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SOLAR-GEOPHYSICAL DATA

Number 639

(Issued in Two Parts)

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Hα SOLAR FLARES

MAY 1997

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		01	0000		0039	No Flare Patrol														
		01	0138		0158	No Flare Patrol														
		01	0213		0337	No Flare Patrol														
		01	0656		0709	No Flare Patrol														
0001	MEUD	01	0903	1004	1116	S32	E90		05	8.5	133					C				
		02	0120		0132	No Flare Patrol														
		02	0229		0314	No Flare Patrol														
		02	0336		0604	No Flare Patrol														
		03	0117		0444	No Flare Patrol														
0002	RAMY	03	1845	1847	1852	S32	E55		05	8.1	7	SF			3	E		13		
		03	2209		2219	No Flare Patrol														
		03	2306		2400	No Flare Patrol														
		04	0000		0005	No Flare Patrol														
		04	0030		0050	No Flare Patrol														
		04	0056		0113	No Flare Patrol														
		04	0131		0423	No Flare Patrol														
		04	1757		2027	No Flare Patrol														
		04	2051		2400	No Flare Patrol														
		05	0000		0135	No Flare Patrol														
		05	2017		2027	No Flare Patrol														
		05	2217		2248	No Flare Patrol														
		05	2307		2319	No Flare Patrol														
		05	2330		2337	No Flare Patrol														
0003	RAMY	06	1405	1405	1416	N18	E65	8038	05	11.5	11	SF	B	1.2	4	E		13		H
		06	1725		1801	No Flare Patrol														
		06	1816		1952	No Flare Patrol														
		06	1959		2150	No Flare Patrol														
		06	2327		2338	No Flare Patrol														
		07	0331		0555	No Flare Patrol														
		07	0800		0854	No Flare Patrol														
		07	1824		1845	No Flare Patrol														
		07	1850		1905	No Flare Patrol														
		07	1914		1923	No Flare Patrol														
		07	1927		1944	No Flare Patrol														
		07	1958		2021	No Flare Patrol														
		07	2046		2324	No Flare Patrol														
		08	0141		0428	No Flare Patrol														
		08	0653		0728	No Flare Patrol														
		08	0738		0859	No Flare Patrol														
0004	SVTO	08	0931	0934	0938	S32	W09		05	7.7	7	SF			3	E		13		H
		08	1957		2005	No Flare Patrol														
		08	2013		2019	No Flare Patrol														
		08	2236		2249	No Flare Patrol														
		08	2304		2400	No Flare Patrol														
		09	0000		0014	No Flare Patrol														
		09	0026		0039	No Flare Patrol														
		09	0046		0251	No Flare Patrol														
		09	1934		1946	No Flare Patrol														
		09	2129		2157	No Flare Patrol														
		09	2202		2218	No Flare Patrol														
		10	2321		2353	No Flare Patrol														
		11	0619		0624	No Flare Patrol														
		11	0953		1007	No Flare Patrol														
		11	1725		1730	No Flare Patrol														
		11	1734		1757	No Flare Patrol														
		11	1923		1939	No Flare Patrol														
		11	2041		2046	No Flare Patrol														
		11	2247		2306	No Flare Patrol														
0005		12	04441	04522	0614	N21	W08	8038	05	11.6	90	1N	C	1.3				148		FHU
	SVTO	12	0444	0454	0632	N21	W07	8038	05	11.7	108	1N			3	E		195		UF
	LEAR	12	0445	0452	0556	N21	W09	8038	05	11.5	71	1F	C	1.3	3	E		100		H

Hα SOLAR FLARES

MAY 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		12	1757		1800	No Flare Patrol														
		12	1849		1855	No Flare Patrol														
		13	0101		0142	No Flare Patrol														
		14	2158		2233	No Flare Patrol														
		15	0031		0429	No Flare Patrol														
		15	2016		2051	No Flare Patrol														
		15	2144		2159	No Flare Patrol														
		15	2231		2400	No Flare Patrol														
		16	0000		0026	No Flare Patrol														
0006	SVTO	16	1251E	1253U	1256D	N24	W68	8038	05	11.3	5D	SF			3	E		12		F
0007		16	1300	1300	1304	N22	W68	8038	05	11.3	4	SF	B	2.1				19		F
	KANZ	16	1300	1300	1304	N19	W66	8038	05	11.5	4	SF			2	C				
	RAMY	16	1300	1300	1305	N22	W69	8038	05	11.2	5	SF	B	2.1	3	E		26		
	SVTO	16	1300E	1302U	1305D	N24	W68	8038	05	11.3	5D	SF			3	E		12		F
		16	2231		2250	No Flare Patrol														
		16	2256		2400	No Flare Patrol														
		17	0000		0501	No Flare Patrol														
		17	0521		0552	No Flare Patrol														
0008	KANZ	17	1038	1054	1110	N20	W74	8038	05	11.8	32	SF			2	C				
		18	0431		0436	No Flare Patrol														
		18	1940		1944	No Flare Patrol														
		18	2024		2030	No Flare Patrol														
		18	2130		2206	No Flare Patrol														
		18	2257		2302	No Flare Patrol														
		19	0045		0114	No Flare Patrol														
		19	0232		0333	No Flare Patrol														
		19	2255		2400	No Flare Patrol														
		20	0000		0020	No Flare Patrol														
		20	1906		2008	No Flare Patrol														
		20	2038		2043	No Flare Patrol														
		20	2126		2227	No Flare Patrol														
0009	LEAR	21	0040	0121	0142	N04	E00	8040	05	21.0	62	SF	B	2.3	3	E		65		H
0010	LEAR	21	0234	0254	0310	N04	E00	8040	05	21.1	36	SF			3	E		20		
0011	LEAR	21	0310	0311	0318	N04	W01	8040	05	21.0	8	SF			3	E		12		
0012	LEAR	21	0324	0328	0355	N04	W01	8040	05	21.1	31	SF			3	E		18		
0013	KANZ	21	0552E	0556	0602	N03	W01	8040	05	21.2	10D	SF			2	C				
0014		21	06065	06262	0700	N04	W03	8040	05	21.0	54	1F	C	2.7				106		F
	KANZ	21	0606	0626	0658	N03	W03	8040	05	21.0	52	1F			2	C				
	LEAR	21	0607	0628	0702	N04	W02	8040	05	21.1	55	SF	C	2.7	3	E		95		F
	SVTO	21	0611	0624U	0645D	N04	W03	8040	05	21.0	34D	1F			3	E		116		F
0015	SVTO	21	0808	0811	0817	N04	W05	8040	05	21.0	9	SF			3	E		17		
0016	SVTO	21	0819	0826	0837	N04	W05	8040	05	21.0	18	SF			3	E		12		
0017	SVTO	21	0838	0842	0849	N28	W56	8043	05	17.0	11	SF			3	E		12		
0018	SVTO	21	0913	0913	0919	N28	W57	8043	05	16.9	6	SF			3	E		16		
0019	SVTO	21	1012	1016	1017	N28	W57	8043	05	17.0	5	SF			3	E		15		
0020	KANZ	21	1045	1052	1114D	N28	W60	8043	05	16.7	29D	SF			2	C				
0021	SVTO	21	1101	1114	1123	N28	W58	8043	05	16.9	22	SF			3	E		21		
0022	RAMY	21	1251	1251	1255	N05	W07	8040	05	21.0	4	SF			3	E		18		

Hα SOLAR FLARES

MAY 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0023		21	13153	1318	1326	N04	W07	8040	05	21.0	11	SF					24		
	RAMY	21	1315	1318	1325	N04	W05	8040	05	21.2	10	SF		3	E		21		
	SVTO	21	1315	1318	1327	N04	W07	8040	05	21.0	12	SF		3	E		26		
	KANZ	21	1318	1318	1322D	N04	W08	8040	05	20.9	4D	SF		2	C				
0024		21	1334	13341	1344	N28	W64	8043	05	16.6	10	SF					14		F
	KANZ	21	1330E	1334	1342	N28	W63	8043	05	16.6	12D	SF		2	C				
	SVTO	21	1334	1335	1345	N29	W64	8043	05	16.5	11	SF		3	E		14		F
0025	KANZ	21	1359	1417U	1429D	N28	W66	8043	05	16.4	30D	SF		2	C				
0026	SVTO	21	1359	1428U	1438D	N28	W60	8043	05	16.9	39D	SF		3	E		15		F
0027	RAMY	21	1446	1447	1451	N04	W07	8040	05	21.1	5	SF		3	E		22		
		21	1652		1658	No Flare Patrol													
0028	RAMY	21	1659E	1659U	1719	N04	W08	8040	05	21.1	20D	SF	B 5.4	2	E		12		F
		21	1818		1824	No Flare Patrol													
		21	2002		2007	No Flare Patrol													
0029	RAMY	21	2008E	2008U	2112D	N05	W12	8040	05	20.9	64D	SF	M 1.3	2	E		82		F
		21	2012		2044	No Flare Patrol													
0030	HOLL	21	2045E	2045U	2048D	N04	W10	8040	05	21.1	3D	SF		1	E		21		
		22	0642		0647	No Flare Patrol													
		22	0725		0729	No Flare Patrol													
		22	0835		1034	No Flare Patrol													
		22	1812		1903	No Flare Patrol													
		22	2047		2313	No Flare Patrol													
0031		23	09304	09344	0954	N04	W32	8040	05	21.0	24	SF	B 2.2				12		
	KANZ	23	0930	0938	0958	N03	W32	8040	05	21.0	28	SF		2	C				
	SVTO	23	0934	0934	0949	N04	W32	8040	05	21.0	15	SF	B 2.2	3	E		12		
0032	RAMY	23	2002E	2003U	2017	N02	W26	8045	05	21.9	15D	SF	B 3.5	2	E		14		
0033	HOLL	24	0041	0041	0045	S28	E66	8046	05	29.2	4	SF	B 5.2	3	E		11		
		24	1842		1918	No Flare Patrol													
		24	1932		1959	No Flare Patrol													
		24	2113		2307	No Flare Patrol													
0034	MEUD	25	1342	1456	1623	S28	E55	8046	05	29.9	161	SN			C	1456	150	2.6	
0035		25	1353	13538	1516	S28	E50	8046	05	29.5	83	SF	B 4.8				21		F
	KANZ	25	1349E	1353	1421D	S28	E51	8046	05	29.6	32D	SF		2	C				
	RAMY	25	1353	1401	1516	S28	E50	8046	05	29.5	83	SF	B 4.8	4	E		21		F
0036		25	1355	1439	1517	S28	E50	8046	05	29.5	82	SF					42		F
	SVTO	25	1355	1439	1517	S29	E49	8046	05	29.4	82	SF		3	E		42		F
	KANZ	25	1429E	1437U	1501D	S27	E51	8046	05	29.6	32D	SF		2	C				
0037	MEUD	26	0931	0936	1002	N29	E90	8047	06	2.4	31	SN			C				
0038	MEUD	26	0950	1004	1015	S28	E42	8046B	05	29.7	25	SN			C	1004	50	0.8	E
		26	1948		1953	No Flare Patrol													
		26	2018		2023	No Flare Patrol													
0039	MEUD	27	0629E	0643	0708	N26	E80	8047	06	2.5	39D	SN			C				A
0040	MEUD	27	0629E	0812	0836	N01	W75	8045	05	21.7	127D	SF			C				T
0041	KANZ	27	0703	0711	0723	N00	W72	8045	05	21.9	20	SF		2	C				

