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

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# **Solar-Geophysical Data comprehensive reports**

Data for February 1989

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S O L A R - G E O P H Y S I C A L   D A T A

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H $\alpha$  SOLAR FLARES

FEBRUARY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Time	Area Measurement		Remarks		
								USAF Region						Mo	Day		(Min)	Opt
0001	VORO	01	0058	0109	0127	S24	E02	5334	02	1.2	29	SF	2	C	0109	63	0.7	DIJT
0002	VORO	01	0121	0122	0126	N24	W68	5329	01	26.9	5	SF	2	C	0122	81		D
0003		01	0146*	0157*	0237	S21	E02	5334	02	1.2	51	SN M 1.4				133	2.2	EFIJT
	VORO	01	0146	0203	0259	S22	E02	5334	02	1.2	73	1N	2	C	0203	269	2.8	EIJT
	PURP	01	0151E	0157	0159D	S21	E03	5334	02	1.3	80	SB		C	0157	160	1.7	E
	PALE	01	0205	0205	0210	S20	E01	5334	02	1.2	5	SN M 1.4	3	E		54		F
	PALE	01	0216	0216	0243	S22	E02	5334	02	1.2	27	SF	3	E		48		F
0004		01	0236I	0238	0248	S20	W35	5330	01	29.5	12	SF				62	1.2	DIT
	VORO	01	0236	0238	0256	S20	W35	5330	01	29.5	20	SF	2	C	0238	99	1.2	DIT
	PALE	01	0237	0238	0241	S19	W35	5330	01	29.5	4	SF	3	E		25		
		01	0301		0303	No Flare Patrol												
0005	LEAR	01	0502	0505	0512	N20	W73	5329	01	26.7	10	1F C 5.3	3	E		107		
0006	LEAR	01	0516	0522	0534	N20	W75	5329	01	26.6	18	SF	3	E		55		
0007	LEAR	01	0610	0610	0618	S21	W03	5334	02	1.0	8	SF	3	E		14		
0008		01	0626	0629	0712	S22	E00	5334	02	1.3	46	SF				70		EF
	LEAR	01	0626	0629	0710	S22	E01	5334	02	1.3	44	SF	3	E		70		F
	KANZ	01	0708E		0715	S22	W00	5334	02	1.3	7D	SF		C				E
0009		01	07383	07412	0830	S22	W02	5334	02	1.2	52	SN C 6.4				121	2.4	EFI
	KANZ	01	0738	0742	0848	S22	W02	5334	02	1.2	70	SF		C				
	SVTO	01	0739	0741	0813D	S22	W02	5334	02	1.2	34D	SN C 6.4	2	E		85		F
	LEAR	01	0739	0741	0816	S22	W03	5334	02	1.1	37	SF C 6.4	4	E		60		F
	ISTA	01	0739	0741	0825	S22	W02	5334	02	1.2	46	1B		V				F
	ABST	01	0741	0743	0801D	S23	W03	5334	02	1.1	20D	1N		P	0743	218	2.4	EI
0010	TACH	01	0742	0743	0754D	S23	E02	5334A	02	1.5	12D	1N	3	C	0743	199	2.1	E
0011		01	0803*	08099	0830	N18	W73	5329	01	26.9	27	1N C 7.9				101	2.4	FHK
	LEAR	01	0803	0809	0836	N17	W74	5329	01	26.8	33	1N C 7.9		E		78		K
	LEAR	01	0803	0818	0836	N17	W74	5329	01	26.8	33	1N C 7.9	3	E		199		F
	HPR	01	0805E		0835	N23	W69	5329	01	27.1	30D	1F		C	0817	100	2.4	
	KANZ	01	0805	0818	0822	N13	W72	5329	01	27.0	17	SF		C				
	SVTO	01	0812	0818	0829	N19	W76	5329	01	26.6	17	SN	2	E		78		FH
	HPR	01	0816	0818	0825	N17	W72	5329	01	27.0	9	SF		C	0818	50		
0012	YUNN	01	0833E	0833U	0837D	S21	W06	5334	01	31.9	4D	SN		P	0833	66	0.7	
0013		01	09224	09303	0948	S22	W02	5334	02	1.2	26	SF				22		F
	KANZ	01	0922	0930	0958	S22	W03	5334	02	1.1	36	SF		V				
	LEAR	01	0925	0933	0945	S22	W04	5334	02	1.1	20	SF	3	E		15		
	SVTO	01	0926	0931	0940	S22	E00	5334	02	1.4	14	SF	3	E		29		F
0014		01	0943*	0948*	1033	N22	W70	5329	01	27.1	50	SF				56		DEF
	KANZ	01	0943	1022	1045	N20	W70	5329	01	27.1	62	SF		V				
	LEAR	01	0946	1007	1025	N23	W69	5329	01	27.2	39	SF	3	E		32		
	KHAR	01	0947	0948	1004	N23	W70	5329	01	27.1	17	SF	2	V	0948			E
	SVTO	01	0959	1025	1105	N21	W71	5329	01	27.1	66	SF	3	E		80		F
	KHAR	01	1018	1021U	1027	N23	W70	5329	01	27.1	9	SF	2	V	1021			D
0015		01	0925*	1010*	1144	S21	W05	5334	02	1.0	139	1N M 3.9				222	5.0	EFIK
	HPR	01	0925	1033	1155	S22	W05	5334	02	1.0	150	1N		C	1033	450	5.0	EI
	SVTO	01	1001	1010	1148	S21	W02	5334	02	1.3	107	1N		E		176		K
	SVTO	01	1001	1034	1148	S21	W02	5334	02	1.3	107	1N M 3.9	3	E		237		F
	KANZ	01	1002	1041	1143	S22	W03	5334	02	1.2	101	1F		V				
	LEAR	01	1007	1030	1042D	S20	W06	5334	02	1.0	35D	SF M 3.9	2	E		46		F
	KHAR	01	1026U	1036	1112	S21	W04	5334	02	1.1	46U	1N	2	P	1036			EI
	CATA	01	1027E	1036	1150	S22	W03	5334	02	1.2	83D	2B	2	P	1036	478	5.1	
	RAMY	01	1131E	1131U	1150D	S22	W15	5334	01	31.3	19D	SN	2	E		50		F
	RAMY	01	1136E	1137U	1152	S23	W04	5334	02	1.2	16D	1F	1	E		119		F
0016	KANZ	01	1143	1146	1150	N23	W71	5329	01	27.1	7	SF		V				

H $\alpha$  SOLAR FLARES

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Feb 89

FEBRUARY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/USAF		CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
								Region	Class							Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
0017	KANZ	01	1220	1223	1229	N09	W42	5344	01	29.5	9	SF			V				
0018		01	12504	12542	1300	S23	W03	5334	02	1.3	10	SF					14		FH
	KANZ	01	1250	1254	1302	S23	W03	5334	02	1.3	12	SF			V				
	SVTO	01	1252	1254	1258	S22	W02	5334	02	1.4	6	SF		3	E		17		F
	RAMY	01	1254	1256	1300	S23	W03	5334	02	1.3	6	SF		4	E		10		FH
0019		01	13452	13472	1400	N21	W71	5329	01	27.2	15	SF					16		F
	HPR	01	1345	1349	1405	N20	W72	5329	01	27.2	20	SF			C	1349	20		
	KANZ	01	1347	1347	1358	N23	W70	5329	01	27.3	11	SF			V				
	RAMY	01	1347	1348	1358	N20	W71	5329	01	27.2	11	SF		4	E		13		F
0020	RAMY	01	1543	1545	1600	S22	W06	5334	02	1.2	17	SF		3	E		26		F
0021	RAMY	01	1609	1616	1629D	N22	W81	5329	01	26.5	20D	SF C	5.2	3	E		61		H
0022	RAMY	01	1629E	1629U	1934	S23	W07	5334	02	1.1	185D	SF		2	E		25		F
0023	RAMY	01	1631E	1632U	1710D	N13	W75	5329	01	27.1	39D	SF		2	E		37		
		01	1633		1710	No Flare Patrol													
		01	1726		1810	No Flare Patrol													
0024	RAMY	01	2000E	2001U	2019D	N24	W74	5329	01	27.2	19D	SF C	3.5	2	E		60		
0025	RAMY	01	2030E	2030U	2047D	S23	W07	5334	02	1.3	17D	SF		2	E		15		F
0026	RAMY	01	2056	2058	2102	N23	W75	5329	01	27.2	6	SF		2	E		15		
0027	RAMY	01	2116	2121	2135	S22	W08	5334	02	1.3	19	SF		2	E		34		F
		01	2140		2237	No Flare Patrol													
0028	LEAR	02	0432	0433	0437	N24	E41	5343	02	5.3	5	SF		4	E		18		
0029		02	0807*	0807*	0830	S23	W14	5334	02	1.2	23	SF C	3.2				29		F
	KANZ	02	0807	0807	0823	S22	W17	5334	02	1.0	16	SF			C				
	ISTA	02	0808		0832	S24	W13	5334	02	1.3	24	1F			V				F
	KANZ	02	0815	0823	0832	S23	W13	5334	02	1.3	17	SF			C				
	LEAR	02	0821	0824	0834	S22	W13	5334	02	1.3	13	SF C	3.2	4	E		29		
0030		02	08401	08422	0848	S22	W14	5334	02	1.3	8	SF C	2.5				23		
	KANZ	02	0840	0844	0848	S23	W14	5334	02	1.3	8	SF			C				
	LEAR	02	0841	0842	0849	S22	W13	5334	02	1.4	8	SF C	2.5	4	E		23		
0031	KAND	02	0845	0846	0848	S23	W13	5334A	02	1.4	3	SN			P	0846	62	0.7	ET
0032		02	09536	09596	1016	S23	W14	5334	02	1.3	23	SF C	3.0				50	0.7	EFT
	SVTO	02	0953	1007U	1020	S23	W14	5334	02	1.3	27	SF C	3.0	2	E		62		F
	KAND	02	0958	1001	1015	S23	W14	5334	02	1.3	17	SB			P	1001	62	0.7	ET
	ISTA	02	0958	1005	1019	S22	W14	5334	02	1.3	21	1F			V				E
	KANZ	02	0959	0959	1014	S23	W14	5334	02	1.3	15	SF			V				
	LEAR	02	0959	1004	1011	S22	W15	5334	02	1.3	12	SF C	3.0	3	E		25		
0033	SVTO	02	0954	1012	1020	S20	W73	5336	01	27.9	26	SF		3	E		50		
0034		02	10232	10265	1042	S24	W16	5334	02	1.2	19	1N					104	1.1	ET
	KAND	02	1023	1031	1043	S24	W17	5334	02	1.1	20	SN			P	1031	104	1.1	ET
	ISTA	02	1024	1026	1044	S24	W14	5334	02	1.3	20	2N			V				E
	KANZ	02	1025	1029	1038	S23	W18	5334	02	1.0	13	SF			V				
0035		02	11231	11255	1151	S21	W16	5334	02	1.2	28	1N C	7.5				140	2.2	EFT
	KAND	02	1123	1125	1155	S21	W15	5334	02	1.3	32	1B			P	1125	208	2.2	ET
	SVTO	02	1124	1126U	1153	S22	W16	5334	02	1.2	29	1N C	7.5	2	E		105		F
	KANZ	02	1124	1128	1154	S21	W17	5334	02	1.2	30	1N			V				
	CATA	02	1130E	1130	1142	S21	W17	5334	02	1.2	12D	1B		1	P	1130	197	2.2	
	RAMY	02	1131E	1131U	1150D	S22	W15	5334	02	1.3	19D	SN C	7.5	2	E		50		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area Measurement			Remarks		
								USAF Region					Mo	Day	(Min)		Opt	Xray
0036	02	1239	1242	1254	S23 W16	5334	02	1.3	15	SF					25			
	KANZ	02	1239	1242	1251	S24 W16	5334	02	1.3	12	SF		V					
	SVTO	02	1239	1242	1258	S22 W17	5334	02	1.2	19	SF	3	E		25			
0037	SVTO	02	1304	1304	1307	N20 W88	5329	01	26.9	3	SF	3	E		24			
0038	02	1319	1320	1332	S22 W16	5334	02	1.3	13	SF					12		F	
	RAMY	02	1319	1320	1331	S21 W17	5334	02	1.2	12	SF	3	E		10		F	
	KANZ	02	1319	1322	1330	S22 W15	5334	02	1.4	11	SF		V					
	SVTO	02	1320	1323	1335	S22 W17	5334	02	1.2	15	SF	3	E		15		F	
0039	KANZ	02	1431	1434	1441	S24 W16	5334A	02	1.4	10	SF		V					
0040	02	1436*	1437*	1458	S22 W18	5334	02	1.2	22	SF					19		F	
	RAMY	02	1436	1437	1443	S22 W17	5334	02	1.3	7	SF	3	E		10		F	
	KANZ	02	1441	1449	1504	S22 W18	5334	02	1.2	23	SF		V					
	HOLL	02	1446	1449	1506D	S21 W19	5334	02	1.1	20D	SF	2	E		37			
	SVTO	02	1446	1450	1505	S22 W18	5334	02	1.2	19	SF	3	E		19		F	
	RAMY	02	1450	1452	1500	S22 W18	5334	02	1.2	10	SF	3	E		10			
0041	02	1622*	1639	1702	S22 W20	5334	02	1.1	40	SF					26			
	HOLL	02	1622	1642	1656	S22 W19	5334	02	1.2	34	SF	3	E		32			
	RAMY	02	1633	1639	1708	S21 W21	5334	02	1.1	35	SF	2	E		21			
0042	RAMY	02	1726	1727	1756D	S22 W19	5334	02	1.3	30D	1N M 1.0	2	E		119		EF	
0043	02	2116	2125	2143	S20 W23	5334	02	1.1	27	SF	3	E			11			
	HOLL	02	2116	2125	2143	S20 W23	5334	02	1.1	27	SF	3	E		11			
	RAMY	02	2121	2121	2133	S21 W23	5334	02	1.1	12	SF	3	E		11			
0044	HOLL	02	2305	2310	2312	S16 W65	5330	01	29.1	7	SF	3	E		10			
0045	HOLL	02	2326	2329	2333	N36 W39	5348	01	30.9	7	SF	3	E		12			
0046	VORO	03	0100	0103	0109	S21 W87	5336	01	27.5	9	SF	2	C	0103	18		DJT	
0047	VORO	03	0213U	0220	0259D	S21 W38	5334	01	31.2	46U	1F	2	C	0220	161	2.1	EIJT	
0048	ABST	03	0642	0646	0709	N30 E85	5351	02	10.0	27	1F		C	0646	79		D	
0049	03	0759*	0812	0830	N23 E03	5349	02	3.6	31	1N		V			42	0.5	EF	
	ISTA	03	0759	0812	0830	N23 E03	5349	02	3.6	31	1N		V				F	
	KAND	03	0810	0812	0825	N24 W01	5349	02	3.3	15	SN		P	0812	42	0.5	E	
	KANZ	03	0812	0815	0824	N22 W01	5349	02	3.3	12	SF		C					
0050	03	0908	0915	0920	N35 W50	5348	01	30.5	12	SF		C	0915	20	0.3		D	
	HPR	03	0908	0915	0920	N35 W50	5348	01	30.5	12	SF		C	0915	20	0.3		D
	KANZ	03	0910	0914	0917	N38 W46	5348	01	30.8	7	SF		C					
	SVTO	03	0911	0915	0920	N37 W45	5348	01	30.8	9	SF	3	E		27			
	CATA	03	0913	0915	0924	N37 W46	5348	01	30.8	11	SB	2	C	0915	45	1.0		
	KAND	03	0915	0915	0918	N39 W45	5348	01	30.8	3	SN		P	0915	62	1.3		D
0051	KANZ	03	1302	1306	1326	S21 W32	5334	02	1.1	24	SF		V					
0052	HPR	03	1320	1326	1345	S30 E90	5353	02	10.6	25	SF		C	1326	20			
0053	03	1408	1416	1424	S20 W72	5330	01	29.2	16	SF M 3.0					12			
	SVTO	03	1408	1416	1424	S20 W72	5330	01	29.2	16	SF M 3.0	3	E		12			
	KANZ	03	1410	1418	1426	S19 W72	5330	01	29.2	16	SF		V					
0054	HOLL	03	1540	1545	1603	S18 W73	5330	01	29.2	23	SF	3	E		21			
0055	RAMY	03	1920E	1924U	1933D	S18 W76	5330	01	29.1	13D	SF	2	E		12			
0056	HOLL	03	2012	2013	2017	N29 E68	5351	02	9.2	5	SF	3	E		35			
0057	LEAR	04	0211	0216	0314	S21 W40	5334	02	1.0	63	SF C 4.4	3	E		81			
0058	ABST	04	0612	0614	0619	N34 E90	5354	02	11.4	7	1N		C	0614	87		AD	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt	Xray	Obs See	Type	Area Measurement			Remarks	
																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0059		04	07522	07526	0802	S28	W63	5346	01	30.5	10	SF						12		
	LEAR	04	0752	0752	0758	S27	W63	5346	01	30.5	6	SF		3	E			12		
	KANZ	04	0754	0758	0805	S29	W63	5346	01	30.5	11	SF			C					
0060		04	08054	08103	0828	S24	W44	5334	01	31.9	23	SN						53	1.0	D
	KANZ	04	0805	0813	0828	S24	W44	5334	01	31.9	23	SF			C					
	CATA	04	0806	0810	0810D	S24	W44	5334	01	31.9	4D	SB		2	P	0810		56	0.8	
	ABST	04	0806	0813	0831	S25	W45	5334	01	31.8	25	SN			C	0813		87	1.3	D
	LEAR	04	0809	0810	0826	S23	W43	5334	02	1.0	17	SF		3	E			15		
0061	ISTA	04	0810E		0818	N22	W13	5349	02	3.3	8D	1F			V					E
0062		04	08133	08201	0824	S28	W63	5346	01	30.5	11	SF						25		
	KANZ	04	0813	0820	0824	S29	W63	5346	01	30.5	11	SF			C					
	LEAR	04	0816	0821	0823	S27	W63	5346	01	30.5	7	SF		3	E			25		
0063	KANZ	04	0936	0940	0946	S18	E35	5339A	02	7.1	10	SF			V					
0064		04	13411	13441	1346	N28	E79	5354	02	10.7	5	SF						22		Y
	KANZ	04	1341	1344	1347	N28	E76	5354	02	10.5	6	SF			V					
	RAMY	04	1342	1345	1346	N29	E82	5354	02	11.0	4	SF		3	E			22		Y
0065		04	14512	14512	1508	N30	E56	5351	02	9.0	17	SF						32		F
	RAMY	04	1451	1451	1509	N30	E56	5351	02	9.0	18	SF		3	E			39		F
	HOLL	04	1451E	1452	1506	N30	E55	5351	02	8.9	15D	SF		2	E			26		
	KANZ	04	1453	1453	1508	N31	E56	5351	02	9.0	15	SF			V					
0066	KANZ	04	1453	1456	1505	N22	W19	5349	02	3.1	12	SF			V					
0067		04	15051	15051	1515	S22	W43	5334	02	1.3	10	SF						10		
	KANZ	04	1505	1505	1519D	S22	W43	5334	02	1.3	14D	SF			V					
	RAMY	04	1506	1506	1515	S21	W43	5334	02	1.3	9	SF		3	E			10		
0068	HOLL	04	1707	1708	1711	S24	E15	5339	02	5.9	4	SF		3	E			11		
0069	HOLL	04	1804	1817	1832	S21	W47	5334	02	1.1	28	SF		3	E			18		
0070	HOLL	04	1825	1826	1829	N20	E54	5347	02	8.9	4	SF		3	E			21		
0071		04	19061	19061	1924	N21	E89		02	11.6	18	SF						15		
	HOLL	04	1906	1906	1926	N21	E90		02	11.7	20	SF		3	E			11		
	RAMY	04	1907	1907	1923	N21	E88		02	11.5	16	SF		4	E			19		
0072		04	20137	20211	2036	S22	W47	5334	02	1.2	23	SF						18		
	HOLL	04	2013	2022	2037	S21	W46	5334	02	1.3	24	SF		3	E			25		
	RAMY	04	2020	2021	2034	S22	W48	5334	02	1.1	14	SF		4	E			11		
0073	RAMY	04	2109	2124	2148	S22	W50	5334	02	1.0	39	SF		3	E			33		F
0074	HOLL	04	2301	2302	2317	N27	E81	5354	02	11.3	16	SF	C 3.9	3	E			15		
0075	LEAR	05	0135	0137	0142	N30	E81	5354	02	11.4	7	SF		3	E			22		
0076	LEAR	05	0416	0418	0429	N26	E69	5354	02	10.5	13	SF		3	E			61		
0077		05	04501	0501	0511	N30	E82	5354	02	11.6	21	1N	C 9.8					92		FH
	MITK	05	0450	0501	0514	N31	E85	5354	02	11.9	24	1N			C	0501		90		H
	LEAR	05	0451	0501	0508	N30	E78	5354	02	11.3	17	SF	C 9.8	3	E			95		F
0078		05	0732*	0740*	0816	N29	E75	5354	02	11.2	44	SF	C 4.2					57		D
	ABST	05	0732	0740	0820	N29	E75	5354	02	11.2	48	1F			C	0740		96		D
	LEAR	05	0806	0806	0810	N29	E75	5354	02	11.2	4	SF	C 4.2	3	E			18		
	KANZ	05	0806	0806	0817	N29	E76	5354	02	11.3	11	SF			C					
0079	KANZ	05	0853	0857	0904	N28	E74	5354	02	11.1	11	SF			C					
0080	SVTO	05	0943	0945	0952	N32	E79	5354	02	11.6	9	SF		3	E			31		F



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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	Time (UT)	Area Measurement		Remarks	
																	Apparent (10-6 Disk)	Corr (Sq Deg)		
0081	05	1036*	1109*	1204	N27	E63	5354	02	10.3	88	1N						184		F	
	SVTO	05	1036	1118	1208	N29	E62	5354	02	10.3	92	1F		3	E		142		F	
	KANZ	05	1046	1109	1201	N26	E63	5354	02	10.3	75	1F			V					
	CATA	05	1121E	1121	1136D	N26	E64	5354	02	10.4	15D	2B		1	P	1121	225			
0082	05	1242	1246	1254	N24	E68		02	10.8	12	SF						20			
	RAMY	05	1211E	1239U	1303D	N24	E65		02	10.5	52D	SF		2	E		20			
	KANZ	05	1242	1246	1254	N23	E70		02	10.9	12	SF			V					
0083	KANZ	05	1322	1322	1331	N29	E73	5354	02	11.3	9	SF			V					
0084	KANZ	05	1341	1345	1356	N31	E79	5354	02	11.8	15	SF			V					
0085	05	1531E	1533	1540	N28	E66	5354	02	10.8	9D	SF						34		F	
	HOLL	05	1531E	1533	1536	N28	E72	5354	02	11.3	5D	SF		2	E		34		F	
	RAMY	05	1536E	1540U	1544	N29	E60	5354	02	10.3	8D	SF		2	E		33			
0086	RAMY	05	1603	1604	1613D	N27	E57	5354	02	10.1	10D	SF		2	E		22			
		05	1728		1738	No Flare Patrol														
0087	RAMY	05	1802E	1805U	1823D	N29	E70	5354	02	11.2	21D	SF C 3.4		2	E		16			
0088	RAMY	05	1828	1831	1842	N20	E39	5347	02	8.7	14	SF		3	E		39		F	
0089	RAMY	05	1840	1902	2002D	N29	E68	5354	02	11.1	82D	1N		2	E		138		F	
0090	05	21122	2113*	2140	N28	E68	5354	02	11.2	28	SF C 3.6						41			
	RAMY	05	2112	2113	2128D	N29	E68	5354	02	11.2	16D	SF C 3.6		2	E		18			
	PALE	05	2114	2128	2140	N28	E68	5354	02	11.2	26	SF C 3.6		3	E		55			
	HOLL	05	2123E	2127U	2135D	N28	E69	5354	02	11.3	12D	SF C 3.6		2	E		51			
0091	HOLL	05	2310	2311	2328	N27	E58	5354	02	10.5	18	SF		3	E		17			
0092	05	23291	2331	2348	N28	E64	5354	02	11.0	19	SN C 8.6						60			
	HOLL	05	2329	2331	2354D	N27	E64	5354	02	11.0	25D	SN C 8.6		2	E		77			
	LEAR	05	2330	2331	2348	N29	E64	5354	02	11.0	18	SF C 8.6		3	E		44			
0093	PALE	06	0004	0006	0012	N27	E63	5354	02	10.9	8	SF		3	E		40			
0094	LEAR	06	0026	0028	0121	N28	E62	5354	02	10.9	55	SF		3	E		39		F	
0095	VORO	06	0032	0036	0046	N35	E89		02	13.1	14	1N		2	C	0036	81		DHIJT	
0096	VORO	06	0128	0131	0141	S21	W65	5334	02	1.1	13	SF		2	C	0131	63		D	
0097	VORO	06	0144	0151	0159	N31	E70	5354	02	11.6	15	SF		2	C	0151	54		EIJT	
0098	06	02122	02153	0236	N30	E67	5354	02	11.4	24	1N M 1.1						100		DEFIJT	
	PALE	06	0212	0216	0244	N27	E63	5354	02	11.0	32	SF M 1.1		3	E		68		F	
	LEAR	06	0213	0215	0233	N29	E64	5354	02	11.1	20	SN M 1.1		3	E		99			
	VORO	06	0213	0216	0235	N31	E68	5354	02	11.4	22	1N		2	C	0216	108		DIJT	
	YUNN	06	0214E	0218U	0220D	N29	E63	5354	02	11.0	6D	1N			P	0218	115			
	MITK	06	0214	0218	0231	N34	E75	5354	02	12.1	17	1N			C	0218	110		E	
0099	PALE	06	0255	0256	0313	N28	E66	5354	02	11.3	18	SF		3	E		22		F	
0100	06	0534	05352	0600	N30	E64	5354	02	11.3	26	1N C 8.0						94		D	
	LEAR	06	0534	0535	0541	N30	E63	5354	02	11.2	7	SN C 8.0		3	E		74			
	ABST	06	0534	0537	0619	N31	E65	5354	02	11.4	45	1N			C	0537	114		D	
0101	ABST	06	0619	0621	0628	N36	E85		02	13.1	9	1F			C	0621	105		D	
0102	ABST	06	0638	0640	0650	N31	E61	5354	02	11.1	12	SF			C	0640	87	2.0	D	
0103	06	08041	0806	0812	N33	E63	5354	02	11.3	8	1N C 6.1						95		D	
	SVTO	06	0804E	0805U	0819D	N35	E65	5354	02	11.5	15D	1N C 6.1		2	E		148			
	ABST	06	0804	0806	0814	N35	E65	5354	02	11.5	10	1N			C	0806	114		D	
	LEAR	06	0805	0806	0811	N30	E59	5354	02	11.0	6	SF C 6.1		3	E		24			

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area Measurement			Remarks		
								USAF Region					Mo	Day	Time (UT)		Apparent (10-6 Disk)	Corr (Sq Deg)
0104		06	0919	09211	0937	N30	E59	5354	02	11.0	18	SF M 1.2			60		F	
	KANZ	06	0918E	0921	0940	N28	E57	5354	02	10.8	22D	SF		C				
	LEAR	06	0919	0922	0934	N30	E57	5354	02	10.9	15	SF M 1.2	3	E	24			
	SVTO	06	0928E	0928U	1036D	N33	E63	5354	02	11.4	68D	SN M 1.2	2	E	95		F	
0105	KANZ	06	1107	1107	1114	N28	E56	5354	02	10.8	7	SF		V				
0106	KANZ	06	1339	1339	1343	N28	E57	5354	02	11.0	4	SF		V				
0107	KANZ	06	1436	1436	1442	N29	E55	5354	02	10.9	6	SF		V				
0108	RAMY	06	1616	1619	1623	N29	E60	5354	02	11.4	7	SF	3	E	64			
0109		06	17461	17481	1758	S20	W73	5334	02	1.1	12	SF			32		F	
	RAMY	06	1746	1749	1758	S21	W73	5334	02	1.1	12	SF	3	E	37		F	
	PALE	06	1747	1748	1759	S19	W73	5334	02	1.2	12	SF	3	E	28		F	
0110	PALE	06	1801	1802	1806	N30	E55	5354	02	11.1	5	SF	3	E	22			
0111		06	1917	1918	1954	N30	E55	5354	02	11.1	37	SN M 1.4			78		EF	
	PALE	06	1917	1918	1948	N29	E55	5354	02	11.1	31	SN M 1.4	3	E	75		FE	
	RAMY	06	1917	1918	1959	N30	E55	5354	02	11.1	42	SF M 1.4	3	E	80		FE	
0112	RAMY	06	2003E	2004U	2010D	N31	E48	5354	02	10.6	7D	SF	3	E	15		F	
0113	RAMY	06	2035E	2124U	2131D	N30	E55	5354	02	11.2	56D	SF C 9.6	3	E	64		F	
0114	RAMY	06	2050E	2052U	2104D	N21	E66	5355	02	11.9	14D	SF C 5.9	3	E	14		F	
		06	2108		2113	No Flare Patrol												
		06	2132		2211	No Flare Patrol												
		06	2218		2301	No Flare Patrol												
0115	VORO	07	0053	0054	0059	N30	E50	5354	02	11.0	6	SF	2	C	0054	90	1.9	EITZ
0116		07	01301	0133	0142	N30	E50	5354	02	11.0	12	SN C 7.0			99		2.2	DFITZ
	VORO	07	0130	0133	0140	N30	E50	5354	02	11.0	10	SN	2	C	0133	108	2.1	DITZ
	LEAR	07	0131	0133	0143	N30	E51	5354	02	11.1	12	SF C 7.0	2	E	79			F
	MITK	07	0135E		0142	N31	E48	5354	02	10.8	7D	1N		C	0135	110	2.3	
0117		07	02072	02125	0222	N31	E56	5354	02	11.5	15	1N			186		5.0	EITZ
	VORO	07	0207	0212	0221D	N30	E55	5354	02	11.4	14D	1F	2	C	0212	233	5.0	EITZ
	MITK	07	0209	0217	0222	N32	E56	5354	02	11.5	13	1N		C	0217	140		E
0118		07	0616	06204	0624	N30	E44	5354	02	10.7	8	1N			122		2.1	DI
	MITK	07	0616	0620	0623	N30	E43	5354	02	10.6	7	SN		C	0620			
	ABST	07	0622E	0624	0626	N29	E45	5354	02	10.8	4D	1F		P	0624	122	2.1	DI
0119	ABST	07	0651	0653	0706	N29	E54	5354	02	11.5	15	1N		C	0653	175	3.6	EI
0120		07	0733*	0734*	0810	N31	E51	5354	02	11.3	37	SF C 2.9			65		1.9	DEFIK
	SVTO	07	0733	0734	0835	N32	E50	5354	02	11.3	62	SF		E	41			K
	SVTO	07	0733	0747	0835	N32	E50	5354	02	11.3	62	SF C 2.9	3	E	26			F
	KANZ	07	0745	0745	0749	N28	E50	5354	02	11.2	4	SF		C				
	ABST	07	0746E	0747	0750	N29	E51	5354	02	11.3	4D	SN		P	0747	87	1.7	DI
	ABST	07	0753	0756	0758D	N32	E51	5354	02	11.4	5D	1F		C	0756	105	2.1	EI
	KANZ	07	0753	0756	0801	N33	E53	5354	02	11.5	8	SF		C				
0121		07	09174	09178	0929	N30	E47	5354	02	11.1	12	SF C 3.0			34		0.7	EF
	KANZ	07	0917	0917	0921	N28	E46	5354	02	11.0	4	SF		V				
	HTPR	07	0917	0918	0926	N31	E45	5354	02	10.9	9	SN		C	0918	50	0.7	E
	SVTO	07	0917	0922	0932	N31	E45	5354	02	10.9	15	SF C 3.0	3	E	17			F
	KANZ	07	0921	0925	0937	N30	E51	5354	02	11.4	16	SF		V				
0122	SVTO	07	1122	1126	1138	N33	E51	5354	02	11.5	16	SF	3	E	10			F
0123		07	1301	1303*	1341	N31	E47	5354	02	11.2	40	SF			12			FK
	SVTO	07	1301	1303	1341	N31	E47	5354	02	11.2	40	SF		E	14			K
	SVTO	07	1301	1328	1341	N31	E47	5354	02	11.2	40	SF	3	E	9			F

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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 Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0124	KANZ	07 1352	1356	1403	N37	E51	5354	02	11.7	11	SF		V				
0125	SVTO	07 1355	1357	1401	S25	W88	5334	01	31.8	6	SF	3	E		25		
0126		07 1441	1444	1452	N29	E42	5354	02	10.9	11	SN C 9.0				58	1.1	E
	KANZ	07 1441	1444	1452	N29	E40	5354	02	10.7	11	SN		V				
	HTPR	07 1441	1445	1452	N30	E44	5354	02	11.1	11	SN		C	1445	80	1.1	E
	RAMY	07 1443E	1444U	1458D	N29	E41	5354	02	10.8	15D	SF C 9.0	1	E		35		
0127	KANZ	07 1508	1508	1512	N28	E39	5354	02	10.7	4	SF		V				
0128	RAMY	07 1638	1640	1657	N31	E45	5354	02	11.2	19	1B M 2.1	3	E		138		F
0129	RAMY	07 1838	1849	1924D	N20	E61	5355	02	12.4	46D	SF		E		33		F
		07 1933		1959	No Flare Patrol												
		07 2158		2209	No Flare Patrol												
		07 2246		2252	No Flare Patrol												
		07 2323		2335	No Flare Patrol												
		07 2340		2400	No Flare Patrol												
		08 0000		0037	No Flare Patrol												
		08 0136		0207	No Flare Patrol												
		08 0211		0213	No Flare Patrol												
		08 0232		0258	No Flare Patrol												
		08 0315		0339	No Flare Patrol												
		08 0406		0412	No Flare Patrol												
0130	YUNN	08 0415	0417	0424	N32	E38	5354	02	11.2	9	1F		C		132	2.3	
		08 0603		0638	No Flare Patrol												
0131	LEAR	08 0608	0609	0618	N36	E45	5354	02	11.9	10	SF C 3.5	3	E		34		F
0132		08 0820	0826	0835	N34	E41	5354	02	11.6	15	SN				60	1.4	DE
	HTPR	08 0820	0826	0835	N36	E43	5354	02	11.8	15	SN		C	0826	70	0.9	E
	ABST	08 0822	0826	0834	N37	E45	5354	02	12.0	12	SN		C	0826	87	1.9	D
	SVTO	08 0824	0826	0836	N29	E34	5354	02	11.0	12	SF	3	E		24		
	KANZ	08 0826	0826	0830D	N34	E42	5354	02	11.7	4D	SF		V				
0133	ABST	08 0848	0850	0856	N24	E59	5355	02	12.9	8	SF		C	0850	87	2.0	D
0134	HTPR	08 0933	0935	0956	N24	E58	5355	02	12.9	23	SF		C	0935	60	1.2	E
0135		08 0935	0939*	0957	N34	E41	5354	02	11.7	22	1B M 1.1				122	1.7	EFK
	LEAR	08 0935	0939	1005	N36	E42	5354	02	11.8	30	1B M 1.1		E		182		K
	LEAR	08 0935	0948	1005	N36	E42	5354	02	11.8	30	1B M 1.1	3	E		127		F
	HTPR	08 0937	0949	0959	N36	E42	5354	02	11.8	22	1N		C	0949	200	2.6	E
	KAND	08 0938E		0941	N35	E42	5354	02	11.8	3D	SB		P	0938	42	0.8	E
	KAND	08 0944	0946	0948	N35	E42	5354	02	11.8	4	SB		P	0946	83	1.6	E
	SVTO	08 0946E		1002	N29	E34	5354	02	11.1	16D	SF	1	E		95		
0136		08 0957	1029	1038	N22	E54	5355	02	12.6	41	SF				28		
	SVTO	08 0957	1029	1045	N20	E51	5355	02	12.3	48	SF		E		28		
	KANZ	08 1009E		1031	N23	E56	5355	02	12.7	22D	SF		V				
0137		08 1020	1023	1030	N16	W02	5347	02	8.3	10	SF				33	0.4	E
	HTPR	08 1020	1023	1032	N17	W02	5347	02	8.3	12	SF		C	1023	30	0.3	
	KAND	08 1021	1022	1028	N17	W01	5347	02	8.3	7	SN		P	1022	42	0.5	E
	SVTO	08 1021	1022	1032	N16	W03	5347	02	8.2	11	SF	2	E		28		
	KANZ	08 1023	1023	1028	N15	W01	5347	02	8.3	5	SF		V				
0138		08 1055	1056	1103	N36	E42	5354	02	11.8	8	SN				80	1.1	E
	HTPR	08 1055	1056	1105	N36	E43	5354	02	11.9	10	SN		C	1056	80	1.1	E
	KANZ	08 1057	1057	1101	N35	E42	5354	02	11.8	4	SF		V				

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											Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0139		08 10573	1100*	1141	N23 E56	5355	02 12.8	44	1N M 1.9			162	3.5	EFI	
	KANZ	08 1057	1111	1139	N21 E56	5355	02 12.7	42	1N	V				EF	
	SVTO	08 1059	1110	1154	N24 E56	5355	02 12.8	55	1N M 1.9	3	E	124		F	
	HTPR	08 1100	1100	1140	N23 E56	5355	02 12.8	40	1B	C	1111	160	2.7	EI	
	KAND	08 1100	1105	1130	N23 E55	5355	02 12.7	30	SN	P	1105	83	1.8	E	
	CATA	08 1117E	1117	1135D	N23 E55	5355	02 12.7	18D	2B	2	P	1117	281	6.0	
0140		08 11212	11252	1134	N15 W06	5347	02 8.0	13	SF			20	0.2	E	
	HTPR	08 1121	1125	1136	N15 W08	5347	02 7.9	15	SF	C	1125	20	0.2	E	
	KANZ	08 1123	1127	1131	N15 W05	5347	02 8.1	8	SF	V					
0141	SVTO	08 1125	1133	1142	N29 E33	5354	02 11.1	17	SF	3	E	17			
0142		08 1241*	12498	1301	N16 W06	5347	02 8.1	20	SN			56	0.6	E	
	HTPR	08 1241	1257	1307	N17 W09	5347	02 7.8	26	SN	C	1257	70	0.7	E	
	KANZ	08 1249	1249	1257	N15 W03	5347	02 8.3	8	SF	V					
	KAND	08 1255	1257	1301	N16 W05	5347	02 8.1	6	SB	P	1257	42	0.5	E	
	KANZ	08 1257	1257	1300	N15 W05	5347	02 8.2	3	SN	V					
0143		08 14375	14421	1447	N16 W08	5347	02 8.0	10	SF			38	0.6		
	SVTO	08 1437	1443	1448	N15 W08	5347	02 8.0	11	SF	2	E	17			
	HTPR	08 1440	1442	1447	N17 W10	5347	02 7.8	7	SN	C	1442	60	0.6		
	KANZ	08 1442	1442	1445	N15 W07	5347	02 8.1	3	SF	V					
0144		08 1449*	15105	1523	N36 E38	5354	02 11.7	34	1N M 1.4			166	2.6	EF	
	SVTO	08 1449	1511	1521D	N37 E37	5354	02 11.6	32D	1N M 1.4	2	E	132		F	
	HTPR	08 1459	1515	1525	N36 E40	5354	02 11.8	26	1N	C	1515	200	2.6	E	
	KANZ	08 1503	1510	1521	N35 E38	5354	02 11.7	18	SN	V					
0145	SVTO	08 1505	1506	1516	N25 E51	5355	02 12.6	11	SF C 6.8	2	E	17			
		08 1606		1644	No Flare Patrol										
0146	HOLL	08 1706	1709	1744	N30 E20	5354	02 10.3	38	SF C 6.2	1	E	19		F	
		08 1748		1855	No Flare Patrol										
0147		08 1900	2007*	2233D	N30 E27	5354	02 10.9	213D	2B M 9.8			411		FKT	
	PALE	08 1900	2021	2233D	N30 E27	5354	02 10.9	213D	2N	3	E	435		FT	
	RAMY	08 1953E	2007	2022D	N30 E27	5354	02 10.9	29D	2B M 9.8		E	361		K	
	RAMY	08 1953E	2023	2036D	N30 E27	5354	02 10.9	43D	2B M 9.8	2	E	436		F	
		08 1923		1929	No Flare Patrol										
		08 1933		1940	No Flare Patrol										
		08 2131		2159	No Flare Patrol										
		08 2222		2236	No Flare Patrol										
0148	YUNN	09 0130	0132	0134	N37 E33	5354	02 11.7	4	SF	C		16	0.3		
0149		09 0235	0235	0239	N22 E47	5355	02 12.7	4	SF C 6.2			28	0.6		
	YUNN	09 0234E	0234U	0238	N22 E47	5355	02 12.7	4D	SF	P	0234	33	0.6		
	LEAR	09 0235	0235	0240	N22 E47	5355	02 12.7	5	SF C 6.2	3	E	23			
0150	ISTA	09 0747	0748	0800	N30 E37	5354	02 12.2	13	1B	V				E	
0151		09 07591	08021	0814	N23 E47	5355	02 12.9	15	SF			69	1.1	E	
	KANZ	09 0759	0802	0811	N22 E43	5355	02 12.6	12	SF	C					
	ISTA	09 0800		0815	N25 E46	5355	02 12.9	15	1N	V				E	
	ABST	09 0800	0802	0820	N23 E43	5355	02 12.6	20	1N	C	0802	131	2.1	E	
	YUNN	09 0800	0803	0809	N26 E53	5355	02 13.4	9	SF	C		25	0.5		
	HTPR	09 0800	0803	0815	N20 E50	5355	02 13.1	15	SF	C	0803	50	0.8	E	
0152		09 08241	08271	0836	N16 W14	5347	02 8.3	12	1N			156	1.8	EFK	
	ISTA	09 0824		0936D	N16 W15	5347	02 8.2	72D	1B	V				FK	
	YUNN	09 0824	0827	0836	N17 W13	5347	02 8.4	12	SF	C		49	0.6		
	KANZ	09 0824	0828	0836	N16 W14	5347	02 8.3	12	SF	C					
	ABST	09 0825	0828	0903D	N16 W15	5347	02 8.2	38D	1F	P	0828	262	3.0	E	

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Grp #	Sta	Start Day	Max (UT)	End (UT)	Lat	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt	Xray	Obs See	Type	Area Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0153	09	09242	0930	0934	N22 E45	5355	02	12.8	10	SN				52		E	
	SVTO	09 0924	0928U	0928D	N23 E44	5355	02	12.8	4D	SF	1	E		52			
	KANZ	09 0926	0930	0934	N22 E43	5355	02	12.7	8	SF		V					
	ISTA	09 0930E	0930	0935	N22 E47	5355	02	13.0	5D	1B		V				E	
0154	KANZ	09 1028	1028	1032	N16 W14	5347	02	8.4	4	SF		V					
0155	09	10421	1043	1050	N22 E42	5355	02	12.7	8	SN				50	0.7		
	HTPR	09 1042	1043	1050	N23 E42	5355	02	12.7	8	SN		C	1043	50	0.7		
	KANZ	09 1043	1043	1050	N22 E43	5355	02	12.7	7	SF		V					
0156	HTPR	09 1121	1122	1124	N23 E42	5355	02	12.7	3	SF		C	1122	70	0.9	E	
0157	HTPR	09 1146	1159	1210	N23 E41	5355	02	12.6	24	SF		C	1159	60	0.8	E	
0158	09	12085	12121	1229	N36 E27	5354	02	11.7	21	SN				72	1.4	E	
	HTPR	09 1208	1212	1220	N36 E25	5354	02	11.5	12	SB		C	1212	120	1.4	E	
	SVTO	09 1212	1213U	1250	N37 E27	5354	02	11.7	38	SF	1	E		25			
	KANZ	09 1213	1213	1217	N35 E30	5354	02	11.9	4	SF		V					
0159	KANZ	09 1223	1231	1238	N22 E42	5355	02	12.7	15	SF		V					
0160	09	12517	1258*	1405	N30 E28	5354	02	11.7	74	1B				147	2.8	EFHK	
	SVTO	09 1251	1258U	1433	N30 E28	5354	02	11.7	102	1B	3	E		126		FH	
	SVTO	09 1251	1317	1433	N30 E28	5354	02	11.7	102	1B		E		85		K	
	RAMY	09 1252	1258U	1316D	N30 E28	5354	02	11.7	24D	1B	2	E		128			
	HTPR	09 1255	1259	1310	N30 E26	5354	02	11.6	15	1B		C	1259	250	2.8		
	KANZ	09 1258	1258	1507D	N28 E30	5354	02	11.9	129D	1F		V				EF	
0161	09	12526	12577	1403	N21 E39	5355	02	12.5	71	2B X 3.9				460	8.1	EIKUVZ	
	RAMY	09 1252	1257	1420D	N20 E38	5355	02	12.4	88D	2B X 3.9		E		164		K	
	RAMY	09 1252	1259U	1420D	N20 E38	5355	02	12.4	88D	2B X 3.9	2	E		517		ZU	
	HTPR	09 1256	1300	1350	N20 E37	5355	02	12.4	54	2B		C	1300	650	8.1	EIV	
	SVTO	09 1256	1304	1416	N22 E39	5355	02	12.5	80	2B X 3.9	3	E		509		ZU	
	KANZ	09 1258	1302	1507D	N21 E41	5355	02	12.7	129D	2N		V					
		09 1612		1650	No Flare Patrol												
0162	HOLL	09 1844E	1847U	1851	S20 E68	5356	02	15.0	7D	SF	3	E		68			
0163	HOLL	09 1900	1901	1939D	N17 E61	5357	02	14.4	39D	SF	3	E		16		F	
0164	09	1917*	1927U	1940	N30 E25	5354	02	11.8	23	1N M 1.0				110		EF	
	PALE	09 1917	1927U	1937	N29 E18	5354	02	11.2	20	1N	3	E		106		F	
	HOLL	09 1927	1927U	1943	N31 E28	5354	02	12.0	16	1N M 1.0	3	E		132		E	
	RAMY	09 1927E	1929U	1941D	N30 E29	5354	02	12.1	14D	SN M 1.0	2	E		91		FE	
0165	09	19501	1952	2010	N20 E40	5355	02	12.9	20	SF				39		F	
	RAMY	09 1944E	1954U	2013D	N19 E41	5355	02	12.9	29D	SN	2	E		73		F	
	HOLL	09 1950	1952	2008D	N21 E39	5355	02	12.8	18D	SF	3	E		20		F	
	PALE	09 1951	1952	2010	N20 E39	5355	02	12.8	19	SF	3	E		23			
0166	HOLL	09 2141	2142	2152	N13 E62	5357	02	14.6	11	SF	3	E		24			
0167	PALE	09 2221	2222	2227	N17 E61	5357	02	14.6	6	SF	3	E		34			
0168	09	23041	2308	2312	N30 E22	5354	02	11.7	8	SF				48	1.2	DIJT	
	HOLL	09 2304	2308	2311	N28 E17	5354	02	11.3	7	SF	3	E		14			
	VORO	09 2305	2308	2312	N33 E27	5354	02	12.1	7	SF	2	C	2308	81	1.2	DIJT	
0169	10	01282	0136*	0207	N15 W26	5347	02	8.1	39	SF				96	1.5	EIJT	
	VORO	10 0128	0137	0201	N16 W26	5347	02	8.1	33	SF	2	C	0137	161	2.0	EIJT	
	LEAR	10 0128	0154	0216	N15 W25	5347	02	8.2	48	SF	4	E		48			
	PURP	10 0130	0136	0205	N15 W26	5347	02	8.1	35	SN		C	0136	79	1.0	E	
0170	10	0407	0426*	0603	N20 E31	5355	02	12.5	116	3B X 1.8				840	10.2	EFJK	
	LEAR	10 0407	0426	0603	N19 E30	5355	02	12.5	116	3B X 1.8		E		987		K	
	LEAR	10 0407	0437	0603	N19 E30	5355	02	12.5	116	3B X 1.8	3	E		891		F	
	YUNN	10 0458E	0518U	0547	N21 E31	5355	02	12.6	49D	2N		P	0518	411	5.7		
	TACH	10 0514E		0620	N21 E32	5355	02	12.7	66D	3N	3	C	0514	1071	14.7	EFJ	

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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)		
0171	LEAR	10	0435	0438	0451	N29	E22	5354	02	11.9	16	SF		3	E			35		
0172	LEAR	10	0438	0439	0445	N12	E57	5357	02	14.5	7	SF		3	E			17		
0173	TACH	10	0514E	0523	0625	N26	E12	5354	02	11.1	71D	1B		3	C	0523		168	2.1	FL
0174	YUNN	10	0515	0518	0534	N23	E11	5365	02	11.1	19	SN			C			66	0.8	
0175		10	0726	0735	0743	N14	W30	5347	02	8.0	17	SF						36		F
	KANZ	10	0708E	0708U	0738	N15	W30	5347	02	8.0	30D	SF			C					
	SVTO	10	0726	0735	0748	N14	W29	5347	02	8.1	22	SF		2	E			36		F
0176		10	0755*	0800*	0831	N14	W29	5347	02	8.1	36	SF						19		Z
	SVTO	10	0755	0800	0821	N13	W29	5347	02	8.1	26	SF		3	E			13		ZZ
	SVTO	10	0824	0826	0830	N15	W28	5347	02	8.2	6	SF		3	E			24		
	LEAR	10	0825	0827	0832	N15	W27	5347	02	8.3	7	SF		3	E			27		
	KANZ	10	0825	0828	0832	N15	W30	5347	02	8.1	7	SF			C					
	SVTO	10	0833	0834	0838	N13	W29	5347	02	8.2	5	SF		3	E			11		
0177		10	08453	08455	0853	N32	E14	5354	02	11.5	8	SF	C 3.6					12		F
	LEAR	10	0845	0845	0853	N32	E14	5354	02	11.5	8	SF		3	E			10		
	KANZ	10	0846	0850	0858D	N32	E16	5354	02	11.6	12D	SF			C					
	SVTO	10	0848	0849	0853	N32	E13	5354	02	11.4	5	SF	C 3.6	3	E			15		F
0178		10	0909	0909	0911	N16	E53	5357	02	14.4	2	SF						21		D
	KHAR	10	0908U		0910	N15	E53	5357	02	14.4	2U	SF		2	V	0908				D
	LEAR	10	0909	0909	0912	N16	E53	5357	02	14.4	3	SF		3	E			21		
0179		10	0906	0936	0954	N16	W29	5347	02	8.2	48	SF						19		
	LEAR	10	0906	0936	0957	N17	W29	5347	02	8.2	51	SF		3	E			19		
	KANZ	10	0938E		0950	N15	W29	5347	02	8.2	12D	SF			C					
0180		10	10145	10172	1022	N15	W30	5347	02	8.1	8	SF						15		
	KANZ	10	1014	1017	1021	N15	W30	5347	02	8.1	7	SF			C					
	SVTO	10	1019	1019	1024	N15	W29	5347	02	8.2	5	SF		3	E			15		
0181		10	10353	10362	1043	N30	E12	5354	02	11.4	8	SF	C 3.9					16		
	SVTO	10	1035	1036	1041	N31	E11	5354	02	11.3	6	SF	C 3.9	3	E			16		
	KANZ	10	1038	1038	1045	N30	E12	5354	02	11.4	7	SF			V					
0182		10	1112	11121	1118	N36	E12	5354	02	11.4	6	SF						80	1.0	
	KANZ	10	1112	1112	1115	N35	E14	5354	02	11.6	3	SF			V					
	HTPR	10	1112	1113	1120	N36	E10	5354	02	11.3	8	SF			C	1113		80	1.0	
0183	KANZ	10	1137	1137	1141	N16	W31	5347	02	8.1	4	SF			V					
0184		10	12123	12239	1429	S17	E50	5356	02	14.3	137	1N						131	3.3	EFIK
	RAMY	10	1212E	1223	1416D	S17	E50	5356	02	14.3	124D	1N			E			112		K
	SVTO	10	1212	1231	1408	S16	E54	5356	02	14.6	116	1N		3	E			130		F
	RAMY	10	1212E	1232	1416D	S17	E50	5356	02	14.3	124D	1N		2	E			181		F
	KANZ	10	1214	1230	1429	S17	E53	5356	02	14.5	135	1F			V					
	HTPR	10	1215		1353D	S18	E48	5356	02	14.2	98D	1N			C	1227		220	3.3	EI
	HOLL	10	1425E	1434U	1450	S16	E46	5356	02	14.1	25D	SF		3	E			12		
0185	HTPR	10	1320	1320	1328	N22	E48	5364	02	14.2	8	SF			C	1320		80	1.2	
0186		10	13243	1327	1333	N30	E10	5354	02	11.3	9	SF						34		
	RAMY	10	1324	1327	1334	N31	E12	5354	02	11.5	10	SF		2	E			31		
	SVTO	10	1326	1327	1333	N29	E06	5354	02	11.0	7	SF		3	E			38		
	KANZ	10	1327	1327	1331	N31	E13	5354	02	11.6	4	SF			V					
0187		10	1500*	1509*	1522	N16	W32	5347	02	8.2	22	SF						17		
	RAMY	10	1500	1510U	1531D	N16	W32	5347	02	8.2	31D	SF		2	E			21		
	HOLL	10	1509	1509	1518	N16	W32	5347	02	8.2	9	SF		3	E			17		
	HOLL	10	1520	1521	1526	N16	W32	5347	02	8.2	6	SF		3	E			13		
0188		10	1608*	1635	1642	N16	W32	5347	02	8.2	34	SF						14		F
	RAMY	10	1608	1628U	1648D	N17	W31	5347	02	8.3	40D	SF		2	E			17		F
	HOLL	10	1634	1635	1642	N16	W32	5347	02	8.3	8	SF		3	E			11		

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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/USAF Region	CMP Mo	Dur Day	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
													Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
		10 1616		1620		No Flare Patrol										
0189	HOLL	10 1735	1739U	1804	N16 W33	5347	02	8.2	29	SF	3	E		27		
0190	HOLL	10 1745	1807	1836	N14 E45	5357	02	14.1	51	SF	3	E		57		
0191	HOLL	10 1915	1917	1925	N15 E46	5357	02	14.3	10	SF	3	E		13		F
0192	HOLL	10 1958	2005	2010	N32 E09	5354	02	11.5	12	SF	3	E		19		
0193	HOLL	10 2033	2035	2041D	S19 E43	5356	02	14.1	8D	SF C	4.9	3	E	37		H
		10 2042		2100		No Flare Patrol										
		10 2132		2147		No Flare Patrol										
0194	HOLL	10 2141E	2150	2200	N18 E42	5357	02	14.1	19D	SF C	4.2	3	E	36		FH
		10 2219		2247		No Flare Patrol										
		10 2346		2400		No Flare Patrol										
		11 0000		0001		No Flare Patrol										
0195	LEAR	11 0126	0126	0148	S25 W66	5339	02	5.9	22	SF	3	E		15		
0196		11 09064	09091	0924	N17 W42	5347	02	8.2	18	SN				50	0.8	F
	LEAR	11 0906	0909	0924	N16 W42	5347	02	8.2	18	SF	3	E		43		F
	KANZ	11 0907	0910	0924	N18 W43	5347	02	8.1	17	SF		V				
	CATA	11 0910	0910	0910D	N18 W40	5347	02	8.3	17D	SB	2	P	0910	56	0.8	
0197		11 09373	09431	1003	N29 W05	5354	02	11.0	26	SF				24		
	LEAR	11 0937	0943	0955	N31 W02	5354	02	11.2	18	SF	3	E		24		
	KANZ	11 0940	0944	1011	N27 W08	5354	02	10.8	31	SF		V				
0198	KHAR	11 0950		0955	S21 E40	5356	02	14.5	5	SF	2	V	0950			D
0199	HTPR	11 1132	1138	1147	S19 E36	5356	02	14.2	15	SN		C	1138	100	1.2	E
0200		11 1132*	1143*	1338	N22 E13	5355	02	12.5	126	2N M	2.9			432	5.0	EFIKV
	HTPR	11 1132	1143	1325	N23 E13	5355	02	12.5	113	2B		C	1143	650	7.1	FIV
	CATA	11 1134	1143	1230D	N23 E14	5355	02	12.6	56D	2B	2	P	1143	618	7.6	
	KANZ	11 1135	1213	1357	N22 E14	5355	02	12.5	142	2N		V				
	RAMY	11 1139E	1150	1338	N22 E15	5355	02	12.6	119D	2N		E		450		K
	RAMY	11 1139E	1223	1338	N22 E15	5355	02	12.6	119D	2N M	2.9	3	E	471		FE
	SVTO	11 1235E	1235U	1351	N22 E14	5355	02	12.6	76D	2F	2	E		365		F
	HTPR	11 1301	1307	1321	N20 E04	5355	02	11.8	20	SN		C	1307	40	0.4	E
0201		11 1217*	1223*	1334	N28 W04	5354	02	11.2	77	SF				35	0.2	FT
	RAMY	11 1217	1223	1357D	N28 E07	5354	02	12.0	100D	SF	3	E		40		T
	HTPR	11 1315	1317	1322	N30 W12	5354	02	10.6	7	SN		C	1317	20	0.2	
	KANZ	11 1315	1323	1342	N26 W04	5354	02	11.2	27	SF		V				
	RAMY	11 1315	1326	1339	N26 W05	5354	02	11.2	24	SF	3	E		46		F
0202		11 12362	1240	1254	N15 W46	5347	02	8.0	18	SF				20		
	KANZ	11 1236	1240	1255	N15 W45	5347	02	8.1	19	SF		V				
	RAMY	11 1238	1240	1254	N15 W46	5347	02	8.0	16	SF	3	E		20		
0203		11 13313	13322	1347	N16 W44	5347	02	8.2	16	SF				10		
	KANZ	11 1331	1334	1346	N15 W45	5347	02	8.1	15	SF		V				
	SVTO	11 1332	1332	1345	N16 W44	5347	02	8.2	13	SF	3	E		10		
	RAMY	11 1334	1334	1350	N16 W44	5347	02	8.2	16	SF	3	E		10		
0204		11 14061	14111	1423	N18 E38	5357	02	14.5	17	SF				16		F
	RAMY	11 1406	1411	1430	N18 E38	5357	02	14.5	24	SF	3	E		20		
	SVTO	11 1407	1412	1416	N18 E38	5357	02	14.5	9	SF	3	E		12		F
0205		11 14526	15001	1517	N32 E02	5354	02	11.8	25	SN C	3.6			121	2.4	EH
	HTPR	11 1452	1500	1513	N30 E04	5354	02	11.9	21	1B		C	1500	220	2.4	E
	KANZ	11 1457	1501	1516	N31 E05	5354	02	12.0	19	SN		V				
	RAMY	11 1458	1500	1529	N31 W05	5354	02	11.2	31	SF C	3.6	3	E	90		
	SVTO	11 1500E	1501U	1509	N34 E05	5354	02	12.0	9D	SN	2	E		54		H

