AUGUST 2003 NUMBER 708 - Part II

Solar-Geophysical Data comprehensive reports

Data for February 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

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Data for February 2003 and Late Data

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SOLAR-GEOPHYSICAL DATA

Number 708

(Issued in Two Parts)

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ACE SOLAR WIND, INTERPLANETARY MAGNETIC FIELD AND PARTICLES -- MONTHLY PLOTS

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DATA FOR FEBRUARY 2003

Hα SOLAR FLARES

FEBRUARY 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
		01	1124		1125	No Flare Patrol													
0001	HOLL	01	1542	1545	1553	S15	E86	10276	02	8.2	11	SF		3	E		71		
0002	RAMY	01	1543E	1543U	1608	S19	E71	10276	02	7.1	25D	SF		3	E		24		
0003	HOLL	01	1946	1948	1952	S14	E89	10276	02	8.5	6	SF		3	E		42		
0004	HOLL	01	2012	2015	2019	S13	E86	10276	02	8.3	7	SF		3	E		18		
0005		01	23231	23257	2345	S15	E78	10276	02	7.9	22	SF					36		H
	HOLL	01	2323	2332	2357D	S15	E79	10276	02	7.9	34D	SF		3	E		47		
	LEAR	01	2324	2325	2345	S15	E78	10276	02	7.9	21	SF		3	E		25		H
0006	LEAR	02	0118	0122U	0132	S15	E78	10276	02	7.9	14	SF		2	E		32		H
0007	LEAR	02	0327	0333	0337	S15	E77	10276	02	8.0	10	SF		2	E		51		
0008	LEAR	02	0357	0400	0405	S15	E77	10276	02	8.0	8	SF		2	E		45		
0009	LEAR	02	0535	0543	0548	S15	E67	10276	02	7.3	13	SF		3	E		42		
0010	LEAR	02	0632	0636	0639	S15	E67	10276	02	7.3	7	SF		3	E		21		
		02	1124		1128	No Flare Patrol													
		02	1408		1410	No Flare Patrol													
		02	1428		1429	No Flare Patrol													
		02	1922		1932	No Flare Patrol													
		02	2129		2235	No Flare Patrol													
		03	0131		0330	No Flare Patrol													
		03	0554		0655	No Flare Patrol													
		03	0745		0752	No Flare Patrol													
		03	0801		0807	No Flare Patrol													
		04	0255		0422	No Flare Patrol													
		04	1030		1050	No Flare Patrol													
		04	1127		1543	No Flare Patrol													
		04	1602		1737	No Flare Patrol													
		04	1807		2000	No Flare Patrol													
0011	HOLL	04	2116	2122	2132	S20	E67	10277	02	10.0	16	SF		3	E		34		F
		05	0843		0915	No Flare Patrol													
		05	1043		1053	No Flare Patrol													
0012	RAMY	05	1411E	1411U	1416	S16	E63	10277	02	10.4	5D	SF		3	E		15		
0013	RAMY	05	1547E	1547U	1553	N20	E73	10278	02	11.2	6D	SF		3	E		34		
0014	RAMY	05	1651E	1651U	1701	N20	E69	10287	02	11.0	10D	SF		3	E		28		
		05	1838		2230	No Flare Patrol													
		05	2258		2400	No Flare Patrol													
0015	LEAR	06	0224E	0224	0233	S17	E55	10277	02	10.3	9D	SF		3	E		36		F
0016	LEAR	06	0234	0239	0242	S17	E55	10277	02	10.3	8	SF		3	E		12		
0017	LEAR	06	0302	0302	0306	N18	E62	10278	02	10.8	4	SF		3	E		19		
0018	LEAR	06	0333	0348	0447	N18	E64	10278	02	11.0	74	1N		3	E		172		EF
0019	LEAR	06	0502	0505	0509	S17	E54	10277	02	10.3	7	SF		3	E		16		H
0020	LEAR	06	0523	0532	0541	N17	E59	10278	02	10.7	18	SF		3	E		25		FH
0021		06	08421	0847	0859	N18	E60	10278	02	10.9	17	SF					21		FH
	LEAR	06	0842	0847	0900	N19	E59	10278	02	10.9	18	SF		2	E		21		FH
	KANZ	06	0843	0847	0858	N17	E60	10278	02	10.9	15	SF		2	E				

FEBRUARY 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
0022		06	09142	09241	0940	N18	E59	10278	02	10.9	26	SF					36		F
	LEAR	06	0914	0924	0942	N19	E58	10278	02	10.8	28	SF		2	E		36		F
	KANZ	06	0916	0925	0937	N17	E60	10278	02	10.9	21	SF		2	E				
0023	LEAR	06	1004	1005	1013	N20	E59	10278	02	10.9	9	SF		2	E		17		F
		06	1058		1059	No Flare Patrol													
		06	1107		1113	No Flare Patrol													
0024		06	1118	1127	1140	N19	E56	10278	02	10.7	22	SF					25		FH
	KANZ	06	1118	1127	1143	N18	E56	10278	02	10.7	25	SF		2	E				
	RAMY	06	1131E	1131U	1138	N20	E56	10278	02	10.8	7D	SF		2	E		25		FH
0025		06	12451	12503	1300	S16	E50	10277	02	10.3	15	SF					22		F
	RAMY	06	1245	1250	1306	S16	E50	10277	02	10.3	21	SF		3	E		22		F
	KANZ	06	1246	1253	1255	S16	E50	10277	02	10.3	9	SF		2	E				
0026		06	13112	13136	1328	S14	E22	10276	02	8.2	17	SF					11		F
	KANZ	06	1311	1319	1330	S14	E22	10276	02	8.2	19	SF		2	E				
	RAMY	06	1313	1313	1327	S15	E22	10276	02	8.2	14	SF		3	E		11		F
0027	RAMY	06	1652	1653	1657	N19	E57	10278	02	11.0	5	SF		3	E		25		
0028	RAMY	06	1843	1845	1848	S20	E43	10277	02	10.1	5	SF		3	E		15		
0029	RAMY	06	1907	1908	1917	N20	E53	10278	02	10.8	10	SF		3	E		15		F
0030		06	23117	23126	2319	N00	E65	10280	02	11.8	8	SF					16		FH
	HOLL	06	2311	2312	2314	N00	E65	10280	02	11.8	3	SF		3	E		12		
	HOLL	06	2318	2318	2324	N00	E65	10280	02	11.8	6	SF		3	E		21		FH
0031	LEAR	07	0107	0110	0126	S17	E42	10277	02	10.2	19	SF		3	E		10		F
0032	RAMY	07	1605	1625	1709	S03	W61	10274	02	3.1	64	SF		3	E		34		F
		07	2223		2400	No Flare Patrol													
		08	1543		1616	No Flare Patrol													
		08	2051		2307	No Flare Patrol													
		09	0000		0322	No Flare Patrol													
		09	0333		0456	No Flare Patrol													
		09	0731		0738	No Flare Patrol													
		09	0751		0834	No Flare Patrol													
		09	1029		1053	No Flare Patrol													
		09	1059		1104	No Flare Patrol													
0033	RAMY	09	1503E	1503U	1510	S08	W06	10280	02	9.2	7D	SF		3	E		30		F
0034	RAMY	09	2043E	2043U	2051	S14	W23	10276	02	8.1	8D	SF		3	E		19		F
		10	0231		0502	No Flare Patrol													
		10	0954		1156	No Flare Patrol													
		10	1820		1852	No Flare Patrol													
		10	2020		2049	No Flare Patrol													
		10	2125		2249	No Flare Patrol													
0035	LEAR	11	0837	0840	0859	S05	W33	10280	02	8.9	22	SF		2	E		20		F
		11	1145		1202	No Flare Patrol													
		11	1217		1330	No Flare Patrol													
		11	1354		1450	No Flare Patrol													
0036	RAMY	11	1512	1515	1532D	S19	W15	10277	02	10.5	20D	SF		3	E		22		F
		11	1717		1849	No Flare Patrol													
		11	1900		1909	No Flare Patrol													
		11	2016		2237	No Flare Patrol													
0037	LEAR	12	0145	0157	0248	S05	W43	10280	02	8.8	63	1F		3	E		171		FU

Hα SOLAR FLARES

FEBRUARY 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP 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
0038	LEAR	12	0539	0539	0601	N10	W22	10282	02	10.6	22	SF			2	E		27		FH
		12	1025		1103	No Flare Patrol														
		12	1108		1109	No Flare Patrol														
		12	1111		1117	No Flare Patrol														
0039	RAMY	12	1356E	1356U	1423	N11	W26	10282	02	10.6	27D	SF			3	E		37		F
0040	RAMY	12	1603E	1603U	1607	S03	W54	10280	02	8.6	4D	SF			3	E		15		
0041	RAMY	12	1604E	1604U	1639	N11	W29	10282	02	10.5	35D	SF			3	E		73		F
		12	2031		2400	No Flare Patrol														
		13	0000		0013	No Flare Patrol														
		13	0021		0029	No Flare Patrol														
		13	0056		0102	No Flare Patrol														
0042	LEAR	13	0123	0125	0133	S03	W55	10280	02	8.9	10	SF			2	E		19		F
0043	LEAR	13	0457	0505	0509	N09	W39	10282	02	10.3	12	SF			2	E		33		F
		13	0910		0946	No Flare Patrol														
		13	1008		1241	No Flare Patrol														
		13	1345		1427	No Flare Patrol														
		13	1444		1531	No Flare Patrol														
0044	RAMY	13	1616E	1616U	1625	N11	W42	10282	02	10.5	9D	SF			3	E		23		F
		13	2141		2245	No Flare Patrol														
0045	LEAR	13	2327	2328	2339	N13	W84	10284	02	7.6	12	SF			3	E		46		FH
0046	LEAR	14	0203	0205	0208	N13	W82	10284	02	7.9	5	SF			3	E		31		
0047	LEAR	14	0519	0521	0536	N13	W84	10284	02	7.9	17	1F			3	E		108		
0048	LEAR	14	0914	0917	0924	N13	W86	10284	02	7.9	10	SF			3	E		78		
		14	1029		1046	No Flare Patrol														
		14	1050		1051	No Flare Patrol														
		14	1121		1124	No Flare Patrol														
		14	1132		1133	No Flare Patrol														
		14	2032		2251	No Flare Patrol														
		14	2314		2319	No Flare Patrol														
		15	1006		1007	No Flare Patrol														
		15	1015		1023	No Flare Patrol														
0049	RAMY	15	1622	1622	1626	S20	E73		02	21.3	4	SF			3	E		23		
		15	2205		2306	No Flare Patrol														
		15	2318		2356	No Flare Patrol														
		16	0444		0448	No Flare Patrol														
		16	0536		0633	No Flare Patrol														
		16	0641		0729	No Flare Patrol														
		16	0739		0750	No Flare Patrol														
		16	1237		1259	No Flare Patrol														
		16	2201		2242	No Flare Patrol														
		17	0243		0248	No Flare Patrol														
		17	0349		0357	No Flare Patrol														
		17	0423		0433	No Flare Patrol														
		17	0450		0507	No Flare Patrol														
		17	1022		1049	No Flare Patrol														
		17	1138		1140	No Flare Patrol														
		17	1153		1206	No Flare Patrol														
		17	1208		1211	No Flare Patrol														
		17	1213		2240	No Flare Patrol														
		17	2314		2321	No Flare Patrol														
		18	0146		0251	No Flare Patrol														

FEBRUARY 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
0050	KANZ	18	0830	0845	0922	N08	W42	10289	02	15.2	52	SF		2	E				
0051	KANZ	18	1133	1135	1140	N08	W42	10289	02	15.3	7	SF		2	E				
		18	1411		1413	No Flare Patrol													
		18	1519		1633	No Flare Patrol													
		18	1648		1732	No Flare Patrol													
		18	2034		2239	No Flare Patrol													
0052	LEAR	19	0324	0324	0328	N13	E29	10288	02	21.3	4	SF		3	E		12		
0053	LEAR	19	0643	0643	0654	N17	E38	10290	02	22.2	11	SF		3	E		19		F
0054	KANZ	19	0900	0906	0910	N18	E41	10290	02	22.5	10	SF		2	E				
0055	KANZ	19	0930	0937	0946	N17	E38	10290	02	22.3	16	SF		2	E				
0056	KANZ	19	1045	1049	1101	N18	E40	10290	02	22.5	16	SF		2	E				
0057	KANZ	19	1128	1136	1140	N18	E40	10290	02	22.5	12	SF		2	E				
0058		19	13127	1322	1335	N18	E40	10290	02	22.6	23	SF					13		F
	KANZ	19	1312	1322	1341	N18	E40	10290	02	22.6	29	SF		2	E				
	RAMY	19	1319	1325U	1329	N17	E39	10290	02	22.5	10	SF		3	E		13		F
0059		19	14142	1435	1600D	N18	E36	10290	02	22.3	106D	SF					13		F
	KANZ	19	1414	1435	1521D	N19	E37	10290	02	22.4	67D	SF		2	E				
	RAMY	19	1416	1420U	1600D	N17	E35	10290	02	22.2	104D	SF		3	E		13		F
		19	1426		1427	No Flare Patrol													
		19	1517		1518	No Flare Patrol													
		19	1520		1629	No Flare Patrol													
		19	1816		1825	No Flare Patrol													
0060	RAMY	19	1825	1830	1934	N17	E37	10290	02	22.6	69	SF		3	E		15		
0061	RAMY	19	1944	1946	1948	N12	E21	10288	02	21.4	4	SF		3	E		31		F
0062	RAMY	19	2004	2006	2012	N17	E34	10290	02	22.4	8	SF		3	E		13		F
		19	2125		2243	No Flare Patrol													
		19	2352		2400	No Flare Patrol													
		20	0000		0016	No Flare Patrol													
		20	0141		0321	No Flare Patrol													
0063	KANZ	20	1156	1158	1208	N13	E10	10288	02	21.2	12	SF		2	E				
0064		20	1222	1224	1232	N18	E27	10290	02	22.6	10	SF					44		
	KANZ	20	1222	1224	1233	N18	E26	10290	02	22.5	11	SF		2	E				
	RAMY	20	1224E	1224U	1231	N18	E28	10290	02	22.6	7D	SF		3	E		44		
0065	RAMY	20	1249E	1249U	1302	N19	E28	10290	02	22.7	13D	SF		3	E		47		
0066	KANZ	20	1331	1334	1344	S22	E22	10291	02	22.2	13	SF		2	E				
0067	KANZ	20	1350	1358	1417	N20	E17	10290	02	21.9	27	SF		2	E				
		20	1631		1637	No Flare Patrol													
		20	1830		2249	No Flare Patrol													
0068	LEAR	21	0505	0505	0512	N11	E14	10290	02	22.3	7	SF		3	E		45		F
0069	KANZ	21	0831	0908	0944	N16	E08	10290	02	22.0	73	SF		2	E				
0070	KANZ	21	1000	1005	1011	N16	E08	10290	02	22.0	11	SF		2	E				
0071	KANZ	21	1048	1123	1148	N16	E08	10290	02	22.0	60	SF		2	E				
0072	KANZ	21	1214	1231	1244	N16	E06	10290	02	22.0	30	SF		2	E				

