

**U.S. DEPARTMENT OF COMMERCE**

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**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

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**NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE**

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JUNE 1997 NUMBER 634 - Part II

# **Solar-Geophysical Data comprehensive reports**

Data for December 1996

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**NATIONAL GEOPHYSICAL DATA CENTER**

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# SOLAR-GEOPHYSICAL DATA

Number 634

(Issued in Two Parts)

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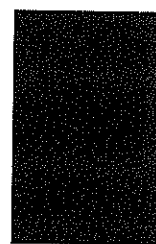
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H $\alpha$  SOLAR FLARES

DECEMBER 1996

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks		
																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)			
0001	KANZ	01	0943	0943	0951	S03	W65	7999	11	26.6	8	SF		2	C						
			01 1027		1256	No Flare Patrol															
0002	HOLL	01	1639	1639	1645	S05	W77	7999	11	26.0	6	SF		3	E					12	
0003	RAMY	01	2021	2023	2045	S05	W75	7999	11	26.3	24	SF C	1.6	3	E					22	
0004		01	2049	2052	2126	S04	W74	7999	11	26.4	37	SN C	5.2							78	F
	HOLL	01	2049	2052	2126	S05	W74	7999	11	26.4	37	SF C	5.2	3	E					68	F
	RAMY	01	2052E	2052U	2105D	S04	W74	7999	11	26.4	13D	SN		3	E					88	
0005	LEAR	02	0842	0843	0850	S06	W77	7999	11	26.7	8	SF B	7.4	3	E					16	
0006	LEAR	02	0858	0900	0902	S06	W77	7999	11	26.7	4	SF		3	E					12	
0007	LEAR	02	0905	0905	0908	S06	W78	7999	11	26.6	3	SF		3	E					14	
			02 1034		1104	No Flare Patrol															
			02 1351		1401	No Flare Patrol															
0008		02	1423	14258	1453	S05	W89	7999	11	26.0	30	SF C	2.7							111	
	HOLL	02	1423	1425	1504	S04	W86	7999	11	26.3	41	SF		3	E					86	
	RAMY	02	1423	1433	1442	S05	W90	7999	11	26.0	19	1F C	2.7	3	E					168	
	SVTO	02	1424E	1429U	1438D	S05	W90	7999	11	26.0	14D	SF		2	E					78	
0009		02	1736	1740	1806	S05	W90	7999	11	26.1	30	SN C	1.6							80	
	RAMY	02	1735E	1736U	1741D	S05	W90	7999	11	26.1	6D	SN		3	E					83	
	HOLL	02	1736	1740	1806	S05	W90	7999	11	26.1	30	SF C	1.6	3	E					77	
0010	LEAR	02	2348	2354	2359	S04	W89	7999	11	26.4	11	1F C	1.2	3	E					123	
			07 1342		1436	No Flare Patrol															
0011	LEAR	09	0920	0921	0924	S31	E04	8003	12	9.7	4	SF		3	E					10	
0012	LEAR	09	0947	0947	0955	S31	E04	8003	12	9.7	8	SF		3	E					15	F
			09 1039		1054	No Flare Patrol															
			09 1056		1101	No Flare Patrol															
0013	RAMY	09	1348	1351	1354	S30	E05	8003	12	10.0	6	SF		3	E					20	
0014	RAMY	09	1709	1716	1727	S30	W01	8003	12	9.6	18	SF B	8.1	3	E					31	
0015	LEAR	10	0933	0933	0935	S29	W12	8003	12	9.4	2	SF		3	E					17	H
			10 1043		1101	No Flare Patrol															
0016	RAMY	10	1430	1431	1437	S29	W14	8003	12	9.5	7	SF B	1.3	3	E					17	
			10 2040		2152	No Flare Patrol															
0017	LEAR	11	0358	0400	0410	S28	W20	8003	12	9.6	12	SF B	1.4	3	E					20	F
0018	LEAR	11	0519	0526	0537	S28	W21	8003	12	9.6	18	SF		3	E					12	
			11 1406		2150	No Flare Patrol															
0019	LEAR	12	0021	0022	0029	S27	W37	8003	12	9.1	8	SF		3	E					13	
0020	LEAR	12	0032	0035	0108	S27	W36	8003	12	9.2	36	SF		3	E					21	F
0021	LEAR	12	0149	0155	0157	S26	W37	8003	12	9.2	8	SF		3	E					21	F
0022	LEAR	12	0322	0322	0326	S28	W33	8003	12	9.6	4	SF		3	E					19	
0023	LEAR	12	0327	0337	0343	S26	W38	8003	12	9.2	16	SF		3	E					33	F

H $\alpha$  SOLAR FLARES

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Dec 96

DECEMBER 1996

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks	
																Apparent (10-6 Disk)	Corr (Sq Deg)		
0024	LEAR	12	0355	0357	0400	S26	W38	8003	12	9.2	5	SF	3	E		16		F	
0025	LEAR	12	0429	0433	0440	S28	W36	8003	12	9.4	11	SF	3	E		44		F	
0026	LEAR	12	0645	0648	0658	S28	W34	8003	12	9.6	13	SN B	6.1	3	E		82		F
0027		12	12574	13005	1316	S30	W39	8003	12	9.5	19	SF B	7.6				49		
	RAMY	12	1257	1300	1309D	S30	W39	8003	12	9.5	12D	SF	3	E			50		
	SVTO	12	1257	1303	1316	S31	W40	8003	12	9.4	19	SF B	7.6	3	E			48	
	KANZ	12	1301	1305	1317	S30	W38	8003	12	9.5	16	SN		2	C				
		12	1800		1824	No Flare Patrol													
		12	1904		2017	No Flare Patrol													
		12	2137		2145	No Flare Patrol													
		13	0016		0104	No Flare Patrol													
		13	0304		0329	No Flare Patrol													
0028	LEAR	13	0551	0554	0557	S27	W51	8003	12	9.3	6	SF B	4.3	3	E		40		
0029	SVTO	13	1330	1331	1338	S28	W54	8003	12	9.3	8	SF B	1.4	3	E		27		
0030	RAMY	13	1340E	1340U	1404D	S28	W54	8003	12	9.3	24D	SF		2	E		18		
		13	1350		1410	No Flare Patrol													
0031	RAMY	13	1932	1935	1938	S30	W54	8003	12	9.6	6	SF		3	E		18		
		13	2048		2121	No Flare Patrol													
		13	2130		2154	No Flare Patrol													
0032	LEAR	14	0320	0321	0324	S27	W61	8003	12	9.4	4	SF B	1.6	3	E		32		
0033	LEAR	14	0440	0440	0444	N04	E44	8004	12	17.5	4	SF		3	E		14		
0034	LEAR	14	0447	0449	0457	N04	E44	8004	12	17.5	10	SF		3	E		11		
0035	LEAR	14	0620	0620	0623	S27	W63	8003	12	9.3	3	SF		3	E		22		
		14	1043		1110	No Flare Patrol													
		14	1901		1907	No Flare Patrol													
		14	2139		2159	No Flare Patrol													
		15	1416		1457	No Flare Patrol													
		15	1803		2133	No Flare Patrol													
		16	0226		0259	No Flare Patrol													
0036		16	0755	0756	0812	S13	E34	8005	12	18.9	17	SF B	3.7				24		F
	LEAR	16	0755	0756	0812	S13	E35	8005	12	19.0	17	SF B	3.7	3	E		24		F
	KANZ	16	0756E	0756U	0812	S13	E34	8005	12	18.9	16D	SF		2	C				
		17	2138		2224	No Flare Patrol													
		17	2302		2400	No Flare Patrol													
		18	0000		0017	No Flare Patrol													
		18	0044		0106	No Flare Patrol													
		18	0319		0927	No Flare Patrol													
		18	1031		1101	No Flare Patrol													
0037	HOLL	18	1525	1526	1529	N04	W18	8004	12	17.3	4	SF		3	E		51		
0038		19	01214	01214	0142	S13	W01	8005	12	19.0	21	SF B	5.8				16		
	LEAR	19	0121	0121	0122D	S12	W02	8005	12	18.9	1D	SF		3	E		22		
	PALE	19	0125	0125	0142	S14	E00	8005	12	19.0	17	SF B	5.8	3	E		11		
		19	1038		1116	No Flare Patrol													
		19	1520		1527	No Flare Patrol													
0039	HOLL	19	1528E	1550	1719	S13	W10	8005	12	18.9	11D	1F		3	E		105		FU
0040	RAMY	19	1538	1610	1745	S14	W09	8005	12	19.0	127	1F C	2.3	3	E		142		FU

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H $\alpha$  SOLAR FLARES

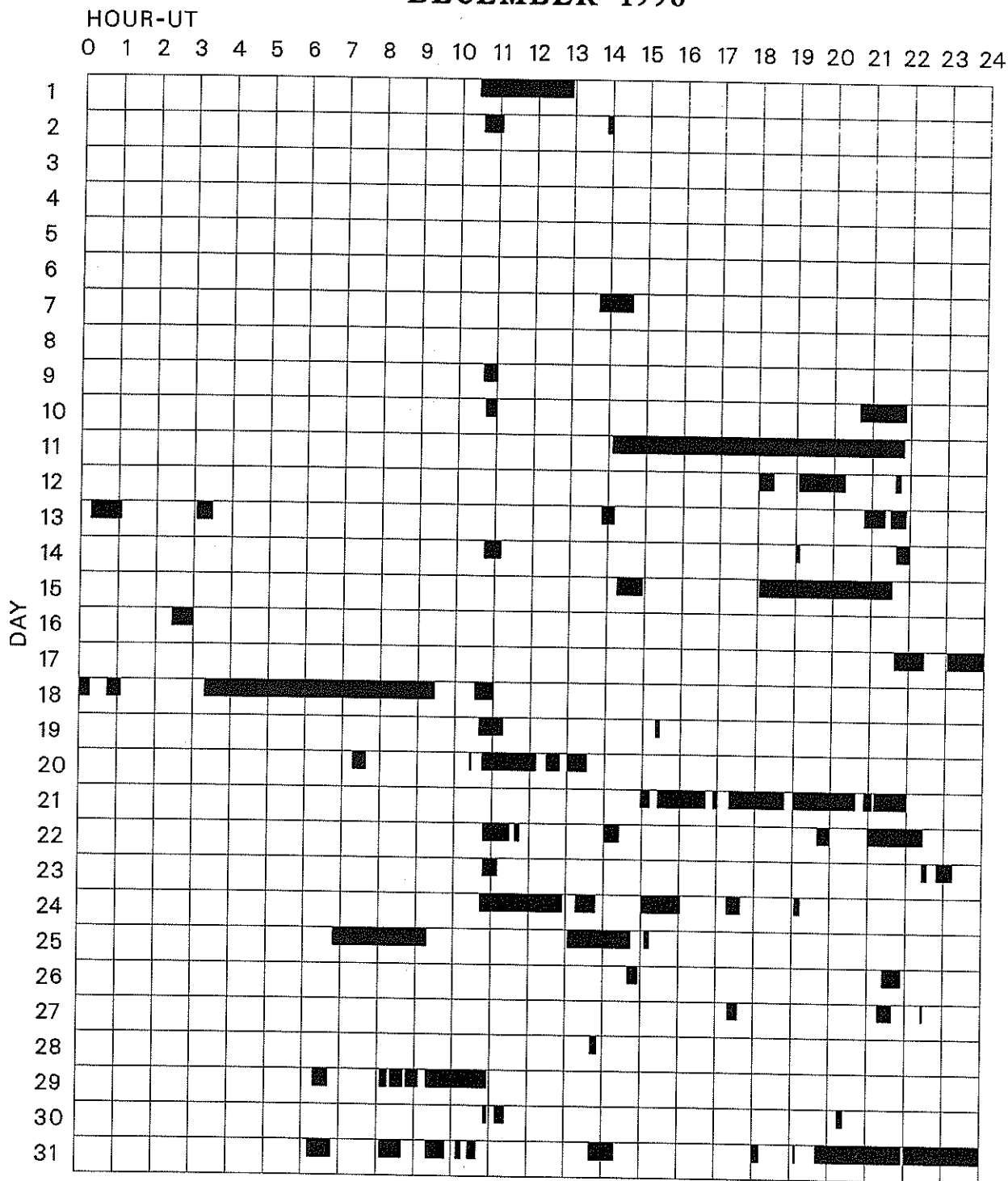
DECEMBER 1996

Grp #	Sta	Start Day (UT)	Max (UT)	End (UT)	NOAA/			Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks
					Lat	CMD Region	Mo Day						Time (UT)	Apparent (10-6 Disk)	
0041	LEAR	19 2237	2239	2241	N07 W30	8004	12 17.7	4	SF		3	E	22		
		20 0717		0738	No Flare Patrol										
		20 1024		1026	No Flare Patrol										
		20 1044		1210	No Flare Patrol										
		20 1227		1248	No Flare Patrol										
		20 1300		1331	No Flare Patrol										
0042	RAMY	20 1624	1626	1634	N00 W47	8004	12 17.2	10	SF B	2.9	3	E	21		F
0043		21 0725	0726	0734	S04 E28	8008	12 23.4	9	SF B	1.8			24		F
	SVTO	21 0725	0729U	0735	S03 E28	8008	12 23.4	10	SF		3	E	21		F
	LEAR	21 0726	0726	0734	S04 E28	8008	12 23.4	8	SF B	1.8	4	E	26		F
		21 1458		1512	No Flare Patrol										
		21 1525		1641	No Flare Patrol										
		21 1653		1701	No Flare Patrol										
		21 1719		1847	No Flare Patrol										
		21 1902		2039	No Flare Patrol										
		21 2053		2105	No Flare Patrol										
		21 2109		2200	No Flare Patrol										
		22 1046		1128	No Flare Patrol										
		22 1137		1144	No Flare Patrol										
		22 1400		1424	No Flare Patrol										
		22 1940		2000	No Flare Patrol										
		22 2059		2226	No Flare Patrol										
		23 1046		1110	No Flare Patrol										
0044	HOLL	23 1621	1624	1626	S06 W05	8008	12 23.3	5	SF		3	E	33		
0045	HOLL	23 2048	2048	2052	S15 W66	8005	12 18.9	4	SF		3	E	13		S
		23 2225		2233	No Flare Patrol										
		23 2248		2313	No Flare Patrol										
		24 1042		1254	No Flare Patrol										
		24 1316		1347	No Flare Patrol										
		24 1501		1603	No Flare Patrol										
		24 1717		1738	No Flare Patrol										
		24 1904		1913	No Flare Patrol										
		25 0648		0918	No Flare Patrol										
		25 1304		1444	No Flare Patrol										
		25 1506		1514	No Flare Patrol										
		26 1439		1455	No Flare Patrol										
		26 2124		2153	No Flare Patrol										
		27 1720		1735	No Flare Patrol										
		27 2117		2139	No Flare Patrol										
		27 2225		2228	No Flare Patrol										
		28 1341		1351	No Flare Patrol										
		29 0618		0641	No Flare Patrol										
		29 0805		0816	No Flare Patrol										
		29 0822		0842	No Flare Patrol										
		29 0847		0906	No Flare Patrol										
		29 0919		1055	No Flare Patrol										
		30 1051		1056	No Flare Patrol										
		30 1110		1124	No Flare Patrol										
		30 2015		2024	No Flare Patrol										
		31 0610		0648	No Flare Patrol										
		31 0806		0840	No Flare Patrol										
		31 0920		0950	No Flare Patrol										
		31 1008		1016	No Flare Patrol										
		31 1026		1040	No Flare Patrol										
		31 1341		1420	No Flare Patrol										
		31 1801		1811	No Flare Patrol										
		31 1907		1909	No Flare Patrol										
		31 1941		2156	No Flare Patrol										
		31 2202		2400	No Flare Patrol										

# INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

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Dec 96

## DECEMBER 1996



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  
Kankelhoehe

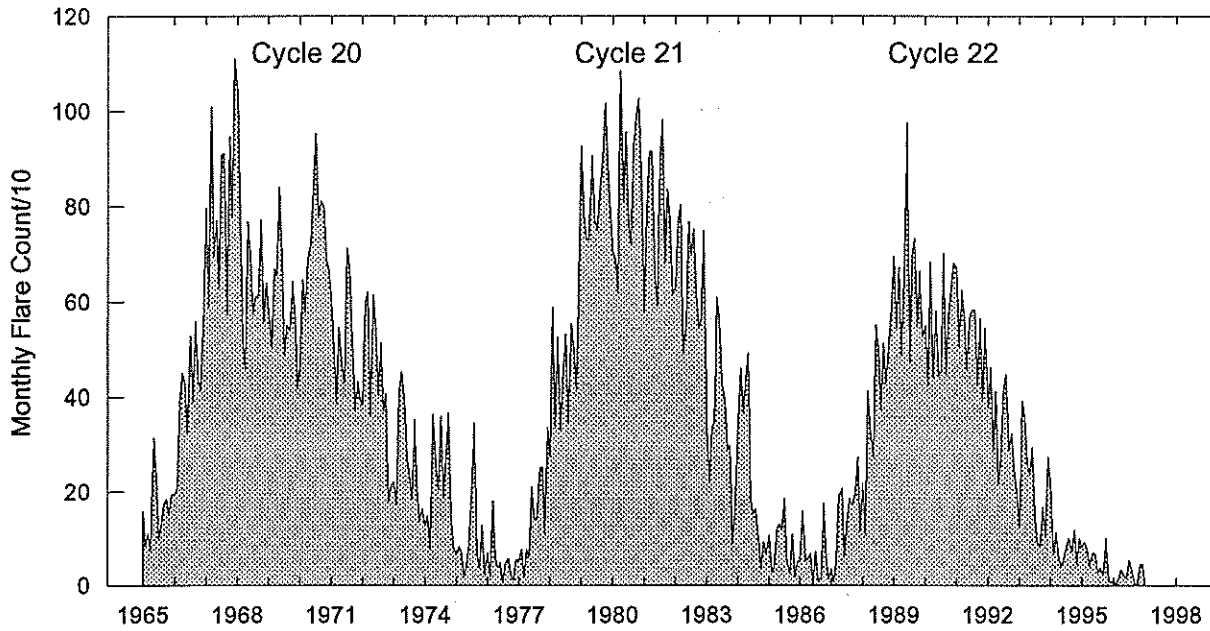
Learmonth  
Meudon

Mitaka  
Palehua

Ramey  
San Vito



## Monthly Counts of Grouped Solar Flares Jan 1965 - Dec 1996



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

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

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

9  
Dec 96

DECEMBER 1996

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
						Peak (10 -22 W/m <sup>2</sup> Hz)	Mean			
01	127 TORN	43 NS	0725.0		350.0		5.0		V=1	
	5730 IRKU	8 S	0527.0	0528.0	3.0	1.0	U			
02	5730 IRKU	8 S	0548.0	0548.0	9.0		2.0	U		
	5730 IRKU	8 S	0610.0	0611.0	10.0		2.0	U		
	3000 IZMI	23 GRF	0850.0	0852.0	25.0		3.0			
	3000 IZMI	5 S	0850.5	0850.6	0.3		7.0	3.0		
09	280 CUBA	44 NS	1450.0E		525.0D		10.0			
	235 CUBA	44 NS	1630.0E		245.0D		5.0			
	410 SGMR	4 S/F	1423.0	1427.0	4.0	8.0			QL=4 ST=2 TYP=3	
	610 SGMR	4 S/F	1424.0	1427.0	3.0	23.0			QL=4 ST=2 TYP=3	
	410 SVTO	8 S	1427.0	1427.0	2.0		8.0		QL=4 ST=3 TYP=3	
	610 SVTO	8 S	1427.0	1427.0	U		21.0		QL=2 ST=3 TYP=3	
10	280 CUBA	44 NS	1335.0E		330.0D		11.0			
	235 CUBA	44 NS	1540.0E		205.0D		3.0			
	245 LEAR	4 S/F	0549.0	0553.0	4.0	9.0			QL=4 ST=2 TYP=3	
	204 IZMI	7 C	1107.0	1107.3	1.0	25.0				
	245 PALE	8 S	2101.0	2102.0	1.0	12.0			QL=2 ST=2 TYP=3	
	410 PALE	8 S	2240.0	2241.0	1.0	3.0			QL=2 ST=3 TYP=3	
	245 LEAR	8 S	2241.0	2241.0	U	15.0			QL=4 ST=2 TYP=3	
	410 LEAR	8 S	2241.0	2241.0	U	3.0			QL=4 ST=2 TYP=3	
	245 PALE	8 S	2241.0	2241.0	U	18.0			QL=2 ST=3 TYP=3	
	200 HIRA	42 SER	2338.6	2341.0	2.6	135.0			O	
	500 HIRA	42 SER	2338.8	2341.1	2.5	39.0			WL	
	11	245 LEAR	4 S/F	0121.0	0123.0	3.0	6.0			QL=4 ST=2 TYP=3
		410 LEAR	4 S/F	0121.0	0123.0	3.0	1.0			QL=4 ST=2 TYP=3
2695 LEAR		8 S	0122.0	0123.0	2.0	2.0			QL=4 ST=2 TYP=3	
8800 LEAR		8 S	0122.0	0123.0	2.0	1.0			QL=4 ST=2 TYP=3	
4995 LEAR		8 S	0122.0	0123.0	2.0	3.0			QL=4 ST=2 TYP=3	
1415 LEAR		8 S	0122.0	0122.0	2.0	1.0			QL=4 ST=2 TYP=3	
610 LEAR		8 S	0122.0	0123.0	1.0				QL=4 ST=2 TYP=3	
245 PALE		8 S	0122.0	0123.0	1.0	6.0			QL=4 ST=2 TYP=3	
500 HIRA		1 S	0122.3	0122.7	1.0	4.0	1.0		QL=2 ST=2 TYP=3	
2800 HIRA		1 S	0122.3	0122.7	1.6	17.0	4.0		O	
245 LEAR		4 S/F	0138.0	0138.0	3.0	9.0			QL=4 ST=2 TYP=3	
245 PALE		4 S/F	0138.0	0138.0	3.0	9.0			QL=4 ST=2 TYP=3	
245 LEAR		8 S	0227.0	0227.0	1.0	30.0			QL=4 ST=2 TYP=3	
245 PALE		8 S	0227.0	0227.0	U	29.0			QL=4 ST=2 TYP=3	
12	280 CUBA	44 NS	1300.0E		530.0D		15.0			
	235 CUBA	44 NS	1446.0E		324.0D		7.0			
	5730 IRKU	8 S	0630.0	0649.0	43.0	3.0	U			
13	204 IZMI	43 NS	0700.0		300.0D		5.0			
	235 CUBA	44 NS	1300.0E		530.0D		15.0			
	235 CUBA	44 NS	1600.0E		350.0D		8.0			
	410 SVTO	8 S	0904.0	0904.0	U	10.0			QL=2 ST=2 TYP=3	
	245 SVTO	8 S	0904.0	0904.0	U	5.0			QL=2 ST=2 TYP=3	
18	127 TORN	43 NS	0814.0		280.0		1.0		V=0	
	235 CUBA	44 NS	1440.0E		430.0D		10.0			
	280 CUBA	44 NS	1440.0E		430.0D		14.0			
	245 PALE	8 S	1738.0	1738.0	2.0	7.0			QL=4 ST=2 TYP=3	
	610 SGMR	8 S	1738.0	1738.0	U	1.0			QL=4 ST=2 TYP=3	
	410 SGMR	8 S	1738.0	1738.0	U	1.0			QL=4 ST=2 TYP=3	
	245 SGMR	8 S	1738.0	1738.0	2.0	6.0			QL=2 ST=2 TYP=3	
19	204 IZMI	43 NS	0758.0		242.0D		10.0			
	127 TORN	43 NS	0905.0		230.0		1.0		V=1	
	5730 IRKU	8 S	0458.0	0501.0	13.0	3.0	U			
20	127 TORN	43 NS	0740.0		320.0		3.0		V=1	
	280 CUBA	44 NS	1345.0E		485.0D		12.0			
	235 CUBA	44 NS	1500.0E		430.0D		7.0			
24	127 TORN	49 GB	1305.0E	1311.0U	12.0D	870.0	60.0			

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

DECEMBER 1996

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
26	127 TORN	47 GB	1333.0E	1335.0U	4.0U	2800.0	340.0		
31	127 TORN	47 GB	0839.0	0845.5	7.0	730.0	190.0		
	127 TORN	40 F	1129.0		10.5		1.0		
	127 TORN	47 GB	1131.5	1132.5	2.8	220.0	50.0		

Reports are received routinely from the following observatories:

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

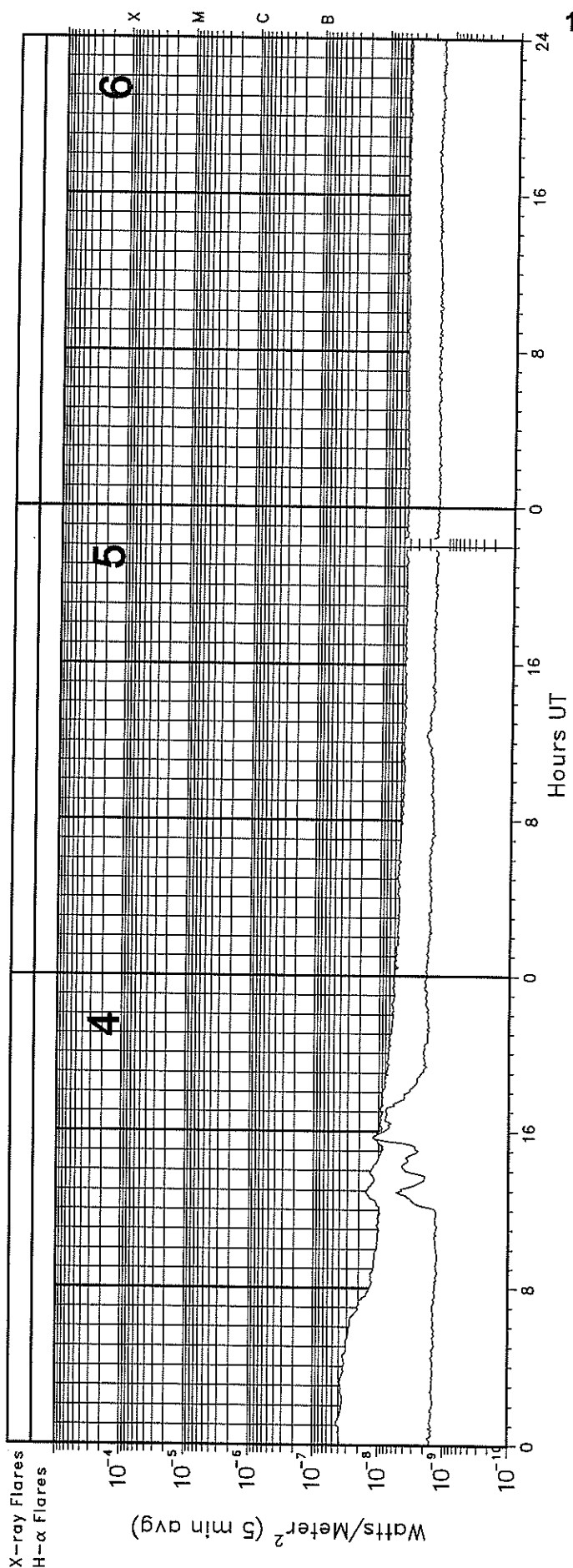
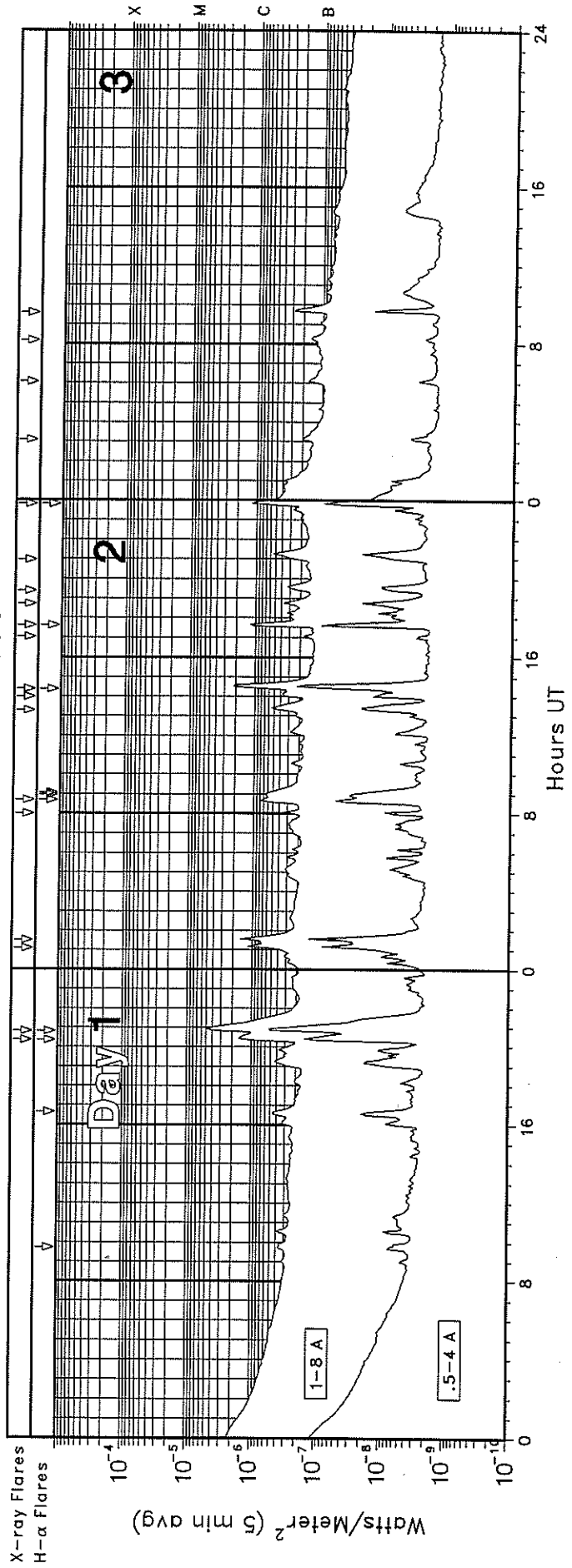
Explanation of Type Code:

