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Data for July 1993

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Number 593

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Hα SOLAR FLARES

JULY 1993

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
0001	VORO	01	0046	0050	0159	S12	E07	7530	07	1.5	73	SF		2	C	0059	90	1.0	EITY
0002		01	0230*	02522	0318	S14	E07	7530	07	1.6	48	SF	C 2.0				37	0.3	EF
	LEAR	01	0230	0252	0329	S15	E07	7530	07	1.6	59	SF	C 2.0	3	E		44		F
	WATU	01	0250	0254	0307	S12	E07	7530	07	1.6	17	SF			C	0254	30	0.3	E
0003	KANZ	01	1034	1038	1050	S09	W13	7536	06	30.5	16	SF		2	C				
0004		01	10381	10402	1046	S12	W04	7530	07	1.1	8	SF					21		F
	KANZ	01	1038	1042	1046	S13	W04	7530	07	1.1	8	SF		2	C				
	SVTO	01	1039	1040	1045	S12	W03	7530	07	1.2	6	SF		3	E		21		F
0005	SVTO	01	1449	1450	1505	S13	W05	7530	07	1.2	16	SF		3	E		18		F
0006		01	16433	16443	1653	S12	W08	7530	07	1.1	10	SF	B 5.1				20		F
	SVTO	01	1643	1646	1652	S12	W07	7530	07	1.2	9	SF	B 5.1	3	E		13		F
	KANZ	01	1644	1644	1651D	S12	W08	7530	07	1.1	7D	SF		2	C				
	HOLL	01	1644E	1646U	1649	S12	W08	7530	07	1.1	5D	SF	B 5.1	3	E		21		F
	RAMY	01	1646	1647	1658	S12	W07	7530	07	1.2	12	SF		3	E		25		F
		01	1932		1935	No Flare Patrol													
0007	HOLL	01	2122	2126	2130	S11	W06	7530	07	1.4	8	SF		3	E		12		
0008	HOLL	01	2141	2142	2144	S12	W11	7530	07	1.1	3	SF	B 3.9	3	E		26		
		01	2230		2235	No Flare Patrol													
0009	VORO	02	0048	0049	0054	S08	W80	7531	06	26.1	6	1F		2	C	0049	54	2.7	E
0010	VORO	02	0116	0117	0124	S12	W42	7529	06	29.0	8	SF		2	C	0117	72	1.0	EY
0011	HTPR	02	0612E		0622	S12	W10	7530	07	1.5	10D	SF			C	0612	150	1.6	E
0012		02	0651	06512	0708	S08	W88	7531	06	25.8	17	SF							T
	HTPR	02	0612E	0653	0722	S07	W90	7531	06	25.6	70D	F			C	0653			T
	KANZ	02	0651	0651	0655	S09	W85	7531	06	26.0	4	SF		2	C				
0013		02	08276	08363	0852	S09	W88	7531	06	25.8	25	SF	C 1.0				34		DT
	SVTO	02	0827	0837	0856	S10	W89	7531	06	25.8	29	SF	C 1.0	3	E		27		
	HTPR	02	0833	0836	0845	S08	W90	7531	06	25.7	12	F			C	0836	40		DT
	KANZ	02	0835E	0839	0855	S09	W85	7531	06	26.1	20D	SF		2	C				
		02	1111		1125	No Flare Patrol													
0014	RAMY	02	1128	1132	1146	S10	W10	7530	07	1.7	18	SF		3	E		29		F
0015	RAMY	02	1317	1317	1322	S20	E02	7534	07	2.7	5	SF		3	E		14		F
0016		02	13144	13186	1400	S11	W16	7530	07	1.3	46	2B	M 4.3				186		EFH
	RAMY	02	1314	1318	1345D	S11	W14	7530	07	1.5	31D	2B	M 4.3	3	E		276		FE
	HOLL	02	1318	1324	1415D	S10	W20	7530	07	1.0	57D	SB		1	E		95		FH
	KANZ	02	1319E	1319U	1400	S11	W13	7530	07	1.6	41D	2B		2	C				
0017	RAMY	02	1350	1351	1401	S11	W14	7530	07	1.5	11	SF		3	E		49		F
0018	KANZ	02	1404		1404D	S08	W85	7531	06	26.3	11D	SF		2	C				
0019	HOLL	02	1415	1419	1445	S10	W04	7534	07	2.3	30	SF		3	E		48		
0020		02	14281	14291	1442	S12	W14	7530	07	1.5	14	SF					36		
	HOLL	02	1428	1430	1452	S13	W14	7530	07	1.5	24	SF		3	E		59		
	RAMY	02	1429	1429	1431	S10	W15	7530	07	1.5	2	SF		3	E		12		
0021	KANZ	02	1435E	1435U	1447D	S13	W13	7530	07	1.6	12D	SF		2	C				
0022	KANZ	02	1443	1447U	1447D	S08	W84	7531	06	26.4	4D	SF		2	C				
		02	1456		1507	No Flare Patrol													
		02	1538		1549	No Flare Patrol													

Hα SOLAR FLARES

JULY 1993

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
		02	1646		1740	No Flare Patrol													
		02	1959		2013	No Flare Patrol													
		02	2025		2252	No Flare Patrol													
0023	VORO	02	2333	2336	2346	S10	E67	7538	07	8.0	13	SF		2	C	2336	72	1.8	DY
0024	VORO	03	0006	0008	0018	S10	E67	7538	07	8.0	12	SF		2	C	0008	81	2.0	DY
0025	VORO	03	0009	0019	0053	S13	W23	7530	07	1.3	44	SF		2	C	0019	81	0.9	DIY
		03	0323		0353	No Flare Patrol													
		03	0407		0501	No Flare Patrol													
0026		03	08051	08095	0824	S12	W26	7530	07	1.4	19	SF					100	1.2	E
	HTPR	03	0805	0809	0823	S12	W26	7530	07	1.4	18	SF			C	0809	100	1.2	E
	KANZ	03	0806	0814	0826	S12	W25	7530	07	1.4	20	SF		2	C				
0027		03	09593	10046	1025	S12	W16	7531	07	2.2	26	SF					40	0.4	
	HTPR	03	0959	1004	1028	S12	W15	7531	07	2.3	29	SF			C	1004	40	0.4	
	KANZ	03	1002	1010	1022	S12	W17	7531	07	2.1	20	SF		2	C				
0028		03	10367	1044*	1153	S11	W25	7530	07	1.6	77	1N	M 1.6				117	1.4	EFK
	HTPR	03	1036	1044	1149	S10	W25	7530	07	1.6	73	SB			C	1044	110	1.3	K
	HTPR	03	1036	1102	1149	S10	W25	7530	07	1.6	73	SB			C	1102	120	1.4	K
	KANZ	03	1038	1102	1118D	S12	W25	7530	07	1.5	40D	1N		2	C				
	RAMY	03	1039E	1101	1153	S11	W25	7530	07	1.6	74D	1N		3	E		104		FE
	SVTO	03	1040	1106	1151	S13	W26	7530	07	1.5	71	1N	M 1.6	3	E		134		FE
	LARI	03	1043	1046	1202	S12	W25	7530	07	1.6	79	1N			P				
0029	ATHN	03	1112	1113	1118	S12	W25	7530	07	1.6	6	1N			C	1113	127	1.4	
0030	SVTO	03	1306	1306	1314	S11	W25	7530	07	1.7	8	SF		3	E		16		
0031	SVTO	03	1318	1320	1342	S11	W25	7530	07	1.7	24	SF	B 8.0	3	E		45		
		03	1514		1516	No Flare Patrol													
0032	HOLL	03	1537	1546	1634	S11	W29	7530	07	1.5	57	SN		3	E		82		
0033	HOLL	03	1715	1824	1907	S11	W28	7530	07	1.6	112	SF	C 1.2	3	E		86		EF
0034	HOLL	03	2016	2021	2032	S11	W30	7530	07	1.6	16	SF		3	E		29		F
		03	2036		2102	No Flare Patrol													
		03	2112		2138	No Flare Patrol													
		04	0146		0219	No Flare Patrol													
0035		04	07131	07153	0726	S11	W38	7530	07	1.4	13	SN	C 1.0				28		F
	SVTO	04	0713	0715	0721	S11	W37	7530	07	1.5	8	SF	C 1.0	3	E		28		F
	KANZ	04	0714	0718	0730	S11	W39	7530	07	1.4	16	SN		2	C				
0036		04	0721*	07508	0823	S14	W38	7530	07	1.4	62	1N	M 1.6				126	0.7	EF
	SVTO	04	0721	0756	0840	S16	W38	7530	07	1.4	79	1B	M 1.6	3	E		203		FE
	KANZ	04	0746	0758	0826	S12	W37	7530	07	1.5	40	1N		2	C				
	LARI	04	0748	0750	0821	S13	W39	7530	07	1.4	33	SN			P				
	ISTA	04	0749		0806	S13	W37	7530	07	1.5	17	1N							F
	WATU	04	0750E	0750	0750D	S14	W37	7530	07	1.5	17D	SB			P	0750	50	0.7	E
0037		04	0850	08504	0903	S14	W39	7530	07	1.4	13	SF	C 1.1				12		EF
	SVTO	04	0850	0850	0904	S16	W39	7530	07	1.4	14	SF	C 1.1	3	E		12		FE
	KANZ	04	0850	0854	0902	S12	W39	7530	07	1.4	12	SF		2	C				
0038		04	11011	1206	1338	S12	W40	7530	07	1.4	157	2B	M 1.8				260		FU
	SVTO	04	1101	1206	1355	S11	W37	7530	07	1.7	174	2B	M 1.8	3	E		272		F
	KANZ	04	1102	1206	1330	S12	W42	7530	07	1.3	148	2N		2	C				
	RAMY	04	1118E	1213U	1330	S12	W41	7530	07	1.4	132D	1B		3	E		248		UF
0039		04	12273	1238	1314	S16	W24	7534	07	2.7	47	SF					20		
	SVTO	04	1227	1238	1323	S15	W24	7534	07	2.7	56	SF		3	E		20		
	KANZ	04	1230	1238	1306	S18	W23	7534	07	2.8	36	SF		2	C				

Hα SOLAR FLARES

JULY 1993

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
0040	HOLL	04	1228E	1232U	1321	S20	W21	7534	07	2.9	53D	1F		2	E		149		
0041		04	14261	14335	1521	N05	W29	7540	07	2.4	55	SF					16		
	KANZ	04	1426	1438	1438D	N05	W29	7540	07	2.4	12D	SF		2	C				
	HOLL	04	1427	1433	1521	N05	W29	7540	07	2.4	54	SF		3	E		16		
0042		04	14401	14453	1458	S12	W42	7530	07	1.4	18	SF					20		
	HOLL	04	1440	1448	1459	S12	W44	7530	07	1.3	19	SF		3	E		26		
	SVTO	04	1441	1445	1458	S11	W39	7530	07	1.7	17	SF		3	E		15		
0043	HOLL	04	1634	1646	1659	S13	W28	7534	07	2.6	25	SF		3	E		43		
0044	HOLL	04	1636	1639	1650	S12	W44	7530	07	1.4	14	SF	C 1.5	3	E		32		
0045	HOLL	04	1659	1659	1703	N11	W41	7537	07	1.6	4	SF		3	E		32		
0046		05	00331	0035	0042	S12	W46	7530	07	1.5	9	SF	C 1.1				40		F
	HOLL	05	0033	0035	0045	S13	W46	7530	07	1.5	12	SF	C 1.1	3	E		49		F
	LEAR	05	0034	0035	0040	S12	W46	7530	07	1.5	6	SF	C 1.1	3	E		31		F
0047		05	07081	07081	0716	S13	W41	7534	07	2.2	8	SF					10		F
	LEAR	05	0708	0708	0712	S12	W42	7534	07	2.1	4	SF		3	E		10		F
	KANZ	05	0709	0709	0721	S13	W40	7534	07	2.3	12	SF		2	C				
	SVTO	05	0710E	0710U	0716	S14	W41	7534	07	2.2	6D	SF		3	E		10		
0048	KANZ	05	0941	0941	0945	S10	W44	7534	07	2.1	4	SF		2	C				
0049	KANZ	05	1133	1133	1137	S10	W57	7530	07	1.2	4	SF		2	C				
0050	HOLL	05	1412	1415	1419	N07	E74	7542	07	11.1	7	SF		3	E		32		
0051	HOLL	05	1920	1923	1933	S11	W61	7530	07	1.2	13	SF		3	E		16		F
0052	HOLL	05	1944	1947	1956	S13	W58	7530	07	1.4	12	SF		3	E		39		H
		06	0000		0000	No Flare Patrol													
0053	LEAR	06	0141	0149	0200	S09	W63	7530	07	1.3	19	SF	B 2.8	3	E		18		
0054	LEAR	06	0503	0514	0523	S09	W64	7530	07	1.4	20	SF		3	E		16		
0055		06	0626	06281	0638	S08	W64	7530	07	1.5	12	SN	B 8.9				39	1.3	D
	LEAR	06	0626	0628	0636	S09	W65	7530	07	1.4	10	SF	B 8.9	3	E		21		
	MITK	06	0626	0629	0639	S06	W64	7530	07	1.5	13	SN			C	0629	57	1.3	D
0056	HTPR	06	0719	0727	0751	S10	W68	7530	07	1.2	32	SF			C	0727	30		DK
0057		06	07246	0725	0731	N06	E65	7542	07	11.2	7	SF					32	1.6	DE
	HTPR	06	0724	0725	0731	N07	E70	7542	07	11.5	7	SF			C	0725	10		D
	LEAR	06	0725	0725	0729	N06	E63	7542	07	11.0	4	SF		3	E		17		
	MITK	06	0725	0725	0729	N03	E64	7542	07	11.1	4	SN			C	0725	69	1.6	E
	ISTA	06	0730		0734	N06	E62	7542	07	10.9	4	1F							E
0058	HTPR	06	0739	0741	0750	N07	E70	7542	07	11.6	11	SF			C	0741	30		D
0059		06	0719*	07411	0758	S08	W66	7530	07	1.3	39	1N					108		K
	HTPR	06	0719	0742	0751	S10	W68	7530	07	1.2	32	SF			C	0742	10		K
	MITK	06	0741	0741	0804	S07	W65	7530	07	1.4	23	1B			C	0741	205		
0060	SVTO	06	1004	1004	1016	S15	W68	7530	07	1.3	12	SF	C 1.0	3	E		18		F
0061	SVTO	06	1011	1011	1018	N08	W65	7537	07	1.5	7	SF		3	E		10		
0062		06	1634*	1651	1658	S12	W68	7530	07	1.6	24	SN	B 4.5				52		EF
	RAMY	06	1634	1651	1659	S12	W69	7530	07	1.5	25	SN	B 4.5	3	E		73		FE
	HOLL	06	1645	1651	1657	S11	W68	7530	07	1.6	12	SN	B 4.5	3	E		30		
0063	RAMY	06	1647	1650	1659	N06	E63	7542	07	11.4	12	SF		3	E		15		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
0064	HTPR	07	0617	0619	0629	S10	W80	7530	07	1.2	12	SF			C	0619	10		T
0065	ISTA	07	0657E		0857	S12	W80	7530	07	1.3	120D	2B							AK
0066	HTPR	07	0724E		0728	S10	W80	7530	07	1.3	4D	SF			C				T
0067	HTPR	07	1045	1049	1058	S10	W80	7530	07	1.4	13	SN			C	1049	20		DT
0068		07	1131	1134	1146	S11	W84	7530	07	1.2	15	SF	C 1.6				34		T
	HTPR	07	1131	1134	1147	S10	W80	7530	07	1.5	16	SN			C	1134	20		T
	RAMY	07	1131	1134	1147	S12	W89	7530	06	30.8	16	SF	C 1.6	3	E		49		
	KANZ	07	1135E	1135U	1144	S12	W82	7530	07	1.3	9D	SF		2	C				
0069	HTPR	07	1229	1236	1240	S10	W80	7530	07	1.5	11	SF			C	1236	10		T
0070	HOLL	07	1359	1359	1404	S12	W82	7530	07	1.4	5	SF		3	E		19		
0071		07	15041	15061	1511	S10	W80	7530	07	1.6	7	SN	B 4.2				15		DT
	HTPR	07	1504	1506	1511	S10	W80	7530	07	1.6	7	SN			C	1506	10		DT
	HOLL	07	1505	1507	1511	S11	W81	7530	07	1.5	6	SF	B 4.2	3	E		20		
0072		07	17034	1712	1719	S12	W87	7530	07	1.1	16	SF	B 4.8				52		
	KANZ	07	1703	1711U	1711D	S11	W82	7530	07	1.5	8D	SF		2	C				
	HOLL	07	1704	1712	1722	S13	W89	7530	07	1.0	18	SF	B 4.8	4	E		84		
	RAMY	07	1707	1712	1716	S12	W89	7530	07	1.0	9	SF	B 4.8	3	E		19		
		08	0000		0000	No Flare Patrol													
		08	2222		2233	No Flare Patrol													
0073	HOLL	08	2250	2252	2259	S10	W12	7538	07	8.0	9	SF		3	E		16		F
		09	2229		2233	No Flare Patrol													
		10	2133		2318	No Flare Patrol													
		11	0000		0000	No Flare Patrol													
		12	0000		0000	No Flare Patrol													
0074	SVTO	12	1026	1031	1036	N07	W16	7542	07	11.2	10	SF	B 2.1	3	E		25		
		13	0000		0000	No Flare Patrol													
		13	0118		0124	No Flare Patrol													
0075		13	08312	08355	0858	S10	E13	7543	07	14.3	27	SN	B 3.4				20	0.2	BFJ
	ISTA	13	0742E		0905D	S10	E14	7543	07	14.4	83D	1B							BFJ
	HTPR	13	0831	0840	0902	S10	E12	7543	07	14.2	31	SF			C	0840	20	0.2	
	SVTO	13	0833	0835	0854	S09	E12	7543	07	14.2	21	SF	B 3.4	3	E		21		F
0076	HTPR	13	0852	0910	0935	N10	E30	7545	07	15.6	43	SF			C	0910	10	0.1	D
0077	ISTA	13	0904		0905D	N10	W27	7542	07	11.3	1D	SN							CD
0078	HOLL	13	1747	1754	1840	S08	E08	7543	07	14.3	53	SF		3	E		37		F
		14	0000		0000	No Flare Patrol													
0079		14	06549	07042	0725	S08	W02	7543	07	14.1	31	SF	B 6.0				41	0.1	DF
	SVTO	14	0654	0704	0731	S07	W01	7543	07	14.2	37	SF	B 6.0	3	E		79		F
	KANZ	14	0702	0706	0719	S08	W03	7543	07	14.1	17	SF		2	C				
	LEAR	14	0703	0704	0724	S07	W03	7543	07	14.1	21	SF	B 6.0	3	E		34		F
	WATU	14	0712E	0712U	0712D	S08	W01	7543	07	14.2	21D	SF			P	0712	10	0.1	D
0080		14	09386	09501	1003	S09	W03	7543	07	14.2	25	SF	B 4.8				29		F
	KANZ	14	0938	0950	0959D	S09	W03	7543	07	14.2	21D	SF		2	C				
	SVTO	14	0944	0951	1003	S09	W03	7543	07	14.2	19	SF	B 4.8	3	E		29		F
0081		14	11431	1145	1150	S08	W04	7543	07	14.2	7	SF	B 6.0				42		F
	SVTO	14	1143	1145	1150	S08	W03	7543	07	14.3	7	SF	B 6.0	3	E		36		F
	RAMY	14	1144	1145	1150	S08	W05	7543	07	14.1	6	SF		3	E		47		F
	KANZ	14	1152E		1152D	S08	W04	7543	07	14.2	6D	SF		2	C				

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0082	RAMY	14	1223	1223	1235	S09	W06	7543	07	14.1	12	SF	B 9.5	3	E		14		F
0083	RAMY	14	1311	1315	1327	S09	W06	7543	07	14.1	16	SF	B 2.7	3	E		13		F
0084	HOLL	14	1738	1738	1742	S08	W08	7543	07	14.1	4	SF		3	E		12		F
0085	HOLL	14	1800	1801	1809	S08	W09	7543	07	14.1	9	SF		3	E		20		F
0086	HOLL	14	2036	2040	2045	S08	W11	7543	07	14.0	9	SF		3	E		17		
		14	2251		2315	No Flare Patrol													
		15	0000		0000	No Flare Patrol													
0087		15	0843	0845	0852	N07	E14	7545	07	16.4	9	SF	B 1.8				16		F
	ISTA	15	0830E		0857D	N07	E15	7545	07	16.5	27D	SF							F
	LEAR	15	0843	0845	0852	N07	E12	7545	07	16.3	9	SF	B 1.8	3	E		16		F
		15	1828		1840	No Flare Patrol													
		15	1855		1912	No Flare Patrol													
		15	2107		2117	No Flare Patrol													
		15	2132		2203	No Flare Patrol													
		15	2241		2327	No Flare Patrol													
		16	1747		1840	No Flare Patrol													
		16	2020		2025	No Flare Patrol													
		16	2030		2045	No Flare Patrol													
		16	2119		2201	No Flare Patrol													
		16	2312		2326	No Flare Patrol													
		17	0000		0000	No Flare Patrol													
0088		17	11391	11411	1148	N07	W80	7542	07	11.5	9	SN	B 3.0				48		DF
	HTPR	17	1139	1142	1149	N09	W80	7542	07	11.5	10	N			C	1142	70		D
	SVTO	17	1140	1141	1146	N05	W79	7542	07	11.6	6	SF	B 3.0	3	E		27		F
0089	SVTO	17	1406	1406	1413	N02	W57	7544	07	13.3	7	SF	B 2.3	3	E		15		F
0090	HOLL	17	1409	1418	1439	S08	W14	7546	07	16.5	30	SF		3	E		19		
0091	RAMY	17	1438	1441	1446	N06	W20	7545	07	16.1	8	SF		3	E		11		
0092	HOLL	17	2031	2033	2037	N06	W22	7545	07	16.2	6	SF		3	E		17		
		17	2234		2244	No Flare Patrol													
		17	2249		2329	No Flare Patrol													
		18	0000		0000	No Flare Patrol													
0093		18	0706	07063	0714	S18	W18	7549	07	16.9	8	SF					15		
	KANZ	18	0706	0706	0714	S19	W16	7549	07	17.1	8	SF		2	C				
	LEAR	18	0706	0709	0715	S17	W19	7549	07	16.8	9	SF		3	E		15		
0094	SVTO	18	1159	1159	1207	S18	E62	7550	07	23.2	8	SF		3	E		15		F
		18	2147		2149	No Flare Patrol													
		18	2207		2243	No Flare Patrol													
0095	LEAR	19	0310	0312	0326	N09	E38	7547	07	22.0	16	SF	B 2.1	3	E		20		
0096		19	0407*	0416*	0434	S08	E46	7548	07	22.6	27	SF	B 3.3				15	0.2	D
	LEAR	19	0407	0416	0432	S08	E47	7548	07	22.7	25	SF	B 3.3	3	E		20		
	SVTO	19	0410	0412U	0435	S05	E45	7548	07	22.5	25	SF	B 3.3	1	E		15		
	WATU	19	0430	0432	0436	S10	E45	7548	07	22.6	6	SF			C	0432	10	0.2	D
		19	2040		2400	No Flare Patrol													
		20	0000		0000	No Flare Patrol													
0097	LEAR	20	0805	0809	0842	S20	E35	7550	07	23.0	37	SF		3	E		21		F
0098		20	1506*	15148	1535	S20	E33	7550	07	23.1	29	SF	B 5.5				50	1.8	EFKT
	HTPR	20	1506	1514	1541	S20	E35	7550	07	23.3	35	SF			C	1514	130	1.8	EKT
	RAMY	20	1522	1522	1532	S20	E34	7550	07	23.2	10	SF	B 5.5	3	E		10		
	SVTO	20	1522	1522	1532	S20	E30	7550	07	22.9	10	SF	B 5.5	3	E		11		F

