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Gregory W. Withee, Acting Assistant Administrator

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Michael A. Chinnery, Director
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Editor: Helen E. Coffey

Chief: Joe H. Allen
Solar-Terrestrial Physics Division

Staff: Christine D. Hanchett
John A. McKinnon
Daniel C. Wilkinson

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H α S O L A R F L A R E S

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/ USAF		CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks	
						Region	Lat									Apparent (10-6 Disk)	Corr (Sq Deg)		
			01 0000		0027	No Flare Patrol													
0001	VORO	01	0220	0221	0226	N04	W80		12	26.2	6	SF		1	C	0221	36		D
0002	MITK	01	0501	0502	0504	N10	E29 7397	01	3.4	3	SN			E	0502	26	0.3	D	
			01 0633		0635	No Flare Patrol													
0003	KANZ	01	1152	1156	1204	S12	W58 7379	12	28.2	12	SN		2	C					
0004	PALE	01	1835E	1836U	1839D	S13	W60 7379	12	28.3	4D	SF B 5.8	3	E			20			
			01 2400		2400	No Flare Patrol													
			02 0000		0011	No Flare Patrol													
0005		02	23412	2345	2422	S13	W76 7379	12	28.3	41	1F C 8.4					88			
	LEAR	02	2341	2345	2422	S13	W79 7379	12	28.1	41	SF C 8.4	3	E			73			
	PALE	02	2343	2348U	2508D	S13	W73 7379	12	28.6	85D	1F	3	E			102			
		03	0618		0620	No Flare Patrol													
		03	1221		1249	No Flare Patrol													
		03	1538		1655	No Flare Patrol													
		03	1927		2203	No Flare Patrol													
		03	2205		2209	No Flare Patrol													
		03	2232		2343	No Flare Patrol													
		04	0404		0408	No Flare Patrol													
		04	0626		0636	No Flare Patrol													
		04	1711		1721	No Flare Patrol													
		04	2327		2358	No Flare Patrol													
		04	2400		2400	No Flare Patrol													
		05	0000		0000	No Flare Patrol													
		05	0002		0024	No Flare Patrol													
0006	MITK	05	0041	0042	0045	S07	W58 7388	12	31.7	4	SN			E	0042	59	1.2	D	
0007	MITK	05	0110	0111	0111	S07	W58 7388	12	31.7	1	SN			E	0111	66	1.3	D	
		05	0332		0334	No Flare Patrol													
		05	0339		0400	No Flare Patrol													
		05	0402		0459	No Flare Patrol													
		05	0527		0532	No Flare Patrol													
0008	LEAR	05	0530	0536	0539	S08	W63 7388	12	31.5	9	SF		3	E		27			
		05	0543		0544	No Flare Patrol													
0009	LEAR	05	0554	0558	0608	S08	W64 7388	12	31.4	14	SF B 5.3	3	E			55			
		05	0557		0614	No Flare Patrol													
		05	0616		0636	No Flare Patrol													
0010		05	1046*	1050*	1136	S08	W65 7388	12	31.6	50	SF					27			
	KANZ	05	1046	1050	1102	S07	W64 7388	12	31.6	16	SF		2	C					
	SVTO	05	1050	1140	1200	S09	W67 7388	12	31.4	70	SF		3	E		27			
	KANZ	05	1130	1134	1146	S07	W64 7388	12	31.7	16	SF		2	C					
0011	RAMY	05	1506	1508	1518	S11	E80 7391	01	11.6	12	SF C 1.3	3	E			28		F	
		05	1702		1722	No Flare Patrol													
0012	HOLL	05	2049	2051	2056	S12	E69 7391	01	11.1	7	SF		3	E		11			
		05	2335		2350	No Flare Patrol													
0013	LEAR	06	0101	0102	0110	S04	E13 7386	01	7.0	9	SF B 5.8	3	E			21		F	
		06	0409		0519	No Flare Patrol													
		06	0534		0635	No Flare Patrol													

H α SOLAR FLARES5
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Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	Remarks
0014	LEAR	06	0627	0633	0636	S08 W79	7388	12	31.3	9	SF		3	E		19		
		06	0651	0737			No Flare Patrol											
		06	0739	0750			No Flare Patrol											
0015	HTPR	06	1452	1454	1510	S02 E05	7386	01	7.0	18	SF			C	1454	40	0.4	
		06	2053	2130			No Flare Patrol											
		06	2314	2400			No Flare Patrol											
		07	0000	0000			No Flare Patrol											
		07	0003	0401			No Flare Patrol											
		07	0403	0459			No Flare Patrol											
		07	0559	0605			No Flare Patrol											
0016	LEAR	07	0752	0757	0809	S06 W01	7386	01	7.2	17	SF		3	E		32		F
0017		07	0809	0842	1011	S06 W02	7386	01	7.2	122	1N C 2.6					194		EF
	LEAR	07	0809	0842	1018	S08 W01	7386	01	7.3	129	1N C 2.6	3	E			234		FE
	SVTO	07	0832E	0842U	1004	S04 W02	7386	01	7.2	92D	1F		2	E		155		F
0018		07	0917	0918	0929	S24 E00	7387	01	7.4	12	SF					31		F
	LEAR	07	0917	0918	0929	S23 E03	7387	01	7.6	12	SF		3	E		40		
	SVTO	07	0917	0919	0929	S24 W02	7387	01	7.2	12	SF		3	E		22		F
0019	HTPR	07	1339		1341D	S22 W05	7387	01	7.2	2D	SN			C	1341	60	0.6	
0020	HOLL	07	2048	2054	2128	S11 E38	7391	01	10.7	40	SF C 1.1	3	E			36		F
		07	2141	2144			No Flare Patrol											
		07	2146	2149			No Flare Patrol											
		07	2321	2400			No Flare Patrol											
		08	0000	0019			No Flare Patrol											
0021	SVTO	08	1019	1022	1024	S17 W12	7394	01	7.5	5	SF B 6.9	3	E			14		H
0022	HTPR	08	1217	1225	1245	S17 W14	7394	01	7.4	28	SN			C	1225	40	0.4	
0023	SVTO	08	1327	1335	1346	S16 W11	7394	01	7.7	19	SF		3	E		16		
		08	1516	1522			No Flare Patrol											
		08	1529	1537			No Flare Patrol											
		08	1539	1549			No Flare Patrol											
		08	1602	1656			No Flare Patrol											
		08	2134	2141			No Flare Patrol											
		08	2143	2150			No Flare Patrol											
		08	2256	2312			No Flare Patrol											
		08	2332	2400			No Flare Patrol											
		09	0000	0002			No Flare Patrol											
		09	0004	0029			No Flare Patrol											
0024		09	10463	1049	1110	S16 W30	7394	01	7.2	24	SF					60	0.7	
	HTPR	09	1046	1049	1120	S16 W30	7394	01	7.2	34	SF			C	1049	60	0.7	
	KANZ	09	1049	1049	1101	S16 W29	7394	01	7.2	12	SF		2	C				
0025	HTPR	09	1411	1415	1420	S25 W10	7389	01	8.8	9	SF			C	1415	20	0.2	D
0026	HTPR	09	1425	1427	1437	S10 E21	7391	01	11.2	12	SF			C	1427	20	0.2	DH
0027	HOLL	09	2152	2204	2225D	S02 W41	7386	01	6.8	33D	SF		3	E		28		F
		09	2226		2343		No Flare Patrol											
0028	LEAR	10	0642	0642	0646	S23 W35	7387	01	7.6	4	SF B 9.1	3	E			96		F
0029	KANZ	10	0928	0932	0936	S24 W43	7387	01	7.1	8	SF		2	C				
0030		10	13005	13333	1417	S19 W38	7394	01	7.6	77	1F C 6.3					114		FHU
	SVTO	10	1300	1329U	1400D	S19 W39	7394	01	7.6	60D	1F		3	E		155		F
	KANZ	10	1300	1336	1400D	S20 W38	7394	01	7.6	60D	1F		2	C				U
	RAMY	10	1305	1333	1417	S19 W38	7394	01	7.6	72	SF C 6.3	3	E			74		FH

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H α SOLAR FLARES

JANUARY 1993

Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement (10-6 Disk)	Apparent (Sq Deg)	Corr (Sq Deg)	Remarks
		10 2102		2129		No Flare Patrol												
		10 2131		2152		No Flare Patrol												
		10 2304		2356		No Flare Patrol												
		11 0000		0004		No Flare Patrol												
		11 0006		0130		No Flare Patrol												
0031	PALE	11 0043	0044	0048	N06	E02 7399	01	11.2	5	SF	C 1.7	3	E		18			
0032	PALE	11 0222	0230	0239	N06	E01 7399	01	11.2	17	SF	C 2.0	3	E		18			
0033	PALE	11 0258	0310	0317	N06	E00 7399	01	11.1	19	SF	B 8.1	3	E		67			
0034	WATU	11 0414	0424	0441	S17	W49 7394	01	7.4	27	SF			C	0424	20	0.3	D	
		11 0544		0545		No Flare Patrol												
		11 0601		0609		No Flare Patrol												
		11 1211		1319		No Flare Patrol												
0035	SVTO	11 1324E	1332U	1336	S16	W54 7394	01	7.5	120	SF		1	E		20			
		11 1513		1540		No Flare Patrol												
		11 1542		1552		No Flare Patrol												
		11 1649		1724		No Flare Patrol												
0036	HOLL	11 1738E	1758U	1919D	S16	W56 7394	01	7.5	101D	SF	C 3.2	1	E		88		F	
		11 1903		1938		No Flare Patrol												
0037	HOLL	11 2037	2045U	2132	S12	W09 7391	01	11.2	55	SF	C 1.1	2	E		31			
		11 2342		2357		No Flare Patrol												
0038	LEAR	12 0602	0624	0650	S12	W14 7391	01	11.2	48	SF	C 1.9	3	E		69		F	
		12 0612		0619		No Flare Patrol												
0039		12 08552	08598	0924	S13	W16 7391	01	11.2	29	SN	C 3.4				61		FH	
	SVTO	12 0855	0901	0937	S14	W15 7391	01	11.2	42	SF	C 3.4	3	E		67		FH	
	LEAR	12 0856	0859	0925	S11	W18 7391	01	11.0	29	SF		3	E		55		F	
	KANZ	12 0856	0900	0920	S14	W16 7391	01	11.2	24	SN		2	C					
	ISTA	12 0857	0907	0914	S12	W15 7391	01	11.2	17	1N			P				F	
0040	SVTO	12 0913	0921	0932	N06	W18 7399	01	11.0	19	SF		3	E		10		F	
0041		12 09533	09563	1004	S12	W14 7391	01	11.3	11	SF					17		F	
	SVTO	12 0953	0959	1004	S12	W14 7391	01	11.3	11	SF		3	E		17		F	
	KANZ	12 0956	0956	10120	S12	W15 7391	01	11.3	160	SF		2	C					
0042	SVTO	12 1028	1041	1121	S21	W66 7394	01	7.4	53	SF	C 3.0	3	E		54		F	
0043	SVTO	12 1223	1227	1253	S10	E01 7400	01	12.6	30	SF	B 8.6	3	E		25		F	
0044	SVTO	12 1432	1437	1454	S12	W18 7391	01	11.2	22	SN	C 6.1	2	E		38		F	
		12 1516		1534		No Flare Patrol												
0045	HOLL	12 1737	1739	1748	S16	W66 7394	01	7.7	11	SF		3	E		17		F	
0046	HOLL	12 1833	1841	1904	S15	W69 7394	01	7.5	31	SF		3	E		26		F	
		12 2019		2026		No Flare Patrol												
		12 2317		2353		No Flare Patrol												
0047	VORO	13 0234	0236	0244	S18	W75 7394	01	7.4	10	SF		1	C	0236	54		DIJ	
0048	PALE	13 0257E	0314	0333D	S08	W77 7386	01	7.3	360	1F	C 9.2	3	E		120		UY	
0049	LEAR	13 0421	0422	0424	S07	W73 7386	01	7.7	3	SF		3	E		20		F	

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Time	Area Measurement		Corr	Remarks			
								USAF Region						Mo Day	(Min)			Opt Xray	See Type	(UT)
0050	LEAR	13	0629	0629	0636	N05	W29	7399	01	11.1	7	SF		3	E		25			
0051	SVTO	13	0823E	0825U	0830	S17	W90	7394	01	6.5	7D	SF C	2.0	2	E		30			
0052	LEAR	13	0829E	0914U	0940	S09	W09	7400	01	12.7	71D	SF C	3.3	2	E		84			
0053	HTPR	13	1155		1206D	S10	W11	7400	01	12.7	11D	SF			C			HT		
0054		13	1212	1214	1240	S14	W32	7391	01	11.1	28	SN C	3.4				90	1.8	BF	
	SVTO	13	1212	1214	1240	S14	W30	7391	01	11.2	28	SF C	3.4	3	E		30		F	
	HTPR	13	1230E		1230D	S13	W35	7391	01	10.9	28D	SN			C	1230	150	1.8	B	
0055	SVTO	13	1251	1251	1303	S15	W30	7391	01	11.3	12	SF		3	E		13		F	
		13	2255		2320	No Flare Patrol														
		13	2322		2333	No Flare Patrol														
0056	PALE	14	0053	0055	0059	S15	W36	7391	01	11.3	6	SF		3	E		15			
0057	KANZ	14	0732	0740	0744D	S13	E69	7401	01	19.5	12D	SF		2	C					
		14	2132		2149	No Flare Patrol														
		14	2151		2154	No Flare Patrol														
		14	2309		2400	No Flare Patrol														
		15	0000		0008	No Flare Patrol														
		15	0059		0108	No Flare Patrol														
		15	0327		0337	No Flare Patrol														
		15	0342		0348	No Flare Patrol														
		15	0444		0455	No Flare Patrol														
		15	0500		0529	No Flare Patrol														
		15	0607		0614	No Flare Patrol														
0058	KANZ	15	1116	1116	1132	S14	W59	7391	01	11.0	16	SF		2	C					
0059	KANZ	15	1116	1124	1128	N11	E74	7403	01	21.0	12	SF		2	C					
0060	KANZ	15	1337	1337U	1337D	N12	W15	7404	01	14.4	12D	SF		2	C					
0061	HOLL	15	2035	2036	2047	N12	E68	7403	01	21.0	12	SF B	5.4	2	E		48			
		15	2321		2400	No Flare Patrol														
0062	PALE	15	2355	2355	2355D	N04	W67	7399	01	11.0	12D	SF		3	E		22			
		16	0000		0008	No Flare Patrol														
		16	0010		0115	No Flare Patrol														
0063		16	0049	0049	0056	N06	W66	7399	01	11.1	7	SF					23			
	PALE	16	0049	0049	0054	N06	W66	7399	01	11.1	5	SF		3	E		24			
	LEAR	16	0049	0049	0059	N06	W66	7399	01	11.1	10	SF		3	E		22			
0064	PALE	16	0101	0101	0107	N04	W68	7399	01	10.9	6	SF		3	E		14			
		16	0117		0130	No Flare Patrol														
0065		16	0126	0128	0138	N13	E68	7403	01	21.2	12	SF C	1.3				94			
	LEAR	16	0126	0128	0138	N12	E67	7403	01	21.1	12	SF C	1.3	3	E		90			
	PALE	16	0129E	0129U	0140D	N14	E69	7403	01	21.3	11D	SF		2	E		97			
		16	0134		0138	No Flare Patrol														
		16	0154		0407	No Flare Patrol														
		16	0409		0421	No Flare Patrol														
		16	0450		0456	No Flare Patrol														
		16	0526		0545	No Flare Patrol														
		16	0552		0612	No Flare Patrol														
0066	LEAR	16	0612	0619	0623	S09	W48	7400	01	12.6	11	SF B	7.5	3	E		51		F	
		16	0622		0632	No Flare Patrol														

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H α SOLAR FLARES

JANUARY 1993

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0067	LEAR	16	0718	0718	0723	S07	W47	7400	01	12.8	5	SF		3	E		60		F
0068		16	07477	07532	0810	S08	W50	7400	01	12.6	23	SF	C 3.0				55		EF
	KANZ	16	0747	0755	0815	S09	W49	7400	01	12.6	28	SF		2	C				
	LEAR	16	0748	0753	0817	S09	W50	7400	01	12.6	29	SF	C 3.0	3	E		63		F
	SVTO	16	0752E	0755U	0807	S06	W50	7400	01	12.6	15D	SF		3	E		47		F
	ISTA	16	0754		0802	S10	W50	7400	01	12.6	8	1F			P				E
0069		16	0919*	0931*	0950	S26	E41	7402	01	19.6	31	SF					30		FH
	KANZ	16	0919	0931	0951	S27	E40	7402	01	19.5	32	SF		2	C				
	LEAR	16	0931	0937	0942	S26	E41	7402	01	19.6	11	SF		3	E		31		F
	SVTO	16	0932	0942	0956	S26	E43	7402	01	19.7	24	SF		3	E		29		H
0070		16	09473	09519	1020	S09	W50	7400	01	12.6	33	1F	C 4.1				114	1.4	DF
	SVTO	16	0947	0957	1023	S09	W50	7400	01	12.6	36	1F	C 4.1	3	E		120		F
	KANZ	16	0947	0959	1019	S09	W50	7400	01	12.6	32	1F		2	C				
	LEAR	16	0948	1000	1017	S10	W52	7400	01	12.5	29	1F		3	E		136		
	BUCA	16	0950	0951	1004D	S09	W50	7400	01	12.6	14D	SN			C	0951	86	1.4	D
0071		16	10092	10114	1022	S26	E41	7402	01	19.6	13	SF					16		F
	SVTO	16	1009	1015	1023	S26	E43	7402	01	19.8	14	SF		3	E		17		
	LEAR	16	1011	1011	1015	S26	E40	7402	01	19.5	4	SF		3	E		15		F
	KANZ	16	1011	1011	1027	S27	E40	7402	01	19.5	16	SF		2	C				
		16	1413		1422	No Flare Patrol													
0072	RAMY	16	1552	1552	1556	S09	W53	7400	01	12.7	4	SF	C 1.3	3	E		12		F
0073	HOLL	16	1643E	1644U	1651	N12	E58	7403	01	21.1	8D	SF	B 9.0	3	E		65		
0074	HOLL	16	1929	1937	2010	S12	E44	7401	01	20.1	41	SF	B 9.4	3	E		25		F
		16	2319		2334	No Flare Patrol													
		16	2343		2400	No Flare Patrol													
0075	LEAR	16	2344	2346	2355	S11	W59	7400	01	12.6	11	SF		3	E		45		
		17	0000		0001	No Flare Patrol													
0076		17	00283	00302	0037	S09	W58	7400	01	12.7	9	SN	C 1.1				27	0.6	DEF
	MITK	17	0028	0030	0031	S08	W57	7400	01	12.7	3	SN			E	0030	33	0.6	D
	LEAR	17	0028	0032	0046	S10	W59	7400	01	12.6	18	SF	C 1.1	3	E		22		F
	MITK	17	0031	0032	0034	S08	W57	7400	01	12.7	3	SN			E	0032	26	0.5	E
0077	LEAR	17	0055	0055	0105	S07	W57	7400	01	12.8	10	SF	C 1.0	3	E		22		
0078	MITK	17	0118	0119	0119	S09	W58	7400	01	12.7	1	SN			E	0119	33	0.6	E
0079	LEAR	17	0136	0137	0142	N11	W42	7404	01	13.9	6	SF		3	E		10		
0080		17	02122	0217	0224	S10	W60	7400	01	12.6	12	1N	C 1.0				118	2.9	DF
	LEAR	17	0212	0217	0228	S11	W61	7400	01	12.5	16	SF	C 1.0	3	E		85		F
	MITK	17	0214	0217	0221	S08	W58	7400	01	12.7	7	1B			E	0217	150	2.9	D
0081		17	04475	0455	0514	S27	E30	7402	01	19.5	27	SN	B 8.5				64	0.7	EF
	LEAR	17	0447	0455	0525	S27	E30	7402	01	19.5	38	SF	B 8.5	3	E		75		F
	MITK	17	0452	0455	0503	S27	E30	7402	01	19.5	11	SN			E	0455	53	0.7	E
0082		17	09457	0953	1004	S26	E27	7402	01	19.5	19	SF	C 1.3				26		
	KANZ	17	0945	0953	1005	S27	E28	7402	01	19.6	20	SF		2	C				
	LEAR	17	0952	0953	1003	S26	E26	7402	01	19.4	11	SF	C 1.3	3	E		26		
0083	KANZ	17	1221	1221	1225	S13	E30	7401	01	19.8	4	SF		2	C				
0084		17	14312	1432	1441	S08	W64	7400	01	12.8	10	SF	C 5.0				29		F
	RAMY	17	1431	1432	1441	S09	W65	7400	01	12.7	10	SF	C 5.0	3	E		29		F
	KANZ	17	1433	1433U	1441D	S08	W63	7400	01	12.9	8D	SF		2	C				
0085	KANZ	17	1433	1433U	1441D	N13	W47	7404	01	14.1	8D	SF		2	C				

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Grp #	Sta	Start Day	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																Apparent (10-6 Disk)	Corr (Sq Deg)	
		17 1642		1703	No Flare Patrol													
0086	RAMY	17 1720	1720	1723	S09 W66	7400	01	12.8	3	SF C	1.1	3	E		22			
		17 1848		1954	No Flare Patrol													
		17 2009		2124	No Flare Patrol													
		17 2126		2152	No Flare Patrol													
		17 2154		2156	No Flare Patrol													
		17 2318		2400	No Flare Patrol													
		18 0000		0003	No Flare Patrol													
		18 0020		0051	No Flare Patrol													
		18 0121		0132	No Flare Patrol													
		18 0138		0143	No Flare Patrol													
0087	LEAR	18 0212	0214	0238	S27 E19	7402	01	19.6	26	SF B	4.8	3	E		38			
		18 0302		0310	No Flare Patrol													
		18 0321		0458	No Flare Patrol													
		18 0510		0550	No Flare Patrol													
0088	LEAR	18 0539	0541	0545	S12 E22	7401	01	19.9	6	SF B	5.9	3	E		30		F	
0089	LEAR	18 0721	0721	0729	S13 E18	7401	01	19.7	8	SF B	6.4	3	E		27		F	
0090	KANZ	18 1304	1304	1308	S11 E84	7406	01	24.9	4	SF		2	C					
		18 1807		1820	No Flare Patrol													
		18 2334		2339	No Flare Patrol													
		18 2341		2400	No Flare Patrol													
		19 0619		0631	No Flare Patrol													
		19 0633		0719	No Flare Patrol													
0091	HOLL	19 1716	1717	1736	S25 W04	7402	01	19.4	20	SF		3	E		21		F	
		19 2327		2335	No Flare Patrol													
0092	MITK	20 0215	0215	0219	S13 E64	7406	01	24.9	4	SB			E	0215	84	2.0	D	
		20 0541		0603	No Flare Patrol													
0093		20 13102	13111	1332	S12 E59	7406	01	25.0	22	SN					80	1.6		
	HTPR	20 1310	1311	1335	S12 E60	7406	01	25.1	25	SN			C	1311	80	1.6		
	KANZ	20 1312	1312	1328	S12 E58	7406	01	24.9	16	SN		2	C					
0094	HTPR	20 1516	1519	1540	S27 W15	7402	01	19.5	24	SF			C	1519	30	0.3	E	
0095	HTPR	20 1524	1536	1550D	S12 E60	7406	01	25.2	26D	SN			C	1536	40	0.8	E	
		20 1552		1608	No Flare Patrol													
		20 1956		2001	No Flare Patrol													
		20 2258		2316	No Flare Patrol													
0096	LEAR	20 2332	2332	2350	N16 E06	7403	01	21.4	18	SF B	3.4	3	E		21		F	
		20 2336		2349	No Flare Patrol													
0097	LEAR	21 0115	0139	0142	S14 W21	7401	01	19.5	27	SF B	2.0	3	E		24		F	
0098	HTPR	21 1433	1438	1455	S13 W27	7401	01	19.6	22	SF			C	1438	80	0.9	H	
		21 2316		2322	No Flare Patrol													
		21 2324		2341	No Flare Patrol													
		22 2003		2015	No Flare Patrol													
		22 2017		2104	No Flare Patrol													
		22 2343		2352	No Flare Patrol													
		23 0000		0015	No Flare Patrol													
		23 0017		0029	No Flare Patrol													
		23 0301		0348	No Flare Patrol													
		23 0414		0459	No Flare Patrol													

