



U.S. DEPARTMENT OF COMMERCE

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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

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JUNE 1998 NUMBER 646 - Part II

Solar-Geophysical Data comprehensive reports

Data for December 1997

International Standard Serial Number: 0038-0911

Library of Congress Catalog Number: 79-640375 //r81

NATIONAL GEOPHYSICAL DATA CENTER

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Subscription information is on the inside back cover.

SOLAR-GEOPHYSICAL DATA

Number 646

(Issued in Two Parts)

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DECEMBER 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt	Xray See	Obs Type	Area Time (UT)	Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0001	LEAR	01	0028	0029	0039	N17	E27 8113	12 3.1	11	SF		4 E		18		
0002	LEAR	01	0039	0040	0042	N18	E27 8113	12 3.1	3	SF		4 E		13		
0003	LEAR	01	0130	0131	0142	N17	E27 8113	12 3.1	12	SF		4 E		22		F
0004	LEAR	01	0235	0235	0331	N19	E27 8113	12 3.2	56	1N		4 E		105		
0005	LEAR	01	0439	0439	0444	N19	E26 8113	12 3.2	5	SF		3 E		12		
			01 0626		0733		No Flare Patrol									
			01 0749		0801		No Flare Patrol									
			01 0927		0928		No Flare Patrol									
0006	LEAR	01	0929	0930	0935	N19	E18 8113	12 2.8	6	SF		3 E		24		
0007	SVTO	01	0952	0952U	1001D	N18	E17 8113	12 2.7	9D	SF		3 E		16		
			01 1034		1055		No Flare Patrol									
			01 1059		1101		No Flare Patrol									
0008	SVTO	01	1139	1139	1151	N18	E16 8113	12 2.7	12	SF		3 E		12		
0009	SVTO	01	1226	1232	1249	N20	E19 8113	12 3.0	23	SF		3 E		13		
0010		01	1326	1328	1346	N19	E17 8113	12 2.8	20	SN				76		
	RAMY	01	1326	1328	1344	N20	E19 8113	12 3.0	18	SF		4 E		69		
	SVTO	01	1326	1328	1347	N18	E15 8113	12 2.7	21	SN		3 E		83		
			01 1642		1714		No Flare Patrol									
			01 1759		1815		No Flare Patrol									
			01 1834		1844		No Flare Patrol									
0011	RAMY	01	1845E	1845U	1855	N20	E16 8113	12 3.0	10D	SF		3 E		11		F
0012		01	19104	19239	2005	N18	E12 8113	12 2.7	55	1F				141		F
	HOLL	01	1910	1932	2010	N17	E13 8113	12 2.8	60	1F		3 E		171		
	RAMY	01	1914	1923	2000	N18	E12 8113	12 2.7	46	1F		3 E		111		F
			01 2138		2400		No Flare Patrol									
			02 0000		0021		No Flare Patrol									
			02 0254		0329		No Flare Patrol									
			02 0354		0446		No Flare Patrol									
			02 0531		0604		No Flare Patrol									
0013	LEAR	02	0536	0538	0550	N19	E08 8113	12 2.8	14	SF		3 E		75		
0014	LEAR	02	0653	0653	0658	N19	E08 8113	12 2.9	5	SF		3 E		12		
			02 0734		1054		No Flare Patrol									
			02 2119		2137		No Flare Patrol									
			02 2212		2245		No Flare Patrol									
			02 2249		2301		No Flare Patrol									
0015	LEAR	03	0058	0118	0137	N19	W02 8113	12 2.9	39	SF		3 E		45		
0016	LEAR	03	0326	0330	0402	N19	W03 8113	12 2.9	36	SF		3 E		50		
0017	URUM	03	0330	0344	0415	N20	W02 8113	12 3.0	45	SN		C		80	0.9	E
0018	LEAR	03	0403	0405	0411	N19	W04 8113	12 2.9	8	SF		3 E		11		
0019	LEAR	03	0412	0417	0446	N19	W04 8113	12 2.9	34	SF		3 E		26		
0020	LEAR	03	0505	0505	0512	N19	W04 8113	12 2.9	7	SF		3 E		11		
0021		03	07063	07152	0728	N20	W05 8113	12 2.9	22	SF				62	0.9	E
	LEAR	03	0706	0715	0734	N19	W06 8113	12 2.8	28	SF		3 E		44		
	URUM	03	0709	0717	0723	N20	W04 8113	12 3.0	14	SF		C		80	0.9	E

H α SOLAR FLARES

5
Dec 97

DECEMBER 1997

Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CHP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks
											Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
		03 0921		0926		No Flare Patrol								
		03 0955		1039		No Flare Patrol								
0022	RAMY	03 1404	1408	1416	N19 W10	8113	12	2.8	12	SF	4	E	13	F
0023	LEAR	03 2222	2222	2242	N22 W10	8113	12	3.2	20	SF	3	E	10	
0024	LEAR	04 0127	0127	0133	N20 W15	8113	12	2.9	6	SF	3	E	16	
0025	LEAR	04 0543	0550	0604	N21 W17	8113	12	2.9	21	SF	3	E	25	
0026	LEAR	04 2329	2333	2344	N22 W25	8113	12	3.0	15	SF	3	E	13	F
		05 0925		1103		No Flare Patrol								
0027	KANZ	06 0840	0844	0900	N19 W44	8113	12	3.0	20	SF	2	C		
0028	URUM	06 0853	0857	0909	N18 W44	8113	12	3.0	16	SF		C	64	1.0 E
		06 2106		2149		No Flare Patrol								
0029	URUM	07 0543	0550	0606	S28 W40	8114	12	4.1	23	SF		C	32	0.5 E
0030	KANZ	07 0949	0953	1001	S30 W41	8114	12	4.2	12	SF	2	C		
		07 1058		1104		No Flare Patrol								
		07 2305		2342		No Flare Patrol								
		08 1027		1103		No Flare Patrol								
		08 1221		1333		No Flare Patrol								
		08 2238		2248		No Flare Patrol								
		08 2303		2400		No Flare Patrol								
		09 0000		0004		No Flare Patrol								
		09 0026		0048		No Flare Patrol								
		09 2350		2400		No Flare Patrol								
		10 0000		0059		No Flare Patrol								
0031	URUM	10 0529	0535	0541	N32 W15	8119	12	9.0	12	SN		C	145	1.8 E
0032	KANZ	10 1019E	1019U	1027	N28 W19	8116	12	8.9	80	SF	2	C		
		10 1959		2011		No Flare Patrol								
		10 2207		2208		No Flare Patrol								
0033	URUM	11 0409	0421	0428	N31 W29	8119	12	8.9	19	SN		C	48	0.7 E
		11 1131		1219		No Flare Patrol								
		11 1230		1252		No Flare Patrol								
		11 1337		1409		No Flare Patrol								
		11 1415		1431		No Flare Patrol								
		11 1456		1740		No Flare Patrol								
		11 1834		1854		No Flare Patrol								
		11 1957		2017		No Flare Patrol								
		11 2244		2307		No Flare Patrol								
		11 2323		2334		No Flare Patrol								
		11 2350		2355		No Flare Patrol								
0034	LEAR	12 0607	0609	0613	N32 W05	8122	12	11.8	6	SF	3	E	19	F
		12 0650		0708		No Flare Patrol								
0035	URUM	12 0709	0718	0733	N34 W41	8119	12	9.0	30	SN		C	46	1.1 E
	LEAR	12 0709	0723	0745	N33 W43	8119	12	8.9	36	SB		C	64	1.1 E
	LEAR	12 0717	0718	0733	N36 W39	8119	12	9.2	16	SF	3	E	27	
0036	URUM	12 0747	0758	0817	N29 W10	8122	12	11.5	30	1B		C	193	2.3 E
0037	LEAR	12 0857	0858	0905	N30 W08	8122	12	11.7	8	SF	3	E	13	
0038	KHAR	12 0920U		0935	N32 W43	8119	12	9.0	15U	SF	2	V		D

H α SOLAR FLARES

DECEMBER 1997

Grp #	Sta	Start Day	Max (UT)	End (UT)	Lat	NOAA/ USAF CMD Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Time (UT)	Area Measurement		Remarks	
												Apparent (10-6 Disk)	Corr (Sq Deg)		
		28 0533		0640		No Flare Patrol									
		28 0644		0751		No Flare Patrol									
		28 1103		1123		No Flare Patrol									
0065	HOLL	28 1751	1752	1756	S22 W25	8124	12 26.8	5	SF	3 E		18			
0066	KANZ	29 0737E	0739	0743	S23 W28	8124	12 27.1	6D	SF	2 C					
0067	RAMY	29 1216	1218	1223	N18 E10	8126	12 30.3	7	SF	3 E		31		E	
0068	URUM	30 0550	0559	0601	S22 W47	8124	12 26.6	11	SB	C		64	1.0	E	
0069	URUM	30 0552	0559	0605	N18 W01	8126	12 30.2	13	SN	C		32	0.4	D	
		30 1944		1958		No Flare Patrol									
		30 2030		2032		No Flare Patrol									
		30 2121		2227		No Flare Patrol									
0070	LEAR	31 0659	0703	0714	N18 W12	8126	12 30.4	15	SF	3 E		45			
		31 1058		1114		No Flare Patrol									
		31 1335		1354		No Flare Patrol									
0071	HOLL	31 1519	1519	1532	N18 W19	8126	12 30.2	13	SF	3 E		21			
0072	HOLL	31 1827	1828	1831	S21 W63	8124	12 26.9	4	SF	3 E		12			
0073	31	1843	1844	1851	S22 W63	8124	12 26.9	8	SF			42		H	
	RAMY	31 1843	1844	1850	S23 W63	8124	12 26.9	7	SF	4 E		38			
	HOLL	31 1843	1844	1852	S22 W63	8124	12 26.9	9	SF	3 E		46		H	
0074	31	2022	2023	2050	S22 W63	8124	12 27.0	28	SF			13		F	
	RAMY	31 2022	2023	2044	S22 W62	8124	12 27.1	22	SF	4 E		15		F	
	HOLL	31 2022	2023	2056	S22 W64	8124	12 26.9	34	SF	3 E		11			

"Remarks"

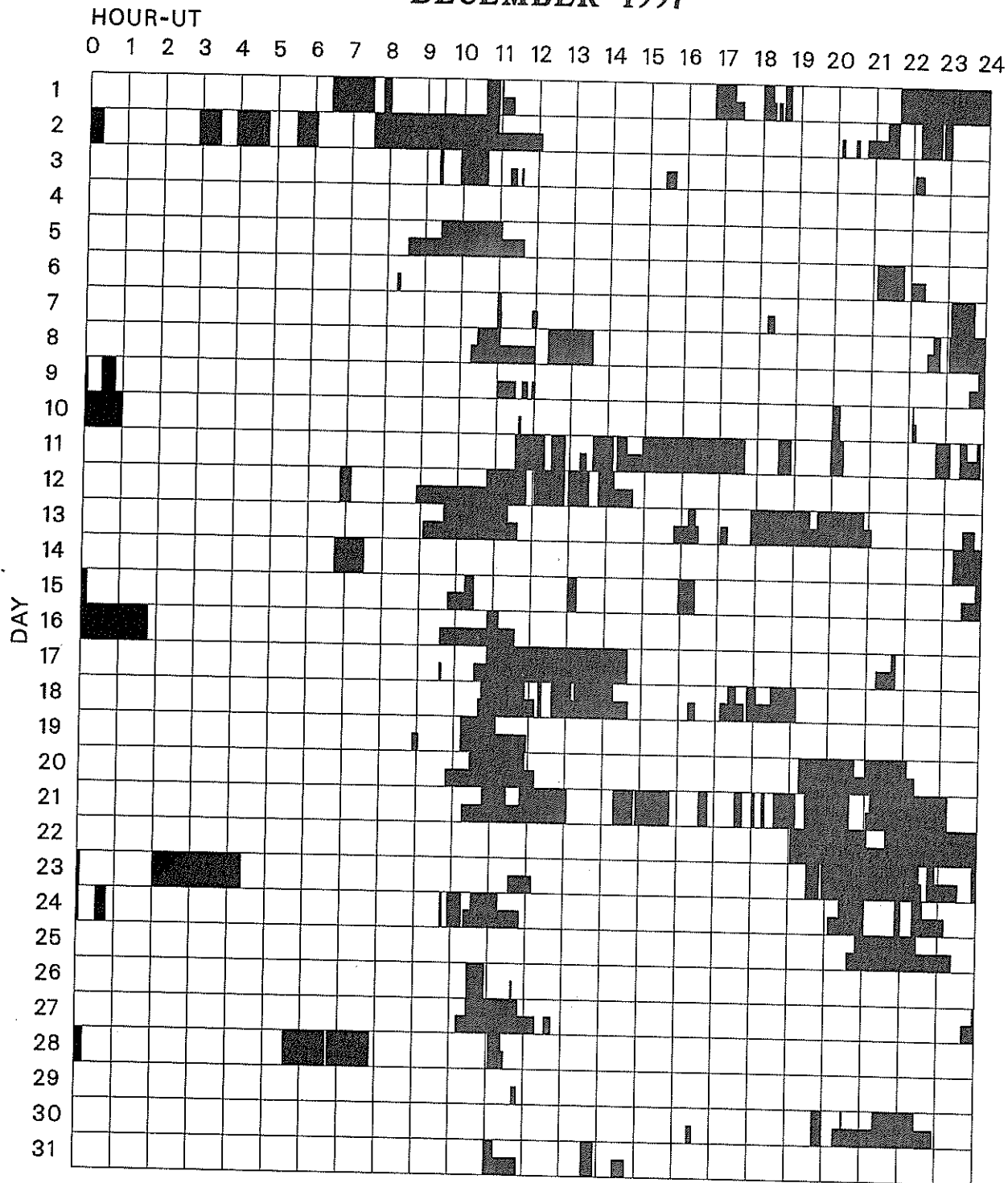
- | | |
|---|---|
| <p>A = Eruptive prominence whose base is less than 90 degrees from central meridian.
 B = Probably the end of a more important flare.
 C = Invisible 10 minutes before.
 D = Brilliant point.
 E = Two or more brilliant points.
 F = Several eruptive centers.
 G = No visible spots in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

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

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

9
Dec 97

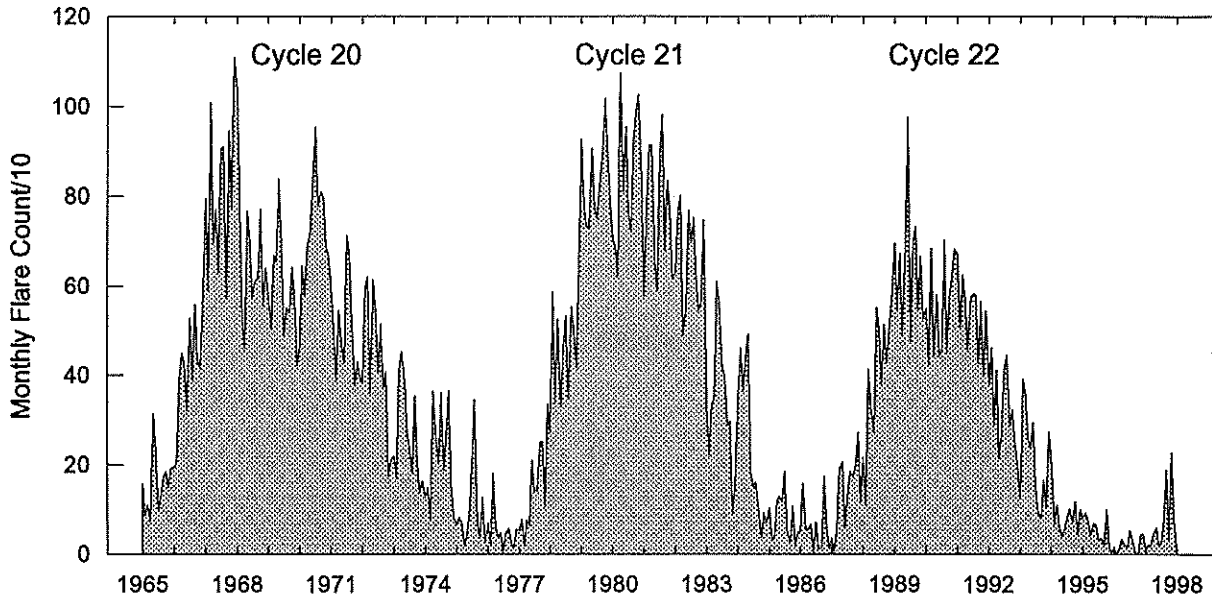
DECEMBER 1997



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

- | | | | |
|-------------|-----------|--------|----------|
| Holloman | Kharkov | Mitaka | San Vito |
| Kanzelhoehe | Learmonth | Ramey | Urumqi |

Monthly Counts of Grouped Solar Flares Jan 1965 - Dec 1997



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1965	158	85	110	74	315	231	99	127	173	184	150	193	1899
1966	194	205	390	449	429	323	528	391	558	432	417	543	4859
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	551	502	375	513	429	518	587	4816
1989	695	544	672	488	691	977	474	699	733	547	665	526	7711
1990	550	424	684	442	580	445	454	703	449	574	623	682	6610
1991	672	503	625	570	458	574	582	581	425	565	396	544	6495
1992	380	462	287	412	214	271	413	447	287	325	248	206	3952
1993	123	392	357	262	237	296	154	92	82	167	104	275	2541
1994	217	67	111	60	40	56	81	101	72	117	45	99	1066
1995	82	95	77	42	69	66	29	37	23	99	14	6	639
1996	14	3	15	34	21	16	54	31	3	0	44	45	280
1997	8	22	18	43	59	18	26	75	188	31	228	74	790

The term 'grouped' means observations of the same event by different sites were lumped together and counted as one.