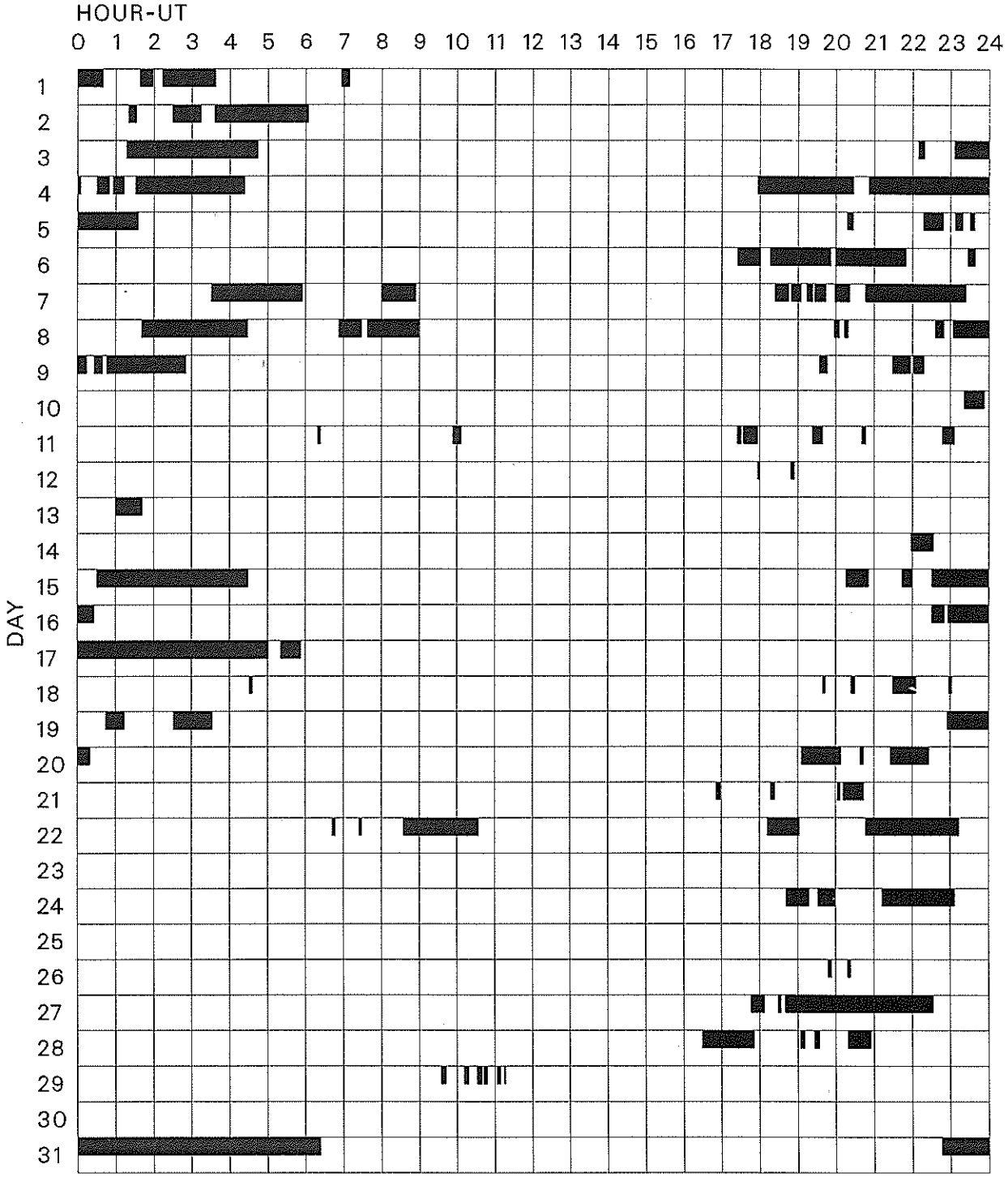
Hα SOLAR FLARES

MAY 1997

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0042	MEUD	27	0729	0741	0754	S27	E25	8046	05	29.2	25	SF			C	0741	70	0.8	
0043	MEUD	27	0926	0943	1013	N01	W75	8045	05	21.8	47	SN			C				KT
0044		27	0939	0959	1007	N02	W76	8045	05	21.7	28	1F	C 4.6				121		F
	SVTO	27	0939	0957U	1007	N02	W80	8045	05	21.4	28	1F	C 4.6	2	E		121		F
	KANZ	27	0939	0959	1008D	N01	W73	8045	05	21.9	29D	1F		2	C				
0045	MEUD	27	1030	1040	1056	N26	E80	8047	06	2.6	26	SN			C				
0046	MEUD	27	1036	1103	1232D	N01	W75	8045	05	21.8	116D	SF			C				KT
0047	RAMY	27	1112	1116	1128	N00	W75	8045	05	21.9	16	SF		3	E		50		F
0048	HOLL	27	1238E	1245U	1252	N02	W82	8045	05	21.4	14D	SF		2	E		33		
0049		27	1308*	13222	1328	N02	W81	8045	05	21.5	20	SF	B 8.4				33		
	SVTO	27	1308	1323	1333	N03	W85	8045	05	21.2	25	SF		3	E		53		
	HOLL	27	1321	1322	1324	N02	W83	8045	05	21.3	3	SF	B 8.4	3	E		28		
	RAMY	27	1322	1324	1328	N02	W75	8045	05	21.9	6	SF		3	E		19		
0050	MEUD	27	1427E	1446	1559D	N01	W75	8045	05	22.0	92D				C				AKT
0051	SVTO	27	1428	1429	1431	N03	W90	8045	05	20.9	3	SF		3	E		33		
		27	1746		1807	No Flare Patrol													
		27	1829		1834	No Flare Patrol													
		27	1840		2233	No Flare Patrol													
0052	SVTO	28	0700	0702	0709	S29	E17	8046	05	29.6	9	SF	B 2.2	3	E		36		F
0053	MEUD	28	0758	0804	0817	N01	W90	8045	05	21.6	19				C				T
0054	MEUD	28	0842	0851	0907	N01	W90	8045	05	21.6	25				C				T
0055	MEUD	28	1149	1204	1214	N01	W90	8045	05	21.8	25				C				T
0056		28	12114	12192	1238	S28	E12	8046B	05	29.4	27	SF					100	1.2	
	MEUD	28	1211	1221	1242	S28	E14	8046B	05	29.6	31	SF			C	1221	100	1.2	
	KANZ	28	1215	1219	1235	S28	E10	8046B	05	29.3	20	SF		2	C				
0057	MEUD	28	1408	1414	1419	N01	W90	8045	05	21.9	11				C				T
		28	1629		1751	No Flare Patrol													
		28	1904		1911	No Flare Patrol													
		28	1926		1934	No Flare Patrol													
		28	2019		2055	No Flare Patrol													
0058	HOLL	29	0034	0035	0039	S24	E03	8046	05	29.2	5	SF		3	E		12		
		29	0935		0942	No Flare Patrol													
		29	1011		1018	No Flare Patrol													
		29	1032		1040	No Flare Patrol													
		29	1042		1048	No Flare Patrol													
		29	1103		1109	No Flare Patrol													
		29	1115		1117	No Flare Patrol													
		31	0000		0623	No Flare Patrol													
0059	KANZ	31	1208E	1208U	1212D	S29	W28		05	29.3	4D	SF		2	C				
		31	2246		2400	No Flare Patrol													

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

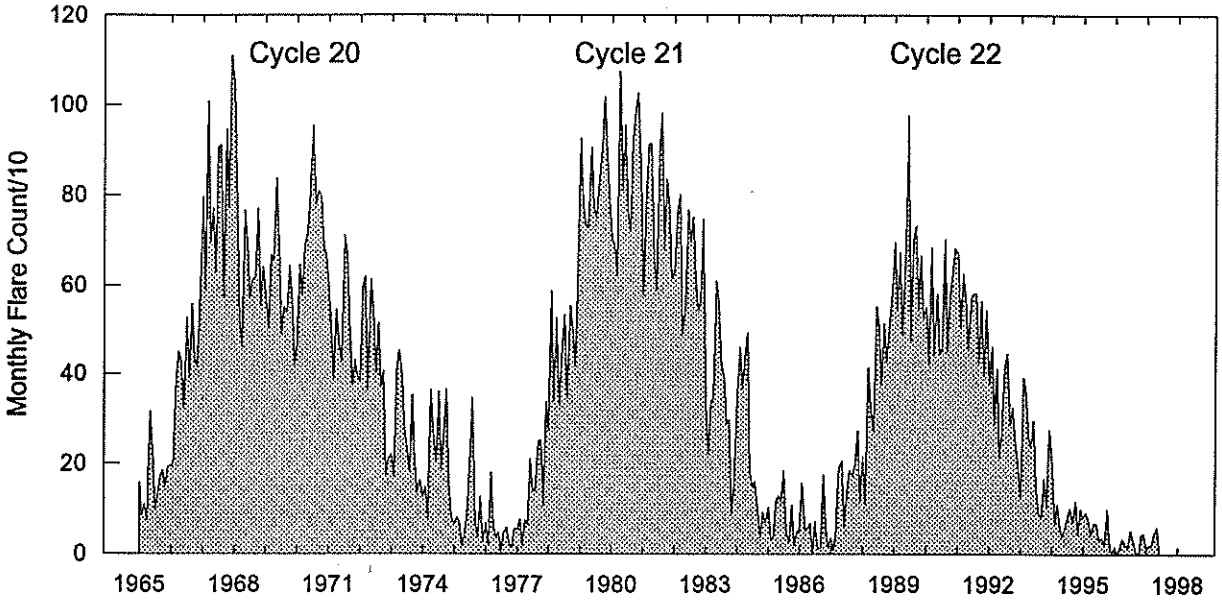
MAY 1997



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 - May 1997



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

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

SOLAR RADIO EMISSION
Outstanding Occurrences

MAY 1997

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
04	3000	IZMI	1	S	0856.2	0856.5	0.6	2.0	1.0		
07	204	IZMI	7	C	0713.0	0713.5	2.0	17.0	5.0		
09	33	UPIC	4	S/F	1549.2	1549.3	0.5				
10	33	UPIC	2	S/F	0540.5	0540.6	0.5				
	204	IZMI	7	C	0649.0	0649.3	1.0	25.0	12.0		
	33	UPIC	2	S/F	0750.6	0750.8	0.6				
11	33	UPIC	42	SER	0629.8	0658.8	48.0				
12	204	IZMI	43	NS	0600.0		360.0D		5.0		
	127	TORN	43	NS	0724.0		270.0		1.0		V=1
	2840	PEKG	23	GRF	0408.0	0453.0	103.0	11.2			
	245	SVTO	49	GB	0442.0	0450.0	10.0	1400.0			QL=2 ST=2 TYP=6
	245	SVTO	48	C	0442.0	0507.0	34.0	280.0			QL=2 ST=3 TYP=8
	1415	SVTO	4	S/F	0442.0	0447.0	45.0	330.0			QL=4 ST=3 TYP=3
	1415	SVTO	4	S/F	0442.0E	0447.0	45.0D	330.0			QL=4 ST=3 TYP=3
	1415	LEAR	8	S	0445.0	0447.0	2.0	48.0			QL=4 ST=2 TYP=3
	1415	SVTO	4	S/F	0445.0	0445.0	42.0	36.0			QL=4 ST=2 TYP=3
	500	HIRA	46	C	0446.5	0452.5	47.0	73.0	18.0		WL
	610	LEAR	48	C	0447.0	0452.0	12.0	120.0			QL=4 ST=2 TYP=8
	410	LEAR	48	C	0448.0	0501.0	28.0	110.0			QL=4 ST=2 TYP=8
	410	SVTO	48	C	0448.0	0509.0	28.0	190.0			QL=4 ST=3 TYP=8
	200	HIRA	46	C	0449.5	0454.4	27.0	51.0	8.0		O
	2800	HIRA	45	C	0449.7	0453.5	15.0	9.0	3.0		O
	245	LEAR	48	C	0450.0	0507.0	24.0	220.0			QL=4 ST=2 TYP=8
	610	SVTO	48	C	0451.0E	0516.0	53.0D	130.0			QL=4 ST=3 TYP=8
	610	SVTO	48	C	0451.0	0516.0	53.0	130.0			QL=4 ST=3 TYP=8
	610	SVTO	48	C	0500.0	0516.0	26.0	130.0			QL=2 ST=2 TYP=8
	610	LEAR	8	S	0518.0	0518.0	1.0	44.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0518.0	0518.0	U	22.0			QL=4 ST=2 TYP=3
	33	UPIC	2	S/F	1538.0	1538.3	0.6				
13	610	LEAR	8	S	0535.0	0535.0	1.0	23.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0535.0	0536.0	1.0	41.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0535.0	0535.0	1.0	120.0			QL=4 ST=2 TYP=3
14	8800	SGMR	4	S/F	1452.0	1453.0	548.0	64.0			QL=4 ST=1 TYP=3
	2695	SGMR	4	S/F	1452.0	1453.0	548.0	63.0			QL=4 ST=1 TYP=3
15	33	UPIC	2	S/F	1214.2	1214.4	0.6				
	33	UPIC	2	S/F	1638.8	1639.0	0.7				
	33	UPIC	2	S/F	1711.8	1712.0	0.6				
16	33	UPIC	2	S/F	1007.5	1007.7	0.5				
20	235	CUBA	44	NS	1300.0E		410.0D		6.0		
	280	CUBA	44	NS	1310.0E		410.0D		12.0		
21	204	IZMI	43	NS	0600.0		360.0D		20.0		
	127	TORN	44	NS	0620.0E		150.0D		2.0		V=1
	245	SVTO	43	NS	0906.0	0906.0	24.0	91.0			QL=4 ST=3 TYP=1
	245	SGMR	43	NS	1209.0	1209.0	23.0	89.0			QL=4 ST=2 TYP=1
	245	SVTO	43	NS	1243.0	1249.0	68.0	64.0			QL=4 ST=3 TYP=1
	235	CUBA	44	NS	1300.0E		460.0D		8.0		
	280	CUBA	44	NS	1300.0E		460.0D		12.0		
	2840	PEKG	45	C	0605.0	0620.8	25.0	20.2			
	3000	IZMI	23	GRF	0607.7	0621.0	28.0	20.0			
	2695	LEAR	4	S/F	0620.0	0621.0	3.0	15.0			QL=4 ST=2 TYP=3
	2800	HIRA	4	S/F	0621.0	0621.5	3.5	15.0			O
	500	HIRA	4	S/F	0621.0	0622.7	3.7	17.0			O
	610	LEAR	8	S	0622.0	0623.0	1.0	45.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0906.0	0906.0	U	57.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0929.0	0930.0	1.0	63.0			QL=4 ST=2 TYP=3
	33	UPIC	2	S/F	1517.0	1517.3	0.5				
	33	UPIC	3	S	1558.0	1558.2	0.6				
	33	UPIC	3	S	1621.3	1621.5	0.4				

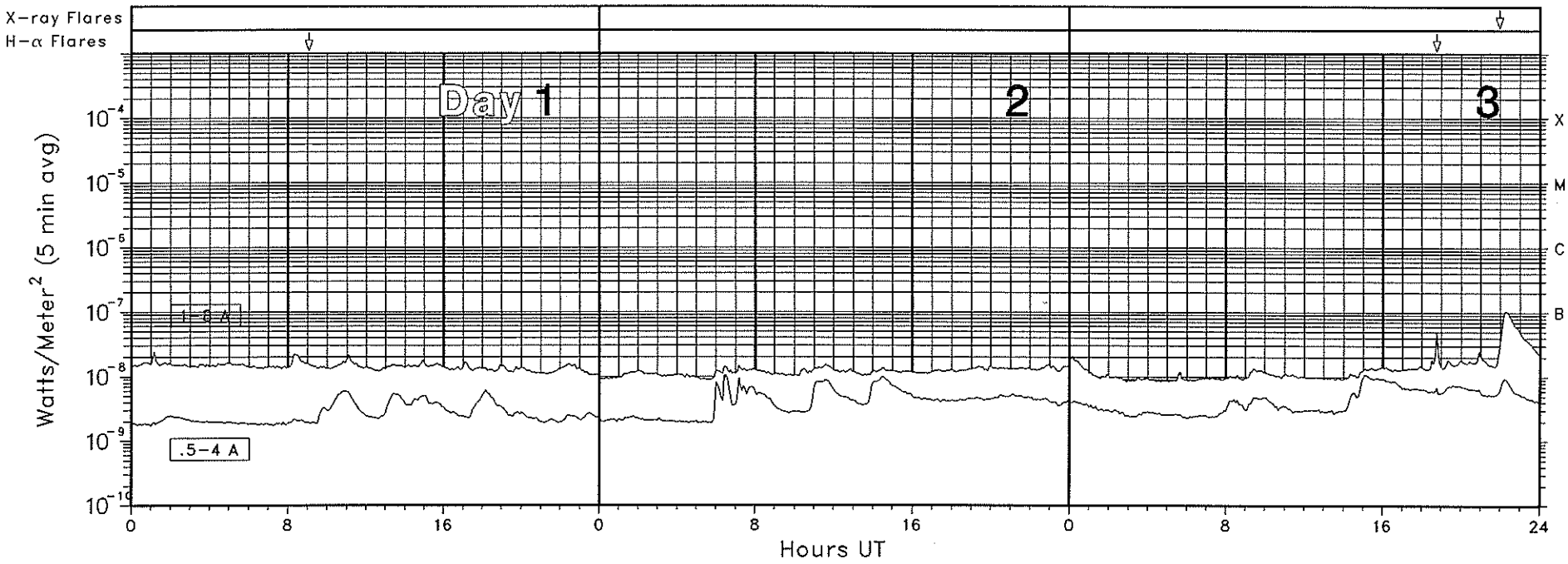
S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