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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)	
0206	RAMY	11	1603	1604	1613	N18	E38	5357	02	14.6	10	SF		3	E		17		F
0207		11	1618	16218	1700	N17	E36	5357	02	14.4	42	SN C	6.5				92		F
	RAMY	11	1618	1621	1657	N18	E37	5357	02	14.5	39	SN C	6.5	3	E		87		F
	HOLL	11	1627E	1629	1703	N16	E36	5357	02	14.4	360	SF C	6.5	3	E		96		F
0208		12	02013	02047	0233	N31	W12	5354	02	11.1	32	1F					164	3.0	EIJT
	VORO	12	0201	0204	0231	N32	W12	5354	02	11.1	30	1F		2	C	0204	242	3.1	EIJT
	LEAR	12	0203	0205	0240	N29	W11	5354	02	11.2	37	SF		3	E		41		
	MITK	12	0204	0211	0227	N31	W12	5354	02	11.1	23	1N			C	0211	210	2.8	E
0209	LEAR	12	0300	0300	0303	N27	W15	5354	02	10.9	3	SF		3	E		16		
0210	LEAR	12	0348	0352	0400	S28	W24	5353	02	10.3	12	SF		3	E		35		FH
0211	LEAR	12	0357	0359	0404	N31	W03	5354	02	11.9	7	SF C	2.2	3	E		30		H
0212	ABST	12	0650	0652	0702	N22	E22	5364	02	14.0	12	SF			C	0652	96	1.2	E
0213	ABST	12	0710	0718	0718D	N17	E25	5357	02	14.2	80	SF			P	0718	87	1.1	D
0214		12	09231	09243	0938	S18	E34	5356	02	15.0	15	SF C	1.7				22		
	KANZ	12	0923	0927	0942	S19	E35	5356	02	15.1	19	SF			V				
	LEAR	12	0924	0924	0933	S18	E34	5356	02	15.0	9	SF C	1.7	4	E		22		
0215		12	10051	10072	1012	S18	E23	5356	02	14.2	7	SF C	1.7				27		
	KANZ	12	1005	1009	1013	S19	E23	5356	02	14.2	8	SF			V				
	LEAR	12	1006	1007	1010	S18	E22	5356	02	14.1	4	SF C	1.7	3	E		20		
	SVTO	12	1006	1008	1012	S17	E23	5356	02	14.2	6	SF C	1.7	3	E		34		
0216		12	1043	10431	1048	N20	E64	5362	02	17.3	5	SF					33		
	KANZ	12	1043	1043	1047	N19	E64	5362	02	17.3	4	SF			V				
	SVTO	12	1043	1044	1048	N21	E63	5362	02	17.3	5	SF		3	E		33		
0217	KANZ	12	1051	1055	1059	N31	W07	5354	02	11.9	8	SF			V				
0218	KANZ	12	1127	1130	1137	S18	E34	5356	02	15.1	10	SF			V				
0219		12	1209*	1209*	1229	S18	E23	5356	02	14.2	20	SF C	1.8				31		EF
	RAMY	12	1208E	1208U	1215	S17	E25	5356	02	14.4	7D	SF C	1.8	3	E		25		F
	KANZ	12	1209	1209	1225	S17	E23	5356	02	14.2	16	SF			V				
	RAMY	12	1225	1226	1233	S18	E22	5356	02	14.2	8	SF C	3.8	3	E		44		E
	SVTO	12	1225	1228	1238	S17	E22	5356	02	14.2	13	SF C	3.8	3	E		23		
	KANZ	12	1225	1229	1233	S19	E21	5356	02	14.1	8	SF			V				
0220	RAMY	12	1215	1215U	1229	N27	W21	5354	02	10.9	14	SF		3	E		32		F
0221	KANZ	12	1249	1259	1310	N20	E04	5355	02	12.8	21	SF			V				
0222	KANZ	12	1303	1307	1314	N28	W14	5354	02	11.4	11	SF			V				
0223		12	14352	1439	1444	S20	E32	5356	02	15.0	9	SF					14		F
	KANZ	12	1435	1439	1446	S20	E32	5356	02	15.0	11	SF			V				
	RAMY	12	1437	1439U	1442	S19	E33	5356	02	15.1	5	SF		3	E		14		F
0224	RAMY	12	1608	1608	1650	N16	E22	5357	02	14.3	42	SF		3	E		15		F
0225	RAMY	12	1623	1625	1632	S38	W56	5363	02	8.1	9	SF		3	E		38		
0226		12	17361	17382	1744	N18	E22	5357	02	14.4	8	SF					14		
	RAMY	12	1736	1738	1746	N17	E25	5357	02	14.6	10	SF		3	E		12		
	HOLL	12	1737	1740	1742	N18	E19	5357	02	14.2	5	SF		3	E		17		
0227	RAMY	12	1840	1842	1847	S19	E24	5356	02	14.6	7	SF		3	E		11		F
0228		12	20313	20361	2047	S18	E22	5356	02	14.5	16	SF					17		
	HOLL	12	2031	2037	2049	S18	E22	5356	02	14.5	18	SF		3	E		21		
	RAMY	12	2034	2036	2045	S18	E22	5356	02	14.5	11	SF		3	E		13		



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Grp #	Sta	Start Day	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt	Xray	Obs See	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks	
																	Obs Type
0229		12 2052	2053	2058	N27	W25	5354	02 10.9	6	SF			12			F	
	HOLL	12 2052	2053	2057	N27	W25	5354	02 10.9	5	SF		3	E	14			
	RAMY	12 2052	2053	2058	N27	W25	5354	02 10.9	6	SF		3	E	11		F	
0230	PALE	12 2101	2101	2112	S17	E19	5356	02 14.3	11	SF		3	E	53			
0231	RAMY	12 2116	2117	2125	S18	E21	5356	02 14.5	9	SF	C 2.5	3	E	13		F	
0232	RAMY	12 2127	2128	2139	N28	W23	5354	02 11.1	12	SF		3	E	24		F	
0233	PALE	12 2206	2209	2219	N31	W20	5354	02 11.3	13	SF	C 2.7	3	E	41			
0234	PALE	12 2326	2333	2337	S18	E20	5356	02 14.5	11	SF		3	E	20			
0235	VORO	12 2331	2334	2347	N31	W16	5354	02 11.7	16	SF		2	C	2334	99	1.2	EIJ
0236		13 03158	03246	0404	N30	W25	5354	02 11.2	49	1N	C 8.4			185	3.6	EF	
	MITK	13 0315	0328	0425	N30	W25	5354	02 11.2	70	1B			C	0328	290	4.1	E
	PURP	13 0320	0330	0338D	N30	W25	5354	02 11.2	18D	1B			C	0330	223	3.2	E
	LEAR	13 0323	0324	0344	N30	W25	5354	02 11.2	21	SF	C 8.4	3	E	41		F	
0237	ABST	13 0626	0629U	0637	N34	E34	5360	02 16.0	11	SF			P	0629	61	0.8	D
0238		13 0751	0754	0757	N32	W26	5354	02 11.3	6	SN				43	0.6	D	
	ABST	13 0751	0754	0800	N34	W25	5354	02 11.3	9	SF			C	0754	70	1.1	D
	YUNN	13 0752E	0752U	0754	N30	W26	5354	02 11.3	2D	SN			P	0752	16	0.2	
0239	ABST	13 0902	0904U	0906D	N22	E51	5362	02 17.3	4D	SF			P	0904	79	1.5	D
0240	ISTA	13 0902		0914	S19	E17	5356	02 14.7	12	1N			V				E
0241		13 09051	09062	0910	N33	W15	5354	02 12.2	5	SN				54	1.2	E	
	ISTA	13 0905	0907	0913	N32	W13	5354	02 12.3	8	1B			V			E	
	KANZ	13 0905	0908	0908	N33	W15	5354	02 12.2	3	SF			C				
	CATA	13 0906	0906	0906D	N33	W15	5354	02 12.2	3D	SB		2	P	0906	84	1.2	
	SVTO	13 0906	0907	0910	N33	W17	5354	02 12.0	4	SF		3	E	23			
0242		13 10523	11032	1118	N20	E13	5357	02 14.4	26	SF				38			
	SVTO	13 1052	1103	1119	N20	E13	5357	02 14.4	27	SF		3	E	38			
	KANZ	13 1055	1105	1117	N19	E13	5357	02 14.4	22	SF			C				
0243		13 1152*	12008	1232	S17	E13	5356	02 14.5	40	SN	C 4.2			72	1.2		
	KANZ	13 1152	1200	1235	S18	E13	5356	02 14.5	43	SF			C				
	SVTO	13 1157	1208	1239	S16	E13	5356	02 14.5	42	SF	C 4.2	3	E	32			
	CATA	13 1202	1208	1222	S18	E13	5356	02 14.5	20	SB		2	C	1208	112	1.2	
0244		13 12393	12411	1256	N33	W18	5354	02 12.1	17	SN				136	3.2		
	SVTO	13 1239	1242	1247	N32	W20	5354	02 11.9	8	SF		3	E	47			
	CATA	13 1241	1241	1241D	N33	W18	5354	02 12.1	8D	1B		2	P	1241	225	3.2	
	KANZ	13 1242	1242	1304	N35	W17	5354	02 12.2	22	SF			C				
		13 1550		1556	No Flare Patrol												
0245	RAMY	13 1630E	1632U	1642D	N24	E53	5362	02 17.8	12D	SF	C 3.7	3	E	46		F	
0246		13 18115	18261	1900	N21	W13	5355	02 12.8	49	1N	M 1.4			205		FU	
	HOLL	13 1811	1827	1944D	N20	W13	5355	02 12.8	93D	2N	M 1.4	3	E	270		UF	
	PALE	13 1816	1826	1900	N21	W13	5355	02 12.8	44	1N	M 1.4	3	E	194		F	
	RAMY	13 1820E	1828U	1902D	N21	W14	5355	02 12.7	42D	1N	M 1.4	2	E	152		UF	
0247		13 18221	1827	1843	S18	E08	5356	02 14.4	21	SF				34			
	PALE	13 1822	1827	1836	S18	E08	5356	02 14.4	14	SF		3	E	27			
	HOLL	13 1823	1827	1850	S18	E09	5356	02 14.4	27	SF		3	E	41			
0248	HOLL	13 1856	1856	1904	N30	W32	5354	02 11.3	8	SF		3	E	17			
0249	PALE	13 1923	1923	1950	S15	E07	5356	02 14.3	27	SF		3	E	30			

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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							Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
0250		13	1952	2010*	2124	S18 E12	5356	02	14.7	92	SF				38		F
	PALE	13	1952	2010	2057	S17 E09	5356	02	14.5	65	SF	3	E		35		
	HOLL	13	1952	2104	2151	S18 E10	5356	02	14.6	119	SF	3	E		53		
	RAMY	13	2002E	2007U	2029D	S19 E16	5356	02	15.0	27D	SF	2	E		25		F
0251		13	20461	20482	2104	N31 W32	5354	02	11.3	18	SF				40		
	HOLL	13	2046	2050	2102	N30 W33	5354	02	11.3	16	SF	3	E		42		
	PALE	13	2047	2048	2106	N32 W30	5354	02	11.5	19	SF	3	E		39		
0252	PALE	13	2047	2054	2109	N17 E10	5357	02	14.6	22	SF	3	E		17		
0253	PALE	13	2123	2123	2129	N30 W36	5354	02	11.0	6	SF	3	E		20		F
0254	HOLL	13	2306	2308	2323	S18 E07	5356	02	14.5	17	SF	3	E		33		
0255		13	23302	23352	2356	S17 E06	5356	02	14.4	26	1F C 6.3				265	5.5	FITU
	HOLL	13	2330	2335	2352	S15 E05	5356	02	14.3	22	1N C 6.3	3	E		150		
	VORO	13	2331E	2337	2409	S18 E07	5356	02	14.5	38D	2F	2	C	2337	529	5.5	UIT
	PALE	13	2332	2333U	2348	S17 E06	5356	02	14.4	16	1F C 6.3	3	E		116		F
0256	PALE	13	2335	2336U	2407	N19 E07	5357	02	14.5	32	SF	3	E		18		
0257		13	23365	23402	2356	N24 W15	5355	02	12.8	20	SF				68	1.3	EFIJ
	VORO	13	2336	2340	2400	N25 W15	5355	02	12.8	24	SF	2	C	2340	108	1.3	EIJ
	HOLL	13	2337	2340	2340D	N23 W13	5355	02	13.0	3D	SF	3	E		56		
	PALE	13	2341	2342	2352	N24 W16	5355	02	12.7	11	SF	3	E		41		F
0258	VORO	14	0010	0015	0038	N27 W59		02	9.4	28	SN	2	C	0015	63	1.2	DIJ
0259	VORO	14	0208	0210	0217	N31 W25	5354	02	12.1	9	SF	2	C	0210	45	0.6	DIJ
0260	YUNN	14	0225E	0225U	0233	S19 E00	5356	02	14.1	8D	SN		P	0225	16	0.2	
0261	VORO	14	0230	0234	0245	N31 W25	5354	02	12.1	15	SF	2	C	0234	27	0.4	DIJ
0262		14	0349	0352	0408	N22 E04	5366	02	14.5	19	SF				60	1.0	
	PALE	14	0349	0352	0407	N22 E05	5366	02	14.5	18	SF	2	E		38		
	YUNN	14	0350E	0350U	0410	N21 E04	5366	02	14.5	20D	SF		P	0350	82	1.0	
0263		14	04391	0453*	0603	N32 W38	5354	02	11.2	84	1N M 2.0				266	4.9	EFIT
	MITK	14	0439	0453	0551	N32 W35	5354	02	11.4	72	2N		C	0453	320	5.3	F
	LEAR	14	0440	0459	0619	N29 W40	5354	02	11.0	99	1F M 2.0	4	E		218		F
	ABST	14	0500E	0520	0600	N34 W40	5354	02	11.0	60D	1N		P	0520	261	4.5	EIT
0264		14	06031	06042	0618	S17 E02	5356	02	14.4	15	SN				151	1.8	DEF
	MITK	14	0603	0604	0618	S16 E02	5356	02	14.4	15	SB		C	0604			E
	LEAR	14	0603	0605	0620	S17 E03	5356	02	14.5	17	1F	4	E		127		F
	ABST	14	0604	0606	0615	S17 E01	5356	02	14.3	11	SN		C	0606	175	1.8	D
0265		14	0620*	0636*	0725	N26 W46	5354	02	10.7	65	1N				160	2.7	EFKT
	LEAR	14	0620	0636	0800	N26 W43	5354	02	10.9	100	1F	4	E		180		F
	LEAR	14	0620	0714	0800	N26 W54	5354	02	10.1	100	1F		E		146		K
	MITK	14	0633	0636	0657	N27 W43	5354	02	10.9	24	1N		C	0636	140	2.5	E
	ABST	14	0636	0638	0642	N27 W45	5354	02	10.8	6	1N		C	0638	175	2.9	ET
0266		14	07031	07093	0758	N30 W41	5354	02	11.1	55	1N				222	4.9	FT
	YUNN	14	0647E	0712	0755	N31 W39	5354	02	11.2	68D	2N		P		395	6.9	
	MITK	14	0703	0709	0731D	N28 W40	5354	02	11.2	28D	2F		C	0709	350	6.0	F
	ABST	14	0704	0712	0751	N30 W44	5354	02	10.8	47	SN		C	0712	87	1.7	FT
	SVTO	14	0727E	0727U	0808	N30 W40	5354	02	11.2	41D	SF	2	E		56		F
0267	YUNN	14	0754E	0755	0758	N19 E39	5362	02	17.3	4D	SN		P		16	0.2	

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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 <sup>-6</sup> Disk)	Corr (Sq Deg)		
0268	14	0945*	0948*	1025	N23	W21	5355	02	12.8	40	SN					87	2.9	FK	
	CATA	14	0945	1010	1040	N24	W21	5355	02	12.8	55	1B	1	C	1010	225	2.9	FK	
	ISTA	14	0946		1025	N24	W20	5355	02	12.9	39	1B		V				FK	
	SVTO	14	0946	0952	1035	N23	W22	5355	02	12.7	49	SB		E		81		K	
	SVTO	14	0946	1014	1035	N23	W22	5355	02	12.7	49	SN	3	E		74		F	
	LEAR	14	0948	0948	0955	N23	W21	5355	02	12.8	7	SF	3	E		16			
	KANZ	14	0949	1013	1034D	N23	W20	5355	02	12.9	45D	SN		C					
	LEAR	14	1010	1013	1020	N23	W21	5355	02	12.8	10	SF	3	E		39		F	
0269	14	03483	03529	0410	N20	E04	5357	02	14.5	22	SF					36		F	
	PALE	14	0348	0401	0409	N20	E05	5357	02	14.5	21	SF	2	E		60		F	
	LEAR	14	0351	0352	0410	N20	E04	5357	02	14.5	19	SF	4	E		12		F	
0270	RAMY	14	1156E	1158U	1218D	N30	W40	5354	02	11.3	22D	SF	2	E		40		F	
0271	RAMY	14	1318E	1320U	1331D	N30	W41	5354	02	11.3	13D	SF	2	E		31		F	
0272	14	1423E	1424U	1440	S18	W04	5356	02	14.3	17D	SN	C 5.6				68		F	
	RAMY	14	1423E	1424U	1443D	S18	W03	5356	02	14.4	20D	SF	C 5.6	2	E		71		F
	SVTO	14	1424E	1425U	1440	S17	W04	5356	02	14.3	16D	SN	C 5.6	2	E		66		F
	14	1514		1524	No Flare Patrol														
0273	RAMY	14	1531E	1533U	1559D	N31	W41	5354	02	11.4	28D	SF	3	E		77		F	
	14	1556		1558	No Flare Patrol														
	14	1652		1711	No Flare Patrol														
0274	RAMY	14	1742E	1742U	1830D	N23	W02	5366	02	14.6	48D	SF	2	E		28			
0275	PALE	14	1928	1929	1949	S16	W06	5356	02	14.3	21	SF	3	E		19		F	
0276	PALE	14	1945	2000	2012	N32	W44	5354	02	11.3	27	SF	3	E		16		F	
	14	2059		2122	No Flare Patrol														
	14	2221		2252	No Flare Patrol														
	14	2309		2311	No Flare Patrol														
0277	PALE	14	2336		2404	N22	W05	5366	02	14.6	28	SF	3	E		53		F	
0278	PALE	15	0013	0013	0021	S15	W14	5356	02	13.9	8	SF	3	E		12		F	
0279	15	01155	01211	0137	N22	W30	5355	02	12.7	22	1N					121	2.5		
	PALE	15	0115	0121	0134	N22	W30	5355	02	12.7	19	SF	3	E		62			
	MITK	15	0120	0122	0140	N22	W31	5355	02	12.7	20	1N		C	0122	180	2.5		
	15	0126		0130	No Flare Patrol														
0280	PALE	15	0244	0256	0305	S14	E72	5368	02	20.5	21	SF	3	E		52			
0281	15	0323	03231	0329	S16	W10	5356	02	14.4	6	SF					24			
	LEAR	15	0323	0323	0327	S17	W10	5356	02	14.4	4	SF	3	E		16			
	PALE	15	0323	0324	0331	S16	W10	5356	02	14.4	8	SF	3	E		31			
0282	15	03223	03285	0356	N28	W64	5354	02	10.1	34	1N	C 6.5				174		F	
	MITK	15	0322	0333	0408	N28	W65	5354	02	10.1	46	2N		C	0333	260			
	YUNN	15	0324	0328	0351D	N28	W62	5354	02	10.3	27D	1N		P		197			
	PALE	15	0325	0329U	0412D	N30	W63	5354	02	10.2	47D	1N	C 6.5	3	E	200			
	LEAR	15	0328E	0332	0345	N26	W64	5354	02	10.2	17D	SF	C 6.5	3	E	41		F	
0283	PALE	15	0337	0341	0346	N19	E34	5362	02	17.7	9	SF	3	E		29			
0284	LEAR	15	0426	0428	0432	S17	W10	5356	02	14.4	6	SF	3	E		23			
0285	LEAR	15	0521	0522	0525	S17	W11	5356	02	14.4	4	SF	C 2.9	3	E	32			
0286	MITK	15	0542	0545	0615	N18	E33	5362	02	17.7	33	1F		C	0545	150	2.1	E	
0287	MITK	15	0543	0600	0630	S28	W68	5358	02	9.9	47	1N		C	0600	120	2.7	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)	
0288	ABST	15	0605	0607	0617	N25	W12	5366	02 14.3	12	SF			C	0607	131	1.6	EI
0289		15	0641	0645*	0722	N30	W52	5354	02 11.2	41	SF					88	2.8	DEF
	MITK	15	0641	0648	0717	N29	W53	5354	02 11.1	36	1N		C	0648	170	4.0	E	
	ABST	15	0642	0645	0709	N31	W52	5354	02 11.2	27	SF		C	0645	70	1.5	D	
	LEAR	15	0642	0716	0741	N29	W51	5354	02 11.3	59	SF	3	E		23		F	
0290		15	0854	0855	0910	S17	W12	5356	02 14.4	16	SN	C 5.4				61	0.5	EF
	LEAR	15	0854	0855	0910	S17	W12	5356	02 14.4	16	SF	C 5.4	3	E		72		F
	HPR	15	0856E		0907D	S17	W15	5356	02 14.2	11D	SN		C	0905	50	0.5	E	
	ISTA	15	0856		0910	S16	W10	5356	02 14.6	14	1N		V				F	
0291		15	0915	0916	0925	N19	E27	5362	02 17.4	10	SF					20		E
	ISTA	15	0915		0922	N18	E28	5362	02 17.5	7	SN		V					E
	LEAR	15	0915	0916	0921	N19	E26	5362	02 17.4	6	SF		3	E		17		
	SVTO	15	0915	0917	0932	N20	E26	5362	02 17.4	17	SF		3	E		23		
0292		15	1339	1339	1356	S16	W16	5356	02 14.3	17	SF	C 3.4				46		F
	RAMY	15	1333E	1341U	1441D	S17	W15	5356	02 14.4	68D	SF	C 3.4	3	E		73		F
	SVTO	15	1339	1339	1356	S16	W17	5356	02 14.3	17	SF	C 3.4	3	E		19		F
0293	RAMY	15	1349E	1357U	1441D	S14	E65	5368	02 20.5	52D	SF		3	E		37		
0294		15	1422	1426	1435	N28	W61	5354	02 10.8	13	SF	C 5.6				38		H
	SVTO	15	1422	1426	1435	N27	W62	5354	02 10.8	13	SF	C 5.6	3	E		46		H
	RAMY	15	1431E	1431U	1441D	N28	W60	5354	02 10.9	10D	SF	C 5.6	2	E		29		H
		15	1452		1530	No Flare Patrol												
		15	1538		1549	No Flare Patrol												
		15	1626		1640	No Flare Patrol												
		15	1650		1711	No Flare Patrol												
		15	1728		1735	No Flare Patrol												
0295	PALE	15	1849	1850	1936	S16	W17	5356	02 14.5	47	SF	C 3.1	4	E		27		F
0296	RAMY	15	2014E	2014U	2045D	N27	W59	5354	02 11.2	31D	SF	C 3.2	2	E		14		
		15	2127		2147	No Flare Patrol												
		15	2156		2202	No Flare Patrol												
		15	2218		2242	No Flare Patrol												
0297		15	2347*	2412	2426	S12	E60	5368	02 20.5	39	SF					40		
	HOLL	15	2347	2412	2435	S13	E59	5368	02 20.4	48	SF		3	E		57		
	LEAR	16	0011	0012	0017	S12	E60	5368	02 20.5	6	SF		3	E		22		
0298	YUNN	16	0232	0240	0248	S13	E57	5368	02 20.4	16	SF			C		16	0.3	
0299	YUNN	16	0237	0240	0248	N24	W25	5366	02 14.2	11	SF			C		49	0.7	
0300		16	0306	0310	0337	S12	E56	5368	02 20.3	31	SN					73	1.7	
	LEAR	16	0306	0310	0337	S11	E57	5368	02 20.4	31	SF		3	E		47		
	YUNN	16	0306	0311	0323D	S13	E55	5368	02 20.3	17D	SN			P		99	1.7	
0301	LEAR	16	0340	0348	0513	N22	E26	5362	02 18.1	93	2N	M 2.2	3	E		276		FH
0302	LEAR	16	0424	0428	0439	N26	W69	5354	02 10.8	15	SF	M 3.5	3	E		45		
0303	LEAR	16	0544	0546	0554	S11	E57	5368	02 20.5	10	SF		3	E		16		
0304	LEAR	16	0702	0702	0708	S16	W27	5356	02 14.2	6	SF		3	E		21		
0305	LEAR	16	0703	0707	0716	N19	E17	5362	02 17.6	13	SF		3	E		28		
0306	LEAR	16	0706	0707	0713	N23	W26	5366	02 14.3	7	SF		3	E		31		
0307	ABST	16	0727	0732	0745	S11	E56	5368	02 20.5	18	1F			C	0732	174	2.8	E

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area Measurement			Remarks		
								USAF Region					Mo	Day	(Min)		Opt	Xray
0308		16	08362	08381	0850	S19	W24	5356	02	14.5	14	SF			48	0.9	EI	
	HTPR	16	0832E		0850	S18	W26	5356	02	14.4	18D	SF		C	0837	80	0.9	EI
	SVTO	16	0836	0839	0852	S19	W24	5356	02	14.5	16	SF		3	E	15		
	KANZ	16	0838	0838	0848	S19	W23	5356	02	14.6	10	SF		C				
0309		16	08432	08473	0901	N17	E17	5362	02	17.6	18	SF				50	0.6	EI
	HTPR	16	0843	0850	0900	N16	E15	5362	02	17.5	17	SF		C	0850	60	0.6	EI
	SVTO	16	0844	0847	0900	N17	E18	5362	02	17.7	16	SF		3	E	41		
	KANZ	16	0845	0848	0903	N17	E19	5362	02	17.8	18	SF		C				
0310		16	08493	08541	0905	S20	E72	5369	02	21.9	16	SF				17		
	SVTO	16	0849	0854	0900	S19	E72	5369	02	21.9	11	SF		3	E	17		
	KANZ	16	0852	0855	0910	S21	E72	5369	02	21.9	18	SF		C				
0311	HTPR	16	0919	0926	0930	S13	E53	5368	02	20.4	11	SN		C	0926	120	1.9	E
0312	SVTO	16	0948	1001	1026	N27	W67	5354	02	11.2	38	SF		3	E	21		
0313	SVTO	16	1017	1021	1041	N23	W30	5366	02	14.1	24	SF		3	E	12		
0314	HTPR	16	1114	1118	1127	N16	E14	5362	02	17.5	13	SF		C	1118	60	0.6	E
0315		16	1120	1133	1140	S13	E52	5368	02	20.4	20	SF				75	1.9	E
	HTPR	16	1120	1133	1138	S13	E52	5368	02	20.4	18	SN		C	1133	120	1.9	E
	KANZ	16	1134E	1134U	1139D	S14	E52	5368	02	20.4	5D	SF		C				
	RAMY	16	1135E	1136U	1142	S13	E53	5368	02	20.5	7D	SF		2	E	30		
0316		16	12421	1304	1330	N17	E18	5362	02	17.9	48	1F				132	1.5	EFHIK
	HTPR	16	1242	1304	1320	N17	E18	5362	02	17.9	38	SN		C	1313	150	1.5	EIK
	RAMY	16	1243	1304	1340	N18	E20	5362	02	18.0	57	1F		2	E	115		FH
	KANZ	16	1306E	1306U	1318D	N16	E15	5362	02	17.7	12D	1F		C				
0317		16	1246	1301	1418D	S14	E51	5368	02	20.4	92D	SF				22		
	RAMY	16	1246	1301	1418D	S14	E52	5368	02	20.5	92D	SF		2	E	22		
	KANZ	16	1306E	1306U	1318D	S13	E50	5368	02	20.3	12D	SF		C				
0318	RAMY	16	1522	1526	1528	S13	E50	5368	02	20.4	6	SF		2	E	14		
0319	RAMY	16	1555	1558	1613	S13	E50	5368	02	20.4	18	SF		2	E	15		
		16	1652		1656	No Flare Patrol												
0320	RAMY	16	1800	1805	1829D	S14	E49	5368	02	20.4	29D	SF		2	E	14		
0321		16	1806	1808	1823	N18	E14	5362	02	17.8	17	SF				32		F
	PALE	16	1806	1808	1823	N18	E15	5362	02	17.9	17	SF		3	E	31		F
	RAMY	16	1806	1808	1827D	N17	E14	5362	02	17.8	21D	SF		2	E	34		
0322	PALE	16	2108	2109U	2210D	S12	E47	5368	02	20.4	62D	SF	C 5.1	3	E	44		
		16	2110		2200	No Flare Patrol												
0323	PALE	16	2201E	2203U	2214D	N20	E17	5362	02	18.2	13D	SF		3	E	44		F
		16	2215		2256	No Flare Patrol												
0324	YUNN	17	0106E	0106U	0118	S13	E42	5368	02	20.2	12D	SF		P	0106	16	0.2	
0325		17	0829*	0852	0907	S12	E40	5368	02	20.4	38	SF				100	1.3	E
	HTPR	17	0829	0852	0910	S12	E41	5368	02	20.4	41	SF		C	0852	100	1.3	E
	KANZ	17	0852	0852	0904	S13	E39	5368	02	20.3	12	SF		C				
0326	HTPR	17	0857	0928	1015	S18	W34	5356	02	14.8	78	SF		C	0936	80	1.0	EIK
0327	HTPR	17	0948	0953	1004	N20	E05	5362	02	17.8	16	SF		C	0953	50	0.5	EI
0328	HTPR	17	0959	1022	1033	S12	E40	5368	02	20.4	34	SN		C	1022	80	1.0	E

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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	NOAA/USAF			CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks	
					Lat	CMD	Region					Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0329	17	1120*	1127*	1324	S12	E36	5368	02 20.2	124	SN			100	1.3	E	
	HTPR	17 1120	1132	1440	S13	E39	5368	02 20.4	200	SN		C	1132	70	0.9	E
	CATA	17 1126E	1127	1127D	S12	E33	5368	02 20.0	1D	1N	1	P	1127	169	2.1	
	KANZ	17 1130	1134	1142	S11	E33	5368	02 20.0	12	SF		V				
	HTPR	17 1330	1347	1350	S13	E38	5368	02 20.4	20	SN		C	1338	60	0.8	E
0330	17	1406E	1412E	1422	S12	E34	5368	02 20.1	16	SN				100	1.2	E
	HTPR	17 1406	1412	1420	S13	E37	5368	02 20.4	14	SN		C	1412	100	1.2	E
	KANZ	17 1408	1414	1425	S12	E31	5368	02 19.9	17	SF		V				
		17 1535		1540	No Flare Patrol											
		17 1610		1627	No Flare Patrol											
	17 1643		1707	No Flare Patrol												
0331	17	1715I	1717U	1815D	S14	E36	5368	02 20.4	60D	SF				50		FUZ
	PALE	17 1715	1717U	1751D	S14	E36	5368	02 20.4	36D	SF	3	E		41		F
	RAMY	17 1716	1726U	1815D	S15	E36	5368	02 20.4	59D	SF	2	E		58		ZU
		17 2102		2107	No Flare Patrol											
		17 2242		2250	No Flare Patrol											
0332	PALE	18 0006E		0006	S18	W45	5356	02 14.6	59D	SF	3	E		20		
		18 0246		0305	No Flare Patrol											
0333	YUNN	18 0630E	0630U	0706	N29	E03	5371	02 18.5	36D	SN		P	0630	33	0.4	
0334	CATA	18 0746	0746	0800	N28	W90	5354	02 11.3	14	1N	1	C	0746	56		
0335	18	0836	0838	0850	S12	E21	5368	02 19.9	14	SF				22		
	LEAR	18 0836	0838	0848	S12	E21	5368	02 19.9	12	SF	3	E		22		
	KANZ	18 0840E	0840U	0851	S12	E21	5368	02 19.9	11D	SF		C				
0336	18	1014	1014	1022	S12	E23	5368	02 20.1	8	SF				26		
	SVTO	18 1011E	1013U	1025D	S13	E28	5368	02 20.5	14D	SF	2	E		32		
	LEAR	18 1012E	1014U	1022	S12	E20	5368	02 19.9	10D	SF	2	E		20		
	KANZ	18 1014	1014	1022	S11	E21	5368	02 20.0	8	SF		C				
		18 1129		1132	No Flare Patrol											
0337	RAMY	18 1402	1403	1419	S12	E18	5368	02 19.9	17	SF	4	E		11		F
0338	RAMY	18 1524	1528	1541	S17	W56	5356	02 14.4	17	SF	3	E		27		F
0339	18	1537	1541	1547	N16	E50	5373	02 22.4	10	SF C 2.2				42		F
	RAMY	18 1537	1541	1549	N16	E51	5373	02 22.5	12	SF C 2.2	4	E		50		F
	SVTO	18 1538E	1539U	1545	N17	E48	5373	02 22.3	7D	SF	2	E		34		
0340	RAMY	18 1830	1831	1844	S16	E84	5374	02 25.1	14	SF	2	E		33		F
0341	RAMY	18 1832	1840	1848D	N25	W59	5366	02 14.2	16D	SF C 3.5	2	E		21		F
		18 2048		2119	No Flare Patrol											
0342	19	00574	0101*	0207	N16	W62	5357	02 14.3	70	1N C 6.3				158	5.5	EIJT
	PALE	19 0057	0101	0149	N16	W61	5357	02 14.4	52	1F C 6.3	3	E		133		
	VORO	19 0059E	0113	0248	N17	W62	5357	02 14.3	109D	2F	2	C	0113	260	5.5	EIJT
	LEAR	19 0100	0102U	0139D	N14	W62	5357	02 14.3	39D	SF	1	E		65		F
	PURP	19 0101	0122	0145	N18	W63	5357	02 14.2	44	1B		C	0122	173		E
0343	19	0100*	0106*	0124	N23	W64	5366	02 14.1	24	1N				59	2.1	E
	MITK	19 0100	0106	0123	N22	W66	5366	02 14.0	23	1N		C	0106	90	2.1	E
	PALE	19 0113	0117	0124	N24	W61	5366	02 14.3	11	SF	3	E		28		
0344	YUNN	19 0250	0254	0258	S10	E82	5374	02 25.3	8	SF		C		41		
0345	19	03437	0413	0504	N22	E30	5368A	02 21.5	81	SF				99	1.3	EG
	YUNN	19 0343	0347U	0414D	N20	E30	5368A	02 21.4	31D	SF		P	0347	99	1.3	G
	MITK	19 0350	0413	0504	N23	E31	5368A	02 21.5	74	SF		C	0413			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)	
0346	TACH	19	0658E	0703U	0740D	S10	E12	5368	02	20.2	42D	SF		1	C	0703	117	1.2	E
			19 0741		0749	No Flare Patrol													
0347	SVTO	19	0922E	0926U	1013	N19	W19	5362	02	17.9	51D	1F C	3.6	2	E		126		FU
0348		19	1043	1045	1127	N21	W17	5362	02	18.1	44	SF					36		F
	SVTO	19	1043	1045	1127	N22	W17	5362	02	18.1	44	SF		3	E		23		F
	RAMY	19	1120E	1123U	1127	N20	W17	5362	02	18.2	70	SF		1	E		48		
0349	SVTO	19	1116	1117	1133	N18	E39	5373	02	22.4	17	SF C	4.0	3	E		18		
0350	RAMY	19	1200	1208	1232	N24	W66	5366	02	14.4	32	SF		3	E		25		
0351	RAMY	19	1225	1231	1252	S12	E09	5368	02	20.2	27	SF C	3.5	3	E		12		FH
0352	RAMY	19	1302	1322	1325	N25	W67	5366	02	14.3	23	SF		3	E		15		
0353	RAMY	19	1346	1347	1353	S11	E08	5368	02	20.2	7	SF C	9.7	3	E		17		F
0354	RAMY	19	1401	1402	1419	N25	W67	5366	02	14.4	18	SF		3	E		17		H
0355	RAMY	19	1404	1404	1409	N14	E39	5373	02	22.5	5	SF		3	E		13		F
0356	SVTO	19	1455	1502	1520	S10	E07	5368	02	20.1	25	SF		3	E		19		
0357	RAMY	19	1501	1505	1510	N24	W68	5366	02	14.4	9	SF		3	E		17		H
0358	RAMY	19	1551	1555	1602	N25	W69	5366	02	14.3	11	SF		3	E		15		
0359	RAMY	19	1712	1712	1722	N20	W22	5362	02	18.0	10	SF		3	E		14		
			19 1834		1839	No Flare Patrol													
			19 1844		1956	No Flare Patrol													
			19 2034		2106	No Flare Patrol													
0360		19	2107E	2108	2141	S12	E04	5368	02	20.2	34D	SF C	5.7				28		F
	HOLL	19	2107E	2108	2126D	S12	E01	5368	02	19.9	19D	SF		2	E		26		F
	PALE	19	2124E	2124U	2141	S13	E06	5368	02	20.3	17D	SF C	5.7	3	E		31		F
			19 2115		2123	No Flare Patrol													
0361	PALE	19	2345	2346	2356	N17	E36	5373	02	22.7	11	SF		3	E		27		
0362	YUNN	20	0307E	0307U	0323	S13	W06	5368	02	19.7	16D	SN			P	0307	33	0.3	
0363	YUNN	20	0325E	0327	0334	N15	W22	5372	02	18.5	9D	SN			P		16	0.2	
0364	LEAR	20	0415	0416	0419	S10	E67	5374	02	25.2	4	SF		3	E		24		
0365	YUNN	20	0714	0717	0731	N31	W18	5371	02	18.9	17	SN			C		33	0.5	
0366		20	07157	07186	0734	S08	W04	5368	02	20.0	19	SB					33	0.3	E
	YUNN	20	0715	0718	0731	S09	W03	5368	02	20.1	16	SB			C		33	0.3	
	ISTA	20	0722	0724	0736	S07	W04	5368	02	20.0	14	SB			V				E
0367		20	0738*	0741*	0813	S21	E22	5369	02	22.0	35	SN					42	0.5	F
	YUNN	20	0738	0741	0809	S20	E24	5369	02	22.1	31	SN			C		41	0.5	
	SVTO	20	0745	0750	0819	S19	E23	5369	02	22.1	34	SF		3	E		43		
	ISTA	20	0747	0751	0807	S21	E23	5369	02	22.1	20	1B			V				F
	KANZ	20	0750	0750	0818	S23	E18	5369	02	21.7	28	SF			C				
0368		20	07488	0751*	0805	S10	E00	5368	02	20.3	17	SN					26	0.4	EH
	YUNN	20	0748	0751	0800	S10	E00	5368	02	20.3	12	SN			C		41	0.4	
	SVTO	20	0754	0805	0812	S10	E00	5368	02	20.3	18	SF		3	E		12		H
	ISTA	20	0756		0804	S10	E01	5368	02	20.4	8	1N			V				E

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
								Region	Mo Day						Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0369		20	0854	0901	0918	N30	W21	5371	02	18.7	24	1N				88	2.3	F	
	YUNN	20	0854	0901	0923D	N32	W21	5371	02	18.7	290	1N		P		164	2.3		
	ISTA	20	0901		0930	N30	W20	5371	02	18.8	29	1B		V				F	
	KANZ	20	0902	0906	0912	N30	W21	5371	02	18.7	10	SF		C					
	SVTO	20	0902	0906	0913	N29	W21	5371	02	18.7	11	SF	3	E		13			
0370		20	1039	1040	1050	S10	E00	5368	02	20.4	11	SN				21	0.2	D	
	KANZ	20	1039	1043	1055	S10	W00	5368	02	20.4	16	SF		V					
	KAND	20	1040	1040	1045	S10	W00	5368	02	20.4	5	SN		P	1040	21	0.2	D	
0371	RAMY	20	1138E	1206	1254	N15	E26	5373	02	22.4	76D	SF	3	E		22		F	
0372		20	1220	1221	1226	N30	W22	5371	02	18.8	6	SF				17			
	RAMY	20	1220	1221	1227	N30	W22	5371	02	18.8	7	SF	3	E		17			
	KANZ	20	1221	1221	1225	N29	W22	5371	02	18.8	4	SF		V					
0373		20	1219	1219*	1234	S10	W04	5368	02	20.2	15	SF				22			
	RAMY	20	1219	1219	1234	S11	W03	5368	02	20.3	15	SF	3	E		22			
	KANZ	20	1221	1229	1233	S10	W04	5368	02	20.2	12	SF		V					
0374	RAMY	20	1311	1312	1320	N16	E26	5373	02	22.5	9	SF	3	E		27			
0375		20	1333	1334	1345	S12	E64	5374	02	25.4	12	SF				18		F	
	KANZ	20	1332E	1335U	1335D	S13	E63	5374	02	25.3	30	SF		C					
	RAMY	20	1333	1334	1345	S12	E64	5374	02	25.4	12	SF	3	E		18		F	
0376	SVTO	20	1356E	1357	1456	S15	W04	5368	02	20.3	60D	SB M 2.5	2	E		80		FZ	
0377	RAMY	20	1400	1401	1414	N30	W23	5371	02	18.8	14	SF	3	E		13			
0378		20	1639*	1647*	1812	N16	E23	5373	02	22.4	93	SF				16			
	RAMY	20	1639	1647	1829	N16	E24	5373	02	22.5	110	SF	3	E		25			
	HOLL	20	1714	1717	1732	N16	E23	5373	02	22.5	18	SF	3	E		11			
	HOLL	20	1744	1744	1835	N16	E23	5373	02	22.5	51	SF	3	E		13			
0379		20	1658	1659	1729	S10	E62	5374	02	25.4	31	SF				36			
	HOLL	20	1658	1700	1728	S10	E61	5374	02	25.3	30	SF	3	E		42			
	RAMY	20	1659	1659	1730	S09	E62	5374	02	25.4	31	SF	3	E		31			
0380		20	1709	1711	1729	S10	W07	5368	02	20.2	20	SF C 2.9				32		FH	
	HOLL	20	1709	1711	1723	S10	W08	5368	02	20.1	14	SF C 2.9	4	E		30		FH	
	RAMY	20	1709	1711	1735	S11	W06	5368	02	20.3	26	SF C 2.9	3	E		34		F	
0381		20	1807	1810	1822	S11	W06	5368	02	20.3	21	SF				13		F	
	RAMY	20	1801	1810	1825	S11	W06	5368	02	20.3	24	SF	3	E		14		F	
	HOLL	20	1808	1810	1818	S11	W06	5368	02	20.3	10	SF	3	E		12		F	
0382		20	1903	1910	1921	N30	W26	5371	02	18.7	18	SF				18		H	
	RAMY	20	1903	1911	1926	N30	W26	5371	02	18.7	23	SF	3	E		18		H	
	PALE	20	1908	1910	1916	N29	W25	5371	02	18.8	8	SF	3	E		17			
0383	HOLL	20	1910	1911	1918	S20	E15	5369	02	21.9	8	SF	3	E		15		F	
0384	PALE	20	2216	2218	2222	S08	E57	5374	02	25.2	6	SF	3	E		14			
		20	2244		2306	No Flare Patrol													
		20	2313		2314	No Flare Patrol													
0385	VORO	21	0025	0027	0035	S11	W11	5368	02	20.2	10	SF	2	C	0027	81	0.8	DIJTZ	
0386	VORO	21	0049	0052	0100	S09	W12	5368	02	20.1	11	SF	2	C	0052	108	1.1	E1JT	
0387	YUNN	21	0300	0306	0323	S09	E54	5374	02	25.2	23	1N		C		148	2.6		
		21	0420		0605	No Flare Patrol													
0388	YUNN	21	0637E	0637U	0644	S12	W15	5368	02	20.1	7D	SN		P	0637	25	0.3		
0389	ISTA	21	1025	1028	1103	N29	E17	5376	02	22.8	38	1B		V				FW	



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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp Opt	Xray	See	Obs Type	Area Measurement			Remarks		
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)			
0390		21	10251	10282	1049	N16	E12	5373	02	22.3	24	SF	C	4.1		65	1.2	E		
	SVTO	21	1025	1030	1050	N16	E12	5373	02	22.3	25	SF	C	4.1	3	E	26			
	KAND	21	1026	1028	1048	N16	E12	5373	02	22.3	22	SF			P	1028	104	1.2	E	
0391		21	1207	1217*	1342	S12	W15	5368	02	20.4	95	SB	M	2.7		154		FHK		
	RAMY	21	1207	1217	1342	S12	W14	5368	02	20.4	95	SB	M	2.7	3	E	69		FH	
	RAMY	21	1207	1250	1342	S12	W14	5368	02	20.4	95	SB				E	178		K	
	SVTO	21	1207	1253	1341	S13	W16	5368	02	20.3	94	1B			2	E	214		F	
		21	1539		1647	No Flare Patrol														
0392	HOLL	21	1704E	1707	1732	S13	W19	5368	02	20.3	28D	SF	C	4.9	3	E	36		F	
0393		21	1817	1819	1912D	S13	W20	5368	02	20.2	55D	1B	M	3.9		178		F		
	RAMY	21	1803E	1820U	1854D	S14	W21	5368	02	20.2	51D	1N	M	3.9	2	E	126		F	
	HOLL	21	1817	1819	1912D	S12	W19	5368	02	20.3	55D	1B	M	3.9	3	E	230		F	
0394		21	1847	1851	1910	S09	E46	5374	02	25.2	23	SF				25				
	HOLL	21	1847	1851	1910	S09	E46	5374	02	25.2	23	SF			3	E	38			
	RAMY	21	1852E	1856U	1924D	S09	E47	5374	02	25.3	32D	SF			2	E	12			
0395	RAMY	21	1957	1958	2001	S09	E45	5374	02	25.2	4	SF			3	E	24			
0396	RAMY	21	2039E	2042U	2101D	S09	E46	5374	02	25.3	22D	SF			2	E	19			
		21	2051		2059	No Flare Patrol														
0397	RAMY	21	2104	2111	2123	S13	W22	5368	02	20.2	19	SF	C	7.2	2	E	36		F	
		21	2129		2219	No Flare Patrol														
		21	2225		2231	No Flare Patrol														
0398	HOLL	21	2235	2240	2251	S11	E44	5374	02	25.2	16	SF			3	E	41		F	
0399		21	2347	23561	2430	S12	W21	5368	02	20.4	43	1B	M	7.9		138	2.1	EFHIJTZ		
	HOLL	21	2343E	2357	2435	S13	W20	5368	02	20.5	52D	SB	M	7.9	3	E	88		FH	
	VORO	21	2347	2356	2424	S12	W22	5368	02	20.3	37	1B			2	C	2356	188	2.1	EIJTZ
		22	0301		0302	No Flare Patrol														
		22	0322		0653	No Flare Patrol														
0400	YUNN	22	0654E	0654U	0703	S12	W29	5368	02	20.1	9D	SN			P	0654	25	0.3		
0401	YUNN	22	0758	0804	0810	S13	W28	5368	02	20.2	12	SN				C	33	0.4		
0402	LEAR	22	0906	0907	0915	N30	W47	5371	02	18.7	9	SF			3	E	15			
0403	LEAR	22	0935	0950	1002	N23	W56	5362	02	18.1	27	SF			3	E	47		F	
0404	LEAR	22	0944	0945	1007	S10	W33	5368	02	19.9	23	SF	M	1.3	3	E	40		F	
		22	1026		1129	No Flare Patrol														
0405	SVTO	22	1040E	1040U	1111D	S13	W33	5368	02	19.9	31D	SF			1	E	46		F	
0406	RAMY	22	1207	1212	1218	S11	W33	5368	02	20.0	11	SF			3	E	13		F	
0407	RAMY	22	1236	1247	1259	N30	W47	5371	02	18.8	23	SF			3	E	46			
0408	RAMY	22	1242	1244	1253	S10	W36	5368	02	19.8	11	SF	C	4.5	3	E	21			
0409		22	1259	1301*	1339	S13	W36	5368	02	19.8	40	SN	M	1.0		77		FK		
	SVTO	22	1258E	1301U	1358D	S14	W34	5368	02	20.0	60D	SN	M	1.0	2	E	95		F	
	SVTO	22	1258E	1320	1358D	S13	W40	5368	02	19.5	60D	SF				E	37		K	
	RAMY	22	1259	1301	1339	S11	W34	5368	02	20.0	40	SN	M	1.0	3	E	98		F	
0410		22	1438	1438	1500	S11	W34	5368	02	20.0	22	SF	C	7.9		58		F		
	RAMY	22	1438	1438	1502	S10	W35	5368	02	20.0	24	SF	C	7.9	3	E	22		F	
	HOLL	22	1443E	1443U	1458	S12	W33	5368	02	20.1	15D	SF	C	7.9	2	E	94		F	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt Xray	Obs See	Type	Area Measurement			Remarks	
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0411	RAMY	22	1635	1637	1644	N17	W02	5373	02	22.5	9	SF	3	E		33			
0412		22	17059	1716	1730	S12	W34	5368	02	20.1	25	SN				32		F	
	HOLL	22	1705	1716	1738	S12	W34	5368	02	20.1	33	SN	3	E		46		F	
	RAMY	22	1714	1716	1723	S12	W34	5368	02	20.1	9	SF	3	E		17		F	
0413		22	1742	1748*	1818	S13	W33	5368	02	20.2	36	SN C 6.9				34		EFK	
	RAMY	22	1742	1748	1816	S12	W32	5368	02	20.3	34	SF C 6.9	3	E		20		F	
	HOLL	22	1742	1748	1819	S13	W34	5368	02	20.2	37	SN C 6.9	3	E		38		FE	
	HOLL	22	1742	1807	1819	S13	W34	5368	02	20.2	37	SN		E		43		K	
0414		22	18238	1824*	1837	N16	W02	5373	02	22.6	14	SF				35		F	
	RAMY	22	1823	1824	1828	N16	W02	5373	02	22.6	5	SF	3	E		10			
	HOLL	22	1831	1837	1846	N17	W03	5373	02	22.5	15	SF	3	E		60		F	
		22	2031		2145	No Flare Patrol													
0415		22	23493	2353	2358	N15	W08	5373	02	22.4	9	SF				74	1.4	DIJT	
	VORO	22	2349	2353	2358	N16	W08	5373	02	22.4	9	SF	2	C	2353	125	1.4	DIJT	
	HOLL	22	2352	2353	2358	N14	W08	5373	02	22.4	6	SF	3	E		24			
0416		22	2339*	23551	2408	S13	W36	5368	02	20.3	29	SF C 3.4				82	1.7	DFIJT	
	LEAR	22	2339	2356	2421	S14	W36	5368	02	20.3	42	SF C 3.4	3	E		86		F	
	VORO	22	2351	2356	2404	S12	W37	5368	02	20.2	13	SN	2	C	2356	134	1.7	DIJT	
	HOLL	22	2353	2355	2359	S13	W36	5368	02	20.3	6	SF C 3.4	3	E		26			
0417	LEAR	23	0010	0011	0021	N17	W12	5373	02	22.1	11	SF	3	E		18		F	
0418	VORO	23	0123	0125	0130	N16	W08	5373	02	22.4	7	SN	2	C	0125	161	1.8	DIJT	
0419		23	01561	01595	0226	N22	W63	5362	02	18.2	30	2F C 9.6				207		AFJU	
	VORO	23	0156	0159	0226	N23	W64	5362	02	18.1	30	2F	2	C	0159	287		AJU	
	LEAR	23	0157	0204	0227D	N22	W62	5362	02	18.3	30D	1F C 9.6	3	E		127		F	
0420		23	0242	02511	0258	N16	W18	5373	02	21.7	16	1B				153	1.8	DIJT	
	VORO	23	0242	0251	0258	N17	W17	5373	02	21.8	16	SB	2	C	0251	125	1.5	DIJT	
	YUNN	23	0248E	0252	0258D	N15	W19	5373	02	21.7	10D	1B		P		181	2.1		
0421	LEAR	23	0422	0425	0431	S13	W41	5368	02	20.1	9	SF M 1.2	3	E		14		F	
0422	TACH	23	0610	0615U	0658D	S12	W41	5368	02	20.2	48D	1B	1	C	0615	224	3.1	F	
0423	SVTO	23	1333E	1333U	1408D	S13	W50	5368	02	19.8	35D	SF	2	E		25			
0424	RAMY	23	1342	1345	1405	S21	W22	5369	02	21.9	23	SF	3	E		21			
0425	HOLL	23	1511	1511	1525	S14	W45	5368	02	20.2	14	SF	3	E		24		F	
0426	RAMY	23	1705	1718	1751	S13	W48	5368	02	20.1	46	SF C 6.7	3	E		76		F	
		23	1757		1819	No Flare Patrol													
0427	HOLL	23	1909	1926	2035	N17	W18	5373	02	22.4	86	SF C 6.9	3	E		57		F	
0428		23	1938	1949*	2041	S16	W54	5368	02	19.7	63	1N C 6.6				66		FK	
	HOLL	23	1938	1949	2041	S16	W54	5368	02	19.7	63	1N C 6.6	3	E		105		F	
	HOLL	23	1938	2021	2041	S16	W54	5368	02	19.7	63	1N		E		28		K	
0429		23	2045	2046*	2126	S16	W53	5368	02	19.8	41	SN C 5.3				40		K	
	HOLL	23	2045	2046	2126	S16	W53	5368	02	19.8	41	SN		E		24		K	
	HOLL	23	2045	2110	2126	S16	W53	5368	02	19.8	41	SN C 5.3	3	E		55		*	
0430	VORO	23	2339	2343	2353	S12	W56	5368	02	19.8	14	SF	2	C	2343	81	1.4	EIJTZ	
0431		23	2344*	24011	2419	S14	W53	5368	02	20.0	35	SF C 5.7				104	3.1	EFIJT	
	HOLL	23	2344	2402	2410	S16	W55	5368	02	19.8	26	SN C 5.7	3	E		67			
	VORO	23	2353	2402	2429	S13	W53	5368	02	20.0	36	1F	2	C	2403	188	3.1	EIJT	
	LEAR	23	2354	2401	2418	S14	W50	5368	02	20.2	24	SF C 5.7	3	E		56		F	