SOLAR RADIO EMISSION
Outstanding Occurrences

11
Dec 97

DECEMBER 1997

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
01	2804	VORO	20 GRF	0235.0	0237.7	55.0	0.5			
	8800	LEAR	8 S	0235.0	0235.0	U	73.0			QL=4 ST=2 TYP=3
	4995	LEAR	8 S	0235.0	0235.0	U	34.0			QL=4 ST=2 TYP=3
	15400	LEAR	8 S	0235.0	0235.0	U	33.0			QL=4 ST=2 TYP=3
	200	HIRA	8 S	0417.4	0417.6	0.4	17.0			QL=4 ST=2 TYP=3
	200	HIRA	42 SER	0607.4	0607.8	1.7	17.0			0
	245	LEAR	4 S/F	0630.0	0632.0	4.0	67.0			WL
	410	LEAR	4 S/F	0631.0	0632.0	3.0	31.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0631.0	0632.0	2.0	74.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	0631.0	0632.0	2.0	49.0			QL=4 ST=2 TYP=3
	200	HIRA	42 SER	0631.2	0631.4	1.5	45.0			QL=4 ST=2 TYP=3
	500	HIRA	8 S	0631.2	0631.5	0.7	20.0			WL
	245	SVTO	4 S/F	0703.0	0704.0	5.0	57.0			WL
	200	HIRA	46 C	0703.9	0704.9	1.5	130.0	28.0		QL=4 ST=2 TYP=3
	245	LEAR	8 S	0704.0	0704.0	U	48.0			WL
	204	IZMI	45 C	0704.0	0704.5	3.0	2400.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0815.0	0815.0	1.0	260.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	0815.0	0815.0	1.0	320.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	0815.0	0815.0	2.0	41.0			QL=4 ST=2 TYP=3
	204	IZMI	42 SER	0815.0	0815.2	11.0	3800.0			QL=4 ST=2 TYP=3
	33	UPIC	4 S/F	0815.7	0816.0	1.5				
	3000	IZMI	5 S	0819.2	0819.5	2.0	6.0	3.0		
	610	LEAR	8 S	0820.0	0820.0	1.0	75.0			
	33	UPIC	2 S/F	0834.5	0834.9	0.5				QL=4 ST=2 TYP=3
	127	TORN	4 S/F	0928.0	0928.5	1.8	230.0	120.0		
	33	UPIC	46 C	1026.5	1027.8	1.5				
	245	SVTO	8 S	1027.0	1027.0	2.0	93.0			QL=4 ST=2 TYP=3
	204	IZMI	41 F	1027.0	1027.2	3.0	210.0			
	33	UPIC	4 S/F	1046.0	1046.2	0.8				
	410	SVTO	8 S	1336.0	1336.0	1.0	25.0			QL=4 ST=2 TYP=3
	1415	SVTO	8 S	1337.0	1337.0	U	72.0			QL=4 ST=2 TYP=3
	127	TORN	4 S/F	1337.8	1338.3	2.0	320.0	160.0		
	245	SGMR	49 GB	1338.0	1338.0	1.0	1000.0			QL=4 ST=2 TYP=6
245	SVTO	49 GB	1338.0	1338.0	1.0	810.0			QL=4 ST=2 TYP=6	
610	SVTO	8 S	1340.0	1340.0	1.0	48.0			QL=4 ST=2 TYP=3	
2800	PENT	1 S	1913.0	1915.0	7.0	14.0			QL=4 ST=2 TYP=3	
410	PALE	49 GB	2058.0	2059.0	2.0	3000.0			QL=4 ST=2 TYP=6	
245	PALE	4 S/F	2115.0	2115.0	6.0	61.0			QL=4 ST=2 TYP=3	
02	235	CUBA	44 NS	1300.0E		530.0D	6.0			
	280	CUBA	44 NS	1300.0E		530.0D	16.0			
	245	PALE	8 S	0005.0	0007.0	2.0	89.0			QL=4 ST=2 TYP=3
	200	HIRA	46 C	0005.4	0006.1	2.0	50.0	4.0		WL
	410	LEAR	8 S	0006.0	0006.0	1.0	39.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0006.0	0007.0	1.0	52.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0006.0	0006.0	1.0	42.0			QL=4 ST=2 TYP=3
	500	HIRA	8 S	0006.2	0006.7	0.5	18.0			QL=4 ST=2 TYP=3
	245	PALE	4 S/F	0113.0	0117.0	7.0	120.0			WL
	200	HIRA	46 C	0115.5	0119.7	5.0	60.0	5.0		QL=4 ST=2 TYP=3
	245	LEAR	8 S	0116.0	0117.0	2.0	66.0			WL
	245	LEAR	8 S	0119.0	0120.0	1.0	40.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0150.0	0150.0	1.0	110.0			QL=4 ST=2 TYP=3
	2840	BEIJ	1 S	0534.0	0537.0	8.0	4.6			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0547.0	0547.0	1.0	160.0			
	245	LEAR	8 S	0816.0	0816.0	U	130.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0816.0	0816.0	U	54.0			QL=4 ST=2 TYP=3
	127	TORN	45 C	0919.2	0924.9	10.5	50.0	7.0		QL=4 ST=2 TYP=3
	204	IZMI	42 SER	0924.0	0925.0	6.5	130.0			
	204	IZMI	41 F	1108.5	1114.5	18.0	230.0			
	245	PALE	4 S/F	1729.0	1732.0	3.0	100.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1731.0	1732.0	1.0	64.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	1758.0	1758.0	U	170.0			QL=4 ST=2 TYP=3
245	SGMR	8 S	1758.0	1758.0	U	110.0			QL=4 ST=2 TYP=3	
410	SGMR	8 S	1937.0	1938.0	1.0	53.0			QL=4 ST=2 TYP=3	
245	LEAR	8 S	2348.0	2348.0	1.0	110.0			QL=4 ST=2 TYP=3	
245	PALE	8 S	2348.0	2348.0	1.0	180.0			QL=4 ST=2 TYP=3	
03	235	CUBA	44 NS	1300.0E		530.0D	5.0			
	280	CUBA	44 NS	1300.0E		530.0D	15.0			

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

DECEMBER 1997

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
03	245	SGMR	43 NS	1303.0	1304.0	6.0	53.0			QL=4 ST=2 TYP=1
	2804	VORO	22 GRF	0007.0	0120.0	101.0	0.4			
	245	LEAR	8 S	0111.0	0112.0	1.0	110.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0111.0	0112.0	1.0	130.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0115.0	0115.0	1.0	49.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0116.0	0117.0	1.0	120.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	0322.0	0323.0	2.0	170.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	0322.0	0323.0	2.0	52.0			QL=4 ST=2 TYP=3
	2804	VORO	22 GRF	0325.0	0330.4	70.0	0.5			
	245	LEAR	8 S	0523.0	0524.0	2.0	110.0			QL=4 ST=2 TYP=3
	245	LEAR	8 S	0551.0	0553.0	2.0	170.0			QL=4 ST=2 TYP=3
	610	LEAR	4 S/F	0551.0	0553.0	4.0	21.0			QL=4 ST=2 TYP=3
	410	LEAR	4 S/F	0552.0	0554.0	3.0	26.0			QL=4 ST=2 TYP=3
	410	SVTO	4 S/F	0654.0	0654.0	4.0	86.0			QL=4 ST=2 TYP=3
	410	LEAR	8 S	0655.0	0655.0	U	87.0			QL=4 ST=2 TYP=3
410	LEAR	8 S	0657.0	0657.0	U	72.0			QL=4 ST=2 TYP=3	
204	IZMI	41 F	1108.5	1110.5	6.0	150.0				
2695	PALE	4 S/F	2220.0	2220.0	31.0	9200.0				QL=4 ST=2 TYP=3
04	280	CUBA	44 NS	1300.0E		520.0D		15.0		
	235	CUBA	44 NS	1300.0E		520.0D		5.0		
	245	LEAR	8 S	0010.0	0010.0	1.0	71.0			QL=4 ST=2 TYP=3
	2804	VORO	20 GRF	0121.8	0126.7	23.0	0.5			
	200	HIRA	46 C	0215.0	0215.4	4.0	10.0	2.0		WL
	2840	BEIJ	45 C	0525.0	0551.0	65.0	42.0			
	2695	LEAR	4 S/F	0547.0	0550.0	7.0	32.0			QL=4 ST=2 TYP=3
	4995	LEAR	4 S/F	0547.0	0550.0	7.0	14.0			QL=4 ST=2 TYP=3
	410	LEAR	4 S/F	0547.0	0552.0	7.0	41.0			QL=4 ST=2 TYP=3
	245	LEAR	4 S/F	0548.0	0552.0	6.0	38.0			QL=4 ST=2 TYP=3
	610	LEAR	4 S/F	0548.0	0549.0	6.0	25.0			QL=4 ST=2 TYP=3
	1415	LEAR	4 S/F	0548.0	0551.0	6.0	19.0			QL=4 ST=2 TYP=3
	2800	HIRA	45 C	0548.5	0550.5	10.0	30.0	9.0		WL
	500	HIRA	46 C	0548.5	0550.9	6.0	21.0	5.0		O
	200	HIRA	46 C	0550.1	0552.4	3.9	10.0	2.0		O
	204	IZMI	7 C	1048.5	1048.8	0.5	75.0	36.0		
	245	SGMR	8 S	1300.0	1300.0	U	53.0			QL=4 ST=2 TYP=3
	245	SVTO	8 S	1401.0	1402.0	2.0	78.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1402.0	1402.0	1.0	66.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1415.0	1415.0	U	50.0			QL=4 ST=2 TYP=3
245	SVTO	8 S	1415.0	1415.0	U	50.0			QL=2 ST=2 TYP=3	
33	UPIC	45 C	1432.2	1432.5	1.8					
15400	SGMR	4 S/F	1516.0	1516.0	524.0	3800.0				QL=4 ST=1 TYP=3
8800	SGMR	4 S/F	1516.0	1517.0	524.0	2300.0				QL=4 ST=1 TYP=3
05	280	CUBA	44 NS	1300.0E		530.0D		16.0		
	235	CUBA	44 NS	1300.0E		530.0D		7.0		
	200	HIRA	46 C	0033.1	0033.7	1.0	35.0	5.0		O
	204	IZMI	42 SER	0822.0	0832.5	12.0	77.0			
	204	IZMI	4 S/F	0930.0	0930.4	1.5	90.0			
	204	IZMI	42 SER	1059.2	1107.5	25.0	75.0			
	245	PALE	8 S	1851.0	1852.0	1.0	87.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1906.0	1906.0	U	51.0			QL=4 ST=2 TYP=3
	245	PALE	4 S/F	2100.0	2108.0	8.0	81.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2107.0	2108.0	1.0	73.0			QL=4 ST=2 TYP=3
06	127	TORN	43 NS	1110.0	1230.6	190.0	40.0	40.0		V=1
	280	CUBA	44 NS	1300.0E		530.0D		17.0		
	235	CUBA	44 NS	1300.0E		530.0D		9.0		
	3000	IZMI	20 GRF	0835.0	0838.5	6.0	3.0			
	410	SVTO	8 S	0926.0	0927.0	1.0	52.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1340.0	1340.0	U	51.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1344.0	1345.0	1.0	56.0			QL=4 ST=2 TYP=3
	410	SVTO	8 S	1352.0	1352.0	U	50.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	1725.0	1727.0	2.0	58.0			QL=4 ST=1 TYP=3
07	235	CUBA	44 NS	1300.0E		530.0D		5.0		
	280	CUBA	44 NS	1300.0E		530.0D		13.0		
	245	LEAR	8 S	0017.0	0018.0	2.0	64.0			QL=4 ST=2 TYP=3
	204	IZMI	42 SER	1122.0	1125.0	6.0	250.0			

