	C1.1	B4.5	B3.3	B2.1	B4.4	C1.9
3	B4.1	B3.3	B3.9	B3.7	B5.9	B5.4	B3.8	B4.4	B2.6	B3.0	B4.0	C3.2
4	B4.2	B4.4	B3.9	B3.7	B8.6	B5.8	B2.4	B5.1	B2.6	B3.2	B3.5	C2.3
5	B3.8	B4.6	B4.0	B3.4	B5.1	B5.1	B3.6	B4.6	B3.6	B3.1	B2.2	C1.2
6	B3.8	B7.4	B5.9	B4.1	B3.3	B5.4	B5.7	B3.7	B2.7	B2.1	B1.8	B2.5
7	B4.0	B9.3	B3.8	B3.8	B2.5	B6.0	B6.2	B3.2	B3.6	B2.2	B2.6	B1.6
8	B5.0	B9.4	B3.1	B3.7	B1.9	B5.3	B7.9	B4.6	B3.4	B2.3	B2.0	B1.0
9	B7.7	C1.1	B3.2	B3.8	B2.0	B2.7	C1.8	B6.7	B3.3	B1.6	B1.9	A9.7
10	C1.0	B7.6	B3.1	B3.3	B1.3	B1.2	C2.1	B5.9	B3.2	B1.7	B2.0	B1.0
11	B9.1	B8.7	B3.1	B2.9	B1.3	A8.2	C3.3	B5.6	B3.2	B1.8	B2.1	B1.8
12	B9.4	B7.1	B2.9	B2.6	B1.2	A7.4	C1.8	B5.9	B2.7	B1.5	B1.8	B2.2
13	B9.7	B7.1	B2.7	B2.6	B1.2	A9.7	C2.1	B3.8	B6.0	B1.9	B1.7	B3.2
14	C1.1	B6.2	B4.1	B2.5	B1.1	B1.0	C1.2	B3.2	C1.0	B1.4	B1.0	B2.2
15	C1.1	B4.6	B4.7	B2.5	B1.0	B1.3	B5.8	B2.6	B6.8	B3.1	B1.1	B1.9
16	C1.4	B4.1	B2.8	B3.5	B1.2	B1.5	B3.6	B2.8	B4.0	B4.0	B1.5	B2.9
17	C1.3	B3.6	B2.3	B3.0	B1.5	B1.6	B2.8	B3.9	B3.7	B3.0	B1.4	B7.2
18	C1.1	B3.5	B1.4	B4.2	B2.0	B1.7	B3.2	B4.2	B3.3	B2.7	B2.4	C1.1
19	B9.2	B3.5	B1.9	B3.6	B2.0	B2.0	B2.9	B5.4	B3.3	B4.1	B5.6	B8.4
20	C1.0	B4.2	B2.8	B2.1	B2.2	B2.4	B3.0	B8.9	B2.8	B5.4	B6.5	B7.3
21	B6.9	B5.4	B4.5	B1.6	B2.9	B2.6	B2.6	B6.6	B3.5	B4.2	C1.4	B6.1
22	B8.6	B3.4	B2.2	B1.4	B4.7	B2.7	B1.7	B7.2	B3.7	B2.6	C4.9	B6.2
23	B7.4	B4.2	B1.0	B1.3	B4.9	B2.5	B1.9	B5.3	B2.3	B3.0	C3.0	B5.9
24	B7.1	B4.4	A8.0	B1.6	B4.1	B2.7	B2.9	B5.1	B2.4	B3.9	C1.6	B5.5
25	B7.4	B3.2	A9.4	B1.7	B6.4	B2.5	B2.4	B4.0	B2.5	B2.9	C1.6	B6.4
26	B4.2	B2.6	B2.2	B3.3	B5.3	B3.5	B3.7	B2.8	B3.1	B3.4	C2.2	B6.0
27	B2.7	B2.0	B4.1	B4.2	B7.2	B4.3	B3.8	B1.9	B3.8	B3.1	C3.6	B7.0
28	B2.6	B2.0	B4.5	B3.4	B5.7	B5.9	B4.1	B2.2	B3.4	B4.0	C3.2	B6.4
29	B1.9	B2.5		B4.3	B5.8	B3.0	B3.7	B1.6	B2.8	B4.8	C3.3	B6.8
30	B1.5	B1.9		B3.8	B4.2	B3.3	B4.5	B1.6	B2.8	B6.6	C2.8	B5.9
31	B1.8	B2.8		B3.8		B4.5		B1.8	B2.4		C1.8	

NOTE: * = Data not available.

