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Number 640

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H α SOLAR FLARES

JUNE 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0001	MEUD	01	0645	0720	0758	S30	E40	8048	06	4.4	73	1F		C	0720	150	2.3	
0002	SVTO	01	1133	1137U	1140D	S31	E35	8048	06	4.2	7D	SF	2	E		12		
0003	MEUD	01	1201		1203	S30	E40	8048	06	4.6	2			C				
0004	RAMY	01	1617	1621	1642	S30	E34	8048	06	4.3	25	SF	3	E		19		
		02	0926		0959	No Flare Patrol												
0005	KANZ	03	0802	0802	0806	S29	E13	8048	06	4.3	4	SF	2	C				
		04	2006		2011	No Flare Patrol												
		04	2045		2124	No Flare Patrol												
		04	2207		2242	No Flare Patrol												
		05	0233		0253	No Flare Patrol												
		05	2259		2308	No Flare Patrol												
		05	2338		2348	No Flare Patrol												
		06	0158		0210	No Flare Patrol												
		06	0350		0612	No Flare Patrol												
		06	0653		0659	No Flare Patrol												
		06	0733		0734	No Flare Patrol												
		06	0937		1034	No Flare Patrol												
		06	1036		1042	No Flare Patrol												
		06	1203		1218	No Flare Patrol												
		06	1248		1253	No Flare Patrol												
		06	1340		1346	No Flare Patrol												
		06	1352		1436	No Flare Patrol												
		06	1615		1627	No Flare Patrol												
		06	1733		1821	No Flare Patrol												
		06	1831		1837	No Flare Patrol												
		06	1917		1930	No Flare Patrol												
		06	1955		2017	No Flare Patrol												
		06	2308		2321	No Flare Patrol												
		07	0751		0805	No Flare Patrol												
		07	0847		1010	No Flare Patrol												
0006	KANZ	07	1320E	1320U	1328	S31	W45	8048	06	4.0	8D	SF	2	C				
		07	2057		2400	No Flare Patrol												
		08	0000		0353	No Flare Patrol												
		08	1948		1959	No Flare Patrol												
		08	2006		2007	No Flare Patrol												
		08	2152		2203	No Flare Patrol												
		08	2226		2234	No Flare Patrol												
		09	0109		0124	No Flare Patrol												
		09	0146		0631	No Flare Patrol												
		09	0915		0941	No Flare Patrol												
0007	KANZ	09	0942E	0942U	0950	N32	E49	8050	06	13.3	8D	SF	2	C				
0008	KANZ	09	1036	1040	1044	S30	W72	8048	06	3.8	8	SF	2	C				
		10	0644		0649	No Flare Patrol												
		10	2153		2202	No Flare Patrol												
		10	2216		2244	No Flare Patrol												
		11	0202		0606	No Flare Patrol												
		11	0726		0734	No Flare Patrol												
		11	0804		0810	No Flare Patrol												
		11	0856		0859	No Flare Patrol												
		11	0953		1000	No Flare Patrol												
		11	1002		1010	No Flare Patrol												
		11	1055		1059	No Flare Patrol												
0009	KANZ	12	0559E	0559U	0615	N17	E51	8052	06	16.1	16D	SF	2	C				
0010	KANZ	12	1103	1103	1111	N17	E46	8052	06	15.9	8	SF	2	C				
		12	1933		1959	No Flare Patrol												
		12	2007		2043	No Flare Patrol												

H α SOLAR FLARES

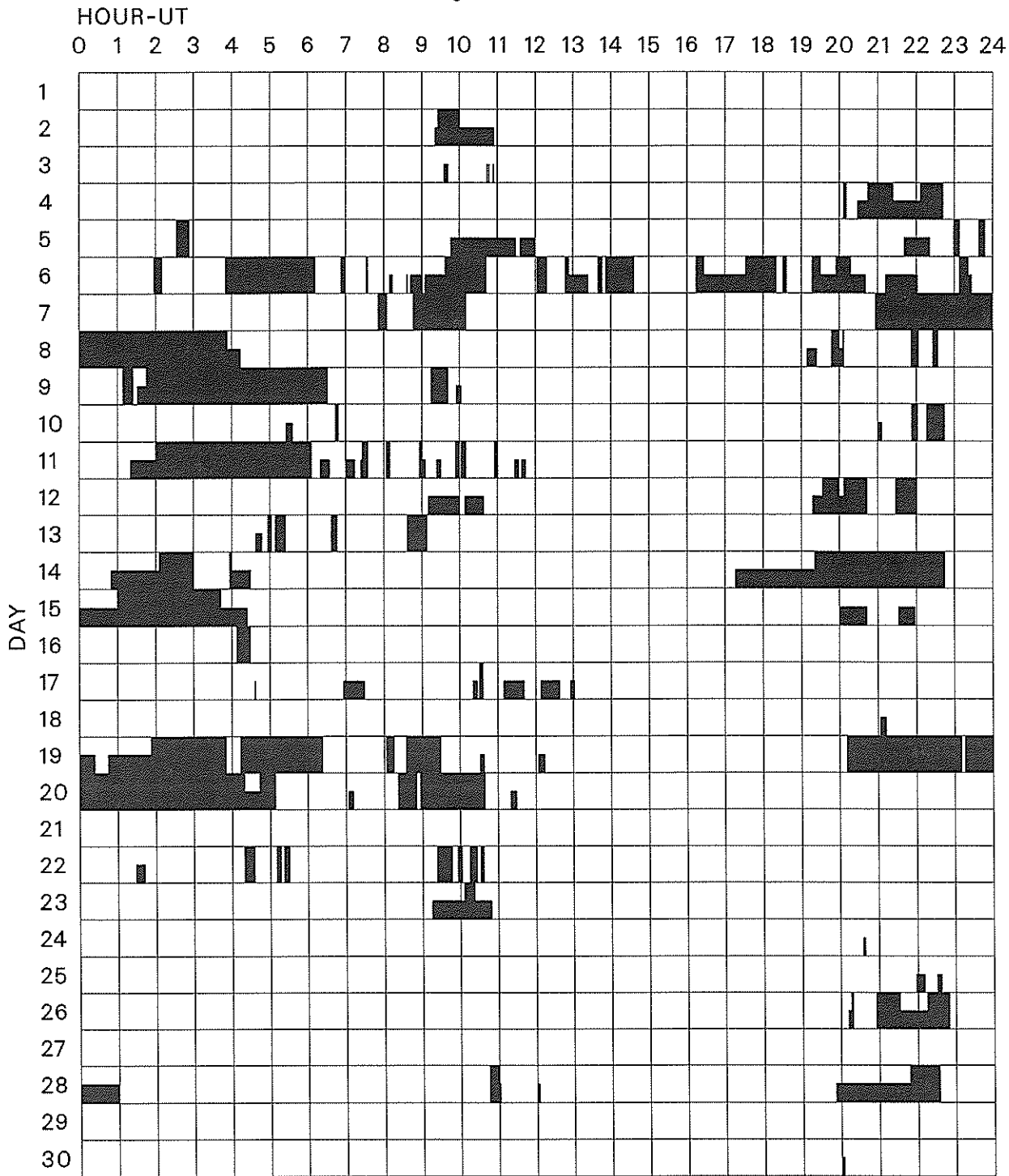
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Jun 97

JUNE 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks	
																	Apparent (10-6 Disk)	Corr (Sq Deg)		
			12 2128		2201			No Flare Patrol												
			13 0457		0503			No Flare Patrol												
			13 0509		0525			No Flare Patrol												
			13 0637		0646			No Flare Patrol												
			13 0837		0908			No Flare Patrol												
			14 0206		0258			No Flare Patrol												
			14 0357		0359			No Flare Patrol												
			14 1921		2244			No Flare Patrol												
			15 0101		0342			No Flare Patrol												
			16 0408		0429			No Flare Patrol												
0011	LEAR	17	0545	0546	0551	N17	W19	8052	06	15.8	6	SF		3	E		11		H	
			17 1031		1037			No Flare Patrol												
			19 0152		0350			No Flare Patrol												
			19 0414		0623			No Flare Patrol												
			19 0803		0815			No Flare Patrol												
			19 0835		0929			No Flare Patrol												
			19 2011		2310			No Flare Patrol												
			19 2316		2400			No Flare Patrol												
			20 0000		0419			No Flare Patrol												
			20 0443		0508			No Flare Patrol												
			20 0822		0851			No Flare Patrol												
			20 0857		1039			No Flare Patrol												
0012	KANZ	21	1033E	1037	1049	S28	W72		06	15.8	16D	SF		2	C					
			22 0419		0435			No Flare Patrol												
			22 0510		0516			No Flare Patrol												
			22 0522		0530			No Flare Patrol												
			22 0923		0947			No Flare Patrol												
			22 0956		1002			No Flare Patrol												
			22 1015		1026			No Flare Patrol												
			22 1032		1037			No Flare Patrol												
			23 1006		1022			No Flare Patrol												
			26 2016		2019			No Flare Patrol												
			26 2055		2132			No Flare Patrol												
			26 2215		2249			No Flare Patrol												
0013	LEAR	28	0653	0654	0659	N23	W55	8056	06	24.0	6	SF		3	E		13			
			28 1045		1059			No Flare Patrol												
0014	KANZ	28	1119E	1123	1147	N31	E18	8057	06	29.9	28D	SF		2	C					
0015	KANZ	28	1241E	1241U	1245D	N18	W58	8056	06	24.1	4D	SF		2	C					
0016	HOLL	28	2127	2130	2140	N31	E13	8057	06	29.9	13	SF		3	E		1			
			28 2147		2234			No Flare Patrol												
0017	HOLL	29	2345	2347		N17	W82	8056	06	23.7		SF		3	E		20			
0018	LEAR	30	0318	0320	0324	N29	W01	8057	06	30.0	6	SF		3	E		16			

