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

NUMBER 543

(Issued in Two Parts)

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C O N T E N T S

PART I (PROMPT REPORTS)

PART II (COMPREHENSIVE REPORTS)

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Comprehensive Reports DATA FOR **MAY 1989** Number 543 Part II

Hα S O L A R F L A R E S

MAY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		01	0053		0153	No Flare Patrol													
0001	HOLL	01	0108E	0110U	0115D	N28	E60	5470	05	5.7	7D	SN	M 5.5	2	E		76		EF
0002	YUNN	01	0202E	0209	0236	N30	E55	5470	05	5.4	34D	SN			P		16	0.4	
0003		01	0206	02042	0213	S18	E10	5464	05	1.8	7	SN					40	0.7	E
	YUNN	01	0202E	0204	0216	S17	E10	5464	05	1.8	14D	SN			P		63	0.7	E
	LEAR	01	0206	0206	0210	S19	E09	5464	05	1.8	4	SF		3	E		16		
0004		01	0325	0323*	0333	N29	E58	5470	05	5.7	8	SF					50	1.5	FH
	PALE	01	0303E	0323	0333	N28	E61	5470	05	5.9	30D	SF		3	E		37		FH
	YUNN	01	0325	0334	0343D	N30	E56	5470	05	5.5	18D	SF			P		63	1.5	F
0005	ABST	01	0418E	0418U	0438D	N20	E47	5473A	05	4.8	20D	2N			P	0418	323	5.8	BE
0006	ABST	01	0418E	0419U	0421	S15	W01	5464	05	1.1	3D	SF			P	0419	44	0.5	BD
0007	ABST	01	0500	0502	0505	S15	W05	5464	04	30.8	5	SF			C	0502	87	1.0	F
0008	YUNN	01	0824E	0824U	0825	S18	E07	5464	05	1.9	1D	SF			P	0824	19	0.2	D
0009	KHAR	01	1009	1010	1016	N30	E58	5470	05	6.0	7	SF		2	V	1010			D
0010		01	1044	1046	1055	S20	E05	5464	05	1.8	11	SN	C 1.7				32		DH
	RAMY	01	1038E	1038U	1056	S18	E05	5464	05	1.8	18D	SF	C 1.7	2	E		32		
	KHAR	01	1044	1046	1054	S21	E05	5464	05	1.8	10	SN		2	V	1046			DH
0011		01	13152	1318	1330	N28	E54	5470	05	5.8	15	SF	C 1.8				64		
	HOLL	01	1315	1318	1334	N29	E56	5470	05	5.9	19	SF	C 1.8	3	E		75		
	RAMY	01	1317	1318	1326	N28	E53	5470	05	5.7	9	SF	C 1.8	3	E		53		
0012	HOLL	01	1433	1525	1532	N29	E52	5470	05	5.7	59	SF	C 3.0	3	E		64		F
0013	RAMY	01	1701E	1707	1745	N27	E53	5470	05	5.8	44D	SF		3	E		22		F
0014	HOLL	01	1820	1823	1829	S23	W79	5460	04	25.8	9	SF		3	E		44		
0015	HOLL	01	1930	1930	1937	N28	E51	5470	05	5.8	7	SF	C 2.1	3	E		10		
0016		01	2012	2014	2016	N28	E49	5470	05	5.7	4	SF	C 1.9				28		F
	RAMY	01	1957E	2011U	2014D	N28	E49	5470	05	5.7	17D	SF	C 1.9	2	E		44		F
	HOLL	01	2012	2014	2016	N29	E49	5470	05	5.7	4	SF		3	E		12		
0017	HOLL	01	2045	2048	2058	N28	E51	5470	05	5.8	13	SN	C 2.8	3	E		44		
0018	HOLL	01	2058	2100	2116	N19	W16	5463	04	30.6	18	SF		3	E		33		
0019		01	2109*	2110*	2145	N27	E49	5470	05	5.7	36	SF	C 5.5				34		K
	HOLL	01	2109	2110	2142	N27	E49	5470	05	5.7	33	SF	C 5.5		E		51		K
	HOLL	01	2109	2119	2142	N27	E49	5470	05	5.7	33	SF	C 5.5	3	E		36		
	HOLL	01	2144	2146	2150	N28	E50	5470	05	5.8	6	SF		3	E		14		
0020		01	2245	2248*	2330	N29	E51	5470	05	5.9	45	SF	C 3.5				30		K
	HOLL	01	2245	2248	2330	N29	E51	5470	05	5.9	45	SF	C 3.5	3	E		43		
	HOLL	01	2245	2312	2330	N29	E51	5470	05	5.9	45	SF	C 3.5		E		17		K
0021	LEAR	02	0052	0055	0058	N30	E49	5470	05	5.9	6	SF		3	E		30		F
0022		02	0115	0116*	0147	N29	E49	5470	05	5.9	32	SF	C 4.4				87	2.9	F
	LEAR	02	0115	0116	0120	N29	E51	5470	05	6.0	5	SF	C 4.4	3	E		33		
	YUNN	02	0121E	0140	0214	N28	E47	5470	05	5.7	53D	1N			P		157	2.9	F
	PALE	02	0154E	0208	0229D	N30	E49	5470	05	5.9	35D	SF	C 9.0	3	E		71		F
0023	LEAR	02	0127	0129	0135	S21	W80	5460	04	26.0	8	SF		3	E		29		
0024	PALE	02	0344	0344	0354	N31	E48	5470	05	5.9	10	SF		3	E		19		H
0025	LEAR	02	0407	0414	0456	N29	E49	5470	05	6.0	49	1N	M 2.1	3	E		114		F

MAY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0026		02	07508	07529	0820	S22	E68	5471	05	7.5	30	1N					88	1.4	EFHI
	KHAR	02	0750	0752	0823	S20	E70	5471	05	7.7	33	1F		2	V	0752			H
	HTPR	02	0751	0754	0825	S20	E67	5471	05	7.4	34	1B			C	0754	130		EI
	CATA	02	0751E	0756	0819	S22	E69	5471	05	7.6	28D	1N		2	P	0756	112		
	KANZ	02	0755	0755	0824	S22	E65	5471	05	7.3	29	SF			P				
	CATA	02	0756	0801	0825D	S25	E67	5471	05	7.5	29D	SN		2	P	0801	56		
	CATA	02	0756	0801	0825D	S21	E65	5471	05	7.3	29D	SN		2	P	0801	56	1.4	
	ISTA	02	0758		0809	S22	E74	5471	05	8.0	11	1N			V				F
0027		02	08253	08271	0835	N30	E47	5470	05	6.0	10	SB					80	1.2	E
	HTPR	02	0825	0827	0835	N30	E48	5470	05	6.1	10	SB			C	0827	80	1.2	E
	KANZ	02	0828	0828	0835	N31	E46	5470	05	6.0	7	SN			P				
0028	KHAR	02	0948		0958	N31	E47	5470	05	6.1	10	SF		2	V	0948			
0029	HTPR	02	1000	1006	1012	S23	W90	5460	04	25.6	12	SF			C	1006	20		
0030		02	1043	1048	1054	N30	E46	5470	05	6.1	11	SN					32	0.3	F
	RAMY	02	1021E	1026U	1048	N29	E43	5470	05	5.8	27D	SF		2	E		45		F
	HTPR	02	1043	1048	1100	N32	E48	5470	05	6.2	17	SN			C	1048	20	0.3	
0031		02	11221	11242	1135	N26	W42	5468	04	29.3	13	SN	C 2.1				20	0.3	E
	HTPR	02	1122	1124	1129	N26	W40	5468	04	29.5	7	SN			C	1124	20	0.3	E
	RAMY	02	1123	1126	1141	N25	W43	5468	04	29.2	18	SF	C 2.1	3	E		19		
0032	HTPR	02	1135	1138	1146	N25	W90		04	25.6	11	SN			C	1138	30		
0033		02	11373	1140	1152	N30	E46	5470	05	6.1	15	SN					36	0.9	EF
	HTPR	02	1137	1140	1155	N30	E46	5470	05	6.1	18	SN			C	1140	60	0.9	E
	RAMY	02	1140	1140	1150	N30	E45	5470	05	6.0	10	SF		3	E		13		F
0034		02	11462	11493	1210	S23	E70	5471	05	7.9	24	SN					40		EF
	HTPR	02	1146	1152	1215	S21	E66	5471	05	7.5	29	SN			C	1152	50		E
	RAMY	02	1148	1149	1206	S25	E73	5471	05	8.1	18	SF		3	E		30		F
0035	HTPR	02	1218	1222	1231	N30	E46	5470	05	6.1	13	SB			C	1222	80	1.2	E
0036	HTPR	02	1247	1248	1256	S17	W04	5464	05	2.2	9	SF			C	1248	20	0.2	
0037		02	1400	14032	1442	N30	E43	5470	05	6.0	42	1N	C 7.4				244	4.9	EFIV
	HOLL	02	1400	1403	1441	N30	E43	5470	05	6.0	41	1N	C 7.4	3	E		185		F
	RAMY	02	1400	1404	1445	N30	E42	5470	05	5.9	45	1F	C 7.4	3	E		196		F
	HTPR	02	1400	1405	1440	N30	E43	5470	05	6.0	40	1B			C	1405	350	4.9	EIV
0038		02	14353	14431	1455	S18	W06	5464	05	2.1	20	SF					36	0.5	EF
	HTPR	02	1435	1443	1500	S19	W04	5464	05	2.3	25	SF			C	1443	50	0.5	E
	HOLL	02	1438	1444	1452	S17	W07	5464	05	2.1	14	SF		3	E		18		F
	RAMY	02	1438	1444	1453	S18	W06	5464	05	2.1	15	SF		3	E		41		F
0039		02	15543	16041	1615	S22	E65	5471	05	7.6	21	SF					35		
	HOLL	02	1554	1604	1612	S22	E65	5471	05	7.6	18	SF		4	E		22		
	RAMY	02	1557	1605	1618	S23	E65	5471	05	7.7	21	SF		3	E		48		
0040		02	16022	1611*	1747	N28	E40	5470	05	5.8	105	1N	M 1.4				119	2.8	EFIK
	HTPR	02	1602		1632D	N27	E42	5470	05	5.9	30D	SB			C	1610	150	2.0	EI
	RAMY	02	1602	1628	1805	N29	E39	5470	05	5.7	123	1N	M 1.4		E		112		K
	RAMY	02	1602	1634	1805	N29	E39	5470	05	5.7	123	1N	M 1.4	3	E		134		FE
	HOLL	02	1604	1611	1805	N27	E38	5470	05	5.6	121	1N	M 1.4		E		92		K
	HOLL	02	1604	1635	1805	N27	E38	5470	05	5.6	121	1N	M 1.4	4	E		101		FE
	PALE	02	1630E	1643	1712	N27	E38	5470	05	5.6	42D	SF			E		61		K
	PALE	02	1630E	1650U	1712	N27	E38	5470	05	5.6	42D	SF		3	E		49		F
	HTPR	02	1636E		1724D	N30	E45	5470	05	6.2	48D	1B			C	1636	250	3.5	EI
0041		02	16382	16393	1646	S18	W10	5464	05	1.9	8	SF					40	0.7	E
	HTPR	02	1638	1639	1647	S17	W10	5464	05	1.9	9	SF			C	1639	70	0.7	E
	HOLL	02	1640	1642	1646	S20	W10	5464	05	1.9	6	SF		3	E		11		

Hα SOLAR FLARES

MAY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0042		02	1827*	18554	2103	S23	W12	5464	05	1.8	156	2N M	3.0				423		FUY
	RAMY	02	1827	1856	2134D	S23	W14	5464	05	1.7	187D	2N M	3.0	3	E		458		YF
	HOLL	02	1828	1855	2139	S21	W12	5464	05	1.8	191	2B M	3.0	4	E		400		UY
	PALE	02	1841	1859	2027	S25	W11	5464	05	1.9	106	2N		3	E		412		UY
0043	HOLL	02	1836	1836	1841	N22	E08	5472	05	3.4	5	SF		4	E		11		
0044		02	19222	19252	1934	N29	E40	5470	05	5.9	12	SF					69		F
	RAMY	02	1922	1927	1939D	N28	E39	5470	05	5.8	17D	SF		2	E		89		
	HOLL	02	1923	1927	1936	N30	E41	5470	05	6.0	13	SN		4	E		79		F
	PALE	02	1924	1925	1933	N30	E41	5470	05	6.0	9	SF		3	E		39		
0045		02	2137	2138*	2212	N26	W49	5468	04	29.2	35	SF					22		K
	HOLL	02	2137	2138	2212	N26	W49	5468	04	29.2	35	SF			E		25		K
	HOLL	02	2137	2157	2212	N26	W49	5468	04	29.2	35	SF		4	E		18		
0046		02	2247*	23071	2334	N27	W50	5468	04	29.1	47	SF C	2.1				65		F
	PALE	02	2247	2307	2321	N27	W49	5468	04	29.2	34	SF C	2.1	3	E		74		F
	HOLL	02	2301	2308	2346	N27	W50	5468	04	29.2	45	SF C	2.1	4	E		56		
0047		02	23443	2350	2406	N26	W49	5468	04	29.3	22	SF C	1.5				38		F
	PALE	02	2344	2350	2405	N26	W48	5468	04	29.3	21	SF C	1.5	3	E		46		F
	HOLL	02	2347	2350	2407	N26	W50	5468	04	29.2	20	SF C	1.5	4	E		31		
0048		03	0041	00421	0046	N28	W50	5468	04	29.2	5	SF					15		
	HOLL	03	0041	0042	0047	N27	W50	5468	04	29.2	6	SF		3	E		14		
	LEAR	03	0041	0043	0046	N28	W49	5468	04	29.3	5	SF		2	E		16		
0049	PALE	03	0116	0116	0120	N27	W51	5468	04	29.2	4	SF		3	E		12		
0050	PALE	03	0148	0150	0153	N26	W51	5468	04	29.2	5	SF		3	E		15		
0051	PALE	03	0156	0159	0215	N29	E34	5470	05	5.7	19	SF		3	E		27		F
0052	PALE	03	0156	0156	0208	S21	W13	5464	05	2.1	12	SF		3	E		16		F
0053	PALE	03	0312	0313	0317	S16	W14	5464	05	2.1	5	SF		3	E		15		
0054		03	0326*	0354	0451	N28	E32	5470	05	5.6	85	2B X	2.3				626	19.3	FJKMUZ
	PALE	03	0326	0354	0451D	N27	E32	5470	05	5.6	85D	3B X	2.3	3	E		732		MU
	LEAR	03	0353E	0355U	0433	N29	E33	5470	05	5.7	40D	2B X	2.3	2	E		398		ZU
	MITK	03	0406E		0506	N28	E32	5470	05	5.7	60D	3B			C	0406	1340	19.3	FJKUZ
	LEAR	03	0434	0442U	0455	N29	E33	5470	05	5.8	21	SF		3	E		33		
0055	HTPR	03	0930	0938	0959	N15	E90	5474	05	10.2	29	SF			C	0938	20		
0056	HTPR	03	0947	0948	0955	S16	W17	5464	05	2.1	8	SF			C	0948	30	0.3	E
0057		03	1014	1020	1039	N28	E26	5470	05	5.4	25	SF					42	0.8	EF
	HTPR	03	1014	1020	1040	N30	E26	5470	05	5.5	26	SF			C	1020	70	0.8	E
	RAMY	03	1018E	1021U	1038	N27	E26	5470	05	5.4	20D	SF		1	E		15		F
0058		03	1058*	11285	1212	N28	E27	5470	05	5.6	74	1N C	5.3				270	2.8	EFHI
	SVTO	03	1058	1132	1203D	N29	E30	5470	05	5.8	65D	2N		2	E		408		FH
	HTPR	03	1123	1128	1206	N28	E25	5470	05	5.4	43	1N			C	1128	250	2.8	EI
	RAMY	03	1123	1133	1219	N28	E27	5470	05	5.6	56	1F C	5.3	3	E		153		FH
0059		03	12012	12054	1244	S21	E53	5471	05	7.6	43	SF C	2.7				68	1.0	EF
	HTPR	03	1201	1205	1250	S23	E54	5471	05	7.7	49	SF			C	1205	60	1.0	E
	SVTO	03	1202	1207	1231D	S20	E53	5471	05	7.5	29D	SF C	2.7	2	E		91		F
	RAMY	03	1203	1209	1239	S21	E53	5471	05	7.6	36	SF C	2.7	3	E		52		F
0060		03	12544	13061	1350	N27	E24	5470	05	5.4	56	SN C	2.9				57	0.8	EF
	HTPR	03	1254	1306	1350	N26	E24	5470	05	5.4	56	SB			C	1306	70	0.8	E
	RAMY	03	1258	1307	1350	N28	E25	5470	05	5.5	52	SF C	2.9	3	E		44		F
0061	HOLL	03	1305	1310	1339	N29	E37	5470	05	6.4	34	SF		2	E		22		
0062	RAMY	03	1425	1425	1431	N29	E27	5470	05	5.7	6	SF		3	E		11		

Hα S O L A R F L A R E S

MAY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0063	RAMY	03	1440	1443	1450	N28	E30	5470	05	5.9	10	SF			3	E		21		
0064	RAMY	03	1451	1451	1456	S18	W18	5464	05	2.2	5	SF			3	E		13		
0065	HTPR	03	1515	1516	1530	S24	W16	5464	05	2.4	15	SF				C	1516	20	0.2	
0066		03	15442	1545*	1600	N17	E75	5474	05	9.3	16	SN	C	2.7				101		AEFV
	RAMY	03	1544	1545	1558	N14	E74	5474	05	9.2	14	SF	C	2.7	3	E		68		
	HOLL	03	1544	1545	1601	N17	E78	5474	05	9.6	17	SF	C	2.7	3	E		91		
	HTPR	03	1545		1559D	N17	E75	5474	05	9.3	14D	1B				C	1546	200		AEV
	SVTO	03	1546	1556	1606D	N20	E74	5474	05	9.3	20D	SF			2	E		45		F
0067		03	1637	1639	1647	N29	E23	5470	05	5.5	10	SF						15		
	RAMY	03	1637	1639	1644	N28	E23	5470	05	5.5	7	SF			3	E		14		
	HOLL	03	1637	1639	1650	N30	E23	5470	05	5.5	13	SF			3	E		16		
0068		03	17261	17322	1746	S20	W22	5464	05	2.0	20	SF	C	2.0				56		F
	HOLL	03	1726	1732	1748	S20	W21	5464	05	2.1	22	SF	C	2.0	3	E		76		F
	RAMY	03	1726	1734	1744	S21	W22	5464	05	2.0	18	SF	C	2.0	3	E		57		
	PALE	03	1727	1732	1745	S20	W22	5464	05	2.0	18	SF	C	2.0	3	E		36		
0069	RAMY	03	1830	1830	1839	S21	W24	5464	05	1.9	9	SF			3	E		10		
0070	RAMY	03	1910	1910	1922	S22	W26	5464	05	1.8	12	SF			3	E		24		
0071		03	19275	1936U	2154	S20	W26	5464	05	1.8	147	1F	M	1.4				128		EFUY
	RAMY	03	1927	1936U	2130D	S19	W26	5464	05	1.8	123D	1N	M	1.4	3	E		148		FE
	PALE	03	1932	1937U	1956D	S20	W26	5464	05	1.8	24D	SF	M	1.4	3	E		70		F
	HOLL	03	2001E	2006U	2154	S21	W26	5464	05	1.8	113D	1F			3	E		167		UY
0072		03	2054	2059U	2211	N28	E22	5470	05	5.6	77	1N	M	1.6				202		EF
	RAMY	03	2054	2059U	2130D	N28	E21	5470	05	5.5	36D	1N	M	1.6	2	E		242		FE
	HOLL	03	2054	2106U	2211	N29	E23	5470	05	5.7	77	1N	M	1.6	2	E		163		FE
0073	HOLL	03	2211	2215	2230	S19	W25	5464	05	2.0	19	SF			3	E		32		
		03	2241		2247	No Flare Patrol														
0074	HOLL	03	2300	2309	2320D	S20	W26	5464	05	2.0	20D	SF	C	3.6	3	E		38		
0075		03	23445	2353	2413	S21	E47	5471	05	7.6	29	SF						24		F
	HOLL	03	2344	2353	2423	S20	E47	5471	05	7.6	39	SF			3	E		33		F
	LEAR	03	2349	2353	2403	S22	E47	5471	05	7.6	14	SF			3	E		16		F
0076		04	01002	01022	0116	S20	W28	5464	05	1.9	16	SF	C	3.4				16		F
	HOLL	04	0100	0102	0115	S19	W30	5464	05	1.7	15	SF	C	3.4	3	E		12		
	LEAR	04	0102	0104	0117	S20	W27	5464	05	2.0	15	SF	C	3.4	3	E		20		F
0077	LEAR	04	0246	0257	0309	S20	W29	5464	05	1.9	23	SF	C	3.7	3	E		45		F
0078		04	0313*	0336*	0433	S19	W26	5464	05	2.1	80	1N	M	4.4				261	2.6	BEFHK
	LEAR	04	0313	0336	0441	S19	W29	5464	05	1.9	88	2B				E		357		K
	LEAR	04	0313	0422	0441	S19	W29	5464	05	1.9	88	2B	M	4.4	4	E		364		FH
	MITK	04	0333	0336	0418	S18	W22	5464	05	2.5	45	SN				C	0336			E
	PALE	04	0352E	0352U	0434	S19	W20	5464	05	2.6	42D	1B			2	E		129		FH
	ABST	04	0400E	0401U	0432	S18	W23	5464	05	2.4	32D	1N				P	0401	280	3.2	BE
	MITK	04	0418	0422	0434	S19	W29	5464	05	2.0	16	SN				C	0422			EH
	ABST	04	0418	0423	0432	S19	W30	5464	05	1.9	14	1N				C	0423	175	2.1	F
0079		04	05213	05264	0550	S17	W29	5464	05	2.0	29	SF	C	3.4				24		H
	LEAR	04	0521	0530	0540	S16	W29	5464	05	2.0	19	SF	C	3.4	4	E		27		
	SVTO	04	0524	0526	0543	S19	W30	5464	05	1.9	19	SN	C	3.4	2	E		20		H
	MITK	04	0524	0527	0607	S16	W27	5464	05	2.2	43	SF				C	0527			H
0080		04	0621*	06363	0650	N26	W65	5468	04	29.3	29	SF						80		
	SVTO	04	0621	0639	0650	N25	W65	5468	04	29.3	29	SF			3	E		94		
	LEAR	04	0634	0636	0639D	N27	W65	5468	04	29.3	5D	SF			3	E		66		

Hα SOLAR FLARES

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0081		04	0715*	0720*	0803	S18	W30	5464	05	2.0	48	1N	C 5.5				163	2.7	DEFIKTV
	ATHN	04	0715E	0715U	0720	S15	W27	5464	05	2.2	5D	1N		3	V	0715	191	2.2	
	ISTA	04	0715	0720	0734	S21	W28	5464	05	2.1	19	2B			V				E
	SVTO	04	0716	0727	0842	S21	W31	5464	05	1.9	86	1F			E		212		K
	SVTO	04	0716	0825	0842	S21	W31	5464	05	1.9	86	1N		3	E		129		F
	LEAR	04	0722	0725	0731	S18	W31	5464	05	1.9	9	SF		3	E		41		F
	LEAR	04	0738	0739	0744D	S16	W30	5464	05	2.0	6D	SF	C 5.5	3	E		81		
	KAND	04	0739	0740	0747	S16	W31	5464	05	2.0	8	1B			P	0740	291	3.5	DITV
	ISTA	04	0741	0745	0749	S17	W32	5464	05	1.9	8	1N			V				D
	KAND	04	0817	0821	0832	S19	W32	5464	05	1.9	15	SB			P	0821	104	1.3	EIT
	ATHN	04	0817E	0821	0832	S19	W28	5464	05	2.2	15D	1N		3	V	0821	318	3.8	
	LEAR	04	0819	0822	0828D	S19	W31	5464	05	2.0	9D	SN	M 2.8	3	E		98		
0082		04	08194	08235	0831	S22	W26	5470B	05	2.3	12	1N							DM
	HURB	04	0819	0823	0827	S23	W24	5470B	05	2.5	8	SF							D
	ISTA	04	0823	0828	0835	S22	W28	5470B	05	2.2	12	2B			V				M
0083	SVTO	04	0852	0901	0917	N29	E17	5470	05	5.7	25	SF		3	E		21		
0084	KAND	04	0923	0924	0931	S17	W31	5464	05	2.0	8	SN			P	0924	42	0.5	DIT
0085	KAND	04	0957	0958	1010	S16	W31	5464	05	2.1	13	SB			P	0958	145	1.7	EHIT
0086		04	1032*	1029*	1132	S20	W33	5464	05	1.9	60	2N	M 5.4				283	5.8	EFHIJKT
	RAMY	04	1026E	1029	1205	S20	W32	5464	05	2.0	99D	2N			E		85		K
	RAMY	04	1026E	1113	1205	S20	W32	5464	05	2.0	99D	2N		3	E		313		FE
	KAND	04	1032	1034	1045	S20	W30	5464	05	2.1	13	SN			P	1034	125	1.5	EIT
	SVTO	04	1040	1046	1104	S20	W34	5464	05	1.8	24	SF		2	E		77		
	SVTO	04	1106E	1131	1140D	S20	W36	5464	05	1.7	34D	2N	M 5.4	2	E		309		H
	KAND	04	1108	1113	1140	S18	W35	5464	05	1.8	32	2B			P	1113	790	10.0	EFIJT
0087		04	10407	10409	1056	N29	E13	5470	05	5.5	16	SF	C 7.2				22		
	SVTO	04	1040	1040	1100	N30	E14	5470	05	5.5	20	SF	C 7.2	2	E		30		
	RAMY	04	1047	1049	1052	N28	E12	5470	05	5.4	5	SF		3	E		15		
0088	RAMY	04	1149	1155	1222	N27	E17	5470	05	5.8	33	SF		3	E		15		F
0089	RAMY	04	1250	1251	1254	N26	E13	5470	05	5.5	4	SF		3	E		13		
0090	RAMY	04	1336	1346	1416	S23	W34	5464	05	1.9	40	SF		3	E		20		F
0091		04	1430	14317	1504	S19	W39	5464	05	1.6	34	SF					20		FK
	RAMY	04	1430	1431	1504	S19	W39	5464	05	1.6	34	SF			E		21		K
	RAMY	04	1430	1438	1504	S19	W39	5464	05	1.6	34	SF		3	E		18		F
0092	RAMY	04	1508	1512	1533	S22	W35	5464	05	1.9	25	SF		3	E		34		F
0093	RAMY	04	1516	1517	1526	N27	E17	5470	05	6.0	10	SF	C 4.7	3	E		39		
0094		04	1607	1616*	1643	S19	W34	5464	05	2.1	36	SN	C 8.8				46		FK
	HOLL	04	1607	1616	1643	S19	W34	5464	05	2.1	36	SN	C 8.8	3	E		60		F
	HOLL	04	1607	1634	1643	S19	W34	5464	05	2.1	36	SN			E		31		K
0095		04	1711*	1712*	1739	S20	W36	5464	05	2.0	28	SF	C 2.2				72		F
	HOLL	04	1711	1712	1715	S19	W35	5464	05	2.0	4	SF	C 2.2	3	E		18		
	HOLL	04	1719	1731	1752	S19	W35	5464	05	2.0	33	SN	C 9.7	3	E		55		
	PALE	04	1726	1732U	1750	S21	W39	5464	05	1.7	24	1F		3	E		143		F
0096		04	1838	18411	1857	S18	W34	5464	05	2.2	19	1B	M 1.1				198		FHU
	PALE	04	1838	1841	1857	S19	W33	5464	05	2.2	19	1N	M 1.1	3	E		216		F
	HOLL	04	1838	1842	1857	S17	W36	5464	05	2.0	19	1B	M 1.1	3	E		180		UH
0097		04	18574	1913*	2009	N29	E14	5470	05	5.9	72	SN	M 2.3				74		EFK
	HOLL	04	1857	1913	2011	N30	E15	5470	05	6.0	74	SN	M 2.3	3	E		62		FE
	HOLL	04	1857	1926	2011	N30	E15	5470	05	6.0	74	SB	M 2.3		E		73		K
	PALE	04	1901	1938	2006	N26	E11	5470	05	5.6	65	SF		3	E		88		F
0098		04	19421	19444	2000	S20	W40	5464	05	1.8	18	SF					18		
	HOLL	04	1942	1944	2003	S18	W39	5464	05	1.8	21	SF		3	E		20		
	PALE	04	1943	1948	1957	S21	W40	5464	05	1.7	14	SF		3	E		16		

Hα S O L A R F L A R E S

MAY 1989

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0099		04	2007*	2007*	2047	S19	W38	5464	05	1.9	40	SF M	1.1				28		KU
	HOLL	04	2007	2007	2024	S17	W40	5464	05	1.8	17	SF		3	E		15		
	PALE	04	2017	2019	2024	S22	W40	5464	05	1.8	7	SF		3	E		21		
	HOLL	04	2028	2036	2101	S19	W36	5464	05	2.1	33	SN M	1.1	3	E		62		
	HOLL	04	2028	2056	2101	S19	W36	5464	05	2.1	33	SN M	1.1		E		14		K
	PALE	04	2057	2102	2106	S20	W38	5464	05	2.0	9	SF		3	E		27		U
0100	HOLL	04	2220	2225	2234	S17	W38	5464	05	2.0	14	1N M	1.0	3	E		106		H
		04	2254		2301	No Flare Patrol													
0101	LEAR	04	2325	2326	2331	N32	E18	5470	05	6.4	6	SF C	2.4	3	E		10		F
0102		05	0243	0250*	0409	S17	W41	5464	05	2.0	86	SF C	7.5				48		FHK
	LEAR	05	0243	0250	0409	S17	W41	5464	05	2.0	86	SF C	7.5	3	E		51		FH
	LEAR	05	0243	0348	0409	S17	W41	5464	05	2.0	86	SF C	7.5		E		45		K
0103	LEAR	05	0325	0326	0342	N29	E06	5470	05	5.6	17	SF C	3.8	3	E		36		F
0104		05	04061	04081	0434	N32	E14	5470	05	6.3	28	1N C	4.8				124	2.3	E
	LEAR	05	0406	0408	0443	N32	E15	5470	05	6.3	37	SF C	4.8	3	E		72		
	ABST	05	0407	0409	0424	N32	E13	5470	05	6.2	17	1N			C	0409	175	2.3	E
0105		05	0410*	0414*	0505	N28	E12	5470	05	6.1	55	SN					87	1.1	D
	ABST	05	0410	0414	0520	N26	E06	5470	05	5.6	70	SN			C	0414	87	1.0	D
	ABST	05	0440	0444	0450	N31	E17	5470	05	6.5	10	SN			C	0444	87	1.2	D
0106		05	0526*	0528*	0556	S18	W39	5464	05	2.2	30	1N					181	4.7	EF
	ABST	05	0526	0528	0556	S18	W38	5464	05	2.3	30	1N			C	0528	349	4.7	E
	LEAR	05	0551	0553	0556	S18	W40	5464	05	2.2	5	SF		3	E		13		F
0107		05	06544	06582	0710	N31	E09	5470	05	6.0	16	SN					54	0.6	D
	HTPR	05	0654	0700	0714	N30	E08	5470	05	5.9	20	SB			C	0700	20	0.2	
	ABST	05	0656	0658	0705D	N31	E10	5470	05	6.1	9D	SN			P	0658	87	1.1	D
	KANZ	05	0658	0658	0706	N31	E09	5470	05	6.0	8	SF			P				
0108		05	07011	0702	0708	S17	W42	5464	05	2.1	7	SF					30	0.4	
	HTPR	05	0701	0702	0710	S16	W42	5464	05	2.1	9	SF			C	0702	30	0.4	
	KANZ	05	0702	0702	0706	S18	W41	5464	05	2.2	4	SF			P				
0109	HTPR	05	0724	0746	0805	S16	W52	5464	05	1.4	41	SN			C	0746	30	0.5	E
0110		05	07209	07319	0844	N30	E04	5470	05	5.6	84	2B X	2.4				671	8.3	EFIUVWY
	HTPR	05	0720	0732	0925	N30	E05	5470	05	5.7	125	2B			C	0732	1000	11.5	EFIUVW
	SVTO	05	0723E	0739	1035	N30	E01	5470	05	5.4	192D	3B X	2.4	2	E		610		UY
	KANZ	05	0724	0740	1105D	N29	E06	5470	05	5.8	221D	3B			P				U
	YUNN	05	0726E	0740U	0835	N29	E07	5470	05	5.8	69D	2N			P	0740	786	9.7	FU
	HURB	05	0729	0731	0748	N26	E05	5470	05	5.7	19	2N							U
	CATA	05	0736E	0736	0759	N36	E04	5470	05	5.6	23D	2B		2	P	0736	450	6.0	
	CATA	05	0736E	0736	0812	N29	W06	5470	05	4.8	36D	1B		2	P	0736	393	4.8	
	CATA	05	0736E	0736	0838	N28	E06	5470	05	5.8	62D	2B		2	P	0736	787	9.6	
0111	KANZ	05	0740	0740	0744D	S17	W40	5464	05	2.3	4D	SF			P				
0112		05	0753	0800	0842	N26	E04	5470	05	5.6	49	2N					450		EFU
	LEAR	05	0747E	0758U	0913	N27	E06	5470	05	5.8	86D	2N		3	E		450		UF
	HURB	05	0753	0800	0810	N24	E03	5470	05	5.6	17	1F							E
0113		05	07574	08013	0817	S18	W43	5464	05	2.0	20	SN					107	2.2	EFHI
	SVTO	05	0757	0802	0826	S17	W42	5464	05	2.1	29	SN		4	E		93		FH
	HTPR	05	0800	0802	0815	S19	W43	5464	05	2.0	15	1N			C	0808	160	2.2	EI
	KANZ	05	0800	0804	0813	S17	W43	5464	05	2.1	13	SF			P				
	LEAR	05	0801	0801	0814	S17	W44	5464	05	2.0	13	SF		3	E		67		F
0114	HTPR	05	0813	0817	0830	S23	W43	5470B	05	2.0	17	SF			C	0817	20	0.3	E
0115	HTPR	05	0945	0948	0955	N27	E01	5470	05	5.5	10	SF			C	0948	100	1.0	E
0116	HTPR	05	1021	1026	1035	S32	E73	5476	05	11.2	14	SN			C	1026	30		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0117	SVTO	05	1046	1046	1057	S22	W48	5464	05	1.7	11	SF		3	E		18		F
0118		05	11183	11252	1136	S20	W42	5464	05	2.2	18	SF					60	0.8	E
	HTPR	05	1118	1127	1140	S20	W43	5464	05	2.2	22	SF			C	1127	60	0.8	E
	KANZ	05	1121	1125	1132	S21	W42	5464	05	2.2	11	SF			P				
0119		05	1208	12094	1246	S18	W45	5464	05	2.1	38	1N	C 5.0				144	2.2	EHV
	SVTO	05	1208	1209	1248	S18	W46	5464	05	2.0	40	1N	C 5.0	3	E		128		H
	HTPR	05	1208	1213	1240	S17	W45	5464	05	2.1	32	1B			C	1213	160	2.2	EV
	KANZ	05	1213E	1213U	1249	S20	W45	5464	05	2.1	36D	1F			P				E
0120		05	1257*	1311*	1358	S17	W54	5464	05	1.4	61	SF	C 3.5				72	1.8	EFK
	SVTO	05	1257	1312	1422	S17	W55	5464	05	1.4	85	SF	C 3.5		E		50		K
	SVTO	05	1257	1327	1422	S17	W55	5464	05	1.4	85	SF	C 3.5	3	E		36		F
	HTPR	05	1259	1311	1335	S16	W55	5464	05	1.4	36	1N			C	1311	140	2.4	EF
	RAMY	05	1303	1313	1346	S16	W52	5464	05	1.6	43	SF	C 3.5	3	E		36		
	KANZ	05	1314E	1314U	1316D	S17	W55	5464	05	1.4	2D	SF			P				
	HTPR	05	1324	1330	1346	S17	W49	5464	05	1.8	22	SN			C	1330	100	1.3	E
0121	RAMY	05	1325	1325	1341	N23	W03	5470	05	5.3	16	SF		3	E		13		
0122	HTPR	05	1350	1355	1400	S15	E90		05	12.4	10	1N			C	1355	80		E
0123		05	13523	13551	1409	S18	W45	5464	05	2.1	17	SF					53	1.1	E
	HTPR	05	1352	1355	1420	S15	W41	5464	05	2.5	28	SF			C	1355	80	1.1	E
	HOLL	05	1354	1356	1358	S17	W43	5464	05	2.3	4	SF		3	E		54		
	RAMY	05	1355	1355U	1458D	S21	W50	5464	05	1.7	63D	SF		3	E		25		
0124	HTPR	05	1528	1531	1538	S25	E20	5471	05	7.2	10	SF			C	1531	20	0.2	
0125	HTPR	05	1529	1540	1550	N22	E42	5474	05	8.9	21	SF			C	1540	80	1.2	E
0126		05	15523	15541	1600	S18	W48	5464	05	2.0	8	SF	C 1.7				29	0.8	
	HTPR	05	1552	1554	1600	S16	W48	5464	05	2.0	8	SF			C	1554	50	0.8	
	HOLL	05	1554	1554	1559	S18	W48	5464	05	2.0	5	SF	C 1.7	3	E		14		
	RAMY	05	1555	1555	1601	S20	W49	5464	05	1.9	6	SF	C 1.7	3	E		22		
0127		05	17181	17201	1730	N31	E08	5470	05	6.3	12	SN	C 3.4				68		EH
	HOLL	05	1718	1720	1730	N32	E07	5470	05	6.3	12	SN	C 3.4	3	E		65		EH
	RAMY	05	1719	1721	1731D	N30	E08	5470	05	6.3	12D	SF	C 3.4	3	E		70		EH
0128		05	1747	18047	1822	S18	W50	5464	05	1.9	35	SF	C 3.4				39		FHK
	HOLL	05	1747	1804	1821	S18	W50	5464	05	1.9	34	SN	C 3.4		E		45		K
	HOLL	05	1747	1811	1821	S18	W50	5464	05	1.9	34	SF	C 3.4	3	E		35		FH
	RAMY	05	1750E	1813U	1825	S19	W51	5464	05	1.8	35D	SF	C 3.4	3	E		36		FH
0129	HOLL	05	1837	1838	1853	S21	W51	5464	05	1.9	16	SF		3	E		25		
0130	HOLL	05	1911	1912	1928	S19	W46	5464	05	2.3	17	SF		3	E		18		
		05	2111		2117	No Flare Patrol													
0131	HOLL	05	2241	2247	2252	N15	E50	5474	05	9.7	11	SF		3	E		13		
0132		06	00331	00342	0039	S21	W52	5464	05	2.0	6	SF					46	1.4	DIJ
	VORO	06	0033	0036	0040	S22	W52	5464	05	2.0	7	SF		2	C	0036	81	1.4	DIJ
	HOLL	06	0034	0034	0038	S20	W51	5464	05	2.1	4	SF		3	E		11		
0133	VORO	06	0058	0101	0107	S15	W51	5464	05	2.2	9	SF		2	C	0101	116	1.9	D
0134		06	0155	0157	0221	S17	W52	5464	05	2.1	26	SN					55	0.9	DEIJ
	PURP	06	0111E	0213U	0221	S19	W52	5464	05	2.1	70D	SN			P	0213	20	0.3	E
	VORO	06	0155	0157	0159D	S15	W51	5464	05	2.2	4D	SF		2	C	0157	90	1.5	DIJ
0135	LEAR	06	0127	0127	0131	S21	W49	5470B	05	2.3	4	SF		3	E		19		F
0136	YUNN	06	0220	0224	0229	S21	W47	5470B	05	2.5	9	SB			C		31	0.5	D
		06	0338		0358	No Flare Patrol													
		06	0408		0417	No Flare Patrol													

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		06	0428		0433	No Flare Patrol													
0137		06	0520E	0524*	0550	S28	E62	5476	05	11.1	30D	SN	M 2.0				129		FK
	SVTO	06	0520E	0524	0554	S27	E60	5476	05	10.9	34D	SN	M 2.0	2	E		69		F
	SVTO	06	0520E	0535	0554	S27	E60	5476	05	10.9	34D	SN	M 2.0		E		115		K
	YUNN	06	0522E	0534	0542	S29	E65	5476	05	11.3	20D	1F			P		204		F
0138		06	06433	0654	0706	S25	W06	5475A	05	5.8	23	1N					12		U
	SVTO	06	0643	0654	0658	S27	W06	5475A	05	5.8	15	SF		3	E		12		U
	ISTA	06	0646		0713	S23	W07	5475A	05	5.7	27	1N			V				U
0139		06	06522	06551	0659	N12	W78		04	30.4	7	SN	C 2.6				36		E
	HTPR	06	0652E		0700	N12	W80		04	30.2	8D	SB			C	0656	60		E
	KANZ	06	0652	0656	0700	N13	W75		04	30.6	8	SF			P				
	SVTO	06	0654	0655	0657	N11	W78		04	30.4	3	SF	C 2.6	3	E		13		
0140	ISTA	06	0719E		0746	S32	E63	5476	05	11.3	27D	1B			V				E
0141		06	0843	08442	0905	S18	W51	5464	05	2.5	22	SF	C 2.9				52	1.6	EFI
	HTPR	06	0843	0844	0904	S16	W50	5464	05	2.6	21	SN			C	0844	100	1.6	EI
	LEAR	06	0843	0845	0901	S17	W52	5464	05	2.4	18	SF	C 2.9	3	E		29		F
	SVTO	06	0843	0845	0909	S19	W52	5464	05	2.4	26	SF	C 2.9	3	E		28		F
	KANZ	06	0843	0846	0903D	S19	W49	5464	05	2.6	20D	SF			P				
0142	RAMY	06	1105E	1108U	1117D	S23	W63	5464	05	1.6	12D	SF		2	E		25		F
0143	RAMY	06	1112E	1114U	1147	N13	E43	5479	05	9.7	35D	SF		2	E		21		
0144	RAMY	06	1119	1120	1140	N28	W15	5470	05	5.3	21	SF		3	E		17		
0145	SVTO	06	1147	1147	1155	S23	W54	5470B	05	2.3	8	SF		3	E		12		F
0146	HTPR	06	1205	1206	1220	S18	W58	5464	05	2.1	15	SF			C	1206	40	0.7	E
0147		06	12541	1254	1320	S20	W59	5464	05	2.0	26	SF					42	0.8	EF
	RAMY	06	1254	1254	1320	S20	W60	5464	05	1.9	26	SF		3	E		33		F
	HTPR	06	1255		1257D	S19	W58	5464	05	2.1	2D	SF			C	1256	50	0.8	E
0148		06	14421	14456	1535	S20	W65	5464	05	1.6	53	SF	M 1.7				76		FHK
	RAMY	06	1442	1445	1542	S19	W64	5464	05	1.7	60	SF	M 1.7		E		53		K
	RAMY	06	1442	1451	1542	S19	W64	5464	05	1.7	60	SF	M 1.7	3	E		91		F
	SVTO	06	1443	1451	1520	S22	W67	5464	05	1.5	37	SN	M 1.7	3	E		84		FH
0149	RAMY	06	1626	1627	1645	S19	W60	5464	05	2.1	19	SF		3	E		23		F
0150		06	16554	1702	1745D	S30	E61	5476	05	11.5	50D	2B	M 4.2				310		F
	RAMY	06	1655	1702	1745D	S31	E59	5476	05	11.3	50D	2B	M 4.2	2	E		344		F
	HOLL	06	1659	1702	1725D	S28	E63	5476	05	11.6	26D	2B	M 4.2	2	E		276		F
0151	RAMY	06	1705	1744U	1849D	S23	W56	5470B	05	2.4	104D	SF	C 6.4	2	E		68		F
		06	1726		1814	No Flare Patrol													
		06	1821		1837	No Flare Patrol													
		06	1843		1848	No Flare Patrol													
0152	RAMY	06	1859E	1948U	2109D	S19	W57	5464	05	2.4	130D	SF		2	E		68		
0153	HOLL	06	1925	1938	2010	N28	W13	5470	05	5.8	45	SF	C 6.0	3	E		17		
0154	HOLL	06	2127	2128	2135	S32	E54	5476	05	11.2	8	SF		3	E		17		
0155		06	2333*	2359*	2445	N31	W13	5470	05	5.9	72	1F	C 8.9				143	3.9	EF
	PURP	06	2333	2420	2453	N30	W13	5470	05	5.9	80	2F			C	2420	579	7.4	
	HOLL	06	2348	2419	2459	N30	W19	5470	05	5.5	71	SF	C 8.9	3	E		62		F
	LEAR	06	2356	2359	2410	N32	W12	5470	05	6.0	14	SF	C 8.9	3	E		18		
	LEAR	07	0012	0017	0039	N31	W12	5470	05	6.1	27	SF	C 8.9	3	E		23		F
	YUNN	07	0018E	0018U	0103	N32	W11	5470	05	6.1	45D	SF			P	0018	31	0.4	E

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0156		07	0117	01202	0130	S28	E54	5476	05	11.3	13	SF					49	1.5	EF
	HOLL	07	0117	0120	0131D	S28	E52	5476	05	11.1	14D	SF		2	E		44		FE
	LEAR	07	0117	0121	0129	S29	E56	5476	05	11.4	12	SF		3	E		23		F
	YUNN	07	0118E	0122	0131	S27	E53	5476	05	11.2	13D	SF			P		79	1.5	F
0157	LEAR	07	0348	0356	0403	S21	W64	5464	05	2.2	15	SF		3	E		22		
0158		07	06514	07032	0733	S29	E52	5476	05	11.4	42	2N	C 9.6				394	12.4	EFJ
	LEAR	07	0651	0704	0724	S30	E52	5476	05	11.4	33	1F	C 9.6	3	E		114		F
	KANZ	07	0652	0704	0740	S27	E51	5476	05	11.2	48	1F			P				EF
	ISTA	07	0655	0703	0735	S31	E54	5476	05	11.5	40	3B			V				FJ
	CATA	07	0655	0705	0730D	S28	E53	5476	05	11.4	35D	3B		2	P	0705	675	12.4	
0159		07	08553	08563	0903	S22	W70	5464	05	2.0	8	SF					24		
	KANZ	07	0855E	0855U	0859	S22	W69	5464	05	2.1	4D	SF			P				
	LEAR	07	0855	0856	0903	S21	W71	5464	05	1.9	8	SF		3	E		28		
	SVTO	07	0858	0859	0908	S23	W70	5464	05	2.0	10	SF		2	E		19		
0160	KANZ	07	0939	0939	0957	N33	W18	5470	05	6.0	18	SN			P				
		07	1221		1222	No Flare Patrol													
0161	RAMY	07	1300	1304U	1309	S21	W71	5464	05	2.1	9	SF		2	E		13		
0162		07	14241	1437	1500	S21	W72	5464	05	2.1	36	SF	C 2.7				46		FH
	RAMY	07	1424	1435U	1539D	S21	W72	5464	05	2.1	75D	SF	C 2.7	2	E		39		FH
	HOLL	07	1425	1437	1500	S21	W72	5464	05	2.1	35	SF	C 2.7	3	E		54		F
0163	HOLL	07	1502	1504	1512	N26	E71	5478	05	13.1	10	SF		3	E		18		
0164		07	16531	1656	1704	S21	W73	5464	05	2.1	11	SN	C 2.6				38		
	HOLL	07	1653	1656	1706	S21	W73	5464	05	2.1	13	SN	C 2.6	3	E		43		
	SVTO	07	1654	1656	1702	S21	W73	5464	05	2.1	8	SF	C 2.6	3	E		33		
0165	HOLL	07	1705	1706	1718	N26	E70	5478	05	13.1	13	SF		4	E		14		
0166	HOLL	07	1749	1749	1759	S31	E44	5476	05	11.2	10	SF		4	E		11		
0167		07	17524	17581	1802	S21	W75	5464	05	2.0	10	SF	C 5.0				30		H
	HOLL	07	1752	1758	1802	S21	W75	5464	05	2.0	10	SF	C 5.0	4	E		35		
	PALE	07	1756	1759	1803	S21	W75	5464	05	2.0	7	SF	C 5.0	3	E		24		H
0168		07	18464	1854	1857	N26	E70	5478	05	13.2	11	SF					12		
	HOLL	07	1846	1854	1857	N26	E70	5478	05	13.2	11	SF		3	E		13		
	PALE	07	1850	1854	1857	N27	E70	5478	05	13.2	7	SF		3	E		12		
0169		07	18548	1907	1920	N26	W28	5470	05	5.6	26	SF					14		F
	HOLL	07	1854	1907	1927	N26	W28	5470	05	5.6	33	SF		4	E		17		F
	PALE	07	1902	1907	1913	N25	W29	5470	05	5.5	11	SF		3	E		10		
0170		07	1910	1912	1922	S21	W74	5464	05	2.1	12	SN	C 6.8				54		EF
	HOLL	07	1910	1912	1922	S21	W78	5464	05	1.8	12	SN	C 6.8	4	E		62		E
	PALE	07	1910	1912	1923	S21	W71	5464	05	2.3	13	SF	C 6.8	3	E		47		FE
0171		07	19211	19311	1945	N26	E70	5478	05	13.2	24	SF					21		
	HOLL	07	1921	1931	1944	N26	E67	5478	05	13.0	23	SF		4	E		24		
	PALE	07	1922	1932	1946	N26	E74	5478	05	13.5	24	SF		3	E		18		
0172		07	1933	1935	1950	S21	W78	5464	05	1.8	17	SF	C 7.0				32		
	PALE	07	1933	1935	1947	S21	W74	5464	05	2.1	14	SF	C 7.0	3	E		36		
	HOLL	07	1933	1935	1953	S21	W83	5464	05	1.4	20	SF	C 7.0	4	E		28		
0173	HOLL	07	2010	2011	2033	N29	W25	5470	05	5.9	23	SF	C 6.6	4	E		12		F
0174	HOLL	07	2112	2115	2119	S30	E44	5476	05	11.3	7	SF		4	E		29		F
0175		07	2113	21188	2130	S21	W78	5464	05	1.9	17	1N	M 2.0				96		DHI
	HOLL	07	2113	2118	2130	S21	W77	5464	05	2.0	17	1B	M 2.0	4	E		110		
	VORO	07	2122E	2126	2130	S21	W80	5464	05	1.7	8D	1F		2	C	2126	81		DHI

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0176	HOLL	07	2129	2131	2136	S30	E43	5476	05	11.3	7	SF		4	E		11		F
0177	HOLL	07	2131	2139	2152	N17	E24	5474	05	9.7	21	SF		4	E		28		F
0178	VORO	07	2158E	2158	2206	N29	W26	5470	05	5.9	8D	SN		2	C	2158	63	0.8	DIJZ
0179		07	22071	22091	2222	S29	E36	5476	05	10.7	15	SN					88	1.8	EFIJ
	VORO	07	2207	2210	2223	S29	E36	5476	05	10.7	16	SB		2	C	2210	134	1.8	EIJ
	HOLL	07	2208	2209	2222	S29	E35	5476	05	10.7	14	SF		4	E		41		F
0180		07	22162	2225	2320	S22	W49	5480	05	4.2	64	2F	C 4.3				268	6.5	EF
	HOLL	07	2216	2225	2317	S21	W48	5480	05	4.2	61	1F	C 4.3	4	E		133		F
	VORO	07	2218	2225	2322	S22	W50	5480	05	4.1	64	2F		2	C	2225	403	6.5	E
0181	HOLL	07	2250	2252	2258	N17	E24	5474	05	9.8	8	SF		4	E		13		
0182		07	23355	23402	2347	S21	W78	5464	05	2.0	12	SN					33		DHI
	VORO	07	2335	2342	2349	S22	W80	5464	05	1.8	14	SN		2	C	2342	45		DHI
	LEAR	07	2340	2340	2345	S20	W76	5464	05	2.2	5	SF		3	E		21		
0183		07	2344	23441	2406	N30	W27	5470	05	5.9	22	SN	C 4.3				66	1.3	EFIJZ
	LEAR	07	2344	2344	2411	N29	W27	5470	05	5.9	27	SF	C 4.3	3	E		42		F
	HOLL	07	2344	2345	2345D	N30	W27	5470	05	5.9	1D	SN	C 4.3	4	E		57		FE
	VORO	07	2344	2345	2400	N30	W28	5470	05	5.8	16	SB		2	C	2345	99	1.3	EIJZ
0184		08	0110*	0134*	0304	N30	W27	5470	05	5.9	114	1F	M 1.2				172	3.5	FK
	YUNN	08	0110	0134	0209	N30	W26	5470	05	6.0	59	SN			P		110	1.5	F
	LEAR	08	0110	0149	0322	N30	W27	5470	05	5.9	132	1F	M 1.2	3	E		159		
	LEAR	08	0110	0227	0322	N30	W27	5470	05	5.9	132	1F	M 1.2		E		174		K
	HOLL	08	0123E	0124U	0128D	N29	W26	5470	05	6.0	5D	SF		2	E		25		F
	YUNN	08	0222	0229	0322	N30	W27	5470	05	6.0	60	2N			C		393	5.5	F
0185		08	0118	01201	0128	S20	W77	5464	05	2.2	10	SN					56		D
	LEAR	08	0118	0120	0131	S21	W78	5464	05	2.1	13	SF		4	E		74		
	YUNN	08	0118	0121	0126	S20	W76	5464	05	2.2	8	SN			C		39		D
0186		08	01312	01341	0140	S31	E42	5476	05	11.4	9	SN					36	0.7	D
	YUNN	08	0131	0134	0141	S30	E42	5476	05	11.4	10	SN			C		47	0.7	D
	LEAR	08	0133	0135	0138	S32	E41	5476	05	11.3	5	SF		4	E		24		
0187	YUNN	08	0151	0201	0218	S19	W50	5475A	05	4.3	27	SN			C		16	0.3	E
0188		08	0153	01541	0158	S16	W76	5464	05	2.3	5	SN					46		
	YUNN	08	0153E	0154	0157	S16	W75	5464	05	2.4	4D	SN			P		39		
	LEAR	08	0153	0155	0158	S16	W76	5464	05	2.3	5	SF		3	E		54		
0189		08	03435	03501	0359	S30	E36	5476	05	11.0	16	SN					67	1.5	E
	YUNN	08	0343	0350	0351D	S30	E36	5476	05	11.0	8D	SN			P		110	1.5	E
	LEAR	08	0348	0351	0359	S29	E35	5476	05	10.9	11	SF		3	E		24		
0190		08	05155	05234	0556	N14	E21	5474	05	9.8	41	1N	C 5.2				279	3.8	EF
	ABST	08	0515	0523	0547	N15	E22	5474	05	9.9	32	1N			C	0523	288	3.3	E
	MITK	08	0516	0527	0543D	N14	E21	5474	05	9.8	27D	1F			C	0527	360	4.2	E
	SVTO	08	0520	0522U	0605	N14	E21	5474	05	9.8	45	1N	C 5.2	2	E		190		F
0191		08	0517	0525	0608	N12	E20	5479	05	9.7	51	1N	C 5.2				196	2.2	F
	LEAR	08	0517	0525	0608	N12	E20	5479	05	9.7	51	1F	C 5.2	3	E		203		F
	YUNN	08	0518E	0518U	0547D	N12	E20	5479	05	9.7	29D	1N			P	0518	189	2.2	F
0192	YUNN	08	0518E	0532	0547D	S29	E34	5476	05	10.9	29D	SN			P		24	0.3	D
0193	KHAR	08	0643E		0650D	N29	E63	5478	05	13.2	7D	SF		2	V				L
0194		08	0819	08176	0840	S23	E74	5481	05	14.0	21	SF	C 2.8				42		EK
	SVTO	08	0816E	0817	0845	S22	E76	5481	05	14.2	29D	SN			E		78		K
	SVTO	08	0816E	0823U	0845	S22	E76	5481	05	14.2	29D	SF	C 2.8	2	E		35		
	LEAR	08	0819	0822	0835	S22	E74	5481	05	14.0	16	SF	C 2.8	3	E		38		
	KANZ	08	0819	0823	0837	S24	E72	5481	05	13.9	18	SF			P				
	YUNN	08	0820E	0820U	0825D	S25	E71	5481	05	13.8	5D	SF			P	0820	16		E

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0195		08	08561	08565	0918	S22	W82	5464	05	2.1	22	SF					19		
	SVTO	08	0856	0856	0916	S23	W88	5464	05	1.6	20	SF		3	E		19		
	KANZ	08	0857	0901	0919	S21	W75	5464	05	2.6	22	SF			P				
0196	KANZ	08	0937	0937	0941	N27	E61	5478	05	13.1	4	SF			P				
0197	KANZ	08	1132	1135	1138	N17	E17	5474	05	9.8	6	SF			P				
0198		08	12507	12537	1306	S28	E28	5476	05	10.7	16	SF					24		F
	KANZ	08	1250	1253	1308	S28	E28	5476	05	10.7	18	SF			P				
	SVTO	08	1251	1253	1304	S27	E29	5476	05	10.8	13	SF		3	E		37		F
	RAMY	08	1252E	1254U	1313D	S29	E28	5476	05	10.7	21D	SF		2	E		25		
	HOLL	08	1257	1300	1306	S28	E27	5476	05	10.6	9	SF		3	E		10		
0199	RAMY	08	1301E	1302U	1312D	N16	E19	5474	05	10.0	11D	SF		2	E		11		
0200	HOLL	08	1401	1406	1417	N25	E53	5478	05	12.7	16	SF		3	E		45		EF
0201	HOLL	08	1448	1449	1453	S25	E71	5481	05	14.1	5	SF		3	E		24		
0202		08	15261	1530	1542	S22	E70	5481	05	14.0	16	SF					48		F
	SVTO	08	1526	1530	1547	S21	E71	5481	05	14.1	21	SF		3	E		26		
	RAMY	08	1527	1530	1538	S22	E68	5481	05	13.9	11	SF		3	E		70		F
0203		08	17222	17251	1732	N32	W27	5470	05	6.6	10	SF					27		
	HOLL	08	1722	1725	1735	N30	W28	5470	05	6.5	13	SF		3	E		35		
	SVTO	08	1724E	1726U	1728	N35	W25	5470	05	6.7	4D	SF		2	E		30		
	PALE	08	1724	1726	1733	N31	W29	5470	05	6.4	9	SF		4	E		17		
0204	HOLL	08	1903	1903	1911	S24	E66	5481	05	13.9	8	SF		3	E		12		
0205		08	2057	2059	2110	N30	W31	5470	05	6.4	13	SF					21		
	HOLL	08	2057	2059	2110	N30	W31	5470	05	6.4	13	SF		3	E		23		
	PALE	08	2102E	2102U	2114D	N31	W31	5470	05	6.4	12D	SF		4	E		19		
0206	HOLL	08	2102	2110	2155	N19	E13	5474	05	9.9	53	SF	C 4.9	3	E		93		EF
0207	HOLL	08	2143	2144	2152	S29	E24	5476	05	10.8	9	SF		3	E		35		F
0208	HOLL	08	2216	2219	2240	S23	E64	5481	05	13.8	24	SF		3	E		29		
0209	HOLL	08	2336	2337	2346	S25	E66	5481	05	14.1	10	SF		3	E		15		F
0210	PURP	09	0020E	0020U	0034	S23	E30	5476A	05	11.3	14D	SB			C	0020	75	1.0	E
0211	HOLL	09	0021	0021	0030	S28	E23	5476	05	10.8	9	SF		3	E		22		
0212	PURP	09	0029	0030	0039	S23	E62	5481	05	13.8	10	SN			C	0030	25	0.6	D
0213	ABST	09	0630	0632	0708	N06	E85	5484	05	15.6	38	1F			C	0632	87		D
0214	ABST	09	0700	0704	0708D	N24	E50	5478	05	13.1	8D	1F			P	0704	131	2.2	E
0215	LEAR	09	0806	0807	0818	S24	E60	5481	05	14.0	12	SF		3	E		22		
0216		09	08191	08231	0841	N18	W78		05	3.4	22	1N					56		
	KANZ	09	0819	0823	0841	N18	W77		05	3.5	22	SF			P				
	CATA	09	0820	0824	0841	N18	W80		05	3.2	21	1N		2	C	0824	56		
0217	KANZ	09	0823	0825	0837	N18	E09	5474	05	10.0	14	SF			P				
0218	KANZ	09	0935	0941	0956	N15	E49	5483	05	13.1	21	SF			P				
0219	CATA	09	1100	1100	1110	N11	E90	5484	05	16.2	10	1F		2	C	1100	56		
0220		09	11041	1105	1119	S28	E74		05	15.2	15	SN					65		
	RAMY	09	1104	1105	1116	S28	E74		05	15.2	12	SF		3	E		18		
	CATA	09	1105	1105	1118	S27	E75		05	15.3	13	1B		2	C	1105	112		
	KANZ	09	1105	1105	1124	S28	E72		05	15.1	19	SN			P				

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0221		09	11161	11192	1200	S29	E17	5476	05	10.8	44	SF	C 5.4				50		F
	SVTO	09	1116	1121	1225	S31	E16	5476	05	10.7	69	SF	C 5.4	3	E		58		
	RAMY	09	1117	1119	1151	S29	E17	5476	05	10.8	34	SF	C 5.4	3	E		43		F
	KANZ	09	1117	1120	1143	S28	E17	5476	05	10.8	26	SF			P				
0222	HOLL	09	1353	1354	1404	S29	E16	5476	05	10.8	11	SF		3	E		25		
0223		09	1509	1510	1532	S28	E15	5476	05	10.8	23	SF	C 2.4				54		
	SVTO	09	1509	1510	1522	S27	E16	5476	05	10.9	13	SF	C 2.4	3	E		33		
	HOLL	09	1509	1510	1542	S29	E14	5476	05	10.7	33	SF	C 2.4	3	E		74		
0224		09	1653	16541	1706	N18	E04	5474	05	10.0	13	SF	M 1.0				20		
	SVTO	09	1653	1654	1703	N19	E04	5474	05	10.0	10	SF	M 1.0	3	E		17		
	HOLL	09	1653	1655	1710	N17	E05	5474	05	10.1	17	SF	M 1.0	3	E		22		
0225	RAMY	09	1946	1947	1952	S34	E16	5476	05	11.1	6	SF		3	E		13		
0226	RAMY	09	2033	2035	2038	N31	W41	5470	05	6.6	5	SF		3	E		11		
0227	HOLL	09	2136E	2138U	2200	S28	E11	5476	05	10.7	24D	SF	C 2.1	3	E		56		
		09	2239		2248	No Flare Patrol													
0228		10	02041	0205	0217	S31	E10	5476	05	10.9	13	SF	C 3.3				36		EF
	LEAR	10	0204	0205	0216	S30	E08	5476	05	10.7	12	SF	C 3.3	3	E		36		F
	MITK	10	0205	0205	0218	S32	E12	5476	05	11.0	13	SF			C	0205			E
0229	LEAR	10	0257	0301	0307	S28	E09	5476	05	10.8	10	SF		3	E		16		
0230		10	03462	03513	0426	N27	E33	5478	05	12.7	40	SF	C 2.2				80		F
	MITK	10	0346	0351	0440	N27	E33	5478	05	12.7	54	SF			C	0351			
	LEAR	10	0348	0352	0415	N25	E33	5478	05	12.7	27	SF	C 2.2	3	E		68		F
	PALE	10	0348	0354	0423	N28	E32	5478	05	12.6	35	SF	C 2.2	3	E		92		F
0231	LEAR	10	0523	0525	0533	S29	E07	5476	05	10.8	10	SF		3	E		16		F
0232	CATA	10	0746E	0803	0840D	N29	E20	5478	05	11.9	54D	SF		2	P	0803	141	1.8	
0233		10	12157	12202	1234	S29	E59		05	15.1	19	SB					40	0.7	E
	HTPR	10	1215	1220	1236	S29	E58		05	15.0	21	SB			C	1220	40	0.7	E
	KANZ	10	1222	1222	1232	S29	E60		05	15.2	10	SN			P				
0234	HTPR	10	1221	1223	1227	N28	E25	5478	05	12.5	6	SN			C	1223	80	0.9	E
		10	1415		1420	No Flare Patrol													
0235		10	1631	1632	1640	S31	E03	5476	05	10.9	9	SF	C 2.5				32		
	HOLL	10	1631E	1632U	1638	S31	E02	5476	05	10.8	7D	SF	C 2.5	2	E		24		
	SVTO	10	1631	1632	1642	S31	E04	5476	05	11.0	11	SF	C 2.5	3	E		39		
0236	PALE	10	1934	1934U	1941	S20	E35	5481	05	13.5	7	SF		3	E		32		
0237	HOLL	10	2137	2143	2152	S32	E00	5476	05	10.9	15	SF		3	E		25		
		10	2310		2313	No Flare Patrol													
0238	HOLL	11	0026E	0036	0055	S31	W02	5476	05	10.9	29D	SF		3	E		67		F
0239	HOLL	11	0047	0049	0057	S29	E53		05	15.2	10	SF		3	E		24		
		11	0124		0136	No Flare Patrol													
0240	LEAR	11	0223	0223	0232	N14	E80	5487	05	17.1	9	SF		3	E		18		
		11	0350		0357	No Flare Patrol													
0241		11	05222	05273	0607	S31	W05	5476	05	10.8	45	1F					138	2.7	EF
	LEAR	11	0522	0530	0604	S31	W06	5476	05	10.7	42	SF		3	E		48		F
	ABST	11	0524	0527	0610	S31	W04	5476	05	10.9	46	1F			C	0527	227	2.7	E

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0242		11	0729*	07518	0818	S31	W06	5476	05	10.8	49	1N	C 8.2				252	3.2	EFHI
	SVTO	11	0729	0755	0851	S30	W08	5476	05	10.7	82	2N	C 8.2	3	E		269		FH
	HTPR	11	0745	0751	0805	S30	W07	5476	05	10.8	20	1N			C	0751	350	4.0	EI
	KANZ	11	0747	0755	0828	S31	W07	5476	05	10.8	41	1N			P				
	BUCA	11	0748	0757	0815	S30	W05	5476	05	10.9	27	1N			P	0757	258	3.0	E
	LEAR	11	0749	0753	0811	S31	W06	5476	05	10.8	22	1F	C 8.2	3	E		135		FH
	KAND	11	0751	0753	0805	S32	W06	5476	05	10.8	14	SB			P	0753	104	1.2	E
	ISTA	11	0751	0756	0801	S31	W03	5476	05	11.1	10	SB			V				F
	CATA	11	0759	0759	0824	S32	W06	5476	05	10.8	25	1B		2	C	0759	394	4.7	
0243		11	08511	0853	0900	S22	W60	5471	05	6.7	9	SF					38	0.9	DG
	LEAR	11	0851	0853	0857	S20	W60	5471	05	6.8	6	SF		3	E		35		
	KAND	11	0852	0853	0856	S23	W61	5471	05	6.7	4	SN			P	0853	42	0.9	DG
	SVTO	11	0852	0853	0908	S23	W60	5471	05	6.7	16	SF		3	E		38		
0244		11	10553	10594	1110	S32	W08	5476	05	10.8	15	SF					44	0.7	EFHIT
	RAMY	11	1055	1103	1114	S31	W08	5476	05	10.8	19	SF		3	E		25		FH
	KAND	11	1058	1059	1107	S32	W07	5476	05	10.9	9	SF			P	1059	62	0.7	EIT
0245	RAMY	11	1106E	1107U	1115	N18	E86	5487	05	18.0	9D	SF		1	E		85		
		11	1345		1423	No Flare Patrol													
		11	1437		1533	No Flare Patrol													
		11	1807		1916	No Flare Patrol													
		11	1945		1954	No Flare Patrol													
0246	HOLL	11	2316	2317	2337	S24	E02	5482	05	12.1	21	SF	C 2.1	3	E		29		
		12	0214		0215	No Flare Patrol													
		12	0219		0227	No Flare Patrol													
		12	0241		0246	No Flare Patrol													
0247		12	0254	0255	0303	S30	W17	5476	05	10.8	9	SF					24	0.3	EF
	YUNN	12	0253E	0253U	0306	S30	W17	5476	05	10.8	13D	SF			P	0253	24	0.3	E
	LEAR	12	0254	0255	0300	S31	W17	5476	05	10.8	6	SF		3	E		24		F
	PALE	12	0255E	0255U	0302D	S30	W16	5476	05	10.9	7D	SF		3	E		23		F
0248	ABST	12	0419	0423	0431	N13	E90	5488	05	19.0	12	1F			C	0423	61		ADI
0249	ISTA	12	0641		0650	N17	E77	5487	05	18.1	9	SN			V				E
0250		12	0720	0722	0725	N37	W90	5470	05	5.0	5	1B							AD
	ISTA	12	0720		0726	N45	W90		05	4.8	6	2B			V				DA
	KAND	12	0720	0722	0724	N29	W90	5470	05	5.2	4	SN			P				A
0251		12	07463	0750	0804	N06	E34	5484	05	14.9	18	1N					20	0.2	D
	HTPR	12	0746	0750	0808	N06	E32	5484	05	14.7	22	SN			C	0750	20	0.2	
	ISTA	12	0749		0800	N05	E35	5484	05	14.9	11	1N			V				D
0252	HTPR	12	0829		0846D	N15	E90	5488	05	19.2	17D	SN			C	0838	40		
0253	HTPR	12	0849E		0902	S31	W25	5476	05	10.4	13D	SF			C	0852	30	0.3	
		12	1019		1024	No Flare Patrol													
0254		12	1044	1059*	1120	N16	E90	5488	05	19.3	36	1N					117		A
	HTPR	12	1044	1059	1120	N16	E90	5488	05	19.3	36	1N			C	1059	150		A
	CATA	12	1111E	1118	1121D	N15	E90	5488	05	19.3	10D	1N		2	P	1118	84		
0255	RAMY	12	1119E	1119U	1159	S29	W22	5476	05	10.7	40D	SF	M 1.2	3	E		53		F
0256	RAMY	12	1215	1216	1223	N15	E84	5488	05	18.9	8	SF		3	E		52		
0257		12	1225	1228	1258	S31	W22	5476	05	10.8	33	1F	C 4.2				139	2.3	EF
	RAMY	12	1225	1228	1252D	S32	W24	5476	05	10.6	27D	1F	C 4.2	3	E		110		F
	HTPR	12	1227E		1229D	S30	W20	5476	05	10.9	2D	1N			C	1227	200	2.3	E
	HOLL	12	1228E	1233U	1258	S31	W22	5476	05	10.8	30D	1F		2	E		108		F
0258	RAMY	12	1234	1236	1249	N15	E81	5488	05	18.6	15	SF		3	E		22		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0259		12	1402	1413*	1610D	S29	W24	5476	05	10.7	128D	1F	C 3.6				168		K
	HOLL	12	1402	1413	1610D	S29	W24	5476	05	10.7	128D	1F	C 3.6	3	E		104		
	HOLL	12	1402	1456	1610D	S29	W24	5476	05	10.7	128D	1F	C 3.6		E		231		K
0260	HOLL	12	1436	1438	1443	N16	E70	5487	05	17.9	7	SF		3	E		21		
		12	1525		1529	No Flare Patrol													
0261	HOLL	12	1532	1536	1552	N27	E06	5478	05	13.1	20	SN		3	E		87		
0262	HOLL	12	1627	1630	1655	N12	W43	5479	05	9.4	28	SF		3	E		34		
0263		12	17433	17531	1806	S28	W26	5476	05	10.7	23	SF					44		
	PALE	12	1743	1754	1807	S28	W26	5476	05	10.7	24	SF		3	E		42		
	HOLL	12	1746	1753	1804	S29	W26	5476	05	10.7	18	SF		3	E		45		
0264	HOLL	12	1752	1756	1802	N28	E04	5478	05	13.0	10	SF		3	E		20		
0265	HOLL	12	1952	1954	2004	N16	E68	5487	05	18.0	12	SF		3	E		19		F
0266		12	2308	2313	2347	N12	W46	5479	05	9.5	39	1F					111		F
	HOLL	12	2308	2313	2347	N11	W45	5479	05	9.6	39	1F		3	E		115		F
	PALE	12	2313E	2316U	2347	N13	W46	5479	05	9.5	34D	1F		3	E		107		
0267	HOLL	12	2315	2317	2335	N17	E63	5487	05	17.7	20	SF		3	E		68		
0268	HOLL	13	0009	0009	0015	N07	E25	5484	05	14.9	6	SF		3	E		13		
0269	PURP	13	0032	0044	0109	N07	E26	5484	05	15.0	37	SN			C	0044	50	0.6	E
0270	ABST	13	0400E	0403D	0404	N17	E80	5488	05	19.2	4D	1F			P	0403	87		AD
0271	ISTA	13	0608E	0608	0629	N16	E23	5484	05	15:0	21D	SF			V				F
0272		13	07174	0721*	0737	N17	E76	5488	05	19.1	20	SF					66		DE
	HTPR	13	0717	0721	0735	N17	E77	5488	05	19.1	18	SF			C	0721	100		E
	BUCA	13	0720	0730	0735	N19	E77	5488	05	19.2	15	SF			P	0730			D
	LEAR	13	0721	0732	0742	N15	E73	5488	05	18.8	21	SF		3	E		31		
0273		13	0803	08146	0826	N28	W08	5478	05	12.7	23	1N					120	1.3	EF
	HTPR	13	0803	0814	0808	N28	W08	5478	05	12.7	5	SF			C	0814	120	1.3	E
	ISTA	13	0814E	0820	0845	N27	W07	5478	05	12.8	31D	1N			V				F
0274		13	08405	08471	0903	N10	E21	5484	05	14.9	23	SB					40	0.4	E
	HTPR	13	0840	0847	0908	N06	E20	5484	05	14.8	28	SN			C	0847	40	0.4	
	ISTA	13	0845	0848	0858	N15	E22	5484	05	15.0	13	SB			V				E
0275		13	0936*	0938*	1020	S32	W34	5476	05	10.7	44	1B					172	2.4	EIKT
	HTPR	13	0936	0938	1020	S32	W34	5476	05	10.7	44	1N			C	0958	200	2.4	EIK
	KAND	13	0955	1000	1005D	S31	W35	5476	05	10.6	10D	SB			P	1000	145		ET
0276		13	10005	10073	1030	N26	W10	5478	05	12.6	30	SN					144	1.6	EI
	HTPR	13	1000	1007	1030	N27	W10	5478	05	12.6	30	SF			C	1007	120	1.3	EI
	CATA	13	1005	1010	1030D	N24	W10	5478	05	12.6	25D	SB		2	P	1010	169	2.0	
0277	HTPR	13	1035	1043	1053	N17	E75	5488	05	19.1	18	SF			C	1045	50		
0278	HOLL	13	1412	1412	1416	N16	E68	5488	05	18.7	4	SF		3	E		11		
0279		13	14487	1500*	1534	N17	E69	5488	05	18.9	46	1N	C 4.4				120		EK
	HOLL	13	1448	1459U	1459D	N15	E68	5488	05	18.8	11D	1N	C 4.4	3	E		100		
	HTPR	13	1455	1500	1512	N18	E73	5488	05	19.2	17	1B			C	1500	150		E
	RAMY	13	1455	1501	1546	N17	E67	5488	05	18.7	51	1N	C 4.4	2	E		162		
	SVTO	13	1455	1504	1530	N20	E69	5488	05	18.9	35	1F	C 4.4	2	E		105		
	RAMY	13	1455	1518	1546	N17	E67	5488	05	18.7	51	1N			E		81		K
0280	HTPR	13	1512	1515	1521	N15	W25		05	11.7	9	SF			C	1515	10	0.1	G

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0281		13	15114	15171	1542	N19	E47	5487	05	17.2	31	SN						59	1.4	EFU
	HTPR	13	1511	1517	1541	N20	E45	5487	05	17.1	30	SB				C	1517	100	1.4	EU
	HOLL	13	1514	1517	1542	N19	E48	5487	05	17.3	28	SF			3	E		47		F
	RAMY	13	1514	1517	1544	N17	E48	5487	05	17.3	30	SF			2	E		53		
	SVTO	13	1515	1518	1542	N21	E47	5487	05	17.2	27	SF			2	E		37		F
0282		13	1638	1642	1649	N08	E17	5484	05	15.0	11	SF	C	3.3				107	2.2	E
	HTPR	13	1638	1642	1649	N10	E17	5484	05	15.0	11	1N				C	1642	220	2.2	E
	HOLL	13	1638	1642	1649	N07	E18	5484	05	15.0	11	SF	C	3.3	3	E		62		
	SVTO	13	1640E	1642U	1646D	N07	E17	5484	05	15.0	6D	SF			2	E		40		
0283	HOLL	13	1812	1813	1818	S32	W34	5476	05	11.1	6	SF			3	E		28		
		13	1842		1848	No Flare Patrol														
0284	PALE	13	2011	2011	2017	N07	E15	5484	05	15.0	6	SF			3	E		19		F
0285		13	2043	2044*	2117	S24	W48	5476	05	10.1	34	SF						22		K
	HOLL	13	2043	2044	2117	S24	W48	5476	05	10.1	34	SF				E		24		K
	HOLL	13	2043	2056	2117	S24	W48	5476	05	10.1	34	SF			3	E		19		
0286		13	2201*	22076	2222	N07	E14	5484	05	15.0	21	SF						14		
	HOLL	13	2201	2207	2210	N07	E14	5484	05	15.0	9	SF			3	E		12		
	HOLL	13	2213	2213	2235	N07	E13	5484	05	14.9	22	SF			3	E		16		
0287	HOLL	13	2339	2340	2343	N07	E13	5484	05	14.9	4	SF			3	E		14		
0288		13	2354*	2409*	2437	N30	E12	5481B	05	14.9	43	SF						16		F
	HOLL	13	2354	2409	2435	N29	E13	5481B	05	15.0	41	SF			3	E		18		
	PALE	14	0030	0031	0039	N30	E10	5481B	05	14.8	9	SF			3	E		14		F
0289	PALE	14	0021	0023	0033	N19	E67	5488	05	19.1	12	SF			3	E		36		F
0290	LEAR	14	0130	0130	0133	S21	W09	5481	05	13.4	3	SF			3	E		16		
0291		14	0441	04439	0504	N06	E10	5484	05	14.9	23	SF						104	2.0	E
	LEAR	14	0441	0443	0502	N06	E10	5484	05	14.9	21	SF			3	E		16		
	ABST	14	0444E	0452	0507	N07	E11	5484	05	15.0	23D	SF				P	0452	192	2.0	E
0292	LEAR	14	0543	0544	0600	N15	E62	5488	05	18.9	17	SF			3	E		30		
0293		14	05471	05531	0614	N18	W54	5474	05	10.1	27	1N	C	3.4				146	4.0	EFG
	ABST	14	0547	0554	0611	N16	W55	5474	05	10.1	24	1N				C	0554	218	4.0	EG
	LEAR	14	0548	0553	0618	N19	W54	5474	05	10.1	30	SF	C	3.4	3	E		74		F
0294		14	06546	06541	0711	N07	E09	5484	05	15.0	17	SN	C	4.9				138	1.8	EF
	LEAR	14	0654	0654	0708	N07	E09	5484	05	15.0	14	SF	C	4.9	3	E		72		F
	CATA	14	0655	0655	0711D	N06	E08	5484	05	14.9	16D	SB			2	P	0655	169	1.8	
	BUCA	14	0700		0714	N07	E09	5484	05	15.0	14	SN				P	0700	172	1.8	E
0295	SVTO	14	0853	0855	0858	N18	E61	5488	05	19.0	5	SF			3	E		29		
0296		14	15112	1515	1520	S32	W60	5476	05	9.9	9	SF						42		
	HOLL	14	1511	1515	1521	S31	W59	5476	05	10.0	10	SF			3	E		50		
	RAMY	14	1513	1515	1519	S33	W60	5476	05	9.9	6	SF			3	E		34		
0297	HOLL	14	1522	1523	1533	S23	W09	5481	05	13.9	11	SF			3	E		17		F
0298	RAMY	14	1523	1525	1532	S23	W18	5492	05	13.2	9	SF			3	E		29		
0299	HOLL	14	1600	1602	1607	S31	W51	5476	05	10.6	7	SF			3	E		18		
0300	HOLL	14	1623	1625	1653	S23	W09	5481	05	14.0	30	SF			3	E		16		
0301		14	16411	1643	1723	N07	E04	5484	05	15.0	42	1N						104		EF
	HOLL	14	1641	1643	1725	N07	E04	5484	05	15.0	44	1N			4	E		133		FE
	PALE	14	1642	1646U	1721	N07	E04	5484	05	15.0	39	SF			3	E		76		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0302		14	1643	16481	1711	N26	W22	5478	05	13.0	28	SF	C 5.7				27		F
	HOLL	14	1643	1648	1712	N26	W24	5478	05	12.8	29	SF	C 5.7	3	E		44		F
	PALE	14	1648E	1649	1712	N27	W23	5478	05	12.9	24D	SF	C 5.7	3	E		26		F
	RAMY	14	1700E	1700U	1709	N26	W20	5478	05	13.1	9D	SF		2	E		12		
0303	HOLL	14	1832	1834	1840	S21	W20	5492	05	13.2	8	SF		4	E		35		
0304	HOLL	14	1907	1907	1914	N26	W25	5478	05	12.8	7	SF		4	E		14		F
0305		14	2109	2113*	2159	S21	W21	5492	05	13.3	50	SF					32		K
	HOLL	14	2109	2113	2159	S21	W21	5492	05	13.3	50	SF			E		32		K
	HOLL	14	2109	2142	2159	S21	W21	5492	05	13.3	50	SF		3	E		31		
0306		14	22281	2230	2241	S29	W64	5476	05	9.9	13	1N	C 2.4				102		D
	VORO	14	2228	2230	2241	S29	W66	5476	05	9.8	13	1N		2	C	2230	125		D
	HOLL	14	2229	2230	2241	S29	W62	5476	05	10.1	12	SN	C 2.4	3	E		80		
0307	LEAR	15	0045	0047	0051	N17	E50	5488	05	18.8	6	SF		3	E		12		
0308	PALE	15	0326	0330	0347	S20	W25	5492	05	13.2	21	SF		3	E		21		
0309		15	03381	03391	0347	S14	E70	5491	05	20.4	9	SF					26		
	LEAR	15	0338	0339	0349	S14	E71	5491	05	20.5	11	SF		3	E		36		
	PALE	15	0339	0340	0345	S14	E70	5491	05	20.4	6	SF		3	E		16		
0310		15	03471	0351	0400	N18	E22	5489	05	16.8	13	SF					14		
	PALE	15	0347	0351	0400	N18	E22	5489	05	16.8	13	SF		3	E		12		
	LEAR	15	0348	0351	0400	N17	E23	5489	05	16.9	12	SF		3	E		16		
0311		15	05314	05362	0608	S21	W26	5492	05	13.2	37	1N	C 6.5				199	3.8	EF
	SVTO	15	0531E	0536	0603	S21	W26	5492	05	13.2	32D	SF	C 6.5	3	E		91		F
	LEAR	15	0531	0536	0611	S20	W26	5492	05	13.2	40	SN	C 6.5	3	E		96		F
	MITK	15	0533	0536	0609D	S20	W27	5492	05	13,2	36D	1B			C	0536	260	3.2	
	ABST	15	0535	0538	0609	S22	W26	5492	05	13.2	34	1N			C	0538	349	4.3	E
0312	ATHN	15	0537E	0537U	0645D	S24	W11	5481	05	14.4	68D	SN		2	V	0537	175	2.0	
0313	SVTO	15	0701E	0703	0716	N19	E47	5488	05	18.9	15D	SF		2	E		20		F
0314	LEAR	15	0746	0746	0756	N14	E48	5488	05	18.9	10	SF		3	E		12		
0315		15	08595	09035	0912	S14	E65	5491	05	20.3	13	SF					24		DEG
	LEAR	15	0859	0903	0910	S13	E63	5491	05	20.1	11	SF		3	E		24		
	KHAR	15	0900		0910	S12	E66	5491	05	20.3	10	SF		2	V	0903			D
	ISTA	15	0904	0908	0917	S16	E66	5491	05	20.4	13	SF			V				EG
		15	1218		1230	No Flare Patrol													
0316		15	1340	13403	1354	N20	E20	5489	05	17.1	14	SF					36		
	SVTO	15	1340	1340	1351	N20	E19	5489	05	17.0	11	SF		3	E		18		
	HOLL	15	1340	1343	1356	N19	E20	5489	05	17.1	16	SF		3	E		55		
0317		15	1354	1354	1400	N25	W34	5478	05	12.9	6	SF					15		
	SVTO	15	1354	1354	1359	N24	W35	5478	05	12.9	5	SF		3	E		14		
	HOLL	15	1354	1354	1402	N26	W33	5478	05	13.0	8	SF		3	E		16		
0318	HOLL	15	1646	1647	1712	N17	E44	5488	05	19.0	26	SF		3	E		16		
0319	HOLL	15	1710	1720	1727	S12	E62	5491	05	20.4	17	SF		3	E		21		
0320	HOLL	15	2127	2128	2135	N08	W10	5484	05	15.1	8	SF		3	E		12		F
		16	0126		0215	No Flare Patrol													
0321	PALE	16	0257	0300	0315	S20	W38	5492	05	13.2	18	SF		3	E		29		F
0322	PALE	16	0316	0320	0331	N19	E28	5487	05	18.3	15	SF		3	E		31		F
		16	0329		0426	No Flare Patrol													