ACTIVE PROMINENCES AND FILAMENTS

NOVEMBER 2003

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	BSL	2230	2345D	S15	W62	10	28.3	3		9	9	E	LEAR	0486	Flare Associated
03	EPL	0935	0948	N07	W90	10	27.7	1		9	9	E	LEAR	0488	
04	LPS	1500	0000	N07	W90	10	29.0			9	9	E	HOLL	0488	
04	LPS	2106	0000	S21	W90	10	29.1			9	9	E	HOLL	0486	Flare Associated
04	LPS	2255E	0000	S17	W90	10	29.2			0	0	E	LEAR		
04	LPS	2255E	0000	S17	W90	10	29.2			9	9	E	LEAR		
04	LPS	2255E	0000	S17	W90	10	29.2			9	9	E	LEAR	0486	
04	LPS	2255E	0920	S17	W90	10	29.2			9	9	E	LEAR	0486	
04	LPS	2316E	0957	N08	W90	10	29.3			9	9	E	LEAR	0488	
05	LPS	0907E	1043	N11	W90	10	29.7			6	4	E	SVTO	0488	
07	DSF	1438U	0650U	S18	W23	11	5.8		16	0	0	E	SVTO		
07	DSF	1642	1937	S18	W21	11	6.1	2	13	0	0	E	HOLL		
08	DSF	0850U	2222U	S07	W12	11	7.5		04	0	0	E	LEAR		
13	EPL	0901	0000	N07	E90	11	20.1	3		9	9	E	LEAR		
13	EPL	0901	0922	N07	E90	11	20.1	3		9	9	E	LEAR		
13	EPL	0911	0954	N04	E90	11	20.1	3		9	9	E	LEAR		
13	EPL	0914	0925	N12	E90	11	20.2	3		9	4	E	SVTO		
13	EPL	0925	0955	N01	E90	11	20.1	3		9	9	E	SVTO		
16	DSF	1431U	0738U	S06	E25	11	18.5		08	0	0	E	SVTO		
17	DSF	2250U	1424U	S05	E24	11	19.7		17	0	0	E	HOLL		
17	DSF	2323U	1420U	S04	E13	11	18.9		09	0	0	E	HOLL	0501	
18	DSF	0716	0813	S04	E16	11	19.5	3	14	8	9	E	LEAR	0501	Flare Associated
18	EPL	1632	2337	S13	E90	11	25.5	3		9	9	E	HOLL		
28	DSF	0254	0345	S06	W61	11	23.5	3	11	0	0	E	LEAR		
28	DSF	2326U	1421U	S12	W67	11	23.9		12	0	0	E	HOLL		
29	EPL	1909	2344	S42	W90	11	22.4			5	6	E	HOLL		

ADF = Active Dark Filament
AFS = Arch Filament System
APR = Active Prominence
ASR = Active Surge Region
BSD = Bright Surge on Disk
BSL = Bright Surge on Limb
CAP = CAP Prominence (Tandberg-Hanssen)
CRN = Coronal Rain
DSD = Dark Surge on Disk
DSF = Disappearing Solar Filament
EPL = Eruptive Prominence on Limb
LPS = Loops
MDP = Mound Prominence
SDF/DSF = Sudden Disappearing Filament
SPY = Spray
SSB = Solar Sector Boundary

For SOLAR SECTOR BOUNDARY REPORTS, the latitude field contains the Carrington longitude of the point where a neutral line crosses the solar equator. The comments field may contain the Carrington longitude and central meridian distance of two more intersection points.

The EXTENT field for limb events is the radial extent above the limb in hundredths of solar radius. For disk events this field contains the heliographic extent in whole degrees.

The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

Observation Type: C= Cinematographic, E= Electronic, P= Photographic, V= Visual.

