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H α SOLAR FLARES

NOVEMBER 1998

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)	
			01 1015		1043			No Flare Patrol											
0001	SVTO	01	1201E	1202U	1217	N17	E43	8375	11	4.8	16D	SF		3	E		28		F
0002	RAMY	01	1220	1220	1259	N16	E44	8375	11	4.8	39	SF		3	E		29		H
0003	RAMY	01	1321	1322	1327	S25	E25	8373	11	3.5	6	SF		3	E		17		F
			01 1446		1506			No Flare Patrol											
			01 1511		1551			No Flare Patrol											
			01 1636		1637			No Flare Patrol											
0004	HOLL	01	1643	1643	1652	S27	E58		11	6.2	9	SF		3	E		12		F
			02 0908		0921			No Flare Patrol											
0005	KANZ	02	0958	0958	1002	S29	E53		11	6.6	4	SF		2	C				
			02 1012		1016			No Flare Patrol											
			02 1026		1030			No Flare Patrol											
0006	KANZ	02	1155	1203	1219	S28	E52		11	6.6	24	SF		2	C				
0007		02	1243*	13582	1541	S26	E46		11	6.1	178	1F					164		FU
	KANZ	02	1243	1400	1408D	S27	E49		11	6.3	85D	1F		2	C				U
	RAMY	02	1348	1358	1518	S25	E45		11	6.1	90	1F		3	E		109		UF
	SVTO	02	1354E	1359U	1412D	S26	E47		11	6.2	18D	1F		3	E		162		UF
	HOLL	02	1402E	1406U	1604	S25	E44		11	6.0	122D	1N		3	E		220		UF
0008	HOLL	02	2017	2021	2029	N19	E16	8375	11	4.1	12	SF		3	E		13		
0009	URUM	03	0151E	0152	0157	N13	E13	8375	11	4.0	6D	SN			P		32	0.3	D
			03 1013		1023			No Flare Patrol											
			03 1029		1033			No Flare Patrol											
			03 1035		1049			No Flare Patrol											
0010		03	1330	1331	1335	N18	E07	8375	11	4.1	5	SF					16		H
	SVTO	03	1330	1331	1335	N20	E06	8375	11	4.0	5	SF		3	E		19		H
	RAMY	03	1330	1331	1335	N17	E08	8375	11	4.2	5	SF		4	E		13		H
0011	HOLL	03	1753	1756	1811	N18	E05	8375	11	4.1	18	SF		3	E		43		
0012		03	1832	1833	1836	N16	E08	8375	11	4.4	4	SF					56		
	HOLL	03	1832	1833	1836	N17	E08	8375	11	4.4	4	SF		3	E		54		
	RAMY	03	1832	1833	1836	N16	E09	8375	11	4.4	4	SF		3	E		58		
0013		03	1852	1924	2024	N20	E02	8375	11	3.9	92	1N					202		
	HOLL	03	1852	1924	2028	N21	E02	8375	11	3.9	96	2N		3	E		388		
	RAMY	03	2013E	2014U	2021	N20	E02	8375	11	4.0	8D	SF		2	E		16		
0014	HOLL	03	2135	2138	2140	N16	E06	8375	11	4.3	5	SF		3	E		22		
0015	HOLL	03	2336	2338	2342	N15	E01	8375	11	4.0	6	SF		3	E		27		
0016	LEAR	04	0033	0034	0037	N16	E05	8375	11	4.4	4	SF		3	E		20		
0017	URUM	04	0157	0200	0212	N17	E00	8375	11	4.1	15	SN			C		48	0.5	D
0018		04	0314	03175	0348	N17	W00	8375	11	4.1	34	SN					124	2.0	EH
	LEAR	04	0314	0317	0407	N17	E01	8375	11	4.2	53	SF		3	E		56		EH
	URUM	04	0318E	0322	0330	N17	W02	8375	11	4.0	12D	SB			P		193	2.0	E
0019	URUM	04	0330	0346	0350	N14	E13	8375	11	5.1	20	SB			C		161	1.7	E
0020	LEAR	04	0615	0620	0627	N17	W01	8375	11	4.2	12	SF		3	E		14		
0021	LEAR	04	0717	0719	0746	N17	W01	8375	11	4.2	29	SF		3	E		34		

H α SOLAR FLARES

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NOVEMBER 1998

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks	
						Lat	CMD	Region						Mo	Day		Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)
0022	04	0853	0902	0916	N18	W04	8375	11	4.1	23	SF			56		EFH EH F	
	LEAR	04	0853	0902	0916	N17	W03	8375	11	4.1	23	SF	3	E	26		
	SVTO	04	0855E	0906U	0916D	N18	W05	8375	11	4.0	21D	SF	2	E	86		
0023	LEAR	04	0925	0925	0934	S28	E23	8376	11	6.2	9	SF	3	E	14		
		04	1013		1143	No Flare Patrol											
		04	1157		1201	No Flare Patrol											
0024	RAMY	04	1205	1206	1209	N15	W01	8375	11	4.4	4	SF	3	E	29		
0025	RAMY	04	1206	1208	1222	S19	W22	8379	11	2.8	16	SF	3	E	13		
0026	RAMY	04	1225	1231	1404	N16	W04	8375	11	4.2	99	1N	3	E	131	FH	
0027	RAMY	04	1312	1312	1319	S19	W23	8379	11	2.8	7	SF	3	E	10		
0028	04	1525*	1548	1603	N18	W08	8375	11	4.0	38	SF			28		F F	
	HOLL	04	1525	1548	1605	N18	W08	8375	11	4.0	40	SF	3	E	30		
	RAMY	04	1545	1548	1601	N17	W07	8375	11	4.1	16	SF	3	E	25		
0029	04	1623	1625	1634	N12	E67	8378	11	9.7	11	SF			27			
	RAMY	04	1623	1625	1633	N12	E67	8378	11	9.7	10	SF	3	E	19		
	HOLL	04	1623	1625	1634	N13	E67	8378	11	9.7	11	SF	3	E	35		
0030	HOLL	04	2002	2005	2011	N18	W11	8375	11	4.0	9	SF	3	E	96		
0031	HOLL	04	2208	2210	2230	N19	W08	8375	11	4.3	22	1F	3	E	105		
0032	HOLL	04	2242	2247	2256	N13	E64	8378	11	9.8	14	SF	3	E	64		
0033	HOLL	04	2242	2243	2254	N16	W12	8375	11	4.0	12	SF	3	E	25		
0034	LEAR	04	2344	2525	2532	N19	W10	8375	11	4.2	108	SN	3	E	95	T	
0035	LEAR	05	0133	0134	0142	N19	W10	8375	11	4.3	9	SF	3	E	12		
0036	LEAR	05	0236	0236	0249	S29	E14	8376	11	6.2	13	SF	3	E	12		
0037	05	0259	03011	0307	N18	W12	8375	11	4.2	8	SN			84	1.4	D	
	LEAR	05	0259	0302	0308	N19	W11	8375	11	4.3	9	SF	3	E	40		
	URUM	05	0301E	0301	0306	N17	W12	8375	11	4.2	5D	SB		P	129		1.4
0038	LEAR	05	0457	0459	0503	N19	W12	8375	11	4.3	6	SN	3	E	46		
0039	LEAR	05	0608	0615	0620	N16	W14	8375	11	4.2	12	SF	3	E	37		
0040	LEAR	05	0644	0644	0649	N19	W13	8375	11	4.3	5	SF	3	E	16		
0041	LEAR	05	0655	0656	0700	N19	W13	8375	11	4.3	5	SF	3	E	33		
0042	LEAR	05	0804	0806	0812	N19	W13	8375	11	4.3	8	SF	3	E	58		
0043	LEAR	05	0845	0847	0851	N19	W14	8375	11	4.3	6	SF	3	E	16		
0044	LEAR	05	0901	0902	0904	N19	W14	8375	11	4.3	3	SF	3	E	26		
0045	LEAR	05	0923	0923	0926	N16	W16	8375	11	4.2	3	SF	3	E	22		
0046	LEAR	05	0944	0945	0949	S23	E66	8380	11	10.5	5	SF	2	E	31	E	
		05	1002		1038	No Flare Patrol											
0047	RAMY	05	1051E	1052U	1106	N16	W15	8375	11	4.3	15D	SF	2	E	14		
0048	05	1108	1109	1123	N16	W15	8375	11	4.3	15	SF			18			
	RAMY	05	1108	1109	1123	N16	W15	8375	11	4.3	15	SF	2	E	18		
	KANZ	05	1113E		1117D	N15	W15	8375	11	4.3	4D	SF	2	C			

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Nov 98

H α SOLAR FLARES

NOVEMBER 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	Time (UT)	Area Measurement		Remarks	
																	Apparent (10-6 Disk)	Corr (Sq Deg)		
0049	RAMY	05	1138E	1139U	1158	N15	W17	8375	11	4.2	20D	SF		3	E		35		H	
0050	RAMY	05	1303	1305	1321	N16	W17	8375	11	4.2	18	SF		3	E		35			
0051		05	1333	1335	1352	N15	W17	8375	11	4.3	19	1N					177		H	
	RAMY	05	1333	1335	1345	N15	W17	8375	11	4.3	12	1B		3	E		177		H	
	KANZ	05	1340E		1400	N15	W17	8375	11	4.3	20D	SF		2	C					
0052	HOLL	05	1510	1511	1515	N17	W15	8375	11	4.5	5	SF		3	E		10			
			05 1700		1725	No Flare Patrol														
			05 1729		1839	No Flare Patrol														
0053	HOLL	05	1831E	1950	2334D	N22	W18	8375	11	4.4	303D	2B		3	E		464		T	
0054	HOLL	05	2101	2107	2115	S18	W41	8379	11	2.7	14	SF		3	E		28			
0055	HOLL	05	2157	2159	2212	S21	E58	8380	11	10.4	15	SF		3	E		21			
0056	LEAR	05	2215E	2219U	2239	N19	W21	8375	11	4.3	24D	SF		2	E		23			
0057	HOLL	05	2248	2249	2302	S18	W42	8379	11	2.7	14	SF		3	E		39			
0058	LEAR	05	2255	2301	2317	N19	W22	8375	11	4.3	22	SF		3	E		81			
0059	HOLL	05	2313	2314	2317	N11	E48	8378	11	9.6	4	SF		3	E		32			
0060		06	0242	02433	0254	N18	W26	8375	11	4.1	12	SN					61	0.8	E	
	LEAR	06	0242	0243	0254	N19	W24	8375	11	4.3	12	SF		3	E		58			
	URUM	06	0242	0246	0253	N18	W28	8375	11	4.0	11	SB			C		64	0.8	E	
0061	LEAR	06	0307	0307	0310	N19	W24	8375	11	4.3	3	SF		3	E		20			
0062	LEAR	06	0417	0417	0421	N19	W24	8375	11	4.3	4	SF		3	E		18			
0063	LEAR	06	0442	0446	0448	N19	W25	8375	11	4.3	6	SF		3	E		16			
0064	LEAR	06	0452	0458	0502	N19	W25	8375	11	4.3	10	SF		3	E		17			
0065		06	05087	05193	0528	N20	W26	8375	11	4.2	20	SN					70	1.1	D	
	LEAR	06	0508	0522	0528	N19	W25	8375	11	4.3	20	SF		3	E		44			
	URUM	06	0515	0519	0527	N21	W26	8375	11	4.2	12	SB			C		96	1.1	D	
0066	URUM	06	0756E	0756	0800	N10	W32		11	3.9	4D	SF			P		80	1.0	D	
0067		06	07525	07591	0803	N20	W26	8375	11	4.3	11	SF					16			
	KANZ	06	0752	0800	0804	N19	W25	8375	11	4.4	12	SF		2	C					
	LEAR	06	0757	0759	0802	N20	W26	8375	11	4.3	5	SF		3	E		16			
0068		06	08311	08321	0838	N17	W29	8375	11	4.1	7	SN					126	2.6	E	
	LEAR	06	0831	0833	0837	N19	W27	8375	11	4.3	6	SF		3	E		44			
	URUM	06	0832E	0832	0836	N18	W32	8375	11	3.9	4D	1B			P		209	2.6	E	
	KANZ	06	0832	0832	0840	N15	W28	8375	11	4.2	8	SF		2	C					
0069		06	0852	0852	0856	N19	W31	8375	11	4.0	4	SN					130	2.9	E	
	KANZ	06	0852	0852	0856	N18	W30	8375	11	4.1	4	SF		2	C					
	URUM	06	0852E	0852	0856	N19	W35	8375	11	3.7	4D	1B			P		225	2.9	E	
	LEAR	06	0852	0852	0857	N19	W27	8375	11	4.3	5	SF		3	E		34			
0070		06	09081	09103	0921	N16	W29	8375	11	4.2	13	SN					210	3.9	DH	
	URUM	06	0908	0912U	0912D	N15	W31	8375	11	4.0	4D	1B			P		321	3.9	D	
	KANZ	06	0908	0913	0917	N15	W28	8375	11	4.3	9	SF		2	C					
	LEAR	06	0909	0910	0925	N19	W27	8375	11	4.3	16	SN		3	E		99		H	
0071		06	0929	0929	0935	N19	W26	8375	11	4.4	6	SF					12			
	KANZ	06	0929	0929	0933	N19	W25	8375	11	4.5	4	SF		2	C					
	LEAR	06	0929	0929	0937	N19	W27	8375	11	4.3	8	SF		3	E		12			
0072	KANZ	06	0933	0937	0941	N14	W28	8375	11	4.3	8	SF		2	C					

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks
						Lat	Cmd	Region						Mo	Day		Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)
0073	KANZ	06	1025E	1029	1041	N16	W29	8375	11	4.2	16D	SF	2	C		
0074		06	1109	1109	1118	N16	W29	8375	11	4.3	9	SN			31	H
	KANZ	06	1109	1109	1117	N15	W29	8375	11	4.3	8	SF	2	C		
	RAMY	06	1109E	1110U	1119	N16	W29	8375	11	4.3	10D	SN	2	E	31	H
0075		06	12032	12041	1219	N15	W30	8375	11	4.2	16	SN			66	FH
	RAMY	06	1203	1204	1217	N15	W30	8375	11	4.2	14	SB	3	E	71	H
	SVTO	06	1204	1207U	1227	N15	W30	8375	11	4.2	23	SF	2	E	61	F
	KANZ	06	1205	1205	1213	N15	W29	8375	11	4.3	8	SF	2	C		
0076		06	13152	13171	1323	N15	W30	8375	11	4.3	8	SF			12	
	RAMY	06	1315	1318	1321	N15	W31	8375	11	4.2	6	SF	3	E	12	
	KANZ	06	1317	1317	1325	N15	W30	8375	11	4.3	8	SF	2	C		
0077		06	13174	13232	1340	N22	E26	8377	11	8.5	23	SF			17	
	KANZ	06	1317	1325	1341	N22	E27	8377	11	8.6	24	SF	2	C		
	RAMY	06	1321	1323	1339	N21	E26	8377	11	8.5	18	SF	3	E	17	
0078		06	15101	1511	1528	N15	W32	8375	11	4.2	18	1N			150	
	RAMY	06	1510	1511	1533	N15	W32	8375	11	4.2	23	1B	3	E	149	
	HOLL	06	1511	1511	1523	N15	W33	8375	11	4.1	12	1F	3	E	151	
0079	RAMY	06	1624	1624	1641	N19	W30	8375	11	4.4	17	SF	3	E	10	
0080	HOLL	06	1825	1825	1836	N18	W37	8375	11	3.9	11	SF	3	E	12	
0081		06	1849	18501	1857	N15	W35	8375	11	4.1	8	SF			46	
	RAMY	06	1849	1850	1856	N15	W35	8375	11	4.1	7	SF	3	E	44	
	HOLL	06	1849	1851	1858	N15	W35	8375	11	4.1	9	SF	3	E	47	
0082	RAMY	06	1903	1903	1916	N20	E24	8377	11	8.6	13	SF	3	E	10	
0083		06	1919	19201	1923	N14	W36	8375	11	4.1	4	SF			20	F
	HOLL	06	1919	1920	1923	N14	W37	8375	11	4.0	4	SF	3	E	24	F
	RAMY	06	1919	1921	1923	N14	W36	8375	11	4.1	4	SF	3	E	15	
0084	HOLL	06	1920	1921	1923	S20	W53	8379	11	2.7	3	SF	3	E	12	
0085		06	19551	1958	2006	N19	W34	8375	11	4.2	11	1F			88	F
	HOLL	06	1955	1958	2007	N19	W34	8375	11	4.2	12	1F	3	E	118	F
	RAMY	06	1956	1958	2004	N19	W33	8375	11	4.3	8	SF	3	E	58	
0086	HOLL	06	2007	2008	2016	S20	W54	8379	11	2.7	9	SF	3	E	12	
0087	HOLL	06	2046	2046	2053	N17	W36	8375	11	4.1	7	SF	3	E	12	
0088	HOLL	06	2057	2102	2111	N17	W36	8375	11	4.1	14	SF	3	E	15	F
0089	HOLL	06	2110	2110	2118	S20	W54	8379	11	2.7	8	SF	3	E	14	
0090	HOLL	06	2207	2211	2227	N13	E39	8378	11	9.9	20	SF	3	E	10	
0091	HOLL	06	2210	2219	2226	S19	W56	8379	11	2.6	16	SF	3	E	11	
0092	HOLL	06	2202	2209	2226	N15	W37	8375	11	4.1	24	SN	3	E	98	
0093	HOLL	06	2229	2229	2235	N16	W35	8375	11	4.3	6	SF	3	E	20	F
0094	HOLL	06	2241	2254	2300	N19	W35	8375	11	4.3	19	SF	3	E	25	
0095		06	23012	23031	2313	N20	W34	8375	11	4.3	12	SF			28	
	HOLL	06	2301	2304	2314	N20	W34	8375	11	4.3	13	SF	3	E	40	
	LEAR	06	2303	2303	2312	N19	W34	8375	11	4.4	9	SF	3	E	15	
0096	HOLL	06	2314	2325	2331	N18	W36	8375	11	4.2	17	SF	3	E	14	
0097		06	23331	2334	2339	N14	W34	8375	11	4.4	6	SF			60	
	HOLL	06	2333	2334	2339	N14	W34	8375	11	4.4	6	SF	3	E	66	
	LEAR	06	2334	2334	2339	N15	W33	8375	11	4.5	5	SF	3	E	55	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area	Measurement		Remarks		
								USA/						Time	Apparent		Corr	
								Region	Mo	Day	(Min)	Opt	Xray	See	Type	(UT)	(10-6 Disk)	(Sq Deg)
0098		06	23292	23364	2350	N20	E20	8377	11	8.5	21	SF				66		EF
	HOLL	06	2329	2336	2359D	N20	E20	8377	11	8.5	30D	SF	3	E		91		
	LEAR	06	2331	2340	2350	N20	E21	8377	11	8.6	19	SF	3	E		41		FE
0099	LEAR	07	0112	0112	0115	N19	W36	8375	11	4.3	3	SF	3	E		22		
0100	LEAR	07	0202	0203	0206	N19	W36	8375	11	4.3	4	SF	3	E		23		
0101		07	05454	05492	0558	N16	W42	8375	11	4.0	13	SN				42	1.0	E
	URUM	07	0545	0549	0601	N18	W45	8375	11	3.8	16	SN		C		64	1.0	E
	LEAR	07	0549	0551	0554	N15	W40	8375	11	4.2	5	SF	4	E		21		E
0102	URUM	07	0656	0700	0704	N15	W45	8375	11	3.9	8	SN		C		64	0.9	E
0103	KANZ	07	0928	0928	0932	N20	E18	8377	11	8.8	4	SF	2	C				
0104	KANZ	07	0944	0944	0956	N15	W41	8375	11	4.3	12	SF	2	C				
0105	KANZ	07	1048	1052	1056	N13	W45	8375	11	4.0	8	SF	2	C				
0106	KANZ	07	1104	1108	1116	N14	W43	8375	11	4.2	12	SN	2	C				
0107	KANZ	07	1216	1216	1216	N19	W40	8375	11	4.4	12	SF	2	C				
0108		07	14142	1416	1418	N21	W44	8375	11	4.2	4	SF				13		
	HOLL	07	1414	1416	1420	N20	W44	8375	11	4.2	6	SF	3	E		13		
	KANZ	07	1416	1416	1416	N22	W44	8375	11	4.2	6	SF	2	C				
0109	HOLL	07	1426	1426	1436	N19	W44	8375	11	4.2	10	SF	3	E		12		F
0110		07	16034	16081	1618	N16	W46	8375	11	4.2	15	SF				21		F
	HOLL	07	1603	1609	1621	N18	W46	8375	11	4.2	18	SF	3	E		25		F
	RAMY	07	1607	1608	1616	N14	W46	8375	11	4.2	9	SF	3	E		17		
0111		07	1659	17001	1707	N18	W44	8375	11	4.3	8	SF				12		F
	RAMY	07	1659	1700	1707	N18	W43	8375	11	4.4	8	SF	3	E		12		
	HOLL	07	1659	1701	1707	N19	W45	8375	11	4.3	8	SF	3	E		13		F
0112		07	1742	17499	1814	N19	W48	8375	11	4.1	32	1F				98		F
	HOLL	07	1742	1749	1814	N19	W48	8375	11	4.1	32	1F	3	E		109		F
	RAMY	07	1742	1758	1813	N19	W47	8375	11	4.1	31	SF	3	E		88		F
0113	HOLL	07	1829	1830	1832	N19	W47	8375	11	4.2	3	SF	3	E		19		F
0114	HOLL	07	1934	1934	1945	N22	W48	8375	11	4.1	11	SF	3	E		16		F
0115		07	20091	2018	2032	S20	W68	8379	11	2.6	23	SF				34		F
	RAMY	07	2009	2018	2035	S20	W67	8379	11	2.7	26	SF	3	E		47		F
	HOLL	07	2010	2018	2028	S20	W68	8379	11	2.6	18	SF	3	E		21		F
0116	HOLL	07	2042	2043	2047	N19	W47	8375	11	4.3	5	SF	3	E		19		
0117	HOLL	07	2142	2142	2146	N19	W47	8375	11	4.3	4	SF	3	E		15		
0118	LEAR	08	0151	0152	0203	N22	W49	8375	11	4.3	12	SF	3	E		21		
0119		08	02191	02212	0234	N18	W54	8375	11	4.0	15	SF				37	0.9	E
	URUM	08	0219	0223	0235	N20	W54	8375	11	4.0	16	SF		C		48	0.9	E
	LEAR	08	0220	0221	0233	N15	W54	8375	11	4.0	13	SF	3	E		26		
0120	LEAR	08	0235	0236	0238	N20	W51	8375	11	4.2	3	SF	3	E		25		F
0121	LEAR	08	0311	0314	0317	N20	W53	8375	11	4.1	6	SF	3	E		26		E
0122		08	04242	0428*	0500	N20	W54	8375	11	4.0	36	1N				120	1.9	EFH
	URUM	08	0424	0428	0456	N21	W57	8375	11	3.8	32	SB		C		96	1.9	E
	LEAR	08	0426	0439	0505	N20	W52	8375	11	4.2	39	1F	3	E		145		FH

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF		CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks
						Region	Lat CMD							Time (UT)	Apparent (10-6 Disk)		Corr (Sq Deg)
0123		08	05123	05151	0519	N24 W50	8375	11	4.3	7	1N			94	2.9	D
	URUM	08	0512	0516	0520	N24 W52	8375	11	4.2	8	1N		C	161	2.9	D
	LEAR	08	0515	0515	0518	N23 W49	8375	11	4.4	3	SF	3	E	26		
0124	LEAR	08	0733	0734	0736	N19 W53	8375	11	4.3	3	SF	3	E	15		
0125		08	09131	09142	0930	N20 W52	8375	11	4.4	17	SF			18		H
	LEAR	08	0913	0916	0930	N21 W53	8375	11	4.3	17	SF	3	E	18		H
	KANZ	08	0914	0914	0930	N20 W52	8375	11	4.4	16	SF	2	C			
		08	1014		1027	No Flare Patrol										
0126	KANZ	08	1121E	1121U	1133D	S26 W30	8376	11	6.1	12D	SF	2	C			
0127	RAMY	08	1253	1254	1258	N15 W61	8375	11	3.9	5	SF	3	E	24		
0128	RAMY	08	1316	1322	1340	S22 W70	8373	11	3.2	24	1F	3	E	135		
0129		08	1337	1337	1404	N16 W58	8375	11	4.2	27	SF			40		F
	RAMY	08	1337	1337	1344	N14 W58	8375	11	4.2	7	SF	3	E	13		
	HOLL	08	1344E	1344U	1425	N18 W57	8375	11	4.2	41D	SF	2	E	67		F
0130		08	1427*	17122	1833	N19 W58	8375	11	4.2	246	2B			354		FHT
	HOLL	08	1427	1712	1921	N19 W58	8375	11	4.2	294	2B	3	E	480		FT
	RAMY	08	1708	1714	1745	N19 W58	8375	11	4.3	37	1N	3	E	227		FH
0131	RAMY	08	1529	1626	1651	N20 W59	8375	11	4.1	82	SF	3	E	68		
0132	RAMY	08	1750	1847	1905	N19 W60	8375	11	4.2	75	SF	3	E	45		
0133		08	19391	19412	1949	N20 W60	8375	11	4.2	10	SF			16		
	RAMY	08	1939	1943	1948	N20 W59	8375	11	4.3	9	SF	3	E	12		
	HOLL	08	1940	1941	1950	N20 W60	8375	11	4.2	10	SF	3	E	20		
0134		08	19561	20036	2056	N20 W58	8375	11	4.4	60	1F			101		F
	RAMY	08	1956	2009	2055	N20 W59	8375	11	4.3	59	1F	3	E	106		F
	HOLL	08	1957	2003	2056	N21 W57	8375	11	4.5	59	SF	3	E	96		
0135	HOLL	08	2112	2212	2219	N22 W59	8375	11	4.3	67	SF	3	E	38		
0136	HOLL	08	2155	2158	2203	S28 W35	8376	11	6.2	8	SF	3	E	17		
0137		08	22442	22486	2323	N20 W62	8375	11	4.2	39	1F			164		E
	HOLL	08	2244	2254	2331D	N20 W63	8375	11	4.1	47D	1F	3	E	183		
	LEAR	08	2246	2248	2323	N21 W61	8375	11	4.3	37	1F	3	E	144		E
0138		08	23207	23285	2350	N18 E16	8378	11	10.2	30	SF			48		FHS
	HOLL	08	2320	2328	2331D	N18 E14	8378	11	10.0	11D	SF	3	E	52		S
	LEAR	08	2327	2333	2350	N19 E17	8378	11	10.3	23	SF	3	E	45		FH
0139	LEAR	09	0002	0003	0019	N22 W61	8375	11	4.3	17	SF	3	E	22		
0140	LEAR	09	0022	0029	0056	N19 W62	8375	11	4.3	34	SF	3	E	32		
0141	LEAR	09	0122	0129	0151	N17 W61	8375	11	4.4	29	SF	4	E	97		E
0142	URUM	09	0242	0246	0249	N23 W65	8375	11	4.1	7	SF		C	48		D
0143	LEAR	09	0258	0310	0332	N19 W63	8375	11	4.3	34	SF	4	E	33		
0144	LEAR	09	0527	0528	0530	N19 W65	8375	11	4.3	3	SF	3	E	15		
		09	1003		1412	No Flare Patrol										
0145	HOLL	09	1441	1443	1448	N23 W68	8375	11	4.4	7	SF	3	E	13		
0146	HOLL	09	1453	1455	1506	N23 W69	8375	11	4.3	13	SF	3	E	71		
0147	HOLL	09	1506	1509	1517	N19 W70	8375	11	4.3	11	SF	3	E	22		

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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt Xray	Obs See	Type	Area Time (UT)	Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0173	KANZ	11 1351	1355U	1407	S32	E57	8384	11	16.1	16	SF	2	C				
0174		11 1423	14231	1430	N23	W84	8375	11	5.1	7	SF				18		
	HOLL	11 1423	1423	1429	N23	W82	8375	11	5.3	6	SF	3	E		21		
	RAMY	11 1423	1424	1431	N23	W86	8375	11	5.0	8	SF	3	E		16		
0175	LEAR	12 0526	0528	0546	N21	W34	8385	11	9.6	20	1N	4	E		108		EH
0176	LEAR	12 0535	0537	0541	S16	E36	8383	11	15.0	6	SF	3	E		18		
0177		12 0708	0708	0715	S16	E40	8383	11	15.3	7	SF				28		
	LEAR	12 0708	0708	0715	S16	E39	8383	11	15.2	7	SF	3	E		32		
	KANZ	12 0708	0708	0716	S16	E41	8383	11	15.4	8	SF	2	C				
	SVTO	12 0708E	0709U	0715	S15	E39	8383	11	15.2	7D	SF	3	E		23		
		12 1637		1648	No Flare Patrol												
		12 1725		2205	No Flare Patrol												
0178	HOLL	12 2155	2200	2210	N19	W44	8385	11	9.5	15	SF	3	E		10		
0179	LEAR	12 2301	2307	2311	N22	W55	8385	11	8.7	10	SF	3	E		18		F
0180	LEAR	12 2352	2354	2405	N19	W44	8385	11	9.6	13	SF	3	E		69		F
0181	LEAR	13 0312	0312	0319	S16	E27	8383	11	15.2	7	SF	3	E		20		
0182		13 0812	08163	0825	N19	W51	8385	11	9.4	13	SF				42		
	KANZ	13 0812	0816	0824	N18	W51	8385	11	9.4	12	SF	2	C				
	LEAR	13 0812	0819	0826	N20	W51	8385	11	9.4	14	SF	3	E		42		
0183	KANZ	13 1136	1140	1148	N19	W52	8385	11	9.5	12	SF	2	C				
0184	KANZ	13 1304	1308	1312	N20	W53	8385	11	9.5	8	SF	2	C				
		13 1556		1612	No Flare Patrol												
		13 1626		1654	No Flare Patrol												
0185	HOLL	13 2058	2059	2128	N19	W59	8385	11	9.4	30	SF	3	E		55		
0186	LEAR	14 0518	0519	0522	N24	W69	8377	11	8.9	4	SF	3	E		11		
0187	LEAR	14 0518	0519	0529	N20	W60	8385	11	9.6	11	SF	3	E		43		
0188	LEAR	14 0545	0546	0553	S15	E13	8383	11	15.2	8	SF	3	E		22		
0189	LEAR	14 0641	0642	0653	N20	W62	8385	11	9.5	12	SF	3	E		19		
0190		14 08472	08491	0858	N20	W62	8385	11	9.6	11	SF				75		
	LEAR	14 0847	0850	0900	N20	W63	8385	11	9.5	13	SF	3	E		75		
	KANZ	14 0849	0849	0857	N20	W61	8385	11	9.7	8	SF	2	C				
0191		14 10112	1011	1014	N22	E52	8388	11	18.4	3	SF				16		
	SVTO	14 1011	1011	1014	N22	E50	8388	11	18.3	3	SF	3	E		16		
	KANZ	14 1013	1013U	1013D	N22	E53	8388	11	18.5	3D	SF	2	C				
		14 1016		1020	No Flare Patrol												
		14 1030		1037	No Flare Patrol												
		14 1159		1210	No Flare Patrol												
0192	RAMY	14 1440	1440	1448	S15	E06	8383	11	15.1	8	SF	3	E		36		
0193	HOLL	14 1955	1957	1959	N19	W71	8377	11	9.4	4	SF	3	E		12		
0194	HOLL	14 2334	2335	2339	S30	E17	8384	11	16.3	5	SF	3	E		15		
0195	LEAR	15 0455	0456	0459	N20	W69	8385	11	9.9	4	SF	3	E		27		
		15 1019		1059	No Flare Patrol												
		15 1104		1114	No Flare Patrol												
		16 1008		1046	No Flare Patrol												