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0323	PALE	16	0414	0415	0433D	N18	E36	5488	05	18.9	19D	SF			3	E		23		
0324		16	0421	0428	0454	N16	E22	5487	05	17.8	33	1N						120	2.1	EF
	PALE	16	0421	0428	0448D	N18	E22	5487	05	17.8	27D	SF			3	E		64		F
	ABST	16	0428E	0431U	0454	N15	E23	5487	05	17.9	26D	1N				P	0431	175	2.1	E
0325	CATA	16	0717	0717	0725	S17	E57	5491	05	20.6	8	1F			2	C	0717	169	3.3	
0326	KHAR	16	0850		0910	N20	W80		05	10.2	20	SF			2	V				D
0327	KHAR	16	0917		0940D	N25	W47	5478	05	12.7	23D	SF			2	V	0918			E
0328	CATA	16	0927E	0930	0956	N24	W28	5481A	05	14.2	29D	SN			2	P	0930	56	0.7	
0329	KHAR	16	1043		1100	N20	W80		05	10.3	17	SF			2	V				D
0330	SVTO	16	1047	1056	1119	N23	E34	5495	05	19.1	32	SF			3	E		30		F
0331	RAMY	16	1336	1336	1350	S21	W44	5492	05	13.2	14	SF			3	E		44		F
0332		16	14341	14341	1442	S17	E50	5491	05	20.4	8	SF						17		
	SVTO	16	1434	1434	1443	S15	E49	5491	05	20.3	9	SF			3	E		19		
	RAMY	16	1435	1435	1442	S19	E50	5491	05	20.4	7	SF			3	E		15		
0333		16	1627	1632	1655	N17	E17	5487	05	18.0	28	SF						35		F
	SVTO	16	1627	1632U	1633D	N18	E14	5487	05	17.7	6D	SF			2	E		33		F
	RAMY	16	1627	1632	1655	N16	E16	5487	05	17.9	28	SF			2	E		25		F
	HOLL	16	1630E	1630U	1644D	N18	E20	5487	05	18.2	14D	SF			3	E		47		F
0334		16	18373	18411	1900	S14	E46	5491	05	20.2	23	SF						64		F
	HOLL	16	1837	1841U	1856D	S16	E45	5491	05	20.2	19D	SF			3	E		82		
	RAMY	16	1839	1841	1901	S12	E45	5491	05	20.2	22	SF			3	E		70		F
	PALE	16	1840	1842	1900	S13	E48	5491	05	20.4	20	SF			3	E		40		
0335	PALE	16	1908	1908	1918	N17	E13	5487	05	17.8	10	SF			3	E		19		F
0336		16	2207	22089	2224	S18	E46	5491	05	20.4	17	SF						36	0.6	D
	VORO	16	2207	2208	2209D	S17	E45	5491	05	20.3	2D	SF			2	C	2208	45	0.7	D
	VORO	16	2213E	2217	2224	S18	E46	5491	05	20.4	11D	SF			2	C	2217	27	0.4	D
0337	VORO	16	2309E	2312	2318	N16	E12	5487	05	17.9	9D	SF			2	C	2312	72	0.8	DIJT
0338	ISTA	17	0814E		0849	N17	E07	5487	05	17.9	35D	SF				V				B
0339		17	0854*	09155	1027	S18	E36	5491	05	20.1	93	2N	C	3.7				405	7.2	EFHILSU
	HTPR	17	0854	0920	1115	S18	E37	5491	05	20.2	141	2N				C	0920	550	6.8	EFISU
	KHAR	17	0857		1012D	S18	E35	5491	05	20.0	75D	2F			2	P	0929	600	6.6	FHILS
	LEAR	17	0908	0918	0926	S17	E36	5491	05	20.1	18	SF	C	3.7	3	E		31		
	CATA	17	0915E	0915	0950D	S18	E35	5491	05	20.0	35D	2B			2	P	0915	618	8.1	
	SVTO	17	0915E	0918	1039	S19	E37	5491	05	20.2	84D	1F	C	3.7	3	E		227		UF
0340	HTPR	17	0952	0955	0959	S30	W85	5476	05	10.7	7	SN				C	0955	30		
0341		17	11553	12003	1227	N18	W12	5489	05	16.6	32	SN						56	0.8	EFIU
	HTPR	17	1155	1200	1230	N18	W14	5489	05	16.4	35	SB				C	1200	80	0.8	EI
	RAMY	17	1158	1202	1214	N18	W11	5489	05	16.7	16	SF			3	E		35		UF
	SVTO	17	1201E	1203	1236	N18	W11	5489	05	16.7	35D	SF			2	E		53		F
0342	HTPR	17	1224	1227	1240	N12	W53	5483	05	13.5	16	SN				C	1227	30	0.5	
0343		17	1614	16151	1629	N18	W14	5489	05	16.6	15	SF						21		F
	RAMY	17	1614	1615	1629	N18	W14	5489	05	16.6	15	SF			3	E		26		
	SVTO	17	1614	1616	1629	N18	W14	5489	05	16.6	15	SF			3	E		16		F
0344		17	1932	1947	2002	S20	W60	5492	05	13.2	30	SF						60		
	HOLL	17	1912E	1947U	2006	S20	W59	5492	05	13.3	54D	SF			2	E		64		
	RAMY	17	1932	1947	1958	S21	W60	5492	05	13.2	26	SF			3	E		56		
0345	LEAR	18	0051	0052	0056	S20	W64	5492	05	13.1	5	SF			3	E		26		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0346	YUNN	18	0238	0239	0245D	N21	E15	5495	05	19.2	7D	SN			P		24	0.3	D
0347		18	04172	0420	0423	S16	E26	5491	05	20.1	6	SN	C 1.6				57	1.1	D
	ABST	18	0417	0420	0423	S15	E26	5491	05	20.1	6	SN			C	0420	96	1.1	D
	LEAR	18	0419	0420	0423	S17	E26	5491	05	20.1	4	SF	C 1.6	3	E		18		
0348	SVTO	18	0555	0556	0604	N16	W02	5487	05	18.1	9	SF		3	E		13		
0349		18	0753	07546	0806	N22	E13	5495	05	19.3	13	SN					47	0.7	EFI
	ISTA	18	0753	0754	0757	N24	E18	5495	05	19.7	4	SN			V				F
	LEAR	18	0753	0755	0808	N21	E11	5495	05	19.2	15	SF		3	E		20		F
	SVTO	18	0753	0759	0814D	N25	E12	5495	05	19.2	21D	SF		3	E		50		
	HTPR	18	0753	0800	0812	N20	E11	5495	05	19.2	19	SN			C	0800	70	0.7	EI
0350	LEAR	18	0855	0857	0919	S21	W64	5492	05	13.5	24	SF		3	E		48		
0351		18	1339	13392	1344	N16	E05	5488	05	18.9	5	SF					19		F
	HOLL	18	1339	1339	1343	N16	E05	5488	05	18.9	4	SF		3	E		19		
	RAMY	18	1339	1341	1345	N16	E05	5488	05	18.9	6	SF		3	E		19		F
0352	HOLL	18	1441E	1442U	1443D	N16	E04	5488	05	18.9	2D	SF		3	E		26		
0353	HOLL	18	1622E	1623U	1627	S18	E19	5491	05	20.1	5D	SF		3	E		51		
0354		18	1757*	1801*	1817	N17	E03	5488	05	19.0	20	SF	C 3.1				34		F
	HOLL	18	1757	1801	1810	N17	E08	5488	05	19.3	13	SF		3	E		25		F
	RAMY	18	1759	1801	1810	N17	E00	5488	05	18.7	11	SF		3	E		21		
	HOLL	18	1812	1813	1828	N18	E02	5488	05	18.9	16	SN	C 3.1	3	E		49		
	PALE	18	1812	1814	1819	N17	E02	5488	05	18.9	7	SF	C 3.1	3	E		43		F
0355	HOLL	18	2054	2057	2107	N17	E02	5488	05	19.0	13	SF		3	E		37		
0356		18	2322*	2329*	2415	N07	W52	5484	05	15.1	53	1F	C 2.2				107		EFH
	HOLL	18	2322	2329	2435	N07	W53	5484	05	15.0	73	1N	C 2.2	3	E		196		FE
	PALE	18	2326	2334	2410	N07	W52	5484	05	15.1	44	1F		3	E		114		FH
	LEAR	18	2351	2352	2359	N08	W52	5484	05	15.1	8	SF		3	E		11		
0357	LEAR	19	0143	0145	0148	N11	W55	5484	05	14.9	5	SF		3	E		31		
0358	LEAR	19	0611	0614	0621	S22	E55	5497	05	23.5	10	SF		3	E		30		
0359	KHAR	19	0700		0710	S16	E23	5496B	05	21.0	10	SF		2	V				D
0360	HTPR	19	1245E		1245D	N20	W02	5495	05	19.4	10D	SN			C	1245	70	0.7	E
0361	RAMY	19	1253E	1253U	1309D	N16	W07	5488	05	19.0	16D	SF		2	E		30		
0362	HTPR	19	1344	1354	1402	N20	W10	5495	05	18.8	18	SF			C	1354	120	1.2	E
0363		19	1443	1448	1500	N17	W11	5488	05	18.8	17	SF	C 1.8				88	1.4	EFI
	RAMY	19	1356E	1450U	1517D	N16	W11	5488	05	18.7	81D	SF		2	E		61		F
	HTPR	19	1443	1448	1456	N18	W09	5488	05	18.9	13	SN			C	1448	140	1.4	EI
	SVTO	19	1443	1448	1500	N18	W14	5488	05	18.5	17	SF	C 1.8	3	E		72		F
	HOLL	19	1443	1448	1503	N16	W11	5488	05	18.8	20	SF	C 1.8	3	E		78		F
0364	HTPR	19	1531	1538	1550	S14	E04	5491	05	19.9	19	SN			C	1538	100	1.0	EI
0365	SVTO	19	1607	1610	1624	S17	E46	5497	05	23.2	17	SF		3	E		12		F
0366		19	16272	1629*	1712	N20	W07	5495	05	19.2	45	1F	C 1.6				60		EFK
	HOLL	19	1627	1629	1730	N19	W08	5495	05	19.1	63	1F	C 1.6		E		48		K
	HOLL	19	1627	1657	1730	N19	W08	5495	05	19.1	63	1F	C 2.2	3	E		122		FE
	HOLL	19	1629	1631	1637	N21	W06	5495	05	19.2	8	SF	C 1.6	3	E		10		
0367	HOLL	19	1756	1802	1814	N22	W10	5495	05	19.0	18	SF		3	E		14		H
0368	HOLL	19	1824	1824	1831	N26	W05	5495	05	19.4	7	SF		3	E		11		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0369		19	18555	19001	1919	S22	E48	5497	05	23.5	24	SF	C 1.5				44		
	HOLL	19	1855	1900	1920	S22	E48	5497	05	23.5	25	SF	C 1.5	3	E		21		
	PALE	19	1900	1901	1918	S21	E49	5497	05	23.5	18	SF	C 1.5	3	E		67		
0370	HOLL	19	2052	2101	2116	N15	W16	5488	05	18.6	24	SF	C 1.4	3	E		25		FH
0371	VORO	19	2206	2207	2211	N22	W09	5495	05	19.2	5	SF		2	C	2207	54	0.6	DIJ
0372	VORO	19	2209	2210	2222	S16	E46	5497	05	23.4	13	SF		2	C	2210	27	0.4	DJ
0373	HOLL	19	2322	2329	2435	N07	W53	5484	05	16.0	73	1N		3	E		196		EF
0374		20	0006	00071	0017	S19	E48	5497	05	23.7	11	SF					39	1.1	EFJ
	PALE	20	0006	0007	0013	S20	E49	5497	05	23.7	7	SF		3	E		19		F
	HOLL	20	0006	0007	0024	S19	E47	5497	05	23.6	18	SF		3	E		26		F
	VORO	20	0006	0008	0014	S19	E48	5497	05	23.7	8	SF		2	C	0008	72	1.1	EJ
0375	VORO	20	0034	0037	0042	N22	W13	5495	05	19.0	8	SF		2	C	0037	63	0.7	DIJ
0376	HOLL	20	0049	0050	0056	N18	W17	5488	05	18.7	7	SF		3	E		25		F
0377	URUM	20	0242	0242	0244	N22	W13	5495	05	19.1	2	SN			C		48	0.6	E
0378	LEAR	20	0258	0303	0308	N21	W15	5495	05	19.0	10	SF		3	E		24		
0379		20	04249	04286	0510	N22	W14	5495	05	19.1	46	SF	C 3.3				118		FK
	LEAR	20	0424	0428	0504	N22	W13	5495	05	19.2	40	SF	C 3.3		E		86		K
	LEAR	20	0424	0434	0504	N22	W13	5495	05	19.2	40	SF	C 3.3	3	E		83		
	PALE	20	0432	0434	0437D	N21	W15	5495	05	19.0	5D	SF	C 3.3	3	E		77		F
	SVTO	20	0433	0435U	0522	N21	W14	5495	05	19.1	49	1F	C 3.3	3	E		225		F
0380	ABST	20	0434	0435	0504	N29	W13	5495	05	19.2	30	SN			C	0435	140	1.6	EV
0381		20	0525*	05439	0552	N22	W14	5495	05	19.1	27	SF					33	0.4	DK
	LEAR	20	0525	0544	0556	N22	W14	5495	05	19.1	31	SF			E		34		K
	LEAR	20	0525	0552	0556	N22	W14	5495	05	19.1	31	SF		3	E		33		
	URUM	20	0541	0543	0544	N22	W14	5495	05	19.2	3	SF			C		32	0.4	D
0382	LEAR	20	0623	0623	0632	S17	W02	5491	05	20.1	9	SF		3	E		15		
0383		20	0627*	0631*	0645	N22	W15	5495	05	19.1	18	SN					66	1.0	EV
	URUM	20	0627	0636	0643	N22	W16	5495	05	19.0	16	SN			C		64	0.8	E
	LEAR	20	0630	0631	0635	N22	W15	5495	05	19.1	5	SF		3	E		20		
	ABST	20	0643	0644	0657	N23	W15	5495	05	19.1	14	SN			C	0644	114	1.3	EV
0384	HTPR	20	0728	0741	0750	N17	W15	5488	05	19.2	22	SF			C	0741	40	0.4	E
0385		20	0732*	0732	0743	N21	W20	5495	05	18.8	11	SF					56	0.7	D
	CATA	20	0732	0732	0737	N22	W20	5495	05	18.8	5	SN		2	C	0732	56	0.7	
	KHAR	20	0733E		0738	N21	W21	5495	05	18.7	5D	SF		2	P	0733			D
	KHAR	20	0746		0755	N20	W19	5495	05	18.9	9	SF		2	V	0748			D
0386		20	0806*	0809*	0824	N22	W17	5495	05	19.0	18	SN					46	0.8	DEH
	HTPR	20	0806	0812	0817	N24	W15	5495	05	19.2	11	SN			C	0812	70	0.8	E
	ISTA	20	0808	0809	0813	N23	W15	5495	05	19.2	5	1N			V				D
	KHAR	20	0812		0834	N21	W19	5495	05	18.9	22	SF		2	V	0814			EH
	CATA	20	0813	0813	0821	N22	W20	5495	05	18.8	8	SN		2	C	0813	56	0.7	
	LEAR	20	0819	0828	0835	N22	W15	5495	05	19.2	16	SF		3	E		13		
0387	HTPR	20	0824	0829	0832	N18	W14	5488	05	19.3	8	SN			C	0829	40	0.4	E
0388	KHAR	20	0904		0910	N07	W71	5484	05	15.0	6	SF		2	V	0905			D
0389	HTPR	20	0950	1003	1012	S15	W08	5491	05	19.8	22	SF			C	1003	50	0.5	E
0390		20	1107*	1107*	1220	N20	W22	5495	05	18.8	73	SF					83	1.6	EFIK
	CATA	20	1107	1107	1126D	N20	W27	5495	05	18.4	19D	1N		2	P	1107	197	2.7	
	RAMY	20	1126	1144	1229	N20	W20	5495	05	18.9	63	SF			E		48		K
	RAMY	20	1126	1201	1229	N20	W20	5495	05	18.9	63	SF		3	E		46		F
	HTPR	20	1144	1155	1203	N20	W20	5495	05	18.9	19	SF			C	1155	40	0.4	EI

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0391	RAMY	20	1127	1145	1224	S21	E39	5497	05	23.5	57	SF		3	E		29		F
0392		20	11342	1137	1147	S24	E59		05	25.0	13	SN					38	1.2	E
	HTPR	20	1134	1137	1150	S25	E60		05	25.1	16	SN			C	1137	60	1.2	E
	SVTO	20	1136	1137	1144	S22	E58		05	24.9	8	SF		3	E		16		
0393	HTPR	20	1152	1155	1203	N24	W13	5495	05	19.5	11	SN			C	1155	40	0.4	
0394		20	13037	1309*	1324	N18	W22	5488	05	18.9	21	SF	C 4.3				46	1.0	EFIU
	HTPR	20	1303	1310	1336	N20	W20	5488	05	19.0	33	SB			C	1310	100	1.0	EI
	RAMY	20	1305	1309	1316	N17	W22	5488	05	18.9	11	SF	C 4.3	3	E		51		F
	HOLL	20	1307	1309	1321	N18	W23	5488	05	18.8	14	SF	C 4.3	3	E		34		
	RAMY	20	1307	1328	1331	N19	W21	5488	05	18.9	24	SF		3	E		30		F
	SVTO	20	1310	1312	1316	N18	W22	5488	05	18.9	6	SF		3	E		13		U
0395		20	14221	14234	1434	S17	W07	5491	05	20.1	12	SF					25	0.4	E
	HTPR	20	1422	1427	1437	S18	W07	5491	05	20.1	15	SF			C	1427	40	0.4	E
	HOLL	20	1423	1423	1432	S16	W07	5491	05	20.1	9	SF		3	E		10		
0396	HOLL	20	1450	1450	1457	N17	W28	5488	05	18.5	7	SF		3	E		18		F
0397		20	1500	15032	1517	N13	W77	5484	05	14.8	17	SF	C 3.5				34		A
	HTPR	20	1500	1503	1515	N10	W80	5484	05	14.6	15	SN			C	1503	40		A
	HOLL	20	1500	1505	1517	N14	W75	5484	05	14.9	17	SF	C 3.5	3	E		29		
	KANZ	20	1502E	1502U	1518	N14	W76	5484	05	14.9	16D	SF			P				
0398	HTPR	20	1546	1548	1553	N18	W25	5488	05	18.7	7	SF			C	1548	20	0.2	
0399		20	15504	15561	1614	N11	W76	5484	05	14.9	24	1F					50		AE
	HTPR	20	1550	1557	1620	N08	W78	5484	05	14.8	30	1F			C	1557	80		AE
	HOLL	20	1554	1556	1607	N14	W75	5484	05	15.0	13	SF		3	E		20		
0400	HOLL	20	1602	1638	1646	N20	W22	5495	05	19.0	44	SF		3	E		14		F
0401		20	17078	17107	1724	N18	W24	5488	05	18.9	17	SF					18	0.2	F
	HTPR	20	1707	1710	1723	N18	W25	5488	05	18.8	16	SF			C	1710	20	0.2	
	HOLL	20	1715	1717	1724	N17	W24	5488	05	18.9	9	SF		3	E		15		F
0402	HTPR	20	1721	1724	1738	N12	W78	5484	05	14.8	17	SN			C	1724	40		E
0403	HTPR	20	1737		1743D	N22	W16	5495	05	19.5	6D	SF			C	1741	80	0.9	E
0404		20	1740*	17439	1754	S20	E34	5497	05	23.3	14	SN					76	1.5	EF
	HTPR	20	1740		1743D	S20	E34	5497	05	23.3	3D	SN			C	1741	130	1.5	E
	HOLL	20	1743	1743	1747	S19	E32	5497	05	23.2	4	SF		3	E		11		F
	HOLL	20	1750	1752	1801	S20	E34	5497	05	23.3	11	SF		3	E		35		
	HTPR	20	1752E		1756D	S20	E34	5497	05	23.3	4D	SN			C	1753	130	1.5	E
0405	PALE	20	1825	1825	1829	S20	E39	5497	05	23.7	4	SF		3	E		10		F
0406		20	1831	1831	1836	N22	W26	5495	05	18.8	5	SF					15		
	HOLL	20	1831	1831	1836	N22	W25	5495	05	18.8	5	SF		3	E		19		
	PALE	20	1831	1831	1836	N22	W26	5495	05	18.8	5	SF		3	E		11		
0407	PALE	20	1917	1919	1925	S21	E31	5497	05	23.2	8	SF		3	E		12		
0408	HOLL	20	1934	1937	1942	S19	E34	5497	05	23.4	8	SF		3	E		22		
0409		20	19597	2008	2042	S20	E33	5497	05	23.3	43	SF	C 3.8				18		F
	PALE	20	1959	2045U	2108	S21	E34	5497	05	23.4	69	SF	C 3.8	3	E		20		F
	HOLL	20	2006	2008	2017	S20	E32	5497	05	23.3	11	SF		3	E		16		F
0410		20	21215	21215	2143	N22	W23	5495	05	19.1	22	SF					22		F
	HOLL	20	2121	2121	2143	N22	W23	5495	05	19.1	22	SF		3	E		22		F
	HOLL	20	2126	2126	2143	N22	W23	5495	05	19.1	17	SF		3	E		22		F
0411	HOLL	20	2123	2126	2144	S16	W09	5491	05	20.2	21	SF		3	E		31		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0412		21	0447	0447	0458	N18	W46	5487	05	17.7	11	SF					38		F
	LEAR	21	0447	0447	0453	N20	W45	5487	05	17.7	6	SF		3	E		18		
	SVTO	21	0447E	0447U	0504	N16	W46	5487	05	17.7	17D	SF		3	E		58		F
0413		21	0638	06392	0651	N23	W27	5495	05	19.2	13	1F	C 5.8				128	2.2	DFK
	LEAR	21	0638	0639	0651	N23	W26	5495	05	19.3	13	1F	C 5.8	3	E		119		F
	ABST	21	0638	0640	0650	N23	W27	5495	05	19.2	12	1N			C	0640	175	2.2	DK
	SVTO	21	0638	0641	0651	N22	W28	5495	05	19.1	13	SF	C 5.8	3	E		90		
0414		21	06474	0651*	0739	S20	E21	5497	05	22.9	52	SF					46	1.1	DE
	URUM	21	0647	0654	0741	S20	E19	5497	05	22.7	54	SN			C		96	1.1	E
	SVTO	21	0651	0651	0726	S19	E21	5497	05	22.9	35	SF		3	E		13		
	LEAR	21	0651	0708	0739	S20	E23	5497	05	23.0	48	SF		3	E		29		
	KHAR	21	0710E		0750	S19	E22	5497	05	23.0	40D	SF		2	P	0711			D
0415	LEAR	21	0657	0659	0711	S17	E17	5494	05	22.6	14	SF		3	E		16		F
0416	CATA	21	0738	0742	0747	N16	W39	5488	05	18.4	9	SB		2	C	0742	56	0.8	
0417	SVTO	21	0822E	0836U	0901	N16	W80	5493	05	15.3	39D	SF		2	E		57		
0418		21	0821	0836	0848	N18	W63	5489	05	16.5	27	SF					26		
	LEAR	21	0821	0836	0848	N17	W63	5489	05	16.6	27	SF		3	E		35		
	SVTO	21	0822E	0836U	0847	N18	W63	5489	05	16.5	25D	SF		2	E		18		
0419		21	0838	08355	0842	N17	W45	5487	05	17.9	4	SF					31	0.5	D
	URUM	21	0835E	0835	0836	N16	W41	5487	05	18.2	1D	SN			C		32	0.5	D
	LEAR	21	0838	0840	0843	N18	W48	5487	05	17.7	5	SF		3	E		42		
	SVTO	21	0840E	0841U	0846	N16	W47	5487	05	17.8	6D	SF		2	E		18		
0420		21	0840	0840	0846	N16	W38	5488	05	18.5	6	SN					34	0.8	
	CATA	21	0840	0840	0846	N16	W40	5488	05	18.3	6	SB		2	C	0840	56	0.8	
	SVTO	21	0840E	0841U	0846	N16	W35	5488	05	18.7	6D	SF		2	E		11		
0421	SVTO	21	0842E	0907U	0917	S16	W21	5491	05	19.8	35D	SF		2	E		19		
0422	SVTO	21	0903E	0907U	0913	N15	W72	5489	05	15.9	10D	SF		2	E		14		
0423	URUM	21	0931E	0931	0932	S17	W22	5491	05	19.7	1D	SN			C		48	0.5	D
0424	CATA	21	0937	0937	0945	N22	W34	5495	05	18.8	8	SB		2	C	0937	84	1.2	H
0425	SVTO	21	1010E	1021U	1029	N21	W31	5495	05	19.0	19D	SF		2	E		12		
0426	URUM	21	1057	1137	1157	S17	W23	5491	05	19.7	60	SF			C		64	0.7	E
0427	SVTO	21	1133	1149	1153	N21	W34	5495	05	18.9	20	SF	C 3.3	3	E		32		
0428	SVTO	21	1201	1205	1221	N21	W35	5495	05	18.8	20	SF	C 4.0	3	E		28		F
0429	SVTO	21	1228	1230	1238	N16	W38	5488	05	18.6	10	SF		3	E		15		
0430	SVTO	21	1323	1323	1334	N18	W39	5488	05	18.6	11	SF		3	E		14		
0431	SVTO	21	1324	1332	1340	N21	W36	5495	05	18.8	16	SF		3	E		19		F
0432		21	14016	14071	1424	S18	W20	5491	05	20.1	23	SF					17		F
	RAMY	21	1401	1408	1429	S18	W21	5491	05	20.0	28	SF		3	E		22		F
	HOLL	21	1407	1407	1419	S17	W18	5491	05	20.2	12	SF		3	E		12		F
0433	RAMY	21	1427	1428	1433	N21	W34	5495	05	19.0	6	SF		3	E		15		
0434		21	1434*	1505*	1547	N21	W38	5495	05	18.7	73	1F	M 1.1				118		EFHK
	RAMY	21	1434	1505	1549	N23	W38	5495	05	18.7	75	1F			E		37		K
	RAMY	21	1434	1514	1549	N23	W38	5495	05	18.7	75	1F	M 1.1	3	E		117		H
	HOLL	21	1443	1454U	1512	N20	W37	5495	05	18.8	29	SF		3	E		50		
	SVTO	21	1509E	1515	1624	N20	W39	5495	05	18.6	75D	1F		3	E		146		F
	HOLL	21	1512E	1515U	1520D	N21	W37	5495	05	18.8	8D	2B		3	E		336		
	HOLL	21	1531	1538	1542	N20	W37	5495	05	18.8	11	SF		3	E		19		FE

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0435		21	1442*	1449*	1524	N16	W38	5488	05	18.7	42	SF					40		F
	RAMY	21	1442	1449	1516	N13	W40	5488	05	18.6	34	SF		3	E		46		F
	KANZ	21	1453E		1530D	N18	W38	5488	05	18.7	37D	1F			P				
	RAMY	21	1516	1522	1531	N16	W37	5488	05	18.8	15	SF		3	E		33		
0436	RAMY	21	1519	1519	1527	S18	W16	5491	05	20.4	8	SF		3	E		19		
0437		21	1531	1532	1550	S16	W22	5491	05	20.0	19	SF					40		
	HOLL	21	1531	1532	1549	S16	W23	5491	05	19.9	18	SF		3	E		57		
	RAMY	21	1531	1532	1551	S17	W20	5491	05	20.1	20	SF		3	E		24		
0438		21	15544	1600	1619	S17	W23	5491	05	19.9	25	SF					58		F
	RAMY	21	1554	1600	1619	S18	W22	5491	05	20.0	25	SF		3	E		67		F
	HOLL	21	1558	1600	1620D	S16	W24	5491	05	19.8	22D	SF		3	E		50		
0439		21	1642*	1702	1710	N20	W34	5495	05	19.1	28	SF					20		F
	RAMY	21	1642	1700U	1710	N20	W34	5495	05	19.1	28	SF		3	E		24		F
	HOLL	21	1702	1702	1710	N21	W35	5495	05	19.0	8	SF		2	E		16		F
0440		21	17331	1739*	1823	N21	W32	5495	05	19.3	50	SN	M 3.0				91		EFK
	PALE	21	1733	1801	1829	N22	W32	5495	05	19.3	56	SB	M 3.0	3	E		95		E
	RAMY	21	1734	1739	1820	N20	W32	5495	05	19.3	46	SF	M 1.9		E		94		K
	RAMY	21	1734	1801	1820	N20	W32	5495	05	19.3	46	SB	M 3.0	3	E		85		F
0441		21	17575	18031	1828	N15	W41	5488	05	18.6	31	SF					27		F
	RAMY	21	1757	1804	1828	N17	W40	5488	05	18.7	31	SF		3	E		42		F
	PALE	21	1802	1803	1829	N13	W42	5488	05	18.6	27	SF		3	E		12		
0442		21	1835*	1847*	1920	N20	W34	5495	05	19.2	45	1N	M 1.0				85		FK
	HOLL	21	1835	1847	1919	N21	W36	5495	05	19.0	44	1N			E		97		K
	HOLL	21	1835	1855	1919	N21	W36	5495	05	19.0	44	1N	M 1.0	3	E		103		
	RAMY	21	1842	1847U	1853D	N19	W33	5495	05	19.3	11D	SF	M 1.0	2	E		60		F
	PALE	21	1855	1858	1923	N21	W33	5495	05	19.2	28	SF	M 1.0	3	E		80		
		21	2040		2045	No Flare Patrol													
		21	2100		2102	No Flare Patrol													
0443	HOLL	21	2109E	2112U	2118	N21	W35	5495	05	19.2	9D	SF		3	E		20		E
0444	HOLL	21	2109E	2116U	2126D	N15	W43	5488	05	18.6	17D	SF		3	E		48		
0445	HOLL	21	2134	2135	2137	S20	E19	5497	05	23.3	3	SF		3	E		23		
0446		21	2222	2236U	2316	S20	E18	5497	05	23.3	54	SN					62		F
	PALE	21	2222	2247U	2319	S20	E20	5497	05	23.5	57	SF		3	E		56		F
	HOLL	21	2231E	2236U	2314	S21	E17	5497	05	23.2	43D	SN		3	E		68		
0447		21	2247*	2248*	2344	N21	W38	5495	05	19.0	57	SF	C 8.3				56	1.0	DFIJKT
	PALE	21	2247	2248	2326	N21	W39	5495	05	18.9	39	SF	C 8.3	3	E		47		F
	VORO	21	2247	2249	2258	N22	W35	5495	05	19.2	11	SF		2	C	2249	63	0.9	DIJT
	HOLL	21	2247	2249	2418	N21	W38	5495	05	19.0	91	SN	C 8.3	3	E		72		
	HOLL	21	2247	2310	2418	N21	W38	5495	05	19.0	91	SN			E		96		K
	VORO	21	2312	2314	2320	N23	W37	5495	05	19.1	8	SF		2	C	2314	81	1.1	DIJT
	PALE	21	2336	2338	2344	N20	W39	5495	05	19.0	8	SF		3	E		11		
	PALE	21	2352	2352	2408	N23	W38	5495	05	19.1	16	SF		3	E		21		F
0448		22	00005	0024*	0204	S21	E15	5497	05	23.2	124	2B	M 5.7				540	5.5	EFKU
	URUM	22	0000	0029	0200	S21	E15	5497	05	23.2	120	2B			C		884	10.0	U
	URUM	22	0000	0038	0200	S22	E15	5497	05	23.1	120	2B			C		755	8.6	U
	URUM	22	0000	0050	0200	S22	E15	5497	05	23.1	120	2B			C		643	7.3	U
	PALE	22	0002	0024	0213	S21	E16	5497	05	23.2	131	2B	M 5.7	3	E		421		FE
	HOLL	22	0002	0035	0150D	S22	E17	5497	05	23.3	108D	2B	M 5.7	3	E		397		UF
	MITK	22	0003	0027	0049D	S20	E18	5497	05	23.4	46D	2N			C	0027	590	6.7	FK
	VORO	22	0004	0028	0158	S22	E12	5497	05	22.9	114	2F		2	C	0028	744	8.3	EU
	LEAR	22	0005	0024	0210	S20	E16	5497	05	23.2	125	2N	M 5.7	3	E		349		FE
	YUNN	22	0148E	0149U	0149D	S21	E16	5497	05	23.3	1D	SB			P	0149	79	0.9	E
0449		22	0028	00348	0056	S18	W26	5491	05	20.0	28	SF					32		
	HOLL	22	0028	0034	0054	S16	W27	5491	05	20.0	26	SF		3	E		40		
	PALE	22	0028	0042	0059	S19	W26	5491	05	20.0	31	SF		3	E		23		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0450	PALE	22	0111	0112	0114	N22	W39	5495	05	19.0	3	SF		3	E		13		
0451	URUM	22	0128	0129	0132	N23	W40	5495	05	19.0	4	SF			C		32	0.5	D
0452		22	02383	02411	0244	S20	E15	5497	05	23.2	6	SF					18		F
	LEAR	22	0238	0241	0245	S20	E13	5497	05	23.1	7	SF		3	E		15		F
	PALE	22	0241	0242	0244	S21	E17	5497	05	23.4	3	SF		3	E		20		
0453	PALE	22	0431	0436	0439	N21	W38	5495	05	19.3	8	SF	C 5.7	2	E		36		F
0454		22	05442	05462	0602	S20	E12	5497	05	23.1	18	SF	C 5.6				61	1.0	D
	ABST	22	0544	0548	0553	S20	E13	5497	05	23.2	9	SN			C	0548	87	1.0	D
	KANZ	22	0546	0546	0601	S20	E12	5497	05	23.1	15	SF			P				
	LEAR	22	0546	0546	0611	S19	E12	5497	05	23.1	25	SF	C 5.6	3	E		35		
0455		22	0601*	0604*	0624	N22	W41	5495	05	19.1	23	SN					87	1.4	DEV
	KANZ	22	0601	0605	0618	N23	W38	5495	05	19.3	17	SF			P				
	ABST	22	0602	0604	0618	N23	W39	5495	05	19.2	16	SN			C	0604	87	1.3	E
	ABST	22	0611	0612	0629	N22	W44	5495	05	18.9	18	SN			C	0612	87	1.4	DV
	KANZ	22	0614	0614	0631	N22	W44	5495	05	18.9	17	SF			P				
0456		22	06272	06282	0641	N14	W50	5488	05	18.5	14	SN	C 3.7				50	0.9	DEV
	KANZ	22	0627	0630	0643	N15	W49	5488	05	18.5	16	SF			P				
	LEAR	22	0628	0628	0638	N14	W49	5488	05	18.6	10	SF	C 3.7	3	E		49		
	ISTA	22	0629	0629	0641	N15	W50	5488	05	18.5	12	1N			V				E
	ABST	22	0629	0629	0642	N14	W50	5488	05	18.5	13	SN			C	0629	52	0.9	DV
0457		22	06544	06576	0721	S21	E16	5497	05	23.5	27	SF					78		E
	KANZ	22	0654	0657	0713	S22	E17	5497	05	23.6	19	SF			P				
	SVTO	22	0655E	0703	0735	S19	E14	5497	05	23.3	40D	SF		2	E		78		
	ISTA	22	0658	0658	0715	S22	E18	5497	05	23.7	17	1N			V				E
0458		22	07477	07579	0813	S20	E14	5497	05	23.4	26	SN	C 4.5				152	2.1	ET
	URUM	22	0747	0758	0822D	S20	E12	5497	05	23.2	35D	1B			C		241	2.7	E
	ISTA	22	0752	0757	0805	S21	E17	5497	05	23.6	13	SF			V				E
	KAND	22	0752	0758	0806	S21	E15	5497	05	23.5	14	SN			P	0758	104	1.1	ET
	CATA	22	0752E	0800	0810D	S21	E13	5497	05	23.3	18D	1B		2	P	0800	225	2.5	
	KANZ	22	0754	0802	0824	S20	E13	5497	05	23.3	30	SF			P				
	SVTO	22	0801E	0806	0818	S19	E13	5497	05	23.3	17D	SF	C 4.5	2	E		40		
0459	SVTO	22	0835	0852	0907	N23	W43	5495	05	19.0	32	SF		2	E		40		
0460	SVTO	22	1016	1018	1028	S19	E10	5497	05	23.2	12	SF	C 5.8	3	E		32		F
0461		22	1206	1224	1247	S22	E06	5497	05	23.0	41	SF	C 5.2				32		F
	SVTO	22	1206	1224	1247	S22	E10	5497	05	23.3	41	SF	C 5.2	3	E		37		F
	RAMY	22	1215E	1215U	1247	S23	E03	5497	05	22.7	32D	SF		2	E		28		F
0462		22	13071	1309	1329	S18	W36	5491	05	19.8	22	SF					38		F
	SVTO	22	1307	1309	1332	S18	W35	5491	05	19.9	25	SF		3	E		42		F
	RAMY	22	1308	1309	1326	S19	W37	5491	05	19.7	18	SF		3	E		35		F
0463	SVTO	22	1325	1325	1332	N19	W45	5495	05	19.1	7	SF		3	E		12		
0464		22	1452*	1453*	1535	S22	E07	5497	05	23.1	43	SF					51		EFK
	RAMY	22	1452	1453	1500	S22	E08	5497	05	23.2	8	SF		3	E		22		
	RAMY	22	1501	1503	1539	S22	E07	5497	05	23.2	38	SF			E		50		K
	RAMY	22	1501	1522	1539	S22	E07	5497	05	23.2	38	SF		3	E		50		F
	SVTO	22	1510	1523	1602	S21	E06	5497	05	23.1	52	SF		3	E		84		F
	HOLL	22	1518	1521	1536	S21	E08	5497	05	23.2	18	SN		3	E		48		FE
0465		22	1515	15231	1608	N20	W48	5495	05	19.0	53	1N	M 1.6				113		EF
	HOLL	22	1515	1523	1615D	N22	W49	5495	05	18.9	60D	SN	M 1.6	3	E		98		
	RAMY	22	1524E	1524	1608	N19	W48	5495	05	19.0	44D	1N		3	E		128		FE
0466	RAMY	22	1651	1651	1656	S22	E07	5497	05	23.2	5	SF		3	E		15		F
0467		22	16541	1656	1705	N20	W48	5495	05	19.0	11	SF					34		F
	PALE	22	1654	1656	1704	N21	W47	5495	05	19.1	10	SF		2	E		42		F
	RAMY	22	1655	1656	1706	N20	W48	5495	05	19.0	11	SF		3	E		27		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0468		22	1752	1754*	1822	S22	E06	5497	05	23.2	30	SF					38		F
	RAMY	22	1752	1754	1822	S23	E07	5497	05	23.3	30	SF		3	E		57		
	HOLL	22	1752	1810	1821	S20	E05	5497	05	23.1	29	SF		3	E		18		F
0469	RAMY	22	1810	1823	1909	N18	W52	5488	05	18.8	59	SF		3	E		31		
0470	PALE	22	1819	1822	1825	N22	W46	5495	05	19.2	6	SF		3	E		25		
0471		22	1847	18546	1915	S22	E08	5497	05	23.4	28	1F	C 3.9				120		EF
	PALE	22	1847	1854U	1913	S23	E09	5497	05	23.5	26	SF	C 3.9	3	E		49		F
	RAMY	22	1847	1900	1915	S23	E07	5497	05	23.3	28	1F	C 3.9	3	E		179		FE
	HOLL	22	1852E	1854	1917	S20	E09	5497	05	23.5	25D	1N	C 3.9	3	E		132		FE
0472		22	19352	1938	1954	S21	E02	5497	05	23.0	19	SF	C 4.0				38		EF
	HOLL	22	1935	1938	1959	S20	E03	5497	05	23.0	24	SF	C 4.0	3	E		39		FE
	RAMY	22	1937	1938	1950	S22	E01	5497	05	22.9	13	SF	C 4.0	3	E		38		F
0473	RAMY	22	1938	1941	1953	S21	W04	5494	05	22.5	15	SF	C 4.0	3	E		21		
0474		22	1942	1947*	2030	N21	W51	5495	05	18.9	48	SN					61		FK
	HOLL	22	1942	1947	2027	N22	W50	5495	05	19.0	45	SB			E		12		K
	HOLL	22	1942	2009	2027	N22	W50	5495	05	19.0	45	SN		3	E		77		F
	RAMY	22	1942	2011U	2036	N19	W52	5495	05	18.8	54	SF		3	E		95		F
0475		22	2032E	20357	2049	S21	E07	5497	05	23.4	17D	SF					68		F
	RAMY	22	2032E	2035	2052	S22	E07	5497	05	23.4	20D	SF		3	E		62		
	HOLL	22	2035E	2042	2046	S20	E07	5497	05	23.4	11D	SF		3	E		73		F
0476		22	21244	2128*	2150	N22	W49	5495	05	19.1	26	SF					28	0.6	DEFIJKT
	HOLL	22	2124	2129	2157	N22	W49	5495	05	19.1	33	SF		3	E		27		FE
	HOLL	22	2124	2147	2157	N22	W49	5495	05	19.1	33	SF			E		21		K
	VORO	22	2128	2128	2136	N23	W49	5495	05	19.1	8	SF		2	C	2128	36	0.6	DIJT
0477		22	2150*	2152*	2210	N17	W56	5488	05	18.6	20	SF					37	1.1	DFIJT
	VORO	22	2150	2152	2156	N16	W59	5488	05	18.4	6	SF		2	C	2152	54	1.1	DIJT
	HOLL	22	2151	2159	2222	N16	W56	5488	05	18.7	31	SF		3	E		31		
	HOLL	22	2201	2203	2212	N19	W54	5488	05	18.8	11	SF		3	E		25		F
0478		22	2327	2327	2340	S17	E00	5497	05	23.0	13	SF					74	1.0	EFHIJT
	HOLL	22	2232E	2335U	2340	S18	E02	5497	05	23.1	68D	SF		3	E		49		F
	VORO	22	2327	2327	2330D	S16	W01	5497	05	22.9	3D	SF		2	C	2327	99	1.0	EIJHT
0479		22	2339	24081	2431	S18	E02	5497	05	23.1	52	SN					74		EF
	LEAR	22	2339	2408	2425	S17	W01	5497	05	22.9	46	SF		3	E		60		F
	HOLL	23	0001E	0009	0037	S20	E05	5497	05	23.4	36D	SN		3	E		89		FE
0480	URUM	22	2341	2359	2411	N23	W40	5495	05	19.9	30	SN			C		80	1.2	E
0481		23	00579	0058*	0115	N23	W52	5495	05	19.0	18	SF					19		F
	HOLL	23	0057	0058U	0107	N22	W52	5495	05	19.0	10	SF		3	E		18		F
	LEAR	23	0058	0058	0103	N23	W51	5495	05	19.1	5	SF		3	E		16		F
	LEAR	23	0106	0108	0135	N23	W53	5495	05	19.0	29	SF		3	E		22		
0482	LEAR	23	0107	0108	0142	S18	E02	5497	05	23.2	35	SF		3	E		12		F
0483		23	0129	0129	0135	S21	E84	5505	05	29.5	6	SF					22		
	HOLL	23	0126E	0128U	0132D	S20	E88	5505	05	29.8	6D	SF		2	E		29		
	LEAR	23	0129	0129	0135	S22	E80	5505	05	29.2	6	SF		3	E		16		
0484		23	01451	0147	0158	N24	W50	5495	05	19.2	13	1B	M 2.5				146	3.8	D
	URUM	23	0145	0147	0201	N24	W51	5495	05	19.1	16	1B			C		209	3.8	D
	LEAR	23	0146	0147	0156	N24	W49	5495	05	19.3	10	SN	M 2.5	3	E		82		
0485		23	0156	0202*	0258	S19	E02	5497	05	23.2	62	SF					41		FK
	LEAR	23	0156	0202	0258	S19	E02	5497	05	23.2	62	SF			E		41		K
	LEAR	23	0156	0246	0258	S19	E02	5497	05	23.2	62	SF		3	E		41		F
0486		23	0235*	0325	0410	S20	E02	5497	05	23.3	95	1N	C 7.4				175	3.1	FU
	URUM	23	0235	0325	0414	S20	E01	5497	05	23.2	99	1N			C		289	3.1	F
	LEAR	23	0300	0325	0406	S19	E03	5497	05	23.3	66	SF	C 7.4	3	E		61		UF

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0487		23	0523*	0539*	0627	S19	E01	5497	05	23.3	64	1F	C 7.5				149	2.3	BEF
	SVTO	23	0523	0539	0620	S20	E03	5497	05	23.4	57	1F	C 7.5	4	E		184		F
	LEAR	23	0536	0540	0606	S19	E00	5497	05	23.2	30	SF	C 7.5	3	E		54		
	URUM	23	0539	0554	0654	S20	W00	5497	05	23.2	75	1N			C		209	2.3	E
	KANZ	23	0627E		0627	S18	E01	5497	05	23.3	75D	1F			P				B
0488		23	07062	0708	0724	S22	W07	5497	05	22.7	18	SF	C 8.6				112	2.0	
	PURP	23	0706	0707U	0708D	S22	W05	5497	05	22.9	2D	SF			C	0707	179	2.0	
	LEAR	23	0707	0708	0719	S22	W08	5497	05	22.7	12	SF	C 8.6	3	E		44		
	KANZ	23	0708	0708	0728	S23	W07	5497	05	22.7	20	SF			P				
0489	SVTO	23	0723	0738	0746	N23	W56	5495	05	19.0	23	SF		3	E		16		
0490		23	0732*	0734*	0802	S19	W01	5497	05	23.2	30	SF	C 8.9				92	2.1	EIKT
	HTPR	23	0729E		0900	S20	W02	5497	05	23.1	91D	SB			C	0735	150	1.5	EIKT
	ATHN	23	0732E	0735U	0745D	S20	W03	5497	05	23.1	13D	1N		2	V	0735	255	2.7	
	SVTO	23	0732	0735	0747	S20	E00	5497	05	23.3	15	SF	C 8.9	3	E		23		
	LEAR	23	0733	0734	0748	S19	W01	5497	05	23.2	15	SF	C 8.9	3	E		19		
	KANZ	23	0734	0734	0748	S19	W02	5497	05	23.2	14	SF			P				E
	KANZ	23	0748	0752	0756	S17	E02	5497	05	23.5	8	SF			P				
	SVTO	23	0750	0750	0754	S20	W01	5497	05	23.2	4	SF		3	E		15		
0491	HTPR	23	1039		1055D	S19	W15	5494	05	22.3	16D	SB			C	1049	50	0.5	E
0492	SVTO	23	1140	1145	1153	S20	W49	5491	05	19.7	13	SF		3	E		18		F
0493	HTPR	23	1201	1206	1225	N16	W63	5488	05	18.7	24	SN			C	1206	30	0.7	
0494		23	12526	12556	1320	S19	W02	5497	05	23.4	28	SN					90	1.5	EFI
	HTPR	23	1252	1259	1320	S19	W05	5497	05	23.1	28	SB			C	1259	150	1.5	EI
	SVTO	23	1253	1255	1308	S19	W02	5497	05	23.4	15	SF		3	E		31		F
	KANZ	23	1254	1258	1326	S20	E02	5497	05	23.7	32	SF			P				
	KANZ	23	1258	1301	1326	S18	W05	5497	05	23.1	28	SF			P				
0495	RAMY	23	1302	1313	1325	N18	W63	5488	05	18.7	23	SF		3	E		15		
0496		23	13034	13085	1324	S17	W16	5494	05	22.3	21	SF	C 6.2				45	1.2	EFK
	HTPR	23	1303	1308	1320	S18	W17	5494	05	22.2	17	SN			C	1308	120	1.2	E
	RAMY	23	1305	1308	1323	S17	W15	5494	05	22.4	18	SF	C 6.2	3	E		30		F
	HOLL	23	1305	1308	1328	S17	W16	5494	05	22.3	23	SF	C 6.2		E		23		K
	SVTO	23	1305	1310	1322	S18	W18	5494	05	22.2	17	SF	C 6.2	3	E		29		
	HOLL	23	1305	1313	1328	S17	W16	5494	05	22.3	23	SF	C 6.2	3	E		22		
	KANZ	23	1307	1310	1322	S16	W16	5494	05	22.3	15	SF			P				
0497	RAMY	23	1325	1333	1351	S19	W03	5497	05	23.3	26	SF		3	E		24		F
0498		23	1438*	14456	1530	N17	W63	5488	05	18.8	52	SF	C 7.4				61	1.4	EF
	HOLL	23	1438	1451U	1520D	N18	W63	5488	05	18.8	42D	SF	C 7.4	3	E		62		
	RAMY	23	1438	1451	1539	N18	W64	5488	05	18.7	61	SF	C 7.4	3	E		89		F
	HTPR	23	1442		1525D	N16	W60	5488	05	19.1	43D	SN			C	1450	70	1.4	E
	SVTO	23	1443	1445	1521	N16	W65	5488	05	18.7	38	SF	C 7.4	3	E		22		
	KANZ	23	1448	1448	1452D	N19	W65	5488	05	18.6	4D	SF			P				
0499		23	14442	14444	1508	N22	W59	5495	05	19.1	24	SF					14		
	SVTO	23	1444	1444	1501	N23	W60	5495	05	19.0	17	SF		3	E		16		
	RAMY	23	1446	1448	1514	N20	W58	5495	05	19.2	28	SF		3	E		13		
0500	HTPR	23	1505	1511	1520	S17	W08	5497	05	23.0	15	SF			C	1511	30	0.3	E
0501		23	1606	16096	1623	S18	W18	5494	05	22.3	17	SF	C 4.2				41	0.6	E
	RAMY	23	1606	1609	1624	S18	W17	5494	05	22.4	18	SF	C 4.2	3	E		33		
	HOLL	23	1606	1615	1625D	S17	W18	5494	05	22.3	19D	SF	C 4.2	3	E		30		
	KANZ	23	1610E	1614	1622	S17	W17	5494	05	22.4	12D	SF			P				
	HTPR	23	1615E		1626D	S18	W20	5494	05	22.1	11D	SF			C	1616	60	0.6	E
0502		23	18194	18294	1834	N20	W64	5495	05	18.9	15	SF	C 5.0				14		
	RAMY	23	1819	1833	1835	N19	W66	5495	05	18.7	16	SF		3	E		23		
	RAMY	23	1820	1829	1835	N20	W62	5495	05	19.0	15	SF	C 5.0	3	E		13		
	HOLL	23	1820	1830	1833	N19	W62	5495	05	19.0	13	SF	C 5.0	3	E		10		
	PALE	23	1823	1830	1835	N20	W65	5495	05	18.8	12	SF	C 5.0	3	E		10		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0503		23	2003	20051	2024	S19	W04	5497	05	23.5	21	SF	C 7.8				79		EFH
	HOLL	23	2003	2005	2021	S20	W03	5497	05	23.6	18	SN		3	E		98		FE
	PALE	23	2003	2006	2027	S19	W04	5497	05	23.5	24	SF	C 7.8	3	E		89		FH
	RAMY	23	2009E	2010U	2014D	S19	W05	5497	05	23.4	5D	SF		3	E		49		
0504		23	2105	2109*	2208	S20	W08	5497	05	23.3	63	SN	C 9.2				113	2.3	DEFHIJKT
	HOLL	23	2105	2109	2209	S19	W08	5497	05	23.3	64	SN			E		66		K
	HOLL	23	2105	2126	2209	S19	W08	5497	05	23.3	64	SN	C 9.2	3	E		89		FE
	PALE	23	2109E	2126	2215	S20	W07	5497	05	23.3	66D	SF	C 9.2	3	E		91		FH
	VORO	23	2132E	2133	2158	S24	W10	5497	05	23.1	26D	1F		1	C	2133	206	2.3	DIJT
0505		23	2207	22086	2216	S20	W49	5491	05	20.2	9	SF					18		FH
	HOLL	23	2207	2208	2214	S20	W47	5491	05	20.3	7	SF		3	E		12		F
	PALE	23	2207	2214	2218	S19	W51	5491	05	20.0	11	SF		3	E		25		H
0506		23	22231	22242	2233	S24	W35	5490	05	21.2	10	1F					102	2.2	D
	VORO	23	2223	2224	2233	S25	W35	5490	05	21.2	10	1F		1	C	2224	161	2.2	D
	HOLL	23	2224	2226	2233	S24	W35	5490	05	21.2	9	SF		3	E		43		
0507	HOLL	23	2227	2230	2238	S18	W06	5497	05	23.5	11	SF		3	E		36		
0508		23	23151	23182	2330	N23	W64	5495	05	19.0	15	1F					73		EIJT
	VORO	23	2315	2318	2331	N23	W65	5495	05	19.0	16	1F		1	C	2318	116		EIJT
	HOLL	23	2316	2320	2329	N23	W64	5495	05	19.0	13	SF		3	E		30		
0509		24	00066	0010*	0030	S21	E77	5505	05	29.9	24	SF					26		D
	HOLL	24	0006	0010	0035	S21	E76	5505	05	29.8	29	SF		3	E		31		
	VORO	24	0006	0011	0016D	S21	E80	5505	05	30.1	10D	SF		1	C	0011	36		D
	PALE	24	0012	0021	0026	S21	E76	5505	05	29.8	14	SF		3	E		12		
0510	PALE	24	0021	0021	0032	N20	W66	5495	05	19.0	11	SF		3	E		10		
0511	PALE	24	0301	0302	0309	S21	E74	5505	05	29.8	8	SF		3	E		12		
0512		24	0608	0615	0641	N17	W72	5488	05	18.8	33	SF					28		
	KANZ	24	0608	0615	0641	N18	W70	5488	05	18.9	33	SF			P				
	SVTO	24	0609E	0614U	0637D	N16	W73	5488	05	18.7	28D	SF		2	E		28		
0513	HTPR	24	0733E		0736D	S19	W22	5497	05	22.6	3D	SF			C	0733	30	0.3	
0514		24	0734	0734	0743	S23	W40	5490	05	21.2	9	SN					100	1.3	
	HTPR	24	0733E		0736D	S23	W40	5490	05	21.2	3D	SN			C	0736	100	1.3	
	KANZ	24	0734	0734	0743	S23	W39	5490	05	21.3	9	SF			P				
0515		24	07472	07533	0812	N24	W76	5495	05	18.4	25	1N	C 5.7				159	4.2	
	KANZ	24	0747	0755	0814	N25	W76	5495	05	18.4	27	1N			P				
	LEAR	24	0749	0756	0811	N25	W76	5495	05	18.4	22	1N	C 5.7	3	E		207		
	CATA	24	0753E	0753	0753D	N22	W74	5495	05	18.6	22D	1B		2	P	0753	112		
	ATHN	24	0758E	0758U	0803D	N24	W78	5495	05	18.3	5D	1F		3	V	0758	159	4.2	
0516		24	0842	08481	0900	N25	W72	5495	05	18.8	18	2N					241		E
	KANZ	24	0842	0848	0900	N25	W71	5495	05	18.9	18	1F			P				
	URUM	24	0842	0849	0859	N25	W74	5495	05	18.6	17	2B			C		241		E
0517		24	09072	0909	0918	S26	E73	5508	05	30.0	11	1N					132		DE
	URUM	24	0907	0909	0913	S26	E77	5508	05	30.4	6	1N			C		113		D
	HTPR	24	0907	0909	0920	S26	E70	5508	05	29.8	13	1B			C	0909	150		E
	KANZ	24	0909	0909	0920	S26	E71	5508	05	29.9	11	SF			P				
0518	KANZ	24	0909	0916	1002	S17	E65	5505	05	29.3	53	SF			P				
0519	URUM	24	1013	1015	1024	N23	W77	5495	05	18.5	11	SN			C		16		A
0520	RAMY	24	1113E	1117U	1126	S18	W18	5497	05	23.1	13D	SF		2	E		22		F
0521	KANZ	24	1149	1152	1158	N26	W77	5495	05	18.5	9	SF			P				
0522		24	13344	13431	1356	S22	E68	5505	05	29.8	22	SF					22		
	HOLL	24	1334	1344	1351	S22	E69	5505	05	29.9	17	SF		3	E		29		
	RAMY	24	1338	1343	1401	S21	E67	5505	05	29.7	23	SF		3	E		16		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0523		24	13433	13437	1419	S19	W21	5497	05	23.0	36	1N	M 1.2				103		FU
	KANZ	24	1343	1343	1346	S16	W20	5497	05	23.0	3	SF			P				
	HOLL	24	1346	1349	1433	S21	W20	5497	05	23.0	47	1N	M 1.2	3	E		103		UF
	KANZ	24	1346	1350	1438	S20	W22	5497	05	22.9	52	1N			P				
0524		24	13491	1350*	1429	N17	W74	5488	05	18.9	40	SF					30		FK
	HOLL	24	1349	1353	1424	N18	W74	5488	05	18.9	35	SF			E		19		K
	HOLL	24	1349	1400	1424	N18	W74	5488	05	18.9	35	SF		3	E		42		F
	KANZ	24	1350	1350	1438	N16	W73	5488	05	19.0	48	SF			P				
0525		24	1553	1556*	1625	N22	W78	5495	05	18.7	32	SF					54		FK
	HOLL	24	1553	1556	1625	N22	W78	5495	05	18.7	32	SF		3	E		49		F
	HOLL	24	1553	1620	1625	N22	W78	5495	05	18.7	32	SF			E		58		K
0526		24	15552	1603	1618	S20	E50	5503	05	28.5	23	SF					34		
	HOLL	24	1555	1603	1622	S19	E51	5503	05	28.5	27	SF		3	E		34		
	KANZ	24	1557	1603	1614	S20	E49	5503	05	28.4	17	SF			P				
0527		24	17156	17184	1730	N20	W77	5495	05	18.8	15	SF					36		F
	HOLL	24	1715	1718	1735	N21	W77	5495	05	18.8	20	SF		3	E		42		
	KANZ	24	1721		1721D	N21	W78	5495	05	18.7	20D	SF			P				
	RAMY	24	1721	1722	1726	N19	W75	5495	05	19.0	5	SF		3	E		29		F
0528	HOLL	24	1748	1749	1755	N31	W11		05	23.9	7	SF		3	E		24		F
0529	RAMY	24	1801	1802	1805	N20	W71	5495	05	19.3	4	SF	C 2.7	3	E		52		
0530	HOLL	24	1804E	1805U	1815	S19	W17	5497	05	23.4	11D	SF		3	E		38		F
0531	HOLL	24	1827	1843	1930	S20	E67	5505	05	29.9	63	SF		3	E		46		
0532		24	1831	1832*	1926	S18	W62	5491	05	20.0	55	SN					60		K
	HOLL	24	1831	1832	1926	S18	W62	5491	05	20.0	55	SF		3	E		74		
	HOLL	24	1831	1852	1926	S18	W62	5491	05	20.0	55	SN			E		46		K
0533	HOLL	24	1844	1846	1849	N16	W83	5488	05	18.5	5	SF		3	E		23		
0534	PALE	24	1931	1942	1949	S20	E68	5505	05	30.0	18	SF		3	E		35		
0535		24	19224	19261	2002	S19	W21	5497	05	23.2	40	SF	C 7.4				76		EF
	HOLL	24	1922	1927	2011	S21	W22	5497	05	23.1	49	1N		3	E		101		FE
	PALE	24	1926	1926	1952	S20	W22	5497	05	23.1	26	SF	C 7.4	3	E		37		
	RAMY	24	1938E	1938U	1939D	S17	W18	5497	05	23.4	1D	SF		1	E		89		F
0536	HOLL	24	1954	1955	2000	N20	E77	5506	05	30.7	6	SF		3	E		53		
0537	HOLL	24	2045	2045	2050	N22	W80	5495	05	18.7	5	SF		3	E		17		
0538	HOLL	24	2052E	2109U	2118	N21	E78	5506	05	30.8	26D	SF		3	E		34		
0539		24	2123*	2124*	2136	S20	E68	5505	05	30.1	13	SF					58		DEI
	VORO	24	2123	2124	2131	S20	E68	5505	05	30.1	8	SF		1	C	2124	45		DI
	VORO	24	2133	2136	2140	S20	E68	5505	05	30.1	7	SF		1	C	2136	72		EI
0540		24	2127	2129	2132	N21	W80	5495	05	18.8	5	1F					54		DI
	VORO	24	2127	2129	2132	N21	W80	5495	05	18.8	5	SF		1	C	2129	27		DI
	VORO	24	2143E		2144D	N21	W80	5495	05	18.8	1D	1F		1	C		81		DI
0541	PALE	24	2216E	2222U	2247	N32	W38	5498	05	21.9	31D	SF		3	E		23		H
0542		24	2224	2232	2240	S17	W28	5497	05	22.8	16	SN					18		E
	PALE	24	2216E	2231U	2237D	S17	W28	5497	05	22.8	21D	SF		3	E		11		
	HOLL	24	2224	2232	2240	S17	W28	5497	05	22.8	16	SN		3	E		26		E
0543	HOLL	24	2323	2323	2327	N19	W78	5488	05	19.0	4	SF	C 6.1	3	E		17		
0544	HOLL	24	2339	2341	2343	N20	W75	5495	05	19.2	4	SN		3	E		42		

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0545		25	00311	00322	0042	S22	E60	5505	05	29.6	11	1F						72	2.6	EI
	VORO	25	0031	0034	0043	S21	E60	5505	05	29.6	12	1F			1	C	0034	125	2.6	EI
	HOLL	25	0032	0032	0042	S22	E59	5505	05	29.5	10	SF			3	E		18		
0546		25	00318	00405	0056	S19	W27	5497	05	23.0	25	SF						32	0.7	F
	PALE	25	0031	0040	0052	S19	W27	5497	05	23.0	21	SF			3	E		27		
	HOLL	25	0032	0041	0103	S19	W28	5497	05	22.9	31	SF			3	E		28		
	PURP	25	0035	0045	0053D	S20	W28	5497	05	22.9	18D	SN				C	0045	57	0.7	
	LEAR	25	0039	0042	0052	S19	W25	5497	05	23.1	13	SF			3	E		14		F
0547	LEAR	25	0130	0132	0136	N33	W40	5498	05	21.9	6	SF			3	E		21		
0548	PALE	25	0202	0203	0211	S17	W69	5491	05	19.8	9	SF			3	E		36		
0549		25	0217	0217	0224	S16	W42	5494	05	21.9	7	SF						22		
	LEAR	25	0217	0217	0223	S16	W42	5494	05	21.9	6	SF			3	E		23		
	PALE	25	0217	0217	0224	S16	W41	5494	05	22.0	7	SF			3	E		20		
0550		25	0409	0411*	0428	N34	W42	5498	05	21.8	19	SF						16		
	SVTO	25	0408E	0411	0428	N35	W40	5498	05	22.0	20D	SF			2	E		10		
	LEAR	25	0409	0422	0429	N33	W43	5498	05	21.7	20	SF			3	E		22		
0551		25	0453	0448*	0545	N32	W42	5498	05	21.9	52	SN						58	1.6	EG
	URUM	25	0441E	0448	0533	N33	W42	5498	05	21.8	52D	SN				C		96	1.6	EG
	SVTO	25	0453	0459	0557	N30	W43	5498	05	21.8	64	SF			3	E		21		
0552	SVTO	25	0513	0516	0531	S19	E44	5503	05	28.6	18	SF			3	E		22		
0553	SVTO	25	0513	0523	0558	S21	W30	5497	05	22.9	45	SF			3	E		31		F
0554		25	05222	05241	0540	S19	E62	5505	05	29.9	18	SF						24		F
	SVTO	25	0522	0525	0547	S18	E62	5505	05	29.9	25	SF			3	E		25		F
	LEAR	25	0524	0524	0534	S20	E61	5505	05	29.9	10	SF			3	E		23		
0555	URUM	25	0537	0614	0633	N34	W44	5498	05	21.7	56	SN				C		80	1.4	E
0556	URUM	25	0559	0605	0617	S18	W34	5494	05	22.7	18	SN				C		64	0.8	E
0557	LEAR	25	0603	0605	0609	N21	W83	5495	05	18.9	6	SF			3	E		42		
0558		25	06344	06375	0711	S24	W52	5490	05	21.2	37	SF						26		F
	SVTO	25	0634	0637	0712	S26	W52	5490	05	21.2	38	SF			3	E		26		F
	KANZ	25	0638	0642	0710	S21	W53	5490	05	21.2	32	SF				P				
0559	URUM	25	0637	0700	0715	S20	W31	5497	05	22.9	38	SN				C		64	0.8	E
0560		25	06382	06383	0652	S16	W41	5494	05	22.2	14	SF						44	0.9	E
	KANZ	25	0638	0638	0657	S13	W40	5494	05	22.2	19	SF				P				
	SVTO	25	0638	0639	0649	S17	W41	5494	05	22.2	11	SF			3	E		25		
	URUM	25	0640	0641	0651	S17	W43	5494	05	22.0	11	SF				C		64	0.9	E
0561		25	07492	07512	0814	N32	W45	5498	05	21.8	25	SN						85	2.3	E
	URUM	25	0749	0752	0836	N33	W45	5498	05	21.7	47	1B				C		161	2.9	E
	KANZ	25	0749	0753	0813	N32	W44	5498	05	21.8	24	SN				P				
	SVTO	25	0750	0751	0803	N30	W45	5498	05	21.8	13	SF			3	E		23		
	LEAR	25	0751	0753U	0803	N33	W44	5498	05	21.8	12	SF			3	E		36		
	HTPR	25	0752E		0811D	N32	W45	5498	05	21.8	19D	SB				C	0752	120	1.7	
0562	URUM	25	0712	0721	0729	S19	W34	5497	05	22.7	17	SN				C		64	0.8	E
0563	KANZ	25	0827	0830	0846	N23	W79	5495	05	19.3	19	SF				P				
0564		25	1037*	1040*	1109	S18	W32	5497	05	23.0	32	SF	C	8.8				31		FHK
	KANZ	25	1037	1040	1054	S19	W33	5497	05	22.9	17	SF				P				
	SVTO	25	1040	1041	1048	S19	W29	5497	05	23.2	8	SF	C	8.8	3	E		30		F
	RAMY	25	1040E	1043	1122	S19	W33	5497	05	22.9	42D	SF	C	8.8		E		39		K
	RAMY	25	1040E	1052	1122	S19	W33	5497	05	22.9	42D	SF	C	8.8	2	E		26		FH
	SVTO	25	1051	1052	1054	S19	W29	5497	05	23.2	3	SF			3	E		22		F
	KANZ	25	1051	1101	1123	S17	W35	5497	05	22.8	32	SF				P				
	SVTO	25	1108E	1110U	1121	S17	W34	5497	05	22.9	13D	SF			2	E		38		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0565	HOLL	25	1318	1324	1351	N17	E66	5506	05	30.6	33	SF			2	E		35		F
0566		25	14442	14451	1452	N20	E67	5506	05	30.7	8	SF						28		F
	HOLL	25	1444	1445	1452	N20	E69	5506	05	30.9	8	SF			3	E		28		F
	KANZ	25	1446	1446	1452	N21	E65	5506	05	30.6	6	SF				P				
0567		25	1519*	1522*	1701	S19	W32	5497	05	23.2	102	1B	M	1.9				108		EFKU
	KANZ	25	1519	1523	1553	S17	W37	5497	05	22.8	34	SN				P				
	HOLL	25	1520	1522	1741	S19	W31	5497	05	23.3	141	1B				E		95		K
	HOLL	25	1520	1531	1741	S19	W31	5497	05	23.3	141	1B	M	1.9	3	E		219		UF
	RAMY	25	1521	1522	1639D	S19	W32	5497	05	23.2	78D	1B				E		87		K
	RAMY	25	1521	1530U	1639D	S19	W32	5497	05	23.2	78D	1B	M	1.9	2	E		109		FE
	KANZ	25	1530	1534	1657D	S19	W28	5497	05	23.5	87D	1N				P				EK
	SVTO	25	1535E	1540U	1656	S20	W28	5497	05	23.5	81D	1B	M	1.9	1	E		125		UF
	PALE	25	1644	1649	1652	S19	W33	5497	05	23.2	8	SF			3	E		15		
0568		25	16151	16161	1622	N23	W86	5495	05	19.0	7	SF						69		
	HOLL	25	1615	1617	1623	N23	W89	5495	05	18.8	8	SF			3	E		69		
	KANZ	25	1616	1616	1620	N23	W83	5495	05	19.3	4	SF				P				
0569		25	1614*	16264	1644	N22	E64	5506	05	30.6	30	SF						20		F
	HOLL	25	1614	1630	1650	N20	E64	5506	05	30.6	36	SF			3	E		29		F
	SVTO	25	1626	1626	1637	N23	E65	5506	05	30.7	11	SF			3	E		11		
0570		25	1639*	1639*	1730	N32	W48	5498	05	21.9	51	SF						16		
	KANZ	25	1639	1639	1657D	N31	W49	5498	05	21.8	18D	SF				P				
	RAMY	25	1652E	1657U	1731	N32	W46	5498	05	22.1	39D	SF			2	E		17		
	HOLL	25	1655	1658	1729	N32	W49	5498	05	21.8	34	SF			3	E		16		
0571	HOLL	25	1800	1802	1810	S18	W45	5494	05	22.3	10	SF			3	E		27		
0572		25	1822	1822	1840	N32	W48	5498	05	22.0	18	SF						12		
	HOLL	25	1822	1822	1838	N32	W50	5498	05	21.8	16	SF			3	E		10		
	RAMY	25	1829E	1829U	1841	N32	W47	5498	05	22.0	12D	SF			2	E		14		
0573	RAMY	25	1847E	1904U	1907	N32	W47	5498	05	22.1	20D	SF			2	E		10		
0574		25	18542	1856	1906	S20	W30	5497	05	23.5	12	SF						26		F
	PALE	25	1854	1856	1911	S19	W31	5497	05	23.4	17	SF			3	E		37		F
	HOLL	25	1856	1856	1900	S20	W30	5497	05	23.5	4	SF			3	E		16		
0575		25	19181	1926	1938	N33	W49	5498	05	21.9	20	SF						88		F
	HOLL	25	1918	1926	1939	N32	W50	5498	05	21.8	21	SN			3	E		90		
	RAMY	25	1918E	1926U	1939D	N33	W48	5498	05	22.0	21D	SF			2	E		87		
	PALE	25	1919	1926	1937	N34	W49	5498	05	21.9	18	SF			3	E		87		F
0576	PALE	25	2031	2033	2042	S19	W35	5497	05	23.2	11	SF			3	E		22		
0577	HOLL	25	2158	2200	2203	S17	W43	5494	05	22.6	5	SF			3	E		13		
0578	HOLL	25	2237	2240	2255	S18	W36	5497	05	23.2	18	SF			3	E		41		
0579		25	22432	22481	2254	S22	E68	5511	05	31.2	11	SF						67		DI
	VORO	25	2243	2249	2254	S23	E69	5511	05	31.3	11	SF			1	C	2249	54		DI
	HOLL	25	2245	2248	2255	S22	E68	5511	05	31.2	10	SF			3	E		80		
0580		25	22526	22575	2310	S21	E53	5505	05	30.0	18	SF	C	2.5				51	1.5	DFI
	VORO	25	2252	2257	2306	S21	E53	5505	05	30.0	14	SN			1	C	2257	90	1.5	DI
	HOLL	25	2255	2257	2312	S20	E53	5505	05	30.0	17	SF	C	2.5	3	E		46		F
	PALE	25	2258	2302	2312	S22	E52	5505	05	29.9	14	SF			3	E		17		F
0581		25	23209	2330	2356	S19	W36	5497	05	23.2	36	1F	C	4.0				78		F
	HOLL	25	2320	2330	2406	S19	W37	5497	05	23.1	46	1F	C	4.0	3	E		112		F
	PALE	25	2329	2330	2345	S19	W36	5497	05	23.2	16	SF	C	4.0	3	E		45		F
0582	HOLL	25	2333	2335	2338	N33	W53	5498	05	21.8	5	SF			3	E		16		
0583	HOLL	25	2356	2359	2411	S20	E52	5505	05	30.0	15	SF			3	E		27		

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0584	LEAR	26	0321	0323	0331	N34	W54	5498	05	21.8	10	SF		3	E		25		
0585	YUNN	26	0328	0330	0337D	S07	W20	5509	05	24.6	9D	SN			P		47	0.5	E
0586	LEAR	26	0353	0355U	0416	N16	E55	5506	05	30.3	23	1F	C 3.4	3	E		103		FU
0587		26	0558	05591	0604	S19	W46	5497	05	22.7	6	SN	C 3.0				81	1.6	DV
	ABST	26	0558	0559	0603	S18	W46	5497	05	22.7	5	SN			C	0559	87	1.3	DV
	HTPR	26	0558	0600	0605	S18	W47	5497	05	22.7	7	SB			C	0600	120	1.8	
	SVTO	26	0559E	0559U	0605	S20	W44	5497	05	22.9	6D	SF	C 3.0	2	E		35		
0588	YUNN	26	0644	0648	0656	S17	W39	5497	05	23.3	12	SF			C		16	0.2	D
0589		26	07208	07292	0747	S08	W22	5509	05	24.6	27	SN					97	1.0	DE
	KHAR	26	0720	0730	0736	S09	W21	5509	05	24.7	16	SN		2	V	0730			D
	YUNN	26	0726	0729	0753	S08	W23	5509	05	24.6	27	SN			C		94	1.1	
	HTPR	26	0728	0731	0752	S07	W22	5509	05	24.7	24	SB			C	0731	100	1.0	E
0590		26	08251	08272	0840	N21	W88	5495	05	19.6	15	1B					40		A
	HTPR	26	0825	0827	0835	N20	W90	5495	05	19.5	10	SB			C	0827	40		
	KHAR	26	0826	0828	0850	N20	W90	5495	05	19.5	24	1B		2	P	0828			
	YUNN	26	0827E	0829	0835	N23	W83	5495	05	19.9	8D				P				A
0591		26	08371	08392	0847	S16	E44	5505	05	29.7	10	SN					38	0.6	DE
	YUNN	26	0837	0841	0846	S15	E44	5505	05	29.7	9	SN			C		16	0.2	D
	HTPR	26	0838	0839	0848	S16	E44	5505	05	29.7	10	SN			C	0839	60	1.0	E
0592		26	0840	08415	0850	S18	W47	5497	05	22.8	10	SN	C 2.3				20	0.4	D
	HTPR	26	0840	0846	0850	S17	W49	5497	05	22.6	10	SN			C	0846	30	0.5	
	YUNN	26	0841E	0841	0846D	S18	W46	5497	05	22.8	5D	SN			P		16	0.2	D
	SVTO	26	0842E	0845U	0849	S20	W46	5497	05	22.8	7D	SF	C 2.3	2	E		15		
0593	KHAR	26	0951		0957	N28	E58	5507	05	30.9	6	SF		2	V	0951			D
0594	KHAR	26	1033		1047D	N32	E90		06	2.6	14D	SF		2	V	1037			D
0595		26	12571	1259	1306	S08	W26	5509	05	24.6	9	SF					25		F
	SVTO	26	1257	1259	1307	S08	W25	5509	05	24.7	10	SF		3	E		28		F
	HOLL	26	1258	1259	1304	S08	W26	5509	05	24.6	6	SF		3	E		22		
0596		26	14402	14452	1455	S20	W48	5497	05	22.9	15	SF	C 2.3				38		
	HOLL	26	1440	1447	1456	S20	W48	5497	05	22.9	16	SF		3	E		37		
	SVTO	26	1442	1445	1454	S21	W47	5497	05	23.0	12	SF	C 2.3	3	E		39		
0597	HOLL	26	1753	1758	1806	N20	E54	5506	05	30.9	13	SF		4	E		33		
0598	HOLL	26	1849	1854	1905	S19	W51	5497	05	22.9	16	SF	C 3.8	3	E		24		EF
0599		26	1940	19431	1950	S20	W50	5497	05	23.0	10	SF					12		F
	PALE	26	1940	1943	1949	S20	W50	5497	05	23.0	9	SF		3	E		14		
	HOLL	26	1940	1944	1951	S21	W49	5497	05	23.1	11	SF		4	E		11		F
0600		26	20471	20513	2139	S19	W44	5497	05	23.5	52	SN	C 4.0				44		EF
	HOLL	26	2047	2054	2140	S19	W45	5497	05	23.4	53	SN	C 4.0	3	E		57		FE
	PALE	26	2048	2051	2138	S19	W44	5497	05	23.5	50	SF	C 4.0	3	E		30		
0601		26	2218	2226*	2409	S18	W47	5497	05	23.3	111	1N	M 1.6				326	8.5	EFIU
	HOLL	26	2218	2226	2409	S19	W47	5497	05	23.3	111	SN	M 1.6	3	E		87		UF
	VORO	26	2232E	2238	2245D	S18	W47	5497	05	23.3	13D	2F		1	C	2238	564	8.5	EI
0602	PALE	26	2309	2313	2342	S18	W49	5497	05	23.2	33	SF		3	E		51		
0603	HOLL	27	0111	0115	0117	N20	E46	5506	05	30.6	6	SF		3	E		22		
0604		27	0534	0548	0600	S20	W49	5497	05	23.5	26	SN	C 1.7				44	1.0	F
	SVTO	27	0534	0538U	0606	S21	W50	5497	05	23.4	32	SF	C 1.7	2	E		26		F
	YUNN	27	0535E	0548	0554	S19	W48	5497	05	23.6	19D	SN			P		63	1.0	
0605	KHAR	27	0855		0904	S18	W53	5497	05	23.3	9	SF		2	V	0858			D