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

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D E C E M B E R 1 9 9 7

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean	Int	Remarks
07	245 SGMR	8 S	1334.0	1334.0	1.0	50.0			QL=4 ST=2 TYP=3
08	280 CUBA	44 NS	1505.0E		415.0D		14.0		
	235 CUBA	44 NS	1505.0E		415.0D		5.0		
09	235 CUBA	44 NS	1300.0E		530.0D		5.0		
	280 CUBA	44 NS	1300.0E		530.0D		14.0		
	2804 VORO	20 GRF	0108.8	0117.5	43.0	0.4			
	245 LEAR	8 S	0505.0	0505.0	U	75.0			QL=2 ST=2 TYP=3
	200 HIRA	8 S	0505.4	0505.5	0.2	45.0			WL
	245 PALE	8 S	1932.0	1932.0	2.0	210.0			QL=4 ST=2 TYP=3
	245 SGMR	8 S	1932.0	1932.0	1.0	180.0			QL=4 ST=2 TYP=3
	245 SGMR	4 S/F	2003.0	2004.0	3.0	51.0			QL=4 ST=2 TYP=3
	245 PALE	8 S	2038.0	2038.0	1.0	69.0			QL=4 ST=2 TYP=3
	245 LEAR	8 S	2249.0	2250.0	2.0	58.0			QL=4 ST=2 TYP=3
	245 PALE	8 S	2250.0	2250.0	U	99.0			QL=4 ST=2 TYP=3
10	280 CUBA	44 NS	1300.0E		515.0D		16.0		
	235 CUBA	44 NS	1300.0E		515.0D		6.0		
	200 HIRA	42 SER	0103.4	0106.7	4.2	90.0			0
	200 HIRA	42 SER	0154.7	0155.0	4.2	12.0			0
	200 HIRA	42 SER	0256.4	0256.5	0.7	28.0			0
	200 HIRA	8 S	0402.9	0403.0	0.3	25.0			0
	200 HIRA	8 S	0521.7	0522.0	0.7	29.0			0
	245 LEAR	8 S	0947.0	0947.0	U	130.0			QL=4 ST=2 TYP=3
	33 UPIC	46 C	0947.0	0947.6	1.1				
	204 IZMI	45 C	0952.0	0952.5	1.0	500.0			
11	280 CUBA	44 NS	1300.0E		530.0D		16.0		
	235 CUBA	44 NS	1300.0E		530.0D		5.0		
12	204 IZMI	7 C	1135.6	1135.7	0.4	150.0			
	500 HIRA	46 C	2219.5	2224.7	20.0	120.0	28.0		ML
	610 LEAR	8 S	2221.0	2223.0	2.0	29.0			QL=4 ST=2 TYP=3
	410 LEAR	48 C	2221.0	2227.0	10.0	160.0			QL=4 ST=2 TYP=8
	410 PALE	48 C	2222.0	2227.0	9.0	160.0			QL=4 ST=2 TYP=8
	1415 LEAR	8 S	2223.0	2224.0	2.0	95.0			QL=4 ST=2 TYP=3
	1415 PALE	8 S	2223.0	2224.0	2.0	110.0			QL=4 ST=2 TYP=3
	610 PALE	20 GRF	2223.0	2225.0	8.0	94.0			QL=4 ST=2 TYP=2
	200 HIRA	46 C	2223.6	2230.7	10.0	21.0	5.0		0
	245 LEAR	8 S	2227.0	2228.0	1.0	28.0			QL=4 ST=2 TYP=3
	500 HIRA	4 S/F	2243.2	2245.0	7.0	50.0	18.0		WL
	410 LEAR	8 S	2244.0	2245.0	2.0	51.0			QL=4 ST=2 TYP=3
	610 LEAR	8 S	2244.0	2245.0	2.0	55.0			QL=4 ST=2 TYP=3
	410 PALE	8 S	2244.0	2245.0	2.0	48.0			QL=4 ST=2 TYP=3
	610 PALE	8 S	2244.0	2245.0	2.0	54.0			QL=4 ST=2 TYP=3
	200 HIRA	3 S	2244.2	2245.2	2.7	12.0	3.0		0
	245 LEAR	8 S	2245.0	2245.0	1.0	46.0			QL=4 ST=2 TYP=3
	245 PALE	8 S	2245.0	2245.0	1.0	37.0			QL=4 ST=2 TYP=3
13	204 IZMI	42 SER	1108.5	1110.0	2.0	22.0			
14	245 LEAR	8 S	0010.0	0011.0	1.0	110.0			QL=4 ST=2 TYP=3
	245 PALE	8 S	0010.0	0011.0	1.0	160.0			QL=4 ST=2 TYP=3
	200 HIRA	8 S	0010.7	0010.9	0.5	18.0			0
	500 HIRA	8 S	0010.9	0011.0	0.2	14.0			0
	410 LEAR	8 S	0011.0	0011.0	U	28.0			QL=4 ST=2 TYP=3
15	204 IZMI	7 C	1012.0	1012.4	0.5	35.0	17.0		
	204 IZMI	42 SER	1059.2	1107.5	25.0	120.0			
16	235 CUBA	44 NS	1500.0E		410.0D		7.0		
	280 CUBA	44 NS	1500.0E		410.0D		15.0		
17	280 CUBA	44 NS	1350.0E		480.0D		14.0		
	235 CUBA	44 NS	1350.0E		480.0D		5.0		
18	245 SGMR	8 S	1349.0	1349.0	U	88.0			QL=4 ST=2 TYP=3
	245 SVTO	8 S	1349.0	1349.0	U	85.0			QL=4 ST=3 TYP=3

S O L A R R A D I O E M I S S I O N
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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
18	280 CUBA	7 C	1350.0	1352.0	4.0	193.0			
	235 CUBA	7 C	1350.0	1352.0	4.0	105.0			
	245 SGMR	8 S	1352.0	1352.0	U	450.0		QL=4 ST=2 TYP=3	
	245 SVTO	8 S	1352.0	1352.0	U	410.0		QL=4 ST=3 TYP=3	
21	2804 VORO	23 GRF	0344.0	0351.6	46.0	0.5			
22	235 CUBA	44 NS	1300.0E		530.0D		9.0		
	280 CUBA	44 NS	1300.0E		530.0D		18.0		
	2804 VORO	46 C	0200.0	0204.6	9.6	0.7			
	2804 VORO	29 PBI	0209.6		55.0	0.4			
	245 SVTO	8 S	0909.0	0910.0	1.0	120.0		QL=2 ST=3 TYP=3	
23	280 CUBA	44 NS	1300.0E		530.0D		18.0		
	235 CUBA	44 NS	1300.0E		530.0D		8.0		
24	235 CUBA	44 NS	1305.0E		525.0D		8.0		
	280 CUBA	44 NS	1305.0E		525.0D		18.0		
	2804 VORO	2 S/F	0120.8	0121.2	1.4	0.4			
	2840 BEIJ	1 S	0434.0	0439.0	9.0	1.7			
	2800 PENT	4 S/F	1903.0	1904.0	7.0	10.0			
25	280 CUBA	44 NS	1320.0E		510.0D		16.0		
	235 CUBA	44 NS	1320.0E		510.0D		9.0		
26	2840 BEIJ	4 S/F	0552.0	0554.0	28.0	10.4			
27	2840 PURP	2 S/F	0553.0	0554.9	11.0	18.0			
28	2840 BEIJ	4 S/F	0656.0	0700.0	38.0	12.2			
	245 SGMR	8 S	1411.0	1411.0	1.0	150.0		QL=4 ST=2 TYP=3	
	245 SVTO	8 S	1411.0	1411.0	1.0	150.0		QL=4 ST=2 TYP=3	

Reports are received routinely from the following observatories:

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

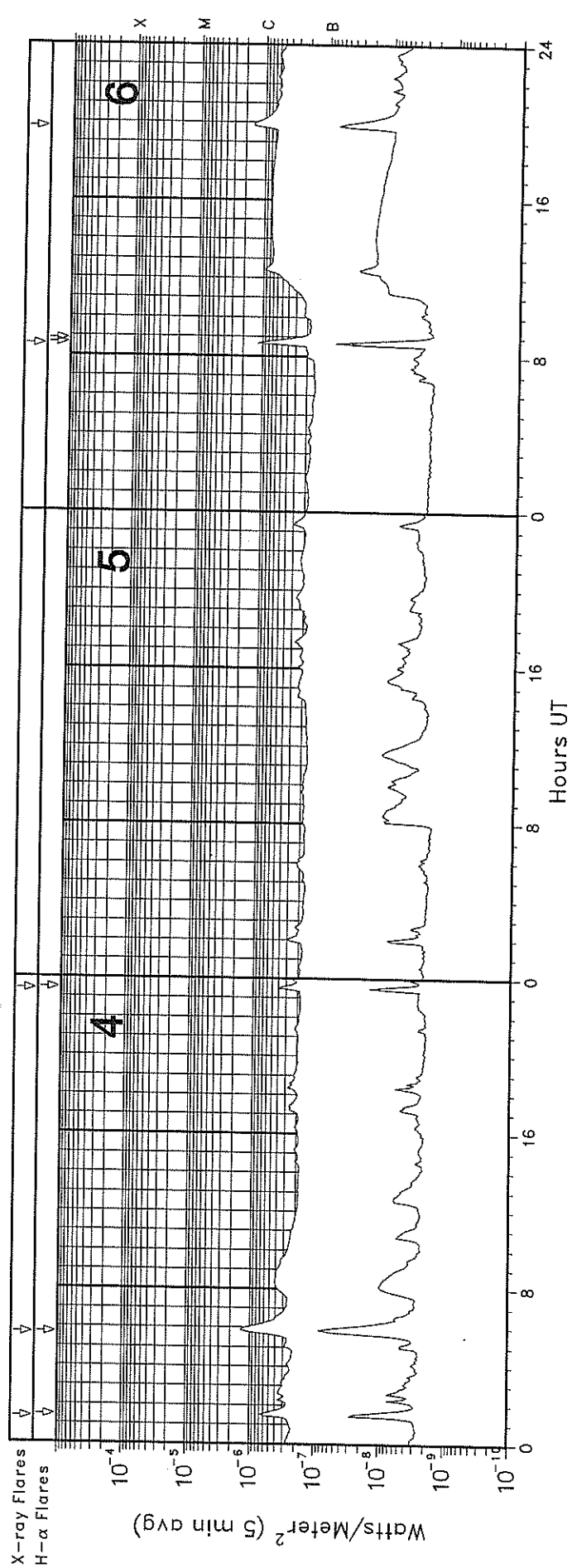
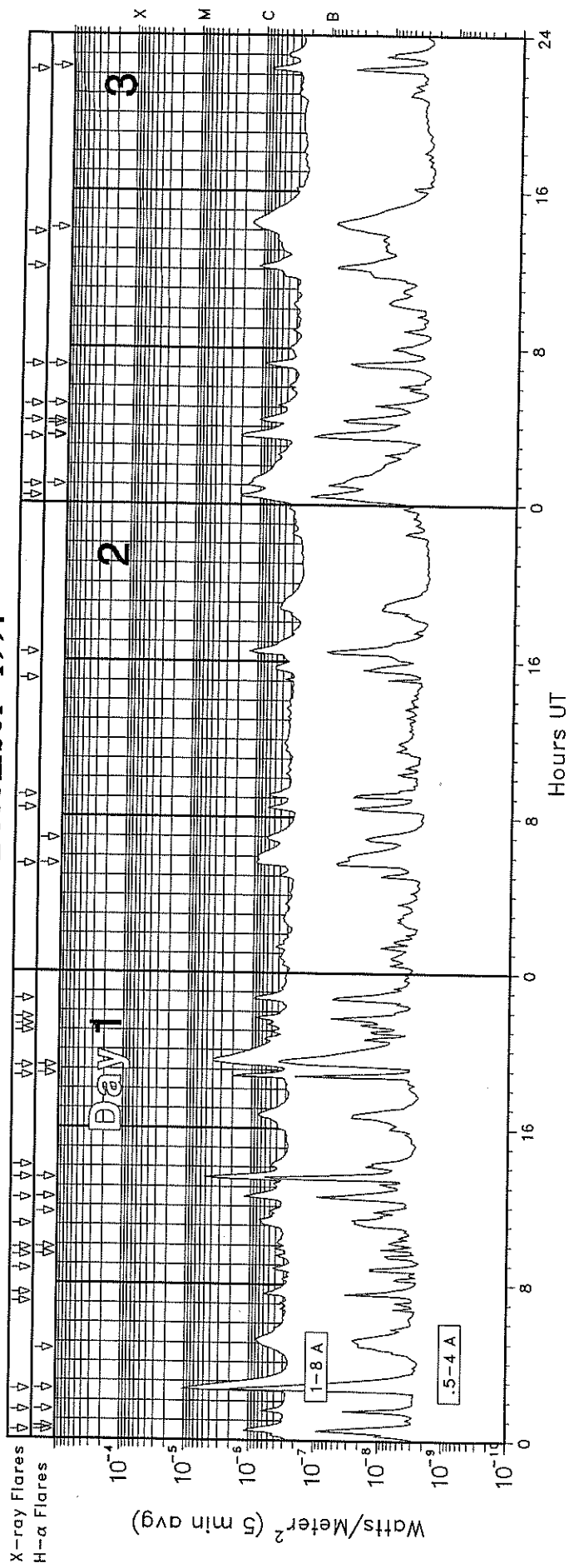
Explanation of Type Code:

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

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

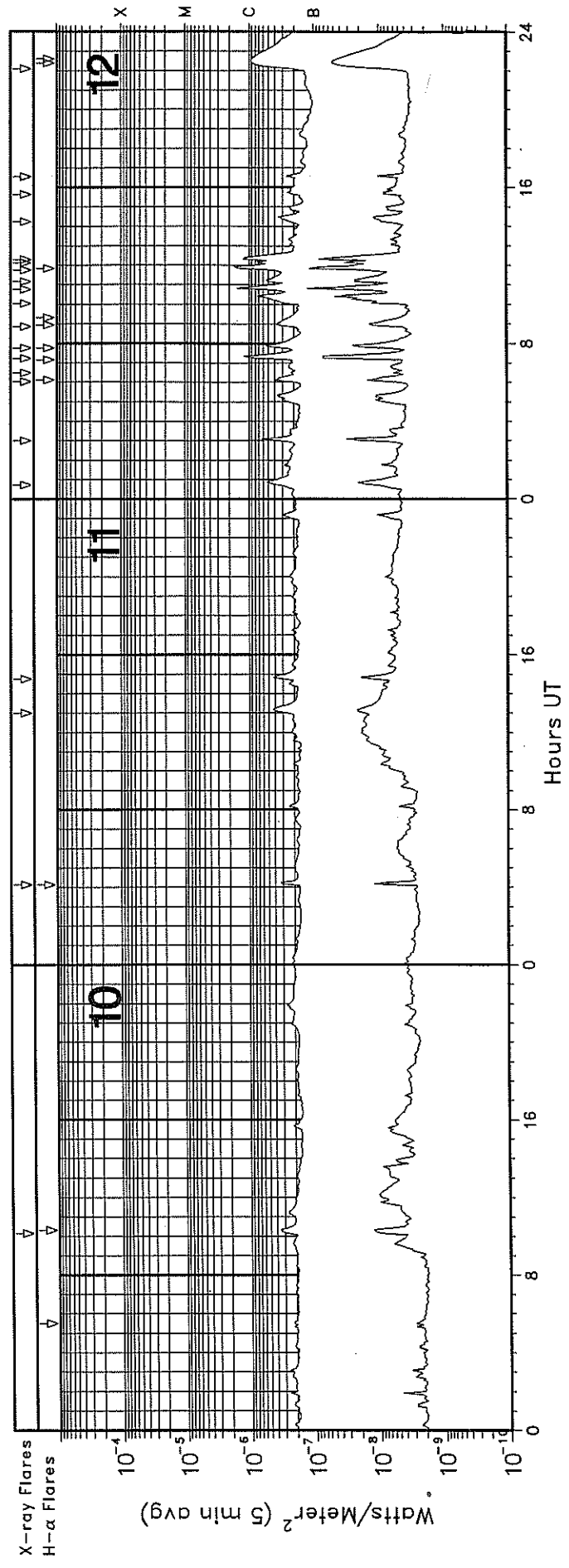
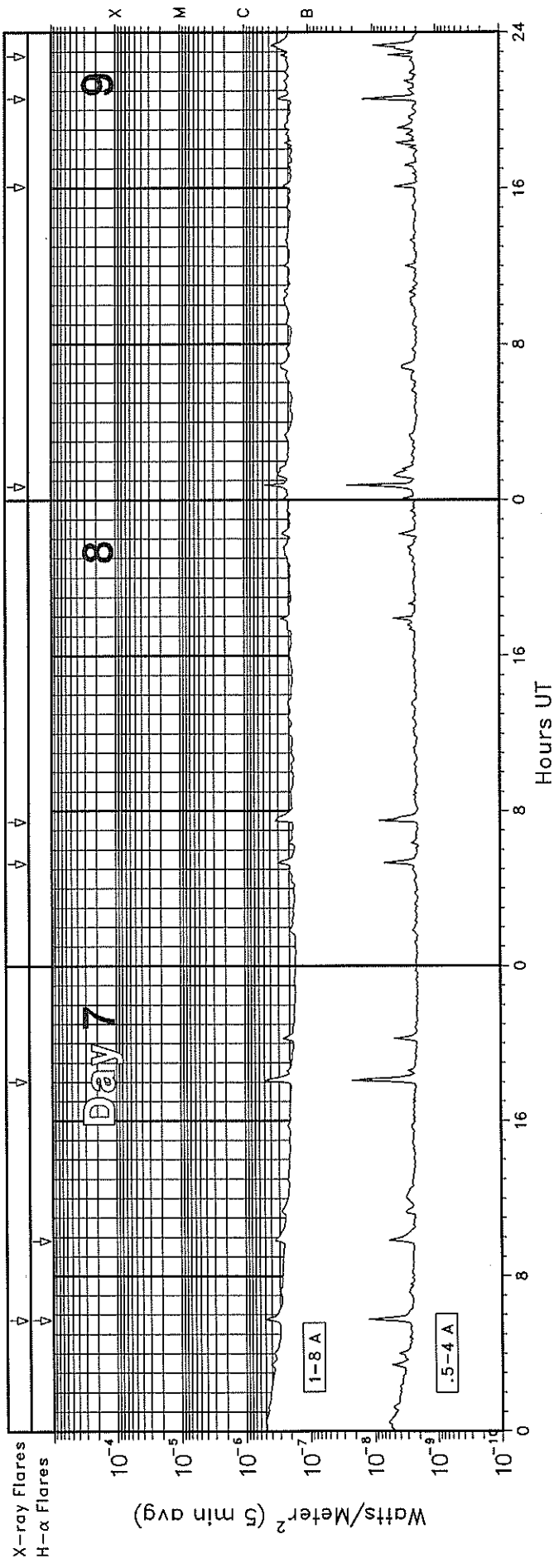
GOES X-RAY DETECTOR