Hα SOLAR FLARES

FEBRUARY 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP 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
0073		21	1246	1258	1311	N16	E06	10290	02	22.0	25	SF						20		F
	KANZ	21	1246	1258	1311	N16	E06	10290	02	22.0	25	SF			2	E				
	RAMY	21	1253E	1253U	1311	N16	E07	10290	02	22.1	18D	SF			3	E		20		F
0074		21	1512	1515	1535	N16	E06	10290	02	22.1	23	SF						28		FH
	RAMY	21	1511E	1511U	1548	N16	E05	10290	02	22.0	37D	SF			3	E		39		
	SVTO	21	1512	1515	1522	N15	E07	10290	02	22.2	10	SF			3	E		18		FH
		21	1608		1614	No Flare Patrol														
		21	1642		1704	No Flare Patrol														
		21	1730		2400	No Flare Patrol														
		22	0000		0101	No Flare Patrol														
0075	LEAR	22	0159	0203	0217	N11	E02	10290	02	22.2	18	SF			3	E		66		
0076	LEAR	22	0509	0512	0515	N16	W02	10290	02	22.1	6	SF			3	E		23		
		22	0520		0526	No Flare Patrol														
		22	0534		0540	No Flare Patrol														
0077		22	0929	09291	0936	N16	W04	10290	02	22.1	7	SF						36		F
	SVTO	22	0929E	0929	0935	N16	W03	10290	02	22.2	6D	SF			3	E		16		
	LEAR	22	0929	0930	0938	N16	W05	10290	02	22.0	9	SF			3	E		55		F
0078	SVTO	22	1044	1044	1047	N16	E03	10290	02	22.7	3	SF			3	E		18		
0079	RAMY	22	1221	1226	1230	N17	W06	10290	02	22.0	9	SF			3	E		21		F
		22	1727		1900	No Flare Patrol														
		22	2154		2251	No Flare Patrol														
		22	2324		2400	No Flare Patrol														
		23	0000		0011	No Flare Patrol														
		23	0208		0433	No Flare Patrol														
		23	0531		0816	No Flare Patrol														
		23	0835		0836	No Flare Patrol														
		23	0859		0900	No Flare Patrol														
		23	2158		2228	No Flare Patrol														
		23	2240		2342	No Flare Patrol														
		24	0013		0154	No Flare Patrol														
		24	0423		0437	No Flare Patrol														
		24	0518		0602	No Flare Patrol														
0080	KANZ	24	0740	0744	0805	N15	W27	10290	02	22.3	25	SF			2	E				
0081		24	1124	1143	1219	N16	W28	10290	02	22.3	55	SF						28		F
	KANZ	24	1124	1143	1221	N16	W28	10290	02	22.3	57	SF			2	E				
	RAMY	24	1126E	1126U	1217	N16	W29	10290	02	22.3	51D	SF			3	E		28		F
		24	2054		2130	No Flare Patrol														
		24	2144		2400	No Flare Patrol														
		25	0000		0001	No Flare Patrol														
0082	LEAR	25	0227	0229	0234	N18	W35	10290	02	22.4	7	SF			3	E		32		F
		25	0407		0411	No Flare Patrol														
0083		25	14181	14191	1425	N16	W44	10290	02	22.2	7	SF						15		F
	KANZ	25	1418	1419	1425	N15	W42	10290	02	22.4	7	SF			2	E				
	RAMY	25	1419	1420	1425	N18	W45	10290	02	22.2	6	SF			3	E		15		F
		25	1754		1811	No Flare Patrol														
		25	2043		2221	No Flare Patrol														
		25	2345		2400	No Flare Patrol														
		26	0000		0013	No Flare Patrol														
		26	0050		0141	No Flare Patrol														
0084		26	0945	0945	0949	N16	W61	10290	02	21.8	4	SF						11		
	KANZ	26	0945	0945	0949	N16	W61	10290	02	21.8	4	SF			2	E				
	LEAR	26	0945	0945	0949	N16	W61	10290	02	21.8	4	SF			2	E		11		

FEBRUARY 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
		27	0028		0201	No Flare Patrol													
		27	0247		0255	No Flare Patrol													
		27	0323		0343	No Flare Patrol													
		27	0355		0405	No Flare Patrol													
		27	0417		0437	No Flare Patrol													
		27	0443		0603	No Flare Patrol													
		27	1932		1937	No Flare Patrol													
		27	1941		1951	No Flare Patrol													
		27	2033		2042	No Flare Patrol													
		28	0241		0310	No Flare Patrol													
0085	KANZ	28	1251	1255	1301	S21	E18	10293	03	1.9	10	SF		2	E				
0086	RAMY	28	1254E	1254U	1311	S06	W19	10293	02	27.1	17D	SF		3	E		15		F
0087		28	13048	13113	1322	N12	E58		03	4.9	18	SF					14		
	KANZ	28	1304	1311	1318	N11	E58		03	4.9	14	SF		2	E				
	RAMY	28	1312	1314	1326	N12	E59		03	5.0	14	SF		3	E		14		
		28	1749		1810	No Flare Patrol													

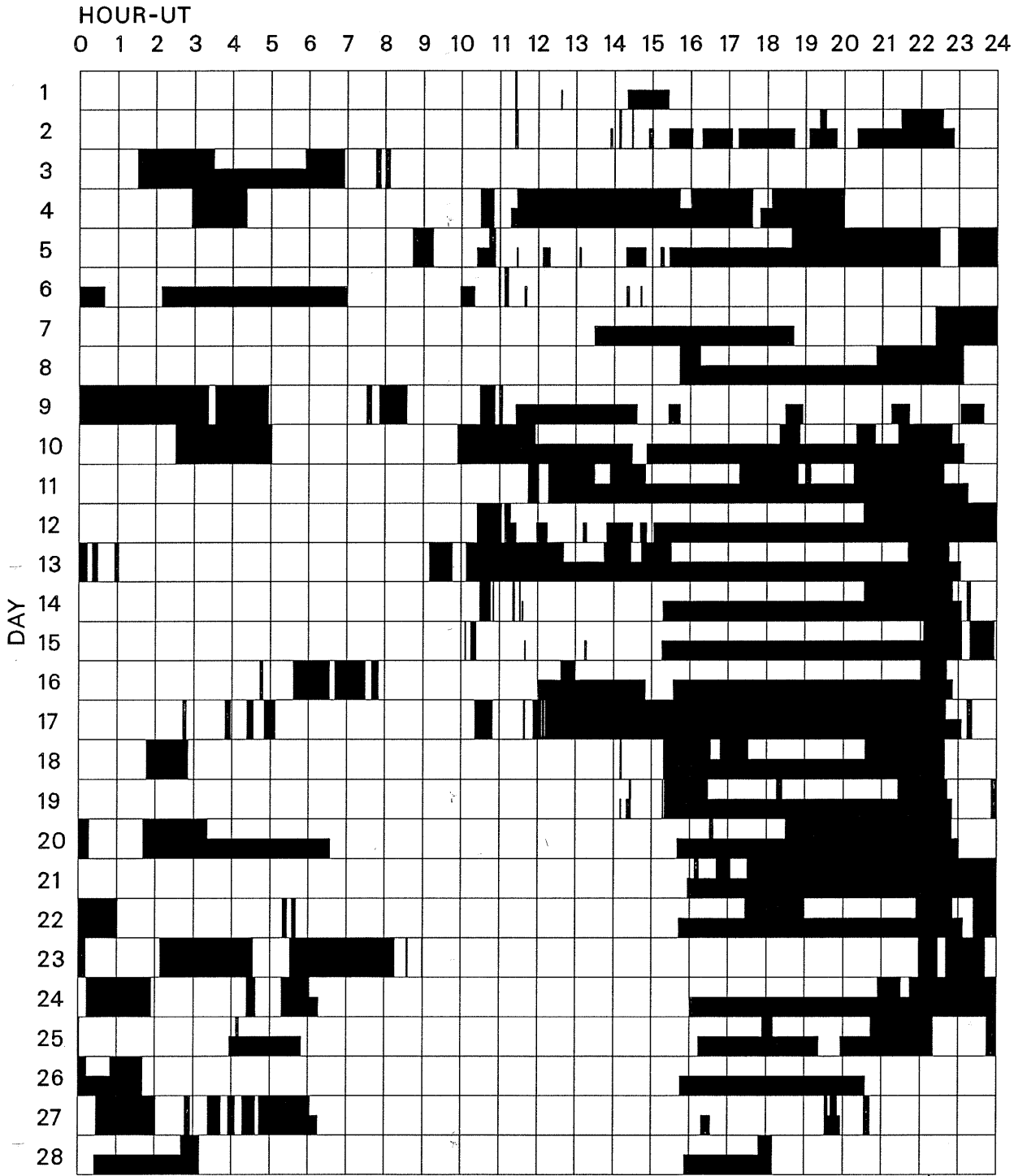
"Remarks"

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

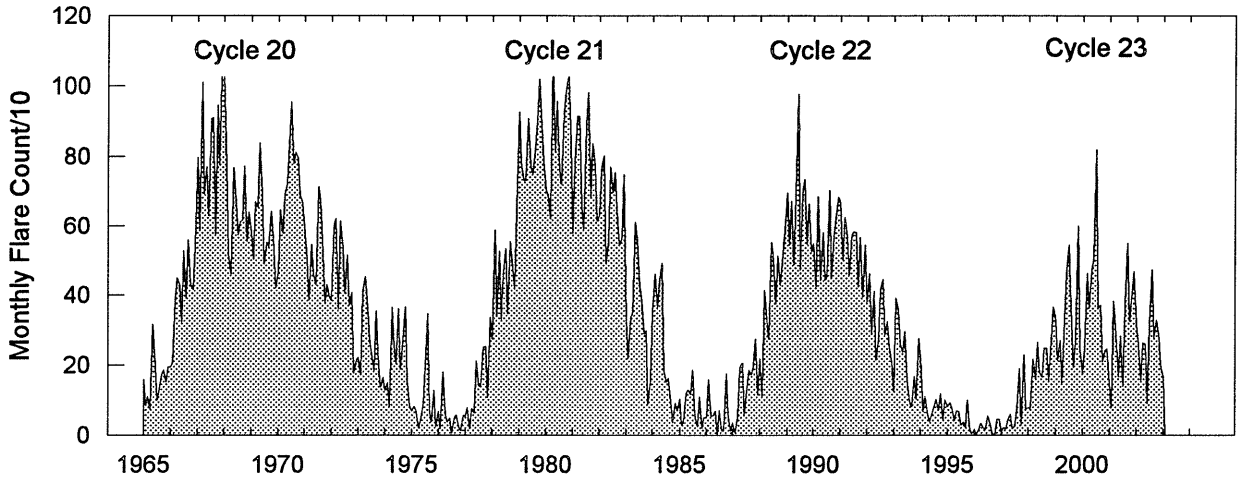
FEBRUARY 2003



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 Ramey San Vito
Kanzelhoehe

Monthly Counts of Grouped Solar Flares
Jan 1965 - Feb 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											251