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0606	SVTO	27	1236	1237	1244	S21	E14	5503	05	28.6	8	SF			3	E		24		
0607	HOLL	27	1438	1440	1443	S18	W56	5497	05	23.3	5	SF			2	E		26		F
0608	HOLL	27	1617	1621	1629	S16	E10	5510	05	28.4	12	SF			3	E		26		F
		27	1751		1756	No Flare Patrol														
0609	HOLL	27	2035	2038	2048	S17	E07	5510	05	28.4	13	SF			3	E		32		F
0610		27	2255*	2307*	2323	S22	E46	5511	05	31.5	28	SF	C	1.6				22		F
	HOLL	27	2255	2307	2318	S22	E47	5511	05	31.6	23	SF	C	1.6	3	E		31		F
	HOLL	27	2319	2319	2328	S22	E46	5511	05	31.5	9	SF			3	E		12		
0611	HOLL	28	0016	0017U	0022	S16	E25	5505	05	29.9	6	SF			3	E		48		EF
0612	HOLL	28	0028	0030	0037	S18	W63	5497	05	23.2	9	SF			3	E		14		F
0613	URUM	28	0143	0155	0214	S16	W11	5510	05	27.2	31	SF				C		80	0.9	E
0614	LEAR	28	0159	0200	0206	S20	W69	5497	05	22.8	7	SF			3	E		47		F
		28	0315		0352	No Flare Patrol														
		28	0409		0416	No Flare Patrol														
0615	SVTO	28	0616	0616	0625	N24	E25	5506	05	30.2	9	SF	C	1.1	3	E		33		
0616		28	07305	07363	0755	S19	W64	5497	05	23.4	25	SN	C	1.9				38	1.5	E
	YUNN	28	0730	0736	0740D	S19	W63	5497	05	23.5	10D	SN				P		63	1.5	E
	KHAR	28	0733		0750	S20	W65	5497	05	23.3	17	SN			2	V	0742			E
	KANZ	28	0735	0739	0754	S19	W64	5497	05	23.4	19	SF				P				
	SVTO	28	0737E	0739U	0802	S18	W62	5497	05	23.6	25D	SF	C	1.9	2	E		14		
0617		28	1048	11082	1133	S20	W71	5497	05	23.0	45	SF	C	2.1				51		FH
	RAMY	28	1048	1108	1145D	S19	W71	5497	05	23.0	57D	SF	C	2.1	2	E		49		FH
	SVTO	28	1107E	1110	1133	S20	W71	5497	05	23.0	26D	SF	C	2.1	3	E		53		F
0618	SVTO	28	1146	1146	1157	S11	W55	5509	05	24.3	11	SF			3	E		11		
0619		28	12099	12261	1249	S18	W76	5497	05	22.7	40	1B	M	4.0				208		H
	SVTO	28	1209	1226	1250	S19	W75	5497	05	22.8	41	1N	M	4.0	3	E		232		
	RAMY	28	1218	1227	1248	S17	W77	5497	05	22.7	30	1B	M	4.0	2	E		183		H
0620		28	13081	1310	1318	N22	E22	5506	05	30.2	10	SF	C	1.7				22		F
	SVTO	28	1308	1310	1318	N23	E21	5506	05	30.2	10	SF	C	1.7	3	E		22		F
	RAMY	28	1309	1310	1318	N22	E22	5506	05	30.2	9	SF	C	1.7	2	E		21		
0621		28	1358	1401	1416	S16	E14	5505	05	29.6	18	SF	C	1.4				36		F
	SVTO	28	1358	1401	1417	S16	E14	5505	05	29.6	19	SF	C	1.4	3	E		58		F
	RAMY	28	1412E	1412U	1415	S17	E15	5505	05	29.7	3D	SF			2	E		15		
0622	SVTO	28	1418	1418	1423	N21	E23	5506	05	30.3	5	SF			3	E		11		
0623	SVTO	28	1524	1528	1559	S16	W04	5510	05	28.3	35	SF			3	E		27		
0624	SVTO	28	1556	1556	1602	N20	E20	5506	05	30.2	6	SF	C	2.4	3	E		12		F
		28	1745		1753	No Flare Patrol														
		28	1759		1802	No Flare Patrol														
		28	2015		2024	No Flare Patrol														
0625	HOLL	28	2044	2047	2054	S22	E63	5513	06	2.7	10	SF			3	E		15		
0626		28	2206	2212	2307	N20	E21	5506	05	30.5	61	1F	M	1.0				332	7.2	EFJ
	VORO	28	2206	2212	2236D	N19	E23	5506	05	30.7	30D	2F			1	C	2212	618	7.2	EJ
	PALE	28	2208E	2214U	2307	N21	E20	5506	05	30.4	59D	1F	M	1.0	3	E		232		FE
	HOLL	28	2209E	2212U	2301D	N21	E19	5506	05	30.4	52D	1N	M	1.0	3	E		145		FE
0627	PALE	28	2258	2303	2313	S17	W74	5497	05	23.3	15	SF	C	8.1	3	E		36		F

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0628	LEAR	28	2348	2356	2412	N19	E25	5506	05	30.9	24	SF		3	E		10		
0629		29	0114*	01265	0202	S16	W10	5510	05	28.3	48	SN					27		EF
	MITK	29	0114	0126	0200	S16	W10	5510	05	28.3	46	SN			C	0126			E
	PALE	29	0124	0131	0203	S15	W10	5510	05	28.3	39	SF		3	E		27		F
0630		29	0248	02521	0309	N22	E15	5506	05	30.3	21	1N	M 1.2				98		EF
	LEAR	29	0248	0252	0309	N22	E15	5506	05	30.3	21	1N	M 1.2	3	E		101		F
	PALE	29	0248	0253	0309	N22	E15	5506	05	30.3	21	SN	M 1.2	3	E		94		FE
0631	LEAR	29	0313	0322	0325	N22	E14	5506	05	30.2	12	SF		3	E		17		F
0632		29	0329*	0348*	0503	S19	W77	5497	05	23.3	94	SF	M 2.1				97		FH
	PALE	29	0329	0348	0401	S18	W78	5497	05	23.2	32	SF		3	E		32		F
	LEAR	29	0337	0432	0536	S18	W77	5497	05	23.3	119	1N	M 2.1	3	E		214		F
	SVTO	29	0426E	0428U	0504	S21	W78	5497	05	23.2	38D	SN	M 3.3	2	E		80		FH
	PALE	29	0427	0430	0434D	S17	W76	5497	05	23.4	7D	1F	M 3.3	2	E		143		F
	SVTO	29	0520	0523	0532	S21	W77	5497	05	23.3	12	SF		3	E		15		
0633	PALE	29	0350	0351	0357	N23	E16	5506	05	30.4	7	SF		3	E		52		F
0634		29	06385	06462	0700	N22	E10	5506	05	30.0	22	SF					16		
	SVTO	29	0638	0648	0701	N22	E11	5506	05	30.1	23	SF		3	E		16		
	KANZ	29	0643	0646	0700	N23	E10	5506	05	30.0	17	SF			P				
0635		29	0646	0646	0652	S20	W78	5497	05	23.3	6	SF					27		
	KANZ	29	0646	0646	0652	S19	W76	5497	05	23.5	6	SF			P				
	SVTO	29	0646	0646	0652	S21	W80	5497	05	23.1	6	SF		3	E		27		
0636		29	07268	0736*	0800	N22	E10	5506	05	30.1	34	SF	C 3.5				48		D
	SVTO	29	0726	0746	0801	N23	E10	5506	05	30.1	35	SF	C 3.5	3	E		45		
	LEAR	29	0727	0746	0801	N22	E10	5506	05	30.1	34	SF	C 3.5	3	E		50		
	KANZ	29	0727	0747	0803	N22	E09	5506	05	30.0	36	SF			P				
	KHAR	29	0734	0736	0755	N22	E10	5506	05	30.1	21	SN		2	V	0736			D
0637	SVTO	29	0835	0841	0845	N23	E10	5506	05	30.1	10	SF		3	E		14		
0638	KHAR	29	0925		0940	N22	E10	5506	05	30.2	15	SF		2	V	0935			D
0639		29	09296	0934	0958	S22	W85	5497	05	22.9	29	1N	C 3.3				76		F
	SVTO	29	0929	0934	0940	S22	W90	5497	05	22.5	11	SN	C 3.3	3	E		76		F
	KHAR	29	0935		1015	S21	W80	5497	05	23.3	40	1F		2	V				
0640		29	10533	1058	1110	N22	E09	5506	05	30.1	17	SN					59		DF
	SVTO	29	1053	1058	1110	N22	E08	5506	05	30.1	17	SF		3	E		59		F
	KHAR	29	1056	1058	1106D	N22	E10	5506	05	30.2	10D	SB		2	V	1058			D
0641	SVTO	29	1118	1119	1124	S17	W15	5510	05	28.3	6	SF		3	E		16		F
0642	SVTO	29	1150	1151	1158	S17	W16	5510	05	28.3	8	SF		3	E		15		F
0643	SVTO	29	1243	1247	1250	S22	W90	5497	05	22.6	7	SF		3	E		24		EF
0644	SVTO	29	1325	1325	1333	S23	W90	5497	05	22.6	8	SF	C 5.3	3	E		28		
0645	SVTO	29	1352	1356	1403	S19	E24	5511	05	31.4	11	SF		3	E		16		F
0646		29	1419E	1419U	1423	S18	W79	5497	05	23.6	4D	SF					12		
	KANZ	29	1419E	1419U	1425D	S18	W78	5497	05	23.6	6D	SF			P				
	HOLL	29	1419E	1421U	1423	S19	W80	5497	05	23.5	4D	SF		2	E		12		
0647	SVTO	29	1434	1434	1444	S21	E25	5511	05	31.5	10	SF		3	E		14		
0648		29	1456	1501	1516	S20	E26	5511	05	31.6	20	SF					24		F
	SVTO	29	1456	1501	1514	S20	E26	5511	05	31.6	18	SF		3	E		31		F
	HOLL	29	1502E	1505U	1517	S21	E25	5511	05	31.5	15D	SF		2	E		18		F
		29	1527		1625	No Flare Patrol													

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Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0649		29	1531	1534	1558	N24	E07	5506	05	30.2	27	SF						32		EF
	HOLL	29	1531	1534	1558	N25	E06	5506	05	30.1	27	SF			3	E		43		FE
	SVTO	29	1534E	1534U	1544D	N22	E08	5506	05	30.3	10D	SF			2	E		20		
0650	HOLL	29	1803	1807U	1820	S19	E23	5511	05	31.5	17	SF			3	E		48		F
0651	HOLL	29	1906	1906	1930	S22	E16	5515	05	31.0	24	SF			3	E		25		
0652		29	2040	2046	2052	S22	E14	5515	05	30.9	12	SF	C	1.4				26		F
	PALE	29	2040	2046	2048	S22	E14	5515	05	30.9	8	SF	C	1.4	3	E		19		
	HOLL	29	2041E	2043U	2056	S22	E15	5515	05	31.0	15D	SF	C	1.4	3	E		34		F
		29	2201		2218	No Flare Patrol														
		29	2227		2229	No Flare Patrol														
0653		29	2331	2347*	2410	S23	E21	5511	05	31.6	39	SF						38		FK
	PALE	29	2331	2347	2410	S23	E21	5511	05	31.6	39	SF				E		39		K
	PALE	29	2331	2404	2410	S23	E21	5511	05	31.6	39	SF			3	E		37		F
0654	HOLL	30	0111	0114	0120D	S20	W79	5497	05	24.0	9D	SF	M	6.6	2	E		13		F
0655	PALE	30	0207	0207	0218	S23	E19	5511	05	31.5	11	SF			3	E		44		F
0656	LEAR	30	0251	0251	0257	S22	E19	5511	05	31.6	6	SF			3	E		11		
0657	LEAR	30	0254	0257	0304	S09	W79	5509	05	24.2	10	SF			3	E		33		
0658		30	03291	03321	0351	N28	E07	5507	05	30.7	22	SF	C	2.3				45		E
	MITK	30	0329	0333	0341	N27	E03	5507	05	30.4	12	SF				C	0333			E
	PALE	30	0330	0332	0401	N30	E11	5507	05	31.0	31	SF	C	2.3	3	E		45		
0659	LEAR	30	0418	0420	0424	S09	W78	5509	05	24.3	6	SF			3	E		19		
0660	ABST	30	0637	0645	0658	N23	W03	5506	05	30.0	21	SF				P	0645	44	0.5	D
0661	URUM	30	1118	1120	1126	N25	W04	5508B	05	30.2	8	SN				C		48	0.6	D
		30	1146		1213	No Flare Patrol														
0662	HOLL	30	1308	1313	1318	S23	E08	5515	05	31.2	10	SF			3	E		22		
0663		30	1350	1351*	1503	S22	E07	5515	05	31.1	73	SN	C	2.1				44		EK
	HOLL	30	1350	1351	1503	S22	E07	5515	05	31.1	73	SN				E		30		K
	HOLL	30	1350	1425	1503	S22	E07	5515	05	31.1	73	SN	C	2.1	4	E		57		E
0664	HOLL	30	1437	1438	1450	N15	E62	5516	06	4.3	13	SF			4	E		10		
0665	SVTO	30	1505	1505	1524	N15	E61	5516	06	4.2	19	SF			3	E		14		
0666	HOLL	30	1515	1527	1543	S21	E06	5515	05	31.1	28	SF			4	E		22		
0667		30	1732	1736	1752	S22	E04	5515	05	31.0	20	SN	C	4.4				66		EF
	HOLL	30	1732	1736	1749	S21	E03	5515	05	31.0	17	SN	C	4.4	4	E		67		E
	PALE	30	1732	1736	1756	S22	E04	5515	05	31.0	24	SN	C	4.4	3	E		65		F
0668	PALE	30	1738	1740	1745	N12	E61	5516	06	4.3	7	SF			3	E		18		
0669	HOLL	30	1759	1803	1832	S20	E10	5511	05	31.5	33	SF			3	E		24		
0670	HOLL	30	1819	1820	1835	N24	W08	5506	05	30.1	16	SF			3	E		21		
0671	PALE	30	1909	1912	1922	N14	E59	5516	06	4.2	13	SF	C	3.9	3	E		24		
		30	1914		1955	No Flare Patrol														
0672	HOLL	30	2020E	2022	2032	N14	E59	5516	06	4.3	12D	SF			3	E		15		

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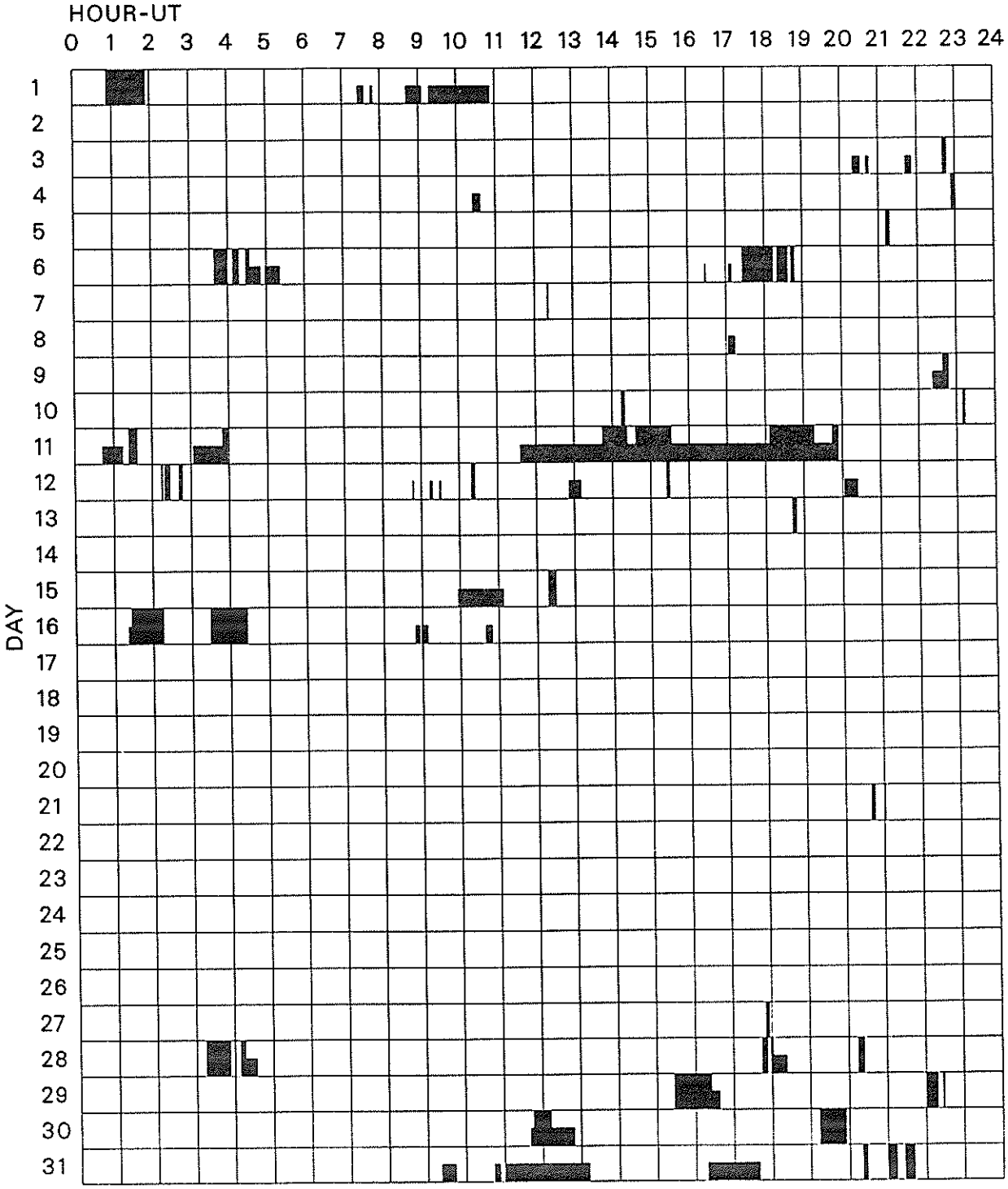
0673		30	2158	2201*	2238	N13	E56	5516	06	4.1	40	SF					35		FK
	PALE	30	2158	2201	2212	N14	E57	5516	06	4.2	14	SF		3	E		41		F
	HOLL	30	2158	2201	2251	N13	E56	5516	06	4.1	53	SF		3	E		42		
	HOLL	30	2158	2228	2251	N13	E56	5516	06	4.1	53	SF			E		21		K
0674	PALE	30	2300	2306	2317	N13	E58	5516	06	4.3	17	SF		3	E		27		
0675	PALE	30	2351	2351	2404	N17	E62	5514	06	4.7	13	SF		3	E		41		
0676	LEAR	31	0407	0409	0435	S22	E03	5511	05	31.4	28	SF	C 2.1	3	E		20		
0677	ABST	31	0550E	0553U	0613	S24	E05	5511	05	31.6	23D	SF			P	0553	87	1.0	D
0678		31	0715*	07203	0736	N14	E54	5516	06	4.4	21	SF	C 2.2				57	0.9	DEF
	BUCA	31	0715	0720	0734	N13	E55	5516	06	4.4	19	SF			C	0720	53	0.9	D
	LEAR	31	0718	0723	0736	N14	E51	5516	06	4.1	18	SF	C 2.2	3	E		72		F
	HTPR	31	0719E		0725D	N15	E55	5516	06	4.5	6D	SF			C	0725	60	1.0	E
	KAND	31	0724E		0729	N14	E54	5516	06	4.4	5D	SN			P	0725	42	0.8	D
	ISTA	31	0725		0747	N13	E53	5516	06	4.3	22	1N			V				E
0679		31	0725*	0729*	0755	N19	W08	5506	05	30.7	30	SN					79	1.0	DEFH
	ISTA	31	0725		0758	N18	W07	5506	05	30.8	33	1B			V				F
	KAND	31	0726	0729	0743	N19	W08	5506	05	30.7	17	SN			P	0729	62	0.7	E
	LEAR	31	0727	0729	0754	N19	W09	5506	05	30.6	27	SF		3	E		26		FH
	BUCA	31	0727	0740	0800	N20	W07	5506	05	30.8	33	SF			C	0740	129	1.4	E
	URUM	31	0737	0742	0801	N21	W11	5506	05	30.5	24	SN			C		80	0.9	D
	HTPR	31	0743E		0807D	N18	W06	5506	05	30.9	24D	SN			C	0747	100	1.0	E
0680		31	0752*	08084	0822	N18	E59	5514	06	4.8	30	SN	C 2.5				50	1.2	DEF
	URUM	31	0752	0812	0832	N19	E60	5514	06	4.9	40	SN			C		48	1.1	D
	KAND	31	0805	0808	0814	N18	E58	5514	06	4.7	9	SB			P	0808	62	1.3	E
	LEAR	31	0807	0808	0819	N18	E59	5514	06	4.8	12	SF	C 2.5	3	E		39		
	ISTA	31	0808	0810	0823	N18	E60	5514	06	4.9	15	1B			V				F
0681	HOLL	31	1629E	1631U	1646	N18	E54	5514	06	4.8	17D	SN		3	E		10		
0682		31	1842E	1843U	1857	S19	E86	5517	06	7.3	15D	1F	C 3.0				145		EF
	PALE	31	1842E	1843U	1855	S18	E82	5517	06	7.0	13D	SF		2	E		49		
	HOLL	31	1842E	1844U	1859	S20	E89	5517	06	7.6	17D	1F	C 3.0	4	E		241		FE
0683	HOLL	31	2002	2003	2012	S18	E85	5517	06	7.3	10	SF		3	E		34		
0684	HOLL	31	2010	2012	2020	S21	W04	5511	05	31.5	10	SF		3	E		35		
		31	2021		2027	No Flare Patrol													
		31	2059		2113	No Flare Patrol													
		31	2126		2141	No Flare Patrol													
0685		31	2347	23455	2358	N18	E62	5514	06	5.7	11	1N					72	2.1	D
	URUM	31	2345E	2345	2352	N16	E60	5514	06	5.5	7D	1N			C		96	2.1	D
	URUM	31	2347	2350	2405	N19	E64	5514	06	5.9	18	SN			C		48		D

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

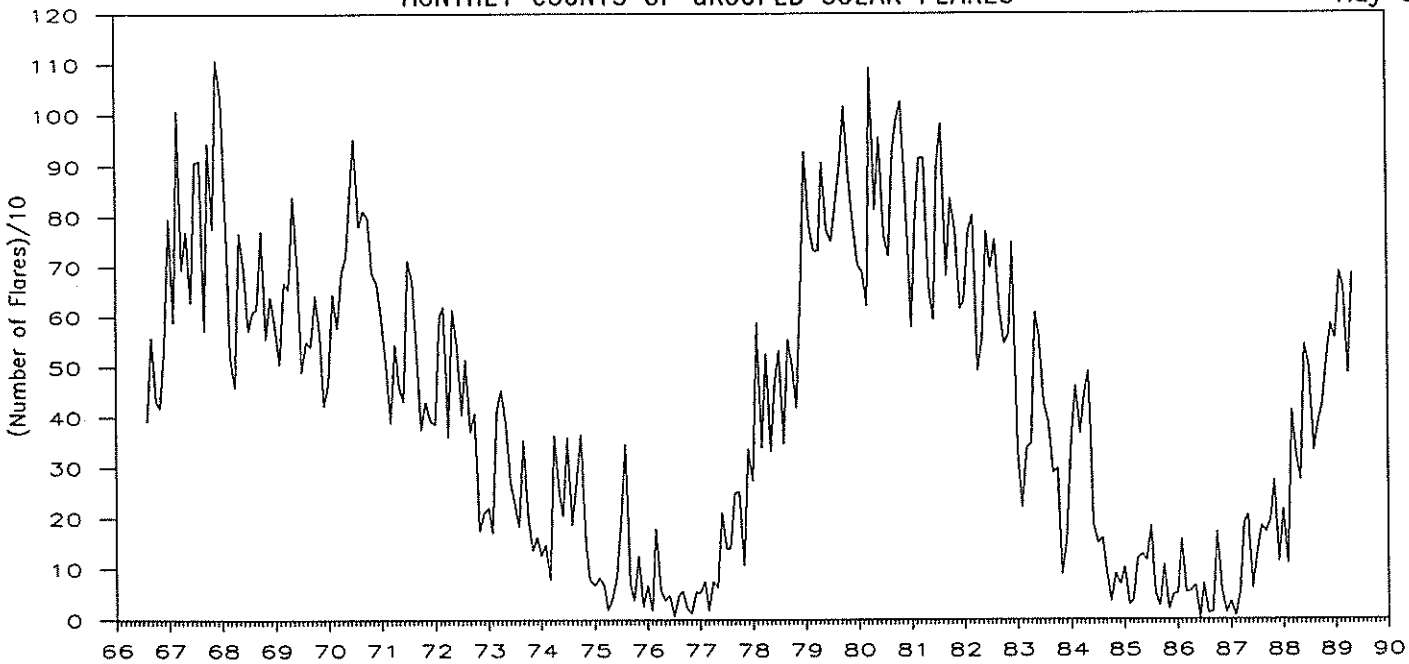
MAY 1989



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

Abastumani	Haute Provence	Kandilli	Mitaka	San Vito
Athens	Holloman	Kanzelhoehe	Palehua	Urumqi
Bucharest	Hurbanovo	Kharkov	Purple Mt.	Voroshilov
Catania	Istanbul	Learmonth	Ramey	Yunnan

MONTHLY COUNTS OF GROUPED SOLAR FLARES*



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1966								391	558	432	417	543	2341
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	544	499	331	390	421	508	584	4618
1989	689	539	658	485	685								3056

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

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	260	ONDR	44	NS	0738.0E	1528.7	498.0D	54.0			
	2840	PEKG	46	C	0050.0	0108.0	71.0	197.0			
	2840	PEKG	46	C	0050.0	0059.5		126.0			
	610	LEAR	4	S/F	0057.0E	0100.0	6.0D	36.0			QL=1 ST=2 TYP=3
	8800	PALE	20	GRF	0057.0E	0059.0	18.0D	340.0			QL=1 ST=2 TYP=2
	15400	LEAR	4	S/F	0057.0E	0059.0	43.0D	370.0			QL=1 ST=2 TYP=5
	500	HIRA	46	C	0057.0	0057.4	32.5	102.0	7.0		O
	100	HIRA	46	C	0057.2	0057.8	1.5	520.0			
	200	HIRA	46	C	0057.4	0100.5	4.3	135.0			O
	410	LEAR	8	S	0058.0E	0058.0	U	20.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	0058.0E	0058.0	2.0D	110.0			QL=1 ST=2 TYP=3
	15400	PALE	20	GRF	0058.0E	0059.0	19.0D	430.0			QL=1 ST=2 TYP=2
	1415	LEAR	4	S/F	0058.0E	0059.0	30.0D	120.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0058.0E	0108.0	42.0D	170.0			QL=1 ST=2 TYP=5
	8800	LEAR	4	S/F	0058.0E	0059.0	42.0D	380.0			QL=1 ST=2 TYP=5
	245	LEAR	8	S	0100.0E	0100.0	1.0D	40.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0451.0	0451.7	1.8	6.0			
	9500	POTS	20	GRF	0904.2	0906.9	11.8	9.0			
	430	KRAK	41	F	1026.0	1047.2	29.5	16.0	3.0		
	536	ONDR	41	F	1030.0	1043.3	23.5	18.0			
	430	KRAK	45	C	1123.0	1128.0	19.0U	53.0	6.0		
	430	KRAK	42	SER	1143.0	1219.5	105.0	40.0			
	810	KRAK	8	S	1245.8	1246.0	0.5	6.0			
	810	KRAK	5	S	1246.5	1247.1	2.5	192.0	80.0		
	536	ONDR	40	F	1500.8	1501.0	0.9	60.0			
	245	PALE	8	S	1913.0E	1913.0	U	54.0			QL=1 ST=2 TYP=3
02	260	ONDR	44	NS	0620.0E	1439.2	580.0D				
	204	IZMI	43	NS	0957.0		128.0	10.0			
	430	KRAK	44	NS	1010.0E	1030.8	180.0D	81.0	5.0		
	245	SGMR	44	NS	1843.0E	1844.0	317.0D	83.0			QL=1 ST=3 TYP=1
	100	HIRA	44	NS	1942.0E	2100.0	580.0D	210.0	40.0		
	200	HIRA	44	NS	1942.0E	0548.0	840.0D	43.0	21.0		WL
	200	HIRA	41	F	0215.2	0221.1	12.5	25.0			O
	9100	GORK	22	GRF	0233.0E		48.0D				
	5900	KISV	29	PBI	0407.0	0415.0	71.8	13.0			
	5900	KISV	4	S/F	0407.0	0412.4	8.0	42.0			
	9300	KISV	29	PBI	0410.6	0418.0	42.0	15.0			
	9300	KISV	4	S/F	0410.6	0412.3	7.4	40.0			
	9100	GORK	21	GRF	0411.3	0429.3	109.0	13.7			
	15000	KISV	2	S/F	0411.7	0412.3	7.3	9.0			
	9100	GORK	2	S/F	0411.7	0412.4	2.4	21.5			
	33	UPIC	8	S	0456.2	0456.3	1.3				
	245	LEAR	8	S	0529.0E	0529.0	1.0D	260.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0529.0E	0529.0	U	290.0			QL=1 ST=2 TYP=3
	650	GORK	22	GRF	0607.0	0624.5	83.0U	6.0			
	5900	KISV	45	C	0615.1	0616.3	8.7	10.0			
	5900	KISV	45	C	0615.1	0617.7		5.0			
	9300	KISV	2	S/F	0615.3	0616.2	7.9	11.0			
	9100	GORK	20	GRF	0615.6	0616.4	16.7	8.5			
	9500	POTS	20	GRF	0750.0	0755.5	33.5	6.0			
	1470	POTS	20	GRF	0750.5	0754.0	50.5	5.0			
	2950	GORK	21	GRF	0750.8	0809.0	80.0	5.6			
	650	GORK	1	S	0751.1	0751.6	0.9	3.5			
	3000	POTS	20	GRF	0751.5U	0754.2	21.2D	9.0			
	950	GORK	1	S	0751.7	0751.8	0.3	1.0			
	2950	GORK	1	S	0853.4	0854.2	1.4	6.8			
	536	ONDR	41	F	0955.0	1010.7	110.0	44.0			
	600	HUMN	41	F	1000.1	1010.0	12.0	12.0	3.0		
	245	SGMR	8	S	1322.0E	1322.0	1.0D	150.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1322.0E	1322.0	1.0D	93.0			QL=1 ST=2 TYP=3
	9500	POTS	21	GRF	1359.8	1422.6	47.0	12.0			
	2800	OTTA	22	GRF	1400.0	1403.0	45.0	15.7	4.0		
	3000	POTS	4	S/F	1400.0	1403.0	5.0U	19.0			
	9500	POTS	4	S/F	1400.5	1403.0	5.5	23.0			
	8800	SGMR	8	S	1402.0E	1403.0	1.0D	55.0			QL=1 ST=3 TYP=3
	4995	SGMR	8	S	1402.0E	1403.0	1.0D	98.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1421.0E	1422.0	2.0D	150.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1421.0E	1422.0	2.0D	140.0			QL=1 ST=3 TYP=3

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
02	536	ONDR	41	F	1429.0	1438.9	26.5	178.0			
	9500	POTS	4	S/F	1437.5	1438.8	2.5	20.0			
	410	SGMR	8	S	1438.0E	1438.0	1.0D	70.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1438.0E	1439.0	1.0D	400.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1438.0E	1438.0	1.0D	320.0			QL=1 ST=3 TYP=3
	410	SVTO	8	S	1438.0E	1439.0	1.0D	70.0			QL=1 ST=2 TYP=3
	1470	POTS	4	S/F	1438.0	1438.7	2.0	14.0			
	3000	POTS	4	S/F	1438.0	1438.8	2.0	10.0			
	2800	OTTA	22	GRF	1546.0	1610.0	146.0	47.6	14.0		
	245	SGMR	8	S	1558.0E	1559.0	1.0D	310.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1559.0E	1559.0	U	240.0			QL=1 ST=2 TYP=3
	2695	SVTO	20	GRF	1606.0E	1610.0	6.0D	46.0			QL=1 ST=2 TYP=2
	4995	SVTO	20	GRF	1606.0E	1608.0	2.0D	24.0			QL=1 ST=2 TYP=2
	410	SGMR	8	S	1610.0E	1611.0	1.0D	53.0			QL=1 ST=2 TYP=3
	8800	SVTO	20	GRF	1610.0E	1610.0	U	22.0			QL=1 ST=2 TYP=2
	600	HUMN	4	S/F	1610.0	1613.5	4.0	11.0	6.0		
	410	SVTO	8	S	1611.0E	1611.0	U	76.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1813.0E	1813.0	1.0D	8300.0			QL=1 ST=2 TYP=6
	410	PALE	8	S	1813.0E	1813.0	1.0D	390.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1813.0E	1813.0	1.0D	160.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1813.0E	1813.0	1.0D	7400.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	1818.0E	1818.0	U	72.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1818.0E	1818.0	U	77.0			QL=1 ST=2 TYP=3
	2800	OTTA	22	GRF	1820.0	1903.5	242.0	108.4	22.0		
	245	PALE	4	S/F	1822.0E	1823.0	3.0D	310.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1835.0E	1836.0	1.0D	63.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1842.0E	1852.0	29.0D	560.0			QL=1 ST=2 TYP=7
	410	SGMR	20	GRF	1849.0E	1857.0	17.0D	140.0			QL=1 ST=2 TYP=2
	1415	PALE	4	S/F	1850.0E	1852.0	5.0D	170.0			QL=1 ST=2 TYP=3
	410	PALE	20	GRF	1850.0E	1857.0	15.0D	220.0			QL=1 ST=2 TYP=2
	2695	SGMR	20	GRF	1851.0E	1903.0	20.0D	110.0			QL=1 ST=2 TYP=2
	4995	SGMR	20	GRF	1853.0E	1903.0	20.0D	80.0			QL=1 ST=2 TYP=2
	2695	PALE	20	GRF	1857.0E	1903.0	14.0D	110.0			QL=1 ST=2 TYP=2
	8800	SGMR	4	S/F	1858.0E	1902.0	6.0D	47.0			QL=1 ST=2 TYP=5
	4995	SGMR	4	S/F	1913.0E	1916.0	6.0D	72.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	1914.0E	1918.0	5.0D	100.0			QL=1 ST=2 TYP=5
	1415	SGMR	4	S/F	1915.0E	1916.0	3.0D	100.0			QL=1 ST=2 TYP=3
	2695	SGMR	4	S/F	1915.0E	1916.0	4.0D	90.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	1916.0E	1916.0	1.0D	58.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	2002.0E	2002.0	1.0D	160.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	2002.0E	2002.0	1.0D	500.0			QL=1 ST=2 TYP=6
	410	PALE	8	S	2002.0E	2002.0	1.0D	270.0			QL=1 ST=3 TYP=3
	1415	SGMR	8	S	2002.0E	2002.0	1.0D	220.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2002.0E	2002.0	1.0D	460.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2002.0E	2002.0	1.0D	220.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	2002.4	2002.9	0.9	780.0			O
	2800	OTTA	47	GB	2051.7	2053.7	2.5	897.0	440.0		
	2695	PALE	49	GB	2052.0E	2053.0	2.0D	670.0			QL=1 ST=2 TYP=6
	2695	SGMR	49	GB	2052.0E	2053.0	2.0D	690.0			QL=1 ST=2 TYP=6
	15400	SGMR	8	S	2052.0E	2052.0	U	24.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	2053.0E	2053.0	1.0D	56.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	2055.8	2056.3	0.8	1600.0			O
	410	PALE	8	S	2057.0E	2057.0	U	140.0			QL=1 ST=2 TYP=5
	245	PALE	49	GB	2057.0E	2057.0	1.0D	1200.0			QL=1 ST=2 TYP=6
	410	SGMR	8	S	2057.0E	2057.0	U	110.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	2057.0E	2057.0	1.0D	1200.0			QL=1 ST=3 TYP=6
	245	PALE	8	S	2105.0E	2105.0	1.0D	73.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	2115.0E	2116.0	1.0D	410.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2330.0E	2332.0	2.0D	110.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	2332.0E	2332.0	U	75.0			QL=1 ST=2 TYP=3
03	100	GORK	44	NS	0300.0E		540.0D		10.0		
	200	GORK	44	NS	0330.0E		510.0D		10.0		
	245	SVTO	44	NS	0407.0E	1236.0	650.0D	260.0			QL=1 ST=3 TYP=1
	204	IZMI	43	NS	0600.0		360.0	15.0			
	260	ONDR	44	NS	0620.0E	1301.0	580.0D	143.0			
	430	KRAK	44	NS	0700.0E		420.0D	19.0	8.0		
	127	TORN	43	NS	0730.0		470.0		50.0		V=2
	234	POTS	43	NS	0825.5	0928.0	373.0	200.0			

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	245	LEAR	44	NS	0837.0E	0932.0	64.0D	160.0			QL=1 ST=2 TYP=1
	245	SGMR	44	NS	0957.0E	1236.0	169.0D	300.0			QL=1 ST=1 TYP=1
	245	SGMR	44	NS	2000.0E	2136.0	203.0D	300.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	2106.0E	2108.0	455.0D	150.0			QL=1 ST=2 TYP=1
	200	HIRA	43	NS	2253.0	0005.0	264.0	27.0	8.0		WL
	245	PALE	8	S	0036.0E	0037.0	1.0D	110.0			QL=1 ST=2 TYP=3
	2695	PENT	3	S	0100.0	0100.7	2.5	33.6	13.0		
	500	HIRA	27	RF	0223.0	0421.5	146.0	25.0	10.0		WL
	650	GORK	23	GRF	0300.0E	0337.9	540.0D	15.0			
	2840	PEKG	28	PRE	0324.0	0338.0		25.4			
	2950	GORK	21	GRF	0324.7	0406.0	520.0D	38.0			
	9100	GORK	23	GRF	0327.6	0406.6	268.0	127.0			
	950	GORK	46	C	0328.0	0349.1		820.0			
	950	GORK	46	C	0328.0	0343.3	23.5	580.0			
	950	GORK	23	GRF	0332.4	0403.0	89.0	6.5			
	2695	LEAR	49	GB	0337.0E	0356.0	36.0D	1100.0			QL=1 ST=2 TYP=7
	4995	LEAR	49	GB	0337.0E	0356.0	59.0D	3600.0			QL=1 ST=2 TYP=7
	1415	LEAR	49	GB	0338.0E	0344.0	25.0D	650.0			QL=1 ST=2 TYP=7
	8800	LEAR	49	GB	0338.0E	0356.0	58.0D	4800.0			QL=1 ST=2 TYP=7
	2840	PEKG	47	GB	0338.0	0343.0D		442.5			
	2840	PEKG	47	GB	0338.0	0346.7		972.2			
	2840	PEKG	47	GB	0338.0	0355.7	22.0	1769.0			
	9100	GORK	47	GB	0338.3	0356.2	28.2	4676.0			
	15400	LEAR	49	GB	0339.0E	0356.0	57.0D	4100.0			QL=1 ST=2 TYP=7
	650	GORK	47	GB	0339.2	0356.1	19.1	9390.0			
	100	HIRA	46	C	0339.3		23.0	1000.0D	280.0D		
	2950	GORK	46	C	0339.5	0356.2		458.0			
	2950	GORK	46	C	0339.5	0347.2	26.2	407.0			
	2950	GORK	46	C	0339.5	0351.9		208.0			
	500	HIRA	48	C	0339.5	0354.9	22.0	7000.0	776.0		WR
	100	GORK	46	C	0339.9	0343.4	18.0	1700.0			
	100	GORK	46	C	0339.9	0346.9		1300.0			
	100	GORK	46	C	0339.9	0353.9		1700.0			
	610	LEAR	49	GB	0340.0E	0356.0	19.0D	9100.0			QL=1 ST=2 TYP=7
	1415	PALE	49	GB	0340.0E	0344.0	19.0D	540.0			QL=1 ST=2 TYP=7
	2695	PALE	49	GB	0340.0E	0356.0	22.0D	1100.0			QL=1 ST=2 TYP=7
	8800	PALE	49	GB	0340.0E	0356.0	1220.0D	4300.0			QL=1 ST=1 TYP=7
	200	HIRA	46	C	0340.6	0342.6	50.0	570.0	30.0		WRWL
	200	HIRA	46	C	0340.6	0355.8		300.0			O
	245	PALE	49	GB	0341.0E	0343.0	3.0D	1600.0			QL=1 ST=2 TYP=7
	245	LEAR	49	GB	0341.0E	0343.0	18.0D	1100.0			QL=1 ST=2 TYP=7
	610	PALE	49	GB	0341.0E	0356.0	16.0D	8600.0			QL=1 ST=2 TYP=7
	15400	PALE	49	GB	0342.0E	0356.0	30.0D	3600.0			QL=1 ST=2 TYP=7
	15000	KISV	29	PBI	0342.0U	0406.0	92.0D	107.0			
	5900	KISV	29	PBI	0342.0U	0406.0	108.0D	107.0			
	9300	KISV	29	PBI	0342.0	0406.0	108.0	67.0			
	15000	KISV	47	GB	0342.0U	0356.1	24.0U	3140.0			
	9300	KISV	47	GB	0342.0U	0356.3	24.0U	4500.0			
	5900	KISV	47	GB	0342.0U	0356.3	24.0U	4172.0			
	410	LEAR	49	GB	0343.0E	0355.0	15.0D	4300.0			QL=1 ST=2 TYP=7
	410	PALE	49	GB	0347.0E	0355.0	11.0D	4700.0			QL=1 ST=2 TYP=7
	2840	PEKG	29	PBI	0400.0		27.0	153.4			
	950	GORK	46	C	0405.0	0413.2	18.5	20.0			
	950	GORK	46	C	0405.0	0421.5		24.0			
	650	GORK	41	F	0411.5	0431.2		29.0			
	650	GORK	41	F	0411.5	0447.2		22.0			
	650	GORK	41	F	0411.5	0421.4		35.0			
	650	GORK	41	F	0411.5	0417.9		36.0			
	650	GORK	41	F	0411.5	0411.9	37.5	29.0			
	100	GORK	46	C	0426.4	0427.5	2.8	135.0			
	100	GORK	46	C	0426.4	0428.6		180.0			
	2950	GORK	4	S/F	0443.1	0448.0	9.0	9.2			
	950	GORK	2	S/F	0444.3	0445.1	1.8	4.5			
	3100	CRIM	1	S	0446.0	0447.0	5.0	8.6	3.0		
	950	GORK	2	S/F	0446.2	0447.0	3.0	4.5			
	100	GORK	41	F	0515.4	0520.5		135.0			
	100	GORK	41	F	0515.4	0519.7		340.0			
	100	GORK	41	F	0515.4	0516.7	6.5	1250.0			
	200	GORK	41	F	0734.1	0757.0		24.0D			

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MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	200	GORK	41	F	0734.1	0743.5	29.0	24.0D			
	200	GORK	41	F	0734.1	0803.8		24.0D			
	1470	POTS	4	S/F	0827.0	0827.6	2.0	14.0			
	950	GORK	1	S	0827.0	0827.8	2.2	2.0			
	9300	KISV	2	S/F	0827.4	0827.9	1.3	3.0			
	5900	KISV	2	S/F	0827.5	0828.5	3.1	4.0			
	5900	KISV	28	PRE	1026.8	1034.2	7.4	4.0			
	5900	KISV	29	PBI	1034.2	1036.2	3.5	4.0			
	5900	KISV	2	S/F	1034.2	1034.7	2.0	18.0			
	9300	KISV	2	S/F	1034.4	1034.6	5.3	7.0			
	3100	CRIM	24	R	1120.0	1128.0		8.7			
	1470	POTS	40	F	1120.3	1122.9	8.4	4.0			
	9500	POTS	20	GRF	1120.5	1134.5	31.0	8.0			
	950	GORK	1	S	1121.0	1123.0	7.6	2.0			
	5900	KISV	25	R	1122.2	1215.0	158.0	12.0			
	9100	GORK	20	GRF	1134.1U	1135.3	27.0D	12.0			
	536	ONDR	41	F	1200.0	1448.8	172.0	34.0			
	810	KRAK	41	F	1222.5	1224.6	6.5	10.0	3.0		
	2800	OTTA	40	F	1300.0		240.0	4.4			
	9500	POTS	20	GRF	1301.0	1320.2	29.8	6.0			
	1470	POTS	20	GRF	1301.5	1303.8	26.5	4.0			
	245	PALE	8	S	1725.0E	1725.0	U	270.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	1833.0E	1833.0	1.0D	280.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1908.0E	1909.0	1.0D	390.0			QL=1 ST=2 TYP=3
	2800	OTTA	4	S/F	1923.5	1937.0	23.0	111.7	45.0		
	245	SGMR	49	GB	1924.0E	1931.0	16.0D	580.0			QL=1 ST=2 TYP=6
	1415	PALE	4	S/F	1927.0E	1930.0	12.0D	240.0			QL=1 ST=2 TYP=3
	1415	SGMR	49	GB	1927.0E	1930.0	11.0D	620.0			QL=1 ST=2 TYP=6
	8800	SGMR	4	S/F	1928.0E	1935.0	10.0D	42.0			QL=1 ST=2 TYP=3
	2695	SGMR	4	S/F	1928.0E	1936.0	15.0D	150.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1928.0E	1943.0	18.0D	51.0			QL=1 ST=2 TYP=3
	4995	SGMR	4	S/F	1928.0E	1931.0	13.0D	85.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	1928.0E	1930.0	10.0D	2700.0			QL=1 ST=2 TYP=6
	610	PALE	49	GB	1929.0E	1934.0	8.0D	1400.0			QL=1 ST=2 TYP=7
	245	PALE	49	GB	1929.0E	1931.0	3.0D	590.0			QL=1 ST=2 TYP=7
	2695	PALE	4	S/F	1930.0E	1936.0	9.0D	110.0			QL=1 ST=2 TYP=5
	200	HIRA	46	C	1938.0E	2029.0	152.0D	135.0	43.0		SL SUNRISE
	100	HIRA	48	C	1938.0E	2018.5		740.0			
	100	HIRA	48	C	1938.0E	1945.5U	218.0D	1000.0D	300.0U		SUNRISE
	610	PALE	8	S	1941.0E	1941.0	U	92.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	1946.0	1946.0	194.0	18.0	9.0		
	610	PALE	8	S	2001.0E	2002.0	2.0D	360.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2001.0E	2003.0	2.0D	66.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2006.0E	2006.0	1.0D	230.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2013.0E	2014.0	2.0D	63.0			QL=1 ST=2 TYP=3
	2800	OTTA	3	S	2014.0	2016.0	4.0	24.7	9.0		
	410	PALE	8	S	2014.0E	2015.0	1.0D	130.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2014.0E	2015.0	1.0D	290.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2014.0E	2015.0	1.0D	310.0			QL=1 ST=2 TYP=3
	500	HIRA	41	F	2014.3	2015.2	2.0	93.0			SL
	610	SGMR	8	S	2018.0E	2019.0	1.0D	130.0			QL=1 ST=2 TYP=3
	2800	OTTA	28	PRE	2042.0	2049.0	10.5	4.0	2.0		
	2800	OTTA	4	S/F	2052.5	2057.0	8.0	47.8	19.0		
	2800	OTTA	29	PBI	2100.0	2100.0	48.0	7.2	3.0		
	610	PALE	4	S/F	2110.0E	2110.0	3.0D	190.0			QL=1 ST=2 TYP=3
	610	SGMR	4	S/F	2110.0E	2110.0	3.0D	210.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2112.0E	2112.0	1.0D	170.0			QL=1 ST=2 TYP=3
	200	HIRA	8	S	2209.9	2210.2	0.9	240.0			O
	500	HIRA	8	S	2209.9	2210.3	0.7	95.0			ML
	2800	OTTA	3	S	2210.0	2210.5	1.3	35.9	14.0		
	245	PALE	8	S	2210.0E	2210.0	U	160.0			QL=1 ST=2 TYP=3
	610	PALE	49	GB	2210.0E	2210.0	U	8500.0			QL=1 ST=2 TYP=6
	15400	PALE	8	S	2210.0E	2210.0	U	65.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2210.0E	2210.0	U	70.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	2210.0E	2210.0	2.0D	53.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	2210.0E	2210.0	U	91.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	2210.0E	2210.0	1.0D	70.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	2210.0E	2210.0	U	9500.0			QL=1 ST=2 TYP=6
	500	HIRA	27	RF	2235.0	2319.5	125.0	13.0	7.0		O

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

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	245	LEAR	8	S	2342.0E	2342.0	1.0D	83.0			QL=1 ST=2 TYP=3
04	100	GORK		NS	0300.0E		540.0D		5.0		
	33	UPIC	44	NS	0400.0E		840.0D				
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0620.0E		590.0D				
	127	TORN	43	NS	0806.6		454.0		3.0		V=1
	245	SGMR	44	NS	1848.0E	2224.0	276.0D	220.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1940.0E	2310.0	840.0D	37.0	13.0		O
	2840	PEKG	5	S	0058.0	0100.3	9.0	37.9			
	610	LEAR	49	GB	0059.0E	0101.0	2.0D	800.0			QL=1 ST=2 TYP=6
	200	HIRA	46	C	0059.3	0102.0	4.0	125.0			O
	500	HIRA	46	C	0059.5	0100.5	3.4	245.0			ML
	15400	LEAR	8	S	0100.0E	0100.0	2.0D	40.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0100.0E	0100.0	1.0D	62.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0100.0E	0100.0	1.0D	31.0			QL=1 ST=2 TYP=3
	1415	LEAR	8	S	0100.0E	0100.0	U	12.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0100.0E	0100.0	1.0D	77.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0155.0E	0156.0	1.0D	160.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0156.0E	0156.0	U	170.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0225.0E	0225.0	1.0D	290.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0225.0E	0225.0	U	330.0			QL=1 ST=2 TYP=3
	500	HIRA	8	S	0225.0	0225.5	0.8	60.0			WL
	245	LEAR	4	S/F	0243.0E	0247.0	5.0D	44.0			QL=1 ST=2 TYP=3
	4995	LEAR	4	S/F	0243.0E	0244.0	5.0D	40.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0243.0E	0246.0	5.0D	46.0			QL=1 ST=2 TYP=3
	610	LEAR	49	GB	0243.0E	0246.0	5.0D	3100.0			QL=1 ST=2 TYP=7
	410	LEAR	4	S/F	0243.0E	0246.0	4.0D	18.0			QL=1 ST=2 TYP=3
	2840	PEKG	45	C	0243.0	0244.3	6.0	25.5			
	500	HIRA	46	C	0243.5	0244.5	11.5	795.0	57.0		ML
	2695	LEAR	4	S/F	0244.0E	0246.0	4.0D	23.0			QL=1 ST=2 TYP=3
	15400	LEAR	4	S/F	0244.0E	0246.0	4.0D	30.0			QL=1 ST=2 TYP=3
	650	GORK	23	GRF	0300.0E	0733.7	439.0D	17.0			
	9100	GORK	23	GRF	0313.6		256.0D				
	2840	PEKG	5	S	0331.0	0334.3	8.0	79.3			
	2950	GORK	21	GRF	0331.3	1027.0	510.0D				
	8800	LEAR	4	S/F	0332.0E	0334.0	7.0D	280.0			QL=1 ST=2 TYP=3
	4995	LEAR	4	S/F	0332.0E	0334.0	5.0D	130.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	0332.1	0347.0		8.0			O
	500	HIRA	46	C	0332.1	0334.5	31.0	29.0	4.0		O
	9100	GORK	4	S/F	0332.2	0334.6	10.6	339.0			
	2950	GORK	4	S/F	0332.3	0334.6	6.0	95.0			
	2695	LEAR	4	S/F	0333.0E	0334.0	3.0D	61.0			QL=1 ST=2 TYP=3
	15400	LEAR	4	S/F	0333.0E	0334.0	5.0D	250.0			QL=1 ST=2 TYP=3
	15400	PALE	8	S	0333.0E	0334.0	2.0D	290.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0333.0E	0334.0	2.0D	260.0			QL=1 ST=2 TYP=3
	950	GORK	46	C	0333.9	0337.0		40.0			
	950	GORK	29	PBI	0333.9	0337.2	21.8	1.6			
	950	GORK	46	C	0333.9	0334.7	3.3	5.5			
	950	GORK	46	C	0333.9	0335.8		28.0			
	1415	LEAR	8	S	0334.0E	0334.0	U	15.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0334.0E	0334.0	U	61.0			QL=1 ST=2 TYP=3
	9300	KISV	22	GRF	0400.0	0443.1	600.0	17.0			
	5900	KISV	28	PRE	0408.4	0414.1	8.0	7.0			
	610	PALE	49	GB	0411.0E	0417.0	8.0D	2500.0			QL=1 ST=2 TYP=7
	950	GORK	46	C	0411.1	0418.2		1700.0			
	650	GORK	47	GB	0411.1	0417.7	16.2	3790.0			
	950	GORK	46	C	0411.1	0411.7	24.5	198.0			
	950	GORK	46	C	0411.1	0417.8		1540.0			
	500	HIRA	42	SER	0411.4	0417.5	23.5	1700.0			WL
	500	HIRA	42	SER	0411.4	0411.9		254.0			WL
	9100	GORK	46	C	0413.7	0418.3	13.6	798.0			
	9100	GORK	46	C	0413.7	0422.9		240.0			
	610	LEAR	49	GB	0416.0E	0417.0	3.0D	2200.0			QL=1 ST=2 TYP=7
	2840	PEKG	45	C	0416.0	0417.1	11.0	324.1			
	3100	CRIM	3	S	0416.0	0417.5	4.6	360.0	110.0		
	100	GORK	4	S/F	0416.3	0422.5		2160.0			
	100	GORK	4	S/F	0416.3	0417.7	7.6	11160.0			
	9300	KISV	29	PBI	0416.4	0419.2	17.7	122.0			

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MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	9300	KISV	47	GB	0416.4	0417.6	2.8	1644.0			
	200	HIRA	48	C	0416.5	0421.5		1500.0			O
	15000	KISV	29	PBI	0416.5	0419.5	26.9	109.0			
	5900	KISV	47	GB	0416.5	0417.6	3.2	1149.0			
	15000	KISV	47	GB	0416.5	0417.6	3.0	1415.0			
	5900	KISV	29	PBI	0416.5	0419.7	15.0	65.0			
	200	HIRA	48	C	0416.5	0417.8	10.6	30000.0	740.0		O
	100	HIRA	42	SER	0416.7	0417.2U	31.7	1000.0D			
	2950	GORK	45	C	0416.7	0418.3	8.3	294.0			
	2950	GORK	45	C	0416.7	0422.7		112.0			
	410	LEAR	49	GB	0417.0E	0417.0	1.0D	1000.0			QL=1 ST=2 TYP=7
	410	PALE	49	GB	0417.0E	0417.0	1.0D	1500.0			QL=1 ST=2 TYP=6
	15400	PALE	49	GB	0417.0E	0417.0	2.0D	3500.0			QL=1 ST=2 TYP=6
	1415	PALE	8	S	0417.0E	0417.0	2.0D	130.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	0417.0E	0417.0	1.0D	12000.0			QL=1 ST=2 TYP=6
	610	SVTO	49	GB	0417.0E	0417.0	2.0D	3300.0			QL=1 ST=2 TYP=6
	4995	SVTO	49	GB	0417.0E	0417.0	7.0D	660.0			QL=1 ST=2 TYP=6
	410	SVTO	49	GB	0417.0E	0417.0	2.0D	1700.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0417.0E	0417.0	1.0D	9200.0			QL=1 ST=2 TYP=6
	1415	SVTO	8	S	0417.0E	0417.0	2.0D	120.0			QL=1 ST=2 TYP=3
	8800	SVTO	49	GB	0417.0E	0417.0	9.0D	1500.0			QL=1 ST=2 TYP=6
	2695	SVTO	4	S/F	0417.0E	0417.0	7.0D	340.0			QL=1 ST=3 TYP=3
	15400	SVTO	49	GB	0417.0E	0417.0	1207.0D	2800.0			QL=1 ST=2 TYP=6
	200	GORK	4	S/F	0417.0	0417.4	6.9	285.0			
	245	SVTO	49	GB	0420.0E	0422.0	3.0D	620.0			QL=1 ST=2 TYP=6
	5900	KISV	45	C	0421.0	0423.0	3.8	139.0			
	8800	PALE	8	S	0421.0E	0422.0	2.0D	120.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	0421.0E	0422.0	2.0D	790.0			QL=1 ST=2 TYP=6
	2695	PALE	8	S	0421.0E	0422.0	2.0D	90.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0421.0E	0422.0	2.0D	80.0			QL=1 ST=2 TYP=3
	5900	KISV	45	C	0421.0	0421.7		121.0			
	3100	CRIM	3	S	0421.1	0422.5	11.4	86.0	30.0		
	15000	KISV	45	C	0421.1	0421.7		158.0			
	15000	KISV	45	C	0421.1	0422.9	4.4	209.0			
	9300	KISV	45	C	0421.2	0421.7		122.0			
	9300	KISV	45	C	0421.2	0422.9	2.9	146.0			
	410	PALE	8	S	0422.0E	0422.0	1.0D	89.0			QL=1 ST=2 TYP=3
	5900	KISV	45	C	0438.9	0442.3	16.0	15.0			
	5900	KISV	45	C	0438.9	0439.5		10.0			
	100	GORK	4	S/F	0439.0	0439.5	10.5	240.0			
	2950	GORK	2	S/F	0439.1	0442.4	5.1	13.3			
	3100	CRIM	1	S	0439.2	0439.5	1.0	13.0	3.0		
	9300	KISV	2	S/F	0439.4	0439.5	0.9	8.0			
	15000	KISV	2	S/F	0439.4	0439.5	0.6	3.0			
	950	GORK	2	S/F	0441.0	0443.0	6.3	15.0			
	9300	KISV	45	C	0441.7	0442.3	0.9	8.0			
	9300	KISV	2	S/F	0448.2	0448.8	1.2	5.0			
	15000	KISV	2	S/F	0448.3	0449.0	1.2	7.0			
	9300	KISV	2	S/F	0457.6	0458.5	2.2	9.0			
	15000	KISV	2	S/F	0457.7	0458.4	3.8	18.0			
	5900	KISV	2	S/F	0458.1	0458.5	0.5	2.0			
	15000	KISV	45	C	0502.7	0504.2	5.3	27.0			
	15000	KISV	45	C	0502.7	0503.2		9.0			
	9300	KISV	1	S	0503.3	0504.1	1.0	15.0			
	9300	KISV	29	PBI	0503.3	0504.3	6.0	7.0			
	15000	KISV	2	S/F	0511.5	0512.0	3.6	6.0			
	15000	KISV	2	S/F	0515.3	0516.2	3.4	17.0			
	5900	KISV	2	S/F	0521.1	0521.1	3.5	2.0			
	100	GORK	4	S/F	0522.9	0526.4	4.1	5400.0			
	200	HIRA	42	SER	0523.0	0525.7	69.0	610.0			O
	410	LEAR	8	S	0524.0E	0526.0	2.0D	120.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0524.0E	0526.0	2.0D	51.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0524.0E	0526.0	2.0D	150.0			QL=1 ST=2 TYP=3
	200	GORK	4	S/F	0524.0	0526.3	3.0	28.0D			
	100	HIRA	41	F	0524.4	0525.7	2.0	1000.0D			
	650	GORK	4	S/F	0524.7	0526.0	2.6	100.0			
	500	HIRA	41	F	0524.7	0526.3	2.3	260.0			O
	245	SVTO	8	S	0525.0E	0526.0	1.0D	180.0			QL=1 ST=2 TYP=3
	950	GORK	4	S/F	0525.0	0525.2	1.2	54.0			

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	600	HUMN	4	S/F	0525.0	0526.5	2.0	54.0	18.0		
	9300	KISV	45	C	0525.4	0526.2	2.8	15.0			
	9300	KISV	29	PBI	0525.4	0526.8	8.2	5.0			
	5900	KISV	46	C	0525.6	0526.0		7.0			
	5900	KISV	46	C	0525.6	0526.3	6.5	14.0			
	5900	KISV	46	C	0525.6	0526.6		8.0			
	15000	KISV	2	S/F	0525.9	0526.3	1.6	4.0			
	950	GORK	1	S	0543.7	0543.9	1.2	4.0			
	5900	KISV	22	GRF	0551.4	0553.6	119.0	8.0			
	500	HIRA	21	GRF	0610.0	0713.0	105.0	13.0	6.0		O
	950	GORK	22	GRF	0636.0	0704.4	51.0	5.0			
	610	LEAR	8	S	0650.0E	0650.0	1.0D	280.0			QL=1 ST=2 TYP=3
	610	SVTO	8	S	0650.0E	0650.0	U	350.0			QL=1 ST=2 TYP=3
	9300	KISV	45	C	0650.3	0650.7	0.5	6.0			
	650	GORK	4	S/F	0650.4	0650.7	0.6	400.0			
	950	GORK	2	S/F	0650.5	0650.8	0.4	12.0			
	600	HUMN	8	S	0651.0	0651.2	0.3	90.0	40.0		
	5900	KISV	25	R	0657.7	0710.0	422.3	14.0			
	9500	POTS	20	GRF	0705.0	0709.4	32.0	15.0			
	9300	KISV	23	GRF	0706.6	0710.0	28.2	16.0			
	536	ONDR	41	F	0708.0		35.0				
	1415	SVTO	8	S	0712.0E	0713.0	1.0D	110.0			QL=1 ST=2 TYP=3
	100	HIRA	42	SER	0737.3		4.2	1000.0D			
	200	HIRA	42	SER	0737.3	0741.1	15.0	15000.0			O
	100	GORK	46	C	0737.6	0741.5		11500.0			
	100	GORK	46	C	0737.6	0740.7	4.3	9480.0			
	127	TORN	46	C	0737.7	0741.3	4.0	3400.0	1700.0		UNCERTAIN
	30	POTS	41	F	0737.9	0738.3U	6.2	10000.0D			
	204	IZMI	41	F	0738.0	0741.0	3.5	50000.0			
	245	LEAR	49	GB	0738.0E	0741.0	3.0D	24000.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0738.0E	0741.0	3.0D	25000.0			QL=1 ST=2 TYP=6
	200	GORK	41	F	0738.0	0741.4		3400.0			
	200	GORK	41	F	0738.0	0740.7	4.0	2140.0			
	234	POTS	41	F	0738.1	0741.3	4.1	75000.0			
	1470	POTS	41	F	0738.9	0739.4	3.2	11.0			
	9300	KISV	1	S	0739.0	0741.0	5.8	4.0			
	950	GORK	2	S/F	0739.0	0739.4	0.8	12.0			
	9500	POTS	20	GRF	0739.0	0741.7	20.5	8.0			
	650	GORK	4	S/F	0739.1	0739.3	0.5	20.0			
	610	LEAR	8	S	0740.0E	0740.0	1.0D	420.0			QL=1 ST=2 TYP=3
	410	LEAR	49	GB	0740.0E	0741.0	1.0D	1100.0			QL=1 ST=2 TYP=6
	410	SVTO	49	GB	0740.0E	0741.0	1.0D	1600.0			QL=1 ST=2 TYP=6
	610	SVTO	49	GB	0740.0E	0740.0	1.0D	510.0			QL=1 ST=2 TYP=6
	650	GORK	46	C	0740.5	0741.1		390.0			
	950	GORK	46	C	0740.5	0741.3		62.0			
	650	GORK	46	C	0740.5	0741.4		580.0			
	650	GORK	46	C	0740.5	0740.6	2.2	1120.0			
	950	GORK	46	C	0740.5	0740.7	1.2	60.0D			
	600	HUMN	4	S/F	0740.8	0740.9	1.0	400.0	80.0		
	650	GORK	4	S/F	0805.6	0806.4	1.0	34.0			
	600	HUMN	4	S/F	0806.0	0806.5	1.0	33.0	12.0		
	950	GORK	1	S	0806.2	0806.5	0.5	6.0			
	3000	POTS	47	GB	0807.0	0818.6	40.0	438.0			
	1470	POTS	47	GB	0809.3	0819.1	44.7	200.0			
	5900	KISV	28	PRE	0810.3	0814.8	6.4	3.0			
	9500	POTS	47	GB	0810.5	0819.2	44.5	1306.0			
	650	GORK	47	GB	0814.4	0818.0U	126.8D	10900.0D			
	9300	KISV	47	GB	0814.5	0819.3	11.4	1784.0			
	610	LEAR	49	GB	0815.0E	0819.0	14.0D	28000.0			QL=1 ST=2 TYP=7
	950	GORK	28	PRE	0815.2	0815.5	0.5	5.0			
	610	SVTO	49	GB	0816.0E	0819.0	13.0D	32000.0			QL=1 ST=2 TYP=6
	500	HIRA	48	C	0816.5	0819.3	19.5	8300.0	350.0		WL
	3100	CRIM	28	PRE	0816.5	0818.4	1.9	5.0	1.0		
	500	HIRA	48	C	0816.5	0822.5		74.0			WL
	950	GORK	46	C	0816.6	0823.5		170.0			
	950	GORK	46	C	0816.6	0818.6	17.2	1000.0			
	810	KRAK	46	C	0816.7E	0824.0		330.0D			
	810	KRAK	46	C	0816.7E	0819.0U	12.5D	330.0D	110.0		
	5900	KISV	47	GB	0816.8	0819.3	4.8	1346.0			

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

Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	9100	GORK	4	S/F	0816.9	0823.0	9.5	554.0			
	600	HUMN	45	C	0817.0	0819.0	20.0	1260.0	60.0		
	4995	LEAR	49	GB	0818.0E	0819.0	9.0D	850.0			QL=1 ST=2 TYP=7
	8800	LEAR	49	GB	0818.0E	0819.0	9.0D	1700.0			QL=1 ST=2 TYP=7
	1415	LEAR	49	GB	0818.0E	0819.0	8.0D	180.0			QL=1 ST=2 TYP=7
	245	LEAR	49	GB	0818.0E	0818.0	5.0D	2200.0			QL=1 ST=2 TYP=7
	8800	SVTO	49	GB	0818.0E	0819.0	8.0D	1800.0			QL=1 ST=2 TYP=7
	15400	SVTO	49	GB	0818.0E	0819.0	8.0D	2500.0			QL=1 ST=2 TYP=7
	1415	SVTO	49	GB	0818.0E	0819.0	7.0D	160.0			QL=1 ST=2 TYP=7
	4995	SVTO	49	GB	0818.0E	0819.0	8.0D	800.0			QL=1 ST=2 TYP=7
	2695	SVTO	49	GB	0818.0E	0818.0	8.0D	430.0			QL=1 ST=2 TYP=7
	410	SVTO	49	GB	0818.0E	0818.0	5.0D	710.0			QL=1 ST=2 TYP=7
	245	SVTO	49	GB	0818.0E	0818.0	5.0D	2200.0			QL=1 ST=2 TYP=6
	15400	LEAR	49	GB	0818.0E	0819.0	10.0D	2200.0			QL=1 ST=2 TYP=7
	2695	LEAR	49	GB	0818.0E	0818.0	10.0D	440.0			QL=1 ST=2 TYP=7
	200	GORK	41	F	0818.0	0819.1	11.7	140.0			
	200	GORK	41	F	0818.0	0829.2		140.0			
	204	IZMI	41	F	0818.0	0819.5	6.5	1600.0			
	15000	KISV	47	GB	0818.1	0819.2	3.7	3163.0			
	234	POTS	42	SER	0818.1	0818.4	13.5	7500.0			
	430	KRAK	46	C	0818.3	0819.0	23.0	150.0D	18.0		
	35000	BERN	47	GB	0818.3	0819.1	6.0	3240.0			
	19600	BERN	47	GB	0818.3	0819.1	6.0	3970.0			
	50000	BERN	47	GB	0818.3	0819.1	6.0	1860.0			
	5200	BERN	47	GB	0818.3	0819.2	6.0	810.0			
	11800	BERN	47	GB	0818.3	0819.2	6.0	4290.0			
	8400	BERN	47	GB	0818.3	0819.2	6.0	2835.0			
	3200	BERN	47	GB	0818.3	0818.5	6.0	405.0			
	430	KRAK	46	C	0818.3	0823.6		140.0			
	2950	GORK	4	S/F	0818.3	0818.8	8.2	266.0D			
	3100	CRIM	47	GB	0818.4	0819.0	9.0	450.0	142.0		
	3100	CRIM	29	PBI	0818.4	0827.0	22.0	14.6	5.0		
	3100	CRIM	47	GB	0818.4	0823.2		232.0			
	100	HIRA	42	SER	0818.5	0818.6	10.8	970.0			
	200	HIRA	46	C	0818.5	0818.7	20.8	930.0	81.0		O
	3013	IZMI	45	C	0818.5	0818.8	11.0	419.0	200.0		
	100	GORK	8	S	0818.8	0819.1	2.2	3960.0			
	15000	KISV	4	S/F	0821.1	0821.3	0.3	56.0			
	5900	KISV	2	S/F	0821.1	0821.3	0.3	25.0			
	5900	KISV	29	PBI	0821.1	0821.6	43.0	146.0			
	15000	KISV	29	PBI	0821.1	0821.7	26.9	203.0			
	15000	KISV	4	S/F	0821.7	0823.1	3.7	453.0			
	5900	KISV	4	S/F	0821.8	0823.1	3.5	350.0			
	9300	KISV	4	S/F	0821.8	0823.1	4.0	390.0			
	9300	KISV	29	PBI	0821.8	0825.9	28.0	30.0			
	100	GORK	8	S	0828.8	0829.3	1.2	4800.0			
	9300	KISV	45	C	0842.3	0843.1	2.3	5.0			
	5900	KISV	46	C	0852.2	0852.9	1.8	3.0			
	536	ONDR	47	GB	0900.0	0953.0	100.0				
	650	GORK	46	C	0900.0	0906.1		18.5			
	536	ONDR	47	GB	0900.0	0908.4	20.0	59.0			
	650	GORK	46	C	0900.0	0903.8	13.3	19.0			
	600	HUMN	2	S/F	0903.0	0903.5	7.0	9.0	6.0		
	9300	KISV	2	S/F	0905.0	0905.4	1.1	4.0			
	9500	POTS	20	GRF	0905.0	0906.9	8.0	9.0			
	9300	KISV	2	S/F	0906.6	0907.6	6.0	10.0			
	30	POTS	4	S/F	0918.8	0922.4	13.3	6000.0			
	100	GORK	4	S/F	0919.5	0923.0	5.2	960.0			
	204	IZMI	41	F	0922.0	0924.0	2.5	600.0			
	410	LEAR	4	S/F	0922.0E	0923.0	5.0D	52.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0922.0E	0923.0	1.0D	190.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0922.0E	0923.0	2.0D	250.0			QL=1 ST=2 TYP=3
	200	GORK	4	S/F	0922.2	0924.3	2.4	27.0D			
	234	POTS	41	F	0922.2	0923.6	3.2	330.0			
	30	POTS	41	F	0922.2	0923.6	3.2	330.0			
	5900	KISV	23	GRF	0922.2	0943.6	25.8	8.0			
	410	SVTO	8	S	0923.0E	0923.0	1.0D	110.0			QL=1 ST=2 TYP=3
	9500	POTS	3	S	0924.6	0925.7	3.1	18.0			
	9300	KISV	2	S/F	0925.4	0925.8	2.2	22.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	15000	KISV	2	S/F	0925.5	0925.9	1.0	12.0			
	9100	GORK	4	S/F	0925.6	0926.4	3.9	239.0			
	5900	KISV	2	S/F	0925.6	0925.8	1.2	5.0			
	5900	KISV	2	S/F	0928.5	0929.6	4.2	5.0			
	5900	KISV	2	S/F	0933.6	0936.8	9.3	12.0			
	9500	POTS	20	GRF	0934.0	0938.6	11.0	6.0			
	9300	KISV	2	S/F	0935.4	0936.8	8.1	7.0			
	15000	KISV	45	C	0951.8	0956.3	6.5	448.0			
	15000	KISV	45	C	0951.8	0956.7		241.0			
	200	GORK	46	C	0954.0	0956.0	3.0	1800.0			
	204	IZMI	41	F	0954.0	0956.0	3.5	7000.0			
	100	GORK	4	S/F	0954.0	0956.2	3.3	18840.0			
	234	POTS	42	SER	0954.0	0956.2	9.6	1900.0			
	200	GORK	46	C	0954.0	0956.3		1800.0			
	30	POTS	4	S/F	0954.1	0956.2	5.4	14000.0D			
	3100	CRIM	1	S	0954.8	0956.5	1.7	22.0	7.0		
	245	SVTO	49	GB	0955.0E	0956.0	2.0D	1800.0			QL=1 ST=2 TYP=6
	127	TORN	8	S	0955.3	0956.0U	2.0	2000.0D	1000.0		
	9500	POTS	4	S/F	0955.4	0955.9	6.1	236.0			
	650	GORK	41	F	0955.5	1001.1		17.0			
	650	GORK	41	F	0955.5	1000.3		30.0			
	5900	KISV	45	C	0955.5	0956.3	3.3	133.0			
	5900	KISV	45	C	0955.5	0956.5		127.0			
	9300	KISV	4	S/F	0955.5	0956.6	9.2	114.0			
	650	GORK	41	F	0955.5	0956.7	6.0	84.0			
	3013	IZMI	5	S	0955.6	0956.4	1.5	28.0	14.0		
	1470	POTS	4	S/F	0955.7	0956.4	2.3	25.0			
	2950	GORK	3	S	0955.8	0956.5	1.3	30.0			
	3000	POTS	4	S/F	0955.9	0956.4	1.1	24.0			
	600	HUMN	4	S/F	0956.0	0957.0	2.0	90.0	40.0		
	15400	SVTO	49	GB	0956.0E	0956.0	1.0D	500.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	0956.0E	0956.0	U	130.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0956.0E	0956.0	1.0D	190.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0956.0E	0956.0	U	75.0			QL=1 ST=2 TYP=3
	3200	BERN	46	C	0956.0	0956.3	1.5	29.0			
	19600	BERN	46	C	0956.0	0956.3	1.5	458.0			
	8400	BERN	46	C	0956.0	0956.3	1.5	185.0			
	5200	BERN	46	C	0956.0	0956.3	1.5	81.0			
	35000	BERN	46	C	0956.0	0956.3	1.5	318.0			
	11800	BERN	46	C	0956.0	0956.3	1.5	370.0			
	810	KRAK	2	S/F	0956.0	0956.3	1.2	27.0	13.0		
	950	GORK	4	S/F	0956.0	0956.4	2.7	46.0			
	127	TORN	47	GB	1000.0	1002.0	3.7	600.0	200.0		
	9300	KISV	23	GRF	1010.5	1123.7	114.0	19.0			
	9500	POTS	21	GRF	1012.0	1028.5	41.0D	12.0			
	5900	KISV	23	GRF	1012.5	1041.1	45.7	17.0			
	1470	POTS	20	GRF	1015.0	1024.8	42.5	4.0			
	9300	KISV	46	C	1018.1	1034.0		23.0			
	9300	KISV	46	C	1018.1	1024.0	23.2	31.0			
	9300	KISV	46	C	1018.1	1018.6		24.0			
	9500	POTS	3	S	1018.2	1018.6	0.9	17.0			
	15000	KISV	23	GRF	1018.4	1046.3	66.6	51.0			
	5900	KISV	2	S/F	1018.5	1024.3	9.8	23.0			
	15000	KISV	45	C	1018.6	1024.1	13.6	33.0			
	15000	KISV	45	C	1018.6	1018.8		17.0			
	3100	CRIM	1	S	1019.5	1024.4	9.0	17.0	5.0		
	3100	CRIM	30	PBI	1019.5	1028.5	32.0	8.5	3.0		
	3013	IZMI	27	RF	1020.0	1024.5	20.0	20.0	10.0		
	650	GORK	41	F	1021.6	1023.1	32.4	14.0			
	650	GORK	41	F	1021.6	1049.5		124.0			
	650	GORK	41	F	1021.6	1027.8		124.0			
	650	GORK	41	F	1021.6	1033.9		80.0			
	9500	POTS	4	S/F	1022.4	1024.3	4.8	12.0			
	2950	GORK	3	S	1022.6	1024.3	3.8	9.9			
	600	HUMN	4	S/F	1025.8	1026.2	0.7	70.0	22.0		
	204	IZMI	41	F	1030.0	1035.0	5.0	3700.0			
	9500	POTS	4	S/F	1032.5	1034.2	11.0	17.0			
	5900	KISV	2	S/F	1032.6	1033.8	4.3	14.0			
	245	SGMR	49	GB	1033.0E	1034.0	2.0D	610.0			QL=1 ST=2 TYP=6

