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**NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE**

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Data for March 1998

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**NATIONAL GEOPHYSICAL DATA CENTER**

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# SOLAR-GEOPHYSICAL DATA

Number 649

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H $\alpha$  SOLAR FLARES

MARCH 1998

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF Region	CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
			01 0044		0052		No Flare Patrol										
0001	LEAR	01	0208	0208	0216	S21 W56	8169	02	24.9	8	SF	3	E		10		
0002	URUM	01	0210	0217	0224	S19 W59	8169	02	24.7	14	SN			C	16	0.3	D
0003	SVTO	01	1107	1107	1112	S17 W66	8169	02	24.5	5	SF	3	E		16		
0004		01	13023	1306	1314	S18 W68	8169	02	24.5	12	SF				45		H
	RAMY	01	1302	1306	1316	S18 W67	8169	02	24.5	14	SF	4	E		54		H
	SVTO	01	1305	1306	1311	S17 W69	8169	02	24.4	6	SF	3	E		36		H
0005		01	2014	2020	2025	S24 W23	8171	02	28.1	11	SF				21		F
	RAMY	01	2011E	2011U	2100D	S24 W23	8171	02	28.1	49D	SF	4	E		12		
	HOLL	01	2014	2020	2025	S23 W23	8171	02	28.1	11	SF	3	E		30		F
0006	URUM	02	0232	0238	0248	S25 W25	8171	02	28.2	16	SB			C	80	1.0	E
0007	LEAR	02	0329	0330	0335	S24 W26	8171	02	28.1	6	SF	3	E		16		
0008	LEAR	02	0424	0433	0437	S23 W28	8171	02	28.0	13	SF	3	E		14		F
0009	LEAR	02	0439	0441	0443	S24 W27	8171	02	28.1	4	SF	3	E		17		F
0010	URUM	02	0641E	0641	0649	S22 W29	8171	02	28.0	8D	SB			P	48	0.6	D
0011	KANZ	02	0808	0808	0816	S24 W27	8171	02	28.2	8	SF	2	C				
			02 1133		1139		No Flare Patrol										
0012		02	1208	12081	1221	S24 W33	8171	02	28.0	13	SF				18		F
	KANZ	02	1208	1208	1220	S25 W32	8171	02	28.0	12	SF	2	C				
	RAMY	02	1208	1209	1222	S24 W33	8171	02	28.0	14	SF	4	E		19		F
	SVTO	02	1216E	1217U	1222D	S23 W33	8171	02	28.0	6D	SF	3	E		17		
0013	HOLL	02	1357E	1400U	1418	S22 W46	8171	02	27.1	21D	SF	3	E		81		F
0014	HOLL	02	2019	2019	2021	S22 W37	8171	02	28.0	2	SF	3	E		20		F
0015	HOLL	02	2025	2028	2036	S23 W35	8171	02	28.1	11	SF	3	E		50		F
0016	HOLL	02	2059	2103	2111	S22 W36	8171	02	28.1	12	SF	3	E		19		F
0017	HOLL	02	2148	2151	2153	S22 W36	8171	02	28.1	5	SF	3	E		10		F
0018	HOLL	02	2253	2256	2258	S22 W37	8171	02	28.1	5	SF	3	E		10		F
0019	HOLL	02	2304	2308	2312	S22 W37	8171	02	28.1	8	SF	3	E		34		F
0020	HOLL	02	2326	2334	2337	S21 W38	8171	02	28.1	11	SF	3	E		10		F
			03 0044		0046		No Flare Patrol										
			03 0128		0221		No Flare Patrol										
0021	LEAR	03	0248	0250	0259	S24 W38	8171	02	28.2	11	SF	3	E		28		F
0022	LEAR	03	0303	0309	0316	S24 W39	8171	02	28.1	13	SF	3	E		52		F
			03 0340		0407		No Flare Patrol										
			03 0455		0502		No Flare Patrol										
0023		03	07191	07202	0728	S22 W43	8171	02	28.0	9	SF				54		
	SVTO	03	0719	0722	0729	S22 W43	8171	02	28.0	10	SF	3	E		62		
	LEAR	03	0720	0720	0728	S23 W43	8171	02	28.0	8	SF	3	E		45		
0024	KANZ	03	0816	0816	0820	S25 W45	8171	02	27.9	4	SF	2	C				
0025	SVTO	03	0908	0918	0921	S22 W43	8171	02	28.1	13	SF	3	E		17		F

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MARCH 1998

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt	Xray	Obs See	Type	Area Measurement			Remarks
																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0026	SVTO	03	0930	0939	1021	S24	W41	8171	02	28.2	51	SF		3	E		62		F
0027		03	11032	11052	1120	S23	W42	8171	02	28.2	17	SF					11		F
	KANZ	03	1103	1107	1111D	S24	W42	8171	02	28.2	8D	SF		2	C				F
	SVTO	03	1105	1105	1120	S22	W43	8171	02	28.1	15	SF		3	E		11		F
0028		03	1128	1131	1138	S22	W40	8171	02	28.4	10	SF					12		
	SVTO	03	1128	1131	1137	S21	W43	8171	02	28.2	9	SF		3	E		12		
	KANZ	03	1131E	1131U	1139	S24	W38	8171	02	28.5	8D	SF		2	C				
0029		03	12252	12272	1232	S24	W42	8171	02	28.3	7	SF					11		
	SVTO	03	1225	1229	1232	S23	W44	8171	02	28.1	7	SF		3	E		11		
	KANZ	03	1227	1227	1231	S26	W40	8171	02	28.4	4	SF		2	C				
0030		03	13173	13234	1347	S22	W45	8171	02	28.1	30	SF					26		FH
	RAMY	03	1317	1327	1417	S21	W45	8171	02	28.1	60	SF		4	E		39		FH
	KANZ	03	1319	1323	1331	S23	W44	8171	02	28.2	12	SF		2	C				
	SVTO	03	1320	1329U	1333	S21	W45	8171	02	28.1	13	SF		3	E		14		F
0031	KANZ	03	1347	1351	1403	S26	W43	8171	02	28.2	16	SF		2	C				
0032		03	13592	1407	1415	S22	W46	8171	02	28.0	16	SF					54		F
	HOLL	03	1357E	1400U	1418	S22	W46	8171	02	28.0	21D	SF		3	E		81		F
	KANZ	03	1359	1407	1415	S24	W44	8171	02	28.2	16	SF		2	C				
	SVTO	03	1401	1401U	1413	S21	W47	8171	02	28.0	12	SF		3	E		26		F
0033	RAMY	03	1424	1424	1429	S21	W45	8171	02	28.2	5	SF		4	E		23		
0034		03	2026*	2028*	2044	S23	W46	8171	02	28.3	18	SF					26		
	RAMY	03	2026	2028	2040	S23	W46	8171	02	28.3	14	SF		3	E		20		
	HOLL	03	2039	2040	2048	S23	W47	8171	02	28.2	9	SF		3	E		31		
0035	HOLL	03	2135	2139	2149	S21	W49	8171	02	28.1	14	SF		3	E		19		
0036	HOLL	03	2151	2152	2157	S21	W52	8171	02	28.0	6	SF		3	E		12		
0037	HOLL	03	2158	2208	2230	S22	W49	8171	02	28.1	32	SF		3	E		90		
0038	HOLL	03	2328	2332	2338	S22	W50	8171	02	28.1	10	SF		3	E		17		
0039	HOLL	03	2342	2348	2350	S21	W52	8171	02	28.0	8	SF		3	E		12		
		04	0057		0058	No Flare Patrol													
0040	LEAR	04	0129	0129	0135	S25	W49	8171	02	28.3	6	SF		4	E		20		
		04	0158		0207	No Flare Patrol													
		04	0230		0236	No Flare Patrol													
		04	0242		0250	No Flare Patrol													
0041	LEAR	04	0338	0344	0347	S25	W49	8171	02	28.3	9	SF		4	E		17		
0042	LEAR	04	0555	0556	0606	S24	W53	8171	02	28.1	11	SF		4	E		15		
0043	SVTO	04	0714	0716	0726	S24	W53	8171	02	28.2	12	SF		3	E		56		F
0044	SVTO	04	1134	1138	1141	S24	W55	8171	02	28.2	7	SF		3	E		12		
0045		04	1734	17351	1742	S21	W64	8171	02	27.9	8	SF					48		H
	RAMY	04	1734	1735	1743	S22	W63	8171	02	28.0	9	SF		4	E		45		H
	HOLL	04	1734	1736	1742	S20	W64	8171	02	27.9	8	SF		3	E		51		H
0046		04	1913	1914	1925	S25	W59	8171	02	28.2	12	SF					26		F
	RAMY	04	1912E	1914U	1927D	S26	W58	8171	02	28.3	15D	SF		4	E		22		F
	HOLL	04	1913	1914	1925	S24	W60	8171	02	28.2	12	SF		3	E		30		
0047	RAMY	04	1941	1943	1945	S25	W56	8171	02	28.5	4	SF		3	E		11		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0048		04	21322	2134	2144	S22	W60 8171	02 28.3	12	SF					16		F
	RAMY	04	2132	2134U	2145D	S23	W61 8171	02 28.2	13D	SF		2	E		12		F
	HOLL	04	2134	2134	2144	S22	W59 8171	02 28.4	10	SF		3	E		21		F
0049	LEAR	05	0018	0020	0029	S24	W63 8171	02 28.1	11	SF		3	E		19		
		05	0037		0332	No Flare Patrol											
0050	LEAR	05	0343	0355	0408	S24	W65 8171	02 28.1	25	SF		3	E		23		
0051	LEAR	05	0446	0446	0451	S24	W65 8171	02 28.2	5	SF		3	E		10		
0052	LEAR	05	0807	0814	0822	S24	W67 8171	02 28.2	15	SF		3	E		22		
0053		05	09091	0911	0916	S25	W70 8171	02 28.0	7	SF					60		
	LEAR	05	0909	0911	0916	S26	W72 8171	02 27.9	7	SF		3	E		54		
	SVTO	05	0910	0911	0917	S24	W67 8171	02 28.2	7	SF		3	E		65		
0054	SVTO	05	0939	0940	0944	S24	W67 8171	02 28.2	5	SF		3	E		14		
0055		05	12051	1209	1230	S24	W68 8171	02 28.2	25	SF					28		
	SVTO	05	1205	1209	1234	S24	W69 8171	02 28.2	29	SF		3	E		44		
	RAMY	05	1206	1209U	1225	S23	W66 8171	02 28.4	19	SF		3	E		11		
0056	RAMY	05	1300	1325	1343	S23	W71 8171	02 28.1	43	SF		4	E		47		
0057		05	1506	15061	1510	S24	W75 8171	02 27.9	4	SF					44		H
	RAMY	05	1506	1506	1510	S25	W74 8171	02 28.0	4	SF		4	E		28		H
	HOLL	05	1506	1507	1510	S22	W76 8171	02 27.9	4	SF		3	E		61		
0058	HOLL	05	1720	1721	1723	S18	W92 8171	02 26.8	3	SF		3	E		19		
0059	HOLL	05	1825	1825	1829	S20	W93 8171	02 26.7	4	SF		3	E		19		
0060	HOLL	05	2009	2010	2026	N24	W46 8172	03 2.3	17	1F		3	E		107		
		05	2226		2254	No Flare Patrol											
0061	LEAR	05	2315E	2318	2321	S24	W75 8171	02 28.2	6D	SF		3	E		53		
		06	0032		0039	No Flare Patrol											
0062	LEAR	06	0126	0128	0134	S24	W77 8171	02 28.1	8	SF		3	E		47		
0063	KANZ	06	1128	1128	1132	S27	W80 8171	02 28.2	4	SF		2	C				
		06	1642		1704	No Flare Patrol											
		06	1733		1801	No Flare Patrol											
		06	1845		1945	No Flare Patrol											
		06	1953		2051	No Flare Patrol											
		06	2059		2154	No Flare Patrol											
		06	2243		2251	No Flare Patrol											
		07	1821		1915	No Flare Patrol											
		07	1951		2259	No Flare Patrol											
0064	LEAR	08	0525	0525	0530	S41	E66 8176	03 13.6	5	SF		4	E		21		
		08	1021		1033	No Flare Patrol											
		08	2120		2133	No Flare Patrol											
		08	2138		2159	No Flare Patrol											
		08	2206		2213	No Flare Patrol											
		08	2220		2231	No Flare Patrol											
		08	2243		2253	No Flare Patrol											
0065	LEAR	09	0457	0458	0501	S42	E51 8176	03 13.4	4	SF		3	E		36		
		09	0956		1109	No Flare Patrol											
		09	2213		2224	No Flare Patrol											

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													Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0066	HOLL	09 2315	2317	2320	S43	E41 8176	03 13.3	5	SF		3	E		23			
0067		09 2323	2326	2334	S42	E42 8176	03 13.4	11	SF					38		F	
	HOLL	09 2323	2326	2335	S43	E42 8176	03 13.4	12	SF		3	E		65			
	LEAR	09 2327	2330	2332	S42	E41 8176	03 13.3	5	SF		3	E		10		F	
		10 0026		0103	No Flare Patrol												
		11 1057		1105	No Flare Patrol												
0068	KANZ	11 1106E	1106U	1115	S17	W08 8174	03 10.8	9D	SF		2	C					
		11 1107		1114	No Flare Patrol												
0069	HOLL	11 1446	1448	1453	S27	E56 8179	03 16.0	7	SF		3	E		24			
0070	HOLL	11 1527	1531	1534	S41	E20 8176	03 13.3	7	SF		3	E		18			
0071	RAMY	11 1543	1545	1552D	S29	E60 8179	03 16.3	9D	SF		3	E		22			
0072	HOLL	11 2133	2138	2154	S42	E18 8176	03 13.4	21	SF		3	E		25			
0073	KANZ	12 1106	1110	1114D	N21	E78	03 18.4	8D	SF		2	C					
0074	URUM	13 0413	0420	0428	S19	W76 8173	03 7.4	15	SB			C		32		D	
		13 1018		1051	No Flare Patrol												
0075	RAMY	13 1058E	1058U	1110	S18	W76 8173	03 7.7	12D	SF		2	E		14			
0076		13 1547	1548	1552	S30	E34 8180	03 16.3	5	SF					25			
	RAMY	13 1547	1548	1551	S29	E35 8180	03 16.4	4	SF		3	E		22			
	HOLL	13 1547	1548	1553	S30	E34 8180	03 16.3	6	SF		3	E		28			
		13 2048		2053	No Flare Patrol												
0077	HOLL	13 2103	2111	2117	S16	W83 8173	03 7.6	14	SF		3	E		45			
		13 2126		2149	No Flare Patrol												
0078	HOLL	13 2206	2209	2215	S24	E29 8179	03 16.2	9	SF		3	E		19			
		13 2232		2236	No Flare Patrol												
0079	HOLL	13 2239	2239	2302D	N18	E62	03 18.7	23D	SF		3	E		17		F	
		13 2243		2255	No Flare Patrol												
0080	URUM	14 0441	0445	0452	S25	E18 8179	03 15.6	11	SN			C		32	0.4	D	
		14 0816		0818	No Flare Patrol												
		14 1006		1045	No Flare Patrol												
0081		14 1117	1118	1141	S24	E18 8179	03 15.9	24	SF					31		F	
	SVTO	14 1110E	1111U	1129D	S25	E20 8179	03 16.0	19D	SF		3	E		28		F	
	RAMY	14 1117	1118	1141	S23	E15 8179	03 15.6	24	SF		3	E		34		F	
		14 1246		1446	No Flare Patrol												
0082	RAMY	14 1446	1448	1503	S21	E16 8179	03 15.8	17	SF		3	E		41		F	
0083	RAMY	14 1625	1625	1629	S23	E13 8179	03 15.7	4	SF		3	E		26			
0084		14 1718*	17302	1737	S22	E13 8179	03 15.7	19	SF					22		F	
	HOLL	14 1718	1732	1737	S23	E13 8179	03 15.7	19	SF		3	E		22		F	
	RAMY	14 1729	1730	1737	S21	E13 8179	03 15.7	8	SF		3	E		23			
0085		14 1753	1753	1801	S22	E12 8179	03 15.7	8	SF					18		F	
	HOLL	14 1753	1753	1801	S22	E12 8179	03 15.7	8	SF		3	E		25		F	
	RAMY	14 1753	1753	1801	S21	E11 8179	03 15.6	8	SF		3	E		12			



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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
0086	HOLL	14	1811	1811	1829	S22	E11	8179	03	15.6	18	SF	3	E		27		
0087	HOLL	14	1856	1858	1906	S22	E11	8179	03	15.6	10	SF	3	E		24		F
			14 1934		1949	No Flare Patrol												
			14 1959		2021	No Flare Patrol												
			14 2025		2317	No Flare Patrol												
0088	LEAR	15	0121	0122	0124	S28	E10	8179	03	15.8	3	SF	3	E		11		
0089	LEAR	15	0315	0317	0319	S28	E09	8179	03	15.8	4	SF	3	E		15		
0090	LEAR	15	0342	0349	0352	S28	E09	8179	03	15.8	10	1F	3	E		238		
0091	URUM	15	0500	0511	0515	S24	E10	8179	03	16.0	15	SN		C		32	0.3	E
			15 0524		0701	No Flare Patrol												
			15 0851		0856	No Flare Patrol												
			15 0901		1046	No Flare Patrol												
0092	RAMY	15	1109E	1110U	1118	S21	E03	8179	03	15.7	9D	SF	2	E		20		F
0093	RAMY	15	1154E	1154	1207	S20	E00	8179	03	15.5	13D	SF	3	E		30		F
0094	RAMY	15	1309	1310	1315	S23	W01	8179	03	15.5	6	SF	4	E		23		F
0095		15	1441	1442	1539	S24	E02	8179	03	15.8	58	SF				43		F
	RAMY	15	1441	1442	1539	S23	E03	8179	03	15.8	58	SF	4	E		36		F
	SVTO	15	1441E	1447U	1552D	S25	E01	8179	03	15.7	71D	SF	3	E		50		F
0096		15	1606	1616	1720	S23	W02	8179	03	15.5	74	1F				98		FU
	RAMY	15	1606	1616	1720	S23	W03	8179	03	15.4	74	1F	3	E		106		UF
	SVTO	15	1610E	1614U	1620D	S23	W02	8179	03	15.5	10D	SF	3	E		91		F
0097		15	1736	1706*	1759	S22	W01	8179	03	15.6	23	SF				46		F
	HOLL	15	1636E	1706	1755D	S22	W01	8179	03	15.6	79D	SF	3	E		59		F
	RAMY	15	1736	1747	1759	S23	W01	8179	03	15.6	23	SF	3	E		34		F
0098	HOLL	15	1913	1921	1943	S21	W03	8179	03	15.6	30	1B	3	E		100		F
0099	HOLL	15	1955	2001	2008	S23	W06	8179	03	15.4	13	SF	3	E		19		
0100	HOLL	15	2111	2111	2118	S25	E01	8179	03	16.0	7	SF	3	E		23		
			15 2131		2154	No Flare Patrol												
0101	HOLL	15	2155	2247	2301D	S23	W01	8179	03	15.8	66D	SF	3	E		48		
			15 2206		2213	No Flare Patrol												
			15 2223		2243	No Flare Patrol												
			16 0034		0206	No Flare Patrol												
0102	LEAR	16	0201	0208	0210	S25	W01	8179	03	16.0	9	SF	3	E		20		
			16 0259		0353	No Flare Patrol												
0103	LEAR	16	0547	0552	0603	S25	W03	8179	03	16.0	16	SF	4	E		22		
0104	LEAR	16	0645	0649	0657	S23	W08	8179	03	15.7	12	SF	4	E		14		
0105	LEAR	16	0739	0815	0842	S20	W09	8179	03	15.6	63	SF	4	E		56		
0106	LEAR	16	0925	0926	0929	S25	W05	8179	03	16.0	4	SF	4	E		10		
0107		16	1055	1156	1306	S23	W12	8179	03	15.5	131	1N				147		FH
	SVTO	16	1055	1156	1312	S23	W12	8179	03	15.5	137	1F	3	E		163		FH
	RAMY	16	1059E	1156	1300	S23	W11	8179	03	15.6	121D	1N	3	E		131		FH
0108	HOLL	16	1618	1618	1627	S25	W09	8179	03	16.0	9	SF	3	E		14		

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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Xray	Obs See	Type	Area Measurement			Remarks	
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0109		16 16384	16462	1704	S24	W14	8179	03	15.6	26	SF				32		F	
	HOLL	16 1638	1648	1708	S24	W15	8179	03	15.5	30	SF	3	E		39		F	
	RAMY	16 1642	1646	1659	S23	W14	8179	03	15.6	17	SF	4	E		26		F	
0110	RAMY	16 1715	1724	1738	S23	W13	8179	03	15.7	23	SF	4	E		23		F	
0111		16 1710*	17514	1814	S24	W12	8179	03	15.8	64	2F				196		F	
	HOLL	16 1710	1755	1818	S25	W10	8179	03	15.9	68	2F	2	E		281		F	
	RAMY	16 1750	1751	1811	S22	W14	8179	03	15.7	21	1F	3	E		112			
0112		16 18332	1836	1928	S24	W14	8179	03	15.7	55	1F				82		F	
	RAMY	16 1833	1836	1927	S23	W13	8179	03	15.8	54	SF	4	E		57		F	
	HOLL	16 1835	1836	1929	S24	W15	8179	03	15.6	54	1F	3	E		107			
0113	HOLL	16 1933	1936	1938	S23	W17	8179	03	15.5	5	SF	3	E		14			
0114		16 1953*	2013*	2111	S24	W16	8179	03	15.6	78	SF				58			
	HOLL	16 1953	2013	2125	S25	W17	8179	03	15.5	92	SF	3	E		92			
	RAMY	16 2006	2025	2057	S23	W15	8179	03	15.7	51	SF	4	E		25			
0115	HOLL	16 2126	2131	2153	S21	W17	8179	03	15.6	27	SF	3	E		64		F	
		16 2205		2400	No Flare Patrol													
		17 0000		0024	No Flare Patrol													
		17 0035		0049	No Flare Patrol													
		17 0103		0158	No Flare Patrol													
0116	LEAR	17 0323	0323	0334	S22	W19	8179	03	15.7	11	SF	4	E		24		F	
0117	LEAR	17 0423	0424	0456	S21	W21	8179	03	15.6	33	SF	3	E		25			
0118	SVTO	17 0829	0829	0836	S23	W21	8179	03	15.7	7	SF	3	E		14		F	
0119	KANZ	17 1041E	1041U	1041D	S23	W23	8179	03	15.7	7D	SF	2	C					
		17 1046		1052	No Flare Patrol													
0120	SVTO	17 1059E	1059U	1107	S23	W23	8179	03	15.7	8D	SF	3	E		16		F	
0121	RAMY	17 1255	1257	1303D	S20	W23	8179	03	15.8	8D	SF	3	E		16			
0122	SVTO	17 1311	1311	1325	S21	W26	8179	03	15.5	14	SF	3	E		31		F	
0123		17 1332E	1332U	1350	S23	W22	8179	03	15.9	18D	1F				120			
	HOLL	17 1332E	1332U	1354	S25	W20	8179	03	16.0	22D	1F	2	E		175			
	RAMY	17 1333E	1333U	1346	S21	W23	8179	03	15.8	13D	SF	3	E		66			
0124	HOLL	17 1413	1417	1422	S25	W21	8179	03	16.0	9	SF	3	E		13		F	
		17 2001		2042	No Flare Patrol													
		17 2157		2250	No Flare Patrol													
0125	LEAR	17 2316	2316	2320	S25	W25	8179	03	16.0	4	SF	3	E		12			
		18 0000		0124	No Flare Patrol													
0126	LEAR	18 0013	0014	0021	S21	W31	8179	03	15.6	8	SF	4	E		22		F	
0127	LEAR	18 0036	0048	0052	S21	W31	8179	03	15.6	16	SF	4	E		14		F	
0128	LEAR	18 0258	0302	0311	S17	W35	8179	03	15.5	13	SF	4	E		33		EF	
		18 0517		0540	No Flare Patrol													
0129		18 1048*	11128	1152	S26	W30	8180	03	16.1	64	1B				273	3.4	E	
	KANZ	18 1048	1112	1152	S27	W30	8180	03	16.1	64	1N	2	C					
	URUM	18 1105	1120	1124D	S26	W30	8180	03	16.1	19D	1B		P		273	3.4	E	
0130	RAMY	18 1517	1517	1526	S24	W38	8179	03	15.7	9	SF	4	E		10			