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0099	HTPR	20	1646	1652	1701	N08	W63	7545	07	16.0	15	SF			C	1652	50	1.1	
0100	HOLL	20	2027	2029	2036D	S19	W50	7549	07	17.0	9D	SF		2	E		13		
0101	HTPR	21	0619	0625	0726	S17	W59	7549	07	16.8	67	SF			C	0625	20	0.4	K
0102	KHAR	21	0945		1025	N08	W90		07	14.6	40	1N		2	V				E
0103	HTPR	21	1629	1632	1638	S20	E24	7550	07	23.5	9	SF			C	1632	40	0.5	
0104	HOLL	21	2255	2255	2257	S12	E09	7548	07	22.6	2	SF		3	E		17		
0105		22	06295	06342	0641	S11	E06	7548	07	22.7	12	SF	B 4.2				16	0.2	EF
	HTPR	22	0629	0634	0642	S12	E05	7548	07	22.6	13	SN			C	0634	20	0.2	E
	LARI	22	0631	0634	0641	S11	E06	7548	07	22.7	10	SF			P				
	SVTO	22	0634	0636	0641	S11	E06	7548	07	22.7	7	SF	B 4.2	3	E		11		F
0106	KHAR	22	0835		0850	N13	E88	7552	07	29.0	15	1N		2	V				H
0107	SVTO	22	0915E	0915U	0930	N14	E84	7552	07	28.7	15D	SF		2	E		19		F
0108		22	1617	16211	1647	S09	E26	7551	07	24.6	30	SF					50	0.6	EFU
	HOLL	22	1555E	1621	1654	S08	E26	7551	07	24.6	59D	SF		3	E		50		UE
	HTPR	22	1617	1622	1640	S10	E26	7551	07	24.6	23	SF			C	1622	50	0.6	F
0109	HTPR	23	0934	0938	1015	N15	E90	7552	07	30.2	41	SF			C	0938			
0110		23	11463	11491	1202	S10	E16	7551	07	24.7	16	SF	B 6.3				13	0.1	EF
	HTPR	23	1146	1149	1202	S10	E15	7551	07	24.6	16	SF			C	1149	10	0.1	E
	SVTO	23	1149	1150	1201	S09	E16	7551	07	24.7	12	SF	B 6.3	3	E		16		F
0111	HOLL	23	1405	1405	1409	N18	E85	7552	07	30.0	4	SF	B 5.4	3	E		26		
0112	HOLL	23	1633	1633	1639	S13	E62	7553	07	28.4	6	SF		3	E		14		
0113	HOLL	23	1913	1918	1945	S11	W10	7548	07	23.0	32	SF	B 6.3	3	E		41		F
0114	HOLL	23	2031	2034	2041	N17	E76	7552	07	29.6	10	SF	B 8.0	3	E		24		
0115	HOLL	23	2138	2151U	2255	S10	W16	7548	07	22.7	77	1N	C 1.0	2	E		132		S
0116	HOLL	23	2305	2305	2318	S19	W11	7550	07	23.1	13	SF		3	E		15		
0117		24	0120	01211	0128	S18	W12	7550	07	23.1	8	SF	B 5.6				46		F
	HOLL	24	0118E	0121	0130	S19	W12	7550	07	23.1	12D	SF	B 5.6	1	E		58		F
	LEAR	24	0120	0122	0126	S18	W13	7550	07	23.1	6	SF	B 5.6	3	E		33		F
0118	SVTO	24	0433E	0434U	0441D	S11	W17	7548	07	22.9	8D	SF		2	E		23		
0119	KANZ	24	0744	0748	0812	S12	W23	7548	07	22.6	28	SF		2	C				
0120		24	09342	09353	0947	S19	W17	7550	07	23.1	13	SF	B 5.0				22	0.3	EF
	HTPR	24	0934	0936	0950	S20	W20	7550	07	22.9	16	SF			C	0936	30	0.3	E
	SVTO	24	0935	0935	0942	S19	W16	7550	07	23.2	7	SF	B 5.0	3	E		15		F
	LARI	24	0935	0938	0951	S19	W15	7550	07	23.2	16	SF			P				
	KANZ	24	0936	0936	0944	S19	W17	7550	07	23.1	8	SF		2	C				
0121	KANZ	24	1200	1204	1208	S15	E51	7553	07	28.4	8	SF		2	C				
0122	HOLL	24	1741	1744	1758	N17	E64	7552	07	29.6	17	SF		3	E		23		
0123	HOLL	25	0008	0023	0038	S08	W04	7551	07	24.7	30	SF		3	E		14		F
0124	HOLL	25	0016	0017	0021	S14	E45	7553	07	28.4	5	SF		3	E		14		
0125	LEAR	25	0233	0234	0238	S21	W27	7550	07	23.0	5	SF		3	E		20		F
0126		25	04583	04596	0516	S10	W30	7548	07	22.9	18	SF	B 5.1				16	0.2	DF
	WATU	25	0458	0459	0504	S08	W30	7548	07	22.9	6	SF			C	0459	20	0.2	D
	SVTO	25	0501	0505	0528	S11	W30	7548	07	22.9	27	SF	B 5.1	3	E		12		F

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0127		25	06184	06203	0640	N13	E41		07	28.3	22	SF					24		F
	LARI	25	0618	0620	0645	N13	E42		07	28.4	27	SF			P				
	SVTO	25	0622	0623	0636	N13	E40		07	28.3	14	SF		3	E		24		F
0128	KANZ	25	0950	0954	1010	S13	W36	7548	07	22.7	20	SF		2	C				
		26	0159		0212	No Flare Patrol													
		26	0254		0302	No Flare Patrol													
0129	HOLL	26	1833E	1835U	1842	N15	E69	7555	08	1.0	9D	SF	B 2.9	3	E		12		F
0130	HOLL	26	2133	2134	2144	N13	E66	7555	07	31.9	11	SF	B 3.4	3	E		58		F
		27	0000		0000	No Flare Patrol													
0131	LEAR	27	0055	0056	0107	S14	E17	7553	07	28.3	12	SF	B 2.9	3	E		15		
0132		27	04402	04425	0448	S12	E14	7553	07	28.2	8	SN					12	0.2	E
	WATU	27	0440	0447	0452	S12	E14	7553	07	28.2	12	SN			C	0447	10	0.1	E
	MITK	27	0442	0442	0443	S12	E15	7553	07	28.3	1	SN			C	0442	14	0.2	E
0133		27	10335	10401	1054	N14	E30	7552	07	29.7	21	SF					50	0.6	D
	KANZ	27	1033	1041	1103	N14	E29	7552	07	29.6	30	SF		2	C				
	HTPR	27	1038	1040	1046	N15	E31	7552	07	29.8	8	SF			C	1040	50	0.6	D
0134	HTPR	27	1112	1113	1122	S12	E12	7553	07	28.4	10	SF			C	1113	60	0.6	D
0135		27	12112	12126	1220	N15	E26	7552	07	29.5	9	SN	B 4.2				41	1.0	F
	HTPR	27	1211	1218	1222	N15	E27	7552	07	29.5	11	SB			C	1218	90	1.0	
	SVTO	27	1212	1212	1217	N15	E26	7552	07	29.5	5	SF	B 4.2	3	E		13		
	RAMY	27	1212	1213	1220	N15	E26	7552	07	29.5	8	SF	B 4.2	3	E		21		F
	KANZ	27	1213	1213	1217D	N16	E27	7552	07	29.5	4D	SN		2	C				
0136	HTPR	27	1432	1437	1444	N12	E60	7555	08	1.1	12	1N			C	1437	170	3.2	T
0137		27	14533	14565	1512	N09	E56	7555	07	31.8	19	SN					72	1.5	FT
	HTPR	27	1453	1501	1521	N08	E58	7555	08	1.0	28	SN			C	1501	80	1.5	T
	RAMY	27	1456	1456	1502	N10	E55	7555	07	31.7	6	SF		3	E		64		F
0138		27	1455*	15436	1714	N11	E60	7555	08	1.1	139	1N	C 5.9				187	5.3	EFTU
	SVTO	27	1455	1543	1713	N08	E61	7555	08	1.2	138	1F	C 5.9	3	E		209		F
	HTPR	27	1534	1549	1700D	N12	E60	7555	08	1.2	86D	2B			C	1549	280	5.3	EFT
	RAMY	27	1537	1544	1714	N13	E59	7555	08	1.1	97	SF		3	E		73		UF
0139	HOLL	27	1605	1621	1800	N13	E58	7555	08	1.0	115	1N		2	E		175		F
0140	HOLL	27	1852	1853	1858	S11	W67	7548	07	22.7	6	SF		3	E		12		
0141	HOLL	27	1945	1947	1951	N08	E57	7555	08	1.1	6	SF		3	E		34		F
		27	2218		2241	No Flare Patrol													
		28	0000		0000	No Flare Patrol													
0142	SVTO	28	0808	0809	0813	N12	E41	7555	07	31.4	5	SF		3	E		15		
0143	KANZ	28	1208	1208	1212	N12	E44	7555	07	31.8	4	SF		2	C				
		28	1857		2322	No Flare Patrol													
0144	HOLL	29	1827	1833	1841	N11	E27	7555	07	31.8	14	SF		3	E		15		
0145	ISTA	30	0846		0914	N13	E25	7555	08	1.2	28	SN							EG
0146	KANZ	30	1310	1310	1322	S24	E25		08	1.5	12	SF		2	C				
0147		30	16543	1658	1710	N16	W08	7552	07	30.1	16	SF	B 2.7				10		F
	KANZ	30	1654	1658	1710	N16	W08	7552	07	30.1	16	SF		2	C				
	HOLL	30	1657	1658	1709	N17	W08	7552	07	30.1	12	SF	B 2.7	3	E		10		F
		30	2232		2258	No Flare Patrol													

Hα SOLAR FLARES

JULY 1993

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
0148		31	08531	08531	0900	N16	W17	7552	07	30.1	7	SF						14		
	SVTO	31	0853	0853	0859	N16	W17	7552	07	30.1	6	SF		3	E			14		
	KANZ	31	0854	0854	0902	N16	W17	7552	07	30.1	8	SF		2	C					
0149		31	1428	14302	1450	S11	W41	7553	07	28.5	22	SF						16		
	HOLL	31	1428	1430	1455	S11	W41	7553	07	28.5	27	SF		3	E			16		
	KANZ	31	1428	1432	1444	S11	W41	7553	07	28.5	16	SF		2	C					
0150		31	1513	15131	1521	N16	W20	7552	07	30.1	8	SF						22		F
	KANZ	31	1513	1513	1517D	N16	W20	7552	07	30.1	4D	SF		2	C					
	SVTO	31	1513	1514	1521	N16	W21	7552	07	30.0	8	SF		3	E			22		F
		31	1857		1936	No Flare Patrol														
		31	2123		2323	No Flare Patrol														

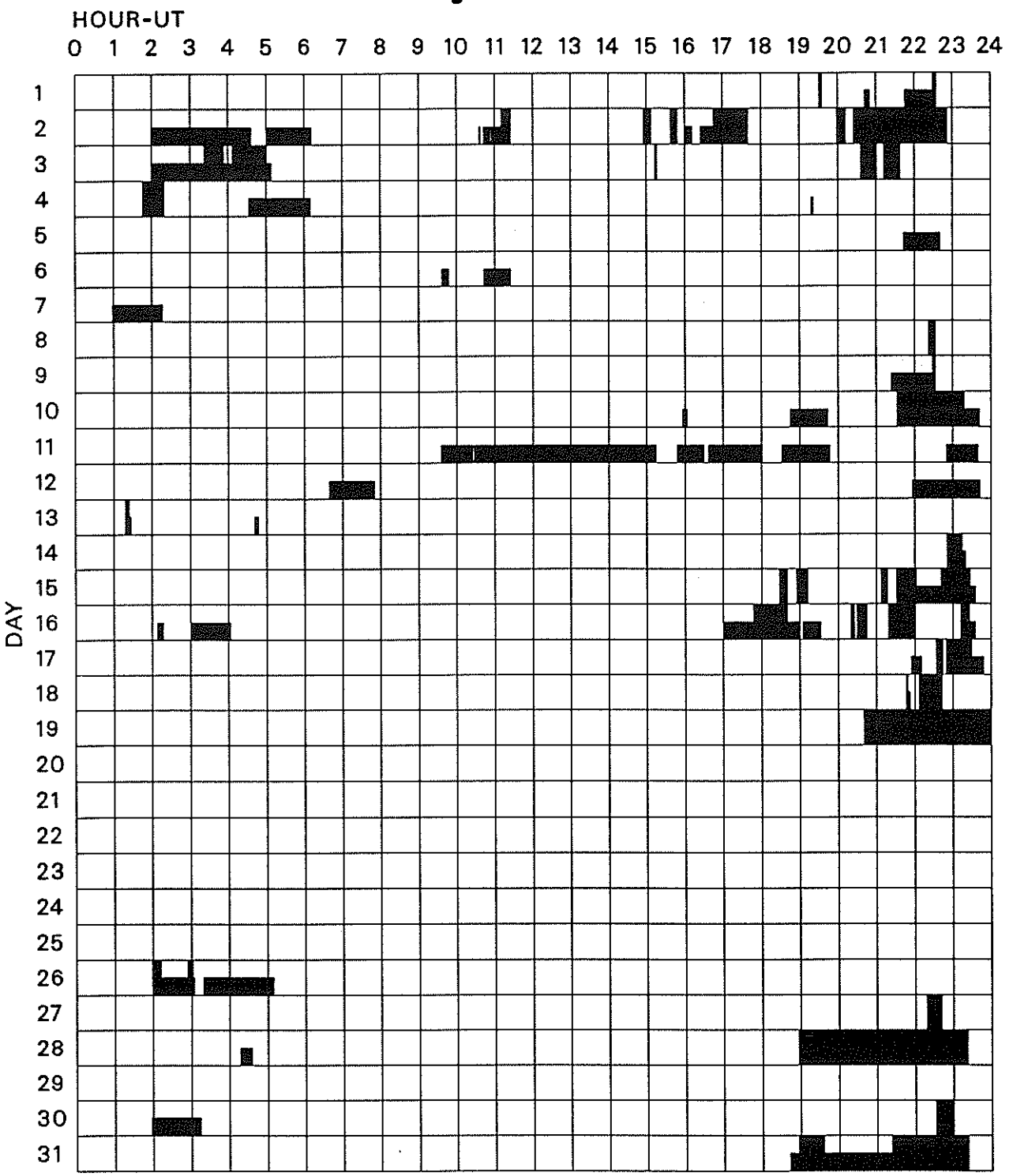
"Remarks"

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.

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

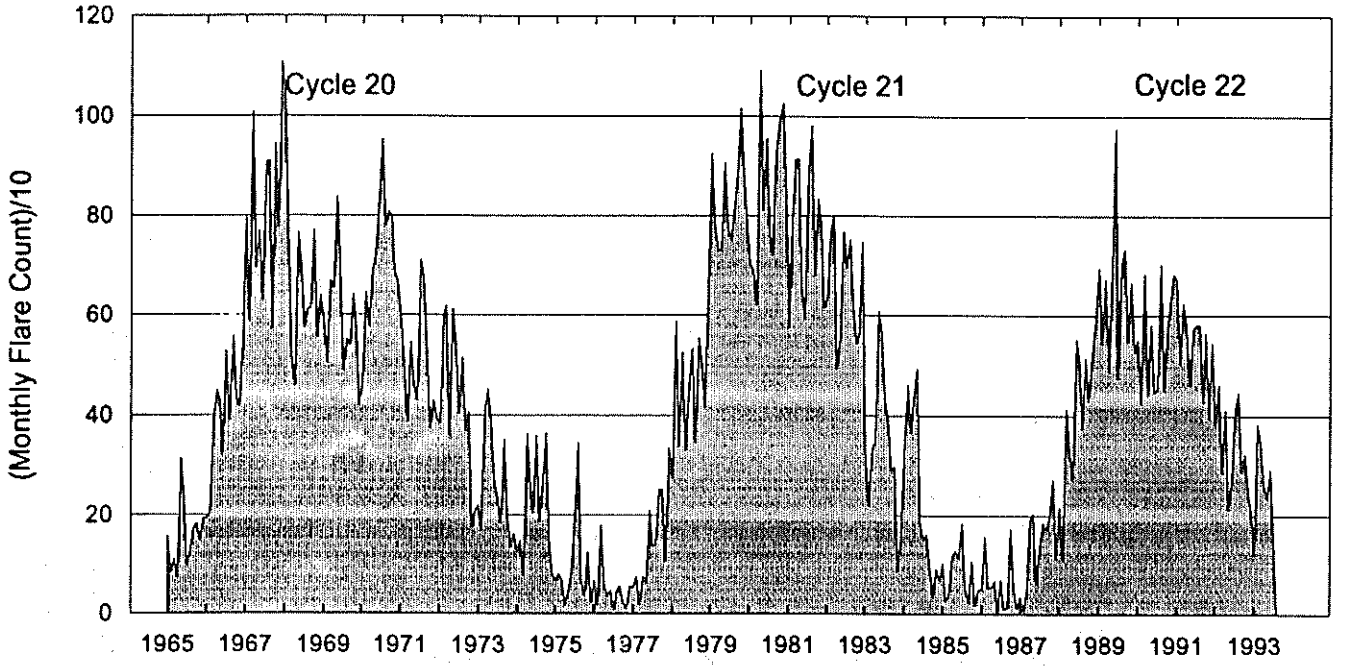
JULY 1993



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

Athens
Haute Province
Holloman
Hurbanovo
Istanbul
Kanzelhoehe
Khabarovsk
Larissa
Learmonth
Mitaka
Ramey
San Vito
Voroshilov
Watukosek
Yunnan

Monthly Counts of Grouped Solar Flares



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1965	158	85	110	74	315	231	99	127	173	184	150	193	1899
1966	194	205	390	449	429	323	528	391	558	432	417	543	4859
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	551	502	375	513	429	518	587	4816
1989	695	544	672	488	691	977	474	699	733	547	665	526	7711
1990	550	424	684	442	580	445	454	703	449	574	623	682	6610
1991	672	503	625	570	458	574	582	581	425	565	396	544	6495
1992	380	462	287	412	214	271	413	447	287	325	248	206	3952
1993	121	384	347	259	235	293	150						1789

Monthly totals for the last 6 months may change significantly, as more stations submit their reports.
The term "grouped" means that observations of the same event by different sites have been lumped together and counted as one.

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1993

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	260	ONDR	44	NS	0600.0E	1652.5	660.0D	180.0			
	245	SVTO	43	NS	0701.0	0707.0	10.0	70.0			QL=4 ST=3 TYP=1
	127	TORN	43	NS	1008.0	1030.2	157.0	10.0	1.0		V=0
	235	CUBA	44	NS	1308.0E		462.0D		9.0		
	280	CUBA	44	NS	1308.0E		462.0D		15.0		
	245	LEAR	43	NS	2321.0	0247.0U	39.0	200.0			QL=4 ST=1 TYP=1
	245	PALE	8	S	0246.0	0247.0	2.0	140.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0250.0	0250.0	U	66.0			QL=4 ST=2 TYP=3
	2850	CRIM	1	S	0442.0	0443.5	6.0	5.0	2.0		
	2950	GORK	20	GRF	0536.0	0541.3	62.0U	7.0			
	245	SGMR	4	S/F	1036.0	1037.0	5.0	88.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1036.0	1037.0	7.0	76.0			QL=4 ST=2 TYP=3
	013	IZMI	40	F	1036.0	1037.5	7.0	4.0			
	204	IZMI	42	SER	1037.0	1039.0	5.5	550.0			
	127	TORN	4	S/F	1037.0	1037.3	1.4	20.0	10.0		
	245	SGMR	8	S	1120.0	1122.0	2.0	50.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1644.0	1646.0	2.0	250.0			QL=2 ST=2 TYP=3
	245	SVTO	8	S	1645.0	1646.0	1.0	210.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1651.0	1652.0	2.0	210.0			QL=2 ST=2 TYP=3
	245	SVTO	8	S	1651.0	1652.0	2.0	260.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1652.0	1652.0	2.0	53.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	1855.0	1857.0	3.0	670.0			QL=4 ST=2 TYP=6
	245	SGMR	49	GB	1857.0	1857.0	U	610.0			QL=4 ST=2 TYP=6
02	235	CUBA	44	NS	1523.0E		322.0D		11.0		
	280	CUBA	44	NS	1523.0E		322.0D		16.0		
	245	SGMR	43	NS	2223.0	2225.0	6.0	74.0			QL=4 ST=2 TYP=1
	245	LEAR	8	S	0623.0	0624.0	2.0	91.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0624.0	0624.0	U	30.0			QL=4 ST=2 TYP=3
	9100	GORK	20	GRF	0845.0	0933.0	60.0D	5.0			
	260	ONDR	40	F	0905.0	1500.0	480.0	52.0			
	8800	SGMR	49	GB	1115.0	1318.0	130.0	850.0			QL=4 ST=2 TYP=6
	19600	BERN	4	S/F	1311.6	1318.0	30.3	47.6			
	8400	BERN	47	GB	1311.7	1318.0	34.7	116.7			
	11800	BERN	47	GB	1312.6	1318.0	30.9	96.6			
	536	ONDR	48	C	1313.5	1317.0	7.5	80.0			
	50000	BERN	3	S	1313.8	1318.6	11.0	39.9			
	2695	SVTO	4	S/F	1314.0	1318.0	15.0	400.0			QL=4 ST=2 TYP=3
	35000	BERN	4	S/F	1314.4	1318.0	14.4	43.7			
	4995	SGMR	49	GB	1315.0	1318.0	10.0	510.0			QL=4 ST=2 TYP=6
	8800	SGMR	49	GB	1315.0	1318.0	10.0	850.0			QL=4 ST=3 TYP=6
	1415	SGMR	4	S/F	1315.0	1318.0	10.0	250.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1315.0	1318.0	10.0	270.0			QL=2 ST=2 TYP=3
	1415	SVTO	49	GB	1315.0	1318.0	12.0	250.0			QL=4 ST=2 TYP=7
	4995	SVTO	49	GB	1315.0	1318.0	12.0	520.0			QL=4 ST=2 TYP=6
	8800	SVTO	49	GB	1315.0	1318.0	12.0	730.0			QL=4 ST=2 TYP=6
	15400	SGMR	49	GB	1316.0	1318.0	9.0	600.0			QL=4 ST=2 TYP=6
	15400	SVTO	49	GB	1316.0	1318.0	7.0	570.0			QL=4 ST=2 TYP=6
	33	UPIC	32	ABS	1316.0	1322.0	19.0				
	808	ONDR	45	C	1316.0	1318.5	16.0				
	3000	ONDR	45	C	1316.0	1318.5	15.0				
	610	SGMR	4	S/F	1317.0	1318.0	8.0	97.0			QL=4 ST=2 TYP=3
	610	SVTO	4	S/F	1319.0	1319.0	3.0	64.0			QL=2 ST=2 TYP=3
	33	UPIC	2	S/F	1319.5	1319.8	0.5				
	245	PALE	8	S	2037.0	2038.0	1.0	65.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2037.0	2038.0	1.0	60.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2054.0	2055.0	1.0	35.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	2058.0	2059.0	3.0	73.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2058.0	2059.0	2.0	73.0			QL=4 ST=2 TYP=3
03	204	IZMI	43	NS	0600.0		360.0D		5.0		
	127	TORN	44	NS	0620.0E		520.0D		4.0		V=2
	235	CUBA	44	NS	1300.8E		462.0D		13.0		
	280	CUBA	44	NS	1308.0E		462.0D		20.0		
	245	PALE	8	S	0250.0	0251.0	2.0	89.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0251.0	0251.0	1.0	88.0			QL=4 ST=2 TYP=3
	2850	CRIM	1	S	0456.8	0457.0	1.4	6.0	2.0		
	3013	IZMI	7	C	1038.5	1040.8	20.0	7.0	4.0		
	33	UPIC	32	ABS	1100.0	1102.0	8.0				

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1993

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	204	IZMI	44	NS	0600.0E		360.0D		25.0		
	127	TORN	44	NS	0620.0E		520.0D		2.0		V=1
	235	CUBA	44	NS	1315.0E		437.0D		19.0		
	280	CUBA	44	NS	1315.0E		437.0D		16.0		
	2800	PENT	3	S	0032.1	0032.7	5.8	8.9	2.0		
	204	IZMI	42	SER	0647.2	0657.0	13.0	80.0			
	2850	CRIM	1	S	0726.0	0727.9	3.0	5.0	2.0		
	9100	GORK	21	GRF	0742.9	0755.9	82.2	15.0			
	3013	IZMI	7	C	0743.0	0748.5	15.0	19.0			
	2950	GORK	21	GRF	0743.4	0750.4	29.0	8.0			
	127	TORN	8	S	0743.8	0744.1	1.4	590.0	290.0		
	2800	HIRA	45	C	0744.0	0749.0	6.0	22.0	7.0		O
	245	LEAR	8	S	0744.0	0744.0	U	180.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0744.0	0744.0	U	150.0			QL=4 ST=2 TYP=3
	33	UPIC	4	S/F	0744.0	0744.3	1.5				
	4995	LEAR	4	S/F	0745.0	0750.0	7.0	38.0			QL=4 ST=2 TYP=3
	33	UPIC	31	ABS	0745.5	0753.0	18.5				
	2695	LEAR	4	S/F	0747.0	0750.0	5.0	38.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0747.0	0750.0	5.0	97.0			QL=4 ST=2 TYP=3
	15400	LEAR	4	S/F	0747.0	0748.0	5.0	68.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0747.0	0748.0	3.0	100.0			QL=4 ST=2 TYP=3
	9100	GORK	4	S/F	0747.6	0748.7	8.3	117.0			
	2695	SVTO	8	S	0748.0	0748.0	U	25.0			QL=4 ST=2 TYP=3
	4995	SVTO	8	S	0748.0	0748.0	2.0	46.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	0748.0	0748.0	2.0	89.0			QL=4 ST=2 TYP=3
	2950	GORK	45	C	0748.4	0748.7	2.0	11.0			
	2950	GORK	45	C	0748.4	0749.7		11.0			
	2840	PEKG	45	C	0749.0	0751.0	3.0	19.2			
	950	GORK	1	S	0749.9	0750.2	0.5	7.0			
	127	TORN	46	C	1153.4	1153.7	3.0	100.0	10.0		
	260	ONDR	8	S	1155.0	1155.5	0.5	140.0			
	33	UPIC	46	C	1155.7	1158.4	12.6				
	127	TORN	4	S/F	1217.3	1218.3	1.5	60.0	30.0		
	245	PALE	8	S	2320.0	2320.0	1.0	51.0			QL=4 ST=2 TYP=3
05	204	IZMI	44	NS	0600.0E		360.0D		25.0		
	260	ONDR	44	NS	0600.0E	1653.5	660.0D	220.0			
	127	TORN	44	NS	0620.0E		360.0D		1.0		V=0
	280	CUBA	44	NS	1307.0E		303.0D		17.0		
	235	CUBA	44	NS	1307.0E		467.0D		12.0		
	2800	HIRA	46	C	0033.2	0033.2	1.5	15.0	8.0		O
	245	LEAR	8	S	0153.0	0153.0	U	62.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0457.0	0457.0	U	57.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0457.0	0457.0	U	65.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0930.0	0930.0	U	81.0			QL=4 ST=2 TYP=3
	9100	GORK	3	S	0940.3	0940.3	0.3	14.0			
	33	UPIC	8	S	1153.6	1153.8	0.8				
	245	SGMR	8	S	1204.0	1205.0	1.0	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1331.0	1331.0	1.0	92.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1331.0	1331.0	1.0	61.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1653.0	1653.0	U	93.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1653.0	1653.0	U	94.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1653.0	1653.0	U	75.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2240.0	2241.0	1.0	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2241.0	2241.0	U	96.0			QL=4 ST=2 TYP=3
06	245	LEAR	43	NS	0059.0	0059.0	93.0	50.0			QL=4 ST=2 TYP=1
	204	IZMI	44	NS	0600.0E		360.0D		20.0		
	260	ONDR	44	NS	0800.0E	1527.0	540.0D				
	245	SVTO	43	NS	1156.0	1743.0	363.0	160.0			QL=4 ST=2 TYP=1
	245	SGMR	43	NS	1232.0	1743.0	602.0	200.0			QL=4 ST=2 TYP=1
	235	CUBA	44	NS	1350.0E		381.0D		26.0		
	280	CUBA	44	NS	1350.0E		381.0D		23.0		
	245	PALE	43	NS	1646.0	1743.0	619.0	220.0			QL=4 ST=2 TYP=1
	1415	LEAR	8	S	0005.0	0006.0	1.0	140.0			QL=4 ST=2 TYP=3
	1415	PALE	8	S	0006.0	0006.0	1.0	150.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0122.0	0122.0	U	59.0			QL=4 ST=2 TYP=3
	1415	LEAR	8	S	0132.0	0132.0	U	46.0			QL=4 ST=2 TYP=3
	9100	GORK	3	S	0547.2	0547.4	0.5	15.0			