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

SOLAR RADIO EMISSION
Outstanding Occurrences

FEBRUARY 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	43	NS	1105.0		215.0		6.0		V=0
	2950	GORK	1	S	0853.3	0854.1	1.6	16.0			
	2950	GORK	21	GRF	0853.3	0936.9	90.7D	21.0			
	9100	GORK	1	S	0853.4	0854.0	1.3	8.0			
	9100	GORK	21	GRF	0853.4	1047.7	124.6D	16.0			
	2950	GORK	1	S	0856.5	0857.5	2.9	16.0			
	200	HIRA	7	C	2326.0	2326.0	5.0	20.0			WL
02	127	TORN	43	NS	1134.0		206.0		6.0		V=0
	2840	PEKG	1	S	0541.0	0543.6	6.0	5.3			
	2840	PEKG	1	S	0634.0	0637.1	6.0	4.9			
03	200	HIRA	8	S	0119.0	0119.0	2.0	35.0			0
	410	LEAR	49	GB	0623.0	0623.0	U	600.0			QL=4 ST=2 TYP=6
	410	SVTO	8	S	0623.0	0623.0	U	380.0			QL=2 ST=2 TYP=3
	204	IZMI	7	C	0909.6	0909.8	0.3	11.0			
	204	IZMI	7	C	0910.9	0910.9	0.1	6.0			
04	127	TORN	43	NS	0803.0		360.0		6.0		V=0,DISTURBED
	2840	PEKG	1	S	0649.0	0651.3	5.0	5.3			
05	127	TORN	43	NS	0810.0		260.0		5.0		V=1
	204	IZMI	7	C	1149.3	1149.4	0.1	3.0			
	200	HIRA	8	S	2317.0	2317.0	1.0	15.0			0
	245	LEAR	8	S	2317.0	2317.0	U	57.0			QL=4 ST=2 TYP=3
06	127	TORN	43	NS	0833.0		387.0		6.0		V=1,DISTURBED
	410	LEAR	8	S	0213.0	0213.0	U	62.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0213.0	0213.0	U	67.0			QL=4 ST=2 TYP=3
	2840	PEKG	3	S	0332.0	0339.8	22.0	77.2			
	4995	LEAR	8	S	0333.0	0333.0	1.0	59.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0339.0	0339.0	U	55.0			QL=4 ST=2 TYP=3
	4995	LEAR	8	S	0339.0	0339.0	U	62.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0340.0	0340.0	U	57.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	0340.0	0340.0	U	43.0			QL=4 ST=2 TYP=3
	900	GORK	46	C	0809.2	0809.8	0.8	56.0			
	900	GORK	46	C	0809.2	0809.9		20.0			
	600	GORK	41	F	0830.9	0831.1	0.9	15.0			
	600	GORK	41	F	0830.9	0831.5		7.0			
	245	SGMR	8	S	1532.0	1532.0	U	130.0			QL=2 ST=2 TYP=3
07	2840	PEKG	1	S	0334.0	0337.4	9.0	4.7			
	2840	PEKG	5	S	0621.0	0623.4	5.0	13.0			
	2840	PEKG	20	GRF	0713.0	0719.2	13.0	1.7			
08	127	TORN	8	S	1321.8	1322.0	0.7	220.0	110.0		
	410	PALE	8	S	1944.0	1945.0	1.0	100.0			QL=4 ST=2 TYP=3
09	127	TORN	43	NS	0925.0		335.0		5.0		V=0
	2800	PENT	29	PBI	2031.0	2042.0	49.0	46.0			
10	127	TORN	44	NS	1330.0E		90.0D		8.0		V=1
11	127	TORN	44	NS	1330.0E		55.0D		5.0		V=1
	2840	PEKG	1	S	0049.0	0051.5	6.0	3.5			
	204	IZMI	7	C	0741.1	0741.1	0.1	26.0			
	204	IZMI	7	C	0852.8	0852.9	0.2	13.0			
	204	IZMI	42	SER	1155.6	1155.8	0.5	6.0			
	2800	PENT	40	F	1708.0	1726.0	24.0U	34.0			
	9500	CUBA	20	GRF	1719.0	1727.0	46.0	10.0	5.0		
	235	CUBA	6	S	1719.5	1733.0	20.6	39.0	20.0		
	280	CUBA	6	S	1719.5	1733.0	20.6	78.0	39.0		
	245	PALE	8	S	1733.0	1733.0	U	48.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1733.0	1733.0	1.0	62.0			QL=4 ST=2 TYP=3
12	127	TORN	43	NS	1040.0		260.0		7.0		V=1
	2840	PEKG	3	S	0144.0	0157.8	26.0	59.3			
	1415	PALE	48	C	0149.0	0154.0	8.0	92.0			QL=4 ST=2 TYP=8
	610	PALE	8	S	0149.0	0150.0	1.0	77.0			QL=4 ST=2 TYP=3

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

FEBRUARY 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	1415	PALE	8	S	0149.0	0149.0	U	63.0			QL=4 ST=2 TYP=3
	2800	HIRA	7	C	0149.0	0158.0	12.0	45.0			0
	610	LEAR	48	C	0149.0	0156.0	12.0	150.0			QL=4 ST=2 TYP=8
	610	PALE	48	C	0149.0	0156.0	12.0	130.0			QL=4 ST=2 TYP=8
	245	PALE	48	C	0150.0	0152.0	7.0	8400.0			QL=4 ST=2 TYP=8
	410	PALE	48	C	0150.0	0153.0	7.0	150.0			QL=4 ST=2 TYP=8
	410	PALE	8	S	0150.0	0150.0	2.0	130.0			QL=4 ST=2 TYP=3
	200	HIRA	47	GB	0150.0	0153.0	10.0	2240.0			0
	410	LEAR	48	C	0150.0	0150.0	11.0	130.0			QL=4 ST=2 TYP=8
	1415	LEAR	4	S/F	0154.0	0154.0	3.0	97.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0156.0	0157.0	2.0	56.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	0156.0	0157.0	2.0	68.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0157.0	0157.0	U	44.0			QL=4 ST=2 TYP=3
	127	TORN	45	C	1422.5	1423.2	2.2	120.0	20.0		
	245	SGMR	8	S	1645.0	1645.0	U	97.0			QL=4 ST=2 TYP=3
	2800	PENT	20	GRF	1841.0	1857.0	41.0	5.0			
	2800	PENT	29	PBI	2054.0	2107.0	38.0U	5.0			
13	127	TORN	44	NS	1340.0E		80.0D		10.0		V=1
	200	HIRA	8	S	0243.0	0243.0	1.0	10.0			0
	200	HIRA	8	S	0454.0	0454.0	1.0	10.0			0
	2800	PENT	24	R	1623.0	1720.0	69.0U	13.0			
14	127	TORN	43	NS	1020.0		263.0		5.0		V=1,DISTURBED
	2840	PEKG	1	S	0517.0	0520.0	8.0	2.2			
	2800	HIRA	8	S	0520.0	0520.0	1.0	45.0			0
	2800	PENT	1	S	1918.0	1926.0	13.0	6.0			
15	127	TORN	43	NS	1047.0		253.0		4.0		V=0
	204	IZMI	42	SER	0732.6	0733.0	0.6	11.0			
	204	IZMI	42	SER	0736.9	0737.6	0.8	42.0			
	245	PALE	8	S	1725.0	1726.0	2.0	76.0			QL=4 ST=2 TYP=3
16	127	TORN	43	NS	1000.0		300.0		8.0		V=1
17	127	TORN	43	NS	0935.0		55.0		9.0		V=0
	204	IZMI	7	C	0714.2	0714.4	0.4	3.0			
	204	IZMI	7	C	1159.6	1159.8	0.3	9.0			
	2800	PENT	1	S	2103.0	2110.0	13.0	3.0			
18	127	TORN	44	NS	1310.0E		90.0D		5.0		V=1
	204	IZMI	42	SER	0833.5	0834.1	1.8	10.0			
	204	IZMI	7	C	1142.3	1142.3	0.1	7.0			
	245	SVTO	8	S	1516.0	1516.0	U	99.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	1616.0	1623.0	15.0	3.0			
19	127	TORN	43	NS	1000.0		90.0		8.0		V=0
	235	CUBA	44	NS	1400.0E		470.0D		7.0		
	280	CUBA	44	NS	1400.0E		470.0D	29.0			
	245	LEAR	43	NS	2251.0	2310.0	46.0	100.0			QL=4 ST=2 TYP=1
	900	GORK	1	S	0817.1	0817.2	0.3	11.0			
	9100	GORK	3	S	0817.1	0817.3	0.5	336.0			
	2800	PENT	1	S	1721.0	1725.0	8.0	2.0			
20	245	LEAR	43	NS	0212.0	0226.0	42.0	130.0			QL=4 ST=2 TYP=1
	245	LEAR	43	NS	0447.0	0447.0	213.0	120.0			QL=4 ST=2 TYP=1
	245	SVTO	43	NS	0618.0	0649.0	51.0	100.0			QL=2 ST=2 TYP=1
	127	TORN	44	NS	0940.0E		150.0D		6.0		V=1,DISTURBED
	204	IZMI	43	NS	1056.0		64.0D		10.0		
	235	CUBA	44	NS	1330.0E		330.0D		8.0		
	280	CUBA	44	NS	1330.0E		330.0D	31.0			
	245	SGMR	43	NS	1417.0	1417.0	13.0	95.0			QL=4 ST=2 TYP=1
	245	LEAR	8	S	0052.0	0052.0	U	64.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0156.0	0156.0	U	52.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0424.0	0424.0	U	56.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0432.0	0432.0	U	64.0			QL=4 ST=2 TYP=3
	2840	PEKG	1	S	0518.0	0524.0	9.0	3.2			
	2840	PEKG	20	GRF	0650.0	0652.9	5.0	3.8			
	204	IZMI	42	SER	1136.7	1137.0	0.4	29.0			

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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	2800	PENT	20	GRF	2237.0	2319.0	75.0	3.0			
21	204	IZMI	43	NS	0700.0		300.0D		10.0		
	127	TORN	43	NS	0940.0		320.0		7.0		V=1
	245	SGMR	43	NS	1436.0	1948.0	362.0	220.0			QL=4 ST=2 TYP=1
	500	HIRA	8	S	0155.0	0155.0	1.0	10.0			0
	500	HIRA	8	S	0157.0	0157.0	1.0	10.0			0
	2840	PEKG	5	S	0501.0	0505.3	8.0	25.1			
	500	HIRA	8	S	0505.0	0505.0	1.0	40.0			0
	2800	HIRA	1	S	0505.0	0505.0	1.0	25.0			0
	2840	PEKG	1	S	0715.0	0717.2	7.0	5.3			
	600	GORK	3	S	0918.1	0918.2	0.5	141.0			
	9100	GORK	3	S	0918.1	0918.3	0.4	20.0			
	245	SGMR	8	S	1407.0	1407.0	U	54.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1513.0	1514.0	2.0	180.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1513.0	1515.0	3.0	81.0			QL=4 ST=2 TYP=3
	4995	SGMR	8	S	1514.0	1514.0	2.0	40.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1514.0	1515.0	3.0	150.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1514.0	1514.0	3.0	100.0			QL=4 ST=2 TYP=3
	610	SGMR	4	S/F	1514.0	1514.0	3.0	46.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1514.0	1514.0	3.0	49.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1514.0	1514.0	3.0	27.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1514.0	1514.0	U	36.0			QL=4 ST=2 TYP=3
	4995	SVTO	8	S	1514.0	1514.0	1.0	43.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1514.0	1514.0	1.0	53.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	1514.0	1514.0	1.0	31.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	1514.2	1514.6	2.8	33.0	16.0		
	2800	PENT	1	S	1847.0	1852.0	10.0	3.0			
	610	SGMR	49	GB	1948.0	1948.0	1.0	1700.0			QL=4 ST=2 TYP=6
	2695	SGMR	8	S	1948.0	1948.0	1.0	55.0			QL=4 ST=2 TYP=3
	15400	SGMR	8	S	1948.0	1948.0	2.0	440.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1948.0	1948.0	5.0	220.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1948.0	1948.0	5.0	100.0			QL=4 ST=2 TYP=3
	1415	SGMR	4	S/F	1948.0	1948.0	4.0	41.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1948.0	1948.0	5.0	91.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1948.0	1948.0	5.0	300.0			QL=4 ST=2 TYP=3
	610	PALE	49	GB	1949.0	1949.0	U	1400.0			QL=4 ST=2 TYP=6
	245	PALE	8	S	1949.0	1949.0	U	190.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1949.0	1949.0	U	85.0			QL=4 ST=2 TYP=3
	1415	PALE	8	S	1949.0	1949.0	U	48.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1949.0	1949.0	U	70.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	1949.0	1949.0	U	96.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1949.0	1949.0	1.0	280.0			QL=4 ST=2 TYP=3
	15400	PALE	8	S	1949.0	1949.0	1.0	450.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	2330.0	2335.0	11.0	3.0			
22	204	IZMI	44	NS	0700.0E		300.0D		18.0		
	127	TORN	43	NS	0942.0		318.0		13.0		V=2,DISTURBED
	235	CUBA	44	NS	1445.0E		245.0D		11.0		
	280	CUBA	44	NS	1445.0E		245.0D	50.0			
	245	LEAR	8	S	0027.0	0027.0	U	51.0			QL=2 ST=2 TYP=3
	245	PALE	8	S	0027.0	0028.0	1.0	84.0			QL=4 ST=2 TYP=3
	2840	PEKG	5	S	0157.0	0201.8	9.0	42.4			
	500	HIRA	8	S	0201.0	0201.0	1.0	215.0			0
	2800	HIRA	1	S	0201.0	0202.0	3.0	40.0			0
	245	LEAR	49	GB	0201.0	0201.0	U	1300.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0201.0	0201.0	U	190.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	0201.0	0201.0	U	240.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0201.0	0201.0	U	81.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	0201.0	0201.0	1.0	1400.0			QL=4 ST=2 TYP=6
	410	PALE	8	S	0201.0	0201.0	U	230.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	0201.0	0201.0	1.0	240.0			QL=4 ST=2 TYP=3
	1415	PALE	8	S	0201.0	0202.0	1.0	97.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	0201.0	0201.0	1.0	56.0			QL=4 ST=2 TYP=3
	2840	PEKG	1	S	0213.0	0215.3	4.0	4.8			
	500	HIRA	8	S	0215.0	0215.0	1.0	25.0			0
	245	LEAR	49	GB	0215.0	0215.0	U	2400.0			QL=4 ST=2 TYP=6
	410	LEAR	8	S	0215.0	0215.0	U	66.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0215.0	0215.0	U	57.0			QL=4 ST=2 TYP=3