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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks
											Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
		21 1502		1543		No Flare Patrol								
		21 1550		1655		No Flare Patrol								
0152	HOLL	21 1826	1827	1832	S21 W83	8179	03 15.4	6	SF	3 E		28		
0153	HOLL	21 2249	2249	2254	S27 E71	8185	03 27.5	5	SF	3 E		21		
		22 0110		0112		No Flare Patrol								
		22 0304		0541		No Flare Patrol								
0154		22 0652	0700	0715	S28 E68	8185	03 27.6	23	1N			101		F
	LEAR	22 0652	0700	0715	S28 E69	8185	03 27.7	23	1N	3 E		112		
	SVTO	22 0656E	0658U	0700D	S28 E67	8185	03 27.5	4D	SF	3 E		90		F
		22 0704		0714		No Flare Patrol								
0155	SVTO	22 1107E	1109U	1121D	N21 E12	8183	03 23.4	14D	SF	3 E		24		F
0156	HOLL	22 1634	1634	1641	S28 E72	8185	03 28.3	7	SF	3 E		38		
0157	HOLL	22 1811	1813	1820	S28 E63	8185	03 27.7	9	SF	3 E		14		
0158	HOLL	22 2026	2029	2032	S28 E60	8185	03 27.5	6	SF	3 E		15		
0159	HOLL	22 2134	2136	2143	S26 E60	8185	03 27.6	9	SF	3 E		30		
0160	HOLL	22 2257	2257	2301	S27 E59	8185	03 27.5	4	SF	3 E		11		
		22 2352		2357		No Flare Patrol								
		23 0010		0040		No Flare Patrol								
		23 0046		0055		No Flare Patrol								
		23 0553		0612		No Flare Patrol								
0161	SVTO	23 0832	0833	0844	N21 E01	8183	03 23.4	12	SF	3 E		19		
		23 2005		2015		No Flare Patrol								
		23 2225		2320		No Flare Patrol								
		23 2325		2357		No Flare Patrol								
		24 0000		0819		No Flare Patrol								
		24 0917		0919		No Flare Patrol								
		24 1014		1044		No Flare Patrol								
0162	KANZ	24 1253	1257	1301	S21 E50	8185	03 28.4	8	SF	2 C				
0163	HOLL	24 1531	1532	1534	S27 E42	8185	03 27.9	3	SF	3 E		10		
0164	HOLL	24 1559	1600	1603	N21 W18	8183	03 23.3	4	SF	3 E		20		
0165	HOLL	24 1803	1804	1811	N22 W19	8183	03 23.3	8	SF	3 E		17		
0166	HOLL	24 1835	1837	1846	S27 E41	8185	03 28.0	11	SF	3 E		37		
0167	HOLL	24 1913	1916	1925	S27 E41	8185	03 28.0	12	SF	3 E		22		F
0168	HOLL	24 1926	1927	1929	S27 E41	8185	03 28.0	3	SF	3 E		11		
		25 0146		0153		No Flare Patrol								
		25 0241		0253		No Flare Patrol								
		25 0545		0633		No Flare Patrol								
		25 0844		0846		No Flare Patrol								
		25 1048		1058		No Flare Patrol								
0169	KANZ	25 1131	1135	1139	S26 E32	8185	03 28.0	8	SF	2 C				
0170		25 1147	1147	1155	S28 E38	8185	03 28.5	8	SF			28		
	RAMY	25 1146E	1148U	1151D	S29 E38	8185	03 28.5	5D	SF	3 E		28		
	KANZ	25 1147	1147	1155	S27 E38	8185	03 28.4	8	SF	2 C				



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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD	Region	CMP Mo	Dur Day	Imp (Min)	Xray Opt	Obs See	Type	Area Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0189	LEAR	29 0717	0718	0733	N36	W39	8119	03	26.2	16	SF	3	E		27		
0190	LEAR	29 0857	0858	0905	N30	W08	8122	03	28.7	8	SF	3	E		13		
		29 1844		1909	No Flare Patrol												
		29 1930		1941	No Flare Patrol												
0191	LEAR	30 0607	0609	0613	N32	W05	8122	03	29.8	6	SF	3	E		19		F
0192	KANZ	30 1404	1408	1424	S26	W40	8185	03	27.5	20	SF	2	C				
0193	HOLL	30 1534	1544	1548	S24	W40	8185	03	27.5	14	SF	3	E		17		
0194	HOLL	30 1557	1558	1602	S24	W40	8185	03	27.6	5	SF	3	E		15		
0195	HOLL	30 2013	2014	2016	S25	E51	8190	04	3.8	3	SF	3	E		20		
0196	HOLL	30 2013	2014	2017	S25	W46	8189	03	27.3	4	SF	3	E		25		
		30 2047		2400	No Flare Patrol												
		31 0000		0017	No Flare Patrol												
0197	LEAR	31 0258	0300	0315	S23	E34	8190	04	2.7	17	SF	3	E		21		
0198	URUM	31 0313E	0313	0325	S22	E47	8190	04	3.7	12D	SF		P		32	0.5	D
0199	URUM	31 0313E	0313	0317	S26	W50	8189	03	27.2	4D	SN		P		32	0.5	D
0200	URUM	31 0325E	0325	0329	S24	W42	8185	03	27.9	4D	SN		P		32	0.5	D
0201	URUM	31 0329	0333	0344	S26	W47	8189	03	27.5	15	SB		C		48	0.7	D
0202	URUM	31 0341	0344	0344D	S26	W49	8189	03	27.3	3D	SF		P		32	0.5	D
0203	LEAR	31 0545	0548	0552	S21	E50	8190	04	4.1	7	SF	3	E		17		
0204	KANZ	31 0628	0628	0632	S23	W38	8185	03	28.3	4	SF	2	C				
0205	LEAR	31 0730	0734	0748	S26	W63	8189	03	26.4	18	SF	3	E		14		F
	SVTO	31 0730E	0740U	0819D	S29	W68	8189	03	26.0	49D	SF	2	E		23		F
	KANZ	31 0732	0736	0800	S29	W60	8189	03	26.6	28	SF	2	C				
0206	LEAR	31 0751	0753	0805	S25	E42	8190	04	3.6	14	SF	3	E		11		
0207	KHAR	31 0855E	0900U	0920	S22	E43	8190	04	3.6	25D	SF	2	P	0906	160	2.1	EHL
	KANZ	31 0900	0904	0920	S22	E42	8190	04	3.6	20	SF	2	C		160	2.1	HLE
0208	LEAR	31 0934	0935	0938	S29	W67	8189	03	26.1	4	SF	3	E		15		
0209	KHAR	31 0935	0937	0948	S26	W52	8185	03	27.5	13	SN	2	P	0940	110	1.8	H
	KANZ	31 0936	0936	0944	S25	W51	8185	03	27.4	8	SF	2	C		110	1.8	H
0210	KANZ	31 1048	1052	1100	S25	W40	8185	03	28.3	12	SF	2	C				
0211	RAMY	31 1332	1334	1339	S21	E44	8190	04	3.9	7	SF	4	E		34		
	HOLL	31 1335E	1335	1344	S23	E43	8190	04	3.9	9D	SF	3	E		19		
															49		
0212	HOLL	31 1414	1414	1418	S24	E42	8190	04	3.8	4	SF	3	E		15		
0213	HOLL	31 1434	1436	1442	S24	E42	8190	04	3.8	8	SF				14		
	SVTO	31 1437E	1438U	1445D	S24	E43	8190	04	3.9	8D	SF	3	E		13		
															16		
0214	HOLL	31 1451	1454	1500	S24	E41	8190	04	3.8	9	SF	3	E		15		

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H $\alpha$  SOLAR FLARES

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/		Dur (Min)	Imp Opt	Obs See	Type	Area Measurement		Remarks
								USAF Region	CMP Mo Day					Time (UT)	Apparent (10-6 Disk)	
0215	HOLL	31	1713	1714	1717	S25	E38	8190	04	3.7	4	SF	3	E	11	
0216	HOLL	31	1742	1743	1747	S25	E38	8190	04	3.7	5	SF	3	E	14	

"Remarks"

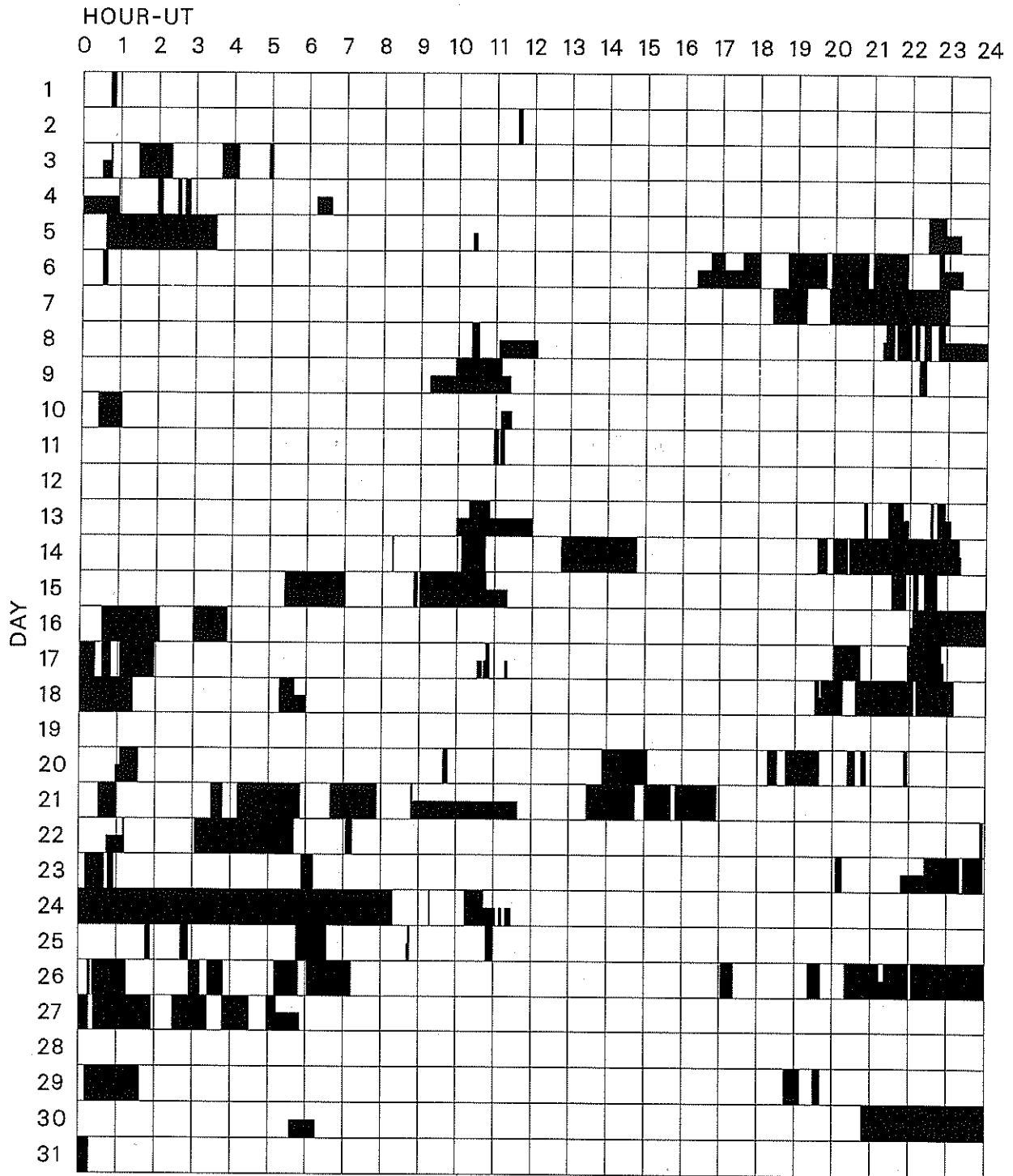
- |   |   |
|---|---|
| <p>A = Eruptive prominence whose base is less than 90 degrees from central meridian.<br/>         B = Probably the end of a more important flare.<br/>         C = Invisible 10 minutes before.<br/>         D = Brilliant point.<br/>         E = Two or more brilliant points.<br/>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

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

# INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

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## MARCH 1998

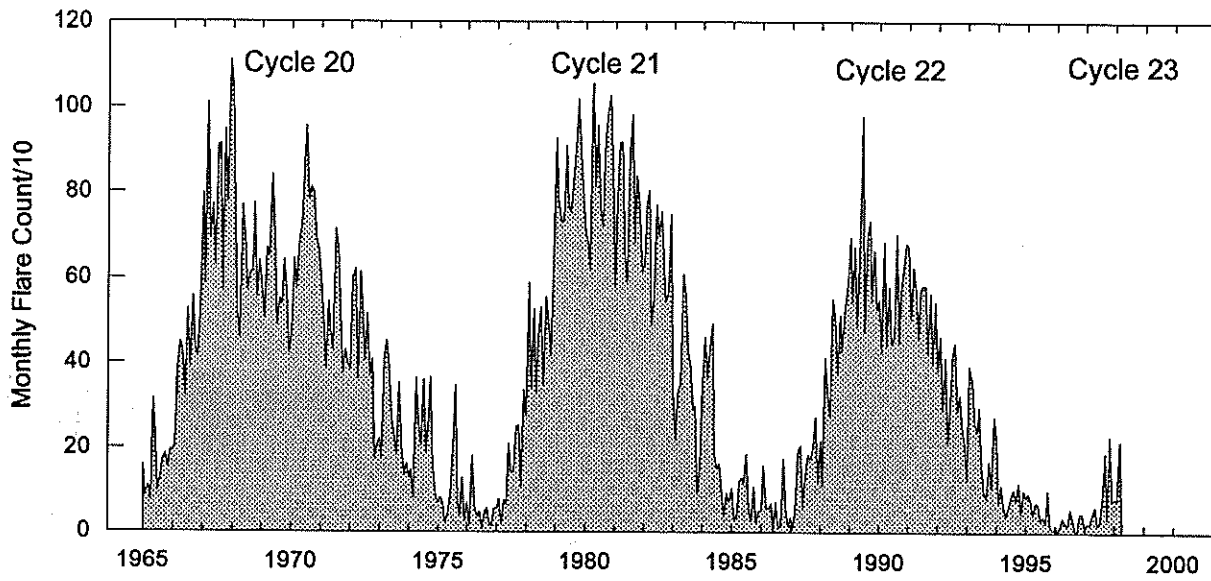


Times of no flare patrol, shown here as shades areas, combine reports from the stations listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind (neither visual or cinematographic); portions of a panel with only the bottom half shaded mark times of only visual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

Holloman	Kanzelhoehe	Learmonth	Ramey	Urumqi
Hurbanovo	Kharkov		San Vito	Voroshilov



## Monthly Counts of Grouped Solar Flares Jan 1965 - Mar 1998



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										370

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

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
01	204	IZMI	43 NS	0822.0		218.0D		10.0		
	235	CUBA	44 NS	1334.0E		496.0D		10.0		
	280	CUBA	44 NS	1334.0E		496.0D		18.0		
	3000	IZMI	1 S		1148.0	0.1	21.0			
	245	PALE	8 S	2218.0	2219.0	1.0	59.0			QL=4 ST=3 TYP=3
02	204	IZMI	44 NS	0700.0E		300.0D		5.0		
	245	SGMR	43 NS	1705.0	1718.0	47.0	74.0			QL=4 ST=2 TYP=1
	245	PALE	8 S	0111.0	0111.0	1.0	130.0			QL=4 ST=2 TYP=3
	2840	BEIJ	1 S	0610.0	0613.5	5.0	3.4			
	5730	IRKU	2 S/F	0612.7	0612.8	1.8	5.0		U	
	5730	IRKU	22 GRF	0804.5	0807.8	5.5	3.0		U	
	204	IZMI	7 C	0905.8	0906.2	1.5	17.0			
	245	SGMR	8 S	1544.0	1544.0	U	50.0			QL=4 ST=2 TYP=3
03	204	IZMI	44 NS	0700.0E	1200.0D	300.0D		40.0		
	235	CUBA	44 NS	1300.0E		530.0D		9.0		
	280	CUBA	44 NS	1300.0E		530.0D		16.0		
	2840	BEIJ	3 S	0153.0	0154.9	10.0	3.9			
	2840	BEIJ	3 S	0715.0	0718.0	5.0	3.9			
	5730	IRKU	4 S/F	0718.6	0719.3	11.4	18.0		U	
	2950	GORK	5 S	0718.8	0719.3	2.5	9.6			
	3000	IZMI	5 S	0718.8	0719.3	45.0	14.0	7.0		
	4995	LEAR	8 S	0719.0	0719.0	U	35.0			QL=4 ST=2 TYP=3
	9100	GORK	5 S	0720.0E	0720.3	3.3D	12.0			
	245	PALE	8 S	2010.0	2010.0	1.0	66.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2010.0	2010.0	U	59.0			QL=4 ST=2 TYP=3
	04	204	IZMI	44 NS	0700.0E		173.0D		30.0	
127		TORN	43 NS	0843.0		233.0		6.0		V=0
204		IZMI	44 NS	0953.0E		127.0D		10.0		
280		CUBA	44 NS	1300.0E		520.0D		16.0		
235		CUBA	44 NS	1310.0E		520.0D		11.0		
5730		IRKU	21 GRF		0555.6	44.5	10.0		U	
2840		BEIJ	5 S	0553.0	0555.8	18.0	3.6			
5730		IRKU	4 S/F	0711.7	0715.8	37.3	22.0		U	
245		SGMR	8 S	1342.0	1343.0	2.0	50.0			QL=4 ST=2 TYP=3
610		SGMR	8 S	1734.0	1734.0	2.0	460.0			QL=4 ST=3 TYP=3
610		PALE	8 S	1736.0	1736.0	U	110.0			QL=4 ST=2 TYP=3
610		PALE	8 S	2047.0	2049.0	2.0	130.0			QL=4 ST=3 TYP=3
610		SGMR	8 S	2047.0	2049.0	2.0	130.0			QL=4 ST=2 TYP=3
610		SGMR	8 S	2049.0	2049.0	U	110.0			QL=4 ST=3 TYP=3
05	245	PALE	43 NS	0001.0	0009.0	29.0	100.0			QL=4 ST=2 TYP=1
	204	IZMI	44 NS	0700.0E		300.0D		5.0		
	235	CUBA	44 NS	1436.0E		324.0D		6.0		
	280	CUBA	44 NS	1436.0E		324.0D		14.0		
	5730	IRKU	22 GRF	0758.6	0800.1	11.4	2.0		U	
	2840	BEIJ	1 S	0810.0	0812.3	4.0	3.7			
	5730	IRKU	22 GRF	0812.6	0813.4	17.3	8.0		U	
	5730	IRKU	21 GRF	0904.0	0909.8	16.0	8.0		U	
	1415	LEAR	8 S	0909.0	0909.0	1.0	170.0			QL=4 ST=2 TYP=3
	1415	SVTO	8 S	0909.0	0909.0	1.0	170.0			QL=4 ST=2 TYP=3
	3000	IZMI	7 C	0909.2	0909.9	2.2	2.0			
	2695	LEAR	4 S/F	2307.0	2308.0	3.0	29.0			QL=2 ST=2 TYP=3
	8800	LEAR	4 S/F	2307.0	2308.0	3.0	27.0			QL=2 ST=2 TYP=3
	1415	LEAR	8 S	2307.0	2308.0	2.0	14.0			QL=2 ST=2 TYP=3
	4995	LEAR	4 S/F	2307.0	2307.0	3.0	61.0			QL=2 ST=2 TYP=3
	4995	PALE	4 S/F	2307.0	2307.0	5.0	65.0			QL=4 ST=2 TYP=3
	500	HIRA	42 SER	2307.9	2308.1	0.7	3.0			0
2800	HIRA	46 C	2307.9	2308.2	2.0	27.0	9.0		0	
410	PALE	8 S	2316.0	2317.0	2.0	94.0			QL=4 ST=2 TYP=3	
06	204	IZMI	44 NS	0700.0E		300.0D		5.0		
	280	CUBA	44 NS	1430.0E		440.0D		17.0		
	235	CUBA	44 NS	1430.0E		440.0D		7.0		
	245	SVTO	49 GB	1038.0	1038.0	1.0	510.0			QL=2 ST=3 TYP=6
	410	SGMR	8 S	1711.0	1711.0	U	51.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2006.0	2007.0	1.0	54.0			QL=4 ST=2 TYP=3

S O L A R R A D I O E M I S S I O N  
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MARCH 1998