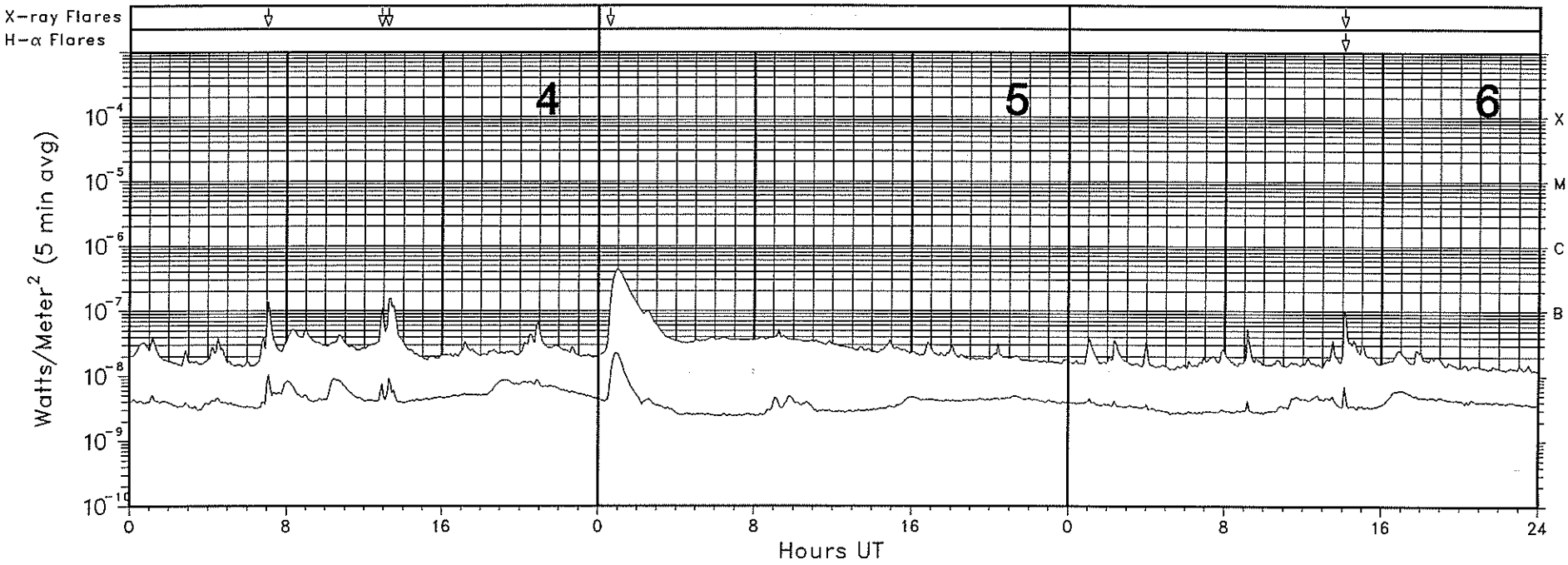
MAY 1997

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
21	245	SGMR	8	S	1708.0	1709.0	1.0	53.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1708.0	1709.0	1.0	55.0			QL=2 ST=2 TYP=3
	610	PALE	4	S/F	2007.0	2010.0	233.0	310.0			QL=4 ST=1 TYP=3
	410	PALE	4	S/F	2008.0	2009.0	8.0	340.0			QL=4 ST=2 TYP=3
	245	PALE	4	S/F	2008.0	2015.0	8.0	240.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2008.0	2010.0	2.0	240.0			QL=4 ST=2 TYP=3
	4995	PALE	4	S/F	2008.0	2009.0	8.0	29.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	2008.0	2009.0	3.0	46.0			QL=4 ST=2 TYP=3
	610	SGMR	4	S/F	2008.0	2010.0	4.0	300.0			QL=4 ST=3 TYP=3
	1415	SGMR	4	S/F	2008.0	2010.0	8.0	430.0			QL=4 ST=3 TYP=3
	410	SGMR	48	C	2008.0	2047.0	57.0	900.0			QL=4 ST=3 TYP=8
	500	HIRA	46	C	2008.7	2009.7	8.0	120.0	23.0		O
	1415	PALE	4	S/F	2009.0	2010.0	3.0	400.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	2009.0	2009.0	3.0	51.0			QL=4 ST=3 TYP=3
	2695	SGMR	8	S	2009.0	2009.0	2.0	65.0			QL=4 ST=3 TYP=3
	245	SGMR	48	C	2009.0	2047.0	61.0	1000.0			QL=4 ST=3 TYP=8
	245	SGMR	48	C	2009.0	2047.0	60.0	1000.0			QL=4 ST=3 TYP=8
	200	HIRA	46	C	2009.2	2012.0	7.0	60.0	8.0		WL
	500	HIRA	27	RF	2015.2	2020.5	20.0	14.0	5.0		WL
	1415	SGMR	4	S/F	2040.0	2047.0	19.0	200.0			QL=4 ST=2 TYP=3
	500	HIRA	46	C	2040.0	2047.0	28.0	400.0	60.0		ML
	610	SGMR	4	S/F	2040.0	2047.0	25.0	400.0			QL=4 ST=2 TYP=3
	200	HIRA	46	C	2040.5	2046.7	26.0	400.0	30.0		WL
	245	PALE	49	GB	2043.0	2047.0	8.0	980.0			QL=4 ST=2 TYP=6
	1415	PALE	4	S/F	2043.0	2047.0	8.0	450.0			QL=4 ST=2 TYP=3
	610	PALE	4	S/F	2043.0	2047.0	8.0	380.0			QL=4 ST=2 TYP=3
	410	PALE	49	GB	2043.0	2047.0	8.0	980.0			QL=4 ST=2 TYP=6
	2695	PALE	4	S/F	2043.0	2047.0	8.0	66.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	2046.0	2047.0	1.0	45.0			QL=4 ST=2 TYP=3
	2800	HIRA	46	C	2046.0	2047.0	22.0	9.0	3.0		O
	245	SGMR	8	S	2215.0	2215.0	U	51.0			QL=2 ST=3 TYP=3
22	280	CUBA	44	NS	1300.0E		470.0D		14.0		
	235	CUBA	44	NS	1300.0E		470.0D		7.0		
	610	LEAR	8	S	0026.0	0026.0	U	26.0			QL=4 ST=2 TYP=3
	410	LEAR	8	S	0026.0	0026.0	U	29.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0026.0	0026.0	U	54.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0026.0	0026.0	U	61.0			QL=2 ST=2 TYP=3
	410	PALE	8	S	0026.0	0026.0	U	45.0			QL=2 ST=2 TYP=3
	245	SGMR	8	S	1607.0	1607.0	2.0	100.0			QL=4 ST=3 TYP=3
	245	SVTO	8	S	1607.0	1607.0	1.0	120.0			QL=4 ST=2 TYP=3
23	280	CUBA	44	NS	1300.0E		470.0D		12.0		
	235	CUBA	44	NS	1300.0E		470.0D		6.0		
26	33	UPIC	2	S/F	1011.0	1011.1	0.5				
	33	UPIC	3	S	1656.0	1656.1	0.3				
27	3000	IZMI	5	S	0955.0	0956.6	4.5	9.0	5.0		
	204	IZMI	7	C	0955.6	0955.8	2.0	36.0			
	33	UPIC	3	S	0957.7		2.3				
	33	UPIC	2	S/F	1545.5	1545.7	0.5				
28	245	SGMR	8	S	1218.0	1219.0	1.0	21.0			QL=4 ST=2 TYP=3
	33	UPIC	45	C	1218.4	1218.5	1.6				
29	200	HIRA	8	S	0034.0	0034.1	0.9	60.0			ML
	33	UPIC	2	S/F	0526.0	0526.1	0.5				
	33	UPIC	8	S	0952.1	0952.3	0.3				
30	33	UPIC	2	S/F	0526.5	0526.9	0.8				
	33	UPIC	8	S	1117.3	1117.4	0.4				
	33	UPIC	8	S	1256.7	1256.8	0.2				
31	33	UPIC	8	S	1327.7	1327.8	0.3				