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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
22	245	PALE	49	GB	0215.0	0215.0	1.0	2600.0			QL=4 ST=2 TYP=6
	410	PALE	8	S	0215.0	0215.0	U	88.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0215.0	0215.0	U	56.0			QL=4 ST=2 TYP=3
	610	LEAR	8	S	0309.0	0309.0	U	200.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	0310.0	0310.0	1.0	30.0			0
	245	LEAR	8	S	0322.0	0322.0	U	81.0			QL=4 ST=2 TYP=3
	2840	PEKG	5	S	0610.0	0614.8	5.0	10.1			
	245	SVTO	8	S	0756.0	0756.0	U	61.0			QL=4 ST=2 TYP=3
	9100	GORK	46	C	0927.6	0928.4	3.9	77.0			
	9100	GORK	46	C	0927.6	0928.7		26.0			
	610	SVTO	8	S	0928.0	0928.0	U	48.0			QL=4 ST=2 TYP=3
	1415	SVTO	8	S	0928.0	0928.0	U	32.0			QL=4 ST=2 TYP=3
	4995	SVTO	8	S	0928.0	0928.0	U	41.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0928.0	0928.0	U	89.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	0928.0	0928.0	U	71.0			QL=4 ST=2 TYP=3
	2950	GORK	4	S/F	0928.2	0928.4	0.5	63.0			
	900	GORK	46	C	0928.2	0928.4	1.0	30.0			
	3000	IZMI	7	C	0928.2	0928.4	0.5	20.0	9.0		
	900	GORK	46	C	0928.2	0928.5		21.0			
	600	GORK	4	S/F	0928.3	0928.4	0.5	64.0			
	610	SVTO	8	S	1058.0	1058.0	U	79.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1203.0	1203.0	1.0	60.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1322.0	1322.0	U	53.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1554.0	1554.0	U	63.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1558.0	1558.0	U	70.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1558.0	1558.0	1.0	72.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1634.0	1634.0	U	100.0			QL=4 ST=2 TYP=3
23	127	TORN	43	NS	1017.0		116.0U		10.0		V=2,DISTURBED
	235	CUBA	44	NS	1420.0E		340.0D		9.0		
	280	CUBA	44	NS	1420.0E		340.0D	27.0			
	245	LEAR	8	S	0227.0	0227.0	U	190.0			QL=4 ST=2 TYP=3
	600	GORK	7	C	1028.2	1028.3	0.5	3.0			
	600	GORK	7	C	1028.2	1028.5		8.0			
	900	GORK	46	C	1029.5	1030.1	1.0	149.0			
	900	GORK	46	C	1029.5	1030.2		127.0			
	127	TORN	4	S/F	1237.8	1239.2	2.2	310.0	120.0		
24	127	TORN	43	NS	0906.0		354.0		6.0		V=0,DISTURBED
	235	CUBA	44	NS	1405.0E		355.0D		6.0		
	280	CUBA	44	NS	1405.0E		415.0D	25.0			
	245	SGMR	8	S	1448.0	1448.0	U	60.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1452.0	1453.0	1.0	66.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1718.0	1718.0	U	90.0			QL=4 ST=2 TYP=3
	500	HIRA	8	S	2221.0	2222.0	1.0	10.0			
	500	HIRA	8	S	2231.0	2231.0	1.0	10.0			
	2800	PENT	20	GRF	2258.0	2312.0	48.0	5.0			
25	127	TORN	43	NS	0813.0		407.0		11.0		V=1
	204	IZMI	7	C	0729.4	0729.4	0.2	18.0			
	900	GORK	2	S/F	0954.2	0954.4	0.5	8.0			
	9100	GORK	7	C	0957.1	0957.3	0.7	17.0			
	9100	GORK	7	C	0957.1	0957.4		19.0			
	600	GORK	2	S/F	1018.9	1019.1	0.5	11.0			
	900	GORK	42	SER	1018.9	1019.1	11.3	8.0			
	900	GORK	42	SER	1018.9	1024.4		4.0			
	204	IZMI	42	SER	1045.3	1045.4	2.7	36.0			
	245	LEAR	8	S	2335.0	2335.0	U	53.0			QL=4 ST=2 TYP=3
26	204	IZMI	43	NS	0700.0		205.0U		35.0		
	245	PALE	43	NS	2325.0	0120.0	35.0	160.0			QL=4 ST=1 TYP=1
	245	PALE	43	NS	2325.0	2326.0	35.0	150.0			QL=4 ST=1 TYP=1
	245	LEAR	43	NS	2334.0	0120.0	264.0	180.0			QL=4 ST=2 TYP=1
	500	HIRA	8	S	0139.0	0140.0	1.0	45.0			
	245	LEAR	8	S	0438.0	0438.0	U	69.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0811.0	0811.0	U	65.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0811.0	0811.0	1.0	67.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	1140.4	1152.0	23.0	139.0			
	245	SGMR	8	S	1844.0	1844.0	U	50.0			QL=4 ST=2 TYP=3

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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
26	245	LEAR	8	S	2325.0	2326.0	1.0	150.0			QL=4 ST=2 TYP=3
27	245	PALE	43	NS	2325.0	0132.0	205.0	160.0			QL=4 ST=2 TYP=1
	245	LEAR	8	S	0716.0	0716.0	U	99.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0716.0	0716.0	U	89.0			QL=4 ST=2 TYP=3
	9100	GORK	46	C	0739.5	0739.7	0.7	329.0			
	9100	GORK	46	C	0739.5	0739.8		296.0			
	245	LEAR	8	S	0741.0	0742.0	1.0	87.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0742.0	0742.0	2.0	64.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0900.0	0901.0	1.0	50.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0901.0	0901.0	U	50.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0904.0	0904.0	U	62.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0911.0	0911.0	U	84.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0911.0	0911.0	U	89.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1015.0	1015.0	U	58.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1423.0	1423.0	2.0	97.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1433.0	1433.0	1.0	59.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	1434.0	1434.0	2.0	84.0			QL=4 ST=2 TYP=8
	245	SGMR	8	S	1436.0	1436.0	U	53.0			QL=4 ST=2 TYP=3
28	127	TORN	44	NS	0850.0E		250.0D		11.0		V=1
	245	SGMR	43	NS	1224.0	1234.0	21.0	190.0			QL=4 ST=2 TYP=1
	245	SGMR	43	NS	1517.0	1535.0	82.0	100.0			QL=4 ST=2 TYP=1
	610	LEAR	8	S	0415.0	0415.0	U	75.0			QL=4 ST=2 TYP=3
	9100	GORK	8	S	0729.5	0729.7	0.5	27.0			
	204	IZMI	42	SER	1052.6	1052.9	0.4	25.0			
	204	IZMI	41	F	1053.8	1054.3	0.7	51.0			
	245	SGMR	8	S	1203.0	1203.0	U	78.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1206.0	1208.0	2.0	63.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	1206.0	1212.0	10.0	200.0			QL=4 ST=2 TYP=8
	245	SGMR	8	S	1211.0	1212.0	1.0	87.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1220.0	1224.0	5.0	72.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1221.0	1221.0	U	50.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1230.0	1234.0	4.0	120.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1456.0	1456.0	U	51.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1517.0	1517.0	2.0	63.0			QL=4 ST=2 TYP=3
	245	SVTO	48	C	1523.0	1529.0	6.0	87.0			QL=4 ST=2 TYP=8
	245	SVTO	48	C	1534.0	1535.0	3.0	68.0			QL=4 ST=2 TYP=8
	245	PALE	8	S	1804.0	1804.0	U	110.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1804.0	1804.0	U	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2056.0	2056.0	U	51.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

BERN = Berne	HUMN = Humain	ONDR = Ondrejov	SVTO = San Vito
CRIM = Crimea	IZMI = IZMIRAN	PEKG = Peking	TORN = Torun
CUBA = Havana	KISV = Kislovodsk	PALE = Palehua	TRST = Trieste
GORK = Gorky	KRAK = Krakow	PENT = Penticton	TYKW = Toyokawa
HIRA = Hiraiso	LEAR = Learmonth	POTS = Potsdam	UPIC = Upice
HUAN = Huancayo	NOBE = Nobeyama	SGMR = Sagamore Hill	

Explanation of Type Code:

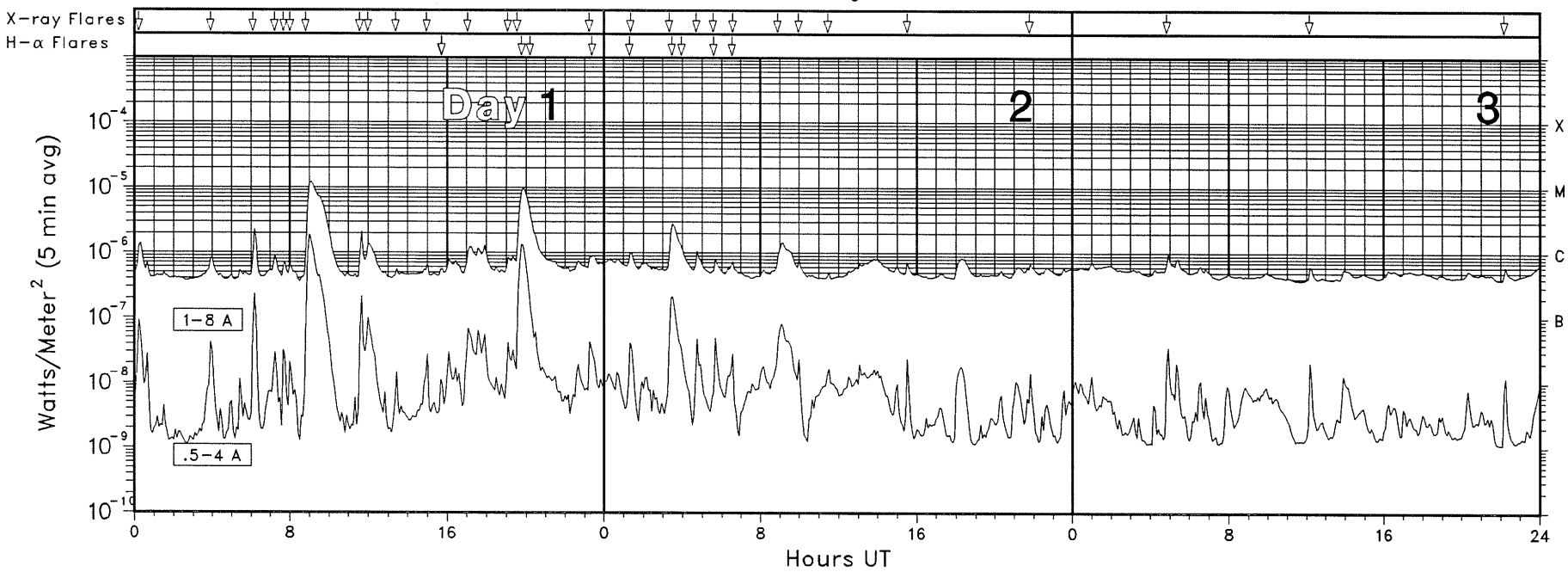
1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precusor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major

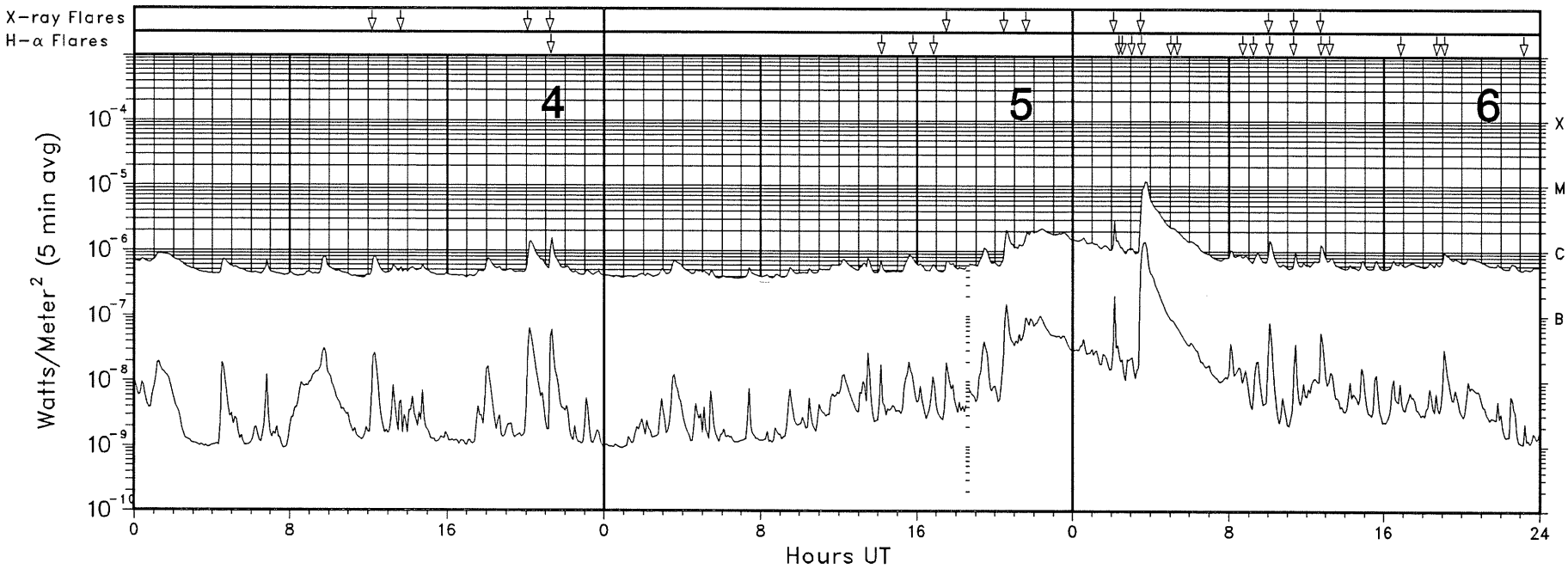
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500 and 200 MHz.