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

JULY 1993

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	204	IZMI	42	SER	0622.0	0622.3	40.0	120.0			
	33	UPIC	45	C	0649.0	0650.0	2.5				
	950	GORK	4	S/F	0722.2	0727.2	5.0U	22.0			
	33	UPIC	46	C	0722.7	0724.4	3.8				
	204	IZMI	45	C	0723.0	0724.5	3.5	2500.0			
	2800	HIRA	4	S/F	0723.5	0724.0	1.3	17.0	7.0		SR
	2950	GORK	4	S/F	0723.8	0724.3	1.0	8.0			
	9100	GORK	1	S	0723.9	0724.4	3.1	4.0			
	1415	SVTO	8	S	0724.0	0724.0	U	110.0			QL=4 ST=2 TYP=3
	3013	IZMI	7	C	1002.6	1002.7	8.0	4.0	2.0		
	245	SGMR	8	S	1013.0	1013.0	U	93.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1013.0	1013.0	1.0	73.0			QL=4 ST=3 TYP=3
	3013	IZMI	5	S	1107.5	1108.3	2.5	3.0	2.0		
	245	SGMR	8	S	1156.0	1156.0	U	74.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1213.0	1213.0	U	74.0			QL=4 ST=2 TYP=3
	33	UPIC	46	C	1213.4	1213.7	1.6				
	245	SVTO	8	S	1408.0	1408.0	1.0	190.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1426.0	1428.0	3.0	460.0			QL=4 ST=2 TYP=3
	245	SVTO	49	GB	1427.0	1428.0	3.0	500.0			QL=4 ST=2 TYP=6
	245	SGMR	49	GB	1432.0	1439.0	8.0	550.0			QL=4 ST=2 TYP=6
	536	ONDR	45	C	1438.0	1438.5	2.5	50.0			
	33	UPIC	8	S	1440.5	1440.6	0.5				
	536	ONDR	4	S/F	1526.0	1527.0	2.5	58.0			
	245	SGMR	49	GB	1527.0	1527.0	U	2400.0			QL=4 ST=2 TYP=6
	410	SGMR	8	S	1527.0	1527.0	1.0	76.0			QL=4 ST=2 TYP=3
	245	SVTO	49	GB	1527.0	1527.0	2.0	3100.0			QL=4 ST=3 TYP=7
	410	SVTO	8	S	1527.0	1527.0	U	170.0			QL=4 ST=3 TYP=3
	33	UPIC	4	S/F	1527.4	1527.8	1.7				
07	260	ONDR	44	NS	0600.0E	1428.0	660.0D	205.0			
	235	CUBA	44	NS	1307.0E		463.0D		10.0		
	280	CUBA	44	NS	1307.0E		463.0D		15.0		
	245	LEAR	8	S	0015.0	0016.0	1.0	130.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0113.0	0113.0	1.0	59.0			QL=4 ST=2 TYP=3
	2800	HIRA	8	S	0131.5	0131.9	0.5	9.0	7.0		O
	245	LEAR	8	S	0326.0	0326.0	U	220.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0326.0	0326.0	U	220.0			QL=2 ST=2 TYP=3
	245	LEAR	8	S	0443.0	0443.0	1.0	46.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0443.0	0443.0	U	58.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0508.0	0509.0	1.0	64.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0508.0	0509.0	1.0	61.0			QL=4 ST=2 TYP=3
	2850	CRIM	3	S	0542.0	0542.9	3.5	69.0	23.0		
	245	LEAR	8	S	0555.0	0555.0	U	64.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0555.0	0555.0	U	56.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0604.0	0606.0	2.0	97.0			QL=4 ST=2 TYP=3
	3013	IZMI	1	S	0617.3	0617.7	1.0	2.0	1.0		
	204	IZMI	41	F	0805.8	0807.0	3.0	150.0			
	245	SGMR	8	S	1254.0	1255.0	1.0	82.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1255.0	1255.0	U	86.0			QL=4 ST=2 TYP=3
	2850	CRIM	45	C	1302.0	1412.0U	70.0U				
	245	SGMR	8	S	1305.0	1305.0	U	100.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1305.0	1305.0	U	120.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1347.0	1347.0	1.0	240.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1347.0	1347.0	1.0	220.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1354.0	1354.0	U	82.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1429.0	1429.0	U	170.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1429.0	1429.0	U	170.0			QL=4 ST=2 TYP=3
	235	CUBA	7	C	1609.3	1610.1	4.6	21.0			
	280	CUBA	7	C	1609.3	1610.1	4.6	31.0			
08	245	LEAR	43	NS	0411.0	0411.0	19.0	88.0			QL=4 ST=3 TYP=1
	245	SVTO	43	NS	0411.0	0411.0	23.0	110.0			QL=4 ST=2 TYP=1
	235	CUBA	44	NS	1306.0E		464.0D		11.0		
	280	CUBA	44	NS	1306.0E		464.0D		16.0		
	245	PALE	43	NS	2158.0	2158.0	21.0	82.0			QL=4 ST=2 TYP=1
	245	SGMR	44	NS	2158.0E	2158.0	120.0D	85.0			QL=2 ST=2 TYP=1
	9100	GORK	20	GRF	0242.0E	0243.7	105.0U	8.0			
	2950	GORK	20	GRF	0309.0E	0319.3	216.0D	5.0			
	245	PALE	8	S	0310.0	0310.0	2.0	48.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1993

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	8	S	0402.0	0402.0	1.0	56.0			QL=2 ST=2 TYP=3
	245	SVTO	8	S	0402.0	0402.0	1.0	61.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0411.0	0411.0	1.0	87.0			QL=2 ST=2 TYP=3
	204	IZMI	41	F	0635.0	0637.5	7.0	40.0			
	260	ONDR	40	F	0955.0	1015.0	27.5	102.0			
	245	PALE	8	S	1908.0	1908.0	1.0	53.0			QL=4 ST=2 TYP=3
	235	CUBA	41	F	2021.5	2046.2	27.2	26.0			
	280	CUBA	41	F	2021.5	2046.2	27.1	10.0			
09	204	IZMI	43	NS	0755.0		70.0		5.0		
	235	CUBA	44	NS	1330.0E		435.0D		10.0		
	280	CUBA	44	NS	1330.0E		435.0D		16.0		
	245	LEAR	8	S	0045.0	0045.0	1.0	93.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0045.0	0045.0	U	86.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0230.0	0230.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0230.0	0230.0	1.0	120.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0638.0	0638.3	2.0	4.2			
	260	ONDR	40	F	0958.0	1001.0	19.0	100.0			
	204	IZMI	41	F	1006.0	1013.5	13.0	55.0			
	536	ONDR	48	C	1007.5	1007.8	5.0	65.0			
	204	IZMI	41	F	1046.7	1047.4	1.0	100.0			
	260	ONDR	8	S	1047.5	1047.8	0.2	120.0			
	127	TORN	4	S/F	1301.1	1301.3	1.3	220.0	110.0		
	33	UPIC	46	C	1301.1	1301.9	1.3				
	410	SGMR	8	S	1544.0	1544.0	U	77.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1544.0	1546.0	3.0	37.0			QL=4 ST=2 TYP=3
	536	ONDR	48	C	1544.5	1548.0	7.0	70.0			
	2800	PENT	3	S	1546.0	1547.1	4.3	9.6	2.0		
	260	ONDR	48	C	1546.0	1546.2	2.0	100.0			
	33	UPIC	46	C	1546.1	1546.3	1.3				
	610	PALE	8	S	1846.0	1846.0	U	230.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1846.0	1846.0	U	240.0			QL=4 ST=2 TYP=3
10	260	ONDR	43	NS	0800.0	1610.0	540.0D	205.0			
	127	TORN	43	NS	1000.0		85.0		2.0		V=1
	235	CUBA	44	NS	1400.0E		410.0D		11.0		
	280	CUBA	44	NS	1410.0E		410.0D		15.0		
	410	LEAR	4	S/F	0025.0	0025.0	3.0	59.0			QL=4 ST=2 TYP=3
	610	LEAR	4	S/F	0025.0	0025.0	3.0	90.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0025.0	0025.0	U	120.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	0025.0	0025.0	U	89.0			QL=4 ST=2 TYP=3
	410	LEAR	4	S/F	0039.0	0040.0	3.0	300.0			QL=4 ST=2 TYP=3
	610	LEAR	4	S/F	0039.0	0040.0	3.0	230.0			QL=4 ST=2 TYP=3
	2800	PENT	3	S	0039.1	0040.3	10.3	11.5	3.0		
	245	LEAR	4	S/F	0040.0	0043.0	4.0	100.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0040.0	0040.0	U	72.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	0040.0	0040.0	U	190.0			QL=4 ST=2 TYP=3
	410	PALE	4	S/F	0040.0	0040.0	3.0	370.0			QL=4 ST=2 TYP=3
	2800	HIRA	3	S	0040.0	0040.4	3.0	10.0	4.0		O
	245	PALE	8	S	0042.0	0043.0	1.0	98.0			QL=4 ST=2 TYP=3
	245	LEAR	49	GB	0253.0	0253.0	1.0	740.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	0253.0	0253.0	1.0	770.0			QL=4 ST=2 TYP=6
	245	PALE	8	S	0332.0	0332.0	1.0	120.0			QL=4 ST=2 TYP=3
	2850	CRIM	3	S	0556.0	0602.6	14.0	80.0	27.0		
	245	SGMR	8	S	1322.0	1322.0	U	130.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1614.0	1614.0	U	69.0			QL=4 ST=2 TYP=3
11	260	ONDR	44	NS	0600.0E	0835.0	660.0D	126.0			
	204	IZMI	5	S	0714.0	0715.3	1.5	64.0			
	2850	CRIM	3	S	1001.0	1005.0	9.0	14.0	5.0		
12	235	CUBA	44	NS	1320.0E		450.0D		10.0		
	280	CUBA	44	NS	1320.0E		450.0D		14.0		
	245	LEAR	8	S	0344.0	0344.0	U	83.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0605.0	0606.0	4.5	120.0			
	245	SVTO	8	S	0816.0	0816.0	U	27.0			QL=4 ST=2 TYP=3
	2850	CRIM	1	S	0852.8	0858.3	9.0	6.0	2.0		
	245	SVTO	8	S	0858.0	0858.0	U	61.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	0858.0	0859.0	1.0	30.0			QL=4 ST=2 TYP=3

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

JULY 1993

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
12	245	LEAR	8	S	0928.0	0928.0	U	73.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0928.0	0928.0	1.0	92.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0928.0	0928.2	2.5	200.0			
	3013	IZMI	5	S	0940.5	0942.0	2.0	3.0	2.0		
	245	SVTO	8	S	1005.0	1005.0	1.0	29.0			QL=4 ST=2 TYP=3
	3013	IZMI	5	S	1030.4	1031.0	1.0	2.0	1.0		
	235	CUBA	6	S	1734.2	1734.9	2.0	33.0			
	280	CUBA	6	S	1734.2	1734.9	2.0	20.0			
	245	PALE	8	S	1836.0	1836.0	U	250.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1836.0	1836.0	U	46.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	1836.0	1836.0	U	19.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1836.0	1836.0	1.0	56.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1836.0	1836.0	1.0	26.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1836.0	1836.0	4.0	270.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2243.0	2243.0	U	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2243.0	2243.0	U	88.0			QL=4 ST=2 TYP=3
13	235	CUBA	44	NS	1322.0E		452.0D		11.0		
	280	CUBA	44	NS	1322.0E		452.0D		16.0		
	245	PALE	8	S	0333.0	0333.0	1.0	100.0			QL=4 ST=2 TYP=3
14	235	CUBA	44	NS	1310.0E		450.0D		10.0		
	280	CUBA	44	NS	1310.0E		460.0D		13.0		
	2800	HIRA	1	S	0701.5	0703.3	3.0	5.0	3.0		O
	3013	IZMI	7	C	0701.5	0703.5	9.0	7.0	3.0		
	2950	GORK	1	S	0702.2	0703.7	5.7	6.0			
	260	ONDR	42	SER	0956.0	1525.0	424.0	50.0			
15	204	IZMI	43	NS	0600.0		360.0D		10.0		
	260	ONDR	44	NS	0600.0E	1656.0	660.0D	70.0			
	127	TORN	43	NS	0815.0		295.0		3.0		V=0
	280	CUBA	44	NS	1305.0E		295.0D		20.0		
	235	CUBA	44	NS	1306.0E		414.0D		16.0		
	3013	IZMI	7	C	0639.0	0639.2	1.0	5.0	3.0		
	3013	IZMI	41	F	0723.0	0730.3	11.0	25.0			
	2800	HIRA	1	S	0724.3	0724.8	1.5	6.0	2.0		O
	245	SVTO	8	S	0748.0	0748.0	1.0	57.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0820.5	0831.0	26.0	160.0			
	3013	IZMI	41	F	0823.0	0825.8	8.0	28.0			
	3013	IZMI	41	F	0842.5	0856.5	14.0U	37.0			
	245	PALE	8	S	1725.0	1726.0	1.0	49.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1725.0	1726.0	1.0	55.0			QL=4 ST=2 TYP=3
16	260	ONDR	44	NS	0600.0E	1326.0	660.0D	85.0			
	235	CUBA	44	NS	1255.0E		474.0D		13.0		
	280	CUBA	44	NS	1255.0E		475.0D		16.0		
	245	SVTO	43	NS	1336.0	1336.0	135.0	78.0			QL=4 ST=2 TYP=1
	2800	HIRA	1	S	0403.4	0404.5	3.0	6.0	2.0		O
	2950	GORK	1	S	0403.9	0405.1	2.1	5.0			
	245	SGMR	8	S	1216.0	1216.0	U	54.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1216.0	1216.0	U	64.0			QL=4 ST=2 TYP=3
	33	UPIC	45	C	1304.0	1304.1	1.3				
	245	SGMR	8	S	1336.0	1336.0	U	74.0			QL=4 ST=2 TYP=3
17	260	ONDR	44	NS	0810.0E	0905.0	55.0D	75.0			
	235	CUBA	44	NS	1307.0E		463.0D		10.0		
	280	CUBA	44	NS	1307.0E		463.0D		14.0		
	245	SGMR	43	NS	2015.0	2106.0	146.0	89.0			QL=4 ST=2 TYP=1
	245	PALE	43	NS	2155.0	2056.0	118.0	75.0			QL=4 ST=2 TYP=1
	204	IZMI	41	F	0703.0	0711.5	12.0	70.0			
	245	LEAR	8	S	0854.0	0854.0	U	53.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0854.0	0854.0	U	74.0			QL=4 ST=2 TYP=3
	127	TORN	46	C	1025.0	1028.7	6.4	80.0	60.0		
	127	TORN	41	F	1036.0	1041.6	9.3	10.0	1.0		
18	235	CUBA	44	NS	1316.0E		454.0D		10.0		
	280	CUBA	44	NS	1316.0E		454.0D		12.0		
	245	PALE	8	S	2126.0	2126.0	1.0	52.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2126.0	2126.0	1.0	51.0			QL=4 ST=3 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1993

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	235	CUBA	44	NS	1304.0E		464.0D		9.0		
	280	CUBA	44	NS	1304.0E		466.0D		13.0		
	127	TORN	43	NS	1321.0		99.0D		12.0		V=3,DISTURBEED
	2950	GORK	20	GRF	0403.0	0406.4	17.5	6.0			
	410	PALE	4	S/F	0405.0	0406.0	4.0	140.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	0406.0	0406.0	U	260.0			QL=4 ST=2 TYP=3
	260	ONDR	48	C	0851.5	0855.0	10.0	127.0			
	127	TORN	4	S/F	0854.8	0856.4	2.7	140.0	30.0		
	245	SVTO	8	S	0855.0	0855.0	1.0	87.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	0855.0	0855.4	2.0	130.0			
	260	ONDR	8	S	1143.0	1145.0	2.0U	31.0			
	260	ONDR	8	S	1147.5	1147.8	0.5	35.0			
	260	ONDR	8	S	1430.5	1431.0	2.0	55.0			
20	235	CUBA	44	NS	1310.0E		290.0D		9.0		
	280	CUBA	44	NS	1310.0E		290.0D		15.0		
	245	PALE	8	S	0354.0	0354.0	U	130.0			QL=4 ST=2 TYP=3
	9100	GORK	4	S/F	0847.9	0848.3	3.1	6431.0			
	260	ONDR	8	S	0914.5	0914.8	6.0	80.0			
	8800	SVTO	8	S	1008.0	1008.0	2.0	100.0			QL=4 ST=2 TYP=3
	2850	CRIM	3	S	1136.3	1137.9	8.0	12.0	4.0		
21	204	IZMI	43	NS	0600.0		360.0D		15.0		
	260	ONDR	44	NS	0730.0E	1119.0	570.0D	125.0			
	127	TORN	43	NS	1140.0		200.0		7.0		V=1
	235	CUBA	44	NS	1313.0E		137.0D		21.0		
	280	CUBA	44	NS	1313.0E		206.0D		23.0		
	245	PALE	8	S	0338.0	0339.0	1.0	140.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0847.0	0848.5	30.0	90.0			
	536	ONDR	45	C	1029.0	1029.8	2.5	55.0			
	808	ONDR	45	C	1029.5	1050.5	21.0U				
	245	SGMR	8	S	1048.0	1048.0	1.0	73.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1048.0	1048.0	1.0	62.0			QL=4 ST=2 TYP=3
	204	IZMI	41	F	1048.0	1048.5	2.0	75.0			
	610	SGMR	8	S	1049.0	1049.0	1.0	33.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1049.0	1049.0	1.0	38.0			QL=4 ST=2 TYP=3
	127	TORN	8	S	1304.6	1305.2	1.1	220.0	110.0		
	245	SGMR	8	S	1308.0	1308.0	1.0	70.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1308.0	1308.0	1.0	68.0			QL=4 ST=2 TYP=3
	33	UPIC	45	C	1308.7	1308.8	0.9				
	245	SVTO	8	S	1629.0	1629.0	2.0	63.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2146.0	2147.0	1.0	90.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2146.0	2147.0	1.0	94.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	2146.0	2147.0	9.0	96.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	2146.0	2146.0	9.0	83.0			QL=4 ST=2 TYP=3
22	204	IZMI	44	NS	0600.0E		360.0D	15.0			
	260	ONDR	44	NS	0600.0E	1201.0	660.0D	85.0			
	280	CUBA	44	NS	1533.0E		317.0D		16.0		
	2800	HIRA	8	S	0632.6	0632.9	0.5	6.0	4.0		O
	9100	GORK	1	S	0632.8	0633.0	2.0	6.0			
	2950	GORK	1	S	0632.8	0633.0	1.8	6.0			
	950	GORK	1	S	0632.9	0633.0	1.7	17.0			
	3013	IZMI	5	S	0633.0	0633.1	1.0	11.0	5.0		
	204	IZMI	41	F	0748.0	0750.5	4.5	80.0			
	204	IZMI	41	F	0851.5	0851.7	4.0	80.0			
	245	SGMR	8	S	1150.0	1150.0	U	62.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1158.0	1200.0	6.0	93.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1159.0	1200.0	4.0	91.0			QL=4 ST=2 TYP=5
	245	SGMR	8	S	1228.0	1229.0	1.0	67.0			QL=4 ST=3 TYP=3
	410	SGMR	8	S	1228.0	1229.0	1.0	14.0			QL=4 ST=3 TYP=3
	610	SGMR	8	S	1228.0	1229.0	1.0	28.0			QL=4 ST=3 TYP=3
	2695	SGMR	8	S	1228.0	1229.0	1.0	120.0			QL=4 ST=3 TYP=3
	245	SVTO	8	S	1229.0	1231.0	2.0	57.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1650.0	1650.0	U	240.0			QL=4 ST=3 TYP=3
	245	SVTO	8	S	1650.0	1650.0	U	250.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2126.0	2126.0	1.0	57.0			QL=4 ST=2 TYP=3
23	204	IZMI	44	NS	0600.0E		360.0D	20.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

JULY 1993

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
23	260	ONDR	44	NS	0600.0E	1614.5	660.0D	160.0			
	235	CUBA	44	NS	1308.0E		462.0D		13.0		
	280	CUBA	44	NS	1308.0E		462.0D		16.0		
	245	LEAR	4	S/F	0541.0	0543.0	6.0	51.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	0543.0	0543.0	1.0	75.0			QL=4 ST=2 TYP=3
	127	TORN	42	SER	1307.0	1309.7	5.0	60.0			
	245	SGMR	8	S	1400.0	1401.0	1.0	60.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1400.0	1401.0	1.0	69.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1642.0	1642.0	1.0	99.0			QL=2 ST=2 TYP=3
	245	SGMR	8	S	1642.0	1642.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1642.0	1642.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	1754.0	1754.0	5.0	110.0			QL=4 ST=2 TYP=5
	245	SGMR	8	S	1754.0	1754.0	U	100.0			QL=4 ST=2 TYP=3
	2800	PENT	4	S/F	2137.0	2145.3	13.0	19.6	8.0		
	2800	HIRA	46	C	2142.0	2142.5	6.0	23.0	14.0		WR
	245	SGMR	4	S/F	2143.0	2144.0	6.0	360.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	2143.0	2144.0	6.0	32.0			QL=4 ST=2 TYP=3
	610	SGMR	4	S/F	2143.0	2145.0	6.0	45.0			QL=4 ST=2 TYP=5
	1415	SGMR	4	S/F	2143.0	2144.0	5.0	45.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2159.0	2200.0	1.0	72.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2334.0	2334.0	2.0	350.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	2335.0	2335.0	U	150.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2335.0	2335.0	U	66.0			QL=4 ST=2 TYP=3
24	260	ONDR	44	NS	0600.0E	1620.0	660.0D	160.0			
	280	CUBA	44	NS	1308.0E		442.0D		16.0		
	245	SVTO	43	NS	1604.0	1635.0	105.0	74.0			QL=4 ST=2 TYP=1
	245	SGMR	43	NS	1635.0	1635.0	48.0	67.0			QL=4 ST=3 TYP=1
	245	PALE	43	NS	1656.0	1854.0	184.0	76.0			QL=4 ST=2 TYP=1
	245	SGMR	43	NS	1855.0	1901.0	7.0	61.0			QL=4 ST=3 TYP=1
	245	LEAR	43	NS	2334.0	2335.0U	356.0	140.0			QL=4 ST=2 TYP=1
	2850	CRIM	30	PBI	0715.8	0810.0	65.0	14.5	5.0		
	2850	CRIM	45	C	0715.8	0730.5	50.0	500.0	100.0		
	2850	CRIM	3	S	0845.1	0846.5	3.0	110.0	37.0		
	2850	CRIM	40	F	0943.0	0943.3	1.0	19.0	6.0		
	245	PALE	4	S/F	2101.0	2102.0	3.0	98.0			QL=4 ST=3 TYP=3
	245	SGMR	8	S	2102.0	2102.0	2.0	110.0			QL=4 ST=3 TYP=3
	245	PALE	8	S	2114.0	2114.0	1.0	87.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2114.0	2114.0	1.0	81.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2314.0	2314.0	U	52.0			QL=2 ST=2 TYP=3
25	245	LEAR	43	NS	0200.0	0427.0	285.0	180.0			QL=4 ST=2 TYP=1
	245	PALE	43	NS	0426.0	0427.0	1174.0	190.0			QL=4 ST=3 TYP=1
	245	SVTO	43	NS	0443.0	0443.0	113.0	99.0			QL=4 ST=2 TYP=1
	260	ONDR	44	NS	0600.0E	0953.0	660.0D	520.0			
	280	CUBA	44	NS	1308.0E		447.0D		13.0		
	245	SVTO	4	S/F	0426.0	0427.0	3.0	190.0			QL=4 ST=3 TYP=3
	204	IZMI	41	F	0639.0	0641.0	3.5	150.0			
	33	UPIC	4	S/F	0951.5	0951.6	0.9				
	245	SGMR	8	S	0952.0	0952.0	U	420.0			QL=2 ST=3 TYP=3
	245	SVTO	8	S	0952.0	0952.0	U	460.0			QL=4 ST=2 TYP=3
	204	IZMI	7	C	0952.0	0952.2	0.5	350.0			
	245	SGMR	8	S	1542.0	1543.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1542.0	1543.0	1.0	96.0			QL=4 ST=2 TYP=3
26	280	CUBA	44	NS	1308.0E		462.0D		15.0		
	260	ONDR	40	F	0610.0	0843.0	275.0	65.0			
	2850	CRIM	4	S/F	0807.0	0810.8	5.0	24.0	8.0		
	204	IZMI	7	C	0926.5	0926.7	0.8	42.0			
	2850	CRIM	1	S	0947.0	0949.1	7.0	13.0	4.0		
	245	PALE	8	S	2129.0	2130.0	2.0	280.0			QL=2 ST=3 TYP=3
	245	SGMR	4	S/F	2129.0	2131.0	3.0	250.0			QL=4 ST=2 TYP=3
27	280	CUBA	44	NS	1308.0E		462.0D		13.0		
	245	LEAR	8	S	0140.0	0140.0	U	84.0			QL=2 ST=2 TYP=3
	245	PALE	8	S	0140.0	0140.0	U	100.0			QL=4 ST=2 TYP=3
	2850	CRIM	45	C	0427.0	0430.0	19.0	79.0	25.0		
	2850	CRIM	45	C	0427.0	0431.5	U	69.0			
	2850	CRIM	1	S	0504.2	0505.0	3.0	4.0	1.0		

