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H α SOLAR FLARES

MARCH 1999

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																	Apparent (10-6 Disk)	Corr (Sq Deg)	
			01 0000		0028	No Flare Patrol													
0001	LEAR	01	0341	0345	0352	N29	W13	8471	02	28.1	11	SF		3	E		38		
0002	URUM	01	0439	0444	0451	N28	W17	8471	02	28.0	12	1N			C		209	2.8	E
0003	LEAR	01	0532	0535	0541	N28	W17	8471	02	28.0	9	SF		3	E		44		F
0004	LEAR	01	0541	0542	0550	N28	W17	8471	02	28.0	9	SF		3	E		30		F
0005	KANZ	01	1335	1335	1339	N27	W19	8471	02	28.1	4	SF		2	C				
0006		01	13327	13354	1352	N26	W21	8471	02	28.0	20	SF					44		
	RAMY	01	1332	1335	1354	N28	W19	8471	02	28.1	22	SF		3	E		44		
	KANZ	01	1339	1339	1351	N25	W23	8471	02	27.9	12	SF		2	C				
0007		01	14349	14376	1452	N30	E20	8475	03	3.2	18	SF					12		
	HOLL	01	1434	1437	1452	N30	E21	8475	03	3.2	18	SF		3	E		14		
	KANZ	01	1439	1439	1455	N29	E19	8475	03	3.1	16	SF		2	C				
	RAMY	01	1443	1443	1449	N30	E20	8475	03	3.2	6	SF		3	E		10		
0008	HOLL	01	1722	1724	1731	N31	E19	8475	03	3.2	9	SF		3	E		19		
0009	HOLL	01	1744	1749	1757	N31	E19	8475	03	3.2	13	SF		3	E		20		
0010	LEAR	02	0635	0635	0639	N29	W27	8471	02	28.1	4	SF		4	E		11		
0011	LEAR	02	0909	0916	0953	N17	W02	8476	03	2.2	44	SF		4	E		40		
0012	LEAR	02	0926	0928	0933	N29	W06	8472	03	1.9	7	SF		4	E		14		
			02 1026		1030	No Flare Patrol													
			02 1044		1052	No Flare Patrol													
			02 1054		1055	No Flare Patrol													
0013	RAMY	02	1209	1210	1234	N31	E11	8475	03	3.4	25	SN		3	E		85		
0014	RAMY	02	1242	1242	1255	N17	W03	8476	03	2.3	13	SF		3	E		14		
0015	RAMY	02	1324	1331	1343	N17	W03	8476	03	2.3	19	SF		3	E		36		
0016	RAMY	02	1332	1333	1337	N30	W04	8472	03	2.2	5	SF		3	E		10		
0017	RAMY	02	1345	1345	1354	N29	W32	8471	02	28.1	9	SF		3	E		32		
0018		02	14154	14173	1427	N29	E08	8475	03	3.2	12	SF					20		
	RAMY	02	1415	1417	1426	N29	E08	8475	03	3.2	11	SF		3	E		18		
	KANZ	02	1416	1420	1428	N29	E08	8475	03	3.2	12	SF		2	C				
	HOLL	02	1419	1420	1427	N30	E09	8475	03	3.3	8	SF		3	E		21		
0019	HOLL	02	1419	1530	1545	N17	W04	8476	03	2.3	86	SF		3	E		54		
0020	RAMY	02	1434	1446	1503	N31	E08	8475	03	3.2	29	SF		3	E		44		
0021	HOLL	02	1447	1450	1547	N29	W34	8471	02	28.0	60	SF		3	E		50		F
0022	RAMY	02	1450	1517	1552	N28	W37	8471	02	27.8	62	1F		3	E		100		F
0023	RAMY	02	1504	1512	1525	N31	E09	8475	03	3.3	21	SF		3	E		54		
0024	HOLL	02	1435	1512	1546	N30	E08	8475	03	3.2	71	SF		3	E		61		
0025	RAMY	02	1526	1534	1543	N30	E07	8475	03	3.2	17	SF		3	E		33		
0026		02	15491	1550	1556	N30	E08	8475	03	3.3	7	SF					30		
	RAMY	02	1549	1550	1557	N30	E07	8475	03	3.2	8	SF		3	E		36		
	HOLL	02	1550	1550	1556	N31	E08	8475	03	3.3	6	SF		3	E		23		

H α SOLAR FLARES

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	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)		
0027		02	1638	16401	1646	N28	W38	8471	02	27.8	8	SF						20		
	HOLL	02	1638	1640	1646	N28	W38	8471	02	27.8	8	SF		3	E			15		
	RAMY	02	1638	1641	1647	N27	W38	8471	02	27.8	9	SF		3	E			26		
0028	HOLL	02	1712	1712	1717	N31	E08	8475	03	3.3	5	SF		3	E			15		
0029	RAMY	02	1708	1734	1753	N32	E08	8475	03	3.3	45	SF		3	E			41		
0030	RAMY	02	1756	1757	1758	N29	E05	8475	03	3.1	2	SF		3	E			10		
0031	HOLL	02	1754	1754	1805	N18	W06	8476	03	2.3	11	SF		3	E			12		
0032	HOLL	02	1819	1820	1826	N29	W36	8471	02	28.0	7	SF		3	E			19		
0033	HOLL	02	2035	2036	2044	N30	E06	8475	03	3.3	9	SF		3	E			10		
0034	LEAR	03	0125	0126	0139	N27	W40	8471	02	28.0	14	SF		3	E			29	F	
0035		03	03349	0334*	0344	N28	W40	8471	02	28.0	10	SN						52	1.3	E
	LEAR	03	0334	0334	0340	N27	W41	8471	02	28.0	6	SF		3	E			23		
	MITK	03	0343	0344	0348	N29	W40	8471	02	28.0	5	SN				0344		81	1.3	E
0036	LEAR	03	0342	0343	0359	N27	W41	8471	02	28.0	17	SF		3	E			45	F	
0037	LEAR	03	0458	0459	0506	N16	W13	8476	03	2.2	8	SF		4	E			20		
0038	LEAR	03	0601	0602	0611	N16	W16	8476	03	2.0	10	SF		4	E			32		
0039	LEAR	03	0750	0751	0753	N18	W13	8476	03	2.3	3	SF		4	E			26		
		03	1030		1036	No Flare Patrol														
0040	RAMY	03	1322	1324	1331	N28	W50	8471	02	27.7	9	SF		3	E			29		
0041	RAMY	03	1348	1348	1354	N28	W50	8471	02	27.8	6	SF		3	E			21		
0042	HOLL	03	1413	1414	1420	N17	W17	8476	03	2.3	7	SF		3	E			25		
0043		03	15262	15272	1546	N17	W17	8476	03	2.3	20	SF						24		
	HOLL	03	1526	1527	1546	N17	W17	8476	03	2.3	20	SF		3	E			17		
	RAMY	03	1528	1529	1546	N17	W17	8476	03	2.3	18	SF		3	E			30		
0044		03	1536	1537	1546	N28	W51	8471	02	27.8	10	SF						19		
	HOLL	03	1536	1537	1546	N28	W51	8471	02	27.8	10	SF		3	E			19		
	RAMY	03	1536	1537	1547	N28	W51	8471	02	27.8	11	SF		3	E			19		
0045	HOLL	03	1601	1608	1625D	N29	W51	8471	02	27.8	24D	SF		3	E			18		
0046		03	16053	1609	1618	N17	W18	8476	03	2.3	13	SF						16		
	HOLL	03	1605	1609	1624D	N17	W17	8476	03	2.4	19D	SF		3	E			15		
	RAMY	03	1608	1609	1618	N17	W18	8476	03	2.3	10	SF		3	E			16		
0047	HOLL	03	1632	1632	1637	N28	W43	8471	02	28.3	5	SF		3	E			15		
0048	HOLL	03	1652	1652	1703	N18	W18	8476	03	2.3	11	SF		3	E			39		
0049	RAMY	03	1731	1731	1734	N17	W19	8476	03	2.3	3	SF		3	E			16		
0050	HOLL	03	1819	1820	1826	N29	W36	8471	02	28.9	7	SF		3	E			19		
0051	RAMY	03	1834	1835	1842	N17	W21	8476	03	2.2	8	SF		3	E			13		
0052	HOLL	03	1847	1855	1904	N18	W19	8476	03	2.3	17	SF		3	E			25		
0053	RAMY	03	1848	1850	1855	N28	W52	8471	02	27.8	7	SF		3	E			30		
0054	HOLL	03	2018	2020	2040	N17	W21	8476	03	2.2	22	SF		3	E			40		
0055	HOLL	03	2041	2045	2053	N17	W21	8476	03	2.3	12	SF		3	E			20		

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H α SOLAR FLARES

MARCH 1999

Grp #	Sta	Start Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/USAF		CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
								Region	Mo								Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0056		03	2336	2342	2404	N32	W04	8475	03	3.7	28	1F						124			
	LEAR	03	2336	2342	2342	N32	W05	8475	03	3.6	6D	SF			3	E		88			
	HOLL	03	2336	2343	2404	N33	W04	8475	03	3.7	28	1F			3	E		160			
0057	LEAR	04	0510	0514	0529	N32	W09	8475	03	3.5	19	SF			4	E		69			F
		04	1056		1059	No Flare Patrol															
0058	RAMY	04	1602	1609	1623	S25	E30	8477	03	7.0	21	SF			3	E		37			
0059	RAMY	04	1808	1808	1814	N31	W16	8475	03	3.5	6	SF			3	E		25			
		04	1930		2004	No Flare Patrol															
		04	2021		2032	No Flare Patrol															
		04	2101		2108	No Flare Patrol															
		04	2123		2338	No Flare Patrol															
		04	2347		2400	No Flare Patrol															
		05	0000		0000	No Flare Patrol															
		05	1012		1111	No Flare Patrol															
0060	RAMY	05	1727	1728	1736	S25	E18	8477	03	7.1	9	SF			4	E		13			
0061	RAMY	05	1834	1837	1844	S15	W66	8478	02	28.8	10	SF			4	E		14			
0062		05	1910	1916	2008	S25	E15	8477	03	7.0	58	1N						136			F
	RAMY	05	1910	1916	2023	S25	E16	8477	03	7.0	73	1N			4	E		131			F
	HOLL	05	1910	1917	2008	S25	E14	8477	03	6.9	58	1F			3	E		142			
0063	URUM	06	0350E	0350	0350D	N16	W66	8476	03	1.1	58	SB					P	32			D
0064	RAMY	06	1241	1241	1246	N30	W39	8475	03	3.5	5	SF			4	E		11			
0065	RAMY	06	1916	1917	1920	S17	W79	8478	02	28.8	4	SF			4	E		13			
0066	RAMY	06	1956	1956	2009	S29	E07	8477	03	7.4	13	SF			4	E		11			
0067	RAMY	06	2105	2111	2118	S29	E06	8477	03	7.3	13	SF			4	E		20			
0068	LEAR	06	2309	2326	2351	N30	W46	8475	03	3.3	42	SF			3	E		47			E
0069	LEAR	07	0356	0407	0427	S24	W03	8477	03	6.9	31	SF			3	E		70			E
		07	1038		1043	No Flare Patrol															
		07	1049		1059	No Flare Patrol															
		07	2121		2133	No Flare Patrol															
		07	2140		2204	No Flare Patrol															
		07	2256		2300	No Flare Patrol															
0070	URUM	08	0219	0223	0235	N20	W54		03	4.0	16	SF					C	48	0.9		E
0071	URUM	08	0424	0428	0456	N21	W57		03	3.8	32	SB					C	96	1.9		E
0072	URUM	08	0512	0516	0520	N24	W52		03	4.2	8	1N					C	161	2.9		D
0073	LEAR	08	0635	0635	0650	S24	E93	8484	03	15.4	15	SF			3	E		57			
		08	0937		0951	No Flare Patrol															
		08	1013		1019	No Flare Patrol															
		08	1025		1029	No Flare Patrol															
0074		08	1540	1542	1546	N22	E72	8485	03	14.2	6	SF						26			
	RAMY	08	1540	1542	1546	N22	E71	8485	03	14.1	6	SF			3	E		30			
	HOLL	08	1541	1542	1546	N22	E73	8485	03	14.3	5	SF			3	E		21			
0075	HOLL	09	0002	0005	0016	S19	W30	8483	03	6.7	14	SF			3	E		43			
0076	URUM	09	0242	0246	0249	N23	W65		03	4.1	7	SF					C	48			D
		09	1023		1341	No Flare Patrol															
		09	1522		1533	No Flare Patrol															

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
								Region	Mo Day						Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0102		11	08191	0824	0833	N16	E75	8487	03	17.0	14	SF				28		F
	LEAR	11	0819	0824	0833	N16	E74	8487	03	16.9	14	SF	3	E		28		F
	KANZ	11	0820	0824	0833	N15	E76	8487	03	17.1	13	SF	2	C				
0103		11	0824	08241	0829	S20	W69	8483	03	6.1	5	SF				30		F
	KANZ	11	0824	0824	0829	S21	W68	8483	03	6.1	5	SF	2	C				
	LEAR	11	0824	0825	0829	S20	W70	8483	03	6.0	5	SF	3	E		30		F
		11	0910		0955	No Flare Patrol												
0104	LEAR	11	0926	0936	0948D	N17	E71	8487	03	16.8	22D	SF	3	E		49		F
		11	1030		1047	No Flare Patrol												
0105	RAMY	11	1123E	1125U	1135D	N20	E33	8485	03	14.0	12D	SF	2	E		18		
0106	RAMY	11	1158	1159	1204	N15	E71	8487	03	16.9	6	SF	3	E		97		H
0107	RAMY	11	1207	1207	1214	N20	E33	8485	03	14.0	7	SF	3	E		23		
0108	RAMY	11	1312	1324	1335	N14	E71	8487	03	16.9	23	SF	3	E		70		FH
0109		11	1414	1414	1430	N14	E72	8487	03	17.0	16	SF				11		H
	RAMY	11	1414	1414	1430	N14	E71	8487	03	16.9	16	SF	3	E		11		H
	KANZ	11	1421E		1429	N15	E72	8487	03	17.0	8D	SF	2	C				
0110	KANZ	11	1421E		1437D	S33	E16	8482	03	12.9	16D	SF	2	C				E
0111	RAMY	11	1503	1503	1508	N14	E70	8487	03	16.9	5	SF	3	E		30		H
0112	RAMY	11	1532	1533	1538	S20	W68	8483	03	6.4	6	SF	3	E		16		
0113	RAMY	11	1544	1545	1548	N14	E70	8487	03	16.9	4	SF	3	E		18		
0114	RAMY	11	1620	1620	1626	S30	W57	8477	03	7.2	6	SF	3	E		11		
0115	RAMY	11	1658	1659	1710	S20	W71	8483	03	6.3	12	SF	4	E		25		
0116	RAMY	11	1716	1717	1722	S18	W70	8483	03	6.4	6	SN	4	E		91		H
0117	HOLL	11	1915	1918	1924	N17	E68	8487	03	17.0	9	SF	3	E		27		
0118	RAMY	11	1959E	2001	2003	S19	W77	8483	03	5.9	4D	SF	3	E		10		H
0119	HOLL	11	2032	2033	2037	N16	E64	8487	03	16.7	5	SF	3	E		86		
0120	HOLL	11	2255	2257	2303	N17	E63	8487	03	16.7	8	SF	3	E		17		
0121		11	23333	2336	2342	N16	E63	8487	03	16.7	9	SF				26		
	HOLL	11	2333	2336	2346	N16	E63	8487	03	16.7	13	SF	3	E		35		
	LEAR	11	2336	2336	2339	N15	E63	8487	03	16.7	3	SF	3	E		17		
0122		12	0005	00043	0013	N20	E24	8485	03	13.8	8	SF				26		
	HOLL	11	2355E	2404	2413	N19	E25	8485	03	13.9	18D	SF	2	E		36		
	LEAR	12	0005	0007	0013	N20	E24	8485	03	13.8	8	SF	3	E		17		
0123	LEAR	12	0009	0010	0016	N15	E66	8487	03	17.0	7	SF	3	E		24		
0124	LEAR	12	0643	0650	0654	N15	E59	8487	03	16.7	11	SF	3	E		28		H
0125	LEAR	12	0740	0754	0801	N15	E58	8487	03	16.7	21	SF	3	E		35		EH
0126	LEAR	12	0853	0856	0903	N15	E57	8487	03	16.7	10	SN	3	E		70		EH
0127	LEAR	12	0930	0931	0935	N15	E55	8487	03	16.5	5	SF	3	E		36		
		12	1010		1014	No Flare Patrol												
0128	KANZ	12	1015E	1019	1023	N14	E58	8487	03	16.8	8D	SN	2	C				

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/		CMP	Dur	Imp	Obs	Area Measurement			Remarks		
						Lat	CMD					Region	Mo	Day		(Min)	Opt
		12	1137		1142	No Flare Patrol											
0129		12	1235	12352	1240	N14	E56	8487	03	16.7	5	SF				35	
	KANZ	12	1235	1235	1239	N14	E56	8487	03	16.7	4	SF	2	C			
	RAMY	12	1235	1237	1241	N14	E57	8487	03	16.8	6	SF	3	E			35
0130		12	13221	13232	1328	N14	E56	8487	03	16.8	6	SF					16
	RAMY	12	1322	1325	1328	N14	E55	8487	03	16.7	6	SF	3	E			16
	KANZ	12	1323	1323	1327	N14	E56	8487	03	16.8	4	SF	2	C			
0131		12	13332	1335	1338	N14	E56	8487	03	16.8	5	SF					14
	RAMY	12	1333	1335	1336	N14	E57	8487	03	16.9	3	SF	3	E			14
	KANZ	12	1335	1335	1339	N14	E56	8487	03	16.8	4	SF	2	C			
0132		12	13271	13272	1332	N19	E16	8485	03	13.8	5	SF					17
	KANZ	12	1327	1327	1331	N19	E16	8485	03	13.8	4	SF	2	C			
	RAMY	12	1328	1329	1332	N19	E16	8485	03	13.8	4	SF	3	E			17
0133		12	14236	14272	1446	N14	E56	8487	03	16.8	23	SF					26
	KANZ	12	1423	1427	1447	N14	E56	8487	03	16.8	24	SF	2	C			
	RAMY	12	1423	1429	1438	N14	E56	8487	03	16.8	15	SF	3	E			18
	HOLL	12	1429	1429	1452	N15	E56	8487	03	16.8	23	SF	3	E			35
0134	RAMY	12	1439	1441	1442	N14	E55	8487	03	16.8	3	SF	3	E			19
0135	RAMY	12	1443	1443	1446	N14	E55	8487	03	16.8	3	SF	3	E			16
0136	KANZ	12	1459	1507	1523	N14	E56	8487	03	16.8	24	SF	2	C			
0137		12	1457*	15391	1547	N14	E56	8487	03	16.8	50	SF					19
	HOLL	12	1457	1540	1551	N14	E55	8487	03	16.8	54	SF	3	E			24
	RAMY	12	1539	1539	1542	N14	E56	8487	03	16.9	3	SF	3	E			14
	KANZ	12	1539	1539	1547	N15	E56	8487	03	16.9	8	SF	2	C			
0138	RAMY	12	1543	1543	1546	N14	E55	8487	03	16.8	3	SF	3	E			12
0139		12	15483	15532	1611	N21	E20	8485	03	14.2	23	SF					44
	HOLL	12	1548	1553	1616	N21	E19	8485	03	14.1	28	SF	3	E			54
	RAMY	12	1550	1553	1615	N21	E19	8485	03	14.1	25	SF	4	E			35
	KANZ	12	1551	1555	1603	N21	E21	8485	03	14.3	12	SF	2	C			
0140	KANZ	12	1559	1603	1611	N19	E15	8485	03	13.8	12	SF	2	C			
0141	KANZ	12	1603	1607	1619	N14	E53	8487	03	16.7	16	SF	2	C			
0142		12	16341	1636	1640	N19	E14	8485	03	13.7	6	SF					22
	RAMY	12	1634	1636	1639	N19	E15	8485	03	13.8	5	SF	4	E			17
	HOLL	12	1634	1636	1640	N19	E14	8485	03	13.7	6	SF	3	E			27
	KANZ	12	1635		1635D	N20	E13	8485	03	13.7	6D	SF	2	C			
0143		12	17181	17271	1746	N14	E54	8487	03	16.8	28	2B					258
	HOLL	12	1718	1728	1749	N14	E54	8487	03	16.8	31	2N	3	E			288
	RAMY	12	1719	1727	1743	N14	E55	8487	03	16.9	24	1B	4	E			228
0144		12	17511	1752	1758	N19	E14	8485	03	13.8	7	SF					17
	HOLL	12	1751	1752	1757	N19	E14	8485	03	13.8	6	SF	3	E			16
	RAMY	12	1752	1752	1759	N19	E14	8485	03	13.8	7	SF	4	E			18
0145	RAMY	12	1822	1827	1831	N19	E13	8485	03	13.7	9	SF	4	E			17
0146	HOLL	12	1839	1841	1844	N16	E53	8487	03	16.8	5	SF	3	E			18
0147		12	1939	19406	1950	N16	E52	8487	03	16.8	11	SF					40
	HOLL	12	1939	1940	1949	N17	E52	8487	03	16.8	10	SF	3	E			52
	RAMY	12	1939	1946	1950	N15	E53	8487	03	16.8	11	SF	3	E			28
0148		12	2037	2037	2047	N15	E52	8487	03	16.8	10	1N					111
	RAMY	12	2037	2037	2047	N13	E52	8487	03	16.8	10	1B	3	E			121
	HOLL	12	2039E	2039U	2040D	N17	E51	8487	03	16.7	1D	1F	2	E			101