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
06	410 SGMR	8 S	2023.0	2024.0	1.0	59.0			QL=4 ST=2 TYP=3
07	204 IZMI	44 NS	0700.0E		300.0D		5.0		
	280 CUBA	44 NS	1300.0E		530.0D		15.0		
	235 CUBA	44 NS	1300.0E		530.0D		8.0		
09	204 IZMI	7 C	1125.9	1126.5	0.9	9.4			
10	204 IZMI	43 NS	0830.0		183.0		5.0		
	280 CUBA	44 NS	1300.0E		530.0D		14.0		
	235 CUBA	44 NS	1300.0E		530.0D		9.0		
	5730 IRKU	20 GRF	0541.0	0544.3	19.0	2.0	U		
	204 IZMI	41 F	0951.4	0952.2	4.4	58.0			
	6700 CUBA	20 GRF	1454.0	1506.0	49.0	7.0	3.0		OOL
	6700 CUBA	22 GRF	1643.0	1947.0	210.0	5.0	2.0		OOL
245 SGMR	8 S	2039.0	2039.0	U	200.0			QL=4 ST=2 TYP=3	
11	204 IZMI	44 NS	0700.0E		300.0D		20.0		
	235 CUBA	44 NS	1300.0E		530.0D		9.0		
	280 CUBA	44 NS	1300.0E		530.0D		14.0		
	500 HIRA	42 SER	0307.1	0308.9	2.0	15.0			0
	200 HIRA	8 S	0307.4	0307.6	0.5	15.0			0
12	235 CUBA	44 NS	1300.0E		530.0D		9.0		
	280 CUBA	44 NS	1300.0E		530.0D		14.0		
	5730 IRKU	20 GRF	0546.0	0548.6	14.0	2.0	U		
	5730 IRKU	20 GRF	0626.0	0628.7	7.7	3.0	U		
	5730 IRKU	21 GRF	0649.0	0654.0	11.5	3.0	U		
	5730 IRKU	21 GRF	0750.0	0754.7	8.0	2.0	U		
13	280 CUBA	44 NS	1300.0E		530.0D		15.0		
	235 CUBA	44 NS	1300.0E		530.0D		8.0		
	204 IZMI	42 SER	0835.0	0843.0	10.0	40.0			
	2800 PENT	3 S	2056.0	2107.0	19.0	5.0			
14	235 CUBA	44 NS	1300.0E		520.0D		8.0		
	280 CUBA	44 NS	1310.0E		520.0D		14.0		
	200 HIRA	8 S	0628.5	0628.7	0.5	20.0			0
	2700 PURP	2 S/F	0744.3	0745.6	8.7	5.0			
	3000 IZMI	20 GRF	1103.8	1112.3	41.0	8.0			
	6700 CUBA	21 GRF	1444.0	1457.0	39.0	8.0	4.0		OOL
	6700 CUBA	2 S/F	1446.0	1446.7	2.0	25.0	12.0		2L
	6700 CUBA	2 S/F	1617.3	1619.6	3.8	6.0	3.0		OOL
	2800 PENT	3 S	1910.0	1912.0	5.0	15.0			
	6700 CUBA	2 S/F	1911.7	1913.2	2.0	8.0	4.0		19L
	6700 CUBA	23 GRF	1952.0	1959.0	26.0	5.0	2.0		OOL
15	235 CUBA	44 NS	1300.0E		512.0D		16.0		
	280 CUBA	44 NS	1310.0E		512.0D		29.0		
	245 SGMR	43 NS	1527.0	1611.0	72.0	55.0			QL=4 ST=2 TYP=1
	410 SGMR	43 NS	1529.0	1604.0	72.0	53.0			QL=4 ST=2 TYP=1
	245 PALE	43 NS	1749.0	1749.0	5.0	53.0			QL=2 ST=2 TYP=1
	245 SGMR	43 NS	1749.0	1749.0	U	65.0			QL=4 ST=2 TYP=1
	5730 IRKU	1 S	0046.7	0047.5	3.3	5.0	U		
	5730 IRKU	2 S/F	0314.0	0314.6	9.4	7.0	U		
	5730 IRKU	21 GRF	0408.0	0430.7	51.0	9.0	U		
	5730 IRKU	21 GRF	0506.5	0511.3	12.5	2.0	U		
	5730 IRKU	2 S/F	0549.0	0549.5	12.8	2.0	U		
	3000 IZMI	1 S	0656.9	0656.9	0.2	8.0			
	3000 IZMI	7 C	0657.1	0657.1	0.2	67.0			
	5730 IRKU	1 S	0728.3	0728.7	1.9	3.0	U		
	9100 GORK	32 ABS	0757.0	0831.7	54.9	55.0			
	3000 IZMI	23 GRF	1148.8	1151.3	11.2D	71.0			
	3000 IZMI	7 C	1151.7	1152.4	1.2	13.0			
	1415 SGMR	8 S	1152.0	1152.0	U	190.0			QL=2 ST=2 TYP=3
	1415 SVTO	8 S	1152.0	1152.0	U	210.0			QL=4 ST=2 TYP=3
	2800 PENT	3 S	1605.0	1609.0	19.0	17.0			
610 SGMR	8 S	1614.0	1614.0	1.0	64.0			QL=4 ST=2 TYP=3	
410 PALE	4 S/F	1708.0	1709.0	3.0	460.0			QL=2 ST=2 TYP=3	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 -22 W/m 2 Hz)	Mean			
15	410	SGMR	49 GB	1709.0	1709.0	U	530.0			QL=2 ST=2 TYP=6	
	2800	PENT	45 C	1734.0	1744.0	36.0	8.0				
	410	PALE	8 S	1759.0	1759.0	1.0	93.0			QL=2 ST=2 TYP=3	
	410	SGMR	8 S	1759.0	1759.0	1.0	82.0			QL=4 ST=2 TYP=3	
	410	PALE	8 S	1803.0	1803.0	1.0	170.0			QL=2 ST=2 TYP=3	
	410	SGMR	8 S	1803.0	1803.0	1.0	170.0			QL=4 ST=2 TYP=3	
	410	PALE	8 S	1807.0	1807.0	U	100.0			QL=2 ST=2 TYP=3	
	410	SGMR	8 S	1807.0	1807.0	U	110.0			QL=4 ST=2 TYP=3	
	2800	PENT	4 S/F	1912.0	1916.0	18.0	40.0				
	8800	PALE	4 S/F	1914.0	1918.0	6.0	110.0			QL=4 ST=2 TYP=3	
	8800	SGMR	4 S/F	1914.0	1918.0	7.0	120.0			QL=4 ST=2 TYP=3	
	4995	SGMR	4 S/F	1914.0	1918.0	8.0	96.0			QL=4 ST=2 TYP=3	
	15400	PALE	4 S/F	1916.0	1918.0	3.0	59.0			QL=4 ST=2 TYP=3	
	4995	PALE	4 S/F	1916.0	1918.0	3.0	64.0			QL=4 ST=2 TYP=3	
	15400	SGMR	4 S/F	1916.0	1918.0	4.0	56.0			QL=2 ST=2 TYP=3	
	2695	PALE	8 S	1918.0	1918.0	U	29.0			QL=4 ST=2 TYP=3	
	2695	SGMR	8 S	1918.0	1918.0	2.0	35.0			QL=4 ST=2 TYP=3	
	410	PALE	49 GB	1932.0	1933.0	1.0	860.0			QL=2 ST=2 TYP=6	
	410	SGMR	49 GB	1932.0	1933.0	1.0	760.0			QL=4 ST=2 TYP=6	
	2800	PENT	1 S	2028.0	2029.0	4.0	8.0				
	2800	PENT	40 F	2141.0	2143.0	19.0	16.0				
	15400	PALE	8 S	2142.0	2142.0	1.0	86.0			QL=4 ST=2 TYP=3	
	8800	PALE	4 S/F	2142.0	2142.0	3.0	94.0			QL=4 ST=2 TYP=3	
	4995	PALE	8 S	2142.0	2143.0	2.0	56.0			QL=4 ST=2 TYP=3	
	4995	SGMR	8 S	2142.0	2143.0	1.0	60.0			QL=4 ST=2 TYP=3	
	8800	SGMR	8 S	2142.0	2142.0	2.0	77.0			QL=2 ST=2 TYP=3	
	16	2840	BEIJ	41 F	0056.0	0105.9	18.0	17.9			
		5730	IRKU	7 C	0446.3	0446.8	12.2	4.0		U	
		2840	BEIJ	1 S	0450.0	0453.5	9.0	5.4			
		5730	IRKU	21 GRF	0513.9	0526.3	16.9	4.0		U	
2840		BEIJ	1 S	0520.0	0526.0	8.0	3.7				
5730		IRKU	20 GRF	0546.0	0551.0	14.0	4.0		U		
5730		IRKU	42 SER	0709.0	0817.8	117.0	23.0		U		
3000		I2MI	20 GRF	0808.9	0815.1	45.4	6.0				
5730		IRKU	21 GRF	0924.3	0928.2	6.7	4.0		U		
9100		GORK	2 S/F	0924.4	0924.7	4.2	8.2				
6700		CUBA	21 GRF	1536.0	2129.0	396.0D	15.0			OOL SUNSET	
6700		CUBA	45 C	1744.9	1751.2	13.4	124.0			5L	
2800		PENT	1 S	1748.0	1749.0	12.0	7.0				
8800		PALE	8 S	1750.0	1751.0	1.0	68.0			QL=4 ST=2 TYP=3	
4995		PALE	8 S	1750.0	1751.0	2.0	83.0			QL=4 ST=2 TYP=3	
8800		SGMR	4 S/F	1750.0	1751.0	3.0	100.0			QL=4 ST=2 TYP=3	
4995		SGMR	8 S	1750.0	1751.0	1.0	83.0			QL=4 ST=2 TYP=3	
15400		SGMR	8 S	1751.0	1751.0	U	33.0			QL=2 ST=2 TYP=3	
6700		CUBA	46 C	1832.0	1834.3	16.3	108.0			1R	
8800		PALE	4 S/F	1833.0	1834.0	3.0	90.0			QL=4 ST=2 TYP=3	
8800		SGMR	4 S/F	1833.0	1834.0	3.0	110.0			QL=4 ST=2 TYP=3	
4995		SGMR	4 S/F	1833.0	1834.0	4.0	56.0			QL=4 ST=2 TYP=3	
4995		PALE	8 S	1834.0	1834.0	1.0	39.0			QL=4 ST=2 TYP=3	
15400		PALE	8 S	1834.0	1834.0	U	39.0			QL=4 ST=2 TYP=3	
6700		CUBA	1 S	1852.7	1853.2	1.6	15.0		7.0	3L	
2800		PENT	8 S	1903.0	1903.0	3.0	20.0				
2800		PENT	8 S	2108.0	2108.0	3.0	20.0				
1415		PALE	49 GB	2110.0	2110.0	U	520.0			QL=4 ST=2 TYP=6	
2695		PALE	8 S	2110.0	2110.0	U	30.0			QL=4 ST=2 TYP=3	
610		PALE	8 S	2110.0	2110.0	U	110.0			QL=4 ST=2 TYP=3	
610	SGMR	8 S	2110.0	2110.0	U	100.0			QL=4 ST=2 TYP=3		
2695	SGMR	8 S	2110.0	2110.0	U	30.0			QL=4 ST=2 TYP=3		
1415	SGMR	49 GB	2110.0	2110.0	U	570.0			QL=4 ST=2 TYP=6		
17	280	CUBA	44 NS	1300.0E		530.0D		16.0			
	235	CUBA	44 NS	1300.0E		530.0D		8.0			
	2840	BEIJ	5 S	0026.0	0032.1	24.0	7.2				
	610	LEAR	4 S/F	0029.0	0031.0	3.0	130.0			QL=4 ST=2 TYP=3	
	610	LEAR	8 S	0029.0	0031.0	2.0	130.0			QL=4 ST=2 TYP=3	
	5730	IRKU	4 S/F	0030.8	0032.5	3.5	8.0		U		
	5730	IRKU	20 GRF	0038.0	0040.5	5.8	3.0		U		
5730	IRKU	20 GRF	0052.0	0055.2	8.0	3.0		U			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak	Mean		
							(10 <sup>-22</sup> W/m <sup>2</sup> Hz)			
17	5730	IRKU	1 S	0118.2	0119.9	5.5	2.0		U	
	5730	IRKU	45 C	0202.5	0216.2	24.5	10.0		U	
	5730	IRKU	4 S/F	0238.2	0239.4	3.8	3.0		U	
	5730	IRKU	1 S	0244.6	0245.2	1.4	2.0		U	
	5730	IRKU	1 S	0249.5	0250.8	3.0	2.0		U	
	5730	IRKU	1 S	0253.0	0253.5	1.0	1.0		U	
	5730	IRKU	42 SER	0255.4	0259.0	23.2	3.0		U	
	5730	IRKU	21 GRF	0322.4	0323.0	14.9	12.0		U	
	5730	IRKU	42 SER	0357.0	0422.8	77.0	18.0		U	
	2840	BEIJ	5 S	0419.0	0423.0	16.0	4.7			
	2840	BEIJ	1 S	0522.0	0524.8	8.0	9.0			
	5730	IRKU	4 S/F	0523.9	0524.7	3.1	4.0		U	
	610	LEAR	8 S	0524.0	0524.0		340.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0524.0	0524.0		88.0			QL=4 ST=2 TYP=3
	1415	LEAR	8 S	0524.0	0524.0	1.0	18.0			QL=4 ST=2 TYP=3
	500	HIRA	42 SER	0524.5	0524.9	0.6	12.0			0
	2800	HIRA	8 S	0524.9	0525.0	0.2	7.0			WL
	5730	IRKU	42 SER	0529.3	0539.5	36.7	5.0		U	
	5730	IRKU	21 GRF	0608.0	0612.2	17.0	3.0		U	
	5730	IRKU	4 S/F	0632.0	0633.7	7.4	4.0		U	
	5730	IRKU	20 GRF	0707.5	0709.2	6.5	2.0		U	
	5730	IRKU	1 S	0742.0	0742.6	2.0	3.0		U	
	5730	IRKU	1 S	0752.5	0752.9	1.0	1.0		U	
	5730	IRKU	45 C	0812.5	0817.2	24.5	9.0		U	
	5730	IRKU	20 GRF	0917.6	0923.0	15.2	5.0		U	
	610	PALE	8 S	1944.0	1944.0		310.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	1944.0	1944.0		320.0			QL=4 ST=3 TYP=3
	6700	CUBA	20 GRF	2023.0	2110.0	143.00	6.0			OOL SUNSET
	610	PALE	8 S	2036.0	2036.0	1.0	130.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	2036.0	2036.0	1.0	130.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	2359.0	0000.0	1.0	84.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2359.0	0000.0	1.0	140.0			QL=4 ST=3 TYP=3
18	204	IZMI	43 NS	0702.0		299.80		20.0		
	127	TORN	43 NS	1116.0		82.0		6.0		V=0
	235	CUBA	44 NS	1410.0E		460.00		19.0		
	280	CUBA	44 NS	1410.0E		460.00		25.0		
	245	SGMR	43 NS	1703.0	1707.0	4.0	110.0			QL=4 ST=2 TYP=1
	5730	IRKU	1 S	0032.5	0036.0	8.8	9.0		U	
	2840	BEIJ	1 S	0034.0	0036.8	5.0	4.7			
	245	PALE	8 S	0103.0	0103.0		72.0			QL=2 ST=3 TYP=3
	245	LEAR	8 S	0123.0	0123.0	1.0	52.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0123.0	0123.0	1.0	84.0			QL=2 ST=3 TYP=3
	245	PALE	8 S	0128.0	0129.0	1.0	51.0			QL=2 ST=3 TYP=3
	245	PALE	8 S	0133.0	0134.0	2.0	64.0			QL=2 ST=3 TYP=3
	245	LEAR	4 S/F	0137.0	0138.0	3.0	55.0			QL=4 ST=2 TYP=3
	245	PALE	4 S/F	0137.0	0138.0	7.0	81.0			QL=2 ST=3 TYP=3
	2840	BEIJ	20 GRF	0209.0	0258.4	218.0	8.7			
	245	PALE	8 S	0210.0	0211.0	2.0	53.0			QL=2 ST=2 TYP=3
	500	HIRA	8 S	0211.0	0211.1	0.2	30.0			WL
	5730	IRKU	1 S	0217.7	0218.2	4.3	1.0		U	
	5730	IRKU	1 S	0226.0	0227.0	2.8	1.0		U	
	500	HIRA	8 S	0235.5	0235.6	0.2	30.0			WL
	5730	IRKU	42 SER	0241.0	0243.1	38.0	11.0		U	
	245	PALE	8 S	0423.0	0424.0	1.0	140.0			QL=2 ST=2 TYP=3
	245	LEAR	8 S	0424.0	0424.0		73.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0429.0	0430.0	1.0	110.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0432.8	0434.7	4.4	1.0		U	
	245	LEAR	8 S	0448.0	0448.0		120.0			QL=4 ST=2 TYP=3
	9100	GORK	22 GRF	0704.0	0723.6	50.5	30.0			
245	LEAR	8 S	0854.0	0854.0	1.0	53.0			QL=4 ST=2 TYP=3	
3000	IZMI	20 GRF	1043.6	1100.6	76.40	16.0				
33	UPIC	45 C	1057.0	1058.0	2.2					
204	IZMI	25 R	1106.7		53.30		50.0			
33	UPIC	46 C	1114.0	1116.5	9.5					
33	UPIC	45 C	1209.1	1210.0	1.7					
245	PALE	8 S	2353.0	2353.0	1.0	150.0			QL=2 ST=2 TYP=3	
19	245	PALE	44 NS	0409.0E	0422.0	17.00	100.0			QL=2 ST=2 TYP=1

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
19	204	IZMI	44 NS	0700.0E		191.0D		15.0		
	280	CUBA	44 NS	1310.0E		520.0D		27.0		
	235	CUBA	44 NS	1310.0E		520.0D		15.0		
	245	PALE	43 NS	1910.0	1930.0	21.0	93.0			QL=2 ST=2 TYP=1
	245	SGMR	43 NS	1912.0	1930.0	21.0	86.0			QL=4 ST=2 TYP=1
	2840	BEIJ	45 C	0115.0	0126.5	22.0	23.8			
	5730	IRKU	42 SER	0116.8	0126.3	89.2	36.0		U	
	2700	PURP	3 S	0121.7	0126.3	8.6	32.0			
	15400	LEAR	4 S/F	0125.0	0126.0	3.0	29.0			QL=4 ST=2 TYP=3
	1415	LEAR	8 S	0125.0	0126.0	2.0	15.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0125.0	0126.0	2.0	17.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0125.0	0126.0	3.0	29.0			QL=4 ST=2 TYP=3
	4995	LEAR	4 S/F	0125.0	0126.0	3.0	22.0			QL=4 ST=2 TYP=3
	500	HIRA	46 C	0125.5	0126.0	3.2	15.0		2.0	
	2800	HIRA	3 S	0126.1	0126.5	2.0	17.0		6.0	0
	2840	BEIJ	5 S	0137.0	0144.5	23.0	10.9			0
	245	PALE	8 S	0158.0	0159.0	2.0	70.0			
	5730	IRKU	4 S/F	0250.0	0252.2	7.0	11.0			QL=2 ST=2 TYP=3
	245	LEAR	8 S	0355.0	0355.0		54.0		U	
	5730	IRKU	42 SER	0502.0	0515.5	49.5	10.0		U	QL=4 ST=2 TYP=3
	245	LEAR	8 S	0503.0	0504.0	1.0	52.0			QL=4 ST=2 TYP=3
	2840	BEIJ	1 S	0510.0	0515.2	8.0	4.0			
	5730	IRKU	22 GRF	0557.0	0601.8	13.7	5.0		U	
	5730	IRKU	1 S	0622.5	0623.0	1.0	1.0		U	
	5730	IRKU	2 S/F	0643.0	0647.4	7.6	2.0		U	
	245	LEAR	8 S	0653.0	0655.0	2.0	130.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0654.0	0655.0	1.0	160.0			QL=4 ST=2 TYP=3
	5730	IRKU	4 S/F	0845.1	0846.6	7.7	6.0		U	
	5730	IRKU	1 S	0852.8	0853.5	3.2	2.0		U	
	5730	IRKU	4 S/F	0902.1	0903.5	3.9	4.0		U	
	3000	IZMI	1 S	1050.4	1050.5	0.2	17.0		8.0	
	245	SGMR	8 S	1128.0	1128.0		58.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1328.0	1328.0		51.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1340.0	1340.0	1.0	190.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1340.0	1341.0	1.0	160.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1407.0	1407.0	1.0	240.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1407.0	1407.0	1.0	200.0			QL=2 ST=2 TYP=3
	610	SGMR	8 S	1503.0	1503.0		60.0		U	QL=4 ST=2 TYP=3
	610	SVTO	8 S	1503.0	1503.0		63.0		U	QL=4 ST=2 TYP=3
	245	SGMR	8 S	1534.0	1534.0		120.0		U	QL=4 ST=2 TYP=3
	245	SGMR	8 S	1544.0	1544.0		92.0		U	QL=4 ST=2 TYP=3
	245	SVTO	8 S	1544.0	1544.0		89.0		U	QL=4 ST=2 TYP=3
	245	SGMR	8 S	1650.0	1650.0	1.0	84.0			QL=4 ST=2 TYP=3
	6700	CUBA	21 GRF	1817.0	1848.0	162.0	15.0		7.0	2L
	245	SGMR	8 S	1825.0	1826.0	1.0	57.0			QL=4 ST=2 TYP=3
2800	PENT	1 S	1844.0	1846.0	6.0	5.0				
245	PALE	8 S	1901.0	1902.0	1.0	130.0			QL=2 ST=2 TYP=3	
245	SGMR	8 S	1902.0	1902.0	1.0	130.0			QL=4 ST=2 TYP=3	
6700	CUBA	1 S	1919.4	1920.1	2.1	13.0		6.0	9L	
2800	PENT	1 S	2038.0	2041.0	9.0	3.0				
410	PALE	8 S	2039.0	2039.0	1.0	170.0			QL=4 ST=2 TYP=3	
410	SGMR	8 S	2039.0	2039.0	1.0	170.0			QL=4 ST=2 TYP=3	
610	SGMR	8 S	2043.0	2043.0		77.0		U	QL=4 ST=2 TYP=3	
410	PALE	8 S	2104.0	2104.0	1.0	110.0			QL=4 ST=2 TYP=3	
410	SGMR	8 S	2104.0	2104.0	1.0	95.0			QL=4 ST=2 TYP=3	
410	PALE	8 S	2108.0	2108.0		160.0		U	QL=4 ST=2 TYP=3	
245	SGMR	8 S	2108.0	2108.0		11.0		U	QL=4 ST=2 TYP=3	
410	SGMR	8 S	2108.0	2108.0		140.0		U	QL=4 ST=2 TYP=3	
20	245	PALE	43 NS	0214.0	0219.0	26.0	94.0			QL=2 ST=2 TYP=1
	245	LEAR	43 NS	0616.0	0658.0	243.0	300.0			QL=4 ST=2 TYP=1
	204	IZMI	44 NS	0700.0E		300.0D		15.0		
	245	SVTO	43 NS	0713.0	0713.0		136.0			QL=4 ST=2 TYP=1
	235	CUBA	44 NS	1300.0E		530.0D		15.0		
	280	CUBA	44 NS	1300.0E		530.0D		23.0		
	245	SGMR	43 NS	1406.0	1415.0	10.0	90.0			QL=4 ST=2 TYP=1
	5730	IRKU	1 S	0119.5	0120.0	2.5	3.0		U	
	245	LEAR	8 S	0219.0	0219.0		66.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0235.0	0236.0	1.0	63.0			QL=4 ST=2 TYP=3