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

Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	245	SVTO	8	S	1033.0E	1034.0	2.0D	450.0			QL=1 ST=2 TYP=3
	200	GORK	41	F	1033.0	1113.7		2200.0			
	100	GORK	4	S/F	1033.0	1034.9	6.0	2160.0			
	200	GORK	41	F	1033.0	1034.9	84.0	1200.0			
	234	POTS	42	SER	1033.1	1034.5	14.3	1750.0			
	30	POTS	42	SER	1033.4	1035.3	11.7	2000.0			
	950	GORK	2	S/F	1033.4	1033.9	1.0	6.0			
	600	HUMN	4	S/F	1033.5	1034.0	1.3	28.0	9.0		
	410	SVTO	8	S	1034.0E	1034.0	1.0D	66.0			QL=1 ST=2 TYP=3
	810	KRAK	45	C	1048.5	1053.3	6.0	240.0U			
	950	GORK	2	S/F	1048.5	1048.9	1.4	12.0			
	600	HUMN	4	S/F	1049.0	1050.0	3.0	65.0	10.0		
	15000	KISV	4	S/F	1057.7	1101.0	4.4	113.0			
	1470	POTS	42	SER	1058.5	1114.8	34.0	302.0			
	5900	KISV	4	S/F	1059.5	1100.9	3.0	65.0			
	650	GORK	4	S/F	1059.7	1100.7	2.0	3070.0			
	9100	GORK	3	S	1059.7	1100.9	3.4	76.0			
	9300	KISV	4	S/F	1100.0	1101.0	3.0	75.0			
	610	SGMR	49	GB	1100.0E	1100.0	1.0D	3100.0			QL=1 ST=2 TYP=6
	3000	POTS	42	SER	1100.0	1114.5	22.8	323.0			
	3100	CRIM	1	S	1100.1	1101.0	3.0	12.0	4.0		
	2950	GORK	3	S	1100.2	1101.0	2.3	12.8			
	950	GORK	46	C	1100.2	1101.1		335.0			
	950	GORK	46	C	1100.2	1100.6	1.1	310.0			
	600	HUMN	4	S/F	1100.7	1101.0	1.0	600.0	180.0		
	430	KRAK	46	C	1103.0	1105.8	7.5	150.0D	30.0		
	810	KRAK	46	C	1103.5	1104.0	6.8	240.0D			
	610	SGMR	49	GB	1105.0E	1107.0	13.0D	8500.0			QL=1 ST=2 TYP=6
	650	GORK	30	PBI	1105.4		6.9				
	650	GORK	47	GB	1105.4	1107.1	6.6	7570.0			
	9100	GORK	46	C	1105.5	1113.7		300.0			
	9100	GORK	46	C	1105.5	1107.7	13.3	98.0			
	5900	KISV	46	C	1105.7	1107.2		75.0			
	950	GORK	46	C	1105.7	1107.3	5.6	516.0			
	5900	KISV	46	C	1105.7	1111.3		64.0			
	950	GORK	46	C	1105.7	1109.4		490.0			
	3100	CRIM	45	C	1105.7	1109.5		29.0			
	15000	KISV	4	S/F	1105.7	1107.6	2.8	86.0			
	9300	KISV	4	S/F	1105.7	1107.7	2.8	76.0			
	5900	KISV	46	C	1105.7	1107.7	5.6	81.0			
	3100	CRIM	45	C	1105.7	1107.8	6.0	32.0	11.0		
	15400	SGMR	4	S/F	1106.0E	1107.0	3.0D	74.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	1106.0	1107.0	12.0	600.0			
	3013	IZMI	41	F	1106.0	1115.0	17.0	323.0			
	8800	SGMR	4	S/F	1106.0E	1115.0	10.0D	130.0			QL=1 ST=2 TYP=3
	100	GORK	41	F	1106.0	1109.6		19800.0			
	100	GORK	41	F	1106.0	1114.6		18250.0			
	600	HUMN	45	C	1106.0	1108.6	20.0	648.0	80.0		
	9500	POTS	42	SER	1106.0E	1113.8	25.0D	456.0			
	2950	GORK	45	C	1106.8	1109.5		21.0			
	2950	GORK	45	C	1106.8	1107.8	3.5	30.0			
	2695	SVTO	4	S/F	1107.0E	1107.0	3.0D	26.0			QL=1 ST=2 TYP=3
	4995	SVTO	4	S/F	1107.0E	1107.0	3.0D	55.0			QL=1 ST=2 TYP=3
	15400	SVTO	4	S/F	1107.0E	1107.0	3.0D	96.0			QL=1 ST=2 TYP=5
	8800	SVTO	8	S	1107.0E	1107.0	2.0D	91.0			QL=1 ST=2 TYP=5
	33	UPIC	46	C	1108.7	1109.4U	12.1				
	245	SGMR	49	GB	1109.0E	1114.0	8.0D	1900.0			QL=1 ST=2 TYP=6
	245	SVTO	8	S	1109.0E	1109.0	1.0D	310.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1109.0E	1109.0	U	160.0			QL=1 ST=2 TYP=3
	15000	KISV	4	S/F	1109.1	1109.5	0.9	56.0			
	9300	KISV	4	S/F	1109.3	1109.5	2.4	77.0			
	30	POTS	4	S/F	1109.3E	1109.8	13.0D	15000.0D			
	430	KRAK	45	C	1110.9	1111.5U	18.0D	150.0D	50.0D		
	810	KRAK	45	C	1110.9	1112.5U	18.0D	240.0D	60.0D		
	15400	SVTO	49	GB	1112.0E	1113.0	4.0D	530.0			QL=1 ST=2 TYP=6
	234	POTS	4	S/F	1112.2	1114.0	12.4	3000.0			
	5900	KISV	47	GB	1112.2	1113.9	5.8	628.0			
	9300	KISV	47	GB	1112.5	1113.8	5.0	509.0			
	127	TORN	47	GB	1112.6	1115.0U	9.7	1000.0D	300.0		

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	950	GORK	4	S/F	1112.8	1114.2	16.0	490.0			
	15000	KISV	47	GB	1112.8	1113.9	3.8	511.0			
	11800	BERN	46	C	1113.0	1114.0	4.0	392.0			
	8400	BERN	46	C	1113.0	1114.0	4.0	425.0			
	19600	BERN	46	C	1113.0	1114.0	4.0	381.0			
	5200	BERN	46	C	1113.0	1114.0	4.0	501.0			
	35000	BERN	46	C	1113.0	1114.0	4.0	185.0			
	3200	BERN	46	C	1113.0	1114.0	4.0	352.0			
	1415	SGMR	4	S/F	1113.0E	1114.0	4.0D	310.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	1113.0E	1113.0	4.0D	3700.0			QL=1 ST=2 TYP=6
	8800	SVTO	4	S/F	1113.0E	1113.0	3.0D	480.0			QL=1 ST=2 TYP=3
	1415	SVTO	4	S/F	1113.0E	1114.0	5.0D	260.0			QL=1 ST=2 TYP=3
	2695	SVTO	4	S/F	1113.0E	1114.0	4.0D	360.0			QL=1 ST=2 TYP=3
	4995	SVTO	4	S/F	1113.0E	1113.0	3.0D	490.0			QL=1 ST=2 TYP=3
	410	SVTO	49	GB	1113.0E	1113.0	5.0D	1200.0			QL=1 ST=2 TYP=6
	3100	CRIM	3	S	1113.0	1114.2	6.0	384.0	120.0		
	2950	GORK	4	S/F	1113.0	1114.4	9.2	79.0			
	650	GORK	2	S/F	1113.0	1114.6	5.4	250.0			
	4995	SGMR	4	S/F	1114.0E	1115.0	3.0D	260.0			QL=1 ST=2 TYP=3
	2695	SGMR	8	S	1115.0E	1115.0	2.0D	210.0			QL=1 ST=2 TYP=3
	15000	KISV	2	S/F	1119.6	1121.1	2.2	18.0			
	9300	KISV	2	S/F	1120.6	1121.0	2.7	26.0			
	5900	KISV	2	S/F	1120.7	1121.0	1.6	23.0			
	600	HUMN	4	S/F	1128.0	1129.0	1.5	70.0	25.0		
	610	SGMR	8	S	1128.0E	1128.0	U	140.0			QL=1 ST=2 TYP=3
	650	GORK	2	S/F	1128.0	1128.2	1.1	227.0			
	100	GORK	4	S/F	1147.7	1148.5	2.1	480.0			
	200	GORK	4	S/F	1148.0	1148.5	3.0	24.0D			
	2800	OTTA	22	GRF	1249.5	1254.0	30.0	6.9	3.0		
	9300	KISV	22	GRF	1249.5	1254.1	16.5	13.0			
	1470	POTS	20	GRF	1251.0	1259.0	29.0	4.0			
	3000	POTS	20	GRF	1251.0	1254.1	26.0	7.0			
	9500	POTS	20	GRF	1251.0	1251.4	24.0	9.0			
	5900	KISV	2	S/F	1253.5	1254.0	1.1	3.0			
	810	KRAK	8	S	1258.3	1258.4	0.2	31.0			
	15000	KISV	2	S/F	1307.0	1308.4	1.9	7.0			
	15000	KISV	2	S/F	1314.5	1314.8	1.0	12.0			
	600	HUMN	2	S/F	1336.0	1338.5	6.0	10.0	4.0		
	536	ONDR	42	SER	1336.5	1337.7	7.0	88.0			
	2800	OTTA	22	GRF	1342.0	1400.0	37.0	6.1	3.0		
	5900	KISV	2	S/F	1342.9	1344.0	4.8	6.0			
	1470	POTS	20	GRF	1349.3	1409.2	22.2	5.0			
	536	ONDR	45	C	1406.0	1409.0	7.0				
	610	SGMR	49	GB	1408.0E	1409.0	5.0D	1400.0			QL=1 ST=2 TYP=6
	610	SVTO	49	GB	1408.0E	1409.0	1.0D	1300.0			QL=1 ST=3 TYP=6
	600	HUMN	4	S/F	1408.0	1409.5	4.0	364.0	67.0		
	9500	POTS	20	GRF	1408.6	1409.4	8.4	15.0			
	536	ONDR	42	SER	1451.0	1451.8	6.5	108.0			
	600	HUMN	4	S/F	1451.5	1452.0	1.5	54.0	15.0		
	600	HUMN	3	S	1454.5	1454.8	1.0	36.0	12.0		
	536	ONDR	45	C	1510.0	1514.9	19.0				
	2800	OTTA	3	S	1514.0	1515.5	2.5	17.8	7.0		
	600	HUMN	4	S/F	1514.0	1515.0	3.0	110.0	35.0		
	15400	SGMR	8	S	1514.0E	1515.0	1.0D	75.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	1514.0E	1515.0	2.0D	4400.0			QL=1 ST=2 TYP=6
	8800	SGMR	8	S	1514.0E	1515.0	1.0D	80.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1514.0E	1515.0	1.0D	88.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1514.0E	1515.0	1.0D	62.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1515.0E	1515.0	U	65.0			QL=1 ST=2 TYP=3
	610	SVTO	49	GB	1515.0E	1515.0	U	5500.0			QL=1 ST=2 TYP=6
	2800	OTTA	3	S	1524.0	1525.0	3.0	24.7	10.0		
	600	HUMN	4	S/F	1524.0	1525.0	3.0	40.0	20.0		
	410	SGMR	8	S	1524.0E	1524.0	1.0D	450.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	1524.0E	1524.0	U	66.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1524.0E	1524.0	1.0D	67.0			QL=1 ST=3 TYP=3
	410	SVTO	8	S	1524.0E	1524.0	1.0D	250.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1524.0E	1524.0	1.0D	52.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	1603.0E	1603.0	1.0D	140.0			QL=1 ST=2 TYP=3
	600	HUMN	4	S/F	1603.5	1604.5	1.7	85.0	30.0		

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	600	HUMN	4	S/F	1612.0	1615.0	3.5	580.0	140.0		
	2800	OTTA	3	S	1613.0	1615.5	4.5	27.1	11.0		
	4995	SGMR	4	S/F	1613.0E	1615.0	3.0D	88.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1613.0E	1615.0	4.0D	130.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	1613.0E	1615.0	2.0D	2700.0			QL=1 ST=2 TYP=6
	610	SVTO	49	GB	1613.0E	1615.0	2.0D	3000.0			QL=1 ST=2 TYP=7
	4995	SVTO	4	S/F	1613.0E	1615.0	3.0D	86.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	1614.0E	1615.0	2.0D	100.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1614.0E	1615.0	2.0D	120.0			QL=1 ST=2 TYP=3
	15400	SVTO	8	S	1614.0E	1615.0	2.0D	100.0			QL=1 ST=2 TYP=3
	2695	SGMR	8	S	1615.0E	1615.0	U	25.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	1617.5	1624.0	42.0	8.1	4.0		
	600	HUMN	4	S/F	1621.0	1623.0	5.0	40.0	12.0		
	610	SGMR	8	S	1623.0E	1623.0	1.0D	56.0			QL=1 ST=2 TYP=3
	2800	OTTA	42	SER	1720.0	1727.5	12.0	17.4	5.0		
	610	PALE	8	S	1720.0E	1720.0	1.0D	220.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	1720.0E	1720.0	1.0D	230.0			QL=1 ST=2 TYP=3
	600	HUMN	41	F	1720.0	1724.5	11.0	210.0	20.0		
	410	PALE	8	S	1723.0E	1723.0	U	130.0			QL=1 ST=3 TYP=3
	610	PALE	8	S	1723.0E	1724.0	1.0D	340.0			QL=1 ST=3 TYP=3
	610	SGMR	8	S	1723.0E	1724.0	1.0D	350.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1726.0E	1726.0	1.0D	170.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1726.0E	1726.0	1.0D	220.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1726.0E	1726.0	U	310.0			QL=1 ST=2 TYP=3
	33	UPIC	48	C	1728.4		16.1				
	610	PALE	8	S	1730.0E	1730.0	U	83.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	1730.0E	1730.0	U	74.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1804.0E	1804.0	U	60.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1817.0E	1817.0	U	140.0			QL=1 ST=2 TYP=3
	2800	OTTA	28	PRE	1826.0	1902.0	36.0	12.2	6.0		
	245	SGMR	49	GB	1838.0E	1839.0	5.0D	1900.0			QL=1 ST=2 TYP=6
	2800	OTTA	3	S	1839.0	1840.0	4.5	93.2	28.0		
	410	SGMR	8	S	1839.0E	1840.0	1.0D	170.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	1839.0E	1840.0	1.0D	46.0			QL=1 ST=2 TYP=3
	2695	SGMR	8	S	1839.0E	1840.0	1.0D	72.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	1840.0E	1840.0	U	58.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1840.0E	1840.0	U	87.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1840.0E	1840.0	U	32.0			QL=1 ST=2 TYP=3
	2800	OTTA	4	S/F	1902.0	1908.0	14.5	93.6	28.0		
	2695	SGMR	4	S/F	1905.0E	1907.0	9.0D	99.0			QL=1 ST=2 TYP=3
	4995	SGMR	4	S/F	1905.0E	1907.0	12.0D	160.0			QL=1 ST=2 TYP=3
	8800	SGMR	20	GRF	1906.0E	1907.0	8.0D	94.0			QL=1 ST=2 TYP=2
	2800	OTTA	29	PBI	1916.5	1920.0	116.0	44.1	22.0		
	8800	SGMR	8	S	2028.0E	2028.0	1.0D	70.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2114.0E	2114.0	U	88.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2130.0E	2130.0	U	63.0			QL=1 ST=2 TYP=3
	2800	OTTA	3	S	2219.0	2221.0	4.5	151.9	46.0		
	245	PALE	49	GB	2219.0E	2219.0	2.0D	1500.0			QL=1 ST=2 TYP=6
	1415	PALE	4	S/F	2219.0E	2220.0	3.0D	55.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	2219.0E	2220.0	1.0D	390.0			QL=1 ST=2 TYP=3
	15400	PALE	8	S	2219.0E	2220.0	2.0D	60.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2219.0E	2220.0	1.0D	480.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	2219.0E	2219.0	2.0D	1800.0			QL=1 ST=2 TYP=6
	100	HIRA	46	C	2219.1		2.6	1000.0D			
	200	HIRA	46	C	2219.1	2219.5	1.7	2400.0			O
	500	HIRA	46	C	2219.4	2220.4	7.7	280.0			WL
	8800	PALE	8	S	2220.0E	2220.0	U	70.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	2220.0E	2220.0	1.0D	120.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	2220.0E	2220.0	U	110.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	2220.0E	2220.0	1.0D	120.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	2220.0E	2220.0	1.0D	58.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2220.0E	2220.0	1.0D	100.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2224.0E	2224.0	U	210.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2242.0E	2242.0	U	97.0			QL=1 ST=2 TYP=3
05	100	GORK	44	NS	0236.0E		288.0D		10.0		
	200	GORK	44	NS	0350.0E		490.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0620.0E		500.0D				

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	127	TORN	43	NS	0746.0		474.0		560.0		V=0
	100	GORK	44	NS	0812.0E		228.0D		100.0		
	245	SVTO	44	NS	1312.0E	1316.0	254.0D	62.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1940.0E	2144.0	340.0D	11.0	8.0		WR
	410	LEAR	8	S	0031.0E	0031.0	2.0D	40.0			QL=1 ST=3 TYP=3
	245	LEAR	49	GB	0031.0E	0031.0	1.0D	1900.0			QL=1 ST=3 TYP=6
	245	PALE	49	GB	0031.0E	0031.0	1.0D	2900.0			QL=1 ST=2 TYP=6
	245	LEAR	8	S	0044.0E	0045.0	1.0D	180.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	0044.0E	0045.0	2.0D	270.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	0136.0	0207.3	125.0	130.0			SR
	500	HIRA	41	F	0241.5	0247.0	15.5	50.0			O
	9100	GORK	23	GRF	0246.2	0754.0	544.0	147.0			
	2840	PEKG	5	S	0247.0	0248.4	5.0	98.3			
	1415	LEAR	8	S	0248.0E	0248.0	U	12.0			QL=1 ST=2 TYP=3
	4995	LEAR	8	S	0248.0E	0248.0	U	58.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0248.0E	0248.0	U	32.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0248.0E	0248.0	U	63.0			QL=1 ST=2 TYP=3
	650	GORK	23	GRF	0303.0E	0357.6	327.0D	8.0			
	100	GORK	8	S	0315.0	0315.2	0.3	680.0			
	245	LEAR	8	S	0317.0E	0318.0	1.0D	64.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0317.0E	0318.0	1.0D	110.0			QL=1 ST=2 TYP=3
	2950	GORK	4	S/F	0318.1	0318.4	1.3	73.0			
	2950	GORK	21	GRF	0322.0	0442.0	215.0	17.0			
	200	HIRA	42	SER	0404.0	0514.5	71.0	450.0			SR
	5900	KISV	23	GRF	0404.0	0421.7	44.0	28.0			
	5900	KISV	4	S/F	0405.5	0410.3	8.9	64.0			
	9300	KISV	23	GRF	0405.6	0430.0	30.4	13.0			
	9300	KISV	4	S/F	0407.4	0410.1	8.9	70.0			
	9100	GORK	3	S	0408.5	0410.2	3.3	50.0			
	2950	GORK	1	S	0409.7	0410.2	2.0	12.6			
	15000	KISV	2	S/F	0409.8	0410.2	0.8	12.0			
	100	HIRA	46	C	0437.6	0438.0U	2.6	960.0	340.0		
	200	GORK	8	S	0438.6	0438.9	0.4	1900.0			
	15000	KISV	2	S/F	0452.1	0452.4	1.0	17.0			
	15000	KISV	2	S/F	0508.3	0508.3	0.6	9.0			
	2840	PEKG	5	S	0524.0	0526.7	6.0	44.7			
	9300	KISV	23	GRF	0524.7	0531.6	46.3	30.0			
	3100	CRIM	3	S	0525.0	0526.0	3.8	46.0	15.0		
	4995	LEAR	8	S	0525.0E	0526.0	2.0D	170.0			QL=1 ST=2 TYP=3
	5900	KISV	4	S/F	0525.0	0527.9	4.2	124.0			
	15000	KISV	2	S/F	0525.1	0526.9	7.3	32.0			
	2950	GORK	3	S	0525.4	0526.7	3.7	42.0			
	9100	GORK	4	S/F	0525.5	0526.7	2.4	46.0			
	9300	KISV	4	S/F	0525.9	0526.8	3.8	58.0			
	8800	LEAR	4	S/F	0526.0E	0526.0	3.0D	59.0			QL=1 ST=2 TYP=3
	15400	LEAR	8	S	0526.0E	0526.0	1.0D	38.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0526.0E	0526.0	1.0D	36.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0526.0E	0526.0	1.0D	55.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0526.0E	0526.0	1.0D	120.0			QL=1 ST=2 TYP=3
	650	GORK	46	C	0530.8	0532.1		14.0			
	650	GORK	46	C	0530.8	0531.2	1.4	14.5			
	5900	KISV	2	S/F	0552.5	0553.1	3.4	6.0			
	610	LEAR	8	S	0553.0E	0553.0	U	63.0			QL=1 ST=2 TYP=3
	610	SVTO	8	S	0553.0E	0553.0	U	93.0			QL=1 ST=2 TYP=3
	950	GORK	2	S/F	0553.0	0553.3	1.0	3.0			
	650	GORK	4	S/F	0553.0	0553.4	2.7	130.0			
	600	HUMN	3	S	0553.8	0554.0	1.2	57.0	20.0		
	5900	KISV	2	S/F	0600.6	0601.0	0.9	5.0			
	245	SVTO	4	S/F	0618.0E	0620.0	3.0D	74.0			QL=1 ST=2 TYP=5
	245	LEAR	8	S	0619.0E	0620.0	1.0D	68.0			QL=1 ST=2 TYP=3
	9500	POTS	4	S/F	0654.6	0655.6	5.4	14.0			
	9100	GORK	1	S	0654.7	0655.5	2.3	14.0			
	15000	KISV	2	S/F	0655.2	0655.6	1.1	17.0			
	3000	POTS	45	C	0704.0	0731.0	174.0	850.0			
	2950	GORK	47	GB	0711.7	0731.1	145.0	1310.0			
	3100	CRIM	28	PRE	0715.7	0721.5	5.7	6.0	4.0		
	9500	POTS	45	C	0718.0	0730.5	172.0	2160.0			
	1470	POTS	45	C	0719.6	0729.8	167.0	864.0			
	9300	KISV	47	GB	0720.6	0729.8		3798.0			

SOLAR RADIO EMISSION

Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	9300	KISV	47	GB	0720.6	0730.8	20.8	4047.0			
	5900	KISV	47	GB	0721.0	0731.1	19.3	3424.0			
	3013	IZMI	47	GB	0721.0	0731.1	66.0	1071.0	500.0		
	5900	KISV	47	GB	0721.0	0729.8		3148.0			
	3100	CRIM	47	GB	0721.5	0731.1		1520.0	510.0		
	3100	CRIM	47	GB	0721.5	0738.1		220.0			
	3100	CRIM	47	GB	0721.5	0735.3		520.0			
	3100	CRIM	47	GB	0721.5	0733.3		664.0			
	3100	CRIM	30	PBI	0721.5	0740.5	139.0	73.0	30.0		
	3100	CRIM	47	GB	0721.5	0727.8	19.0	434.0			
	4995	LEAR	49	GB	0722.0E	0731.0	36.0D	2300.0			QL=1 ST=2 TYP=6
	2695	LEAR	49	GB	0722.0E	0731.0	36.0D	1100.0			QL=1 ST=2 TYP=6
	1415	LEAR	49	GB	0722.0E	0729.0	36.0D	1400.0			QL=1 ST=2 TYP=6
	234	POTS	45	C	0722.0	0730.5	445.0D	900.0			
	950	GORK	29	PBI	0722.0	0751.5U	39.2	13.0			
	950	GORK	47	GB	0722.0	0729.7	30.0	290.0			
	9100	GORK	47	GB	0722.0	0730.8	20.0	3720.0			
	100	HIRA	48	C	0722.4	0746.4		890.0			
	100	HIRA	48	C	0722.4	0730.5	31.7	5600.0	380.0		WL
	200	GORK	41	F	0724.0	0806.0		230.0D			
	2695	SVTO	49	GB	0724.0E	0731.0	38.0D	1000.0			QL=1 ST=2 TYP=7
	200	GORK	41	F	0724.0	0729.0	45.0	1300.0			
	8800	SVTO	49	GB	0724.0E	0730.0	51.0D	3500.0			QL=1 ST=2 TYP=7
	200	GORK	41	F	0724.0	0730.5		960.0			
	200	GORK	41	F	0724.0	0800.5		2400.0D			
	650	GORK	47	GB	0724.3	0731.0	45.1	500.0			
	200	HIRA	48	C	0724.4	0801.1		790.0			O
	200	HIRA	48	C	0724.4	0745.3		230.0			O
	200	HIRA	48	C	0724.4	0728.8	36.3	4100.0	112.0		O
	500	HIRA	46	C	0725.0	0747.0		105.0			WR
	430	KRAK	49	GB	0725.0	0747.0		86.0			
	1415	SVTO	49	GB	0725.0E	0729.0	11.0D	1300.0			QL=1 ST=3 TYP=7
	15400	LEAR	49	GB	0725.0E	0728.0	33.0D	3000.0			QL=1 ST=2 TYP=6
	8800	LEAR	49	GB	0725.0E	0730.0	33.0D	3100.0			QL=1 ST=2 TYP=6
	245	LEAR	4	S/F	0725.0E	0729.0	33.0D	400.0			QL=1 ST=2 TYP=3
	15400	SVTO	49	GB	0725.0E	0728.0	50.0D	3100.0			QL=1 ST=2 TYP=7
	430	KRAK	49	GB	0725.0	0732.0U	45.5	160.0D	60.0D		
	810	KRAK	49	GB	0725.0	0726.4	45.5	260.0D			
	500	HIRA	46	C	0725.0	0734.5	47.0	465.0	80.0		SR
	204	IZMI	42	SER	0725.0	0728.5	43.0	3500.0			
	15000	KISV	47	GB	0725.1	0730.7	6.9	1998.0			
	15000	KISV	47	GB	0725.1	0729.8		1798.0			
	100	GORK	41	F	0725.8	0747.2		550.0			
	100	GORK	41	F	0725.8	0726.2	24.0	900.0			
	100	GORK	41	F	0725.8	0730.4		14300.0			
	100	GORK	41	F	0725.8	0739.7		350.0			
	100	GORK	41	F	0725.8	0734.9		750.0			
	8400	BERN	47	GB	0726.0	0731.0	14.0	4780.0			
	50000	BERN	47	GB	0726.0	0731.0	14.0	946.0			
	35000	BERN	47	GB	0726.0	0731.0	14.0	1080.0			
	5200	BERN	47	GB	0726.0	0731.0	14.0	4050.0			
	11800	BERN	47	GB	0726.0	0731.0	14.0	2660.0			
	19600	BERN	47	GB	0726.0	0731.0	14.0	1720.0			
	3200	BERN	47	GB	0726.0	0731.0	14.0	640.0			
	610	LEAR	4	S/F	0726.0E	0730.0	32.0D	330.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	0726.0E	0800.0	35.0D	1300.0			QL=1 ST=3 TYP=7
	30	POTS	45	C	0726.0	0729.0	54.0	12000.0D			
	610	SVTO	4	S/F	0727.0E	0730.0	8.0D	450.0			QL=1 ST=3 TYP=5
	410	LEAR	4	S/F	0727.0E	0734.0	31.0D	300.0			QL=1 ST=2 TYP=3
	410	SVTO	4	S/F	0728.0E	0734.0	8.0D	300.0			QL=1 ST=3 TYP=5
	127	TORN	46	C	0728.8	0730.7	16.0	26000.0	1000.0		
	600	HUMN	47	GB	0729.0	0731.0	49.0	160.0	41.0		
	5900	KISV	4	S/F	0745.0	0750.3	9.5	191.0			
	9100	GORK	3	S	0800.2	0801.2	2.3	100.0			
	5900	KISV	4	S/F	0800.2	0801.4	2.4	187.0			
	3100	CRIM	1	S	0800.3	0801.2	2.0	51.0	17.0		
	9300	KISV	4	S/F	0800.5	0801.3	1.7	96.0			
	15000	KISV	4	S/F	0800.7	0801.3	1.3	88.0			
	200	HIRA	24	R	0810.6	0908.0	73.0D	70.0U	45.0U		MR SUNSET

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	100	HIRA	24	R	0811.0	0900.0	66.0D	650.0U	300.0U		SUNSET
	500	HIRA	46	C	0814.0	0814.2	5.1	25.0			WR
	430	KRAK	2	S/F	0814.2	0814.3	1.0	52.0	3.0		
	810	KRAK	2	S/F	0814.3	0816.6	2.3	33.0	4.0		
	650	GORK	22	GRF	1007.2E	1014.0	43.8D	3.7			
	9500	POTS	3	S	1011.8	1012.6	1.7	13.0			
	15000	KISV	2	S/F	1012.3	1012.8	1.0	18.0			
	9300	KISV	2	S/F	1012.5	1012.7	0.5	11.0			
	19600	BERN	4	S/F	1042.5	1043.3	1.5	190.0			
	11800	BERN	4	S/F	1042.5	1043.3	1.5	100.0			
	8400	BERN	4	S/F	1042.5	1043.3	1.5	36.0			
	9500	POTS	3	S	1042.5	1043.3	6.0	52.0			
	9300	KISV	4	S/F	1042.5	1043.4	2.2	50.0			
	15000	KISV	4	S/F	1042.5	1043.5	2.9	179.0			
	9300	KISV	29	PBI	1042.5	1044.7	6.9	5.0			
	9100	GORK	3	S	1042.7	1043.3	2.3	52.0			
	8800	SGMR	8	S	1043.0E	1043.0	U	55.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	1043.0E	1043.0	1.0D	140.0			QL=1 ST=2 TYP=3
	650	GORK	4	S/F	1046.5	1047.8	1.5	17.0			
	600	HUMN	4	S/F	1047.0	1048.4	1.6	12.0	4.0		
	9300	KISV	2	S/F	1114.9	1115.2	0.5	6.0			
	9500	POTS	20	GRF	1115.0	1120.0	15.0	6.0			
	536	ONDR	8	S	1121.8	1122.0	0.6	126.0			
	15000	KISV	23	GRF	1139.5	1140.7	15.0	17.0			
	810	KRAK	8	S	1203.0	1203.3	0.5	28.0			
	610	SGMR	4	S/F	1207.0E	1209.0	4.0D	130.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	1207.0E	1208.0	3.0D	120.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1207.0E	1208.0	2.0D	340.0			QL=1 ST=2 TYP=3
	3000	POTS	4	S/F	1207.1	1209.2	2.9	30.0			
	536	ONDR	41	F	1207.1	1208.7	3.0	127.0			
	1470	POTS	4	S/F	1207.5	1209.2	7.5	18.0			
	9500	POTS	20	GRF	1207.6	1209.3	47.4	31.0			
	5900	KISV	29	PBI	1207.7	1211.2	6.6	4.0			
	5900	KISV	4	S/F	1207.7	1209.4	3.5	66.0			
	9300	KISV	4	S/F	1207.7	1209.4	3.6	40.0			
	2800	OTTA	3	S	1208.0	1209.5	3.5	31.3	9.0		
	245	SGMR	49	GB	1208.0E	1208.0	1.0D	590.0			QL=1 ST=2 TYP=6
	600	HUMN	4	S/F	1208.0	1209.5	2.0	62.0	12.0		
	15000	KISV	2	S/F	1209.1	1209.4	0.4	11.0			
	5900	KISV	2	S/F	1211.2	1212.8	6.6	8.0			
	9300	KISV	20	GRF	1211.3	1213.6	18.6	16.0			
	245	SGMR	8	S	1212.0E	1213.0	1.0D	300.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1212.0E	1213.0	1.0D	220.0			QL=1 ST=2 TYP=3
	1470	POTS	20	GRF	1306.0	1324.3	34.0	4.0			
	5900	KISV	25	R	1306.9	1308.5	53.0	20.0			
	9300	KISV	23	GRF	1307.1	1308.5	27.4	18.0			
	9500	POTS	20	GRF	1307.7	1308.5	45.0	12.0			
	2800	OTTA	3	S	1718.0	1719.0	3.0	80.6	24.0		
	8800	PALE	8	S	1718.0E	1718.0	U	74.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1718.0E	1718.0	1.0D	110.0			QL=1 ST=3 TYP=3
	2695	SGMR	8	S	1718.0E	1718.0	1.0D	69.0			QL=1 ST=3 TYP=3
	8800	SGMR	8	S	1718.0E	1718.0	U	60.0			QL=1 ST=3 TYP=3
	2800	OTTA	3	S	1801.0	1801.5	2.0	28.1	8.0		
	410	PALE	8	S	1801.0E	1801.0	1.0D	470.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1801.0E	1801.0	1.0D	3700.0			QL=1 ST=2 TYP=6
	410	SGMR	49	GB	1801.0E	1801.0	1.0D	640.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1801.0E	1801.0	1.0D	3500.0			QL=1 ST=2 TYP=6
	245	PALE	49	GB	1804.0E	1805.0	2.0D	1900.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1804.0E	1805.0	3.0D	1700.0			QL=1 ST=2 TYP=6
	500	HIRA	27	RF	2332.5	2342.5	65.0	13.0	5.0		O
06	536	ONDR	43	NS	0920.0	1014.1	152.0	10.0			
	33	UPIC	43	NS	1316.0		284.0D				
	410	LEAR	4	S/F	0258.0E	0303.0	6.0D	110.0			QL=1 ST=2 TYP=3
	650	GORK	22	GRF	0300.0E	0304.0	242.4U	5.0			
	245	LEAR	4	S/F	0301.0E	0304.0	5.0D	280.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0303.0E	0303.0	1.0D	110.0			QL=1 ST=3 TYP=3
	245	LEAR	8	S	0303.0E	0304.0	1.0D	280.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	0303.0E	0304.0	1.0D	400.0			QL=1 ST=2 TYP=3

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
06	410	PALE	8	S	0303.0E	0303.0	1.0D	130.0			QL=1 ST=2 TYP=3
	950	GORK	1	S	0303.8	0304.0	1.1	4.0			
	200	HIRA	8	S	0303.8	0304.2	0.8	257.0			O
	9100	GORK	22	GRF	0421.2	0653.8	216.0	17.3			
	9300	KISV	45	C	0428.5	0430.1	8.1	9.0			
	9300	KISV	45	C	0428.5	0434.6		6.0			
	200	HIRA	41	F	0442.9	0443.6	2.0	148.0			O
	245	LEAR	8	S	0443.0E	0444.0	1.0D	98.0			QL=1 ST=2 TYP=3
	950	GORK	1	S	0444.5	0444.7	0.4	4.0			
	9300	KISV	2	S/F	0444.6	0445.4	4.5	5.0			
	9300	KISV	22	GRF	0505.2	0508.5		13.0			
	9300	KISV	22	GRF	0505.2	0536.7	535.0	31.0			
	950	GORK	2	S/F	0507.1	0507.2	1.8	23.0			
	2950	GORK	20	GRF	0509.0	0548.0	220.0	19.0			
	5900	KISV	22	GRF	0526.6	0536.8	72.3	14.0			
	15000	KISV	2	S/F	0528.2	0528.3	0.3	9.0			
	245	SVTO	8	S	0548.0E	0549.0	1.0D	53.0			QL=1 ST=2 TYP=3
	9300	KISV	21	GRF	0644.9	0653.8	29.9	25.0			
	100	HIRA	46	C	0647.5	0648.6	3.0	530.0			
	5900	KISV	22	GRF	0651.7	0653.7	10.0	8.0			
	5900	KISV	20	GRF	0707.1	0710.8	10.3	3.0			
	9300	KISV	1	S	0750.7	0752.3	2.9	4.0			
	5900	KISV	2	S/F	0751.6	0752.8	3.9	4.0			
	9300	KISV	42	SER	0800.7	0801.1	32.0	10.0			
	9300	KISV	42	SER	0800.7	0807.4		10.0			
	5900	KISV	2	S/F	0801.0	0801.1	1.6	4.0			
	9500	POTS	3	S	0801.0	0801.4	1.5	11.0			
	9500	POTS	20	GRF	0805.0	0806.8	50.0	9.0			
	5900	KISV	20	GRF	0805.9	0808.2	15.9	4.0			
	9300	KISV	22	GRF	0841.1	0847.7	12.6	8.0			
	3100	CRIM	45	C	0841.4	0842.5	3.0	37.0	12.0		
	3100	CRIM	45	C	0841.4	0843.5		13.0			
	5900	KISV	23	GRF	0842.1	0845.3	13.1	7.0			
	950	GORK	2	S/F	0843.4	0844.0	0.5	17.5			
	810	KRAK	8	S	0844.0	0844.3	0.3	8.0			
	650	GORK	4	S/F	0848.0	0848.5	1.1	44.0			
	260	ONDR	41	F	0900.0	1034.4	420.0D	97.0			
	5900	KISV	2	S/F	1017.2	1018.2	4.9	16.0			
	9300	KISV	2	S/F	1017.4	1018.2	4.7	17.0			
	9500	POTS	3	S	1017.5	1018.3	2.0	13.0			
	204	IZMI	5	S	1034.0	1034.5	1.0	400.0	300.0		
	234	POTS	4	S/F	1034.2	1034.5	1.3	140.0	25.0		
	30	POTS	4	S/F	1034.4	1034.6	0.7	80.0	15.0		
	9300	KISV	2	S/F	1100.3	1101.9	5.8	8.0			
	204	IZMI	5	S	1113.2	1113.5	1.0	380.0	200.0		
	9300	KISV	2	S/F	1203.1	1204.0	3.8	8.0			
	5900	KISV	2	S/F	1203.4	1204.0	3.5	6.0			
	9500	POTS	3	S	1248.4	1248.8	9.6	12.0			
	9300	KISV	2	S/F	1253.3	1253.9	3.5	21.0			
	5900	KISV	2	S/F	1253.4	1253.9	1.6	6.0			
	2800	OTTA	32	ABS	1350.0	1424.0	51.0	4.0	2.0		
	536	ONDR	42	SER	1358.5	1359.1	26.0	127.0			
	2800	OTTA	45	C	1441.0	1500.0	25.0	119.0	36.0		
	3200	BERN	46	C	1445.0	1451.2	13.0	91.0			
	5200	BERN	46	C	1445.0	1451.2	13.0	84.0			
	8400	BERN	46	C	1445.0	1451.2	13.0	56.0			
	2695	SVTO	4	S/F	1448.0E	1500.0	14.0D	110.0			QL=1 ST=2 TYP=5
	4995	SVTO	4	S/F	1448.0E	1450.0	14.0D	110.0			QL=1 ST=2 TYP=5
	4995	SGMR	20	GRF	1449.0E	1450.0	14.0D	84.0			QL=1 ST=2 TYP=2
	8800	SVTO	4	S/F	1449.0E	1500.0	12.0D	51.0			QL=1 ST=2 TYP=5
	2695	SGMR	4	S/F	1450.0E	1459.0	14.0D	110.0			QL=1 ST=2 TYP=5
	33	UPIC	48	C	1502.9	1505.9U	5.2				
	2800	OTTA	29	PBI	1506.0	1506.0	115.0	8.0	4.0		
	2800	OTTA	3	S	1701.0	1702.2	3.0	136.7	41.0		
	8400	BERN	46	C	1701.0	1702.0	3.0	480.0			
	1415	PALE	8	S	1701.0E	1702.0	2.0D	180.0			QL=1 ST=2 TYP=3
	15400	PALE	49	GB	1701.0E	1702.0	2.0D	750.0			QL=1 ST=2 TYP=6
	2695	PALE	8	S	1701.0E	1701.0	1.0D	150.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	1701.0E	1702.0	2.0D	430.0			QL=1 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
06	1415	SGMR	4	S/F	1701.0E	1702.0	3.0D	200.0			QL=1 ST=2 TYP=3
	2695	SGMR	4	S/F	1701.0E	1702.0	3.0D	150.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	1701.0E	1702.0	3.0D	350.0			QL=1 ST=2 TYP=3
	15400	SGMR	49	GB	1701.0E	1702.0	3.0D	820.0			QL=1 ST=2 TYP=6
	4995	SGMR	4	S/F	1701.0E	1702.0	3.0D	210.0			QL=1 ST=2 TYP=3
	2695	SVTO	8	S	1701.0E	1702.0	2.0D	110.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1701.0E	1702.0	2.0D	210.0			QL=1 ST=2 TYP=3
	8800	SVTO	4	S/F	1701.0E	1702.0	3.0D	420.0			QL=1 ST=2 TYP=3
	15400	SVTO	49	GB	1701.0E	1702.0	3.0D	790.0			QL=1 ST=2 TYP=6
	3200	BERN	46	C	1701.0	1702.2	3.0	137.0			
	11800	BERN	46	C	1701.0	1702.2	3.0	616.0			
	5200	BERN	46	C	1701.0	1702.2	3.0	191.0			
	19600	BERN	46	C	1701.0	1702.2	3.0	506.0			
	35000	BERN	46	C	1701.0	1702.2	3.0	520.0			
	50000	BERN	46	C	1701.0	1702.2	3.0	411.0			
	2800	OTTA	29	PBI	1704.0	1720.0	275.0	20.5	10.0		
	4995	SGMR	8	S	1936.0E	1937.0	1.0D	63.0			QL=1 ST=2 TYP=3
	15400	PALE	8	S	2025.0E	2025.0	U	70.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	2025.0E	2025.0	U	72.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2241.0E	2241.0	2.0D	86.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2241.0E	2241.0	U	120.0			QL=1 ST=3 TYP=3
07	100	GORK	44	NS	0255.0E		407.0D		5.0		
	127	TORN	43	NS	0900.0		350.0		4.0		V=0
	536	ONDR	43	NS	0907.0	0922.6	78.0	18.0			
	430	KRAK	43	NS	1116.5	1240.2	150.0D	38.0	4.0		
	536	ONDR	43	NS	1239.5	1421.3	145.5	19.0			
	245	SGMR	44	NS	1914.0E	1914.0	U	57.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1940.0E	2003.0	140.0D	11.0	6.0		MR
	100	HIRA	44	NS	1940.0E	0035.0	830.0D	80.0	32.0		
	245	SGMR	44	NS	1944.0E	1944.0	U	51.0			QL=1 ST=2 TYP=1
	245	LEAR	8	S	0119.0E	0119.0	U	110.0			QL=/ ST=2 TYP=3
	9100	GORK	21	GRF	0433.0	0704.7	306.0D	29.0			
	650	GORK	2	S/F	0449.5	0449.8	0.6	5.0			
	950	GORK	2	S/F	0449.6	0449.6	0.6	5.0			
	5900	KISV	23	GRF	0516.0	0531.5	49.0	16.0			
	9300	KISV	23	GRF	0519.0	0531.6	57.0	14.0			
	15400	LEAR	4	S/F	0523.0E	0524.0	3.0D	83.0			QL=1 ST=2 TYP=3
	8800	LEAR	8	S	0523.0E	0524.0	2.0D	85.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0523.0E	0524.0	1.0D	69.0			QL=1 ST=2 TYP=3
	15400	SVTO	8	S	0523.0E	0524.0	2.0D	87.0			QL=1 ST=2 TYP=3
	19600	BERN	4	S/F	0523.0	0524.3	3.0	19.0			
	11800	BERN	4	S/F	0523.0	0524.3	3.0	91.0			
	5200	BERN	4	S/F	0523.0	0524.3	3.0	19.0			
	8400	BERN	4	S/F	0523.0	0524.3	3.0	71.0			
	2950	GORK	3	S	0523.0	0524.3	3.4	5.1			
	5900	KISV	4	S/F	0523.1	0524.2	32.0	36.0			
	9300	KISV	4	S/F	0523.2	0524.2	3.4	83.0			
	15000	KISV	4	S/F	0523.2	0524.2	3.4	63.0			
	9100	GORK	4	S/F	0523.2	0524.3	3.8	90.0			
	650	GORK	2	S/F	0523.5	0523.6	1.2	3.0			
	950	GORK	2	S/F	0523.5	0523.7	1.2	3.5			
	15000	KISV	2	S/F	0536.1	0536.5	0.8	7.0			
	15000	KISV	2	S/F	0647.0	0647.4	1.6	12.0			
	5900	KISV	23	GRF	0652.1	0704.9	58.0	14.0			
	9300	KISV	23	GRF	0652.3	0706.0	49.5	12.0			
	2950	GORK	3	S	0653.0	0654.8	3.2	9.7			
	5900	KISV	4	S/F	0653.7	0654.6	2.2	31.0			
	9300	KISV	2	S/F	0653.8	0654.6	2.0	30.0			
	9100	GORK	1	S	0653.8	0654.7	1.9	27.0			
	3100	CRIM	1	S	0654.0	0654.9	1.5	9.0	3.0		
	15000	KISV	2	S/F	0654.1	0654.7	1.6	18.0			
	950	GORK	41	F	0654.4	0658.5		9.0			
	950	GORK	41	F	0654.4	0654.7	6.1	13.0			
	650	GORK	1	S	0654.7	0658.4	6.0	1.7			
	3100	CRIM	20	GRF	0657.0	0707.0	10.0	5.0	2.0		
	2950	GORK	20	GRF	0657.7	0709.0	45.0	4.5			
	260	ONDR	41	F	0700.0	1137.7	540.0D	7.0			
	600	HUMN	2	S/F	0736.8	0737.0	1.0	25.0	10.0		

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
07	5900	KISV	2	S/F	0823.7	0824.8	2.6	13.0			
	9300	KISV	2	S/F	0824.1	0824.7	1.3	5.0			
	9500	POTS	20	GRF	0930.0	0939.3	16.5	8.0			
	5900	KISV	23	GRF	0936.6	0937.3	17.9	9.0			
	2950	GORK	1	S	0936.7	0937.4	1.6	8.2			
	3100	CRIM	1	S	0936.9	0937.4	1.0	6.3	2.0		
	5900	KISV	22	GRF	1128.4	1304.0	151.6	7.0			
	9300	KISV	1	S	1134.0	1136.0	4.7	3.0			
	15000	KISV	45	C	1149.9	1151.1	1.9	6.0			
	15000	KISV	2	S/F	1204.3	1205.0	1.2	8.0			
	600	HUMN	20	GRF	1234.0	1418.0	298.0	14.0	9.0		
	9300	KISV	21	GRF	1243.7	1246.6	40.6	10.0			
	9500	POTS	1	S	1246.0	1246.7	4.0	9.0			
	15000	KISV	2	S/F	1246.3	1246.7	1.1	6.0			
	5900	KISV	21	GRF	1313.4	1320.9	17.1	10.0			
	9300	KISV	2	S/F	1320.2	1320.8	1.5	6.0			
	245	PALE	8	S	1851.0E	1851.0	1.0D	240.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1851.0E	1851.0	1.0D	220.0			QL=1 ST=2 TYP=3
	2800	OTTA	22	GRF	1928.0	2016.5	280.0	30.6	15.0		
	500	HIRA	46	C	2215.3	2219.3	6.5	39.0			WL
	610	PALE	8	S	2219.0E	2219.0	U	81.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2219.0E	2219.0	U	85.0			QL=1 ST=2 TYP=3
08	100	GORK	44	NS	0248.0E		455.0D		10.0		
	127	TORN	44	NS	0720.0E		440.0D		35.0		V=1
	536	ONDR	43	NS	0911.0	0945.3	69.0	12.0			
	1415	LEAR	8	S	0129.0E	0129.0	U	95.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	0129.0E	0129.0	U	100.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0133.0E	0134.0	1.0D	100.0			QL=1 ST=2 TYP=3
	1415	LEAR	8	S	0133.0E	0134.0	1.0D	84.0			QL=1 ST=2 TYP=3
	2840	PEKG	3	S	0133.0	0138.6	14.0	38.3			
	1415	PALE	8	S	0134.0E	0134.0	U	85.0			QL=1 ST=2 TYP=3
	610	PALE	8	S	0134.0E	0134.0	U	81.0			QL=1 ST=2 TYP=3
	4995	LEAR	4	S/F	0138.0E	0138.0	4.0D	68.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0138.0E	0138.0	2.0D	39.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0138.0E	0138.0	4.0D	41.0			QL=1 ST=2 TYP=3
	9100	GORK	21	GRF	0242.0E	0300.9	282.0D	15.8			
	9100	GORK	1	S	0340.2	0340.7	1.9	13.0			
	950	GORK	2	S/F	0349.2	0349.5	0.8	9.0			
	15000	KISV	46	C	0412.5	0414.0		4.0			
	15000	KISV	46	C	0412.5	0413.1	2.1	4.0			
	15000	KISV	46	C	0412.5	0412.6		5.0			
	15000	KISV	2	S/F	0426.0	0426.2	1.2	5.0			
	2840	PEKG	45	C	0512.0	0518.3		23.0			
	2840	PEKG	45	C	0512.0	0523.5	18.0D	53.8			
	3100	CRIM	25	R	0514.0	0518.0		9.5			
	950	GORK	23	GRF	0515.0	0521.9	18.0	5.0			
	9300	KISV	22	GRF	0516.0	0518.2		11.0			
	9300	KISV	22	GRF	0516.0	0523.7	332.3	15.0			
	650	GORK	21	GRF	0516.7	0518.3	26.1	2.5			
	5900	KISV	23	GRF	0516.8	0523.7	127.5	18.0			
	9100	GORK	20	GRF	0516.9	0535.3	39.8	9.5			
	3100	CRIM	42	SER	0518.0	0518.0	1.0	3.0	1.0		
	3100	CRIM	42	SER	0518.0	0518.1		3.9			
	1415	LEAR	4	S/F	0521.0E	0522.0	3.0D	100.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	0521.5	0522.1	3.0	40.0			O
	3100	CRIM	42	SER	0522.0	0523.0		3.3			
	650	GORK	46	C	0522.0	0523.0		38.0			
	610	LEAR	8	S	0522.0E	0522.0	2.0D	45.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0522.0E	0522.0	U	40.0			QL=1 ST=2 TYP=3
	410	LEAR	8	S	0522.0E	0522.0	1.0D	22.0			QL=1 ST=2 TYP=3
	1415	SVTO	8	S	0522.0E	0522.0	2.0D	87.0			QL=1 ST=2 TYP=3
	950	GORK	4	S/F	0522.0	0522.3	2.0	52.0			
	3100	CRIM	42	SER	0522.0	0522.5	2.0	4.5	2.0		
	650	GORK	46	C	0522.0	0522.5	2.5	53.0			
	650	GORK	46	C	0522.0	0523.6		22.0			
	3100	CRIM	42	SER	0522.0	0523.8		2.4			
	600	HUMN	4	S/F	0522.5	0523.0	2.0	24.0	10.0		
	260	ONDR	41	F	0620.0E	0753.0	580.0D	28.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
08	5900	KISV	22	GRF	0728.8	0730.3	15.2	3.0			
	650	GORK	21	GRF	0744.5	0756.7	19.9	2.0			
	410	LEAR	8	S	0752.0E	0753.0	1.0D	20.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0752.0E	0753.0	1.0D	73.0			QL=1 ST=2 TYP=3
	33	UPIC	45	C	0752.6	0753.5	1.4				
	430	KRAK	8	S	0752.8	0753.0	0.3	41.0			
	245	SVTO	8	S	0753.0E	0753.0	U	68.0			QL=1 ST=2 TYP=3
	100	GORK	46	C	0753.0	0753.1	0.7	1100.0			
	650	GORK	1	S	0753.0	0753.1	0.3	4.0			
	204	IZMI	4	S/F	0753.0	0753.1	1.0	75.0	40.0		
	100	GORK	46	C	0753.0	0753.3		2000.0			
	100	GORK	46	C	0753.0	0753.5		1200.0			
	5900	KISV	45	C	0818.0	0820.2	3.3	8.0			
	5900	KISV	22	GRF	0818.0	0913.8	162.0	7.0			
	9100	GORK	22	GRF	0818.2	0840.8	59.3	7.8			
	9500	POTS	1	S	0819.2	0820.2	1.5	5.0			
	9300	KISV	2	S/F	0819.7	0820.2	0.7	4.0			
	430	KRAK	42	SER	0916.5	0932.5	16.5	37.0			
	430	KRAK	8	S	1136.5	1136.9	0.4	67.0			
	245	SVTO	49	GB	1155.0E	1155.0	U	490.0			QL=1 ST=2 TYP=6
	33	UPIC	8	S	1215.6	1215.8	0.4				
	536	ONDR	42	SER	1237.0	1302.8	26.0	62.0			
	430	KRAK	8	S	1252.3	1252.5	0.5	22.0			
	9500	POTS	1	S	1302.4	1302.9	3.1	9.0			
	536	ONDR	47	GB	1402.8	1407.5	22.0	134.0			
	410	SGMR	8	S	1407.0E	1407.0	1.0D	76.0			QL=1 ST=2 TYP=3
	9500	POTS	1	S	1407.3	1407.8	0.9	5.0			
	600	HUMN	3	S	1408.0	1408.4	0.8	42.0	25.0		
	410	SGMR	20	GRF	1410.0E	1417.0	12.0D	220.0			QL=/ ST=2 TYP=2
	410	SVTO	20	GRF	1410.0E	1417.0	15.0D	200.0			QL=/ ST=3 TYP=2
	610	SGMR	4	S/F	1411.0E	1416.0	11.0D	32.0			QL=/ ST=2 TYP=3
	600	HUMN	3	S	1413.0	1417.0	10.0	22.0	12.0		
	245	PALE	8	S	1724.0E	1724.0	U	130.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1724.0E	1724.0	U	110.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	2033.9	2040.3	27.0	140.0			MR
	500	HIRA	21	GRF	2115.0	2256.5	145.0	8.0	4.0		O
09	260	ONDR	41	F	0620.0E	0825.1	250.0D	216.0			
	204	IZMI	8	S	0721.6	0721.6	0.2	160.0	100.0		
	9100	GORK	1	S	0741.9	0742.2	1.4	4.2			
	9500	POTS	1	S	0741.9	0742.3	1.6	6.0			
	245	SVTO	49	GB	0815.0E	0825.0	945.0D	1300.0			QL=1 ST=1 TYP=6
	950	GORK	8	S	0819.0	0819.2	0.4	17.0			
	1470	POTS	4	S/F	0819.0	0819.3	1.0U	23.0			
	410	LEAR	8	S	0823.0E	0825.0	2.0D	190.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0823.0E	0825.0	2.0D	63.0			QL=1 ST=2 TYP=3
	245	LEAR	49	GB	0823.0E	0825.0	3.0D	1000.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0823.0E	0825.0	2.0D	1300.0			QL=1 ST=2 TYP=6
	950	GORK	41	F	0823.2	0825.2		2.5			
	950	GORK	41	F	0823.2	0824.2	2.2	4.0			
	536	ONDR	42	SER	0823.4	0825.1	4.5	128.0			
	650	GORK	41	F	0823.7	0824.0	1.5	130.0			
	650	GORK	41	F	0823.7	0825.2		6.0			
	234	POTS	8	S	0823.7	0825.2	1.9	4000.0	1000.0		
	100	GORK	41	F	0823.9	0833.0		500.0			
	100	GORK	41	F	0823.9	0826.1		25.0			
	100	GORK	41	F	0823.9	0824.1	22.0	20.0			
	100	GORK	41	F	0823.9	0845.6		30.0			
	410	SVTO	8	S	0824.0E	0825.0	1.0D	220.0			QL=1 ST=2 TYP=3
	204	IZMI	41	F	0824.0	0825.3	2.2	2000.0			
	610	SVTO	8	S	0825.0E	0825.0	U	60.0			QL=1 ST=2 TYP=3
	9100	GORK	20	GRF	0852.6	0858.0	18.3	6.8			
	536	ONDR	40	F	1011.0	1011.5	1.0	97.0			
	9500	POTS	1	S	1011.4	1011.5	1.1	8.0			
	810	KRAK	8	S	1021.0	1021.1	0.4	12.0			
	536	ONDR	42	SER	1056.0	1056.2	36.0	60.0			
	9500	POTS	20	GRF	1103.0	1121.0	47.0	6.0			
	410	SGMR	8	S	1437.0E	1437.0	1.0D	130.0			QL=1 ST=2 TYP=3
	2800	OTTA	45	C	1639.0	1650.0	15.0	44.3	13.0		

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

Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
09	2800	OTTA	45	C	1639.0	1655.0	30.0	44.8	18.0		
	8400	BERN	46	C	1642.0	1655.0	22.0	88.0			
	5200	BERN	46	C	1642.0	1655.0	22.0	112.0			
	11800	BERN	46	C	1642.0	1655.0	22.0	49.0			
	3200	BERN	46	C	1642.0	1655.0	22.0	48.0			
	4995	SVTO	4	S/F	1645.0E	1654.0	14.0D	110.0			QL=1 ST=2 TYP=5
	8800	SVTO	4	S/F	1647.0E	1650.0	5.0D	61.0			QL=1 ST=2 TYP=5
	4995	SGMR	20	GRF	1647.0E	1654.0	11.0D	120.0			QL=1 ST=2 TYP=2
	8800	SGMR	4	S/F	1647.0E	1654.0U	11.0D	110.0			QL=1 ST=2 TYP=5
	2800	OTTA	45	C	1654.0	1655.0	15.0	44.8	13.0		
	8800	PALE	8	S	1654.0E	1654.0	1.0D	72.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1745.0E	1745.0	2.0D	67.0			QL=1 ST=2 TYP=3
	100	HIRA	8	S	2203.6	2204.2	1.0	750.0			
	200	HIRA	8	S	2203.6	2203.7	0.8	700.0			MR
10	950	GORK	30	PBI	0344.5	0354.0					
	950	GORK	46	C	0344.5	0350.6	8.5	540.0			
	950	GORK	46	C	0344.5	0351.6		680.0			
	410	LEAR	4	S/F	0346.0E	0351.0	7.0D	78.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0346.0E	0349.0	7.0D	25.0			QL=1 ST=2 TYP=3
	610	LEAR	4	S/F	0346.0E	0351.0	7.0D	130.0			QL=1 ST=2 TYP=3
	650	GORK	46	C	0346.1	0349.6	11.7	42.0			
	650	GORK	46	C	0346.1	0351.7		167.0			
	500	HIRA	46	C	0346.5	0351.0	10.0	131.0			O
	200	HIRA	46	C	0346.9	0347.0	4.0	880.0			O
	245	LEAR	4	S/F	0347.0E	0347.0	6.0D	110.0			QL=1 ST=2 TYP=3
	1415	LEAR	4	S/F	0347.0E	0350.0	6.0D	36.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0347.0E	0348.0	1.0D	120.0			QL=1 ST=2 TYP=3
	2950	GORK	4	S/F	0347.6	0349.2	4.8	8.5			
	410	PALE	8	S	0350.0E	0351.0	2.0D	85.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0358.0E	0358.0	1.0D	64.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	0420.0	0425.5	9.5	16.0			O
	650	GORK	46	C	0421.2	0422.6	7.9	6.0			
	650	GORK	46	C	0421.2	0425.8		2.5			
	650	GORK	20	GRF	0443.0	0449.7	14.7	2.8			
	950	GORK	2	S/F	0451.5	0452.4	3.0	2.4			
	950	GORK	40	F	0520.4	0551.0		12.0			
	950	GORK	40	F	0520.4	0552.0		11.0			
	950	GORK	40	F	0520.4	0537.1	39.6	4.0			
	950	GORK	40	F	0520.4	0541.6		3.0			
	650	GORK	46	C	0520.5	0521.1	5.0	9.5			
	650	GORK	46	C	0520.5	0523.7		2.5			
	9300	KISV	2	S/F	0532.1	0532.6	0.9	4.0			
	5900	KISV	2	S/F	0532.1	0532.6	0.9	2.0			
	650	GORK	22	GRF	0533.3	0549.0	27.0U	2.5			
	950	GORK	1	S	0615.0	0616.2	3.0	7.4			
	9100	GORK	22	GRF	0625.3	0626.8	9.8	8.8			
	5900	KISV	2	S/F	0625.8	0626.9	3.4	6.0			
	260	ONDR	42	SER	0635.0	1050.1	290.0	33.0			
	9100	GORK	1	S	0738.5	0738.7	0.6	7.8			
	5900	KISV	1	S	0738.6	0738.7	0.3	1.0			
	9300	KISV	1	S	0738.6	0738.7	1.0	6.0			
	15000	KISV	1	S	0738.6	0738.8	0.6	15.0			
	204	IZMI	8	S	1023.6	1023.6	0.2	80.0	70.0		
	245	SGMR	8	S	1033.0E	1033.0	1.0D	53.0			QL=1 ST=3 TYP=3
	204	IZMI	5	S	1034.0	1034.0	0.3	360.0	250.0		
	950	GORK	22	GRF	1034.0	1038.0	19.8	6.6			
	204	IZMI	5	S	1044.5	1044.6	0.3	50.0	30.0		
	650	GORK	1	S	1052.0	1052.7	3.0	1.0			
	650	GORK	46	C	1106.0E	1107.0		14.0			
	650	GORK	46	C	1106.0E	1106.4	5.0D	18.0			
	536	ONDR	8	S	1141.4	1141.5	0.5	17.0			
	260	ONDR	46	C	1205.0	1221.5	30.0	39.0			
	245	SGMR	8	S	1224.0E	1224.0	U	110.0			QL=1 ST=2 TYP=3
	260	ONDR	46	C	1458.8	1500.0	1.5	9.0			
	410	SGMR	8	S	1555.0E	1556.0	1.0D	90.0			QL=1 ST=2 TYP=3
11	200	GORK	43	NS	0403.0		470.0		5.0		
	200	HIRA	43	NS	0517.0	0600.0	190.0	6.0	4.0		

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
11	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0600.0E	0948.0	590.0D	118.0			
	2840	PEKG	1	S	0544.0	0545.4	8.0	6.8			
	204	IZMI	41	F	0601.3	0606.5	19.0	460.0			
	500	HIRA	42	SER	0605.8	0611.3	6.5	113.0			O
	100	HIRA	42	SER	0605.9	0611.2	14.7	620.0			
	650	GORK	46	C	0606.0E	0606.2	7.7D	18.0			
	200	HIRA	42	SER	0606.0	0606.3	10.6	840.0			
	650	GORK	46	C	0606.0E	0611.4		200.0			
	950	GORK	46	C	0606.0E	0611.4		37.0			
	950	GORK	46	C	0606.0E	0606.7	6.9D	7.3			
	3100	CRIM	1	S	0606.1	0606.5	2.0	9.4	3.0		
	5900	KISV	2	S/F	0606.2	0606.5	3.2	2.0			
	2950	GORK	1	S	0606.5		1.7	10.0	5.0		
	100	GORK	41	F	0606.8	0607.1	4.8	110.0			
	100	GORK	41	F	0606.8	0611.5		220.0			
	410	LEAR	8	S	0611.0E	0611.0	U	86.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0611.0E	0611.0	U	120.0			QL=1 ST=2 TYP=3
	610	LEAR	8	S	0611.0E	0611.0	U	120.0			QL=1 ST=2 TYP=3
	610	SVTO	8	S	0611.0E	0611.0	U	130.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0611.0E	0611.0	U	92.0			QL=1 ST=2 TYP=3
	200	GORK	8	S	0611.1	0611.5	1.7	138.0			
	234	POTS	8	S	0611.2	0611.4	0.8	125.0	40.0		
	204	IZMI	5	S	0724.3	0725.0	0.7	120.0	60.0		
	5900	KISV	22	GRF	0747.0	0755.7	17.4	8.0			
	9300	KISV	22	GRF	0748.9	0755.9	21.2	9.0			
	245	SVTO	8	S	0751.0E	0752.0	1.0D	65.0			QL=1 ST=2 TYP=5
	9500	POTS	20	GRF	0752.0	0755.5	11.5	6.0			
	430	KRAK	2	S/F	0851.0	0852.2	2.0	34.0	3.0		
	245	LEAR	8	S	0852.0E	0852.0	U	90.0			QL=1 ST=2 TYP=3
	234	POTS	41	F	0852.0	0852.7	0.9	125.0			
	204	IZMI	41	F	0909.4	0916.4	7.8	380.0			
	430	KRAK	8	S	0916.2	0916.4	0.4	29.0			
	245	SGMR	4	S/F	0946.0E	0947.0	3.0D	110.0			QL=1 ST=3 TYP=3
	204	IZMI	41	F	0946.3	0948.1	10.0	350.0			
	234	POTS	41	F	0946.4	0947.8	4.6	200.0			
	430	KRAK	41	F	0947.5	0949.0	1.8	7.0	1.0		
	650	GORK	4	S/F	1028.7	1029.3	1.7	47.0			
	536	ONDR	42	SER	1052.3	1052.7	42.0	86.0			
	245	SGMR	8	S	1222.0E	1223.0	1.0D	53.0			QL=1 ST=2 TYP=3
	536	ONDR	8	S	1256.1	1256.4	1.2	88.0			
	245	SGMR	8	S	1320.0E	1320.0	U	60.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1320.0E	1320.0	U	63.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1721.0E	1722.0	1.0D	62.0			QL=1 ST=2 TYP=3
	200	HIRA	46	C	2315.0	2315.9	1.9	270.0			
	100	HIRA	46	C	2315.5		2.0	1000.0D			
	500	HIRA	4	S/F	2315.7	2316.2	1.2	11.0			O
	245	SGMR	8	S	2316.0E	2316.0	U	68.0			QL=1 ST=2 TYP=3
12	200	GORK	44	NS	0247.0E		552.0D		5.0		
	260	ONDR	44	NS	1113.0E	1430.7	277.0D	138.0			
	200	HIRA	44	NS	1940.0E	0134.0	830.0D	11.0	6.0		
	5900	KISV	2	S/F	0537.5	0538.4	3.2	5.0			
	3100	CRIM	1	S	0537.5	0538.5	1.5	9.6	3.0		
	260	ONDR	41	F	0600.0E	0658.6	313.0D	199.0			
	950	GORK	2	S/F	0640.0	0640.2	0.5	2.0			
	650	GORK	2	S/F	0640.3	0640.7	0.6	5.0			
	200	HIRA	8	S	0657.7	0658.0	0.7	4500.0			
	245	LEAR	49	GB	0658.0E	0658.0	U	690.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	0658.0E	0658.0	U	820.0			QL=1 ST=3 TYP=6
	234	POTS	4	S/F	0658.2	0658.4	1.3	1200.0			
	650	GORK	4	S/F	0658.2	0658.5	0.6	39.0			
	204	IZMI	5	S	0658.3	0659.0	0.7	1300.0	800.0		
	200	GORK	8	S	0658.4	0658.6	1.1	4500.0			
	950	GORK	1	S	0658.4	0658.6	0.3	1.0			
	100	GORK	8	S	0658.5	0658.6	0.2	2500.0			
	430	KRAK	8	S	0740.6	0740.6	0.1	7.0			
	40	POTS	42	SER	0744.2	0756.5	12.6	3800.0			
	410	LEAR	8	S	0745.0E	0746.0	1.0D	45.0			QL=1 ST=2 TYP=3

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
12	200	HIRA	42	SER	0745.5	0745.7	6.6	1400.0			
	100	HIRA	46	C	0745.6	0746.2	1.5	810.0			
	245	LEAR	8	S	0746.0E	0746.0	1.0D	86.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0746.0E	0746.0	U	75.0			QL=1 ST=3 TYP=3
	650	GORK	46	C	0746.2	0747.1		9.0			
	950	GORK	46	C	0746.2	0747.2		4.5			
	204	IZMI	41	F	0746.2	0746.3	7.5	1375.0			
	950	GORK	46	C	0746.2	0746.4	2.7	13.0			
	650	GORK	46	C	0746.2	0746.5	4.5	11.5			
	200	GORK	8	S	0746.2	0746.5	1.7	700.0			
	100	GORK	46	C	0746.3	0747.4		870.0			
	234	POTS	42	SER	0746.3	0756.5	10.7	275.0			
	100	GORK	46	C	0746.3	0746.6	1.7	1200.0			
	810	KRAK	2	S/F	0746.4	0746.4	1.0	12.0	2.0		
	430	KRAK	8	S	0746.4	0746.6	1.0	100.0			
	430	KRAK	42	SER	0752.2	0752.5	0.6	22.0			
	650	GORK	5	S	0757.6	0758.0	0.9	7.0			
	950	GORK	5	S	0757.9	0758.1	0.7	1.0			
	15000	KISV	22	GRF	1103.0	1105.0	11.1	18.0			
	9100	GORK	1	S	1103.4	1104.7	3.2	18.9			
	9500	POTS	20	GRF	1103.6	1104.9	11.9	16.0			
	9300	KISV	2	S/F	1104.0	1105.1	9.4	18.0			
	5900	KISV	2	S/F	1104.1	1105.0	3.5	9.0			
	536	ONDR	42	SER	1215.4	1215.9	135.0	102.0			
	33	UPIC	8	S	1216.6	1216.7	0.5				
	3100	CRIM	1	S	1223.5	1225.6	5.0	9.4	3.0		
	5900	KISV	20	GRF	1225.4	1240.5	34.6	8.0			
	9300	KISV	20	GRF	1225.5	1232.0	35.2	8.0			
	2800	OTTA	3	S	1314.0	1314.0	1.0	11.0	5.0		
	3000	POTS	3	S	1314.3	1314.6	0.7	10.0			
	1470	POTS	1	S	1314.3	1314.7	0.7	6.0			
	5900	KISV	1	S	1314.3	1314.8	0.9	5.0			
	9300	KISV	1	S	1314.5	1314.8	0.8	8.0			
	33	UPIC	8	S	1317.7	1317.8U	1.1				
	3000	POTS	1	S	1407.0	1407.6	1.3	6.0			
	1470	POTS	3	S	1407.0	1407.8	1.3	15.0			
	33	UPIC	3	S	1423.0	1423.1	0.2				
	33	UPIC	45	C	1427.2	1427.4	1.1				
	200	HIRA	8	S	2129.0	2129.0	0.3	685.0			
	245	PALE	8	S	2129.0E	2129.0	U	330.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2129.0E	2129.0	U	310.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2311.0E	2311.0	U	74.0			QL=1 ST=2 TYP=3
13	200	GORK	44	NS	0242.6E		330.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0610.0E		530.0D				
	200	HIRA	42	SER	0008.6	0017.8	12.5	4200.0			
	245	LEAR	8	S	0009.0E	0009.0	U	95.0			QL=1 ST=2 TYP=3
	100	HIRA	42	SER	0009.2		13.2	1000.0D			
	245	LEAR	8	S	0018.0E	0018.0	U	120.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0018.0E	0018.0	U	210.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0446.0E	0448.0	2.0D	140.0			QL=1 ST=2 TYP=3
	500	HIRA	8	S	0459.5	0459.6	0.6	49.0			WR
	950	GORK	8	S	0813.5	0813.7	0.3	12.5			
	650	GORK	8	S	0813.6	0813.7	0.3	24.0			
	810	KRAK	8	S	0813.8	0814.0	0.2	34.0			
	204	IZMI	5	S	0924.0	0924.3	0.6	45.0	35.0		
	234	POTS	4	S/F	1009.6	1011.2	3.0	3200.0			
	245	SGMR	49	GB	1010.0E	1011.0	1.0D	1200.0			QL=1 ST=3 TYP=6
	410	SGMR	8	S	1010.0E	1010.0	U	92.0			QL=1 ST=3 TYP=3
	30	POTS	4	S/F	1010.1	1011.1	2.6	14000.0D			
	204	IZMI	41	F	1010.3	1011.5	1.3	3100.0			
	245	SVTO	49	GB	1011.0E	1011.0	U	890.0			QL=1 ST=3 TYP=6
	204	IZMI	5	S	1036.5	1036.6	0.6	50.0	30.0		
	245	SVTO	8	S	1100.0E	1100.0	U	400.0			QL=1 ST=2 TYP=3
	204	IZMI	8	S	1108.8	1108.9	0.3	75.0	65.0		
	204	IZMI	41	F	1138.1	1139.0	5.0	95.0			
	260	ONDR	8	S	1210.5	1211.0	0.7	21.0			
	1470	POTS	4	S/F	1229.3	1229.9U	6.5	129.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
13	810	KRAK	41	F	1242.2	1244.4	8.5D	43.0	4.0		
	245	SGMR	8	S	1255.0E	1255.0	1.0D	62.0			QL=1 ST=2 TYP=3
	260	ONDR	8	S	1255.3	1255.7	1.5	40.0			
	8800	SGMR	8	S	1501.0E	1502.0	1.0D	160.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1645.0E	1646.0	1.0D	58.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1733.0E	1734.0	2.0D	880.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1734.0E	1734.0	U	890.0			QL=1 ST=2 TYP=6
	245	SGMR	8	S	1747.0E	1747.0	1.0D	130.0			QL=1 ST=3 TYP=3
	2800	OTTA	4	S/F	1812.0	1812.0	2.0	17.7	7.0		
	1415	SGMR	8	S	1812.0E	1812.0	U	52.0			QL=1 ST=2 TYP=3
	500	HIRA	42	SER	2116.5	2122.0	5.8	152.0			O
	100	HIRA	42	SER	2142.9	2145.2	3.3	1000.0D			
	200	HIRA	8	S	2335.8	2336.0	0.8	4500.0			
	245	LEAR	8	S	2336.0E	2336.0	1.0D	270.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2336.0E	2336.0	1.0D	380.0			QL=1 ST=2 TYP=3
14	200	GORK	43	NS	0400.0		330.0		5.0		
	200	HIRA	43	NS	0400.0	0600.0	330.0D	7.0	5.0		WL
	204	IZMI	43	NS	0600.0		240.0	10.0			
	260	ONDR	44	NS	0600.0E	0853.5	252.0D	30.0			
	245	SGMR	43	NS	1739.0	1750.0	234.0	91.0			QL=1 ST=2 TYP=1
	245	PALE	44	NS	1749.0E	1754.0	151.0D	89.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1940.0E	2023.0	830.0D	18.0	6.0		MR
	100	HIRA	42	SER	0149.9	0150.6	22.4	1000.0D			
	245	PALE	8	S	0150.0E	0151.0	1.0D	58.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	0150.2	0210.7	20.7	510.0			
	245	LEAR	8	S	0151.0E	0151.0	U	53.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0209.0E	0210.0	2.0D	140.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0210.0E	0210.0	1.0D	120.0			QL=1 ST=2 TYP=3
	650	GORK	22	GRF	0357.7	0443.5	67.0U	5.5			
	950	GORK	2	S/F	0439.0	0441.2	6.0	3.6			
	1470	POTS	20	GRF	0650.0	0654.0	60.0	3.0			
	5900	KISV	23	GRF	0652.6	0700.4	13.4	4.0			
	9300	KISV	23	GRF	0652.6	0702.6	13.4	6.0			
	3000	POTS	4	S/F	0652.6	0653.7	1.7	15.0			
	9500	POTS	21	GRF	0652.7	0657.3	52.0	6.0			
	5900	KISV	4	S/F	0652.8	0653.7	7.2	52.0			
	3200	BERN	3	S	0653.0	0653.4	1.5	20.0			
	11800	BERN	3	S	0653.0	0653.4	1.5	26.0			
	8400	BERN	3	S	0653.0	0653.4	1.5	48.0			
	5200	BERN	3	S	0653.0	0653.4	1.5	43.0			
	3100	CRIM	1	S	0653.0	0653.6	1.3	20.0	5.0		
	2950	GORK	4	S/F	0653.2	0655.6	5.7	20.6			
	9100	GORK	3	S	0653.2	0653.6	0.6	45.0			
	9100	GORK	29	PBI	0653.2	0653.8	11.2	12.0			
	9300	KISV	4	S/F	0653.3	0653.6	5.2	49.0			
	9500	POTS	3	S	0653.3	0653.7	1.1	35.0			
	3013	IZMI	5	S	0653.4	0653.6	3.0	13.0	7.0		
	15000	KISV	2	S/F	0653.4	0653.6	6.1	10.0			
	204	IZMI	5	S	0807.1	0807.3	0.4	110.0	70.0		
	204	IZMI	41	F	0850.2	0854.0	4.0	500.0			
	234	POTS	41	F	0851.5	0853.5	4.7	110.0			
	200	GORK	4	S/F	0851.7	0854.0	6.4	20.0			
	30	POTS	42	SER	0851.8	0853.2	7.6	10000.0D			
	100	GORK	41	F	0852.0	0857.7		2600.0			
	100	GORK	41	F	0852.0	0852.7	7.2	10000.0			
	33	UPIC	48	C	0852.1		6.5				
	536	ONDR	42	SER	1006.0	1030.0	25.0	15.0			
	260	ONDR	41	F	1013.5	1143.7	257.0	93.0			
	536	ONDR	42	SER	1124.2	1124.5	2.5	28.0			
	234	POTS	4	S/F	1142.9	1143.5	2.1U	180.0			
	245	SGMR	8	S	1143.0E	1143.0	1.0D	230.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1143.0E	1143.0	1.0D	180.0			QL=1 ST=2 TYP=5
	204	IZMI	5	S	1143.5	1144.0	2.0	250.0	120.0		
	536	ONDR	42	SER	1307.5	1307.8	8.0	30.0			
	245	SGMR	49	GB	1522.0E	1522.0	U	700.0			QL=1 ST=2 TYP=6
	245	SVTO	8	S	1522.0E	1522.0	U	430.0			QL=1 ST=2 TYP=3
	2800	OTTA	3	S	1640.0	1644.0	7.0	56.4	21.0		
	245	PALE	49	GB	1641.0E	1644.0	3.0D	2100.0			QL=1 ST=2 TYP=6

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
14	245	SGMR	49	GB	1641.0E	1644.0	3.0D	1800.0			QL=1 ST=2 TYP=6
	600	HUMN	4	S/F	1642.5	1645.0	3.5	18.0	9.0		
	1415	PALE	8	S	1643.0E	1643.0	1.0D	180.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	1643.0E	1644.0	2.0D	100.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1643.0E	1644.0	1.0D	120.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1643.0E	1643.0	1.0D	64.0			QL=1 ST=2 TYP=3
	1415	SVTO	8	S	1643.0E	1644.0	1.0D	110.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1643.0E	1643.0	1.0D	59.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1644.0E	1644.0	U	210.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1644.0E	1644.0	U	220.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	1644.0E	1644.0	1.0D	1300.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	1644.0E	1644.0	1.0D	190.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	1646.0	1647.0	51.0	14.2	5.0		
	2800	OTTA	1	S	1647.0	1648.0	2.0	8.1	3.0		
	410	PALE	8	S	1647.0E	1647.0	U	68.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1647.0E	1647.0	U	70.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1647.0E	1647.0	1.0D	67.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1720.0E	1721.0	2.0D	67.0			QL=1 ST=2 TYP=3
	2695	SVTO	4	S/F	1721.0E	1722.0	4.0D	52.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	1722.0E	1723.0	2.0D	61.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1830.0E	1831.0	1.0D	340.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1830.0E	1831.0	1.0D	270.0			QL=1 ST=2 TYP=3
	500	HIRA	41	F	2228.0	2229.0	2.1	29.0			O
	245	SGMR	8	S	2230.0E	2230.0	U	53.0			QL=1 ST=2 TYP=3
15	200	GORK	44	NS	0242.0E		438.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0600.0E	1509.4	590.0D	59.0			
	127	TORN	43	NS	0901.0		120.0		4.0		V=1
	100	GORK	43	NS	0903.0		63.0		5.0		
	200	HIRA	44	NS	1940.0E	0212.0	830.0D	11.0	6.0		WL
	9100	GORK	20	GRF	0533.5	0535.0	60.0	8.3			
	9300	KISV	2	S/F	0534.0	0535.0	4.1	10.0			
	5900	KISV	2	S/F	0534.0	0535.0	4.8	10.0			
	5900	KISV	23	GRF	0534.0	0540.0	26.0	4.0			
	9300	KISV	23	GRF	0534.0	0540.7	26.0	8.0			
	15000	KISV	20	GRF	0534.5	0540.5	14.8	11.0			
	245	SVTO	8	S	0559.0E	0600.0	2.0D	90.0			QL=1 ST=2 TYP=3
	536	ONDR	8	S	1253.2	1253.5	0.7	50.0			
	245	SGMR	8	S	1828.0E	1828.0	U	85.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1830.0E	1831.0	1.0D	100.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1831.0E	1831.0	U	95.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	2126.7	2127.2	1.1	100.0			O
	410	SGMR	8	S	2127.0E	2127.0	U	180.0			QL=1 ST=2 TYP=3
16	100	GORK	44	NS	0251.0E		369.0D		5.0		
	200	GORK	44	NS	0251.0E		549.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	15.0			
	260	ONDR	44	NS	0600.0E	1336.6	590.0D	56.0			
	127	TORN	44	NS	0620.0E		540.0D		6.0		V=2
	245	SGMR	44	NS	1335.0E	1335.0	1.0D	52.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1940.0E		520.0D	8.0	4.0		WL
	9100	GORK	20	GRF	0427.0	0433.4	24.0	8.0			
	410	SGMR	8	S	1347.0E	1347.0	U	120.0			QL=1 ST=3 TYP=3
	1470	POTS	1	S	1402.6	1402.9	1.0	5.0			
17	100	GORK	43	NS	0733.0		186.0		5.0		
	260	ONDR	44	NS	1322.0E	1405.9	148.0D	62.0			
	200	HIRA	43	NS	2127.7	2200.0	68.0	7.0	3.0		WR
	260	ONDR	41	F	0600.0E	0936.5	442.0D	43.0			
	204	IZMI	41	F	0732.0	0734.2	7.2	550.0			
	650	GORK	2	S/F	0838.1	0841.9	4.0	3.0			
	245	SVTO	8	S	0847.0E	0847.0	1.0D	60.0			QL=1 ST=2 TYP=3
	1470	POTS	20	GRF	0855.0	0941.0	94.0	13.0			
	3000	POTS	20	GRF	0859.0	0956.0	87.0	29.0			
	9100	GORK	20	GRF	0900.0U	1201.0	181.0D	22.0			
	2950	GORK	20	GRF	0904.7	0953.9	131.0	12.7			
	536	ONDR	45	C	0904.8	0905.2	0.4	22.0			
	3100	CRIM	24	R	0905.0	1010.0		14.9			