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

JUNE 1997

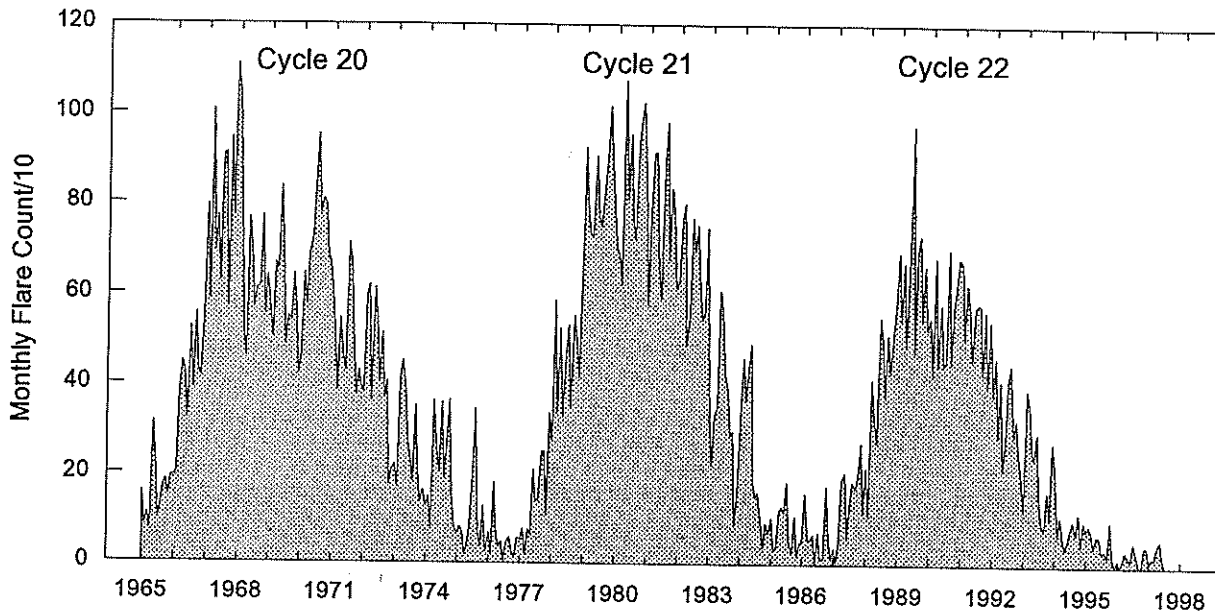


Times of no flare patrol, shown here as shaded areas, combine reports from the stations listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind (neither visual nor cinematographic); portions of a panel with only the bottom half shaded mark times of only visual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

- | | | | |
|-----------|-------------|--------|------------|
| Bucharest | Kanzelhoehe | Meudon | San Vito |
| Holloman | Kharkov | Mitaka | Voroshilov |
| Hurbanovo | Learmonth | Ramey | |

Monthly Counts of Grouped Solar Flares Jan 1965 - Jun 1997

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Jun 97



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							168

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

8
Jun 97

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

JUNE 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	235	CUBA	44 NS	1320.0E		510.0D		7.0				
		280	CUBA	44 NS	1320.0E		510.0D		13.0			
02	127	TORN	43 NS	1130.0		170.0U		1.0		V=1,DISTURBED		
		235	CUBA	44 NS	1300.0E		470.0D		10.0			
			280	CUBA	44 NS	1300.0E		470.0D		15.0		
		33	UPIC	2 S/F	0759.3	0759.8	0.7					
			33	UPIC	2 S/F	1518.3	1518.6	0.7				
03	127	TORN	43 NS	0720.0	0858.1	166.0	40.0			V=1		
		245	SVTO	43 NS	1052.0	1052.0	U	68.0			QL=2 ST=2 TYP=1	
	245		SGMR	43 NS	1052.0	1052.0	44.0	76.0			QL=4 ST=2 TYP=1	
	235	CUBA	44 NS	1250.0E		475.0D		17.0				
		280	CUBA	44 NS	1250.0E		475.0D		23.0			
	245	PALÉ	44 NS	2006.0E	2026.0	54.0D	79.0				QL=4 ST=2 TYP=1	
		245	SGMR	43 NS	2008.0	2025.0	104.0	91.0			QL=4 ST=2 TYP=1	
04	127	TORN	43 NS	0623.0		94.0		3.0		V=3,UNCERTAIN		
		235	CUBA	44 NS	1300.0E		530.0D		8.0			
			280	CUBA	44 NS	1300.0E		530.0D		13.0		
		33	UPIC	4 S/F	0744.5	0745.1	0.8					
05	127	TORN	43 NS	0652.0		488.0		4.0		V=1		
		235	CUBA	44 NS	1300.0E		530.0D		11.0			
			280	CUBA	44 NS	1300.0E		530.0D		15.0		
		245	SGMR	43 NS	1441.0	1504.0	24.0	88.0				QL=4 ST=2 TYP=1
			245	SGMR	43 NS	1540.0	1540.0	6.0	58.0			QL=4 ST=3 TYP=1
		245	SVTO	8 S	1504.0	1504.0	1.0	65.0				QL=2 ST=2 TYP=3
06	280	CUBA	44 NS	1300.0E		530.0D		15.0				
		235	CUBA	44 NS	1300.0E		530.0D		9.0			
	245	LEAR	8 S	0751.0	0751.0	1.0	73.0				QL=4 ST=2 TYP=3	
		245	SVTO	8 S	0751.0	0751.0	1.0	96.0			QL=2 ST=2 TYP=3	
	245	SGMR	8 S	1344.0	1344.0	U	65.0				QL=4 ST=2 TYP=3	
		245	SVTO	8 S	1344.0	1344.0	U	64.0			QL=2 ST=2 TYP=3	
	245	SGMR	8 S	1358.0	1358.0	1.0	50.0				QL=4 ST=2 TYP=3	
07	280	CUBA	43 NS	1635.0		315.0D		12.0				
		235	CUBA	43 NS	1635.0		315.0D		6.0			
	33	UPIC	1 S	0748.1	0748.3	0.7						
		33	UPIC	2 S/F	1510.8	1511.1	0.5					
	33	UPIC	2 S/F	1722.9	1723.1	0.4						
08	33	UPIC	1 S	1734.1	1734.3	0.4						
11	245	SGMR	8 S	1443.0	1443.0	U	65.0			QL=4 ST=2 TYP=3		
17	33	UPIC	3 S	0934.1	0934.2	0.3						
		33	UPIC	4 S/F	1731.5	1731.6	0.9					
20	33	UPIC	4 S/F	1250.1	1250.5	0.8						
		33	UPIC	1 S	1425.6	1425.7	0.4					
26	280	CUBA	44 NS	1300.0E		530.0D		13.0				
		235	CUBA	44 NS	1300.0E		530.0D		10.0			
27	235	CUBA	44 NS	1300.0E		245.0D		8.0				
		280	CUBA	44 NS	1300.0E		245.0D		12.0			
28	200	HIRA	8 S	0303.5	0303.7	0.6	26.0			0		
		HIRA	42 SER	0429.6	0431.0	2.0	30.0			0		
		HIRA	8 S	0557.2	0557.5	1.0	11.0			0		
		HIRA	42 SER	0606.2	0607.2	1.4	31.0			0		
		245	LEAR	8 S	0607.0	0607.0	U	31.0				QL=4 ST=2 TYP=3
			200	HIRA	8 S	0645.5	0645.7	0.9	7.0			WL
		200	HIRA	42 SER	0650.2	0650.4	1.6	11.0			WL	
		200	HIRA	42 SER	0734.2	0735.1	2.0	9.0			WR	
		33	UPIC	3 S	0955.4	0955.5	0.5					
		127	TORN	42 SER	1116.0	1125.1	10.0	20.0				

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

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Jun 97

JUNE 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		
28	127 TORN	4 S/F	1116.0	1117.7	6.0	50.0	20.0		
	33 UPIC	42 SER	1116.7	1117.9	10.7				
	33 UPIC	1 S	1249.4	1249.6	0.7				
	33 UPIC	3 S	1251.2	1251.3	0.4				
	127 TORN	4 S/F	1432.6	1435.1	3.0				
29	2800 PENT	1 S	2344.4	2346.2	4.8	5.0			
	2840 PEKG	4 S/F	2345.0	2349.0	4.0	4.8			
	5730 IRKU	20 GRF	2345.0	2354.4	26.5	4.0		U	
30	200 HIRA	46 C	0315.5	0317.2	2.7	22.0	4.0		WL

Reports are received routinely from the following observatories:

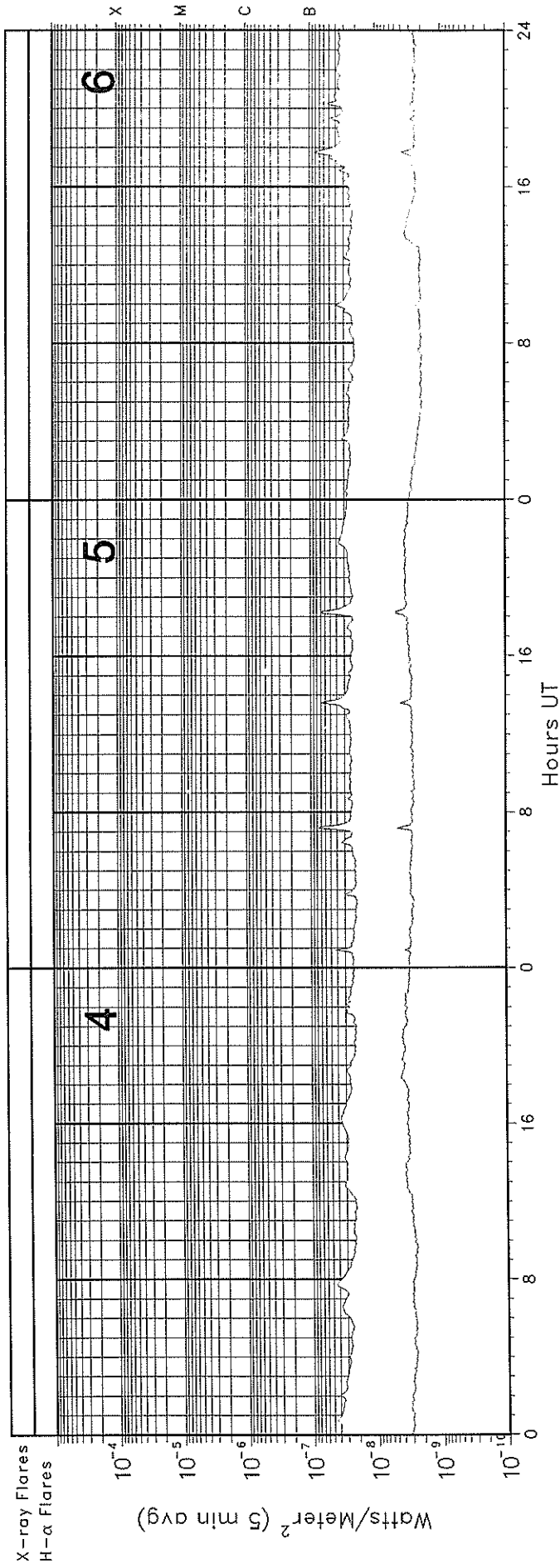
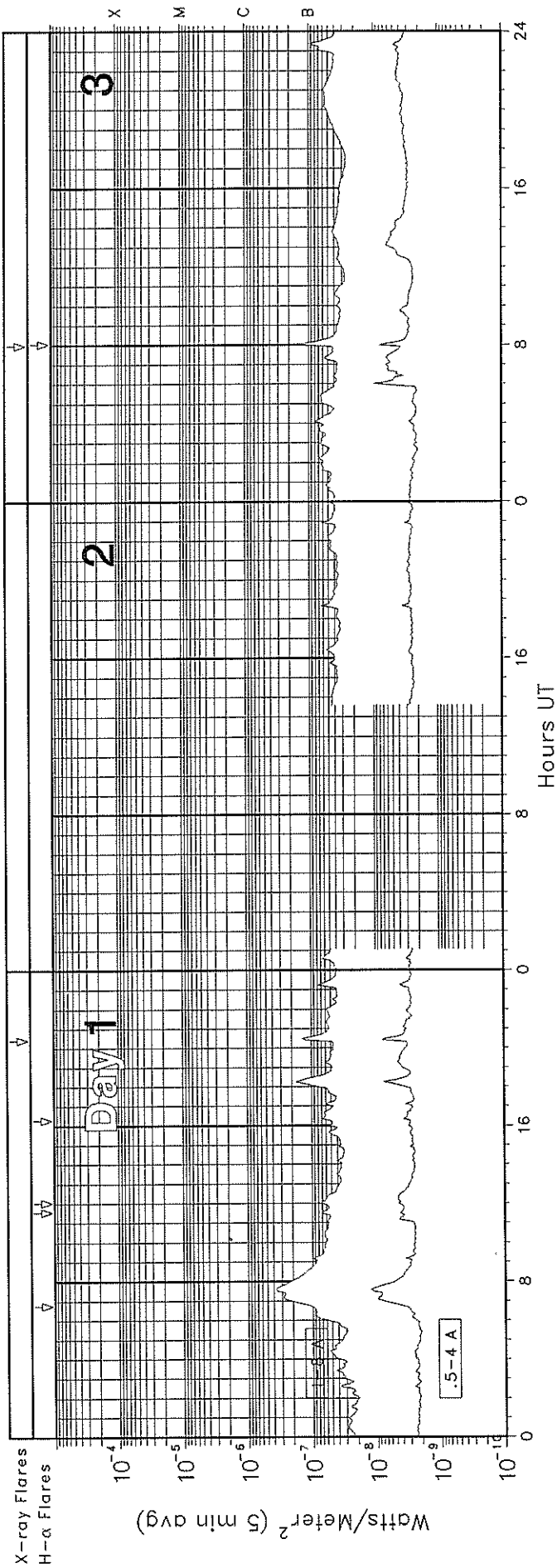
BERN = Berne	HUMN = Humain	ONDR = Ondrejov	SVTO = San Vito
CRIM = Crimea	IZMI = IZMIRAN	PEKG = Peking	TORN = Torun
CUBA = Havana	KISV = Kislovodsk	PALE = Palehua	TRST = Trieste
GORK = Gorky	KRAK = Krakow	PENT = Penticton	TYKW = Toyokawa
HIRA = Hiraiso	LEAR = Learmonth	POTS = Potsdam	UPIC = Upice
HUAN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