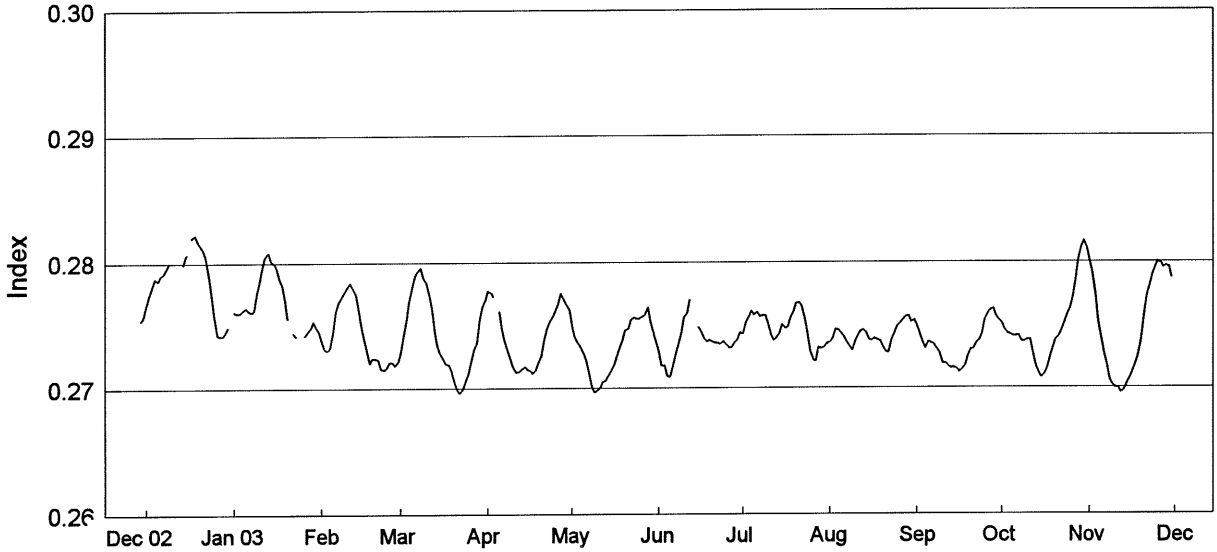
ABST = Abastumani
ATHN = Athens
BUCA = Bucharest
CATA = Catania
HOLL = Holloman
KHAR = Kharkov
LEAR = Learmonth
PALE = Palehua
RAMY = Ramey
SVTO = San Vito
VORO = Voroshilov
VALA = Valasske Mezirici
WROC = Wroclaw

NOTE: The U.S. Air Force solar observing sites (HOLL, LEAR, RAMY, AND SVTO) have changed operational requirements and will only report the following: BSL, EPL, LPS, SPY, and DSF's.

NOAA Solar Ultraviolet (UV) MgII Core-to-Wing Index

Dec 2002 - Nov 2003

Version 9.1



Day	Dec 02	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	0.2767	0.2761	0.2738	0.2728	0.2778	0.2749	0.2729	0.2743	0.2736	0.2749	0.2751	0.2801
2	0.2774	0.2760	0.2732	0.2743	0.2776	0.2741	0.2718	0.2751	0.2739	0.2744	0.2746	0.2792
3	0.2782	0.2760	0.2730	0.2754	0.2772	0.2736	0.2718	0.2756	0.2747	0.2736	0.2743	0.2774
4	0.2788	0.2762	0.2732	0.2769	----	0.2733	0.2710	0.2761	0.2746	0.2731	0.2743	0.2752
5	0.2786	0.2764	0.2745	0.2781	0.2761	0.2728	0.2709	0.2758	0.2744	0.2737	0.2741	0.2738
6	0.2790	0.2762	0.2761	0.2789	0.2747	0.2722	0.2717	0.2760	0.2741	0.2736	0.2741	0.2727
7	0.2792	0.2761	0.2769	0.2793	0.2738	0.2713	0.2728	0.2757	0.2736	0.2734	0.2742	0.2719
8	0.2795	0.2762	0.2772	0.2796	0.2730	0.2701	0.2735	0.2758	0.2732	0.2730	0.2737	0.2706
9	0.2800	0.2775	0.2777	0.2788	0.2724	0.2697	0.2743	0.2758	0.2730	0.2728	0.2737	0.2702
10	----	0.2784	0.2781	0.2784	0.2716	0.2698	0.2756	0.2749	0.2737	0.2720	0.2738	0.2700
11	----	0.2797	0.2784	0.2776	0.2713	0.2700	0.2759	0.2742	0.2741	0.2719	0.2738	0.2700
12	0.2785	0.2805	0.2780	0.2763	0.2713	0.2705	0.2770	0.2738	0.2745	0.2717	0.2728	0.2696
13	----	0.2808	0.2775	0.2746	0.2715	0.2706	----	0.2740	0.2746	0.2715	0.2717	0.2698
14	0.2799	0.2802	0.2765	0.2734	0.2717	0.2710	----	0.2743	0.2744	0.2716	0.2712	0.2702
15	0.2807	0.2800	0.2749	0.2728	0.2715	0.2714	0.2748	0.2750	0.2739	0.2715	0.2708	0.2707
16	----	0.2796	0.2740	0.2724	0.2714	0.2718	0.2745	0.2747	0.2738	0.2713	0.2710	0.2712
17	0.2820	0.2788	0.2729	0.2720	0.2712	0.2725	0.2739	0.2748	0.2740	0.2714	0.2714	0.2717
18	0.2822	0.2782	0.2720	0.2719	0.2714	0.2731	0.2737	0.2756	0.2738	0.2717	0.2723	0.2724
19	0.2817	0.2771	0.2724	0.2714	0.2720	0.2738	0.2738	0.2760	0.2737	0.2725	0.2732	0.2737
20	0.2814	0.2755	0.2724	0.2705	0.2726	0.2746	0.2737	0.2767	0.2731	0.2731	0.2738	0.2754
21	0.2810	----	0.2723	0.2699	0.2738	0.2747	0.2736	0.2768	0.2729	0.2731	0.2740	0.2773
22	0.2804	0.2744	0.2716	0.2696	0.2748	0.2754	0.2736	0.2765	0.2728	0.2735	0.2746	0.2780
23	0.2789	0.2741	0.2715	0.2699	0.2753	0.2756	0.2735	0.2757	0.2737	0.2737	0.2752	0.2789
24	0.2774	----	0.2716	0.2705	0.2756	0.2755	0.2737	0.2743	0.2743	0.2743	0.2758	0.2795
25	0.2758	----	0.2721	0.2712	0.2762	0.2755	0.2734	0.2729	0.2749	0.2753	0.2762	0.2801
26	0.2743	0.2742	0.2721	0.2721	0.2767	0.2757	0.2732	0.2723	0.2751	0.2759	0.2770	0.2799
27	0.2742	0.2745	0.2718	0.2730	0.2775	0.2758	0.2732	0.2721	0.2754	0.2762	0.2786	0.2795
28	0.2742	0.2748	0.2721	0.2736	0.2770	0.2764	0.2736	0.2732	0.2756	0.2763	0.2802	0.2797
29	0.2745	0.2753		0.2754	0.2766	0.2752	0.2738	0.2732	0.2757	0.2757	0.2811	0.2796
30	0.2749	0.2748		0.2764	0.2762	0.2745	0.2744	0.2732	0.2752	0.2753	0.2817	0.2786
31	----	0.2745		0.2770		0.2736		0.2735	0.2754		0.2810	
Mean	0.2784	0.2768	0.2742	0.2743	0.2741	0.2732	0.2736	0.2748	0.2742	0.2734	0.2748	0.2749