GOES X-RAY DETECTOR

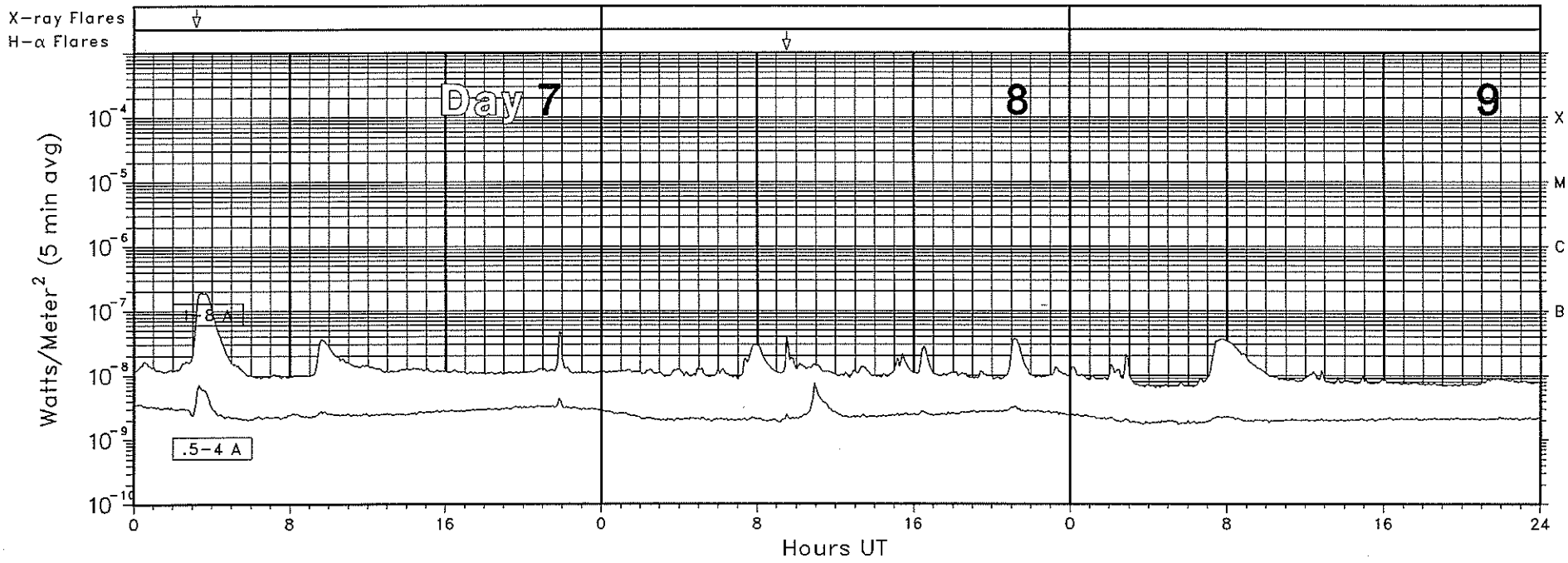
May 1997

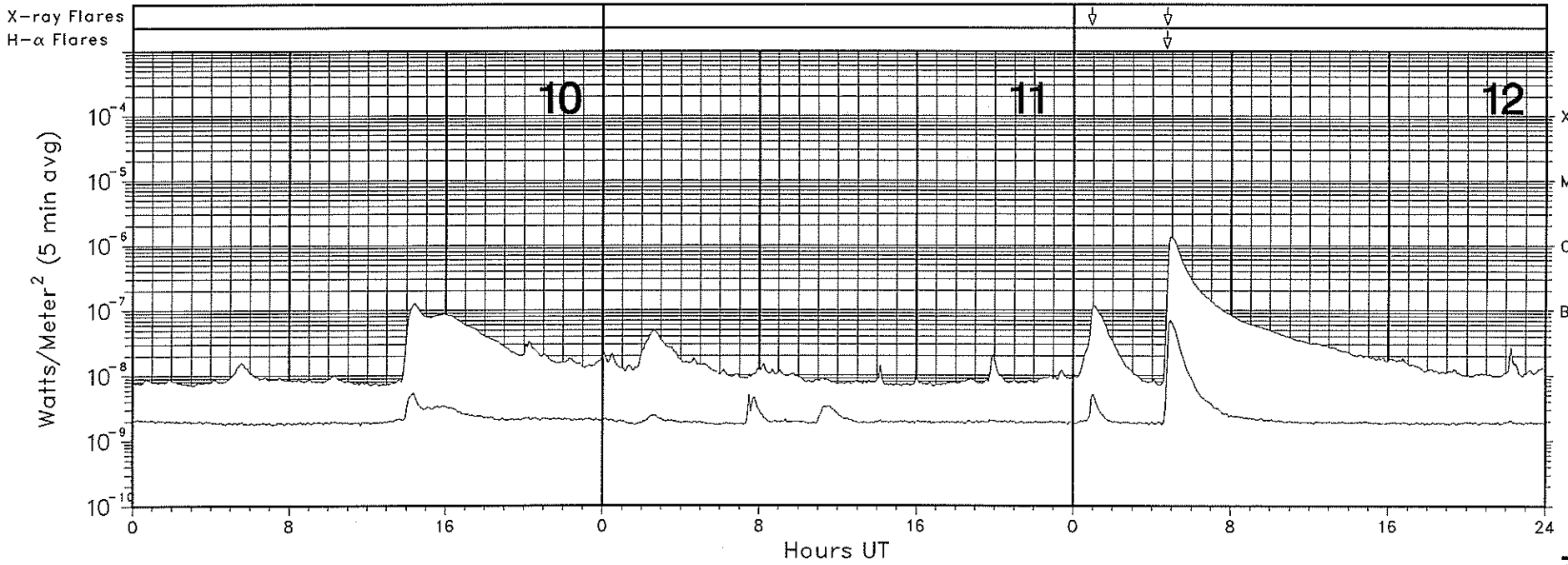




GOES X-RAY DETECTOR

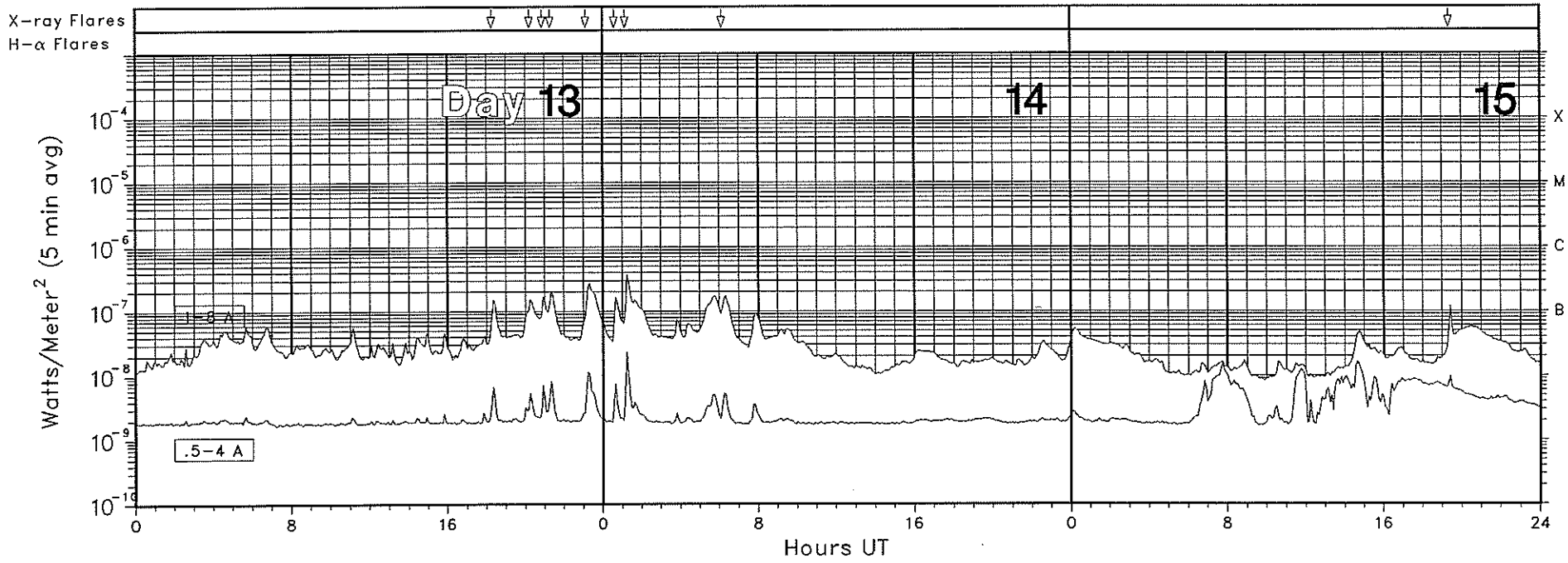
May 1997

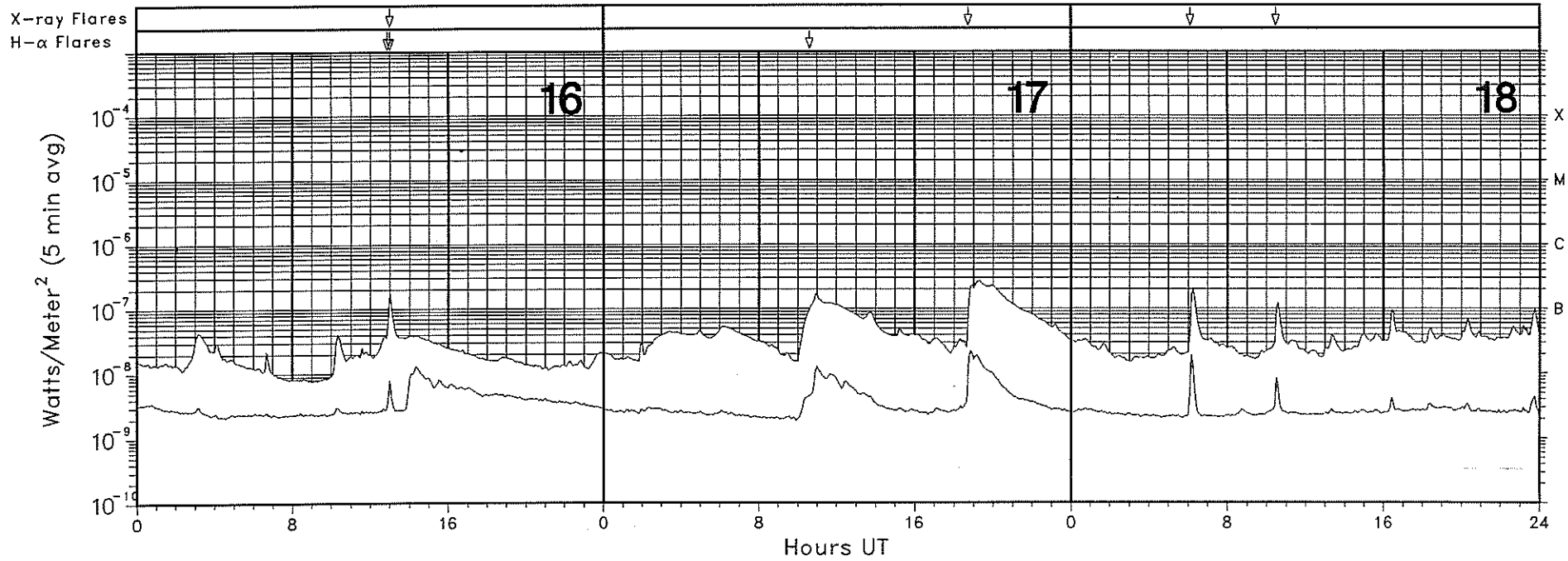




GOES X-RAY DETECTOR

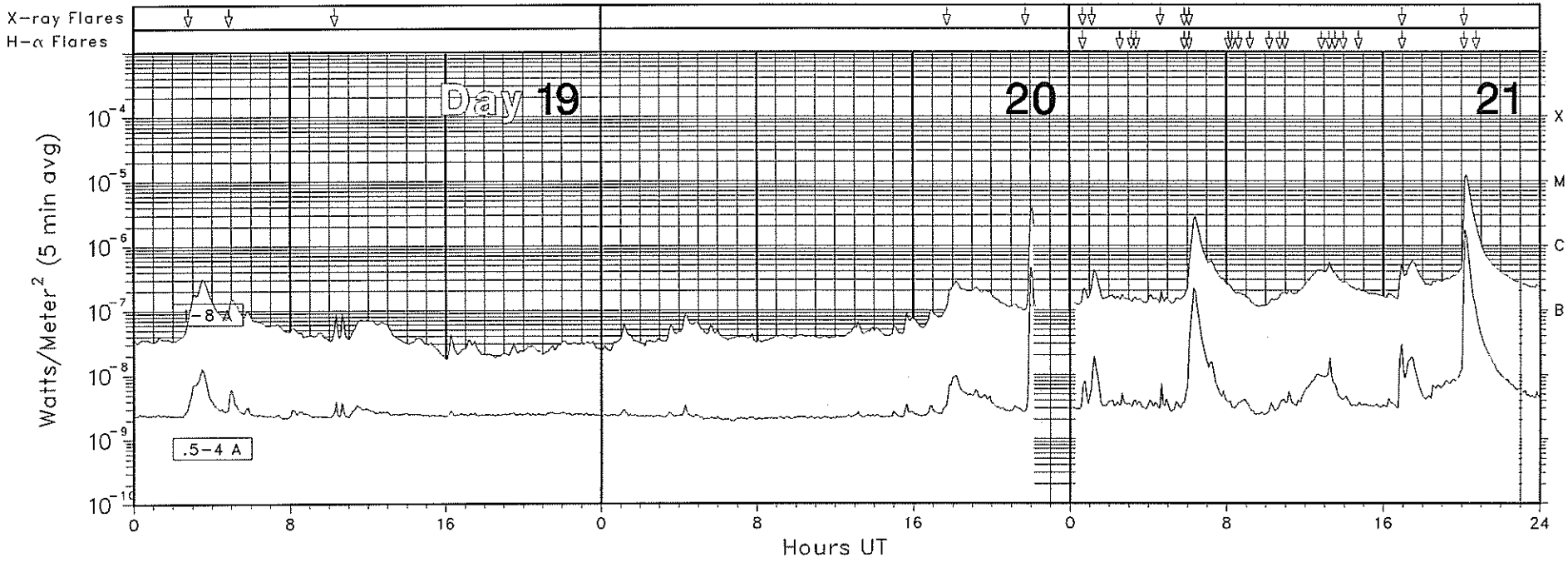
May 1997

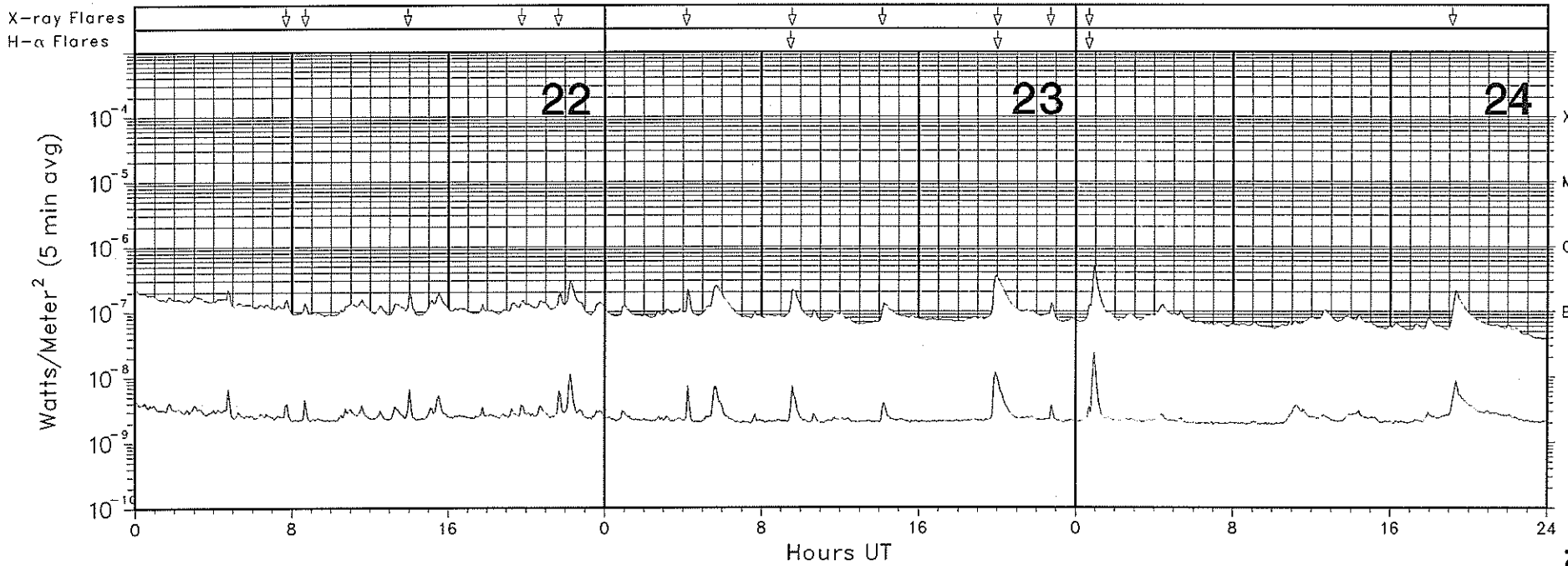




GOES X-RAY DETECTOR

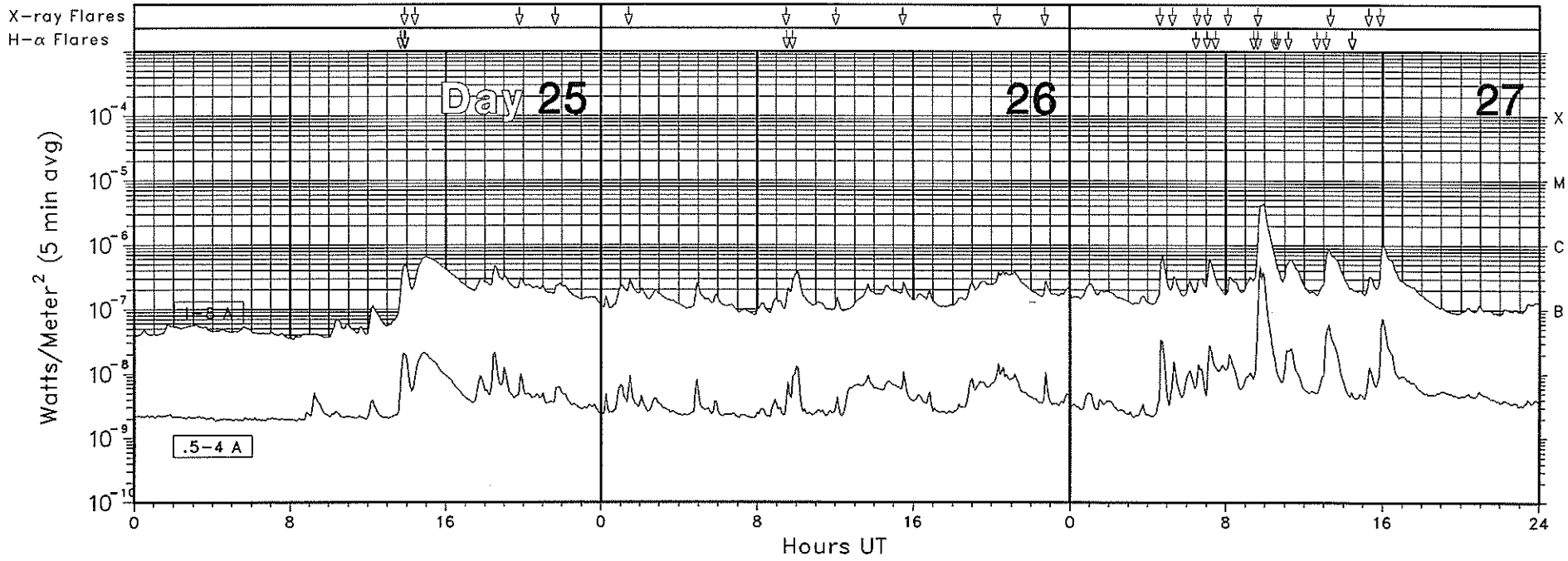
May 1997

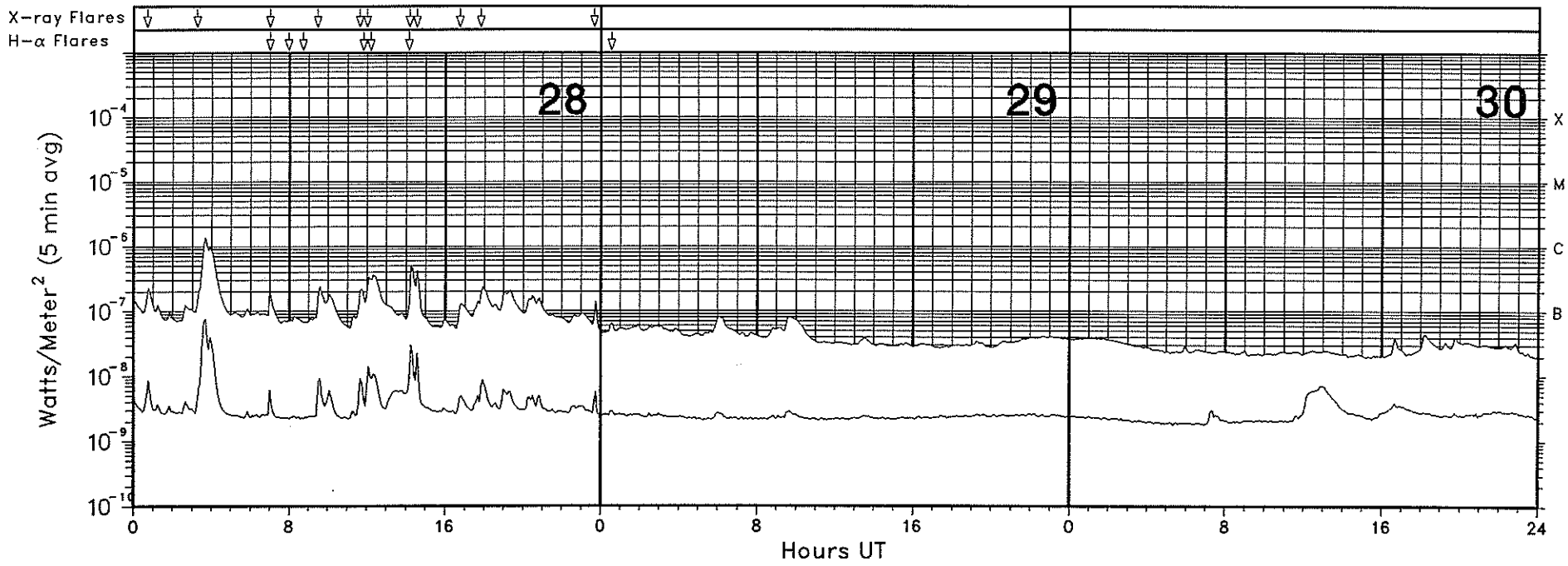




GOES X-RAY DETECTOR

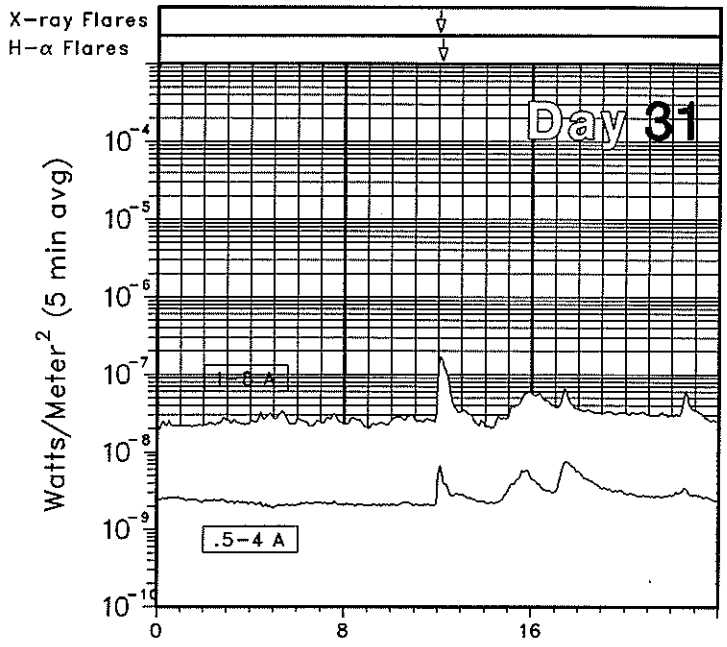
May 1997





GOES X-RAY DETECTOR

May 1997



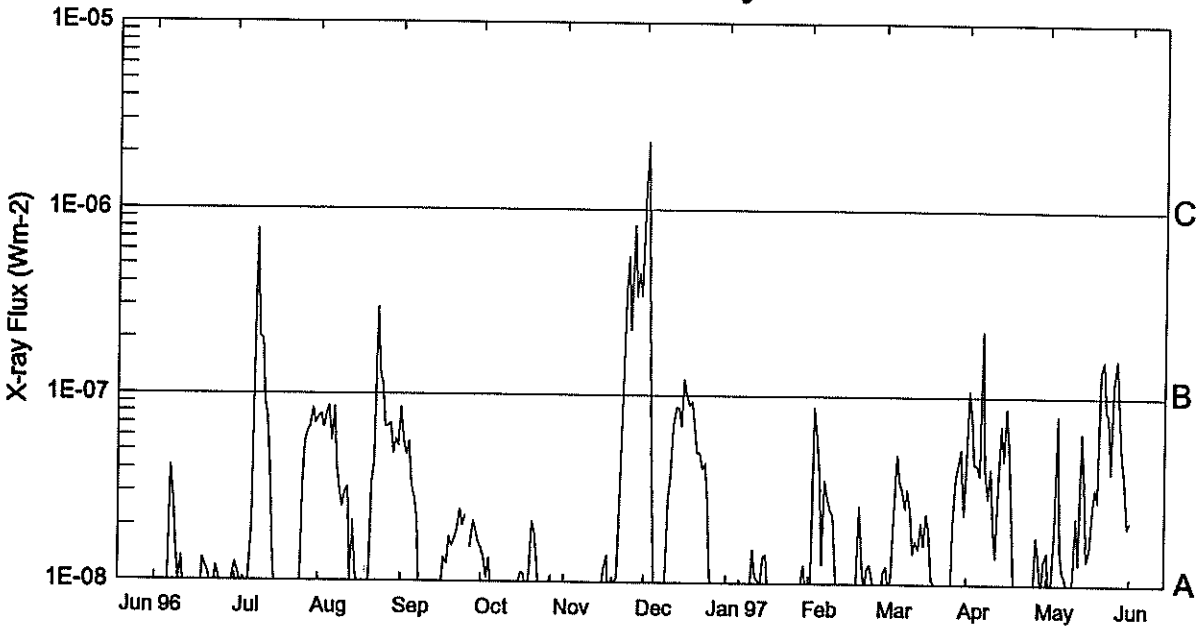
GOES S O L A R X-RAY F L A R E S
Preliminary Listing

May 1997

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp	Opt	Xray	NOAA/ USAF Region
03	2158	2212	2300					B1.0	
04	0701	0706	0713					B1.2	
04	1251	1255	1301					B1.2	
04	1312	1319	1327					B1.7	
05	0035	0100	0131					B4.3	
06	1405	1405	1416	N18	E65	SF		B1.2	8038
07	0312	0323	0356					B1.9	
12	0055	0102	0117					B1.2	
12	0445	0452	0556	N21	W09	1F		C1.3	8038
13	1816	1823	1829					B1.4	
13	2013	2017	2024					B1.5	
13	2052	2058	2104					B1.5	
13	2117	2123	2129					B1.9	
13	2309	2320	2337					B2.5	
14	0036	0042	0051					B1.5	
14	0110	0117	0125					B3.7	
14	0609	0620	06927					B1.7	
15	1922	1926	1929					B1.4	
16	1300	1300	1305	N22	W69	SF		B2.1	8038
17	1844	1920	2038					B2.7	
18	0607	0616	0624					B1.9	
18	1029	1034	1042					B1.3	
19	0248	0333	0352					B3.1	
19	0453	0503	0519					B1.5	
19	1018	1021	1023					B1.0	
20	1745	1812	1847					B2.8	
20	2145	2210	2216					C4.2	