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks		
						Lat	CMD	Region									Apparent (10-6 Disk)	Corr (Sq Deg)			
0099	KANZ	23	1220	1220	1224	S12	W52	7401	01	19.6	4	SF		2	C						
0100		23	12315	12382	1248	N17	W29	7403	01	21.3	17	SF B 2.3				1238	20	0.3	FH		
	HTPR	23	1231	1238	1247	N17	W30	7403	01	21.2	16	SF		C			20	0.3			
	SVTO	23	1233	1239	1248	N16	W30	7403	01	21.2	15	SF B 2.3	3	E			19		FH		
	KANZ	23	1236	1240	1248	N17	W28	7403	01	21.4	12	SF		C							
		23	1501		1503	No Flare Patrol															
		23	2332		2400	No Flare Patrol															
		24	0000		0011	No Flare Patrol															
		24	0055		0108	No Flare Patrol															
		24	0401		0412	No Flare Patrol															
		24	0414		0627	No Flare Patrol															
0101	LEAR	24	0515	0517	0521	N14	W40	7403	01	21.2	6	SF B 4.0	3	E			32				
0102	ISTA	24	0828		0929	S05	E44	7407	01	27.6	61	1F		P					F		
		24	1531		1554	No Flare Patrol															
		24	1556		1605	No Flare Patrol															
		24	1616		1630	No Flare Patrol															
0103		24	17131	17132	1734	N16	W42	7403	01	21.5	21	SF B 2.5					18		FH		
	HOLL	24	1713	1713	1730	N17	W42	7403	01	21.5	17	SF	3	E			25		F		
	RAMY	24	1714	1715	1737	N16	W43	7403	01	21.4	23	SF B 2.5	3	E			11		FH		
		24	1827		1838	No Flare Patrol															
0104	RAMY	24	2026	2028	2035	N09	W61	7408	01	20.3	9	SF		3	E		22				
0105		24	21061	2114*	2236	N10	W62	7408	01	20.2	90	SF					44		FS		
	RAMY	24	2106	2114	2155D	N09	W62	7408	01	20.2	49D	SF	3	E			12				
	HOLL	24	2107	2204	2236	N11	W62	7408	01	20.2	89	SF	3	E			77		FS		
		24	2305		2400	No Flare Patrol															
		25	0000		0011	No Flare Patrol															
0106	VORO	25	0033	0034	0038	N13	W55	7403	01	20.9	5	1N		1	C	0034	99	2.2	DIJ		
0107	PALE	25	0121	0123	0129	N08	W64	7408	01	20.2	8	SF B 4.1	3	E			21				
0108	KANZ	25	0744E	0744U	0752	N09	W68	7408	01	20.2	8D	SF		2	C						
0109	SVTO	25	1105	1131	1145	N08	W71	7408	01	20.1	40	SF		3	E		12		FH		
0110	SVTO	25	1221	1228	1236	N08	W72	7408	01	20.1	15	SF		3	E		10		F		
		25	1431		1455	No Flare Patrol															
		25	2316		2327	No Flare Patrol															
		25	2336		2400	No Flare Patrol															
		26	0000		0017	No Flare Patrol															
		26	0019		0032	No Flare Patrol															
		26	0034		0243	No Flare Patrol															
		26	0352		0353	No Flare Patrol															
		26	0405		0406	No Flare Patrol															
		26	0415		0429	No Flare Patrol															
		26	0612		0626	No Flare Patrol															
		26	2301		2354	No Flare Patrol															
		26	2356		2400	No Flare Patrol															
		27	0110		0112	No Flare Patrol															
		27	0123		0131	No Flare Patrol															
		27	0302		0306	No Flare Patrol															
		27	0404		0414	No Flare Patrol															
		27	0416		0506	No Flare Patrol															
	0111	HTPR	27	0832E	0922	1045	S13	W17	7411	01	26.1	133D	1F		C	0922	250	2.6	FT		
			27	0904		0919	No Flare Patrol														
		27	0923		0939	No Flare Patrol															

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																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0112	HTPR	27	1254	1350	1356	N13	E78	7413	02	2.4	62	SF			C	1350			G
		27	2042		2046			No Flare Patrol											
		27	2105		2111			No Flare Patrol											
		27	2134		2159			No Flare Patrol											
		27	2201		2203			No Flare Patrol											
		27	2205		2335			No Flare Patrol											
		27	2354		2400			No Flare Patrol											
		28	0000		0019			No Flare Patrol											
		28	0021		0141			No Flare Patrol											
0113		28	13171	13172	1323	S13	W32	7411	01	26.1	6	SN B 5.9					84	1.8	EFKT
	SVTO	28	1317	1317	1323	S13	W32	7411	01	26.1	6	SF B 5.9	3	E			18		F
	HTPR	28	1318	1319	14430	S13	W33	7411	01	26.1	850	SN		C		1319	150	1.8	EKT
0114	HTPR	28	1353	1359	1410	S20	W64	7403C	01	23.7	17	SF			C	1359	30	0.7	DK
0115		29	1001	0939*	1051	S12	W47	7411	01	25.9	50	SF					80	1.2	EK
	HTPR	29	0939E	0939	11020	S12	W46	7411	01	25.9	830	SF		C		0939	60	0.8	K
	HTPR	29	1001	1033	1051	S12	W49	7411	01	25.7	50	SN		C		1033	100	1.5	E
	KANZ	29	1020E	1033	10410	S13	W47	7411	01	25.9	210	SF		2	C				
0116	HOLL	29	2054	2105	2136	S13	W55	7411	01	25.7	42	SF B 7.9	3	E			88		F
0117		30	01161	0118	0126	S11	W52	7411	01	26.1	10	1F B 8.1					63	2.1	DIJ
	VORO	30	0116	0118	0130	S10	W55	7411	01	25.9	14	1F		1	C	0118	116	2.1	DIJ
	LEAR	30	0117	0118	0122	S12	W50	7411	01	26.3	5	SF B 8.1	3	E			10		
0118	PALE	30	0216	0216	0219	S17	E51	7412	02	3.0	3	SF B 4.9	3	E			12		
0119	RAMY	30	1352	1353	1358	S10	W60	7411	01	26.1	6	SF B 6.0	3	E			24		E
		30	1605		1606			No Flare Patrol											
0120	KHAR	31	0947	0953U	1000	S13	E90	7416	02	7.2	13	SN		2	P	0953			H
0121		31	0957	0957	1006	S22	E48		02	4.1	9	SF							H
	KHAR	31	0957		1003	S23	E48		02	4.1	6	SF		2	P	0957			H
	KANZ	31	0957	0957	1009	S22	E47		02	4.0	12	SF		2	C				
		31	2334		2400			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.

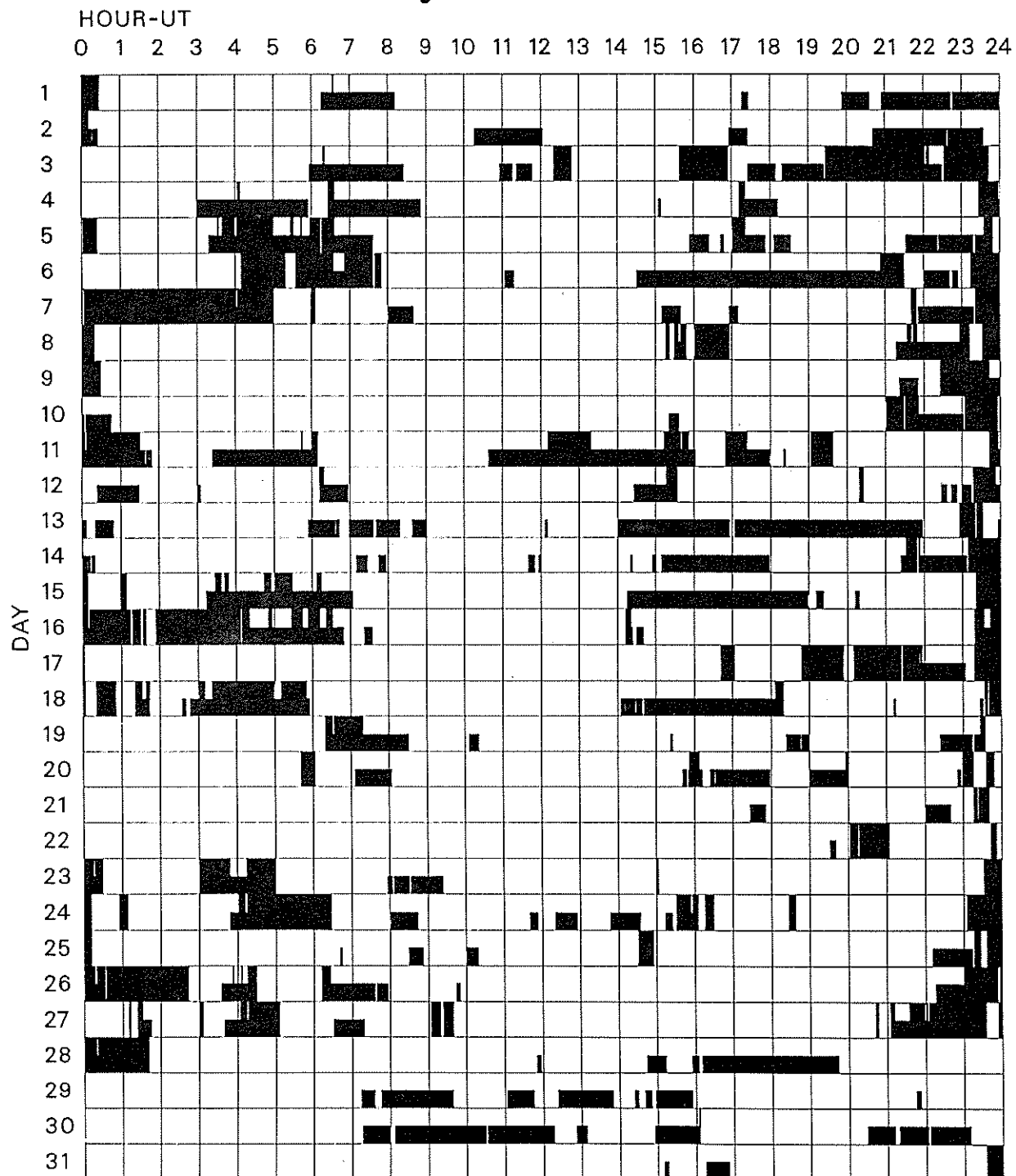
O = Observations have been made in the H and K lines of Ca II.
 P = Flare shows Helium D3 in emission.
 Q = Flare shows Balmer continuum in emission.
 R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
 S = Brightness follows disappearance of filament in same position.
 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

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Jan 93

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

JANUARY 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
Bucharest
Haute Provence

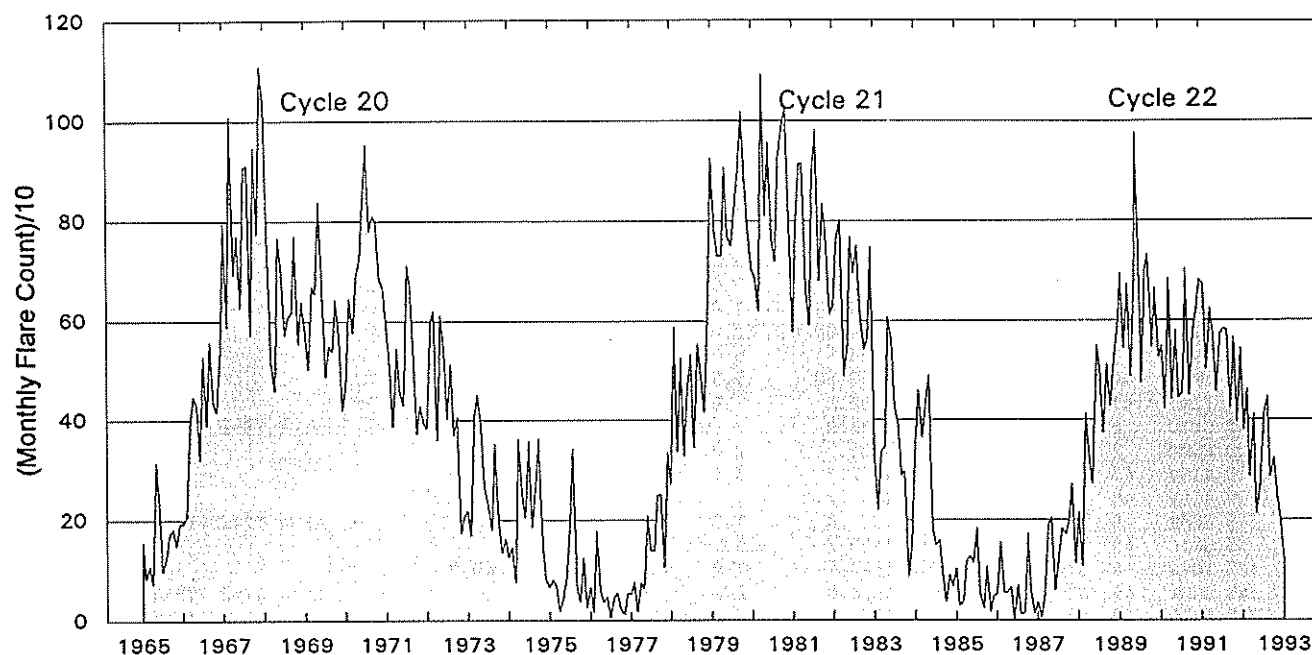
Holloman
Istanbul
Kanzelhoehe

Kharkov
Learmonth
Mitaka
Ondrejov

Palehau
Ramey
San Vito
Tashkent

Urumqi
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												121

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.

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Jan 93

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

Outstanding Occurrences

JANUARY 1993

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
01	204	IZMI	41 F	0943.5	0944.5	1.5	15.0			
	245	SVTO	49 GB	1150.0	1151.0	5.0	1600.0			QL=4 ST=2 TYP=6
	260	ONDR	48 C	1150.0		5.0		U		
	204	IZMI	41 F	1150.5	1152.0	5.0	1800.0			
	410	SVTO	8 S	1151.0	1151.0	1.0	83.0			QL=4 ST=2 TYP=3
	127	TORN	46 C	1151.0	1152.0U	12.0	140.0	30.0		
	536	ONDR	45 C	1151.0	1153.5	5.0	60.0			
	33	UPIC	48 C	1151.5	1152.5U	5.5				
	3013	IZMI	41 F	1151.5	1152.8	7.0	14.0			
	2695	SVTO	8 S	1152.0	1152.0		33.0			QL=2 ST=2 TYP=3
	600	HUMN	2 S/F	1152.0	1153.5	2.0	5.0	2.0		
	9300	KISV	45 C	1154.0	1155.2	3.3	9.0			
	9300	KISV	45 C	1154.0	1154.7		7.0			
	245	SGMR	8 S	1320.0	1321.0	1.0	72.0			QL=4 ST=2 TYP=3
	33	UPIC	45 C	1320.6	1320.7	0.5				
	127	TORN	4 S/F	1320.8	1321.5	1.0	70.0	40.0		
	245	SGMR	49 GB	1337.0	1338.0	2.0	950.0			QL=4 ST=2 TYP=6
	245	SVTO	49 GB	1337.0	1338.0	2.0	930.0			QL=4 ST=2 TYP=6
	127	TORN	41 F	1338.2	1342.0	14.0	15.0	3.0		
	127	TORN	4 S/F	1338.2	1338.6	1.5	150.0	80.0		
	127	TORN	47 GB	1443.8	1445.6	2.6	550.0	290.0		
	245	SGMR	8 S	1528.0	1528.0		52.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1538.0	1540.0	2.0	78.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	1836.0	1836.0		74.0			QL=4 ST=2 TYP=3
245	SGMR	8 S	1836.0	1836.0		83.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	1842.0	1843.0	1.0	120.0			QL=4 ST=2 TYP=3	
245	SGMR	8 S	1842.0	1843.0	1.0	130.0			QL=4 ST=2 TYP=3	
02	200	HIRA	46 C	0533.4	0533.5	4.0	450.0	100.0		0
	245	LEAR	8 S	0534.0	0534.0		62.0			QL=4 ST=2 TYP=3
	100	HIRA	46 C	0538.6	0538.8	6.0	540.0	300.0		WL
	9100	GORK	20 GRF	0700.0U	0737.3	168.0D	12.0			
	100	HIRA	46 C	2339.0	2341.0	6.0	60.0	15.0		0
	200	HIRA	46 C	2340.2	2341.3	2.0	50.0	15.0		0
03	2950	GORK	2 S/F	0920.0	0921.7	3.6	4.0			
	260	ONDR	8 S	1123.0	1123.5	0.5	68.0			
	33	UPIC	46 C	1256.9	1257.8	2.1				
	127	TORN	42 SER	1257.2	1257.6	8.0	110.0	10.0		
04	260	ONDR	44 NS	1000.0E	1156.0	120.0D	49.0			
05	127	TORN	43 NS	0720.0		230.0D		10.0		V=1
	204	IZMI	43 NS	0755.0		240.0D		10.0		
	260	ONDR	44 NS	1000.0E	1122.5	120.0D	50.0			
	245	LEAR	8 S	0657.0	0657.0		56.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0657.0	0657.0		93.0			QL=4 ST=2 TYP=3
	204	IZMI	5 S	0703.5	0703.6	0.6	70.0	35.0		
	204	IZMI	42 SER	0719.0	0725.3	11.0	1300.0			
	204	IZMI	42 SER	0942.0	0944.5	11.0	80.0			
	204	IZMI	41 F	1028.0	1029.5	3.0	60.0			
245	SGMR	8 S	1505.0	1505.0	1.0	120.0			QL=4 ST=2 TYP=3	
06	245	LEAR	43 NS	0502.0	0537.0	302.0	110.0			QL=4 ST=2 TYP=1
	260	ONDR	44 NS	0930.0E	0951.5	150.0D	506.0			
	204	IZMI	41 F	0810.0	0810.2	2.0	37.0			
	536	ONDR	40 F	0930.0E	1000.5	170.0D	160.0			
	808	ONDR	46 C	0945.5	0948.5	26.0	110.0			
07	200	HIRA	43 NS	0130.0	0352.0	240.0D	120.0	25.0		ML
	204	IZMI	44 NS	0700.0E		85.0D		10.0		
	33	UPIC	43 NS	0852.0		329.0				
	127	TORN	44 NS	0940.0E		280.0D		190.0		V=0
	260	ONDR	44 NS	1000.0E	1130.5	120.0D	69.0			
	245	SVTO	43 NS	1013.0	1127.0U	300.0	320.0			QL=4 ST=2 TYP=1
	410	SVTO	43 NS	1125.0	1339.0U	228.0	190.0			QL=4 ST=2 TYP=1
	245	SGMR	43 NS	1237.0	1313.0	389.0	390.0			QL=4 ST=2 TYP=1
	410	SGMR	43 NS	1246.0	1325.0	129.0	170.0			QL=4 ST=2 TYP=1
	610	SGMR	43 NS	1304.0	1309.0	108.0	79.0			QL=4 ST=2 TYP=1

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

Outstanding Occurrences

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Jan 93

JANUARY 1993

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean (2 Hz)		
07	245 PALE	43 NS	1756.0	1757.0	174.0	79.0			QL=4 ST=2 TYP=1
	100 HIRA	46 C	0203.0	0204.8	6.6	110.0	40.0		WL
	245 PALE	8 S	0204.0	0205.0	1.0	51.0			QL=4 ST=2 TYP=3
	200 HIRA	46 C	0204.6	0205.0	2.0	240.0	50.0		WL
	204 IZMI	41 F	0708.0	0709.0	2.0	200.0			
	204 IZMI	42 SER	0743.5	0744.5	20.0	75.0			
	600 HUMN	47 GB	0820.0	0854.5	118.0	553.0	35.0		
	204 IZMI	25 R	0821.0	0910.0	159.00	180.0			
	245 LEAR	4 S/F	0824.0	0828.0	4.0	190.0			QL=4 ST=2 TYP=3
	410 LEAR	8 S	0828.0	0828.0	U	180.0			QL=4 ST=2 TYP=3
	410 SVTO	8 S	0828.0	0828.0	U	180.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	0828.0	0828.0	U	250.0			QL=4 ST=2 TYP=3
	610 LEAR	4 S/F	0830.0	0835.0	9.0	65.0			QL=4 ST=2 TYP=5
	410 SVTO	8 S	0830.0	0831.0	1.0	25.0			QL=4 ST=2 TYP=3
	610 SVTO	4 S/F	0830.0	0835.0	9.0	84.0			QL=4 ST=2 TYP=5
	245 LEAR	4 S/F	0830.0	0831.0	14.0	77.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	0831.0	0831.0	U	100.0			QL=4 ST=2 TYP=3
	410 LEAR	4 S/F	0835.0	0836.0	4.0	33.0			QL=4 ST=2 TYP=3
	245 LEAR	49 GB	0844.0	0953.0	89.0	510.0			QL=4 ST=2 TYP=7
	410 LEAR	49 GB	0845.0	0948.0	72.0	1500.0			QL=4 ST=2 TYP=7
	610 LEAR	49 GB	0846.0	0854.0	66.0	2100.0			QL=4 ST=2 TYP=7
	1415 LEAR	8 S	0848.0	0848.0	U	35.0			QL=4 ST=2 TYP=3
	610 SVTO	49 GB	0849.0	0854.0	63.0	3000.0			QL=4 ST=2 TYP=6
	410 SVTO	4 S/F	0852.0	0858.0	65.0	280.0			QL=4 ST=2 TYP=3
	245 SVTO	4 S/F	0852.0	0852.0	81.0	150.0			QL=4 ST=2 TYP=3
	1415 SVTO	4 S/F	0852.0	0857.0	1436.0	260.0			QL=4 ST=2 TYP=3
	3013 IZMI	7 C	0915.5	0917.0	6.5	12.0	6.0		
	2850 CRIM	1 S	0916.2	0917.0	2.0	4.5	1.0		
	9300 KISV	2 S/F	0916.4	0917.4	4.1	4.0			
	204 IZMI	41 F	0940.0	0940.8	2.0	1000.0			
	204 IZMI	45 C	0949.5	0950.6	4.5	250.0			
	204 IZMI	41 F	1036.0	1036.5	2.5	670.0			
	600 HUMN	27 RF	1053.5	1117.0	82.0	11.0	5.0		
	204 IZMI	41 F	1100.5	1103.0	3.0	550.0			
	600 HUMN	27 RF	1240.0	1309.0	81.0	32.0	13.0		
08	200 HIRA	44 NS	0000.0E	0224.0	300.00	40.0	25.0		SL
	245 SVTO	43 NS	0635.0	0642.0	60.0	180.0			QL=4 ST=2 TYP=1
	127 TORN	44 NS	0700.0E		450.00		7.0		V=1
	260 ONDR	40 F	1000.00	1019.0	120.00	340.0			
	536 ONDR	2 S/F	1017.0	1017.5	0.5	190.0			
	204 IZMI	42 SER	1018.0	1019.0	9.0	800.0			
	245 LEAR	8 S	1018.0	1018.0	1.0	380.0			QL=4 ST=2 TYP=3
	410 LEAR	8 S	1018.0	1018.0	1.0	97.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	1018.0	1018.0	1.0	460.0			QL=4 ST=2 TYP=3
	410 SVTO	8 S	1018.0	1019.0	1.0	52.0			QL=4 ST=2 TYP=3
	2950 GORK	1 S	1018.0	1018.8	1.6	3.0			
	127 TORN	4 S/F	1018.2	1019.0U	1.8	160.0	80.0		
	33 UPIC	8 S	1019.0	1019.2	0.4				
	204 IZMI	7 C	1151.1	1151.8	1.0	155.0			
	127 TORN	8 S	1152.1	1152.6	1.0	120.0	60.0		
	245 SGMR	8 S	1436.0	1436.0	U	98.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	1436.0	1436.0	U	85.0			QL=4 ST=3 TYP=3
09	127 TORN	44 NS	0700.0E		280.00		5.0		V=0, DISTURBED
	204 IZMI	41 F	0838.0	0839.5	2.0	220.0			
	260 ONDR	8 S	1127.5	1127.8	0.3	33.0			
10	260 ONDR	8 S	1127.0	1127.5	0.5	30.0			
	8800 SGMR	20 GRF	1339.0	1347.0	621.0	29.0			QL=2 ST=1 TYP=2
	15400 SGMR	20 GRF	1342.0	1359.0	618.0	44.0			QL=2 ST=1 TYP=2
11	245 SGMR	8 S	1713.0	1713.0	U	90.0			QL=4 ST=2 TYP=3
12	2950 GORK	1 S	0710.9	0712.0	2.9	4.0			
	9300 KISV	22 GRF	0846.4	0911.3	64.1	12.0			
	127 TORN	42 SER	0951.0	0955.4	8.0	60.0			
	260 ONDR	45 C	1007.5	1032.0	39.5	40.0			
	9300 KISV	22 GRF	1024.4	1047.0	81.7	12.0			