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	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)	
			17 0000		0013	No Flare Patrol										
0196	KANZ	17	0915	0915	0931	S14 W41 8383	11 14.3	16	SF		2	C				
			17 1142		1352	No Flare Patrol										
			17 2055		2201	No Flare Patrol										
			17 2209		2224	No Flare Patrol										
			18 0000		0204	No Flare Patrol										
			18 0419		0609	No Flare Patrol										
			19 1659		1703	No Flare Patrol										
			19 2030		2046	No Flare Patrol										
			19 2050		2149	No Flare Patrol										
			20 1029		1059	No Flare Patrol										
			20 2041		2232	No Flare Patrol										
			20 2236		2338	No Flare Patrol										
			20 2344		2356	No Flare Patrol										
			21 0040		0126	No Flare Patrol										
			21 0949		1045	No Flare Patrol										
0197	LEAR	22	0114	0116	0118	S17 E24 8391	11 23.9	4	SF		3	E			11	
			22 1012		1058	No Flare Patrol										
			22 1113		1139	No Flare Patrol										
0198	LEAR	23	0650	0653	0702	S28 W89 8384	11 16.3	12	SF		3	E			50	
			23 1026		1150	No Flare Patrol										
0199	RAMY	23	1151E	1153U	1325	S23 E58 8392	11 28.0	94D	1N		2	E			185	F
			23 1238		1316	No Flare Patrol										
			23 1335		1352	No Flare Patrol										
0200	RAMY	23	1421	1424	1428	S14 W05 8391	11 23.2	7	SF		3	E			26	
0201		23	1426	1426	1436	S20 W75 8386	11 17.9	10	SF						10	
	RAMY	23	1426	1426	1436	S20 W74 8386	11 17.9	10	SF		3	E			10	
	HOLL	23	1426	1427	1435	S21 W76 8386	11 17.8	9	SF		3	E			10	
0202	LEAR	24	0256	0256	0259	S30 W81 8384	11 17.7	3	SF		3	E			35	
0203	LEAR	24	0413	0413	0418	S18 W89 8386	11 17.4	5	SF		3	E			42	
0204	LEAR	24	0541	0542	0545	S18 W89 8386	11 17.4	4	SF		3	E			30	
			24 0549		0652	No Flare Patrol										
			24 1023		1128	No Flare Patrol										
			24 1155		1405	No Flare Patrol										
0205	RAMY	24	1627	1628	1632	S16 E62 8393	11 29.4	5	SF		4	E			24	
0206	RAMY	24	1652	1652	1656	S17 W47 8394	11 21.1	4	SF		3	E			13	
0207	RAMY	24	1653	1654	1700	S19 W89 8386	11 17.9	7	SF		3	E			23	
			24 1823		1840	No Flare Patrol										
			24 1913		1937	No Flare Patrol										
			24 1943		2020	No Flare Patrol										
			24 2031		2113	No Flare Patrol										
			24 2133		2212	No Flare Patrol										
0208	LEAR	24	2214	2215	2221	N17 E72 8395	11 30.4	7	1F		3	E			116	
0209	LEAR	24	2341	2342	2346	S16 E57 8393	11 29.3	5	SF		3	E			49	
0210	LEAR	25	0125	0126	0128	S17 E54 8393	11 29.2	3	SF		3	E			29	
0211	LEAR	25	0330	0335	0343	N17 E74 8395	11 30.8	13	SF		3	E			79	E

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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)	
0212	LEAR	25	0551	0556	0613	N18	E72	8395	11 30.7	22	SF	3 E		87		F
0213	LEAR	25	0651	0652	0708	S19	E58	8393	11 29.7	17	SF	3 E		23		
		25	0852		0902	No Flare Patrol										
0214	LEAR	25	0944	0947	0953	S19	E59	8393	11 29.9	9	SF	3 E		15		F
0215	LEAR	25	0955	1000	1005	S16	E51	8393	11 29.3	10	SF	3 E		21		
		25	1013		1106	No Flare Patrol										
		25	1245		1358	No Flare Patrol										
0216		25	1417	1420	1428	N19	E68	8395	11 30.8	11	1N			89		
	RAMY	25	1412E	1412U	1432D	N18	E68	8395	11 30.8	20D	1N	3 E		103		
	HOLL	25	1417	1420	1428	N20	E68	8395	11 30.8	11	SF	3 E		75		
0217	HOLL	25	1454	1455	1501	S19	E51	8393	11 29.5	7	SF	3 E		15		
0218	RAMY	25	1901	1908	1916	S24	E22	8392	11 27.5	15	SF	3 E		32		
0219		25	20088	20171	2028	S23	E21	8392	11 27.4	20	SF			26		H
	RAMY	25	2008	2018	2037	S24	E21	8392	11 27.5	29	SF	3 E		32		H
	HOLL	25	2016	2017	2020	S22	E21	8392	11 27.4	4	SF	3 E		20		
0220		25	22481	2251	2258	S23	E19	8392	11 27.4	10	SF			31		
	HOLL	25	2248	2251	2259	S23	E20	8392	11 27.5	11	SF	3 E		41		
	LEAR	25	2249	2251	2256	S23	E18	8392	11 27.3	7	SF	3 E		21		
0221	LEAR	26	0021	0024	0030	S24	E18	8392	11 27.4	9	SF	3 E		28		
0222	LEAR	26	0443	0443	0455	S24	E16	8392	11 27.4	12	SF	3 E		22		
0223		26	0436	04397	0455	N20	E60	8395	11 30.8	19	SF			51	0.7	D
	LEAR	26	0436	0439	0456	N19	E61	8395	11 30.8	20	SF	3 E		70		
	URUM	26	0446E	0446	0454	N20	E60	8395	11 30.8	8D	SF	P		32	0.7	D
0224	LEAR	26	0528	0529	0538	S20	E42	8393	11 29.4	10	SF	3 E		36		
0225		26	07591	0805	0814	S22	E12	8392	11 27.2	15	SF			32		F
	LEAR	26	0759	0805	0817	S23	E14	8392	11 27.4	18	SF	3 E		40		F
	SVTO	26	0800	0805	0811	S22	E09	8392	11 27.0	11	SF	3 E		24		F
0226	SVTO	26	0944	0947	0950	S18	E44	8393	11 29.7	6	SF	3 E		22		F
0227	LEAR	26	0944	0947	0951	S19	E36	8393	11 29.1	7	SF	3 E		49		
0228	SVTO	26	1028	1040	1051	N18	E57	8395	11 30.8	23	SF	3 E		126		F
0229	SVTO	26	1259	1259	1306	N27	W38	8396	11 23.6	7	SF	3 E		10		
0230	RAMY	26	1644	1644	1652	N15	E57	8395	12 1.0	8	SF	4 E		39		H
0231	RAMY	26	1747	1747	1757	N19	E54	8395	11 30.9	10	SF	4 E		58		F
0232	RAMY	26	1813	1817	1821	N25	W42	8396	11 23.5	8	SF	4 E		17		
		26	2144		2158	No Flare Patrol										
0233	LEAR	27	0302	0304	0310	N19	E47	8395	11 30.7	8	SF	3 E		24		
0234	LEAR	27	0452	0453	0503	S23	E03	8392	11 27.4	11	SF	3 E		33		
0235		27	07087	07383	0912	S25	E10	8392	11 28.1	124	2N			350		EU
	SVTO	27	0708	0738	0932	S26	E10	8392	11 28.1	144	2N	3 E		340		UE
	LEAR	27	0715	0741	0851	S24	E09	8392	11 28.0	96	2N	3 E		359		UE
0236	URUM	27	0748E	0748	0823	S24	E07	8392	11 27.9	35D	2N	P		723	8.3	E

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Grp #	Sta	Start Day	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CMP Mo	Dur Day	Imp (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks								
															Apparent (10-6 Disk)	Corr (Sq Deg)									
0256		29	18387	18478	1905	N18 E26 8395	12	1.7	27	SF					41		F								
	RAMY	29	1838	1847	1929D	N16 E27 8395	12	1.8	51D	SF		3	E		55										
	HOLL	29	1845	1855	1905	N19 E26 8395	12	1.8	20	SF		3	E		27		F								
		29	1923		1931	No Flare Patrol																			
		29	1945		2006	No Flare Patrol																			
0257	RAMY	29	2051E	2051U	2116D	N23 E34 8395	12	2.5	25D	SF		2	E		22										
0258	LEAR	30	0009	0013	0017	N22 E31 8395	12	2.4	8	SF		3	E		24										
0259	LEAR	30	0026	0027	0035	N30 W84 8396	11	23.4	9	SF		3	E		28										
0260	LEAR	30	0042	0053	0058	N22 E30 8395	12	2.3	16	SF		3	E		37										
																		30	0505		0525	No Flare Patrol			
0261	LEAR	30	0556	0558	0602	N22 E27 8395	12	2.3	6	SF		3	E		14										
0262	LEAR	30	0557	0558	0602	N26 W83 8396	11	23.8	5	SF		3	E		30										
0263	LEAR	30	0645	0656	0709	S22 W31 8392	11	27.9	24	SF		3	E		39		E								
0264	LEAR	30	0649	0651	0715	N17 E32 8395	12	2.7	26	SF		3	E		91		U								
0265	LEAR	30	0717	0717	0729	N24 E24 8395	12	2.1	12	SF		3	E		40		E								
0266	LEAR	30	0936	0938	0941	S22 W33 8392	11	27.9	5	SF		3	E		10										
																		30	1007		1109	No Flare Patrol			
																		30	1118		1331	No Flare Patrol			
																		30	1340		1401	No Flare Patrol			
0267	HOLL	30	2114	2115	2118	N17 E72 8397	12	6.3	4	SF		3	E		14										
0268	HOLL	30	2253	2300	2314	N16 E70 8397	12	6.3	21	SF		3	E		96										

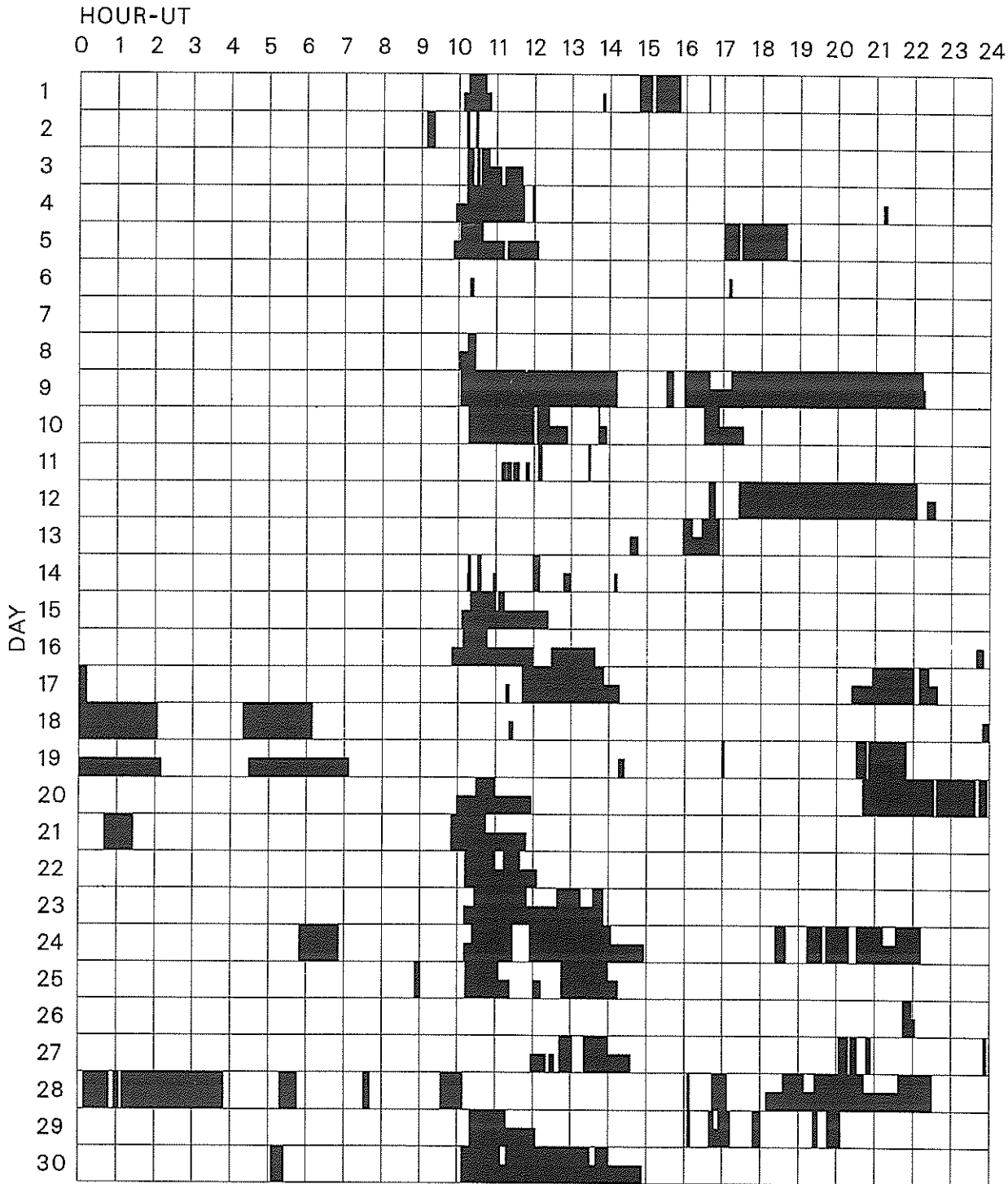
"Remarks"

- | | |
|---|---|
| <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

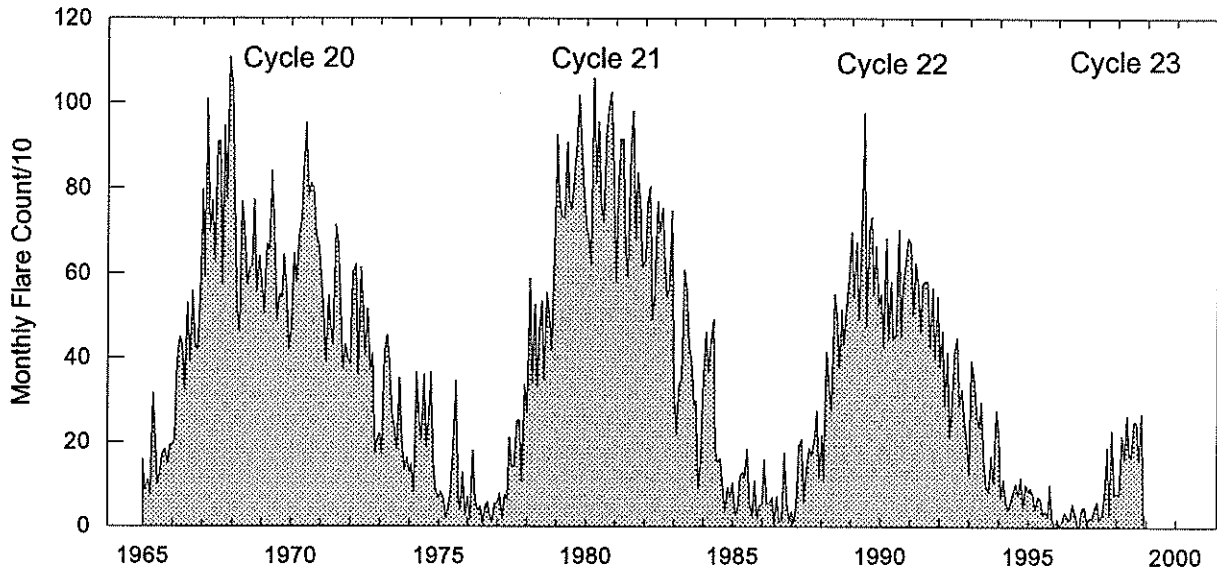
NOVEMBER 1998



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 | Ramey | Urumqi |
| Hurbanovo | Learmonth | San Vito | |

Monthly Counts of Grouped Solar Flares Jan 1965 - Nov 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	161	264	177	164	248	249	155	268		2056

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

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

NOVEMBER 1998

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
01	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	280	CUBA	44 NS	1300.0E		530.0D		11.0		
	5730	IRKU	20 GRF	0235.5	0305.0	44.5	8.0		U	
02	280	CUBA	44 NS	1300.0E		530.0D		12.0		
	235	CUBA	44 NS	1300.0E		530.0D		6.0		
	204	IZMI	42 SER	0715.1	0715.9	1.8	23.0			
	33	UPIC	41 F	0952.5	0955.0	33.0				
	245	SVTO	48 C	1311.0	1356.0	649.0	140.0			QL=4 ST=1 TYP=8
	610	SVTO	4 S/F	1355.0	1356.0	3.0	18.0			QL=4 ST=2 TYP=3
	245	SVTO	4 S/F	1355.0	1356.0	3.0	80.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1356.0	1356.0	2.0	76.0			QL=4 ST=2 TYP=3
	1415	SVTO	4 S/F	1356.0	1359.0	15.0	170.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	1356.0	1358.0	20.0	180.0			QL=4 ST=2 TYP=3
	280	CUBA	6 S	1356.5	1357.3	4.8	150.0			
	410	SGMR	48 C	1357.0	1400.0	4.0	100.0			QL=2 ST=2 TYP=8
	1415	SGMR	4 S/F	1357.0	1358.0	18.0	140.0			QL=4 ST=2 TYP=3
	4995	SGMR	48 C	1357.0	1401.0	18.0	54.0			QL=4 ST=2 TYP=8
	2695	SGMR	4 S/F	1357.0	1358.0	18.0	140.0			QL=4 ST=2 TYP=3
	4995	SVTO	20 GRF	1357.0	1404.0	15.0	91.0			QL=4 ST=2 TYP=2
	6700	CUBA	20 GRF	1357.0	1401.0	149.0	55.0	27.0		9R
245	SGMR	4 S/F	1358.0	1359.0	3.0	19.0			QL=4 ST=2 TYP=3	
15400	SGMR	4 S/F	1358.0	1402.0	7.0	24.0			QL=4 ST=2 TYP=3	
8800	SGMR	20 GRF	1358.0	1404.0	15.0	33.0			QL=4 ST=2 TYP=2	
610	SGMR	4 S/F	1358.0	1400.0	11.0	20.0			QL=4 ST=2 TYP=3	
8800	SVTO	8 S	1359.0	1359.0		24.0			QL=4 ST=2 TYP=3	
03	280	CUBA	44 NS	1300.0E		540.0D		16.0		
	235	CUBA	44 NS	1300.0E		540.0D		7.0		
	6700	CUBA	1 S	1031.0	1031.4	1.8	19.0			54L
	2800	PENT	40 F	1827.0E	1932.0	183.0U	26.0			
	235	CUBA	7 C	1830.0	1831.6	2.6	923.0			
	280	CUBA	7 C	1830.8	1831.6	1.0	405.0			
	245	PALE	49 GB	1831.0	1831.0	2.0	2800.0			QL=4 ST=2 TYP=6
	410	PALE	49 GB	1831.0	1831.0	2.0	980.0			QL=4 ST=2 TYP=6
	610	PALE	8 S	1831.0	1833.0	2.0	180.0			QL=4 ST=2 TYP=3
	4995	PALE	8 S	1831.0	1831.0		30.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	1831.0	1833.0	2.0	140.0			QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1831.0	1831.0	2.0	2000.0			QL=4 ST=2 TYP=6
	410	SGMR	49 GB	1831.0	1831.0	2.0	900.0			QL=4 ST=2 TYP=6
	610	SGMR	8 S	1833.0	1833.0		110.0			QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1833.0	1833.0		820.0			QL=4 ST=2 TYP=6
	6700	CUBA	23 GRF	1849.0	1919.0	123.0	31.0	15.0		18L
	4995	SGMR	20 GRF	1917.0	1931.0	59.0	40.0			QL=4 ST=2 TYP=2
	1415	SGMR	20 GRF	1919.0	1944.0	42.0	16.0			QL=4 ST=2 TYP=2
	2695	SGMR	20 GRF	1919.0	1926.0	54.0	30.0			QL=4 ST=2 TYP=2
8800	SGMR	20 GRF	1924.0	1946.0	49.0	61.0			QL=4 ST=2 TYP=2	
15400	PALE	20 GRF	1929.0E	1940.0	12.0D	65.0			QL=2 ST=2 TYP=2	
2695	PALE	4 S/F	1929.0E	1929.0	12.0D	36.0			QL=4 ST=2 TYP=3	
4995	PALE	4 S/F	1929.0E	1929.0	12.0D	52.0			QL=4 ST=2 TYP=3	
15400	SGMR	20 GRF	1932.0	1956.0	27.0	37.0			QL=2 ST=2 TYP=2	
04	245	LEAR	43 NS	0659.0	0736.0	199.0	340.0			QL=4 ST=2 TYP=1
	245	SVTO	43 NS	0659.0	0722.0	1021.0	190.0			QL=4 ST=3 TYP=1
	204	IZMI	43 NS	0700.0		300.0D		45.0		
	127	TORN	43 NS	0720.0		460.0		30.0		V=3
	245	SGMR	43 NS	1143.0	1247.0	130.0	310.0			QL=4 ST=2 TYP=1
	235	CUBA	44 NS	1300.0E		240.0D		22.0		
	280	CUBA	44 NS	1300.0E		240.0D		28.0		
	245	PALE	43 NS	1748.0	1748.0		100.0			QL=4 ST=2 TYP=1
	2700	PURP	45 C	0303.0	0317.4	19.0	49.2			
	5730	IRKU	4 S/F	0311.3	0317.6	48.7U	24.0		U	
	245	LEAR	8 S	0517.0	0517.0	1.0	66.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0614.0	0614.0		67.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0614.0	0614.0	1.0	75.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0654.0	0655.0	3.0	100.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0654.0	0655.0	1.0	120.0			QL=4 ST=2 TYP=3
33	UPIC	46 C	0656.5	0656.6	3.5					
3000	IZMI	7 C	0714.7	0716.8	10.0	17.5				

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

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Nov 98

NOVEMBER 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 (2 Hz)		
04	5730	IRKU	1 S	0715.4	0716.8	12.6	5.0		U	
	245	SVTO	8 S	0736.0	0736.0	1.0	340.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	0736.0	0736.0	1.0	32.0			QL=4 ST=2 TYP=3
	204	IZMI	25 R	0812.0		100.0		13.0		
	3000	IZMI	7 C	0858.9	0901.4	3.5	10.5			
	33	UPIC	46 C	1128.0	1129.5	4.5				
	410	SGMR	49 GB	1204.0	1205.0	1.0	630.0			QL=4 ST=2 TYP=6
	245	SGMR	49 GB	1204.0	1204.0	2.0	8500.0			QL=4 ST=2 TYP=6
	245	SVTO	8 S	1204.0	1204.0	1.0	12000.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1204.0	1205.0	1.0	1800.0			QL=4 ST=2 TYP=3
	410	SGMR	4 S/F	1247.0	1248.0	4.0	68.0			QL=4 ST=3 TYP=3
	6700	CUBA	20 GRF	1253.0E	1253.0U	197.0D	28.0			OOL SUNRISE
	245	SGMR	8 S	1750.0	1751.0	1.0	79.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	2346.0	2348.0	2.0	64.0			QL=2 ST=2 TYP=3
	410	LEAR	49 GB	2346.0	2346.0	1.0	500.0			QL=2 ST=2 TYP=6
05	245	LEAR	43 NS	0507.0	0554.0	1133.0	140.0			QL=4 ST=3 TYP=1
	245	SVTO	43 NS	0552.0	0554.0	1088.0	150.0			QL=4 ST=1 TYP=1
	127	TORN	44 NS	0620.0E		180.0D		6.0		V=2,DISTURBED
	204	IZMI	44 NS	0700.0E		300.0D		20.0		
	33	UPIC	43 NS	0754.0		400.0				
	235	CUBA	44 NS	1300.0E		530.0D		15.0		
	280	CUBA	44 NS	1300.0E		530.0D		24.0		
	245	SGMR	43 NS	1743.0	1827.0	205.0	240.0			QL=2 ST=2 TYP=1
	245	PALE	43 NS	1746.0	1936.0	199.0	160.0			QL=2 ST=2 TYP=1
	245	LEAR	43 NS	2309.0	0028.0	111.0	190.0			QL=4 ST=2 TYP=1
	245	PALE	43 NS	2319.0	0043.0	84.0	120.0			QL=2 ST=2 TYP=1
	245	LEAR	8 S	0015.0	0016.0	1.0	100.0			QL=4 ST=2 TYP=3
	2800	HIRA	1 S	0025.0	0026.2	3.2	2.0			0
	245	PALE	4 S/F	0045.0	0047.0	3.0	160.0			QL=4 ST=2 TYP=3
	610	PALE	4 S/F	0045.0	0047.0	3.0	36.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	0047.0	0047.0	2.0	33.0			QL=2 ST=2 TYP=3
	245	LEAR	8 S	0047.0	0047.0	2.0	160.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0047.0	0047.0	2.0	35.0			QL=2 ST=2 TYP=3
	410	PALE	8 S	0047.0	0047.0	1.0	38.0			QL=4 ST=2 TYP=3
	245	LEAR	49 GB	0050.0	0051.0	1.0	680.0			QL=4 ST=2 TYP=6
	245	PALE	49 GB	0050.0	0051.0	1.0	730.0			QL=4 ST=2 TYP=6
	5730	IRKU	4 S/F	0123.3	0123.7	1.3	11.0			U
	245	PALE	8 S	0129.0	0129.0	1.0	70.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0138.0	0139.0	2.0	96.0			QL=4 ST=3 TYP=3
	245	LEAR	49 GB	0258.0	0258.0	1.0	1300.0			QL=4 ST=2 TYP=6
	610	LEAR	49 GB	0258.0	0258.0	1.0	630.0			QL=4 ST=2 TYP=6
	500	HIRA	42 SER	0258.4	0258.6	1.2	10.0			0
	245	PALE	8 S	0259.0	0259.0		480.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0446.5	0446.7	2.0	6.0			U
	245	LEAR	8 S	0457.0	0457.0	2.0	300.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0507.0	0507.0	1.0	50.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0519.0	0519.0	5.0	55.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0526.0	0529.0	3.0	65.0			QL=4 ST=2 TYP=3
410	LEAR	8 S	0558.0	0559.0	1.0	43.0			QL=2 ST=2 TYP=3	
610	LEAR	8 S	0559.0	0559.0		73.0			QL=2 ST=2 TYP=3	
610	LEAR	8 S	0607.0	0607.0	1.0	73.0			QL=2 ST=2 TYP=3	
5730	IRKU	1 S	0607.6	0607.9	1.4	2.0			U	
8800	LEAR	8 S	0614.0	0614.0	1.0	25.0			QL=4 ST=2 TYP=3	
245	LEAR	49 GB	0614.0	0614.0	1.0	3800.0			QL=4 ST=2 TYP=6	
4995	LEAR	8 S	0614.0	0614.0	1.0	48.0			QL=4 ST=2 TYP=3	
610	LEAR	49 GB	0614.0	0614.0	1.0	7300.0			QL=4 ST=2 TYP=6	
2695	LEAR	8 S	0614.0	0614.0	1.0	60.0			QL=4 ST=2 TYP=3	
15400	LEAR	8 S	0614.0	0614.0		28.0			U	
1415	LEAR	8 S	0614.0	0614.0	1.0	91.0			QL=4 ST=2 TYP=3	
410	LEAR	49 GB	0614.0	0614.0	1.0	3200.0			QL=4 ST=2 TYP=6	
500	HIRA	42 SER	0614.2	0615.0	2.0	240.0			0	
5730	IRKU	4 S/F	0614.5	0614.8	7.5	22.0			U	
2800	HIRA	8 S	0614.8	0615.0	1.0	5.0			0	
245	SVTO	8 S	0759.0	0800.0	1.0	190.0			QL=2 ST=2 TYP=3	
5730	IRKU	42 SER	0804.0	0804.3	5.0	13.0			U	
3000	IZMI	7 C	0804.1	0804.3	1.4	16.0				
410	LEAR	8 S	0839.0	0839.0	1.0	450.0			QL=2 ST=2 TYP=3	
610	LEAR	8 S	0839.0	0839.0	1.0	140.0			QL=2 ST=2 TYP=3	

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

NOVEMBER 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			
05	245	LEAR	49 GB	0839.0	0839.0	1.0	2000.0			QL=4 ST=2 TYP=6	
	245	SVTO	49 GB	0839.0	0839.0	1.0	2900.0			QL=2 ST=2 TYP=6	
	410	SVTO	49 GB	0839.0	0839.0	1.0	660.0			QL=4 ST=2 TYP=6	
	5730	IRKU	1 S	0839.3	0839.6	1.0	5.0		U		
	204	IZMI	45 C	0839.6	0839.7	0.7	3044.0				
	245	LEAR	8 S	0950.0	0950.0	1.0	370.0			QL=4 ST=2 TYP=3	
	245	SVTO	8 S	0950.0	0950.0	1.0	430.0			QL=4 ST=2 TYP=3	
	204	IZMI	42 SER	0950.6	0958.4	10.4	460.0				
	410	SVTO	4 S/F	0954.0	0956.0	4.0	60.0			QL=4 ST=2 TYP=3	
	245	SVTO	4 S/F	0954.0	0955.0	6.0	180.0			QL=4 ST=2 TYP=3	
	245	LEAR	4 S/F	0955.0	0955.0	5.0	140.0			QL=4 ST=2 TYP=3	
	127	TORN	48 C	0958.0	1004.0U	6.0	1100.0D	370.0D			UNCERTAIN
	610	LEAR	8 S	1010.0	1011.0	2.0	150.0				QL=4 ST=2 TYP=3
	6700	CUBA	3 S	1023.2	1024.5	2.8	161.0	48.0			4L
	33	UPIC	48 C	1051.5	1053.0	4.0					
	204	IZMI	41 F	1051.8	1052.4	2.1	644.0				
	245	SVTO	49 GB	1052.0	1053.0	1.0	630.0				QL=4 ST=2 TYP=6
	410	SVTO	8 S	1053.0	1053.0		350.0		U		QL=4 ST=2 TYP=3
	245	SVTO	49 GB	1137.0	1137.0	3.0	2000.0				QL=4 ST=2 TYP=6
	410	SVTO	48 C	1137.0	1137.0	3.0	2400.0				QL=4 ST=2 TYP=8
	204	IZMI	45 C	1137.3	1137.7	3.3	4869.0				
	410	SGMR	4 S/F	1145.0	1146.0	5.0	180.0				QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1145.0	1146.0	5.0	4000.0				QL=2 ST=2 TYP=6
	245	SVTO	49 GB	1145.0	1146.0	5.0	4400.0				QL=4 ST=2 TYP=6
	410	SVTO	4 S/F	1145.0	1146.0	5.0	270.0				QL=4 ST=2 TYP=3
	204	IZMI	45 C	1145.6	1146.1	4.7	4091.0				
	410	SGMR	4 S/F	1301.0	1302.0	3.0	48.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1302.0	1302.0	2.0	82.0				QL=2 ST=2 TYP=3
	245	SVTO	4 S/F	1302.0	1305.0	3.0	400.0				QL=2 ST=2 TYP=3
	410	SVTO	4 S/F	1302.0	1304.0	3.0	390.0				QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1304.0	1305.0	2.0	530.0				QL=2 ST=2 TYP=6
	410	SGMR	8 S	1304.0	1304.0		200.0		U		QL=4 ST=2 TYP=3
	245	SGMR	8 S	1308.0	1308.0		200.0		U		QL=2 ST=2 TYP=3
	245	SVTO	8 S	1308.0	1308.0		150.0		U		QL=2 ST=2 TYP=3
	245	SGMR	49 GB	1334.0	1335.0	5.0	2800.0				QL=2 ST=2 TYP=6
	4995	SGMR	8 S	1334.0	1335.0	1.0	110.0				QL=4 ST=2 TYP=3
	1415	SGMR	8 S	1334.0	1335.0	2.0	54.0				QL=4 ST=2 TYP=3
	410	SGMR	4 S/F	1334.0	1335.0	3.0	450.0				QL=4 ST=2 TYP=3
	610	SGMR	4 S/F	1334.0	1335.0	3.0	94.0				QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1334.0	1335.0	1.0	270.0				QL=4 ST=2 TYP=3
	1415	SVTO	8 S	1334.0	1335.0	1.0	65.0				QL=4 ST=2 TYP=3
	4995	SVTO	8 S	1334.0	1335.0	1.0	110.0				QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1334.0	1335.0	1.0	250.0				QL=4 ST=2 TYP=3
	15400	SVTO	8 S	1334.0	1335.0	1.0	110.0				QL=4 ST=2 TYP=3
	245	SVTO	49 GB	1334.0	1335.0	2.0	2800.0				QL=2 ST=2 TYP=6
	410	SVTO	49 GB	1334.0	1335.0	1.0	550.0				QL=4 ST=2 TYP=6
	33	UPIC	48 C	1334.0	1335.5U	4.0					
	2695	SGMR	8 S	1335.0	1335.0	1.0	45.0				QL=4 ST=2 TYP=3
	15400	SGMR	8 S	1335.0	1335.0	2.0	130.0				QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1335.0	1335.0		52.0		U		QL=4 ST=2 TYP=3
235	CUBA	41 F	1335.1	1336.0	5.3	2755.0					
280	CUBA	41 F	1335.1	1336.0	5.3	1401.0					
245	SVTO	8 S	1338.0	1338.0	1.0	270.0				QL=4 ST=2 TYP=3	
410	SVTO	8 S	1338.0	1338.0	1.0	110.0				QL=4 ST=2 TYP=3	
410	SGMR	8 S	1359.0	1359.0		93.0		U		QL=4 ST=2 TYP=3	
410	SVTO	8 S	1359.0	1359.0		95.0		U		QL=4 ST=2 TYP=3	
245	SVTO	8 S	1359.0	1359.0		42.0		U		QL=4 ST=2 TYP=3	
245	SGMR	8 S	1419.0	1419.0		80.0		U		QL=2 ST=2 TYP=3	
245	SGMR	49 GB	1441.0	1441.0	1.0	640.0				QL=2 ST=2 TYP=6	
245	SVTO	49 GB	1441.0	1441.0	1.0	510.0				QL=4 ST=2 TYP=6	
410	SGMR	8 S	1616.0	1616.0		130.0		U		QL=4 ST=2 TYP=3	
245	SGMR	8 S	1656.0	1657.0	1.0	54.0				QL=2 ST=2 TYP=3	
245	SGMR	8 S	1725.0	1725.0		85.0		U		QL=2 ST=2 TYP=3	
245	PALE	48 C	1822.0	1824.0	7.0	320.0				QL=2 ST=2 TYP=8	
410	PALE	4 S/F	1822.0	1824.0	7.0	120.0				QL=2 ST=2 TYP=3	
245	SGMR	4 S/F	1823.0	1824.0	3.0	300.0				QL=2 ST=2 TYP=3	
4995	PALE	8 S	1824.0	1824.0		78.0		U		QL=4 ST=2 TYP=3	
610	PALE	8 S	1824.0	1824.0		31.0		U		QL=2 ST=2 TYP=3	
1415	PALE	8 S	1824.0	1824.0		44.0		U		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