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

JULY 1993

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	204	IZMI	7	C	1139.5	1140.2	2.0	35.0			
	2800	PENT	4	S/F	1533.7	1539.3	12.2	24.4	11.0		
	280	CUBA	48	C	1536.4	1543.3	16.4	91.0D			
	260	ONDR	49	GB	1537.5	1544.0	22.5	170.0			
	536	ONDR	45	C	1537.5	1542.5	25.0	40.0			
	2695	SVTO	4	S/F	1538.0	1539.0	5.0	32.0			QL=4 ST=2 TYP=3
	1415	SGMR	4	S/F	1539.0	1543.0	7.0	25.0			QL=4 ST=2 TYP=3
	1415	SVTO	8	S	1539.0	1539.0	1.0	26.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1541.0	1543.0	5.0	180.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1541.0	1543.0	6.0	190.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1543.0	1543.0	U	26.0			QL=4 ST=2 TYP=3
	2800	PENT	29	PBI	1545.9	1546.3	110.0	11.1	4.0		
	2800	PENT	3	S	1552.5	1557.6	11.4	7.0	2.0		
28	280	CUBA	44	NS	1515.0E		288.0D		12.0		
	2850	CRIM	8	S	0549.5	0549.6	0.2	23.0			
	2850	CRIM	1	S	0711.0	0711.8	1.5	3.0	1.0		
	9100	GORK	7	C	0841.3	0842.1	1.8	10.0			
	9100	GORK	7	C	0841.3	0842.5	U	10.0			
	245	SGMR	8	S	1847.0	1847.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	SGMR	4	S/F	1853.0	1855.0	3.0	150.0			QL=4 ST=2 TYP=3
30	2850	CRIM	1	S	0441.1	0444.8	3.7U	6.0	2.0		
	2850	CRIM	45	C	0458.8	0500.0	7.0	12.6	6.0		
	2850	CRIM	45	C	0458.8	0502.6	U	18.4			
	33	UPIC	4	S/F	1211.7	1211.9	0.7				
31	260	ONDR	48	C	1148.0	1151.0	5.0	257.0			
	536	ONDR	45	C	1148.0	1149.5	3.5	162.0			
	204	IZMI	45	C	1149.0	1152.0	5.0	1700.0			
	3013	IZMI	5	S	1149.0	1150.0	3.5	4.0	2.0		

Reports are received routinely from the following observatories:

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

Explanation of Type Code:

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

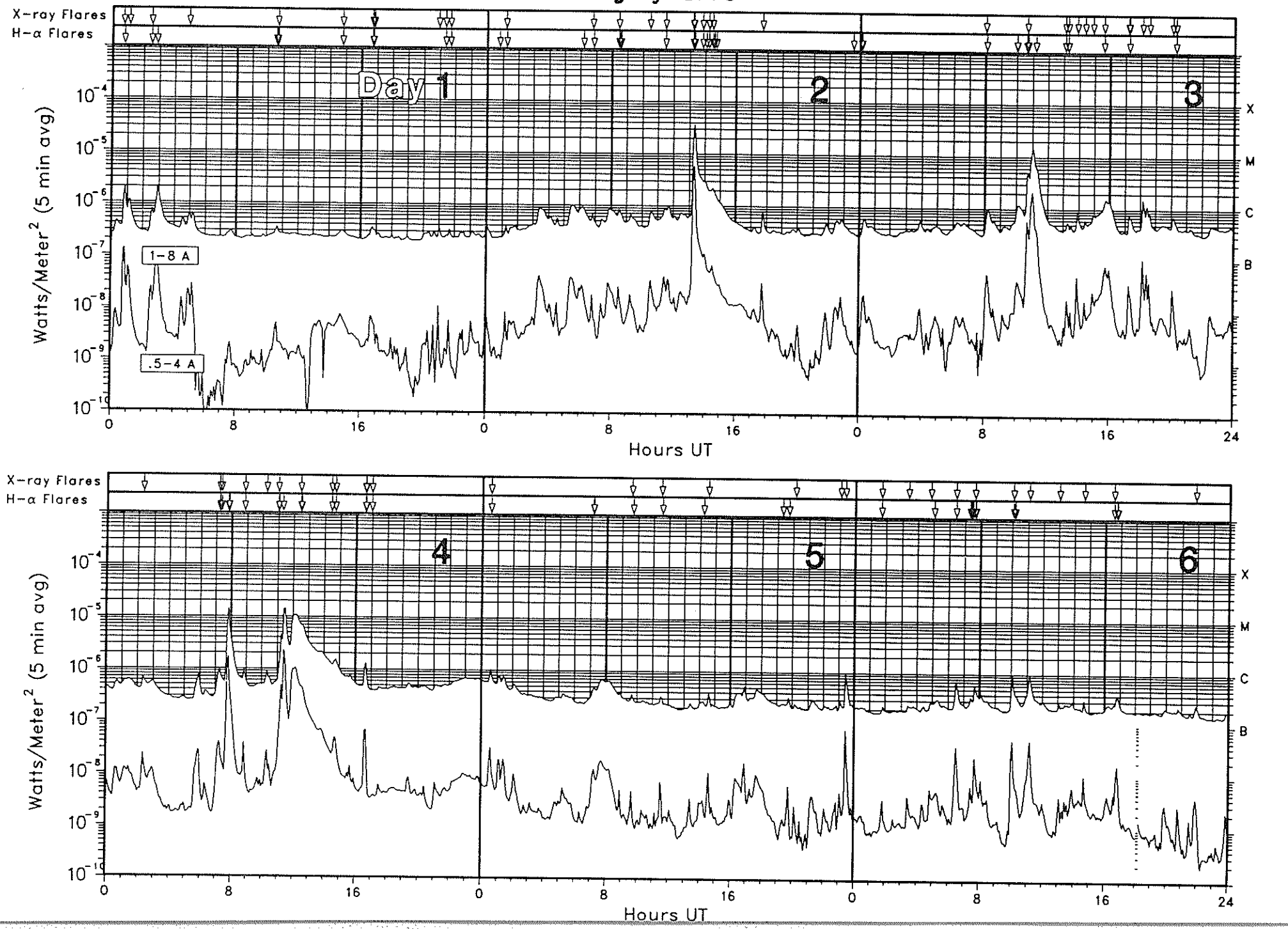
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

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; Penticton, Canada 2800 MHz; Hiraiso, Japan 500 and 200 MHz; and Toyokawa, Japan 9400, 3750, 2000 and 1000 MHz.