21	0040	0121	0142	N04	E00	SF		B2.3	8040
21	0109	0119	0124					B4.6	
21	0438	0443	0445					B2.2	
21	0553	0556	0558					B2.3	
21	0607	0628	0702	N04	W02	SF		C2.7	8040
21	1659	1659	1719	N04	W08	SF		B5.4	8040
21	2008	2008	2112	N05	W12	SF		M1.3	8040
22	0741	0744	0747					B1.9	
22	0841	0844	0846					B2.4	
22	1356	1401	1407					B2.3	
22	1946	1949	1956					B1.6	
22	2139	2144	2149					B1.9	
23	0412	0418	0423					B2.5	
23	0934	0934	0949	N04	W32	SF		B2.2	8040
23	1410	1417	1433					B1.1	
23	2002	2003	2017	N02	W26	SF		B3.5	8045
23	2244	2247	2253					B1.2	
24	0041	0041	0045	S28	E66	SF		B5.2	8046
24	1909	1923	1934					B2.1	
25	1353	1401	1516	S28	E50	SF		B4.8	8046
25	1425	1500	1552					B6.5	
25	1948	1953	1958					B3.0	
25	2139	2155	2216					B2.2	
26	0127	0131	0138					B3.0	
26	0930	1004	1014					B3.7	
26	1202	1207	1212					B1.6	
26	1528	1532	1537					B2.4	
26	2017	2021	2027					B3.6	
26	2243	2247	2251					B2.7	
27	0438	0444	0455					B7.6	
27	0517	0522	0530					B3.3	
27	0632	0645	0656					B3.2	
27	0705	0713	0722					B5.7	
27	0807	0813	0831					B3.4	
27	0939	0957U	1007	N02	W80	1F		C4.6	8045
27	1321	1322	1324	N02	W83	SF		B8.4	8045
27	1517	1524	1530					B3.1	
27	1553	1604	1617					C1.0	
28	0043	0047	0053					B2.1	
28	0315	0342	0406					C1.2	
28	0700	0702	0709	S29	E17	SF		B2.2	
28	0927	0937	0948					B2.4	
28	1137	1144	1151					B2.4	
28	1200	1222	1235					B3.3	
28	1410	1420	1426					B4.8	
28	1433	1437	1440					B4.5	
28	1644	1650	1706					B1.3	
28	1749	1755	1809					B2.1	
28	2341	2345	2349					B1.4	
31	1201	1203	1212	S28	W28	SF		B1.7	8046