21
Nov 98

NOVEMBER 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		
05	8800	PALE	8 S	1824.0	1824.0	U	110.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	1824.0	1824.0	2.0	31.0			QL=4 ST=2 TYP=3
	15400	SGMR	8 S	1824.0	1824.0	2.0	40.0			QL=4 ST=2 TYP=3
	1415	SGMR	8 S	1824.0	1824.0	2.0	34.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1824.0	1824.0	2.0	76.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1824.0	1824.0	2.0	130.0			QL=4 ST=2 TYP=3
	4995	SGMR	8 S	1824.0	1824.0	2.0	73.0			QL=4 ST=2 TYP=3
	6700	CUBA	21 GRF	1900.0	2048.0	164.00	91.0			196 2144 OFF
	6700	CUBA	47 GB	1937.9	2021.2		206.0			14L
	6700	CUBA	47 GB	1937.9	1952.2	69.0	1544.0			6L
	4995	SGMR	48 C	1940.0	1952.0	32.0	850.0			QL=4 ST=2 TYP=8
	15400	SGMR	20 GRF	1941.0	1943.0	18.0	490.0			QL=4 ST=2 TYP=2
	2695	SGMR	48 C	1941.0	1952.0	21.0	350.0			QL=4 ST=2 TYP=8
	8800	SGMR	48 C	1941.0	1943.0	25.0	870.0			QL=4 ST=2 TYP=8
	15400	PALE	48 C	1941.0	1944.0	67.0	520.0			QL=4 ST=2 TYP=8
	8800	PALE	48 C	1941.0	1944.0	60.0	830.0			QL=4 ST=2 TYP=8
	4995	PALE	48 C	1941.0	1952.0	72.0	880.0			QL=4 ST=2 TYP=8
	2695	PALE	48 C	1941.0	1952.0	74.0	400.0			QL=4 ST=2 TYP=8
	1415	SGMR	20 GRF	1942.0	1950.0	22.0	150.0			QL=4 ST=2 TYP=2
	1415	PALE	48 C	1942.0	1946.0	73.0	150.0			QL=4 ST=2 TYP=8
	410	PALE	4 S/F	1944.0	1945.0	69.0	220.0			QL=2 ST=2 TYP=3
	610	SGMR	20 GRF	1945.0	1954.0	21.0	64.0			QL=4 ST=2 TYP=2
	410	SGMR	4 S/F	1945.0	1945.0	27.0	190.0			QL=4 ST=2 TYP=3
	610	PALE	20 GRF	1945.0	1954.0	70.0	69.0			QL=2 ST=2 TYP=2
	245	SGMR	4 S/F	1950.0	1956.0	22.0	190.0			QL=2 ST=2 TYP=3
	235	CUBA	48 C	1951.0	1956.1	9.0	246.0			
	280	CUBA	48 C	1951.0	2005.2		391.0			
	245	SGMR	48 C	2014.0	2018.0	4.0	170.0			QL=2 ST=2 TYP=8
	410	SGMR	4 S/F	2015.0	2015.0	32.0	74.0			QL=4 ST=2 TYP=3
	1415	SGMR	4 S/F	2015.0	2026.0	32.0	110.0			QL=2 ST=3 TYP=3
	4995	SGMR	20 GRF	2016.0	2026.0	31.0	130.0			QL=2 ST=3 TYP=2
	2695	SGMR	20 GRF	2016.0	2035.0	31.0	110.0			QL=2 ST=3 TYP=2
	245	PALE	48 C	2025.0	2045.0	23.0	190.0			QL=2 ST=2 TYP=8
	610	SGMR	4 S/F	2025.0	2027.0	22.0	51.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	2026.0	2027.0	19.0	95.0			QL=2 ST=3 TYP=3
	410	LEAR	8 S	2244.0	2244.0	U	54.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	2306.0	2307.0	1.0	27.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	2306.0	2307.0	1.0	98.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2312.0	2312.0	2.0	97.0			QL=2 ST=3 TYP=3
	06	245	LEAR	43 NS	0028.0	0028.0	1412.0	190.0			QL=4 ST=1 TYP=1
204		IZMI	44 NS	0700.0E		300.00		20.0		
33		UPIC	43 NS	0736.0		393.0				
127		TORN	43 NS	1100.0		204.00		2.0		V=2, DISTURBED
235		CUBA	44 NS	1300.0E		530.00		12.0		
280		CUBA	44 NS	1300.0E		530.00		18.0		
245		PALE	8 S	0028.0	0028.0	U	190.0			QL=2 ST=2 TYP=3
5730		IRKU	4 S/F	0115.2	0116.1	2.3	11.0		U	
245		LEAR	49 GB	0238.0	0238.0	1.0	520.0			QL=4 ST=2 TYP=6
245		PALE	49 GB	0238.0	0238.0	1.0	520.0			QL=2 ST=2 TYP=6
8800		PALE	4 S/F	0240.0	0242.0	3.0	54.0			QL=4 ST=2 TYP=3
2695		PALE	8 S	0240.0	0241.0	2.0	23.0			QL=4 ST=2 TYP=3
15400		PALE	4 S/F	0240.0	0242.0	3.0	70.0			QL=4 ST=2 TYP=3
4995		PALE	4 S/F	0240.0	0241.0	3.0	95.0			QL=4 ST=2 TYP=3
8800		LEAR	8 S	0241.0	0241.0	2.0	60.0			QL=4 ST=2 TYP=3
4995		LEAR	8 S	0241.0	0241.0	1.0	80.0			QL=4 ST=2 TYP=3
245		LEAR	8 S	0241.0	0242.0	2.0	280.0			QL=4 ST=2 TYP=3
245		PALE	8 S	0241.0	0242.0	1.0	250.0			QL=2 ST=2 TYP=3
5730		IRKU	4 S/F	0241.3	0241.5	10.3	68.0		U	
2800		HIRA	4 S/F	0241.4	0242.4	2.0	2.0			0
2700		PURP	2 S/F	0241.4	0241.9	2.6	30.5			
5730		IRKU	1 S	0416.4	0418.0	9.3	3.0		U	
5730		IRKU	1 S	0433.3	0437.6	12.2	3.0		U	
245		LEAR	8 S	0437.0	0437.0	1.0	140.0			QL=4 ST=2 TYP=3
5730		IRKU	1 S	0558.1	0558.9	2.0	4.0		U	
5730		IRKU	1 S	0710.4	0711.7	12.6	4.0		U	
204		IZMI	7 C	0715.9	0716.0	0.3	209.0			
245	LEAR	49 GB	0830.0	0831.0	1.0	4500.0			QL=4 ST=2 TYP=6	
8800	LEAR	8 S	0830.0	0830.0	1.0	73.0			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

NOVEMBER 1998

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak	Mean		
							(10	-22	W/m ² Hz)	
06	15400	LEAR	8 S	0830.0	0830.0	1.0	67.0			QL=2 ST=2 TYP=3
	4995	SVTO	8 S	0830.0	0831.0	1.0	52.0			QL=4 ST=2 TYP=3
	15400	SVTO	8 S	0830.0	0830.0	1.0	64.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0830.0	0830.0	2.0	110.0			QL=4 ST=2 TYP=3
	245	SVTO	49 GB	0830.0	0831.0	2.0	4500.0			QL=2 ST=2 TYP=6
	204	IZMI	45 C	0830.4	0830.7	1.8	704.0			
	3000	IZMI	7 C	0830.6	0830.8	1.4	21.0			
	610	LEAR	8 S	0831.0	0831.0	1.0	110.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0831.0	0831.0		200.0		U	QL=4 ST=2 TYP=3
	410	SVTO	8 S	0831.0	0831.0		280.0		U	QL=4 ST=2 TYP=3
	1415	SVTO	8 S	0831.0	0831.0		51.0		U	QL=4 ST=2 TYP=3
	204	IZMI	41 F	0903.3	0903.4	0.8	296.0			
	410	LEAR	8 S	0909.0	0909.0	1.0	240.0			QL=4 ST=2 TYP=3
	245	LEAR	49 GB	0909.0	0909.0	1.0	9700.0			QL=4 ST=2 TYP=6
	4995	LEAR	8 S	0909.0	0909.0	1.0	160.0			QL=4 ST=2 TYP=3
	15400	LEAR	8 S	0909.0	0909.0	1.0	310.0			QL=2 ST=2 TYP=3
	8800	LEAR	8 S	0909.0	0909.0	1.0	370.0			QL=4 ST=2 TYP=3
	245	SVTO	49 GB	0909.0	0910.0	4.0	10000.0			QL=2 ST=2 TYP=6
	410	SVTO	8 S	0909.0	0910.0	1.0	360.0			QL=4 ST=2 TYP=3
	4995	SVTO	8 S	0909.0	0910.0	1.0	190.0			QL=4 ST=2 TYP=3
	15400	SVTO	8 S	0909.0	0909.0	1.0	240.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0909.0	0909.0	1.0	410.0			QL=4 ST=2 TYP=3
	3000	IZMI	7 C	0909.6	0910.1	1.0	40.0			
	204	IZMI	45 C	0909.7	0910.0	1.5	18000.0			
	610	LEAR	8 S	0910.0	0910.0		97.0		U	QL=4 ST=2 TYP=3
	245	LEAR	8 S	0936.0	0936.0		82.0		U	QL=4 ST=2 TYP=3
	410	SVTO	4 S/F	1106.0	1109.0	3.0	270.0			QL=4 ST=2 TYP=3
	245	SVTO	49 GB	1106.0	1107.0	5.0	44000.0			QL=2 ST=3 TYP=6
	33	UPIC	46 C	1106.5	1107.0	4.5				
	204	IZMI	42 SER	1106.5	1108.9	4.2	791.0			
	1415	SVTO	8 S	1107.0	1109.0	2.0	58.0			QL=4 ST=2 TYP=3
	3000	IZMI	7 C	1108.8	1109.4	0.6	7.0			
	33	UPIC	48 C	1202.0	1204.5	5.3				
	610	SGMR	4 S/F	1203.0	1206.0	4.0	24.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1203.0	1204.0	3.0	360.0			QL=2 ST=2 TYP=3
	2695	SGMR	4 S/F	1203.0	1204.0	3.0	57.0			QL=2 ST=2 TYP=3
	245	SGMR	49 GB	1203.0	1204.0	2.0	2100.0			QL=4 ST=2 TYP=6
	1415	SGMR	4 S/F	1203.0	1204.0	4.0	27.0			QL=4 ST=2 TYP=3
	4995	SGMR	8 S	1203.0	1204.0	2.0	140.0			QL=2 ST=2 TYP=3
	4995	SVTO	8 S	1203.0	1204.0	1.0	180.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1203.0	1204.0	1.0	88.0			QL=4 ST=2 TYP=3
	410	SVTO	4 S/F	1203.0	1204.0	3.0	120.0			QL=4 ST=2 TYP=3
	8800	SVTO	49 GB	1203.0	1204.0	2.0	510.0			QL=4 ST=2 TYP=6
	245	SVTO	49 GB	1203.0	1204.0	2.0	2700.0			QL=2 ST=2 TYP=6
	410	SGMR	4 S/F	1204.0	1204.0	3.0	110.0			QL=4 ST=2 TYP=3
	15400	SGMR	8 S	1204.0	1204.0	1.0	230.0			QL=2 ST=2 TYP=3
	1415	SVTO	8 S	1204.0	1204.0	1.0	32.0			QL=4 ST=2 TYP=3
	15400	SVTO	8 S	1204.0	1204.0	2.0	300.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1215.0	1215.0		77.0		U	QL=4 ST=2 TYP=3
	245	SVTO	8 S	1215.0	1215.0		120.0		U	QL=2 ST=3 TYP=3
410	SGMR	4 S/F	1315.0	1316.0	3.0	250.0			QL=4 ST=2 TYP=3	
410	SVTO	8 S	1315.0	1316.0	1.0	200.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	1316.0	1316.0	2.0	90.0			QL=4 ST=2 TYP=3	
245	SVTO	8 S	1316.0	1317.0	2.0	73.0			QL=4 ST=2 TYP=3	
235	CUBA	7 C	1316.2	1317.2	3.8	145.0			QL=2 ST=2 TYP=3	
280	CUBA	7 C	1316.2	1316.2	3.0	209.0				
235	CUBA	6 S	1326.0	1326.2	1.0	43.0				
410	SGMR	4 S/F	1435.0	1436.0	3.0	64.0			QL=4 ST=3 TYP=3	
245	SGMR	8 S	1436.0	1436.0	2.0	140.0			QL=4 ST=3 TYP=3	
245	SVTO	8 S	1436.0	1436.0	2.0	140.0			QL=2 ST=2 TYP=3	
410	SVTO	8 S	1437.0	1438.0	1.0	110.0			QL=4 ST=2 TYP=3	
235	CUBA	6 S	1437.8	1438.0	0.8	157.0				
280	CUBA	6 S	1437.8	1438.0	0.8	73.0				
8800	SGMR	49 GB	1509.0	1510.0	4.0	620.0			QL=4 ST=2 TYP=6	
410	SGMR	49 GB	1509.0	1510.0	4.0	3500.0			QL=4 ST=2 TYP=6	
610	SGMR	4 S/F	1509.0	1511.0	4.0	120.0			QL=4 ST=2 TYP=3	
6700	CUBA	1 S	1509.4	1510.0U	2.0U	90.0			26L	
235	CUBA	48 C	1510.0	1510.0	2.2	298.0				
245	SGMR	49 GB	1510.0	1510.0	3.0	67000.0			QL=4 ST=2 TYP=6	

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

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NOVEMBER 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	1415	SGMR	4 S/F	1510.0	1511.0	3.0	140.0			QL=4 ST=2 TYP=3	
	2695	SGMR	4 S/F	1510.0	1510.0	3.0	150.0			QL=4 ST=2 TYP=3	
	15400	SGMR	8 S	1510.0	1510.0	2.0	380.0			QL=4 ST=2 TYP=3	
	4995	SGMR	4 S/F	1510.0	1510.0	3.0	310.0			QL=4 ST=2 TYP=3	
	1415	SVTO	8 S	1510.0	1511.0	1.0	140.0			QL=4 ST=2 TYP=3	
	8800	SVTO	49 GB	1510.0	1510.0	1.0	820.0			QL=4 ST=2 TYP=6	
	410	SVTO	49 GB	1510.0	1510.0	4.0	4900.0			QL=4 ST=2 TYP=6	
	2695	SVTO	8 S	1510.0	1510.0	1.0	240.0			QL=4 ST=2 TYP=3	
	15400	SVTO	8 S	1510.0	1510.0	1.0	350.0			QL=4 ST=2 TYP=3	
	245	SVTO	49 GB	1510.0	1510.0	2.0	54000.0			QL=2 ST=2 TYP=6	
	4995	SVTO	8 S	1510.0	1510.0	1.0	360.0			QL=4 ST=2 TYP=3	
	280	CUBA	48 C	1510.0	1510.0U	2.5	341.0				
	6700	CUBA	2 S/F	1517.0U	1522.4	7.0U	10.0				18L
	245	SGMR	4 S/F	1728.0	1730.0	3.0	67.0				QL=4 ST=2 TYP=3
	245	SGMR	8 S	1829.0	1829.0	U	52.0				QL=4 ST=2 TYP=3
	235	CUBA	48 C	1840.0	1844.4	7.0	5159.0				
	410	PALE	48 C	1847.0	1849.0	4.0	120.0				QL=2 ST=2 TYP=8
	2800	PENT	1 S	1847.0	1848.0	5.0	11.0				
	410	SGMR	4 S/F	1847.0	1849.0	5.0	100.0				QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1847.0	1850.0	3.0	700.0				QL=4 ST=2 TYP=6
	610	SGMR	4 S/F	1847.0	1849.0	5.0	180.0				QL=4 ST=2 TYP=3
	245	PALE	49 GB	1848.0	1849.0	2.0	700.0				QL=2 ST=2 TYP=6
	610	PALE	8 S	1849.0	1849.0	2.0	180.0				QL=2 ST=2 TYP=3
	6700	CUBA	1 S	1849.1	1849.4	2.9	44.0	22.0			15L
	280	CUBA	48 C	1849.5	1856.0	8.5	2180.0				
	245	PALE	49 GB	1854.0	1856.0	2.0	1000.0				QL=2 ST=2 TYP=6
	410	PALE	8 S	1855.0	1855.0	1.0	29.0				QL=2 ST=2 TYP=3
	245	SGMR	49 GB	1855.0	1856.0	1.0	1100.0				QL=4 ST=2 TYP=6
	245	PALE	8 S	1900.0	1901.0	1.0	110.0				QL=2 ST=2 TYP=3
	6700	CUBA	1 S	1954.2	1954.8	1.2	19.0	9.0			15L
	2800	PENT	1 S	2050.0	2059.0	25.0	6.0				
	410	PALE	8 S	2052.0	2053.0	2.0	52.0				QL=2 ST=2 TYP=3
	245	PALE	8 S	2053.0	2053.0	1.0	230.0				QL=2 ST=2 TYP=3
	245	PALE	48 C	2145.0	2152.0	7.0	440.0				QL=2 ST=2 TYP=8
	410	PALE	4 S/F	2150.0	2150.0	4.0	59.0				QL=2 ST=2 TYP=3
	245	PALE	49 GB	2207.0	2208.0	1.0	27000.0				QL=2 ST=2 TYP=6
	500	HIRA	5 S	2207.8	2208.6	2.7	10.0				WR
	15400	PALE	8 S	2208.0	2208.0	U	130.0				QL=4 ST=2 TYP=3
	410	PALE	49 GB	2208.0	2208.0	1.0	710.0				QL=2 ST=2 TYP=6
	1415	PALE	8 S	2208.0	2208.0	1.0	47.0				QL=4 ST=2 TYP=3
	610	PALE	8 S	2208.0	2208.0	1.0	110.0				QL=2 ST=2 TYP=3
	2695	PALE	8 S	2208.0	2208.0	U	66.0				QL=4 ST=2 TYP=3
	4995	PALE	8 S	2208.0	2208.0	U	200.0				QL=4 ST=2 TYP=3
	8800	PALE	8 S	2208.0	2208.0	U	300.0				QL=4 ST=2 TYP=3
	2800	HIRA	5 S	2208.4	2208.8	2.0	7.0				0
	245	LEAR	8 S	2233.0	2233.0	U	64.0				QL=4 ST=2 TYP=3
	245	PALE	8 S	2233.0	2233.0	U	86.0				QL=2 ST=2 TYP=3
	245	LEAR	8 S	2318.0	2318.0	U	96.0				QL=4 ST=2 TYP=3
	245	PALE	8 S	2318.0	2318.0	U	87.0				QL=2 ST=2 TYP=3
	245	LEAR	49 GB	2326.0	2330.0	8.0	870.0				QL=4 ST=2 TYP=6
245	PALE	49 GB	2327.0	2330.0	7.0	980.0				QL=2 ST=2 TYP=6	
410	PALE	4 S/F	2328.0	2331.0	3.0	58.0				QL=2 ST=2 TYP=3	
500	HIRA	42 SER	2328.0	2333.2	6.0	6.0				WL	
410	LEAR	8 S	2332.0	2332.0	2.0	100.0				QL=4 ST=2 TYP=3	
245	LEAR	8 S	2358.0	2358.0	U	72.0				QL=4 ST=3 TYP=3	
245	PALE	8 S	2358.0	2358.0	U	60.0				QL=2 ST=2 TYP=3	
07	245	LEAR	43 NS	0600.0	0609.0	73.0	270.0			QL=4 ST=2 TYP=1	
	127	TORN	44 NS	0620.0E		200.0D		15.0		V=3	
	204	I2MI	44 NS	0700.0E		300.0D		30.0			
	33	UPIC	43 NS	0906.0	1105.5U	182.0					
	245	SGMR	43 NS	1151.0	1157.0	225.0	330.0			QL=4 ST=2 TYP=1	
	280	CUBA	44 NS	1300.0E		530.0D		17.0			
	235	CUBA	44 NS	1300.0E		540.0D		9.0			
	245	LEAR	8 S	0138.0	0139.0	1.0	290.0				QL=4 ST=2 TYP=3
	245	LEAR	8 S	0157.0	0158.0	1.0	180.0				QL=4 ST=2 TYP=3
	245	PALE	8 S	0157.0	0158.0	1.0	170.0				QL=2 ST=2 TYP=3
5730	IRKU	1 S	0214.8	0216.8	14.3	1.0				U	
5730	IRKU	1 S	0232.2	0234.2	3.1	3.0				U	

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Outstanding Occurrences

NOVEMBER 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		
07	500	HIRA	4 S/F	0244.6	0246.0	3.0	33.0			WL
	410	LEAR	8 S	0245.0	0245.0	1.0	100.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0245.0	0245.0	1.0	450.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0245.0	0245.0	1.0	440.0			QL=2 ST=3 TYP=3
	410	PALE	8 S	0245.0	0245.0	1.0	78.0			QL=2 ST=3 TYP=3
	5730	IRKU	4 S/F	0300.5	0300.7	0.5	7.0		U	
	5730	IRKU	1 S	0424.8	0425.2	4.2	2.0		U	
	245	LEAR	8 S	0545.0	0545.0		130.0			QL=2 ST=2 TYP=3
	5730	IRKU	42 SER	0545.2	0545.4	11.3	15.0		U	
	500	HIRA	8 S	0547.0	0547.1	0.2	4.0			WL
	5730	IRKU	42 SER	0653.7	0654.4	6.3	4.0		U	
	245	LEAR	8 S	0655.0	0655.0	2.0	300.0			QL=2 ST=2 TYP=3
	245	SVTO	8 S	0711.0	0712.0	1.0	110.0			QL=2 ST=2 TYP=3
	127	TORN	47 GB	0926.0	0928.0	3.0	2200.00	1100.0		
	204	IZMI	45 C	0926.2	0927.8	3.0	3590.0			
	33	UPIC	46 C	0927.5	0928.0	2.5				
	3000	IZMI	5 S	0944.1	0944.3	1.0	5.0			
	33	UPIC	48 C	1104.0	1105.5U	3.5				
	3000	IZMI	45 C	1104.5	1106.0	3.8	50.0			
	204	IZMI	45 C	1104.6	1104.8	3.2	32060.0			
	204	IZMI	42 SER	1151.6	1151.7	1.7	1330.0			
	2800	PENT	1 S	1656.0	1657.0	4.0	3.0			
	245	SGMR	8 S	1656.0	1656.0	1.0	260.0			QL=4 ST=2 TYP=3
	6700	CUBA	23 GRF	1730.0	1758.0	88.0	15.0		7.0	OOL
	245	PALE	8 S	1738.0	1738.0	1.0	68.0			QL=2 ST=2 TYP=3
	245	SGMR	8 S	1738.0	1738.0	1.0	81.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	1758.0	1758.0		61.0			QL=4 ST=2 TYP=3
	245	PALE	49 GB	1902.0	1902.0		900.0			QL=4 ST=2 TYP=6
	245	SGMR	49 GB	1902.0	1902.0		990.0			QL=4 ST=2 TYP=6
	410	PALE	8 S	1935.0	1935.0		160.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	1935.0	1935.0		130.0			QL=4 ST=2 TYP=3
	280	CUBA	6 S	1948.4	1949.4	2.0	192.0			
	235	CUBA	6 S	1948.4	1949.4	2.0	235.0			
	245	PALE	8 S	1949.0	1951.0	2.0	330.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	1949.0	1949.0	1.0	84.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1949.0	1949.0	1.0	230.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1949.0	1949.0	1.0	72.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	2006.0	2044.0	83.00	9.0			OOL 2129 OFF
	245	PALE	8 S	2040.0	2040.0	1.0	56.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2040.0	2040.0	1.0	53.0			QL=2 ST=2 TYP=3
2800	PENT	1 S	2119.0	2121.0	5.0	3.0				
245	PALE	49 GB	2122.0	2122.0	5.0	1000.0			QL=4 ST=2 TYP=6	
410	PALE	8 S	2122.0	2122.0	1.0	140.0			QL=4 ST=2 TYP=3	
280	CUBA	6 S	2135.0	2135.8	1.1	318.0				
235	CUBA	6 S	2135.0	2135.8	1.1	824.0				
245	LEAR	8 S	2244.0	2244.0	1.0	140.0			QL=4 ST=2 TYP=3	
245	PALE	4 S/F	2244.0	2244.0	7.0	120.0			QL=4 ST=2 TYP=3	
245	LEAR	8 S	2324.0	2324.0		59.0			QL=4 ST=2 TYP=3	
08	204	IZMI	44 NS	0700.0E		360.00		5.0		
	235	CUBA	44 NS	1300.0E		530.00		9.0		
	280	CUBA	44 NS	1300.0E		530.00		18.0		
	8800	PALE	8 S	0018.0	0018.0		31.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0019.0	0021.0	3.0	200.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0019.0	0021.0	2.0	180.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0019.0	0020.0	1.0	38.0			QL=4 ST=2 TYP=3
	245	LEAR	49 GB	0147.0	0150.0	4.0	2400.0			QL=4 ST=2 TYP=6
	245	PALE	49 GB	0147.0	0150.0	4.0	2100.0			QL=4 ST=2 TYP=6
	410	LEAR	8 S	0150.0	0150.0		74.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0150.0	0150.0		70.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0214.6	0217.2	15.2	10.0		U	
	245	LEAR	8 S	0250.0	0250.0	2.0	68.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0304.2	0311.0	24.4	4.0		U	
	245	LEAR	8 S	0343.0	0344.0	1.0	380.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0343.0	0344.0	1.0	320.0			QL=4 ST=2 TYP=3
	5730	IRKU	42 SER	0422.0	0426.8	38.0	27.0		U	
	245	LEAR	8 S	0451.0	0451.0	1.0	230.0			QL=4 ST=2 TYP=3
410	LEAR	8 S	0451.0	0451.0	1.0	300.0			QL=4 ST=2 TYP=3	
245	LEAR	8 S	0630.0	0630.0	1.0	120.0			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		
08	5730	IRKU	1 S	0732.0	0733.4	12.0	2.0		U	
	204	IZMI	7 C	0801.4	0801.8	0.5	35.0			
	204	IZMI	7 C	0905.3	0905.6	0.6	118.0			
	33	UPIC	42 SER	1014.5	1210.5	203.5				
	3000	IZMI	22 GRF	1047.5	1104.3	52.0	19.0			
	204	IZMI	45 C	1101.7	1104.0	4.0	790.0			
	127	TORN	46 C	1102.0	1103.4	6.0	340.0	50.0		
	204	IZMI	25 R	1115.0U		45.0D		30.0		
	245	SGMR	4 S/F	1250.0	1254.0	7.0	64.0			QL=4 ST=2 TYP=3
	6700	CUBA	21 GRF	1314.0	1357.0	80.0	9.0	4.0		11R
	6700	CUBA	2 S/F	1318.2	1321.0	3.8	9.0	4.0		12L
	245	SGMR	49 GB	1337.0	1337.0	1.0	680.0			QL=4 ST=2 TYP=6
	280	CUBA	6 S	1337.2	1337.2	0.8	1385.0			
	235	CUBA	6 S	1337.2	1337.2	0.8	274.0			
	6700	CUBA	1 S	1353.0	1354.5	2.0	7.0	3.0		46R
	610	SGMR	8 S	1438.0	1438.0	1.0	78.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1438.0	1438.0	1.0	350.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1438.0	1438.0	1.0	81.0			QL=4 ST=2 TYP=3
	235	CUBA	7 C	1438.0	1438.7	1.0	323.0			
	280	CUBA	7 C	1438.0	1438.7	1.0	261.0			
	6700	CUBA	21 GRF	1532.0	1725.0	144.0	24.0	12.0		00L
	245	SGMR	8 S	1549.0	1550.0	1.0	56.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	1610.0	1611.0	2.0	22.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1610.0	1610.0	2.0	18.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1631.0	1631.0	1.0	60.0			QL=4 ST=2 TYP=3
	6700	CUBA	4 S/F	1706.9	1710.3	8.1	33.0	11.0		8L
	6700	CUBA	20 GRF	1834.0	1845.0	32.0	10.0	5.0		10R
	245	PALE	8 S	1936.0	1936.0	1.0	55.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1936.0	1936.0	1.0	59.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1954.0	2007.0	83.0D	12.0			13R SUNSET
	410	PALE	8 S	2203.0	2204.0	1.0	65.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2203.0	2203.0	U	200.0			QL=4 ST=2 TYP=3
	2800	PENT	3 S	2236.0	2244.0	24.0	11.0			
	4995	LEAR	8 S	2255.0	2255.0	U	55.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	2255.0	2255.0	U	88.0			QL=4 ST=2 TYP=3
	15400	LEAR	8 S	2255.0	2255.0	U	53.0			QL=4 ST=2 TYP=3
	15400	PALE	8 S	2255.0	2255.0	U	37.0			QL=4 ST=2 TYP=3
	4995	PALE	8 S	2255.0	2255.0	U	73.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2255.0	2255.0	U	100.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	2356.0	2357.0	1.0	68.0			QL=4 ST=2 TYP=3
09	280	CUBA	44 NS	1300.0E		530.0D		21.0		
	235	CUBA	44 NS	1300.0E		540.0D	12.0			
	410	LEAR	8 S	0053.0	0053.0	1.0	59.0			QL=4 ST=2 TYP=3
	5730	IRKU	4 S/F	0254.5	0259.9	19.5	11.0		U	
	245	LEAR	8 S	0300.0	0300.0	1.0	51.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0322.5	0328.0	30.5	3.0		U	
	5730	IRKU	1 S	0444.6	0446.0	2.5	3.0		U	
	245	LEAR	8 S	0455.0	0456.0	1.0	59.0			QL=4 ST=2 TYP=3
	204	IZMI	41 F	0800.8	0802.5	3.1	62.0			
	245	SVTO	8 S	0802.0	0802.0	U	51.0			QL=4 ST=2 TYP=3
	204	IZMI	41 F	0935.0	0936.0	1.5	42.0			
	245	SVTO	8 S	1501.0	1501.0	1.0	180.0			QL=4 ST=2 TYP=3
	245	SGMR	4 S/F	1533.0	1536.0	6.0	94.0			QL=4 ST=3 TYP=3
	245	SGMR	8 S	1631.0	1631.0	1.0	24.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1631.0	1631.0	1.0	55.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	1717.0	1718.0	1.0	57.0			QL=4 ST=2 TYP=3
	245	SGMR	4 S/F	1850.0	1857.0	9.0	73.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1902.0	1904.0	2.0	120.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1945.0E	1945.0U	45.0D	16.0			00R
	245	LEAR	8 S	2347.0	2347.0	U	62.0			QL=4 ST=2 TYP=3
245	PALE	8 S	2347.0	2347.0	U	62.0			QL=2 ST=2 TYP=3	
410	PALE	8 S	2347.0	2347.0	U	94.0			QL=4 ST=2 TYP=3	
10	204	IZMI	43 NS	0700.0		300.0D		10.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		
	280	CUBA	44 NS	1337.0E		517.0D		20.0		
	4995	LEAR	8 S	0012.0	0012.0	1.0	75.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0012.0	0012.0	1.0	110.0			QL=4 ST=2 TYP=3