GOES-7 X-RAY DETECTOR

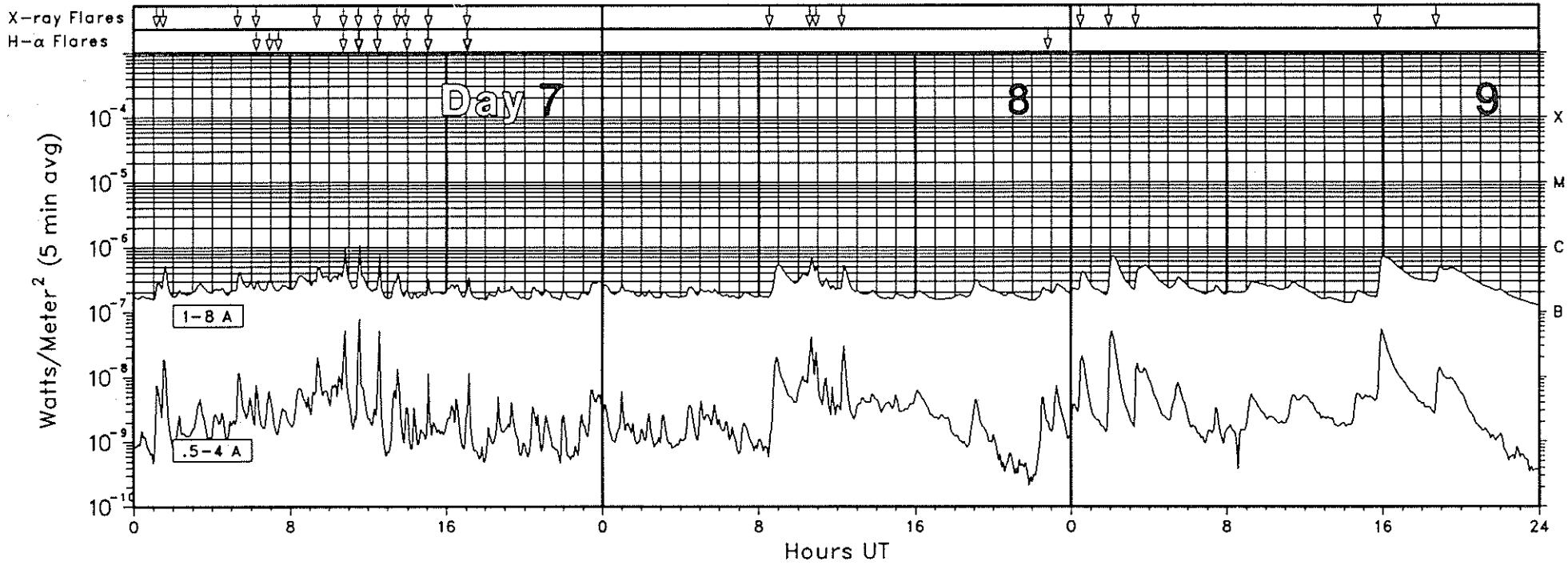
July 1993

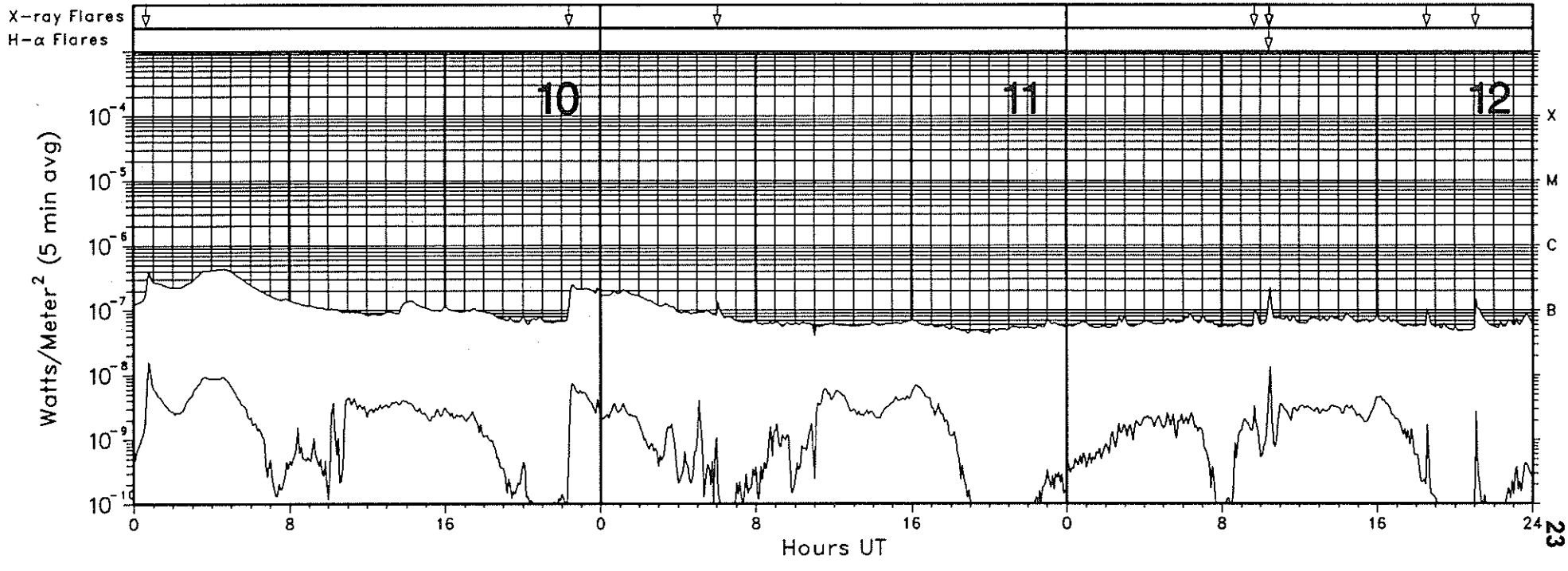
22 Jul 93



GOES-7 X-RAY DETECTOR

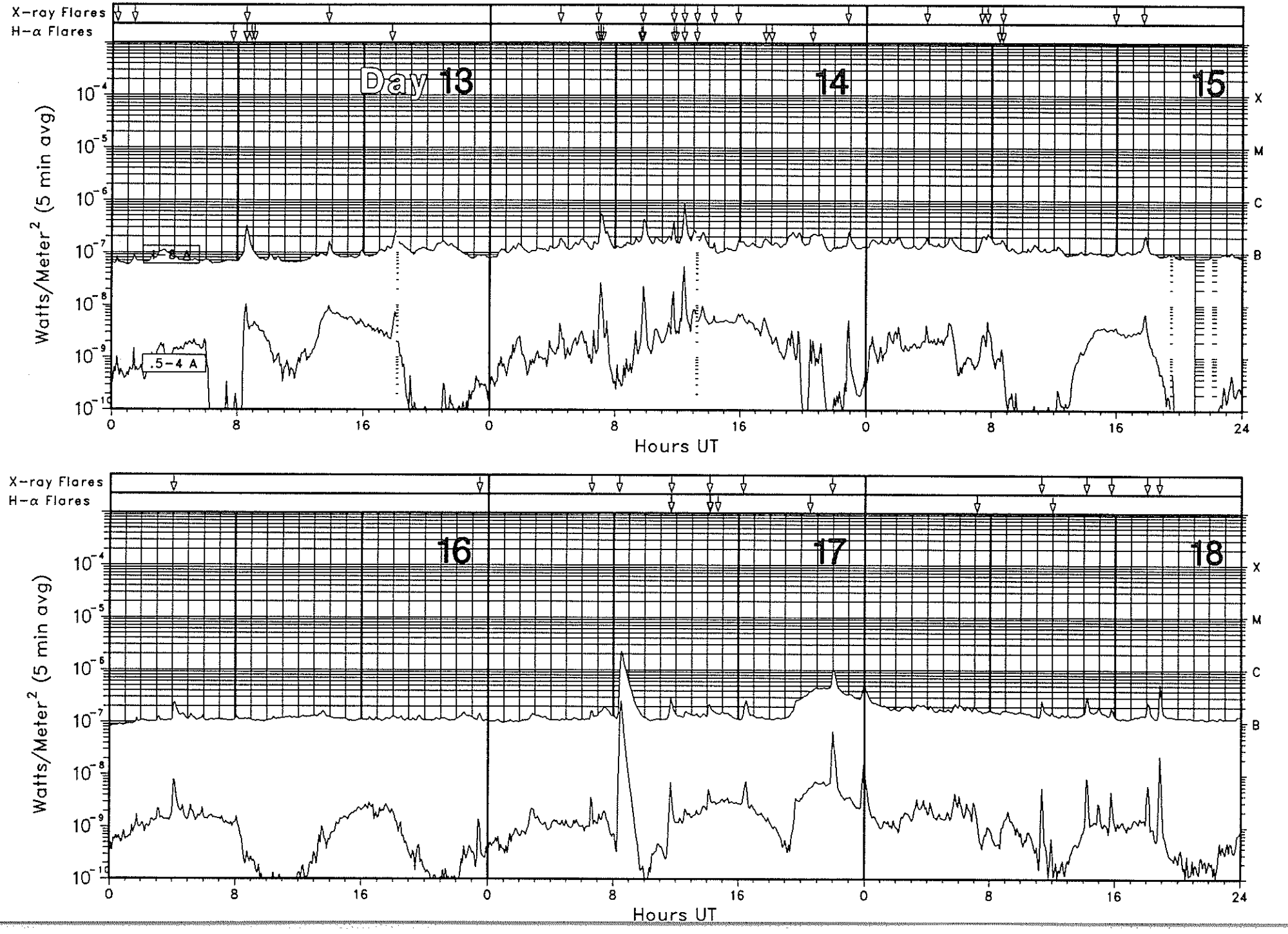
July 1993





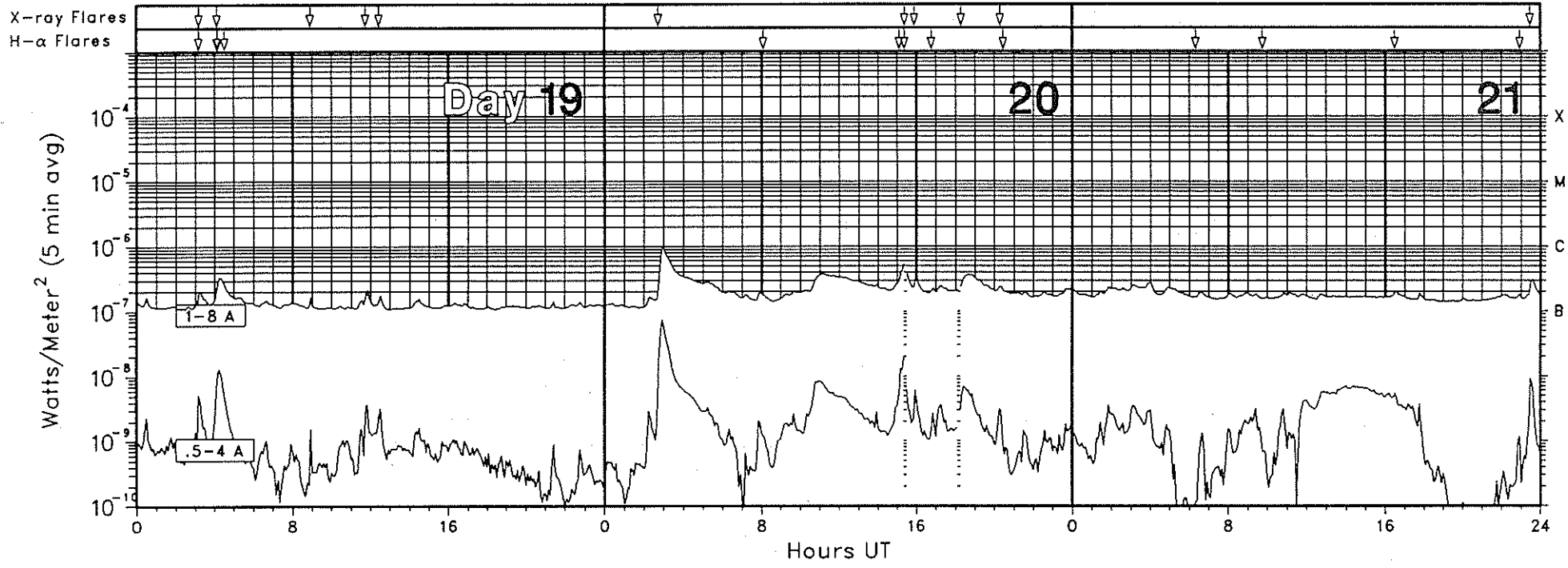
GOES-7 X-RAY DETECTOR

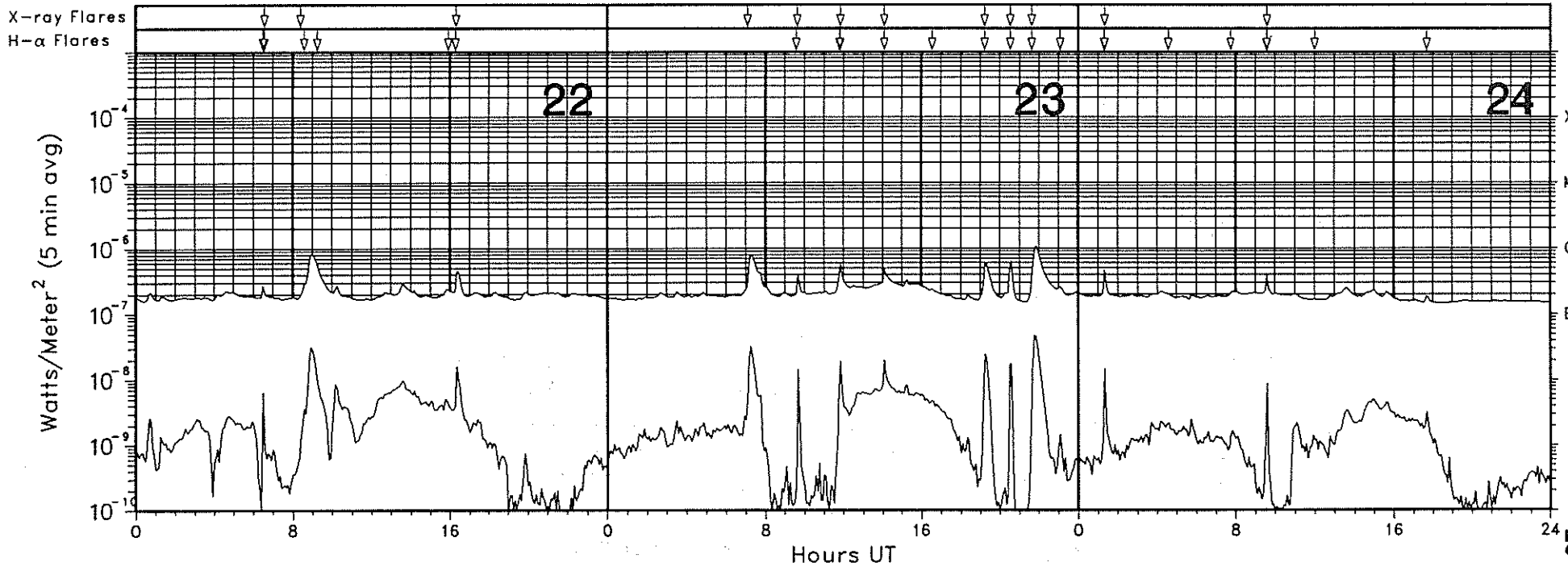
July 1993



GOES-7 X-RAY DETECTOR

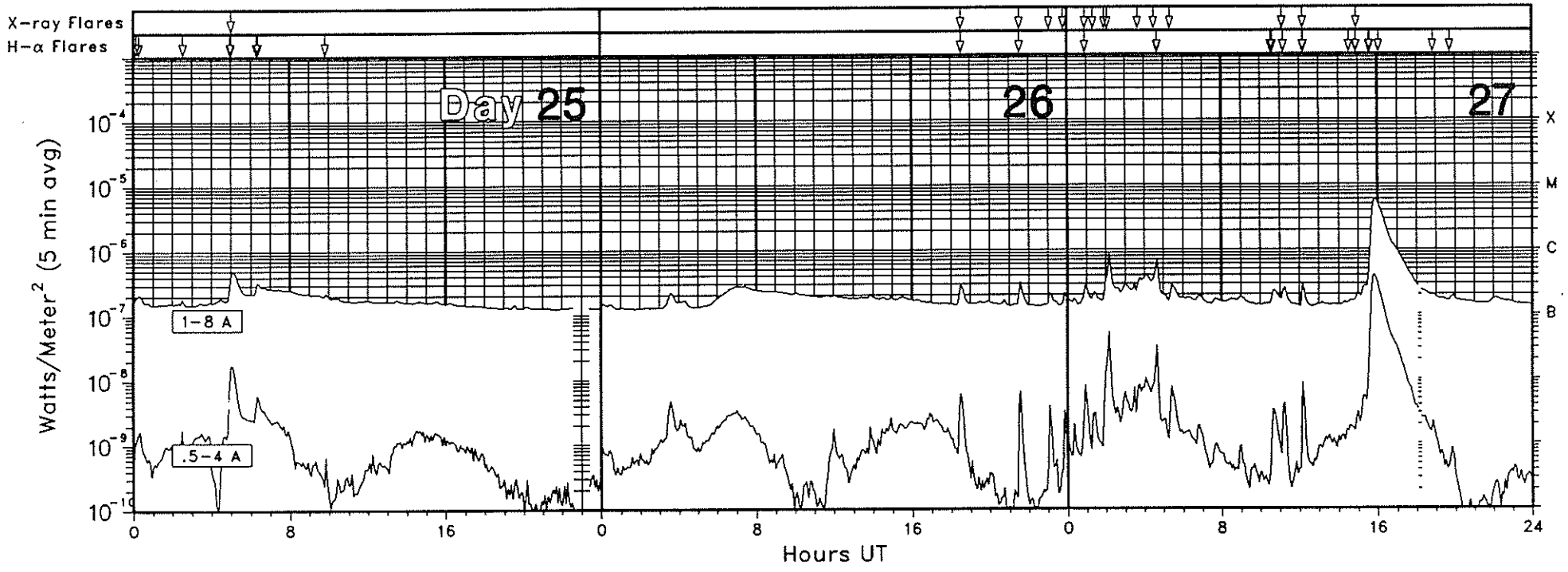
July 1993

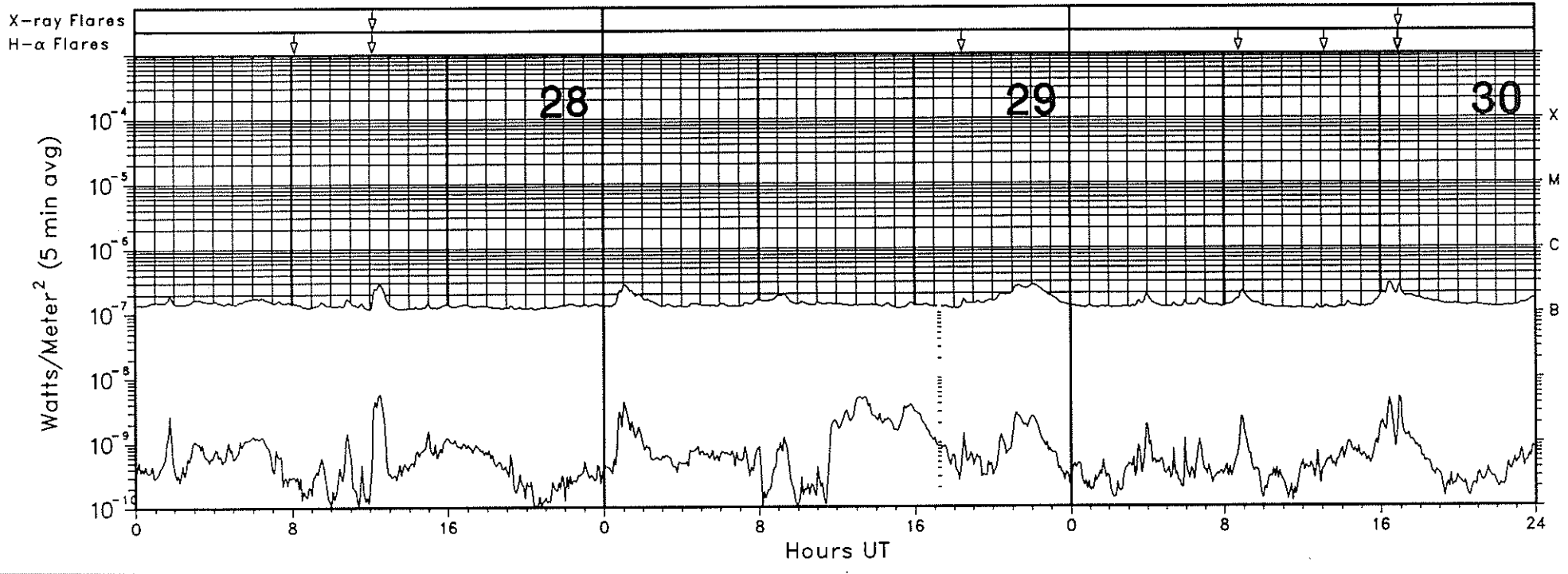




GOES-7 X-RAY DETECTOR

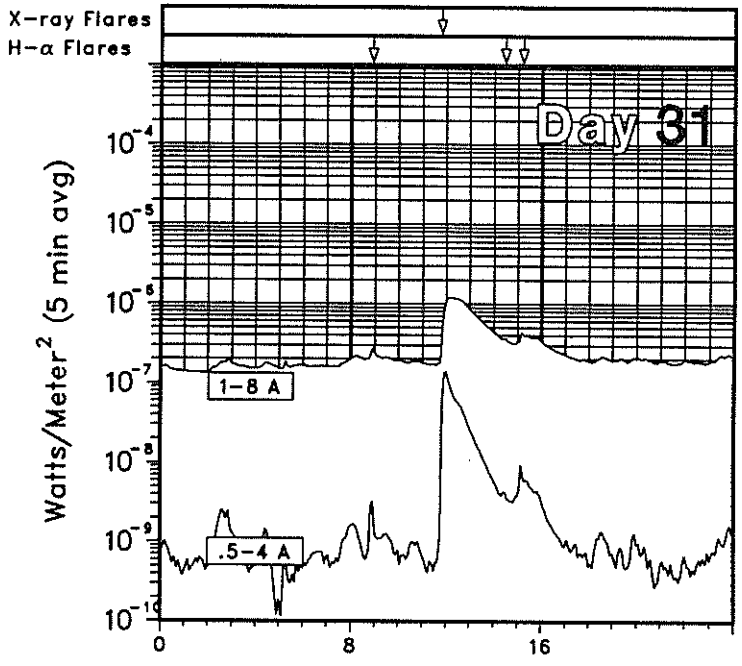
July 1993





GOES-7 X-RAY DETECTOR

July 1993



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

July 1993

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region
01	0043	0050	0056				C2.1	
01	0105	0109	0113				C1.2	
01	0230	0252	0329	S15	E07	SF	C2.0	7530
01	0454	0502	0505				B6.6	
01	1039	1040	1045	S12	W03	SF		7530
01	1449	1450	1505	S13	W05	SF		7530
01	1643	1646	1652	S12	W07	SF	B5.1	7530
01	1650	1655	1657			SF	B3.7	
01	2057	2101	2105			SF	B4.4	
01	2122	2126	2130	S11	W06	SF		7530
01	2141	2142	2144	S12	W11	SF	B3.9	7530
02	0113	0116	0120				B4.3	
02	0648	0651	0654			SF	B7.4	
02	0827	0837	0856	S10	W89	SF	C1.0	7531
02	1028	1037	1047				B8.5	
02	1128	1132	1146	S10	W10	SF		7530
02	1314	1318	1345	S11	W14	SF	M4.3	7530
02	1317	1317	1322	S20	E02	SF		7534
02	1350	1351	1401	S11	W14	SF		7530
02	1415	1419	1445	S10	W04	SF		7534
02	1428	1430	1452	S13	W14	SF		7530
02	1743	1747	1753				B8.6	
03	0802	0812	0825				B9.9	
03	1040	1106	1151	S13	W26	1N	M1.6	7530
03	1306	1306	1314	S11	W25	SF		7530
03	1318	1320	1342	S11	W25	SF	B8.0	7530
03	1353	1357	1400				C1.1	
03	1423	1427	1431				B6.6	
03	1454	1458	1507				B8.6	
03	1537	1546	1634	S11	W29	SN		7530
03	1712	1716	1730				B8.3	
03	1715	1824	1907	S11	W28	SF	C1.2	7530
03	1806	1812	1817				C1.7	
03	1833	1837	1839				B9.6	
03	2003	2009	2014				B8.8	
03	2016	2021	2032	S11	W30	SF		7530
04	0218	0222	0227				B7.4	
04	0713	0715	0721	S11	W37	SF	C1.0	7530
04	0721	0756	0840	S16	W38	1B	M1.6	7530
04	0850	0850	0904	S16	W39	SF	C1.1	7530
04	1016	1020	1025				B9.8	
04	1101	1206	1355	S11	W37	2B	M1.8	7530
04	1227	1238	1323	S15	W24	SF		7534
04	1427	1433	1521	N05	W29	SF		7540
04	1440	1448	1459	S12	W44	SF		7530
04	1636	1639	1650	S12	W44	SF	C1.5	7530
04	1634	1646	1659	S13	W28	SF		7534
04	1659	1659	1703	N11	W41	SF		7537
05	0033	0035	0045	S13	W46	SF	C1.1	7530
05	0937	0941	0945				B3.8	
05	1130	1134	1136				B4.6	
05	1431	1437	1441				B4.1	
05	2010	2013	2015				B3.1	
05	2302	2306	2309				B3.2	
05	2322	2328	2331				C1.4	
06	0141	0149	0200	S09	W63	SF	B2.8	7530
06	0324	0328	0331				B2.9	
06	0450	0454	0458				B3.1	
06	0626	0628	0636	S09	W65	SF	B8.9	7530
06	0738	0741	.0744				B7.3	

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region
06	1004	1004	1016	S15	W68	SF	C1.0	7530
06	1106	1112	1115				C1.1	
06	1302	1305	1307				B3.2	
06	1438	1443	1445				B4.2	
06	1634	1651	1659	S12	W69	SN	B4.5	7530
06	2151	2155	2205				B2.6	
07	0109	0114	0124				B3.2	
07	0129	0134	0141				B5.7	
07	0519	0524	0531				B4.6	
07	0615	0619	0621				B4.2	
07	0922	0929	0937				B5.2	
07	1045	1051	1054				C1.2	
07	1131	1134	1147	S12	W89	SF	C1.6	7530
07	1231	1236	1238				C1.3	
07	1329	1334	1336				B4.7	
07	1354	1400	1402				B2.6	
07	1505	1507	1511	S11	W81	SF	B4.2	7530
07	1704	1712	1722	S13	W89	SF	B4.8	7530
08	0834	0900	0929				B5.5	
08	1036	1042	1048				B7.0	
08	1055	1059	1101				B5.9	
08	1214	1222	1231				B5.5	
09	0029	0034	0050				B4.3	
09	0157	0209	0229				B7.5	
09	0319	0348	0420				B5.2	
09	1545	1601	1657				B7.2	
09	1845	1858	2012				B4.9	
10	0038	0046	0056				B4.2	
10	2221	2353	0006				B2.5	
11	0603	0606	0611				B1.7	
12	0940	0944	0946				B1.3	
12	1026	1031	1036	N07	W16	SF	B2.1	7542
12	1029	1032	1035				B2.7	
12	1833	1837	1841				B1.5	
12	2103	2108	2110				B1.8	
13	0018	0021	0024				B1.0	
13	0124	0127	0130				B1.0	
13	0833	0835	0854	S09	E12	SF	B3.4	7543
13	1346	1352	1359				B1.6	
14	0429	0434	0442				B1.9	
14	0654	0704	0731	S07	W01	SF	B6.0	7543
14	0944	0951	1003	S09	W03	SF	B4.8	7543
14	1143	1145	1150	S08	W03	SF	B6.0	7543
14	1223	1223	1235	S09	W06	SF	B9.5	7543
14	1311	1315	1327	S09	W06	SF	B2.7	7543
14	1418	1421	1423				B1.8	
14	1551	1555	1604				B1.8	
14	2250	2255	2302				B2.7	
15	0350	0353	0355				B2.4	
15	0720	0728	0742				B2.1	
15	0743	0748	0752				B2.5	
15	0843	0845	0852	N07	E12	SF	B1.8	7545
15	1556	1600	1602				B1.5	
15	1743	1754	1756				B2.4	
16	0402	0410	0419				B2.4	
16	2326	2329	2333				B1.7	

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

July 1993

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp	Xray	NOAA/ USAF Region
17	0635	0639	0642				B	2.1	
17	0821	0833	0844				C	2.3	
17	1140	1141	1146	N05	W79	SF	B	3.0	7542
17	1406	1406	1413	N02	W57	SF	B	2.3	7544
17	1617	1632	1639				B	2.7	
17	2156	2203	2210				C	1.1	
18	1116	1122	1127				B	2.7	
18	1408	1415	1420				B	3.3	
18	1544	1548	1552				B	2.1	
18	1800	1809	1815				B	2.6	
18	1846	1852	1858				B	5.8	
19	0310	0312	0326	N09	E38	SF	B	2.1	7547
19	0407	0416	0432	S08	E47	SF	B	3.3	7548
19	0853	0856	0859				B	1.9	
19	1144	1150	1154				B	2.4	
19	1226	1231	1236				B	1.8	
20	0243	0259	0319				C	1.0	
20	1522	1522	1532	S20	E34	SF	B	5.5	7550
20	1553	1557	1605				B	3.3	
20	1817	1843	1911				B	3.6	
20	2017	2019	2021				B	3.0	
21	2327	2335	2345				B	3.1	
22	0634	0636	0641	S11	E06	SF	B	4.2	7548
22	0824	0900	0920				B	8.4	
22	1618	1624	1633				B	5.0	
23	0706	0717	0734				B	8.5	
23	0938	0944	0946				B	6.6	
23	1149	1150	1201	S09	E16	SF	B	6.3	7551
23	1405	1405	1409	N18	E85	SF	B	5.4	7552
23	1913	1918	1945	S11	W10	SF	B	6.3	7548
23	2031	2034	2041	N17	E76	SF	B	8.0	7552
23	2138U	2151	2255	S10	W16	1N	C	1.0	7548
24	0120	0122	0126	S18	W13	SF	B	5.6	7550
24	0935	0935	0942	S19	W16	SF	B	5.0	7550
25	0501	0505	0528	S11	W30	SF	B	5.1	7548
26	1833E	1835U	1842	N15	E69	SF	B	2.9	7555
26	2133	2134	2144	N13	E66	SF	B	3.4	7555
26	2304	2307	2312				B	2.4	
26	2347	2351	2357				B	2.2	
27	0055	0056	0107	S14	E17	SF	B	2.9	7553
27	0121	0124	0130				B	2.3	
27	0157	0200	0205				B	4.1	
27	0206	0211	0216				B	9.6	
27	0340	0408	0419				B	4.3	
27	0430	0443	0445				B	7.5	
27	0521	0525	0538				B	3.2	
27	1109	1115	1121				B	2.7	
27	1212	1213	1220	N15	E26	SF	B	4.2	7552
27	1455	1543	1713	N08	E61	1F	C	5.9	7555
28	1209	1230	1246				B	2.9	
30	1657	1658	1709	N17	W08	SF	B	2.7	7552
31	1147	1209	1320				C	1.2	

EDITOR's NOTE: Please note that whenever optical flares are given, the times given are times of the optical flares and not the times of the X-ray flares. These data are taken directly from the NOAA SEL "Preliminary Report and Forecast of Solar Geophysical Data" weekly report.

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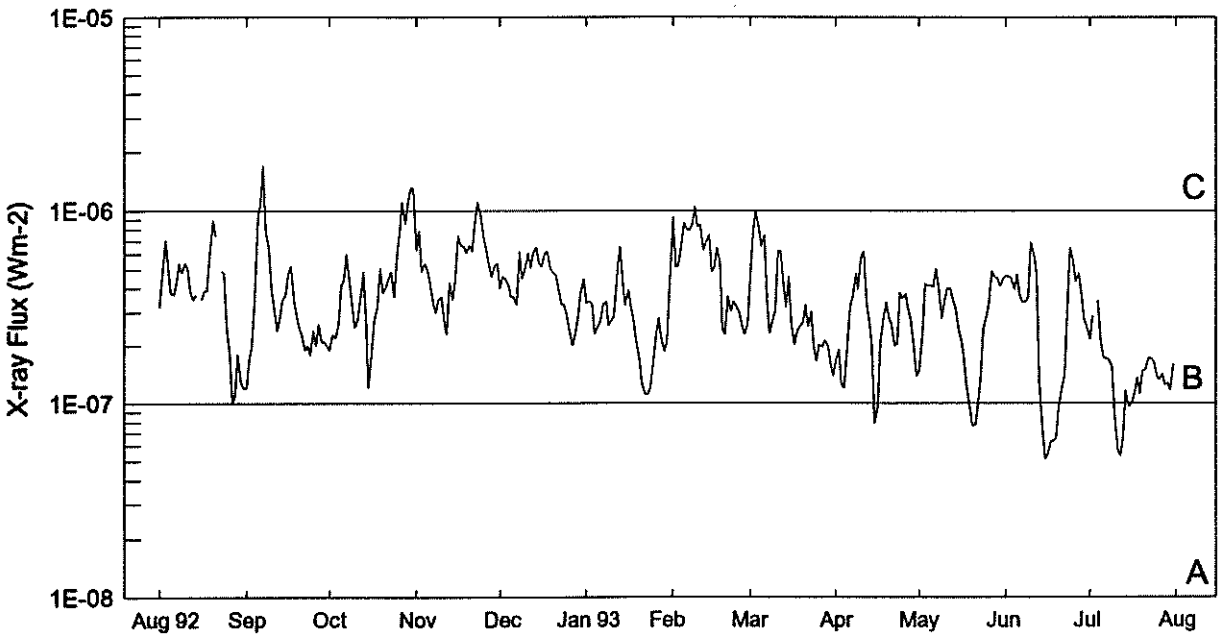
Jul 93

Preliminary GOES Satellite Daily X-ray Background Aug 92 - Jul 93



Day	Aug 92	Sep	Oct	Nov	Dec	Jan 93	Feb	Mar	Apr	May	Jun	Jul
1	B3.2	B1.2	B1.9	B6.3	B4.0	B3.3	B9.2	B4.5	B1.6	B1.4	B4.6	B2.1
2	B4.6	B1.7	B2.3	B7.9	B4.6	B3.4	B5.1	B7.6	B1.9	B2.2	B4.5	B2.8
3	B7.1	B2.0	B2.2	B4.9	B4.5	B3.3	B5.1	C1.0	B1.2	B4.2	B4.5	---
4	B5.2	B3.5	B2.6	B5.4	B4.2	B2.3	B6.3	B8.2	B1.2	B4.1	B3.9	B3.4
5	B3.8	B9.2	B4.2	B5.0	B3.6	B2.4	B8.6	B6.5	B1.7	B4.1	B4.7	B2.0
6	B3.7	C1.1	B4.4	B4.3	B3.6	B2.7	B8.1	B7.4	B3.2	B4.0	B3.6	B1.7
7	B4.3	C1.7	B6.0	B3.4	B3.3	B3.3	B7.9	B3.5	B3.6	B5.0	B3.4	B1.7
8	B5.4	B7.9	B4.3	B3.0	B6.2	B3.4	B8.5	B2.3	B4.7	B4.0	B3.4	B1.6
9	B4.8	B6.4	B3.2	B3.5	B4.5	B2.5	C1.0	B2.6	B3.9	B2.7	B3.5	B1.5
10	B5.4	B4.0	B2.5	B3.6	B5.1	B2.7	B8.2	B3.0	B5.8	B3.4	B6.8	A8.5
11	B5.1	B3.0	B2.7	B2.7	B6.1	B2.8	B8.4	B6.2	B6.1	B4.0	B5.9	A5.7
12	B3.9	B2.4	B3.6	B2.3	B5.1	B4.9	B6.2	B6.2	B3.2	B4.0	B4.7	A5.3
13	B3.5	B2.8	B4.9	B4.3	B6.1	B6.5	B6.8	B4.0	B2.7	B3.4	B1.3	A6.6
14	B3.7	B3.5	B2.5	B3.5	B6.5	B4.4	B7.5	B3.2	B1.9	B3.2	A7.2	B1.1
15	---	B3.7	B1.2	B4.5	B5.4	B3.2	B4.8	B4.6	A7.8	B2.4	A5.1	A9.5
16	B3.5	B4.8	B1.8	B7.5	B5.2	B3.9	B5.0	B2.6	A9.5	B2.1	A5.4	A9.9
17	B3.9	B5.2	B2.7	B6.7	B6.1	B3.1	B6.4	B2.0	B2.0	B1.7	A6.3	B1.1
18	B3.9	B3.5	B3.2	B6.6	B6.2	B2.7	B5.4	B2.3	B2.8	B1.2	A6.3	B1.3
19	B6.1	B2.9	B5.1	B6.1	B5.1	B2.1	B2.4	B2.5	B3.3	A9.5	A6.5	B1.1
20	B8.9	B2.5	B3.8	B6.7	B4.8	B1.7	B2.3	B2.6	B2.8	A7.6	A9.5	B1.4
21	B7.4	B2.3	B4.0	B6.2	B4.7	B1.2	B3.6	B3.2	B2.6	A7.7	B1.2	B1.5
22	---	B1.9	B4.5	B8.5	B4.0	B1.1	B3.0	B2.5	B1.9	A9.0	B1.4	B1.7
23	B4.9	B2.0	B4.9	C1.1	B3.3	B1.1	B3.4	B3.0	B2.0	B1.3	B3.0	B1.7
24	B4.8	B1.8	B3.6	B9.6	B3.3	B1.1	B3.2	B1.9	B3.7	B2.4	B6.4	B1.6
25	B2.6	B2.4	B5.9	B7.5	B2.9	B1.5	B3.0	B1.6	B3.5	B2.8	B5.5	B1.4
26	B1.8	B2.0	B7.7	B6.3	B2.4	B2.2	B2.5	B2.0	B3.7	B3.3	B4.3	B1.3
27	B1.0	B2.6	C1.1	B5.5	B2.0	B2.8	B2.2	B1.9	B3.1	B4.9	B4.7	B1.4
28	B1.1	B2.1	B8.6	B4.6	B2.3	B2.1	B2.5	B2.1	B2.7	B4.6	B3.6	B1.2
29	B1.8	B2.1	C1.1	B5.2	B2.8	B1.8		B1.9	B1.9	B4.4	B2.7	B1.2
30	B1.3	B2.0	C1.3	B5.4	B3.8	B2.0		B1.6	B1.3	B4.1	B2.5	B1.1
31	B1.2		C1.3		B4.5	B4.2		B1.3		B4.5		B1.6

MASS EJECTIONS FROM THE SUN--PROXY DATA*

July 1993

Site	Mo	Day	Observed UT Start	Max	End	Location RA°	R/Ro	Freq or Wavelength	Kind of Event
WROC	Jul	02	0744		0802	275	1.1	H-alpha	S
WROC	Jul	02	1016		1040	275	1.1	H-alpha	S
WROC	Jul	02	1314		1345	270		H-alpha	Q
KHAR	Jul	22	0824		0850	278	1.00-1.02	H-alpha	S
KHAR	Jul	22	0835		0850	77	1.00-1.03	H-alhpa	S
SVTO	Jul	22	0852.0		0904.0			Meter	II 1000km/s
IZMI	Jul	22	0852.1		0903.6			Meter	II
POTS	Jul	22	0852.2		0915.8			40-150	II H,HARM
LEAR	Jul	22	0853.0		0902.0			Meter	II 800km/s
SGMR	Jul	27	1547.0		1602.0			Meter	II 2000km/s
SVTO	Jul	27	1547.0		1602.0			Meter	II 1600km/s
IZMI	Jul	31	1151.1		1155.5			Meter	II HARM
ONDR	Jul	31	1151.5		1152.9			Decimeter, Meter	II

QUALIFIERS ON START, MAX AND END TIMES
- 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
- IZMI = Izmiran
- KHAR = Kharkov
- LEAR = Learmonth
- ONDR = Ondrejov
- POTS = Potsdam
- SGMR = Sagamore Hill
- SVTO = San Vito
- WROC = Wroclaw

*Please be advised that this list is made up of proxy data--not actual measurements of coronal mass ejections (CMEs). The list was requested by the IAU Commission 10 in 1979. See page 46 in the July 1987 supplement to Solar-Geophysical Data for more information.

