U.S. DEPARTMENT OF COMMERCE
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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
William E. Evans, Under Secretary for Oceans and Atmosphere

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
Thomas N. Pyke, Jr., Assistant Administrator

JANUARY 1989 NUMBER 533 - Part II

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Data for July 1988

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

NUMBER 533

(Issued in Two Parts)

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C O N T E N T S

PART I (PROMPT REPORTS)

PART II (COMPREHENSIVE REPORTS)

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A C T I V E R E G I O N S
CARRINGTON ROTATION 1803

(5 June to 2 July 1988)

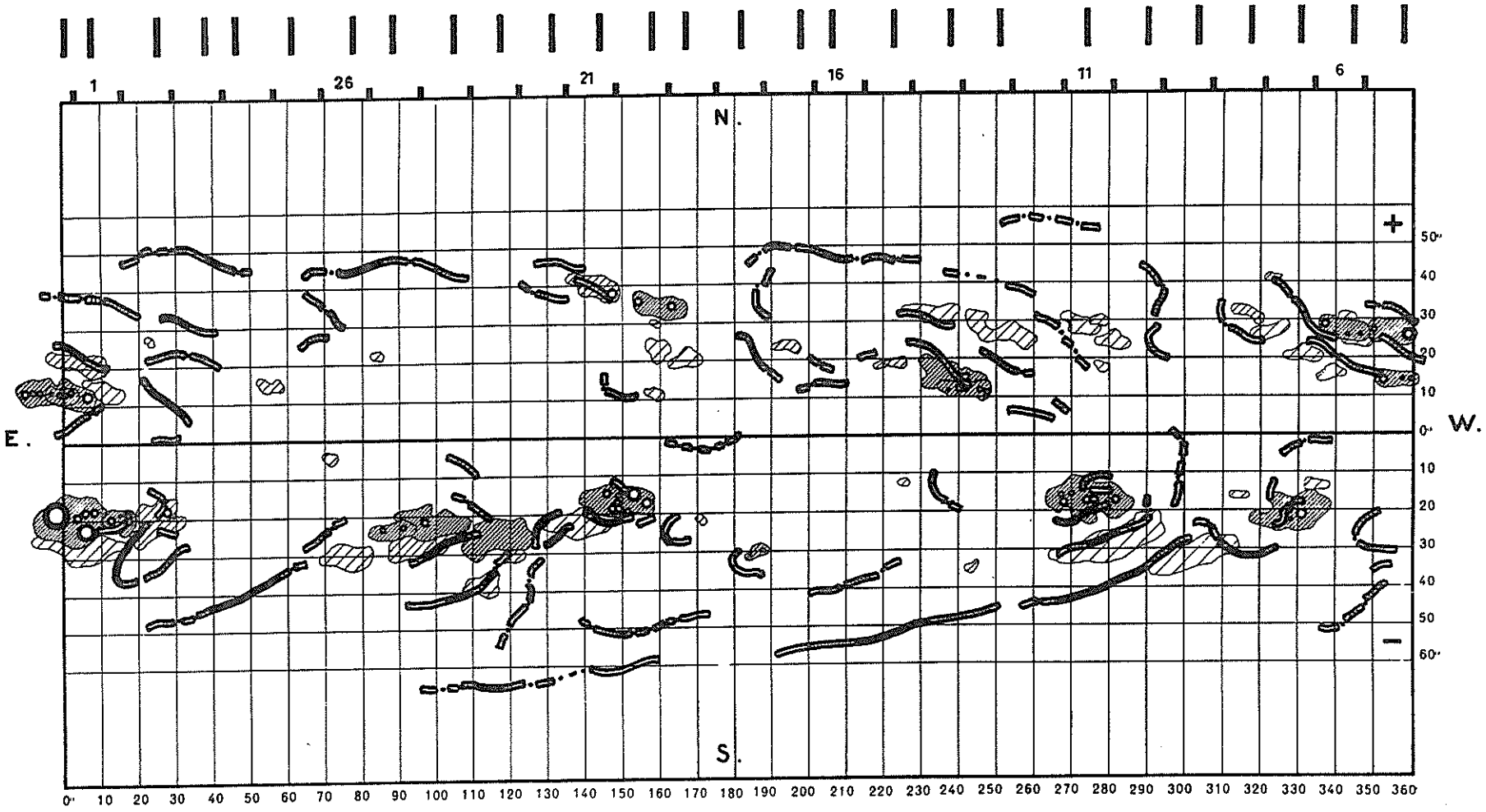
Region No.	Coordinates Lat.	Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1802	Activity at West Limb
1	14 N	356	3	0			stable
2	27 N	354	4	>6			decreasing
3	27 N	344	1	>6	x		disappeared
4	27 N	343	3	0			decreasing
5	13 S	335	1	>6	x	3	decreasing
6	21 N	332	1	>6	x	4	dispersed
7	21 S	329	3	>6	x		decreasing
8	27 N	323	1	>6	x		dispersed
9	32 N	317	1	>6	x		decreasing
10	25 N	281	1	>6	x	18	dispersed
11	30 N	277	1	+2	x		dispersed
12	17 S	275	5	>6		17	decreasing
13	27 N	251	1	>6	x	23	dispersed
14	12 N	242	2	0			decreasing
15	14 N	239	2	>6			decreasing
16	19 N	224	1	-2	x		dispersed
17	19 N	220	1	+4	x		disappeared
18	24 N	195	1	+6	x		disappeared
19	30 S	186	2	+3			disappeared
20	21 S	171	1	+5	x		disappeared
21	22 N	160	1	>6	x	27	dispersed
22	34 N	160	4	+3			stable
23	11 N	159	1	-2	x		stable
24	17 S	150	6	>6			stable
25	40 N	144	3	>6			decreasing
26	22 S	139	1	>6	x		decreasing
27	30 S	121	1	>6	x		disappeared
28	25 S	117	1	>6	x		decreasing
29	22 S	99	2	>6		34	decreasing
30	27 S	98	1	>6	x	32	dispersed
31	24 S	69	2	0			decreasing
32	30 S	76	1	>6			dispersed
33	4 S	72	1	+1	x		disappeared
34	15 N	56	1	+3	x		disappeared
35	22 S	26	1	>6	x	40	decreasing
36	18 S	25	3	>6			decreasing
37	20 S	16	3	+3			decreasing
38	15 N	10	1	>6	x		dispersed
39	21 N	5	1	>6	x	45	decreasing
40	27 S	5	1	>6	x	44	dispersed
41	20 S	4	8	>6			decreasing
42	13 N	0	4	>6			decreasing
43	13 N	0	2	+1			stable

CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1803
(5 June to 2 July 1988)

Meudon Observatory

June 1988



5 Jun 88

Hα SOLAR FLARES

JULY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr. (Sq Deg)	Remarks
0001	PALE	01	0001	0003	0008	N13	E16	5062	07	2.2	7	SF		3	E		12		
0002		01	00311	00341	0042	N12	E16	5062	07	2.2	11	SF					18		
	HOLL	01	0031	0035	0041	N13	E16	5062	07	2.2	10	SF		3	E		19		
	LEAR	01	0032	0034	0042	N12	E15	5062	07	2.1	10	SF		3	E		17		
0003	LEAR	01	0216	0217	0233	S20	E11	5060	07	1.9	17	SF		3	E		23		
0004		01	0350*	0423	0441	S20	E08	5060	07	1.8	51	1N					140	2.0	ET
	TACH	01	0350	0406U	0440D	S19	E06	5060	07	1.6	50D	SB			C	0406	173	2.0	ET
	LEAR	01	0414	0423	0441	S20	E11	5060	07	2.0	27	1F		3	E		106		
0005	TACH	01	0412	0420U	0431	S18	W12	5058	06	30.3	19	SB			C	0420	133	1.5	ELT
0006		01	05001	0501	0514	S21	E08	5060	07	1.8	14	SF	C 4.3				22		F
	SVTO	01	0500	0501	0502	S22	E07	5060	07	1.7	2	SF	C 4.3	2	E		32		F
	LEAR	01	0501	0501	0526	S20	E10	5060	07	2.0	25	SF	C 4.3	3	E		13		
0007	CATA	01	0630E	0630	0640	S17	E09	5060	07	1.9	10D	SN		2	P	0630	56	0.6	
0008		01	08323	08419	0915	S20	W05	5066	07	1.0	43	1N	C 6.9				348	4.7	FHK
	LEAR	01	0832	0845	0921	S22	W10	5066	06	30.6	49	2F	C 6.9	3	E		259		FH
	SVTO	01	0832	0850	0917	S21	W04	5066	07	1.0	45	1F	C 6.9	3	E		216		H
	KHAR	01	0835	0844	0915	S19	W03	5066	07	1.1	40	1N		2	P	0847	270	2.9	HK
	YUNN	01	0836E	0844U	0905	S19	W05	5066	07	1.0	29D	1B	C 6.9		P	0844	321	3.6	
	CATA	01	0841E	0841	0915	S20	W04	5066	07	1.0	34D	2B		2	P	0841	675	7.6	
0009		01	0940	0940	0947	S14	E10	5060	07	2.1	7	SN					86	0.9	E
	HTPR	01	0940E		1008D	S14	E13	5060	07	2.4	28D	SF			C	0941	30	0.3	E
	CATA	01	0940	0940	0947	S15	E08	5060	07	2.0	7	SN		2	C	0940	141	1.5	
0010	CATA	01	1115	1115	1130	S17	E06	5060	07	1.9	15	SN		2	C	1115	112	1.2	
		01	1256		1340	No Flare Patrol													
0011	HOLL	01	1315E	1318U	1322D	S21	W09	5066	06	30.9	7D	SF		3	E		32		
		01	1343		1354	No Flare Patrol													
0012	HTPR	01	1407E		1422D	S18	E01	5060	07	1.7	15D	SN			C	1409	40	0.4	
0013	HTPR	01	1450E		1454D	S18	W10	5066	06	30.8	4D	SF			C	1452	30	0.3	
0014	HOLL	01	1458	1458	1512	S18	E03	5060	07	1.8	14	SF		3	E		12		F
0015		01	1539E	1552U	1616D	S19	E03	5060	07	1.9	37D	SN	C 6.3				60		F
	KANZ	01	1539E	1552U	1552D	S18	E01	5060	07	1.7	13D	SN		1					
	HOLL	01	1543E	1553U	1616D	S20	E05	5060	07	2.0	33D	SN	C 6.3	3	E		60		F
		01	1622		1627	No Flare Patrol													
0016	PALE	01	1901	1901	1929	S18	W08	5066	07	1.2	28	SF		3	E		16		
0017	RAMY	01	2109E	2110U	2123	S20	W08	5066	07	1.3	14D	SF	C 2.0	2	E		18		
0018	PALE	01	2304	2307	2322	S14	W06	5060	07	1.5	18	SN	C 1.9	3	E		39		F
0019		02	00417	00519	0152	S19	W12	5066	07	1.1	71	2B	M 3.0				657	7.4	FHU
	LEAR	02	0041	0100	0202	S20	W13	5066	07	1.0	81	3B	M 3.0	3	E		670		
	MITK	02	0046	0051	0157	S19	W12	5066	07	1.1	71	1B			P	0051	270	3.1	FH
	PEKG	02	0048	0100	0137	S19	W11	5066	07	1.2	49	2B	M 3.0		C	0100	1030	11.7	U
0020	PALE	02	0048	0100	0148	S14	W06	5060	07	1.6	60	2B	M 3.0	3	E		362		
0021		02	0128*	0136*	0150	N13	E06	5062	07	2.5	22	SN					34	0.3	E
	LEAR	02	0128	0136	0152	N12	E08	5062	07	2.7	24	SB		3	E		50		
	PALE	02	0136	0136	0149	N13	E03	5062	07	2.3	13	SF		3	E		22		
	PEKG	02	0145	0147	0150	N13	E06	5062	07	2.5	5	SF			C	0147	29	0.3	E

Hα SOLAR FLARES

JULY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0022		02	05292	05321	0539	N12	E04	5062	07	2.5	10	SN					50	0.5	DH
	TACH	02	0529	0530U	0545	N10	E02	5062	07	2.4	16	SN			C	0530	71	0.7	DH
	PEKG	02	0530	0532	0535	N13	E05	5062	07	2.6	5	SF			C	0532	50	0.5	D
	HTPR	02	0531	0533	0537	N14	E04	5062	07	2.5	6	SN			C	0533	30	0.3	
0023	HTPR	02	0608	0614	0620	S27	W05	5066	07	1.9	12	SF			C	0614	10	0.1	
0024		02	06351	06433	0700	S22	W13	5066	07	1.3	25	1N	C 3.7				261	3.4	DEFI
	PEKG	02	0635	0644	0655	S23	W11	5066	07	1.4	20	2N	C 3.7		C	0644	463	5.4	D
	ABST	02	0636E	0643U	0645D	S21	W12	5066	07	1.3	9D	1N			P	0643	220	2.5	FI
	LEAR	02	0636	0643	0702	S22	W13	5066	07	1.3	26	1F	C 3.7	3	E		133		
	HTPR	02	0636	0646	0700	S20	W17	5066	07	1.0	24	SN			C	0646	120	1.2	E
	MITK	02	0640E	0643	0704	S23	W14	5066	07	1.2	24D	1B			C	0643	370	4.4	E
0025	SVTO	02	0638	0646U	0658	S20	W07	5060	07	1.7	20	SF	C 3.7	2	E		71		F
0026		02	0653	06551	0658	N12	E03	5062	07	2.5	5	SN					54	0.6	D
	PEKG	02	0653	0655	0657	N13	E05	5062	07	2.7	4	SF			C	0655	59	0.6	D
	HTPR	02	0653	0656	0658	N12	E01	5062	07	2.4	5	SN			C	0656	50	0.5	
0027		02	08023	0805	0810	S16	W02	5060	07	2.2	8	SN					59	0.8	EH
	SVTO	02	0802	0805U	0810	S15	W01	5060	07	2.2	8	SF		2	E		16		
	HTPR	02	0803	0805	0810	S15	W02	5060	07	2.2	7	SN			C	0805	60	0.6	E
	KHAR	02	0805		0810	S17	W02	5060	07	2.2	5	SN		2	P	0808	100	1.0	H
0028		02	08242	0828	0832	S16	W02	5060	07	2.2	8	SN					46	0.6	E
	HTPR	02	0824	0828	0832	S15	W02	5060	07	2.2	8	SN			C	0828	60	0.6	E
	LEAR	02	0826	0828	0832	S16	W02	5060	07	2.2	6	SF		3	E		31		
0029	CATA	02	0952E	0952	0952D	N12	W06	5062	07	1.9	6D	SN		2	P	0952	56	0.6	
0030		02	1048	10512	1100	S15	W04	5060	07	2.1	12	SN					86	0.9	E
	HTPR	02	1048	1053	1101	S15	W04	5060	07	2.1	13	SN			C	1053	60	0.6	E
	CATA	02	1051E	1051	1100	S15	W03	5060	07	2.2	9D	SN		2	P	1051	112	1.2	
		02	1200		1207	No Flare Patrol													
0031	HOLL	02	1315E	1318U	1322D	S21	W09	5060	07	1.9	7D	SF	C 1.4	3	E		32		
0032	HOLL	02	1336E	1339U	1349D	S26	W12	5060	07	1.6	13D	SF	C 1.4	3	E		18		
0033	HTPR	02	1336E		1408D	S18	W16	5060	07	1.3	32D	SN			C	1336	50	0.5	E
0034	HTPR	02	1428	1430	1445	N24	W90		06	25.7	17	SN			C	1430	20		
		02	1538		1546	No Flare Patrol													
		02	1548		1600	No Flare Patrol													
0035	HOLL	02	1603	1604	1611	S20	W16	5066	07	1.4	8	SF		3	E		12		F
0036		02	16045	1611	1618	N12	W03	5062	07	2.4	14	SF	C 1.5				35	0.6	E
	SVTO	02	1604	1606U	1615	N12	W05	5062	07	2.3	11	SF	C 1.5	2	E		10		
	HOLL	02	1609	1611	1620	N12	W03	5062	07	2.4	11	SF	C 1.5	3	E		34		
	HTPR	02	1613E		1623D	N12	W02	5062	07	2.5	10D	SN			C	1613	60	0.6	E
0037	HOLL	02	1634	1635	1640	S16	W06	5060	07	2.2	6	SF		3	E		28		F
0038	HOLL	02	2022	2026	2039	N12	W08	5062	07	2.2	17	SF		4	E		13		F
0039		02	2026	20261	2034	S24	W11	5060	07	2.0	8	SF					14		F
	PALE	02	2026	2026	2033	S24	W12	5060	07	1.9	7	SF		3	E		14		F
	HOLL	02	2026	2027	2034	S23	W10	5060	07	2.1	8	SF		4	E		13		F
0040		02	2044	20451	2100	N13	W06	5062	07	2.4	16	SF	C 2.2				30		F
	PALE	02	2044	2045	2057	N13	W06	5062	07	2.4	13	SF	C 2.2	3	E		23		F
	HOLL	02	2044	2046	2103	N13	W06	5062	07	2.4	19	SF	C 2.2	4	E		37		F
0041		02	22101	2212	2218	S16	W16	5060	07	1.7	8	SF					14		F
	HOLL	02	2210	2212	2218	S16	W15	5060	07	1.8	8	SF		4	E		14		
	PALE	02	2211	2212	2218	S16	W16	5060	07	1.7	7	SF		3	E		14		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0042		02	22181	22181	2225	N12	W10	5062	07	2.2	7	SF						13		EF
	HOLL	02	2218	2218	2226	N12	W10	5062	07	2.2	8	SF			4	E		15		F
	PALE	02	2219	2219	2224	N12	W11	5062	07	2.1	5	SF			3	E		11		E
0043	LEAR	03	0002	0003	0008	S20	W11	5060	07	2.2	6	SF			4	E		17		
0044		03	00161	00181	0031	N12	W13	5062	07	2.0	15	SF	C	2.5				34		F
	PALE	03	0016	0018	0032	N13	W14	5062	07	1.9	16	SF	C	2.5	3	E		29		F
	HOLL	03	0016	0019	0029	N12	W12	5062	07	2.1	13	SF	C	2.5	4	E		30		F
	LEAR	03	0017	0019	0032	N12	W12	5062	07	2.1	15	SF	C	2.5	4	E		43		
0045		03	00425	00462	0056	S17	W14	5060	07	2.0	14	SF	C	2.5				48	1.4	DEF
	LEAR	03	0042	0046	0102	S17	W14	5060	07	2.0	20	SF	C	2.5	4	E		36		F
	PEKG	03	0043	0046	0055	S17	W15	5060	07	1.9	12	SN	C	2.5		C	0046	126	1.4	D
	HOLL	03	0045	0046	0054	S17	W13	5060	07	2.0	9	SF	C	2.5	4	E		18		FE
	PALE	03	0047	0048	0053	S16	W14	5060	07	2.0	6	SF	C	2.5	3	E		10		
0046		03	00545	00547	0102	N14	W13	5062	07	2.0	8	SF	C	1.8				36	1.0	EF
	HOLL	03	0054	0054	0105	N13	W10	5062	07	2.3	11	SF	C	1.8	4	E		21		F
	PEKG	03	0054	0055	0100	N16	W16	5062	07	1.8	6	SN	C	1.8		C	0055	92	1.0	E
	LEAR	03	0055	0055	0058	N15	W15	5062	07	1.9	3	SF	C	1.8	4	E		14		F
	PALE	03	0059	0101	0104	N14	W12	5062	07	2.1	5	SF			3	E		15		F
0047	LEAR	03	0216	0218	0232	S17	W16	5060	07	1.9	16	SF	C	1.8	4	E		16		F
0048		03	0343	03431	0354	N12	W15	5062	07	2.0	11	SF						19		F
	PALE	03	0343	0343	0348	N13	W15	5062	07	2.0	5	SF			3	E		11		F
	LEAR	03	0343	0344	0359	N12	W15	5062	07	2.0	16	SF			4	E		27		F
0049		03	04043	04072	0413	N16	W16	5062	07	1.9	9	SN	C	1.6				58	1.0	DFKTZ
	TACH	03	0404	0405U	0555D	N15	W17	5062	07	1.9	111D	SB				C	0405	100	1.1	FKTZ
	PALE	03	0407	0407	0410	N16	W16	5062	07	1.9	3	SF	C	1.6	3	E		13		
	LEAR	03	0407	0408	0416	N15	W16	5062	07	2.0	9	SF	C	1.6	4	E		31		F
	ABST	03	0407	0409	0412	N16	W17	5062	07	1.9	5	SN				C	0409	87	1.0	D
0050		03	04058	0414	0422	S18	W18	5060	07	1.8	17	SB						81	0.9	DT
	TACH	03	0405	0411U	0420	S21	W19	5060	07	1.7	15	SB				C	0411	75	0.8	DT
	ABST	03	0413	0414	0425	S16	W16	5060	07	2.0	12	SN				C	0414	87	1.0	D
0051	ABST	03	0449	0452	0503	N14	W18	5062	07	1.8	14	SN				C	0452	87	1.0	DJKT
0052	ABST	03	0508	0511	0525	N13	W12	5062	07	2.3	17	SN				C	0511	131	1.4	FKT
0053	RAMY	03	1247	1317	1344	N12	W22	5062	07	1.9	57	SF			3	E		73		F
0054		03	1359*	14181	1508	N12	W18	5062	07	2.2	69	SN	C	7.1				95		F
	RAMY	03	1359	1418	1519	N12	W20	5062	07	2.1	80	1N	C	7.1	3	E		123		
	SVTO	03	1418	1418	1454	N13	W18	5062	07	2.2	36	SF	C	7.1	3	E		82		
	HOLL	03	1418	1419	1512	N12	W15	5062	07	2.5	54	SN	C	7.1	4	E		81		F
0055	RAMY	03	1426	1427	1430	S20	W18	5060	07	2.2	4	SF			3	E		86		
0056	RAMY	03	1521	1537	1552	N13	W22	5062	07	2.0	31	SF			3	E		19		F
0057		03	1554*	1603*	1624	N13	W19	5062	07	2.2	30	SF	C	8.2				63		EF
	RAMY	03	1554	1603	1622	N13	W19	5062	07	2.2	28	SF	C	8.2	3	E		91		F
	SVTO	03	1557	1603	1614	N13	W20	5062	07	2.1	17	SF	C	8.2	3	E		77		
	HOLL	03	1557	1605	1633	N12	W17	5062	07	2.4	36	SN	C	8.2	4	E		65		FE
	RAMY	03	1625	1626	1628	N13	W19	5062	07	2.2	3	SF	C	2.2	3	E		18		F
0058	RAMY	03	1625	1629	1631	S25	W25	5060	07	1.7	6	SF			3	E		14		
0059	PALE	03	1707E		1712	S19	W37	5066	06	30.9	5D	SN			3	E		34		
0060		03	18521	18542	1912	N12	W20	5062	07	2.3	20	SF	C	1.3				24		
	HOLL	03	1852	1854	1910	N12	W20	5062	07	2.3	18	SF	C	1.3	3	E		27		
	PALE	03	1853	1856	1914	N13	W20	5062	07	2.3	21	SF	C	1.3	3	E		22		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0061		03	19161	1924	1943	N13	W20	5062	07	2.3	27	SF	C	2.8					64		
	PALE	03	1916	1924	1946	N13	W21	5062	07	2.2	30	SF	C	2.8	3	E			71		
	HOLL	03	1917	1924	1940	N13	W20	5062	07	2.3	23	SF	C	2.8	3	E			57		
0062		03	20231	2025	2035	N12	W22	5062	07	2.2	12	SF							30		
	PALE	03	2023	2025	2036	N13	W21	5062	07	2.3	13	SF			3	E			34		
	HOLL	03	2024	2025	2034	N11	W22	5062	07	2.2	10	SF			3	E			27		
0063		03	2146	2147	2158	N12	W20	5062	07	2.4	12	SN	C	5.8					71		F
	PALE	03	2146	2147	2158	N13	W22	5062	07	2.2	12	SN	C	5.8	3	E			76		F
	HOLL	03	2150E	2150U	2158	N12	W19	5062	07	2.5	8D	SF	C	5.8	3	E			66		F
0064	LEAR	04	0223	0225	0233	N13	W23	5062	07	2.4	10	SF	C	2.0	3	E			32		F
0065	ABST	04	0409	0412	0420	N12	W26	5062	07	2.2	11	SF				C	0412		174	2.0	FT
0066	ABST	04	0410	0411	0420	S26	W30	5060	07	1.8	10	SF				C	0411		87	1.2	DT
0067	LEAR	04	0525	0527	0538	S20	W32	5060	07	1.8	13	SF			3	E			21		F
0068	KAND	04	0830	0830	0836	N12	W29	5062	07	2.2	6	SN				P	0830		10	0.3	CD
0069	KAND	04	1133	1133	1138	S21	W41	5066	07	1.3	5	SN				P	1133		21	0.6	DIT
0070	RAMY	04	1221	1221	1229	S22	W39	5060	07	1.5	8	SF	C	1.5	3	E			15		
0071	RAMY	04	1705	1706	1711	S25	W39	5060	07	1.7	6	SF	C	1.0	3	E			39		
0072	HOLL	04	1732	1732	1748	S18	W38	5060	07	1.8	16	SF			3	E			19		F
		04	2210		2238	No Flare Patrol															
		04	2256		2400	No Flare Patrol															
		05	0000		0028	No Flare Patrol															
0073	PALE	05	0059	0101	0115	N13	W37	5062	07	2.2	16	SF	C	1.3	3	E			44		
		05	0229		0256	No Flare Patrol															
0074	PALE	05	0342	0344	0347	N11	W42	5062	07	2.0	5	SF			3	E			28		
0075	ABST	05	0431	0433	0440	S18	W54	5066	07	1.1	9	SN				C	0433		87	1.5	D
0076		05	06113	06141	0638	S15	W43	5060	07	2.0	27	1N							174	2.4	F
	KANZ	05	0611	0615	0642	S15	W42	5060	07	2.1	31	SF			1						
	ABST	05	0614	0614	0635	S15	W44	5060	07	1.9	21	1N				C	0615		174	2.4	F
0077		05	06297	0630*	0644	N13	W43	5062	07	2.0	15	SF	C	1.8					62	1.5	DK
	SVTO	05	0629	0630	0643	N10	W42	5062	07	2.1	14	SF	C	1.8	3	E			37		
	KANZ	05	0635E	0639	0642	N13	W43	5062	07	2.0	7D	SF			1						
	ABST	05	0636	0640	0646	N15	W43	5062	07	2.0	10	SN				C	0640		87	1.5	DK
0078		05	0738E		0752	S18	W42	5060	07	2.1	14D	SN							25	0.3	E
	HTPR	05	0738E		0752	S21	W41	5060	07	2.2	14D	SN				C	0741		10	0.1	
	HTPR	05	0738E		0925D	S16	W43	5060	07	2.0	107D	SF				C	0755		40	0.5	E
0079		05	10387	10441	1052	S20	W56	5066	07	1.1	14	SN							41	1.2	DE
	HTPR	05	1038	1044	1052	S20	W58	5066	07	1.0	14	SB				C	1044		80	1.5	E
	KANZ	05	1041	1045	1052	S18	W56	5066	07	1.2	11	SF			2						
	SVTO	05	1044	1044	1047	S21	W56	5066	07	1.1	3	SF			3	E			18		
	KHAR	05	1045		1054	S22	W55	5066	07	1.2	9	SN			2	V	1045				D
	KAND	05	1047E		1053	S20	W55	5066	07	1.2	6D	SN				P	1047		26	1.0	E
0080		05	12491	1252	1257	S20	W43	5060	07	2.2	8	SF	C	1.7					26	0.6	DIT
	KANZ	05	1249	1252	1256	S19	W43	5060	07	2.2	7	SF			2						
	KAND	05	1250	1252	1257	S21	W43	5060	07	2.2	7	SN				P	1252		21	0.6	DIT
	SVTO	05	1250	1252	1257	S21	W43	5060	07	2.2	7	SF	C	1.7	3	E			30		
0081		05	1317E	1350U	1357	S18	W45	5060	07	2.1	40D	SF							52	1.1	E
	HTPR	05	1317E		1403D	S16	W47	5060	07	2.0	46D	SF				C	1344		80	1.1	E
	RAMY	05	1350E	1350U	1357	S20	W43	5060	07	2.3	7D	SF			3	E			24		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0082		05	1411	14111	1418	S18	W60	5066	07	1.0	7	SF					20		
	RAMY	05	1411	1411	1417	S19	W61	5066	06	30.9	6	SF		3	E		15		
	KANZ	05	1411	1411	1419	S17	W60	5066	07	1.0	8	SF		2					
	HOLL	05	1411	1412	1418	S19	W58	5066	07	1.2	7	SF		3	E		26		
0083		05	14174	14215	1436	S19	W46	5060	07	2.1	19	SN	C 1.1				44	0.8	EK
	HTPR	05	1413E		1524D	S16	W47	5060	07	2.0	71D	SN			C	1508	80	1.1	E
	HOLL	05	1417	1421	1438	S20	W42	5060	07	2.4	21	SF	C 1.1	3	E		17		
	KANZ	05	1419	1423	1439	S19	W45	5060	07	2.2	20	SF		2					
	HTPR	05	1421	1421	1434	S20	W47	5060	07	2.0	13	SN			C	1421	40	0.6	EK
	HTPR	05	1421	1426	1434	S20	W47	5060	07	2.0	13	SN			C	1426	40	0.6	
0084	RAMY	05	1443	1452	1505	N13	W48	5062	07	2.0	22	SF		3	E		18		
0085		05	1531	1531	1552	S18	W47	5060	07	2.1	21	SN	C 1.3				24	0.4	E
	HTPR	05	1530E		1604	S20	W47	5060	07	2.0	34D	SN			C	1531	30	0.4	E
	HTPR	05	1530E		1637D	S16	W48	5060	07	2.0	67D	SN			C	1621	30	0.4	E
	RAMY	05	1531	1531	1539	S19	W46	5060	07	2.1	8	SF	C 1.3	3	E		12		
0086		05	16097	1613	1617	N13	W49	5062	07	2.0	8	SN					28	0.5	EF
	HTPR	05	1609		1637D	N13	W55	5062	07	1.5	28D	SB			C	1612	20	0.3	
	HOLL	05	1611	1613	1617	N12	W48	5062	07	2.0	6	SF		3	E		13		F
	HTPR	05	1616		1637D	N13	W45	5062	07	2.3	21D	SF			C	1623	50	0.7	E
0087	PALE	05	1932	1933	1949	S19	W54	5060	07	1.7	17	SF	C 1.7	3	E		33		
0088	PALE	05	2153	2155	2210	S15	W52	5060	07	2.0	17	1N	C 5.2	3	E		101		
0089	ABST	06	0436	0436	0440	S16	W48	5060	07	2.5	4	SN			C	0436	87	1.7	D
0090	ABST	06	0452	0455	0505	S21	W60	5060	07	1.6	13	SN			C	0455	87	1.7	D
0091	SVTO	06	0558	0602U	0610	N13	W72		06	30.8	12	SF		1	E		25		
0092	SVTO	06	0722	0725U	0735	N13	W72		06	30.9	13	SF		1	E		95		
0093	HTPR	06	0801	0804	0809	S17	W59	5060	07	1.8	8	SN			C	0804	60	1.2	E
0094	HTPR	06	0832	0848	0915	N12	W62	5062	07	1.7	43	SN			C	0848	20	0.4	
0095		06	0856	08583	0907	S15	W58	5060	07	2.0	11	SN					15	0.4	D
	KAND	06	0856	0858	0905	S16	W57	5060	07	2.0	9	SN			P	0858	10	0.4	D
	HTPR	06	0856	0901	0909	S14	W60	5060	07	1.8	13	SF			C	0901	20	0.4	
0096		06	10205	10251	1040	N13	W57	5062	07	2.1	20	SN	C 1.8				84	1.9	CDE
	KAND	06	1020		1035	N13	W57	5062	07	2.1	15	SB			P	1025	26	1.0	CD
	HTPR	06	1022	1026	1040	N13	W56	5062	07	2.2	18	1B			C	1026	160	2.7	E
	SVTO	06	1024	1026	1032	N12	W58	5062	07	2.1	8	SF	C 1.8	3	E		39		
	CATA	06	1025	1025	1044	N14	W57	5062	07	2.1	19	1B		2	P	1025	112	2.1	
	RAMY	06	1030E	1031U	1050	N13	W57	5062	07	2.1	20D	SF		2	E		85		
0097	RAMY	06	1030E	1031	1036	N48	E21		07	8.2	6D	SF		2	E		38		
0098	HTPR	06	1102E		1112	S16	W60	5060	07	1.9	10D	SF			C	1103	20	0.4	
0099		06	1132	1132	1138	N14	W58	5062	07	2.1	6	SF					12		
	RAMY	06	1132	1132	1137	N14	W57	5062	07	2.2	5	SF		3	E		12		
	KANZ	06	1134E	1134U	1138	N15	W58	5062	07	2.1	4D	SF		1					
0100		06	11497	11542	1214	S15	W59	5060	07	2.0	25	1N	C 1.8				91	2.8	EIT
	HTPR	06	1149	1154	1215	S15	W60	5060	07	1.9	26	1B			C	1154	130	2.6	E
	KAND	06	1155	1156	1210	S16	W60	5060	07	1.9	15	1B			P	1156	72	3.1	EIT
	RAMY	06	1156	1157U	1211	S16	W60	5060	07	1.9	15	SF	C 1.8	3	E		70		
	KANZ	06	1159E	1159U	1219	S13	W57	5060	07	2.2	20D	SF		1					
0101	KANZ	06	1159E	1159U	1203	N15	W56	5062	07	2.2	4D	SF		1					
0102		06	1257	12581	1300	S16	W61	5060	07	1.9	3	SN					15	0.4	D
	KAND	06	1257	1258	1259	S18	W60	5060	07	2.0	2	SF			P	1258	10	0.5	D
	HTPR	06	1257	1259	1301	S15	W62	5060	07	1.8	4	SB			C	1259	20	0.4	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0103		06	14365	14402	1458	S15	W62	5060	07	1.9	22	SF					23	0.6	E
	HTPR	06	1436	1442	1456	S15	W61	5060	07	2.0	20	SF			C	1442	30	0.6	E
	KANZ	06	1440	1440	1501	S14	W63	5060	07	1.8	21	SF		2					
	RAMY	06	1441	1441	1508D	S15	W62	5060	07	1.9	27D	SF		4	E		16		
0104	HOLL	06	1527	1532	1550D	S21	W59	5060	07	2.1	23D	SF	C 1.6	2	E		18		F
0105		06	1702	1703	1710	N12	W62	5062	07	2.0	8	SN	C 1.0				26	0.6	
	RAMY	06	1702	1703	1707	N12	W63	5062	07	2.0	5	SF	C 1.0	3	E		21		
	HTPR	06	1702	1703	1712	N13	W60	5062	07	2.2	10	SN			C	1703	30	0.6	
0106	HTPR	06	1704	1712	1720	S15	W61	5060	07	2.1	16	SF			C	1712	30	0.6	E
0107		06	1826	18272	1846	N21	E44	5069	07	10.1	20	SF					23		
	HOLL	06	1823E	1827	1849	N22	E45	5069	07	10.2	26D	SF		3	E		31		
	RAMY	06	1826	1829	1842	N20	E44	5069	07	10.1	16	SF		3	E		15		
0108		06	19521	19531	2004	N20	E43	5069	07	10.1	12	SF					14		
	RAMY	06	1952	1953	2024D	N20	E43	5069	07	10.1	32D	SF		3	E		14		
	PALE	06	1953	1954	2004	N21	E43	5069	07	10.1	11	SF		3	E		14		
0109		06	20243	20271	2040	N12	W64	5062	07	2.0	16	SF	C 1.4				40		
	RAMY	06	2024	2028	2042	N13	W64	5062	07	2.0	18	SF	C 1.4	3	E		48		
	HOLL	06	2027	2027	2038	N12	W63	5062	07	2.1	11	SF	C 1.4	3	E		31		
0110		06	20484	20541	2104	N12	W64	5062	07	2.0	16	SF					21		
	RAMY	06	2048	2055	2109D	N13	W64	5062	07	2.0	21D	SF		3	E		24		
	HOLL	06	2052	2054	2104	N12	W63	5062	07	2.1	12	SF		3	E		18		
0111		06	21152	21173	2129	S17	W66	5060	07	1.9	14	SF	C 1.0				51		H
	HOLL	06	2115	2117	2129	S19	W64	5060	07	2.0	14	SF	C 1.0	3	E		39		
	RAMY	06	2117	2120	2132D	S15	W67	5060	07	1.8	15D	SF	C 1.0	2	E		63		H
0112	PALE	06	2151	2154	2159	N22	E44	5069	07	10.3	8	SF		3	E		19		
0113		06	2203	2204	2210	N12	W64	5062	07	2.1	7	SF	C 1.4				45		F
	PALE	06	2203	2204	2208	N12	W65	5062	07	2.0	5	SF	C 1.4	3	E		44		
	HOLL	06	2203	2204	2213	N13	W63	5062	07	2.2	10	SF	C 1.4	3	E		46		F
		07	0139		0149	No Flare Patrol													
0114	HTPR	07	0527E		0538	N22	E30	5069	07	9.5	11D	SF			C	0532	60	0.7	
0115		07	05553	0558	0618	N13	W73	5062	07	1.7	23	SN	M 1.1				82		E
	HTPR	07	0555	0558	0635	N14	W70	5062	07	1.9	40	1B			C	0558	120		E
	TACH	07	0556	0558U	0633D	N12	W72	5062	07	1.8	37D	1N			C	0558	153		E
	SVTO	07	0558	0602U	0610	N13	W72	5062	07	1.8	12	SF	M 1.1	1	E		25		
	YUNN	07	0600E	0604U	0635D	N13	W76	5062	07	1.5	35D	SN	M 1.1		P	0604	32		
	KANZ	07	0605E	0605U	0609	N15	W75	5062	07	1.6	4D	SF		1					
0116		07	06524	06591	0704	N22	E39	5069	07	10.3	12	SN					80	1.0	E
	HTPR	07	0652	0659	0704	N22	E38	5069	07	10.2	12	SN			C	0659	80	1.0	E
	KANZ	07	0656	0700	0703	N22	E40	5069	07	10.4	7	SF		2					
0117		07	07175	07233	0747	N14	W73	5062	07	1.8	30	1N	M 3.3				123		EFU
	HTPR	07	0717	0723	0747	N14	W70	5062	07	2.0	30	2B			C	0723	310		EU
	LEAR	07	0722	0723	0744	N13	W73	5062	07	1.8	22	1F	M 3.3	2	E		119		F
	SVTO	07	0722	0725U	0735	N13	W72	5062	07	1.9	13	SF	M 3.3	1	E		95		
	KAND	07	0722	0725	0740	N14	W71	5062	07	1.9	18	SN			P	0725	42		E
	KANZ	07	0722	0726	0810	N15	W73	5062	07	1.8	48	1F		2					U
	YUNN	07	0727E	0729U	0745	N13	W79	5062	07	1.3	18D	SN	M 3.3		P	0729	48		
0118	HTPR	07	0937	0941	0945	N14	W70	5062	07	2.1	8	SF			C	0941	40		E
0119		07	09441	0945	0950	N13	E42	5069A	07	10.6	6	SN					57	0.8	E
	HTPR	07	0944	0945	0948	N13	E42	5069A	07	10.6	4	SF			C	0945	30	0.4	E
	CATA	07	0945	0945	0951	N13	E41	5069A	07	10.5	6	SN		2	C	0945	84	1.2	

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JULY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0120		07	11085	1110*	1125	N22	E36	5069	07	10.2	17	SF					35	0.4	E
	HTPR	07	1108	1110	1119	N22	E38	5069	07	10.4	11	SN			C	1110	40	0.5	
	KANZ	07	1110	1110	1118	N21	E37	5069	07	10.3	8	SF		2					
	HTPR	07	1113	1121	1137	N23	E34	5069	07	10.1	24	SF			C	1121	30	0.4	E
0121	RAMY	07	1154E	1154U	1216D	N14	W90		06	30.7	22D	SB		2	E				
0122		07	12224	12322	1243	N14	W74	5062	07	1.9	21	SN					50		
	HTPR	07	1222	1232	1238	N14	W73	5062	07	2.0	16	SB			C	1232	40		
	RAMY	07	1225	1233	1249	N13	W73	5062	07	2.0	24	SF		3	E		60		
	KANZ	07	1226	1234	1242	N14	W76	5062	07	1.8	16	SF		2					
0123		07	1238*	12557	1325	S15	W71	5060	07	2.1	47	SN					40	1.4	EK
	HTPR	07	1238	1255	1345	S15	W68	5060	07	2.4	67	SB			C	1300	60	1.4	EK
	HTPR	07	1238	1300	1345	S15	W68	5060	07	2.4	67	SB			C	1300	60	1.4	
	RAMY	07	1253	1302	1313	S15	W74	5060	07	1.9	20	SF		3	E		24		
	KANZ	07	1254	1258	1311	S14	W73	5060	07	2.0	17	SF		2					
	HOLL	07	1255	1259	1313	S15	W70	5060	07	2.2	18	SF		3	E		16		
0124	HTPR	07	1353	1404	1408	S15	W68	5060	07	2.4	15	SF			C	1404	60	1.4	E
0125	HTPR	07	1435	1436	1443	N13	E40	5069A	07	10.6	8	SF			C	1436	50	0.7	
0126		07	1437*	14448	1509	S16	W73	5060	07	2.1	32	SB	C 6.3				82	1.6	E
	HTPR	07	1437	1444	1505	S15	W68	5060	07	2.5	28	SB			C	1444	70	1.6	E
	RAMY	07	1438	1445	1513D	S16	W75	5060	07	1.9	35D	1N	C 6.3	3	E		123		
	SVTO	07	1440	1446U	1505	S19	W75	5060	07	1.9	25	SN	C 6.3	2	E		64		
	KANZ	07	1441	1445	1503	S13	W74	5060	07	2.0	22	SB		2					
	HOLL	07	1441	1445	1504	S16	W71	5060	07	2.2	23	1B	C 6.3	3	E		121		
	HTPR	07	1451	1452	1530	S14	W74	5060	07	2.0	39	SB			C	1452	30		E
0127		07	1442*	1442*	1502	N13	W74	5062	07	2.0	20	SF					44		
	HOLL	07	1442	1442	1446	N11	W72	5062	07	2.2	4	SF		3	E		14		
	KANZ	07	1452	1452	1507	N14	W76	5062	07	1.9	15	SN		2					
	HOLL	07	1452	1453	1513	N13	W75	5062	07	2.0	21	SF		3	E		64		
	RAMY	07	1452	1454	1501	N13	W71	5062	07	2.3	9	SF		3	E		55		
0128	HOLL	07	1454	1456	1505	N22	E75	5071	07	13.4	11	SF		3	E		14		
0129	KANZ	07	1527	1530	1538	N13	W74	5062	07	2.1	11	SF		2					
0130		07	15264	15303	1538	N21	E35	5069	07	10.3	12	SF	C 1.6				52	1.6	EH
	HTPR	07	1526	1532	1540	N23	E38	5069	07	10.6	14	SN			C	1532	120	1.6	E
	KANZ	07	1530	1530	1538	N21	E34	5069	07	10.2	8	SF		2					
	RAMY	07	1530	1532	1536	N21	E34	5069	07	10.2	6	SF	C 1.6	3	E		20		
	HOLL	07	1530	1533	1537	N21	E36	5069	07	10.4	7	SF	C 1.6	3	E		25		H
	SVTO	07	1531E	1532U	1537	N21	E33	5069	07	10.2	6D	SF	C 1.6	2	E		44		
0131		07	1701	1704	1722	S20	W74	5060	07	2.0	21	SF					30		F
	HOLL	07	1701	1704	1722	S20	W72	5060	07	2.2	21	SF		3	E		46		F
	RAMY	07	1704E	1704U	1707D	S19	W76	5060	07	1.9	3D	SF		2	E		13		
0132	HOLL	07	1711	1712	1717	N13	W76	5062	07	2.0	6	SF	C 1.1	3	E		16		
0133		07	17401	17421	1810	N14	W77	5062	07	1.9	30	SN	C 1.3				34		E
	HTPR	07	1740	1742	1819	N14	W78	5062	07	1.8	39	SN			C	1742	30		E
	HOLL	07	1741	1743	1801	N13	W76	5062	07	2.0	20	SF	C 1.3	3	E		39		
0134		07	18116	18176	1827	N21	E30	5069	07	10.0	16	SF					27	0.4	E
	HTPR	07	1811	1820	1826	N22	E31	5069	07	10.1	15	SF			C	1820	40	0.4	E
	RAMY	07	1816	1817	1828	N21	E30	5069	07	10.1	12	SF		3	E		26		
	HOLL	07	1817	1823	1828	N21	E30	5069	07	10.1	11	SF		3	E		15		
0135		07	18403	1846	1858	N14	W75	5062	07	2.1	18	SF					24		
	HOLL	07	1840	1846	1858	N14	W73	5062	07	2.3	18	SF		3	E		30		
	RAMY	07	1843	1846	1915D	N13	W77	5062	07	2.0	32D	SF		2	E		19		
0136	RAMY	07	2050	2108	2120D	N12	W80	5062	07	1.8	30D	SF		2	E		26		
		07	2247		2253	No Flare Patrol													

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0137	LEAR	08	0055	0102	0106	N13	W81	5062	07	1.9	11	SF		3	E		19		
0138	LEAR	08	0121	0127	0131	N13	W82	5062	07	1.9	10	SF		4	E		23		
0139	LEAR	08	0335	0335	0343	S13	W80	5060	07	2.1	8	SF	C 9.4	4	E		19		
0140	LEAR	08	0347E	0347U	0350D	N22	E25	5069	07	10.1	3D	SF		2	E		24		
0141	HTPR	08	0615	0617	0621	N15	W90	5062	07	1.4	6	SF			C	0617	20		
0142		08	0708	07101	0722	N21	E22	5069	07	10.0	14	SN					42	0.6	DE
	HTPR	08	0708	0710	0727	N21	E20	5069	07	9.8	19	SB			C	0710	40	0.4	E
	LEAR	08	0708	0711	0721	N21	E24	5069	07	10.1	13	SF		3	E		15		
	KHAR	08	0710E		0718	N22	E22	5069	07	10.0	8D	SF		2	P	0714	70	0.7	D
0143	SVTO	08	0745	0747	0755	N23	E23	5069	07	10.1	10	SF		3	E		12		
0144		08	07532	07551	0807	S19	W86	5060	07	1.8	14	SN	M 1.1				67		EH
	KHAR	08	0753	0756	0805	S19	W90	5060	07	1.5	12	SN		2	P	0756			H
	SVTO	08	0754	0755	0801	S23	W88	5060	07	1.5	7	SF	M 1.1	3	E		46		
	LEAR	08	0754	0756	0808	S20	W82	5060	07	2.0	14	SN	M 1.1	3	E		76		
	HTPR	08	0754	0756	0810	S17	W90	5060	07	1.5	16	1B			C	0756	80		E
	KANZ	08	0755	0755	0809	S17	W79	5060	07	2.3	14	SN		2					
0145		08	09343	09356	0956	N22	E23	5069	07	10.2	22	SN	C 7.4				92	1.2	EH
	HTPR	08	0934	0938	1004	N21	E20	5069	07	9.9	30	SB			C	0938	70	0.7	E
	CATA	08	0935	0935	0940D	N22	E25	5069	07	10.3	5D	SB		2	P	0935	141	1.7	
	KANZ	08	0936	0936	0956	N23	E25	5069	07	10.3	20	SN		2					
	SVTO	08	0936	0941	0951	N23	E24	5069	07	10.2	15	SN	C 7.4	3	E		64		
	KHAR	08	0937	0941	0955	N22	E22	5069	07	10.1	18	SN		2	V	0941			H
0146		08	11407	11558	1224	N13	W88	5062	07	1.8	44	1B	M 4.4				250		E
	HTPR	08	1140		1205D	N15	W90	5062	07	1.7	25D	2B			C	1149	250		
	KAND	08	1146	1203	1226	N14	W85	5062	07	2.1	40	SB			P				E
	SVTO	08	1147	1155	1222	N11	W90	5062	07	1.7	35	SN	M 4.4	3	E				
0147		08	13063	13092	1315	S17	W90	5060	07	1.7	9	SN					26		
	HTPR	08	1306	1310	1317	S18	W90	5060	07	1.7	11	SB			C	1310	20		
	HOLL	08	1308	1309	1314	S18	W89	5060	07	1.8	6	SF		3	E		32		
	RAMY	08	1309	1311	1313	S16	W90	5060	07	1.7	4	SF		3	E				
0148	HTPR	08	1310	1315	1327	N15	W90	5062	07	1.7	17	SF			C	1315	20		
0149		08	13589	14093	1424	N22	E21	5069	07	10.2	26	SN	C 3.4				50	0.6	EF
	HOLL	08	1358	1412	1427	N22	E22	5069	07	10.3	29	SF	C 3.4	3	E		47		FE
	RAMY	08	1407	1409	1425	N22	E22	5069	07	10.3	18	SF	C 3.4	3	E		44		
	HTPR	08	1407	1411	1420	N22	E18	5069	07	10.0	13	SB			C	1411	60	0.6	E
0150	HTPR	08	1444	1447	1455	N20	E10	5069	07	9.4	11	SF			C	1447	40	0.4	E
0151		08	15383	15412	1548	N14	W90	5062	07	1.8	10	SN	C 4.7				30		
	HTPR	08	1538	1541	1550	N15	W90	5062	07	1.8	12	SB			C	1541	30		
	RAMY	08	1540	1541	1546	N14	W91	5062	07	1.8	6	SF		3	E				
	HOLL	08	1540	1542	1546	N14	W90	5062	07	1.8	6	SF	C 4.7	3	E		30		
	SVTO	08	1541	1543	1549	N11	W90	5062	07	1.9	8	SF	C 4.7	2	E				
0152		08	16042	16063	1614	N14	W90	5062	07	1.9	10	SN	C 7.3				44		
	SVTO	08	1604	1606	1614	N12	W90	5062	07	1.9	10	SF	C 7.3	2	E				
	HOLL	08	1605	1607	1613	N13	W90	5062	07	1.9	8	SF	C 7.3	3	E		68		
	HTPR	08	1605	1609	1615	N15	W90	5062	07	1.8	10	SB			C	1609	40		
	RAMY	08	1606	1607	1613	N14	W89	5062	07	1.9	7	SF	C 7.3	3	E		24		
0153		08	16411	16431	1648	N14	W90	5062	07	1.9	7	SN	C 3.4				32		
	RAMY	08	1641	1643	1647	N14	W90	5062	07	1.9	6	SF	C 3.4	3	E		40		
	HTPR	08	1641	1643	1648	N15	W90	5062	07	1.9	7	SB			C	1643	20		
	HOLL	08	1642	1643	1649	N14	W90	5062	07	1.9	7	SF	C 3.4	3	E		35		
	SVTO	08	1642	1644	1648	N12	W90	5062	07	1.9	6	SF	C 3.4	2	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	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0154		08	17151	1717	1729	N14	W90	5062		07	1.9	14	SN	C	1.4				43		
	HOLL	08	1715	1717	1728	N13	W91	5062		07	1.8	13	SN	C	1.4	3	E		59		
	RAMY	08	1716	1717	1725	N14	W90	5062		07	1.9	9	SF	C	1.4	3	E		49		
	HTPR	08	1716	1717	1735	N15	W90	5062		07	1.9	19	SB				C	1717	20		
0155		08	17461	17503	1805	N14	W90	5062		07	1.9	19	1N						156		
	HOLL	08	1746	1750	1806	N14	W90	5062		07	1.9	20	1N			3	E		166		
	HTPR	08	1746	1753	1805	N15	W90	5062		07	1.9	19	1B				C	1753	150		
	RAMY	08	1747	1750	1805	N14	W89	5062		07	2.0	18	1N			3	E		153		
0156		08	17532	17562	1808	N20	E20	5069		07	10.3	15	SN						23	0.3	E
	HTPR	08	1753	1756	1810	N20	E20	5069		07	10.3	17	SB				C	1756	30	0.3	E
	RAMY	08	1755	1758	1805	N20	E19	5069		07	10.2	10	SF			3	E		16		
0157		08	1816	18161	1824	N22	E19	5069		07	10.2	8	SF						24		F
	RAMY	08	1816	1816	1822	N23	E19	5069		07	10.2	6	SF			3	E		28		F
	HOLL	08	1816	1817	1826	N22	E19	5069		07	10.2	10	SF			3	E		21		
0158	RAMY	08	1829	1831	1835	N22	E19	5069		07	10.2	6	SF			3	E		32		
0159		08	20281	20281	2032	N14	W90	5062		07	2.0	4	SF						24		
	HOLL	08	2028	2028	2031	N13	W91	5062		07	2.0	3	SF			3	E		23		
	RAMY	08	2029	2029	2033	N14	W90	5062		07	2.0	4	SF			3	E		24		
0160		08	21001	21013	2113	N20	E16	5069		07	10.1	13	SF						14		
	PALE	08	2100	2104	2118	N21	E16	5069		07	10.1	18	SF			3	E		18		
	RAMY	08	2101	2101	2108	N20	E17	5069		07	10.2	7	SF			3	E		11		
0161	LEAR	09	0109	0110	0121	N20	E13	5069		07	10.0	12	SF			3	E		28		
0162	LEAR	09	0339	0340	0343	N20	E13	5069		07	10.1	4	SF			3	E		14		
0163	LEAR	09	0357	0357	0402	N25	E55	5071		07	13.4	5	SF			3	E		11		
0164	HTPR	09	0607		0628D	N22	E06	5069		07	9.7	21D	SF				C	0617	50	0.5	E
0165	KHAR	09	0648		0655	N22	E08	5069		07	9.9	7	SF			2	P	0648			EL
0166		09	07163	07197	0741	N22	E12	5069		07	10.2	25	SN	C	6.8				103	1.5	EF
	KHAR	09	0716	0719	0738	N22	E12	5069		07	10.2	22	SN			2	V	0719			
	HTPR	09	0716	0719	0747	N22	E12	5069		07	10.2	31	SB				C	0719	180	1.8	E
	KAND	09	0717	0719	0740	N23	E12	5069		07	10.2	23	SB				P	0719	42	0.9	EF
	SVTO	09	0718	0719	0736	N22	E12	5069		07	10.2	18	SF	C	6.8	3	E		57		F
	LEAR	09	0718	0721	0742	N22	E13	5069		07	10.3	24	SN	C	6.8	3	E		67		F
	KANZ	09	0719	0719	0743	N22	E12	5069		07	10.2	24	SN			2					E
	CATA	09	0726E	0726	0742	N21	E14	5069		07	10.4	16D	SB			2	P	0726	169	1.9	
0167		09	09348	0938	0950	N15	W90	5062		07	2.6	16	SN						20		DR
	HTPR	09	0934	0938	0946	N15	W90	5062		07	2.6	12	SN				C	0938	20		
	KHAR	09	0942		0955	N15	W90	5062		07	2.6	13	SF			2	V	0942			DR
0168		09	09431	09473	1008	N21	E02	5069		07	9.5	25	SN						53	0.6	H
	HTPR	09	0943	0947	1008	N20	E01	5069		07	9.5	25	SN				C	0947	50	0.5	
	KHAR	09	0944		1003D	N22	E03	5069		07	9.6	19D	SF			2	V	0948			H
	CATA	09	0950E	0950	1007	N20	E01	5069		07	9.5	17D	SB			2	P	0950	56	0.6	
0169		09	10162	10183	1030	N22	E10	5069		07	10.2	14	SN	C	1.9				61	1.0	EF
	HTPR	09	1016	1021	1035	N22	E10	5069		07	10.2	19	SN				C	1021	100	1.0	E
	SVTO	09	1018	1018	1026	N22	E10	5069		07	10.2	8	SF	C	1.9	3	E		22		F
0170		09	1139*	13202	1336	N22	E09	5069		07	10.2	117	SF	C	2.0				26	0.3	EF
	RAMY	09	1139	1320	1344	N21	E09	5069		07	10.2	125	SF	C	2.0	3	E		35		F
	HTPR	09	1310	1320	1333	N22	E10	5069		07	10.3	23	SN				C	1320	30	0.3	E
	SVTO	09	1321	1322	1330	N23	E08	5069		07	10.2	9	SF	C	2.0	3	E		12		
0171		09	13538	13585	1404	N23	E04	5069		07	9.9	11	SF						22	0.3	
	RAMY	09	1353	1358	1401	N21	E08	5069		07	10.2	8	SF			3	E		13		
	HTPR	09	1401	1403	1407	N25	E01	5069		07	9.7	6	SF				C	1403	30	0.3	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0172		09	14093	14192	1513	N22	E08	5069	07	10.2	64	SF							26	0.2	F
	HTPR	09	1409	1421	1515	N22	E07	5069	07	10.1	66	SF				C		1421	20	0.2	
	RAMY	09	1412	1419	1511	N21	E08	5069	07	10.2	59	SF			3	E			32		F
0173	RAMY	09	1536	1558	1605	N21	E07	5069	07	10.2	29	SF			3	E			12		
0174	RAMY	09	1637	1639	1644	N22	E04	5069	07	10.0	7	SF			3	E			18		F
0175		09	1703*	1707*	1740	N21	E04	5069	07	10.0	37	SF							28	0.6	EF
	HTPR	09	1703	1707	1800	N22	E02	5069	07	9.9	57	SF				C		1707	60	0.6	E
	RAMY	09	1705	1707	1723	N21	E06	5069	07	10.2	18	SF			3	E			12		F
	RAMY	09	1728	1732	1736	N21	E05	5069	07	10.1	8	SF			3	E			12		F
0176		09	1736*	1759	1806	N16	E08	5069	07	10.3	30	SF							40	0.5	EF
	HTPR	09	1736		1817D	N15	E07	5069	07	10.3	41D	SF				C		1746	50	0.5	E
	RAMY	09	1755	1759	1806	N16	E10	5069	07	10.5	11	SF			3	E			29		F
0177	RAMY	09	1904	1911	1920	N20	E02	5069	07	9.9	16	SF			3	E			14		
		09	2019		2023	No Flare Patrol															
0178	HOLL	09	2131	2133	2140	N24	E50	5071	07	13.7	9	SF			3	E			40		
0179	PALE	09	2316	2318	2324	N28	E38	5073	07	12.9	8	SF	C	1.5	3	E			45		F
0180		09	23391	23431	2419	N22	E01	5069	07	10.1	40	1N	M	1.6					134		F
	PALE	09	2339	2343	2425	N24	E01	5069	07	10.1	46	1N			3	E			158		F
	LEAR	09	2340	2344	2413	N20	E01	5069	07	10.1	33	1N	M	1.6	3	E			111		F
0181		10	04517	04554	0510	N22	W02	5069	07	10.0	19	SN	C	1.3					106	1.7	EF
	TACH	10	0451	0455	0511	N23	W02	5069	07	10.0	20	SB				C		0455	133	1.5	F
	ABST	10	0456	0459	0511	N22	W02	5069	07	10.0	15	SF				C		0459	174	1.9	E
	LEAR	10	0458	0458	0508	N21	W01	5069	07	10.1	10	SF	C	1.3	3	E			12		
0182		10	0634*	0654*	0742	N21	W04	5069	07	10.0	68	1N	C	5.3					210	3.0	EF
	LEAR	10	0634	0654	0743	N21	W04	5069	07	10.0	69	1F	C	5.3	3	E			125		F
	ABST	10	0652	0654	0656D	N22	W05	5069	07	9.9	4D	1N				P		0654	271	2.9	F
	CATA	10	0652E	0655	0711D	N22	W03	5069	07	10.0	19D	1B			2	P		0655	337	3.7	
	SVTO	10	0652	0655	0744	N21	W04	5069	07	10.0	52	SF	C	5.3	3	E			91		F
	KANZ	10	0654	0654	0740	N21	W04	5069	07	10.0	46	SF			2						E
	KHAR	10	0657E		0739D	N22	W03	5069	07	10.0	42D	1F			2	V		0657			E
	CATA	10	0721E	0724	0751D	N21	W04	5069	07	10.0	30D	1B			2	P		0724	225	2.4	
0183		10	0803	08052	0820	N22	W02	5069	07	10.2	17	SF							15		E
	LEAR	10	0803	0805	0815	N21	W02	5069	07	10.2	12	SF			3	E			11		
	SVTO	10	0803	0806	0818	N23	W01	5069	07	10.2	15	SF			3	E			19		
	KANZ	10	0803	0807	0818	N21	W03	5069	07	10.1	15	SF			2						
	KHAR	10	0805E		0830	N22	W03	5069	07	10.1	25D	1F			2	V					E
0184		10	1137	1145	1150	N21	W07	5069	07	9.9	13	SF							26		F
	SVTO	10	1137	1145	1150	N21	W07	5069	07	9.9	13	SF			3	E			16		
	RAMY	10	1142E	1142U	1150	N21	W07	5069	07	9.9	8D	SF			2	E			35		F
0185	RAMY	10	1159	1202	1205	N21	W05	5069	07	10.1	6	SF			3	E			10		
0186	RAMY	10	1217	1221	1246	N27	E30	5073	07	12.8	29	SF			3	E			16		F
0187		10	20221	20264	2102	N22	W08	5069	07	10.2	40	SF							66		F
	RAMY	10	2022	2030	2100	N22	W07	5069	07	10.3	38	SF			3	E			62		F
	PALE	10	2023	2026	2105	N22	W09	5069	07	10.1	42	SF			3	E			71		F
0188	HOLL	11	0021	0023	0048	N22	W11	5069	07	10.2	27	SF			4	E			21		F
0189		11	0029	0038U	0102	S16	E90	5074	07	17.8	33	1B	M	2.7					126		
	HOLL	11	0029	0039U	0052	S17	E89	5074	07	17.8	23	1B	M	2.7	4	E			153		
	LEAR	11	0033E	0038U	0112	S15	E90	5074	07	17.8	39D	SN	M	2.7	3	E			98		
0190	PALE	11	0040E		0046D	S18	E89	5074	07	17.8	6D	1B	M	2.7	3	E			188		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0191	KANZ	11	0642	0650	0700	N23	W13	5069	07	10.3	18	SF			2					
0192	KANZ	11	1010	1014	1018	S14	E74	5074	07	17.0	8	SF			2					
0193	SVTO	11	1031	1041	1047	N21	W17	5069	07	10.1	16	SF			3	E		12		
0194		11	1126	1126	1132	N24	E28	5071	07	13.6	6	SF	C	2.7				48		
	SVTO	11	1126	1126	1132	N24	E25	5071	07	13.4	6	SF	C	2.7	3	E		48		
	KANZ	11	1126	1126	1133	N23	E30	5071	07	13.8	7	SF			2					
0195	HOLL	11	1441E	1442	1452	N24	W20	5069	07	10.1	11D	SF			3	E		17		
0196		11	16268	16351	1647	N22	W19	5069	07	10.2	21	SF						27		F
	RAMY	11	1626	1635	1656D	N21	W17	5069	07	10.4	30D	SF			2	E		30		F
	HOLL	11	1634	1636	1647	N22	W21	5069	07	10.1	13	SF			3	E		24		
0197	HOLL	11	1923	1924	1948	N21	W23	5069	07	10.0	25	SF	C	1.2	3	E		38		F
0198	HOLL	11	2258	2301	2308	S22	E73	5075	07	17.6	10	SF			3	E		34		F
0199	HTPR	12	0555	0555	0601	S20	E78	5075	07	18.2	6	SF				C	0555	30		
0200		12	06592	07041	0717	N27	E15	5071	07	13.4	18	SN						74	0.8	D
	HTPR	12	0659	0705	0719	N28	E15	5071	07	13.5	20	SN				C	0705	60	0.7	
	ABST	12	0701	0704	0715	N26	E15	5071	07	13.4	14	SN				C	0704	87	1.0	D
0201		12	07154	07202	0735	N28	E04	5073	07	12.6	20	SN						68	0.8	EF
	HTPR	12	0715	0722	0745	N27	E03	5073	07	12.5	30	SN				C	0722	50	0.5	E
	ABST	12	0719	0720	0725	N30	E06	5073	07	12.8	6	SN				C	0720	87	1.0	F
0202		12	0646*	0656*	0822	S24	E79	5075	07	18.4	96	1N						58		DK
	HTPR	12	0646	0656	0822	S26	E78	5075	07	18.3	96	SF				C	0656	30		K
	ABST	12	0724	0726	0730D	S22	E80	5075	07	18.4	6D	1N				C	0726	87		D
0203		12	07391	07404	0750	S15	E62	5074	07	17.0	11	1N						102	2.2	E
	HTPR	12	0739	0744	0750	S14	E62	5074	07	17.0	11	1F				C	0744	120	2.4	E
	CATA	12	0740	0740	0750D	S16	E63	5074	07	17.1	10D	1N			2	P	0740	84	2.1	
0204	HTPR	12	0825	0828	0835	N28	E07	5073	07	12.9	10	SF				C	0828	20	0.2	E
0205	HTPR	12	1055	1110	1117	S20	E68	5075	07	17.6	22	SN				C	1110	30	0.7	E
0206	HTPR	12	1308	1320	1340	S14	E72	5074	07	18.0	32	SF				C	1320	30		
0207	HTPR	12	1444	1448	1500	S20	E70	5075	07	18.0	16	SF				C	1448	30		E
0208		12	14466	14563	1529	N24	E07	5071	07	13.1	43	SN	C	2.5				102	1.6	EFK
	HOLL	12	1446	1459	1534	N25	E11	5071	07	13.5	48	1N	C	2.5	3	E		103		E
	RAMY	12	1447	1457	1540	N24	E11	5071	07	13.5	53	SN	C	2.5	3	E		97		E
	HTPR	12	1450	1456	1520	N22	W03	5071	07	12.4	30	SB				C	1456	160	1.6	EK
	SVTO	12	1452	1458	1521	N24	E10	5071	07	13.4	29	SF	C	2.5	3	E		47		F
0209		12	15505	15552	1617	S22	E72	5075	07	18.2	27	SF						34		E
	HTPR	12	1550	1555	1605	S22	E68	5075	07	17.9	15	SF				C	1555	50		E
	HOLL	12	1553	1556	1622	S21	E74	5075	07	18.3	29	SF			3	E		24		
	RAMY	12	1555	1557	1624	S23	E75	5075	07	18.4	29	SF			3	E		28		
0210		12	16502	16528	1717	S21	E71	5075	07	18.1	27	SF						32		
	HTPR	12	1650	1700	1715	S21	E68	5075	07	17.9	25	SF				C	1700	40		
	HOLL	12	1652	1652	1719	S21	E74	5075	07	18.4	27	SF			3	E		23		
0211	HOLL	12	1740	1741	1752	N22	E12	5071	07	13.6	12	SF			3	E		13		
0212		12	1732	1821	1829	S20	E68	5075	07	17.9	57	SF						42		E
	HTPR	12	1732		1813D	S21	E67	5075	07	17.9	41D	SF				C	1753	50		E
	HOLL	12	1810E	1821	1829	S18	E69	5075	07	18.0	19D	SF			3	E		33		
0213	HOLL	12	1815	1816	1827	N24	E10	5071	07	13.5	12	SF			3	E		37		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0214	HOLL	12	1849	1851	1859	N27	E10	5071	07	13.6	10	SF			3	E		11		
0215	HOLL	12	1909	1915	2014	N30	E03	5073	07	13.0	65	SF	C	2.4	3	E		48		F
0216	HOLL	12	2125	2129	2137	S20	E70	5075	07	18.2	12	SF			3	E		23		
0217	HOLL	12	2133	2137	2159	N22	E06	5071	07	13.3	26	SF			4	E		35		E
		12	2233		2241	No Flare Patrol														
0218	HOLL	12	2301	2309	2337	N24	E05	5071	07	13.3	36	SF			3	E		38		
0219	HOLL	12	2312	2318	2331	S21	E69	5075	07	18.2	19	SN			4	E		44		
0220	HOLL	13	0023	0023	0037	N22	E05	5071	07	13.4	14	SF			3	E		18		
0221		13	00291	0031	0113	N29	W03	5073	07	12.8	44	1N	M	1.1				262	4.8	EF
	YUNN	13	0025E	0039U	0039D	N30	W04	5073	07	12.7	14D	1B	M	1.1		P	0039	402	4.6	
	HOLL	13	0029	0031	0125	N29	W02	5073	07	12.9	56	1B	M	1.1	3	E		191		F
	PALE	13	0030	0031	0053	N28	W03	5073	07	12.8	23	1F	M	1.1	3	E		157		
	LEAR	13	0030	0031	0104	N28	W02	5073	07	12.9	34	1N	M	1.1	3	E		120		F
	PEKG	13	0033E	0033U	0131	N29	W02	5073	07	12.9	58D	1B				C	0033	442	5.0	E
0222		13	00255	00351	0048	S22	E69	5075	07	18.3	23	SN						73		D
	HOLL	13	0025	0036	0045	S21	E69	5075	07	18.3	20	SN			3	E		61		
	YUNN	13	0030	0035	0048	S20	E68	5075	07	18.2	18	1B				C		161		
	PALE	13	0030	0035	0049	S22	E68	5075	07	18.2	19	SF			3	E		48		
	LEAR	13	0030	0036	0050	S23	E67	5075	07	18.2	20	SF			3	E		65		
	PEKG	13	0033E			S23	E71	5075	07	18.5	D	SF				P	0033	29		D
0223	LEAR	13	0103	0107	0112	S20	E68	5075	07	18.2	9	SF			3	E		26		
0224		13	01061	0108	0118	N22	E05	5071	07	13.4	12	SN						52	1.1	DF
	HOLL	13	0106	0108	0118	N21	E04	5071	07	13.3	12	SF			3	E		39		F
	PEKG	13	0107E	0107U	0123	N21	E05	5071	07	13.4	16D	SB				C	0107	105	1.1	D
	PALE	13	0107	0108	0112	N23	E06	5071	07	13.5	5	SF			3	E		13		
0225		13	01366	01441	0150	S22	E68	5075	07	18.3	14	SN						40		D
	PEKG	13	0132E	0137U		S23	E69	5075	07	18.4	D	SB				P	0137	50		D
	LEAR	13	0136	0144	0150	S22	E66	5075	07	18.1	14	SF			3	E		45		
	PALE	13	0142	0145	0149	S21	E68	5075	07	18.3	7	SF			3	E		24		
0226	LEAR	13	0156	0159	0206	S23	E66	5075	07	18.2	10	SF			3	E		34		
0227	TACH	13	0356	0400U	0413	N22	E02	5071	07	13.3	17	SN				C	0400	82	0.9	EI
0228		13	0425*	0430	0458	N28	W04	5073	07	12.9	33	1N	C	7.3				199	3.2	EI
	TACH	13	0425	0430U	0510	N28	W02	5073	07	13.0	45	1B				C	0430	306	3.4	I
	PEKG	13	0428	0430	0459	N29	W05	5073	07	12.8	31	1B	C	7.3		C	0430	252	2.9	E
	SVTO	13	0438	0441U	0446	N28	W04	5073	07	12.9	8	SF	C	7.3	2	E		40		
0229	PEKG	13	0426	0430	0437	S19	E67	5075	07	18.3	11	SF				C	0430	46		E
0230	PEKG	13	0444	0446	0448	S22	E65	5075	07	18.2	4	SF				C	0446	42		D
0231	PEKG	13	0528	0535	0536D	S23	E68	5075	07	18.5	8D	SF	C	1.6		C	0535	67		D
0232		13	06103	06134	0624	N22	E00	5071	07	13.2	14	SN	C	2.3				77	1.1	EF
	HTPR	13	0610	0617	0622	N20	W02	5071	07	13.1	12	SB				C	0617	80	0.8	E
	LEAR	13	0612	0616	0626D	N24	E02	5071	07	13.4	14D	SN	C	2.3	3	E		56		
	SVTO	13	0613	0613	0622	N21	E01	5071	07	13.3	9	SF	C	2.3	3	E		41		
	ABST	13	0613	0617	0628	N22	E01	5071	07	13.3	15	SN				C	0617	131	1.4	F
0233	HTPR	13	0810	0812	0820	S20	E59	5075	07	17.8	10	SN				C	0812	20	0.4	
0234		13	08462	08474	0902	N28	W08	5073	07	12.7	16	SN						106	1.2	D
	HTPR	13	0846	0849	0908	N27	W08	5073	07	12.7	22	SN				C	0849	80	0.9	
	KANZ	13	0847	0847	0854	N30	W07	5073	07	12.8	7	SF			2					
	ABST	13	0848	0851	0903	N28	W09	5073	07	12.7	15	SN				C	0851	131	1.4	D