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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	Time (UT)	Area Measurement		Remarks	
																Apparent (10-6 Disk)	Corr (Sq Deg)		
			12 2131		2138		No Flare Patrol												
0149			12 2157	2159	2207	N14 E54	8487	03	17.0	10	SF					20		F	
	RAMY		12 2156E	2158U	2206	N13 E54	8487	03	17.0	10D	SF		2	E		15			
	HOLL		12 2157	2159	2208	N14 E53	8487	03	16.9	11	SF		3	E		26		F	
0150	HOLL		12 2227	2227	2231	N19 E11	8485	03	13.8	4	SF		3	E		25			
0151			12 2321	23215	2332	N16 E50	8487	03	16.8	11	SF					32			
	HOLL		12 2321	2321	2330	N16 E50	8487	03	16.8	9	SF		3	E		54			
	LEAR		12 2321	2326	2335	N16 E50	8487	03	16.8	14	SF		3	E		11			
0152			12 23381	2340	2402	N16 E50	8487	03	16.8	24	SF					34		F	
	LEAR		12 2338	2340	2402	N17 E51	8487	03	16.9	24	SF		4	E		30		F	
	HOLL		12 2339	2342U	2344D	N16 E50	8487	03	16.8	5D	SF		2	E		39			
0153	URUM		13 0246E	0246	0246D	N20 W62		03	8.4	5D	1B			P		113		EG	
0154	URUM		13 0303E	0303	0303D	N24 W66		03	8.0	5D	1F			P		80		E	
0155	LEAR		13 0338	0339	0343	N15 E49	8487	03	16.9	5	SF		3	E		20			
0156	LEAR		13 0428	0430	0439	N17 E48	8487	03	16.8	11	SF		3	E		19			
0157	LEAR		13 0501	0502	0505	N15 E47	8487	03	16.8	4	SF		3	E		16			
0158	LEAR		13 0510	0525	0535	N17 E50	8487	03	17.0	25	SF		3	E		46		F	
0159	LEAR		13 0536	0545	0551	N17 E48	8487	03	16.9	15	SF		3	E		15		F	
0160	LEAR		13 0551	0557	0613	N17 E48	8487	03	16.9	22	SF		3	E		17		F	
0161	KANZ		13 0812E		0812	N13 E44	8487	03	16.7	22D	SF		2	C					
0162	KANZ		13 0908	0908	0912	N18 E05	8485	03	13.8	4	SF		2	C					
0163	KANZ		13 1052	1052	1112	N21 E10	8485	03	14.2	20	SN		2	C					
0164			13 1120	1120	1132	N16 E48	8487	03	17.1	12	SF					31			
	KANZ		13 1120	1120	1132	N16 E48	8487	03	17.1	12	SF		2	C					
	RAMY		13 1120E	1121U	1137D	N15 E47	8487	03	17.0	17D	SF		2	E		31			
0165	HOLL		13 1420	1424	1429	N17 E43	8487	03	16.9	9	SF		3	E		19		F	
0166	HOLL		13 1430	1435	1439	N17 E43	8487	03	16.9	9	SF		3	E		26			
0167	HOLL		13 1519	1522	1527	N17 E42	8487	03	16.8	8	SF		3	E		13		F	
0168	HOLL		13 1537	1541	1551	N17 E42	8487	03	16.8	14	SF		3	E		21		F	
0169	RAMY		13 1634	1637	1643	N22 E02	8485	03	13.8	9	SF		3	E		11		F	
0170			13 16552	1712	1720	N22 E02	8485	03	13.8	25	SF					26		F	
	RAMY		13 1655	1712	1722	N22 E02	8485	03	13.8	27	SF		3	E		28			
	HOLL		13 1657	1712	1719	N23 E02	8485	03	13.9	22	SF		3	E		24		F	
0171			13 17311	1734	1738	N16 E42	8487	03	16.9	7	SF					20		F	
	HOLL		13 1731	1734	1739	N16 E42	8487	03	16.9	8	SF		3	E		26		F	
	RAMY		13 1732	1734	1738	N15 E43	8487	03	17.0	6	SF		3	E		15			
0172	RAMY		13 1853	1854	1913	N24 E01	8485	03	13.9	20	SF		3	E		20			
0173			13 19518	1951*	2002	N16 E40	8487	03	16.9	11	SF					18		F	
	RAMY		13 1951	1951	1958	N15 E39	8487	03	16.8	7	SF		3	E		25			
	HOLL		13 1959	2002	2007	N17 E40	8487	03	16.9	8	SF		3	E		12		F	
0174	HOLL		13 2018	2018	2023	N17 E39	8487	03	16.8	5	SF		3	E		16		F	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/		CMP	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks	
						Region	Mo								Apparent (10-6 Disk)	Corr (Sq Deg)		
0175		13	20231	20289	2112	N16	E40	8487	03	16.9	49	1N			124		E	
	HOLL	13	2023	2037	2112	N17	E41	8487	03	17.0	49	1N			141			
	RAMY	13	2024	2028	2122D	N14	E40	8487	03	16.9	58D	1N			107		E	
0176	LEAR	14	0113	0113	0118	N21	W01	8485	03	14.0	5	SF		4	E	15		E
0177	LEAR	14	0122	0125	0156	N15	E39	8487	03	17.0	34	1N		4	E	101		FZ
0178	LEAR	14	0156	0158	0201	N23	W01	8485	03	14.0	5	SF		4	E	12		
0179	LEAR	14	0216	0216	0226	N21	E00	8485	03	14.1	10	SF		4	E	21		
0180	LEAR	14	0248	0250	0302	N24	W03	8485	03	13.9	14	SF		4	E	27		E
0181	LEAR	14	0407	0412	0426	N21	W03	8485	03	13.9	19	SF		4	E	25		E
0182	LEAR	14	0427	0439	0443	N24	W02	8485	03	14.0	16	SF		3	E	10		
0183	LEAR	14	0608	0610	0623	N25	W05	8485	03	13.9	15	SF		4	E	28		E
0184		14	09102	0916	1022	N16	E34	8487	03	17.0	72	SF			83		E	
	LEAR	14	0910	0916	1023D	N16	E34	8487	03	17.0	73D	SF		3	E	83		E
	KANZ	14	0912	0916	1022	N15	E33	8487	03	16.9	70	SF		2	C			
0185	KANZ	14	0916	0916	0920D	N14	E29	8487	03	16.6	4D	SF		2	C			
		14	1031		1106	No Flare Patrol												
		14	1116		1128	No Flare Patrol												
0186	RAMY	14	1258	1301	1310	N22	W08	8485	03	13.9	12	SF		3	E	16		
0187		14	13421	13452	1434	N15	E30	8487	03	16.8	52	SN			86		F	
	HOLL	14	1336E	1336U	1450	N17	E29	8487	03	16.8	74D	SN		3	E	89		F
	RAMY	14	1342	1345	1418	N15	E30	8487	03	16.8	36	SN		3	E	83		
	KANZ	14	1343	1347	1416D	N14	E30	8487	03	16.8	33D	SN		2	C			
0188	HOLL	14	1458	1501	1508	N21	W11	8485	03	13.8	10	SF		3	E	22		
0189	HOLL	14	1555	1555	1601	N21	W09	8485	03	14.0	6	SF		3	E	10		
0190		14	16061	16071	1618	N21	W11	8485	03	13.8	12	SF			29			
	HOLL	14	1606	1607	1619	N21	W11	8485	03	13.8	13	SF		3	E	36		
	RAMY	14	1607	1608	1617	N21	W11	8485	03	13.8	10	SF		3	E	22		
0191	LEAR	15	0322	0335	0410	N16	E26	8487	03	17.1	48	1N		3	E	176		FU
0192	LEAR	15	0338	0340	0342	N22	W17	8485	03	13.8	4	SF		3	E	13		
0193	LEAR	15	0348	0351	0359	N22	W16	8485	03	13.9	11	SF		3	E	45		F
0194	LEAR	15	0705	0705	0725	N17	E19	8487	03	16.7	20	SF		3	E	10		
0195	KANZ	15	0714E		0742	N19	E26	8487	03	17.3	28D	SF		2	C			E
0196		15	0823	08232	0828	N19	W20	8485	03	13.8	5	SF			26			
	KANZ	15	0823	0823	0827	N19	W20	8485	03	13.8	4	SF		2	C			
	LEAR	15	0823	0825	0829	N19	W20	8485	03	13.8	6	SF		3	E	26		
0197		15	08313	0835	0839	N21	W19	8485	03	13.9	8	SF			12			
	KANZ	15	0831	0835	0839	N19	W20	8485	03	13.8	8	SF		2	C			
	LEAR	15	0834	0835	0839	N23	W18	8485	03	14.0	5	SF		3	E	12		
0198	RAMY	15	1118E	1124U	1144	N22	W20	8485	03	13.9	26D	SF		3	E	30		F
		15	1409		1458	No Flare Patrol												
0199	HOLL	15	1514	1514	1520	N23	W23	8485	03	13.9	6	SF		3	E	11		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/		CMP	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks	
						Lat	Region							Mo	Day		Time (UT)
0200		15	1647	1647	1704	N22 W23	8485	03	13.9	17	1F				102		EF
	HOLL	15	1647	1647	1703	N23 W22	8485	03	14.0	16	SF	3	E		88		
	RAMY	15	1647	1647	1704	N21 W24	8485	03	13.8	17	1F	3	E		117		FE
0201	HOLL	15	1750	1752	1755	N23 W25	8485	03	13.8	5	SF	3	E		13		
0202	RAMY	15	1816	1818	1821	N15 E14	8487	03	16.8	5	SF	3	E		12		
0203	RAMY	15	1840	1841	1848	N15 E15	8487	03	16.9	8	SF	3	E		12		
0204	RAMY	15	1913	1916	1918	N15 E14	8487	03	16.9	5	SF	3	E		10		
		15	2010		2028	No Flare Patrol											
		15	2123		2131	No Flare Patrol											
		15	2143		2252	No Flare Patrol											
0205	LEAR	15	2320	2322	2325	N19 W28	8485	03	13.8	5	SF	3	E		52		
		16	0113		0248	No Flare Patrol											
0206		16	06261	06281	0702	N22 W30	8485	03	14.0	36	1N				214	3.5	EF
	LEAR	16	0626	0628	0726	N22 W31	8485	03	13.9	60	1F	3	E		169		F
	MITK	16	0627	0629	0638	N22 W30	8485	03	14.0	11	1B			0629	259	3.5	E
0207	URUM	16	0719E	0720	0732	N22 W29	8485	03	14.1	13D	2N		C		723	9.9	E
0208	LEAR	16	0819	0823	0828	N15 E10	8487	03	17.1	9	SF	3	E		13		F
0209	LEAR	16	0936	0942	1002	N23 W28	8485	03	14.2	26	SF	2	E		38		
		16	1023		1122	No Flare Patrol											
0210		16	1324	13282	1346	N22 W32	8485	03	14.1	22	SF				35		
	RAMY	16	1324	1328	1346	N21 W33	8485	03	14.0	22	SF	3	E		35		
	KANZ	16	1326E	1330	1338D	N22 W31	8485	03	14.2	12D	SF	2	C				
0211	RAMY	16	1417	1419	1437	N21 W34	8485	03	14.0	20	SF	3	E		24		
0212	RAMY	16	1431	1433	1442	N15 E06	8487	03	17.0	11	SF	3	E		28		F
0213	HOLL	16	1456	1456	1506	N23 W34	8485	03	14.0	10	SF	3	E		21		
0214	KANZ	16	1547	1547	1551	N17 E03	8487	03	16.9	4	SF	2	C				
0215	HOLL	16	1547	1550	1554	N17 E03	8487	03	16.9	7	SF	3	E		25		
0216	RAMY	16	1548	1549	1553	N17 E03	8487	03	16.9	5	SF	3	E		22		
0217	RAMY	16	1608	1608	1612	N25 W42	8485	03	13.4	4	SF	3	E		29		FH
0218	RAMY	16	1647	1648	1654	N17 E03	8487	03	16.9	7	SF	3	E		17		
0219	RAMY	16	1653	1658	1708	N24 W39	8485	03	13.7	15	SF	3	E		14		
0220		16	17083	17111	1723	N22 W36	8485	03	13.9	15	SF				37		FH
	RAMY	16	1708	1711	1727	N21 W36	8485	03	13.9	19	SF	3	E		42		FH
	HOLL	16	1711	1712	1719	N22 W37	8485	03	13.9	8	SF	3	E		32		
0221		16	17463	17531	1757	N17 E02	8487	03	16.9	11	SF				14		
	RAMY	16	1746	1754	1758	N16 E02	8487	03	16.9	12	SF	3	E		12		
	HOLL	16	1749	1753	1756	N18 E02	8487	03	16.9	7	SF	3	E		15		
0222		16	18243	1837*	1845	N22 W37	8485	03	13.9	21	SF				40		FH
	RAMY	16	1824	1902	2039D	N22 W37	8485	03	13.9	135D	SF	3	E		67		FH
	HOLL	16	1827	1837	1845	N22 W37	8485	03	13.9	18	SF	3	E		14		
0223	HOLL	16	1859	1916	1936	N22 W38	8485	03	13.9	37	SF	3	E		74		
0224	HOLL	16	2010	2012	2033	N20 W40	8485	03	13.8	23	SF	3	E		28		

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MARCH 1999

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)	
0225	RAMY	16	2051E	2052U	2059	N22 W38	8485	03	13.9	80	SF	3	E		53		F
0226	RAMY	16	2102	2110	2132D	N23 W36	8485	03	14.1	30D	1N	3	E		165		FU
0227	HOLL	16	2104	2144	2221	N23 W39	8485	03	13.9	77	2N	3	E		268		
0228	LEAR	17	0342	0342	0347	N22 W47	8485	03	13.5	5	SF	4	E		11		
0229	LEAR	17	0358	0359	0405	N22 W41	8485	03	14.0	7	SF	4	E		19		F
0230	LEAR	17	0426	0427	0430	N22 W41	8485	03	14.0	4	SF	3	E		22		
0231	LEAR	17	0456	0456	0503	N22 W41	8485	03	14.0	7	SF	3	E		24		
		17	0959		1006	No Flare Patrol											
0232	SVTO	17	1007	1022	1041	N23 W45	8485	03	13.9	34	2N	3	E		507		
		17	1014		1029	No Flare Patrol											
0233	SVTO	17	1035	1037	1059	N16 W07	8487	03	16.9	24	SF	2	E		32		
0234		17	11348	11431	1207	N24 W44	8485	03	14.1	33	SF				42		F
	SVTO	17	1134	1144	1207	N25 W43	8485	03	14.1	33	SF	3	E		61		F
	RAMY	17	1142	1143	1207	N22 W46	8485	03	13.9	25	SF	3	E		23		F
0235		17	1210	1212	1241	N23 W45	8485	03	14.0	31	SF				34		F
	RAMY	17	1210	1212	1233	N23 W44	8485	03	14.1	23	SF	3	E		31		
	SVTO	17	1210	1212	1249	N23 W46	8485	03	14.0	39	SF	3	E		36		F
0236	RAMY	17	1234	1236	1252	N24 W44	8485	03	14.1	18	SF	3	E		11		
0237	RAMY	17	1357	1405	1417	N25 W50	8485	03	13.7	20	SF	3	E		40		
0238	RAMY	17	1422	1430	1432	N21 W49	8485	03	13.8	10	SF	4	E		11		F
0239	RAMY	17	1445	1446	1526	N23 W46	8485	03	14.1	41	SN	4	E		92		F
		17	1804		1825	No Flare Patrol											
		17	2013		2017	No Flare Patrol											
0240	RAMY	17	2041E	2041U	2050	N22 W50	8485	03	14.0	90	SF	2	E		17		
		17	2128		2400	No Flare Patrol											
		18	0000		0029	No Flare Patrol											
0241	URUM	18	0401	0405	0413	N22 W53	8485	03	14.1	12	1F		C		161	3.2	E
0242	URUM	18	0522E	0522	0534	N23 W52	8485	03	14.2	120	SN		P		80	1.6	E
0243	KANZ	18	0815	0815	0819	N23 W54	8485	03	14.2	4	SF	2	C				
0244	KANZ	18	0831	0831	0839	N22 W53	8485	03	14.3	8	SN	2	C				
		18	0849		0854	No Flare Patrol											
		18	0856		0917	No Flare Patrol											
		18	0919		1043	No Flare Patrol											
0245		18	12583	13137	1336	N26 W70	8485	03	13.1	38	1F				120		H
	RAMY	18	1258	1320	1339	N26 W70	8485	03	13.1	41	1F	4	E		120		H
	KANZ	18	1301	1313	1334	N25 W69	8485	03	13.2	33	1F	2	C				
0246	KANZ	18	1326	1326	1330	S25 E33	8494	03	21.1	4	SF	2	C				
0247		18	14113	14141	1442	N26 W72	8485	03	13.0	31	1N				170		FH
	RAMY	18	1411	1415	1441	N27 W74	8485	03	12.8	30	1N	4	E		170		FH
	KANZ	18	1414	1414	1442	N26 W69	8485	03	13.2	28	SF	2	C				

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	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)			
0248		18	15575	15584	1618	N24	W57	8485	03	14.3	21	SF							13		
	RAMY	18	1557	1558	1623	N24	W58	8485	03	14.2	26	SF	3	E					13		
	KANZ	18	1602	1602	1614	N24	W56	8485	03	14.3	12	SF	2	C							
0249	RAMY	18	1741	1744	1756	N23	W62	8485	03	13.9	15	SF	3	E						57	
0250	RAMY	18	1825	1829	1849	N24	W62	8485	03	14.0	24	SF	3	E						48	
		18	2046		2400	No Flare Patrol															
		19	0000		0034	No Flare Patrol															
		19	0106		0315	No Flare Patrol															
		19	0534		0615	No Flare Patrol															
		19	0625		0707	No Flare Patrol															
0251	KANZ	19	0732	0736	0740	N23	W67	8485	03	14.1	8	SF	2	C							
0252	HOLL	19	2009	2010	2014	S12	W02	8496	03	19.7	5	SF	3	E						20	
0253		19	2112	21121	2120	N20	W22	8493	03	18.2	8	SF								22	
	HOLL	19	2112	2112	2116	N20	W21	8493	03	18.3	4	SF	3	E						19	
	RAMY	19	2112	2113	2125	N20	W22	8493	03	18.2	13	SF	3	E						25	
0254	HOLL	19	2328	2330	2336	N20	W22	8493	03	18.3	8	SF	3	E						81	
		20	0106		0220	No Flare Patrol															
		20	0732		0733	No Flare Patrol															
		20	0807		0812	No Flare Patrol															
		20	0814		0819	No Flare Patrol															
		20	0825		0834	No Flare Patrol															
		20	0846		0852	No Flare Patrol															
		20	0906		0912	No Flare Patrol															
		20	0941		1043	No Flare Patrol															
		21	0109		0659	No Flare Patrol															
0255	LEAR	21	0357	0403	0438	N25	W26	8419	03	19.1	41	SF	4	E						21	
		21	0717		0912	No Flare Patrol															
		21	0957		1043	No Flare Patrol															
		21	1049		1100	No Flare Patrol															
0256	LEAR	22	0233	0317	0328	N25	W26	8419	03	20.1	55	SF	3	E						20	
0257	LEAR	22	0446	0506	0520	N25	W27	8419	03	20.1	34	SF	4	E						17	
		23	0727		1040	No Flare Patrol															
		23	1043		1123	No Flare Patrol															
		23	1127		1221	No Flare Patrol															
		23	1223		1229	No Flare Patrol															
		23	1231		1237	No Flare Patrol															
		23	1243		1323	No Flare Patrol															
0258	URUM	24	0130E	0130	0130D	N07	W80		03	18.1	34D	1N		P						161	
0259	URUM	24	0322	0326	0338	S23	W76		03	18.3	16	SB		C						48	
		24	0536		0611	No Flare Patrol															
		24	0628		0655	No Flare Patrol															
0260	URUM	24	0812	0824	0846	N18	W33	8499	03	21.8	34	SN		C						145	
																				2.0	
0261	KANZ	24	1007	1011	1031	N17	E66	8498	03	29.4	24	SF	2	C							
		25	0113		0129	No Flare Patrol															
		25	0346		0514	No Flare Patrol															
0262	SVTO	25	0706E	0711	0729	N26	W84	8493	03	18.8	23D	SF	3	E						26	
0263	KANZ	25	0758	0802	0814	N32	E37	8497	03	28.3	16	SF	2	C							