S O L A R R A D I O E M I S S I O N
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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	9500	POTS	20	GRF	0906.0	1005.0	65.0	14.0			
	950	GORK	21	GRF	0907.6E		17.2D				
	650	GORK	22	GRF	0907.7E	0916.8	13.3U	4.5			
	950	GORK	46	C	0915.0	0916.8	5.5	6.0			
	950	GORK	46	C	0915.0	0917.8		17.6			
	810	KRAK	27	RF	0915.8	0917.4	4.7	8.0	4.0		
	100	GORK	46	C	0921.9	0923.3	3.5	210.0			
	127	TORN	27	RF	0934.5		32.0		10.0		
	650	GORK	20	GRF	0935.5	0942.0	21.5U	8.5			
	810	KRAK	27	RF	0935.8	0940.0U	10.0	5.0	4.0		
	950	GORK	22	GRF	0936.0	0940.2	24.7	6.7			
	536	ONDR	45	C	1049.3	1051.4	3.0	11.0			
	9500	POTS	20	GRF	1121.0	1202.0	74.0	8.0			
	1470	POTS	1	S	1402.6	1402.9	1.0	5.0			
	610	SVTO	8	S	1649.0E	1649.0	U	85.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1801.0E	1801.0	U	75.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1801.0E	1801.0	U	72.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	2339.0E	2339.0	2.0D	140.0			QL=1 ST=2 TYP=3
18	260	ONDR	44	NS	0600.0E	1005.3	580.0D	43.0			
	200	HIRA	43	NS	2330.0	0449.0	510.0	15.0	6.0		WR
	500	HIRA	27	RF	0303.0	0313.0	40.0	4.0	2.0		O
	1470	POTS	1	S	1017.5	1019.0	1.8	4.0			
	5900	KISV	2	S/F	1209.1	1209.8	4.9	6.0			
19	200	GORK	43	NS	0521.0		399.0		5.0		
	204	IZMI	43	NS	0600.0		360.0	15.0			
	260	ONDR	44	NS	0600.0E	1152.8	550.0D	97.0			
	127	TORN	43	NS	0832.0		420.0		4.0		V=1
	200	HIRA	44	NS	1930.0E	0120.0	830.0D	17.0	7.0		O
	500	HIRA	21	GRF	0400.0	0441.5	85.0	9.0	4.0		WR
	5900	KISV	1	S	0817.2	0817.5	0.6	4.0			
	536	ONDR	8	S	0842.8	0843.0	0.8	58.0			
	204	IZMI	5	S	0937.7	0939.3	1.6	70.0	35.0		
	536	ONDR	8	S	1239.0	1239.1	0.7	169.0			
	245	SVTO	8	S	1659.0E	1659.0	U	310.0			QL=1 ST=2 TYP=3
20	100	GORK	44	NS	0245.0E		106.0D		10.0		
	200	GORK	43	NS	0524.0		216.0		5.0		
	100	GORK	43	NS	0540.0		292.0		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0600.0E		590.0D				
	200	HIRA	44	NS	1930.0E	2037.0	720.0D	33.0	11.0		WR
	5900	KISV	23	GRF	0432.2	0448.6	26.8	8.0			
	9300	KISV	23	GRF	0432.3	0447.2	20.4	7.0			
	5900	KISV	2	S/F	0432.6	0434.0	7.4	15.0			
	15000	KISV	2	S/F	0433.1	0433.6	3.0	10.0			
	9300	KISV	2	S/F	0433.2	0434.0	6.0	16.0			
	9100	GORK	21	GRF	0624.0E	0932.2	207.0D	23.0			
	200	HIRA	42	SER	0700.0	0805.0	67.0	215.0			O
	100	GORK	4	S/F	0700.0	0700.3	1.5	1600.0			
	204	IZMI	5	S	0700.0	0700.6	1.0	150.0	80.0		
	536	ONDR	42	SER	0730.0	0732.8	44.0	121.0			
	430	KRAK	42	SER	0730.5	0730.8	2.5	52.0			
	600	HUMN	8	S	0732.7	0732.9	0.4	69.0	30.0		
	430	KRAK	42	SER	0808.5U	0809.2	3.7D	50.0			
	600	HUMN	8	S	0809.0	0809.2	0.5	90.0	40.0		
	810	KRAK	42	SER	0809.7	0810.0	1.2	38.0			
	5900	KISV	2	S/F	0851.0	0854.2	6.1	6.0			
	3000	POTS	47	GB	0918.0	0922.0	79.0	96.0			
	15000	KISV	2	S/F	0918.3	0921.7	8.7	15.0			
	1470	POTS	47	GB	0918.5	0922.5	157.0	150.0			
	3100	CRIM	45	C	0919.0	0932.0		55.0			
	3200	BERN	4	S/F	0919.0	0921.3	26.0	88.0			
	5200	BERN	4	S/F	0919.0	0921.3	26.0	45.0			
	8400	BERN	4	S/F	0919.0	0921.3	26.0	22.0			
	11800	BERN	4	S/F	0919.0	0921.3	26.0	12.0			
	3100	CRIM	45	C	0919.0	0921.8	31.0	94.0	33.0		
	3013	IZMI	45	C	0919.1	0923.0	5.8	60.0	40.0		

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	3013	IZMI	45	C	0919.1	0923.0	5.8	60.0	40.0		
	5900	KISV	45	C	0919.2	0930.3		16.0			
	5900	KISV	45	C	0919.2	0921.7	20.1	34.0			
	950	GORK	46	C	0919.4	0931.1		30.0			
	950	GORK	29	PBI	0919.4	0950.1	30.7D	13.0			
	950	GORK	46	C	0919.4	0922.3	30.7	98.0			
	9300	KISV	45	C	0919.5	0921.6	27.0	24.0			
	9300	KISV	45	C	0919.5	0931.7		18.0			
	9500	POTS	20	GRF	0919.7	0921.5	30.0D	19.0			
	33	UPIC	49	GB	0919.8		40.2				
	810	KRAK	45	C	0920.0	0932.0		59.0			
	2695	LEAR	4	S/F	0920.0E	0921.0	4.0D	110.0			QL=1 ST=2 TYP=3
	1415	LEAR	4	S/F	0920.0E	0922.0	6.0D	130.0			QL=1 ST=2 TYP=3
	2695	SVTO	4	S/F	0920.0E	0921.0	4.0D	120.0			QL=1 ST=2 TYP=3
	1415	SVTO	4	S/F	0920.0E	0922.0	18.0D	130.0			QL=1 ST=2 TYP=3
	30	POTS	45	C	0920.0	0938.0U	47.0	16000.0D			
	810	KRAK	45	C	0920.0	0925.4		96.0			
	810	KRAK	45	C	0920.0	0922.5	35.5	77.0	32.0		
	536	ONDR	47	GB	0920.0	0926.5	60.0	139.0			
	9100	GORK	1	S	0920.2	0921.6	4.6	21.0			
	650	GORK	46	C	0920.3	0932.0		63.0			
	650	GORK	29	PBI	0920.3	0950.1	29.8D	16.0			
	650	GORK	46	C	0920.3	0926.6		130.0			
	650	GORK	46	C	0920.3	0922.9	29.8	83.0			
	600	HUMN	45	C	0920.5	0926.5	66.0	84.0	18.0		
	4995	LEAR	8	S	0921.0E	0921.0	1.0D	37.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	0921.0E	0921.0	3.0D	8000.0			QL=1 ST=2 TYP=6
	410	SVTO	4	S/F	0921.0E	0928.0	17.0D	170.0			QL=1 ST=2 TYP=5
	204	IZMI	47	GB	0921.0	0923.0	30.0	250.0			
	200	HIRA	48	C	0921.0	0923.1U	8.6	11000.0U	1960.0U		O SUNSET
	430	KRAK	45	C	0921.0	0927.5		210.0D			
	100	GORK	41	F	0921.4	0941.2'		440.0			
	100	GORK	41	F	0921.4	0939.3		660.0			
	100	GORK	41	F	0921.4	0923.8	20.0	200.0			
	127	TORN	27	RF	0921.5	0922.0	18.5	7000.0	80.0		
	234	POTS	45	C	0922.0E	0923.6U	420.0D	11000.0			
	1415	LEAR	4	S/F	0927.0E	0930.0	5.0D	71.0			QL=1 ST=2 TYP=5
	2695	LEAR	4	S/F	0928.0E	0929.0	4.0D	59.0			QL=1 ST=2 TYP=3
	4995	LEAR	8	S	0929.0E	0929.0	U	24.0			QL=1 ST=2 TYP=3
	810	KRAK	29	PBI	0955.5	1007.0	44.0	9.0	6.0		
	3100	CRIM	20	GRF	1001.9	1012.0	58.0	20.0	7.0		
	5900	KISV	23	GRF	1129.1	1152.1	47.0	8.0			
	9500	POTS	21	GRF	1130.0	1144.6	33.5	9.0			
	9300	KISV	23	GRF	1135.3	1149.8	28.2	6.0			
	5900	KISV	2	S/F	1143.7	1149.5	5.8	14.0			
	9300	KISV	2	S/F	1143.7	1144.8	3.5	9.0			
	9500	POTS	4	S/F	1153.4	1154.9	4.1	20.0			
	9300	KISV	2	S/F	1153.5	1154.8	5.0	27.0			
	5900	KISV	2	S/F	1153.7	1154.9	5.3	22.0			
	15000	KISV	2	S/F	1154.3	1154.9	5.7	13.0			
	5900	KISV	2	S/F	1218.5	1221.4	7.9	6.0			
	3200	BERN	3	S	1307.0	1309.0	12.0	21.0			
	5200	BERN	3	S	1307.0	1309.0	12.0	24.0			
	5900	KISV	23	GRF	1307.0	1315.0	28.5	6.0			
	5900	KISV	2	S/F	1307.3	1308.5	7.1	20.0			
	9300	KISV	23	GRF	1307.8	1318.3	33.2	9.0			
	2800	OTTA	20	GRF	1308.0	1309.0	36.0	17.0	8.0		
	9500	POTS	42	SER	1320.0	1327.5	10.8	32.0			
	9300	KISV	1	S	1320.0	1320.6	2.2	18.0			
	5900	KISV	1	S	1320.4	1320.6	2.2	10.0			
	9300	KISV	1	S	1327.0	1327.5	2.0	42.0			
	15000	KISV	2	S/F	1327.0	1327.6	1.4	15.0			
	5900	KISV	1	S	1327.2	1327.5	2.1	15.0			
	536	ONDR	42	SER	1431.0	1514.0	61.0	110.0			
	410	PALE	8	S	2032.0E	2032.0	U	82.0			QL=1 ST=2 TYP=3
	410	SGMR	4	S/F	2032.0E	2032.0	120.0D	240.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2158.0E	2158.0	U	54.0			QL=1 ST=2 TYP=3
21	100	GORK	43	NS	0536.0		237.0		5.0		

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	260	ONDR	44	NS	0600.0E		590.0D				
	127	TORN	44	NS	0620.0E	1258.6	560.0D	300.0	6.0		V=1
	200	HIRA	44	NS	1930.0E		840.0D		8.0		MR
	2695	PENT	45	C	0015.5	0020.4	11.1	168.1	50.0		
	2695	PENT	45	C	0026.6	0029.0	3.3	179.9	54.0		
	2695	PENT	45	C	0032.3	0034.1	3.1	101.6	30.0		
	2695	PENT	45	C	0037.2	0045.3	18.7	125.0	37.0		
	2695	PENT	45	C	0104.0	0110.1	9.9	81.9	25.0		
	2695	PENT	45	C	0120.0	0124.3	24.0	50.6	15.0		
	9100	GORK	2	S/F	0318.3	0319.2	3.6	9.8			
	650	GORK	46	C	0431.0	0432.2		5.0			
	950	GORK	45	C	0431.0	0431.2	3.5	2.5			
	950	GORK	45	C	0431.0	0432.2		1.5			
	650	GORK	46	C	0431.0	0431.3	1.3	6.0			
	5900	KISV	2	S/F	0445.6	0446.5	2.4	4.0			
	204	IZMI	4	S/F	0600.5	0601.0	6.0	40.0			
	3200	BERN	46	C	0634.3	0639.5	8.0	68.0			
	5200	BERN	46	C	0634.3	0639.5	8.0	60.0			
	2950	GORK	46	C	0634.5	0637.0	6.5	39.0			
	2950	GORK	29	PBI	0634.5	0643.0	83.0	19.5			
	2950	GORK	46	C	0634.5	0641.7		94.0			
	3013	IZMI	45	C	0634.5	0639.8	10.5	74.0	40.0		
	5900	KISV	45	C	0634.6	0636.8		67.0			
	5900	KISV	45	C	0634.6	0639.8	11.6	80.0			
	3100	CRIM	45	C	0634.8	0637.0		31.0			
	3100	CRIM	45	C	0634.8	0635.4	7.0	7.1			
	3100	CRIM	29	PBI	0634.8	0641.8	8.0	7.1	2.0		
	3100	CRIM	45	C	0634.8	0639.8		72.0			
	9300	KISV	46	C	0635.0	0637.0		74.0			
	9300	KISV	46	C	0635.0	0639.5	13.5	81.0			
	9300	KISV	46	C	0635.0	0639.7		69.0			
	8800	SVTO	8	S	0636.0E	0636.0	1.0D	75.0			QL=1 ST=2 TYP=3
	8400	BERN	46	C	0636.0	0639.3	5.0	96.0			
	19600	BERN	46	C	0636.0	0639.3	5.0	19.0			
	11800	BERN	46	C	0636.0	0639.3	5.0	64.0			
	9100	GORK	30	PBI	0636.0	0640.3	92.0	20.0			
	9100	GORK	46	C	0636.0	0639.4		80.0			
	950	GORK	21	GRF	0636.0	0641.4	48.3	2.0			
	9100	GORK	46	C	0636.0	0636.9	4.3	68.0			
	15000	KISV	45	C	0638.8U	0658.5		39.0			
	15000	KISV	45	C	0638.8U	0639.6	19.7U	52.0			
	4995	SVTO	8	S	0639.0E	0639.0	1.0D	71.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0639.0E	0639.0	1.0D	87.0			QL=1 ST=2 TYP=3
	2695	SVTO	8	S	0639.0E	0639.0	1.0D	79.0			QL=1 ST=2 TYP=3
	950	GORK	3	S	0639.0	0639.5	1.8	74.0			
	650	GORK	4	S/F	0639.1	0639.4	1.6	38.0			
	9300	KISV	2	S/F	0649.4	0649.8	1.7	20.0			
	9500	POTS	1	S	0649.5	0649.7	1.0	10.0			
	9100	GORK	1	S	0649.5	0649.8	1.7	16.0			
	430	KRAK	42	SER	0739.5	0740.8	5.5	46.0			
	650	GORK	5	S	0739.8	0741.0	1.8	14.0			
	245	SVTO	49	GB	0740.0E	0741.0	1.0D	1000.0			QL=1 ST=2 TYP=6
	536	ONDR	42	SER	0740.0	0801.3	23.0	124.0			
	234	POTS	4	S/F	0740.6	0740.7	1.0	2100.0			
	1470	POTS	1	S	0740.7	0741.1	1.2	5.0			
	810	KRAK	8	S	0740.7	0740.7	0.1	5.0			
	950	GORK	2	S/F	0740.8	0741.1	1.3	8.6			
	204	IZMI	5	S	0741.0	0741.5	0.5	500.0	300.0		
	5900	KISV	22	GRF	0822.3	0843.5	36.2	14.0			
	3100	CRIM	20	GRF	0826.0	0827.8	7.0	8.2	3.0		
	2950	GORK	20	GRF	0826.3	0827.7	9.6	8.6			
	9300	KISV	2	S/F	0847.8	0849.5	3.4	9.0			
	536	ONDR	42	SER	0907.0	0935.6	28.6				
	1470	POTS	4	S/F	0908.8	0909.4	1.3	38.0			
	1415	LEAR	8	S	0909.0E	0909.0	U	120.0			QL=1 ST=2 TYP=3
	1415	SVTO	8	S	0909.0E	0909.0	1.0D	110.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0930.4	0930.6	2.0	6.0			
	1470	POTS	4	S/F	0933.9	0936.1	9.6	21.0			
	410	SGMR	8	S	0935.0E	0936.0	1.0D	420.0			QL=1 ST=2 TYP=3

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	410	SVTO	49	GB	0935.0E	0936.0	1.0D	890.0			QL=1 ST=2 TYP=6
	9500	POTS	4	S/F	0935.1	0936.1	4.9	11.0			
	9300	KISV	2	S/F	0935.5	0936.2	2.1	13.0			
	810	KRAK	2	S/F	0935.5	0935.6	4.5	21.0	2.0		
	3000	POTS	4	S/F	0935.6	0936.1	2.9	25.0			
	5900	KISV	1	S	0935.7	0936.2	2.0	17.0			
	3100	CRIM	3	S	0935.9	0936.0	2.5	25.0	7.0		
	3013	IZMI	5	S	0936.0	0936.1	2.1	16.0	8.0		
	204	IZMI	5	S	0936.0	0936.5	0.6	140.0	70.0		
	536	ONDR	42	SER	1052.0	1148.2	76.0	202.0			
	430	KRAK	42	SER	1052.7	1101.3	9.0	92.0			
	810	KRAK	8	S	1101.1	1101.1	0.1	8.0			
	600	HUMN	4	S/F	1128.0	1128.5	1.0	34.0	10.0		
	9500	POTS	21	GRF	1132.0	1205.4	67.0	9.0			
	3000	POTS	21	GRF	1132.0	1204.5	64.0	10.0			
	600	HUMN	4	S/F	1148.0	1149.0	3.0	95.0	12.0		
	810	KRAK	42	SER	1148.0	1150.2	3.0	28.0			
	9500	POTS	1	S	1148.7	1150.4	4.3	7.0			
	430	KRAK	42	SER	1148.8	1203.2	21.0	170.0			
	3000	POTS	1	S	1148.8	1150.5	2.2	5.0			
	1470	POTS	4	S/F	1149.6	1150.5	2.4	12.0			
	610	SGMR	8	S	1150.0E	1151.0	1.0D	100.0			QL=1 ST=2 TYP=3
	1470	POTS	42	SER	1202.7	1204.4	3.3	6.0			
	234	POTS	4	S/F	1202.9	1204.1	2.7	1100.0			
	245	SGMR	49	GB	1203.0E	1204.0	1.0D	750.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	1203.0E	1204.0	1.0D	540.0			QL=1 ST=3 TYP=6
	9300	KISV	2	S/F	1203.3	1205.2	8.6	12.0			
	5900	KISV	2	S/F	1203.4	1205.2	6.0	11.0			
	3000	POTS	4	S/F	1203.5	1204.4	3.5	10.0			
	9500	POTS	1	S	1204.0	1205.5	3.0	5.0			
	536	ONDR	42	SER	1346.5	1446.0	94.0	177.0			
	2800	OTTA	22	GRF	1408.0	1449.0	200.0	18.3	5.0		
	610	SGMR	8	S	1414.0E	1414.0	U	270.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1414.0E	1414.0	1.0D	75.0			QL=1 ST=2 TYP=3
	600	HUMN	4	S/F	1414.0	1414.5	0.7	100.0	30.0		
	9500	POTS	4	S/F	1414.0	1414.9	4.5	14.0			
	1470	POTS	1	S	1414.1	1414.9	2.9	5.0			
	3000	POTS	4	S/F	1414.5	1414.9	1.5	9.0			
	410	SVTO	8	S	1448.0E	1449.0	1.0D	76.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1449.0E	1449.0	1.0D	3600.0			QL=1 ST=2 TYP=6
	410	SGMR	8	S	1449.0E	1449.0	U	82.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	1449.0E	1449.0	1.0D	2500.0			QL=1 ST=2 TYP=6
	2800	OTTA	3	S	1511.5	1514.0	4.0	33.6	10.0		
	4995	SVTO	8	S	1513.0E	1513.0	1.0D	53.0			QL=1 ST=3 TYP=3
	2695	SVTO	8	S	1513.0E	1514.0	2.0D	50.0			QL=1 ST=3 TYP=3
	610	SVTO	49	GB	1513.0E	1514.0	2.0D	560.0			QL=1 ST=2 TYP=6
	610	SGMR	49	GB	1513.0E	1514.0	527.0D	810.0			QL=1 ST=3 TYP=6
	3200	BERN	4	S/F	1513.3	1514.0	2.5	27.0			
	8400	BERN	4	S/F	1513.3	1513.5	2.5	49.0			
	5200	BERN	4	S/F	1513.3	1513.5	2.5	27.0			
	11800	BERN	4	S/F	1513.3	1513.5	2.5	60.0			
	600	HUMN	4	S/F	1513.5	1513.8	0.6	480.0			
	2800	OTTA	3	S	1653.5	1654.7	2.8	12.8	3.0		
	2800	OTTA	3	S	1736.0	1737.0	4.0	14.9	5.0		
	610	PALE	8	S	1736.0E	1737.0	1.0D	290.0			QL=1 ST=2 TYP=3
	610	SVTO	8	S	1736.0E	1737.0	1.0D	310.0			QL=1 ST=2 TYP=3
	600	HUMN	4	S/F	1736.8	1737.0	0.8	65.0	20.0		
	2800	OTTA	3	S	1757.0	1802.0	8.0	128.0	48.0		
	15400	PALE	8	S	1800.0E	1800.0	1.0D	150.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	1800.0E	1800.0	2.0D	140.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	1800.0E	1800.0	1.0D	250.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	1800.0E	1800.0	1.0D	150.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1800.0E	1800.0	1.0D	440.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1800.0E	1800.0	1.0D	1700.0			QL=1 ST=2 TYP=6
	410	SGMR	8	S	1800.0E	1800.0	1.0D	370.0			QL=1 ST=2 TYP=3
	610	SGMR	49	GB	1800.0E	1800.0	U	1100.0			QL=1 ST=2 TYP=6
	15400	SGMR	8	S	1800.0E	1800.0	2.0D	160.0			QL=1 ST=2 TYP=3
	8800	SGMR	8	S	1800.0E	1800.0	2.0D	300.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	1800.0E	1800.0	1.0D	210.0			QL=1 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	1415	SGMR	8	S	1800.0E	1800.0	1.0D	180.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	1804.0	1845.0	120.0	12.8	4.0		
	2800	OTTA	3	S	1852.0	1853.0	6.0	45.9	17.0		
	410	PALE	8	S	1853.0E	1853.0	U	66.0			QL=1 ST=3 TYP=3
	610	PALE	49	GB	1853.0E	1853.0	U	810.0			QL=1 ST=3 TYP=6
	610	SGMR	8	S	1853.0E	1853.0	U	300.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1853.0E	1853.0	U	86.0			QL=1 ST=3 TYP=3
	2695	SGMR	8	S	1853.0E	1853.0	U	45.0			QL=1 ST=3 TYP=3
	4995	SGMR	8	S	1853.0E	1853.0	U	59.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	1928.0E	1928.0	1.0D	130.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	2113.2	2114.5	3.3	85.0			O
	2800	OTTA	3	S	2246.0	2247.0	5.0	47.2	17.0		
	500	HIRA	42	SER	2246.0	2253.3	9.0	11.0			WR
	2695	SGMR	8	S	2247.0E	2247.0	1.0D	59.0			QL=1 ST=2 TYP=3
	4995	SGMR	8	S	2247.0E	2247.0	U	62.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2249.0E	2249.0	U	75.0			QL=1 ST=2 TYP=3
	2695	PENT	45	C	2351.0	2429.0	105.0D	179.9	54.0		
22	100	GORK	44	NS	0248.0E		270.0D		15.0		
	200	GORK	43	NS	0457.0		423.0		5.0		
	127	TORN	44	NS	0620.0E		560.0D		16.0		V=0
	100	GORK	43	NS	0725.5		274.0		5.0		
	200	HIRA	44	NS	1930.0E	0743.0	840.0D	20.0	11.0		MR
	100	HIRA	44	NS	1930.0E	0734.0	840.0D	70.0	20.0		
	500	HIRA	48	C	0006.0	0041.0		2950.0			WR
	500	HIRA	48	C	0006.0	0108.0		14000.0			SL
	500	HIRA	48	C	0006.0	0138.5	150.0	21000.0	2400.0		SL
	200	HIRA	48	C	0007.9	0138.0	132.0	2200.0	270.0		ML
	200	HIRA	48	C	0007.9	0028.7		225.0			WR
	2695	LEAR	4	S/F	0015.0E	0029.0	43.0D	160.0			QL=1 ST=2 TYP=5
	4995	LEAR	4	S/F	0015.0E	0020.0	54.0D	140.0			QL=1 ST=2 TYP=3
	8800	LEAR	20	GRF	0015.0E	0042.0	54.0D	78.0			QL=1 ST=2 TYP=2
	245	PALE	49	GB	0016.0E	0138.0	82.0D	7300.0			QL=1 ST=2 TYP=7
	410	PALE	49	GB	0016.0E	0138.0	100.0D	20000.0			QL=1 ST=2 TYP=7
	100	HIRA	48	C	0016.5	0152.1		310.0			
	100	HIRA	48	C	0016.5	0040.3	404.0	490.0	77.0		
	100	HIRA	48	C	0016.5	0049.6		430.0			
	2695	PALE	20	GRF	0017.0E	0020.0	18.0D	160.0			QL=1 ST=2 TYP=2
	1415	PALE	49	GB	0018.0E	0056.0	41.0D	2500.0			QL=1 ST=2 TYP=7
	8800	PALE	20	GRF	0018.0E	0043.0	46.0D	98.0			QL=1 ST=2 TYP=2
	610	PALE	49	GB	0018.0E	0137.0	96.0D	12000.0			QL=1 ST=2 TYP=7
	1415	LEAR	49	GB	0018.0E	0042.0	1422.0D	1500.0			QL=1 ST=1 TYP=7
	2840	PEKG	45	C	0018.0	0020.5	19.0	201.0			
	15400	LEAR	20	GRF	0019.0E	0042.0	50.0D	67.0			QL=1 ST=2 TYP=2
	15400	PALE	20	GRF	0028.0E	0044.0	22.0D	84.0			QL=1 ST=2 TYP=2
	2840	PEKG	27	RF	0042.0	0048.5	12.0	79.5			
	2695	LEAR	4	S/F	0111.0E	0111.0	4.0D	58.0			QL=1 ST=2 TYP=3
	1415	LEAR	49	GB	0111.0E	0124.0	39.0D	1300.0			QL=1 ST=2 TYP=7
	245	PALE	8	S	0232.0E	0232.0	2.0D	55.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0318.0E	0318.0	U	89.0			QL=1 ST=2 TYP=3
	2950	GORK	1	S	0334.2	0334.5	0.6	3.9			
	9100	GORK	20	GRF	0430.0	0434.5	10.8	9.0			
	650	GORK	1	S	0434.0	0434.1	0.3	1.7			
	5900	KISV	2	S/F	0434.0	0434.6	4.5	11.0			
	9300	KISV	2	S/F	0434.0	0434.7	4.5	10.0			
	9100	GORK	21	GRF	0454.5	1020.7	371.0	24.0			
	5900	KISV	2	S/F	0516.4	0517.1	1.7	3.0			
	9100	GORK	1	S	0545.6	0546.5	1.4	7.2			
	9300	KISV	2	S/F	0545.7	0546.7	2.2	10.0			
	5900	KISV	2	S/F	0545.9	0546.7	1.6	5.0			
	260	ONDR	41	F	0600.0E		590.0D				
	9300	KISV	45	C	0600.0	0601.4	6.0	18.0			
	5900	KISV	45	C	0600.0	0601.5	5.0	12.0			
	5900	KISV	45	C	0600.0	0603.8		8.0			
	9300	KISV	45	C	0600.0	0603.9		12.0			
	950	GORK	4	S/F	0600.8	0601.2	2.9	206.0			
	650	GORK	4	S/F	0600.9	0601.1	2.8	520.0			
	15000	KISV	2	S/F	0601.2	0601.4	1.0	12.0			
	9100	GORK	1	S	0603.2	0603.6	1.2	7.2			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
22	15000	KISV	2	S/F	0603.5	0603.7	0.5	6.0			
	5900	KISV	2	S/F	0618.5	0618.8	0.7	6.0			
	100	GORK	47	GB	0625.4	0628.1	3.0	21540.0			
	200	HIRA	46	C	0625.5	0626.4	5.3	980.0	270.0		WR
	234	POTS	4	S/F	0625.8	0627.6	6.0	2100.0			
	100	HIRA	46	C	0625.9		3.1	1000.0D			
	200	GORK	4	S/F	0625.9	0628.0	4.6	700.0			
	204	IZMI	41	F	0626.0	0628.0	4.0	4500.0			
	4995	LEAR	8	S	0626.0E	0628.0	2.0D	110.0			QL=1 ST=2 TYP=3
	2695	LEAR	8	S	0626.0E	0628.0	2.0D	39.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	0626.0E	0627.0	4.0D	1200.0			QL=1 ST=2 TYP=6
	5900	KISV	4	S/F	0626.0	0628.2	3.7	102.0			
	2840	PEKG	45	C	0626.0	0628.6	6.0	42.0			
	3100	CRIM	45	C	0626.1	0628.0		43.4			
	3100	CRIM	45	C	0626.1	0627.0	6.0	13.2			
	8400	BERN	4	S/F	0626.2	0628.0	3.0	66.0			
	5200	BERN	4	S/F	0626.2	0628.0	3.0	102.0			
	3200	BERN	4	S/F	0626.2	0628.0	3.0	42.0			
	3013	IZMI	7	C	0626.4	0628.0	9.0	45.0	30.0		
	500	HIRA	46	C	0626.5	0633.0	6.5	41.0			WL
	650	GORK	4	S/F	0626.5	0628.3	4.8	42.0			
	950	GORK	4	S/F	0626.5	0628.4	4.8	52.0			
	950	GORK	29	PBI	0626.5	0631.4	6.5U	1.0			
	650	GORK	29	PBI	0626.5	0631.4	8.5	1.3			
	30	POTS	4	S/F	0626.6	0627.4	4.6	14000.0D			
	33	UPIC	46	C	0626.7		3.3				
	9300	KISV	4	S/F	0626.8	0628.3	7.2	61.0			
	600	HUMN	3	S	0627.0	0628.0	3.5	15.0	7.0		
	4995	SVTO	8	S	0627.0E	0628.0	1.0D	95.0			QL=1 ST=2 TYP=3
	9100	GORK	3	S	0627.4	0628.0	2.0	54.0			
	1415	LEAR	8	S	0628.0E	0628.0	1.0D	51.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	0628.0E	0628.0	U	110.0			QL=1 ST=2 TYP=3
	1470	POTS	3	S	0649.1	0649.8	0.9	9.0			
	950	GORK	4	S/F	0649.4	0649.6	0.6	540.0			
	3100	CRIM	1	S	0649.6	0649.7	0.5	4.8	1.0		
	9300	KISV	1	S	0649.7	0650.0	0.7	4.0			
	5900	KISV	2	S/F	0649.8	0649.9	2.3	7.0			
	3100	CRIM	1	S	0652.9	0654.0	3.0	7.2	2.0		
	5900	KISV	2	S/F	0711.3	0712.0	2.4	3.0			
	5900	KISV	46	C	0751.0	0753.3		5.0			
	5900	KISV	46	C	0751.0	0752.4		7.0			
	5900	KISV	46	C	0751.0	0756.6	7.6	9.0			
	15000	KISV	2	S/F	0755.2	0757.6	3.8	6.0			
	9300	KISV	2	S/F	0755.5	0756.7	3.5	9.0			
	100	HIRA	45	C	0804.3	0804.6	1.7	950.0			
	33	UPIC	4	S/F	0805.7	0805.8	0.9				
	430	KRAK	42	SER	0816.8	0822.4	5.7	45.0			
	810	KRAK	42	SER	0817.0	0817.6	1.2	65.0			
	245	SGMR	8	S	0956.0E	0956.0	U	280.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0956.0E	0956.0	1.0D	240.0			QL=1 ST=2 TYP=3
	234	POTS	8	S	0956.3	0956.6	0.4	150.0			
	204	IZMI	5	S	0956.3	0956.8	0.5	200.0	100.0		
	33	UPIC	42	SER	1004.6	1021.9	39.5				
	9300	KISV	23	GRF	1014.8	1022.6	21.2	7.0			
	9500	POTS	20	GRF	1014.9	1017.5	16.0D	20.0			
	11800	BERN	3	S	1015.0	1017.3	10.0	12.0			
	8400	BERN	3	S	1015.0	1017.3	10.0	27.0			
	3200	BERN	3	S	1015.0	1016.5	10.0	9.0			
	5200	BERN	3	S	1015.0	1016.5	10.0	26.0			
	9100	GORK	1	S	1015.7	1017.5	2.8	20.0			
	9300	KISV	2	S/F	1015.9	1017.7	6.7	24.0			
	3100	CRIM	20	GRF	1016.0	1016.8	7.0	6.3	1.0		
	1470	POTS	3	S	1120.2	1120.7	0.8	9.0			
	3100	CRIM	1	S	1143.1	1143.8	1.0	4.4	1.0		
	1470	POTS	3	S	1143.4	1143.9	1.6	12.0			
	536	ONDR	42	SER	1150.0	1150.3	70.0	90.0			
	536	ONDR	42	SER	1448.0	1449.4	12.0	85.0			
	2800	OTTA	20	GRF	1506.0	1515.5	125.0	8.4	4.0		
	4995	SGMR	4	S/F	1519.0E	1523.0	14.0D	220.0			QL=1 ST=2 TYP=3

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
22	2800	OTTA	3	S	1519.5	1523.5	9.0	134.7	40.0		
	8800	SGMR	4	S/F	1520.0E	1523.0	13.0D	170.0			QL=1 ST=2 TYP=3
	2695	SGMR	4	S/F	1521.0E	1523.0	6.0D	130.0			QL=1 ST=2 TYP=3
	8400	BERN	3	S	1521.0	1524.2	6.0	136.0			
	19600	BERN	3	S	1521.0	1524.2	6.0	24.0			
	11800	BERN	3	S	1521.0	1524.2	6.0	80.0			
	2800	OTTA	29	PBI	1528.5	1528.5	96.0	17.7	8.0		
	245	PALE	8	S	1701.0E	1702.0	1.0D	220.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1702.0E	1702.0	U	200.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1702.0E	1702.0	U	170.0			QL=1 ST=2 TYP=3
	2800	OTTA	40	F	1830.0		300.0	8.0			
	245	PALE	49	GB	1939.0E	1940.0	1.0D	710.0			QL=1 ST=2 TYP=6
	410	PALE	49	GB	1939.0E	1939.0	1.0D	650.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	1939.0E	1940.0	1.0D	710.0			QL=1 ST=2 TYP=6
	410	SGMR	49	GB	1939.0E	1939.0	1.0D	520.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	2100.0E	2101.0	1.0D	300.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2101.0E	2101.0	U	250.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2255.0E	2255.0	U	250.0			QL=1 ST=2 TYP=3
23	100	GORK	44	NS	0236.0E		570.0D		10.0		
	200	GORK	44	NS	0509.0E		411.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	260	ONDR	44	NS	0600.0E	0911.0	590.0D	58.0			
	127	TORN	44	NS	0620.0E	0838.6	560.0D	1300.0	45.0		V=1
	245	SGMR	44	NS	1016.0E	1052.0	824.0D	92.0			QL=1 ST=3 TYP=1
	200	HIRA	44	NS	1930.0E	0823.0	840.0D	44.0	23.0		MR
	100	HIRA	44	NS	1930.0E	0747.0	840.0D	310.0	128.0		
	100	HIRA	42	SER	0022.4	0034.0	27.7	980.0			
	200	HIRA	42	SER	0033.0	0033.9	18.5	430.0			O
	500	HIRA	42	SER	0033.6	0034.5	19.0	34.0			ML
	245	PALE	8	S	0034.0E	0034.0	1.0D	470.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0047.0E	0048.0	2.0D	240.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	0051.0E	0052.0	1.0D	64.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0052.0E	0052.0	U	170.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0059.0E	0059.0	1.0D	96.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0103.0E	0103.0	U	120.0			QL=1 ST=2 TYP=3
	15400	LEAR	8	S	0145.0E	0146.0	1.0D	88.0			QL=1 ST=2 TYP=3
	2695	LEAR	4	S/F	0145.0E	0146.0	4.0D	130.0			QL=1 ST=2 TYP=3
	4995	LEAR	4	S/F	0145.0E	0146.0	5.0D	190.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0145.0E	0146.0	3.0D	140.0			QL=1 ST=2 TYP=3
	1415	LEAR	8	S	0145.0E	0146.0	1.0D	94.0			QL=1 ST=2 TYP=3
	1415	PALE	8	S	0145.0E	0146.0	1.0D	140.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0145.0E	0146.0	1.0D	160.0			QL=1 ST=2 TYP=3
	2695	PALE	4	S/F	0145.0E	0146.0	3.0D	130.0			QL=1 ST=2 TYP=3
	2840	PEKG	45	C	0145.0	0146.2	5.0	152.4			
	245	PALE	8	S	0152.0E	0152.0	U	130.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	0243.0E	0244.0	3.0D	110.0			QL=1 ST=2 TYP=3
	9100	GORK	21	GRF	0308.7	0817.4	478.0	22.0			
	245	PALE	8	S	0328.0E	0328.0	U	160.0			QL=1 ST=2 TYP=3
	500	HIRA	42	SER	0357.2	0400.5	5.0	510.0			WL
	610	PALE	8	S	0400.0E	0400.0	U	74.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0440.2	0442.2	5.1	9.0			
	9300	KISV	2	S/F	0441.4	0442.3	5.1	6.0			
	5900	KISV	23	GRF	0503.0	0505.0	19.5	3.0			
	9300	KISV	23	GRF	0506.0	0514.0	24.0	6.0			
	5900	KISV	2	S/F	0508.6	0509.2	5.4	6.0			
	9300	KISV	2	S/F	0508.6	0509.2	3.6	10.0			
	15000	KISV	2	S/F	0508.7	0509.2	3.0	6.0			
	204	IZMI	5	S	0614.0	0614.6	1.0	200.0			
	1470	POTS	21	GRF	0659.0	0735.5	176.0	6.0			
	3000	POTS	21	GRF	0700.0	0811.0	175.0	22.0			
	3000	POTS	4	S/F	0703.0	0707.4	6.2	27.0			
	5900	KISV	23	GRF	0703.8	0733.3	71.2	13.0			
	9500	POTS	21	GRF	0704.5	0808.0	156.0	14.0			
	15000	KISV	23	GRF	0704.6	0738.2	67.4	12.0			
	3100	CRIM	3	S	0705.0	0707.2	4.0	19.0	6.0		
	3013	IZMI	5	S	0705.0	0707.2	5.0	16.0	8.0		
	9500	POTS	4	S/F	0705.0	0707.3	8.0	11.0			
	9300	KISV	23	GRF	0705.1	0733.3	85.9	9.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
23	9300	KISV	2	S/F	0705.1	0707.6	7.8	12.0			
	5900	KISV	2	S/F	0705.3	0707.6	3.8	16.0			
	950	GORK	2	S/F	0705.4	0707.6	8.3	7.6			
	9100	GORK	1	S	0705.5	0707.0	3.2	13.6			
	1470	POTS	4	S/F	0705.5	0706.9	3.4	9.0			
	650	GORK	4	S/F	0705.6	0706.9	4.8	14.0			
	810	KRAK	2	S/F	0705.7	0706.3	2.3	19.0	2.0		
	430	KRAK	8	S	0723.5	0724.4	1.5	19.0			
	500	HIRA	8	S	0748.3	0748.7	0.7	36.0			O
	810	KRAK	8	S	0748.5	0749.0	0.5	5.0			
	430	KRAK	8	S	0748.5	0748.7	0.5	40.0			
	9500	POTS	3	S	0749.5	0750.1	6.0	31.0			
	9300	KISV	1	S	0749.6	0750.0	5.7	34.0			
	9100	GORK	1	S	0749.6	0750.1	1.3	33.0			
	5900	KISV	1	S	0749.7	0750.0	4.3	16.0			
	15000	KISV	2	S/F	0749.7	0750.2	5.3	24.0			
	430	KRAK	41	F	0753.5	0754.4	1.5	9.0	2.0		
	3100	CRIM	1	S	0810.0	0810.4	1.5	5.5	1.0		
	200	HIRA	42	SER	0839.3	0839.8	9.2	870.0			O
	245	SVTO	49	GB	0840.0E	0840.0	U	1600.0			QL=1 ST=2 TYP=6
	204	IZMI	41	F	0840.0	0840.5	9.0	1500.0			
	430	KRAK	8	S	0840.2	0840.3	0.2	16.0			
	5900	KISV	2	S/F	0840.3	0840.6	0.8	6.0			
	245	SVTO	8	S	0910.0E	0911.0	1.0D	120.0			QL=1 ST=3 TYP=3
	204	IZMI	5	S	0911.0	0911.6	0.6	160.0	80.0		
	100	GORK	41	F	1014.1	1052.0		2900.0			
	100	GORK	41	F	1014.1	1045.2		2600.0			
	100	GORK	41	F	1014.1	1055.6		5660.0			
	100	GORK	41	F	1014.1	1040.6	48.9	2500.0			
	430	KRAK	8	S	1120.0	1120.0	0.1	12.0			
	100	GORK	41	F	1154.0	1156.1	12.0	560.0			
	100	GORK	41	F	1154.0	1200.5		320.0			
	2800	OTTA	40	F	1200.0	2600.0		8.0			
	536	ONDR	42	SER	1205.7		140.0				
	3000	POTS	4	S/F	1250.8	1253.3	3.7	15.0			
	1470	POTS	1	S	1251.0	1253.0	4.8	4.0			
	3100	CRIM	1	S	1251.0	1253.3	3.0	13.5	3.0		
	9500	POTS	4	S/F	1251.1	1253.0	2.9	11.0			
	5900	KISV	22	GRF	1251.2	1253.4	47.6	12.0			
	9300	KISV	22	GRF	1251.5	1253.5	62.0	13.0			
	245	SGMR	8	S	1313.0E	1313.0	2.0D	66.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1313.0E	1313.0	U	62.0			QL=1 ST=2 TYP=3
	9500	POTS	4	S/F	1403.0	1404.2	4.4	15.0			
24	100	GORK	44	NS	0241.0E		559.0D		25.0		
	200	GORK	44	NS	0500.0E		280.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0600.0E	0853.6	590.0D				
	127	TORN	44	NS	0620.0E		560.0D		190.0		V=1
	200	HIRA	44	NS	1930.0E		840.0D	17.0	12.0		O
	5900	KISV	2	S/F	0535.4	0536.8	3.5	3.0			
	5900	KISV	2	S/F	0546.2	0550.6	5.6	6.0			
	5900	KISV	2	S/F	0610.7	0611.8	5.7	7.0			
	9100	GORK	1	S	0610.9	0611.8	2.7	6.6			
	9300	KISV	2	S/F	0611.3	0611.8	1.5	6.0			
	5900	KISV	2	S/F	0731.7	0733.3	2.8	5.0			
	536	ONDR	42	SER	0745.7	0807.3	22.0	123.0			
	950	GORK	8	S	0754.9	0755.0	0.5	46.0			
	810	KRAK	42	SER	0755.2	0755.6	4.5	18.0			
	5900	KISV	2	S/F	0840.6	0841.4	1.2	7.0			
	3100	CRIM	1	S	0840.6	0841.5	1.0	5.5	2.0		
	9300	KISV	2	S/F	0847.5	0849.2	2.9	5.0			
	5900	KISV	2	S/F	0847.7	0848.4	5.3	13.0			
	3100	CRIM	1	S	0848.0	0848.4	0.5	3.3	1.0		
	650	GORK	22	GRF	0855.6E	0930.8	51.6U	7.4			
	950	GORK	22	GRF	0901.1	0930.8	41.1	4.0			
	5900	KISV	2	S/F	0906.4	0906.7	1.1	3.0			
	5900	KISV	2	S/F	0909.4	0910.1	3.0	5.0			
	9300	KISV	2	S/F	0909.7	0910.2	0.7	4.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
24	536	ONDR	41	F	0910.0	0931.4	25.0	22.0			
	810	KRAK	40	F	0926.5	0932.3	19.5	10.0	2.0		
	5900	KISV	2	S/F	0953.4	0953.9	1.7	8.0			
	9300	KISV	2	S/F	0953.5	0953.8	1.0	5.0			
	3100	CRIM	1	S	0954.0	0954.4	1.5	4.0	1.0		
	810	KRAK	8	S	1102.5	1102.9	0.5	12.0			
	9100	GORK	1	S	1119.2	1120.1	3.0	4.9			
	536	ONDR	42	SER	1122.3	1203.8	43.0	117.0			
	5900	KISV	2	S/F	1154.0	1155.5	2.8	3.0			
	5900	KISV	22	GRF	1157.7	1201.8	22.7	6.0			
	2800	OTTA	22	GRF	1341.0	1349.0	210.0	16.2	8.0		
	1470	POTS	20	GRF	1341.5	1357.3	68.0D	3.0			
	536	ONDR	42	SER	1343.7	1343.8	30.0	44.0			
	9300	KISV	23	GRF	1344.0	1349.0	41.3	36.0			
	9500	POTS	20	GRF	1344.6	1349.0	64.0D	25.0			
	5200	BERN	4	S/F	1345.0	1349.0	60.0	37.0			
	3200	BERN	4	S/F	1345.0	1349.0	60.0	16.0			
	8400	BERN	4	S/F	1345.0	1349.0	60.0	27.0			
	11800	BERN	4	S/F	1345.0	1349.0	60.0	19.0			
	3000	POTS	20	GRF	1345.0	1349.0	64.0D	16.0			
	5900	KISV	4	S/F	1345.2	1349.0	4.5	42.0			
	5900	KISV	23	GRF	1345.2	1350.4	29.0	29.0			
	410	SGMR	20	GRF	1509.0E	1509.0	U	59.0			QL=/ ST=2 TYP=2
	8800	SGMR	8	S	1542.0E	1542.0	U	81.0			QL=/ ST=2 TYP=3
	2800	OTTA	40	F	1750.0	1923.0	180.0	15.8	6.0		
	600	HUMN	4	S/F	1800.7	1801.0	0.7	60.0	15.0		
	245	PALE	49	GB	1927.0E	1927.0	U	1400.0			QL=1 ST=3 TYP=6
	245	SGMR	49	GB	1927.0E	1927.0	U	1200.0			QL=1 ST=2 TYP=6
	245	SGMR	4	S/F	1948.0E	1949.0	4.0D	120.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1949.0E	1949.0	U	140.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1951.0E	1951.0	U	120.0			QL=1 ST=2 TYP=3
	410	PALE	8	S	1957.0E	1958.0	1.0D	130.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1958.0E	1958.0	1.0D	1000.0			QL=1 ST=2 TYP=6
	410	SGMR	8	S	1958.0E	1958.0	1.0D	100.0			QL=1 ST=2 TYP=3
	2800	OTTA	4	S/F	2123.0	2130.0	9.0	20.3	8.0		
	610	PALE	49	GB	2129.0E	2129.0	1.0D	560.0			QL=1 ST=3 TYP=6
	610	SGMR	49	GB	2129.0E	2129.0	2.0D	630.0			QL=1 ST=3 TYP=6
	2800	OTTA	4	S/F	2136.0	2139.0	22.0	57.5	17.0		
	4995	SGMR	4	S/F	2137.0E	2138.0	5.0D	87.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	2137.0E	2137.0	1.0D	53.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	2138.0E	2138.0	1.0D	61.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	2138.0E	2138.0	U	53.0			QL=1 ST=2 TYP=3
	8800	SGMR	4	S/F	2138.0E	2138.0	4.0D	89.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2152.0E	2153.0	1.0D	160.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2223.0E	2223.0	U	360.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2223.0E	2223.0	1.0D	380.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2226.0E	2226.0	U	130.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2229.0E	2229.0	U	150.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	2230.0E	2230.0	1.0D	370.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	2233.0E	2234.0	1.0D	160.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2234.0E	2234.0	U	98.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2234.0E	2234.0	U	150.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	2259.0E	2259.0	U	1200.0			QL=1 ST=2 TYP=6
	245	SGMR	49	GB	2259.0E	2259.0	1.0D	980.0			QL=1 ST=2 TYP=6
	245	PALE	8	S	2313.0E	2313.0	U	390.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2313.0E	2313.0	U	270.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	2323.0E	2323.0	U	150.0			QL=1 ST=2 TYP=3
25	100	GORK	44	NS	0251.0E		549.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	20.0			
	127	TORN	44	NS	0620.0E	1051.3	560.0D	550.0	25.0		V=1
	245	SGMR	44	NS	1029.0E	1029.0	214.0D	110.0			QL=1 ST=2 TYP=1
	410	PALE	8	S	0127.0E	0128.0	1.0D	140.0			QL=1 ST=2 TYP=3
	9100	GORK	23	GRF	0254.4	1040.9	549.0D	22.0			
	245	PALE	8	S	0349.0E	0349.0	U	320.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0349.0E	0349.0	U	200.0			QL=1 ST=2 TYP=3
	650	GORK	2	S/F	0411.2	0411.5	3.0	5.0			
	950	GORK	46	C	0411.3	0413.8		2.5			
	950	GORK	46	C	0411.3	0411.9	2.9	5.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
25	9300	KISV	22	GRF	0521.9	0553.9	43.7	9.0			
	5900	KISV	22	GRF	0526.8	0533.8	35.0	10.0			
┌	9300	KISV	2	S/F	0556.5	0556.9	3.3	3.0			
└	5900	KISV	2	S/F	0556.6	0557.0	1.6	3.0			
┌	245	SVTO	8	S	0606.0E	0608.0	2.0D	100.0			QL=1 ST=2 TYP=3
├	650	GORK	2	S/F	0606.8	0609.0	4.3	7.0			
├	950	GORK	2	S/F	0606.8	0610.2	4.4	5.8			
└	5900	KISV	2	S/F	0607.4	0609.8	3.6	3.0			
┌	234	POTS	4	S/F	0622.7	0623.5	1.3	100.0			
├	245	SVTO	8	S	0623.0E	0623.0	U	97.0			QL=1 ST=2 TYP=3
├	650	GORK	8	S	0623.3	0623.5	0.5	41.0			
└	950	GORK	8	S	0623.3	0623.7	0.6	22.0			
┌	650	GORK	2	S/F	0637.3	0637.9	1.6	9.5			
└	950	GORK	2	S/F	0637.5	0637.8	1.5	4.0			
┌	5900	KISV	2	S/F	0647.6	0648.1	1.4	2.0			
└	9300	KISV	2	S/F	0647.7	0648.1	2.1	3.0			
┌	5900	KISV	2	S/F	0716.9	0717.8	4.3	3.0			
└	9300	KISV	2	S/F	0717.5	0717.9	1.4	3.0			
	430	KRAK	8	S	0733.8	0733.8	0.1	14.0			
┌	5900	KISV	2	S/F	0742.1	0743.0	3.8	3.0			
└	9300	KISV	2	S/F	0742.1	0742.9	2.4	4.0			
┌	5900	KISV	45	C	0808.1	0810.1	5.3	6.0			
├	5900	KISV	45	C	0808.1	0809.3		4.0			
└	9300	KISV	2	S/F	0809.6	0810.1	1.9	6.0			
	9300	KISV	2	S/F	0817.2	0817.7	2.0	4.0			
	5900	KISV	2	S/F	0820.0	0820.3	1.0	4.0			
┌	9500	POTS	20	GRF	0821.0	0822.3	9.0	8.0			
├	5900	KISV	2	S/F	0821.5	0822.2	1.7	4.0			
└	9300	KISV	45	C	0821.5	0822.3	5.6	7.0			
	9300	KISV	45	C	0821.5	0824.7		5.0			
	9300	KISV	2	S/F	0837.8	0838.8	4.0	5.0			
	9300	KISV	2	S/F	0909.0	0911.1	3.9	6.0			
	5900	KISV	2	S/F	0935.3	0936.3	6.9	4.0			
	950	GORK	21	GRF	0947.6	1106.0	132.0D	5.0			
	650	GORK	41	F	1008.3U	1058.2		18.0			
	650	GORK	41	F	1008.3U	1023.7		1.6			
┌	650	GORK	41	F	1008.3U	1016.9		3.6			
├	650	GORK	41	F	1008.3U	1035.9		5.6			
├	650	GORK	41	F	1008.3U	1014.9	517.0U	3.6			
└	5900	KISV	2	S/F	1013.1	1016.2	5.6	4.0			
┌	430	KRAK	42	SER	1013.2	1052.4U		90.0D			
└	430	KRAK	42	SER	1013.2	1050.5U	52.0D	97.0D			
┌	9300	KISV	2	S/F	1015.7	1016.3	7.4	7.0			
└	950	GORK	1	S	1016.7	1016.9	0.5	2.6			
┌	245	SGMR	8	S	1020.0E	1020.0	1.0D	95.0			QL=1 ST=2 TYP=3
└	245	SVTO	8	S	1020.0E	1020.0	1.0D	72.0			QL=1 ST=3 TYP=3
┌	245	SGMR	8	S	1023.0E	1023.0	2.0D	90.0			QL=1 ST=2 TYP=3
├	810	KRAK	1	S	1023.3	1023.5	0.7	5.0	2.0		
└	950	GORK	1	S	1023.5	1023.7	0.5	4.7			
	245	SVTO	8	S	1029.0E	1029.0	1.0D	78.0			QL=1 ST=2 TYP=3
	9300	KISV	23	GRF	1031.8	1046.0	42.2	10.0			
┌	5900	KISV	4	S/F	1034.5	1038.0	7.5	79.0			
│	5900	KISV	23	GRF	1034.5	1042.0	44.5	10.0			
│	950	GORK	2	S/F	1035.5	1035.9	0.9	6.8			
│	2950	GORK	3	S	1037.0	1040.0	3.4	118.0			
├	4995	SGMR	8	S	1037.0E	1038.0	1.0D	51.0			QL=1 ST=2 TYP=3
├	15400	SGMR	8	S	1037.0E	1038.0	1.0D	91.0			QL=1 ST=2 TYP=3
├	8800	SGMR	8	S	1037.0E	1038.0	1.0D	81.0			QL=1 ST=2 TYP=3
├	8800	SVTO	8	S	1037.0E	1038.0	1.0D	94.0			QL=1 ST=2 TYP=3
│	2950	GORK	30	PBI	1037.0	1041.5	44.0	7.8			
├	9300	KISV	4	S/F	1037.0	1037.9	8.8	96.0			
├	15000	KISV	2	S/F	1037.3	1038.0	8.7	43.0			
├	3013	IZMI	5	S	1037.4	1038.0	3.0	34.0	15.0		
├	3200	BERN	3	S	1037.5	1038.0	1.5	34.0			
├	11800	BERN	3	S	1037.5	1038.0	1.5	98.0			
├	8400	BERN	3	S	1037.5	1038.0	1.5	85.0			
├	5200	BERN	3	S	1037.5	1038.0	1.5	54.0			
├	19600	BERN	3	S	1037.5	1038.0	1.5	59.0			
├	9100	GORK	3	S	1037.5	1038.0	3.0	98.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
25	3100	CRIM	3	S	1037.7	1038.3	2.0	33.0	10.0		
	4995	SVTO	8	S	1038.0E	1038.0	U	61.0			QL=1 ST=2 TYP=3
	15400	SVTO	8	S	1038.0E	1038.0	U	88.0			QL=1 ST=2 TYP=3
	245	SGMR	49	GB	1050.0E	1050.0	1.0D	3100.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	1050.0E	1050.0	1.0D	2200.0			QL=1 ST=2 TYP=6
	810	KRAK	42	SER	1050.0	1058.0	10.2	21.0			
	200	GORK	41	F	1050.0	1053.3	23.0	270.0			
	200	GORK	41	F	1050.0	1057.6		270.0			
	234	POTS	42	SER	1050.0	1050.7	22.7	1300.0			
	950	GORK	1	S	1050.2	1051.3	2.8	2.0			
	9300	KISV	2	S/F	1050.2	1050.7	1.4	13.0			
	5900	KISV	2	S/F	1050.2	1050.7	2.2	24.0			
	2950	GORK	2	S/F	1050.3	1050.8	2.9	3.8			
	9100	GORK	1	S	1050.6	1050.7	0.8	13.6			
	5900	KISV	46	C	1055.0	1058.1	5.5	15.0			
	1470	POTS	42	SER	1055.0	1105.2	25.0	5.0			
	950	GORK	46	C	1055.9	1056.2	4.5	6.0			
	950	GORK	46	C	1055.9	1058.3		12.0			
	5900	KISV	46	C	1056.1			6.0			
	9500	POTS	21	GRF	1056.5	1110.2	37.5	8.0			
	9500	POTS	4	S/F	1056.6	1058.0	3.4	15.0			
	245	SGMR	8	S	1057.0E	1057.0	2.0D	340.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1057.0E	1057.0	1.0D	280.0			QL=1 ST=2 TYP=3
	3000	POTS	4	S/F	1057.0	1058.2	3.0	9.0			
	9300	KISV	45	C	1057.4	1058.0	2.2	14.0			
	9100	GORK	2	S/F	1057.4	1058.1	2.0	14.4			
	9300	KISV	45	C	1057.4	1058.2		12.0			
	2950	GORK	2	S/F	1057.5	1058.1	2.7	6.3			
	5900	KISV	46	C	1059.2			7.0			
	5900	KISV	45	C	1103.6	1105.4	5.6	8.0			
	5900	KISV	45	C	1103.6	1107.8		5.0			
	650	GORK	4	S/F	1104.3	1105.2	1.8	2.7			
	950	GORK	4	S/F	1104.6	1105.2	1.4	13.0			
	33	UPIC	8	S	1104.9	1105.0	0.4				
	100	GORK	41	F	1106.2	1107.0	6.0	200.0			
	100	GORK	41	F	1106.2	1111.3		440.0			
	30	POTS	4	S/F	1110.1	1111.3	2.1	6000.0			
	33	UPIC	46	C	1110.5	1111.4	1.4				
	2950	GORK	1	S	1144.9	1145.0	2.7	2.5			
	600	HUMN	2	S/F	1156.0	1158.0	3.0	10.0	3.0		
	810	KRAK	2	S/F	1304.5	1305.0	1.5	25.0	8.0		
	2800	OTTA	22	GRF	1514.0	1620.0	185.0	16.4	8.0		
	2800	OTTA	4	S/F	1519.0	1521.5	9.0	23.9	9.0		
	245	SGMR	49	GB	1519.0E	1520.0	3.0D	2500.0			QL=1 ST=2 TYP=6
	245	SVTO	49	GB	1520.0E	1520.0	2.0D	1700.0			QL=1 ST=2 TYP=6
	410	SVTO	8	S	1520.0E	1520.0	1.0D	94.0			QL=1 ST=2 TYP=3
	600	HUMN	4	S/F	1520.0	1520.8	5.0	34.0	5.0		
	245	SGMR	8	S	1522.0E	1522.0	1.0D	150.0			QL=1 ST=2 TYP=3
	245	SGMR	4	S/F	1526.0E	1529.0	5.0D	190.0			QL=1 ST=3 TYP=3
	2800	OTTA	4	S/F	1528.0	1531.0	16.0	50.7	15.0		
	3200	BERN	46	C	1528.0	1531.0	6.0	54.0			
	600	HUMN	4	S/F	1528.0	1531.0	4.0	14.0	6.0		
	245	SGMR	4	S/F	1528.0E	1529.0	3.0D	190.0			QL=1 ST=2 TYP=3
	4995	SGMR	4	S/F	1528.0E	1530.0	5.0D	110.0			QL=1 ST=3 TYP=3
	5200	BERN	46	C	1528.0	1530.4	6.0	104.0			
	8400	BERN	46	C	1528.0	1530.4	6.0	144.0			
	11800	BERN	46	C	1528.0	1530.4	6.0	68.0			
	8800	SGMR	8	S	1529.0E	1530.0	2.0D	63.0			QL=1 ST=3 TYP=3
	2695	SVTO	8	S	1529.0E	1531.0	2.0D	56.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1529.0E	1529.0	2.0D	150.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	1529.0E	1530.0	2.0D	85.0			QL=1 ST=2 TYP=3
	4995	SVTO	4	S/F	1529.0E	1530.0	3.0D	110.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1553.0E	1553.0	U	170.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1553.0E	1553.0	2.0D	150.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1812.0E	1812.0	1.0D	540.0			QL=1 ST=2 TYP=6
	245	SGMR	8	S	1812.0E	1812.0	1.0D	490.0			QL=1 ST=2 TYP=3
	200	HIRA	24	R	1930.0E	2431.7	840.0D	12.0	8.0		WR
	2695	PENT	4	S/F	2320.0	2323.5	22.0	14.0	4.0		
	200	HIRA	46	C	2320.5	2322.4	7.9	84.0			O

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
25	500	HIRA	4	S/F	2320.8	2323.9	4.5	9.0			WR
	245	PALE	8	S	2322.0E	2323.0	2.0D	120.0			QL=1 ST=2 TYP=3
26	100	GORK	44	NS	0242.0E		558.0D		5.0		
	650	GORK	4	S/F	0325.8	0326.0	0.6	10.0			
	650	GORK	2	S/F	0330.1	0330.3	0.5	5.5			
	600	HUMN	3	S	0423.5	0424.2	1.1	16.0	8.0		
	650	GORK	4	S/F	0423.7	0424.2	1.0	125.0			
	2950	GORK	2	S/F	0423.8	0424.0	2.6	8.9			
	950	GORK	3	S	0423.8	0424.0	0.8	35.0			
	2950	GORK	21	GRF	0429.7	0439.8	87.0	6.4			
	9100	GORK	22	GRF	0448.3	0558.7	72.0	10.0			
	245	SVTO	8	S	0451.0E	0451.0	U	110.0			QL=1 ST=2 TYP=3
	1415	LEAR	4	S/F	0556.0E	0558.0	3.0D	460.0			QL=1 ST=2 TYP=3
	410	SVTO	49	GB	0556.0E	0558.0	3.0D	840.0			QL=1 ST=3 TYP=6
	2950	GORK	4	S/F	0556.0	0558.6	4.0	114.0			
	500	HIRA	41	F	0556.2	0558.3	6.0	288.0			O
	650	GORK	46	C	0556.5	0557.4	3.6	27.0			
	3100	CRIM	3	S	0556.5	0557.5	4.0	68.0	20.0		
	650	GORK	46	C	0556.5	0558.7		94.0			
	600	HUMN	4	S/F	0556.5	0558.8	2.5	145.0	8.0		
	5900	KISV	46	C	0556.6	0558.4		13.0			
	5900	KISV	46	C	0556.6	0557.5		9.0			
	950	GORK	4	S/F	0556.6	0558.8	3.3	183.0			
	5900	KISV	46	C	0556.6	0558.8	3.7	16.0			
	9300	KISV	46	C	0556.7	0558.4		10.0			
	9300	KISV	46	C	0556.7	0557.4		8.0			
	9300	KISV	46	C	0556.7	0558.7	3.3	11.0			
	2695	LEAR	8	S	0557.0E	0558.0	2.0D	82.0			QL=1 ST=2 TYP=3
	4995	LEAR	8	S	0558.0E	0558.0	U	13.0			QL=1 ST=2 TYP=3
	2840	PEKG	3	S	0558.0	0559.0	3.0	105.0			
	1415	SVTO	8	S	0558.0E	0558.0	1.0D	380.0			QL=1 ST=3 TYP=3
	2695	SVTO	8	S	0558.0E	0558.0	1.0D	78.0			QL=1 ST=3 TYP=3
	610	SVTO	8	S	0558.0E	0559.0	U	400.0			QL=1 ST=3 TYP=3
	5900	KISV	2	S/F	0612.1	0613.0	2.7	2.0			
	950	GORK	1	S	0624.3	0626.9	4.1	12.7			
	100	GORK	8	S	0626.0	0626.6	1.5	1110.0			
	234	POTS	4	S/F	0626.2	0626.5	1.0	800.0			
	650	GORK	45	C	0626.3	0730.0		2.0			
	650	GORK	45	C	0626.3	0628.5	3.5	4.5			
	204	IZMI	41	F	0626.4	0627.0	2.0	550.0			
	30	POTS	3	S	0626.4	0626.5	0.7	100.0			
	950	GORK	46	C	0727.6	0730.0		2.0			
	650	GORK	46	C	0727.6	0734.4		7.0			
	650	GORK	46	C	0727.6	0728.5	9.8	22.0			
	950	GORK	46	C	0727.6	0728.5	3.5	4.5			
	650	GORK	46	C	0727.6	0732.8		8.6			
	500	HIRA	42	SER	0727.8	0739.8	21.0	55.0			O
	600	HUMN	1	S	0728.0	0728.3	2.0	10.0	4.0		
	810	KRAK	2	S/F	0728.2	0728.5	0.7	13.0	4.0		
	430	KRAK	41	F	0728.5	0733.0		12.0			
	430	KRAK	41	F	0728.5	0729.5	7.0	11.0	3.0		
	430	KRAK	41	F	0728.5	0734.7		13.0			
	950	GORK	46	C	0732.5	0734.3		10.0			
	950	GORK	46	C	0732.5	0732.9	7.8	7.6			
	810	KRAK	41	F	0732.7	0733.0	2.5	6.0	3.0		
	810	KRAK	41	F	0732.7	0734.5		6.0			
	430	KRAK	42	SER	0737.0	0744.4		190.0D			
	430	KRAK	42	SER	0737.0	0740.5	8.0	190.0D			
	810	KRAK	42	SER	0737.8	0744.6	7.2	7.0			
	430	KRAK	8	S	0740.0	0740.2	0.2	25.0			
	950	GORK	46	C	0746.5	0747.0	1.4	60.0			
	950	GORK	46	C	0746.5	0747.4		50.0			
	810	KRAK	8	S	0747.4	0747.5	0.1	5.0			
	430	KRAK	8	S	0748.7	0749.0	0.5	180.0D			
	650	GORK	41	F	0836.9	0838.0	13.2	4.0			
	650	GORK	41	F	0836.9	0847.3		3.7			
	650	GORK	41	F	0836.9	0843.3		17.5			
	650	GORK	41	F	0836.9	0840.5		5.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
26	650	GORK	41	F	0836.9	0841.6		7.0			
	650	GORK	41	F	0836.9	0844.9		8.5			
	5900	KISV	2	S/F	0837.0	0841.3	7.0	5.0			
	950	GORK	20	GRF	0837.0	0838.5	11.0	1.5			
	9300	KISV	2	S/F	0839.5	0841.5	4.5	3.0			
	5900	KISV	2	S/F	1041.9	1044.5	6.7	4.0			
	5900	KISV	2	S/F	1136.5	1137.8	3.8	6.0			
	950	GORK	4	S/F	1136.5	1137.9	2.2	25.0			
	2950	GORK	1	S	1137.4	1138.4	1.5	3.1			
	650	GORK	4	S/F	1137.9	1138.1U	0.6	95.0D			
	610	SGMR	8	S	1138.0E	1138.0	U	100.0			QL=1 ST=3 TYP=3
	245	SGMR	8	S	1255.0E	1255.0	1.0D	71.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1732.0E	1733.0	1.0D	64.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1734.0E	1734.0	U	77.0			QL=1 ST=2 TYP=3
	2800	OTTA	20	GRF	1841.0	1849.0	48.0	5.1	2.0		
	245	PALE	8	S	1958.0E	1958.0	U	120.0			QL=1 ST=2 TYP=3
	2800	OTTA	20	GRF	2045.0	2054.0	70.0	8.3	4.0		
	245	PALE	8	S	2133.0E	2133.0	U	110.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2133.0E	2133.0	1.0D	97.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2141.0E	2141.0	U	210.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2141.0E	2141.0	U	180.0			QL=1 ST=2 TYP=3
	2800	OTTA	20	GRF	2212.0	2228.5	180.0	23.3	11.0		
27	200	HIRA	44	NS	1930.0E		270.0D		5.0		O
	9100	GORK	1	S	0257.7	0258.2	2.9	5.6			
	5900	KISV	2	S/F	0548.8	0549.0	0.9	3.0			
	5900	KISV	2	S/F	0550.8	0551.1	0.7	2.0			
	5900	KISV	2	S/F	0614.6	0615.1	3.1	5.0			
	245	SGMR	8	S	1105.0E	1106.0	1.0D	270.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1106.0E	1106.0	U	220.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	1159.4	1200.9	7.3	3.0			
	5900	KISV	2	S/F	1235.5	1236.2	7.6	4.0			
	9300	KISV	2	S/F	1235.8	1236.3	5.2	4.0			
	245	SGMR	8	S	1253.0E	1253.0	1.0D	120.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1253.0E	1253.0	1.0D	90.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2041.0E	2042.0	1.0D	91.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2207.0E	2207.0	U	63.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2257.0E	2258.0	1.0D	90.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2312.0E	2312.0	U	100.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2312.0E	2312.0	U	110.0			QL=1 ST=2 TYP=3
28	204	IZMI	43	NS	0600.0		360.0	15.0			
	245	SVTO	44	NS	0752.0E	1717.0	595.0D	88.0			QL=1 ST=2 TYP=1
	127	TORN	43	NS	0906.0		394.0		4.0		V=1
	245	SGMR	43	NS	1232.0	1233.0	16.0	170.0			QL=1 ST=3 TYP=1
	245	PALE	44	NS	1822.0E	1951.0	100.0D	180.0			QL=1 ST=2 TYP=1
	245	SGMR	44	NS	1901.0E	1951.0	65.0D	180.0			QL=1 ST=2 TYP=1
	200	HIRA	44	NS	1930.0E	2357.0	840.0D	36.0	14.0		MR
	200	HIRA	46	C	0203.2	0204.0	1.2	95.0			O
	245	PALE	8	S	0210.0E	0210.0	2.0D	150.0			QL=1 ST=2 TYP=3
	9100	GORK	1	S	0349.0	0349.7	3.4	4.0			
	245	PALE	8	S	0422.0E	0422.0	U	99.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0422.0E	0422.0	1.0D	69.0			QL=1 ST=2 TYP=3
	5900	KISV	2	S/F	0456.3	0456.6	1.7	3.0			
	245	SVTO	8	S	0521.0E	0522.0	1.0D	60.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0527.0E	0527.0	1.0D	94.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0530.0E	0530.0	U	74.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	0600.0E	0600.0	U	87.0			QL=1 ST=2 TYP=3
	204	IZMI	5	S	0616.5	0617.0	0.5	180.0			
	950	GORK	1	S	0621.5	0622.6	1.8	2.6			
	950	GORK	4	S/F	0622.4	0622.6	0.8	11.5			
	430	KRAK	8	S	0653.9	0654.0	0.2	13.0			
	200	HIRA	46	C	0724.3	0725.2	1.6	97.0			O
	5900	KISV	22	GRF	0731.0	0733.3	14.0	12.0			
	2950	GORK	3	S	0731.3	0733.3	8.0	8.0			
	9100	GORK	20	GRF	0731.5	0733.0	23.0	4.0			
	3100	CRIM	1	S	0731.8	0733.6	2.5	5.0	2.0		
	430	KRAK	8	S	0733.0	0733.0	0.1	18.0			
	430	KRAK	8	S	0856.7	0857.2	0.5	80.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
28	950	GORK	1	S	0908.4	0909.2	1.5	1.3			
	810	KRAK	1	S	0908.7	0909.0	0.8	2.0	1.0		
	430	KRAK	2	S/F	0908.7	0909.5	1.5	21.0	6.0		
	650	GORK	45	C	0908.8	0909.3		3.5			
	650	GORK	45	C	0908.8	0908.9	1.0	3.0			
	100	GORK	4	S/F	0909.0	0909.4	2.3	110.0			
	245	SVTO	8	S	1023.0E	1024.0	2.0D	280.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1025.0E	1025.0	2.0D	420.0			QL=1 ST=2 TYP=3
	234	POTS	8	S	1025.0	1025.9	1.5	165.0			
	430	KRAK	8	S	1025.3	1025.6	0.5	24.0			
	5900	KISV	2	S/F	1053.5	1054.5	4.3	3.0			
	430	KRAK	8	S	1107.2	1107.5	1.0	17.0			
	127	TORN	46	C	1125.7	1135.0	12.0	1000.0	50.0		
	245	SGMR	8	S	1138.0E	1138.0	1.0D	160.0			QL=1 ST=2 TYP=3
	2800	OTTA	3	S	1212.0	1221.0	18.0	127.1	38.0		
	430	KRAK	45	C	1216.0	1220.7	10.8	150.0U	40.0		
	3000	POTS	42	SER	1216.1	1221.0	21.9	119.0			
	9300	KISV	47	GB	1216.2	1221.0	13.4	1038.0			
	1470	POTS	42	SER	1216.2	1221.5	20.3	84.0			
	9500	POTS	42	SER	1216.5	1221.1	20.0	816.0			
	410	SGMR	4	S/F	1217.0E	1219.0	6.0D	130.0			QL=1 ST=2 TYP=5
	600	HUMN	4	S/F	1217.0	1221.0	11.0	54.0	20.0		
	5900	KISV	47	GB	1217.2	1221.0	8.4	621.0			
	234	POTS	42	SER	1217.5	1228.4	18.0U	330.0			
	30	POTS	42	SER	1217.6	1221.6	18.7	1300.0			
	4995	SGMR	4	S/F	1218.0E	1221.0	5.0D	400.0			QL=1 ST=2 TYP=3
	8800	SVTO	49	GB	1218.0E	1221.0	5.0D	890.0			QL=1 ST=2 TYP=6
	410	SVTO	4	S/F	1218.0E	1219.0	4.0D	130.0			QL=1 ST=2 TYP=3
	4995	SVTO	4	S/F	1218.0E	1221.0	4.0D	350.0			QL=1 ST=2 TYP=3
	15400	SVTO	49	GB	1218.0E	1221.0	6.0D	2000.0			QL=1 ST=2 TYP=6
	8800	SGMR	49	GB	1218.0E	1221.0	702.0D	1100.0			QL=1 ST=1 TYP=6
	810	KRAK	45	C	1218.0	1220.6	7.7	49.0	14.0		
	11800	BERN	46	C	1218.4	1221.0	3.5	1040.0			
	8400	BERN	46	C	1218.4	1221.0	3.5	740.0			
	5200	BERN	46	C	1218.4	1221.0	3.5	370.0			
	3200	BERN	46	C	1218.4	1221.0	3.5	180.0			
	35000	BERN	46	C	1218.4	1221.1	3.5	2146.0			
	50000	BERN	46	C	1218.4	1221.1	3.5	1660.0			
	19600	BERN	46	C	1218.4	1221.1	3.5	1180.0			
	245	SGMR	4	S/F	1219.0E	1221.0	8.0D	320.0			QL=1 ST=2 TYP=5
	610	SGMR	4	S/F	1219.0E	1221.0	4.0D	95.0			QL=1 ST=2 TYP=3
	1415	SGMR	8	S	1220.0E	1221.0	2.0D	86.0			QL=1 ST=2 TYP=3
	2695	SGMR	8	S	1220.0E	1221.0	2.0D	110.0			QL=1 ST=2 TYP=3
	1415	SVTO	8	S	1220.0E	1221.0	1.0D	75.0			QL=1 ST=2 TYP=3
	2695	SVTO	8	S	1220.0E	1221.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1221.0E	1221.0	2.0D	230.0			QL=1 ST=2 TYP=3
	5900	KISV	46	C	1225.9	1227.2		5.0			
	5900	KISV	46	C	1225.9	1226.3		4.0			
	5900	KISV	46	C	1225.9	1228.4	3.5	6.0			
	245	SGMR	8	S	1228.0E	1228.0	U	260.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1228.0E	1228.0	U	190.0			QL=1 ST=2 TYP=3
	430	KRAK	2	S/F	1228.0	1228.5	1.5	24.0U	4.0		
	600	HUMN	4	S/F	1231.0	1234.0	6.0	18.0	6.0		
	430	KRAK	41	F	1231.5	1234.5	4.0	27.0	5.0		
	245	SVTO	4	S/F	1232.0E	1234.0	3.0D	140.0			QL=1 ST=2 TYP=3
	810	KRAK	41	F	1232.7	1234.3	3.0	11.0	3.0		
	9300	KISV	2	S/F	1234.0	1234.5	2.0	9.0			
	5900	KISV	2	S/F	1234.0	1234.6	2.2	4.0			
	9300	KISV	2	S/F	1309.0	1310.2	4.0	8.0			
	5900	KISV	2	S/F	1316.8	1317.4	2.4	2.0			
	245	SGMR	8	S	1323.0E	1323.0	1.0D	54.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1331.0E	1331.0	1.0D	55.0			QL=1 ST=2 TYP=3
	33	UPIC	45	C	1331.5	1331.6	0.8				
	9500	POTS	1	S	1430.9	1431.3	4.4	6.0			
	245	SGMR	8	S	1450.0E	1450.0	1.0D	67.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1648.0E	1648.0	1.0D	100.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1653.0E	1654.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1653.0E	1654.0	1.0D	93.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2148.0E	2148.0	1.0D	51.0			QL=1 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
28	2800	OTTA	4	S/F	2205.0	2208.0	10.0	92.2	27.0		
	2695	SGMR	4	S/F	2205.0E	2207.0	7.0D	84.0			QL=1 ST=2 TYP=5
	2695	PALE	8	S	2206.0E	2207.0	1.0D	95.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	2206.2	2210.5		23.0			WR
	500	HIRA	46	C	2206.2	2220.7	28.0	31.0	9.0		WR
	200	HIRA	46	C	2208.6	2226.4		55.0			WR
	200	HIRA	46	C	2208.6	2210.7	23.8	145.0	16.0		WR
	100	HIRA	42	SER	2209.2	2210.8	19.1	420.0			
	245	PALE	8	S	2211.0E	2211.0	2.0D	75.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2211.0E	2211.0	1.0D	70.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	2215.0	2221.0	40.0D	15.2	7.0		
	610	PALE	8	S	2220.0E	2220.0	1.0D	67.0			QL=1 ST=2 TYP=3
	610	SGMR	8	S	2220.0E	2220.0	1.0D	61.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2256.0E	2256.0	1.0D	67.0			QL=1 ST=2 TYP=3
	15400	SGMR	8	S	2306.0E	2307.0	2.0D	67.0			QL=1 ST=2 TYP=3
29	245	PALE	44	NS	0013.0E	0024.0	278.0D	190.0			QL=1 ST=2 TYP=1
	100	GORK	44	NS	0243.0E		446.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	30.0			
	127	TORN	44	NS	0620.0E		560.0D		2.0		V=1
	200	HIRA	43	NS	2100.0	0731.0	770.0D	38.0	10.0		SR
	245	PALE	8	S	0046.0E	0047.0	1.0D	340.0			QL=1 ST=2 TYP=3
	2695	PENT	3	S	0105.0	0107.0	16.0	58.4	17.0		
	500	HIRA	41	F	0301.5	0305.0	3.8	26.0			MR
	650	GORK	23	GRF	0301.5E	0312.6	36.7D	3.0			
	950	GORK	21	GRF	0303.0E		32.0D				
	950	GORK	4	S/F	0303.9	0304.3	1.1	23.0			
	650	GORK	2	S/F	0304.6	0304.9	0.6	3.0			
	9100	GORK	21	GRF	0316.8	0449.4	224.0	35.0			
	2840	PEKG	1	S	0328.0	0329.3	3.0	8.4			
	2950	GORK	2	S/F	0328.3	0329.1	2.0	9.3			
	9100	GORK	1	S	0328.4	0329.2	1.9	16.6			
	650	GORK	4	S/F	0328.4	0328.7	1.1	12.0			
	2950	GORK	21	GRF	0344.1	0439.0	247.0	28.0			
	2840	PEKG	5	S	0348.0	0350.2	7.0	78.9			
	200	HIRA	46	C	0348.1	0349.5	3.6	310.0			WR
	100	HIRA	46	C	0348.5		7.3	1000.0D			
	100	GORK	8	S	0348.7	0349.6	3.3	4700.0			
	245	PALE	8	S	0349.0E	0350.0	2.0D	430.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0349.0E	0350.0	2.0D	65.0			QL=1 ST=2 TYP=3
	2695	SVTO	8	S	0349.0E	0350.0	2.0D	83.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0349.0E	0350.0	2.0D	72.0			QL=1 ST=2 TYP=3
	1415	SVTO	4	S/F	0349.0E	0350.0	3.0D	78.0			QL=1 ST=2 TYP=5
	245	SVTO	8	S	0349.0E	0350.0	2.0D	230.0			QL=1 ST=2 TYP=3
	500	HIRA	46	C	0349.3	0350.0	4.0	32.0			MR
	650	GORK	4	S/F	0349.4	0350.1	6.4	24.0			
	950	GORK	4	S/F	0349.4	0350.3	5.5	24.0			
	3100	CRIM	3	S	0349.5	0350.2	3.0	63.0	21.0		
	2950	GORK	3	S	0349.6	0350.1	2.6	48.0			
	9100	GORK	1	S	0349.6	0350.2	2.6	28.0			
	410	SVTO	8	S	0350.0E	0350.0	U	140.0			QL=1 ST=2 TYP=5
	3100	CRIM	21	GRF	0402.0	0430.0	192.0	24.0	7.0		
	950	GORK	46	C	0416.5	0429.1		42.0			
	950	GORK	46	C	0416.5	0428.1		74.0			
	950	GORK	46	C	0416.5	0427.1		68.0			
	950	GORK	46	C	0416.5	0426.3		26.0			
	950	GORK	46	C	0416.5	0434.6		32.0			
	950	GORK	46	C	0416.5	0424.6	19.2	15.8			
	5900	KISV	23	GRF	0425.4	0438.0	22.4	15.0			
	500	HIRA	42	SER	0426.7	0429.0	8.5	55.0			MR
	2950	GORK	3	S	0427.2	0428.2	3.3	14.6			
	5900	KISV	4	S/F	0427.3	0428.2	5.4	26.0			
	9300	KISV	23	GRF	0427.3	0437.6	27.8	14.0			
	3100	CRIM	1	S	0427.4	0428.3	3.0	13.0	4.0		
	9300	KISV	2	S/F	0427.4	0428.3	3.6	10.0			
	650	GORK	41	F	0428.3	0433.4		6.0			
	650	GORK	41	F	0428.3	0429.7	7.0	7.5			
	650	GORK	41	F	0428.3	0434.9		6.0			
	500	HIRA	41	F	0458.0	0504.0	10.5	80.0			MR