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

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

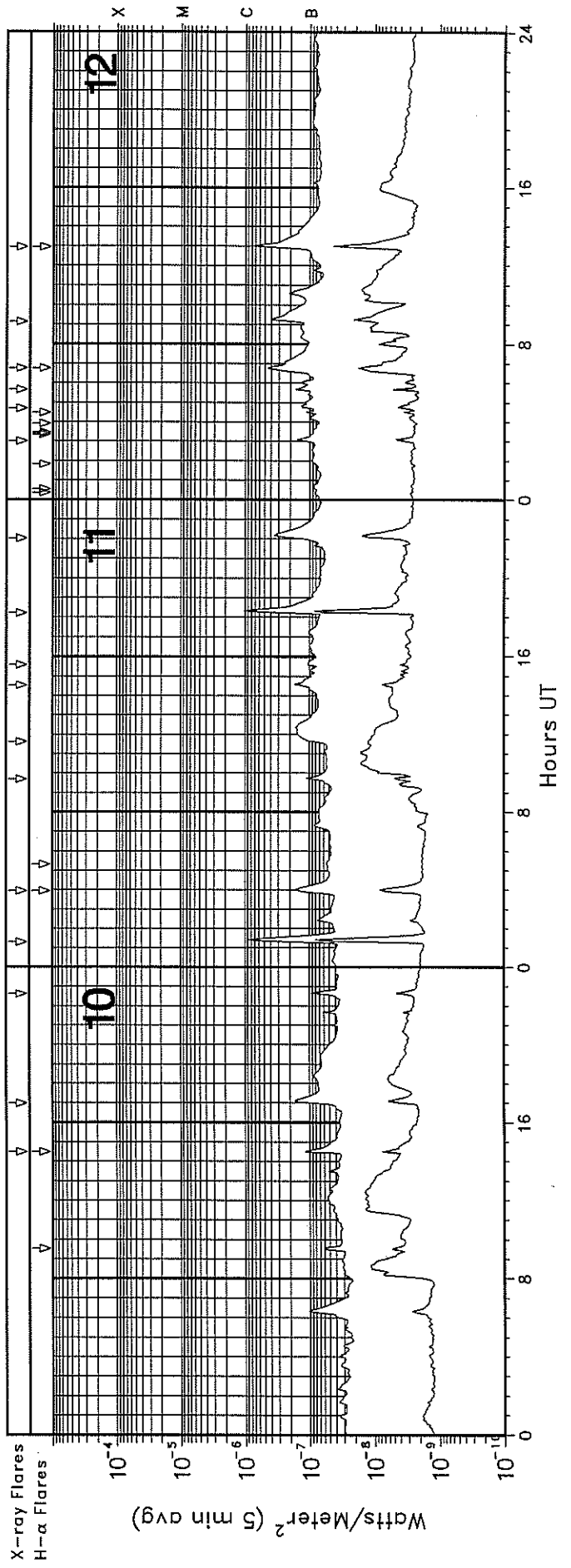
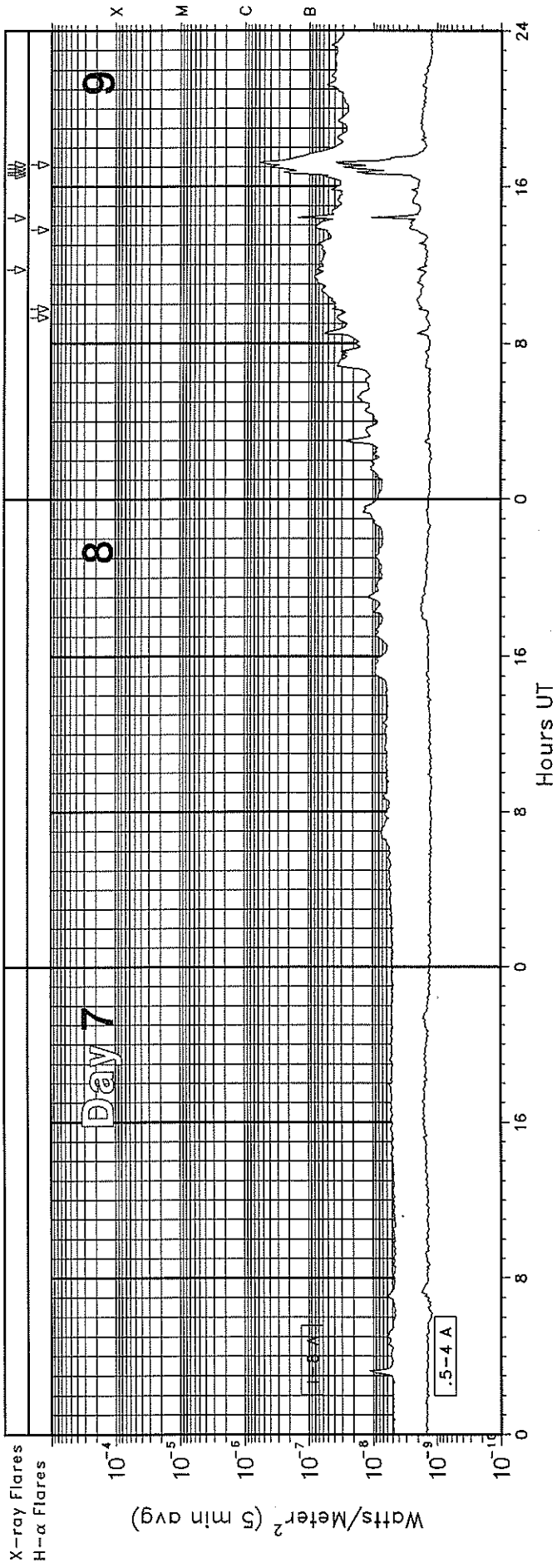
# GOES-7 X-RAY DETECTOR

December 1996



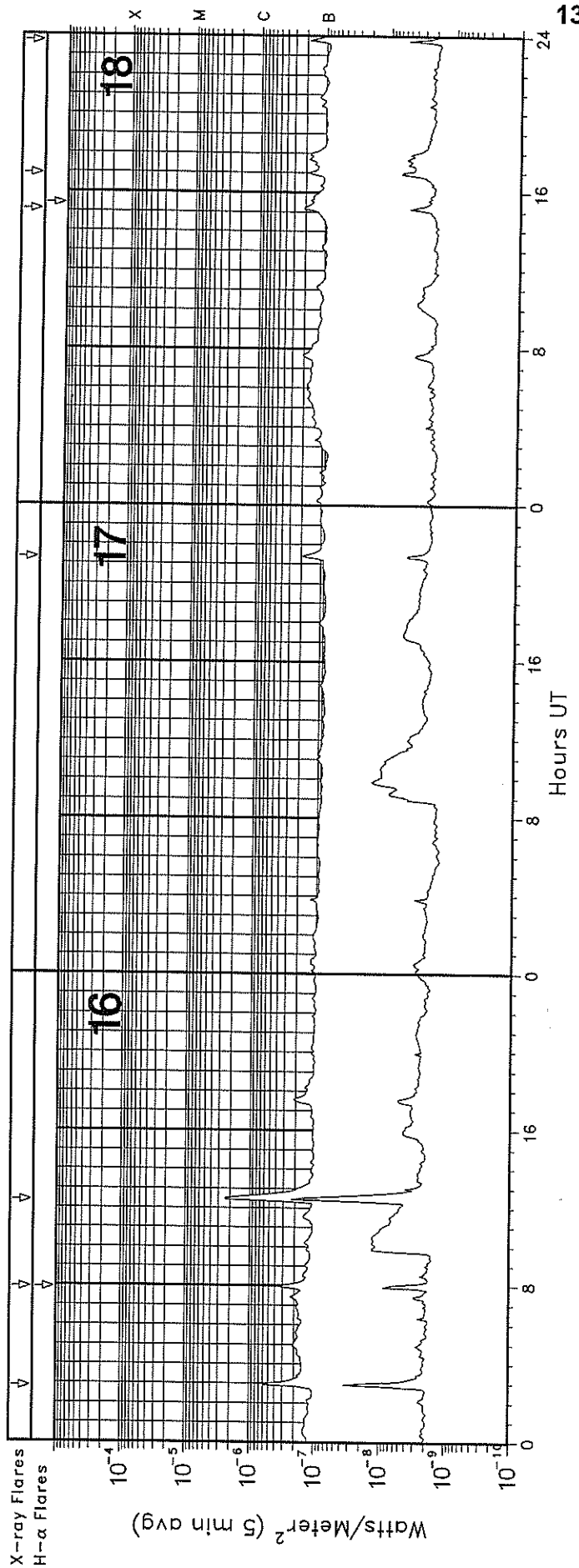
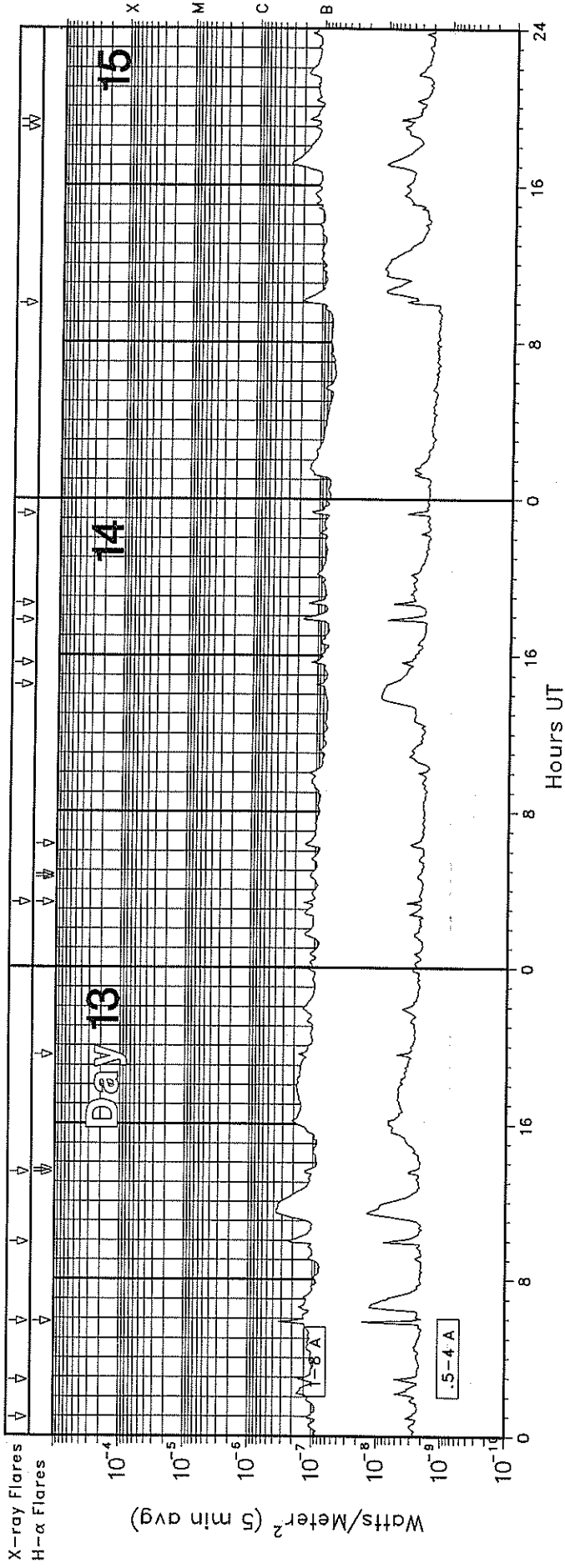
# GOES-7 X-RAY DETECTOR

December 1996



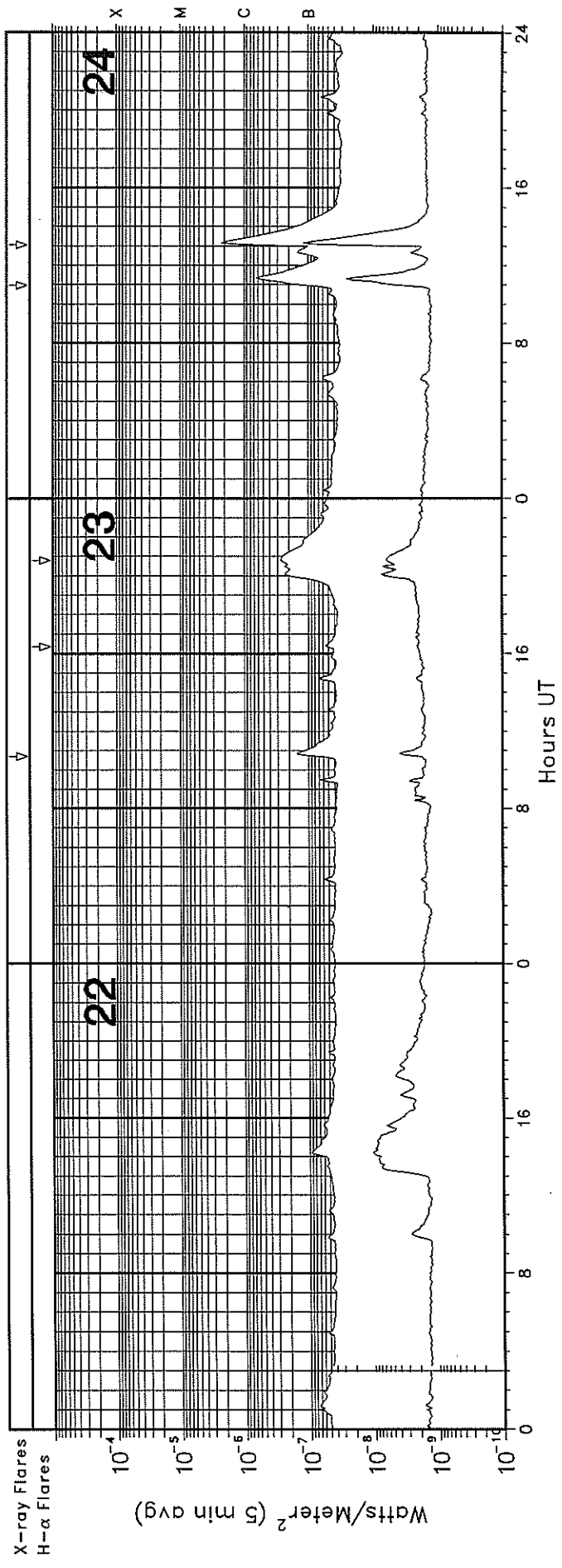
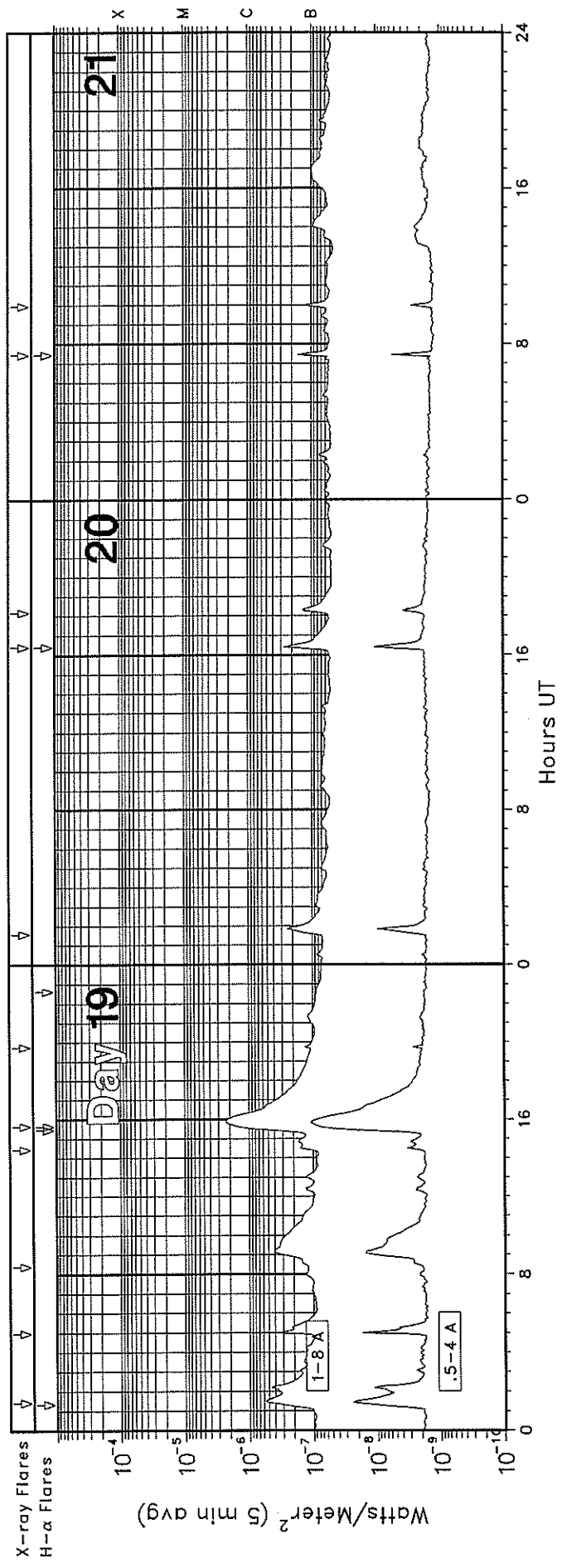
# GOES-7 X-RAY DETECTOR