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Grp #	Sta	Start Day	Max (UT)	End (UT)	NOAA/USAF			CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
					Lat	CMD	Region							Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0432		24 0001	0002	0014	S23	W27	5369	02	21.9	13	SN				95	1.7	DIT
	VORO	24 0001	0003	0017	S22	W27	5369	02	21.9	16	SN	2	C	0003	143	1.7	DIT
	HOLL	24 0002E	0002	0010	S24	W27	5369	02	21.9	8D	SF	3	E		47		
0433	LEAR	24 0007E		0007	S13	W66		02	19.0	8D	SF	3	E		24		
		24 0301		0504	No Flare Patrol												
0434	ABST	24 0605	0608	0625	N17	W05	5373D	02	23.9	20	SN		C	0608	174	1.9	ET
0435	ISTA	24 0737	0740	0752	S13	W57	5368	02	20.0	15	SN		V				F
0436	ISTA	24 0804	0815	0824	S10	W56	5368	02	20.1	20	1N		V				F
0437		24 0824E	0828	0837	S12	W59	5368	02	19.9	13	SN				134	2.6	D
	YUNN	24 0824	0828	0837	S13	W59	5368	02	19.9	13	1N		C		181	3.6	D
	ISTA	24 0826	0828	0839	S12	W58	5368	02	20.0	13	SN		V				D
	ABST	24 0828E	0828	0835	S10	W60	5368	02	19.8	7D	SN		P	0828	87	1.7	D
0438	ABST	24 0854	0858	0903D	N17	W05	5378	02	24.0	9D	SN		P	0858	174	1.9	ET
0439	ABST	24 0858	0900	0903D	N15	E64	5377	03	1.2	5D	1N		P	0900	87		D
0440	ISTA	24 0923	0926	0939	S12	W56	5368	02	20.2	16	SF		V				E
0441		24 0950E	0950	0957	N10	E62	5377	03	1.1	7	SN				49	0.9	DE
	SVTO	24 0934E	0951	0959	N12	E62	5377	03	1.1	25D	SF	2	E		56		
	KAND	24 0950	0950	0955	N09	E60	5377	02	28.9	5	SN		P	0950	42	0.9	D
	ISTA	24 0952		0956	N10	E65	5377	03	1.3	4	SN		V				E
0442	KHAR	24 1028E		1036	S14	W60	5368	02	19.9	8D	SF	2	P	1032			D
0443	KHAR	24 1108U		1115	S14	W60	5368	02	19.9	7U	SF	2	V	1108			D
0444	SVTO	24 1124	1127	1130	N11	E59	5377	02	28.9	6	SF	3	E		25		
0445	SVTO	24 1145	1148	1155	S16	W58	5368	02	20.1	10	SF	3	E		21		
0446		24 1210E	1212*	1230	S14	W61	5368	02	19.9	20	SF	C 3.9			36		DFH
	KHAR	24 1210	1212	1215	S14	W60	5368	02	20.0	5	SF		2	V	1212		D
	RAMY	24 1217	1221	1251	S13	W61	5368	02	19.9	34	SF	C 3.9	3	E	53		F
	KHAR	24 1218	1222	1228	S14	W60	5368	02	20.0	10	SN		2	V	1222		DH
	SVTO	24 1219	1220	1225	S15	W64	5368	02	19.7	6	SF	C 3.9	3	E	18		
0447		24 1419E	1420	1442	S13	W60	5368	02	20.1	23	SF	C 8.3			92	4.0	BEFI
	RAMY	24 1419	1420	1451	S13	W61	5368	02	20.0	32	SF	C 8.3	3	E	46		F
	HOLL	24 1420	1420	1433	S14	W60	5368	02	20.1	13	SF	C 8.3	3	E	30		
	HTPR	24 1431E		1514D	S13	W60	5368	02	20.1	43D	1N		C	1434	200	4.0	BEI
0448		24 1429E	1439	1443	N10	E57	5377	02	28.9	14	SF				60		
	RAMY	24 1429	1439	1442	N11	E58	5377	03	1.0	13	SF		3	E	67		
	HOLL	24 1432	1439	1444	N10	E56	5377	02	28.8	12	SF		3	E	54		
0449	HOLL	24 1504	1504	1508	N11	E60	5377	03	1.1	4	SF		3	E	15		
0450		24 1543*	1546*	1624	S13	W64	5368	02	19.8	41	SF	C 4.7			30		K
	HOLL	24 1543	1546	1624	S13	W64	5368	02	19.8	41	SF			E	32		K
	HOLL	24 1543	1558	1624	S13	W64	5368	02	19.8	41	SF	C 4.7	3	E	19		
	RAMY	24 1557	1559	1624	S12	W64	5368	02	19.8	27	SF	C 4.7	3	E	39		
0451	PALE	24 1730E	1732U	1810D	S12	W61	5368	02	20.1	40D	SF		2	E	53		F
0452		24 1742E	1743	1746	N11	E58	5377	03	1.1	4	SF				37		F
	HOLL	24 1742	1743	1746	N11	E59	5377	03	1.2	4	SF		3	E	29		
	PALE	24 1742E	1743	1813D	N11	E56	5377	02	28.9	31D	SN		2	E	39		F
	RAMY	24 1743	1743	1837D	N12	E60	5377	03	1.2	54D	SF		3	E	43		
0453	HOLL	24 1932	1940	1948	N10	E57	5377	03	1.1	16	SF		4	E	35		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt	Xray	Obs See	Type	Area Measurement			Remarks	
																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0454	HOLL	24	1947	1947	2002	S13	W66	5368	02	19.8	15	SF	C	2.5	4	E		25		
0455	HOLL	24	2006	2011	2114	N10	E57	5377	03	1.1	68	SN	C	9.7	4	E		93		EF
0456	PALE	24	2106	2109	2118	S13	W66	5368	02	19.9	12	SF	C	5.3	3	E		20		
0457		24	2126	2130	2200	N13	E54	5377	03	1.0	34	SF						45		
	PALE	24	2126	2130	2154D	N13	E54	5377	03	1.0	28D	SF			3	E		25		
	HOLL	24	2152E	2154U	2200	N13	E54	5377	03	1.0	8D	SF			3	E		65		
0458	HOLL	24	2152	2154U	2157	S09	E02	5374	02	25.1	5	SF			3	E		49		
0459	HOLL	24	2152E	2155U	2157	S12	W64	5368	02	20.1	5D	SF			3	E		26		
0460		24	2243	2245	2258	N12	E55	5377	03	1.1	15	SF						44		F
	HOLL	24	2240E	2240U	2304	N13	E54	5377	03	1.0	24D	SF			3	E		63		
	PALE	24	2243	2245	2252	N11	E56	5377	03	1.1	9	SF			3	E		25		F
0461		24	22594	23012	2313	S13	W67	5368	02	19.9	14	SF	C	7.0				47		
	PALE	24	2259	2301	2310	S13	W66	5368	02	20.0	11	SF	C	7.0	3	E		59		
	LEAR	24	2303	2303	2307	S13	W66	5368	02	20.0	4	SF	C	7.0	3	E		13		
	HOLL	24	2303E	2303U	2321	S13	W68	5368	02	19.8	18D	SF			3	E		68		
0462	HOLL	24	2309	2313	2316	N10	E55	5377	03	1.1	7	SF			3	E		12		
0463		24	23341	2336*	2356	N10	E55	5377	03	1.1	22	SN	C	2.4				68		K
	PALE	24	2334	2336	2355	N11	E56	5377	03	1.2	21	SN	C	2.4		E		75		K
	PALE	24	2334	2349	2355	N11	E56	5377	03	1.2	21	SN	C	2.4	3	E		52		
	LEAR	24	2335	2336	2356	N10	E54	5377	03	1.0	21	SF				E		68		K
	HOLL	24	2335E	2337	2356	N10	E55	5377	03	1.1	21D	SN			3	E		86		
	HOLL	24	2335E	2349	2356	N10	E55	5377	03	1.1	21D	SN				E		77		K
	LEAR	24	2335	2349	2356	N10	E54	5377	03	1.0	21	SF			3	E		48		
0464		24	2335	2342*	2404	S12	W68	5368	02	19.8	29	SN	C	3.4				36		K
	HOLL	24	2335	2342	2408D	S13	W69	5368	02	19.8	33D	SN	C	3.4	3	E		57		K
	PALE	25	0001E	0001	0004	S12	W67	5368	02	19.9	3D	SF	C	3.4	3	E		15		
0465		25	01031	0105	0112	N12	E53	5377	03	1.0	9	SF						38		
	PALE	25	0103	0105	0113	N10	E54	5377	03	1.1	10	SF			3	E		47		
	LEAR	25	0104	0105	0111	N13	E52	5377	03	1.0	7	SF			3	E		28		
0466		25	01161	01214	0134	N42	E58	5380	03	1.8	18	1F	C	6.4				86		F
	PALE	25	0116	0125	0135	N41	E59	5380	03	1.9	19	1F	C	6.4	3	E		136		F
	LEAR	25	0117	0121	0134	N42	E58	5380	03	1.8	17	SF			3	E		35		F
0467		25	01488	01524	0200	N11	E52	5377	03	1.0	12	SF						23		0.6
	YUNN	25	0148	0152	0201	N11	E52	5377	03	1.0	13	SN				C		33		0.6
	PALE	25	0152	0156	0200	N10	E52	5377	03	1.0	8	SF			3	E		21		
	LEAR	25	0156	0156	0159	N13	E52	5377	03	1.0	3	SF			3	E		15		
0468		25	02414	0247	0254	N11	E51	5377	02	28.9	13	SN						52		1.2
	YUNN	25	0241	0247U	0256	N11	E51	5377	02	28.9	15	SN				P	0247	66		1.2
	PALE	25	0245	0247	0252	N11	E51	5377	02	28.9	7	SF			3	E		39		
0469	PALE	25	0242	0242	0246	S15	W62	5368	02	20.4	4	SF			3	E		20		
0470	YUNN	25	0247E	0247U	0256	S26	E36	5375B	02	27.9	9D	SN				P	0247	49		0.7
0471	PALE	25	0313	0313	0318	N10	E55	5377	03	1.3	5	SF			3	E		28		
0472		25	03325	03353	0350	S14	W70	5368	02	19.8	18	SN	C	2.8				18		
	YUNN	25	0332	0335	0356	S14	W70	5368	02	19.8	24	SN				C		16		
	LEAR	25	0337	0338	0345	S13	W71	5368	02	19.8	8	SF	C	2.8	3	E		21		
0473		25	03393	03441	0352	N11	E50	5377	02	28.9	13	SN						34		0.6
	LEAR	25	0339	0345	0353	N11	E50	5377	02	28.9	14	SF			3	E		35		
	YUNN	25	0342	0344	0350	N11	E50	5377	02	28.9	8	SN				C		33		0.6
0474	YUNN	25	0347	0348	0404	S29	E27	5375B	02	27.3	17	SN				C		25		0.3

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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	NOAA/USAF			CMP Mo	Dur Day	Imp (Min)	Opt Xray	Obs See	Area Measurement (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks	
					Region	Lat	CMD										
		25 0527		0529	No Flare Patrol												
0475	ABST	25 0549	0552	0610	S26	E26	5375B	02	27.3	21	SN	C	0552	87	1.1	DT	
0476	ABST	25 0550	0551	0602	N10	E50	5377	03	1.0	12	SF	C	0551	87	1.5	D	
0477	YUNN	25 0653E	0653U	0729	S27	E27	5375B	02	27.4	36D	SF	P	0653	25	0.3		
0478	25	07184	07216	0738	S16	E50	5379	03	1.1	20	SN			56	0.9	D	
	YUNN	25 0718	0721	0741	S16	E51	5379	03	1.2	23	SN	C		25	0.4		
	ABST	25 0722	0727	0734	S15	E50	5379	03	1.1	12	SF	C	0727	87	1.4	D	
0479	ABST	25 0848	0851	0859	N30	W18	5376	02	23.9	11	SN	C	0851	87	1.2	D	
0480	25	08501	08512	0858	N11	E50	5377	03	1.1	8	SN			60	1.5	D	
	LEAR	25 0850	0851	0858	N12	E49	5377	03	1.0	8	SF	2	E	32			
	ABST	25 0851	0853	0859	N10	E50	5377	03	1.1	8	SN	C	0851	87	1.5	D	
		25 0906		0916	No Flare Patrol												
		25 1009		1027	No Flare Patrol												
		25 1048		1135	No Flare Patrol												
0481	RAMY	25 1215	1220	1238D	N17	W42	5373	02	22.3	23D	SF	3	E	40		EF	
0482	RAMY	25 1331	1335	1341	N15	W20	5378	02	24.0	10	SF	3	E	12			
0483	HOLL	25 1546	1554	1608	S20	E68	5380A	03	2.8	22	SF	3	E	14			
0484	RAMY	25 1646	1646	1650	S13	W78	5368	02	19.8	4	SF	3	E	40			
0485	25	1747*	1754*	1836	N14	W22	5378	02	24.1	49	SF			58			
	RAMY	25 1747	1754	1858D	N15	W22	5378	02	24.1	71D	SF	2	E	47			
	PALE	25 1800	1816	1836	N14	W23	5378	02	24.0	36	SF	3	E	69			
0486	25	18562	1858*	1938	N16	W46	5373	02	22.3	42	SF C 4.2			48			
	HOLL	25 1856	1925	2001	N17	W45	5373	02	22.4	65	SF C 4.2	3	E	79			
	PALE	25 1858	1858	1916	N14	W46	5373	02	22.3	18	SF	3	E	16			
0487	HOLL	25 2055	2056	2100	S16	W75	5368	02	20.2	5	SF	3	E	27			
0488	HOLL	25 2157	2158	2209	S13	W80	5368	02	19.9	12	SF C 3.7	3	E	33			
0489	HOLL	25 2201	2203	2227	S30	E18	5375	02	27.3	26	SF	3	E	26			
0490	PALE	25 2249	2249	2255	N15	W23	5378	02	24.2	6	SF	3	E	12		F	
0491	25	23414	23462	2409	N18	W48	5373	02	22.3	28	SF			46	1.6	DFIJT	
	VORO	25 2341	2346	2420	N18	W47	5373	02	22.4	39	SF	2	C	2346	99	1.6	DIJT
	HOLL	25 2345	2346	2404	N17	W48	5373	02	22.3	19	SF	3	E	21			
	PALE	25 2345	2348	2403	N18	W48	5373	02	22.3	18	SF	3	E	18		F	
0492	PALE	26 0009	0010	0013	S12	W79	5368	02	20.0	4	SF	3	E	16			
0493	26	01416	01444	0211	N10	E41	5377	03	1.1	30	SF			50	1.7	EFHIJT	
	VORO	26 0141	0148	0228	N11	E41	5377	03	1.1	47	SF	2	C	0157	116	1.7	EHIJT
	PALE	26 0144	0144	0209	N10	E41	5377	03	1.1	25	SF	3	E	15		F	
	LEAR	26 0147	0148	0157	N10	E40	5377	03	1.1	10	SF	3	E	18			
0494	26	02301	0232	0241	N15	W25	5378	02	24.2	11	SF C 2.4			63	1.6	DIT	
	VORO	26 0230	0232	0251	N16	W25	5378	02	24.2	21	SF	2	C	0232	134	1.6	DIT
	PALE	26 0231	0232	0235	N15	W25	5378	02	24.2	4	SF C 2.4	3	E	27			
	LEAR	26 0231	0232	0236	N14	W25	5378	02	24.2	5	SF C 2.4	4	E	27			
0495	26	03204	03264	0352	N42	E44	5380	03	1.7	32	SF C 6.0			56		EFU	
	MITK	26 0320	0330	0354	N42	E43	5380	03	1.7	34	SN	C	0330			E	
	PALE	26 0323	0326	0353	N42	E46	5380	03	1.9	30	SF C 6.0	3	E	61		UF	
	LEAR	26 0324	0328	0348	N42	E43	5380	03	1.7	24	SF C 6.0	3	E	51		UF	
0496	PURP	26 0434E	0439	0558	S08	W15	5374	02	25.1	84D	SB	C	0439	70	0.7	E	

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Gr: #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks	
											Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0497		26 0530*	0551	0558	N18 W50	5373	02 22.4	28	SN			71	1.8	E	
	PURP	26 0530	0551	0555	N20 W50	5373	02 22.4	25	SB		C	0551	95	1.8	E
	LEAR	26 0547	0551	0601	N17 W51	5373	02 22.4	14	SF		3 E		47		
0498	CATA	26 0835	0835	0835D	S11 W90	5368	02 19.6	14D	1N		1 P	0835	56		
		26 1032		1129	No Flare Patrol										
		26 1143		1333	No Flare Patrol										
0499	SVTO	26 1356	1412	1435	S21 E38	5379	03 1.5	39	SF		3 E		33		F
0500	HOLL	26 1553	1602	1611	N40 E39	5380	03 1.8	18	SF		3 E		16		F
0501	HOLL	26 1653	1655	1851	S20 E30	5379	03 1.0	118	1N C 4.3		3 E		113		EF
0502	HOLL	26 1817	1824	1852	S26 E10	5375	02 27.5	35	SN		3 E		64		EF
0503	HOLL	26 2156	2202	2217	S27 E09	5375	02 27.6	21	SF		3 E		61		F
0504	LEAR	26 2320	2331	2348	N14 W63	5373	02 22.2	28	SF		3 E		16		
0505	YUNN	27 0112	0116	0118	S16 E36	5379	03 1.8	6	SN		C		16	0.2	
0506		27 01323	01371	0201	S22 E31	5379	03 1.4	29	1N M 1.8				260	4.6	E
	YUNN	27 0132	0137	0204	S22 E30	5379	03 1.4	32	1N		C		378	4.6	E
	MITK	27 0133	0138	0203	S21 E32	5379	03 1.5	30	SB		C	0138			E
	LEAR	27 0135	0137	0155	S22 E31	5379	03 1.4	20	1N M 1.8		3 E		142		
0507	YUNN	27 0134	0141	0204	S18 W29	5382	02 24.8	30	SF		P		33	0.4	
0508	YUNN	27 0250E	0253	0325D	N13 W42	5378	02 23.9	35D	SN		P		99	1.5	
0509		27 06362	06371	0644	N16 W64	5373	02 22.4	8	SF C 2.4				33		
	LEAR	27 0636	0637	0646	N17 W64	5373	02 22.4	10	SF C 2.4		3 E		54		
	SVTO	27 0638	0638	0643	N15 W64	5373	02 22.4	5	SF C 2.4		3 E		12		
0510	SVTO	27 0953	0954	1017D	S18 W33	5382	02 24.9	24D	SF		2 E		18		
0511	SVTO	27 0956E	0956U	1000D	N58 W21		02 25.6	4D	SF		1 E		35		
0512	SVTO	27 1007E	1007U	1136D	S18 E23	5379	03 1.2	89D	SF C 2.5		2 E		39		F
		27 1025		1212	No Flare Patrol										
		27 1214		1251	No Flare Patrol										
		27 1257		1304	No Flare Patrol										
		27 1312		1318	No Flare Patrol										
		27 1323		1352	No Flare Patrol										
0513		27 1618	1619	1644	S22 E23	5379	03 1.4	26	SF				31		F
	HOLL	27 1618	1619	1640	S21 E22	5379	03 1.4	22	SF		3 E		22		F
	RAMY	27 1618	1621U	1648	S22 E24	5379	03 1.5	30	SF		3 E		40		
0514		27 16362	1639	1646	S28 E00	5375	02 27.7	10	SF				21		
	HOLL	27 1636	1639	1646	S28 W05	5375	02 27.3	10	SF		3 E		24		
	RAMY	27 1638	1639	1645	S27 E06	5375	02 28.2	7	SF		3 E		18		
0515		27 1639*	1640*	1705	N38 E24	5380	03 1.6	26	SF				16		F
	RAMY	27 1639	1640	1703	N38 E24	5380	03 1.6	24	SF		3 E		20		
	HOLL	27 1655	1655	1707	N39 E24	5380	03 1.6	12	SF		3 E		11		F
0516		27 1658	17041	1732	N16 E24	5383	03 1.5	34	1F				99		EF
	HOLL	27 1658	1704	1735	N16 E24	5383	03 1.5	37	1F		3 E		104		EF
	RAMY	27 1658	1705	1730	N17 E25	5383	03 1.6	32	SF		3 E		94		
0517		27 1805*	1818	1848	S22 E22	5379	03 1.4	43	SF				30		F
	RAMY	27 1805	1811U	1846	S22 E22	5379	03 1.4	41	SF		3 E		26		
	HOLL	27 1817	1818	1851	S21 E21	5379	03 1.4	34	SF		3 E		33		F

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H $\alpha$  SOLAR FLARES

FEBRUARY 1989

Grp #	Sta	Start Day (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)			
0518		27 1836	1842	1850	N14	W72	5373	02 22.3	14	SF						32			
	HOLL	27 1836	1842	1850	N13	W71	5373	02 22.4	14	SF		3	E			35			
	RAMY	27 1836	1843	1858D	N14	W73	5373	02 22.2	22D	SF		3	E			28			
0519		27 1949	2025*	2129	N17	W72	5373	02 22.3	100	1N C 4.3						105		FK	
	RAMY	27 1949	2025	2119D	N17	W72	5373	02 22.3	90D	1N			E			65		K	
	RAMY	27 1949	2118U	2119D	N17	W72	5373	02 22.3	90D	1N C 4.3		2	E			124		F	
	HOLL	27 2055E	2114	2129	N16	W71	5373	02 22.5	34D	1N C 4.3		3	E			125		F	
0520		27 20123	2017*	2114D	S22	E22	5379	03 1.5	62D	SF						47		FK	
	HOLL	27 2012	2017	2100D	S22	E22	5379	03 1.5	48D	SF			E			52		K	
	HOLL	27 2012	2030	2100D	S22	E22	5379	03 1.5	48D	SF		3	E			51		F	
	RAMY	27 2015	2029	2114D	S22	E22	5379	03 1.5	59D	SF		3	E			39		F	
0521	HOLL	27 2206	2210	2250	S21	E21	5379	03 1.5	44	SF		3	E			41		F	
		27 2337		2400	No Flare Patrol														
		28 0000		0007	No Flare Patrol														
		28 0035		0036	No Flare Patrol														
0522		28 0100	0107	0124	N14	W56	5378	02 23.8	24	SF						46	0.5		
	LEAR	28 0100	0107	0123	N13	W56	5378	02 23.8	23	SF		3	E			66			
	YUNN	28 0110E	0110U	0124	N14	W56	5378	02 23.8	14D	SF			P	0110		25	0.5		
0523	YUNN	28 0203	0209	0222	N13	W57	5378	02 23.8	19	SN			P			25	0.5		
0524	YUNN	28 0246	0252	0310	S20	E17	5379	03 1.4	24	SF			C			132	1.5		
0525		28 02574	03076	0322	N16	E20	5383	03 1.6	25	SF						67	1.2		
	YUNN	28 0257	0307	0325	N17	E21	5383	03 1.7	28	SF			C			99	1.2		
	LEAR	28 0301	0313	0320	N16	E20	5383	03 1.6	19	SF		3	E			35			
0526	YUNN	28 0405	0408	0429	S26	W03	5375	02 27.9	24	SN			C			49	0.5		
		28 0417		0421	No Flare Patrol														
0527	ABST	28 0521	0522	0526	S23	E16	5379	03 1.4	5	SN			C	0522		174	1.9	ET	
0528	LEAR	28 0812	0814	0818	N13	W59	5378	02 23.9	6	SF		3	E			13			
		28 0911		0912	No Flare Patrol														
0529		28 1030E	1048	1258	N14	W62	5378	02 23.7	148D	1F						82	2.5	EHI	
	SVTO	28 1030E	1048	1204D	N12	W62	5378	02 23.8	94D	SN		2	E			44			
	HPR	28 1118E		1132D	N14	W63	5378	02 23.7	14D	1F			C	1128		120	2.5	EI	
	RAMY	28 1130E	1130U	1258	N14	W61	5378	02 23.9	88D	SF		3	E			42		H	
	HPR	28 1146E		1330D	N14	W63	5378	02 23.7	104D	1F			C	1210		120	2.5	EI	
0530	SVTO	28 1056	1059	1122	S20	E12	5379	03 1.4	26	SF		3	E			20		F	
		28 1139		1143	No Flare Patrol														
0531		28 11552	11571	1210	S08	E01		02 28.6	15	SN						50	0.5	E	
	HPR	28 1155	1158	1210	S08	E01		02 28.6	15	SN			C	1158		50	0.5	E	
	KANZ	28 1157	1157	1204D	S09	E01		02 28.6	7D	SF			C						
	28 1331		1335	No Flare Patrol															
0532		28 1343	1344*	1509	N13	W62	5378	02 23.9	86	SN						58		K	
	SVTO	28 1235E	1424	1515	N12	W62	5378	02 23.8	160D	SN			E			56		K	
	SVTO	28 1235E	1435	1515	N12	W62	5378	02 23.8	160D	SN		2	E			46			
	RAMY	28 1343	1344	1457	N14	W63	5378	02 23.8	74	SF		3	E			71			
0533		28 15181	1521	1538	S20	E10	5379	03 1.4	20	SF C 2.7						58		F	
	RAMY	28 1518	1521	1544	S20	E11	5379	03 1.5	26	SF C 2.7		3	E			79		F	
	SVTO	28 1519	1521	1532	S19	E09	5379	03 1.3	13	SF C 2.7		3	E			38		F	

FEBRUARY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area Measurement			Remarks	
								USAF Region					Mo	Day	Time (UT)		Apparent (10-6 Disk)
0534		28	15241	1535*	1558	N13	W64	5378	02	23.8	34	SF			24		K
	RAMY	28	1524	1535	1559	N14	W63	5378	02	23.9	35	SF		E	26		K
	RAMY	28	1524	1549	1559	N14	W63	5378	02	23.9	35	SF	3	E	15		
	SVTO	28	1525	1538	1558	N12	W66	5378	02	23.7	33	SF		E	35		K
	SVTO	28	1525	1551	1558	N12	W66	5378	02	23.7	33	SF	3	E	19		
		28	1603		2133	No Flare Patrol											
0535		28	1625	1628*	1727	N14	W64	5378	02	23.8	62	SF C 4.9			46		K
	RAMY	28	1625	1628	1727	N14	W64	5378	02	23.8	62	SF		E	39		K
	RAMY	28	1625	1710	1727	N14	W64	5378	02	23.8	62	SF C 4.9	3	E	53		
0536	RAMY	28	1806	1808	1812	S17	W51	5382	02	24.9	6	SF		3	E	26	
0537	RAMY	28	1756	1821	1947	N14	W64	5378	02	23.9	111	SF M 1.7	3	E	65		F
0538	RAMY	28	1819	1828	1858D	N18	W73	5373	02	23.2	39D	SF		3	E	68	
		28	2142		2232	No Flare Patrol											
		28	2237		2253	No Flare Patrol											
0539		28	2322	2323	2334	N15	W67	5378	02	23.9	12	1F C 5.6			93		DJT
	LEAR	28	2322	2323	2339	N14	W67	5378	02	23.9	17	SF C 5.6	3	E	70		
	VORO	28	2325E		2329	N16	W67	5378	02	23.9	4D	1F	1	C	2325	116	DJT

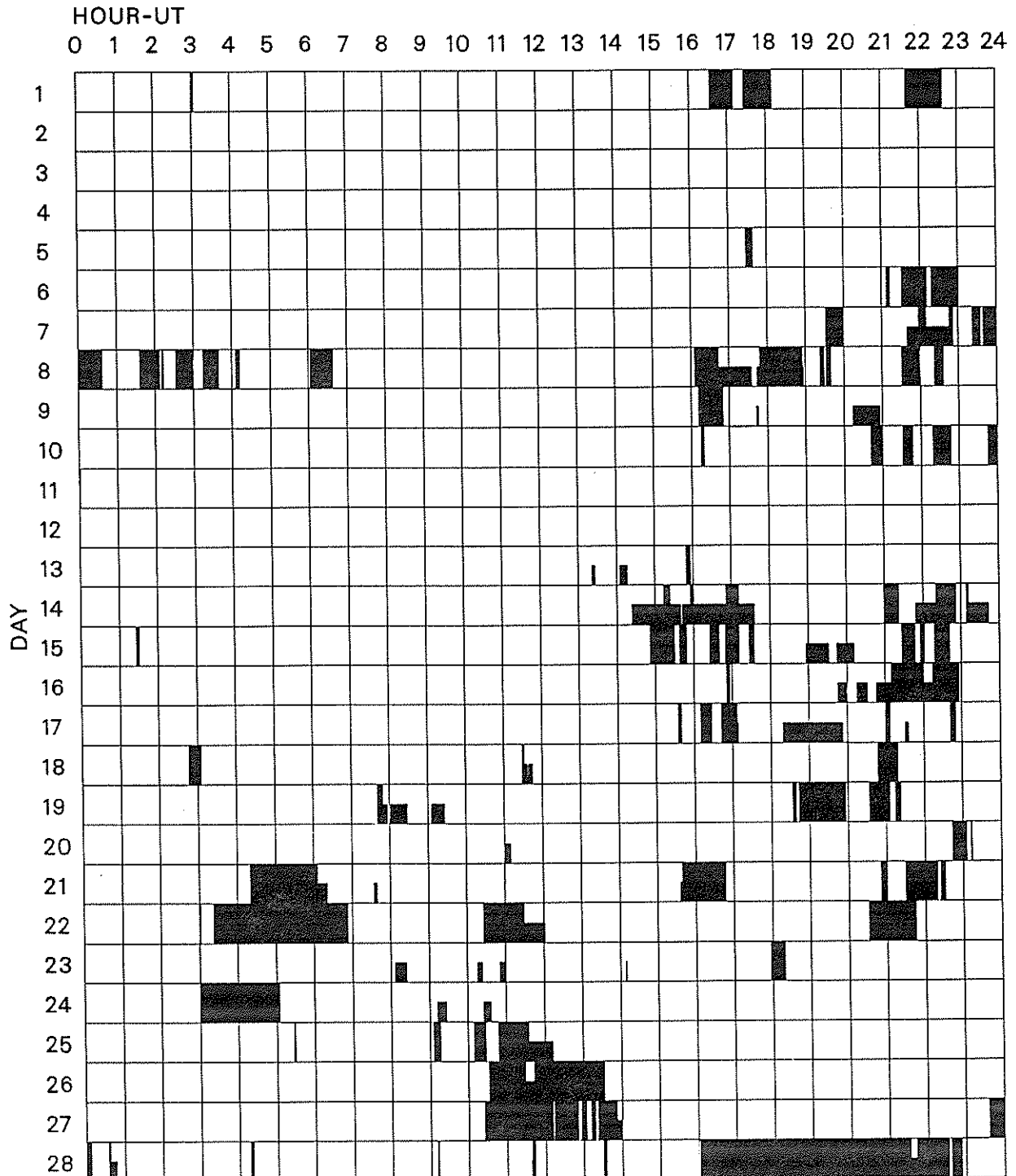
"Remarks"

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



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

FEBRUARY 1989



Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

Abastumani  
Catania  
Haute Provence

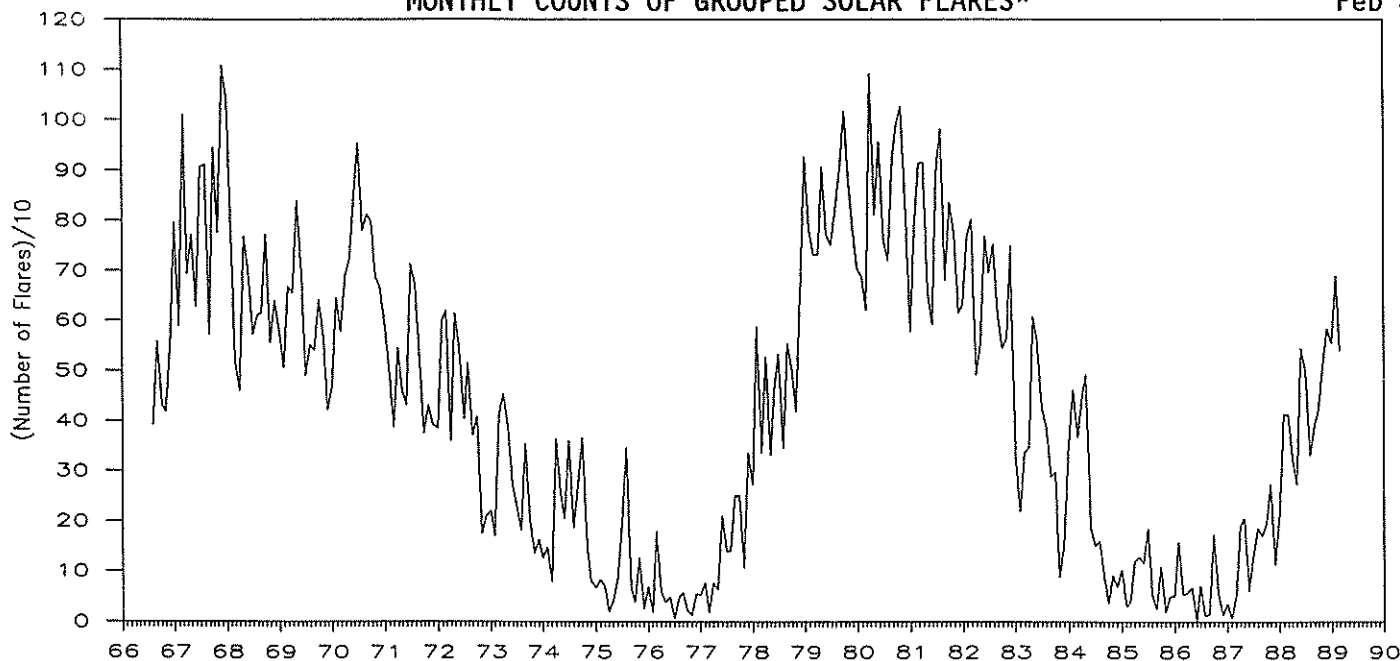
Holloman  
Hurbanovo  
Istanbul

Kandilli  
Kanzelhoehe  
Kharkov  
Learmonth

Mitaka  
Palehua  
Purple Mt.  
Ramey

San Vito  
Tashkent  
Voroshilov  
Yunnan

MONTHLY COUNTS OF GROUPED SOLAR FLARES\*



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1966								391	558	432	417	543	2341
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	171	198	273	114	1626
1988	217	412	412	328	272	544	499	331	390	421	508	584	4918
1989	689	539											1228

\*Flare counts are preliminary from July 1982 to present. In particular, the monthly totals for the last 6 months may change significantly, as more sites submit their reports. The term "grouped" means that observations of the same event by different stations have been lumped together and counted as one.

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

FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Int	Remarks
01	200	GORK	43 NS	0557.0		180.0D		5.0		
	204	IZMI	43 NS	0700.0		300.0	10.0			
	245	SVTO	8 S	0627.0E	0627.0	U	160.0			QL=1 ST=2 TYP=3
	5900	KISV	23 GRF	0738.0	0750.1	50.5	13.0			
	5900	KISV	45 C	0738.0	0738.8		15.0			
	5900	KISV	45 C	0738.0	0741.9	10.5	26.0			
	9300	KISV	45 C	0738.1	0738.7	8.0	32.0			
	9300	KISV	45 C	0738.1	0741.8		18.0			
	9300	KISV	23 GRF	0738.1	0746.8	70.0	8.0			
	9100	GORK	30 PBI	0738.3	0739.0	63.0	12.8			
	9100	GORK	1 S	0738.3	0738.7	0.7	28.0			
	15000	KISV	2 S/F	0738.4	0738.6	1.0	11.0			
	15000	KISV	23 GRF	0738.4	0813.6		8.0			
	15000	KISV	23 GRF	0738.4	0743.9	48.0	8.0			
	9100	GORK	1 S	0740.6	0741.8	2.3	9.4			
	3000	POTS	25 R	0800.0	1045.0	317.0	80.0			
	9300	KISV	2 S/F	0802.2	0802.9	1.0	5.0			
	5900	KISV	2 S/F	0802.3	0802.9	2.2	8.0			
	9100	GORK	1 S	0802.6	0803.0	0.7	5.9			
	9500	POTS	25 R	0806.0	1045.0	309.0	63.0			
	5900	KISV	46 C	0806.2	0807.6		8.0			
	5900	KISV	46 C	0806.2	0808.7	15.0	12.0			
	9100	GORK	2 S/F	0807.3	0808.2	2.3	9.3			
	9300	KISV	46 C	0807.3	0808.2	10.5	11.0			
	9300	KISV	46 C	0807.3	0807.7		7.0			
	9300	KISV	46 C	0807.3	0808.8		11.0			
	2950	GORK	20 GRF	0808.0	0809.2	10.0	5.4			
	260	ONDR	42 SER	0810.0	1014.4	360.0	118.0			
	810	KRAK	8 S	0824.1	0824.3	0.4	6.0			
	1470	POTS	25 R	0840.0	1045.0	268.0	29.0			
	5900	KISV	23 GRF	0941.4	1006.5	134.0	31.0			
	5900	KISV	23 GRF	0941.4	1042.8		48.0			
	2950	GORK	21 GRF	0945.2	1042.0	106.0	52.0			
	9100	GORK	21 GRF	0949.4	1044.5	130.0D	59.0			
	3100	CRIM	45 C	0949.5	1014.0		68.6	22.8		
	3100	CRIM	45 C	0949.5	1022.1		30.8			
	3100	CRIM	45 C	0949.5	1002.2	100.0	18.8			
	3100	CRIM	45 C	0949.5	1007.5		19.8			
	3100	CRIM	45 C	0949.5	1043.5		28.7			
	3100	CRIM	45 C	0949.5	1026.6		19.8			
	15000	KISV	23 GRF	0950.5	1044.4	113.0	40.0			
	15000	KISV	23 GRF	0950.5	1017.7		14.0			
	9300	KISV	23 GRF	0955.1	1045.4	115.5	60.0			
	327	TRST	27 RF	0956.2	1013.9	44.0	575.0			7R
	408	TRST	27 RF	0956.3	1013.8	54.0	71.0			6R
	234	POTS	27 RF	0957.0	1014.0	61.0	40.0			
	950	GORK	23 GRF	0957.5	1035.4	64.3	5.3			
3000	POTS	42 SER	0958.0	1014.0	32.0	118.0				
650	GORK	21 GRF	0958.2E	1057.0	64.8D	4.0				
3013	IZMI	40 F	1000.0	1014.0	60.0	57.0	45.0			
1470	POTS	42 SER	1000.0	1013.5	30.0	92.0				
950	GORK	46 C	1001.7	1006.3	8.3	26.0				
950	GORK	46 C	1001.7	1007.5		27.0				
237	TRST	27 RF	1002.0	1014.5	58.0	97.0			2R	
430	KRAK	27 RF	1005.0	1013.0		8.0				
204	IZMI	24 R	1005.0	1014.0	55.0	28.0				
650	GORK	46 C	1005.0	1013.5		8.5				
430	KRAK	27 RF	1005.0	1007.5	20.2	7.0	3.0			
536	ONDR	49 GB	1005.0	1043.5	45.0	27.5				
650	GORK	46 C	1005.0	1007.9	13.0	9.0				
810	KRAK	27 RF	1005.2	1006.5	23.2	12.0	4.0			
810	KRAK	27 RF	1005.2	1014.9		14.0				
9500	POTS	42 SER	1010.0	1026.8	20.0	54.0				
2950	GORK	3 S	1011.2	1014.0	7.4	82.0	40.0			
5900	KISV	4 S/F	1011.4	1013.7	6.9	48.0				
9300	KISV	2 S/F	1011.7	1012.9	7.7	28.0				
410	LEAR	4 S/F	1012.0E	1013.0	3.0D	25.0			QL=1 ST=2 TYP=3	
245	LEAR	4 S/F	1012.0E	1014.0	5.0D	81.0			QL=1 ST=2 TYP=3	
2695	LEAR	4 S/F	1012.0E	1014.0	5.0D	88.0			QL=1 ST=2 TYP=3	

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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean	Int	Remarks	
01	950 GORK	4 S/F	1012.4	1014.7	4.8	58.0				
	9100 GORK	1 S	1012.7	1014.0	3.4	23.0				
	15000 KISV	2 S/F	1012.7	1013.8	4.8	9.0				
	15400 LEAR	8 S	1013.0E	1014.0	1.00	33.0			QL=1 ST=2 TYP=3	
	1415 SVTO	4 S/F	1013.0E	1014.0	6.00	80.0			QL=1 ST=2 TYP=3	
	4995 SVTO	4 S/F	1013.0E	1013.0	6.00	83.0			QL=1 ST=2 TYP=3	
	2695 SVTO	4 S/F	1013.0E	1014.0	6.00	93.0			QL=1 ST=2 TYP=3	
	245 SVTO	4 S/F	1014.0E	1014.0	5.00	81.0			QL=1 ST=2 TYP=3	
	245 LEAR	4 S/F	1020.0E	1021.0	3.00	52.0			QL=1 ST=2 TYP=3	
	8400 BERN	46 C	1020.0	1027.0	45.0	85.0				
	5200 BERN	46 C	1020.0	1027.0	45.0	102.0				
	11800 BERN	46 C	1020.0	1045.0	45.0	96.0				
	3200 BERN	46 C	1020.0	1045.0	45.0	239.0				
	19600 BERN	46 C	1020.0	1045.0	45.0	114.0				
	950 GORK	2 S/F	1020.4	1022.3	5.0	13.7				
	2950 GORK	3 S	1020.6	1022.2	3.4	22.0				
	2695 LEAR	8 S	1021.0E	1021.0	1.00	25.0			QL=1 ST=2 TYP=3	
	245 SVTO	4 S/F	1021.0E	1021.0	3.00	63.0			QL=1 ST=2 TYP=3	
	2950 GORK	1 S	1024.4	1026.6	2.2	8.7				
	9300 KISV	4 S/F	1025.8	1026.6	3.9	38.0				
	5900 KISV	4 S/F	1025.8	1026.6	5.0	48.0				
	9100 GORK	2 S/F	1025.8	1026.7	3.6	30.0				
	4995 SVTO	4 S/F	1026.0E	1026.0	4.00	82.0			QL=1 ST=2 TYP=3	
	15000 KISV	2 S/F	1026.1	1026.7	3.0	12.0				
	430 KRAK	27 RF	1034.2	1038.0	14.0	9.0	6.0			
	650 GORK	46 C	1034.4	1044.8		20.0				
	650 GORK	46 C	1034.4	1037.9	13.6	14.0				
	810 KRAK	27 RF	1034.5	1045.0	26.0	27.0	7.0			
	810 KRAK	27 RF	1034.5	1046.6		26.0				
	950 GORK	46 C	1036.0	1045.0	14.3	36.0				
	950 GORK	46 C	1036.0	1046.7		36.0				
	810 KRAK	41 F	1116.3	1116.4	1.8	13.0	3.0			
	610 PALE	8 S	1806.0E	1806.0	1.00	180.0			QL=1 ST=2 TYP=3	
	245 PALE	49 GB	1806.0E	1806.0	1.00	920.0			QL=1 ST=2 TYP=6	
	02	204 IZMI	43 NS	0700.0		300.0	10.0			
		260 ONDR	44 NS	0810.0E	1024.6	370.00	45.0			
		9100 GORK	21 GRF	0809.0	0842.8	92.4	11.8			
		5900 KISV	23 GRF	0814.3	0822.4	36.8	8.0			
		5900 KISV	2 S/F	0814.7	0815.0	1.1	3.0			
		9300 KISV	23 GRF	0818.3	0824.5	54.0	8.0			
5900 KISV		2 S/F	0818.4	0819.1	1.6	10.0				
9100 GORK		1 S	0818.8	0819.0	0.7	6.9				
9300 KISV		2 S/F	0818.8	0819.1	0.9	8.0				
9300 KISV		2 S/F	0822.0	0822.4	1.2	4.0				
5900 KISV		22 GRF	0840.4	0842.9	10.7	5.0				
9300 KISV		22 GRF	0840.7	0841.7	10.1	5.0				
5900 KISV		45 C	0958.2	0959.2	15.6	5.0				
5900 KISV		45 C	0958.2	1003.9		5.0				
9300 KISV		21 GRF	0958.5	1004.0	16.6	5.0				
9300 KISV		1 S	0958.8	0959.4	0.9	9.0				
430 KRAK		8 S	1001.2	1001.2	0.1	5.0				
9100 GORK		21 GRF	1022.4	1026.3	13.6	8.6				
9100 GORK		4 S/F	1022.7	1023.6	2.1	72.0				
536 ONDR		40 F	1041.1	1041.2	1.0	51.0				
408 TRST		5 S	1041.2	1041.2	0.1	829.0			7R	
327 TRST		42 SER	1041.2	1041.3	0.5	51.0			5R	
237 TRST		42 SER	1041.2	1041.5	0.5	42.0			6R	
5900 KISV		2 S/F	1102.5	1104.0	3.0	3.0				
9500 POTS		4 S/F	1122.0	1123.4	3.0	54.0				
9300 KISV		29 PBI	1122.4	1129.2	14.8	5.0				
3200 BERN		4 S/F	1122.4	1123.4	2.0	17.0				
8400 BERN		4 S/F	1122.4	1123.4	2.0	105.0				
11800 BERN		4 S/F	1122.4	1123.4	2.0	42.0				
5200 BERN		4 S/F	1122.4	1123.4	2.0	136.0				
9300 KISV	4 S/F	1122.4	1123.7	6.4	91.0					
5900 KISV	29 PBI	1122.5	1126.7	9.5	15.0					
5900 KISV	4 S/F	1122.5	1123.8	4.2	142.0					
2950 GORK	1 S	1122.9	1123.6	2.0	8.7					

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
02	15000	KISV	46 C	1123.0	1123.1		11.0			
	15000	KISV	46 C	1123.0	1123.6		6.0			
	3013	IZMI	5 S	1123.0	1123.7	2.0	24.0	15.0		
	15000	KISV	46 C	1123.0	1123.8	8.8	20.0			
	3000	POTS	4 S/F	1123.0	1123.8	1.5	15.0			
	430	KRAK	8 S	1143.1	1143.1	0.5	6.0			
	810	KRAK	8 S	1202.3	1202.5	0.3	7.0			
	2800	OTTA	3 S	1724.6	1727.0	10.5	115.0	23.0		
	4995	SGMR	8 S	1726.0E	1726.0	2.00	260.0			QL=1 ST=2 TYP=3
	8800	SGMR	8 S	1726.0E	1726.0	1.00	140.0			QL=1 ST=2 TYP=3
2695	SGMR	8 S	1726.0E	1727.0	1.00	97.0			QL=1 ST=2 TYP=3	
03	200	HIRA	43 NS	0000.0	0130.0	480.00	6.0	3.0		0
	204	IZMI	43 NS	0700.0		300.0	15.0			
	245	SGMR	43 NS	1218.0	1316.0	526.00	56.0			QL=1 ST=2 TYP=1
	245	SVTO	44 NS	1316.0E	1359.0	150.00	180.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2136.0E	2312.0	380.00	5.0	2.0		0
	2840	PEKG	1 S	0302.0	0302.8	3.0	2.5			
	204	IZMI	42 SER	0720.0	0730.0	11.0	117.0			
	3100	CRIM	1 S	0724.5	0724.6	3.0	6.1	2.0		
	650	GORK	2 S/F	0729.1	0729.6	1.2	5.5			
	100	GORK	46 C	0729.2	0729.2	2.4	415.0			
	100	GORK	46 C	0729.2	0730.8		415.0			
	950	GORK	2 S/F	0729.3	0729.6	1.9	10.0			
	3013	IZMI	5 S	0729.5	0730.0	3.0	5.0	4.0		
	2950	GORK	1 S	0729.5	0729.7	1.9	20.0	10.0		
	5900	KISV	22 GRF	1002.1	1005.8	13.2	4.0			
	810	KRAK	42 SER	1006.5	1037.7	35.0	7.0			
	9300	KISV	22 GRF	1009.0	1020.9	19.2	7.0			
	430	KRAK	42 SER	1034.0	1036.0	6.2	38.0			
	327	TRST	46 C	1034.1	1034.3	0.3	126.0			1R
	1470	POTS	42 SER	1053.2	1104.1	11.0	7.0			
	204	IZMI	5 S	1121.5	1122.0	1.0	80.0	50.0		
	430	KRAK	42 SER	1145.5	1153.6	134.5	23.0			
	245	SVTO	4 S/F	1151.0E	1153.0	3.00	110.0			QL=1 ST=2 TYP=3
	200	GORK	4 S/F	1151.2	1153.5	2.6	17.0			
	100	GORK	46 C	1151.8	1153.1	2.1	270.0			
	100	GORK	46 C	1151.8	1153.3		600.0			
	234	POTS	4 S/F	1152.1	1153.3	2.8	110.0			
	40	POTS	4 S/F	1152.1	1153.6	3.4	3600.0			
	237	TRST	46 C	1152.4	1153.3	1.8	460.0			OL Var. Pol.
	327	TRST	46 C	1153.4	1153.6	0.4	104.0			8R
408	TRST	45 C	1153.5	1153.6	0.3	85.0			10R	
204	IZMI	5 S	1157.0	1158.0	2.0	350.0	200.0			
3100	CRIM	1 S	1203.0	1203.5	1.0	6.2	2.0			
245	SVTO	8 S	1204.0E	1204.0	U	190.0			QL=1 ST=2 TYP=3	
810	KRAK	8 S	1259.5	1259.5	0.3	4.0				
810	KRAK	8 S	1305.6	1305.6	0.3	5.0				
2800	OTTA	40 F	1410.0	1441.0	31.0	15.0	6.0			
3000	POTS	20 GRF	1412.2	1424.8	28.0	12.0				
1470	POTS	20 GRF	1413.5	1424.9	27.0	15.0				
33	UPIC	46 C	1430.6	1433.7	5.9					
2800	OTTA	22 GRF	1541.0	1615.0	170.0	12.5	4.0			
200	HIRA	46 C	2226.5	2226.9	3.5	71.0			0	
04	221	ABST	43 NS	0500.0		240.0		12.0		
	200	HIRA	46 C	0016.2	0019.8	8.6	58.0			0
	500	HIRA	46 C	0017.3	0020.5	8.0	105.0	24.0		0
	100	HIRA	46 C	0017.8	0020.5	6.7	430.0			
	610	LEAR	8 S	0020.0E	0020.0	1.00	35.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0020.0E	0020.0	1.00	50.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0020.0E	0020.0	1.00	19.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0031.0E	0031.0	U	160.0			QL=1 ST=2 TYP=3
	5900	KISV	22 GRF	0610.8	0624.7	21.3	4.0			
	5900	KISV	22 GRF	0804.4	0809.7	15.3	5.0			
	430	KRAK	2 S/F	0836.5	0837.0	1.2	20.0	3.0		
	15000	KISV	2 S/F	0849.0	0850.0	3.5	5.0			
	9300	KISV	2 S/F	0849.3	0850.0	6.0	8.0			
	5900	KISV	2 S/F	0849.3	0850.0	3.0	6.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
04	L 9100	GORK	1 S	0849.3	0850.1	4.4	6.0			
	9100	GORK	46 C	0920.5	1009.0		384.0			
	9100	GORK	46 C	0920.5	1003.7		448.0			
	9100	GORK	46 C	0920.5	0955.9	39.6	500.0			
	3000	POTS	30 PBI	0935.0	1003.5	293.0	435.0			
	5900	KISV	28 PRE	0938.4	0944.4	9.6	5.0			
	9100	GORK	21 GRF	0939.9	1031.1	140.00	122.0			
	9500	POTS	30 PBI	0940.0	0956.0	285.0	476.0			
	9300	KISV	28 PRE	0940.9	0948.5	7.8	5.0			
	2950	GORK	47 GB	0941.1	1017.6		292.0			
	2950	GORK	47 GB	0941.1	1003.7	140.00	424.0			
	1470	POTS	30 PBI	0945.8	1004.2	69.0	96.0			
	3013	I2MI	45 C	0947.2	1003.6	52.0	379.0	250.0		
	3100	CRIM	45 C	0948.0	1009.0		156.6			
	3100	CRIM	29 PBI	0948.0	1040.0	80.00	34.5			
	5900	KISV	29 PBI	0948.0	1015.0	117.0	229.0			
	3100	CRIM	45 C	0948.0	1014.2		129.1			
	5900	KISV	47 GB	0948.0	1009.2		424.0			
	3100	CRIM	45 C	0948.0	1017.5		185.1			
	5900	KISV	47 GB	0948.0	1003.5	27.0	709.0			
	3100	CRIM	45 C	0948.0	0956.5	52.0	151.5			
	3100	CRIM	45 C	0948.0	1003.6		258.0	86.0		
	5900	KISV	47 GB	0948.0	0956.6		567.0			
	3100	CRIM	45 C	0948.0	1022.7		104.7			
	9300	KISV	47 GB	0948.5	1009.0		426.0			
	9300	KISV	29 PBI	0948.5	1012.0	120.0	213.0			
	9300	KISV	47 GB	0948.5	1003.8		520.0			
	9300	KISV	47 GB	0948.5	0955.9	23.5	560.0			
	4995	SVTO	49 GB	0949.0E	0956.0	59.00	580.0			QL=1 ST=2 TYP=7
	15400	SVTO	4 S/F	0950.0E	0956.0	34.00	250.0			QL=1 ST=3 TYP=5
	8400	BERN	46 C	0950.0	0956.0	40.0	457.0			
	11800	BERN	46 C	0950.0	0956.0	40.0	264.0			
	5200	BERN	46 C	0950.0	1004.0	40.0	528.0			
	3200	BERN	46 C	0950.0	1004.0	40.0	440.0			
	2695	SVTO	4 S/F	0950.0E	0956.0	52.00	380.0			QL=1 ST=3 TYP=5
	15000	KISV	46 C	0950.4	1004.1		151.0			
	15000	KISV	46 C	0950.4	1009.2		164.0			
	15000	KISV	46 C	0950.4	0955.8	24.4	225.0			
	15000	KISV	29 PBI	0950.4	1014.8	117.2	110.0			
	8800	SVTO	4 S/F	0951.0E	0956.0	56.00	470.0			QL=1 ST=2 TYP=5
	8800	LEAR	4 S/F	0951.0E	0955.0	61.00	420.0			QL=1 ST=2 TYP=3
	2695	LEAR	4 S/F	0951.0E	1003.0	61.00	410.0			QL=1 ST=2 TYP=5
	327	TRST	27 RF	0951.5	0956.5	30.0	88.0			1R
	950	GORK	23 GRF	0951.9	1009.2	47.9	6.0			
	1415	SVTO	4 S/F	0952.0E	1004.0	52.00	95.0			QL=1 ST=3 TYP=5
	610	TRST	27 RF	0952.0	0956.1	20.0	199.0			9R Spikes
	810	KRAK	45 C	0952.2	0955.4	30.5	21.0	6.0		
	810	KRAK	45 C	0952.2	1003.8		18.0			
	430	KRAK	45 C	0952.7	1006.5		33.0			
	430	KRAK	45 C	0952.7	0955.9	14.0	57.0	17.0		
237	TRST	27 RF	0952.8	1010.7	45.0	155.0			1L	
610	LEAR	4 S/F	0953.0E	0956.0	5.00	42.0			QL=1 ST=2 TYP=3	
410	LEAR	4 S/F	0953.0E	0956.0	5.00	110.0			QL=1 ST=2 TYP=3	
410	SVTO	4 S/F	0953.0E	0956.0	20.00	75.0			QL=1 ST=2 TYP=5	
204	I2MI	45 C	0953.0	0959.0	60.0	300.0	50.0			
650	GORK	46 C	0953.0	0956.1	16.3	42.0				
650	GORK	30 PBI	0953.0	1009.3	20.7	4.0				
650	GORK	46 C	0953.0	1004.5		13.0				
408	TRST	27 RF	0953.0	0956.5	20.0	228.0			2R Spikes	
234	POTS	45 C	0953.0	1010.5	47.0	100.0				
950	GORK	46 C	0954.0	1004.2		27.0				
950	GORK	46 C	0954.0	0957.5	13.5	18.0				
245	LEAR	4 S/F	0955.0E	1010.0	22.00	76.0			QL=1 ST=2 TYP=5	
245	SVTO	4 S/F	0955.0E	1010.0	29.00	81.0			QL=1 ST=3 TYP=5	
100	GORK	41 F	0955.3	0956.2	47.0	1750.0				
100	GORK	41 F	0955.3	1042.3		170.0				
100	GORK	41 F	0955.3	1002.3		17000.0				
127	TORN	27 RF	0958.9		38.0		85.0			
127	TORN	47 GB	0958.9	1002.0U	4.4	5700.00	2800.00			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (2 Hz)		
04	30	POTS	45 C	1000.0E	1042.0	52.0D	600.0			
	327	TRST	47 GB		1006.3	0.5	630.0			2R
	9300	KISV	45 C	1013.5	1017.7		104.0			
	9300	KISV	45 C	1013.5	1015.7	6.5	116.0			
	650	GORK	41 F	1014.2	1020.0		33.0			
	650	GORK	41 F	1014.2	1017.5	6.5	17.0			
	5900	KISV	45 C	1015.3	1016.2		154.0			
	15000	KISV	2 S/F	1015.3	1015.7	4.7	33.0			
	5900	KISV	45 C	1015.3	1017.7	4.2	152.0			
	950	GORK	1 S	1016.7	1017.6	3.1	4.0			
	5900	KISV	4 S/F	1021.9	1022.8	2.2	61.0			
	9300	KISV	4 S/F	1022.2	1022.9	2.0	64.0			
	15000	KISV	2 S/F	1022.5	1023.0	1.5	29.0			
	810	KRAK	42 SER	1025.7	1026.0	34.0	41.0			
	650	GORK	4 S/F	1027.7	1027.9	0.8	13.5			
	430	KRAK	2 S/F	1034.0	1035.0	1.5	18.0	5.0		
	204	IZMI	41 F	1136.0	1138.0	4.0	10.0			
	237	TRST	42 SER	1137.3	1137.4	0.3	32.0			2L
	237	TRST	46 C	1137.9	1138.1	0.2	84.0			3L
	245	SGMR	8 S	1319.0E	1319.0	1.0D	310.0			QL=1 ST=2 TYP=3
05	100	GORK	44 NS	0548.0E		373.0D		5.0		
	221	ABST	43 NS	0600.0		180.0		8.0		
	127	TORN	43 NS	0942.0		318.0		3.0		V=0
	410	SVTO	44 NS	1146.0E	1454.0	734.0D	74.0			QL=1 ST=1 TYP=1
	245	SGMR	43 NS	1216.0	1415.0	563.0D	81.0			QL=1 ST=2 TYP=1
	200	HIRA	41 F	0332.7	0333.1	3.1	42.0			0
	9300	KISV	23 GRF	0604.0	1106.0	356.0	27.0			
	5900	KISV	23 GRF	0609.7	1112.7	350.3	23.0			
	15000	KISV	2 S/F	0610.3	0611.0	1.6	2.0			
	9300	KISV	46 C	0613.5	0620.0	7.3	6.0			
	9300	KISV	46 C	0613.5	0615.2		6.0			
	9300	KISV	46 C	0613.5	0618.3		6.0			
	5900	KISV	45 C	0613.5	0618.4		6.0			
	5900	KISV	45 C	0613.5	0614.8	9.7	8.0			
	9300	KISV	46 C	0613.5	0616.9		6.0			
	15000	KISV	22 GRF	0613.7	0620.0	13.3	4.0			
	9300	KISV	2 S/F	0624.3	0624.9	3.0	3.0			
	9300	KISV	2 S/F	0655.3	0655.7	2.3	5.0			
	9300	KISV	2 S/F	0700.0	0700.7	1.2	2.0			
	9300	KISV	45 C	0712.8	0714.2		3.0			
	9300	KISV	45 C	0712.8	0713.4	2.0	3.0			
	204	IZMI	8 S	0714.3	0714.4	0.2	47.0	40.0		
	15000	KISV	2 S/F	0728.5	0728.8	0.8	4.0			
	9300	KISV	2 S/F	0730.0	0735.5	9.7	4.0			
	9100	GORK	2 S/F	0734.0	0734.2	4.5	5.0			
	9300	KISV	2 S/F	0752.3	0753.2	6.9	5.0			
	5900	KISV	2 S/F	0753.0	0754.3	4.7	2.0			
	9300	KISV	3 S	0805.3	0805.7	6.1	32.0			
	9500	POTS	4 S/F	0805.3	0805.8	1.1	30.0			
	9100	GORK	2 S/F	0805.4	0805.7	3.1	26.0			
	5900	KISV	1 S	0805.4	0805.7	4.1	16.0			
	15000	KISV	1 S	0805.5	0805.7	2.3	16.0			
	5900	KISV	2 S/F	0818.0	0823.0	9.2	6.0			
9300	KISV	2 S/F	0819.8	0821.2	7.7	6.0				
810	KRAK	8 S	0841.1	0841.2	0.2	4.0				
9300	KISV	45 C	0855.2	0856.1	4.6	6.0				
9300	KISV	45 C	0855.2	0858.6		6.0				
5900	KISV	45 C	0855.5	0856.0		2.0				
5900	KISV	45 C	0855.5	0858.5	6.2	8.0				
9100	GORK	20 GRF	0913.7	0917.5	17.7	12.7				
9300	KISV	45 C	0914.6	0915.2	2.0	3.0				
9300	KISV	45 C	0914.6	0916.5		3.0				
9300	KISV	2 S/F	0917.2	0917.6	6.0	5.0				
430	KRAK	8 S	0955.4	0955.5	0.3	5.0				
245	SVTO	8 S	1028.0E	1028.0	U	96.0			QL=1 ST=2 TYP=3	
1470	POTS	41 F	1046.4	1047.9	7.1	19.0				
5900	KISV	46 C	1046.5	1052.2		2.0				
5900	KISV	46 C	1046.5	1050.5		3.0				