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 -22 W/m 2 Hz)	Mean			
20	245	LEAR	8 S	0326.0	0326.0	U	66.0			QL=4 ST=2 TYP=3	
	245	PALE	8 S	0326.0	0326.0	U	69.0			QL=2 ST=2 TYP=3	
	245	LEAR	8 S	0332.0	0333.0	1.0	94.0			QL=4 ST=2 TYP=3	
	245	PALE	8 S	0332.0	0333.0	1.0	79.0			QL=2 ST=2 TYP=3	
	245	LEAR	4 S/F	0349.0	0351.0	3.0	130.0			QL=4 ST=2 TYP=3	
	8800	LEAR	4 S/F	0443.0	0445.0	3.0	78.0			QL=4 ST=2 TYP=3	
	2840	BEIJ	1 S	0443.0	0446.1	6.0	2.1				
	4995	LEAR	8 S	0444.0	0445.0	2.0	41.0				QL=4 ST=2 TYP=3
	15400	LEAR	8 S	0444.0	0444.0	2.0	120.0				QL=4 ST=2 TYP=3
	5730	IRKU	45 C	0445.6	0446.1	36.4	42.0		U		
	245	LEAR	4 S/F	0452.0	0453.0	3.0	59.0				QL=4 ST=2 TYP=3
	245	LEAR	8 S	0503.0	0503.0	1.0	54.0				QL=4 ST=2 TYP=3
	245	LEAR	8 S	0616.0	0617.0	2.0	97.0				QL=4 ST=2 TYP=3
	245	SVTO	48 C	0616.0	0617.0	2.0	110.0				QL=4 ST=3 TYP=8
	245	SVTO	8 S	0625.0	0625.0	1.0	74.0				QL=4 ST=3 TYP=3
	245	LEAR	8 S	0650.0	0650.0	1.0	130.0				QL=4 ST=2 TYP=3
	245	SVTO	8 S	0650.0	0650.0	U	100.0				QL=4 ST=3 TYP=3
	245	SVTO	8 S	0654.0	0654.0	1.0	200.0				QL=4 ST=3 TYP=3
	245	SVTO	48 C	0658.0	0658.0	2.0	310.0				QL=4 ST=3 TYP=8
	204	IZMI	7 C	0928.3	0928.3	0.2	172.0				
	33	UPIC	46 C	1202.0	1202.5	6.3					
	245	SGMR	8 S	1224.0	1224.0	U	50.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1251.0	1251.0	1.0	52.0				QL=4 ST=2 TYP=3
	245	SVTO	8 S	1251.0	1251.0	U	51.0				QL=4 ST=3 TYP=3
	33	UPIC	46 C	1307.8	1310.5	6.2					
	33	UPIC	46 C	1543.5	1551.0	10.0					
	245	SVTO	8 S	1553.0	1554.0	1.0	53.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1554.0	1554.0	U	59.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1611.0	1612.0	2.0	260.0				QL=4 ST=2 TYP=3
	245	SVTO	8 S	1611.0E	1612.0U	1.0D	130.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1630.0	1630.0	U	50.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1650.0	1652.0	2.0	75.0				QL=4 ST=2 TYP=3
	33	UPIC	48 C	1721.5		7.0					
245	PALE	8 S	2106.0	2107.0	1.0	86.0				QL=2 ST=2 TYP=3	
245	SGMR	8 S	2106.0	2107.0	1.0	81.0				QL=4 ST=3 TYP=3	
245	PALE	8 S	2348.0	2348.0	1.0	75.0				QL=2 ST=2 TYP=3	
21	204	IZMI	44 NS	0700.0E		300.0D		10.0			
	245	SGMR	43 NS	1430.0	1500.0	122.0	160.0				QL=4 ST=2 TYP=1
	245	SVTO	43 NS	1441.0	1500.0	559.0	120.0				QL=4 ST=3 TYP=1
	245	SGMR	43 NS	1822.0	1822.0	5.0	75.0				QL=4 ST=2 TYP=1
	2840	BEIJ	3 S	0720.8	0721.4	6.6	46.0				
	33	UPIC	48 C	1300.0		8.2					
	245	SGMR	8 S	1421.0	1422.0	1.0	120.0				QL=4 ST=2 TYP=3
	245	SVTO	8 S	1421.0	1422.0	1.0	100.0				QL=4 ST=2 TYP=3
	33	UPIC	47 GB	1652.5		21.5					
	245	PALE	8 S	1822.0	1822.0	U	56.0				QL=4 ST=2 TYP=3
	245	PALE	4 S/F	1826.0	1827.0	7.0	54.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1935.0	1935.0	1.0	64.0				QL=4 ST=2 TYP=3
245	PALE	8 S	1943.0	1943.0	1.0	68.0				QL=4 ST=2 TYP=3	
22	204	IZMI	44 NS	0700.0E		300.0D		20.0			
	280	CUBA	44 NS	1400.0E		470.0D		16.0			
	235	CUBA	44 NS	1400.0E		470.0D		11.0			
	1415	SVTO	4 S/F	0000.0	1513.0	1.0	31.0				QL=4 ST=2 TYP=3
	245	SVTO	48 C	0641.0	0656.0	24.0	170.0				QL=2 ST=2 TYP=8
	2950	GORK	25 R	0642.0	0709.0	27.0D	11.0				
	610	SVTO	8 S	0645.0	0646.0	1.0	58.0				QL=2 ST=2 TYP=3
	2840	BEIJ	4 S/F	0651.0	0657.5	36.0	57.9				
	5730	IRKU	45 C	0652.0	0657.0	31.0	30.0		U		
	2700	PURP	5 S	0652.3	0657.0	10.5	80.0				
	3000	IZMI	20 GRF	0653.8	0657.0	46.2	55.0				
	600	GORK	2 S/F	0654.2	0655.9	3.1	17.0				
	2950	GORK	4 S/F	0654.5	0657.0	6.7	3.4U				
	9100	GORK	2 S/F	0654.6	0656.7	5.0	27.0				
500	HIRA	46 C	0654.7	0656.0	3.0	22.0		3.0		0	
2800	HIRA	3 S	0655.0	0657.0	4.2	40.0		12.0		0	
1415	SVTO	8 S	0655.0	0655.0	U	31.0				QL=4 ST=2 TYP=3	
2695	SVTO	4 S/F	0655.0	0657.0	3.0U	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		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
22	1415	LEAR	8 S	0656.0	0657.0	1.0	7.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0656.0	0657.0	1.0	29.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0656.0	0657.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0656.0	0656.0	1.0	120.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	0656.0	0657.0	1.0	5.0			QL=4 ST=2 TYP=3
	4995	LEAR	8 S	0656.0	0657.0	1.0	31.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0656.0	0656.0	1.0	14.0			QL=4 ST=2 TYP=3
	15400	LEAR	8 S	0656.0	0656.0	U	7.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0656.0	0656.0	U	25.0			QL=2 ST=2 TYP=3
	4995	SVTO	8 S	0656.0	0657.0	1.0	50.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	0656.0	0657.0	1.0	47.0			QL=4 ST=2 TYP=3
	204	IZMI	41 F	0656.0	0657.4	2.8	115.0			
	200	HIRA	46 C	0656.5	0657.5	2.5	45.0	5.0		0
	5730	IRKU	1 S	0831.0	0832.5	3.5	2.0	U		
6700	CUBA	20 GRF	1824.0	1847.0	135.0	6.0	3.0		OOL	
6700	CUBA	20 GRF	2008.0	2017.0	29.0	6.0	3.0		OOL	
23	204	IZMI	44 NS	0700.0E		300.0D		60.0		
	280	CUBA	44 NS	1300.0E		530.0D		10.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		
	5730	IRKU	4 S/F	0159.0	0201.0	7.0	6.0	U		
	5730	IRKU	45 C	0241.0	0300.5	82.5	21.0	U		
	2840	BEIJ	1 S	0250.0	0259.0		18.0			
	5730	IRKU	1 S	0755.9	0756.7	15.1	1.0	U		
	5730	IRKU	1 S	0821.5	0828.2	20.7	2.0	U		
	245	LEAR	8 S	0846.0	0846.0	1.0	65.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0846.0	0846.0	1.0	56.0			QL=4 ST=3 TYP=3
	245	LEAR	8 S	0947.0	0947.0	U	78.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0947.0	0947.0	U	56.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1244.0	1244.0	U	77.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1244.0	1244.0	U	96.0			QL=4 ST=2 TYP=3
245	PALE	8 S	2159.0	2200.0	1.0	130.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	2159.0	2200.0	1.0	95.0			QL=4 ST=2 TYP=3	
24	204	IZMI	44 NS	0700.0E		300.0D		10.0		
	235	CUBA	44 NS	1313.0E		517.0D		13.0		
	280	CUBA	44 NS	1313.0E		517.0D		17.0		
	245	PALE	43 NS	1953.0	1953.0	12.0	62.0			QL=4 ST=2 TYP=1
	245	SGMR	43 NS	1959.0	1959.0	U	80.0			QL=4 ST=2 TYP=1
	245	LEAR	43 NS	2249.0	0223.0	623.0	110.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	2343.0	2343.0	7.0	70.0			QL=4 ST=2 TYP=1
	5730	IRKU	45 C	0144.7	0147.5U	71.3	60.0D	U		
	2840	BEIJ	1 S	0146.0	0148.0	5.0	4.4			
	15400	LEAR	8 S	0147.0	0148.0	2.0	23.0			QL=4 ST=2 TYP=3
	4995	LEAR	8 S	0147.0	0148.0	1.0	40.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0147.0	0148.0	1.0	65.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0147.0	0148.0	2.0	85.0			QL=4 ST=2 TYP=3
	4995	PALE	8 S	0147.0	0148.0	2.0	66.0			QL=4 ST=2 TYP=3
	5730	IRKU	21 GRF	0412.0	0442.7	79.0	38.0	U		
	2840	BEIJ	1 S	0441.0	0443.0	4.0	9.2			
	5730	IRKU	1 S	0545.6	0546.0	4.4	1.0	U		
	5730	IRKU	42 SER	0651.2	0652.0	8.8	2.0	U		
	5730	IRKU	1 S	0704.8	0707.2	10.0	1.0	U		
	2840	BEIJ	41 F	0745.0	0748.0	5.0	5.5			
	5730	IRKU	1 S	0746.3	0749.0	4.7	3.0	U		
	5730	IRKU	1 S	0805.6	0805.7	2.9	1.0	U		
3000	IZMI	22 GRF	1022.8	1027.4	97.2D	11.0				
204	IZMI	22 GRF	1027.1	1047.1	37.0	17.0				
245	SGMR	8 S	1903.0	1904.0	2.0	53.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2238.0	2238.0	U	69.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2339.0	2339.0	1.0	80.0			QL=4 ST=2 TYP=3	
25	204	IZMI	44 NS	0700.0E		300.0D		25.0		
	127	TORN	43 NS	1059.0		133.0		1.0		V=1, DISTURBED
	280	CUBA	44 NS	1300.0E		530.0D		27.0		
	235	CUBA	44 NS	1300.0E		530.0D		22.0		
	245	SGMR	43 NS	1429.0	1429.0	9.0	59.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	1732.0	1737.0	241.0	150.0			QL=2 ST=2 TYP=1
245	PALE	8 S	0102.0	0102.0	U	85.0			QL=4 ST=2 TYP=3	



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
25	2840	BEIJ	1 S	0216.0	0218.0	4.0	2.9			
	5730	IRKU	1 S	0219.0	0219.9	6.0	3.0		U	
	245	PALE	8 S	0223.0	0223.0		120.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0606.5	0607.0	1.8	2.0		U	
	5730	IRKU	1 S	0632.0	0632.8	8.0	1.0		U	
	5730	IRKU	20 GRF	0651.0	0701.5	32.0	2.0		U	
	5730	IRKU	1 S	0723.0	0725.8	5.0	2.0		U	
	5730	IRKU	20 GRF	0753.0	0800.0	47.5	4.0		U	
	245	SGMR	8 S	1136.0	1137.0	1.0	88.0			QL=4 ST=2 TYP=3
	204	IZMI	45 C	1137.6	1137.7	0.4	120.0			
	245	SGMR	8 S	1423.0	1423.0		93.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1552.0	1552.0		61.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2227.0	2227.0	1.0	90.0			QL=2 ST=2 TYP=3
	245	PALE	8 S	2323.0	2324.0	1.0	370.0			QL=2 ST=2 TYP=3
245	LEAR	8 S	2324.0	2324.0		190.0			QL=4 ST=2 TYP=3	
2840	BEIJ	2 S/F	2356.0	0001.0	11.0	4.4				
26	410	PALE	43 NS	0054.0	0002.0	1399.0	71.0			QL=4 ST=2 TYP=1
	204	IZMI	44 NS	0700.0E		300.0D		5.0		
	280	CUBA	44 NS	1300.0E	1521.0	150.0D	44.0	14.0		SUNRISE
	235	CUBA	44 NS	1300.0E		530.0D		8.0		
	280	CUBA	44 NS	1300.0E		530.0D		16.0		
	245	PALE	43 NS	2327.0	0015.0	144.0	320.0			QL=4 ST=2 TYP=1
	245	LEAR	43 NS	2332.0	0015.0	72.0	270.0			QL=4 ST=2 TYP=1
	2840	BEIJ	5 S	0050.0	0053.0	7.0	3.7			
	6700	CUBA	29 PBI	1300.0E		239.0D	53.0			2L SUNRISE
	245	PALE	4 S/F	1744.0	1744.0	4.0	60.0			QL=2 ST=2 TYP=3
	245	SGMR	8 S	1744.0	1744.0	1.0	53.0			QL=4 ST=2 TYP=3
	500	HIRA	27 RF	2305.0	0000.0	150.0	20.0	6.0		WL
	245	LEAR	4 S/F	2307.0	2315.0	9.0	51.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2307.0	2307.0		56.0			QL=2 ST=2 TYP=3
245	LEAR	8 S	2315.0	2316.0	2.0	77.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2315.0	2316.0	1.0	120.0			QL=2 ST=2 TYP=3	
27	410	PALE	43 NS	0054.0	2354.0	1386.0	56.0			QL=4 ST=1 TYP=1
	204	IZMI	43 NS	0950.0		112.0		8.0		
	245	SGMR	43 NS	1148.0	1205.0	33.0	130.0			QL=4 ST=2 TYP=1
	127	TORN	43 NS	1206.0		40.0		9.0		V=3
	280	CUBA	44 NS	1300.0E		530.0D		21.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		
	245	SGMR	43 NS	1511.0	1520.0	73.0	200.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	1714.0	1743.0	37.0	120.0			QL=2 ST=3 TYP=1
	245	SGMR	43 NS	1714.0	1717.0U	37.0	100.0			QL=4 ST=2 TYP=1
	500	HIRA	42 SER	0042.6	0043.9	1.5	25.0			0
	245	PALE	8 S	0154.0	0154.0		68.0			QL=2 ST=3 TYP=3
	245	PALE	8 S	0229.0	0229.0		76.0			QL=2 ST=3 TYP=3
	2840	BEIJ	20 GRF	0544.0	0552.0	16.0	2.9			
	5730	IRKU	20 GRF	0546.5	0551.0	28.5	3.0		U	
	2840	BEIJ	1 S	0848.0	0849.0	3.0	2.5			
	245	SGMR	8 S	1135.0	1135.0		56.0			QL=4 ST=2 TYP=3
	204	IZMI	24 R	1142.0		74.0		60.0		
	610	SGMR	48 C	1443.0	1454.0	17.0	2700.0			
	1415	SGMR	49 GB	1453.0	1455.0	4.0	840.0			QL=4 ST=2 TYP=6
	410	SGMR	20 GRF	1453.0	1455.0	7.0	63.0			QL=4 ST=2 TYP=2
	1415	SVTO	49 GB	1453.0	1455.0	4.0	860.0			QL=4 ST=2 TYP=6
245	SGMR	46 C	1454.0	1458.0	6.0	44.0			QL=4 ST=2 TYP=8	
245	SGMR	8 S	1522.0	1523.0	1.0	460.0			QL=2 ST=3 TYP=3	
245	SGMR	8 S	1537.0	1537.0	1.0	330.0			QL=2 ST=2 TYP=3	
2800	PENT	3 S	1557.0	1558.0	23.0	9.0				
245	PALE	8 S	1738.0	1739.0	2.0	380.0			QL=2 ST=2 TYP=3	
245	SGMR	8 S	1738.0	1739.0	2.0	390.0			QL=2 ST=2 TYP=3	
245	PALE	49 GB	2003.0	2004.0	3.0	570.0			QL=2 ST=2 TYP=6	
245	SGMR	8 S	2004.0	2004.0		430.0			QL=4 ST=2 TYP=3	
2800	PENT	3 S	2212.0	2214.0	20.0	38.0				
2695	PALE	4 S/F	2214.0	2215.0	39.0	42.0			QL=4 ST=2 TYP=3	
2800	HIRA	21 GRF	2214.0	2216.0	166.0	30.0	8.0		0	
4995	PALE	20 GRF	2215.0	2231.0	38.0	53.0			QL=4 ST=2 TYP=2	
8800	PALE	20 GRF	2217.0	2231.0	36.0	47.0			QL=4 ST=2 TYP=2	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
28	235	CUBA	44 NS	1300.0E		530.0D		6.0		
	280	CUBA	44 NS	1300.0E		530.0D		12.0		
	245	SGMR	43 NS	1410.0	1410.0	31.0	130.0			QL=4 ST=2 TYP=1
	245	SVTO	43 NS	1410.0	1410.0	590.0	100.0			QL=4 ST=3 TYP=1
	245	SGMR	43 NS	1850.0	1903.0	14.0	79.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	2332.0	2359.0	87.0	200.0			QL=4 ST=2 TYP=1
	245	LEAR	43 NS	2332.0	2359.0	118.0	150.0			QL=4 ST=2 TYP=1
	2840	BEIJ	1 S	0128.0	0131.0	6.0	7.6			
	410	LEAR	8 S	0130.0	0131.0	1.0	140.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0130.0	0131.0	1.0	120.0			QL=4 ST=2 TYP=3
	5730	IRKU	45 C	0130.3	0131.6	1.9	5.0		U	
	500	HIRA	42 SER	0130.7	0131.6	1.0	80.0			O
	2800	HIRA	42 SER	0131.2	0131.7	0.6	8.0			WL
	2840	BEIJ	2 S/F	0131.5	0131.7	3.0	13.9			
	610	PALE	8 S	0248.0	0250.0	2.0	59.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	0250.0	0250.0	1.0	55.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0451.0	0451.0	2.0	130.0			QL=4 ST=2 TYP=3
	2840	BEIJ	1 S	0704.0	0710.0	7.0	8.9			
	5730	IRKU	45 C	0705.0	0714.0	39.7	11.0		U	
	3000	IZMI	23 GRF	0707.5	0714.1	17.5	11.0			
	2840	BEIJ	5 S	0711.0	0713.0	29.0	14.3			
	2950	GORK	7 C	0711.4	0714.1	6.6	12.0			
	2800	HIRA	3 S	0712.2	0714.2	5.5	5.0	2.0		O
9100	GORK	5 S	0713.4	0713.9	2.8	7.1				
204	IZMI	41 F	0911.9	0912.3	1.9	102.0				
410	SVTO	4 S/F	1421.0	1423.0	3.0	70.0			QL=4 ST=2 TYP=3	
410	SGMR	8 S	1423.0	1423.0	U	67.0			QL=4 ST=2 TYP=3	
6700	CUBA	23 GRF	1851.0	1955.0	64.0	12.0	6.0		12L	
29	204	IZMI	43 NS	0838.7		89.0		15.0		
	500	HIRA	29 PBI	0243.0	0243.6	7.5	8.0	2.0		O
	245	LEAR	8 S	0354.0	0354.0	U	110.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0354.0	0354.0	U	100.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0432.0	0433.0	1.0	52.0			QL=4 ST=2 TYP=3
	9100	GORK	5 S	0654.5	0655.0	0.8	6.7			
	245	SVTO	8 S	0856.0	0857.0	1.0	66.0			QL=4 ST=3 TYP=3
	245	SGMR	8 S	1233.0	1233.0	U	140.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1954.0	1955.0	1.0	54.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2124.0	2124.0	1.0	65.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2124.0	2125.0	2.0	59.0			QL=4 ST=2 TYP=3
30	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	280	CUBA	44 NS	1300.0E		530.0D		12.0		
	6700	CUBA	23 GRF	1858.0	1951.0	193.0D	13.0			OL SUNSET
	2800	PENT	8 S	2347.0	2348.0	4.0	15.0			
	2800	HIRA	1 S	2348.5	2349.0	0.7	13.0	3.0		WL
500	HIRA	8 S	2348.7	2348.9	0.5	160.0			O	
31	235	CUBA	44 NS	1300.0E		370.0D		8.0		
	280	CUBA	44 NS	1300.0E		530.0D		14.0		
	2840	BEIJ	5 S	0451.0	0503.5	28.0	5.5			
	500	HIRA	3 S	0500.0	0505.0	15.0	10.0	3.0		O
	200	HIRA	8 S	0500.0	0500.3	0.6	670.0			O
	5730	IRKU	3 S	0502.5	0503.5	11.5	4.0		U	
	2800	HIRA	20 GRF	0502.7	0505.0	7.5	6.0	1.0		O
	2840	BEIJ	5 S	0535.0	0546.2	28.0	6.7			
	500	HIRA	46 C	0544.5	0545.7	5.0	13.0	3.0		O
	5730	IRKU	20 GRF	0545.0	0549.3	11.0	4.0		U	
	2800	HIRA	20 GRF	0545.0	0546.7	7.5	6.0	2.0		O
	5730	IRKU	20 GRF	0625.3	0627.5	8.4	2.0		U	
	5730	IRKU	20 GRF	0654.2	0657.5	22.8	3.0		U	
	2840	BEIJ	1 S	0655.0	0657.6	7.0	3.6			
	200	HIRA	42 SER	0656.2	0657.5	1.5	13.0			O
	500	HIRA	42 SER	0656.2	0658.7	2.7	3.0			O
	204	IZMI	42 SER	0656.4	0656.7	1.3	60.0			
3000	IZMI	1 S	0657.3	0657.6	0.8	2.0				
204	IZMI	20 GRF	0726.1	0808.7	71.9	8.0				
410	SVTO	4 S/F	0816.0	0818.0	7.0	180.0			QL=4 ST=2 TYP=3	
410	LEAR	8 S	0817.0	0818.0	1.0	150.0			QL=4 ST=2 TYP=3	

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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
31	410 SVTO	8 S	0817.0	0818.0	1.0	180.0			QL=4 ST=3 TYP=3
	500 HIRA	42 SER	0817.0	0817.7	0.9	7.0			0
	5730 IRKU	1 S	0817.6	0818.2	1.2	3.0	U		
	2950 GORK	1 S	0817.7	0818.2	1.4	2.8			
	410 LEAR	4 S/F	0932.0	0933.0	3.0	62.0			QL=4 ST=2 TYP=3
	410 SVTO	8 S	0932.0	0933.0	2.0	59.0			QL=2 ST=3 TYP=3
	610 LEAR	8 S	0933.0	0933.0	1.0	42.0			QL=4 ST=2 TYP=3
	610 SVTO	8 S	0933.0	0933.0	1.0	57.0			QL=2 ST=3 TYP=3
	410 SVTO	8 S	1412.0	1412.0	U	110.0			QL=2 ST=2 TYP=3
	245 SVTO	49 GB	1412.0	1412.0	U	560.0			QL=2 ST=2 TYP=6
	6700 CUBA	20 GRF	1857.0	2040.0	193.00	11.0			OOL SUNSET
	410 LEAR	8 S	2319.0	2319.0	U	160.0			QL=4 ST=2 TYP=3
	410 PALE	8 S	2319.0	2319.0	U	210.0			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 = Hiraïso	LEAR = Learmonth	POTS = Potsdam	UPIC = Upice
HUAN = Huancayo	NOBE = Nobeyama	SGMR = Sagamore Hill	

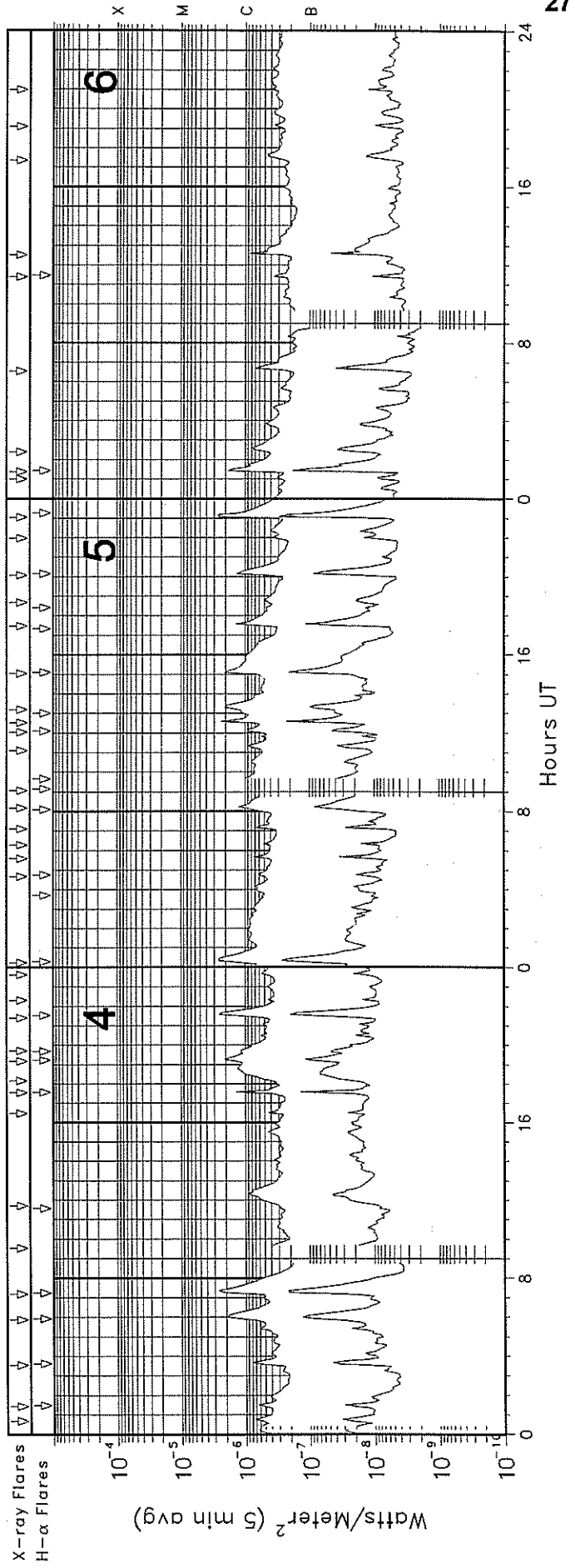
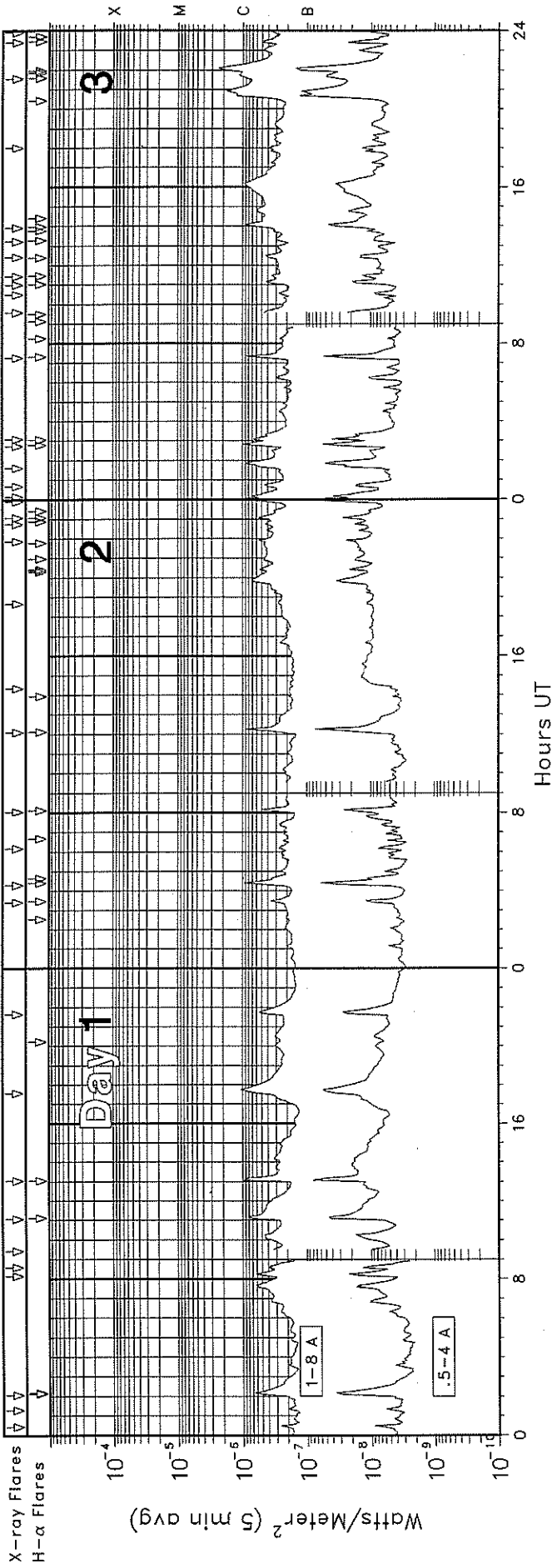
Explanation of Type Code:

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 Precursor	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 Hiraïso, Japan 500 and 200 MHz.