Data at: http://www.sec.noaa.gov/ftpmenu/sbuv.html

SOLAR CORONAL MASS EJECTIONS (CMEs)
FROM SOHO/LASCO

http://cdaw.gsfc.nasa.gov/

Center for Solar Physics and Space Weather (CSPSW) – The Catholic University of America/NRL/NASA

NOVEMBER 2003

First C2 Appearance		Central Position	Width Angular	Linear Fit	—2nd order speed—			Accel	Measurement Position	Remarks
Date	Time UT	Angle degree	Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	Angle degree	
2003/11/01	12:30:05	263	68	246	204	289	437	6.2	257	
2003/11/01	14:54:05	274	55	334	77	589	478	9.3	276	
2003/11/01	21:30:08	318	>143	413	407	419	421	0.5	320	Partial Halo
2003/11/01	23:06:53	254	>93	899	1112	676	802	-26.3	224	
2003/11/02	09:30:05	Halo	360	2036	2284	1773	1966	-64.2	195	
2003/11/02	17:30:05	Halo	360	2598	2647	2554	2500	-32.4	265	Only 3 points
2003/11/03	01:59:24	304	65	827	1016	618	638	-28.3	324	
2003/11/03	10:06:05	293	104	1384	1386	1383	1383	-0.4	330	
2003/11/03	19:31:43	109	26	641	560	722	948	25.3	109	
2003/11/04	12:06:06	Halo	360	1208	1467	926	1090	-41.2	84	
2003/11/04	12:54:05	263	72	605	185	1027	1038	44.0	263	
2003/11/04	19:31:42	197	52	327	471	170	0	-146.2	187	Only 3 points/C2
2003/11/04	19:54:05	Halo	360	2657	2031	3284	3731	434.8	260	Only 3 points
2003/11/05	16:54:05	258	12	1075	1117	1038	802	-26.9	256	
2003/11/06	03:54:05	127	12	532	----	----	----	------	131	Only 2 points/C2
2003/11/06	04:06:05	247	23	643	799	490	0	-74.6	252	
2003/11/06	04:30:05	310	21	301	323	281	0	-5.0	311	
2003/11/06	07:31:40	122	11	749	694	804	849	11.1	120	
2003/11/06	17:30:05	Halo	360	1523	1822	1205	1413	-59.5	100	
2003/11/07	15:54:05	Halo	360	2237	2460	2022	2028	-87.4	302	
2003/11/08	06:54:05	70	71	656	719	596	471	-12.4	82	
2003/11/08	09:30:10	223	44	703	798	612	0	-58.1	229	Only 3 points
2003/11/09	02:30:05	232	35	75	0	150	192	1.6	231	
2003/11/09	06:30:05	Halo	360	2008	2420	1579	1788	-128.6	112	
2003/11/09	17:06:05	290	15	639	532	741	1083	37.6	294	
2003/11/10	16:54:05	55	43	478	494	461	454	-1.9	49	
2003/11/11	00:06:29	235	40	553	639	464	330	-13.2	245	
2003/11/11	02:30:07	Halo	360	1359	1472	1242	1322	-20.0	203	
2003/11/11	05:54:05	118	>52	1445	1387	1503	1660	40.3	104	Only 3 points
2003/11/11	13:54:05	Halo	360	1315	1535	1090	1223	-36.6	251	
2003/11/11	15:54:05	87	128	1785	1723	1843	1873	23.9	100	Partial Halo
2003/11/12	10:54:06	Halo	360	1197	1170	1225	1223	5.5	42	
2003/11/12	18:30:05	246	88	891	998	778	697	-21.9	249	
2003/11/13	05:30:05	103	62	598	629	570	512	-5.9	120	
2003/11/13	06:54:05	202	18	444	430	458	514	3.3	206	
2003/11/13	09:30:05	49	217	1141	1109	1175	1155	4.3	58	Partial Halo
2003/11/13	22:30:05	130	113	554	654	457	304	-14.1	142	
2003/11/14	10:54:05	282	57	683	817	535	0	-28.1	281	
2003/11/15	17:50:05	245	148	1375	1276	1465	1513	28.1	267	Partial Halo
2003/11/16	07:50:05	255	18	979	1032	930	792	-18.8	251	