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	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)
0264	RAMY	25	1438	1440	1450	S25	W62	8494	03	20.8	12	SF	3	E		12		
		25	1925		1934	No Flare		Patrol										
		25	2015		2215	No Flare		Patrol										
		25	2224		2400	No Flare		Patrol										
		26	0000		0114	No Flare		Patrol										
		26	0441		0537	No Flare		Patrol										
0265	URUM	26	0446E	0446	0454	N20	E60		03	30.8	8D	SF		P		32	0.7	D
		26	0602		0614	No Flare		Patrol										
		26	0915		0946	No Flare		Patrol										
		26	1008		1040	No Flare		Patrol										
		26	1604		1647	No Flare		Patrol										
		26	1703		1857	No Flare		Patrol										
		26	1901		1906	No Flare		Patrol										
		26	1924		2147	No Flare		Patrol										
		26	2221		2400	No Flare		Patrol										
		27	0000		0129	No Flare		Patrol										
		27	0415		0658	No Flare		Patrol										
		27	0707		0713	No Flare		Patrol										
0266	URUM	27	0748E	0748	0823	S24	E07		03	27.9	35D	2N		P		723	8.3	E
		27	0828		1039	No Flare		Patrol										
0267	RAMY	27	1107E	1107U	1124D	N26	E75	8501	04	2.3	17D	SF	3	E		20		
		28	0115		0445	No Flare		Patrol										
0268	URUM	28	0547E	0547	0705	N21	E43		03	31.5	78D	3B		P		1527	22.7	E
0269	RAMY	29	1208	1213	1216	S27	E68	8502	04	3.8	8	SF	4	E		28		FH
0270	RAMY	29	1702	1704	1708	S29	E66	8502	04	3.9	6	SF	3	E		18		
0271	HOLL	29	2214	2216	2220	S27	E64	8502	04	3.9	6	SF	3	E		26		
		30	2035		2040	No Flare		Patrol										
		30	2140		2144	No Flare		Patrol										
		30	2200		2215	No Flare		Patrol										
		30	2300		2400	No Flare		Patrol										
		31	0000		0010	No Flare		Patrol										
		31	0033		0049	No Flare		Patrol										
		31	0307		0330	No Flare		Patrol										
		31	2300		2309	No Flare		Patrol										
		31	2316		2400	No Flare		Patrol										

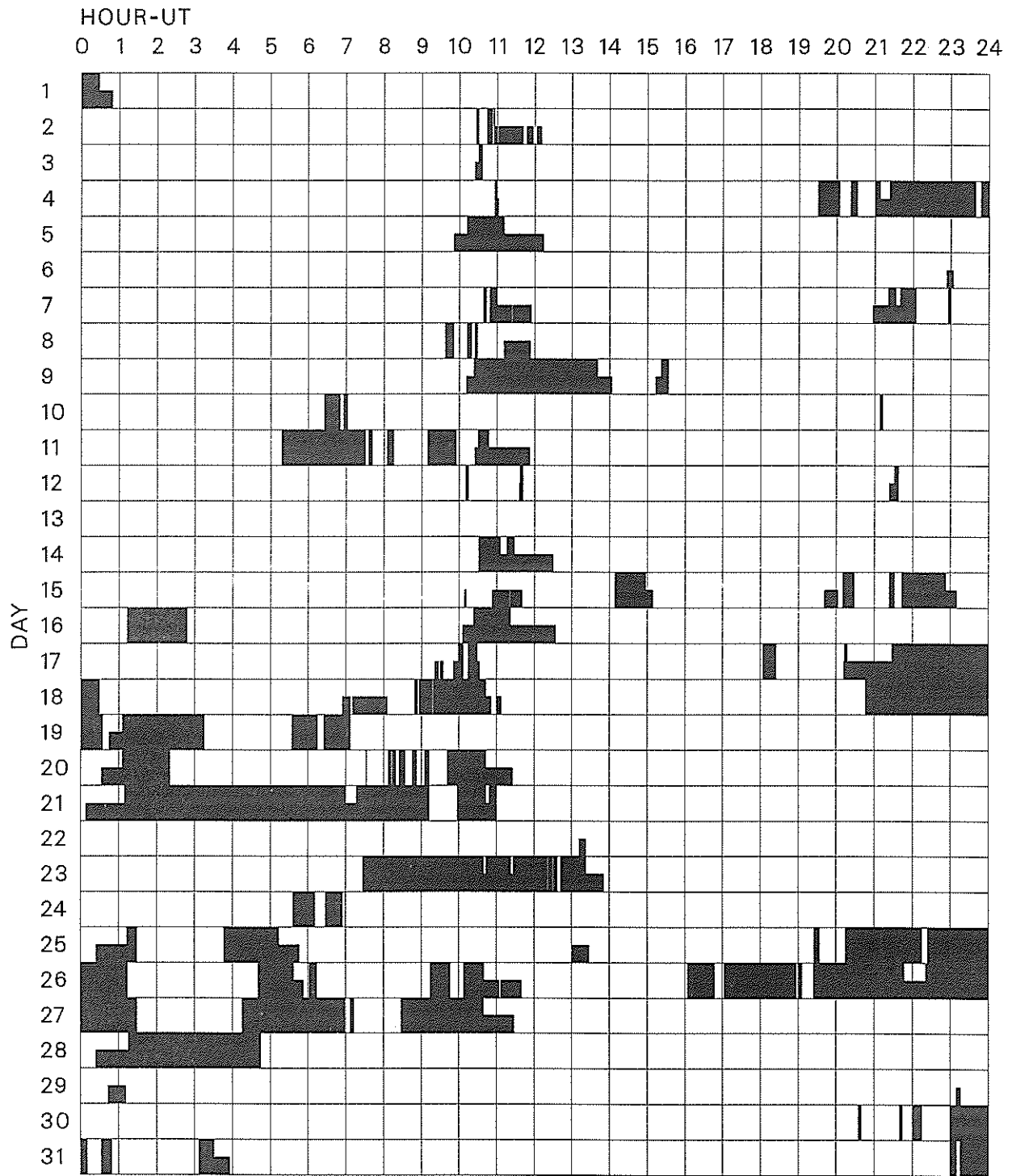
"Remarks"

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

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

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

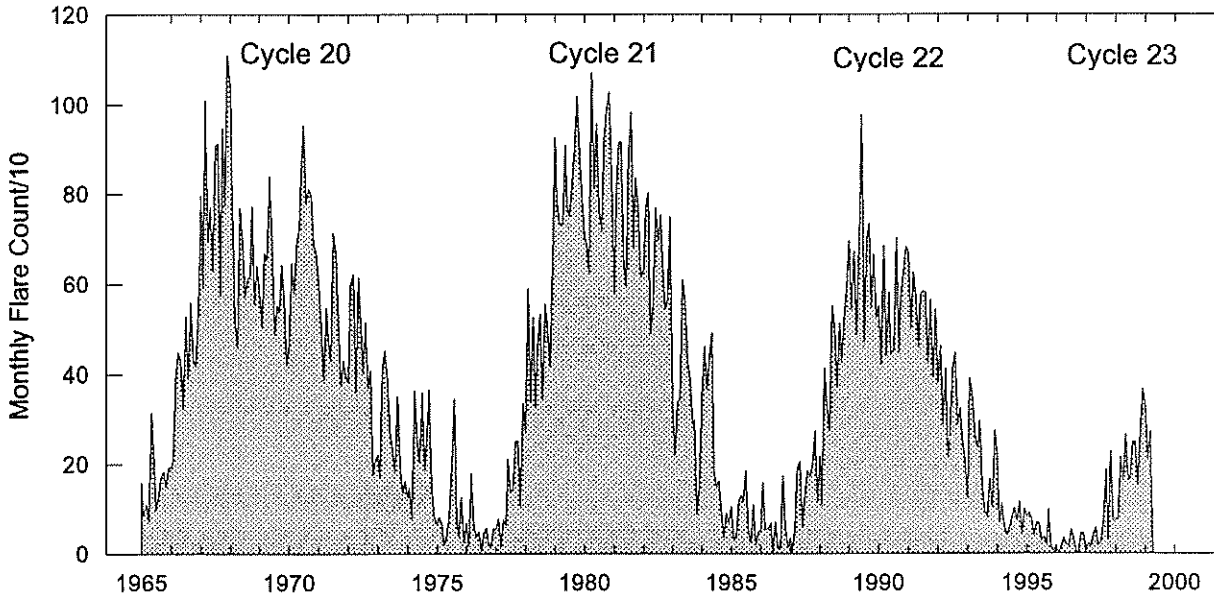
MARCH 1999



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	Mitaka	San Vito
Hurbanovo	Learmonth	Ramey	Urumqi

Monthly Counts of Grouped Solar Flares Jan 1965 - Mar 1999



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1965	158	85	110	74	315	231	99	127	173	184	150	193	1899
1966	194	205	390	449	429	323	528	391	558	432	417	543	4859
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	551	502	375	513	429	518	587	4816
1989	695	544	672	488	691	977	474	699	733	547	665	526	7711
1990	550	424	684	442	580	445	454	703	449	574	623	682	6610
1991	672	503	625	570	458	574	582	581	425	565	396	544	6495
1992	380	462	287	412	214	271	413	447	287	325	248	206	3952
1993	123	392	357	262	237	296	154	92	82	167	104	275	2541
1994	217	67	111	60	40	56	81	101	72	117	45	99	1066
1995	82	95	77	42	69	66	29	37	23	99	14	6	639
1996	14	3	15	34	21	16	54	31	3	0	44	45	280
1997	8	22	18	43	59	18	26	75	188	31	228	74	790
1998	78	76	216	161	264	177	164	248	249	155	268	367	2423
1999	330	212	271										813

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

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

MARCH 1999

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
01	280	CUBA	44 NS	1300.0E		530.0D		15.0		
	235	CUBA	44 NS	1300.0E		530.0D		6.0		
02	280	CUBA	44 NS	1300.0E		530.0D		21.0		
	235	CUBA	44 NS	1300.0E		530.0D		11.0		
	4995	SGMR	4 S/F	1208.0	1209.0	3.0	120.0			QL=4 ST=2 TYP=3
	15400	SGMR	4 S/F	1208.0	1209.0	3.0	140.0			QL=4 ST=2 TYP=3
	245	SGMR	4 S/F	1208.0	1208.0	3.0	150.0			QL=4 ST=2 TYP=3
	610	SGMR	4 S/F	1208.0	1209.0	3.0	76.0			QL=4 ST=2 TYP=3
	1415	SGMR	4 S/F	1208.0	1209.0	3.0	81.0			QL=4 ST=2 TYP=3
	410	SGMR	4 S/F	1208.0	1209.0	3.0	300.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1208.0	1209.0	3.0	240.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	1208.0	1209.0	3.0	44.0			QL=4 ST=2 TYP=3
33	UPIC	46 C	1208.5	1209.5	3.0					
6700	CUBA	23 GRF	1512.0	1607.0	124.0	11.0	5.0		OOL	
03	245	LEAR	43 NS	0332.0	0335.0	422.0	91.0			QL=4 ST=2 TYP=1
	204	IZMI	43 NS	0700.0		300.0D		25.0		
	127	TORN	43 NS	0950.0		230.0		12.0		V=2
	280	CUBA	44 NS	1300.0E		275.0D		26.0		
	235	CUBA	44 NS	1300.0E		285.0D		14.0		
	500	HIRA	8 S	0228.7	0228.8	0.2	6.0			WR
	610	LEAR	8 S	0229.0	0229.0	U	51.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0229.0	0229.0	U	29.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0229.0	0229.0	U	52.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0313.0	0313.0	U	87.0			QL=4 ST=3 TYP=3
	5730	IRKU	1 S	0341.0	0342.0	3.0	3.0	U		
	5730	IRKU	3 S	0424.5	0425.5	10.1	17.0	U		
	3000	IZMI	1 S	1143.6	1143.6	0.1	10.0			
	33	UPIC	45 C	1435.0	1435.5	1.3				
	245	SGMR	8 S	2049.0	2049.0	U	64.0			QL=4 ST=2 TYP=3
	2800	PENT	45 C	2334.0	2337.0	10.0	19.0			
1415	LEAR	8 S	2336.0	2337.0	1.0	120.0			QL=4 ST=2 TYP=3	
2695	LEAR	8 S	2337.0	2337.0	U	28.0			QL=4 ST=2 TYP=3	
500	HIRA	42 SER	2342.0	2342.5	1.5	36.0			WR	
04	127	TORN	44 NS	0640.0E		500.0D		5.0		V=1
	204	IZMI	44 NS	0700.0E		300.0D		25.0		
	235	CUBA	44 NS	1300.0E		530.0D		22.0		
	280	CUBA	44 NS	1300.0E		530.0D		31.0		
	245	SGMR	43 NS	1531.0	1538.0	21.0	87.0			QL=4 ST=3 TYP=1
	245	SGMR	43 NS	2057.0	2103.0	63.0	68.0			QL=4 ST=2 TYP=1
	2840	BEIJ	1 S	0408.0	0411.5	8.0	7.5	5.6		
	5730	IRKU	2 S/F	0410.5	0417.3	9.9	3.0	U		
	5730	IRKU	4 S/F	0509.1	0510.4	18.4	6.0	U		
	5730	IRKU	1 S	0638.8	0639.0	2.8	2.0	U		
	600	GORK	1 S	0738.0	0738.9	1.8	3.0			
	2950	GORK	1 S	0738.1	0738.8	1.4	3.3			
	900	GORK	5 S	0738.2	0738.7	1.3	3.0			
	900	GORK	29 PBI	0739.1	0739.1	1.6	2.0			
	600	GORK	40 F	0951.1	0952.4	1.3	3.1			
	600	GORK	40 F	0951.1	0951.9	0.9	5.4			
900	GORK	4 S/F	0951.6	0952.0	1.0	9.0				
900	GORK	30 PBI	0952.6	0953.2	1.7	3.0				
600	GORK	30 PBI	0952.7	0952.7	0.8	2.0				
245	SGMR	8 S	1904.0	1905.0	2.0	81.0			QL=4 ST=2 TYP=3	
2800	PENT	21 GRF	1925.0	1929.0	7.0	4.0				
245	SGMR	4 S/F	1926.0	1929.0	5.0	500.0			QL=4 ST=2 TYP=3	
05	127	TORN	44 NS	0640.0E		500.0D		20.0		V=1
	204	IZMI	44 NS	0700.0E		30.0D		10.0		
	235	CUBA	44 NS	1300.0E		530.0D		15.0		
	280	CUBA	44 NS	1300.0E		530.0D		24.0		
	245	SGMR	43 NS	1429.0	1430.0	2.0	120.0			QL=4 ST=2 TYP=1
	245	SGMR	43 NS	1549.0	1555.0	77.0	93.0			QL=4 ST=2 TYP=1
	5730	IRKU	1 S	0737.5	0738.6	3.0	2.0	U		
	5730	IRKU	1 S	0820.0	0821.8	40.0U	7.0	U		
	245	PALE	4 S/F	1200.0	1203.0	8.0	170.0			QL=4 ST=2 TYP=3
	245	SGMR	4 S/F	1200.0	1203.0	8.0	170.0			QL=4 ST=3 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		
05	245	SGMR	4 S/F	1840.0	1841.0	5.0	110.0			QL=4 ST=2 TYP=3
	2800	PENT	1 S	1909.0	1923.0	23.00	11.0			
	6700	CUBA	20 GRF	1911.0	1920.0	77.0	10.0	5.0		9L
	245	SGMR	8 S	1912.0	1913.0	1.0	100.0			QL=4 ST=2 TYP=3
	9500	CUBA	20 GRF	1923.0	1931.0	68.0	9.0	4.0		
	245	PALE	8 S	2207.0	2207.0	U	77.0			QL=2 ST=2 TYP=3
06	204	IZMI	44 NS	0700.0E		300.00		5.0		
	127	TORN	43 NS	1020.0		160.0		2.0		V=1
	280	CUBA	44 NS	1300.0E		530.00		19.0		
	235	CUBA	44 NS	1300.0E		530.00		9.0		
	5730	IRKU	1 S	0819.4	0819.8	3.6	2.0		U	
	204	IZMI	42 SER	0931.7	0932.2	0.7	40.5			
	245	SGMR	8 S	1421.0	1422.0	1.0	82.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1421.0	1432.0	59.0	4.0	2.0		00L
	410	SGMR	8 S	1524.0	1525.0	2.0	68.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1525.0	1525.0	1.0	20.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1555.0	1556.0	2.0	56.0			QL=4 ST=2 TYP=3
	9500	CUBA	1 S	1736.1	1736.3	0.7	16.0	8.0		
	245	PALE	4 S/F	2111.0	2114.0	4.0	140.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2111.0	2111.0	1.0	89.0			QL=4 ST=2 TYP=3
	07	280	CUBA	44 NS	1300.0E		530.00		16.0	
235		CUBA	44 NS	1300.0E		530.00		7.0		
5730		IRKU	1 S	0137.6	0139.8	8.4	7.0		U	
5730		IRKU	1 S	0402.0	0409.7	18.6	5.0		U	
5730		IRKU	1 S	0524.0	0524.3	5.8	1.0		U	
5730		IRKU	21 GRF	0544.3	0600.5	75.7	9.0		U	
245		SGMR	8 S	1653.0	1653.0	1.0	62.0			QL=4 ST=2 TYP=3
08	204	IZMI	43 NS	0645.0		28.00		5.0		
	280	CUBA	44 NS	1300.0E		530.00		15.0		
	235	CUBA	44 NS	1300.0E		530.00		7.0		
	5730	IRKU	1 S	0343.1	0343.5	1.2	3.0		U	
	5730	IRKU	42 SER	0552.6	0558.0	11.6	5.0		U	
	500	HIRA	46 C	0632.5	0635.5	4.0	15.0			0
	600	GORK	4 S/F	0632.5	0635.6	4.3	380.0			
	900	GORK	28 PRE	0632.5	0634.7	2.2	6.0			
	2950	GORK	28 PRE	0633.0E	0634.1	1.10	3.3			
	2700	PURP	3 S	0633.0	0635.3	6.0	50.0	49.0		
	5730	IRKU	4 S/F	0633.4	0635.20	10.6	270.0		U	
	4995	LEAR	8 S	0634.0	0635.0	2.0	140.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0634.0	0635.0	2.0	64.0			QL=4 ST=2 TYP=3
	1415	LEAR	8 S	0634.0	0635.0	2.0	49.0			QL=4 ST=2 TYP=3
	8800	LEAR	49 GB	0634.0	0635.0	2.0	590.0			QL=4 ST=2 TYP=6
	2840	BEIJ	5 S	0634.0	0637.2	5.0	64.6	55.2		
	2950	GORK	4 S/F	0634.1	0635.3	1.8	68.4			
	900	GORK	4 S/F	0634.7	0635.4	2.4	49.0			
	2800	HIRA	5 S	0635.0	0636.0	3.0	5.0			0
	15400	LEAR	8 S	0635.0	0635.0	U	320.0			QL=4 ST=2 TYP=3
	600	GORK	3 S	0635.5	0635.7	0.4	14.0			
	2950	GORK	29 PBI	0636.3	0636.3	3.7	15.0			
	600	GORK	30 PBI	0636.8	0636.8	3.0	4.0			
	600	GORK	2 S/F	0637.0	0637.4	0.5	3.0			
	900	GORK	29 PBI	0637.1	0637.1	2.7	6.0			
	200	HIRA	47 GB	0638.0	0638.5	2.5	430.0			0
	900	GORK	40 F	0822.9	0823.7	6.7	64.0			
	2950	GORK	45 C	0823.1	0824.1	1.0	8.0			
	2950	GORK	45 C	0823.1	0823.3	3.5	3.2			
	2950	GORK	45 C	0823.1	0825.3	2.2	4.8			
2950	GORK	45 C	0823.1	0825.6	2.5	3.2				
600	GORK	40 F	0823.5	0824.1	3.3	106.0				
600	GORK	40 F	0823.5	0823.8	2.6	27.0				
5730	IRKU	1 S	0836.6	0836.9	1.1	2.0		U		
900	GORK	40 F	1001.0	1002.4	4.0	4.0				
600	GORK	42 SER	1001.2	1002.4	9.5	11.0				
245	SGMR	8 S	1257.0	1257.0	U	260.0			QL=4 ST=2 TYP=3	
410	SGMR	8 S	1257.0	1257.0	U	95.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	1317.0	1317.0	U	390.0			QL=4 ST=2 TYP=3	