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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
05	5900 KISV	46 C	1046.5	1049.6	6.3	5.0			
	950 GORK	40 F	1046.8	1049.5	8.0	4.5			
	204 IZMI	41 F	1047.0	1049.0	3.0	88.0			
	9100 GORK	20 GRF	1047.7	1106.2	51.0	9.4			
	100 GORK	41 F	1048.0	1049.3		110.0			
	100 GORK	41 F	1048.0	1048.8	4.7	220.0			
	100 GORK	41 F	1048.0	1051.9		30.0			
	650 GORK	45 C	1048.2	1050.4		4.5			
	650 GORK	45 C	1048.2	1049.6	2.4	5.0			
	810 KRAK	8 S	1049.0	1049.4	0.7	4.0			
	15000 KISV	46 C	1050.4	1055.1	7.0	6.0			
	15000 KISV	46 C	1050.4	1053.1		4.0			
	15000 KISV	46 C	1050.4	1056.3		4.0			
	15000 KISV	46 C	1050.4	1054.6		4.0			
	9300 KISV	2 S/F	1127.9	1128.4	5.1	5.0			
	430 KRAK	42 SER	1154.7	1252.2	73.0	9.0			
	810 KRAK	8 S	1324.5	1324.7	0.5	9.0			
	430 KRAK	8 S	1338.8	1338.8	0.1	10.0			
2800 OTTA	20 GRF	1823.0	1845.0	53.0	5.9	3.0			
410 SGMR	8 S	1954.0E	1954.0	2.0D	120.0			QL=1 ST=2 TYP=3	
06	245 LEAR	44 NS	2317.0E	0202.0	43.0D	79.0			QL=1 ST=1 TYP=1
	100 HIRA	44 NS	2348.0E	0013.0	490.0D	74.0	21.0		
	200 HIRA	44 NS	2348.0E	0322.0	490.0D	13.0	8.0		WR
	500 HIRA	41 F	0034.8	0035.6	2.3	107.0			O
	15400 LEAR	8 S	0533.0E	0534.0	1.0D	64.0			QL=1 ST=2 TYP=3
	8800 LEAR	4 S/F	0533.0E	0534.0	4.0D	190.0			QL=1 ST=2 TYP=3
	9100 GORK	3 S	0533.3	0534.0	1.0	140.0			
	17000 NOBE	1 S	0533.8	0534.1	2.0	57.0			34L
	9300 KISV	2 S/F	0544.6	0546.6	4.0	7.0			
	5900 KISV	2 S/F	0545.1	0546.7	4.6	7.0			
	9300 KISV	42 SER	0549.4	0553.0		3.0			
	9300 KISV	42 SER	0549.4	0550.0	12.2	6.0			
	9300 KISV	42 SER	0549.4	0559.3		3.0			
	9300 KISV	42 SER	0549.4	0556.5		3.0			
	9300 KISV	23 GRF	0623.1	0638.6	247.5	21.0			
	5900 KISV	22 GRF	0624.0	0630.3	72.0	10.0			
	15000 KISV	23 GRF	0626.7	0842.0	151.5	10.0			
	15000 KISV	2 S/F	0628.1	0628.5	2.7	7.0			
	200 GORK	4 S/F	0657.2	0658.2	3.0	20.0			
	9100 GORK	21 GRF	0712.0E	0812.9	108.0D	11.0			
	15000 KISV	2 S/F	0754.5	0754.8	1.2	3.0			
	260 ONDR	42 SER	0800.0	1334.2	400.0D	51.0			
	5900 KISV	2 S/F	0800.8	0801.2	1.7	2.0			
	9300 KISV	2 S/F	0800.8	0801.3	2.0	9.0			
	9500 POTS	4 S/F	0802.6	0804.4	7.4	320.0			
	15000 KISV	3 S	0803.5	0804.5	2.0	305.0			
	9100 GORK	3 S	0803.6	0804.5	3.9	430.0			
	9300 KISV	3 S	0803.7	0804.4	3.0	373.0			
	15400 LEAR	8 S	0804.0E	0804.0	1.0D	330.0			QL=1 ST=2 TYP=3
	8800 SVTO	8 S	0804.0E	0804.0	1.0D	310.0			QL=1 ST=2 TYP=3
	15400 SVTO	8 S	0804.0E	0804.0	1.0D	370.0			QL=1 ST=2 TYP=3
	4995 SVTO	8 S	0804.0E	0804.0	U	72.0			QL=1 ST=2 TYP=3
	5900 KISV	3 S	0804.0	0804.6	5.6	174.0			
	9300 KISV	45 C	0812.3	0813.7		3.0			
9300 KISV	45 C	0812.3	0812.9	2.5	7.0				
5900 KISV	22 GRF	0836.8	0842.3	13.0	3.0				
9300 KISV	22 GRF	0838.6	0843.2	6.9	5.0				
9100 GORK	21 GRF	0906.2	0922.2	93.4	50.0				
5900 KISV	45 C	0907.3	0917.0	17.4	64.0				
5900 KISV	45 C	0907.3	0918.3		51.0				
5900 KISV	29 PBI	0907.3	0924.8	57.7	24.0				
9300 KISV	45 C	0910.8	0917.0	13.8	135.0				
9300 KISV	29 PBI	0910.8	0924.6	58.7	49.0				
9300 KISV	45 C	0910.8	0917.9		112.0				
15000 KISV	45 C	0913.1	0917.0	13.0	69.0				
15000 KISV	23 GRF	0913.1	0944.2	81.7	22.0				
15000 KISV	23 GRF	0913.1	0927.6		20.0				
15000 KISV	45 C	0913.1	0918.9		55.0				



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
06	3013	IZMI	20 GRF	0913.7	0917.1	11.0	25.0	15.0		
	650	GORK	4 S/F	0913.7	0917.1U	5.1	84.0D			
	9100	GORK	46 C	0913.9	0916.9	8.2	92.0			
	9100	GORK	46 C	0913.9	0918.9		68.0			
	15400	LEAR	4 S/F	0914.0E	0916.0	8.0D	69.0			QL=1 ST=2 TYP=5
	8400	BERN	46 C	0914.0	0917.0	11.0	228.0			
	19600	BERN	46 C	0914.0	0917.0	11.0	72.0			
	5200	BERN	46 C	0914.0	0917.0	11.0	79.0			
	3200	BERN	46 C	0914.0	0917.0	11.0	167.0			
	11800	BERN	46 C	0914.0	0917.0	11.0	308.0			
	8800	LEAR	4 S/F	0914.0E	0916.0	11.0D	120.0			QL=1 ST=2 TYP=5
	3100	CRIM	45 C	0914.2	0917.0		19.0	6.0		
	950	GORK	46 C	0914.2	0915.0	5.7	65.0			
	3100	CRIM	45 C	0914.2	0916.1	3.4	17.0			
	950	GORK	46 C	0914.2	0918.6		76.0			
	3100	CRIM	29 PBI	0914.2	0917.6	36.4	15.0	5.0		
	2950	GORK	21 GRF	0914.5	0921.3	36.0	9.2			
	15400	SVTO	8 S	0915.0E	0916.0	2.0D	73.0			QL=1 ST=2 TYP=3
	8800	SVTO	4 S/F	0915.0E	0916.0	12.0D	100.0			QL=1 ST=2 TYP=3
	2950	GORK	3 S	0915.5	0917.0	5.8	16.6	8.0		
	2695	LEAR	4 S/F	0916.0E	0916.0	5.0D	32.0			QL=1 ST=2 TYP=3
	610	LEAR	8 S	0916.0E	0917.0	1.0D	43.0			QL=1 ST=2 TYP=3
	4995	SVTO	8 S	0916.0E	0916.0	1.0D	61.0			QL=1 ST=2 TYP=3
	430	KRAK	42 SER	0932.2	0947.0	89.0	21.0			
	430	KRAK	42 SER	0932.2	0957.2		20.0			
	15000	KISV	45 C	1105.8	1106.1	10.0	28.0			
	15000	KISV	45 C	1105.8	1110.8		24.0			
	9300	KISV	23 GRF	1106.0	1115.0	33.7	5.0			
	9300	KISV	45 C	1106.0	1106.1		9.0			
	9300	KISV	45 C	1106.0	1110.7	5.9	15.0			
	9100	GORK	46 C	1106.2	1107.2	9.9	12.0			
	9100	GORK	46 C	1106.2	1110.8		15.0			
	5900	KISV	23 GRF	1109.9	1124.1	43.0	3.0			
	5900	KISV	2 S/F	1109.9	1111.2	2.0	2.0			
	5900	KISV	2 S/F	1125.6	1126.2	3.3	6.0			
	9300	KISV	2 S/F	1125.7	1126.2	3.2	7.0			
	204	IZMI	5 S	1157.5	1158.0	0.8	54.0	25.0		
	810	KRAK	42 SER	1312.5	1312.6	5.0	41.0			
	234	POTS	4 S/F	1333.1	1333.6	2.5	385.0	20.0		
	40	POTS	4 S/F	1334.1	1334.2	2.7	525.0	125.0		
	810	KRAK	8 S	1334.7	1335.0	0.5	17.0			
	430	KRAK	8 S	1335.2	1335.5	0.5	14.0			
	9500	POTS	4 S/F	1434.1	1436.4	40.0	94.0			
	8800	SGMR	8 S	1436.0E	1436.0	U	91.0			QL=1 ST=2 TYP=3
	15400	SGMR	8 S	1436.0E	1436.0	U	77.0			QL=1 ST=2 TYP=3
	8800	SVTO	8 S	1436.0E	1436.0	U	87.0			QL=1 ST=2 TYP=3
	15400	SVTO	8 S	1436.0E	1436.0	1.0D	86.0			QL=1 ST=2 TYP=3
	2800	OTTA	3 S	1643.0	1650.0	80.0	60.1	18.0		
8800	SGMR	4 S/F	1916.0E	1918.0	4.0D	65.0			QL=1 ST=3 TYP=3	
15400	PALE	8 S	1918.0E	1918.0	U	64.0			QL=1 ST=2 TYP=3	
15400	SGMR	8 S	1918.0E	1918.0	U	68.0			QL=1 ST=3 TYP=3	
245	PALE	8 S	2016.0E	2016.0	U	130.0			QL=1 ST=2 TYP=3	
245	SGMR	8 S	2016.0E	2016.0	U	250.0			QL=1 ST=2 TYP=3	
07	245	SVTO	44 NS	0614.0E	0738.0	577.0D	71.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0800.0E	1134.2	300.0D	38.0			
	200	HIRA	44 NS	2133.0E	2325.0	620.0D	9.0	4.0		0
	245	LEAR	43 NS	2226.0	1043.0	744.0D	240.0			QL=1 ST=2 TYP=1
	100	HIRA	46 C	0027.7		2.2	1000.0D			
	200	HIRA	46 C	0028.1	0028.1	2.0	105.0			0
	2695	LEAR	8 S	0213.0E	0214.0	1.0D	23.0			QL=1 ST=2 TYP=3
	15400	LEAR	8 S	0213.0E	0214.0	2.0D	90.0			QL=1 ST=2 TYP=3
	17000	NOBE	7 C	0213.2	0214.4	2.5	68.0			10L
	2840	PEKG	45 C	0213.6	0214.1	2.4	7.0			
	8800	LEAR	8 S	0214.0E	0214.0	U	28.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	0251.0E	0251.0	1.0D	130.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	0312.0E	0312.0	U	130.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	0327.0E	0327.0	U	79.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	0333.0E	0335.0	2.0D	130.0			QL=1 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 (2 Hz)		
07	3100	CRIM	25 R	0607.0	0652.0		14.0			
	5900	KISV	2 S/F	0616.9	0618.0	6.3	4.0			
	9100	GORK	1 S	0619.1	0619.6	1.8	26.0			
	15000	KISV	2 S/F	0619.1	0619.9	2.3	31.0			
	9300	KISV	2 S/F	0619.2	0619.6	2.4	26.0			
	17000	NOBE	1 S	0619.4	0619.6	0.5	30.0			33L
	9100	GORK	21 GRF	0631.8	0756.3	234.0	21.0			
	245	SVTO	8 S	0634.0E	0634.0	U	220.0			QL=1 ST=2 TYP=3
	5900	KISV	45 C	0647.1	0651.4		21.0			
	5900	KISV	45 C	0647.1	0652.4	22.3	23.0			
	9300	KISV	45 C	0650.2	0652.3	12.7	40.0			
	9300	KISV	45 C	0650.2	0651.4		19.0			
	9100	GORK	2 S/F	0650.7	0652.3	2.9	38.0			
	5900	KISV	2 S/F	0706.2	0707.5	3.2	2.0			
	5900	KISV	2 S/F	0723.2	0725.1	8.3	3.0			
	9300	KISV	2 S/F	0730.0	0731.0	2.2	4.0			
	9300	KISV	2 S/F	0733.9	0734.9	5.2	6.0			
	5900	KISV	23 GRF	0738.0	0808.3	145.0	15.0			
	15000	KISV	2 S/F	0739.7	0740.8	3.6	16.0			
	9300	KISV	45 C	0740.3	0742.0		9.0			
	9300	KISV	23 GRF	0740.3	0815.2	62.8	10.0			
	9300	KISV	45 C	0740.3	0740.7	4.2	21.0			
	5900	KISV	2 S/F	0740.3	0740.8	1.1	3.0			
	9100	GORK	1 S	0740.4	0740.7	2.6	19.0			
	3100	CRIM	20 GRF	0745.0	0811.5	45.0	6.7	2.0		
	5900	KISV	46 C	0752.0	0754.1		11.0			
	5900	KISV	46 C	0752.0	0755.5		12.0			
	5900	KISV	46 C	0752.0	0752.7	10.6	16.0			
	9300	KISV	45 C	0752.4	0755.3		8.0			
	9100	GORK	1 S	0752.4	0752.8	0.7	7.0			
	9300	KISV	45 C	0752.4	0752.8	7.0	11.0			
	237	TRST	46 C	0817.0	0817.1	0.2	118.0			1R
	9300	KISV	22 GRF	0847.5	0850.4	22.0	11.0			
	15000	KISV	23 GRF	0847.6	0854.1		8.0			
	15000	KISV	23 GRF	0847.6	0922.3	83.0	12.0			
	9300	KISV	22 GRF	0909.9	0928.4	53.5	7.0			
	9300	KISV	2 S/F	0915.9	0917.5	4.3	8.0			
	5900	KISV	2 S/F	0915.9	0917.5	3.2	9.0			
	9300	KISV	45 C	0920.7	0924.0	6.0	10.0			
	9300	KISV	45 C	0920.7	0921.2		5.0			
	5900	KISV	45 C	0923.4	0925.4		2.0			
	5900	KISV	45 C	0923.4	0923.9	3.3	6.0			
	15000	KISV	2 S/F	0923.6	0924.1	1.3	5.0			
	1470	POTS	41 F	0933.5	0934.7	5.9	22.0			
	5900	KISV	22 GRF	0939.9	0947.4	14.8	3.0			
	5900	KISV	2 S/F	0959.2	1001.0	5.4	10.0			
	9300	KISV	2 S/F	0959.2	1000.4	2.0	3.0			
	5900	KISV	22 GRF	1033.9	1037.9	18.4	4.0			
	204	IZMI	42 SER	1037.0	1117.0	50.0	123.0			
	1470	POTS	4 S/F	1041.7	1042.4	3.4	28.0			
	9300	KISV	2 S/F	1116.8	1118.2	3.7	7.0			
5900	KISV	2 S/F	1117.4	1118.2	2.3	3.0				
15000	KISV	2 S/F	1117.7	1118.2	1.7	4.0				
9300	KISV	23 GRF	1124.0	1131.2		4.0				
9300	KISV	23 GRF	1124.0	1125.9	13.0	5.0				
15000	KISV	2 S/F	1124.8	1125.8	2.6	7.0				
1470	POTS	4 S/F	1240.4	1240.6	1.1	13.0				
1470	POTS	4 S/F	1405.5	1406.1	1.5	15.0				
2800	OTTA	22 GRF	1700.0	1851.0	250.0	18.9	9.0			
2800	OTTA	1 S	1912.0	1913.3	2.7	27.1	11.0			
410	PALE	8 S	2123.0E	2123.0	1.0D	130.0			QL=1 ST=2 TYP=3	
245	LEAR	8 S	2311.0E	2313.0	2.0D	130.0			QL=1 ST=2 TYP=3	
245	PALE	8 S	2356.0E	2356.0	1.0D	160.0			QL=1 ST=2 TYP=3	
08	221	ABST	43 NS	0500.0		240.0	22.0			
	200	GORK	44 NS	0539.0E		180.0D	5.0			
	245	SVTO	44 NS	0633.0E	1048.0	452.0D	330.0		QL=1 ST=2 TYP=1	
	204	IZMI	43 NS	0700.0		300.0	45.0			
	260	ONDR	44 NS	0800.0E		380.0D				

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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	410	SVTO	44 NS	0909.0E	1301.0	271.00	42.0			QL=1 ST=2 TYP=1	
	127	TORN	43 NS	0921.0		130.0		2.0		V=1	
	234	POTS	43 NS	0955.0	1052.0	215.0	55.0				
	245	SGMR	43 NS	1212.0	1757.0	571.00	370.0			QL=1 ST=2 TYP=1	
	245	PALE	44 NS	1944.0E	1952.0	256.00	280.0			QL=1 ST=3 TYP=1	
	100	HIRA	44 NS	2133.0E		620.00					
	200	HIRA	44 NS	2133.0E		620.00					
	245	LEAR	44 NS	2227.0E	2238.0	93.00	100.0				QL=1 ST=1 TYP=1
	200	HIRA	42 SER	0509.0	0546.0	43.0	290.0				0
	15000	KISV	22 GRF	0603.1	0608.9	56.4	6.0				
	5900	KISV	46 C	0605.1	0609.0		11.0				
	5900	KISV	23 GRF	0605.1	0624.6	101.0	8.0				
	5900	KISV	46 C	0605.1	0607.7		9.0				
	5900	KISV	46 C	0605.1	0609.9	16.6	12.0				
	9300	KISV	46 C	0606.5	0607.5		8.0				
	9300	KISV	23 GRF	0606.5	0653.7	61.5	9.0				
	9300	KISV	46 C	0606.5	0608.8	9.4	13.0				
	9300	KISV	46 C	0606.5	0609.9		12.0				
	245	SVTO	8 S	0627.0E	0628.0	1.00	100.0				QL=1 ST=2 TYP=3
	100	HIRA	42 SER	0636.8	0639.6	6.2	625.0				
	200	HIRA	42 SER	0637.0	0639.6	5.6	485.0				0
	5900	KISV	46 C	0640.0	0645.2		8.0				
	5900	KISV	46 C	0640.0	0643.3	12.5	9.0				
	5900	KISV	46 C	0640.0	0641.4		4.0				
	5900	KISV	46 C	0640.0	0642.9		7.0				
	9300	KISV	46 C	0646.6	0647.3		4.0				
	9300	KISV	46 C	0646.6	0650.3		5.0				
	9300	KISV	46 C	0646.6	0649.4	6.0	6.0				
	9300	KISV	46 C	0646.6	0648.9		5.0				
	9300	KISV	45 C	0659.3	0700.2		6.0				
	9300	KISV	45 C	0659.3	0701.2	7.8	9.0				
	5900	KISV	45 C	0659.8	0700.2		4.0				
	5900	KISV	45 C	0659.8	0701.3	7.5	5.0				
	5900	KISV	2 S/F	0731.3	0735.0	5.4	3.0				
	9100	GORK	21 GRF	0751.3	1123.7	249.00	34.0				
	15000	KISV	22 GRF	0817.5	0848.6	37.3	7.0				
	5900	KISV	22 GRF	0823.9	0835.8	31.5	4.0				
	810	KRAK	8 S	0829.4	0829.5	0.2	21.0				
	9300	KISV	2 S/F	0829.7	0831.5	8.5	4.0				
	100	GORK	41 F	0836.8	0846.5		180.0				
	100	GORK	41 F	0836.8	0839.8	14.0	120.0				
	2950	GORK	3 S	0843.9	0846.9	7.8	13.0				
	430	KRAK	2 S/F	0925.9	0926.6	1.0	18.0		1.0		
	327	TRST	8 S	0926.7	0926.7	0.1	394.0				64R Spike
	15000	KISV	22 GRF	0930.5	0947.8	29.0	18.0				
	9300	KISV	22 GRF	0930.9	0952.3	43.0	9.0				
	15000	KISV	2 S/F	0930.9	0931.8	1.7	6.0				
	5900	KISV	22 GRF	0931.2	0950.3	127.7	13.0				
	9300	KISV	2 S/F	0933.4	0934.5	3.8	18.0				
	9100	GORK	1 S	0933.5	0934.4	2.7	14.5				
5900	KISV	2 S/F	0933.5	0934.5	3.3	14.0					
810	KRAK	42 SER	0936.0	0938.0	11.0	60.0					
810	KRAK	42 SER	0936.0	0945.9		220.0					
5900	KISV	4 S/F	0942.3	0946.7	8.0	195.0					
950	GORK	46 C	0942.5	0945.0	10.0	64.0					
950	GORK	46 C	0942.5	0945.7		66.0					
650	GORK	46 C	0943.1	0946.1		1200.0					
650	GORK	46 C	0943.1	0944.6	3.9	750.0					
9300	KISV	4 S/F	0943.9	0947.0U	8.0	101.00					
9500	POTS	3 S	0943.9	0946.3	6.1	209.0					
610	TRST	47 GB	0943.9	0945.8	3.1	3104.0				3R Spikes	
1470	POTS	3 S	0943.9	0946.9	11.0	43.0					
610	LEAR	49 GB	0944.0E	0945.0	3.00	500.0				QL=1 ST=3 TYP=7	
3000	POTS	3 S	0944.0	0946.6	12.0	146.0					
3013	IZMI	5 S	0944.2	0946.8	6.0	102.0	80.0				
3100	CRIM	29 PBI	0945.0	0948.0	12.0	11.6	4.0				
3100	CRIM	3 S	0945.0	0946.8	3.0	90.0	30.0				
9100	GORK	4 S/F	0945.5	0946.7	4.2	305.0					
15000	KISV	4 S/F	0945.7	0946.8	2.1	191.0					

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 -22 W/m 2 Hz)	Mean			
08	8800	LEAR	8 S	0946.0E	0946.0	1.0D	200.0			QL=1 ST=2 TYP=3	
	2695	LEAR	8 S	0946.0E	0946.0	2.0D	130.0			QL=1 ST=2 TYP=3	
	15400	LEAR	8 S	0946.0E	0946.0	1.0D	180.0			QL=1 ST=2 TYP=3	
	2695	SVTO	4 S/F	0946.0E	0946.0	4.0D	110.0			QL=1 ST=2 TYP=3	
	4995	SVTO	4 S/F	0946.0E	0946.0	4.0D	150.0			QL=1 ST=2 TYP=3	
	15400	SVTO	4 S/F	0946.0E	0946.0	4.0D	170.0			QL=1 ST=2 TYP=3	
	8800	SVTO	4 S/F	0946.0E	0946.0	4.0D	200.0			QL=1 ST=2 TYP=3	
	810	KRAK	3 S	0950.5	0950.5	6.3	11.0	7.0			
	9100	GORK	2 S/F	0951.0	0951.9	2.2	25.0				
	9300	KISV	2 S/F	0955.0	0955.9	3.1	27.0				
	15000	KISV	2 S/F	0955.4	0955.9	1.4	31.0				
	5900	KISV	2 S/F	0955.5	0955.9	0.9	4.0				
	410	SVTO	8 S	1004.0E	1004.0	U	490.0				QL=1 ST=3 TYP=3
	245	SVTO	8 S	1004.0E	1004.0	U	80.0				QL=1 ST=2 TYP=3
	245	SVTO	8 S	1015.0E	1015.0	U	130.0				QL=1 ST=2 TYP=3
	9300	KISV	2 S/F	1040.7	1043.0	5.2	7.0				
	5900	KISV	46 C	1054.2	1057.4		5.0				
	5900	KISV	46 C	1054.2	1055.6		6.0				
	5900	KISV	46 C	1054.2	1056.7	4.7	7.0				
	5900	KISV	22 GRF	1054.2	1114.7	44.5	17.0				
	9300	KISV	23 GRF	1055.1	1117.3	46.6	31.0				
	2950	GORK	20 GRF	1059.3	1107.5	37.0	31.0				
	5900	KISV	46 C	1059.4	1107.5		13.0				
	5900	KISV	46 C	1059.4	1111.7		15.0				
	5900	KISV	46 C	1059.4	1109.8	15.2	18.0				
	3000	POTS	20 GRF	1102.5	1107.5	9.9	25.0				
	3013	IZMI	40 F	1103.0	1109.8	10.0	17.0	10.0			
	15000	KISV	23 GRF	1104.0	1118.4	43.5	17.0				
	9100	GORK	22 GRF	1104.1	1109.8	18.7	24.0				
	9300	KISV	46 C	1106.6	1107.6		13.0				
	9300	KISV	46 C	1106.6	1111.8		16.0				
	9300	KISV	46 C	1106.6	1109.8	8.9	18.0				
	15000	KISV	2 S/F	1111.2	1111.8	2.1	5.0				
	204	IZMI	41 F	1122.0	1124.0	4.0	1500.0				
	950	GORK	2 S/F	1122.8	1124.2	4.1	11.0				
	650	GORK	4 S/F	1122.8	1124.2	5.2	65.0				
	430	KRAK	2 S/F	1123.0	1123.3	1.0	16.0	2.0			
	430	KRAK	4 S/F	1124.0	1124.0	2.2	180.0	10.0			
	810	KRAK	41 F	1124.0	1124.3	1.5	13.0	3.0			
	610	TRST	46 C	1124.1	1124.2	0.2	290.0				21R Spikes
	237	TRST	47 GB	1124.1	1124.2	0.2	1035.0				20R Noise Storm
	408	TRST	46 C	1124.1	1124.3	0.2	296.0				28R Spikes
	327	TRST	46 C	1124.1	1124.3	0.2	314.0				26R Spikes
	430	KRAK	8 S	1136.5	1136.5	0.1	27.0				
	245	SVTO	49 GB	1204.0E	1205.0	1.0D	720.0				QL=1 ST=2 TYP=6
	430	KRAK	8 S	1242.1	1242.2	0.2	140.0				
	430	KRAK	8 S	1242.5	1242.7	0.4	250.0D				
	810	KRAK	8 S	1242.9	1243.0	0.2	10.0				
	127	TORN	47 GB	1253.2	1255.1	4.0	700.0	60.0			
	430	KRAK	8 S	1256.7	1256.7	0.4	150.0				
430	KRAK	42 SER	1343.8	1344.5	1.0	110.0					
810	KRAK	8 S	1358.9	1359.0U	0.2	25.0					
810	KRAK	8 S	1408.5	1408.9	0.5	74.0					
234	POTS	4 S/F	1439.1	1441.6	4.1	770.0	50.0				
610	SGMR	4 S/F	1440.0E	1441.0	3.0D	58.0				QL=1 ST=2 TYP=3	
410	SGMR	8 S	1440.0E	1441.0	2.0D	81.0				QL=1 ST=2 TYP=3	
245	SGMR	8 S	1440.0E	1441.0	2.0D	430.0				QL=1 ST=2 TYP=3	
245	SVTO	4 S/F	1440.0E	1441.0	3.0D	280.0				QL=1 ST=2 TYP=3	
610	SVTO	8 S	1440.0E	1441.0	2.0D	60.0				QL=1 ST=2 TYP=3	
410	SVTO	8 S	1440.0E	1441.0	1.0D	69.0				QL=1 ST=2 TYP=3	
40	POTS	4 S/F	1440.1	1441.8	3.0	1100.0	200.0				
127	TORN	4 S/F	1441.0	1441.5	2.7	2100.0	1000.0				
610	SGMR	8 S	1458.0E	1458.0	1.0D	310.0				QL=1 ST=2 TYP=3	
610	SVTO	8 S	1458.0E	1458.0	1.0D	380.0				QL=1 ST=2 TYP=3	
610	SVTO	8 S	1501.0E	1501.0	U	390.0				QL=1 ST=2 TYP=3	
8800	SVTO	8 S	1509.0E	1509.0	2.0D	71.0				QL=1 ST=2 TYP=3	
4995	SVTO	4 S/F	1509.0E	1509.0	3.0D	71.0				QL=1 ST=2 TYP=3	
2695	SVTO	4 S/F	1509.0E	1509.0	3.0D	83.0				QL=1 ST=2 TYP=3	
11800	BERN	46 C	1509.0	1509.5	2.0	123.0					

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
08	5200	BERN	46 C	1509.0	1509.5	2.0	57.0			
	8400	BERN	46 C	1509.0	1509.5	2.0	95.0			
	3200	BERN	46 C	1509.0	1509.5	2.0	80.0			
	245	PALE	49 GB	1740.0E	1740.0	1.0D	4100.0			QL=1 ST=2 TYP=6
	245	SGMR	49 GB	1740.0E	1740.0	1.0D	4200.0			QL=1 ST=2 TYP=6
	410	PALE	8 S	1850.0E	1850.0	U	85.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	1850.0E	1850.0	U	87.0			QL=1 ST=2 TYP=3
	410	SGMR	8 S	1850.0E	1850.0	U	58.0			QL=1 ST=3 TYP=3
	245	PALE	4 S/F	1854.0E	1856.0	3.0D	330.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1856.0E	1856.0	1.0D	390.0			QL=1 ST=2 TYP=3
	2800	OTTA	4 S/F	1908.0	2039.0	200.0	176.8	53.0		
	410	SGMR	8 S	1925.0E	1925.0	1.0D	64.0			QL=1 ST=2 TYP=3
	410	PALE	8 S	1935.0E	1935.0	U	120.0			QL=1 ST=2 TYP=3
	610	PALE	8 S	1935.0E	1935.0	1.0D	440.0			QL=1 ST=2 TYP=3
	4995	SGMR	4 S/F	2012.0E	2038.0	50.0D	330.0			QL=1 ST=2 TYP=5
	8800	SGMR	4 S/F	2013.0E	2038.0	41.0D	240.0			QL=1 ST=2 TYP=5
	245	PALE	8 S	2015.0E	2015.0	1.0D	270.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	2015.0E	2015.0	1.0D	330.0			QL=1 ST=2 TYP=3
	610	PALE	8 S	2017.0E	2017.0	1.0D	230.0			QL=1 ST=2 TYP=3
	610	SGMR	8 S	2017.0E	2017.0	1.0D	280.0			QL=1 ST=2 TYP=3
	2695	SGMR	20 GRF	2017.0E	2038.0	28.0D	160.0			QL=1 ST=2 TYP=2
	4995	PALE	20 GRF	2017.0E	2038.0	64.0D	310.0			QL=1 ST=2 TYP=2
	8800	PALE	20 GRF	2017.0E	2038.0	78.0D	310.0			QL=1 ST=2 TYP=2
	2695	PALE	20 GRF	2019.0E	2038.0	26.0D	150.0			QL=1 ST=2 TYP=2
	15400	SGMR	20 GRF	2021.0E	2038.0	28.0D	140.0			QL=1 ST=2 TYP=2
	15400	PALE	20 GRF	2021.0E	2038.0	72.0D	150.0			QL=1 ST=2 TYP=2
	1415	SGMR	4 S/F	2034.0E	2038.0	6.0D	86.0			QL=1 ST=2 TYP=3
	1415	PALE	4 S/F	2035.0E	2039.0	5.0D	77.0			QL=1 ST=2 TYP=3
	100	HIRA	42 SER	2213.1	2213.9	14.5	510.0			
	500	HIRA	27 RF	2219.5	2232.3	70.0	20.0			WR
	200	HIRA	46 C	2225.9	2233.0	12.0	150.0	75.0		WL
	200	HIRA	46 C	2258.7	2300.0	1.3	480.0			
	245	LEAR	8 S	2259.0E	2300.0	2.0D	230.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	2300.0E	2300.0	1.0D	450.0			QL=1 ST=2 TYP=3
	09	221	ABST	43 NS	0500.0		240.0		9.0	
100		GORK	44 NS	0600.0E		360.0D		5.0		
245		SVTO	43 NS	0612.0	1429.0	582.0D	190.0			QL=1 ST=2 TYP=1
260		ONDR	44 NS	0800.0E		410.0D				
127		TORN	43 NS	0950.0		310.0				V=1
245		SGMR	43 NS	1211.0	1506.0	574.0D	140.0			QL=1 ST=2 TYP=1
200		HIRA	44 NS	2130.0E	2221.0	630.0D	19.0	6.0		WL
245		LEAR	44 NS	2227.0E	0445.0	742.0D	170.0			QL=1 ST=2 TYP=1
2840		PEKG	20 GRF	0510.0	0545.3	149.0	13.1			
9100		GORK	21 GRF	0651.4	1045.0	309.0D	27.0			
5900		KISV	2 S/F	0746.8	0748.2	2.0	5.0			
9300		KISV	45 C	0746.9	0748.1	1.9	7.0			
9300		KISV	45 C	0746.9	0747.2		7.0			
410		SVTO	8 S	0747.0E	0748.0	1.0D	200.0			QL=1 ST=2 TYP=3
2950		GORK	1 S	0747.4	0748.1	1.0	6.6	3.0		
408		TRST	46 C	0747.9	0748.1	0.3	287.0			3L
5900		KISV	22 GRF	0756.9	0802.3	19.0	4.0			
2950		GORK	20 GRF	0757.1	0800.1	20.9	7.5			
5900		KISV	2 S/F	0757.4	0757.8	1.2	2.0			
9500		POTS	4 S/F	0759.0	0800.0	2.9	30.0			
15000		KISV	22 GRF	0759.2	0803.2	16.8	5.0			
5900		KISV	2 S/F	0759.3	0800.1	2.3	27.0			
9300		KISV	4 S/F	0759.3	0800.2	3.3	48.0			
9300		KISV	22 GRF	0759.3	0802.8	14.0	6.0			
9100		GORK	4 S/F	0759.5	0801.0	2.8	40.0			
15000		KISV	2 S/F	0759.6	0800.2	2.0	15.0			
204		I2MI	41 F	0835.0	0838.5	4.0	114.0			
100		GORK	41 F	0840.3	0844.4		450.0			
100		GORK	41 F	0840.3	0841.7	5.0	1345.0			
9300		KISV	2 S/F	0857.4	0859.8	4.2	5.0			
5900		KISV	22 GRF	0910.0	0914.3	10.2	4.0			
9300		KISV	23 GRF	0923.3	0935.3	13.7	6.0			
15000		KISV	23 GRF	0925.8	0935.0	17.4	5.0			
5900		KISV	23 GRF	0926.2	0934.8	11.1	3.0			

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

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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
09	9300	KISV	2 S/F	0926.8	0928.6	4.3	9.0			
	5900	KISV	2 S/F	0927.3	0928.6	4.0	7.0			
	15000	KISV	2 S/F	0928.5	0929.0	1.5	4.0			
	430	KRAK	42 SER	0933.1	0933.8	2.0	13.0			
	237	TRST	45 C	0933.3	0933.6	0.6	53.0			7L
	327	TRST	41 F	0933.3	0933.6	0.7	159.0			10L Spikes
	408	TRST	42 SER	0933.5	0933.8	0.6	127.0			13L
	245	SVTO	8 S	0934.0E	0934.0		180.0			QL=1 ST=3 TYP=3
	237	TRST	47 GB	0934.6	0934.7	0.3	897.0			2L
	15000	KISV	23 GRF	0942.0	0946.3	11.1	5.0			
	15000	KISV	1 S	0944.5	0944.7	1.0	10.0			
	5900	KISV	2 S/F	1032.2	1032.9	1.4	5.0			
	5900	KISV	23 GRF	1042.0	1047.6	11.1	4.0			
	5900	KISV	1 S	1044.8	1045.0	2.0	7.0			
	9300	KISV	1 S	1044.8	1045.1	1.7	14.0			
	9300	KISV	2 S/F	1107.5	1108.2	7.5	8.0			
	15000	KISV	1 S	1108.2	1108.4	1.8	13.0			
	950	GORK	41 F	1112.6	1122.3		3.8			
	950	GORK	41 F	1112.6	1116.5		2.3			
	950	GORK	41 F	1112.6	1119.5		3.8			
	950	GORK	41 F	1112.6	1113.8	11.0	2.3			
	5900	KISV	2 S/F	1128.3	1129.5	3.7	4.0			
	5900	KISV	2 S/F	1142.2	1142.8	1.4	5.0			
	810	KRAK	42 SER	1146.4	1156.1	14.0	35.0			
	15000	KISV	2 S/F	1146.7	1147.9	3.0	8.0			
	9300	KISV	22 GRF	1147.0	1148.1	13.0	11.0			
	1470	POTS	29 PBI	1250.6	1259.4	125.0	523.0			
	3000	POTS	29 PBI	1252.6	1259.4	143.0	1320.0			
	3100	CRIM	28 PRE	1253.3	1255.4	2.1	7.0	3.0		
	9500	POTS	30 PBI	1254.0	1258.0	124.0	1237.0			
	3100	CRIM	47 GB	1255.4	1259.0		583.0	194.0		
	3100	CRIM	47 GB	1255.4	1258.2	12.0	550.0			
	3100	CRIM	29 PBI	1255.4	1307.4	50.00	60.0	22.0		
	33	UPIC	45 C	1255.8	1257.0	1.8				
	1415	SGMR	4 S/F	1256.0E	1259.0	9.00	460.0			QL=1 ST=2 TYP=3
	8800	SGMR	49 GB	1256.0E	1258.0	19.00	1300.0			QL=1 ST=2 TYP=6
	2695	SGMR	49 GB	1256.0E	1258.0	19.00	1100.0			QL=1 ST=2 TYP=6
	4995	SGMR	49 GB	1256.0E	1258.0	19.00	1200.0			QL=1 ST=2 TYP=6
	15400	SGMR	49 GB	1256.0E	1258.0	14.00	1700.0			QL=1 ST=2 TYP=6
	4995	SVTO	49 GB	1256.0E	1258.0	15.00	1000.0			QL=1 ST=2 TYP=6
	15400	SVTO	49 GB	1256.0E	1258.0	12.00	1700.0			QL=1 ST=2 TYP=6
	2695	SVTO	49 GB	1256.0E	1258.0	15.00	1100.0			QL=1 ST=2 TYP=6
	1415	SVTO	20 GRF	1256.0E	1259.0	10.00	460.0			QL=1 ST=2 TYP=2
	8800	SVTO	49 GB	1256.0E	1258.0	664.00	1200.0			QL=1 ST=1 TYP=6
	536	ONDR	47 GB	1256.4	1258.0	11.5				
	810	KRAK	45 C	1256.5	1259.0		57.0			
	810	KRAK	45 C	1256.5	1257.3	12.0	78.0	22.0		
430	KRAK	7 C	1257.3	1257.3	7.5	29.0	7.0			
430	KRAK	7 C	1257.3	1259.8		14.0				
245	SGMR	49 GB	1259.0E	1300.0	2.00	2400.0			QL=1 ST=2 TYP=6	
245	SVTO	49 GB	1259.0E	1300.0	2.00	1600.0			QL=1 ST=2 TYP=6	
234	POTS	4 S/F	1259.5	1301.0	4.9	5500.0	250.0			
127	TORN	47 GB	1259.6	1303.1	6.0	770.0	200.0			
237	TRST	47 GB	1259.7	1300.9	1.7	7810.0			2L	
327	TRST	42 SER	1309.2	1309.2	0.2	340.0			17L	
810	KRAK	27 RF	1313.5	1314.0	5.8	6.0	2.0			
2800	OTTA	26 FAL	1320.0	1320.0	160.0	32.5	15.0			
245	SGMR	8 S	1429.0E	1429.0	2.00	260.0			QL=1 ST=2 TYP=3	
245	SGMR	49 GB	1621.0E	1621.0	2.00	690.0			QL=1 ST=2 TYP=6	
245	PALE	49 GB	1921.0E	1921.0		1100.0			QL=1 ST=2 TYP=6	
245	SGMR	49 GB	1921.0E	1921.0	1.00	1600.0			QL=1 ST=2 TYP=6	
245	PALE	4 S/F	1925.0E	1928.0	4.00	450.0			QL=1 ST=3 TYP=5	
2800	OTTA	2 S/F	1925.5	1929.0	7.0	23.0	7.0			
245	SGMR	49 GB	1928.0E	1928.0	1.00	620.0			QL=1 ST=2 TYP=6	
4995	SGMR	8 S	1928.0E	1928.0	2.00	60.0			QL=1 ST=2 TYP=3	
8800	SGMR	8 S	1928.0E	1928.0	2.00	80.0			QL=1 ST=2 TYP=3	
15400	PALE	8 S	2049.0E	2049.0	1.00	59.0			QL=1 ST=2 TYP=3	
15400	SGMR	8 S	2049.0E	2049.0	1.00	68.0			QL=1 ST=2 TYP=3	
8800	SGMR	8 S	2049.0E	2049.0	1.00	78.0			QL=1 ST=2 TYP=3	

S O L A R R A D I O E M I S S I O N  
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FEBRUARY 1989

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
09	200 HIRA	46 C	2229.7	2230.1	4.6	70.0			0
	100 HIRA	42 SER	2229.7	2231.2	4.2	890.0			
10	221 ABST	43 NS	0500.0		240.0		15.0		
	200 GORK	44 NS	0530.0E		180.00		5.0		
	245 SVTO	44 NS	0611.0E	1233.0	584.00	54.0			QL=1 ST=2 TYP=1
	204 IZMI	43 NS	0700.0		300.0	15.0			
	260 ONDR	44 NS	0800.0E	1301.6	410.00	37.0			
	127 TORN	43 NS	1100.0		240.0		10.0		V=1
	410 SVTO	44 NS	1215.0E	1342.0	220.00	38.0			QL=1 ST=2 TYP=1
	245 SGMR	43 NS	1701.0	2032.0	285.00	66.0			QL=1 ST=2 TYP=1
	410 PALE	8 S	0221.0E	0221.0		U	190.0		QL=1 ST=2 TYP=3
	245 PALE	8 S	0311.0E	0311.0		U	53.0		QL=1 ST=2 TYP=3
	2840 PEKG	28 PRE	0405.0	0415.0	10.0	26.7			
	2840 PEKG	45 C	0415.0	0434.3	24.0	263.8			
	17000 NOBE	7 C	0423.6	0434.3	36.0	193.0			4R
	35000 NOBE	7 C	0423.6	0434.3	32.0	158.0			0
	15400 LEAR	4 S/F	0426.0E	0434.0	36.00	210.0			QL=1 ST=2 TYP=5
	80000 NOBE	7 C	0431.8	0434.3	30.0	45.0			
	500 HIRA	46 C	0432.1	0433.2	7.9	13.0			0
	610 LEAR	8 S	0433.0E	0434.0	2.00	31.0			QL=1 ST=2 TYP=3
	245 LEAR	8 S	0437.0E	0437.0		U	190.0		QL=1 ST=2 TYP=3
	2840 PEKG	29 PBI	0439.0		77.0	48.8			
	100 HIRA	42 SER	0442.2	0443.6	13.2	560.0			
	500 HIRA	46 C	0523.0	0527.4	24.5	40.0	7.0		0
	100 GORK	41 F	0526.2	0532.3		580.0			
	100 GORK	41 F	0526.2	0537.7		230.0			
	100 GORK	41 F	0526.2	0526.9	12.0	176.0			
	9100 GORK	21 GRF	0530.0E	0559.3	390.00	24.0			
	5900 KISV	2 S/F	0554.6	0600.4	6.8	24.0			
	2840 PEKG	3 S	0558.0	0600.1	11.0	32.5			
	2950 GORK	3 S	0558.6	0559.7	4.2	38.0			
	3100 CRIM	3 S	0559.5	0600.6	1.4	30.0	10.0		
	3100 CRIM	29 PBI	0559.5	0600.9	3.0	14.0	5.0		
	9300 KISV	2 S/F	0600.0	0600.4	4.7	9.0			
	245 LEAR	49 GB	0611.0E	0611.0		U	620.0		QL=1 ST=2 TYP=6
	245 SVTO	49 GB	0611.0E	0611.0		U	910.0		QL=1 ST=2 TYP=6
	610 LEAR	8 S	0632.0E	0632.0		U	93.0		QL=1 ST=2 TYP=3
	650 GORK	20 GRF	0723.0	0815.0	106.0	8.0			
	9300 KISV	22 GRF	0731.6	0734.0	13.7	4.0			
	5900 KISV	22 GRF	0748.3	0751.9	10.3	2.0			
	9300 KISV	22 GRF	0748.8	0749.4	8.2	5.0			
	5900 KISV	2 S/F	0749.0	0749.3	1.3	2.0			
430 KRAK	40 F	0803.5	0814.7	60.2	19.0	1.0			
2950 GORK	1 S	0804.0	0804.5	4.5	5.4				
5900 KISV	2 S/F	0804.0	0804.5	1.7	3.0				
2950 GORK	20 GRF	0819.3	0828.0	28.0	9.0				
9500 POTS	4 S/F	0843.0	0844.9	13.0	51.0				
9300 KISV	4 S/F	0843.2	0844.8	6.2	57.0				
5900 KISV	2 S/F	0843.4	0844.7	6.0	16.0				
9100 GORK	4 S/F	0843.6	0844.8	3.8	53.0				
15000 KISV	2 S/F	0843.9	0844.7	3.5	58.0				
8800 LEAR	8 S	0844.0E	0844.0	1.00	60.0			QL=1 ST=2 TYP=3	
5900 KISV	23 GRF	0907.7	0910.0	18.3	3.0				
5900 KISV	45 C	0907.8	0908.2	1.5	3.0				
5900 KISV	45 C	0907.8	0908.3		3.0				
9300 KISV	2 S/F	0912.0	0912.9	6.0	8.0				
536 ONDR	49 GB	1010.0	1050.4	100.0					
9300 KISV	2 S/F	1013.5	1014.7	4.5	6.0				
9300 KISV	23 GRF	1027.0	1032.7	17.0	5.0				
9300 KISV	45 C	1027.5	1028.2	3.3	15.0				
9300 KISV	45 C	1027.5	1028.5		14.0				
5900 KISV	45 C	1027.6	1028.2		10.0				
5900 KISV	45 C	1027.6	1028.4	2.6	11.0				
9100 GORK	1 S	1027.8	1028.1	2.0	17.0				
15000 KISV	2 S/F	1028.0	1028.1	2.0	4.0				
9300 KISV	2 S/F	1033.3	1035.5	6.1	25.0				
5900 KISV	2 S/F	1034.2	1035.4	5.0	21.0				
9100 GORK	1 S	1034.7	1035.6	1.7	17.0				

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

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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
10	3100	CRIM	1 S	1034.8	1035.5	1.2	6.5	2.0		
	2950	GORK	1 S	1035.0	1035.5	1.0	7.0	3.5		
	9100	GORK	1 S	1050.8	1051.5	1.5	10.0			
	5900	KISV	24 R	1101.2	1129.5	58.8	14.0			
	9300	KISV	25 R	1102.0	1122.7	58.0	5.0			
	810	KRAK	8 S	1119.0	1119.1	0.9	22.0			
	9300	KISV	2 S/F	1155.4	1155.7	1.1	5.0			
	9500	POTS	29 PBI	1159.0	1230.9	111.0	71.0			
	3000	POTS	29 PBI	1201.0	1222.8	111.0	206.0			
	1470	POTS	45 C	1209.5	1232.3	47.0	168.0			
	810	KRAK	46 C	1210.0	1231.4	108.0	70.0	12.0		
	3100	CRIM	28 PRE	1210.1	1219.9	9.8	12.0	4.0		
	610	TRST	27 RF	1213.0	1302.0	103.0	290.0			38L
	610	TRST	27 RF	1213.0	1250.8	103.0	363.0			49L Var. Pol.
	237	TRST	27 RF	1214.0	1232.2	110.0	94.0			18L Var. Pol.
	237	TRST	27 RF	1214.0	1342.3	110.0	85.0			34L
	237	TRST	27 RF	1214.0	1302.4	110.0	156.0			71L
	327	TRST	27 RF	1215.0	1342.0	98.0	75.0			8L
	327	TRST	27 RF	1215.0	1231.1	98.0	81.0			15L Var. Pol.
	408	TRST	27 RF	1215.0	1343.2	93.0	75.0			8L
	408	TRST	27 RF	1215.0	1302.5	93.0	72.0			30L
	408	TRST	27 RF	1215.0	1230.5	93.0	96.0			11L Var. Pol.
	327	TRST	27 RF	1215.0	1301.8	98.0	105.0			53L
	430	KRAK	46 C	1215.2	1230.2	105.00	57.0	14.0		
	3200	BERN	46 C	1218.0	1223.0	30.0	130.0			
	5200	BERN	46 C	1218.0	1223.0	30.0	130.0			
	11800	BERN	46 C	1218.0	1233.0	30.0	60.0			
	8400	BERN	46 C	1218.0	1223.0	30.0	74.0			
	3100	CRIM	45 C	1219.9	1221.2	18.5	123.0			
	3100	CRIM	45 C	1219.9	1228.3		130.0			
	3100	CRIM	45 C	1219.9	1231.4		136.0			
	3100	CRIM	45 C	1219.9	1222.6		141.0	47.0		
	2695	SGMR	4 S/F	1220.0E	1223.0	7.00	190.0			QL=1 ST=3 TYP=3
	2695	SVTO	4 S/F	1220.0E	1222.0	27.00	220.0			QL=1 ST=2 TYP=5
	1415	SGMR	4 S/F	1221.0E	1222.0	6.00	130.0			QL=1 ST=3 TYP=3
	4995	SGMR	4 S/F	1221.0E	1223.0	6.00	170.0			QL=1 ST=3 TYP=3
	1415	SVTO	4 S/F	1221.0E	1232.0	20.00	160.0			QL=1 ST=2 TYP=5
	4995	SVTO	4 S/F	1221.0E	1223.00	21.00	190.0			QL=1 ST=2 TYP=5
	8800	SVTO	8 S	1222.0E	1222.0	1.00	54.0			QL=1 ST=2 TYP=3
	4995	SVTO	8 S	1222.0E	1222.0	1.00	54.0			QL=1 ST=2 TYP=3
	3100	CRIM	29 PBI	1223.1	1240.4	17.3	46.0	15.0		
	610	SGMR	8 S	1249.0E	1250.0	2.00	160.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1300.0E	1302.0	2.00	140.0			QL=1 ST=2 TYP=3
	610	SGMR	8 S	1301.0E	1302.0	1.00	93.0			QL=1 ST=2 TYP=3
	245	SVTO	8 S	1301.0E	1302.0	1.00	85.0			QL=1 ST=2 TYP=3
	245	SGMR	4 S/F	1336.0E	1342.0	6.00	120.0			QL=1 ST=3 TYP=3
	1470	POTS	4 S/F	1414.9	1415.4	1.6	9.0			
	234	POTS	4 S/F	1422.3	1422.5	0.3	200.0			
	237	TRST	47 GB	1422.4	1422.5	0.4	575.0			36L Var. Pol.
	327	TRST	41 F	1422.4	1422.6	0.4	389.0			67L Spikes
	1470	POTS	20 GRF	1440.4	1448.4	23.0	49.0			
	245	SGMR	8 S	1446.0E	1446.0	U	350.0			QL=1 ST=3 TYP=3
	245	SVTO	8 S	1446.0E	1446.0	U	220.0			QL=1 ST=2 TYP=3
234	POTS	4 S/F	1446.2	1446.5	1.1	450.0				
408	TRST	41 F	1446.3	1446.5	0.4	111.0			44L Spikes	
237	TRST	47 GB	1446.3	1446.5	0.6	1264.0			4L Var. Pol.	
327	TRST	46 C	1446.3	1446.6	0.6	141.0			10L Var. Pol.	
245	SGMR	8 S	1604.0E	1605.0	1.00	200.0			QL=1 ST=2 TYP=3	
245	PALE	8 S	2032.0E	2033.0	1.00	65.0			QL=1 ST=2 TYP=3	
11	221	ABST	43 NS	0500.0		240.0		11.0		
	260	ONDR	44 NS	0800.0E	1157.5	420.00	72.0			
	245	SGMR	43 NS	1208.0	1759.0	712.0	73.0			QL=1 ST=3 TYP=1
	127	TORN	43 NS	1248.0		108.0		2.0		V=1
	245	LEAR	44 NS	2228.0E	1005.0	740.00	350.0			QL=1 ST=2 TYP=1
	5900	KISV	22 GRF	0030.3	0035.8	10.0	17.0			
	2840	PEKG	20 GRF	0628.0	0633.7	19.0	8.0			
	3100	CRIM	20 GRF	0630.0	0634.8	29.2	11.0	4.0		
9300	KISV	22 GRF	0630.5	0635.8	15.1	12.0				