SOLAR CORONAL MASS EJECTIONS (CMEs)
FROM SOHO/LASCO

http://cdaw.gsfc.nasa.gov/

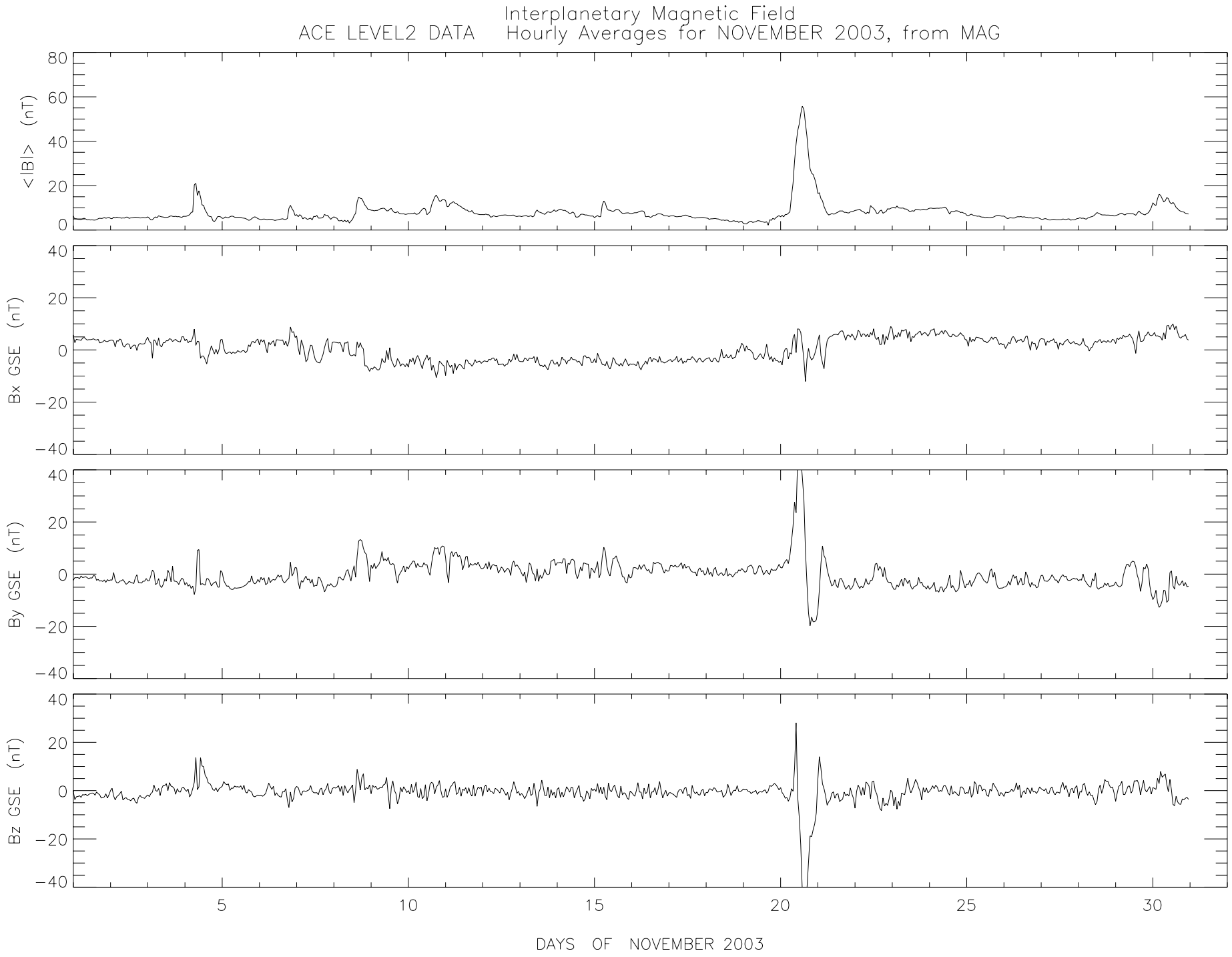
Center for Solar Physics and Space Weather (CSPSW) – The Catholic University of America/NRL/NASA