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
Jun 96 - May 97



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

ACTIVE PROMINENCES AND FILAMENTS

MAY 1997

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	ASR	0610E	1400D	S32	E84	05	7.9			9	9	E	SVTO		
01	ASR	1025E	1204D	S32	E90	05	8.5			8	7	E	RAMY		
03	AFS	0505E	0840D	S25	W23	05	1.4		01	7	7	E	SVTO		
03	AFS	1230E	1730	S25	W25	05	1.6		01	9	9	E	SVTO		
03	AFS	1256E	2008D	S25	W24	05	1.7		01	9	9	E	RAMY		
03	AFS	1330E	0130	S25	W25	05	1.6		01	9	9	E	HOLL	8037	
04	DSD	1131E	1337D	S25	W36	05	1.7		01	9	9	E	RAMY	8037	
04	ASR	1356E	1510D	N14	E90	05	11.4			9	8	E	RAMY		
05	ASR	0925E	1223D	N24	E90	05	12.3			9	9	E	SVTO	8038	
05	ADF	1804E	1811	S31	E33	05	8.3	1	03	5	7	E	RAMY		
06	DSD			S32	E29	05	8.3		04	9	9	E	HOLL		
06	ASR	0419E	0815D	S35	E28	05	8.4	1		9	9	E	LEAR		
06	AFS	0550E	0910	N18	E70	05	11.6	1	01	9	9	E	LEAR	8038	
06	AFS	0913E	1020D	N20	E68	05	11.6		02	9	9	E	SVTO	8038	
06	ASR	1351E	1400	S37	E90	05	13.8			9	9	E	RAMY		
06	BSD	1411	1417	N18	E65	05	11.5		02	9	9	E	RAMY	8038	Flare Associated
06	DSF	1707U	1136U	S31	E19	05	8.2	2	05	0	0	E	RAMY		
06	DSD	1740E	1800D	S32	E29	05	9.0		04	9	9	E	HOLL		
06	ADF	1800E	0005	S32	E29	05	9.0	1	04	9	9	E	HOLL		
08	ADF	0931	1005	S34	W05	05	8.0	1	05	9	9	V	KHAR		
08	DSD	0936	1012D	S32	W09	05	7.7		05	9	9	E	SVTO		Flare Associated
08	DSD	0950U	1008	N24	E41	05	11.5	1	01	9	9	V	KHAR		
08	DSD	1012	1035D	N20	E43	05	11.7	1	01	9	9	V	KHAR		
08	ADF	1037E	1821D	N21	E42	05	11.7	1	04	9	9	E	RAMY	8038	
08	ADF	1320E	1734	N21	E40	05	11.6	1	09	9	9	E	SVTO	8038	
09	ADF	0455E	1729	N21	E33	05	11.7	2	10	9	9	E	SVTO	8038	
09	ADF	0530E	1740	N14	E15	05	10.4	2	12	9	9	E	SVTO	8038	
09	ADF	1110E	1804D	N21	E29	05	11.7	1	06	8	9	E	RAMY	8038	
09	ADF	1401E	0025	N20	E24	05	11.4	1	04	6	5	E	HOLL	8038	
09	AFS	2224E	0025	N25	W38	05	7.0		01	8	9	E	HOLL	8039	
10	ADF	0530E	1740	N14	E15	05	11.4	2	12	9	9	E	SVTO	8038	
10	ADF	1116E	1852	N20	E15	05	11.6	1	06	8	8	E	RAMY	8038	
10	AFS	1810E	2320	N24	W51	05	6.8		01	8	8	E	HOLL	8039	
11	AFS	0505E	1724	N26	W57	05	6.8		03	7	7	E	SVTO	8039	
12	AFS	0001E	0938	N24	W65	05	7.0		02	3	4	E	LEAR	8039	
12	ADF	0455E	0845D	N23	W09	05	11.5	1	04	9	9	E	SVTO	8038	
12	DSF	0924U	2333U	S32	E29	05	14.7		07	0	0	E	LEAR		
12	ADF	1605E	1735	N27	W13	05	11.6	1	05	9	9	E	SVTO	8038	
12	ASR	2350E	0936	N26	W82	05	6.6			9	9	E	LEAR	8039	
13	ASR	0455E	1530D	N26	W90	05	6.2			9	9	E	SVTO	8039	
13	AFS	0525E	1540D	N20	W21	05	11.6		01	9	9	E	SVTO	8038	
13	ADF	0712E	1730	N26	W23	05	11.5	1	07	9	9	E	SVTO	8038	
13	BSL	0812E	0910	N23	W90	05	6.5	1	03	9	9	V	KHAR		
13	ADF	0900	0927	N24	W25	05	11.5	1			9	V	KHAR		
13	BSL	0916	0928	N30	W90	05	6.6	1	01	9	9	V	KHAR		
13	BSL	0918	0945D	N23	W90	05	6.6	1	02	9	9	V	KHAR		
13	ASR	1010E	1928	N24	W90	05	6.5			9	9	E	RAMY	8039	
13	AFS	1024E	1928	N19	W24	05	11.6		01	6	6	E	RAMY	8038	
13	ADF	1036E	1928	N26	W23	05	11.6	1	07	9	9	E	RAMY	8038	
13	AFS	1312E	0132	N20	W25	05	11.6		01	6	5	E	HOLL	8038	
13	ADF	1312E	0132	N24	W25	05	11.6	1	03	6	6	E	HOLL	8038	
13	DSD	1347E	1428D	N19	W26	05	11.6		01	9	9	E	RAMY	8038	
13	ASR	1816	0132	N24	W81	05	7.5			9	9	E	HOLL	8039	
13	DSD	2300	2335	N27	W30	05	11.6		04	9	9	E	HOLL	8038	
13	DSD	2326	2341	N24	W32	05	11.5		07	9	9	E	LEAR	8038	
13	ASR	2340E	0810	N24	W80	05	7.8			5	6	E	LEAR	8039	
14	ASR	0615E	0830D	N26	W90	05	7.3			9	9	E	SVTO	8039	
14	DSD	1353E	1451D	S18	W01	05	14.5		01	5	4	E	RAMY		
14	ADF	1612E	2000	N32	W38	05	11.7	1	08	8	9	E	RAMY	8038	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1997

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
14	ADF	1650	0030	N20	W41	05	11.6	1	05	9	9	E	HOLL	8038	
15	AFS	0440E	1650	S05	W19	05	13.8		01	9	9	E	SVTO		
15	DSD	1210E	1504D	N21	W54	05	11.4		02	9	9	E	SVTO	8038	
16	AFS	0525E	0840D	S04	W33	05	13.7		01	9	9	E	SVTO		
16	AFS	0531E	1629	N03	E67	05	21.2		03	9	9	E	SVTO	8040	
16	AFS	1133E	2217	N04	E62	05	21.1		01	9	9	E	RAMY	8040	
16	DSD	1218E	1535D	N04	E63	05	21.2		01	9	9	E	RAMY	8040	
16	AFS	1542E	2255	N04	E60	05	21.1		01	8	5	E	HOLL	8040	
17	AFS	0800E	1720	N02	E50	05	21.1		02	9	9	E	SVTO	8040	
17	AFS	0820E	1720	N03	E32	05	19.7		01	9	9	E	SVTO	8041	
17	ADF	0925E	1511D	N23	W76	05	11.5	1	09	7	7	E	SVTO	8038	
17	ADF	0935U	0957	N11	E49	05	21.1	1	05	9	9	V	KHAR		
17	APR	1005	1055	S38	E90	05	24.2	3		9	9	V	KHAR		
17	AFS	1021	2155	N04	E49	05	21.1		01	9	9	E	RAMY	8040	
17	DSD	1046E	1350D	N03	E48	05	21.0		02	9	9	E	RAMY	8040	
17	BSD	1047E	1103D	N22	W74	05	11.8		04	9	9	E	RAMY	8038	
17	AFS	1054E	2155	N04	E30	05	19.7		01	9	9	E	RAMY	8041	
17	DSD	1350E	1710D	N04	E44	05	20.9		02	9	9	E	RAMY	8040	
18	AFS	0252E	0835	N04	E40	05	21.1		01	9	9	E	LEAR	8040	
18	AFS	0449E	1601	N02	E38	05	21.0		04	9	9	E	SVTO	8040	
18	ASR	0452E	0625D	N26	W89	05	11.3			3	4	E	SVTO	8038	
18	ASR	0510E	0552D	N21	W88	05	11.5			3	5	E	LEAR	8038	
18	AFS	1010E	2023	N03	E35	05	21.0		02	9	9	E	RAMY	8040	
18	AFS	1305E	2352	N05	E34	05	21.1		01	8	8	E	HOLL	8040	
18	DSD	1437E	1512D	N06	E13	05	19.6		01	9	9	E	RAMY	8041	
18	DSD	1731E	1854D	N04	E14	05	19.8		01	9	9	E	RAMY	8041	
18	DSD	1957E	2023	S12	W64	05	14.0		02	9	9	E	RAMY		
19	AFS	0002E	0939	N03	E27	05	21.0		02	8	7	E	LEAR	8040	
19	AFS	0543E	1725	N02	E23	05	20.9		01	6	3	E	SVTO	8040	
19	AFS	0559E	1725	N29	W29	05	17.0		02	9	9	E	SVTO	8043	
19	AFS	0743E	0939	N27	W31	05	16.9		02	9	9	E	LEAR		
19	ASR	0809E	1615D	S39	E90	05	26.6			9	9	E	SVTO		
19	AFS	1012E	1354D	N03	E22	05	21.1		02	9	9	E	RAMY	8040	
19	AFS	1014E	2244	N32	W27	05	17.3		01	9	9	E	RAMY	8043	
19	ASR	1019E	1159D	S44	E90	05	26.9			9	9	E	SVTO		
19	ADF	1030E	1725	N04	E20	05	20.9	2	09	9	9	E	SVTO	8040	
19	DSD	1044	1242D	N34	W27	05	17.3		01	9	9	E	RAMY	8043	
19	DSD	1047E	1725	N03	E22	05	21.1		02	9	9	E	SVTO	8040	
19	DSD	1049E	1122D	N04	E22	05	21.1		02	9	9	E	RAMY	8040	
19	AFS	1328E	2254	N04	E15	05	20.7		03	6	6	E	HOLL	8040	
19	AFS	1328E	2254	N29	W35	05	16.8		02	7	8	E	HOLL	8043	
19	APR	1330E	1725	S41	E90	05	26.9	1		9	9	E	SVTO		
19	DSD	1726E	1915D	N05	E00	05	19.7		01	5	9	E	RAMY	8041	
19	ASR	1824E	1943D	S38	E90	05	27.0			3	2	E	RAMY	8044	
20	AFS	0050E	0930	N28	W43	05	16.7		02	9	9	E	LEAR	8043	
20	AFS	0410E	1546	N02	E10	05	20.9		02	9	9	E	SVTO	8040	
20	AFS	0412E	1546	N29	W42	05	16.9		02	9	9	E	SVTO	8043	
20	DSD	0535E	0631D	N31	W46	05	16.6		02	9	9	E	SVTO	8043	
20	DSD	0557E	0719D	N03	E10	05	21.0		02	9	9	E	SVTO	8040	
20	ASR	0832E	0920D	S43	E78	05	26.8			7	7	E	SVTO	8044	
20	AFS	1436E	0040	N29	W50	05	16.7		02	7	6	E	HOLL	8043	
20	AFS	2330E	0934	N28	W56	05	16.6		02	9	9	E	LEAR	8043	
20	DSD	2330E	0934	N29	W52	05	16.9		02	9	9	E	LEAR	8043	
21	DSD	0121	0154D	N04	E01	05	21.1		02	9	9	E	LEAR	8040	Flare Associated
21	AFS	0237E	0934	N03	E00	05	21.1		02	9	9	E	LEAR	8040	
21	AFS	0615E	0934	N02	E09	05	21.9		01	9	9	E	LEAR		
21	AFS	1103E	2137	N01	E07	05	22.0		01	9	9	E	RAMY	8045	
21	AFS	1103E	2137	N03	W03	05	21.2		02	6	7	E	RAMY	8040	
21	AFS	1103E	2137	N28	W64	05	16.4		02	6	8	E	RAMY	8043	
21	DSD	1122E	1411D	N30	W65	05	16.4		03	9	9	E	RAMY	8043	
21	BSD	1344E	2137	N28	W69	05	16.2		07	9	9	E	RAMY	8043	
21	DSD	1709E	2137	N04	W10	05	21.0		01	9	9	E	RAMY	8040	
21	AFS	1800E	2330D	N02	E03	05	22.0		01	8	7	E	HOLL	8045	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1997