December 1997



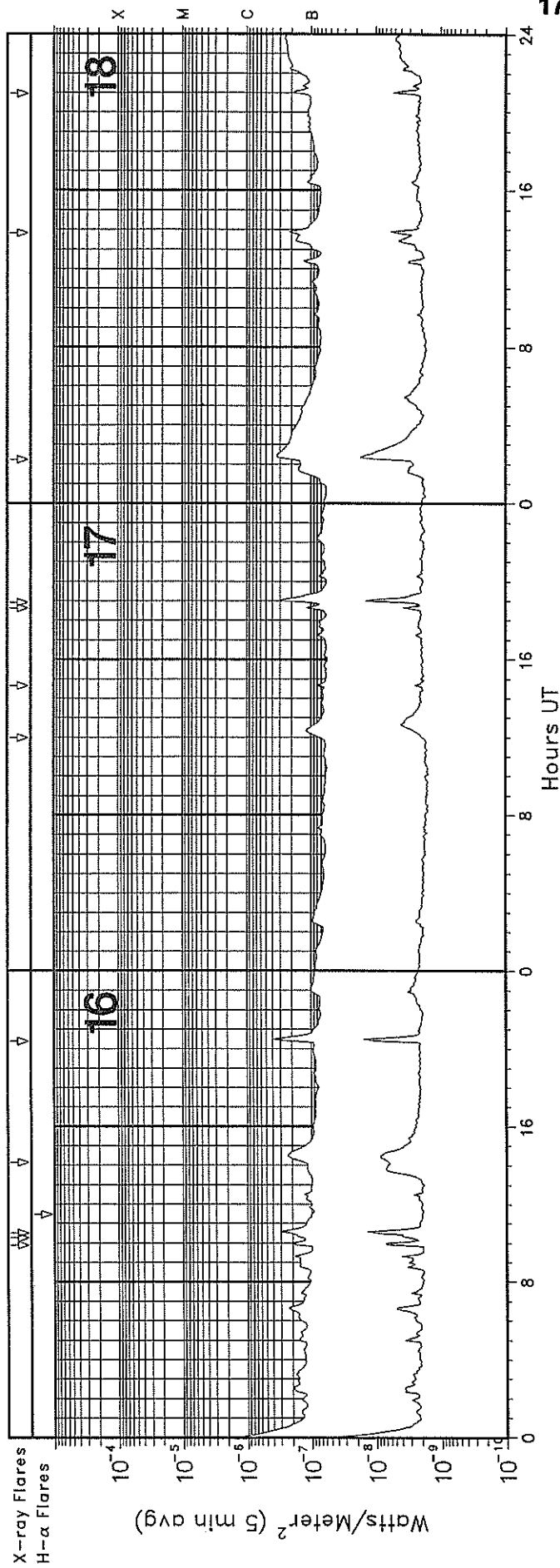
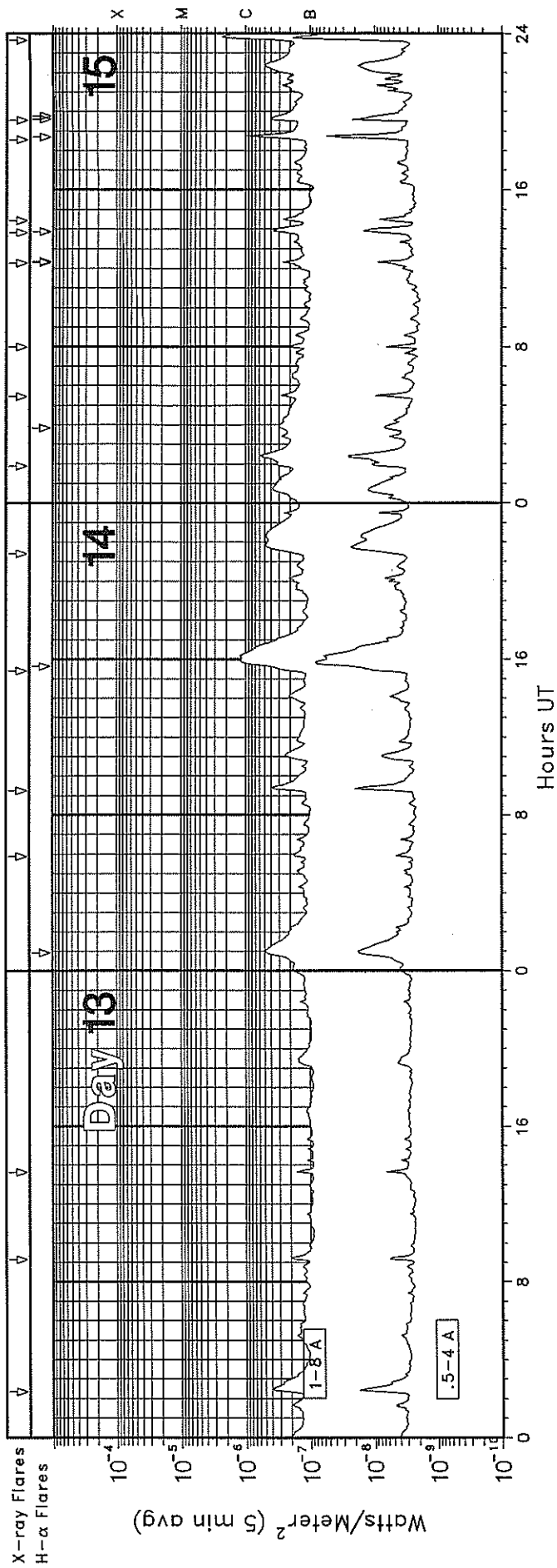
GOES X-RAY DETECTOR

December 1997



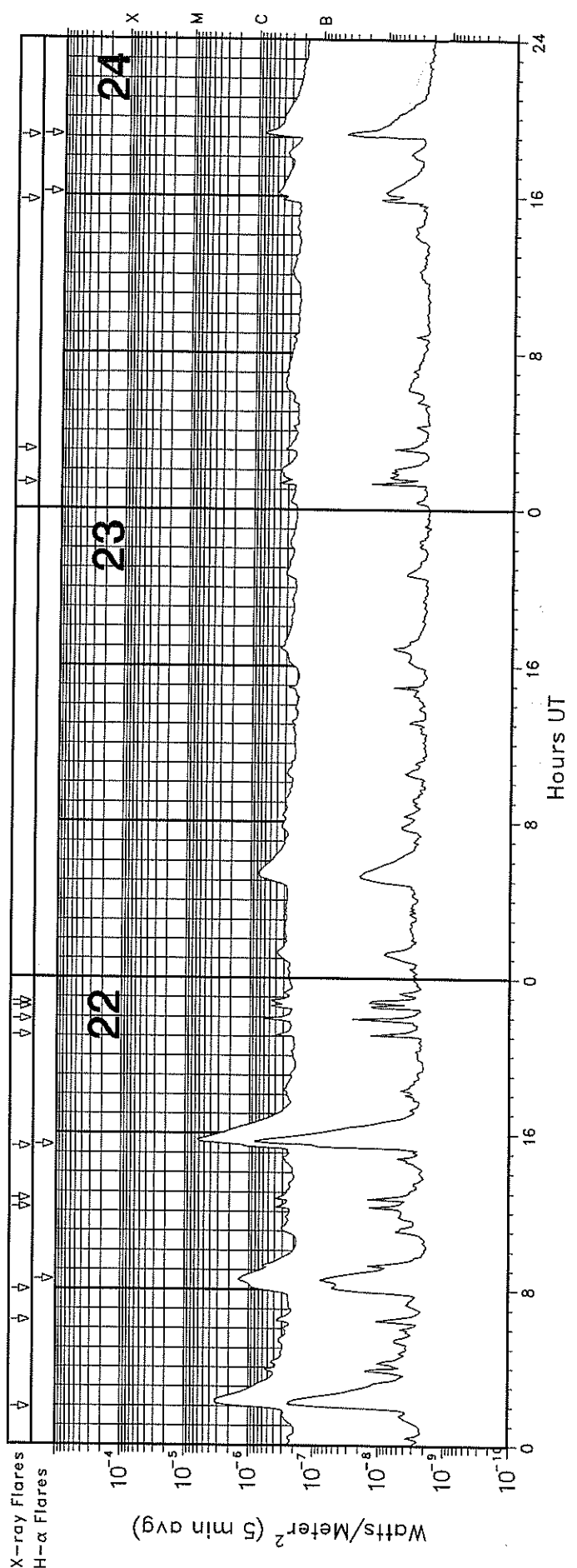
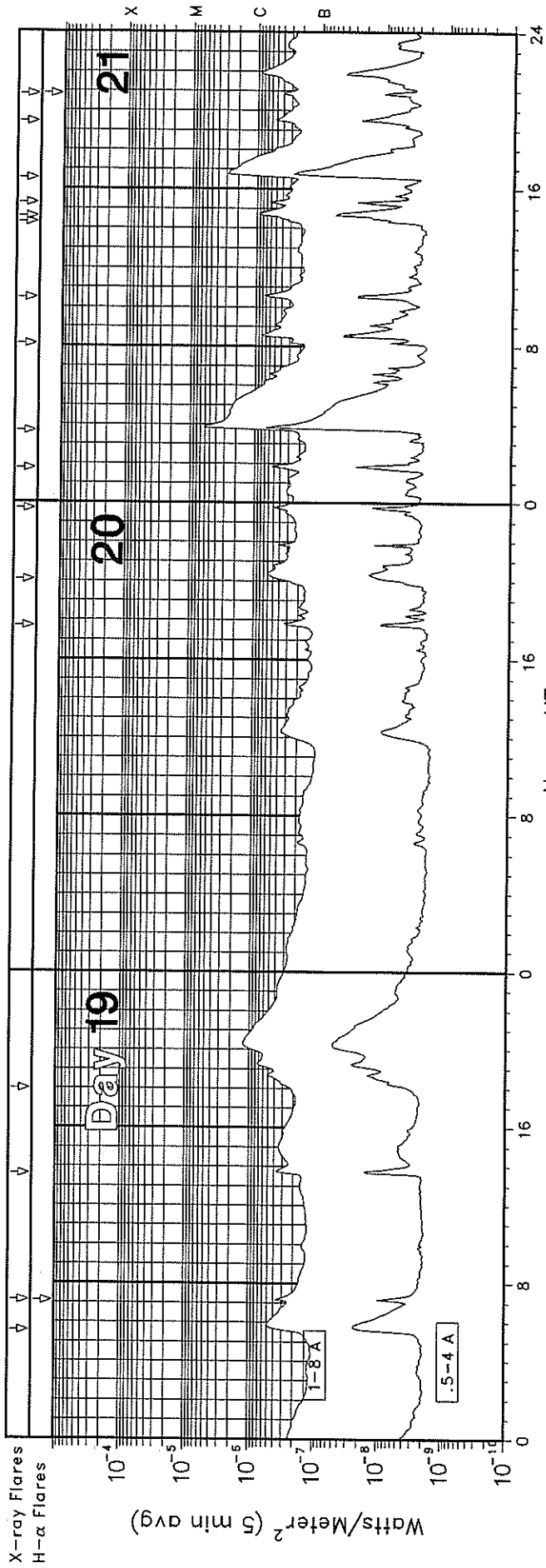
GOES X-RAY DETECTOR