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0235	HTPR	13	0947	0947	0953	S20	E60	5075	07	18.0	6	SF				C	0947	20	0.4	
0236		13	1325	13282	1342	S22	E60	5075	07	18.2	17	SF						24		
	HOLL	13	1325	1328	1339	S22	E61	5075	07	18.2	14	SF			3	E		28		
	RAMY	13	1325	1330	1345	S22	E60	5075	07	18.2	20	SF			3	E		20		
0237	RAMY	13	1354	1359	1402	S22	E60	5075	07	18.2	8	SF			3	E		20		
0238		13	16051	1607	1627	N28	W10	5073	07	12.9	22	SN	C	1.7				56	0.8	E
	HTPR	13	1605	1607	1620	N27	W08	5073	07	13.0	15	SB				C	1607	70	0.8	E
	RAMY	13	1606	1607	1621	N28	W11	5073	07	12.8	15	SF	C	1.7	3	E		39		
	HOLL	13	1606	1607	1639	N28	W11	5073	07	12.8	33	SN	C	1.7	3	E		58		E
0239		13	16351	1636	1651	N23	W46	5069	07	10.1	16	SN						36	0.6	EF
	HTPR	13	1635	1636	1650	N23	W45	5069	07	10.2	15	SN				C	1636	40	0.6	E
	HOLL	13	1636	1636	1652	N23	W48	5069	07	10.0	16	SF			3	E		32		F
0240		13	16491	1651	1741	S20	E59	5075	07	18.2	52	SF						26	0.6	E
	RAMY	13	1649	1651	1741	S20	E58	5075	07	18.1	52	SF			3	E		21		
	HTPR	13	1650		1715D	S21	E60	5075	07	18.3	25D	SF				C	1650	30	0.6	E
0241		13	1741	17417	1801	N23	W04	5071	07	13.4	20	SF						54		F
	RAMY	13	1741	1741	1955D	N22	W06	5071	07	13.3	134D	SF			3	E		28		F
	HOLL	13	1741	1748	1801	N24	W03	5071	07	13.5	20	SF			3	E		80		F
0242		13	20092	20102	2025	N22	W51	5069	07	9.9	16	SF						24		F
	HOLL	13	2009	2010	2031	N22	W49	5069	07	10.1	22	SF			4	E		30		F
	PALE	13	2011	2012	2019	N22	W53	5069	07	9.8	8	SF			3	E		18		
0243		13	20101	20111	2024	N28	W14	5073	07	12.7	14	SN	C	2.5				46		F
	HOLL	13	2010	2011	2026	N29	W14	5073	07	12.7	16	SN	C	2.5	4	E		39		F
	PALE	13	2011	2012	2022	N28	W14	5073	07	12.7	11	SF	C	2.5	3	E		52		F
0244		13	2051*	20549	2104	N28	W14	5073	07	12.8	13	SF						34		
	PALE	13	2051	2054	2058	N29	W15	5073	07	12.7	7	SF			3	E		48		
	HOLL	13	2051	2054	2110D	N29	W14	5073	07	12.8	19D	SF			3	E		44		
	RAMY	13	2052	2054	2110	N28	W13	5073	07	12.8	18	SF			3	E		13		
	PALE	13	2102	2103	2104	N28	W14	5073	07	12.8	2	SF			3	E		33		
0245		13	2153	21531	2200	N21	W08	5071	07	13.3	7	SF						24		E
	PALE	13	2153	2153	2157	N21	W08	5071	07	13.3	4	SF			3	E		14		
	HOLL	13	2153	2154	2203	N21	W07	5071	07	13.4	10	SF			3	E		34		E
0246	HOLL	13	2211	2212	2225	N29	W16	5073	07	12.7	14	SF			3	E		12		
0247	HOLL	13	2252	2313	2331	N29	W15	5073	07	12.8	39	SF			4	E		47		
0248	LEAR	14	0206	0207	0214	S21	E54	5075	07	18.2	8	SF			3	E		13		
0249	PALE	14	0251	0251	0254	N25	W07	5071	07	13.6	3	SF			3	E		14		
0250	ABST	14	0532	0533	0546	N26	W08	5071	07	13.6	14	SF				C	0533	87	1.0	DT
0251		14	06383	06446	0705	N25	W14	5071	07	13.2	27	SN						54	0.7	EF
	YUNN	14	0638	0645	0722	N25	W15	5071	07	13.1	44	SN				C		32	0.4	
	KAND	14	0641	0644	0658	N24	W14	5071	07	13.2	17	SN				P	0644	26	0.6	EF
	PEKG	14	0647E	0650	0655	N25	W12	5071	07	13.3	8D	SF				P	0650	105	1.2	E
		14	0950		0954	No Flare Patrol														
0252	RAMY	14	1228	1229	1235	S20	E48	5075	07	18.2	7	SF			3	E		14		
0253		14	1257	1257	1301	N27	W18	5073	07	13.1	4	SN						18	0.5	D
	RAMY	14	1257	1257	1300	N27	W17	5073	07	13.2	3	SF			3	E		15		
	KAND	14	1257	1257	1302	N27	W18	5073	07	13.1	5	SN				P	1257	21	0.5	D
0254	HOLL	14	1325E	1329U	1350D	S19	E57	5075	07	18.9	25D	SF			3	E		22		
0255	RAMY	14	1430	1430	1437	N23	W13	5071	07	13.6	7	SF			3	E		15		

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0256	RAMY	14	1521	1526	1537	N23	W13	5071	07	13.6	16	SF		3	E		19		
0257	RAMY	14	1708	1715	1733	S19	E46	5075	07	18.2	25	SF		3	E		11		
		14	1810		1816	No Flare Patrol													
0258	PALE	14	1826	1827	1830	N28	W21	5073	07	13.1	4	SF		3	E		14		
		14	1836		1902	No Flare Patrol													
		14	2139		2148	No Flare Patrol													
0259	PALE	14	2221	2223	2240	S19	E43	5075	07	18.2	19	SF	C 1.1	3	E		73		
0260		15	04087	0416	0436	N22	W22	5071	07	13.5	28	1N	C 1.1				122	2.5	FL
	TACH	15	0408	0420U	0446	N23	W22	5071	07	13.5	38	1B			C	0420	214	2.5	FL
	LEAR	15	0415	0416	0425	N22	W22	5071	07	13.5	10	SF	C 1.1	3	E		31		
0261		15	09023	09032	0915	S24	E34	5075	07	18.0	13	SN					48	0.6	E
	HTPR	15	0902	0903	0914	S23	E38	5075	07	18.3	12	SF			C	0903	40	0.5	E
	CATA	15	0905	0905	0916	S24	E30	5075	07	17.7	11	SN		2	C	0905	56	0.8	
0262		15	09051	0907	0917	N22	W24	5071	07	13.5	12	SN					55	0.9	E
	HTPR	15	0905	0907	0918	N24	W24	5071	07	13.5	13	SN			C	0907	80	0.9	E
	LEAR	15	0906	0907	0916	N21	W24	5071	07	13.5	10	SF		3	E		30		
0263	HTPR	15	0945	0947	1005	S26	E34	5075	07	18.0	20	SF			C	0947	50	0.6	E
0264	KAND	15	1020		1025	S27	E40	5075	07	18.5	5	SF			P	1020	10	0.3	D
0265	HTPR	15	1226	1228	1230	S14	E22	5074	07	17.2	4	SF			C	1228	20	0.2	E
0266		15	1640	1649	1706	S20	E32	5075	07	18.1	26	SN					48	0.8	E
	HTPR	15	1640	1649	1706	S21	E30	5075	07	18.0	26	SN			C	1649	70	0.8	E
	SVTO	15	1646E	1646U	1706	S20	E33	5075	07	18.2	20D	SF		3	E		26		
0267		15	1728	1729	1740	N24	W32	5071	07	13.2	12	SF					24		
	RAMY	15	1728	1729	1736	N23	W31	5071	07	13.3	8	SF		3	E		28		
	PALE	15	1729E	1729U	1743	N24	W32	5071	07	13.2	14D	SF		3	E		20		
0268		15	18271	18281	1838	S19	E24	5075	07	17.6	11	SF					34		F
	RAMY	15	1827	1828	1838	S19	E24	5075	07	17.6	11	SF		3	E		34		F
	PALE	15	1828	1829	1834	S20	E24	5075	07	17.6	6	SF		3	E		24		F
	HOLL	15	1833E	1833U	1841	S19	E23	5075	07	17.5	8D	SF		2	E		45		F
		15	2142		2147	No Flare Patrol													
0269		16	00353	00422	0106	S19	E26	5075	07	18.0	31	SF	C 1.2				40		F
	PALE	16	0035	0044	0110	S19	E26	5075	07	18.0	35	SF	C 1.2	3	E		42		F
	LEAR	16	0038	0042	0103	S19	E27	5075	07	18.1	25	SF	C 1.2	3	E		38		
0270	TACH	16	0335E	0352U	0404D	S21	E17	5075	07	17.4	29D	SB			C	0352	55	0.7	EH
		16	2146		2328	No Flare Patrol													
0271	ABST	17	0551	0553U	0557	S19	E05	5075	07	17.6	6	SF			P	0553	131	1.5	E
0272	KHAR	17	1020		1035	S16	E14	5076	07	18.5	15	SF		1	V	1020			D
0273	KHAR	17	1056	1057	1112	S27	E13	5075	07	18.5	16	SN		1	V	1057			D
0274	HTPR	16	0714	0714	0720	S20	E18	5075	07	17.7	6	SN			C	0714	30	0.3	E
0275	HTPR	16	0807	0810	0836	S25	E22	5075	07	18.0	29	SF			C	0810	30	0.3	E
0276	HTPR	16	0831	0832	0838	S20	E11	5074	07	17.2	7	SF			C	0832	40	0.4	E
0277	HTPR	16	0919	0923	0930	S19	E12	5074	07	17.3	11	SN			C	0923	40	0.4	E
0278	HTPR	16	1118	1129	1145	S18	E21	5075	07	18.1	27	SN			C	1129	100	1.0	E

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0279		16	1333*	13432	1359	S16	E25	5076	07	18.5	26	SN						34	0.9	EF
	HTPR	16	1333	1345	1410	S18	E25	5076	07	18.5	37	SB				C	1345	80	0.9	E
	SVTO	16	1342	1343	1354	S15	E26	5076	07	18.5	12	SF			3	E		22		
	HOLL	16	1345	1345	1354	S15	E25	5076	07	18.5	9	SF			3	E		13		F
	RAMY	16	1345	1345	1426D	S15	E25	5076	07	18.5	41D	SF			2	E		20		F
0280	HTPR	16	1458	1503	1528	N30	W50	5073	07	12.7	30	SF				C	1503	20	0.3	
0281		16	1543	15464	1558	S25	E19	5075	07	18.1	15	SN	C	2.4				64	1.2	EF
	HTPR	16	1543	1546	1558	S26	E20	5075	07	18.2	15	SB				C	1546	110	1.2	E
	HOLL	16	1547E	1547	1601	S25	E21	5075	07	18.3	14D	SF	C	2.4	3	E		53		F
	RAMY	16	1549E	1550	1556	S24	E15	5075	07	17.8	7D	SF	C	2.4	3	E		29		
0282		16	1622*	1632*	1739	S16	E24	5076	07	18.5	77	SN	C	3.0				96	1.6	EFHK
	HTPR	16	1622	1632	1745	S18	E24	5076	07	18.5	83	SB				C	1656	150	1.6	EK
	RAMY	16	1627	1703	1743	S16	E24	5076	07	18.5	76	1F	C	3.0	3	E		115		FH
	PALE	16	1652	1703	1730	S17	E23	5076	07	18.4	38	SF	C	3.0	3	E		40		F
	HOLL	16	1654	1703	1738	S15	E24	5076	07	18.5	44	SF	C	3.0	4	E		78		F
0283	HOLL	16	1911	1911	1920	N22	W43	5071	07	13.5	9	SF			4	E		15		
0284	HOLL	16	2103	2104	2112	S21	E76	5077	07	22.7	9	SF			3	E		11		
0285	YUNN	17	0419	0431	0442	S21	E03	5075	07	17.4	23	SN				C		32	0.4	E
0286		17	1332	1333	1359	S21	E06	5075	07	18.0	27	SF	C	1.8				22		
	RAMY	17	1332	1333	1356	S21	E05	5075	07	17.9	24	SF	C	1.8	3	E		23		
	SVTO	17	1332	1333	1402	S21	E07	5075	07	18.1	30	SF	C	1.8	3	E		20		
0287	RAMY	17	1419	1419	1422	S20	E02	5075	07	17.7	3	SF	C	1.0	3	E		14		H
0288		17	15131	15171	1530	N22	W55	5071	07	13.4	17	SF						16		
	HOLL	17	1513	1517	1530	N22	W55	5071	07	13.4	17	SF			3	E		13		
	RAMY	17	1514	1518	1530	N22	W55	5071	07	13.4	16	SF			3	E		19		
		17	2043		2058	No Flare Patrol														
		17	2104		2140	No Flare Patrol														
		17	2149		2203	No Flare Patrol														
		17	2254		2328	No Flare Patrol														
0289		18	0030	0005*	0028	S24	E02	5075	07	18.2	1438	SF	C	1.2				14		
	LEAR	18	0005E	0005	0022	S24	E03	5075	07	18.2	17D	SF			3	E		12		
	LEAR	18	0030	0031	0034	S24	E02	5075	07	18.2	4	SF	C	1.2	3	E		17		
0290		18	02211	02221	0230	S16	E04	5076	07	18.4	9	SN						51	0.9	E
	YUNN	18	0221	0223	0231	S18	E03	5076	07	18.3	10	SN				C		80	0.9	E
	LEAR	18	0222	0222	0230	S14	E05	5076	07	18.5	8	SF			3	E		22		
0291	LEAR	18	0225	0233	0303	N22	W59	5071	07	13.6	38	SF			3	E		41		F
0292		18	0305	03173	0330	S20	W08	5075	07	17.5	25	SN						44	0.7	
	YUNN	18	0305	0317	0330	S20	W09	5075	07	17.4	25	SN				C		64	0.7	
	LEAR	18	0305	0320	0329	S20	W08	5075	07	17.5	24	SF			3	E		25		
0293	LEAR	18	0324	0325	0327	N19	W61	5071	07	13.5	3	SF			3	E		12		
0294	LEAR	18	0700	0702	0707	N28	W75	5073	07	12.4	7	SF	C	1.3	3	E		15		
0295		18	0741*	0741*	0813	S23	W10	5075	07	17.5	32	SN						87	1.4	E
	CATA	18	0741	0741	0741D	S23	W10	5075	07	17.5	32D	SB			2	P	0741	169	2.0	
	LEAR	18	0742	0754	0811	S24	W10	5075	07	17.5	29	SN			3	E		33		
	SVTO	18	0742	0757	0811	S24	W09	5075	07	17.6	29	SF			3	E		42		
	YUNN	18	0742	0802	0817	S23	W13	5075	07	17.3	35	SN				C		48	0.6	
	KANZ	18	0745	0757	0812	S23	W11	5075	07	17.5	27	SN			1					
	CATA	18	0752E	0752	0801D	S23	W10	5075	07	17.5	9D	SB			2	P	0752	141	1.7	
	PEKG	18	0759	0800	0812	S24	W11	5075	07	17.5	13	1N				V				E
0296	LEAR	18	0818	0823	0838	N28	W75	5073	07	12.5	20	SF			3	E		23		

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0297	KANZ	18	0928	0932	0936	S19	W11	5075		07	17.5	8	SF			2						
0298		18	09502	09521	0957	N28	W78	5073		07	12.3	7	SF	C	1.8					25		
	KANZ	18	0950	0953	0958	N30	W79	5073		07	12.2	8	SF			2						
	SVTO	18	0952	0952	0956	N26	W76	5073		07	12.5	4	SF	C	1.8	3	E			25		
0299		18	10532	10534	1103	N29	W75	5073		07	12.6	10	1N	C	2.8					83		H
	CATA	18	1051E	1057	1105	N29	W75	5073		07	12.6	14D	2B			2	P		1057	169		
	RAMY	18	1053	1053	1103	N28	W75	5073		07	12.6	10	SF	C	2.8	2	E			48		H
	KANZ	18	1053	1057U	1057D	N29	W77	5073		07	12.4	4D	SF			2						
	SVTO	18	1055	1056	1102	N29	W72	5073		07	12.8	7	SF	C	2.8	3	E			33		
0300		18	12521	1253	1300	N27	W78	5073		07	12.4	8	SF	C	2.3					30		
	RAMY	18	1252	1253	1300	N28	W77	5073		07	12.5	8	SF	C	2.3	3	E			31		
	SVTO	18	1253	1253	1259	N26	W79	5073		07	12.4	6	SF	C	2.3	3	E			28		
0301	SVTO	18	1540	1541	1544	S21	W13	5075		07	17.6	4	SF	C	2.2	3	E			34		H
0302		18	1600*	1609*	1632	S22	W17	5075		07	17.4	32	1F	C	6.3					88		FH
	SVTO	18	1600	1609	1621	S24	W14	5075		07	17.6	21	SF			3	E			39		
	RAMY	18	1607	1626	1642	S22	W22	5075		07	17.0	35	1F	C	6.3	3	E			108		FH
	SVTO	18	1626	1627	1634	S20	W15	5075		07	17.5	8	1F	C	4.6	3	E			117		
0303	HOLL	18	1948	2007U	2016D	S21	W13	5075		07	17.8	28D	SF			3	E			126		
0304	HOLL	18	1959	2004U	2012D	N22	W68	5071		07	13.6	13D	SF			3	E			56		
0305	HOLL	18	2024E	2024U	2028	N28	W85	5073		07	12.2	4D	SF			3	E			10		
		18	2037		2045	No Flare Patrol																
		18	2108		2115	No Flare Patrol																
0306		19	0027	0030	0051	S24	W15	5075		07	17.8	24	1N	C	9.4					114		F
	LEAR	19	0027	0030	0051	S24	W19	5075		07	17.5	24	1N	C	9.4	3	E			141		F
	PALE	19	0027E	0031U	0051	S24	W11	5075		07	18.2	24D	SN	C	9.4	3	E			88		F
0307		19	0143	01431	0159	S22	W12	5075		07	18.1	16	SF	C	2.2					26		F
	PALE	19	0143	0143	0203	S24	W12	5075		07	18.1	20	SF	C	2.2	3	E			26		
	LEAR	19	0143	0144	0155	S21	W12	5075		07	18.1	12	SF	C	2.2	3	E			25		F
0308	LEAR	19	0424	0429	0445	S20	W09	5075		07	18.5	21	SF			3	E			31		
0309		19	05382	05409	0558	N22	W74	5071		07	13.5	20	1N	C	5.3					87		EFG
	TACH	19	0538	0539U	0552	N22	W71	5071		07	13.8	14	1B				C		0539	87		FG
	LEAR	19	0539	0541	0608	N23	W74	5071		07	13.5	29	SF	C	5.3	3	E			60		
	ABST	19	0539E	0549	0556D	N22	W80	5071		07	13.1	17D	1N				P		0544	175		E
	SVTO	19	0540	0540	0555	N22	W72	5071		07	13.7	15	SF	C	5.3	3	E			27		
0310		19	07487	07533	0808	S24	W23	5075		07	17.5	20	SN	C	7.1					96	1.8	EF
	HTPR	19	0748	0753	0813	S23	W25	5075		07	17.4	25	SB				C		0758	120	1.6	E
	ABST	19	0751	0754	0809	S23	W23	5075		07	17.5	18	1N				C		0754	192	2.5	E
	LEAR	19	0752	0753	0809	S25	W23	5075		07	17.5	17	SF	C	7.1	3	E			38		
	KANZ	19	0752	0756	0803D	S22	W23	5075		07	17.6	11D	SF			2						E
	SVTO	19	0753	0753	0801	S26	W22	5075		07	17.6	8	SF	C	7.1	3	E			17		F
	CATA	19	0755	0755	0810D	S24	W24	5075		07	17.5	15D	SB			2	P		0755	112	1.4	
0311	HTPR	19	1034	1048	1140	S24	W23	5075		07	17.7	66	SN				C		1048	60	0.7	E
0312		19	12102	12156	1230	S22	W27	5075		07	17.4	20	SF	C	3.4					72	1.3	EFH
	HTPR	19	1210	1215	1234	S23	W29	5075		07	17.3	24	SF				C		1215	120	1.3	E
	RAMY	19	1212	1221	1227	S21	W25	5075		07	17.6	15	SF	C	3.4	3	E			25		FH
0313	HOLL	19	1249	1253	1306	S12	W15	5076		07	18.4	17	SF			3	E			15		F
0314		19	13335	13372	1344	S18	W24	5075		07	17.7	11	SN	C	2.3					41	1.0	EF
	HTPR	19	1333	1337	1345	S19	W23	5075		07	17.8	12	SB				C		1337	90	1.0	E
	SVTO	19	1336	1337	1344	S18	W23	5075		07	17.8	8	SF	C	2.3	3	E			21		
	RAMY	19	1336	1339	1344	S17	W24	5075		07	17.7	8	SF	C	2.3	3	E			23		F
	HOLL	19	1338	1338	1345	S17	W24	5075		07	17.7	7	SF	C	2.3	3	E			30		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0315	HTPR	19	1438	1438	1440	S21	W22	5075	07	17.9	2	SN			C	1438	20	0.2	E
0316	HTPR	19	1438	1443	1500	S23	W29	5075	07	17.4	22	SF			C	1443	40	0.4	E
0317	HOLL	19	1745	1746	1758	S20	W25	5075	07	17.8	13	SF		3	E		13		
0318	HOLL	19	2148	2150	2201D	S24	W30	5075	07	17.6	13D	SF		2	E		60		F
0319	LEAR	19	2355	2359	2412	S22	W33	5075	07	17.5	17	SF	C 1.7	3	E		30		
0320	YUNN	20	0128	0137	0247	S20	W49	5079	07	16.3	79	SN			C		32	0.6	
0321		20	0254*	0306	0314	S17	W50	5079	07	16.3	20	SN					25	0.6	
	YUNN	20	0254	0306	0312	S17	W51	5079	07	16.2	18	SN			C		32	0.6	
	LEAR	20	0305	0306	0316	S17	W49	5079	07	16.4	11	SF		3	E		18		
0322		20	04485	04505	0500	S17	W50	5079	07	16.4	12	SF					44	1.5	D
	SVTO	20	0448	0450	0457	S19	W49	5079	07	16.5	9	SF		3	E		22		
	LEAR	20	0450	0451	0456	S17	W51	5079	07	16.3	6	SF		3	E		24		
	ABST	20	0453	0455	0506	S16	W50	5079	07	16.4	13	SF			C	0455	87	1.5	D
0323		20	07466	07523	0810	S24	W38	5075	07	17.4	24	SN					112	1.6	E
	HTPR	20	0746	0755	0805	S23	W39	5075	07	17.3	19	SF			C	0755	140	1.8	E
	CATA	20	0752	0752	0814	S24	W37	5075	07	17.5	22	SN		2	C	0752	84	1.3	
0324		20	09243	09255	0945	S24	W38	5075	07	17.4	21	SN	C 1.8				97	1.9	EF
	HTPR	20	0924	0927	0940	S23	W40	5075	07	17.3	16	SN			C	0927	80	1.0	E
	CATA	20	0925	0925	1005	S24	W38	5075	07	17.4	40	1B		2	C	0925	197	3.0	
	KAND	20	0927	0929	0933	S25	W36	5075	07	17.6	6	SN			P	0929	62	1.8	E
	SVTO	20	0927	0930	0941	S24	W37	5075	07	17.5	14	SF	C 1.8	3	E		48		F
0325	RAMY	20	1318	1319	1335	S17	W55	5079	07	16.4	17	SF		3	E		10		
0326		20	14102	14161	1424	S30	W42		07	17.3	14	SF	C 2.8				70		FH
	SVTO	20	1410	1416	1424	S26	W40		07	17.5	14	SF	C 2.8	3	E		68		FH
	KANZ	20	1412	1416	1424	S32	W41		07	17.3	12	1F		2					H
	RAMY	20	1412	1417	1423	S32	W46		07	16.9	11	SF	C 2.8	3	E		73		F
0327		20	17322	17361	1749	S15	W43	5074	07	17.5	17	SF	C 1.0				28		F
	RAMY	20	1732	1736	1750	S17	W41	5074	07	17.6	18	SF	C 1.0	3	E		30		
	KANZ	20	1733	1733U	1733D	S16	W41	5074	07	17.6	18D	SF		2					
	PALE	20	1734	1737	1748	S13	W46	5074	07	17.3	14	SF		3	E		27		F
0328	RAMY	20	1847	1849	1852	S22	W44	5075	07	17.4	5	SF		3	E		28		F
0329		20	23472	23501	2400	S22	W47	5075	07	17.4	13	SF	C 1.1				52		
	HOLL	20	2347	2350	2408	S22	W47	5075	07	17.4	21	SF	C 1.1	4	E		66		
	LEAR	20	2348	2350	2355	S22	W46	5075	07	17.4	7	SF	C 1.1	3	E		44		
	PALE	20	2349	2351	2356	S22	W47	5075	07	17.4	7	SF	C 1.1	3	E		45		
0330		21	01291	01311	0148	S15	W48	5074	07	17.4	19	1N	C 6.2				100		
	LEAR	21	0129	0131	0154	S13	W51	5074	07	17.2	25	1F	C 6.2	3	E		106		
	PALE	21	0130	0132	0142	S17	W46	5074	07	17.6	12	SN	C 6.2	3	E		93		
0331	LEAR	21	0413	0414	0424	S19	W56	5079	07	16.9	11	SF		3	E		42		
0332	LEAR	21	0504	0505	0518	S17	W65	5079	07	16.3	14	SF		3	E		16		
0333	HTPR	21	0615	0649	0700	S23	W44	5075	07	17.9	45	SF			C	0649	120	1.7	E
0334		21	07081	07085	0723	S17	W50	5074	07	17.5	15	1N	C 3.3				147	2.7	E
	SVTO	21	0708	0708	0722	S19	W49	5074	07	17.5	14	1N	C 3.3	3	E		139		
	LEAR	21	0708	0709	0727	S17	W51	5074	07	17.4	19	1N	C 3.3	3	E		120		
	HTPR	21	0708	0710	0727	S15	W50	5074	07	17.5	19	1B			C	0710	150	2.3	E
	YUNN	21	0709E	0709U	0719	S17	W51	5074	07	17.4	10D	1B	C 3.3		P	0709	161	2.9	
	ABST	21	0709	0711	0722	S16	W51	5074	07	17.4	13	1N			C	0711	166	2.8	E
	KANZ	21	0709	0713	0722	S16	W50	5074	07	17.5	13	SN		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	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0335		21	0756	0800	0808	S23	W51	5075	07 17.4	12	SN					102	1.8	
	HTPR	21	0756	0800	0806	S22	W50	5075	07 17.5	10	SF			C	0800	120	1.9	
	CATA	21	0800E	0800	0811	S24	W52	5075	07 17.3	11D	SN		2	P	0800	84	1.7	
0336	HTPR	21	1014	1021	1047	S25	W40	5075	07 18.3	33	SN			C	1021	100	1.3	E
0337	KHAR	21	1120	1121	1126	S24	W53	5075	07 17.4	6	SF		2	V	1121			D
0338		21	11294	11348	1154	S25	W43	5075	07 18.1	25	SF	C 1.2				44	0.9	E
	HTPR	21	1129	1134	1157	S27	W39	5075	07 18.4	28	SN			C	1134	60	0.8	E
	RAMY	21	1132	1141	1157	S22	W46	5075	07 17.9	25	SF	C 1.2	3	E		33		
	SVTO	21	1133	1141	1149	S26	W43	5075	07 18.1	16	SF	C 1.2	3	E		27		
	KANZ	21	1134E	1142	1153D	S26	W44	5075	07 18.1	19D	SF		2					
	CATA	21	1139E	1139	1145D	S26	W45	5075	07 18.0	6D	SN		2	P	1139	56	1.0	
0339	HTPR	21	1432	1436	1457	S30	E56		07 26.0	25	SN			C	1436	50	0.9	E
0340	HOLL	21	1533	1533	1535	S17	W69	5079	07 16.4	2	SF		3	E		28		
0341		21	18259	1834U	1847	S19	E84		07 28.2	22	1N	C 4.5				257		
	RAMY	21	1823E	1834U	1847	S19	E88		07 28.5	24D	1B	C 4.5	2	E		241		
	PALE	21	1825	1836U	1847D	S20	E88		07 28.5	22D	2B	C 4.5	3	E		290		
	RAMY	21	1834	1834U	1835D	S17	E75		07 27.5	1D	1F	C 4.5	3	E		241		
0342	HOLL	21	2234	2234	2243	S22	W51	5075	07 18.0	9	SF		3	E		20		
0343		22	00251	0028	0034	S17	W58	5074	07 17.6	9	SF	C 1.6				53		
	PALE	22	0025	0028	0032	S17	W57	5074	07 17.7	7	SF	C 1.6	3	E		41		
	HOLL	22	0026	0028	0037	S17	W59	5074	07 17.5	11	SF	C 1.6	3	E		65		
0344		22	01051	0112	0118	S17	W59	5074	07 17.6	13	SF					27		H
	HOLL	22	0105	0112	0122	S17	W60	5074	07 17.5	17	SF		3	E		36		H
	PALE	22	0106	0112	0113	S17	W58	5074	07 17.6	7	SF		3	E		18		
0345		22	0154	01562	0203	S18	W59	5074	07 17.6	9	1N	C 1.7				99	2.7	D
	PALE	22	0154	0156	0203	S17	W58	5074	07 17.7	9	SF	C 1.7	3	E		68		
	PEKG	22	0155E	0158	0203	S18	W60	5074	07 17.5	8D	1B	C 1.7		C	0158	130	2.7	D
0346	TACH	22	0302	0353U	0403	S18	W59	5074	07 17.6	61	1B			C	0353	97	2.2	D
0347	LEAR	22	0500	0509	0514	S17	W76	5079	07 16.4	14	SF		3	E		34		
0348		22	05533	05561	0559	S18	W61	5074	07 17.6	6	SF	C 1.5				78	1.8	E
	HTPR	22	0553	0556	0559	S17	W58	5074	07 17.8	6	SN			C	0556	120	1.7	E
	LEAR	22	0556	0556	0558	S18	W61	5074	07 17.6	2	SF	C 1.5	3	E		20		
	PEKG	22	0556E	0557	0600	S18	W64	5074	07 17.4	4D	SF	C 1.5		C	0557	95	2.0	E
0349		22	0630	06302	0636	S18	W76	5079	07 16.5	6	SN					39		
	SVTO	22	0630	0630	0633	S20	W77	5079	07 16.4	3	SF		3	E		12		
	HTPR	22	0630	0631	0640	S16	W76	5079	07 16.5	10	SB			C	0631	70		
	LEAR	22	0630	0632	0634	S18	W76	5079	07 16.5	4	SF		3	E		35		
0350		22	0736*	0805*	0828	S18	W79	5079	07 16.3	52	SN					15		
	HTPR	22	0736	0805	0840	S16	W76	5079	07 16.5	64	SB			C	0805	20		
	LEAR	22	0815	0815	0822	S18	W81	5079	07 16.2	7	SF		3	E		12		
	SVTO	22	0815	0815	0823	S20	W79	5079	07 16.3	8	SF		3	E		12		
0351		22	09075	09135	0919	S18	W80	5079	07 16.3	12	SN	C 1.3				30		
	HTPR	22	0907	0918	0920	S16	W77	5079	07 16.5	13	SB			C	0918	30		
	SVTO	22	0912	0913	0918	S21	W84	5079	07 15.9	6	SF	C 1.3	3	E		31		
0352	CATA	22	0959E	0959	1011	S18	W90	5079	07 15.6	12D	SB		2	P	0959	28		
0353	CATA	22	0959E	0959	1035	S23	E06	5077	07 22.9	36D	1B		2	P	0959	225	2.6	
0354		22	11123	11182	1134	S21	E90	5084	07 29.4	22	1N	C 7.3				134		AE
	HTPR	22	1112	1120	1133	S20	E90	5084	07 29.3	21	1B			C	1120	150		AE
	KANZ	22	1115	1118	1134	S20	E90	5084	07 29.3	19	SF		2					
	RAMY	22	1115E	1119U	1131D	S20	E88	5084	07 29.2	16D	SF	C 7.3	2	E		82		
	CATA	22	1119E	1119	1140D	S23	E90	5084	07 29.4	21D	2N		2	P	1119	169		

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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	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0355	HTPR	22	1336	1340	1348	N13	E90	5085	07	29.3	12	SB			C	1340	40		
0356	HTPR	22	1415	1417	1418	S17	W60	5076	07	18.0	3	SN			C	1417	30	0.6	
0357	SVTO	22	1658	1701	1705	S22	W67	5075	07	17.5	7	SF		3	E		22		
0358	HOLL	22	2039	2039	2045	S22	W66	5075	07	17.8	6	SF		3	E		10		
0359	HOLL	22	2322	2330	2405	S22	W01	5077	07	22.9	43	SF		4	E		41		F
0360	HTPR	23	0823	0824	0832	S20	W71	5075	07	17.9	9	SF			C	0824	20		
0361	HTPR	23	1111	1120	1138	S23	W70	5075	07	18.1	27	SN			C	1120	30		
0362		23	13106	13164	1336	S18	W61	5081	07	18.9	26	1N C	2.3				106	1.6	EF
	HOLL	23	1310	1319	1338	S18	W61	5081	07	18.9	28	1N C	2.3	3	E		124		E
	HTPR	23	1313	1320	1335	S20	W60	5081	07	19.0	22	SB			C	1320	80	1.6	E
	KANZ	23	1315	1318	1333	S18	W61	5081	07	18.9	18	SF		2					
	SVTO	23	1316	1316	1337	S18	W61	5081	07	18.9	21	1F C	2.3	3	E		114		F
0363		23	15041	15121	1536	N12	E65	5085	07	28.5	32	SF					71	1.5	EFH
	HTPR	23	1504	1512	1535	N10	E64	5085	07	28.4	31	SN			C	1512	70	1.5	E
	SVTO	23	1504	1513	1536	N13	E67	5085	07	28.7	32	SF		3	E		59		H
	KANZ	23	1505	1513	1533	N10	E62	5085	07	28.3	28	SF		2					
	HOLL	23	1505	1513	1537	N14	E68	5085	07	28.8	32	SF		4	E		87		F
	RAMY	23	1505	1513	1540	N11	E65	5085	07	28.5	35	SF		3	E		68		H
0364		23	16214	16233	1637	S23	W73	5075	07	18.0	16	SF					17		E
	HTPR	23	1621	1625	1645	S23	W72	5075	07	18.1	24	SN			C	1625	30		E
	RAMY	23	1623	1623	1633	S26	W74	5075	07	17.9	10	SF		3	E		11		
	HOLL	23	1625	1626	1634	S19	W74	5075	07	18.0	9	SF		3	E		11		
0365		23	17422	17451	1753	N12	E62	5085	07	28.4	11	SF					59	1.3	EFH
	HTPR	23	1742	1745	1753	N11	E62	5085	07	28.4	11	SN			C	1745	60	1.3	E
	HOLL	23	1744	1746	1753	N12	E63	5085	07	28.5	9	SF		4	E		67		FH
	RAMY	23	1744	1746	1754	N13	E62	5085	07	28.4	10	SF		3	E		50		
0366	HOLL	23	1823	1829	1839	N12	E64	5085	07	28.6	16	SF		3	E		48		
0367	HOLL	23	1824	1829	1842	S24	W78	5075	07	17.7	18	SF		3	E		35		
0368	HOLL	23	2147	2148	2152	S19	W71	5075	07	18.5	5	SF		3	E		18		
0369	HOLL	23	2202	2212	2220	N10	E62	5085	07	28.6	18	SF		3	E		42		F
		24	0155		0235	No Flare Patrol													
0370	LEAR	24	0250	0252	0258	N12	E63	5085	07	28.9	8	SF C	1.1	3	E		22		
		24	0318		0427	No Flare Patrol													
0371		24	0635*	0649*	0931	S20	E60	5094	07	28.9	176	2N M	2.8				413		FU
	KANZ	24	0635	0653	0925	S21	E62	5094	07	29.0	170	2N		2					U
	CATA	24	0635	0658	0915	S22	E64	5094	07	29.2	160	2B		2	C	0658	506		
	SVTO	24	0637	0649	0824	S21	E55	5094	07	28.5	107	2N M	2.8	3	E		293		UF
	SVTO	24	0830	0830	1059	S16	E60	5094	07	28.9	149	2F		3	E		441		U
0372		24	10184	10223	1038	N14	E70	5090	07	29.7	20	SF					34		
	KANZ	24	1018	1022	1038	N13	E68	5090	07	29.5	20	SF		2					
	SVTO	24	1022	1025	1039	N16	E71	5090	07	29.8	17	SF		3	E		34		
0373		24	12141	12161	1220	N13	E58	5085	07	28.9	6	SF C	5.3				16		H
	KANZ	24	1214	1217	1221	N12	E58	5085	07	28.9	7	SF		2					
	SVTO	24	1215	1216	1219	N15	E58	5085	07	28.9	4	SF C	5.3	3	E		14		H
	RAMY	24	1215	1216	1221	N13	E58	5085	07	28.9	6	SF C	5.3	3	E		18		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0374		24	15583	16012	1633	S22	W35	5087	07	22.0	35	1F	C	4.3					136		FU
	HOLL	24	1558	1603	1647	S22	W36	5087	07	21.9	49	1N	C	4.3	4	E			176		UF
	SVTO	24	1559	1601	1620	S24	W35	5087	07	22.0	21	1F	C	4.3	3	E			104		F
	RAMY	24	1559	1601	1631	S23	W35	5087	07	22.0	32	1F	C	4.3	3	E			129		UF
	KANZ	24	1601	1601	1645D	S21	W35	5087	07	22.0	44D	1F			2						
0375	HOLL	24	1950	1952	2018	N13	E68	5090	07	29.9	28	SF			4	E			53		F
		24	2216		2236	No Flare Patrol															
		24	2244		2346	No Flare Patrol															
0376		25	05354	05391	0604	N14	E62	5090	07	29.9	29	1N	C	1.8					127		EHLS
	TACH	25	0535	0538U	0600D	N15	E64	5090	07	30.1	25D	1N				C		0538	143		EHL
	LEAR	25	0536	0539	0607	N12	E61	5090	07	29.8	31	1N	C	1.8	3	E			172		
	SVTO	25	0539	0540	0602	N15	E60	5090	07	29.8	23	SF	C	1.8	3	E			66		HS
0377	RAMY	25	1156	1159	1219	S23	W46	5087	07	21.9	23	SF			3	E			16		
0378		25	14182	14202	1434	S24	W35	5077	07	22.9	16	SF							28		H
	HOLL	25	1418	1422	1444D	S28	W35	5077	07	22.9	26D	SF			3	E			34		H
	KANZ	25	1420	1420	1440	S21	W35	5077	07	22.9	20	SF			2						
	RAMY	25	1420	1422	1429	S23	W35	5077	07	22.9	9	SF			3	E			21		
0379	HOLL	25	1526	1529	1532	S22	W90	5075	07	18.7	6	SF			3	E			35		
0380		25	1928	2007	2047	S28	E51	5084	07	29.8	79	2F	M	1.5					206		FH
	HOLL	25	1928	2007	2047	S27	E50	5084	07	29.7	79	2F	M	1.5	4	E			287		FH
	RAMY	25	1947E	1957U	2033D	S28	E52	5084	07	29.9	46D	1F	M	1.5	3	E			125		F
0381		26	0251E	0255U	0314	S25	E47	5084	07	29.7	23D	1B	C	3.7					184	3.0	BDF
	PEKG	26	0251E	0255U	0312	S28	E48	5084	07	29.9	21D	1N	C	3.7		V					D
	TACH	26	0259E		0315	S22	E46	5084	07	29.6	16D	1B				C		0300	184	3.0	BF
0382		26	0308	0344U	0610	N26	E94	5092	08	2.4	182	SN							40		AKY
	TACH	26	0308	0344U	0600D	N27	E98	5092	08	2.8	172D	SB				C		0421	41		KY
	HTPR	26	0528E		0610	N25	E90	5092	08	2.2	42D	SF				C		0545	40		A
0383	ABST	26	0449E	0453U	0500D	S24	E47	5084	07	29.8	11D	SF				P		0453	87	1.5	D
0384	HTPR	26	0737	0744	0805	S24	E28	5094	07	28.5	28	1B				C		0744	240	2.6	EU
0385	HTPR	26	0738	0743	0805	N25	E90	5092	08	2.3	27	SF				C		0743	30		
0386	HTPR	26	0801	0803	0808	S15	W90		07	19.5	7	SF				C		0803	20		
0387		26	0810*	0824*	0913	N24	E90	5092	08	2.3	63	1N							81		
	HTPR	26	0810	0824	0905	N25	E90	5092	08	2.3	55	SN				C		0824	50		
	CATA	26	0822	0846	0921	N23	E90	5092	08	2.3	59	1F			2	C		0846	112		
0388	HTPR	26	0933	0935	0938	S21	E29	5094	07	28.6	5	SF				C		0935	50	0.6	E
0389	HTPR	26	0952	0956	1007	N15	E34	5090	07	29.0	15	SN				C		0956	50	0.6	E
0390		26	1007	1013	1039	S22	E40	5084	07	29.5	32	SN							100	1.2	DEL
	HTPR	26	1007	1013	1045	S22	E37	5084	07	29.3	38	SB				C		1013	100	1.2	E
	KHAR	26	1028E	1028U	1033	S21	E44	5084	07	29.8	5D	SF			2	V		1028			DL
0391	HTPR	26	1030	1032	1040	N36	E82	5095	08	2.0	10	SB				C		1032	40		
0392	HTPR	26	1035	1122	1252	S23	E25	5094	07	28.4	137	SN				C		1122	150	1.6	EI
0393	RAMY	26	1206E	1208U	1218D	S25	E13		07	27.5	12D	SN			2	E			87		F
0394	RAMY	26	1210E	1211U	1218D	N27	E70		08	1.0	8D	SF			2	E			47		F
0395		26	13204	1328	1348	N26	E90	5092	08	2.5	28	SN							34		E
	HTPR	26	1320	1328	1352	N25	E90	5092	08	2.5	32	SN				C		1328	50		E
	HOLL	26	1324	1328	1344	N28	E90	5092	08	2.6	20	SF			3	E			17		

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0396	HTPR	26	1354	1357	1415	S25	E26	5094	07	28.6	21	SN				C	1357	60	0.7	E
0397	HTPR	26	1354	1358	1404	N36	E80	5095	08	2.0	10	SB				C	1358	20		
0398	HTPR	26	1455	1457	1508	N15	E30	5090	07	28.9	13	SN				C	1457	60	0.7	E
0399	HTPR	26	1530	1538	1558	S24	E24	5094	07	28.5	28	SB				C	1537	80	0.9	E
0400	HOLL	26	1648	1648	1701	S23	E39	5084	07	29.7	13	SF			3	E		17		
0401	HTPR	26	1700	1712	1735	N27	E80	5092	08	1.9	35	SN				C	1712	40		E
0402	HTPR	26	1732	1732	1737	S25	E24	5094	07	28.6	5	SF				C	1732	40	0.4	E
		26	1917		1931	No Flare Patrol														
		26	2015		2043	No Flare Patrol														
		26	2051		2156	No Flare Patrol														
		26	2256		2301	No Flare Patrol														
		26	2313		2400	No Flare Patrol														
		27	0000		0000	No Flare Patrol														
0403	HOLL	27	0038	0039	0046	S21	E30	5084	07	29.3	8	SF			3	E		27		F
		27	2003		2032	No Flare Patrol														
		27	2037		2047	No Flare Patrol														
		27	2052		2107	No Flare Patrol														
		27	2114		2121	No Flare Patrol														
		27	2125		2159	No Flare Patrol														
		27	2321		2328	No Flare Patrol														
0404	HTPR	28	0635	0640	0710	N25	E65	5092	08	2.3	35	SN				C	0640	50	1.1	E
0405	HTPR	28	0725	0734	0743	N29	E71	5095	08	2.9	18	SN				C	0734	50		E
0406		27	0729*	07442	0801	S25	E29	5084	07	29.5	32	1N	C	8.9				337	5.0	EFU
	SVTO	27	0729	0744	0806	S24	E31	5084	07	29.7	37	2N	C	8.9	3	E		259		F
	CATA	27	0737	0746	0750D	S28	E29	5084	07	29.6	13D	1B			2	P	0746	337	4.8	
	ABST	27	0739	0744	0758	S24	E31	5084	07	29.7	19	1N				C	0744	349	4.8	E
	YUNN	27	0740E	0744	0755	S23	E28	5084	07	29.5	15D	2N	C	8.9		P		402	5.4	
	KANZ	27	0741	0745	0804	S25	E28	5084	07	29.5	23	1N			2					U
0407		27	0934	09341	0940	S22	E30	5084	07	29.7	6	SF								D
	KANZ	27	0934	0934	0938	S22	E29	5084	07	29.6	4	SF			2					
	KHAR	27	0934	0935	0943	S22	E30	5084	07	29.7	9	SF			2	P	0935			D
0408		27	09532	09552	1003	N14	E36	5090	07	30.1	10	SF	C	2.0				55	0.8	DL
	KHAR	27	0944U	0955	1005D	N12	E36	5090	07	30.1	21U	SF			2	P	0958	80	1.0	DL
	KANZ	27	0953	0957	1001	N14	E36	5090	07	30.1	8	SF			2					
	SVTO	27	0954	0955	1005	N16	E37	5090	07	30.2	11	SF	C	2.0	3	E		30		
	CATA	27	0955	0955	1010D	N12	E36	5090	07	30.1	15D	SN			2	P	0955	56	0.7	
0409		27	1031*	1033*	1050	N27	E82	5092	08	2.8	19	SF	C	3.2				16		D
	SVTO	27	1031	1033	1037	N29	E81	5092	08	2.8	6	SF	C	3.2	3	E		16		
	KHAR	27	1032	1035	1042	N26	E85	5092	08	3.0	10	SF			2	V	1035			D
	KANZ	27	1037	1041	1104	N28	E79	5092	08	2.6	27	SF			2					
	KHAR	27	1047	1049	1058	N26	E85	5092	08	3.0	11	SF			2	V	1049			D
0410		27	11004	1104*	1140	S20	E28	5084	07	29.6	40	SF	C	5.7				79		
	KANZ	27	1100	1104	1143	S22	E27	5084	07	29.5	43	SF			2					
	SVTO	27	1104	1124	1138	S18	E29	5084	07	29.7	34	SF	C	5.7	3	E		79		
0411	RAMY	27	1206E	1208U	1208D	S17	E26	5084	07	29.5	2D	SN			2	E		87		F
0412		27	12147	12183	1234	S22	E28	5084	07	29.7	20	SF	C	3.4				32		
	KANZ	27	1214	1218	1235	S22	E25	5084	07	29.4	21	SF			2					
	SVTO	27	1221	1221	1233	S21	E30	5084	07	29.8	12	SF	C	3.4	3	E		32		
0413		27	1356	1356	1410	S22	E24	5084	07	29.4	14	SF	C	4.0				25		
	SVTO	27	1356	1356	1403	S21	E21	5084	07	29.2	7	SF	C	4.0	3	E		25		
	KANZ	27	1356	1356	1418	S22	E27	5084	07	29.6	22	SF			2					