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean	Int	Remarks
10	15400	LEAR	8 S	0012.0	0012.0	1.0	200.0			QL=2 ST=2 TYP=3
	15400	PALE	8 S	0012.0	0012.0	1.0	150.0			QL=4 ST=2 TYP=3
	8800	PALE	4 S/F	0012.0	0012.0	4.0	250.0			QL=4 ST=2 TYP=3
	4995	PALE	8 S	0012.0	0012.0	1.0	96.0			QL=4 ST=2 TYP=3
	5730	IRKU	21 GRF	0458.5	0533.5	94.0	13.0		U	
	5730	IRKU	1 S	0638.5	0639.5	3.5	11.0		U	
	3000	IZMI	5 S	0707.3	0707.5	0.6	2.0			
	610	LEAR	8 S	0710.0	0710.0	1.0	210.0			QL=4 ST=2 TYP=3
	3000	IZMI	5 S	0710.7	0710.9	0.4	27.0			
	245	LEAR	49 GB	0749.0	0749.0	1.0	590.0			QL=4 ST=2 TYP=6
	245	LEAR	8 S	0818.0	0819.0	1.0	190.0			QL=4 ST=2 TYP=3
	410	LEAR	49 GB	0818.0	0819.0	1.0	670.0			QL=4 ST=2 TYP=6
	204	IZMI	7 C	0819.0	0819.1	0.5	230.0			
	410	LEAR	8 S	0857.0	0858.0	1.0	56.0			QL=4 ST=2 TYP=3
	3000	IZMI	5 S	0930.2	0930.6	1.5	10.0			
	610	SGMR	8 S	1342.0	1342.0	1.0	73.0			QL=4 ST=2 TYP=3
	1415	SGMR	8 S	1343.0	1343.0	U	57.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1415.0E	1415.0U	96.0D	6.0			00R
	410	SGMR	8 S	1536.0	1536.0	U	120.0			QL=4 ST=2 TYP=3
	2800	PENT	1 S	1643.0	1645.0	9.0	10.0			
1415	SGMR	8 S	1648.0	1649.0	1.0	58.0			QL=4 ST=2 TYP=3	
6700	CUBA	4 S/F	1836.0	1841.0	9.0	13.0	6.0		15R	
6700	CUBA	23 GRF	1926.0	1936.0	78.0	7.0	3.0		14R	
11	235	CUBA	44 NS	1300.0E		513.0D		8.0		
	280	CUBA	44 NS	1300.0E		530.0D		17.0		
	245	SGMR	43 NS	1600.0	1600.0	13.0	110.0			QL=4 ST=2 TYP=1
	5730	IRKU	1 S	0407.1	0410.5	5.4	5.0		U	
	410	LEAR	8 S	0428.0	0428.0	U	38.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0428.0	0428.0	U	69.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0609.2	0609.8	0.9	1.0		U	
	5730	IRKU	21 GRF	0628.1	0642.3	31.9	5.0		U	
	245	LEAR	8 S	0732.0	0732.0	U	52.0			QL=4 ST=2 TYP=3
	3000	IZMI	5 S	0946.9	0947.9	1.9	8.6			
410	SGMR	8 S	1704.0	1704.0	U	55.0			QL=4 ST=2 TYP=3	
12	204	IZMI	43 NS	0700.0		300.0D		5.0		
	235	CUBA	44 NS	1300.0E		530.0D		10.0		
	280	CUBA	44 NS	1300.0E		530.0D		20.0		
	245	SGMR	43 NS	1506.0	1506.0	534.0	51.0			QL=4 ST=1 TYP=1
	610	PALE	8 S	0226.0	0228.0	2.0	82.0			QL=4 ST=2 TYP=3
	410	LEAR	49 GB	0227.0	0227.0	1.0	1400.0			QL=4 ST=2 TYP=6
	610	LEAR	8 S	0227.0	0228.0	1.0	97.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0227.0	0227.0	1.0	41.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0227.0	0227.0	1.0	34.0			QL=2 ST=2 TYP=3
	410	PALE	49 GB	0227.0	0228.0	1.0	1300.0			QL=4 ST=2 TYP=6
	500	HIRA	8 S	0228.0	0228.1	0.2	44.0			WR
	2700	PURP	3 S	0526.2	0526.7	4.8	81.8			
	5730	IRKU	4 S/F	0526.5	0527.2	2.5	74.0		U	
	15400	LEAR	8 S	0527.0	0527.0	U	61.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0527.0	0527.0	U	51.0			QL=4 ST=2 TYP=3
	4995	LEAR	8 S	0527.0	0527.0	U	47.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0611.0	0612.0	1.0	130.0			QL=2 ST=3 TYP=3
	5730	IRKU	4 S/F	0706.5	0707.8	2.8	5.0		U	
204	IZMI	25 R	0938.0		142.0D		105.0			
235	CUBA	48 C	1401.0	1402.2	1.8	1299.0				
245	PALE	8 S	2243.0	2244.0	1.0	280.0			QL=2 ST=2 TYP=3	
245	LEAR	8 S	2244.0	2244.0	U	240.0			QL=4 ST=2 TYP=3	
13	280	CUBA	44 NS	1300.0E		530.0D		17.0		
	235	CUBA	44 NS	1300.0E		530.0D		9.0		
	245	LEAR	8 S	0249.0	0249.0	1.0	51.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0334.0	0334.0	U	71.0			QL=4 ST=2 TYP=3
	3000	IZMI	1 S	0832.4	0832.5	0.5	8.0	4.0		
	6700	CUBA	20 GRF	1309.0	1342.0	88.0	13.0	6.0		12L
	6700	CUBA	20 GRF	1739.0	1807.0	48.0	6.0	3.0		2R
2800	PENT	20 GRF	2026.0	2057.0	66.0	9.0				
14	204	IZMI	43 NS	0700.0		300.0D		5.0		

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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
14	[	280 CUBA	44 NS	1300.0E		530.0D		16.0		
		235 CUBA	44 NS	1300.0E		530.0D		8.0		
	[	245 PALE	8 S	0020.0	0021.0	1.0	240.0			QL=4 ST=2 TYP=3
		245 LEAR	8 S	0021.0	0021.0	U	200.0			QL=4 ST=2 TYP=3
		5730 IRKU	1 S	0205.5	0206.1	1.5	1.0	U		
		5730 IRKU	1 S	0208.2	0209.4	5.4	11.0	U		
	[	5730 IRKU	45 C	0500.3	0505.1	32.0	8.0	U		
		245 LEAR	8 S	0502.0	0502.0	1.0	110.0			QL=4 ST=2 TYP=3
		5730 IRKU	1 S	0627.0	0629.5	7.8	2.0	U		
		33 UPIC	46 C	0913.0	0914.0	1.5				
	245 LEAR	8 S	2330.0	2330.0	U	50.0			QL=4 ST=2 TYP=3	
15		245 SVTO	43 NS	0851.0	0851.0	14.0	74.0			QL=4 ST=2 TYP=1
	[	280 CUBA	44 NS	1300.0E		480.0D		17.0		
		235 CUBA	44 NS	1300.0E		530.0D		9.0		
		5730 IRKU	1 S	0518.5	0520.1	3.3	2.0	U		
		245 LEAR	8 S	0652.0	0652.0	U	50.0			QL=4 ST=2 TYP=3
		5730 IRKU	1 S	0713.2	0713.6	1.8	4.0	U		
		5730 IRKU	1 S	0733.5	0734.2	2.1	2.0	U		
	[	245 LEAR	8 S	0803.0	0804.0	1.0	80.0			QL=4 ST=2 TYP=3
		245 SVTO	8 S	0803.0	0804.0	1.0	81.0			QL=4 ST=2 TYP=3
		245 LEAR	8 S	0842.0	0842.0	U	110.0			QL=4 ST=2 TYP=3
		245 LEAR	8 S	0851.0	0851.0	1.0	67.0			QL=4 ST=3 TYP=3
		204 IZMI	42 SER	0918.6	0921.1	30.6	31.0			
16		204 IZMI	43 NS	0700.0		300.0D		5.0		
	[	235 CUBA	44 NS	1300.0E		530.0D		20.0		
		280 CUBA	44 NS	1300.0E		530.0D		28.0		
		5730 IRKU	1 S	0224.0	0224.5	4.5	2.0	U		
		5730 IRKU	42 SER	0634.0	0636.1	10.8	10.0	U		
		204 IZMI	25 R	0906.0		74.0U		100.0		
		33 UPIC	42 SER	1117.0	1202.5	125.5				
		235 CUBA	7 C	1349.0	1350.0	1.2	892.0			
		6700 CUBA	1 S	2146.8	2148.1	20.0U	37.0	18.0		17R
17		204 IZMI	44 NS	0700.0E		300.0D		17.0		
	[	280 CUBA	44 NS	1300.0E		530.0D		22.0		
		235 CUBA	44 NS	1300.0E		530.0D		13.0		
		3000 IZMI	7 C	1122.9	1123.0	0.7	2.0			
18	[	235 CUBA	44 NS	1300.0E		530.0D		38.0		
		280 CUBA	44 NS	1300.0E		530.0D		46.0		
		204 IZMI	41 F	0713.1	0713.5	0.7	73.0			
		33 UPIC	4 S/F	1212.0	1212.5	1.0				
19	[	235 CUBA	44 NS	1300.0E		530.0D		11.0		
		280 CUBA	44 NS	1300.0E		530.0D		18.0		
20	[	127 TORN	44 NS	0650.0E		340.0D		20.0		V=2, DISTURBED
		204 IZMI	43 NS	0700.0		300.0D		17.0		
	[	235 CUBA	44 NS	1300.0E		530.0D		12.0		
		280 CUBA	44 NS	1300.0E		530.0D		25.0		
		33 UPIC	4 S/F	0712.5	0713.0	1.5				
		127 TORN	47 GB	0839.0	0840.0	4.0	600.0D	150.0		UNCERTAIN
		6700 CUBA	23 GRF	1853.0	1906.0	19.0D	6.0	3.0		15R
	6700 CUBA	23 GRF	1939.0	1949.0	76.0	5.0	2.0		00L	
21	[	204 IZMI	44 NS	0700.0E		193.0D		10.0		
		204 IZMI	44 NS	0913.0E		167.0D		5.0		
	[	235 CUBA	44 NS	1300.0E		530.0D		8.0		
		280 CUBA	44 NS	1300.0E		530.0D		16.0		
		3000 IZMI	5 S	1013.7	1014.2	1.3	6.0			
	[	204 IZMI	41 F	1144.6	1144.8	1.1	106.0			
		33 UPIC	46 C	1145.0	1145.5	5.0				
		6700 CUBA	23 GRF	2000.0	2026.0	67.0	13.0	6.0		00L
	2800 PENT	1 S	2052.0	2053.0	8.0	9.0				
22	[204 IZMI	44 NS	0700.0E		300.0D		11.0		
		245 LEAR	43 NS	0714.0	0753.0	96.0	130.0			QL=4 ST=2 TYP=1

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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)	Mean	Int	Remarks
22	280	CUBA	44 NS	1300.0E		520.0D		23.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		
	5730	IRKU	49 GB	0630.8	0640.0U	71.2	600.0U		U	
	2700	PURP	45 C	0632.0	0636.0	17.0	365.1			
	2800	HIRA	46 C	0635.0	0637.6	12.0	28.0			0
	500	HIRA	46 C	0636.2	0640.6	10.0	30.0			0
	204	IZMI	42 SER	0912.6	0913.1	3.9	285.0			
	3000	IZMI	20 GRF	1003.7	1004.2	3.0	6.0			
	33	UPIC	45 C	1152.5	1153.0	1.5				
	6700	CUBA	20 GRF	1411.0	1434.0	50.0	6.0	3.0		00L
	6700	CUBA	31 ABS	1602.0U	1606.7	9.0U	6.0			00L
	6700	CUBA	45 C	1611.3	1627.0	19.3	378.0			1L
	2800	PENT	40 F	1613.0	1619.0	57.0	83.0			
	235	CUBA	48 C	1623.0	1631.9	9.0	2074.0			
	280	CUBA	48 C	1623.0	1631.9	11.0	739.0			
	6700	CUBA	29 PBI	1630.6		73.4	62.0	31.0		00L
	6700	CUBA	23 GRF	1829.0	1858.0	96.0	11.0	5.0		00L
245	LEAR	8 S	2316.0	2317.0	1.0	58.0			QL=4 ST=2 TYP=3	
23	127	TORN	44 NS	0700.0E		360.0D		7.0		V=2?,DISTURBED
	280	CUBA	44 NS	1400.0E		370.0D		17.0		
	235	CUBA	44 NS	1400.0E		370.0D		10.0		
	245	LEAR	8 S	0122.0	0122.0	2.0	270.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0126.0	0126.0	1.0	81.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0132.0	0134.0	3.0	78.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0216.0	0216.0		270.0		U	QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0359.0	0359.4	2.8	5.0		U	
	5730	IRKU	49 GB	0558.1	0635.0	114.9	745.0		U	
	2700	PURP	45 C	0632.5	0635.0	17.5	112.4			
	15400	LEAR	49 GB	0633.0	0635.0	16.0	990.0			QL=4 ST=2 TYP=6
	8800	SVTO	49 GB	0633.0	0636.0	20.0	620.0			QL=2 ST=2 TYP=6
	15400	SVTO	4 S/F	0633.0	0635.0	20.0	460.0			QL=2 ST=2 TYP=3
	8800	LEAR	4 S/F	0634.0	0636.0	6.0	440.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0634.0	0636.0	5.0	110.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	0634.0	0636.0	5.0	130.0			QL=4 ST=2 TYP=3
	2800	HIRA	46 C	0634.0	0636.0	12.0	10.0			0
	4995	LEAR	4 S/F	0634.0	0636.0	12.0	370.0			QL=4 ST=2 TYP=3
	4995	SVTO	4 S/F	0634.0	0636.0	14.0	440.0			QL=2 ST=2 TYP=3
	1415	LEAR	8 S	0635.0	0636.0	2.0	32.0			QL=4 ST=2 TYP=3
	1415	SVTO	4 S/F	0635.0	0636.0	3.0	39.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	0636.0	0636.0		75.0		U	QL=4 ST=2 TYP=3
	500	HIRA	42 SER	0636.8	0637.0	0.8	36.0			0
	410	LEAR	49 GB	0637.0	0637.0	1.0	770.0			QL=4 ST=2 TYP=6
	410	SVTO	8 S	0637.0	0637.0	1.0	460.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0747.0	0748.0	1.0	280.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0747.0	0748.0	1.0	310.0			QL=4 ST=2 TYP=3
	204	IZMI	45 C	0747.4	0748.0	2.0	12260.0			
	3000	IZMI	5 S	0747.8	0748.1	3.0	11.0			
	33	UPIC	45 C	0748.0	0748.0	1.0				
	127	TORN	47 GB	0748.0	0748.6	2.3	1250.0	620.0		
	33	UPIC	45 C	0936.5	0937.5	1.5				
	204	IZMI	7 C	1054.8	1111.1	33.6	36.0			
3000	IZMI	45 C	1058.8	1105.7	31.4	140.0				
33	UPIC	48 C	1106.5	1139.5	34.5					
2695	SGMR	48 C	1209.0	1221.0	18.0	200.0			QL=4 ST=2 TYP=8	
1415	SGMR	4 S/F	1211.0	1215.0	12.0	190.0			QL=4 ST=2 TYP=3	
4995	SGMR	4 S/F	1213.0	1215.0	3.0	75.0			QL=4 ST=2 TYP=3	
610	SGMR	4 S/F	1213.0	1215.0	10.0	53.0			QL=4 ST=2 TYP=3	
410	SGMR	4 S/F	1215.0	1215.0	5.0	27.0			QL=4 ST=2 TYP=3	
8800	SGMR	8 S	1215.0	1216.0	2.0	13.0			QL=4 ST=2 TYP=3	
245	SGMR	4 S/F	1215.0	1223.0	8.0	29.0			QL=4 ST=2 TYP=3	
6700	CUBA	4 S/F	1244.8	1248.0	7.7	17.0	8.0		00L	
245	SGMR	8 S	1405.0	1406.0	1.0	78.0			QL=4 ST=2 TYP=3	
24	280	CUBA	44 NS	1300.0E		490.0D		20.0		
	235	CUBA	44 NS	1300.0E		490.0D		9.0		
	2700	PURP	47 GB	0206.0	0214.2	21.0	626.8			
	2800	HIRA	46 C	0206.6	0213.8	21.0	39.0			0
	4995	LEAR	4 S/F	0207.0	0214.0	17.0	500.0			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		
24	4995	PALE	49 GB	0207.0	0214.0	18.0	600.0			QL=4 ST=2 TYP=6
	2695	PALE	4 S/F	0208.0	0214.0	14.0	470.0			QL=4 ST=2 TYP=3
	8800	PALE	49 GB	0208.0	0215.0	17.0	1400.0			QL=4 ST=2 TYP=6
	5730	IRKU	46 C	0208.0U	0220.0U	160.0U	200.0U		U	
	8800	LEAR	49 GB	0209.0	0215.0	17.0	1400.0			QL=4 ST=2 TYP=6
	15400	LEAR	49 GB	0209.0	0215.0	14.0	1400.0			QL=4 ST=2 TYP=6
	2695	LEAR	4 S/F	0209.0	0214.0	11.0	380.0			QL=4 ST=2 TYP=3
	15400	PALE	49 GB	0209.0	0215.0	12.0	1500.0			QL=4 ST=2 TYP=6
	610	LEAR	48 C	0210.0	0212.0	13.0	270.0			QL=4 ST=2 TYP=8
	1415	LEAR	4 S/F	0210.0	0214.0	11.0	330.0			QL=4 ST=2 TYP=3
	1415	PALE	4 S/F	0210.0	0214.0	11.0	340.0			QL=4 ST=2 TYP=3
	610	PALE	48 C	0211.0	0212.0	11.0	200.0			QL=4 ST=2 TYP=8
	500	HIRA	46 C	0211.2	0219.0	26.0	11.0			0
	410	LEAR	48 C	0212.0	0221.0	10.0	270.0			QL=4 ST=2 TYP=8
	410	PALE	48 C	0212.0	0221.0	10.0	280.0			QL=4 ST=2 TYP=8
	245	LEAR	4 S/F	0215.0	0215.0	8.0	480.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0215.0	0215.0		470.0		U	QL=2 ST=2 TYP=3
	204	IZMI	42 SER	0842.9	0846.3	4.4	695.0			
	33	UPIC	42 SER	0843.0	0844.5	69.0				
	245	LEAR	8 S	0845.0	0846.0	1.0	120.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0845.0	0846.0	1.0	64.0			QL=2 ST=2 TYP=3
	245	LEAR	8 S	0950.0	0951.0	1.0	170.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0950.0	0951.0	1.0	91.0			QL=2 ST=2 TYP=3
	204	IZMI	42 SER	0950.6	0951.1	1.5	271.0			
	245	SGMR	8 S	1226.0	1227.0	1.0	100.0			QL=4 ST=2 TYP=3
	410	SGMR	8 S	1226.0	1227.0	1.0	28.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1227.0	1227.0		40.0		U	QL=2 ST=2 TYP=3
	410	SGMR	4 S/F	1231.0	1234.0	6.0	230.0			QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1231.0	1234.0	6.0	1400.0			QL=4 ST=2 TYP=6
	610	SGMR	8 S	1234.0	1234.0		31.0		U	QL=4 ST=2 TYP=3
	245	SVTO	49 GB	1234.0	1234.0	2.0	520.0			QL=2 ST=2 TYP=6
	610	SVTO	8 S	1234.0	1234.0		60.0		U	QL=2 ST=2 TYP=3
	33	UPIC	3 S	1320.5	1321.0	1.0				
	410	SGMR	8 S	1420.0	1420.0		23.0		U	QL=4 ST=2 TYP=3
	245	SGMR	8 S	1420.0	1420.0		78.0		U	QL=4 ST=2 TYP=3
	245	SGMR	8 S	1528.0	1528.0		110.0		U	QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1608.0	1613.0	16.0	8.0	4.0		00L
	410	SGMR	8 S	1626.0	1627.0	1.0	200.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1627.0	1627.0	1.0	420.0			QL=4 ST=2 TYP=3
	6700	CUBA	20 GRF	1707.0	1714.0	18.0	8.0	4.0		00L
	2800	PENT	20 GRF	1827.0	1838.0	63.0	9.0			
	6700	CUBA	1 S	1907.4	1908.6	2.3	13.0	6.0		21L
	610	LEAR	8 S	2207.0	2207.0	1.0	68.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	2207.0	2207.0	1.0	110.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	2207.0	2207.0	1.0	93.0			QL=4 ST=2 TYP=3
	2800	HIRA	29 PBI	2207.2	2215.6	12.0	4.0			0
	500	HIRA	42 SER	2207.6	2208.0	0.7	35.0			0
15400	LEAR	8 S	2210.0	2211.0	1.0	27.0			QL=4 ST=2 TYP=3	
245	LEAR	49 GB	2211.0	2212.0	2.0	1500.0			QL=4 ST=2 TYP=6	
245	PALE	49 GB	2211.0	2212.0	2.0	1500.0			QL=2 ST=2 TYP=6	
410	LEAR	8 S	2212.0	2212.0		80.0		U	QL=4 ST=2 TYP=3	
610	LEAR	8 S	2212.0	2212.0		45.0		U	QL=4 ST=2 TYP=3	
1415	LEAR	8 S	2212.0	2212.0	1.0	69.0			QL=4 ST=2 TYP=3	
4995	LEAR	8 S	2212.0	2212.0		26.0		U	QL=4 ST=2 TYP=3	
2695	LEAR	8 S	2212.0	2212.0	1.0	28.0			QL=4 ST=2 TYP=3	
410	PALE	8 S	2212.0	2212.0		74.0		U	QL=4 ST=2 TYP=3	
2695	PALE	8 S	2212.0	2212.0	1.0	39.0			QL=4 ST=2 TYP=3	
1415	PALE	4 S/F	2212.0	2212.0	3.0	100.0			QL=4 ST=2 TYP=3	
500	HIRA	46 C	2212.0	2212.6	5.0	14.0			0	
245	LEAR	8 S	2215.0	2217.0	2.0	96.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2217.0	2217.0		65.0		U	QL=2 ST=2 TYP=3	
2695	LEAR	8 S	2340.0	2341.0	1.0	29.0			QL=4 ST=2 TYP=3	
245	LEAR	49 GB	2340.0	2340.0	1.0	1600.0			QL=4 ST=2 TYP=6	
2695	PALE	8 S	2340.0	2341.0	1.0	34.0			QL=4 ST=2 TYP=3	
245	PALE	49 GB	2340.0	2340.0	1.0	1500.0			QL=4 ST=2 TYP=6	
4995	PALE	8 S	2340.0	2341.0	1.0	31.0			QL=4 ST=2 TYP=3	
25	280	CUBA	44 NS	1300.0E		530.0D		19.0		
	235	CUBA	44 NS	1300.0E		530.0D		12.0		

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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
25	245	LEAR	8 S	0004.0	0004.0	U	88.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0004.0	0004.0	U	73.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0256.0	0256.0	1.0	64.0			QL=2 ST=2 TYP=3
	5730	IRKU	21 GRF	0307.2	0431.2	108.3	10.0		U	
	245	LEAR	8 S	0429.0	0429.0	2.0	100.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0514.0	0514.0	U	140.0			QL=4 ST=2 TYP=3
	245	LEAR	49 GB	0554.0	0555.0	2.0	2300.0			QL=4 ST=2 TYP=6
	5730	IRKU	4 S/F	0608.0	0608.5	4.0	11.0		U	
	3000	IZMI	1 S	0821.9	0822.1	0.4	3.0			
	245	LEAR	8 S	0940.0	0940.0	1.0	270.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0940.0	0940.0	1.0	180.0			QL=2 ST=2 TYP=3
	1415	LEAR	8 S	0941.0	0941.0	U	58.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0958.0	0959.0	1.0	110.0			QL=4 ST=2 TYP=3
	3000	IZMI	7 C	0959.4	0959.6	0.4	4.0			
	3000	IZMI	20 GRF	1029.2	1029.8	1.5	3.0			
	245	SVTO	8 S	1051.0	1052.0	1.0	180.0			QL=2 ST=2 TYP=3
	245	SVTO	8 S	1054.0	1054.0	1.0	350.0			QL=2 ST=2 TYP=3
	3000	IZMI	7 C	1054.5	1054.8	2.0	4.0			
	6700	CUBA	21 GRF	1250.0E	1326.0	78.0D	14.0			00L SUNRISE
	6700	CUBA	2 S/F	1319.2	1321.4	6.0	11.0	5.0		25R
	6700	CUBA	1 S	1400.0	1401.0	2.0	18.0	9.0		15L
	245	SGMR	8 S	1400.0	1401.0	1.0	50.0			QL=4 ST=3 TYP=3
	245	SGMR	8 S	1619.0	1619.0	U	71.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1648.0	1648.0	U	71.0			QL=4 ST=2 TYP=3
	245	PALE	49 GB	1756.0	1756.0	1.0	1700.0			QL=4 ST=2 TYP=6
245	SGMR	49 GB	1756.0	1756.0	1.0	1600.0			QL=4 ST=2 TYP=6	
2800	PENT	1 S	1846.0	1847.0	3.0	6.0				
245	SGMR	8 S	1901.0	1901.0	U	50.0			QL=4 ST=2 TYP=3	
2800	PENT	3 S	2040.0	2056.0	52.0	14.0				
6700	CUBA	21 GRF	2047.0	2058.0	45.0D	12.0			22L SUNSET	
6700	CUBA	1 S	2155.9	2156.9	1.9	7.0	3.0		00L	
26	235	CUBA	44 NS	1300.0E		520.0D		11.0		
	280	CUBA	44 NS	1300.0E		530.0D		22.0		
	245	LEAR	8 S	0039.0	0039.0	1.0	53.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0312.0	0312.0	U	320.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0312.0	0312.0	U	270.0			QL=4 ST=2 TYP=3
	5730	IRKU	4 S/F	0442.1	0442.3	1.5	6.0		U	
	5730	IRKU	4 S/F	0529.7	0529.8	0.3	6.0		U	
	410	LEAR	8 S	0606.0	0606.0	U	99.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0606.0	0606.0	U	19.0			QL=4 ST=2 TYP=3
	3000	IZMI	7 C	1028.1	1028.5	2.6	7.0			
	3000	IZMI	5 S	1054.1	1054.1	0.2	17.7			
	245	SGMR	8 S	1225.0	1225.0	U	170.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1225.0	1225.0	U	53.0			QL=2 ST=2 TYP=3
	6700	CUBA	1 S	1644.3	1645.2	1.5	4.0	2.0		50L
	2800	PENT	1 S	1920.0E	1923.0	5.0U	6.0			
6700	CUBA	1 S	2007.0	2007.5	2.4	7.0	3.0		50L	
6700	CUBA	20 GRF	2055.0	2122.0	34.0D	7.0			30L SUMSET	
27	127	TORN	44 NS	0700.0E		190.0D		10.0		V=2?DISTURBED
	245	SVTO	43 NS	1005.0	1044.0	81.0	120.0			QL=4 ST=2 TYP=1
	235	CUBA	44 NS	1300.0E		105.0D		14.0		
	280	CUBA	44 NS	1300.0E		105.0D		27.0		
	245	LEAR	8 S	0009.0	0010.0	1.0	180.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0009.0	0010.0	1.0	55.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0233.0	0233.0	U	60.0			QL=4 ST=2 TYP=3
	5730	IRKU	1 S	0344.5	0346.0	4.5	6.0		U	
	5730	IRKU	46 C	0717.0	0737.4	43.0D	270.0		U	
	3000	IZMI	45 C	0719.2	0737.5	33.2	318.0			
	245	SVTO	4 S/F	0723.0	0726.0	4.0	130.0			QL=4 ST=2 TYP=3
	204	IZMI	45 C	0723.6	0726.6	37.9	453.0			
	245	LEAR	4 S/F	0725.0	0726.0	3.0	110.0			QL=4 ST=2 TYP=3
	2695	LEAR	48 C	0731.0	0737.0	13.0	390.0			QL=4 ST=2 TYP=8
	4995	LEAR	48 C	0731.0	0737.0	22.0	250.0			QL=4 ST=2 TYP=8
245	LEAR	48 C	0731.0	0739.0	26.0	400.0			QL=4 ST=2 TYP=8	
410	LEAR	48 C	0731.0	0739.0	29.0	2200.0			QL=4 ST=2 TYP=8	
1415	SVTO	4 S/F	0732.0	0736.0	9.0	190.0			QL=4 ST=2 TYP=3	
1415	LEAR	48 C	0732.0	0736.0	10.0	190.0			QL=4 ST=2 TYP=8	