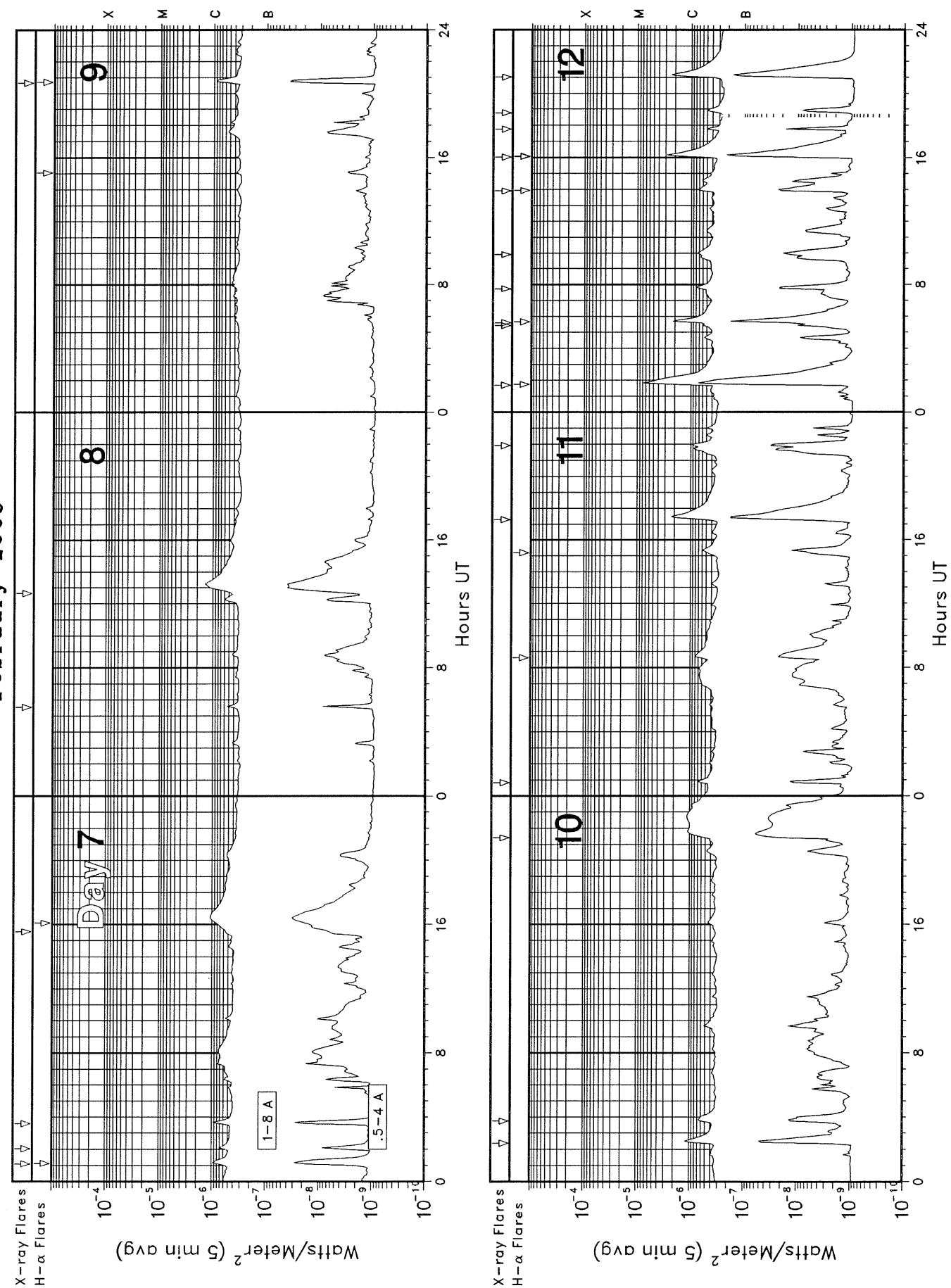
GOES X-RAY DETECTOR

February 2003



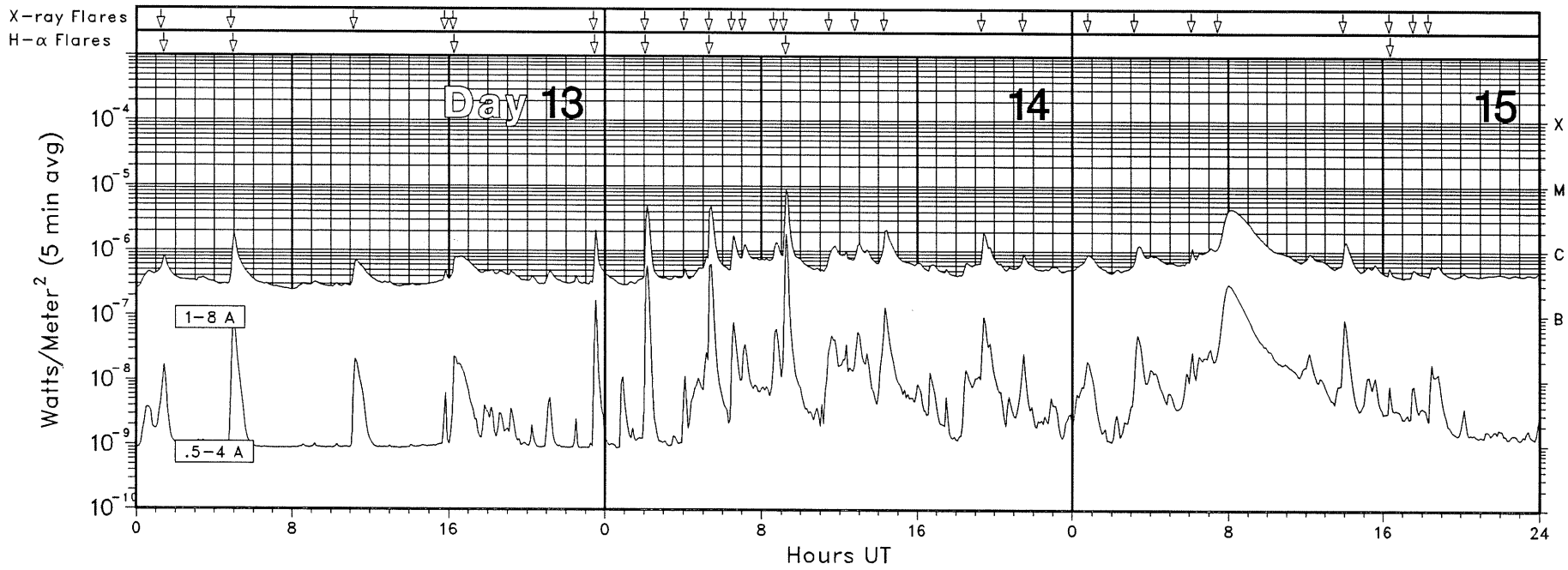


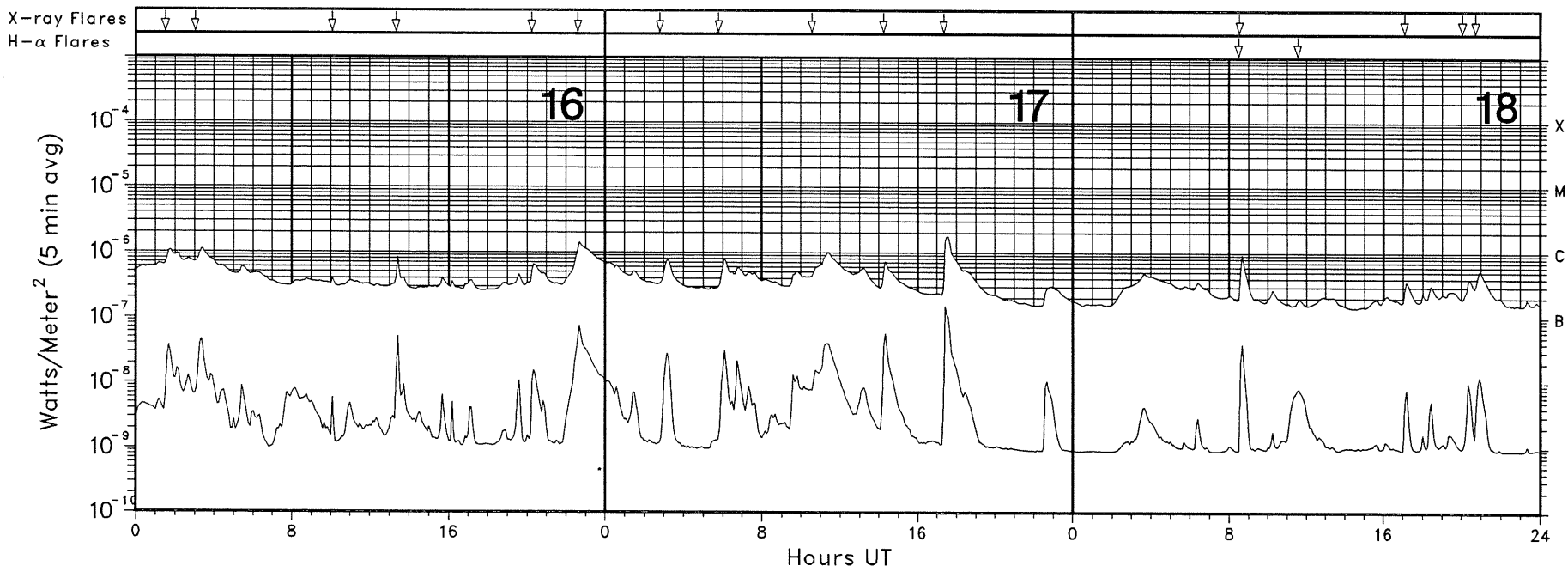
17
Feb 03


GOES X-RAY DETECTOR
February 2003
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
1-8 A
.5-4 A
Day 7
Hours UT
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT

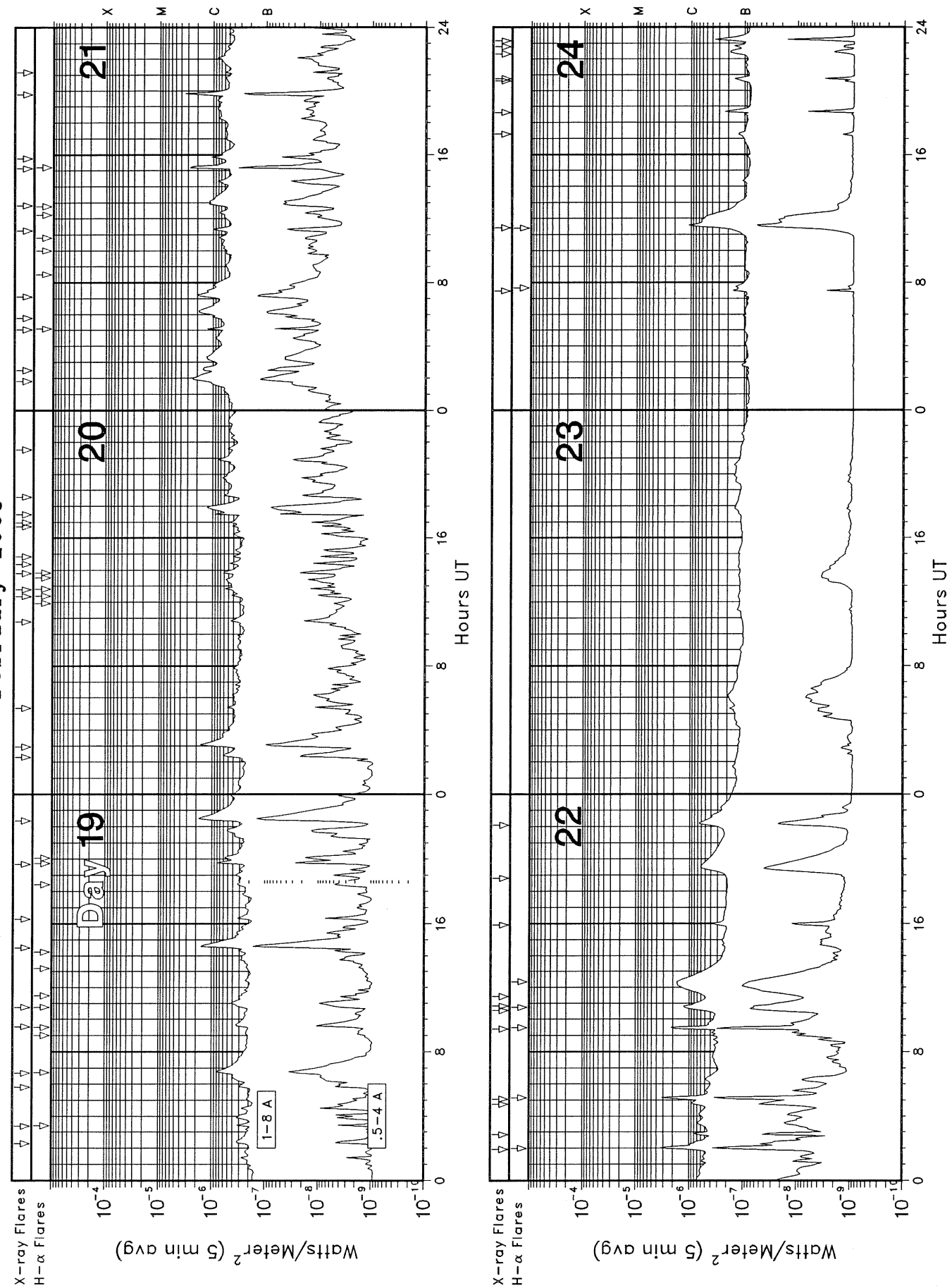
GOES X-RAY DETECTOR

February 2003



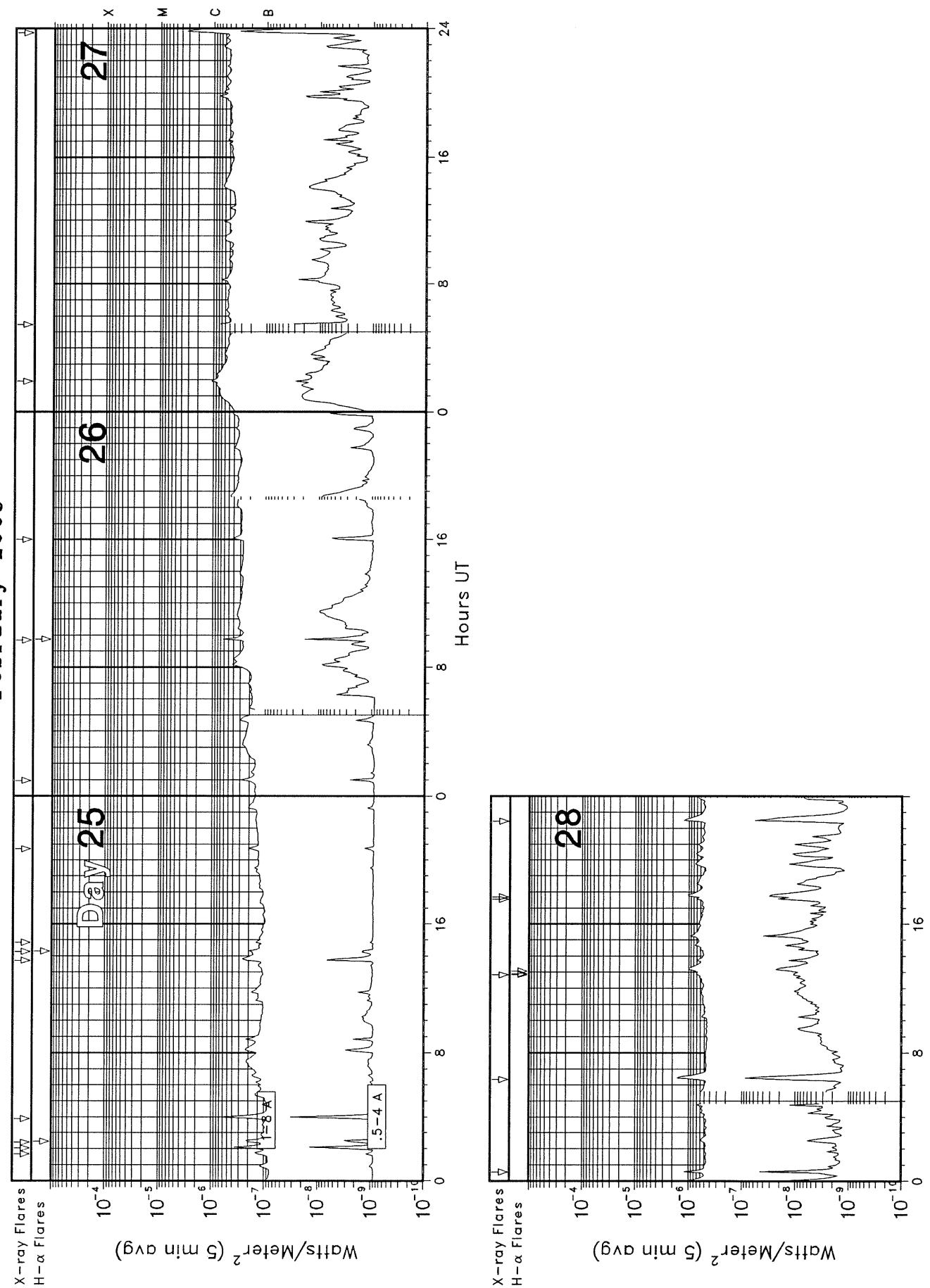


20
Feb 03


GOES X-RAY DETECTOR
February 2003
Day 19
20
21
22
23
24
X
M
C
B
1-8 A
.5-4 A
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
0
8
16
24