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0414		27	1455	14561	1506	N16	E32	5090	07	30.0	11	SF	C	1.3				22		
	HOLL	27	1455	1456	1505	N16	E33	5090	07	30.1	10	SF	C	1.3	2	E		24		
	SVTO	27	1455	1457	1506	N17	E32	5090	07	30.0	11	SF	C	1.3	3	E		20		
0415	RAMY	27	1732	1732	1741	S23	E24	5084	07	29.6	9	SF			3	E		28		
0416	LEAR	28	0011	0012	0017	N26	E69	5092	08	2.4	6	SF			3	E		22		
0417	PALE	28	0012	0013	0020	N28	E87	5095	08	3.8	8	SF			3	E		31		
0418		28	0122	01222	0138	N14	E30	5090	07	30.3	16	SF						29		
	PALE	28	0122	0122	0143	N15	E31	5090	07	30.4	21	SF			3	E		40		
	LEAR	28	0122	0124	0132	N14	E30	5090	07	30.3	10	SF			3	E		18		
0419	LEAR	28	0441	0443	0445	N25	E72	5092	08	2.8	4	SF	C	2.0	3	E		10		
0420	LEAR	28	0636	0636	0646	N25	E71	5092	08	2.8	10	SF	C	1.7	3	E		11		
0421	LEAR	28	0734	0736	0741	N28	E76	5092	08	3.2	7	SF	C	2.7	3	E		15		
0422	HTPR	28	0858	0900	1005	N25	E64	5092	08	2.3	67	SN				C	0900	50	1.1	E
0423	HTPR	28	1204	1210	1240	S28	E15	5084	07	29.7	36	1B				C	1210	200	2.2	EI
0424		28	12061	1212	1228	N27	E70	5092	08	2.9	22	SN	C	7.9				102	4.0	EFV
	SVTO	28	1206	1208U	1214	N27	E77	5092	08	3.5	8	SF	C	7.9	2	E		60		
	HTPR	28	1207	1212	1242	N26	E62	5092	08	2.3	35	1B				C	1212	200	4.0	EV
	RAMY	28	1210E	1211U	1218D	N27	E70	5092	08	3.0	8D	SF	C	7.9	2	E		47		F
0425	HTPR	28	1556	1603	1615	N25	E62	5092	08	2.5	19	SB				C	1603	30	0.6	
0426	HTPR	28	1703	1723	1750	N24	E63	5092	08	2.6	47	SN				C	1723	60	1.2	E
0427	HTPR	28	1710	1724	1810	N25	E41	5096	07	31.9	60	SF				C	1724	40	0.5	E
0428	PALE	28	1926	1929	1930	S21	E09	5084	07	29.5	4	SF			3	E		19		
0429	PALE	28	1932	1933	1938	N32	E77	5095	08	3.9	6	SF			3	E		46		F
		28	2103		2210	No Flare Patrol														
0430	HOLL	28	2207	2225	2229	N28	E66	5095	08	3.1	22	SF	C	1.3	2	E		38		
		28	2245		2259	No Flare Patrol														
0431	HOLL	28	2325	2326	2353D	N25	E40	5096	08	1.1	28D	SF	C	4.0	3	E		20		
0432	PALE	29	0117E	0124	0136	N26	E40	5096	08	1.2	19D	SF			3	E		19		
0433	TACH	29	0322	0325U	0341D	N15	E14	5090	07	30.2	19D	SB				C	0325	31	0.3	E
0434	LEAR	29	0529	0529	0534	N33	E67	5095	08	3.5	5	SF	C	1.9	3	E		12		
0435	LEAR	29	0632	0635	0637	N33	E70	5095	08	3.8	5	SF			3	E		26		
0436		29	07091	0716*	0759	N16	E06	5090	07	29.7	50	SF						58	0.6	E
	ABST	29	0709	0716	0758	N16	E07	5090	07	29.8	49	SF				C	0716	87	0.9	E
	HTPR	29	0710	0729	0800	N15	E06	5090	07	29.7	50	SF				C	0729	30	0.3	E
0437		29	07481	07481	0759	S20	E04	5084	07	29.6	11	SN						58	0.8	EFV
	LEAR	29	0748	0748	0757	S20	E05	5084	07	29.7	9	SF			3	E		26		F
	HTPR	29	0748	0748	0758	S20	E05	5084	07	29.7	10	SB				C	0748	60	0.6	E
	KANZ	29	0749	0749	0756	S21	E02	5084	07	29.5	7	SF			2					
	ABST	29	0749	0749	0804	S21	E06	5084	07	29.8	15	SF				C	0749	87	1.0	EV

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0438		29	08022	08022	0812	N26	E62	5092	08	3.1	10	SF	C 2.5				49	1.0	DEV
	LEAR	29	0802	0802	0807	N26	E61	5092	08	3.1	5	SF	C 2.5	3	E		30		
	KHAR	29	0802	0803	0808	N24	E63	5092	08	3.2	6	SF		2	V	0803			D
	KANZ	29	0803	0803	0815	N27	E61	5092	08	3.1	12	SF		2					
	ABST	29	0803	0804	0807	N28	E65	5092	08	3.4	4	SN			C	0804	70		DV
	HTPR	29	0803	0804	0810	N24	E60	5092	08	3.0	7	SN			C	0804	60	1.0	E
	SVTO	29	0804	0804	0823	N28	E59	5092	08	2.9	19	SF	C 2.5	3	E		35		
0439		29	12552	12572	1316	S25	W05	5084	07	29.1	21	SF					29	0.7	E
	HTPR	29	1255	1257	1318	S25	W04	5084	07	29.2	23	SN			C	1257	60	0.7	E
	RAMY	29	1256	1259	1312	S25	W04	5084	07	29.2	16	SF		3	E		13		
	KANZ	29	1257	1257	1316	S25	W06	5084	07	29.1	19	SF		2					
	HOLL	29	1300E	1300U	1319	S25	W05	5084	07	29.1	19D	SF		3	E		14		
0440		29	13463	13511	1413	N27	E54	5092	08	2.8	27	SN	C 3.5				60		EF
	SVTO	29	1346	1351	1403	N27	E56	5092	08	2.9	17	SF	C 3.5	3	E		65		
	HOLL	29	1347	1352	1426	N28	E57	5092	08	3.0	39	SN	C 3.5	3	E		75		FE
	RAMY	29	1349	1351	1404	N28	E55	5092	08	2.9	15	SN	C 3.5	3	E		79		E
	HOLL	29	1349	1352	1420	N24	E49	5092	08	2.4	31	SF		3	E		20		
0441	HTPR	29	1402E		1509	N15	E02	5090	07	29.7	67D	SF			C	1410	40	0.4	E
0442		29	1508	1513	1525	N26	E48	5092	08	2.3	17	SN					34	0.7	E
	HTPR	29	1508	1513	1527	N26	E45	5092	08	2.1	19	SB			C	1513	50	0.7	E
	RAMY	29	1515E	1515U	1523	N27	E52	5092	08	2.7	8D	SF		2	E		17		
0443		29	1550*	16153	1654	N14	E02	5090	07	29.8	64	SN					70	1.2	EFI
	HTPR	29	1550	1618	1715	N15	E02	5090	07	29.8	85	SN			C	1618	120	1.2	EI
	RAMY	29	1612	1615	1632	N14	E03	5090	07	29.9	20	SF		3	E		19		F
0444	HTPR	29	1623	1623	1634	N24	E50	5092	08	2.5	11	SF			C	1623	20	0.3	E
0445	HTPR	29	1656	1659	1706	N26	E52	5092	08	2.7	10	SF			C	1659	30	0.5	E
0446	HTPR	29	1706	1720	1732	S22	W08	5094	07	29.1	26	SN			C	1720	30	0.3	E
0447	PALE	29	1840	1840	1906	N14	E02	5090	07	29.9	26	SF		3	E		11		F
		29	1929		2020	No Flare Patrol													
		29	2029		2130	No Flare Patrol													
0448	PALE	29	2131	2133	2215D	N32	E61	5095	08	3.7	44D	1F	M 1.6	3	E		199		F
		29	2141		2205	No Flare Patrol													
0449		29	2227	2236	2252	N14	W02	5090	07	29.8	25	SF					33		F
	PALE	29	2227	2236	2252	N15	W03	5090	07	29.7	25	SF		3	E		38		F
	HOLL	29	2247E	2247U	2252	N12	W02	5090	07	29.8	5D	SF		2	E		28		F
0450		29	2259	2316	2319	S21	W04	5084	07	29.6	20	SF					37		F
	HOLL	29	2247E	2249U	2301	S22	W02	5084	07	29.8	14D	SF		2	E		27		F
	PALE	29	2259	2316	2316	S20	W04	5084	07	29.6	17	SF		3	E		32		F
	HOLL	29	2319E	2321U	2340	S22	W07	5084	07	29.4	21D	SF		2	E		53		F
0451	HOLL	29	2336E	2340U	2356	N32	E56	5095	08	3.4	20D	SF		2	E		34		
0452	LEAR	29	2354	2414	2531	N16	E00	5090	07	30.0	97	SF		3	E		34		
0453		30	0008*	0013*	0040	S22	W06	5084	07	29.5	32	SF	C 6.0				50		F
	LEAR	30	0008	0013	0019	S21	W08	5084	07	29.4	11	SF	C 6.0	3	E		54		
	HOLL	30	0008	0013	0023D	S23	W02	5084	07	29.8	15D	SF	C 6.0	3	E		52		F
	PALE	30	0013	0013	0037	S22	W04	5084	07	29.7	24	SF	C 6.0	3	E		21		
	LEAR	30	0022	0024	0044	S21	W09	5084	07	29.3	22	SF		3	E		85		
	PALE	30	0038	0044	0047	S23	W04	5084	07	29.7	9	SF		3	E		22		
	LEAR	30	0048	0052	0054	S21	W09	5084	07	29.3	6	SF		3	E		64		
0454	LEAR	30	0011E	0011	0033	N26	E47	5092	08	2.6	22D	SF		3	E		22		
0455	PALE	30	0237	0239	0250	S20	W07	5084	07	29.6	13	SF		3	E		31		F

Hα SOLAR FLARES

JULY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0456		30	02552	03047	0337	S20	W08	5084	07	29.5	42	SN	C 4.6				92	1.6	BEF
	MITK	30	0255	0304	0353	S20	W04	5084	07	29.8	58	SN			C	0304			E
	PALE	30	0257	0311	0328	S21	W10	5084	07	29.3	31	SF	C 4.6	3	E		52		F
	TACH	30	0259E		0330	S20	W11	5084	07	29.3	31D	SB			C	0259	133	1.6	BF
0457		30	02593	03021	0325	N15	W04	5090	07	29.8	26	SN					112	1.2	BEF
	TACH	30	0259E		0330	N16	W06	5090	07	29.7	31D	SB			C	0259	177	1.2	BF
	MITK	30	0259	0302	0332	N14	W04	5090	07	29.8	33	SN			C	0302			E
	PALE	30	0302	0303	0313	N14	W03	5090	07	29.9	11	SF		3	E		46		
0458	LEAR	30	0546	0546	0600	N33	E53	5095	08	3.4	14	SF		3	E		11		
0459		30	0655	06559	0728	S21	W08	5084	07	29.7	33	SN	C 2.7				54	1.0	EF
	SVTO	30	0655	0655	0731	S21	W06	5084	07	29.8	36	SN	C 2.7	3	E		26		F
	LEAR	30	0655	0656	0704	S22	W09	5084	07	29.6	9	SF	C 2.7	3	E		20		F
	CATA	30	0704E	0704	0726D	S20	W08	5084	07	29.7	22D	SN		2	P	0704	112	1.3	
	HTPR	30	0711E		0750	S22	W09	5084	07	29.6	39D	SN			C	0715	60	0.7	E
0460	SVTO	30	0657	0658	0701	N13	W06	5090	07	29.8	4	SF		3	E		12		
0461		30	07205	07215	0731	N14	W11	5090	07	29.5	11	SN					30	0.3	DE
	HTPR	30	0720	0721	0730	N14	W10	5090	07	29.5	10	SN			C	0721	30	0.3	E
	KHAR	30	0725	0726	0732	N15	W12	5090	07	29.4	7	SF		2	V	0726			D
0462	KHAR	30	0759	0800	0806	N25	E23	5096	08	1.1	7	SF		2	V	0800			DH
0463	HTPR	30	0824	0825	0832	N30	E45	5095	08	2.9	8	SF			C	0825	30	0.4	E
0464		30	08352	08382	0845	N24	E40	5092	08	2.4	10	SF					39	0.5	
	HTPR	30	0835	0838	0845	N26	E43	5092	08	2.7	10	SF			C	0838	20	0.3	
	HTPR	30	0835	0840	0845	N24	E37	5092	08	2.2	10	SF			C	0840	40	0.5	
	CATA	30	0837	0840	0844	N23	E40	5092	08	2.4	7	SN		2	C	0840	56	0.8	
0465		30	08352	0838	0851	N16	W12	5090	07	29.4	16	SN					60	0.6	DE
	HTPR	30	0835	0838	0855	N15	W10	5090	07	29.6	20	SN			C	0838	60	0.6	E
	KHAR	30	0837	0838	0847	N17	W13	5090	07	29.4	10	SF		2	V	0838			D
0466		30	08452	08488	0921	N27	E45	5092	08	2.9	36	1B	M 1.8				280	4.6	CEFIV
	LEAR	30	0845	0848	0852D	N28	E47	5092	08	3.0	7D	1B		3	E		160		F
	HTPR	30	0846	0850	0930	N27	E45	5092	08	2.9	44	1B			C	0850	300	3.6	EI
	SVTO	30	0847	0848	0912	N28	E41	5092	08	2.6	25	2N	M 1.8	3	E		267		F
	KHAR	30	0848U	0849	0918D	N27	E45	5092	08	2.9	30U	1B		2	P	0853	280	4.2	CV
	CATA	30	0856E	0856	0917D	N27	E45	5092	08	2.9	21D	2B		2	P	0856	394	6.0	
0467	SVTO	30	0952	0954	1000	N13	W09	5090	07	29.7	8	SF		3	E		16		
0468		30	11148	11225	1201	S23	W11	5084	07	29.6	47	SF	C 1.8				47	0.6	E
	HTPR	30	1114	1127	1245	S20	W09	5084	07	29.8	91	SF			C	1127	80	0.8	E
	HTPR	30	1118	1122	1130	S26	W18	5084	07	29.1	12	SF			C	1122	30	0.3	E
	SVTO	30	1122	1125	1147	S22	W07	5084	07	29.9	25	SF	C 1.8	3	E		30		
0469	HTPR	30	1205	1207	1230	N15	W12	5090	07	29.6	25	SF			C	1207	60	0.6	E
0470	HTPR	30	1208	1211	1235	N26	E31	5096	08	1.9	27	SF			C	1211	30	0.3	
0471		30	1412	14121	1428	S20	W14	5084	07	29.5	16	SN	C 1.6				39	0.6	EF
	HOLL	30	1412	1412	1431	S20	W13	5084	07	29.6	19	SF	C 1.6	3	E		18		
	HTPR	30	1412	1413	1426	S21	W14	5084	07	29.5	14	SN			C	1413	60	0.6	EF
0472		30	15353	15363	1550	N28	E42	5092	08	2.9	15	SN					28	0.4	E
	HTPR	30	1535	1536	1548	N28	E41	5092	08	2.8	13	SN			C	1536	30	0.4	E
	HOLL	30	1538	1539	1551	N28	E43	5092	08	3.0	13	SF		3	E		25		
0473		30	1608	16093	1629	N28	E42	5092	08	2.9	21	SN	C 1.5				52	0.9	EF
	HOLL	30	1608	1609	1628	N28	E42	5092	08	2.9	20	SF	C 1.5	3	E		33		F
	HTPR	30	1608	1612	1630	N28	E41	5092	08	2.9	22	SN			C	1612	70	0.9	E
0474	HTPR	30	1640		1802D	S22	W16	5084	07	29.5	82D	SN			C	1712	90	0.9	E

Hα SOLAR FLARES

JULY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0475	HTPR	30	1613	1615	1633	N12	W10	5090	07	29.9	20	SF				C	1615	40	0.4	E
0476	HTPR	30	1704	1705	1712	N24	E39	5092	08	2.7	8	SF				C	1705	40	0.5	E
0477		30	1721*	17345	1749	N28	E41	5092	08	2.9	28	SN	C	2.8				66	1.5	EF
	HTPR	30	1721	1734	1752	N29	E38	5092	08	2.7	31	SB				C	1734	120	1.5	EF
	HOLL	30	1733	1734	1748	N28	E42	5092	08	3.0	15	SF	C	2.8	3	E		45		F
	PALE	30	1734	1739	1748	N28	E42	5092	08	3.0	14	SF	C	2.8	3	E		34		
0478	HOLL	30	1857	1857	1902	N27	E41	5092	08	3.0	5	SF			4	E		11		
0479	HOLL	30	2104	2106U	2133	N16	W15	5090	07	29.7	29	SF			3	E		27		F
0480		30	21253	21331	2154	S22	W16	5084	07	29.7	29	1N	C	6.1				123		FU
	HOLL	30	2125	2134	2157	S23	W16	5084	07	29.6	32	1N	C	6.1	3	E		154		UF
	PALE	30	2128	2133	2151	S22	W17	5084	07	29.6	23	SN	C	6.1	3	E		92		F
0481		30	2141	21418	2212	N25	E36	5092	08	2.7	31	SF						56		F
	HOLL	30	2139E	2149	2204	N25	E36	5092	08	2.7	25D	SF			3	E		74		F
	PALE	30	2141	2141	2219	N25	E36	5092	08	2.7	38	SF			3	E		37		F
0482		30	2355	23554	2406	N14	W15	5090	07	29.9	11	SF	C	2.4				111	2.1	EFI
	LEAR	30	2355	2355	2409	N13	W14	5090	07	29.9	14	SF	C	2.4	3	E		45		F
	VORO	30	2355	2356	2404	N14	W15	5090	07	29.9	9	1F			2	C	2356	197	2.1	EI
	PALE	30	2355	2359	2404	N14	W15	5090	07	29.9	9	SF	C	2.4	3	E		92		F
0483		31	0242	02431	0249	N16	W17	5090	07	29.8	7	SF						27		
	LEAR	31	0242	0243	0248	N16	W17	5090	07	29.8	6	SF			3	E		12		
	PALE	31	0242	0244	0250	N16	W17	5090	07	29.8	8	SF			3	E		42		
0484	LEAR	31	0252	0300	0318	N33	E42	5095	08	3.4	26	SF			3	E		35		
0485	LEAR	31	0300	0300	0307	N24	E32	5092	08	2.6	7	SF			3	E		18		
0486	LEAR	31	0346	0349	0418	N13	W17	5090	07	29.9	32	SF	C	2.2	3	E		21		
0487	ABST	31	0611	0624U	0628	N13	W19	5090	07	29.8	17	SF				P	0624	87	1.0	F
0488		31	06281	06371	0656	N27	E35	5092	08	3.0	28	SF						26		F
	LEAR	31	0628	0638	0654	N26	E34	5092	08	2.9	26	SF			3	E		26		F
	KANZ	31	0629	0637	0659	N28	E36	5092	08	3.1	30	SF			2					
0489	LEAR	31	0654	0656	0703	N15	W19	5090	07	29.8	9	SF			3	E		17		F
0490		31	0711*	07243	0814	N34	E41	5095	08	3.6	63	1B	M	4.0				304	5.4	FIR
	CATA	31	0711	0726	0750D	N33	E41	5095	08	3.5	39D	2B			2	P	0726	506	7.6	
	ABST	31	0711	0732U	0759	N35	E43	5095	08	3.7	48	2N				P	0732	393	6.0	FI
	KANZ	31	0718	0725	0815	N33	E41	5095	08	3.6	57	1N			2					
	LEAR	31	0718	0727	0812	N34	E41	5095	08	3.6	54	1B	M	4.0	3	E		234		F
	SVTO	31	0721	0724	0814	N35	E41	5095	08	3.6	53	1B	M	4.0	3	E		170		F
	KHAR	31	0722E	0727	0828	N34	E43	5095	08	3.7	66D	2N			2	P	0724	490	7.6	IR
	YUNN	31	0800E	0804U	0813D	N34	E41	5095	08	3.6	13D	SB	M	4.0		P	0804	32	0.5	
0491	KHAR	31	0846		0852	N14	W40	5085	07	28.3	6	SF			2	V	0846			DH
0492		31	08524	08592	0915	N13	W21	5090	07	29.8	23	SN						85	1.0	EFH
	LEAR	31	0852	0901	0916	N12	W20	5090	07	29.9	24	SF			3	E		81		F
	KHAR	31	0854	0859	0918	N15	W23	5090	07	29.6	24	1F			2	P	0859			EH
	YUNN	31	0855E	0902U	0902D	N13	W21	5090	07	29.8	7D	SB				P	0902	32	0.4	
	KANZ	31	0856	0859	0911	N13	W21	5090	07	29.8	15	SF			2					
	CATA	31	0859E	0859	0905D	N14	W20	5090	07	29.9	6D	SB			2	P	0859	141	1.6	
0493	SVTO	31	1452E	1453U	1520	N34	E38	5095	08	3.6	28D	SN	C	3.2	3	E		46		F
0494		31	1540*	16056	1642	N32	E31	5095	08	3.1	62	SF	C	3.9				62		FH
	RAMY	31	1540	1611	1651	N32	E33	5095	08	3.3	71	SF	C	3.9	3	E		84		F
	HOLL	31	1602	1610	1631	N32	E30	5095	08	3.0	29	SF	C	3.9	4	E		47		FH
	KANZ	31	1605	1605	1644	N31	E29	5095	08	2.9	39	SF			2					
	SVTO	31	1606E	1607U	1640	N32	E32	5095	08	3.2	34D	SN	C	3.9	3	E		55		F

Hα SOLAR FLARES

JULY 1988

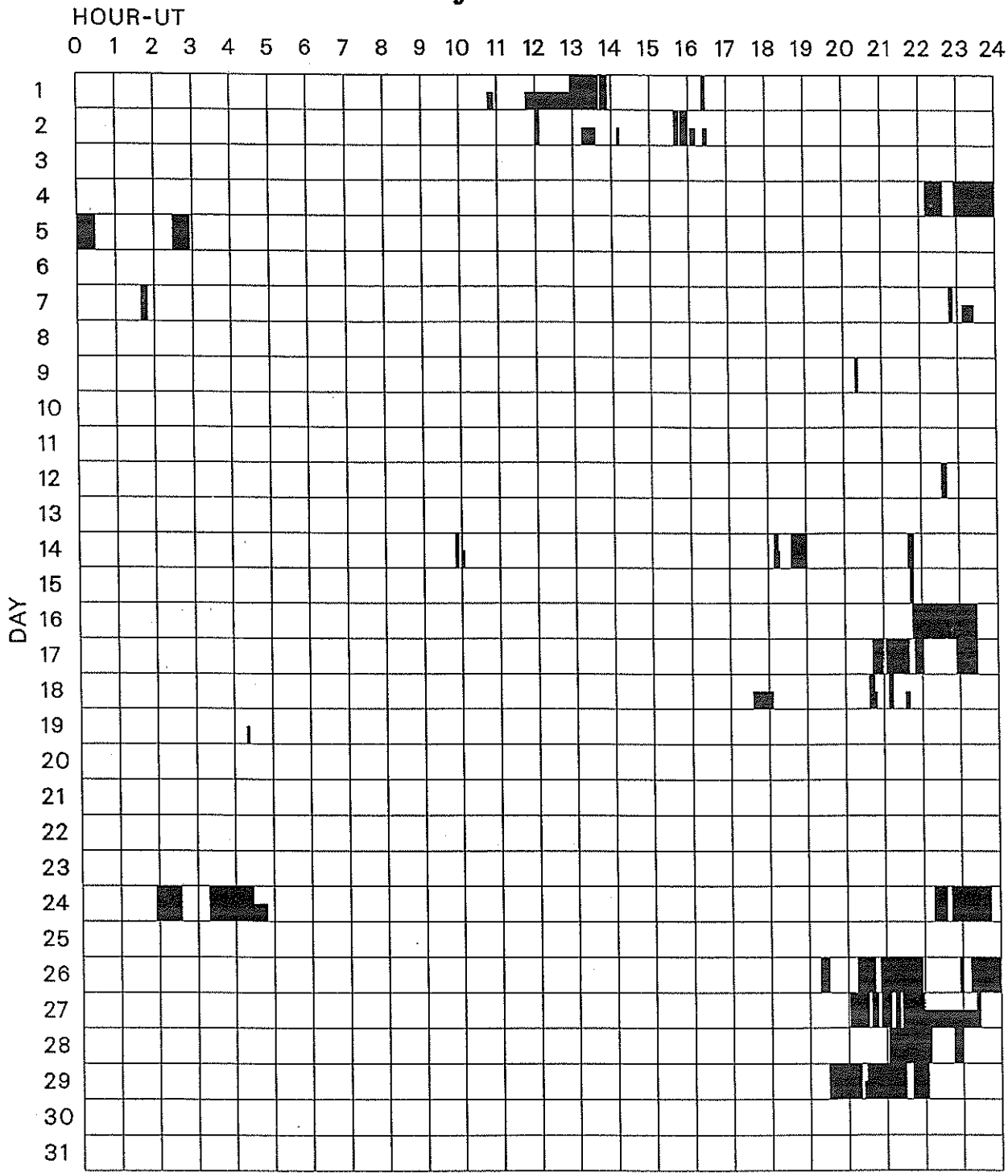
Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0495		31	16422	16483	1704	S27	E42	5097	08	4.0	22	SF					36		EF
	HOLL	31	1642	1651	1704	S26	E42	5097	08	3.9	22	SF		4	E		36		F
	KANZ	31	1644	1648	1707D	S28	E43	5097	08	4.0	23D	SF		2					E
0496		31	18011	18036	1821	N34	E35	5095	08	3.5	20	SF					28		F
	PALE	31	1801	1809	1821	N34	E36	5095	08	3.6	20	SF		3	E		54		
	RAMY	31	1801	1809	1823	N33	E34	5095	08	3.4	22	SF		2	E		12		
	HOLL	31	1802	1803	1820	N34	E35	5095	08	3.5	18	SF		4	E		17		F
0497	PALE	31	2129	2134	2144	N14	W30	5090	07	29.6	15	SF	C 2.1	3	E		34		
0498	VORO	31	2217	2221	2304	N35	E33	5095	08	3.6	47	SF		2	C	2221	99	1.4	DI
0499	HOLL	31	2310	2312	2333	N11	W47	5085	07	28.4	23	SF		3	E		25		

"Remarks"

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

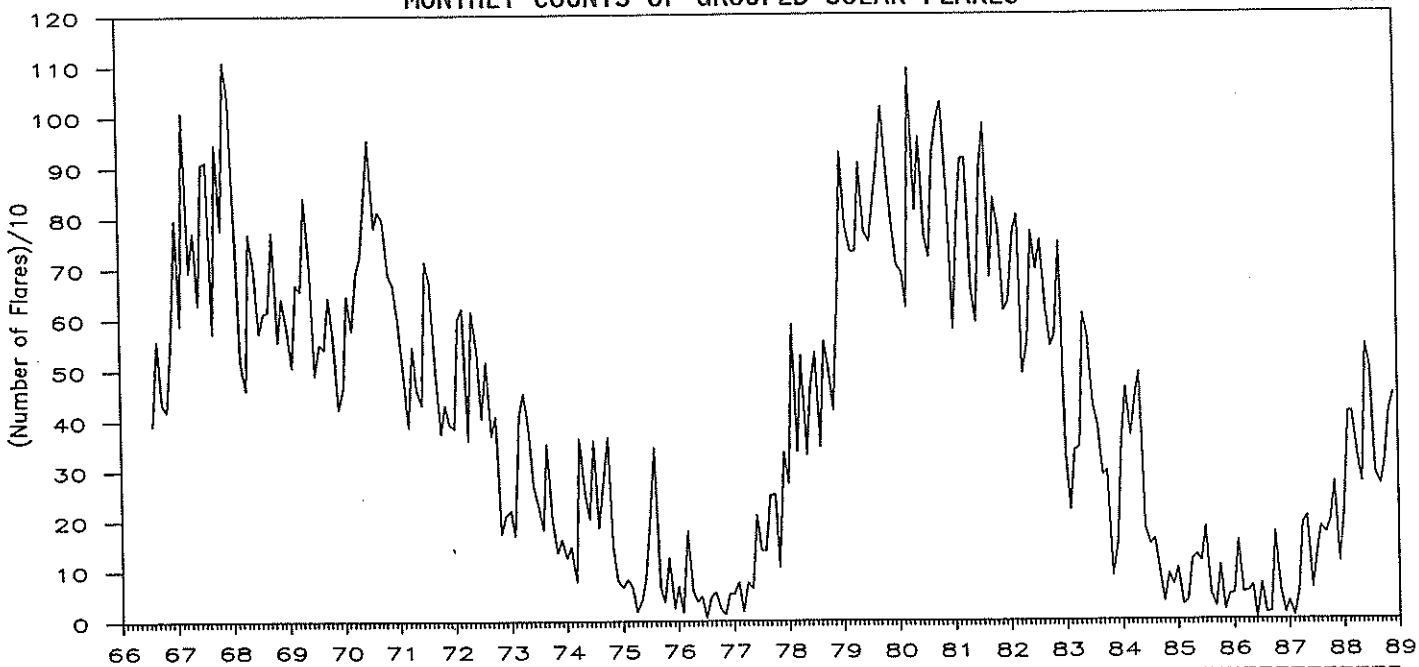
JULY 1988



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	Holloman	Kharkov	Mitaka	San Vito
Catania	Kandilli	Learmonth	Palehua	Tashkent
Haute Provence	Kanzelhoehe	Lvov	Peking	Voroshilov
		Manila	Ramey	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	209	412	412	328	272	544	499	291	267	308	415	447	4404

*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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	200	GORK	44	NS	0300.0E		228.0D		5.0		
	100	GORK	44	NS	0300.0E		256.0D		6.0		
	200	HIRA	43	NS	0330.0	0823.0	480.0D	46.0	15.0		ML
	410	SVTO	43	NS	0345.0	0925.0	855.0D	120.0			QL=1 ST=2 TYP=1
	245	SVTO	43	NS	0345.0	0918.0	855.0D	280.0			QL=1 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	40.0			
	430	KRAK	44	NS	0703.0E	0843.3	367.0D	40.0	1.0		
	260	ONDR	44	NS	0705.0E	0938.8	475.0D	260.0			
	245	SGMR	43	NS	0934.0	1000.0	867.0D	210.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0535.0	840.0D	160.0	79.0		MR
	410	PALE	44	NS	2121.0E	2346.0	309.0D	66.0			QL=1 ST=2 TYP=1
	410	LEAR	43	NS	2322.0	0049.0	611.0	71.0			QL=1 ST=2 TYP=1
	245	LEAR	8	S	0300.0	0301.0	1.0	180.0			QL=1 ST=2 TYP=3
	15000	KISV	1	S	0318.2	0318.4	0.5	9.0			
	15000	KISV	2	S/F	0326.4	0327.0	3.8	12.0			
	500	HIRA	45	C	0343.8	0345.9	3.5	8.0			WL
	9300	KISV	2	S/F	0400.9	0401.1	3.0	13.0			
	5900	KISV	2	S/F	0401.0	0401.1	3.0	9.0			
	5900	KISV	23	GRF	0404.5	0431.5	112.0	20.0			
	9300	KISV	20	GRF	0406.0	0500.0	93.0	15.0			
	3100	CRIM	20	GRF	0413.0	0433.0	32.0	4.0	1.0		
	9300	KISV	1	S	0418.3	0418.4	4.0	13.0			
	245	LEAR	8	S	0435.0	0435.0	1.0	99.0			QL=1 ST=2 TYP=3
	9300	KISV	1	S	0435.0	0435.6	1.0	4.0			
	15000	KISV	45	C	0458.4	0505.0		38.0			
	15000	KISV	45	C	0458.4	0500.0	36.0	32.0			
	17000	NOBE	7	C	0459.1	0459.8	10.0	27.0			13L
	15400	LEAR	4	S/F	0500.0E	0511.0	11.0D	56.0			QL=1 ST=2 TYP=5
	5900	KISV	2	S/F	0501.0	0505.2	29.0	29.0			
	9300	KISV	45	C	0502.0	0505.3	8.5	37.0			
	9300	KISV	1	S	0547.0	0548.1	3.7	7.0			
	204	IZMI	42	SER	0602.5	0604.0	18.5	220.0			
	200	HIRA	42	SER	0602.6	0603.8	18.2	270.0			ML
	245	LEAR	8	S	0606.0E	0607.0	1.0D	58.0			QL=1 ST=2 TYP=3
	15000	KISV	2	S/F	0636.7	0637.2	4.4	27.0			
	9300	KISV	42	SER	0643.3	0654.6		4.0			
	9300	KISV	42	SER	0643.3	0646.8		6.0			
	9300	KISV	42	SER	0643.3	0650.8		7.0			
	9300	KISV	42	SER	0643.3	0655.9		6.0			
	9300	KISV	42	SER	0643.3	0643.9	17.5	4.0			
	5900	KISV	23	GRF	0646.8	0650.8	210.0	7.0			
	3100	CRIM	25	R	0712.0	0810.0		6.4			
	33	UPIC	42	SER	0720.0		579.7				
	29	UPIC	42	SER	0720.3		579.4				
	5900	KISV	22	GRF	0727.8	0904.0	245.0	11.0			
	9300	KISV	22	GRF	0743.0	0745.8	37.0	9.0			
	2950	GORK	21	GRF	0745.5	0948.0	132.0	16.9			
	3013	IZMI	7	C	0840.0	0846.0	7.8	13.0	6.5		
	3000	POTS	4	S/F	0840.0U	0845.0	9.0U	25.0			
	9500	POTS	20	GRF	0841.0	0848.4	24.0	10.0			
	5900	KISV	45	C	0841.0	0845.6	19.0	28.0			
	1470	POTS	4	S/F	0841.0	0843.6	10.0	18.0			
	950	GORK	21	GRF	0841.3	0940.8	109.3	5.0			
	3100	CRIM	45	C	0841.5	0845.2		14.9			
	3100	CRIM	45	C	0841.5	0843.6	7.0	11.7	4.0		
	410	SVTO	8	S	0842.0	0843.0	2.0	70.0			QL=1 ST=3 TYP=3
	650	GORK	21	GRF	0842.0	0926.8	72.0	10.5			
	410	LEAR	8	S	0843.0	0843.0	1.0	66.0			QL=1 ST=2 TYP=3
	2950	GORK	45	C	0843.0	0845.2		19.7			
	2950	GORK	45	C	0843.0	0843.6	3.3	12.2			
	650	GORK	46	C	0843.3	0845.2		8.0			
	950	GORK	46	C	0843.3	0845.2		9.0			
	950	GORK	46	C	0843.3	0844.3		16.0			
	9300	KISV	22	GRF	0843.3	0848.3	19.0	11.0			
	650	GORK	46	C	0843.3	0843.6	2.3	19.0			
	950	GORK	46	C	0843.3	0843.7	3.1	36.0			
	810	KRAK	41	F	0843.3	0843.7	3.5	23.0	4.0		
	5900	KISV	45	C	0852.3E	0852.3	1.0D	8.0			
	234	POTS	42	SER	0916.0	0939.2	25.0	1100.0			

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JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	245	LEAR	4	S/F	0923.0	0927.0	6.0	260.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0925.0	0926.0	2.0	84.0			QL=1 ST=2 TYP=3
	536	ONDR	42	SER	1015.0	1418.4	285.0D	4.0U			
	15000	KISV	1	S	1040.8	1041.0	10.0	36.0			
	5900	KISV	23	GRF	1108.3	1112.3	15.7	7.0			
	410	SVTO	8	S	1112.0	1112.0	2.0	54.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1112.0	1113.0	3.0	490.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1112.0	1113.0	3.0	9.0			QL=1 ST=2 TYP=3
	9300	KISV	2	S/F	1113.0	1113.2	1.9	9.0			
	9500	POTS	42	SER	1113.0	1113.2	7.0	8.0			
	15000	KISV	2	S/F	1113.0	1113.3	1.4	36.0			
	9500	POTS	42	SER	1113.0	1117.8		10.0			
	15000	KISV	2	S/F	1117.4	1118.1	2.0	16.0			
	9300	KISV	2	S/F	1117.6	1117.9	1.0	8.0			
	5900	KISV	20	GRF	1322.5	1327.3	13.5	19.0			
	9400	HUAN	1	S	1323.0	1328.0	10.1	3.7	1.7		
	9300	KISV	20	GRF	1324.3	1327.2	8.6	12.0			
	9400	HUAN	1	S	1358.2	1402.4	8.9	7.4	4.5		
	9400	HUAN	20	GRF	1447.3	1457.2	29.4	9.3	4.6		
	2800	OTTA	22	GRF	1449.0	1456.8	165.0	14.2	7.0		
	9400	HUAN	21	GRF	1532.0	1556.7	93.0	16.8	8.6		
	8800	SGMR	4	S/F	1541.0	1549.0	8.0	60.0			QL=1 ST=3 TYP=3
	15400	SGMR	4	S/F	1541.0	1549.0	8.0	57.0			QL=1 ST=3 TYP=3
	4995	SGMR	4	S/F	1541.0	1550.0	10.0	67.0			QL=1 ST=3 TYP=3
	8800	SVTO	20	GRF	1541.0	1549.0	17.0	60.0			QL=1 ST=2 TYP=2
	4995	SVTO	20	GRF	1541.0	1550.0	17.0	54.0			QL=1 ST=2 TYP=2
	9400	HUAN	4	S/F	1541.2	1550.0	14.9	35.4	20.4		
	4995	SGMR	4	S/F	1548.0	1550.0	3.0	67.0			QL=1 ST=2 TYP=3
	15400	SGMR	4	S/F	1549.0	1549.0	8.0	57.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1549.0	1549.0	8.0	60.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1600.0	1600.0		100.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1658.0	1659.0	1.0	79.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	1722.8	1725.5	7.7	3.7	1.6		
	245	PALE	8	S	1750.0	1750.0	1.0	170.0			QL=1 ST=3 TYP=3
	410	PALE	8	S	1905.0	1905.0	1.0	160.0			QL=1 ST=2 TYP=3
	9400	HUAN	20	GRF	1909.7	1934.2	46.6	7.4	3.6		
	200	HIRA	42	SER	2014.2	2106.3	53.0	730.0			ML
	9400	HUAN	21	GRF	2014.6	2056.5	90.0	9.3	4.8		
	245	PALE	8	S	2029.0	2029.0	1.0	120.0			QL=1 ST=2 TYP=3
	9400	HUAN	3	S	2035.3	2037.2	5.8	24.2	10.2		
	100	HIRA	46	C	2035.6		2.5	1000.0D			
	500	HIRA	6	S	2036.8	2037.5	1.5	200.0			SL
	245	PALE	8	S	2040.0	2040.0	1.0	150.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	2105.3		4.1	1000.0D			
	500	HIRA	42	SER	2105.3	2110.3	6.6	530.0			SL
	9400	HUAN	4	S/F	2105.4	2106.2	11.3	124.9	30.5		
	15400	PALE	8	S	2106.0	2106.0	2.0	67.0			QL=1 ST=2 TYP=3
	610	PALE	4	S/F	2106.0	2110.0	5.0	320.0			QL=1 ST=2 TYP=5
	245	PALE	8	S	2106.0	2106.0	1.0	460.0			QL=1 ST=2 TYP=3
	410	PALE	4	S/F	2106.0	2106.0	4.0	190.0			QL=1 ST=2 TYP=5
	8800	PALE	8	S	2106.0	2106.0	1.0	110.0			QL=1 ST=2 TYP=3
	4995	PALE	4	S/F	2106.0	2106.0		60.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	2106.0	2106.0	1.0	370.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	2106.0	2106.0	1.0	120.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	2106.0	2106.0	1.0	370.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	2106.0	2108.0	5.0	270.0			QL=1 ST=2 TYP=5
	245	SGMR	49	GB	2106.0	2106.0	5.0	510.0			QL=1 ST=2 TYP=6
	610	SGMR	4	S/F	2106.0	2110.0	5.0	340.0			QL=1 ST=2 TYP=3
	15400	SGMR	4	S/F	2106.0	2106.0	8.0	76.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	2128.3	2130.5	5.7	11.2	6.2		
	500	HIRA	42	SER	2304.2	2316.5	18.0	310.0			ML
	410	PALE	4	S/F	2305.0	2305.0		67.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	2305.0	2305.0		78.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2310.0	2310.0	1.0	60.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	2311.0	2311.0	1.0	150.0			QL=1 ST=2 TYP=3
	610	PALE	4	S/F	2315.0	2317.0	7.0	220.0			QL=1 ST=2 TYP=5
	410	PALE	4	S/F	2315.0	2320.0	7.0	310.0			QL=1 ST=2 TYP=5
	4995	PALE	8	S	2315.0	2316.0	2.0	63.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	2316.0	2316.0	1.0	76.0			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 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	610	SGMR	8	S	2316.0	2317.0	1.0	160.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	2316.0	2318.0	5.0	90.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	2316.0	2320.0	6.0	260.0			QL=1 ST=2 TYP=5
02	200	GORK	44	NS	0300.0E		200.0D				
	100	GORK	44	NS	0314.0E		376.0D		10.0		
	245	SVTO	44	NS	0345.0E	1546.0	855.0D	410.0			QL=1 ST=2 TYP=1
	410	SVTO	44	NS	0345.0E	0642.0	855.0D	76.0			QL=1 ST=2 TYP=1
	33	UPIC	43	NS	0427.0		737.5				
	29	UPIC	43	NS	0427.5		736.9				
	204	IZMI	43	NS	0600.0		360.0	70.0			
	234	POTS	44	NS	0600.0E	0733.0	554.0D	110.0			
	260	ONDR	44	NS	0630.0E	1500.0U	549.0D				
	430	KRAK	44	NS	0714.0E		353.0D		3.0		
	245	SGMR	44	NS	0934.0E	1753.0	866.0D	1200.0			QL=1 ST=3 TYP=1
	245	PALE	44	NS	1612.0E	1834.0	769.0D	460.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1638.0E	1834.0	743.0D	460.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1950.0E	0510.0	840.0D	98.0	40.0		MR
	100	HIRA	44	NS	1950.0E	0712.0U	840.9D	130.0U	45.0		
	245	LEAR	44	NS	2332.0E	0115.0	602.0D	370.0			QL=1 ST=2 TYP=1
	245	PALE	4	S/F	0014.0	0014.0		310.0			QL=1 ST=3 TYP=3
	500	HIRA	27	RF	0043.0	0108.0	80.0	24.0	13.0		WR
	500	HIRA	42	SER	0044.8	0046.0	5.5	75.0			MR
	610	LEAR	4	S/F	0046.0	0046.0	4.0	89.0			QL=1 ST=2 TYP=3
	610	PALE	4	S/F	0046.0	0046.0	7.0	94.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0048.0	0048.0	1.0	360.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	0048.0	0048.0		410.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0048.0	0048.0	1.0	90.0			QL=1 ST=2 TYP=3
	35000	NOBE	20	GRF	0050.7		35.0	35.0			O
	17000	NOBE	20	GRF	0050.7	0100.6	40.0	33.0			O
	410	LEAR	4	S/F	0109.0	0119.0	15.0	170.0			QL=1 ST=2 TYP=5
	610	LEAR	4	S/F	0111.0	0118.0	8.0	150.0			QL=1 ST=2 TYP=5
	500	HIRA	41	F	0111.3	0114.5	9.5	180.0			ML
	610	PALE	4	S/F	0114.0	0117.0	5.0	150.0			QL=1 ST=2 TYP=5
	410	PALE	4	S/F	0116.0	0118.0	3.0	160.0			QL=1 ST=2 TYP=5
	245	LEAR	8	S	0125.0	0127.0	2.0	260.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0253.0	0254.0	2.0	60.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0254.0	0254.0	1.0	100.0			QL=1 ST=2 TYP=3
	2950	GORK	21	GRF	0300.0E	0448.0	345.0D	12.5			
	245	LEAR	49	GB	0328.0	0329.0	2.0	540.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	0328.0E	0328.0		510.0			QL=1 ST=2 TYP=6
	17000	NOBE	7	C	0356.5	0356.6	1.0	18.0			18L
	650	GORK	23	GRF	0404.5U		262.0U	6.5			
	410	PALE	8	S	0409.0	0409.0	1.0	300.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0415.5	0417.7	8.5	13.0			
	500	HIRA	6	S	0416.5	0418.0	2.0	105.0			ML
	2950	GORK	4	S/F	0416.6	0417.7	2.8	7.2			
	650	GORK	2	S/F	0416.7	0418.0	2.3	16.0			
	410	PALE	8	S	0417.0	0417.0	1.0	77.0			QL=1 ST=2 TYP=5
	410	LEAR	8	S	0437.0	0438.0	2.0	50.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	0437.0	0437.0		230.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	0437.0	0437.0		250.0			QL=1 ST=3 TYP=3
	5900	KISV	1	S	0437.3	0437.7	1.0	9.0			
	245	LEAR	8	S	0438.0	0438.0	2.0	190.0			QL=1 ST=2 TYP=3
	650	GORK	41	F	0450.4	0533.5		49.0			
	650	GORK	41	F	0450.4	0558.6		26.0			
	650	GORK	41	F	0450.4	0453.7	79.8	10.0			
	650	GORK	41	F	0450.4	0543.8		10.0			
	245	SVTO	49	GB	0549.0E	0551.0	5.0D	990.0			QL=1 ST=3 TYP=6
	245	LEAR	49	GB	0550.0E	0552.0	4.0D	920.0			QL=1 ST=2 TYP=7
	410	LEAR	8	S	0552.0	0552.0	1.0	46.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	0636.0	0643.2		600.0			
	100	GORK	41	F	0636.0	0649.3		130.0			
	100	GORK	41	F	0636.0	0638.4		130.0			
	100	GORK	41	F	0636.0	0636.4	17.5	130.0			
	200	GORK	46	C	0636.2	0646.0		480.0			
	200	GORK	46	C	0636.2	0638.0	10.6	860.0			
	200	GORK	46	C	0636.2	0641.5		380.0			
	3100	CRIM	42	SER	0637.0	0644.2		5.0			

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Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
02	3100	CRIM	42	SER	0637.0	0638.5	17.0	17.0	5.0		
	5900	KISV	4	S/F	0637.0	0642.6	8.5	41.0			
	3100	CRIM	42	SER	0637.0	0642.9		51.0			
	950	GORK	21	GRF	0637.6	0645.0	16.2	2.0			
	650	GORK	4	S/F	0637.6	0638.1	2.1	10.0			
	2950	GORK	1	S	0637.6	0638.4	1.6	4.0			
	3013	IZMI	3	S	0637.7	0642.8	7.3	86.0			
	500	HIRA	42	SER	0638.0	0652.0	18.5	840.0			SL
	950	GORK	4	S/F	0638.0	0638.1	2.0	14.0			
	245	LEAR	4	S/F	0640.0	0643.0	4.0	160.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0642.0	0643.0	1.0	130.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0642.0	0643.0	1.0	150.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	0642.0	0643.0	1.0	70.0			QL=1 ST=3 TYP=3
	610	SVTO	8	S	0642.0	0643.0	1.0	140.0			QL=1 ST=3 TYP=3
	2695	SVTO	4	S/F	0642.0	0642.0	10.0	61.0			QL=1 ST=3 TYP=3
	9500	POTS	3	S	0642.0	0642.7	3.0	32.0			
	3000	POTS	3	S	0642.0	0642.7	2.0	63.0			
	1470	POTS	4	S/F	0642.0	0642.8	6.5	156.0			
	650	GORK	4	S/F	0642.1	0643.1	1.9	272.0			
	9300	KISV	4	S/F	0642.2	0642.7	2.4	38.0			
	950	GORK	45	C	0642.3	0643.2		89.0			
	950	GORK	45	C	0642.3	0642.5	2.6	98.0			
	9100	GORK	4	S/F	0642.3U	0642.7	1.0D	30.0			
	2950	GORK	3	S	0642.3	0642.8	2.4	65.0			
	15000	KISV	2	S/F	0642.5	0642.8	1.1	24.0			
	610	LEAR	8	S	0643.0	0643.0	1.0	200.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0643.0	0643.0	1.0	61.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0643.0	0643.0	8.0	30.0			QL=1 ST=2 TYP=3
	15400	LEAR	4	S/F	0643.0	0643.0		23.0			QL=1 ST=2 TYP=3
	650	GORK	46	C	0648.8	0650.4	7.7	270.0			
	950	GORK	4	S/F	0648.8	0648.9	1.7	17.0			
	650	GORK	46	C	0648.8	0651.9		273.0			
	610	LEAR	4	S/F	0649.0	0650.0	7.0	270.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0649.0	0650.0	4.0	40.0			QL=1 ST=2 TYP=3
	2950	GORK	2	S/F	0649.0	0649.8	2.3	5.9			
	245	LEAR	4	S/F	0650.0	0655.0	10.0	190.0			QL=1 ST=2 TYP=5
	3100	CRIM	26	FAL	0658.0	0900.0		9.0			
	9500	POTS	20	GRF	0720.5	0722.4	20.0	11.0			
	9300	KISV	22	GRF	0721.5	0724.5	14.5	20.0			
	5900	KISV	22	GRF	0721.6	0722.6	14.0	6.0			
	15000	KISV	22	GRF	0721.7	0724.7	18.3	24.0			
	200	GORK	5	S	0802.0	0803.6	3.5	1380.0			
	1470	POTS	2	S/F	0803.2	0803.8	3.8	4.0			
	234	POTS	8	S	0803.3	0803.6	0.9	12000.0	4000.0		
	950	GORK	2	S/F	0803.4	0805.4	2.5	4.5			
	100	GORK	47	GB	0803.5	0805.2		2200.0			
	100	GORK	47	GB	0803.5	0803.6	2.3	2600.0			
	30	POTS	4	S/F	0803.6	0804.2	4.4	4000.0	200.0		
	650	GORK	46	C	0803.6	0805.4		6.0			
	650	GORK	46	C	0803.6	0803.9	2.2	14.0			
	100	GORK	8	S	0825.2	0825.3	0.3	3000.0			
	30	POTS	42	SER	1048.4	1055.2	7.3	18000.0	300.0		
	234	POTS	41	F	1053.7	1054.7	1.4	19000.0	200.0		
	5900	KISV	2	S/F	1146.6	1147.7	3.8	4.0			
	536	ONDR	40	F	1153.6	1154.6	142.4	66.0			
	5900	KISV	22	GRF	1159.0	1212.5	48.5	4.0			
	9300	KISV	1	S	1241.6	1242.1	1.0	6.0			
	245	SGMR	4	S/F	1315.0	1315.0		350.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1315.0	1315.0	1.0	350.0			QL=1 ST=2 TYP=3
	5900	KISV	29	PBI	1325.0	1341.1	17.5	8.0			
	5900	KISV	4	S/F	1325.0	1331.1U	16.0	60.0D			
	9400	HUAN	4	S/F	1328.1	1331.2	8.3	70.2	26.1		
	9500	POTS	4	S/F	1328.5	1331.2	11.0	56.0			
	15000	KISV	2	S/F	1329.2	1331.1	4.5	22.0			
	9300	KISV	4	S/F	1329.2	1331.1	6.3	82.0			
	9300	KISV	29	PBI	1329.2	1335.6	24.5	18.0			
	15000	KISV	29	PBI	1329.2	1333.8	14.5	4.0			
	8800	SVTO	8	S	1330.0	1331.0	1.0	72.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	1331.0	1331.0	1.0	58.0			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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
02	9400	HUAN	30	PB1	1336.4	1336.4	74.1	10.0	4.8		
	9400	HUAN	1	S	1427.0	1428.6	4.0	12.0	6.3		
	245	SVTO	8	S	1428.0	1428.0	1.0	260.0			QL=1 ST=3 TYP=3
	9500	POTS	1	S	1428.0	1428.6	3.0	8.0			
	245	SGMR	49	GB	1540.0	1540.0	1.0	1200.0			QL=1 ST=2 TYP=6
	410	PALE	8	S	1643.0	1643.0	1.0	90.0			QL=1 ST=3 TYP=3
	245	PALE	49	GB	1643.0E	1643.0	2.0D	3000.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	1643.0	1643.0	1.0	90.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1643.0	1643.0	44.0	56.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1643.0E	1643.0	500.0D	3200.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	1710.0	1710.0	1.0	290.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1753.0	1753.0	2.0	1100.0			QL=1 ST=2 TYP=6
	245	SVTO	8	S	1755.0	1755.0	1.0	410.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1810.0	1810.0	1.0	70.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1810.0	1810.0	1.0	130.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1810.0	1810.0	44.0	50.0			QL=1 ST=2 TYP=3
	9400	HUAN	2	S/F	1834.5	1838.4	7.2	6.0	3.2		
	245	PALE	8	S	1911.0	1911.0	1.0	200.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	2218.0	2219.0	1.0	770.0			QL=1 ST=2 TYP=6
	610	SGMR	4	S/F	2238.0	2238.0	44.0	110.0			QL=1 ST=2 TYP=3
	17000	NOBE	7	C	2311.2	2311.8	7.0	35.0			28L
03	100	GORK	44	NS	0245.0E		405.0D		20.0		
	200	GORK	44	NS	0248.0E		222.0D		20.0		
	245	SVTO	44	NS	0345.0E	1648.0	855.0D	270.0			QL=1 ST=2 TYP=1
	410	SVTO	44	NS	0345.0E	1754.0	855.0D	45.0			QL=1 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	60.0			
	234	POTS	44	NS	0600.0E	1229.0	532.0D	165.0			
	260	ONDR	44	NS	0600.0E	1150.8	480.0D				
	430	KRAK	44	NS	0707.0E		364.0D		4.0		
	410	SGMR	43	NS	0935.0	1846.0		28.0			QL=1 ST=2 TYP=1
	245	SGMR	43	NS	0935.0	1306.0		370.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1639.0E	2328.0	742.0D	230.0			QL=1 ST=2 TYP=1
	100	HIRA	44	NS	1950.0E	2300.0	840.0D	180.0	70.0		
	200	HIRA	44	NS	1950.0E	2224.0	840.0D	130.0	67.0		WR
	245	LEAR	44	NS	2322.0E	2342.0	612.0D	140.0			QL=1 ST=2 TYP=1
	410	PALE	8	S	0043.0	0044.0	1.0	110.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	0043.9	0045.5	19.0	86.0	5.0		0
	15400	LEAR	4	S/F	0044.0	0044.0		65.0			QL=1 ST=1 TYP=3
	2695	LEAR	4	S/F	0044.0	0044.0		83.0			QL=1 ST=1 TYP=3
	8800	LEAR	4	S/F	0044.0	0044.0	3.0	120.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0044.0	0044.0	2.0	100.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0044.0	0046.0	3.0	110.0			QL=1 ST=2 TYP=3
	4995	PALE	8	S	0044.0	0044.0	2.0	83.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0044.0	0044.0	2.0	99.0			QL=1 ST=2 TYP=3
	1415	PALE	4	S/F	0044.0	0044.0		99.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0044.0	0044.0	1.0	120.0			QL=1 ST=2 TYP=3
	4995	PALE	8	S	0044.0	0044.0	2.0	120.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0044.0	0044.0	2.0	83.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0044.0	0045.0	2.0	90.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0045.0	0046.0	1.0	96.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0046.0	0046.0	1.0	92.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0220.0	0220.0		89.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0220.0	0220.0	1.0	50.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	0248.8	0250.4	2.6	970.0			
	245	LEAR	4	S/F	0323.0	0323.0		190.0			QL=1 ST=2 TYP=3
	9300	KISV	22	GRF	0411.0	0431.2	25.5	12.0			
	2950	GORK	20	GRF	0447.3	0800.0	590.0D	15.8			
	5900	KISV	21	GRF	0558.0	0617.2	26.0	12.0			
	9100	GORK	21	GRF	0558.2	0614.8	27.1	7.0			
	9300	KISV	2	S/F	0613.9	0617.1	6.0	12.0			
	9100	GORK	1	S	0616.8	0617.1	1.2	6.0	3.0		
	100	HIRA	42	SER	0633.4	0655.0U	51.0	1000.0D			
	810	KRAK	8	S	0714.1	0714.2	0.2	3.0			
	3100	CRIM	20	GRF	0742.8	0803.7	46.0	9.0	3.0		
	5900	KISV	20	GRF	0750.5	0758.4	18.0	8.0			
	100	GORK	41	F	0830.0	0835.5		225.0			
	100	GORK	41	F	0830.0	0840.5		540.0			
	100	GORK	41	F	0830.0	0833.6	15.7	360.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	9500	POTS	1	S	1131.3	1131.7	2.1	7.0			
	245	SGMR	4	S/F	1156.0	1156.0		410.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1156.0	1156.0		420.0			QL=1 ST=2 TYP=3
	536	ONDR	4	S/F	1158.9	1159.0	1.4	10.0			
	810	KRAK	8	S	1222.3	1222.4	0.2	5.0			
	245	SVTO	8	S	1305.0	1306.0	1.0	260.0			QL=1 ST=3 TYP=3
	9400	HUAN	3	S	1416.8	1417.5	8.0	31.6	16.0		
	2800	OTTA	22	GRF	1417.5	1418.0	150.0	20.5	9.0		
	9400	HUAN	29	PBI	1424.8	1424.8	34.8	9.5	4.6		
	9400	HUAN	1	S	1507.6	1510.0	5.9	9.5	4.8		
	9400	HUAN	1	S	1555.1	1557.0	9.5	11.1	6.2		
	245	SVTO	49	GB	1643.0	1643.0	1.0	3400.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	1654.0	1654.0	1.0	270.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1732.0E	1732.0	1.0D	650.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1732.0E	1732.0	865.0D	610.0			QL=1 ST=3 TYP=6
	9400	HUAN	1	S	1746.1	1749.3	7.4	6.3	3.4		
	245	PALE	8	S	1834.0	1834.0	1.0	230.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1905.0E	1906.0	1.0D	1000.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	1906.0E	1906.0	1.0D	970.0			QL=1 ST=2 TYP=6
	9400	HUAN	4	S/F	2144.1	2146.0	7.6	96.5	24.8		
	15400	SGMR	4	S/F	2145.0	2146.0	3.0	50.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	2145.0E	2146.0	1.0D	83.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	2146.0	2146.0	1.0	92.0			QL=1 ST=2 TYP=3
	4995	PALE	8	S	2146.0	2146.0	2.0	69.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	2146.0	2146.0	1.0	82.0			QL=1 ST=2 TYP=3
	15400	SGMR	4	S/F	2221.0	2221.0	3.0	93.0			QL=1 ST=2 TYP=3
	17000	NOBE	1	S	2221.2	2221.5	0.8	60.0			20L
	410	PALE	8	S	2318.0	2319.0	1.0	150.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2318.0	2319.0	1.0	300.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2318.0	2319.0	1.0	120.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	2318.5	2318.6	0.5	1350.0			O
04	200	GORK	44	NS	0253.0E		547.0D		5.0		
	100	GORK	44	NS	0253.0E		547.0D		20.0		
	245	SVTO	44	NS	0346.0E	0919.0	1214.0D	120.0			QL=1 ST=1 TYP=1
	245	SVTO	43	NS	0356.0	1220.0	844.0D	230.0			QL=1 ST=2 TYP=1
	260	ONDR	44	NS	0510.0E	1330.2	600.0D				
	204	IZMI	43	NS	0600.0		360.0	80.0			
	234	POTS	44	NS	0600.0E	1004.5	350.0D	70.0			
	430	KRAK	44	NS	0717.0E	1219.7	356.0D	27.0			
	245	SGMR	44	NS	0935.0E	1132.0	865.0D	470.0			QL=1 ST=3 TYP=1
	33	UPIC	43	NS	1002.7		477.3D				
	29	UPIC	43	NS	1002.8		477.2D				
	127	TORN	44	NS	1240.0E		180.0D		36.0		V=1
	245	PALE	44	NS	1640.0E	0333.0	741.0D	68.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0830.0	840.0D	22.0	6.0		O
	245	PALE	8	S	0247.0	0247.0	1.0	220.0			QL=1 ST=2 TYP=3
	100	GORK	24	R	0311.4	0322.8	20.3	150.0			
	200	HIRA	46	C	0350.2	0351.2	1.8	810.0			MR
	100	GORK	24	R	0415.6	0430.2	56.7	70.0			
	5900	KISV	2	S/F	0450.6	0451.6	6.0	9.0			
	200	HIRA	46	C	0455.6	0456.9	5.3	200.0			MR
	3100	CRIM	20	GRF	0506.0	0526.7	41.0	11.0	4.0		
	2950	GORK	20	GRF	0508.0	0526.0	125.0	14.4			
	100	GORK	8	S	0531.6	0531.9	0.8	270.0			
	200	GORK	4	S/F	0647.7	0648.1	0.9	350.0			
	9100	GORK	20	GRF	0700.0	0724.2	59.3	10.0	5.0		
	9100	GORK	21	GRF	0815.0	0833.0	36.3	6.0			
	15000	KISV	2	S/F	0829.4	0829.6	1.5	31.0			
	9300	KISV	2	S/F	0829.4	0829.6	1.0	16.0			
	5900	KISV	2	S/F	0829.4	0829.6	4.5	9.0			
	9100	GORK	1	S	0829.5	0829.7	1.9	19.0	6.0		
	2950	GORK	20	GRF	0917.0	1154.5	268.0	10.2			
	810	KRAK	8	S	0917.3	0917.4	0.2	5.0			
	9500	POTS	20	GRF	0920.0	0937.2	95.0	9.0			
	3000	POTS	20	GRF	0920.0	0929.4	40.0U	8.0			
	1470	POTS	20	GRF	0921.0	0930.5	140.0	4.0			
	9100	GORK	20	GRF	0922.2	0935.7	61.2	11.0			
	234	POTS	4	S/F	0923.1	0923.4	0.7	250.0	25.0		