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MARCH 1999

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 -22 W/m 2 Hz)	Mean			
08	410	SGMR	4 S/F	1647.0	1648.0	3.0	96.0			QL=4 ST=2 TYP=3	
		245	SGMR	8 S	1648.0	1648.0	2.0	44.0			QL=4 ST=2 TYP=3
09	235	CUBA	44 NS	1300.0E		530.0D		7.0			
		280	CUBA	44 NS	1300.0E		530.0D		16.0		
	245	SGMR	8 S	1553.0	1553.0	1.0	74.0			QL=4 ST=2 TYP=3	
		280	CUBA	6 S	1749.0	1750.5	1.9	87.0			
	235	CUBA	6 S	1749.0	1750.5	1.9	98.0				
		245	PALE	49 GB	1750.0	1750.0	U	770.0			QL=4 ST=2 TYP=6
	245	SGMR	49 GB	1750.0	1750.0	U	840.0				QL=4 ST=2 TYP=6
		2800	PENT	42 SER	1824.0	1826.0	4.0	7.0			
	235	CUBA	41 F	1825.0	1826.5	19.7	824.0				
		280	CUBA	41 F	1825.0	1837.5	21.2	1299.0			
	245	PALE	49 GB	1826.0	1826.0	1.0	1100.0				QL=4 ST=2 TYP=6
		410	PALE	8 S	1826.0	1827.0	1.0	100.0			
	410	SGMR	8 S	1826.0	1827.0	1.0	100.0				QL=4 ST=2 TYP=3
		245	SGMR	49 GB	1826.0	1826.0	1.0	1000.0			
	245	SGMR	49 GB	1832.0	1832.0	1.0	550.0				QL=4 ST=2 TYP=6
		245	PALE	49 GB	1837.0	1837.0	U	780.0			QL=4 ST=2 TYP=6
	245	SGMR	49 GB	1837.0	1837.0	U	840.0				QL=4 ST=2 TYP=6
		410	SGMR	8 S	1837.0	1837.0	U	280.0			QL=4 ST=2 TYP=3
	245	PALE	4 S/F	1841.0	1843.0	3.0	210.0				QL=4 ST=2 TYP=3
		245	SGMR	4 S/F	1841.0	1843.0	3.0	250.0			QL=4 ST=3 TYP=3
410	SGMR	4 S/F	2005.0	2007.0	7.0	78.0				QL=4 ST=2 TYP=3	
	245	SGMR	4 S/F	2005.0	2012.0	9.0	56.0			QL=4 ST=2 TYP=3	
410	PALE	4 S/F	2006.0	2007.0	3.0	97.0				QL=4 ST=2 TYP=3	
	235	CUBA	7 C	2006.3	2014.1	31.0	36.0				
280	CUBA	7 C	2006.3	2014.1	31.0	33.0					
	235	CUBA	44 NS	1300.0E		530.0D		7.0			
280		CUBA	44 NS	1300.0E		530.0D		16.0			
	5730	IRKU	1 S	0222.5	0223.8	5.0	7.0	U			
5730		IRKU	4 S/F	0321.5	0323.3	7.5	22.0	U			
5730	IRKU	1 S	0503.0	0504.0	10.0	5.0	U				
	5730	IRKU	1 S	0514.9	0515.1	3.3	2.0	U			
204	IZMI	42 SER	0940.4	0940.9	0.6	14.0					
	410	SGMR	8 S	1907.0	1907.0	U	87.0			QL=4 ST=2 TYP=3	
235	CUBA	44 NS	1300.0E		530.0D		8.0				
	280	CUBA	44 NS	1300.0E		530.0D		17.0			
2840	BEIJ	3 S	0005.0	0005.4	8.0	11.4				8.9	
	2800	PENT	40 F	0006.0	0008.0	4.0	10.0				
2700	PURP	2 S/F	0246.3	0247.4	2.2	6.0				5.3	
	204	IZMI	7 C	0816.3	0816.4	0.2	72.0				
204	IZMI	7 C	0818.8	0818.9	0.2	13.0					
	2840	BEIJ	1 S	0822.0	0823.4	3.0	8.1			6.4	
3000	IZMI	42 SER	0822.8	0824.1	3.6	11.0					
	204	IZMI	7 C	0824.1	0824.2	0.2	36.0				
33	UPIC	42 SER	0913.5	1157.5	166.5						
	204	IZMI	45 C	0913.9	0914.1	0.5	368.0				
204	IZMI	7 C	0933.1	0933.2	0.2	21.0					
	204	IZMI	7 C	1001.6	1001.8	0.4	15.0				
204	IZMI	45 C	1003.0	1003.1	0.4	340.0					
	204	IZMI	42 SER	1008.6	1009.2	29.0	230.0				
204	IZMI	42 SER	1031.4	1031.5	0.8	77.0					
	204	IZMI	7 C	1051.4	1051.6	0.6	56.0				
204	IZMI	45 C	1126.3	1126.4	0.5	144.0					
	204	IZMI	7 C	1145.7	1145.8	0.2	15.0				
245	SGMR	49 GB	1155.0	1156.0	4.0	1700.0				QL=4 ST=2 TYP=6	
	204	IZMI	45 C	1155.4	1156.0	4.2	7770.0				
410	SGMR	8 S	1156.0	1156.0	1.0	310.0				QL=4 ST=2 TYP=3	
	245	SGMR	8 S	2032.0	2033.0	1.0	120.0			QL=4 ST=2 TYP=3	
204	IZMI	43 NS	0700.0		300.0D		5.0				
	235	CUBA	44 NS	1300.0E		510.0D		9.0			
280	CUBA	44 NS	1320.0E		510.0D		19.0				
	245	PALE	8 S	0223.0	0223.0	U	290.0			QL=4 ST=2 TYP=3	
410	SVTO	8 S	0648.0	0648.0	1.0	63.0				QL=4 ST=2 TYP=3	
	245	SVTO	49 GB	0648.0	0648.0	1.0	920.0			QL=4 ST=2 TYP=6	

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Outstanding Occurrences

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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		
12	245	SVTO	8 S	0747.0	0747.0	1.0	190.0			QL=4 ST=2 TYP=3
	204	IZMI	7 C	0747.8	0747.9	0.4	70.0			
	410	SVTO	8 S	0755.0	0756.0	2.0	37.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0755.0	0756.0	2.0	260.0			QL=4 ST=2 TYP=3
	610	SVTO	8 S	0756.0	0756.0	1.0	13.0			QL=4 ST=2 TYP=3
	1415	SVTO	8 S	0756.0	0756.0	U	6.0			QL=4 ST=2 TYP=3
	600	GORK	40 F	0756.0	0756.3	1.3	4.0			
	600	GORK	40 F	0756.0	0756.8	0.8	15.0			
	900	GORK	3 S	0756.1	0756.8	1.7	22.0			
	204	IZMI	45 C	0848.1	0848.1	0.5	346.0			
	5730	IRKU	1 S	0854.4	0856.0	3.6	3.0		U	
	2950	GORK	45 C	0854.6	0856.0	1.6	5.4			
	900	GORK	4 S/F	0854.6	0856.0	2.4	95.0			
	2950	GORK	45 C	0854.6	0854.9	2.0	3.1			
	1415	LEAR	8 S	0855.0	0855.0	1.0	84.0			
	1415	SVTO	8 S	0855.0	0855.0	1.0	100.0			
	610	SVTO	8 S	0855.0	0856.0	1.0	31.0			
	410	SVTO	8 S	0855.0	0856.0	1.0	89.0			
	245	SVTO	8 S	0855.0	0856.0	1.0	180.0			
	204	IZMI	7 C	0855.6	0855.9	1.0	117.0			
	900	GORK	40 F	1015.8	1017.8	5.6	23.0			
	1415	LEAR	8 S	1016.0	1017.0	2.0	51.0			
	245	SVTO	49 GB	1016.0	1017.0	5.0	1000.0			
	610	SVTO	4 S/F	1016.0	1017.0	5.0	15.0			
	410	SVTO	49 GB	1016.0	1017.0	4.0	680.0			
	2950	GORK	28 PRE	1016.4	1017.4	1.0	3.0			
	204	IZMI	45 C	1016.6	1017.5	1.7	590.0			
	600	GORK	40 F	1016.8	1017.0	4.2	7.0			
	2695	SVTO	8 S	1017.0	1017.0	U	13.0			
	1415	SVTO	8 S	1017.0	1017.0	2.0	49.0			
	33	UPIC	48 C	1017.0	1018.0	4.0				
	2950	GORK	4 S/F	1017.4	1017.7	0.5	13.3			
	3000	IZMI	7 C	1017.4	1017.7	0.6	120.0			
	2950	GORK	29 PBI	1017.9	1017.9	1.1	3.7			
	204	IZMI	42 SER	1018.4	1019.9	4.2	203.0			
	33	UPIC	42 SER	1122.0	1123.0	78.5				
	8800	SVTO	49 GB	1126.0	1127.0	2.0	5900.0			
	245	SGMR	8 S	1238.0	1239.0	2.0	230.0			
	245	SVTO	8 S	1238.0	1239.0	1.0	200.0			
	610	SGMR	8 S	1328.0	1328.0	U	270.0			
	610	SVTO	8 S	1328.0	1328.0	U	200.0			
	245	PALE	8 S	1725.0	1726.0	1.0	190.0			
	410	PALE	4 S/F	1731.0	1732.0	3.0	27.0			
	245	PALE	4 S/F	1731.0	1732.0	3.0	79.0			
	245	PALE	8 S	1934.0	1934.0	U	120.0			
410	PALE	8 S	1934.0	1934.0	U	260.0				
410	SGMR	8 S	1934.0	1934.0	1.0	250.0				
245	SGMR	8 S	1934.0	1934.0	1.0	140.0				
2800	PENT	42 SER	2035.0	2037.0	5.0	22.0				
410	PALE	4 S/F	2036.0	2037.0	3.0	210.0				
245	PALE	49 GB	2036.0	2036.0	2.0	1500.0				
245	SGMR	49 GB	2036.0	2036.0	3.0	1700.0				
410	SGMR	4 S/F	2036.0	2037.0	3.0	220.0				
6700	CUBA	2 S/F	2036.5	2037.4	3.5	22.0	11.0			
1415	PALE	8 S	2037.0	2037.0	U	54.0				
4995	SGMR	8 S	2037.0	2037.0	U	13.0				
610	SGMR	8 S	2037.0	2037.0	U	13.0				
1415	SGMR	8 S	2037.0	2037.0	U	19.0				
2695	SGMR	8 S	2037.0	2037.0	U	13.0				
8800	SGMR	8 S	2037.0	2037.0	U	18.0				
280	CUBA	7 C	2037.0	2037.3	1.0	3770.0				
235	CUBA	7 C	2037.0	2037.3	1.0	195.0				
13	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	280	CUBA	44 NS	1300.0E		530.0D		18.0		
	5730	IRKU	4 S/F	0501.0	0501.3	1.5	10.0		U	
	245	SVTO	8 S	0632.0	0632.0	U	87.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0811.0	0811.0	1.0	68.0			QL=4 ST=2 TYP=3
410	SVTO	8 S	0811.0	0811.0	1.0	8.0			QL=4 ST=2 TYP=3	

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MARCH 1999

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
13	600	GORK	2 S/F	0811.2	0811.5	0.8	2.0			
	204	IZMI	42 SER	0811.2	0811.6	1.7	130.0			
	2950	GORK	1 S	0811.3	0811.5	0.5	2.4			
	900	GORK	1 S	0811.3	0811.7	0.6	2.0			
	33	UPIC	45 C	0811.5	0812.0	1.5				
	2950	GORK	28 PRE	0903.0	0908.9	5.9	3.1			
	900	GORK	42 SER	0907.1	0907.9	3.9	44.0			
	600	GORK	8 S	0907.6	0907.9	0.4	36.0			
	2950	GORK	42 SER	0908.9	0909.0	2.3	6.2			
	2950	GORK	42 SER	0908.9	0910.1	2.2	9.4			
	204	IZMI	7 C	0942.3	0942.4	0.6	92.0			
	410	SVTO	8 S	0948.0	0948.0		320.0			QL=2 ST=2 TYP=3
	2950	GORK	21 GRF	1042.8	1052.4	18.0D	4.3			
	3000	IZMI	7 C	1049.9	1052.8	4.8	8.0			
	2950	GORK	1 S	1050.1	1050.3	0.4	5.3			
	245	SVTO	8 S	1132.0	1133.0	2.0	95.0			QL=4 ST=2 TYP=3
	204	IZMI	42 SER	1132.2	1132.8	1.7	209.0			
	33	UPIC	45 C	1132.5	1133.5	1.5				
	245	SGMR	8 S	1133.0	1133.0	1.0	140.0			QL=4 ST=2 TYP=3
	6700	CUBA	21 GRF	1937.0	2035.0	178.0	18.0	9.0		00L SUNSET
	9500	CUBA	21 GRF	2024.0	2034.0	122.0D	22.0			SUNSET
	9500	CUBA	46 C	2024.9	2029.2	8.8	43.0	12.0		
	6700	CUBA	46 C	2025.0	2029.5	10.1	44.0	16.0		11L
	610	PALE	8 S	2026.0	2026.0	1.0	100.0			QL=4 ST=2 TYP=3
	4995	SGMR	46 C	2026.0	2032.0	8.0	41.0			QL=4 ST=2 TYP=8
	610	SGMR	8 S	2026.0	2026.0	1.0	110.0			QL=4 ST=2 TYP=3
	2695	SGMR	48 C	2026.0	2032.0	8.0	68.0			QL=4 ST=2 TYP=8
	8800	PALE	4 S/F	2028.0	2029.0	7.0	37.0			QL=4 ST=2 TYP=3
	4995	PALE	4 S/F	2028.0	2032.0	7.0	30.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	2028.0	2032.0	7.0	55.0			QL=4 ST=2 TYP=3
	1415	PALE	4 S/F	2028.0	2032.0	5.0	26.0			QL=4 ST=2 TYP=3
	2800	PENT	40 F	2028.0	2032.0	7.0	60.0			
	15400	SGMR	4 S/F	2028.0	2029.0	6.0	25.0			QL=4 ST=2 TYP=3
610	PALE	4 S/F	2029.0	2032.0	6.0	34.0			QL=4 ST=2 TYP=3	
8800	SGMR	4 S/F	2031.0	2032.0	3.0	34.0			QL=4 ST=2 TYP=3	
1415	SGMR	8 S	2032.0	2032.0	2.0	31.0			QL=4 ST=2 TYP=3	
610	SGMR	8 S	2032.0	2032.0	1.0	36.0			QL=4 ST=2 TYP=3	
610	SGMR	4 S/F	2056.0	2100.0	7.0	47.0			QL=4 ST=2 TYP=3	
14	204	IZMI	43 NS	0700.0		300.0D		5.0		
	127	TORN	43 NS	0830.0		390.0				V=1
	245	SVTO	43 NS	1136.0	1201.0	38.0	120.0			QL=4 ST=2 TYP=1
	245	SGMR	43 NS	1150.0	1201.0	30.0	160.0			QL=4 ST=2 TYP=1
	280	CUBA	44 NS	1300.0E		530.0D		18.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		
	2840	BEIJ	45 C	0105.0	0125.0	35.0	202.0	136.0		
	245	PALE	8 S	0122.0	0123.0	1.0	29.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0123.0	0124.0	2.0	47.0			QL=4 ST=2 TYP=3
	1415	LEAR	8 S	0123.0	0124.0	2.0	42.0			QL=4 ST=2 TYP=3
	4995	LEAR	8 S	0123.0	0124.0	2.0	50.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0123.0	0125.0	2.0	140.0			QL=4 ST=2 TYP=3
	4995	PALE	8 S	0124.0	0124.0	1.0	31.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0124.0	0125.0	1.0	110.0			QL=4 ST=2 TYP=3
	1415	PALE	8 S	0124.0	0124.0	1.0	37.0			QL=4 ST=2 TYP=3
	15400	LEAR	4 S/F	0125.0	0125.0	5.0	54.0			QL=4 ST=2 TYP=3
	15400	PALE	4 S/F	0125.0	0125.0	4.0	41.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0128.0	0129.0	3.0	110.0			QL=4 ST=2 TYP=3
	5730	IRKU	4 S/F	0248.0	0249.2	2.6	7.0		U	
	5730	IRKU	1 S	0305.6	0305.7	0.8	1.0		U	
	5730	IRKU	1 S	0609.5	0611.5	5.0	4.0		U	
	245	SVTO	8 S	0627.0	0627.0		64.0			QL=4 ST=2 TYP=3
	204	IZMI	41 F	0906.0	0906.1	0.3	144.0			
2950	GORK	21 GRF	0907.0E	1042.7	135.7D	14.1				
245	SVTO	8 S	0910.0	0910.0	1.0	65.0			QL=4 ST=2 TYP=3	
900	GORK	4 S/F	0911.6	0912.2	1.0	19.0				
2950	GORK	42 SER	0931.3	0931.5	7.4	4.4				
3000	IZMI	5 S	0937.2	0938.1	1.9	10.0				
3000	IZMI	7 C	0946.7	0948.6	4.2	9.0				
900	GORK	40 F	0947.0	0947.9	2.6	7.0				