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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	ADF	0202E	0922	S18	W32	06	28.7	1	10	8	8	E	LEAR	7529	
01	AFS	0400E	0922	S12	W06	06	30.7		02	7	7	E	LEAR	7530	
01	DSD	0710E	1740	S11	W21	06	29.8		02	9	9	E	SVTO	7529	
01	AFS	0724E	1030D	S12	W05	06	30.9		01	9	9	E	SVTO	7530	
01	ASR	0844E	1740	N08	W90	06	24.7			9	9	E	SVTO	7532	
01	AFS	1030E	1740	S12	W02	07	1.3		02	9	9	E	SVTO	7530	
01	AFS	1059E	1733D	S14	W32	06	29.1		02	8	8	E	RAMY	7529	
01	AFS	1100E	2229	S12	E02	07	1.6		02	9	9	E	RAMY	7530	
01	AFS	1100E	2229	S12	W07	06	30.9		01	8	8	E	RAMY	7530	
01	ASR	1102E	2229	N08	W90	06	24.8			9	9	E	RAMY	7532	
01	AFS	1104E	1740	N03	E24	07	3.2		02	9	9	E	SVTO	7535	
01	AFS	1105E	1811D	N18	W51	06	27.7		02	8	8	E	RAMY	7533	
01	AFS	1108E	2229	S13	E16	07	2.7		01	9	9	E	RAMY	7534	
01	DSD	1436E	2038D	S13	W09	06	30.9		02	9	9	E	RAMY	7530	
01	DSD	1443E	1740	S13	W08	07	1.0		04	9	9	E	SVTO	7530	
01	DSD	1948E	0026D	S14	W12	06	30.9		02	9	9	E	HOLL	7530	
02	ASR	0440E	0500	S01	W90	06	25.6			9	9	E	LEAR	7531	
02	AFS	0510E	1645	S12	W12	07	1.3		01	9	9	E	SVTO	7530	
02	ASR	0520E	1645	S09	W90	06	25.6			9	9	E	SVTO	7531	
02	ADF	0538E	1645	S11	W14	07	1.2	1	05	9	9	E	SVTO	7530	
02	DSD	0724E	1645	S14	E07	07	2.8		02	9	9	E	SVTO	7534	
02	AFS	0727E	1645	N11	W09	07	1.6		01	5	8	E	SVTO		
02	ASR	0749	0802	N11	W90	06	25.6			9	9	E	SVTO	7532	
02	DSD	0810E	0945D	S10	W14	07	1.3		04	9	9	E	SVTO	7530	
02	EPL	0839E	0916	S10	W90	06	25.7	1	05				KHAR		
02	SPY	1018E	1031	N12	W90	06	25.7	1	07				KHAR		RN
02	ASR	1020E	1033D	N11	W90	06	25.7			9	9	E	SVTO	7532	
02	DSD	1130E	1216D	S10	W09	07	1.8		02	9	9	E	RAMY	7530	
02	AFS	1130E	1625	S10	W14	07	1.4		02	9	9	E	RAMY	7530	
02	AFS	1139E	1625	N12	W11	07	1.6		01	8	7	E	RAMY	7537	
02	AFS	1141E	1625	S09	E74	07	8.0		02	9	9	E	RAMY	7538	
02	ASR	1145E	1625	S06	W90	06	25.8			9	9	E	RAMY	7531	
02	ASR	1150E	1223D	N14	W90	06	25.8			9	9	E	RAMY	7533	
02	AFS	1211E	1625	N03	E10	07	3.2		01	7	7	E	RAMY	7535	
02	DSD	1215E	1625	S09	W16	07	1.3		01	9	9	E	RAMY	7530	
02	AFS	1215E	1625	S10	W08	07	1.9		01	9	9	E	RAMY	7530	
02	ADF	1315E	2256D	S12	W50	06	28.9	1	03	9	9	E	HOLL	7529	
02	DSD	1338E	1425D	S11	W18	07	1.2		02	9	9	E	HOLL	7530	Flare Associated
02	APR	1547E	1608	S18	E90	07	9.5	1	07				KHAR		RS
02	EPL	1617E	1617D	S10	W90	06	26.0	1	05				KHAR		
03	AFS	0832E	1730	N09	W22	07	1.7		01	9	9	E	SVTO	7537	
03	AFS	0832E	1730	S13	W20	07	1.8		02	9	9	E	SVTO	7530	
03	AFS	0833E	1730	S09	E64	07	8.1		02	9	9	E	SVTO	7538	
03	ADF	0910E	1730	S14	W21	07	1.8	1	04	9	9	E	SVTO	7530	
03	AFS	1040E	1513	S11	W26	07	1.5		01	9	9	E	RAMY	7530	
03	AFS	1052E	1513	S09	E60	07	7.9		02	9	9	E	RAMY	7538	
03	AFS	1117E	1513	N16	W61	06	28.9		02	9	9	E	RAMY		
03	AFS	1124E	1513	N11	W24	07	1.7		01	9	9	E	RAMY	7537	
03	BSD	1200E	1220D	S11	E62	07	8.2		04	9	9	E	RAMY	7538	
03	DSD	1205E	1730	S19	W76	06	27.8		01	9	9	E	SVTO		
03	AFS	1215E	1513	S18	W75	06	27.9		03	9	9	E	RAMY		
03	AFS	1542E	0135	S04	W17	07	2.4		01	9	9	E	HOLL		
03	AFS	1720E	0135	S10	E56	07	7.9		02	9	9	E	HOLL	7538	
03	AFS	1728E	0135	S11	W27	07	1.7		02	9	9	E	HOLL	7530	
04	AFS	0540E	1713	S12	W34	07	1.7		01	9	9	E	SVTO	7530	
04	AFS	0631E	1713	N04	W24	07	2.5		01	8	7	E	SVTO		
04	AFS	0634E	1713	N08	W33	07	1.8		02	9	9	E	SVTO	7537	
04	DSD	0645E	1713	S17	W20	07	2.8		02	9	9	E	SVTO	7534	
04	ADF	0742E	1713	S15	W35	07	1.7	1	03	9	9	E	SVTO	7530	Flare Associated
04	SSB	0857		109	W18	07	5.0			0	0	E	SVTO		
04	DSD	0956E	1713	S09	E52	07	8.3		05	9	9	E	SVTO	7538	
04	AFS	1116E	2201	N11	W37	07	1.7		02	9	9	E	RAMY	7537	
04	AFS	1117E	2201	S16	W72	06	29.1		02	8	8	E	RAMY	7529	
04	AFS	1118E	2201	S11	W52	06	30.5		02	9	9	E	RAMY	7536	
04	DSD	1118E	2201	S13	W73	06	29.1		02	9	9	E	RAMY	7529	
04	ADF	1119E	2201	S11	E49	07	8.1	1	06	9	9	E	RAMY	7538	
04	AFS	1120E	2201	S10	E43	07	7.7		02	9	9	E	RAMY	7538	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
04	AFS	1224E	2201	S11	W42	07	1.3		02	9	9	E	RAMY	7530	
04	SSB	1225		109	W20	07	5.2			0	0	E	RAMY		
04	AFS	1232E	2201	N05	W27	07	2.5		02	9	9	E	RAMY	7540	
04	AFS	1404E	1618D	N06	W28	07	2.5		02	9	9	E	HOLL		
04	ASR	1410E	0206	S18	W90	06	27.8			9	9	E	HOLL		
04	EPL	1704E	1755D	S15	E90	07	11.5	3		9	9	E	RAMY		
04	EPL	1708E	0206	S24	E90	07	11.7			9	9	E	HOLL		
04	APR	1928E	2201	S15	E90	07	11.6	1		9	9	E	RAMY		
04	ADF	2055E	0206	S18	E51	07	8.7	1	18	9	9	E	HOLL		
05	AFS	0225E	0930	N06	W36	07	2.4		01	9	9	E	LEAR	7540	
05	DSD	0540E	0720D	S08	W47	07	1.7		03	9	9	E	LEAR	7530	
05	AFS	0622E	1627	S08	E37	07	8.0		02	9	9	E	SVTO	7538	
05	AFS	0622E	1627	S13	W48	07	1.6		02	9	9	E	SVTO	7530	
05	DSD	0622E	1627	S17	W51	07	1.4		02	9	9	E	SVTO	7530	
05	DSD	0740E	1340D	N03	W37	07	2.5		01	9	9	E	SVTO	7540	
05	AFS	0740E	1340D	S08	E50	07	9.1		02	9	9	E	SVTO		
05	AFS	0740E	1627	N05	W40	07	2.3		02	9	9	E	SVTO	7540	
05	DSD	0740E	1627	S08	E38	07	8.2		02	9	9	E	SVTO	7538	
05	APR	1034E	1627	S18	W90	06	28.7	1		9	9	E	SVTO		
05	ADF	1041E	1627	S11	W49	07	1.7	1	05	9	9	E	SVTO	7530	
05	DSD	1153E	1627	S08	E36	07	8.2		02	9	9	E	SVTO	7538	
05	ASR	1335E	1536D	S15	W90	06	28.8			9	9	E	HOLL	7529	
05	AFS	1335E	1830D	S09	E33	07	8.0		01	9	9	E	HOLL	7538	
05	ASR	1435E	1455	S04	E79	07	11.5			9	9	E	HOLL		
05	AFS	1536E	0115	S13	W59	07	1.2		02	9	9	E	HOLL	7530	
05	DSD	1553E	1907D	S11	E33	07	8.1		03	9	9	E	HOLL	7538	
05	EPL	1708E	0206	S18	W90	06	29.0			9	9	E	HOLL		
05	SSB	1910		130	W58	07	8.4			0	0	E	HOLL		
05	DSD	1950E	2240D	S13	W57	07	1.5		03	9	9	E	HOLL	7530	Flare Associated
05	ADF	2055E	0206	S18	E51	07	9.7	1	18	9	9	E	HOLL		
05	APR	2115E	0115	S22	W89	06	29.1	1		9	9	E	HOLL	7529	
06	AFS	0233E	0930	S10	W68	07	1.0		03	9	9	E	LEAR	7530	
06	ADF	0250E	0810D	S11	E30	07	8.4	1	08	9	9	E	LEAR	7538	
06	DSD	0555E	1600	S15	W62	07	1.5		07	9	9	E	SVTO	7530	
06	AFS	0700E	1600	S07	E24	07	8.1		03	9	9	E	SVTO	7538	
06	ADF	0700E	1600	S12	W56	07	2.1	1	11	9	9	E	SVTO	7530	
06	DSD	0742E	1600	N08	E66	07	11.3		02	9	9	E	SVTO	7542	
06	ASR	0840E	0930	S22	W90	06	29.5			9	9	E	LEAR		
06	AFS	1058E	2249	N06	E68	07	11.5		03	9	9	E	RAMY	7542	
06	ASR	1325	2105D	S23	W90	06	29.7			9	9	E	HOLL		
06	AFS	1330E	0205	N06	W56	07	2.4		02	9	9	E	HOLL	7540	
06	ADF	1330E	0205	S09	W70	07	1.3	1	06	9	9	E	HOLL	7530	
06	AFS	1330E	0205	S11	W67	07	1.5		02	9	9	E	HOLL	7530	
06	DSD	1330E	2105D	N07	E64	07	11.3		04	9	9	E	HOLL	7542	
06	ADF	1330E	2105D	S11	E33	07	9.0	1	05	9	9	E	HOLL		
06	SSB	1558		111	W50	07	7.6			0	0	E	RAMY		
06	AFS	1856E	2249	S10	W70	07	1.5		03	9	9	E	RAMY	7530	
06	DSD	2350E	0250D	N07	E55	07	11.1		01	7	7	E	LEAR	7542	
06	AFS	2350E	0930	S10	W75	07	1.3		02	8	8	E	LEAR	7530	
07	APR	0222E	0540D	S15	W85	06	30.7	1		7	9	E	LEAR	7530	
07	AFS	0240E	0501D	N06	W60	07	2.6		01	7	7	E	LEAR	7540	
07	AFS	0257E	0503D	N07	E55	07	11.2		01	8	8	E	LEAR	7542	
07	ADF	0330E	0930	S10	E27	07	9.2	1	12	9	9	E	LEAR		
07	ASR	0514E	0930	S12	W82	07	1.0			9	9	E	LEAR	7530	
07	AFS	0717E	1223D	S13	W75	07	1.6		01	9	9	E	SVTO	7530	
07	ASR	0717E	1740	S14	W90	06	30.5			9	9	E	SVTO	7530	
07	DSD	0920E	1557D	N09	E51	07	11.2		03	9	9	E	SVTO	7542	
07	DSD	1039E	1536D	S10	E21	07	9.0		01	9	9	E	SVTO		
07	AFS	1039E	1556D	N02	W65	07	2.6		01	9	9	E	SVTO	7540	
07	AFS	1039E	1740	S10	E07	07	8.0		02	9	9	E	SVTO	7538	
07	APR	1226E	1740	S18	W90	06	30.7	1		9	9	E	SVTO	7530	
07	ASR	1315E	0205	S11	W90	06	30.8			9	9	E	HOLL	7530	
07	ASR	1359E	0034D	N13	E82	07	13.8			9	9	E	HOLL		
07	AFS	1424E	1740	N10	E52	07	11.5		01	9	9	E	SVTO	7542	
07	DSD	1602E	1720D	S13	W83	07	1.4		06	9	9	E	SVTO	7530	
07	ASR	1709E	1740	S08	E90	07	14.5			9	9	E	SVTO		
07	APR	2235E	0205	S15	W90	07	1.1			9	9	E	HOLL		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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	APR	0030E	0820D	S15	W90	07	1.2			9	9	E	LEAR		
08	ASR	0045E	0830D	S09	E83	07	14.3			9	9	E	LEAR		
08	ADF	0048E	0935	S13	E09	07	8.7	1	08	9	9	E	LEAR		
08	ASR	0136E	0935	S11	W90	07	1.3			9	9	E	LEAR	7530	
08	AFS	0530E	0935	S10	W02	07	8.1		02	9	9	E	LEAR	7538	
08	AFS	0955E	1748	S09	W03	07	8.2		01	9	9	E	SVTO	7538	
08	DSD	1020E	1116D	N09	E37	07	11.2		02	9	9	E	SVTO	7542	
08	AFS	1037E	2156	S09	E76	07	14.1		02	9	9	E	RAMY	7543	
08	DSD	1037E	2156	S10	E75	07	14.1		02	9	9	E	RAMY	7543	
08	AFS	1049E	2156	S10	W04	07	8.1		01	9	9	E	RAMY	7538	
08	APR	1055E	2156	S15	W90	07	1.6	1		9	9	E	RAMY		
08	ASR	1056E	2156	S13	W90	07	1.7			9	9	E	RAMY		
08	AFS	1057E	2156	N08	E41	07	11.5		02	9	9	E	RAMY	7542	
08	AFS	1110E	2156	N12	E71	07	13.8		02	8	8	E	RAMY	7544	
08	ASR	1133E	1202D	S14	W90	07	1.7			9	9	E	SVTO	7530	
08	ASR	1203E	2156	N10	W90	07	1.7			9	9	E	RAMY		
08	AFS	1259E	0125	N03	E69	07	13.7		01	9	9	E	HOLL		
08	AFS	1302E	2322D	S11	E89	07	15.2		01	9	9	E	HOLL	7544	
08	DSD	1316E	1448D	S11	W06	07	8.1		02	9	9	E	HOLL	7538	
08	AFS	1349E	2322D	S09	W06	07	8.1		02	9	9	E	HOLL	7538	
08	APR	1458E	1748	S18	W90	07	1.8			9	9	E	SVTO		
08	AFS	1704E	1748	S08	E74	07	14.2		01	9	9	E	SVTO	7543	
08	APR	1850	2300D	S14	W90	07	2.0	1		9	9	E	HOLL	7530	
08	ASR	1903E	2300D	S11	W90	07	2.0			9	9	E	HOLL	7530	
09	ADF	0525E	0935	S10	W17	07	7.9	1	04	9	9	E	LEAR	7538	
09	DSD	0533E	0711D	N07	E27	07	11.2		03	9	9	E	SVTO	7542	
09	AFS	0542E	1735	S11	W16	07	8.0		02	9	9	E	SVTO	7538	
09	ADF	0556E	1735	S12	W17	07	8.0	1	04	9	9	E	SVTO	7538	
09	ADF	0619E	1735	S07	E68	07	14.3	1	06	9	9	E	SVTO	7543	
09	CRN	0638	0649D	S08	W90	07	2.5	2					KHAR		N
09	BSL	0643	0713	S12	W90	07	2.5	2	10				KHAR		RS
09	BSL	0729	0853	S17	W90	07	2.5	1	07				KHAR		RS
09	ADF	0850E	0935	N03	E27	07	11.4	1	03	5	5	E	LEAR	7542	
09	AFS	1043E	2228	S09	W16	07	8.2		02	9	9	E	RAMY	7538	
09	AFS	1045E	2228	N05	E28	07	11.5		02	8	8	E	RAMY	7542	
09	AFS	1046E	2228	N12	E62	07	14.1		02	9	9	E	RAMY		
09	AFS	1157E	1735	N06	E26	07	11.4		01	9	9	E	SVTO	7542	
09	ASR	1227E	1440D	S80	E69	07	15.9			8	9	E	RAMY		
09	ADF	1237E	1735	N07	E21	07	11.1	1	03	9	9	E	SVTO	7542	
09	AFS	1335E	1735	N14	E57	07	13.9		01	9	9	E	SVTO		
09	AFS	1411E	1735	S08	E62	07	14.2		02	9	9	E	SVTO	7543	
09	AFS	1439E	1833D	S09	W20	07	8.1		03	9	7	E	HOLL	7538	
09	ADF	1500E	1735	N05	E53	07	13.6	1	03	9	9	E	SVTO	7544	
09	ADF	2006E	2110D	S10	W24	07	8.0	1	04	9	9	E	RAMY	7538	
10	ADF	0045E	0840D	S11	W17	07	8.7	1	05	9	9	E	LEAR		
10	DSD	0605E	0908D	N21	W04	07	9.9		01	9	9	E	SVTO	7541	
10	ADF	0618E	1710	S10	E52	07	14.2	1	04	9	9	E	SVTO	7453	
10	DSD	0722E	0900D	N04	E44	07	13.6		03	9	9	E	SVTO	7544	
10	AFS	0900E	1710	N04	E42	07	13.5		01	9	9	E	SVTO	7544	
10	ADF	0900E	1710	N05	E51	07	14.2	1	06	9	9	E	SVTO	7544	
10	APR	1006E	1710	N42	W90	07	3.0	1		7	9	E	SVTO		
10	AFS	1208E	2220	N02	E41	07	13.6		02	9	9	E	RAMY	7544	
10	AFS	1243E	1710	N06	E13	07	11.5		01	9	9	E	SVTO	7542	
10	AFS	1244E	1523D	S10	W31	07	8.2		01	9	9	E	SVTO	7538	
10	AFS	1318E	2130	N01	E42	07	13.7		02	9	9	E	HOLL	7544	
10	APR	1327E	2130	N42	W90	07	3.2			9	9	E	HOLL		
10	DSD	1359E	2220	N03	E41	07	13.6		01	9	9	E	RAMY	7544	
10	AFS	1434E	1654D	N05	E10	07	11.3		01	9	9	E	RAMY	7542	
10	AFS	2345E	0943	N04	E34	07	13.5		02	9	9	E	LEAR	7544	
11	ADF	0355E	0943	N06	E38	07	14.0	1	04	9	9	E	LEAR	7544	
11	AFS	0532E	0846	N05	E36	07	13.9		02	9	9	E	SVTO	7544	
11	DSD	0542E	0846	N09	E04	07	11.5		02	7	8	E	SVTO	7542	
11	ADF	0700E	0846	N05	E37	07	14.0	1	06	9	9	E	SVTO	7544	
11	DSD	0708E	0846	N00	E04	07	11.6		02	8	8	E	SVTO	7542	
11	ADF	0720E	0846	S11	W43	07	8.1	1	07	9	9	E	SVTO	7538	
11	SSB	1538		377	W23	07	5.7			0	0	E	HOLL		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
11	DSF	1631U	1949U	S02	W25	07	9.8		17	0	0	E	HOLL		
11	AFS	1954E	2230D	N04	E22	07	13.5		01	5	5	E	HOLL	7544	
11	AFS	2245E	2249	N14	E47	07	15.5		01	9	9	E	HOLL		
12	AFS	0504E	1745	N04	E17	07	13.5		01	9	9	E	SVTO	7544	
12	ADF	0504E	1745	N07	E23	07	13.9	1	07	9	8	E	SVTO	7544	
12	DSD	0514E	1745	N07	W12	07	11.3		03	9	9	E	SVTO	7542	
12	ADF	0521E	1125D	N23	W28	07	10.1	1	06	9	9	E	SVTO	7541	
12	DSF	0900U	2330U	N16	E62	07	17.1		10	0	0	E	LEAR		
12	AFS	0929E	1745	S10	E25	07	14.3		02	9	9	E	SVTO	7543	
12	AFS	1043E	1745	N07	E53	07	16.4		01	9	9	E	SVTO		
12	DSD	1055E	1325D	N04	E18	07	13.8		03	9	9	E	SVTO	7544	
12	AFS	1551E	2111	S10	W63	07	7.9		02	9	9	E	RAMY	7538	
12	DSD	1553E	2111	N04	E12	07	13.5		02	9	9	E	RAMY	7544	
12	DSD	1616E	2111	N08	W18	07	11.3		03	9	9	E	RAMY	7542	
12	DSD	1623E	2111	N06	E50	07	16.4		02	9	9	E	RAMY	7545	
12	AFS	1623E	2111	N07	E49	07	16.3		01	9	9	E	RAMY	7545	
12	AFS	1623E	2111	S10	E21	07	14.3		02	9	9	E	RAMY	7543	
12	AFS	2355E	0945	S11	E17	07	14.3		03	7	6	E	LEAR	7543	
12	AFS	2355E	0945D	N06	E44	07	16.3		02	9	9	E	LEAR	7545	
13	DSD	0500E	1800	N00	E04	07	13.5		01	9	9	E	SVTO	7544	
13	APR	0530	1100	N10	E90	07	20.0						ATHN		
13	DSD	0553E	1800	S10	E12	07	14.1		03	9	9	E	SVTO	7543	
13	AFS	0553E	1800	S10	E14	07	14.3		02	9	9	E	SVTO	7543	
13	AFS	0634E	1800	N09	E40	07	16.3		02	9	9	E	SVTO	7545	
13	AFS	0645E	0947D	N08	W22	07	11.6		02	9	9	E	SVTO	7542	
13	SSB	0653		347	W14	07	9.7			0	0	E	SVTO		
13	AFS	0704E	1800	N03	E01	07	13.4		02	9	9	E	SVTO	7544	
13	AFS	0801E	1800	S06	E40	07	16.3		01	9	9	E	SVTO	7546	
13	AFS	0852E	1800	S14	W60	07	8.8		02	9	9	E	SVTO		
13	DSD	1021E	1800	S06	E39	07	16.3		03	9	9	E	SVTO	7546	
13	DSD	1021E	1800	S06	E41	07	16.5		03	9	9	E	SVTO	7546	
13	AFS	1058E	2214	S11	W60	07	8.9		02	9	9	E	RAMY		
13	DSD	1103E	2214	N08	W28	07	11.4		02	9	9	E	RAMY	7542	
13	AFS	1105E	2214	S09	E12	07	14.4		02	9	9	E	RAMY	7543	
13	DSD	1106E	2214	S09	E11	07	14.3		02	9	9	E	RAMY	7543	
13	AFS	1107E	2214	S09	E43	07	16.7		02	8	8	E	RAMY	7546	
13	DSD	1108E	1651D	S09	E42	07	16.6		02	9	9	E	RAMY	7546	
13	AFS	1110E	2214	N04	W01	07	13.4		02	9	9	E	RAMY	7544	
13	AFS	1414E	2214	S10	W76	07	7.9		02	9	9	E	RAMY	7538	
13	AFS	1500E	2008	N04	W04	07	13.3		01	9	9	E	HOLL	7544	
13	DSF	2006U	1536U	S21	W78	07	7.8	2	25	0	0	E	HOLL		
13	AFS	2046E	2214	N07	W30	07	11.6		02	9	9	E	RAMY	7542	
13	DSD	2345E	0630D	S08	E02	07	14.1		03	9	9	E	LEAR	7543	
13	AFS	2345E	0935	S08	E00	07	14.0		03	9	9	E	LEAR	7543	
14	AFS	0005E	0935	N04	W07	07	13.5		03	9	9	E	LEAR	7544	
14	AFS	0335E	0935	S08	E34	07	16.7		03	9	9	E	LEAR	7546	
14	DSD	0518E	0738D	S09	W02	07	14.1		01	9	9	E	SVTO	7543	
14	APR	0530	0730	N08	E90	07	21.0						ATHN		
14	DSD	0629E	0850D	N07	W38	07	11.4		01	9	9	E	LEAR	7542	
14	DSD	0634E	1046D	N06	W37	07	11.5		03	9	9	E	SVTO	7542	
14	SPY	0710E	0710E	N10	E90	07	21.1	2	13				KHAR		R
14	SSB	0925		334	W16	07	11.8			0	0	E	SVTO		
14	DSD	1027E	1403D	S09	E00	07	14.4		01	9	9	E	RAMY	7543	
14	AFS	1027E	2240	S08	W04	07	14.1		02	9	9	E	RAMY	7543	
14	DSD	1040E	2240	N04	W38	07	11.6		03	9	9	E	RAMY	7542	
14	AFS	1048E	2240	N04	E31	07	16.8		01	9	9	E	RAMY	7546	
14	AFS	1350E	2343	S09	W06	07	14.1		03	9	9	E	HOLL	7543	
14	APR	1430E	2343	N08	E90	07	21.3	1		9	9	E	HOLL		
14	SSB	1438		322	W06	07	13.0			0	0	E	HOLL		
14	DSD	1445E	2343	N09	W44	07	11.3		03	9	9	E	HOLL	7542	
14	APR	1511E	1621D	N15	E90	07	21.4	1		9	9	E	RAMY		
14	DSD	1741E	2343	N05	W44	07	11.4		03	9	9	E	HOLL	7542	
14	ASR	1749E	2101D	S15	W90	07	7.9			9	9	E	HOLL		
14	DSD	1934E	2240	S08	W08	07	14.2		01	9	9	E	RAMY	7543	
14	AFS	2150E	2240	N05	E17	07	16.2		02	9	9	E	RAMY	7545	
14	DSD	2150E	2240	N06	E16	07	16.1		02	9	9	E	RAMY	7545	
14	AFS	2345E	0935	N06	E18	07	16.3		03	9	9	E	LEAR	7545	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
14	AFS	2345E	0935	S09	W10	07	14.2		04	9	9	E	LEAR	7543	
15	AFS	0150E	0935	N09	W47	07	11.5		02	5	5	E	LEAR	7542	
15	DSD	0525E	0753D	N06	W49	07	11.5		01	9	9	E	SVTO	7542	
15	DSD	0535E	0715D	N09	W52	07	11.3		01	9	9	E	LEAR	7542	
15	DSD	0538E	0745D	N06	E14	07	16.3		02	9	9	E	LEAR	7545	
15	DSD	0550E	0726D	N06	E14	07	16.3		02	9	9	E	SVTO	7545	
15	DSD	0630	0825D	S10	W18	07	13.9		01	9	9	E	SVTO	7543	
15	SSB	0705		325	W19	07	13.4			0	0	E	SVTO		
15	AFS	1050E	2233	N06	E10	07	16.2		02	9	9	E	RAMY	7545	
15	AFS	1057E	2233	S08	W17	07	14.2		02	9	9	E	RAMY	7543	
15	AFS	1112E	2233	N04	W28	07	13.4		01	6	6	E	RAMY	7544	
15	SSB	1120		326	W22	07	13.5			0	0	E	RAMY		
15	DSD	1335E	1413D	N06	E08	07	16.2		01	9	9	E	RAMY	7545	
15	AFS	1514E	2233	S09	E35	07	18.3		01	6	7	E	RAMY		
15	DSD	1707E	2233	N09	W55	07	11.6		02	9	9	E	RAMY	7542	
15	AFS	1716E	2233	N06	E78	07	21.5		03	9	9	E	RAMY	7547	
15	SSB	2035		329	W30	07	13.6			0	0	E	HOLL		
15	AFS	2350E	0938	N06	E02	07	16.1		02	9	9	E	LEAR	7545	
15	AFS	2350E	0938	S08	E27	07	18.0		02	6	6	E	LEAR	7543	
16	ADF	0425E	0938	S08	W31	07	13.8	1	06	9	9	E	LEAR	7543	
16	ADF	0500E	0925D	S10	W30	07	13.9	1	06	9	9	E	SVTO	7543	
16	DSD	0500E	1552D	N06	W65	07	11.3		01	9	9	E	SVTO	7542	
16	APR	0537E	0955D	S23	W90	07	9.3	1		9	9	E	SVTO		
16	AFS	0720E	1025D	N02	W40	07	13.3		02	9	9	E	SVTO	7544	
16	DSD	0807E	1556D	N01	W43	07	13.1		02	9	9	E	SVTO	7544	
16	AFS	1048E	1929	N08	E72	07	21.8		02	9	9	E	RAMY	7547	
16	AFS	1048E	1929	S08	W31	07	14.1		03	9	9	E	RAMY	7543	
16	DSD	1048E	1929	S09	W33	07	14.0		03	9	9	E	RAMY	7543	
16	AFS	1049E	1929	N05	W03	07	16.2		02	9	9	E	RAMY	7545	
16	DSD	1125E	1929	S12	E88	07	23.1		02	9	9	E	RAMY	7548	
16	SSB	1133		326	W35	07	14.4			0	0	E	SVTO		
16	ASR	1252E	1418D	S13	E89	07	23.2			9	9	E	SVTO		
16	APR	1605E	1929	S21	W90	07	9.8	1		9	8	E	RAMY		
16	AFS	1857E	2202	N06	W08	07	16.2		03	9	9	E	HOLL	7545	
16	AFS	1857E	2202	S09	W37	07	14.0		02	7	7	E	HOLL	7543	
16	APR	1922E	2202	S21	W90	07	9.9	1		9	9	E	HOLL		
16	ASR	2157E	2202	S20	E90	07	23.8			9	9	E	HOLL		
16	SSB	2209		324	W40	07	15.0			0	0	E	HOLL		
16	AFS	2355E	0936	N07	W11	07	16.2		02	9	9	E	LEAR	7545	
17	SSB	0211		325	W44	07	15.0			0	0	E	LEAR		
17	DSD	0220E	0302D	S09	E76	07	22.8		15	9	9	E	LEAR	7548	
17	ADF	0220E	0936	S08	E60	07	21.6	1	09	9	9	E	LEAR	7548	
17	ADF	0330E	0936	S10	E08	07	17.7	1	05	9	9	E	LEAR		
17	DSD	0510E	1740	N04	W14	07	16.2		01	9	9	E	SVTO	7545	
17	AFS	0510E	1740	N05	W14	07	16.2		02	9	9	E	SVTO	7545	
17	ADF	0510E	1740	N06	W14	07	16.2	1	05	9	9	E	SVTO	7545	
17	DSD	0510E	1740	N10	E61	07	21.8		01	9	9	E	SVTO	7547	
17	AFS	0510E	1740	S10	W42	07	14.0		02	9	9	E	SVTO	7543	
17	ADF	0510E	1740	S11	E08	07	17.8	1	04	9	9	E	SVTO		
17	DSD	0510E	1740	S11	W38	07	14.3		02	9	9	E	SVTO	7543	
17	AFS	0510E	1740	S18	W02	07	17.1		01	9	9	E	SVTO		
17	APR	0820	0850	S23	E90	07	24.3	1					KHAR		A,WS
17	AFS	1050E	2210	S08	W44	07	14.1		02	9	9	E	RAMY	7543	
17	ADF	1052E	1640D	S10	W45	07	14.1	1	04	9	9	E	RAMY	7543	
17	AFS	1102E	2210	S12	E72	07	22.9		01	9	9	E	RAMY	7548	
17	ADF	1105E	2210	S06	E49	07	21.1	1	04	9	9	E	RAMY		
17	AFS	1110E	2210	S18	W06	07	17.0		02	9	9	E	RAMY	7549	
17	AFS	1115E	2210	N06	W17	07	16.2		02	9	9	E	RAMY	7545	
17	SSB	1206		325	W48	07	15.4			0	0	E	RAMY		
17	AFS	1241E	1740	S19	E77	07	23.4		02	9	8	E	SVTO		
17	DSD	1312E	2210	S21	E74	07	23.2		02	9	9	E	RAMY		
17	AFS	1316E	2248	S24	W12	07	16.6		01	7	7	E	HOLL		
17	SSB	1420		324	W49	07	15.6			0	0	E	HOLL		
17	DSD	1611E	2210	S18	W08	07	17.1		02	9	9	E	RAMY	7549	
17	AFS	1623E	2210	N08	E56	07	21.9		01	9	9	E	RAMY	7547	
17	ADF	2135E	2248	N08	W23	07	16.2	1	05	9	9	E	HOLL	7545	
17	APR	2157E	2202	S21	W90	07	11.0	1		9	9	E	HOLL		