GOES X-RAY DETECTOR

February 2003



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

February 2003

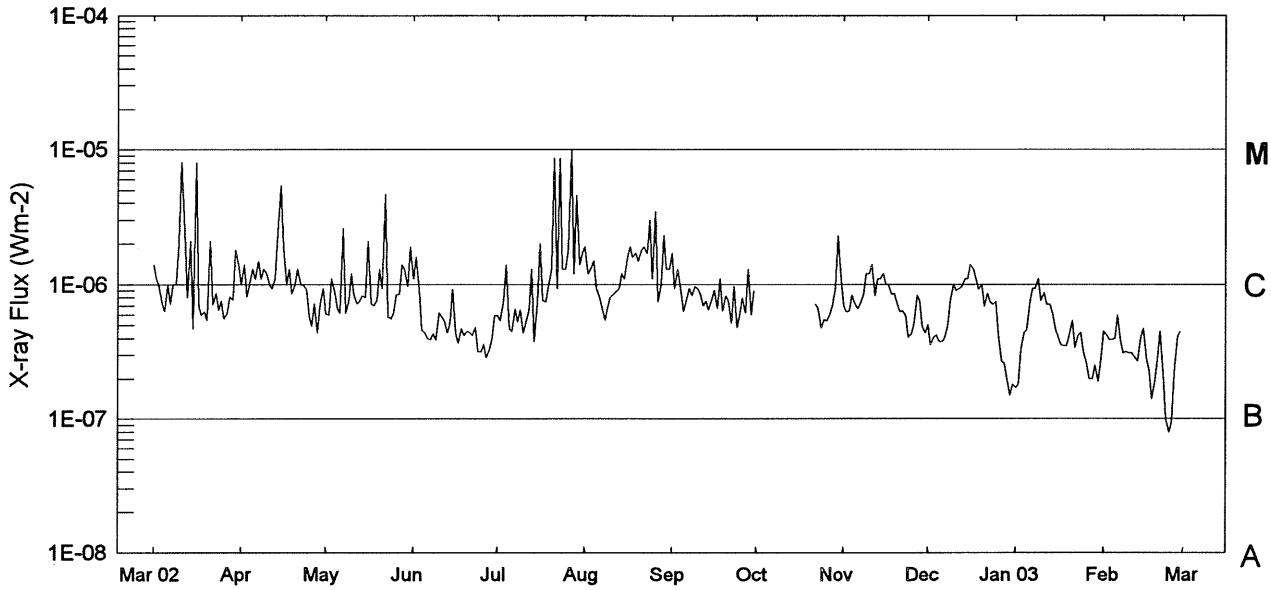
Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp	Xray	NOAA/ USAF Region	Flux
01	0013	0019	0025				C1.5	10276		9.0E-04
01	0354	0359	0404				B9.5	10276		4.9E-04
01	0605	0613	0617				C2.6	10276		1.3E-03
01	0712	0716	0720				B9.7	10276		4.0E-04
01	0740	0744	0749				B8.1	10276		3.7E-04
01	0800	0804	0807				B7.7	10276		2.8E-04
01	0848	0905	0938				M1.2	10276		2.4E-02
01	1133	1141	1145				C2.7	10276		1.0E-03
01	1159	1203	1208				C1.4	10276		7.3E-04
01	1322	1325	1329				B6.0	10276		2.3E-04
01	1457	1501	1503				B8.5	10276		2.5E-04
01	1702	1715	1723				C1.3	10276		1.4E-03
01	1904	1908	1910				C1.0	10276		3.0E-04
01	1932	1954	2010	S14	E89	SF	C9.9	10276		1.5E-02
01	2314	2318	2335	S15	E78	SF	C1.0	10276		1.1E-03
02	0121	0124	0126	S15	E78	SF	C1.3	10276		3.3E-04
02	0319	0334	0348	S15	E77	SF	C2.8	10276		3.6E-03
02	0442	0447	0452				C1.1	10276		5.7E-04
02	0533	0543	0545	S15	E67	SF	C1.4	10276		4.8E-04
02	0634	0637	0639	S15	E67	SF	C1.1	10276		2.2E-04
02	0853	0910	0936				C1.4	10276		3.0E-03
02	0958	1001	1003				B9.1	10276		2.3E-04
02	1127	1130	1132				B6.7	10276		1.6E-04
02	1530	1533	1535				C1.0	10276		2.3E-04
02	2147	2150	2153				B7.4			2.3E-04
03	0451	0456	0501				C1.0	10276		5.2E-04
03	1209	1213	1218				B7.0	10276		3.3E-04
03	2211	2215	2220				B6.6	10276		3.1E-04
04	1212	1222	1232				B8.3	10277		8.7E-04
04	1337	1340	1342				B6.6	10277		1.7E-04
04	2004	2015	2031				C1.4	10278		1.9E-03
04	2113	2121	2126	S20	E67	SF	C1.6	10277		9.3E-04
05	1729	1733	1739				B7.7			4.2E-04
05	2026	2037	2049				C2.1			2.2E-03
05	2135	2139	2144				C2.2			1.0E-03
06	0207	0212	0214				C3.4			1.0E-03
06	0330	0349	0401				M1.2			1.7E-02
06	1001	1008	1015	N20	E59	SF	C1.5	10278		1.1E-03
06	1119	1125	1129	N20	E56	SF	C1.1	10278		4.9E-04
06	1242	1248	1255	S16	E50	SF	C1.3	10277		8.8E-04
07	0105	0110	0123	S17	E42	SF	B9.8	10277		9.1E-04
07	0202	0205	0214				B7.1			4.7E-04
07	0334	0341	0347				B9.8			6.2E-04
07	1533	1628	1704	S03	W61	SF	C1.0	10274		4.7E-03
08	0532	0536	0540				B5.5			2.4E-04
08	1239	1315	1339				C1.4			3.6E-03
09	2040	2050	2058	S14	W23	SF	B9.4	10276		8.3E-04
10	0222	0230	0242				C1.2	10277		1.1E-03
10	0344	0348	0407				B6.6			8.5E-04
10	2124	2242	2341				C1.1	10274		7.8E-03
11	0050	0056	0103				B7.0			5.1E-04
11	1718	1731	1743				C2.3	10280		2.3E-03
11	2155	2200	2204				B9.9	10276		4.9E-04
12	0525	0528	0530				B7.2	10283		1.9E-04
12	0536	0542	0549	N10	W22	SF	C2.4	10282		1.3E-03
12	0744	0751	0757				B8.0			5.6E-04
12	0954	1001	1009				B7.5			6.3E-04
12	1354	1400	1415	N11	W26	SF	B7.7	10282		8.3E-04
12	1601	1612	1620	S03	W54	SF	C2.9	10280		2.1E-03
12	1745	1748	1750				B7.2	10280		1.7E-04
12	1846	1855	1906				B5.0	10282		5.1E-04
12	2101	2112	2123				C2.3	10282		2.1E-03
13	0115	0129	0135	S03	W55	SF	B8.4	10280		8.1E-04
13	0450	0502	0510	N09	W39	SF	C1.8	10282		1.4E-03
13	1110	1120	1143				B7.1	10282		1.2E-03
13	1547	1551	1554				B5.4	10276		2.0E-04
13	1613	1618	1709	N11	W42	SF	B8.2	10282		2.5E-03
13	2324	2332	2337	N13	W84	SF	C2.2	10284		1.1E-03
14	0202	0212	0218	N13	W82	SF	C5.0	10284		3.2E-03
14	0402	0406	0411				B5.6	10276		2.7E-04
14	0518	0526	0533	N13	W84	1F	C5.2	10284		3.6E-03
14	0628	0637	0646				C1.7	10282		1.4E-03
14	0702	0711	0718				C1.2			1.1E-03
14	0837	0847	0857				C1.4	10284		1.4E-03
14	0907	0918	0923	N13	W86	SF	M1.2	10284		5.6E-03
14	1126	1147	1157				C1.2	10284		2.0E-03
14	1247	1303	1311				C1.3	10284		1.6E-03
14	1417	1425	1433				C2.2	10276		1.8E-03
14	1919	1928	1937				C2.1	10280		1.7E-03
14	2127	2131	2137				B9.4	10287		5.2E-04
15	0046	0052	0056				B9.1			5.4E-04
15	0310	0328	0338				C1.2			1.7E-03
15	0606	0610	0615				C1.2	10282		5.6E-04
15	0727	0810	0902				C4.5	10276		1.9E-02
15	1356	1405	1417				C1.4	10282		1.5E-03
15	1619	1622	1626	S20	E73	SF	B6.4	10288		2.4E-04
15	1733	1738	1741				B5.4			2.6E-04
15	1820	1830	1840				B6.2			6.4E-04
16	0130	0145	0216				C1.0	10276		2.5E-03
16	0302	0325	0340				C1.1	10276		2.1E-03
16	1005	1008	1010				B4.6			1.2E-04
16	1320	1326	1330				B9.5			3.9E-04
16	2014	2024	2039				B6.6			8.8E-04
16	2236	2242	2254				C1.4			1.4E-03
17	0248	0311	0325				B7.9			1.2E-03
17	0548	0608	0619				B8.4			1.1E-03
17	1034	1129	1148				C1.0			3.2E-03
17	1414	1421	1433				B7.5			7.1E-04
17	1721	1729	1745				C1.9			2.0E-03
18	0833	0841	0850				B9.8			6.9E-04
18	1704	1711	1723				B3.6			3.6E-04
18	2003	2027	2040				B3.9			6.5E-04
18	2043	2056	2112				B5.3			7.5E-04
19	0217	0225	0237				B3.3			3.6E-04
19	0322	0327	0332	N13	E29	SF	B3.6	10288		1.7E-04
19	0548	0552	0601				B3.1			2.2E-04
19	0640	0648	0657	N17	E38	SF	B8.0	10290		7.2E-04
19	0933	0939	0952				B3.6			3.6E-04