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	100	GORK	24	R	0959.2	1017.7	23.1	75.0			
	536	ONDR	42	SER	1120.0	1341.6	220.0	6.0			
	234	POTS	4	S/F	1131.8	1132.3	0.8	660.0	20.0		
	245	SVTO	8	S	1132.0	1132.0	1.0	410.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	1132.0	1132.0		70.0			QL=1 ST=2 TYP=3
	200	GORK	4	S/F	1132.1	1132.3	0.9	520.0			
	204	IZMI	4	S/F	1132.4	1132.4	0.6	500.0	300.0		
	245	SVTO	8	S	1159.0	1200.0	1.0	380.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1200.0	1201.0	1.0	380.0			QL=1 ST=3 TYP=3
	810	KRAK	8	S	1219.2	1219.2	0.1	6.0			
	9300	KISV	2	S/F	1314.6	1314.8	0.5	6.0			
	9400	HUAN	1	S	1326.1	1329.5	8.0	14.3	3.0		
	245	SGMR	8	S	1329.0	1329.0	1.0	410.0			QL=1 ST=2 TYP=3
	9100	GORK	1	S	1329.1	1329.4	3.1	15.0			
	9300	KISV	2	S/F	1329.1	1329.4	4.0	16.0			
	245	PALE	8	S	1652.0	1653.0	1.0	100.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1706.0	1706.0	1.0	61.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1734.0	1735.0	1.0	78.0			QL=1 ST=2 TYP=5
	245	PALE	49	GB	1830.0E	1830.0	1.0D	600.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	1846.0E	1846.0	1.0D	1200.0			QL=1 ST=2 TYP=6
05	100	GORK	44	NS	0255.0E		248.0D		5.0		
	200	GORK	44	NS	0255.0E		548.0D		5.0		
	245	SVTO	43	NS	0347.0	1046.0	853.0D	370.0			QL=1 ST=2 TYP=1
	221	ABST	43	NS	0500.0	0752.0	300.0D	15.0			QL= ST= TYP=1
	260	ONDR	44	NS	0510.0E	0843.1	590.0D	158.0			
	204	IZMI	43	NS	0600.0		360.0	50.0			
	410	SVTO	43	NS	0624.0	0723.0	696.0D	73.0			QL=1 ST=2 TYP=1
	127	TORN	44	NS	0730.0E		490.0D		13.0		V=2
	245	SGMR	43	NS	0936.0	1345.0	864.0D	150.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1639.0E	1701.0	441.0D	120.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1950.0E	2105.0	370.0D	6.0	3.0		WL
	245	LEAR	44	NS	2322.0E	0051.0U	38.0D	67.0			QL=1 ST=2 TYP=1
	245	PALE	8	S	0052.0	0052.0	1.0	65.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0140.0	0141.0	1.0	100.0			QL=1 ST=2 TYP=3
	500	HIRA	41	F	0140.3	0141.2	2.9	490.0			O
	610	LEAR	8	S	0208.0	0209.0	2.0	71.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0209.0	0209.0	1.0	49.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0210.0	0210.0		44.0			QL=1 ST=2 TYP=3
	200	GORK	41	F	0303.2	0312.0		6300.0			
	200	GORK	41	F	0303.2	0333.0U		250.0			
	200	GORK	41	F	0303.2	0304.0U	31.1	25.0D			
	200	GORK	41	F	0303.2	0324.7		410.0			
	100	HIRA	42	SER	0303.3		31.0	1000.0D			
	100	GORK	41	F	0303.3	0312.0		9000.0			
	100	GORK	41	F	0303.3	0304.0	30.0	100.0			
	100	GORK	41	F	0303.3	0333.1		800.0			
	100	GORK	41	F	0303.3	0315.2		230.0			
	100	GORK	41	F	0303.3	0324.7		800.0			
	9100	GORK	21	GRF	0309.3E	0328.8	42.2D	6.5			
	9100	GORK	1	S	0311.0	0312.0	2.2	9.5			
	245	LEAR	8	S	0311.0	0311.0	1.0	250.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0311.0	0311.0	1.0	230.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	0311.7	0311.9	0.6	9000.0			O
	245	PALE	8	S	0324.0	0324.0	1.0	51.0			QL=1 ST=2 TYP=3
	500	HIRA	42	SER	0325.5	0328.3	8.0	1100.0			O
	610	LEAR	8	S	0328.0	0328.0	2.0	360.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0328.0	0328.0	2.0	460.0			QL=1 ST=2 TYP=3
	650	GORK	8	S	0328.0	0328.2U	0.5	60.0D			
	950	GORK	8	S	0328.1	0328.3	0.9	12.5			
	245	LEAR	8	S	0332.0	0333.0	1.0	75.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0401.6	0401.8	0.7	4.0			
	2950	GORK	21	GRF	0427.0	0636.0	230.0	8.9			
	200	HIRA	46	C	0427.1	0429.0	3.7	1700.0			O
	200	GORK	41	F	0427.7	0434.3		190.0			
	200	GORK	41	F	0427.7	0428.4	7.2	100.0			
	200	GORK	41	F	0427.7	0429.6		110.0			
	100	GORK	46	C	0427.8	0428.2	1.0	180.0			
	100	GORK	46	C	0427.8	0428.4		600.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	245	LEAR	49	GB	0428.0E	0429.0	2.0D	3100.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	0428.0E	0429.0	2.0D	2600.0			QL=1 ST=2 TYP=6
	5900	KISV	4	S/F	0428.6	0429.0	1.7	49.0			
	5900	KISV	29	PBI	0428.6	0430.4	7.4	5.0			
	500	HIRA	46	C	0428.7	0429.1	8.0	127.0	6.0		O
	3100	CRIM	3	S	0428.9	0429.5	5.0	26.5	9.0		
	650	GORK	46	C	0429.0	0430.0		26.0			
	950	GORK	5	S	0429.0	0430.0	2.3	22.0			
	610	LEAR	8	S	0429.0	0429.0	2.0	140.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0429.0	0429.0	1.0	33.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0429.0	0429.0	1.0	290.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	0429.0E	0429.0		150.0			QL=1 ST=3 TYP=3
	610	SVTO	8	S	0429.0	0429.0	1.0	73.0			QL=1 ST=3 TYP=3
	245	SVTO	49	GB	0429.0E	0429.0	1213.0D	3500.0			QL=1 ST=3 TYP=6
	9300	KISV	2	S/F	0429.0	0429.3	3.0	24.0			
	650	GORK	46	C	0429.0	0429.3U	1.6	50.0D			
	950	GORK	29	PBI	0429.0	0431.4	12.7	7.5			
	650	GORK	29	PBI	0429.0	0430.6	5.4	10.0			
	15000	KISV	2	S/F	0429.1	0429.3	0.8	5.0			
	2950	GORK	3	S	0429.1	0429.4	2.7	33.0			
	9100	GORK	1	S	0429.2	0429.3	0.8	19.0	7.0		
	100	GORK	42	SER	0430.0	0445.2		270.0			
	100	GORK	42	SER	0430.0	0430.2	20.3	180.0			
	100	GORK	42	SER	0430.0	0449.9		200.0			
	5900	KISV	2	S/F	0433.2	0433.3	0.6	3.0			
	5900	KISV	22	GRF	0452.0	0630.0		10.0			
	5900	KISV	22	GRF	0452.0	0636.8		10.0			
	5900	KISV	22	GRF	0452.0	0514.9	188.0	5.0			
	650	GORK	1	S	0518.0	0518.2	0.5	2.0			
	9300	KISV	2	S/F	0519.1	0519.3	0.5	19.0			
	9100	GORK	1	S	0519.2	0519.4	1.1	17.0			
	950	GORK	1	S	0519.3	0519.4	0.3	1.0			
	100	GORK	46	C	0545.5	0546.3		450.0			
	100	GORK	46	C	0545.5	0545.9	1.5	270.0			
	200	GORK	4	S/F	0545.6	0546.2U	0.9	25.0D			
	9100	GORK	1	S	0557.4	0557.8	2.1	7.5			
	9300	KISV	2	S/F	0557.4	0557.8	2.4	9.0			
	2695	SVTO	8	S	0611.0	0611.0	1.0	120.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	0612.0	0614.0		4300.0			
	100	GORK	41	F	0612.0	0613.3	3.5	2400.0			
	234	POTS	42	SER	0612.4	0613.7	18.0	15000.0			
	100	HIRA	42	SER	0612.5		43.6	1000.0D			
	200	HIRA	42	SER	0612.5	0613.5	26.0	23000.0			WR
	200	GORK	41	F	0612.6	0614.0		15300.0			
	204	IZMI	47	GB	0612.6	0614.0	2.4	2100.0	770.0		
	200	GORK	41	F	0612.6	0623.1		60.0			
	200	GORK	41	F	0612.6	0613.2	43.7	1000.0			
	200	GORK	41	F	0612.6	0620.5		85.0			
	200	GORK	41	F	0612.6	0651.5		180.0			
	200	GORK	41	F	0612.6	0627.5		750.0			
	200	GORK	41	F	0612.6	0636.5		130.0			
	200	GORK	41	F	0612.6	0621.8		65.0			
	200	GORK	41	F	0612.6	0628.9		2000.0			
	30	POTS	42	SER	0612.8	0629.0	17.0	10000.0			
	650	GORK	4	S/F	0613.0	0614.0	4.5	15.0			
	15400	LEAR	8	S	0613.0	0614.0	1.0	23.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0613.0	0613.0	1.0	85.0			QL=1 ST=3 TYP=3
	245	SVTO	49	GB	0613.0E	0613.0	1.0D	3500.0			QL=1 ST=2 TYP=6
	9100	GORK	1	S	0613.4	0614.0	1.8	9.5			
	950	GORK	2	S/F	0613.6	0613.9	3.7	3.0			
	9300	KISV	2	S/F	0613.7	0614.1	1.3	7.0			
	15000	KISV	2	S/F	0613.7	0613.9	0.5	19.0			
	5900	KISV	2	S/F	0613.8	0614.2	1.2	5.0			
	245	LEAR	8	S	0620.0	0620.0	1.0	89.0			QL=1 ST=2 TYP=3
	204	IZMI	42	SER	0620.2	0627.6	19.8	1000.0			
	100	GORK	41	F	0621.6	0629.0		13000.0			
	100	GORK	41	F	0621.6	0623.3		830.0			
	100	GORK	41	F	0621.6	0627.4		600.0			
	100	GORK	41	F	0621.6	0653.4		1000.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	100	GORK	41	F	0621.6	0636.6		730.0			
	100	GORK	41	F	0621.6	0624.7		180.0			
	100	GORK	41	F	0621.6	0621.8	35.0	180.0			
	100	GORK	41	F	0621.6	0655.9		270.0			
	9100	GORK	21	GRF	0624.3	0638.4	26.5	7.5			
	245	LEAR	49	GB	0627.0	0628.0	2.0	560.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0627.0	0628.0	3.0	650.0			QL=1 ST=2 TYP=6
	5900	KISV	1	S	0628.6	0628.9	0.8	8.0			
	9100	GORK	1	S	0628.7	0628.9	0.3	7.5			
	9300	KISV	1	S	0628.7	0628.9	1.4	11.0			
	5900	KISV	2	S/F	0732.3	0735.0	14.0	20.0			
	15000	KISV	32	ABS	0734.3	0735.0	4.0	4.0			
	200	GORK	41	F	0734.6	0737.0	9.4	110.0			
	200	GORK	41	F	0734.6	0742.6		60.0			
	9300	KISV	32	ABS	0735.0	0735.3	1.5	2.0			
	5900	KISV	2	S/F	0750.3	0750.5	1.3	14.0			
	9100	GORK	1	S	0750.3	0750.6	0.7	9.0	5.0		
	9300	KISV	2	S/F	0750.3	0750.6	0.7	10.0			
	200	HIRA	46	C	0841.3	0842.4	2.6	1800.0			O
	200	GORK	46	C	0841.6	0843.1		1500.0			
	200	GORK	46	C	0841.6	0842.8	2.0	1250.0			
	245	LEAR	49	GB	0842.0	0843.0	1.0	500.0			QL=1 ST=2 TYP=6
	410	SVTO	49	GB	0842.0E	0843.0	1.0D	440.0			QL=1 ST=3 TYP=6
	245	SVTO	49	GB	0842.0	0843.0	1.0	580.0			QL=1 ST=3 TYP=6
	234	POTS	4	S/F	0842.0	0843.1	2.2	1200.0	60.0		
	100	GORK	46	C	0842.0	0843.2		800.0			
	30	POTS	4	S/F	0842.0	0843.3	3.6	7800.0	700.0		
	100	GORK	46	C	0842.0	0842.9	1.8	4000.0			
	9300	KISV	2	S/F	0842.3	0843.1	4.5	10.0			
	204	IZMI	2	S/F	0842.6	0843.0	1.2	1300.0	550.0		
	15000	KISV	2	S/F	0842.6	0843.0	1.3	13.0			
	9500	POTS	1	S	0842.9	0845.0	2.1	8.0			
	33	UPIC	45	C	0843.0	0843.5U	1.3				
	29	UPIC	45	C	0843.2	0843.5	1.5				
	100	HIRA	46	C	0844.3		2.0	1000.0D			
	810	KRAK	1	S	0900.2	0900.2	0.3	3.0	1.0		
	9500	POTS	1	S	0901.5	0902.0	1.5	8.0			
	9300	KISV	2	S/F	0901.7	0901.9	3.5	10.0			
	5900	KISV	2	S/F	0901.8	0902.0	0.4	5.0			
	810	KRAK	42	SER	0918.2	0925.5	15.8	23.0			
	204	IZMI	42	SER	0922.0	0922.4	6.4	500.0			
	2695	SVTO	8	S	0930.0	0930.0	1.0	60.0			QL=1 ST=2 TYP=3
	430	KRAK	42	SER	1039.2	1041.5	3.0	190.0D			
	536	ONDR	41	F	1040.4	1041.4	4.6	11.0			
	410	SGMR	8	S	1041.0	1041.0	1.0	87.0			QL=1 ST=2 TYP=3
	810	KRAK	1	S	1042.5	1042.6	0.3	1.0	1.0		
	9400	HUAN	1	S	1228.6	1231.0	4.9	5.7	2.6		
	5900	KISV	2	S/F	1231.0	1232.0	4.5	8.0			
	245	SGMR	8	S	1315.0	1316.0	2.0	410.0			QL=1 ST=2 TYP=3
	33	UPIC	45	C	1315.4	1315.5	2.6				
	29	UPIC	45	C	1315.7	1315.8	1.7				
	245	SGMR	4	S/F	1316.0	1316.0	644.0	410.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	1337.0	1337.6	5.0	8.0			
	234	POTS	41	F	1344.3	1346.3	2.5	440.0			
	30	POTS	4	S/F	1345.2	1345.3	1.0	2200.0	400.0		
	9400	HUAN	2	S/F	1642.4	1646.4	6.6	7.6	3.8		
	245	SGMR	49	GB	1646.0E	1646.0	644.0D	610.0			QL=1 ST=2 TYP=6
	9400	HUAN	1	S	1651.8	1653.7	6.2	8.5	4.2		
	245	PALE	8	S	2018.0	2018.0	1.0	63.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	2149.5		10.0	1000.0D			
	200	HIRA	7	C	2150.8	2232.3		28.0			MR
	200	HIRA	7	C	2150.8	2153.7	98.0	14000.0	56.0		O
	410	SGMR	4	S/F	2152.0	2155.0	6.0	52.0			QL=1 ST=2 TYP=3
	610	SGMR	4	S/F	2152.0	2154.0	7.0	70.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	2152.0	2154.2	6.1	18.9	7.1		
	500	HIRA	46	C	2152.6	2154.9	9.0	170.0	8.0		WR
	245	PALE	49	GB	2153.0E	2154.0	4.0D	2200.0			QL=1 ST=2 TYP=6
	610	PALE	8	S	2154.0	2154.0	2.0	81.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	2154.0E	2154.0	1.0D	5300.0			QL=1 ST=2 TYP=6

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	2695	SGMR	4	S/F	2154.0	2154.0	4.0	94.0			QL=1 ST=2 TYP=3
	100	HIRA	27	RF	2210.6	2230.0	69.0	230.0	25.0		
	245	PALE	8	S	2305.0	2305.0	1.0	210.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2314.0	2314.0	1.0	180.0			QL=1 ST=2 TYP=3
06	200	GORK	44	NS	0253.0E		549.0D		5.0		
	100	GORK	44	NS	0300.0E		540.0D		5.0		
	221	ABST	43	NS	0500.0	0845.0	300.0	10.0			
	260	ONDR	44	NS	0510.0E	1155.0	630.0D				
	204	IZMI	43	NS	0600.0		360.0	25.0			
	127	TORN	44	NS	0800.0E		430.0D		5.0		V=1
	245	SGMR	43	NS	0937.0	1344.0	863.0D	440.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0646.0	840.0D	14.0	3.0		WR
	245	LEAR	43	NS	2322.0	0051.0	613.0	67.0			QL=1 ST=2 TYP=1
	100	GORK	46	C	0327.1	0328.6		100.0			
	100	GORK	46	C	0327.1	0327.9	2.2	85.0			
	245	LEAR	8	S	0432.0	0432.0	1.0	110.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0432.0	0432.0	1.0	92.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0432.0	0432.0	1.0	120.0			QL=1 ST=2 TYP=3
	5900	KISV	4	S/F	0442.0	0446.5	4.8	35.0			
	5900	KISV	29	PBI	0442.0	0446.8	12.0	11.0			
	2950	GORK	21	GRF	0446.3	0454.0	160.0	7.1			
	9300	KISV	2	S/F	0449.4	0450.8	3.3	6.0			
	3100	CRIM	1	S	0449.5	0451.0	4.0	5.0	2.0		
	2950	GORK	3	S	0449.8	0451.0	3.0	7.1			
	15000	KISV	1	S	0502.7	0503.9	1.5	6.0			
	9100	GORK	20	GRF	0543.6U	0546.2	16.3D	5.7			
	9300	KISV	22	GRF	0739.0	0743.2	29.0	8.0			
	5900	KISV	2	S/F	0742.7	0744.7	6.5	5.0			
	5900	KISV	22	GRF	0845.0	0846.3	13.5	3.0			
	100	GORK	46	C	0855.3	0856.1U		30.0D			
	100	GORK	46	C	0855.3	0855.9U	1.9	30.0D			
	200	GORK	46	C	0855.4	0856.8		10.0			
	200	GORK	46	C	0855.4	0855.8	2.0	30.0			
	9100	GORK	1	S	0855.5	0855.6	0.9	3.8			
	33	UPIC	42	SER	0855.7		457.7				
	29	UPIC	42	SER	0855.8		442.8				
	200	GORK	4	S/F	0931.2	0931.5	1.9	30.0			
	100	GORK	4	S/F	0931.2	0931.8U	1.3	320.0D			
	200	GORK	4	S/F	1059.1	1059.3U	1.0	30.0D			
	100	GORK	4	S/F	1059.1	1059.6U	1.3	30.0D			
	9100	GORK	1	S	1114.7	1114.9	3.0	11.0			
	9300	KISV	2	S/F	1114.7	1114.9	2.5	113.0			
	9500	POTS	1	S	1114.7	1114.9	9.3	8.0			
	9500	POTS	20	GRF	1145.0	1155.5	30.0	13.0			
	200	GORK	41	F	1146.7	1150.0		25.0			
	200	GORK	41	F	1146.7	1154.7		870.0			
	200	GORK	41	F	1146.7	1148.9	8.0	30.0			
	30	POTS	4	S/F	1147.3	1155.0	11.0	8000.0	250.0		
	245	SVTO	49	GB	1148.0E	1154.0	8.0D	1900.0			QL=1 ST=2 TYP=7
	234	POTS	41	F	1148.7	1154.6	8.6	1200.0	15.0		
	100	GORK	41	F	1148.8	1153.0		820.0			
	100	GORK	41	F	1148.8	1150.1U		30.0D			
	100	GORK	41	F	1148.8	1151.4U		30.0D			
	100	GORK	41	F	1148.8	1154.6		4600.0			
	100	GORK	41	F	1148.8	1148.9	7.7	1090.0			
	9300	KISV	21	GRF	1151.4	1155.5	120.0	13.0			
	410	SVTO	4	S/F	1152.0E	1155.0	4.0D	110.0			QL=1 ST=2 TYP=3
	650	GORK	1	S	1152.0	1152.9	1.5	1.5			
	950	GORK	1	S	1152.7	1153.0	0.5	33.0			
	536	ONDR	4	S/F	1152.7	1155.0	3.5	78.0			
	245	SGMR	49	GB	1154.0E	1154.0	1.0D	3700.0			QL=1 ST=3 TYP=6
	204	IZMI	4	S/F	1154.0	1154.6	2.4	800.0	200.0		
	1470	POTS	4	S/F	1154.4	1155.5	2.6	17.0			
	3000	POTS	4	S/F	1154.4	1155.5	2.1	20.0			
	950	GORK	2	S/F	1154.5	1155.0	2.4	8.0			
	650	GORK	4	S/F	1154.5	1155.0	1.3	24.0			
	650	GORK	29	PBI	1154.5	1155.8	3.8	8.5			
	9100	GORK	1	S	1154.7	1155.3	3.2	5.5			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
06	2950	GORK	4	S/F	1154.7	1155.5	2.5	28.0			
	410	SGMR	4	S/F	1155.0E	1155.0	6.0D	92.0			QL=1 ST=3 TYP=3
	3100	CRIM	1	S	1155.0	1155.6	1.0	13.4	4.0		
	3013	IZMI	7	C	1155.0	1155.6	1.0	17.0	7.0		
	9400	HUAN	1	S	1226.7	1230.1	6.5	11.7	2.1		
	15000	KISV	2	S/F	1228.0	1230.2	3.0	9.0			
	245	SVTO	49	GB	1229.0E	1230.0	2.0D	2300.0			QL=1 ST=2 TYP=6
	5900	KISV	2	S/F	1229.5	1232.0	3.5D	6.0			
	9500	POTS	1	S	1229.5	1230.0	2.0	9.0			
	9300	KISV	2	S/F	1229.8	1230.2	2.0	15.0			
	234	POTS	4	S/F	1229.8	1230.3	1.7	1200.0	240.0		
	536	ONDR	4	S/F	1229.9	1230.4	0.8	122.0			
	410	SGMR	4	S/F	1230.0E	1230.0	6.0D	94.0			QL=1 ST=3 TYP=3
	410	SVTO	4	S/F	1230.0E	1230.0	4.0D	110.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1230.0E	1230.0	726.0D	3700.0			QL=1 ST=3 TYP=6
	30	POTS	4	S/F	1230.0	1230.2	1.4	2600.0	650.0		
	15000	KISV	2	S/F	1253.5	1257.8	6.0	9.0			
	30	POTS	4	S/F	1255.2	1257.8	4.7	2800.0	200.0		
	234	POTS	4	S/F	1256.6	1257.8	3.3	1600.0	250.0		
	9400	HUAN	1	S	1256.7	1257.7	6.1	10.0	2.4		
	245	SVTO	49	GB	1257.0E	1257.0	1.0D	750.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	1257.0E	1257.0	1.0D	230.0			QL=1 ST=2 TYP=3
	1470	POTS	2	S/F	1257.0	1257.9	2.5	4.0			
	9500	POTS	3	S	1257.0	1257.9	3.0	11.0			
	3100	CRIM	1	S	1257.2	1257.7	1.3	5.6	2.0		
	9300	KISV	2	S/F	1257.2	1257.8	2.3	14.0			
	5900	KISV	2	S/F	1257.2	1257.9	2.5	9.0			
	3000	POTS	1	S	1257.5	1257.7	1.0	5.0			
	536	ONDR	4	S/F	1258.1	1258.7	2.3	121.0			
	245	SVTO	4	S/F	1343.0E	1344.0	3.0D	340.0			QL=1 ST=3 TYP=5
	30	POTS	4	S/F	1343.2	1343.7	0.8	260.0	25.0		
	234	POTS	41	F	1343.2	1344.8	2.4	525.0	25.0		
	245	SVTO	8	S	1344.0E	1344.0	1.0D	340.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	1522.4	1525.2	7.0	11.7	2.0		
	245	SVTO	4	S/F	1616.0E	1617.0	3.0D	210.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1617.0E	1617.0	1.0D	460.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1617.0E	1617.0	3.0D	210.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1620.0E	1620.0	1.0D	200.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1620.0E	1620.0	1.0D	220.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1620.0E	1620.0	1.0D	140.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	2017.7	2021.2	7.4	5.0	1.8		
	245	PALE	8	S	2057.0E	2057.0	1.0D	330.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	2057.0E	2057.0	1.0D	80.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2057.0E	2057.0	1.0D	75.0			QL=1 ST=2 TYP=3
	8800	PALE	49	GB	2101.0E	2111.0	18.0D	580.0			QL=1 ST=2 TYP=7
	245	SGMR	8	S	2226.0E	2227.0	1.0D	440.0			QL=1 ST=3 TYP=3
07	200	GORK	44	NS	0258.0E		542.0D		5.0		
	260	ONDR	44	NS	0510.0E	1446.3U	590.0D				
	204	IZMI	43	NS	0600.0		360.0	50.0			
	127	TORN	44	NS	0620.0E		560.0D		9.0		V=1
	100	GORK	44	NS	0654.0E		375.0D		5.0		
	430	KRAK	44	NS	0714.0E	0913.5	372.0D	31.0			
	245	SGMR	43	NS	0937.0	1023.0	463.0D	110.0			QL=1 ST=1 TYP=1
	245	SGMR	44	NS	0937.0E	1023.0	863.0D	110.0			QL=1 ST=1 TYP=1
	2950	GORK	1	S	0355.4	0355.8	0.9	1.9			
	9100	GORK	1	S	0355.6	0355.9	0.9	2.3			
	5900	KISV	21	GRF	0444.0	0445.8	11.0	8.0			
	9100	GORK	1	S	0444.1	0444.2	1.0	3.7			
	9100	GORK	1	S	0445.5	0445.9	1.0	3.7			
	2950	GORK	1	S	0449.1	0451.0	3.2	1.9			
	5900	KISV	2	S/F	0507.0	0507.7	1.5	5.0			
	9100	GORK	1	S	0507.4	0507.8	2.1	3.7			
	3100	CRIM	1	S	0507.5	0508.0	1.5	3.3	1.0		
	2950	GORK	1	S	0507.5	0507.7	1.5	3.2	1.6		
	9300	KISV	2	S/F	0507.5	0507.7	1.0	4.0			
	9100	GORK	21	GRF	0554.3	0603.5	21.2	7.3			
	2950	GORK	21	GRF	0555.4	0600.0	13.3	4.5			
	8800	LEAR	8	S	0557.0E	0559.0	2.0D	21.0			QL=1 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
07	3100	CRIM	1	S	0557.0	0558.1	3.0	8.3	3.0		
	5900	KISV	21	GRF	0557.0	0557.9	78.0	19.0			
	2950	GORK	1	S	0557.6	0558.1	2.4	5.2			
	9100	GORK	45	C	0557.9	0558.0	3.4	18.3			
	9100	GORK	45	C	0557.9	0559.5		12.8			
	2695	LEAR	8	S	0558.0E	0558.0	1.0D	12.0			QL=1 ST=2 TYP=3
	950	GORK	1	S	0558.8	0558.9	0.5	3.0			
	650	GORK	3	S	0559.2	0559.3	0.2	6.0			
	245	LEAR	8	S	0620.0E	0620.0	1.0D	62.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0710.0	0710.9	4.5	3.0			
	3100	CRIM	20	GRF	0718.8	0723.0	18.0	6.0	2.0		
	9100	GORK	21	GRF	0720.9	0726.1	14.7	9.1			
	15000	KISV	45	C	0721.3	0723.6	4.0	27.0			
	5900	KISV	2	S/F	0721.7	0725.2	9.0	10.0			
	9300	KISV	2	S/F	0721.8	0725.1	19.5	20.0			
	9500	POTS	4	S/F	0722.5	0723.8	7.0	20.0			
	9100	GORK	4	S/F	0722.9	0725.1	3.2	12.8			
	15400	LEAR	8	S	0723.0E	0723.0	1.0D	29.0			QL=1 ST=2 TYP=3
	5900	KISV	4	S/F	0741.0	0802.0	21.0D	32.0			
	5900	KISV	29	PBI	0741.0	0810.0	32.0	4.0			
	15000	KISV	1	S	0800.0	0802.1	6.0	10.0			
	9300	KISV	4	S/F	0800.7	0802.1	4.0	43.0			
	9300	KISV	29	PBI	0800.7	0804.4	16.5	8.0			
	9500	POTS	3	S	0801.0	0802.0	4.0	25.0			
	9100	GORK	3	S	0801.1	0802.0	2.3	31.0			
	9100	GORK	29	PBI	0801.1	0803.5	31.5	9.0			
	100	GORK	4	S/F	0905.8	0906.2	1.6	14.0			
	200	GORK	4	S/F	1043.3	1043.5	1.6	25.0			
	100	GORK	4	S/F	1044.1	1044.4U	0.9	15.0D			
	810	KRAK	8	S	1240.8	1240.9	0.3	4.0			
	536	ONDR	40	F	1327.4	1444.5	92.6	144.0			
	9400	HUAN	4	S/F	1433.6	1443.0		16.1			
	9400	HUAN	4	S/F	1433.6	1444.5		25.2			
	9400	HUAN	4	S/F	1433.6	1437.6	15.8	24.1	8.0		
	3000	POTS	2	S/F	1437.0	1438.0	3.0	5.0			
	410	SGMR	8	S	1437.0E	1437.0	1.0D	140.0			QL=1 ST=2 TYP=3
	610	SGMR	4	S/F	1437.0E	1445.0	9.0D	90.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1437.0E	1437.0	1.0D	490.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1437.0E	1437.0	1.0D	350.0			QL=1 ST=2 TYP=3
	9500	POTS	4	S/F	1437.0	1438.1	4.0	20.0			
	30	POTS	42	SER	1437.2	1443.4	7.5	8200.0			
	234	POTS	42	SER	1437.4	1442.7	8.8	2100.0			
	1470	POTS	4	S/F	1437.5	1437.7	3.0	11.0			
	410	SGMR	4	S/F	1442.0E	1442.0	3.0D	110.0			QL=1 ST=3 TYP=3
	245	SGMR	49	GB	1442.0E	1442.0	3.0D	980.0			QL=1 ST=3 TYP=6
	245	SVTO	49	GB	1442.0E	1442.0	3.0D	860.0			QL=1 ST=2 TYP=6
	1470	POTS	4	S/F	1442.5	1442.7	7.5	24.0			
	9500	POTS	4	S/F	1442.5	1444.9	7.5	20.0			
	3000	POTS	4	S/F	1443.0	1445.0	7.0	14.0			
	1470	POTS	1	S	1451.0	1452.0	3.5	2.0			
	3000	POTS	4	S/F	1451.4	1452.5	3.6	9.0			
	9400	HUAN	1	S	1612.9	1614.6	5.2	6.0	2.7		
08	245	LEAR	44	NS	0145.0E	0251.0	470.0D	48.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	0217.0E	0412.0	164.0D	130.0			QL=1 ST=2 TYP=1
	200	GORK	44	NS	0258.0E		542.0D		5.0		
	245	SVTO	44	NS	0340.0E	1354.0	1220.0D	150.0			QL=1 ST=1 TYP=1
	245	SVTO	44	NS	0348.0E	0618.0	1212.0D	51.0			QL=1 ST=1 TYP=1
	245	SVTO	44	NS	0349.0E	1404.0	850.0D	160.0			QL=1 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	40.0			
	100	GORK	43	NS	0704.0		296.0D		5.0		
	430	KRAK	44	NS	0716.0E	1310.3	368.0D	63.0	3.0		
	410	SGMR	44	NS	0938.0E	1344.0	861.0D	57.0			QL=1 ST=2 TYP=1
	245	SGMR	44	NS	0938.0E	2118.0	861.0D	400.0			QL=1 ST=2 TYP=1
	410	SVTO	44	NS	0955.0E	1240.0	484.0D	39.0			QL=1 ST=2 TYP=1
	127	TORN	43	NS	1006.0		334.0D		80.0		V=2
	29	UPIC	43	NS	1047.5		432.5D				
	33	UPIC	43	NS	1047.6		432.4D				
	234	POTS	44	NS	1110.0E	1417.0	230.0D	80.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
08	245	PALE	44	NS	1719.0E	0100.0	702.0D	99.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	2230.0	840.0D	47.0	21.0		MR
	100	HIRA	44	NS	1950.0E	2029.7	120.0D	175.0	14.0		
	100	HIRA	43	NS	2146.0	2224.0	59.0	110.0	23.0		
	410	LEAR	8	S	0317.0E	0317.0	1.0D	24.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0317.0E	0317.0	1335.0D	49.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	0331.0	0335.5	7.3	710.0	340.0		
	100	GORK	46	C	0331.7	0336.2		350.0			
	100	GORK	46	C	0331.7	0331.8	5.6	30.0D			
	100	GORK	46	C	0331.7	0334.8		350.0			
	500	HIRA	46	C	0332.5	0334.8	5.7	42.0	8.0		O
	650	GORK	46	C	0332.6	0334.5		29.0			
	650	GORK	46	C	0332.6	0333.9	4.2U	13.0			
	950	GORK	29	PBI	0332.7	0337.0	6.0	3.0			
	950	GORK	46	C	0332.7	0334.4		27.0			
	950	GORK	46	C	0332.7	0333.9	4.4	23.0			
	245	LEAR	49	GB	0333.0E	0335.0	3.0D	1000.0			QL=1 ST=2 TYP=7
	410	LEAR	4	S/F	0333.0E	0335.0	4.0D	370.0			QL=1 ST=2 TYP=3
	9100	GORK	4	S/F	0333.0	0335.5	4.8	22.0			
	200	HIRA	46	C	0333.7	0335.5	4.0	405.0	29.0		O
	200	GORK	4	S/F	0333.8	0335.8	5.2	110.0			
	2695	LEAR	4	S/F	0334.0E	0335.0	3.0D	69.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0334.0E	0335.0	4.0D	31.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0334.0E	0335.0	2.0D	34.0			QL=1 ST=2 TYP=3
	2695	PALE	4	S/F	0334.0E	0335.0	4.0D	70.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	0334.0E	0335.0	2.0D	1100.0			QL=1 ST=2 TYP=6
	410	PALE	49	GB	0334.0E	0334.0	4.0D	580.0			QL=1 ST=3 TYP=6
	2950	GORK	45	C	0334.1	0335.4		54.0			
	2950	GORK	45	C	0334.1	0335.7		44.0			
	2950	GORK	45	C	0334.1	0334.9	4.8	42.0			
	200	HIRA	27	RF	0341.6	0353.0	86.0	11.0	5.0		WR
	2950	GORK	20	GRF	0342.0	0348.5	12.0	4.0			
	200	HIRA	41	F	0403.3	0407.3	9.2	94.0			MR
	2950	GORK	20	GRF	0421.0	0434.5	33.0	3.3			
	650	GORK	4	S/F	0630.4	0632.8	7.3	19.0			
	950	GORK	46	C	0630.5	0632.2	4.6	21.0			
	950	GORK	46	C	0630.5	0632.7		18.0			
	200	HIRA	42	SER	0726.4	0729.3	3.3	180.0			MR
	810	KRAK	8	S	0746.5	0746.5	0.1	5.0			
	3100	CRIM	3	S	0754.0	0755.0	2.0	26.0	9.0		
	15400	LEAR	49	GB	0754.0E	0754.0	1.0D	720.0			QL=1 ST=2 TYP=6
	8800	LEAR	8	S	0754.0E	0754.0	1.0D	420.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0754.0E	0754.0	1226.0D	21.0			QL=1 ST=2 TYP=3
	9500	POTS	4	S/F	0754.0	0754.6	11.0	422.0			
	15000	KISV	1	S	0754.0	0754.6U	1.7	239.0D			
	5900	KISV	29	PBI	0754.0	0754.6U	6.0	60.0D			
	3000	POTS	4	S/F	0754.0	0754.7	8.5U	41.0			
	9100	GORK	29	PBI	0754.1	0756.2	8.7	20.0			
	9100	GORK	3	S	0754.1	0754.6	2.2	725.0			
	9300	KISV	29	PBI	0754.1	0754.6U	6.5	102.0D			
	35000	NOBE	1	S	0754.1	0754.7	0.6	120.0			10L
	17000	NOBE	7	C	0754.1	0754.7	3.0	690.0			27L
	2950	GORK	45	C	0754.2	0754.3	1.1	36.0			
	2950	GORK	29	PBI	0754.2	0755.3	10.7	6.6			
	2950	GORK	45	C	0754.2	0754.6		44.0			
	200	HIRA	41	F	0815.2	0816.2	8.6	83.0			MR
	5900	KISV	29	PBI	0820.0E	0820.0	21.0D	6.0			
	9300	KISV	45	C	0933.5	0936.1	23.0	12.0			
	9300	KISV	45	C	0933.5	0939.3		20.0			
	5900	KISV	46	C	0934.9	0936.1	5.2	23.0			
	5900	KISV	29	PBI	0934.9	0940.2	29.0	6.0			
	5900	KISV	46	C	0934.9	0939.4		26.0			
	5900	KISV	46	C	0934.9	0938.9		17.0			
	3100	CRIM	3	S	0935.0	0936.0	6.0	25.0	8.0		
	3000	POTS	4	S/F	0935.0	0936.0	7.5U	29.0			
	1470	POTS	4	S/F	0935.0	0936.0	6.0	16.0			
	3013	IZMI	7	C	0935.0	0936.1	5.0	24.0	13.0		
	9100	GORK	20	GRF	0935.0	0939.3	19.6	14.0			
	650	GORK	46	C	0935.0	0935.4U	6.1	50.0D			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
08	9500	POTS	24	R	0935.0	0939.5	40.0	17.0			
	650	GORK	46	C	0935.0	0937.6		28.0			
	810	KRAK	45	C	0935.0	0938.7	5.0	36.0	3.0		
	650	GORK	46	C	0935.0	0938.8U		50.0D			
	2950	GORK	4	S/F	0935.0	0935.9	6.5	33.0			
	950	GORK	46	C	0935.1	0938.7		19.0			
	950	GORK	29	PBI	0935.1	0939.7	12.0	2.0			
	950	GORK	46	C	0935.1	0935.8	4.6	27.0			
	950	GORK	46	C	0935.1	0937.8		16.0			
	204	IZMI	4	S/F	1041.5	1042.0	8.5	170.0	80.0		
	200	GORK	4	S/F	1041.8	1042.5U	2.0	30.0D			
	100	GORK	4	S/F	1042.0	1042.8U	1.9	30.0D			
	810	KRAK	2	S/F	1048.0	1048.3	0.4	7.0	2.0		
	950	GORK	22	GRF	1107.3	1151.5U	49.7	12.0			
	650	GORK	22	GRF	1108.7	1151.6U	51.0D	14.0			
	9500	POTS	21	GRF	1115.0	1205.5	100.0	12.0			
	204	IZMI	24	R	1117.5		42.5	20.0			
	1470	POTS	21	GRF	1120.0	1131.0U	110.0	3.0			
	3000	POTS	21	GRF	1140.0	1156.0	79.0	4.0			
	5900	KISV	21	GRF	1140.9	1158.1	43.0	9.0			
	3100	CRIM	3	S	1145.0	1146.0	3.0	26.0	9.0		
	8800	SGMR	8	S	1145.0E	1146.0	1.0D	110.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1145.0E	1146.0	1.0D	70.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1145.0E	1146.0	1.0D	91.0			QL=1 ST=2 TYP=3
	4995	SGMR	4	S/F	1145.0E	1146.0	735.0D	86.0			QL=1 ST=1 TYP=3
	2950	GORK	45	C	1145.0	1146.1	3.5	37.0			
	2950	GORK	45	C	1145.0	1146.3		34.0			
	1470	POTS	1	S	1145.0U	1146.5	4.0U	4.0			
	3000	POTS	4	S/F	1145.0	1145.9	3.0	35.0			
	5900	KISV	4	S/F	1145.2	1146.7	3.1	158.0			
	9300	KISV	45	C	1145.4	1146.1	8.7	79.0			
	3013	IZMI	7	C	1145.4	1146.2	4.6	34.0	27.0		
	9300	KISV	45	C	1145.4	1146.4		91.0			
	9500	POTS	4	S/F	1145.5	1146.5	3.0	83.0			
	15400	SVTO	4	S/F	1146.0E	1146.0	8.0D	66.0			QL=1 ST=2 TYP=3
	9100	GORK	4	S/F	1146.2U		2.0D				
	9300	KISV	4	S/F	1200.0	1202.5	3.0	98.0			
	3100	CRIM	3	S	1200.6	1202.4	3.4	16.0	5.0		
	5900	KISV	4	S/F	1200.9	1202.5	3.0	156.0			
	15000	KISV	1	S	1201.0	1202.5	3.5	54.0U			
	9500	POTS	4	S/F	1201.0	1202.5	3.0	104.0			
	3000	POTS	4	S/F	1201.0	1202.5	3.4	20.0			
	15400	SVTO	4	S/F	1202.0E	1202.0	8.0D	100.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1202.0E	1202.0	1.0D	73.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1202.0E	1202.0	1.0D	110.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1309.0E	1309.0	862.0D	69.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1310.0E	1310.0	862.0D	520.0			QL=1 ST=2 TYP=6
	245	SVTO	4	S/F	1310.0E	1310.0	1211.0D	370.0			QL=1 ST=2 TYP=3
	234	POTS	4	S/F	1310.0	1310.2	0.8	600.0	60.0		
	1470	POTS	1	S	1407.0U	1409.8	3.0U	5.0			
	9400	HUAN	1	S	1407.6	1409.0	5.4	6.3	3.6		
	610	SGMR	8	S	1408.0E	1408.0	1.0D	270.0			QL=1 ST=3 TYP=3
	610	SGMR	4	S/F	1408.0E	1408.0	592.0D	270.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1444.0E	1444.0	1.0D	480.0			QL=1 ST=2 TYP=3
	234	POTS	4	S/F	1444.6	1444.8	0.5	550.0	150.0		
	9400	HUAN	1	S	1515.0	1516.6	4.1	5.2	1.8		
	9400	HUAN	1	S	1523.1	1525.4	5.7	6.3	2.1		
	9400	HUAN	2	S/F	1545.4	1552.1	11.4	8.4	3.8		
	9400	HUAN	20	GRF	1608.1	1620.5	28.1	6.3	2.5		
	245	PALE	4	S/F	1642.0E	1642.0	1226.0D	75.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1715.0E	1715.0	1.0D	68.0			QL=1 ST=2 TYP=5
	245	PALE	4	S/F	1804.0E	1804.0	401.0D	120.0			QL=1 ST=3 TYP=3
	245	PALE	4	S/F	1811.0E	1811.0	401.0D	140.0			QL=1 ST=3 TYP=3
	100	HIRA	42	SER	2253.0	2255.8	12.5	560.0			
09	245	LEAR	43	NS	0145.0	0145.0	349.0D	100.0			QL=1 ST=2 TYP=1
	200	GORK	44	NS	0250.0E		400.0D		5.0		
	100	GORK	44	NS	0300.0E		390.0D		5.0		
	245	SVTO	43	NS	0349.0	0611.0	849.0D	190.0			QL=1 ST=3 TYP=1

SOLAR RADIO EMISSION
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JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
09	204	IZMI	43	NS	0600.0		360.0	40.0			
	127	TORN	44	NS	0620.0E		370.0D		60.0		V=2
	430	KRAK	44	NS	0722.0E	0959.0	223.0D	34.0	5.0		
	245	SGMR	44	NS	0939.0E	1949.0	860.0D	330.0			QL=1 ST=2 TYP=1
	245	PALE	43	NS	1646.0	1927.0	735.0D	180.0			QL=1 ST=2 TYP=1
	410	PALE	43	NS	1650.0	1927.0	580.0D	84.0			QL=1 ST=2 TYP=1
	410	SGMR	44	NS	1837.0E	1852.0	322.0D	75.0			QL=1 ST=2 TYP=1
	200	HIRA	46	C	0143.9	0144.6	4.0	250.0	55.0		WR
	245	PALE	8	S	0144.0E	0145.0	1.0D	94.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	0144.2	0144.6	5.3	850.0	310.0		
	9100	GORK	20	GRF	0309.0E	0348.0	159.0D	10.0			
	650	GORK	23	GRF	0334.4	0350.0	47.8	5.0			
	2950	GORK	20	GRF	0347.2	0533.1	154.0	5.4			
	650	GORK	4	S/F	0357.7	0357.9	0.3	7.0			
	100	GORK	41	F	0404.8	0405.1U	4.0	30.0D			
	100	GORK	41	F	0404.8	0408.5U		30.0D			
	100	GORK	41	F	0605.3	0611.1	28.0	320.0			
	100	GORK	41	F	0605.3	0630.1U		350.0D			
	245	LEAR	8	S	0610.0E	0610.0	1.0D	160.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0611.0E	0611.0	1227.0D	32.0			QL=1 ST=2 TYP=3
	650	GORK	23	GRF	0642.8	0816.9	114.7	4.0			
	650	GORK	4	S/F	0647.2	0647.6	0.3	18.0			
	5900	KISV	29	PBI	0715.8	0719.3	19.0	14.0			
	5900	KISV	4	S/F	0715.8	0718.5	3.5	43.0			
	3013	IZMI	5	S	0716.0	0718.7	8.6	36.0	20.0		
	9100	GORK	21	GRF	0716.1	0720.0	26.0	12.0			
	9300	KISV	21	GRF	0716.3	0718.7	17.0	27.0			
	3100	CRIM	1	S	0716.5	0718.5	3.0	18.3	6.0		
	8800	LEAR	8	S	0717.0E	0718.0	2.0D	29.0			QL=1 ST=2 TYP=3
	9500	POTS	29	PBI	0717.0	0718.0	23.0	22.0			
	1470	POTS	1	S	0717.0	0718.5	3.0	5.0			
	3000	POTS	3	S	0717.0	0718.5	3.5	27.0			
	2950	GORK	21	GRF	0717.0	0717.8	33.0	5.4			
	650	GORK	46	C	0717.3	0717.4	2.0	4.5			
	650	GORK	46	C	0717.3	0718.7		18.0			
	2695	LEAR	8	S	0718.0E	0718.0	1.0D	21.0			QL=1 ST=2 TYP=3
	15400	LEAR	4	S/F	0718.0E	0718.0	966.0D	13.0			QL=1 ST=2 TYP=3
	2950	GORK	3	S	0718.0	0718.5	1.8	21.0			
	9100	GORK	3	S	0718.1	0718.5	1.3	16.0	8.0		
	810	KRAK	8	S	0835.5	0835.6	0.2	3.0			
	245	LEAR	8	S	0838.0E	0839.0	2.0D	110.0			QL=1 ST=2 TYP=3
	810	KRAK	42	SER	0947.0	1035.5	62.5	10.0			
	5900	KISV	21	GRF	1317.3	1321.3	16.0	6.0			
	9400	HUAN	20	GRF	1610.1	1630.0U	42.9	7.1	1.8		
	2800	OTTA	22	GRF	1743.0	1900.0	260.0	9.1	4.0		
	245	PALE	20	GRF	1818.0E	1844.0	47.0D	140.0			QL=1 ST=2 TYP=2
	410	PALE	20	GRF	1818.0E	1844.0	47.0D	130.0			QL=1 ST=2 TYP=2
	610	PALE	20	GRF	1818.0E	1844.0	47.0D	80.0			QL=1 ST=2 TYP=2
	610	SGMR	20	GRF	1830.0E	1844.0	33.0D	62.0			QL=1 ST=2 TYP=2
	245	SGMR	20	GRF	1830.0E	1844.0	60.0D	90.0			QL=1 ST=2 TYP=2
	410	SGMR	20	GRF	1830.0E	1852.0	60.0D	90.0			QL=1 ST=3 TYP=2
	245	PALE	8	S	2009.0E	2009.0	1.0D	200.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	2009.0E	2009.0	330.0D	250.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2035.0E	2035.0	1.0D	230.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2035.0E	2035.0	2.0D	330.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	2257.0E	2257.0	322.0D	97.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	2339.0E	2342.0	6.0D	71.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	2339.0E	2341.0	3.0D	34.0			QL=1 ST=2 TYP=3
10	200	GORK	44	NS	0251.0E		213.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	430	KRAK	44	NS	0725.0E	1058.3	338.0D	18.0			
	15400	LEAR	20	GRF	0053.0E	0058.0	9.0D	24.0			QL=1 ST=2 TYP=2
	5900	KISV	20	GRF	0454.0	0455.6	12.5	4.0			
	9300	KISV	2	S/F	0512.6	0512.9	0.5	17.0			
	9500	POTS	20	GRF	0630.0	0655.4	90.0U	22.0			
	3100	CRIM	20	GRF	0635.0	0655.0	125.0	7.2	2.0		
	5900	KISV	22	GRF	0636.0	0655.7	62.0	16.0			
	650	GORK	4	S/F	0659.5	0659.7	0.6	16.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
10	100	GORK	41	F	0716.8	0721.1	5.0	20.0			
	100	GORK	41	F	0716.8	0716.9	5.0	20.0			
	810	KRAK	8	S	0751.6	0751.6	0.1	9.0			
	100	GORK	46	C	0753.1	0753.2	1.3	30.0			
	100	GORK	46	C	0753.1	0753.5U		30.0D			
	5900	KISV	20	GRF	1134.9	1144.0	55.0	7.0			
	3100	CRIM	20	GRF	1135.0	1144.1	25.0D	7.5			
	810	KRAK	8	S	1154.3	1154.4	0.5	13.0			
	810	KRAK	8	S	1205.8	1205.9	0.5	13.0			
	810	KRAK	8	S	1221.5	1221.5	0.3	21.0			
	810	KRAK	8	S	1237.4	1237.5	0.2	4.0			
11	245	LEAR	43	NS	0035.0	0129.0	542.0	140.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	0039.0E	0128.0	261.0D	100.0			QL=1 ST=2 TYP=1
	245	SVTO	43	NS	0351.0	1420.0	847.0D	110.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	0416.0E	0442.0	350.0D	15.0	7.0		MR
	200	GORK	44	NS	0433.0E		367.0D		5.0		
	100	GORK	44	NS	0433.0E		569.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	30.0			
	260	ONDR	44	NS	0905.0E	1125.5	405.0D				
	245	SGMR	43	NS	0940.0	1420.0	858.0D	110.0			QL=1 ST=2 TYP=1
	500	HIRA	20	GRF	0035.0	0200.0	360.0	7.0	4.0		WR
	245	SVTO	8	S	0723.0E	0724.0	1.0D	150.0			QL=1 ST=2 TYP=3
	500	HIRA	6	S	0723.3	0724.0	1.8	32.0			WL
	245	LEAR	4	S/F	0724.0E	0724.0	1405.0D	140.0			QL=1 ST=2 TYP=3
	204	IZMI	4	S/F	0724.0	0724.2	0.8	340.0	160.0		
	3100	CRIM	1	S	0724.0	0724.3	2.0	2.4	0.8		
	100	GORK	46	C	0905.8	0906.1U	0.6	30.0D			
	100	GORK	46	C	0905.8	0906.2		20.0			
	810	KRAK	8	S	1118.5	1118.6	0.2	7.0			
	9300	KISV	20	GRF	1121.8	1131.7	14.0	6.0			
	204	IZMI	46	C	1123.6	1126.0	4.2	700.0	270.0		
	610	SGMR	4	S/F	1124.0E	1125.0	3.0D	60.0			QL=1 ST=2 TYP=3
	200	GORK	4	S/F	1124.0	1125.5	3.0	830.0			
	100	GORK	41	F	1124.0	1135.8		70.0			
	950	GORK	4	S/F	1124.0	1125.8	3.6	130.0			
	100	GORK	41	F	1124.0	1125.8	12.8	1900.0			
	33	UPIC	46	C	1124.1		4.5				
	30	POTS	4	S/F	1124.2	1126.7	5.2	13000.0	3000.0		
	29	UPIC	46	C	1124.3	1125.8	3.3				
	5900	KISV	29	PBI	1124.4	1128.1	4.5	9.0			
	5900	KISV	45	C	1124.4	1125.6	3.7	77.0			
	5900	KISV	45	C	1124.4	1126.6		20.0			
	234	POTS	4	S/F	1124.6	1125.3	2.4	1800.0			
	650	GORK	4	S/F	1124.7	1125.6	4.0	67.0			
	1470	POTS	3	S	1124.8	1125.6	3.2	40.0			
	245	SGMR	49	GB	1125.0E	1125.0	2.0D	1700.0			QL=1 ST=2 TYP=6
	2695	SGMR	8	S	1125.0E	1125.0	2.0D	52.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1125.0E	1125.0	2.0D	70.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1125.0E	1125.0	1.0D	48.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1125.0E	1125.0	2.0D	250.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1125.0E	1125.0	1.0D	66.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	1125.0E	1125.0	1.0D	2200.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	1125.0E	1125.0	1.0D	310.0			QL=1 ST=2 TYP=3
	3100	CRIM	3	S	1125.0	1125.5	3.0	36.0	12.0		
	2950	GORK	3	S	1125.0	1125.5	2.8	74.0			
	430	KRAK	2	S/F	1125.0	1125.5	2.5	170.0	40.0		
	3013	IZMI	3	S	1125.0	1125.6	2.8	64.0	30.0		
	9500	POTS	4	S/F	1125.0	1125.6	3.0	31.0			
	3000	POTS	3	S	1125.0	1125.7	4.0	58.0			
	536	ONDR	46	C	1125.1	1125.8	2.4	110.0			
	810	KRAK	2	S/F	1125.2	1125.5	1.2	90.0	13.0		
	9300	KISV	45	C	1125.3	1125.5	2.5	45.0			
	9300	KISV	45	C	1125.3	1126.6		10.0			
	15000	KISV	2	S/F	1125.5	1125.6	1.5	9.0			
	9100	GORK	3	S	1126.3	1126.5	2.0	33.0			
	810	KRAK	8	S	1220.5	1220.6	0.2	3.0			
	810	KRAK	41	F	1238.5	1241.7	3.6	7.0	3.0		
	810	KRAK	8	S	1256.0	1256.1	0.2	4.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
11	234	POTS	4	S/F	1419.0	1420.1	1.0	165.0	15.0		
	30	POTS	8	S	1419.8	1420.2	0.8	2400.0	800.0		
	1415	SYDN	4	S/F	2345.0	2403.0	57.0	380.0			QL= ST= TYP=5
12	200	GORK	44	NS	0312.0E		529.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0600.0E	0956.5U	540.0D	60.0			
	127	TORN	44	NS	0620.0E		460.0D		8.0		V=1
	100	GORK	43	NS	0628.0		332.0D		5.0		
	430	KRAK	44	NS	0728.5E	1110.5	401.5D	9.0			
	245	SGMR	44	NS	1635.0E	1813.0	445.0D	70.0			QL=1 ST=1 TYP=1
	245	PALE	44	NS	1640.0E	1813.0	365.0D	52.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	2028.0	180.0D	15.0	8.0		O
	410	LEAR	8	S	0045.0E	0045.0	1.0D	80.0			QL=1 ST=2 TYP=3
	950	GORK	4	S/F	0435.7	0436.5	1.5	12.0			
	410	LEAR	8	S	0436.0E	0436.0	1.0D	61.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0455.9	0456.7	2.5	5.0			
	5900	KISV	1	S	0532.9	0533.3	2.0	3.0			
	5900	KISV	45	C	0553.1	0554.4	7.0	3.0			
	5900	KISV	45	C	0553.1	0557.7		2.0			
	3100	CRIM	24	R	0627.0	0718.0		7.0			
	200	HIRA	41	F	0658.2	0658.5	3.3	140.0			O
	200	GORK	4	S/F	0658.7	0659.4U	4.9	30.0D			
	1470	POTS	4	S/F	0700.0	0701.2	2.5	15.0			
	500	HIRA	6	S	0700.0	0700.9	2.0	11.0			WR
	5900	KISV	45	C	0714.0	0718.2	22.0	10.0			
	5900	KISV	45	C	0714.0	0727.5		5.0			
	9300	KISV	42	SER	0717.0	0718.2	19.0	6.0			
	15000	KISV	1	S	0718.0U	0718.3	0.5D	7.0			
	810	KRAK	42	SER	0838.5	0848.0U		180.2D			
	810	KRAK	42	SER	0838.5	0843.7	14.0D	182.0D			
	9400	HUAN	20	GRF	1446.4	1458.0U	47.1	6.6	2.0		
	245	PALE	4	S/F	1706.0E	1706.0	440.0D	100.0			QL=1 ST=2 TYP=3
	2800	OTTA	24	R	1725.0	2140.0	300.0D	12.1	6.0		
	9400	HUAN	1	S	1725.0	1727.1	7.3	8.2	5.7		
	200	HIRA	8	S	2303.3	2303.3	0.9	78.0			O
13	200	HIRA	43	NS	0217.0	0310.0	480.0D	5.0	2.0		O
	200	GORK	44	NS	0255.0E		545.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0600.0E	1246.2	540.0D	207.0			
	8800	LEAR	8	S	0029.0E	0030.0	2.0D	42.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0029.0E	0030.0	2.0D	52.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0029.0E	0030.0	2.0D	50.0			QL=1 ST=2 TYP=3
	4995	PALE	8	S	0029.0E	0030.0	2.0D	51.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	0029.0E	0029.0	2.0D	52.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0029.0E	0030.0	2.0D	50.0			QL=1 ST=2 TYP=3
	2695	SYDN	8	S	0029.0	0030.0	2.0	33.0			QL= ST= TYP=3
	500	HIRA	6	S	0121.5	0122.5	1.9	24.0			O
	240	SYDN	4	S/F	0232.0	0321.0	83.0	76.0			QL= ST= TYP=4
	5900	KISV	22	GRF	0351.0	0424.0	80.0	13.0			
	650	GORK	1	S	0359.7	0359.8	1.1	2.4			
	3100	CRIM	3	S	0428.1	0429.6	3.0	17.0	5.0		
	2950	GORK	29	PBI	0428.5	0430.3	6.0	2.0			
	2950	GORK	3	S	0428.5	0429.5	1.9	39.0			
	5900	KISV	46	C	0428.5	0429.5		15.0			
	9300	KISV	2	S/F	0428.5	0429.6	8.0	14.0			
	5900	KISV	46	C	0428.5	0428.7	2.0	8.0			
	5900	KISV	46	C	0428.5	0429.8		12.0			
	950	GORK	2	S/F	0429.3	0429.8	0.9	3.0			
	9100	GORK	1	S	0429.4	0429.6	0.6	7.8			
	2950	GORK	1	S	0446.7	0447.2	1.5	2.0			
	650	GORK	1	S	0446.8	0447.1	1.9	2.5			
	950	GORK	2	S/F	0447.0	0447.1	1.0	5.6			
	9300	KISV	22	GRF	0527.0	0535.6	125.0	9.0			
	5900	KISV	1	S	0530.2	0531.4	5.0	4.0			
	5900	KISV	2	S/F	0611.5	0613.4	11.5	18.0			
	3100	CRIM	1	S	0612.0	0613.5	3.0	8.0	3.0		
	3013	IZMI	1	S	0612.2	0613.4	2.8	10.0	5.0		