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
21	DSD	1802E	2135D	N02	W11	05	20.9		02	9	9	E	HOLL	8040	
21	BSD	1847	2015D	N31	W69	05	16.3		16	4	2	E	HOLL	8043	
22	DSD	0247	0251	N04	W16	05	20.9		01	0	0	E	LEAR	8040	
22	DSD	1147	1610D	N02	W05	05	22.1		01	9	9	E	RAMY	8045	
22	DSD	1314E	1707D	N05	W19	05	21.1		01	9	9	E	RAMY	8040	
22	AFS	1325E	1718	N05	W20	05	21.1		02	9	9	E	SVTO	8040	
22	AFS	1330E	1718	N02	W09	05	21.9		02	9	9	E	SVTO	8045	
22	DSD	1450E	1707D	N07	W25	05	20.7		03	9	9	E	RAMY	8040	
22	BSD	1714E	1811	N30	W80	05	16.4		01	9	9	E	RAMY	8043	
23	ASR	0230E	0922	S30	E89	05	30.1			4	4	E	LEAR		
23	ADF	0525E	1450D	N03	W30	05	21.0	1	07	9	9	E	SVTO	8040	
23	ASR	0600E	0922	N28	W89	05	16.3			7	9	E	LEAR	8043	
23	ASR	0605E	1710D	N28	W90	05	16.2			9	9	E	SVTO	8043	
23	ASR	1016E	1759D	N28	W90	05	16.4			9	9	E	RAMY	8043	
23	DSD	1432E	1940D	N06	W40	05	20.6		01	9	9	E	RAMY	8040	
23	ASR	2138E	2230	N26	W90	05	16.9			9	9	E	RAMY	8043	
23	ASR	2337E	0730D	N25	W86	05	17.3			4	3	E	LEAR	8043	
24	DSD	0910E	1201D	N09	W51	05	20.5		01	9	9	E	SVTO	8040	
24	AFS	0910E	1201D	S27	E62	05	29.2		01	9	9	E	SVTO	8046	
24	ADF	0920E	1201D	S35	E27	05	26.5	1	03	9	9	E	SVTO	8045	
24	DSF	1741U	1008U	N12	W54	05	20.7	2	05	0	0	E	RAMY	8040	
25	ASR	0738E	0805D	N24	E90	06	1.3			9	9	E	SVTO		
25	ADF	0740E	0933	S27	E50	05	29.2	1	07	9	9	E	LEAR	8046	
25	ADF	0815E	1728	S29	E55	05	29.6	1	06	9	9	E	SVTO	8046	
25	DSD	0846E	1500D	N03	W51	05	21.5		02	9	9	E	SVTO	8045	
25	DSD	0930E	1229D	N08	W71	05	20.1		01	9	9	E	SVTO	8040	
25	DSD	1008E	1210D	N01	W48	05	21.8		01	9	9	E	RAMY	8045	
25	AFS	1157E	2019D	N01	W52	05	21.6		01	9	9	E	RAMY	8045	
25	DSD	1158E	1252D	N28	W47	05	21.8		01	9	9	E	RAMY		
25	AFS	1300E	1603	S28	E46	05	29.1		03	7	6	E	HOLL	8046	
25	DSD	1426	1519D	S28	E48	05	29.3		02	9	9	E	RAMY	8046	
25	AFS	1530E	1728	N03	W55	05	21.5		02	9	9	E	SVTO	8045	
25	AFS	1540E	1728	N30	W51	05	21.6		01	8	8	E	SVTO		
25	DSD	1725E	2150	N29	W51	05	21.7		01	9	9	E	RAMY		
26	AFS	0013E	0935	N05	W62	05	21.4		04	9	9	E	LEAR	8045	
26	AFS	0013E	0935	N29	W58	05	21.5		02	5	7	E	LEAR		
26	ADF	0038E	0935	S25	E45	05	29.5	1	16	9	9	E	LEAR	8046	
26	AFS	0502E	1345D	N02	W60	05	21.7		03	9	9	E	SVTO	8045	
26	AFS	0505E	1035D	N26	W50	05	22.3		02	9	9	E	SVTO		
26	ADF	0509E	1603	S33	E47	05	29.9	1	15	9	9	E	SVTO	8046	
26	ASR	0936E	1603	N26	E78	06	1.5			9	9	E	SVTO		
26	ADF	1305E	2345	S28	E39	05	29.6	1	09	9	9	E	HOLL	8046	
26	ASR	1323E	2156	N24	E90	06	2.5			9	9	E	RAMY		
26	BSD	1529	2156	N08	W81	05	20.6		01	9	9	E	RAMY	8040	
26	BSD	1817E	1822D	N01	W67	05	21.7		02	0	0	E	RAMY	8045	
26	ASR	2322E	0910D	N24	E89	06	2.8			9	9	E	LEAR		
27	AFS	0530E	1700D	N02	W81	05	21.2		06	9	9	E	SVTO	8045	
27	ADF	0550E	1745	S29	E31	05	29.7	1	09	9	9	E	SVTO	8046	
27	AFS	1045E	1635D	N06	W73	05	22.0		02	9	9	E	RAMY	8045	
27	BSD	1326E	1839	N01	W79	05	21.6		10	6	6	E	RAMY	8045	
27	ASR	1330	1503	N02	W90	05	20.8			9	9	E	HOLL	8045	
27	ASR	1356E	1650D	N03	W90	05	20.8			9	9	E	SVTO	8045	
27	ASR	2332E	0930	N04	W90	05	21.2			7	9	E	LEAR	8045	
27	ASR	2339	0130	N30	W90	05	20.9			9	7	E	LEAR		
28	ADF	0230E	0930	S29	E21	05	29.7	1	09	8	9	E	LEAR	8046	
28	ADF	0620E	1125D	S29	E17	05	29.6	3	05	9	9	E	SVTO	8046	
28	ADF	1346E	1615D	S27	E15	05	29.7	1	09	6	7	E	RAMY	8046	
28	AFS	2145E	0111	S06	E00	05	28.9		01	9	9	E	HOLL		
28	ADF	2310E	0111	S30	E01	05	29.0	1	04	7	6	E	HOLL	8046	
29	ADF	1003E	1755	N27	E61	06	3.2	1	05	9	9	E	SVTO	8047	
29	AFS	1324E	1719D	N26	E51	06	2.5		01	8	9	E	RAMY	8047	
29	ADF	1600E	0117	N24	E53	06	2.8	1	06	7	8	E	HOLL	8047	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1997

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
30	ADF	0430E	1756	N27	E52	06	3.2	1	04	9	9	E	SVTO	8047	
30	ADF	0505E	1756	S32	E71	06	4.8	1	07	9	9	E	SVTO	8048	
30	AFS	1008E	1211D	N25	E41	06	2.6		02	9	9	E	SVTO	8047	
30	AFS	1150E	1756	S23	W15	05	29.3		01	9	9	E	SVTO	8046	
30	ADF	1251E	2203	N27	E46	06	3.1	1	07	8	9	E	RAMY	8047	
30	ADF	1425E	1454D	N25	E39	06	2.6	1	07	9	9	E	SVTO	8047	

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

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

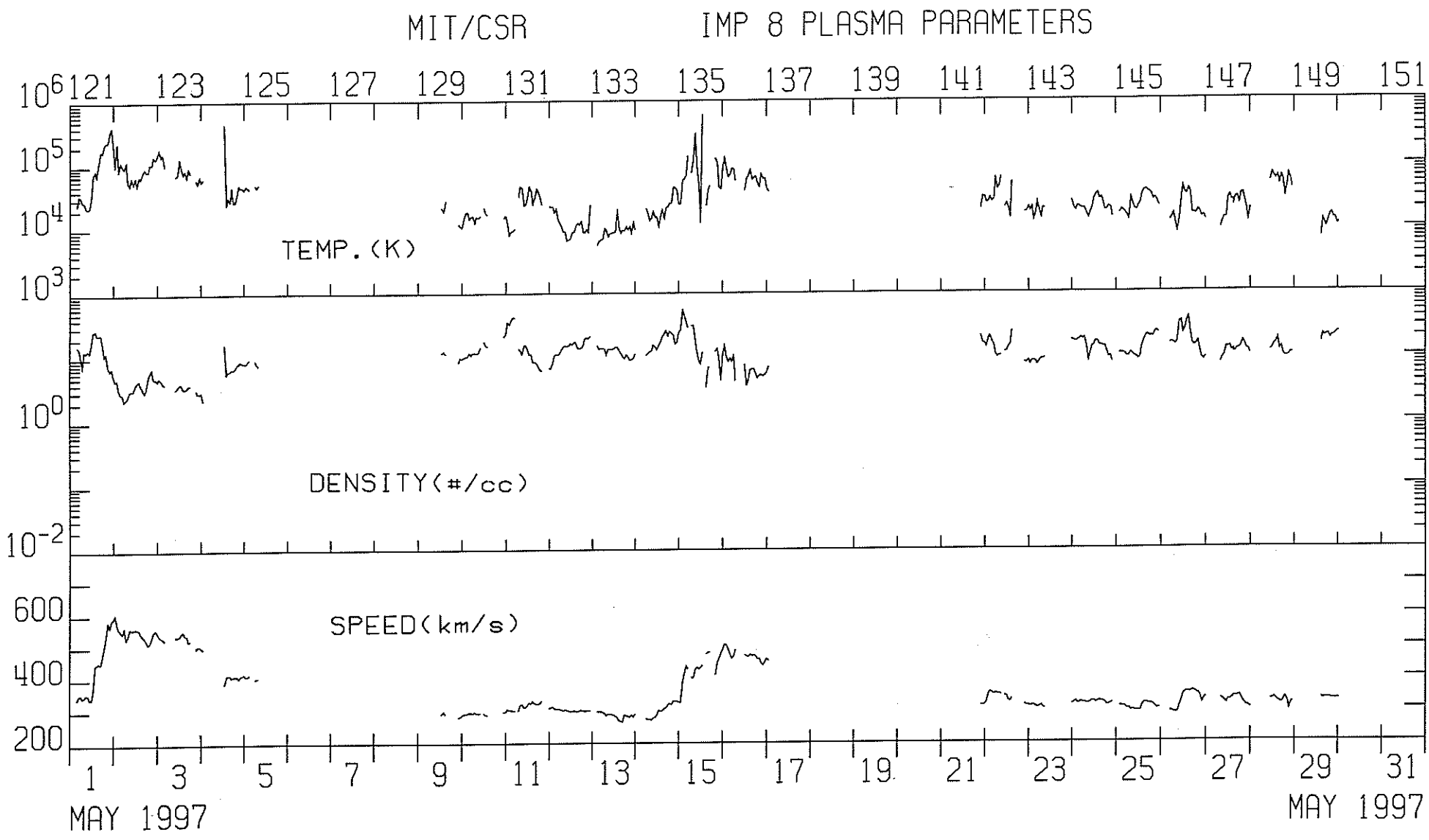
The EXTENT field for limb events is the radial extent above the limb in hundredths of solar radius. For disk events this field contains the heliographic extent in whole degrees.

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

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

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

IMP 8 SOLAR WIND PLASMA
MAY 1997



IMP 8 MIT ONE-HOUR AVERAGES

CONTENTS

Comprehensive Reports Number 639 Part II

MISCELLANEOUS DATA

FLARE INDEX

Kleczek (1952) first introduced the quantity "Q = i x t" to quantify the daily flare activity over 24 hours per day. He assumed that this relationship gives roughly the total energy emitted by the flares. In this relation, "i" represents the intensity scale of importance and "t" the duration (in minutes) of the flare. Some reviews of flare activity using Kleczek's method are given for each day from 1936 to 1986 by Kleczek (1952), Knoska and Letfus (unpublished), Knoska and Petrasek (1984), Atac (1987) and Atac and Ozguc (1986-1995). The daily flare index for the 21st Solar Cycle was determined by using the final grouped solar flares which are compiled by NGDC (National Geophysical Data Center). It is calculated for each flare using the formula:

$$Q = (i \times t)$$

where "i" is the importance coefficient of the flare as shown in Table 1, and "t" is the duration of the flare in minutes.

Table 1

Importance	i	Importance	i
SF,SN,SB	0.5	2B	2.5
1F,1N	1.0	3N,3F,4F	3.0
1B	1.5	3B,4N	3.5
2F,2N	2.0	4B	4.0

To obtain final daily values, the daily sums of the index for the northern and southern hemispheres and for the total surface are divided by the total time of observation of that day calculated from Solar-Geophysical Data, Comprehensive Reports solar flare list.

January 1976-December 1985 flare index data are produced by: Dr. Tamer Atac and Dr. Atila Ozguc, Bogazici University, Kandilli Observatory and Earthquake Research Institute, Cengelkoy-81220 Istanbul, Turkey, e-mails: atac@boun.edu.tr and ozguc@boun.edu.tr, fax: 90-216-3321711, phone: 90-216-3080514

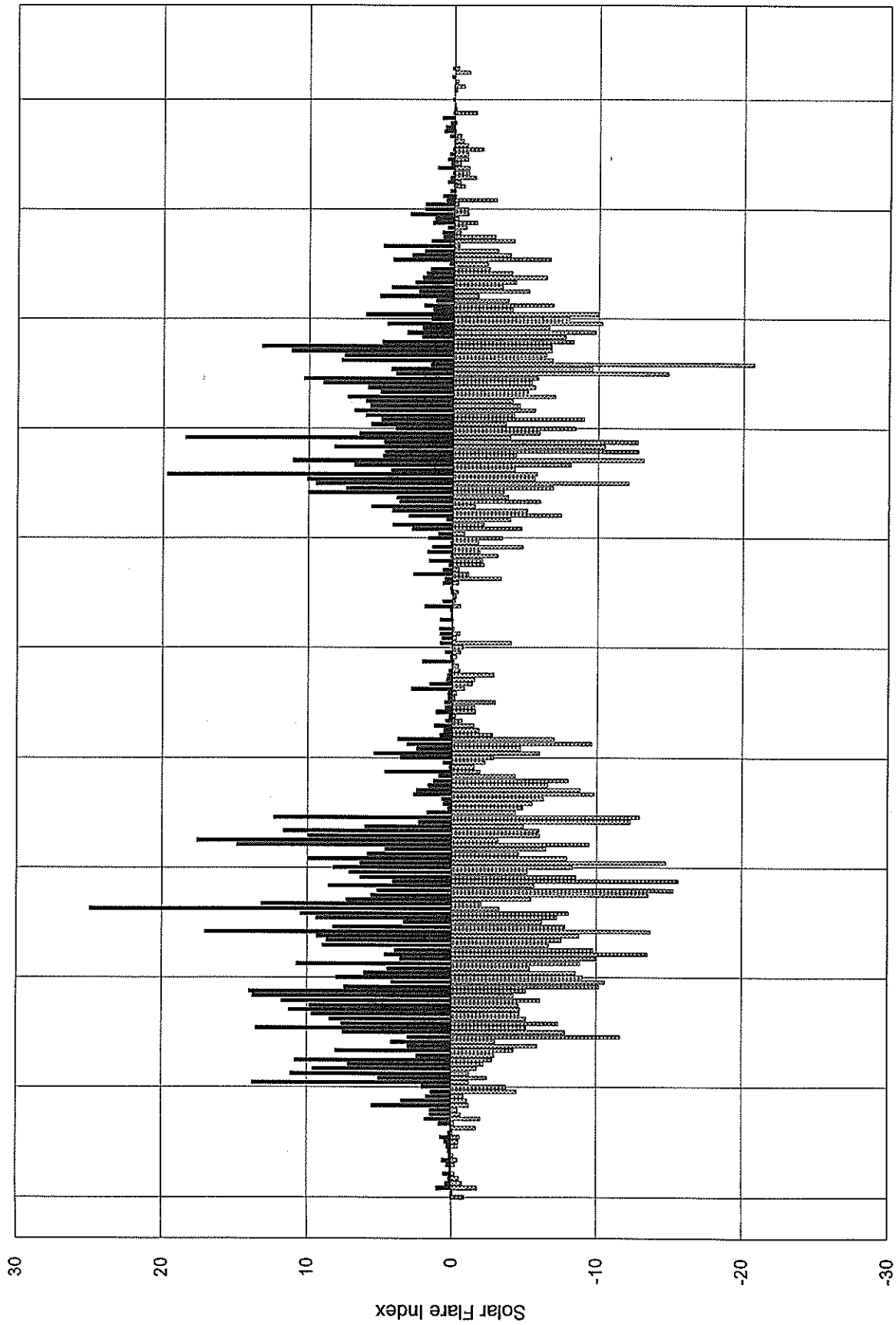
REFERENCES

Atac, T.: 1987, **Astrophys. Space Sci. 135**, 201.
Kleczek, J.: 1952, **Publ. Inst. Centr. Astron., No. 22**, Prague.
Knoska, S and Petrasek, J.: 1984, **Contr. Astron. Obs. Skalnate Pleso 12**, 165.