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Jan 93

SOLAR RADIO EMISSION

Outstanding Occurrences

JANUARY 1993

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Mean	Int	Remarks
12	600 HUMN	41 F	1431.5	1432.8	3.5	30.0			
13	[204 IZMI	44 NS	0700.0E		300.0D		5.0		
	127 TORN	43 NS	1102.0		168.0D		3.0		V=1
	200 HIRA	44 NS	2300.0E	0543.0	510.0D	50.0	20.0		0
	245 SVTO	8 S	0845.0	0845.0	1.0	45.0			QL=4 ST=2 TYP=3
	260 ONDR	40 F	1000.0E	1010.5	120.0D	55.0			
14	[204 IZMI	43 NS	0700.0		300.0		5.0		
	127 TORN	44 NS	0810.0E		350.0D		2.0		V=1
	2950 GORK	2 S/F	0645.7	0647.7	2.3	4.0			
	410 SVTO	8 S	0930.0	0930.0	U	45.0			QL=4 ST=2 TYP=3
	260 ONDR	40 F	1000.0E	1120.5	120.0D	40.0			
	127 TORN	46 C	1244.0	1247.3	8.0	130.0	10.0		
	[245 SGMR	8 S	1357.0	1357.0	U	70.0			QL=4 ST=2 TYP=3
	245 SVTO	4 S/F	1357.0	1357.0	3.0	89.0			QL=4 ST=2 TYP=3
	9500 CUBA	21 GRF	1413.0	1931.0	421.0	23.0	11.0		
	9500 CUBA	40 F	1814.0	1815.0	3.0	13.0	6.0		
	9500 CUBA	1 S	2050.7	2051.1	0.9	9.0	4.0		
15	204 IZMI	43 NS	0700.0		300.0		5.0		
	245 LEAR	8 S	0602.0	0603.0	1.0	72.0			QL=4 ST=2 TYP=3
	204 IZMI	7 C	0823.6	0824.1	0.5	18.0			
	245 LEAR	8 S	0923.0	0923.0	2.0	190.0			QL=4 ST=2 TYP=3
	[245 SVTO	8 S	0923.0	0923.0	1.0	270.0			QL=4 ST=2 TYP=3
	204 IZMI	45 C	0923.0	0923.5	6.5	340.0			
	127 TORN	47 GB	0924.0	0926.0U	3.0	360.0D	50.0D		
	650 GORK	1 S	0924.6	0925.1	1.8	3.0			
	2950 GORK	1 S	0924.6	0925.1	1.8	3.0			
	[33 UPIC	2 S/F	0925.5	0925.7	1.0				
	127 TORN	4 S/F	0928.2	0929.1	3.4	130.0	40.0		
	260 ONDR	40 F	1000.0E	1114.0	120.0D	49.0			
	[204 IZMI	42 SER	1029.0	1115.0	80.0	60.0			
	245 PALE	8 S	2034.0	2034.0	U	190.0			QL=4 ST=2 TYP=3
	[245 SGMR	8 S	2034.0	2034.0	U	170.0			QL=4 ST=2 TYP=3
16	200 HIRA	43 NS	0007.0	0127.0	113.0	100.0	20.0		WL
	204 IZMI	41 F	0655.5	0656.0	0.7	19.0			
	[9100 GORK	20 GRF	0745.0U	0753.7	48.7D	14.0			
	204 IZMI	42 SER	0752.0	0754.0	4.5	6.5			
	9100 GORK	20 GRF	0948.2	0957.3	41.8	12.0			
	204 IZMI	42 SER	1001.0	1001.8	14.0	4.3			
	204 IZMI	42 SER	1027.0	1042.0	15.0	70.0			
	33 UPIC	2 S/F	1027.9	1028.1	0.5				
	[204 IZMI	7 C	1153.5	1153.7	1.0	74.0			
	127 TORN	5 S	1154.0	1154.5	1.8	450.0	230.0		
	33 UPIC	46 C	1154.2	1154.8	1.5				
	[127 TORN	46 C	1248.2	1252.1	5.5	90.0	5.0		
	33 UPIC	2 S/F	1251.4	1251.6	0.5				
	[127 TORN	4 S/F	1403.8	1404.9	2.0	810.0	280.0		
	33 UPIC	45 C	1404.1	1404.9	1.4				
	[245 SVTO	8 S	1452.0	1453.0	2.0	100.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1453.0	1453.0	U	100.0			QL=4 ST=2 TYP=3
	410 SGMR	8 S	1642.0	1643.0	1.0	53.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1748.0	1748.0	U	53.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1904.0	1904.0	U	100.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1924.0	1926.0	2.0	99.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	2025.0	2026.0	1.0	62.0			QL=4 ST=2 TYP=3
	245 SGMR	49 GB	2033.0	2033.0	1.0	1000.0			QL=4 ST=3 TYP=6
17	200 HIRA	44 NS	0000.0E	0350.0	300.0D	120.0	20.0		WR
	[260 ONDR	44 NS	1000.0E	1155.0	120.0D	80.0			
	127 TORN	43 NS	1150.0		110.0		2.0		V=2
	245 LEAR	4 S/F	0043.0	0045.0	5.0	92.0			QL=4 ST=2 TYP=3
	[245 LEAR	8 S	0105.0	0105.0	U	130.0			QL=4 ST=2 TYP=3
	245 PALE	8 S	0105.0	0105.0	1.0	120.0			QL=4 ST=2 TYP=3
	[245 LEAR	8 S	0724.0	0724.0	1.0	91.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	0724.0	0724.0	1.0	110.0			QL=2 ST=2 TYP=3
	245 SVTO	8 S	0755.0	0755.0	1.0	61.0			QL=2 ST=2 TYP=3

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

Outstanding Occurrences

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Jan 93

JANUARY 1993

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
17	204 IZMI	42 SER	0800.5	0802.0	6.0	123.0			
	204 IZMI	42 SER	1029.5	1035.3	24.5	60.0			
	245 LEAR	8 S	1037.0	1037.0	1.0	81.0			QL=4 ST=2 TYP=3
18	127 TORN	43 NS	0752.0		408.0		4.0		V=0
	204 IZMI	43 NS	0956.0		124.0		10.0		
	9100 GORK	7 C	0707.1	0708.3		6.0			
	9100 GORK	7 C	0707.1	0707.4	1.7	4.0			
	260 ONDR	41 F	1000.0	1111.0	120.0	78.0			
	245 SVTO	8 S	1145.0	1145.0	1.0	65.0			QL=2 ST=2 TYP=3
	9500 CUBA	3 S	1656.2	1656.5	2.3	64.0	32.0		
	245 SGMR	8 S	1722.0	1722.0	U	120.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1751.0	1751.0	U	66.0			QL=4 ST=3 TYP=3
	245 SGMR	8 S	1754.0	1754.0	1.0	59.0			QL=4 ST=2 TYP=3
19	204 IZMI	43 NS	0748.0		146.0		25.0		
	245 LEAR	43 NS	0902.0	0917.0	86.0	92.0			QL=4 ST=2 TYP=1
	204 IZMI	42 SER	0726.5	0729.9	8.0	35.0			
	245 LEAR	8 S	0822.0	0822.0	1.0	72.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	0822.0	0822.0	1.0	110.0			QL=2 ST=3 TYP=3
	245 LEAR	4 S/F	0852.0	0853.0	3.0	64.0			QL=4 ST=2 TYP=3
	260 ONDR	42 SER	1000.0	1128.5	105.0	100.0			
	204 IZMI	42 SER	1126.5	1128.0	23.0	53.0			
20	245 LEAR	8 S	0339.0	0340.0	1.0	77.0			QL=4 ST=2 TYP=3
	204 IZMI	7 C	0708.7	0708.9	0.7	26.0			
	260 ONDR	42 SER	1000.0	1016.0	120.0	130.0			
	204 IZMI	42 SER	1010.5	1014.5	20.0	37.0			
	245 LEAR	8 S	1013.0	1014.0	2.0	38.0			QL=4 ST=2 TYP=3
	410 LEAR	8 S	1014.0	1014.0	U	65.0			QL=4 ST=2 TYP=3
	610 LEAR	8 S	1014.0	1014.0	U	32.0			QL=4 ST=2 TYP=3
	2950 GORK	2 S/F	1142.8	1143.0	0.5	10.0			
	2850 CRIM	4 S/F	1310.5	1311.1	16.7	5.2	1.0		
21	2950 GORK	1 S	0827.4	0827.9	0.8	3.0			
	950 GORK	22 GRF	1021.0	1051.5	95.4	30.0			
22	204 IZMI	8 S	0817.5	0817.6	0.5	60.0			
	127 TORN	45 C	1451.0	1451.4	3.0	60.00	20.00		
23	204 IZMI	44 NS	0700.0E		300.00		5.0		
	200 HIRA	27 RF	0320.0	0350.0	53.0	20.0	12.0		WL
24	127 TORN	45 C	1347.8	1348.2	4.0	15.0	3.0		
25	245 SGMR	8 S	1933.0	1933.0	U	67.0			QL=4 ST=2 TYP=3
26	9100 GORK	3 S	0926.5	0926.7	0.4	36.0			
	260 ONDR	45 C	1100.5	1107.0	6.5	80.0			
	950 GORK	4 S/F	1144.8	1145.1	0.5	66.0			
	2950 GORK	2 S/F	1145.0	1145.1	0.2	11.0			
	9500 CUBA	2 S/F	1614.3	1614.7	1.5	13.0	6.0		
	9500 CUBA	20 GRF	1934.0	2123.0	116.00	11.0			2130 OFF
27	245 LEAR	4 S/F	0443.0	0443.0	7.0	490.0			QL=4 ST=2 TYP=3
	200 HIRA	8 S	0443.2	0443.4	0.7	750.0			0
28	9100 GORK	4 S/F	1021.9	1022.2	1.3	10.8			
	2950 GORK	2 S/F	1112.7	1113.3	3.3	8.0			
	9500 CUBA	1 S	1430.5	1430.6	0.3	10.0	5.0		
29	9100 GORK	20 GRF	0619.9	0751.6	340.10	10.3			
	3013 IZMI	1 S	0924.0	0925.0	2.0	3.0	2.0		
	9500 CUBA	1 S	2054.2	2054.4	0.7	8.0	4.0		
30	127 TORN	43 NS	1250.0		110.0		1.0		V=0
	9100 GORK	20 GRF	1030.0	1050.8	90.00	10.2			
31	127 TORN	43 NS	1420.0	1427.8	40.00	40.0	3.0		V=1

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Jan 93

SOLAR RADIO EMISSION Outstanding Occurrences

JANUARY 1993

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
31	9100 GORK	20 GRF	0642.0	1133.0	318.00	8.9			
	204 IZMI	41 F	0713.6	0713.6	1.2	62.0			
	260 ONDR	45 C	1012.0	1013.5	3.5	160.0			

Reports are received routinely from the following observatories:

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

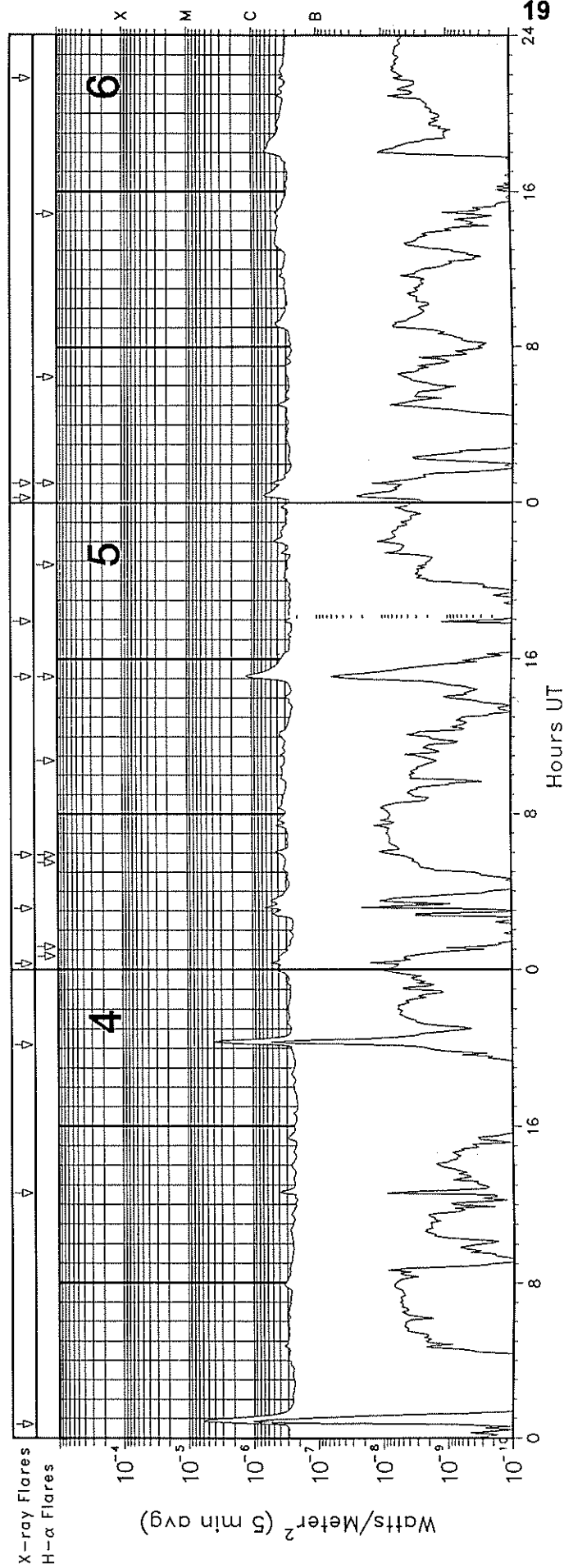
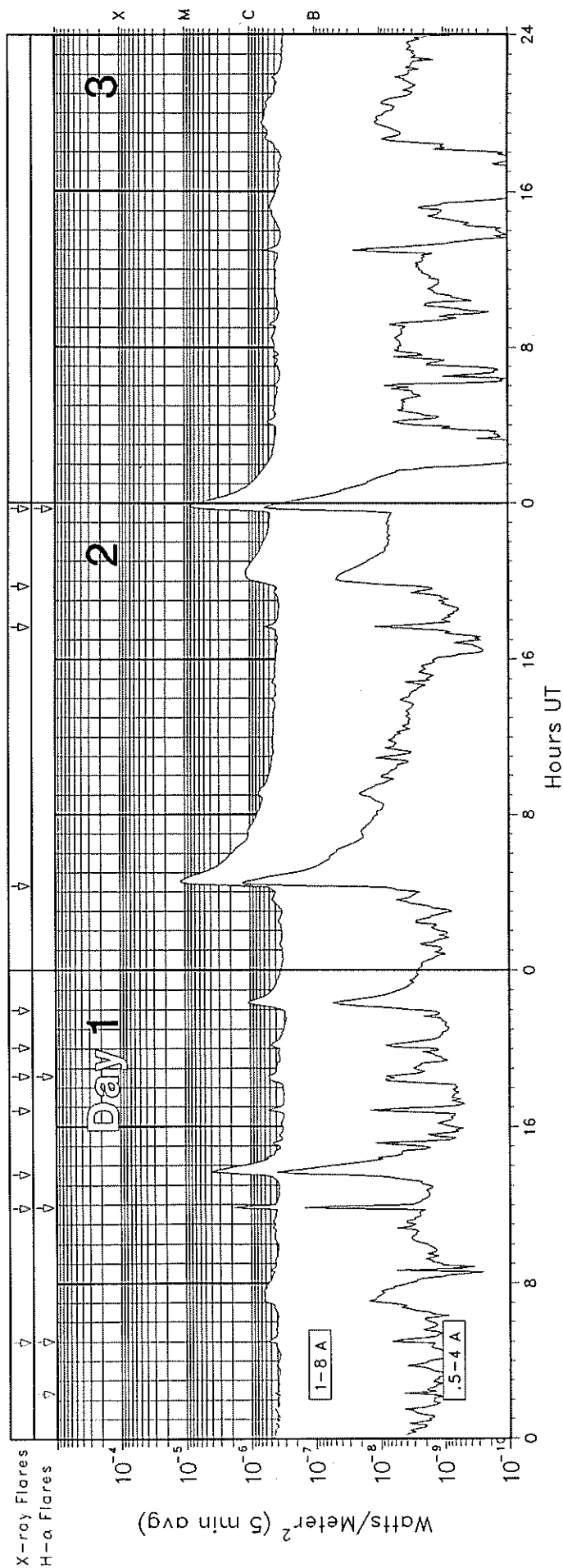
Explanation of Type Code:

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

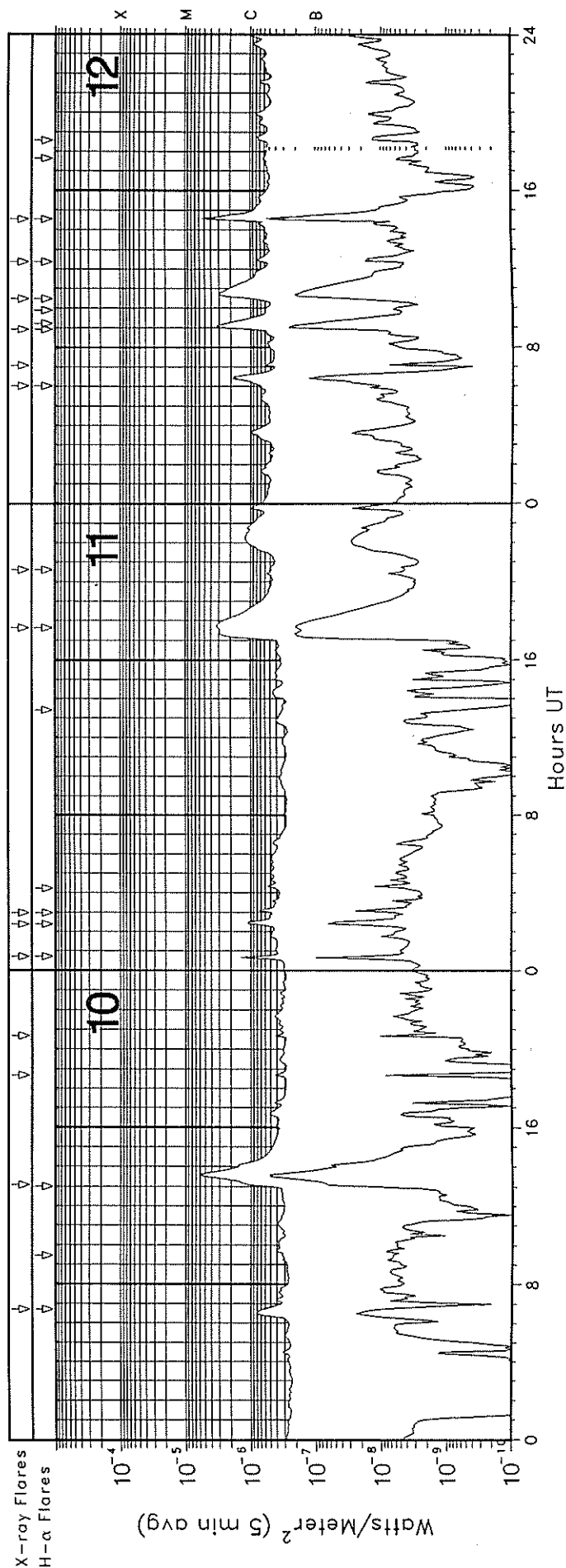
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; Hiraiso, Japan 500 and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