December 1996



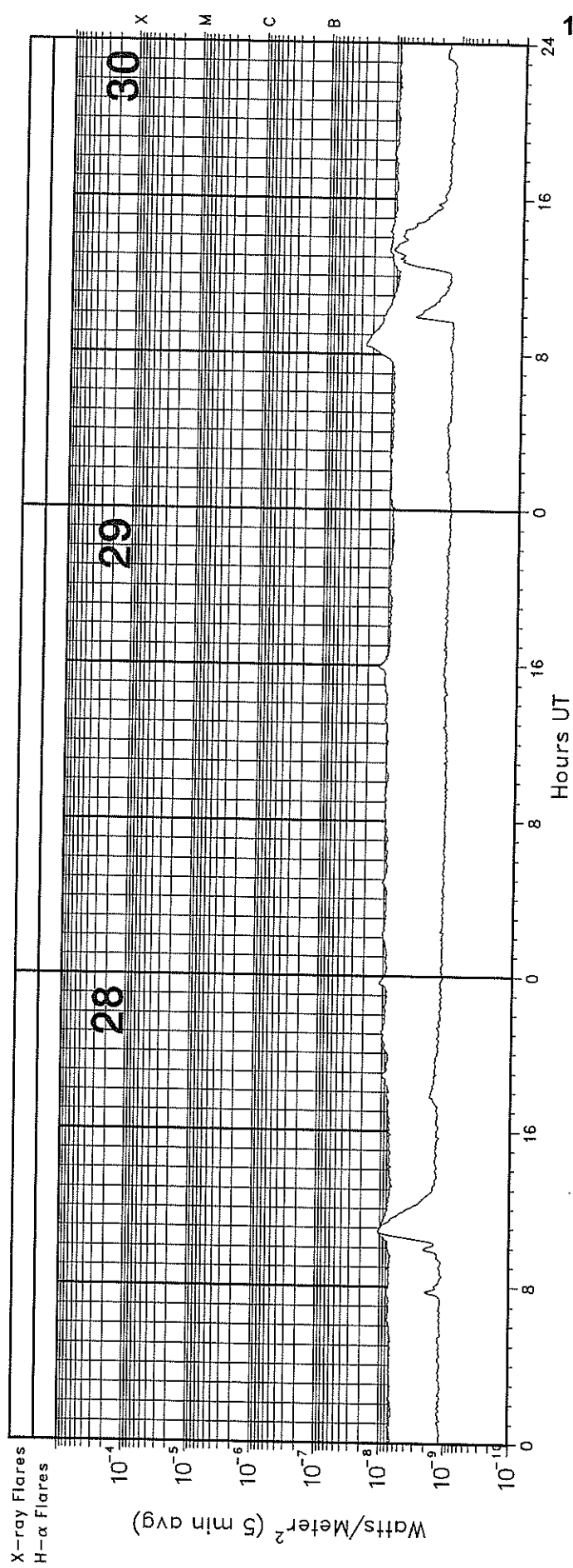
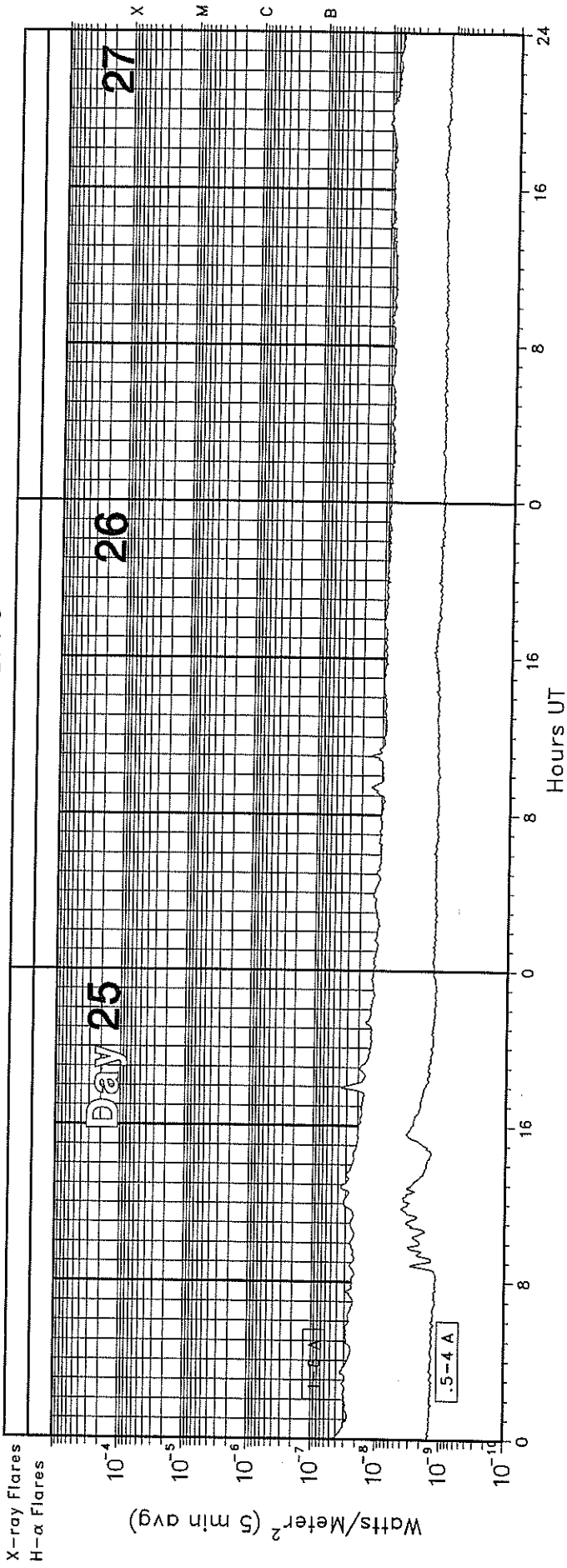
# GOES-7 X-RAY DETECTOR

December 1996



# GOES-7 X-RAY DETECTOR

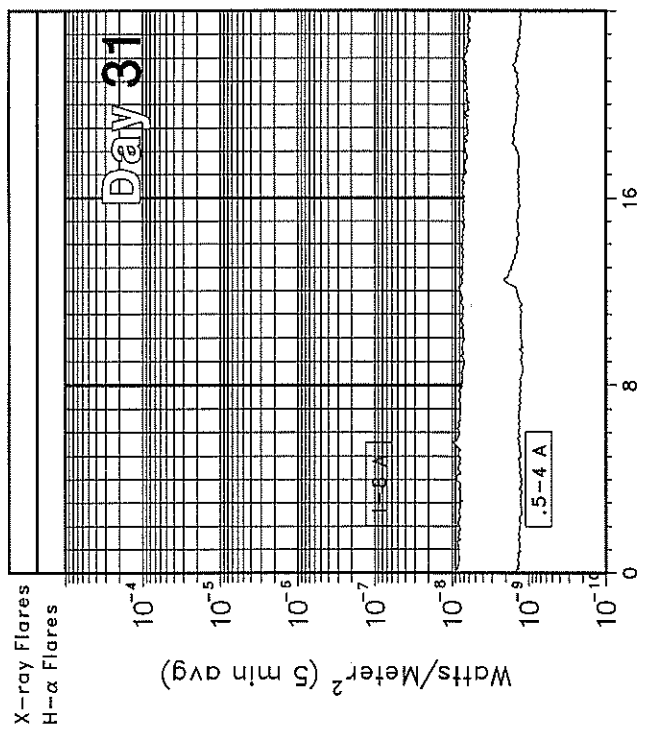
December 1996





# GOES-7 X-RAY DETECTOR

December 1996



GOES SOLAR X-RAY FLARES  
 \*\*Preliminary Listing\*\*

17  
 Dec 96

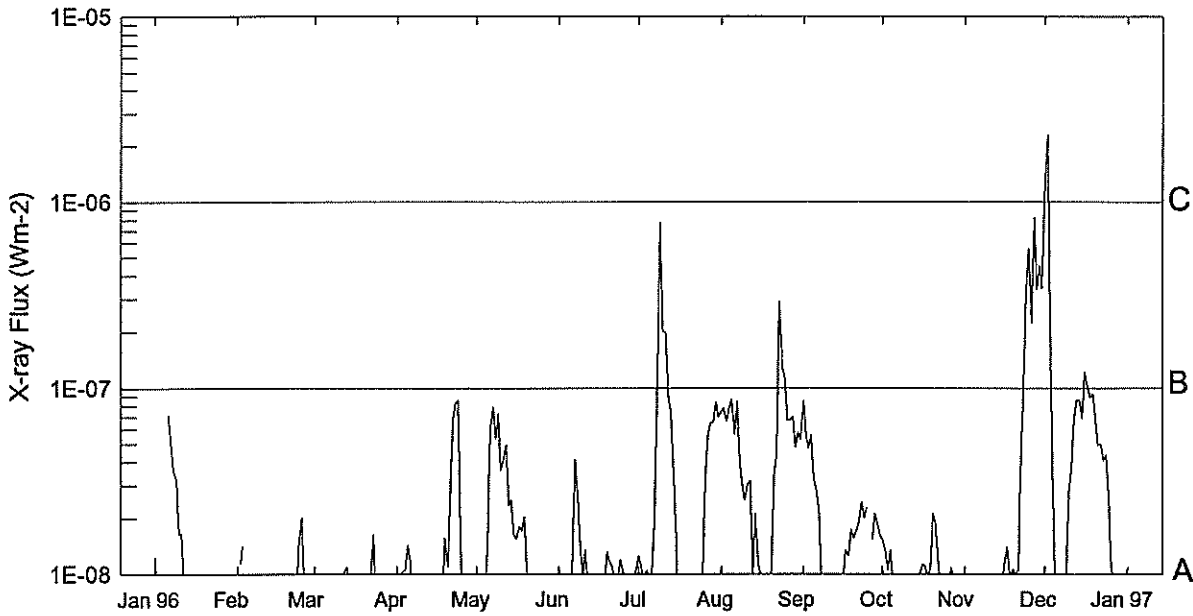
December 1996

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
01	2021	2023	2045	S05 W75	SF	C1.6	7999
01	2049	2052	2126	S05 W74	SF	C5.2	7999
02	0105	0113	0119			C1.2	
02	0132	0137	0141			C1.6	
02	0800	0805	0809			B3.2	
02	0842	0843	0850	S06 W77	SF	B7.4	7999
02	1316	1328	1332			B5.8	
02	1358	1403	1420			B3.4	
02	1423	1433	1442	S05 W90	1F	C2.7	7999
02	1701	1705	1708			B2.0	
02	1736	1740	1806	S05 W90	SF	C1.6	7999
02	1843	1846	1849			B3.7	
02	1923	1934	1944			B2.9	
02	2058	2117	2125			B5.6	
02	2348	2354	2359	S04 W89	1F	C1.2	7999
03	0306	0309	0311			B2.1	
03	0603	0607	0611			B1.7	
03	0811	0813	0824			B1.5	
03	0936	0943	0950			B3.3	
09	1146	1149	1151			B1.0	
09	1424	1428	1430			B2.6	
09	1637	1640	1642			B2.6	
09	1644	1648	1650			B3.5	
09	1655	1700	1703			B6.3	
09	1709	1716	1727	S30 W01	SF	B8.1	8003
10	1430	1431	1437	S29 W14	SF	B1.3	8003
10	1659	1708	1721			B1.7	
10	2237	2241	2243			B1.1	
11	0118	0127	0132			B8.8	
11	0358	0400	0410	S28 W20	SF	B1.4	8003
11	0941	0944	0947			B1.3	
11	1137	1222	1245			B1.7	
11	1432	1436	1439			B1.8	
11	1535	1539	1541			B1.4	
11	1813	1821	1827			C1.1	
11	2202	2214	2225			B3.5	
12	0301	0307	0311			B1.6	
12	0441	0449	0454			B1.4	
12	0539	0543	0546			B2.1	
12	0645	0648	0658	S28 W34	SN	B6.1	8003
12	0909	0918	0927			B4.1	
12	1257	1303	1316	S31 W40	SF	B7.6	8003

Start Day (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
13	0055	0059	0102				B1.4
13	0250	0256	0301				B1.7
13	0551	0554	0557	S27 W51	SF		B4.3 8003
13	0953	0959	1005				B2.8
13	1330	1331	1338	S28 W54	SF		B1.4 8003
14	0320	0321	0324	S27 W61	SF		B1.6 8003
14	1428	1431	1434				B1.1
14	1536	1540	1546				B1.3
14	1747	1753	1800				B1.9
14	1839	1843	1846				B1.9
14	2314	2319	2323				B1.7
15	0958	1007	1021				B2.0
15	1856	1900	1903				B1.3
15	1919	1923	1928				B1.8
16	0250	0258	0304				B6.2
16	0755	0756	0812	S13 E35	SF		B3.7
16	1222	1229	1236				C2.9
17	2119	2124	2130				B2.0
18	1506	1513	1524				B2.1
18	1655	1659	1706				B2.0
18	2342	2346	2352				B2.0
19	0125	0125	0142	S14 W00	SF		B5.8 8005
19	0457	0501	0505				B4.4
19	0823	0913	1044				B4.1
19	1427	1453	1507				B1.6
19	1538	1610	1745	S14 W09	1F		C2.3 8005
19	1944	1947	1949				B1.3
20	0134	0152	0201				B2.5
20	1624	1626	1634	S00 W47	SF		B2.9 8004
20	1811	1820	1829				B1.4
21	0726	0726	0734	S04 E28	SF		B1.8
21	0956	1000	1006				B1.4
23	1043	1053	1103				B1.5
24	1058	1121	1135				B6.4
24	1303	1311	1323				C2.1