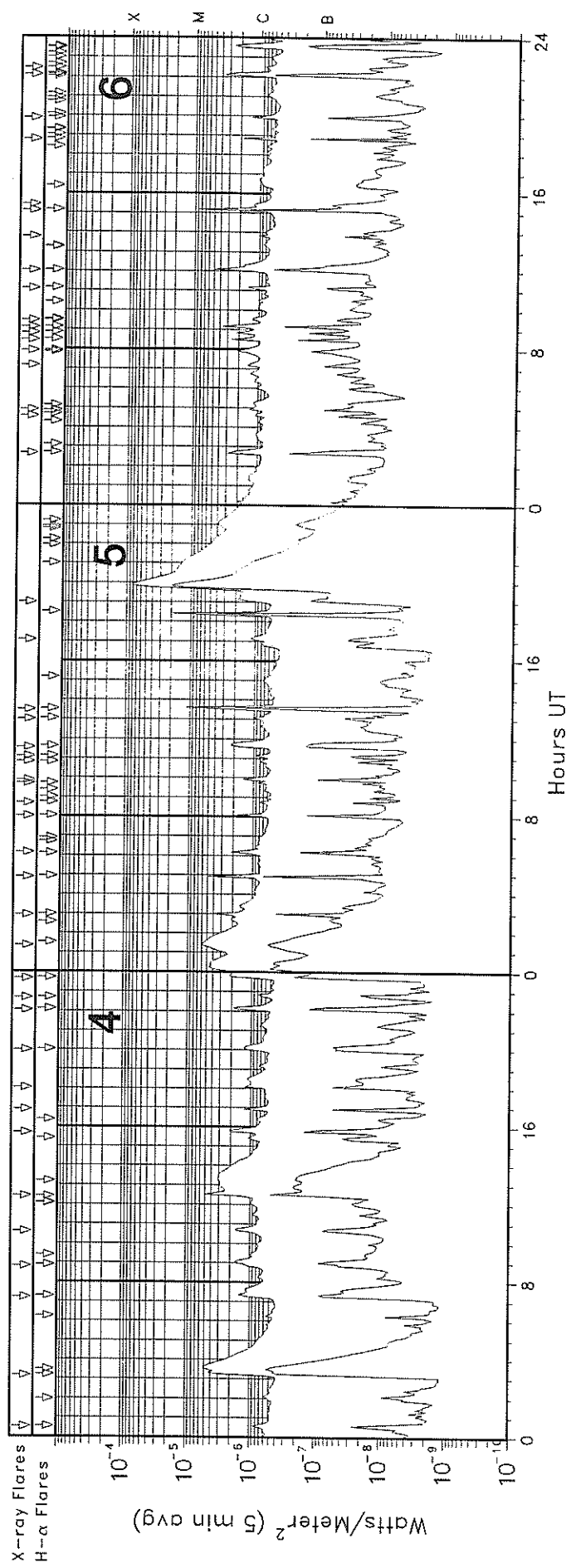
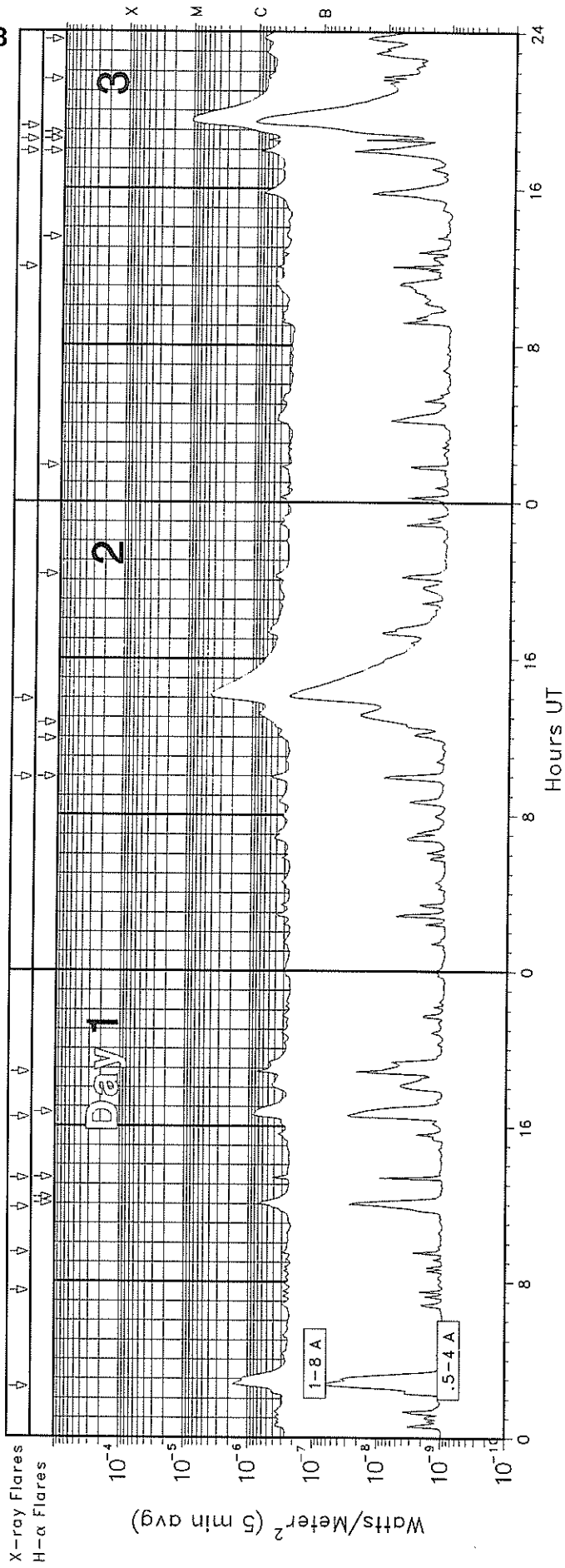
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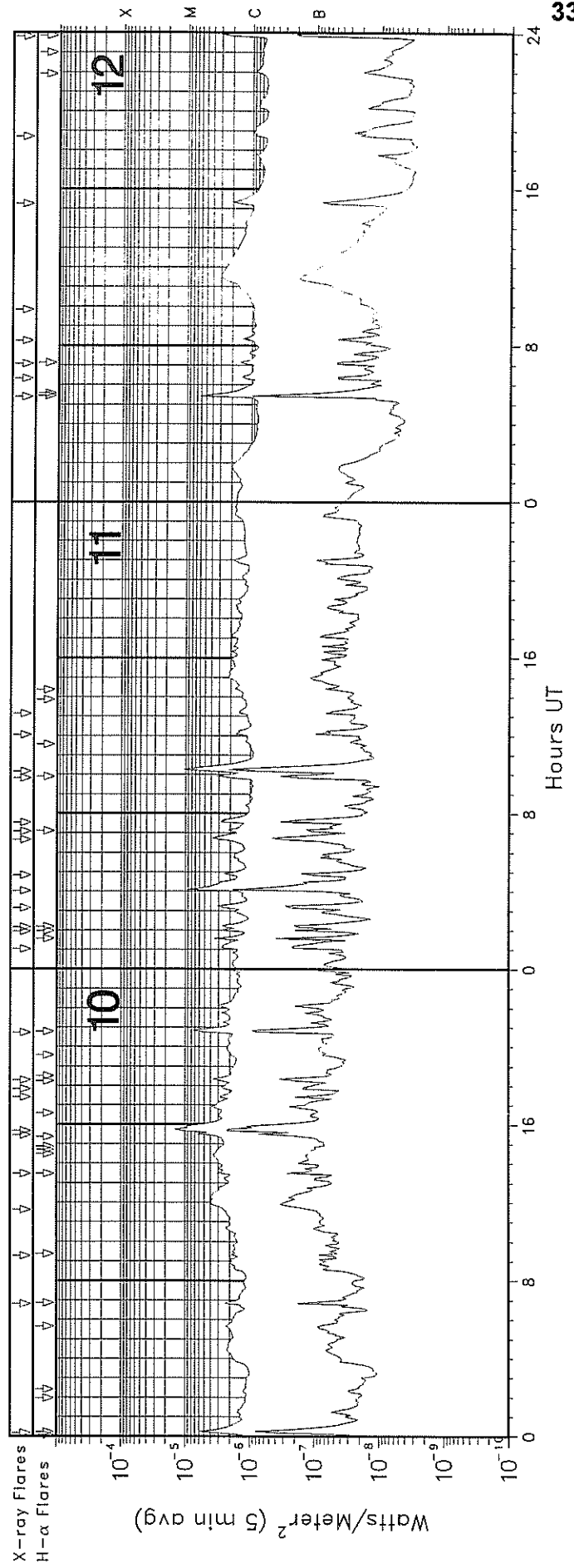
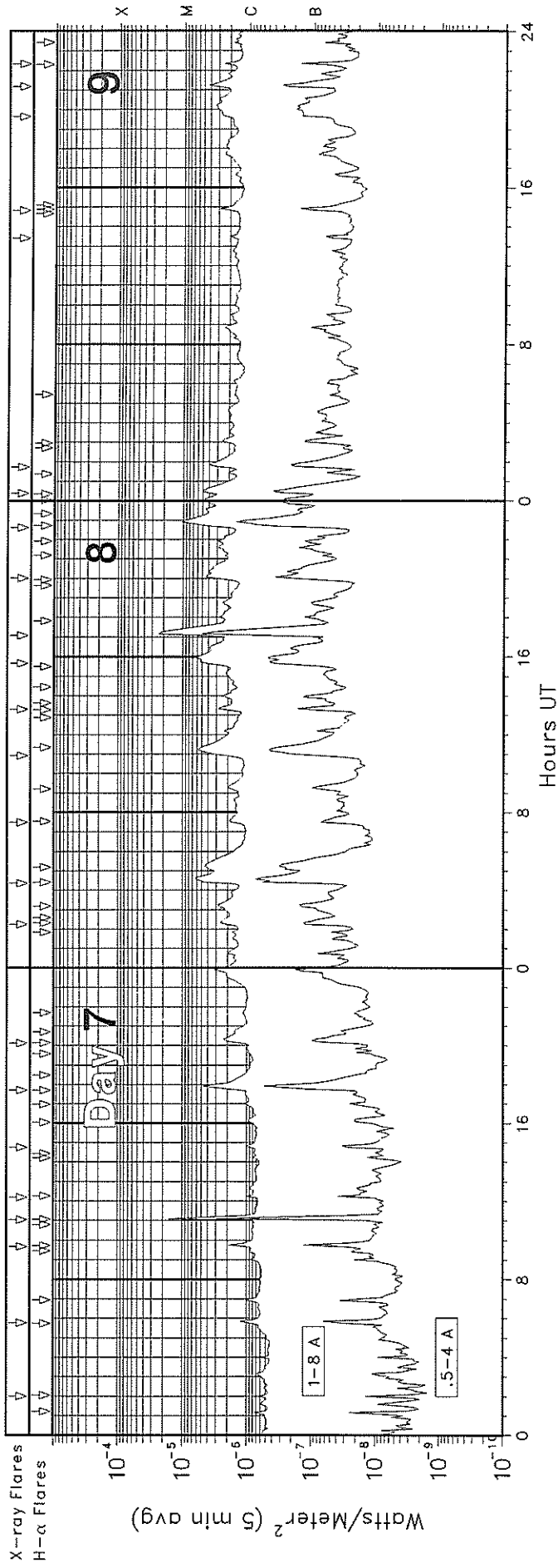
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
27	2695	SVTO	4 S/F	0732.0	0737.0	15.0	440.0			QL=4 ST=2 TYP=3
	4995	SVTO	20 GRF	0732.0	0737.0	24.0	230.0			QL=4 ST=2 TYP=2
	8800	SVTO	4 S/F	0732.0	0739.0	24.0	170.0			QL=4 ST=2 TYP=3
	2700	PURP	45 C	0732.8	0737.2	11.2	208.6			
	15400	LEAR	20 GRF	0733.0	0739.0	12.0	95.0			QL=4 ST=2 TYP=2
	610	LEAR	4 S/F	0733.0	0739.0	12.0	390.0			QL=4 ST=2 TYP=3
	8800	LEAR	20 GRF	0733.0	0739.0	14.0	130.0			QL=4 ST=2 TYP=2
	245	SVTO	4 S/F	0733.0	0739.0	32.0	430.0			QL=4 ST=3 TYP=3
	410	SVTO	48 C	0733.0	0739.0	32.0	1600.0			QL=4 ST=3 TYP=8
	610	SVTO	4 S/F	0734.0	0739.0	6.0	210.0			QL=4 ST=2 TYP=3
	15400	SVTO	4 S/F	0734.0	0740.0	22.0	66.0			QL=4 ST=3 TYP=3
	410	LEAR	4 S/F	0802.0	0805.0	3.0	100.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	0805.0	0805.0		88.0		U	QL=4 ST=2 TYP=3
	245	LEAR	8 S	0841.0	0842.0	1.0	98.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0841.0	0842.0	2.0	94.0			QL=4 ST=2 TYP=3
	610	SGMR	8 S	1232.0	1232.0		230.0		U	QL=4 ST=2 TYP=3
	610	SVTO	8 S	1232.0	1232.0	1.0	62.0			QL=2 ST=3 TYP=3
	245	SGMR	8 S	1333.0	1335.0	2.0	56.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1333.0	1334.0	1.0	55.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1402.0	1402.0	1.0	61.0			QL=4 ST=2 TYP=3
245	SGMR	8 S	1405.0	1405.0	1.0	75.0			QL=4 ST=2 TYP=3	
28	127	TORN	44 NS	0720.0E		240.0D		10.0		V=2
	5730	IRKU	48 C	0454.7	0540.9	180.0D	5144.0		U	
	2700	PURP	28 PRE	0526.4		8.6				
	2695	LEAR	49 GB	0531.0	0540.0	116.0	3600.0			QL=4 ST=3 TYP=6
	4995	LEAR	49 GB	0531.0	0540.0	122.0	3600.0			QL=4 ST=3 TYP=6
	8800	LEAR	49 GB	0531.0	0540.0	124.0	2000.0			QL=4 ST=3 TYP=6
	245	LEAR	4 S/F	0532.0	0534.0	51.0	8.0			QL=4 ST=3 TYP=3
	1415	LEAR	49 GB	0532.0	0541.0	60.0	1200.0			QL=4 ST=3 TYP=6
	2800	HIRA	47 GB	0532.0	0539.2	25.0	210.0			0
	2700	PURP	47 GB	0535.0	0541.0	20.0	2611.6			
	15400	LEAR	49 GB	0535.0	0540.0	109.0	950.0			QL=4 ST=3 TYP=6
	500	HIRA	5 S	0539.8	0542.8	17.0	6.0			0
	610	LEAR	8 S	0540.0	0541.0	1.0	72.0			QL=4 ST=3 TYP=3
	500	HIRA	46 C	0557.0	0559.6	6.0	4.0			0
	2800	HIRA	46 C	0558.2	0559.6	3.0	2.0			0
	1415	SVTO	4 S/F	0613.0E	0624.0U	44.0D	260.0			QL=2 ST=2 TYP=3
	8800	SVTO	20 GRF	0613.0E	0619.0U	54.0D	230.0			QL=2 ST=2 TYP=2
	2695	SVTO	4 S/F	0613.0E	0624.0U	90.0D	210.0			QL=2 ST=2 TYP=3
	4995	SVTO	48 C	0613.0E	0624.0U	100.0D	250.0			QL=2 ST=2 TYP=8
	500	HIRA	8 S	0613.6	0613.8	0.4	21.0			0
2700	PURP	45 C	0622.0	0624.4	6.0	109.9				
500	HIRA	5 S	0623.0	0625.0	10.0	4.0			0	
245	SVTO	4 S/F	0623.0E	0624.0U	3.0D	57.0			QL=2 ST=2 TYP=3	
2800	HIRA	46 C	0623.6	0624.6	2.7	2.0			0	
204	IZMI	25 R	0736.0	0835.0U	108.0		35.0			
610	SGMR	20 GRF	1442.0	1452.0	16.0	48.0			QL=4 ST=2 TYP=2	
610	SGMR	20 GRF	1523.0	1525.0	19.0	47.0			QL=4 ST=2 TYP=2	
610	SGMR	20 GRF	1550.0	1607.0	39.0	98.0			QL=4 ST=2 TYP=2	
245	PALE	8 S	1822.0	1823.0	2.0	50.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	1822.0	1823.0	2.0	62.0			QL=4 ST=2 TYP=3	
29	204	IZMI	43 NS	0700.0		300.0D		7.0		
	5730	IRKU	1 S	0228.2	0228.5	0.7	9.0		U	
	5730	IRKU	1 S	0629.5	0629.7	1.7	1.0		U	
	5730	IRKU	1 S	0633.0	0635.3	7.1	3.0		U	
	33	UPIC	46 C	0900.0	0904.0	7.5				
	245	SGMR	4 S/F	1434.0	1436.0	6.0	57.0			QL=4 ST=2 TYP=3
	245	SGMR	49 GB	1609.0	1609.0		4100.0		U	QL=4 ST=2 TYP=6
	2800	PENT	1 S	2044.0	2045.0	16.0	23.0			
30	5730	IRKU	1 S	0227.5	0230.4	4.5	17.0		U	
	5730	IRKU	1 S	0302.0	0303.4	2.0	6.0		U	
	5730	IRKU	1 S	0333.9	0334.7	6.1	9.0		U	
	5730	IRKU	8 S	0428.2	0428.3	0.8	8.0		U	
	5730	IRKU	4 S/F	0555.0	0559.4	21.0	13.0		U	
	3000	IZMI	5 S	0715.2	0716.0	2.6	11.0			
	6700	CUBA	20 GRF	1529.0	1535.0	19.0	9.0	4.0		00L

GOES X-RAY DETECTOR November 1998

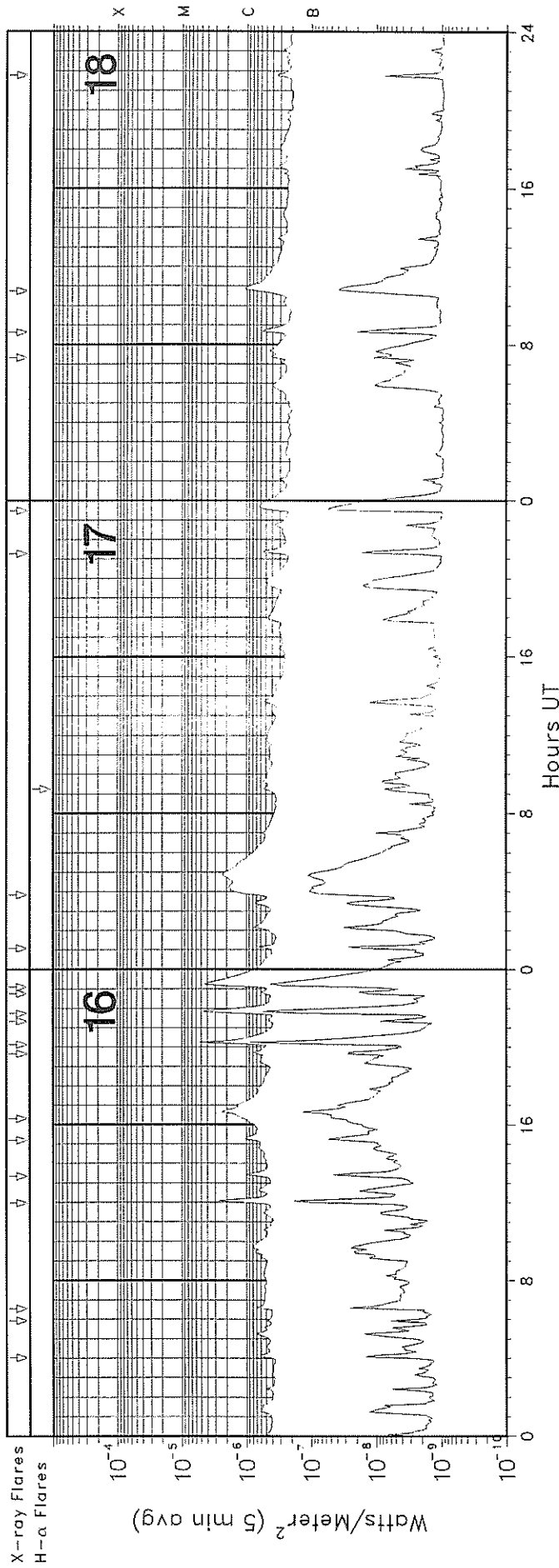
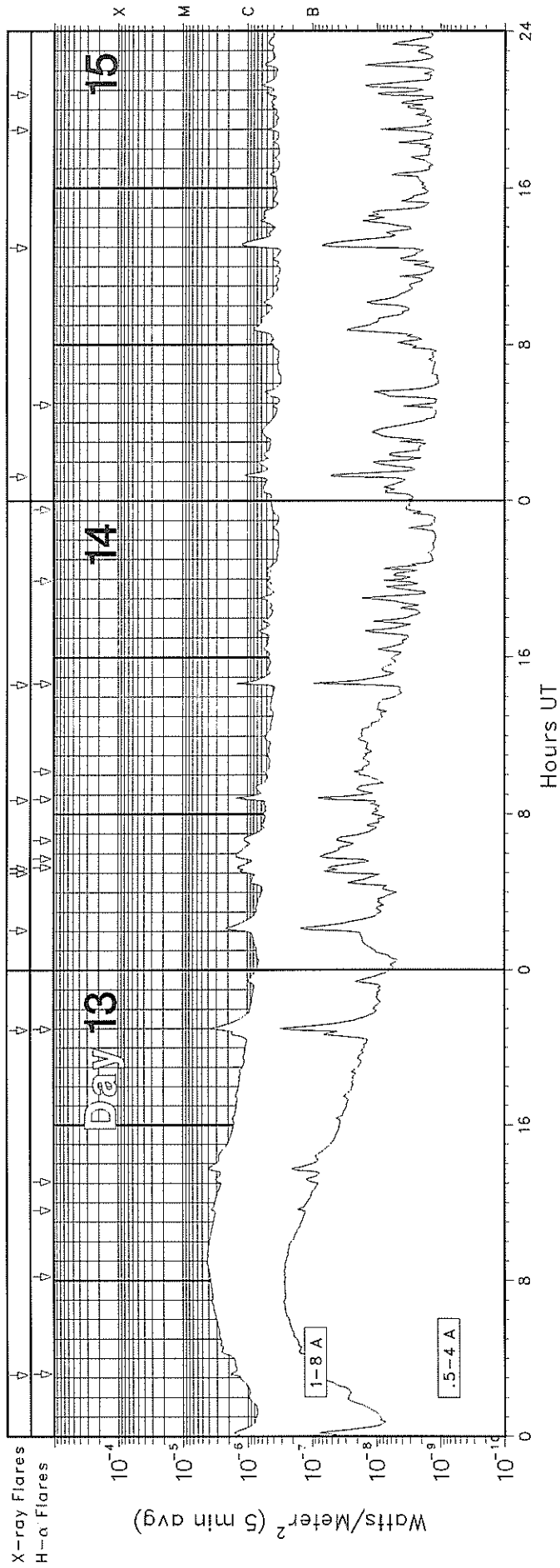


GOES X-RAY DETECTOR

November 1998

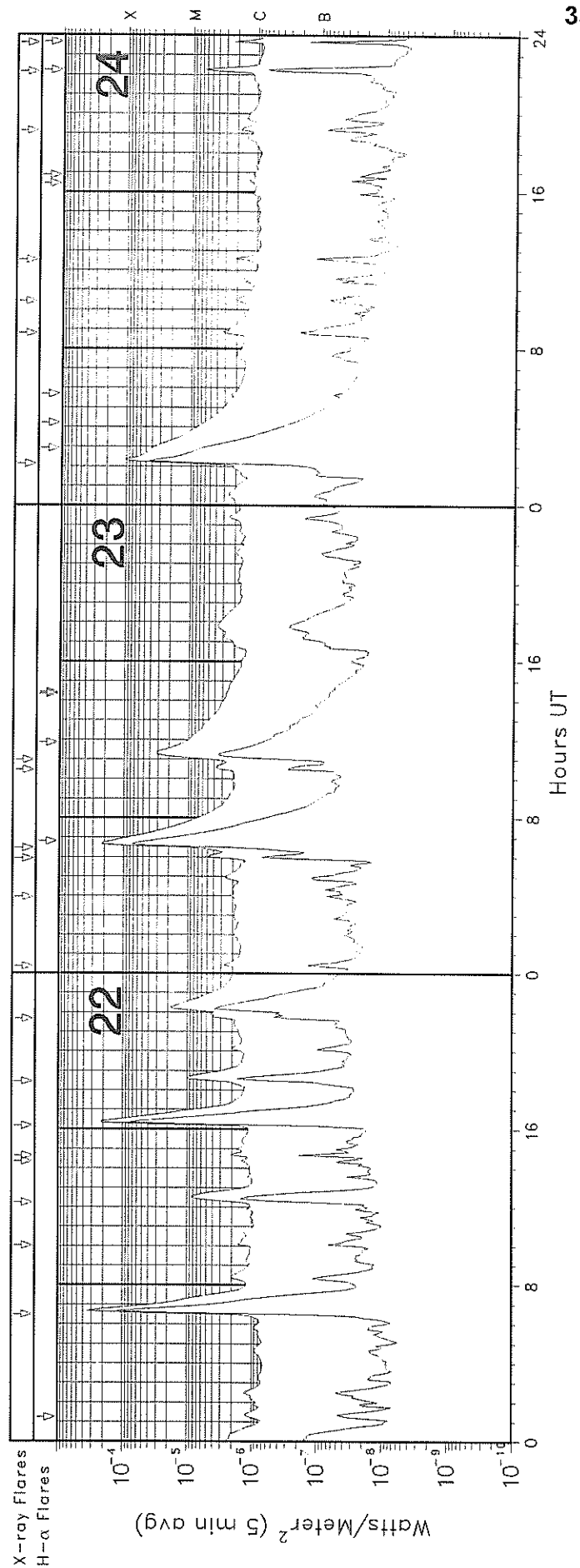
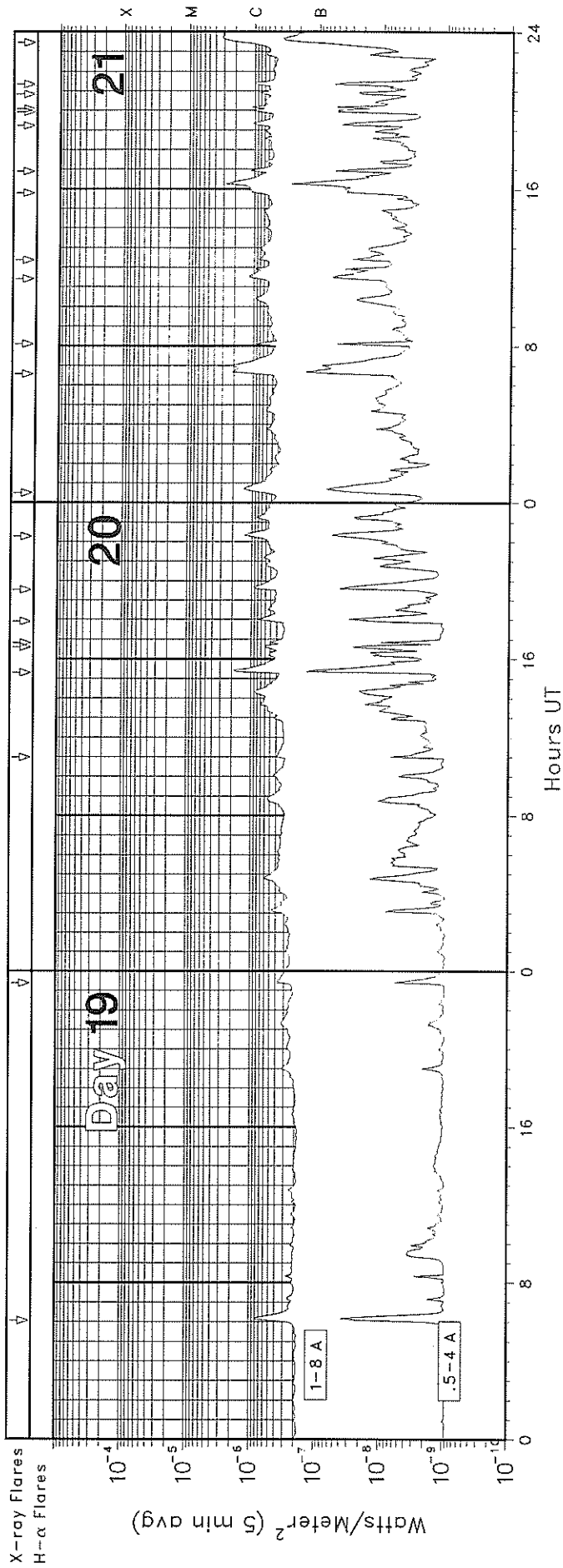


GOES X-RAY DETECTOR November 1998



GOES X-RAY DETECTOR

November 1998

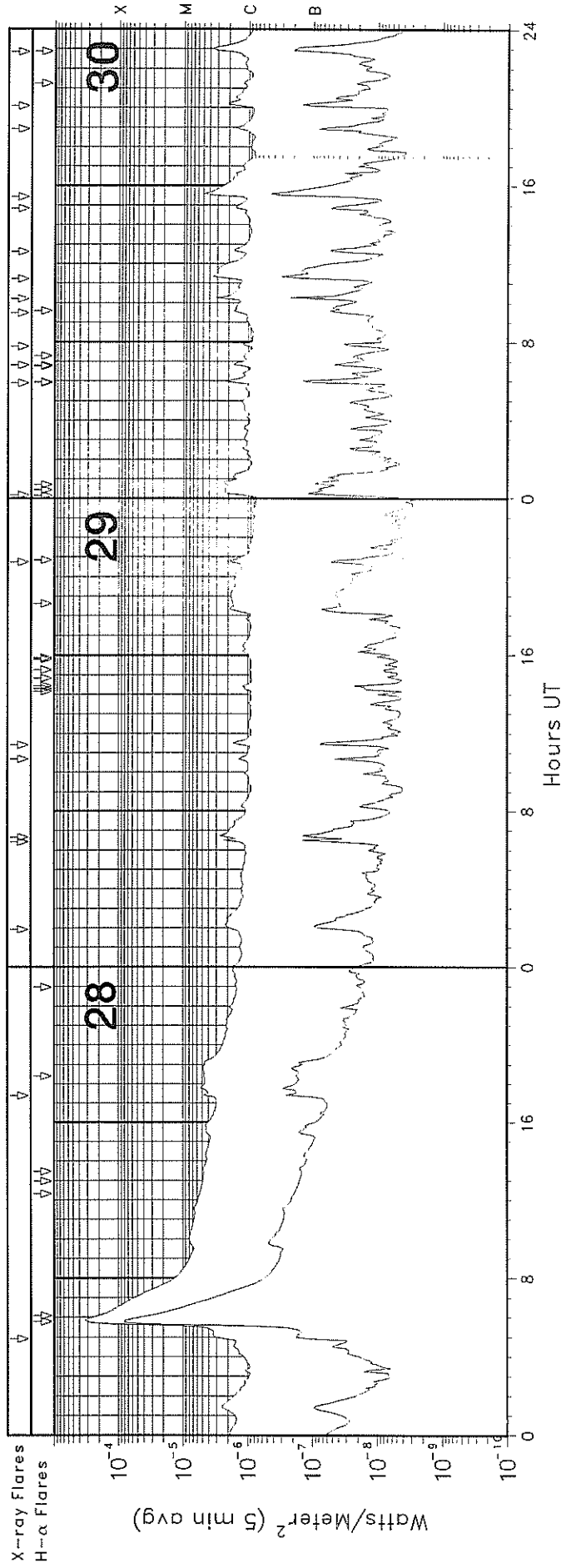
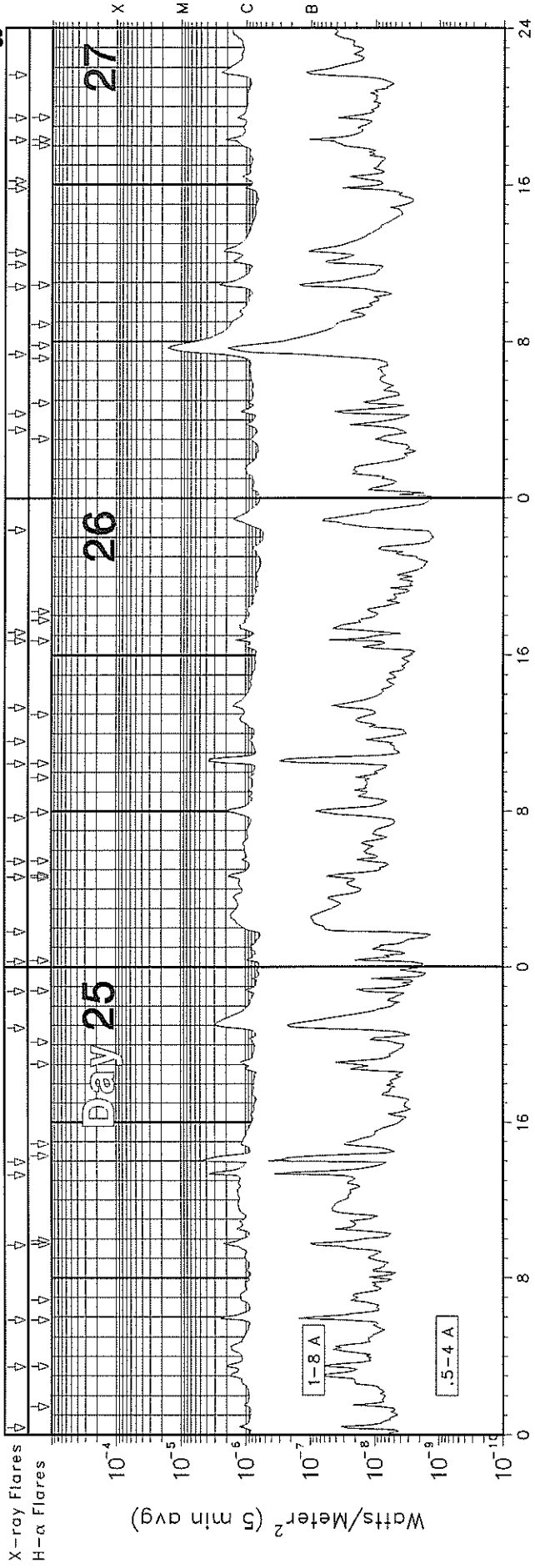


GOES X-RAY DETECTOR

November 1998

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Nov 98



November 1998

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux	Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux	
14	0203	0210				C2.5		1.5E-03	22	1828	1839				M1.0		1.1E-02	
14	0500	0508				C1.3		1.1E-03	22	2140	2215				M1.8		3.1E-02	
14	0515	0518				C1.7	8385	6.1E-04	23	0022	0028				C2.8		2.0E-03	
14	0843	0851				C1.7		7.7E-04	23	0357	0400				C2.9		6.9E-04	
14	1436	1441				C1.6	8383	6.7E-04	23	0556	0604				C4.9		4.1E-03	
15	0114	0119				C1.2		6.1E-04	23	0628	0644				X2.2	8384	2.4E-01	
15	1258	1311				C1.2		1.5E-03	23	1028	1040				C3.8		3.6E-03	
15	1858	1901				B5.2		1.7E-04	23	1059	1121				M3.1		5.2E-02	
15	2046	2049				B6.9		1.9E-04	24	0207	0220				X1.0		1.2E-01	
16	0402	0411				B6.5		4.5E-04	24	0848	0851				C3.4		1.3E-03	
16	0555	0558				B5.7		1.4E-04	24	1026	1030				C2.3		1.1E-03	
16	0632	0636				B8.8		2.6E-04	24	1233	1237				C2.3		1.1E-03	
16	1159	1206				SF C2.9		1.4E-03	24	1907	1913				C1.9		1.5E-03	
16	1321	1328				C1.0		6.3E-04	24	2209	2215				N17 E72 1F	C8.4	8395	3.3E-03
16	1512	1519				C1.0		8.6E-04	24	2338	2342				S16 E57 SF	C2.9	8393	8.4E-04
16	1619	1643				SF C2.5		3.4E-03	25	0021	0025				C1.3		6.4E-04	
16	1939	1946				B8.5		4.0E-04	25	0328	0333				N17 E74 SF	C2.0	8395	9.8E-04
16	2009	2015				C7.9		1.8E-03	25	0550	0559				N18 E72 SF	C2.7	8395	1.7E-03
16	2120	2123				B5.5		1.7E-04	25	0940	0945				S19 E59 SF	C2.4	8393	1.2E-03
16	2144	2153				SF C4.9		3.1E-03	25	0940	0945				S19 E59 SF	C2.4	8393	1.2E-03
16	2246	2250				B6.7		2.8E-04	25	1317	1323				C4.5		2.1E-03	
16	2307	2316				C4.5		4.6E-03	25	1358	1403				C6.4		2.6E-03	
17	0106	0110				B7.9		2.6E-04	25	2051	2107				C2.9		4.8E-03	
17	0351	0456				C2.3		9.7E-03	25	2246	2250				S23 E20 SF	C1.1	8392	4.2E-04
17	2116	2125				B5.8		4.2E-04	26	0018	0023				S24 E18 SF	C1.0	8392	4.7E-04
17	2328	2343				B6.3		1.3E-03	26	0149	0238				C1.7		6.8E-03	
18	0719	0723				B4.9		2.0E-04	26	0437	0443				S24 E16 SF	C1.8	8392	1.0E-03
18	0837	0843				B6.2		4.2E-04	26	0526	0530				S20 E42 SF	C1.2	8393	5.9E-04
18	1044	1055				C1.0		1.2E-03	26	0740	0804				S23 E14 SF	C2.0	8392	2.4E-03
18	2146	2149				B4.9		1.1E-04	26	1026	1039				N18 E57 1F	C4.0	8395	3.3E-03
19	0604	0613				B8.5		6.9E-04	26	1136	1139				C1.0		2.6E-04	
19	2322	2327				B3.8		5.8E-04	26	1319	1328				C1.6		1.7E-03	
20	1058	1102				B4.7		1.6E-04	26	1643	1647				N15 E57 SF	C1.7	8395	5.5E-04
20	1517	1524				C2.5		1.1E-03	26	1710	1730				C1.2		1.9E-03	
20	1635	1639				B8.2		2.7E-04	26	2223	2259				C1.5		3.5E-03	
20	1649	1653				B5.5		2.0E-04	27	0330	0348				C1.1		1.1E-03	
20	1755	1801				S17 E37 SF	B8.5	5.8E-04	27	0419	0425				C1.2		1.1E-03	
20	1932	1938				S17 E37 SF	B9.8	9.0E-04	27	0721	0743				S24 E09	M1.6		2.4E-02
20	2216	2221				C1.3		8.4E-04	27	1048	1056				N21 E51 SF	C2.6	8395	1.9E-03
21	0030	0042				C1.3		1.8E-03	27	1155	1205				C1.6		1.7E-03	
21	0634	0641				C2.2		3.8E-03	27	1232	1237				C2.2		1.9E-03	
21	0805	0808				C1.5		3.1E-04	27	1549	1552				C1.2		3.8E-04	
21	1125	1132				S28 W70 SF	C1.1	1.2E-03	27	1612	1625				C1.2		1.2E-03	
21	1223	1227				B9.5		3.4E-04	27	1818	1821				N19 E53 SF	C2.4	8395	7.3E-04
21	1548	1616				S28 W77 SF	C3.0	3.5E-03	27	1925	1928				S21 E25 SF	C1.4	8393	5.7E-04
21	1654	1658				S28 W77 SF	C1.2	4.6E-04	27	2137	2147				C2.4		2.8E-03	
21	1914	1918				S30 W72 SF	C1.3	6.0E-04	28	0454	0552				N17 E32 3N	X3.3		5.0E-01
21	1955	2000				S28 W80 1F	C1.7	4.7E-04	28	1723	1726				C5.1		1.9E-03	
21	2006	2010				S14 W93 SF	C1.3	4.2E-04	29	0156	0207				C2.1		5.4E-03	
21	2051	2055				S30 W72 SF	C1.2	3.2E-04	29	0626	0630				C2.8		8.4E-04	
21	2121	2124				C1.7		3.8E-04	29	0640	0645				C2.8		2.0E-03	
21	2328	2358				C3.2		6.7E-03	29	1040	1043				C1.6		5.1E-04	
22	0630	0642				S27 W82 1N	X3.7	2.0E-01	29	1124	1131				C1.6		1.3E-03	
22	1002	1007				S17 E19 SF	C1.6	2.0E-03	29	2045	2049				N23 E34 SF	C2.1		9.1E-04
22	1215	1231				C8.8		1.1E-02	30	0011	0050				C2.5	8395	5.9E-03	
22	1421	1424				C1.6		6.1E-04	30	0554	0600				C2.5	8396	1.4E-03	
22	1439	1443				C2.5		9.8E-04	30	0648	0654				S22 W31	C1.7	8392	1.0E-03
22	1610	1623				S30 W89 2N	X2.5	1.6E-01	30	0747	0756				C1.3		8.2E-04	
									30	0929	0938				S22 W33 SF	C1.8	8392	2.2E-03