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
29	100	HIRA	41	F	0500.0	0505.6	8.6	670.0			
	100	GORK	41	F	0500.3	0505.2		880.0			
	100	GORK	41	F	0500.3	0504.8	7.4	550.0			
	245	SVTO	49	GB	0503.0E	0504.0	2.0D	510.0			QL=1 ST=2 TYP=6
	410	SVTO	4	S/F	0503.0E	0504.0	3.0D	75.0			QL=1 ST=2 TYP=5
	650	GORK	4	S/F	0503.3	0504.4	4.2	21.0			
	5900	KISV	2	S/F	0503.8	0504.3	1.0	2.0			
	600	HUMN	4	S/F	0504.0	0505.0	2.8	14.0	5.0		
	950	GORK	4	S/F	0504.0U	0504.3	3.0D	11.4			
	950	GORK	1	S	0639.5	0639.6	0.6	4.7			
	650	GORK	1	S	0639.5	0639.7	0.7	5.0			
	245	SVTO	8	S	0712.0E	0712.0	U	74.0			QL=1 ST=2 TYP=3
	100	GORK	8	S	0712.2	0713.0	1.8	10100.0			
	204	IZMI	5	S	0712.3	0713.0	1.0	280.0	180.0		
	950	GORK	1	S	0712.3	0713.1	1.5	2.3			
	650	GORK	2	S/F	0712.4	0713.3	1.5	2.6			
	33	UPIC	45	C	0712.7	0712.9	1.0				
	5900	KISV	2	S/F	0743.2	0744.4	1.7	2.0			
	430	KRAK	42	SER	0745.5	0801.5	22.3	18.0			
	9100	GORK	1	S	0838.9	0839.4	2.7	3.6			
	950	GORK	20	GRF	0903.8	0915.5	15.7	2.5			
	5900	KISV	23	GRF	0904.8	0937.5	38.7	6.0			
	430	KRAK	42	SER	0910.7	0912.0	1.5	51.0			
	234	ONDR	42	SER	0911.9	0933.2U	23.0	950.0			
	33	UPIC	8	S	0912.0	0912.2	0.5				
	100	GORK	41	F	0912.0	0912.2	57.0	330.0			
	100	GORK	41	F	0912.0	0933.5		1400.0			
	30	POTS	42	SER	0912.0	0933.5U	25.2	12000.0D			
	2950	GORK	1	S	0912.1	0912.3	1.0	5.1	2.5		
	5900	KISV	2	S/F	0912.1	0912.3	1.7	5.0			
	650	GORK	1	S	0912.2	0912.3	0.6	3.0			
	3100	CRIM	3	S	0922.0	0923.4	3.0	55.0	18.0		
	650	GORK	21	GRF	0923.4	0925.7	19.8	5.9			
	430	KRAK	42	SER	0923.5	0924.5	3.0	60.0			
	245	SVTO	8	S	0924.0E	0924.0	1.0D	210.0			QL=1 ST=2 TYP=3
	950	GORK	21	GRF	0924.0	0924.9	13.3	2.5			
	650	GORK	4	S/F	0924.2	0924.6	0.7	8.0			
	600	HUMN	2	S/F	0924.7	0925.0	1.5	8.0	3.0		
	204	IZMI	5	S	0928.0	0933.1	5.1	58.0	30.0		
	9500	POTS	4	S/F	0931.0	0933.3	9.0	68.0			
	430	KRAK	4	S/F	0931.5	0933.0	3.0	150.0	60.0		
	33	UPIC	48	C	0931.7		5.3				
	1470	POTS	4	S/F	0931.8	0933.1	3.2	20.0			
	650	GORK	46	C	0931.8	0932.4	19.8	56.0			
	650	GORK	46	C	0931.8	0933.5		33.0			
	2950	GORK	3	S	0931.9	0933.1	3.0	51.0			
	5900	KISV	4	S/F	0931.9	0933.1	4.6	124.0			
	3000	POTS	4	S/F	0931.9	0933.2	3.1U	57.0			
	3013	IZMI	5	S	0932.0	0933.0	3.0	58.0	30.0		
	810	KRAK	3	S	0932.0	0933.0	2.7	12.0	5.0		
	245	SGMR	4	S/F	0932.0E	0933.0	3.0D	380.0			QL=1 ST=3 TYP=3
	410	SGMR	8	S	0932.0E	0933.0	1.0D	150.0			QL=1 ST=3 TYP=3
	410	SVTO	8	S	0932.0E	0933.0	2.0D	410.0			QL=1 ST=2 TYP=3
	245	SVTO	49	GB	0932.0E	0933.0	3.0D	630.0			QL=1 ST=2 TYP=6
	11800	BERN	4	S/F	0932.0	0933.1	3.0	60.0			
	8400	BERN	4	S/F	0932.0	0933.1	3.0	90.0			
	5200	BERN	4	S/F	0932.0	0933.1	3.0	110.0			
	3200	BERN	4	S/F	0932.0	0933.1	3.0	68.0			
	9300	KISV	4	S/F	0932.0	0933.1	5.6	95.0			
	950	GORK	4	S/F	0932.0	0933.3	2.8	10.0			
	9100	GORK	3	S	0932.3	0933.2	2.1	80.0			
	9100	GORK	29	PBI	0932.3	0934.4	10.4	14.4			
	600	HUMN	4	S/F	0932.5	0934.0	2.5	50.0	8.0		
	15000	KISV	2	S/F	0932.7	0933.1	2.3	34.0			
	127	TORN	47	GB	0932.7	0934.7	7.0	1500.0	700.0		
	204	IZMI	45	C	0933.0	0934.0	4.0	1400.0			
	8800	SVTO	8	S	0933.0E	0933.0	U	75.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0933.0E	0933.0	1.0D	94.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	0945.0E	0946.0	2.0D	67.0			QL=1 ST=2 TYP=3

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

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
29	430	KRAK	42	SER	0952.5	0953.0	1.3	30.0			
	430	KRAK	2	S/F	1036.0	1037.5	3.0	20.0	6.0		
	245	SGMR	8	S	1037.0E	1037.0	2.0D	76.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1037.0E	1038.0	1.0D	65.0			QL=1 ST=2 TYP=3
	234	POTS	42	SER	1037.0	1057.5	24.0	140.0			
	30	POTS	42	SER	1037.5	1057.5	22.0	12000.0			
	810	KRAK	8	S	1037.5	1037.7	0.5	9.0			
	9300	KISV	23	GRF	1051.8	1057.5	23.5	11.0			
	9500	POTS	20	GRF	1051.9	1057.4	23.1	5.0			
	5900	KISV	46	C	1052.0	1054.7		9.0			
	5900	KISV	46	C	1052.0	1052.8		10.0			
	5900	KISV	46	C	1052.0	1054.9	6.7	12.0			
	9300	KISV	2	S/F	1052.3	1052.8	1.5	7.0			
	9300	KISV	2	S/F	1054.3	1054.9	0.9	6.0			
	430	KRAK	42	SER	1055.0	1057.2	10.0	71.0			
	810	KRAK	42	SER	1055.0	1101.6	7.3	6.0			
	245	SGMR	8	S	1057.0E	1057.0	1.0D	250.0			QL=1 ST=2 TYP=3
	600	HUMN	4	S/F	1057.5	1057.8	1.0	14.0	5.0		
	245	SGMR	8	S	1145.0E	1145.0	1.0D	100.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1229.0E	1229.0	1.0D	91.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1229.0E	1229.0	U	61.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1232.0E	1232.0	2.0D	62.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1232.0E	1232.0	1.0D	55.0			QL=1 ST=2 TYP=3
	430	KRAK	8	S	1303.0	1303.0	0.1	45.0			
	9300	KISV	22	GRF	1311.3	1335.9	39.0	7.0			
	5900	KISV	2	S/F	1324.3	1325.2	3.2	2.0			
	245	SGMR	8	S	1326.0E	1327.0	2.0D	120.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1326.0E	1327.0	1.0D	88.0			QL=1 ST=2 TYP=3
	234	POTS	42	SER	1356.4	1406.3	19.8	825.0			
	245	SGMR	8	S	1357.0E	1358.0	2.0D	100.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1358.0E	1359.0	2.0D	80.0			QL=1 ST=3 TYP=3
	600	HUMN	2	S/F	1405.0	1406.0	3.5	9.0	3.0		
	245	SGMR	4	S/F	1405.0E	1406.0	5.0D	250.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1405.0E	1406.0	1.0D	50.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1405.0E	1406.0	2.0D	200.0			QL=1 ST=2 TYP=3
	30	POTS	4	S/F	1405.6	1406.3	1.9	800.0			
	410	SGMR	8	S	1406.0E	1406.0	U	60.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1412.0E	1412.0	U	140.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1521.0E	1522.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1521.0E	1522.0	1.0D	100.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1528.0E	1528.0	3.0D	87.0			QL=1 ST=3 TYP=5
	245	SGMR	8	S	1619.0E	1620.0	2.0D	110.0			QL=1 ST=2 TYP=3
	600	HUMN	1	S	1620.0	1620.3	1.0	4.0	2.0		
	600	HUMN	2	S/F	1623.0	1625.0	3.0	6.0	3.0		
	245	SGMR	8	S	1651.0E	1651.0	U	70.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1720.0E	1720.0	U	62.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1720.0E	1720.0	1.0D	59.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1929.0E	1929.0	1.0D	180.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1934.0E	1934.0	U	58.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2328.0E	2328.0	U	110.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2328.0E	2328.0	1.0D	70.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2343.0E	2344.0	1.0D	75.0			QL=1 ST=2 TYP=3
30	100	GORK	44	NS	0256.0E		544.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	10.0			
	127	TORN	44	NS	0620.0E		560.0D		10.0		V=1
	15400	LEAR	4	S/F	0104.0E	0105.0	6.0D	140.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0104.0E	0105.0	6.0D	99.0			QL=1 ST=2 TYP=3
	4995	LEAR	4	S/F	0105.0E	0106.0	4.0D	72.0			QL=1 ST=2 TYP=3
	15400	PALE	8	S	0105.0E	0105.0	1.0D	140.0			QL=1 ST=2 TYP=3
	8800	PALE	8	S	0105.0E	0105.0	1.0D	120.0			QL=1 ST=2 TYP=3
	2695	PALE	8	S	0105.0E	0106.0	1.0D	58.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0123.0E	0123.0	U	66.0			QL=1 ST=2 TYP=3
	950	GORK	2	S/F	0328.7	0331.5	8.0	3.9			
	245	PALE	49	GB	0332.0E	0333.0	2.0D	810.0			QL=1 ST=2 TYP=6
	410	PALE	8	S	0333.0E	0333.0	1.0D	410.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0339.0E	0339.0	U	100.0			QL=1 ST=2 TYP=3
	100	GORK	4	S/F	0541.6	0546.1	5.0	1300.0			
	950	GORK	2	S/F	0641.0	0641.4	0.7	14.6			

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

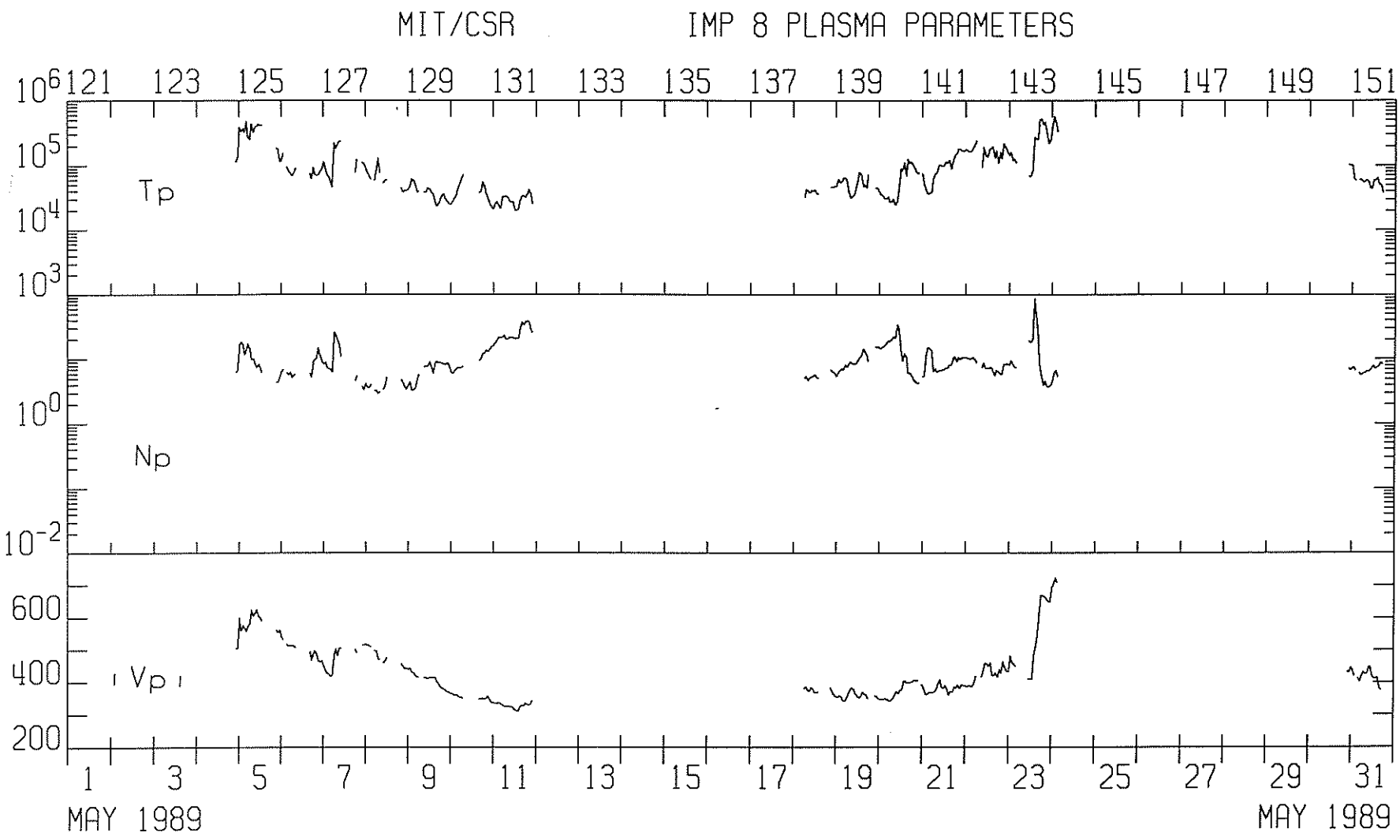
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
30	650	GORK	2	S/F	0641.1	0641.4	0.6	8.0			
	15400	LEAR	8	S	0713.0E	0714.0	2.0D	220.0			QL=1 ST=2 TYP=3
	4995	LEAR	8	S	0713.0E	0714.0	2.0D	98.0			QL=1 ST=2 TYP=3
	8800	LEAR	4	S/F	0713.0E	0714.0	3.0D	240.0			QL=1 ST=2 TYP=3
	9500	POTS	21	GRF	0713.0	0714.1	8.5	9.0			
	9500	POTS	21	GRF	0713.0	0748.2	77.0	9.0			
	9100	GORK	3	S	0713.3	0714.1	2.2	270.0			
	9100	GORK	30	PBI	0713.3	0715.5	71.2	23.0			
	5900	KISV	23	GRF	0713.4	0733.0	85.6	10.0			
	9300	KISV	45	C	0713.4	0719.1		27.0			
	9300	KISV	45	C	0713.4	0714.2	8.0	107.0D			
	9300	KISV	23	GRF	0713.4	0739.6	75.6	13.0			
	5900	KISV	45	C	0713.6	0719.1		27.0			
	15000	KISV	4	S/F	0713.6	0714.2	1.9	157.0			
	5900	KISV	45	C	0713.6	0714.5D	7.6	53.0D			
	2950	GORK	30	PBI	0713.8	0720.2	240.0	4.7			
	2950	GORK	46	C	0713.8	0719.3		6.7			
	2950	GORK	46	C	0713.8	0714.8	6.2	87.0			
	15400	SVTO	8	S	0715.0E	0716.0	2.0D	230.0			QL=1 ST=2 TYP=3
	8800	SVTO	8	S	0715.0E	0716.0	2.0D	250.0			QL=1 ST=2 TYP=3
	4995	SVTO	8	S	0716.0E	0716.0	1.0D	91.0			QL=1 ST=2 TYP=3
	9100	GORK	2	S/F	0718.0	0719.4	2.1	21.0			
	204	IZMI	5	S	0800.8	0801.0	0.8	250.0	180.0		
	950	GORK	2	S/F	0815.0	0815.5	0.6	11.6			
	650	GORK	45	C	0816.2	0816.4	0.8	1.3			
	650	GORK	45	C	0816.2	0816.9		1.7			
	100	GORK	41	F	0836.9	0915.1		1100.0			
	100	GORK	41	F	0836.9	0840.9	42.1	1300.0			
	245	SVTO	8	S	0839.0E	0841.0	2.0D	95.0			QL=1 ST=2 TYP=3
	650	GORK	46	C	0840.3	0846.3		3.0			
	650	GORK	46	C	0840.3	0853.3		5.0			
	650	GORK	46	C	0840.3	0843.3		3.0			
	650	GORK	46	C	0840.3	0840.8	18.4	5.0			
	950	GORK	46	C	0840.5	0843.0	15.7	42.0			
	950	GORK	46	C	0840.5	0847.2		23.0			
	950	GORK	46	C	0840.5	0850.6		24.0			
	950	GORK	46	C	0840.5	0854.8		44.0			
	127	TORN	47	GB	0840.7	0841.2	3.2	700.0	350.0		
	3100	CRIM	2	S/F	0841.0	0842.5	3.0	4.0	1.0		
	5900	KISV	2	S/F	0841.2	0843.3	2.9	3.0			
	810	KRAK	42	SER	0841.7	0843.0	9.1	12.0			
	2950	GORK	1	S	0843.1	0843.1	0.3	4.7			
	810	KRAK	4	S/F	0852.5	0854.6	3.8	71.0	8.0		
	1470	POTS	4	S/F	0852.5	0854.6	4.0	14.0			
	3100	CRIM	2	S/F	0853.0	0854.0	3.0	5.0	2.0		
	2950	GORK	2	S/F	0853.0	0854.2	3.3	7.3			
	430	KRAK	8	S	0901.2	0901.5	0.8	44.0			
	127	TORN	7	C	0914.7	0916.1	2.0	500.0	250.0		
	650	GORK	46	C	0931.1	0931.3	2.3	5.0			
	650	GORK	46	C	0931.1	0932.9		7.0			
	950	GORK	1	S	0947.5	0948.3	1.3	2.6			
	810	KRAK	1	S	0948.0	0948.5	0.7	4.0	1.0		
	245	SGMR	8	S	1113.0E	1113.0	2.0D	350.0			QL=1 ST=3 TYP=3
	245	SVTO	8	S	1113.0E	1113.0	2.0D	280.0			QL=1 ST=2 TYP=3
	30	POTS	4	S/F	1113.0	1114.4	3.0	2200.0			
	204	IZMI	5	S	1113.0	1114.5	2.5	300.0	200.0		
	234	POTS	4	S/F	1113.0	1114.5	7.0	120.0			
	430	KRAK	2	S/F	1113.3	1114.9	2.8	25.0	6.0		
	430	KRAK	8	S	1125.2	1125.5	0.6	11.0			
	127	TORN	45	C	1138.5	1139.9	5.0	400.0	70.0		
	245	SGMR	8	S	1139.0E	1139.0	1.0D	74.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1143.0E	1143.0	2.0D	200.0			QL=1 ST=2 TYP=3
	410	SGMR	8	S	1143.0E	1143.0	2.0D	200.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1143.0E	1143.0	1.0D	180.0			QL=1 ST=2 TYP=3
	410	SVTO	8	S	1143.0E	1143.0	1.0D	280.0			QL=1 ST=2 TYP=3
	127	TORN	4	S/F	1143.2	1144.3	3.0	400.0	200.0		
	204	IZMI	41	F	1145.0	1149.0	4.0	400.0			
	30	POTS	4	S/F	1205.7	1209.0	8.0	7000.0			
	1470	POTS	4	S/F	1206.1	1211.6	7.1	6.0			

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1989

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
30	234	POTS	4	S/F	1206.2	1212.5	7.1	150.0			
	3000	POTS	1	S	1207.4	1209.4	8.1	5.0			
	245	SGMR	4	S/F	1210.0E	1212.0	3.0D	240.0			QL=1 ST=2 TYP=3
	245	SVTO	4	S/F	1210.0E	1212.0	3.0D	200.0			QL=1 ST=2 TYP=3
	430	KRAK	2	S/F	1210.3	1212.0	3.5	16.0	6.0		
	3000	POTS	4	S/F	1310.7	1311.7	9.3	44.0			
	2800	OTTA	3	S	1311.0	1312.0	13.0	45.4	13.0		
	1470	POTS	4	S/F	1311.0	1312.0	5.5	8.0			
	3100	CRIM	29	PBI	1311.0	1315.0	25.0	10.0	3.0		
	3100	CRIM	3	S	1311.0	1311.2	4.0	48.0	16.0		
	9300	KISV	4	S/F	1311.0	1311.8	8.6	35.0			
	5900	KISV	4	S/F	1311.0	1311.9	9.2	45.0			
	8400	BERN	3	S	1311.2	1311.4	3.0	31.0			
	5200	BERN	3	S	1311.2	1311.4	3.0	43.0			
	3200	BERN	3	S	1311.2	1311.4	3.0	42.0			
	9500	POTS	4	S/F	1311.3	1311.8	6.7	21.0			
	245	SGMR	8	S	1520.0E	1520.0	2.0D	61.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1526.0E	1526.0	1.0D	110.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1526.0E	1526.0	1.0D	83.0			QL=1 ST=2 TYP=3
	245	SVTO	8	S	1623.0E	1623.0	1.0D	70.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1701.0E	1701.0	1.0D	77.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1701.0E	1701.0	1.0D	72.0			QL=1 ST=2 TYP=3
	245	PALE	49	GB	1818.0E	1819.0	2.0D	700.0			QL=1 ST=2 TYP=6
	245	SGMR	8	S	1818.0E	1819.0	2.0D	500.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	1957.0E	1957.0	2.0D	59.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1957.0E	1957.0	U	56.0			QL=1 ST=2 TYP=3
	200	HIRA	42	SER	2123.8	2155.4	35.0	505.0			WR
31	204	IZMI	43	NS	0600.0		360.0	10.0			
	245	SVTO	43	NS	0645.0	0642.0	40.0	59.0			QL=1 ST=2 TYP=1
	33	UPIC	43	NS	0731.5		416.4				
	200	HIRA	8	S	0224.8	0225.3	0.9	110.0			O
	100	GORK	4	S/F	0555.2	0559.6	6.9	330.0			
	100	GORK	41	F	0633.3	0634.3	25.2	38.0D			
	100	GORK	41	F	0633.3	0652.9		890.0			
	100	HIRA	42	SER	0651.3	0651.6	19.1	860.0			
	200	HIRA	42	SER	0651.5	0652.1	6.7	240.0			MR
	204	IZMI	41	F	0652.0	0653.0	7.0	200.0			
	127	TORN	42	SER	0652.2	0652.9	6.7	1500.0	30.0		
	500	HIRA	4	S/F	0656.6	0656.7	1.9	13.0			WR
	810	KRAK	8	S	0711.1	0711.2	0.2	6.0			
	430	KRAK	8	S	0711.1	0711.2	0.2	11.0			
	204	IZMI	5	S	0720.5	0720.8	0.3	480.0	350.0		
	5900	KISV	22	GRF	0806.5	0807.7	54.5	7.0			
	9300	KISV	22	GRF	0806.7	0808.2	54.3	7.0			
	100	GORK	46	C	0909.6	0913.0		1000.0			
	100	GORK	46	C	0909.6	0911.7	6.3	1110.0			
	30	POTS	4	S/F	0910.2	0913.6	5.1	10000.0			
	234	POTS	41	F	0910.4	0915.3	5.7	385.0			
	100	GORK	46	C	0945.2	0945.5	1.3	560.0			
	100	GORK	46	C	0945.2	0945.8		440.0			
	430	KRAK	8	S	1010.2	1010.6	0.8	15.0			
	810	KRAK	8	S	1010.6	1010.8	0.3	4.0			
	245	SVTO	49	GB	1122.0E	1122.0	1.0D	540.0			QL=1 ST=2 TYP=6
	3000	POTS	21	GRF	1242.5	1302.5	55.0	15.0			
	1470	POTS	21	GRF	1250.0	1308.0	65.0	5.0			
	2800	OTTA	3	S	1320.0	1323.5	7.0	34.5	10.0		
	3000	POTS	4	S/F	1321.5	1323.0	4.5	29.0			
	1470	POTS	4	S/F	1321.5	1322.4	3.7	9.0			
	5200	BERN	3	S	1322.0	1323.0	2.5	21.0			
	3200	BERN	3	S	1322.0	1323.0	2.5	30.0			
	410	PALE	4	S/F	1750.0E	1751.0	3.0D	72.0			QL=1 ST=2 TYP=3
	245	PALE	4	S/F	1838.0E	1840.0	3.0D	56.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	1839.0E	1840.0	1.0D	59.0			QL=1 ST=3 TYP=3
	245	PALE	8	S	2103.0E	2103.0	U	68.0			QL=1 ST=2 TYP=3
	245	SGMR	8	S	2103.0E	2103.0	U	71.0			QL=1 ST=2 TYP=3

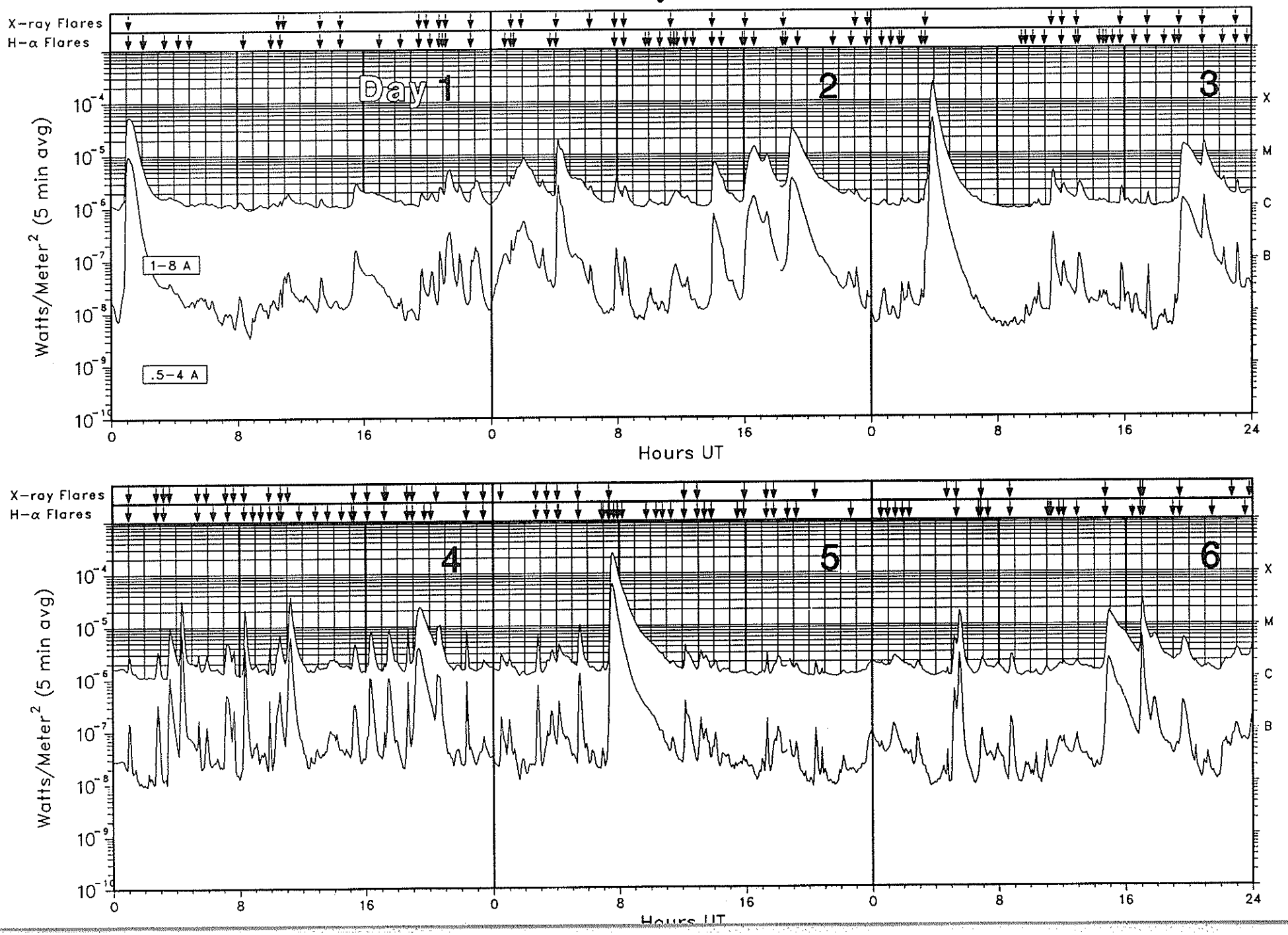
IMP 8 SOLAR WIND PLASMA
MAY 1989



IMP 8 MIT PRELIMINARY ONE-HOUR AVERAGES

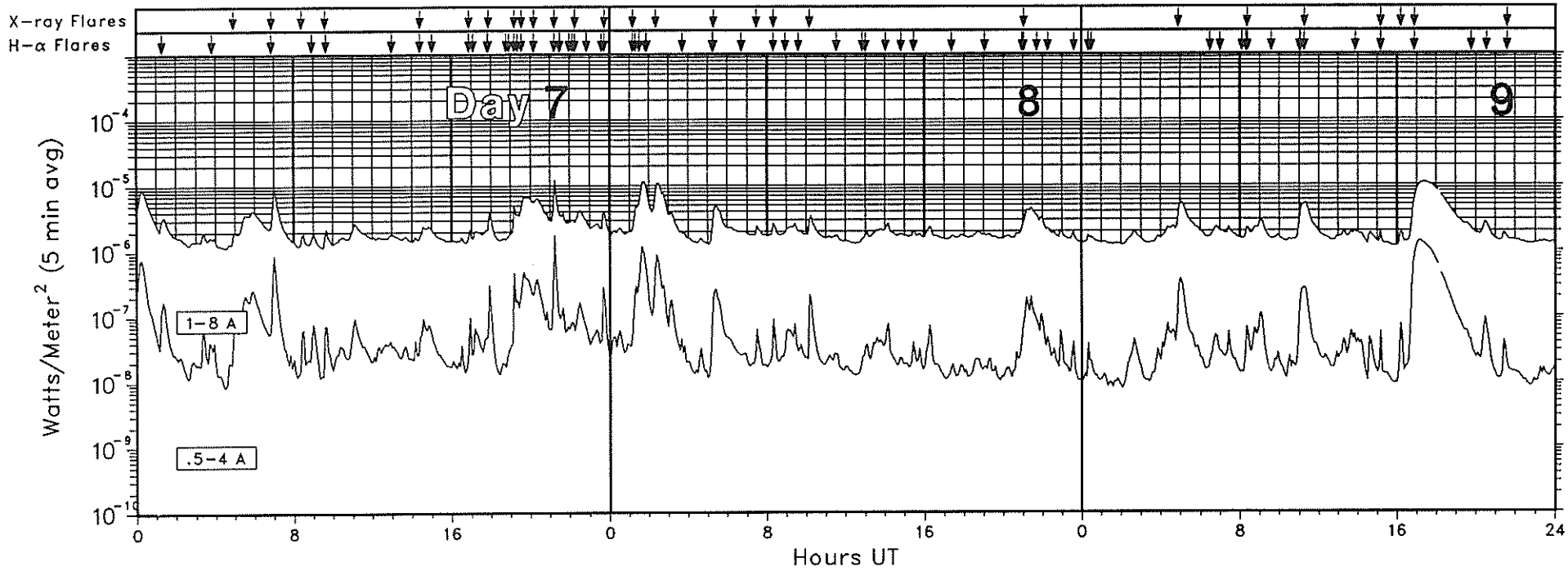
GOES-7 X-RAY DETECTOR

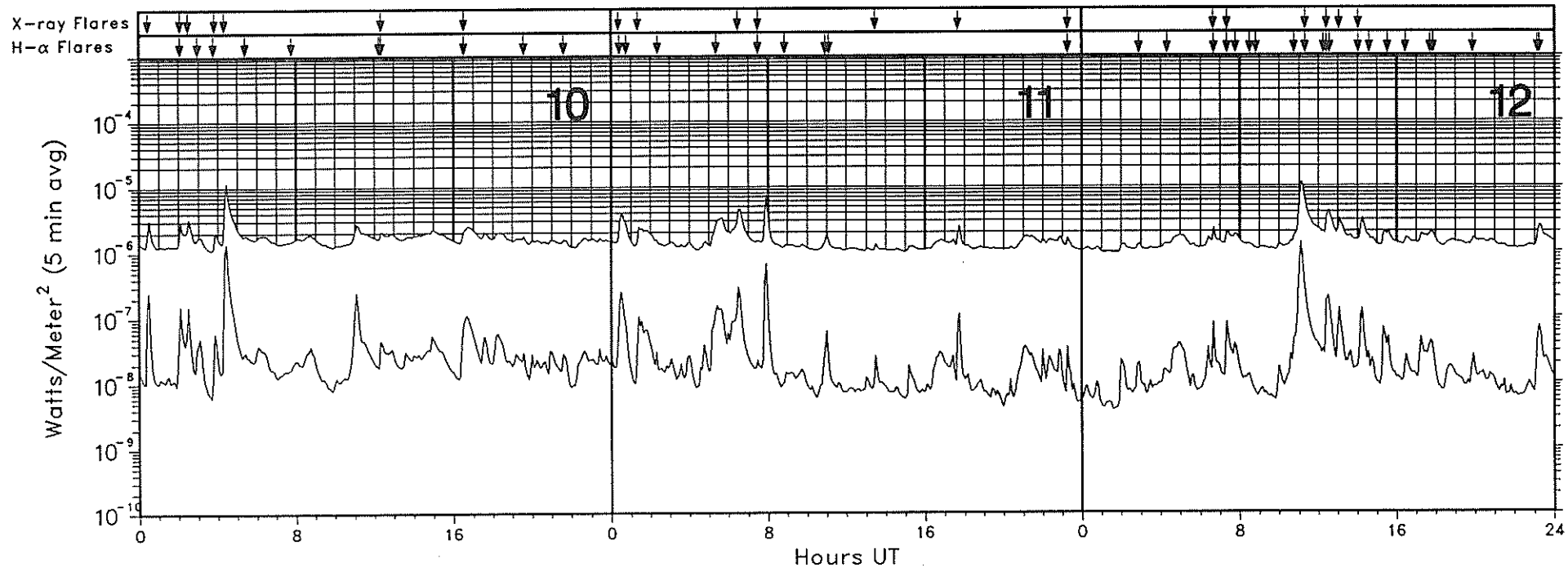
May 1989



GOES-7 X-RAY DETECTOR

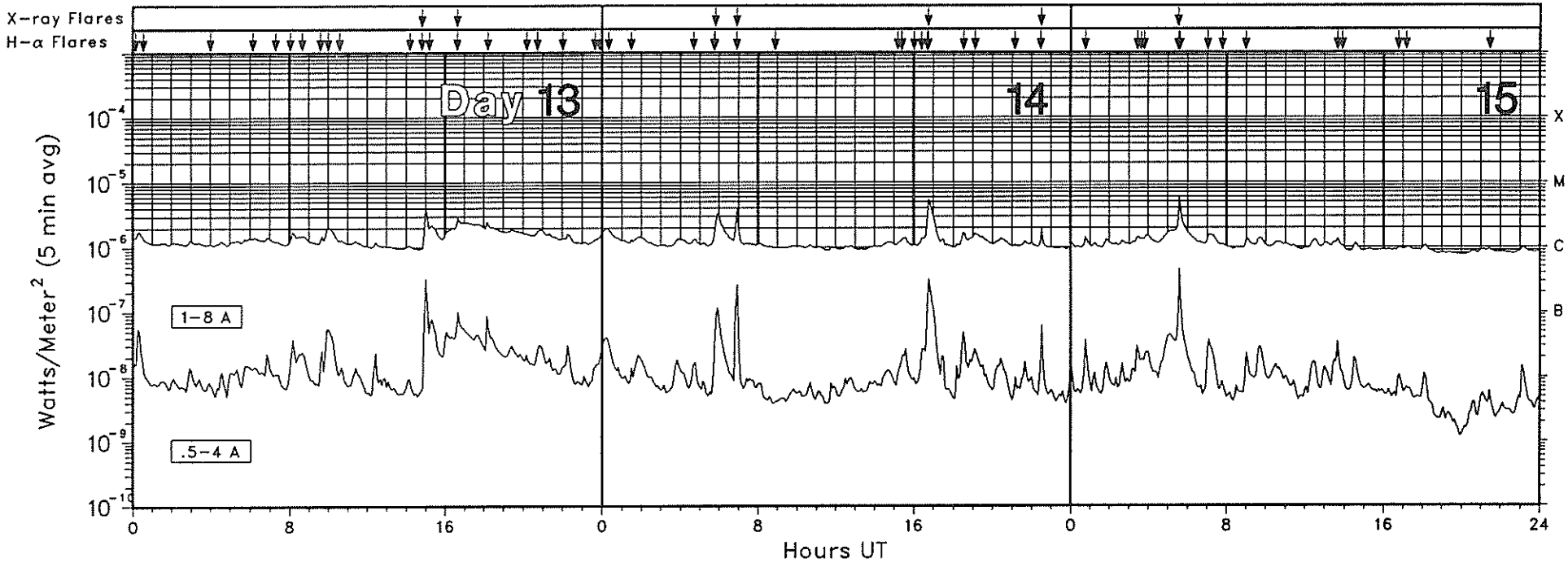
May 1989

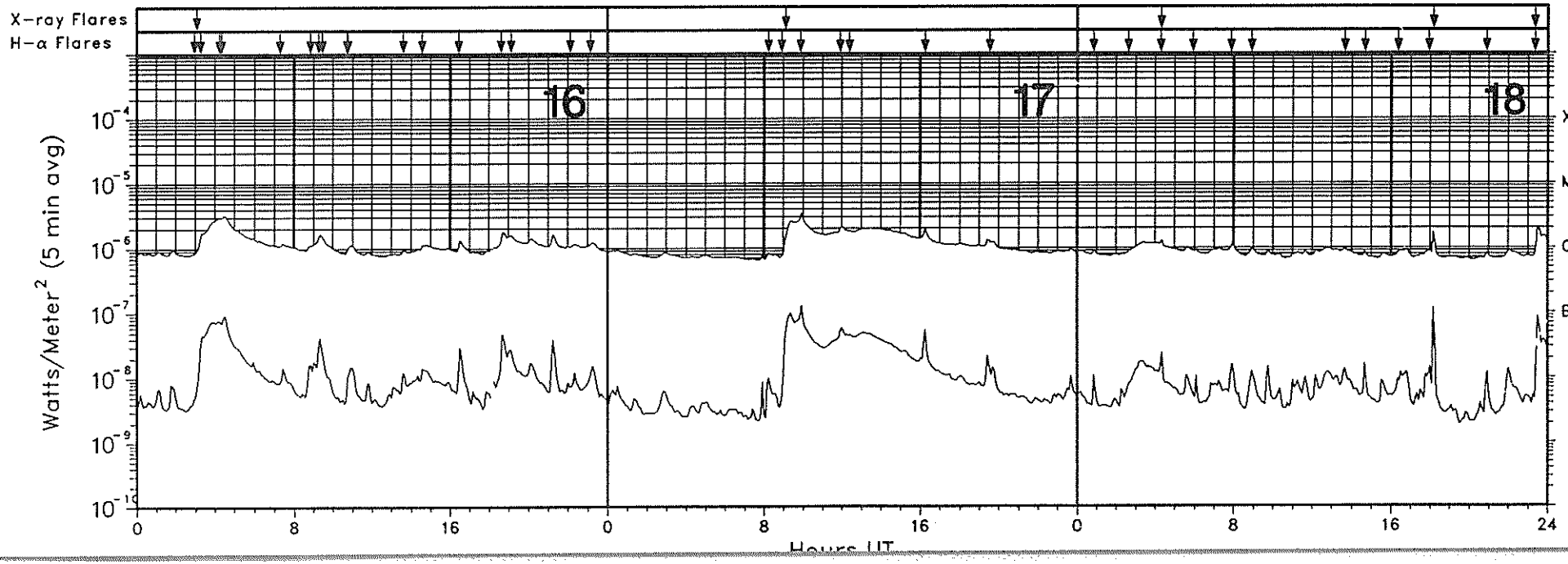




GOES-7 X-RAY DETECTOR

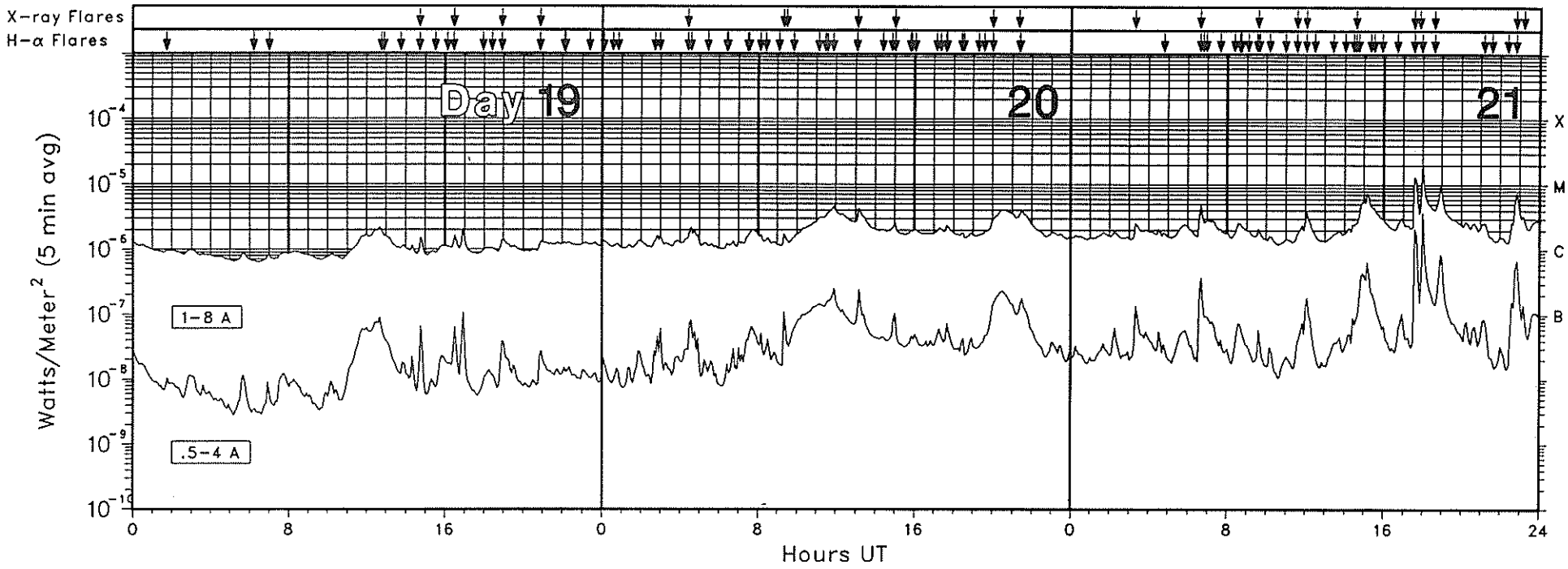
May 1989

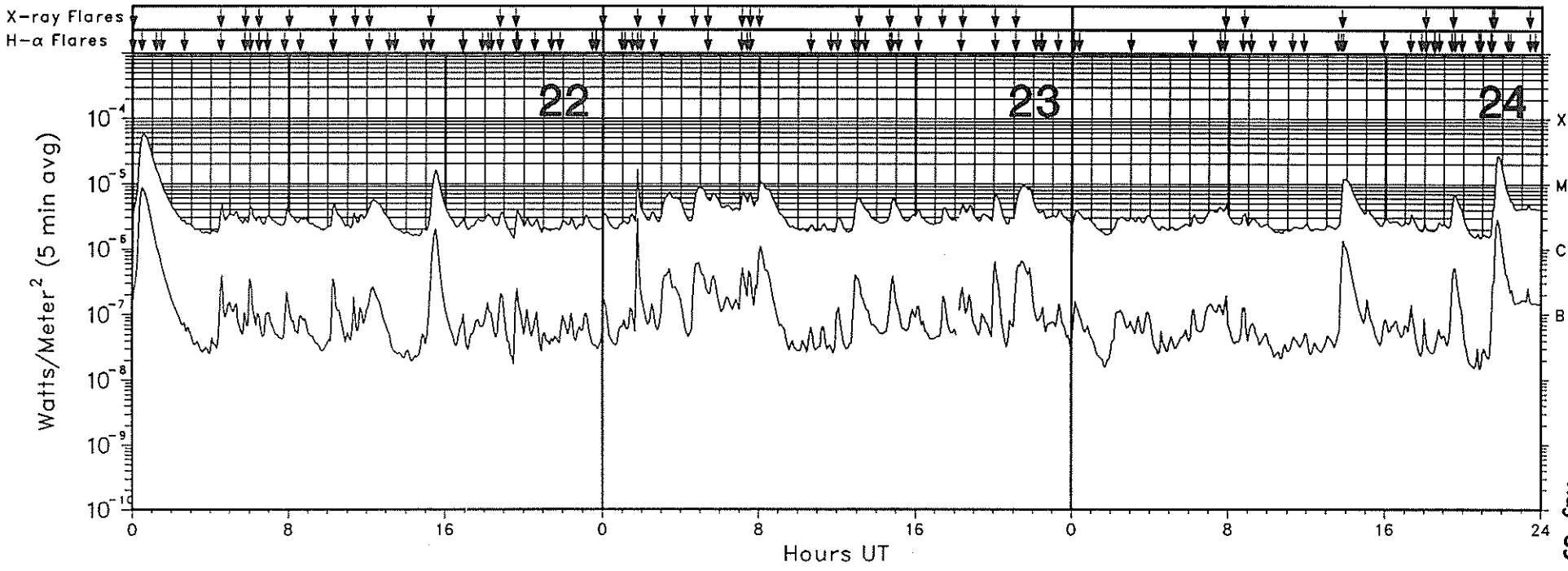




GOES-7 X-RAY DETECTOR

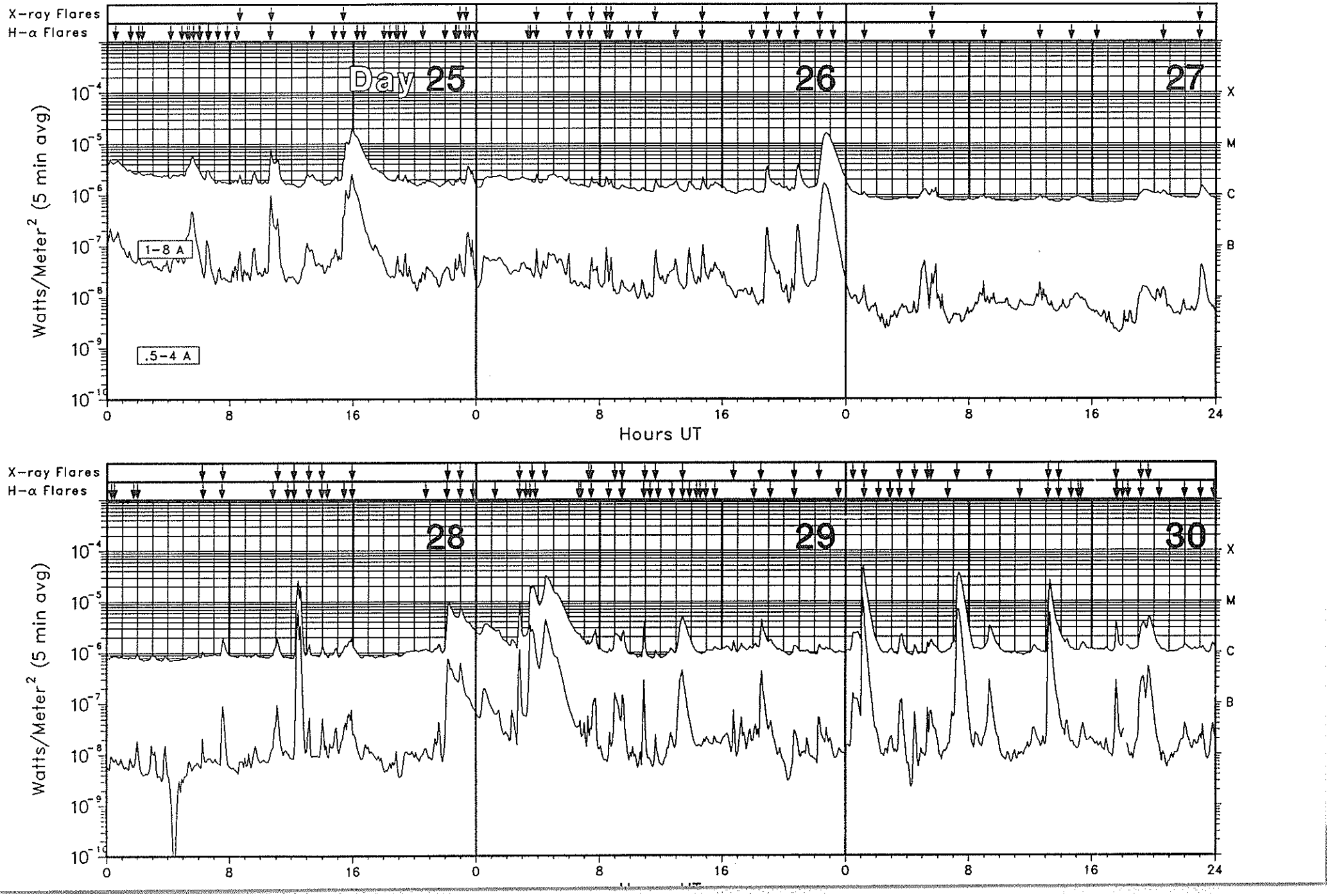
May 1989





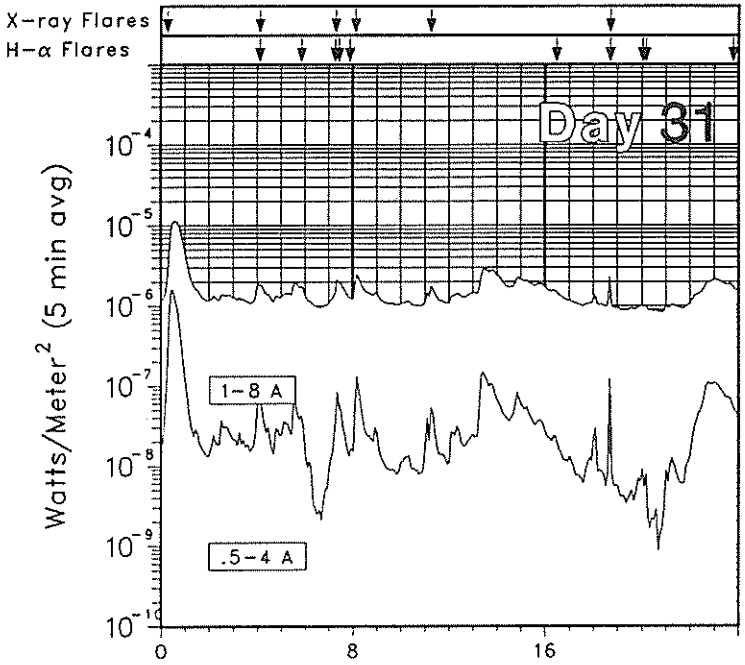
GOES-7 X-RAY DETECTOR

May 1989



GOES-7 X-RAY DETECTOR

May 1989



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

May 1989

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
01	0108	0110U	0115	N28	E60	SN	M5.5	5470
01	1038	1038U	1056D	S18	E05	SF	C1.7	5464
01	1057	1117	1126				C1.9	
01	1315E	1318	1334D	N29	E56	SF	C1.8	5470
01	1433E	1525	1532D	N29	E52	SF	C3.0	5470
01	1930E	1930	1937D	N28	E51	SF	C2.1	5470
01	1957	2011U	2014	N28	E49	SF	C1.9	5470
01	2045E	2048	2058D	N28	E51	SN	C2.8	5470
01	2109E	2119	2142D	N27	E49	SF	C5.5	5470
01	2245E	2248	2330D	N29	E51	SF	C3.5	5470
02	0115E	0116	0120D	N29	E51	SF	C4.4	5470
02	0154	0208	0229	N30	E49	SF	C9.0	5470
02	0407E	0414	0456D	N29	E49	1N	M2.1	5470
02	0616	0619	0624				C3.2	
02	0750E	0752	0823D	S10	E70	1F	C3.5	
02	0825	0829	0838				C2.7	
02	1123E	1126	1141D	N25	W43	SF	C2.1	5468
02	1400E	1403	1441D	N30	E43	1N	C7.4	5470
02	1604E	1635	1805D	N27	E38	1N	M1.4	5470
02	1828E	1855	2139D	S12	W12	2B	M3.0	5464
02	2301E	2308	2346D	N27	W50	SF	C2.1	5468
02	2347E	2350	0007D	N26	W50	SF	C1.5	5468
03	0326E	0354	0451	N27	E32	3B	X2.3	5470
03	1123E	1133	1219D	N28	E27	1F	C5.3	5470
03	1203E	1209	1239D	S21	E53	SF	C2.7	5471
03	1258E	1307	1350D	N28	E25	SF	C2.9	5470
03	1544E	1545	1601D	N17	E78	SF	C2.7	5474
03	1726E	1732	1748D	S20	W21	SF	C2.0	5464
03	1927E	1936U	2130	S19	W26	1N	M1.4	5464
03	2054E	2106U	2211D	N29	E23	1N	M1.6	5470
03	2300E	2309	2320	S20	W26	SF	C3.6	5464
04	0102E	0104	0117D	S20	W27	SF	C3.4	5464
04	0246E	0257	0309D	S20	W29	SF	C3.7	5464
04	0313E	0422	0441D	S19	W29	2B	M4.4	5464
04	0335	0335	0428	S19	W27	SB	M1.1	5464
04	0521E	0530	0540D	S16	W29	SF	C3.4	5464
04	0555E	0558	0559	N29	E19	SF	C2.9	5470
04	0707E	0716	0739	S19	W31	1F	C5.2	5464
04	0738E	0739	0744	S16	W30	SF	C5.5	5464
04	0819E	0822	0828	S19	W31	SN	M2.8	5464
04	0954	0958	1001				C5.9	
04	1038E	1038	1100D	N28	E12	SF	C7.2	5470
04	1106	1131	1140	S20	W36	2N	M5.4	5464
04	1516E	1517	1526D	N27	E17	SF	C4.7	5470
04	1607E	1616	1643D	S19	W34	SN	C8.8	5464
04	1711E	1712	1715E	S19	W35	SF	C2.2	5464
04	1719E	1731	1752D	S19	W35	SN	C9.7	5464
04	1838E	1842	1857D	S17	W36	1B	M1.1	5464
04	1857E	1913	2011D	N30	E15	SN	M2.3	5470
04	2028	2036	2106D	S20	W38	SN	M1.1	5464
04	2220E	2225	2234D	S17	W38	1N	M1.0	5464
04	2325E	2326	2331D	N32	E18	SF	C2.4	5470
05	0030E	0032	0040D	S18	W39	SF	C3.1	5464
05	0243E	0250	0409D	S17	W41	SF	C7.5	5464
05	0325E	0326	0342D	N29	E06	SF	C3.8	5470
05	0406E	0408	0443D	N32	E15	SF	C4.8	5470
05	0524E	0529	0542D	S18	W33	1B	M1.1	5464
05	0723	0739	1035D	N30	E01	3B	X2.4	5470
05	1208E	1209	1248D	S18	W46	1N	C5.0	5464
05	1257E	1313	1422D	S17	W55	SF	C3.5	5464
05	1555E	1555	1601D	S20	W49	SF	C1.7	5464
05	1718E	1720	1730D	N32	E07	SN	C3.4	5470
05	1747E	1811	1821D	S18	W50	SF	C3.4	5464
05	2023	2028	2034				C2.0	
06	0444	0448	0450				C1.8	
06	0520	0524	0554D	S27	E60	SN	M2.0	5476
06	0654E	0655	0657D	N11	W78	SF	C2.6	5463
06	0843E	0845	0901D	S17	W52	SF	C2.9	5464
06	1442E	1451	1542D	S22	W67	SN	M1.7	5464
06	1655E	1702	1745	S31	E59	2B	M4.2	5476
06	1705E	1744U	1849	S23	W56	SF	C6.4	5464
06	1925E	1938	2010D	N28	W13	SF	C6.0	5470
06	2243	2303	2321				C3.4	
06	2348E	0017	0059D	N32	W12	SF	C8.9	5470
07	0651E	0704	0724D	S30	E52	1F	C9.6	5476
07	0454	0555	0637				C4.3	
07	0651E	0704	0724D	S30	E52	1F	C9.6	5476
07	0823	0832	0836				C2.0	
07	0936	0940	0945				C2.7	
07	1425E	1437	1500D	S21	W72	SF	C2.7	5464
07	1653E	1656	1706D	S21	W73	SN	C2.6	5464
07	1752E	1758	1802D	S21	W75	SF	C5.0	5464
07	1910E	1912	1922D	S21	W78	SN	C6.8	5464
07	1933E	1935	1953D	S21	W83	SF	C7.0	5464
07	2010E	2011	2033D	N29	W25	SF	C6.6	5470
07	2113E	2118	2130D	S21	W77	1B	M2.0	5464
07	2216E	2225	2317D	S21	W48	1F	C4.3	5480
07	2344E	2345	0000D	N30	W27	SN	C4.3	5470
08	0110E	0149	0322D	N30	E27	1F	M1.2	5470
08	0221	0230	0257				M1.1	
08	0517E	0525	0608D	N12	E20	1F	C5.2	5474
08	0728	0732	0737				C2.5	
08	0819E	0822	0835D	S22	E74	SF	C2.8	5481
08	1010	1015	1022				C3.9	
08	2102E	2110	2155D	N19	E13	SF	C4.9	5474
09	0453	0505	0517				C5.6	
09	0822	0826	0828				C2.6	
09	1116E	1121	1225D	S31	E16	SF	C5.4	5476
09	1509E	1510	1542D	S29	E14	SF	C2.4	5476
09	1610	1615	1619				C2.1	
09	1653E	1654	1703D	N19	E04	SF	M1.0	5474
09	2136	2138U	2200D	S28	E11	SF	C2.1	5476
10	0026	0032	0037				C3.4	
10	0204E	0205	0216D	S30	E08	SF	C3.3	5476
10	0228	0233	0238				C3.4	
10	0348E	0352	0415D	N25	E33	SF	C2.2	5478
10	0419	0426	0439				M1.4	
10	1221	1224	1230				C2.3	
10	1631E	1632	1642D	S31	E04	SF	C2.5	5476
11	0023	0035	0050				C3.9	
11	0122	0127	0202				C2.6	
11	0629	0635	0642				C4.8	
11	0729E	0755	0851D	S30	W08	2N	C8.2	5476
11	1328	1331	1333				C1.5	
11	1740	1745	1752				C2.6	
11	2316E	2317	2337D	S24	E02	SF	C2.1	5482

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

May 1989

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
12	0639	0643	0646					C2.6	
12	0720	0724	0728					C2.5	
12	1119	1119U	1159D	S29	W22	SF		M1.2	5476
12	1225E	1228	1252	S32	W24	1F		C4.2	5476
12	1303	1308	1314					C3.6	
12	1402E	1413	1610	S29	W24	1F		C3.6	5476
13	1448E	1500	1619D	N17	E69	1N		C4.4	5488
13	1638E	1642	1649D	N07	E18	SF		C3.3	5484
14	0548E	0553	0618D	N19	W54	SF		C3.4	5474
14	0654E	0654	0708D	N07	E09	SF		C4.9	5484
14	1643E	1648	1712D	N26	W24	SF		C5.7	5478
14	2229E	2230	2241D	S29	W62	SN		C2.4	5476
15	0531E	0536	0611D	S20	W26	SN		C6.5	5481
16	0305	0430	0530					C3.7	
17	0908E	0918	0926D	S17	E36	SF		C3.7	5491
18	0419E	0420	0423D	S17	E26	SF		C1.6	5491
18	1812E	1813	1828D	N18	E02	SN		C3.1	5488
18	2322E	2329	0035D	N07	W53	1N		C2.2	5484
19	1443E	1448	1503D	N16	W11	SF		C1.8	5488
19	1627E	1657	1730D	N19	W08	1F		C2.2	5488
19	1629E	1631	1637D	N21	W06	SF		C1.6	5495
19	1855E	1900	1920D	S22	E48	SF		C1.5	5497
19	2052E	2101	2116D	N15	W16	SF		C1.4	5495
20	0424E	0434	0504D	N22	W13	SF		C3.3	5495
20	0919	0924	0929					C1.9	
20	0929	1155	1308					C5.2	
20	1305E	1309	1316D	N17	W22	SF		C4.3	5488
20	1500E	1505	1517D	N14	W72	SF		C3.5	
20	1959E	2045U	2108D	S21	E34	SF		C3.8	5497
20	2120	2130	2140					C4.0	
21	0318	0322	0335					C2.7	
21	0638E	0639	0651D	N23	W26	1F		C5.8	5495
21	0934	0938	0940					C2.6	
21	1133E	1149	1153D	N21	W34	SF		C3.3	5495
21	1201E	1205	1221D	N21	W35	SF		C4.0	5495
21	1434E	1514	1549D	N23	W38	1F		M1.1	5495
21	1733E	1738	1755D	N22	W32	1B		M1.9	5495
21	1750E	1801	1827D	N22	W32	1B		M3.0	5495
21	1835D	1855	1919D	N21	W36	1N		M1.0	5495
21	2247E	2249	0018D	N21	W38	SN		C8.3	5495
21	2311	2314	2317					C4.2	
22	0002E	0024	0213D	S21	E16	2B		M5.7	5497
22	0431E	0436	0439D	N21	W38	SF		C5.7	5495
22	0546E	0546	0611D	S19	E12	SF		C5.6	5497
22	0628E	0628	0638D	N14	W49	SF		C3.7	5488
22	0801	0806	0818D	S19	E13	SF		C4.5	5497
22	1016E	1018	1028D	S19	E10	SF		C5.8	5497
22	1123E	1146	1150D	S21	E09	SF		C3.7	5497
22	1206E	1224	1247D	S22	E10	SF		C5.2	5497
22	1514E	1531	1612D	N19	W49	1N		M1.6	5495
22	1847E	1900	1915D	S23	E07	1F		C3.9	5497
22	1935E	1938	1959D	S20	E03	SF		C4.0	5497
23	0000	0010	0015					C4.0	
23	0146E	0147	0156D	N24	W49	SN		M2.5	5495
23	0300E	0325	0406D	S19	E03	SF		C7.4	5497
23	0441	0500	0524					C9.0	
23	0523E	0539	0620D	S20	E03	1F		C7.5	5497
23	0707E	0708	0719D	S22	W08	SF		C8.6	5497
23	0733E	0734	0748D	S19	W01	SF		C8.9	5497
23	0800	0809	0853					M1.0	
23	1305E	1313	1328D	S17	W16	SF		C6.2	5494
23	1438E	1451	1539D	N18	W64	SF		C7.4	5488
23	1606E	1615	1625	S17	W18	SF		C4.2	5494
23	1720	1725	1730					C4.5	
23	1823E	1830	1835D	N20	W65	SF		C5.0	5495
23	2003E	2006	2027D	S19	W04	SF		C7.8	5497
23	2105E	2126	2209D	S19	W08	SN		C9.2	5497
24	0749E	0756	0811D	N25	W76	1N		C5.7	5495
24	0847	0850	0854					C4.0	
24	1346E	1349	1433D	S21	W20	1N		M1.2	5497
24	1801E	1802	1805D	N20	W71	SF		C2.7	5495
24	1926E	1926	1952D	S20	W22	SF		C7.4	5497
24	2127	2131	2134					C4.8	
24	2134	2150	2237					M2.8	5495
24	2323E	2323	2327D	N19	W78	SF		C6.1	5495
25	0838	0841	0845					C2.7	
25	1040E	1041	1048D	S19	W29	SF		C8.8	5497
25	1520E	1531	1741D	S19	W31	1B		M1.9	5497
25	2255E	2257	2312D	S20	E53	SF		C2.5	5505
25	2320E	2330	0006D	S19	W37	1F		C4.0	5497
26	0352E	0354	0410D	N19	E54	1N		C3.4	
26	0559	0559U	0605D	S20	W44	SF		C3.0	5497
26	0726	0731	0734					C2.6	
26	0824	0830	0833					C2.5	
26	0842	0845U	0849D	S20	W46	SF		C2.3	5497
26	1136	1142	1148					C2.1	
26	1440E	1447	1456D	S20	W48	SF		C2.3	5497
26	1849E	1854	1905D	S19	W51	SF		C3.8	5497
26	2047E	2054	2140D	S19	W45	SN		C4.0	5497
26	2218E	2226	0009D	S19	W47	SN		M1.6	5497
27	0534E	0538U	0606D	S21	W50	SF		C1.7	5497
27	2255E	2307	2318D	S22	E47	SF		C1.6	5511
28	0613E	0616	0625D	N24	E28	SN		C1.1	5506
28	0733E	0736	0750D	S20	W66	SN		C1.9	
28	1107	1110	1133D	S20	W71	SF		C2.1	5497
28	1209E	1226	1250D	S19	W75	1N		M4.0	5497
28	1308E	1310	1318D	N23	E21	SF		C1.7	5506
28	1358E	1401	1417D	S16	E14	SF		C1.4	5505
28	1556E	1556	1602D	N20	E20	SF		C2.4	5506
28	2209	2212U	2301	N21	E19	1N		M1.0	5506
28	2258E	2303	2313D	S17	W74	SF		C8.1	5497
29	0248E	0252	0309D	N22	E15	1N		M1.2	5506
29	0337E	0432	0536D	S18	W77	1N		M2.1	5497
29	0427E	0430	0434	S17	W76	1F		M3.3	5497
29	0716	0719	0721					C1.9	
29	0726E	0746	0801D	N23	E10	SF		C3.5	5506
29	0859	0908	0924					C2.3	
29	0929E	0934	0940D	S22	W90	SN		C3.3	5497

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

May 1989

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
29	1056E	1058	1106	N22	E10			C4.9	
29	1139	1142	1147					C1.2	
29	1325E	1325	1333D	S23	W90		SF	C5.3	5497
29	1644	1648	1652					C1.8	
29	1830	1837	1842					C5.0	
29	2040E	2046	2048D	S22	E14		SF	C1.4	5511
29	2216	2220	2225					C1.5	
30	0028	0050	0059					C2.5	
30	0111E	0114	0120	S20	W79		SF	M6.6	5497
30	0330E	0332	0336	N28	E03		SF	C2.3	5507
30	0429	0434	0439					C1.4	
30	0519	0523	0527					C1.8	
30	0531	0536	0544					C1.8	

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
30	0712	0721	0758					M3.8	5497
30	0918	0924	0933					C3.5	
30	1310	1318	1341					M2.7	
30	1350E	1425	1503D	S22	E07		SN	C2.1	5515
30	1732E	1736	1749D	S21	E03		SN	C4.4	5515
30	1909E	1912	1922D	N14	E59		SF	C3.9	5516
30	1938	1945	1954					C5.0	
31	0017	0039	0102					M1.1	
31	0407E	0409	0435D	S22	E03		SF	C2.1	5511
31	0718E	0723	0736D	N14	E51		SF	C2.2	5516
31	0807E	0808	0819D	N18	E59		SF	C2.5	5514
31	1115	1119	1124					C1.9	
31	1842	1844U	1859D	S20	E89		1F	C3.0	5517

Preliminary GOES Satellite Data
Daily Average X-ray Background
June 1988 - May 1989

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

MASS EJECTIONS FROM THE SUN

MAY 1989

Site	Mo	Day	Observed UT Start	Observed UT Max	Observed UT End	Location RA*	Location R/Ro	Freq or Wavelength	Kind of Event
KHAR	May	1	1050 E		1100 D	150	0.27	H-alpha	S
KHAR	May	2	0750 E		0808	109	0.90	H-alpha	S
KHAR	May	2	1054 E		1100 D	248	1.00	H-alpha	S
KHAR	May	3	0756 E		0830 D	230	0.38	H-alpha	S
WEIS	May	4	1000		1003.3			76- 55 MHz	II
WEIS	May	4	1113.9		1121.1			130- 30 MHz	II Harmonic
WEIS	May	5	0728.5		0736.6			600-300 MHz	IV Decimeter
WEIS	May	5	0745.8		0748.0			86- 30 MHz	II Harmonic
WEIS	May	6	0649.1		0654.7			86- 38 MHz	II Harmonic
WEIS	May	6	1500.6		1519.0			86- 30 MHz	II Herringbone
VORO	May	7	2219	2223 U	2311	30	0.8	H-alpha	S
VORO	May	7	2122 E	2122 U	2128	340	0.9	H-alpha	SP
VORO	May	7	2122 E	2122	2132	315	1	H-alpha	SP
KHAR	May	11	0838 E		0906	342	0.68	H-alpha	S
ABST	May	12	0458	0530	0602	77	1.00	H-alpha	SP
WEIS	May	14	1647.2		1701.7			160- 30 MHz	II Herringbone
KHAR	May	16	0940 E		0958 D	290	1.00	H-alpha	S
KHAR	May	17	0827 E		0839	237	1.00	H-alpha	S
KHAR	May	17	0852		1012 D	110	0.72	H-alpha	Q or SP
KHAR	May	17	0856		0916 D	118	0.62	H-alpha	SP or Q
KHAR	May	17	0908 E		0945 D	125	0.55	H-alpha	SP
WEIS	May	17	0922.1		0939.8			80- 30 MHz	II Harmonic
WROC	May	17	1015		1331	331	0.6	H-alpha	Q
WROC	May	17	1115		1430	332	0.6	H-alpha	Q
KHAR	May	19	0756		0920	110	0.83	H-alpha	S
KHAR	May	20	0813		0830	320	0.51	H-alpha	S
WEIS	May	20	0921.5		0924.3			360-180 MHz	II
WEIS	May	20	0924.4		0926.6			42- 30 MHz	II
WEIS	May	20	0930.7		0955.3			70- 30 MHz	II Harmonic
KHAR	May	20	0933		1002 D	26	0.46	H-alpha	S
VORO	May	22	2326 E	2327 U	2356	300	0.25	H-alpha	SP
VORO	May	22	2327 E	2327 U	2358	315	0.28	H-alpha	SP
WROC	May	24	0930		1230	249	0.6	H-alpha	Q
WROC	May	24	1030		1330	250	0.6	H-alpha	Q
WEIS	May	28	1232.4		1235.4			70- 30 MHz	II Harmonic
KHAR	May	29	0933		1002 E	26	0.46	H-alpha	S

QUALIFIERS ON START, MAX, AND END TIMES
- D = event ended after tabulated time
- E = event began before tabulated time
- U = uncertain time

REPORTING STATIONS
- ABST = Abastumani
- KHAR = Kharkov
- VORO = Voroshilov
- WEIS = Weissenau

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 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