GOES-7 X-RAY DETECTOR

January 1993

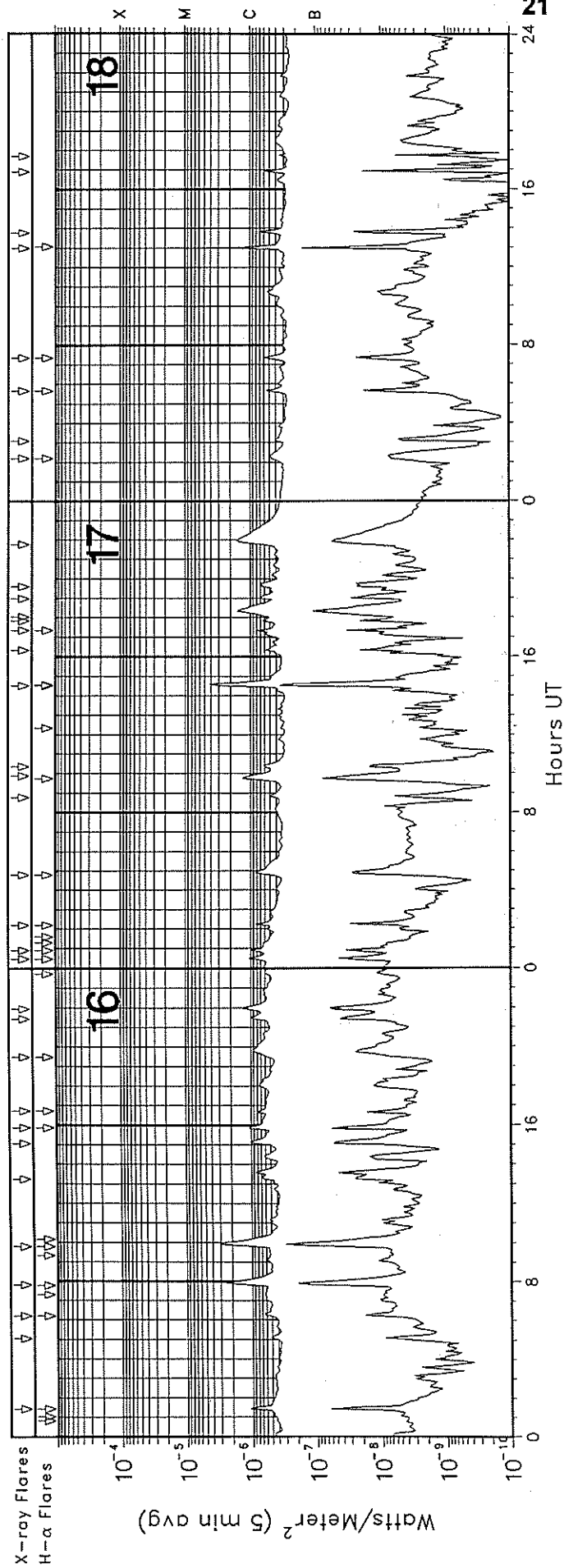
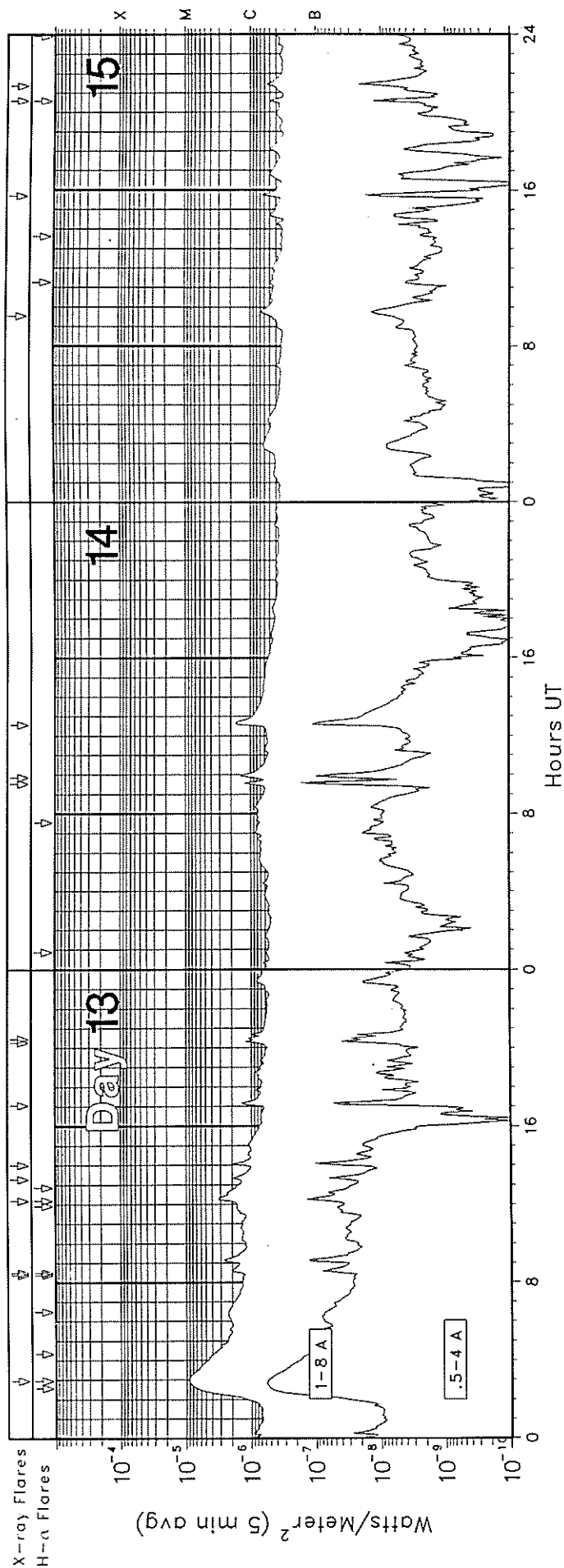


January 1993



GOES-7 X-RAY DETECTOR

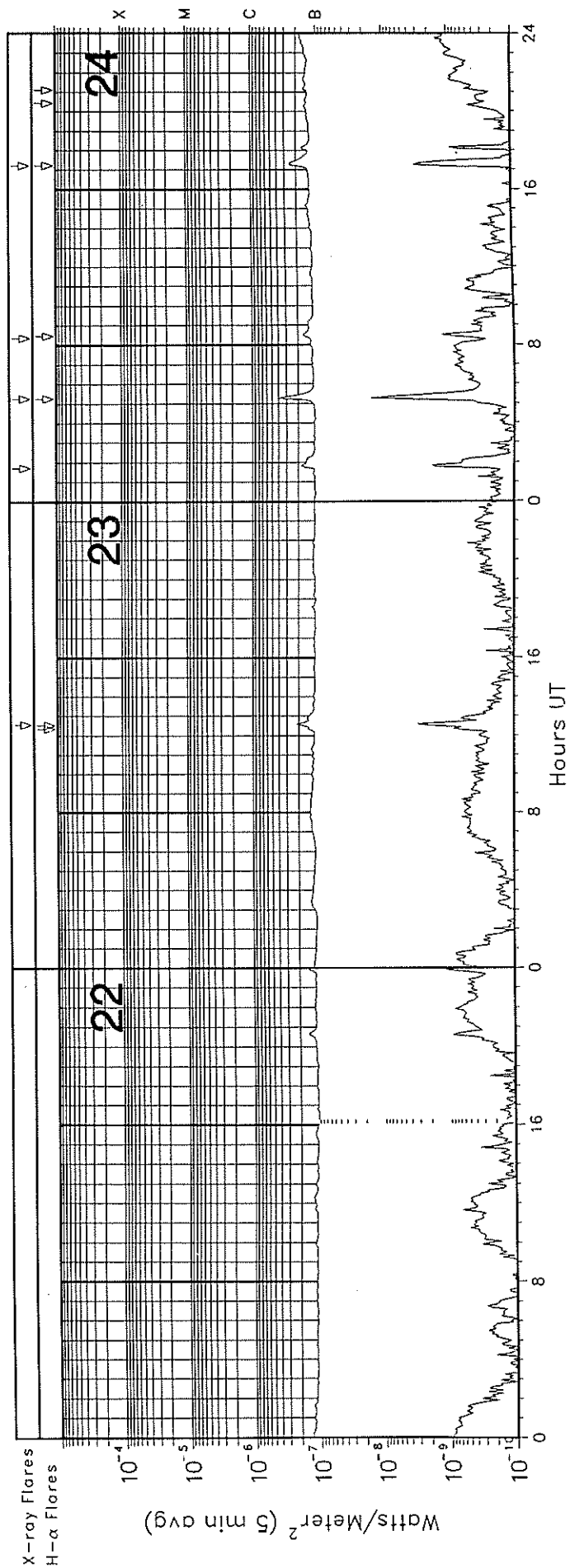
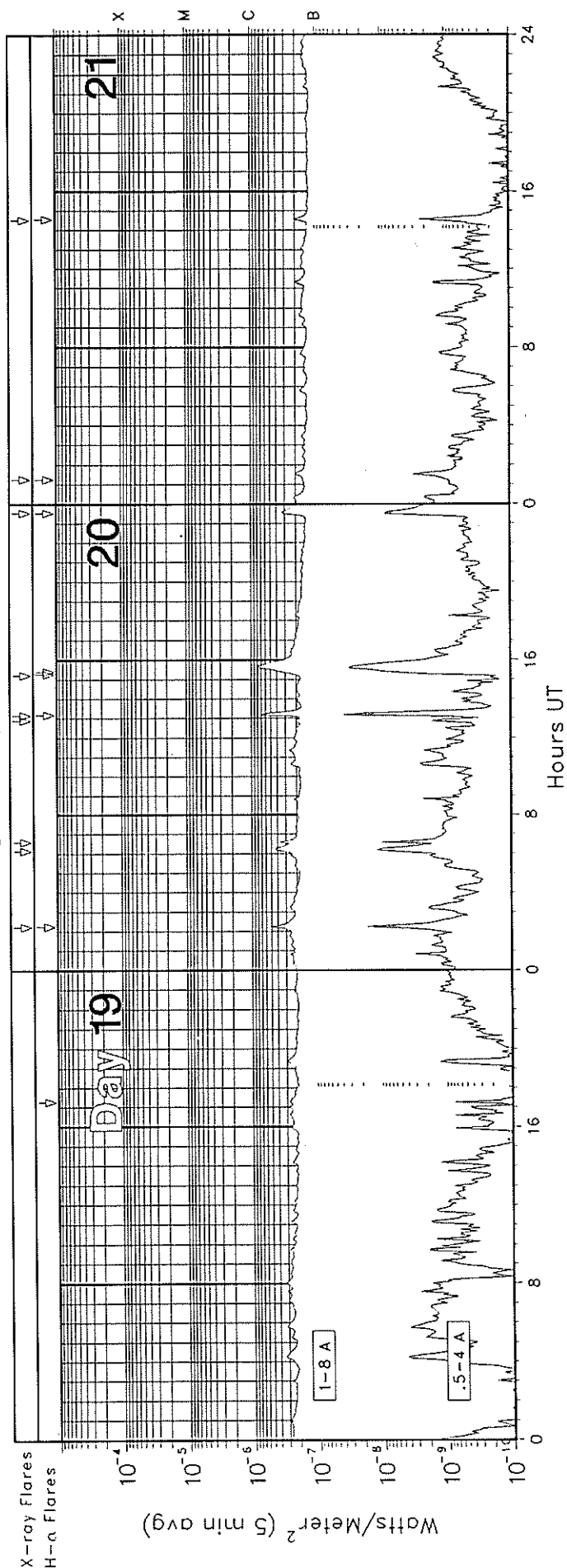
January 1993



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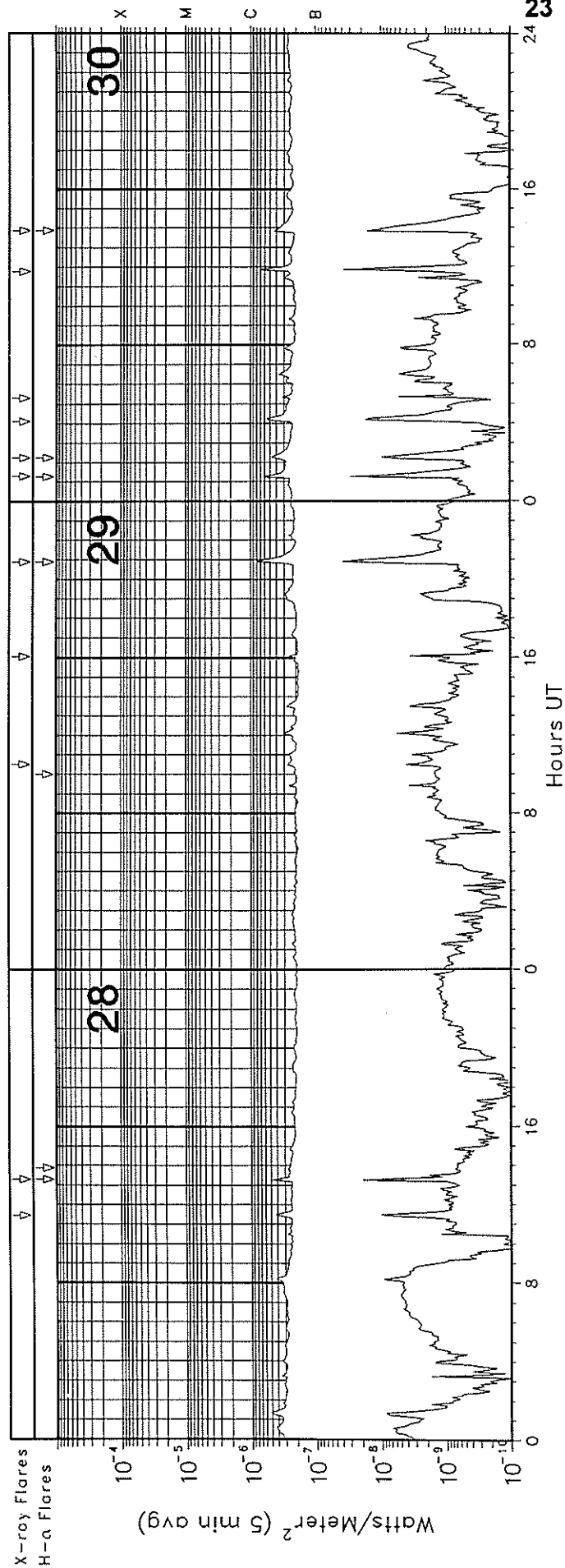
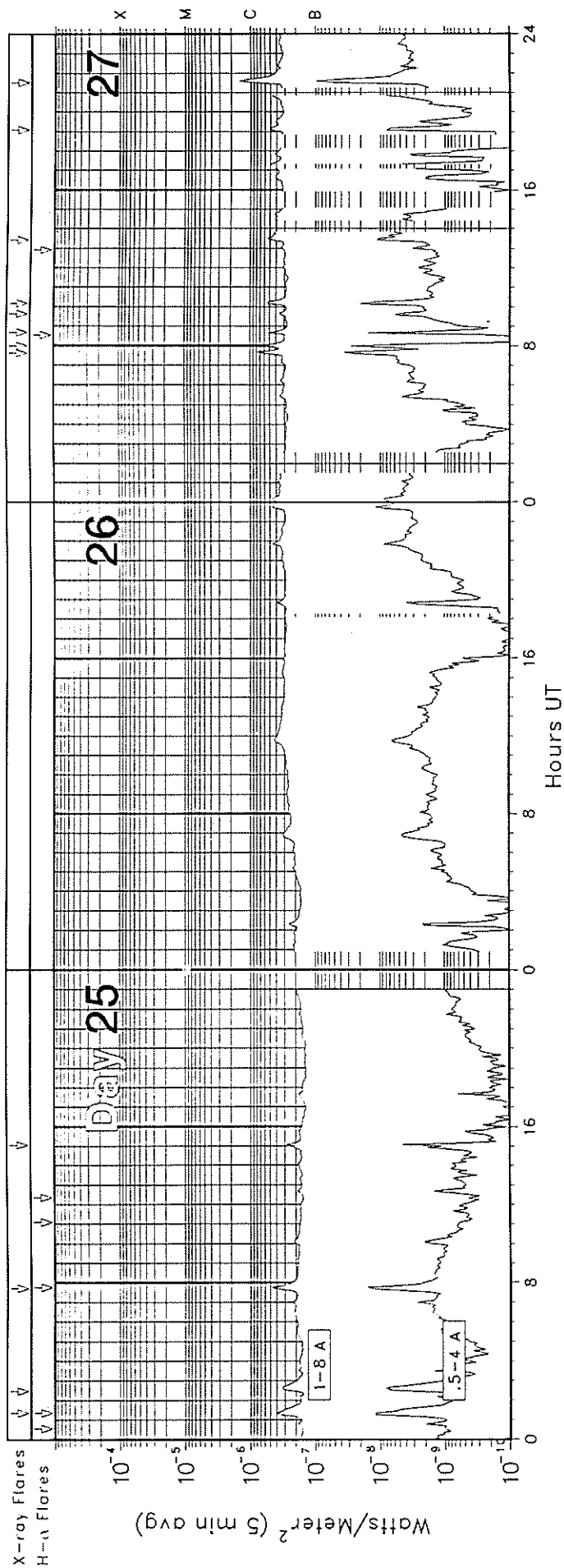
GOES-7 X-RAY DETECTOR

January 1993



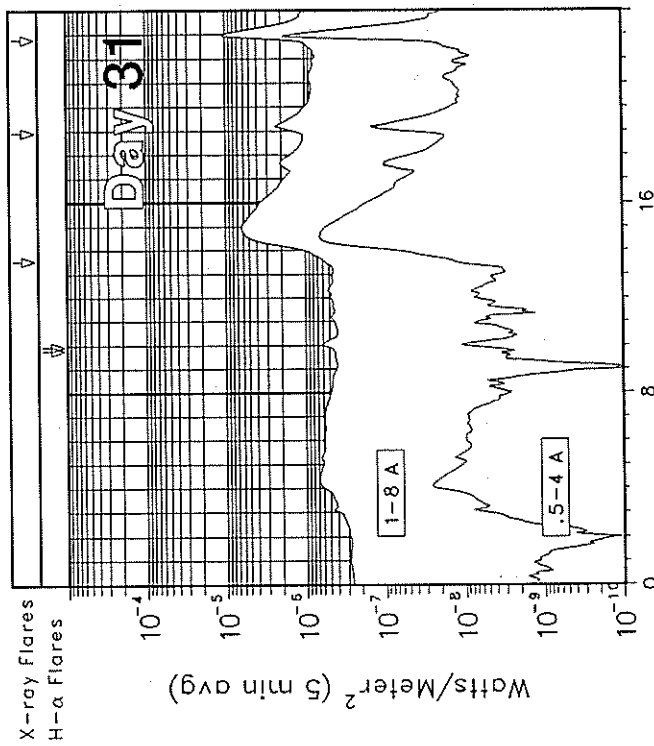
GOES-7 X-RAY DETECTOR

January 1993



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GOES-7 X-RAY DETECTOR January 1993



GOES SOLAR X-RAY FLARES
Preliminary Listing

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Jan 93

January 1993

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
01	0459	0503	0508				B5.9	
01	1150	1154	1157				C3.2	
01	1333	1343	1354				C4.2	
01	1650	1653	1655				B7.2	
01	1835E	1836U	1839D	S13	W60	SF	B5.8	7379
01	2003	2011	2024				B4.9	
01	2157	2220	2242				C1.0	
02	0419	0436	0506				M1.1	
02	1739	1742	1746				B6.1	
02	1943	2015	2128				C1.1	
02	2341	2345	2422	S13	W79	SF	C8.4	7379
04	0043	0055	0101				C6.6	
04	1235	1239	1243				B5.0	
04	2011	2025	2029				C4.6	
05	0019	0023	0026				B5.6	
05	0308	0312	0317				B7.3	
05	0554	0558	0608	S08	W64	SF	B5.3	7388
05	1506	1508	1518	S11	E80	SF	C1.3	7391
05	1756	1759	1802				B3.7	
06	0016	0026	0039				B6.7	
06	0101	0102	0110	S04	E13	SF	B5.8	7386
06	2148	2151	2153				B5.2	
07	0809	0842	1018	S08	W01	1W	C2.6	7386
07	1339	1343	1345				B7.0	
07	2048	2054	2128	S11	E38	SF	C1.1	7391
08	1019	1022	1024	S17	W12	SF	B6.9	7394
08	1743	1746	1750				B4.6	
08	2123	2128	2134				B6.9	
08	2323	2328	2338				B4.5	
10	0642	0642	0646	S23	W35	SF	B9.1	7387
10	1305	1333	1417	S19	W38	SF	B6.3	7394
10	1840	1843	1846				B4.7	
10	2040	2044	2046				B5.4	
11	0043	0044	0048	N06	E02	SF	C1.7	7399
11	0222	0230	0239	N06	E01	SF	C2.0	7399
11	0258	0310	0317	N06	W00	SF	B8.1	7399
11	1738E	1758U	1919D	S16	W56	SF	C3.2	7394
11	2037	2045U	2132	S12	W09	SF	C1.1	7391
12	0602	0624	0650	S12	W14	SF	C1.9	7391
12	0705	0709	0712				B6.7	
12	0855	0901	0937	S14	W15	SF	C3.4	7391
12	1028	1041	1121	S21	W66	SF	C3.0	7394
12	1223	1227	1253	S10	E01	SF	B8.6	
12	1432	1437	1454	S12	W18	SN	C6.1	7391
13	0257E	0314	0333D	S08	W77	1F	C9.2	7386
13	0823E	0825U	0830D	S17	W90	SF	C2.0	7394
13	0829E	0914U	0940	S09	W09	SF	C3.3	7400
13	1212	1214	1240	S14	W30	SF	C3.4	7391
13	1317	1322	1327				C1.9	
13	1401	1406	1411				C2.1	
13	1704	1713	1718				C1.4	
13	2017	2023	2026				C1.3	
13	2028	2031	2033				C1.5	

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
14	0931	0937	0941				C1.3	
14	0951	0958	1007				C1.4	
14	1233	1239	1253				C1.7	
15	0931	0947	1001				B6.8	
15	1541	1546	1554				B6.8	
15	2035	2036	2047	N12	E68	SF	B5.4	7403
15	2120	2127	2132				B5.8	
16	0126	0128	0138	N12	E67	SF	C1.3	7403
16	0503	0509	0512				B5.4	
16	0612	0619	0623	S09	W48	SF	B7.5	7400
16	0748	0753	0817	S09	W50	SF	C3.0	7400
16	0947	0957	1023	S09	W50	1F	C4.1	7400
16	1314	1338	1345				B9.2	
16	1503	1514	1520				C1.0	
16	1552	1552	1556	S09	W53	SF	C1.3	7400
16	1643E	1644U	1651	N12	E58	SF	B9.0	7403
16	1929	1937	2010	S12	E44	SF	B9.4	7401
16	2125	2130	2139				C1.0	
16	2156	2201	2206				C1.5	
17	0028	0032	0046	S10	W59	SF	C1.1	7400
17	0055	0055	0105	S07	W57	SF	C1.0	7400
17	0212	0217	0228	S11	W61	SF	C1.0	7400
17	0447	0455	0525	S27	E30	SF	B8.5	7402
17	0847	0852	0857				B5.1	
17	0952	0953	1003	S26	E26	SF	C1.3	7402
17	1022	1025	1028				B7.3	
17	1431	1432	1441	S09	W65	SF	C5.0	7400
17	1619	1622	1627				B6.2	
17	1720	1720	1723	S09	W66	SF	C1.1	7400
17	1749	1753	1758				B6.7	
17	1803	1823	1831				C1.6	
17	1859	1903	1912				B8.0	
17	1935	1938	1943				B6.9	
17	2146	2202	2221				C1.6	
18	0212	0214	0238	S27	E19	SF	B4.8	7402
18	0306	0310	0312				B5.0	
18	0539	0541	0545	S12	E22	SF	B5.9	7401
18	0721	0721	0729	S13	E18	SF	B6.4	7401
18	1259	1303	1306				C2.4	
18	1347	1351	1355				B8.8	
18	1654	1658	1701				B7.7	
18	1743	1746	1748				B5.6	
20	0213	0217	0219				B6.1	
20	0607	0615	0623				B4.5	
20	0635	0639	0641				B4.3	
20	1252	1255	1257				B2.5	
20	1309	1314	1318				B9.8	
20	1512	1540	1553				B7.9	
20	2332	2332	2350	N16	E06	SF	B3.4	7403
21	0115	0139	0142	S14	W21	SF	B2.0	7401
21	1430	1435	1442				B2.0	
23	1233	1239	1248	N16	W30	SF	B2.3	7403
24	0143	0149	0156				B1.8	
24	0515	0517	0521	N14	W40	SF	B4.0	7403
24	0821	0828	0840				B1.6	
24	1714	1715	1737	N16	W43	SF	B2.5	7403

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Jan 93

GOES SOLAR X-RAY FLARES
Preliminary Listing

January 1993

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
25 0121	0123	0129	N08	W64	SF	B4.1	7408
25 0228	0243	0253				B3.3	
25 0741	0746	0750				B5.6	
25 1504	1507	1509				B3.7	
27 0735	0742	0745				B8.8	
27 0758	0802	0806				B7.1	
27 0839	0843	0847				B5.5	
27 0937	0940	0943				B4.2	
27 1009	1015	1020				B6.4	
27 1325	1331	1339				B5.7	
27 1905	1911	1916				B5.3	
27 2130	2139	2145				C1.5	
28 1127	1131	1136				B4.4	

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
28 1317	1317	1323	S13	W32	SF	B5.9	7411
29 1031	1034	1037				B3.1	
29 1604	1607	1609				B3.0	
29 2054	2105	2136	S13	W55	SF	B7.9	7411
30 0117	0118	0122	S12	W50	SF	B8.1	7411
30 0216	0216	0219	S17	E51	SF	B4.9	7412
30 0408	0417	0423				B5.9	
30 0519	0523	0525				B3.6	
30 1147	1153	1158				B7.9	
30 1352	1353	1358	S10	W60	SF	B6.0	7411
31 1333	1500	1608				C6.3	
31 1855	1911	1929				C2.3	
31 2248	2301	2316				M1.1	

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.