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
13	2950	GORK	4	S/F	0612.5	0613.3	2.0	8.8			
	9100	GORK	1	S	0613.0	0613.3	1.9	7.8			
	9300	KISV	2	S/F	0613.1	0613.4	1.5	10.0			
	5900	KISV	22	GRF	0637.8	0641.8	32.2	6.0			
	430	KRAK	42	SER	0810.0U	0811.0	1.5D	29.0			
	410	LEAR	8	S	0810.0E	0811.0	1.0D	60.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0810.1	0810.8	1.2	3.0			
	650	GORK	2	S/F	0810.1	0810.9	1.5	5.5			
	100	GORK	4	S/F	0810.2	0810.9U	1.0	30.0D			
	950	GORK	2	S/F	0810.3	0811.0	1.8	6.4			
	810	KRAK	42	SER	0810.5	0811.0		14.0			
	810	KRAK	42	SER	0810.5	0810.5	1.5	14.0			
	430	KRAK	1	S	0904.3	0904.7	0.7	2.0			
	245	SVTO	8	S	0907.0E	0907.0	1.0D	280.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0907.0E	0907.0	1405.0D	190.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0924.6	0925.0	0.9	2.0			
	5900	KISV	2	S/F	0946.2	0947.0	5.1	12.0			
	9100	GORK	1	S	0946.5	0946.9	1.5	15.0			
	9300	KISV	2	S/F	0946.6	0947.1	1.5	13.0			
	15000	KISV	2	S/F	0946.6	0946.8	1.8	13.0			
	3000	POTS	3	S	1142.7	1143.2	5.8	16.0			
	9500	POTS	32	ABS	1145.0	1146.8	11.0	8.0			
	430	KRAK	8	S	1155.2	1155.3	0.2	4.0			
	430	KRAK	8	S	1214.2	1214.2	0.1	6.0			
	9400	HUAN	1	S	1635.2	1639.0	6.3	5.6	1.9		
14	200	HIRA	44	NS	0020.0E	0025.0	180.0D	9.0	5.0		WL
	100	GORK	44	NS	0303.0E		537.0D		5.0		
	3100	CRIM	24	R	0519.0	0650.0		4.0			
	234	POTS	4	S/F	0641.2	0641.3	0.6	100.0	25.0		
	430	KRAK	42	SER	0830.2	0846.6	30.0	39.0			
	245	SVTO	8	S	1328.0E	1329.0	1.0D	140.0			QL= ST=2 TYP=3
	410	SVTO	8	S	1328.0E	1329.0	1.0D	75.0			QL= ST=2 TYP=3
	1470	POTS	1	S	1329.0	1329.1	1.3	4.0			
	2800	OTTA	22	GRF	1648.0	1657.0	75.0	15.8	7.0		
	9400	HUAN	1	S	2036.8	2038.3	3.5	9.5	3.2		
15	260	ONDR	44	NS	0540.0E	0946.9	560.0D	118.0			
	200	GORK	43	NS	0940.0		140.0D		5.0		
	1470	POTS	1	S	0853.3	0853.6	1.3	4.0			
	9500	POTS	1	S	0900.0	0901.0	2.0	10.0			
	3000	POTS	3	S	0900.3	0901.0	2.2	21.0			
	1470	POTS	3	S	0900.5	0901.0	3.5	11.0			
	810	KRAK	1	S	0900.5	0900.5	1.7	3.0	1.0		
	5900	KISV	8	S	0900.8	0901.1	0.8	27.0			
	3100	CRIM	1	S	0900.9	0901.1	3.0	12.7	4.0		
	15000	KISV	2	S/F	0900.9	0901.1	0.6	8.0			
	9300	KISV	1	S	0900.9	0901.1	0.7	15.0			
	5900	KISV	2	S/F	0906.2	0906.7	1.4	6.0			
	9500	POTS	31	ABS	1221.0	1226.1	6.0	14.0			
	9400	HUAN	2	S/F	1224.8E	1226.1	5.8D	15.9	5.3		
	5900	KISV	4	S/F	1224.9	1226.2	6.9	24.0			
	9300	KISV	2	S/F	1225.4	1226.2	5.4	25.0			
	15000	KISV	2	S/F	1226.0	1226.2	2.3	13.0			
	536	ONDR	4	S/F	1456.3	1456.3	1.1	88.0			
	536	ONDR	4	S/F	1518.3	1518.3	1.1	96.0			
16	100	GORK	44	NS	0251.0E		399.0D		10.0		
	260	ONDR	44	NS	0600.0E	0907.4	426.0D	7.0U			
	127	TORN	44	NS	0620.0E		560.0D		130.0		V=1
	100	HIRA	44	NS	1950.0E	0128.0	840.0D	360.0	142.0		
	200	HIRA	44	NS	1950.0E	0120.0	840.0D	31.0	15.0		ML
	100	GORK	8	S	0306.3	0306.6	1.0	20.0			
	200	GORK	2	S/F	0306.4	0306.6	0.7	25.0			
	950	GORK	2	S/F	0319.6	0320.1	0.8	8.5			
	950	GORK	1	S	0352.7	0353.1	1.0	1.9			
	950	GORK	2	S/F	0543.4	0543.7	0.8	1.5			
	536	ONDR	41	F	0600.0	0919.6	430.0D	42.0U			
	9300	KISV	2	S/F	0713.0	0713.5	1.2	4.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density 'Mean	Int	Remarks
16	5900	KISV	2	S/F	0713.2	0713.6	1.3	2.0			
	100	GORK	45	C	0833.5	0834.2U	2.4	30.0D			
	100	GORK	45	C	0833.5	0834.8U		30.0D			
	200	GORK	8	S	0833.7	0834.2	0.9	20.0			
	650	GORK	8	S	0834.1	0834.2	0.3	28.0			
	950	GORK	8	S	0834.1	0834.2	0.3	48.0			
	430	KRAK	8	S	0834.2	0834.2	0.1	3.0			
	810	KRAK	8	S	0834.2	0834.2	0.1	72.0			
	29	UPIC	42	SER	0834.3		188.7				
	430	KRAK	42	SER	0909.5	0915.5	6.5	25.0			
	100	GORK	46	C	0918.0	0920.0	4.0	350.0			
	610	LEAR	8	S	0918.0E	0919.0	2.0D	64.0			QL=1 ST=2 TYP=3
	100	GORK	46	C	0918.0	0921.6		3200.0			
	100	GORK	46	C	0918.0	0920.7		300.0			
	950	GORK	41	F	0918.4	0918.5	3.5	116.0			
	950	GORK	41	F	0918.4	0920.5		10.0			
	810	KRAK	42	SER	0918.4	0918.5	3.5	160.0			
	650	GORK	41	F	0918.4	0918.8	3.6	102.0			
	200	GORK	46	C	0918.4	0920.8		70.0			
	650	GORK	41	F	0918.4	0920.8		25.0			
	650	GORK	41	F	0918.4	0919.9		30.0			
	950	GORK	41	F	0918.4	0919.9		20.0			
	200	GORK	46	C	0918.4	0918.9U	3.8	30.0D			
	430	KRAK	42	SER	0918.5	0919.0	3.5	29.0			
	9100	GORK	1	S	0918.5	0918.6	0.3	5.8			
	2950	GORK	1	S	0918.5	0918.8	0.8	3.2			
	204	IZMI	41	F	0918.6	0920.8	3.7	170.0			
	430	KRAK	42	SER	0927.2	0932.4	8.0	24.0			
	430	KRAK	42	SER	0945.1	0950.2	7.0	20.0			
	810	KRAK	8	S	1240.3	1240.3	0.5	8.0			
	245	SGMR	8	S	1331.0E	1332.0	2.0D	93.0			QL=1 ST=2 TYP=3
	810	KRAK	8	S	1331.9	1332.2	0.5	5.0			
	234	POTS	4	S/F	1331.9	1332.4	1.1	100.0	45.0		
	30	POTS	8	S	1332.2	1332.5	0.6	4000.0	1500.0		
	810	KRAK	1	S	1402.5	1402.6	0.5	5.0	2.0		
	810	KRAK	1	S	1415.0	1415.0	0.5	4.0	2.0		
	9400	HUAN	1	S	1542.1	1545.2	7.2	5.9	2.8		
	9400	HUAN	20	GRF	1650.2	1712.9U	59.9	7.4	3.4		
	9400	HUAN	20	GRF	1824.8	1843.2	28.4	7.4	3.0		
	9400	HUAN	1	S	1946.2	1950.4	11.1	8.2	4.2		
	100	HIRA	42	SER	1951.0	2018.7	34.0	540.0			
	200	HIRA	42	SER	2017.8	2018.5	5.3	165.0			SL
	100	HIRA	42	SER	2117.2	2136.2	21.8	510.0			
	200	HIRA	41	F	2200.8	2201.3	5.7	415.0			O
	245	SGMR	4	S/F	2201.0E	2201.0	5.0D	440.0			QL=1 ST=3 TYP=3
	245	PALE	4	S/F	2201.0E	2201.0	440.0D	290.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	2203.0	2205.3	5.2	470.0	230.0		
	245	PALE	8	S	2204.0E	2204.0	2.0D	140.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	2318.0E	2318.0	1.0D	170.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	2354.5	2356.1	2.5	590.0	180.0		
	200	HIRA	46	C	2354.5	2355.6	2.3	3200.0			SL
	245	LEAR	8	S	2356.0E	2356.0	1.0D	170.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	2356.0E	2356.0	1.0D	30.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2356.0E	2356.0	1.0D	64.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2356.0E	2356.0	2.0D	160.0			QL=1 ST=2 TYP=3
17	100	GORK	44	NS	0251.0E		399.0D		20.0		
	200	GORK	44	NS	0251.0E		399.0D		5.0		
	260	ONDR	44	NS	0550.0E	0642.5	490.0D	108.0			
	245	LEAR	44	NS	0552.0E	0634.0	227.0D	56.0			QL=1 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	15.0			
	127	TORN	44	NS	0620.0E		560.0D		1300.0D		V=1
	245	SGMR	43	NS	0945.0	2230.0	849.0D	210.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1640.0E	0159.0	739.0D	220.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0553.0	840.0D	200.0	118.0		SL
	100	HIRA	44	NS	1950.0E	0812.0	840.0D	680.0	540.0		
	410	PALE	44	NS	2301.0E	0057.0	358.0D	88.0			QL=1 ST=2 TYP=1
	410	LEAR	44	NS	2320.0E	2330.0	40.0D	140.0			QL=1 ST=3 TYP=1
	245	LEAR	44	NS	2320.0E	2336.0	40.0D	200.0			QL=1 ST=3 TYP=1

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	100	HIRA	46	C	0057.2	0100.0	6.6	530.0	160.0		
	200	HIRA	46	C	0057.2	0100.3	6.6	240.0	84.0		SL
	200	HIRA	46	C	0057.2	0120.5		210.0			ML
	1415	SYDN	4	S/F	0058.0	0102.0	7.0	140.0			QL= ST= TYP=5
	610	LEAR	49	GB	0059.0E	0100.0	2.0D	540.0			QL=1 ST=2 TYP=6
	410	LEAR	8	S	0059.0E	0100.0	2.0D	90.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0059.0E	0100.0	1.0D	75.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0059.0E	0100.0	1.0D	490.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	0100.0E	0100.0	2.0D	120.0			QL=1 ST=2 TYP=3
	245	LEAR	49	GB	0102.0E	0103.0	1.0D	1500.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	0102.0E	0103.0	1.0D	1100.0			QL=1 ST=2 TYP=6
	100	HIRA	46	C	0307.9	0309.9	2.1	370.0			
	200	HIRA	42	SER	0327.3	0427.3	61.0	2400.0			ML
	200	GORK	2	S/F	0343.1	0345.0U	3.2	20.0D			
	245	PALE	49	GB	0344.0E	0344.0	1.0D	530.0			QL=1 ST=2 TYP=6
	245	LEAR	49	GB	0344.0E	0344.0	1378.0D	640.0			QL=1 ST=2 TYP=6
	950	GORK	2	S/F	0344.4	0344.7	1.0	6.0			
	100	HIRA	42	SER	0415.2	0427.1	21.8	560.0			
	200	GORK	2	S/F	0415.6	0416.6U	2.0	15.0D			
	100	GORK	41	F	0415.7	0416.5	13.0	240.0			
	100	GORK	41	F	0415.7	0427.8		2400.0			
	950	GORK	41	F	0416.1	0417.2	13.1	72.0			
	950	GORK	41	F	0416.1	0427.9		73.0			
	2950	GORK	1	S	0417.3	0417.6	0.3	2.1			
	650	GORK	4	S/F	0426.8	0427.3	1.3	103.0			
	200	GORK	4	S/F	0426.8	0427.7	1.6	360.0			
	410	LEAR	4	S/F	0427.0E	0427.0	1381.0D	30.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0543.8	0544.2	0.6	7.0			
	9300	KISV	2	S/F	0544.0	0544.3	0.6	4.0			
	245	LEAR	8	S	0548.0E	0550.0	2.0D	420.0			QL=1 ST=2 TYP=3
	30	POTS	4	S/F	0548.6	0550.0	2.0	3400.0	60.0		
	200	HIRA	8	S	0548.8	0549.2	0.7	600.0			SL
	410	LEAR	8	S	0549.0E	0550.0	1.0D	380.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0549.0E	0550.0	1.0D	81.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0549.0E	0549.0	1.0D	460.0			QL=1 ST=2 TYP=3
	200	GORK	4	S/F	0549.3	0550.0	1.1	430.0			
	100	GORK	4	S/F	0549.3	0549.9	1.0	100.0			
	950	GORK	4	S/F	0549.3	0549.9	1.2	11.0			
	234	POTS	8	S	0549.4	0550.0	0.7	160.0	50.0		
	650	GORK	4	S/F	0549.6	0549.9	0.5	54.0			
	9100	GORK	1	S	0549.6	0549.9	0.6	3.6			
	9300	KISV	2	S/F	0549.6	0549.9	0.8	7.0			
	5900	KISV	2	S/F	0549.6	0549.9	1.3	7.0			
	2950	GORK	1	S	0549.7	0550.0	0.5	1.2			
	204	IZMI	41	F	0639.8	0646.7	9.7	900.0			
	200	HIRA	46	C	0642.2	0646.3	5.9	800.0	110.0		SL
	100	HIRA	46	C	0642.9	0646.2	4.8	510.0	270.0		
	950	GORK	46	C	0644.3	0645.4	2.7	118.0			
	950	GORK	46	C	0644.3	0646.4		59.0			
	950	GORK	46	C	0644.3	0647.6		41.0			
	2950	GORK	1	S	0645.0	0646.6	2.0	2.1			
	100	GORK	4	S/F	0645.0	0646.7	3.0	280.0			
	234	POTS	4	S/F	0645.0	0647.7	4.0	150.0	25.0		
	650	GORK	4	S/F	0646.0	0647.0	1.8	127.0			
	610	LEAR	8	S	0646.0E	0646.0	2.0D	210.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0646.0E	0647.0	2.0D	78.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0646.0E	0646.0	1.0D	48.0			QL=1 ST=2 TYP=3
	30	POTS	4	S/F	0646.0	0647.3	4.0	650.0	30.0		
	200	GORK	4	S/F	0646.1	0647.7	3.8	680.0			
	200	HIRA	27	RF	0701.0	0719.0	38.0	42.0	14.0		ML
	430	KRAK	42	SER	0701.5	0728.5	42.0	68.0			
	100	HIRA	46	C	0748.8	0751.5	3.4	250.0	115.0		
	536	ONDR	48	C	0820.0U	0828.7	20.0U	60.0			
	2950	GORK	1	S	0836.4	0836.7	0.9	2.5			
	3100	CRIM	1	S	0936.4	0936.9	2.6	2.5	0.8		
	810	KRAK	42	SER	0952.5	0956.0	3.8	8.0			
	430	KRAK	42	SER	0952.5	0956.0	4.2	19.0			
	234	POTS	27	RF	1001.0	1028.0	100.0	41.0	7.0		
	234	POTS	4	S/F	1012.2	1015.5	4.0	825.0	120.0		

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JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	204	IZMI	4	S/F	1013.4	1015.3	3.0	1080.0	300.0		
	245	SGMR	8	S	1014.0E	1015.0	2.0D	240.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1014.0E	1015.0	1.0D	190.0			QL=1 ST=2 TYP=3
	30	POTS	4	S/F	1014.3	1015.4	2.0	2000.0	350.0		
	810	KRAK	42	SER	1014.5	1015.0	7.0	210.0			
	430	KRAK	42	SER	1014.5	1015.5	7.5	32.0			
	5900	KISV	2	S/F	1040.7	1041.8	6.1	15.0			
	5900	KISV	2	S/F	1055.9	1056.3	5.1	22.0			
	9300	KISV	45	C	1055.9	1056.3	4.9	11.0			
	9300	KISV	45	C	1055.9	1056.9		7.0			
	430	KRAK	42	SER	1057.3	1105.0	9.5	8.0			
	9300	KISV	2	S/F	1115.6	1117.1	5.4	8.0			
	9300	KISV	4	S/F	1328.3	1332.4	6.2	135.0			
	5900	KISV	29	PBI	1329.6	1336.0	22.2	32.0			
	5900	KISV	4	S/F	1329.6	1332.4	6.4	129.0			
	15000	KISV	2	S/F	1330.0	1332.6	6.0	49.0			
	9500	POTS	3	S	1330.5	1332.5	7.5	89.0			
	4995	SGMR	4	S/F	1331.0E	1332.0	3.0D	100.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1331.0E	1332.0	3.0D	170.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	1331.0E	1332.0	2.0D	60.0			QL=1 ST=2 TYP=3
	9300	KISV	29	PBI	1334.5	1334.5	24.5	34.0			
	610	SGMR	8	S	1414.0E	1414.0	1.0D	100.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1414.0E	1414.0	1.0D	140.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	1414.0E	1415.0	3.0D	74.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1414.0E	1414.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1437.0E	1438.0	1.0D	90.0			QL=1 ST=3 TYP=3
	410	SGMR	8	S	1437.0E	1438.0	1.0D	180.0			QL=1 ST=3 TYP=3
	610	SGMR	8	S	1437.0E	1438.0	1.0D	490.0			QL=1 ST=3 TYP=3
	610	SVTO	8	S	1437.0E	1438.0	1.0D	340.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1437.0E	1438.0	1.0D	140.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1438.0E	1438.0	1.0D	61.0			QL=1 ST=2 TYP=3
	29	UPIC	8	S	1438.0	1438.1	0.5				
	33	UPIC	4	S/F	1438.0	1438.2	0.5				
	9400	HUAN	1	S	1742.5	1746.2	9.2	3.0	1.4		
	9400	HUAN	1	S	1805.6	1807.6	4.2	7.5	2.6		
	9400	HUAN	1	S	1813.4	1818.5	13.2	9.0	4.2		
	9400	HUAN	21	GRF	1901.6	1948.5	63.1	9.0	3.8		
	9400	HUAN	3	S	1943.2	1944.7	4.2	42.1	4.7		
	410	PALE	8	S	2056.0E	2056.0	1.0D	130.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2056.0E	2056.0	1.0D	89.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2056.0E	2056.0	1.0D	190.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2056.0E	2056.0	1.0D	83.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2218.0E	2219.0	1.0D	280.0			QL=1 ST=3 TYP=3
	610	SGMR	8	S	2218.0E	2219.0	2.0D	83.0			QL=1 ST=3 TYP=3
	410	SGMR	8	S	2219.0E	2219.0	1.0D	80.0			QL=1 ST=3 TYP=3
18	200	GORK	44	NS	0307.0E		329.0D		5.0		
	410	SVTO	44	NS	0356.0E	0930.0	838.0D	130.0			QL=1 ST=3 TYP=1
	245	SVTO	44	NS	0356.0E	1530.0	838.0D	240.0			QL=1 ST=3 TYP=1
	260	ONDR	44	NS	0510.0E	1247.6	486.0D				
	204	IZMI	43	NS	0600.0		360.0	200.0			
	127	TORN	44	NS	0620.0E		560.0D		2700.0D		V=0
	100	GORK	44	NS	0647.0E		313.0D		50.0		
	430	KRAK	44	NS	0710.0E	0951.8	350.0D	170.0	1.0		
	245	SGMR	44	NS	0945.0E	1024.0	855.0D	120.0			QL=1 ST=1 TYP=1
	245	PALE	44	NS	1639.0E	1652.0	441.0D	80.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1950.0E	0605.0	840.0D	95.0	64.0		SL
	100	HIRA	44	NS	1950.0E	0030.0	840.0D	780.0	575.0		
	410	LEAR	44	NS	2320.0E	0008.0	620.0D	98.0			QL=1 ST=2 TYP=1
	245	LEAR	44	NS	2320.0E	0441.0	620.0D	620.0			QL=1 ST=2 TYP=1
	2700	PENT	4	S/F	0025.0	0027.0	30.0	44.6	17.0		
	245	LEAR	4	S/F	0113.0E	0116.0	8.0D	56.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0159.0E	0159.0	8.0D	210.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0208.0E	0208.0	8.0D	61.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0242.0E	0243.0	2.0D	28.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0242.0E	0243.0	2.0D	64.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0243.0E	0243.0	1.0D	38.0			QL=1 ST=2 TYP=3
	650	GORK	41	F	0315.1	0320.5		120.0			
	650	GORK	41	F	0315.1	0316.7U	1.9	25.0D			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
18	650	GORK	41	F	0315.1	0318.9U		25.0D			
	950	GORK	41	F	0316.3	0320.4		38.0			
	950	GORK	41	F	0316.3	0317.4	4.0U	58.0			
	950	GORK	41	F	0316.3	0319.6		46.0			
	100	HIRA	46	C	0316.6	0319.1	4.1	740.0	260.0		
	410	LEAR	4	S/F	0318.0E	0322.0	4.0D	44.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0318.0E	0320.0	4.0D	480.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0319.0E	0319.0	2.0D	34.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0319.0E	0319.0	2.0D	120.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0319.0E	0320.0	1.0D	470.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0326.0E	0326.0	4.0D	85.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0505.0E	0505.0	1.0D	24.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0505.0E	0505.0	1.0D	19.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0505.0E	0505.0	1.0D	25.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0508.0E	0508.0	2.0D	44.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0508.0E	0508.0	2.0D	28.0			QL=1 ST=2 TYP=3
	9100	GORK	1	S	0549.6	0549.9	0.6	3.6			
	5900	KISV	2	S/F	0552.3	0553.3	8.7	18.0			
	9300	KISV	2	S/F	0552.4	0553.3	4.2	13.0			
	810	KRAK	8	S	0741.6	0741.6	0.1	1.0			
	950	GORK	2	S/F	0750.9	0751.5	1.1	2.0			
	9300	KISV	2	S/F	0751.2	0755.7	8.1	11.0			
	204	IZMI	4	S/F	0751.4	0752.0	1.2	1050.0	200.0		
	5900	KISV	2	S/F	0753.6	0755.8	6.0	12.0			
	536	ONDR	48	C	0820.0U	0828.7	20.0U	60.0			
	610	LEAR	8	S	0827.0E	0828.0	2.0D	57.0			QL=1 ST=2 TYP=3
	410	LEAR	49	GB	0828.0E	0828.0	2.0D	500.0			QL=1 ST=3 TYP=6
	950	GORK	4	S/F	0828.0	0828.6	2.8	44.0			
	650	GORK	4	S/F	0828.1	0828.4U	2.2	45.0D			
	810	KRAK	8	S	0846.0	0846.2	0.5	5.0			
	810	KRAK	1	S	0851.0	0851.2	0.7	3.0	1.0		
	200	GORK	4	S/F	0930.6	0931.7	1.6	4800.0			
	204	IZMI	4	S/F	0931.2	0931.4	0.8	2500.0	400.0		
	810	KRAK	8	S	0947.7	0947.7	0.1	6.0			
	9300	KISV	2	S/F	1040.8	1041.7	6.6	10.0			
	3100	CRIM	24	R	1045.0	1126.1		7.0			
	536	ONDR	48	C	1045.4U	1045.4	1.7U	44.0			
	5900	KISV	29	PBI	1046.3	1049.5	10.2	8.0			
	5900	KISV	4	S/F	1046.3	1047.7	3.2	27.0			
	810	KRAK	8	S	1050.2	1050.2	0.1	3.0			
	9300	KISV	2	S/F	1105.9	1106.3	1.1	7.0			
	810	KRAK	8	S	1151.2	1151.2	0.1	6.0			
	536	ONDR	48	C	1156.7U	1156.7	2.0U	90.0			
	5900	KISV	2	S/F	1157.8	1158.3	4.1	5.0			
	810	KRAK	42	SER	1220.5	1221.0	4.5	16.0			
	810	KRAK	8	S	1233.5	1233.5	0.5	4.0			
	30	POTS	4	S/F	1246.8	1247.4	2.7	11000.0	500.0		
	245	SGMR	49	GB	1247.0E	1247.0	855.0D	3300.0			QL=1 ST=2 TYP=6
	234	POTS	4	S/F	1247.0	1247.4	2.0	6600.0	250.0		
	810	KRAK	8	S	1247.3	1247.4	0.6	2.0	1.0		
	234	POTS	4	S/F	1302.5	1302.8	1.0	550.0	100.0		
	30	POTS	4	S/F	1302.6	1303.0	1.1	2600.0	50.0		
	5900	KISV	2	S/F	1309.5	1310.7	4.0	8.0			
	9300	KISV	2	S/F	1309.7	1310.9	8.3	6.0			
	9400	HUAN	1	S	1325.3	1328.7	7.8	12.2	2.3		
	5900	KISV	2	S/F	1326.7	1329.0	4.3	5.0			
	9500	POTS	3	S	1328.5	1329.0	6.5	13.0			
	9300	KISV	2	S/F	1328.5	1329.1	3.0	16.0			
	536	ONDR	48	C	1345.3U	1345.3	14.8U	78.0			
	9400	HUAN		S/F	1534.3	1541.3		12.2			
	9400	HUAN	2	S/F	1534.3	1539.4	9.8	9.1	3.8		
	245	SGMR	49	GB	1537.0E	1541.0	5.0D	16000.0			QL=1 ST=2 TYP=6
	2800	OTTA	4	S/F	1539.4	1541.5	7.0	81.0	28.0		
	2695	SGMR	8	S	1541.0E	1541.0	2.0D	65.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1541.0E	1541.0	1.0D	64.0			QL=1 ST=2 TYP=3
	2800	OTTA	4	S/F	1555.0	1603.4	16.0	23.7	6.0		
	9400	HUAN	20	GRF	1555.6	1603.8	28.0	10.7	4.2		
	33	UPIC	46	C	1625.0		6.0				
	2800	OTTA	4	S/F	1625.0	1626.0	9.0	284.0	85.0		

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JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
18	2695	SGMR	8	S	1625.0E	1626.0	2.0D	280.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1625.0E	1626.0	2.0D	180.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1625.0E	1626.0	1.0D	340.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	1625.0E	1625.0	4.0D	8200.0			QL=1 ST=2 TYP=6
	410	SGMR	49	GB	1625.0E	1625.0	4.0D	2300.0			QL=1 ST=2 TYP=6
	15400	SGMR	8	S	1625.0E	1626.0	1.0D	81.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1625.0E	1626.0	455.0D	140.0			QL=1 ST=1 TYP=3
	9400	HUAN	3	S	1625.1	1626.0	3.1	126.6	39.5		
	245	SGMR	49	GB	1626.0E	1628.0	6.0D	500.0			QL=1 ST=2 TYP=7
	9400	HUAN	29	PBI	1628.2	1628.2	99.5	6.1	2.6		
	610	PALE	8	S	1852.0E	1853.0	1.0D	100.0			QL=1 ST=2 TYP=3
	410	PALE	49	GB	1852.0E	1853.0	1.0D	5800.0			QL=1 ST=3 TYP=6
	245	PALE	49	GB	1852.0E	1853.0	1.0D	7800.0			QL=1 ST=3 TYP=6
	245	SGMR	49	GB	1852.0E	1853.0	1.0D	5900.0			QL=1 ST=2 TYP=6
19	410	PALE	44	NS	0149.0E	0410.0	190.0D	100.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0306.0E		477.0D		60.0		
	200	GORK	44	NS	0306.0E		477.0D		80.0		
	410	SVTO	44	NS	0356.0E	0414.0	286.0D	150.0			QL=1 ST=2 TYP=1
	245	SVTO	44	NS	0356.0E	0416.0	335.0D	730.0			QL=1 ST=2 TYP=1
	245	SVTO	44	NS	0356.0E	0504.0U	335.0D	730.0			QL=1 ST=2 TYP=1
	29	UPIC	44	NS	0400.0E		840.0D				
	33	UPIC	44	NS	0400.0E		840.0D				
	610	LEAR	44	NS	0450.0E	0458.0	90.0D	35.0			QL=1 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	30.0			
	260	ONDR	44	NS	0600.0E	0802.1U	301.0D	25.0			
	127	TORN	44	NS	0620.0E		560.0D		1410.0D		V=1
	430	KRAK	44	NS	0727.0E	0752.0	341.0D	45.0D			
	430	KRAK	44	NS	0727.0E	1028.6		74.0			
	245	PALE	44	NS	1639.0E	0416.0	441.0D	450.0			QL=1 ST=1 TYP=1
	245	PALE	44	NS	1639.0E	0412.0	441.0D	320.0			QL=1 ST=1 TYP=1
	100	HIRA	44	NS	1950.0E	0636.0	840.0D	280.0	187.0		
	200	HIRA	44	NS	1950.0E	0843.0	840.0D	22.0	7.0		WL
	610	LEAR	4	S/F	0026.0E	0026.0	3.0D	130.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0026.0E	0030.0	8.0D	49.0			QL=1 ST=2 TYP=3
	610	PALE	4	S/F	0026.0E	0026.0	4.0D	13.0			QL=1 ST=2 TYP=3
	4995	PALE	4	S/F	0026.0E	0027.0	6.0D	86.0			QL=1 ST=3 TYP=5
	2695	LEAR	4	S/F	0026.0E	0034.0	10.0D	54.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0054.0E	0054.0	1.0D	52.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0142.0E	0143.0	1.0D	81.0			QL=1 ST=2 TYP=3
	8800	PALE	4	S/F	0142.0E	0143.0	4.0D	87.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0145.0E	0147.0	3.0D	55.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0153.0E	0154.0	2.0D	180.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0210.0E	0210.0	2.0D	63.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0245.0E	0246.0	1.0D	130.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0250.0E	0250.0	1.0D	110.0			QL=1 ST=2 TYP=3
	950	GORK	22	GRF	0309.0E	0312.4	90.0D		9.0		
	200	HIRA	27	RF	0327.0	0440.0	149.0	495.0	170.0		SL
	200	GORK	27	RF	0327.0	0449.5	169.0	740.0			
	245	LEAR	4	S/F	0331.0E	0332.0	3.0D	120.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0347.0E	0347.0	3.0D	99.0			QL=1 ST=2 TYP=3
	100	GORK	27	RF	0416.0	0449.0	114.0	2500.0			
	100	HIRA	46	C	0417.8	0512.8	86.0	230.0	70.0		
	5900	KISV	25	R	0424.0	0609.0	230.0	33.0			
	9300	KISV	25	R	0424.0	0607.5	224.5	23.0			
	5900	KISV	45	C	0425.6	0428.3		5.0			
	5900	KISV	45	C	0425.6	0426.5	6.0	6.0			
	950	GORK	23	GRF	0441.0	0526.3	128.0	33.0			
	3100	CRIM	21	GRF	0446.5	0554.2	372.0	19.4	6.0		
	950	GORK	46	C	0450.7	0455.1		24.0			
	950	GORK	46	C	0450.7	0454.2		11.0			
	950	GORK	46	C	0450.7	0451.4	4.8	5.0			
	1415	SYDN	4	S/F	0456.0	0507.0	50.0	145.0			QL= ST= TYP=5
	1415	SVTO	4	S/F	0506.0E	0509.0	7.0D	110.0			QL=1 ST=3 TYP=3
	950	GORK	46	C	0508.5	0509.3		10.0			
	950	GORK	46	C	0508.5	0508.6	1.3	10.0			
	2950	GORK	21	GRF	0518.0E	0527.0	178.0D	18.6			
	1415	SVTO	8	S	0527.0E	0528.0	2.0D	250.0			QL=1 ST=3 TYP=3
	5900	KISV	2	S/F	0546.0	0550.8	6.5	7.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
19	9300	KISV	2	S/F	0547.4	0550.7	4.2	5.0			
	9300	KISV	2	S/F	0600.6	0601.5	3.0	6.0			
	5900	KISV	2	S/F	0601.1	0601.5	4.8	6.0			
	650	GORK	21	GRF	0609.6E	0823.4		80.0			
	950	GORK	2	S/F	0629.8	0630.9	2.0	7.0			
	650	GORK	46	C	0642.9	0650.0	21.7	30.0			
	650	GORK	46	C	0642.9	0652.7		16.0			
	650	GORK	46	C	0642.9	0645.9	233.0	17.0			
	950	GORK	23	GRF	0722.7	0749.1	110.0U	16.0			
	810	KRAK	47	GB	0726.5	0752.0	117.0D	120.0	28.0U		
	5900	KISV	2	S/F	0742.6	0742.9	1.0	5.0			
	2695	LEAR	4	S/F	0750.0E	0753.0	4.0D	110.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0750.0E	0752.0	4.0D	33.0			QL=1 ST=2 TYP=3
	2950	GORK	3	S	0750.4	0753.0	5.6	119.0			
	5900	KISV	4	S/F	0750.5	0753.0	3.3	138.0			
	1470	POTS	4	S/F	0750.5	0752.0	6.5	66.0			
	9500	POTS	4	S/F	0750.5	0753.0	6.5	37.0			
	3000	POTS	4	S/F	0750.5	0752.8	6.5	104.0			
	3013	IZMI	7	C	0750.6	0753.0	9.4	108.0	80.0		
	3100	CRIM	3	S	0750.7	0753.0	11.5	84.0	28.0		
	8800	LEAR	4	S/F	0751.0E	0753.0	3.0D	56.0			QL=1 ST=2 TYP=3
	650	GORK	4	S/F	0751.0	0752.6	3.0	53.0			
	9300	KISV	4	S/F	0751.1	0752.9	5.3	68.0			
	950	GORK	46	C	0751.4	0756.0		32.0			
	9100	GORK	21	GRF	0751.4	0754.0	13.0	6.4			
	950	GORK	46	C	0751.4	0752.2	25.6	115.0			
	950	GORK	46	C	0751.4	0801.3		23.0			
	950	GORK	46	C	0751.4	0757.4		28.0			
	950	GORK	46	C	0751.4	0758.8		22.0			
	9100	GORK	4	S/F	0751.9	0753.0	1.7	48.0			
	4995	SVTO	8	S	0752.0E	0752.0	1.0D	130.0			QL=1 ST=3 TYP=3
	2695	SVTO	8	S	0752.0E	0752.0	1.0D	100.0			QL=1 ST=3 TYP=3
	2950	GORK	22	GRF	0826.3	0847.5	85.0	5.7			
	9500	POTS	3	S	0846.5	0847.0	3.5	19.0			
	5900	KISV	45	C	0846.5	0847.1	1.5	11.0			
	5900	KISV	45	C	0846.5	0847.7		7.0			
	9300	KISV	2	S/F	0846.7	0847.0	3.0	24.0			
	9100	GORK	4	S/F	0846.8	0847.0	2.5	24.0			
	5900	KISV	2	S/F	0926.5	0927.9	3.0	4.0			
	810	KRAK	42	SER	1007.0	1017.7	45.2	41.0			
	950	GORK	4	S/F	1017.6	1017.8	0.5	18.0			
	536	ONDR	40	F	1028.3	1028.7	55.4	244.0U			
	950	GORK	4	S/F	1038.6	1038.7	0.3	15.0			
	5900	KISV	23	GRF	1104.5	1115.1	36.0	31.0			
	3000	POTS	45	C	1210.0	1215.4	17.0	47.0			
	1470	POTS	45	C	1210.0	1215.6	28.0	14.0			
	2800	OTTA	4	S/F	1210.9	1215.8	6.8	57.5	26.0		
	3100	CRIM	47	GB	1211.0	1223.5		21.5			
	3100	CRIM	47	GB	1211.0	1215.8		46.5			
	3100	CRIM	47	GB	1211.0	1214.8	17.0	33.0	15.0		
	9300	KISV	20	GRF	1213.0	1215.9	30.5	10.0			
	9500	POTS	20	GRF	1214.3	1223.9	35.0	9.0			
	2800	OTTA	29	PBI	1217.7	1217.7	22.3	16.1	8.0		
	810	KRAK	8	S	1218.0	1218.0	0.1	4.0			
	9500	POTS	20	GRF	1232.0	1346.7	74.7D	6.0			
	410	SGMR	49	GB	1330.0E	1335.0	7.0D	1000.0			QL=1 ST=2 TYP=6
	5900	KISV	45	C	1332.0	1335.3	24.0	14.0			
	5900	KISV	45	C	1332.0	1346.6		14.0			
	9300	KISV	22	GRF	1334.0	1346.5		9.0			
	1470	POTS	2	S/F	1334.0	1335.5	3.7	5.0			
	9300	KISV	22	GRF	1334.0	1336.5	26.5D	9.0			
	234	POTS	4	S/F	1334.4	1335.2	2.4	130.0	15.0		
	3000	POTS	1	S	1334.5	1335.4	5.5U	6.0U			
	536	ONDR	4	S/F	1334.7	1335.4	5.6	195.0			
	30	POTS	4	S/F	1334.8	1335.1	3.4	16000.0	3000.0		
	610	SGMR	8	S	1335.0E	1335.0	1.0D	440.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	1344.8	1347.2	8.8	4.1	2.1		
	2800	OTTA	4	S/F	1346.7	1347.4	2.3	28.2	14.0		
	2800	OTTA	4	S/F	1352.0	1353.0	3.0	34.7	17.0		

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
19	2800	OTTA	4	S/F	1355.3	1356.1	2.9	39.2	19.0		
	9400	HUAN	2	S/F	1433.6	1437.6	10.0	9.6	2.9		
	9500	POTS	3	S	1437.5	1438.1	2.0	13.0			
	1470	POTS	4	S/F	1438.5	1440.7	4.5	10.0			
	410	PALE	8	S	2054.0E	2054.0	1.0D	63.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2054.0E	2054.0	1.0D	98.0			QL=1 ST=3 TYP=3
	610	SGMR	8	S	2054.0E	2054.0	1.0D	78.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2054.0E	2054.0	1.0D	73.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	2351.2	2352.1	7.1	570.0	140.0		
	200	HIRA	46	C	2352.8	2354.1	5.3	240.0	86.0		O
	245	LEAR	8	S	2354.0E	2354.0	1.0D	310.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2354.0E	2354.0	1.0D	280.0			QL=1 ST=2 TYP=3
	500	HIRA	41	F	2355.5	2358.2	3.1	25.0			O
20	200	GORK	44	NS	0305.0E		536.0D		5.0		
	100	GORK	44	NS	0306.0E		534.0D		20.0		
	245	SVTO	44	NS	0358.0E	0657.0	1202.0D	34.0			QL=1 ST=1 TYP=1
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0610.0E	0931.5U	467.0D	113.0			
	127	TORN	44	NS	0620.0E		460.0D		475.0D		V=1
	245	SGMR	44	NS	0947.0E	2206.0	845.0D	130.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1950.0E	0624.0	840.0D	35.0	17.0		ML
	100	HIRA	44	NS	1950.0E	0308.6	840.0D	200.0	87.0		
	500	HIRA	8	S	0014.3	0014.8	0.8	27.0			WL
	2700	PENT	4	S/F	0127.9	0131.2	5.8	55.5	27.0		
	9300	KISV	2	S/F	0444.3	0444.7	0.4	5.0			
	5900	KISV	2	S/F	0450.0	0450.7	3.5	6.0			
	2950	GORK	20	GRF	0526.3	0526.7	7.5	3.0			
	100	HIRA	42	SER	0649.8	0650.8	7.3	650.0			
	3100	CRIM	20	GRF	0703.0	0716.0	40.0	4.0	1.0		
	245	SVTO	4	S/F	0707.0E	0708.0	3.0D	210.0			QL=1 ST=2 TYP=3
	410	SVTO	49	GB	0707.0E	0707.0	2.0D	1000.0			QL=1 ST=2 TYP=6
	4995	SVTO	8	S	0707.0E	0708.0	1.0D	82.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0707.0E	0708.0	1.0D	50.0			QL=1 ST=2 TYP=3
	610	SVTO	8	S	0707.0E	0707.0	2.0D	110.0			QL=1 ST=2 TYP=3
	2695	SVTO	8	S	0707.0E	0708.0	1.0D	74.0			QL=1 ST=2 TYP=3
	2950	GORK	20	GRF	0717.1	0719.8	20.2	1.8			
	430	KRAK	42	SER	0827.5	0853.0	31.0	53.0			
	430	KRAK	42	SER	0924.0	0931.0	46.5	240.0D			
	650	GORK	3	S	0924.4	0927.9	8.6	3.0			
	3000	POTS	4	S/F	0924.5	0927.7	8.5	18.0			
	536	ONDR	41	F	0924.6	0931.2	8.5U				
	3100	CRIM	3	S	0924.7	0927.6	8.0	14.7	5.0		
	2950	GORK	3	S	0924.9	0927.6	8.5	17.9			
	410	SVTO	8	S	0925.0E	0925.0	2.0D	61.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0925.0E	0925.0	40.0D	81.0			QL=1 ST=2 TYP=3
	5900	KISV	21	GRF	0925.0	0927.4	34.0	16.0			
	1470	POTS	4	S/F	0925.0	0927.5	7.5	22.0			
	3013	IZMI	7	C	0925.0	0927.6	5.6	14.0	7.0		
	950	GORK	20	GRF	0925.1	0927.8	8.7	5.5			
	9500	POTS	20	GRF	0927.0	0928.5	21.0	5.0			
	810	KRAK	1	S	0927.3	0928.2	2.7	2.0	1.0		
	245	LEAR	4	S/F	0928.0E	0931.0	3.0D	160.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0928.0E	0931.0	6.0D	120.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	0929.0E	0930.0	3.0D	280.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	0931.0E	0931.0	3.0D	100.0			QL=1 ST=2 TYP=3
	5900	KISV	22	GRF	1025.0	1028.9	35.0	6.0			
	5900	KISV	22	GRF	1140.2	1142.0	20.0	7.0			
	3000	POTS	3	S	1206.9	1207.0	21.0	14.0			
	1470	POTS	21	GRF	1411.0	1430.3	39.0D	8.0			
	3000	POTS	20	GRF	1412.0	1417.3	28.0U	13.0			
	9500	POTS	20	GRF	1412.0	1413.5	33.0	5.0			
	234	POTS	4	S/F	1425.2	1425.6	1.8	110.0	10.0		
	245	SGMR	4	S/F	1733.0E	1734.0	3.0D	50.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	1734.0E	1735.0	1.0D	40.0			QL=1 ST=2 TYP=3
	410	SGMR	49	GB	1734.0E	1735.0	3.0D	5400.0			QL=1 ST=2 TYP=6
	410	PALE	49	GB	1734.0E	1735.0	10.0D	5900.0			QL=1 ST=2 TYP=6
	610	PALE	4	S/F	1734.0E	1735.0	386.0D	41.0			QL=1 ST=1 TYP=3
	9400	HUAN	1	S	1739.2	1741.0	8.0	8.4	4.3		

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	9400	HUAN	1	S	1847.1	1849.4	5.2	5.0	2.3		
	245	LEAR	8	S	2342.0E	2342.0	1.0D	36.0			QL=1 ST=3 TYP=3
	100	HIRA	42	SER	2346.6	2347.5	4.7	840.0			
	200	HIRA	42	SER	2346.9	2346.9	4.6	305.0			O
	500	HIRA	42	SER	2347.0	2351.0	4.5	51.0			O
	410	LEAR	4	S/F	2347.0E	2347.0	6.0D	17.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	2347.0E	2347.0	1.0D	81.0			QL=1 ST=3 TYP=3
	610	LEAR	4	S/F	2347.0E	2347.0	4.0D	23.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	2351.0E	2351.0	4.0D	30.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	2351.0E	2351.0	1.0D	39.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	2351.0E	2351.0	6.0D	39.0			QL=1 ST=2 TYP=3
21	245	LEAR	44	NS	0006.0E	0104.0	575.0D	22.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0308.0E		522.0D		15.0		
	200	GORK	44	NS	0308.0E		532.0D		5.0		
	245	SVTO	43	NS	0358.0	0738.0	834.0D	41.0			QL=1 ST=3 TYP=1
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0620.0E	0708.4	460.0D				
	127	TORN	44	NS	0935.0E		365.0D		710.0		V=1
	245	SGMR	44	NS	0948.0E	2111.0	843.0D	160.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1651.0E	2200.0	409.0D	100.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0321.0	840.0D	37.0	8.0		ML
	100	HIRA	46	C	0127.0	0130.5	10.6	960.0	295.0		
	200	HIRA	46	C	0127.7	0131.0	11.2	95.0	28.0		O
	500	HIRA	46	C	0128.3	0140.0		570.0			SL
	500	HIRA	46	C	0128.3	0132.0	13.5	1050.0	160.0		SL
	8800	LEAR	4	S/F	0129.0E	0131.0	4.0D	120.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0129.0E	0131.0	9.0D	72.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0129.0E	0130.0	8.0D	73.0			QL=1 ST=2 TYP=3
	410	PALE	49	GB	0129.0E	0131.0	4.0D	1800.0			QL=1 ST=2 TYP=6
	410	LEAR	49	GB	0129.0E	0132.0	13.0D	2300.0			QL=1 ST=2 TYP=6
	35000	NOBE	7	C	0129.9	0130.9	3.0	50.0			O
	17000	NOBE	7	C	0129.9	0130.9	3.0	120.0			15L
	15400	LEAR	8	S	0130.0E	0131.0	2.0D	130.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0130.0E	0131.0	1.0D	57.0			QL=1 ST=2 TYP=3
	15400	PALE	8	S	0130.0E	0130.0	1.0D	93.0			QL=1 ST=2 TYP=3
	4995	PALE	8	S	0130.0E	0131.0	1.0D	66.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0130.0E	0130.0	1.0D	130.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0130.0E	0141.0	12.0D	260.0			QL=1 ST=2 TYP=5
	245	PALE	8	S	0131.0E	0131.0	1.0D	52.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0131.0E	0132.0	2.0D	140.0			QL=1 ST=2 TYP=3
	500	HIRA	41	F	0145.9	0146.6	2.3	80.0			WL
	410	LEAR	8	S	0146.0E	0147.0	2.0D	40.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0204.0E	0204.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	0538.0E	0538.0	1201.0D	69.0			QL=1 ST=2 TYP=3
	5900	KISV	25	R	0551.2	0552.8	429.0	8.0			
	5900	KISV	2	S/F	0617.4	0618.7	2.3	5.0			
	200	HIRA	46	C	0705.9	0708.6	6.1	384.0	82.0		O
	204	IZMI	46	C	0706.0	0709.0	4.8	1200.0	340.0		
	100	GORK	46	C	0706.2	0709.2		2800.0			
	100	GORK	46	C	0706.2	0708.4	5.2	3200.0			
	200	GORK	4	S/F	0706.2	0708.9	4.6	1500.0			
	100	HIRA	46	C	0706.3		4.7	1000.0D	450.0D		
	2950	GORK	3	S	0706.3	0707.9	3.5	66.0D			
	536	ONDR	4	S/F	0706.5	0707.6	13.6	241.0			
	500	HIRA	46	C	0706.5	0707.9	6.5	960.0	120.0		SL
	245	LEAR	8	S	0707.0E	0708.0	2.0D	220.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0707.0E	0708.0	2.0D	210.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0707.0E	0708.0	2.0D	76.0			QL=1 ST=2 TYP=3
	410	LEAR	49	GB	0707.0E	0708.0	2.0D	1000.0			QL=1 ST=2 TYP=6
	410	SVTO	49	GB	0707.0E	0707.0	1013.0D	1000.0			QL=1 ST=1 TYP=6
	2695	SVTO	4	S/F	0707.0E	0708.0	1013.0D	74.0			QL=1 ST=1 TYP=3
	650	GORK	29	PBI	0707.0	0709.2	21.7	4.5			
	3000	POTS	4	S/F	0707.0	0708.3	6.2	79.0			
	3100	CRIM	3	S	0707.0	0708.4	3.3	64.0	21.0		
	650	GORK	4	S/F	0707.0	0708.4	2.1	103.0			
	9500	POTS	3	S	0707.0	0708.4	6.2	39.0			
	1470	POTS	4	S/F	0707.0	0708.5	5.0	22.0			
	9300	KISV	4	S/F	0707.2	0708.3	1.8	53.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	9300	KISV	29	PBI	0707.2	0709.3	35.0	7.0			
	3013	IZMI	3	S	0707.2	0708.4	2.8	67.0	44.0		
	5900	KISV	4	S/F	0707.2	0708.4	1.9	160.0			
	9100	GORK	3	S	0707.3	0708.3	4.7	44.0			
	950	GORK	4	S/F	0707.4U	0708.4	3.3D	15.0			
	950	GORK	30	PBI	0707.4U	0710.8	11.3D	3.5			
	15000	KISV	29	PBI	0707.6	0709.3	3.3	7.0			
	15000	KISV	2	S/F	0707.6	0708.7	1.7	34.0			
	8800	LEAR	8	S	0708.0E	0708.0	1.0D	44.0			QL=1 ST=2 TYP=3
	15400	LEAR	4	S/F	0708.0E	0708.0	1350.0D	27.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0709.2	0709.3	0.5	7.0			
	5900	KISV	29	PBI	0709.7E	0709.7	2.1D	79.0			
	5900	KISV	32	ABS	0712.2	0713.8	4.0	3.0			
	1470	POTS	1	S	0714.0	0716.0	4.0	4.0			
	950	GORK	1	S	0714.7	0715.5	2.0	2.0			
	430	KRAK	45	C	0714.7	0717.7	4.5	87.0	15.0		
	2950	GORK	1	S	0714.7	0715.8	3.6	3.7	1.7		
	500	HIRA	41	F	0714.8	0718.0	4.5	28.0			WL
	810	KRAK	8	S	0756.0	0756.0	0.1	3.0			
	430	KRAK	2	S/F	0756.7	0757.0	0.6	22.0	2.0		
	430	KRAK	42	SER	0935.7	0956.7	35.7	15.0			
	430	KRAK	42	SER	1020.2	1049.0	29.5	20.0			
	430	KRAK	42	SER	1104.5	1139.0	39.7	26.0			
	2950	GORK	20	GRF	1130.5	1133.0	14.8	5.0			
	430	KRAK	2	S/F	1153.8	1154.5	0.8	0.9	0.2		
	430	KRAK	8	S	1205.5	1205.5	0.1	20.0			
	430	KRAK	42	SER	1219.5	1220.9	35.0	6.0			
	245	PALE	8	S	1700.0E	1700.0	1.0D	130.0			QL=1 ST=2 TYP=3
	29	UPIC	3	S	1700.5	1700.6	0.5				
	33	UPIC	3	S	1700.5	1700.6	0.5				
	200	HIRA	42	SER	2110.6	2113.5	4.0	510.0			O
	245	PALE	8	S	2111.0E	2111.0	1.0D	130.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	2113.0E	2113.0	1.0D	62.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	2145.8	2146.2	0.9	605.0			O
	245	SGMR	4	S/F	2200.0E	2200.0	852.0D	140.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	2246.0E	2246.0	1.0D	480.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	2246.0E	2246.0	852.0D	660.0			QL=1 ST=2 TYP=6
22	245	LEAR	44	NS	0053.0E	0657.0	528.0D	160.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	0150.0E	0356.0	188.0D	99.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0309.0E		279.0D		5.0		
	200	GORK	44	NS	0309.0E		531.0D		15.0		
	245	SVTO	43	NS	0359.0	1321.0	832.0D	230.0			QL=1 ST=2 TYP=1
	221	ABST	43	NS	0500.0	0728.0	300.0	22.0			QL= ST= TYP=1
	234	POTS	44	NS	0550.0E	0604.0	190.0D	80.0			
	204	IZMI	43	NS	0600.0		360.0	40.0			
	127	TORN	44	NS	0620.0E		560.0D		7.0		V=1
	260	ONDR	44	NS	0620.0E	0651.7U	470.0D				
	430	KRAK	44	NS	0649.5E	1259.0	372.0D	20.0	1.0		
	245	SGMR	43	NS	0949.0	1329.0	842.0D	310.0			QL=1 ST=2 TYP=1
	410	PALE	44	NS	1654.0E	2039.0	496.0D	46.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1654.0E	1716.0	621.0D	120.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	2051.0	130.0D	24.0	10.0		ML
	245	LEAR	4	S/F	0011.0E	0111.0	61.0D	280.0			QL=1 ST= TYP=3
	245	LEAR	49	GB	0024.0E	0026.0	4.0D	830.0			QL=1 ST=2 TYP=6
	410	LEAR	4	S/F	0024.0E	0026.0	4.0D	37.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	0025.6	0025.8	2.6	1200.0			O
	100	HIRA	41	F	0025.7	0025.7	2.0	280.0			
	245	PALE	49	GB	0026.0E	0026.0	2.0D	710.0			QL=1 ST=2 TYP=6
	500	HIRA	8	S	0027.4	0027.5	0.6	110.0			WL
	500	HIRA	42	SER	0106.8	0111.9	6.0	105.0			WL
	200	HIRA	46	C	0110.9	0111.9	2.7	130.0			WL
	245	LEAR	8	S	0111.0E	0111.0	1.0D	280.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0111.0E	0111.0	2.0D	32.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0111.0E	0111.0	1.0D	32.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0111.0E	0112.0	1.0D	180.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0111.0E	0111.0	1.0D	2800.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	0111.0E	0111.0	1414.0D	270.0			QL=1 ST=2 TYP=3
	410	LEAR	4	S/F	0111.0E	0112.0	1439.0D	80.0			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 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
22	100	HIRA	46	C	0111.0	0111.7	1.5	550.0			
	200	HIRA	42	SER	0150.8	0152.1	7.3	370.0			WL
	245	LEAR	4	S/F	0152.0E	0152.0	3.0D	140.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0152.0E	0152.0	1.0D	120.0			QL=1 ST=2 TYP=3
	100	HIRA	42	SER	0152.1	0154.8	7.3	880.0			
	500	HIRA	41	F	0153.7	0156.5	3.5	160.0			WL
	610	LEAR	8	S	0156.0E	0156.0	1.0D	49.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0158.0E	0159.0	1.0D	58.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0158.0E	0159.0	1.0D	45.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0158.0E	0159.0	2.0D	96.0			QL=1 ST=2 TYP=3
	245	LEAR	4	S/F	0203.0E	0203.0	3.0D	63.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0223.0E	0224.0	1.0D	56.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0225.0E	0225.0	1.0D	96.0			QL=1 ST=2 TYP=3
	100	HIRA	46	C	0257.4	0258.7	2.1	890.0			
	200	HIRA	46	C	0257.7	0258.7	1.3	1300.0			O
	245	LEAR	4	S/F	0258.0E	0259.0	3.0D	280.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0259.0E	0259.0	2.0D	250.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	0326.1	0457.4		170.0			
	100	GORK	41	F	0326.1	0351.4		4000.0			
	100	GORK	41	F	0326.1	0328.7	100.0	560.0			
	650	GORK	46	C	0351.3	0351.6	2.2	9.0			
	650	GORK	46	C	0351.3	0352.7		7.5			
	950	GORK	2	S/F	0351.3	0351.8	2.2	1.5			
	200	GORK	4	S/F	0351.3	0351.8	0.9	270.0			
	500	HIRA	22	GRF	0525.0	0548.0	150.0	5.0	2.0		WL
	200	HIRA	27	RF	0533.7	0609.0	110.0	125.0	27.0		SL
	245	SVTO	4	S/F	0538.0E	0538.0	1201.0D	69.0			QL=1 ST=2 TYP=3
	29	UPIC	42	SER	0550.5		474.7				
	100	GORK	41	F	0551.0	0554.5		170.0			
	100	GORK	41	F	0551.0	0551.9	5.2	170.0			
	245	LEAR	4	S/F	0554.0E	0555.0	3.0D	64.0			QL=1 ST=3 TYP=3
	33	UPIC	42	SER	0600.0E		465.2D				
	536	ONDR	41	F	0640.0E	1301.7	450.0D				
	245	LEAR	4	S/F	0647.0E	0648.0	3.0D	230.0			QL=1 ST=2 TYP=3
	30	POTS	42	SER	0648.0	0652.4	5.1	260.0	3.0		
	234	POTS	42	SER	0648.0	0648.5	5.0	600.0	10.0		
	245	LEAR	4	S/F	0652.0E	0652.0	3.0D	410.0			QL=1 ST=2 TYP=3
	100	GORK	46	C	0701.8	0709.1		85.0			
	100	GORK	46	C	0701.8	0707.4	15.0	100.0			
	204	IZMI	24	R	0946.4		10.2	36.0			
	2950	GORK	21	GRF	0946.4	1118.0	134.0D	5.0			
	200	GORK	46	C	0946.5	0949.0U	13.3	30.0D			
	200	GORK	46	C	0946.5	0952.9U		30.0D			
	127	TORN	46	C	0947.1	0951.1	10.0	190.0	20.0		
	100	GORK	46	C	0948.0	0949.1U	13.0	30.0D			
	100	GORK	46	C	0948.0	0951.2U		30.0D			
	3000	POTS	29	PBI	1110.7	1115.4	25.0	19.0			
	650	GORK	4	S/F	1110.8	1114.6	4.9	18.0			
	950	GORK	1	S	1111.1	1114.6	6.6	3.0			
	3100	CRIM	1	S	1111.4	1115.0	5.6	13.7	5.0		
	3100	CRIM	29	PBI	1111.4	1117.0	13.0	4.0	1.0		
	2950	GORK	3	S	1111.5	1115.0	6.0	15.0	6.0		
	3013	IZMI	7	C	1111.6	1115.2	7.4	15.0	7.0		
	1470	POTS	29	PBI	1112.3	1114.8	22.0	6.0			
	410	SGMR	8	S	1114.0E	1114.0	1.0D	210.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1114.0E	1114.0	1.0D	82.0			QL=1 ST=2 TYP=3
	810	KRAK	8	S	1226.2	1226.2	0.2	3.0			
	610	SGMR	8	S	1301.0E	1301.0	1.0D	110.0			QL=1 ST=2 TYP=3
	5900	KISV	1	S	1301.5	1301.7	0.4	9.0			
	8800	SGMR	49	GB	1427.0E	1427.0	1.0D	2800.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	1749.0E	1749.0	1.0D	170.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1900.0E	1900.0	2.0D	67.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	1900.0E	1900.0	3.0D	430.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1900.0E	1900.0	1.0D	600.0			QL=1 ST=3 TYP=6
	500	HIRA	6	S	2039.5	2039.9	0.9	260.0			WL
	500	HIRA	21	GRF	2045.0	2112.0	90.0	6.0	3.0		WL
	500	HIRA	21	GRF	2200.0	2329.0	140.0	11.0	3.0		WL
	200	HIRA	46	C	2318.0	2321.8	16.5	84.0	27.0		O
	245	PALE	8	S	2320.0E	2322.0	2.0D	110.0			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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JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
22	100	HIRA	41	F	2320.5	2321.8	4.0	270.0			
	245	LEAR	8	S	2321.0E	2322.0	1.0D	89.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2322.0E	2322.0	1.0D	130.0			QL=1 ST=2 TYP=3
	15400	LEAR	8	S	2331.0E	2332.0	2.0D	100.0			QL=1 ST=2 TYP=3
23	200	GORK	43	NS	0309.0		381.0D		5.0		
	245	SGMR	44	NS	0950.0E	1525.0	850.0D	89.0			QL=1 ST=1 TYP=1
	500	HIRA	27	RF	0027.5	0039.0	68.0	9.0	4.0		WL
	100	HIRA	46	C	0238.3	0240.3	5.3	460.0	150.0		
	260	ONDR	41	F	0610.0E	1317.6	478.0D	84.0			
	430	KRAK	41	F	1055.0	1055.2	1.5	7.0	1.0		
	127	TORN	49	GB	1214.7	1218.5	10.5	1000.0	80.0		
	33	UPIC	42	SER	1225.6		270.4				
	29	UPIC	42	SER	1225.6		270.6				
	1470	POTS	20	GRF	1301.0	1315.0	19.0	5.0			
	3000	POTS	20	GRF	1302.0	1315.0	33.0	4.0			
	9500	POTS	20	GRF	1307.0	1318.0	30.0	5.0			
	30	POTS	4	S/F	1313.1	1318.4	11.0	4500.0	120.0		
	234	POTS	4	S/F	1315.6	1316.0	1.7	770.0	150.0		
	245	SGMR	49	GB	1316.0E	1316.0	850.0D	700.0			QL=1 ST=2 TYP=6
	9400	HUAN	1	S	1754.3	1758.9	9.6	5.2	2.8		
	9400	HUAN	1	S	1821.4	1824.2	8.1	3.4	1.6		
	245	PALE	49	GB	1833.0E	1833.0	2.0D	1100.0			QL=1 ST=2 TYP=6
	410	PALE	8	S	1833.0E	1833.0	2.0D	85.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1833.0E	1833.0	1.0D	80.0			QL=1 ST=3 TYP=3
	245	SGMR	49	GB	1833.0E	1833.0	644.0D	2200.0			QL=1 ST=3 TYP=6
	245	SGMR	49	GB	1936.0E	1936.0	644.0D	550.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	2037.0E	2037.0	1.0D	130.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2037.0E	2037.0	1.0D	160.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	2047.0E	2047.0	2.0D	63.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2048.0E	2048.0	1.0D	59.0			QL=1 ST=2 TYP=3
24	245	SVTO	44	NS	0635.0E	0810.0	473.0D	60.0			QL=1 ST=2 TYP=1
	200	GORK	43	NS	0636.0		174.0D		5.0		
	204	IZMI	43	NS	0637.0		263.0	10.0			
	260	ONDR	44	NS	0637.0E	0821.3	453.0D	281.0			
	430	KRAK	43	NS	0657.5	0831.8	367.0D	93.0			
	200	HIRA	41	F	0002.6	0044.9	63.0	360.0			WR
	500	HIRA	27	RF	0013.0	0103.0	160.0	5.0	3.0		O
	245	LEAR	8	S	0044.0E	0045.0	1.0D	53.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0102.0E	0103.0	1.0D	66.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0230.0E	0230.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0230.0E	0230.0	1.0D	110.0			QL=1 ST=2 TYP=3
	3100	CRIM	28	PRE	0621.0	0636.0	15.0	17.0	6.0		
	500	HIRA	46	C	0626.0	0656.0		17.0			O
	500	HIRA	46	C	0626.0	0645.5	133.0	22.0	5.0		O
	650	GORK	21	GRF	0628.7	0745.6	91.0U	7.0			
	3013	IZMI	47	GB	0628.8		60.2	77300.0			
	950	GORK	21	GRF	0631.0	0710.8	179.0D	20.0			
	1415	SVTO	4	S/F	0632.0E	0647.0	48.0D	340.0			QL=1 ST=2 TYP=3
	2695	SVTO	49	GB	0632.0E	0647.0	48.0D	530.0			QL=1 ST=2 TYP=6
	4995	SVTO	4	S/F	0632.0E	0647.0	48.0D	250.0			QL=1 ST=2 TYP=3
	5900	KISV	29	PBI	0635.4	0654.0		94.0			
	5900	KISV	47	GB	0635.4	0647.7	21.6	242.0			
	9300	KISV	47	GB	0635.9	0647.7	15.1	116.0D			
	9100	GORK	21	GRF	0636.0	0657.0	240.0D	52.0			
	3100	CRIM	47	GB	0636.6	0656.0		148.0			
	3100	CRIM	29	PBI	0636.6	0720.0	260.0	28.0	10.0		
	3100	CRIM	47	GB	0636.6	0638.5		43.4			
	3100	CRIM	47	GB	0636.6	0647.6	43.4	326.0	108.0		
	204	IZMI	25	R	0637.0		31.2	12.0			
	8800	SVTO	4	S/F	0637.0E	0648.0	43.0D	110.0			QL=1 ST=2 TYP=3
	200	HIRA	46	C	0637.0	0656.1	41.0	21.0	4.0		O
	100	HIRA	46	C	0640.3	0704.6	79.0	70.0	12.0		
	200	GORK	27	RF	0641.2	0657.3	33.0	20.0			
	100	GORK	27	RF	0641.2	0657.4	29.0	30.0D			
	9500	POTS	45	C	0641.5	0648.5	99.0D	115.0			
	1470	POTS	45	C	0642.5E	0647.8	145.0D	205.0			
	950	GORK	45	C	0642.8	0656.2		60.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
24	950	GORK	45	C	0642.8	0645.4	28.0	70.0			
	950	GORK	45	C	0642.8	0700.5		40.0			
	950	GORK	45	C	0642.8	0647.7		83.0			
	650	GORK	45	C	0642.9	0656.1		11.0			
	650	GORK	45	C	0642.9	0645.3	26.1	13.0			
	650	GORK	45	C	0642.9	0647.8		12.0			
	15400	SVTO	4	S/F	0643.0E	0649.0	37.0D	56.0			QL=1 ST=2 TYP=3
	3000	POTS	45	C	0643.0E	0647.5	107.0D	329.0			
	9100	GORK	3	S	0645.5	0648.0	9.0	54.0			
	8800	LEAR	4	S/F	0646.0E	0648.0	6.0D	59.0			QL=1 ST=2 TYP=3
	2695	LEAR	49	GB	0646.0E	0647.0	32.0D	570.0			QL=1 ST=2 TYP=6
	15400	LEAR	4	S/F	0647.0E	0649.0	3.0D	46.0			QL=1 ST=2 TYP=3
	29	UPIC	42	SER	0650.2		281.6				
	9300	KISV	29	PBI	0651.0	0651.0	21.0	95.0			
	33	UPIC	42	SER	0651.5		280.0				
	127	TORN	46	C	0656.0	0704.1	11.0	570.0	110.0		
	200	HIRA	46	C	0723.8	0735.6	16.5	12.0	3.0		WR
	245	LEAR	8	S	0753.0E	0754.0	1.0D	49.0			QL=1 ST=2 TYP=3
	245	LEAR	49	GB	0802.0E	0802.0	2.0D	1700.0			QL=1 ST=2 TYP=6
	410	LEAR	8	S	0802.0E	0802.0	1.0D	110.0			QL=1 ST=2 TYP=3
	200	GORK	41	F	0802.2	0810.1		100.0			
	200	GORK	41	F	0802.2	0831.6		2100.0			
	200	GORK	41	F	0802.2	0802.7	30.8	8600.0			
	200	HIRA	42	SER	0802.2	0802.8	34.0	7800.0			WR
	100	HIRA	8	S	0802.2	0802.9	1.3	940.0			
	204	IZMI	41	F	0802.4	0831.5	31.0	3100.0			
	536	ONDR	8	S	0802.4	0802.6	0.7	22.0			
	100	GORK	46	C	0802.5	0802.6	1.0	2000.0			
	100	GORK	46	C	0802.5	0802.8		2700.0			
	245	LEAR	8	S	0809.0E	0810.0	1.0D	68.0			QL=1 ST=2 TYP=3
	536	ONDR	4	S/F	0821.2	0821.6	1.6	113.0			
	100	HIRA	42	SER	0829.0		3.6	1000.0D			
	500	HIRA	42	SER	0829.4	0831.5	3.5	58.0			MR
	100	GORK	41	F	0829.6	0830.5	3.5	340.0			
	100	GORK	41	F	0829.6	0831.6		3700.0			
	30	POTS	4	S/F	0829.8	0831.6	3.4	13000.0	2000.0		
	245	LEAR	8	S	0830.0E	0831.0	2.0D	430.0			QL=1 ST=2 TYP=3
	127	TORN	47	GB	0830.0	0832.5U	3.9	2200.0D	1100.0D		
	234	POTS	4	S/F	0830.0	0831.7	3.2	950.0	150.0		
	410	LEAR	8	S	0831.0E	0831.0	1.0D	54.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0831.0E	0831.0	1.0D	390.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0831.0E	0831.0	1.0D	60.0			QL=1 ST=2 TYP=3
	810	KRAK	41	F	0831.7	0831.8	1.0	7.0	5.0		
	127	TORN	45	C	1122.0	1128.3U	10.5	330.0D	15.0		
	245	SVTO	8	S	1129.0E	1130.0	2.0D	120.0			QL=1 ST=2 TYP=3
	234	POTS	4	S/F	1129.2	1130.1	1.5	275.0	50.0		
	30	POTS	4	S/F	1129.5	1130.2	2.3	1800.0	300.0		
	204	IZMI	41	F	1129.8	1130.3	18.4	500.0			
	245	SGMR	8	S	1130.0E	1130.0	1.0D	160.0			QL=1 ST=2 TYP=3
	100	HIRA	41	F	1956.7	2000.0	5.3	890.0			
25	245	LEAR	44	NS	0200.0E	0307.0	240.0D	45.0			QL=1 ST=1 TYP=1
	200	GORK	44	NS	0251.0E		550.0D		5.0		
	260	ONDR	44	NS	0610.0E	0955.6U	480.0D				
	127	TORN	43	NS	1002.0		140.0		16.0		V=1
	245	LEAR	8	S	0206.0E	0207.0	1.0D	59.0			QL=1 ST=2 TYP=3
	100	HIRA	42	SER	0536.6	0545.5	10.7	960.0			
	245	SVTO	8	S	0715.0E	0716.0	2.0D	200.0			QL=1 ST=2 TYP=3
	430	KRAK	1	S	0920.7	0921.0	0.5	4.0	1.0		
	3000	POTS	4	S/F	0953.0	0955.6	39.0	463.0			
	536	ONDR	40	F	0953.8	0956.7	14.4	280.0			
	1415	SVTO	49	GB	0954.0E	0955.0	5.0D	810.0			QL=1 ST=2 TYP=6
	4995	SVTO	4	S/F	0954.0E	0955.0	4.0D	500.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	0954.0E	0955.0	3.0D	390.0			QL=1 ST=2 TYP=3
	2695	SVTO	49	GB	0954.0E	0955.0	5.0D	560.0			QL=1 ST=2 TYP=6
	3100	CRIM	29	PBI	0954.0	1015.0	180.0	5.0			
	234	POTS	4	S/F	0954.0	0955.4	12.0	44000.0			
	5900	KISV	47	GB	0954.0	0955.5	6.6	554.0			
	3100	CRIM	3	S	0954.0	0955.5	21.0	369.0	123.0		