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

## Preliminary GOES Satellite Daily X-Ray Background Jan 96 - Dec 96



Day	Jan 96	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	A1.0	---	<A1.0	<A1.0	<A1.0	<A1.0	A1.2	A7.4	A8.5	A1.5	<A1.0	C1.3
2	<A1.0	A1.1	<A1.0	<A1.0	<A1.0	<A1.0	A1.1	A7.7	A5.5	A1.3	<A1.0	C2.3
3	<A1.0	A1.4	<A1.0	A1.0	<A1.0	<A1.0	<A1.0	A6.6	A4.7	A1.0	<A1.0	B2.4
4	---	---	<A1.0	A1.0	<A1.0	<A1.0	A1.0	A7.8	A5.5	A1.3	<A1.0	A3.7
5	---	---	<A1.0	A1.4	A1.3	<A1.0	<A1.0	A8.5	A3.2	<A1.0	<A1.0	<A1.0
6	A7.1	---	<A1.0	A1.1	A5.9	A1.0	A1.0	A5.6	A2.7	<A1.0	<A1.0	<A1.0
7	A5.0	<A1.0	---	<A1.0	A7.8	A4.1	A1.8	A8.4	A2.1	<A1.0	<A1.0	<A1.0
8	A3.6	<A1.0	<A1.0	<A1.0	A5.3	A2.6	B1.2	A4.0	<A1.0	<A1.0	<A1.0	<A1.0
9	A3.1	<A1.0	<A1.0	<A1.0	A7.2	A1.4	B7.7	A3.0	<A1.0	<A1.0	<A1.0	<A1.0
10	A1.6	<A1.0	<A1.0	<A1.0	A3.6	<A1.0	B2.0	A2.4	<A1.0	<A1.0	<A1.0	A2.7
11	A1.6	<A1.0	<A1.0	<A1.0	A4.0	A1.3	B1.9	A3.0	<A1.0	<A1.0	<A1.0	A3.6
12	<A1.0	<A1.0	A1.0	<A1.0	A4.9	<A1.0	A9.0	A3.1	<A1.0	<A1.0	<A1.0	A6.7
13	<A1.0	<A1.0	A1.0	<A1.0	A2.3	<A1.0	A7.4	<A1.0	<A1.0	<A1.0	<A1.0	A8.5
14	<A1.0	<A1.0	<A1.0	<A1.0	A2.4	<A1.0	A3.9	A2.1	<A1.0	<A1.0	<A1.0	A8.5
15	<A1.0	<A1.0	<A1.0	<A1.0	A1.6	<A1.0	A1.5	A1.1	<A1.0	<A1.0	<A1.0	A6.8
16	---	<A1.0	<A1.0	<A1.0	A1.5	<A1.0	<A1.0	<A1.0	<A1.0	A1.1	A1.1	B1.2
17	<A1.0	<A1.0	<A1.0	<A1.0	A1.8	<A1.0	<A1.0	<A1.0	A1.3	A1.1	A1.3	B1.0
18	<A1.0	<A1.0	<A1.0	<A1.0	A1.7	<A1.0	<A1.0	<A1.0	A1.2	<A1.0	<A1.0	A8.9
19	<A1.0	<A1.0	<A1.0	A1.5	A2.0	A1.3	<A1.0	<A1.0	A1.7	A1.1	A1.0	A9.2
20	<A1.0	---	<A1.0	A1.1	A1.0	A1.1	<A1.0	A1.0	A1.5	A2.1	A1.0	A6.7
21	<A1.0	<A1.0	<A1.0	A3.0	<A1.0	A1.1	<A1.0	A3.3	A1.7	A1.8	A1.0	A4.9
22	<A1.0	<A1.0	A1.0	A6.8	<A1.0	<A1.0	<A1.0	A4.3	A1.8	A1.2	A3.3	A4.9
23	<A1.0	<A1.0	A1.6	A8.3	<A1.0	<A1.0	<A1.0	B2.9	A2.4	<A1.0	B1.0	A4.0
24	<A1.0	A1.3	<A1.0	A8.5	<A1.0	A1.2	<A1.0	B1.2	A1.9	<A1.0	B3.3	A4.3
25	<A1.0	A2.0	<A1.0	A1.0	<A1.0	A1.0	<A1.0	B1.1	A2.2	<A1.0	B5.5	A2.6
26	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A3.1	A6.6	---	<A1.0	B2.2	A1.0
27	<A1.0	---	<A1.0	<A1.0	<A1.0	<A1.0	A5.5	A6.7	A1.5	A1.0	B8.2	<A1.0
28	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A6.4	A6.9	A2.1	<A1.0	B3.3	<A1.0
29	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A6.5	A4.7	A1.8	<A1.0	B4.5	<A1.0
30	<A1.0	---	<A1.0	<A1.0	<A1.0	A1.0	A8.3	A5.7	A1.6	<A1.0	B3.4	<A1.0
31	---	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A7.0	A5.2	<A1.0	<A1.0	<A1.0	<A1.0

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Day	Event Type	Start (UT)	End (UT)	Lat	ChD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
01	DSD	0410E	0635D	S73	W06	11 30.6		05	9	9	E	LEAR	7999	
01	AFS	0455E	1026	S18	W56	11 27.0		04	6	5	E	LEAR		
01	AFS	0858E	1026	S24	W09	11 30.7		01	9	9	E	LEAR		
01	DSD	1320E	2105	S02	W68	11 26.6		01	9	9	E	RAMY	7999	
01	ASR	1516E	2105	S05	W80	11 25.7			7	7	E	RAMY	7999	
01	AFS	1644E	2105	N14	E25	12 3.6		01	5	5	E	RAMY		
02	ASR	1100E	0430D	S02	W90	11 25.8			5	7	E	LEAR	7999	
02	ASR	1156E	2133	S04	W90	11 25.9			9	8	E	RAMY	7999	
02	APR	1217E	2133	N05	W90	11 25.9	1		7	9	E	RAMY		
02	ASR	1510E	2214	S04	W90	11 26.0			9	9	E	HOLL	7999	
02	ASR	2115E	0303	N08	W90	11 26.2			9	9	E	PALE	7999	
03	ASR	0110E	0228D	S19	W90	11 26.3			9	9	E	LEAR	8001	
03	ASR	1022E	1432	S02	W90	11 26.8			8	8	E	SVTO		
03	ASR	1206E	1432	S07	W90	11 26.9			9	8	E	SVTO		
03	ASR	1416E	2049D	S03	W90	11 27.0			9	9	E	RAMY		
03	ASR	1433E	1742D	N12	W90	11 26.9			4	6	E	RAMY		
03	ASR	1710E	2328	S01	W90	11 27.1			9	9	E	HOLL	7999	
03	AFS	1900E	0258	N10	E12	12 4.7		02	9	9	E	PALE		
03	AFS	2025E	2134	N10	E15	12 5.0		02	5	5	E	RAMY		
03	AFS	2052E	2328	N09	E15	12 5.0		01	6	5	E	HOLL		
03	AFS	2325E	1035	N08	E14	12 5.0		02	7	4	E	LEAR		
04	AFS	0845E	0937D	N12	E04	12 4.7		01	8	8	E	SVTO		
04	AFS	0845E	1449	N09	E08	12 5.0		02	7	7	E	SVTO		
07	AFS	1725E	2348	S30	E31	12 10.2		01	6	8	E	HOLL	8003	
07	AFS	1805E	1935	S29	E28	12 9.9		02	8	6	E	RAMY		
07	AFS	2255E	1040	S32	E22	12 9.7		01	9	7	E	LEAR	8003	
08	ADF	0350E	1040	S22	E55	12 12.4	1	10	7	7	E	LEAR		
08	ADF	0351E	1040	N47	E69	12 13.9	1	15	6	5	E	LEAR		
08	AFS	0713E	1450	S30	E19	12 9.8		02	9	9	E	SVTO	8003	
08	AFS	1116E	2125	S29	E18	12 9.9		01	9	9	E	RAMY	8003	
08	DSD	1210E	2125	S32	E18	12 9.9		01	8	8	E	RAMY	8003	
08	AFS	1430E	2348	S30	E16	12 9.9		01	9	9	E	HOLL	8003	
08	DSF	1548U	1609U	N41	E46	12 12.4	2	06	0	0	E	RAMY		
08	DSF	2035U	1128U	S39	E08	12 9.5	2	05	0	0	E	RAMY	8003	
08	AFS	2205E	1038	S30	E11	12 9.8		02	9	6	E	LEAR	8003	
09	DSD	0945E	1038	S30	E04	12 9.7		02	9	9	E	LEAR	8003	
09	AFS	1102E	2133	S30	E05	12 9.8		02	9	9	E	RAMY	8003	
09	DSD	1105E	2133	S29	E03	12 9.7		04	9	9	E	RAMY	8003	
09	AFS	1410E	2338	S30	E04	12 9.9		02	7	9	E	HOLL	8003	
09	ADF	1415E	2133	S14	E26	12 11.5	1	14	5	5	E	RAMY		
09	DSD	1752E	0153	S31	W01	12 9.7		03	9	9	E	PALE	8003	
09	DSD	1830E	2338	S30	W01	12 9.7		04	9	9	E	HOLL	8003	
09	DSD	1850E	2133	S29	W04	12 9.5		02	9	9	E	RAMY	8003	
09	DSF	2035U	1128U	S39	E08	12 10.5	2	05	0	0	E	RAMY	8003	
09	AFS	2230E	1042	S31	W03	12 9.7		02	9	5	E	LEAR	8003	
09	ADF	2315E	1042	S16	E20	12 11.5	1	11	6	4	E	LEAR		
10	DSD	0640E	0850D	S28	W12	12 9.3		06	8	9	E	LEAR	8003	
10	DSD	0934E	0951D	S28	W14	12 9.3		04	9	9	E	LEAR	8003	
10	DSD	1210E	2039	S26	W14	12 9.4		02	9	9	E	RAMY	8003	
10	APR	1258E	2039	N02	E90	12 17.3	1		9	9	E	RAMY		
10	DSD	1309E	1355D	S29	W11	12 9.7		03	9	9	E	RAMY	8003	
10	ADF	1350E	2026D	S16	E14	12 11.6	1	13	6	9	E	RAMY		
10	DSD	1438E	1450	S29	W17	12 9.3		03	9	9	E	SVTO	8003	
10	DSD	1559E	1828D	S30	W11	12 9.8		03	9	9	E	RAMY	8003	
10	DSD	1635E	2039	S29	W18	12 9.3		05	9	9	E	RAMY	8003	
10	AFS	2008E	2039	S30	W18	12 9.4		01	9	9	E	RAMY	8003	
10	DSD	2221E	1035	S26	W22	12 9.2		04	9	4	E	LEAR	8003	
10	ADF	2325E	1035	S23	E18	12 12.4	1	10	5	5	E	LEAR		
11	DSF	1035U	2151U	S19	E03	12 11.7	1	09	0	0	E	LEAR		
11	DSD	1157E	1405	S26	W27	12 9.4		04	9	9	E	SVTO	8003	
11	AFS	1159E	1405	S24	W30	12 9.2		03	9	9	E	SVTO	8003	
11	ADF	1200E	1405	S28	W27	12 9.4	1	04	9	9	E	SVTO	8003	

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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	NOAA/USAF Sta Reg#	Remarks
11	DSD	1300E	1405	S28	W33	12 9.0		05	9	9	E	SVTO 8003	
11	ADF	1411E	1826	S26	W30	12 9.3	2	03	9	7	E	HOLL 8003	
11	AFS	1411E	1911	S23	W31	12 9.2		02	9	9	E	HOLL 8003	
11	DSD	1939E	2349	S29	W31	12 9.4		02	9	9	E	HOLL 8003	
11	AFS	2132E	2349	S27	W36	12 9.1		02	9	9	E	HOLL 8003	
11	AFS	2205E	1045	S26	W33	12 9.3		02	8	7	E	LEAR 8003	
12	AFS	0703E	1502	S28	W37	12 9.4		02	9	9	E	SVTO 8003	
12	DSD	0705E	0930D	S30	W39	12 9.2		04	9	9	E	SVTO 8003	
12	ADF	0708E	0935D	N11	E81	12 18.4	1	14	9	9	E	SVTO 8004	
12	DSF	0735U	0758U	S22	E10	12 13.1	2	07	0	0	E	SVTO	
12	DSD	0757E	1502	S27	W37	12 9.4		02	9	9	E	SVTO 8003	
12	DSD	0955E	1045	S27	W45	12 8.9		04	9	9	E	LEAR 8003	
12	DSD	1138E	1835D	S28	W35	12 9.7		02	9	9	E	RAMY 8003	
12	AFS	1138E	2136	S29	W33	12 9.9		02	9	9	E	RAMY 8003	
12	ADF	1230E	1502	S33	W38	12 9.5	1	06	9	9	E	SVTO 8003	
12	ADF	1300E	1715D	N08	E73	12 18.0	1	08	9	9	E	RAMY 8004	
12	DSD	1301E	1406D	S31	W36	12 9.7		02	8	8	E	RAMY 8003	
12	AFS	1412E	2349	S28	W44	12 9.1		02	9	9	E	HOLL 8003	
12	ADF	1430E	1502	N09	E78	12 18.4	1	09	9	9	E	SVTO 8004	
12	DSD	1720E	2040D	N05	W65	12 7.9		02	9	7	E	RAMY 8004	
12	DSD	2045E	2136	S27	W19	12 11.4		02	7	7	E	RAMY	
12	AFS	2300E	0303	N29	W47	12 9.3		02	9	9	E	PALE 8003	
13	AFS	0940E	1349	S30	W55	12 9.1		02	9	9	E	SVTO 8003	
13	DSD	1320E	1955	S28	W54	12 9.3		03	9	9	E	RAMY 8003	
13	ADF	1443E	1955	N10	E60	12 18.1	1	12	9	9	E	RAMY 8004	
13	BSD	1506E	1601D	S29	W57	12 9.2		02	9	9	E	RAMY 8003	
13	DSD	1602E	1955	S28	W59	12 9.0		02	9	9	E	RAMY 8003	
13	AFS	1630E	1955	S29	W56	12 9.3		03	8	9	E	RAMY 8003	
14	ADF	0055E	1042	N05	E44	12 17.3	1	10	6	6	E	LEAR 8004	
14	ADF	0420E	1042	N08	E56	12 18.4	1	14	9	9	E	LEAR 8004	
14	BSD	1322E	1351D	S33	W70	12 9.0		03	9	9	E	RAMY 8003	
14	DSD	1402E	1944	N07	E35	12 17.2		01	7	8	E	RAMY 8004	
14	BSD	1710E	1944	S28	W75	12 8.8		03	9	9	E	RAMY 8003	
14	ASR	2250E	0555D	S25	W78	12 8.9			9	9	E	LEAR 8003	
15	AFS	0910E	1238D	S14	E50	12 19.2		04	9	9	E	SVTO	
15	AFS	0912E	1249	N04	E26	12 17.3		01	8	7	E	SVTO 8004	
15	ADF	0915E	1145D	N06	E26	12 17.3	1	04	8	8	E	SVTO 8004	
15	ADF	1230E	1249	N05	E24	12 17.3	1	09	9	9	E	SVTO 8004	
15	ADF	1238E	1249	S11	E45	12 18.9	1	07	9	9	E	SVTO	
15	DSD	1320E	1802	N08	E26	12 17.5		01	7	9	E	RAMY 8004	
15	ASR	1408E	1802	S32	W75	12 9.6			7	9	E	RAMY 8003	
15	ADF	1520E	1802	S11	E44	12 18.9	1	05	8	9	E	RAMY	
15	ASR	1525E	1802	S27	W90	12 8.6			8	7	E	RAMY 8003	
15	ASR	2245	0323	S26	W90	12 8.9			6	9	E	PALE 8003	
15	ASR	2255E	1045	S25	W90	12 9.0	1		7	9	E	LEAR 8003	
16	ASR	0925E	1504	S29	W90	12 9.3			6	7	E	SVTO 8003	
16	AFS	0927E	1212D	N04	E12	12 17.3		02	9	9	E	SVTO 8004	
16	DSD	1431E	1935D	N06	E10	12 17.3		02	6	5	E	RAMY 8004	
16	ASR	1435E	2029	S28	W90	12 9.6			5	5	E	RAMY 8003	
16	ASR	1850	0520	S25	W90	12 9.8			9	9	E	PALE 8003	
16	ADF	1926E	2029	S08	E24	12 18.6	1	12	9	9	E	RAMY 8005	
17	ADF	0428E	1038	S14	E24	12 19.0	1	03	9	9	E	LEAR 8005	
17	AFS	0445E	1038	S29	E30	12 19.5		02	9	6	E	LEAR	
17	ADF	0650E	1038	N09	E15	12 18.4	1	11	8	7	E	LEAR 8004	
17	ADF	0700E	1038	S07	E12	12 18.2	1	06	7	5	E	LEAR 8005	
17	DSD	0922E	1038	N08	E01	12 17.5		02	9	9	E	LEAR 8004	
17	DSD	0943E	1413	N06	E01	12 17.5		02	9	9	E	SVTO 8004	
17	AFS	0945E	1413	S30	E26	12 19.4		02	9	9	E	SVTO	
17	DSD	1124E	2137	N05	E02	12 17.6		02	9	9	E	RAMY 8004	
17	ADF	1225E	1413	N09	E11	12 18.3	1	10	9	9	E	SVTO 8004	
17	ADF	1321E	2137	S03	W39	12 14.6	1	24	9	9	E	RAMY	
17	AFS	1323E	2137	S30	E25	12 19.5		01	7	9	E	RAMY 8006	
17	DSD	1655E	2137	N06	W05	12 17.3		01	9	9	E	RAMY 8004	
17	DSD	1701E	1850D	S29	E23	12 19.5		01	9	9	E	RAMY 8006	