Preliminary GOES Satellite Data
Daily Average X-ray Background
Feb 1992 - Jan 1993

	1992											1993
Day	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1	C1.7	B9.2	C1.2	B4.2	B1.4	B3.9	B3.2	B1.2	B1.9	B6.3	B4.0	B3.3
2	C2.6	B9.1	B7.5	B4.5	B1.4	B3.6	B4.6	B1.7	B2.3	B7.9	B4.6	B3.4
3	C3.0	B8.3	B7.8	B3.5	B1.6	B4.1	B7.1	B2.0	B2.2	B4.9	B4.5	B3.3
4	C1.9	B8.0	B9.7	B6.3	B1.7	B3.1	B5.2	B3.5	B2.6	B5.4	B4.2	B2.3
5	C2.2	B8.6	C1.0	B7.6	B2.0	C1.1	B3.8	B9.2	B4.2	B5.0	B3.6	B2.4
6	C2.2	B8.5	B6.8	B4.4	B2.3	C1.2	B3.7	C1.1	B4.4	B4.3	B3.6	B2.7
7	C2.2	B9.5	B5.0	B4.3	B2.4	B8.8	B4.3	C1.7	B6.0	B3.4	B3.3	B3.3
8	C1.4	---	B6.0	B3.2	B2.4	B7.3	B5.4	B7.9	B4.3	B3.0	B6.2	B3.4
9	C1.6	B9.8	B4.3	B2.8	B3.3	B7.0	B4.8	B6.4	B3.2	B3.5	B4.5	B2.5
10	C1.6	B7.6	B4.1	B2.4	B3.5	B8.5	B5.4	B4.0	B2.5	B3.6	B5.1	B2.7
11	C1.4	B6.0	B4.0	B2.6	B3.5	B8.6	B5.1	B3.0	B2.7	B2.7	B6.1	B2.8
12	C1.0	B6.1	B4.6	B2.7	B3.3	B8.8	B3.9	B2.4	B3.6	B2.3	B5.1	B4.9
13	B8.5	B5.5	B4.5	B2.6	B3.2	B9.1	B3.5	B2.8	B4.9	B4.3	B6.1	B6.5
14	C1.2	B6.9	B4.7	B3.2	B3.2	B9.1	B3.7	B3.5	B2.5	B3.5	B6.5	B4.4
15	C1.8	B8.7	B4.7	B3.0	B2.8	C1.1	---	B3.7	B1.2	B4.5	B5.4	B3.2
16	C1.5	B7.5	B6.7	B2.1	B2.4	B6.9	B3.5	B4.8	B1.8	B7.5	B5.2	B3.9
17	C1.1	B7.3	B9.6	B1.8	B2.8	B5.5	B3.9	B5.2	B2.7	B6.7	B6.1	B3.1
18	C2.0	B7.1	C1.1	B2.2	B2.7	B7.3	B3.9	B3.5	B3.2	B6.6	B6.2	B2.7
19	C2.0	B6.6	C1.2	B5.9	B2.2	B7.1	B6.1	B2.9	B5.1	B6.1	B5.1	B2.1
20	C1.9	B6.0	B9.4	B4.3	B2.2	B9.8	B8.9	B2.5	B3.8	B6.7	B4.8	B1.7
21	C2.4	B5.9	C1.0	B4.0	B2.3	B3.4	B7.4	B2.3	B4.0	B6.2	B4.7	B1.2
22	C1.6	B5.3	B7.3	B3.5	B2.9	B2.2	---	B1.9	B4.5	B8.5	B4.0	B1.1
23	C1.3	B7.8	B6.4	B3.4	B4.9	B2.2	B4.9	B2.0	B4.9	C1.1	B3.3	B1.1
24	C1.2	C1.0	B6.3	B3.3	B5.7	B2.2	B4.8	B1.8	B3.6	B9.6	B3.3	B1.1
25	C1.6	C1.3	B6.0	B2.6	B7.9	B2.0	B2.6	B2.4	B5.9	B7.5	B2.9	B1.5
26	C1.2	B7.7	B4.5	B2.4	B8.0	B1.5	B1.8	B2.0	B7.7	B6.3	B2.4	B2.2
27	C1.5	B6.5	B4.7	B2.6	B5.0	B1.4	B1.0	B2.6	C1.1	B5.5	B2.0	B2.8
28	C1.0	B7.3	B3.9	B2.7	B6.4	B1.2	B1.1	B2.1	B8.6	B4.6	B2.3	B2.1
29	C1.0	B8.0	B3.4	B2.5	B4.1	B2.0	B1.8	B2.1	C1.1	B5.2	B2.8	B1.8
30		B6.2	B3.0	B1.7	B4.3	B2.0	B1.3	B2.0	C1.3	B5.4	B3.8	B2.0
31		C1.0		B1.2		B1.9	B1.2		C1.3		B4.5	B4.2

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Jan 93

MASS EJECTIONS FROM THE SUN--PROXY DATA*

JANUARY 1993

Site	Mo	Day	— Observed UT —			Location		Freq or Wavelength	Kind of Event
			Start	Max	End	RA	R/Ro		
ONDR	Jan	01	1150.5		1155.2			Decimeter; meter	IV
POTS	Jan	01	1150.6		1158.0			500- 40 MHz	IV,II Harmonic
POTS	Jan	01	1335.6		1353.0			400- 40 MHz	IV,II Harmonic
LEAR	Jan	02	0534.0		0556.0			Meter	II
KHAR	Jan	06	1023 E		1030 D	096	0.85	H-alpha	S
POTS	Jan	07	0828.1		1005 U			800-600 MHz	II Harmonic? IV
LEAR	Jan	07	0836.0		0843.0			Meter	II
LEAR	Jan	07	0843.0		1054.0			Meter	IV
SVTO	Jan	07	0849.0		2400.0			Meter	IV
ONDR	Jan	07	0853.1		0912.0			Meter	IV
SGMR	Jan	07	1237.0		2037.0			Meter	IV
POTS	Jan	15	0923.2		0930.6U			500-100 MHz	IV,II Herringbone
IZMI	Jan	15	0926.9		0933.0			Meter	II
LEAR	Jan	15	0927.0		0931.0			Meter	II
SVTO	Jan	15	0928.0		0928.0			Meter	II
KHAR	Jan	31	0952 E	0953 U	1005 D	104	1.00-1.05	H-alpha	S
KHAR	Jan	31	1003 E		1012 D	113	0.73	H-alpha	S

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

*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

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Jan 93

JANUARY 1993

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
01	AFS	1357E	2135	S24	E75	01 7.4		03	9	9	E	RAMY	7387	
01	ADF	1358E	2135	S21	E78	01 7.6	1	11	9	9	E	RAMY	7387	
01	DSD	1400E	2135	S24	E80	01 7.8		03	9	9	E	RAMY	7387	
01	ASR	1408E	1802D	N03	W90	12 26.0		02	9	9	E	RAMY	7384	
01	ASR	1409E	1803D	N12	W90	12 25.9		03	9	9	E	RAMY	7378	
01	AFS	1430E	2135	N03	W60	12 28.2		02	9	9	E	RAMY	7381	
01	AFS	1440E	2135	S06	W63	12 28.0		02	9	9	E	RAMY	7383	
01	DSD	1441E	2135	S08	W65	12 27.8		02	9	9	E	RAMY	7383	
01	DSD	1443E	2041D	S12	W59	12 28.3		13	9	9	E	RAMY	7379	
01	ADF	1443E	2135	S12	W59	12 28.3	1	06	9	9	E	RAMY	7379	
01	ADF	1735E	2135	S18	W52	12 28.9	1	04	9	9	E	RAMY	7382	
01	SSB	1800		414	W60	12 31.5			0	0	E	PALE		
01	DSD	1800E	0316	N01	W60	12 28.4		04	9	9	E	PALE	7381	
01	ASR	1800E	0316	N13	W90	12 26.0		02	9	9	E	PALE	7378	
01	ADF	1800E	0316	S08	W59	12 28.4	1	03	9	9	E	PALE	7383	
01	AFS	1800E	2029D	N03	W64	12 28.1		02	8	8	E	PALE	7381	
01	DSD	1845E	2022D	S14	W60	12 28.3		11	9	9	E	PALE	7379	
01	ASR	1850E	2044D	N01	W90	12 26.2		01	8	8	E	PALE	7384	
01	ASR	2217E	0316	N01	W90	12 26.3		02	9	9	E	PALE	7384	
01	ASR	2250E	0150D	N02	W90	12 26.3		03	9	9	E	LEAR	7384	
01	ASR	2250E	1045	N15	W90	12 26.2		03	9	9	E	LEAR	7378	
02	ASR	0101E	0316	S28	E90	01 9.1		02	9	9	E	PALE		
02	ASR	0120E	1045	S30	E90	01 9.1		03	7	7	E	LEAR		
02	AFS	0245E	1045	S27	E69	01 7.5		04	9	9	E	LEAR	7387	
02	ASR	0415E	0445D	N05	W90	12 26.5		08	9	9	E	LEAR	7384	
02	BSL	0445E	0740D	N04	W90	12 26.6		17	9	9	E	LEAR		
02	AFS	1151E	2040	S02	E63	01 7.2		02	9	9	E	RAMY	7386	
02	AFS	1155E	2040	S24	E61	01 7.2		02	9	9	E	RAMY	7387	
02	AFS	1208E	2040	S08	W23	12 31.8		01	9	9	E	RAMY		
02	ASR	1233E	2040	N03	E90	01 9.2		01	8	7	E	RAMY		
02	ADF	1254E	2040	S23	E65	01 7.5	1	04	9	9	E	RAMY	7387	
02	DSD	1256E	2040	S21	E66	01 7.6		03	9	9	E	RAMY	7387	
02	AFS	1258E	2040	S21	E67	01 7.7		02	9	9	E	RAMY	7387	
02	AFS	1320E	2040	S17	E79	01 8.5		02	8	8	E	RAMY		
02	DSD	1325E	2040	S13	W72	12 28.2		02	9	9	E	RAMY	7379	
02	ASR	1328E	1745D	N10	W90	12 26.9		03	7	8	E	RAMY		
02	AFS	1427E	2040	S13	W71	12 28.3		02	9	9	E	RAMY	7379	
02	AFS	1830E	0324	S09	W27	12 31.7		02	9	9	E	PALE		
02	ADF	1830E	0324	S20	E57	01 7.1	1	02	9	9	E	PALE	7387	
02	AFS	1830E	0324	S25	E60	01 7.4		03	9	9	E	PALE	7387	
02	SSB	1930		412	W71	01 1.7			0	0	E	PALE		341 W48
02	ASR	1934E	2040	S22	W90	12 27.0		03	7	8	E	RAMY		
02	DSD	2118E	2137D	S02	E58	01 7.2		03	9	9	E	PALE	7386	
02	ASR	2335E	2342	S10	W81	12 28.0		11	9	9	E	LEAR	7379	
02	BSL	2341	0324	S10	W81	12 28.0		16	9	9	E	PALE	7379	
02	BSL	2342	2347	S10	W81	12 28.0		18	9	9	E	LEAR	7379	
03	ASR	0030E	0240D	S10	W83	12 27.9		07	9	9	E	LEAR	7379	
03	ASR	0045E	0240D	S05	W90	12 27.4		03	9	9	E	LEAR		
03	AFS	0400E	1045	S07	W33	12 31.7		02	9	9	E	LEAR	7388	
03	ASR	0858E	1500	N03	W90	12 27.7		03	9	7	E	SVTO	7381	
03	AFS	0908E	1500	S08	W36	12 31.7		02	9	9	E	SVTO	7388	
03	AFS	0922E	0956D	S23	E54	01 7.5		02	6	6	E	SVTO	7387	
03	DSD	1130E	1407D	S08	W35	12 31.8		02	9	9	E	RAMY	7388	
03	AFS	1130E	1818	S09	W35	12 31.8		02	9	9	E	RAMY	7388	
03	AFS	1135E	1631D	S04	E51	01 7.3		02	9	9	E	RAMY	7386	
03	AFS	1140E	1818	S01	E49	01 7.1		02	9	9	E	RAMY	7386	
03	ASR	1219E	1358D	S06	W90	12 27.9		01	9	9	E	RAMY	7383	
03	ASR	1308E	1358D	S13	W90	12 27.8		01	9	9	E	RAMY	7379	
03	ASR	1308E	1358D	S16	W90	12 27.8		03	9	9	E	RAMY	7379	
03	ASR	1313E	1818	S16	E90	01 10.4		02	9	9	E	RAMY	7389	
03	DSD	1401E	1530D	S24	E59	01 8.1		03	9	9	E	RAMY	7387	
03	DSD	1407E	1818	S08	W40	12 31.6		03	9	9	E	RAMY	7388	
03	ASR	1508E	1818	N04	W90	12 28.0		01	9	9	E	RAMY	7381	
03	ADF	1518E	1818	S20	E44	01 7.0	1	08	9	9	E	RAMY	7387	
03	AFS	1703E	1818	N10	W31	01 1.4		01	9	9	E	RAMY	7390	
03	ASR	1718E	1810D	S14	W87	12 28.2		03	9	9	E	RAMY	7379	
03	AFS	1820E	0236	S03	E46	01 7.2		01	8	8	E	PALE	7386	
03	ADF	1820E	0236	S10	E47	01 7.3	1	02	9	9	E	PALE	7386	

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Jan 93

ACTIVE PROMINENCES AND FILAMENTS

JANUARY 1993

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
03	ASR	1820E	0236	S14	W90	12 28.1		02	9	9	E	PALE	7379	
03	AFS	1824E	0236	S07	W44	12 31.5		03	9	9	E	PALE	7388	
03	AFS	1830E	0236	N12	W31	01 1.4		01	9	9	E	PALE		
03	AFS	2245E	1053	S06	W43	12 31.7		02	6	5	E	LEAR	7388	
03	AFS	2245E	1053	S24	E45	01 7.4		03	6	9	E	LEAR	7387	
03	DSF	2318U	1537U	N16	W20	01 2.4		06	0	0	E	HOLL		
04	DSD	0126E	0652D	S08	W47	12 31.5		03	5	9	E	LEAR	7388	
04	ASR	1000E	1053	S12	W90	12 28.7		04	9	9	E	LEAR	7379	
04	AFS	1131E	2011	S09	W50	12 31.7		03	9	9	E	RAMY	7388	
04	AFS	1133E	2011	S23	E38	01 7.4		02	9	9	E	RAMY	7387	
04	ASR	1242E	2011	S16	W90	12 28.8		01	9	9	E	RAMY	7379	
04	DSD	1443E	2326	S08	E31	01 6.9		03	9	9	E	HOLL	7386	
04	DSF	1630U	1949U	N24	E34	01 7.3	2	09	0	0	E	RAMY		
04	ADF	1635E	1718D	S04	E34	01 7.2	1	12	9	9	E	RAMY	7386	
04	AFS	1635E	2011	S03	E34	01 7.2		02	9	9	E	RAMY	7386	
04	DSD	1635E	2011	S05	E30	01 6.9		03	9	9	E	RAMY	7386	
04	DSF	1635U	1718U	S04	E34	01 7.2	2	12	0	0	E	RAMY	7386	
04	AFS	1703E	2011	S17	E20	01 6.2		01	9	9	E	RAMY		
04	DSD	1830E	1845	S05	E29	01 6.9		04	9	9	E	PALE	7386	
04	AFS	1830E	1845	S05	E30	01 7.0		01	9	9	E	PALE	7386	
04	AFS	1830E	1845	S07	W55	12 31.6		02	9	9	E	PALE	7388	
04	AFS	1834E	1845	S18	E17	01 6.1		01	9	9	E	PALE		
04	AFS	1840E	2326	S19	E18	01 6.1		02	9	9	E	HOLL		
04	ASR	2010E	2053D	S13	E80	01 10.9		02	9	9	E	HOLL	7391	
04	APR	2015E	2326	S31	W90	12 28.8	1	08	8	8	E	HOLL		
04	BSL	2027	2053D	S13	E80	01 10.9		15	9	9	E	HOLL	7391	
04	AFS	2317E	0836D	S19	E16	01 6.2		03	6	9	E	LEAR	7393	
05	AFS	0540E	1052	S08	E63	01 9.9		03	9	9	E	LEAR	7388	
05	DSD	0845E	1228D	S07	E68	01 10.4		01	9	9	E	SVTO	7391	
05	AFS	0940E	1053	S20	E25	01 7.3		03	6	9	E	LEAR	7387	
05	AFS	1019E	1343D	S09	E23	01 7.1		01	9	9	E	SVTO	7386	
05	DSD	1135E	1946	S17	E28	01 7.6		02	9	9	E	RAMY	7394	
05	DSD	1135E	1946	S21	E25	01 7.4		02	9	9	E	RAMY	7387	
05	AFS	1142E	1946	S09	W63	12 31.7		03	9	9	E	RAMY	7388	
05	DSD	1143E	1946	S08	E22	01 7.1		03	9	9	E	RAMY	7386	
05	AFS	1145E	1946	S20	E07	01 6.0		02	7	8	E	RAMY	7393	
05	AFS	1426E	1946	S17	E27	01 7.6		01	9	9	E	RAMY	7394	
05	AFS	1436E	1946	S03	E19	01 7.0		02	9	9	E	RAMY	7386	
05	AFS	1626E	1946	S06	E21	01 7.2		01	9	9	E	RAMY	7386	
05	DSD	1802E	1946	S10	E72	01 11.2		02	9	9	E	RAMY	7391	
05	DSD	1910E	2132D	S06	E16	01 7.0		02	8	8	E	HOLL	7386	
05	AFS	1915E	2132D	S24	E17	01 7.1		01	8	8	E	HOLL	7387	
05	AFS	2304E	1053	S08	W72	12 31.6		02	8	9	E	LEAR	7388	
05	DSD	2305E	0145D	S22	E21	01 7.6		03	6	7	E	LEAR	7387	
06	ADF	0145E	1053	S25	E20	01 7.6	1	16	9	9	E	LEAR	7387	
06	DSD	0235E	0840D	S03	E13	01 7.1		02	8	5	E	LEAR	7386	
06	AFS	0315E	1053	S16	E20	01 7.6		02	6	9	E	LEAR	7394	
06	AFS	0940E	1053	S24	E09	01 7.1		02	9	9	E	LEAR	7387	
06	AFS	1138E	2137	S21	E09	01 7.2		02	9	9	E	RAMY	7387	
06	DSD	1141E	2137	S01	E08	01 7.1		03	9	9	E	RAMY	7386	
06	AFS	1141E	2137	S02	E07	01 7.0		01	7	7	E	RAMY	7386	
06	ADF	1203E	1514	S09	E61	01 11.1	1	06	9	9	E	SVTO	7391	
06	DSD	1203E	1514	S10	E62	01 11.2		05	9	9	E	SVTO	7391	
06	DSD	1203E	1514	S22	E10	01 7.3		02	9	9	E	SVTO	7387	
06	DSD	1215E	1514	S08	W80	12 31.5		02	9	9	E	SVTO	7388	
06	DSD	1221E	1514	S17	W04	01 6.2		01	9	9	E	SVTO	7393	
06	DSD	1233E	1514	S02	E07	01 7.0		04	9	9	E	SVTO	7386	
06	DSD	1233E	1514	S06	E09	01 7.2		02	9	9	E	SVTO	7386	
06	AFS	1316E	2137	S11	E47	01 10.1		01	9	9	E	RAMY		
06	AFS	1330E	1514	S11	E48	01 10.2		02	9	9	E	SVTO	7391	
06	APR	1401E	1529D	S08	W85	12 31.2	1	09	9	9	E	RAMY	7388	
06	AFS	1532E	2137	S04	E08	01 7.2		02	9	9	E	RAMY	7386	
06	ASR	1628E	2113D	N05	E90	01 13.4		03	9	9	E	RAMY		
06	AFS	1712E	2137	N09	E74	01 12.3		02	8	8	E	RAMY	7395	
06	DSD	1720E	2137	S24	E03	01 6.9		02	9	9	E	RAMY	7387	
06	ASR	1823E	2137	N19	W90	12 31.0		03	9	9	E	RAMY		
06	DSD	1940E	2137	S17	E09	01 7.5		06	9	9	E	RAMY	7394	