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
25	200	GORK	41	F	0954.2	0958.0		6300.0			
	200	GORK	41	F	0954.2	0955.4	6.0	12800.0			
	2950	GORK	46	C	0954.2	0955.5	8.8	516.0			
	15000	KISV	4	S/F	0954.2	0955.5	3.5	121.0			
	2950	GORK	46	C	0954.2	0956.7		148.0			
	200	GORK	41	F	0954.2	0956.8		6200.0			
	650	GORK	29	PBI	0954.3	1000.0	8.4	5.0			
	650	GORK	4	S/F	0954.3	0956.1	5.7	136.0			
	1470	POTS	4	S/F	0954.3	0955.5	46.0	616.0			
	127	TORN	47	GB	0954.5	1000.5U	6.2	16000.0D	8000.0D		
	3013	IZMI	47	GB	0954.6		13.0	500.0	300.0		
	430	KRAK	45	C	0954.6	0956.0		200.0D			
	950	GORK	47	GB	0954.6	0956.0	14.4	386.0			
	950	GORK	29	PBI	0954.6	1009.0	23.0	4.0			
	430	KRAK	45	C	0954.6	0957.2		200.0D			
	430	KRAK	45	C	0954.6	0955.3	6.0	200.0D	44.0		
	9300	KISV	47	GB	0954.6	0955.5	5.4	106.6			
	9100	GORK	46	C	0954.7	0955.0	4.3	303.0			
	9100	GORK	29	PBI	0954.7	0959.0	8.1	18.0			
	9100	GORK	46	C	0954.7	0955.7		170.0			
	810	KRAK	45	C	0954.8	0956.0U	17.0	66.0D	12.0D		
	9500	POTS	4	S/F	0954.9	0955.1	12.0	261.0			
	100	GORK	41	F	0954.9	1005.5		3400.0			
	100	GORK	41	F	0954.9	1037.6		25.0			
	100	GORK	41	F	0954.9	0955.7	44.0	12400.0			
	245	SGMR	49	GB	0955.0E	0955.0	3.0D	4200.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0955.0E	0955.0	3.0D	5800.0			QL=1 ST=2 TYP=6
	15400	SVTO	8	S	0955.0E	0955.0	1.0D	110.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0955.0E	0955.0	2.0D	280.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	0955.0E	0955.0	845.0D	320.0			QL=1 ST=1 TYP=3
	204	IZMI	46	C	0955.0	0956.8	5.0	70000.0	650.0		
	30	POTS	4	S/F	0955.2	0956.6	15.0	300.0			
	430	KRAK	29	PBI	1000.6	1024.8	27.5	10.0	2.0		
	410	SVTO	8	S	1004.0E	1004.0	1.0D	170.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1004.0E	1004.0	845.0D	71.0			QL=1 ST=2 TYP=3
	430	KRAK	42	SER	1039.7	1130.7	52.5	9.0			
	234	POTS	4	S/F	1327.9	1328.4	1.5	2200.0	300.0		
	245	SVTO	49	GB	1328.0E	1328.0	3.0D	520.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1328.0E	1328.0	845.0D	890.0			QL=1 ST=2 TYP=6
	30	POTS	8	S	1328.0	1328.6	1.4	8000.0	2500.0		
	33	UPIC	8	S	1328.5	1328.8	0.7				
	410	SVTO	8	S	1338.0E	1338.0	1.0D	100.0			QL=1 ST=2 TYP=3
	2800	OTTA	22	GRF	1845.0	2013.0	320.0	29.3	15.0		
	9400	HUAN	20	GRF	1955.7	2032.2	92.9	21.4	12.1		
	200	HIRA	42	SER	2338.0	2339.7	10.3	62.0			O
26	200	GORK	43	NS	0257.0		543.0D		5.0		
	260	ONDR	44	NS	0610.0E	1056.6	480.0D	87.0			
	245	SGMR	44	NS	1455.0E	1602.0	545.0D	98.0			QL=1 ST=3 TYP=1
	200	HIRA	46	C	0152.1	0152.9	1.8	74.0			O
	100	HIRA	46	C	0152.8	0153.0	2.0	240.0			
	2950	GORK	22	GRF	0410.0	1012.0	480.0D	8.2			
	430	KRAK	8	S	0729.0	0729.0	0.1	6.0			
	100	GORK	8	S	0754.4	0754.6	0.7	260.0			
	430	KRAK	42	SER	0842.5	0851.0	34.7	31.0			
	536	ONDR	8	S	0844.4	0844.7	0.9	73.0			
	9500	POTS	20	GRF	1004.5	1013.8	60.0	16.0			
	3100	CRIM	20	GRF	1005.9	1015.0	30.0	3.4	1.0		
	3000	POTS	20	GRF	1006.1	1008.3	89.0	5.0			
	9100	GORK	20	GRF	1006.5	1010.0	67.0	15.0			
	5900	KISV	22	GRF	1006.7	1009.4	21.9	16.0			
	9300	KISV	22	GRF	1007.6	1011.2	17.8	14.0			
	100	GORK	41	F	1058.6	1058.7	13.0	130.0			
	100	GORK	41	F	1058.6	1109.7U		30.0D			
	200	GORK	41	F	1058.7	1111.3U		25.0D			
	200	GORK	41	F	1058.7	1058.8U	12.9	25.0D			
	1470	POTS	4	S/F	1142.4	1142.5	0.6	7.0			
	430	KRAK	8	S	1219.6	1219.6	0.1	14.0			
	430	KRAK	42	SER	1234.5	1235.7	3.5	8.0			

SOLAR RADIO EMISSION

Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
26	2800	OTTA	3	S	1236.4	1237.3	6.7	32.0	8.0		
	3000	POTS	4	S/F	1236.5	1237.4	3.5	24.0			
	1470	POTS	4	S/F	1236.5E	1237.4	6.5D	24.0			
	127	TORN	45	C	1236.6	1242.0U	7.5	370.0D	55.0		
	3100	CRIM	1	S	1236.7	1237.2	2.0	23.4	8.0		
	9500	POTS	1	S	1236.9	1237.3	1.3	6.0			
	810	KRAK	1	S	1237.2	1237.8	2.0	3.0	1.0		
	430	KRAK	8	S	1308.5	1308.5	0.1	5.0			
	536	ONDR	4	S/F	1333.4	1333.8	0.7	38.0			
	9400	HUAN	1	S	1636.3	1639.7	6.8	5.7	2.4		
	200	HIRA	46	C	2340.3	2341.2	15.8	200.0			SR
27	200	GORK	44	NS	0254.0E		546.0D		10.0		
	200	HIRA	43	NS	0507.0	0819.0	250.0D	22.0	4.0		MR
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0605.0E	1313.8	498.0D				
	127	TORN	43	NS	0742.0	1120.3	414.0	290.0	5.0		V=1
	245	SGMR	44	NS	1116.0E	1315.0	750.0D	94.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1817.0E	1941.0	639.0D	57.0			QL=1 ST=2 TYP=1
	200	HIRA	42	SER	0100.0	0150.5	119.0	160.0			SR
	200	HIRA	41	F	0314.2	0318.8	9.2	120.0			SR
	200	GORK	46	C	0314.5	0319.5	9.5	15.0			
	200	GORK	46	C	0314.5	0322.6		25.0			
	950	GORK	20	GRF	0330.6	0335.0	9.4	2.0			
	9100	GORK	1	S	0330.6	0333.9	4.8	4.7			
	2950	GORK	29	PBI	0334.0	0335.7	18.1	3.6			
	2950	GORK	4	S/F	0334.0	0334.9	1.8	21.0			
	200	HIRA	41	F	0335.3	0339.6	5.0	110.0			SR
	3100	CRIM	25	R	0533.0	0748.3		10.0			
	200	HIRA	46	C	0540.0	0541.9	2.4	370.0			WR
	200	GORK	4	S/F	0541.4	0542.0	2.6	690.0			
	100	GORK	46	C	0542.0	0542.1	1.1	170.0			
	100	GORK	46	C	0542.0	0542.7		380.0			
	9100	GORK	20	GRF	0622.2	0639.0	22.3	5.6			
	245	LEAR	8	S	0649.0E	0651.0	2.0D	57.0			QL=1 ST=2 TYP=3
	2950	GORK	21	GRF	0709.0	1122.3	291.0D	13.4			
	2695	SVTO	4	S/F	0710.0E	0710.0	5.0D	310.0			QL=1 ST=2 TYP=3
	3000	POTS	29	PBI	0723.4	0742.8	52.0	23.0			
	3100	CRIM	1	S	0723.5	0724.6	5.5	3.3	1.0		
	9500	POTS	29	PBI	0726.5	0743.2	54.0	141.0			
	9100	GORK	31	ABS	0727.5	0738.2	12.3	4.5			
	8800	LEAR	8	S	0741.0E	0743.0	2.0D	2700.0			QL=1 ST=2 TYP=3
	1470	POTS	27	RF	0741.0	0744.1	33.0	4.0			
	5900	KISV	4	S/F	0741.1	0743.3	4.5	165.0			
	3013	IZMI	7	C	0741.6	0750.4	8.8	22.0	10.0		
	9100	GORK	29	PBI	0741.7	0744.0	22.0	15.0			
	9100	GORK	4	S/F	0741.7	0743.1	2.0	170.0			
	3100	CRIM	1	S	0742.0	0743.0	3.0	7.4	2.0		
	15400	LEAR	8	S	0742.0E	0743.0	1.0D	1.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0742.0E	0743.0	2.0D	130.0			QL=1 ST=3 TYP=3
	9300	KISV	4	S/F	0742.2	0743.3	9.2	77.0D			
	2950	GORK	4	S/F	0742.2	0742.9	2.3	21.4			
	15000	KISV	4	S/F	0742.5	0743.2	9.6	77.0			
	17000	NOBE	1	S	0742.6	0743.2	1.5	17.0			O
	15400	SVTO	8	S	0743.0E	0743.0	1.0D	63.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0743.0E	0743.0	1.0D	150.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0743.0E	0743.0	1.0D	100.0			QL=1 ST=2 TYP=3
	950	GORK	1	S	0830.3	0833.6	3.9	1.0			
	9100	GORK	1	S	0847.0	0848.5	1.7	3.7			
	9100	GORK	21	GRF	0910.8	0933.7	76.2	9.0			
	9500	POTS	1	S	0933.5	0933.8	3.0	10.0			
	9100	GORK	4	S/F	0955.6	0957.2	4.0	128.0			
	9500	POTS	29	PBI	0955.8	0956.8	18.0	131.0			
	15400	SVTO	8	S	0957.0E	0957.0	1.0D	160.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0957.0E	0957.0	1.0D	140.0			QL=1 ST=2 TYP=3
	100	GORK	4	S/F	1000.5	1001.1	1.0	40.0			
	9500	POTS	4	S/F	1028.2	1029.2	2.8	18.0			
	9100	GORK	1	S	1028.8	1029.1	0.7	13.0	6.0		
	9100	GORK	1	S	1036.7	1039.2	6.5	3.5			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
27	9100	GORK	21	GRF	1050.3	1149.9	69.0D	16.0			
	3000	POTS	25	R	1101.0	1126.5	94.0	6.0			
┌	9500	POTS	25	R	1101.0	1106.5	94.0	13.0			
├	3000	POTS	4	S/F	1101.1	1104.0	6.4	15.0			
├	1470	POTS	25	R	1101.1	1109.0	94.0	2.0			
├	1470	POTS	4	S/F	1101.2	1104.0	7.8	10.0			
├	3100	CRIM	1	S	1101.8	1104.0	6.0	12.9	4.0		
├	2950	GORK	3	S	1102.0E	1104.0U	3.0U	11.0U			
└	3013	IZMI	7	C	1103.0	1104.1	13.8	12.0	7.0		
┌	100	GORK	27	RF	1111.5	1123.3	38.0	15.0			
├	3000	POTS	4	S/F	1117.0	1121.5	8.0	18.0			
├	3100	CRIM	1	S	1117.3	1121.5	5.0	12.0	4.0		
├	2950	GORK	4	S/F	1118.4	1121.5	4.0	13.4			
└	1470	POTS	1	S	1120.0	1121.4	5.0	3.0			
	9100	GORK	2	S/F	1128.4	1129.6	5.0	11.0			
	3100	CRIM	1	S	1216.0	1217.7	1.8	4.0	1.3		
┌	245	SGMR	49	GB	1351.0E	1352.0	1.0D	630.0			QL=1 ST=2 TYP=6
├	245	SVTO	8	S	1351.0E	1352.0	2.0D	330.0			QL=1 ST=3 TYP=3
├	410	SVTO	49	GB	1351.0E	1354.0	7.0D	730.0			QL=1 ST=3 TYP=6
├	234	POTS	4	S/F	1351.5	1352.4	2.9	385.0	60.0		
├	3000	POTS	4	S/F	1351.5	1352.6	7.3	11.0			
├	1470	POTS	4	S/F	1352.1	1352.7	8.9	14.0			
├	536	ONDR	42	SER	1352.5	1354.1	6.7	122.0			
├	410	SVTO	49	GB	1354.0E	1354.0	4.0D	730.0			QL=1 ST=3 TYP=6
└	410	SGMR	49	GB	1354.0E	1354.0	606.0D	810.0			QL=1 ST=1 TYP=6
	9400	HUAN	1	S	1627.3	1629.0	7.2	6.1	2.6		
	245	PALE	8	S	1923.0E	1924.0	2.0D	63.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	1939.0E	1941.0	3.0D	92.0			QL=1 ST=2 TYP=3
┌	9400	HUAN	3	S	1953.6	1957.1	6.8	30.4	9.4		
├	410	SGMR	4	S/F	1954.0E	1954.0	3.0D	80.0			QL=1 ST=3 TYP=3
├	410	PALE	8	S	1955.0E	1956.0	1.0D	70.0			QL=1 ST=3 TYP=3
├	2695	PALE	4	S/F	1955.0E	1957.0	3.0D	86.0			QL=1 ST=3 TYP=3
└	2695	SGMR	8	S	1956.0E	1957.0	2.0D	87.0			QL=1 ST=3 TYP=3
28 ┌	200	GORK	44	NS	0254.0E		550.0D		5.0		
├	127	TORN	44	NS	0620.0E		340.0D		11.0		V=1
├	260	ONDR	44	NS	0620.0E	1204.6U	467.0D	109.0			
├	245	SGMR	43	NS	0954.0	2125.0	831.0D	92.0			QL=1 ST=2 TYP=1
├	100	GORK	43	NS	1006.0		118.0		5.0		
├	245	PALE	44	NS	1715.0E	2142.0	701.0D	81.0			QL=1 ST=2 TYP=1
├	200	HIRA	44	NS	1950.0E	0715.0	820.0D	35.0	19.0		SR
└	245	LEAR	44	NS	2316.0E	0837.0	628.0D	290.0			QL=1 ST=2 TYP=1
	500	HIRA	42	SER	0002.0	0003.9	12.5	84.0			O
┌	410	PALE	8	S	0008.0E	0008.0	1.0D	300.0			QL=1 ST=2 TYP=3
└	245	PALE	8	S	0008.0E	0008.0	2.0D	220.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0011.0E	0011.0	1429.0D	190.0			QL=1 ST=1 TYP=3
┌	245	PALE	8	S	0013.0E	0013.0	2.0D	50.0			QL=1 ST=2 TYP=3
└	410	PALE	8	S	0013.0E	0013.0	1.0D	100.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	0110.4	0135.3	120.0	180.0			WR
	245	PALE	8	S	0235.0E	0235.0	1.0D	140.0			QL=1 ST=2 TYP=3
┌	200	GORK	46	C	0324.9	0334.2		30.0			
├	200	GORK	46	C	0324.9	0336.6		25.0			
└	200	GORK	46	C	0324.9	0331.6U	12.6	30.0D			
┌	5900	KISV	4	S/F	0437.4	0441.4	7.0	27.0			
└	9300	KISV	2	S/F	0439.7	0441.4	8.4	22.0			
	9100	GORK	3	S	0440.7	0441.1	1.8	17.0	8.0		
	2950	GORK	21	GRF	0452.0	1000.0	427.0	8.6			
	5900	KISV	32	ABS	0630.0	0632.1	4.0	2.0			
┌	9300	KISV	2	S/F	0633.2	0636.0	8.3	15.0			
├	5900	KISV	2	S/F	0634.2	0636.0	3.4	19.0			
├	5900	KISV	29	PBI	0634.2	0637.7	45.0	2.0			
├	9100	GORK	3	S	0634.2	0635.8	5.0	17.0	8.0		
├	2950	GORK	1	S	0635.3	0636.0	1.6	3.0			
├	3100	CRIM	1	S	0635.5	0636.2	1.4	2.4	0.8		
└	15000	KISV	2	S/F	0635.8	0636.0	1.1	4.0			
	410	LEAR	8	S	0724.0E	0725.0	1.0D	67.0			QL=1 ST=2 TYP=3
┌	500	HIRA	42	SER	0724.4	0732.5	10.5	70.0			O
├	430	KRAK	42	SER	0724.5	0733.5		200.0D			
├	430	KRAK	42	SER	0724.5	0730.5	14.0	200.0D			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
28	5900	KISV	28	PRE	0728.4	0733.5	5.1	3.0			
	410	LEAR	8	S	0730.0E	0730.0	1.0D	98.0			QL=1 ST=2 TYP=3
	2950	GORK	4	S/F	0730.0	0733.7	5.0	23.0			
	650	GORK	1	S	0730.0	0733.9	6.3	4.3			
	1470	POTS	4	S/F	0730.0	0733.9	18.0	21.0			
	950	GORK	3	S	0730.5	0733.9	5.9	8.0			
	410	LEAR	8	S	0732.0E	0733.0	1.0D	260.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0732.0E	0733.0	3.0D	28.0			QL=1 ST=2 TYP=3
	3000	POTS	3	S	0732.4	0733.9	4.6	22.0			
	3013	IZMI	5	S	0733.0	0734.0	2.0	9.0	5.0		
	410	SVTO	4	S/F	0733.0E	0733.0	4.0D	190.0			QL=1 ST=3 TYP=3
	9500	POTS	3	S	0733.0	0733.8	2.0	13.0			
	200	GORK	2	S/F	0733.2	0733.5	1.0	5.0			
	9100	GORK	2	S/F	0733.3	0733.7	1.5	21.0			
	100	GORK	8	S	0733.4	0733.6	0.6	9.0			
	9300	KISV	2	S/F	0733.5	0733.9	2.5	21.0			
	3100	CRIM	1	S	0733.6	0734.0	1.5	17.4	6.0		
	5900	KISV	29	PBI	0733.6	0735.4	3.9	2.0			
	5900	KISV	2	S/F	0733.6	0733.9	1.9	11.0			
	15000	KISV	2	S/F	0733.6	0733.9	0.9	6.0			
	204	IZMI	42	SER	0754.0	0817.4	30.2	132.0			
	5900	KISV	22	GRF	0848.6	0907.7	24.0	4.0			
	9300	KISV	22	GRF	0848.6	0907.8	43.0	8.0			
	430	KRAK	8	S	0952.0	0952.0	0.1	20.0			
	200	GORK	46	C	1005.3	1010.1		10.0			
	200	GORK	46	C	1005.3	1016.5		10.0			
	200	GORK	46	C	1005.3	1009.6	18.3	160.0			
	234	POTS	4	S/F	1006.0	1009.5	4.0	550.0	100.0		
	100	GORK	46	C	1008.0	1008.3	3.6	15.0			
	100	GORK	46	C	1008.0	1009.4		10.0			
	100	GORK	46	C	1008.0	1010.4		10.0			
	1470	POTS	4	S/F	1008.8	1009.8	4.7	47.0			
	410	SGMR	4	S/F	1009.0E	1009.0	3.0D	90.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	1009.0E	1009.0	4.0D	180.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1009.0E	1009.0	2.0D	430.0			QL=1 ST=3 TYP=3
	2695	SVTO	4	S/F	1009.0E	1009.0	5.0D	100.0			QL=1 ST=3 TYP=3
	245	SGMR	49	GB	1009.0E	1009.0	846.0D	530.0			QL=1 ST=2 TYP=6
	430	KRAK	2	S/F	1009.0	1009.2	0.8	58.0	15.0		
	3000	POTS	4	S/F	1009.2	1009.5	2.3	62.0			
	204	IZMI	4	S/F	1009.2	1009.6	0.8	450.0	170.0		
	2950	GORK	3	S	1009.2	1009.6U	1.8	40.0D			
	810	KRAK	2	S/F	1009.2	1009.7	1.5	6.0	1.0		
	950	GORK	29	PBI	1009.3	1010.1	13.9	3.0			
	650	GORK	3	S	1009.3	1009.7	3.7	15.0			
	950	GORK	1	S	1009.3	1009.7	0.7	6.5			
	3013	IZMI	5	S	1009.4	1009.6	0.6	28.0	11.0		
	5900	KISV	1	S	1009.4	1009.7	0.5	8.0			
	650	GORK	1	S	1014.3	1014.8	1.6	2.0			
	245	SGMR	8	S	1159.0E	1159.0	1.0D	150.0			QL=1 ST=2 TYP=3
	3000	POTS	29	PBI	1203.5	1207.0	79.0	10.0			
	5900	KISV	2	S/F	1204.4	1209.4	7.0	24.0			
	5900	KISV	29	PBI	1204.4	1211.5	108.5	5.0			
	9500	POTS	29	PBI	1205.5	1209.3	75.0	84.0			
	1470	POTS	27	RF	1206.6	1208.1	69.0	4.0			
	9300	KISV	29	PBI	1207.4	1212.1	73.5	15.0			
	9300	KISV	4	S/F	1207.4	1209.3	4.5	109.0D			
	15000	KISV	2	S/F	1208.8	1209.3	3.0	39.0			
	4995	SGMR	4	S/F	1209.0E	1209.0	455.0D	66.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1209.0E	1209.0	573.0D	74.0			QL=1 ST=2 TYP=3
	430	KRAK	2	S/F	1221.2	1221.5	1.0	4.0	1.0		
	536	ONDR	8	S	1352.7	1352.7	0.3	20.0			
	9400	HUAN	1	S	1507.2	1509.1	6.9	7.2	2.1		
	9400	HUAN	1	S	1542.2	1545.3	7.3	8.0	3.2		
	9400	HUAN	1	S	1625.3	1629.7	12.9	6.4	2.4		
	410	PALE	8	S	1705.0E	1705.0	1.0D	83.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1705.0E	1705.0	3.0D	50.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	1842.5	1846.5	8.9	4.8	2.2		
	9400	HUAN	1	S	1930.7	1933.7	5.7	4.8	1.4		
	9400	HUAN	20	GRF	2006.6	2027.0	51.6	6.4	2.6		

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
28	410	PALE	8	S	2018.0E	2019.0	1.0D	68.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2018.0E	2019.0	1.0D	300.0			QL=1 ST=3 TYP=3
	410	SGMR	8	S	2018.0E	2019.0	1.0D	70.0			QL=1 ST=3 TYP=3
	245	PALE	4	S/F	2019.0E	2019.0	405.0D	210.0			QL=1 ST=2 TYP=3
	500	HIRA	22	GRF	2029.0	2127.0	85.0	11.0	5.0		WR
	9400	HUAN	2	S/F	2110.7	2114.1	14.3	23.9	7.2		
	245	PALE	8	S	2324.0E	2325.0	1.0D	57.0			QL=1 ST=2 TYP=3
29	410	SVTO	44	NS	0405.0E	0455.0	820.0D	10.0			QL=1 ST=2 TYP=1
	245	SVTO	44	NS	0405.0E	0455.0	820.0D	100.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0418.0E		462.0D		10.0		
	200	GORK	44	NS	0419.0E		442.0D		40.0		
	234	POTS	44	NS	0550.0E	1037.0U	535.0D	85.0			
	204	IZMI	43	NS	0600.0		360.0	100.0			
	260	ONDR	44	NS	0600.0E	1101.0U	493.0D				
	127	TORN	44	NS	0620.0E		560.0D		120.0		V=2
	430	KRAK	44	NS	0700.0E	1029.3	390.0D	31.0	2.0		
	245	SGMR	43	NS	0955.0	1038.0	829.0D	160.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1640.0E	0124.0	736.0D	300.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	2028.0	820.0D	33.0	14.0		SR
	245	LEAR	44	NS	2315.0E	0124.0	630.0D	320.0			QL=1 ST=2 TYP=1
	240	SYDN	4	S/F	0024.0	0042.0	29.0	65.0			QL= ST= TYP=4
	8800	LEAR	8	S	0038.0E	0039.0	2.0D	52.0			QL=1 ST=3 TYP=3
	4995	PALE	8	S	0038.0E	0039.0	1.0D	74.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0038.0E	0039.0	1.0D	52.0			QL=1 ST=2 TYP=3
	500	HIRA	27	RF	0116.5	0153.5	92.0	4.0	2.0		WR
	9100	GORK	20	GRF	0333.9	0352.8	55.2	11.0			
	200	HIRA	46	C	0352.5	0352.8	1.5	148.0			O
	500	HIRA	46	C	0356.0	0402.0	14.0	5.0	2.0		O
	245	PALE	8	S	0433.0E	0433.0	1.0D	140.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	0433.0E	0433.0	1195.0D	130.0			QL=1 ST=3 TYP=3
	5900	KISV	25	R	0442.8	0444.4	30.5	4.0			
	9100	GORK	22	GRF	0452.8	0459.4	16.6	7.4			
	9300	KISV	1	S	0458.9	0459.5	1.3	10.0			
	500	HIRA	22	GRF	0511.0	0639.0	150.0	8.0	3.0		WR
	5900	KISV	1	S	0513.9	0516.4	7.5	8.0			
	2950	GORK	21	GRF	0514.0	0804.0	400.0D	8.4			
	9100	GORK	1	S	0515.6	0516.3	2.4	6.5			
	9300	KISV	2	S/F	0515.9	0516.4	1.3	8.0			
	5900	KISV	3	S	0527.9	0528.6	1.5	57.0			
	3100	CRIM	21	GRF	0528.0	0640.0	194.0	7.0	3.0		
	9300	KISV	3	S	0528.0	0528.6	1.0	45.0			
	9100	GORK	3	S	0528.1	0528.7	2.8	36.0			
	15000	KISV	1	S	0528.2	0528.6	0.5	8.0			
	2950	GORK	3	S	0528.3	0528.7	0.6	9.0			
	3100	CRIM	1	S	0528.5	0528.9	1.0	6.4	2.0		
	245	LEAR	49	GB	0601.0E	0601.0	44.0D	600.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0601.0E	0601.0	1195.0D	670.0			QL=1 ST=3 TYP=6
	204	IZMI	4	S/F	0601.2	0601.3	0.5	1600.0	900.0		
	3013	IZMI	5	S	0601.2	0601.3	0.3	49.0	18.0		
	9100	GORK	20	GRF	0618.7	0623.8	10.7	5.5			
	9300	KISV	22	GRF	0727.5	0733.3		4.0			
	9300	KISV	22	GRF	0727.5	0737.3		4.0			
	9300	KISV	22	GRF	0727.5	0728.5	13.0	4.0			
	5900	KISV	1	S	0727.8	0728.3	0.8	4.0			
	9100	GORK	21	GRF	0736.0	0752.9	58.3	7.3			
	5900	KISV	2	S/F	0745.9	0747.4	2.5	23.0			
	9300	KISV	2	S/F	0746.9	0747.4	1.7	28.0			
	9500	POTS	3	S	0746.9	0747.5	4.1	21.0			
	9100	GORK	1	S	0747.1	0747.5	1.8	23.0			
	9300	KISV	2	S/F	0752.4	0752.9	0.7	4.0			
	9500	POTS	4	S/F	0800.0	0801.5	3.0	16.0			
	3000	POTS	4	S/F	0800.0	0801.5	9.0	9.0			
	5900	KISV	4	S/F	0800.7	0801.4	2.7	27.0			
	9300	KISV	2	S/F	0800.9	0801.4	1.2	2.5			
	3013	IZMI	7	C	0801.0	0801.5	4.1	8.0	5.0		
	15000	KISV	1	S	0801.3	0801.4	0.2	6.0			
	810	KRAK	8	S	0804.5	0804.5	0.5	11.0			
	5900	KISV	23	GRF	1004.0	1016.0	31.0	24.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
29	9100	GORK	1	S	1005.3	1007.1	3.8	3.6			
	9100	GORK	21	GRF	1014.3	1020.6	9.9	11.0			
	9300	KISV	4	S/F	1014.6	1016.0	23.0	46.0			
	9100	GORK	4	S/F	1015.2	1016.0	2.6	38.0			
	9500	POTS	29	PBI	1015.5	1016.2	60.0	34.0			
	234	POTS	4	S/F	1024.7	1025.2	0.9	770.0	150.0		
	536	ONDR	8	S	1045.7	1045.7	0.4	86.0			
	9300	KISV	2	S/F	1052.4	1052.6	0.4	9.0			
	9100	GORK	1	S	1155.9	1156.8	2.3	6.3			
	9400	HUAN	1	S	1254.2	1256.2	6.9	9.0	3.6		
	3000	POTS	1	S	1255.0	1256.2	2.5	5.0			
	9500	POTS	1	S	1255.3	1256.3	1.7	10.0			
	5900	KISV	45	C	1255.6	1256.0		13.0			
	5900	KISV	45	C	1255.6	1256.4	2.0	23.0			
	9300	KISV	2	S/F	1255.6	1256.4	1.5	12.0			
	9300	KISV	2	S/F	1350.8	1351.2	1.0	21.0			
	5900	KISV	2	S/F	1350.9	1351.5	2.0	22.0			
	33	UPIC	42	SER	1442.0	1457.2	57.1				
	9400	HUAN	21	GRF	1701.6	1718.7	30.4	11.1	4.6		
	9400	HUAN	4	S/F	1706.6	1707.7	4.8	33.3	12.6		
	9400	HUAN	1	S	1817.6	1820.0	7.0	7.4	2.0		
	410	PALE	8	S	1833.0E	1834.0	2.0D	400.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1833.0E	1834.0	2.0D	410.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1838.0E	1838.0	1.0D	160.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1838.0E	1838.0	1.0D	190.0			QL=1 ST=2 TYP=3
	9400	HUAN	20	GRF	1841.2	1904.9U	60.5	13.0	4.6		
	410	PALE	8	S	1845.0E	1845.0	1.0D	120.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1845.0E	1845.0	1.0D	88.0			QL=1 ST=2 TYP=3
	9400	HUAN	1	S	2041.6	2045.0	7.7	9.2	4.2		
	9400	HUAN	20	GRF	2118.1	2141.5	40.7	7.4	2.8		
	500	HIRA	46	C	2228.8	2230.5		11.0			WR
	500	HIRA	46	C	2228.8	2242.8	48.0	17.0	4.0		WR
	200	HIRA	46	C	2236.3	2242.2	14.3	63.0	21.0		MR
	200	HIRA	46	C	2236.3	2236.6		45.0			SR
	410	LEAR	8	S	2348.0E	2348.0	1.0D	57.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	2348.0E	2349.0	1.0D	39.0			QL=1 ST=2 TYP=3
30	200	GORK	44	NS	0315.0E		377.0D		10.0		
	100	GORK	44	NS	0315.0E		378.0D		10.0		
	410	SVTO	44	NS	0406.0E	1215.0	818.0D	120.0			QL=1 ST=2 TYP=1
	245	SVTO	44	NS	0406.0E	1033.0	818.0D	120.0			QL=1 ST=2 TYP=1
	234	POTS	44	NS	0550.0E	1032.0U	525.0D	50.0			
	204	IZMI	43	NS	0600.0		360.0	80.0			
	127	TORN	44	NS	0620.0E		560.0D		85.0		V=2
	260	ONDR	44	NS	0630.0E	1014.4	458.0D				
	430	KRAK	44	NS	0650.0E	1115.0	360.0D	48.0	4.0		
	410	LEAR	44	NS	0801.0E	0822.0	104.0D	73.0			QL=1 ST=2 TYP=1
	410	SGMR	44	NS	0956.0E	1448.0	827.0D	49.0			QL=1 ST=2 TYP=1
	245	SGMR	44	NS	0956.0E	1045.0	827.0D	190.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1639.0E	1702.0	736.0D	10.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1950.0E	0753.0	820.0D	21.0	8.0		MR
	245	LEAR	8	S	0044.0E	0045.0	1.0D	260.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0044.0E	0045.0	1.0D	310.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0234.0E	0235.0	1.0D	26.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	0401.0	0411.5		30.0			
	100	GORK	41	F	0401.0	0409.7		30.0			
	100	GORK	41	F	0401.0	0403.8	14.3	27.0			
	2950	GORK	21	GRF	0430.2	0543.5	480.0D	14.6			
	5900	KISV	28	PRE	0434.5	0438.9	4.5	9.0			
	245	PALE	8	S	0438.0E	0439.0	1.0D	93.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0438.0E	0439.0	1.0D	64.0			QL=1 ST=2 TYP=3
	5900	KISV	4	S/F	0438.9	0440.3	2.0	23.0			
	5900	KISV	29	PBI	0438.9	0440.9	11.5	11.0			
	9100	GORK	1	S	0439.4	0440.2	2.9	9.0			
	9300	KISV	2	S/F	0439.5	0440.2	3.5	4.0			
	2950	GORK	1	S	0455.5	0455.9	1.6	3.6	1.8		
	500	HIRA	22	GRF	0508.0	0605.0	240.0	7.0	3.0		WR
	3100	CRIM	25	R	0522.0	0549.5		6.4			
	3100	CRIM	1	S	0542.5	0545.0	7.0	3.2	1.0		

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
30	9300	KISV	29	PBI	0555.3E	0555.3U	5.0D	9.0			
	100	GORK	46	C	0604.8	0605.1		450.0			
	200	GORK	8	S	0604.8	0604.8	0.4	520.0			
	100	GORK	46	C	0604.8	0604.9	1.0	135.0			
	5900	KISV	1	S	0627.9	0628.4	5.5	6.0			
	9100	GORK	20	GRF	0631.6	0655.2	68.4	10.0			
	3013	IZMI	1	S	0652.8	0655.2	7.2	11.4	7.1		
	3100	CRIM	1	S	0653.0	0655.0	7.0	7.6	2.5		
	950	GORK	45	C	0653.6	0655.3	2.4	2.5			
	950	GORK	45	C	0653.6	0655.7		2.0			
	2950	GORK	3	S	0654.0	0655.2	3.8	10.3	5.0		
	5900	KISV	2	S/F	0654.0	0655.4	3.0	24.0			
	3000	POTS	4	S/F	0654.4	0655.4	4.6	11.0			
	9500	POTS	1	S	0654.4	0655.5	1.6	7.0			
	950	GORK	4	S/F	0718.2	0720.9	4.6	7.0			
	650	GORK	46	C	0718.4	0721.3		10.0			
	650	GORK	46	C	0718.4	0720.4	3.5	11.0			
	650	GORK	46	C	0718.4	0720.9		7.6			
	17000	NOBE	7	C	0720.4	0724.1	45.0	38.0			9R
	810	KRAK	41	F	0720.5	0720.6	1.2	6.0	2.0		
	100	GORK	41	F	0735.2	0811.2		180.0			
	100	GORK	41	F	0735.2	0735.3	104.0	360.0			
	100	GORK	41	F	0735.2	0917.4		180.0			
	100	GORK	41	F	0735.2	0823.4		180.0			
	100	GORK	41	F	0735.2	0743.5		115.0			
	100	GORK	41	F	0735.2	0816.6		180.0			
	100	GORK	41	F	0735.2	0745.8		180.0			
	950	GORK	1	S	0822.2	0822.5	1.8	1.8			
	3000	POTS	4	S/F	0824.0	0825.2	6.0	20.0			
	3100	CRIM	1	S	0824.9	0825.0	1.0	7.6	2.0		
	5900	KISV	2	S/F	0824.9	0825.1	0.7	9.0			
	2950	GORK	1	S	0824.9	0825.2	0.7	9.0	4.0		
	3013	IZMI	7	C	0825.0	0825.2	1.5	8.6	2.9		
	9500	POTS	1	S	0825.0	0825.4	1.0	5.0			
	5900	KISV	2	S/F	0837.4	0837.7	0.5	4.0			
	9300	KISV	29	PBI	0844.8	0849.0	72.0	45.0			
	9300	KISV	47	GB	0844.8	0847.7	4.0	405.0			
	9500	POTS	29	PBI	0845.7	0848.0	55.0	250.0			
	5900	KISV	29	PBI	0845.7	0850.1	42.5	48.0			
	5900	KISV	47	GB	0845.7	0848.3	4.5	483.0			
	3000	POTS	29	PBI	0846.0	0848.3	59.0	78.0			
	9100	GORK	29	PBI	0846.3	0850.3	9.0	25.0			
	9100	GORK	3	S	0846.3	0848.3	4.0	368.0			
	2950	GORK	3	S	0846.4	0848.4	5.2	9.2			
	15000	KISV	47	GB	0846.5	0848.3	3.5	366.0			
	3100	CRIM	3	S	0846.5	0848.3	12.0	53.7	18.0		
	3013	IZMI	5	S	0846.8	0848.4	8.2	70.0	49.0		
	8800	SVTO	8	S	0847.0E	0848.0	2.0D	360.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0847.0E	0848.0	2.0D	310.0			QL=1 ST=2 TYP=3
	650	GORK	1	S	0847.1	0848.0	2.8	4.0			
	950	GORK	1	S	0847.8	0848.0	2.6	2.0			
	1470	POTS	29	PBI	0847.8	0848.6	12.0	3.0			
	15400	SVTO	8	S	0848.0E	0848.0	1.0D	130.0			QL=1 ST=2 TYP=3
	2695	SVTO	4	S/F	0848.0E	0848.0	5.0D	60.0			QL=1 ST=2 TYP=3
	9300	KISV	2	S/F	0952.3	0952.5	0.5	7.0			
	5900	KISV	2	S/F	0952.3	0952.6	0.8	8.0			
	9400	HUAN	21	GRF	1153.4E	1305.5	74.7D	12.9	3.4		
	3000	POTS	27	RF	1200.0	1208.9	59.0	16.0			
	9500	POTS	25	R	1201.1	1214.0	50.0	21.0			
	9300	KISV	23	GRF	1201.7	1213.8	27.0	17.0			
	5900	KISV	22	GRF	1204.0	1213.1	78.0	22.0			
	1470	POTS	27	RF	1204.0	1209.5	58.0	4.0			
	9400	HUAN	1	S	1207.2	1208.7	5.0	11.2	2.8		
	9400	HUAN	4	S/F	1218.5	1220.0	6.1	32.2	14.6		
	5900	KISV	2	S/F	1219.1	1220.4	3.0	13.0			
	9300	KISV	2	S/F	1219.5	1220.3	4.5	25.0			
	9500	POTS	4	S/F	1219.5	1220.4	5.5	18.0			
	234	POTS	4	S/F	1316.6	1317.6	1.4	1200.0	60.0		
	9300	KISV	2	S/F	1334.5	1339.8	8.0	27.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
30	9400	HUAN	3	S	1337.7	1339.8	8.0	25.7	12.4		
	5900	KISV	2	S/F	1338.2	1339.3	4.0	16.0			
	9500	POTS	3	S	1339.2	1339.8	2.1	13.0			
	9400	HUAN	4	S/F	1410.2	1412.0	11.2	45.0	26.2		
	9500	POTS	4	S/F	1410.5	1412.3	5.5	29.0			
	8800	PALE	8	S	1710.0E	1711.0	2.0D	94.0			QL=1 ST=2 TYP=3
	9400	HUAN	4	S/F	1710.4	1711.7	3.8	80.4	30.6		
	8800	SVTO	8	S	1711.0E	1711.0	1.0D	120.0			QL=1 ST=2 TYP=3
	9400	HUAN	29	PBI	1714.2	1714.2	36.4	3.2	1.6		
	9400	HUAN	1	S	2024.8	2028.0	6.6	3.2	1.4		
	9400	HUAN	4	S/F	2125.7	2133.6	16.7	30.6	12.8		
	4995	SYDN	4	S/F	2142.0	2143.0	3.0	38.0			QL= ST= TYP=3
	245	PALE	4	S/F	2306.0E	2306.0	441.0D	120.0			QL=1 ST=2 TYP=3
31	245	LEAR	44	NS	0015.0E	0213.0	570.0D	240.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0300.0E		390.0D		5.0		
	200	GORK	44	NS	0300.0E		390.0D		5.0		
	245	SVTO	44	NS	0407.0E	1442.0	816.0D	79.0			QL=1 ST=2 TYP=1
	410	SVTO	44	NS	0407.0E	0724.0	816.0D	23.0			QL=1 ST=2 TYP=1
	234	POTS	44	NS	0550.0E	1259.0	521.0D	52.0			
	204	IZMI	43	NS	0600.0		360.0	40.0			
	127	TORN	44	NS	0620.0E		560.0D		45.0		V=1
	260	ONDR	44	NS	0640.0E	0943.4	490.0D				
	245	SGMR	44	NS	0957.0E	1102.0	843.0D	55.0			QL=1 ST=1 TYP=1
	245	SGMR	44	NS	0957.0E	1442.0	843.0D	110.0			QL=1 ST=1 TYP=1
	245	PALE	44	NS	1639.0E	0417.0	736.0D	120.0			QL=1 ST=2 TYP=1
	100	HIRA	44	NS	2000.0E	0145.0	820.0D	70.0	45.0		
	200	HIRA	44	NS	2000.0E	0842.0	820.0D	64.0	39.0		MR
	245	LEAR	44	NS	2314.0E	0339.0	632.0D	130.0			QL=1 ST=2 TYP=1
	245	PALE	8	S	0212.0E	0213.0	1.0D	220.0			QL=1 ST=2 TYP=3
	2950	GORK	23	GRF	0340.5	0718.0	350.0D	9.8			
	200	GORK	4	S/F	0343.6	0344.0U	1.1	25.0D			
	5900	KISV	2	S/F	0557.2	0558.0	2.0	7.0			
	204	IZMI	41	F	0609.0	0612.1	4.1	580.0			
	200	HIRA	41	F	0609.6	0610.9	3.6	390.0			SR
	9100	GORK	21	GRF	0654.0	0733.2	98.4	48.0			
	9300	KISV	2	S/F	0704.0	0704.5	1.0	12.0			
	1470	POTS	29	PBI	0708.0	0724.6	97.0	49.0			
	200	HIRA	42	SER	0711.2	0711.6	3.3	75.0			MR
	3100	CRIM	29	PBI	0714.0	0730.0	110.0	16.8	5.0		
	3100	CRIM	3	S	0714.0	0724.5	16.0	77.2	26.0		
	3000	POTS	29	PBI	0714.0	0724.6	90.0	92.0			
	1415	SVTO	4	S/F	0715.0E	0724.0	10.0D	63.0			QL=1 ST=2 TYP=5
	5900	KISV	4	S/F	0715.5	0724.2	13.5	135.0			
	5900	KISV	29	PBI	0715.5	0729.2	79.0	36.0			
	950	GORK	21	GRF	0716.3	0729.2	317.0	3.5			
	15400	SVTO	4	S/F	0717.0E	0724.0	7.0D	62.0			QL=1 ST=2 TYP=5
	2695	SVTO	4	S/F	0717.0E	0724.0	8.0D	96.0			QL=1 ST=2 TYP=5
	4995	SVTO	4	S/F	0717.0E	0724.0	9.0D	130.0			QL=1 ST=2 TYP=5
	9500	POTS	29	PBI	0717.0	0724.3	65.0	92.0			
	9300	KISV	4	S/F	0717.2	0724.0	9.0	102.0D			
	9300	KISV	29	PBI	0717.2	0726.1	76.0	55.0			
	15000	KISV	21	GRF	0718.0	0724.5	33.0	71.0			
	3013	IZMI	45	C	0718.0	0724.6	17.0	80.0	59.0		
	500	HIRA	46	C	0718.5	0720.5	10.0	540.0	37.0		WR
	650	GORK	46	C	0719.3	0721.3U		60.0D			
	650	GORK	46	C	0719.3	0722.5		100.0			
	650	GORK	46	C	0719.3	0723.7		140.0			
	650	GORK	46	C	0719.3	0720.8	9.9	60.0			
	410	LEAR	4	S/F	0720.0E	0725.0	8.0D	85.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0720.0E	0724.0	8.0D	85.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0720.0E	0720.0	8.0D	240.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0720.0E	0724.0	8.0D	71.0			QL=1 ST=2 TYP=3
	430	KRAK	46	C	0720.0	0721.2	8.0	144.0D	5.0		
	810	KRAK	4	S/F	0720.5	0724.1	9.0	58.0	5.0		
	9100	GORK	1	S	0720.6	0720.9	1.3	15.0			
	950	GORK	45	C	0720.7	0722.0	12.9	7.0			
	2950	GORK	46	C	0721.7	0725.3		57.0			
	2950	GORK	46	C	0721.7	0724.5	6.0	76.0			

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

JULY 1988

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
31	2950	GORK	46	C	0721.7	0726.8		19.0			
	9100	GORK	4	S/F	0723.2	0724.2	3.1	66.0			
	100	GORK	46	C	0731.3	0732.0	5.2	10.0			
	100	GORK	46	C	0731.3	0734.1		35.0			
	33	UPIC	2	S/F	0900.7	0901.5	1.0				
	9500	POTS	3	S	0939.4	0940.0	3.4	12.0			
	9300	KISV	1	S	0939.8	0940.4	3.5	17.0			
	9500	POTS	1	S	1105.4	1106.7	3.5	8.0			
	9300	KISV	42	SER	1310.6	1313.1	16.0	14.0			
	9300	KISV	42	SER	1310.6	1319.8		7.0			
	9400	HUAN	1	S	1310.8	1313.4	7.8	11.7	5.2		
	9500	POTS	25	R	1311.7	1313.3	18.0	12.0			
	9500	POTS	4	S/F	1406.0	1412.6	12.0	13.0			
	9400	HUAN	1	S	1407.0	1412.8	7.4	10.9	4.7		
	9400	HUAN	3	S	1425.8	1427.6	7.6	20.1	6.8		
	245	SVTO	4	S/F	1455.0E	1455.0	816.0D	160.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	1455.0E	1455.0	843.0D	230.0			QL=1 ST=2 TYP=3
	9400	HUAN	21	GRF	1545.8	1611.3	45.5	8.4	3.6		
	9400	HUAN	4	S/F	1559.1	1602.1	6.1	25.1	8.2		
	9400	HUAN	1	S	1913.0	1916.6	7.5	5.8	1.8		
	500	HIRA	46	C	2106.5	2119.1	31.5	32.0	7.0		WL
	500	HIRA	46	C	2212.8	2304.0	78.0	75.0	19.0		WR
	500	HIRA	46	C	2212.8	2242.3		60.0			WR