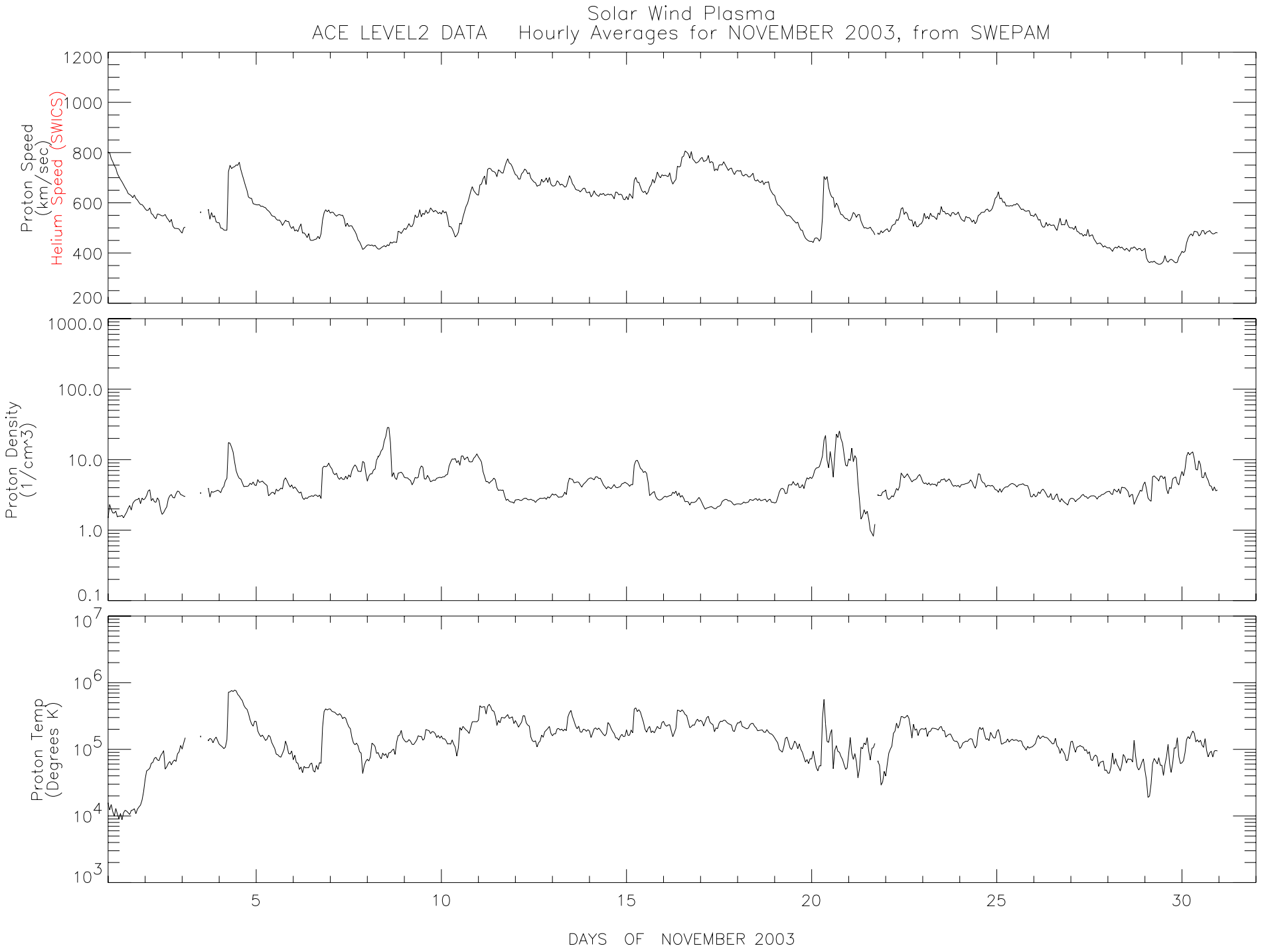
NOVEMBER 2003

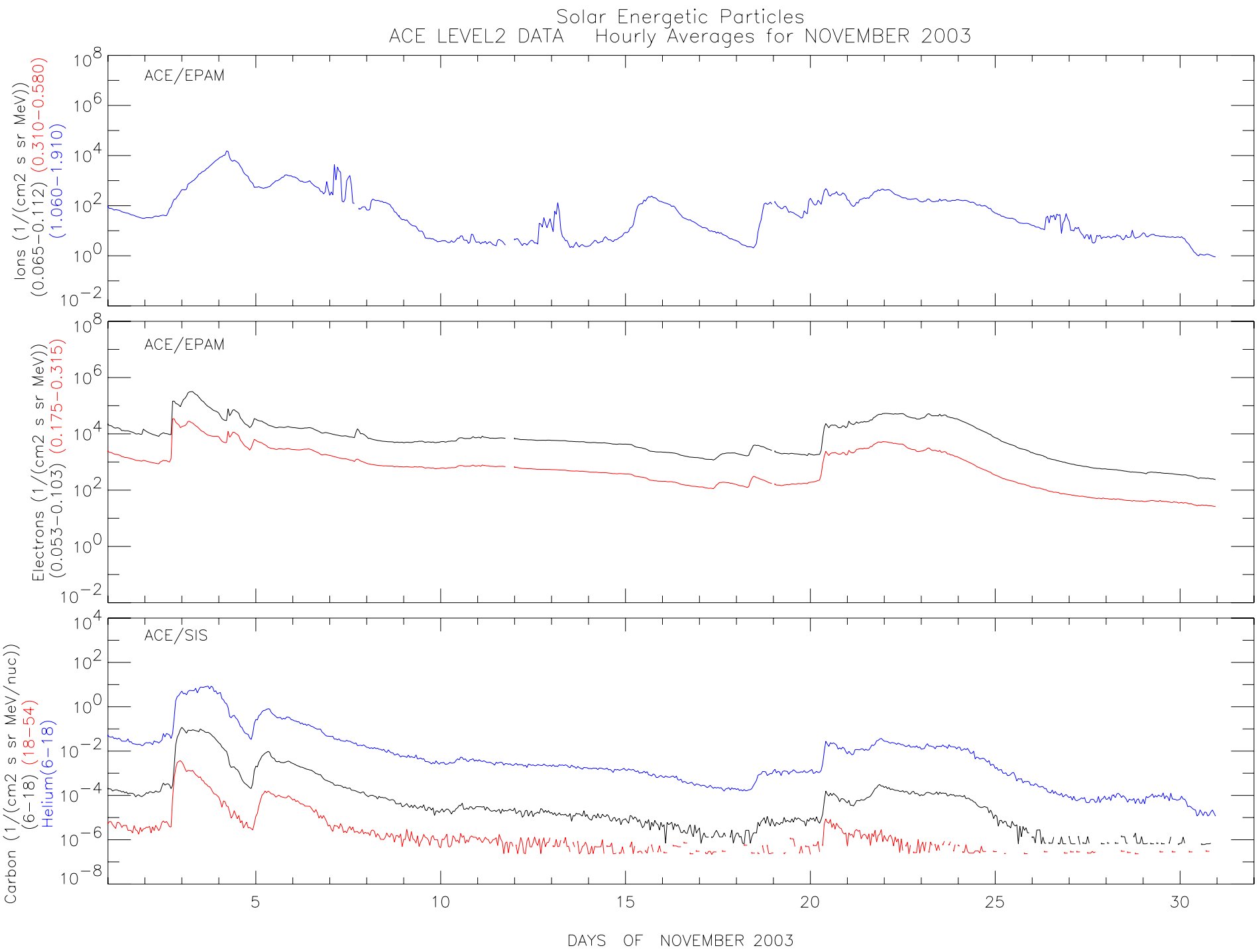
First C2 Appearance		Central Position Angle	Width Angular	Linear Fit	—2nd order speed—			Accel	Measurement Position Angle	Remarks
Date	Time UT	degree	degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	degree	
2003/11/17	08:50:05	255	6	----	----	----	----	------	252	Only 1 point/C2
2003/11/17	09:26:05	72	>242	1061	1079	1041	1051	-2.7	151	Partial Halo
2003/11/17	13:50:05	257	86	139	78	199	401	6.4	250	
2003/11/17	23:50:05	257	4	----	----	----	----	------	255	Only 1 points/C2
2003/11/18	05:26:06	109	32	267	188	351	1294	68.1	107	Only 3 points/C2
2003/11/18	08:06:05	144	>104	1223	974	1469	1348	37.8	168	
2003/11/18	08:50:05	Halo	360	1660	1674	1645	1656	-3.3	206	
2003/11/18	09:50:05	95	>197	1824	1532	2133	1941	59.6	87	Partial Halo
2003/11/19	09:26:05	307	84	422	261	581	628	13.7	334	
2003/11/19	15:06:05	206	48	606	409	806	1164	49.8	209	
2003/11/20	02:50:05	221	63	364	459	261	0	-11.1	213	
2003/11/20	08:06:05	242	47	890	991	797	0	-44.7	243	
2003/11/20	08:06:05	Halo	360	669	830	504	385	-23.8	219	
2003/11/20	10:06:05	73	63	396	494	304	0	-12.2	65	