ACTIVE PROMINENCES AND FILAMENTS

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Jan 93

JANUARY 1993

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
06	DSD	1956E	2137	S10	E58	01	11.2		04	9	9	E	RAMY	7391	
06	ASR	2010E	2137	S10	W90	12	31.1		02	9	9	E	RAMY	7388	
06	ADF	2055E	2137	S09	W09	01	6.2	1	04	9	9	E	RAMY	7386	
06	ASR	2255E	2313	S05	W90	12	31.2		03	9	9	E	HOLL	7388	
06	ASR	2307E	1048	S07	W90	12	31.2		02	9	9	E	LEAR	7388	
06	AFS	2308E	0230D	S16	E11	01	7.8		02	7	9	E	LEAR	7394	
06	DSD	2310E	2313	S21	E02	01	7.1		04	9	9	E	HOLL	7387	
07	AFS	0012E	1048	N10	W48	01	3.4		03	9	9	E	LEAR		
07	DSD	0106E	1048	S22	E02	01	7.2		03	9	9	E	LEAR	7387	
07	DSD	0455E	1048	N09	E70	01	12.4		04	9	9	E	LEAR	7395	
07	AFS	0748E	1503	N09	W52	01	3.4		02	9	9	E	SVTO		
07	ASR	0914E	1503	S09	W90	12	31.6		01	9	9	E	SVTO	7388	
07	AFS	0936E	1503	S05	W01	01	7.3		02	9	9	E	SVTO	7386	
07	SSB	1104		286	W07	01	13.9			0	0	E	SVTO		
07	ADF	1122E	1503	S01	W20	01	6.0	1	03	9	9	E	SVTO	7387	
07	AFS	1206E	1742	S21	W05	01	7.1		02	9	9	E	RAMY	7387	
07	DSD	1206E	1742	S22	E03	01	7.7		06	9	9	E	RAMY	7387	
07	AFS	1210E	1742	S04	W08	01	6.9		02	8	8	E	RAMY	7386	
07	AFS	1210E	1742	S05	W03	01	7.3		02	9	9	E	RAMY	7386	
07	SSB	1211		287	W08	01	14.0			0	0	E	RAMY		
07	DSD	1234E	1742	S07	W10	01	6.8		02	9	9	E	RAMY	7386	
07	ADF	1238E	1742	S13	E46	01	11.0	1	04	9	9	E	RAMY	7391	
07	AFS	1248E	1742	N09	W57	01	3.2		02	9	9	E	RAMY	7397	
07	ADF	1258E	1742	S23	E14	01	8.6	1	04	9	9	E	RAMY	7389	
07	DSD	1302E	1742	N08	E63	01	12.3		03	9	9	E	RAMY	7395	
07	ASR	1308E	1636D	S09	W90	12	31.8		02	9	9	E	RAMY		
07	ASR	1443E	1637D	N10	E90	01	14.4		02	9	9	E	RAMY		
07	SSB	1730		289	W12	01	14.4			0	0	E	HOLL		
07	DSD	1735E	2150	N08	E61	01	12.3		04	9	9	E	HOLL	7395	
07	ADF	1735E	2150	S05	W06	01	7.3		07	9	9	E	HOLL	7386	
07	AFS	2053E	2150	N07	E64	01	12.7		02	8	8	E	HOLL	7395	
07	AFS	2120E	2122	N07	E59	01	12.3		01	9	9	E	PALE	7395	
07	DSD	2349E	0716	S14	E42	01	11.2		02	9	9	E	LEAR	7391	
07	DSD	2350E	0716	S20	W25	01	6.1		02	9	9	E	LEAR	7393	
07	DSD	2351E	0716	S21	W12	01	7.1		02	9	9	E	LEAR	7387	
08	AFS	0253E	0716	S18	W06	01	7.7		01	9	9	E	LEAR	7394	
08	AFS	0800E	1502	S18	W08	01	7.7		03	9	9	E	SVTO	7394	
08	DSD	0802E	1502	S24	W16	01	7.1		04	9	9	E	SVTO	7387	
08	AFS	0804E	1502	N09	E53	01	12.3		01	9	9	E	SVTO		
08	ADF	0806E	1502	S07	W13	01	7.4	1	07	9	9	E	SVTO	7386	
08	DSD	0811E	1502	S06	W14	01	7.3		01	9	9	E	SVTO	7386	
08	AFS	0838E	1502	S04	W19	01	6.9		02	9	9	E	SVTO	7386	
08	DSD	1010E	1502	N11	E82	01	14.6		01	9	9	E	SVTO		
08	DSD	1019	1153D	S17	W13	01	7.4		03	9	9	E	SVTO	7394	
08	DSD	1250E	2133	S19	E02	01	8.7		02	9	9	E	RAMY	7396	
08	AFS	1255E	2133	S04	W22	01	6.9		02	9	9	E	RAMY	7386	
08	AFS	1255E	2133	S06	W16	01	7.3		02	9	9	E	RAMY	7386	
08	AFS	1255E	2133	S23	W18	01	7.1		02	9	9	E	RAMY	7387	
08	AFS	1259E	2133	S18	W12	01	7.6		02	9	9	E	RAMY	7394	
08	AFS	1407E	2133	N08	E49	01	12.3		02	9	9	E	RAMY	7398	
08	DSD	1408E	2133	N10	E49	01	12.3		02	9	9	E	RAMY	7398	
08	ADF	1430E	2133	S11	W18	01	7.2	1	04	9	9	E	RAMY	7386	
08	SSB	1640		287	W24	01	15.4			0	0	E	RAMY		
08	AFS	1758E	0254	S05	W23	01	7.0		02	9	9	E	PALE	7386	
08	ADF	1758E	0254	S07	W19	01	7.3	1	03	9	9	E	PALE	7386	
08	AFS	1805E	2133	N12	W73	01	3.2		03	9	9	E	RAMY	7397	
08	AFS	1816E	0254	N08	E46	01	12.2		02	9	9	E	PALE	7398	
08	DSD	1816E	0254	S25	W22	01	7.0		02	9	9	E	PALE	7387	
08	ADF	1816E	0254	S27	W18	01	7.3	1	04	9	9	E	PALE	7387	
08	AFS	1818E	0254	S19	W15	01	7.6		02	9	9	E	PALE	7394	
08	DSD	1818E	0254	S20	W14	01	7.7		02	9	9	E	PALE	7394	
08	DSD	1857E	2133	N11	W72	01	3.4		04	9	9	E	RAMY	7397	
08	ADF	1903E	2133	S17	W13	01	7.8	1	03	9	9	E	RAMY	7394	
08	AFS	1932E	2133	N06	E30	01	11.0		02	9	9	E	RAMY		
08	ADF	1937E	0254	S20	W37	01	6.0	1	02	9	9	E	PALE	7393	
09	SSB	0031		288	W29	01	15.9			0	0	E	PALE		
09	AFS	0810E	1445	S19	W22	01	7.7		02	9	9	E	SVTO	7394	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
09	ASR	0812E	1445	N08	E40	01 12.3		01	9	9	E	SVTO	7398	
09	ADF	0816E	1445	S07	E21	01 10.9	1	04	9	9	E	SVTO	7391	
09	AFS	0817E	1445	S11	E10	01 10.1		01	9	9	E	SVTO	7396	
09	ADF	0831E	1445	S08	W30	01 7.1	1	06	9	9	E	SVTO	7386	
09	ADF	0833E	1445	S17	W19	01 7.9	1	04	9	9	E	SVTO	7394	
09	AFS	1138E	1445	S21	W11	01 8.6		02	9	9	E	SVTO	7389	
09	AFS	1140E	2140	S16	W28	01 7.4		02	9	9	E	RAMY	7394	
09	AFS	1140E	2140	S19	W24	01 7.6		02	9	9	E	RAMY	7394	
09	AFS	1214E	2140	S20	W11	01 8.7		02	9	9	E	RAMY	7389	
09	DSD	1215E	2140	S17	W27	01 7.4		02	9	9	E	RAMY	7394	
09	AFS	1217E	2140	S11	E07	01 10.0		01	9	9	E	RAMY	7396	
09	AFS	1221E	2140	N07	E37	01 12.3		02	9	9	E	RAMY	7398	
09	ADF	1426E	2140	S04	W30	01 7.3	1	04	9	9	E	RAMY	7386	
09	ADF	1426E	2140	S15	W23	01 7.9	1	05	9	9	E	RAMY	7394	
09	AFS	1455E	2225	N08	E35	01 12.2		02	9	9	E	HOLL	7398	
09	SSB	1510		285	W34	01 16.4			0	0	E	HOLL		
09	AFS	1520E	2225	S11	E05	01 10.0		02	9	9	E	HOLL	7396	
09	AFS	1530E	2225	S18	W14	01 8.6		02	9	9	E	HOLL	7389	
09	ADF	1540E	2225	S08	W32	01 7.2	1	10	8	8	E	HOLL	7386	
09	AFS	1717E	2140	N06	E19	01 11.1		01	9	9	E	RAMY	7399	
09	DSD	1718E	2140	S12	E05	01 10.1		02	9	9	E	RAMY	7396	
09	ADF	1800	0352	S05	W34	01 7.2	1	05	8	8	E	PALE	7386	
09	AFS	1810	0352	S13	E05	01 10.1		02	9	9	E	PALE	7396	
09	AFS	1810	0352	S18	W15	01 8.6		02	9	9	E	PALE	7389	
09	AFS	1812	0352	N08	E33	01 12.2		02	9	9	E	PALE	7398	
09	AFS	1812	0352	S19	W28	01 7.6		02	9	9	E	PALE	7394	
09	DSD	2355E	1053	S17	W44	01 6.6		01	9	9	E	LEAR	7394	
09	AFS	2355E	1053	S18	W34	01 7.4		01	9	9	E	LEAR	7394	
09	AFS	2356E	1053	S12	E00	01 10.0		02	9	9	E	LEAR	7396	
09	AFS	2357E	1053	N07	E31	01 12.3		01	8	8	E	LEAR	7398	
09	ADF	2358E	1053	S04	W35	01 7.4	1	07	9	9	E	LEAR	7387	
10	DSD	0141	0352	S17	W34	01 7.5		02	9	9	E	PALE	7394	
10	ADF	0825E	1508	S01	W43	01 7.1	1	11	9	9	E	SVTO	7386	
10	AFS	0825E	1508	S18	W36	01 7.6		02	9	9	E	SVTO	7394	
10	DSD	0825E	1508	S27	W38	01 7.4		02	9	9	E	SVTO	7387	
10	AFS	1140E	2054	N08	E24	01 12.3		02	9	9	E	RAMY	7398	
10	AFS	1140E	2054	S18	W38	01 7.6		02	9	9	E	RAMY	7394	
10	AFS	1144E	2054	S11	W05	01 10.1		01	9	9	E	RAMY	7396	
10	DSD	1214E	2054	S09	E08	01 11.1		01	9	9	E	RAMY	7391	
10	DSD	1220E	1549D	S19	W28	01 8.4		01	9	9	E	RAMY	7389	
10	AFS	1231E	2054	N05	E08	01 11.1		01	9	9	E	RAMY	7399	
10	SSB	1236		248	W09	01 14.1			0	0	E	RAMY		282 W43
10	DSD	1250E	1549D	S18	W40	01 7.5		02	9	9	E	RAMY	7394	
10	DSD	1305E	1549D	S19	W35	01 7.9		02	9	9	E	RAMY	7394	
10	ADF	1538E	2054	N00	W49	01 7.0	1	12	9	9	E	RAMY	7386	
10	AFS	1638E	2054	N12	E47	01 14.2		02	7	7	E	RAMY		
10	AFS	1645E	2054	S20	W31	01 8.3		02	9	9	E	RAMY	7389	
10	ADF	1649E	2054	S26	W39	01 7.7	1	13	9	9	E	RAMY	7387	
10	SSB	1710		249	W13	01 14.4			0	0	E	HOLL		284 W48
10	AFS	1723E	2047	S16	W43	01 7.5		02	9	9	E	HOLL	7394	
10	ADF	1723E	2047	S19	W50	01 6.9		12	9	9	E	HOLL	7394	
10	ADF	1845E	0323	N01	W50	01 7.0	1	03	9	9	E	PALE	7386	
10	ADF	1845E	0323	S04	W54	01 6.7	1	04	9	9	E	PALE	7386	
10	ADF	1845E	0323	S26	W47	01 7.1	1	04	9	9	E	PALE	7387	
10	AFS	2000E	0323	S16	W44	01 7.5		01	8	8	E	PALE	7394	
10	AFS	2000E	0323	S18	W32	01 8.4		02	9	9	E	PALE	7389	
10	SSB	2020		246	W11	01 14.3			0	0	E	PALE		285 W50
10	DSF	2054U	1604U	N02	E19	01 12.3		22	0	0	E	HOLL		
10	SSB	2352		232	W11	01 13.4			0	0	E	LEAR		
10	SSB	2352		232	W53	01 13.7			0	0	E	LEAR		
10	DSD	2355E	1056	S20	W47	01 7.4		01	9	9	E	LEAR	7394	
10	DSD	2355E	1056	S22	W30	01 8.7		01	9	9	E	LEAR	7389	
10	AFS	2356E	1056	N05	E01	01 11.1		01	9	9	E	LEAR	7399	
10	ADF	2357E	1056	S02	W52	01 7.1	1	08	9	9	E	LEAR	7386	
11	SSB	0846		251	W24	01 15.3			0	0	E	SVTO		282 W54
11	ADF	1054E	1442	N09	E09	01 12.1	1	04	9	9	E	SVTO	7398	
11	DSD	1054E	1442	S19	W53	01 7.4		03	9	9	E	SVTO	7394	
11	DSD	1130E	1148	S12	W04	01 11.2		02	9	9	E	RAMY	7391	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
11	AFS	1132E	1148	S19	W52	01	7.5		02	7	7	E	RANY	7394	
11	AFS	1333E	1442	S16	W54	01	7.5		04	9	9	E	SVTO	7394	
11	SSB	1604		251	W24	01	15.6			0	0	E	HOLL		284 W60
11	AFS	1639E	0005	N08	W09	01	11.0		02	9	9	E	HOLL	7399	
11	AFS	2000E	0323	S18	W32	01	9.4		02	9	9	E	PALE	7389	
11	AFS	2041E	0005	N08	E04	01	12.2		02	7	7	E	HOLL	7398	
11	AFS	2041E	0005	S12	W10	01	11.1		01	9	9	E	HOLL	7391	
11	AFS	2130E	0243	N06	W13	01	10.9		02	9	9	E	PALE	7399	
11	SSB	2205		250	W30	01	15.8			0	0	E	PALE		
11	ADF	2215E	0005	S04	W63	01	7.2	1	18	9	9	E	HOLL	7386	
11	DSF	2219U	1650U	S26	W20	01	10.4		25	0	0	E	HOLL		
11	AFS	2339E	1053	S19	W55	01	7.8		02	9	9	E	LEAR	7394	
11	DSD	2341E	1053	N07	W12	01	11.1		02	9	9	E	LEAR	7399	
12	AFS	0545E	1053	N06	W16	01	11.0		02	9	9	E	LEAR	7399	
12	AFS	0640E	1053	S12	W14	01	11.2		03	9	9	E	LEAR	7391	
12	DSD	0855	1515	S13	W20	01	10.9		08	9	9	E	SVTO	7391	
12	AFS	0910E	1515	N06	W17	01	11.1		02	9	9	E	SVTO	7399	
12	ADF	0910E	1515	N10	E00	01	12.4	1	05	9	9	E	SVTO	7398	
12	ADF	0910E	1515	S09	W70	01	7.1	1	07	9	9	E	SVTO	7386	
12	DSD	0910E	1515	S13	W17	01	11.1		03	9	9	E	SVTO	7391	
12	AFS	0910E	1515	S14	W16	01	11.2		02	9	9	E	SVTO	7391	
12	DSD	0910E	1515	S18	W68	01	7.2		04	9	9	E	SVTO	7394	
12	AFS	0910E	1515	S20	W64	01	7.5		03	9	9	E	SVTO	7394	
12	DSF	1023U	2307U	N32	W08	01	11.8	2	27	0	0	E	LEAR		
12	SSB	1024		250	W36	01	16.4			0	0	E	SVTO		223 W09
12	DSF	1024U	1401U	S27	W24	01	10.6	2	19	0	0	E	SVTO		
12	DSD	1027E	1515	S10	E03	01	12.7		02	9	9	E	SVTO		
12	AFS	1027E	1515	S10	E04	01	12.7		01	9	9	E	SVTO		
12	ASR	1326E	1400	S25	W90	01	5.6		11	9	8	E	SVTO		
12	AFS	1341E	1515	S06	W05	01	12.2		03	9	9	E	SVTO	7398	
12	AFS	1640E	0007	N07	W22	01	11.0		03	9	9	E	HOLL	7399	
12	ADF	1645E	0007	S18	W63	01	7.9	1	07	9	9	E	HOLL	7394	
12	SSB	1650		256	W45	01	17.3			0	0	E	HOLL		
12	ADF	1710E	0007	S09	W74	01	7.2	1	05	9	9	E	HOLL		
12	DSD	1910E	0333	N04	W25	01	10.9		02	9	9	E	PALE	7399	
12	DSD	1910E	0333	N07	W22	01	11.1		03	9	9	E	PALE	7399	
12	AFS	1910E	0333	N09	W21	01	11.2		02	8	8	E	PALE	7399	
12	DSD	1910E	0333	S09	E01	01	12.9		02	9	9	E	PALE	7400	
12	DSD	1910E	0333	S13	W20	01	11.3		02	8	8	E	PALE	7391	
12	ADF	1910E	0333	S13	W21	01	11.2	1	03	9	9	E	PALE	7391	
12	ADF	1910E	0333	S19	W63	01	8.0	1	04	9	9	E	PALE	7394	
12	SSB	1930		224	W15	01	14.6			0	0	E	PALE		234 W25 253 W44
12	AFS	2330E	0947	N06	W26	01	11.0		02	9	9	E	LEAR	7399	
12	ADF	2335E	0947	N09	W11	01	12.1	1	03	9	9	E	LEAR	7398	
13	ASR	0110E	0333	S06	E90	01	19.8		03	9	9	E	PALE		
13	LPS	0319E	0333	S06	W80	01	7.1		05	9	9	E	PALE	7386	
13	LPS	0335E	0738D	S04	W80	01	7.2		05	9	9	E	LEAR	7386	
13	AFS	0748E	1430	S10	W08	01	12.7		03	9	9	E	SVTO	7400	
13	AFS	0748E	1430	S10	W11	01	12.5		03	9	9	E	SVTO	7400	
13	APR	0748E	1430	S24	E90	01	20.3	1	11	7	7	E	SVTO		
13	SSB	0751		250	W48	01	17.5			0	0	E	SVTO		
13	ASR	0823E	1123	S17	W90	01	6.5		02	8	7	E	SVTO	7394	
13	BSD	0902E	0947	S17	W87	01	6.8		11	9	9	E	LEAR	7394	
13	ASR	1038E	1123	S20	W90	01	6.5		05	9	9	E	SVTO	7394	
13	ASR	1038E	1430	N37	E90	01	20.7		06	7	8	E	SVTO		
13	DSD	1053E	1430	S09	W11	01	12.6		02	9	9	E	SVTO	7400	
13	ASR	1211E	1316D	S25	W90	01	6.5		05	9	9	E	SVTO	7387	
13	ADF	1211E	1430	S13	W34	01	10.9	1	06	9	9	E	SVTO	7391	
13	ASR	1211E	1430	S19	W90	01	6.6		06	8	9	E	SVTO	7394	
13	AFS	1325E	1430	N04	W32	01	11.2		02	9	9	E	SVTO	7399	
13	DSD	1325E	1430	N10	E14	01	14.6		02	9	9	E	SVTO		
13	AFS	1326E	1430	N05	W17	01	12.3		02	9	9	E	SVTO	7398	
13	DSD	1336E	1430	S08	E84	01	19.9		01	9	9	E	SVTO		
13	AFS	1659E	1703	N06	W36	01	11.0		02	9	9	E	HOLL	7399	
13	AFS	1701E	1703	S09	W14	01	12.6		03	9	9	E	HOLL	7400	
13	ASR	2129E	0320D	S17	W90	01	7.0		06	9	9	E	PALE	7394	
13	AFS	2129E	0348	N05	W39	01	11.0		02	9	9	E	PALE	7399	
13	SSB	2222		248	W54	01	18.1			0	0	E	PALE		