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
18	SSB	0010		327	W57	07	15.6			0	0	E	LEAR		
18	AFS	0019E	0936	N07	W25	07	16.1		03	9	9	E	LEAR	7545	
18	AFS	0020E	0936	S17	W15	07	16.9		04	9	9	E	LEAR	7549	
18	ADF	0143E	0903D	N15	W27	07	16.0	1	13	9	9	E	LEAR	7545	
18	ASR	0337E	0936	S09	E90	07	24.9			9	9	E	LEAR		
18	DSD	0420E	0813D	S21	E64	07	23.1		03	9	9	E	LEAR		
18	DSD	0500E	1135D	N09	E48	07	21.8		02	9	9	E	SVTO	7547	
18	AFS	0500E	1750	N05	W26	07	16.3		02	9	9	E	SVTO	7545	
18	ADF	0500E	1750	N06	W26	07	16.3	1	06	9	9	E	SVTO	7545	
18	AFS	0500E	1750	S09	W53	07	14.2		02	9	9	E	SVTO	7543	
18	AFS	0500E	1750	S19	W15	07	17.1		02	9	9	E	SVTO	7549	
18	ASR	0520E	1135D	S09	E90	07	25.0			9	9	E	SVTO		
18	AFS	0520E	1750	S09	W01	07	18.1		02	9	9	E	SVTO		
18	ASR	0540E	0936	N07	W90	07	11.5			9	8	E	LEAR	7542	
18	DSF	0814U	2332U	N27	W40	07	15.2		14	0	0	E	LEAR		
18	DSD	1042E	1750	S10	W62	07	13.8		01	9	9	E	SVTO	7543	
18	AFS	1055E	1750	N07	E39	07	21.4		01	9	9	E	SVTO	7547	
18	AFS	1058E	2157	S18	W20	07	16.9		01	9	9	E	RAMY	7549	
18	SSB	1104		325	W61	07	16.2			0	0	E	RAMY		
18	AFS	1107E	1600D	S09	W05	07	18.1		01	6	6	E	RAMY		
18	AFS	1113E	2157	N06	W30	07	16.2		02	9	9	E	RAMY	7545	
18	AFS	1118E	2157	S11	E59	07	22.9		02	9	9	E	RAMY	7548	
18	AFS	1118E	2157	S21	E61	07	23.1		02	9	9	E	RAMY	7550	
18	AFS	1130E	2157	N07	E45	07	21.8		01	9	9	E	RAMY	7547	
18	ADF	1309E	0200	S29	W39	07	15.5		01	9	9	E	HOLL	7549	
18	AFS	1315E	0200	N06	E31	07	20.9		02	8	8	E	HOLL	7545	
18	DSD	1505E	1750	S10	W67	07	13.6		04	9	9	E	SVTO	7543	
18	ADF	1521E	1750	N09	E42	07	21.8	1	09	9	9	E	SVTO	7547	
18	ASR	1645E	1750	S09	E90	07	25.4			9	9	E	SVTO	7551	
18	ASR	1647E	1734D	S11	E80	07	24.7			9	9	E	RAMY	7551	
18	AFS	1734E	0200	S20	E59	07	23.2		01	9	9	E	HOLL	7550	
18	DSD	1737E	0200	N07	E38	07	21.6		02	9	9	E	HOLL	7547	
18	DSD	1741E	0200	S09	W60	07	14.2		01	9	9	E	HOLL	7543	
18	ASR	2015E	0200	S09	E82	07	25.0			9	9	E	HOLL	7551	
19	ADF	0220E	0938	N17	E40	07	22.1	1	11	9	9	E	LEAR	7547	
19	DSD	0426E	0650D	S09	E44	07	22.5		03	9	9	E	LEAR	7548	Flare Associated
19	AFS	0500E	1745	N04	W40	07	16.2		02	6	6	E	SVTO	7545	
19	AFS	0500E	1745	N08	E36	07	21.9		04	8	8	E	SVTO	7547	
19	AFS	0500E	1745	N10	E76	07	24.9		01	6	6	E	SVTO		
19	DSD	0505E	1450D	S08	E70	07	24.5		02	6	6	E	SVTO	7551	
19	ADF	0505E	1745	S07	E46	07	22.6	1	03	9	9	E	SVTO	7548	
19	AFS	0505E	1745	S08	E48	07	22.8		04	9	9	E	SVTO	7548	
19	AFS	0505E	1745	S09	E72	07	24.6		02	6	6	E	SVTO	7551	
19	DSD	0510E	1450D	S18	W33	07	16.7		02	7	5	E	SVTO	7549	
19	AFS	0510E	1745	S19	E52	07	23.2		02	9	8	E	SVTO	7550	
19	AFS	0620E	1745	S18	W32	07	16.8		03	9	9	E	SVTO	7549	
19	AFS	0625E	1745	S09	W14	07	18.2		02	5	5	E	SVTO		
19	AFS	1039E	1404D	N07	E32	07	21.8		01	9	9	E	RAMY	7547	
19	AFS	1045E	1404D	S11	E47	07	23.0		02	9	9	E	RAMY	7548	
19	SSB	1053		326	W75	07	17.1			0	0	E	RAMY		
19	AFS	1106E	1404D	S17	W35	07	16.8		02	9	9	E	RAMY	7549	
19	DSD	1114E	1450D	N07	E31	07	21.8		01	9	9	E	SVTO	7547	
19	DSD	1123E	1745	S14	E48	07	23.1		02	9	9	E	SVTO	7550	
19	DSD	1204E	1404D	N09	E73	07	25.0		02	9	9	E	RAMY		
19	AFS	1207E	1404D	S11	E67	07	24.5		02	9	9	E	RAMY	7551	
19	AFS	1207E	1404D	S20	E48	07	23.2		02	9	9	E	RAMY	7550	
19	AFS	1250E	2039	S19	W36	07	16.8		02	7	7	E	HOLL	7549	
19	AFS	1607E	2039	S08	W22	07	18.0		01	9	9	E	HOLL		
20	AFS	0150E	0940	S16	W43	07	16.8		03	5	5	E	LEAR	7549	
20	AFS	0153E	0940	S20	E40	07	23.1		04	9	9	E	LEAR	7550	
20	ASR	0253E	0430D	S13	E90	07	26.9			9	9	E	LEAR		
20	ASR	0355E	0800D	N11	W90	07	13.4			9	9	E	LEAR		
20	ADF	0440E	0940	N12	E22	07	21.8	1	05	9	9	E	LEAR	7547	
20	DSD	0535E	1132D	S11	E32	07	22.6		01	9	9	E	SVTO	7548	
20	DSD	0535E	1740	N03	W56	07	16.0		02	9	9	E	SVTO	7545	
20	ADF	0535E	1740	S09	E32	07	22.6	1	04	9	9	E	SVTO	7548	
20	DSD	0537E	1400D	S17	W46	07	16.7		02	9	9	E	SVTO	7549	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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	DSD	0537E	1400D	S20	W45	07	16.8		01	9	9	E	SVTO	7549	
20	AFS	0537E	1740	S19	W44	07	16.9		02	9	9	E	SVTO	7549	
20	DSD	0539E	1251D	S19	E39	07	23.2		01	9	9	E	SVTO	7550	
20	AFS	0539E	1740	N06	E22	07	21.9		02	9	9	E	SVTO	7547	
20	DSD	0539E	1740	N12	E21	07	21.8		02	9	9	E	SVTO	7547	
20	AFS	0539E	1740	S18	E38	07	23.1		02	9	9	E	SVTO	7550	
20	DSD	0540E	1350D	S08	E60	07	24.7		01	9	9	E	SVTO	7551	
20	AFS	0540E	1740	S12	E60	07	24.7		02	9	9	E	SVTO	7551	
20	APR	0805	0835	N02	W90	07	13.6	1					KHAR		WS
20	DSD	0855E	0940	S16	W50	07	16.6		02	9	9	E	LEAR	7549	
20	AFS	1102E	2028	S20	E35	07	23.1		02	9	9	E	RAMY	7550	
20	ADF	1108E	2028	N11	W58	07	16.1	1	05	9	9	E	RAMY	7545	
20	AFS	1110E	2028	N06	W57	07	16.2		02	9	9	E	RAMY	7545	
20	AFS	1115E	2028	S17	W49	07	16.7		02	9	9	E	RAMY	7549	
20	DSD	1116E	2028	S18	W46	07	17.0		03	9	9	E	RAMY	7549	
20	AFS	1139E	2028	N18	E82	07	26.7		01	9	9	E	RAMY		
20	AFS	1139E	2028	S09	E56	07	24.7		02	9	9	E	RAMY	7551	
20	AFS	1139E	2028	S13	E33	07	23.0		02	9	9	E	RAMY	7548	
20	BSD	1145E	1527D	S13	E80	07	26.5		05	9	9	E	RAMY		
20	SSB	1216		242	W05	07	23.6			0	0	E	RAMY		
20	ASR	1224E	1740	S08	W90	07	13.8			9	9	E	SVTO	7543	
20	ADF	1225E	1740	S11	W90	07	13.7		02	9	9	E	SVTO	7543	
20	ASR	1226E	1743D	S09	W89	07	13.8			9	9	E	RAMY	7543	
20	AFS	1357E	0104	N08	E21	07	22.1		03	9	9	E	HOLL	7547	
20	ASR	1357E	0104	S12	W90	07	13.8			9	9	E	HOLL		
20	AFS	1357E	0104	S21	E36	07	23.3		03	9	9	E	HOLL	7550	
20	APR	1743E	2028	S07	W90	07	14.0	1		9	9	E	RAMY	7543	
20	APR	2338E	0104	N14	E90	07	27.8	1		9	9	E	HOLL		
20	AFS	2345E	0940	S11	W56	07	16.8		02	7	7	E	LEAR	7549	
20	AFS	2348E	0940	S20	E27	07	23.0		03	9	9	E	LEAR	7550	
20	SSB	2358		243	W12	07	24.2			0	0	E	HOLL		246 W15
21	DSD	0435E	1134D	S12	E23	07	22.9		03	9	9	E	SVTO	7548	
21	AFS	0437E	1733	S20	E23	07	22.9		02	9	9	E	SVTO	7550	
21	DSD	0445E	0927D	S19	W59	07	16.7		02	9	9	E	SVTO	7549	
21	DSD	0524E	1521D	S09	E40	07	24.2		02	9	9	E	SVTO	7551	
21	SSB	0541		241	W14	07	24.3			0	0	E	SVTO		
21	APR	0800	0850	S18	W90	07	14.5	1					KHAR		A,WS
21	DSD	0909E	1733	S19	E21	07	23.0		03	9	9	E	SVTO	7550	
21	AFS	0915E	1733	S21	E43	07	24.7		01	9	9	E	SVTO		
21	DSD	0934E	1136D	N09	E04	07	21.7		01	9	9	E	SVTO	7547	
21	SSB	1100		243	W18	07	24.7			0	0	E	RAMY		
21	APR	1102E	2133	N14	E90	07	28.3	1		9	9	E	RAMY		
21	AFS	1110E	2133	N07	E06	07	21.9		02	9	9	E	RAMY	7547	
21	AFS	1110E	2133	S22	E41	07	24.6		01	9	9	E	RAMY		
21	AFS	1118E	2133	S12	E39	07	24.4		02	9	9	E	RAMY	7551	
21	AFS	1130E	2133	S21	E23	07	23.2		01	9	9	E	RAMY	7550	
21	AFS	1223E	2133	S18	W62	07	16.8		02	9	9	E	RAMY	7549	
21	APR	1300E	2133	S19	W90	07	14.7	1		9	9	E	RAMY		
21	APR	1306E	1733	S24	W90	07	14.6	1		9	8	E	SVTO		
21	ASR	1357E	0104	S12	W90	07	14.8			9	9	E	HOLL		
21	AFS	1357E	0104	S19	W49	07	17.8		03	9	9	E	HOLL	7549	
21	AFS	1357E	0104	S21	E36	07	24.3		03	9	9	E	HOLL	7550	
21	AFS	1519E	1733	S09	E4J	07	24.6		01	9	9	E	SVTO	7551	
21	APR	1540E	1733	N15	E90	07	28.5	1		9	9	E	SVTO		
21	ADF	1652E	2133	S08	E13	07	22.7	1	05	9	9	E	RAMY	7548	
21	AFS	1652E	2133	S12	E17	07	23.0		01	9	9	E	RAMY	7548	
21	SSB	1851		245	W25	07	25.3			0	0	E	HOLL		
21	AFS	1859E	0042	S21	E19	07	23.2		01	9	9	E	HOLL	7550	
21	ASR	1937E	2216D	S12	E90	07	28.6			9	9	E	HOLL		
21	ASR	1950E	2024D	N16	E90	07	28.6			9	9	E	RAMY		
21	APR	2143E	0042	S19	W90	07	15.0			9	9	E	HOLL		
21	ASR	2213E	0042	N17	E90	07	28.8			9	9	E	HOLL		
21	APR	2338E	0104	N14	E90	07	28.8	1		9	9	E	HOLL		
21	APR	2346E	0042	N13	E90	07	28.8			9	9	E	HOLL		
22	APR	0000E	0130D	N10	E90	07	28.8	1		7	7	E	LEAR		
22	AFS	0003E	0945	N08	W02	07	21.8		02	8	8	E	LEAR	7547	
22	ADF	0030E	0945	S10	E07	07	22.5	1	05	9	9	E	LEAR	7548	
22	DSD	0733E	1740	S11	E06	07	22.8		03	9	9	E	SVTO	7548	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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	DSD	0748E	1733D	S17	E14	07	23.4		01	9	9	E	SVTO	7550	
22	AFS	0748E	1740	S19	E12	07	23.2		02	9	9	E	SVTO	7550	
22	DSD	0752E	1740	S18	W73	07	16.8		02	9	9	E	SVTO	7549	
22	ADF	0802E	1735D	S08	E32	07	24.7	1	04	9	9	E	SVTO	7551	
22	DSD	0806E	1735D	S08	E27	07	24.4		01	9	9	E	SVTO	7551	
22	AFS	0806E	1740	S11	E27	07	24.4		01	9	9	E	SVTO	7551	
22	BSL	0824	0850	N08	W90	07	15.6	1					KHAR		WS
22	BSL	0835	0850	N13	E90	07	29.1	1					KHAR		R,B,WS
22	DSD	0838E	1740	N08	W08	07	21.7		01	9	9	E	SVTO	7547	
22	SSB	0841		244	W31	07	25.8			0	0	E	SVTO		
22	DSD	0946E	1740	N10	W12	07	21.5		01	9	9	E	SVTO	7547	
22	AFS	1052E	1740	N05	W07	07	21.9		01	9	9	E	RAMY	7547	
22	AFS	1104E	1740	S19	E09	07	23.1		01	9	9	E	RAMY	7550	
22	AFS	1109E	1740	S10	E27	07	24.5		01	9	9	E	RAMY	7551	
22	ASR	1113E	1738D	N15	E90	07	29.3			9	9	E	RAMY		
22	SSB	1157		212	W01	07	23.4			0	0	E	RAMY		244 W33
22	ASR	1226E	1740	S19	W90	07	15.6			8	6	E	SVTO	7549	
22	SSB	1252		211	W00	07	23.3			0	0	E	HOLL		
22	AFS	1406E	0043	S08	E28	07	24.7		02	9	9	E	HOLL	7551	
22	BSD	1409E	1602D	S17	W79	07	16.6		10	9	9	E	HOLL	7549	
22	ADF	1414E	2023D	N22	W03	07	22.4	1	14	9	9	E	HOLL	7547	
22	ADF	1516E	1740	S09	E62	07	27.3	1	05	9	9	E	SVTO		
22	AFS	1558E	0043	N07	W11	07	21.8		01	9	9	E	HOLL	7547	
22	AFS	1905E	0043	S20	E05	07	23.2		02	9	9	E	HOLL	7550	
22	ASR	2146E	2306D	S13	E90	07	29.7			9	9	E	HOLL		
22	ASR	2159E	0043	N16	E84	07	29.3			9	9	E	HOLL		
23	ASR	0150E	0945	N16	E90	07	29.9			7	7	E	LEAR		
23	ASR	0431E	0501	N19	E90	07	30.0			9	9	E	SVTO		
23	BSL	0501	0521	N19	E90	07	30.1			9	9	E	SVTO		
23	DSD	0625E	1425D	S01	W20	07	21.8		01	9	9	E	SVTO	7550	
23	DSD	0625E	1425D	S11	E75	07	28.9		01	9	9	E	SVTO		
23	DSD	0717E	1425D	N07	W22	07	21.6		02	9	9	E	SVTO	7547	
23	SSB	0921		245	W46	07	27.1			0	0	E	SVTO		
23	AFS	1323E	0159	S04	W20	07	22.1		01	9	9	E	HOLL	7550	
23	ASR	1328E	0159	N15	E90	07	30.4			9	9	E	HOLL		
23	AFS	1353E	0159	S03	E14	07	24.6		02	6	9	E	HOLL	7551	
23	SSB	1506		251	W55	07	28.0			0	0	E	HOLL		
23	ADF	2120E	0159	S08	W16	07	22.7	3	07	9	9	E	HOLL	7548	
24	ADF	0330E	0945	N18	W31	07	21.8	1	10	9	9	E	LEAR	7547	
24	ADF	0405E	1751	N14	W31	07	21.8	1	07	9	9	E	SVTO	7547	
24	DSD	0521E	1751	N08	W30	07	22.0		02	9	9	E	SVTO	7547	
24	ADF	0534E	1701D	N11	E26	07	26.2	1	10	9	9	E	SVTO		
24	AFS	0548E	1751	S21	W13	07	23.2		02	9	9	E	SVTO	7550	
24	AFS	0558E	1751	S08	E05	07	24.6		02	9	9	E	SVTO	7551	
24	DSD	0613E	0916D	N16	E70	07	29.6		02	9	9	E	SVTO	7552	
24	AFS	0851E	1751	N17	E17	07	25.7		01	9	9	E	SVTO		
24	DSD	0909E	0000	S13	E02	07	24.5		01	9	9	E	SVTO	7551	
24	DSD	0916E	1751	N18	E66	07	29.4		01	9	9	E	SVTO	7552	
24	AFS	0922E	1751	S12	E55	07	28.5		02	9	9	E	SVTO	7553	
24	DSD	0922E	1751	S13	E55	07	28.5		02	9	9	E	SVTO	7553	
24	AFS	0944E	1751	S19	W16	07	23.2		02	9	9	E	SVTO	7551	
24	DSD	1034E	1751	S13	E52	07	28.4		01	9	9	E	SVTO	7553	
24	DSD	1302E	1637D	S02	E23	07	26.3		02	7	7	E	HOLL	7550	
24	DSD	1400E	1609D	S14	E56	07	28.8		02	9	9	E	RAMY	7553	
24	AFS	1403E	1609D	N16	E66	07	29.6		02	9	9	E	RAMY	7552	
24	AFS	1403E	1609D	S10	E00	07	24.6		01	9	9	E	RAMY	7551	
24	AFS	1527E	1609D	S11	W23	07	22.9		02	9	9	E	RAMY	7548	
24	AFS	1544E	0158	S05	E09	07	25.3		01	9	9	E	HOLL	7551	
24	ADF	1650E	0158	N14	W41	07	21.6	1	20	9	9	E	HOLL		
25	ADF	0115E	0945	N25	W40	07	21.9	1	15	9	9	E	LEAR		
25	AFS	0140E	0945	S09	W04	07	24.8		03	6	9	E	LEAR	7551	
25	AFS	0430E	1742	S08	W06	07	24.7		02	9	9	E	SVTO	7551	
25	DSD	0544E	0828D	S13	W10	07	24.5		01	9	9	E	SVTO	7551	
25	AFS	0544E	1742	S09	W02	07	25.1		01	9	9	E	SVTO	7551	
25	DSD	0625E	1742	S20	W31	07	22.9		03	9	9	E	SVTO	7550	
25	DSD	0750E	1742	N08	W44	07	22.0		02	9	9	E	SVTO	7547	
25	AFS	0825E	0905D	S19	W28	07	23.2		02	9	9	E	SVTO	7550	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
25	APR	1130E	2204	S03	W90	07	18.7	1		7	9	E	RAMY		
25	ADF	1201E	1647D	S12	W12	07	24.6	1	04	9	9	E	RAMY	7551	
25	AFS	1202E	2204	N19	E54	07	29.6		02	9	9	E	RAMY	7552	
25	DSD	1203E	1744D	N13	E50	07	29.3		02	9	9	E	RAMY	7552	
25	ADF	1205E	1701D	N19	E13	07	26.5	1	10	9	9	E	RAMY		
25	AFS	1208E	2204	S14	E42	07	28.7		01	9	9	E	RAMY	7553	
25	DSD	1326E	1742	S13	E43	07	28.8		01	9	9	E	SVTO	7553	
25	ADF	1550E	0158	N20	E11	07	26.5	1	10	9	9	E	HOLL		
25	DSD	1550E	2019D	N14	E02	07	25.8		01	9	9	E	HOLL		
25	DSD	1550E	2237D	N06	W52	07	21.8		03	9	9	E	HOLL	7547	
25	ADF	1705E	0158	N16	W51	07	21.8	1	11	9	9	E	HOLL	7547	
26	DSF	0125U	2340U	N30	W40	07	22.9	2	15	0	0	E	LEAR		
26	DSD	0625E	0909D	S10	W16	07	25.1		01	9	9	E	SVTO	7551	
26	ADF	0702E	1742	S24	W43	07	23.0	1	03	9	9	E	SVTO	7550	
26	SSB	0708		220	W60	07	28.0			0	0	E	SVTO		
26	AFS	0836E	1742	S10	W17	07	25.1		01	9	9	E	SVTO	7551	
26	AFS	1048E	1649	S11	W46	07	23.0		02	9	9	E	RAMY	7548	
26	DSD	1110E	1437D	S08	W33	07	24.0		01	9	9	E	RAMY	7551	
26	AFS	1116E	1649	S12	E27	07	28.5		02	9	9	E	RAMY	7553	
26	ASR	1410E	0041	N12	E83	08	1.8			9	9	E	HOLL		
26	ADF	1410E	0041	N13	E80	08	1.6	1	15	9	9	E	HOLL		
26	ADF	1410E	0041	S19	E30	07	28.9	1	22	9	9	E	HOLL		
26	ADF	1410E	0041	S22	W48	07	22.9	1	03	9	9	E	HOLL	7550	
26	ADF	1440E	1649	N17	W04	07	26.3	1	10	9	9	E	RAMY		
26	ADF	1440E	1649	S21	W46	07	23.1	1	03	9	9	E	RAMY	7550	
26	ADF	1512E	1649	N13	E80	08	1.7	1	09	9	9	E	RAMY		
26	AFS	1522E	1742	S23	W47	07	23.0		02	9	9	E	SVTO	7550	
26	AFS	1526E	1742	S11	E27	07	28.7		02	9	9	E	SVTO	7553	
27	AFS	0015E	0940	S02	E17	07	28.3		02	9	8	E	LEAR	7553	
27	ADF	0450E	0940	N33	E16	07	28.5	1	03	9	9	E	LEAR	7552	
27	AFS	0534E	1753	S12	E05	07	27.6		02	9	9	E	SVTO	7553	
27	ADF	0626E	1742	N16	E32	07	29.7	1	03	9	9	E	SVTO	7552	
27	AFS	0626E	1742	S11	E17	07	28.5		02	9	9	E	SVTO	7553	
27	AFS	0706E	1753	N09	E54	07	31.3		01	9	9	E	SVTO	7555	
27	ADF	0750E	1742	S15	W44	07	24.0	1	03	9	9	E	SVTO	7551	
27	ADF	0937E	1753	N15	E44	07	30.7	1	05	9	9	E	SVTO	7555	
27	AFS	1057E	2149	S11	W60	07	22.9		02	9	9	E	RAMY	7548	
27	AFS	1100E	2149	S08	W38	07	24.6		01	7	9	E	RAMY	7551	
27	DSD	1115E	1502D	N08	E65	08	1.3		04	9	9	E	RAMY	7555	
27	DSD	1121E	2149	S11	E16	07	28.7		02	9	9	E	RAMY	7553	
27	AFS	1121E	2149	S12	E14	07	28.5		02	9	9	E	RAMY	7553	
27	DSD	1128E	2149	S11	E14	07	28.5		01	9	9	E	RAMY	7553	
27	AFS	1243E	0157	S10	E14	07	28.6		03	9	9	E	HOLL	7553	
27	AFS	1333E	2149	S11	W11	07	26.7		01	9	9	E	RAMY		
27	DSD	1502E	2149	N09	E58	08	1.0		03	9	9	E	RAMY	7555	
27	AFS	1506E	1742	S15	W44	07	24.3		02	9	9	E	SVTO	7551	
27	DSD	1509E	1742	N11	E55	07	31.8		03	9	9	E	SVTO	7555	
27	DSD	1655E	1751D	N13	E22	07	29.4		03	9	9	E	RAMY	7552	
27	AFS	1732E	2149	S13	W46	07	24.2		02	9	9	E	RAMY	7551	
27	ADF	1751E	2149	N13	E22	07	29.4	1	08	9	9	E	RAMY	7552	
27	ADF	1752E	2149	N10	E53	07	31.7	1	05	9	9	E	RAMY	7555	
27	ADF	1832E	0157	N16	E56	08	1.0	1	14	9	9	E	HOLL	7555	
27	ADF	1850E	0157	N16	E23	07	29.5	1	06	9	9	E	HOLL	7552	
27	DSD	1856E	1950	N09	E65	08	1.7		06	9	9	E	HOLL	7555	
27	AFS	2335E	0945	S11	E07	07	28.5		02	9	9	E	LEAR	7553	
28	AFS	0534E	1753	S12	E05	07	28.6		02	9	9	E	SVTO	7553	
28	AFS	0706E	1753	N09	E54	08	1.3		01	9	9	E	SVTO	7555	
28	ADF	0937E	1753	N15	E44	07	31.7	1	05	9	9	E	SVTO	7555	
28	AFS	1101E	2053	S08	W51	07	24.6		02	8	8	E	RAMY	7551	
28	DSD	1102E	2053	S12	W56	07	24.2		02	9	7	E	RAMY	7551	
28	AFS	1105E	2053	S12	E01	07	28.5		02	9	9	E	RAMY	7553	
28	ADF	1119E	2053	N13	E55	08	1.6	1	12	9	9	E	RAMY	7555	
28	APR	1120E	2053	N17	W90	07	21.6	1		9	9	E	RAMY		
28	ADF	1240E	1456D	N08	E41	07	31.6	3	05	9	9	E	RAMY	7555	
28	DSF	1240U	1456U	N07	E42	07	31.7	3	05	0	0	E	RAMY	7555	
28	DSD	1326E	2053	S16	W02	07	28.4		03	9	9	E	RAMY	7553	
28	AFS	1430E	2053	N09	E55	08	1.7		02	9	9	E	RAMY	7555	