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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
17	AFS	1733E	0018D	S29	E23	12 19.5		02	9	9	E	PALE	8006	
17	AFS	1733E	0318	N09	W04	12 17.4		02	9	9	E	PALE	8004	
17	ADF	1746E	2352D	S13	E16	12 18.9	1	03	9	4	E	HOLL	8005	
17	DSD	1821	1856	N07	W02	12 17.6		02	9	8	E	HOLL	8004	
17	DSD	1825E	1900D	N07	W02	12 17.6		02	9	9	E	PALE	8004	
17	ADF	1838	2225D	S27	E23	12 19.6	1	02	6	4	E	HOLL	8006	
18	DSD	0018E	0107D	N06	W09	12 17.3		02	9	9	E	PALE	8004	
18	DSD	1208E	1645D	N09	W14	12 17.4		01	6	9	E	RAMY	8004	
18	ADF	1216E	1838D	S04	W53	12 14.5	1	11	7	9	E	RAMY		
18	ADF	1328E	2140	S13	E03	12 18.8	1	08	9	9	E	RAMY	8005	
18	DSD	1519E	1930D	N05	W17	12 17.4		03	8	9	E	RAMY	8004	
18	AFS	1535E	2140	N08	W16	12 17.4		01	9	9	E	RAMY	8004	
18	DSD	1545E	2120D	N06	W16	12 17.4		03	9	9	E	RAMY	8004	
18	AFS	1653E	2140	S30	E11	12 19.6		02	4	5	E	RAMY	8006	
18	ADF	1746E	2352D	N09	W17	12 17.5		03	4	5	E	HOLL	8004	
18	ADF	1903E	2206	S11	E02	12 18.9		03	3	2	E	HOLL	8005	
18	AFS	1927E	0254	N08	W18	12 17.5		02	9	9	E	PALE	8004	
19	ADF	0815E	1017	N11	W10	12 18.6	1	15	9	9	E	LEAR	8004	
19	ADF	0930E	1429D	N08	W11	12 18.6	1	13	9	9	E	SVTO	8004	
19	AFS	1015E	1225D	S29	E01	12 19.5		02	7	7	E	SVTO	8006	
19	ADF	1046E	1500	N04	W31	12 17.1	1	04	9	9	E	SVTO	8004	
19	AFS	1130E	1430D	N07	W30	12 17.2		02	9	9	E	SVTO	8004	
19	ADF	1239E	2127	N05	W29	12 17.3	1	05	9	9	E	RAMY	8004	
19	AFS	1312E	2127	N08	W27	12 17.5		01	9	9	E	RAMY	8004	
19	AFS	1415E	2127	S04	E50	12 23.3		01	9	9	E	RAMY		
19	AFS	1432E	1500	S29	W02	12 19.4		02	8	8	E	SVTO	8006	
19	AFS	1503E	2352	S28	W02	12 19.5		01	7	7	E	HOLL	8006	
19	AFS	1610E	2127	S30	W02	12 19.5		02	5	7	E	RAMY	8006	
19	ADF	1612E	2127	S15	W09	12 19.0	1	06	7	8	E	RAMY	8005	
19	ADF	1630E	2352D	S13	W11	12 18.8	1	06	5	6	E	HOLL	8005	
19	DSF	1633U	1713U	N02	W34	12 17.1	2	06	0	0	E	RAMY	8004	
19	BSD	1640E	1711D	N02	W34	12 17.1		02	0	0	E	RAMY	8004	
19	DSD	1704E	1753D	S30	E00	12 19.7		01	9	9	E	RAMY	8006	
19	DSD	2227E	0223	N05	W35	12 17.3		02	9	9	E	PALE	8004	
19	AFS	2227E	0223	S29	W06	12 19.5		02	5	6	E	PALE	8006	
20	ADF	1250E	2142	N13	W29	12 18.3	1	16	9	9	E	RAMY	8004	
20	DSD	1332E	1642D	S28	W10	12 19.8		03	6	5	E	RAMY	8006	
20	AFS	1332E	2142	S02	E37	12 23.3		02	5	5	E	RAMY		
20	DSD	1435E	1552D	N05	W43	12 17.4		01	9	9	E	RAMY	8004	
20	ADF	1435E	2142	N03	W44	12 17.3	1	05	6	7	E	RAMY	8004	
20	DSD	1622	2353	N05	W45	12 17.3		03	9	9	E	HOLL	8004	
20	DSD	1630	1705D	S02	W49	12 17.0		01	9	9	E	RAMY	8004	Flare Associated
20	AFS	1820E	1934	S03	E34	12 23.3		03	4	5	E	PALE		
20	DSF	2330U	0025U	N11	W48	12 17.4	2	11	9	9	E	LEAR	8004	
21	ADF	0025E	1035	N07	W51	12 17.2	1	09	9	9	E	LEAR	8004	
21	AFS	0318E	1035	N05	W34	12 18.6		02	9	9	E	LEAR	8004	
21	AFS	0820E	1443	N04	W37	12 18.6		02	9	9	E	SVTO		
21	APR	0845E	1035	S02	W90	12 14.6	1		8	8	E	LEAR		
21	APR	0845E	1443	S02	W90	12 14.6	1		7	8	E	SVTO		
21	AFS	0930E	1443	S28	W23	12 19.6		02	8	8	E	SVTO	8006	
21	AFS	1340E	2041D	S01	E24	12 23.4		02	5	4	E	RAMY		
22	ADF	0055E	0605D	N04	W63	12 17.3	1	21	9	9	E	LEAR		
23	DSF	1045U	2329U	S18	W55	12 19.2	3	07	0	0	E	LEAR	8005	
23	ASR	1245E	2110	N07	W90	12 16.8			9	9	E	RAMY		
23	DSD	1931	2006	N10	W78	12 17.9		02	9	9	E	HOLL	8004	
23	ADF	2006	2011	S15	W67	12 18.8	1	09	7	9	E	RAMY	8005	
23	EPL	2011	2048	S13	W67	12 18.8	3		7	9	E	RAMY	8005	
23	DSF	2016	2046	S14	W67	12 18.8	3	15	7	9	E	HOLL	8005	
23	ASR	2023	2040	N08	W84	12 17.5			9	9	E	HOLL	8004	
23	DSF	2035U	2048U	S15	W67	12 18.8	3	09	7	9	E	RAMY	8005	
24	AFS	0340E	1041	S18	W03	12 23.9		01	7	7	E	LEAR		
24	APR	0815E	1041	N07	W90	12 17.6	1		9	9	E	LEAR	8004	
24	ADF	0815E	1041	S13	W73	12 18.8	1	08	6	8	E	LEAR	8005	

ACTIVE PROMINENCES AND FILAMENTS

DECEMBER 1996

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
24	APR	1255E	1604D	N06	W90	12	17.8			9	9	E	RAMY	8004	
24	ASR	1307E	1404D	N08	W90	12	17.8			9	9	E	RAMY	8007	
24	AFS	1704E	2103	S19	W11	12	23.9		01	9	9	E	RAMY		
25	AFS	1445E	1534D	S18	W22	12	23.9		01	4	3	E	RAMY		
25	AFS	1641E	2035	S04	W32	12	23.3		01	5	6	E	RAMY	8008	
25	AFS	1746E	0125	S05	W32	12	23.3		02	7	6	E	PALE	8008	
25	ASR	1818E	1930D	N07	W90	12	19.0			7	8	E	RAMY	8007	
26	AFS	1258E	2123	S21	W16	12	25.3		01	6	9	E	RAMY		
26	AFS	1540E	2318	S22	W17	12	25.3		01	5	4	E	HOLL		
26	DSD	1615E	2318	S21	W17	12	25.4		02	9	7	E	HOLL		
26	DSD	1924E	2123	S19	W20	12	25.3		01	6	7	E	RAMY		
26	DSF	1924U	1142U	S48	E59	12	31.8	2	08	0	0	E	RAMY		
30	APR	1450E	2147	S29	E90	01	6.7	1		7	7	E	RAMY		

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

ABST = Abastumani	HOLL = Holloman	RAMY = Ramey
ATHN = Athens	KHAR = Kharkov	SVTO = San Vito
BUCA = Bucharest	LEAR = Learmonth	VORO = Voroshilov
CATA = Catania	PALE = Palehua	VALA = Valasske Mezirici
		WROC = Wroclaw

1996 SOLAR IRRADIANCE INSTANTANEOUS VALUES  
EARTH RADIATION BUDGET EXPERIMENT

NASA LANGLEY RESEARCH CENTER

WATTS/m<sup>2</sup>

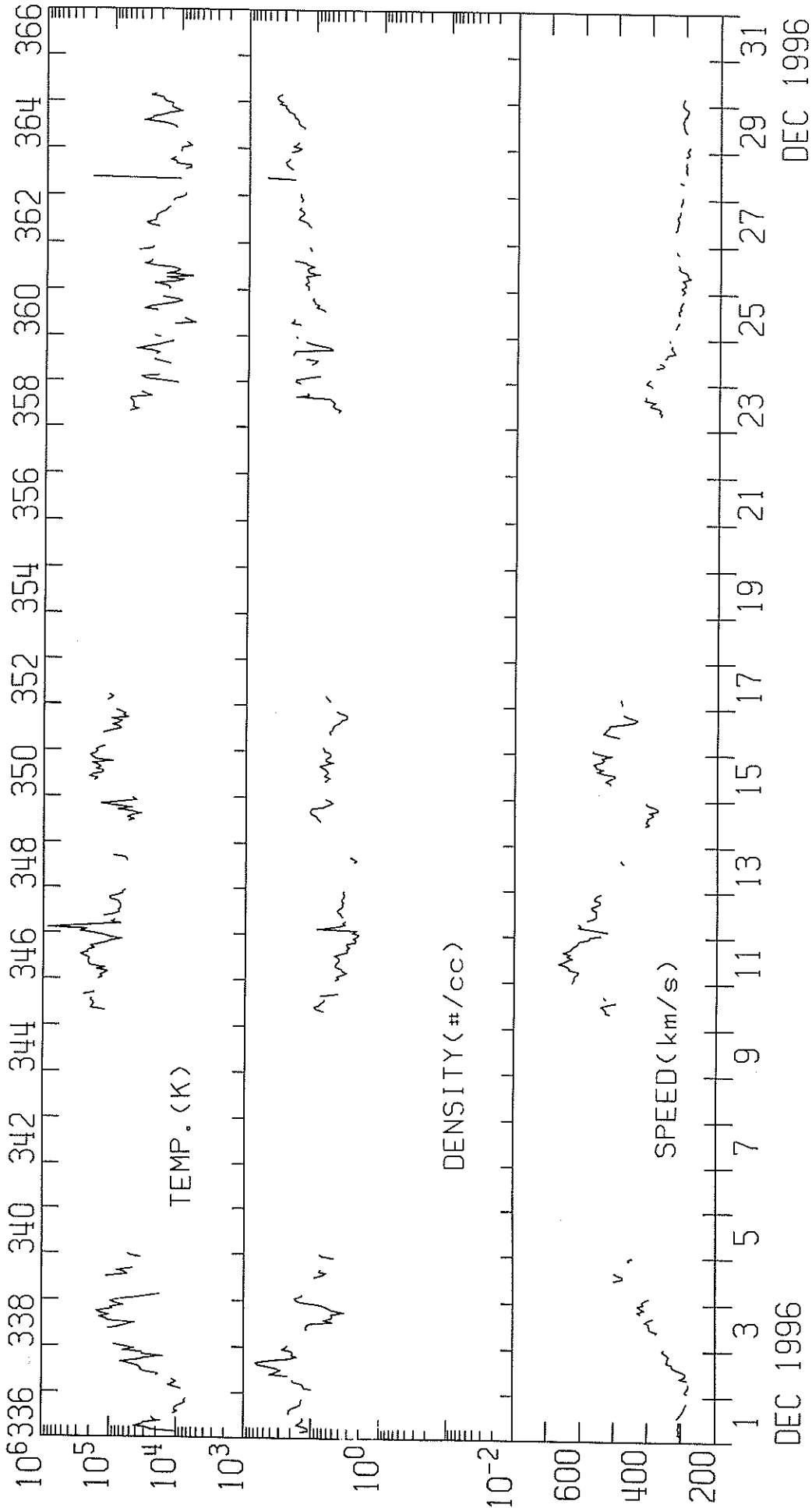
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	1364.9	---	---	---	---	---	1364.7	1364.6	---	---	---	---
4	---	1365.5	---	---	---	---	---	---	---	---	---	1364.8
5	---	---	---	---	---	1365.5	---	---	---	---	---	---
6	1365.2	---	---	---	---	---	---	---	---	---	1365.0	---
7	---	---	---	---	---	---	---	---	---	---	---	1365.3
8	---	---	---	1365.0	---	---	1364.4	---	---	---	1365.0	---
9	---	---	---	---	---	1364.8	---	---	---	1364.8	---	---
10	---	---	---	1365.1	1364.5	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	1365.0	---	---	---
12	1364.6	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	1365.3	---	---	---	---
15	---	1365.5	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	1364.9	---	---	---	---	---	1364.8	---	---	---	---	---
18	---	---	---	---	---	---	---	---	1364.4	---	---	1364.7
19	---	---	---	---	---	1364.7	---	---	---	---	---	---
20	---	1365.4	---	---	---	---	---	---	---	---	1365.0	---
21	---	---	1365.9	---	---	---	1364.6	---	---	---	---	---
22	1364.9	---	---	---	---	---	---	---	1364.8	---	---	---
23	---	---	---	1364.5	---	---	---	---	---	1366.0	---	---
24	---	---	---	1365.1	1364.7	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	1365.0	1366.3	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	1364.7	---	---	---	---	---	---	---	---	---
28	---	1364.9	---	---	---	---	---	1364.6	---	1365.2	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	1365.3	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

\* Solar Irradiance = Instantaneous values are cosine-corrected for any off-axis positioning of the sun in the telescope aperture.  
All values are normalized to 1 astronomical unit.