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
13	AFS	2235E	0348	N05	W24	01 12.1		01	9	9	E	PALE	7398	
13	AFS	2235E	0348	S09	W16	01 12.7		01	9	9	E	PALE	7400	
13	AFS	2247E	0348	N10	E06	01 14.4		02	8	8	E	PALE		
13	AFS	2340E	0913	S09	W15	01 12.9		02	9	9	E	LEAR	7399	
13	DSD	2341E	0610D	S14	W39	01 11.0		03	9	9	E	LEAR	7391	
13	AFS	2342E	0913	N06	W25	01 12.1		02	9	9	E	LEAR	7398	
13	ASR	2355E	0913	S19	W90	01 7.1		10	9	9	E	LEAR	7394	
14	DSD	0225E	0913	S09	W21	01 12.5		03	9	9	E	LEAR	7400	
14	EPL	0655E	0742D	S27	E90	01 21.3	3	25	9	9	E	LEAR		
14	EPL	0717E	0745D	S25	E90	01 21.3	3	25	7	8	E	SVTO	7402	
14	AFS	0943E	1510	S10	E23	01 16.1		03	9	9	E	SVTO	7400	
14	AFS	0943E	1510	S10	E24	01 16.2		03	9	9	E	SVTO	7400	
14	DSD	0951E	1510	S09	E23	01 16.1		03	9	9	E	SVTO	7400	
14	AFS	0955E	1510	N06	W45	01 11.0		02	9	9	E	SVTO	7399	
14	APR	1030E	1510	S20	E90	01 21.3	1	06	6	8	E	SVTO	7402	
14	ADF	1030E	1510	S24	E67	01 19.6	1	06	9	9	E	SVTO	7402	
14	ADF	1214E	1510	S10	E68	01 19.6	1	03	9	9	E	SVTO	7401	
14	DSD	1214E	1510	S10	E70	01 19.8		02	9	9	E	SVTO	7401	
14	AFS	1230E	1510	N08	W31	01 12.2		03	9	9	E	SVTO	7398	
14	ADF	1230E	1510	N10	W29	01 12.3	1	02	9	9	E	SVTO	7398	
14	ASR	1237E	1510	S20	W90	01 7.6		02	9	9	E	SVTO	7394	
14	SSB	1810		247	W64	01 18.9			0	0	E	PALE		
14	AFS	1810E	0326	N04	W34	01 12.2		01	9	9	E	PALE	7398	
14	AFS	1810E	0326	S11	W29	01 12.6		01	9	9	E	PALE	7400	
14	DSD	2355E	1010D	N05	W53	01 11.0		01	9	9	E	LEAR	7399	
14	AFS	2356E	1045	S08	W29	01 12.8		01	9	9	E	LEAR	7400	
14	DSD	2356E	1045	S10	W25	01 13.1		03	9	9	E	LEAR	7400	
14	DSD	2357E	1045	N07	W38	01 12.1		02	9	9	E	LEAR	7398	
15	DSD	0028E	0241D	S09	W37	01 12.2		02	9	9	E	PALE	7400	
15	EPL	0032E	0140D	N11	E90	01 21.8	3	06	0	0	E	PALE	7403	
15	AFS	0250E	0326	S06	E67	01 20.1		03	9	9	E	PALE	7401	
15	ASR	0500E	0900D	N18	E90	01 22.1		03	8	8	E	LEAR	7403	
15	APR	0758E	1510	S15	W90	01 8.5		18	5	5	E	SVTO		
15	ASR	0820E	1045	S13	W90	01 8.5		03	8	8	E	LEAR		
15	ADF	0925E	1510	S10	W35	01 12.8		02	9	9	E	SVTO	7400	
15	DSD	0925E	1510	S11	W31	01 13.1		03	9	9	E	SVTO	7400	
15	ADF	0925E	1510	S13	W41	01 12.3		02	9	9	E	SVTO	7400	
15	EPL	0955E	1048D	S27	W90	01 8.4	3	13	9	9	E	SVTO		
15	EPL	0958E	1012D	S26	W90	01 8.4	3	08	8	8	E	LEAR		
15	ASR	0959E	1048D	S23	W90	01 8.5		03	9	9	E	SVTO		
15	ADF	1125E	1510	S25	E53	01 19.6		01	9	9	E	SVTO	7402	
15	DSD	1125E	1510	S25	E53	01 19.6		01	9	9	E	SVTO	7402	
15	DSD	1130E	1510	N13	E75	01 21.1		03	9	9	E	SVTO	7403	
15	DSD	1429E	0009	N05	W56	01 12.4		02	9	9	E	HOLL	7399	
15	AFS	1429E	0009	S11	W35	01 14.0		02	9	9	E	HOLL	7400	
15	ADF	1429E	0009	S18	W65	01 11.6		10	9	9	E	HOLL	7401	
15	DSD	1429E	0009	S25	E46	01 20.2		02	8	8	E	HOLL	7402	
15	BSD	1938E	0009	N08	W65	01 11.9		03	9	9	E	HOLL	7399	
15	AFS	1957E	2012	N05	W64	01 11.0		02	8	8	E	RAMY	7399	
15	AFS	1959E	2012	S10	W41	01 12.7		02	9	9	E	RAMY	7400	
15	AFS	2001E	2012	N12	E68	01 20.9		01	9	9	E	RAMY	7403	
15	AFS	2008E	2012	N08	E43	01 19.1		01	9	9	E	RAMY		
15	AFS	2052E	0153	S09	W41	01 12.8		02	9	9	E	PALE	7400	
15	ADF	2130E	0153	S27	E50	01 19.8	1	03	9	9	E	PALE	7402	
15	AFS	2140E	0153	N06	W52	01 12.0		02	9	9	E	PALE	7398	
15	AFS	2206E	0009	N15	W25	01 14.0		01	9	9	E	HOLL		
15	DSF	2207U	1900U	S44	E15	01 17.2		20	0	0	E	HOLL		
15	AFS	2239E	0153	N04	W66	01 11.0		02	9	9	E	PALE	7399	
15	SSB	2259		178	W11	01 21.8			0	0	E	PALE		
15	SSB	2320		178	W11	01 21.8			0	0	E	LEAR		
15	SSB	2320		216	W49	01 17.3			0	0	E	LEAR		
15	SSB	2343		216	W49	01 17.3			0	0	E	PALE		
15	AFS	2343E	0153	N13	W26	01 14.0		01	8	8	E	PALE		
15	DSD	2357E	0605D	S07	W45	01 12.6		02	8	8	E	LEAR	7400	
15	AFS	2357E	1056	S08	W42	01 12.8		01	9	9	E	LEAR	7400	
15	AFS	2358E	1056	N14	W26	01 14.0		01	9	9	E	LEAR		
15	ADF	2358E	1056	S10	E52	01 19.9	1	06	8	8	E	LEAR	7401	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
16	BSD	0038E	0259D	N12	E66	01 21.0		02	9	9	E	LEAR	7403	
16	DSD	0038E	0259D	N12	E67	01 21.1		03	9	9	E	LEAR	7403	
16	DSD	0540E	1056	N13	E64	01 21.1		04	9	9	E	LEAR	7403	
16	DSF	0607U	2345U	S35	W08	01 15.6	2	20	0	0	E	LEAR		
16	AFS	0840E	1320	S10	W48	01 12.7		03	9	9	E	SVTO	7400	
16	ADF	0855E	1320	S27	E44	01 19.8	1	04	9	9	E	SVTO	7402	
16	DSF	0907U	1330U	S48	E01	01 16.5	2	18	0	0	E	SVTO		
16	AFS	0922E	1320	N12	W32	01 14.0		01	9	9	E	SVTO		
16	DSD	0940	1105D	S23	E45	01 19.9		04	9	9	E	SVTO	7402	
16	AFS	1216E	2017	S09	W49	01 12.8		03	9	9	E	RAMY	7400	
16	DSD	1221E	2017	S25	E36	01 19.3		02	9	9	E	RAMY	7402	
16	ADF	1224E	2017	S29	E44	01 20.0	1	05	9	9	E	RAMY	7402	
16	AFS	1227E	2017	N14	W33	01 14.0		02	9	9	E	RAMY	7404	
16	DSF	1327U	1051U	S27	E13	01 17.6	2	26	0	0	E	SVTO		
16	SSB	1354		S26	W67	01 18.9			0	0	E	RAMY		
16	BSD	1403E	1507D	N14	E59	01 21.0		02	9	9	E	RAMY	7403	
16	AFS	1403E	2017	N11	E59	01 21.0		02	8	5	E	RAMY	7403	
16	DSD	1633E	2017	N12	E60	01 21.2		03	9	9	E	RAMY	7403	
16	AFS	1635E	2017	S11	E42	01 19.8		02	8	8	E	RAMY	7401	
16	DSD	1800E	2342	N11	E57	01 21.0		03	9	9	E	HOLL	7403	
16	AFS	1800E	2342	N16	W36	01 14.0		02	9	9	E	HOLL		
16	AFS	1901E	2342	S07	W54	01 12.7		03	8	8	E	HOLL	7400	
16	SSB	1920		S16	W07	01 21.5			0	0	E	HOLL		246 W90
16	BSD	2132E	2342	N08	W80	01 10.9		10	9	9	E	HOLL	7339	
16	DSF	2200U	0330U	S36	W03	01 16.7	2	25	0	0	E	LEAR		
16	AFS	2206E	0009	N15	W25	01 15.0		01	9	9	E	HOLL		
16	DSD	2340E	1054	N12	E53	01 21.0		03	9	9	E	LEAR	7403	
17	ASR	0230E	0750D	N04	W90	01 10.4		03	9	9	E	LEAR	7399	
17	AFS	1124E	2008	S11	W56	01 13.3		02	9	9	E	RAMY	7400	
17	ADF	1135E	2008	S24	E36	01 20.3	1	11	9	9	E	RAMY	7402	
17	AFS	1135E	2008	S26	E28	01 19.6		02	9	9	E	RAMY	7402	
17	DSD	1140E	1725D	S12	E28	01 19.6		01	9	9	E	RAMY	7401	
17	ADF	1140E	2008	S05	E41	01 20.5	1	09	9	9	E	RAMY	7401	
17	DSD	1140E	2008	S10	E31	01 19.8		03	9	9	E	RAMY	7401	
17	AFS	1140E	2008	S12	E29	01 19.7		02	9	9	E	RAMY	7401	
17	AFS	1143E	2008	N13	W46	01 14.0		02	9	9	E	RAMY	7404	
17	CAP	1206E	2008	S10	E90	01 24.3		01	9	9	E	RAMY		
17	SSB	1305		S14	W01	01 21.0			0	0	E	RAMY		186 W40 224 W78
17	ASR	1415E	1710D	S04	W90	01 10.9		02	9	9	E	RAMY		
17	ASR	1520E	1727	N08	W85	01 11.3		01	9	9	E	HOLL	7399	
17	AFS	1523E	1727	N16	W48	01 14.0		02	7	7	E	HOLL	7404	
17	ADF	1526E	1727	S31	E29	01 19.9	1	04	8	8	E	HOLL	7402	
17	ASR	1635E	2008	S13	E90	01 24.5		03	9	9	E	RAMY		
17	ASR	1710E	2008	N04	W90	01 11.0		03	9	9	E	RAMY		
17	AFS	1715E	2008	N16	E50	01 21.5		02	8	8	E	RAMY	7403	
17	DSD	1747E	2008	N14	W50	01 14.0		02	9	9	E	RAMY	7404	
17	ASR	1810E	2008	S10	W90	01 11.0		04	9	9	E	RAMY		
17	ASR	2008E	2008	S16	E90	01 24.7		03	9	9	E	RAMY		
17	AFS	2305E	1040	S08	W72	01 12.6		04	9	9	E	LEAR	7400	
17	AFS	2306E	1040	N14	W54	01 13.9		04	7	9	E	LEAR	7404	
18	ASR	0157E	1040	S16	E90	01 24.9		08	9	9	E	LEAR		
18	ASR	0320E	1040	S11	W90	01 11.4		04	9	9	E	LEAR		
18	ASR	0320E	1040	S11	W90	01 11.4		04	9	9	E	LEAR		
18	AFS	1338E	2126	S13	E13	01 19.5		03	9	9	E	RAMY	7401	
18	AFS	1342E	2126	N15	W68	01 13.4		02	7	8	E	RAMY	7404	
18	ASR	1345E	2126	S13	E90	01 25.4		03	9	9	E	RAMY		
18	AFS	1353E	2126	S08	E22	01 20.2		01	7	7	E	RAMY		
18	SSB	1414		S14	W16	01 22.3			0	0	E	RAMY		189 W56
18	DSD	1535E	2126	S22	E09	01 19.3		05	9	9	E	RAMY	7402	
18	DSD	1610E	2126	N13	W66	01 13.7		03	9	9	E	RAMY	7404	
18	DSD	1628E	2126	S12	E10	01 19.4		04	9	9	E	RAMY	7401	
18	ADF	1631E	2126	N01	E34	01 21.2	1	07	9	9	E	RAMY		
18	DSD	1645E	2126	N15	E29	01 20.9		03	9	9	E	RAMY	7403	
18	AFS	1712E	2126	S09	W81	01 12.6		02	9	9	E	RAMY	7400	
18	SSB	2150		S16	W39	01 24.4			0	0	E	PALE		
18	AFS	2152E	0241	S10	E09	01 19.6		02	8	8	E	PALE	7401	
18	ASR	2152E	0241	S10	W90	01 12.1		03	9	9	E	PALE	7400	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP No	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
18	DSD	2152E	0241	S13	E09	01	19.6		02	8	8	E	PALE	7401	
18	AFS	2152E	0241	S24	E10	01	19.7		02	8	8	E	PALE	7402	
18	AFS	2153E	0241	N10	E32	01	21.3		02	9	9	E	PALE	7403	
18	DSD	2153E	0241	N12	E41	01	22.0		02	9	9	E	PALE	7403	
18	ASR	2230E	0241	S13	E90	01	25.7		03	9	9	E	PALE		
18	ASR	2325E	1050	S13	E90	01	25.8		03	9	9	E	LEAR	7406	
18	ASR	2328E	1050	S10	W88	01	12.4		08	9	9	E	LEAR	7400	
19	AFS	0520E	1050	S06	E12	01	20.1		03	7	8	E	LEAR	7401	
19	AFS	0940E	1050	S22	W01	01	19.3		03	9	5	E	LEAR	7402	
19	DSD	1138E	1428	N13	E21	01	21.1		02	9	9	E	RAMY	7403	
19	AFS	1143E	1428	S13	E02	01	19.6		02	9	9	E	RAMY	7401	
19	DSD	1146E	1428	S11	W01	01	19.4		02	9	9	E	RAMY	7401	
19	AFS	1150E	1428	S22	W01	01	19.4		02	9	9	E	RAMY	7402	
19	AFS	1200E	1428	S13	E73	01	25.0		02	9	9	E	RAMY	7406	
19	ADF	1202E	1428	S13	E75	01	25.2	1	05	9	9	E	RAMY	7406	
19	ASR	1209E	1428	S11	W90	01	12.7		02	9	9	E	RAMY	7400	
19	DSD	1210E	1428	S11	W81	01	13.4		02	9	9	E	RAMY	7400	
19	DSD	1230E	1428	N16	W72	01	14.1		03	9	9	E	RAMY	7404	
19	SSB	1452		163	W44	01	24.8			0	0	E	HOLL		132 W19
19	DSF	1453U	1441U	S33	E34	01	22.3		08	0	0	E	HOLL		
19	ADF	1506E	2326	N25	E22	01	21.3	1	26	7	8	E	HOLL		
19	AFS	1527E	2326	S13	E00	01	19.6		01	8	9	E	HOLL	7401	
19	AFS	2030E	0158	S10	W04	01	19.5		02	9	9	E	PALE	7401	
19	DSD	2030E	0158	S15	W04	01	19.5		02	9	9	E	PALE	7401	
19	AFS	2045E	0158	N12	E16	01	21.1		02	8	8	E	PALE	7403	
19	ADF	2045E	0158	S26	W01	01	19.8	1	05	9	9	E	PALE	7402	
19	SSB	2047		132	W16	01	22.3			0	0	E	PALE		155 W39 169 W53
19	DSD	2100E	0158	S11	E68	01	25.0		03	9	9	E	PALE	7406	
19	ADF	2100E	0158	S17	E73	01	25.4	1	06	9	9	E	PALE	7406	
19	SSB	2104		167	W52	01	25.6			0	0	E	RAMY		
19	AFS	2335E	1047	S14	W06	01	19.5		02	9	9	E	LEAR	7401	
19	AFS	2336E	1047	S14	E65	01	24.9		05	9	9	E	LEAR	7406	
20	DSF	1000U	0449U	S10	W21	01	18.8		13	0	0	E	LEAR		
20	DSF	1000U	0449U	S23	W29	01	18.2		09	0	0	E	LEAR		
20	AFS	1200E	1859	S13	W10	01	19.7		02	9	9	E	RAMY	7401	
20	DSD	1210E	1859	S25	W14	01	19.4		03	9	9	E	RAMY	7402	
20	AFS	1210E	1859	S26	W14	01	19.4		02	9	9	E	RAMY	7402	
20	SSB	1825		109	W05	01	21.4			0	0	E	HOLL		
20	AFS	2020	0107	S13	W16	01	19.6		02	8	8	E	PALE	7401	
20	ADF	2022	0205	N15	E09	01	21.5		05	9	8	E	PALE	7403	
20	DSD	2039	2250	S12	W16	01	19.6		02	9	9	E	PALE	7401	
20	AFS	2257E	1044	S13	W17	01	19.7		03	9	9	E	LEAR	7401	
20	AFS	2258E	1044	S15	E56	01	25.2		03	9	9	E	LEAR	7406	
20	DSD	2317	0205	S13	W19	01	19.5		02	9	9	E	PALE	7401	
20	DSD	2335E	1044	S13	W20	01	19.5		03	9	9	E	LEAR	7401	
21	AFS	0130	0205	S18	E54	01	25.2		03	8	8	E	PALE	7406	
21	DSD	0145	0205	S15	E60	01	25.6		02	9	9	E	PALE	7406	
21	AFS	0730E	1458	S12	E49	01	25.0		04	9	9	E	SVTO	7406	
21	ADF	0730E	1458	S16	E48	01	24.9	1	03	9	9	E	SVTO	7406	
21	ADF	0810E	1044	S04	E35	01	23.9	1	06	3	6	E	LEAR		
21	DSD	0845E	1458	S12	E46	01	24.8		04	9	9	E	SVTO	7406	
21	DSF	0944U	2234U	S27	E10	01	22.2		06	0	0	E	LEAR		
21	DSD	1100E	1458	S08	E86	01	27.9		01	9	9	E	SVTO		
21	AFS	1150E	2137	S13	W22	01	19.8		02	9	9	E	RAMY	7401	
21	DSD	1150E	2137	S15	E52	01	25.4		01	9	9	E	RAMY	7406	
21	AFS	1221E	1458	S13	W24	01	19.7		03	9	9	E	SVTO	7401	
21	APR	1300E	1458	N35	E90	01	28.7	1	04	5	6	E	SVTO		
21	SSB	1518		456	W04	01	17.4			0	0	E	RAMY		
21	DSF	1733	1824	N19	E00	01	21.7		03	0	0	E	PALE	7403	
21	ADF	1818	0400	S10	W22	01	20.1	1	10	9	9	E	PALE	7401	
21	DSD	1828	0400	S18	E46	01	25.3		01	8	8	E	PALE	7406	
21	ADF	2045	0400	S13	E42	01	25.0	1	03	9	9	E	PALE	7406	
21	DSF	2241U	0029	S13	W31	01	19.6		03	0	0	E	PALE	7401	
21	ASR	2314	0150	N02	E90	01	28.7		02	9	9	E	PALE		
21	ADF	2325E	0008	S12	W32	01	19.6		04	9	9	E	HOLL	7401	
22	DSD	0505E	0555D	S11	W34	01	19.6		02	9	9	E	LEAR	7401	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
22	DSO	0835E	1010D	S12	W36	01	19.6		02	9	9	E	LEAR	7401	
22	DSF	1107U	1002U	N26	W18	01	21.1	2	09	0	0	E	SVTO	7403	
22	DSO	1135E	1523	N12	W17	01	21.2		02	9	9	E	SVTO	7403	
22	ADF	1135E	1523	N15	W13	01	21.5	1	05	9	9	E	SVTO	7403	
22	AFS	1135E	1523	S03	E09	01	23.1		01	9	9	E	SVTO		
22	DSO	1135E	1523	S05	E65	01	27.3		02	9	9	E	SVTO	7407	
22	DSO	1135E	1523	S14	E36	01	25.2		03	9	9	E	SVTO	7406	
22	SSB	1149		456	W15	01	18.2			0	0	E	RAMY		108 W27
22	DSO	1345E	2107	N16	W18	01	21.2		03	9	9	E	RAMY	7403	
22	DSO	1352E	2107	S13	E33	01	25.1		01	9	9	E	RAMY	7406	
22	AFS	2130E	0413	S06	E61	01	27.5		02	9	9	E	PALE	7407	
22	ADF	2136E	0413	S13	E32	01	25.3	1	04	8	8	E	PALE	7406	
22	ADF	2147E	0413	N17	W19	01	21.5	1	02	9	9	E	PALE	7403	
22	DSO	2238E	0413	S14	W42	01	19.8		02	9	9	E	PALE	7401	
22	AFS	2308E	1052	S13	W46	01	19.5		03	4	5	E	LEAR	7401	
23	AFS	0235E	0713D	S07	E62	01	27.7		03	5	4	E	LEAR	7407	
23	ADF	0400E	1052	S14	E28	01	25.3	1	06	5	6	E	LEAR	7406	
23	ADF	0415E	0635D	N26	W29	01	20.9	1	10	5	5	E	LEAR		
23	DSF	0444U	0635U	N26	W29	01	20.9	2	10	0	0	E	LEAR		
23	AFS	0923E	1455	S13	W50	01	19.6		02	9	9	E	SVTO	7401	
23	DSO	1214	1313D	S14	E19	01	24.9		01	9	9	E	SVTO	7406	
23	DSO	1225E	2148	S12	W51	01	19.7		01	9	9	E	RAMY	7401	
23	ADF	1232E	2148	N19	W18	01	22.1	1	10	9	9	E	RAMY	7403	
23	ADF	1233E	2148	N16	W23	01	21.8	1	05	9	9	E	RAMY	7403	
23	ADF	1245E	1455	N16	W25	01	21.6	1	06	9	9	E	SVTO	7403	
23	DSO	1248E	2148	S14	E20	01	25.0		01	9	9	E	RAMY	7406	
23	AFS	1249E	2148	S15	E26	01	25.5		01	9	9	E	RAMY	7406	
23	ADF	1303E	2148	N17	E14	01	24.6	1	02	9	9	E	RAMY		
23	AFS	1323E	1455	N17	E10	01	24.3		02	9	9	E	SVTO		
23	ADF	1432E	0017	N18	W28	01	21.5	1	14	9	9	E	HOLL	7403	
23	ADF	1432E	0017	S11	W42	01	20.4	1	06	9	9	E	HOLL	7401	
23	SSB	1440		457	W31	01	19.1			0	0	E	HOLL		
23	SSB	1452		445	W18	01	20.2			0	0	E	RAMY		456 W30 110 W43
23	AFS	1520E	0017	N17	E11	01	24.5		02	9	9	E	HOLL		
23	AFS	1531E	2148	N17	E11	01	24.5		02	9	9	E	RAMY		
23	APR	1717E	2049D	S26	E90	01	30.7	1	09	9	9	E	RAMY		
23	APR	1720E	2148	S42	W90	01	16.3	1	08	9	9	E	RAMY		
23	AFS	1728E	2148	S08	E53	01	27.7		02	9	9	E	RAMY	7407	
23	DSO	1742E	2148	S04	E53	01	27.7		02	9	9	E	RAMY	7407	
23	DSO	1748E	2148	S22	W56	01	19.4		02	8	7	E	RAMY	7402	
23	AFS	1751E	2148	S12	W56	01	19.5		01	9	9	E	RAMY	7401	
23	DSO	1805E	2148	N13	W33	01	21.3		02	9	9	E	RAMY	7403	
23	AFS	1832E	0400	N12	W30	01	21.5		02	9	9	E	PALE	7402	
23	ADF	1832E	0400	N16	W28	01	21.6	1	04	9	9	E	PALE	7403	
23	AFS	1832E	0400	S11	W53	01	19.8		02	8	8	E	PALE	7401	
23	AFS	1833E	0400	N17	E11	01	24.6		02	8	8	E	PALE		
23	AFS	1833E	0400	S07	E56	01	28.0		02	9	9	E	PALE	7407	
23	AFS	1833E	0400	S12	E11	01	24.6		02	8	8	E	PALE	7406	
23	SSB	1843		444	W20	01	20.4			0	0	E	PALE		457 W33
23	AFS	1925E	2148	S15	E77	01	29.6		02	7	7	E	RAMY		
23	ADF	2135E	2148	S33	W21	01	22.2	1	10	6	8	E	RAMY		
23	DSF	2156U	1630U	N08	W10	01	23.2		07	0	0	E	HOLL		
23	AFS	2305E	0240D	N17	E05	01	24.3		02	8	7	E	LEAR		
24	ADF	0930E	1506	N16	W37	01	21.6	1	03	9	9	E	SVTO	7403	
24	DSO	0930E	1506	S14	E09	01	25.1		01	9	9	E	SVTO	7406	
24	AFS	0930E	1506	S15	W64	01	19.5		01	9	9	E	SVTO	7401	
24	AFS	0945E	1506	N11	W59	01	20.0		01	9	8	E	SVTO		
24	AFS	0945E	1506	N17	W02	01	24.2		02	7	7	E	SVTO		
24	DSO	0945E	1506	S07	E41	01	27.5		01	9	9	E	SVTO	7407	
24	AFS	1208E	2205	S15	E70	01	29.8		01	9	9	E	RAMY		
24	AFS	1212E	2205	S07	E42	01	27.6		02	9	9	E	RAMY	7407	
24	AFS	1218E	2205	N17	W02	01	24.4		02	9	9	E	RAMY	7409	
24	DSO	1218E	2205	N17	W03	01	24.3		01	9	9	E	RAMY	7409	
24	DSO	1222E	2205	S13	E09	01	25.2		02	9	9	E	RAMY	7406	
24	AFS	1223E	2205	S13	E04	01	24.8		01	7	7	E	RAMY	7406	
24	ADF	1227E	2205	N15	W57	01	20.2	1	06	9	9	E	RAMY	7408	
24	DSO	1232E	2205	S12	W65	01	19.6		01	9	9	E	RAMY	7401	
24	APR	1237E	2205	S42	W90	01	17.1	1	07	9	9	E	RAMY		