December 1997



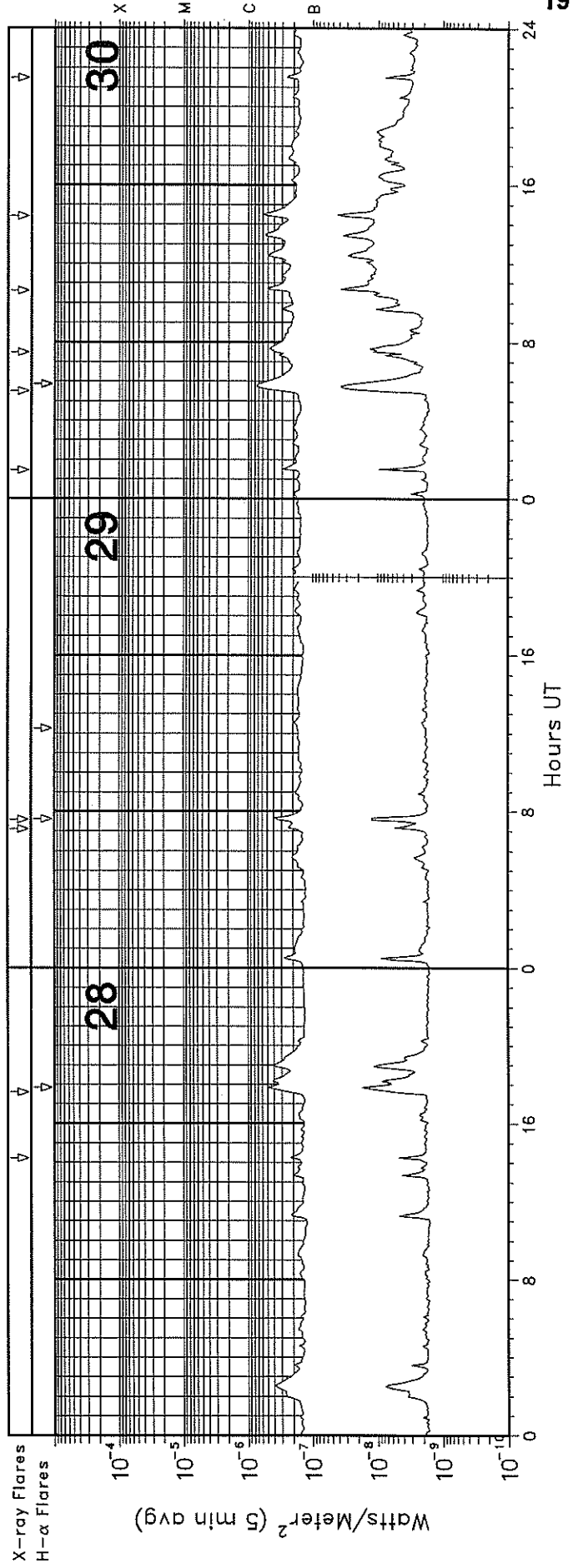
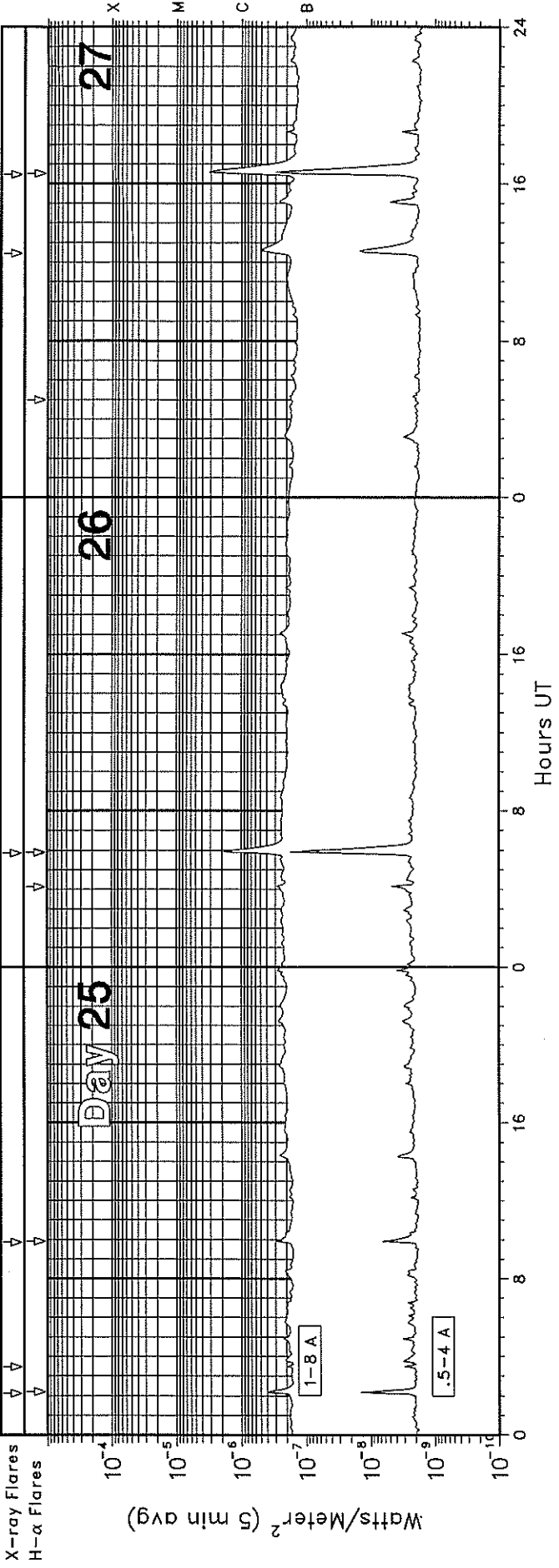
GOES X-RAY DETECTOR

December 1997



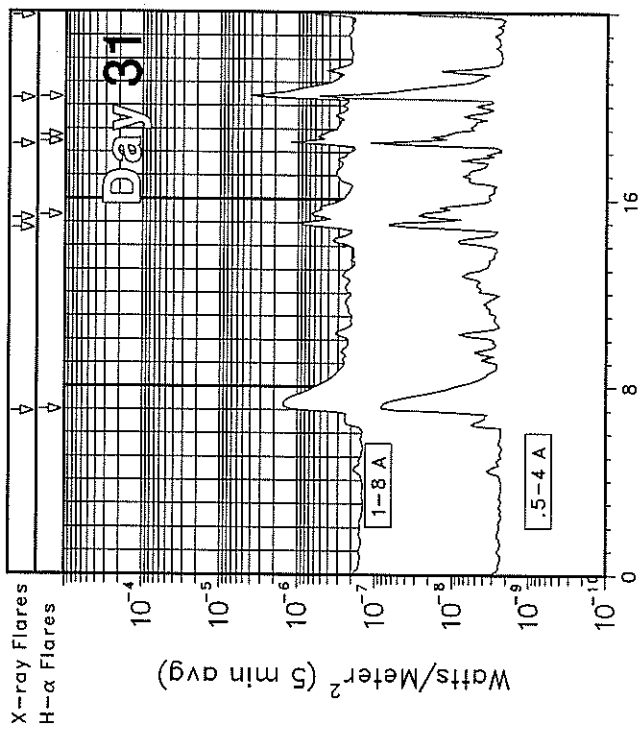
GOES X-RAY DETECTOR

December 1997



GOES X-RAY DETECTOR

December 1997



GOES SOLAR X-RAY FLARES
 Preliminary Listing

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 Dec 97

December 1997

Day (UT)	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
01	0026	0031	0041	N18	E27	SF	C1.1 8113	8.6E-04	
01	0128	0133	0137	N17	E27	SF	B7.2 8113	3.2E-04	
01	0232	0237	0247	N19	E27	1N	M1.2 8113	7.2E-03	
01	0702	0705	0707				B3.4	9.0E-05	
01	0728	0732	0738				B7.0	3.4E-04	
01	0844	0850	0856				B4.7	2.9E-04	
01	0926	0930	0933	N19	E18	SF	B4.7 8113	1.7E-04	
01	0949	0953	0956	N18	E17	SF	B4.6 8113	1.7E-04	
01	1100	1120	1126				B7.5	9.1E-04	
01	1221	1232	1241	N20	E19	SF	C1.3 8113	1.1E-03	
01	1323	1331	1335	N20	E19	SF	C6.6 8113	2.7E-03	
01	1402	1405	1407				B5.7	1.5E-04	
01	1837	1843	1847	N20	E16	SF	C2.4 8113	9.4E-04	
01	1908	1925	1945	N18	E12	1F	C4.3 8113	5.8E-03	
01	2055	2100	2103				B6.4	2.5E-04	
01	2116	2121	2127				B6.0	3.5E-04	
01	2139	2143	2146				C1.0	3.8E-04	
01	2235	2241	2252				C1.0	8.1E-04	
02	0533	0539	0619	N19	E08	SF	B9.5 8113	2.3E-03	
02	0824	0832	0839				B6.6	4.9E-04	
02	0904	0908	0917				B6.9	4.5E-04	
02	1503	1506	1508				B4.3	1.1E-04	
02	1622	1632	1642				C1.3	1.2E-03	
03	0021	0029	0036				C2.2	1.5E-03	
03	0056	0103	0123	N19	W02	SF	C1.6 8113	2.2E-03	
03	0323	0335	0346	N19	W03	SF	C2.1 8113	2.1E-03	
03	0413	0422	0432	N19	W04		C1.0 8113	9.9E-04	
03	0503	0507	0510	N19	W04	SF	B5.9 8113	2.3E-04	
03	0704	0716	0720	N19	W06	SF	C1.0 8113	7.2E-04	
03	1203	1213	1220				C1.1	1.0E-03	
03	1349	1424	1444	N19	W10	SF	C1.5 8113	3.8E-03	
03	2211	2219	2227	N22	W10	SF	B8.6 8113	7.0E-04	
04	0121	0129	0141	N20	W15	SF	B7.1 8113	6.6E-04	
04	0541	0554	0606	N21	W17	SF	C1.4 8113	1.7E-03	
04	2325	2332	2338	N22	W25	SF	B4.1 8113	2.6E-04	
06	0834	0842	0850				C1.2	8.0E-04	
06	1944	1952	2006				C1.5	1.8E-03	
07	0543	0547	0551				B5.4	2.3E-04	
07	1802	1808	1814				B5.3	3.1E-04	
08	0518	0521	0527				B3.1	1.5E-04	
08	0727	0733	0745				B3.8	3.2E-04	
09	0042	0046	0048				B7.9	1.6E-04	
09	1605	1608	1612				B2.3	9.0E-05	
09	2036	2039	2041				B4.7	1.0E-04	
09	2248	2251	2253				B3.0	7.9E-05	
10	1010	1014	1026				B4.1 8115	3.2E-04	
11	0409	0414	0418				B4.5	1.8E-04	
11	1301	1312	1323				B4.4	5.0E-04	
11	1445	1452	1459				B4.3	3.1E-04	
12	0044	0054	0100				B5.2	4.4E-04	
12	0301	0305	0308				B8.0	2.4E-04	
12	0602	0608	0618	N32	W05	SF	B4.3 8122	3.3E-04	
12	0630	0633	0635				B2.3	5.9E-05	
12	0714	0719	0725	N36	W39	SF	C1.4 8119	6.4E-04	

Day (UT)	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
12	0747	0755	0800				B6.2	3.5E-04	
12	0853	0901	0916	N30	W08	SF	B3.8 8122	4.5E-04	
12	1003	1028	1033				B8.8	8.6E-04	
12	1046	1052	1056				C1.8	6.7E-04	
12	1110	1114	1119				B6.8	2.9E-04	
12	1145	1154	1159				C2.3	1.1E-03	
12	1208	1212	1215				B8.0	3.0E-04	
12	1218	1225	1229				C1.3	7.4E-04	
12	1415	1419	1422				B3.0	1.1E-04	
12	1539	1545	1602				B2.6	3.1E-04	
12	1634	1638	1641				B3.3	1.1E-04	
12	2205	2232	2305	N25	W52	SF	B9.4 8116	2.6E-03	
13	0220	0230	0245				B4.0	5.0E-04	
13	0909	0914	0919				B2.3	1.1E-04	
13	1338	1342	1346				B1.8	7.2E-05	
14	0553	0559	0609				B1.8	1.6E-04	
14	0916	0925	0935				B4.2	3.7E-04	
14	1523	1611	1639	N29	W41	SF	C1.2 8122	3.8E-03	
14	2125	2144	2235				B4.4	1.7E-03	
15	0153	0225	0236				B6.2	1.1E-03	
15	0527	0531	0535				B2.9	1.2E-04	
15	0759	0803	0806				B2.5	8.5E-05	
15	1216	1221	1225	N17	E53	SF	B2.7 8123	1.2E-04	
15	1350	1359	1405	N17	E53	SF	B3.8 8123	2.9E-04	
15	1426	1430	1437				B2.7	1.5E-04	
15	1834	1846	1850	N16	E50	SF	C1.1 8123	5.1E-04	
15	1933	1938	1950	N17	E49	SF	B4.8 8123	3.7E-04	
15	2339	2350	0004				C2.4	2.3E-03	
16	0953	1000	1006				B2.3	1.4E-04	
16	1016	1025	1030				B1.8	1.4E-04	
16	1030	1035	1042				B3.3	1.9E-04	
16	1408	1431	1452				B2.4	5.1E-04	
16	2023	2030	2036				B4.6	2.3E-04	
17	1158	1217	1243				B1.1	2.7E-04	
17	1439	1442	1444				B1.0	2.5E-05	
17	1838	1841	1843				B1.4	3.5E-05	
17	1856	1904	1909				B3.7	1.9E-04	
18	0214	0225	0255				B3.4	7.1E-04	
18	1350	1355	1359				B2.3	1.1E-04	
18	2057	2107	2111				B1.8	1.4E-04	
19	0534	0554	0630				B5.1	1.4E-03	
19	0707	0710	0715	N18	E02	SF	B3.9 8123	1.6E-04	
19	1338	1346	1401				B3.7	4.3E-04	
19	1800	0011	2153				C1.1		
20	1743	1749	1756				B3.6	2.2E-04	
20	2005	2024	2039				B5.6	9.6E-04	
20	2341	2346	2350				B5.3	2.5E-04	
21	0145	0153	0157				B5.9	3.3E-04	
21	0341	0354	0407				C7.0	6.1E-03	
21	0808	0835	0851				B8.5	1.2E-03	
21	1029	1035	1041				B8.0	4.7E-04	
21	1418	1426	1429				B3.4	2.0E-04	
21	1436	1445	1453				B9.7	8.0E-04	
21	1518	1521	1523				B7.8	2.0E-04	
21	1634	1645	1724				C2.9	5.8E-03	

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GOES SOLAR X-RAY FLARES
Preliminary Listing

December 1997

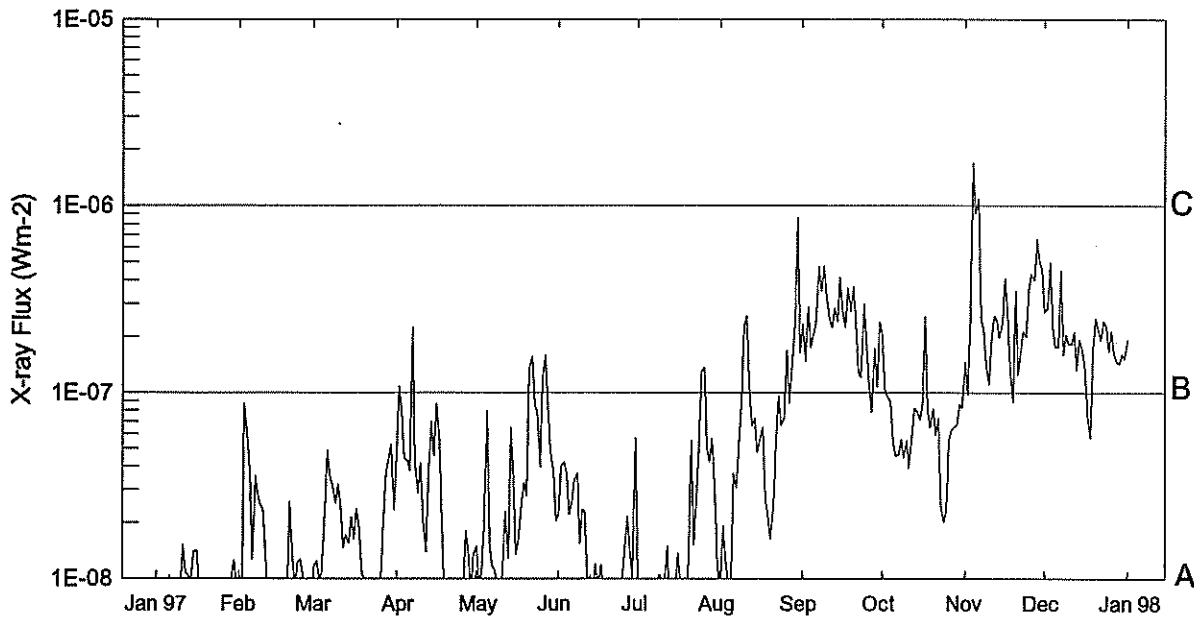
Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
21	1926	1932	1943				B5.6	8124	4.7E-04
21	2050	2055	2057	S21	W63	SF	B4.8	8124	1.8E-04
22	0155	0220	0238				C3.3		6.2E-03
22	0622	0627	0636				B3.8		2.9E-04
22	0757	0831	0852	S24	E64	SF	C1.4	8124	3.5E-03
22	1212	1217	1222				B4.0		2.1E-04
22	1238	1243	1247				B4.3		2.0E-04
22	1517	1541	1558	S24	E58	SF	C6.5	8124	9.2E-03
22	2102	2108	2112				B4.2		2.0E-04
22	2151	2156	2200				B7.1		2.7E-04
22	2229	2235	2240				B5.3		2.7E-04
22	2245	2249	2254				B5.6		2.4E-04
24	0119	0122	0125				B5.2		1.5E-04
24	0302	0306	0315				B3.0		2.1E-04
24	1545	1550	1601	S22	E25	SF	B4.3	8124	3.5E-04
24	1903	1915	1929	N24	E72	SF	B8.0	8126	9.7E-04
25	0207	0212	0217	S22	E23	SF	B4.7	8124	2.1E-04
25	0327	0330	0332				B2.3		5.8E-05
25	0952	0956	1001	S22	E18	SF	B3.2	8124	1.4E-04
26	0551	0557	0604	S22	E07	SF	C2.0	8124	1.1E-03

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp Xray	NOAA/ USAF Region	Flux
27	1228	1238	1253				B4.9		6.2E-04
27	1628	1638	1646	S23	W06	1F	C3.2	8124	2.3E-03
28	1413	1417	1421				B2.3		1.0E-04
28	1736	1752	1802	S22	W25	SF	B5.0	8124	5.7E-04
29	0707	0713	0728				B2.4		2.8E-04
29	0736	0740	0743				B4.4		1.6E-04
30	0127	0131	0138				B3.4		1.8E-04
30	0530	0548	0604				B7.5		1.2E-03
30	0729	0743	0754				B4.9		6.4E-04
30	1037	1045	1054				B5.3		4.5E-04
30	1424	1432	1439				B6.1		4.7E-04
30	2129	2134	2137				B2.6		1.1E-04
31	0655	0718	0747	N18	W12	SF	C1.5	8126	3.7E-03
31	1445	1500	1507				C1.0		9.0E-04
31	1512	1527	1535	N18	W19	SF	B7.0	8126	7.7E-04
31	1819	1826	1832	S21	W63	SF	C1.3	8124	6.6E-04
31	2018	2027	2033	S22	W64	SF	C4.5	8124	2.4E-03
31	2352	2358	0007				B7.2		4.9E-04

*****EDITOR'S NOTE: Only GOES X-ray times now appear in this table, beginning with the July 1997 data. These data are from the NOAA Space Environment Center on-line archives (see <http://www.sec.noaa.gov>).