IMP 8 SOLAR WIND PLASMA  
DECEMBER 1996

MIT/CSR IMP 8 PLASMA PARAMETERS



IMP 8 MIT ONE-HOUR AVERAGES

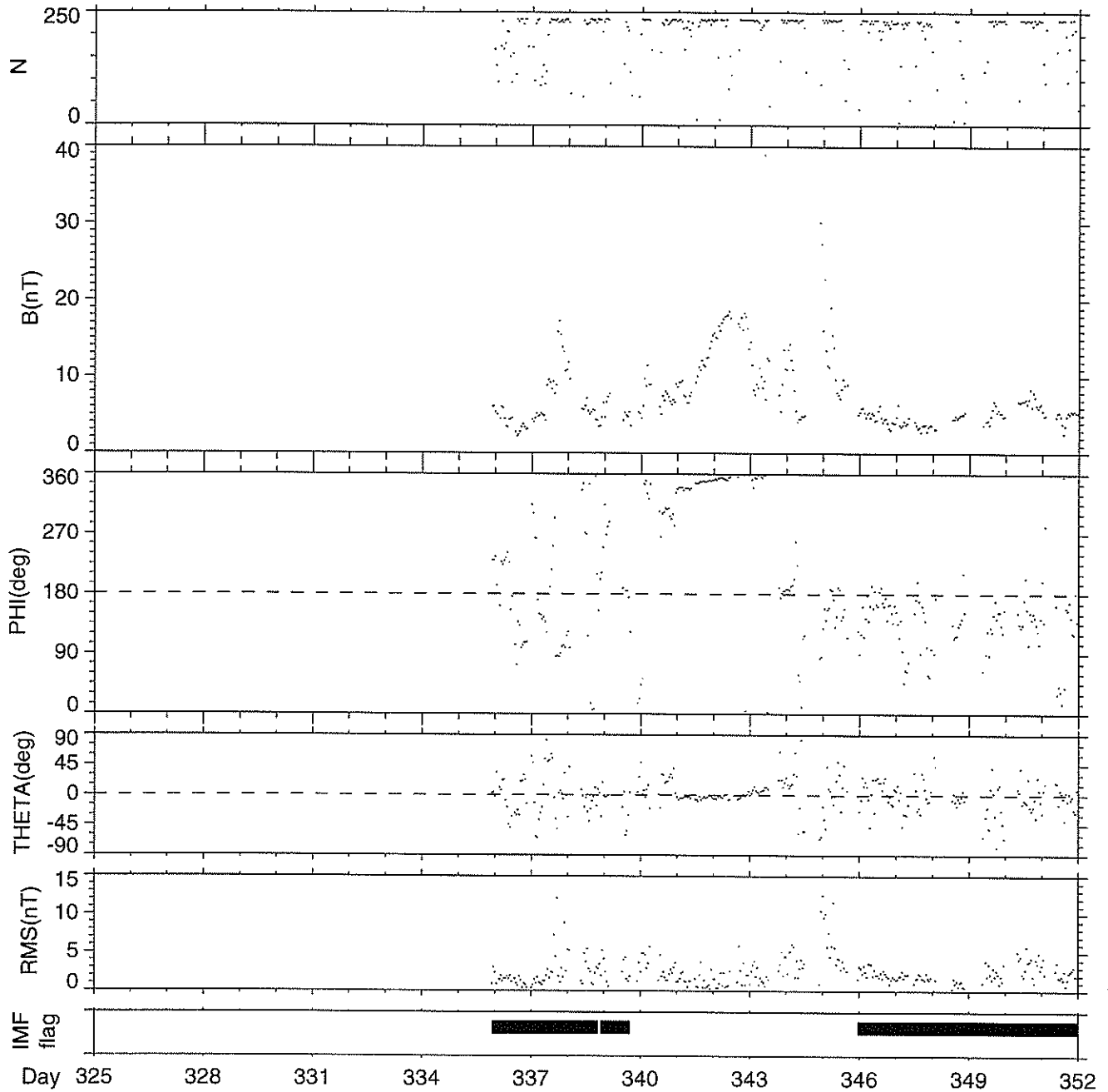
DEC 1996

IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 335 - 352

November 30 1996 - December 17 1996



Generation Date : Thu Jun 12 08:12:36 1997

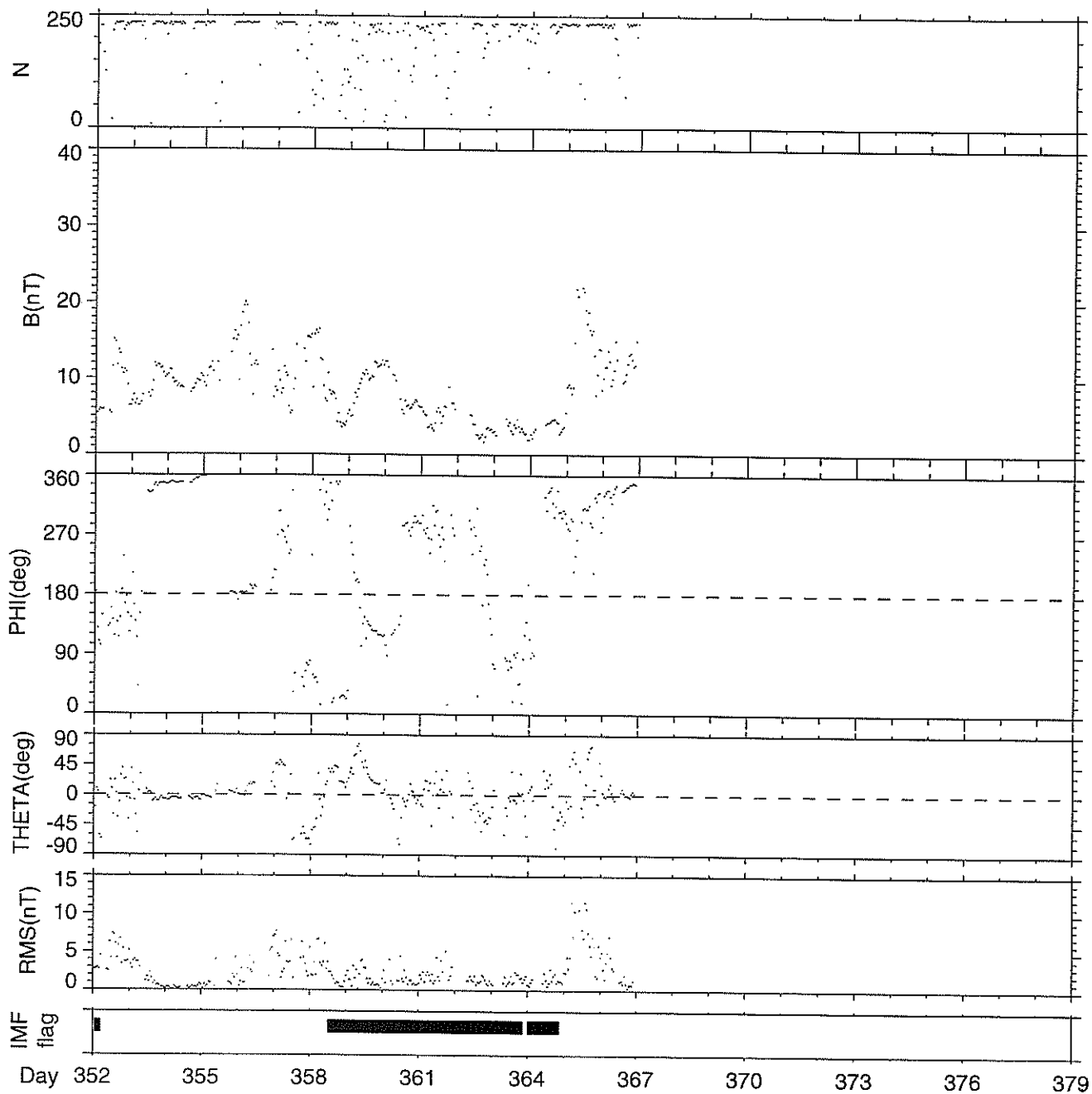
NOTE: The IMF "flag" (black boxes at the bottom of the plots) indicates where the interplanetary magnetic field regions are according to a dynamic model of the location of the bow shock. At all other times IMP-8 is in the magnetosphere.

### IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 352 - 366

December 17 1996 - December 31 1996



Generation Date : Thu Jun 12 08:12:37 1997

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.

# CONTENTS

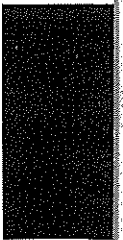
Comprehensive Reports

Number 634 Part II

## MISCELLANEOUS DATA

Page

TOTAL SOLAR IRRADIANCE from UARS ACRIM II October 1991-December 1996 Upper Atmosphere Research Satellite (UARS) Active Cavity Radiometer Irradiance Monitor Experiment (ACRIM II)	
Descriptive Text and Graph .....	28-29
Tables for October 1991-December 1996 .....	30-35



**Total Solar Irradiance (TSI) Results from the  
Upper Atmosphere Research Satellite (UARS)  
Active Cavity Radiometer Irradiance Monitor II Experiment  
(ACRIM II)**

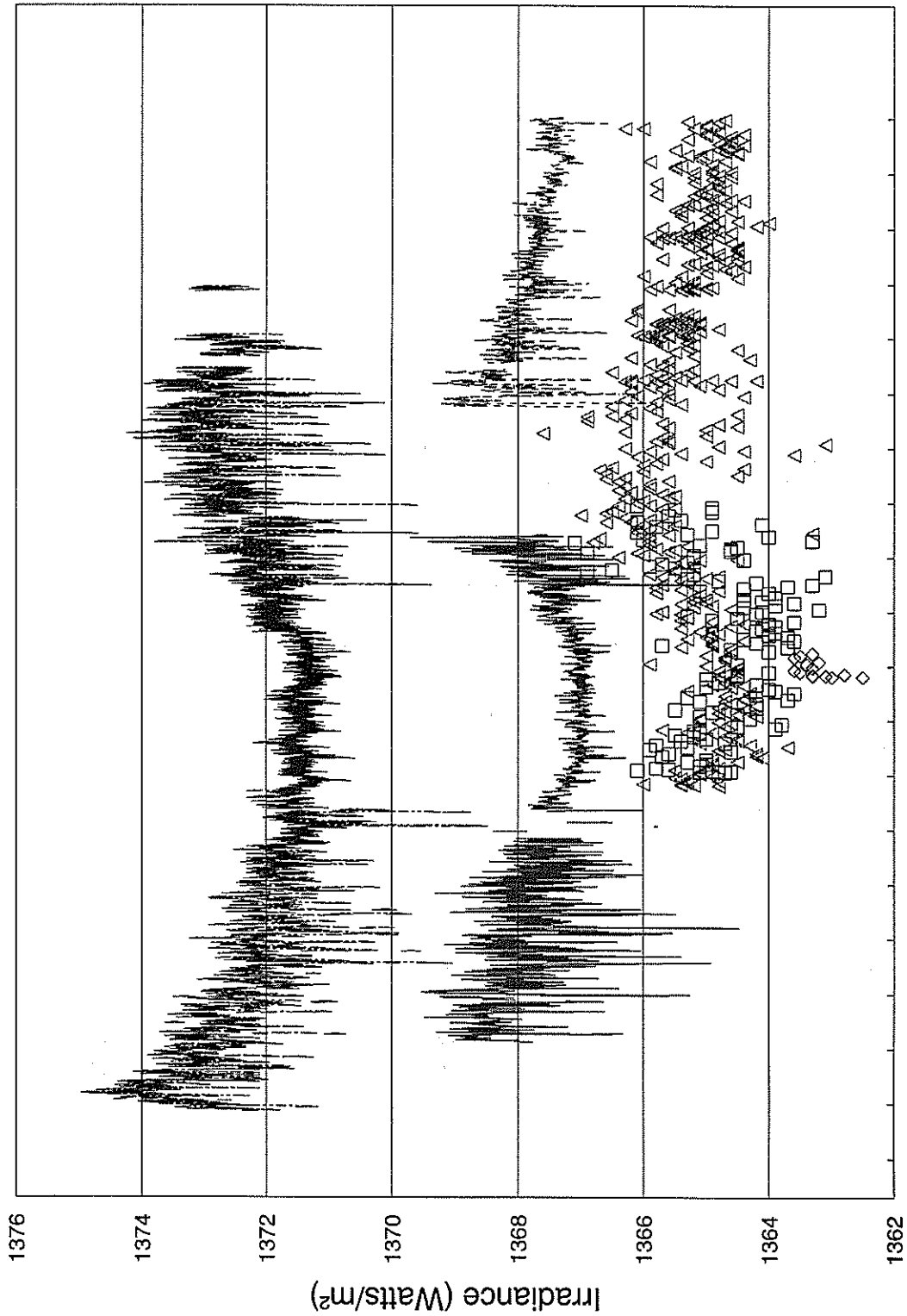
Dr. Richard C. Willson  
Center for Climate Systems Research  
Columbia University  
2845 Windfall Ave., Altadena, CA, 91001  
Phone: 818-398-9803 Fax: 818-398-6334  
E-mail: [acrim@primenet.com](mailto:acrim@primenet.com)  
ACRIM Web Homepage: <http://www.acrim.org>

The second Active Cavity Radiometer Irradiance Monitor experiment (ACRIM II) was launched in September 1991 as part of the science payload of the Upper Atmosphere Research Satellite (UARS). The UARS/ACRIM II results are shown in Figure 1. The variations on solar rotational and active region time scales are clearly seen. The large, short-term decreases are caused by the total solar irradiance (TSI) blocking effect of sunspots in magnetically active regions as they rotate through our view from Earth. The peaks of TSI preceding and following these sunspot 'dips' are caused by the faculae of solar active regions whose larger areal extent causes them to be seen first as the region rotates onto our side of the sun and last as they rotate over the opposite solar limb. The downward trend through the 1991-1997 period is similar in slope and amplitude to that observed by ACRIM I during the declining activity phase of solar cycle 21. From the peak of solar cycle 21 to its minimum the TSI decreased by about 0.08%. It appears likely from the ACRIM II results thus far that the cycle 22-23 minimum in TSI will occur during 1997, near the average solar cycle period of about 11 years after the cycle 21-22 minimum, and with a similar decrease relative to the maximum of cycle 22 in the 1990-1991 period.

The tabulated results of the ACRIM II experiment appear in the following tables. The digital files include four columns of data: year, month, day, mean daily TSI ( $W/m^2$ ) and uncertainty ( $W/m^2$ ). The data can be accessed at the NGDC web site <http://www.ngdc.noaa.gov/stp>. TSI is reported on 'ACRIM II native scale' defined by operation of sensor 'B', the full-time monitoring sensor. Results are reconciled to 1 A.U. and are fully corrected for sensor degradation.

# Total Solar Irradiance

Satellites: Nimbus 7, SMM, ERBS, NOAA 9, NOAA 10, UARS



+ NIMBUS 7 - SMM Δ ERBS □ NOAA 9 ◇ NOAA 10 -- UARS

1991 DAILY MEAN SOLAR IRRADIANCE  
UARS (ACRIM-II)

Units=W/m<sup>2</sup>

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1												1366.574
2												1366.721
3											1366.747	1366.669
4									1364.758		1366.657	1366.676
5									1365.241		1366.377	1366.541
6										1365.857	1366.250	1366.489
7										1366.361	1366.385	1366.346
8										1366.422	1366.455	1366.300
9										1366.799		1365.782
10										1366.775	1366.506	1365.587
11										1366.807	1366.055	1365.780
12										1366.532	1366.073	1365.997
13										1366.463	1366.200	1366.046
14										1366.388	1366.352	1365.921
15										1366.287	1366.580	1365.463
16										1366.442	1366.646	1365.236
17										1366.684	1366.711	1365.601
18										1366.864	1366.876	1365.934
19										1366.996	1366.899	1366.026
20										1366.871	1366.963	
21										1366.806	1366.910	1365.546
22										1366.692	1366.875	1365.096
23										1366.324	1366.797	1364.938
24										1365.633	1366.769	1364.700
25										1364.917	1366.779	1364.596
26											1366.648	1364.180
27										1363.884	1366.653	
28										1363.750	1366.638	1363.929
29										1363.945	1366.626	1364.033
30										1364.312	1366.614	1364.845
31										1364.921		1365.372