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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		
14	600	GORK	40 F	0947.5	0947.6	2.7	29.0			
	2950	GORK	45 C	0948.1	0948.4	2.9	9.6			
	2950	GORK	2 S/F	1003.4	1003.9	1.2	4.4			
	3000	IZMI	5 S	1003.4	1003.9	0.8	8.0			
	3000	IZMI	5 S	1043.1	1044.3	4.1	6.0			
	245	SGMR	8 S	1140.0	1140.0	1.0	150.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1142.0	1144.0	2.0	63.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1158.0	1159.0	2.0	59.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1158.0	1159.0	1.0	58.0			QL=4 ST=2 TYP=3
	9500	CUBA	22 GRF	1254.0E	1415.0U	209.0D	17.0			
6700	CUBA	22 GRF	1259.0E	1412.0U	295.0D	22.0			9L SUNSET	
15	204	IZMI	44 NS	0700.0E		300.0D		10.0		
	127	TORN	43 NS	0910.0		320.0		3.0		V=2
	235	CUBA	44 NS	1335.0E		425.0D		10.0		
	280	CUBA	44 NS	1335.0E		425.0D		13.0		
	2840	BEIJ	45 C	0325.0	0329.4	18.0	28.2	19.5		
	500	HIRA	46 C	0330.0	0335.5	11.0	5.0			WL
	610	PALE	4 S/F	0331.0	0334.0	6.0	220.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0335.0	0336.0	1.0	30.0			QL=4 ST=2 TYP=3
	600	GORK	21 GRF	0643.3	0653.0	12.5	2.0			
	600	GORK	42 SER	0646.2	0646.6	7.5	6.0			
	900	GORK	2 S/F	0646.3	0646.6	1.2	3.0			
	3000	IZMI	5 S	0704.0	0704.0	0.2	16.0			
	2950	GORK	1 S	0825.1	0825.4	1.1	3.2			
	3000	IZMI	5 S	1125.4	1126.3	4.2	6.0			
	6700	CUBA	21 GRF	1646.0	1648.0	23.0	8.0	4.0		00L
	6700	CUBA	1 S	1646.9	1647.3	1.3	14.0	7.0		00L
16	204	IZMI	44 NS	0700.0E		300.0D		10.0		
	127	TORN	43 NS	0800.0		440.0D		10.0		V=2
	235	CUBA	44 NS	1320.0E		510.0D		16.0		
	280	CUBA	44 NS	1320.0E		510.0D		23.0		
	245	SGMR	43 NS	1428.0	1445.0	112.0	190.0			QL=4 ST=2 TYP=1
	5730	IRKU	1 S	0252.2	0252.7	1.8	4.0			U
	5730	IRKU	1 S	0419.6	0420.2	1.6	4.0			U
	5730	IRKU	1 S	0426.6	0427.3	1.4	2.0			U
	5730	IRKU	42 SER	0435.4	0441.8	9.8	5.0			U
	2950	GORK	28 PRE	0615.0	0627.3	12.3	23.9			
	5730	IRKU	46 C	0618.4	0627.9	141.6	73.0			U
	9100	GORK	20 GRF	0620.3	0627.9	16.0	54.9			
	2700	PURP	3 S	0622.0	0628.3	11.5	35.0	25.9		
	900	GORK	21 GRF	0624.0	0628.6	8.4	3.0			
	2840	BEIJ	3 S	0626.0	0628.5	6.0	28.6	19.2		
	2950	GORK	3 S	0627.3	0628.1	1.4	49.5			
	900	GORK	40 F	0627.5	0628.6	1.7	9.0			
	2950	GORK	30 PBI	0628.7	0628.7	88.3	30.7			
	2840	BEIJ	1 S	0704.0	0705.8	4.0	7.0	4.7		
	3000	IZMI	7 C	0706.0	0707.0	5.0	8.0			
	2950	GORK	1 S	0706.6	0707.6	1.4	7.7			
	2700	PURP	1 S	0707.0	0708.0	3.0	7.0	4.9		
	204	IZMI	45 C	0800.5	0809.0U	17.5	200.0U			
	3000	IZMI	42 SER	0807.0	0809.0	7.0	30.0			
	204	IZMI	45 C	0822.0	0824.0	18.0	200.0U			
	3000	IZMI	42 SER	0824.0	0825.0	6.0	33.0			
	204	IZMI	25 R	1030.0		90.0D		15.0		
	8800	SGMR	8 S	1201.0	1201.0	1.0	65.0			QL=4 ST=2 TYP=3
	4995	SGMR	8 S	1201.0	1201.0	1.0	64.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1201.0	1201.0	1.0	64.0			QL=4 ST=2 TYP=3
	4995	SVTO	8 S	1201.0	1201.0	1.0	78.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1323.0	1324.0	2.0	70.0			QL=4 ST=3 TYP=3
15400	SVTO	8 S	1323.0	1324.0	2.0	60.0			QL=4 ST=3 TYP=3	
15400	SGMR	8 S	1324.0	1324.0	U	44.0			QL=4 ST=2 TYP=3	
8800	SGMR	8 S	1324.0	1324.0	1.0	76.0			QL=4 ST=2 TYP=3	
245	SVTO	8 S	1445.0	1445.0	1.0	110.0			QL=2 ST=2 TYP=3	
6700	CUBA	20 GRF	1712.0	1716.0	21.0	12.0	6.0		00L	
6700	CUBA	21 GRF	1820.0	1900.0	140.0	32.0	16.0		6L	
9500	CUBA	21 GRF	1822.0	1859.0	47.0	14.0				
9500	CUBA	2 S/F	1826.4	1827.5	3.6	34.0	17.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 ⁻²² W/m ² Hz)		Int	Remarks
							Peak	Mean		
16	6700	CUBA	2 S/F	1826.8	1827.5	4.2	31.0	15.0		5L
	6700	CUBA	1 S	1927.4	1928.0	1.8	7.0	3.0		42R
	2800	PENT	42 SER	2055.0	2139.0	96.0D	99.0			
	15400	SGMR	8 S	2104.0	2105.0	1.0	82.0			QL=4 ST=2 TYP=3
	4995	SGMR	8 S	2104.0	2105.0	1.0	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	2104.0	2105.0	1.0	51.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	2104.0	2105.0	1.0	140.0			QL=4 ST=2 TYP=3
	9500	CUBA	2 S/F	2105.0	2106.0	2.8	90.0	34.0		
	6700	CUBA	4 S/F	2105.0E	2105.4	0.6D	134.0			4R
	6700	CUBA	47 GB	2136.9	2140.0	9.4	691.0			12R
	4995	SGMR	49 GB	2137.0	2138.0	9.0	980.0			QL=4 ST=2 TYP=6
	8800	SGMR	49 GB	2137.0	2138.0	10.0	1500.0			QL=4 ST=2 TYP=6
	2800	HIRA	5 S	2138.0	2139.0	3.0	7.0			0
	2695	SGMR	8 S	2138.0	2139.0	2.0	80.0			QL=4 ST=2 TYP=3
	15400	SGMR	49 GB	2138.0	2138.0	2.0	550.0			QL=2 ST=2 TYP=6
	6700	CUBA	29 PBI	2146.3		37.0	40.0			00L SUNSET
	17	204	IZMI	44 NS	0700.0E		300.0D		15.0	
127		TORN	43 NS	0800.0		420.0		7.0		V=3
280		CUBA	44 NS	1425.0E		410.0D		19.0		
235		CUBA	44 NS	1425.0E		410.0D		12.0		
245		SGMR	43 NS	1620.0	1657.0	100.0	280.0			QL=4 ST=2 TYP=1
245		PALE	43 NS	1655.0	1657.0	24.0	160.0			QL=4 ST=2 TYP=1
5730		IRKU	4 S/F	0207.0	0208.1	3.1	9.0		U	
5730		IRKU	1 S	0341.0	0342.0	1.5	3.0		U	
5730		IRKU	1 S	0348.2	0348.5	1.0	3.0		U	
2840		BEIJ	5 S	0354.0	0356.0	4.0	12.9		8.8	
5730		IRKU	4 S/F	0357.4	0358.7	1.7	8.0		U	
5730		IRKU	42 SER	0451.0	0459.9	16.0	4.0		U	
3000		IZMI	5 S	0702.0	0702.0	0.2	27.0			
2950		GORK	1 S	0835.6	0836.2	1.5	3.3			
600		GORK	4 S/F	0835.8	0836.1	0.8	9.0			
900		GORK	1 S	0836.0	0836.1	0.7	2.0			
2950		GORK	28 PRE	0950.7	0952.7	2.0	13.0			
9100		GORK	28 PRE	0951.3	0952.5	1.2	16.2			
15400		LEAR	49 GB	0952.0	0953.0	2.0	610.0			QL=4 ST=2 TYP=6
2695		LEAR	4 S/F	0952.0	0954.0	3.0	98.0			QL=4 ST=2 TYP=3
8800		LEAR	49 GB	0952.0	0953.0	3.0	820.0			QL=4 ST=2 TYP=6
4995		LEAR	4 S/F	0952.0	0953.0	5.0	460.0			QL=4 ST=2 TYP=3
15400		SVTO	49 GB	0952.0	0953.0	4.0	690.0			QL=4 ST=2 TYP=6
2695		SVTO	4 S/F	0952.0	0954.0	3.0	86.0			QL=4 ST=2 TYP=3
4995		SVTO	49 GB	0952.0	0953.0	11.0	520.0			QL=4 ST=2 TYP=6
8800		SVTO	49 GB	0952.0	0953.0	14.0	1000.0			QL=4 ST=2 TYP=6
3000		IZMI	45 C	0952.1	0954.0	43.0	110.0			
9100		GORK	4 S/F	0952.5	0953.3	2.4	886.5			
2950		GORK	4 S/F	0952.7	0954.1	3.0	118.5			
9100		GORK	29 PBI	0954.9	0954.9	42.2	139.3			
2950		GORK	29 PBI	0955.7	0955.7	58.0	31.3			
33		UPIC	41 F	1006.0	1009.0	15.0				
245		SGMR	8 S	1200.0	1202.0	2.0	120.0			QL=4 ST=2 TYP=3
245	SVTO	8 S	1201.0	1202.0	1.0	89.0			QL=2 ST=2 TYP=3	
8800	SGMR	8 S	1227.0	1227.0	U	66.0			QL=4 ST=2 TYP=3	
4995	SGMR	8 S	1227.0	1227.0	1.0	89.0			QL=4 ST=2 TYP=3	
8800	SVTO	8 S	1227.0	1227.0	U	44.0			QL=4 ST=2 TYP=3	
4995	SVTO	8 S	1227.0	1227.0	U	75.0			QL=4 ST=2 TYP=3	
245	SVTO	8 S	1341.0	1342.0	1.0	100.0			QL=2 ST=3 TYP=3	
245	SVTO	4 S/F	1341.0	1342.0	8.0	100.0			QL=2 ST=3 TYP=3	
245	SGMR	8 S	1342.0	1342.0	U	120.0			QL=4 ST=3 TYP=3	
245	SGMR	8 S	1415.0	1415.0	U	76.0			QL=4 ST=2 TYP=3	
15400	SGMR	8 S	1445.0	1445.0	1.0	75.0			QL=4 ST=2 TYP=3	
8800	SVTO	8 S	1445.0	1445.0	2.0	150.0			QL=4 ST=2 TYP=3	
4995	SVTO	8 S	1445.0	1445.0	1.0	77.0			QL=4 ST=2 TYP=3	
15400	SVTO	8 S	1445.0	1445.0	1.0	71.0			QL=4 ST=2 TYP=3	
245	SGMR	4 S/F	1459.0	1501.0	3.0	100.0			QL=4 ST=3 TYP=3	
245	SVTO	8 S	1500.0	1501.0	1.0	67.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	1607.0	1607.0	1.0	86.0			QL=4 ST=2 TYP=3	
245	SGMR	4 S/F	1905.0	1906.0	8.0	63.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2126.0	2126.0	U	53.0			QL=4 ST=2 TYP=3	
2800	PENT	42 SER	2148.0	2150.0	11.0	8.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean	Int	Remarks
17	245	PALE	8 S	2320.0	2320.0	U	56.0			QL=4 ST=2 TYP=3
18	245	PALE	43 NS	0023.0	0029.0	70.0	350.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	0315.0	0319.0	70.0	150.0			QL=4 ST=2 TYP=1
	127	TORN	44 NS	0630.0E		510.0D		6.0		V=1
	204	IZMI	44 NS	0700.0E		300.0D		10.0		
	235	CUBA	44 NS	1300.0E		530.0D		9.0		
	280	CUBA	44 NS	1300.0E		530.0D		18.0		
	245	PALE	8 S	0001.0	0002.0	2.0	80.0			QL=4 ST=2 TYP=3
	2840	BEIJ	5 S	0015.0	0017.0	4.0	21.1	14.7		
	2800	PENT	45 C	0017.0	0018.0	4.0	20.0			
	245	PALE	8 S	0259.0	0259.0	2.0	75.0			QL=4 ST=2 TYP=3
	5730	IRKU	4 S/F	0401.4	0401.6	2.6	6.0		U	
	2840	BEIJ	1 S	0520.0	0521.0	2.0	6.8	4.7		
	5730	IRKU	4 S/F	0520.7	0520.9	1.4	3.0		U	
	245	SVTO	8 S	0521.0	0522.0	1.0	63.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0542.0	0542.0	U	88.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0726.2	0726.8	2.8	3.0		U	
	2950	GORK	28 PRE	0826.5	0829.0	2.5	5.4			
	2840	BEIJ	5 S	0827.0	0829.0	4.0	25.5	17.7		
	4995	LEAR	4 S/F	0828.0	0829.0	3.0	150.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	0828.0	0829.0	5.0	270.0			QL=4 ST=2 TYP=3
	4995	SVTO	4 S/F	0828.0	0829.0	3.0	150.0			QL=4 ST=2 TYP=3
	15400	SVTO	4 S/F	0828.0	0829.0	3.0	260.0			QL=4 ST=2 TYP=3
	5730	IRKU	46 C	0828.1	0829.2	30.9U	72.0		U	
	9100	GORK	46 C	0828.6	0830.0	3.6	101.1			
	9100	GORK	46 C	0828.6	0829.3	2.0	247.7			
	9100	GORK	46 C	0828.6	0828.8	2.0	58.6			
	3000	IZMI	7 C	0828.7	0829.2	2.5	25.0			
	2950	GORK	45 C	0829.0	0830.0	1.5	27.0			
	2695	LEAR	8 S	0829.0	0829.0	U	22.0			QL=4 ST=2 TYP=3
	15400	LEAR	8 S	0829.0	0829.0	U	220.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0829.0	0829.0	1.0	210.0			QL=4 ST=2 TYP=3
	2950	GORK	45 C	0829.0	0829.2	1.5	17.5			
	9100	GORK	30 PBI	0830.7	0830.7	47.0	42.8			
	9100	GORK	3 S	0837.4	0837.7	0.7	13.3			
	9100	GORK	28 PRE	0927.0	0928.6	1.6	21.4			
	33	UPIC	46 C	1125.0	1126.0	3.0				
	245	SGMR	8 S	1325.0	1325.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1325.0	1325.0	1.0	75.0			QL=2 ST=3 TYP=3
	245	SVTO	4 S/F	1334.0	1336.0	3.0	85.0			QL=2 ST=2 TYP=3
	6700	CUBA	21 GRF	1409.0	1424.0	56.0	8.0	4.0		00L
	6700	CUBA	2 S/F	1412.2	1415.0	4.8	28.0	14.0		00L
	8800	SGMR	8 S	1414.0	1414.0	2.0	34.0			QL=4 ST=2 TYP=3
	1415	SGMR	8 S	1414.0	1415.0	2.0	40.0			QL=4 ST=2 TYP=3
	4995	SGMR	8 S	1414.0	1414.0	2.0	44.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1415.0	1415.0	1.0	33.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1538.0	1538.0	U	170.0			QL=4 ST=2 TYP=3
	6700	CUBA	1 S	1740.9	1742.3	5.1	11.0	5.0		16R
	9500	CUBA	2 S/F	1741.2	1742.0	3.6	13.0	6.0		
	6700	CUBA	21 GRF	1821.0	1826.0	14.0	11.0	5.0		00L
	2800	PENT	1 S	1823.0	1825.0	4.0	7.0			
	4995	SGMR	4 S/F	1824.0	1825.0	5.0	37.0			QL=4 ST=2 TYP=3
	9500	CUBA	1 S	1824.2	1825.0	1.3	19.0	9.0		
	6700	CUBA	1 S	1824.2	1824.9	1.3	23.0	11.0		18R
	6700	CUBA	21 GRF	1912.0	2009.0	69.0	10.0	5.0		00L
	6700	CUBA	1 S	2005.0E	2005.4	0.4D	17.0			39R
	9500	CUBA	45 C	2137.7	2138.8	6.3	392.0			
19	127	TORN	44 NS	0630.0E		300.0D		4.0		V=1
	204	IZMI	44 NS	0700.0E		300.0D		15.0		
	235	CUBA	44 NS	1300.0E		530.0D		13.0		
	280	CUBA	44 NS	1300.0E		530.0D		25.0		
	3000	IZMI	5 S	0714.4	0714.4	0.2	20.0			
	2700	PURP	1 S	0734.0	0735.8	12.6	9.0	7.2		
	204	IZMI	42 SER	0825.3	0825.4	0.4	72.0			
	33	UPIC	46 C	0936.0	0937.5	7.0				UNCERTN
	3000	IZMI	1 S	1125.5	1125.6	0.2	10.0			
	245	SVTO	8 S	1213.0	1215.0	2.0	70.0			QL=4 ST=2 TYP=3

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

MARCH 1999

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
19	8800	SGMR	8 S	1307.0	1308.0	1.0	420.0			QL=4 ST=2 TYP=3
20	204	IZMI	44 NS	0700.0E		300.0D		5.0		
	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	280	CUBA	44 NS	1300.0E		530.0D		15.0		
	33	UPIC	3 S	0908.0	0908.5	1.0				
	204	IZMI	7 C	1057.0	1057.3	0.7	214.0			
	33	UPIC	3 S	1057.5	1058.0	1.0				
21	2695	LEAR	4 S/F	0515.0	0524.0	10.0	330.0			QL=4 ST=2 TYP=3
	2700	PURP	45 C	0636.0	0640.2	6.6	13.0	11.0		
	2950	GORK	3 S	0639.7	0640.1	0.9	12.1			
	5730	IRKU	1 S	0639.7	0640.1	1.4	8.0		U	
	900	GORK	2 S/F	0639.8	0639.9	0.7	3.0			
	2950	GORK	29 PBI	0640.6	0640.6	1.4	3.2			
	5730	IRKU	1 S	0733.2	0733.7	0.8	2.0		U	
	2840	BEIJ	5 S	0737.0	0740.0	9.0	15.9	12.2		
	2950	GORK	1 S	1025.5	1027.1	2.3	5.2			
	3000	IZMI	5 S	1026.1	1026.2	2.1	4.0			
	2950	GORK	29 PBI	1026.8	1026.8	15.2	2.9			
24	245	SVTO	8 S	0914.0	0914.0	U	200.0			QL=2 ST=2 TYP=3
	3000	IZMI	5 S	0923.4	0923.5	0.2	37.0			
25	235	CUBA	44 NS	1300.0E		530.0D		6.0		
	280	CUBA	44 NS	1300.0E		530.0D		12.0		
27	900	GORK	2 S/F	0630.0	0630.4	1.3	2.0			
	600	GORK	2 S/F	0630.0	0630.5	1.3	4.0			
	127	TORN	8 S	1348.4	1348.7	0.8	2470.0	1230.0		
28	204	IZMI	42 SER	0828.1	0828.2	0.4	38.0			
29	235	CUBA	44 NS	1300.0E		530.0D		8.0		
	280	CUBA	44 NS	1300.0E		530.0D		14.0		
	245	SGMR	8 S	2143.0	2143.0	U	70.0			QL=4 ST=2 TYP=3
30	280	CUBA	44 NS	1300.0E		530.0D		15.0		
	235	CUBA	44 NS	1300.0E		530.0D		7.0		
31	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	280	CUBA	44 NS	1300.0E		530.0D		15.0		

Reports are received routinely from the following observatories:

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

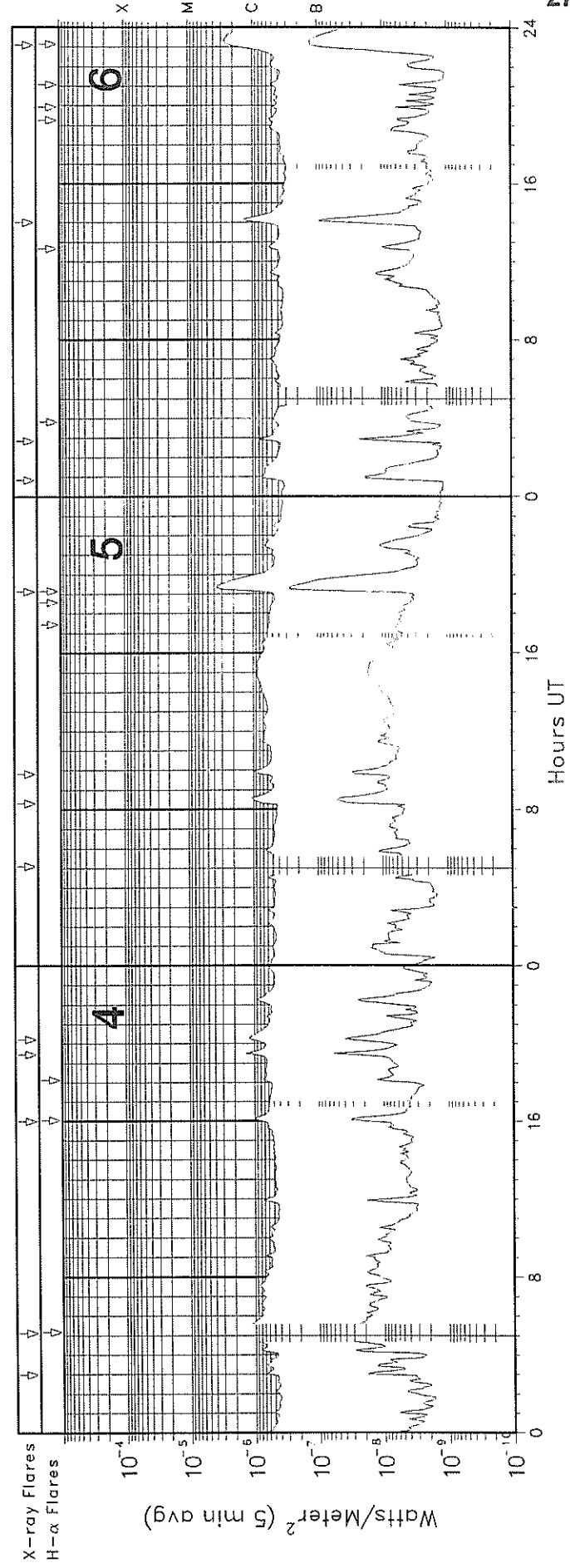
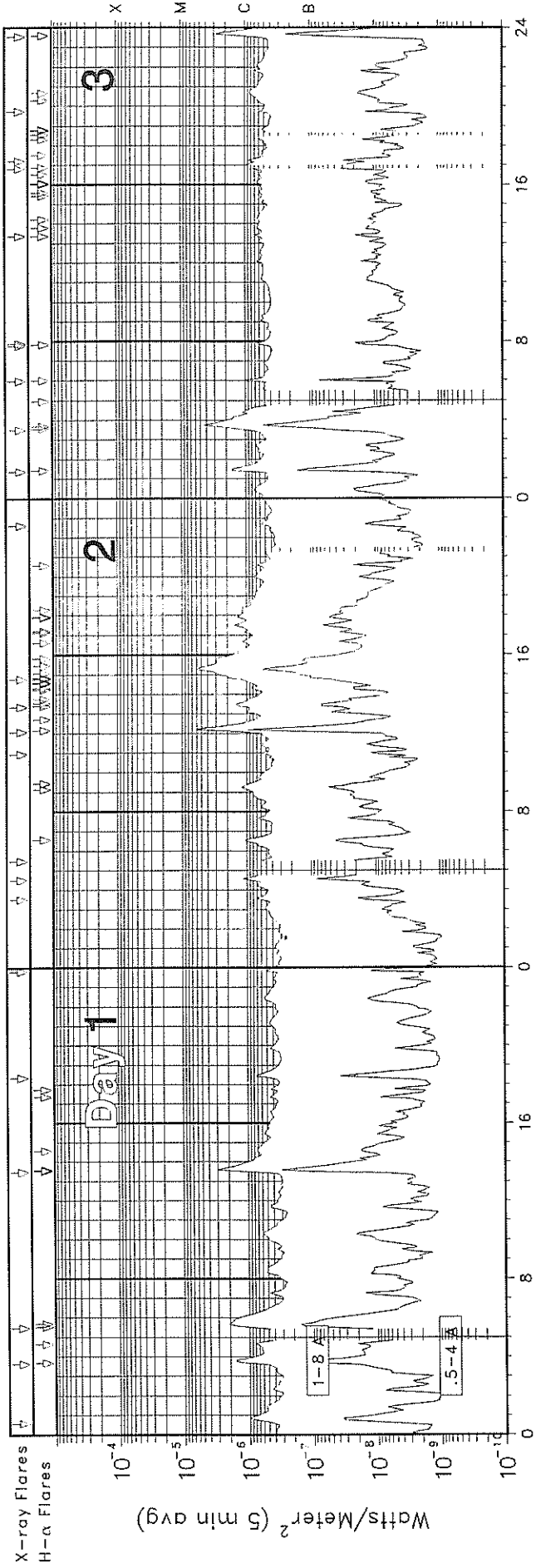
Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 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	