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP No	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
24	ADF	1240E	2205	N16	W38	01	21.6	1	04	9	9	E	RAMY	7403	
24	SSB	1259		459	W44	01	19.6			0	0	E	RAMY		110 W55
24	ADF	1640E	2304	N17	W39	01	21.7	1	05	9	9	E	HOLL	7403	
24	AFS	1713E	2205	N10	W59	01	20.3		02	9	9	E	RAMY	7408	
24	AFS	1720E	2304	N11	W58	01	20.3		02	8	8	E	HOLL	7408	
24	AFS	1722E	2304	S11	W68	01	19.6		02	6	6	E	HOLL	7401	
24	BSD	1728E	0000	N16	W43	01	21.5		03	9	9	E	RAMY	7403	
24	SSB	1730		112	W60	01	25.8			0	0	E	HOLL		
24	DSD	1742E	2205	S15	E04	01	25.0		01	9	9	E	RAMY	7406	
24	AFS	1844E	0404	N13	W41	01	21.7		02	8	8	E	PALE	7403	
24	DSD	1844E	0404	N17	W42	01	21.6		03	9	9	E	PALE	7403	
24	ADF	1844E	0404	N21	W37	01	21.9	1	04	9	9	E	PALE	7403	
24	AFS	1844E	0404	S12	W61	01	20.2		02	9	9	E	PALE	7401	
24	DSD	1845E	0404	N06	W19	01	23.3		01	9	9	E	PALE	7409	
24	AFS	1845E	0404	N10	W57	01	20.5		01	9	9	E	PALE	7408	
24	AFS	1845E	0404	N21	W04	01	24.5		02	8	8	E	PALE	7409	
24	AFS	1845E	0404	S06	E38	01	27.6		02	9	9	E	PALE	7407	
24	AFS	1845E	0404	S11	E03	01	25.0		02	9	9	E	PALE	7406	
24	DSD	1845E	0404	S11	E07	01	25.3		02	9	9	E	PALE	7406	
24	ADF	1845E	0404	S13	E42	01	27.9	1	04	9	9	E	PALE	7407	
24	SSB	1905		458	W47	01	19.9			0	0	E	PALE		106 W55
24	AFS	1950E	2205	N14	W45	01	21.4		02	8	8	E	RAMY	7403	
24	DSD	2025E	2205	N13	W47	01	21.3		02	9	9	E	RAMY	7403	
24	DSF	2038U	2109U	N13	W75	01	19.2	1	13	7	7	E	HOLL		
24	DSF	2043U	1150U	N11	W73	01	19.4	1	10	0	0	E	RAMY		
25	DSD	0230E	0634	N09	W68	01	20.0		04	9	9	E	LEAR	7408	
25	AFS	0230E	0634	N10	W65	01	20.2		02	9	9	E	LEAR	7408	
25	AFS	0322E	0634	N18	W11	01	24.3		02	9	9	E	LEAR	7409	
25	DSF	0532U	0330U	S37	E09	01	25.9		14	0	0	E	LEAR		
25	DSD	1105	0000	N09	W69	01	20.3		05	9	9	E	SVTO	7408	
25	DSD	1208E	2011D	N13	W58	01	21.1		04	9	9	E	RAMY	7403	
25	ADF	1210E	2151	N17	W52	01	21.5	1	05	9	9	E	RAMY	7403	
25	AFS	1222E	2151	N10	W73	01	20.0		02	9	9	E	RAMY	7408	
25	DSD	1223E	2015D	N10	W75	01	19.9		03	9	9	E	RAMY	7408	
25	AFS	1225E	2151	N16	W17	01	24.2		02	8	8	E	RAMY	7409	
25	AFS	1228E	1653D	S05	E31	01	27.8		02	9	9	E	RAMY	7407	
25	AFS	1229E	2151	S14	E57	01	29.8		01	9	9	E	RAMY		
25	SSB	1230		425	W25	01	23.6			0	0	E	RAMY		460 W60 111 W71
25	DSF	1348U	0737U	S47	E17	01	27.0	2	15	0	0	E	SVTO		
25	DSF	1853U	1633U	S45	E07	01	26.4		06	0	0	E	HOLL		
25	SSB	1922		459	W61	01	20.6			0	0	E	HOLL		
25	AFS	1930E	2355	N11	W76	01	20.1		02	9	9	E	HOLL	7408	
25	DSF	1935U	1136U	S40	E00	01	25.8	1	10	0	0	E	RAMY		
25	ADF	2115E	0033	N07	W73	01	20.4	1	05	9	9	E	PALE	7408	
25	DSD	2115E	0033	N18	W22	01	24.2		02	9	9	E	PALE	7409	
25	AFS	2115E	0033	S07	E20	01	27.4		02	9	9	E	PALE	7407	
25	AFS	2115E	0033	S10	W10	01	25.1		01	9	9	E	PALE	7406	
25	DSD	2115E	0033	S14	W08	01	25.3		02	9	9	E	PALE	7406	
25	AFS	2140E	2355	N18	W22	01	24.2		02	9	9	E	HOLL	7409	
26	SSB	0737		396	W05	01	19.1			0	0	E	SVTO		
26	ASR	0816E	1401	N09	W90	01	19.6		02	9	9	E	SVTO	7408	
26	ADF	0835E	1401	N16	W66	01	21.3	1	04	9	9	E	SVTO	7403	
26	ADF	0850E	1401	S02	E16	01	27.6	1	03	9	9	E	SVTO	7407	
26	DSD	0850E	1401	S07	E16	01	27.6		02	9	9	E	SVTO	7407	
26	ADF	0914E	1401	S15	W16	01	25.2	1	02	9	9	E	SVTO	7406	
26	DSF	1136U	1421U	N02	E27	01	28.5	1	05	0	0	E	RAMY		
26	ASR	1142E	2152	N10	W90	01	19.7		02	9	9	E	RAMY	7408	
26	DSD	1159E	1713D	S15	W18	01	25.1		01	9	9	E	RAMY	7406	
26	SSB	1218		395	W07	01	19.4			0	0	E	RAMY		460 W72
26	AFS	1247E	1653D	S05	E14	01	27.6		01	9	9	E	RAMY	7407	
26	ADF	1313E	2152	N17	W65	01	21.6	1	04	9	9	E	RAMY	7403	
26	AFS	1318E	2152	N14	W67	01	21.5		02	9	9	E	RAMY	7403	
26	DSD	1350E	2152	N17	W31	01	24.2		02	9	9	E	RAMY	7409	
26	SSB	1429		457	W70	01	21.4			0	0	E	HOLL		
26	ADF	1503E	2235	N07	W57	01	22.3	1	12	9	9	E	HOLL	7408	
26	ADF	1504E	2235	N06	W73	01	21.2	1	06	9	9	E	HOLL	7408	
26	ADF	1506E	2234	N02	W68	01	21.5	1	07	7	7	E	HOLL	7408	
26	ASR	1523E	2235	N02	W68	01	21.6		01	9	9	E	HOLL	7408	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
26	ASR	1637E	1835D	N08	W90	01	19.9		01	9	9	E	RAMY	7408	
26	ADF	1722E	2152	N04	W54	01	22.7	1	09	9	9	E	RAMY		
26	AFS	1800E	0225	N19	W34	01	24.1		01	9	9	E	PALE	7409	
26	ASR	1800E	0403	N10	W90	01	20.0		02	9	9	E	PALE	7408	
26	ADF	1800E	0403	N16	W62	01	22.0	1	03	9	9	E	PALE	7403	
26	ADF	1800E	0403	S06	E10	01	27.5	1	03	9	9	E	PALE	7407	
26	DSD	1800E	0403	S12	W22	01	25.1		02	9	9	E	PALE	7406	
26	AFS	1800E	0403	S12	W23	01	25.0		01	8	8	E	PALE	7406	
26	AFS	1800E	0403	S18	W24	01	24.9		01	8	8	E	PALE	7410	
26	SSB	1810		397	W12	01	19.4			0	0	E	PALE		425 W40 456 W71
27	ASR	0750E	1520	N06	W90	01	20.6		01	9	9	E	SVTO	7408	
27	AFS	0750E	1520	N13	W30	01	25.1		02	9	9	E	SVTO	7406	
27	DSD	0750E	1520	N14	W28	01	25.2		01	8	8	E	SVTO	7406	
27	AFS	0750E	1520	S05	E04	01	27.6		02	9	9	E	SVTO	7407	
27	ASR	0806E	1200	S13	E87	02	2.9		01	9	9	E	SVTO		
27	AFS	0837E	1520	S11	W14	01	26.3		03	9	9	E	SVTO		
27	AFS	0840E	0935	S11	W14	01	26.3		02	9	9	E	LEAR		
27	DSD	1134E	1728D	S15	W32	01	25.0		01	9	9	E	RAMY	7406	
27	AFS	1139E	2022	S11	W16	01	26.3		02	9	9	E	RAMY	7411	
27	DSD	1140E	2022	S10	W14	01	26.4		02	9	9	E	RAMY	7411	
27	AFS	1150E	2022	S05	E02	01	27.6		02	9	9	E	RAMY	7407	
27	ASR	1203E	1632D	N07	W90	01	20.8		02	7	8	E	RAMY	7408	
27	ASR	1204E	2022	N15	W90	01	20.7		02	9	9	E	RAMY	7403	
27	ASR	1205E	1655D	S16	E90	02	3.3		02	9	9	E	RAMY		
27	ASR	1206E	1655D	S19	E90	02	3.4		01	9	9	E	RAMY		
27	APR	1208E	1632D	N05	E90	02	3.2	1	03	8	7	E	RAMY		
27	DSD	1320E	1520	S10	W18	01	26.2		03	9	9	E	SVTO		
27	AFS	1353E	1520	N11	E72	02	2.0		02	9	9	E	SVTO		
27	AFS	1422E	2022	N10	E73	02	2.1		02	9	9	E	RAMY		
27	DSD	1423E	2022	N11	E73	02	2.1		03	9	9	E	RAMY		
27	APR	1632E	2022	N06	W90	01	20.9	1	06	9	9	E	RAMY	7408	
27	ASR	1655E	2022	S14	E90	02	3.5		01	9	9	E	RAMY	7412	
27	DSD	1712E	2022	S07	E00	01	27.7		02	9	9	E	RAMY	7407	
27	DSD	1719E	2022	S11	W20	01	26.2		02	9	9	E	RAMY	7411	
27	DSD	1719E	2022	S12	W21	01	26.1		01	9	9	E	RAMY	7411	
27	ADF	1731E	2022	N04	W72	01	22.3	1	11	7	9	E	RAMY	7408	
27	DSD	1750E	0400	S13	W29	01	25.5		03	9	9	E	PALE	7406	
27	AFS	1800E	0225	N19	W34	01	25.1		01	9	9	E	PALE	7409	
27	AFS	1802E	0400	S05	W01	01	27.7		02	9	9	E	PALE	7407	
27	DSD	1815E	0400	S15	E81	02	2.9		01	9	9	E	PALE	7412	
27	ASR	1828E	2207	N06	W80	01	21.8		03	9	9	E	PALE	7408	
27	DSD	1837E	2133	S10	W18	01	26.4		02	9	9	E	HOLL	7411	
27	AFS	1837E	2133	S10	W21	01	26.2		02	9	9	E	HOLL	7411	
27	ASR	1837E	2133	S16	E90	02	3.6		01	8	8	E	HOLL	7412	
27	DSD	1841E	0400	S10	W22	01	26.1		02	9	9	E	PALE	7411	
27	SSB	1915		375	W04	01	22.2			0	0	E	PALE		
28	DSD	0250E	1101	S12	W24	01	26.3		02	8	8	E	LEAR	7411	
28	SSB	0755		406	W41	01	27.8			0	0	E	SVTO		
28	DSD	0810E	1525	S09	E72	02	2.7		02	9	9	E	SVTO	7412	
28	DSD	0810E	1525	S16	E80	02	3.4		04	9	9	E	SVTO	7412	
28	DSD	0822E	1525	S13	W30	01	26.1		02	9	9	E	SVTO	7411	
28	DSD	0845	1525	S12	W28	01	26.2		02	9	9	E	SVTO	7411	
28	ADF	0846	1525	S11	W31	01	26.0	1	03	9	9	E	SVTO	7411	
28	AFS	0939E	1525	N12	E60	02	1.9		02	9	9	E	SVTO		
28	AFS	0949E	1525	S12	W30	01	26.1		03	9	9	E	SVTO	7411	
28	AFS	1021E	1525	S24	W61	01	23.7		02	9	9	E	SVTO		
28	AFS	1304E	1525	N07	E11	01	29.4		02	7	6	E	SVTO		
28	AFS	1515E	1609	S11	W33	01	26.1		02	9	9	E	RAMY	7411	
28	DSD	1515E	1609	S11	W34	01	26.1		03	9	9	E	RAMY	7411	
28	AFS	1524E	1609	S14	W46	01	25.2		02	9	9	E	RAMY	7406	
28	DSD	1529E	1609	N11	E58	02	2.0		01	9	9	E	RAMY	7413	
28	AFS	2056E	2358	S11	W36	01	26.2		03	9	9	E	HOLL	7411	
28	SSB	2220		404	W47	01	28.6			0	0	E	HOLL		
28	DSD	2350E	0355D	S13	W39	01	26.0		02	9	9	E	LEAR	7411	
28	AFS	2350E	1052	S12	W37	01	26.2		01	9	9	E	LEAR	7411	
28	AFS	2351E	0355D	N12	E52	02	1.9		01	9	9	E	LEAR	7413	
28	ADF	2351E	1052	S12	E67	02	3.0	1	06	8	8	E	LEAR	7412	

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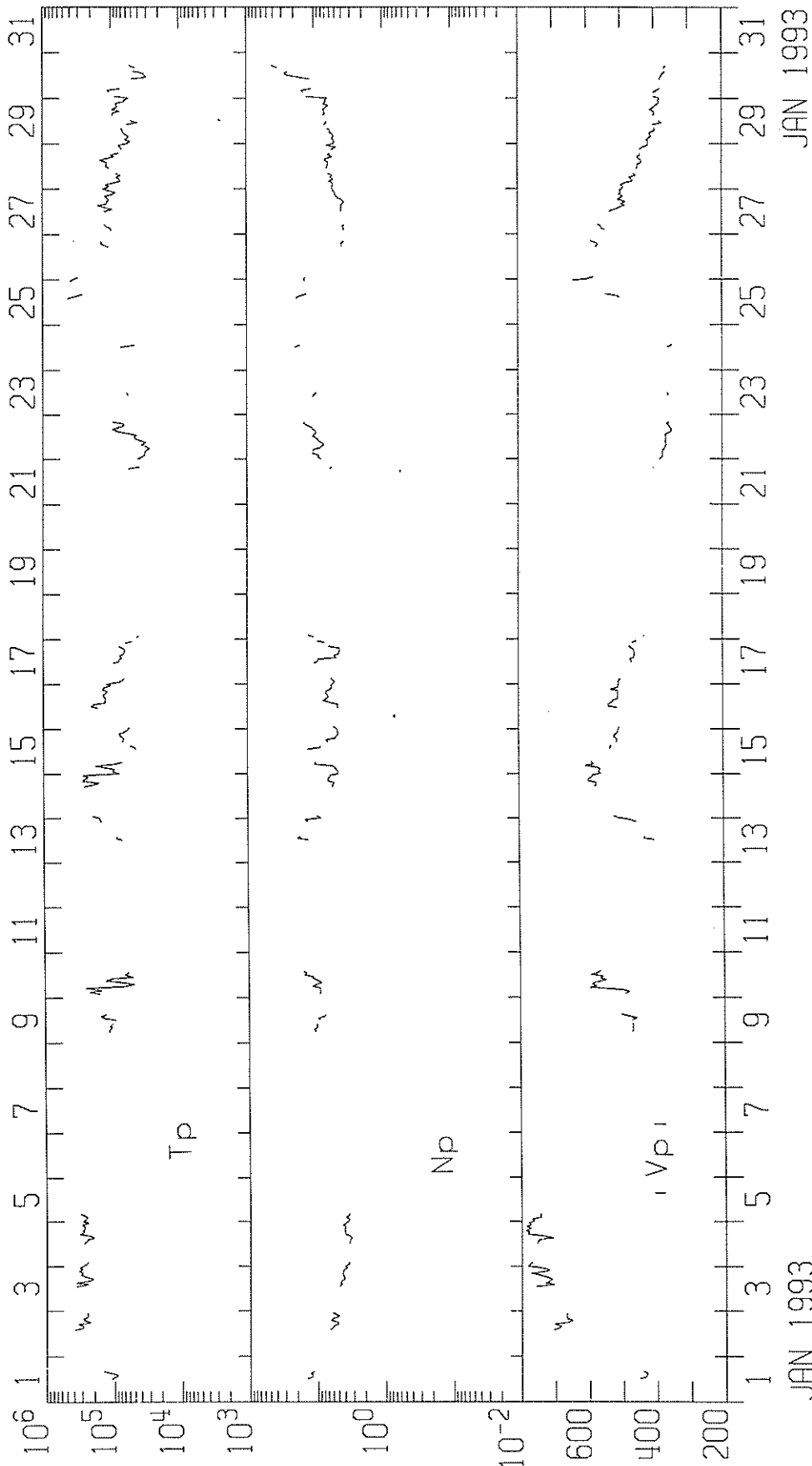
ACTIVE PROMINENCES AND FILAMENTS

JANUARY 1993

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
29	AFS	1625E	0015	N00	W47	01 26.2		01	8	7	E	HOLL	7411	
29	ADF	1625E	2155D	S10	W50	01 25.9	1	11	9	9	E	HOLL	7400	
29	DSD	2155E	2320D	S11	W53	01 25.9		03	9	9	E	HOLL	7411	
29	SSB	2230		373	W30	01 24.2			0	0	E	HOLL		
29	AFS	2315E	1051	S12	W50	01 26.2		03	9	9	E	LEAR	7411	
29	AFS	2316E	1051	S10	W50	01 26.2		03	9	9	E	LEAR	7411	
29	ADF	2318E	1051	S14	E54	02 3.0	1	05	9	9	E	LEAR	7412	
30	ADF	0215E	0400	S12	W53	01 26.1	1	04	9	9	E	PALE	7411	
30	AFS	0215E	0400	S13	W50	01 26.3		02	9	9	E	PALE	7411	
30	SSB	0225		369	W28	01 24.7			0	0	E	PALE		389 W48
30	AFS	0230E	0400	S15	E48	02 2.7		02	9	9	E	PALE	7412	
30	ADF	0230E	0400	S16	E54	02 3.2	1	04	9	9	E	PALE	7412	
30	DSD	0556E	0835D	N10	E35	02 1.9		03	9	9	E	LEAR	7413	
30	ASR	1226E	2117	S20	W90	01 23.6		06	9	9	E	RAMY	7410	
30	DSD	1229E	2117	S12	W59	01 26.1		01	9	9	E	RAMY	7411	
30	DSD	1229E	2117	S12	W62	01 25.8		02	9	9	E	RAMY	7411	
30	DSD	1236E	2117	N11	E32	02 1.9		02	9	9	E	RAMY	7413	
30	ADF	1239E	2117	S11	E49	02 3.2	1	12	9	9	E	RAMY	7412	
30	ADF	1239E	2117	S20	E50	02 3.3	1	08	9	9	E	RAMY	7412	
30	DSD	1240E	2117	S21	E51	02 3.4		03	9	9	E	RAMY	7412	
30	AFS	1348E	2117	N16	E63	02 4.3		01	9	9	E	RAMY		
30	ASR	1440E	0022	S20	W90	01 23.7		03	9	9	E	HOLL	7410	
30	AFS	1453E	2117	S13	W59	01 26.2		01	9	9	E	RAMY	7411	
30	SSB	1503		389	W55	01 22.9			0	0	E	HOLL		
30	DSD	1656E	2117	S14	E40	02 2.7		04	9	9	E	RAMY	7412	
30	ASR	1711E	2117	S24	W90	01 23.8		02	9	9	E	RAMY	7410	
30	ADF	2130E	0355	S09	W68	01 25.8	1	03	9	9	E	PALE	7411	
30	DSD	2130E	0355	S10	W64	01 26.1		02	9	9	E	PALE	7411	
30	DSD	2130E	0355	S12	W67	01 25.8		03	9	9	E	PALE	7411	
30	AFS	2133E	0355	S13	E38	02 2.8		02	9	9	E	PALE	7412	
30	ADF	2133E	0355	S16	E45	02 3.3	1	04	9	9	E	PALE	7412	
30	ADF	2133E	0355	S17	E54	02 4.0	1	06	9	9	E	PALE	7412	
30	DSD	2133E	0355	S19	E48	02 3.6		02	9	9	E	PALE	7412	
30	DSD	2345E	0022	S07	W67	01 26.0		03	9	9	E	HOLL	7411	
30	ADF	2345E	0022	S12	E43	02 3.2		05	9	9	E	HOLL	7412	
30	ADF	2345E	0022	S12	E44	02 3.3		06	9	9	E	HOLL	7412	
31	ASR	0010E	0540D	S22	W89	01 24.2		05	9	9	E	LEAR		
31	AFS	0020E	0355	S10	W65	01 26.1		02	8	8	E	PALE	7406	
31	ASR	0020E	0355	S27	W90	01 24.0		03	9	9	E	PALE	7410	
31	SSB	0025		371	W42	01 25.2			0	0	E	PALE		393 W64
31	DSD	0845E	1201D	S15	E32	02 2.8		02	9	9	E	SVTO	7412	
31	DSD	0923E	0000	S09	W74	01 25.8		06	9	9	E	SVTO	7411	
31	DSD	0923E	1207D	S14	W72	01 25.9		03	9	9	E	SVTO	7411	
31	DSD	0959E	1156D	S26	E48	02 4.1		02	9	9	E	SVTO	7412	
31	ADF	1435E	1910	S14	E32	02 3.0	1	14	9	9	E	RAMY	7412	
31	AFS	1439E	1910	S11	W72	01 26.2		02	9	9	E	RAMY	7411	
31	DSD	1710E	1910	S09	W76	01 26.0		03	9	9	E	RAMY	7411	
31	APR	1718E	1910	N11	E90	02 7.5	1	06	9	9	E	RAMY		
31	ASR	1720E	1910	S19	W90	01 24.8		02	8	8	E	RAMY	7410	
31	APR	1722E	1910	S13	E90	02 7.5	1	02	9	9	E	RAMY		
31	ASR	2005E	0023	N08	E90	02 7.6		08	9	9	E	HOLL		
31	APR	2009E	0023	S13	E90	02 7.6		03	9	9	E	HOLL		
31	ASR	2248	0023	S12	E90	02 7.7		04	9	9	E	HOLL		
31	ASR	2340E	1045	S12	E90	02 7.8		14	9	9	E	LEAR		

IMP 8 SOLAR WIND PLASMA JANUARY 1993

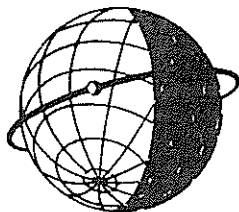
MIT/CSR IMP 8 PLASMA PARAMETERS



IMP 8

MIT

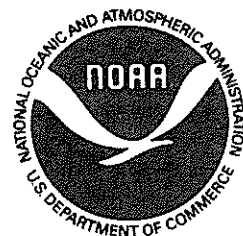
PRELIMINARY ONE-HOUR AVERAGES



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

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