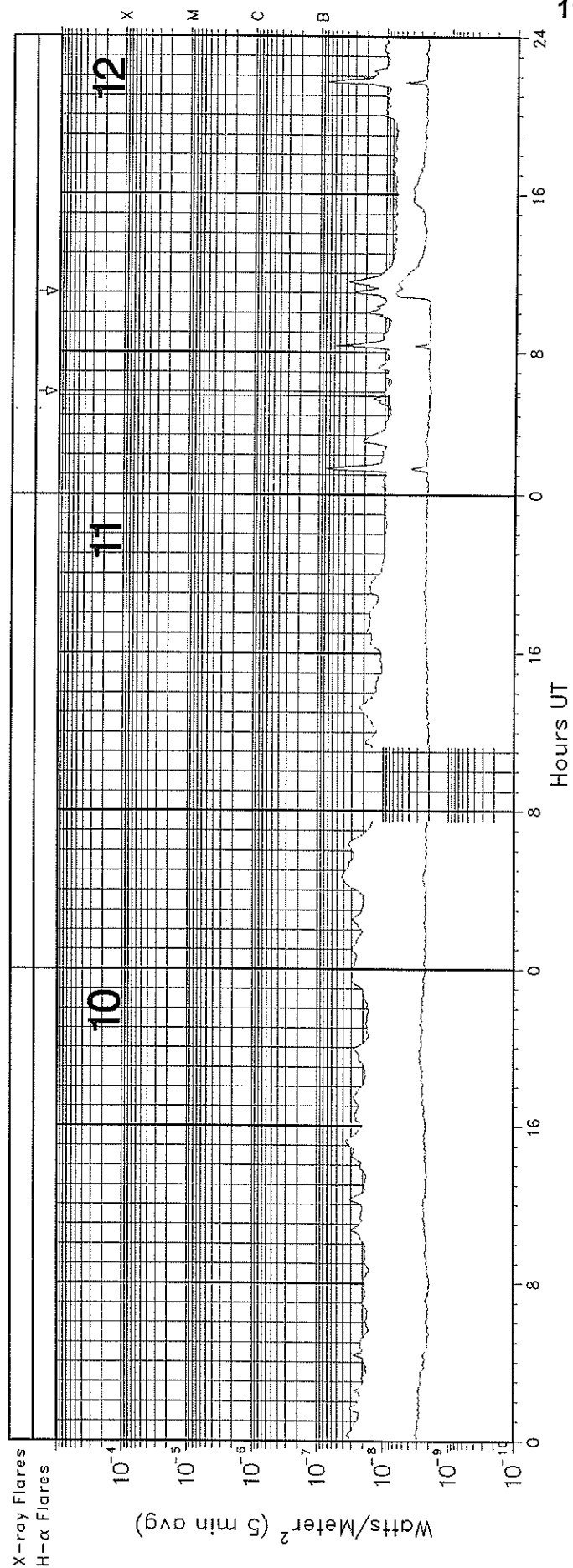
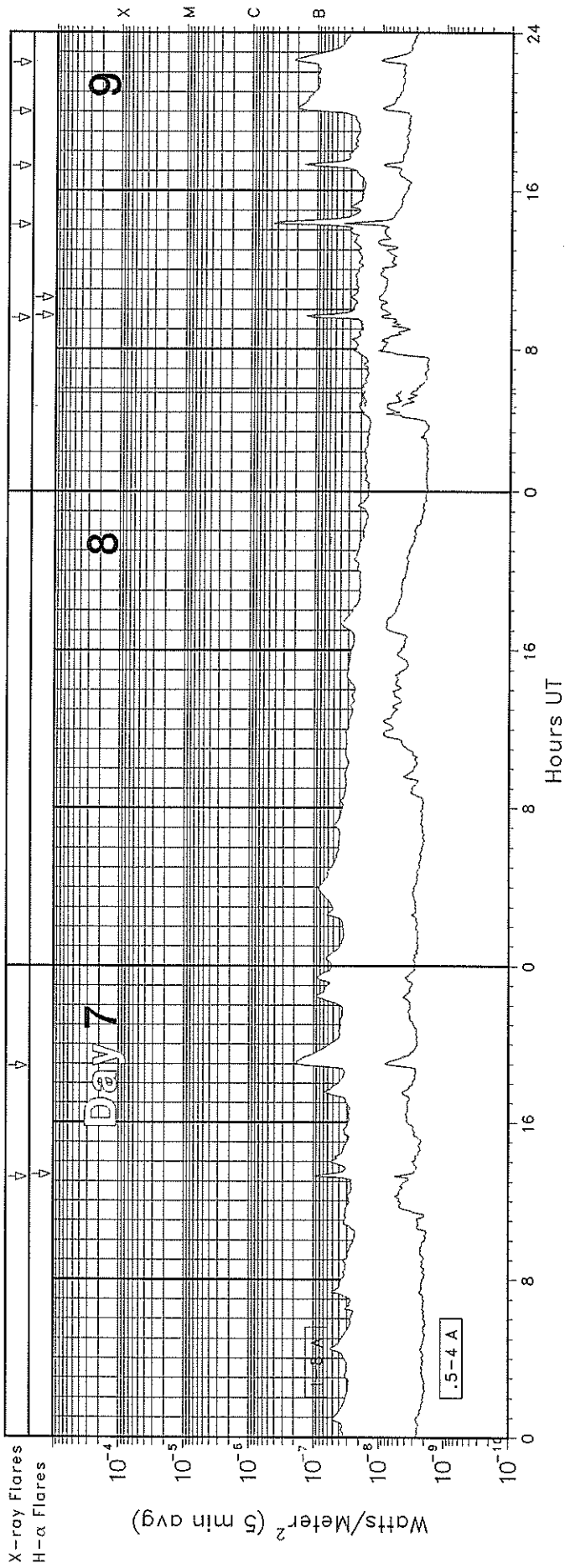
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; Hiraiso, Japan 500 and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