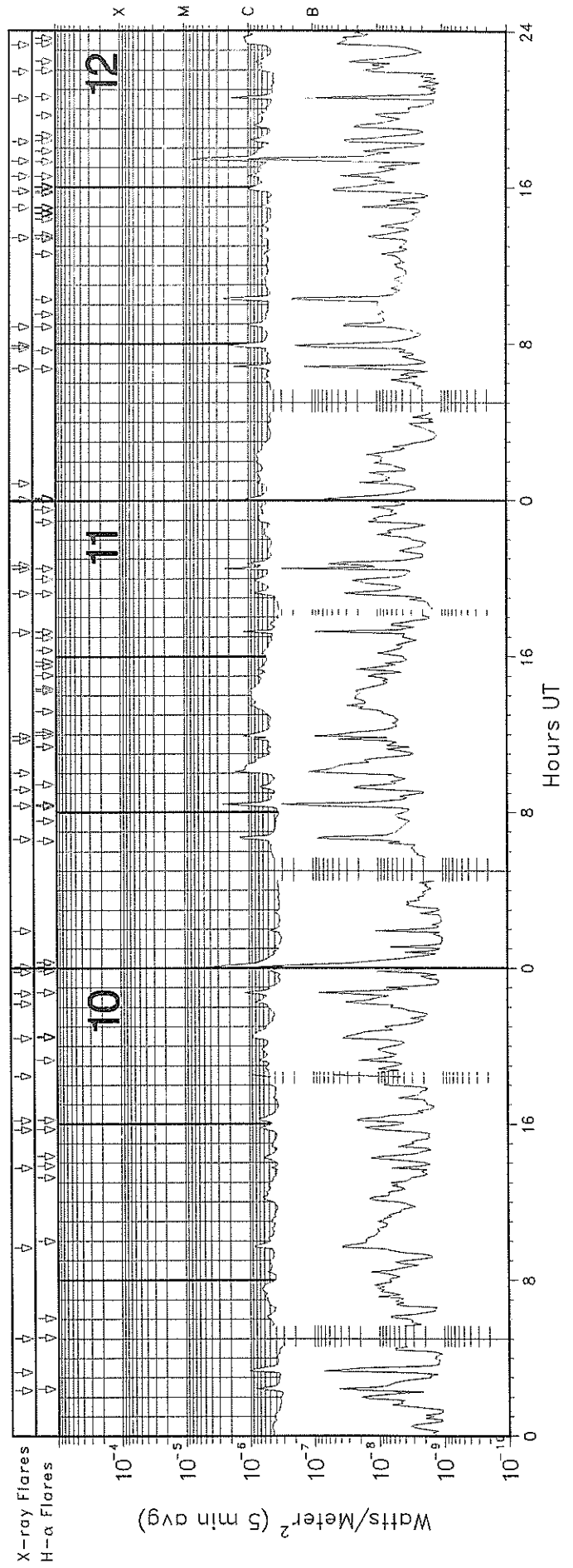
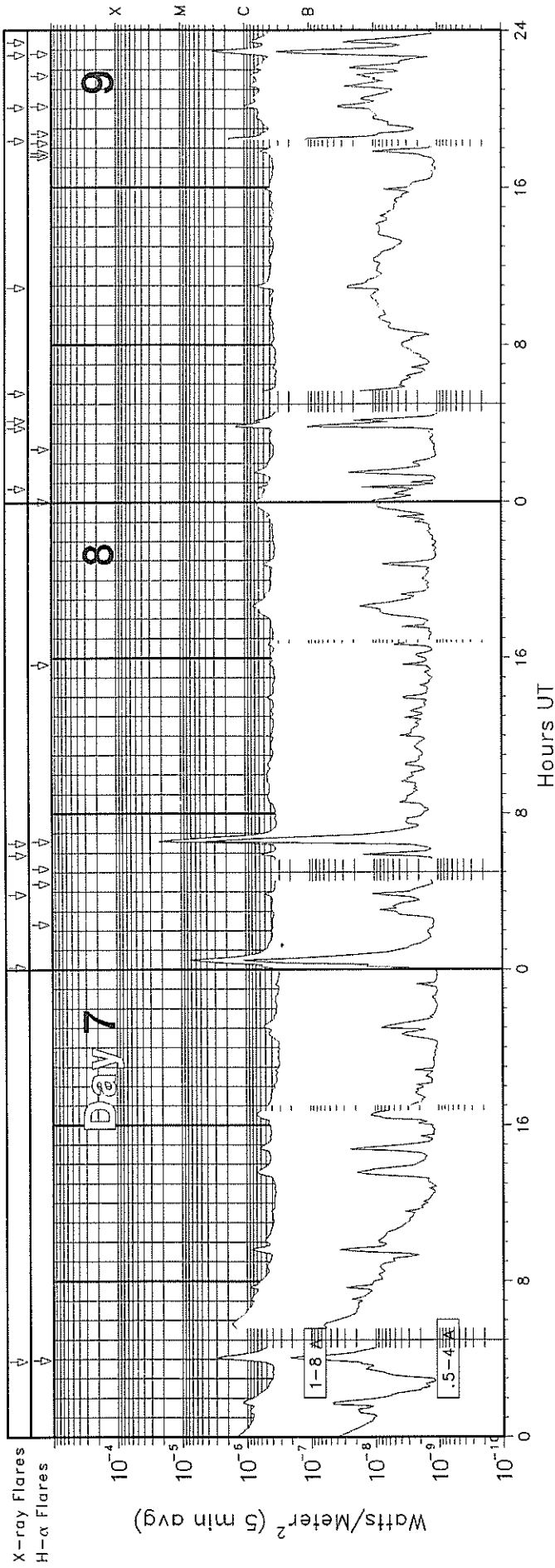
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500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

GOES X-RAY DETECTOR

March 1999

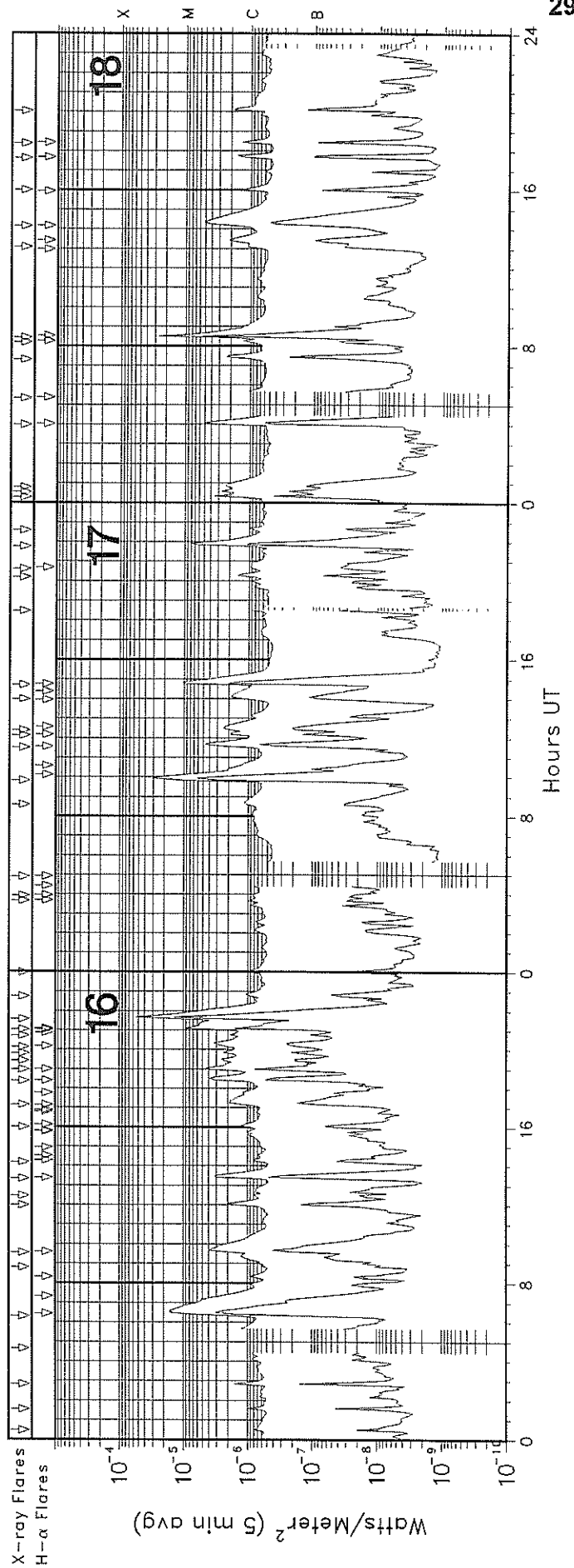
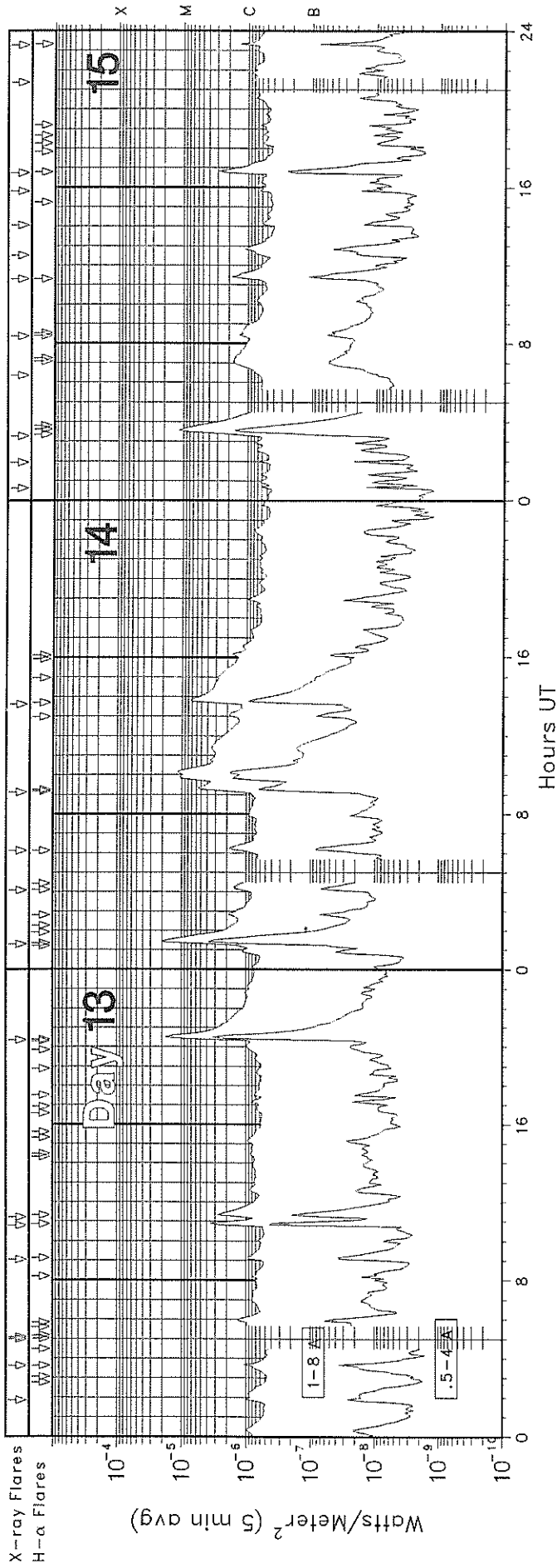


GOES X-RAY DETECTOR March 1999



GOES X-RAY DETECTOR

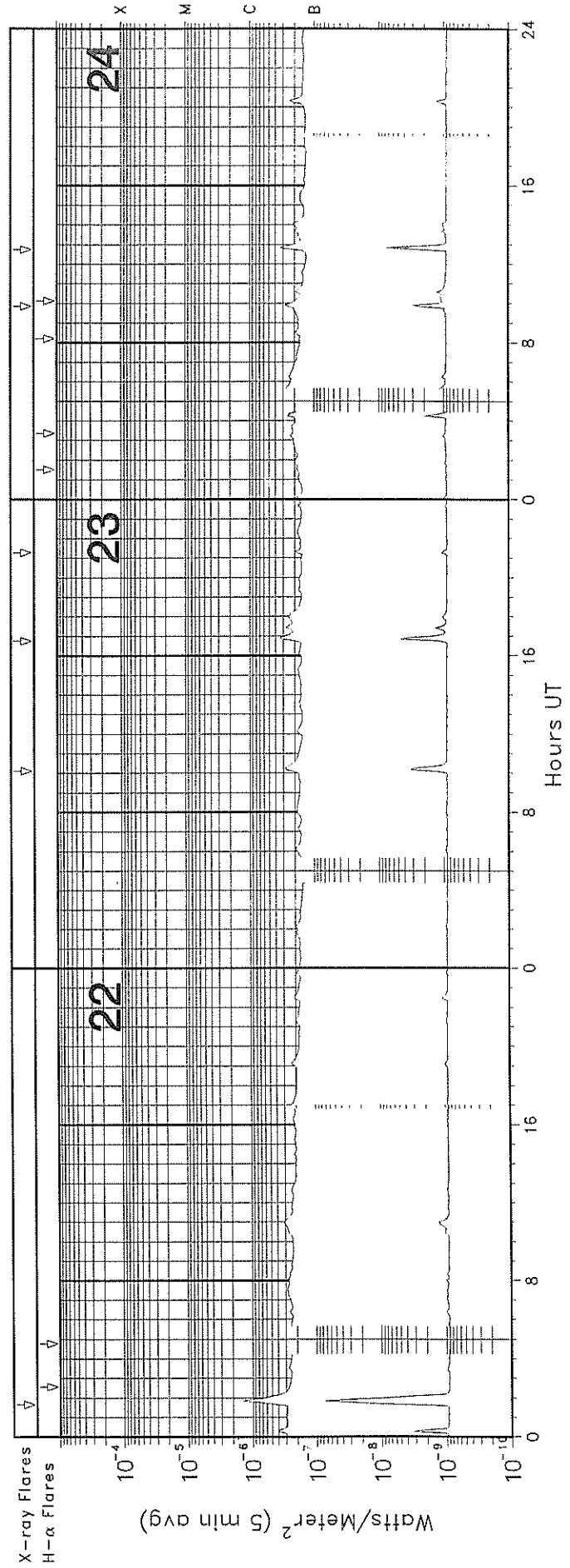
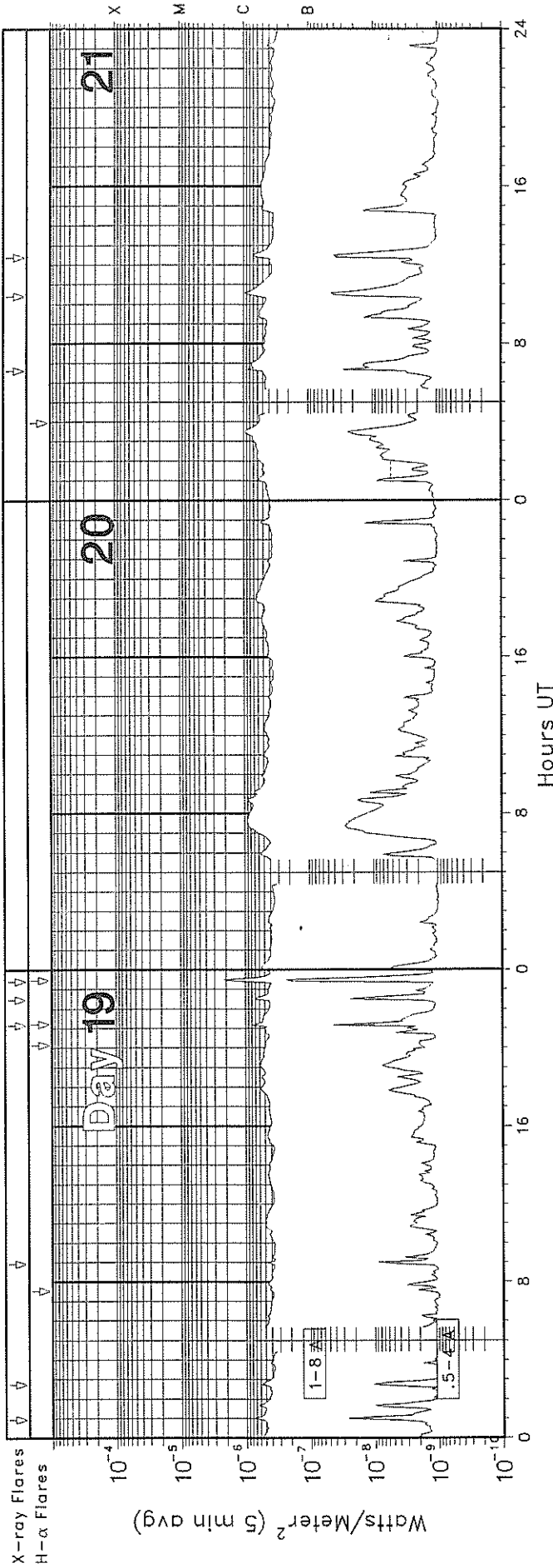
March 1999



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Mar 99

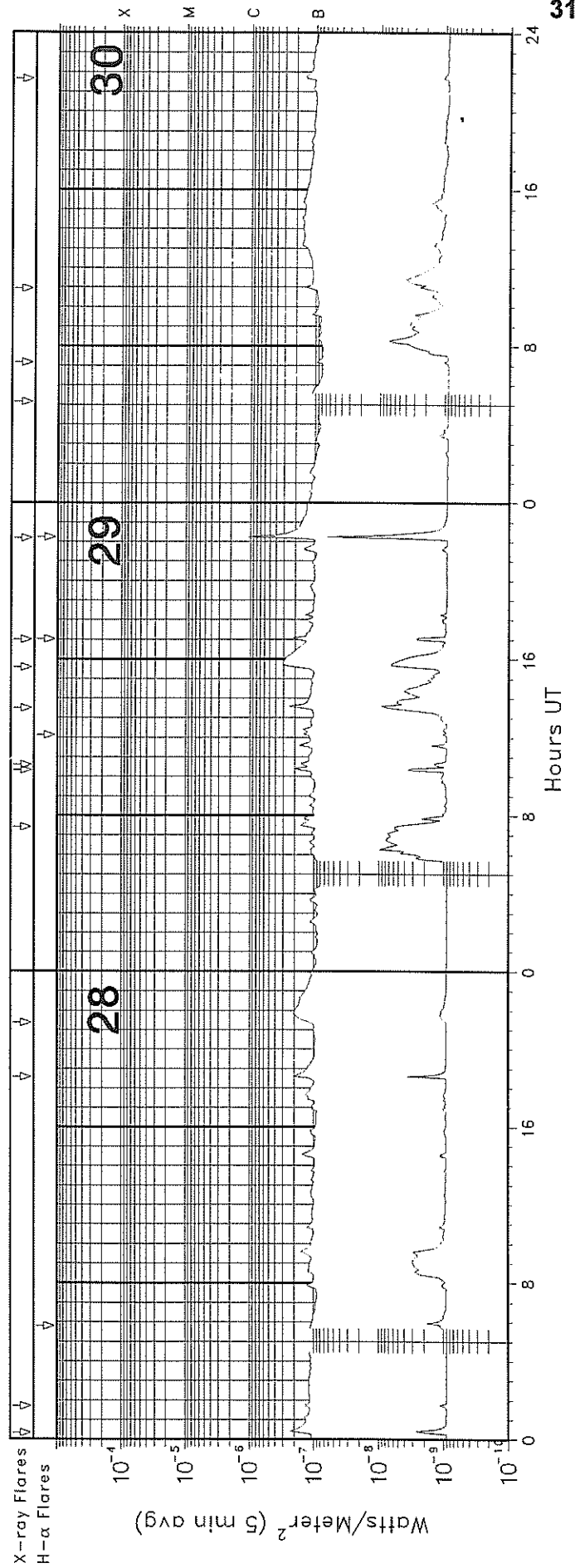
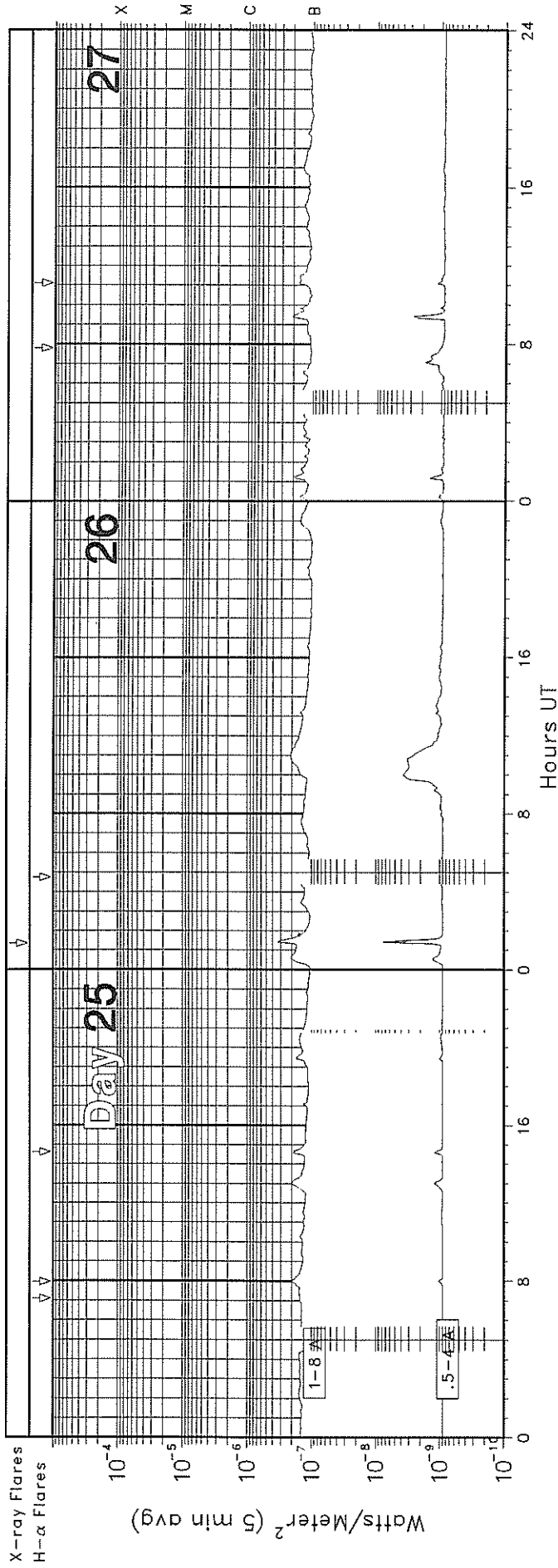
GOES X-RAY DETECTOR