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 = Hiraiso	LEAR = Learmonth	PENT = Penticton	TRST = Trieste
HUAN = Huancayo	NOBE = Nobeyama	POTS = Potsdam	TYKW = Toyokawa
		SGMR = Sagamore Hill	UPIC = Upice

Explanation of Type Code:

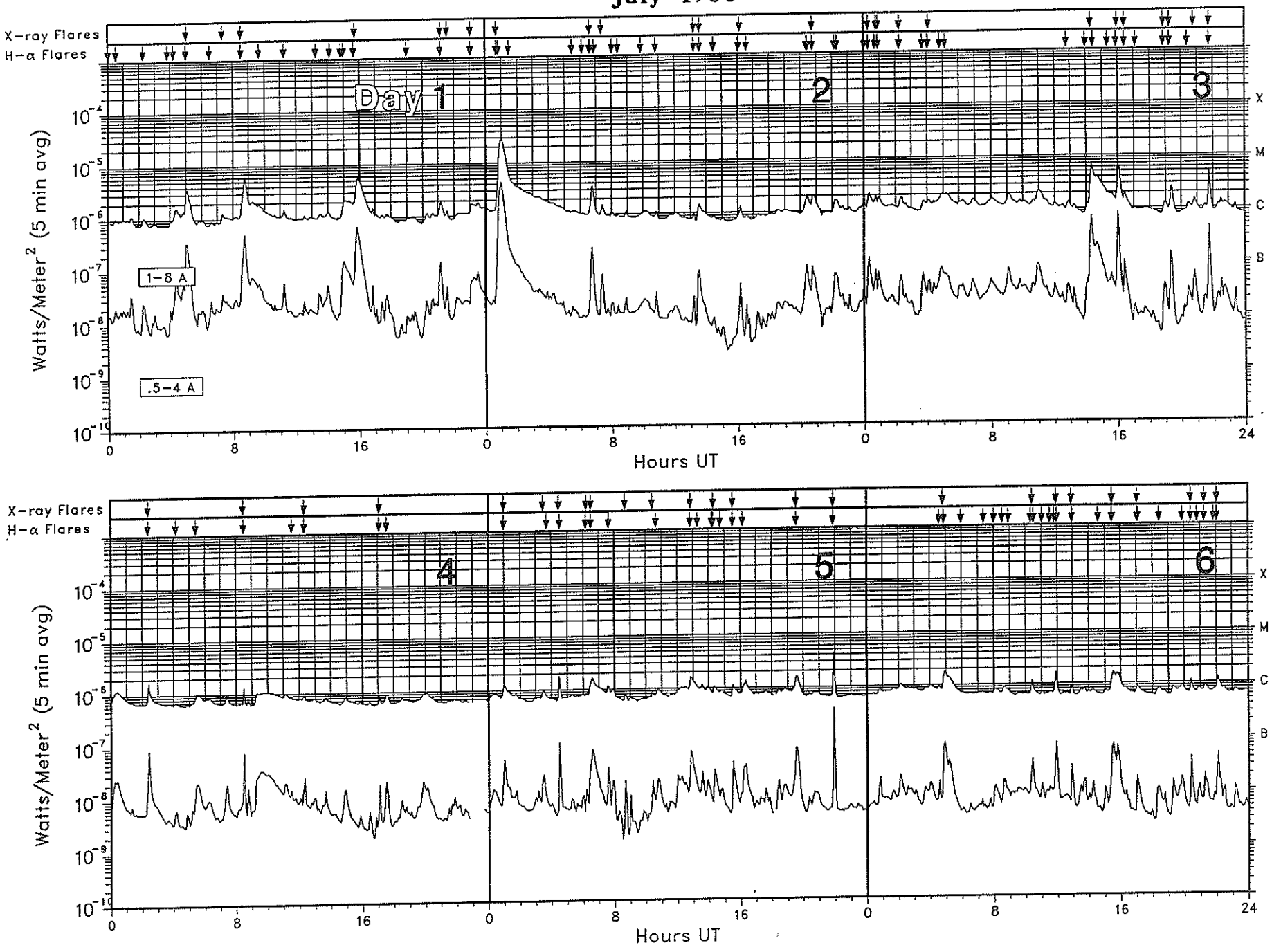
1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple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

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

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

GOES-7 X-RAY DETECTOR

July 1988

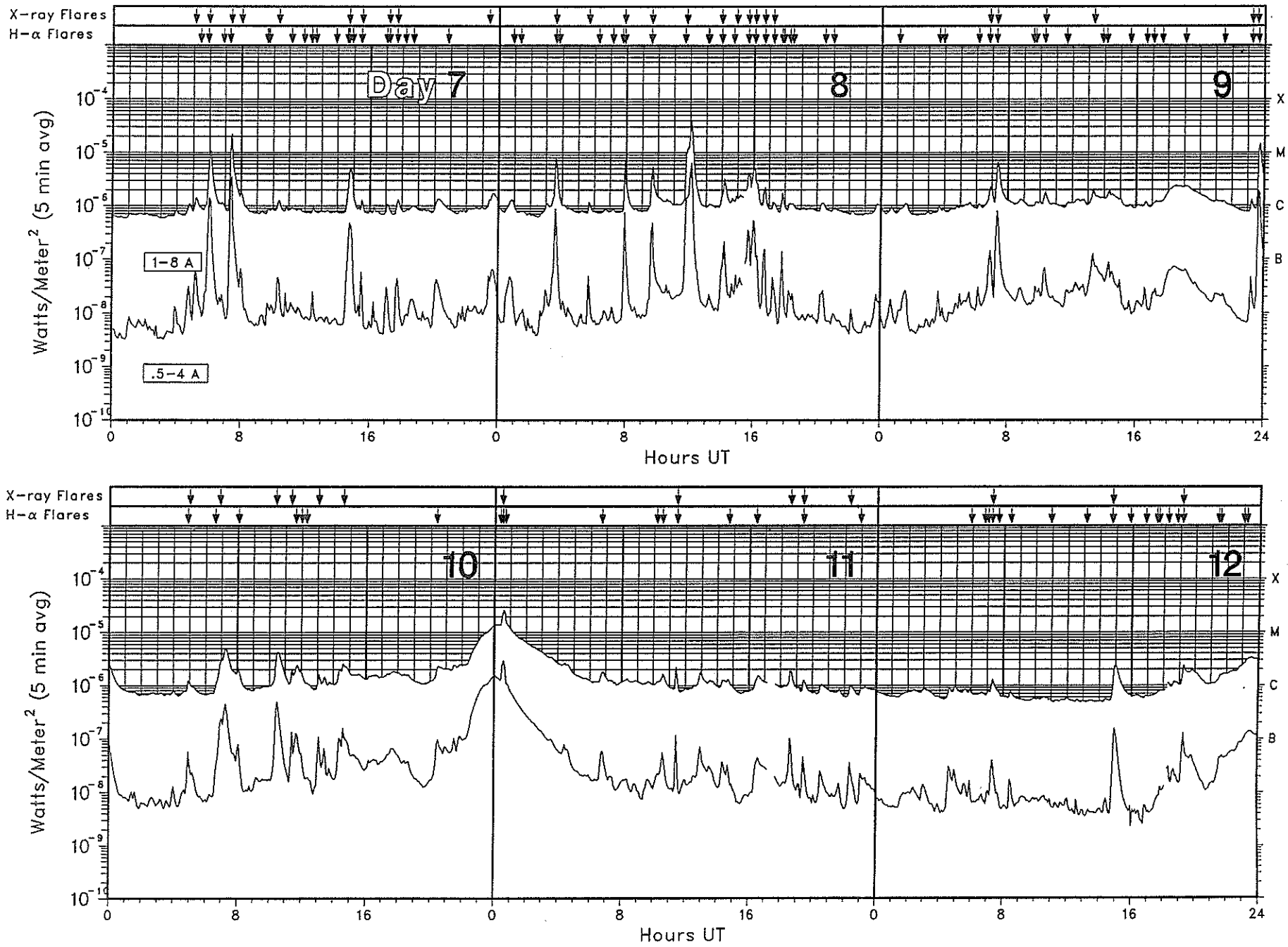


73 Jul 88

GOES-7 X-RAY DETECTOR

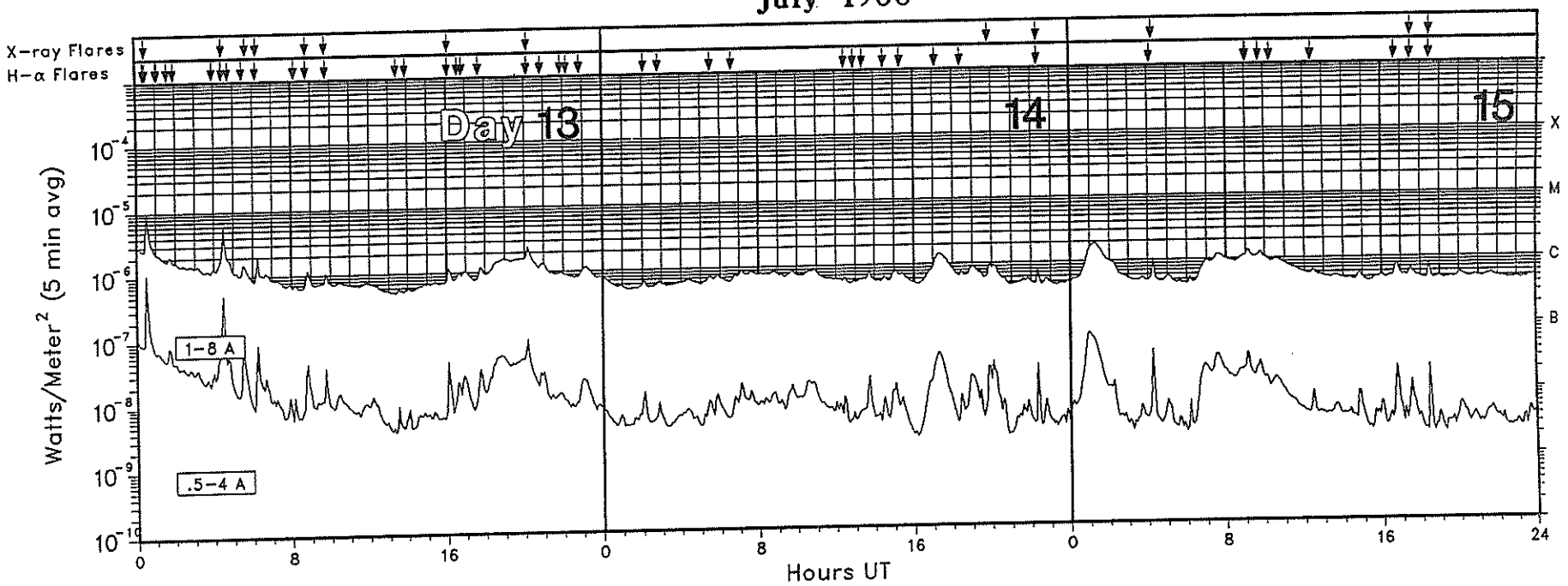
July 1988

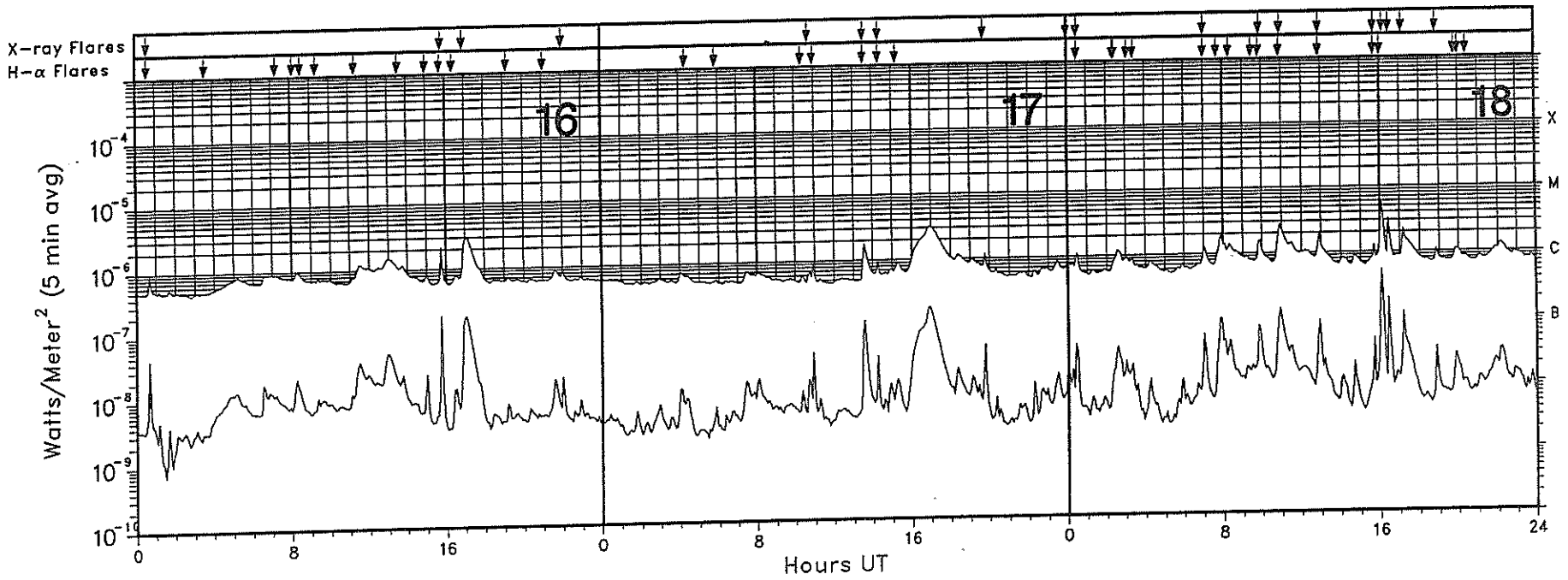
Jul 74 88



GOES-7 X-RAY DETECTOR

July 1988



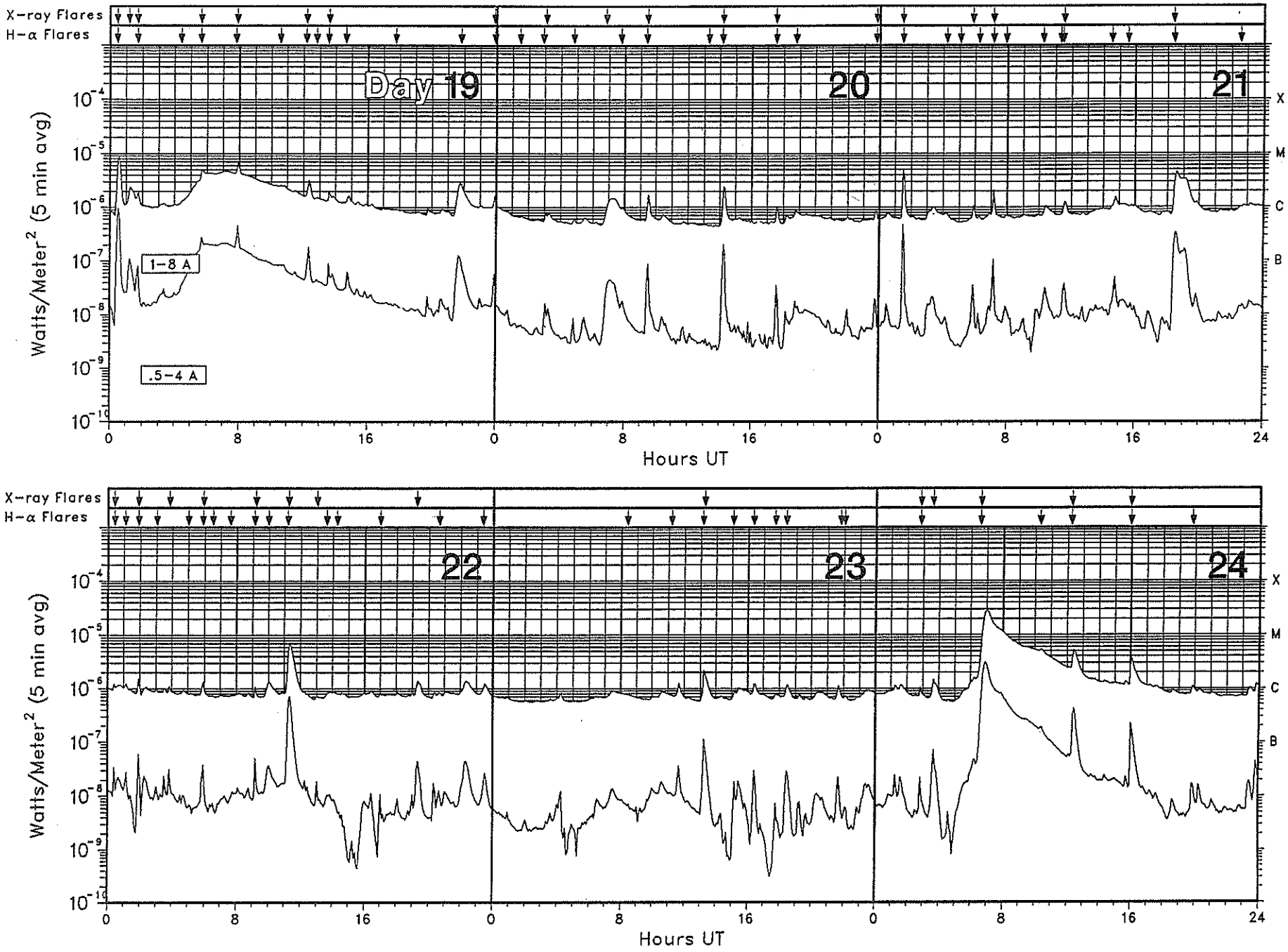


Jul 88

GOES-7 X-RAY DETECTOR

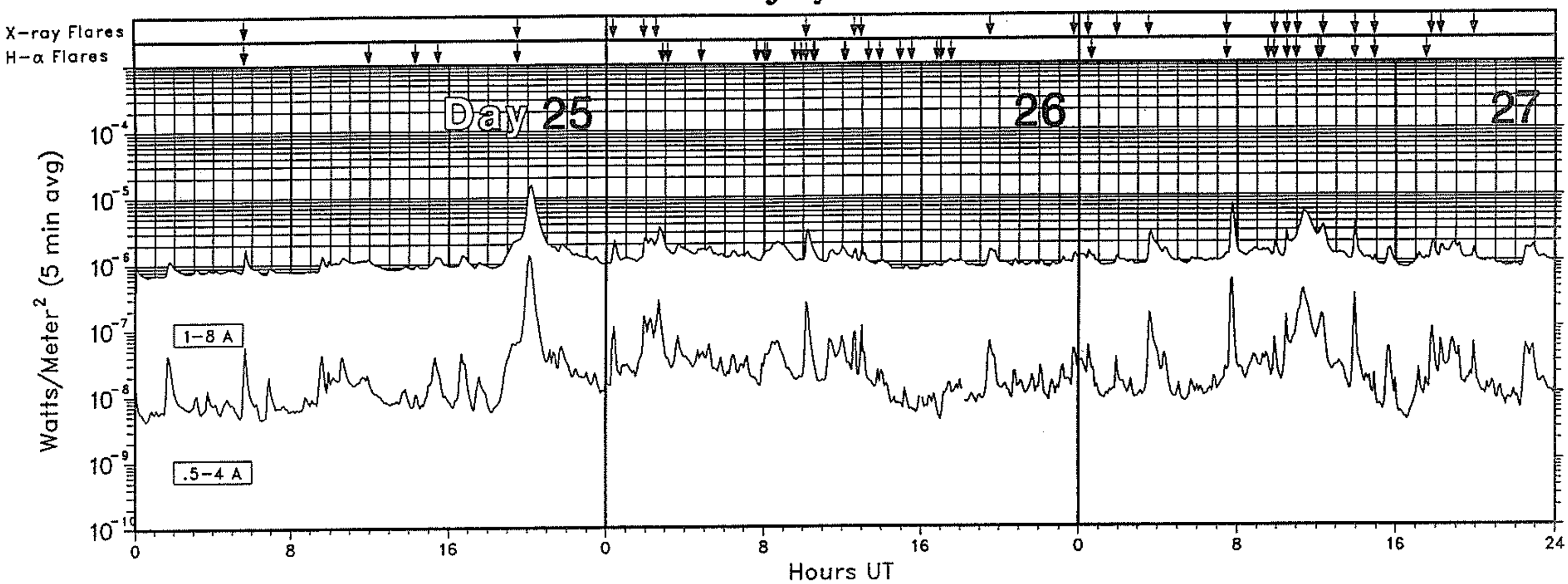
July 1988

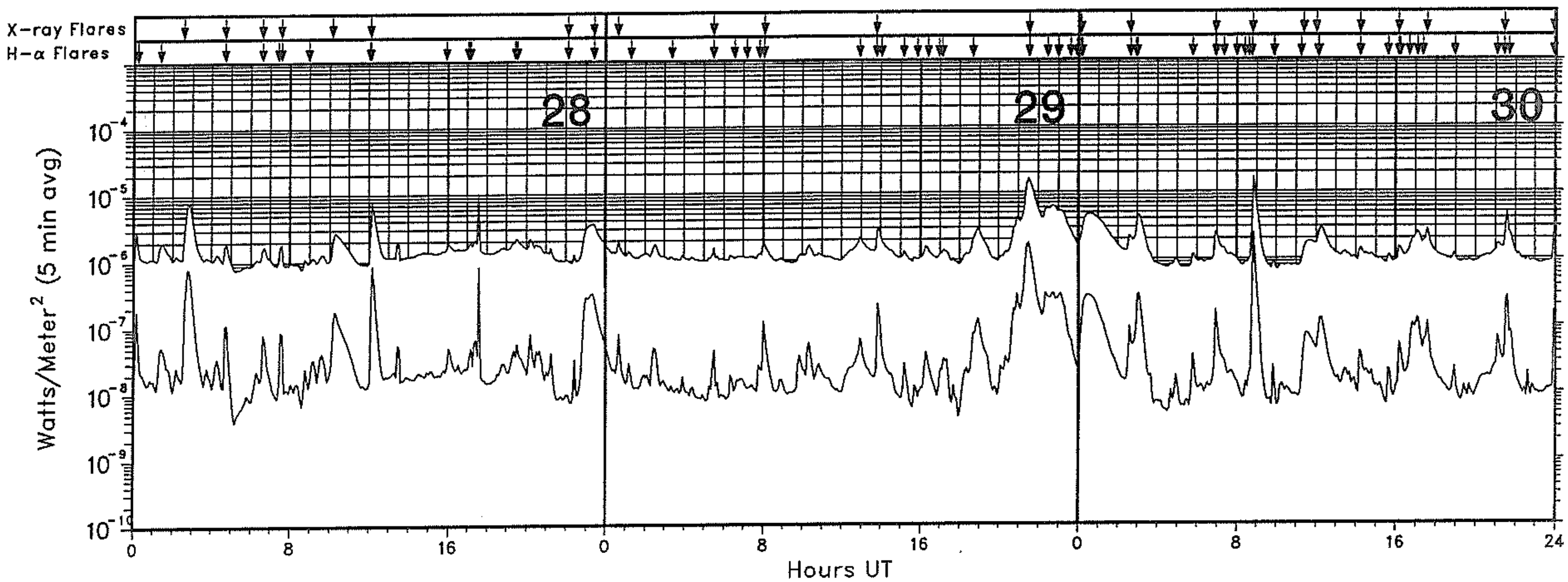
Jul 76 88



GOES-7 X-RAY DETECTOR

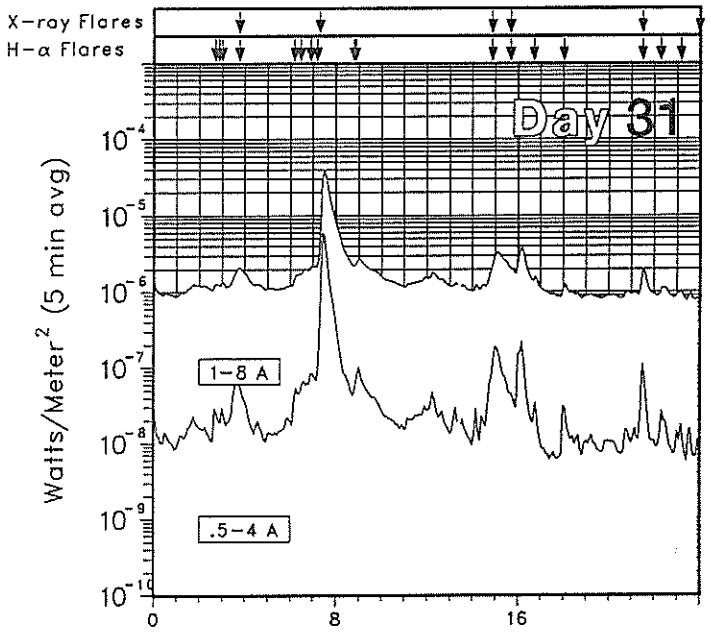
July 1988





GOES-7 X-RAY DETECTOR

July 1988



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

July 1988

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
01	0501	0501	0526	S20	E10		SF	C4.3	5060
01	0720	0723	0728					C1.3	
01	0832	0845	0921	S22	W10		2F	C6.9	5060
01	1543E	1553U	1616D	S20	E05		SN	C6.3	5060
01	2109E	2110D	2123	S20	W08		SF	C2.0	5060
01	2134	2137	2139					C2.1	
01	2304	2307	2322	S14	W06		SN	C1.9	5060
02	0041	0100	0202	S20	W13		3B	M3.0	5060
02	0636	0643	0702	S22	W13		1F	C3.7	5060
02	0721	0726	0729					C1.9	
02	1315E	1318U	1322D	S21	W09		SF	C1.4	5060
02	1336E	1339U	1349D	S26	W12		SF	C1.4	5060
02	1609	1611	1620	N12	W03		SF	C1.5	5062
02	2044	2046	2103	N13	W06		SF	C2.2	5062
03	0016	0018	0032	N13	W14		SF	C2.5	5062
03	0047	0048	0053	S16	W14		SF	C2.5	5060
03	0054	0054	0105	N13	W10		SF	C1.8	5062
03	0216	0218	0232	S17	W16		SF	C1.8	5060
03	0407	0408	0416	N15	W16		SF	C1.6	5062
03	1418	1419	1512	N12	W15		SN	C7.1	5062
03	1557	1605	1633	N12	W17		SN	C8.2	5062
03	1625	1626	1628	N13	W19		SF	C2.2	5062
03	1853	1856	1914	N13	W20		SF	C1.3	5062
03	1916	1924	1946	N13	W21		SF	C2.8	5062
03	2047	2050	2056					C1.6	
03	2146	2147	2158	N13	W22		SN	C5.8	5062
04	0223	0225	0233	N13	W23		SF	C2.0	5062
04	0828	0832	0834					C1.8	
04	1221	1221	1229	S22	W39		SF	C1.5	5060
04	1705	1706	1711	S25	W39		SF	C1.0	5060
05	0059	0101	0115	N13	W37		SF	C1.3	5062
05	0327	0330	0337					C1.0	
05	0428	0433	0436					C2.2	
05	0612	0615	0617					C1.0	
05	0629E	0630	0643D	N10	W42		SF	C1.8	5062
05	0841	0845	0847					C1.0	
05	1024	1027	1030					B9.7	
05	1250E	1252	1257D	S21	W43		SF	C1.7	5060
05	1417E	1421	1438D	S20	W42		SF	C1.1	5060
05	1531E	1531	1539D	S19	W46		SF	C1.3	5060
05	1932E	1933	1949D	S19	W54		SF	C1.7	5060
05	2153E	2155	2210D	S15	W52		1N	C5.2	5060
06	0449	0458	0519					C1.7	
06	1024E	1026	1032D	N12	W58		SF	C1.8	5062
06	1156E	1157U	1211D	S16	W60		SF	C1.8	5060
06	1255	1259	1301					C1.2	
06	1527E	1532	1550	S21	W59		SF	C1.6	5060
06	1702E	1703	1707D	N12	W63		SF	C1.0	5062
06	2024E	2028	2042D	N13	W64		SF	C1.4	5062
06	2115E	2117	2129D	S19	W64		SF	C1.0	5060
06	2203E	2204	2213D	N13	W63		SF	C1.4	5062
07	0507	0515	0522					C1.4	
07	0558E	0602U	0610D	N13	W72		SF	M1.1	5062
07	0722E	0723	0744D	N13	W73		1F	M3.3	5062
07	0801	0805	0808					C2.1	
07	1021	1025	1029					C1.4	
07	1441E	1445	1504D	S16	W71		1B	C6.3	5060
07	1530E	1532	1536D	N21	E34		SF	C1.6	5069
07	1711E	1712	1717D	N13	W76		SF	C1.1	5062
07	1741E	1743	1801D	N13	W76		SF	C1.3	5062
07	2324	2347	2359					C1.7	
08	0335D	0335	0343D	S13	W80		SF	C9.4	5060
08	0539	0543	0548					C1.3	
08	0754E	0756	0808D	S20	W82		SN	M1.1	5060
08	0936E	0941	0951D	N23	E24		SN	C7.4	5069
08	1147E	1155	1222D	N11	W90		SN	M4.4	5062
08	1358E	1412	1427D	N22	E22		SF	C3.4	5069
08	1455	1459	1501					C1.8	
08	1540E	1542	1546D	N14	W90		SF	C4.7	5062
08	1606E	1607	1613D	N14	W89		SF	C7.3	5062
08	1641E	1643	1647D	N14	W90		SF	C3.4	5062
08	1715E	1717	1728D	N13	W91		SN	C1.4	5062
09	0651	0659	0705					C2.3	
09	0718E	0721	0742D	N22	E13		SN	C6.8	5069
09	1018E	1018	1026D	N22	E10		SF	C1.9	5069
09	1321E	1322	1330D	N23	E08		SF	C2.0	5069
09	2316E	2318	2324D	N28	E38		SF	C1.5	5073
09	2337	2346	2358					M1.6	
10	0458E	0458	0508D	N21	W04		SF	C1.3	5069
10	0652E	0655	0744D	N21	W04		SF	C5.3	5069
10	1024	1036	1049					C4.4	
10	1122	1127	1133					C2.0	
10	1302	1308	1313					C1.6	
10	1434	1438	1446					C2.7	
11	0029E	0039U	0120D	S18	E89		1B	M2.7	5074
11	1126E	1126	1132D	N24	E25		SF	C2.7	5071
11	1835	1839	1844					C2.2	
11	1923E	1924	1948D	N21	W23		SF	C1.2	5069
11	2218	2224	2238					C1.0	
12	0716	0721	0728					C1.3	
12	1446E	1459	1534D	N25	E11		1N	C2.5	5071
12	1909E	1915	2014D	N30	E03		SF	C2.4	5073
13	0028	0032	0040	N28	W02		1N	M1.1	5073
13	0427	0431	0434					C7.3	
13	0540	0534	0539					C1.6	
13	0612E	0616	0626	N24	E02		SN	C2.3	5071
13	0847	0855	0858					C1.2	
13	0945	0949	0952					C1.4	
13	1606E	1607	1639D	N28	W11		SN	C1.7	5073
13	2010D	2011	2026D	N29	W14		SN	C2.5	5073
14	1951	1955	2002					C1.0	
14	2221E	2223	2240D	S19	E43		SF	C1.1	5075
15	0415E	0416	0425D	N22	W22		SF	C1.1	5071
15	1728E	1729	1736D	N23	W31		SF	B8.1	5071

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

July 1988

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
15	1827E	1828	1838D	S19	E24		SF	B9.1	5075
16	0035E	0044	0110D	S19	E26		SF	C1.2	5075
16	1547	1547	1601D	S25	E21		SF	C2.4	5075
16	1654E	1703	1738D	S15	W24		SF	C3.0	5076
16	2200	2203	2206					C1.0	
17	1041	1045	1051					B7.6	
17	1332E	1333	1356D	S21	E05		SF	C1.8	5075
17	1419E	1419	1422D	S20	E02		SF	C1.0	5075
17	1943	1947	1952					C1.2	
17	2359	0004	0008					B9.6	
18	0030E	0031	0034D	S24	E02		SF	C1.2	5075
18	0700E	0702	0707D	N28	W75		SF	C1.3	5073
18	0952E	0952	0956D	N26	W76		SF	C1.8	5073
18	1055E	1056	1102D	N29	W72		SF	C2.8	5073
18	1252E	1253	1300D	N28	W77		SF	C2.3	5073
18	1540E	1541	1544D	S21	W13		SF	C2.2	5075
18	1607E	1626	1642D	S15	W19		1F	C6.3	5075
18	1626E	1627	1634D	S20	W15		1F	C4.6	5075
18	1707	1713	1718					C2.4	
18	1851	1854	1856					C2.5	
19	0027E	0030	0051D	S24	W19		1N	C9.4	5075
19	0111	0118	0132					C2.4	
19	0143E	0144	0155D	S21	W12		SF	C2.2	5075
19	0539E	0541	0608D	N23	W74		SF	C5.3	5071
19	0753E	0753	0801D	S26	W22		SF	C7.1	5075
19	1212E	1221	1227D	S21	W25		SF	C3.4	5075
19	1336E	1339	1344D	S17	W24		SF	C2.3	5075
19	2353	2358	0001					C1.7	
20	0305E	0306	0316D	S17	W49		SF	B9.0	5079
20	0650	0715	0745					C1.5	
20	0927E	0930	0941D	S24	W37		SF	C1.8	5075
20	1412E	1417	1423D	S32	W46		SF	C2.8	5075
20	1732E	1736	1750D	S17	W41		SF	C1.0	5075
20	2349E	2351	2356D	S22	W47		SF	C1.1	5075
21	0129E	0131	0154D	S13	W51		1F	C6.2	5075
21	0551	0556	0604					C1.0	
21	0708E	0708	0722D	S19	W49		1N	C3.3	5075
21	1132E	1141	1157D	S22	W46		SF	C1.2	5075
21	1823E	1831	1844D	S20	E88		2F	C4.5	
22	0025E	0028	0032D	S17	W57		SF	C1.6	5075
22	0154E	0156	0203D	S17	W58		SF	C1.7	5075
22	0350	0353	0355					C1.4	
22	0556E	0556	0558D	S18	W61		SF	C1.5	5075
22	0912E	0913	0918D	S21	W84		SF	C1.3	5079
22	1115	1119U	1131	S20	E88		SF	C7.3	5084
22	1300	1303	1305					C1.0	
22	1916	1922	1933					C1.4	
23	1316E	1316	1337D	S18	W66		1F	C2.3	5075
24	0250E	0252	0253D	N12	E63		SF	C1.1	5085
24	0336	0342	0357					C1.4	
24	0637E	0649	0824D	S21	E55		2N	M2.8	5084
24	1215E	1216	1221D	N13	E58		SF	C5.3	5085
24	1558E	1603	1647D	S22	W36		1N	C4.3	5087
25	0536E	0539	0607D	N12	E61		1N	C1.8	5090
25	1928E	2007	2047D	S27	E50		2F	M1.5	5084
26	0020	0027	0034					C2.3	
26	0153	0201	0226					C2.7	
26	0230	0249	0258					C3.7	
26	1008	1016	1024					C3.3	
26	1236	1240	1243					C2.0	
26	1257	1302	1304					C2.2	
26	1931	1935	1948					C1.6	
26	2345	2349	2351					C1.9	
27	0028	0031	0037					C1.5	
27	0156	0159	0202					C1.3	
27	0333	0340	0350					C3.1	
27	0729E	0744	0806D	S24	E31		2N	C8.9	5084
27	0954E	0955	1005D	N16	E37		SF	C2.0	5090
27	1031E	1033	1037D	N29	E81		SF	C3.2	5092
27	1104E	1124	1138D	S18	E29		SF	C5.7	5084
27	1221E	1221	1233D	S21	E30		SF	C3.4	5084
27	1356E	1356	1403D	S21	E21		SF	C4.0	5084
27	1455E	1457	1506D	N17	E32		SF	C1.3	5090
27	1746	1751	1759					C2.1	
27	1815	1820	1825					C1.9	
27	1955	1959	2002					C1.8	
28	0233	0252	0303					C8.3	
28	0441E	0443	0445D	N25	E72		SF	C2.0	5092
28	0636E	0636	0646D	N25	E71		SF	C1.7	5092
28	0734E	0736	0741D	N28	E76		SF	C2.7	5092
28	1009	1023	1045					C2.7	
28	1206	1208U	1218	S25	E13		SN	C7.9	5084
28	2207E	2225	2229D	N28	E66		SF	C1.3	5095
28	2325E	2326	2353	N25	E40		SF	C4.0	
29	0038	0041	0045					C2.1	
29	0529E	0529	0534D	N33	E67		SF	C1.9	5092
29	0804E	0804	0823D	N28	E59		SF	C2.5	5092
29	1347E	1352	1426D	N28	E57		SN	C3.5	5092
29	2131E	2133	2215	N32	E61		1F	M1.6	5092
30	0008E	0013	0019D	S21	W08		SF	C6.0	5084
30	0237E	0311	0328D	S21	W10		SF	C4.6	5084
30	0655E	0656	0704D	S22	W09		SF	C2.7	5084
30	0847E	0848	0912D	N28	E41		2N	M1.8	5092
30	1122E	1125	1147D	S22	W07		SF	C1.8	5084
30	1200	1215	1225					C2.9	
30	1412E	1412	1431D	S20	W13		SF	C1.6	5084
30	1608E	1609	1628D	N28	E42		SF	C1.5	5092
30	1733E	1734	1748D	N28	E42		SF	C2.8	5092
30	2125E	2134	2157D	S23	W16		1N	C6.1	5084
30	2354	2358	0004					C2.4	

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

July 1988

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
31	0346E	0349	0418D	N13	W17	SF	C2.2	5090
31	0718E	0727	0812D	N34	E41	1B	M4.0	5092
31	1452	1453U	1520D	N34	E38	SN	C3.2	5092
31	1540E	1611	1651D	N32	E33	SF	C3.9	5092
31	2129E	2134	2144D	N14	W30	SF	C2.1	5090
31	2358	0004	0013	S19	W37	SF	C1.3	5084

Preliminary GOES Satellite Data
Daily Average X-ray Background
August 1987 - July 1988

Day	1987 Aug	Sep	Oct	Nov	Dec	1988 Jan	Feb	Mar	Apr	May	Jun	Jul
1	B1.2	B1.1	A6.8	B2.2	A7.6	B2.0	B2.5	B1.0	B4.4	B1.9	B7.5	B8.4
2	B1.2	B1.3	A6.8	B3.8	A8.3	B1.4	B2.5	A8.5	B3.5	B2.6	B6.6	B7.1
3	B1.0	B1.3	A7.7	B3.4	A5.2	B4.6	B1.9	B1.1	B3.7	B3.7	B7.1	B9.7
4	A6.7	B1.3	B1.2	B3.4	A4.8	B2.4	B1.5	B1.8	B3.5	B5.1	B9.5	B6.3
5	A6.5	B1.4	B1.1	B2.1	A5.3	B2.3	B1.7	B1.6	B4.2	B4.1	B6.0	B6.4
6	A6.9	B1.4	B1.0	B2.1	A7.8	B2.5	B1.5	B1.4	B4.3	B2.9	B4.8	B6.5
7	B1.7	B2.7	B1.1	B1.7	A8.5	B2.5	B2.4	B1.6	B3.8	B3.1	B5.6	B6.8
8	B2.8	B2.2	B1.7	B1.2	A9.1	B2.7	B1.8	B1.6	B3.9	B2.5	B5.2	B7.0
9	B2.1	B1.6	B2.1	A8.8	B1.4	B2.3	B1.8	B1.6	B3.2	B1.8	B6.4	B7.7
10	B2.3	B1.7	B2.0	A8.8	A9.4	B3.0	B1.5	B1.8	B3.1	B1.6	B4.9	B9.1
11	B2.9	B1.6	B1.8	B1.9	B2.3	B2.1	B1.6	B2.8	B4.5	B1.6	B4.3	B7.7
12	B2.9	B1.3	B1.7	B1.4	B3.2	B3.1	B1.8	B3.4	B5.5	B1.5	B3.7	B4.9
13	B2.6	B1.2	B2.3	B1.4	B1.8	--	B1.8	B3.4	B4.4	B1.4	B3.0	B5.3
14	B1.9	A9.5	B2.1	A8.2	B1.3	B4.0	B1.5	B2.5	B6.0	B1.3	B2.8	B5.0
15	B1.2	A7.1	B2.2	A9.7	B1.4	B3.9	B1.4	B6.0	B7.4	B1.1	B3.3	B4.7
16	B1.4	A4.6	B2.6	B1.1	B1.2	B5.1	B1.2	B6.9	B9.2	B1.3	B3.7	B5.5
17	B1.1	A5.2	B2.1	B1.1	A9.5	B3.6	B1.2	B4.6	B5.3	B2.0	B3.6	B4.8
18	B1.1	A3.8	B2.6	B1.6	A8.9	B2.2	B1.6	B3.0	B3.9	B3.2	B4.0	B6.7
19	B1.2	A4.7	B2.4	B2.7	A7.3	B2.5	B1.4	B3.3	B5.5	B2.9	B2.6	B9.2
20	B1.3	A7.6	B1.7	B5.2	A7.1	B2.3	B1.2	B4.4	B5.1	B3.2	B2.6	B4.5
21	B1.6	A5.9	B1.5	B3.5	A9.8	B2.4	B1.3	B3.8	B4.7	B4.1	B3.5	B6.5
22	B1.6	A5.0	B1.6	B3.6	B1.5	B2.0	A9.9	B3.7	B3.1	B5.8	B4.6	B7.2
23	B1.5	A3.4	B1.4	B3.0	B1.0	B2.0	B1.0	B6.0	B2.2	B8.8	B9.8	B6.1
24	B1.5	A3.7	B1.4	B2.9	B2.3	B3.1	A9.0	B6.8	B2.6	B4.5	C1.2	B6.7
25	B1.4	A3.0	B1.8	B2.9	B4.9	B1.9	A9.0	B6.1	B2.0	B5.3	---	B7.7
26	B1.1	A2.7	B1.9	B2.9	B4.7	B2.2	B9.5	B4.5	B1.5	B3.8	C2.7	B8.0
27	B1.1	A7.6	B2.5	B2.0	B3.4	B4.6	B1.0	B4.0	B1.1	B3.7	C1.1	B8.9
28	A8.6	B1.0	B2.7	B1.7	B2.3	B5.1	B1.2	B3.5	B1.1	B5.0	C1.6	B9.4
29	A6.6	A9.8	B1.9	B1.7	B1.8	B4.4	B2.0	B3.5	B1.1	B7.2	C1.5	B9.9
30	A7.6	A7.0	B2.7	B1.1	B2.5	B2.7		B3.3	B1.6	B8.0	B8.1	B7.8
31	B1.3		B2.7		---	B2.1		B4.2		B8.5		B9.4

MASS EJECTIONS FROM THE SUN

JULY 1988

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R$_o$	Freq or Wavelength	Kind of Event
KHAR	Jul 01	0840	0848 U	0916 D	190	0.37	H-alpha	S
SGMR	Jul 01	2101.0		2114.0			Meter	IV
LEAR	Jul 02	0050.0		0933.0			Meter	IV
KHAR	Jul 02	0730 E		0747	122	1.00	H-alpha	S
KHAR	Jul 02	0810	0810 U	0820 D	183	0.28	H-alpha	S
CULG	Jul 02	2105		2115			Meter	II
SGMR	Jul 04	1336.0		1358.0			Meter	II
KHAR	Jul 05	0811 E		0820	294	0.50	H-alpha	S
CULG	Jul 06	2058		2058			Meter	II
SGMR	Jul 07	1437.0		1447.0			Meter	IV
KHAR	Jul 08	0755		0825	251	1.00	H-alpha	S
KHAR	Jul 08	0914 E		0927 D	251	1.00	H-alpha	S
KHAR	Jul 08	0946	0947 U	1007	053	0.50	H-alpha	S
KHAR	Jul 08	1014 E		1035	251	1.00	H-alpha	S
KHAR	Jul 09	0654		0702	254	1.00	H-alpha	S
KHAR	Jul 09	0729		0755 D	017	0.28	H-alpha	S
KHAR	Jul 09	0927 E		0945	006	0.28	H-alpha	S
KHAR	Jul 09	0954		1003 D	008	0.32	H-alpha	S
SGMR	Jul 09	1656.0		1724.0			Meter	IV
KHAR	Jul 10	0835		0911 D	343	0.31	H-alpha	S
KHAR	Jul 10	1056 E		1110 D	107	1.00	H-alpha	S
KHAR	Jul 16	0634	0735 U	0756	033	0.75	H-alpha	S
KHAR	Jul 16	0718		0750 D	139	0.48	H-alpha	S
KHAR	Jul 16	0731 E		0745	110	1.00	H-alpha	S
KHAR	Jul 16	0840		0920	110	1.00	H-alpha	S
SVTO	Jul 18	1624.0		1651.0			Meter	IV
SGMR	Jul 18	1625.0		1655.0			Meter	IV
SGMR	Jul 19	1210.0		1227.0			Meter	IV
LEAR	Jul 20	0650.0		0707.0			Meter	II
PALE	Jul 20	1728.0		1741.0			Meter	IV
SGMR	Jul 20	1734.0		1744.0			Meter	IV
KHAR	Jul 21	1055	1100 U	1112	238	0.85	H-alpha	S
KHAR	Jul 21	1120	1126 U	1130 D	238	0.85	H-alpha	S
WEIS	Jul 23	1317.0		1325.5			140-36 MHz	II Herringbone
SVTO	Jul 24	0649.0		0743.0			Meter	IV
LEAR	Jul 24	0650.0		0656.0			Meter	II
CULG	Jul 24	0650		0655			Meter	II
WEIS	Jul 24	0650.1		0703.3			70-30 MHz	II Herringbone
LEAR	Jul 24	0656.0		0857.0			Meter	IV
SVTO	Jul 25	0543.0		0549.0			Meter	II
LEAR	Jul 25	0543.0		0549.0			Meter	II
CULG	Jul 25	0543		0549.5			Meter	II
WEIS	Jul 25	0543.1		0548.8			160-38 MHz	II Herringbone
KHAR	Jul 25	0715		0728	282	1.00	H-alpha	S
WEIS	Jul 25	0956.4		1010.9			450-30 MHz	II Herringbone
SGMR	Jul 25	1003.0		1009.0			Meter	II
WROC	Jul 26	0720	0825	1145	063	0.06	H-alpha	S
KHAR	Jul 26	0800 E	0836 U	1003	063	1.00	H-alpha	S
SGMR	Jul 26	1243.0		1251.0			Meter	II
KHAR	Jul 27	0924 E	0924 U	0943 D	245	0.95	H-alpha	S
KHAR	Jul 27	1040 E	1048 U	1105	064	1.00	H-alpha	S

MASS EJECTIONS FROM THE SUN

JULY 1988

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R$_o$	Freq or Wavelength	Kind of Event
CULG	Jul 28	0128		0134			Meter	II
KHAR	Jul 30	0736		0750	054	0.75	H-alpha	S
KHAR	Jul 30	0800		0807	045	0.48	H-alpha	S
KHAR	Jul 30	1006	E 1010	U 1020 D	064	0.73	H-alpha	S
WEIS	Jul 31	0729.3		0735.5			140-35 MHz	II Herringbone
WEIS	Jul 31	0740.8		0746.7			70-30 MHz	II Herringbone
KHAR	Jul 31	0842	0907	0929	285	0.57	H-alpha	S
KHAR	Jul 31	0902	E 0918	U 1023 D	288	0.39	H-alpha	S
KHAR	Jul 31	0930	E	0957 D	047	0.50	H-alpha	S
KHAR	Jul 31	1010	1023	U 1103 D	285	0.51	H-alpha	S

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 = coronal 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
- SP = flare-spray if there is a known flare association
- * = movement may be caused by ionospheric refraction

REPORTING STATIONS
- CULG = Culgoora
- KHAR = Kharkov
- LEAR = Learmonth
- PALE = Palehua
- SGMR = Sagamore Hill
- SVTO = San Vito
- WEIS = Weissenau
- WROC = Wroclaw