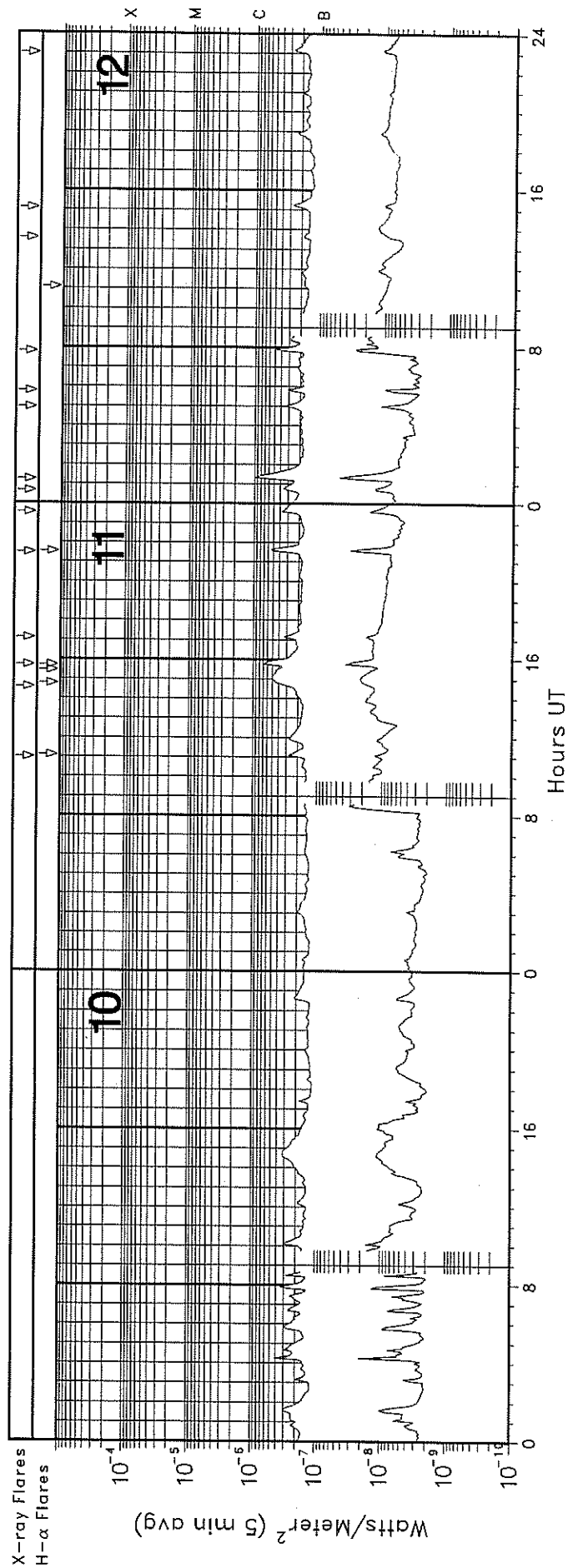
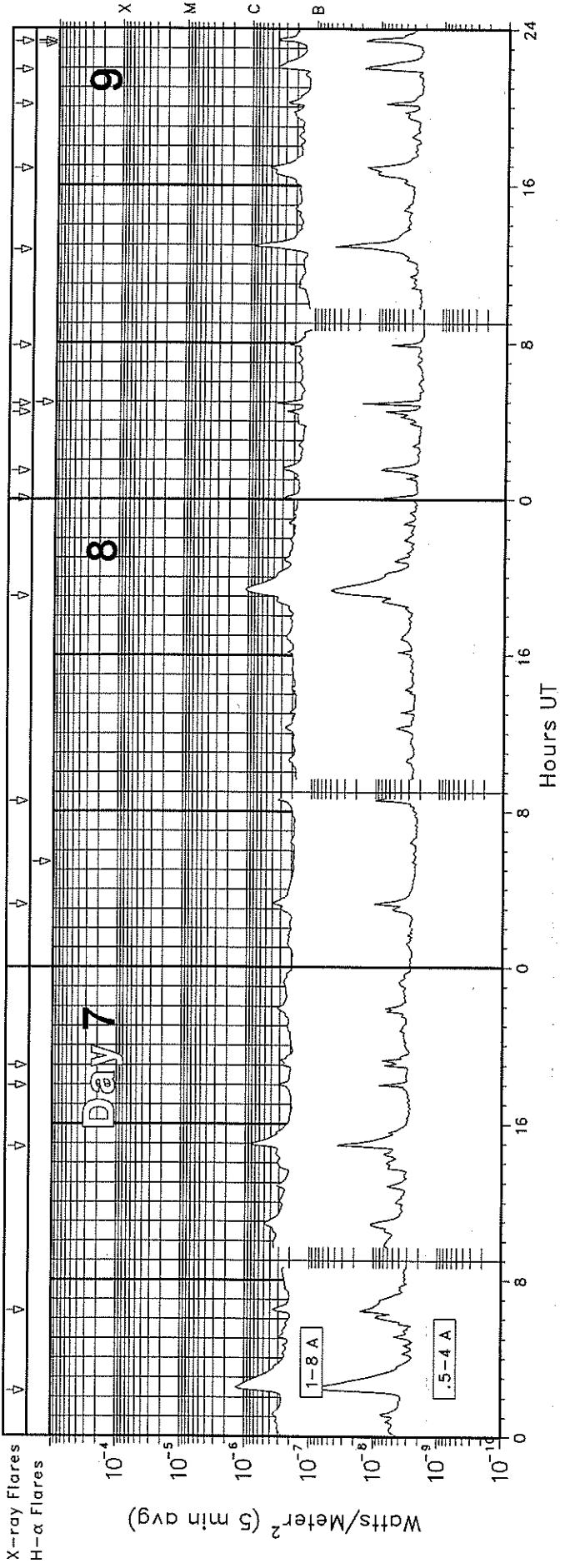
# GOES X-RAY DETECTOR

March 1998



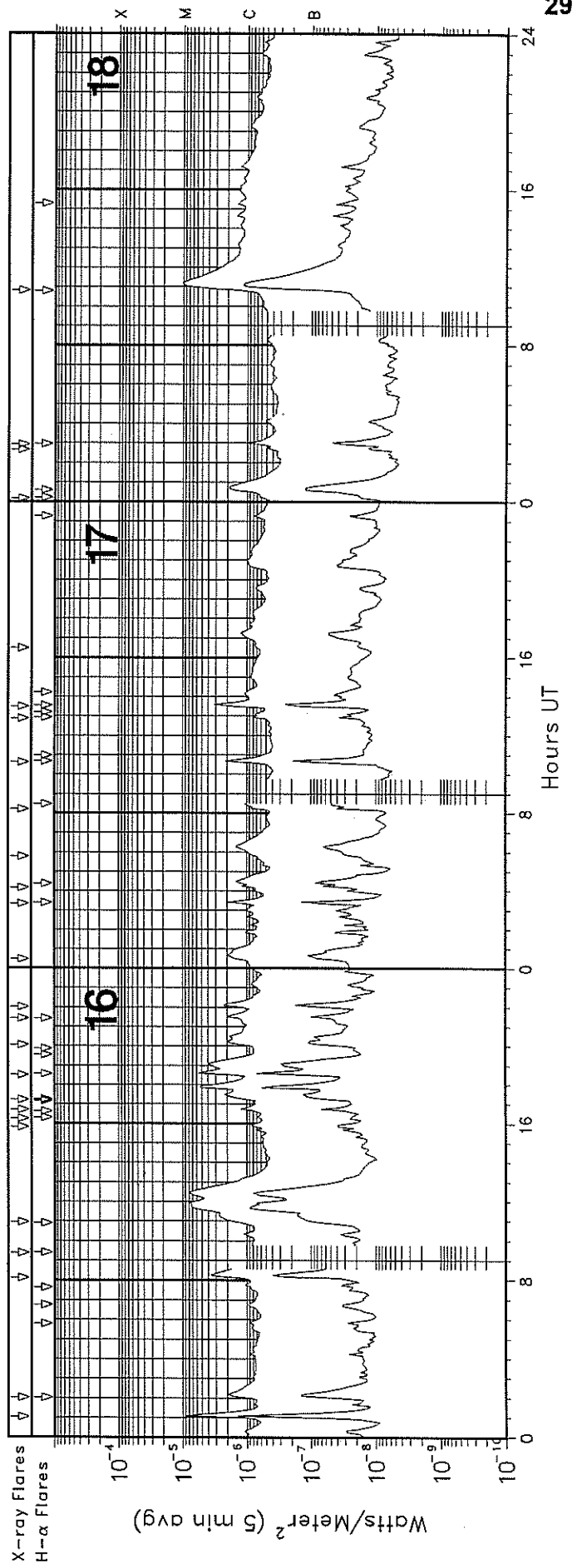
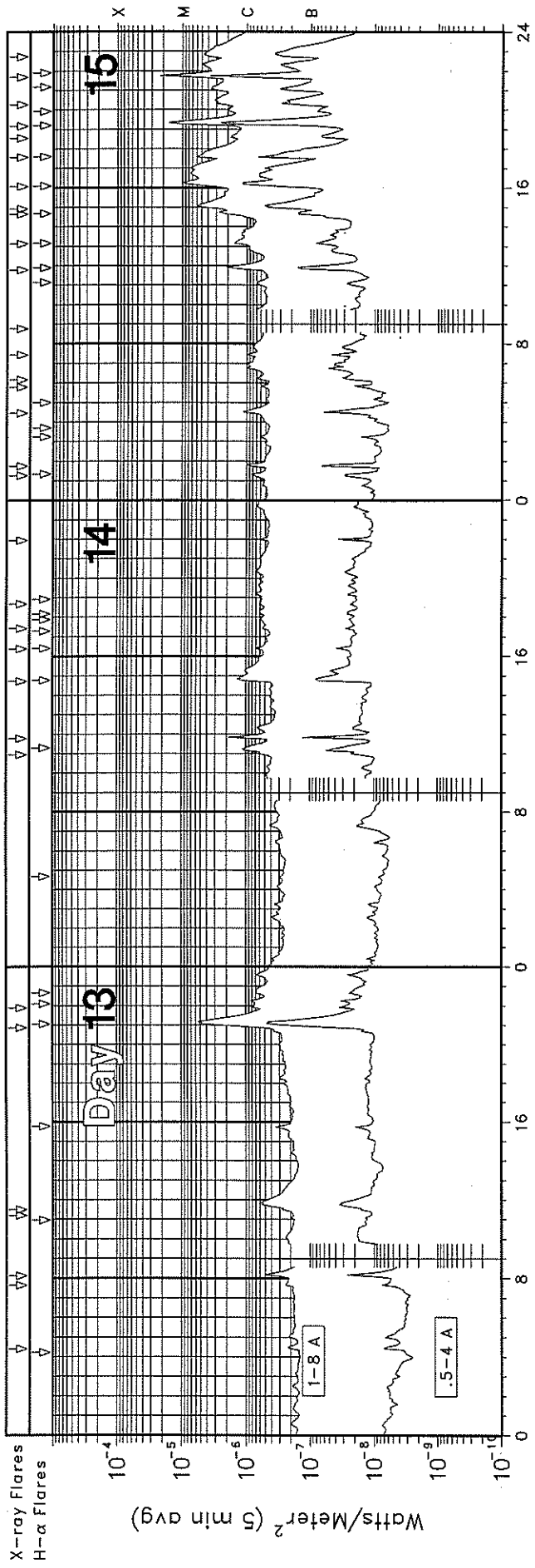
# GOES X-RAY DETECTOR

March 1998



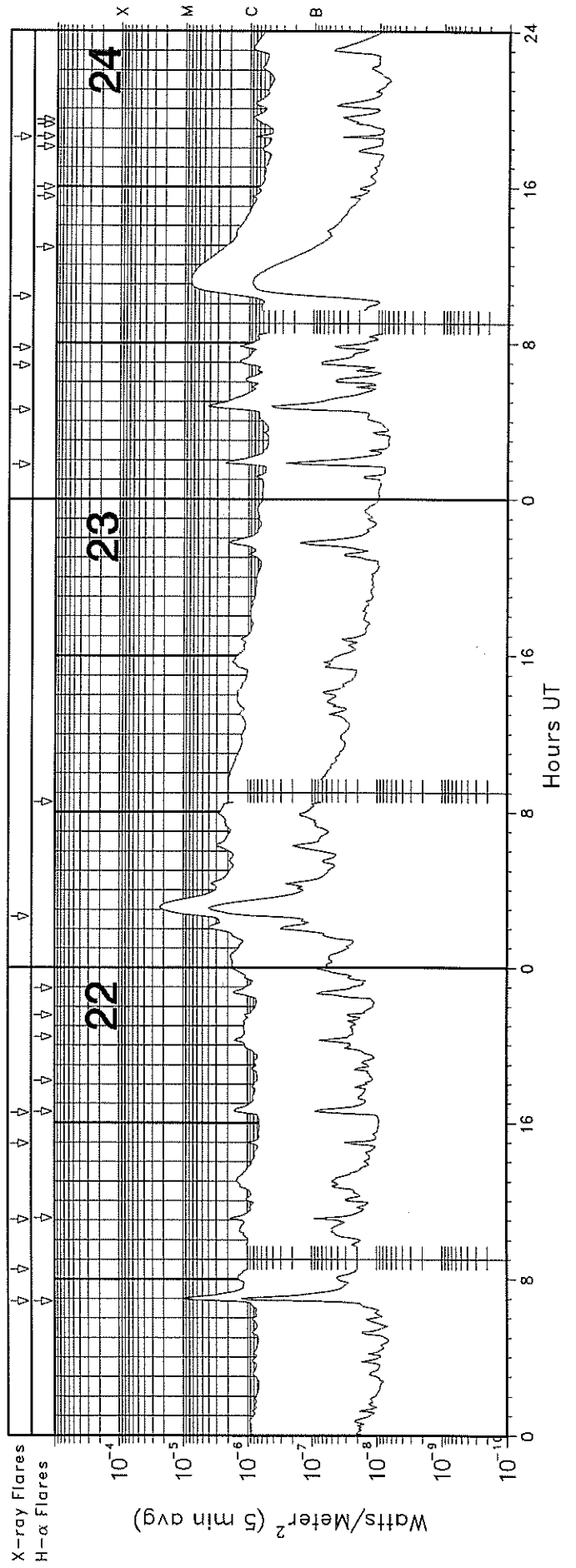
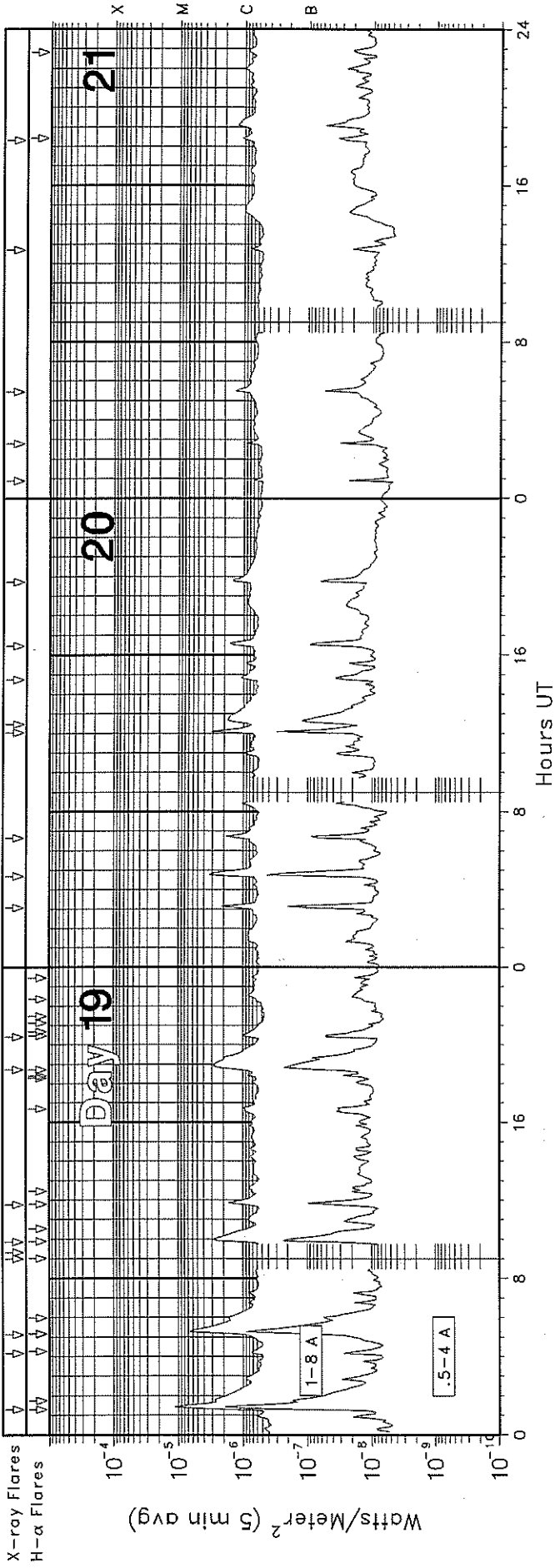
# GOES X-RAY DETECTOR

March 1998



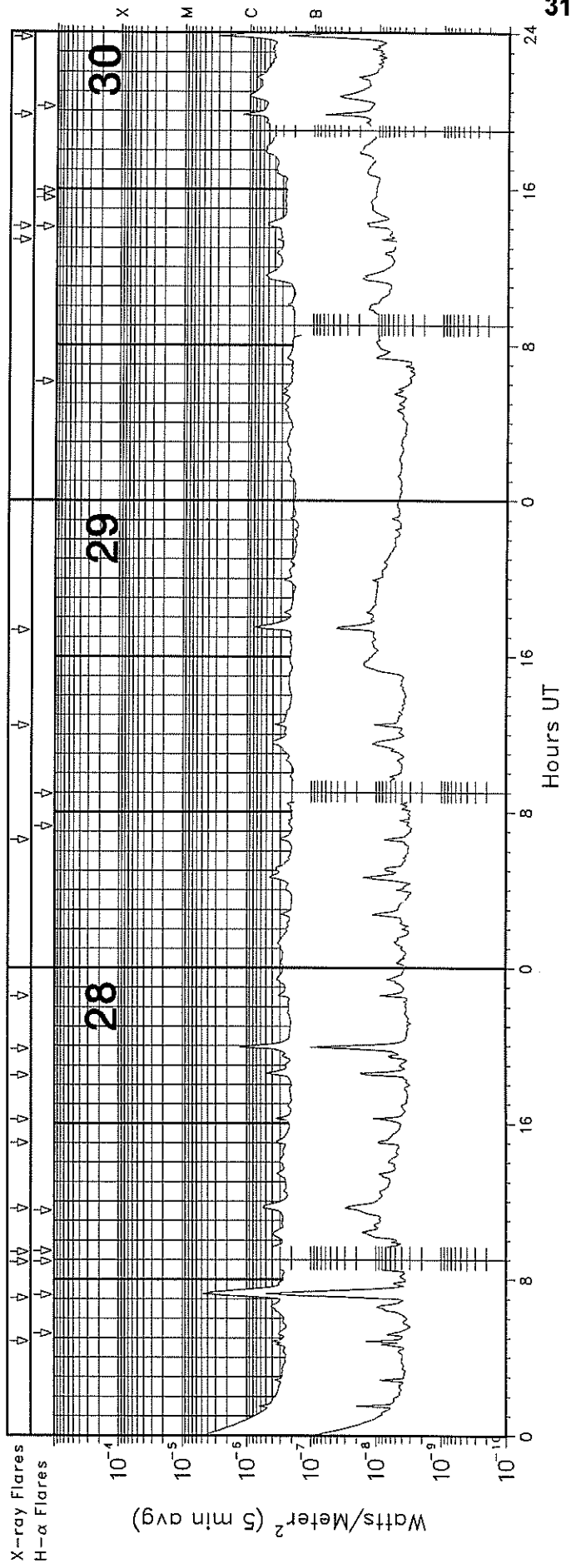
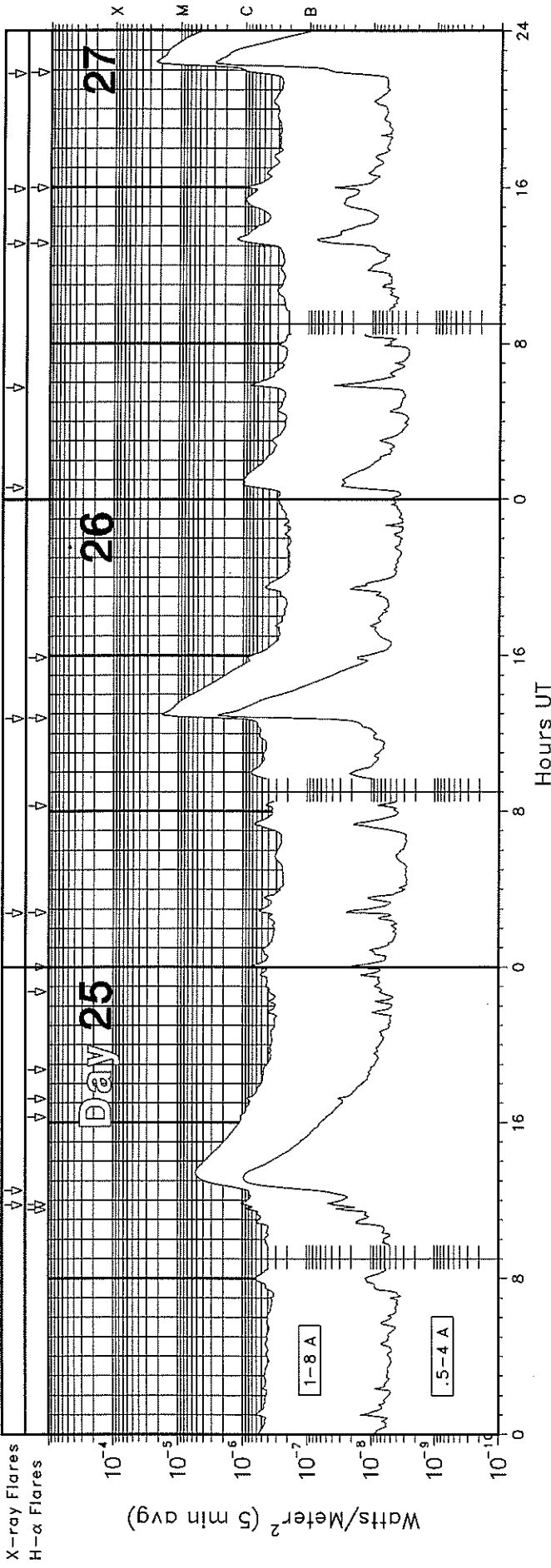
# GOES X-RAY DETECTOR