GOES SOLAR X-RAY FLARES
 Preliminary Listing

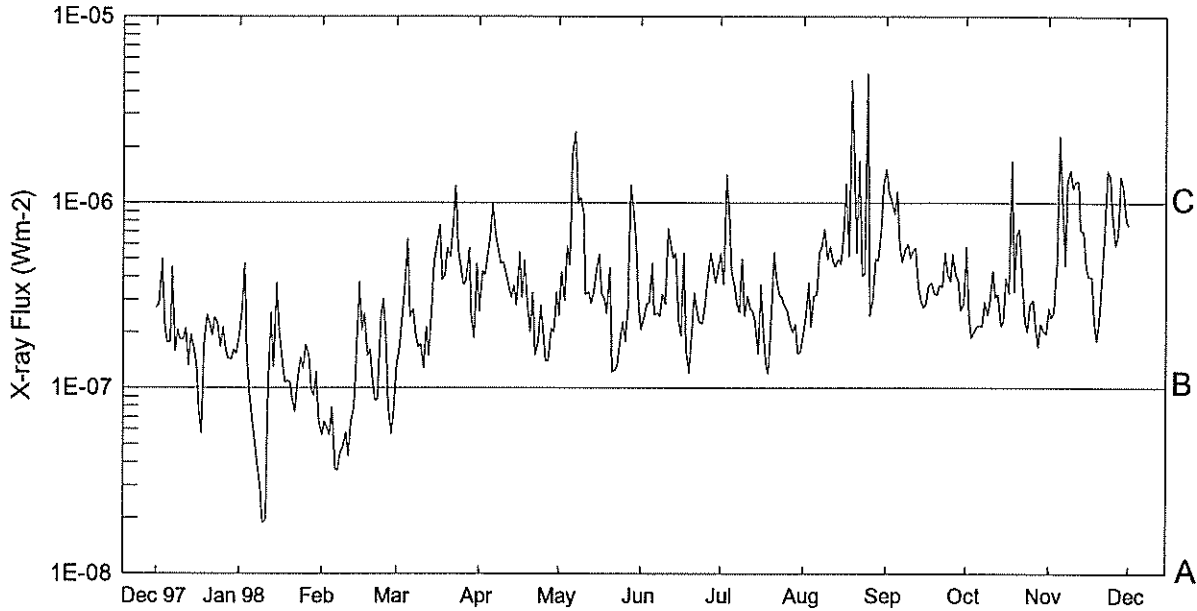
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 Nov 98

November 1998

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
30	1012	1016	1020				C3.7		1.3E-03
30	1114	1123	1156				C3.6		7.4E-03
30	1237	1242	1250				C1.7		1.2E-03
30	1450	1454	1456				C2.0		5.9E-04

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
30	1526	1536	1553				C4.9		5.7E-03
30	1854	1900	1906				C1.6		1.0E-03
30	2005	2013	2024				C2.1		2.1E-03
30	2251	2301	2312	N16	E70	SF	C3.5	8397	3.8E-03

Preliminary GOES Satellite Daily X-Ray Background Dec 97 - Nov 98



Day	Dec 97	Jan 98	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	B2.7	B1.9	A5.6	B1.3	B2.6	B2.4	B2.0	B5.3	B1.9	C1.5	B5.8	B2.7
2	B2.8	B2.6	A6.6	B1.5	B4.3	B4.2	B2.4	B3.6	B2.4	C1.1	B2.4	B2.4
3	B4.9	B4.7	A6.1	B2.2	B4.1	B2.9	B2.8	C1.4	B3.7	C1.0	B1.8	B2.6
4	B2.2	B1.4	A5.5	B3.6	B5.2	B5.8	B2.8	B9.2	B2.1	B8.7	B2.0	B4.8
5	B1.7	A9.4	A7.9	B6.3	B6.6	B4.6	B4.7	B4.2	B3.1	C1.1	B2.1	C2.3
6	B1.7	A6.5	A3.6	B2.4	C1.0	C1.8	B2.4	B3.5	B3.1	B5.8	B2.1	C1.1
7	B4.4	A5.0	A3.5	B2.6	B6.6	C2.4	B2.5	B2.8	B5.4	B4.7	B2.1	B4.6
8	B1.5	A3.8	A4.5	B1.9	B5.6	B9.9	B2.4	B2.5	B5.8	B5.4	B2.9	C1.3
9	B2.0	A2.9	A4.7	B1.6	B4.7	C1.0	B3.2	B5.0	B7.2	B6.0	B2.4	C1.5
10	B1.8	A1.8	A5.7	B1.7	B4.8	B8.7	B2.8	B2.4	B4.9	B5.0	B3.0	C1.2
11	B1.8	A1.9	A4.3	B1.2	B4.1	B3.1	B7.2	B3.1	B5.8	B5.4	B4.2	C1.3
12	B2.1	B1.1	A6.6	B2.1	B3.5	B3.3	B6.0	B2.6	B4.8	B5.7	B3.0	C1.3
13	B1.3	B2.5	A7.9	B1.4	B3.1	B2.8	B5.0	B2.6	B4.5	B3.4	B3.2	B7.1
14	B1.9	B1.3	B1.4	B2.5	B3.6	B3.2	B5.3	B2.2	B4.9	B2.9	B2.1	B7.0
15	B1.6	B3.6	B3.7	B4.8	B2.8	B4.4	B2.3	B1.5	B4.6	B2.7	B2.3	B4.5
16	B1.3	B2.0	B2.0	B6.1	B5.4	B5.3	B1.9	B3.6	B6.5	B2.8	B3.9	B4.0
17	A7.5	B1.5	B2.5	B7.6	B3.1	B3.1	B5.3	B2.0	C1.2	B3.6	B3.2	B4.0
18	A5.7	B1.0	B1.4	B3.8	B4.9	B3.0	B1.5	B1.2	B5.1	B3.7	C1.6	B2.3
19	B1.7	B1.0	B1.6	B4.0	B3.0	B2.5	B1.2	B1.2	C4.5	B3.2	B3.3	B1.8
20	B2.4	B1.0	B1.1	B5.7	B2.0	B4.4	B1.9	B2.5	C1.6	B3.1	B6.7	B2.3
21	B2.2	A8.6	A8.6	B5.1	B3.3	B1.2	B3.2	B5.4	B5.3	B3.5	B7.2	B4.2
22	B1.9	A7.4	A8.6	B7.5	B1.5	B1.2	B2.6	B3.8	C1.6	B3.5	B3.7	B7.2
23	B2.4	B1.1	B2.4	C1.2	B1.8	B1.3	B2.2	B3.1	B4.0	B5.3	B2.3	C1.5
24	B2.2	B1.4	B3.0	B5.6	B2.8	B1.8	B2.2	B3.1	B4.1	B4.1	B2.0	C1.4
25	B1.6	B1.2	B1.8	B4.3	B2.0	B2.2	B2.7	B2.7	B4.9	B3.7	B2.8	B8.4
26	B2.1	B1.7	A8.0	B3.6	B1.4	B1.7	B3.8	B2.6	B2.4	B5.3	B3.0	B5.9
27	B1.6	B1.5	A5.6	B3.8	B1.4	B2.7	B5.3	B2.2	B3.0	B4.0	B2.1	B6.8
28	B1.4	A9.9	A7.5	B5.6	B2.1	C1.2	B4.4	B2.0	B5.0	B3.8	B1.6	C1.4
29	B1.4	A9.1		B2.5	B2.0	B8.8	B3.7	B2.2	B4.8	B2.6	B2.2	C1.2
30	B1.6	B1.2		B1.8	B3.3	B5.9	B4.4	B1.5	B7.3	B2.8	B2.0	B8.0
31	B1.5	A6.6		B4.6		B2.7		B1.5	C1.2		B1.9	

ACTIVE PROMINENCES AND FILAMENTS

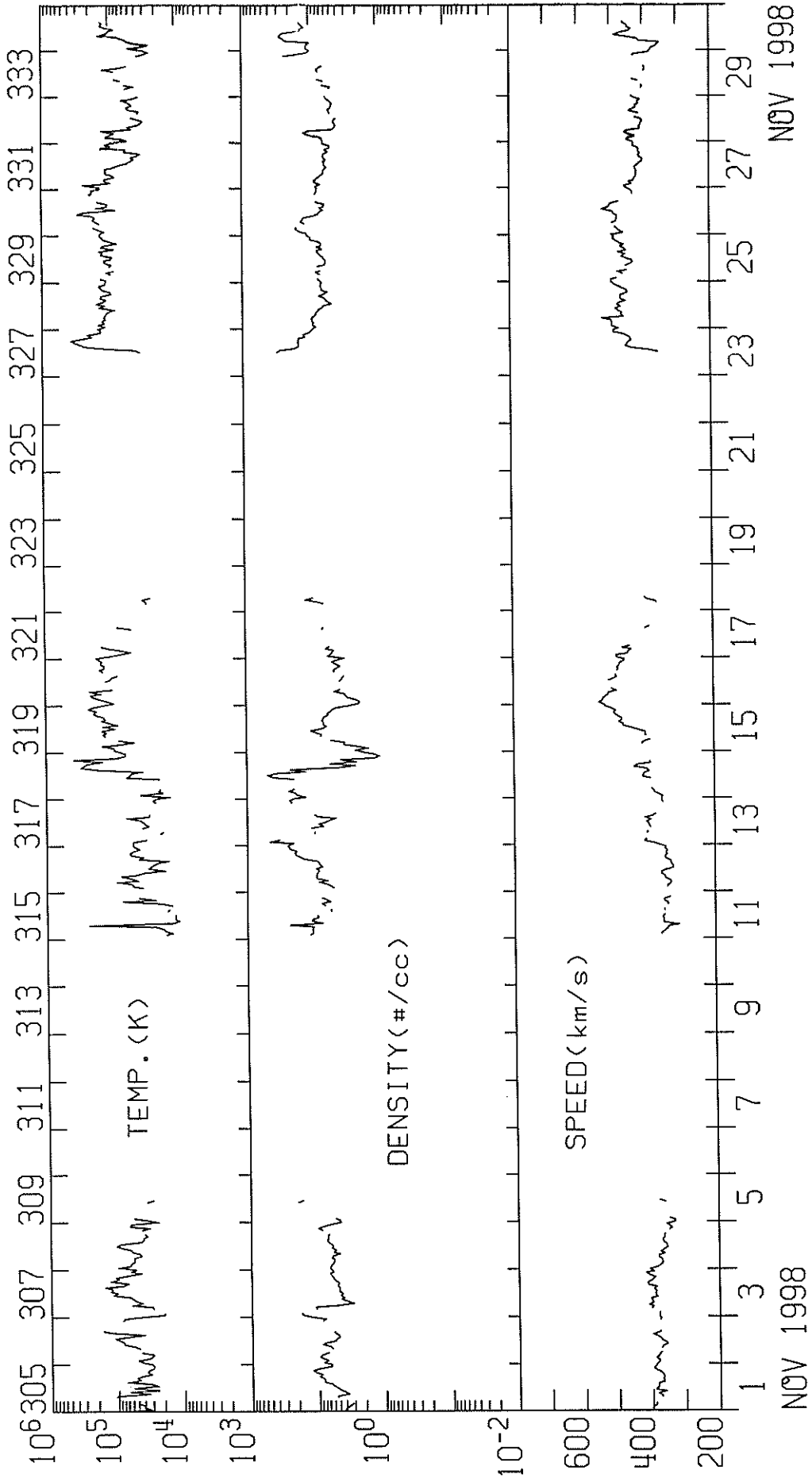
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NOV 98

NOVEMBER 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
01	DSF	1413U	0630U	S37	E50	11	5.6		06	0	0	E	SVTO		
02	EPL	0241E	0309	N57	E90	11	9.9	2		6	7	E	LEAR		
03	DSF	0959U	2221U	N19	E06	11	3.9		14	0	0	E	LEAR	8375	
04	DSF	2024U	1129U	S29	E19	11	6.3		15	0	0	E	RAMY	8376	
05	DSF	1820U	1105U	S17	W17	11	4.5		05	0	0	E	RAMY	8374	
05	DSF	1820U	1120U	S24	E00	11	5.8		08	0	0	E	RAMY	8376	
05	DSF	2326U	1437U	S26	E28	11	8.1	2	12	0	0	E	HOLL		
06	EPL	1442	1639D	N16	W90	10	30.9	3		7	7	E	RAMY		
06	EPL	1505E	1541	S17	W90	10	30.9	3		9	9	E	HOLL	8371	
08	DSF	2308	2328	N24	E22	11	10.7	3	09	9	9	E	HOLL	8378	
08	DSF	2318	2330	N24	E25	11	10.9	3	08	0	0	E	LEAR	8378	
10	LPS	1535E	1717	N19	W90	11	3.8			8	9	E	RAMY	8375	
10	LPS	1541	1756D	N21	W90	11	3.7			8	7	E	HOLL	8375	Flare Associated
10	EPL	1923E	1940	S20	E90	11	17.7	3		9	9	E	RAMY		
10	EPL	1925	1933	S20	E90	11	17.7	3		9	9	E	HOLL		
10	DSF	2342U	1408U	N57	W64	11	5.4	2	22	0	0	E	HOLL		
11	DSF	1013U	2227U	N25	E71	11	16.9	2	06	0	0	E	LEAR		
11	DSF	1013U	2227U	S39	E48	11	15.3	2	19	0	0	E	LEAR		
11	DSF	1102U	1408U	N43	W48	11	7.5	2	38	5	5	E	RAMY		
13	ASR	0937E	1215D	S10	W90	11	6.6	0	3			P	WROC		
13	APR	0937E	1217D	S32	W90	11	6.3	1	13			P	WROC		
13	CAP	0944E	1217D	N28	W90	11	6.4	0	4			P	WROC		
14	BSL	0518	0543	N28	W90	11	7.2			9	8	E	LEAR		Flare Associated
23	LPS	0712	0925	N29	W90	11	16.2	1		9	9	E	LEAR	8384	
23	SPY	1216E	1237D	N20	E90	11	30.4			9	9	E	RAMY		
24	DSF	1137U	0749U	S30	W08	11	23.8		09	0	0	E	SVTO		
24	DSF	1942U	1203U	S32	W10	11	24.0		07	0	0	E	RAMY		
25	DSF	1126U	0948U	N60	E46	11	29.5		21	0	0	E	SVTO		
25	DSF	2114U	1226U	N63	E53	11	30.6		22	0	0	E	RAMY		
29	DSF	0958U	2218U	N00	W36	11	26.7		17	0	0	E	LEAR		
29	DSF	1402U	0705U	S05	W48	11	26.0		08	0	0	E	SVTO		
29	DSF	1636U	1729U	S05	W44	11	26.4	2	08	0	0	E	RAMY		

IMP 8 SOLAR WIND PLASMA
NOVEMBER 1998

MIT/CSR IMP 8 PLASMA PARAMETERS



IMP 8 ONE-HOUR AVERAGES

MIT

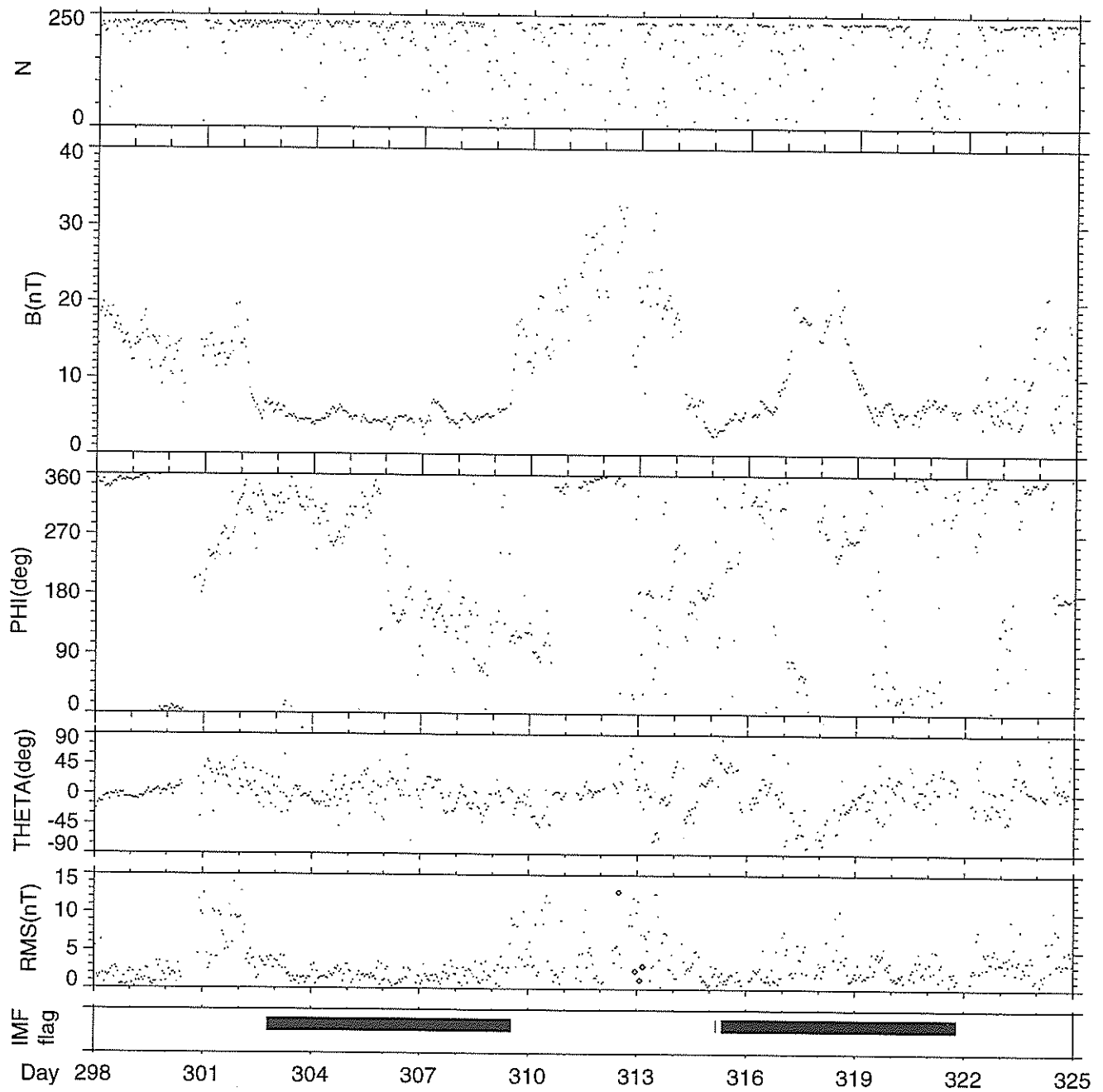
IMP 8

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 298 - 325

October 25 1998 - November 21 1998



Generation Date : Thu May 27 11:36:01 1999

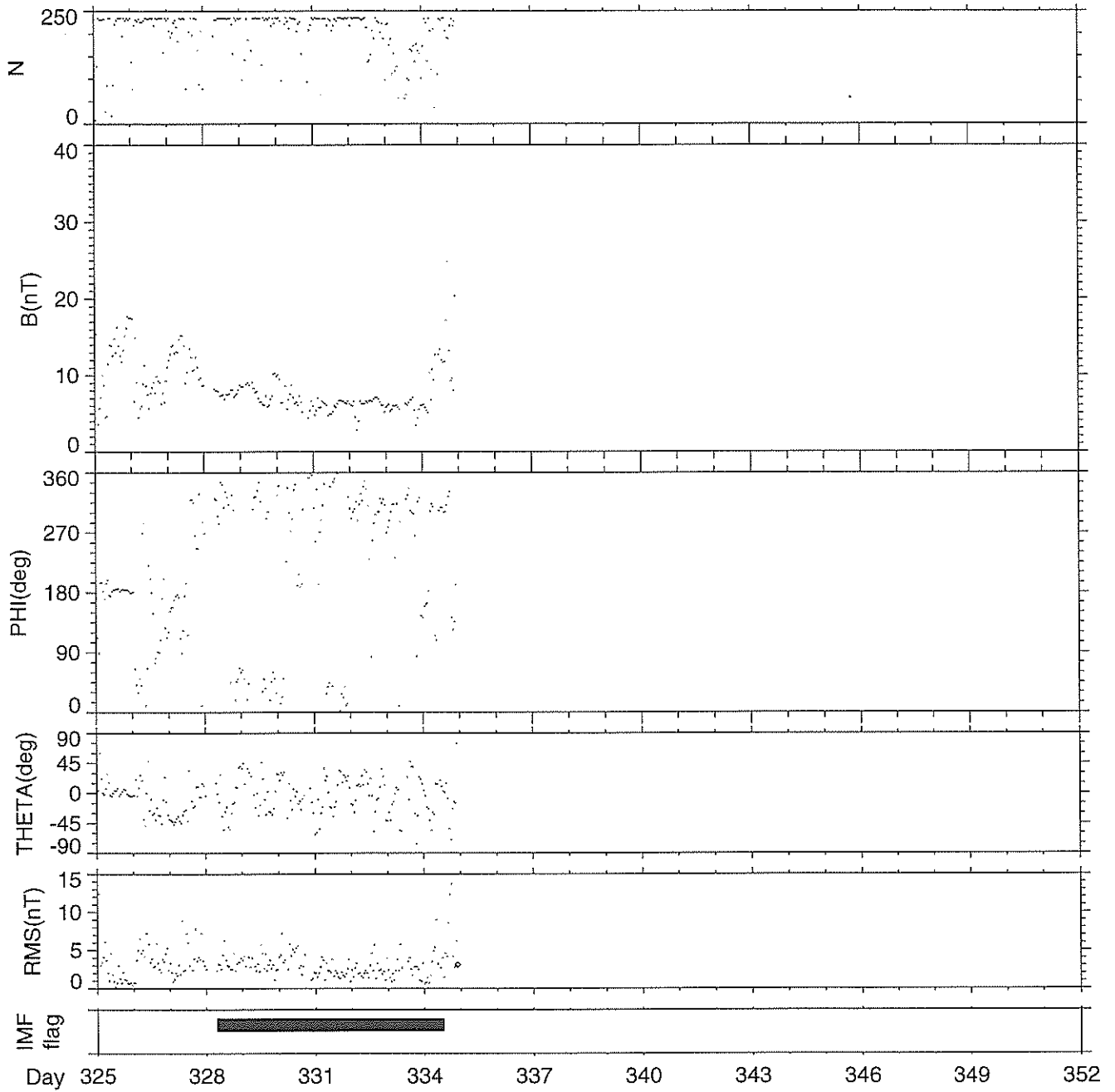
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 325 - 334

November 21 1998 - November 30 1998



Generation Date : Thu May 27 11:36:03 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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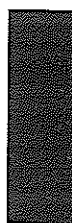
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OBSERVATION Day (UT)	Start (UT)	End (UT)	Sta	EVENT				FREQUENCY		Remarks
				Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	
01	0000	0809	HIRA							
	0000	0815	CULG							
			ONDR	0836.2	0839.1	DCIM	G	2	1130	2000X
	0757	1432	ONDR	0836.2	0838.4	DCIM	G	2	2000X	4355
	0714	1200	IZMI	1053.1	1053.3	III	B	2	45X	120
	0734	1450	POTS	1053.2	1053.7	III	B	2	40X	120
	0747	1205	IZMI	1053.3	1053.4	V		2	45X	60
			POTS	1103	1105	I	S,W	1	200U	270
	2040	2400	CULG	2128.0	2128.0	III	B	1	65	100
	2133	2400	HIRA							
02	0000	0810	HIRA							
	0000	0815	CULG	0008.0	0008.0	III	B	1	65	160
			CULG	0154.0	0156.0	III	G	1	20	70
			LEAR	0154.0	0155.0	III		2	30	60
	0755	1434	ONDR							
			LEAR	0853.0	0853.0	III		1	37	70
	0650	1200	IZMI	0853.1	0853.3	III	B	2	45	145
	0734	1450	POTS	0853.1	0853.4	III	B	2	40X	160
			SVTO	1233.0	1234.0	III		2	38	84
			POTS	1233.8	1234.5	III	G	2	40X	150
			SVTO	1449.0	1449.0	III		1	33U	72U
			PALE	1920.0	1922.0	III		1	25	50
	2040	2400	CULG							
	2132	2400	HIRA							
03	0000	0811	HIRA							
	0000	0815	CULG							
			SVTO	0745.0	0922.0	CONT		1	35	51
	0753	1435	ONDR							
	0734	1450	POTS	0838	0840	I	S	2	110U	125
			LEAR	0913.0	0914.0	III		1	65	80
			SVTO	0913.0	0914.0	III		1	66	84
			POTS	0913.5	0914.3	III	G,U	3	65	225
	0700	1200	IZMI	0913.6	0914.1	III	G	2	65	230
			SVTO	1201.0	1440.0	CONT		1	35	56
			POTS	1221	1231	I	S,W	1	130	160
	2040	2400	CULG							
	2131	2400	HIRA							
04	0000	0812	HIRA							
	0000	0815	CULG							
			SVTO	0643.0	0938.0	CONT		1	36	56
	0751	1438	ONDR							
			SVTO	0836.0	0840.0	V		2	36	85
	0734	1450	POTS	1031	1303	I	S,W	1	110U	170U
			SVTO	1121.0	1354.0	CONT		2	37	60
			POTS	1147.5	1148.1	III	G	2	40X	350
	0703	1200	IZMI	1147.5	1147.9	III	G	2	55	230
			SGMR	1606.0	1607.0	III		1	30	73
	2040	2400	CULG							
	2130	2400	HIRA							
05	0000	0813	HIRA							
	0000	0815	CULG							
			SVTO	0656.0	1301.0	CONT		1	39	55
	0700	1200	IZMI							
	0734	0843	POTS	0734 E	0843 U	I	S,W	1	200U	250
	0749	1440	ONDR							
			POTS	0806.8	0807.1	UNCLF		1	140	170U
	2040	2400	CULG							
	2129	2400	HIRA							
06	0000	0814	HIRA							
	0000	0815	CULG	0000.0	0001.0	III	G	1	20	100
			CULG	0521.0	0525.0	III	G	1	23	90
			LEAR	0521.0	0524.0	III		1	30	55
			SVTO	0617.0	1028.0	CONT		1	39	55
	0747	1441	ONDR							

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OBSERVATION			EVENT				FREQUENCY		Remarks		
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)		Lower (MHz)	Upper (MHz)
06	0650	1200	IZMI	0938.0U	1200.0D	I	S	1	200	270X	
			SVTO	1125.0	1331.0	CONT		1	39	55	
	2040	2400	CULG	2049.0	2053.0	III	G	1	20	90	
	2128	2400	HIRA								
07	0000	0815	CULG								
	0000	0815	HIRA								
			LEAR	0119.0	0120.0	III		1	30	59	
			LEAR	0609.0	0610.0	III		1	30	45	
	0702	1200	IZMI	0702.0U	1200.0D	I	S	1	190	270X	
	0745	1443	ONDR								
	2040	2400	CULG								
	2128	2400	HIRA								
08	0000	0816	HIRA								
			LEAR	0231.0	0232.0	III		2	30	67	
	0000	0815	CULG	0232.0	0232.0	III	B	1	23	90	
			LEAR	0335.0	0335.0	III		1	30	47	
			CULG	0626.0	0627.0	III	G	1	30	150	
			LEAR	0704.0	0705.0	III		1	35	55	
			CULG	0705.0	0815.0D	III	S	1	20	180	
			SVTO	0705.0	0932.0	CONT		2	35	85	
			LEAR	0713.0	0908.0	CONT		2	30	80	
	0700	1200	IZMI	0735.0U	1000.0U	I	S	2	45	270X	
	0743	1447	ONDR								
			IZMI	1000.0U	1200.0D	I	S	2	45	270X	
			SVTO	1007.0	1007.0	III		1	65	73	
			SVTO	1011.0	1418.0	CONT		2	35	85	
		SGMR	1455.0	1456.0	III		1	30	48		
	2127	2400	HIRA								
09	0000	0817	HIRA								
			LEAR	0034.0	0034.0	III		1	40	63	
			PALE	0034.0	0034.0	III		1	25	40	
			LEAR	0401.0	0401.0	III		1	30	46	
			LEAR	0458.0	0500.0	III		1	30	62	
			LEAR	0519.0	0534.0	II		1	30	62	
	0704	1200	IZMI	0704.0E	1200.0D	I	N	1	105	270X	
	0734	1450	POTS	0734 E	1450 E	I	S,C	1	110U	400	
	0741	1448	ONDR								
			POTS	0858.2	0911.0	III	G	2	110U	170U	
			IZMI	0907.2	0907.3	III	B	2	120	160	
			POTS	0944.4	0944.5	III	B	2	110U	130	
			POTS	1011.8	1013.2	III	G	1	110U	130	
			POTS	1132.5	1132.6	III	G	2	110U	135	
			POTS	1216.1	1216.2	III	B	1	110U	150	
			POTS	1239.5	1239.8	III	G	2	110U	170U	
			POTS	1251.0	1252.5	III	G	2	135	170	
			POTS	1424.4	1424.5	III	B	1	110U	150	
	2040	2400	CULG	2107.0	2110.0	III	G	1	20	45	
	2126	2400	HIRA								
	10			LEAR	0150.0	0153.0	III		2	30	80
				PALE	0151.0	0152.0	III		1	25	60
0000		0815	CULG	0151.0	0154.0	III	G	1	20	80	
0000		0818	HIRA	0151.0	0151.2	III	B	1	25X	70	
			LEAR	0249.0	0250.0	III		1	30	51	
			CULG	0338.0	0339.0	III	B	2	18X	80	
			LEAR	0338.0	0338.0	III		2	30	80	
			HIRA	0338.4	0338.6	III	B	1	25X	80	
0650		1200	IZMI	0650.0E	1200.0D	I	S	1	105	270X	
			IZMI	0716.2	0716.3	III	B	1	80	120	
0734		1450	POTS	0734 E	1450 U	I	S,C,DC	2	110U	400	
0739		1449	ONDR								
			POTS	0841.8	0842.1	III	B	2	110U	170U	
			POTS	1048	1450 U	III	N	1	110U	170U	
			IZMI	1049.2	1049.4	III	B,RS	1	95	125	
		IZMI	1150.2	1150.3	III	B	2	45X	165		
		POTS	1150.2	1150.4	III	B	3	40X	170U		