ACTIVE PROMINENCES AND FILAMENTS

JULY 1993

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
28	DSD	1455	1715D	N10	E42	07	31.8		03	9	9	E	SVTO	7555	Flare Associated
28	DSD	1549E	2053	N07	E50	08	1.4		02	9	9	E	RAMY	7555	
28	DSD	1830E	1856	N08	E47	08	1.3		03	9	9	E	HOLL	7555	
28	ADF	1830E	1856	N13	E51	08	1.6	1	14	9	9	E	HOLL	7555	
29	AFS	0516E	1740	S22	E43	08	1.5		01	9	9	E	SVTO		
29	AFS	0518E	1740	S12	W10	07	28.5		01	9	9	E	SVTO	7553	
29	AFS	0519E	1740	N10	E40	08	1.2		02	9	9	E	SVTO	7555	
29	ADF	0545E	1740	N12	E34	07	31.8	1	05	9	9	E	SVTO	7555	
29	DSD	0648E	0917D	S21	W33	07	26.7		01	9	9	E	SVTO		
29	AFS	0745E	0901	S11	W11	07	28.5		02	9	9	E	LEAR	7553	
29	AFS	0746E	0901	N08	E39	08	1.2		02	9	9	E	LEAR	7555	
29	DSD	0945E	1740	S14	W03	07	29.2		02	9	9	E	SVTO	7553	
29	AFS	1130E	2218	S11	W13	07	28.5		02	9	9	E	RAMY	7553	
29	DSD	1131E	2025D	S14	W05	07	29.1		02	9	9	E	RAMY	7553	
29	AFS	1137E	2218	S23	E39	08	1.5		01	9	9	E	RAMY		
29	AFS	1141E	2218	N09	E36	08	1.2		02	8	8	E	RAMY	7555	
29	AFS	1350E	0058D	N14	E38	08	1.4		02	9	9	E	HOLL	7553	
29	DSD	1618E	1740	S14	W08	07	29.1		04	9	9	E	SVTO	7553	
29	DSD	1619E	1740	N08	E34	08	1.2		01	9	9	E	SVTO	7555	
29	DSD	1633E	2014D	S13	W08	07	29.1		02	9	9	E	HOLL	7553	
29	ADF	1716E	2218	N10	E28	07	31.8	1	05	9	9	E	RAMY	7555	
29	ADF	2015E	2218	N11	E36	08	1.5	1	08	9	9	E	RAMY	7555	
30	AFS	0528E	1740	N16	E02	07	30.4		02	9	9	E	SVTO	7552	
30	DSD	0528E	1740	N17	W01	07	30.1		02	9	9	E	SVTO	7552	
30	AFS	0528E	1740	S14	W22	07	28.6		01	9	9	E	SVTO	7553	
30	DSD	0533E	1740	N07	E26	08	1.2		01	9	9	E	SVTO	7555	
30	ADF	0533E	1740	N07	E31	08	1.5	1	16	9	9	E	SVTO	7555	
30	ADF	0650E	0945	N12	E30	08	1.5	1	12	9	9	E	LEAR	7555	
30	AFS	1110E	2213	N08	E25	08	1.3		01	9	9	E	RAMY	7555	
30	ADF	1110E	2213	N11	E27	08	1.5	1	07	9	9	E	RAMY	7555	
30	ADF	1112E	2213	N15	E21	08	1.0	1	03	9	9	E	RAMY	7555	
30	AFS	1129E	2213	S12	W26	07	28.5		02	9	9	E	RAMY	7553	
30	DSD	1210E	1644D	S11	E61	08	4.1		01	9	9	E	SVTO		
30	ADF	1305E	0130	N10	E35	08	2.2	1	12	9	9	E	HOLL	7555	
30	AFS	1313E	1740	S23	E26	08	1.5		01	9	9	E	SVTO		
30	DSD	1445E	1703D	N16	W06	07	30.1		01	9	9	E	HOLL	7552	
30	DSD	1541E	1917D	N16	W07	07	30.1		01	9	9	E	RAMY	7552	
30	DSD	1651E	1740	S13	W26	07	28.7		03	9	9	E	SVTO	7553	
30	AFS	1705E	0130	S12	W27	07	28.7		01	9	9	E	HOLL	7553	
30	AFS	1706E	0130	N17	W08	07	30.1		01	9	9	E	HOLL	7552	
30	DSD	1720E	0130	N17	W07	07	30.2		02	9	9	E	HOLL	7552	
31	AFS	1008E	1651	N16	W18	07	30.0		02	9	9	E	SVTO	7552	
31	DSD	1119E	1530D	N16	W18	07	30.1		02	9	9	E	SVTO	7552	
31	SSB	1240		170	W78	08	7.0			0	0	E	RAMY		
31	DSD	1750E	0118	S24	E09	08	1.4		01	9	9	E	HOLL		
31	ADF	1823E	0118	N14	W31	07	29.4	1	10	9	9	E	HOLL	7552	

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EARTH RADIATION BUDGET SATELLITE (ERBS) TOTAL SOLAR IRRADIANCE MEASUREMENTS OCTOBER 1984 THROUGH JULY 1993

The Earth Radiation Budget Satellite (ERBS) solar irradiance values for 1984-1992 were obtained from the ERBS solar monitor. The ERBS solar monitor, an active cavity radiometer, is an earlier version of the Active Cavity Radiometer Irradiance Monitors (ACRIM) which are located on the NASA Upper Atmosphere Research Satellite (UARS) spacecraft. The monitor was placed into orbit aboard the NASA ERBS spacecraft on October 5, 1984. The monitor is operating properly at this time.

The individual total solar irradiance values represent instantaneous measurements which are cosine corrected and normalized to the mean Earth/Sun distance of one astronomical unit. Once every 2 weeks, the Sun is observed by the monitor for several 64-second measurement intervals. Each interval is separated into two 32-second periods. During the first period, the unocculted Sun drifts across the 13.7-degree fields of view, and its radiation field is measured. During the second period, a low-emittance shutter, representative of a near- zero irradiance source, is cycled into the field of view, and its radiation field is measured. The resulting measurements from the two different periods are used to define the irradiance, using the model that is described in reference 1 of the reference list. Typically, two to eight values of the irradiance are made per orbit. Considering that each of these irradiance values is derived over a period of only a few minutes, the averaged irradiance value represents an instantaneous one and not a daily average. However, daily ERBS solar irradiance measurements were made in support of the NASA Space Shuttle Atmospheric Laboratory for Applications and Science (ATLAS-1 and -2), the Solar Constant (SOLCON), and the European Retrievable Carrier (EURECA) Solar Variations (SOVA) Experiments during the periods of: March 23-April 2, 1992; January 16-30, 1993; and April 6-22, 1993. No measurements were performed between July 18-November 21, 1993 due to spacecraft power problems. Normal measurement operations were resumed on November 22, 1993.

As shown in Figure 1, the ERBS solar monitor time series covers the period from October 25, 1984, through July 17, 1993. The measurement precision is approximately 0.01 percent while the accuracy is 0.2 percent (reference 1). The ERBS data reduction model is described in considerable detail in reference 1. In reference 2, analyses of the time series have been presented as well as inter-comparisons of the ERBS time series with those of the ACRIM Solar Maximum Mission and the Nimbus 7 Earth Radiation Budget (ERB) Channel 10c pyrheliometers. Inter-comparisons among the Nimbus 6-ERB, Mariner VI, Mariner VII, Space Lab I, ERBS, NOAA-9 and NOAA-10 pyrheliometers are also presented in reference 3.

ERBS SOLAR MONITOR

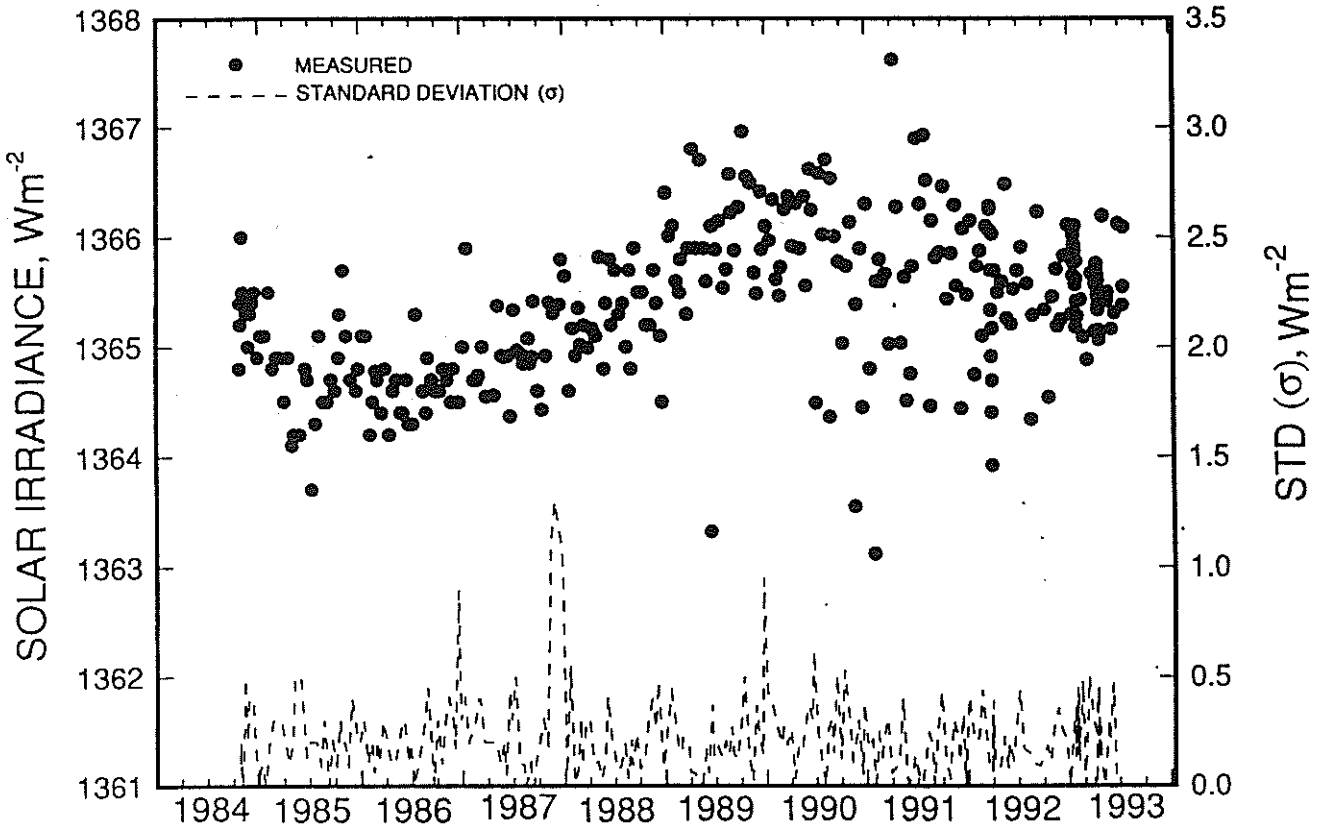

Fig. 1. Total solar irradiance measurements from the Earth Radiation Budget Satellite (ERBS) are presented for the period October 25, 1984 through July 17, 1993.

References

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2. R.B. Lee III, M.A. Gibson, N. Shivakumar, R. Wilson, H.L. Kyle, and A.T. Mecherikunnel, Solar Irradiance Measurements: Minimum through Maximum Solar Activity, Metrologia, Vol. 28, pp. 265-268, 1991.

3. R.B. Lee III, B.R. Barkstrom, M.R. Luther, and R.D. Cess, Solar Irradiance Measurements Using the Earth Radiation Budget Experiment Solar Monitors, Proceedings Sixth Conference on Atmospheric Radiation, American Meteorological Society, pp. J5-J8, 1986.

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1984 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01											1366.0	
02												
03												1365.2
04												
05											1365.4	
06												
07												
08												
09												
10												1365.2
11												
12											1365.3	
13												
14												
15												
16												
17												1365.3
18												
19												
20											1365.4	
21												
22												
23												
24												
25										1365.0		
26										1365.5	1364.8	
27												
28												1364.8
29										1365.3		
30												
31												

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1985 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01					1364.4							
02										1364.7		
03				1364.7								
04									1364.7			
05												
06		1365.3	1365.0									
07								1365.3				
08					1364.4							
09	1365.1											
10							1364.0					
11												
12												
13											1365.2	
14												
15												
16										1365.1		
17				1365.2								
18						1364.84			1365.0			1364.6
19												
20		1364.9	1365.1									
21								1364.8		1365.3		
22												
23	1365.0											
24							1364.6					
25												1364.7
26						1365.0						
27											1364.6	
28												
29					1364.6							
30												
31										1365.7		

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1986 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01										1364.6		
02				1364.9								
03									1364.9			
04						1364.4						1364.8
05		1364.2	1364.7									
06												
07												
08	1365.0											
09							1364.3					
10												
11												
12											1364.7	
13												
14					1365.0							
15		1364.51								1364.6		
16				1364.3								
17								1364.4	1364.7			
18												1364.48
19			1364.4			1364.7						
20												
21												
22	1365.0											
23							1365.3					
24												1364.5
25						1364.3						
26		1364.38									1364.5	
27												
28					1364.6			1364.36				
29										1364.8		
30				1364.7								
31												

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m²
1987 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01				1364.6								
02									1364.9			
03						1364.93						
04			1364.7									
05								1364.9				
06												
07	1365.0											
08							1365.3					
09									1364.9			
10												
11											1365.4	
12								1364.8				
13					1365.4							
14										1364.4		
15		1364.8										
16									1365.4			
17												
18			1365.0			1364.96						1365.4
19												
20												
21	1365.9											
22							1365.0					
23												1365.8
24						1364.4						
25											1365.3	
26		1364.7										
27					1364.9							
28								1365.1		1364.9		
29				1364.6								
30									1364.6			
31												

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1988 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01												
02						1365.4						1365.4
03		1365.2	1365.0					1365.4				
04												
05												
06	1365.7						1365.7					
07												
08												
09											1365.2	
10												
11					1365.8							
12										1365.5		
13				1365.2								
14									1365.9			
15								1365.0				
16			1365.2									1365.1
17						1365.8						
18												
19												
20	1364.6						1365.3					
21												1364.5
22						1365.2						
23											1365.7	
24												
25					1364.8							
26								1365.7		1365.2		
27				1365.1								
28									1365.5			
29			1365.0									
30												
31								1364.8				

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m²
1989 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01	1366.1	1366.1	1365.8									
02						1365.6						
03								1365.5				
04												
05												
06							1365.9					
07												
08												
09											1366.5	
10												
11					1366.7							
12		1365.6								1367.0		
13				1366.8								
14									1365.9			
15						1363.3		1365.7				
16												1366.4
17												
18	1365.2											
19												
20							1366.1					
21												1365.9
22			1365.3			1366.1						
23											1365.7	
24		1365.5										
25					1365.9							
26								1366.2		1366.5		
27				1365.9								
28			1365.9						1365.5			
29												
30											1365.5	
31								1366.3				

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1990 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01								1366.0				
02												
03	1366.1											
04							1364.5					
05												
06												
07											1366.1	
08												
09					1365.9							
10										1365.0		
11		1365.6		1365.9				1366.7				
12									1366.0			
13												1365.9
14			1366.3			1366.6						
15												
16												
17	1366.0											
18							1366.6					
19												1364.4
20						1366.3						
21											1363.5	
22		1365.5										
23								1364.4				
24					1366.4					1365.7		
25				1366.3								
26									1365.8			
27												
28		1365.7	1366.4								1365.4	
29								1366.5				
30					1365.5							
31	1366.3											

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m²
1991 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01												
02	1366.3											
03							1366.9					
04												
05												
06											1365.9	
07												
08												
09		1365.6			1365.0			1366.5		1366.5		1364.4
10				1367.6								
11									1365.8			
12						1364.8						
13			1365.7									
14												
15												
16	1364.8											
17							1366.3					
18												1366.1
19						1365.7						
20		1365.8									1366.3	
21								1364.5				
22					1366.5							
23										1365.4		
24				1366.3								
25									1365.9			
26											1365.6	
27		1365.6	1365.0									
28					1364.5			1366.2				
29												
30	1363.1					1366.9						
31												

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1992 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01	1365.5			1365.2			1365.7					
02				1366.0								
03												
04											1365.5	
05								1365.6				
06		1365.7			1365.6							1365.3
07										1365.3		
08				1365.7		1365.2						
09												
10												
11			1366.1									
12									1366.2			
13												
14												
15	1366.2						1365.9					
16												1365.8
17						1365.5						
18		1365.9						1364.3			1365.7	
19												
20					1366.5							
21										1364.5		
22				1365.5							1365.2	
23			1366.3						1365.2			
24			1366.3		1365.3							
25			1366.1									
26		1365.1	1365.7									
27			1365.3									
28			1364.9									
29	1364.8		1364.4				1365.1					
30			1363.9									1366.1
31			1364.7									

SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT
NASA LANGLEY RESEARCH CENTER
WATTS/m^2
1993 - ERBS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01		1365.3										
02												
03												
04												
05					1366.2	1365.2						
06				1365.7								
07				1365.1								
08				1365.6								
09				1365.7								
10			1364.9	1365.7								
11				1365.8								
12				1365.8								
13	1365.3			1365.7								
14		1365.4		1365.7								
15				1365.5								
16	1365.8			1365.6		1365.3	1365.6					
17	1365.6			1365.5			1366.1					
18	1366.0			1365.3								
19	1365.8			1365.4	1365.4							
20	1365.9			1365.2								
21	1365.9			1365.1	1365.5							
22	1365.6			1365.1								
23	1365.9											
24	1366.1	1365.1	1365.7									
25	1365.6											
26	1365.3											
27	1365.2											
28	1365.6											
29	1365.8											
30	1365.4					1366.1						
31												

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