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	DSD	0204E	0310	N29	E67	05	6.3		05	9	9	E	LEAR	5470	
01	ASR	0303E	0446D	S21	E88	05	7.9			9	9	E	PALE		
01	APR	0447E	0703D	S46	W90	04	23.8	1				C	ABST		
01	BSL	0506E	0703D	S30	W90	04	24.2	1				C	ABST		
01	BSL	0630E	0640D	S22	E90	05	8.2	1-				C	CATA		
01	BSL	0740	0746	S22	E90	05	8.2	1-				C	CATA		
01	APR	0950E	1005D	S52	W90	04	23.8					V	ATHN		
01	ADF	0955E	1015D	S53	W65	04	25.9					V	ATHN		
01	ADF	1035E	2014D	S17	E09	05	2.1	1	04	9	9	E	RAMY	5464	
01	DSD	1053E	1100D	S18	E07	05	2.0	1				V	KHAR		
01	AFS	1335E	0028D	N29	E09	05	2.3		02	9	9	E	HOLL	5467	
01	DSD	1729E	0134D	N32	E54	05	6.0		06	9	9	E	PALE	5470	
01	DSD	1729E	0305D	S19	W01	05	1.6		01	9	9	E	PALE	5464	
01	ADF	1729E	0403D	N15	W18	04	30.4		06	9	9	E	PALE	5463	
01	ADF	1729E	0403D	S14	E02	05	1.9		03	9	9	E	PALE	5464	
01	ADF	1729E	0403D	S17	E04	05	2.0		04	9	9	E	PALE	5464	
01	ADF	1729E	0403D	S19	W01	05	1.6	1	06	9	9	E	PALE	5464	
01	ADF	1729E	0403D	S24	E52	05	5.7		03	9	8	E	PALE		
01	ADF	1950E	0028D	N20	W06	05	1.4		17	9	9	E	HOLL	5463	
01	ADF	1950E	0028D	S13	E01	05	1.9		09	9	9	E	HOLL	5464	
01	DSD	2025E	2332D	N30	E53	05	6.0		06	9	9	E	HOLL	5470	
01	AFS	2043E	0028D	N22	E21	05	3.5		02	9	9	E	HOLL	5472	
01	AFS	2315E	0938D	N30	E51	05	6.0		02	9	9	E	LEAR	5470	
01	ADF	2320E	0938D	S17	E02	05	2.1	1	11	9	9	E	LEAR	5464	
02	DSD	0132E	0235D	S15	W07	05	1.5		04	9	9	E	LEAR	5464	
02	AFS	0300E	0938D	N27	W38	04	29.3		02	9	9	E	LEAR	5468	
02	ASR	0301E	0403D	S20	W85	04	25.7			8	8	E	PALE	5460	
02	AFS	0308E	0403D	N27	W39	04	29.2		02	9	9	E	PALE	5468	
02	DSD	0349E	0403D	N31	E47	05	5.9		03	9	9	E	PALE	5470	Flare Associated
02	APR	0452E	0807D	S50	W90	04	24.7	1				C	ABST		
02	BSL	0452E	0807D	S52	E90	05	9.9	1				C	ABST		
02	BSL	0710	0725	S34	E90	05	9.5	1-				C	CATA		
02	BSL	0715	0720	S19	W90	04	25.5	1-				C	CATA		
02	ADF	0730E	0825	S23	W07	05	1.8	1				V	KHAR		
02	DSD	0750E	0808	S19	E66	05	7.4	1				V	KHAR		
02	BSL	0756	0810	S19	W90	04	25.6	1-				C	CATA		
02	BSL	1054E	1100D	S22	W90	04	25.6	1				V	KHAR		
02	BSL	1105E	1116D	S20	W90	04	25.7	1-				C	CATA		
02	ADF	1110E	2134D	N29	E47	05	6.1	1	06	9	9	E	RAMY	5470	
02	ADF	1415E	0128D	S18	W06	05	2.1	2	05	9	9	E	HOLL	5464	
02	ADF	1415E	0128D	S21	W10	05	1.8	1	06	9	9	E	HOLL	5464	
02	ASR	1704E	0052D	N34	W90	04	25.6			9	9	E	PALE	5456	
02	AFS	1723E	0441D	N27	W47	04	29.2		01	9	9	E	PALE	5468	
02	ASR	1726E	2340D	N34	W90	04	25.6			9	9	E	HOLL	5456	
02	AFS	1729E	0305D	S20	E66	05	7.8		02	9	9	E	PALE	5471	
02	DSD	1810E	2240D	N26	W49	04	29.0		04	9	9	E	HOLL	5468	
02	SSB	1816		433	W30	04	30.2			0	0	E	HOLL		
02	DSD	1817	0128D	S16	W09	05	2.1		03	6	7	E	HOLL	5464	
02	LPS	1922E	2240D	S21	W13	05	1.8			9	9	E	HOLL	5464	Flare Associated
02	LPS	1923E	2004D	S21	W13	05	1.8			9	9	E	PALE	5464	Flare Associated
02	AFS	2135E	0128D	N27	W50	04	29.1		03	9	9	E	HOLL	5468	
02	APR	2145E	0128D	S50	W90	04	25.4	1		9	9	E	HOLL		
02	APR	2339E	0128D	N44	E90	05	10.4	1		9	9	E	HOLL		
03	LPS	0000E	0033D	N17	E90	05	9.8			9	9	E	PALE		
03	ASR	0005E	0925D	N14	E90	05	9.8			9	9	E	LEAR		
03	AFS	0020E	0925D	S12	W17	05	1.7		02	9	9	E	LEAR	5464	
03	ASR	0033E	0451D	N17	E90	05	9.9			9	9	E	PALE		
03	SSB	0203		435	W36	04	30.3			0	0	E	PALE		
03	DSD	0314E	0451D	N31	E36	05	6.0		03	9	9	E	PALE	5470	
03	APR	0426E	0704D	S52	W90	04	25.6	1				C	ABST		
03	ADF	0553E	0925D	N31	E38	05	6.2	1	12	9	9	E	LEAR	5470	
03	ADF	0555E	0925D	S14	W22	05	1.6	1	04	9	9	E	LEAR	5464	
03	APR	0654E	0730D	S52	W90	04	25.7	1				C	ABST		
03	APR	0743E	1045D	S52	W90	04	25.7	1				V	KHAR		
03	DSD	0756E	0830D	S17	W18	05	2.0	1				V	KHAR		
03	BSL	0911E	0915D	N17	E90	05	10.2	1-				C	CATA		
03	AFS	1101E	1636D	N32	E32	05	6.0		02	9	9	E	SVTO	5470	
03	ADF	1106E	1636D	S20	W22	05	1.8	1	07	9	9	E	SVTO	5464	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMP CMD	Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
03	ADF	1108E	1636D	N28	E21	05	5.1	1	08	9	9	E	SVTO	5470	
03	ADF	1108E	1636D	N32	E26	05	5.5	1	06	9	9	E	SVTO	5470	
03	ADF	1122E	2126D	S20	E57	05	7.8	1	05	9	9	E	RAMY	5471	
03	ADF	1122E	2130D	N30	E27	05	5.6	1	04	9	9	E	RAMY	5470	
03	DSD	1147E	1632D	N30	E24	05	5.4		03	9	9	E	SVTO	5470	Flare Associated
03	ADF	1247E	1720D	S23	W24	05	1.7	1	06	9	9	E	RAMY	5464	
03	SDF	1428E	0029D	N20	W29	05	1.4		17	0	0	E	HOLL		
03	AFS	1543E	2355D	N31	E32	05	6.2		03	9	9	E	HOLL	5470	
03	APR	1545E	0120D	S51	W90	04	26.1	1		9	9	E	HOLL		
03	BSL	1549E	1614D	N19	E72	05	9.1			9	9	E	SVTO		Flare Associated
03	BSL	1550	1642D	N19	E76	05	9.4			9	9	E	HOLL		Flare Associated
03	AFS	1710E	2015D	N31	E22	05	5.4		02	8	9	E	PALE	5470	
03	SSB	1744		434	W44	04	30.9			0	0	E	HOLL		
03	ADF	1813E	2355D	N19	W44	04	30.4	2	13	9	9	E	HOLL	5463	
03	SSB	1825		433	W46	05	1.0			0	0	E	PALE		
03	LPS	2024E	2220D	S21	W26	05	1.8			9	9	E	HOLL	5464	Flare Associated
03	DSD	2027	0120D	S17	W24	05	2.0		05	9	9	E	HOLL	5464	Flare Associated
03	SDF	2130E	1027D	S02	E10	05	4.6		06	0	0	E	RAMY		
03	SDF	2134E	1018D	S17	W12	05	3.0		04	0	0	E	RAMY	5464	
03	ADF	2224E	0120D	N23	E21	05	5.5	2	08	9	9	E	HOLL	5470	
03	ADF	2335E	0934D	S18	W31	05	1.6	1	06	9	9	E	LEAR	5464	
03	ADF	2336E	0934D	N26	E19	05	5.4	1	04	9	9	E	LEAR	5470	
03	ADF	2337E	0934D	S21	E49	05	7.7	1	04	9	9	E	LEAR	5471	
04	DSD	0426	0450	S19	W30	05	1.9		06	9	9	E	LEAR	5464	
04	DSD	0526	1608D	S19	W30	05	1.9		08	9	9	E	SVTO	5464	Flare Associated
04	DSD	0550E	0622D	S16	W28	05	2.1		06	9	7	E	LEAR	5464	
04	SSB	0801		388	W06	04	27.8			0	0	E	SVTO		
04	ADF	1102E	1420D	N26	E24	05	6.3	1	06	9	9	E	RAMY	5470	
04	DSD	1120E	1250D	S18	W34	05	1.9		06	9	9	E	RAMY	5464	Flare Associated
04	DSD	1122E	1608D	S19	W34	05	1.9		04	9	9	E	SVTO	5464	Flare Associated
04	ADF	1150E	1602D	S29	E45	05	8.0	1	16	9	9	E	RAMY	5471	
04	ADF	1420E	1602D	N25	E14	05	5.7	1	12	9	9	E	RAMY	5470	
04	DSD	1555E	2042D	S18	W42	05	1.5		04	9	9	E	HOLL	5464	
04	AFS	1555E	2310D	S22	W32	05	2.2		02	9	9	E	HOLL	5464	
04	ADF	1600E	0020D	N33	E17	05	6.0		14	9	9	E	HOLL	5470	
04	ASR	1758E	2332D	N31	W90	04	27.7			9	9	E	PALE	5468	
04	AFS	1758E	2332D	N32	E17	05	6.1		05	9	9	E	PALE	5470	
04	ADF	1758E	2332D	S19	E29	05	7.0		06	7	9	E	PALE	5471	
04	DSD	1758E	2332D	S19	W44	05	1.4		06	9	9	E	PALE	5464	
04	DSD	1842E	2042D	S16	W34	05	2.2		06	9	9	E	HOLL	5464	Flare Associated
04	DSD	2230E	0020D	S17	W36	05	2.2		09	9	9	E	HOLL	5464	Flare Associated
04	DSD	2308E	0920D	S15	W37	05	2.2		04	9	9	E	LEAR	5464	
04	ADF	2310E	0920D	N28	E11	05	5.8	1	09	9	9	E	LEAR	5470	
04	DSD	2335E	0510	N31	E19	05	6.5		04	9	9	E	LEAR	5470	
04	ADF	2336E	0920D	S28	E41	05	8.2	1	17	9	9	E	LEAR	5471	
05	DSD	0747E	0920D	N28	E06	05	5.8		06	9	9	E	LEAR	5470	
05	BSL	0758E	0819	S34	E90	05	12.5	1				C	CATA		
05	BSL	0758E	0845	S23	E90	05	12.3	2				C	CATA		
05	LPS	0759	1202D	N30	E07	05	5.9			9	9	E	SVTO	5470	Flare Associated
05	DSD	0805	1656D	N32	E12	05	6.3		07	9	9	E	SVTO	5470	Flare Associated
05	DSD	0809	0832	S14	W45	05	1.9	2				C	CATA		
05	DSD	0815E	1656D	S19	W42	05	2.1		14	9	9	E	SVTO	5464	Flare Associated
05	DSD	0954E	1005D	S13	W44	05	2.1	1				C	CATA		
05	BSL	1048	1110D	N17	W90	04	28.7	1-				C	CATA		
05	BSL	1050	1108	S20	E90	05	12.3	1-				C	CATA		
05	BSL	1055	1110D	N14	W90	04	28.7	1-				C	CATA		
05	ADF	1108E	1556D	N25	W04	05	5.1	1	08	9	9	E	SVTO	5470	
05	ADF	1122E	1656D	N18	E57	05	9.8	1	05	9	9	E	SVTO	5474	
05	DSD	1456E	1942D	S23	W47	05	2.0		03	9	9	E	RAMY	5464	
05	ADF	1456E	2034D	N25	E02	05	5.8	1	11	9	9	E	RAMY	5470	
05	DSD	1715E	1900D	N30	E07	05	6.3		05	9	9	E	RAMY	5470	Flare Associated
05	DSD	1725E	1820D	N31	E08	05	6.3		07	9	9	E	HOLL	5470	Flare Associated
05	DSD	1808E	0127D	N18	E46	05	9.2		16	9	9	E	HOLL	5464	Flare Associated
05	SSB	1940		383	W20	04	29.6			0	0	E	RAMY		434 W71
05	BSL	2214E	2247	N24	W90	04	29.1	1				C	VORO		
05	ADF	2220	0200D	N02	E19	05	7.3	1				C	VORO		
05	APR	2235	0200D	N63	E90	05	13.9	1				C	VORO		
05	APR	2235	0200D	S49	W90	04	28.4	1				C	VORO		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
05	APR	2244	0200D	S23	W90	04	29.1	1				C	VORO		
05	AFS	2317E	0850D	S18	W53	05	1.9		02	9	9	E	LEAR	5464	
05	ADF	2319E	0905D	N29	W01	05	5.9	1	08	8	8	E	LEAR	5470	
06	BSL	0138	0159	S36	E90	05	13.3	1				C	VORO		
06	AFS	0200E	0944D	S22	E66	05	11.1		02	9	9	E	LEAR	5476	
06	APR	0515E	0530D	N65	E90	05	14.3					V	ATHN		
06	ADF	0515E	0530D	N70	E45	05	10.3					V	ATHN		
06	APR	0515E	0530D	S58	W90	04	28.4					V	ATHN		
06	BSL	0626E	0630D	N13	W90	04	29.6	1-				C	CATA		
06	BSL	0655	0715	N13	W90	04	29.6	1				C	CATA		
06	BSD	0656	0802D	N11	W78	04	30.4		10	9	9	E	SVTO	5463	Flare Associated
06	BSD	0657E	0740D	N13	W77	04	30.5		07	9	9	E	LEAR	5463	
06	BSL	0816E	0828D	S87	E90	05	14.7	1-				C	CATA		
06	ADF	0851E	1702D	N31	W16	05	5.1	1	14	9	9	E	SVTO	5470	
06	AFS	0851E	1702D	S20	E21	05	8.0		03	6	8	E	SVTO	5471	
06	APR	0901E	0933D	S58	W90	04	28.6	1				C	ABST		
06	BSL	0911	0919	S22	E90	05	13.3	1-				C	CATA		
06	BSL	0930E	0940D	S22	E90	05	13.3	1-				C	CATA		
06	DSD	1007	1028	S14	W58	05	2.0	1				C	CATA		
06	BSL	1009	1028	N24	E90	05	13.4	1-				C	CATA		
06	BSL	1015	1035	N31	W90	04	29.4	1-				C	CATA		
06	BSL	1028	1043	N17	E90	05	13.3	1-				C	CATA		
06	BSL	1100E	1106D	N40	E90	05	13.8	1				C	CATA		
06	SSB	1118		386	W32	04	29.8			0	0	E	SVTO		
06	DSD	1125E	1445D	S18	W58	05	2.0		06	9	9	E	RAMY	5464	
06	ADF	1125E	2112D	N25	W09	05	5.8	1	13	9	9	E	RAMY	5470	
06	DSD	1130E	1702D	S22	E21	05	8.1		03	9	9	E	SVTO	5471	
06	ASR	1137E	1202D	N11	W82	04	30.3			9	9	E	RAMY	5463	
06	AFS	1145E	1702D	N18	E43	05	9.8		03	9	9	E	SVTO	5474	
06	ASR	1151E	1533D	N12	W84	04	30.2			9	9	E	SVTO	5463	
06	BSL	1458	1510D	S20	W68	05	1.4			9	9	E	SVTO	5464	Flare Associated
06	SSB	1906		349	W00	05	3.1			0	0	E	HOLL		383 W34
06	AFS	2008E	0131D	N10	E42	05	10.0		03	9	9	E	HOLL	5477	
06	AFS	2009E	0131D	S31	E54	05	11.1		05	9	9	E	HOLL	5476	
06	DSD	2232E	2336D	S23	W63	05	2.1		20	9	9	E	HOLL	5464	
06	ADF	2238E	0131D	N33	W13	05	5.9	1	11	9	9	E	HOLL	5470	
06	DSD	2317E	0702D	S15	W51	05	3.1		05	9	9	E	LEAR	5464	
06	ADF	2322E	0939D	N25	W19	05	5.5	1	10	9	9	E	LEAR	5470	
06	AFS	2323E	0939D	N11	E42	05	10.1		02	9	9	E	LEAR	5477	
06	DSD	2324E	0607D	S15	W61	05	2.3		04	9	9	E	LEAR	5464	
06	AFS	2325E	0939D	S31	E51	05	11.0		02	9	9	E	LEAR	5476	
06	ASR	2326E	0625D	N15	W82	04	30.8			9	9	E	LEAR	5463	
06	AFS	2328E	0939D	N15	E37	05	9.8		02	9	9	E	LEAR	5474	
07	DSD	0018E	0131D	S16	W63	05	2.2		08	9	9	E	HOLL	5464	
07	AFS	0629E	0939D	S22	W41	05	4.1		02	9	7	E	LEAR		
07	APR	0630E	0650D	N50	E90	05	14.9					V	ATHN		
07	ADF	0635E	0655D	N58	E60	05	12.5					V	ATHN		
07	ADF	0735E	0805D	N12	E37	05	10.1	1				V	KHAR		
07	ASR	0806E	0939D	S23	W90	04	30.4			9	9	E	LEAR		
07	DSD	0844E	1726D	S23	W67	05	2.2		03	9	9	E	SVTO	5464	
07	ADF	0849E	1726D	N25	W23	05	5.6	1	08	9	9	E	SVTO	5470	
07	AFS	0909E	1726D	S28	E44	05	10.8		03	9	9	E	SVTO	5476	
07	AFS	0918E	1726D	N11	E34	05	9.9		04	9	9	E	SVTO	5477	
07	AFS	0923E	1726D	N14	E29	05	9.6		03	9	9	E	SVTO	5474	
07	AFS	0923E	1726D	N18	E31	05	9.7		03	9	9	E	SVTO	5474	
07	AFS	1006E	1726D	S24	W43	05	4.1		05	9	9	E	SVTO		
07	BSL	1045	1056	N02	E90	05	14.2	1-				C	CATA		
07	ADF	1127E	1540D	S12	W71	05	2.1	1	04	9	9	E	RAMY	5464	
07	AFS	1321E	0128D	N10	E32	05	10.0		04	9	9	E	HOLL	5477	
07	ADF	1322E	0128D	N30	W21	05	5.9	1	06	9	9	E	HOLL	5470	
07	SSB	1322		348	W08	05	3.9			0	0	E	RAMY		
07	AFS	1324E	0128D	S22	W45	05	4.1		03	8	8	E	HOLL	5480	
07	AFS	1326E	0128D	N13	E26	05	9.5		02	9	9	E	HOLL	5479	
07	AFS	1326E	0128D	N16	E29	05	9.7		03	9	9	E	HOLL	5474	
07	SSB	1330		345	W05	05	4.2			0	0	E	HOLL		392 W52 430 W90
07	AFS	1418E	0128D	S31	E44	05	11.1		02	7	8	E	HOLL	5476	
07	ADF	1639E	0128D	N27	E68	05	13.0	2	13	9	9	E	HOLL	5478	
07	BSD	1656	1746D	S21	W73	05	2.1		07	9	9	E	HOLL	5464	Flare Associated

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
07	ADF	1748E	0128D	N28	W26	05	5.7	2	11	9	9	E	HOLL	5470	
07	AFS	1800E	0444D	N10	E29	05	9.9		03	9	9	E	PALE	5477	
07	AFS	1800E	0444D	N13	E24	05	9.6		02	9	9	E	PALE	5479	
07	ADF	1800E	0444D	N34	W24	05	5.8	1	18	9	9	E	PALE	5470	
07	DSD	1800E	0444D	S16	W72	05	2.3		03	9	9	E	PALE	5464	Flare Associated
07	AFS	1800E	0444D	S20	W44	05	4.4		02	9	9	E	PALE	5480	
07	ASR	1932	2015D	S21	E83	05	14.2			9	9	E	HOLL	5464	Flare Associated
07	BSD	2118	2140	S21	W75	05	2.1		16	9	9	E	HOLL	5464	Flare Associated
07	DSD	2122E	0128D	S17	W73	05	2.3		05	9	9	E	HOLL	5464	
07	BSL	2122	2132D	S19	W90	05	1.0	1				C	VORO		
07	DSD	2122E	2128D	S16	W80	05	1.8	1				C	VORO		
07	ADF	2146	0014D	N58	E30	05	10.5	1				C	VORO		
07	ADF	2151	0014D	S03	W04	05	7.6	1				C	VORO		
07	ADF	2152	0014D	N19	E90	05	14.8	1				C	VORO		
07	APR	2200	0014D	S45	E90	05	15.4	1				C	VORO		
07	BSD	2219	2311	S19	W49	05	4.2	1				C	VORO		
07	APR	2250	0014D	N63	E90	05	15.9	1				C	VORO		
07	BSL	2307	2342	S12	W90	05	1.2	1				C	VORO		
07	ASR	2308	0041D	S12	W90	05	1.2			9	9	E	HOLL	5464	
07	AFS	2350E	0928D	S30	E37	05	10.9		02	9	9	E	LEAR	5476	
08	ASR	0020E	0130D	S26	W90	05	1.0			9	9	E	LEAR	5464	
08	ASR	0024E	0140D	S19	W68	05	2.8			9	9	E	LEAR	5464	Flare Associated
08	ASR	0123E	0128D	S21	W77	05	2.1			9	9	E	HOLL	5464	
08	ASR	0252E	0928D	S16	W90	05	1.3			9	9	E	LEAR	5464	
08	APR	0441E	0644D	S65	E90	05	16.2	1				C	ABST		
08	APR	0514E	0644D	N60	E90	05	16.1	1				C	ABST		
08	ADF	0643E	0710D	N21	E53	05	12.3	1				V	KHAR		
08	ADF	0751E	0730D	N33	W32	05	5.8	1	21	9	8	E	SVTO	5470	
08	ADF	0751E	1730D	N18	E24	05	10.1	1	10	9	8	E	SVTO	5474	
08	ASR	1100E	1933D	S19	W90	05	1.6			9	9	E	RAMY	5464	
08	ADF	1113E	1933D	N18	E19	05	9.9	1	07	9	9	E	RAMY	5474	
08	DSD	1124E	1505D	S25	E30	05	10.8		03	9	9	E	RAMY	5476	
08	ASR	1435E	0104D	S23	W90	05	1.7			9	9	E	HOLL	5464	
08	ASR	1639E	0244D	N10	E90	05	15.4			9	9	E	PALE	5484	
08	ASR	1716E	0244D	S19	W89	05	1.9			9	9	E	PALE	5464	
08	BSD	1730E	2348D	N19	W73	05	3.1		06	9	9	E	HOLL	5472	
08	BSD	1750E	0234D	N20	W74	05	3.1		04	9	9	E	PALE	5472	
08	ASR	1756E	0104D	N12	E90	05	15.5			9	9	E	HOLL		
08	SPY	1918E	2006	S14	W90	05	2.0			9	9	E	HOLL	5464	
08	BSL	1925E	1943D	S15	W90	05	2.0			9	9	E	PALE	5464	
09	ASR	0005E	0930D	S16	W90	05	2.2			9	9	E	LEAR	5464	
09	ASR	0013E	0930D	N12	E90	05	15.8			9	9	E	LEAR	5484	
09	DSD	0145E	0220D	N28	E48	05	12.8		05	9	9	E	PALE	5478	
09	ASR	0342E	0930D	N20	W80	05	3.0			9	9	E	LEAR	5472	
09	BSL	0432E	0554D	N34	E90	05	16.4	1				C	ABST		
09	BSL	0432E	0710D	S17	W90	05	2.3	1				C	ABST		
09	APR	0453E	0710D	N60	E90	05	17.1	1				C	ABST		
09	ADF	0520E	1720D	N13	E06	05	9.7	1	07	9	9	E	SVTO	5479	
09	ADF	0520E	1720D	N17	E05	05	9.6	1	10	9	9	E	SVTO	5474	
09	ASR	0520E	1720D	S18	W90	05	2.4			9	9	E	SVTO	5464	
09	BSL	0527E	0556D	N20	W90	05	2.3	1				C	ABST		
09	BSD	0530E	1720D	N17	W84	05	2.8		06	9	9	E	SVTO	5472	
09	ASR	0600E	1720D	N28	W51	05	5.3			9	9	E	SVTO	5470	
09	AFS	0600E	1720D	S24	W67	05	4.1		02	9	9	E	SVTO	5480	
09	BSL	0629E	0630D	S15	W90	05	2.4	1				C	CATA		
09	BSL	0629E	0630D	S21	W90	05	2.4	1-				C	CATA		
09	BSL	0643E	0711D	S18	W90	05	2.4	1-				C	CATA		
09	BSL	0711E	0722	S33	W90	05	2.1	1-				C	CATA		
09	BSL	0759E	0831	S15	W90	05	2.5	2				C	CATA		
09	BSL	0824	0844	S22	E90	05	16.3	1				C	CATA		
09	DSD	0840E	0951D	N20	E08	05	10.0		05	9	9	E	SVTO	5474	
09	BSL	0849	0859	N13	W90	05	2.6	1-				C	CATA		
09	BSL	0933	0939	N18	E90	05	16.2	1-				C	CATA		
09	BSL	1017	1025D	N32	W90	05	2.3	1-				C	CATA		
09	BSL	1035E	1057	N33	W90	05	2.3	1-				C	CATA		
09	BSL	1035E	1100	S14	W90	05	2.6	1				C	CATA		
09	BSL	1057	1118	N08	E90	05	16.2	1				C	CATA		
09	BSL	1057	1118D	S28	E90	05	16.5	1				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
09	ASR	1103E	1511D	N13	E76	05	15.2			9	9	E	SVTO	5484	
09	ASR	1105E	1120D	N09	E77	05	15.2			9	9	E	RAMY	5484	
09	ASR	1105E	2030D	S15	W89	05	2.7			9	9	E	RAMY	5464	
09	ASR	1105E	2238D	N19	W80	05	3.3			9	9	E	RAMY	5472	
09	BSL	1110	1135D	S15	W90	05	2.6	1				C	CATA		
09	AFS	1118E	2238D	S29	E17	05	10.8		02	9	9	E	RAMY	5476	
09	ADF	1221E	2238D	N26	E47	05	13.2	1	08	9	9	E	RAMY	5478	
09	ADF	1221E	2238D	N29	W46	05	5.9	1	15	9	9	E	RAMY	5470	
09	ASR	1425E	0051D	N19	W90	05	2.7			9	9	E	HOLL	5472	
09	SDF	1529E	2216D	N24	E40	05	12.7		11	0	0	E	HOLL		
09	SSB	1530		392	W80	05	1.1			0	0	E	SVTO		
09	ASR	1740E	0051D	S21	W90	05	2.8			9	9	E	HOLL		
09	LPS	1807E	1808D	S21	W90	05	2.8			9	9	E	PALE	5464	
09	LPS	1816E	0051D	S20	W90	05	2.9			9	9	E	HOLL	5464	
09	AFS	1904E	0051D	S30	E14	05	10.9		04	9	9	E	HOLL	5476	
09	ASR	1934E	0051D	S16	W90	05	3.0			9	9	E	HOLL		
09	SSB	2000		334	W24	05	7.2			0	0	E	RAMY		346 W36 385 W75
09	ASR	2211E	0449D	N19	W89	05	3.1			9	9	E	PALE	5472	
09	SDF	2238E	1100D	N25	E47	05	13.6		12	0	0	E	RAMY		
09	ADF	2335E	0530D	N28	W54	05	5.8	1	07	9	9	E	LEAR	5470	
09	ASR	2336E	0928D	N19	W90	05	3.1			9	9	E	LEAR		
09	ADF	2337E	0530D	N11	E71	05	15.3	1	09	9	9	E	LEAR	5484	
10	APR	0005E	0200D	N19	W90	05	3.1	1				C	VORO		
10	APR	0005E	0200D	N32	E90	05	17.1	1				C	VORO		
10	APR	0005E	0200D	N66	E90	05	18.1	1				C	VORO		
10	APR	0005E	0200D	S01	W90	05	3.3	1				C	VORO		
10	BSL	0012	0019	N19	E90	05	16.9	1				C	VORO		
10	ADF	0050	0200D	N63	W90	05	2.0	1				C	VORO		
10	ADF	0236E	0412	N16	E26	05	12.1	1	11	9	9	E	LEAR	5478	
10	ADF	0350E	0415D	N37	E35	05	13.0	2	19	9	9	E	PALE	5478	
10	SDF	0400E	0415D	N36	E28	05	12.4	3	15	0	0	E	PALE	5478	
10	SDF	0412	0415	N16	E26	05	12.1	3	11	9	9	E	LEAR	5478	Flare Associated
10	ADF	0415E	0449D	N21	E31	05	12.5	1	09	9	9	E	PALE	5478	
10	BSL	0628E	0645	S11	E90	05	17.0	1-				C	CATA		
10	BSL	0636	0645	N19	W90	05	3.4	1-				C	CATA		
10	BSL	0636	0650	S13	W90	05	3.5	1-				C	CATA		
10	BSL	0658	0735D	N17	E90	05	17.1	1-				C	CATA		
10	BSL	0726	0735D	S13	E90	05	17.1	1-				C	CATA		
10	BSL	0825	0840	S17	W90	05	3.5	1-				C	CATA		
10	AFS	0850E	1730D	N10	W07	05	9.8		03	9	9	E	SVTO	5477	
10	ADF	0850E	1730D	N32	W58	05	5.8	1	18	9	8	E	SVTO	5470	
10	AFS	0850E	1730D	S32	E00	05	10.4		04	9	9	E	SVTO	5476	
10	BSL	1041	1112	S12	W90	05	3.7	1				C	CATA		
10	BSL	1112	1130	N20	W90	05	3.6	1				C	CATA		
10	ASR	1118E	1730D	N15	W90	05	3.6			9	9	E	SVTO		
10	BSL	1141E	1141D	N17	W90	05	3.6	1-				C	CATA		
10	BSL	1141E	1141D	N19	W90	05	3.6	1-				C	CATA		
10	ADF	1152E	1730D	S19	E48	05	14.1	1	07	9	9	E	SVTO	5481	
10	AFS	1433E	0116D	S29	E04	05	10.9		03	9	9	E	HOLL	5476	
10	SSB	1520		329	W30	05	8.3			0	0	E	RAMY		348 W49
10	ASR	1520E	1730D	S21	W90	05	3.7			7	7	E	SVTO	5480	
10	ASR	1522E	1730D	N19	E90	05	17.5			9	9	E	SVTO		
10	ASR	1540E	0116D	N16	E90	05	17.5			9	9	E	HOLL		
10	ADF	1650E	1730D	S31	E03	05	10.9	1	06	9	9	E	SVTO	5476	
10	ASR	1705E	0306D	N16	E90	05	17.5			9	9	E	PALE		
10	ASR	1808E	0306D	N19	W90	05	3.9			9	8	E	PALE	5472	
10	AFS	2108E	0306D	S30	W01	05	10.8		01	6	6	E	PALE	5476	
10	ASR	2113E	0332D	S14	W90	05	4.1			8	8	E	PALE	5464	
10	SSB	2220		348	W53	05	6.8			0	0	E	HOLL		385 W90
10	ASR	2231E	0116D	N18	W90	05	4.1			9	9	E	HOLL		
10	AFS	2350E	0930D	S31	W02	05	10.8		02	9	9	E	LEAR	5476	
10	ADF	2352E	0930D	N19	W11	05	10.1	1	11	9	9	E	LEAR	5474	
10	ADF	2353E	0930D	N12	E64	05	15.8	1	06	9	9	E	LEAR	5484	
10	ASR	2354E	0930D	N14	E90	05	17.8			9	9	E	LEAR		
11	ASR	0515	0600	N90	W20	05	9.3			9	9	E	LEAR		
11	ASR	0632E	0815D	N18	E90	05	18.1					P	BUCA		
11	BSL	0641	0651	N52	E90	05	19.0	1-				C	CATA		
11	BSL	0735E	0855	N17	E90	05	18.1	1				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
11	DSD	0750	0900	S32	W08	05	10.7		04	9	9	E	LEAR	5476	
11	BSL	0758	0915	N14	E90	05	18.1	1-				C	CATA		
11	ASR	0800E	1655D	N21	E90	05	18.2			9	9	E	SVTO		
11	DSD	0806E	1616D	S32	W04	05	11.0		06	9	9	E	SVTO	5476	Flare Associated
11	DSD	0807	0824	S32	W07	05	10.8	1				C	CATA		
11	BSL	0815	0824	N31	E90	05	18.4	1-				C	CATA		
11	ADF	0835	0907D	N58	W23	05	9.3	1				V	KHAR		
11	DSD	0838E	0906	N16	W38	05	8.5	1				V	KHAR		
11	BSL	0849	0900	S17	W90	05	4.5	1-				C	CATA		
11	BSL	0950	1003	N13	E90	05	18.2	1-				C	CATA		
11	BSL	0950	1003	N17	E90	05	18.2	1-				C	CATA		
11	ADF	0955	1030	N29	E16	05	12.7	1				V	KHAR		
11	ASR	1116E	1811D	S24	W90	05	4.5			9	9	E	RAMY	5480	
11	ADF	1123E	2055D	N26	E22	05	13.2	1	06	9	9	E	RAMY	5478	
11	SSB	1530		298	W13	05	19.0			0	0	E	RAMY		348 W63 355 W70
11	ASR	2118E	0453D	N21	E86	05	18.5			9	9	E	PALE	5487	
11	SSB	2308		349	W68	05	7.5			0	0	E	HOLL		
12	AFS	0002E	0453D	S23	E01	05	12.1		02	6	6	E	PALE	5482	
12	ADF	0003E	0820D	S28	W16	05	10.7	1	04	9	9	E	LEAR	5476	
12	ADF	0004E	0820D	S18	W23	05	10.2	1	10	9	9	E	LEAR	4574	
12	ADF	0005E	0820D	N32	E09	05	12.7	1	15	9	9	E	LEAR	5478	
12	ADF	0006E	0820D	N13	E49	05	15.7	1	04	9	9	E	LEAR	5484	
12	ADF	0007E	0820D	N16	E69	05	17.2	1	06	9	9	E	LEAR	5487	
12	ASR	0008E	0820D	N15	E90	05	18.8			9	9	E	LEAR	5487	
12	ADF	0104E	0136D	N24	E71	05	17.5	1	20	9	9	E	HOLL	5487	
12	ADF	0120E	0453D	N19	E71	05	17.5	1	18	9	9	E	PALE	5487	
12	ASR	0308E	0820D	N28	W90	05	5.1			9	9	E	LEAR	5470	
12	ASR	0323E	0453D	N29	W90	05	5.1			9	9	E	PALE	5470	
12	BSL	0434E	0602D	S25	E90	05	19.2	1				C	ABST		
12	BSL	0458	0602D	N13	E90	05	19.0	1				C	ABST		
12	BSL	0506E	0602D	N21	W90	05	5.3	1				C	ABST		
12	BSL	0506E	0602D	S08	E90	05	19.0	1				C	ABST		
12	BSL	1111E	1111D	S17	E90	05	19.3	1-				C	CATA		
12	ASR	1235E	1251D	N15	E90	05	19.3			9	9	E	RAMY		
12	ADF	1240E	1251D	N24	E08	05	13.1	1	05	9	9	E	RAMY	5478	
12	ASR	1252E	0133D	N16	E90	05	19.4			9	9	E	HOLL		
12	ASR	1650E	0454D	N17	E82	05	18.9			9	9	E	PALE		
12	APR	2155E	0133D	N32	W90	05	5.8	1		9	9	E	HOLL		
12	ASR	2205E	0133D	N24	W90	05	6.0			9	9	E	HOLL	5470	
13	ASR	0026E	0730D	N23	W90	05	6.1			9	9	E	LEAR	5470	
13	BSL	0439E	0626D	N20	W90	05	6.3	1				C	ABST		
13	BSL	0439E	0626D	S12	W90	05	6.4	1				C	ABST		
13	ADF	0440E	0929D	N19	E53	05	17.2	1	10	9	9	E	LEAR	5487	
13	DSD	0447E	0750	N06	E25	05	15.1		03	9	9	E	LEAR	5484	
13	ADF	0452E	0929D	N17	W46	05	9.7	1	09	9	9	E	LEAR	5477	
13	ASR	0603	0929D	N16	E76	05	19.0			9	9	E	LEAR		
13	DSD	0815	0929D	N26	W05	05	12.9		03	9	9	E	LEAR	5478	
13	BSL	0957E	1030D	S18	E90	05	20.3	1-				C	CATA		
13	BSL	1020E	1030D	N23	W90	05	6.5	1				C	CATA		
13	BSL	1055	1140	S18	E90	05	20.3	1-				C	CATA		
13	AFS	1337E	1646D	N28	W12	05	12.6		02	9	9	E	SVTO	5478	
13	AFS	1350E	1858D	N28	W11	05	12.7		03	9	9	E	RAMY	5478	
13	ADF	1352E	1858D	N21	E57	05	17.9	1	07	9	9	E	RAMY	5487	
13	APR	1440E	1646D	S15	W90	05	6.8	1		9	9	E	SVTO		
13	AFS	1443E	0141D	N28	W09	05	12.9		04	9	9	E	HOLL	5478	
13	DSD	1510	1630D	N20	E69	05	18.9		02	9	9	E	SVTO	5488	Flare Associated
13	AFS	1707E	0450D	N27	W12	05	12.8		02	9	9	E	PALE	5478	
13	AFS	1749E	0141D	N08	E16	05	14.9		01	9	9	E	HOLL	5484	
13	DSD	1948E	0450D	S21	W06	05	13.4		02	9	9	E	PALE	5481	
13	DSD	2007E	0450D	N22	W54	05	9.7		06	9	9	E	PALE	5474	
13	BSD	2059E	2120D	S26	W48	05	10.1		05	9	9	E	PALE	5476	
14	DSD	0120E	0515D	N05	E12	05	14.9		03	9	9	E	LEAR	5484	
14	DSD	0124E	0930D	S17	W02	05	13.9		03	9	9	E	LEAR	5481	
14	DSD	0349E	0450D	N13	E17	05	15.4		03	9	9	E	PALE	5484	
14	APR	0435E	0632D	N18	W90	05	7.3	1				C	ABST		
14	APR	0506E	0633D	N30	W90	05	7.1	1				C	ABST		
14	DSD	0550	0735	N18	E50	05	18.0		03	9	9	E	LEAR	5487	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
14	BSL	0813	0827	S22	E90	05	21.2	1-				C	CATA		
14	AFS	1043E	1614D	N19	E60	05	19.0		02	9	9	E	SVTO	5488	
14	BSL	1105	1125	S26	W90	05	7.5	1-				C	CATA		
14	ASR	1109E	1614D	S28	W90	05	7.4			9	9	E	SVTO		
14	AFS	1116E	1614D	N26	W23	05	12.7		02	9	9	E	SVTO	5478	
14	AFS	1116E	1614D	S21	W14	05	13.4		02	9	9	E	SVTO	5481	
14	DSD	1140E	1710D	N15	E58	05	18.9		02	9	9	E	RAMY	5488	
14	ASR	1450E	0039D	S22	W90	05	7.7			9	9	E	HOLL	5471	
14	ADF	1451E	2030D	S31	W59	05	10.0	1	10	9	9	E	HOLL	5476	
14	AFS	1452E	0131D	S21	W17	05	13.3		03	9	9	E	HOLL	5481	
14	AFS	1453E	0131D	N17	E57	05	18.9		03	9	9	E	HOLL	5488	
14	AFS	1454E	0131D	N18	E28	05	16.7		03	9	9	E	HOLL		
14	SSB	1456		268	W22	05	19.8			0	0	E	HOLL		
14	AFS	1544E	1614D	N16	W20	05	13.1		02	9	9	E	SVTO	5483	
14	AFS	1544E	1614D	N19	E27	05	16.7		02	9	9	E	SVTO		
14	AFS	1544E	1614D	N19	E27	05	16.7		02	9	9	E	SVTO		
14	AFS	1602E	0131D	N16	W20	05	13.1		03	9	9	E	HOLL	5483	
14	AFS	1650E	0414D	N18	E27	05	16.7		02	9	9	E	PALE	5489	
14	AFS	1716E	0414D	N16	W20	05	13.2		01	9	9	E	PALE	5483	
14	ADF	1717E	2030D	N12	E47	05	18.3	2	12	9	9	E	HOLL	5487	
14	SDF	1719E	1153D	S36	E03	05	15.0		11	0	0	E	RAMY		
14	AFS	1725E	0414D	S21	W19	05	13.3		03	9	9	E	PALE	5481	
14	DSD	1729	0039D	S31	W58	05	10.1		06	7	7	E	HOLL	5476	Flare Associated
14	DSD	1730E	1900D	S30	W59	05	10.1		06	9	9	E	PALE	5476	Flare Associated
14	DSD	1730E	2245D	N16	E62	05	19.4		05	9	9	E	PALE	5488	
14	ASR	1918E	2247D	S21	W90	05	7.9			8	8	E	PALE	5471	
14	SDF	2041E	1634D	S35	E33	05	17.5		10	0	0	E	PALE		
14	APR	2158E	0125D	N30	W90	05	7.8	1				C	VORO		
14	APR	2158E	0125D	N63	W90	05	6.9	1				C	VORO		
14	APR	2158E	0125D	S39	E90	05	22.2	1				C	VORO		
14	APR	2240	0125	N64	E90	05	23.0	1				C	VORO		
14	APR	2249	0125D	S10	W90	05	8.2	1				C	VORO		
14	BSL	2258	2313	S23	W90	05	8.0	1				C	VORO		
14	ADF	2325	0125D	N32	W90	05	7.8	1				C	VORO		
15	ASR	0257E	0335D	S24	W90	05	8.2			9	9	E	PALE	5471	
15	DSD	0350E	0414D	N17	E47	05	18.7		03	9	9	E	PALE	5488	
15	APR	0413E	0701D	N60	W90	05	7.2	1				C	ABST		
15	APR	0413E	0701D	S10	W90	05	8.4	1				C	ABST		
15	ADF	0450E	0926D	N13	E52	05	19.1	1	04	9	9	E	LEAR	5488	
15	AFS	0450E	0926D	N16	E50	05	19.0		02	9	9	E	LEAR	5488	
15	ADF	0452E	0926D	N20	E33	05	17.7	1	07	9	9	E	LEAR	5487	
15	ADF	0455E	0926D	N19	E21	05	16.8	1	03	9	9	E	LEAR	5489	
15	AFS	0503E	1719D	N18	E48	05	18.9		02	9	9	E	SVTO	5488	
15	AFS	0510E	1719D	S21	W25	05	13.3		02	9	9	E	SVTO	5481	
15	ASR	0540	1146D	S26	W90	05	8.2			9	9	E	SVTO	5471	
15	AFS	0739E	1719D	N24	E50	05	19.2		02	7	7	E	SVTO		
15	BSL	0925	0950	N82	E90	05	23.8	1-				C	CATA		
15	AFS	1136E	1719D	S22	W28	05	13.3		02	9	9	E	SVTO	5481	
15	ADF	1203E	1719D	N13	E00	05	15.5	1	07	9	9	E	SVTO	5484	
15	ADF	1539E	1849D	N21	E07	05	16.2	1	04	9	9	E	RAMY	5489	
15	AFS	1541E	1719D	N19	E29	05	17.9		03	9	9	E	SVTO	5487	
15	ADF	1541E	1719D	S20	E66	05	20.7	1	10	9	9	E	SVTO	5490	
15	AFS	1627E	2232D	S24	W22	05	14.0		03	9	9	E	HOLL	5481	
15	AFS	1715E	0448D	S24	W23	05	13.9		03	6	6	E	PALE	5481	
15	AFS	1721E	0448D	N16	E25	05	17.6		02	9	9	E	PALE	5487	
15	SSB	1850		231	W00	05	18.1			0	0	E	HOLL		247 W16
15	AFS	2231E	0125D	S20	W34	05	13.3		03	9	9	E	HOLL	5492	
15	ASR	2333E	0448D	S16	E90	05	22.8			9	9	E	PALE	5494	
15	ASR	2335E	0125D	S16	E90	05	22.8			9	9	E	HOLL		
16	ASR	0149E	0448D	N21	W89	05	9.2			9	9	E	PALE	5474	
16	AFS	0235E	0921D	N15	E37	05	18.9		02	9	9	E	LEAR	5488	
16	ASR	0236E	0921D	N20	W90	05	9.2			9	9	E	LEAR	5474	
16	AFS	0237E	0921D	S20	W37	05	13.3		02	9	9	E	LEAR	5492	
16	AFS	0312E	0448D	S20	W39	05	13.1		02	9	9	E	PALE	5492	
16	APR	0501E	0700D	N29	E90	05	23.3	1				C	ABST		
16	BSL	0725	0736	S19	E90	05	23.2	1-				C	CATA		
16	BSL	0940E	0958D	N20	W90	05	9.5	1				V	KHAR		
16	APR	1040E	1106D	N20	W90	05	9.6	1				V	KHAR		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
16	AFS	1216E	2223D	N14	E32	05	18.9		02	7	8	E	RAMY	5488	
16	AFS	1217E	1609D	N06	W23	05	14.8		02	6	5	E	RAMY	5484	
16	AFS	1300E	1633D	N17	E31	05	18.9		03	7	7	E	SVTO	5488	
16	AFS	1300E	1633D	S21	W44	05	13.2		02	9	9	E	SVTO	5492	
16	ASR	1447E	2050D	N20	W90	05	9.7			9	9	E	HOLL	5474	
16	AFS	1455E	1633D	S15	E49	05	20.3		02	7	7	E	SVTO	5491	
16	ADF	1529E	2050D	S17	E40	05	19.7		10	9	9	E	HOLL	5491	
16	AFS	1644E	0022D	N08	W25	05	14.8		02	6	7	E	PALE	5484	
16	AFS	1654E	0219D	N18	E18	05	18.1		02	9	9	E	PALE	5487	
16	ADF	1702E	0219D	S18	E39	05	19.7		15	9	9	E	PALE	5491	
16	ASR	1725E	2223D	N18	W90	05	9.9			9	9	E	RAMY	5474	
16	ASR	1732E	0219D	N18	E90	05	23.6			9	9	E	PALE	5474	
16	APR	2205E	0106D	N59	W90	05	9.0	1				C	VORO		
16	ADF	2219	0106D	S21	E90	05	23.8	1				C	VORO		
16	APR	2237	0106D	N30	W90	05	9.9	1				C	VORO		
16	AFS	2350E	0926D	N14	E28	05	19.1		02	9	9	E	LEAR	5488	
17	DSD	0018E	0219D	N08	W26	05	15.1		02	9	9	E	PALE	5484	
17	APR	0218E	0926D	N19	W90	05	10.2	1		9	9	E	LEAR	5474	
17	AFS	0550E	0926D	N18	W08	05	16.6		02	9	9	E	LEAR	5489	
17	APR	0644E	0655D	N18	W90	05	10.4	1				V	KHAR		
17	ADF	0755E	0810D	S18	E35	05	20.0	1				V	KHAR		
17	BSL	0827E	0839D	S33	W90	05	10.2	1				V	KHAR		
17	ADF	0852	1012D	S17	E46	05	20.9	3				V	KHAR		
17	ADF	0855E	0912	S20	E35	05	20.0	1	09	9	9	E	SVTO	5491	
17	AFS	0855E	1717D	N17	E20	05	18.9		03	6	9	E	SVTO	5488	
17	AFS	0855E	1717D	N17	W10	05	16.6		02	7	9	E	SVTO	5489	
17	AFS	0855E	1717D	N20	W09	05	16.7		03	9	9	E	SVTO	5489	
17	ADF	0855E	1717D	S12	E42	05	20.5	3	22	9	9	E	SVTO	5491	
17	SDF	0856	0916	S18	E35	05	20.0	1				V	KHAR		
17	DSD	0908E	0945D	S20	E29	05	19.6	2				V	KHAR		
17	SDF	0912	0913	S20	E35	05	20.1	3	09	0	0	E	SVTO	5491	
17	BSL	0915E	0950	N37	W90	05	10.1	1-				C	CATA		
17	ADF	0920E	1012D	S12	E70	05	22.7	1				V	KHAR		
17	EPL	1050E	1135D	N35	W90	05	10.2					V	ATHN		
17	APR	1121E	1540D	N61	W90	05	9.5	1		9	9	E	RAMY		
17	ADF	1242E	2116D	S12	E38	05	20.4	1	18	9	9	E	RAMY	5491	
17	SDF	1355E	0001D	S33	W42	05	14.2		11	0	0	E	HOLL		
17	DSD	1611E	1717D	S16	E34	05	20.2		05	9	9	E	SVTO	5498	
17	APR	1840E	0453D	N62	W90	05	9.8	1		8	9	E	PALE		
17	ASR	1911E	0054D	S32	W90	05	10.7			9	9	E	PALE	5476	
17	DSD	1911E	0257D	S21	W62	05	13.0		02	9	8	E	PALE	5492	
17	SDF	2116E	1045D	S34	W39	05	14.8		19	0	0	E	RAMY		
17	ADF	2330	0200D	S10	E60	05	22.5	1				C	VORO		
17	AFS	2353E	0453D	N15	E27	05	20.0		02	9	9	E	PALE	5496	
17	APR	2355	0200D	N58	W90	05	10.1	1				C	VORO		
17	ADF	2355	0200D	S19	E90	05	24.9	1				C	VORO		
18	SDF	0001E	1202D	S11	E61	05	22.6		07	0	0	E	HOLL		
18	AFS	0001E	0930D	N14	E28	05	20.1		02	9	9	E	LEAR		
18	APR	0006	0200	N30	W90	05	10.9	1				C	VORO		
18	APR	0006	0200D	S12	W90	05	11.2	1				C	VORO		
18	ADF	0011	0200D	S20	E37	05	20.8	1				C	VORO		
18	AFS	0240E	0930D	N08	W43	05	14.9		03	9	9	E	LEAR	5484	
18	AFS	0253E	0453D	N08	W43	05	14.9		03	8	8	E	PALE	5484	
18	ADF	0309E	0453D	N14	W38	05	15.2		05	9	9	E	PALE	5493	
18	DSD	0425E	0610D	N17	E10	05	18.9		04	9	9	E	LEAR	5488	
18	AFS	0430E	0930D	S08	W44	05	14.9		03	9	9	E	LEAR	5484	
18	BSL	0456E	0705D	S17	E90	05	25.0	1				C	ABST		
18	BSL	0533E	0705D	S66	W90	05	10.1	1				C	ABST		
18	AFS	0608E	1225D	N15	E23	05	20.0		01	9	9	E	SVTO	5496	
18	AFS	0738E	1225D	N18	E07	05	18.8		03	7	8	E	SVTO	5488	
18	BSL	0851E	0851D	S30	E90	05	25.4	1				C	CATA		
18	ADF	1230E	1540D	S20	E49	05	22.3	1	08	9	9	E	RAMY	5494	
18	SSB	1250		200	W06	05	18.5			0	0	E	RAMY		218 W24 223 W29
18	SSB	1250		230	W36	05	20.9			0	0	E	RAMY		243 W49
18	DSD	1340E	2040D	S23	E64	05	23.5		03	9	9	E	RAMY	5497	
18	DSD	1703E	0001D	S20	E64	05	23.6		04	8	8	E	PALE	5497	
18	AFS	1703E	0453D	N14	E19	05	20.1		02	8	8	E	PALE	5496	
18	DSD	1703E	0453D	S13	E17	05	20.0		02	9	9	E	PALE	5491	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
18	AFS	2006E	0150D	N13	E17	05	20.1		04	9	9	E	HOLL	5496	
18	AFS	2113E	0150D	N18	E00	05	18.9		04	9	9	E	HOLL	5488	
18	SSB	2118		224	W34	05	20.8			0	0	E	HOLL		246 W56
18	DSD	2329	0112D	N08	W56	05	14.8		10	9	9	E	HOLL	5484	Flare Associated
18	DSD	2329	0158D	N09	W55	05	14.8		10	9	9	E	PALE	5484	Flare Associated
18	AFS	2351E	0928D	N13	E14	05	20.0		02	9	9	E	LEAR	5496	
18	AFS	2358E	0453D	S20	E58	05	23.4		03	9	9	E	PALE	5497	
19	ADF	0010E	0928D	S11	E16	05	20.2	1	19	9	9	E	LEAR	5491	
19	ADF	0015E	0928D	S18	E40	05	22.0	1	02	9	9	E	LEAR	5494	
19	AFS	0310E	0453D	N33	E36	05	22.0		02	9	9	E	PALE		
19	AFS	0335E	0928D	S35	W31	05	16.7		02	9	9	E	LEAR		
19	AFS	0535E	0928D	N20	W02	05	19.1		03	9	9	E	LEAR	5488	
19	DSD	0550E	0720D	S20	W67	05	14.1		04	8	8	E	LEAR	5492	
19	AFS	0621E	1642D	N19	W04	05	18.9		03	9	9	E	SVTO	5488	
19	AFS	0621E	1642D	N24	W01	05	19.2		02	9	9	E	SVTO	5495	
19	DSD	0756	0920	S19	E56	05	23.6	1				V	KHAR		
19	BSL	0816E	0820D	N20	E90	05	26.2	1-				C	CATA		
19	BSL	0816E	0820D	N64	E90	05	27.4	1-				C	CATA		
19	ADF	0833	0925	S17	E18	05	20.7	1				V	KHAR		
19	ADF	0907	0955	N11	W56	05	15.2	1				V	KHAR		
19	BSL	0931E	0950	S18	W90	05	12.5	1-				C	CATA		
19	BSL	1105	1130	S18	W90	05	12.6	1-				C	CATA		
19	DSD	1130E	1749D	S19	E49	05	23.2		03	9	9	E	RAMY	5497	
19	AFS	1143E	1642D	S18	E50	05	23.3		03	9	9	E	SVTO	5497	
19	AFS	1509E	0150D	S20	E51	05	23.5	1	02	9	9	E	HOLL	5497	
19	DSD	1510E	1549D	N18	W12	05	18.7		03	9	9	E	HOLL	5488	
19	DSD	1548E	0150D	S18	E09	05	20.3		02	9	9	E	HOLL	5491	
19	ADF	1714E	0150D	S19	E13	05	20.7	1	06	9	7	E	HOLL	5491	
19	DSD	1800	0150D	N22	W10	05	19.0		05	9	9	E	HOLL	5495	Flare Associated
19	AFS	1830E	0150D	N12	W09	05	19.1	1	03	9	9	E	HOLL	5495	
19	AFS	1835E	0150D	S12	E02	05	19.9		02	9	9	E	HOLL	5491	
19	AFS	1842E	0150D	N33	E26	05	21.8		01	8	8	E	HOLL	5498	
19	ADF	1925E	0150D	N14	W56	05	15.6	1	11	9	9	E	HOLL	5484	
19	SSB	2001		242	W65	05	23.6			0	0	E	HOLL		
19	ADF	2219	0131D	S20	E10	05	20.7	1				C	VORO		
19	APR	2240	0131	N60	W90	05	12.0	1				C	VORO		
19	ADF	2252	0131D	S18	W21	05	18.3	1				C	VORO		
19	AFS	2325E	0150D	N16	W15	05	18.8		03	9	9	E	HOLL	5488	
19	ASR	2330E	0929D	S21	W78	05	14.0			9	9	E	LEAR	5492	
20	APR	0001E	0131D	S27	E90	05	27.0	1				C	VORO		
20	AFS	0035E	0437D	N18	W15	05	18.9		04	9	9	E	PALE	5488	
20	ADF	0035E	0437D	N18	W25	05	18.1		06	9	9	E	PALE	5487	
20	AFS	0035E	0437D	N22	W10	05	19.2		05	9	9	E	PALE	5495	
20	AFS	0035E	0437D	S19	E45	05	23.4		05	9	9	E	PALE	5497	
20	BSL	0100	0131	S20	W90	05	13.1	1				C	VORO		
20	DSD	0425	0929D	N23	W13	05	19.2		04	9	9	E	LEAR	5495	
20	AFS	0430E	0929D	N24	W13	05	19.2		03	9	9	E	LEAR	5495	
20	AFS	0440E	0929D	S20	E43	05	23.5		02	9	9	E	LEAR	5497	
20	ADF	0442E	0929D	S13	E01	05	20.3	1	15	9	9	E	LEAR	5491	
20	AFS	0442E	0929D	S16	E00	05	20.2		02	9	9	E	LEAR	5491	
20	AFS	0445E	1715D	N18	W17	05	18.9		03	8	8	E	SVTO	5488	
20	AFS	0445E	1715D	N22	W15	05	19.0		03	8	8	E	SVTO	5495	
20	DSD	0455	0640D	S18	E45	05	23.6		04	9	9	E	LEAR	5497	
20	AFS	0510E	1715D	S19	E42	05	23.4		04	9	9	E	SVTO	5497	
20	BSL	0533E	0658D	N33	W90	05	13.1	1				C	ABST		
20	AFS	0552E	1715D	S17	W02	05	20.1		03	9	9	E	SVTO	5491	
20	BSL	0553E	0658D	S64	W90	05	12.2	1				C	ABST		
20	BSL	0733	0745D	S18	W90	05	13.5	1-				C	CATA		
20	DSD	0813	0830	N21	W21	05	18.7	1				V	KHAR		
20	DSD	0815	0832	N24	W20	05	18.8		05	9	9	E	LEAR	5495	
20	BSL	0900	0907	S22	W90	05	13.4	1-				C	CATA		
20	BSL	0917	0926	S22	W90	05	13.5	1-				C	CATA		
20	BSL	0917	0936	N12	W90	05	13.6	1-				C	CATA		
20	BSL	0936	0953	S22	W90	05	13.5	1-				C	CATA		
20	ADF	1000E	1015	S17	E03	05	20.6	1				V	KHAR		
20	ADF	1035E	1715D	S18	E37	05	23.2	1	07	9	9	E	SVTO	5497	
20	ADF	1041E	1715D	N13	W53	05	16.4	1	06	9	9	E	SVTO	5489	
20	AFS	1102E	1529D	N16	W22	05	18.8		01	8	7	E	RAMY	5488	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
20	AFS	1102E	1532D	S21	E38	05	23.4		02	9	9	E	RAMY	5497	
20	ADF	1102E	2129D	S12	W08	05	19.8	1	22	9	9	E	RAMY	5491	
20	AFS	1102E	2129D	S17	W05	05	20.1		03	9	9	E	RAMY	5491	
20	DSD	1203E	1529D	N17	W27	05	18.4		03	9	9	E	RAMY	5488	
20	SSB	1218		190	W22	05	27.4			0	0	E	RAMY		
20	ADF	1222E	1539D	S22	E36	05	23.3	1	05	9	9	E	RAMY	5497	
20	ADF	1300E	1530D	N11	W75	05	14.9	1	06	9	9	E	RAMY	5484	
20	AFS	1453E	0150D	N23	W19	05	19.1		04	9	9	E	HOLL	5495	
20	DSD	1453E	2238D	N17	W28	05	18.5		05	9	9	E	HOLL	5488	
20	AFS	1456E	0114D	S21	E39	05	23.6		03	9	9	E	HOLL	5497	
20	ASR	1458E	0150D	N14	W79	05	14.6			9	9	E	HOLL	5483	
20	ADF	1613E	0115D	S12	W12	05	19.8	1	22	9	9	E	HOLL	5491	
20	ASR	1708E	0100D	N13	W90	05	13.9			9	9	E	PALE	5483	
20	DSD	1724E	0444D	N17	W27	05	18.7		03	9	9	E	PALE	5488	
20	ADF	1732E	0444D	S20	E00	05	20.7		08	9	9	E	PALE	5491	
20	AFS	1738E	0444D	N22	W18	05	19.3		01	9	9	E	PALE	5495	
20	DSD	1930E	0150D	S19	E39	05	23.8		06	9	9	E	HOLL	5497	
20	DSD	2007E	0444D	S20	E39	05	23.8		05	9	9	E	PALE	5497	
20	AFS	2113E	0154D	S15	W25	05	19.0		02	9	9	E	PALE		
20	AFS	2317E	0924D	S20	E31	05	23.3		02	9	9	E	LEAR	5497	
20	AFS	2318E	0924D	N24	W23	05	19.2		03	9	9	E	LEAR	5495	
20	AFS	2319E	0924D	S16	W11	05	20.1		03	9	9	E	LEAR	5491	
20	ASR	2321E	0924D	N14	W84	05	14.6			7	7	E	LEAR	5493	
21	ASR	0411E	0444D	N13	W90	05	14.4			9	9	E	PALE	5484	
21	DSD	0441E	1005D	S18	E32	05	23.6		09	9	9	E	SVTO	5497	
21	BSL	0453E	0705D	N15	W90	05	14.4	1				C	ABST		
21	ASR	0543E	0850D	N12	W90	05	14.4			9	9	E	SVTO	5484	
21	ADF	0606E	1000D	N12	W36	05	18.5	1	03	9	9	E	SVTO	5488	
21	ADF	0621E	1040D	S12	W15	05	20.1	1	30	9	9	E	SVTO	5491	
21	BSL	0658E	0726	N16	W90	05	14.5	1				C	CATA		
21	ADF	0710E	0800D	S21	W18	05	19.9	1				V	KHAR		
21	BSL	0716	0738	S17	E90	05	28.1	1-				C	CATA		
21	BSL	0738	0800	N09	W90	05	14.6	1				C	CATA		
21	BSL	0747	0810D	N14	W90	05	14.5	1-				C	CATA		
21	BSL	0825E	0900D	N11	W90	05	14.6	1				C	CATA		
21	DSD	0846	0857	N15	W43	05	18.1	1				C	CATA		
21	DSD	0945	0956	N25	W36	05	18.6	1				C	CATA		
21	DSD	0945E	1005D	N21	W36	05	18.6		11	9	9	E	SVTO	5495	
21	BSL	1015	1031	N08	W90	05	14.7	1-				C	CATA		
21	BSL	1015	1050	N15	W90	05	14.6	1-				C	CATA		
21	BSL	1020	1031	S83	E90	05	29.8	1-				C	CATA		
21	BSL	1031	1039	N85	W90	05	13.0	1-				C	CATA		
21	SDF	1040E	1040D	S19	W10	05	20.7		15	0	0	E	SVTO	5491	
21	BSL	1045	1059	N14	W90	05	14.6	1-				C	CATA		
21	BSL	1045	1140D	N10	W90	05	14.7	1-				C	CATA		
21	BSL	1050	1055	N82	E90	05	29.8	1-				C	CATA		
21	BSL	1055	1140D	N86	E90	05	29.9	1-				C	CATA		
21	AFS	1105E	1853D	S17	W21	05	19.9		02	9	9	E	RAMY	5491	
21	AFS	1107E	1853D	N18	W30	05	19.2		03	9	9	E	RAMY	5495	
21	ADF	1116E	1725D	S19	W13	05	20.5	1	22	9	9	E	SVTO	5491	
21	ASR	1154E	1853D	S15	E90	05	28.3			9	9	E	RAMY		
21	DSD	1207E	1440D	N11	W33	05	19.0		05	9	9	E	RAMY	5495	Flare Associated
21	ADF	1340E	1725D	S19	E19	05	23.0	1	03	9	9	E	SVTO	5497	
21	AFS	1340E	1725D	S19	E25	05	23.5		02	9	9	E	SVTO	5497	
21	ASR	1435E	0150D	N08	W90	05	14.8			9	9	E	HOLL	5484	
21	ASR	1435E	0150D	N14	W90	05	14.8			9	9	E	HOLL	5493	
21	ASR	1445E	1853D	N13	W90	05	14.8			9	9	E	RAMY	5493	
21	AFS	1705E	0150D	N23	W33	05	19.2		02	9	9	E	HOLL	5495	
21	ASR	1725E	1726D	S16	E90	05	28.5			8	8	E	PALE		
21	ASR	1825E	0448D	N12	W90	05	15.0			9	9	E	PALE	5489	
21	DSD	1900E	1901D	N21	W33	05	19.3		03	9	9	E	PALE	5495	Flare Associated
21	ASR	2020E	0150D	S16	E90	05	28.7			9	9	E	HOLL		
21	SDF	2129E	1543D	S09	W03	05	21.7		08	0	0	E	RAMY		
21	APR	2241	0200D	N60	W90	05	14.0	1				C	VORO		
21	BSL	2241	2256	N12	W90	05	15.2	1				C	VORO		
21	BSL	2241E	2256D	S16	E90	05	28.8	1				C	VORO		
21	APR	2309	0200D	N32	W90	05	14.8	1				C	VORO		
21	ADF	2335E	0922D	N19	W38	05	19.1	1	04	9	9	E	LEAR	5495	
21	AFS	2336E	0922D	S15	W28	05	19.9		02	9	9	E	LEAR	5491	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
21	DSD	2337E	0540D	S19	E14	05	23.0		03	9	9	E	LEAR	5497	
21	AFS	2337E	0922D	S20	E16	05	23.2		02	9	9	E	LEAR	5497	
21	BSL	2346	0020	N09	W90	05	15.2	1				C	VORO		
21	ADF	2347	0200	S12	W02	05	21.8	1				C	VORO		
21	ADF	2347	0200D	N54	E18	05	23.5	1				C	VORO		
21	ADF	2354	0200	S48	E18	05	23.5	1				C	VORO		
22	ASR	0340E	0700D	S18	E85	05	28.6			9	9	E	LEAR		
22	BSL	0456E	0708D	S67	W90	05	14.1	1				C	ABST		
22	BSL	0543E	0708D	N36	W90	05	15.0	1				C	ABST		
22	BSL	0740E	0740D	S22	E90	05	29.2	1-				C	CATA		
22	BSL	0740E	0740D	S24	E90	05	29.3	1-				C	CATA		
22	SSB	1139		177	W35	05	28.6			0	0	E	RAMY		
22	ASR	1149E	1702D	S20	E85	05	29.0			9	9	E	SVTO		
22	ADF	1155E	1702D	S21	E08	05	23.1	1	03	9	9	E	SVTO	5497	
22	ASR	1240E	2216D	S24	E90	05	29.5			8	9	E	RAMY		
22	ASR	1244E	1855D	N16	W90	05	15.7			9	9	E	RAMY	5489	
22	AFS	1310E	2216D	N20	W44	05	19.2		03	9	9	E	RAMY	5495	
22	ADF	1310E	2216D	N22	W41	05	19.4	1	05	9	9	E	RAMY	5495	
22	AFS	1651E	2018D	S18	W39	05	19.7		02	9	9	E	PALE	5491	
22	ASR	1700E	2018D	S22	W90	05	15.8			9	9	E	PALE	5503	
22	ASR	1726E	1727D	N13	W90	05	15.9			9	9	E	PALE		
22	ASR	1726E	1727D	N90	W13	05	21.5			9	9	E	PALE		
22	BSL	1733	1745	N16	W90	05	15.9			9	9	E	RAMY	5489	Flare Associated
22	DSD	1815E	1920D	N22	W51	05	18.8		06	9	9	E	HOLL	5495	
22	ASR	1943E	2045D	N15	W90	05	16.0			9	9	E	RAMY	5489	
22	SSB	2119		178	W41	05	29.3			0	0	E	HOLL		
22	APR	2126	0124D	S23	E90	05	29.8	1				C	VORO		
22	BSL	2126	2136	N19	W90	05	16.0	1				C	VORO		
22	BSL	2126	2148	N14	W90	05	16.1	1				C	VORO		
22	APR	2126E	0124D	N33	W90	05	15.7	1				C	VORO		
22	APR	2215	0124D	N62	W90	05	14.9	1				C	VORO		
22	SDF	2216E	1046D	N31	E13	05	23.9		15	0	0	E	RAMY	5501	
22	APR	2316	0124D	S43	W90	05	15.5	1				C	VORO		
22	DSD	2326	2358	S16	E02	05	23.1	1				C	VORO		
22	DSD	2327	2356	S15	E01	05	23.0	1				C	VORO		
22	APR	2328	0124D	S57	E90	05	30.8	1				C	VORO		
22	AFS	2340E	0935D	S18	E04	05	23.3		03	9	9	E	LEAR	5497	
22	DSD	2341E	0935D	S18	W02	05	22.8		03	9	9	E	LEAR	5497	
22	AFS	2342E	0935D	S15	W40	05	19.9		02	9	9	E	LEAR	5491	
22	ASR	2343E	0730D	S24	E87	05	29.7			9	9	E	LEAR	5503	
23	ASR	0012E	0735D	N17	W90	05	16.2			9	9	E	LEAR	5489	
23	BSL	0121	0127D	S21	E90	05	29.9	1				C	VORO		
23	AFS	0139E	0935D	N22	E14	05	24.1		02	9	9	E	LEAR		
23	BSL	0425E	0456D	N17	E90	05	30.0	1				C	ABST		
23	DSD	0716	0728D	S20	W10	05	22.5		04	9	9	E	SVTO	5497	Flare Associated
23	ASR	1045E	1530D	S22	E90	05	30.4			9	9	E	SVTO	5405	
23	AFS	1055E	1430D	N21	W55	05	19.2		04	9	8	E	RAMY	5495	
23	AFS	1055E	2014D	N17	W57	05	19.1		04	8	7	E	RAMY	5495	
23	AFS	1055E	2014D	S16	W06	05	23.0		04	9	9	E	RAMY	5497	
23	ASR	1055E	2014D	S21	E90	05	30.3			9	9	E	RAMY	5505	
23	AFS	1104E	1530D	N22	E07	05	24.0		02	9	9	E	SVTO	5404	
23	AFS	1108E	1530D	N18	W61	05	18.8		02	9	9	E	SVTO	5495	
23	AFS	1112E	1430D	S21	W43	05	20.2		02	9	9	E	RAMY	5491	
23	ADF	1114E	1530D	S24	W53	05	19.4	1	13	9	9	E	SVTO	5491	
23	AFS	1139E	1530D	S18	W02	05	23.3		02	9	9	E	SVTO	5497	
23	AFS	1325E	0145D	S19	W03	05	23.3		01	9	9	E	HOLL	5497	
23	AFS	1345E	0145D	N23	E08	05	24.2		02	9	9	E	HOLL		
23	AFS	1713E	0023D	N23	E06	05	24.2		03	9	9	E	PALE	5504	
23	ASR	1944E	0240D	N20	E89	05	30.6			9	9	E	PALE	5506	
23	DSD	2002E	0240D	S18	W07	05	23.3		07	9	9	E	PALE	5497	Flare Associated
23	DSD	2002E	2223D	N23	W59	05	19.3		03	9	9	E	PALE	5495	
23	DSD	2109	0145D	S22	W14	05	22.8		08	9	9	E	HOLL	5497	Flare Associated
23	BSL	2132	2143	N31	E90	05	31.0	1				C	VORO		
23	APR	2132E	0016D	S38	E90	05	31.2	1				C	VORO		
23	ASR	2210E	0454D	S18	E90	05	30.8			9	9	E	PALE	5505	
23	DSD	2212E	2226	S19	W50	05	20.1		06	9	9	E	PALE	5491	Flare Associated
23	DSD	2214E	0145D	S19	W49	05	20.2		16	9	9	E	HOLL	5491	Flare Associated
23	BSL	2215	2153	S15	E90	05	30.7	1				C	VORO		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
23	ASR	2227E	0145D	S17	E90	05	30.8			9	9	E	HOLL	5505	
23	DSD	2229E	2338D	S22	W36	05	21.2		04	9	9	E	PALE	5490	
23	APR	2232	0016	N62	W90	05	16.0	1				C	VORO		
23	BSL	2240	2254	N30	E90	05	31.0	1				C	VORO		
23	BSL	2311	2332	N28	E90	05	31.0	1				C	VORO		
23	BSL	2348	0000	N20	E90	05	30.9	1				C	VORO		
24	ASR	0142E	0240D	N30	E89	05	31.1			9	9	E	PALE		
24	AFS	0448E	1444D	N20	W67	05	19.1		03	9	9	E	SVTO	5495	
24	AFS	0449E	1444D	N17	W70	05	18.9		03	9	9	E	SVTO	5488	
24	AFS	0502E	1444D	S18	W10	05	23.4		03	9	9	E	SVTO	5497	
24	AFS	0502E	1444D	S22	E13	05	25.2		03	9	9	E	SVTO	5497	
24	DSD	0503E	1444D	S19	E17	05	25.5		04	9	9	E	SVTO	5497	
24	ADF	0614E	1444D	S18	E71	05	29.7	1	08	9	9	E	SVTO	5505	
24	AFS	0623E	1444D	S24	W39	05	21.2		02	9	9	E	SVTO	5490	
24	AFS	0635E	1444D	S18	W58	05	19.8		03	9	9	E	SVTO	5491	
24	EPL	0640E	0700D	N22	W90	05	17.4					V	ATHN		
24	DSD	0643E	1444D	S15	W60	05	19.7		03	9	9	E	SVTO	5500	
24	AFS	0643E	1444D	S15	W61	05	19.7		02	9	9	E	SVTO	5500	
24	BSL	0728	0732	N26	E90	05	31.3	1-				C	CATA		
24	EPL	1036E	1105D	S25	W90	05	17.5	3				C	CATA		
24	ADF	1240E	1939D	S18	E67	05	29.6	1	05	9	9	E	RAMY	5505	
24	AFS	1300E	0154D	N32	W31	05	22.1		02	9	9	E	HOLL	5498	
24	DSD	1305E	2318D	S18	W23	05	22.8		10	9	9	E	HOLL	5497	
24	AFS	1307E	2105D	S13	W63	05	19.8		01	9	9	E	HOLL	5500	
24	AFS	1319E	1939D	N34	W31	05	22.1		02	9	9	E	RAMY	5498	
24	ASR	1325E	0154D	N20	W80	05	18.4			9	9	E	HOLL	5495	
24	ASR	1540E	2318D	S18	E90	05	31.5			9	9	E	HOLL		
24	APR	1545E	1700D	N18	W90	05	17.8	1		9	9	E	HOLL		
24	BSD	1702E	1958D	S17	W68	05	19.5		02	9	9	E	HOLL	5491	
24	AFS	1705E	0154D	S18	W17	05	23.4		02	9	9	E	HOLL	5497	
24	SSB	1706		172	W60	05	31.0			0	0	E	HOLL		
24	AFS	1827E	2359D	N24	W78	05	18.7		03	9	9	E	PALE	5495	
24	AFS	1827E	2359D	S13	W68	05	19.6		02	9	9	E	PALE	5491	
24	AFS	1827E	2359D	S16	W67	05	19.7		07	9	9	E	PALE	5491	
24	DSD	1958E	2318D	S15	W66	05	19.8		07	9	9	E	HOLL	5491	
24	EPL	2121E	2141D	N22	W90	05	18.0	1				C	VORO		
24	BSL	2138	2141D	N13	W90	05	18.1	1				C	VORO		
24	APR	2141	0200D	N60	W90	05	17.0	1				C	VORO		
24	APR	2141E	0200D	S40	E90	06	1.2	1				C	VORO		
24	ASR	2151E	0154D	N15	W90	05	18.1			9	9	E	HOLL	5488	
24	EPL	2151E	2214D	N26	W90	05	17.9			9	9	E	HOLL	5495	
24	APR	2151E	2318D	N26	W90	05	17.9			9	9	E	HOLL	5495	
24	LPS	2232E	2232D	N15	W90	05	18.1			9	9	E	HOLL	5488	
24	DSD	2255E	0443D	N32	W38	05	21.9		03	9	9	E	PALE	5498	Flare Associated
24	AFS	2320E	0924D	S18	W19	05	23.5		03	9	9	E	LEAR	5497	
24	ASR	2322E	0924D	N22	W85	05	18.4			9	9	E	LEAR	5488	
24	AFS	2323E	0924D	S22	E59	05	29.5		03	9	9	E	LEAR	5405	
24	AFS	2325E	0924D	N33	W37	05	22.0		02	9	9	E	LEAR	5498	
24	ASR	2348E	0154D	N20	W77	05	19.1			9	9	E	HOLL	5495	
25	ADF	0002E	0443D	S18	E44	05	28.3	1	13	9	9	E	PALE	5503	
25	ASR	0015E	0443D	N21	W83	05	18.6			9	9	E	PALE	5495	
25	BSL	0020E	0052D	N21	W90	05	18.1	1				C	VORO		
25	AFS	0312E	0924D	S07	W07	05	24.6		02	9	9	E	LEAR		
25	AFS	0425E	1703D	N35	W40	05	22.0		03	9	9	E	SVTO	5498	
25	ASR	0509E	1703D	N17	W81	05	19.0			9	9	E	SVTO	5488	
25	ASR	0712	1012D	S25	E90	06	1.3			9	9	E	SVTO		
25	AFS	0720E	1703D	S18	W33	05	22.8		02	9	9	E	SVTO	5497	
25	AFS	0720E	1703D	S25	E90	06	1.3		02	9	9	E	SVTO	5490	
25	AFS	0755E	1703D	S08	W08	05	24.7		02	9	9	E	SVTO	5509	
25	AFS	0858E	1703D	S24	E60	05	30.0		02	9	9	E	SVTO	5508	
25	ASR	0915E	1703D	N21	W90	05	18.5			9	9	E	SVTO	5495	
25	SDF	0924E	2336D	S56	W11	05	24.4		35	0	0	E	LEAR		
25	ASR	1042E	2117D	N19	W86	05	18.9			9	9	E	RAMY	5488	
25	ASR	1047E	2117D	N22	W78	05	19.4			9	9	E	RAMY	5495	
25	DSD	1100	1715D	S18	W35	05	22.8		06	9	9	E	RAMY	5497	Flare Associated
25	AFS	1125E	2117D	S08	W11	05	24.6		02	9	9	E	RAMY	5509	
25	AFS	1208E	2117D	N32	W46	05	21.9		02	9	9	E	RAMY	5499	
25	ADF	1226E	2117D	S23	E70	05	30.9	1	03	9	9	E	RAMY		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
25	ASR	1245E	0155D	N22	W90	05	18.6			9	9	E	HOLL	5495	
25	AFS	1245E	0155D	S17	W37	05	22.7		02	8	8	E	HOLL	5497	
25	AFS	1250E	0155D	N32	W46	05	21.9		04	9	9	E	HOLL	5498	
25	DSD	1537E	0155D	S16	W37	05	22.8		08	9	9	E	HOLL	5497	Flare Associated
25	AFS	1558E	0155D	S08	W12	05	24.8		02	9	9	E	HOLL	5509	
25	SDF	1703E	1400D	S50	W28	05	23.3		41	0	0	E	SVTO		
25	LPS	1711E	1740D	S20	W32	05	23.3			9	9	E	RAMY	5497	Flare Associated
25	AFS	1729E	0420D	N34	W46	05	22.1		03	9	9	E	PALE	5498	
25	DSD	1729E	0420D	S08	W14	05	24.7		04	9	7	E	PALE		
25	AFS	1729E	0420D	S18	W33	05	23.2		03	9	9	E	PALE	5497	
25	ADF	1729E	0420D	S20	E33	05	28.2		05	9	9	E	PALE	5503	
25	DSD	1729E	0420D	S21	E51	05	29.6		04	9	9	E	PALE	5505	
25	ADF	1729E	0420D	S23	W60	05	21.1	1	05	9	9	E	PALE	5490	
25	DSD	1729E	0420D	S27	E53	05	29.8		06	9	9	E	PALE	5508	
25	ASR	1729E	2341D	N22	W90	05	18.8			9	9	E	PALE	5495	
25	ASR	2125	2219	N21	W90	05	19.0	1				C	VORO		
25	APR	2125E	0048D	N11	W90	05	19.1	1				C	VORO		
25	APR	2206	0048D	S40	E90	06	2.2	1				C	VORO		
25	SDF	2227	2338	S37	W58	05	21.3		38	0	0	E	HOLL		
25	ADF	2230	0048D	S48	W50	05	21.7	1				C	VORO		
25	APR	2231E	0048D	N31	W90	05	18.8	1				C	VORO		
25	ASR	2322E	0445D	N86	W22	05	23.9			9	9	E	LEAR	5495	
25	AFS	2323E	0755D	S07	W17	05	24.7		03	9	9	E	LEAR	5509	
25	AFS	2324E	0445D	S26	E48	05	29.7		02	9	9	E	LEAR	5508	
25	AFS	2325E	0755D	S22	E48	05	29.7		02	9	9	E	LEAR	5505	
25	AFS	2327E	0445D	N33	W49	05	22.1		02	9	9	E	LEAR	5498	
25	DSD	2327E	0445D	N34	W53	05	21.7		04	9	9	E	LEAR	5498	
26	SDF	0007E	1214D	N37	E31	05	28.5		15	0	0	E	HOLL		
26	APR	0007	0048D	N60	W90	05	18.1	1				C	VORO		
26	AFS	0210E	0445D	S23	E72	05	31.6		02	9	9	E	LEAR		
26	ASR	0220E	0445D	S11	W88	05	19.5			9	9	E	LEAR	5500	
26	ADF	0509E	1733D	S25	E30	05	28.5	1	08	9	9	E	SVTO	5503	
26	AFS	0524E	1733D	S09	W21	05	24.6		02	9	9	E	SVTO	5509	
26	DSD	0530E	1102D	N30	W57	05	21.7		04	9	9	E	SVTO	5498	
26	AFS	0544E	1733D	S21	W39	05	23.2		02	9	9	E	SVTO	5497	
26	BSL	0631E	0658D	S40	E90	06	2.6	1				C	ABST		
26	ADF	0720	0738	S28	E32	05	28.8	1				V	KHAR		
26	APR	0830E	0843D	S21	E90	06	2.2			9	9	E	SVTO	5491	
26	ADF	0952	1013	N28	E65	05	31.5	1				V	KHAR		
26	ADF	1022	1042	N28	E65	05	31.5	1				V	KHAR		
26	ASR	1051E	1104D	N32	E90	06	2.6			9	9	E	SVTO		
26	APR	1104E	1432D	N31	E90	06	2.6			9	9	E	SVTO		
26	ASR	1110E	1733D	S21	W90	05	19.6			9	9	E	SVTO	5491	
26	AFS	1149E	1733D	S30	W58	05	21.9		02	9	9	E	SVTO	5498	
26	ASR	1210	1733D	N12	W90	05	19.7			9	9	E	SVTO		
26	ASR	1229E	1651D	N15	W88	05	19.8			9	9	E	RAMY	5496	
26	ASR	1229E	1651D	N22	W90	05	19.6			9	9	E	RAMY	5495	
26	ADF	1248E	1651D	N32	W57	05	22.0	1	03	9	9	E	RAMY	5498	
26	ASR	1523E	2145D	S19	W90	05	19.8			9	9	E	HOLL	5491	
26	ASR	1800E	0334D	N15	W90	05	19.9			9	9	E	PALE	5496	
26	AFS	1805E	0334D	S16	E22	05	28.4		02	9	9	E	PALE	5510	
26	AFS	1820	0334D	S18	W52	05	22.8		03	9	9	E	PALE	5497	
26	SDF	1857E	1857D	S50	W36	05	23.7		26	0	0	E	PALE		
26	ASR	1910E	2145D	N15	W90	05	20.0			9	9	E	HOLL		
26	SSB	1954		103	W18	05	27.0			0	0	E	HOLL		
26	DSD	2205E	0150D	S17	W54	05	22.8		04	9	9	E	HOLL	5497	
27	AFS	0023E	0123D	S06	E01	05	27.1		01	9	9	E	HOLL		
27	BSL	0702	0710D	N16	E90	06	3.1	1-				C	CATA		
27	AFS	0748E	1721D	S21	E59	05	31.8		02	9	9	E	SVTO	5511	
27	BSL	0801	0806	N68	E90	06	4.5	1-				C	CATA		
27	BSL	0801	0806	N74	W90	05	19.1	1-				C	CATA		
27	BSL	0806	0810D	N36	E90	06	3.6	1-				C	CATA		
27	AFS	0816E	1721D	S17	E71	06	1.7		02	8	8	E	SVTO		
27	ADF	0817E	0930D	N11	W45	05	23.9	1	05	9	9	E	SVTO		
27	AFS	0817E	1721D	N09	W43	05	24.1		02	9	9	E	SVTO		
27	ADF	0823	0855	S10	W75	05	21.7	1				V	KHAR		
27	DSD	0911E	1500D	S23	W54	05	23.2		02	9	9	E	SVTO	5497	
27	ADF	0930E	1721D	N22	E46	05	30.9	1	07	9	9	E	SVTO	5506	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
27	AFS	0930E	1721D	N24	E37	05	30.2		02	9	9	E	SVTO	5506	
27	BSL	1002	1006	N12	E90	06	3.2	1-				C	CATA		
27	BSL	1002	1022	N32	E90	06	3.5	1-				C	CATA		
27	BSL	1015	1027	N51	W90	05	19.8	1-				C	CATA		
27	DSD	1412E	1550D	S23	W64	05	22.7		03	9	9	E	RAMY	5497	
27	ASR	1419E	1721D	S20	E90	06	3.5			9	9	E	SVTO		
27	SSB	1515		132	W62	05	30.5			0	0	E	HOLL		
27	AFS	1515E	1550D	S21	E52	05	31.6		02	9	9	E	RAMY	5511	
27	AFS	1557E	0123D	S08	W39	05	24.7		02	9	9	E	HOLL	5509	
27	DSD	1602E	0123D	S18	W62	05	22.9		04	9	9	E	HOLL	5497	
27	SDF	1721E	0501D	S42	E10	05	28.5		13	0	0	E	SVTO		
27	SDF	1926E	1857D	S50	W36	05	24.8		26	0	0	E	PALE		
27	AFS	2248E	0123D	S04	W20	05	26.4		01	9	9	E	HOLL		
28	BSL	0706E	0722	N33	W90	05	21.1	1-				C	CATA		
28	ADF	0802	0817	S08	W54	05	24.3	1				V	KHAR		
28	BSL	0831	0846	N28	W90	05	21.3	1				C	CATA		
28	ADF	0848E	1154D	S08	W50	05	24.6	1	06	9	9	E	SVTO	5509	
28	AFS	0848E	1738D	N09	W60	05	23.9		02	9	9	E	SVTO	5512	
28	ADF	0848E	1738D	N22	E30	05	30.7	1	11	9	9	E	SVTO	5506	
28	SDF	0912E	2340D	N20	E37	05	31.2		08	0	0	E	LEAR		
28	BSL	1000	1017	S32	E90	06	4.5	1				C	CATA		
28	BSL	1025	1049	N29	W90	05	21.4	1-				C	CATA		
28	BSL	1056	1104	S72	W90	05	20.2	1-				C	CATA		
28	ADF	1105E	1559D	S22	W73	05	22.8	1	04	9	9	E	RAMY	5497	
28	BSL	1111	1121	N02	W90	05	21.7	1-				C	CATA		
28	DSD	1121E	1332D	S15	W75	05	22.8		06	9	9	E	RAMY	5497	
28	BSD	1225	1256	S18	W77	05	22.6		14	9	9	E	SVTO	5497	Flare Associated
28	BSD	1228E	1300D	S18	W78	05	22.6		03	9	9	E	RAMY	5497	Flare Associated
28	BSL	1256	1332	S18	W78	05	22.6			9	9	E	RAMY	5497	Flare Associated
28	BSL	1256	1320	S18	W77	05	22.7			9	9	E	SVTO	5497	Flare Associated
28	AFS	1431E	1738D	S20	E40	05	31.7		02	9	9	E	SVTO	5511	
28	SDF	1559E	1359D	N15	E33	05	31.2		12	0	0	E	RAMY	5506	
28	ADF	1659E	0434D	N18	E25	05	30.6	1	07	9	9	E	PALE	5506	
28	AFS	1659E	0434D	S25	E37	05	31.6		03	8	8	E	PALE	5511	
28	SDF	1738E	0850D	N20	E38	05	31.6		22	0	0	E	SVTO		
28	APR	2205E	0017D	N66	E90	06	6.0	2				C	VORO		
28	ADF	2347E	0932D	N24	E16	05	30.2	1	04	9	9	E	LEAR	5506	
28	AFS	2348E	0915D	S21	E34	05	31.6		01	9	9	E	LEAR	5511	
28	BSL	2355E	0007D	S50	W90	05	21.4	1				C	VORO		
28	APR	2355E	0017D	N67	W90	05	20.9	1				C	VORO		
29	SDF	0055E	1800D	N40	E54	06	2.4		18	0	0	E	HOLL		
29	ASR	0204E	0332D	N33	W90	05	21.9			9	9	E	PALE	5498	
29	ASR	0217	0315D	S18	W88	05	22.4			9	9	E	PALE	5497	
29	ASR	0224E	0932D	S20	W90	05	22.2			9	9	E	LEAR	5497	
29	ASR	0225E	0932D	N19	E90	06	5.0			9	9	E	LEAR		
29	DSD	0508E	0551D	S22	W73	05	23.6		07	9	9	E	SVTO	5497	Flare Associated
29	BSD	0508E	0717D	S21	W81	05	23.0		04	9	9	E	SVTO	5497	Flare Associated
29	LPS	0508E	1113D	S23	W74	05	23.5			9	9	E	SVTO	5497	Flare Associated
29	ADF	0624E	1655D	S21	E08	05	29.9	1	09	9	9	E	SVTO	5505	
29	BSL	0626E	1055D	N47	E90	06	5.8	1				C	ABST		
29	LPS	0651E	0915D	S19	W83	05	22.9			9	9	E	LEAR	5497	Flare Associated
29	APR	0706E	0816D	S21	W90	05	22.4	1				V	KHAR		
29	ASR	0830E	1655D	N23	E82	06	4.7			9	9	E	SVTO		
29	BSL	0835	0842	N07	W90	05	22.6	1-				C	CATA		
29	AFS	0836E	1655D	S20	E29	05	31.6		02	9	9	E	SVTO		
29	APR	0840E	1655D	N37	E90	06	5.6	1		9	9	E	SVTO		
29	BSL	0842	0854	N12	W90	05	22.6	1-				C	CATA		
29	DSD	0933	1002	N23	E13	05	30.4	1				V	KHAR		
29	ASR	1020E	1655D	S23	W90	05	22.5			9	9	E	SVTO	5497	
29	ASR	1355E	1526D	S19	W90	05	22.7			8	8	E	RAMY	5497	
29	APR	1400E	1655D	N61	E90	06	6.5	1		9	9	E	SVTO		
29	APR	1429E	1526D	N50	E90	06	6.2			9	9	E	RAMY		
29	SDF	1655E	0533D	N53	E52	06	3.2		18	0	0	E	SVTO		
29	ASR	1718E	0437D	S18	W90	05	22.9			9	8	E	PALE	5497	
29	ADF	1727E	0437D	S27	W17	05	28.4		06	9	6	E	PALE	5503	
29	AFS	1736E	0437D	N17	E80	06	4.8		05	9	9	E	PALE	5514	
29	AFS	1736E	0437D	S21	E23	05	31.5		05	9	9	E	PALE	5511	
29	ADF	1736E	0437D	S27	E50	06	2.6		14	9	9	E	PALE	5513	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
29	DSD	1736E	2358D	S20	W01	05	29.6		03	9	8	E	PALE	5505	
29	ADF	1748E	0000D	S21	W66	05	24.7		04	8	9	E	PALE		
29	ADF	1748E	0437D	N23	E46	06	2.3	1	16	9	9	E	PALE		
29	SDF	1823E	1808D	N09	E04	05	30.1		06	0	0	E	PALE		
29	APR	2159E	2301D	N63	E90	06	6.9	1				C	VORO		
29	APR	2159E	2301D	S39	E90	06	6.2	1				C	VORO		
29	ADF	2205	2301D	S39	E30	06	1.3	1				C	VORO		
29	APR	2259	2301D	N36	E90	06	6.2	1				C	VORO		
29	ASR	2348E	0842D	S20	W85	05	23.5			9	9	E	LEAR	5497	
29	AFS	2350E	0842D	S21	E20	05	31.5		03	9	9	E	LEAR	5511	
29	AFS	2350E	0842D	S22	E19	05	31.4		03	9	9	E	LEAR	5511	
29	ADF	2350E	0842D	S25	E12	05	30.9	1	08	9	9	E	LEAR	5511	
30	ADF	0240E	0535D	N28	E07	05	30.6	1	05	9	9	E	LEAR	5507	
30	ADF	0620E	1658D	N19	W05	05	29.9	1	04	9	9	E	SVTO	5506	
30	BSL	0634E	0708D	N67	E90	06	7.4	1				C	ABST		
30	LPS	0743	0915	S22	W90	05	23.4			9	9	E	SVTO	5497	
30	AFS	0755E	1658D	S20	E17	05	31.6		04	9	9	E	SVTO	5511	
30	ADF	0755E	1658D	S23	E13	05	31.3	1	13	9	9	E	SVTO	5511	
30	BSL	0804	0810	N06	W90	05	23.6	1-				C	CATA		
30	BSL	0804	0816	N73	W90	05	22.1	1				C	CATA		
30	BSL	0823	0837D	S20	W90	05	23.5	1				C	CATA		
30	BSL	0911	0911D	N74	E90	06	7.6	1-				C	CATA		
30	BSL	1027	1030	S78	E90	06	7.8	1-				C	CATA		
30	BSL	1030	1036	S68	E90	06	7.6	1-				C	CATA		
30	AFS	1030E	1658D	S18	E31	06	1.8		02	9	9	E	SVTO	5413	
30	BSL	1051	1051D	N85	E90	06	7.8	1-				C	CATA		
30	AFS	1054E	1448D	S21	E07	05	31.0		02	9	9	E	SVTO	5511	
30	DSD	1300E	0003D	N14	E61	06	4.1		05	9	9	E	HOLL		
30	AFS	1330E	0158D	S21	E04	05	30.9		02	9	9	E	HOLL		
30	AFS	1330E	0158D	S21	E13	05	31.5		04	9	9	E	HOLL	5511	
30	ASR	1340E	1658D	S22	W90	05	23.6			9	9	E	SVTO	5497	
30	ASR	1353	1658D	S11	W90	05	23.8			7	8	E	SVTO	5509	
30	DSD	1358E	1450D	N15	E57	06	3.9		08	9	9	E	SVTO	5414	
30	DSD	1450E	1658D	N15	E57	06	3.9		08	9	9	E	SVTO		
30	SDF	1510E	1435D	N34	W40	05	27.4		04	0	0	E	HOLL		
30	ASR	1715E	0128D	S08	W90	05	24.0			9	9	E	PALE	5509	
30	DSD	1715E	0143D	S21	E01	05	30.8		02	9	9	E	PALE	5515	
30	DSD	1715E	0157D	N10	E59	06	4.1		04	9	9	E	PALE	5516	
30	ADF	1715E	0159D	N19	E68	06	4.9		08	9	9	E	PALE	5514	
30	ADF	1715E	0159D	N20	W02	05	30.6		05	8	8	E	PALE	5506	
30	AFS	1715E	0159D	S21	E04	05	31.0		04	9	9	E	PALE	5515	
30	AFS	1715E	0159D	S22	E10	05	31.5		05	9	9	E	PALE	5511	
30	ADF	1715E	0159D	S27	E37	06	2.6		15	9	9	E	PALE	5513	
30	ASR	1757E	0158D	S10	W81	05	24.7			9	9	E	HOLL	5509	
30	SSB	1808		418	W26	05	29.3			0	0	E	HOLL		
30	ADF	2106E	0159D	N31	E71	06	5.5		14	9	9	E	PALE		
30	ADF	2106E	0159D	S32	E14	06	1.0		18	9	9	E	PALE		
30	APR	2200E	2218D	N35	E90	06	7.1	1				C	VORO		
30	APR	2200E	2218D	N59	E90	06	7.8	1				C	VORO		
30	BSL	2200E	2218D	S11	W90	05	24.1	1				C	VORO		
30	ASR	2352E	0920D	S10	W90	05	24.2			9	9	E	LEAR	5509	
31	APR	0028E	0920D	N62	E90	06	8.0	1		9	9	E	LEAR		
31	AFS	0050E	0920D	N12	E57	06	4.3		02	9	9	E	LEAR	5516	
31	APR	0115E	0158D	N62	E90	06	8.0	1		9	9	E	HOLL		
31	AFS	0140E	0920D	S22	W05	05	30.7		02	9	9	E	LEAR	5515	
31	AFS	0330E	0920D	S22	E03	05	31.4		04	9	9	E	LEAR	5511	
31	APR	0523E	0645D	N66	E90	06	8.3	1				C	ABST		
31	BSL	0523E	0645D	S17	E90	06	7.1	1				C	ABST		
31	DSD	0742E	0920D	N19	W10	05	30.5		05	9	9	E	LEAR	5506	Flare Associated
31	BSL	0959	1000D	S17	E90	06	7.2	1-				C	CATA		
31	BSL	0959	1000D	S27	E90	06	7.4	1				C	CATA		
31	ASR	1425E	2315D	S10	W90	05	24.8			9	9	E	HOLL	5509	
31	AFS	1427E	0000D	S22	E00	05	31.6		03	8	8	E	HOLL	5511	
31	AFS	1427E	0000D	S22	W10	05	30.8		02	8	8	E	HOLL	5515	
31	AFS	1428E	0000D	N14	E48	06	4.2		03	9	9	E	HOLL	5516	
31	ASR	1430E	2315D	S17	E90	06	7.4			9	9	E	HOLL		
31	SSB	1431		419	W38	05	30.1			0	0	E	HOLL		
31	SDF	1435E	1623D	N25	E21	06	2.2		13	0	0	E	HOLL		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1989