2003/11/20	20:26:23	82	53	174	94	255	1046	45.0	77	Only 3 points/C2
2003/11/21	00:26:05	245	52	494	514	473	433	-3.3	237	
2003/11/21	17:50:05	292	15	554	607	508	423	-8.1	290	
2003/11/21	19:27:16	106	82	737	905	568	147	-32.9	107	
2003/11/22	01:50:05	249	18	675	801	549	0	-80.6	246	
2003/11/22	05:26:05	305	46	285	145	435	1633	120.8	301	Only 3 points/C2
2003/11/22	10:06:05	88	20	316	355	276	0	-13.2	90	Only C2
2003/11/22	12:50:05	242	18	729	781	675	391	-20.1	242	Only 3 points
2003/11/22	19:27:13	267	9	777	----	----	----	------	267	Only 3 points
2003/11/22	22:06:05	254	28	850	779	920	1067	23.2	255	
2003/11/23	09:06:05	56	23	734	963	529	0	-75.7	59	
2003/11/23	09:18:05	358	55	283	----	----	----	------	357	Only C3
2003/11/24	10:50:06	51	18	440	489	388	202	-8.2	55	
2003/11/25	04:06:05	63	43	791	789	793	794	0.3	75	
2003/11/27	09:26:05	228	106	402	382	424	461	2.8	230	
2003/11/27	15:26:05	50	73	618	561	673	725	9.3	56	
2003/11/28	02:26:05	238	15	365	347	384	406	2.0	237	
2003/11/28	10:06:05	146	93	248	73	433	396	7.2	126	
2003/11/28	11:26:07	230	23	422	354	489	660	12.9	227	
2003/11/30	12:26:05	287	13	495	110	864	1615	109.3	282	