S O L A R R A D I O E M I S S I O N  
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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 <sup>2</sup> Hz)	Mean		
11	9100	GORK	20 GRF	0631.9	0635.5	8.0	6.8			
	9300	KISV	2 S/F	0707.8	0708.2	1.0	4.0			
	5900	KISV	2 S/F	0707.8	0708.2	2.6	3.0			
	9300	KISV	2 S/F	0831.8	0832.6	1.3	5.0			
	536	ONDR	42 SER	1005.8	1006.0	5.0				
	810	KRAK	8 S	1007.4	1007.5	0.5	8.0			
	9100	GORK	22 GRF	1021.4	1025.9	28.4	9.3			
	9300	KISV	2 S/F	1025.5	1025.9	1.8	5.0			
	15000	KISV	2 S/F	1025.9	1026.1	1.4	3.0			
	5900	KISV	2 S/F	1050.1	1051.0	2.5	4.0			
	810	KRAK	8 S	1108.0	1108.1	0.3	8.0			
	1470	POTS	20 GRF	1125.0	1141.6	24.0	37.0			
	3100	CRIM	21 GRF	1128.4	1139.2	60.0	20.0			
	5900	KISV	29 PBI	1134.8	1144.5	155.0	29.0			
	5900	KISV	4 S/F	1134.8	1141.8	9.7	110.0			
	9300	KISV	29 PBI	1135.0	1144.4	15.6	35.0			
	3013	IZMI	5 S	1135.0	1141.5	10.0	60.0	40.0		
	3000	POTS	20 GRF	1135.0	1141.5	15.0	92.0			
	9500	POTS	20 GRF	1135.0	1141.6	10.0	81.0			
	9300	KISV	4 S/F	1135.0	1141.9	9.4	101.0			
	950	GORK	22 GRF	1135.4	1142.5	15.0	4.6			
	15000	KISV	29 PBI	1135.6	1144.5	15.5	22.0			
	15000	KISV	4 S/F	1135.6	1141.8	8.9	67.0			
	2950	GORK	21 GRF	1136.4	1146.8	27.00	26.0			
	9100	GORK	21 GRF	1136.8	1150.9	24.00	33.0			
	2950	GORK	45 C	1137.6	1138.2	2.2	8.7	4.0		
	2950	GORK	45 C	1137.6	1139.5		8.7			
	3100	CRIM	3 S	1139.5	1141.8	5.0	42.0	14.0		
	9100	GORK	4 S/F	1139.6	1141.7	5.7	65.0			
	2950	GORK	3 S	1140.7	1143.7	5.8	63.0			
	3000	POTS	20 GRF	1158.0	1207.4	12.0	46.0			
	1470	POTS	20 GRF	1201.0	1206.8	10.0	27.0			
3100	CRIM	3 S	1203.3	1207.3	9.8	27.0	9.0			
810	KRAK	8 S	1319.2	1319.3	0.2	7.0				
245	SGMR	8 S	1411.0E	1411.0	1.00	400.0			QL=1 ST=2 TYP=3	
245	SVTO	8 S	1411.0E	1412.0	1.00	270.0			QL=1 ST=2 TYP=3	
245	SGMR	8 S	1457.0E	1457.0	1.00	360.0			QL=1 ST=2 TYP=3	
245	SVTO	8 S	1457.0E	1457.0	1.00	300.0			QL=1 ST=2 TYP=3	
2800	OTTA	3 S	1615.0	1621.0	11.0	43.0	13.0			
4995	SGMR	4 S/F	1619.0E	1621.0	4.00	49.0			QL=1 ST=2 TYP=3	
12	200	HIRA	43 NS	0010.0	0123.0	310.0	17.0	6.0		MR
	245	PALE	44 NS	0058.0E	0238.0	193.00	130.0			QL=1 ST=2 TYP=1
	221	ABST	43 NS	0500.0		240.0		17.0		
	245	SVTO	43 NS	0608.0	1005.0	590.00	430.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0800.0E	1229.0	410.00				
	245	SGMR	44 NS	1207.0E	1228.0	582.00	240.0			QL=1 ST=2 TYP=1
	9300	KISV	2 S/F	0616.3	0616.7	3.7	5.0			
	5900	KISV	2 S/F	0644.3	0645.4	4.6	4.0			
	204	IZMI	4 S/F	0729.5	0730.0	1.5	88.0			
	5900	KISV	2 S/F	0739.0	0741.2	6.2	5.0			
	5900	KISV	2 S/F	0746.9	0748.0	2.8	3.0			
	204	IZMI	5 S	0853.2	0853.5	1.5	76.0	55.0		
	204	IZMI	41 F	0922.0	0923.0	4.0	400.0			
	234	POTS	4 S/F	0922.1	0923.1	2.5	800.0	50.0		
	5900	KISV	45 C	0922.2	0923.4	7.8	15.0			
	5900	KISV	45 C	0922.2	0922.9		14.0			
	9300	KISV	23 GRF	0922.3	0929.8	12.0	3.0			
	9300	KISV	45 C	0922.4	0923.3	2.2	9.0			
	9300	KISV	45 C	0922.4	0922.9		6.0			
	9100	GORK	1 S	0922.5	0926.3	4.1	5.9			
	410	LEAR	8 S	0928.0E	0928.0		69.0			QL=1 ST=2 TYP=3
	204	IZMI	41 F	0936.0	0940.7	9.0	170.0			
	650	GORK	2 S/F	0940.6	0940.8	0.4	4.0			
	1470	POTS	4 S/F	1004.7	1006.6	4.8	52.0			
2950	GORK	1 S	1005.5	1006.6	1.8	8.7	4.0			
430	KRAK	42 SER	1005.5	1005.7	1.5	84.0				
536	ONDR	42 SER	1005.8	1006.0	5.0					
3100	CRIM	1 S	1005.8	1006.5	1.3	7.8	3.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean	Int	Remarks
12	950	GORK	4 S/F	1006.0	1006.7	1.0	18.0			
	810	KRAK	42 SER	1006.0	1006.7	0.8	18.0			
	9300	KISV	2 S/F	1006.2	1006.6	1.6	5.0			
	650	GORK	4 S/F	1006.2	1006.6U	0.8	50.00			
	5900	KISV	1 S	1050.3	1050.6	0.7	4.0			
	5900	KISV	45 C	1054.4	1055.0		7.0			
	5900	KISV	45 C	1054.4	1054.8	1.7	10.0			
	9300	KISV	2 S/F	1054.6	1054.8	1.7	11.0			
	15000	KISV	2 S/F	1054.6	1054.9	1.0	2.0			
	650	GORK	1 S	1054.8	1054.9	0.3	5.0			
	5900	KISV	22 GRF	1103.2	1112.8	20.8	7.0			
	3100	CRIM	1 S	1103.5	1104.1	1.5	3.8	1.0		
	9100	GORK	22 GRF	1115.0	1120.4	10.2	12.7			
	204	IZMI	41 F	1128.0	1129.0	1.8	900.0			
	15000	KISV	2 S/F	1128.6	1128.8	0.9	4.0			
	204	IZMI	5 S	1150.0	1150.5	1.0	150.0	100.0		
	536	ONDR	42 SER	1210.5	1225.1	20.0				
	430	KRAK	42 SER	1223.3	1225.5	5.5	125.0			
	410	SVTO	4 S/F	1224.0E	1225.0	4.00	170.0			QL=1 ST=3 TYP=3
	3000	POTS	4 S/F	1224.5	1226.2	2.8	27.0			
	1470	POTS	4 S/F	1224.5	1225.6	2.5	18.0			
	410	SGMR	8 S	1225.0E	1225.0	1.00	200.0			QL=1 ST=2 TYP=3
	410	SVTO	8 S	1225.0E	1226.0	1.00	77.0			QL=1 ST=2 TYP=3
	245	SVTO	4 S/F	1226.0E	1228.0	3.00	210.0			QL=1 ST=2 TYP=3
	234	POTS	4 S/F	1315.4	1315.6	1.0	250.0			
	430	KRAK	42 SER	1321.5	1322.9	4.5	77.0			
	410	SGMR	8 S	1322.0E	1322.0	1.00	100.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1444.0E	1444.0	1.00	410.0			QL=1 ST=2 TYP=3
	2800	OTTA	20 GRF	1605.0	1609.0	50.0	10.2	5.0		
	410	SGMR	8 S	1725.0E	1726.0	2.00	56.0			QL=1 ST=2 TYP=3
	410	SGMR	8 S	1859.0E	1859.0	1.00	140.0			QL=1 ST=2 TYP=3
	410	SGMR	8 S	1914.0E	1914.0	1.00	110.0			QL=1 ST=2 TYP=3
13	245	LEAR	44 NS	0006.0E	0110.0	641.00	74.0			QL=1 ST=2 TYP=1
	200	HIRA	43 NS	0033.0	0046.0	109.0	4.0	1.0		WR
	200	GORK	44 NS	0518.0E		210.00		5.0		
	245	SVTO	43 NS	0607.0	1134.0	592.00	170.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0750.0E	1338.8	420.00	59.0			
	100	GORK	43 NS	0843.0		197.0		5.0		
	204	IZMI	43 NS	0900.0		180.0	30.0			
	127	TORN	43 NS	0904.0		356.0		4.0		V=1
	234	POTS	43 NS	1028.0	1107.0U	152.0	28.0			
	245	SGMR	44 NS	1205.0E	1913.0	585.00	200.0			QL=1 ST=2 TYP=1
	245	PALE	44 NS	2020.0E	2042.0	472.00	130.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2130.0E	0700.0	630.00	70.0	20.0		WL
	245	LEAR	44 NS	2229.0E	0752.0	737.00	120.0			QL=1 ST=2 TYP=1
	245	LEAR	4 S/F	0045.0E	0048.0	3.00	60.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0047.0E	0048.0	1.00	52.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0102.0E	0102.0	U	50.0			QL=1 ST=2 TYP=3
	200	HIRA	46 C	0127.7	0128.1	2.2	67.0			SR
	2840	PEKG	5 S	0319.0	0324.2	19.0	80.0			
	17000	NOBE	1 S	0322.6	0323.9	3.0	30.0			20R
	4995	PALE	8 S	0323.0E	0323.0	2.00	120.0			QL=1 ST=2 TYP=3
	2695	PALE	8 S	0323.0E	0323.0	1.00	72.0			QL=1 ST=2 TYP=3
	8800	PALE	8 S	0323.0E	0323.0	1.00	71.0			QL=1 ST=2 TYP=3
	15000	KISV	4 S/F	0602.7	0603.2	2.3	358.0			
	15000	KISV	46 C	0634.0	0636.0	3.4	33.0			
	15000	KISV	46 C	0634.0	0635.4		13.0			
	15000	KISV	22 GRF	0634.0	0638.5	13.5	8.0			
	15000	KISV	46 C	0634.0	0634.8		13.0			
	15000	KISV	23 GRF	0702.8	0709.6		9.0			
	15000	KISV	23 GRF	0702.8	0716.9	24.7	13.0			
	15000	KISV	2 S/F	0714.8	0715.0	0.7	4.0			
	9300	KISV	2 S/F	0734.7	0735.5	2.3	3.0			
	9300	KISV	2 S/F	0751.2	0752.1	6.6	18.0			
	15000	KISV	45 C	0751.3	0752.1	2.1	6.0			
	15000	KISV	45 C	0751.3	0752.3		5.0			
9100	GORK	1 S	0751.4	0752.1	6.6	14.7				
5900	KISV	1 S	0751.5	0752.2	4.0	16.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks	
13	245	LEAR	8 S	0801.0E	0801.0	U	66.0			QL=1 ST=3 TYP=3	
	204	IZMI	8 S	0801.3	0801.5	0.2	140.0	135.0			
	327	TRST	46 C	0801.4	0801.4	0.1	269.0			49L	
	237	TRST	46 C	0801.4	0801.4	0.1	509.0			68L	
	408	TRST	46 C	0801.4	0801.4	0.1	128.0			37L	
	610	TRST	46 C	0801.4	0801.4	0.1	267.0			30L	
	5900	KISV	2 S/F	0822.8	0823.6	9.7	4.0				
	9300	KISV	2 S/F	0825.2	0826.2	2.7	12.0				
	9100	GORK	1 S	0825.6	0825.9	1.5	13.0				
	5900	KISV	2 S/F	0836.0	0836.5	4.7	4.0				
	9300	KISV	22 GRF	0854.0	0904.0	25.2	8.0				
	9100	GORK	20 GRF	0856.1	0910.7	144.6	13.0				
	327	TRST	42 SER	0859.8	0900.2	0.5	221.0				OR
	5900	KISV	22 GRF	0900.2	0904.0	38.0	5.0				
	5900	KISV	1 S	0901.7	0902.1	1.0	4.0				
	9300	KISV	2 S/F	0901.8	0902.1	1.0	4.0				
	408	TRST	46 C	0902.2	0902.2	0.1	83.0				5R
	327	TRST	5 S	0902.2	0902.3	0.1	588.0				0L
	950	GORK	23 GRF	0904.2	0904.5	11.4	3.0				
	650	GORK	4 S/F	0906.6	0907.3	0.9	2.9				
	950	GORK	2 S/F	0907.0	0907.3	1.1	8.0				
	650	GORK	20 GRF	0927.0	0927.7	9.0	4.0				
	5900	KISV	23 GRF	1019.5	1025.0	36.0	5.0				
	5900	KISV	23 GRF	1019.5	1040.5		5.0				
	5900	KISV	2 S/F	1157.2	1159.6	5.5	4.0				
	3100	CRIM	1 S	1241.0	1241.8	1.0	9.2	3.0			
	3100	CRIM	31 ABS	1242.0	1244.0	5.5	3.4	1.0			
	536	ONDR	42 SER	1253.0	1253.4	3.0	26.0				
	536	ONDR	42 SER	1323.7	1325.9	6.0	32.0				
	410	SGMR	8 S	1325.0E	1326.0	1.0D	57.0				QL=1 ST=2 TYP=3
	245	SGMR	8 S	1325.0E	1326.0	1.0D	270.0				QL=1 ST=2 TYP=3
	245	SVTO	8 S	1325.0E	1326.0	1.0D	190.0				QL=1 ST=2 TYP=3
	410	SVTO	8 S	1325.0E	1326.0	1.0D	53.0				QL=1 ST=2 TYP=3
	237	TRST	46 C	1326.0	1326.0	0.2	408.0				3R Var. Pol.
	408	TRST	46 C	1326.0	1326.0	0.2	125.0				19L
	327	TRST	46 C	1326.0	1326.0	0.2	196.0				13L Var. Pol.
	410	SGMR	8 S	1328.0E	1328.0	U	92.0				QL=1 ST=2 TYP=3
	410	SGMR	8 S	1626.0E	1626.0	1.0D	320.0				QL=1 ST=2 TYP=3
	245	SGMR	8 S	1627.0E	1627.0	U	140.0				QL=1 ST=2 TYP=3
	2800	OTTA	20 GRF	1821.0	1826.0	70.0	13.5	4.0			
	245	PALE	8 S	1913.0E	1913.0	U	190.0				QL=1 ST=2 TYP=3
	14	100	HIRA	43 NS	0323.0	0700.0	280.0D	140.0	41.0		
		221	ABST	43 NS	0500.0		240.0		25.0		
		200	GORK	44 NS	0518.0E		210.0D		20.0		
		100	GORK	43 NS	0546.3		373.0		20.0		
245		SVTO	44 NS	0605.0E	0908.0	595.0D	140.0				QL=1 ST=2 TYP=1
234		POTS	44 NS	0638.0E	0644.0	206.0D	47.0				
204		IZMI	43 NS	0700.0		300.0		50.0			
260		ONDR	44 NS	0750.0E	1117.6	420.0D	72.0				
127		TORN	44 NS	0830.0E	1324.0U	390.0D	2000.0D	30.0			V=1
245		SGMR	43 NS	1204.0	1903.0	587.0D	230.0				QL=1 ST=2 TYP=1
200		HIRA	44 NS	2130.0E		630.0D					
245		LEAR	44 NS	2230.0E	0118.0	736.0D	460.0				QL=1 ST=2 TYP=1
245		PALE	44 NS	2253.0E	0117.0	319.0D	390.0				QL=1 ST=2 TYP=1
610		LEAR	44 NS	2343.0E	0145.0	663.0D	18.0				QL=1 ST=2 TYP=1
410		LEAR	44 NS	2349.0E	0004.0	657.0D	48.0				QL=1 ST=2 TYP=1
245		LEAR	8 S	0010.0E	0011.0	2.0D	55.0				QL=1 ST=2 TYP=3
100		HIRA	42 SER	0010.8	0011.4	7.5	960.0				
2695		LEAR	4 S/F	0439.0E	0458.0	35.0D	72.0				QL=1 ST=2 TYP=3
8800		LEAR	4 S/F	0443.0E	0458.0	31.0D	46.0				QL=1 ST=2 TYP=3
2840		PEKG	46 C	0443.0	0456.1	38.4	69.7				
2840		PEKG	29 PBI	0521.4		33.4	35.8				
9100		GORK	21 GRF	0558.3	0711.5	113.0	25.0				
5900		KISV	45 C	0601.7	0604.1		18.0				
5900		KISV	45 C	0601.7	0603.1	7.0	108.0				
8800		LEAR	8 S	0602.0E	0603.0	2.0D	190.0				QL=1 ST=2 TYP=3
15400	LEAR	8 S	0602.0E	0603.0	2.0D	290.0				QL=1 ST=2 TYP=3	
2950	GORK	1 S	0602.2	0603.1	2.2	14.3	7.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Int	Remarks
14	9100	GORK	4 S/F	0602.2	0603.2	3.6	250.0			
	9300	KISV	4 S/F	0602.4	0603.0U	5.0	72.00			
	17000	NOBE	7 C	0602.8	0603.2	2.0	232.0			7L
	80000	NOBE	1 S	0602.8	0603.2	2.0	10.0			
	35000	NOBE	1 S	0602.8	0603.2	2.0	87.0			0
	2950	GORK	21 GRF	0618.1	0710.0	102.0	18.0			
	2840	PEKG	46 C	0626.4	0635.9	21.8	49.8			
	245	LEAR	4 S/F	0629.0E	0634.0	5.00	49.0			QL=1 ST=2 TYP=3
	9300	KISV	22 GRF	0630.9	0638.6	17.6	12.0			
	950	GORK	4 S/F	0633.0	0634.1	8.7	67.0			
	5900	KISV	46 C	0633.7	0636.0	16.7	71.0			
	5900	KISV	46 C	0633.7	0635.3		46.0			
	5900	KISV	46 C	0633.7	0634.7		54.0			
	2950	GORK	45 C	0633.9	0636.0		45.0			
	9300	KISV	46 C	0633.9	0636.0	3.5	65.0			
	9300	KISV	46 C	0633.9	0635.3		45.0			
	9300	KISV	46 C	0633.9	0634.3		47.0			
	2950	GORK	45 C	0633.9	0634.4	3.8	46.0			
	9300	KISV	46 C	0633.9	0634.7		53.0			
	9100	GORK	4 S/F	0633.9	0635.9	3.5	97.0			
	610	LEAR	8 S	0634.0E	0635.0	2.00	80.0			QL=1 ST=2 TYP=3
	8800	LEAR	8 S	0634.0E	0635.0	2.00	81.0			QL=1 ST=2 TYP=3
	2695	LEAR	8 S	0634.0E	0635.0	2.00	48.0			QL=1 ST=2 TYP=3
	4995	SVTO	8 S	0634.0E	0635.0	2.00	78.0			QL=1 ST=2 TYP=3
	410	SVTO	8 S	0634.0E	0634.0	U	250.0			QL=1 ST=2 TYP=3
	650	GORK	46 C	0634.5	0634.5	4.2	970.0			
	650	GORK	46 C	0634.5	0635.9		80.0			
	15400	LEAR	8 S	0635.0E	0636.0	1.00	17.0			QL=1 ST=2 TYP=3
	8800	SVTO	8 S	0635.0E	0635.0	1.00	100.0			QL=1 ST=2 TYP=3
	17000	NOBE	1 S	0635.5	0636.0	1.0	23.0			13R
	5900	KISV	45 C	0700.5	0705.2		28.0			
	5900	KISV	45 C	0700.5	0710.6	32.0	36.0			
	9300	KISV	23 GRF	0701.0	0716.2	28.0	19.0			
	650	GORK	4 S/F	0708.0	0708.6	0.7	19.0			
	9100	GORK	1 S	0714.5	0715.2	2.6	9.5			
	9300	KISV	2 S/F	0714.6	0715.2	1.2	9.0			
	9300	KISV	22 GRF	0802.8	0806.3	11.7	6.0			
	5900	KISV	2 S/F	0803.2	0804.2	5.0	9.0			
	9300	KISV	2 S/F	0803.4	0804.2	2.0	8.0			
	9100	GORK	1 S	0803.6	0804.2	3.1	8.9			
	2950	GORK	20 GRF	0810.3	0956.5	181.0	14.3			
	9100	GORK	1 S	0830.6	0834.5	7.1	5.2			
	5900	KISV	22 GRF	0832.6	0836.8	13.7	4.0			
	5900	KISV	2 S/F	0833.1	0834.8	3.1	4.0			
	810	KRAK	8 S	0844.7	0844.7	0.5	11.0			
	3100	CRIM	45 C	0934.0	0936.0		40.7	13.0		
	3100	CRIM	45 C	0934.0	0934.5	3.0	31.1			
	5900	KISV	22 GRF	0943.5	1000.9	25.7	8.0			
	9300	KISV	2 S/F	0955.5	0956.5	6.0	12.0			
	9100	GORK	20 GRF	0955.6	0956.7	8.7	7.7			
	5900	KISV	2 S/F	0955.7	0956.6	4.3	7.0			
	810	KRAK	42 SER	1106.3E	1106.6	23.50	98.0			
	100	GORK	8 S	1124.0	1124.1	0.3	480.0			
	5900	KISV	23 GRF	1137.4	1148.2	29.8	15.0			
	3000	POTS	20 GRF	1137.5	1140.0	9.5	16.0			
	3013	I2MI	5 S	1138.5	1140.0	5.0	13.0	8.0		
	9300	KISV	2 S/F	1138.5	1139.8	4.2	5.0			
	3100	CRIM	29 PBI	1138.6	1142.0	17.0	4.4	1.5		
	3100	CRIM	1 S	1138.6	1140.1	3.0	9.9	3.3		
	2950	GORK	2 S/F	1138.7	1140.0	4.8	12.5			
	5900	KISV	2 S/F	1138.7	1140.1	4.2	11.0			
	9100	GORK	20 GRF	1139.2	1144.4	21.00	7.7			
	5900	KISV	2 S/F	1143.9	1144.5	2.6	7.0			
	9300	KISV	23 GRF	1144.1	1148.1	15.3	7.0			
	9300	KISV	2 S/F	1144.1	1144.4	1.7	4.0			
	234	POTS	4 S/F	1409.2	1409.5	0.8	385.0	20.0		
	8800	SGMR	8 S	1420.0E	1421.0	2.00	68.0			QL=1 ST=3 TYP=3
	8800	SVTO	8 S	1420.0E	1421.0	1.00	60.0			QL=1 ST=2 TYP=3
	5200	BERN	4 S/F	1420.3	1421.0	2.0	26.0			

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

FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
14	11800	BERN	4 S/F	1420.3	1421.0	2.0	268.0			
	19600	BERN	4 S/F	1420.3	1421.0	2.0	52.0			
	8400	BERN	4 S/F	1420.3	1421.0	2.0	197.0			
	245	SGMR	4 S/F	1539.0E	1544.0	5.0D	500.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1543.0E	1544.0	1.0D	500.0			QL=1 ST=2 TYP=3
	245	SVTO	8 S	1543.0E	1544.0	1.0D	280.0			QL=1 ST=2 TYP=3
	2800	OTTA	20 GRF	1806.5	1808.5	12.0	5.9	2.0		
	245	PALE	8 S	1903.0E	1903.0	1.0D	370.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1903.0E	1903.0	1.0D	410.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	2109.0E	2109.0	U	120.0			QL=1 ST=2 TYP=3
	2695	PENT	32 ABS	2130.0	2212.0	55.0	5.0	2.0		
	245	PALE	8 S	2256.0E	2256.0	U	270.0			QL=1 ST=2 TYP=3
	200	HIRA	24 R	2326.0	2626.0	526.0D	415.0	225.0		SR
	500	HIRA	24 R	2328.0	2403.0	528.0D	23.0	8.0		WR
	100	HIRA	24 R	2335.0	2700.0	515.0D	710.0	650.0		
	100	HIRA	42 SER	2350.0	2353.5	5.3	1000.0D			
	245	PALE	8 S	2353.0E	2353.0	1.0D	130.0			QL=1 ST=2 TYP=3
15	221	ABST	43 NS	0500.0		240.0		11.0		
	100	GORK	44 NS	0517.0E		403.0D		25.0		
	200	GORK	44 NS	0518.0E		215.0D		30.0		
	245	SVTO	44 NS	0604.0E	0711.0	598.0D	200.0			QL=1 ST=2 TYP=1
	234	POTS	44 NS	0630.0E	0658.0U	510.0D	220.0U			
	204	IZMT	43 NS	0700.0		300.0	45.0			
	127	TORN	44 NS	0700.0E	1002.8	480.0D	870.0	150.0		V=1
	260	ONDR	44 NS	0800.0E	1212.1	410.0D	98.0			
	245	SGMR	43 NS	1202.0	1333.0	591.0D	170.0			QL=1 ST=2 TYP=1
	245	LEAR	43 NS	2230.0	2342.0	735.0	44.0			QL=1 ST=2 TYP=1
	245	PALE	8 S	0331.0E	0332.0	1.0D	140.0			QL=1 ST=2 TYP=3
	410	PALE	8 S	0332.0E	0332.0	U	68.0			QL=1 ST=2 TYP=3
	410	PALE	8 S	0350.0E	0350.0	U	150.0			QL=1 ST=2 TYP=3
	650	GORK	22 GRF	0524.0E	0733.8	204.0D	10.0			
	9300	KISV	23 GRF	0716.3	0723.9	12.5	5.0			
	9100	GORK	22 GRF	0716.8	0720.0	11.8	10.0			
	9300	KISV	2 S/F	0717.0	0717.8	2.0	4.0			
	5900	KISV	2 S/F	0717.6	0718.0	1.0	2.0			
	9300	KISV	45 C	0719.6	0720.0	4.0	9.0			
	9300	KISV	45 C	0719.6	0721.5		7.0			
	5900	KISV	23 GRF	0719.7	0720.0	13.4	3.0			
	5900	KISV	23 GRF	0719.7	0724.2		3.0			
	9300	KISV	2 S/F	0739.5	0740.0	1.8	4.0			
	5900	KISV	23 GRF	0755.3	0815.1		7.0			
	5900	KISV	23 GRF	0755.3	0758.1	29.7	7.0			
	9300	KISV	2 S/F	0811.7	0812.2	1.5	7.0			
	5900	KISV	2 S/F	0811.8	0812.2	1.3	6.0			
	9100	GORK	21 GRF	0811.9	0833.2	28.3	6.0			
	810	KRAK	3 S	0815.0	0821.0	14.0	40.0	23.0		
	5900	KISV	45 C	0825.4	0826.3	4.6	13.0			
	5900	KISV	22 GRF	0825.4	0834.5	16.0	7.0			
	5900	KISV	45 C	0825.4	0827.6		8.0			
	9300	KISV	23 GRF	0825.6	0834.1	12.7	5.0			
	9300	KISV	46 C	0825.7	0826.3		4.0			
	9300	KISV	45 C	0825.7	0827.6	4.0	5.0			
	3013	IZMI	41 F	0826.0	0832.0	6.0	13.0			
	3100	CRIM	1 S	0826.0	0826.3	0.5	2.2	0.7		
	9300	KISV	3 S	0830.3	0831.3	3.5	61.0			
	5900	KISV	3 S	0830.3	0831.3	3.9	70.0			
	9500	POTS	4 S/F	0830.4	0831.4	8.6	38.0			
	9100	GORK	3 S	0830.6	0831.3	2.3	42.0			
	3000	POTS	4 S/F	0830.6	0831.4	6.9	12.0			
	15000	KISV	1 S	0830.8	0831.3	1.7	8.0			
	3100	CRIM	1 S	0830.9	0831.5	1.0	4.4	1.5		
	810	KRAK	8 S	0845.2	0845.5	0.5	6.0			
9300	KISV	23 GRF	0847.4	0858.6	21.0	9.0				
9300	KISV	2 S/F	0847.6	0848.6	2.4	6.0				
5900	KISV	2 S/F	0847.6	0848.7	2.8	7.0				
3100	CRIM	1 S	0848.0	0848.5	1.0	2.3	0.8			
15400	LEAR	8 S	0852.0E	0854.0	2.0D	16.0			QL=1 ST=2 TYP=3	
8800	LEAR	4 S/F	0852.0E	0854.0	3.0D	43.0			QL=1 ST=2 TYP=3	

# S O L A R R A D I O E M I S S I O N

## Outstanding Occurrences

53  
Feb 89

FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Int	Remarks	
15	245	SVTO	49 GB	0852.0E	0852.0	U	510.0			QL=1 ST=2 TYP=6	
	9100	GORK	21 GRF	0852.3	0856.7	14.8	8.5				
	5900	KISV	23 GRF	0852.5	0903.0	18.6	10.0				
	5900	KISV	45 C	0853.3	0854.3	6.1	32.0				
	5900	KISV	45 C	0853.3	0855.7		13.0				
	9300	KISV	4 S/F	0853.4	0854.3	5.1	55.0				
	9100	GORK	4 S/F	0853.5	0854.4	2.9	44.0				
	15000	KISV	2 S/F	0853.8	0854.3	5.3	24.0				
	810	KRAK	41 F	0914.2	0914.2	2.8	8.0	2.0			
	234	POTS	4 S/F	0914.8	0915.4	1.7	165.0	30.0			
	245	LEAR	8 S	0915.0E	0915.0	U	170.0				QL=1 ST=2 TYP=3
	2950	GORK	1 S	0915.0	0915.6	1.5	3.5				
	100	GORK	46 C	0915.1	0915.5	1.1	5500.0				
	100	GORK	46 C	0915.1	0915.6		7000.0				
	950	GORK	1 S	0915.1	0915.7	1.4	2.6				
	327	TRST	46 C	0915.2	0915.3	0.8	266.0				6R
	650	GORK	4 S/F	0915.2	0915.5	1.7	12.0				
	237	TRST	46 C	0915.2	0915.8	0.8	559.0				8R
	204	IZMI	5 S	0915.4	0916.0	1.0	500.0	300.0			
	5900	KISV	22 GRF	0940.5	0944.4	12.7	8.0				
	536	ONDR	8 S	1017.3	1018.2	0.9	117.0				
	9300	KISV	23 GRF	1040.7	1100.0		5.0				
	9300	KISV	23 GRF	1040.7	1042.1	55.0	6.0				
	9300	KISV	23 GRF	1105.9	1106.4		5.0				
	9300	KISV	23 GRF	1105.9	1109.5	11.5	8.0				
	9100	GORK	20 GRF	1106.3	1109.4	10.3	5.0				
	5900	KISV	2 S/F	1106.4	1109.5	7.2	7.0				
	5900	KISV	2 S/F	1122.8	1123.4	2.2	3.0				
	5900	KISV	22 GRF	1151.8	1156.3	16.8	7.0				
	245	SGMR	49 GB	1212.0E	1212.0	U	580.0				QL=1 ST=2 TYP=6
	234	POTS	4 S/F	1212.0	1212.3	0.6	660.0	50.0			
	237	TRST	47 GB	1212.2	1212.3	0.3	1935.0				6R Var. Pol.
	536	ONDR	8 S	1235.3	1235.5	0.4	135.0				
	245	SVTO	8 S	1247.0E	1248.0	1.0D	280.0				QL=1 ST=2 TYP=3
	237	TRST	47 GB	1247.9	1248.0	0.3	1130.0				OR Var. Pol.
	810	KRAK	8 S	1323.5	1323.7	0.2	25.0				
	8800	SGMR	8 S	1340.0E	1341.0	1.0D	76.0				QL=1 ST=2 TYP=3
	4995	SVTO	8 S	1340.0E	1341.0	1.0D	50.0				QL=1 ST=2 TYP=3
	8800	SVTO	4 S/F	1340.0E	1341.0	61.0D	60.0				QL=1 ST=2 TYP=3
	9500	POTS	4 S/F	1340.2	1341.2	5.8	52.0				
	5200	BERN	3 S	1340.4	1341.1	1.5	57.0				
	8400	BERN	3 S	1340.4	1341.1	1.5	83.0				
	11800	BERN	3 S	1340.4	1341.1	1.5	30.0				
	9500	POTS	3 S	1419.5	1420.5	2.4	13.0				
	1470	POTS	4 S/F	1419.5	1420.5	2.3	6.0				
	3000	POTS	4 S/F	1419.8	1420.2	2.2	2.0				
	610	TRST	46 C	1430.2	1430.2	0.3	380.0				OL
	2800	OTTA	2 S/F	2012.0	2014.3	3.5	10.0	4.0			
	16	100	HIRA	43 NS	0243.0	0304.0	92.0	40.0	5.0		
		245	SVTO	44 NS	0603.0E	0957.0	600.0D	190.0			QL=1 ST=2 TYP=1
245		SVTO	44 NS	0638.0E	0639.0	565.0D	40.0			QL=1 ST=2 TYP=1	
260		ONDR	44 NS	0740.0E	1358.2	430.0D	25.0				
245		SGMR	44 NS	1423.0E	1436.0	577.0D	54.0			QL=1 ST=3 TYP=1	
200		HIRA	44 NS	2122.0E	0630.0	650.0D	10.0	7.0			WR
245		LEAR	43 NS	2231.0	0619.0	734.0	56.0				QL=1 ST=2 TYP=1
200		HIRA	42 SER	0014.5	0042.0	61.0	135.0				WR
200		HIRA	27 RF	0240.0	0300.0	66.0	9.0	4.0			WL
2840		PEKG	45 C	0337.0E	0340.5	43.0D	65.0				
8800		LEAR	4 S/F	0340.0E	0345.0	27.0D	94.0				QL=1 ST=2 TYP=3
2695		LEAR	4 S/F	0340.0E	0342.0	27.0D	75.0				QL=1 ST=2 TYP=3
610		LEAR	8 S	0341.0E	0341.0	U	49.0				QL=1 ST=2 TYP=3
8800		PALE	4 S/F	0341.0E	0346.0	7.0D	100.0				QL=1 ST=2 TYP=5
4995		PALE	4 S/F	0341.0E	0346.0	6.0D	71.0				QL=1 ST=2 TYP=5
15400		LEAR	4 S/F	0341.0E	0346.0	26.0D	57.0				QL=1 ST=2 TYP=3
500		HIRA	46 C	0341.4	0342.5	10.6	160.0				O
410		LEAR	8 S	0342.0E	0342.0	1.0D	22.0				QL=1 ST=2 TYP=3
2695		PALE	8 S	0342.0E	0342.0	1.0D	66.0				QL=1 ST=2 TYP=3
2840		PEKG	45 C	0420.0	0422.9	15.0	30.8				

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Outstanding Occurrences

FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
16	500	HIRA	42 SER	0422.8	0424.8	4.0	42.0			0
	2840	PEKG	20 GRF	0459.0	0502.5	19.0	5.6			
	221	ABST	45 C	0502.0	0508.0	30.0	15.0	8.0		
	9100	GORK	23 GRF	0532.8	0545.0	206.0	16.2			
	2840	PEKG	1 S	0538.0	0539.0	4.0	3.8			
	9100	GORK	1 S	0539.2	0540.5	2.2	21.0			
	9300	KISV	2 S/F	0609.2	0609.8	2.3	8.0			
	5900	KISV	23 GRF	0609.4	0619.5	16.7	4.0			
	5900	KISV	2 S/F	0609.4	0609.7	0.7	4.0			
	950	GORK	2 S/F	0609.5	0609.8	0.9	7.0			
	5900	KISV	2 S/F	0612.3	0613.1	2.7	4.0			
	2840	PEKG	20 GRF	0656.0	0702.4	27.0	7.2			
	9300	KISV	46	0657.3	0700.4		5.0			
	9300	KISV	46 C	0657.3	0702.4	19.0	13.0			
	9300	KISV	46 C	0657.3	0707.5		11.0			
	9300	KISV	46 C	0657.3	0703.6		13.0			
	9300	KISV	46 C	0657.3	0658.6		7.0			
	5900	KISV	46 C	0657.5	0703.0		18.0			
	5900	KISV	46 C	0657.5	0700.4		6.0			
	5900	KISV	46 C	0657.5	0702.4	23.3	25.0			
	5900	KISV	46 C	0657.5	0707.5		12.0			
	5900	KISV	46 C	0657.5	0658.7		7.0			
	3100	CRIM	20 GRF	0701.0	0702.5	30.5	10.0	4.0		
	2950	GORK	20 GRF	0701.5	0702.5	8.3	9.7			
	9300	KISV	22 GRF	0729.2	0734.7	13.5	5.0			
	9300	KISV	2 S/F	0733.1	0733.7	1.3	5.0			
	5900	KISV	23 GRF	0754.1	0758.2		9.0			
	5900	KISV	23 GRF	0754.1	0756.8	10.0	10.0			
	810	KRAK	42 SER	0808.8	0811.6	6.0	18.0			
	5900	KISV	2 S/F	0815.7	0816.0	1.6	6.0			
	9300	KISV	2 S/F	0815.7	0816.0	2.0	7.0			
	5900	KISV	22 GRF	0815.7	0819.7	14.5	3.0			
	9100	GORK	1 S	0815.8	0816.0	0.4	6.7	3.0		
	15000	KISV	2 S/F	0815.9	0816.0	0.7	4.0			
	5900	KISV	2 S/F	0832.0	0834.3	7.6	13.0			
	2950	GORK	1 S	0833.2	0834.2	3.2	5.7			
	9300	KISV	2 S/F	0845.2	0845.4	0.6	11.0			
	5900	KISV	2 S/F	0845.2	0845.5	1.1	4.0			
	9100	GORK	1 S	0845.3	0845.5	0.6	8.4			
	810	KRAK	8 S	0848.9	0848.9	0.2	8.0			
5900	KISV	2 S/F	0901.8	0902.8	2.5	5.0				
237	TRST	5 S	0939.3	0939.3	0.1	190.0			53R	
5900	KISV	45 C	0955.5	1001.3	12.6	8.0				
5900	KISV	45 C	0955.5	1002.8		8.0				
33	UPIC	45 C	1013.5	1014.0	0.8					
234	POTS	4 S/F	1028.3	1028.4	1.1	120.0	6.0			
237	TRST	47 GB	1028.4	1028.8	0.8	523.0			43R Var. Pol.	
536	ONDR	40 F	1057.8	1058.4	1.2	116.0				
810	KRAK	8 S	1157.5	1157.5	0.5	12.0				
204	IZMI	4 S/F	1159.0	1159.5	0.5	180.0				
234	POTS	4 S/F	1320.0	1320.3	1.0	120.0	10.0			
237	TRST	41 F	1320.3	1320.3	0.4	268.0			70R	
536	ONDR	8 S	1321.3	1321.6	0.8	129.0				
2800	OTTA	3 S	1631.5	1633.0	6.0	12.2	5.0			
2800	OTTA	3 S	2150.0	2153.5	12.0	45.0	18.0			
1415	PALE	4 S/F	2151.0E	2153.0	5.0D	100.0			QL=1 ST=2 TYP=3	
17	221	ABST	43 NS	0500.0		240.0		12.0		
	200	GORK	44 NS	0515.0E		277.0D		5.0		
	245	SVTO	43 NS	0601.0	0659.0	603.0D	140.0			QL=1 ST=2 TYP=1
	204	IZMI	43 NS	0700.0		300.0	20.0			
	260	ONDR	44 NS	0740.0E	1131.0	420.0D	21.0			
	200	HIRA	44 NS	2122.0E	0523.0	650.0D	17.0	8.0		MR
	245	LEAR	44 NS	2232.0E	0440.0	732.0D	79.0			QL=1 ST=2 TYP=1
	2695	LEAR	8 S	0203.0E	0204.0	1.0D	74.0			QL=1 ST=2 TYP=3
	500	HIRA	42 SER	0620.5	0623.7	8.5	30.0			0
	650	GORK	23 GRF	0621.0	0631.2	14.5	1.5			
	5900	KISV	22 GRF	0622.3	0630.5	20.3	4.0			
	5900	KISV	2 S/F	0623.8	0624.1	0.6	7.0			

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

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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
17	650	GORK	4 S/F	0623.9	0624.1	1.7	29.0			
	5900	KISV	23 GRF	0706.7	0717.5	33.2	8.0			
	2950	GORK	21 GRF	0713.5	0717.0	11.0	5.6	2.0		
	9300	KISV	22 GRF	0713.5	0721.7	13.7	5.0			
	2840	PEKG	1 S	0714.0	0715.4	5.0	9.8			
	3013	IZMI	5 S	0714.0	0715.6	5.0	20.0	10.0		
	3100	CRIM	1 S	0714.1	0715.1	3.0	8.7	3.0		
	5900	KISV	2 S/F	0714.7	0715.4	2.6	8.0			
	2950	GORK	1 S	0714.8	0715.4	2.2	11.0	5.0		
	9300	KISV	2 S/F	0714.8	0715.4	1.7	3.0			
	204	IZMI	4 S/F	0721.0	0721.5	1.0	49.0			
	9100	GORK	20 GRF	0732.7	0734.5	8.9	4.2			
	100	GORK	46 C	0921.3	0922.1	2.5	30.0			
	9300	KISV	2 S/F	0921.3	0922.2	2.9	4.0			
	100	GORK	46 C	0921.3	0922.5		40.00			
	5900	KISV	45 C	0921.4	0922.2	1.9	4.0			
	5900	KISV	45 C	0921.4	0922.5		3.0			
	950	GORK	1 S	0921.6	0922.7	3.1	1.0			
	2950	GORK	1 S	0921.8	0922.3	1.4	3.7	1.8		
	650	GORK	20 GRF	0922.0	0924.6	9.9	1.3			
	9300	KISV	2 S/F	1100.5	1106.5	7.4	3.0			
	5900	KISV	2 S/F	1105.4	1106.5	4.4	2.0			
	536	ONDR	8 S	1117.5	1117.8	0.8	13.0			
	5900	KISV	45 C	1126.6	1127.3	3.9	7.0			
	5900	KISV	45 C	1126.6	1128.8		4.0			
	2800	OTTA	22 GRF	1638.0	1737.5	215.0	38.0	15.0		
245	PALE	8 S	1734.0E	1734.0	U	430.0			QL=1 ST=2 TYP=3	
245	SGMR	8 S	1734.0E	1734.0	1.00	470.0			QL=1 ST=2 TYP=3	
610	SGMR	8 S	2042.0E	2042.0	U	52.0			QL=1 ST=2 TYP=3	
610	LEAR	8 S	2338.0E	2338.0	U	55.0			QL=1 ST=2 TYP=3	
18	221	ABST	43 NS	0500.0		240.0		10.0		
	200	GORK	44 NS	0518.0E		276.00		5.0		
	245	SVTO	44 NS	0600.0E	1334.0	605.00	25.0			
	204	IZMI	43 NS	0700.0		300.0	30.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0750.0E	1002.6	420.00	25.0			
	127	TORN	43 NS	1000.0		270.0		3.0		V=1,DISTURBED
	245	SGMR	43 NS	1158.0	1421.0	340.00	37.0			QL=1 ST=3 TYP=1
	245	LEAR	8 S	0240.0E	0240.0	1.00	63.0			QL=1 ST=3 TYP=3
	500	HIRA	46 C	0346.5	0401.4	32.0	52.0	17.0		O
	610	LEAR	4 S/F	0347.0E	0351.0	29.00	240.0			QL=1 ST=2 TYP=3
	610	PALE	20 GRF	0349.0E	0351.0	13.00	220.0			QL=1 ST=2 TYP=2
	9100	GORK	21 GRF	0743.6	0749.0	60.0	9.6			
	9300	KISV	4 S/F	0743.6	0747.2	8.9	58.0			
	9300	KISV	29 PBI	0743.6	0752.5	23.3	10.0			
	5900	KISV	29 PBI	0744.6	0751.1	14.9	7.0			
	5900	KISV	4 S/F	0744.6	0747.2	6.5	55.0			
	3000	POTS	4 S/F	0745.0	0747.4	6.8	55.0			
	9500	POTS	4 S/F	0745.5	0747.0	4.5	59.0			
	3100	CRIM	29 PBI	0746.0	0750.0	8.0	10.1	3.3		
	4995	LEAR	4 S/F	0746.0E	0747.0	3.00	55.0			QL=1 ST=2 TYP=3
	2695	LEAR	4 S/F	0746.0E	0747.0	5.00	67.0			QL=1 ST=2 TYP=3
	15400	LEAR	8 S	0746.0E	0747.0	1.00	31.0			QL=1 ST=2 TYP=3
	8800	LEAR	8 S	0746.0E	0747.0	2.00	49.0			QL=1 ST=2 TYP=3
	3100	CRIM	3 S	0746.0	0747.3	4.0	50.7	17.0		
	8400	BERN	4 S/F	0746.1	0747.1	3.5	57.0			
	11800	BERN	4 S/F	0746.1	0747.1	3.5	36.0			
	3200	BERN	4 S/F	0746.1	0747.2	3.5	49.0			
	5200	BERN	4 S/F	0746.1	0747.2	3.5	51.0			
	9100	GORK	3 S	0746.1	0747.2	3.0	53.0			
	2950	GORK	3 S	0746.1	0747.4	2.6	64.0			
	2950	GORK	29 PBI	0746.1	0748.8	8.2	19.5			
	15000	KISV	45 C	0746.2	0747.2	7.3	35.0			
	15000	KISV	45 C	0746.2	0746.7		32.0			
3013	IZMI	5 S	0746.3	0747.4	9.0	59.0	45.0			
650	GORK	1 S	0746.5	0747.4	1.4	1.8				
950	GORK	1 S	0746.6	0748.0	3.5	1.5				
4995	SVTO	8 S	0747.0E	0747.0	U	50.0			QL=1 ST=2 TYP=3	
2695	SVTO	8 S	0747.0E	0747.0	U	62.0			QL=1 ST=2 TYP=3	



S O L A R R A D I O E M I S S I O N  
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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks	
18	8800	SVTO	8 S	0747.0E	0747.0		53.0			QL=1 ST=2 TYP=3	
	810	KRAK	42 SER	1111.5	1123.5	15.0	240.00				
	810	KRAK	42 SER	1111.5	1123.9		240.00				
	536	ONDR	40 F	1122.4	1122.6	1.5	23.0				
	5900	KISV	46 C	1122.7	1124.1	5.7	10.0				
	5900	KISV	46 C	1122.7	1123.3		8.0				
	5900	KISV	46 C	1122.7	1123.7		9.0				
	2950	GORK	4 S/F	1122.8	1124.0	5.4	9.1				
	650	GORK	4 S/F	1122.8	1123.2	1.7	85.0				
	3100	CRIM	1 S	1123.0	1124.0	2.0	5.8	2.0			
	9100	GORK	2 S/F	1123.0	1124.0	1.8	8.5				
	3000	POTS	4 S/F	1123.0	1124.0	2.0	9.0				
	950	GORK	4 S/F	1123.0	1124.1	1.4	394.0				
	9300	KISV	46 C	1123.0	1124.1	3.0	9.0				
	9500	POTS	1 S	1123.0	1124.2	2.0	5.0				
	9300	KISV	46 C	1123.0	1123.3		3.0				
	3013	I2MI	5 S	1123.0	1124.4	2.0	6.0	3.0			
	9300	KISV	46 C	1123.0	1123.7		6.0				
	600	HUMN	8 S	1123.2	1123.7	1.4	38.0	10.0			
	810	KRAK	2 S/F	1316.7	1317.0	2.2	21.0	4.0			
810	KRAK	42 SER	1348.6	1352.5	6.0	39.0					
536	ONDR	40 F	1350.2	1352.0	2.6	67.0					
600	HUMN	8 S	1352.0	1352.1	0.3	36.0	15.0				
19	200	GORK	44 NS	0512.0E		254.00		5.0			
	127	TORN	43 NS	0930.0		170.0		3.0		V=0	
	1415	PALE	8 S	0106.0E	0106.0	1.00	120.0			QL=1 ST=2 TYP=3	
	260	ONDR	42 SER	0740.0E	1218.3	420.00	71.0				
	15000	KISV	2 S/F	0752.9	0753.5	1.9	6.0				
	9100	GORK	1 S	0753.0	0753.4	1.0	3.5				
	9300	KISV	2 S/F	0753.0	0753.5	1.2	5.0				
	810	KRAK	42 SER	0910.5	0914.0	9.7	11.0				
	650	GORK	1 S	0917.5	0918.8	3.0	2.7				
	15000	KISV	2 S/F	0933.4	0933.8	1.3	5.0				
	810	KRAK	42 SER	0939.5	0940.5	10.5	43.0				
	9100	GORK	20 GRF	1050.5	1122.6	40.00	6.0				
	5900	KISV	22 GRF	1106.3	1119.4		6.0				
	5900	KISV	22 GRF	1106.3	1122.4	26.7	8.0				
	536	ONDR	40 F	1118.9	1119.6	5.5	178.0				
	650	GORK	4 S/F	1120.4	1120.5	3.2	92.0				
	430	KRAK	4 S/F	1120.5	1120.7	2.7	190.0	8.0			
	9300	KISV	2 S/F	1121.5	1122.7	3.0	3.0				
	810	KRAK	2 S/F	1122.0	1123.0	2.0	19.0	7.0			
	950	GORK	2 S/F	1122.0	1122.9	1.9	9.0				
	536	ONDR	42 SER	1212.4	1214.4	3.0	165.0				
	430	KRAK	42 SER	1213.0	1214.3	2.0	220.0				
	810	KRAK	42 SER	1219.8	1225.6	14.5	15.0				
	430	KRAK	42 SER	1320.0	1320.1	4.3	55.0				
	430	KRAK	42 SER	1320.0	1322.6		53.0				
	536	ONDR	42 SER	1321.9	1350.6	30.0	116.0				
	430	KRAK	8 S	1350.6	1350.6	0.5	52.0				
	810	KRAK	8 S	1350.8	1351.0	0.2	9.0				
	810	KRAK	2 S/F	1357.0	1357.2	1.0	10.0				
	430	KRAK	42 SER	1357.4	1357.8	0.5	12.0				
	410	SGMR	8 S	1453.0E	1453.0		U	75.0			QL=1 ST=2 TYP=3
	410	SVTO	8 S	1453.0E	1453.0		U	60.0			QL=1 ST=2 TYP=3
245	SGMR	8 S	1455.0E	1455.0	1.00	120.0				QL=1 ST=2 TYP=3	
245	SVTO	8 S	1455.0E	1455.0	1.00	80.0				QL=1 ST=2 TYP=3	
410	SVTO	8 S	1455.0E	1455.0	1.00	110.0				QL=1 ST=2 TYP=3	
410	SVTO	8 S	1503.0E	1503.0		U	55.0			QL=1 ST=2 TYP=3	
410	SGMR	8 S	1509.0E	1509.0		U	130.0			QL=1 ST=2 TYP=3	
410	SVTO	8 S	1509.0E	1509.0	1.00	75.0				QL=1 ST=2 TYP=3	
610	PALE	4 S/F	2100.0E	2102.0	3.00	130.0				QL=1 ST=2 TYP=3	
610	SGMR	4 S/F	2100.0E	2102.0	3.00	140.0				QL=1 ST=2 TYP=3	
610	PALE	8 S	2110.0E	2110.0	1.00	100.0				QL=1 ST=2 TYP=3	
610	SGMR	8 S	2110.0E	2110.0	1.00	96.0				QL=1 ST=3 TYP=3	
610	PALE	8 S	2113.0E	2113.0	1.00	150.0				QL=1 ST=2 TYP=3	
610	SGMR	8 S	2113.0E	2113.0	2.00	150.0				QL=1 ST=2 TYP=3	

S O L A R R A D I O E M I S S I O N  
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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
20	260	ONDR	44 NS	0730.0E	1358.2	420.00	65.0			
	8800	LEAR	4 S/F	0001.0E	0002.0	3.00	51.0			QL=1 ST=2 TYP=3
	15400	LEAR	8 S	0001.0E	0002.0	2.00	76.0			QL=1 ST=2 TYP=3
	17000	NOBE	1 S	0001.9	0002.0	0.7	79.0			0
	5900	KISV	22 GRF	0746.3	0754.6	17.7	8.0			
	9300	KISV	22 GRF	0749.2	0755.0	21.6	7.0			
	15000	KISV	20 GRF	0755.7	0803.7	13.5	11.0			
	9100	GORK	20 GRF	0903.8	0921.0	63.0	6.7			
	2950	GORK	20 GRF	0911.5	0925.2	28.0	7.9			
	33	UPIC	2 S/F	0945.4	0945.9	1.1				
	5900	KISV	2 S/F	1038.4	1039.2	1.9	3.0			
	650	GORK	2 S/F	1038.8	1039.4	2.6	1.2			
	2950	GORK	1 S	1039.0	1039.1	0.6	3.6	1.8		
	950	GORK	45 C	1039.0	1039.5	1.3	8.0			
	950	GORK	45 C	1039.0	1039.9		14.0			
	9100	GORK	2 S/F	1242.4	1242.7	1.3	6.7			
	810	KRAK	8 S	1334.3	1334.4	0.1	17.0			
	430	KRAK	8 S	1334.5	1334.6	0.2	8.0			
	600	HUMN	48 C	1351.6	1357.7	21.5	120.0	35.0		
	536	ONDR	49 GB	1352.0	1357.5	13.0	171.0			
	430	KRAK	48 C	1352.0	1357.5U	5.5D	140.0	60.0		
	2800	OTTA	4 S/F	1352.1	1357.9	16.5	328.3	131.0		
	810	KRAK	48 C	1352.2	1357.5U	5.5D	116.0	54.0		
	11800	BERN	46 C	1353.0	1358.0	16.0	137.0			
	5200	BERN	46 C	1353.0	1358.0	16.0	258.0			
	3200	BERN	46 C	1353.0	1358.0	16.0	223.0			
	8400	BERN	46 C	1353.0	1358.0	16.0	193.0			
	19600	BERN	46 C	1353.0	1358.0	16.0	77.0			
	610	SVTO	4 S/F	1353.0E	1357.0	12.00	200.0			QL=1 ST=2 TYP=3
	610	SGMR	4 S/F	1353.0E	1357.0	607.00	200.0			QL=1 ST=1 TYP=3
	3100	CRIM	3 S	1353.0	1357.8	10.00	168.0			
	1415	SGMR	49 GB	1354.0E	1356.0	9.00	600.0			QL=1 ST=2 TYP=6
	410	SVTO	4 S/F	1354.0E	1355.0	5.00	170.0			QL=1 ST=2 TYP=3
	1415	SVTO	49 GB	1354.0E	1356.0	9.00	610.0			QL=1 ST=2 TYP=6
	2695	SGMR	4 S/F	1354.0E	1357.0	10.00	300.0			QL=1 ST=2 TYP=3
	4995	SGMR	4 S/F	1354.0E	1358.0	11.00	260.0			QL=1 ST=2 TYP=3
	4995	SVTO	4 S/F	1354.0E	1358.0	11.00	260.0			QL=1 ST=2 TYP=3
	2695	SVTO	4 S/F	1354.0E	1357.0	11.00	310.0			QL=1 ST=2 TYP=3
	8800	SVTO	4 S/F	1354.0E	1358.0	10.00	180.0			QL=1 ST=2 TYP=3
	410	SGMR	4 S/F	1354.0E	1355.0	606.00	150.0			QL=1 ST=1 TYP=3
	8800	SGMR	4 S/F	1355.0E	1358.0	7.00	170.0			QL=1 ST=2 TYP=3
	15400	SGMR	4 S/F	1356.0E	1358.0	4.00	87.0			QL=1 ST=2 TYP=3
	245	SGMR	8 S	1356.0E	1358.0	2.00	140.0			QL=1 ST=2 TYP=3
	15400	SVTO	4 S/F	1356.0E	1358.0	6.00	95.0			QL=1 ST=2 TYP=3
	245	SVTO	8 S	1357.0E	1358.0	1.00	100.0			QL=1 ST=2 TYP=3
2800	OTTA	29 PBI	1408.6	1408.6	115.0	21.0	10.0			
610	PALE	8 S	2045.0E	2045.0	1.00	100.0			QL=1 ST=2 TYP=3	
610	SGMR	8 S	2045.0E	2045.0	1.00	140.0			QL=1 ST=2 TYP=3	
500	HIRA	46 C	2215.5	2220.5	11.5	50.0	12.0		0	
245	PALE	49 GB	2218.0E	2218.0	1.00	3600.0			QL=1 ST=2 TYP=6	
410	PALE	8 S	2220.0E	2220.0	U	77.0			QL=1 ST=2 TYP=3	
21	221	ABST	43 NS	0600.0		180.0		9.0		
	260	ONDR	44 NS	0730.0E	0930.4	440.00	62.0			
	100	HIRA	44 NS	2117.0E	2304.0	340.00	95.0	30.0		
	8800	LEAR	8 S	0026.0E	0026.0	U	26.0			QL=1 ST=2 TYP=3
	4995	LEAR	8 S	0026.0E	0026.0	U	24.0			QL=1 ST=2 TYP=3
	15400	LEAR	8 S	0026.0E	0026.0	U	38.0			QL=1 ST=2 TYP=3
	35000	NOBE	1 S	0026.0	0026.3	1.0	59.0			0
	17000	NOBE	7 C	0026.0	0026.3	1.5	69.0			0
	9100	GORK	1 S	0548.5	0549.2	1.3	6.0			
	245	SVTO	8 S	0625.0E	0625.0	2.00	330.0			QL=1 ST=2 TYP=3
	5900	KISV	2 S/F	0630.0	0633.8	8.7	5.0			
	9300	KISV	23 GRF	0630.0	0633.8	12.0	6.0			
	15000	KISV	23 GRF	0630.0	0633.9	17.0	6.0			
	9100	GORK	22 GRF	0631.0	0633.7	7.5	4.3			
	5900	KISV	32 ABS	0705.4	0709.8	8.2	2.0			
	9300	KISV	32 ABS	0707.8	0712.5	5.6	3.0			
9300	KISV	2 S/F	0713.5	0714.0	1.5	7.0				

S O L A R R A D I O E M I S S I O N  
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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
21	5900	KISV	2 S/F	0713.6	0714.3	1.2	2.0			
	9100	GORK	20 GRF	0749.3	1027.9	232.0	13.6			
	15000	KISV	26 FAL	0750.0	0754.6	5.0	8.0			
	810	KRAK	8 S	0827.0	0827.0	0.4	35.0			
	33	UPIC	45 C	0841.3	0843.2	2.4				
	2950	GORK	20 GRF	0912.2	0924.0	42.0	5.3			
	650	GORK	45 C	0921.7	0923.1	10.9	5.0			
	650	GORK	45 C	0921.7	0925.7		3.3			
	650	GORK	45 C	0921.7	0924.8		6.0			
	408	TRST	27 RF	0922.6	0923.0	9.0	71.0			1R
	327	TRST	27 RF	0923.0	0923.8	12.0	212.0			1L
	950	GORK	1 S	0923.6	0924.6	3.2	2.2			
	237	TRST	27 RF	0925.0	0930.2	18.0	141.0			5L
	245	LEAR	4 S/F	0927.0E	0931.0	6.00	89.0			QL=1 ST=2 TYP=3
	245	SVTO	4 S/F	0927.0E	0930.0	7.00	95.0			QL=1 ST=2 TYP=3
	204	IZMI	24 R	0927.0	0932.0	17.0	38.0			
	650	GORK	1 S	0940.0	0940.0	0.4	1.6			
	33	UPIC	45 C	0944.4	0945.2	2.3				
	2950	GORK	20 GRF	1001.4	1028.0	55.0	8.9			
	9300	KISV	2 S/F	1108.0	1108.6	6.2	5.0			
	5900	KISV	2 S/F	1108.5	1108.8	5.5	3.0			
	204	IZMI	41 F	1126.0	1128.0	3.0	330.0			
	327	TRST	41 F	1126.6	1126.7	0.1	113.0			39R Spikes
	237	TRST	46 C	1126.6	1126.7	0.1	480.0			12R Spike
	408	TRST	41 F	1127.6	1127.7	0.1	105.0			49R Spikes
	237	TRST	47 GB	1127.6	1127.7	0.2	796.0			6R Var. Pol.
	327	TRST	41 F	1127.6	1127.7	0.2	122.0			28R Spikes
	810	KRAK	41 F	1145.2	1146.4	2.0	24.0	4.0		
	810	KRAK	8 S	1155.0	1155.2	0.5	9.0			
	3000	POTS	42 SER	1158.5	1218.8	47.0	84.0			
	9100	GORK	21 GRF	1203.0E	1257.3	60.00	43.0			
	9500	POTS	42 SER	1203.5	1212.8	39.0	101.0			
	2950	GORK	21 GRF	1206.0	1230.0	60.00	17.4			
	9100	GORK	45 C	1206.5	1219.1		42.0			
	9100	GORK	45 C	1206.5	1208.5	15.1	24.0			
	9100	GORK	45 C	1206.5	1212.7		64.0			
	950	GORK	46 C	1206.6	1216.5		61.0			
	950	GORK	46 C	1206.6	1218.6		39.0			
	950	GORK	46 C	1206.6	1214.6	42.0	71.0			
	650	GORK	22 GRF	1207.7	1232.6	42.0	27.0			
	600	HUMN	27 RF	1207.9	1232.9	45.9	10.0	3.0		
	536	ONDR	41 F	1209.0	1216.4	46.5	9.0			
	4995	SVTO	4 S/F	1211.0E	1212.0	3.00	74.0			QL=1 ST=2 TYP=3
	8800	SVTO	4 S/F	1211.0E	1212.0	3.00	94.0			QL=1 ST=2 TYP=3
	810	KRAK	40 F	1211.0	1229.0	42.5	22.0	3.0		
2950	GORK	45 C	1211.5	1212.2	3.4	15.7				
2950	GORK	45 C	1211.5	1213.9		16.6				
15400	SVTO	8 S	1212.0E	1212.0	1.00	61.0			QL=1 ST=2 TYP=3	
2950	GORK	3 S	1217.2	1219.0	3.7	42.0				
8800	SVTO	8 S	1218.0E	1219.0	2.00	75.0			QL=1 ST=2 TYP=3	
2950	GORK	45 C	1225.9	1227.1		24.0				
2950	GORK	45 C	1225.9	1226.3	2.6	20.0				
2950	GORK	3 S	1236.5	1237.8	3.9	40.0				
9100	GORK	1 S	1236.6	1238.1	3.1	11.7				
4995	SVTO	8 S	1237.0E	1237.0	1.00	52.0			QL=1 ST=2 TYP=3	
2695	SVTO	8 S	1237.0E	1237.0	1.00	57.0			QL=1 ST=2 TYP=3	
2950	GORK	4 S/F	1251.6	1252.6	1.9	28.0				
237	TRST	46 C	1330.3	1330.5	0.4	107.0			9L	
245	SGHR	8 S	1755.0E	1755.0	U	50.0			QL=1 ST=2 TYP=3	
200	HIRA	27 RF	2117.0E	2216.0	650.00	37.0	10.0		ML	
17000	NOBE	7 C	2347.4	2357.7	20.0	55.0			O	
500	HIRA	42 SER	2349.5	2355.0	9.5	370.0			O	
410	LEAR	4 S/F	2353.0E	2355.0	6.00	67.0			QL=1 ST=2 TYP=3	
245	LEAR	8 S	2354.0E	2355.0	2.00	16.0			QL=1 ST=2 TYP=3	
610	LEAR	4 S/F	2355.0E	2357.0	4.00	37.0			QL=1 ST=2 TYP=3	
8800	LEAR	4 S/F	2356.0E	2357.0	5.00	32.0			QL=1 ST=2 TYP=3	
4995	LEAR	4 S/F	2356.0E	2357.0	5.00	44.0			QL=1 ST=2 TYP=3	
22	200	GORK	44 NS	0500.0E		180.00		5.0		