GOES X-RAY DETECTOR June 1997



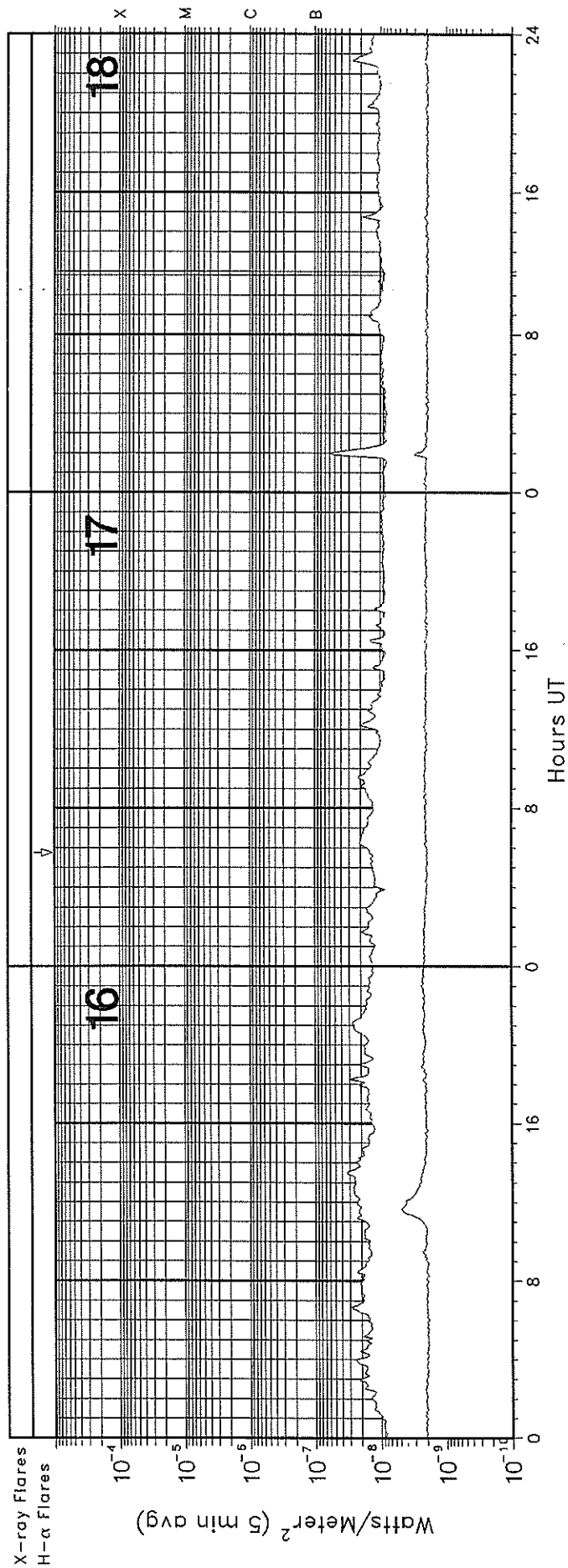
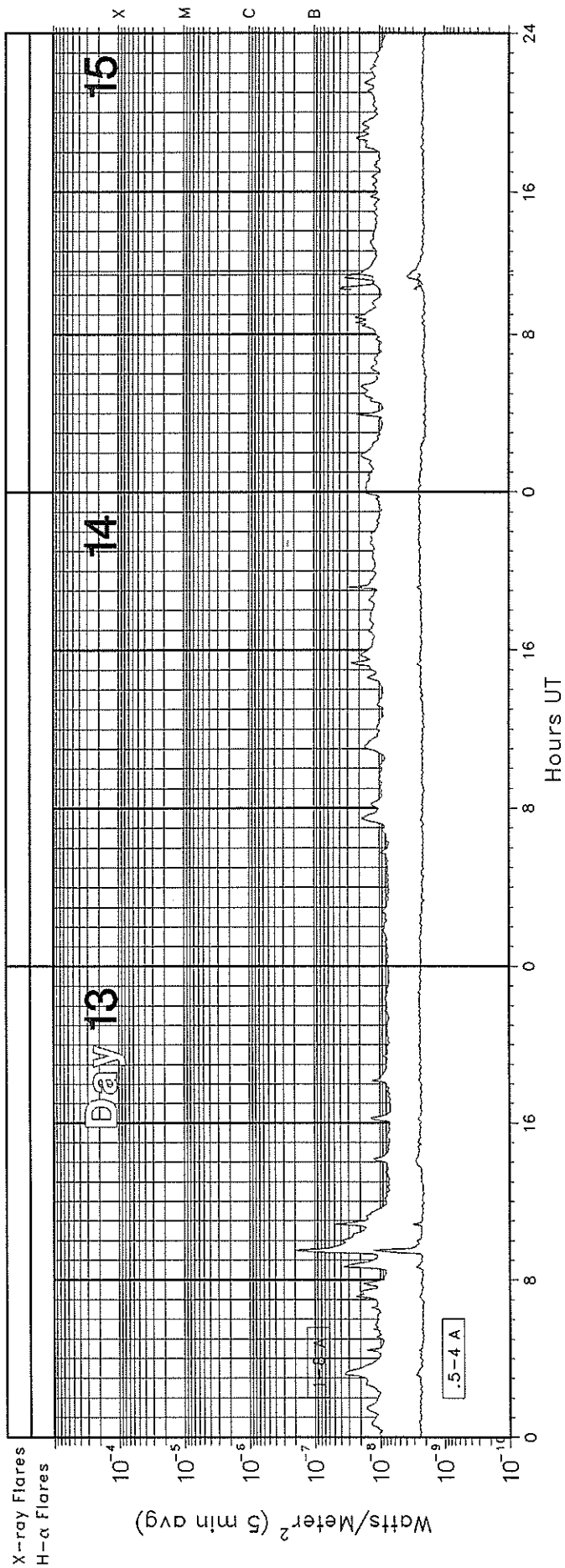
GOES X-RAY DETECTOR

June 1997



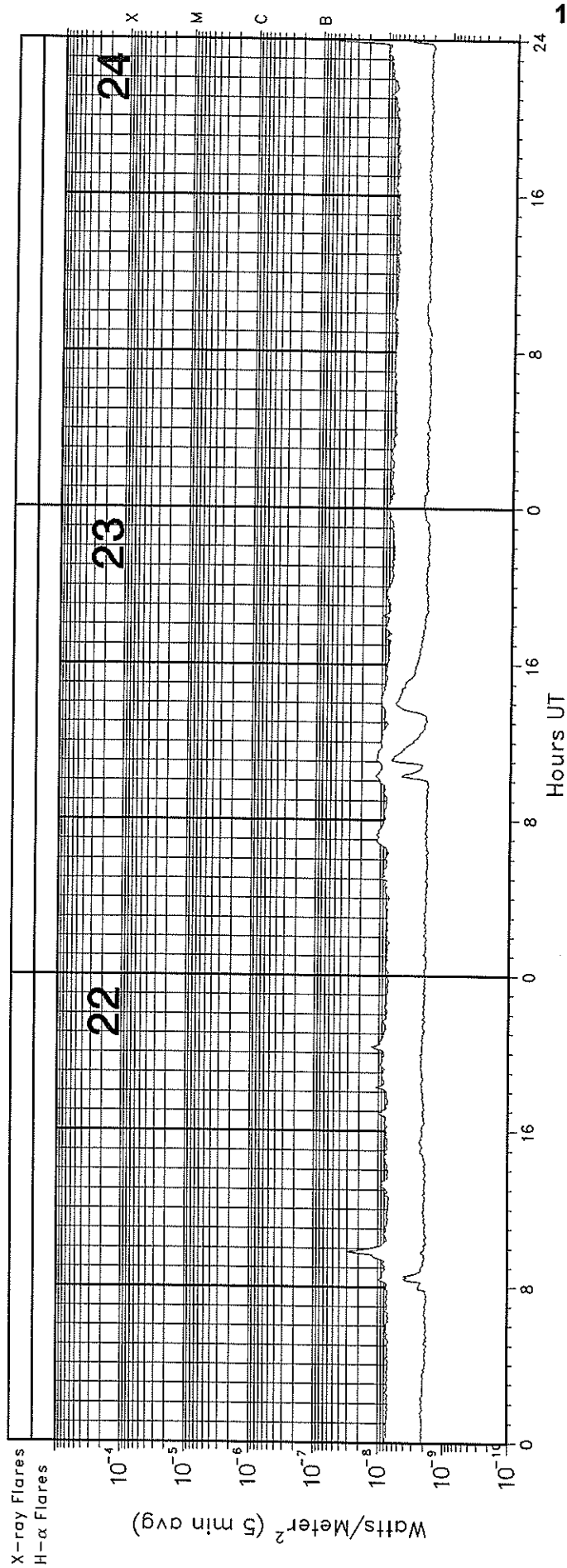
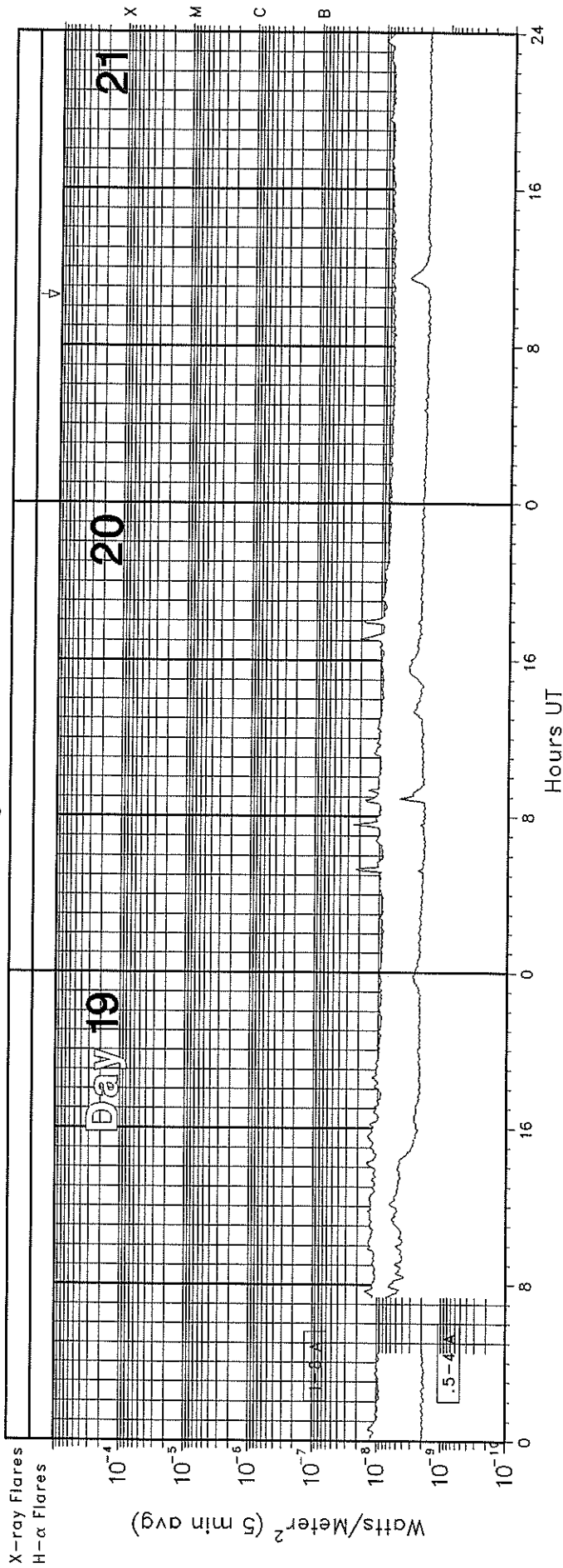
GOES X-RAY DETECTOR