March 1998



# GOES X-RAY DETECTOR

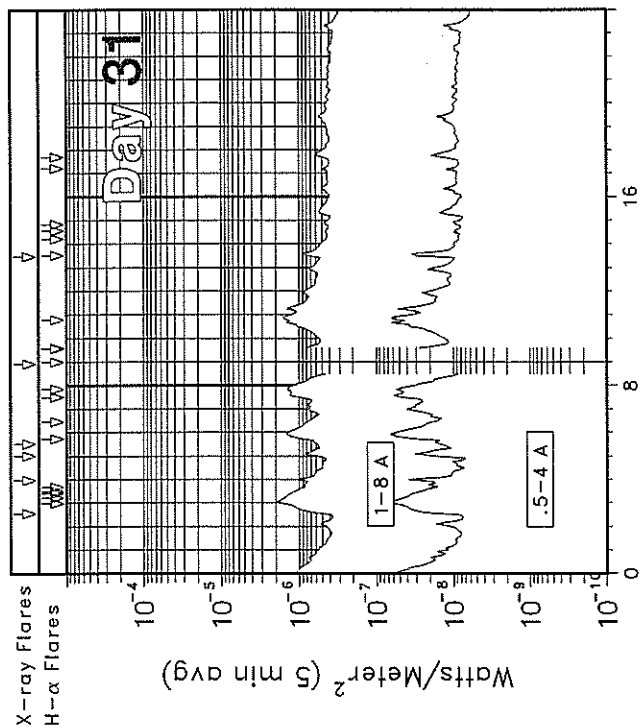
March 1998





# GOES X-RAY DETECTOR

March 1998



GOES SOLAR X-RAY FLARES  
 \*\*Preliminary Listing\*\*

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 Mar 98

March 1998

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
01	0026	0032	0030				B3.5		9.3E-05
01	0117	0128	0121				B2.0		1.2E-04
01	0204	0217	0210	S21	W56	SF	B7.8	8169	4.3E-04
01	0809	0822	0816				B6.5		4.1E-04
01	0836	0841	0839				B6.5		1.4E-04
01	0926	0938	0933				B3.1		2.0E-04
01	1104	1114	1109	S17	W66	SF	C1.0	8169	4.5E-04
01	1302	1313	1308	S18	W67	SF	C1.2	8169	5.3E-04
01	1734	1755	1746				C1.1		1.0E-03
01	2139	2154	2144				B6.4		4.3E-04
02	0326	0333	0330	S24	W26	SF	B4.2	8171	1.5E-04
02	0419	0432	0425	S23	W28	SF	C1.0	8171	5.3E-04
02	0610	0615	0613				B4.1		8.4E-05
02	0804	0816	0810				B5.7		2.8E-04
02	1205	1219	1216				C1.2	8171	4.8E-04
02	1420	1425	1423				B2.1		5.1E-05
02	1841	1846	1844				B3.2		7.7E-05
02	2152	2159	2155	S22	W36		B6.0	8171	2.2E-04
02	2245	2252	2248				B4.3		1.7E-04
02	2304	2310	2308	S22	W37	SF	B6.7	8171	2.0E-04
02	2354	2404	2401				C1.9		6.0E-04
03	0008	0015	0013				B8.6		2.8E-04
03	0041	0048	0044				B5.2		2.0E-04
03	0137	0156	0154				C1.6		7.7E-04
03	0244	0257	0252	S24	W38	SF	C1.0	8171	5.6E-04
03	0305	0311	0309	S24	W39		C1.1	8171	2.6E-04
03	0716	0724	0720	S23	W43	SF	C1.2	8171	3.5E-04
03	0936	0943	0940	S24	W41		B4.2	8171	1.6E-04
03	1031	1036	1034				B3.1		7.8E-05
03	1101	1113	1109	S22	W43	SF	B5.0	8171	2.3E-04
03	1126	1132	1130	S21	W43	SF	B4.7	8171	1.4E-04
03	1226	1232	1229	S23	W44		B5.5	8171	1.6E-04
03	1314	1324	1320	S21	W45	SF	B3.4	8171	1.7E-04
03	1356	1412	1407	S21	W47	SF	B9.7	8171	6.7E-04
03	1801	1807	1804				B4.6		1.5E-04
03	2134	2159	2147				C1.1	8171	1.5E-03
03	2324	2332	2328	S22	W50	SF	B6.2	8171	2.4E-04
03	2355	2438	2418				B5.6		1.2E-03
04	0040	0051	0046				B7.6		4.3E-04
04	0126	0134	0130	S25	W49	SF	B7.2	8171	3.0E-04
04	0333	0349	0340	S25	W49	SF	B8.5	8171	6.0E-04
04	0553	0616	0605	S24	W53	SF	C1.9	8171	2.2E-03
04	0711	0733	0719	S24	W53	SF	C2.7	8171	2.6E-03
04	0933	0943	0939				B4.0		2.1E-04
04	1143	1240	1144				B8.3		2.1E-03
04	1628	1635	1631				B4.9		1.7E-04
04	1732	1740	1736	S22	W63	SF	C1.5	8171	5.2E-04
04	1809	1909	1849				C1.3		3.5E-03
04	1910	1925	1916	S26	W58	SF	C2.1	8171	1.6E-03
04	1942	1949	1945	S25	W56		C1.2	8171	5.1E-04
04	2124	2148	2139	S22	W59	SF	C2.7	8171	2.4E-03
04	2219	2225	2222				B5.0		1.6E-04
04	2337	2352	2340				B5.6		4.7E-04
05	0014	0038	0020	S24	W63	SF	C2.8	8171	3.1E-03
05	0441	0455	0447				B6.3		4.7E-04
05	0536	0546	0540				B8.2		3.8E-04
05	0617	0622	0620				B6.3		1.6E-04
05	0707	0718	0714				B7.8		3.9E-04
05	0812	0818	0815	S24	W67		C1.4	8171	4.6E-04
05	0905	0915	0912	S26	W72	SF	C4.4	8171	1.5E-03
05	1107	1127	1122				B9.5		8.6E-04

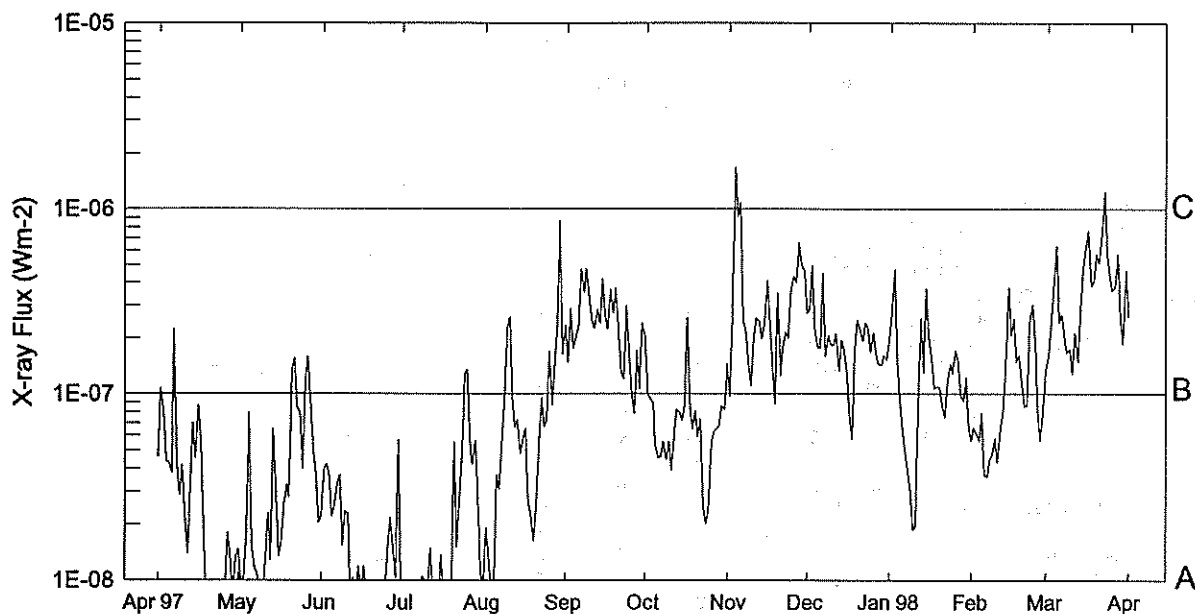
Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux	
05	1202	1216	1211	S24	W69	SF	B9.7	8171	7.0E-04	
05	1231	1242	1237				C2.6		1.1E-03	
05	1312	1332	1320	S23	W71		C2.0	8171	2.1E-03	
05	1502	1516	1508	S25	W74	SF	C2.5	8171	1.4E-03	
05	1729	1741	1737				C1.5		7.4E-04	
05	1841	1858	1844				B5.0		4.8E-04	
05	2004	2025	2011	N24	W46	1F	C1.4	8172	1.2E-03	
05	2159	2206	2203				B4.1		1.5E-04	
05	2302	2312	2309				C5.6		1.4E-03	
06	0100	0109	0104				B3.6		1.7E-04	
06	0123	0133	0128	S24	W77	SF	C2.7	8171	9.6E-04	
06	0223	0248	0235				B7.7		9.6E-04	
06	0633	0652	0643				B8.0		5.6E-04	
06	1123	1132	1127				B4.0		1.8E-04	
06	1231	1240	1236				C1.0		3.4E-04	
06	1721	1750	1739				B4.6		6.3E-04	
06	1906	1913	1910				B4.1		1.5E-04	
06	2059	2105	2103				B5.0		1.4E-04	
07	0219	0253	0231				C1.3		2.1E-03	
07	0624	0637	0631				B3.4		2.4E-04	
07	1451	1510	1458				B8.6		7.9E-04	
07	1759	1805	1803				B4.5		1.2E-04	
07	1859	1907	1902				B3.0		1.3E-04	
08	0314	0325	0318				B4.2		2.5E-04	
08	0832	0842	0837				B3.4		1.9E-04	
08	1902	1939	1924				C1.1		1.9E-03	
09	0004	0011	0008				B3.2		1.2E-04	
09	0127	0141	0135				B3.2		2.4E-04	
09	0427	0432	0430				B3.2		7.9E-05	
09	0454	0500	0458	S42	E51	SF	B6.0	8176	1.4E-04	
09	0753	0801	0757				B2.6		1.1E-04	
09	1245	1307	1258				C1.1		8.2E-04	
09	1652	1700	1656				B5.6		2.5E-04	
09	2008	2020	2014				B3.1		1.9E-04	
09	2155	2224	2205				B4.1		5.7E-04	
09	2321	2334	2330	S42	E41	SF	B4.7	8176	2.8E-04	
11	1100	1117	1106				B2.8		2.4E-04	
11	1435	1538	1503	S27	E56	SF	B5.0	8179	1.6E-03	
11	1542	1557	1546				SF	B7.3	8179	5.3E-04
11	1706	1716	1711				B3.4		1.8E-04	
11	2130	2145	2139	S42	E18	SF	B6.3	8176	4.1E-04	
11	2333	2343	2337				B4.1		2.1E-04	
12	0039	0059	0045				B3.5		3.8E-04	
12	0114	0131	0122				C1.0		7.7E-04	
12	0456	0506	0501				B3.7		1.9E-04	
12	0546	0553	0550				B3.7		1.3E-04	
12	0748	0800	0755				B5.6		2.9E-04	
12	1335	1349	1338				B1.9		1.5E-04	
12	1506	1522	1514				B2.8		2.3E-04	
12	2301	2322	2309				B2.7		3.0E-04	
13	0424	0435	0429				B2.4		1.4E-04	
13	0739	0744	0742				B2.9		7.3E-05	
13	0807	0817	0811				B5.2		2.6E-04	
13	1112	1207	1151				B5.8		1.2E-03	
13	1129	1134	1132				B3.4		8.1E-05	
13	2051	2120	2111	S16	W83	SF	C5.8	8173	5.7E-03	
13	2153	2159	2156				B8.8		2.7E-04	

March 1998

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
14	1056	1127	1117	S23	E15	SF	C1.1	8179	1.5E-03
14	1147	1156	1152				C2.2		7.6E-04
14	1443	1507	1452	S21	E16	SF	C1.4	8179	1.6E-03
14	1622	1628	1626	S23	E13	SF	B8.3	8179	2.6E-04
14	1726	1731	1729	S23	E13		B6.8	8179	1.8E-04
14	1841	1846	1844				B6.6		1.7E-04
14	2157	2203	2201				B8.3		2.1E-04
15	0116	0124	0119	S28	E10	SF	B9.3	8179	4.0E-04
15	0145	0152	0149				C1.6		4.5E-04
15	0427	0436	0433				C1.2		5.4E-04
15	0547	0553	0550				B6.8		2.1E-04
15	0610	0622	0614				B7.2		4.7E-04
15	0725	0731	0729				C1.1		3.6E-04
15	0846	0853	0850				B9.3		3.1E-04
15	1148	1204	1156	S20	E00	SF	C2.1	8179	1.5E-03
15	1307	1322	1311	S23	W01	SF	C1.6	8179	1.3E-03
15	1439	1452	1445	S23	E03	SF	C2.9	8179	1.8E-03
15	1456	1519	1507				C5.8	8179	6.4E-03
15	1604	1626	1616	S23	W03	1F	M1.0	8179	9.4E-03
15	1734	1742	1737	S23	W01	SF	C7.5	8179	2.8E-03
15	1834	1844	1838				C1.7		9.5E-04
15	1911	1927	1920	S21	W03	1B	M1.8	8179	1.0E-02
15	2016	2040	2032				C3.4		4.1E-03
15	2141	2150	2146				M2.7		8.8E-03
15	2245	2306	2248	S23	W01		C5.0	8179	5.4E-03
16	0102	0112	0106				M1.1		4.0E-03
16	0201	0226	0212	S25	W01	SF	C1.9	8179	2.4E-03
16	0807	0830	0815	S20	W09		C3.7	8179	3.8E-03
16	0923	0931	0926	S25	W05	SF	C1.0	8179	4.5E-04
16	1057	1211	1157	S23	W11	1N	C7.9	8179	2.0E-02
16	1550	1603	1555				B8.7		6.1E-04
16	1616	1623	1619	S25	W09	SF	B7.6	8179	2.8E-04
16	1643	1650	1647	S23	W14		C1.3	8179	4.8E-04
16	1714	1801	1753	S23	W13	SF	C6.4	8179	7.1E-03
16	1831	1846	1837	S23	W13	SF	C5.9	8179	3.8E-03
16	2003	2036	2014	S23	W15	SF	C2.1	8179	3.4E-03
16	2126	2138	2131	S21	W17	SF	C2.0	8179	1.3E-03
16	2201	2215	2210				C2.4		1.6E-03
17	0028	0101	0041				C2.0		3.4E-03
17	0320	0331	0327	S22	W19	SF	C2.0	8179	1.0E-03
17	0411	0421	0417				C1.2		6.1E-04
17	0546	0629	0618				C1.4		2.8E-03
17	0813	0834	0829	S23	W21	SF	C1.1	8179	1.1E-03
17	1037	1048	1041				C2.3		1.1E-03
17	1253	1304	1257	S20	W23	SF	B8.2	8179	4.7E-04
17	1329	1341	1335	S21	W23	SF	C3.6	8179	1.7E-03
17	1629	1730	1716				C1.2		3.3E-03
18	0011	0059	0046	S21	W31	SF	C1.9	8179	3.4E-03
18	0240	0253	0244				B5.2		3.6E-04
18	0255	0304	0300	S17	W35	SF	C1.2	8179	4.8E-04
18	1050	1134	1112				M1.0		1.9E-02
19	0117	0134	0127	N18	E58	1N	M1.2	8183	7.3E-03
19	0410	0417	0414				C1.0		3.3E-04
19	0508	0530	0517	N18	E54	1F	C7.5	8183	6.0E-03
19	0900	0905	0903	N18	E52	SF	C1.1	8183	2.6E-04
19	0919	0924	0922				C1.0		2.5E-04
19	0951	1013	0958	N18	E52	1F	C3.2	8183	2.9E-03
19	1145	1159	1152	N21	E53	SF	C1.7	8183	1.1E-03
19	1844	1918	1857	S20	W53		C2.8	8179	4.7E-03
19	2024	2037	2030	S21	W56	SF	C1.0	8179	7.2E-04
20	0305	0314	0310				C2.7		9.6E-04

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
20	0442	0457	0448				C3.8		2.4E-03
20	0640	0650	0644				C2.0		9.6E-04
20	1203	1211	1208				C4.5		1.3E-03
20	1229	1305	1245				C1.7		3.1E-03
20	1445	1500	1454				C1.1		9.1E-04
20	1628	1642	1633				C1.8		1.2E-03
20	1943	1954	1949				C1.8		9.2E-04
21	0054	0100	0058				B8.6		2.6E-04
21	0248	0254	0252				C1.0		3.1E-04
21	0527	0538	0531				C1.4		8.0E-04
21	1242	1252	1245				B8.0		4.4E-04
21	1820	1832	1826	S21	W83	SF	C1.1	8179	7.2E-04
22	0651	0708	0700	S28	E69	1N	M1.1	8185	7.1E-03
22	0829	0837	0833				C2.1		7.7E-04
22	1102	1111	1107	N21	E12	SF	C2.0	8183	9.3E-04
22	1457	1503	1500				C1.1		3.6E-04
22	1631	1638	1635	S28	E72	SF	C1.9	8185	6.1E-04
23	0239	0329	0309				M2.3		5.0E-02
24	0145	0203	0153				C2.3		1.9E-03
24	0433	0459	0447				C4.3		4.6E-03
24	0650	0719	0705				C1.3		2.0E-03
24	0745	0755	0750				C1.5		7.5E-04
24	1022	1217	1114				C8.0		4.2E-02
24	1833	1840	1837	S27	E41	SF	B9.6	8185	3.2E-04
25	1145	1154	1149	S29	E38	SF	C1.2	8185	5.4E-04
25	1231	1434	1325				C5.3		2.7E-02
26	0249	0304	0255				B5.7		4.6E-04
26	1246	1340	1259	S26	E19	2B	M1.8	8185	3.9E-02
27	0036	0127	0046				C1.0		2.8E-03
27	0545	0607	0553				B8.1		8.1E-04
27	1307	1339	1323	S25	W11	SF	C1.3		2.0E-03
27	1557	1608	1603	S28	W03	SF	C1.0	8185	5.8E-04
27	2149	2317	2227	S24	W03	3N	M2.4	8185	6.8E-02
28	0450	0455	0453				B5.4		1.2E-04
28	0703	0725	0717	N23	W63	SF	C4.9	8183	3.3E-03
28	0853	0907	0902				B4.4		3.1E-04
28	0925	0937	0930				B7.3		4.1E-04
28	1138	1151	1143	S26	W26		B5.7	8189	4.1E-04
28	1500	1509	1504				B3.9		1.9E-04
28	1612	1620	1616				B3.7		1.5E-04
28	1829	1841	1835				B5.2		3.0E-04
28	1950	2002	1957				C1.3		6.5E-04
28	2233	2244	2237				B3.4		2.0E-04
29	0635	0643	0638				B3.4		1.5E-04
29	1226	1235	1231				B4.0		1.9E-04
29	1721	1738	1730				B8.3		5.9E-04
30	1324	1330	1327				B4.0		1.3E-04
30	1405	1420	1409				B4.9		4.1E-04
30	1947	1955	1952				C1.4		5.3E-04
30	2345	2355	2351				C3.5		1.3E-03
31	0233	0329	0302	S23	E34	SF	C2.0	8190	4.4E-03
31	0358	0404	0401				C1.1		3.6E-04
31	0501	0511	0507				B8.9		4.5E-04
31	0532	0631	0558	S21	E50	SF	C1.4	8190	3.5E-03
31	0855	0916	0907				C1.1		1.1E-03
31	1329	1341	1334	S21	E44	SF	C1.0	8190	6.0E-04