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
31	AFS	1519E	1813D	S20	W01	05	31.6		02	9	9	E	RAMY	5511	
31	DSD	1522E	1813D	S21	W08	05	31.0		03	9	9	E	RAMY	5515	
31	ASR	1622E	1813D	S08	W90	05	24.9			9	9	E	RAMY	5509	
31	ASR	1742E	1813D	S17	E77	06	6.6			9	9	E	RAMY	5517	
31	AFS	2225E	0035D	S21	W04	05	31.6		03	9	9	E	PALE	5511	
31	AFS	2335E	0845D	S19	W14	05	30.9		02	9	9	E	LEAR	5515	

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

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

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

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

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

C O N T E N T S

Comprehensive Reports **MISCELLANEOUS DATA** Number 543 Part II

CARTE SYNOPTIQUE
ACTIVE REGIONS
CARRINGTON ROTATION 1813

(4 March to 1 April 1989)

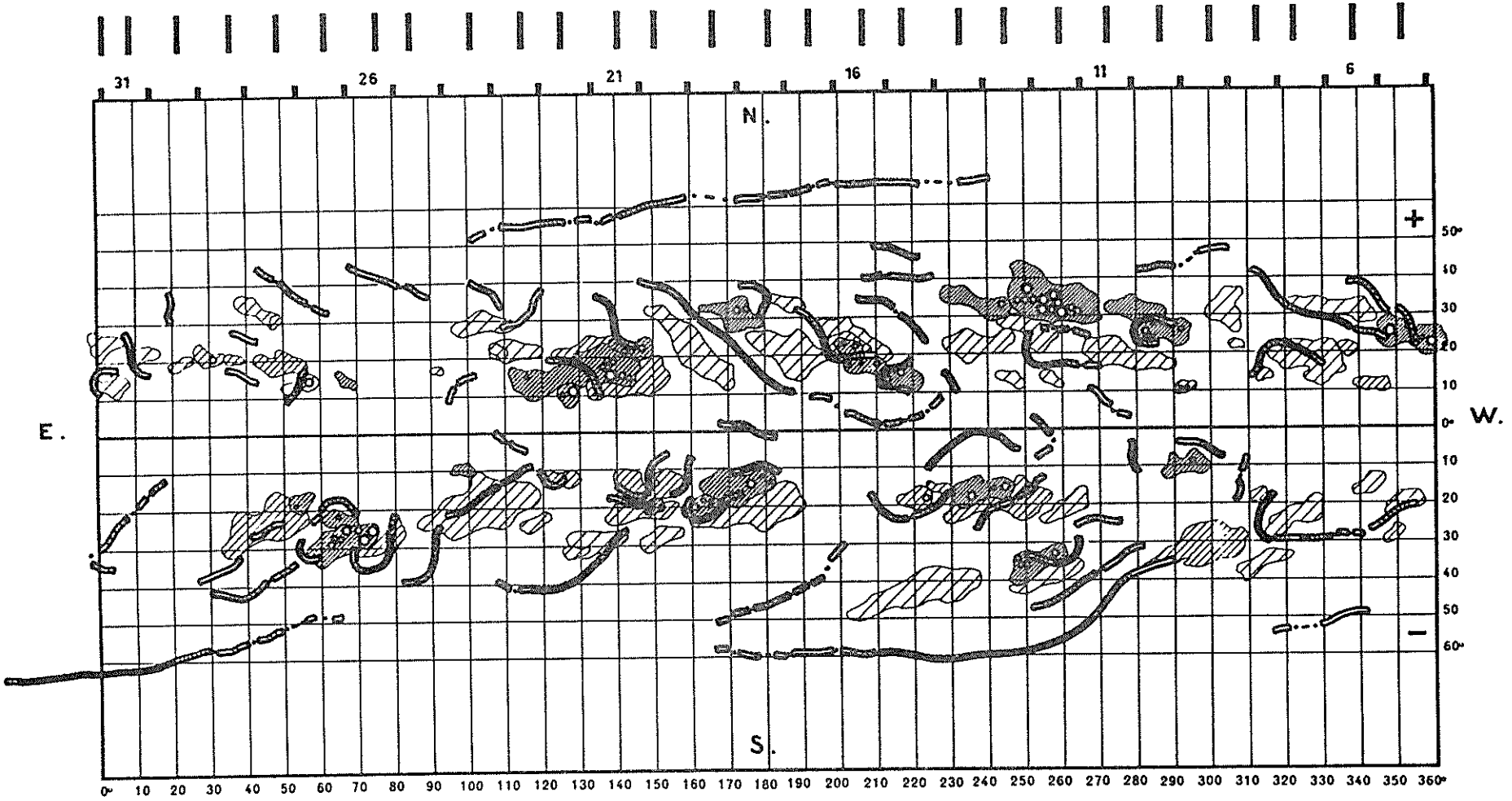
Region No.	Coordinates Lat.	Long.	Age at CMP (Days)	Imp	Spotless Region	Region No. in Rotation 1812	Activity at West Limb
1	24 N	354	+5	4			decreasing
2	19 S	352	>6	1	x	1	dispersed
3	28 S	349	>6	1	x		disappeared
4	12 N	344	>6	1	x		disappeared
5	15 S	342	>6	1	x	6	dispersed
6	22 N	337	>6	1	x		disappeared
7	19 N	326	>6	1	x		dispersed
8	23 S	323	>6	1	x		dispersed
9	15 N	314	+4	1	x		disappeared
10	18 S	313	+4	1	x		disappeared
11	35 S	313	>6	1	x		dispersed
12	31 S	298	>6	1	x	13+15	decreasing
13	9 S	293	>6	2			decreasing
14	11 N	293	0	2			decreasing
15	26 N	287	>6	3			decreasing
16	31 N	280	>6	1	x	17	stable
17	20 N	278	>6	1	x	19	dispersed
18	20 S	261	>6	1	x	24	dispersed
19	35 N	257	>6	10			stable
20	35 S	252	>6	3			decreasing
21	28 N	251	>6	1	x		decreasing
22	17 S	243	>6	1	x	31	decreasing
23	16 S	239	+4	4			decreasing
24	23 N	238	>6	1	x	29	decreasing
25	34 N	237	>6	3			decreasing
26	15 S	226	+2	1	x		disappeared
27	18 S	221	+2	2			stable
28	14 N	217	>6	2			decreasing
29	18 N	208	+1	2			decreasing
30	22 N	203	+4	2			stable
31	23 N	202	>6	1	x		dispersed
32	19 S	177	>6	1	x	39	decreasing
33	14 S	173	>6	4		40	decreasing
34	32 N	172	>6	2		38	decreasing
35	20 S	163	0	3			decreasing
36	19 S	150	0	2			decreasing
37	15 S	148	>6	1	x		decreasing
38	20 S	147	>6	1	x		dispersed
39	23 N	144	-1	3			stable
40	18 N	140	>6	1	x	47	decreasing
41	19 N	138	>6	4		46	decreasing
42	11 N	127	>6	3			decreasing
43	11 S	125	+6	1	x		disappeared
44	15 N	123	>6	2		51	decreasing
45	18 S	103	>6	1	x	55	dispersed
46	9 S	98	-3	1	x		decreasing
47	27 S	76	>6	1	x		decreasing
48	15 N	67	+2	1	x		disappeared
49	27 S	67	>6	5			decreasing
50	21 S	64	-2	2			decreasing
51	17 S	54	+1	2			decreasing
52	14 N	54	>6	2		61	decreasing
53	20 N	49	>6	1	x		dispersed
54	22 S	45	>6	1	x	63	decreasing
55	34 N	43	>6	1	x		disappeared
56	21 N	36	+1	1	x		decreasing
57	21 N	30	>6	2			decreasing
58	20 N	22	>6	1	x		disappeared
59	14 N	3	+5	1	x		dispersed

CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1813
(4 March to 1 April 1989)

Meudon Observatory

March 1989

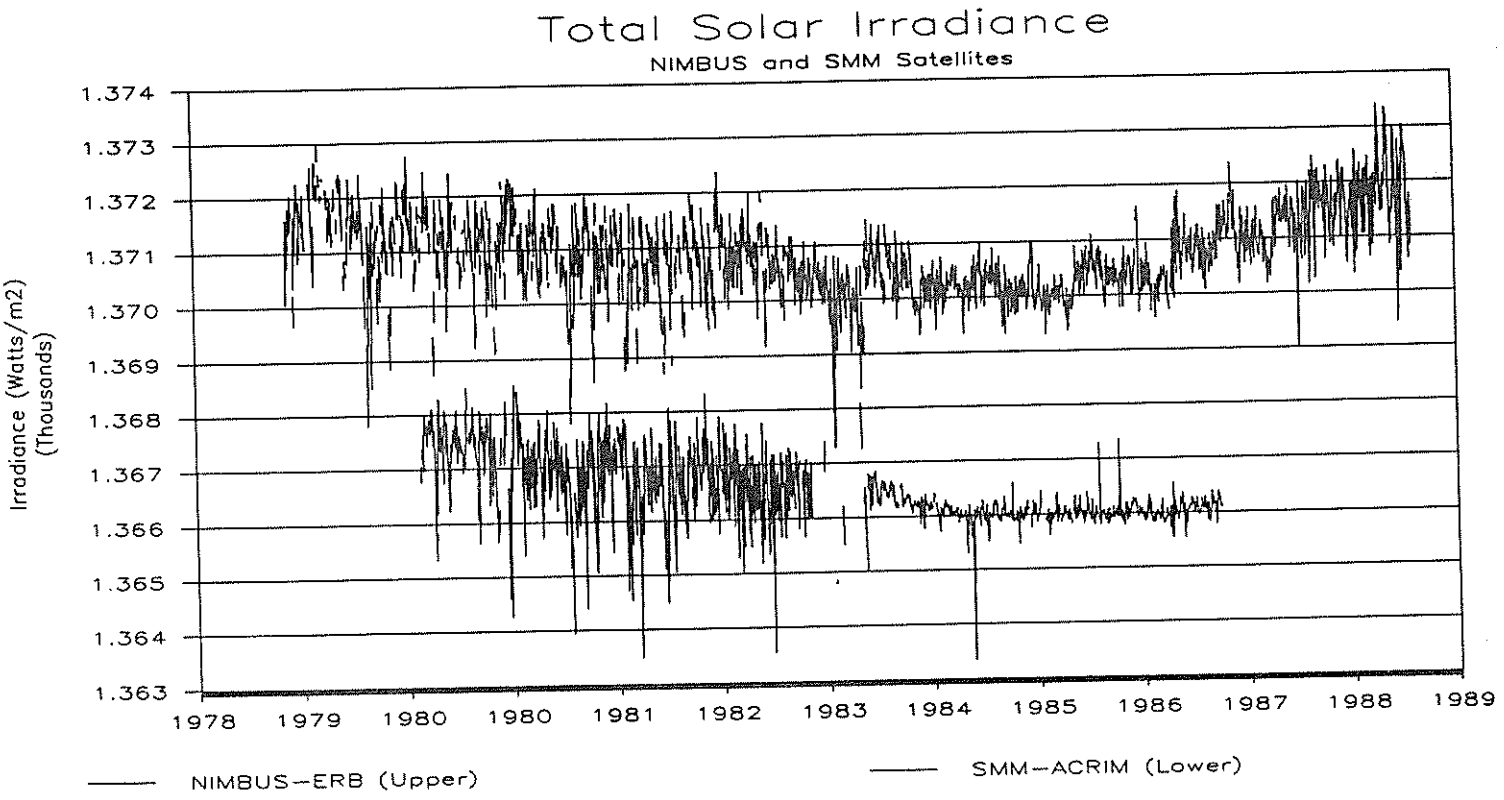


Heliographic Longitude

114
Misc

NIMBUS 7 Total Solar Irradiance Data November 1978-July 1989:

This is an updated version of the Eppley Laboratory product for the Total Solar Irradiance measured by the cavity radiometer, channel 10C of the ERB experiment aboard the NIMBUS 7 satellite. These data have been recalculated using an almanac correction for the Sun-Earth distance which has been applied on a daily basis to the daily mean result. The data are in the process of being revised to incorporate changes on an orbital basis. The ERB experiment experienced a failure and recovery in September 1989, but is now operational again (Nov. 6, 1989). Further updates of the data will be available at a later time based on NASA update of the processing of the entire orbital data set.



1978 DAILY MEAN SOLAR IRRADIANCE*

Eppley Lab — NIMBUS-7 (ERB Channel 10C) — Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1												---
2												1371.76
3												1371.38
4												1371.63
5												---
6												1372.05
7												1371.44
8												1371.76
9												---
10												1370.23
11												1369.65
12												1369.86
13												---
14												1370.36
15												1371.17
16											1370.06	1371.67
17											1370.86	1371.32
18											1371.61	1371.08
19											---	1370.97
20											1371.44	1371.28
21											1370.92	---
22											1371.23	1371.30
23											1370.72	1371.67
24											1371.39	1371.95
25											1371.40	---
26											1371.81	1372.27
27											---	1371.77
28											1371.64	1372.14
29											1371.34	---
30											1371.80	1371.31
31												1370.83

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1979 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1370.96	---	1372.44	1371.74	1370.90	1371.47	---	1371.42	1370.17	---	1371.19	1371.53
2	---	1371.97	1372.67	---	---	1371.24	1371.51	---	1370.21	1371.36	---	1371.15
3	1371.02	---	---	1371.67	1371.80	---	1371.07	1372.43	---	1371.24	1370.93	1371.17
4	1371.79	1371.67	1372.42	---	1371.77	1370.59	1371.20	1371.60	1369.08	1371.49	1370.59	---
5	1371.95	---	1372.56	1371.65	1371.98	1370.33	---	1371.99	1368.48	---	1371.02	1371.38
6	---	1371.99	1372.61	---	---	1370.61	1371.72	---	1368.53	1370.94	---	---
7	1371.79	---	---	1372.51	1372.17	---	1371.19	1371.77	1370.08	1370.08	1369.88	1372.26
8	1371.79	1372.17	1371.98	---	1371.81	1370.78	1371.45	1371.43	1370.75	1370.32	1368.84	---
9	1371.63	1372.28	1371.98	1372.16	1371.91	1370.86	1372.05	1371.56	1371.58	---	1369.31	1372.29
10	---	1372.03	1372.27	1371.93	---	1370.56	1371.98	1370.88	1371.57	1370.87	---	1372.17
11	1371.69	---	---	1371.81	1371.43	---	1371.53	1370.99	---	1370.35	1369.78	1371.61
12	1371.48	1371.77	1372.69	---	---	1370.58	1371.85	1370.77	1371.49	1370.65	1369.48	---
13	1371.70	1372.57	1373.02	1371.65	1371.40	1370.55	---	1370.84	1371.01	---	1370.01	1372.26
14	---	1372.17	1372.84	1371.22	1371.37	1370.63	1372.07	---	1370.57	1371.88	---	1371.60
15	1371.30	---	---	1371.45	1371.63	---	1371.47	1370.57	---	1371.60	1371.08	1371.73
16	1371.49	1371.77	1372.44	1371.35	---	1371.22	1371.64	1369.64	1371.93	1371.51	1371.20	---
17	1372.07	1370.94	1372.22	1371.42	1372.17	1370.79	---	1369.61	1371.45	---	1371.47	1372.06
18	---	1370.40	1372.37	1371.68	---	1371.39	1371.55	---	1371.61	1371.03	---	---
19	1371.61	---	---	1371.85	1372.35	---	1371.37	1369.28	---	1370.82	1371.58	1371.56
20	1371.26	1370.64	1371.96	---	1372.19	1371.66	1371.40	1368.71	1371.20	1371.21	1370.94	---
21	1371.05	1371.03	1371.94	1372.00	1372.27	1371.44	---	1368.62	1370.70	---	1371.23	1371.13
22	---	1371.49	1372.07	1371.90	---	1371.65	1371.60	1367.81	1371.03	1371.84	---	1370.53
23	1370.54	---	---	1371.65	1372.39	---	1371.26	1368.81	---	1371.34	1371.27	1370.95
24	---	1372.13	1372.01	---	1372.10	1371.94	1371.49	1369.83	1371.29	1372.19	1370.57	---
25	1371.42	---	1372.06	1371.73	1372.44	1371.61	1371.60	1369.29	1371.05	---	1371.10	1371.68
26	---	1372.28	1371.99	1371.22	---	1371.94	1371.63	---	1371.42	1371.73	---	1371.62
27	1371.53	---	---	1371.38	1371.99	1372.35	1371.60	1369.29	---	1371.00	1371.66	1371.38
28	---	1372.01	1372.37	1371.13	1371.71	1371.96	1371.77	1369.35	1370.37	1371.24	1371.50	---
29	1372.50		1372.33	1371.26	1372.22	1371.86	---	1371.48	1369.69	---	1371.47	1371.38
30	---		1372.36	---	1372.05	1371.96	1371.60	---	1370.53	1371.38	---	1371.01
31	1373.13		---		1372.36		1371.37	1371.21		1370.63		1371.54

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1980 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	---	1370.95	---	1371.21	1371.03	---	1371.49	1371.46	---	1371.30	1370.74	1370.79
2	1372.15	---	1371.67	---	1370.31	1371.18	1371.62	1371.38	1369.83	1371.49	1370.23	---
3	1371.69	1370.38	1371.58	1371.47	1370.58	1370.83	---	1371.57	1369.41	1371.78	1369.96	1371.53
4	1371.91	1370.29	1371.55	---	---	1371.01	1370.80	---	1369.70	1371.59	---	1371.10
5	---	1370.60	---	1370.76	1371.20	---	1370.80	1371.39	---	1371.26	1369.61	1371.46
6	1372.24	---	1371.66	---	1371.10	1371.36	1370.84	1371.13	1370.70	1371.63	1369.10	---
7	1371.72	1370.84	1371.65	1369.44	1371.38	1371.09	1370.79	1370.92	1370.76	---	1369.27	1372.25
8	1371.88	1370.43	1371.37	1368.72	---	1371.66	1371.07	---	1371.75	1371.62	---	1372.12
9	---	1370.86	---	1369.29	1371.96	1372.43	1370.80	1371.19	---	1370.76	1369.35	1372.25
10	1371.98	---	1371.97	---	1371.57	1371.53	1370.76	1370.98	1371.93	1370.45	1369.14	---
11	1371.55	1371.10	1371.58	1369.72	1371.49	1371.37	---	1371.08	1371.55	---	1369.20	1371.99
12	1371.91	1371.05	1371.76	1369.74	---	1371.93	1370.81	---	1371.48	1370.06	---	1370.84
13	---	1371.36	1372.47	1370.28	1371.36	---	1370.33	1371.21	---	1369.80	1369.93	1370.78
14	1372.75	---	1371.77	---	1371.04	1371.86	1370.49	1371.31	1371.20	1370.83	1370.08	---
15	1371.51	1371.48	1371.50	1370.98	1371.63	1371.59	---	1371.94	1370.97	---	1370.61	1370.60
16	1371.61	1371.03	1371.56	1371.02	---	1370.97	1370.76	---	1371.27	1371.91	---	1370.11
17	---	1371.28	---	1371.62	1371.64	---	1370.48	1371.74	---	1371.56	1371.18	1370.56
18	1371.57	---	1371.88	---	1371.48	1371.88	1370.58	1371.30	1371.70	1371.57	1370.65	---
19	1371.40	1371.84	1371.54	1371.95	1371.58	1371.78	---	1371.36	1371.12	---	1370.64	1371.13
20	1371.53	1371.65	1371.60	1371.48	---	1371.90	1370.68	---	1371.00	1370.78	---	1371.15
21	---	1371.54	---	1371.36	1371.40	---	1370.64	1371.41	---	1370.10	1370.95	1371.90
22	1371.62	---	1371.77	---	1370.71	1371.40	1370.65	1370.84	1370.93	1370.12	1370.80	---
23	1371.04	1370.96	1371.40	1371.05	1370.33	---	---	1370.83	1370.58	---	1371.12	1371.98
24	1371.05	1370.81	1371.83	1370.52	---	---	1371.32	---	1370.85	1370.66	---	1371.45
25	---	1371.07	---	1370.87	1369.99	---	1371.35	1371.19	---	1371.06	1371.52	1371.80
26	1371.66	---	1371.98	---	1369.53	1371.48	1371.40	1370.64	1371.41	1371.40	1371.17	---
27	1371.65	1371.69	1371.69	1371.31	1370.01	1371.49	---	1370.71	1371.13	---	1371.45	1372.21
28	1371.93	1371.62	1371.43	1371.13	1370.02	1371.67	1371.04	---	1371.18	1371.60	---	1371.52
29	---	1371.62	---	1371.34	1370.54	---	1370.78	1370.60	---	1371.32	1371.20	1371.78
30	1371.83		1371.34	---	1370.53	1371.41	1370.64	1369.55	1371.73	1371.16	1370.51	---
31	1371.42		1370.97		1371.09		---	1369.22		---		1371.86

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

1981 DAILY MEAN SOLAR IRRADIANCE*

Eppley Lab — NIMBUS-7 (ERB Channel 10C) — Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1371.90	1371.29	1370.07	---	1371.32	1371.30	1370.39	1370.85	1371.38	1371.52	1370.59	---
2	1372.31	1370.57	1370.23	1371.97	1371.47	1371.11	1370.50	1371.10	1371.06	---	1370.29	1371.52
3	---	1370.56	1370.62	1371.53	---	1371.23	1370.89	---	1371.25	1371.78	---	1371.49
4	1371.01	---	---	1371.57	1371.40	1371.85	1370.86	1370.96	---	1371.16	1370.19	1371.79
5	1371.32	1371.30	1371.47	1372.13	1371.05	1371.67	1370.74	1370.59	1370.99	1370.88	1370.26	---
6	1371.32	1371.09	1370.65	1371.34	1370.93	1371.22	---	1370.53	1370.08	---	1370.82	1371.36
7	---	1371.06	1371.08	1370.58	---	1371.47	1370.76	---	1370.14	1371.10	---	1370.29
8	1371.30	---	---	1370.75	1371.18	---	1370.78	1369.82	---	1370.99	1371.11	1369.68
9	1371.26	1371.11	1370.87	---	1371.22	1371.82	1370.87	1369.55	1370.91	1371.19	1370.73	---
10	1371.34	1370.58	1370.64	1370.62	1370.99	1371.53	---	1369.78	1370.59	---	1370.66	1369.88
11	1372.23	1370.82	1371.18	1370.22	---	1371.47	1370.72	1370.01	1370.31	1370.33	---	1370.01
12	1372.01	---	---	1370.67	1370.95	---	1370.41	1370.79	---	1369.54	1370.48	1370.09
13	1371.31	1371.51	1371.42	---	1370.45	1370.97	1370.34	1370.76	1370.82	1369.03	1370.20	---
14	1371.69	1370.72	1371.23	1370.36	1370.62	1370.73	---	1371.81	1370.57	---	1370.68	1370.94
15	---	1370.63	1371.51	1370.14	---	1370.61	1370.44	---	1370.90	1369.24	---	1370.75
16	1371.83	---	---	1370.20	1370.41	1370.57	1370.26	1371.18	---	1368.55	1371.45	1370.81
17	1371.26	1370.59	1371.74	---	1370.31	1370.91	1370.41	1370.66	1371.42	1368.59	1370.87	---
18	1371.69	1370.08	1371.30	1370.43	1370.40	1370.88	---	1370.51	1370.92	---	1371.06	1371.09
19	---	1370.66	1371.38	1370.34	---	1371.22	1370.63	---	1371.09	1369.60	---	1370.71
20	1372.15	---	---	1370.78	1371.25	---	1369.86	1370.92	---	1369.52	1370.90	1370.89
21	1371.63	1371.03	1370.78	1371.23	1371.68	1371.43	1369.27	1370.73	1371.32	1370.21	1370.62	---
22	1371.75	1370.19	1370.45	1370.94	1371.76	1371.03	---	1371.09	1371.81	1370.10	1370.94	1371.44
23	---	1370.36	1370.80	1370.42	---	1371.11	1368.64	---	1371.88	1371.32	---	1371.09
24	1371.76	---	---	1371.18	1371.59	---	1367.89	1371.85	1371.96	1371.32	1371.43	1371.62
25	1371.45	1370.34	1371.36	---	1371.26	1370.78	1367.80	1371.43	1371.93	1371.18	1371.16	---
26	1371.53	1370.27	1370.87	1371.34	1371.26	1370.73	---	1371.10	1371.42	---	1371.34	1371.34
27	---	1370.12	1371.19	1371.23	---	1370.32	1368.29	1370.49	1371.40	1371.45	---	1370.68
28	1371.76	---	---	1371.13	1371.28	---	1368.52	1371.03	---	1371.58	1370.73	1370.97
29	1371.64		1371.52	---	1370.95	1370.74	1369.08	1370.73	1371.52	1371.85	1370.26	---
30	1371.61		1371.30	1371.50	1371.41	1370.42	1369.67	1370.96	1371.34	---	1379.43	1371.89
31	---		1371.81		---		1370.15	---		1371.25		---

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1982 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1371.95	1368.76	1369.93	1371.22	1371.16	1371.19	1371.15	1370.34	1370.95	---	1371.71	1370.99
2	---	1369.39	1369.88	1371.26	---	1371.27	1370.91	---	1371.30	1370.93	---	1370.54
3	1371.73	---	---	1371.56	1371.31	1371.58	1370.71	1370.52	---	1371.07	1371.73	1370.25
4	1371.24	1370.82	1370.47	---	1370.87	1370.96	1370.96	1370.86	1371.58	1371.72	1371.12	---
5	1371.57	1370.69	1370.40	1371.31	1371.03	1370.50	---	1370.83	1371.11	---	1371.29	1369.98
6	---	1370.74	1370.73	1370.92	1371.19	1370.10	1371.11	---	1371.44	1371.78	---	1369.84
7	1371.73	---	---	1371.24	1370.75	---	1370.77	1370.89	---	1371.13	1371.21	1370.25
8	1371.11	1369.75	1371.58	1371.59	1370.73	1370.18	1371.05	1370.98	1371.56	1371.29	1370.81	---
9	1371.50	1368.90	1370.91	1371.45	1370.85	1369.51	---	1370.95	1371.35	---	1371.19	1370.59
10	---	1368.89	1371.15	1370.78	---	1369.55	1370.71	---	1371.40	1371.36	---	1369.76
11	1371.46	---	---	1370.36	1371.14	---	1369.73	1371.22	---	1370.82	1370.87	1369.89
12	1370.92	1369.84	1371.52	---	1371.08	1369.90	1369.51	---	1371.28	1370.96	1370.22	---
13	1370.67	1369.30	1371.01	1370.61	1371.21	1369.44	---	1371.49	1370.56	---	1369.88	1369.69
14	---	1370.10	1370.63	1369.95	---	1369.42	1369.02	---	1370.70	1371.02	---	1369.52
15	1370.48	---	---	1370.46	1371.20	---	1368.86	1371.23	---	1370.66	1369.88	1370.08
16	1369.97	1370.55	1369.53	---	1370.49	1368.90	1369.03	1370.65	1371.14	1370.95	1369.71	---
17	1370.56	1369.88	1368.89	1370.73	1370.61	1368.69	---	1370.61	1370.74	---	1370.19	1371.33
18	---	1369.95	1369.08	1370.15	---	1368.72	1370.16	---	1370.63	1371.12	---	1371.29
19	1371.16	---	---	1370.54	1371.03	---	1370.82	1371.01	---	1370.75	1370.54	1371.77
20	1370.91	1370.39	1370.01	---	1370.41	1368.98	1371.41	1370.68	1370.82	1370.91	1369.88	---
21	1370.98	1370.48	1370.18	1370.72	1370.35	1369.49	---	1370.53	1370.42	---	1369.49	1371.99
22	---	1371.04	1370.79	1370.22	---	1369.75	1371.68	---	1370.84	1371.03	---	1371.47
23	1371.26	---	---	1370.06	1370.65	---	1371.25	1370.13	---	1370.63	1370.32	1371.96
24	1370.93	1371.82	1370.33	---	1370.60	1370.87	1371.10	1369.52	1371.98	1370.73	1370.35	---
25	1371.27	1371.11	1369.89	1370.10	1371.14	1371.10	---	1369.62	1371.68	---	1370.83	1372.09
26	1371.51	1371.47	1369.98	1370.00	---	1371.56	1371.14	---	1371.51	1370.26	---	1371.34
27	1371.66	---	---	1370.81	1371.03	---	---	1369.57	---	1369.93	1371.44	1371.77
28	1370.44	1370.65	1370.21	---	1370.51	1371.64	1370.86	1369.38	1370.82	1370.88	1370.97	---
29	1370.06		1370.23	1371.44	1370.95	1371.21	---	1369.83	1369.88	---	1370.96	1372.38
30	---		1370.29	1371.18	---	1371.19	1370.71	---	1370.55	1371.52	---	1371.59
31	1369.31		---		1371.49		1370.28	1371.42		---		1371.29

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1983 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	---	1370.35	1370.94	1371.04	---	1371.07	1370.48	---	1370.59	1370.24	1370.03	1370.51
2	1371.38	---	---	1371.11	1371.10	---	1370.30	1370.08	---	1370.27	1370.26	1370.47
3	1370.59	1371.01	1371.17	---	1370.78	1370.56	1370.58	1369.88	1370.84	1370.42	1370.10	1370.39
4	1370.90	1370.23	1370.25	1371.05	1371.04	1370.32	---	1369.91	1370.48	1370.61	1370.47	1370.54
5	---	1370.55	1370.52	1370.89	---	1369.99	1370.86	---	1371.18	1370.38	1370.21	1370.42
6	1371.42	---	---	1371.10	1371.05	1369.30	1370.53	1370.57	---	1370.18	1370.24	1370.62
7	1371.05	1370.40	1370.87	---	1370.72	1369.16	1370.37	1370.59	1371.15	1370.08	1370.42	1370.36
8	1371.30	1370.54	1370.76	1370.86	1371.07	1369.40	---	1370.43	1370.50	1369.99	1370.78	1370.53
9	---	1371.11	1371.11	1370.69	---	1369.73	1370.37	---	1371.00	1370.07	1370.51	1370.51
10	1371.62	---	---	1370.74	1370.60	---	1370.36	1370.25	---	1369.76	1370.60	1370.64
11	1371.21	1371.61	1371.04	---	1369.76	1370.17	1370.44	1369.64	1371.17	1370.11	1370.56	1370.58
12	1371.06	1371.10	1370.63	1371.37	1369.68	1370.29	---	1370.47	1370.68	1370.53	1370.69	1370.70
13	---	1371.31	1371.03	1370.81	1370.23	1370.60	1370.84	---	1371.02	1370.72	1370.54	1370.18
14	1371.56	---	---	1371.20	1370.63	---	1370.37	1371.03	1370.84	1370.37	1370.26	1370.43
15	1371.01	1370.98	1371.12	1371.99	1370.61	1371.34	1370.59	1370.73	1370.73	1370.05	1370.21	1370.32
16	1371.00	1370.26	1370.13	1371.14	1371.09	1371.03	---	1370.94	1370.36	1370.11	1369.88	1370.37
17	---	1370.69	1370.61	1370.83	---	1371.11	1370.95	---	1370.57	1370.21	1370.04	1370.10
18	1370.63	---	1371.42	1370.78	1371.31	---	1370.84	1371.00	1370.17	1370.15	1370.05	1370.48
19	1370.23	1370.76	1370.70	---	1371.40	1371.20	1370.89	1370.87	1370.41	1370.30	1370.24	1370.32
20	1370.06	1370.26	1370.14	1371.22	1371.12	1370.95	1371.39	1370.96	1369.92	1370.40	1370.35	1370.56
21	---	1370.84	1370.57	1370.63	---	1371.18	1370.90	---	1370.51	1371.09	1370.24	1370.48
22	1370.69	---	---	1370.96	1371.17	1371.23	1370.53	1370.88	1370.76	1370.87	1370.13	1370.24
23	1370.53	1371.03	1371.57	---	1371.20	1370.35	1370.70	1370.82	1370.79	1370.94	1370.32	1369.93
24	1371.18	1370.61	1371.09	1371.01	1371.43	1370.23	---	1370.89	1370.44	1370.51	1370.63	1370.21
25	---	1370.84	1371.39	1370.64	---	1370.40	1370.77	---	1370.45	1370.39	1370.68	1370.10
26	1371.01	---	---	1370.76	1371.99	---	1370.44	1370.72	1370.40	1370.39	1370.82	1370.45
27	1370.38	1371.27	1371.70	---	1371.81	1370.74	1370.66	1370.36	1370.33	1370.47	1370.60	1370.37
28	1370.75	1370.73	1371.04	1370.73	1371.86	1370.62	---	1370.73	1370.18	1370.40	1370.83	1370.53
29	---		1371.34	1370.30	---	1370.51	1370.54	---	1370.36	1370.43	1370.90	1370.42
30	1370.59		---	1370.68	1371.45	---	1369.94	1370.89	1370.13	1370.36	1371.07	1370.60
31	1369.86		1371.55		1370.84		1370.15	1370.57		1370.49		1369.95

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1984 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1370.17	1368.95	1370.41	1369.05	1368.52	1370.71	1370.73	1370.94	1370.17	1370.51	1370.14	1370.20
2	1370.14	1370.11	1370.19	---	1369.54	1370.27	---	1371.25	1370.06	---	1369.97	1370.30
3	1370.54	1370.28	1370.36	1369.42	---	1370.45	1371.10	1370.77	1370.14	1370.59	1369.97	1370.29
4	1370.50	1370.80	1370.12	1369.92	1370.62	---	1370.68	1371.15	---	1370.34	1369.82	1370.37
5	1370.76	1370.47	1370.49	1369.80	1370.06	1370.82	1370.94	1370.82	1370.33	1370.73	1369.97	1370.35
6	1370.50	1370.33	1370.02	1370.00	1370.16	1370.43	---	1370.98	1369.63	---	1369.95	1370.48
7	1370.80	1369.57	1370.37	1370.00	---	1370.73	1371.14	---	1371.23	1370.84	1369.85	1370.25
8	1370.70	1369.71	1369.88	1370.21	1369.96	---	1371.13	1370.75	---	1370.55	1369.74	1370.59
9	1370.31	1369.07	1370.13	1369.87	1369.14	1371.10	1371.22	1370.55	1371.05	1370.35	1369.80	1370.35
10	1370.16	1369.20	1369.84	1370.13	1368.99	1370.81	---	1370.76	1370.62	---	1369.68	1369.92
11	1370.34	1369.14	1370.22	1369.85	---	1371.20	1371.35	---	1370.67	1370.39	1369.95	1369.83
12	1369.96	1369.66	1369.91	1370.19	1369.34	---	1370.41	1370.88	1369.94	1370.19	1369.76	1370.09
13	1369.99	1369.63	1370.06	1369.85	1369.01	1371.37	1370.69	1370.64	1370.49	1370.69	1369.81	1369.93
14	1369.72	1370.37	1369.65	1370.09	1369.49	1370.87	---	1370.78	1369.98	---	1369.96	1370.17
15	1370.18	1370.49	1370.30	1369.85	---	1370.87	1370.34	---	1369.96	1370.72	1369.95	1370.19
16	1370.11	1370.62	1370.25	1369.76	1370.73	---	1370.23	1370.99	---	1370.44	1369.88	1370.41
17	1369.73	1370.30	1370.46	---	1370.58	1371.11	1370.28	1370.35	1370.30	1370.26	1369.91	1370.33
18	1369.55	1370.76	1370.33	1369.91	1370.80	1370.57	---	1370.51	1370.33	---	1369.85	1369.99
19	1370.12	1370.17	1370.64	1369.82	---	1370.87	1370.48	---	1370.21	1370.33	1369.76	1369.93
20	1369.95	1370.45	1370.34	1370.32	1371.08	---	1370.17	1370.76	---	1370.22	1369.76	1370.21
21	1370.18	1369.82	1370.64	---	1370.55	1370.73	1370.45	1370.65	1370.46	1370.19	1369.77	1369.97
22	1370.01	1369.76	1370.09	1370.58	1370.65	1370.21	---	1370.69	1370.50	---	1369.86	1370.22
23	1370.40	1369.41	1370.38	1369.81	---	1370.60	1370.19	---	1370.45	1371.05	1369.75	1370.14
24	1369.82	1369.77	1370.02	1369.14	1370.54	---	1369.91	1370.25	---	1370.72	1369.73	1370.35
25	1369.64	1369.65	1370.57	---	1370.19	1370.53	1370.02	1369.95	1370.73	1370.67	1369.63	1370.44
26	1368.21	1370.18	1370.24	1368.10	1370.74	1370.29	---	1369.95	1370.28	---	1369.33	1370.02
27	1367.60	1370.26	1370.45	1367.25	---	1370.35	1370.35	---	1370.15	1370.81	1369.56	1369.92
28	1367.30	1370.42	1370.06	1367.52	1371.46	---	1370.02	1370.67	---	1370.28	1369.72	1370.01
29	1367.29	1370.15	1369.72	---	1370.88	1370.84	1370.27	1370.19	1371.04	1370.33	1369.89	1370.17
30	1367.59		1369.47	1368.37	1370.88	1370.48	---	1370.38	1370.74	1370.23	1370.35	1370.04
31	1368.52		1369.23		---		1371.36	---		1370.15		1370.29

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1985 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1370.45	1369.90	1370.26	1370.33	1370.15	1370.33	1370.21	1370.30	1370.48	1370.18	1369.72	1369.87
2	1370.37	1370.05	1370.47	1370.41	1370.26	1370.71	1370.19	1370.21	1370.27	1369.73	1369.85	1369.77
3	1370.23	1370.11	1370.21	1370.39	1370.14	1370.48	1370.07	1370.32	1370.27	1370.32	1370.02	1369.83
4	1369.81	1370.38	1370.48	1370.58	1370.37	1370.77	1370.39	1370.36	1369.89	1370.27	1370.02	1369.84
5	1370.09	1370.20	1370.12	1370.19	1370.23	1370.43	1370.11	1370.45	1369.98	1370.33	1370.11	1369.81
6	1369.94	1370.43	1370.31	1370.23	1370.41	1370.23	1370.06	1370.29	1369.82	1370.08	1370.17	1370.14
7	1370.19	1370.02	1370.28	1370.17	1370.19	1370.04	1369.89	1370.89	1369.88	1370.07	1370.13	1369.96
8	1370.26	1370.57	1370.29	1370.01	1370.26	1369.93	1369.84	1370.90	1369.45	1369.93	1370.31	1370.02
9	1370.54	1370.24	1370.29	1370.27	1370.29	1369.88	1369.85	1370.50	1370.11	1369.93	1370.08	1370.01
10	1370.47	1370.75	1370.32	1370.14	1370.06	1369.88	1370.31	1370.52	1370.06	1369.70	1370.21	1370.30
11	1370.37	1370.49	1370.31	1370.12	1370.01	1369.79	1370.48	1370.38	1370.07	1369.81	1370.02	1370.36
12	1370.49	1370.12	1370.32	1370.00	1369.99	1370.14	1370.54	1370.43	1369.93	1370.25	1370.20	1370.56
13	1370.60	1369.93	1370.19	1370.21	1370.08	1370.45	1370.60	1370.06	1369.84	1370.26	1370.16	1370.52
14	1370.68	1370.00	1370.45	1370.24	1370.03	1370.62	1370.39	1370.43	1369.80	1370.08	1370.36	1370.69
15	1370.06	1369.70	1370.37	1370.21	1370.33	1370.47	1370.20	1370.15	1369.71	1370.13	1369.99	1370.65
16	1369.87	1370.02	1370.53	1370.25	1369.74	1370.55	1370.69	1370.24	1369.32	1369.94	1369.98	1370.63
17	1370.23	1370.01	1370.34	1370.16	1370.03	1370.64	1370.46	1369.98	1370.05	1370.01	1370.04	1370.75
18	1370.35	1370.26	1370.56	1370.13	1370.03	1370.62	1370.50	1369.98	1369.90	1369.81	1370.15	1370.94
19	1370.05	1369.82	1370.27	1370.15	1370.27	1370.43	1370.34	1370.58	1370.59	1369.81	1370.16	1371.01
20	1369.42	1370.21	1370.46	1370.11	1370.13	1370.66	1370.41	1370.63	1370.31	1370.10	1370.29	1371.01
21	1369.67	1370.04	1370.37	1370.17	1369.98	1370.58	1370.48	1370.30	1370.45	1370.11	1370.41	1371.01
22	1369.78	1370.18	1370.53	1370.00	1369.92	1370.62	1370.40	1370.55	1370.09	1369.66	1370.16	1371.03
23	1370.32	1369.94	1370.32	1369.72	1370.13	1370.71	1370.25	1370.51	1370.42	1369.93	1370.15	1370.82
24	1369.96	1370.21	1370.61	1369.34	1370.17	1371.03	1370.43	1370.32	1370.07	1370.02	1370.29	1369.96
25	1370.42	1369.92	1370.47	1369.38	1370.35	1370.53	1370.43	1370.33	1370.09	1370.16	1369.99	1370.17
26	1370.37	1370.24	1370.43	1369.54	1370.19	1370.29	1370.26	1370.23	1369.96	1370.31	1370.17	1369.89
27	1370.52	1370.13	1370.38	1369.55	1370.57	1369.89	1370.36	1370.28	1369.94	1370.38	1370.17	1370.11
28	1370.26	1370.18	1370.26	1369.77	1370.12	1370.07	1370.52	1370.15	1369.62	1370.19	1370.17	1370.06
29	1370.51		1370.14	1369.97	1370.33	1369.95	1370.58	1369.95	1369.67	1369.80	1370.17	1369.80
30	1369.88		1370.18	1370.35	1370.36	1370.48	1370.26	1370.75	1369.76	1369.84	1370.24	1369.79
31	1370.11		1370.36		1370.48		1370.45	1370.47		1369.72		1369.81

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1986 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1369.76	1370.20	1370.11	1370.28	1370.04	1370.25	1370.37	1370.20	1370.03	1370.16	1369.80	1370.02
2	1369.97	1370.09	1370.09	1370.40	1369.95	1370.64	1370.17	1370.44	1369.78	1370.24	1370.54	1369.99
3	1369.86	1369.52	1370.13	1370.27	1369.83	1370.16	1370.38	1370.11	1370.21	1370.67	1370.53	1370.04
4	1370.02	1369.30	1370.00	1370.18	1369.74	1370.25	1370.23	1370.36	1370.40	1370.36	1370.68	1370.06
5	1370.07	1369.41	1370.15	1370.39	1369.98	1369.98	1370.63	1370.65	1370.65	1370.56	1370.55	1370.13
6	1369.85	1369.56	1369.97	1370.12	1369.79	1370.18	1370.41	1370.85	1370.52	1370.48	1370.57	1370.06
7	1369.89	1369.89	1370.00	1370.23	1370.02	1370.15	1370.62	1370.76	1370.75	1370.40	1370.90	1370.29
8	1370.05	1370.07	1369.91	1369.92	1369.76	1370.27	1370.41	1370.61	1370.31	1370.23	1370.64	1370.09
9	1370.05	1370.11	1370.24	1370.26	1370.03	1370.14	1370.83	1370.66	1370.41	1370.31	1370.47	1370.36
10	1370.22	1369.86	1370.18	1369.81	1369.82	1370.57	1370.43	1370.54	1370.18	1370.36	1370.26	1370.52
11	1370.19	1369.85	1370.39	1369.88	1370.11	1370.16	1370.57	1370.63	1370.24	1370.48	1370.26	1370.47
12	1370.09	1369.73	1370.27	1369.90	1369.99	1370.56	1370.51	1370.89	1370.53	1370.50	1370.29	1370.59
13	1370.15	1370.22	1370.05	1369.84	1370.12	1370.35	1370.78	1370.52	1370.51	1370.28	1370.16	1370.66
14	1370.31	1369.96	1369.92	1369.87	1369.82	1370.56	1370.63	1370.79	1370.44	1370.23	1370.38	1370.75
15	1370.50	1370.17	1370.17	1369.93	1370.16	1370.77	1370.94	1370.41	1370.44	1370.28	1370.39	1370.84
16	1370.59	1369.95	1369.98	1369.71	1370.10	1370.29	1370.77	1370.55	1370.18	1370.31	1370.31	---
17	1370.43	1369.96	1370.05	1369.68	1370.39	1370.84	1371.12	1370.39	1370.27	1370.17	1370.44	---
18	1369.98	1369.65	1369.94	1369.60	1370.30	1370.64	1370.80	1370.38	1370.19	1370.21	1370.37	---
19	1369.92	1369.72	1370.17	1369.73	1370.59	1369.98	1370.98	1370.28	1370.51	1370.09	1370.55	1371.35
20	1369.89	1369.66	1370.01	1369.53	1370.35	1370.44	1370.74	1370.82	1370.49	1369.77	1370.69	1371.45
21	1369.95	1369.88	1370.19	1369.86	1370.92	1370.24	1370.92	1370.46	1370.52	1370.15	1370.56	1371.55
22	1369.90	1369.88	1370.04	1370.15	1370.32	1370.26	1370.45	1370.52	1370.44	1370.41	1370.54	1371.40
23	1369.76	1369.92	1370.19	1369.67	1370.24	1370.10	1370.91	1370.53	1370.40	1370.31	1370.71	1371.45
24	1369.72	1369.80	1369.86	1369.36	1370.25	1370.43	1370.47	1370.50	1370.25	1370.26	1370.73	1371.63
25	1369.90	1369.91	1370.01	1369.55	1370.33	1370.82	1370.65	1370.43	1370.25	1370.31	1370.67	1371.50
26	1369.84	1369.92	1370.03	1369.42	1370.49	1370.48	1370.47	1370.42	1370.47	1370.26	1370.65	1370.48
27	1369.81	1370.12	1370.13	1369.82	1370.39	1370.80	1370.64	1370.10	1370.42	1370.36	1370.70	1369.68
28	1369.92	1369.97	1370.15	1369.61	1370.41	1370.52	1370.52	1370.07	1370.48	1370.43	1370.67	1369.86
29	1369.95		1369.97	1369.92	1370.30	1370.91	1370.45	1369.96	1370.52	1370.45	1370.03	1369.78
30	1370.02		1370.22	1369.84	1370.57	1370.30	1370.37	1369.86	1370.32	1370.19	1370.04	1370.04
31	1370.04		---		1370.63		1370.50	1369.90		1369.78		1370.04

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1987 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1369.94	---	1370.08	1370.14	1370.71	1371.04	1370.51	1370.69	1371.10	1371.29	1371.25	1370.96
2	1370.05	1370.58	1370.30	1370.06	1371.24	1370.89	1370.40	1371.00	1370.83	1371.19	1371.13	1371.00
3	1370.19	1370.54	1369.90	1370.20	1370.83	1370.89	1370.64	1370.67	1370.79	1371.12	1371.16	1370.95
4	1370.22	1370.40	1370.37	1370.44	1371.07	1370.97	1370.63	1370.63	1370.52	1370.97	1371.28	1371.11
5	1370.54	1369.70	1369.99	1370.15	1370.55	1370.96	1370.58	1370.47	1370.51	1371.44	1371.37	1371.04
6	1370.47	1369.96	1370.29	1370.08	1371.68	1371.02	1370.46	1370.32	1370.92	1371.45	1371.10	1370.45
7	1370.67	1369.88	1369.85	1369.83	1370.83	1371.22	1370.50	1370.27	1370.89	1371.53	1371.30	1370.53
8	1370.06	1370.20	1370.31	1369.95	1371.63	1371.47	1370.74	1370.87	1370.57	1371.54	1371.82	1370.51
9	1370.08	1369.89	1370.28	1369.79	1370.38	1371.31	1370.59	1371.20	1370.49	1371.63	1371.68	1370.59
10	1370.09	1370.19	1370.22	1369.74	1371.78	1370.61	1370.78	1371.05	1370.85	1371.21	1371.66	1370.57
11	1370.38	---	1370.14	1369.73	1370.75	1370.63	1370.72	1370.94	1370.83	1371.18	1371.84	1370.75
12	1370.36	---	1370.38	---	1371.71	1370.60	1371.10	1371.04	1370.79	1370.94	1371.78	1370.24
13	1370.62	---	1370.28	---	1370.96	1370.59	1370.74	1370.95	1370.81	1371.41	1372.40	1370.18
14	1370.52	---	1370.42	---	1371.89	1370.85	1370.85	1370.79	1371.05	1371.20	1372.30	1370.74
15	1370.17	---	1370.37	1370.12	1370.75	1370.78	1370.77	1370.27	1371.14	1371.15	1371.99	1371.14
16	1370.14	---	1370.51	1370.18	1371.72	1370.55	1370.95	1370.11	1370.86	1371.17	1371.84	1370.98
17	1370.29	1369.86	1370.27	1370.24	1371.03	1371.01	1371.26	1370.09	1370.93	1371.13	1372.04	1371.40
18	1370.20	1370.07	1370.46	1370.48	1371.21	1370.76	1370.87	1370.75	1370.85	1371.29	1371.97	1371.22
19	1370.53	1369.86	1370.25	1370.44	1370.58	1371.08	1371.18	1370.51	1370.82	1371.33	1371.30	1371.58
20	1370.17	1370.20	1370.43	1370.25	1371.04	1371.06	1371.26	1370.76	1370.60	1371.40	1371.34	1370.86
21	1370.56	1370.15	1370.41	1370.07	1370.45	1371.03	1371.22	1370.80	1371.11	1371.23	1371.17	1370.98
22	1370.48	1370.20	1370.38	1371.21	1371.25	1370.89	1370.80	1370.84	1370.92	1371.70	1371.42	1371.09
23	1370.80	1369.59	1370.42	1370.12	1370.32	1370.82	1371.28	1370.76	1370.80	1371.62	1371.68	1371.22
24	1370.59	1370.11	1370.42	1371.10	1370.27	1370.61	1370.76	1370.64	1370.63	1371.41	1371.63	1371.42
25	1370.96	1370.05	1370.37	1370.06	1370.46	1370.98	1370.89	1370.64	1370.83	1371.47	1371.74	1371.23
26	1370.62	1370.16	1370.53	1371.09	1370.55	1370.96	1370.43	1370.73	1371.01	1371.49	1371.89	1371.22
27	1370.22	1370.14	1370.38	1370.51	1370.63	1371.01	1371.08	1370.73	1371.16	1371.39	1371.69	1371.14
28	1370.16	1370.27	1370.26	1370.91	1370.52	1371.03	1371.03	1370.64	1371.48	1371.13	1371.29	1371.01
29	1370.35		1370.13	1369.94	1370.75	1371.10	1370.89	1370.53	1371.62	1371.01	1371.01	1370.65
30	1370.18		1370.12	1371.36	---	1371.20	1370.45	1370.40	1371.47	1371.01	1370.78	1370.55
31	1370.42		1369.99		1370.71		1370.64	1370.74		1371.05		1370.57

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1988 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1371.05	1370.64	1371.03	1370.40	1371.30	1371.19	1368.99	1371.43	1370.25	1371.28	1371.91	1371.04
2	1371.03	1370.98	1371.05	1370.77	1371.59	1371.17	1369.06	1371.74	1370.40	1371.99	1371.51	1371.30
3	1371.22	1371.14	1371.13	1370.99	1371.61	1371.01	1369.66	1371.53	1370.91	1372.03	1371.20	1371.02
4	1371.33	1371.05	1370.85	1370.99	1371.86	1370.82	1370.75	1371.87	1372.06	1371.91	1370.88	1371.54
5	1371.13	1371.10	1370.55	1370.92	1371.90	1371.18	1371.56	1371.67	1372.19	1371.25	1370.82	1371.72
6	1371.15	1371.21	1370.56	1370.65	1371.42	1370.85	1372.04	1372.05	1372.22	1371.12	1370.88	1372.05
7	1371.13	1371.02	1370.70	1371.27	1371.28	1371.17	---	1371.54	1372.12	1370.60	1371.30	1371.97
8	1370.78	1371.39	1370.66	1371.40	1371.32	1371.51	1371.70	1371.47	1371.87	1370.85	1371.20	1372.10
9	1370.73	1371.34	1370.86	1371.61	1371.30	1371.73	1371.66	1371.19	1371.76	1370.96	1371.36	1372.25
10	1370.82	1371.59	1370.77	1371.65	1371.47	1371.66	1371.65	1370.63	1371.59	1371.75	1371.77	1372.08
11	1371.26	1371.20	1370.73	1371.62	1371.40	1371.71	1371.16	1370.17	1372.05	1372.22	1371.69	1372.19
12	1371.58	1370.97	1370.84	1371.74	1371.48	1371.67	1370.98	1370.34	1372.27	1372.31	1371.77	1372.18
13	1371.00	1370.87	1371.01	1371.53	1371.42	1371.52	1371.23	1370.43	1371.97	1372.18	1371.30	1372.14
14	1371.04	1370.89	1370.48	1371.16	1371.57	1371.75	1371.08	1370.74	1371.72	1372.08	1371.40	1372.25
15	1371.18	1370.74	1370.48	1371.08	1371.61	1371.64	1370.93	1370.95	1371.66	1372.17	1371.39	1371.91
16	1370.82	1370.83	1370.37	1370.83	1371.34	1371.54	1370.79	1371.91	1371.69	1371.67	1371.57	1371.78
17	1370.99	1370.78	1370.20	1370.95	1371.35	1371.72	1370.61	1371.83	1371.52	1371.58	1371.68	1371.56
18	1370.94	1370.69	1370.18	1371.18	1371.33	1371.36	1370.81	1372.22	1371.92	1371.52	1371.74	1371.29
19	1370.70	1370.67	1370.19	1371.30	1371.46	1371.05	1370.94	1372.05	1372.02	1371.96	1371.81	1371.20
20	1370.89	1370.74	1370.45	1371.52	1371.51	1370.71	1371.07	1372.14	1372.01	1371.70	1371.66	1370.60
21	1370.56	1371.02	1370.67	1371.42	1371.71	1370.84	1371.28	1371.98	1371.96	1371.59	1371.63	1370.91
22	1370.52	1371.07	1370.51	1371.72	1371.77	1370.93	1371.66	1371.68	1371.80	1371.18	1371.93	1370.52
23	1370.75	1371.02	1370.59	1371.77	1371.60	1371.03	1371.72	1371.89	1371.67	1370.89	1372.07	1370.77
24	1370.95	1371.32	1370.60	1371.73	1371.63	1371.19	1371.93	1371.77	1371.73	1370.89	1372.32	1371.20
25	1371.24	1371.33	1370.56	1371.62	1371.27	1371.44	1371.81	1371.73	1371.62	1370.91	1372.41	1371.31
26	1370.84	1371.21	1370.33	1371.50	1371.28	1371.44	1371.63	1372.40	1371.70	1371.36	1371.91	1371.26
27	1371.05	1371.24	1370.56	1371.40	1371.47	1371.23	1371.40	1372.49	1371.69	1371.59	1372.18	1371.50
28	1371.05	1371.20	1370.43	1371.41	1371.38	1370.37	1371.04	1372.18	1371.52	1371.59	1371.90	1370.99
29	1371.12	1371.25	1370.30	1371.40	1371.60	1369.46	1370.65	1371.39	1371.59	1371.73	1372.14	1371.32
30	1371.35		1370.36	1371.54	1371.96	1369.01	1371.11	1370.94	1371.77	1371.76	1371.48	1371.27
31	1370.82		1370.55		1371.42		1371.31	1370.31		1372.10		1371.65

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

Eppley Lab

1989 DAILY MEAN SOLAR IRRADIANCE*
NIMBUS-7 (ERB Channel 10C)

Units = W/m2

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1371.61	1372.19	1371.86	1371.76	1371.98	1371.70	1372.23					
2	1371.55	1371.68	1371.73	1371.68	1371.92	1372.13	1372.48					
3	1371.78	1371.73	1371.94	1371.56	1372.09	1372.62	1372.62					
4	1371.93	1371.85	1372.05	1371.59	1372.04	1373.00	1372.34					
5	1371.96	1372.14	1372.43	1371.85	1372.36	1372.87	1372.27					
6	1371.84	1372.09	1372.47	1371.97	1372.60	1372.91	1372.36					
7	1371.64	1372.35	1372.43	1372.14	1372.91	1372.72	1372.96					
8	1371.12	1372.11	1372.22	1372.60	1373.17	1372.93	1373.04					
9	1371.30	1371.83	1371.75	1373.04	1373.13	1372.77	1372.99					
10	1371.45	1371.60	1371.39	1373.10	1373.35	1371.96	1372.87					
11	1372.01	1371.50	1370.94	1373.42	1373.24	1371.35	1372.85					
12	1371.85	1371.64	1370.64	1373.42	1373.16	1370.73	1372.71					
13	1371.63	1371.04	1370.79	1373.15	1373.19	1370.11	1372.66					
14	1371.43	1371.22	1371.20	1372.69	1372.86	1369.67	1372.44					
15	1370.33	1371.21	1371.60	1372.18	1372.73	1369.43	1372.61					
16	1370.52	1371.71	1371.77	1371.71	1372.07	1369.85	1372.44					
17	1370.71	1371.97	1372.09	1371.55	1371.74	1370.52	1371.78					
18	1371.33	1372.10	1372.07	1371.46	1371.83	1371.45	1371.69					
19	1371.93	1372.23	1371.96	1371.46	1371.64	1372.48	1371.43					
20	1372.60	1371.88	1371.45	1371.48	1370.86	1372.59	1371.28					
21	1372.60	1371.35	1371.03	1371.77	1370.97	1372.77	1371.06					
22	1372.55	1371.07	1370.85	1371.71	1371.20	1372.19	1370.85					
23	1371.53	1371.06	1371.12	1371.57	1371.39	1371.08	1370.59					
24	1371.13	1371.43	1371.29	1371.47	1371.49	1370.65	1370.88					
25	1371.14	1371.93	1371.36	1371.86	1371.51	1370.39	1371.16					
26	1370.74	1372.02	1372.14	1371.80	1371.40	1370.44	1371.52					
27	1371.09	1372.25	1372.10	1371.93	1371.47	1370.35	1371.51					
28	1371.21	1372.21	1371.79	1372.12	1371.48	1370.43	1371.77					
29	1371.27		1372.14	1372.06	1371.74	1370.97	1371.29					
30	1371.94		1372.00	1372.15	1371.73	1371.44	1371.21					
31	1372.01		1371.88		1371.51		1370.84					

*Daily averages are cosine-corrected for any off-axis positioning of the sun in the telescope aperture. All values are normalized to 1 astronomical unit.

International Geophysical Calendar 1990

This Calendar continues the series begun for the IGY years 1957-58, and is issued annually to recommend dates for solar and geophysical observations which cannot be carried out continuously. Thus, the amount of observational data in existence tends to be larger on Calendar days. The recommendations on data reduction and especially the flow of data to **World Data Centers (WDCs)** in many instances emphasize Calendar days. The Calendar is prepared by the **International Ursigram and World Days Service (IUWDS)** with the advice of spokesmen for the various scientific disciplines. For some programs, greater detail concerning recommendations appears from time to time published in **IAGA News, IUGG Chronicle, URSI Information Bulletin** or other scientific journals or newsletters.

The definitions of the designated days remain as described on previous Calendars. **Universal Time (UT)** is the standard time for all world days. **Regular Geophysical Days (RGD)** are each Wednesday. **Regular World Days (RWD)** are three consecutive days each month (always Tuesday, Wednesday and Thursday near the middle of the month). **Priority Regular World Days (PRWD)** are the **RWD** which fall on Wednesdays. **Quarterly World Days (QWD)** are one day each quarter and are the **PRWD** which fall in the **World Geophysical Intervals (WGI)**. The **WGI** are fourteen consecutive days in each season, beginning on Monday of the selected month, and normally shift from year to year. In 1990 the **WGI** will be January, April, July and October.

The Solar Eclipses are:

a.) 26 January 1990 (annular) beginning in Antarctica and ending in South Atlantic. Partial phases visible on the South Island of New Zealand and much of South America.

b.) 22 July 1990 (total) begins in Finland, then along northern coasts of Europe and Asia. Totality path 130 miles wide at maximum, duration 2 minutes 33 seconds; Sun at about 40° altitude. Totality crosses Alaska's Aleutian Islands. Partial phases in northeastern Europe, northwestern North America, northern Asia, and Hawaiian Islands.

Meteor Showers (selected by P.M. Millman, Ottawa) include important visual showers and also unusual showers observable mainly by radio and radar techniques. The dates for Northern Hemisphere meteor showers are: Jan 3, 4; Apr 22-23; May 4-5; Jun 8-12; Jul 28-29; Aug 10-14; Oct 21-22; Nov 2-3, 17-18; Dec 12-16, 22-23, 1990; and Jan 3-4, 1991. The dates for Southern Hemisphere meteor showers are: May 4-5; Jun 8-12; Jul 27-30; Oct 21-22; Nov 2-3, 17-18; and Dec 5-7, 12-16, 1990.

The occurrence of unusual solar or geophysical conditions is announced or forecast by the IUWDS through various types of geophysical **"Alerts"** (which are widely distributed by telegram and radio broadcast on a current schedule). Stratospheric warmings **(STRATWARM)** are also designated. The meteorological telecommunications network coordinated by WMO carries these worldwide Alerts once daily soon after 0400 UT. For definitions of Alerts see IUWDS "Synoptic Codes for Solar and Geophysical Data, Third Revised Edition 1973" and its amendments. **Retrospective World Intervals** are selected and announced by MONSEE and elsewhere to provide additional analyzed data for particular events studied in the ICSU Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) programs.

RECOMMENDED SCIENTIFIC PROGRAMS

OPERATIONAL EDITION

(The following material was reviewed in 1989 by spokesmen of IAGA, WMO and URSI as suitable for coordinated geophysical programs in 1990.) **Airglow and Aurora Phenomena.** Airglow and auroral observatories operate with their full capacity around the New Moon periods. However, for progress in understanding the mechanism of many phenomena, such as low latitude aurora, the coordinated use of all available techniques, optical and radio, from the ground and in space is required. Thus, for the airglow and aurora 7-day periods on the Calendar, ionosonde, incoherent scatter, special satellite or balloon observations, etc., are especially encouraged. Periods of approximately one weeks' duration centered on the New Moon are proposed for high resolution of ionospheric, auroral and magnetospheric observations at high latitudes during northern winter.

Atmospheric Electricity. Non-continuous measurements and data reduction for continuous measurements of atmospheric electric current density, field, conductivities, space charges, ion number densities, ionosphere potentials, condensation nuclei, etc.; both at ground as well as with radiosondes, aircraft, rockets; should be done with first priority on the **RGD** each Wednesday, beginning on 3 January 1990 at 0000 UT, 10 January at 0600 UT, 17 January at 1200 UT, 24 January at 1800 UT, etc. (beginning hour shifts six hours each week, but is always on Wednesday). Minimum program is at the same time on **PRWD** beginning with 17 January at 1200 UT. Data reduction for continuous measurements should be extended, if possible, to cover at least the full RGD including, in addition, at least 6 hours prior to indicated beginning time. Measurements prohibited by bad weather should be done 24 hours later. Results on sferics and ELF are wanted with first priority for the same hours, short-period measurements centered around the minutes 35-50 of the hours indicated. **Priority Weeks** are the weeks which contain a PRWD; minimum priority weeks are the ones with a QWD. The World Data Centre for Atmospheric Electricity, 7 Karbysheva, Leningrad 194018, USSR, is the collection point for data and information on measurements.

Geomagnetic Phenomena. It has always been a leading principle for geomagnetic observatories that operations should be as continuous as possible and the great majority of stations undertake the same program without regard to the Calendar.

Stations equipped for making magnetic observations, but which cannot carry out such observations and reductions on a continuous schedule are encouraged to carry out such work at least on RWD (and during times of **MAGSTORM** Alert).

Ionospheric Phenomena. Special attention is continuing on particular events which cannot be forecast in advance with reasonable certainty. These will be identified by Retrospective World Intervals. The importance of obtaining full observational coverage is therefore stressed even if it is possible to analyze the detailed data only for the chosen events. In the case of vertical incidence sounding, the need to obtain quarter-hourly ionograms at as many stations as possible is particularly stressed and takes priority over recommendation (a) below when both are not practical.

For the vertical incidence (VI) sounding program, the summary recommendations are: (a) All stations should make soundings on the hour and every quarter hour; (b) On **RWDs**, ionogram soundings should be made at least every quarter hour and preferably every five minutes or more frequently, particularly at high latitudes; (c) All stations are encouraged to make f-plots on **RWDs**; f-plots should be made for high latitude stations, and for so-called "representative" stations at lower latitudes for all days (i.e., including **RWDs** and **WGIs**) (Continuous records of ionospheric parameters are acceptable in place of f-plots at temperate and low latitude stations); (d) Copies of hourly ionograms with appropriate scales for **QWDs** are to be sent to WDCs; (e) Stations in the eclipse zone and its conjugate area should take continuous observations on solar eclipse days and special observations on adjacent days. See also recommendations under **Airglow and Aurora Phenomena.**

For the incoherent scatter observation program, every effort should be made to obtain measurements at least on the **Incoherent Scatter Coordinated Observation Days**, and intensive series should be attempted whenever possible in WGIs or the **Airglow and Aurora Periods.** The need for collateral VI observations with not more than quarter-hourly spacing at least during all observation periods is stressed. Special programs: Dr. V. Wickwar, Utah State University, Center for Atmospheric and Space Sciences, Logan, UT 84322-4405 U.S.A., URSI Working Group G.5. Phone: (801)750-3641.

For the ionospheric drift or wind measurement by the various radio techniques, observations are recommended to be concentrated on the weeks including **RWDs.**

For traveling ionosphere disturbances, propose special periods for coordinated measurements of gravity waves induced by magnetospheric activity, probably on selected **PRWD** and **RWD.**

For the ionospheric absorption program half-hourly observations are made at least on all **RWDs** and half-hourly tabulations sent to WDCs. Observations should be continuous on **solar eclipse** days for stations in eclipse zone and in its conjugate area. Special efforts should be made to obtain daily absorption measurements at temperate latitude stations during the period of Absorption Winter Anomaly, particularly on days of abnormally high or abnormally low absorption (approximately October-March, Northern Hemisphere; April-September, Southern Hemisphere).

For back-scatter and forward scatter programs, observations should be made and analyzed on all **RWDs** at least.

For synoptic observations of mesospheric (D region) electron densities, several groups have agreed on using the **RGD** for the hours around noon.

For ELF noise measurements involving the earth-ionosphere cavity resonances any special effort should be concentrated during the **WGIs.**

It is recommended that more intensive observations in all programs be considered on days of **unusual meteor activity.**

Meteorology. Particular efforts should be made to carry out an intensified program on the **RGD** -- each Wednesday, UT. A desirable goal would be the scheduling of meteorological rocketsondes, ozone sondes and radiometer sondes on these days, together with maximum-altitude rawinsonde ascents at both 0000 and 1200 UT.

During **WGI** and **STRATWARM** Alert Intervals, intensified programs are also desirable, preferably by the implementation of RGD-type programs (see above) on Mondays and Fridays, as well as on Wednesdays.

Solar Phenomena. Observatories making specialized studies of solar phenomena, particularly using new or complex techniques, such that continuous observation or reporting is impractical, are requested to make special efforts to provide to WDCs data for solar **eclipse** days, **RWDs** and during **PROTON/FLARE ALERTS**. The attention of those recording solar noise spectra, solar magnetic fields and doing specialized optical studies is particularly drawn to this recommendation.

Solar Interplanetary Variability Program (SIV). Sponsored by SCOSTEP, focusses on observations of the transition phenomena from solar minimum to solar maximum (1988-1989). 1990 will emphasize analysis and interpretation of the observations. For details, contact Dr. E.J. Smith, JPL, Mail Stop 169/506, 4800 Oak Grove Dr., Pasadena, CA 91109 U.S.A.

Transient Interplanetary Processes with emphasis on the solar connection (SOLTIP). Proposed program within the SCOSTEP STEP (Solar-Terrestrial Energy Program) project: 1990-1995. It will focus on remote and <u>in situ</u> observations and analyses of solar-generated phenomena and their propagation throughout the heliosphere. Desired goals include: (1) interplanetary scintillation observation of remote radio galaxies as well as telemetry signals to/from interplanetary spacecraft; (2) coordination of Earth-orbiting spacecraft such as IMP-8 in the solar wind and solar-orbiting spacecraft such as ICE, GIOTTO, SAKIGAKE, VOYAGER 1/2, PIONEER 10/11, ULYSSES, RELICT, WIND, and SOHO.

Space Research, Interplanetary Phenomena, Cosmic Rays, Aeronomy. Experimenters should take into account that observational effort in other disciplines tends to be intensified on the days marked on the Calendar, and schedule balloon and rocket experiments accordingly if there are no other geophysical reasons for choice. In particular it is desirable to make rocket measurements of ionospheric characteristics on the same day at as many locations as possible; where feasible, experimenters should endeavor to launch rockets to monitor at least normal conditions on the **Quarterly World Days (QWD)** or on **RWDs**, since these are also days when there will be maximum support from ground observations. Also, special efforts should be made to assure recording of telemetry on **QWD** and **Airglow and Aurora Periods** of experiments on satellites and of experiments on spacecraft in orbit around the Sun.

The **International Ursigram and World Days Service (IUWDS)** is a permanent scientific service of the **International Union of Radio Science (URSI)**, with the participation of the **International Astronomical Union** and the **International Union Geodesy and Geophysics.** **IUWDS** adheres to the **Federation of Astronomical and Geophysical Services (FAGS)** of the **International Council of Scientific Unions (ICSU).** The **IUWDS** coordinates the international aspects of the world days program and rapid data interchange.

This Calendar for 1990 has been drawn up by H.E. Coffey, of the IUWDS Steering Committee, in association with spokesmen for the various scientific disciplines in SCOSTEP, IAGA and URSI. Similar Calendars are issued annually beginning with the IGY, 1957-58, and are published in various widely available scientific publications.

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Additional copies are available upon request to IUWDS Chairman, Dr. R. Thompson, IPS Radio and Space Services, Department of Administrative Services, P.O. Box 702, Darlinghurst, NSW 2010, Australia, or IUWDS Secretary for World Days, Miss H.E. Coffey, WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder, Colorado 80303, USA.

NOTES:

1. Days with unusual meteor shower activity are: Northern Hemisphere Jan 3,4; Apr 22-23; May 4-5; Jun 8-12; Jul 28-29; Aug 10-14; Oct 21-22; Nov 2-3, 17-18; Dec 12-16, 22-23, 1990; Jan 3-4, 1991. Southern Hemisphere May 4-5; Jun 8-12; Jul 26-30; Oct 21-22; Nov 2-3, 17-18; Dec 5-7, 12-16, 1990.

2. Solar Interplanetary Variability (SIV) Observing Program 1988 - 1989 concludes with in-depth data analysis in 1990.

3. Day intervals that IMP 8 satellite is in the solar wind (begin and end days are generally partial days): 29 Dec 1989-5 Jan 1990; 10-17 Jan; 23-30 Jan; 4-11 Feb; 17-24 Feb; 2-9 Mar; 15-22 Mar; 27 Mar-3 Apr; 9-16 Apr; 22-28 Apr; 4-11 May; 17-23 May; 30 May-5 Jun; 11-18 Jun; 24 Jun-1 Jul; 7-13 Jul; 19-26 Jul; 1-8 Aug; 13-20 Aug; 25 Aug-2 Sep; 7-15 Sep; 19-27 Sep; 2-10 Oct; 15-23 Oct; 28 Oct-4 Nov; 9-17 Nov; 22-29 Nov; 4-11 Dec; 16-24 Dec; 29 Dec-5 Jan 1991.

   There will not be total IMP 8 data monitoring coverage during these intervals. (Information kindly provided by the WDC-A for Rockets and Satellites, NASA GSFC, Greenbelt, MD 20771 U.S.A.).

4. + Incoherent Scatter programs start at 1600 UT on the first day of the intervals indicated, and end at 1600 UT on the last day of the intervals.

5. Incoherent Scatter world days: 24-25 Jan 1990; 12-17 Feb LTCS/WAGS; 21-23 Feb GISMOS; 20-21 Mar; 21-22 May; 25-29 Jun GITCAD/SUNDIAL/WAGS; 20-21 Sep; 13-15 Nov DELITE; 17-19 Dec DELITE; 11-12 Jan 1991.

where DELITE= Dynamics Explorer - Lower Ionosphere-Thermosphere Emissions;
GISMOS= Global Ionospheric Simultaneous Measurements of Substorms;
GITCAD= Global Ionosphere-Thermosphere Coupling and Dynamics;
LTCS= Lower Thermosphere Coupling Study;
SUNDIAL= Coordinated study of the ionosphere/magnetosphere;
WAGS= Worldwide Acoustics Gravity Wave Study.

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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."