June 1997



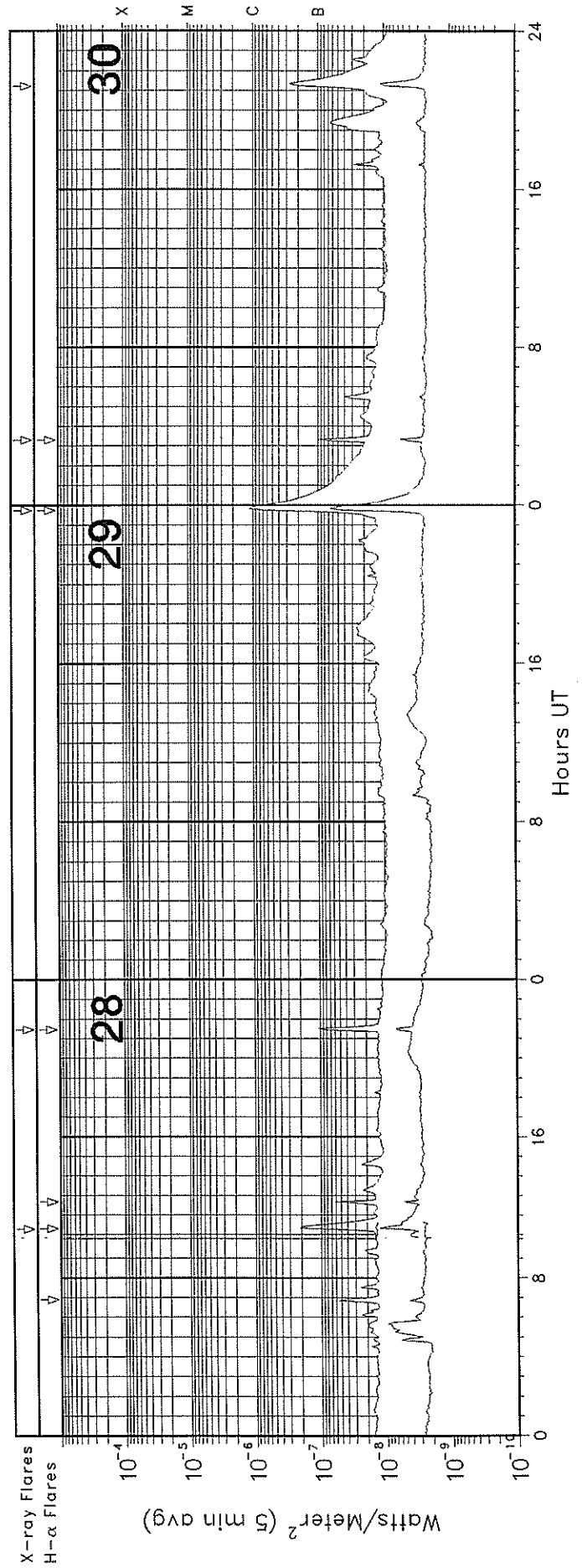
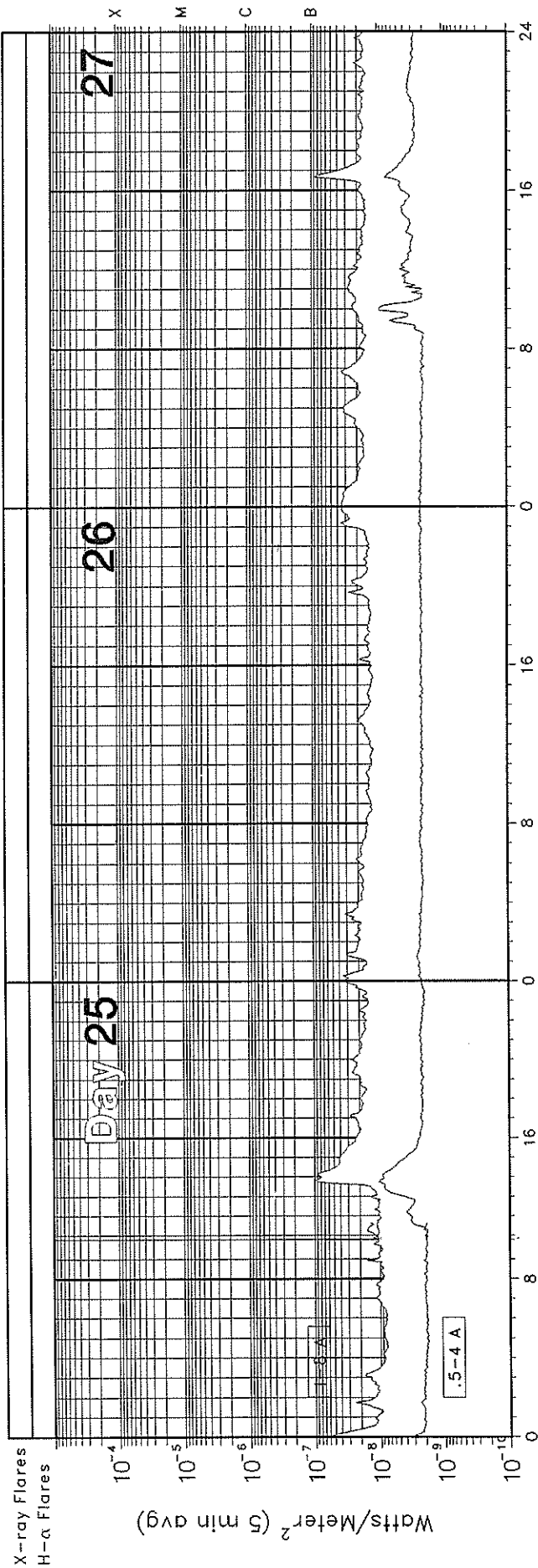
GOES X-RAY DETECTOR

June 1997



GOES X-RAY DETECTOR

June 1997



GOES SOLAR X-RAY FLARES
 Preliminary Listing

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 Jun 97

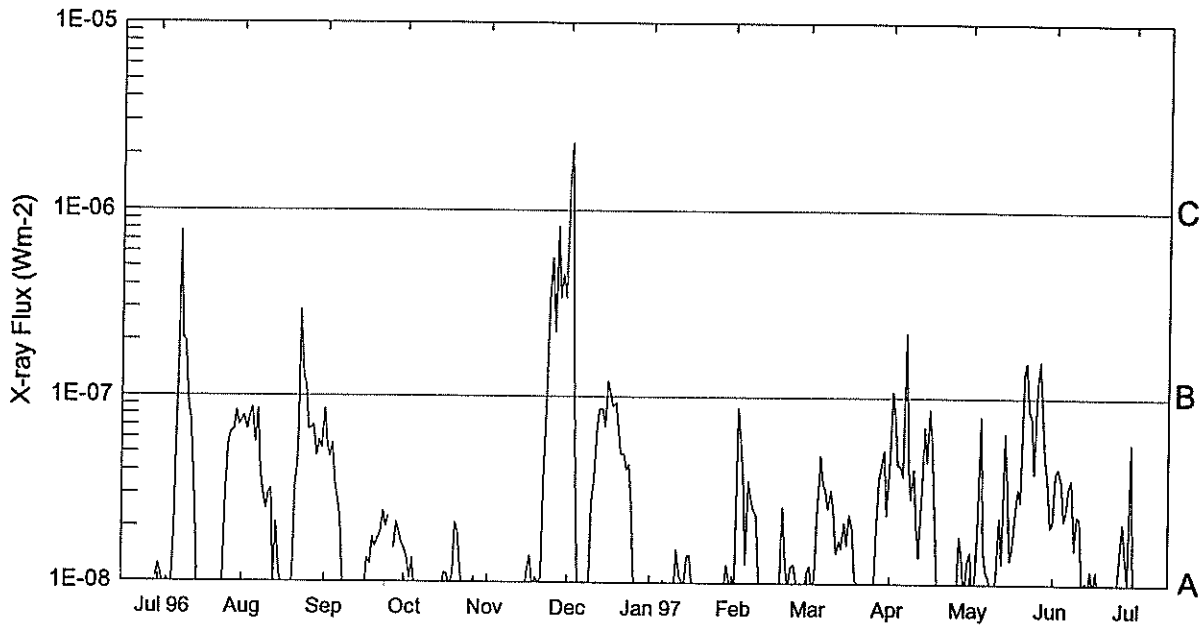
June 1997

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
01	2024	2028	2036				B1.5	
03	0758	0802	0809				B1.3	
07	1313	1316	1322				B1.0	
07	1853	1905	1925				B1.8	
09	0934	0940	0944				B1.7	
09	1416	1422	1429				B5.0	
09	1715	1720	1723				B2.1	

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/USAF Region
09	2001	2013	2040				B2.0	
09	2229	2238	2247				B2.3	
28	1117	1124	1131				B2.1	
28	2127	2130	2140	N31	E13	SF	B1.5	8057
29	2345	2347	2401	N17	W82	SF	C1.1	8056
30	0318	0320	0328	N29	W01	SF	B1.4	8057
30	2112	2121	2130				B2.8	

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 Jul 96 - Jun 97



Day	Jul 96	Aug	Sep	Oct	Nov	Dec	Jan 97	Feb	Mar	Apr	May	Jun
1	A1.2	A7.4	A8.5	A1.5	<A1.0	C1.3	<A1.0	<A1.0	A1.1	A4.6	A1.4	A2.2
2	A1.1	A7.7	A5.5	A1.3	<A1.0	C2.3	<A1.0	<A1.0	A1.2	B1.0	<A1.0	A4.0
3	<A1.0	A6.6	A4.7	A1.0	<A1.0	B2.4	<A1.0	A8.7	<A1.0	A7.9	A1.0	A4.2
4	A1.0	A7.8	A5.5	A1.3	<A1.0	A3.7	<A1.0	A5.9	A1.0	A4.3	A1.8	A3.6
5	<A1.0	A8.5	A3.2	<A1.0	<A1.0	<A1.0	<A1.0	A3.8	A2.3	A4.3	A7.9	A2.2
6	A1.0	A5.6	A2.7	<A1.0	<A1.0	<A1.0	A1.0	A1.2	A4.9	A3.8	A1.5	A2.5
7	A1.8	A8.4	A2.1	<A1.0	<A1.0	<A1.0	<A1.0	A3.5	A3.4	B2.2	A1.1	A3.3
8	B1.2	A4.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A2.7	A3.2	A4.1	A1.1	A3.6
9	B7.7	A3.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A2.4	A2.5	A2.8	<A1.0	A1.5
10	B2.0	A2.4	<A1.0	<A1.0	<A1.0	A2.7	<A1.0	A2.3	A3.2	A4.1	<A1.0	A2.3
11	B1.9	A3.0	<A1.0	<A1.0	<A1.0	A3.6	A1.5	A1.1	A2.4	A2.0	A1.1	A2.2
12	A9.0	A3.1	<A1.0	<A1.0	<A1.0	A6.7	A1.0	<A1.0	A1.4	A1.4	A2.2	<A1.0
13	A7.4	<A1.0	<A1.0	<A1.0	<A1.0	A8.5	A1.0	<A1.0	A1.7	A3.2	A1.2	A1.0
14	A3.9	A2.1	<A1.0	<A1.0	<A1.0	A8.5	<A1.0	<A1.0	A1.5	A6.9	A6.4	<A1.0
15	A1.5	A1.1	<A1.0	<A1.0	<A1.0	A6.8	A1.4	<A1.0	A2.1	A4.5	A3.3	A1.2
16	<A1.0	<A1.0	<A1.0	A1.1	A1.1	B1.2	A1.4	<A1.0	A1.6	A8.6	A1.3	<A1.0
17	<A1.0	<A1.0	A1.3	A1.1	A1.3	B1.0	<A1.0	<A1.0	A2.3	A5.5	A1.5	A1.1
18	<A1.0	<A1.0	A1.2	<A1.0	<A1.0	B8.9	<A1.0	<A1.0	A1.9	A1.9	A2.5	<A1.0
19	<A1.0	<A1.0	A1.7	A1.1	A1.0	A9.2	<A1.0	<A1.0	A1.0	<A1.0	A3.2	<A1.0
20	<A1.0	A1.0	A1.5	A2.1	A1.0	A6.7	<A1.0	A2.5	A1.0	<A1.0	A2.7	<A1.0
21	<A1.0	A3.3	A1.7	A1.8	A1.0	A4.9	<A1.0	A1.2	<A1.0	<A1.0	B1.3	<A1.0
22	<A1.0	A4.3	A1.8	A1.2	A3.3	A4.9	<A1.0	<A1.0	<A1.0	<A1.0	B1.5	<A1.0
23	<A1.0	B2.9	A2.4	<A1.0	B1.0	A4.0	<A1.0	A1.2	<A1.0	<A1.0	A8.5	<A1.0
24	<A1.0	B1.2	A1.9	<A1.0	B3.3	A4.3	<A1.0	A1.2	<A1.0	<A1.0	A7.8	<A1.0
25	<A1.0	B1.1	A2.2	<A1.0	B5.5	A2.6	<A1.0	A1.0	<A1.0	<A1.0	A3.9	<A1.0
26	A3.1	A6.6	---	<A1.0	B2.2	A1.0	<A1.0	<A1.0	<A1.0	<A1.0	B1.1	A1.4
27	A5.5	A6.7	A1.5	A1.0	B8.2	<A1.0	<A1.0	<A1.0	A2.0	A1.8	B1.5	A2.1
28	A6.4	A6.9	A2.1	<A1.0	B3.3	<A1.0	<A1.0	<A1.0	A3.7	A1.4	A8.4	A1.4
29	A6.5	A4.7	A1.8	<A1.0	B4.5	<A1.0	<A1.0		A4.3	<A1.0	A4.8	A1.0
30	A8.3	A5.7	A1.6	<A1.0	B3.4	<A1.0	A1.2		A5.2	A1.3	A3.6	A5.7
31	A7.0	A5.2		<A1.0		<A1.0	<A1.0		A2.3		A2.0	