If you use data from this catalog, please acknowledge as follows:
"This CME catalog is generated and maintained by the Center for Solar Physics and Space Weather, The Catholic University of America in cooperation with the Naval Research Laboratory and NASA. SOHO is a project of international cooperation between ESA and NASA."

CME heights are measured at the fastest segment of the leading edge
PA= Postion Angle measured from Solar North in degrees (Counter clockwise)
ONLINE -- Click on date to view java script movies
ONLINE -- Click on time to see height-time digital files
ONLINE -- Click on speed to view height-time plot
Numbers in 2nd order fit columns correspond to the speed at the last height of measurement and at a distance of 20 solar radii.


Interplanetary Magnetic Field
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2003, from MAG
<|B|> (nT)
Bx GSE (nT)
By GSE (nT)
Bz GSE (nT)
80
60
40
20
0
40
20
0
−20
−40
5
10
15
20
25
30
DAYS OF NOVEMBER 2003


Solar Wind Plasma
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2003, from SWEPAM
Proton Speed (km/sec)
Helium Speed (SWICS)
1200
1000
800
600
400
200
Proton Density (1/cm^3)
1000.0
100.0
10.0
1.0
0.1
Proton Temp (Degrees K)
10^7
10^6
10^5
10^4
10^3
5
10
15
20
25
30
DAYS OF NOVEMBER 2003


Solar Energetic Particles
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2003
ACE/EPAM
Ions (1/(cm2 s sr MeV))
(0.065–0.112) (0.310–0.580)
(1.060–1.910)
ACE/EPAM
Electrons (1/(cm2 s sr MeV))
(0.053–0.103) (0.175–0.315)
ACE/SIS
Carbon (1/(cm2 s sr MeV/nuc))
(6–18) (18–54)
Helium(6–18)
DAYS OF NOVEMBER 2003