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

February 2003

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
19	1045	1103	1114				B4.2		6.2E-04
19	1430	1437	1448	N17	E35	SF	C1.8	10290	1.3E-03
19	1618	1622	1626				B3.4		1.4E-04
19	1941	1948	1953	N12	E21	SF	B9.1	10288	4.4E-04
19	2222	2232	2246				C1.7	10290	1.9E-03
20	0218	0225	0235				B6.4		5.6E-04
20	0256	0306	0316				C1.7		1.5E-03
20	0522	0525	0531				B5.4		2.7E-04
20	1046	1051	1059				B4.6		3.2E-04
20	1221	1225	1227	N18	E28	SF	B5.9	10290	1.6E-04
20	1247	1251	1254	N19	E28	SF	B6.0	10290	2.3E-04
20	1348	1354	1358				B7.0		3.6E-04
20	1422	1426	1431				B4.9		2.4E-04
20	1450	1453	1456				B4.7		1.5E-04
20	1642	1645	1648				B4.6		1.5E-04
20	1658	1701	1705				B5.2		1.9E-04
20	1728	1733	1735				C1.3		3.3E-04
20	1834	1842	1903				B6.5		9.1E-04
20	2132	2135	2139				B5.6		2.1E-04
21	0149	0200	0212				C2.5		2.8E-03
21	0229	0234	0244				C1.6		1.4E-03
21	0502	0506	0509	N11	E14	SF	C1.6	10290	4.8E-04
21	0546	0617	0629				C1.8	10289	3.5E-03
21	0707	0717	0721				C2.1		1.5E-03
21	1115	1122	1127				C1.0		6.4E-04
21	1250	1255	1321	N16	E07	SF	C1.3	10289	2.0E-03
21	1508	1514	1518	N15	E07	SF	C3.7	10290	1.5E-03
21	1546	1551	1555				C1.1		5.3E-04
21	1946	1950	1954				C4.3	10290	1.4E-03
21	2110	2113	2115				B7.3		1.8E-04
22	0155	0203	0207	N11	E02	SF	C4.3	10290	1.8E-03
22	0250	0254	0257				C1.1		3.5E-04
22	0444	0450	0500				B9.6		8.2E-04
22	0504	0510	0513	N16	W02	SF	C4.7	10290	1.4E-03
22	0924	0929	0931	N16	W05	SF	C5.8	10290	9.9E-04
22	1032	1044	1046	N16	E03	SF	C2.1	10290	7.6E-04
22	1049	1052	1054				C1.5		3.9E-04
22	1125	1220	1238	N17	W06	SF	C1.7	10290	5.1E-03
22	1555	1600	1603				B5.3		1.8E-04
22	1848	1933	2026				B6.1		2.4E-03
22	2205	2215	2225				B6.7		6.9E-04
24	0729	0733	0736				B2.2		6.7E-05
24	1125	1136	1144	N16	W29	SF	C1.1	10290	8.8E-04
24	1716	1719	1721				B1.7		4.2E-05
24	1838	1843	1845				B3.2		8.5E-05
24	2036	2039	2042				B1.5		4.7E-05
24	2045	2049	2051				B1.9		5.6E-05
24	2219	2230	2232				B2.2		1.4E-04
24	2246	2249	2254				B1.7		7.2E-05
24	2309	2317	2321				B4.2		1.9E-04
25	0140	0144	0149				B1.7		7.6E-05
25	0201	0206	0209				B4.7		1.4E-04
25	0223	0230	0233	N18	W35	SF	B2.7	10290	1.2E-04
25	0353	0401	0405				B8.1	10288	2.8E-04
25	1343	1348	1400				B2.6		2.3E-04
25	1416	1420	1423	N18	W45	SF	B2.2	10290	8.1E-05
25	1450	1453	1457				B1.6		6.3E-05
25	2042	2045	2049				B2.2		8.3E-05
26	0057	0101	0105				B2.9		1.2E-04
26	0941	0946	0948	N16	W61	SF	B7.8	10290	2.2E-04
26	1600	1605	1612				B4.2		2.8E-04
27	0155	0158	0201				C1.2	10288	4.0E-04
27	0528	0533	0535				B7.8		2.7E-04
27	2344	2352	2359				C3.4		2.0E-03
28	0033	0037	0040				C1.5		4.4E-04
28	0620	0628	0634				C1.7		1.1E-03
28	1250	1315	1323	S06	W19	SF	C1.0	10293	1.6E-03
28	1732	1735	1737				B9.0		2.2E-04
28	1742	1751	1755				C1.1	10297	7.3E-04
28	2227	2234	2238				C1.5	10296	7.4E-04

Preliminary GOES Satellite Daily X-Ray Background
Mar 2002 - Feb 2003



Day	Mar 02	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 03	Feb
1	C1.4	C1.0	C1.9	C1.1	B5.9	C1.9	C1.7	*	B7.0	B5.0	B1.7	B4.5
2	C1.1	C1.4	C1.2	C1.6	B5.4	C1.2	B9.4	*	B6.3	B3.6	B1.8	B4.2
3	B9.8	B8.1	C1.3	B9.0	B7.5	C1.3	C1.3	*	B6.4	B4.1	B3.3	B3.9
4	B7.3	C1.0	C1.5	B4.6	C1.4	C1.5	B9.7	*	B8.3	B4.2	B4.4	B3.9
5	B6.4	C1.3	B9.5	B4.4	B4.7	B9.5	B6.4	*	B7.3	B3.8	B4.6	B4.0
6	B9.9	C1.1	B8.0	B4.0	B4.5	B8.0	B7.5	*	B6.7	B3.8	B7.4	B5.9
7	B7.2	C1.5	B6.8	B3.9	B6.6	B6.8	B9.4	*	B7.2	B4.0	B9.3	B3.8
8	C1.0	C1.1	B5.5	B4.3	B5.3	B5.5	B8.3	*	B8.4	B5.0	B9.4	B3.1
9	C1.0	C1.3	B6.8	B3.9	B6.5	B6.8	B9.6	*	C1.2	B7.7	C1.1	B3.2
10	C2.0	C1.2	B8.0	B6.2	B4.4	B8.0	B9.3	*	C1.2	C1.0	B7.6	B3.1
11	C8.1	C1.0	B8.5	B5.8	B5.2	B8.5	B8.7	*	C1.4	B9.1	B8.7	B3.1
12	C2.5	B9.3	B8.9	B5.4	B6.5	B8.9	B7.0	*	B8.3	B9.4	B7.1	B2.9
13	B8.0	C1.1	B9.3	B4.4	C1.3	B9.3	B7.5	*	C1.1	B9.7	B7.1	B2.7
14	C2.1	C2.4	C1.2	B5.2	B3.8	C1.2	B6.5	*	C1.1	C1.1	B6.2	B4.1
15	B4.7	C5.4	C1.1	B9.2	B7.3	C1.1	B7.7	*	C1.2	C1.1	B4.6	B4.7
16	C8.0	C1.9	C1.6	B4.4	C2.0	C1.6	B9.0	*	C1.0	C1.4	B4.1	B2.8
17	B7.0	C1.0	C1.9	B3.7	B7.6	C1.9	B6.7	*	C1.0	C1.3	B3.6	B2.3
18	B6.0	C1.3	C1.6	B4.7	B7.4	C1.6	C1.1	*	B8.5	C1.1	B3.5	B1.4
19	B6.3	B8.6	C1.7	B4.2	B9.7	C1.7	B6.4	*	B8.6	B9.2	B3.5	B1.9
20	B5.5	C1.0	C1.5	B4.5	C1.3	C1.5	B8.2	*	B7.1	C1.0	B4.2	B2.8
21	C2.1	C1.3	C1.8	B4.4	C8.6	C1.8	B7.6	*	B6.3	B6.9	B5.4	B4.5
22	B7.1	C1.0	C1.9	B4.2	B9.3	C1.9	B5.2	B7.1	B6.4	B8.6	B3.4	B2.2
23	B8.6	B9.9	C1.7	B4.8	C8.6	C1.7	B9.7	B6.7	B5.9	B7.4	B4.2	B1.0
24	B6.5	B9.2	C3.0	B3.2	C1.3	C3.0	B4.8	B4.8	B4.1	B7.1	B4.4	A8.0
25	B7.5	B5.9	C1.1	B3.2	C1.3	C1.1	B6.0	B5.5	B4.3	B7.4	B3.2	A9.4
26	B5.6	B4.9	C3.5	B3.6	C1.8	C3.5	B7.9	B5.4	B5.1	B4.2	B2.6	B2.2
27	B6.1	B7.2	B7.4	B2.9	C9.8	B7.4	B6.2	B6.0	B8.3	B2.7	B2.0	B4.1
28	B8.1	B4.4	C1.0	B3.3	C1.2	C1.0	C1.3	B6.9	B7.6	B2.6	B2.0	B4.5
29	B7.7	B7.1	C2.3	B3.9	C4.6	C2.3	B6.0	B9.4	B4.9	B1.9	B2.5	
30	C1.8	B9.4	C1.3	B5.9	C1.4	C1.3	B9.0	C2.3	B4.4	B1.5	B1.9	
31	C1.4		C1.3		C1.7	C1.3		C1.1		B1.8	B2.8	

NOTE: * = Data not available.

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 2003

Day	Event Type	Start (UT)	End (UT)	Lat	CMP	Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
06	DSF	1453U	0654	N09	W39	02	3.7		10	0	0	E	SVTO		
06	DSF	1602	1626	S02	W35	02	4.0	3	07	0	0	E	HOLL	0274	
06	DSF	1604	1626	S03	W35	02	4.0	3	12	0	0	E	RAMY	0274	
07	DSF	2353U	1950U	N23	W18	02	6.6		50	0	0	E	HOLL		
12	DSF	2022U	1259U	N05	W16	02	11.6		11	0	0	E	RAMY	0283	
12	DSF	2022U	1259U	S18	E58	02	17.3		13	0	0	E	RAMY		
13	DSF	1005U	2320U	S39	E74	02	19.4		37	0	0	E	LEAR		
16	DSF	0940U	2342U	S27	E36	02	19.2		12	0	0	E	LEAR		
17	DSF	2124U	1159U	N34	W58	02	13.3		32	0	0	E	RAMY		
18	DSF	0125	0253U	N31	W69	02	12.6		47	0	0	E	LEAR		
19	DSF	1013U	2254U	N12	E09	02	20.1		11	0	0	E	LEAR		
20	DSF	1526U	0624U	S21	E22	02	22.3		15	0	0	E	SVTO		
20	DSF	1526U	0624U	S29	E49	02	24.5		06	0	0	E	SVTO		
20	DSF	1526U	0624U	S32	E43	02	24.0		08	0	0	E	SVTO		
21	EPL	1301	0000	N04	W90	02	14.8	3		9	9	E	RAMY	0289	
21	EPL	1301	1351	N04	W90	02	14.8	3		9	9	E	RAMY	0289	
25	DSF	1602U	0617U	S31	W48	02	21.9		20	0	0	E	SVTO		
25	DSF	2028U	1119U	S30	W65	02	20.7		25	0	0	E	RAMY		
26	DSF	0130	0245	S30	W41	02	22.8	3	22	0	0	E	LEAR		
27	DSF	0027U	0202U	S17	W38	02	24.1		06	0	0	E	LEAR		
27	DSF	1253U	0721U	N34	E18	03	1.0		20	0	0	E	SVTO		
27	DSF	1753U	1110U	N33	E08	02	28.4		24	0	0	E	RAMY		

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.

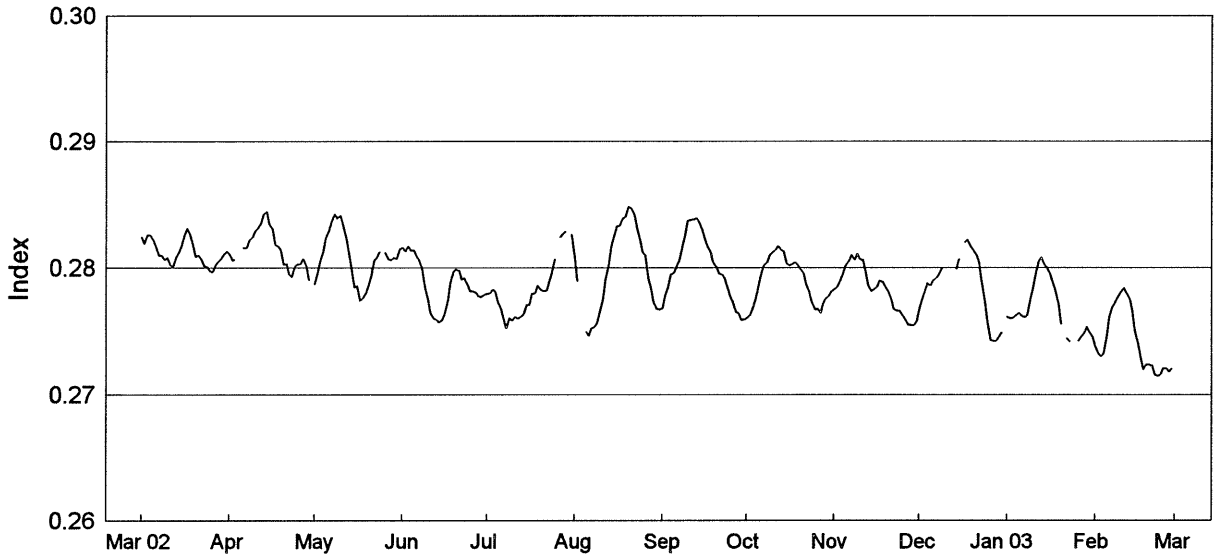
The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

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

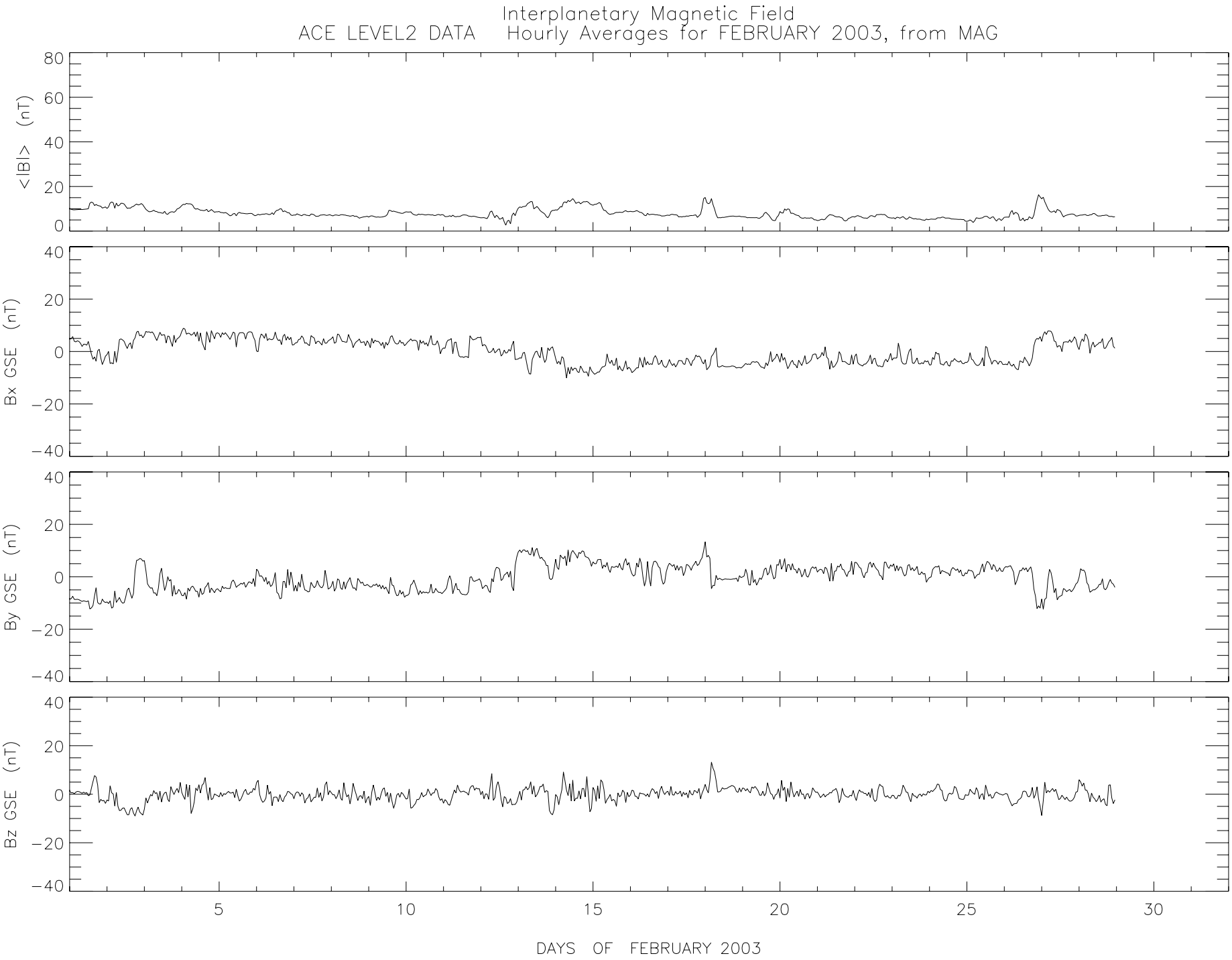
NOTE: The U.S. Air Force solar observing sites (HOLL, LEAR, RAMY, AND SVTO) have changed operational requirements and will only report the following: BSL, EPL, LPS, SPY, and DSF's.