ACTIVE PROMINENCES AND FILAMENTS

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Jun 97

JUNE 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
01	ADF	0300E	0931	S35	E44	06	4.6	1	07	6	7	E	LEAR	8048	
01	AFS	0443E	0931	S30	E39	06	4.3		02	9	9	E	LEAR	8048	
01	AFS	0452E	1458	S30	E38	06	4.2		03	9	9	E	SVTO	8048	
01	ADF	0458E	1048D	S34	E43	06	4.6	1	03	9	9	E	SVTO	8048	
01	AFS	1021E	2212	S29	E35	06	4.2		02	9	9	E	RAMY	8048	
01	ADF	1228E	2212	N26	E21	06	3.1	1	06	9	9	E	RAMY	8047	
01	DSD	1357E	1715D	N24	E15	06	2.7		01	9	9	E	RAMY	8047	
01	ADF	1445E	1458	N21	E13	06	2.6	1	08	9	9	E	SVTO	8047	
01	DSD	1458	1715D	S28	E31	06	4.0		04	9	9	E	RAMY	8048	
02	AFS	0850E	1627	S29	E22	06	4.1		04	9	9	E	SVTO	8048	
02	AFS	1010E	2200	S29	E22	06	4.1		02	9	9	E	RAMY	8048	
02	AFS	1212E	0159	S29	E21	06	4.1		03	9	6	E	HOLL	8048	
02	ASR	1356E	1627	N37	E85	06	9.4			9	9	E	SVTO		
02	DSD	1544E	1618	S31	E21	06	4.3		03	9	9	E	HOLL	8048	
03	AFS	0540E	1452	S28	E12	06	4.2		02	9	9	E	SVTO	8048	
03	AFS	0620E	1452	N05	E10	06	4.0		01	9	9	E	SVTO		
03	AFS	0830E	0852	S30	E09	06	4.1		02	7	6	E	LEAR	8048	
03	ADF	0858E	1452	S31	E16	06	4.6	2	10	9	9	E	SVTO	8048	
03	ADF	1104E	1334D	S35	E11	06	4.3	1	06	8	7	E	RAMY	8048	
03	ADF	1207E	1426D	S22	W28	06	1.3	1	05	7	6	E	RAMY	8049	
03	AFS	1212E	0151	S28	E07	06	4.0		03	6	7	E	HOLL	8048	
03	DSF	1240U	1414U	S30	E07	06	4.1		07	0	0	E	SVTO	8048	
03	ADF	1244E	0151	S36	E20	06	5.1	1	10	8	7	E	HOLL	8048	
03	ADF	1351E	1549D	S36	E16	06	4.9	1	04	0	0	E	RAMY	8048	
03	ADF	2014E	2034	S34	E07	06	4.4	1	04	9	9	E	RAMY	8048	
03	ADF	2014E	2034	S34	E07	06	4.4	1	04	9	9	E	RAMY	8048	
03	DSF	2044U	1047U	S31	E09	06	4.6	2	05	0	0	E	RAMY	8048	
04	DSD	0916E	1315D	S26	W07	06	3.8		02	7	7	E	SVTO	8048	
04	ADF	0920E	1201D	S33	W03	06	4.1	1	04	8	6	E	SVTO	8048	
04	ADF	1318E	2206	S37	W04	06	4.2	1	04	9	9	E	RAMY	8048	
04	ADF	1525E	1730	S33	W08	06	4.0	1	05	9	9	E	SVTO	8048	
04	ADF	1533E	2028	S33	W03	06	4.4	1	10	8	7	E	HOLL	8048	
05	DSD	0713	0715	S33	W14	06	4.2		05	8	5	E	LEAR	8048	
05	ADF	0713	0925	S32	W13	06	4.3		05	8	5	E	LEAR	8048	
05	ADF	0715E	0945	S35	W11	06	4.4	1	12	9	9	E	SVTO	8048	
05	DSD	1030E	1245D	S27	W24	06	3.6		02	9	9	E	RAMY	8048	
05	DSD	1337E	1917D	S28	W14	06	4.5		03	9	9	E	RAMY	8048	
05	ADF	1430E	0023	S35	W13	06	4.6	1	06	9	9	E	HOLL	8048	
05	ADF	1858E	2231	S33	W23	06	4.0	1	06	8	8	E	RAMY	8048	
05	DSF	2115U	1315U	S35	W17	06	4.5	2	08	0	0	E	RAMY	8048	
06	DSF	0023U	1822U	S34	W19	06	4.5	2	07	0	0	E	HOLL	8048	
06	ADF	0245E	0645D	S35	W25	06	4.1		07	5	5	E	LEAR	8048	
06	DSD	0850E	1440D	S27	W24	06	4.5		02	9	9	E	SVTO	8048	
06	ADF	1520E	1614	S29	W33	06	4.0	1	12	9	9	E	SVTO	8048	
07	DSD	0605	0610	S26	W50	06	3.4		05	5	5	E	LEAR	8048	
07	AFS	1317E	1524D	S29	W46	06	3.9		02	9	9	E	SVTO	8048	
07	ADF	1332E	1756	S29	W48	06	3.8	1	08	9	9	E	RAMY	8048	
07	ADF	1400E	1524D	S29	W46	06	4.0	1	09	9	9	E	SVTO	8048	
07	DSD	1718	1745	S30	W49	06	3.9		04	9	9	E	RAMY	8048	
07	BSD	1727	1750	S31	W44	06	4.2		02	9	9	E	RAMY	8048	
07	DSD	1856E	1928	S28	W47	06	4.1		02	9	9	E	RAMY	8048	
08	DSD	0525E	0559D	N22	E02	06	8.4		01	9	9	E	SVTO		
08	AFS	0540E	1651	S27	W56	06	3.9		02	9	9	E	SVTO	8048	
08	AFS	0614E	0730D	N21	E02	06	8.4		01	9	9	E	SVTO		
08	DSD	1424E	2002D	S29	W59	06	4.0		02	9	9	E	RAMY	8048	
08	DSD	1724E	2002D	N29	E60	06	13.4		02	9	9	E	RAMY	8048	
08	AFS	2150E	0145	N21	W07	06	8.4		01	5	5	E	HOLL	8051	
09	ASR	1950E	2215D	N35	W90	06	2.6			9	9	E	HOLL	8047	
09	APR	2216E	0200	N35	W90	06	2.7			8	7	E	HOLL	8047	
10	ASR	2134	0201	S76	W33	06	7.8	1		0	0	E	HOLL	8048	

ACTIVE PROMINENCES AND FILAMENTS

JUNE 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
11	DSD	1105E	1921D	N26	E23	06 13.2		01	9	9	E	RAMY	8050	
12	AFS	0005E	0925	N07	E66	06 16.9		01	9	9	E	LEAR		
12	DSD	0109E	0140D	N11	E55	06 16.2		03	0	0	E	LEAR		
12	DSD	0109E	0140D	N11	E65	06 16.9		03	0	0	E	LEAR		
12	AFS	0420E	1725	N15	E55	06 16.3		02	9	9	E	SVTO	8052	
12	ADF	1044E	1725	N32	E13	06 13.5	2	04	9	9	E	SVTO	8050	
12	AFS	1045E	1515D	N31	E10	06 13.2		01	9	9	E	SVTO	8050	
12	DSD	1142E	1316D	N18	E47	06 16.1		01	6	7	E	RAMY	8052	
12	AFS	1211E	0147	N17	E45	06 15.9		02	6	6	E	HOLL	8052	
12	ADF	1211E	0147	N31	E11	06 13.4	1	03	6	5	E	HOLL	8050	
12	ADF	1358E	2006	N34	E15	06 13.8	1	05	9	8	E	RAMY	8050	
13	DSD	0448E	0620D	N29	E00	06 13.2		02	9	9	E	SVTO	8050	
13	AFS	1015E	1610	N18	E35	06 16.1		01	9	9	E	RAMY	8052	
13	AFS	1125E	1520	N16	E35	06 16.1		01	9	9	E	SVTO	8052	
13	AFS	1221E	0205	N18	E32	06 15.9		01	8	9	E	HOLL	8052	
13	AFS	1433E	1520	N29	W03	06 13.4		01	9	9	E	SVTO	8050	
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14	AFS	1118E	1920	N17	E22	06 16.1		01	4	4	E	RAMY	8052	
14	AFS	1210E	1533	N17	E20	06 16.0		01	9	9	E	HOLL	8052	
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15	DSD	0635E	0730D	N09	E12	06 16.2		02	9	9	E	SVTO		
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15	AFS	1331E	0107	N17	E06	06 16.0		01	9	9	E	HOLL	8052	
15	ADF	1500E	1745	N21	E05	06 16.0	1	03	9	9	E	SVTO	8052	
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16	AFS	0415E	1753	N15	W03	06 16.0		02	9	9	E	SVTO	8052	
16	AFS	0520E	0807D	N30	W34	06 13.5		03	9	9	E	SVTO	8050	
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16	ADF	1350E	0206	N18	E06	06 17.0	1	11	7	8	E	HOLL		
16	DSF	1918U	1245U	N45	E23	06 18.7	2	08	0	0	E	RAMY		
17	AFS	0023E	0912	N19	W09	06 16.3		02	9	9	E	LEAR	8052	
17	DSF	0131U	1358U	N39	E23	06 18.9	2	07	0	0	E	HOLL		
17	DSD	0547E	0607D	N17	W19	06 15.8		02	9	9	E	LEAR	8052	Flare Associated
17	AFS	0611E	1740	N22	W20	06 15.7		02	6	5	E	SVTO	8052	
17	AFS	0845E	1138D	N18	W22	06 15.7		01	8	7	E	SVTO	8052	
17	DSD	0915E	0942	N19	W21	06 15.8	1	02	9	9	V	KHAR		
17	AFS	1130E	2216	N19	W18	06 16.1		01	9	9	E	RAMY	8052	
17	AFS	1320E	0152	N29	W53	06 13.4		01	8	8	E	HOLL	8052	
17	ADF	1500E	0152	N13	W09	06 16.9	1	04	9	9	E	HOLL		
17	ADF	1600E	0152	N45	W29	06 15.2	1	13	9	9	E	HOLL		
17	AFS	2337E	0600D	N18	W24	06 16.1		02	6	5	E	LEAR	8052	
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19	DSF	2312U	1333U	S05	W39	06 17.0	2	06	0	0	E	HOLL		
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20	APR	0903E	1745	S43	E90	06 27.8	1		9	9	E	SVTO		
20	DSD	1059E	1145D	N06	W72	06 15.1		01	4	5	E	RAMY		
20	APR	1222E	2140	S43	E90	06 27.9	1		6	5	E	RAMY		
21	DSD	1120E	1403D	S21	W45	06 18.0		01	9	9	E	RAMY		
21	AFS	1125E	1225D	S20	W49	06 17.7		02	7	7	E	SVTO		