# Preliminary GOES Satellite Daily X-Ray Background Apr 97 - Mar 98



Day	Apr 97	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 98	Feb	Mar
1	A1.4	A2.2	<A1.0	<A1.0	B2.3	B2.0	B1.4	B1.4	B2.7	B1.9	A5.6	B1.3
2	<A1.0	A4.0	<A1.0	A1.9	B1.4	B1.0	A9.7	A9.7	B2.8	B2.6	A6.6	B1.5
3	A1.0	A4.2	<A1.0	A1.3	B2.8	A9.4	B2.6	B2.6	B4.9	B4.7	A6.1	B2.2
4	A1.8	A3.6	<A1.0	<A1.0	B1.7	A8.9	C1.6	C1.6	B2.2	B1.4	A5.5	B3.6
5	A7.9	A2.2	<A1.0	<A1.0	B2.0	A5.3	B9.1	B9.1	B1.7	A9.4	A7.9	B6.3
6	A1.5	A2.5	<A1.0	A3.6	B2.3	A4.5	C1.0	C1.0	B1.7	A6.5	A3.6	B2.4
7	A1.1	A3.3	<A1.0	A3.0	B4.7	A4.6	B2.4	B2.4	B4.4	A5.0	A3.5	B2.6
8	A1.1	A3.6	<A1.0	A5.2	B3.5	A5.5	B2.2	B2.2	B1.5	A3.8	A4.5	B1.9
9	<A1.0	A1.5	A1.0	A8.8	B4.8	A4.4	B1.4	B1.4	B2.0	A2.9	A4.7	B1.6
10	<A1.0	A2.3	A1.0	B2.3	B3.3	A5.5	B1.1	B1.1	B1.8	A1.8	A5.7	B1.7
11	A1.1	A2.2	<A1.0	B2.5	B2.4	A3.9	B2.0	B2.0	B1.8	A1.9	A4.3	B1.2
12	A2.2	<A1.0	A1.4	A9.5	B2.2	A5.8	B2.5	B2.5	B2.1	B1.1	A6.6	B2.1
13	A1.2	A1.0	<A1.0	A6.6	B2.8	A8.2	B2.4	B2.4	B1.3	B2.5	A7.9	B1.4
14	A6.4	<A1.0	<A1.0	A7.2	B2.4	A7.9	B1.9	B1.9	B1.9	B1.3	B1.4	B2.5
15	A3.3	A1.2	<A1.0	A4.7	B4.1	A7.1	B2.3	B2.3	B1.6	B3.6	B3.7	B4.8
16	A1.3	<A1.0	A1.3	A5.7	B2.6	A8.6	B4.1	B4.1	B1.3	B2.0	B2.0	B6.1
17	A1.5	A1.1	<A1.0	A6.5	B2.2	B2.5	B2.6	B2.6	A7.5	B1.5	B2.5	B7.6
18	A2.5	<A1.0	<A1.0	A2.7	B3.6	A8.0	B1.3	B1.3	A5.7	B1.0	B1.4	B3.8
19	A3.2	<A1.0	A1.0	A2.1	B2.7	A6.5	A8.9	A8.9	B1.7	B1.0	B1.6	B4.0
20	A2.7	<A1.0	<A1.0	A1.6	B3.7	A8.1	B3.5	B3.5	B2.4	B1.0	B1.1	B5.7
21	B1.3	<A1.0	A5.5	A2.4	B2.3	A5.8	B1.2	B1.2	B2.2	A8.6	A8.6	B5.1
22	B1.5	<A1.0	A1.5	A5.5	B1.2	A7.2	B1.7	B1.7	B1.9	A7.4	A8.6	B7.5
23	A8.5	<A1.0	A2.6	A9.5	B1.2	A2.4	B2.1	B2.1	B2.4	B1.1	B2.4	C1.2
24	A7.8	<A1.0	A5.0	A6.6	B2.9	A2.0	B2.0	B2.0	B2.2	B1.4	B3.0	B5.6
25	A3.9	<A1.0	B1.2	A7.2	B1.7	A2.3	B3.6	B3.6	B1.6	B1.2	B1.8	B4.3
26	B1.1	A1.4	B1.3	B1.6	B1.0	A5.5	B4.3	B4.3	B2.1	B1.7	A8.0	B3.6
27	B1.5	A2.1	A5.0	A8.7	A7.8	A6.3	B3.9	B3.9	B1.6	B1.5	A5.6	B3.8
28	A8.4	A1.4	A4.2	B1.4	B1.7	A6.5	B6.6	B6.6	B1.4	A9.9	A7.5	B5.6
29	A4.8	A1.0	A5.6	B2.3	B1.0	A6.7	B5.0	B5.0	B1.4	A9.1		B2.5
30	A3.6	A5.7	A2.7	B8.6	B2.4	A8.6	B4.6	B4.6	B1.6	B1.2		B1.8
31	A2.0		A1.1	B1.6		A8.2			B1.5	A6.6		B4.6

ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	ASR	0243	0703D	S20	E79	03 7.1			4	4	E	LEAR		
01	AFS	0710E	1546	S18	W66	02 24.4		02	9	9	E	SVTO 8169		
01	AFS	0710E	1546	S23	W18	02 28.0		04	9	9	E	SVTO 8171		
01	AFS	0804E	1546	N17	W60	02 24.9		02	9	9	E	SVTO 8164		
01	ADF	1003E	1546	S50	E09	03 2.2	1	52	9	9	E	SVTO		
01	AFS	1125E	2100	S23	W17	02 28.2		02	7	7	E	RAMY 8171		
01	AFS	1126E	1435D	S25	W42	02 26.3		01	5	5	E	RAMY 8167		
01	AFS	1128E	1425D	N21	E12	03 2.4		01	5	5	E	RAMY 8172		
01	AFS	1129E	2020D	N17	W60	02 25.0		01	8	8	E	RAMY 8164		
01	BSD	1304	1323	S18	W68	02 24.5		04	9	9	E	RAMY 8169		Flare Associated
01	BSD	1307E	1321D	S16	W72	02 24.2		06	9	9	E	SVTO 8169		Flare Associated
01	AFS	1351E	0053	S23	W17	02 28.3		02	9	9	E	HOLL 8171		
01	DSD	1635	2020D	N23	E11	03 2.5		01	9	9	E	RAMY 8172		
01	BSD	1636	1642	S24	W18	02 28.3		02	5	6	E	RAMY 8171		
01	BSD	1656	1720	S21	W72	02 24.3		04	6	6	E	RAMY 8169		
01	ADF	1700E	2100	S26	W23	02 28.0		04	5	6	E	RAMY		
01	EPL	1859	1910	S26	W86	02 23.2	3		8	9	E	HOLL		
01	AFS	2343E	1027	N14	W70	02 24.8		01	9	9	E	LEAR 8164		
01	AFS	2343E	1027	N21	E03	03 2.2		01	9	7	E	LEAR 8172		
01	AFS	2343E	1027	S25	W24	02 28.1		02	9	9	E	LEAR 8171		
02	ADF	0325	1027	N24	E10	03 2.9	1	08	9	9	E	LEAR 8172		
02	AFS	0644E	1607	S23	W26	02 28.3		05	9	9	E	SVTO 8171		
02	AFS	0720E	1607	N18	W75	02 24.7		02	9	9	E	SVTO 8164		
02	ADF	0814E	1607	N25	E09	03 3.0	1	10	9	9	E	SVTO 8172		
02	ADF	1038E	1607	S45	W07	03 1.9	1	17	7	8	E	SVTO		
02	AFS	1202E	2134	S23	W31	02 28.1		01	6	6	E	RAMY 8171		
02	DSD	1204E	1720D	S24	W33	02 28.0		03	9	9	E	RAMY 8171		
02	DSD	1315E	1720D	S24	W33	02 26.5		01	8	7	E	RAMY 8167		
02	AFS	1445E	0043	S23	W32	02 28.1		02	9	9	E	HOLL 8171		
02	DSD	2030	2110D	S21	W41	02 27.8		04	8	9	E	HOLL 8171		Flare Associated
03	AFS	0223E	0917	S23	W38	02 28.2		03	9	9	E	LEAR 8171		
03	AFS	0601E	1605	S22	W42	02 28.0		04	9	9	E	SVTO 8171		
03	DSD	0758E	0945D	S23	W38	02 28.4		02	9	9	E	SVTO 8171		
03	AFS	1130E	2138	S22	W44	02 28.1		01	9	9	E	RAMY 8171		
03	DSD	1343	1415	S23	W43	02 28.2		02	9	9	E	RAMY 8171		Flare Associated
03	ASR	1348E	1925D	S18	W90	02 24.8			9	9	E	RAMY		
03	AFS	1400E	0056	S23	W45	02 28.1		02	9	9	E	HOLL 8171		
03	DSD	1415E	1455D	S24	W48	02 28.0		04	7	9	E	HOLL 8171		
03	APR	1430E	1825D	N15	W90	02 24.9			9	9	E	HOLL 8164		
04	AFS	0059E	0611	S24	W51	02 28.1		02	9	9	E	LEAR 8171		
04	DSD	0110	0239D	S24	W51	02 28.1		02	6	6	E	LEAR 8171		
04	BSD	0338	0348	S24	W51	02 28.2		02	0	0	E	LEAR 8171		
04	AFS	0625E	1613	S22	W54	02 28.1		03	9	9	E	SVTO 8171		
04	AFS	0913E	1613	N23	W27	03 2.3		02	7	7	E	SVTO 8172		
04	AFS	1059E	2149	S23	W54	02 28.3		02	9	9	E	RAMY 8171		
04	DSD	1110E	1309	N22	W27	03 2.4		03	9	9	E	RAMY 8172		
04	AFS	1110E	2149	N22	W26	03 2.5		01	9	9	E	RAMY 8172		
04	AFS	1407E	0003	N23	W29	03 2.3		01	5	8	E	HOLL 8172		
04	DSF	1456U	1951U	S52	W65	02 27.2	2	11	5	4	E	RAMY		
04	BSD	1502	1514	S25	W56	02 28.3		02	9	9	E	RAMY 8171		
04	DSD	1551	0003	S23	W60	02 28.0		05	9	9	E	HOLL 8171		
04	DSD	1551E	1630D	S25	W60	02 28.0		04	9	9	E	RAMY 8171		
04	BSD	1734	1750	S21	W63	02 28.0		04	0	0	E	HOLL 8171		
04	BSD	1735	1938D	S22	W64	02 27.9		09	9	9	E	RAMY 8171		Flare Associated
04	DSD	2014	2149	S24	W62	02 28.0		03	9	9	E	RAMY 8171		
04	AFS	2034	0003	S24	W62	02 28.1		02	9	9	E	HOLL 8171		
04	DSF	2103U	1520U	S40	W46	03 1.1	2	08	0	0	E	RAMY		
04	BSD	2253	0003	S23	W64	02 28.0		02	9	9	E	HOLL 8171		
04	AFS	2320E	1031	N21	W36	03 2.2		03	8	7	E	LEAR 8172		
04	AFS	2320E	1031	S24	W58	02 28.5		02	5	6	E	LEAR 8171		
05	AFS	0630E	1448	S20	W70	02 28.0		03	9	9	E	SVTO 8171		
05	AFS	0633E	1448	N24	W41	03 2.1		02	9	9	E	SVTO 8172		
05	BSD	0934E	0943D	S20	W76	02 27.7		03	9	9	E	SVTO 8171		
05	BSD	1122E	1230D	S22	W71	02 28.0		01	9	9	E	RAMY 8171		
05	BSD	1235E	1310D	S20	W75	02 27.9		09	9	9	E	SVTO 8171		
05	BSD	1255	1436D	S22	W71	02 28.1		01	9	9	E	RAMY 8171		

## ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
05	BSD	1506	1639D	S24	W74	02	28.0		01	9	9	E	RAMY	8171	Flare Associated
05	BSD	1635	1726D	S25	W76	02	27.9		06	5	6	E	RAMY	8171	
05	DSD	1701	1723	S27	W74	02	28.0		05	0	0	E	HOLL	8171	
05	EPL	1726E	1834	S52	W90	02	26.1	3		5	5	E	RAMY		
05	BSD	1823	1834	S25	W69	02	28.4		08	5	6	E	RAMY	8171	
05	AFS	2325E	1015	N21	W49	03	2.2		03	9	8	E	LEAR	8172	
06	BSD	0053	0105	S24	W76	02	28.2		02	9	9	E	LEAR	8171	
06	AFS	0221	1015	S16	E20	03	7.6		02	9	9	E	LEAR	8173	
06	ASR	0404E	1015	S29	E90	03	13.2			7	7	E	LEAR		
06	ADF	0745E	1015	S25	E81	03	12.6	1	04	8	5	E	LEAR		
06	AFS	0918E	1634	N26	W53	03	2.3		03	9	9	E	SVTO	8172	
06	BSD	0920E	1555D	S19	W86	02	27.9		03	9	9	E	SVTO	8171	
06	AFS	1202E	1732	N23	W56	03	2.2		02	6	9	E	RAMY	8172	
06	AFS	1309E	1732	S19	E56	03	10.8		01	9	9	E	RAMY		
06	ASR	1309E	1732	S22	W84	02	28.1			8	9	E	RAMY	8171	
06	APR	2155E	2242	S44	E90	03	14.3	1		3	3	E	HOLL		
07	AFS	1130E	1730	S19	E43	03	10.8		01	5	6	E	RAMY	8174	
07	ASR	1202E	1730	S22	W90	02	28.6			5	5	E	RAMY	8171	
07	AFS	1603E	1950	S20	E39	03	10.6		01	9	9	E	HOLL	8174	
07	BSD	1657E	1730	N22	W75	03	1.9		02	6	7	E	RAMY	8172	
07	AFS	2300E	0230D	S17	E40	03	11.0		02	9	9	E	LEAR	8174	
07	AFS	2300E	0611	S42	E71	03	13.8		02	9	9	E	LEAR	8176	
08	DSD	0356	0421	S40	E63	03	13.3		01	0	0	E	LEAR	8176	
08	DSD	0532	0606	S41	E66	03	13.6		01	9	9	E	LEAR	8176	
08	ASR	0546	0704	N22	W86	03	1.6			8	9	E	LEAR	8172	
08	AFS	0651	1020	S40	E63	03	13.4		02	8	8	E	LEAR	8176	
08	ASR	1112E	2119	N21	W90	03	1.6			9	9	E	RAMY	8172	
08	DSD	1113E	1328	S40	E58	03	13.2		01	9	9	E	RAMY	8176	
08	AFS	1125E	1657D	S34	W14	03	7.3		01	7	8	E	RAMY	8177	
08	AFS	1126E	2119	S43	E60	03	13.4		01	9	9	E	RAMY	8176	
08	AFS	1238E	1511	S47	E59	03	13.5		04	7	8	E	SVTO	8176	
08	AFS	1241E	1511	S32	W18	03	7.1		02	7	7	E	SVTO		
08	AFS	1445E	1550D	S33	W17	03	7.3		01	6	6	E	HOLL	8177	
08	AFS	1450E	0100	S43	E59	03	13.5		01	8	9	E	HOLL	8176	
08	ASR	1604E	0100	N26	W90	03	1.7			9	9	E	HOLL	8172	
08	AFS	2306E	0955	S41	E55	03	13.5		01	9	8	E	LEAR	8176	
08	ASR	2322E	0950	S26	E89	03	15.9			8	7	E	LEAR		
09	DSD	0258	0313	S18	E20	03	10.6		01	9	9	E	LEAR	8174	
09	DSF	0912U	2320U	S44	E19	03	10.9	2	14	0	0	E	LEAR		
09	AFS	1425E	2359	S19	E16	03	10.8		01	7	8	E	HOLL	8174	
09	AFS	1428E	2359	S42	E46	03	13.4		01	9	9	E	HOLL	8176	
09	DSF	2033U	1146U	S51	E06	03	10.4	2	08	0	0	E	RAMY		
09	AFS	2320E	1013	S41	E42	03	13.4		01	6	6	E	LEAR	8176	
09	DSD	2328	0012	S41	E42	03	13.4		02	8	9	E	LEAR	8176	
10	AFS	0104E	1013	S20	E08	03	10.6		02	5	4	E	LEAR	8174	
10	AFS	0626E	1541	S41	E35	03	13.1		06	9	9	E	SVTO	8176	
10	AFS	0825E	1517	S42	E22	03	12.1		02	9	9	E	SVTO	8176	
10	AFS	0931E	1541	S28	E70	03	15.9		05	9	9	E	SVTO		
10	AFS	0931E	1541	S34	E71	03	16.0		06	9	9	E	SVTO		
10	DSD	1034E	1136D	S18	E69	03	15.7		02	9	9	E	SVTO	8178	
10	AFS	1224E	2139	S40	E35	03	13.4		01	5	5	E	RAMY	8176	
10	AFS	1340E	0100	S43	E33	03	13.3		01	9	9	E	HOLL	8176	
10	DSD	1445E	1541	S40	E34	03	13.4		03	9	9	E	SVTO	8176	
10	AFS	2309E	1019	S18	W03	03	10.7		02	4	4	E	LEAR	8174	
10	AFS	2309E	1019	S39	E30	03	13.4		01	6	6	E	LEAR	8176	
11	DSD	0121	0153	S26	E68	03	16.3		01	6	6	E	LEAR	8179	
11	DSD	0207	0235	S42	E27	03	13.3		01	8	8	E	LEAR	8176	
11	AFS	0825E	1517	S42	E22	03	13.1		02	9	9	E	SVTO	8176	
11	DSD	1034E	1136D	S18	E69	03	16.7		02	9	9	E	SVTO	8178	
11	DSD	1304	1458D	S18	W09	03	10.8		03	9	9	E	RAMY	8174	
11	AFS	1339E	0101	S42	E19	03	13.1		01	3	7	E	HOLL	8176	
11	AFS	1420E	2031	S41	E22	03	13.4		01	6	5	E	RAMY	8176	
11	AFS	1705	0101	S32	E57	03	16.2		02	6	7	E	HOLL	8176	
11	DSD	1709E	2008D	S16	E63	03	16.5		02	9	9	E	RAMY	8178	

ACTIVE PROMINENCES AND FILAMENTS

MARCH 1998

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
12	AFS	0001E	0936	S40	E13	03 13.0		03	6	5	E	LEAR	8176	
12	AFS	0003E	0936	S31	E54	03 16.3		03	9	7	E	LEAR	8179	
12	AFS	0611E	1201	S42	E11	03 13.2		03	9	9	E	SVTO	8176	
12	AFS	0614E	1201	S24	E44	03 15.6		02	9	9	E	SVTO	8179	
12	ADF	0720E	1201	N44	E10	03 13.1	1	13	9	9	E	SVTO	8175	
12	AFS	1102E	2122	S40	E10	03 13.3		01	5	4	E	RAMY	8176	
12	ADF	1130E	2125D	S16	W22	03 10.8	1	07	8	7	E	RAMY	8174	
12	AFS	1338E	0100	S41	E07	03 13.1		02	9	8	E	HOLL	8176	
12	ADF	1628E	2122	S14	W24	03 10.9	1	04	9	9	E	RAMY	8174	
12	AFS	1628E	2122	S28	E47	03 16.3		01	7	4	E	RAMY	8180	
13	DSF	0030U	1403U	N22	E10	03 13.8	1	04	0	0	E	HOLL		
13	ADF	0100E	1017	S26	W24	03 11.2	1	16	6	5	E	LEAR	8174	
13	AFS	1144E	2219	S22	E28	03 15.6		01	7	7	E	RAMY	8179	
13	AFS	1337E	2319	S23	E25	03 15.5		02	9	9	E	HOLL	8179	
13	BSD	1930E	2125D	S18	W85	03 7.3		08	9	9	E	HOLL	8173	
13	ADF	2151E	2319	S24	E33	03 16.5	1	09	9	9	E	HOLL	8179	
13	AFS	2315E	1004	S23	E19	03 15.4		02	9	9	E	LEAR	8179	
14	ADF	0125E	0710	S53	W09	03 13.3	1	03	9	9	E	LEAR	8176	
14	ADF	0144E	0707	N20	E59	03 18.6	1	04	9	9	E	LEAR		
14	ASR	0310	1004	S16	W82	03 7.9			9	9	E	LEAR	8173	
14	ASR	0640E	1519D	S14	W90	03 7.5			9	9	E	SVTO	8173	
14	AFS	0641E	1600	S23	E16	03 15.5		03	9	9	E	SVTO	8179	
14	DSD	0741E	1129D	S21	E14	03 15.4		03	9	9	E	SVTO	8179	
14	AFS	1046E	1958	S22	E15	03 15.6		02	9	9	E	RAMY	8179	
14	AFS	1107E	1958	S40	W13	03 13.4		02	6	5	E	RAMY	8176	
14	ASR	1149E	1958	S18	W90	03 7.6			6	7	E	RAMY		
14	DSD	1159	1235	S22	E24	03 16.3		03	8	7	E	RAMY	8179	
14	AFS	1219E	1600	S40	W18	03 13.0		02	7	8	E	SVTO	8176	
14	AFS	1710E	2024	S23	E13	03 15.7		02	9	9	E	HOLL	8179	
14	DSD	1743E	1828D	S20	E10	03 15.5		02	9	9	E	RAMY	8179	
14	ASR	1750E	2024	S15	W90	03 7.9			9	9	E	HOLL		
14	AFS	1828E	1958	S20	E09	03 15.4		02	9	9	E	RAMY	8179	
14	BSD	1913E	1950D	S23	E15	03 15.9		03	9	9	E	RAMY	8179	
14	DSF	1958U	1047U	S55	W18	03 13.3		08	0	0	E	RAMY		
14	DSF	2158U	1629U	S55	W12	03 13.9	2	12	0	0	E	HOLL		
15	DSD	1108E	1344D	S39	W27	03 13.3		01	9	9	E	RAMY	8176	
15	AFS	1418E	1620	S20	E15	03 16.7		03	6	7	E	SVTO	8178	
15	DSD	1439	1633D	S44	W26	03 13.4		04	9	9	E	RAMY	8176	
15	AFS	1650E	0033	S22	E01	03 15.8		02	9	9	E	HOLL	8179	
15	DSF	1830U	1048U	S30	W34	03 13.1		04	0	0	E	RAMY		
16	AFS	0220E	1017	S21	E09	03 16.8		03	5	6	E	LEAR	8181	
16	AFS	0225E	1017	S21	W09	03 15.4		02	9	9	E	LEAR	8179	
16	DSD	0735	0752	S23	W08	03 15.7		01	7	9	E	LEAR	8179	
16	DSD	1123E	1145	N15	W59	03 12.0		01	7	8	E	RAMY		
16	DSD	1155E	1310D	S25	W16	03 15.2		04	9	9	E	SVTO	8179	Flare Associated
16	DSD	1159	1320	S20	W14	03 15.4		04	9	9	E	RAMY	8179	Flare Associated
16	AFS	1411E	2200	S23	W13	03 15.6		02	9	9	E	HOLL	8179	
16	DSD	1451	1630D	S39	W45	03 13.0		01	7	8	E	RAMY	8176	
16	DSD	1502	1537D	S20	W15	03 15.5		02	9	9	E	RAMY	8179	
16	ADF	1815E	2204	S25	W08	03 16.1	1	05	9	9	E	RAMY	8179	
16	DSF	2157U	1332U	S32	E43	03 20.3	2	22	0	0	E	HOLL	8179	
16	DSF	2204U	1147U	S31	E47	03 20.6	2	23	0	0	E	RAMY		
17	AFS	0159E	1014	S21	W20	03 15.5		02	6	5	E	LEAR	8179	
17	DSD	0545E	1557	S16	W25	03 15.3		04	9	9	E	SVTO	8179	
17	DSD	0641E	1056D	S18	W17	03 16.0		02	9	9	E	SVTO	8179	
17	AFS	1127E	2000	S23	W23	03 15.7		03	9	9	E	RAMY	8179	
17	DSF	1249U	1718U	S05	W27	03 15.5	2	06	0	0	E	RAMY		
17	DSD	1252E	2000	S18	W26	03 15.5		02	9	9	E	RAMY	8179	
17	AFS	1332E	0105	S25	W28	03 15.4		03	9	8	E	HOLL	8179	
17	DSD	1332E	0105	S28	W29	03 15.3		02	9	9	E	HOLL	8179	
17	AFS	1702E	2000	S24	W41	03 14.5		01	5	5	E	RAMY		
18	DSD	0056	0107	S21	W31	03 15.7		01	6	5	E	LEAR	8179	
18	DSD	0226	0234	S21	W34	03 15.5		01	7	8	E	LEAR	8179	

## ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
18	DSD	0300	0314	S22	W30	03 15.8		01	9	9	E	LEAR	8179	
18	DSD	0301	0312	S17	W35	03 15.5		01	5	5	E	LEAR	8179	
18	DSD	0333	0341	S19	W34	03 15.5		01	5	4	E	LEAR	8179	
18	AFS	1130E	1620D	S23	W51	03 14.5		01	6	5	E	RAMY	8182	
18	AFS	1130E	2034	N21	E65	03 23.5		01	7	7	E	RAMY	8183	
18	AFS	1420	2210	N22	E64	03 23.5		02	8	7	E	HOLL	8183	
18	AFS	1420	2210	S22	W38	03 15.7		03	9	9	E	HOLL	8179	
18	BSD	1436	1455D	N21	E64	03 23.5		05	9	9	E	RAMY	8183	Flare Associated
18	AFS	2315E	1021	N19	E58	03 23.4		02	9	9	E	LEAR	8183	
18	AFS	2315E	1021	S21	W58	03 14.5		03	5	7	E	LEAR	8182	
19	BSD	0117	0147D	N19	E58	03 23.5		07	9	9	E	LEAR	8183	
19	AFS	0300E	1021	S19	W47	03 15.5		03	4	3	E	LEAR	8179	
19	ADF	0630E	1541	S21	W48	03 15.6	1	04	9	9	E	SVTO	8179	
19	DSD	0630E	1541	S22	W40	03 16.2		02	9	9	E	SVTO	8179	
19	DSD	0634E	0701D	N20	E52	03 23.2		03	9	9	E	SVTO	8183	
19	AFS	0634E	1541	N20	E55	03 23.5		02	7	7	E	SVTO	8183	
19	ASR	0640E	0701D	N29	E90	03 26.3			9	9	E	SVTO		
19	ASR	1322E	2118	N31	E90	03 26.6			5	8	E	RAMY		
19	ASR	1949E	2118	S28	E90	03 26.8			8	9	E	RAMY		
19	DSF	2041U	1147U	S29	E65	03 24.9		10	0	0	E	RAMY		
19	AFS	2315E	0426	S21	W71	03 14.5		02	9	9	E	LEAR	8182	
19	ASR	2315E	0934	S30	E90	03 27.0			9	9	E	LEAR		
20	ADF	0015E	0420	N26	W15	03 18.8	1	07	9	9	E	LEAR		
20	ADF	0015E	0709	N15	E51	03 23.9	1	04	9	9	E	LEAR		
20	AFS	0713E	0934	N20	E41	03 23.4		01	6	5	E	LEAR	8183	
20	ASR	0820E	1218D	S16	E90	03 27.2			9	9	E	SVTO		
20	AFS	0822E	1541	N21	E41	03 23.5		04	9	9	E	SVTO	8183	
20	AFS	1021E	1541	S24	W63	03 15.6		04	6	7	E	SVTO	8179	
20	EPL	1217	1234	S26	E90	03 27.5			6	7	E	RAMY		
20	EPL	1218E	1235D	S27	E90	03 27.5			9	9	E	SVTO		
20	DSD	1235E	1541	S18	E90	03 27.4		07	9	9	E	SVTO		
20	AFS	1615E	0029	S21	E50	03 24.5		01	9	9	E	HOLL	8184	
20	ASR	1620E	0029	S28	E90	03 27.7			9	9	E	HOLL	8185	
20	AFS	2325E	0800D	N20	E34	03 23.6		01	8	6	E	LEAR	8183	
20	AFS	2325E	0933	S23	E44	03 24.4		02	9	7	E	LEAR	8184	
20	ASR	2325E	0933	S30	E85	03 27.7			9	8	E	LEAR	8185	
21	ASR	1116E	2209	S25	E90	03 28.4			7	5	E	RAMY	8185	
21	AFS	1117E	1958D	S21	E42	03 24.7		01	5	4	E	RAMY	8184	
21	AFS	1118E	1716D	N22	E28	03 23.6		01	7	8	E	RAMY	8183	
21	DSD	1120E	2209	S24	W88	03 14.7		01	6	5	E	RAMY	8182	
21	AFS	1313E	1323	N21	E26	03 23.5		03	9	9	E	SVTO	8183	
21	ASR	1321E	1323	S25	W90	03 14.6			9	9	E	SVTO	8185	
21	AFS	1716E	2209	S28	W67	03 16.5		01	0	0	E	RAMY	8180	
21	DSD	1739E	2209	N22	E25	03 23.6		02	9	9	E	RAMY	8183	
21	ASR	1831	1920D	S22	W90	03 14.8			9	9	E	HOLL	8179	
22	DSD	0119	0200	N21	E20	03 23.6		02	6	6	E	LEAR	8183	
22	BSD	0602E	0806D	S25	W74	03 16.5		04	7	7	E	SVTO	8179	
22	ASR	0619E	0648D	S18	W85	03 15.8			9	9	E	SVTO	8179	
22	ASR	0632E	0648D	S14	W90	03 15.5			8	7	E	SVTO	8178	
22	ASR	0915E	1421	S21	W90	03 15.5			7	7	E	SVTO	8179	
22	AFS	0920E	1421	N22	E14	03 23.5		03	9	9	E	SVTO	8183	
22	AFS	1102E	2152	N21	E12	03 23.4		01	9	9	E	RAMY	8183	
22	ASR	1102E	2152	S21	W90	03 15.5			7	8	E	RAMY	8179	
22	AFS	1112E	1408D	N11	W19	03 21.0		01	6	6	E	RAMY	8186	
22	ADF	1142E	1421	S25	E62	03 27.3	1	05	8	8	E	SVTO	8185	
22	ASR	1210E	1421	S15	W90	03 15.7			9	9	E	SVTO	8178	
22	DSF	1230U	1901U	N27	W34	03 19.9	2	07	0	0	E	RAMY		
22	DSD	1312E	1915D	S25	E64	03 27.5		02	9	9	E	RAMY	8185	
22	AFS	1325E	0110	N21	E10	03 23.3		02	9	9	E	HOLL	8183	
22	ASR	1325E	0110	S19	W90	03 15.7			7	6	E	HOLL	8179	
22	DSD	1418E	1653D	S18	E27	03 24.6		01	9	9	E	RAMY	8184	
22	DSD	1557	0110	S27	E60	03 27.3		02	8	9	E	HOLL	8185	
23	AFS	0056E	0938	N20	E06	03 23.5		02	6	6	E	LEAR	8183	
23	ASR	0300E	0938	S18	W89	03 16.3			9	9	E	LEAR	8178	
23	DSD	0314	0339	S29	E56	03 27.5		02	4	5	E	LEAR	8185	



ACTIVE PROMINENCES AND FILAMENTS

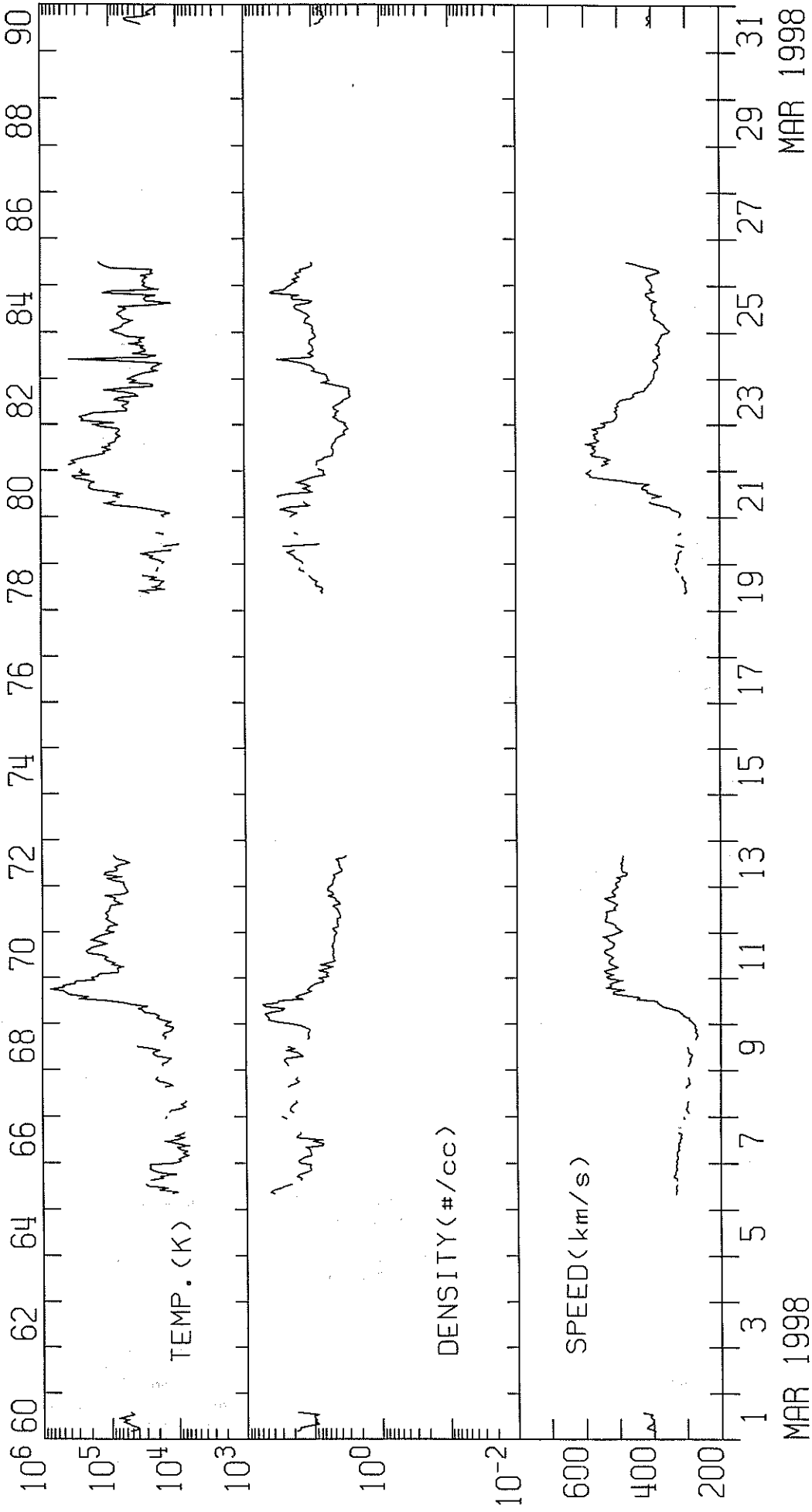
MARCH 1998

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP No	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
23	AFS	0355E	0938	S29	E58	03	27.7		02	8	6	E	LEAR	8185	
23	ASR	1121E	1623D	S22	W90	03	16.5			7	6	E	RAMY	8179	
23	AFS	1436E	0111	N22	W03	03	23.4		02	9	9	E	HOLL	8183	
23	AFS	1617E	2236	N22	W04	03	23.4		01	7	7	E	RAMY	8183	
23	DSD	1914E	1957D	S25	E50	03	27.7		02	6	6	E	RAMY	8185	
23	DSD	1935	0111	S26	E56	03	28.2		02	6	7	E	HOLL	8185	
24	AFS	0820E	1008	N22	W12	03	23.4		02	8	7	E	LEAR	8183	
24	AFS	0820E	1008	S28	E40	03	27.5		02	9	7	E	LEAR	8185	
24	ASR	1052E	1720D	N28	E90	03	31.5			9	9	E	RAMY		
24	AFS	1226E	2134	N22	W15	03	23.4		02	6	4	E	RAMY	8183	
24	BSD	1242	1348D	S22	E49	03	28.3		06	9	9	E	RAMY	8185	
24	AFS	1321E	0112	N21	W16	03	23.3		02	7	6	E	HOLL	8183	
24	LPS	1346E	1532	S32	W90	03	17.4			9	9	E	RAMY		
24	LPS	1400E	1614	S32	W90	03	17.4			9	9	E	HOLL		
24	DSF	1940U	1220U	S28	E42	03	28.1		10	0	0	E	RAMY	8185	
24	AFS	2319E	0112	S21	W08	03	24.3		02	9	9	E	HOLL	8184	
25	AFS	0020E	1008	S20	W09	03	24.3		03	9	9	E	LEAR	8184	
25	AFS	0020E	1008	S26	E41	03	28.2		01	7	9	E	LEAR	8185	
25	DSF	0112U	1320U	S29	E38	03	28.0		11	0	0	E	HOLL	8185	
25	ADF	0747	1008	S28	E35	03	28.0	1	14	9	9	E	LEAR	8185	
25	DSF	0957U	1320U	S35	E35	03	28.2	2	09	0	0	E	LEAR	8185	
25	DSD	2200E	0021	S27	E21	03	27.5		03	9	9	E	HOLL	8185	
26	ADF	0245E	0801	S20	E21	03	27.7	1	04	9	9	E	LEAR	8185	
26	ADF	0245E	0801	S21	W18	03	24.7	1	05	9	9	E	LEAR	8185	
26	DSD	1207E	1258D	S26	E02	03	26.7		01	9	9	E	RAMY		
26	BSD	1252	1323	S23	E15	03	27.7		02	9	9	E	RAMY	8185	Flare Associated
26	DSD	1604E	2115D	S27	E16	03	27.9		06	9	9	E	RAMY	8185	
26	DSD	1850E	2203D	S27	W03	03	26.5		03	9	9	E	HOLL		
27	AFS	0605E	1648	S24	W22	03	25.5		02	9	9	E	SVTO	8189	
27	AFS	0615E	1648	N28	E32	03	29.8		02	9	9	E	SVTO	8188	
27	AFS	0640E	1646	S25	W08	03	26.6		03	9	9	E	SVTO		
27	AFS	0640E	1648	N26	W64	03	22.3		03	9	9	E	SVTO	8183	
27	ASR	0648E	0940D	S27	E89	04	3.2			9	9	E	SVTO		
27	ADF	1125	1138	N31	W60	03	22.9	1	02	4	9	V	KHAR		
27	ASR	1629E	0114D	S23	E90	04	3.6			9	9	E	HOLL		
27	AFS	2310E	0530	N24	W58	03	23.5		02	9	9	E	LEAR	8143	
27	ADF	2335E	0529D	N21	W55	03	23.8		03	9	9	E	LEAR	8183	
28	ASR	0050	0720D	S24	E90	04	4.0			9	8	E	LEAR		
28	AFS	0605E	1648	S24	W22	03	26.5		02	9	9	E	SVTO	8189	
28	AFS	0615E	1648	N28	E32	03	30.8		02	9	9	E	SVTO	8188	
28	AFS	0640E	1648	N26	W64	03	23.3		03	9	9	E	SVTO	8183	
28	ASR	0648E	0940D	S27	E89	04	4.2			9	9	E	SVTO		
28	DSF	0933U	2038	N17	W20	03	26.9	2	27	0	0	E	LEAR		
28	DSF	1016U	0541	N19	W21	03	26.8	2	28	0	0	E	SVTO		
28	AFS	1316E	2356	N29	E25	03	30.5		02	9	9	E	HOLL	8188	
28	AFS	1316E	2356	S25	W04	03	28.2		03	9	9	E	HOLL	8185	
28	DSF	1826	2038	N19	W26	03	26.8	2	27	0	0	E	HOLL		
28	AFS	1826E	2205	N29	E24	03	30.6		01	5	6	E	RAMY	8188	
28	AFS	1827E	2205	S26	W27	03	26.7		01	5	5	E	RAMY	8189	
28	ASR	2004E	2110D	S23	E90	04	4.8			5	5	E	RAMY		
28	DSF	2205U	1056U	N30	E02	03	29.1	2	27	0	0	E	RAMY		
29	AFS	0230E	0955	N29	E16	03	30.3		03	9	9	E	LEAR	8188	
29	AFS	0230E	0955	S24	E79	04	4.2		02	9	9	E	LEAR		
29	DSD	0345	0502	S24	W33	03	26.6		02	6	5	E	LEAR	8189	
29	AFS	0437	0955	S24	W34	03	26.6		02	7	6	E	LEAR	8189	
29	ASR	0630E	0800D	N24	W90	03	22.3			9	9	E	SVTO	8183	
29	ASR	1123E	1843	N26	W90	03	22.5			8	9	E	RAMY	8183	
29	AFS	1127E	1649	S25	W41	03	26.3		03	9	9	E	SVTO	8189	
29	AFS	1127E	1649	S28	W35	03	26.7		02	9	9	E	SVTO	8189	
29	AFS	1131E	1528D	S27	W36	03	26.7		01	6	7	E	RAMY	8189	
29	DSD	1131E	1649D	S29	W32	03	27.0		01	9	9	E	RAMY	8189	
29	ASR	1200E	1217D	N29	W90	03	22.4			7	8	E	SVTO	8183	
29	DSD	1203E	1649	S27	W25	03	27.5		04	9	9	E	SVTO	8185	
29	DSD	1437E	1615D	S25	W23	03	27.8		01	9	9	E	RAMY	8185	



IMP 8 SOLAR WIND PLASMA  
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MIT/CSR IMP 8 PLASMA PARAMETERS



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IMP 8 MIT ONE-HOUR AVERAGES

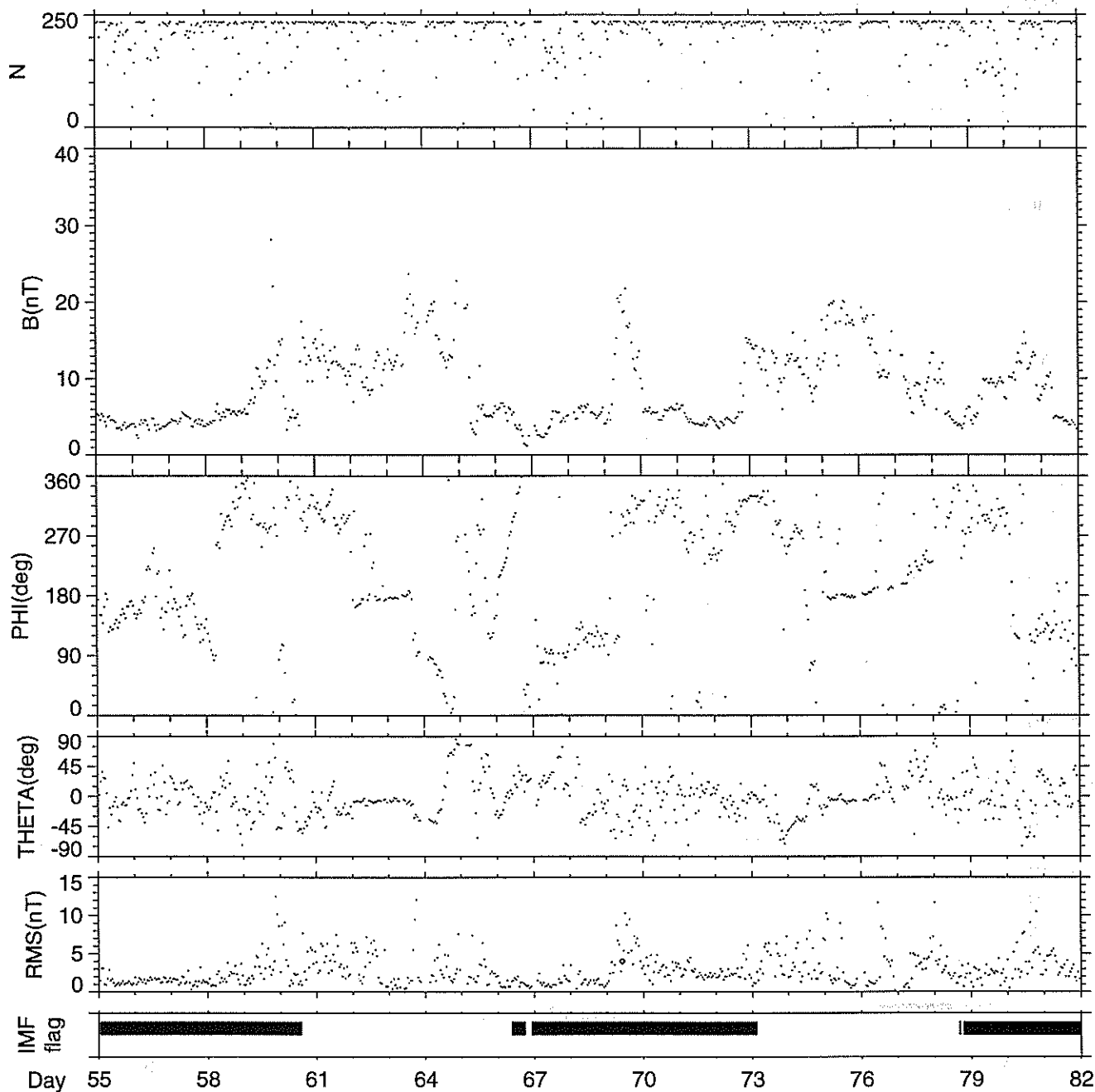
### IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 55 - 82

February 24 1998 -

March 23 1998



Generation Date : Wed Sep 16 09:52:13 1998

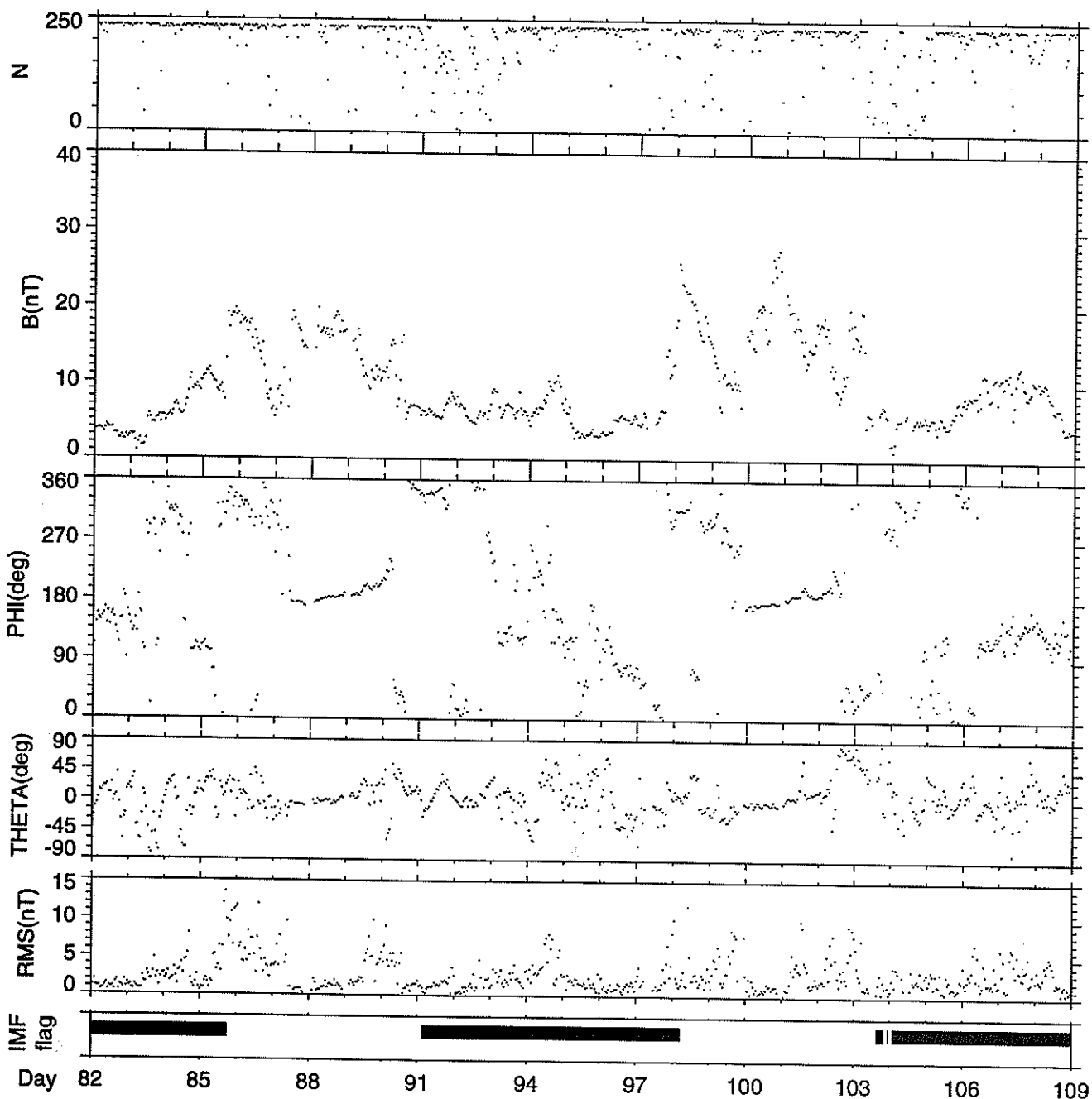
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

### IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 82 - 109

March 23 1998 - April 19 1998



Generation Date : Wed Sep 16 09:53:56 1998

NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.



# **WORLD DATA CENTER A**

## **FOR**

# **SOLAR-TERRESTRIAL PHYSICS**



The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."