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FEBRUARY 1989

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
22	221	ABST	43 NS	0500.0		240.0		6.0		
	260	ONDR	44 NS	0730.0E	1031.5	430.00				
	204	IZMI	43 NS	0800.0		240.0	15.0			
	127	TORN	43 NS	0842.0		180.0		2.0		V=0
	245	LEAR	44 NS	0930.0E	1003.0	71.00	130.0			QL=1 ST=2 TYP=1
	245	SGMR	44 NS	1430.0E	1641.0	570.00	220.0			QL=1 ST=3 TYP=1
	200	HIRA	44 NS	2117.0E	0528.0	650.00	7.0	2.0		0
	245	LEAR	43 NS	2234.0	2312.0	726.00	190.0			QL=1 ST=2 TYP=1
	410	LEAR	43 NS	2234.0	0004.0	726.00	40.0			QL=1 ST=2 TYP=1
	245	LEAR	49 GB	0312.0E	0312.0	1.00	700.0			QL=1 ST=2 TYP=6
	410	LEAR	8 S	0312.0E	0312.0	2.00	42.0			QL=1 ST=2 TYP=3
	200	HIRA	42 SER	0313.8	0318.2	6.2	780.0			0
	410	LEAR	4 S/F	0316.0E	0317.0	3.00	37.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0317.0E	0318.0	2.00	340.0			QL=1 ST=2 TYP=3
	2840	PEKG	5 S	0327.0	0329.8	8.0	7.3			
	410	LEAR	4 S/F	0331.0E	0332.0	3.00	38.0			QL=1 ST=2 TYP=3
	15400	LEAR	8 S	0332.0E	0332.0	2.00	23.0			QL=1 ST=2 TYP=3
	8800	LEAR	8 S	0332.0E	0332.0	2.00	30.0			QL=1 ST=2 TYP=3
	4995	LEAR	8 S	0332.0E	0332.0	2.00	12.0			QL=1 ST=2 TYP=3
	2695	LEAR	8 S	0332.0E	0332.0	U	6.0			QL=1 ST=2 TYP=3
	610	LEAR	8 S	0332.0E	0332.0	2.00	12.0			QL=1 ST=2 TYP=3
	17000	NOBE	1 S	0332.3	0332.4	0.5	20.0			0
	200	HIRA	41 F	0421.0	0433.0	32.0	140.0			0
	245	LEAR	4 S/F	0441.0E	0443.0	3.00	65.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0522.0E	0522.0	U	64.0			QL=1 ST=2 TYP=3
	9100	GORK	1 S	0522.0	0522.6	1.4	8.5			
	950	GORK	2 S/F	0522.1	0522.4	0.9	8.0			
	650	GORK	4 S/F	0522.3	0522.4	0.2	12.0			
	9100	GORK	21 GRF	0524.6	1010.8	455.00	38.0			
	410	LEAR	8 S	0530.0E	0530.0	U	72.0			QL=1 ST=2 TYP=3
	9100	GORK	45 C	0539.2	0540.4	2.8	15.3			
	9100	GORK	45 C	0539.2	0540.7		15.3			
	5900	KISV	22 GRF	0612.7	0618.0	13.6	8.0			
	5900	KISV	2 S/F	0631.5	0632.0	1.8	5.0			
	650	GORK	1 S	0713.1	0713.2	0.2	1.0			
	9300	KISV	2 S/F	0736.6	0737.0	7.4	5.0			
	2840	PEKG	21 GRF	0757.9	0759.7	14.1	2.2			
	15000	KISV	46 C	0758.0	0758.1	10.3	15.0			
	2950	GORK	2 S/F	0758.0	0758.2	5.0	3.7			
	5900	KISV	46 C	0758.0	0758.2	11.5	38.0			
	15000	KISV	46 C	0758.0	0758.5		13.0			
	5900	KISV	46 C	0758.0	0802.5		14.0			
	15000	KISV	46 C	0758.0	0802.6		11.0			
	5900	KISV	46 C	0758.0	0758.6		32.0			
	9100	GORK	46 C	0758.1	0758.2	5.8	43.0			
	9300	KISV	46 C	0758.1	0758.2	15.2	37.0			
	9300	KISV	46 C	0758.1	0802.5		14.0			
	9100	GORK	46 C	0758.1	0758.6		23.0			
	9300	KISV	46 C	0758.1	0758.7		26.0			
	5900	KISV	45 C	0816.3	0820.5		15.0			
	5900	KISV	45 C	0816.3	0820.7	10.5	20.0			
	2840	PEKG	21 GRF	0816.5	0820.7	7.5	2.7			
9300	KISV	45 C	0817.7	0820.5		12.0				
9300	KISV	45 C	0817.7	0820.8	10.8	20.0				
950	GORK	4 S/F	0820.2	0820.7	0.7	47.0				
2950	GORK	1 S	0820.3	0820.7	0.8	3.7				
9100	GORK	2 S/F	0820.3	0820.7	2.1	15.2				
245	LEAR	8 S	0832.0E	0832.0	2.00	56.0			QL=1 ST=2 TYP=3	
245	SVTO	8 S	0832.0E	0832.0	U	56.0			QL=1 ST=2 TYP=3	
204	IZMI	8 S	0832.5	0832.6	0.2	120.0	100.0			
950	GORK	4 S/F	0904.8	0905.0	0.5	86.0				
3100	CRIM	1 S	0905.0	0905.2	1.0	7.4	2.0			
5900	KISV	2 S/F	0905.0	0905.7	1.9	14.0				
9100	GORK	1 S	0905.2	0905.6	0.9	10.0	5.0			
9300	KISV	2 S/F	0905.3	0905.6	2.8	14.0				
2950	GORK	1 S	0905.4	0905.7	0.9	7.3				
2840	PEKG	1 S	0905.4	0905.7	1.6	5.0				
536	ONDR	41 F	0905.4	0911.8	25.0	18.0				
3013	IZMI	5 S	0905.6	0906.0	1.0	7.0	3.0			

S O L A R R A D I O E M I S S I O N  
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
22	15000	KISV	1 S	0905.6	0905.7	0.4	3.0			
	204	IZMI	41 F	0925.0	0926.0	1.5	400.0			
	245	LEAR	8 S	0925.0E	0925.0	1.00	220.0			QL=1 ST=2 TYP=3
	245	SVTO	8 S	0925.0E	0925.0	1.00	240.0			QL=1 ST=2 TYP=3
	234	POTS	41 F	0925.2	0925.6	1.6	250.0	25.0		
	5900	KISV	23 GRF	0932.7	1003.2	108.5	35.0			
	2950	GORK	21 GRF	0939.3	1006.0	162.0	18.2			
	9300	KISV	23 GRF	0939.4	1002.9	98.0	23.0			
	3100	CRIM	21 GRF	0940.0	1010.0	95.0	11.5	4.0		
	3100	CRIM	1 S	0943.0	0944.0	2.0	15.7	5.0		
	3013	IZMI	5 S	0943.0	0944.0	1.5	21.0	10.0		
	5900	KISV	2 S/F	0943.0	0943.9	3.2	28.0			
	9300	KISV	2 S/F	0943.1	0943.8	3.4	21.0			
	9100	GORK	1 S	0943.2	0943.8	2.4	16.0			
	2950	GORK	3 S	0943.5	0944.0	1.5	18.3			
	15000	KISV	2 S/F	0943.5	0943.9	1.7	3.0			
	15000	KISV	22 GRF	0951.1	1000.0	15.5	6.0			
	234	POTS	41 F	1003.4	1004.0	1.6	550.0	25.0		
	204	IZMI	42 SER	1004.0	1033.0	30.0	2000.0			
	245	LEAR	49 GB	1027.0E	1031.0	5.00	900.0			QL=1 ST=2 TYP=7
	100	GORK	46 C	1028.0	1032.0	9.2	700.0			
	100	GORK	46 C	1028.0	1035.5		7000.0			
	100	GORK	46 C	1028.0	1033.7		3000.0			
	950	GORK	46 C	1028.2	1030.2		4.5			
	950	GORK	46 C	1028.2	1028.9	5.9	5.0			
	127	TORN	47 GB	1028.3	1032.00	6.8	1200.0	350.0		
	650	GORK	1 S	1028.4	1029.0	4.4	3.3			
	234	POTS	4 S/F	1030.0	1031.5	7.0	1650.0			
	245	SVTO	49 GB	1031.0E	1031.0	1.00	1100.0			QL=1 ST=2 TYP=6
	40	POTS	4 S/F	1034.8	1035.5	3.0	2700.0			
	5900	KISV	2 S/F	1043.6	1044.0	2.7	5.0			
	810	KRAK	42 SER	1239.5	1244.0	5.0	68.0			
	9500	POTS	42 SER	1240.2	1243.9	4.8	75.0			
	650	GORK	4 S/F	1240.3	1240.6	0.6	12.5			
	3100	CRIM	45 C	1240.3	1240.8	5.0	25.3	12.0		
3100	CRIM	45 C	1240.3	1243.9		34.8				
3000	POTS	4 S/F	1240.3	1243.9	5.3	47.0				
9100	GORK	46 C	1240.4	1240.7	5.4	23.0				
950	GORK	46 C	1240.4	1243.8		92.0				
2950	GORK	45 C	1240.4	1240.8	5.4	31.0				
9100	GORK	46 C	1240.4	1243.8		43.0				
2950	GORK	45 C	1240.4	1243.9		42.0				
950	GORK	46 C	1240.4	1240.9	7.0	7.4				
234	POTS	41 F	1324.5	1325.6	3.6	440.0				
245	SGMR	49 GB	1325.0E	1325.0	1.00	570.0			QL=1 ST=2 TYP=6	
245	SVTO	8 S	1325.0E	1325.0	1.00	400.0			QL=1 ST=2 TYP=3	
237	TRST	47 GB	1325.2	1325.8	1.0	1454.0			11R Var. Pol.	
327	TRST	46 C	1325.4	1325.6	0.5	162.0			37R Spikes	
40	POTS	3 S	1325.5	1325.7	1.4	750.0	100.0			
810	KRAK	8 S	1336.6	1336.6	0.5	17.0				
1415	SGMR	8 S	1355.0E	1355.0	U	94.0			QL=1 ST=2 TYP=3	
327	TRST	42 SER	1503.3	1503.3	0.5	194.0			13R Var. Pol.	
327	TRST	2 S/F	1503.7	1503.7	0.1	151.0			6R	
408	TRST	2 S/F	1503.7	1503.7	0.1	126.0			8R	
2800	OTTA	22 GRF	1740.0	1802.0	108.0	7.8	3.0			
245	LEAR	8 S	2301.0E	2301.0	2.00	300.0			QL=1 ST=2 TYP=3	
23	200	GORK	44 NS	0500.0E		180.00		5.0		
	221	ABST	43 NS	0500.0		240.0		8.0		
	245	SVTO	44 NS	0553.0E	0615.0	619.00	120.0			QL=1 ST=2 TYP=1
	410	SVTO	44 NS	0553.0E	0601.0	619.00	50.0			QL=1 ST=2 TYP=1
	204	IZMI	43 NS	0700.0		300.0	30.0			
	260	ONDR	44 NS	0730.0E	1217.0	430.00	171.0			
	127	TORN	43 NS	0754.0		426.0		3.0		V=1, DISTURBED
	600	HUMN	43 NS	0931.0		420.00	17.0			
	430	KRAK	44 NS	1010.0E		231.00	7.0			
	245	SGMR	43 NS	1150.0	2109.0	613.00	150.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2117.0E	0209.0	495.00	39.0	6.0		ML
245	LEAR	44 NS	2234.0E	0258.0	726.00	130.0			QL=1 ST=2 TYP=1	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak	Mean		
							(10 -22 W/m 2 Hz)			
23	410	LEAR	44 NS	2234.0E	2322.0	726.00	67.0			
	245	LEAR	8 S	0041.0E	0041.0	1.00	39.0			QL=1 ST=2 TYP=1
	410	LEAR	8 S	0041.0E	0042.0	1.00	55.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0246.0E	0246.0	1.00	100.0			QL=1 ST=2 TYP=3
	100	HIRA	42 SER	0246.0	0246.3U	5.9	1000.00			
	200	HIRA	42 SER	0246.2	0246.2	6.1	530.0			0
	9100	GORK	2 S/F	0508.3	0509.0	2.2	22.5			
	3100	CRIM	1 S	0508.7	0509.5	1.3	21.0	7.0		
	2950	GORK	1 S	0509.0	0509.4	1.1	20.0	10.0		
	650	GORK	22 GRF	0521.0E	1123.3	395.00	18.5			
	9100	GORK	2 S/F	0529.3	0530.2	3.3	12.0			
	2950	GORK	1 S	0530.0	0530.3	0.9	3.7	1.8		
	9300	KISV	45 C	0628.9	0630.1	2.0	14.0			
	9300	KISV	45 C	0628.9	0629.5		5.0			
	15000	KISV	45 C	0629.0	0630.1	2.1	20.0			
	15000	KISV	45 C	0629.0	0629.5		6.0			
	9100	GORK	2 S/F	0629.1	0630.0	1.9	13.0			
	17000	NOBE	1 S	0629.8	0630.0	0.6	20.0			0
	5900	KISV	2 S/F	0629.9	0630.1	1.0	5.0			
	9100	GORK	21 GRF	0651.0E	0958.2	305.00	15.0			
	9300	KISV	2 S/F	0705.0	0705.1	1.0	8.0			
	5900	KISV	2 S/F	0705.0	0705.1	1.0	3.0			
	15000	KISV	2 S/F	0705.0	0705.1	1.0	8.0			
	9300	KISV	2 S/F	0725.2	0725.4	0.6	5.0			
	5900	KISV	2 S/F	0725.2	0725.4	0.5	3.0			
	5900	KISV	2 S/F	0734.8	0735.7	2.4	4.0			
	9500	POTS	4 S/F	0734.8	0735.8	2.7	13.0			
	3000	POTS	1 S	0734.9	0736.0	2.6	3.0			
	15000	KISV	2 S/F	0735.2	0735.8	1.6	7.0			
	9100	GORK	1 S	0735.4	0735.7	0.7	6.0			
	9300	KISV	2 S/F	0735.4	0735.7	0.8	6.0			
	100	GORK	8 S	0809.8	0810.0	0.8	460.0			
	536	ONDR	41 F	0830.0E	1347.0	370.00	22.0			
	100	GORK	8 S	0846.7	0847.3	1.3	750.0			
	33	UPIC	2 S/F	0928.5	0928.9	1.0				
	5900	KISV	21 GRF	0936.0	0940.9	34.7	11.0			
	9300	KISV	21 GRF	0940.5	0940.9	22.7	5.0			
	33	UPIC	4 S/F	0950.0	0950.3	0.5				
	5900	KISV	2 S/F	1051.6	1053.5	3.2	4.0			
	9300	KISV	2 S/F	1052.6	1054.5	3.5	5.0			
204	IZMI	41 F	1129.4	1130.0	2.0	220.0				
5900	KISV	1 S	1133.5	1135.1	7.5	2.0				
9300	KISV	1 S	1133.8	1135.2	2.3	2.0				
204	IZMI	41 F	1143.0	1143.5	5.0	200.0				
5900	KISV	2 S/F	1148.7	1149.4	1.8	4.0				
9300	KISV	2 S/F	1148.7	1149.5	1.7	2.0				
2800	OTTA	22 GRF	1625.0	1723.0	75.0	9.4	4.0			
24	221	ABST	43 NS	0500.0		240.0		7.0		
	245	SVTO	43 NS	0551.0	0721.0	622.00	150.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0720.0E	1153.0	440.00	43.0			
	430	KRAK	44 NS	0820.0E		343.00	19.0			
	204	IZMI	43 NS	0915.0		165.0	20.0			
	245	SGMR	44 NS	1148.0E	2017.0	617.00	70.0			
	245	PALE	43 NS	2017.0	2024.0	221.00	170.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2114.0E	0507.0	650.00	8.0	3.0		QL=1 ST=2 TYP=1
	245	LEAR	43 NS	2235.0	0113.0	724.00	92.0			WL
	5900	KISV	22 GRF	0606.0	0618.0	22.3	7.0			QL=1 ST=2 TYP=1
	9100	GORK	21 GRF	0606.0	0615.1	19.5	29.6			
	5900	KISV	22 GRF	0606.0	0620.2		4.0			
	9300	KISV	22 GRF	0609.7	0618.5	20.1	7.0			
	5900	KISV	45 C	0610.7	0611.2	0.7	7.0			
	9300	KISV	45 C	0610.7	0611.2	0.7	7.0			
	15000	KISV	45 C	0610.7	0611.2	0.7	2.0			
	15000	KISV	45 C	0610.7	0610.9		2.0			
	9300	KISV	45 C	0610.7	0610.9		5.0			
	5900	KISV	45 C	0610.7	0610.9		7.0			
	5900	KISV	1 S	0649.5	0649.7	1.6	1.0			
9300	KISV	2 S/F	0649.5	0649.9	1.5	3.0				

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FEBRUARY 1989

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	5900	KISV	2 S/F	0700.0	0700.4	1.1	1.0			
	5900	KISV	22 GRF	0725.1	0834.6	153.5	11.0			
	9300	KISV	22 GRF	0725.2	0905.8	153.3	8.0			
	5900	KISV	23 GRF	0734.2	0738.6	13.7	11.0			
	9300	KISV	22 GRF	0736.0	0739.3	12.7	5.0			
	5900	KISV	20 GRF	0754.1	0809.0	25.5	8.0			
	9300	KISV	20 GRF	0756.0	0809.0	24.5	8.0			
	2950	GORK	20 GRF	0759.7	0812.0	73.0	7.3			
	9300	KISV	2 S/F	0801.8	0802.3	1.6	4.0			
	5900	KISV	2 S/F	0801.8	0802.4	1.3	3.0			
	9300	KISV	46 C	0821.5	0825.4		9.0			
	9300	KISV	46 C	0821.5	0824.6	8.8	9.0			
	9300	KISV	46 C	0821.5	0826.6		4.0			
	5900	KISV	46 C	0824.2	0825.4	7.2	18.0			
	5900	KISV	46 C	0824.2	0826.6		11.0			
	5900	KISV	46 C	0824.2	0824.6		17.0			
	5900	KISV	46 C	0824.2	0826.8		11.0			
	9100	GORK	2 S/F	0824.3	0825.3	4.0	8.5			
	15000	KISV	45 C	0824.3	0825.4		2.0			
	15000	KISV	45 C	0824.3	0824.5	1.5	2.0			
	536	OHRD	41 F	0830.0E	1210.2	380.0D	39.0			
	5900	KISV	45 C	0832.2	0833.3		1.0			
	5900	KISV	45 C	0832.2	0832.7	1.3	2.0			
	9300	KISV	2 S/F	0832.3	0832.8	2.6	4.0			
	9300	KISV	23 GRF	0912.6	0915.2	22.2	11.0			
	5900	KISV	23 GRF	0914.4	0915.3	15.0	13.0			
	204	IZMI	4 S/F	0915.0	0915.2	0.8	150.0			
	2950	GORK	20 GRF	0954.0	1010.5	25.0	5.4			
	5900	KISV	2 S/F	1011.7	1012.8	6.5	2.0			
	9300	KISV	2 S/F	1012.2	1013.3	6.0	2.0			
	9300	KISV	20 GRF	1023.4	1028.5	13.5	3.0			
	5900	KISV	21 GRF	1024.0	1027.1	14.0	6.0			
	5900	KISV	26 FAL	1103.0	1105.6	3.0	3.0			
	9300	KISV	1 S	1105.2	1105.6	5.3	2.0			
	9300	KISV	45 C	1130.4	1133.1	7.1	4.0			
	9300	KISV	45 C	1130.4	1131.7		3.0			
	5900	KISV	45 C	1130.6	1133.2	7.1	4.0			
	5900	KISV	45 C	1130.6	1131.7		2.0			
	430	KRAK	2 S/F	1131.0	1131.5	1.2	54.0	16.0		
	9300	KISV	20 GRF	1142.0	1148.0	18.5D	4.0			
	5900	KISV	23 GRF	1142.5	1149.1	17.5D	9.0			
	810	KRAK	8 S	1201.5	1201.6	0.5	17.0			
	810	KRAK	8 S	1207.7	1207.8	0.5	130.0D			
9500	POTS	20 GRF	1220.0	1221.0	50.0	11.0				
245	SGMR	8 S	1231.0E	1232.0	1.0D	330.0			QL=1 ST=2 TYP=3	
237	TRST	2 S/F	1244.3	1244.4	0.1	193.0			1L	
410	SGMR	8 S	1315.0E	1316.0	1.0D	90.0			QL=1 ST=3 TYP=3	
9500	POTS	20 GRF	1415.0	1426.7	30.0	23.0				
2800	OTTA	22 GRF	1417.0	1420.5	98.0	10.5	5.0			
2800	OTTA	3 S	1426.0	1427.5	2.8	10.5	5.0			
2695	SGMR	8 S	1547.0E	1547.0	U	92.0			QL=1 ST=2 TYP=3	
25	221	ABST	43 NS	0500.0		240.0		16.0		
	410	SVTO	43 NS	0550.0	0635.0	429.0D	34.0			QL=1 ST=2 TYP=1
	245	SVTO	44 NS	0550.0E	0557.0	624.0D	100.0			QL=1 ST=2 TYP=1
	260	OHRD	44 NS	0720.0E	0747.8	440.0D	85.0			
	204	IZMI	43 NS	0735.0		275.0	20.0			
	245	SGMR	44 NS	1147.0E	2117.0	619.0D	68.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2114.0E	0717.0	650.0D	5.0	2.0		WR
	100	HIRA	42 SER	0244.9	0245.5U	2.6	1000.0D			
	410	LEAR	8 S	0245.0E	0246.0	1.0D	150.0			QL=1 ST=2 TYP=3
	245	LEAR	49 GB	0245.0E	0246.0	1.0D	1300.0			QL=1 ST=2 TYP=6
	410	PALE	8 S	0245.0E	0246.0	1.0D	150.0			QL=1 ST=2 TYP=3
	245	PALE	49 GB	0245.0E	0246.0	1.0D	2000.0			QL=1 ST=2 TYP=6
	4995	LEAR	8 S	0415.0E	0415.0	U	38.0			QL=1 ST=2 TYP=3
	8800	LEAR	8 S	0415.0E	0415.0	U	64.0			QL=1 ST=2 TYP=3
	17000	NOBE	1 S	0415.0	0415.3	1.0	29.0			11L
9300	KISV	2 S/F	0648.7	0649.8	2.1	3.0				
9300	KISV	1 S	0727.2	0727.4	1.3	2.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
25	9500	POTS	4 S/F	0747.2	0748.6	3.3	12.0			
	9300	KISV	2 S/F	0747.6	0748.4	3.0	23.0			
	9100	GORK	2 S/F	0748.0	0748.4	1.9	20.0			
	15000	KISV	2 S/F	0748.0	0748.4	1.4	9.0			
	5900	KISV	2 S/F	0748.0	0748.4	4.8	25.0			
	9300	KISV	1 S	0825.2	0825.7	2.6	2.0			
	5900	KISV	21 GRF	0825.5	0826.1	44.5	9.0			
	5900	KISV	45 C	0854.0	0855.1		2.0			
	5900	KISV	45 C	0854.0	0854.3	16.0	2.0			
	9300	KISV	45 C	0854.1	0855.1	1.9	3.0			
	9300	KISV	45 C	0854.1	0854.3		2.0			
	5900	KISV	21 GRF	0924.5	0926.1	15.6	7.0			
	9300	KISV	21 GRF	0924.8	0926.2	10.8	7.0			
	536	ONDR	42 SER	0942.0	0956.4	25.5	16.0			
	9300	KISV	45 C	1000.2	1010.4		2.0			
	9300	KISV	45 C	1009.2	1009.4	1.9	2.0			
	810	KRAK	8 S	1020.7	1021.0	0.5	33.0			
	810	KRAK	8 S	1033.3	1033.6	0.5	31.0			
	5900	KISV	22 GRF	1036.2	1103.8U	31.8	5.0			
	5900	KISV	46 C	1113.6	1114.1		2.0			
	5900	KISV	46 C	1113.6	1115.5		2.0			
	5900	KISV	46 C	1113.6	1118.5	11.5	4.0			
	9300	KISV	46 C	1113.8	1114.1		2.0			
	9300	KISV	46 C	1113.8	1115.4		3.0			
	9300	KISV	46 C	1113.8	1118.5	10.4	4.0			
	9500	POTS	4 S/F	1219.2	1219.6	2.9	17.0			
	245	SGMR	8 S	1245.0E	1245.0	U	130.0			QL=1 ST=2 TYP=3
	245	SVTO	8 S	1245.0E	1245.0	U	88.0			QL=1 ST=2 TYP=3
	810	KRAK	8 S	1310.3	1310.5	0.5	185.0D			
	9500	POTS	1 S	1403.5	1404.6	1.7	9.0			
	2800	OTTA	22 GRF	1630.0	1825.0	205.0	7.7	3.0		
	8800	LEAR	8 S	2327.0E	2327.0	1.0D	50.0			QL=1 ST=2 TYP=3
	4995	LEAR	8 S	2327.0E	2328.0	1.0D	39.0			QL=1 ST=2 TYP=3
17000	NOBE	1 S	2327.6	2327.9	1.0	26.0			32L	
26	245	LEAR	44 NS	0115.0E	0435.0	563.0D	150.0			QL=1 ST=2 TYP=1
	221	ABST	43 NS	0500.0		240.0		10.0		
	245	SVTO	44 NS	0548.0E	0657.0	244.0D	85.0			QL=1 ST=2 TYP=1
	100	GORK	43 NS	0612.0		264.0		5.0		
	204	IZMI	43 NS	0700.0		300.0	15.0			
	260	ONDR	44 NS	0720.0E	1050.4	420.0D	25.0			
	127	TORN	43 NS	0956.0	1134.3	130.0	60.0		3.0	V=1
	245	SGMR	43 NS	1145.0	1850.0	622.0D	57.0			QL=1 ST=2 TYP=1
	200	HIRA	44 NS	2110.0E	0226.0	675.0D	33.0		15.0	MR
	245	LEAR	44 NS	2236.0E	0845.0	721.0D	48.0			QL=1 ST=2 TYP=1
	245	PALE	8 S	0158.0E	0158.0	U	120.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0313.0E	0313.0	1.0D	86.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0313.0E	0313.0	1.0D	290.0			QL=1 ST=2 TYP=3
	410	PALE	8 S	0313.0E	0313.0	U	70.0			QL=1 ST=2 TYP=3
	245	PALE	8 S	0313.0E	0313.0	U	470.0			QL=1 ST=2 TYP=3
	500	HIRA	46 C	0320.5	0326.0	9.5	50.0		18.0	
	610	LEAR	4 S/F	0321.0E	0324.0	7.0D	230.0			QL=1 ST=2 TYP=3
	610	PALE	8 S	0323.0E	0324.0	2.0D	200.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0326.0E	0326.0	U	12.0			QL=1 ST=2 TYP=3
	245	LEAR	8 S	0441.0E	0441.0	1.0D	150.0			QL=1 ST=2 TYP=3
	410	LEAR	8 S	0441.0E	0441.0	U	140.0			QL=1 ST=2 TYP=3
	200	GORK	4 S/F	0441.0	0441.5	1.4	26.0			
	100	GORK	8 S	0441.0	0441.6	1.4	36.0			
	100	GORK	41 F	0618.0	0625.5		36.0			
	100	GORK	41 F	0618.0	0618.7	8.2	28.0			
	200	GORK	41 F	0629.0	0629.3	8.0	19.0			
	200	GORK	41 F	0629.0	0635.5		18.0			
	200	GORK	41 F	0629.0	0636.5		17.0			
	5900	KISV	22 GRF	0647.1	0648.3	13.5	1.0			
	5900	KISV	45 C	0704.4	0706.0	7.1	8.0			
	5900	KISV	45 C	0704.4	0704.9		3.0			
	9300	KISV	45 C	0704.5	0706.0	6.8	9.0			
	9300	KISV	45 C	0704.5	0705.0		3.0			
5900	KISV	20 GRF	0753.0	0754.5	13.0	3.0				



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean	Int	Remarks
26	5900	KISV	22 GRF	0807.0	0811.2	14.6	2.0			
	430	KRAK	42 SER	0843.5	0859.0	28.0	14.0			
	100	GORK	8 S	0846.5	0846.9	1.1	34.0			
	5900	KISV	2 S/F	0935.6	0936.8	4.5	4.0			
	430	KRAK	42 SER	1305.5	1317.5	55.00	23.0			
	536	ONDR	42 SER	1350.0	1353.6	24.0	14.0			
	2800	OTTA	22 GRF	1653.0	1810.0	145.0	9.0	4.0		
27	100	HIRA	43 NS	0200.0	0718.0	380.00	54.0	23.0		
	200	GORK	44 NS	0448.0E		180.00		5.0		
	100	GORK	44 NS	0448.0E		420.00		20.0		
	204	IZMI	43 NS	0700.0		300.0	20.0			
	127	TORN	44 NS	0700.0E		480.00		65.0		V=2
	260	ONDR	44 NS	0710.0E	1240.3	480.00	20.0			
	200	HIRA	44 NS	2110.0E	2332.0	675.00	56.0	27.0		SR
	100	HIRA	44 NS	2110.0E	2143.0	675.00	170.00	36.00		
	245	LEAR	43 NS	2236.0	0801.0	721.0	53.0			QL=1 ST=2 TYP=1
	15400	LEAR	8 S	0134.0E	0136.0	2.00	54.0			QL=1 ST=2 TYP=3
	610	LEAR	8 S	0135.0E	0135.0	1.00	89.0			QL=1 ST=2 TYP=3
	610	PALE	8 S	0135.0E	0135.0	1.00	78.0			QL=1 ST=2 TYP=3
	4995	LEAR	4 S/F	0136.0E	0138.0	7.00	27.0			QL=1 ST=2 TYP=3
	8800	LEAR	8 S	0137.0E	0138.0	2.00	17.0			QL=1 ST=2 TYP=3
	9300	KISV	26 FAL	0630.0	0637.6	16.0	7.0			
	15000	KISV	20 GRF	0635.8	0644.0	16.0	4.0			
	5900	KISV	2 S/F	0635.8	0636.5	3.8	11.0			
	9100	GORK	20 GRF	0635.8	0636.5	11.3	9.4			
	5900	KISV	2 S/F	0651.4	0651.7	3.8	1.0			
	5900	KISV	22 GRF	0717.3	0721.8	12.4	2.0			
	2950	GORK	21 GRF	0746.8	1009.0	250.0	5.2			
	5900	KISV	2 S/F	0804.2	0806.0	4.0	1.0			
	5900	KISV	46 C	0843.0	0846.0	6.0	7.0			
	5900	KISV	29 PBI	0843.0	0849.0	29.0	3.0			
	5900	KISV	46 C	0843.0	0847.6		6.0			
	5900	KISV	46 C	0843.0	0847.7		7.0			
	9300	KISV	46 C	0844.5	0846.0	3.8	8.0			
	9300	KISV	29 PBI	0844.5	0848.4	36.3	5.0			
	9300	KISV	46 C	0844.5	0846.5		8.0			
	9300	KISV	46 C	0844.5	0847.7		8.0			
	9100	GORK	20 GRF	0844.9	0846.0	43.0	7.6			
	237	TRST	46 C	0845.3	0845.4	0.1	137.0			6R
327	TRST	46 C	0845.3	0845.4	0.1	226.0			1L	
15000	KISV	22 GRF	0847.0	0857.2	24.5	5.0				
15000	KISV	22 GRF	0847.0	0847.7		3.0				
100	GORK	41 F	0954.5	1004.5		230.0				
100	GORK	41 F	0954.5	0959.7	10.7	2100.0				
5900	KISV	22 GRF	1002.7	1004.7	13.0	4.0				
3100	CRIM	1 S	1003.0	1004.8	2.0	4.0	1.0			
2950	GORK	1 S	1004.0	1004.6	2.0	3.0				
5900	KISV	2 S/F	1107.0	1108.2	5.0	3.0				
3100	CRIM	1 S	1109.0	1110.2	3.0	2.0	1.0			
200	GORK	8 S	1140.7	1141.0	1.0	200.0				
810	KRAK	41 F	1142.0	1143.5	5.5	6.0	2.0			
536	ONDR	40 F	1158.0	1158.9	2.0	183.0				
2800	OTTA	4 S/F	1658.0	1659.5	5.0	11.9	5.0			
245	PALE	8 S	1919.0E	1919.0	2.00	120.0			QL=1 ST=2 TYP=3	
500	HIRA	23 GRF	2110.0E	2140.0	115.00	47.0	14.0			
245	PALE	4 S/F	2116.0E	2118.0	21.00	110.0			QL=1 ST=2 TYP=3	
500	HIRA	46 C	2137.5	2142.0	10.5	50.0	7.0		0	
28	221	ABST	43 NS	0500.0		240.0		11.0		
	245	SVTO	43 NS	0545.0	0702.0	632.00	15.0			QL=1 ST=2 TYP=1
	234	POTS	44 NS	0608.0E	0619.0	154.00	45.0			
	204	IZMI	43 NS	0700.0		300.0	20.0			
	127	TORN	44 NS	0700.0E	1315.7	480.00	830.0	30.0		V=2
	260	ONDR	44 NS	0710.0E	0900.1	450.00	45.0			
	200	HIRA	44 NS	2110.0E	0522.0	675.00	158.0	26.0		SR
	9300	KISV	2 S/F	0922.4	0922.9	1.1	5.0			
	5900	KISV	22 GRF	0940.8	0947.8	24.8	4.0			
	536	ONDR	42 SER	1159.0	1215.5	19.0	30.0			

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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
28	2800 OTTA	4 S/F	1805.0	1818.0	26.0	85.3	26.0		
	4995 PALE	4 S/F	1815.0E	1817.0	5.00	160.0			QL=1 ST=2 TYP=3
	8800 PALE	4 S/F	1815.0E	1817.0	6.00	210.0			QL=1 ST=2 TYP=3
	15400 PALE	4 S/F	1816.0E	1817.0	4.00	200.0			QL=1 ST=2 TYP=3
	15400 SGMR	4 S/F	1816.0E	1817.0	3.00	140.0			QL=1 ST=2 TYP=3
	2695 PALE	8 S	1817.0E	1817.0	1.00	89.0			QL=1 ST=2 TYP=3
	8800 PALE	8 S	1825.0E	1825.0	U	74.0			QL=1 ST=2 TYP=3
	2800 OTTA	29 PBI	1830.0	1830.0	170.0	8.9	5.0		
	2800 OTTA	4 S/F	2139.0	2143.0	7.0	40.6	16.0		
	410 PALE	8 S	2142.0E	2142.0	U	200.0			QL=1 ST=2 TYP=3

Reports are received routinely from the following observatories:

BERN = Berne	IZMI = IZMIRAN	ONDR = Ondrejov	SVTO = San Vito
CRIM = Crimea	KISK = Kislovodsk	OTTA = Ottawa	SYDN = Sydney
GORK = Gorky	KRAK = Krakow	PALE = Palehua	TORN = Torun
HIRA = Hiraïso	LEAR = Learmonth	PENT = Penticton	TRST = Trieste
HUAN = Huancayo	NOBE = Nobeyama	POTS = Potsdam	TYKW = Toyokawa
		SGMR = Sagamore Hill	UPIC = Upice

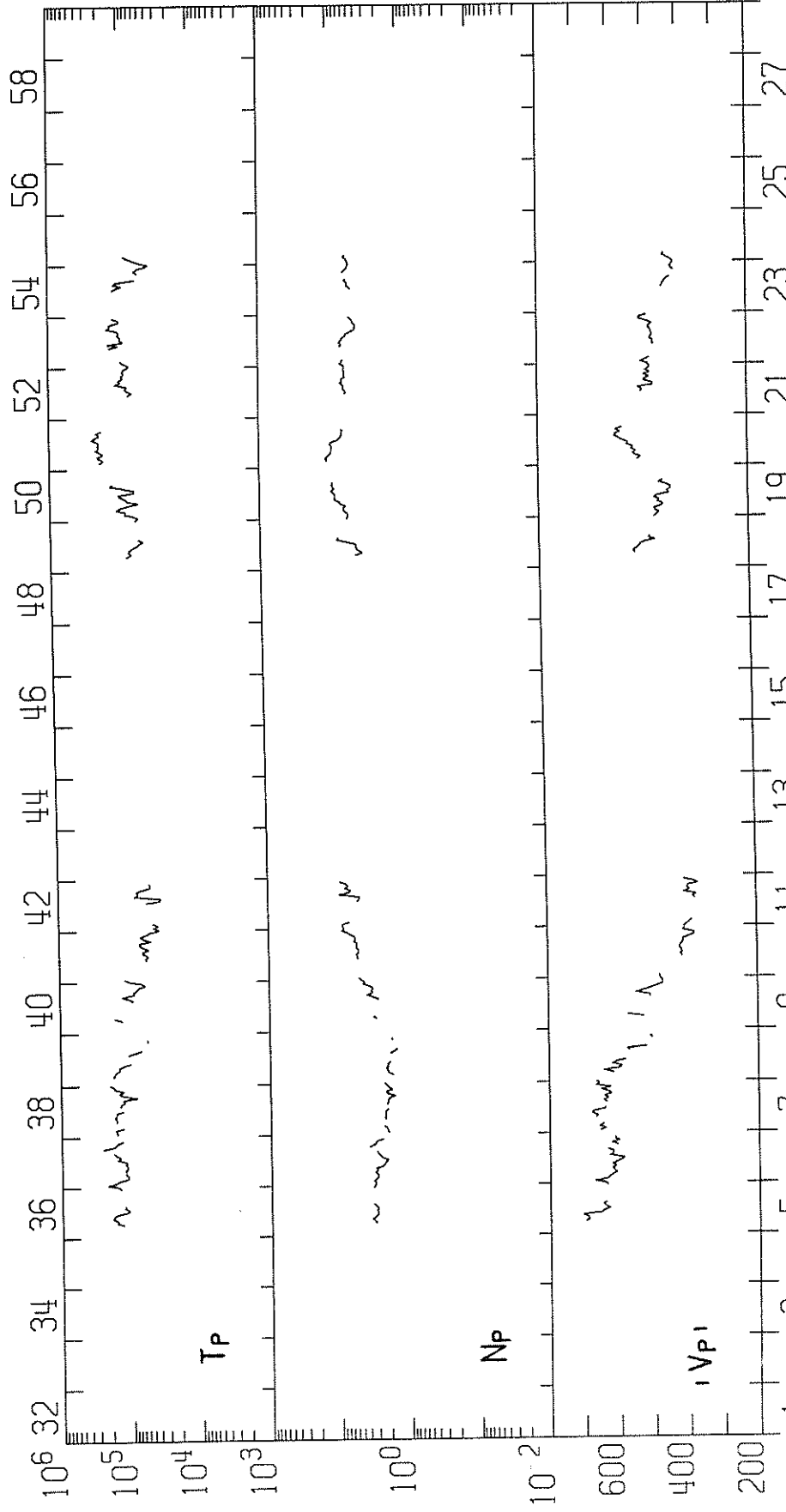
Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A	

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Ottawa, Canada 2800 MHz; Hiraïso, Japan 500 and 200 MHz; and Toyokawa, Japan 9400, 3750, 2000 and 1000 MHz.

IMP 8 SOLAR WIND PLASMA  
FEBRUARY 1989

MIT/CSR IMP 8 PLASMA PARAMETERS

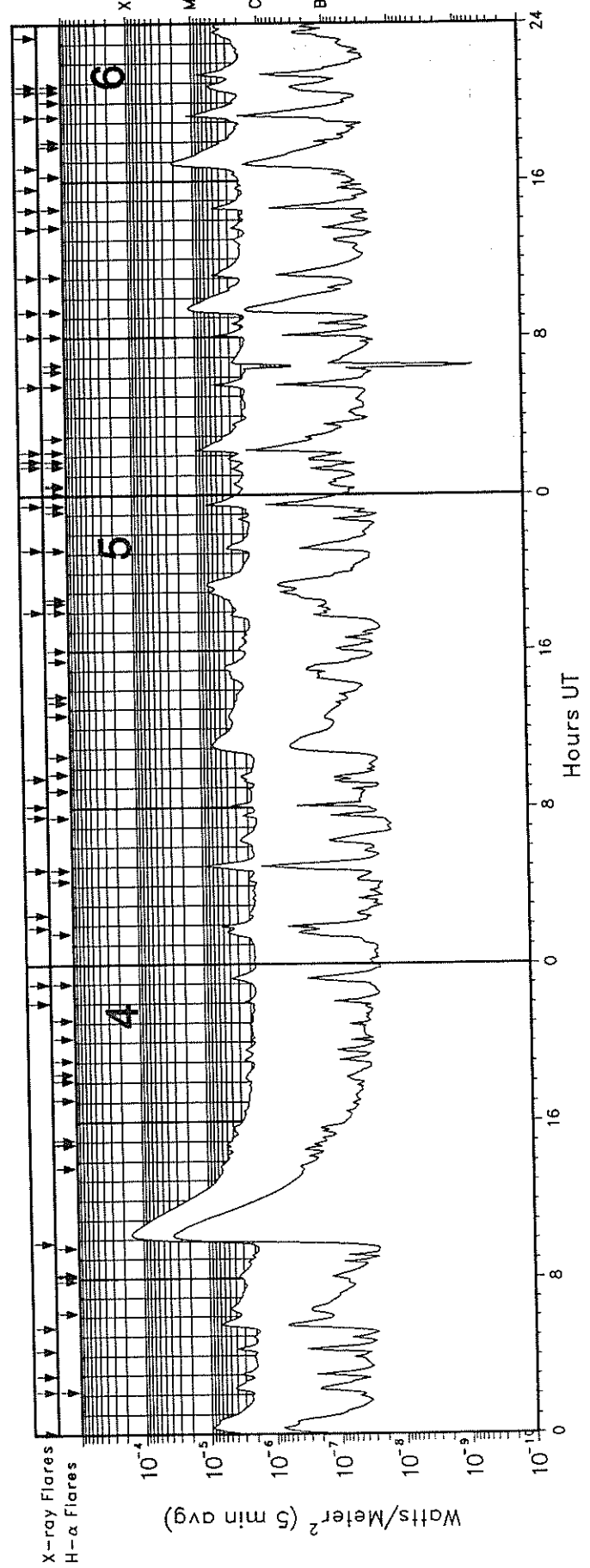
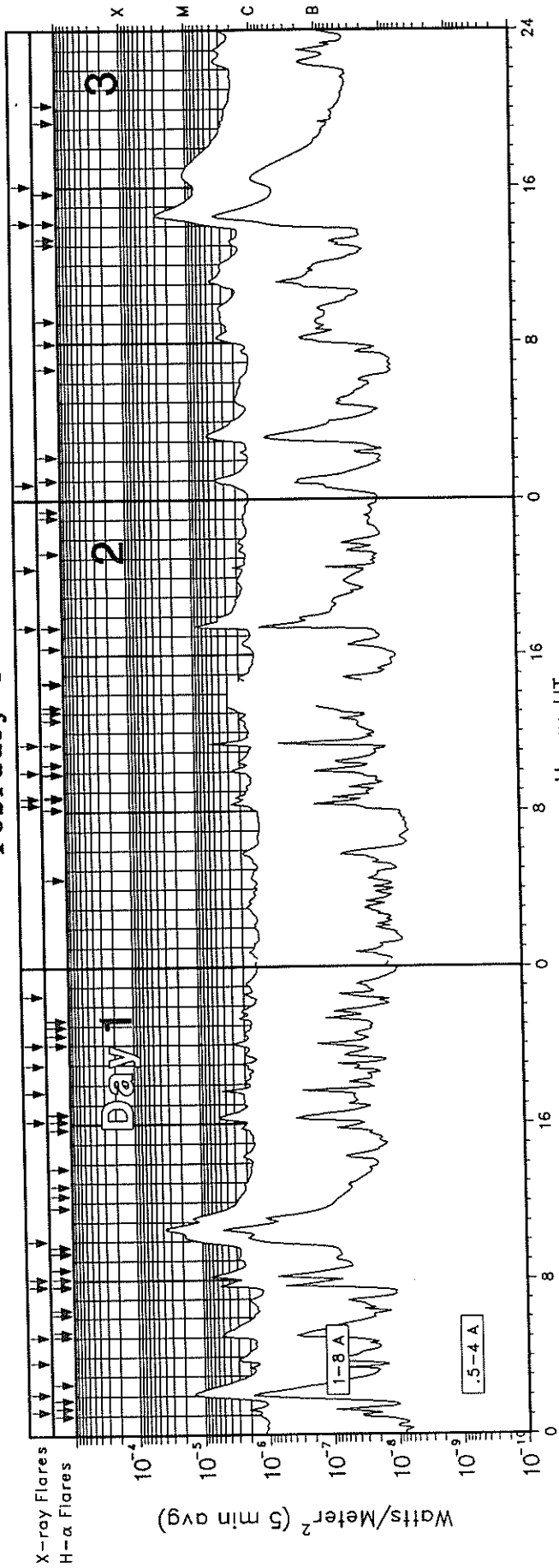


FEB 1989 FEB 1989

IMP 8 MIT PRELIMINARY ONE-HOUR AVERAGES

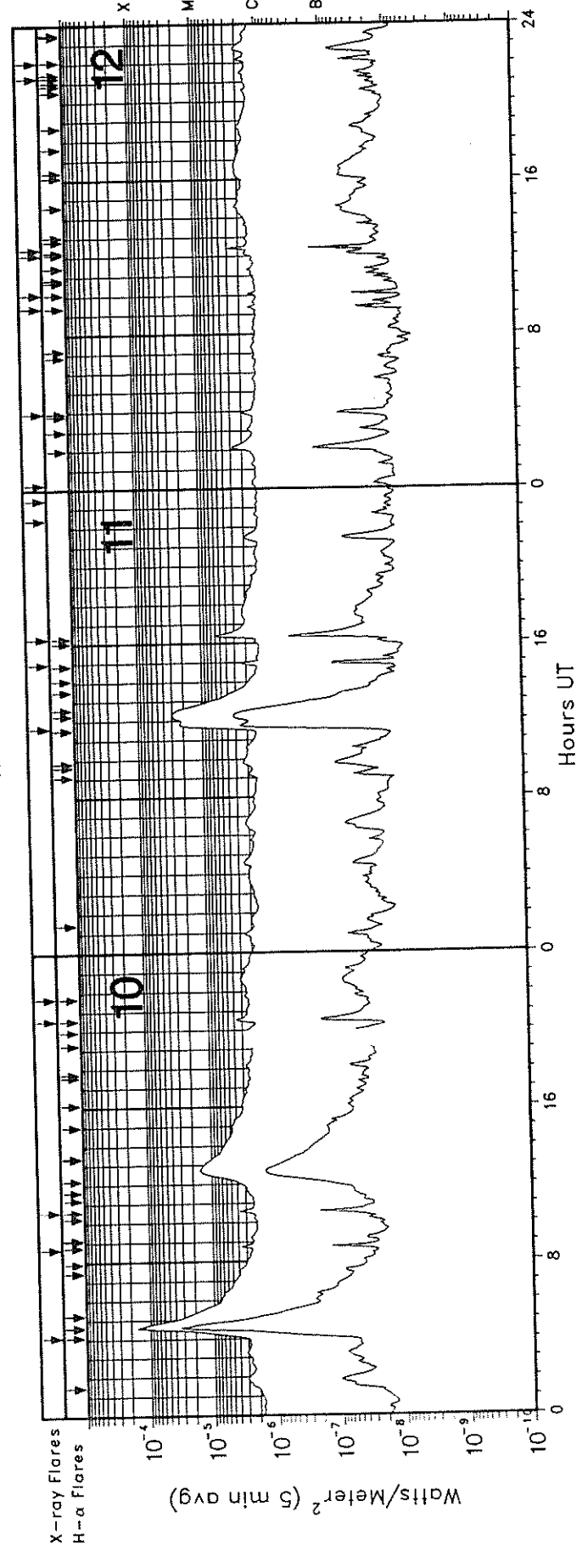
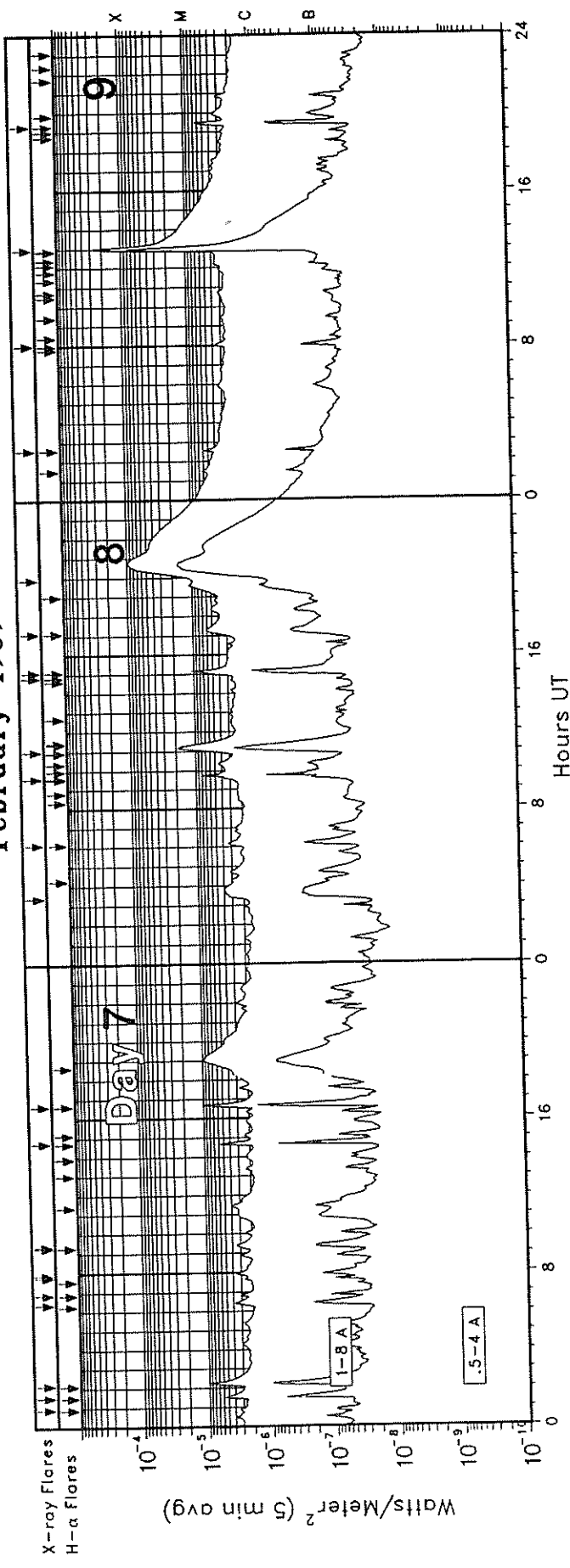
# GOES-7 X-RAY DETECTOR

February 1989



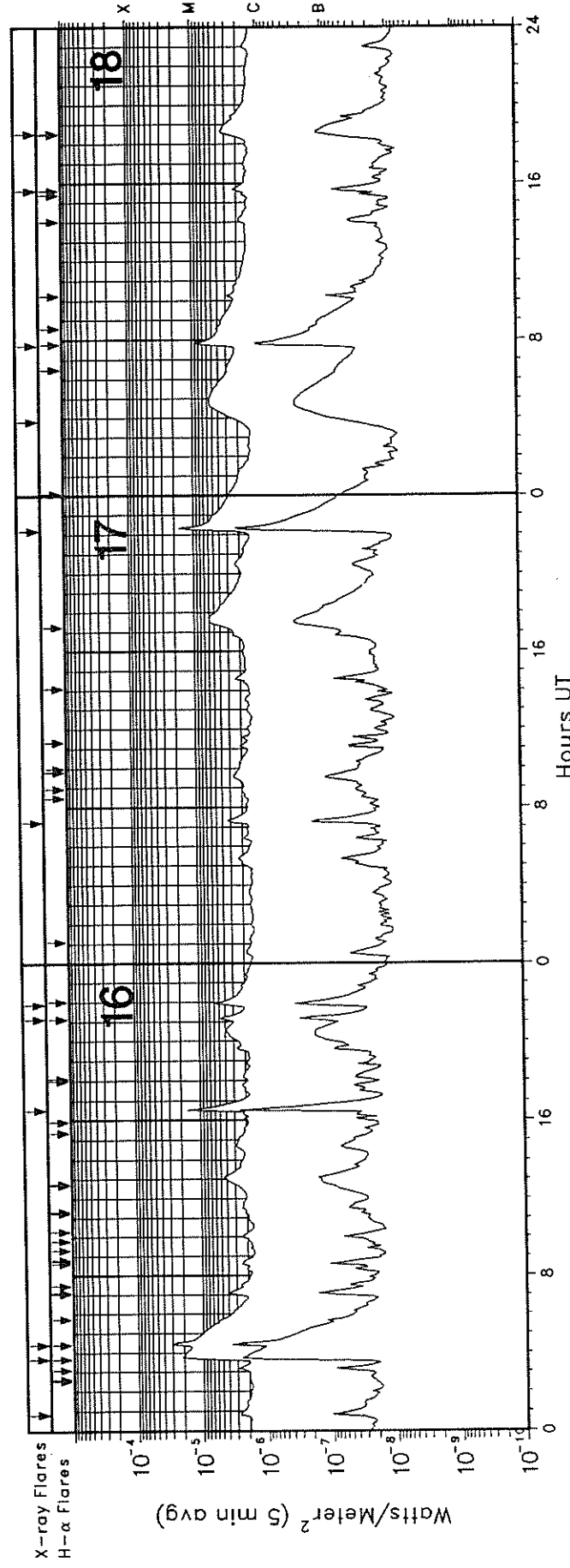
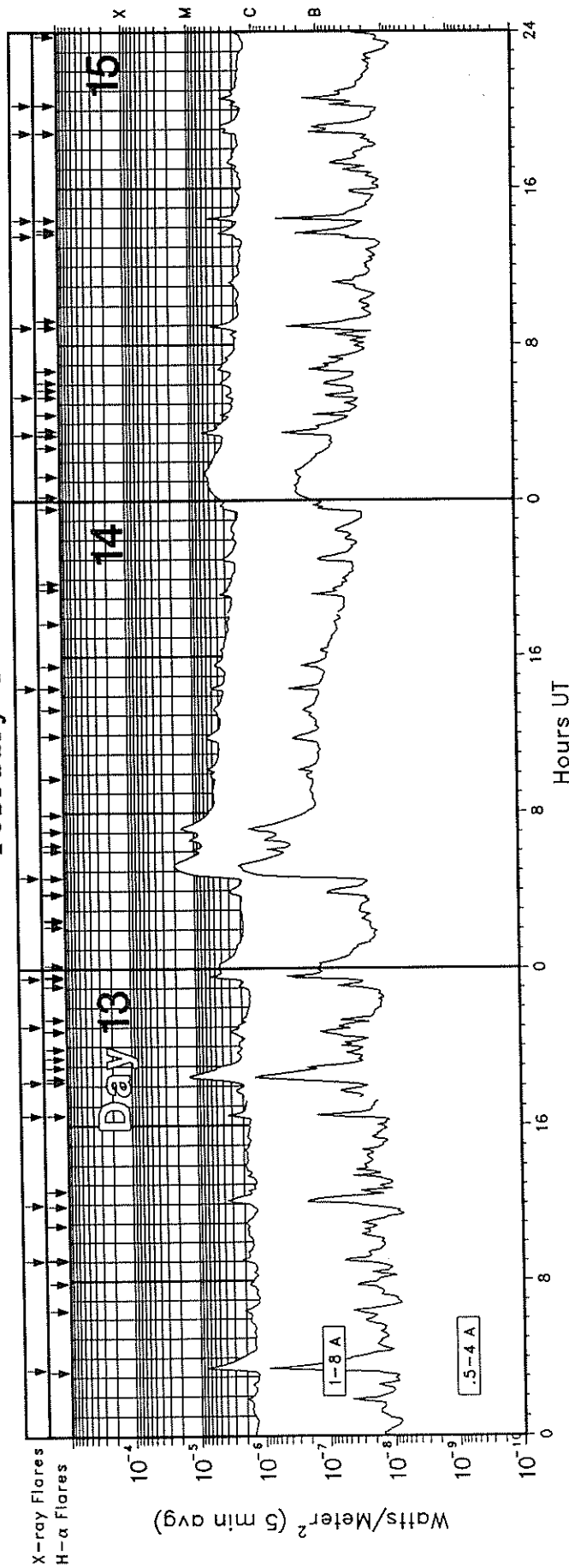
# GOES-7 X-RAY DETECTOR