ACTIVE PROMINENCES AND FILAMENTS

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JUNE 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
22	DSD	0740E	1031D	N15	E15	06	23.4		02	9	9	E	SVTO	8055	
22	AFS	0740E	1646	N13	E17	06	23.6		01	9	9	E	SVTO	8055	
22	AFS	0802E	1030D	S02	E37	06	25.1		01	9	9	E	SVTO		
22	AFS	1112E	2231	N14	E16	06	23.7		01	9	9	E	RAMY	8055	
22	AFS	1310E	0208	N14	E14	06	23.6		01	9	9	E	HOLL	8055	
22	DSD	1728E	1824D	N14	E10	06	23.5		02	9	9	E	RAMY	8055	
23	AFS	0235E	0355D	N14	E06	06	23.6		01	7	5	E	LEAR	8055	
23	ASR	0310E	0715D	N25	W90	06	16.1			9	9	E	LEAR	8052	
23	ASR	0410E	0710D	N23	W90	06	16.2			9	9	E	SVTO		
23	AFS	0816E	1748	N13	E02	06	23.5		02	9	9	E	SVTO	8055	
23	AFS	1024E	1831	N15	E02	06	23.6		01	9	9	E	RAMY	8055	
23	DSD	1047E	1831	N16	E02	06	23.6		01	9	9	E	RAMY	8055	
23	DSD	1138E	1748	N16	E01	06	23.6		01	9	9	E	SVTO	8055	
23	AFS	1258E	0208	N16	W03	06	23.3		01	6	5	E	HOLL	8055	
24	AFS	0017E	0450D	S02	E14	06	25.0		03	3	3	E	LEAR		
24	AFS	0017E	0505D	N15	W06	06	23.5		03	5	5	E	LEAR	8055	
24	AFS	0500E	1230D	N14	W10	06	23.4		02	7	6	E	SVTO	8055	
24	AFS	1042E	1602D	N15	W13	06	23.5		01	7	8	E	RAMY	8055	
24	AFS	1417E	2057	N18	E00	06	24.6		01	9	9	E	RAMY		
24	AFS	1452E	0000	N01	W17	06	23.3		01	9	9	E	HOLL		
24	AFS	1452E	1704	N18	W01	06	24.5		02	9	9	E	SVTO		
24	DSD	1610E	1644D	N18	W02	06	24.5		02	9	9	E	SVTO		
24	DSD	1626	1638	N01	W18	06	23.3		02	9	9	E	HOLL		
25	DSD	0005E	0022D	N20	W07	06	24.5		02	9	9	E	LEAR		
25	AFS	0520E	1753	N18	W10	06	24.5		02	9	9	E	SVTO	8056	
25	AFS	0636E	0920D	N15	W25	06	23.4		01	9	9	E	SVTO	8055	
25	DSD	0640E	1753	N20	W10	06	24.5		05	9	9	E	SVTO	8056	
25	DSD	0700E	0920	N18	W11	06	24.4		03	4	5	E	LEAR		
25	ADF	0700E	0920	N22	W12	06	24.4		05	4	5	E	LEAR		
25	AFS	1057E	2242	N19	W12	06	24.5		02	9	9	E	RAMY	8056	
25	DSD	1141E	1830D	N18	W13	06	24.5		01	9	9	E	RAMY	8056	
25	AFS	1214E	0153	N18	W13	06	24.5		01	9	9	E	HOLL	8056	
25	DSD	1505E	1640D	N17	W14	06	24.6		02	9	9	E	RAMY	8056	
25	ADF	1840E	1952D	N15	W32	06	23.3	1	05	9	9	E	RAMY	8055	
25	ADF	1910	2352	N14	W32	06	23.4	1	03	9	9	E	HOLL	8055	
25	AFS	2330E	0920	N19	W04	06	25.7		02	9	9	E	LEAR		
26	AFS	0100E	0923	N18	W21	06	24.4		03	8	5	E	LEAR	8056	
26	AFS	0510E	1527	N17	W26	06	24.2		02	7	6	E	SVTO	8056	
26	DSF	1523U	0440U	N34	E21	06	28.3		10	0	0	E	SVTO		
26	DSF	1523U	0440U	N34	E21	06	28.3		10	0	0	E	SVTO		
27	AFS	0015E	0933	N19	W33	06	24.5		02	6	5	E	LEAR	8056	
27	AFS	0510E	1750	N18	W38	06	24.3		02	7	7	E	SVTO	8056	
27	AFS	1103E	2159	N18	W40	06	24.4		02	5	4	E	RAMY	8056	
27	DSD	1336E	1520D	N16	W47	06	24.0		01	9	9	E	SVTO	8056	
28	DSD	0925E	1038D	N30	E19	06	29.9		03	9	9	E	SVTO	8057	
28	DSD	1130E	1546D	N20	W58	06	24.0		01	9	9	E	RAMY	8056	
28	DSD	1149E	1430D	N30	E18	06	29.9		01	6	8	E	RAMY	8055	
28	DSD	1300E	1540D	N19	W56	06	24.3		07	9	9	E	SVTO	8056	
28	BSD	1621E	1639D	N20	W54	06	24.5		03	9	9	E	RAMY	8056	
28	DSF	1621U	0505U	N24	E01	06	28.7		07	0	0	E	SVTO		
28	DSF	1621U	0505U	N64	W33	06	25.7		15	0	0	E	SVTO		
28	DSF	1949U	1052U	N26	W03	06	28.6	2	06	0	0	E	RAMY		
29	DSD	0347	0600D	N28	E09	06	29.9		02	9	9	E	LEAR	8057	
29	DSD	0544E	0604D	N28	E07	06	29.8		02	9	9	E	SVTO	8057	
29	ADF	0832E	1600	N22	W60	06	24.7	1	09	8	7	E	SVTO	8056	
29	DSD	0948E	1600	N28	E03	06	29.6		02	9	9	E	SVTO	8057	
29	DSD	1034E	1400D	N28	E04	06	29.7		02	9	9	E	RAMY	8057	
29	AFS	1037E	1320D	N20	W07	06	28.9		01	9	9	E	SVTO		
29	AFS	1120E	1202D	N20	W07	06	28.9		01	9	9	E	RAMY		
29	DSD	1702E	2102D	N30	E01	06	29.8		03	9	9	E	RAMY	8057	
29	DSD	1750E	2354	N30	E00	06	29.7		03	9	9	E	HOLL	8057	
29	DSD	2140E	2232	N30	W01	06	29.8		01	9	9	E	RAMY	8057	

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ACTIVE PROMINENCES AND FILAMENTS

JUNE 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
30	ASR	0533	0700D	N23	W90	06	23.3			6	9	E	LEAR	8056	
30	AFS	0548E	1726	S27	E61	07	5.0		01	7	7	E	SVTO		
30	ASR	0608E	0730D	N17	W90	06	23.4			9	9	E	SVTO	8056	
30	AFS	0830E	0936	S34	E57	07	4.9		03	8	6	E	LEAR		
30	DSD	0947E	1428D	S26	E58	07	4.9		02	9	9	E	SVTO		
30	DSD	1056	1110D	N28	W09	06	29.7		01	9	9	E	RAMY	8057	
30	ASR	1450E	1457D	N14	W90	06	23.8			9	9	E	SVTO	8056	
30	ASR	2139	2318	N19	W86	06	24.3			9	9	E	HOLL	8056	

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 = Valaske Mezirici
		WROC = Wroclaw