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OBSERVATION			EVENT					FREQUENCY		Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
10			IZMI	1150.3	1150.6	V		2	45	70	
			POTS	1150.4	1150.8	V		3	40X	60	
			POTS	1222.8	1223.9	III	B		110U	220	
			POTS	1311.2	1312.7	III	G	2	110U	170U	
			POTS	1426.9	1427.1	III	B	2	40X	130	
			SGMR	1659.0	1659.0	III		1	30	80	
			SGMR	1816.0	1816.0	III		1	30	50	
	2040	2400	CULG	2040.0E	2145.0	III	S	1	20	180	
			PALE	2100.0	2101.0	III		1	25	45	
	2125	2400	HIRA								
		CULG	2354.0	2354.0	III	B	1	40	90		
		LEAR	2354.0	0041.0	CONT		1	30	80		
11	0000	0819	HIRA								
			LEAR	0404.0	0404.0	III		1	30	50	
	0700	1200	IZMI	0700.0E	1200.0D	I	N	1	105	270X	
	0711	1507	POTS	0711 E	1507 U	I	S,C	2	110U	350	
	0737	1454	ONDR								
			IZMI	0800.6	0804.2	III	GG	2	45X	150	
			LEAR	0801.0	0803.0	III		2	30	80	
	0000	0815	CULG	0801.0	0804.0	III	G	1	25	140	
			POTS	0801.2	0808.1	III	GG,RS	2	40X	320	
			IZMI	0806.9	1016.2U	III	N	1	45X	90	
			POTS	0841	1417	III	N	1	110U	170U	
			POTS	1108.2	1108.3	UNCLF		1	220	300	
			POTS	1139.9	1140.3	III	G	2	110U	160	
	2040	2400	CULG	2121.0	2121.0	III	B	1	20	40	
2124	2400	HIRA									
12	0000	0815	CULG	0322.0	0345.0	IV		3	130	460	
	0000	0820	HIRA	0322.0	0343.0	IV		3	130	500	
			CULG	0325.0	0329.0	II	SH	1	100	170	
			CULG	0325.0	0330.0	II	FN,H	2	50	90	
			LEAR	0325.0	0330.0	II		1	52	76	ESS 0400
			HIRA	0325.6	0329.0	II	FN	2	50	80	ESS 400
			HIRA	0325.6	0329.0	II	SH	2	100	130	ESS 400
			CULG	0340.0	0342.0	III	G	1	20	120	
			LEAR	0340.0	0900.0	CONT		1	30	80	
			CULG	0413.0	0416.0	III	G	1	20	80	
			CULG	0625.0	0625.0	III	B	1	30	100	
	0700	1200	IZMI	0700.0E	1200.0D	I	N	1	45	270	
			IZMI	0704.0U	1200.0D	III	N	1	45X	135	
	0713	1510	POTS	0713 E	1510 U	I	S,C,DC	2	55	350	
			IZMI	0717.7	0718.2	III	G	2	45X	270	
			POTS	0717.9	0718.2	III	G	3	40X	250	
			CULG	0718.0	0722.0	III	G	1	20	260	
			HIRA	0718.0	0718.2	III	B	1	50	240	
			CULG	0745.0	0815.0D	III	N	1	20	80	
			POTS	0822.7	0822.8	III	B	2	110U	160	
			LEAR	1006.0	1008.0	III		1	30	60	
			ONDR	1006.0	1007.1	DCIM	G	1	1390	2000X	
	0734	1455	ONDR	1006.0	1007.4	DCIM	GG	2	2000X	4130	
			IZMI	1006.7	1008.1	III	G	2	45X	130	
			POTS	1007.0	1008.2	III	G	2	40X	65	
			POTS	1103.7	1104.7	III	G	3	110U	300	
			IZMI	1104.1	1104.6	III	G	1	95	270X	
			POTS	1204.7	1204.8	III	B	2	110U	170U	
			POTS	1328.8	1329.1	III	B	2	110U	270	
			POTS	1335.0	1339.4	DCIM	P	2	200U	550	
			POTS	1404.7	1404.8	III	B	2	110U	170U	
			ONDR	1425.4	1426.3	DCIM	GG,SP	3	800	1230	
	2040	2400	CULG	2250.0	2332.0	III	N	1	60	170	
	2123	2400	HIRA	2331.4	2331.6	III	B	1	70	260	
13			LEAR	0059.0	0059.0	III		1	30	55	
	0000	0815	CULG	0059.0	0244.0	III	N	1	18	140	
			LEAR	0141.0	0141.0	III		2	30	80	
			PALE	0141.0	0141.0	III		1	25	50	
	0000	0821	HIRA	0141.2	0141.4	III	B	1	25X	120	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
13		CULG	0326.0	0350.0	III	N	1	18X	180	
		LEAR	0333.0	0349.0	III	N	2	30	80	
		HIRA	0333.8	0337.6	III	G	1	25X	170	
		HIRA	0348.6	0349.0	III	B	1	50	130	
		CULG	0433.0	0519.0	III	N	1	18X	180	
		LEAR	0454.0	0953.0	III	N	2	30	80	
		CULG	0531.0	0538.0	III	G	2	18	160	
		HIRA	0533.0	0535.0	III	G	2	50	140	
		CULG	0556.0	0625.0	III	N	1	20	90	
		CULG	0635.0	0815.0D	III	N	1	20	90	
		IZMI	0658.4	0658.5	III	B	1	45	90	
		IZMI	0659.1	0959.2	III	B, HARM	1	50	90	
0700	1200	IZMI	0700.0E	1200.0D	I	S	1	45	270X	
0713	1510	POTS	0713 E	1510 U	I	S,C,DC	2	60	500	
		IZMI	0721.6	1200.0D	III	N	1	45X	90	
		POTS	0722	1501	III	N	1	40X	70	
		IZMI	0751.3	0751.7	III	G	2	45X	135	
		POTS	0751.4	0751.7	III	G	2	40X	300	
		IZMI	0807.6	0808.0	III	G	2	45X	105	
		POTS	0823.9	0832.3	III	GG,RS	3	40X	250	
		IZMI	0828.0	0828.3	III	G	2	45X	225	
		IZMI	0829.5	0830.0	III	G	2	45X	240	
		IZMI	0831.6	0832.2	III	G	2	45X	220	
		POTS	0831.7	0832.2	DCIM	P	2	350U	550	
0732	1458	ONDR	0852.1	0852.5	DCIM		1	2675	4365X	
		POTS	0901.8	0903.6	DCIM		2	300U	650	
		IZMI	0903.2	0903.6	III	G	2	60	270X	
		POTS	0903.3	0904.6	III	G	3	110U	800X	
		POTS	0906.4	0906.6	III	B	2	40X	70	
		IZMI	1026.1	1028.6	I	GG,DC	2	105	125	
		POTS	1104.5	1104.6	III	B	2	40X	90U	
		IZMI	1158.7	1158.9	III	B	2	45X	135	
		POTS	1158.7	1159.0	III	B	3	40X	140	
		SGMR	1230.0	1230.0	III		1	30	53	
		POTS	1230.3	1236.0	III	G	2	40X	90U	
		POTS	1313.5	1338.3	III	GG	2	40X	90U	
		SGMR	1325.0	1605.0	III	N	3	30	80	
		POTS	1411.7	1418.1	III	G	3	40X	300U	
		POTS	1415.6	1418.1	DCIM		2	300U	650	
		POTS	1427.2	1427.3	DCIM		2	250	620	
		SGMR	1610.0	1759.0	CONT		2	30	70	
		PALE	2015.0	2041.0	III	N	2	25	60	
		SGMR	2021.0	2023.0	III		1	30	52	
2040	2400	CULG	2040.0E	2210.0U	III	S	1	20	90	
		CULG	2040.0E	2400.0D	I	S	1	60	130	
		SGMR	2041.0	2041.0	III		1	30	50	
		PALE	2107.0	2152.0	CONT		1	25	45	
		CULG	2229.0	2230.0	III	G	2	18X	90	
2122	2400	HIRA	2229.6	2230.0	III	B	1	25X	70	
		CULG	2335.0	2338.0	III	G	2	18X	150	
		LEAR	2335.0	2337.0	III		2	30	80	
		PALE	2335.0	2337.0	III		2	25	60	
		HIRA	2335.6	2337.6	III	G	1	25X	120	
14	0000 0815	CULG	0000.0E	0510.0	I	S	1	60	150	
		CULG	0001.0	0002.0	III	G	1	20	90	
		LEAR	0001.0	0002.0	III		2	30	80	
		PALE	0001.0	0002.0	III		1	25	40	
		LEAR	0002.0	1047.0	CONT		1	30	80	
		CULG	0108.0	0432.0	III	N	1	20	160	
		CULG	0213.0	0214.0	III	G	2	50	280	
		LEAR	0213.0	0214.0	III		2	50	75	
		PALE	0213.0	0214.0	III		2	50	70	
0000	0822	HIRA	0214.0	0214.2	III	B	2	50	240	
		LEAR	0309.0	0310.0	III		2	30	80	
		PALE	0309.0	0309.0	III		1	25	70	
		HIRA	0309.4	0309.6	III	B	1	25X	130	
		CULG	0510.0	0510.0	III	B	1	23	90	
		CULG	0545.0	0548.0	III	G	2	60	250	

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OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
14		HIRA	0545.8	0546.0	III	B	1	100	210	
		CULG	0552.0	0815.0D	III	N	1	35	150	
		LEAR	0601.0	0601.0	III		2	30	80	
		LEAR	0636.0	0637.0	III		2	30	72	
	0650 1200	IZMI	0650.0E	1200.0D	III	N	1	45X	120	
		IZMI	0650.0E	1035.0U	I	S	1	85	260	
		LEAR	0653.0	0654.0	III		2	30	80	
		IZMI	0653.5	0654.3	III	G	2	45X	165	
		CULG	0654.0	0654.0	III	G	2	18X	150	
	0713 1510	POTS	0713 E	1510 U	III	N	1	110U	170U	
		POTS	0713 E	1035	I	S,C,DC	2	80	400	
		POTS	0741.0	0741.2	III	G	2	110U	170U	
		LEAR	0751.0	0754.0	III		2	30	80	
		IZMI	0751.7	0752.8	III	G	2	45X	230	
		POTS	0751.7	0752.7	III	G	3	40X	170U	
		IZMI	0754.3	0754.5	III	G,HARM	2	45X	170	
		POTS	0754.3	0754.5	III	G	3	40X	250	
		IZMI	0802.0	0805.7	III	GG	2	45X	260	
		LEAR	0802.0	0803.0	III		2	30	80	
		POTS	0802.0	0803.1	III	G	3	40X	250	
		POTS	0805.1	0805.3	III	G	1	40X	90U	
		POTS	0810.2	0811.4	III	G,U	3	110U	275	
		POTS	0827.3	0830.9	III	G	2	40X	170U	
		LEAR	0830.0	0830.0	III		2	32	75	
		IZMI	0830.5	0830.9	III	G	2	45X	145	
		LEAR	0845.0	0847.0	III		2	30	80	
		IZMI	0845.9	0846.4	III	G	2	45X	165	
		POTS	0845.9	0846.6	III	G	3	40X	170U	
		POTS	0919.3	0920.8	III	G	2	40X	170U	
		POTS	0926.0	0926.1	III	B	2	110U	170U	
		IZMI	0942.7	0942.8	III	B,HARM	1	50	135	
		POTS	0942.7	0942.8	III	B	2	40X	160	
		IZMI	1002.6	1005.7	III	GG	2	45X	175	
		POTS	1002.7	1010.0	III	GG,U	3	40X	300	
		ONDR	1007.2	1025.1	DCIM	GG	2	800X	1490	
		IZMI	1009.6	1009.9	III	G	2	45	165	
		POTS	1011.5	1011.6	III	B	2	40X	70	
		POTS	1011.7	1012.5	DCIM		2	450	650	
		POTS	1021.6	1021.7	III	B	2	110U	160	
		POTS	1021.8	1022.1	III	G	2	40X	90U	
		ONDR	1025.2	1051.4	DCIM	GG	2	800X	2000X	
	0730 1500	POTS	1030	1510 U	IV		3	40X	800X	
		ONDR	1034.0	1045.1	DCIM		2	2000X	4385X	
		IZMI	1035.0U	1200.0D	I	S	2	45X	270X	
		IZMI	1040.0U	1200.0D	CONT		2	45X	270X	
		POTS	1045.6	1055 U	II	F,H	2	40X	80	
		POTS	1050.1	1052.7	II	SH,H	3	110U	170U	
		ONDR	1051.5	1115.0	DCIM	GG	2	800X	2000X	
		ONDR	1115.2	1149.4	DCIM	GG,SP	2	800X	2000X	
		SGMR	1203.0	2151.0	CONT		1	30	80	
		ONDR	1207.2	1230.3	DCIM	GG	3	800X	2000X	
		ONDR	1208.3	1216.1	DCIM	G	2	2000X	2870	
		ONDR	1248.3	1311.5	DCIM	GG	3	800X	1850	
		ONDR	1330.2	1349.5	DCIM	G	2	800X	1250	
		ONDR	1409.0	1422.0	DCIM		1	2000X	4385X	
		ONDR	1409.2	1422.4	DCIM	G,SP	2	800X	2000X	
	2040 2400	CULG	2040.0E	2400.0D	III	S	1	20	160	
		CULG	2040.0E	2400.0D	I	S	2	40	120	
		CULG	2113.0	2113.0	III	B	2	18X	120	
		PALE	2113.0	2113.0	III		1	25	65	
		PALE	2119.0	2119.0	III		1	25	45	
		PALE	2120.0	0412.0	CONT		1	25	65	
		LEAR	2230.0	1045.0	CONT		3	30	80	
		LEAR	2348.0	2349.0	III		3	30	80	
		PALE	2348.0	2349.0	III		2	25	75	
	2121 2400	HIRA	2348.8	2349.0	III	B	1	25X	220	
		CULG	2349.0	2349.0	III	B	2	18	240	
15		CULG	0000.0E	0815.0D	III	S	1	20	160	

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OBSERVATION			Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks					
Day	Start (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)		Upper (MHz)				
15	0000	0815	CULG	0000.0E	0815.0D	I	S	2	60	130					
			PALE	0059.0	0059.0	III		2	25	45					
			CULG	0212.0	0213.0	III	G	2	18X	240					
			LEAR	0212.0	0213.0	III		3	30	80					
			PALE	0212.0	0213.0	III		2	25	75					
	0000	0823	HIRA	0213.0	0213.2	III	B	2	30	220					
			HIRA	0449.8	0450.0	III	B	1	30	200					
			HIRA	0625.8	0626.2	III	B	2	30	180					
			CULG	0626.0	0627.0	III	G	3	18X	170					
			HIRA	0649.6	0649.8	III	B	1	25X	140					
			CULG	0650.0	0650.0	III	B	3	18X	150					
			IZMI	0710.0E	1200.0D	CONT		1	45X	270X					
			IZMI	0710.0E	1200.0D	I	S	2	45X	270X					
	0710	1200	POTS	0713	E	1510	U	I	S	1	200U	400			
			0713	1510	POTS	0713	E	1510	U	IV		3	40X	170U	
	POTS	0714.5			0718.3	II	UE	3	40X	90U					
	POTS	0728.0E			0732.5	UNCLF		3	40X	70					
	POTS	0745.8E			0752	UNCLF		3	40X	65					
	IZMI	0756.6			0756.7	III	G	2	45X	230					
	POTS	0756.6			0756.8	III	G	3	40X	350					
	POTS	0818			E	0827.5	UNCLF		3	40X	90U				
	IZMI	0823.0			0823.5	III	G	2	95	180					
	POTS	0823.1			0824.2	III	G	3	40X	170U					
	IZMI	0823.6			0824.2	III	G	2	45X	190					
	IZMI	0855.3			0900.4	I	GG,DC	2	55	135					
	POTS	0900.0			0903.3U	UNCLF		3	40X	65					
	0728	1501			ONDR	0921.1	0922.2	DCIM		1	1180	2000X			
					ONDR	1003.4	1004.1	DCIM		1	1395X	2000X			
					IZMI	1018.2	1018.4	III	G	2	200	270X			
			POTS	1018.2	1018.4	III	G	2	200U	350					
			IZMI	1117.5	1117.9	III	G	2	75	260					
			POTS	1117.6	1118.1	III	G	3	40X	275					
			SGMR	1224.0	1304.0	II		2	30	80	ESS 0500				
			SGMR	1304.0	2115.0	IV		3	30	80					
			POTS	1430.4	1433.6	III	G	2	200U	280					
			POTS	1447	U	1505	III	G,P	2	40X	90U				
			SGMR	1739.0	1741.0	III		3	30	80					
			PALE	1740.0	0135.0	CONT		2	25	75					
			SGMR	1907.0	1907.0	III		3	30	80					
			SGMR	2034.0	2035.0	III		2	30	80					
			2040	2400	CULG	2040.0E	2210.0	III	S	1	20	80			
					2119	2400	HIRA								
							CULG	2230.0	2230.0	III	B	1	18	80	
							LEAR	2249.0	0300.0	CONT		1	30	80	
	CULG	2307.0					2309.0	III	G	1	20	100			
CULG	2328.0	2328.0					III	B	1	20	100				
16	0000	0815					CULG	0123.0	0230.0	III	N	1	20	80	
			CULG	0255.0	0258.0	III	G	1	120	380					
			CULG	0256.0	0311.0	II	FN,H	2	18	100	SWF FLA				
			LEAR	0256.0	0306.0	II		2	30	80	ESS 0800				
			HIRA	0256.6	0307.0	II	FN	2	30	90	ESS 750				
	0000	0824	CULG	0257.0	0311.0	II	SH,H	2	30	180	ESS 750				
			HIRA	0257.0	0307.0	II	SH	2	100	120	ESS 750				
			LEAR	0300.0	1045.0	IV		2	30	80					
			CULG	0303.0	0815.0D	IV	FS	3	20	340					
			CULG	0317.0	0319.0	UNCLF		2	20	50					
			IZMI	0701.0E	1200.0D	CONT		2	45X	270X					
			IZMI	0701.0U	1200.0D	III	N	1	45X	270X					
			IZMI	0701.0E	1200.0D	I	S	2	45X	270X					
	0701	1200	POTS	0713	E	1510	U	III	N	1	40X	90U			
			POTS	0713	E	1510	U	III	N	1	110U	170U			
0713	1510	POTS	0713	E	1510	U	I	S,C,DC	3	40X	500				
		POTS	0737.7	0738.3	DCIM		1	250U	375						
		ONDR	0739.2	0740.4	DCIM		1	800X	1030						
		POTS	0804.3	0804.4	DCIM		2	250U	375						
		POTS	0819	0825	II	UE	3	40X	65						
		POTS	0843	0851	II	UE	3	40X	70						
		POTS	0909.4	0911.5	III	GG	3	40X	300						

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day (UT)	Start End (UT) (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
16		IZMI	0910.1	0911.1	III	GG	2	45X	270	
		IZMI	0910.4	0911.4	V	G	2	50	165	
		POTS	0924.6	0928.9	DCIM		2	200U	400	
		IZMI	0924.7	0924.9	III	G	1	200	270X	
		IZMI	0927.3	0928.1	III	GG	1	190	270X	
		POTS	1010.4	1010.7	III	G	2	225	375	
		POTS	1012.6	1012.8	III	G	1	250	360	
		IZMI	1033.3	1033.6	III	GG	2	110	270X	
		POTS	1033.3	1033.7	III	G	3	110U	300	
		POTS	1105.3	1117.4	III	GG	2	75	800X	
		IZMI	1115.8	1116.5	III	GG	2	75	270X	
		POTS	1140.2	1154.6	III	GG	2	110U	375	
		IZMI	1147.2	1147.3	III	G	2	150	270X	
		IZMI	1148.2	1148.4	III	G	2	150	270X	
		POTS	1231.6	1241.9	III	GG	3	40X	750	
		SGMR	1237.0	1238.0	III		1	32	57	
	0726 1503	ONDR	1318.2	1324.3	DCIM	G	2	2000X	4375X	
		POTS	1318.8	1319.6	III	G,C	3	40X	700	
		ONDR	1319.1	1319.3	DCIM		1	965	1245	
		POTS	1336.1	1336.4	III	G	3	80	300	
		POTS	1351.6	1352.2	III	G,C	3	40X	380	
		SGMR	1356.0	1356.0	III		1	30	38	
		SGMR	1402.0	1404.0	III		1	30	52	
		SGMR	1417.0	1808.0	CONT		2	30	80	
		POTS	1458.4	1503.3	III	GG	3	40X	800X	
		SGMR	1459.0	1503.0	V		3	30	80	
		ONDR	1459.1	1501.0	DCIM	GG	2	800X	1920	
		PALE	1818.0	1818.0	III		1	25	55	
		PALE	1912.0	1920.0	III		2	25	75	
		PALE	2020.0	0145.0	CONT		2	25	55	
	2040 2400	CULG	2040.0E	2400.0D	III	S	1	20	140	
		PALE	2059.0	2100.0	III		2	25	55	
		CULG	2119.0	2122.0	III	G	3	18X	450	
		PALE	2119.0	2124.0	V		3	25	75	
		SGMR	2119.0	2123.0	III		2	30	80	
		CULG	2120.0	2124.0	V		2	20	160	
		CULG	2126.0	2131.0	II	FN	3	40	90	
		CULG	2126.0	2131.0	II	SH	2	85	180	ESS 700
		HIRA	2126.0	2129.0	II	SH	2	100	170	ESS 750
	2118 2400	HIRA	2126.0	2128.0	II	FN	1	50	80	ESS 750
		PALE	2251.0	2324.0	III	N	3	25	75	
		CULG	2309.0	2309.0	III	B	2	20	140	
		HIRA	2309.4	2309.6	III	B	1	25X	150	
		CULG	2322.0	2323.0	III	G	3	18X	400	
		HIRA	2322.2	2322.8	III	B	3	25X	400	
		LEAR	2335.0	1045.0	CONT		1	30	80	
17	0000 0815	CULG	0000.0E	0233.0	III	S	1	20	240	
	0000 0825	HIRA	0057.6	0058.0	III	B	1	200	400	
		CULG	0058.0	0101.0	III	G	3	18X	460	
		PALE	0058.0	0100.0	III		3	25	75	
		HIRA	0059.2	0059.4	III	B	3	25X	1000	
		LEAR	0210.0	0442.0	III	N	2	30	80	
		PALE	0210.0	0232.0	III	N	2	25	75	
		CULG	0227.0	0227.0	III	B	2	20	260	
		HIRA	0227.2	0227.4	III	B	2	25X	210	
		HIRA	0232.2	0232.4	III	B	1	30	210	
		HIRA	0318.8	0319.0	III	B	1	25X	200	
		CULG	0319.0	0319.0	III	B	2	20	180	
		PALE	0319.0	0319.0	III		1	37	51	
		CULG	0430.0	0815.0D	I	S	1	200	300	
		CULG	0431.0	0433.0	III	G	1	200	380	
		CULG	0442.0	0815.0D	III	S	1	20	120	
		CULG	0444.0	0444.0	III	B	1	100	260	
		LEAR	0612.0	0613.0	III		2	30	55	
		CULG	0617.0	0618.0	III	G	1	40	400	
		LEAR	0619.0	0619.0	III		2	30	80	
		IZMI	0700.0E	1200.0D	III	N	1	45X	190U	
	0700 1200	IZMI	0700.0E	1200.0D	I	S	2	85U	270X	

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Day (UT)	Start End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)		
17		POTS	0713	E	1510	U	III	N	1	40X	90U
		POTS	0713	E	1510	U	III	N	1	110U	170U
	0713 1510	POTS	0713	E	1510	U	I	S,C,DC	2	40X	400
		POTS	0713.6		0713.7		III	B	2	65	170U
		IZMI	0746.7		0746.8		III	G	1	90U	270X
		POTS	0746.7		0752.0		III	G	2	110U	170U
		POTS	0757.3		0757.4		III	B	2	110U	170U
		IZMI	0801.6		0801.7		III	G	1	85	270X
		LEAR	0835.0		0837.0		III		2	30	80
		IZMI	0835.2		0835.5		III	G	2	45	245
		POTS	0835.2		0837.0		III	G	3	40X	275
		IZMI	0836.6		0837.3		III	G	3	45X	270
		IZMI	0836.7		0837.0		V		2	45	125
		POTS	0845.6		0852.2		III	G,U	3	110U	250
		IZMI	0848.3		0848.9		III	G	2	95	245
		POTS	0859.5		0909.4		III	GG	2	40X	170U
		IZMI	0859.7		0900.5		III	GG	2	45X	245
		IZMI	0904.3		0904.5		III	G	2	45	210
		POTS	0929.2		0931.2		III	G,U	2	40X	170U
		POTS	1003.7		1003.8		III	G,U	2	240	420
		IZMI	1017.6		1018.6		III	GG	2	55	165
		POTS	1017.6		1018.6		III	GG	3	40X	170U
		POTS	1051.6		1052.2		III	G	2	110U	170U
		POTS	1059.9		1108.8		III	G	2	110U	170U
	0724 1506	ONDR	1110.4		1111.1		DCIM		1	965	1215
		IZMI	1158.8		1159.6		III	GG,RS	2	55	270X
		POTS	1158.9		1159.8		III	GG	3	110U	375
		POTS	1230.2		1237.7		III	GG,U	3	65	275
		ONDR	1307.3		1307.4		DCIM		2	825	1360
		SGMR	1520.0		1528.0		V		1	30	80
		SGMR	1830.0		1833.0		III		1	30	60
		SGMR	2031.0		2031.0		III		1	30	55
		CULG	2040.0E		2400.0D		III	S	1	20	100
	2040 2400	CULG	2040.0E		2140.0		I	S	1	200	300
		CULG	2119.0		2120.0		III	G	2	40	160
		PALE	2130.0		0017.0		CONT		1	30	40
		CULG	2256.0		2257.0		III	G	2	18X	180
		LEAR	2256.0		2256.0		III		2	30	80
		PALE	2256.0		0017.0		III	N	2	25	75
	2117 2400	HIRA	2256.6		2256.8		III	B	1	25X	230
		LEAR	2344.0		2344.0		III		1	36	55
18	0000 0815	CULG	0000.0E		0815.0D		III	N	1	20	100
		LEAR	0008.0		1044.0		CONT		1	30	60
	0000 0826	HIRA	0233.4		0233.8		III	B	1	80	180
		HIRA	0421.6		0421.8		III	B	1	50	180
		HIRA	0531.4		0531.6		III	B	1	50	210
		IZMI	0640.0E		1200.0D		I	S	2	160U	270X
	0640 1200	IZMI	0640.0E		1200.0D		III	N	1	45X	160U
		IZMI	0644.3		0644.9		III	G	2	45X	150
		HIRA	0644.4		0644.8		III	B	1	50	150
		CULG	0645.0		0645.0		III	B	1	30	150
		CULG	0651.0		0651.0		III	B	1	30	150
		IZMI	0651.1		0651.9		III	G	2	45X	210
		HIRA	0651.4		0651.6		III	B	1	60	200
		POTS	0713	E	1510	U	III	N	1	40X	90U
		POTS	0713	E	1510	U	III	N	1	110U	170U
	0713 1510	POTS	0713	E	1510	U	I	S,C,DC,P	2	110U	400
		POTS	0714.7		0717.8		III	GG	2	110U	170U
		IZMI	0715.7		0716.8		III	GG	2	45X	270X
		POTS	0724.1		0726.6		III	G	2	110U	170U
		POTS	0747.6		0748.1		III	G	2	40X	170U
		IZMI	0801.4		0801.6		III	G	2	45X	150
		POTS	0801.4		0801.7		III	B	2	40X	165
		POTS	0817.3		0830.1		III	GG	3	40X	360
		POTS	0821.0		0823.3		DCIM		2	500	650
		ONDR	0821.2		0822.3		DCIM	GG	2	800X	2000X
		IZMI	0821.3		0824.7		III	GG	1	45X	270X
		IZMI	0825.0		0825.4		III	G,HARM	2	60	270X

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
18		IZMI	0825.5	0826.0	III	G	2	50	270X	
		IZMI	0825.9	0826.5	V	G, HARM	2	45X	160	
		LEAR	0826.0	0828.0	III		2	30	80	
		IZMI	0827.2	0828.6	III	GG	2	45X	270X	
		IZMI	0827.9	0828.7	V	G	2	45X	135	
		IZMI	0904.0	0904.3	III	G	2	50	140	
		POTS	0904.0	0904.3	III	G	2	55	170U	
		IZMI	0914.9	0915.3	III	G	2	45X	270X	
		POTS	0914.9	0915.3	III	G	3	40X	350	
		POTS	0919.0	0919.1	III	B	2	110U	170U	
		POTS	0923.9	0927.8	III	GG	2	40X	170U	
		IZMI	0927.1	0927.7	III	GG	2	45X	130	
		POTS	0935.5	0936.7	III	G	2	40X	170U	
		POTS	1008.3	1010.2	DCIM	U	2	250U	800X	
		LEAR	1009.0	1011.0	III		2	30	80	
		POTS	1009.1	1011.7	III	GG, C	3	40X	400	
		ONDR	1009.2	1010.3	DCIM		1	800X	1040	
		IZMI	1009.6	1010.7	III	GG	2	45X	260	
		IZMI	1009.7	1010.7	CONT		2	45	70	
		POTS	1018.4	1029.1	III	G, RS	3	40X	600	
		POTS	1020.4	1029.6	DCIM		2	320U	650	
		ONDR	1025.2	1032.2	DCIM		1	800X	2000X	
0721	1508	ONDR	1025.2	1029.4	DCIM	G	1	2000X	4375X	
		POTS	1046.5	1048.1	DCIM		2	280	540	
		IZMI	1056.4	1056.5	III	B	2	50	150	
		POTS	1056.4	1056.6	III	B	2	40X	160	
		IZMI	1108.4	1109.8	III	GG, HARM	2	45X	270X	
		POTS	1108.5	1116.1	III	GG	3	40X	370	
		IZMI	1115.5	1116.2	III	G	2	55	220	
		POTS	1119.9	1120.4	III	G	2	40X	170U	
		IZMI	1125.4	1126.4	III	G	2	45	160	
		POTS	1125.4	1126.4	III	GG	2	40X	170U	
		POTS	1131.1	1132.0	III	G	2	110U	225	
		IZMI	1150.7	1151.0	III	G	2	55	180	
		POTS	1150.8	1151.0	III	G	2	55	170U	
		POTS	1203.0	1203.6	III	G	3	40X	220	
		POTS	1204.3	1204.7	III	G, U	3	110U	220	
		POTS	1212.4	1212.6	III	G	2	110U	220	
		POTS	1222.7	1222.9	III	G	2	110U	170U	
		POTS	1233.8	1245.4	III	G	3	40X	400U	
		POTS	1233.9	1245.3	DCIM		2	250U	800X	
		ONDR	1244.2	1246.5	DCIM		1	800X	1910	
		POTS	1314.9	1315.1	III	G	2	110U	250	
		POTS	1322.8	1333.1	III	G	3	40X	320	
		SGMR	1332.0	1333.0	III		2	30	80	
		POTS	1339.4	1339.8	III	G	2	40X	170U	
		POTS	1351.2	1351.9	UNCLF		3	110U	400	
		POTS	1402.5	1411.1	DCIM		2	250U	800X	
		POTS	1402.6	1411.9	III	GG, C	3	40X	400U	
		ONDR	1408.2	1411.0	DCIM	G	2	800X	2000X	
		SGMR	1409.0	1413.0	V		3	30	80	
		SGMR	1434.0	1434.0	III		1	30	60	
		POTS	1434.2	1434.8	III	G	3	40X	400	
		SGMR	1700.0	1701.0	V		3	30	80	
		SGMR	1809.0	2000.0	III	N	2	30	80	
		PALE	1817.0	1821.0	III		1	67	69	
		PALE	1846.0	1852.0	III		2	25	75	
		PALE	1846.0	1852.0	V		2	25	75	
		PALE	2013.0	2014.0	III		1	32	38	
		PALE	2024.0	2025.0	III		1	30	41	
2040	2400	CULG	2040.0E	2040.0	III	N	1	20	150	
		PALE	2218.0	2219.0	III		1	25	75	
		CULG	2219.0	2220.0	III	G	3	18X	180	
		CULG	2233.0	2240.0	III	G	1	20	150	
		PALE	2233.0	2248.0	III		1	25	75	
		CULG	2247.0	2249.0	III	G	3	18X	220	
		CULG	2343.0	2344.0	III	G	2	30	180	
		LEAR	2343.0	2344.0	III		2	30	80	
2330	2400	HIRA	2343.2	2343.6	III	B	1	30	180	