February 1989



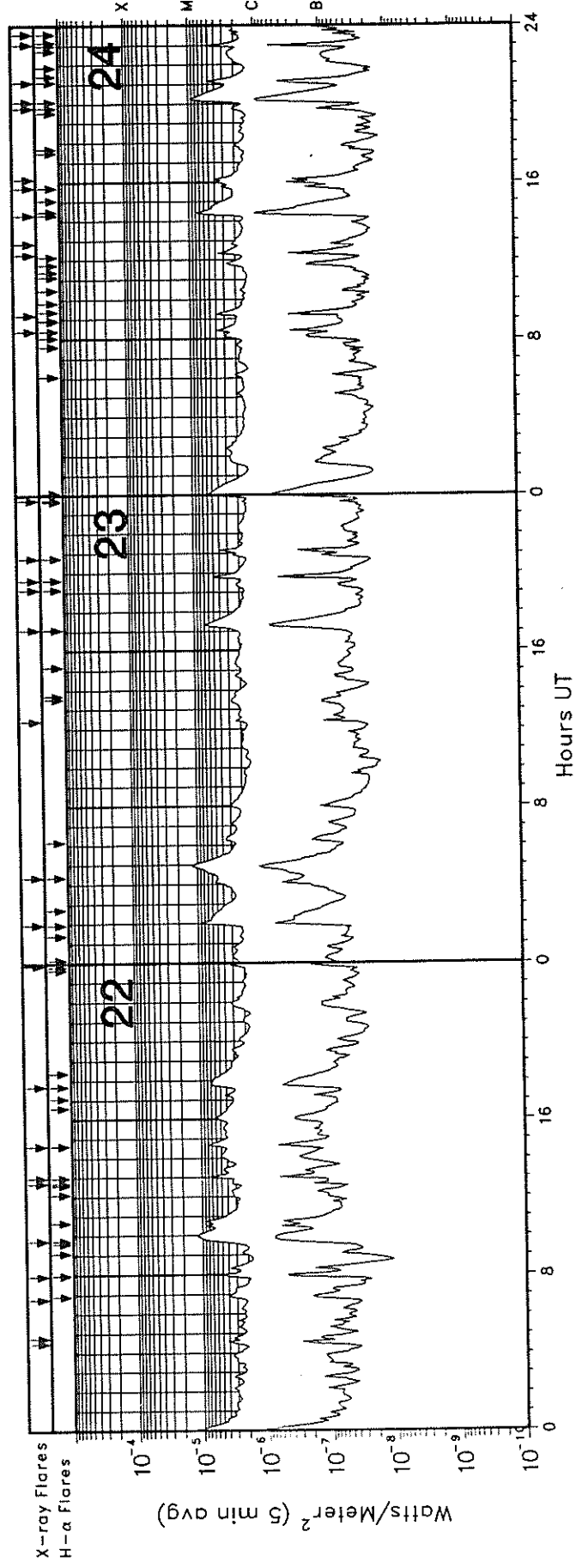
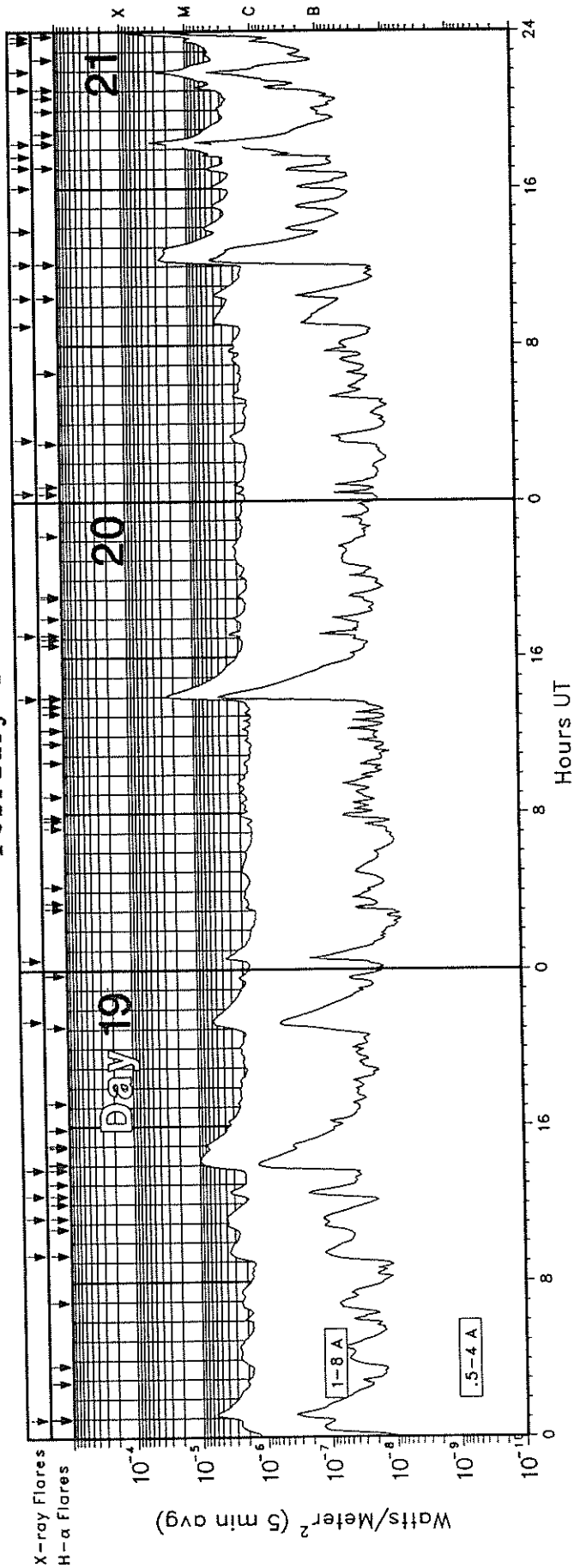
# GOES-7 X-RAY DETECTOR

February 1989



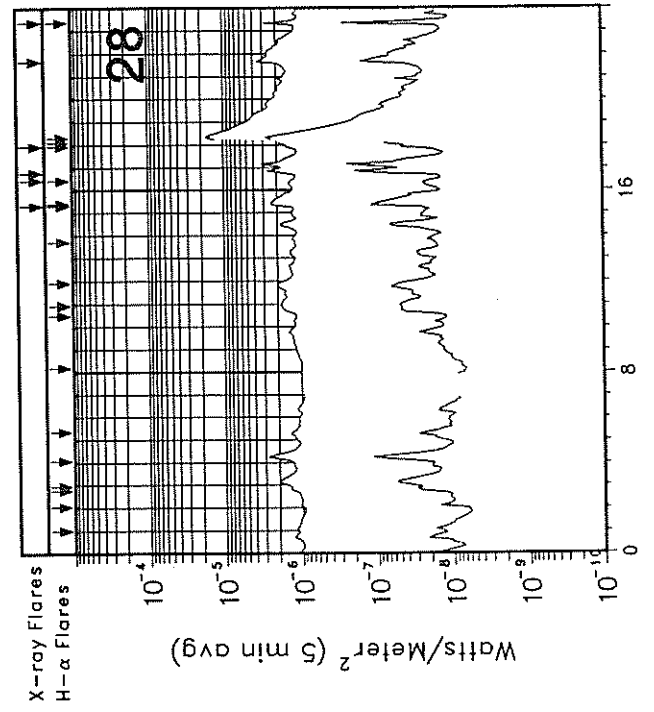
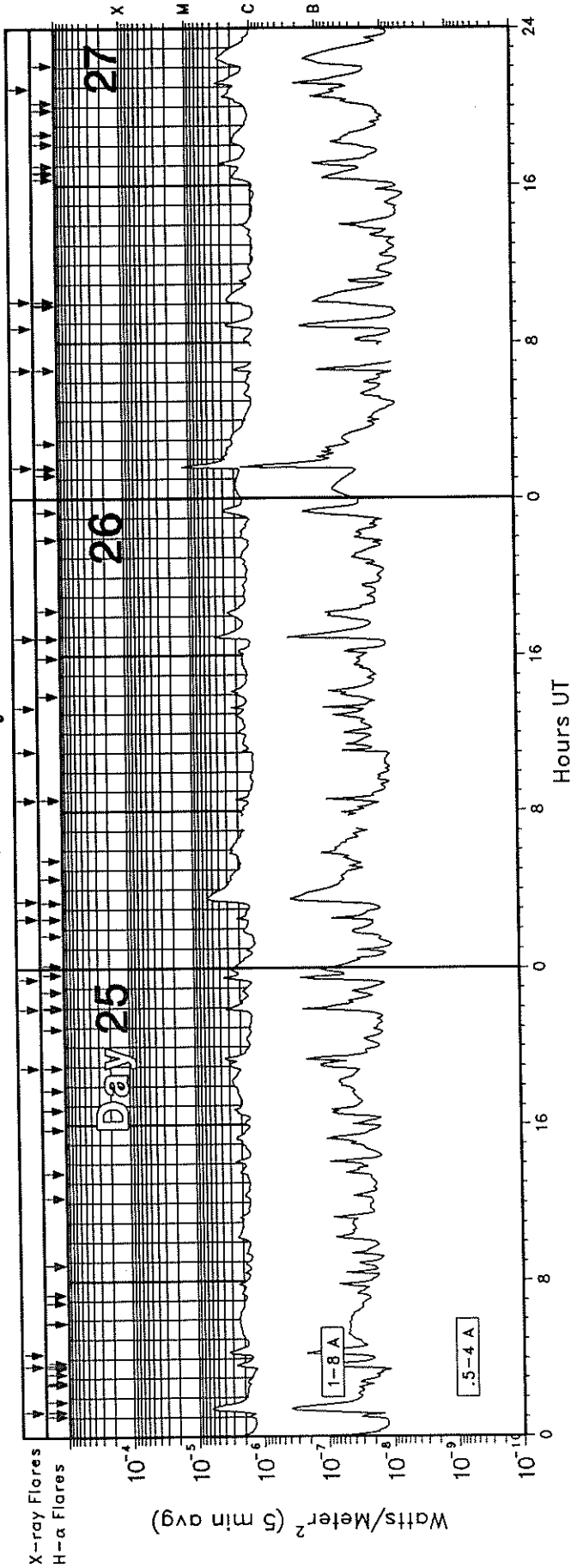
# GOES-7 X-RAY DETECTOR

February 1989



# GOES-7 X-RAY DETECTOR

February 1989





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Feb 89

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

February 1989

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
01	0112	0116	0118				C3.5	
01	0205E	0205	0210D	S20	E01	SN	M1.4	5334
01	0343	0351	0406				C3.0	
01	0502E	0505	0534D	N20	W73	1F	C5.3	5329
01	0739E	0741	0816D	S22	W03	SF	C6.4	5334
01	0803E	0818	0836D	N17	W74	1N	C7.9	5329
01	1001E	1034	1148D	S21	W02	1N	M3.9	5334
01	1609E	1616	1629	N22	W81	SF	C5.2	5329
01	1737	1742	1746				C4.9	
01	1858	1901	1903				C2.9	
01	2000	2001U	2019	N24	W74	SF	C3.5	5329
01	2232	2236	2239				C2.2	
02	0821E	0824	0834D	S22	W13	SF	C3.2	5334
02	0841E	0842	0849D	S22	W13	SF	C2.5	5334
02	0959E	1004	1011D	S22	W15	SF	C3.0	5334
02	1124E	1126U	1150	S22	W16	1N	C7.5	5334
02	1726E	1727	1756	S22	W19	1N	M1.0	5334
02	2028	2032	2036				C2.4	
03	0049	0104	0111				C4.1	
03	1408E	1416	1424D	S20	W72	SF	M3.0	5336
03	1603	1626	1757				M1.1	
04	0005	0022	0103				C9.9	5354
04	0211E	0216	0314D	S21	W40	SF	C4.4	5334
04	0259	0303	0309				C3.6	
04	0416	0423	0429				C4.1	
04	0527	0538	0553				C6.9	
04	0950	1017	1241	N29	E73		X1.5	5354
04	2202	2206	2208				C3.4	
04	2301E	2302	2317D	N27	E81	SF	C3.9	5354
05	0153	0157	0202				C5.6	
05	0233	0236	0238				C2.7	
05	0451E	0501	0508D	N30	E78	SF	C9.8	5354
05	0734	0740	0744	N30	E90		C2.5	5354
05	0806E	0806	0810D	N29	E75	SF	C4.2	5354
05	0931	0935	0939				C2.7	
05	1802	1805U	1823	N29	E70	SF	C3.4	5354
05	2114E	2128	2140D	N28	E68	SF	C3.6	5354
05	2330E	2331	2348D	N29	E64	SF	C8.6	5354
06	0128E	0131	0141D	N31	E64	1N	C3.0	5354
06	0146	0150	0158				C3.4	
06	0213E	0215	0233D	N29	E64	SB	M1.1	5354
06	0534E	0535	0541D	N30	E63	SN	C8.0	5354
06	0804	0805U	0819	N35	E65	1N	C6.1	5354
06	0919E	0922	0934D	N30	E57	SF	M1.2	5354
06	1105	1112	1118				C6.2	
06	1334	1341	1343				C2.9	
06	1433	1438	1443				C6.7	
06	1538	1541	1543				C2.8	
06	1642	1658	1750				M2.1	
06	1917E	1918	1948D	N29	E55	SN	M1.4	5354
06	2035	2124U	2131	N30	E55	SF	C9.6	5354
06	2050	2052U	2104	N21	E66	SF	C5.9	5355
06	2321E	2323	2338	N19	E19	SF	C5.2	5347
07	0055B		0057	N32	E56	SF	C4.0	5354
07	0131E	0133	0143D	N30	E51	SF	C7.0	5354
07	0209	0216	0225				M1.2	
07	0622	0624	0626D	N29	E45	1F	C3.8	5354
07	0652E	0653	0706D	N29	E54	1N	C3.5	5354

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
07	0746	0747	0750D	N29	E51	SN	C2.9	5354
07	0753	0756	0758D	N32	E51	1F	C3.6	5354
07	0917E	0922	0932D	N31	E45	SF	C3.0	5354
07	0922	0925	0929				C4.2	
07	1443	1444U	1458	N29	E41	SF	C9.0	5354
07	1638E	1640	1657D	N31	E45	1B	M2.1	5354
08	0322	0351	0412				C3.9	
08	0608E	0609	0618D	N36	E45	SF	C3.5	5354
08	0935E	0948	1005D	N36	E42	1B	M1.1	5354
08	1059E	1110	1154D	N24	E56	1N	M1.9	5355
08	1449E	1511	1521	N37	E37	1N	M1.4	5354
08	1505E	1506	1516D	N25	E51	SF	C6.8	5355
08	1706E	1709	1744D	N30	E20	SF	C6.2	5354
08	1953	2023	2036	N30	E27	2B	M9.8	5354
09	0235E	0235	0240D	N22	E47	SF	C6.2	5355
09	0800	0803	0810				C3.8	
09	1256E	1304	1416D	N22	E39	2B	X3.9	5355
09	1917E	1927U	1943D	N31	E28	1N	M1.0	5354
10	0407E	0437	0603D	N19	E30	3B	X1.8	5355
10	0840E	0849	0853D	N32	E03	SF	C3.6	5354
10	1035E	1036	1041D	N31	E11	SF	C3.9	5354
10	2033E	2035	2041	S19	E43	SF	C4.9	5356
10	2141	2150	2200D	N18	E42	SF	C4.2	5357
11	1139	1223	1338D	N22	E15	2N	M2.9	5355
11	1458E	1500	1529D	N31	W05	SF	C3.6	5354
11	1618E	1621	1657D	N18	E37	SN	C6.5	5357
11	2225	2228	2230				C2.0	
11	2328	2331	2333				C1.9	
12	0016	0019	0021				C2.6	
12	0357E	0359	0404D	N31	W03	SF	C2.2	5354
12	0924E	0924	0933D	S18	E34	SF	C1.7	5356
12	1006E	1008	1012D	S17	E23	SF	C1.7	5356
12	1208	1208U	1215D	S17	E25	SF	C1.8	5356
12	1225E	1228	1238D	S17	E22	SF	C3.8	5356
12	2116E	2117	2125D	S18	E21	SF	C2.5	5356
12	2205E	2212	2240D	N31	W23	SF	C2.7	5354
13	0323E	0324	0344D	N30	W25	SF	C8.4	5354
13	0902E	0904	0906	N22	E51	SF	C2.4	
13	1157E	1208	1239D	S16	E13	SF	C4.2	5356
13	1630	1632U	1642	N24	E53	SF	C3.7	5362
13	1811E	1827	1944	N20	W13	2N	M1.4	5355
13	2102	2105	2108				C2.7	
13	2330E	2335	2352D	S15	E05	1N	C6.3	5356
14	0440E	0459	0619D	N29	W40	1F	M2.0	5354
14	1423	1424U	1443	S18	W03	SF	C5.6	5356
15	0325E	0331	0345D	N28	W63	1N	C6.5	5354
15	0521E	0522	0525D	S17	W11	SF	C2.9	5356
15	0854E	0855	0910D	S17	W12	SF	C5.4	5356
15	1333	1341U	1441	S17	W15	SF	C3.4	5356
15	1422E	1426	1435D	N27	W62	SF	C5.6	5354
15	1849E	1850	1936D	S16	W17	SF	C3.1	5356
15	2014	2014U	2045	N27	W59	SF	C3.2	5354
16	0050	0053	0100				C3.0	
16	0340E	0348	0513D	N22	E26	2N	M2.2	5362
16	0424E	0428	0439D	N26	W69	SF	M3.5	5354

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

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February 1989

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
16	1631E	1633	1725D	S13	E49	1B	M2.5	5368
16	2108E	2109U	2210	S12	E47	SF	C5.1	5368
16	2153E	2155	2220D	N19	E13	SF	C5.7	5362
17	0714	0722	0730				C3.5	
17	2212E	2216	2230D	N28	W90	SN	M1.9	5354
18	0349	0435	0623				C5.6	
18	0744	0751	0800				C9.9	
18	1537E	1541	1549D	N16	E51	SF	C2.2	5373
18	1832E	1840	1848	N25	W59	SF	C3.5	5366
19	0057E	0101	0149D	N16	W61	1F	C6.3	5357
19	0922	0926U	1013D	N19	W19	1F	C3.6	5362
19	1116E	1117	1133D	N18	E39	SF	C4.0	5373
19	1225E	1231	1252D	S12	E09	SF	C3.5	5368
19	1346E	1347	1353D	S11	E08	SF	C9.7	5368
19	2124	2124U	2141D	S13	E06	SF	C5.7	5368
20	0031	0038	0049				C3.7	
20	1356	1357	1456D	S15	W04	SB	M2.5	5368
20	1709E	1711	1723D	S10	W08	SF	C2.9	5368
21	0026E	0029	0034D	S12	W10	SN	C2.4	5368
21	0311E	0315	0333D	S11	W13	SN	C2.4	5368
21	0900	0912	0959				C3.9	
21	1025E	1030	1050D	N16	E12	SF	C4.1	5373
21	1207E	1217	1342D	S12	W14	SB	M2.7	5368
21	1350	1400	1410				C5.5	
21	1602	1605	1612				C4.4	
21	1704	1707	1732D	S13	W19	SF	C4.9	5368
21	1739	1743	1746				C6.3	
21	1817E	1819	1912	S12	W19	1B	M3.9	5368
21	2104E	2111	2123D	S13	W22	SF	C7.2	5368
21	2158E	2203	2214D	S13	W24	SB	M2.8	5368
21	2330	2333	2346				M1.1	
21	2343	2357	0035D	S13	W20	SB	M7.9	5368
22	0430E	0435	0449D	S12	W28	SN	C4.8	5368
22	0447	0450	0452				C4.2	
22	0645	0658	0730				C4.2	
22	0756E	0758	0803D	S12	W30	SF	M1.3	5368
22	0944E	0945	1111	S10	W33	SF	M1.3	5368
22	1242E	1244	1253D	S10	W36	SF	C4.5	5368
22	1259E	1301	1339D	S11	W34	SN	M1.0	5368
22	1438E	1438	1502D	S10	W35	SF	C7.9	5368
22	1742E	1748	1819D	S13	W34	SN	C6.9	5368
22	2353E	2355	2359D	S13	W36	SF	C3.4	5368

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
23	0157E	0204	0227	N22	W62	1F	C9.6	5362
23	0422E	0425	0431D	S13	W41	SF	M1.2	5368
23	1225	1228	1232				C2.6	
23	1705E	1718	1751D	S13	W48	SF	C6.7	5368
23	1909E	1926	2035D	N17	W18	SF	C6.9	5373
23	1938E	1949	2041D	S16	W54	1N	C6.6	5368
23	2045E	2110	2126D	S16	W53	SN	C5.3	5368
23	2344E	0002	0010D	S16	W55	SN	C5.7	5368
24	0824	0828	0832				C4.2	
24	0913	0920	0925				C4.1	
24	1217E	1221	1251D	S13	W61	SF	C3.9	5368
24	1251	1254	1257				C2.5	
24	1419E	1420	1451D	S13	W61	SF	C8.3	5368
24	1543E	1558	1624D	S13	W64	SF	C4.7	5368
24	1609	1612	1616				C4.2	
24	1947E	1947	2002D	S13	W66	SF	C2.5	5368
24	2006E	2011	2114D	N10	E57	SN	C9.7	5377
24	2106E	2109	2118D	S13	W66	SF	C5.3	5368
24	2303	2303U	2321D	S13	W68	SF	C7.0	5368
24	2334E	2349	2355D	N11	E56	SN	C2.4	5377
24	2335E	0000	0008	S13	W69	SN	C3.4	5368
25	0116E	0125	0135D	N38	E48	1F	C6.4	5380
25	0337E	0338	0345D	S13	W71	SF	C2.8	5368
25	0414	0420	0428				C3.7	
25	1856E	1925	2001D	N17	W45	SF	C4.2	5373
25	2157E	2158	2209D	S13	W80	SF	C3.7	5368
25	2327	2331	2337				C3.9	
26	0231E	0232	0236D	N14	W25	SF	C2.4	5378
26	0324	0328	0348D	N42	E43	SF	C6.0	5380
26	0833	0837	0841				C2.3	
26	1104	1108	1111				C1.8	
26	1319	1322	1325				C2.7	
26	1653E	1655	1851D	S20	E30	1N	C4.3	5379
27	0135E	0137	0155D	S22	E31	1N	M1.8	5379
27	0636E	0637	0646D	N17	W64	SF	C2.4	5373
27	0845	0855	0905				C2.5	
27	1007	1007U	1136	S18	E23	SF	C2.5	5379
27	2055	2114	2129D	N16	W71	1N	C4.3	5373
28	1518E	1521	1544D	S20	E11	SF	C2.7	5379
28	1625E	1710	1727D	N14	W64	SF	C4.9	5378
28	1646	1654	1702				C2.6	
28	1756E	1821	1947D	N14	W64	SF	M1.7	5378
28	2140E	2144	2159D	N38	E05	SN	C4.2	5380
28	2322E	2323	2339D	N14	W67	SF	C5.6	5378

Preliminary GOES Satellite Data  
Daily Average X-ray Background  
March 1988 - February 1989

Day	1988										1989	
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
1	B1.0	B4.4	B1.9	B7.5	B8.4	B9.4	B6.9	C1.0	B5.7	B4.6	C1.7	C1.2
2	A8.5	B3.5	B2.6	B6.6	B7.1	B9.8	B6.5	C1.2	B6.1	B4.7	C2.1	C1.2
3	B1.1	B3.7	B3.7	B7.1	B9.7	C1.1	B6.9	C1.3	B5.2	B4.4	C2.2	C1.6
4	B1.8	B3.5	B5.1	B9.5	B6.3	B8.6	B6.7	C1.0	B5.0	B4.5	C2.0	C2.0
5	B1.6	B4.2	B4.1	B6.0	B6.4	B8.3	B6.4	B8.7	B4.6	B5.7	C1.9	C1.6
6	B1.4	B4.3	B2.9	B4.8	B6.5	B7.9	B6.1	C1.0	B5.8	B6.2	C2.4	C1.9
7	B1.6	B3.8	B3.1	B5.6	B6.8	B8.2	B6.9	B7.4	B5.5	B6.6	C4.7	C1.9
8	B1.6	B3.9	B2.5	B5.2	B7.0	C1.1	B5.5	B5.3	B5.5	B7.4	C4.6	C2.1
9	B1.6	B3.2	B1.8	B6.4	B7.7	C1.0	B4.8	B5.0	B9.2	B7.8	C3.4	C2.2
10	B1.8	B3.1	B1.6	B4.9	B9.1	C1.0	B3.2	B4.7	B9.8	C1.0	C2.5	C1.9
11	B2.8	B4.5	B1.6	B4.3	B7.7	B6.7	B2.7	B4.9	B9.8	C1.3	C3.1	C1.3
12	B3.4	B5.5	B1.5	B3.7	B4.9	B5.1	B2.8	B5.4	B6.3	C1.2	C2.3	C1.1
13	B3.4	B4.4	B1.4	B3.0	B5.3	B3.9	B2.4	B5.4	B8.9	C1.1	C5.0	C1.3
14	B2.5	B6.0	B1.3	B2.8	B5.0	B3.1	B2.3	B4.7	C1.3	C1.4	C3.8	C2.0
15	B6.0	B7.4	B1.1	B3.3	B4.7	B3.2	B2.6	B5.9	B7.9	C2.1	C2.9	C1.5
16	B6.9	B9.2	B1.3	B3.7	B5.5	B3.0	B3.0	B7.8	C1.4	C1.7	C3.1	C1.7
17	B4.6	B5.3	B2.0	B3.6	B4.8	B3.2	B3.6	C1.2	C1.0	C2.0	C2.1	C1.4
18	B3.0	B3.9	B3.2	B4.0	B6.7	B2.8	B5.3	B8.0	B8.1	C1.3	C2.8	C1.3
19	B3.3	B5.5	B2.9	B2.6	B9.2	B2.7	B4.8	B8.3	B8.4	C1.9	C2.0	C1.5
20	B4.4	B5.1	B3.2	B2.6	B4.5	B2.7	B6.9	B6.8	B6.6	C2.2	C2.3	C1.4
21	B3.8	B4.7	B4.1	B3.5	B6.5	B2.8	B7.2	B7.3	C1.1	C2.3	C2.7	C1.7
22	B3.7	B3.1	B5.8	B4.6	B7.2	B2.7	C1.0	B8.2	B8.3	C1.8	C2.1	C2.2
23	B6.0	B2.2	B8.8	B9.8	B6.1	B7.4	B8.8	B8.0	B5.1	C2.3	C1.9	C1.5
24	B6.8	B2.6	B4.5	C1.2	B6.7	B7.7	B8.1	B6.6	B5.3	C2.1	C1.8	C1.4
25	B6.1	B2.0	B5.3	---	B7.7	B7.3	B8.5	B6.0	B5.7	C1.5	C1.4	C1.5
26	B4.5	B1.5	B3.8	C2.7	B8.0	B7.4	B6.2	B5.3	B7.2	C1.3	C1.3	C1.1
27	B4.0	B1.1	B3.7	C1.1	B8.9	B8.1	B7.3	B6.7	B7.5	C1.9	C1.3	B9.5
28	B3.5	B1.1	B5.0	C1.6	B9.4	B7.3	B6.0	B7.3	B4.2	C1.4	C1.1	C1.0
29	B3.5	B1.1	B7.2	C1.5	B9.9	B9.2	B6.0	B8.4	B4.3	B8.7	C1.1	
30	B3.3	B1.6	B8.0	B8.1	B7.8	B9.4	B8.4	B8.0	B4.1	C1.0	C8.9	
31	B4.2		B8.5		B9.4	B8.9		B6.7			C1.0	

FEBRUARY 1989

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		Start	Max	End	RA <sup>o</sup>	R/R <sub>o</sub>		
KHAR	Feb 01	0934	E	0939	242	0.63	H-alpha	S
KHAR	Feb 01	0945		1056	242	0.63	H-alpha	S
KHAR	Feb 01	1030	E	1054	287	1.00-1.02	H-alpha	S
KHAR	Feb 01	1108		1135	287	1.00-1.02	H-alpha	S
WEIS	Feb 03	1426.8		1436.3			80- 30 MHz	II Herringbone
LEAR	Feb 04	0019.0		0025.0			Meter	II
ABST	Feb 04	0546	E 0636	U 0903	D 060	1.00	H-alpha	SP
ABST	Feb 04	0835	E 0845	U 0903	D 057	1.00	H-alpha	SP
SVTO	Feb 04	0958.0		1017.0			Meter	II
WEIS	Feb 04	0958.8		1022.8			150- 30 MHz	II Herringbone
LEAR	Feb 04	0958.0		1023.0			Meter	II
LEAR	Feb 04	1013.0		1052.0			Meter	IV
SVTO	Feb 04	1017.0		1104.0			Meter	IV
VORO	Feb 06	0031	E 0050	U 0119	D 350	1	H-alpha	S
SGMR	Feb 06	1647.0		1701.0			Meter	II
PALE	Feb 08	2029.0		2049.0			Meter	II
SGMR	Feb 08	2130.0		2145.0			Meter	II
WEIS	Feb 09	1259.7		1305.7			320- 70 MHz	II Herringbone
SVTO	Feb 09	1302.0		1307.0			Meter	II
SGMR	Feb 09	1303.0		1310.0			Meter	II
PALE	Feb 09	1938.0		1953.0			Meter	II
SGMR	Feb 09	1939.0		1951.0			Meter	II
LEAR	Feb 10	0439.0		0449.0			Meter	II
LEAR	Feb 10	0534.0		0546.0			Meter	II
KHAR	Feb 10	0819	E	0855	106	0.77	H-alpha	S
SGMR	Feb 10	1245.0		1253.0			Meter	II
WEIS	Feb 10	1247.0		1248.9			46- 36 MHz	II
KHAR	Feb 11	0805	E	0920	329	1.00-1.03	H-alpha	S
KHAR	Feb 11	0807	E	0840	057	0.95	H-alpha	S
KHAR	Feb 11	0845	E	1024	106	0.72	H-alpha	S
WEIS	Feb 21	0922.9		0924.1			400-300 MHz	II
WEIS	Feb 22	1030.3		1037.8			280- 30 MHz	II Herringbone
SVTO	Feb 22	1035.0		1038.0			Meter	II
LEAR	Feb 22	1035.0		1041.0			Meter	II
WIES	Feb 22	1046.8		1050.0			60- 30 MHz	II
VORO	Feb 23	0158	0202	U 0214	052	1	H-alpha	S
KHAR	Feb 23	0910	E	0917	U 321	0.45	H-alpha	S
KHAR	Feb 24	1150	E	1225	D 070	0.91	H-alpha	S
KHAR	Feb 24	1218	E	1230	D 254	0.83	H-alpha	S
VORO	Feb 26	0146	0149	U 0159	097	0.7	H-alpha	S
PALE	Feb 28	1822.0		1828.0			Meter	II
SGMR	Feb 28	1822.0		1835.0			Meter	II

QUALIFIERS ON START, MAX AND END TIMES

D = event ended after tabulated time  
 E = event began before the tabulated time  
 U = uncertain time

TYPE OF EVENT

A = eruptive active region prominence  
 CB = corona cloud bubble  
 D = coronal depletions  
 E = coronal enhancement  
 EL = coronal expanding loop  
 II = Type II radio burst  
 IVm = moving Type IV radio burst  
 Q = eruptive quiescent prominence  
 R = coronal ray or streamer  
 S = flare-surge if there is a known flare association  
 S' = flare-spray if there is a known flare association  
 = movement may be caused by ionospheric refraction

REPORTING STATIONS

ABST = Abastumani  
 KHAR = Kharkov  
 LEAR = Learmonth  
 PALE = Palehua  
 SGMR = Sagamore Hill  
 SVTO = San Vito  
 VORO = Voroshilov  
 WEIS = Weissenau

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	NOAA/USAF Sta Reg#	Remarks
01	APR	0013	0300D	S27	W90	01 25.1	1				C	VORO	
01	SDF	0015E	1501D	N49	E35	02 4.0		47	0	0	E	HOLL	
01	APR	0145	0300D	S29	E90	02 8.1	1				C	VORO	
01	AFS	0315E	1042D	S06	E27	02 3.1		03	6	4	E	LEAR	
01	BSD	0345E	0353D	N03	W73	01 26.8		03	6	5	E	LEAR 5329	
01	SDF	0711E	1159	N49	E06	02 1.8		34	0	0	E	SVTO	
01	AFS	0733E	1521D	S05	E25	02 3.2		03	9	9	E	SVTO	
01	ADF	0751E	1521D	S21	W02	02 1.2	1	07	9	9	E	SVTO 5334	
01	DSD	0822E	1521D	N12	W73	01 26.9		02	9	9	E	SVTO 5329	Flare Associated
01	ADF	0854E	1521D	N33	E61	02 6.2	1	09	9	9	E	SVTO	
01	BSL	0900	0907D	N16	E90	02 8.2	1-				C	CATA	
01	ADF	0923E	0945	S24	E01	02 1.5	1				V	KHAR	
01	ASR	0929E	1042D	N17	W88	01 25.8			9	7	E	LEAR 5329	
01	DSD	0934E	0939	S22	W37	01 29.6	1				V	KHAR	
01	DSD	0940E	0953	S21	W36	01 29.7		05	9	6	E	LEAR 5330	
01	BSL	0941E	0949	N15	E90	02 8.2	1-				C	CATA	
01	DSD	0945E	1056	S22	W37	01 29.7	1				V	KHAR	
01	BSL	1008	1016D	N18	E90	02 8.3	1				C	CATA	
01	BSL	1027E	1051	N17	W90	01 25.7	1-				C	CATA	
01	SDF	1027E	1216	N35	E05	02 1.8	3+				C	CATA	
01	BSL	1030E	1054	N17	W90	01 25.7	1				V	KHAR	
01	LPS	1040E	1521D	N22	W74	01 26.8	1		9	9	E	SVTO 5329	Flare Associated
01	SDF	1104E	2238D	N50	E30	02 4.0		30	0	0	E	LEAR	
01	BSL	1108	1135	N17	W90	01 25.7	1				V	KHAR	
01	EPL	1126	1235	N77	E90	02 9.8	3				C	CATA	
01	LPS	1200E	1900D	N22	W72	01 27.1			9	9	E	RAMY 5329	
01	AFS	1228E	1521D	N08	W43	01 29.4		03	9	9	E	SVTO	
01	ADF	1235E	1316D	N44	W09	01 31.8	3	26	9	9	E	RAMY	
01	ASR	1244E	2139D	N16	W90	01 25.8			9	9	E	RAMY 5329	
01	DSD	1247E	2139D	S18	W63	01 27.8		05	9	9	E	RAMY 5336	
01	AFS	1247E	2139D	S19	W44	01 29.3		03	9	9	E	RAMY 5330	
01	AFS	1247E	2139D	S20	W59	01 28.1		03	9	9	E	RAMY 5336	
01	DSD	1256E	1945D	S23	W02	02 1.4		03	9	9	E	RAMY 5334	Flare Associated
01	ADF	1309E	2105D	N32	E61	02 6.4	1	08	9	9	E	RAMY 5343	
01	AFS	1313E	2139D	S06	E22	02 3.2		03	9	9	E	RAMY 5342	
01	SSB	1354		217	W65	02 3.1			0	0	E	RAMY	
01	ASR	1617	1712D	N22	W81	01 26.5			9	9	E	RAMY 5329	Flare Associated
01	AFS	1917E	2139D	N21	E02	02 1.9		02	9	9	E	RAMY 5338	
01	DSD	1948E	2055D	S21	W08	02 1.2		07	9	9	E	RAMY 5334	
01	SDF	2000E	1316D	N42	E42	02 5.3		45	9	9	E	RAMY	
02	BSL	0004E	0025	N12	W90	01 26.3	1				C	VORO	
02	ADF	0035	0300D	S23	W30	01 30.8	1				C	VORO	
02	SDF	0103E	0011D	S43	W19	01 31.5		12	0	0	E	LEAR	
02	AFS	0200E	1037D	S07	E15	02 3.2		02	6	3	E	LEAR	
02	AFS	0200E	1037D	S23	W10	02 1.3		02	5	3	E	LEAR 5334	
02	BSL	0229	0248	N32	E90	02 9.2	1				C	VORO	
02	AFS	0300E	1037D	N26	E41	02 5.3		02	6	4	E	LEAR	
02	ASR	0345E	1037D	N22	W90	01 26.3			9	7	E	LEAR 5329	
02	BSL	0947E	0950D	N16	E90	02 9.2	1-				C	CATA	
02	BSL	1015	1015D	N21	W90	01 26.6	1				C	CATA	
02	BSL	1145	1158	N10	W90	01 26.8	1-				C	CATA	
02	BSL	1145	1158	N13	W90	01 26.8	1-				C	CATA	
02	AFS	1240E	1528D	N36	W35	01 30.8		01	9	9	E	SVTO	
02	AFS	1240E	1528D	S23	E47	02 6.1		01	9	9	E	SVTO 5339	
02	ASR	1241E	2154D	N21	W90	01 26.7			8	8	E	RAMY 5329	
02	AFS	1245E	1528D	S06	E07	02 3.0		01	9	9	E	SVTO 5342	
02	AFS	1245E	1528D	S19	W60	01 29.0		02	9	9	E	SVTO 5330	
02	ASR	1304E	1528D	N90	W16	02 1.0			9	9	E	SVTO 5329	
02	AFS	1325E	2154D	S06	E07	02 3.1		02	6	8	E	RAMY 5342	
02	ASR	1609E	2154D	N16	E88	02 9.3			9	9	E	RAMY	
02	APR	1838E	2217D	N23	W90	01 26.9	2		9	9	E	HOLL 5329	
02	AFS	2022E	0024D	N20	W49	01 30.2	1	03	9	9	E	HOLL 5345	
02	AFS	2147E	0024D	S07	E04	02 3.2	1	03	9	9	E	HOLL 5342	
02	AFS	2216E	0024D	S15	E61	02 7.5	1	02	9	9	E	HOLL 5340	
02	ASR	2249	0024D	N22	W90	01 27.1			9	9	E	HOLL 5329	
03	BSL	0038	0105	N35	W90	01 26.9	1				C	VORO	
03	APR	0039	0300D	S36	W90	01 26.9	1				C	VORO	
03	APR	0130	0300	S42	E90	02 10.4	1				C	VORO	

## ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	NOAA/ USAF Reg#	Remarks
03	APR	0146	0300D	S20	W90	01 27.3	1				C	VORO	
03	AFS	0215E	1039D	S14	E58	02 7.5		02	6	5	E	LEAR 5340	
03	AFS	0215E	1039D	S22	W25	02 1.2		03	5	7	E	LEAR 5334	
03	AFS	0230E	1039D	N20	W53	01 30.1		03	7	5	E	LEAR 5345	
03	ASR	0445E	1039D	N20	W88	01 27.6			9	9	E	LEAR 5329	
03	ASR	0445E	1039D	S32	E89	02 10.2			9	9	E	LEAR	
03	BSL	0629E	0909D	S40	W90	01 27.0	1				C	ABST	
03	APR	0654E	0846D	S56	E90	02 11.1	1				C	ABST	
03	AFS	0730E	0930D	N10	E03	02 3.5		02	9	9	E	SVTO	
03	AFS	0730E	1540D	N17	W58	01 30.0		02	9	8	E	SVTO 5345	
03	ASR	0730E	1540D	N17	W90	01 27.6			9	9	E	SVTO 5329	
03	AFS	0730E	1540D	S04	W07	02 2.8		02	9	9	E	SVTO	
03	AFS	0730E	1540D	S06	W03	02 3.1		02	9	9	E	SVTO 5342	
03	ASR	0730E	1540D	S29	E90	02 10.4			9	9	E	SVTO	
03	BSL	1042E	1113	N25	E90	02 10.4	1				C	CATA	
03	BSL	1049	1107	N57	E90	02 11.3	1-				C	CATA	
03	SSB	1145		126	W07	02 5.4			0	0	E	SVTO	
03	BSL	1149	1150D	N17	E90	02 10.3	1				C	CATA	
03	ADF	1453E	2204D	N20	E68	02 8.8	1	08	9	9	E	RAMY 5347	
03	ASR	1555E	0029D	N23	W90	01 27.8			9	9	E	HOLL 5329	
03	AFS	1710E	2204D	N21	W90	01 27.9		03	9	9	E	RAMY 5329	
03	ASR	1738	1829D	N32	E90	02 10.8			9	9	E	HOLL	
03	CRN	1829E	2342D	N32	E90	02 10.9		13	9	9	E	HOLL 5351	
03	AFS	1840E	2319D	S21	W35	02 1.1		02	9	9	E	PALE 5334	
03	ADF	2030E	0029D	N18	E61	02 8.5		08	9	9	E	HOLL 5347	
03	AFS	2055E	0029D	N23	W09	02 3.2		02	9	9	E	HOLL 5349	
03	AFS	2126E	2319D	N24	W08	02 3.3		02	9	9	E	PALE 5349	
03	ADF	2313E	1050D	N15	E67	02 9.0	1	04	9	9	E	LEAR 5347	
03	ASR	2321E	1050D	N33	E86	02 10.8			9	9	E	LEAR 5351	
03	AFS	2331E	1050D	S05	W11	02 3.1		01	9	8	E	LEAR 5342	
04	BSL	0004	0040	N32	E90	02 11.1	2				C	VORO	
04	BSL	0016	0039	S16	W90	01 28.3	1				C	VORO	
04	APR	0016	0300D	N13	W90	01 28.3	1				C	VORO	
04	SPY	0018E	0029D	N32	E90	02 11.1			9	9	E	HOLL 5351	
04	APR	0058	0300D	S35	W90	01 27.9	1				C	VORO	
04	APR	0200	0300D	S57	E90	02 11.9	1				C	VORO	
04	BSL	0228	0250	S20	W90	01 28.3	2				C	VORO	
04	ASR	0229	0415	S20	W89	01 28.4			9	9	E	LEAR 5336	
04	BSL	0258	0302D	N32	E90	02 11.2	1				C	VORO	
04	APR	0546E	0903D	N30	E90	02 11.3	1				C	ABST	
04	APR	0618E	0903D	S59	E90	02 12.1	1				C	ABST	
04	BSL	0824E	1002	N33	E90	02 11.5	2				C	CATA	
04	APR	0835E	0903D	N33	E90	02 11.5	1				C	ABST	
04	BSL	0944	1023	N20	W90	01 28.6	2				C	CATA	
04	BSL	1016	1146	N31	E90	02 11.5	2				C	CATA	
04	LPS	1028E	1345D	N35	E90	02 11.6			9	9	E	SVTO	
04	BSL	1035	1053	N55	E90	02 12.2	1-				C	CATA	
04	EPL	1102	1201D	N34	E90	02 11.6	1				C	CATA	
04	LPS	1126E	2206D	N29	E73	02 10.2			9	9	E	RAMY 5354	
04	BSL	1146	1201D	N17	E90	02 11.3	1				C	CATA	
04	BSL	1146	1201D	N19	W90	01 28.7	2				C	CATA	
04	EPL	1221E	1242D	N33	E90	02 11.7	1				C	CATA	
04	AFS	1246E	2206D	N15	E29	02 6.7		02	9	9	E	RAMY 5350	
04	SSB	1312		112	W18	02 5.5			0	0	E	SVTO	
04	AFS	1312E	1345D	S06	W18	02 3.2		03	9	9	E	SVTO 5342	
04	LPS	1415E	0008D	N31	E90	02 11.7			9	9	E	HOLL 5354	
04	APR	1555E	2109D	S29	E87	02 11.5	1		9	9	E	HOLL 5353	
04	ASR	1625	0008D	N30	E90	02 11.8			9	9	E	HOLL 5354	
04	SSB	1835		114	W04	02 5.8			0	0	E	RAMY	129 W19
04	SPY	2220E	2319D	N34	E90	02 12.1			9	9	E	HOLL 5354	
04	SPY	2222E	2335D	N34	E90	02 12.1			9	9	E	PALE 5354	
04	SPY	2239E	2326D	N34	E90	02 12.1			9	9	E	LEAR 5354	
04	AFS	2300E	1040D	N18	E46	02 8.5		02	9	9	E	LEAR 5347	
04	ASR	2330E	0735D	N20	W79	01 30.0			9	9	E	LEAR 5345	
04	AFS	2330E	1040D	N13	E22	02 6.6		03	9	9	E	LEAR 5350	
04	AFS	2330E	1040D	N23	W24	02 3.1		02	9	9	E	LEAR 5349	
04	ASR	2330E	1040D	N34	E90	02 12.1			9	9	E	LEAR 5354	
05	BSL	0006	0024	S18	W90	01 29.2	1				C	VORO	

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
05	APR	0030	0300D	S37	W90	01 28.9	1				C	VORO		
05	BSL	0041	0054	N32	E90	02 12.1	1				C	VORO		
05	APR	0100	0300D	N37	E90	02 12.3	1				C	VORO		
05	EPL	0227	0300D	S19	W90	01 29.3	2				C	VORO		
05	BSL	0252	0322	S19	W90	01 29.3			9	9	E	LEAR	5336	
05	ASR	0322	0735D	S14	W90	01 29.4			9	9	E	LEAR	5336	
05	APR	0535E	0901D	S60	E90	02 13.1	1				C	ABST		
05	APR	0625E	0902D	N28	E90	02 12.3	1				C	ABST		
05	BSL	0706E	0849D	N35	E90	02 12.5	1				C	ABST		
05	AFS	0800E	1456D	N19	E40	02 8.4		02	9	9	E	SVTO	5347	
05	AFS	0801E	1456D	S23	E12	02 6.2		02	9	9	E	SVTO	5339	
05	AFS	0802E	1456D	S22	W55	02 1.1		02	9	9	E	SVTO	5334	
05	AFS	0803E	1456D	S07	W30	02 3.1		02	8	8	E	SVTO	5342	
05	AFS	0804E	1456D	N21	W30	02 3.0		02	8	8	E	SVTO	5349	
05	SSB	0805		103	W28	02 5.6			0	0	E	SVTO		
05	ADF	0806E	1355D	N26	E60	02 10.0	1	17	9	9	E	SVTO	5354	
05	APR	0807E	1456D	N29	E90	02 12.4	1		9	9	E	SVTO	5354	
05	ASR	0816E	1456D	N20	E88	02 12.1			9	9	E	SVTO		
05	ASR	1156E	1456D	N16	W90	01 29.8			9	9	E	SVTO	5344	
05	APR	1200E	1456D	S43	W87	01 29.4	1		9	9	E	SVTO		
05	BSL	1203E	1216D	N23	E90	02 12.4	2				C	CATA		
05	APR	1205E	1227	N24	E87	02 12.2			9	9	E	SVTO	5354	
05	EPL	1227	1234	N24	E87	02 12.2	3		9	9	E	SVTO	5354	
05	ASR	1300E	1558D	N17	W90	01 29.8			9	9	E	RAMY	5344	
05	AFS	1310E	2203D	N18	E39	02 8.5		02	9	9	E	RAMY	5347	
05	AFS	1312E	2110D	N21	W32	02 3.1		02	9	9	E	RAMY	5349	
05	ADF	1320E	2203D	N27	E47	02 9.2	1	12	9	9	E	RAMY	5351	
05	ADF	1325E	2203D	S20	E10	02 6.3	1	06	9	9	E	RAMY	5352	
05	ADF	1330E	2203D	N26	E65	02 10.6	1	08	9	9	E	RAMY	5354	
05	ASR	1530E	2203D	N18	E90	02 12.5			9	9	E	RAMY		
05	AFS	1624E	2354D	N17	E38	02 8.6		02	9	9	E	HOLL	5347	
05	ASR	2020E	2056D	N36	E77	02 12.0			9	9	E	RAMY	5354	
05	SSB	2116		103	W08	02 6.1			0	0	E	RAMY		
05	SSB	2150		102	W07	02 6.0			0	0	E	HOLL		
05	ASR	2251E	0328D	S58	W90	01 29.2			8	9	E	PALE		
05	ASR	2300E	1008D	N21	E78	02 11.9			9	7	E	LEAR		
05	ADF	2303E	2354D	N23	E64	02 10.9	1	06	9	9	E	HOLL	5354	
05	ADF	2303E	1008D	N28	E59	02 10.6	1	10	9	9	E	LEAR	5354	
05	AFS	2318E	1008D	S05	W38	02 3.1		01	9	6	E	LEAR	5342	
06	BSL	0031	0119	N35	E90	02 13.2	2				C	VORO		
06	BSL	0100	0120	N34	E78	02 12.2			9	9	E	LEAR	5354	
06	APR	0103	0300D	N53	E90	02 13.7	1				C	VORO		
06	APR	0115	0300D	N54	W90	01 29.4	1				C	VORO		
06	ASR	0120	0550D	N34	E78	02 12.3			9	9	E	LEAR	5354	
06	ADF	0140E	1008D	N27	E52	02 10.1	2	09	9	9	E	LEAR	5354	
06	APR	0145	0300D	N50	W90	01 29.5	1				C	VORO		
06	BSL	0522E	0842D	N36	E90	02 13.4	1				C	ABST		
06	BSL	0522E	0842D	N48	W90	01 29.8	1				C	ABST		
06	BSL	0522E	0842D	N56	E90	02 14.0	1				C	ABST		
06	BSL	0522E	0842D	S47	E90	02 13.7	1				C	ABST		
06	DSD	0540	0620D	N29	E63	02 11.2		05	9	9	E	LEAR	5354	
06	BSL	0628E	0842D	N44	E90	02 13.7	1				C	ABST		
06	ADF	0726E	1541D	N29	E61	02 11.1	1	09	9	9	E	SVTO	5354	
06	AFS	0726E	1541D	N33	E62	02 11.2		02	9	9	E	SVTO	5354	
06	BSL	0751E	0800D	S20	E90	02 13.2	1				C	CATA		
06	ASR	1135E	1152D	N20	E88	02 13.2			9	9	E	SVTO		
06	ADF	1152E	1541D	N22	E70	02 11.9	1	08	9	9	E	SVTO		
06	ASR	1512E	1541D	S28	W90	01 30.7			9	9	E	SVTO		
06	BSL	1515E	1533D	S27	W90	01 30.7			9	9	E	RAMY	5346	
06	ASR	1533E	2131D	S27	W90	01 30.7			9	9	E	RAMY	5346	
06	ADF	1540E	2131D	N18	E36	02 9.4	1	15	9	9	E	RAMY	5354	
06	AFS	1540E	2131D	N29	E61	02 11.4		03	9	9	E	RAMY	5354	
06	SSB	1555		101	W16	02 6.7			0	0	E	RAMY		132 W47
06	AFS	1605E	2042D	S25	W71	02 1.2		03	9	9	E	RAMY	5334	
06	APR	1630E	1643D	N36	E90	02 13.9	1		9	9	E	RAMY		
06	EPL	1643E	1714D	N37	E90	02 13.9	3		9	9	E	RAMY		
06	ASR	1714E	2131D	N34	E90	02 13.9			9	9	E	RAMY		
06	ASR	1913E	2131D	N35	W90	01 30.7			9	9	E	RAMY	5348	
06	SDF	2131E	1142D	N25	E28	02 9.1		25	0	0	E	RAMY		

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	NOAA/USAF Sta Reg#	Remarks
06	SDF	2131E	1142D	N37	W03	02 6.6		16	0	0	E	RAMY	
06	SDF	2203E	1212D	S18	W17	02 5.6		07	0	0	E	RAMY 5339	
07	APR	0000	0227D	N55	E90	02 14.8	1				C	VORO	
07	APR	0010	0227D	S24	W90	01 31.0	1				C	VORO	
07	APR	0020	0227D	S44	E90	02 14.4	1				C	VORO	
07	APR	0030	0227D	N50	W90	01 30.5	1				C	VORO	
07	APR	0142	0227D	N56	E90	02 14.9	1				C	VORO	
07	APR	0559E	0900D	N05	E90	02 14.0	1				C	ABST	
07	APR	0559E	0900D	S45	E90	02 14.7	1				C	ABST	
07	BSL	0648E	0900D	N49	W90	01 30.8	1				C	ABST	
07	APR	0648E	0900D	N54	E90	02 15.0	1				C	ABST	
07	BSL	0648E	0900D	S28	W90	01 31.2	1				C	ABST	
07	ADF	0707E	1555D	N22	E32	02 9.7	1	37	9	9	E	SVTO 5354	
07	ADF	0717E	1555D	S22	W84	01 31.8	1	09	9	9	E	SVTO 5334	
07	ADF	0744E	1555D	N24	E55	02 11.6	1	15	9	9	E	SVTO 5355	
07	BSL	0814E	0900D	N30	W90	01 31.3	1				C	ABST	
07	BSL	0814E	0900D	N35	W90	01 31.1	1				C	ABST	
07	BSL	0831E	0840D	N36	W90	01 31.1	1				C	CATA	
07	BSL	0910	0920	S18	E90	02 14.2	1				C	CATA	
07	BSL	0910	0932	S33	W90	01 31.2	3				C	CATA	
07	BSL	0953	1032	S33	W90	01 31.3	2				C	CATA	
07	DSD	1250E	2116D	N21	W62	02 2.8		03	9	9	E	RAMY 5349	
07	ADF	1258E	2116D	N30	E20	02 9.1	1	15	9	9	E	RAMY 5351	
07	ADF	1348E	2116D	S31	E39	02 10.6	1	07	9	9	E	RAMY 5353	
07	ADF	1405E	2116D	N28	E35	02 10.3	1	19	9	9	E	RAMY 5354	
07	ADF	1405E	2116D	N28	E35	02 10.3	1	21	9	9	E	RAMY 5354	
07	ADF	1405E	2116D	N28	E51	02 11.6	1	15	9	9	E	RAMY 5354	
07	ADF	1405E	2116D	N29	E47	02 11.3	1	18	4	4	E	RAMY 5354	
07	ADF	1405E	2116D	N42	E49	02 11.6	1	26	9	9	E	RAMY 5354	
07	ADF	1427E	2116D	N04	W28	02 5.5	1	14	9	9	E	RAMY	
07	ASR	1433E	2116D	N13	E90	02 14.4			9	9	E	RAMY	
07	SDF	2131E	1142D	N25	E28	02 10.1		25	0	0	E	RAMY	
07	SDF	2131E	1142D	N37	W03	02 7.6		16	0	0	E	RAMY	
07	ADF	2340E	1012D	N36	E44	02 11.5	1	07	9	9	E	LEAR 5354	
07	ADF	2340E	1012D	N43	E41	02 11.4	1	07	9	9	E	LEAR 5354	
08	ASR	0005E	1012D	N89	E19	02 9.8			9	9	E	LEAR	
08	BSL	0526E	0809D	N46	W90	01 31.7	1				C	ABST	
08	APR	0559E	0900D	N55	E90	02 16.0	1				C	ABST	
08	APR	0559E	0900D	S40	E90	02 15.6	1				C	ABST	
08	BSL	0721E	0743D	N53	W90	01 31.6	1				C	ABST	
08	ADF	0844E	1521D	S30	E28	02 10.6	1	06	9	9	E	SVTO 5353	
08	ADF	1220E	1521D	N26	E23	02 10.3	1	04	9	9	E	SVTO 5354	
08	ADF	1220E	1521D	N29	E33	02 11.1	1	03	9	9	E	SVTO 5354	
08	ADF	1220E	1521D	N32	E34	02 11.2	1	12	9	9	E	SVTO 5354	
08	AFS	1305E	1521D	N37	E38	02 11.6		03	9	9	E	SVTO 5354	
08	SDF	1521E	0811D	N48	W24	02 6.6		22	0	0	E	SVTO	
08	ADF	1955E	2036D	N32	E40	02 12.0	1	26	9	9	E	RAMY 5354	
08	APR	2340	0229D	N55	E90	02 16.7	1				C	VORO	
09	APR	0529E	0901D	N55	E90	02 17.0	1				C	ABST	
09	APR	0529E	0901D	S40	E90	02 16.6	1				C	ABST	
09	ADF	0701E	1510D	N24	E12	02 10.2	1	07	9	9	E	SVTO 5354	
09	ADF	0701E	1510D	N27	E26	02 11.3	1	06	9	9	E	SVTO 5354	
09	BSL	0726E	0749D	N18	W90	02 2.4	1				C	ABST	
09	AFS	0731E	1510D	N29	E24	02 11.2		03	9	9	E	SVTO 5354	
09	ADF	0742E	1510D	N21	E42	02 12.5	1	07	9	9	E	SVTO 5355	
09	AFS	1032E	1510D	N16	W17	02 8.1		03	9	9	E	SVTO 5347	
09	ADF	1206E	2013D	N33	E32	02 12.0	1	06	9	9	E	RAMY 5354	
09	ADF	1226E	2013D	N27	E27	02 11.6	1	05	9	9	E	RAMY 5354	
09	DSD	1247E	1840D	S22	W78	02 3.5		02	9	9	E	RAMY	
09	ADF	1247E	2013D	N32	E24	02 11.4	1	08	9	9	E	RAMY 5354	
09	AFS	1247E	2103D	N17	W15	02 8.4		02	9	9	E	RAMY 5347	
09	DSD	1327E	1404D	N35	E28	02 11.8		05	9	9	E	SVTO 5354	
09	ADF	1426E	2013D	N12	E60	02 14.1	1	04	9	9	E	RAMY 5357	
09	ASR	1753E	1838D	S20	W90	02 2.9			9	9	E	RAMY	
09	ADF	1812E	0300D	N25	E16	02 11.0		06	9	9	E	PALE 5354	
09	ADF	1812E	0300D	N32	E13	02 10.8		04	9	9	E	PALE 5354	
09	ADF	2110E	0035D	N24	E20	02 11.4	1	08	9	9	E	HOLL 5354	