March 1999



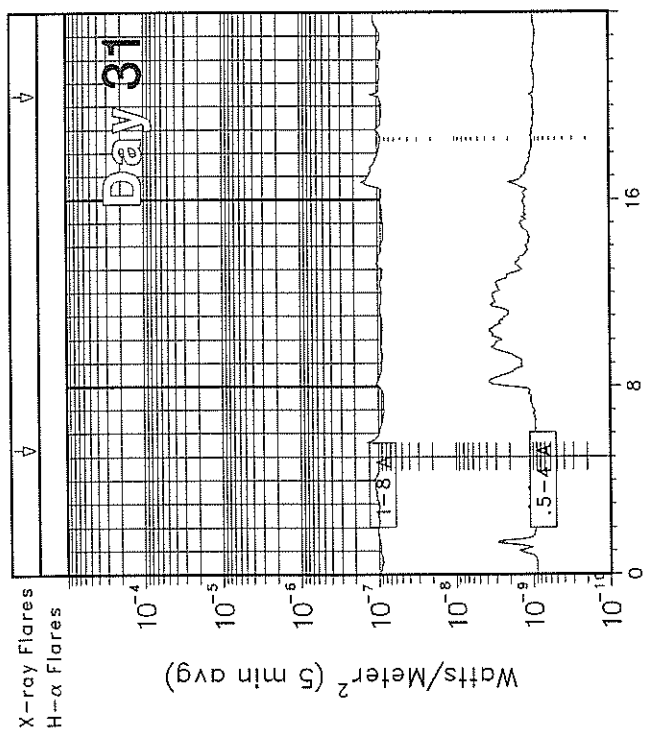
GOES X-RAY DETECTOR

March 1999



GOES X-RAY DETECTOR

March 1999



GOES SOLAR X-RAY FLARES
 Preliminary Listing

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 Mar 99

March 1999

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/	Region Flux	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/	Region Flux
								USAF										USAF	
01	0035	0052	0104				C1.0		1.3E-03	10	1345	1348	1350				B5.1		1.4E-04
01	0337	0345	0355	N29	W13	SF	C1.7	8471	1.4E-03	10	1541	1553	1555	N22	E45	SF	B9.1	8485	5.2E-04
01	0528	0542	0605	N28	W17	SF	C2.0	8471	3.5E-03	10	1610	1614	1618	S29	W43	SF	B8.6	8477	3.5E-04
01	1329	1337	1348	N28	W19	SF	C3.1	8471	2.4E-03	10	1828	1833	1835				C1.1		3.6E-04
01	1821	1827	1837				B7.7		6.2E-04	10	2024	2028	2040	N23	E45	SF	B9.5	8485	8.2E-04
01	2348	2353	2358				B5.5		2.9E-04	10	2211	2215	2221				B8.6		4.5E-04
02	0331	0335	0339				B7.7		3.3E-04	10	2243	2247	2249	S17	W64	SF	C1.4	8483	4.0E-04
02	0431	0435	0439				C1.3		5.1E-04	10	2348	2352	2355	S17	W63	SF	B5.2	8483	1.9E-04
02	0529	0532	0535				B6.5		2.1E-04	11	0004	0009	0011	S17	W63	SF	C8.7	8483	1.6E-03
02	1056	1100	1102				B6.9		2.0E-04	11	0155	0158	0200				B5.8		1.5E-04
02	1204	1212	1220	N31	E11	SN	C6.3		3.9E-03	11	0638	0646	0648	N16	E76	SF	C1.7		7.9E-04
02	1322	1330	1335	N17	W03	SF	C1.6	8476	1.1E-03	11	0821	0825	0827	N16	E74	SF	C5.0	8487	8.4E-04
02	1447	1519	1530	N28	W37	1F	C6.2	8471	9.0E-03	11	0911	0922	0925				B7.2		5.1E-04
02	2237	2240	2245				B6.1		2.6E-04	11	1002	1006	1009				C2.0		6.1E-04
03	0122	0128	0137	N27	W40	SF	C2.0	8471	1.3E-03	11	1142	1147	1151				B9.3		3.9E-04
03	0331	0345	0356	N27	W41	SF	C4.5	8471	4.0E-03	11	1154	1157	1159	N15	E71	SF	C2.0	8487	3.7E-04
03	0558	0602	0604	N16	W16	SF	C1.5	8476	3.6E-04	11	1714	1717	1719	S18	W70	SN	C2.8	8483	3.7E-04
03	0747	0750	0752	N18	W13	SF	B7.6	8476	1.6E-04	11	1914	1918	1921	N17	E68	SF	B8.8		3.4E-04
03	0753	0757	0800				B7.1		2.6E-04	11	2030	2034	2036	N16	E64	SF	C6.1	8487	8.0E-04
03	1322	1325	1327	N28	W50	SF	B8.1	8471	2.2E-04	11	2041	2046	2048				C1.4		3.9E-04
03	1649	1654	1705	N18	W18	SF	C1.1	8476	9.3E-04	12	0003	0007	0009	N20	E24	SF	C1.3	8485	3.7E-04
03	1713	1716	1719				B9.6		3.1E-04	12	0053	0056	0058				B8.4		2.2E-04
03	1944	1947	1949				B6.9		1.7E-04	12	0646	0651	0653	N15	E59	SF	C2.3	8487	5.9E-04
03	2333	2343	2350	N33	W04	1F	C3.0	8475	2.0E-03	12	0747	0752	0754	N15	E58	SF	C1.8	8487	4.6E-04
04	0258	0303	0312				B7.3		5.4E-04	12	0755	0758	0801				C2.6		7.5E-04
04	0507	0514	0523	N32	W09	SF	C3.3		0.0E+00	12	0853	0856	0904	N15	E57	SN	C1.0	8487	6.2E-04
04	1559	1609	1615	S25	E30	SF	C1.0	8477	8.5E-04	12	1326	1329	1331	N19	E16	SF	B7.7	8487	1.9E-04
04	1926	1931	1937				C1.4		7.8E-04	12	1459	1503	1505	N14	E55	SF	B8.1		2.4E-04
04	2013	2018	2025				C1.2		8.3E-04	12	1548	1555	1607	N21	E19	SF	C1.0	8485	9.8E-04
05	0506	0510	0516				B8.0		4.0E-04	12	1633	1637	1639	N19	E15	SF	C1.1	8485	3.4E-04
05	0819	0836	0846				C1.0		1.5E-03	12	1720	1726	1732	N14	E55	1B	C9.4	8487	3.7E-03
05	0949	0956	1005				B9.8		8.5E-04	12	1820	1824	1830	N19	E13	SF	C1.0	8485	5.0E-04
05	1909	1925	1944	S25	E16	1N	C3.7		5.8E-03	12	2033	2038	2040	N13	E52	1B	C3.2	8487	6.5E-04
06	0051	0100	0141				B7.4		1.9E-03	12	2155	2227	2233	N14	E53	SF	B8.6	8485	1.5E-03
06	0251	0258	0305				B8.1		5.6E-04	12	2317	2341	2346	N17	E51	SF	C1.3	8487	1.8E-03
06	1401	1410	1418				C1.4		1.2E-03	13	0151	0155	0204				C1.0		7.0E-04
06	2305	2323	2354	N30	W46	SF	C2.7	8475	6.9E-03	13	0337	0343	0345	N15	E49	SF	C1.1	8487	4.8E-04
07	0354	0408	0415	S24	W03	SF	C2.9	8477	2.5E-03	13	0459	0502	0504	N15	E47	SF	C1.1	8487	2.4E-04
08	0008	0031	0036				C7.9		4.9E-03	13	0506	0516	0530	N17	E50	SF	C2.7	8487	2.7E-03
08	0352	0355	0358				B5.8		1.9E-04	13	0904	0909	0913				C1.1		5.0E-04
08	0553	0559	0602				B6.2		2.9E-04	13	1048	1054	1100				C4.3		2.0E-03
08	0630	0637	0643	S24	E93	SF	M2.6	8484	1.0E-02	13	1114	1122	1134	N15	E47	SF	C2.7		2.5E-03
09	0043	0046	0048				B7.1		1.8E-04	13	2022	2034	2039	N17	E39	SF	M1.9	8487	1.2E-02
09	0347	0353	0359				C1.6		8.4E-04	14	0119	0127	0140	N15	E39	1N	M2.1		1.8E-02
09	0410	0413	0415				B8.3		2.1E-04	14	0406	0415	0429	N21	W03	SF	C1.5	8485	1.9E-03
09	0533	0537	0540				B8.9		2.6E-04	14	0607	0615	0623	N25	W05	SF	C1.9	8485	1.5E-03
09	1054	1059	1106				B7.0		4.2E-04	14	0908	1010	1025	N16	E34	SF	M1.1	8487	3.2E-02
09	1823	1830	1834				C2.0	8485	9.7E-04	14	1338	1350	1411	N15	E30	SN	C7.5	8487	1.1E-02
09	2004	2010	2015	S24	E68	SF	C1.1	8484	6.2E-04	15	0038	0041	0043				B7.4		1.8E-04
09	2245	2257	2303	S24	E66	1F	C3.2	8484	2.1E-03	15	0157	0201	0203				B8.2		2.5E-04
09	2323	2327	2335				B8.5		5.4E-04	15	0317	0336	0350	N16	E26	1N	M1.1		1.3E-02
10	0220	0225	0231	N23	E55	SF	B8.7		4.4E-04	15	0521	0701	0744				C1.6		6.2E-03
10	0317	0324	0327				C1.6		5.5E-04	15	0822	0825	0827	N19	W20	SF	C1.6	8485	4.1E-04
10	0501	0506	0510	N20	E50	SF	B7.9		3.3E-04	15	1118	1126	1131	N22	W20	SF	C2.1		1.1E-03
10	0938	0943	0950				C1.0		5.7E-04	15	1231	1253	1302				C1.3		1.6E-03
										15	1404	1409	1421				B6.4		5.7E-04
										15	1549	1553	1557				B7.1		3.1E-04
										15	1644	1649	1657	N21	W24	1F	C3.3	8485	1.8E-03
										15	2122	2125	2127				C1.7		3.9E-04
										15	2316	2321	2323	N19	W28	SF	C2.0	8485	4.9E-04

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Mar 99

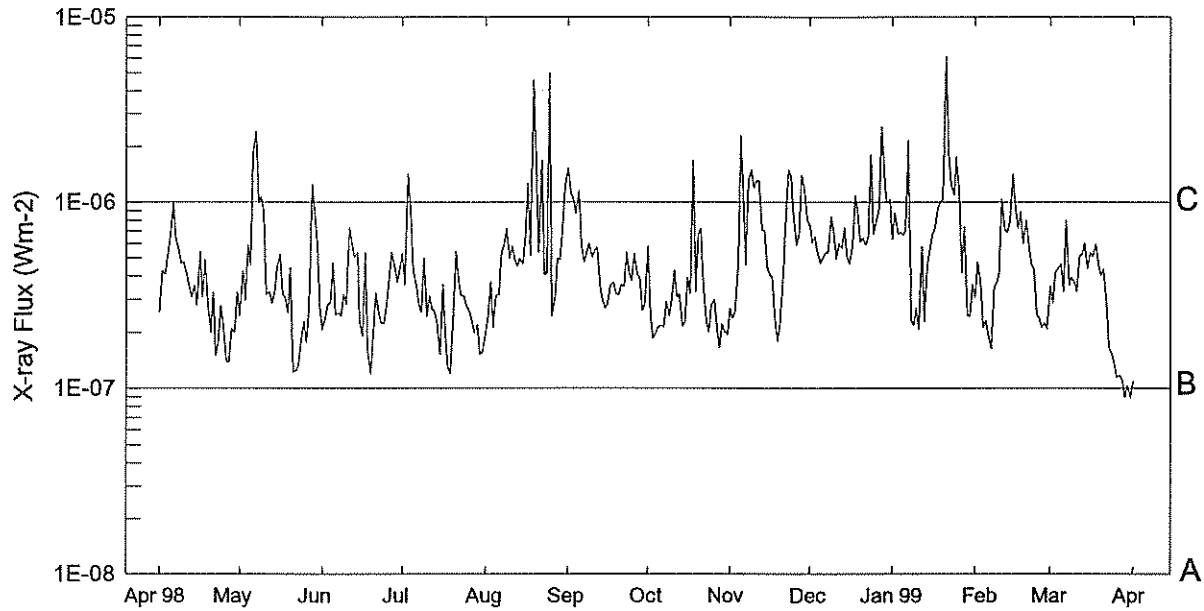
GOES SOLAR X-RAY FLARES
Preliminary Listing

March 1999

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region	Flux
16	0028	0031	0033			B9.2		2.2E-04
16	0132	0136	0138			C1.2		3.2E-04
16	0249	0252	0255			C2.2		5.4E-04
16	0439	0443	0446			C1.8		6.5E-04
16	0618	0635	0656	N22	W31 1F	M1.6		2.4E-02
16	0848	0851	0853			B6.8		1.7E-04
16	0932	0942	0959	N23	W28 SF	C4.1	8485	4.8E-03
16	1158	1204	1210			C2.3		1.2E-03
16	1227	1230	1232			B9.3		2.5E-04
16	1321	1329	1337	N21	W33 SF	C3.7	8485	2.4E-03
16	1411	1416	1427	N21	W34 SF	B8.1	8485	6.9E-04
16	1600	1608	1611	N25	W42 SF	C1.4	8485	7.4E-04
16	1708	1718	1736	N21	W36 SF	C2.0	8485	2.7E-03
16	1822	1829	1839	N22	W37 SF	C4.6	8485	3.2E-03
16	1857	1902	1909	N22	W38 SF	C5.0		2.7E-03
16	1925	1930	1934			C2.7		1.3E-03
16	1947	1951	1957			C2.4		1.3E-03
16	2007	2021	2027	N20	W40 SF	C3.4	8485	3.2E-03
16	2042	2045	2050			C1.9		8.2E-04
16	2101	2107	2114	N23	W36 1N	M1.1		5.4E-03
16	2134	2141	2146	N23	W39 2N	M6.2		2.5E-02
16	2245	2251	2257			C1.1		7.0E-04
16	2358	2402	2408			C1.0		5.4E-04
17	0339	0342	0345	N22	W47 SF	C1.1	8485	3.4E-04
17	0356	0359	0402	N22	W41 SF	C1.0	8485	3.2E-04
17	0453	0506	0519	N22	W41 SF	C1.3	8485	1.8E-03
17	0835	0840	0853			C1.1		1.2E-03
17	0950	0956	1005	N23	W44 1F	M3.2		2.0E-02
17	1130	1143	1150	N25	W43 SF	C4.8		3.7E-03
17	1207	1214	1219	N23	W44 SF	C2.2	8485	1.3E-03
17	1224	1229	1242	N24	W44 SF	C2.5	8485	2.4E-03
17	1359	1406	1423	N25	W50 SF	C1.8	8485	2.3E-03
17	1442	1449	1458	N23	W46 SN	M1.2	8485	7.7E-03
17	1828	1832	1835			B9.7		3.7E-04
17	2011	2018	2023			C1.6		9.1E-04
17	2037	2040	2100	N22	W50 SF	C1.0	8485	1.3E-03
17	2145	2156	2200			C9.5		4.8E-03
17	2236	2241	2243			C1.2		4.3E-04
18	0016	0021	0026			C4.0		1.6E-03
18	0032	0036	0039			C3.1		1.1E-03
18	0047	0052	0107			C2.4		2.5E-03
18	0358	0404	0413			C5.2		3.3E-03
18	0519	0525	0528			C3.0		1.0E-03
18	0718	0728	0733			C3.1		1.6E-03
18	0810	0815	0818			C1.5		5.7E-04
18	0825	0831	0835			M3.3		9.2E-03
18	1304	1327	1338	N26	W70 1F	C2.1	8485	3.0E-03

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region	Flux
18	1408	1422	1438	N27	W74 1N	C5.3	8485	6.8E-03
18	1559	1603	1607	N24	W58 SF	C1.6	8485	5.9E-04
18	1738	1745	1749	N23	W62 SF	C2.0	8485	9.0E-04
18	1822	1827	1832	N24	W62 SF	C1.5	8485	6.7E-04
18	2002	2006	2015			C2.0		1.2E-03
19	0057	0101	0103			B9.4		2.7E-04
19	0245	0248	0250			B7.0		1.8E-04
19	0856	0900	0902			B5.5		1.7E-04
19	2110	2112	2114	N20	W21 SF	C1.1	8493	1.9E-04
19	2228	2233	2239			B8.0		4.3E-04
19	2325	2330	2332	N20	W22 SF	C4.9	8493	9.2E-04
21	0638	0642	0645			C1.0		3.4E-04
21	1025	1036	1046			B9.9		1.0E-03
21	1224	1230	1241			B7.4		6.6E-04
22	0138	0152	0159			C1.4		1.1E-03
23	1007	1017	1024			B2.8		2.7E-04
23	1646	1658	1704			B3.5		3.2E-04
23	2116	2119	2123			B2.2		8.4E-05
24	0951	0955	1001			B2.9		1.6E-04
24	1245	1252	1300			B3.4		2.5E-04
26	0121	0128	0135			B3.5		2.4E-04
28	0020	0026	0037			B2.3		2.0E-04
28	0142	0145	0147			B1.7		4.3E-05
28	1833	1837	1843			B2.3		1.1E-04
28	2123	2148	2236			B2.0		7.7E-04
29	0725	0731	0745			B1.6		1.7E-04
29	1020	1025	1029			B2.3		1.0E-04
29	1036	1040	1043			B1.8		6.8E-05
29	1330	1336	1340			B2.7		1.2E-04
29	1534	1549	1620			B3.1		7.5E-04
29	1700	1705	1707	S29	E66 SF	B3.1	8502	9.3E-05
29	2212	2216	2219	S27	E64 SF	C1.4	8502	3.6E-04
30	0509	0513	0516			B3.3		8.7E-05
30	0710	0713	0716			B1.1		3.5E-05
30	1056	1100	1104			B1.6		6.6E-05
30	2139	2144	2154			B1.5		1.3E-04
31	0519	0524	0529			B4.3		1.9E-04
31	2027	2030	2033			B1.3		4.2E-05

Preliminary GOES Satellite Daily X-Ray Background Apr 98 - Mar 99



Day	Apr 98	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 99	Feb	Mar
1	B2.6	B2.4	B2.0	B5.3	B1.9	C1.5	B5.8	B2.7	B7.5	B6.3	B3.0	B3.5
2	B4.3	B4.2	B2.4	B3.6	B2.4	C1.1	B2.4	B2.4	B6.0	B8.7	B4.7	B2.8
3	B4.1	B2.9	B2.8	C1.4	B3.7	C1.0	B1.8	B2.6	B6.5	B6.7	B3.5	B4.1
4	B5.2	B5.8	B2.8	B9.2	B2.1	B8.7	B2.0	B4.8	B5.4	B6.8	B2.1	B4.3
5	B6.6	B4.6	B4.7	B4.2	B3.1	C1.1	B2.1	C2.3	B4.7	B6.6	B2.3	B4.6
6	C1.0	C1.8	B2.4	B3.5	B3.1	B5.8	B2.1	C1.1	B5.0	B7.0	B1.9	B3.3
7	B6.6	C2.4	B2.5	B2.8	B5.4	B4.7	B2.1	B4.6	B5.3	C2.1	B1.6	B8.0
8	B5.6	B9.9	B2.4	B2.5	B5.8	B5.4	B2.9	C1.3	B5.3	B2.3	B3.4	B3.5
9	B4.7	C1.0	B3.2	B5.0	B7.2	B6.0	B2.4	C1.5	B8.3	B2.2	B3.6	B3.9
10	B4.8	B8.7	B2.8	B2.4	B4.9	B5.0	B3.0	C1.2	B6.8	B2.7	B4.1	B3.7
11	B4.1	B3.1	B7.2	B3.1	B5.8	B5.4	B4.2	C1.3	B4.9	B2.0	C1.0	B3.3
12	B3.5	B3.3	B6.0	B2.6	B4.8	B5.7	B3.0	C1.3	B6.0	B5.7	B7.1	B5.0
13	B3.1	B2.8	B5.0	B2.6	B4.5	B3.4	B3.2	B7.1	B5.6	B2.2	B6.8	B5.2
14	B3.6	B3.2	B5.3	B2.2	B4.9	B2.9	B2.1	B7.0	B7.2	B4.4	B7.8	B6.0
15	B2.8	B4.4	B2.3	B1.5	B4.6	B2.7	B2.3	B4.5	B5.1	B5.5	C1.4	B4.3
16	B5.4	B5.3	B1.9	B3.6	B6.5	B2.8	B3.9	B4.0	B4.6	B6.6	B9.2	B5.3
17	B3.1	B3.1	B5.3	B2.0	C1.2	B3.6	B3.2	B4.0	B5.8	B7.4	B7.2	B5.0
18	B4.9	B3.0	B1.5	B1.2	B5.1	B3.7	C1.6	B2.3	C1.0	B9.2	B8.9	B5.9
19	B3.0	B2.5	B1.2	B1.2	C4.5	B3.2	B3.3	B1.8	B8.7	C1.0	B6.0	B4.6
20	B2.0	B4.4	B1.9	B2.5	C1.6	B3.1	B6.7	B2.3	B6.1	C1.0	B7.9	B3.9
21	B3.3	B1.2	B3.2	B5.4	B5.3	B3.5	B7.2	B4.2	B6.3	C6.1	B5.9	B4.4
22	B1.5	B1.2	B2.6	B3.8	C1.6	B3.5	B3.7	B7.2	B5.9	C1.8	B4.6	B2.8
23	B1.8	B1.3	B2.2	B3.1	B4.0	B5.3	B2.3	C1.5	B6.5	C1.2	B4.4	B1.6
24	B2.8	B1.8	B2.2	B3.1	B4.1	B4.1	B2.0	C1.4	C1.8	C1.0	B2.4	B1.5
25	B2.0	B2.2	B2.7	B2.7	B4.9	B3.7	B2.8	B8.4	B6.7	C1.7	B2.3	B1.4
26	B1.4	B1.7	B3.8	B2.6	B2.4	B5.3	B3.0	B5.9	B8.0	C1.1	B2.1	B1.1
27	B1.4	B2.7	B5.3	B2.2	B3.0	B4.0	B2.1	B6.8	B9.2	B4.2	B2.2	B1.1
28	B2.1	C1.2	B4.4	B2.0	B5.0	B3.8	B1.6	C1.4	C2.5	B7.4	B2.0	B1.1
29	B2.0	B8.8	B3.7	B2.2	B4.8	B2.6	B2.2	C1.2	C1.2	B2.4		A8.9
30	B3.3	B5.9	B4.4	B1.5	B7.3	B2.8	B2.0	B8.0	B9.9	B2.4		B1.0
31		B2.7		B1.5	C1.2		B1.9		C1.0	B3.6		A8.9