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Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)	
18			LEAR	2356.0	2357.0	III		2	45	60		
			HIRA	2356.6	2356.8	III	B	1	90	250		
			CULG	2357.0	2357.0	III	B	1	20	270		
19	0000	0815	LEAR	0003.0	0003.0	III		2	30	80		
			CULG	0003.0	0004.0	III	G	2	30	150		
	0000	0827	HIRA	0003.2	0003.4	III	B	2	30	160		
			CULG	0045.0	0046.0	III	G	3	23	260		
			LEAR	0045.0	0046.0	III		3	30	80		
			PALE	0045.0	0046.0	III		2	25	75		
			HIRA	0045.4	0045.8	III	B	2	25X	220		
			LEAR	0053.0	0053.0	III		1	50	65		
			LEAR	0113.0	0500.0	CONT		1	30	80		
			CULG	0131.0	0144.0	III	N	1	20	120		
			CULG	0210.0	0408.0	III	N	1	20	150		
			LEAR	0210.0	0211.0	III		2	30	80		
			PALE	0210.0	0211.0	III		1	25	75		
			HIRA	0210.4	0211.0	III	G	1	30	180		
			LEAR	0235.0	0240.0	III		3	30	80		
			CULG	0239.0	0241.0	III	G	3	18X	270		
			PALE	0239.0	0240.0	III		3	25	75		
			HIRA	0239.6	0240.0	III	B	3	25X	250		
			CULG	0304.0	0304.0	III	B	1	200	500		
			HIRA	0304.2	0304.4	III	B	1	170	520		
			CULG	0322.0	0322.0	III	B	2	30	260		
			LEAR	0322.0	0328.0	III		2	30	80		
			PALE	0322.0	0322.0	III		1	40	60		
			HIRA	0322.4	0322.6	III	B	1	40	230		
			LEAR	0403.0	0407.0	III		2	30	80		
			LEAR	0523.0	0548.0	III	N	1	30	80		
			CULG	0524.0	0549.0	III	N	1	20	140		
			CULG	0634.0	0636.0	III	G	1	20	100		
			LEAR	0634.0	0636.0	III		1	30	65		
			LEAR	0659.0	1043.0	CONT		1	30	66		
			CULG	0700.0	0742.0	III	N	1	20	140		
	0708	1200		IZMI	0713.8	0714.1	III	B,U	2	50	150	
	0719	1508		ONDR								
				IZMI	0719.8	0720.1	III	G	1	45X	160	
				IZMI	0725.7	0725.8	III	B	1	90	245	
				IZMI	0727.0U	1200.0D	III	N	1	45X	130	
				IZMI	0741.9	0742.2	III	G	2	45X	270X	
	0747	1510		POTS	0747 E	1510 U	I	S,C,DC	2	110U	400	
				IZMI	0759.5	0759.7	III	B	1	45	145	
				POTS	0759.5	0803.7	III	G	2	110U	300	
				POTS	0807 E	1510 U	III	N	1	110U	170U	
				IZMI	0817.8	0817.9	III	B	1	50	150	
				POTS	0817.8	0818.0	III	B	2	110U	170U	
				IZMI	0833.3	0833.5	III	B	1	50	170	
				POTS	0833.3	0833.4	III	B	2	55	170U	
				IZMI	0841.8	0842.0	III	B	2	45X	140	
				POTS	0841.8	0842.1	III	B	2	40X	170U	
				IZMI	0907.0U	1200.0D	I	N	1	190	270	
				IZMI	0910.7	0910.9	III	B	1	45	135	
				POTS	0910.7	0910.9	III	G	2	40X	150	
				IZMI	0931.4	0932.1	III	G,HARM	2	50	175	
				POTS	0931.5	0931.9	III	G	2	110U	170U	
			POTS	0937.1	0937.2	DCIM	U	2	275	450		
			IZMI	0945.7	0946.6	III	G	2	45	150		
			POTS	0945.9	1000.9	III	GG	2	40X	275		
			IZMI	0950.5	0950.7	III	G,HARM	2	55	245		
			IZMI	0959.6	1000.3	III	G	2	95	270		
			POTS	1011.2	1011.3	III	B	2	110U	170U		
			POTS	1024.7	1026.7	III	G	3	40X	275		
			IZMI	1024.8	1026.0	III	GG	2	45X	220		
			IZMI	1031.6	1031.8	III	G	2	200	270X		
			POTS	1031.7	1031.9	III	G	2	140	325		
			POTS	1052.6	1052.7	III	B	2	110U	170U		
			IZMI	1122.7	1122.8	III	B	1	80	170		
			POTS	1122.7	1132.6	III	G	2	110U	275		

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OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
19		POTS	1124.1	1128.9	DCIM		2	250	600	
		IZMI	1132.5	1133.1	III	G	1	45X	270X	
		IZMI	1137.3	1138.3	III	GG	2	45X	220	
		POTS	1137.3	1139.3	III	G	3	40X	220	
		IZMI	1137.4	1137.6	V	B	2	45X	80	
		POTS	1159.9	1200.2	III	B	2	40X	225	
		POTS	1205.1	1209.3	III	G	2	40X	275	
		POTS	1213.7	1213.9	III	B	2	40X	150	
		POTS	1221.3	1221.6	III	G	2	110U	250	
		POTS	1251.3	1251.4	III	B	2	80	170U	
		POTS	1252.2	1252.6	III	B	2	40X	150	
		POTS	1345.0	1346.7	III	G	2	110U	170U	
		POTS	1423.6	1423.8	III	B	3	50	300	
		SGMR	1436.0	1443.0	V		2	30	80	
		POTS	1436.6	1443.5	III	GG,C	3	40X	350	
		POTS	1443.7	1443.8	DCIM	U	2	400	500	
		SGMR	1603.0	1615.0	III	N	1	30	60	
		SGMR	1626.0	1631.0	V		2	30	80	
2040	2400	CULG	2042.0	2110.0	III	N	1	20	50	
2115	2400	HIRA								
		CULG	2314.0	2314.0	III	B	1	30	100	
		CULG	2329.0	2329.0	III	B	1	30	100	
		PALE	2356.0	0004.0	III		1	25	75	
20		LEAR	0104.0	0110.0	III		2	30	80	
	0000 0815	CULG	0104.0	0109.0	III	G	1	25	250	
	0000 0828	HIRA	0104.0	0104.4	III	B	1	30	220	
		CULG	0158.0	0204.0	III	G	1	20	100	
		LEAR	0158.0	0203.0	III		2	30	70	
		LEAR	0400.0	0414.0	III	N	3	30	80	
		CULG	0401.0	0408.0	III	G	3	18X	270	
		HIRA	0402.6	0405.0	III	G	3	25X	300	
		CULG	0412.0	0414.0	III	G	1	20	300	
		HIRA	0413.0	0413.2	III	B	1	50	260	
		LEAR	0416.0	0425.0	II		2	30	80	ESS 0700
		CULG	0417.0	0424.0	II	FN	2	23	60	
		CULG	0417.0	0430.0	II	SH	3	35	100	ESS 550
		HIRA	0417.0	0419.0	II	FN	1	30	50	ESS 600
		HIRA	0417.0	0422.0	II	SH	3	50	100	ESS 600
		LEAR	0422.0	0750.0	IV		1	30	80	
		CULG	0425.0	0815.0D	IV		1	50	250	
		LEAR	0554.0	0559.0	III		2	30	80	
		CULG	0555.0	0559.0	III	G	1	20	90	
		CULG	0637.0	0750.0	III	N	1	30	180	
	0655 1200	IZMI	0655.0E	1200.0D	III	N	1	45X	130U	
		IZMI	0655.0E	1200.0D	I	S,C	2	45X	270X	
		POTS	0713 E	1510 U	III	N	1	110U	170U	
	0713 1510	POTS	0713 E	1510 U	I	S,C,DC	3	110U	400	
	0717 1512	ONDR								
		IZMI	0736.7	0737.0	III	G,HARM	2	50	270X	
		POTS	0736.8	0737.0	III	B	3	50	300	
		POTS	0803	1510 U	III	N	1	40X	90U	
		IZMI	0810.0	0810.3	III	G	1	200	270X	
		POTS	0810.0	0810.5	DCIM		2	200U	350	
		LEAR	0833.0	0834.0	III		1	38	50	
		LEAR	0904.0	0957.0	III	N	2	33	60	
		POTS	0908.9	0909.1	III	B	2	40X	170U	
		POTS	0913.9	0914.1	DCIM		2	240	400	
		IZMI	0926.3	0926.8	III	G	2	45	145	
		POTS	0926.3	0933.2	III	GG	3	40X	220	
		IZMI	0931.2	0932.5	III	GG	2	45X	180	
		POTS	0939.8	0942.7	III	GG,C	2	40X	220	
		IZMI	0940.0	0942.4	III	GG	1	45X	180	
		IZMI	0951.7	0953.0	III	GG	2	90	270X	
		POTS	0951.7	0955.3	III	G,C,U	3	40X	450	
		POTS	0953.9	0955.0	DCIM		2	200U	450	
		IZMI	0954.1	0955.1	III	G	2	80	270X	
		IZMI	1048.7	1049.0	III	G	2	45X	245	
		POTS	1048.7U	1049.2	III	B	2	40X	130U	

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OBSERVATION			EVENT				FREQUENCY			Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
20			IZMI	1114.1	1118.0	I	GG,DC	2	205	265	
			IZMI	1144.2	1145.5	III	G	2	45X	160	
			POTS	1144.2	1145.6	III	G	2	40X	170U	
			POTS	1201.1	1201.3	III	G,UG	3	125	280	
			POTS	1306.4	1312.4	III	G	2	110U	300	
			POTS	1347.4	1347.6	III	G	2	40X	170U	
			POTS	1410.9	1412.7	DCIM		2	200U	550	
			POTS	1411.1	1418.4	III	GG,U	3	40X	250U	
			SGMR	1418.0	1421.0	III		1	30	55	
			POTS	1436.1	1436.2	III	B	2	110U	140	
			POTS	1440.4	1440.7	III	B	2	110U	170U	
			SGMR	1512.0	1517.0	V		3	30	80	
			SGMR	1724.0	1725.0	III		1	30	70	
			SGMR	1739.0	1740.0	III		1	30	80	
			SGMR	1918.0	1921.0	III		1	30	55	
			PALE	2034.0	2037.0	V		2	25	75	
			SGMR	2034.0	2037.0	V		2	30	80	
	2040	2400	CULG	2109.0	2109.0	III	G	1	20	50	
			PALE	2121.0	2129.0	V		2	25	75	
			CULG	2122.0	2131.0	III	G	2	18X	130	
			SGMR	2123.0	2124.0	III		1	30	60	
	2114	2400	HIRA	2124.0	2124.2	III	B	1	25X	200	
			CULG	2151.0	2156.0	III	G	1	20	40	
			CULG	2247.0	2310.0	III	N	1	18	120	
			PALE	2253.0	2309.0	III	N	2	25	55	
			LEAR	2308.0	2309.0	III		1	30	80	
			HIRA	2308.4	2309.0	III	G	1	25X	140	
21	0000	0829	HIRA								
			LEAR	0020.0	0022.0	III		2	30	80	
	0000	0815	CULG	0020.0	0023.0	III	G	1	18X	100	
			PALE	0022.0	0022.0	III		2	30	55	
	0653	1530	POTS	0653 E	1530 U	I	S,C,DC	2	110U	400	
			POTS	0653.9	0654.8	III	G	2	110U	145	
			POTS	0705	1530 U	III	N	1	110U	170U	
	0727	1202	IZMI	0807.0U	1202.0D	I	N	1	105	260	
			POTS	0823.6	0823.8	UNCLF		2	130	225	
			ONDR	0940.3	0950.1	DCIM	G	1	800X	1420	
	0715	1513	ONDR	0940.5	0949.4	DCIM		1	2000X	4375X	
			POTS	0940.6	0946.9	DCIM		2	200U	600	
			IZMI	0941.0	0943.4	III	GG	2	45X	160	
			LEAR	0941.0	0949.0	III		3	30	80	
			POTS	0941.0	0948.3	III	GG,C	3	40X	140	
			IZMI	0941.9	0944.1	V	G	2	45X	140	
			IZMI	0945.2	0947.9	III	G	2	45X	245	
			IZMI	0945.4	0948.7	CONT		2	45	140	
			IZMI	0949.3	0949.7	III	G	2	45X	125	
			POTS	0957.8	1014 U	II	SH,H	3	40X	140	
			IZMI	0958.3	1011.9	II	HARM	2	45X	125	
			POTS	0959.5	1002.1U	II	F	3	40X	50	
			IZMI	1046.8	1049.1	III	G	2	45X	90	
			POTS	1046.8	1047.2	III	B	2	40X	65	
			IZMI	1050.0U	1202.0D	III	N	1	45X	90	
			POTS	1139.6	1139.7	III	B	2	110U	170U	
			POTS	1157.6	1204.2	III	GG,C	2	40X	225	
			IZMI	1157.7	1202.0D	III	GG	2	45X	170	
			POTS	1247.1	1247.2	III	G	2	110U	350	
			ONDR	1306.0	1309.5	DCIM		1	2000X	4375X	
			POTS	1309.7	1309.8	DCIM		1	700	800X	
			POTS	1311.2	1316.1	III	G	2	75	350U	
			POTS	1424.1	1424.3	III	B	2	110U	325	
			SGMR	1530.0	1531.0	III		1	30	70	
	2040	2400	CULG								
	2112	2400	HIRA								
22	0000	0830	HIRA								
			LEAR	0101.0	0101.0	III		1	30	57	
			LEAR	0307.0	0308.0	III		1	30	61	
	0000	0815	CULG	0307.0	0307.0	III	B	1	35	110	

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OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
22		LEAR	0428.0	0429.0	III		1	30	60	
		CULG	0429.0	0429.0	III	B	1	23	50	
		CULG	0528.0	0529.0	III	G	1	40	80	
0652	1530	POTS	0652 E	1530 U	I	S	1	110U	450	
0712	1516	ONDR								
		POTS	0729.4	0729.5	III	B	2	110U	160	
0647	1200	IZMI	0729.4	0729.6	III	B	1	50	150	
		LEAR	0737.0	0745.0	III		1	30	80	
		IZMI	0737.8	0737.9	III	B	2	45X	70	
		CULG	0740.0	0746.0	III	G	1	20	100	
		IZMI	0740.4	0740.8	III	G	2	45X	170	
		POTS	0740.4	0740.6	III	B	2	40X	160	
		IZMI	0743.4	0743.5	III	B	1	45	70	
		IZMI	0745.0U	1200.0D	I	N	1	130U	270X	
		IZMI	0745.3	0745.7	III	G,RS	2	45X	95	
		POTS	0745.3	0745.6	III	G	2	40X	130	
		POTS	0752.6	0752.7	III	B	1	140	170U	
		LEAR	0821.0	0821.0	III		1	40	75	
		IZMI	0821.1	0821.4	III	G,RS	2	45	160	
		POTS	0821.1	0821.3	III	B	2	40X	170U	
		POTS	0837.2	0837.4	III	G	1	40X	170U	
		LEAR	0907.0	0916.0	III		3	30	80	
		POTS	0907.9	0916.1	III	G	3	40X	170U	
		IZMI	0908.0	0908.5	III	G	1	45X	85	
		IZMI	0914.2	0916.0	III	G	2	45X	175	
		IZMI	0914.4	0915.8	V		2	45X	95	
		POTS	0914.7	0915.7	V		3	40X	65	
		POTS	1140.6	1140.8	III	G	2	40X	150	
		POTS	1158.2	1158.5	III	B	1	40X	150	
		SGMR	1355.0	1356.0	III		1	30	80	
		POTS	1355.2	1356.5	III	G	3	40X	170U	
		POTS	1355.6	1356.3	V		3	40X	65	
		SGMR	1649.0	1650.0	III		2	30	80	
		PALE	1947.0	1947.0	III		1	35	50	
2040	2400	CULG								
2111	2400	HIRA								
23	0000 0815	CULG	0106.0	0109.0	III	G	1	20	90	
		LEAR	0108.0	0109.0	III		2	30	80	
		PALE	0108.0	0109.0	III		1	27	60	
		CULG	0323.0	0324.0	III	G	2	23	100	
		PALE	0328.0	0329.0	III		1	30	70	
0000	0831	HIRA	0328.2	0328.4	III	B	2	25X	130	
		LEAR	0554.0	0557.0	III		2	30	65	
		CULG	0555.0	0557.0	III	G	1	20	70	
		CULG	0642.0	0642.0	III	B	1	30	100	
		HIRA	0642.2	0642.4	III	B	1	50	130	
0652	1530	POTS	0652 E	1530 U	I	S	1	110U	170U	
		CULG	0657.0	0657.0	III	B	1	23	80	
		LEAR	0657.0	0657.0	III		2	30	70	
		POTS	0657.3	0657.6	III	B	2	40X	130	
0710	1518	ONDR								
		IZMI	0731.1	0737.7	III	G	1	45X	90	
		POTS	0732.9	0733.7	III	G	3	40X	170U	
0700	1200	IZMI	0732.9	0734.4	III	GG	2	45X	175	
		CULG	0733.0	0735.0	III	G	3	25	120	
		LEAR	0733.0	0804.0	III	N	3	30	80	
		HIRA	0733.2	0733.4	III	B	2	50	150	
		IZMI	0733.2	0734.2	V	G	2	45	85	
		POTS	0733.4	0734.2	V		3	40X	55	
		CULG	0737.0	0744.0	III	G	1	35	70	
		IZMI	0742.7	0743.6	III	G	1	45	95	
		POTS	0742.8	0742.9	III	B	1	110U	165	
		IZMI	1009.9	1010.3	III	G	2	45	175	
		POTS	1009.9	1017.7	III	GG	3	40X	275	
		IZMI	1010.0U	1200.0D	I	N	1	240U	270X	
		IZMI	1012.9	1013.2	III	G	2	45X	245	
		LEAR	1016.0	1018.0	III		3	30	80	
		IZMI	1016.1	1018.9	III	G	2	45X	245	

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OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start Day (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)		Upper (MHz)
23		IZMI	1016.7	1018.2	V	G	2	45X	140	
		POTS	1017.1U	1018.4	V		3	40X	55	
		POTS	1124.5	1125.0	III	B	1	40X	150	
		POTS	1300.0	1300.4	III	G	2	40X	220	
		SGMR	1310.0	1311.0	III		2	30	80	
		POTS	1310.7	1311.4	III	G	3	40X	260	
		POTS	1311.1	1311.7	V		3	40X	60	
		POTS	1402.5	1403.4	III	G	2	40X	170U	
		SGMR	1403.0	1403.0	III		1	30	45	
		SGMR	1601.0	1602.0	III		1	30	52	
		2040 2400	CULG	2104.0	2104.0	III	B	1	25	40
	2110 2400	HIRA								
24		LEAR	0028.0	0029.0	III		1	35	45	
		LEAR	0033.0	0035.0	III		2	30	70	
		PALE	0033.0	0035.0	III		2	30	65	
	0000 0815	CULG	0033.0	0036.0	III	G	1	18	80	
		CULG	0054.0	0055.0	III	G	2	20	130	
		LEAR	0054.0	0055.0	III		3	30	80	
		PALE	0054.0	0055.0	III		2	30	75	
	0000 0832	HIRA	0054.0	0054.4	III	B	3	25X	220	
		CULG	0147.0	0147.0	III	B	1	30	80	
		CULG	0151.0	0203.0	II	FN	3	18X	45	
		PALE	0151.0	0204.0	II		2	25	75	ESS 0700
		HIRA	0151.6	0203.0	II	SH	3	40	100	ESS 700
		CULG	0152.0	0211.0	II	SH	3	25	90	ESS 700
		LEAR	0152.0	0205.0	II		3	30	80	ESS 0700
		HIRA	0154.0	0159.0	II	FN	1	25X	40	ESS 700
	0656 1200	IZMI								
	0708 1519	ONDR								
	0652 1530	POTS	0808	1530 U	I	S,W	1	140	300	
		PALE	2132.0	2133.0	III		2	25	60	
		SGMR	2132.0	2133.0	III		1	34	75	
	2040 2400	CULG	2132.0	2133.0	III	G	2	23	180	
2109 2400	HIRA	2132.8	2133.0	III	B	2	30	130		
25	0000 0815	CULG								
	0000 0833	HIRA								
	0650 1200	IZMI								
	0706 1523	ONDR								
	0652 1530	POTS	0910.9	0912.0	III	G	1	110U	170U	
		POTS	1301.9	1302.0	III	B	1	110U	145	
2040 2400	CULG									
2107 2400	HIRA									
26	0000 0815	CULG	0040.0	0040.0	III	B	1	20	100	
		CULG	0459.0	0459.0	III	B	2	35	170	
	0000 0834	HIRA	0459.0	0459.2	III	B	1	40	240	
		CULG	0533.0	0533.0	III	B	1	60	160	
		HIRA	0629.8	0630.0	III	B	1	50	220	
		CULG	0630.0	0630.0	III	B	1	60	180	
	0703 1524	ONDR								
		LEAR	0817.0	0825.0	III		3	30	80	
	0652 1530	POTS	0817.8	0819.2	III	GG,C	3	40X	375	
	0650 1200	IZMI	0817.9	0818.8	III	GG	2	45X	270X	
		IZMI	0818.0	0818.4	V	G	2	45	135	
		HIRA	0818.2	0818.4	III	B	2	30	270	
		POTS	0818.2	0818.9	V		3	40X	55	
		POTS	0820.4	0825.4	III	G	3	40X	275	
		IZMI	0824.7	0824.8	III	G	2	45	245	
		IZMI	0824.7	0825.0	V	HARM	2	45	135	
		IZMI	0942.2	0942.3	III	B	1	45	140	
		POTS	0942.2	0942.5	III	G	2	40X	170U	
		POTS	0955.1	0956.1	III	G	1	110U	160	
		POTS	1135.6	1135.7	III	B	1	110U	170U	
		POTS	1154.4	1210.1	III	GG	3	40X	350	
		IZMI	1155.0	1200.0D	III	N	1	45X	150	
		POTS	1317.1	1318.0	III	G	2	40X	250	
	POTS	1334.9	1339.8	III	G	2	110U	250		

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OBSERVATION			EVENT				FREQUENCY			Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
26			SGMR	1351.0	1352.0	III		1	30	80	
			POTS	1351.2	1353.4	III	G	3	40X	270	
			SGMR	1710.0	1711.0	III		1	30	60	
			PALE	1959.0	2000.0	III		3	25	75	
			SGMR	1959.0	1959.0	III		1	30	80	
			PALE	2056.0	2056.0	III		1	25	50	
	2040	2400	CULG	2056.0	2056.0	III	B	1	30	90	
	2106	2400	HIRA								
			CULG	2240.0	2339.0	III	N	1	20	180	
			PALE	2304.0	2324.0	III	N	1	25	55	
		LEAR	2318.0	2320.0	III		1	30	58		
27			LEAR	0010.0	0011.0	III		1	30	80	
			PALE	0011.0	0029.0	III	N	2	25	75	
	0000	0815	CULG	0011.0	0029.0	III	N	1	20	160	
	0000	0835	HIRA	0021.8	0022.0	III	B	1	30	100	
			LEAR	0026.0	0028.0	III		2	30	80	
			CULG	0215.0	0216.0	III	G	1	20	40	
			CULG	0530.0	0531.0	III	G	2	18	240	
			LEAR	0530.0	0531.0	III		3	30	80	
			HIRA	0530.6	0531.0	III	B	2	25X	250	
	0700	1200	IZMI								
	0701	1525	ONDR								
	0652	1530	POTS	1200.9	1201.0	III	B	2	110U	160	
			POTS	1323.9	1325.2	III	G	2	40X	170U	
	2040	2400	CULG								
2105	2400	HIRA									
28	0000	0815	CULG								
	0000	0836	HIRA								
	0659	1528	ONDR								
	0700	1200	IZMI								
	0652	1530	POTS	1015.2	1017.9	III	G	1	110U	170U	
			SGMR	1443.0	1445.0	V		2	30	60	
			POTS	1443.5	1444.4	III	G	3	40X	170U	
			POTS	1444.1	1444.5	V		3	40X	55	
			POTS	1503.1	1503.2	III	B	1	110U	145	
	2040	2400	CULG								
2104	2400	HIRA									

Event Remarks:

B = Single burst	N = Intermittent activity in this period
C = Underlying continuum (particularly with Type I)	MOV = Moving (Type IV)
DC = Drifting chains	MWB = Meter wave burst
DP = Drifting pairs	RS = Reverse slope burst
FN = Fundamental emission (Type II)	S = Storm in the sense of intermittent but apparently connected actively
FS = Fine structures (Type IV) (includes fiber, pulsations, zebra)	SH = Secondary harmonic emission
G = Small group of bursts (<10)	STA = Stationary (Type IV)
GG = Large group of bursts (>10)	U = U-shaped burst of Type III
H = Herringbone	UE = Uncertain emission (Type II)
HARM = Harmonic	W = Weak

Frequency qualifiers:

X = Extends beyond instrument range	U = Uncertain frequency
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Remarks:

SWF = Associated short wave fade observed	ESS = Estimated shock speed in km/s (Type II)
FLA = Associated flare observed (class optional)	

Stations Reporting:

BLEN = Bleien	CULG = Culgoora	HIRA = Hiraio	IZMI = Izmiran	LEAR = Learmonth
ONDR = Ondrejov	PALE = Palehua	POTS = Potsdam	SGMR = Sagamore Hill	SVTO = San Vito

P R I N C I P A L M A G N E T I C S T O R M S

FEBRUARY 1999

Sta	Geomag		Commencement		SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges			End	
	Lat	Long	Day (UT)	Type	D (Min)	H (Gamma)	Z (Gamma)			D (Min)	H (Gamma)	Z (Gamma)	Day (UT)	Hour
KRC	16.4N	28	0326	..	..	..	..	28(7,8) 01(2,5,6,7,8)	5	9	171	56	02	07
UJJ	13.6N	28	0600	..	..	..	..		-	6	158	34	02	20
NGP	11.3N	28	0600	..	..	..	..		-	4	197	28	02	20
ABG	09.4N	28	0600	..	..	..	..	01(5,6,7,8)	5	6	135	37	02	20
HYB	07.6N	28	0549	SC	0	9	- 1	28(4,7,8) 01(5,6,8)	5	4	196	26	02	22
PND	02.0N	28	0600	..	..	..	..		-	3	193	50	02	20
ETT	00.7S	28	0548	SC	0	12	7		-	--	--	--	--	--
TRD	01.1S	28	0600	..	..	..	..		-	2	243	79	02	20

Stations:

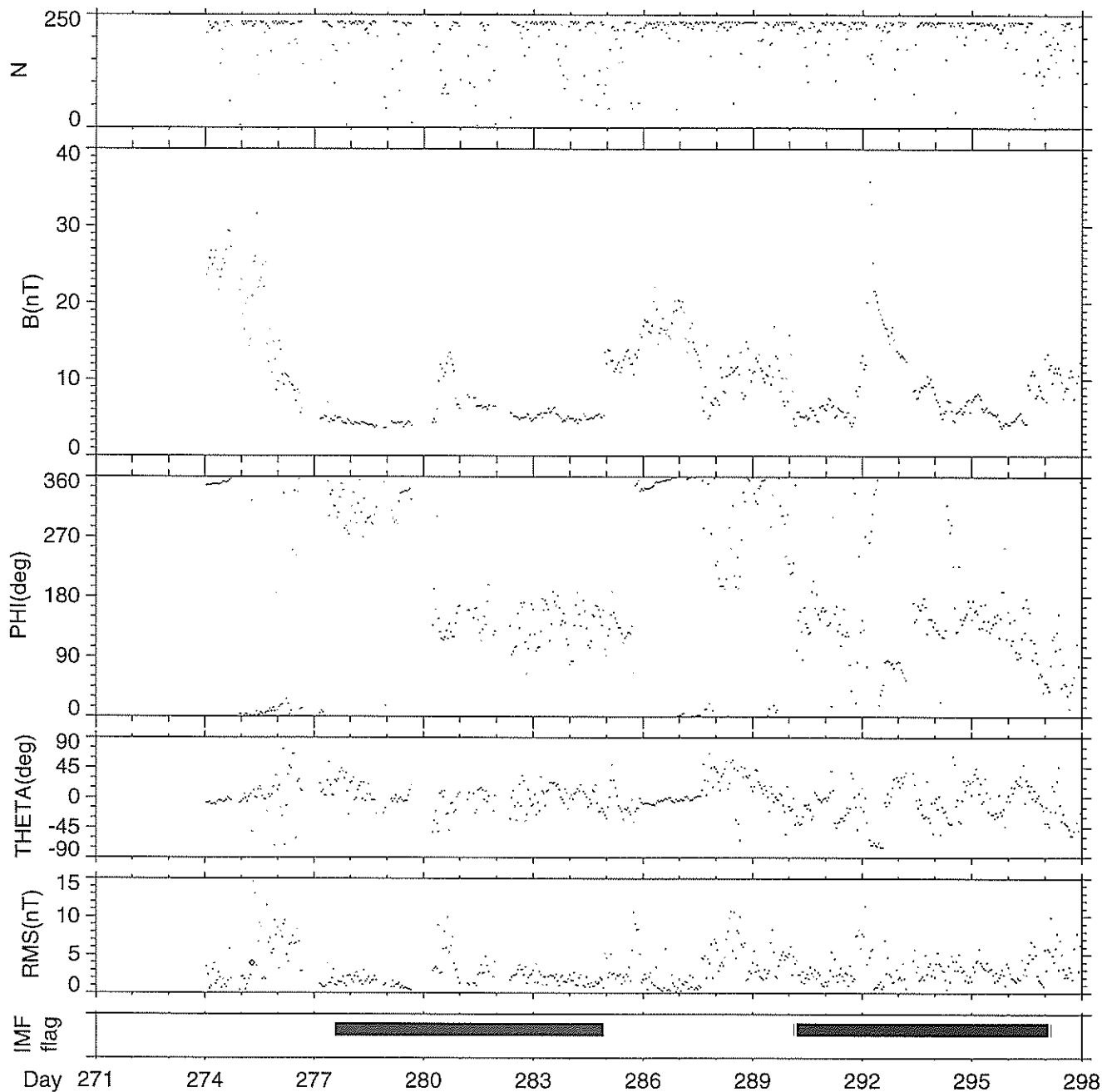
- | | | | |
|------------------------|------------------------|-------------------------|--------------------|
| ABG = ALIBAG | CZT = PORT ALFRED | HON = HONOLULU | PMG = PORT MORESBY |
| AMS = MARTIN DE VIVIES | DRV = DUMONT D'URVILLE | HYB = HYDERABAD | PND = PONDICHERRY |
| ANN = ANNAMALAINAGAR | ETT = ETAIYAPURAM | JAI = JAIPUR | SHL = SHILLONG |
| BJI = BEIJING | GNA = GNANGARA | KRC = KARACHI | SIT = SITKA |
| CAN = CANBERRA | GUA = GUAM | NGP = NAGPUR | TRD = TRIVANDRUM |
| CMO = COLLEGE | HER = HERMANUS | PAF = PORT AUX FRANCAIS | UJJ = UJJAIN |

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 274 - 298

October 1 1998 - October 25 1998



Generation Date : Thu May 27 11:35:34 1999

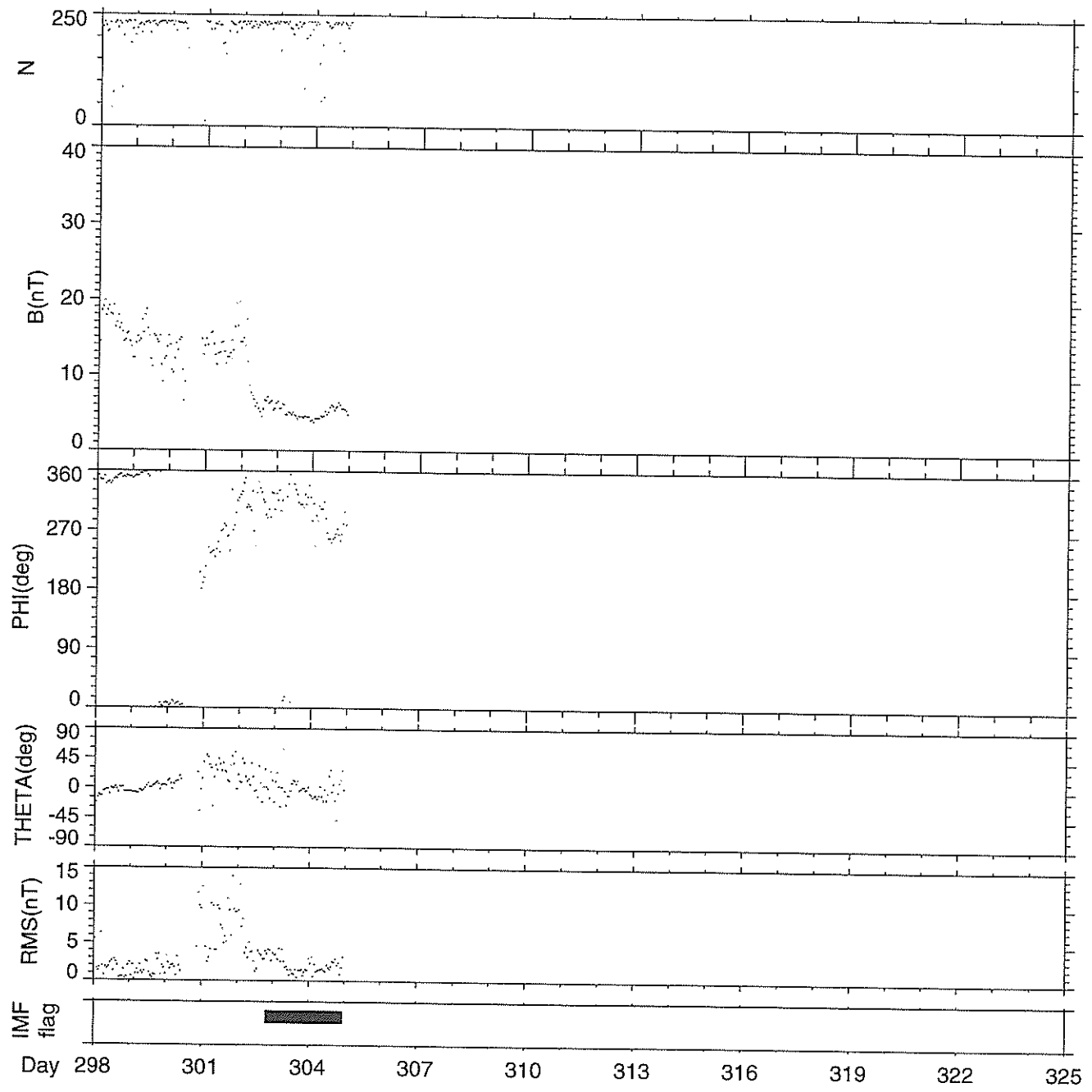
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

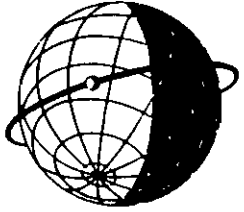
(c) DOY 298 - 304

October 25 1998 - October 31 1998



Generation Date : Thu May 27 11:31:43 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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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."