Preliminary GOES Satellite Daily X-Ray Background Jan 97 - Dec 97

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Dec 97



Day	Jan 97	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	<A1.0	A1.1	A4.6	A1.4	A2.2	<A1.0	<A1.0	B2.3	B2.0	B1.4	B1.4	B2.7
2	<A1.0	A1.2	B1.0	<A1.0	A4.0	<A1.0	A1.9	B1.4	B1.0	A9.7	A9.7	B2.8
3	A8.7	<A1.0	A7.9	A1.0	A4.2	<A1.0	A1.3	B2.8	A9.4	B2.6	B2.6	B4.9
4	A5.9	A1.0	A4.3	A1.8	A3.6	<A1.0	<A1.0	B1.7	A8.9	C1.6	C1.6	B2.2
5	A3.8	A2.3	A4.3	A7.9	A2.2	<A1.0	<A1.0	B2.0	A5.3	B9.1	B9.1	B1.7
6	A1.2	A4.9	A3.8	A1.5	A2.5	<A1.0	A3.6	B2.3	A4.5	C1.0	C1.0	B1.7
7	A3.5	A3.4	B2.2	A1.1	A3.3	<A1.0	A3.0	B4.7	A4.6	B2.4	B2.4	B4.4
8	A2.7	A3.2	A4.1	A1.1	A3.6	<A1.0	A5.2	B3.5	A5.5	B2.2	B2.2	B1.5
9	A2.4	A2.5	A2.8	<A1.0	A1.5	A1.0	A8.8	B4.8	A4.4	B1.4	B1.4	B2.0
10	A2.3	A3.2	A4.1	<A1.0	A2.3	A1.0	B2.3	B3.3	A5.5	B1.1	B1.1	B1.8
11	A1.1	A2.4	A2.0	A1.1	A2.2	<A1.0	B2.5	B2.4	A3.9	B2.0	B2.0	B1.8
12	<A1.0	A1.4	A1.4	A2.2	<A1.0	A1.4	A9.5	B2.2	A5.8	B2.5	B2.5	B2.1
13	<A1.0	A1.7	A3.2	A1.2	A1.0	<A1.0	A6.6	B2.8	A8.2	B2.4	B2.4	B1.3
14	<A1.0	A1.5	A6.9	A6.4	<A1.0	<A1.0	A7.2	B2.4	A7.9	B1.9	B1.9	B1.9
15	<A1.0	A2.1	A4.5	A3.3	A1.2	<A1.0	A4.7	B4.1	A7.1	B2.3	B2.3	B1.6
16	<A1.0	A1.6	A8.6	A1.3	<A1.0	A1.3	A5.7	B2.6	A8.6	B4.1	B4.1	B1.3
17	<A1.0	A2.3	A5.5	A1.5	A1.1	<A1.0	A6.5	B2.2	B2.5	B2.6	B2.6	A7.5
18	<A1.0	A1.9	A1.9	A2.5	<A1.0	<A1.0	A2.7	B3.6	A8.0	B1.3	B1.3	A5.7
19	<A1.0	A1.0	<A1.0	A3.2	<A1.0	A1.0	A2.1	B2.7	A6.5	A8.9	A8.9	B1.7
20	A2.5	A1.0	<A1.0	A2.7	<A1.0	<A1.0	A1.6	B3.7	A8.1	B3.5	B3.5	B2.4
21	A1.2	<A1.0	<A1.0	B1.3	<A1.0	A5.5	A2.4	B2.3	A5.8	B1.2	B1.2	B2.2
22	<A1.0	<A1.0	<A1.0	B1.5	<A1.0	A1.5	A5.5	B1.2	A7.2	B1.7	B1.7	B1.9
23	A1.2	<A1.0	<A1.0	A8.5	<A1.0	A2.6	A9.5	B1.2	A2.4	B2.1	B2.1	B2.4
24	A1.2	<A1.0	<A1.0	A7.8	<A1.0	A5.0	A6.6	B2.9	A2.0	B2.0	B2.0	B2.2
25	A1.0	<A1.0	<A1.0	A3.9	<A1.0	B1.2	A7.2	B1.7	A2.3	B3.6	B3.6	B1.6
26	<A1.0	<A1.0	<A1.0	B1.1	A1.4	B1.3	B1.6	B1.0	A5.5	B4.3	B4.3	B2.1
27	<A1.0	A2.0	A1.8	B1.5	A2.1	A5.0	A8.7	A7.8	A6.3	B3.9	B3.9	B1.6
28	<A1.0	A3.7	A1.4	A8.4	A1.4	A4.2	B1.4	B1.7	A6.5	B6.6	B6.6	B1.4
29		A4.3	<A1.0	A4.8	A1.0	A5.6	B2.3	B1.0	A6.7	B5.0	B5.0	B1.4
30		A5.2	A1.3	A3.6	A5.7	A2.7	B8.6	B2.4	A8.6	B4.6	B4.6	B1.6
31		A2.3		A2.0		A1.1	B1.6		A8.2			B1.5

ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	DSD	1340	1418D	N22	E06	12	2.0		02	9	9	E	RAMY	8113	
01	ADF	1624E	2131	N22	E17	12	3.0	1	05	9	9	E	RAMY	8113	
01	DSD	2104E	2131	N21	E07	12	2.4		03	9	9	E	RAMY	8113	
02	ADF	1341E	2118	N20	E06	12	3.0	1	04	9	9	E	RAMY	8113	
02	DSD	1353E	2118	N28	W04	12	2.3		02	9	9	E	RAMY	8113	
03	ADF	0212E	0956	N35	E07	12	3.6	1	32	9	9	E	LEAR		
03	DSF	0324	0506	S26	E09	12	3.8	3	05	0	0	E	LEAR		
03	DSF	0611	0711	S46	E25	12	5.3	3	12	0	0	E	LEAR		
03	AFS	1337E	2132	S30	E09	12	4.3		01	6	7	E	RAMY	8114	
03	ADF	1513E	2203	N45	E23	12	5.5	1	22	3	5	E	HOLL		
03	ADF	1736E	2132	N45	E27	12	6.0		25	6	6	E	RAMY		
04	BSD	0523	0526	N24	W22	12	2.5		02	9	9	E	LEAR	8113	
04	ASR	0756E	1407	N37	E90	12	11.6			9	9	E	SVTO		
04	AFS	1115E	1410D	N18	W23	12	2.7		03	4	7	E	RAMY	8113	
04	DSD	1434	1455D	N23	W28	12	2.4		04	7	9	E	RAMY	8113	
04	DSD	1807	1814	N19	W25	12	2.8		01	0	0	E	RAMY	8113	
05	AFS	0115E	0924	N34	W04	12	4.7		02	9	9	E	LEAR		
05	ADF	0115E	0924	N49	E26	12	7.2	1	38	6	7	E	LEAR		
05	AFS	0230E	1025	N34	W15	12	3.9		02	9	9	E	LEAR	8115	
05	AFS	1426E	2207	N34	W12	12	4.6		01	5	6	E	HOLL	8115	
05	DSD	1605E	2010	N25	E45	12	9.1		01	9	9	E	RAMY	8116	
05	AFS	1615E	2214	N24	E46	12	9.2		01	9	9	E	HOLL	8116	
05	ADF	1640E	2335	N27	W36	12	2.9	1	05	4	4	E	HOLL	8113	
05	ADF	1703E	2010	N46	E10	12	6.5	1	33	9	9	E	RAMY		
05	AFS	1734E	1945D	N33	W15	12	4.5		01	5	5	E	RAMY	8115	
05	ADF	1800E	2335	N45	E18	12	7.2	1	32	9	9	E	HOLL		
05	DSF	2010U	1105U	N46	E10	12	6.7	2	33	9	9	E	RAMY		
05	AFS	2217E	0230D	N34	W15	12	4.7		02	9	9	E	LEAR	8115	
05	AFS	2217E	1025	N22	W43	12	2.6		01	9	9	E	LEAR	8116	
05	ADF	2250E	1025	S29	W19	12	4.5	1	03	3	4	E	LEAR	8114	
06	AFS	1130E	2050	N25	E34	12	9.1		01	8	7	E	RAMY	8116	
06	ADF	1201E	1558D	N48	W14	12	5.3	1	14	9	9	E	RAMY		
06	DSD	1325E	2019D	N23	W56	12	2.2		04	9	7	E	RAMY	8113	
06	AFS	1510E	2159	N24	E32	12	9.1		01	9	9	E	HOLL	8116	
06	DSF	1527U	1558U	N47	W13	12	5.5	2	14	0	0	E	RAMY		
06	ADF	1530E	2159	N37	W39	12	3.5	1	18	7	9	E	HOLL	8113	
06	AFS	2300E	1021	N22	E29	12	9.2		01	7	7	E	LEAR	8116	
06	ADF	2309E	0857D	N31	W50	12	3.0		06	9	9	E	LEAR	8113	
07	BSD	0115E	0125D	N21	E28	12	9.2		01	0	0	E	LEAR	8116	
07	ADF	0150E	1021	N52	W13	12	6.0		12	5	6	E	LEAR		
07	AFS	0505E	1021	N17	E49	12	10.9		02	7	9	E	LEAR		
07	AFS	1120E	2132	N24	E18	12	8.9		02	9	9	E	RAMY	8116	
07	AFS	1120E	2132	N33	W39	12	4.4		01	9	9	E	RAMY	8115	
07	DSD	1250E	2132	N24	E16	12	8.8		04	9	9	E	RAMY	8116	
07	ADF	1635E	2132	N45	W30	12	5.2	1	32	6	7	E	RAMY		
07	DSD	1907E	2132	S42	E53	12	12.1		04	9	9	E	RAMY		
07	AFS	1956E	2132	S40	E53	12	12.1		01	8	9	E	RAMY		
07	AFS	2020E	2304	N36	W44	12	4.3		01	9	9	E	HOLL	8115	
07	AFS	2023E	2304	N21	E39	12	10.8		01	9	8	E	HOLL	8117	
07	AFS	2026E	2304	N24	E13	12	8.8		01	7	8	E	HOLL	8116	
07	APR	2032E	2304	N32	W90	11	30.7			9	8	E	HOLL		
07	ADF	2045E	2304	N30	W63	12	2.9	1	07	9	9	E	HOLL	8113	
07	ADF	2050E	2304	N56	W71	12	1.7	1	34	7	6	E	HOLL		
08	AFS	0013E	0200D	N18	E38	12	10.9		03	6	7	E	LEAR	8117	
08	AFS	0013E	1016	N23	E14	12	9.1		03	9	9	E	LEAR	8116	
08	AFS	0013E	1016	N37	W42	12	4.6		03	9	9	E	LEAR	8115	
08	ADF	0034E	0200D	N50	W35	12	5.0		38	9	8	E	LEAR		
08	AFS	1442E	2302	N25	E04	12	8.9		02	7	6	E	HOLL	8116	
08	AFS	1442E	2302	N32	E06	12	9.1		01	9	9	E	HOLL	8119	
08	BSD	1513	1532	S40	E40	12	11.9		06	5	8	E	HOLL	8118	
08	DSD	1540	2302	S44	E40	12	12.0		04	9	7	E	HOLL	8118	
08	AFS	1735E	2302	S37	E40	12	11.9		01	9	9	E	HOLL	8118	
08	DSD	1816E	2302	S23	E36	12	11.5		01	9	9	E	HOLL	8120	