1997 SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT

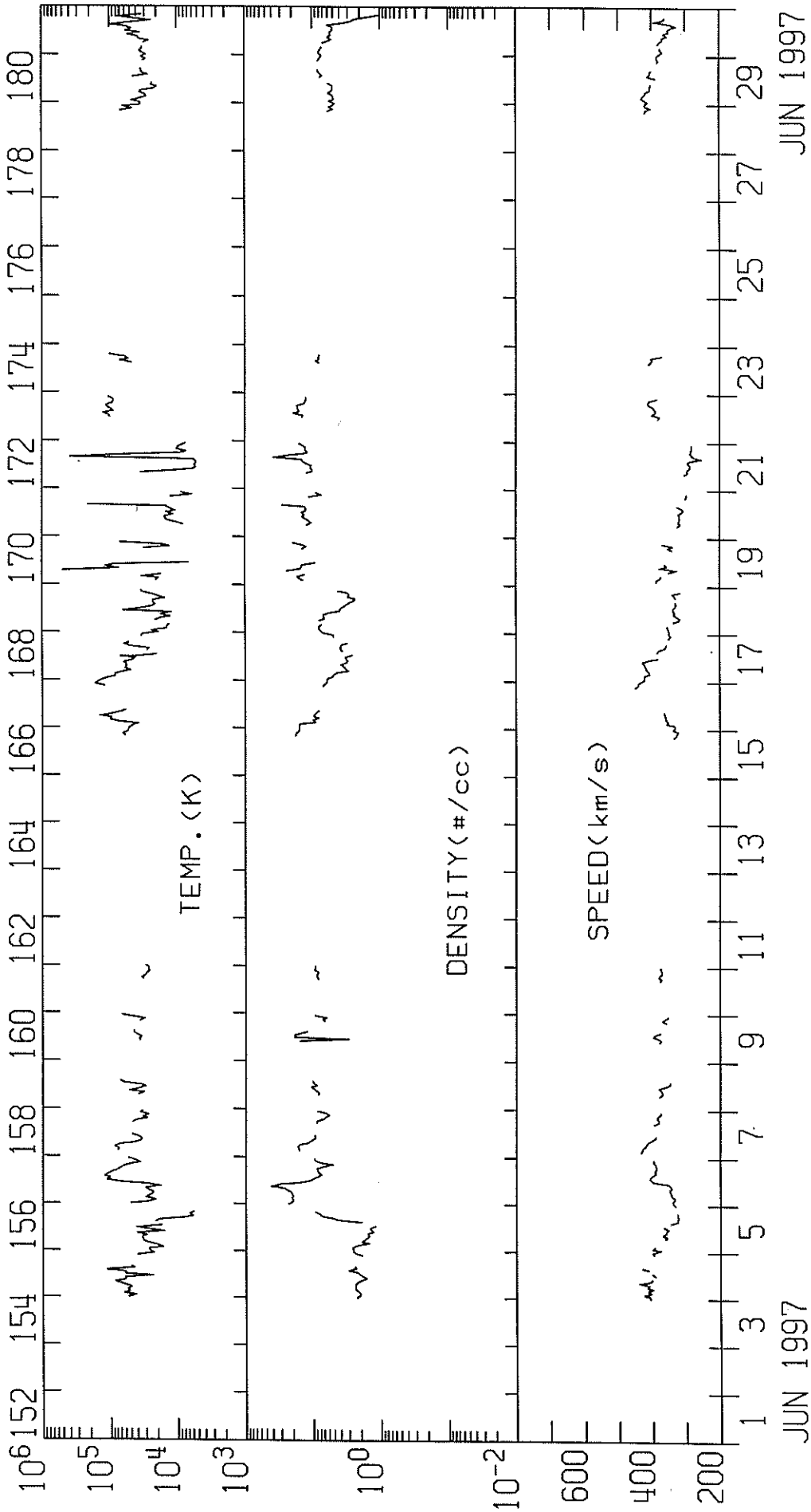
NASA LANGLEY RESEARCH CENTER

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1365.1											
2						1364.8	1365.1					
3												
4	1365.2						1365.7					
5						1364.7						
6												
7					1365.4							
8								1365.4		1365.3		
9				1365.0								
10								1365.2	1363.8			
11								1365.2				
12		1364.4	1365.7					1365.0				
13								1365.8				
14		1365.7						1365.4	1364.9			
15	1364.6											
16							1365.1	1365.4				
17	1365.1							1365.3	1364.9			
18			1365.2			1365.0		1365.7				
19					1364.7			1365.3				
20			1364.7					1365.3				
21					1364.9			1365.2				
22				1364.5				1365.3				
23								1365.2				
24				1365.1				1365.1	1365.1			
25									1365.4			
26		1365.1	1364.7									
27								1365.3				
28												
29												
30	1364.9						1365.1					
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
JUNE 1997

MIT/CSR IMP 8 PLASMA PARAMETERS



IMP 8 MIT ONE-HOUR AVERAGES

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Comprehensive Reports

Number 640 Part II

MISCELLANEOUS DATA

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IMP-8 INTERPLANETARY MAGNETIC FIELD PLOT May 1997 24-25

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Late
May 97

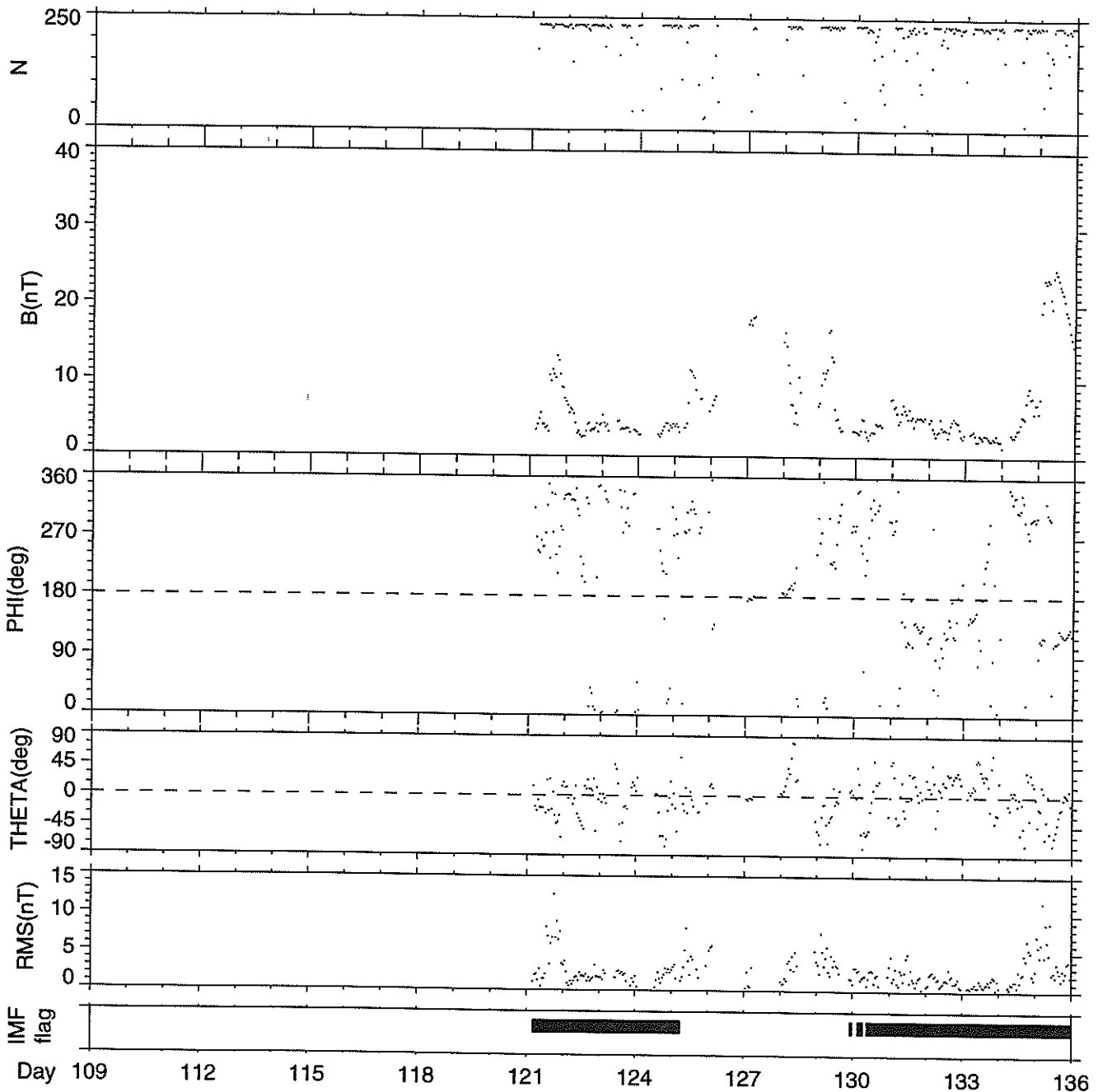
IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 121 - 136

May 1 1997 -

May 16 1997



Generation Date : Thu Oct 30 17:23:43 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.

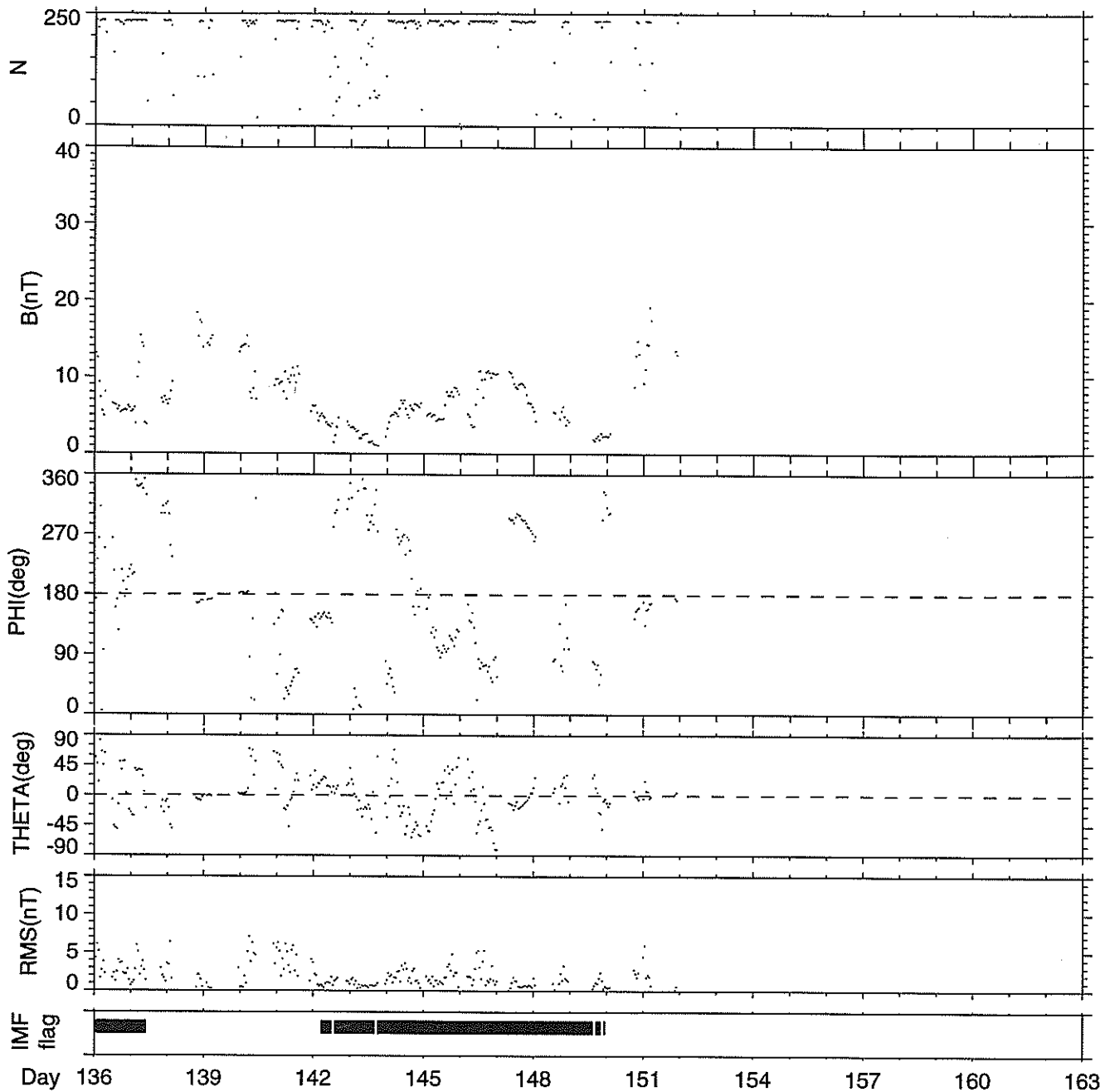
IMP-8 Magnetic Field Data in GSE Coordinates

1 Hour Averages

(c) DOY 136 - 151

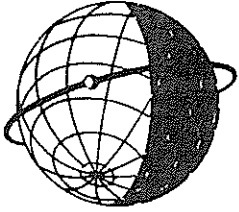
May 16 1997 -

May 31 1997

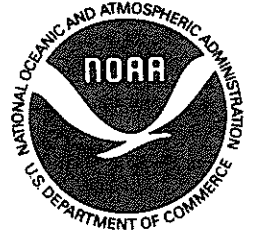


Generation Date : Thu Oct 30 17:23:48 1997

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.



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."