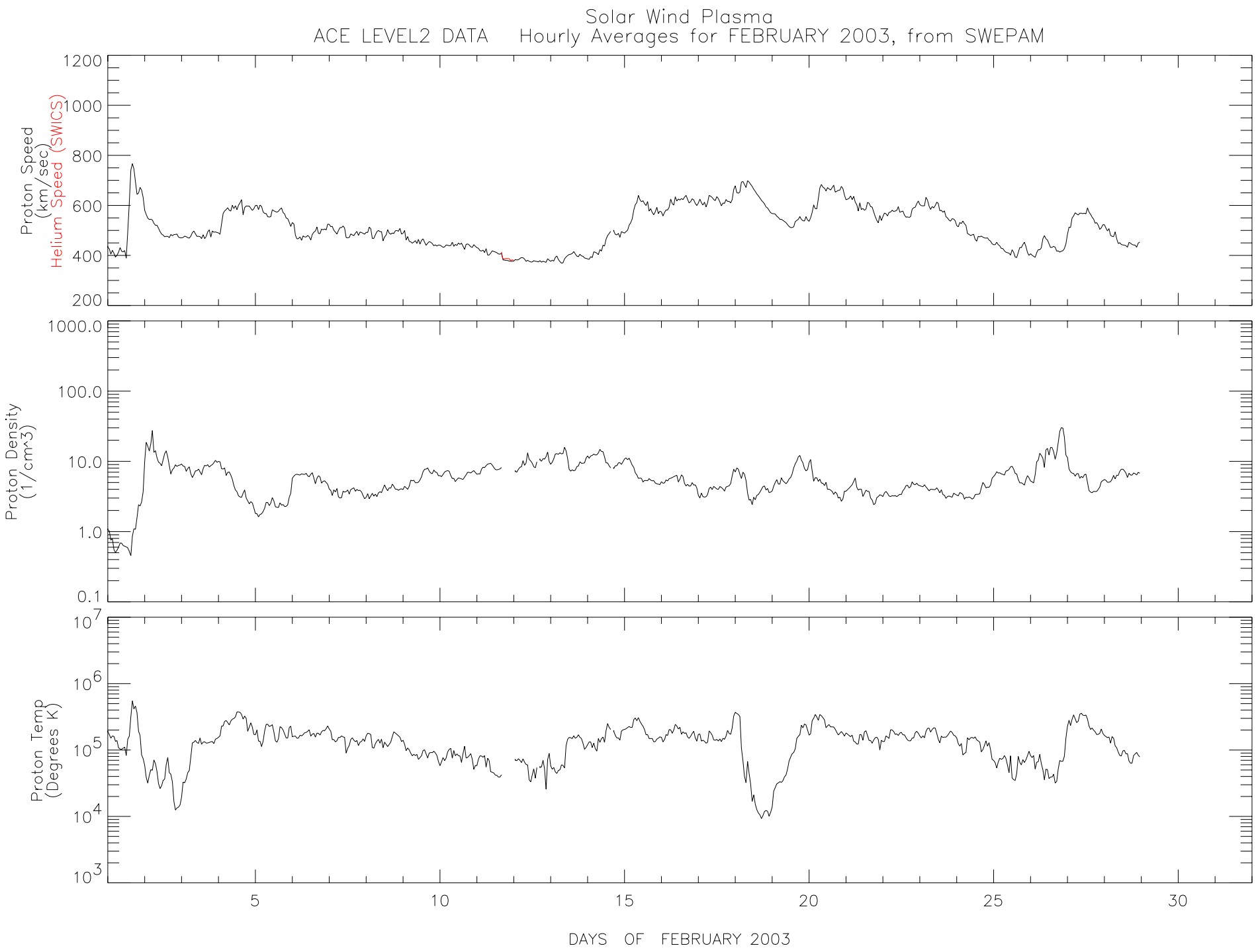
NOAA Solar Ultraviolet (UV) MgII Core-to-Wing Index
Mar 2002 - Feb 2003
Version 9.1

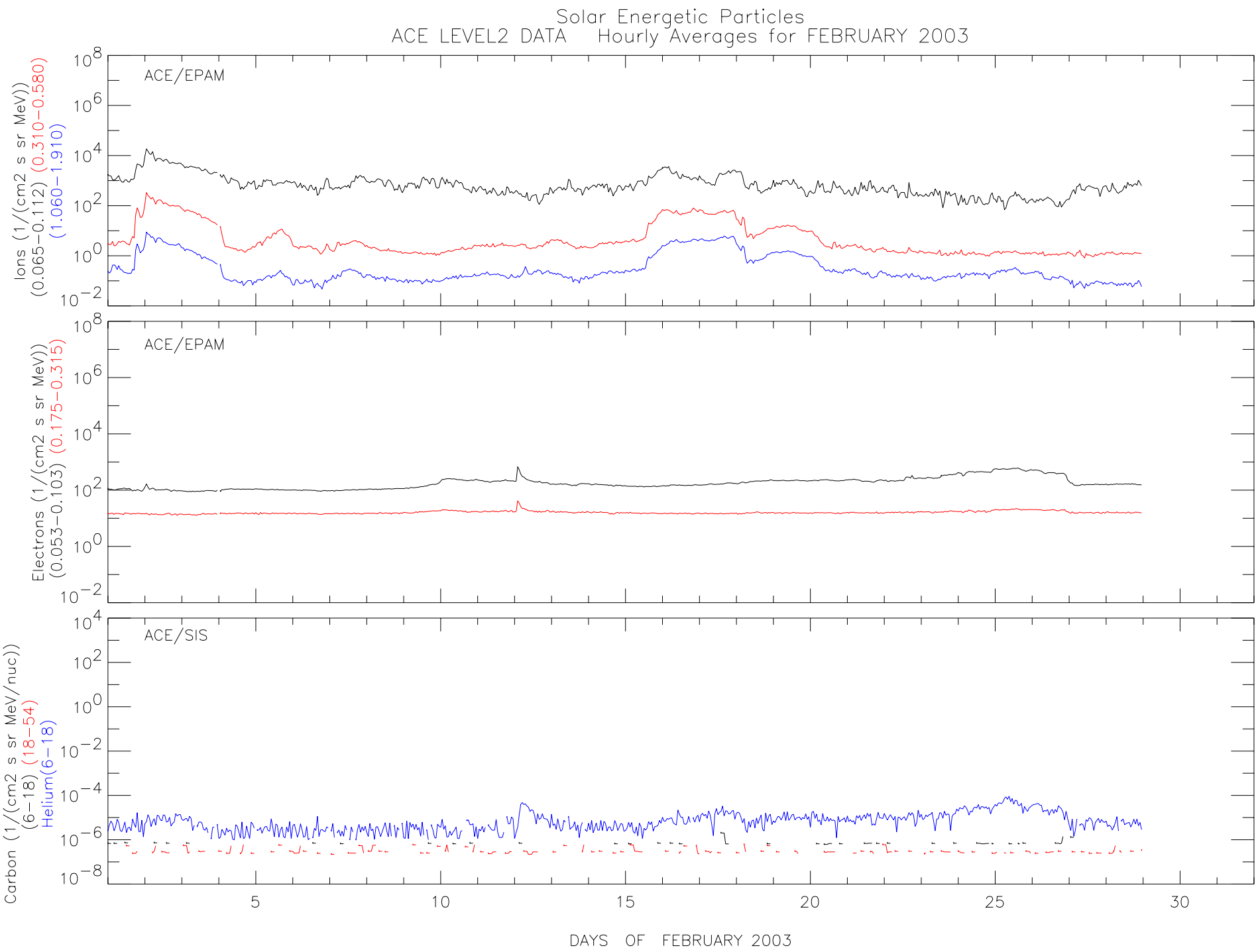


Day	Mar 02	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 03	Feb
1	0.2824	0.2811	0.2787	0.2816	0.2780	0.2808	0.2768	0.2760	0.2783	0.2767	0.2761	0.2738
2	0.2819	0.2806	0.2795	0.2813	0.2780	0.2789	0.2778	0.2762	0.2785	0.2774	0.2760	0.2732
3	0.2826	0.2807	0.2806	0.2817	0.2783	----	0.2785	0.2767	0.2789	0.2782	0.2760	0.2730
4	0.2826	----	0.2812	0.2814	0.2781	----	0.2795	0.2775	0.2796	0.2788	0.2762	0.2732
5	0.2822	----	0.2823	0.2814	0.2773	0.2749	0.2796	0.2785	0.2802	0.2786	0.2764	0.2745
6	0.2817	0.2816	0.2829	0.2809	0.2767	0.2746	0.2801	0.2796	0.2805	0.2790	0.2762	0.2761
7	0.2810	0.2816	0.2836	0.2806	0.2759	0.2752	0.2805	0.2802	0.2810	0.2792	0.2761	0.2769
8	0.2810	0.2822	0.2842	0.2799	0.2752	0.2753	0.2817	0.2804	0.2806	0.2795	0.2762	0.2772
9	0.2806	0.2824	0.2839	0.2786	0.2760	0.2756	0.2825	0.2810	0.2811	0.2800	0.2775	0.2777
10	0.2808	0.2829	0.2841	0.2776	0.2758	0.2764	0.2837	0.2812	0.2807	----	0.2784	0.2781
11	0.2803	0.2831	0.2834	0.2764	0.2761	0.2774	0.2838	0.2814	0.2806	----	0.2797	0.2784
12	0.2801	0.2835	0.2824	0.2760	0.2760	0.2791	0.2838	0.2817	0.2797	0.2785	0.2805	0.2780
13	0.2807	0.2842	0.2813	0.2759	0.2761	0.2802	0.2839	0.2815	0.2786	----	0.2808	0.2775
14	0.2812	0.2844	0.2801	0.2757	0.2763	0.2817	0.2836	0.2813	0.2782	0.2799	0.2802	0.2765
15	0.2817	0.2834	0.2785	0.2758	0.2771	0.2826	0.2830	0.2804	0.2783	0.2807	0.2800	0.2749
16	0.2826	0.2831	0.2786	0.2763	0.2771	0.2833	0.2823	0.2802	0.2785	----	0.2796	0.2740
17	0.2831	0.2819	0.2774	0.2773	0.2780	0.2833	0.2816	0.2803	0.2790	0.2820	0.2788	0.2729
18	0.2827	0.2817	0.2776	0.2788	0.2780	0.2839	0.2813	0.2804	0.2789	0.2822	0.2782	0.2720
19	0.2818	0.2814	0.2780	0.2797	0.2786	0.2840	0.2804	0.2805	0.2785	0.2817	0.2771	0.2724
20	0.2809	0.2803	0.2786	0.2799	0.2783	0.2848	0.2801	0.2806	0.2781	0.2814	0.2755	0.2724
21	0.2810	0.2803	0.2793	0.2798	0.2782	0.2847	0.2796	0.2796	0.2775	0.2810	----	0.2723
22	0.2807	0.2795	0.2806	0.2791	0.2782	0.2842	0.2795	0.2787	0.2768	0.2804	0.2744	0.2716
23	0.2802	0.2793	0.2808	0.2792	0.2789	0.2832	0.2792	0.2781	0.2766	0.2789	0.2741	0.2715
24	0.2801	0.2801	0.2813	0.2787	0.2796	0.2822	0.2784	0.2773	0.2766	0.2774	----	0.2716
25	0.2798	0.2803	----	0.2782	0.2807	0.2812	0.2777	0.2767	0.2762	0.2758	----	0.2721
26	0.2797	0.2803	0.2812	0.2782	----	0.2810	0.2773	0.2768	0.2759	0.2743	0.2742	0.2721
27	0.2802	0.2807	0.2807	0.2781	0.2824	0.2791	0.2765	0.2764	0.2755	0.2742	0.2745	0.2718
28	0.2805	0.2801	0.2806	0.2778	0.2827	0.2784	0.2764	0.2772	0.2755	0.2742	0.2748	0.2721
29	0.2807	0.279	----	0.2777	0.2829	0.2772	0.2759	0.2776	0.2754	0.2745	0.2753	
30	0.2811	0.2786	----	0.2779	----	0.2768	0.2759	0.2778	0.2757	0.2749	0.2748	
31	0.2813		----		0.2826	0.2767		0.2782		----	0.2745	
Mean	0.2812	0.2814	0.2808	0.2787	0.2782	0.2799	0.2800	0.2790	0.2783	0.2784	0.2768	0.2742

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


Interplanetary Magnetic Field
ACE LEVEL2 DATA Hourly Averages for FEBRUARY 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 FEBRUARY 2003


Solar Wind Plasma
ACE LEVEL2 DATA Hourly Averages for FEBRUARY 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 FEBRUARY 2003


Solar Energetic Particles
ACE LEVEL2 DATA Hourly Averages for FEBRUARY 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 FEBRUARY 2003