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
09	DSD	0135E	0515D	S23	E31	12	11.4		03	9	9	E	LEAR	8120	
09	AFS	0135E	1031	N24	E01	12	9.1		03	9	9	E	LEAR	8116	
09	ASR	0135E	1031	N27	W90	12	2.0			9	9	E	LEAR	8113	
09	AFS	0135E	1031	N30	E02	12	9.2		03	7	9	E	LEAR	8119	
09	AFS	0135E	1031	S43	E32	12	11.7		04	9	8	E	LEAR	8118	
09	AFS	0530E	1031	S25	E30	12	11.5		03	9	5	E	LEAR	8120	
09	ADF	0730E	1031	N28	W48	12	5.6	1	08	6	7	E	LEAR	8115	
09	APR	0730E	1031	N34	W90	12	2.1	1		7	7	E	LEAR		
09	AFS	0735E	1035D	S42	E36	12	12.3		02	9	9	E	SVTO	8118	
09	AFS	0739E	1325	N29	W04	12	9.0		02	9	9	E	SVTO	8119	
09	DSD	1035E	1325	S41	E36	12	12.4		03	9	9	E	SVTO	8118	
09	APR	1135E	1150D	S32	W90	12	2.3	1		9	9	E	SVTO	8114	
09	AFS	1141E	2129	N32	W06	12	9.0		01	9	9	E	RAMY	8119	
09	AFS	1141E	2129	S40	E31	12	12.0		01	9	9	E	RAMY	8118	
09	EPL	1150	1154	S27	W90	12	2.5	3		9	9	E	SVTO	8114	
09	AFS	1441E	2349	N31	W08	12	9.0		02	8	7	E	HOLL	8119	
09	AFS	1441E	2349	S41	E27	12	11.8		03	9	9	E	HOLL	8118	
09	AFS	1711	2349	N25	W39	12	6.7		02	7	9	E	HOLL	8121	
09	DSD	2127	2219	N27	W39	12	6.8		03	9	9	E	HOLL	8121	
10	AFS	0133E	1031	N27	W36	12	7.2		02	9	9	E	LEAR	8121	
10	AFS	0133E	1031	N32	W08	12	9.4		02	7	9	E	LEAR	8119	
10	DSD	0212E	1031	N30	W45	12	6.5		02	9	7	E	LEAR	8121	
10	AFS	0227E	1031	N26	W13	12	9.1		03	6	7	E	LEAR	8116	
10	ADF	0230E	1031	N25	W52	12	6.1	1	23	9	9	E	LEAR	8115	
10	APR	0230E	1031	N31	W90	12	3.0	1		9	9	E	LEAR	8115	
10	EPL	1007E	1349D	N48	W90	12	2.8	3		9	9	E	SVTO	8115	
10	APR	1011E	1357	N26	W90	12	3.4	1		9	9	E	SVTO	8115	
10	APR	1013E	1357	N40	W90	12	3.1	1		9	9	E	SVTO	8115	
10	AFS	1027E	1357	N33	W11	12	9.6		02	9	9	E	SVTO	8119	
10	AFS	1031E	1357	N28	W39	12	7.4		02	9	9	E	SVTO	8121	
10	APR	1349E	1357	N48	W90	12	3.0	1		9	9	E	SVTO	8115	
10	AFS	1410E	2332	N26	W48	12	6.9		01	9	8	E	HOLL	8121	
10	AFS	1410E	2332	N32	W21	12	8.9		02	9	9	E	HOLL	8119	
10	AFS	1410E	2059	N24	W48	12	6.9		01	5	7	E	RAMY	8121	
10	APR	1630E	2059	N31	W90	12	3.6	1		9	9	E	RAMY		
10	APR	1638	2332	N31	W90	12	3.6	1		9	9	E	HOLL		
10	AFS	1730E	2059	N29	W20	12	9.2		01	7	6	E	RAMY	8119	
11	AFS	0002E	1034	N31	W52	12	6.9		03	9	9	E	LEAR	8121	
11	AFS	0002E	1034	N33	W22	12	9.2		04	9	9	E	LEAR	8119	
11	APR	0010E	1034	N40	W90	12	3.7		7	6	6	E	LEAR	8115	
11	APR	0413E	1034	S26	W90	12	4.2		9	9	9	E	LEAR	8114	
11	APR	0724E	1455	N32	W90	12	4.2	1		9	9	E	SVTO	8115	
11	AFS	0734E	1455	N29	E01	12	11.4		02	9	9	E	SVTO		
11	AFS	0821E	1034	N30	E03	12	11.6		03	8	8	E	LEAR		
11	DSD	0940E	1034	N27	E03	12	11.6		02	5	9	E	LEAR		
11	AFS	1741E	2349	N29	W06	12	11.3		02	9	9	E	HOLL	8122	
11	ADF	1741E	2349	N34	W19	12	10.2	1	09	6	9	E	HOLL		
11	AFS	2219E	1015	N30	W06	12	11.4		03	7	7	E	LEAR	8122	
11	AFS	2219E	1015	N34	W35	12	9.1		02	5	7	E	LEAR	8119	
12	DSD	0540E	0630D	N34	W07	12	11.7		03	9	9	E	LEAR	8122	
12	ASR	0600E	1015	N30	W90	12	5.2			9	9	E	LEAR		
12	APR	0850E	1000U	S28	W90	12	5.5	1		9	9	V	KHAR		
12	DSD	2010E	2350	N30	W17	12	11.5		03	9	9	E	HOLL	8122	
13	DSD	0001E	0012D	N23	W33	12	10.4		04	0	0	E	LEAR	8117	
13	AFS	0100E	0937	N31	W18	12	11.6		02	7	7	E	LEAR	8122	
13	APR	0440E	0937	N36	W90	12	6.0	1		6	5	E	LEAR		
13	ADF	0530E	0937	S43	W20	12	11.6	1	04	9	7	E	LEAR	8118	
13	AFS	1245E	1500D	N27	W54	12	9.3		01	5	4	E	RAMY	8119	
13	DSD	1430E	1517D	N31	W28	12	11.4		01	5	4	E	RAMY	8122	
13	DSD	1631E	2059D	N28	W35	12	10.9		01	9	9	E	RAMY	8122	
13	AFS	2115E	2350	N31	W32	12	11.4		01	9	9	E	HOLL	8122	
14	AFS	0036E	0939D	N32	W29	12	11.7		02	7	8	E	LEAR	8122	
14	AFS	0924E	1522	N28	W38	12	11.4		03	9	9	E	SVTO	8122	
14	AFS	0948E	1522	N18	E68	12	19.6		02	9	9	E	SVTO		

ACTIVE PROMINENCES AND FILAMENTS

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Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
14	AFS	1216E	2110	N31	W38	12 11.5		01	9	9	E	RAMY	8122	
14	AFS	1445E	2258	N33	W41	12 11.3		02	9	9	E	HOLL	8122	
14	APR	2245E	1013	N30	W90	12 7.9			9	9	E	LEAR	8116	
14	AFS	2249E	1013	N13	E61	12 19.5		01	9	9	E	LEAR	8123	
14	AFS	2255	2258	N13	E61	12 19.5		01	8	7	E	HOLL	8123	
15	AFS	0340E	1013	N33	W44	12 11.6		04	8	8	E	LEAR	8122	
15	ASR	0425E	1013	N36	W73	12 9.3			9	9	E	LEAR	8119	
15	AFS	1030E	1435	N18	E54	12 19.5		01	9	9	E	SVTO	8123	
15	AFS	1147E	2010D	N17	E53	12 19.5		01	7	8	E	RAMY	8123	
15	AFS	1346E	1435	N20	E55	12 19.8		02	9	9	E	SVTO	8123	
15	AFS	1625E	2350	N17	E49	12 19.4		01	8	9	E	HOLL	8123	
15	BSD	1805	1815	N17	E53	12 19.8		01	0	0	E	HOLL	8123	
15	ASR	2238	2350	N26	W90	12 8.9			8	9	E	HOLL	8116	
16	AFS	0204E	1020	N14	E45	12 19.5		03	9	9	E	LEAR	8123	
16	AFS	0204E	1020	N18	E17	12 17.4		04	7	6	E	LEAR		
16	ASR	0235E	1020	N32	W90	12 9.0			9	9	E	LEAR	8119	
16	ADF	0528E	1020	S13	W63	12 11.5	1	08	2	5	E	LEAR	8120	
16	DSD	1203	2000D	N17	E34	12 19.1		02	9	9	E	RAMY	8123	
16	ASR	1203E	1730D	N34	W90	12 9.3			0	0	E	RAMY		
16	AFS	1301	2138	N18	E38	12 19.4		03	6	9	E	RAMY	8123	
16	AFS	1507E	2351	N17	E37	12 19.4		02	7	8	E	HOLL	8123	
16	DSD	2011	2032	S40	W65	12 11.5		09	9	9	E	HOLL	8118	
17	AFS	1450E	2250	N18	E24	12 19.4		02	7	7	E	HOLL	8123	
17	ASR	1623	2352	N31	W90	12 10.6			5	5	E	HOLL	8122	
17	APR	1851	1929	N31	W90	12 10.7	3		9	9	E	HOLL	8122	
17	AFS	2147E	1042	N17	E19	12 19.3		02	4	4	E	LEAR	8123	
18	ASR	0100E	1042	N36	W85	12 11.2			4	4	E	LEAR	8122	
18	AFS	1154E	1714D	N18	E11	12 19.3		02	6	6	E	RAMY	8123	
18	ASR	1208E	2055	N32	W90	12 11.4			6	5	E	RAMY	8122	
18	DSD	1805E	2055	N18	E13	12 19.7		02	9	9	E	RAMY	8123	
19	ASR	0340E	0725D	N35	W90	12 11.9			7	8	E	LEAR		
19	DSD	1348E	2040	N15	W04	12 19.3		05	9	9	E	RAMY	8123	
19	BSD	1357E	1400D	N15	W04	12 19.3		01	9	9	E	RAMY	8123	
19	DSD	1417E	1523	N16	W05	12 19.2		05	6	8	E	HOLL	8123	
19	DSD	1545	1641D	N17	W09	12 19.0		01	9	9	E	RAMY	8123	
19	ASR	1645E	2353	S43	W90	12 12.3			8	8	E	HOLL		
19	ADF	1725E	2353	N17	W04	12 19.4	1	05	9	9	E	HOLL	8123	
19	DSD	1742	2215D	N20	E00	12 19.7		04	7	7	E	HOLL	8123	
20	ASR	0115E	0612D	N38	W90	12 12.8			8	8	E	LEAR		
20	ASR	1319E	2100	S22	E90	12 27.5			6	7	E	RAMY	8124	
20	ADF	2220E	1015D	N20	W21	12 19.3	1	06	7	9	E	LEAR	8123	
20	ASR	2348E	1046	S26	E90	12 28.0			9	9	E	LEAR	8124	
21	DSD	0505E	0523D	N20	W26	12 19.2		02	9	9	E	LEAR	8123	
21	ADF	0745E	1046	N30	E11	12 22.2	1	16	4	6	E	LEAR		
21	DSF	0846U	1015U	N20	W28	12 19.2	2	06	6	8	E	LEAR	8123	
22	ADF	0808E	1430	S23	E58	12 26.8	1	04	9	9	E	SVTO	8124	
22	AFS	0808E	1430	S23	E59	12 26.9		02	9	9	E	SVTO	8124	
22	AFS	1125E	2133	S22	E56	12 26.8		01	6	6	E	RAMY	8124	
22	AFS	1215E	1415D	S01	W10	12 21.8		01	5	5	E	RAMY		
22	ADF	1330E	2133	S24	E49	12 26.3	1	05	9	9	E	RAMY	8124	
22	AFS	2330E	1012D	S26	E64	12 27.9		03	9	9	E	LEAR	8124	
23	DSD	0719E	0853D	S25	E44	12 26.7		02	9	9	E	SVTO	8124	
23	AFS	0740E	1100D	S23	E52	12 27.3		01	9	9	E	SVTO	8124	
23	AFS	1139E	1953	N18	E48	12 27.1		01	4	4	E	RAMY	8125	
23	DSD	1505E	1953	S21	E48	12 27.3		01	9	9	E	RAMY	8124	
24	ADF	1530	2218	S21	E29	12 26.9	1	15	9	9	E	HOLL	8124	
24	DSD	1559	1622	S20	E28	12 26.8		01	9	9	E	RAMY	8124	
24	ADF	1600E	2021	S21	E29	12 26.9	1	15	9	9	E	RAMY	8124	
24	DSD	1611	1618	S21	E29	12 26.9		02	0	0	E	HOLL	8124	Flare Associated
24	BSD	1905	1952	N24	E68	12 30.0		01	9	9	E	RAMY	8126	

ACTIVE PROMINENCES AND FILAMENTS

27
Dec 97

DECEMBER 1997

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
25	ASR	0847E	1226D	N18	W90	12 18.5			9	9	E	SVTO		
25	DSF	1025U	2227U	N34	E14	12 26.5	2	10	0	0	E	LEAR		
25	DSD	1314	1540	S24	E17	12 26.9		01	7	6	E	RAMY	8124	
25	BSD	1348	1512D	N23	E55	12 29.8		02	4	3	E	RAMY	8126	
25	ADF	1513	2048	N26	E73	12 31.3	1	05	8	8	E	RAMY	8126	
25	ASR	2323E	0959D	N22	W90	12 19.0			9	9	E	LEAR	8123	
26	ASR	0726E	1103D	N21	W90	12 19.4			9	9	E	SVTO	8123	
26	DSD	1331	1622D	S20	E02	12 26.7		05	9	9	E	RAMY	8124	
26	APR	2325E	2352D	N35	W90	12 19.8	1		8	5	E	LEAR		
26	EPL	2352E	0116D	N35	W90	12 19.8	3		8	5	E	LEAR		
26	EPL	2354E	2355	N30	W90	12 19.9	3		0	0	E	HOLL		
27	AFS	0334E	0950D	N29	W41	12 23.9		02	9	9	E	LEAR		
27	AFS	1145E	1600D	N18	E35	12 30.1		01	4	5	E	RAMY	8126	
27	AFS	1230E	1600D	S22	W04	12 27.2		01	5	8	E	RAMY	8124	
27	ADF	1420E	2102	S21	W02	12 27.4	1	05	6	7	E	HOLL	8124	
28	ADF	0147E	1000	N20	W13	12 27.1	1	06	9	7	E	LEAR	8125	
28	ADF	0940E	1000	S19	W32	12 26.0	1	11	9	9	E	LEAR	8124	
28	DSD	1406	1606D	S23	W16	12 27.3		02	7	8	E	RAMY	8124	
28	DSD	1406E	1606D	N18	W21	12 27.0		02	9	9	E	RAMY	8125	
28	BSD	1410	1414	N21	E23	12 30.3		02	7	7	E	RAMY	8126	
28	DSD	1414	1659D	N24	E24	12 30.4		02	6	7	E	RAMY	8126	
28	AFS	1420E	2346	S22	W24	12 26.7		02	7	8	E	HOLL	8124	
28	ADF	1701E	2142	S22	W23	12 26.9	1	06	9	9	E	RAMY	8124	
28	ADF	1722	2346	S20	W30	12 26.4	1	09	9	7	E	HOLL	8124	
29	ADF	0745E	1457	S22	W34	12 26.7	1	13	9	9	E	SVTO	8124	
29	ADF	0746E	1457	N15	E05	12 29.7	1	14	9	9	E	SVTO	8126	
29	AFS	1041E	1457	S32	E36	01 1.3		01	9	9	E	SVTO		
29	AFS	1210E	1457	S23	W30	12 27.2		01	9	9	E	SVTO	8124	
29	ADF	1418E	2116	S21	W39	12 26.6	1	10	9	9	E	RAMY	8124	
29	AFS	1607E	2116	S30	E33	01 1.3		01	9	9	E	RAMY	8130	
29	ADF	1610E	2357	S20	W42	12 26.5	1	08	9	9	E	HOLL	8124	
29	AFS	1726E	2116	N26	E39	01 1.7		01	8	7	E	RAMY	8129	
29	AFS	1730E	2357	S30	E31	01 1.2		01	9	9	E	HOLL	8130	
29	DSD	1814E	2116	S30	E34	01 1.4		02	9	9	E	RAMY	8130	
29	ADF	1956E	2116	N48	E51	01 3.1	1	22	9	9	E	RAMY		
29	AFS	2010E	2357	N25	E39	01 1.9		01	6	7	E	HOLL	8129	
29	DSF	2054U	2033U	S47	E33	01 1.6	2	05	0	0	E	HOLL		
30	ADF	0200E	1028	S20	W42	12 26.9		05	9	9	E	LEAR	8124	
30	DSD	0337E	1028	S32	E27	01 1.3		03	9	9	E	LEAR	8130	
30	AFS	0458E	1028	S30	E24	01 1.1		03	9	9	E	LEAR	8130	
30	AFS	0705E	1327	S32	E23	01 1.1		03	9	9	E	SVTO	8130	
30	ADF	0840E	1327	S22	W44	12 27.0	1	05	9	9	E	SVTO	8124	
30	DSD	1110E	1327	S23	W47	12 26.8		01	9	9	E	SVTO	8124	
30	DSD	1130E	1327	S30	E21	01 1.1		03	9	9	E	SVTO	8130	
30	AFS	1140E	2029	S29	E20	01 1.0		01	9	9	E	RAMY	8130	
30	ADF	2257E	1027	N17	W60	12 26.4		05	6	7	E	LEAR	8124	
30	AFS	2257E	1027	S30	E12	12 31.9		02	7	7	E	LEAR	8130	
31	DSD	1124E	1315D	N20	W15	12 30.3		02	4	6	E	RAMY	8126	
31	AFS	1140E	2109	S29	E07	01 1.0		01	9	9	E	RAMY	8130	
31	DSD	1956E	2109	N20	W22	12 30.1		01	9	9	E	RAMY	8126	