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Mar 99

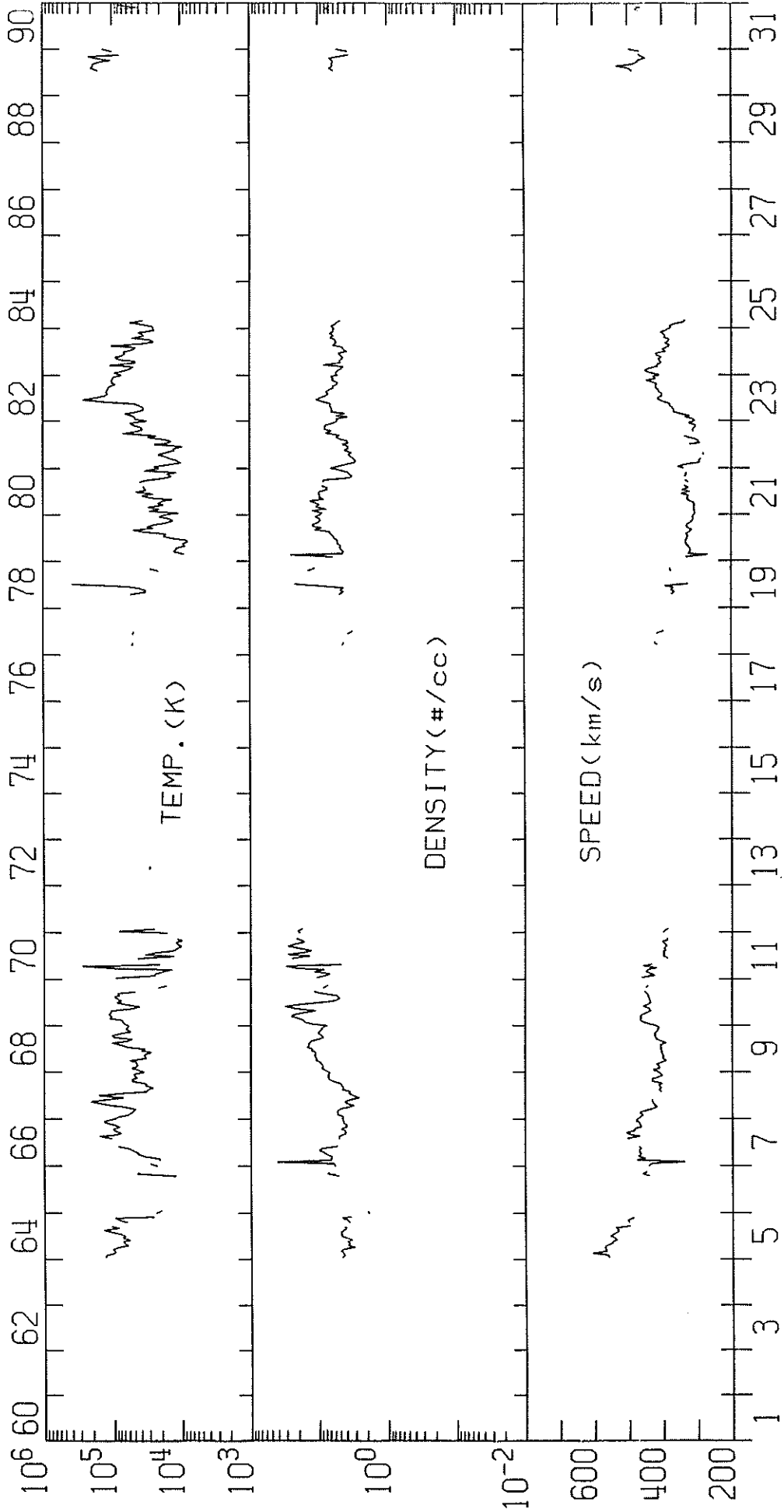
ACTIVE PROMINENCES AND FILAMENTS

MARCH 1999

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
02	DSF	1817U	1154U	S16	E12	03	3.7		10	0	0	E	RAMY		
03	DSF	1418U	0031	S16	W25	03	1.7	3	09	4	1	E	HOLL		
04	DSF	0031U	1418U	S16	W25	03	2.1	3	09	0	0	E	HOLL		
04	DSF	1015U	2340U	S05	E16	03	5.6		04	0	0	E	LEAR		
04	DSF	2058U	1153U	S07	E11	03	5.7		07	7	7	E	RAMY		
04	DSF	2058U	1153U	S28	E47	03	8.5		09	0	0	E	RAMY		
04	DSF	2058U	1153U	S63	E69	03	11.0		38	0	0	E	RAMY		
06	DSF	0954U	2307U	N30	W35	03	3.6		11	0	0	E	LEAR	8475	
09	BSL	1843	1849	S25	E64	03	14.7			9	9	E	HOLL	8484	Flare Associated
10	DSF	0021U	1423U	S53	E06	03	10.5	2	43	0	0	E	HOLL		
12	DSF	1006U	2301U	N50	E26	03	14.6		15	0	0	E	LEAR		
13	DSF	0834U	2311U	N02	E32	03	15.7		15	0	0	E	LEAR		
13	DSF	0834U	2311U	S27	E65	03	18.4		20	0	0	E	LEAR		
13	DSF	2113U	1110U	S38	E55	03	18.3		07	0	0	E	RAMY		
14	DSF	2046U	1130U	N19	E29	03	17.1		12	0	0	E	RAMY	8487	
15	DSF	1008U	2315U	S35	W32	03	12.9		16	0	0	E	LEAR		
17	DSF	1939U	1140U	N37	W16	03	16.5		10	0	0	E	RAMY		
17	DSF	1939U	1140U	S33	E45	03	21.4		10	0	0	E	RAMY		
18	DSF	1851U	1121U	N08	W11	03	18.0		24	0	0	E	RAMY		
19	EPL	1532E	1620D	S58	E90	03	27.5	3		7	6	E	RAMY		
19	EPL	1545E	1650	S48	E90	03	27.2	3		9	9	E	HOLL		
20	DSF	2004U	1149U	N13	W04	03	20.5		20	0	0	E	RAMY		
23	DSF	0043U	1423U	S50	E48	03	27.1	3	24	0	0	E	HOLL		
23	DSF	2028U	1226U	N18	W04	03	23.5		10	0	0	E	RAMY		
23	DSF	2028U	1226U	N25	W24	03	22.0		12	0	0	E	RAMY		
23	DSF	2028U	1230U	S06	W03	03	23.6		06	0	0	E	RAMY		
24	DSF	0017U	1419U	N27	W25	03	22.1	2	05	0	0	E	HOLL		
24	DSF	1744U	1122U	S12	W11	03	23.9		17	0	0	E	RAMY		
26	DSF	1601U	1128U	N39	E24	03	28.6		06	0	0	E	RAMY	8497	
29	DSF	1850U	1103U	N00	E32	04	1.2		14	0	0	E	RAMY		

IMP 8 SOLAR WIND PLASMA
MARCH 1999

MIT/CSR IMP 8 PLASMA PARAMETERS



MAR 1999

MAR 1999

IMP 8

MIT

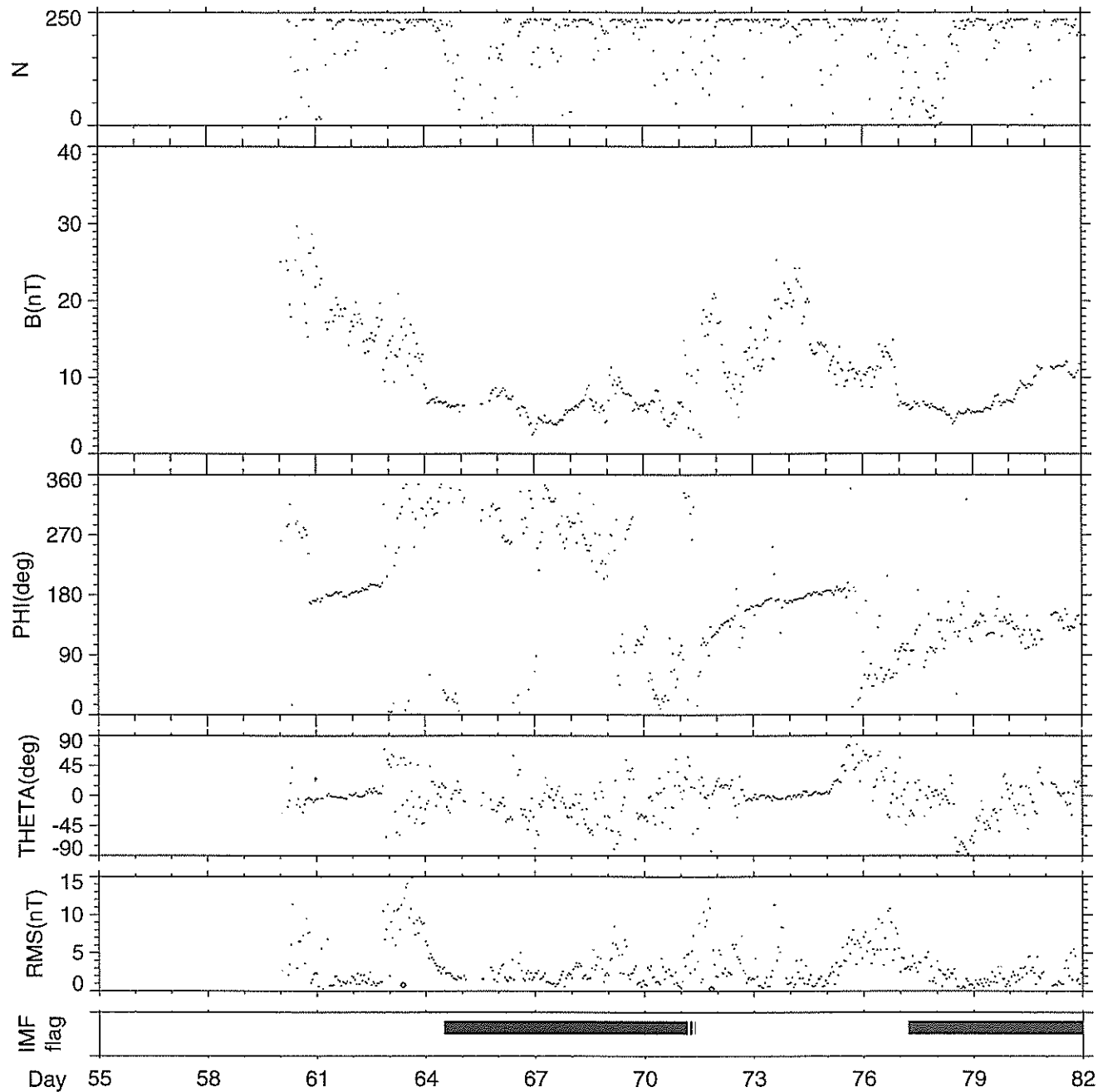
ONE-HOUR AVERAGES

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 60 - 82

March 1 1999 - March 23 1999



Generation Date : Thu Jun 10 15:50:46 1999

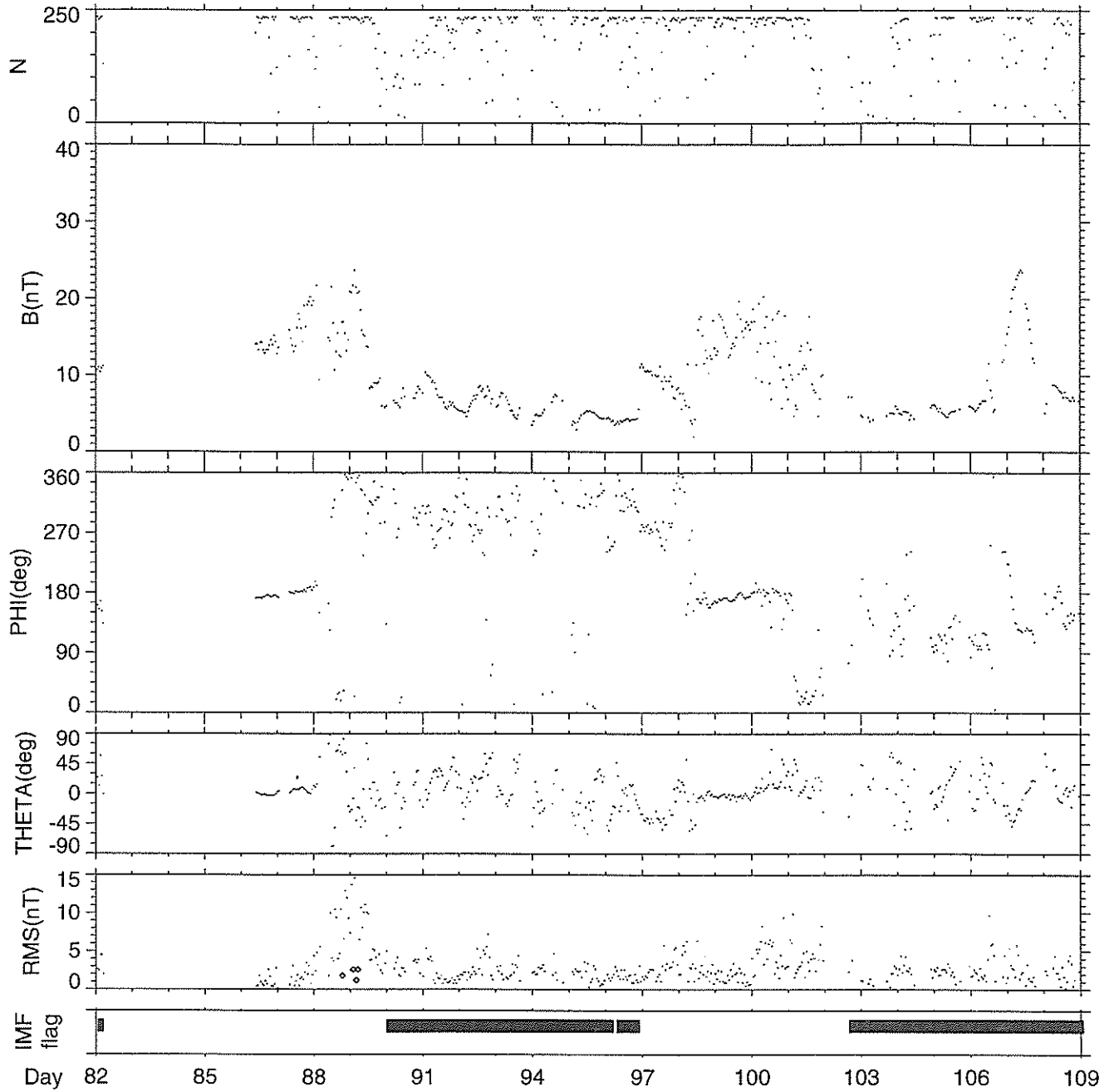
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 82 - 109

March 23 1999 - April 19 1999



Generation Date : Thu Jun 10 15:51:05 1999

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.

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Comprehensive Reports

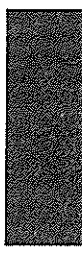
Number 661 Part II

MISCELLANEOUS or LATE DATA

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POLAR CAP (PC) GEOMAGNETIC INDEX

Plot of 1-minute values -- Vostok June 1999 42

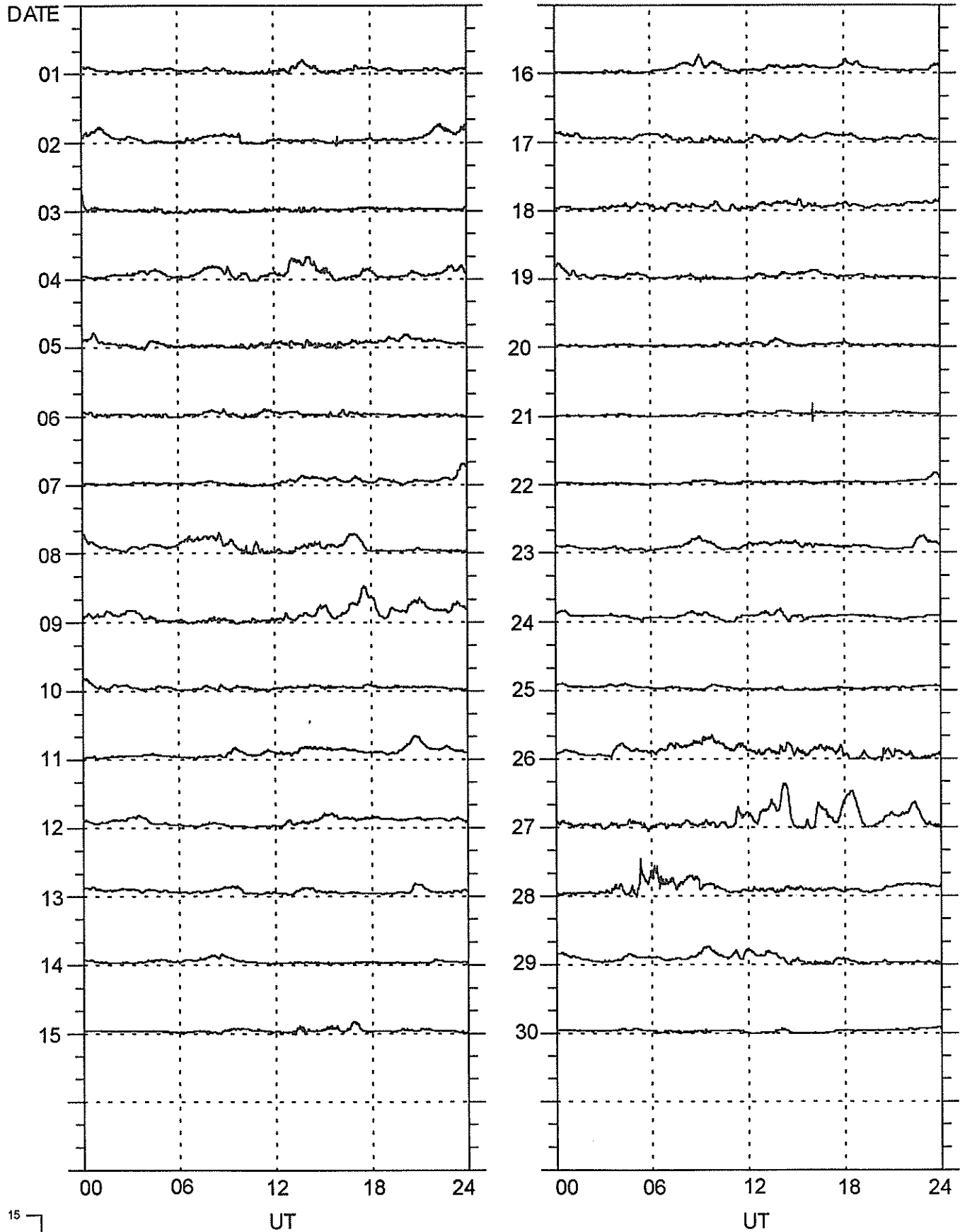


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Late
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Vostok

PC-INDEX

June, 1999



15
0

1-min. Values

Arctic & Antarctic Research Institute, Russia



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."