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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
09	ADF	2119E	0035D	N17	W22	02	8.2	1	05	9	9	E	HOLL	5347	
09	AFS	2159	0035D	N17	W19	02	8.5		02	7	8	E	HOLL	5347	
09	DSD	2212	2239D	N16	E63	02	14.7		17	9	9	E	HOLL	5357	
09	AFS	2228E	0035D	S31	E08	02	10.6	1	02	9	9	E	HOLL	5353	
09	AFS	2312E	1028D	N16	W25	02	8.1		06	9	9	E	LEAR	5347	
09	ADF	2316E	1028D	N29	E21	02	11.6	1	07	9	9	E	LEAR	5354	
09	AFS	2321E	1028D	N31	E07	02	10.5		02	9	9	E	LEAR	5353	
09	ASR	2340E	1028D	N29	W88	02	3.1			9	9	E	LEAR	5349	
10	APR	0000	0300D	N55	E90	02	17.8	2				C	VORO		
10	ASR	0034E	1028D	S22	W90	02	3.1			9	9	E	LEAR		
10	APR	0041	0300D	S42	E90	02	17.4	1				C	VORO		
10	ADF	0042	0300D	N43	W38	02	6.9	1				C	VORO		
10	AFS	0203E	0300D	N16	W21	02	8.5		03	9	9	E	PALE	5347	
10	APR	0210	0300D	N54	W90	02	2.3	1				C	VORO		
10	DSD	0520E	0700D	N31	E17	02	11.6		02	9	9	E	LEAR	5354	
10	ADF	0728E	1536D	N26	E14	02	11.4	1	06	9	9	E	SVTO	5354	
10	ADF	0742E	1536D	N15	W28	02	8.2	1	05	9	9	E	SVTO	5343	
10	ADF	0806E	0835	N11	E37	02	13.1	1				V	KHAR		
10	DSD	0819E	0855	S16	E53	02	14.4	1				V	KHAR		
10	ASR	0830E	1028D	N32	E86	02	17.2			9	8	E	LEAR		
10	ADF	0945E	1005D	N17	W28	02	8.3	1				V	KHAR		
10	ADF	0958	1018D	N42	W37	02	7.4	1				V	KHAR		
10	ADF	1145E	1756D	N13	E50	02	14.3	1	04	9	9	E	RAMY	5357	
10	DSD	1145E	1756D	N17	W28	02	8.4		02	9	9	E	RAMY	5347	
10	ADF	1145E	1756D	N17	W31	02	8.1	1	10	9	9	E	RAMY	5347	
10	ADF	1145E	1756D	N26	E13	02	11.5	1	05	9	9	E	RAMY	5354	
10	ADF	1145E	1756D	S18	E51	02	14.4	1	06	9	9	E	RAMY	5356	
10	ASR	1145E	1756D	S23	W90	02	3.5			9	9	E	RAMY		
10	ADF	1446E	1756D	N29	E69	02	16.0	1	04	9	9	E	RAMY		
10	ASR	1608E	0010D	S20	W90	02	3.8	1		9	9	E	HOLL		
10	DSD	1612E	2010D	N15	W34	02	8.1		03	6	9	E	HOLL	5347	
10	ADF	1616E	0010D	N26	E09	02	11.4	1	07	9	9	E	HOLL	5354	
10	ASR	1703E	2121D	N30	E90	02	17.8			9	9	E	HOLL		
10	DSD	1735E	2335D	N32	W03	02	10.5		03	9	9	E	HOLL	5354	
10	SSB	1738		436	W45	02	7.7			0	0	E	RAMY		
10	ADF	1741E	1756D	N19	E25	02	12.6	1	06	9	9	E	RAMY	5355	
10	ADF	1812E	0300D	N25	E16	02	12.0		06	9	9	E	PALE	5354	
10	ADF	1812E	0300D	N32	E13	02	11.8		04	9	9	E	PALE	5354	
10	DSD	1920E	2335D	N35	E16	02	12.1		05	9	9	E	HOLL	5354	
10	ADF	2101E	0010D	S19	E43	02	14.1	1	06	9	9	E	HOLL	5356	
10	DSD	2101E	0010D	S19	E43	02	14.1		07	9	9	E	HOLL	5356	Flare Associated
10	ADF	2101E	0010D	S33	E52	02	15.0	1	11	9	9	E	HOLL	5356	
10	DSD	2200E	0010D	N15	E47	02	14.5		07	9	9	E	HOLL	5357	Flare Associated
10	ASR	2302E	0010D	N14	E90	02	17.8			9	8	E	HOLL		
10	DSD	2335E	0010D	N30	E00	02	11.0		03	9	9	E	HOLL	5354	
10	DSD	2335E	0010D	N31	E08	02	11.6		03	9	9	E	HOLL	5354	
11	ADF	0129E	1022D	N30	E08	02	11.7	1	02	9	9	E	LEAR	5354	
11	ADF	0129E	1022D	N39	E08	02	11.7	1	07	9	9	E	LEAR	5354	
11	ASR	0134E	0814D	N14	E81	02	17.2			9	9	E	LEAR		
11	ASR	0208E	0456D	N37	W80	02	4.6			9	6	E	LEAR		
11	ADF	0211E	1022D	S16	E44	02	14.4		04	9	9	E	LEAR	5356	
11	DSD	0215E	0524D	N21	E20	02	12.6		02	9	9	E	LEAR	5355	
11	AFS	0218E	0815D	N17	W38	02	8.2		02	9	9	E	LEAR	5347	
11	ADF	0726E	1538D	N37	E04	02	11.6	1	12	9	9	E	SVTO	5354	
11	ADF	0758E	1538D	N18	E19	02	12.8	1	11	9	9	E	SVTO	5355	
11	ADF	0800E	1112D	S19	E40	02	14.4	1				V	KHAR		
11	BSL	0805E	0920D	N58	W90	02	3.5	1				V	KHAR		
11	ADF	0806E	0905D	N32	W01	02	11.2	1				V	KHAR		
11	DSD	0807E	0840	N28	E65	02	16.4	1				V	KHAR		
11	ADF	0812E	1538D	N30	E56	02	15.7	1	08	9	9	E	SVTO	5360	
11	ADF	0822E	1538D	N30	W11	02	10.5	1	05	9	9	E	SVTO	5353	
11	ADF	0831E	1538D	S16	E41	02	14.5	1	09	9	9	E	SVTO	5356	
11	DSD	0845E	1024	S17	E48	02	15.0	1				V	KHAR		
11	BSL	1127E	1140	N28	E90	02	18.5	1-				C	CATA		
11	SSB	1308		385	W04	02	5.2			0	0	E	RAMY		405 W20 441 W60
11	DSD	1315E	1750D	N29	W01	02	11.5		03	9	9	E	RAMY	5354	
11	ADF	1315E	2215D	N24	W03	02	11.3	1	07	9	9	E	RAMY	5354	
11	ADF	1315E	2215D	N37	W01	02	11.5	1	17	9	9	E	RAMY	5354	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	NOAA/USAF Sta Reg#	Remarks
11	DSD	1502E	1538D	N33	E05	02 12.0		03	9	9	E	SVTO 5354	Flare Associated
11	DSD	1620E	1655	S17	E28	02 13.8		03	9	9	E	HOLL 5356	
11	DSD	1655E	1804D	S18	E37	02 14.5		04	9	9	E	HOLL 5356	
11	SDF	1756E	1139D	S30	W57	02 7.3		09	0	0	E	RAMY 5339	
11	ASR	2310E	0550D	N12	E81	02 18.1			9	8	E	LEAR 5362	
11	ADF	2315E	1017D	N29	W06	02 11.5	1	04	9	9	E	LEAR 5354	
11	ADF	2315E	1017D	N38	W08	02 11.3	1	06	9	9	E	LEAR 5354	
11	DSD	2340E	0538D	S18	E32	02 14.4		04	9	9	E	LEAR 5356	
12	APR	0056	0300D	N61	E90	02 20.0	1				C	VORO	
12	APR	0106	0300D	N40	E90	02 19.4	1				C	VORO	
12	APR	0106	0300D	S08	W90	02 5.3	1				C	VORO	
12	APR	0125	0300D	N07	W90	02 5.3	1				C	VORO	
12	APR	0155	0300D	N02	E90	02 18.8	1				C	VORO	
12	APR	0218	0300D	S41	W90	02 4.7	1				C	VORO	
12	APR	0221	0300D	N55	W90	02 4.3	1				C	VORO	
12	DSD	0330E	0540D	S29	W08	02 11.5		05	9	9	E	LEAR	
12	DSD	0348	0540D	S31	W22	02 10.4		04	9	9	E	LEAR 5353	
12	DSD	0357	0540D	N31	W03	02 11.9		06	9	9	E	LEAR 5354	
12	AFS	0451E	1017D	S16	W54	02 8.1		02	9	9	E	LEAR 5361	
12	APR	0557E	0858D	N01	E90	02 19.0	1				C	ABST	
12	APR	0557E	0858D	N48	E90	02 19.8	1				C	ABST	
12	AFS	0930E	1512D	N30	W13	02 11.4		02	9	9	E	SVTO 5354	
12	AFS	0931E	1512D	N21	E28	02 14.5		02	9	9	E	SVTO 5357	
12	ADF	0932E	1512D	S17	E26	02 14.4	1	08	9	9	E	SVTO 5356	
12	AFS	0933E	1512D	S19	W56	02 8.1		02	9	9	E	SVTO 5361	
12	ADF	0934E	1512D	N35	W16	02 11.1	1	07	9	9	E	SVTO 5354	
12	AFS	0935E	1512D	S18	E29	02 14.6		02	9	9	E	SVTO 5356	
12	ADF	1325E	2208D	N30	W13	02 11.5	1	09	9	9	E	RAMY 5354	
12	ADF	1325E	2208D	N39	W10	02 11.7	1	17	9	9	E	RAMY 5354	
12	SSB	1330		375	W07	02 6.9			0	0	E	RAMY	436 W69
12	ADF	1340E	2208D	S19	E27	02 14.6	1	10	9	9	E	RAMY 5356	
12	AFS	1340E	2208D	S19	E28	02 14.7		03	9	9	E	RAMY 5356	
12	AFS	1344E	1512D	S39	W56	02 8.0		02	9	9	E	SVTO	
12	AFS	1355E	2208D	S38	W55	02 8.1		03	9	9	E	RAMY 5363	
12	AFS	1400E	2208D	N20	E67	02 17.7		03	9	9	E	RAMY 5362	
12	ADF	1535E	0013D	N28	W14	02 11.5	1	05	9	9	E	HOLL 5354	
12	ADF	1535E	0036D	N29	W19	02 11.1	1	11	9	9	E	HOLL 5354	
12	DSD	1850E	2208D	S29	W47	02 9.1		08	9	9	E	RAMY 5363	
12	ADF	1900E	0036D	N15	E19	02 14.2	1	07	9	9	E	HOLL 5357	
12	ADF	1900E	0036D	S16	E18	02 14.1	1	06	9	9	E	HOLL 5356	
12	ADF	1955E	1959D	N33	W16	02 11.5	1	08	9	9	E	PALE 5354	
12	AFS	2120E	0010D	S36	W59	02 8.1		02	8	8	E	PALE 5363	
12	SSB	2341		378	W16	02 7.1			0	0	E	HOLL	
13	ADF	0013E	0036D	N34	W09	02 12.3	2	05	9	9	E	HOLL 5354	
13	APR	0014	0130D	N30	W90	02 5.9	1				C	VORO	
13	APR	0034	0130D	N02	E90	02 19.7	1				C	VORO	
13	APR	0044E	0130D	S42	W90	02 5.6	1				C	VORO	
13	APR	0537E	0905D	N43	W90	02 5.8	1				C	ABST	
13	APR	0537E	0905D	S42	E90	02 20.6	1				C	ABST	
13	APR	0600E	0905D	S02	E90	02 20.0	1				C	ABST	
13	ADF	0830E	1431D	S15	E14	02 14.4	1	05	9	9	E	SVTO 5356	
13	AFS	0831E	1431D	S18	E17	02 14.6		04	9	9	E	SVTO 5356	
13	ADF	0832E	1431D	N31	W30	02 11.0	1	15	9	9	E	SVTO 5354	
13	ADF	0833E	1431D	N25	W28	02 11.2	1	06	9	9	E	SVTO 5354	
13	AFS	0834E	1431D	N30	W25	02 11.4		03	9	9	E	SVTO 5354	
13	AFS	0835E	1431D	S39	W65	02 8.1		02	9	9	E	SVTO 5363	
13	ADF	0836E	1431D	N21	E60	02 17.9	1	06	9	9	E	SVTO 5362	
13	BSL	1024	1034	N78	W90	02 5.1	1-				C	CATA	
13	BSL	1128	1148	S28	E90	02 20.5	1-				C	CATA	
13	ADF	1342E	2104D	S32	W39	02 10.5	1	07	9	9	E	RAMY 5353	
13	ADF	1353E	2104D	N30	W30	02 11.2	1	34	9	9	E	RAMY 5354	
13	ADF	1420E	2104D	S10	E02	02 13.7	1	12	9	9	E	RAMY 5356	
13	AFS	1420E	2104D	S19	E14	02 14.7		05	9	9	E	RAMY 5356	
13	ADF	1420E	2104D	S20	E08	02 14.2	1	04	9	9	E	RAMY 5356	
13	ADF	1430E	2104D	N19	W11	02 12.8	1	07	9	9	E	RAMY 5355	
13	SSB	1520		374	W21	02 8.0			0	0	E	HOLL	
13	ADF	1611E	0010D	N17	W08	02 13.1	1	08	9	9	E	HOLL 5355	
13	ADF	1611E	0010D	N27	W29	02 11.4	1	11	9	9	E	HOLL 5354	

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 1989

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
13	ADF	1611E	0010D	S16	E08	02	14.3	1	04	9	9	E	HOLL	5356	
13	ADF	1816E	0420D	N26	W30	02	11.4		06	8	9	E	PALE	5354	
13	DSD	1830E	2020D	N19	W13	02	12.8		05	9	9	E	HOLL	5355	Flare Associated
13	ADF	1831E	0420D	N21	E53	02	17.8		05	9	9	E	PALE	5362	
13	DSD	1844E	1903D	N19	W12	02	12.9		07	9	9	E	RAMY	5355	Flare Associated
13	AFS	1910E	0420D	N19	W12	02	12.9		03	9	9	E	PALE	5355	Flare Associated
13	BSD	1915E	0005D	S17	E30	02	16.1		04	9	9	E	HOLL	5356	
13	SDF	2208E	1712D	N13	E41	02	17.0		09	0	0	E	PALE		
13	AFS	2315E	0010D	N24	E04	02	14.3		02	8	6	E	HOLL	5357	
13	APR	2346	0130D	N48	E90	02	21.5	1				C	VORO		
13	APR	2349	0230D	S30	W90	02	6.9	1				C	VORO		
13	APR	2349	0230D	S36	E90	02	21.2	1				C	VORO		
13	APR	2359	0252D	N46	E90	02	21.5	1				C	VORO		
14	ADF	0020	0252D	N42	E13	02	15.1	1				C	VORO		
14	APR	0030	0252D	N41	W90	02	6.7	2				C	VORO		
14	BSL	0040	0053	N20	W90	02	7.1	1				C	VORO		
14	AFS	0305E	1028D	N24	E02	02	14.3		02	9	9	E	LEAR		
14	AFS	0310E	0420D	N25	E02	02	14.3		02	9	9	E	PALE		
14	ASR	0527E	1028D	N16	W90	02	7.4			9	9	E	LEAR	5347	
14	ADF	0540E	1028D	N20	W30	02	11.9	1	08	9	9	E	LEAR	5354	
14	APR	0541E	0908D	S34	E90	02	21.4	1				C	ABST		
14	APR	0541E	0908D	S66	E90	02	22.3	1				C	ABST		
14	APR	0608E	0908D	N37	W90	02	7.0	1				C	ABST		
14	BSL	0608E	0908D	N45	W90	02	6.8	1				C	ABST		
14	APR	0710E	0908D	N45	E90	02	21.8	1				C	ABST		
14	ADF	0728E	1555D	N39	W28	02	12.0	1	05	9	9	E	SVTO	5354	
14	APR	0753E	0908D	S23	E90	02	21.3	1				C	ABST		
14	ADF	0816E	1555D	N21	W22	02	12.6	1	04	9	9	E	SVTO	5355	
14	ADF	0904E	1555D	N16	W15	02	13.2	1	07	9	9	E	SVTO	5364	
14	ADF	0940E	1555D	S31	W52	02	10.3	1	05	9	9	E	SVTO	5353	
14	DSD	0950E	1555D	N35	W16	02	13.1		02	9	9	E	SVTO		
14	BSL	0953	1016	N19	W90	02	7.5	1-				C	CATA		
14	AFS	0956E	1555D	N31	E37	02	17.3		02	9	9	E	SVTO		
14	EPL	1016	1245D	N40	E90	02	21.7	3				C	CATA		
14	BSL	1021	1030	N74	E90	02	22.7	1-				C	CATA		
14	BSL	1030E	1106D	N20	W90	02	7.5	1-				C	CATA		
14	ADF	1235E	1912D	N25	W26	02	12.5	1	15	9	9	E	RAMY	5355	
14	SDF	1555E	0712D	N37	E03	02	14.9		20	0	0	E	SVTO		
14	ASR	1816E	0412D	N17	W90	02	7.9			9	9	E	PALE	5347	
14	AFS	1848E	1912D	N24	W04	02	14.5		02	9	9	E	RAMY	5366	
14	SDF	2037E	1755D	S52	W11	02	13.9		12	0	0	E	PALE		
15	ASR	0500E	1030D	S21	E90	02	22.1			9	9	E	LEAR		
15	ASR	0510E	1030D	N12	W88	02	8.6			9	9	E	LEAR	5347	
15	APR	0522E	0812D	S38	E90	02	22.5	1				C	ABST		
15	APR	0522E	0812D	S65	E90	02	23.3	1				C	ABST		
15	APR	0645E	0812D	S20	E90	02	22.2	1				C	ABST		
15	ASR	0750	1030D	S18	W88	02	8.6			9	9	E	LEAR	5361	
15	ADF	0757E	1549D	N23	W35	02	12.6	1	06	9	9	E	SVTO	5355	
15	AFS	0758E	1549D	N23	W14	02	14.2		03	9	9	E	SVTO	5366	
15	ASR	0855E	0918D	S16	W90	02	8.5			9	9	E	SVTO		
15	AFS	0930E	1549D	N30	E24	02	17.3		03	9	9	E	SVTO	5367	
15	AFS	1347E	1549D	S12	E63	02	20.3		04	9	9	E	SVTO		
15	ASR	1350E	2047D	S21	E85	02	22.1			7	7	E	RAMY		
15	ASR	1350E	2047D	S37	W90	02	8.3			9	9	E	RAMY	5363	
15	DSD	1427E	1444D	N25	W62	02	10.8		08	9	9	E	SVTO	5354	Flare Associated
15	ASR	1431E	1441D	N27	W62	02	10.8			9	9	E	RAMY	5354	Flare Associated
15	BSD	1431E	1441D	N28	W60	02	10.9		05	9	9	E	RAMY	5354	Flare Associated
15	AFS	1713E	0043D	S13	E65	02	20.6		02	9	9	E	HOLL		
15	AFS	1740E	2047D	S13	E63	02	20.5		02	8	8	E	RAMY		
15	AFS	1830E	0205D	S13	E60	02	20.3		04	9	9	E	PALE	5368	
15	AFS	2103E	0205D	N28	E17	02	17.2		03	9	9	E	PALE	5367	
15	AFS	2108E	0205D	N31	E39	02	18.9		04	9	9	E	PALE		
15	AFS	2243E	1025D	N23	W22	02	14.2		03	9	9	E	LEAR	5366	
15	AFS	2245E	1025D	N17	E31	02	18.3		02	9	9	E	LEAR	5367	
15	AFS	2245E	1025D	S12	E39	02	18.9		02	9	9	E	LEAR	5368	
15	AFS	2247E	1025D	N32	E37	02	18.9		02	7	7	E	LEAR		
15	ADF	2300E	1025D	S27	W58	02	11.4	1	10	9	9	E	LEAR		
15	ASR	2305E	0410D	N18	W82	02	9.7			7	7	E	LEAR	5347	

## ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
16	ASR	0248E	1025D	N19	E84	02 22.5			9	9	E	LEAR		
16	DSD	0340	0705D	N22	E23	02 17.9		04	9	9	E	LEAR	5362	
16	BSL	0631E	0812D	S50	E90	02 23.9	1				C	ABST		
16	ASR	0920E	1218D	N18	E90	02 23.2			9	9	E	SVTO		
16	APR	0920E	1218D	N23	E90	02 23.3	1		9	9	E	SVTO		
16	AFS	0925E	1550D	N29	E07	02 16.9		02	9	9	E	SVTO	5367	
16	AFS	1135E	2045D	S13	E52	02 20.4		02	9	9	E	RAMY	5368	
16	AFS	1238E	2045D	N28	E09	02 17.2		02	9	9	E	RAMY	5367	
16	DSD	1258E	1330D	N26	E20	02 18.1		05	9	9	E	RAMY	5362	Flare Associated
16	AFS	1258E	2045D	N20	E15	02 17.7		02	9	9	E	RAMY	5362	
16	DSD	1329E	2040D	S16	W28	02 14.4		02	9	9	E	RAMY	5356	
16	ADF	1329E	2045D	S10	W38	02 13.7	1	04	9	9	E	RAMY	5356	
16	ASR	1335E	2045D	N27	W74	02 10.8			9	9	E	RAMY	5354	
16	ASR	1451E	2045D	N19	E90	02 23.5			9	9	E	RAMY		
16	AFS	1817E	0407D	N13	E46	02 20.2		03	9	9	E	PALE	5368	
16	AFS	1817E	0407D	N31	E07	02 17.3		01	9	9	E	PALE	5367	
16	DSD	2040E	2045D	S22	E68	02 22.1		02	9	9	E	RAMY	5369	
16	ASR	2315E	1017D	N23	W79	02 10.9			9	9	E	LEAR	5365	
16	ASR	2315E	1017D	N28	W78	02 10.9			9	8	E	LEAR	5354	
16	AFS	2330E	1017D	S19	E65	02 21.9		02	9	9	E	LEAR	5369	
16	APR	2332	0220D	N40	W90	02 9.6	1				C	VORO		
16	AFS	2335E	1017D	N18	E10	02 17.7		02	9	9	E	LEAR	5362	
16	ADF	2335E	1017D	N24	E14	02 18.1	1	08	9	9	E	LEAR	5362	
16	APR	2349E	0220D	S50	E90	02 24.6	1				C	VORO		
17	AFS	0015E	0407D	N20	E06	02 17.5		02	9	9	E	PALE	5362	
17	ASR	0015E	0407D	N30	W90	02 9.9			9	9	E	PALE	5354	
17	DSD	0021E	0200D	S49	E13	02 18.1		02	9	9	E	LEAR	5368	
17	APR	0029	0220D	N13	E90	02 23.8	1				C	VORO		
17	DSD	0040E	0407D	N18	W27	02 15.0		02	9	9	E	PALE	5357	
17	ADF	0215E	1017D	S11	E50	02 20.8	1	09	9	9	E	LEAR	5368	
17	AFS	0215E	1017D	S12	E44	02 20.4		02	9	9	E	LEAR	5368	
17	BSL	0902	0921	N26	W90	02 10.4	1-				C	CATA		
17	BSL	0908	0934	N27	W90	02 10.4	1-				C	CATA		
17	BSL	1021E	1049D	N28	W90	02 10.4	1-				C	CATA		
17	BSL	1021E	1049D	N33	W90	02 10.3	1-				C	CATA		
17	BSL	1059E	1100D	N28	W90	02 10.4	1-				C	CATA		
17	BSL	1126E	1126D	N32	W90	02 10.3	1-				C	CATA		
17	DSD	1140E	1153	S11	E33	02 20.0	1				C	CATA		
17	BSL	1140E	1208D	N28	W90	02 10.4	1-				C	CATA		
17	BSL	1143E	1155D	S50	E90	02 25.1	1				C	ABST		
17	ASR	1159E	1818D	N28	W90	02 10.5			9	9	E	RAMY	5354	
17	ADF	1222E	1818D	S21	W36	02 14.7	1	25	9	9	E	RAMY	5356	
17	BSL	1235E	1245D	N28	W90	02 10.5	1-				C	CATA		
17	AFS	1320E	1818D	S18	W56	02 13.3		02	9	8	E	RAMY		
17	ADF	1354E	1818D	N23	E09	02 18.3	1	12	9	9	E	RAMY	5362	
17	AFS	1547E	1818D	S12	E31	02 20.0		03	9	9	E	RAMY	5368	
17	ADF	1547E	1818D	S13	E36	02 20.4	1	06	9	9	E	RAMY	5368	
17	AFS	1547E	1818D	S13	E37	02 20.4		03	9	9	E	RAMY	5368	
17	AFS	1600E	1818D	N29	W25	02 15.7		02	9	9	E	RAMY	5360	
17	ASR	1828E	0415D	N30	W90	02 10.7			9	9	E	PALE	5354	
17	AFS	2105E	0415D	S12	E27	02 19.9		03	9	9	E	PALE	5368	
17	ASR	2210E	0045D	N27	W90	02 10.9			9	9	E	HOLL	5354	
17	BSL	2222	2319D	N27	W90	02 10.9			9	9	E	HOLL	5354	
17	ASR	2257E	1030D	N23	W90	02 11.0			9	9	E	LEAR	5354	
17	ASR	2300E	0530D	S34	W85	02 11.2			9	9	E	LEAR	5353	
17	AFS	2305E	1030D	S13	E33	02 20.4		02	9	9	E	LEAR	5368	
17	AFS	2310E	0530D	N24	W49	02 14.2		03	9	9	E	LEAR	5366	
17	ADF	2342E	1030D	S13	W52	02 14.1	1	06	9	9	E	LEAR	5356	
18	ASR	0740E	0800	N24	W90	02 11.4			9	9	E	SVTO	5355	Normal Emission 1/3
18	BSL	0745E	0805	N28	W90	02 11.3	1				C	CATA		
18	APR	0745E	1557D	N20	W90	02 11.4	1		9	9	E	SVTO	5355	
18	ASR	0750E	0758D	S35	W90	02 11.1			9	9	E	SVTO		
18	APR	0830E	1300D	S20	E90	02 25.2	1		9	9	E	SVTO		
18	AFS	1015E	1557D	S14	E28	02 20.5		03	9	9	E	SVTO	5368	
18	APR	1222E	1906D	N22	W90	02 11.6	1		8	9	E	RAMY	5355	
18	SSB	1227		S10	W21	02 17.7			0	0	E	RAMY		332 W43
18	ADF	1232E	1906D	S15	W46	02 15.0	1	04	9	9	E	RAMY	5356	

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
18	ADF	1240E	1906D	N17	W51	02 14.6	1	15	9	9	E	RAMY	5357	
18	AFS	1240E	1906D	N17	W55	02 14.3		03	9	9	E	RAMY	5356	
18	AFS	1318E	1906D	S11	E18	02 19.9		05	9	9	E	RAMY	5368	
18	AFS	1318E	1906D	S13	E18	02 19.9		03	9	9	E	RAMY	5368	
18	ASR	1500E	1557D	S08	E90	02 25.4			9	9	E	SVTO		
18	SDF	1557E	0630D	N35	E53	02 22.9		25	0	0	E	SVTO		
18	ASR	1800E	0411D	N32	W90	02 11.6			7	8	E	PALE	5354	
18	AFS	1800E	0411D	S11	E15	02 19.9		03	9	9	E	PALE	5368	
18	ADF	1800E	0411D	S26	E44	02 22.2		10	9	9	E	PALE	5369	
18	SDF	1906E	1300D	N33	E33	02 21.4		25	0	0	E	RAMY		
18	SDF	1906E	1300D	N37	E27	02 21.0		16	0	0	E	RAMY		
18	AFS	2105E	0415D	S12	E27	02 20.9		03	9	9	E	PALE	5368	
18	ASR	2123E	0411D	S11	E84	02 25.2			9	9	E	PALE		
18	ASR	2257E	1030D	N23	W90	02 12.0			9	9	E	LEAR	5354	
18	ASR	2300E	0530D	S34	W85	02 12.2			9	9	E	LEAR	5353	
18	AFS	2303E	0039D	S12	E14	02 20.0	1	03	9	9	E	HOLL	5368	
18	ADF	2303E	0039D	S15	E16	02 20.2	1	06	9	9	E	HOLL	5368	
18	AFS	2305E	1030D	S13	E33	02 21.4		02	9	9	E	LEAR	5368	
18	AFS	2310E	0530D	N24	W49	02 15.2		03	9	9	E	LEAR	5366	
19	APR	0019	0300D	S27	W90	02 12.0	1				C	VORO		
19	APR	0230E	0845D	S25	W90	02 12.1	1		9	9	E	LEAR		
19	AFS	0315E	0845D	S12	E10	02 19.9		02	9	8	E	LEAR	5368	
19	SDF	0330	0346	N39	E29	02 21.5	3	09	0	0	E	LEAR		
19	AFS	0500E	0845D	N16	E43	02 22.5		03	7	9	E	LEAR	5373	
19	DSD	0725E	0845D	S11	E13	02 20.3	1	03	3	6	E	LEAR	5368	
19	DSD	0828E	0905D	S09	E12	02 20.2	1				C	CATA		
19	ADF	0922E	1310D	S09	E12	02 20.3	2	07	9	9	E	SVTO	5368	
19	AFS	0925E	1600D	N22	W67	02 14.2		02	9	9	E	SVTO	5366	
19	ADF	0926E	1600D	S24	W61	02 14.7	1	24	9	9	E	SVTO	5356	
19	DSD	0927E	0956	S08	E12	02 20.3	1				C	CATA		
19	AFS	0929E	1600D	N18	E39	02 22.4		03	9	9	E	SVTO	5373	
19	BSL	1033E	1037	N88	E90	02 27.8	1-				C	CATA		
19	BSL	1123	1155	S36	W90	02 12.2	1-				C	CATA		
19	DSD	1136E	1230D	S10	E11	02 20.3		03	9	9	E	RAMY	5368	
19	ASR	1221E	1840D	N19	W90	02 12.6			9	9	E	RAMY	5355	
19	ASR	1235E	1246D	N26	W65	02 14.5			9	9	E	RAMY	5366	Flare Associated
19	DSD	1236E	1249D	S07	E12	02 20.4		09	9	9	E	RAMY	5368	Flare Associated
19	SDF	1244E	0741D	S13	E56	02 23.7	1				C	CATA		
19	AFS	1244E	1843D	N16	E38	02 22.4		02	9	9	E	RAMY	5373	
19	DSD	1320E	1411D	S10	E07	02 20.1		03	7	8	E	RAMY	5368	
19	DSD	1320E	1411D	S11	E10	02 20.3		02	7	9	E	RAMY	5368	
19	DSD	1320E	1411D	S14	E01	02 19.6		02	9	9	E	RAMY	5368	
19	ASR	1410E	1550D	N26	W65	02 14.5			9	9	E	RAMY	5366	Flare Associated
19	AFS	1646E	1843D	N27	W34	02 17.0		02	9	9	E	RAMY	5367	
19	AFS	2020E	2351D	N16	E34	02 22.4		03	9	8	E	HOLL	5373	
19	SSB	2023		339	W68	02 16.3			0	0	E	HOLL		
19	ADF	2133E	0121D	N20	W24	02 18.1		02	7	9	E	PALE	5362	
20	SDF	0239E	0243D	N25	W08	02 19.5	2	10	0	0	E	LEAR		
20	AFS	0456E	0945D	N16	E29	02 22.4		02	9	9	E	LEAR	5373	
20	ADF	0456E	0945D	N18	E31	02 22.6	1	06	9	9	E	LEAR	5373	
20	BSL	0650E	0755D	S20	E90	02 27.2	1				C	ABST		
20	DSD	0810	0833	S13	E00	02 20.3		03	9	9	E	SVTO	5368	Flare Associated
20	AFS	0905E	0945D	N30	W19	02 18.9		01	9	9	E	LEAR	5371	
20	AFS	1112E	2036D	N16	E22	02 22.1		04	9	9	E	RAMY	5373	
20	DSD	1122E	1145	S08	E64	02 25.3		04	9	9	E	RAMY	5374	
20	AFS	1122E	2036D	S13	E60	02 25.0		03	9	9	E	RAMY	5374	
20	AFS	1221E	2036D	N30	W20	02 18.9		02	9	9	E	RAMY	5371	
20	ASR	1229E	1342D	N34	W90	02 13.3			9	7	E	RAMY		
20	ASR	1230E	1243	N29	W90	02 13.5			9	9	E	SVTO		
20	ASR	1341E	2036D	N16	W90	02 13.7			7	9	E	RAMY	5357	
20	ADF	1423E	1602D	N30	E40	02 23.7	1	09	9	9	E	RAMY		
20	DSD	1430E	1646D	S11	W01	02 20.5		05	9	9	E	RAMY	5368	Flare Associated
20	SDF	1533E	0615D	N29	E33	02 23.2		16	0	0	E	SVTO		
20	DSD	1544E	1639	S10	W06	02 20.2		03	7	7	E	HOLL	5368	
20	AFS	1634E	0041D	N16	E22	02 22.3		03	9	8	E	HOLL	5373	
20	ASR	1648E	1740D	N32	W90	02 13.6			9	9	E	RAMY	5360	
20	ASR	1649	1729D	N32	W90	02 13.6			9	9	E	HOLL	5360	
20	BSL	1659	1721	N32	W90	02 13.6			9	9	E	HOLL	5360	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
20	SDF	1659E	1744D	N08	E46	02 24.1		29	0	0	E	HOLL		
20	SDF	1659E	1744D	N25	E40	02 23.8		16	0	0	E	HOLL		
20	BSL	1700	1724D	N32	W90	02 13.6			9	9	E	RAMY	5360	
20	DSD	1713E	1728	S11	W08	02 20.1		03	9	9	E	HOLL	5368	Flare Associated
20	ASR	1739	0024D	N24	W79	02 14.6			9	9	E	HOLL	5366	
20	AFS	1751E	0231D	N17	E22	02 22.4		04	9	7	E	PALE	5373	
20	AFS	1751E	0231D	N31	W26	02 18.7		02	9	9	E	PALE	5371	
20	ASR	1751E	0231D	N38	W90	02 13.5			8	7	E	PALE	5360	
20	AFS	1751E	0231D	S09	E59	02 25.2		02	9	9	E	PALE	5374	
20	ASR	1810E	2036D	N25	W80	02 14.5			9	9	E	RAMY	5366	
20	SSB	1826		339	W80	02 17.1			0	0	E	HOLL		
20	DSD	1847E	1950D	S11	W04	02 20.5		04	9	9	E	HOLL	5368	
20	DSD	1858E	2036D	S11	W04	02 20.5		03	9	9	E	RAMY	5368	
20	DSD	1903	2036D	N31	W26	02 18.7		03	9	9	E	RAMY	5371	Flare Associated
20	ADF	1906E	0231D	S09	W04	02 20.5		03	9	8	E	PALE	5368	
20	DSD	1917E	0231D	N30	W28	02 18.6		02	9	9	E	PALE	5371	Flare Associated
21	APR	0055	0230D	N30	W90	02 14.0	1				C	VORO		
21	ASR	0100E	0231D	N17	W89	02 14.3			6	6	E	PALE	5357	
21	ADF	0116	0230D	N65	W02	02 20.9	1				C	VORO		
21	DSD	0133	0147	N17	E13	02 22.0	1				C	VORO		
21	BSL	0210	0230	S16	W90	02 14.3	1				C	VORO		
21	AFS	0332E	0929D	N17	E16	02 22.4		02	9	9	E	LEAR	5373	
21	ADF	0332E	0929D	S11	W16	02 19.9	1	02	9	9	E	LEAR	5368	
21	ASR	0334E	0929D	N15	W88	02 14.5			9	9	E	LEAR	5357	
21	ASR	0607E	0929D	N36	W85	02 14.4			9	9	E	LEAR	5360	
21	BSL	0648E	0711D	S15	W90	02 14.5	1				C	ABST		
21	AFS	0657E	0929D	S12	W16	02 20.1		04	9	9	E	LEAR	5368	
21	AFS	0659E	0929D	S10	E53	02 25.3		02	9	9	E	LEAR	5374	
21	ASR	0823E	1505D	N14	W90	02 14.5			9	9	E	SVTO	5357	
21	ADF	0824E	1505D	S13	E47	02 24.9	1	26	9	9	E	SVTO		
21	ADF	0825E	1505D	S23	E73	02 27.0	1	08	9	9	E	SVTO		
21	AFS	0826E	1505D	S07	E52	02 25.2		02	9	9	E	SVTO	5374	
21	AFS	0827E	1505D	N16	E12	02 22.3		04	9	9	E	SVTO	5373	
21	AFS	0828E	1505D	N29	W33	02 18.8		02	7	8	E	SVTO	5371	
21	APR	0829E	1505D	S33	W90	02 14.2	1		9	9	E	SVTO		
21	APR	0830E	1505D	N33	W90	02 14.2	1		9	9	E	SVTO		
21	AFS	0831E	1505D	S12	W16	02 20.1		04	9	9	E	SVTO	5368	
21	SDF	0835E	1120D	N32	E56	02 25.8		21	0	0	E	SVTO		
21	BSL	0920E	1004D	N43	E90	02 28.8	3				C	CATA		
21	SDF	0942E	0726D	S26	E14	02 22.5		12	0	0	E	LEAR	5369	
21	AFS	1220E	2128D	N16	E11	02 22.3		02	9	9	E	RAMY	5373	
21	ADF	1220E	2128D	N25	W44	02 18.1	1	05	9	9	E	RAMY	5362	
21	AFS	1220E	2128D	S11	W20	02 20.0		02	9	9	E	RAMY	5368	
21	ASR	1224E	1436D	N18	W90	02 14.7			9	9	E	RAMY	5357	
21	DSD	1229	1436D	S12	W16	02 20.3		04	9	9	E	RAMY	5368	Flare Associated
21	SDF	1356E	1200D	N13	E41	02 24.7		20	0	0	E	RAMY		
21	SDF	1356E	1200D	N24	E22	02 23.3		16	0	0	E	RAMY		
21	DSD	1409E	1436D	S29	E11	02 22.4		02	9	9	E	RAMY		
21	SDF	1501E	1426D	N20	W04	02 21.3		05	0	0	E	HOLL		
21	SDF	1501E	1426D	N51	W07	02 21.0		18	0	0	E	HOLL		
21	SDF	1501E	1426D	S33	E62	02 26.5		12	0	0	E	HOLL		
21	DSD	1720E	0048D	N16	E04	02 22.0		04	9	9	E	HOLL	5373	
21	DSD	1942E	2128D	N14	E05	02 22.2		05	9	9	E	RAMY	5373	
22	ADF	0005	0300D	S40	W02	02 21.8	1				C	VORO		
22	DSD	0014E	0048D	S11	E19	02 23.4		10	9	9	E	HOLL	5368	Flare Associated
22	BSL	0014	0025	N11	E90	02 28.8	1				C	VORO		
22	APR	0022	0300D	N38	E90	03 1.3	1				C	VORO		
22	APR	0135	0300D	S41	E90	03 1.4	1				C	VORO		
22	ASR	0728E	1025D	N35	W80	02 15.9			8	6	E	LEAR	5367	
22	ADF	0729E	1025D	S13	W26	02 20.4	1	07	9	9	E	LEAR	5368	
22	AFS	0730E	1025D	N30	W45	02 18.8		02	8	8	E	LEAR	5371	
22	SDF	0740	1001	N50	W18	02 20.8		24	0	0	E	LEAR		
22	AFS	0900E	1025D	N15	E00	02 22.4		03	9	9	E	LEAR	5373	
22	AFS	0901E	1358D	S15	W30	02 20.1		06	9	9	E	SVTO	5368	
22	AFS	1100E	1358D	N16	W04	02 22.1		03	9	9	E	SVTO	5373	
22	AFS	1205E	2040D	S10	W32	02 20.1		02	9	9	E	RAMY	5368	
22	APR	1214E	1358D	S08	W90	02 15.8	1		9	9	E	SVTO		
22	ASR	1235E	2040D	N31	W90	02 15.4			9	9	E	RAMY	5360	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
22	DSD	1337E	1859D	N16	W06	02 22.1		02	9	9	E	RAMY	5373	
22	SDF	1358E	0814D	N51	W12	02 21.6		20	0	0	E	SVTO		
22	ASR	1414E	2040D	N09	E90	03 1.3			9	9	E	RAMY		
22	DSD	1438E	1857D	S10	W35	02 20.0		02	9	9	E	RAMY	5368	
22	ASR	1538E	2040D	N37	E90	03 1.9			9	9	E	RAMY		
22	ASR	1559E	0049D	N13	E90	03 1.4			9	7	E	HOLL		
22	AFS	1631E	2040D	S11	E33	02 25.2		02	9	9	E	RAMY	5374	
22	DSD	1658E	0049D	S12	W38	02 19.8		04	9	9	E	HOLL	5368	
22	DSD	1706E	2250D	N14	E11	02 23.5		06	9	8	E	HOLL	5373	
22	AFS	2250E	1015D	N15	W08	02 22.3		04	9	9	E	LEAR	5373	
22	ADF	2252E	1015D	S13	W38	02 20.1	1	06	9	9	E	LEAR	5368	
22	ASR	2253E	1015D	N10	E87	03 1.5			9	9	E	LEAR		
22	ASR	2256E	1015D	S12	W85	02 16.5			8	7	E	LEAR	5359	
22	AFS	2258E	1015D	S11	E28	02 25.1		02	9	9	E	LEAR	5374	
22	BSL	2351	0014	S25	W90	02 16.0	1				C	VORO		
23	BSL	0013	0030	N25	W90	02 16.0	1				C	VORO		
23	APR	0013	0300D	S38	E90	03 2.3	1				C	VORO		
23	ASR	0015E	0049D	N31	W90	02 15.9			9	9	E	HOLL	5362	
23	ASR	0135E	1015D	N19	W83	02 16.7			9	9	E	LEAR	5362	
23	ASR	0150E	1015D	N39	E85	03 2.0			9	9	E	LEAR		
23	BSL	0158	0214	N26	W90	02 16.1	1				C	VORO		
23	DSD	0910E	0920D	N16	W16	02 22.2	1				V	KHAR		
23	ADF	0910E	0920D	S09	W43	02 20.1	1				V	KHAR		
23	ADF	0940E	1459D	S13	W44	02 20.1	1	06	9	9	E	SVTO	5368	
23	AFS	0941E	1459D	N18	W15	02 22.3		04	9	9	E	SVTO	5373	
23	ASR	1124E	1756D	N31	W90	02 16.4			9	9	E	RAMY	5367	
23	BSL	1133	1147	N22	E90	03 2.4	1-				C	CATA		
23	AFS	1144E	1756D	N17	W14	02 22.4		02	9	9	E	RAMY	5373	
23	AFS	1220E	1756D	S11	W46	02 20.0		02	9	9	E	RAMY	5368	
23	BSL	1225	1241D	N41	W90	02 16.1	1				C	CATA		
23	ASR	1230E	1756D	N17	E89	03 2.3			9	9	E	RAMY	5377	
23	ASR	1419E	1609	N25	W79	02 17.5			9	9	E	HOLL	5362	
23	AFS	1431E	1459D	N26	W03	02 23.4		02	9	9	E	SVTO	5376	
23	ASR	1445E	1459D	N24	W90	02 16.7			9	9	E	SVTO		
23	AFS	2255E	0258D	S11	W51	02 20.1		03	9	9	E	LEAR	5368	
23	ADF	2255E	0258D	S13	W54	02 19.9	1	08	9	9	E	LEAR	5368	
23	AFS	2257E	0258D	N16	W22	02 22.3		03	9	9	E	LEAR	5373	
23	ASR	2300E	0200D	N30	W81	02 17.6			8	8	E	LEAR	5367	
23	ASR	2302E	0258D	N16	W85	02 17.5			9	9	E	LEAR		
23	AFS	2304E	0258D	N14	E66	02 28.9		02	9	9	E	LEAR	5377	
24	ADF	0025	0300D	N39	E11	02 24.9	1				C	VORO		
24	APR	0027	0300D	S44	E90	03 3.5	1				C	VORO		
24	APR	0203	0300D	N54	W90	02 16.3	1				C	VORO		
24	BSL	0625E	0900D	S35	W90	02 17.1	1				C	ABST		
24	BSL	0625E	0900D	S54	E90	03 4.0	1				C	ABST		
24	BSL	0827E	0859D	S05	E90	03 3.1	1				C	ABST		
24	ASR	0931E	1248D	N22	W90	02 17.5			9	9	E	SVTO	5362	
24	AFS	0936E	1248D	N14	W05	02 24.0		03	9	9	E	SVTO	5378	
24	AFS	1059E	1248D	S12	W61	02 19.9		02	9	9	E	SVTO	5368	
24	DSD	1150E	1225	N16	E64	03 1.3	1				V	KHAR		
24	AFS	1210E	1553D	S12	W58	02 20.1		03	9	9	E	RAMY	5368	
24	DSD	1210E	1912D	S14	W55	02 20.3		03	9	9	E	RAMY	5368	
24	DSD	1218E	1230D	S17	W57	02 20.2	1				V	KHAR		
24	DSD	1234E	1557D	N17	W35	02 21.9		02	9	9	E	RAMY	5373	
24	DSD	1243E	1559D	S12	E04	02 24.8		05	9	9	E	RAMY	5374	
24	SDF	1248E	0740D	S22	E42	02 27.8		14	0	0	E	SVTO		
24	SDF	1248E	0740D	S27	E62	03 1.4		33	0	0	E	SVTO		
24	AFS	1258E	1912D	N14	W06	02 24.1		03	9	9	E	RAMY	5378	
24	AFS	1258E	1912D	N29	W08	02 23.9		03	9	9	E	RAMY	5376	
24	AFS	1308E	1912D	N12	E62	03 1.2		03	9	9	E	RAMY	5377	
24	DSD	1308E	1912D	N14	E63	03 1.3		08	9	9	E	RAMY	5377	
24	AFS	1317E	1912D	S19	E63	03 1.4		03	9	9	E	RAMY		
24	AFS	1320E	1912D	S08	E55	02 28.7		03	9	9	E	RAMY		
24	SSB	1326		217	W08	02 25.8			0	0	E	RAMY		232 W23
24	APR	1440E	1912D	N24	W90	02 17.6	1		9	9	E	RAMY	5362	
24	APR	1526E	0008D	N21	W90	02 17.7			9	9	E	HOLL	5362	
24	DSD	1553E	1912D	S15	W63	02 19.9		08	7	8	E	RAMY	5368	
24	AFS	1810E	0227D	S08	E50	02 28.5		02	9	9	E	PALE		

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
24	AFS	1810E	0238D	S27	E30	02 27.1		02	9	9	E	PALE	5375	
24	AFS	1855E	0421D	N17	W09	02 24.1		03	9	9	E	PALE	5378	
24	AFS	2247E	1008D	S19	E55	03 1.1		02	9	9	E	LEAR	5379	
24	ASR	2249E	0525D	S23	E86	03 3.6			8	7	E	LEAR		
24	AFS	2250E	1008D	N15	W33	02 22.4		03	9	9	E	LEAR	5373	
24	AFS	2251E	1008D	S13	W64	02 20.1		02	9	9	E	LEAR	5368	
24	AFS	2252E	1008D	N11	E55	03 1.1		02	9	9	E	LEAR	5377	
24	ADF	2257E	0826D	S26	E19	02 26.4	1	09	9	9	E	LEAR	5375	
24	ASR	2300E	0517D	N19	W83	02 18.6			8	8	E	LEAR	5372	
24	AFS	2340E	1008D	N14	W12	02 24.1		03	9	9	E	LEAR	5378	
24	AFS	2340E	1008D	S26	W38	02 22.0		02	9	9	E	LEAR		
25	SDF	0057E	0050D	S14	E34	02 27.6		07	0	0	E	LEAR		
25	BSL	0721	0810	S34	E90	03 4.5	1				C	ABST		
25	BSL	0721E	0859D	S01	E90	03 4.0	1				C	ABST		
25	AFS	0840E	1308D	N16	W16	02 24.1		03	9	9	E	SVTO	5878	
25	AFS	0841E	1308D	S24	E35	02 28.1		02	9	9	E	SVTO	5875	
25	ASR	1224E	1308D	N31	W82	02 19.0			9	9	E	SVTO	5371	
25	APR	1228E	1900D	N32	W90	02 18.4	1		9	9	E	RAMY	5362	
25	AFS	1253E	1900D	S12	W74	02 20.0		02	9	9	E	RAMY	5368	
25	AFS	1253E	1900D	S14	W72	02 20.1		02	9	9	E	RAMY	5368	
25	AFS	1259E	1900D	N16	W42	02 22.3		03	9	9	E	RAMY	5373	
25	AFS	1330E	1900D	S25	E30	02 27.9		02	9	9	E	RAMY	5375	
25	AFS	1339E	1900D	N15	W20	02 24.0		03	9	9	E	RAMY	5378	
25	AFS	1339E	1900D	N16	W28	02 23.4		02	9	9	E	RAMY	5378	
25	AFS	1347E	1900D	N12	E50	03 1.3		05	9	9	E	RAMY	5377	
25	SSB	1400		196	W00	03 4.7			0	0	E	RAMY		216 W20 239 W43
25	AFS	1759E	0423D	N12	E45	03 1.1		03	9	8	E	PALE	5377	
25	ADF	1759E	0423D	S19	W66	02 20.7		04	9	8	E	PALE	5368	
25	SDF	1912E	1136D	S22	E42	03 1.0		25	0	0	E	RAMY		
25	AFS	1924E	0423D	N16	W21	02 24.2		02	9	9	E	PALE	5378	
25	SSB	2025		193	W01	03 4.8			0	0	E	HOLL		237 W45
25	ADF	2035E	2338D	N40	E48	03 1.8	1	11	6	9	E	HOLL	5380	
25	ASR	2135E	2340D	N31	W90	02 18.8			9	9	E	HOLL		
26	BSL	0119	0157	N28	W90	02 19.0	1				C	VORO		
26	BSD	0146	0159	N25	E31	02 28.5	1				C	VORO		
26	APR	0200	0300D	N20	W90	02 19.2	1				C	VORO		
26	BSL	0817E	0854D	N25	W90	02 19.4	1				C	ABST		
26	ASR	0831	0853D	S13	W90	02 19.6			9	9	E	LEAR	5368	
26	AFS	0845E	1445D	S24	E22	02 28.1		03	9	9	E	SVTO	5375	
26	ADF	1131E	1445D	N15	W31	02 24.1	1	04	9	9	E	RAMY	5378	
26	ASR	1131E	1445D	S14	W86	02 20.0			9	9	E	RAMY	5368	
26	ADF	1340E	1445D	N20	E37	03 1.4	1	05	9	9	E	SVTO	5377	
26	ADF	1348E	1445D	N15	W33	02 24.1	1	05	9	9	E	SVTO	5378	
26	ADF	1402E	1445D	N20	E60	03 3.2	1	09	9	9	E	SVTO		
26	DSD	1443E	1445D	S21	E37	03 1.4		03	9	9	E	RAMY	5379	
26	AFS	1605E	0042D	N11	E33	03 1.1		01	9	9	E	HOLL	5377	
26	DSD	1605E	2023D	N11	E26	02 28.6		04	9	9	E	HOLL	5377	
26	ADF	1640E	0042D	S36	E22	02 28.5	1	03	9	9	E	HOLL	5379	
26	DSD	1640E	1730D	S33	E20	02 28.3		02	9	9	E	HOLL	5379	
26	ASR	1717E	2211D	S13	W90	02 19.9			9	9	E	HOLL	5368	
26	AFS	1723E	2205D	S13	W60	02 22.2		01	8	6	E	HOLL		
26	DSD	1730E	2024D	S21	E38	03 1.6		03	9	9	E	HOLL	5379	Flare Associated
26	AFS	1737E	2214D	N11	E32	03 1.1		01	9	9	E	PALE	5377	
26	ASR	1744E	2214D	N13	E90	03 5.5			9	9	E	PALE	5368	
26	AFS	1748E	2214D	S13	W58	02 22.4		02	9	9	E	PALE		
26	AFS	2110E	0042D	S17	W65	02 21.9		02	9	9	E	HOLL	5382	
26	AFS	2116E	2214D	S17	W27	02 24.8		02	9	9	E	PALE	5382	
26	AFS	2301E	1024D	S18	W28	02 24.8		02	9	9	E	LEAR	5382	
26	ASR	2304E	1024D	S14	W83	02 20.7			9	9	E	LEAR	5368	
27	ADF	0541E	1024D	S16	W32	02 24.8	1	04	4	9	E	LEAR	5382	
27	AFS	0620E	1550D	N12	W65	02 22.4		03	9	9	E	SVTO	5373	
27	ADF	0714E	1550D	N20	E28	03 1.4	1	06	9	9	E	SVTO	5383	
27	DSD	0730E	1550D	N10	E17	02 28.6		03	9	9	E	SVTO	5377	
27	AFS	0740E	1550D	S18	W32	02 24.9		03	9	9	E	SVTO	5382	
27	AFS	0801E	1550D	S25	E12	02 28.3		02	9	9	E	SVTO	5375	
27	ADF	0837E	1550D	S21	E47	03 3.0	1	14	9	9	E	SVTO		
27	AFS	0838E	1550D	S15	W68	02 22.2		02	9	3	E	SVTO		Flare Associated



ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 1989

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
27	ADF	0857E	1024D	N21	E31	03	1.7	1	07	9	9	E	LEAR	5383	
27	DSD	1434E	1544	S10	E15	02	28.7		05	9	9	E	HOLL	5377	
27	AFS	1437E	0051D	S22	E24	03	1.4		02	9	9	E	HOLL	5379	
27	ASR	1439E	1559	S12	W90	02	20.8			8	9	E	HOLL	5368	
27	ADF	1449E	0051D	N18	E30	03	1.9	1	07	6	6	E	HOLL	5383	
27	ADF	1515E	0051D	S57	W05	02	27.2	1	29	4	6	E	HOLL		
27	ADF	1531E	1913D	N40	E18	03	1.1	1	05	9	9	E	RAMY	5380	
27	AFS	1539E	2250D	S11	W15	02	26.5		01	7	6	E	HOLL		
27	ASR	1547E	1950D	S09	W90	02	20.9			9	9	E	RAMY	5368	
27	ADF	1553E	2119D	S17	W34	02	25.1	1	07	9	9	E	RAMY	5382	
27	DSD	1648E	2119D	S22	W24	02	25.8		03	9	9	E	RAMY	5379	
27	ADF	1735E	2119D	N15	E30	03	2.0	1	04	9	9	E	RAMY	5383	
27	BSD	1845	1900	N10	E11	02	28.6		02	9	9	E	HOLL	5377	
27	SSB	2040		192	W26	03	7.0			0	0	E	HOLL		211 W45
28	AFS	0130E	0800D	S22	E30	03	2.4		02	9	9	E	LEAR		
28	BSL	0733E	0911D	S30	E90	03	7.4	1				C	ABST		
28	BSL	0750E	0911D	N73	E90	03	8.6	1				C	ABST		
28	AFS	0803E	0856D	S20	E11	03	1.2		02	9	3	E	LEAR	5379	
28	ASR	0807E	0856D	N34	W78	02	22.1			9	9	E	LEAR	5376	
28	AFS	0906E	1602D	N20	W60	02	23.8		06	9	9	E	SVTO	5378	
28	BSL	0931	0931D	N22	W90	02	21.5	1-				C	CATA		
28	BSL	1010E	1031D	N22	W90	02	21.5	1-				C	CATA		
28	SDF	1043E	0813D	S21	W25	02	26.5		04	0	0	E	SVTO		
28	SDF	1043E	0813D	S25	W50	02	24.6		06	0	0	E	SVTO		
28	AFS	1048E	1602D	S19	E12	03	1.4		04	9	9	E	SVTO	5379	
28	ADF	1058E	1602D	N41	E15	03	1.7	1	05	9	9	E	SVTO	5380	
28	DSD	1110E	1602D	N31	E03	02	28.7		03	9	9	E	SVTO	5377	
28	AFS	1126E	2141D	N14	W61	02	23.9		02	9	9	E	RAMY	5378	
28	ADF	1126E	2141D	N17	W62	02	23.8	1	04	9	9	E	RAMY	5378	
28	ASR	1126E	2141D	N17	W79	02	22.5			9	9	E	RAMY	5373	
28	ADF	1233E	1800D	N39	E15	03	1.7	1	15	9	9	E	RAMY	5380	
28	SSB	1300		195	W38	03	8.2			0	0	E	RAMY		
28	SDF	1550E	1043D	N22	E25	03	2.6		08	0	0	E	SVTO	5383	
28	SDF	1757E	1129D	N20	E12	03	1.7		06	0	0	E	RAMY	5383	
28	AFS	2330E	1020D	N18	E09	03	1.7		02	9	9	E	LEAR	5383	
28	AFS	2331E	1020D	S19	E03	03	1.2		03	9	9	E	LEAR	5379	

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

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

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

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

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

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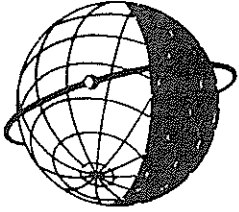
- UAG-55 EQUIVALENT IONOSPHERIC CURRENT REPRESENTATIONS BY A NEW METHOD, ILLUSTRATED FOR 8-9 NOVEMBER 1969 MAGNETIC DISTURBANCES, by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO; H.W. Kroehl, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, CO; Joe Haskell Allen, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; and S.-I. Akasofu, Geophysical Institute, University of Alaska, Fairbanks, AK, April 1976, 91 pp, \$1.50 (microfiche only).
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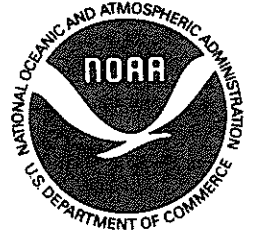
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- UAG-95 SUNSPOT NUMBERS: 1610-1985, (based on THE SUNSPOT-ACTIVITY IN THE YEARS 1610-1960, by Prof. M. Waldmeier, Copyright 1961, Swiss Federal Observatory, Zurich, Switzerland), revised by John A. McKinnon, National Geophysical Data Center, NOAA, Boulder, CO, January 1987, 112 pp, \$10.00.
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