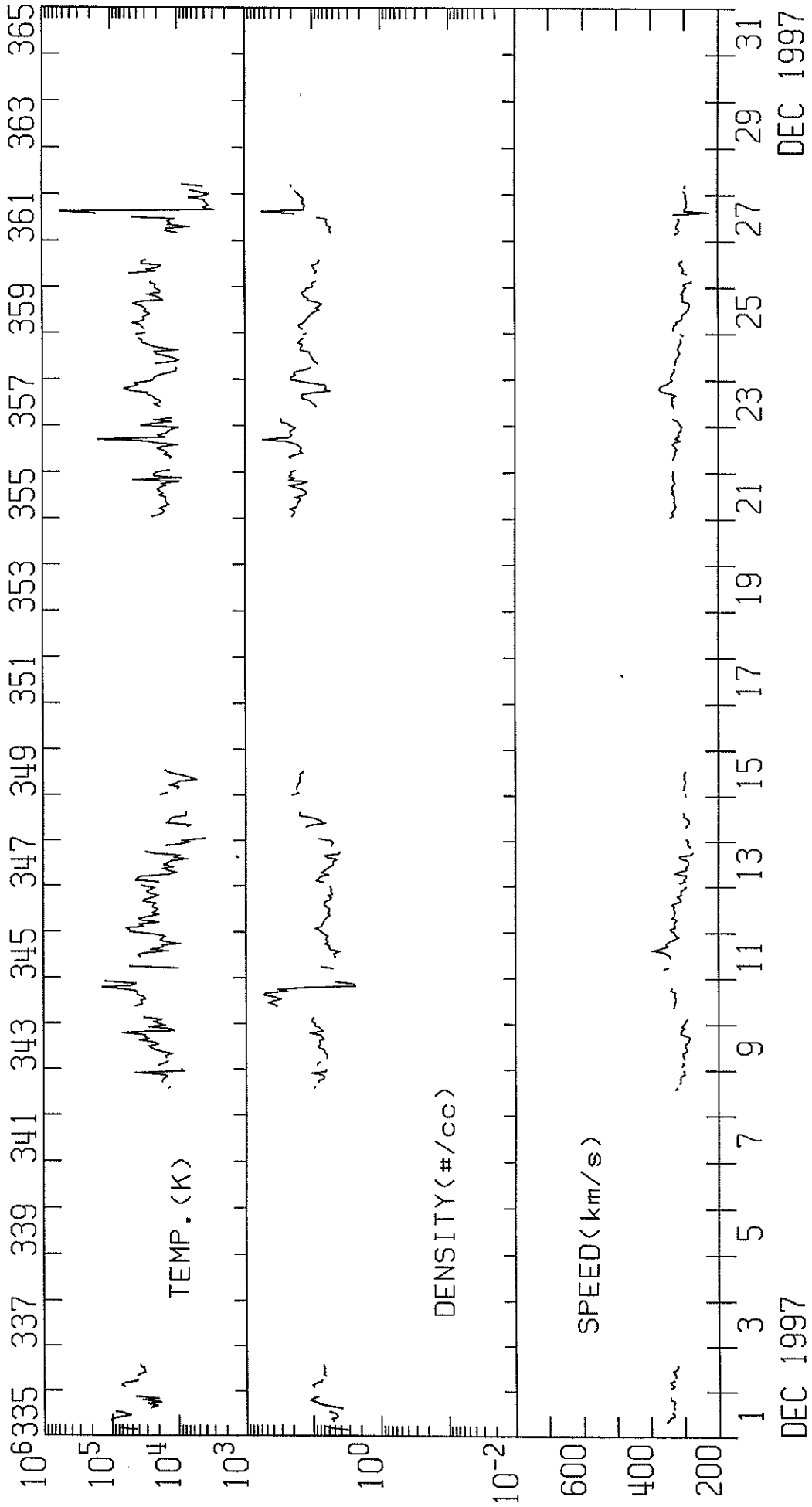
1997 DAILY MEAN SOLAR IRRADIANCE
UARS (ACRIM-II) - 1997 Update

Units=W/m²

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.12	1365.19	1365.39	1365.36	1365.68	1365.58	1365.60	1365.58	1365.58	1366.11	1365.93	1365.37
2	1365.04	1365.19	1365.36	1365.37	1365.61	1365.59	1365.60	1365.60	1365.80	1366.16	1365.91	1365.35
3	1365.11	1365.04		1365.43	1365.54	1365.56	1365.65	1365.65	1366.19	1366.07	1365.44	1365.37
4	1365.14	1365.14		1365.61	1365.61	1365.51	1365.55	1365.55	1366.03	1365.98	1365.51	1365.56
5	1365.08	1365.32		1365.58	1365.61	1365.53	1365.60	1365.60	1365.88	1366.22	1365.58	1365.65
6	1365.05	1365.31		1365.59	1365.62	1365.67	1365.55	1365.51	1365.68	1366.20	1365.80	1365.89
7	1365.03	1365.42		1365.44	1365.64	1365.70	1365.56	1365.60	1365.52	1366.25	1365.83	1365.78
8	1365.20	1365.40			1365.58	1365.70	1365.58	1365.51	1365.30	1366.30	1365.94	1365.79
9	1365.12	1365.44		1365.39	1365.60	1365.61	1365.58	1365.58	1365.10	1366.20	1365.93	1365.62
10	1365.25	1365.36		1365.26	1365.54	1365.59	1365.55	1365.55	1365.06	1366.31	1365.80	1365.55
11	1365.19	1365.44		1365.33	1365.59	1365.64	1365.59	1365.64	1365.24	1366.14	1365.72	1365.60
12	1365.21	1365.42		1365.45	1365.60	1365.70	1365.60	1365.58	1365.30	1366.18	1365.70	1365.54
13	1365.21	1365.39			1365.46	1365.61	1365.51	1365.69	1365.47	1366.14	1365.72	1365.67
14	1365.24	1365.24		1365.30	1365.64	1365.60	1365.52	1365.80	1365.68	1366.06	1365.75	1365.64
15	1365.18	1365.23		1365.28	1365.64	1365.70	1365.59	1365.75	1365.73	1366.01	1365.71	1365.70
16	1365.09	1365.16		1365.21	1365.45	1365.60	1365.59	1365.68		1365.98	1365.64	1365.61
17	1365.16	1365.23	1365.48		1365.71	1365.60	1365.73	1365.73	1365.78	1366.00	1365.52	1365.61
18	1365.17	1365.26	1365.41	1365.32	1365.65	1365.72	1365.70	1365.71	1365.81	1366.05	1365.41	1365.64
19	1365.16	1365.19	1365.19	1365.30	1365.56	1365.78	1365.65	1365.71	1365.76	1365.92	1365.41	1365.59
20	1364.94	1365.08		1365.25	1365.55	1365.62	1365.71	1365.74	1365.83		1365.41	1365.82
21	1365.18	1365.16			1365.45	1365.65	1365.79	1365.76	1365.83		1365.36	1365.88
22	1365.11	1365.23			1365.58	1365.62	1365.76	1365.78	1366.05		1365.30	1365.88
23	1365.00	1365.24			1365.67	1365.54	1365.73	1365.73	1365.87		1365.65	1365.69
24	1365.17	1365.29	1365.34	1365.30	1365.71	1365.64	1365.79	1365.74	1365.81		1365.75	1365.72
25	1365.08	1365.27			1365.74	1365.58	1365.78	1365.90			1365.85	1365.72
26	1364.92	1365.32			1365.74	1365.67	1365.93	1365.94	1365.80		1365.71	1365.73
27	1365.10	1365.35			1365.68	1365.69	1365.88	1365.85	1365.88	1366.09		1365.77
28	1365.10	1365.30			1365.71	1365.72	1365.82	1365.76	1365.97	1366.06	1365.69	1365.76
29	1365.05	1365.13	1365.34	1365.34	1365.77	1365.69	1365.82	1365.63	1366.04	1366.03	1365.48	1365.84
30	1365.16		1365.34	1365.34	1365.81	1365.57	1365.88	1365.57	1366.07		1365.49	1365.84
31	1365.20		1365.36	1365.36		1365.73	1365.50	1365.50		1365.95	1365.49	1365.92

IMP 8 SOLAR WIND PLASMA
DECEMBER 1997

MIT/CSR IMP 8 PLASMA PARAMETERS

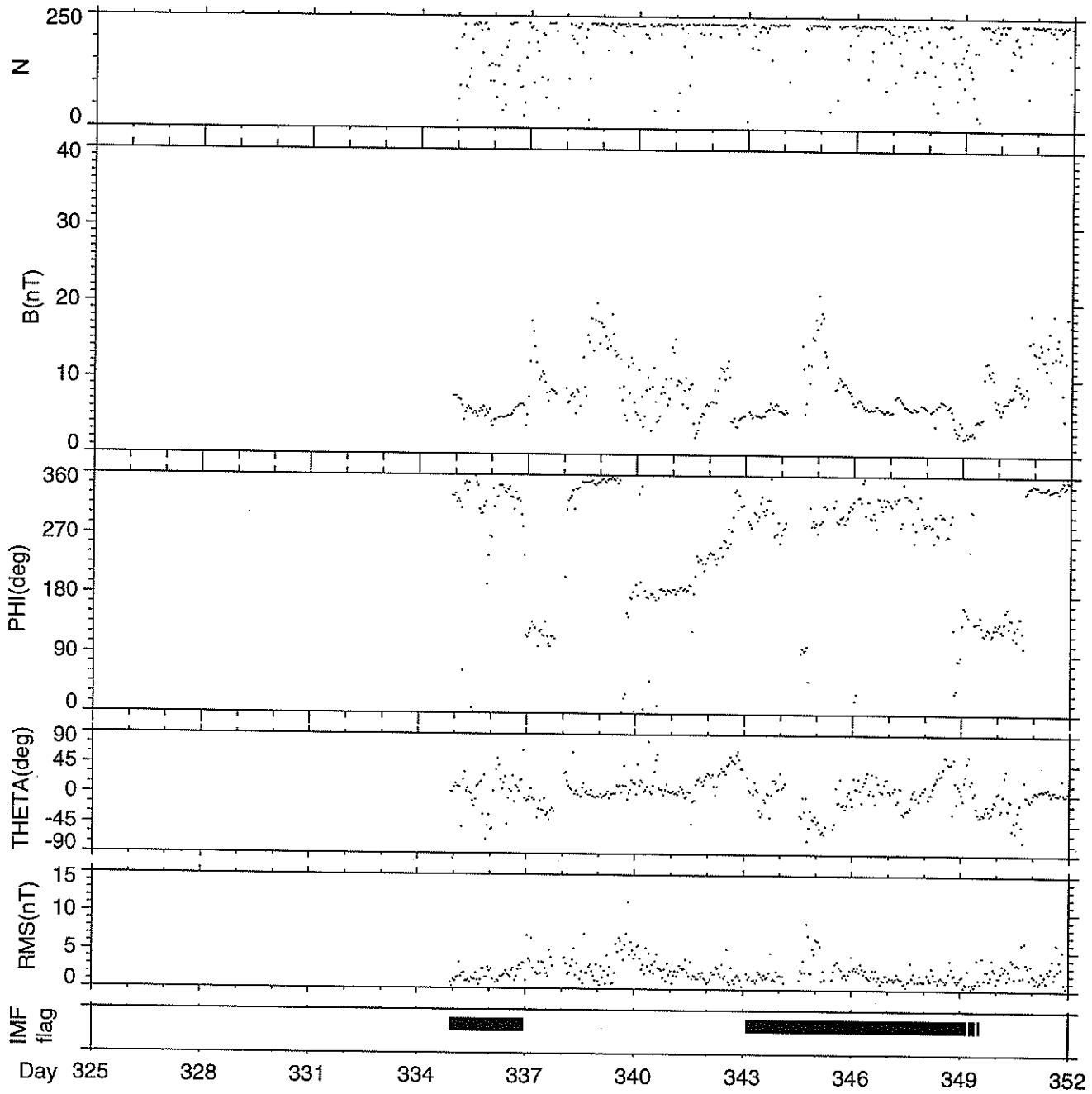


IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 334 - 352

November 30 1997 - December 18 1997



Generation Date : Mon Mar 2 17:21:35 1998

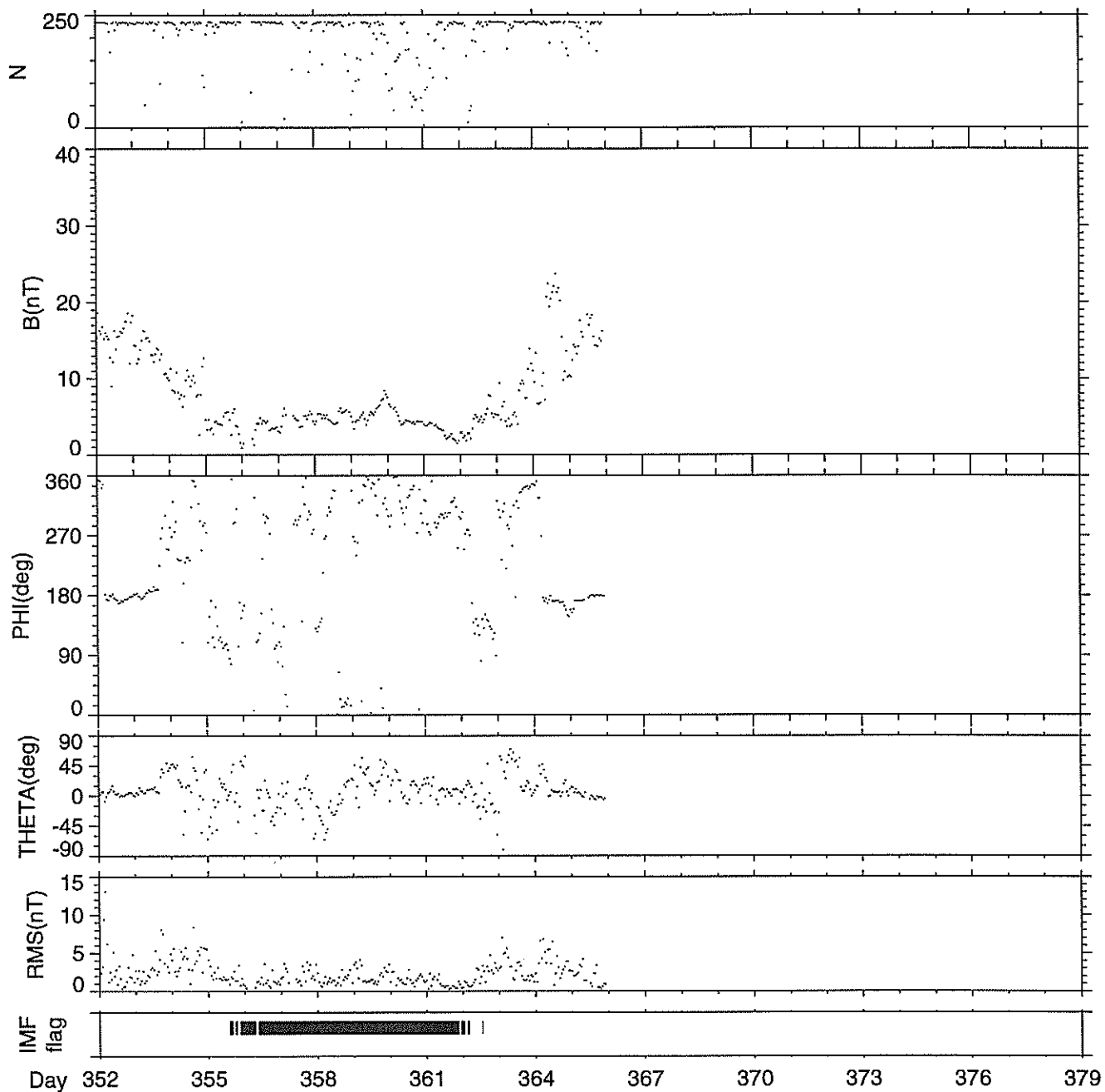
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 352 - 365

December 18 1997 - December 31 1997



Generation Date : Mon Mar 2 17:21:38 1998

NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.



WORLD DATA CENTER A

FOR

SOLAR-TERRESTRIAL PHYSICS



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."