Jet Propulsion Lab

**1992 DAILY MEAN SOLAR IRRADIANCE  
UARS (ACRIM-II)**

Jet Propulsion Lab

Units=W/m<sup>2</sup>

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.682	1365.208	1366.720	1365.580	1365.895	1366.231		1365.842	1366.090	1365.732	1365.873	1365.692
2	1365.782	1365.398	1367.135	1366.154	1366.063	1365.981		1365.848	1366.094	1365.895	1365.905	1365.920
3	1365.442	1365.321	1367.127	1366.309	1366.229			1365.941	1366.149	1365.974	1365.895	1366.118
4		1365.639	1366.948	1366.189	1366.249			1365.984	1366.126	1366.046	1365.729	1366.158
5	1364.896	1365.824	1366.921	1366.073	1366.222			1366.125	1365.962	1365.919	1365.686	1365.988
6	1364.718	1365.949	1366.779	1366.053	1366.172			1366.019	1365.815	1365.819	1365.612	1365.966
7	1364.742	1366.185		1366.122	1366.200			1365.818	1365.976	1365.874	1365.454	1365.945
8	1365.037	1366.318	1366.667	1366.172	1366.137			1365.946	1366.336	1365.999	1365.321	1366.103
9	1365.365	1366.232	1366.530	1366.233	1366.147			1366.129	1366.386	1366.167	1365.151	1366.059
10	1365.664	1365.750	1366.489	1366.290	1366.266				1366.289	1366.237	1365.165	1365.643
11	1365.960	1365.540	1366.569	1366.250	1366.466			1366.335	1366.226	1366.271	1365.449	1365.348
12	1366.234	1365.512	1366.673	1366.271	1366.654			1366.286	1366.156	1366.254	1365.662	1365.196
13	1366.264	1365.618	1366.565	1366.230	1366.817			1366.163		1366.294	1365.770	1365.338
14	1366.244	1365.637	1366.409	1366.221	1366.776			1365.817	1365.991	1366.263	1365.824	1365.630
15	1366.287	1365.598	1366.297	1366.313	1366.761			1365.652	1366.047	1366.170	1365.998	1366.082
16	1366.228	1365.764	1366.434	1366.368	1366.836			1365.378	1365.861	1366.113	1366.156	1366.476
17	1366.229	1366.020	1366.573	1366.182	1366.926			1365.138	1365.940	1366.030	1366.198	1366.438
18	1366.284		1366.733	1366.039	1366.935			1364.975		1365.940	1366.084	1366.307
19	1366.355	1366.565	1366.850	1366.216	1366.700			1364.702	1366.117	1365.571	1366.013	1366.233
20	1366.348	1366.680	1366.848	1366.200	1366.419			1364.732	1366.028	1365.145	1365.940	1366.186
21	1366.377	1366.449	1366.812	1366.271	1366.159			1365.157	1365.759	1364.873	1365.803	1366.218
22	1366.379	1366.023	1366.677	1366.083	1365.986		1366.263	1365.594	1365.948	1364.810	1365.763	1366.135
23		1365.664	1366.706	1366.114	1365.973		1366.057	1365.879	1365.800	1364.995	1365.722	1366.193
24	1366.156	1365.345	1366.617	1366.174	1366.048		1365.953	1365.985	1365.906	1365.085	1365.882	1366.209
25	1366.166	1365.005	1366.396	1366.222	1366.172		1365.906	1365.960	1365.858	1364.904	1365.969	1366.118
26	1365.977		1366.089	1366.237	1366.179		1365.945	1365.940	1366.009	1364.819	1366.024	1365.935
27	1365.562	1365.312	1365.640	1366.254	1366.316		1365.934	1365.874	1365.729	1364.833	1365.909	1365.837
28	1365.285	1365.708	1365.193	1366.379	1366.348		1365.765	1365.909	1365.532	1364.872	1365.725	1365.822
29	1365.178	1366.269	1364.640	1366.256	1366.322		1365.773	1366.081	1365.543	1365.050	1365.659	1365.996
30	1364.917		1364.703	1366.035	1366.323		1365.730	1366.137	1365.606	1365.355	1365.544	1365.983
31	1364.874		1365.059		1366.243		1365.720	1366.108		1365.656		1366.013



1993 DAILY MEAN SOLAR IRRADIANCE  
UARS (ACRIM-II)

Jet Propulsion Lab

Units=W/m<sup>2</sup>

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.956	1365.872	1365.732	1365.858	1366.252	1365.781	1365.780	1365.992	1365.813	1364.706	1365.414	1365.514
2	1365.986	1365.761	1365.731	1365.849	1366.221	1365.743	1365.864	1366.113	1365.761	1364.497	1365.274	1365.647
3	1365.862	1365.778	1365.820	1365.853	1366.221	1365.721	1365.776	1366.085	1365.737	1364.508	1365.115	1365.759
4	1365.741	1365.411	1365.728	1365.801	1366.269	1365.930	1365.932	1366.008	1365.700	1364.694	1365.052	1365.812
5	1365.700	1365.062	1365.716	1365.788	1366.263	1365.878	1366.010	1366.010	1365.696	1364.690	1365.112	1365.740
6	1365.695	1364.954	1365.675	1365.509	1366.099	1365.640	1366.045	1366.045	1365.713	1364.927	1365.200	1365.613
7	1365.708	1364.696	1365.346	1365.519	1365.690	1365.694	1365.874	1365.874	1365.762	1365.187	1365.348	1365.511
8	1365.870	1364.389	1364.998	1365.621	1365.330	1365.743	1365.727	1365.727	1365.792	1365.478	1365.459	1365.680
9	1365.962	1364.485	1365.060	1365.693	1365.060	1365.806	1365.624	1365.624	1365.817	1365.566	1365.587	1365.680
10	1366.058	1364.489	1365.252	1365.889	1364.947	1365.772	1365.563	1365.626	1365.775	1365.621	1365.666	1365.847
11	1365.206	1364.819	1365.635	1365.980	1365.189	1365.855	1365.556	1365.727	1365.738	1365.696	1365.689	1365.928
12	1366.185	1365.209	1365.924	1366.025	1365.581	1365.769	1365.618	1365.814	1365.700	1365.680	1365.695	1365.779
13	1366.112	1365.636	1366.055	1366.024	1365.752	1365.691	1365.521	1365.821	1365.673	1365.644	1365.590	1365.649
14	1366.002	1365.838	1366.075	1366.075	1366.045	1365.688	1365.496	1365.802	1365.740	1365.668	1365.665	1365.502
15	1366.175	1366.118	1366.000	1365.979	1366.010	1365.728	1365.435	1365.800	1365.833	1365.684	1365.422	1365.502
16	1366.112	1366.138	1365.915	1365.978	1365.978	1365.808	1365.587	1365.780	1365.898	1365.725	1365.165	1365.425
17	1366.002	1365.947	1365.970	1365.916	1365.916	1365.822	1365.723	1365.835	1365.986	1365.788	1365.082	1365.434
18	1366.030	1365.903	1365.968	1365.916	1365.916	1365.914	1365.763	1365.864	1365.986	1365.838	1364.917	1365.387
19	1365.998	1365.980	1365.974	1365.980	1365.980	1366.003	1365.794	1365.907	1365.986	1365.810	1364.784	1365.585
20	1366.050	1365.878	1365.922	1366.058	1366.058	1365.951	1365.756	1365.937	1365.937	1365.690	1365.028	1365.579
21	1366.029	1365.846	1366.082	1365.542	1366.093	1365.988	1365.613	1365.935	1365.935	1365.567	1365.242	1365.598
22	1365.955	1365.500	1365.943	1365.684	1366.030	1366.033	1365.771	1365.873	1365.625	1365.543	1365.439	1365.499
23	1366.006	1365.355	1365.909	1365.811	1366.016	1366.055	1365.901	1365.842	1365.694	1365.524	1365.551	1365.428
24	1366.014	1365.446	1365.948	1365.868	1366.072	1365.950	1366.088	1365.825	1365.566	1365.585	1365.366	1365.273
25	1366.002	1365.792	1366.083	1366.127	1366.099	1365.994	1366.068	1365.895	1365.482	1365.796	1365.321	1365.043
26	1365.957	1365.775	1366.175	1366.240	1366.058	1366.133	1365.917	1365.917	1365.431	1365.693	1365.432	1364.915
27	1365.890	1365.752	1366.158	1366.362	1366.031	1366.106	1365.877	1365.877	1365.435	1365.631	1365.634	1365.066
28	1365.992	1365.756	1365.945	1366.383	1365.838	1365.937	1366.031	1365.878	1365.356	1365.620	1365.690	1365.291
29	1366.049	1366.269	1365.928	1366.389	1365.772	1365.866	1365.998	1365.900	1365.276	1365.631	1365.645	1365.480
30	1365.968	1365.937	1365.937	1366.294	1365.671	1365.735	1365.971	1365.943	1364.995	1365.571	1365.642	1365.589
31	1365.901	1365.926	1365.926	1365.926	1365.585	1365.995	1365.908	1365.908	1365.522	1365.522	1365.522	1365.501

**1994 DAILY MEAN SOLAR IRRADIANCE  
UARS (ACRIM-II)**

Jet Propulsion Lab Units=W/m<sup>2</sup>

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.087	1365.882	1365.771	1365.669	1365.457	1365.449	1365.323	1365.686	1365.388	1365.514	1365.395	1365.523
2	1364.712	1365.830	1365.677	1365.707	1365.416	1365.464	1365.357	1365.773	1365.288	1365.481	1365.471	1365.491
3	1364.674	1365.792	1365.723	1365.584	1365.472	1365.515	1365.407	1365.751	1365.205	1365.490	1365.553	1365.481
4	1364.713	1365.677	1365.735	1365.566	1365.454	1365.499	1365.509	1365.661	1365.110	1365.423	1365.523	1365.439
5		1365.614	1365.630	1365.461	1365.505	1365.505	1365.560	1365.589	1365.091	1365.429	1365.533	1365.438
6	1364.998	1365.465	1365.557	1365.422	1365.525	1365.545	1365.648	1365.598	1365.151	1365.438	1365.521	1365.520
7		1365.350	1365.498	1365.456	1365.589	1365.587	1365.647	1365.601	1365.143	1365.434	1365.421	1365.505
8	1365.566	1365.406	1365.497	1365.493	1365.602	1365.667	1365.565	1365.600	1365.318	1365.469	1365.516	1365.488
9	1365.333	1365.343	1365.403	1365.540	1365.617	1365.690	1365.539	1365.561	1365.425	1365.441	1365.544	1365.445
10	1365.305	1365.236	1365.455	1365.564	1365.663	1365.689	1365.593	1365.529	1365.478	1365.454	1365.546	1365.310
11	1365.254	1365.213	1365.524	1365.607	1365.684	1365.641	1365.668	1365.570	1365.454	1365.479	1365.564	1365.129
12	1365.368	1365.381	1365.579	1365.565	1365.685	1365.608	1365.840	1365.532	1365.478	1365.348	1365.580	1364.737
13	1365.493	1365.604	1365.639	1365.560	1365.622	1365.663	1365.894	1365.384	1365.496	1365.313	1365.530	1364.915
14	1365.551	1365.717	1365.488	1365.588	1365.664	1365.772	1365.805	1365.225	1365.470	1365.255	1365.576	1364.827
15	1365.565	1365.727	1365.590	1365.631	1365.589	1365.812	1365.668	1365.339	1365.472	1365.225	1365.557	1365.040
16	1365.468	1365.658		1365.730	1365.536	1365.807	1365.618	1365.385	1365.460	1365.162	1365.546	1365.108
17	1365.422	1365.548		1365.740	1365.534	1365.846	1365.609	1365.479	1365.420	1365.194	1365.533	1365.311
18	1365.314	1365.461		1365.756	1365.560	1365.785	1365.637	1365.556	1365.495	1365.244	1365.463	1365.484
19	1365.202	1365.421	1365.565	1365.647	1365.545	1365.767	1365.563	1365.509	1365.426	1365.582	1365.461	1365.481
20	1365.142	1365.639	1365.803	1365.716	1365.651	1365.666	1365.475	1365.470	1365.438	1365.444	1365.315	1365.434
21	1365.040	1365.872	1365.893	1365.567	1365.703	1365.633	1365.406	1365.538	1365.474	1365.436	1365.442	1365.412
22	1365.031	1365.999	1365.794	1365.622	1365.757	1365.555	1365.370	1365.551	1365.505	1365.505	1365.463	1365.357
23	1365.215	1366.021		1365.662	1365.730	1365.550	1365.344	1365.519	1365.484	1365.529	1365.479	1365.308
24	1365.269	1366.036	1365.910	1365.661	1365.555	1365.523	1365.380	1365.488	1365.480	1365.522	1365.473	1365.384
25	1365.489	1365.949	1365.777	1365.686	1365.515	1365.498	1365.478	1365.515		1365.507	1365.411	1365.423
26	1365.755	1365.923	1365.866		1365.542	1365.527	1365.537	1365.515	1365.541	1365.590	1365.383	1365.489
27	1366.027	1365.729	1365.807	1365.678	1365.460	1365.514	1365.572	1365.577	1365.623	1365.628	1365.383	
28	1366.004	1365.746	1365.774	1365.656	1365.398	1365.547	1365.591	1365.593	1365.570	1365.545	1365.459	1365.551
29	1365.932	1366.269	1365.761	1365.625	1365.420	1365.529	1365.579	1365.577	1365.586	1365.451	1365.537	1365.438
30	1365.847		1365.691	1365.580	1365.384	1365.369	1365.651	1365.595	1365.568	1365.356	1365.542	1365.384
31	1365.827		1365.751			1365.693	1365.511			1365.349		1365.351



**1996 DAILY MEAN SOLAR IRRADIANCE  
UARS (ACRIM-II)**

Jet Propulsion Lab Day	Units=W/m <sup>2</sup>											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.169	1365.190		1364.965	1365.071	1365.509	1365.468	1364.899	1365.397	1365.234	1365.125	
2	1365.194			1364.919	1365.230	1365.508	1365.503	1364.934	1365.331	1365.159		
3	1365.111			1365.014	1365.213	1365.587	1365.453	1364.910		1365.130	1365.175	1365.417
4	1364.989		1365.025	1365.100	1365.208	1365.645	1365.426	1364.901	1364.969	1365.235	1365.159	1365.450
5	1365.007		1364.843	1364.988	1365.210	1365.660	1365.394	1365.248	1365.187	1365.145	1365.095	1365.389
6	1365.100			1364.930	1365.213	1365.549	1365.345	1365.308	1365.170	1365.108	1365.173	1365.466
7	1365.084		1364.767	1365.011	1365.189	1365.489	1365.356	1365.334	1365.217	1365.095	1365.136	1365.330
8	1365.088		1364.870	1364.985		1365.517	1365.098	1365.332	1365.218	1365.176	1365.150	1365.314
9			1364.920	1364.978		1365.434	1364.997	1365.180	1365.218	1365.218	1365.184	1365.312
10	1365.120			1364.912	1365.150	1365.384	1365.072	1365.229	1365.228	1364.913	1365.173	1365.331
11			1365.000	1364.885	1365.181	1365.379	1365.167	1365.276	1365.169	1365.109	1365.196	
12			1364.821	1365.000	1365.204	1365.333	1365.305	1365.389	1365.171		1365.320	1365.345
13			1364.900	1365.024		1365.323	1365.275	1365.507	1365.217	1365.061	1365.313	1365.585
14		1365.245	1364.929	1364.952		1365.303	1365.189	1365.443	1365.230	1365.150	1365.286	1365.600
15		1365.225	1364.904	1365.040		1365.213	1365.219	1365.370	1365.198	1365.144	1365.403	1365.463
16			1365.047	1364.996	1365.279	1365.182	1365.208	1365.355	1365.178	1365.103	1365.330	1365.397
17		1365.252	1365.117	1365.038	1365.310	1365.180	1365.160	1365.314		1365.190	1365.466	
18		1365.217	1365.131	1364.994	1365.293	1365.139	1365.166	1365.209	1365.284	1365.227	1365.419	1365.431
19		1365.187	1365.138	1365.098	1365.297	1365.174	1365.178	1365.168	1365.273	1365.294	1365.327	1365.446
20		1365.232	1365.050	1365.024	1365.066	1365.176	1365.157	1365.152	1365.297	1365.355	1365.423	1365.555
21		1365.270	1365.064	1364.908	1365.199	1365.175	1365.116	1365.152	1365.415	1365.275	1365.451	1365.521
22		1365.262	1365.007	1365.025	1364.983	1365.158		1365.143	1365.488	1365.303	1365.350	1365.515
23		1365.239	1364.988	1364.973		1365.126		1365.215	1365.499	1365.293	1365.008	1365.221
24		1365.166	1364.983	1365.014		1365.188		1365.320	1365.416	1365.329	1364.694	1365.308
25		1365.181	1365.029	1365.045	1365.148	1365.267		1365.421	1365.451	1365.344	1364.399	1365.169
26			1365.042	1365.052		1365.178		1365.425	1365.425	1365.306	1364.380	1365.228
27		1365.148	1365.014	1365.031		1365.250		1365.378	1365.380		1364.678	1365.245
28	1365.074	1365.166	1365.069	1365.048		1365.307		1365.345		1365.272	1364.803	1365.100
29	1365.206	1365.127	1365.010	1365.057	1365.238	1365.425		1365.309	1365.364	1365.165	1365.120	1365.182
30	1365.161		1364.974	1365.051	1365.294	1365.412		1365.314	1365.357	1365.166		1365.086
31	1365.160		1364.924		1365.484		1364.947	1365.303		1365.126		1365.217



**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."