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	ASR	0023E	0321D	S26	W90	06	24.1			7	9	E	PALE	5056	
01	APR	0330E	0932D	S24	W90	06	24.3	2		8	6	E	LEAR	5056	
01	DSD	0700E	1153D	S14	E12	07	2.2		03	9	9	E	SVTO	5060	
01	AFS	0700E	1558D	S19	E11	07	2.1		01	9	9	E	SVTO	5060	
01	ADF	0700E	1558D	S32	E18	07	2.7	1	10	9	9	E	SVTO	5060	
01	DSD	0705	0715	S14	E10	07	2.0	1				C	CATA		
01	ADF	0740E	0750	N28	E24	07	3.2	1				V	KHAR		
01	APR	0800	1100D	N46	W90	10	24.9	1				V	KHAR		
01	DSD	0803E	1153D	N29	E21	07	3.0		08	9	9	E	SVTO	5061	
01	DSD	0840	0916D	S19	W04	07	1.0	1				V	KHAR		
01	DSD	0852	0915	S20	W07	06	30.8	1				C	CATA		
01	BSL	0905	0923	S56	E90	07	9.2	1-				C	CATA		
01	BSL	0935	0947	N57	E90	07	9.2	1-				C	CATA		
01	SDF	1145E	0918D	S37	E65	07	6.7	2				C	CATA		
01	SDF	1558E	0515D	S22	E70	07	7.0		23	0	0	E	SVTO		
01	SDF	1851E	1849D	S23	E64	07	6.7		21	0	0	E	PALE		
01	AFS	1940E	2132D	N13	E08	07	2.4		02	9	9	E	RAMY	5062	
01	ADF	1948E	2132D	S15	W07	07	1.3	1	07	7	9	E	RAMY	5060	
01	AFS	2007E	0335D	N13	E06	07	2.3		03	9	9	E	PALE	5062	
01	ADF	2128E	2139	S25	W07	07	1.3	1	09	9	9	E	HOLL	5060	
01	SDF	2128E	2139	S25	W07	07	1.3		09	0	0	E	HOLL	5060	
02	SDF	0027E	0330D	S30	E44	07	5.5		28	0	0	E	LEAR		
02	ADF	0040E	0345	S05	W14	07	1.0	2	11	9	9	E	LEAR	5060	
02	DSD	0130E	0335D	S18	W12	07	1.1		06	9	9	E	PALE	5060	Flare Associated
02	ASR	0230E	0345	S21	W90	06	25.3			8	8	E	LEAR	5056	
02	SDF	0345	0345	S05	W14	07	1.1		11	0	0	E	LEAR	5060	
02	ASR	0345	0928D	S21	W90	06	25.3			8	8	E	LEAR	5056	
02	DSD	0640E	1727D	S16	E01	07	2.3		04	9	9	E	SVTO	5060	
02	ADF	0700E	0845D	S28	W17	07	1.0	2	07	9	9	E	LEAR	5060	
02	ADF	0705E	0915D	N12	W02	07	2.1	1	05	9	9	E	SVTO	5062	
02	BSL	0730E	0747	S32	E90	07	9.4	1				V	KHAR		
02	DSD	0810	0820D	S14	W02	07	2.2	1				V	KHAR		
02	AFS	0940E	1727D	N12	W05	07	2.0		07	9	9	E	SVTO	5062	
02	DSD	1031E	1040D	S14	E01	07	2.5	1				C	CATA		
02	DSD	1100	1105	S15	E03	07	2.7	1-				C	CATA		
02	DSD	1115E	1727D	N15	W10	07	1.7		05	9	9	E	SVTO	5062	
02	ASR	2220	2251	S25	W78	06	27.0			9	9	E	HOLL	5056	
02	AFS	2223E	0138D	N12	W12	07	2.0		03	6	8	E	HOLL	5062	
03	BSL	0404E	0635D	N50	W90	06	25.6	1				C	ABST		
03	BSL	0432E	0635D	S10	W90	06	26.5	1				C	ABST		
03	AFS	0439E	1740D	N16	W18	07	1.8		04	9	9	E	SVTO	5062	
03	DSD	0445E	0900D	S15	W16	07	2.0		04	9	9	E	SVTO	5060	
03	AFS	0518E	1740D	N12	W13	07	2.2		03	9	9	E	SVTO	5062	
03	BSL	1035	1039	N13	E90	07	10.2	1-				C	CATA		
03	AFS	1139E	2047D	N12	W21	07	1.9		04	9	9	E	RAMY	5062	
03	AFS	1327E	0047D	N12	W21	07	2.0		03	7	9	E	HOLL	5062	
03	ADF	1401	1814D	N26	E25	07	5.5	1	03	5	6	E	HOLL	5065	
03	ADF	1725E	2047D	S18	W37	06	30.9	2	07	9	9	E	RAMY	5066	
03	SDF	2151E	1238D	S22	E60	07	8.5		23	0	0	E	HOLL		
03	AFS	2223E	0138D	N12	W12	07	3.0		03	6	8	E	HOLL	5062	
03	ADF	2321E	0611D	S17	W40	06	30.9	1	06	9	9	E	LEAR	5060	
04	BSL	0441E	0705D	S30	E90	07	11.3	1				C	ABST		
04	DSD	0442E	1740D	S23	W35	07	1.5		03	9	9	E	SVTO	5060	
04	ADF	0453E	1740D	S14	E52	07	8.1	1	14	9	9	E	SVTO		
04	DSD	0501E	1740D	N12	W20	07	2.7		03	9	9	E	SVTO	5062	
04	SDF	1100E	0925D	N05	W57	06	30.2	1				C	CATA		
04	SDF	1100E	0925D	N13	W63	06	29.8	1				C	CATA		
04	AFS	1148E	2205D	N12	W36	07	1.8		04	9	9	E	RAMY	5062	
04	AFS	1306E	1812D	S09	W22	07	2.9		02	9	9	E	RAMY	5067	
04	AFS	1330E	1749D	S09	W21	07	3.0		01	9	9	E	HOLL		
04	ADF	1420E	1742D	N30	W19	07	3.1	2	05	8	6	E	RAMY	5061	
04	ADF	1425E	2205D	N24	W37	07	1.7	2	09	9	7	E	RAMY	5063	
04	ADF	1430E	2205D	S28	W35	07	1.9	2	08	9	9	E	RAMY	5060	
04	AFS	2105E	2151D	N22	E76	07	10.7		01	9	9	E	HOLL		
05	BSL	0558E	0650D	S35	W90	06	28.1	1				C	ABST		
05	ADF	0715E	0722	S30	W42	07	2.0	1				V	KHAR		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
05	DSD	0811E	0820	N14	W29	07	3.1	1				V	KHAR		
05	ADF	0923E	1619D	S20	W47	07	1.8	1	08	9	9	E	SVTO	5060	
05	BSL	1021	1033	N19	E90	07	12.3	1-				C	CATA		
05	AFS	1145E	1656D	N14	W43	07	2.2		01	9	9	E	RAMY	5062	
05	ADF	1600E	2043D	N12	W47	07	2.1	1	09	9	9	E	RAMY	5062	
05	ADF	1600E	1710D	S15	W49	07	1.9	1	05	9	9	E	SVTO	5060	
05	DSD	1656E	2043D	S16	W50	07	1.9		04	9	9	E	RAMY	5060	
06	AFS	0652E	1658D	N24	E50	07	10.1		03	9	9	E	SVTO	5069	
06	ADF	0755E	0854	N13	W60	07	1.8	1				V	KHAR		
06	BSL	0944	0955	N84	W90	06	28.1	1-				C	CATA		
06	AFS	1140E	2139D	N14	W60	07	1.9		02	9	9	E	RAMY	5062	
06	AFS	1145E	2139D	N21	E47	07	10.1		02	9	9	E	RAMY	5069	
06	ASR	1251E	1500D	S20	W90	06	29.7			9	9	E	SVTO	5060	
06	ADF	1255E	2139D	S14	W62	07	1.8	1	03	9	9	E	RAMY	5060	
06	SDF	1658E	0922D	N28	W17	07	5.4		10	0	0	E	SVTO		
06	ASR	1734E	2139D	N24	E86	07	13.4			9	9	E	RAMY	5071	
06	ADF	1813E	2051D	N27	W04	07	6.4		08	0	0	E	PALE		
06	AFS	1906E	0030D	N23	E44	07	10.2		03	9	9	E	HOLL	5069	
06	DSD	1940E	2115D	S17	W64	07	1.9		03	9	9	E	HOLL	5060	
06	AFS	2038E	0450D	N22	E41	07	10.0		03	9	9	E	PALE	5069	
06	BSD	2124	2133	S14	W67	07	1.8		07	9	9	E	HOLL	5060	Flare Associated
06	DSD	2124E	2139D	S14	W69	07	1.7		04	9	9	E	RAMY	5060	Flare Associated
06	DSD	2133E	0030D	S17	W64	07	2.0		26	9	9	E	HOLL	5060	Flare Associated
06	SDF	2139E	1420D	N25	W17	07	5.6		09	0	0	E	RAMY		
07	SDF	0030E	1221D	N22	W17	07	5.7		09	0	0	E	HOLL		
07	ASR	0411E	0455D	N13	W86	06	30.7			9	9	E	PALE	5062	
07	BSL	0943E	0953D	S18	W90	06	30.5	1-				C	CATA		
07	BSL	0952	0953D	N30	W90	06	30.3	1-				C	CATA		
07	AFS	1133E	0000D	N20	E33	07	10.0		02	9	9	E	RAMY	5069	
07	DSD	1133E	0000D	N22	E38	07	10.4		06	9	9	E	RAMY	5069	
07	DSD	1146E	1254D	S13	W63	07	2.7		03	9	9	E	RAMY	5060	
07	ADF	1153E	1620D	N24	E37	07	10.3	1	04	9	9	E	SVTO	5069	
07	AFS	1208E	0000D	S15	E55	07	11.7		02	9	9	E	RAMY	5070	
07	ASR	1245E	0000D	S18	W83	07	1.2			9	9	E	RAMY	5060	
07	ASR	1251E	2337D	S19	W76	07	1.7			9	9	E	HOLL	5060	
07	ASR	1251E	1500D	S20	W90	06	30.6			9	9	E	SVTO	5060	
07	DSD	1254E	2337D	N12	W75	07	1.9		07	9	9	E	HOLL	5062	
07	AFS	1255E	2337D	N21	E31	07	9.9		03	9	9	E	HOLL	5069	
07	DSD	1309E	1913D	N12	W75	07	1.9		04	9	9	E	RAMY	5062	
07	SDF	1311E	1510D	N22	E17	07	8.8		05	0	0	E	HOLL		
07	SDF	1311E	1510D	N35	W29	07	5.2		12	0	0	E	HOLL		
07	SDF	1311E	1510D	S37	W07	07	7.0		18	0	0	E	HOLL		
07	AFS	1417E	0000D	N30	W17	07	6.2		01	9	9	E	RAMY	5068	
07	SDF	1510E	2347D	N28	W19	07	6.1		06	0	0	E	HOLL		
07	DSD	1530	2337D	N23	E35	07	10.3		03	9	9	E	HOLL	5069	Flare Associated
07	SDF	1626E	0833D	N35	W30	07	5.3		11	0	0	E	SVTO		
07	SDF	1626E	0833D	S40	E15	07	8.9		14	0	0	E	SVTO		
07	ASR	1816E	0455D	S19	W88	07	1.0			9	9	E	PALE	5060	
07	AFS	1829E	0455D	N22	E32	07	10.2		04	9	9	E	PALE	5069	
07	DSD	2015	2337D	N19	E50	07	11.6		02	9	9	E	HOLL		
07	SDF	2208E	1630D	N35	W30	07	5.5		10	0	0	E	RAMY		
07	SDF	2208E	1630D	S36	E01	07	8.0		13	0	0	E	RAMY		
08	AFS	0110E	0928D	N31	W23	07	6.2		02	8	7	E	LEAR	5068	
08	ASR	0250E	0928D	N11	W90	07	1.3			9	9	E	LEAR	5060	
08	ASR	0411E	0455D	N13	W86	07	1.7			9	9	E	PALE	5062	
08	SDF	0417E	0012D	N27	W06	07	7.7		07	0	0	E	LEAR		
08	SDF	0417E	0012D	S42	E17	07	9.6		12	0	0	E	LEAR		
08	BSL	0443E	0456D	S15	W90	07	1.4	1				C	ABST		
08	ASR	0505E	0928D	N13	W90	07	1.4			8	8	E	LEAR	5062	
08	BSL	0755	0825	S19	W90	07	1.5	1				V	KHAR		
08	BSL	0814E	0826D	S20	W90	07	1.4	1-				C	CATA		
08	BSL	0855E	0937	S10	W90	07	1.6	2				C	CATA		
08	BSL	0914E	0927D	S19	W90	07	1.5	1				V	KHAR		
08	BSL	0932	0940	S18	W90	07	1.5	1-				C	CATA		
08	DSD	0946	1007D	N23	E25	07	10.3	1				V	KHAR		
08	ADF	1004E	1100D	N22	E17	07	9.7	1				V	KHAR		
08	BSL	1014E	1035D	S19	W90	07	1.5	1				V	KHAR		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
08	ADF	1017E	1650D	N26	W46	07	4.8	1	09	9	9	E	SVTO		
08	DSD	1018E	1650D	N21	E15	07	9.6		05	9	9	E	SVTO	5069	
08	ASR	1021E	1650D	S23	W90	07	1.5			9	9	E	SVTO	5060	
08	ASR	1030E	1650D	N11	W90	07	1.7			9	9	E	SVTO	5062	
08	APR	1245E	1917D	S12	W90	07	1.7			9	9	E	HOLL	5060	
08	ASR	1245E	2351D	N14	W90	07	1.7			9	9	E	HOLL	5062	
08	ASR	1245E	2351D	S21	W90	07	1.6			9	9	E	HOLL	5060	
08	DSD	1250E	2351D	N21	E15	07	9.7		05	9	9	E	HOLL	5069	
08	ASR	1252E	2203D	S20	W90	07	1.6			9	9	E	RAMY	5060	
08	ASR	1255E	2203D	N13	W90	07	1.7			9	9	E	RAMY	5062	
08	DSD	1301E	1913D	N19	E12	07	9.4		11	9	9	E	RAMY	5069	
08	APR	1312	1650D	S18	W90	07	1.7	1		9	9	E	SVTO	5060	
08	APR	1405E	2203D	S13	W90	07	1.8	1		9	9	E	RAMY	5060	
08	ADF	1439E	2203D	N27	W47	07	4.9	1	12	9	9	E	RAMY	5065	
08	AFS	1445E	2203D	N30	W31	07	6.2		01	7	6	E	RAMY	5068	
08	AFS	1710E	2203D	N21	E17	07	10.0		03	9	6	E	RAMY	5069	
08	DSD	1740E	1913D	N24	E12	07	9.7		04	9	9	E	RAMY	5069	
08	DSD	1913E	2031D	N19	E17	07	10.1		03	9	9	E	RAMY	5069	
08	AFS	1926E	0452D	N21	E13	07	9.8		03	9	9	E	PALE	5069	
08	APR	1937E	0452D	S20	W90	07	1.9			9	7	E	PALE	5060	
08	ASR	1945E	0452D	N13	W90	07	2.0			9	9	E	PALE	5062	
08	AFS	2021E	2351D	N22	E14	07	9.9		03	9	9	E	HOLL	5069	
08	APR	2033E	2351D	S31	W87	07	2.0			6	6	E	HOLL	5060	
08	DSD	2150E	2203D	N20	E14	07	10.0		03	9	9	E	RAMY	5069	
08	DSD	2150E	2203D	N24	E08	07	9.5		08	9	9	E	RAMY	5069	
08	AFS	2335E	0935D	N21	E12	07	9.9		02	9	7	E	LEAR	5069	
08	ASR	2338E	0935D	S19	W90	07	2.1			8	7	E	LEAR	5060	
08	ASR	2340E	0935D	N15	W90	07	2.2			9	9	E	LEAR	5062	
09	SDF	0012E	0105D	S05	E27	07	11.0		07	0	0	E	LEAR		
09	ADF	0300E	0935D	N19	E10	07	9.9	1	08	8	9	E	LEAR	5069	
09	AFS	0503E	0935D	N30	W39	07	6.1		03	9	6	E	LEAR	5068	
09	ASR	0521E	1718D	S18	W90	07	2.4			9	9	E	SVTO	5060	
09	ASR	0522E	1718D	N12	W90	07	2.4			9	9	E	SVTO	5062	
09	DSD	0542E	0600	N22	E08	07	9.8		05	9	9	E	SVTO	5069	
09	ADF	0600	1718D	N21	E07	07	9.8	1	06	9	9	E	SVTO	5069	
09	DSD	0613	1000D	N20	E06	07	9.7		03	9	9	E	SVTO	5069	
09	BSL	0636E	0706	S19	W90	07	2.4	1				C	CATA		
09	ADF	0654	0700	N25	E07	07	9.8	1				V	KHAR		
09	BSL	0654	0702	S16	W90	07	2.5	1				V	KHAR		
09	BSL	0726E	0742	S19	W90	07	2.4	1-				C	CATA		
09	DSD	0729	0755D	N20	E05	07	9.7	1				V	KHAR		
09	AFS	0751E	1718D	N30	E46	07	12.9		02	9	9	E	SVTO		
09	BSL	0909	0915D	S18	W90	07	2.5	1-				C	CATA		
09	DSD	0927E	0945	N21	E02	07	9.5	1				V	KHAR		
09	DSD	0954	1003D	N24	E02	07	9.6	1				V	KHAR		
09	BSL	1007	1016	N12	W90	07	2.6	1-				C	CATA		
09	DSD	1007	1029	N24	E01	07	9.5		05	9	9	E	SVTO	5069	
09	BSL	1108E	1108D	S18	W90	07	2.6	1-				C	CATA		
09	ASR	1113E	1845D	S20	W90	07	2.6			9	9	E	RAMY	5060	
09	ASR	1113E	1927	N13	W90	07	2.7			9	7	E	RAMY	5062	
09	AFS	1113E	1930D	N21	E05	07	9.8		03	9	9	E	RAMY	5069	
09	AFS	1113E	1930D	N21	E10	07	10.2		02	9	9	E	RAMY	5069	
09	ADF	1113E	2018D	N20	E08	07	10.1	1	07	9	9	E	RAMY	5069	
09	DSD	1132	1350D	N21	E06	07	9.9		06	9	9	E	RAMY	5069	
09	AFS	1151E	2018D	S14	E24	07	11.3		02	7	5	E	RAMY	5070	
09	AFS	1158E	2108D	N28	E43	07	12.8		02	9	9	E	RAMY		
09	ASR	1245E	2351D	N14	W90	07	2.7			9	9	E	HOLL	5062	
09	ASR	1245E	2351D	S21	W90	07	2.6			9	9	E	HOLL	5060	
09	DSD	1250E	2351D	N21	E15	07	10.7		05	9	9	E	HOLL	5069	
09	DSD	1252E	1315	N23	E14	07	10.6		04	9	9	E	RAMY	5069	
09	DSD	1252E	1729D	N23	E06	07	10.0		09	9	9	E	RAMY	5069	
09	SDF	1718E	0425D	S40	E43	07	13.2		20	0	0	E	SVTO		
09	ASR	1809E	1836D	S20	W89	07	2.9			9	9	E	PALE	5060	
09	AFS	2021E	2351D	N22	E14	07	10.9		03	9	9	E	HOLL	5069	
09	ASR	2030E	2204D	N15	W85	07	3.4			9	9	E	HOLL	5061	
09	AFS	2030E	2204D	N28	E39	07	12.9		02	9	9	E	HOLL		
09	APR	2033E	2351D	S31	W87	07	3.0			6	6	E	HOLL	5060	
09	SDF	2042E	1808D	S45	E30	07	12.3		13	0	0	E	PALE		
09	SDF	2042E	1808D	S50	E90	07	17.5		34	0	0	E	PALE		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
10	ASR	0150E	0935D	N25	W90	07	3.1			7	6	E	LEAR	5061	
10	AFS	0150E	0935D	N27	E36	07	12.9		02	8	6	E	LEAR		
10	ADF	0450	0800D	N26	W01	07	10.1	2	06	9	9	E	SVTO	5069	
10	AFS	0502E	0935D	N21	W02	07	10.0		02	9	9	E	LEAR	5069	
10	AFS	0510E	1736D	N29	E32	07	12.7		02	9	9	E	SVTO	5073	
10	BSL	0518E	0656D	N35	W90	07	3.0	1				C	ABST		
10	BSL	0518E	0658D	N50	W90	07	2.6	1				C	ABST		
10	AFS	0518E	0935D	N22	E42	07	13.4		03	9	9	E	LEAR	5071	
10	ADF	0623E	0847D	N22	W06	07	9.8	2	04	9	9	E	LEAR	5069	
10	DSD	0740E	0800D	N26	E42	07	13.6		03	9	9	E	SVTO	5071	
10	DSD	0835	0911D	N22	W06	07	9.9	1				V	KHAR		
10	BSL	0906	0911D	S19	E90	07	17.2	1-				C	CATA		
10	BSL	0906E	0911D	N30	W90	07	3.3	1-				C	CATA		
10	EPL	0930E	1101	S46	E90	07	17.9	2				C	CATA		
10	ASR	0949E	1736D	S15	E90	07	17.2			9	9	E	SVTO		
10	BSL	1030	1131D	S18	E90	07	17.3	1-				C	CATA		
10	BSL	1055	1125	S14	E90	07	17.2	1-				C	CATA		
10	BSL	1056E	1110D	S17	E90	07	17.3	1				V	KHAR		
10	BSL	1116	1131D	S20	E90	07	17.3	1-				C	CATA		
10	AFS	1202E	2019D	N27	E30	07	12.8		02	9	9	E	RAMY	5073	
10	AFS	1202E	2126D	N28	E28	07	12.7		02	9	9	E	RAMY	5073	
10	ASR	1217	1539D	N28	W90	07	3.5			8	8	E	RAMY	5061	
10	AFS	1245E	1736D	N26	E39	07	13.6		01	8	8	E	SVTO	5071	
10	ADF	1601E	2126D	N26	W08	07	10.0	1	08	9	9	E	RAMY	5069	
10	AFS	1647E	2126D	N21	W09	07	10.0		02	9	9	E	RAMY	5069	
10	SDF	2018E	1126D	N20	W06	07	10.4		07	0	0	E	RAMY	5069	
10	AFS	2331E	0209D	N21	W15	07	9.8		03	9	9	E	LEAR	5069	
11	SDF	0044E	0114D	S44	E45	07	14.7		33	0	0	E	LEAR		
11	LPS	0135E	0500D	S22	E88	07	17.8			0	0	E	PALE		
11	BSL	0437E	0640D	N27	W90	07	4.2	1				C	ABST		
11	BSL	0437E	0902D	S20	E90	07	18.1	1				C	ABST		
11	ADF	0452E	1412D	N21	W15	07	10.0	1	06	0	0	E	SVTO	5069	
11	AFS	0457E	1811D	N25	E30	07	13.5		02	9	9	E	SVTO	5071	
11	ASR	0502E	1315D	S19	E90	07	18.1			9	9	E	SVTO	5074	
11	BSL	0933	0942	N45	W90	07	3.9	1-				C	CATA		
11	BSL	1120E	1145D	S19	E90	07	18.3			9	9	E	SVTO	5074	
11	AFS	1555E	2125D	N21	W21	07	10.0		02	9	9	E	RAMY	5069	
11	DSD	1555E	2125D	N25	E24	07	13.5		02	9	9	E	RAMY	5071	
11	ADF	1555E	2125D	N28	W18	07	10.2	2	07	9	9	E	RAMY	5069	
11	ASR	1555E	2125D	S20	E82	07	17.9			9	9	E	RAMY	5074	
11	ASR	1807E	0444D	S21	E84	07	18.2			9	9	E	PALE	5074	
11	ADF	1904E	0145D	N28	E24	07	13.7	1	03	9	9	E	HOLL	5071	
11	SDF	2015E	2059D	S17	E32	07	14.3		30	0	0	E	HOLL		
11	ASR	2110	0145D	S20	E86	07	18.4			9	9	E	HOLL	5074	
11	AFS	2130E	0145D	N25	E22	07	13.6		03	9	9	E	HOLL	5071	
11	AFS	2259E	0444D	N23	E20	07	13.5		02	9	9	E	PALE	5071	
11	AFS	2333E	0722D	N23	E22	07	13.7		03	9	9	E	LEAR	5071	
11	ASR	2333E	0722D	S88	E16	07	13.5			9	9	E	LEAR	5074	
11	ADF	2340E	0145D	S26	W46	07	8.4		07	5	8	E	HOLL		
12	AFS	0010E	0145D	S29	E12	07	12.9		02	9	9	E	HOLL	5073	
12	AFS	0010E	0145D	S29	E13	07	13.0		02	9	9	E	HOLL	5073	
12	BSL	0746	0750	N68	W90	07	4.2	1-				C	CATA		
12	BSL	0747E	0820D	N06	E90	07	19.1	1				C	ABST		
12	BSL	0747E	0911D	S04	E90	07	19.0	1				C	ABST		
12	BSL	1100	1116	S83	W90	07	4.1	1-				C	CATA		
12	BSL	1136	1136D	N68	E90	07	20.6	1-				C	CATA		
12	AFS	1302E	2151D	N28	E03	07	12.8		02	9	9	E	RAMY	5073	
12	DSD	1302E	2151D	N28	E06	07	13.0		02	9	9	E	RAMY	5073	
12	AFS	1351E	2151D	N23	E12	07	13.5		02	9	9	E	RAMY	5071	
12	SDF	2101E	1821D	N35	E41	07	16.1		09	0	0	E	PALE		
13	BSL	0649E	0900D	S04	W90	07	6.5	1				C	ABST		
13	BSL	0724E	0900D	N20	W90	07	6.4	1				C	ABST		
13	BSL	0724E	0900D	N50	E90	07	20.9	1				C	ABST		
13	BSL	0726	0745D	S25	E90	07	20.3	2				C	CATA		
13	BSL	0731	0745D	S20	E90	07	20.2	1-				C	CATA		
13	BSL	0803E	0952D	S30	E90	07	20.4	2				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
13	AFS	0930E	1717D	S19	E63	07	18.2		03	9	9	E	SVTO	5075	
13	ADF	1345E	2142D	N23	E01	07	13.6	1	04	9	9	E	RAMY	5071	
13	AFS	1345E	2142D	S22	E59	07	18.1		02	9	9	E	RAMY	5075	
14	AFS	0158E	0422D	S22	E54	07	18.2		03	9	9	E	PALE	5075	
14	AFS	0200E	0911D	N24	W09	07	13.4		02	9	9	E	LEAR	5071	
14	AFS	0318E	0422D	N25	W06	07	13.7		02	9	9	E	PALE	5071	
14	AFS	0505E	1719D	N24	W08	07	13.6		02	9	9	E	SVTO	5071	
14	DSD	0650E	0730D	N24	W15	07	13.1		04	9	9	E	SVTO	5071	
14	BSL	0730	0740	N68	E90	07	22.4	1-				C	CATA		
14	DSD	0830E	1719D	N24	W52	07	10.3		03	9	9	E	SVTO	5069	
14	DSD	0930E	1719D	N27	W17	07	13.1		04	9	9	E	SVTO	5073	
14	AFS	0930E	1719D	S20	E50	07	18.2		04	9	9	E	SVTO	5075	
14	BSL	0957E	1000D	N89	E90	07	22.8	1-				C	CATA		
14	AFS	1158E	1801D	S22	E48	07	18.2		03	9	9	E	RAMY	5075	
14	ADF	1335E	1801D	N28	W53	07	10.4	1	09	9	9	E	RAMY	5069	
14	AFS	1339E	1801D	N23	W12	07	13.6		02	7	5	E	RAMY	5071	
14	DSD	2311E	2345D	S23	E36	07	17.7		06	9	9	E	PALE	5075	
15	AFS	0230E	0937D	S22	E40	07	18.2		02	9	6	E	LEAR	5075	
15	BSL	0456E	0734D	N05	E90	07	21.9	1				C	ABST		
15	BSL	0456E	0734D	S26	E90	07	22.2	1				C	ABST		
15	BSL	0735	0745	N84	E90	07	23.7	1-				C	CATA		
15	BSL	0801	0812	S86	W90	07	6.9	1-				C	CATA		
15	DSD	0910	0920D	S27	E30	07	17.7	1				C	CATA		
15	SDF	1140E	0649D	S16	W35	07	12.8	1				C	CATA		
15	APR	1235E	2052D	S24	E84	07	22.0	1		9	9	E	RAMY		
15	AFS	1310E	2052D	S24	E35	07	18.2		04	9	9	E	RAMY	5075	
15	AFS	1505E	2052D	S25	W27	07	13.5		02	8	7	E	RAMY	5071	
15	AFS	2305E	0500D	S23	E29	07	18.2		03	9	9	E	PALE	5075	
15	AFS	2352E	0500D	N24	W31	07	13.6		02	7	7	E	PALE	5071	
16	AFS	0225E	0934D	N28	W43	07	12.7		03	9	9	E	LEAR	5071	
16	AFS	0225E	0934D	S19	E25	07	18.0		02	9	9	E	LEAR	5075	
16	AFS	0231E	0500D	S16	E32	07	18.5		02	9	9	E	PALE	5075	
16	ADF	0611E	1308D	N28	W51	07	12.3	1	04	9	9	E	SVTO	5073	
16	SDF	0634	0756	N42	E35	07	19.1	1				V	KHAR		
16	APR	0635	0725D	N35	E90	07	23.5	1				V	KHAR		
16	BSL	0716E	0800D	S20	E90	07	23.2	1				C	CATA		
16	DSD	0718	0750D	S18	E19	07	17.7	1				V	KHAR		
16	BSL	0731E	0745	S20	E90	07	23.2	1				V	KHAR		
16	ASR	0830E	0934D	N18	E90	07	23.2			9	9	E	LEAR		
16	ASR	0830E	0934D	S15	E90	07	23.2			9	9	E	LEAR		
16	BSL	0840	0920	S20	E90	07	23.2	1				V	KHAR		
16	DSD	0940E	1535D	S19	E17	07	17.7		08	9	9	E	SVTO	5075	
16	DSD	1138E	1955D	S20	E14	07	17.5		03	9	9	E	RAMY	5075	
16	ASR	1220	1535D	S19	E90	07	23.4			9	9	E	SVTO		
16	AFS	1228E	1535D	S14	E27	07	18.5		04	9	9	E	SVTO	5075	
16	DSD	1300E	2203D	S20	E14	07	17.6		03	9	9	E	HOLL	5075	
16	ASR	1301E	1535D	N19	W90	07	9.7			9	9	E	SVTO	5069	
16	AFS	1311E	2145D	S15	E27	07	18.6		03	9	8	E	RAMY	5076	
16	AFS	1327E	2203D	S15	E26	07	18.5		03	9	9	E	HOLL	5076	
16	AFS	1702E	2203D	N23	W41	07	13.5		03	9	9	E	HOLL	5071	
16	DSD	1708	1955D	S14	E23	07	18.4		05	8	9	E	RAMY	5076	Flare Associated
16	DSD	2002E	0455D	S20	E09	07	17.5		03	9	9	E	PALE	5075	
17	ADF	0005E	0752D	S16	E21	07	18.6	1	05	9	9	E	LEAR	5076	
17	ASR	0005E	0752D	S22	E79	07	23.1			9	9	E	LEAR		
17	AFS	0005E	0937D	S21	E07	07	17.5		02	9	9	E	LEAR	5075	
17	BSL	0548E	0621D	N26	W90	07	10.2	1				C	ABST		
17	ADF	0730E	1750D	N22	W50	07	13.5	1	06	9	9	E	SVTO	5071	
17	AFS	0752E	0937D	S16	E16	07	18.5		04	9	9	E	LEAR	5076	
17	ADF	0822	0953D	S13	E28	07	19.5	1				V	KHAR		
17	SDF	1125E	0630D	N08	E01	07	17.5	1				C	CATA		
17	AFS	1130E	1455D	N30	W61	07	12.7		02	9	9	E	RAMY	5073	
17	ADF	1130E	1735D	S17	E12	07	18.4	1	03	9	9	E	RAMY	5076	
17	ADF	1130E	1754D	S26	E09	07	18.2	1	04	9	9	E	RAMY	5075	
17	DSD	1419	1517D	S20	E02	07	17.7		02	9	9	E	RAMY	5075	Flare Associated
17	SDF	1750E	0717D	S02	W03	07	17.5		08	0	0	E	SVTO		
17	DSD	1920E	0014D	S21	E00	07	17.8		04	8	5	E	HOLL	5075	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
17	APR	1921E	0014D	N12	W90	07	11.0	1		8	8	E	HOLL	5072	
18	AFS	0230E	0931D	S24	E00	07	18.1		01	9	9	E	LEAR	5075	
18	BSL	0433E	0643D	N19	W90	07	11.3	1				C	ABST		
18	BSL	0821	0821D	S78	W90	07	10.0	1-				C	CATA		
18	AFS	1050E	1658D	S18	W24	07	16.6		02	9	9	E	SVTO	5079	
18	BSD	1053	1338D	N28	W74	07	12.7		02	9	9	E	RAMY	5073	Flare Associated
18	BSD	1053	1110	N26	W77	07	12.5		02	9	9	E	SVTO	5073	
18	AFS	1124E	2219D	N18	W24	07	16.6		02	9	9	E	RAMY		
18	ADF	1147E	2219D	N22	W63	07	13.6		02	9	9	E	RAMY	5071	
18	DSD	1256E	1658D	S24	W10	07	17.8		03	9	9	E	SVTO	5075	
18	DSD	1356E	2205D	S20	W08	07	18.0		02	9	9	E	RAMY	5075	
18	DSD	1356E	2205D	S20	W13	07	17.6		03	9	9	E	RAMY	5075	
18	ADF	1356E	2219D	S25	W05	07	18.2		04	9	9	E	RAMY	5075	
18	DSD	1541	1658	S21	W13	07	17.6		08	9	9	E	SVTO	5075	
18	DSD	1640E	2132D	S21	W18	07	17.3		08	9	9	E	RAMY	5075	Flare Associated
18	LPS	1709	1727	N26	W85	07	12.1			9	9	E	SVTO	5073	
18	SDF	1756E	0650D	S31	E51	07	22.8		26	0	0	E	SVTO		
18	DSD	1909E	0459D	S19	W14	07	17.7		05	9	9	E	PALE	5075	
18	ASR	2001	0013D	N29	W80	07	12.6			8	9	E	HOLL	5073	
18	AFS	2121E	0026D	S19	W11	07	18.0		03	9	9	E	PALE	5075	
18	DSD	2142E	0022D	S22	W06	07	18.4	1	08	9	9	E	PALE	5075	
18	ASR	2150E	0459D	N29	W82	07	12.5			9	9	E	PALE	5073	
18	DSD	2225E	0013D	S22	W14	07	17.8		07	7	9	E	HOLL	5075	
19	ASR	0115E	0932D	N28	W82	07	12.6			9	9	E	LEAR	5073	
19	ADF	0330E	0932D	S21	W21	07	17.5	2	03	8	7	E	LEAR	5075	
19	BSL	0559E	0815D	N40	W90	07	11.9	1				C	ABST		
19	BSL	0628E	0815D	S45	W90	07	11.8	1				C	ABST		
19	AFS	0655E	1140D	S20	W20	07	17.7		01	9	9	E	SVTO	5075	
19	AFS	0655E	1140D	S25	W11	07	18.4		01	9	9	E	SVTO	5075	
19	AFS	0655E	1741D	S18	E48	07	22.9		01	9	9	E	SVTO	5077	
19	BSL	0745	0810D	N31	W90	07	12.2	1-				C	CATA		
19	BSL	0912	0916	N84	E90	07	27.8	1-				C	CATA		
19	DSD	1012	1030	S20	W26	07	17.4	1				C	CATA		
19	ASR	1140	1741D	N26	W90	07	12.5			9	9	E	SVTO	5073	
19	ASR	1145E	2136D	N28	W85	07	12.8			9	9	E	RAMY	5073	
19	ADF	1145E	2136D	S24	W24	07	17.6	2	05	9	9	E	RAMY	5075	
19	ADF	1145E	2136D	S26	W16	07	18.2	1	06	9	9	E	RAMY	5075	
19	DSD	1225E	1415D	S20	W26	07	17.5		03	9	9	E	RAMY	5075	Flare Associated
19	DSD	1228	1253D	S21	W24	07	17.7		04	9	9	E	SVTO	5075	
19	ADF	1353E	2136D	S16	W13	07	18.6	1	05	9	9	E	RAMY	5076	
19	ASR	1411E	2215D	N28	W88	07	12.7			8	9	E	HOLL	5073	
19	SSB	1556		258	W28	07	24.2			0	0	E	HOLL		
19	ASR	1753E	0405D	N28	W90	07	12.7			9	9	E	PALE	5073	
19	SSB	1813		256	W28	07	24.1			0	0	E	PALE		
19	SDF	1920E	1820D	S27	E38	07	22.8		16	0	0	E	PALE		
19	DSD	2013E	2055D	S15	W43	07	16.6		03	9	9	E	RAMY	5079	
19	AFS	2013E	2136D	S17	W45	07	16.4		02	9	9	E	RAMY	5079	
19	AFS	2020E	2215D	S17	W45	07	16.4		02	9	9	E	HOLL	5079	
19	AFS	2121E	0026D	S19	W11	07	19.0		03	9	9	E	PALE	5075	
19	LPS	2200E	2337D	N28	W90	07	12.9			8	9	E	PALE	5073	
19	ASR	2321E	0938D	N28	W83	07	13.5			8	8	E	LEAR	5073	
20	AFS	0400E	0938D	S17	W50	07	16.4		02	9	9	E	LEAR	5079	
20	AFS	0455E	1730D	S22	W12	07	19.3		01	9	9	E	SVTO		
20	ASR	0456E	1730D	N22	W90	07	13.3			9	9	E	SVTO	5071	
20	AFS	0457E	1730D	S19	W50	07	16.4		01	9	9	E	SVTO	5079	
20	ASR	0620E	0938D	N22	W90	07	13.3			9	9	E	LEAR	5071	
20	ADF	0620E	0938D	N44	W10	07	19.4	2	23	8	8	E	LEAR		
20	BSL	0641	0641D	S23	E90	07	27.2	1-				C	CATA		
20	EPL	0653E	1030D	S40	E90	07	27.6	3				C	CATA		
20	DSD	0738	0902D	S25	W25	07	18.4		02	9	9	E	SVTO	5075	
20	BSL	0744E	0756D	S40	E90	07	27.6	1				C	ABST		
20	BSL	0756E	0756D	S07	E90	07	27.1	1				C	ABST		
20	ASR	0811E	0938D	S20	E90	07	27.2			9	8	E	LEAR		
20	ASR	0930E	1730D	S23	E90	07	27.3			8	8	E	SVTO		
20	DSD	1417	1546	S22	W39	07	17.6		16	9	9	E	RAMY	5075	Flare Associated
20	DSD	1419	1528	S24	W39	07	17.6		08	9	9	E	SVTO	5075	Flare Associated
20	ADF	1425E	2125D	S17	W27	07	18.5	1	08	8	9	E	RAMY	5076	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
20	AFS	1431E	2125D	N25	E20	07	22.1		02	8	7	E	RAMY		
20	ADF	1434E	2045D	S17	W37	07	17.8	1	07	8	7	E	RAMY	5075	
20	ADF	1434E	2125D	S24	W36	07	17.8	1	09	9	9	E	RAMY	5075	
20	AFS	1445E	2125D	S17	W54	07	16.5		03	9	9	E	RAMY	5079	
20	ASR	1629	2125D	S23	W90	07	13.7			9	9	E	RAMY	5071	
20	DSD	1659E	1740D	S18	W53	07	16.7		02	9	9	E	RAMY	5079	
20	DSD	1840E	1940D	S16	W57	07	16.4		03	9	9	E	RAMY	5079	
20	DSD	1849	1920D	S20	W44	07	17.4		17	9	9	E	RAMY	5075	Flare Associated
20	DSD	1940E	2122D	S18	W55	07	16.6		04	9	9	E	RAMY	5079	
20	AFS	2117E	0355D	N25	E16	07	22.1		02	6	6	E	PALE	5082	
20	AFS	2300E	0114D	S17	W58	07	16.5		02	6	8	E	HOLL	5079	
20	DSD	2302E	0114D	S21	W48	07	17.3		08	9	9	E	HOLL	5075	
20	SDF	2348	0058D	S22	W46	07	17.4		07	9	9	E	LEAR	5075	
21	AFS	0000E	0922D	S22	W26	07	19.0		03	9	9	E	LEAR	5081	
21	AFS	0005E	0922D	N24	E15	07	22.2		02	9	9	E	LEAR	5082	
21	AFS	0005E	0922D	S18	W58	07	16.6		02	9	9	E	LEAR	5079	
21	SDF	0145E	0234D	S17	W46	07	17.6		04	9	9	E	LEAR	5075	
21	ASR	0212E	0455D	S23	E88	07	27.9			9	9	E	PALE		
21	AFS	0523E	0922D	S23	E25	07	23.1		06	9	9	E	LEAR	5077	
21	ADF	0627E	1757D	S23	W28	07	19.1	1	07	9	9	E	SVTO	5081	
21	ADF	0629E	1757D	S28	W41	07	18.1	1	09	9	9	E	SVTO	5075	
21	AFS	0630E	1757D	N25	E11	07	22.1		03	9	9	E	SVTO	5082	
21	ADF	0631E	1344D	S19	W39	07	18.3	1	06	9	9	E	SVTO	5076	
21	BSL	0725E	0734D	S26	E90	07	28.3	2				C	CATA		
21	DSD	0811E	0854D	S22	W52	07	17.3		12	9	9	E	LEAR	5075	
21	DSD	0815E	0824D	S25	W55	07	17.1	1				C	CATA		
21	BSL	0837E	0850D	S67	E90	07	29.5	1-				C	CATA		
21	BSL	1040E	1045D	S66	E90	07	29.5	1-				C	CATA		
21	DSD	1055	1112	S25	W52	07	17.4	1				V	KHAR		
21	DSD	1120	1130D	S25	W52	07	17.4	1				V	KHAR		
21	AFS	1251E	2020D	S17	W66	07	16.5		02	8	7	E	RAMY	5079	
21	DSD	1251E	2156D	S21	W52	07	17.5		03	9	9	E	RAMY	5075	
21	AFS	1251E	2207D	N24	E08	07	22.1		02	9	9	E	RAMY	5082	
21	ADF	1251E	2207D	S17	W41	07	18.4	2	03	9	9	E	RAMY	5076	
21	AFS	1251E	2207D	S21	W30	07	19.2		01	9	9	E	RAMY	5081	
21	ADF	1251E	2207D	S26	W41	07	18.4	2	08	9	9	E	RAMY	5075	
21	DSD	1320E	1522D	S20	W54	07	17.4		06	9	9	E	HOLL	5075	
21	AFS	1320E	1910D	S17	W67	07	16.5		02	7	8	E	HOLL	5079	
21	DSD	1328E	1400	S24	W53	07	17.5		05	9	9	E	SVTO	5075	
21	AFS	1459E	0203D	N25	E07	07	22.2		02	6	6	E	HOLL	5082	
21	DSD	1600E	1658D	S23	W55	07	17.4		06	9	9	E	SVTO	5075	
21	DSD	1720E	2156D	S16	W70	07	16.4		02	9	9	E	RAMY	5079	
21	ASR	1822E	2100D	S19	E89	07	28.5			9	9	E	PALE		
21	EPL	1901E	1958D	S18	E88	07	28.5			9	9	E	PALE		
21	AFS	2114E	0455D	N24	E04	07	22.2		02	9	9	E	PALE	5082	
21	ASR	2216E	2335D	S21	W35	07	19.2			9	9	E	PALE	5081	
21	AFS	2252E	0455D	S21	W35	07	19.3		02	9	9	E	PALE	5081	
21	ASR	2347E	0136D	S18	E88	07	28.7			9	9	E	PALE		
21	ASR	2355E	0057D	S18	E89	07	28.8			9	9	E	HOLL		
22	DSD	0118E	0203D	S16	W60	07	17.5		04	9	9	E	HOLL	5079	Flare Associated
22	ASR	0143E	0203D	S18	E89	07	28.8			9	9	E	HOLL		
22	ASR	0153E	0455D	S17	W72	07	16.6			9	9	E	PALE	5079	
22	ASR	0212E	0455D	S23	E88	07	28.9			9	9	E	PALE		
22	ASR	0405E	0939D	N12	E90	07	28.9			9	9	E	LEAR		
22	AFS	0405E	0939D	S23	W42	07	18.9		05	9	9	E	LEAR	5081	
22	ADF	0600E	1751D	S22	W42	07	19.0	1	07	9	9	E	SVTO	5081	
22	AFS	0600E	1751D	S23	W40	07	19.2		02	9	9	E	SVTO	5081	
22	AFS	0608E	1751D	S23	W56	07	17.9		03	9	9	E	SVTO	5075	
22	ADF	0608E	1751D	S28	W57	07	17.8	1	08	9	9	E	SVTO	5075	
22	ADF	0613E	1228D	S19	W51	07	18.4	1	05	9	9	E	SVTO	5076	
22	ASR	0614E	1751D	S16	E90	07	29.1	1		9	9	E	SVTO		
22	BSL	0703E	0706D	S19	W90	07	15.4	1-				C	CATA		
22	BSL	0749	0800	S24	W90	07	15.4	1-				C	CATA		
22	BSL	0822E	0829	S23	W90	07	15.4	1-				C	CATA		
22	BSL	0822E	0846	S25	W90	07	15.4	1-				C	CATA		
22	BSL	0831	0846	S23	W90	07	15.4	1-				C	CATA		
22	BSL	0910	0915D	S24	W90	07	15.4	1-				C	CATA		
22	BSL	1019	1030	S22	W90	07	15.5	1-				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
22	ASR	1119E	1915D	S20	E90	07	29.3			9	9	E	RAMY		
22	ASR	1321E	0152D	S17	W85	07	16.1			9	9	E	HOLL	5079	
22	SSB	1359		191	W65	07	30.7			0	0	E	HOLL		
22	AFS	1412E	0152D	S22	W09	07	21.9		02	9	9	E	HOLL		
22	ADF	1447E	1915D	S25	W58	07	18.1	1	08	9	9	E	RAMY	5075	
22	ASR	1503E	1915D	S21	W90	07	15.7			9	9	E	RAMY	5079	
22	ADF	1539E	1915D	S25	W43	07	19.3	1	10	9	9	E	RAMY	5081	
22	ADF	1545E	1915D	S23	W09	07	22.0		02	6	6	E	RAMY		
22	AFS	1709E	0453D	N25	W08	07	22.1		02	9	9	E	PALE	5082	
22	ASR	1727E	1801	S21	E88	07	29.5			9	9	E	PALE	5084	
22	AFS	1930E	0040D	S31	E21	07	24.5		02	7	7	E	HOLL	5086	
22	ASR	2015E	0152D	N12	E90	07	29.6			9	9	E	HOLL	5085	
22	ASR	2020	0152D	S28	E90	07	29.9			9	9	E	HOLL	5084	
22	ASR	2021E	0453D	N12	E90	07	29.6			9	9	E	PALE	5085	
22	ASR	2347E	0136D	S18	E88	07	29.7			9	9	E	PALE		
23	AFS	0500E	0940D	N21	W25	07	21.3		02	9	9	E	LEAR		
23	ASR	0500E	0940D	S17	W90	07	16.4			9	9	E	LEAR	5074	
23	AFS	0500E	0940D	S23	W04	07	22.9		02	9	9	E	LEAR	5077	
23	SDF	0615E	0800D	S14	W51	07	19.4		13	0	0	E	LEAR		
23	BSL	0630E	0630D	N85	E90	07	31.7	1-				C	CATA		
23	ADF	0643E	1737D	S19	E81	07	29.5	1	06	9	9	E	SVTO	5084	
23	ADF	0644E	1737D	S28	W72	07	17.6	1	08	9	9	E	SVTO	5075	
23	ASR	0654	0733D	S18	W51	07	19.4	1				V	KHAR		
23	BSL	0716	0750	S27	W90	07	16.3	1-				C	CATA		
23	BSL	0732	0744	S33	W90	07	16.2	1-				C	CATA		
23	AFS	0815E	1737D	N20	W28	07	21.2		03	9	9	E	SVTO		
23	AFS	0815E	1737D	S23	W16	07	22.1		02	9	9	E	SVTO		
23	BSL	0828	0845	S27	W90	07	16.3	1-				C	CATA		
23	BSL	0932E	0945D	N54	W90	07	15.6	1				C	CATA		
23	BSL	0932E	0945D	S27	W90	07	16.4	1				C	CATA		
23	BSL	0935	0944	N73	E90	07	31.6	1-				C	CATA		
23	BSL	0935	0945D	S22	W90	07	16.5	1-				C	CATA		
23	BSL	1006E	1040D	N15	E90	07	30.2	2				C	CATA		
23	BSL	1022	1030	S27	W90	07	16.4	1-				C	CATA		
23	ASR	1030	1235D	S20	E90	07	30.3			9	9	E	SVTO	5084	
23	BSL	1037	1040D	S26	W90	07	16.4	1-				C	CATA		
23	BSL	1101E	1140D	N14	E90	07	30.3	2				C	CATA		
23	AFS	1240E	0044D	N22	W30	07	21.2		03	9	9	E	HOLL		
23	AFS	1240E	0044D	N24	W20	07	22.0		02	9	9	E	HOLL	5082	
23	AFS	1240E	0044D	S22	W22	07	21.8		03	9	9	E	HOLL		
23	DSD	1520E	2030D	N12	E64	07	28.5		02	9	9	E	RAMY	5085	Flare Associated
23	AFS	1520E	2126D	S23	W23	07	21.9		02	9	9	E	RAMY	5087	
23	ADF	1520E	2126D	S27	W73	07	17.9	1	04	9	9	E	RAMY	5075	
23	DSD	1520E	1737D	N14	E65	07	28.5		03	9	9	E	SVTO	5085	
23	ASR	1645E	1745D	S27	E87	07	30.5			8	8	E	HOLL	5084	
23	ASR	1648E	2126D	S22	W88	07	16.9			9	9	E	RAMY	5075	
23	AFS	1735E	2126D	N24	W21	07	22.1		02	9	9	E	RAMY	5082	
23	DSD	1742	1920D	N12	E63	07	28.5		03	9	9	E	HOLL	5085	Flare Associated
23	ASR	1757E	0044D	S20	W88	07	17.0			7	8	E	HOLL	5075	
23	AFS	1800E	0455D	N25	W20	07	22.2		02	9	9	E	PALE	5082	
23	AFS	1800E	0455D	S22	W22	07	22.0		02	9	9	E	PALE	5087	
23	ASR	2345E	0615D	S20	W77	07	18.1			9	9	E	LEAR	5075	
24	AFS	0238E	0615D	N24	W26	07	22.1		02	9	9	E	LEAR	5082	
24	AFS	0245E	0615D	N19	W35	07	21.4		02	9	9	E	LEAR	5088	
24	ADF	0535E	1730D	S19	E67	07	29.3	1	05	9	9	E	SVTO	5084	
24	AFS	0542E	1730D	N24	W27	07	22.1		03	9	9	E	SVTO	5082	
24	AFS	0627E	1730D	S20	W31	07	21.9		03	5	5	E	SVTO	5087	
24	BSL	0656	0745	S15	W90	07	17.5	1-				C	CATA		
24	BSL	0814	0830	S13	W90	07	17.5	1-				C	CATA		
24	BSL	0915	0935	S20	W90	07	17.5	1-				C	CATA		
24	ASR	0920E	1730D	S22	W90	07	17.5			9	9	E	SVTO	5075	
24	EPL	0930	1135	N37	W90	07	17.1	3				C	CATA		
24	AFS	1102E	1830D	N24	W29	07	22.2		02	8	7	E	RAMY	5082	
24	ADF	1102E	1830D	S17	E52	07	28.4	2	19	9	9	E	RAMY	5084	
24	SDF	1135E	0657D	N50	W18	07	22.9	3				C	CATA		
24	DSD	1216	1244D	N15	E58	07	28.9		05	9	9	E	SVTO	5085	Flare Associated
24	DSD	1220E	1440D	N13	E58	07	28.9		03	9	9	E	RAMY	5085	Flare Associated
24	LPS	1316E	1333	S21	W88	07	17.8			9	9	E	HOLL	5075	

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
24	LPS	1316	1350	S23	W87	07	17.8			9	9	E	SVTO	5075	
24	ASR	1420E	2243D	S21	W88	07	17.8			7	7	E	HOLL	5075	
24	SDF	1730E	0930D	N36	W01	07	24.6		58	0	0	E	SVTO		
24	ADF	1845E	2243D	S18	E56	07	29.0	1	09	9	9	E	HOLL	5084	
24	ADF	1845E	2243D	S27	E66	07	29.9	1	17	9	9	E	HOLL	5084	
24	SDF	2310E	2255D	N48	E05	07	25.4		65	0	0	E	PALE		
25	ASR	0055E	0931D	S15	W84	07	18.7			9	9	E	LEAR	5075	
25	AFS	0115E	0931D	N21	E26	07	27.0		02	9	9	E	LEAR		
25	AFS	0125E	0931D	N14	E51	07	28.9		03	9	9	E	LEAR	5085	
25	ADF	0135E	0931D	N13	E70	07	30.3	1	05	7	9	E	LEAR		
25	ADF	0150E	0931D	S19	E51	07	29.0	1	11	9	9	E	LEAR	5084	
25	ADF	0520E	1721D	S16	E44	07	28.5	1	28	9	9	E	SVTO	5084	
25	ADF	0525E	0550D	N15	E60	07	29.8	1	03	9	9	E	SVTO		
25	ADF	0525E	1721D	N20	E52	07	29.2	1	05	9	9	E	SVTO	5085	
25	DSD	0536	0615	N13	E60	07	29.8		16	9	9	E	LEAR		
25	SDF	0550	0550	N15	E60	07	29.8		03	9	9	E	SVTO		Flare Associated
25	DSD	0550E	0620D	N17	E61	07	29.9		15	9	9	E	SVTO		Flare Associated
25	ADF	0634E	0645D	N18	E51	07	29.1	1				V	KHAR		
25	AFS	0642E	1721D	N22	W43	07	22.0	1	03	8	5	E	SVTO	5082	
25	BSL	0657E	0705D	S12	W90	07	18.5	1-				C	CATA		
25	ADF	0657E	0758D	S22	E54	07	29.4	1				V	KHAR		
25	BSL	0715E	0732	S12	W90	07	18.5	1-				C	CATA		
25	BSL	0715	0728	S12	W90	07	18.5	1				V	KHAR		
25	BSL	0744	0808	N76	E90	08	2.6	1-				C	CATA		
25	BSL	0756E	0819D	S13	W90	07	18.5	1-				C	CATA		
25	BSL	0808	0819D	S40	W90	07	18.0	1-				C	CATA		
25	ADF	0810E	1721D	S23	W47	07	21.7	1	04	9	9	E	SVTO	5087	
25	BSL	0829E	0850D	S41	W90	07	18.0	1-				C	CATA		
25	BSL	0902E	0910D	N30	E90	08	1.4	1				C	CATA		
25	APR	0935	1000	S20	W90	07	18.5	1				V	KHAR		
25	LPS	0943E	1000D	S31	W90	07	18.3			9	9	E	SVTO		
25	BSL	1002E	1015D	S13	W90	07	18.6	2				C	CATA		
25	BSL	1051	1100	S12	W90	07	18.7	1				C	CATA		
25	DSD	1058E	1735D	S23	W46	07	21.9		02	9	9	E	RAMY	5087	
25	ADF	1058E	2033D	S18	E40	07	28.5	2	14	9	9	E	RAMY	5084	
25	ADF	1058E	2033D	S21	E53	07	29.5	2	09	9	9	E	RAMY	5084	
25	BSL	1115	1130	S78	E90	08	2.8	1-				C	CATA		
25	AFS	1137E	1720D	N22	W45	07	22.0		02	8	8	E	RAMY	5082	
25	ASR	1150E	2033D	S21	W86	07	18.9			9	9	E	RAMY	5075	
25	ADF	1304E	0016D	S31	E66	07	30.7	1	10	9	9	E	HOLL	5084	
25	ADF	1339E	0016D	S20	E52	07	29.5	1	14	9	9	E	HOLL	5084	
25	ASR	1416	1940D	S20	W88	07	18.9			8	9	E	HOLL	5075	
25	AFS	1420E	1757D	S21	W52	07	21.6		01	9	9	E	HOLL	5087	
25	DSD	1425	1429D	S23	W39	07	22.6		04	7	9	E	HOLL	5077	Flare Associated
25	DSD	1438E	1558D	S21	W37	07	22.8		02	9	9	E	RAMY	5077	
25	ASR	1520	1540	S24	W90	07	18.7			9	9	E	SVTO		
25	LPS	1524	1608D	S24	W90	07	18.7	1		9	9	E	SVTO		
25	BSL	1537E	1619	S22	W90	07	18.7			9	9	E	HOLL	5075	Flare Associated
25	BSL	1539E	1615D	S22	W90	07	18.7			9	9	E	RAMY	5075	
25	BSL	1540	1608	S25	W90	07	18.7	1		9	9	E	SVTO		
25	SDF	1600E	1616D	N50	W03	07	25.4		70	0	0	E	HOLL		
25	DSD	1637	1752D	S25	E48	07	29.4		03	9	9	E	HOLL	5084	
25	DSD	1935	2220D	S29	E56	07	30.2		46	9	9	E	HOLL	5084	Flare Associated
26	ASR	0015E	0923D	N25	E90	08	2.0			9	9	E	LEAR		
26	APR	0015E	0923D	N30	E90	08	2.1	1		9	9	E	LEAR		
26	AFS	0015E	0923D	S21	E47	07	29.6		01	9	9	E	LEAR	5084	
26	ADF	0015E	0923D	S22	E47	07	29.6	1	13	9	9	E	LEAR	5084	
26	ASR	0025	0923D	S21	W90	07	19.1			9	9	E	LEAR	5081	
26	BSL	0428E	0800D	N25	E90	08	2.1	1				C	ABST		
26	BSL	0428E	0800D	S20	W90	07	19.3	1				C	ABST		
26	BSL	0428E	0800D	S20	W90	07	19.3	1				C	ABST		
26	BSL	0630E	0735D	S20	W90	07	19.4	1				C	CATA		
26	BSL	0651	0700	N89	W90	07	17.9	1-				C	CATA		
26	BSL	0655	0735	S19	W90	07	19.4	1-				C	CATA		
26	ASR	0720E	1703D	N27	E90	08	2.3			9	9	E	SVTO		
26	ADF	0722E	1703D	S17	E30	07	28.6	1	14	9	9	E	SVTO	5084	
26	ASR	0724E	1703D	S23	W90	07	19.4			9	9	E	SVTO	5081	
26	BSL	0750E	0801	S20	W90	07	19.4	1-				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
26	BSL	0800E	1003D	N27	E90	08	2.3	1				V	KHAR		
26	BSL	0805	0841	S21	W90	07	19.4	1-				C	CATA		
26	BSL	0814	0841	S19	W90	07	19.5	1-				C	CATA		
26	SDF	0923E	0001D	S40	W05	07	26.0		45	0	0	E	LEAR		
26	SDF	0946E	0625D	S46	E22	07	28.2	2				C	CATA		
26	ADF	1028E	1045D	S20	E38	07	29.3	1				V	KHAR		
26	AFS	1045E	1703D	S24	W38	07	23.5		02	8	8	E	SVTO	5080	
26	ASR	1308E	2253D	N27	E87	08	2.3			9	8	E	HOLL		
26	ADF	1316E	0127D	S20	E34	07	29.1	1	04	9	9	E	HOLL	5084	
26	ASR	1409E	1626D	S21	W88	07	19.8			6	7	E	HOLL		
26	AFS	1534E	1625D	S23	W42	07	23.4		01	5	9	E	HOLL	5091	
26	AFS	1624	2253D	N16	E47	07	30.2		01	8	8	E	HOLL	5090	
26	SDF	1703E	0504D	S37	W03	07	26.5		52	0	0	E	SVTO		
26	ASR	1712E	1737D	S22	W88	07	19.9			9	9	E	PALE	5081	
26	ADF	1750E	0457D	S36	E63	07	31.8	1	12	9	9	E	PALE	5084	
27	SDF	0103E	1410D	S38	W16	07	25.8		42	0	0	E	HOLL		
27	AFS	0235E	0747D	S32	E24	07	29.0		02	9	9	E	LEAR	5084	
27	ASR	0247E	0457D	N24	E89	08	3.0			9	9	E	PALE	5092	
27	ASR	0250E	0747D	N26	E87	08	2.9			9	9	E	LEAR	5092	
27	BSL	0432E	0801D	N35	E90	08	3.4	1				C	ABST		
27	BSL	0516E	0801D	S30	E90	08	3.3	1				C	ABST		
27	ASR	0700E	1716D	N31	E88	08	3.2			9	9	E	SVTO	5092	
27	AFS	0702E	1716D	N25	W39	07	24.3		02	9	9	E	SVTO		
27	DSD	0924E	0943D	S23	W70	07	22.0	1				V	KHAR		
27	ADF	0924E	1002D	S18	E16	07	28.6	1				V	KHAR		
27	BSL	1040E	1105	N26	E90	08	3.4	1				V	KHAR		
27	APR	1040E	1105	N26	W90	07	20.4	1				V	KHAR		
27	ADF	1204E	2124D	S36	E48	07	31.3	1	22	9	9	E	RAMY	5084	
27	ADF	1205E	2124D	S28	E33	07	30.1	1	05	9	9	E	RAMY	5084	
27	ASR	1259E	2124D	N25	E90	08	3.5			7	8	E	RAMY	5092	
27	AFS	1313E	2124D	N24	W43	07	24.2		02	9	9	E	RAMY	5093	
27	ADF	1423E	1932D	S24	E25	07	29.5	1	08	9	9	E	HOLL	5084	
27	AFS	1640E	1832D	N26	W44	07	24.3		02	8	6	E	HOLL	5093	
27	SDF	1744E	2226D	S48	E30	07	30.3		38	0	0	E	PALE		
27	ASR	2241E	0456D	S20	W75	07	22.2			9	9	E	PALE	5087	
28	ASR	0145E	0936D	S24	W90	07	21.1			7	6	E	LEAR	5087	
28	BSL	0434E	0802D	N26	W90	07	21.2	1				C	ABST		
28	BSL	0434E	0802D	N40	E90	08	4.5	1				C	ABST		
28	AFS	0511E	1720D	N26	W52	07	24.2		02	7	7	E	SVTO	5093	
28	ADF	0517E	1720D	N34	E72	08	2.9	1	12	9	9	E	SVTO	5095	
28	ADF	0523E	1720D	S34	E39	07	31.3	1	13	9	9	E	SVTO	5084	
28	ADF	0524E	1720D	S19	E17	07	29.5	1	14	9	9	E	SVTO	5084	
28	ADF	0720E	0852	S18	E02	07	28.4	1				V	KHAR		
28	ADF	0720E	0940	S34	E38	07	31.3	1				V	KHAR		
28	APR	0927	0940	S20	E90	08	4.3	1				V	KHAR		
28	ADF	0930	0950	S18	E02	07	28.5	1				V	KHAR		
28	BSL	1050E	1140D	S23	W90	07	21.5	1-				C	CATA		
28	DSD	1141E	1430D	N14	E06	07	28.9		02	9	9	E	RAMY	5085	
28	ADF	1300E	1745D	S25	E12	07	29.5	1	10	9	9	E	RAMY	5084	
28	ASR	1400E	1709D	S26	W90	07	21.6			9	9	E	RAMY	5091	
28	AFS	1712E	1745D	N25	W58	07	24.2		02	8	7	E	RAMY	5093	
28	SDF	1744E	2226D	S48	E30	07	31.3		38	0	0	E	PALE		
28	AFS	2230E	2339D	N25	E40	08	1.0		01	9	9	E	HOLL		
29	AFS	0400E	0936D	N13	E09	07	29.8		02	9	9	E	LEAR	5090	
29	AFS	0605E	1707D	N14	E08	07	29.8		03	9	9	E	SVTO	5090	
29	ADF	0607E	1707D	S33	E22	07	31.0	1	13	9	9	E	SVTO	5084	
29	ADF	0609E	1707D	S20	E04	07	29.6	1	15	9	9	E	SVTO	5084	
29	AFS	0612E	1707D	N27	E35	08	1.0		02	9	9	E	SVTO		
29	BSL	0626E	0808D	N40	E90	08	5.6	1				C	ABST		
29	ADF	0650E	0725	S32	E18	07	30.7	1				V	KHAR		
29	ADF	0740	0755	S18	W12	07	28.4	1				V	KHAR		
29	AFS	0750E	0936D	S20	E04	07	29.6		02	9	9	E	LEAR	5084	
29	AFS	1146E	1707D	N27	E33	08	1.1		03	9	9	E	SVTO	5096	
29	ADF	1210E	1510D	N24	E46	08	2.1	1	07	9	9	E	RAMY	5092	
29	ADF	1210E	1510D	N30	E58	08	3.1	1	07	9	8	E	RAMY	5095	
29	DSD	1210E	1630D	S23	W03	07	29.3		02	9	9	E	RAMY	5084	
29	AFS	1210E	1736D	N25	E32	08	1.0		02	9	9	E	RAMY	5096	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
29	ADF	1210E	1736D	S25	E01	07	29.6	1	26	9	9	E	RAMY	5084	
29	AFS	1255E	0023D	N14	E03	07	29.8		03	9	9	E	HOLL	5090	
29	AFS	1255E	2326D	N25	E32	08	1.0		02	9	9	E	HOLL	5096	
29	DSD	1305E	1603D	S04	W25	07	27.7		03	9	9	E	HOLL	5084	Flare Associated
29	ADF	1510E	1630D	N32	E52	08	2.7	1	06	9	9	E	RAMY	5092	
29	DSD	1630E	1736D	N26	E45	08	2.2		04	9	9	E	RAMY	5092	
29	AFS	1809E	0456D	N15	E01	07	29.8		02	9	9	E	PALE	5090	
30	BSL	0451E	0523D	S21	W90	07	23.3	1				C	ABST		
30	BSL	0455	0610	S22	W88	07	23.4			9	9	E	LEAR	5080	
30	ADF	0601E	1320D	S20	W19	07	28.8	1	11	9	9	E	SVTO	5084	
30	ADF	0609E	1320D	N34	E54	08	3.6	1	24	9	9	E	SVTO	5092	
30	ADF	0610E	1718D	N29	E34	08	1.9	1	05	9	9	E	SVTO	5092	
30	DSD	0736	0750	N30	E45	08	2.8	1				V	KHAR		
30	DSD	0800	0807	N25	E22	08	1.0	1				V	KHAR		
30	BSL	0807E	0816	S17	E90	08	6.2	1-				C	CATA		
30	DSD	1006E	1020	N23	E47	08	3.0	1				V	KHAR		
30	AFS	1255E	0023D	N14	E03	07	30.8		03	9	9	E	HOLL	5090	
30	AFS	1300E	2234D	N15	W10	07	29.8		02	9	9	E	HOLL	5090	
30	AFS	1325E	1718D	N14	W11	07	29.7		03	9	9	E	SVTO	5090	
30	ADF	1325E	1718D	N23	E45	08	3.0	1	04	9	9	E	SVTO	5092	
30	ADF	1325E	1718D	S33	E09	07	31.3	1	12	9	9	E	SVTO		
30	ADF	1330E	2234D	S22	E39	08	2.5	1	14	9	9	E	HOLL	5084	
30	AFS	1606E	1820D	S25	E57	08	4.1		01	7	8	E	HOLL		
30	ASR	1617E	2234D	N27	W88	07	23.8			7	7	E	HOLL	5093	
30	AFS	1744E	0455D	N16	W12	07	29.8		03	9	9	E	PALE	5090	
30	AFS	1809E	0456D	N15	E01	07	30.8		02	9	9	E	PALE	5090	
30	ADF	2040E	2234D	N16	W19	07	29.4	1	05	9	9	E	HOLL	5090	
30	ADF	2210E	0200D	S42	W09	07	30.2	1				C	VORO		
31	ADF	0149E	0455D	N12	W36	07	28.4		03	9	9	E	PALE	5085	
31	AFS	0230E	0937D	S22	W19	07	29.6		02	9	9	E	LEAR	5084	
31	AFS	0255E	0937D	N16	W17	07	29.8		03	9	9	E	LEAR	5090	
31	ADF	0509E	1657D	S21	W26	07	29.2	1	07	9	9	E	SVTO	5084	
31	ADF	0514E	1515D	N34	E41	08	3.5	1	12	9	9	E	SVTO	5092	
31	AFS	0521E	1515D	N15	W19	07	29.8		04	9	9	E	SVTO	5090	
31	AFS	0630E	1515D	S24	W20	07	29.7		05	9	9	E	SVTO	5084	
31	DSD	0842	0929	N14	W35	07	28.7	1				V	KHAR		
31	BSL	0845	0845D	N76	E90	08	8.7	1-				C	CATA		
31	BSL	0845	0845D	S77	E90	08	8.7	1-				C	CATA		
31	BSL	0859E	0906	N83	W90	07	23.0	1-				C	CATA		
31	DSD	0902E	1023	N13	W23	07	29.6	1				V	KHAR		
31	DSD	0930E	0957	N25	E24	08	2.2	1				V	KHAR		
31	DSD	1010	1103	N14	W31	07	29.1	1				V	KHAR		
31	ADF	1358E	2119D	N13	W29	07	29.4	2	04	9	9	E	RAMY	5090	
31	ADF	1358E	2119D	S20	W37	07	28.7	2	10	9	9	E	RAMY	5084	
31	ADF	1358E	2119D	S29	W25	07	29.6	2	13	9	9	E	RAMY	5084	
31	SDF	1452E	1302D	S17	W01	07	31.5		13	0	0	E	HOLL		
31	ASR	1530E	1745D	N26	W90	07	24.6			9	9	E	HOLL	5093	
31	ASR	1546E	2119D	N26	W90	07	24.7			9	9	E	RAMY	5093	
31	DSD	1625E	1717D	N28	W32	07	29.2		08	9	9	E	HOLL	5092	Flare Associated
31	ADF	1627E	0013D	N14	W29	07	29.5	1	12	7	9	E	HOLL	5090	
31	ASR	1805E	0322D	N23	W90	07	24.8			6	7	E	PALE	5093	
31	DSD	2120E	0100D	N26	E30	08	3.2		05	9	9	E	PALE	5092	
31	AFS	2343E	0943D	N15	W29	07	29.8		03	9	9	E	LEAR	5090	

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

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

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

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

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

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