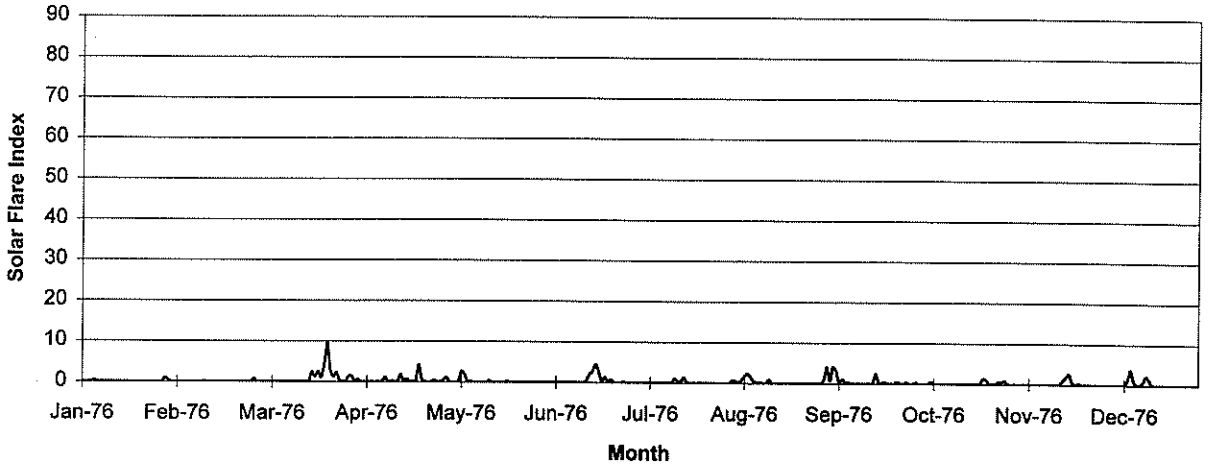
ACKNOWLEDGMENTS

The authors would like to thank H.E. Coffey and E.H. Erwin, WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, Broadway 325, Boulder, CO, 80303, who made available the grouped flare lists. A digital version of these data are available at www.ngdc.noaa.gov/stp in the Solar and Upper Atmosphere on-line databases.

Monthly Mean Flare Index
Jan 1976 - Oct 1996



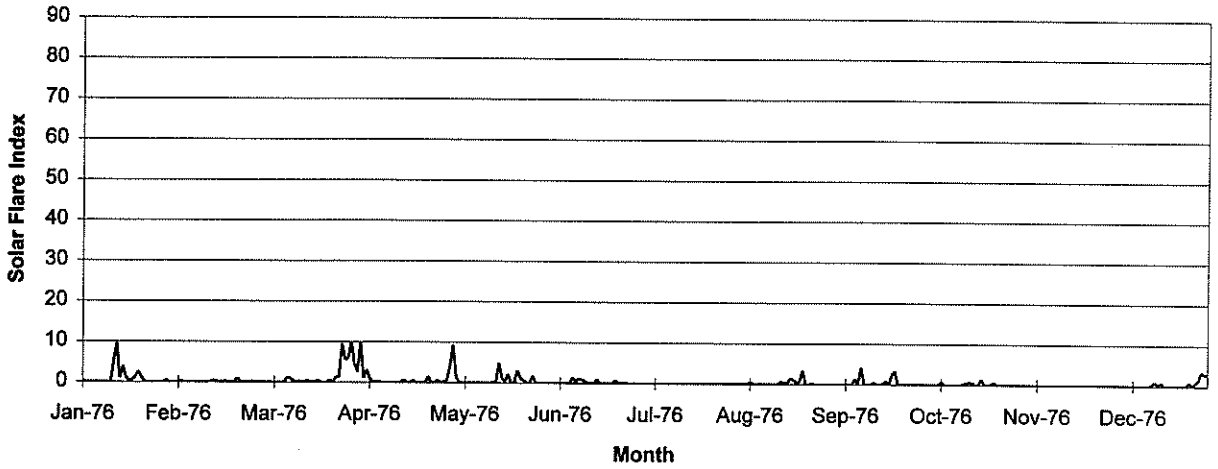
Flare Index of Solar Activity
Northern Hemisphere
1976



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	4.26	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.54	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.33	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.73	3.35	0.00	0.00	0.00
5	0.55	0.00	0.00	0.00	1.84	0.00	0.00	1.81	0.00	0.60	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	1.25	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.21	0.00	0.00	1.50	0.35	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.35	0.00	0.00	1.10
9	0.00	0.00	0.00	1.32	0.00	0.00	0.00	0.11	0.00	0.00	0.00	3.93
10	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.98
11	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.46	0.00	1.19	1.06	0.00	0.00	0.00	0.68
14	0.00	0.00	0.00	1.92	0.00	0.48	0.42	0.00	0.00	0.00	0.00	2.32
15	0.00	0.00	0.00	0.00	0.00	2.11	0.25	0.00	0.00	0.00	0.00	1.36
16	0.00	0.00	2.56	0.84	0.00	2.69	1.54	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	1.21	0.00	0.00	4.67	0.00	0.00	2.62	0.00	1.17	0.00
18	0.00	0.00	2.64	0.04	0.00	2.79	0.00	0.00	0.00	0.00	1.86	0.00
19	0.00	0.00	0.94	0.28	0.31	0.29	0.00	0.00	0.32	0.00	2.80	0.00
20	0.00	0.00	3.90	4.42	0.00	1.44	0.00	0.00	0.41	0.00	0.62	0.00
21	0.00	0.00	9.95	0.43	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	2.77	0.00	0.00	0.87	0.00	0.00	0.00	1.48	0.37	0.00
23	0.00	0.00	1.17	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.00
24	0.00	0.00	2.39	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
25	0.00	0.00	0.26	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.94	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.65	0.00	0.00
28	1.21	0.00	1.42	0.46	0.14	0.00	0.00	0.00	0.00	0.50	0.00	0.00
29	0.41	0.00	1.54	1.33	0.00	0.00	0.00	0.00	0.00	1.02	0.00	0.00
30	0.09		0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00
31	0.00		0.73		0.00		0.00	0.85		0.00		0.00
Mean	0.07	0.04	1.02	0.39	0.19	0.53	0.11	0.34	0.64	0.18	0.23	0.33

Yearly Mean = 0.34

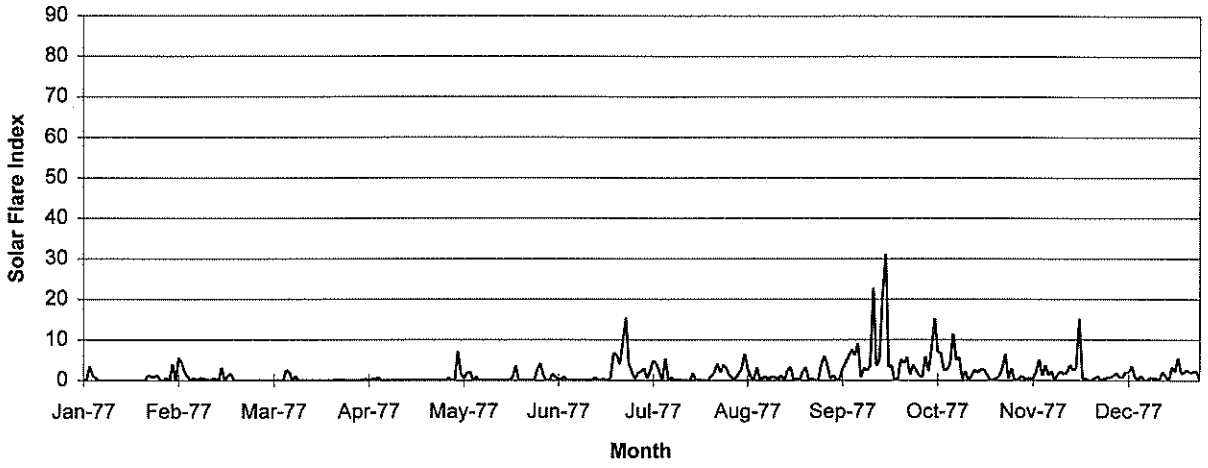
Flare Index of Solar Activity
Southern Hemisphere
1976



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.31	0.15	0.00	1.09	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.32	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00
7	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	1.13	0.00	0.00	1.38	0.00	0.00	1.35	0.00	0.00	0.00
9	0.00	0.00	0.50	0.00	0.00	0.38	0.00	0.00	0.14	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	4.20	0.00	0.00	0.00
11	5.32	0.00	0.40	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
12	9.65	0.41	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00
13	1.08	0.35	0.29	0.00	0.15	0.00	0.00	0.00	0.00	0.14	0.00	0.38
14	3.98	0.09	0.38	0.66	0.00	0.00	0.00	0.00	0.51	0.53	0.00	0.97
15	1.21	0.18	0.00	0.00	4.98	0.00	0.00	0.73	0.00	0.62	0.00	0.32
16	0.31	0.22	0.15	0.00	1.11	1.07	0.00	0.22	0.00	0.60	0.00	0.81
17	0.58	0.16	0.48	0.53	0.45	0.00	0.00	0.32	0.17	0.00	0.00	0.00
18	1.34	0.00	0.00	0.00	2.13	0.00	0.00	1.42	0.88	0.00	0.00	0.00
19	2.69	0.00	0.00	0.00	0.00	0.00	0.00	1.18	0.00	1.46	0.00	0.00
20	1.20	1.03	0.00	0.00	0.00	0.00	0.00	0.42	2.38	0.00	0.00	0.00
21	0.23	0.32	0.58	0.00	3.09	0.00	0.00	0.69	3.42	0.00	0.00	0.00
22	0.00	0.00	0.00	1.50	1.15	0.70	0.00	3.44	0.00	0.17	0.00	0.00
23	0.00	0.00	1.31	0.00	0.71	0.19	0.00	0.00	0.00	0.69	0.00	0.00
24	0.00	0.00	1.30	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00
25	0.00	0.27	9.50	0.57	0.00	0.19	0.00	0.10	0.00	0.00	0.00	0.96
26	0.00	0.00	5.59	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	6.04	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
28	0.49	0.00	9.92	0.63	0.00	0.00	0.00	0.00	0.17	0.00	0.00	1.38
29	0.00	0.00	4.70	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.53
30	0.00		2.60	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97
31	0.00		9.94		0.00		0.00	0.00		0.00		3.00
Mean	0.92	0.12	1.80	0.77	0.55	0.22	0.00	0.29	0.44	0.16	0.00	0.49

Yearly Mean = 0.48

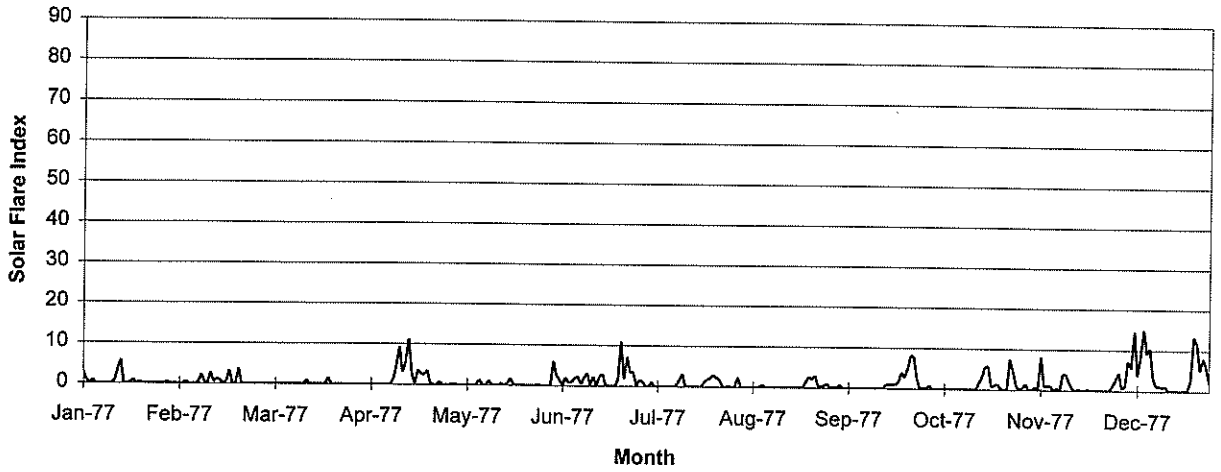
Flare Index of Solar Activity
Northern Hemisphere
1977



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	5.60	0.00	0.00	0.00	0.00	1.90	0.53	3.84	1.15	0.00	0.67
2	0.29	4.40	0.00	0.00	0.00	0.00	2.13	0.52	0.45	0.69	0.14	0.69
3	3.45	2.03	0.00	0.34	7.11	1.54	2.96	1.66	1.29	5.84	0.97	1.11
4	1.20	0.84	0.00	0.00	1.67	0.88	0.48	2.92	0.00	2.27	0.74	1.80
5	0.62	0.00	0.00	0.32	0.48	0.00	2.41	6.56	0.44	8.08	0.24	0.89
6	0.00	0.61	0.00	0.30	1.83	0.60	4.81	2.96	2.93	15.28	0.60	0.72
7	0.00	0.00	0.00	0.75	2.19	0.81	4.14	0.74	4.39	6.93	0.30	1.98
8	0.00	0.63	2.52	0.00	0.00	0.00	2.17	0.33	6.03	6.78	2.17	2.00
9	0.00	0.45	2.09	0.00	0.93	0.00	0.00	3.07	7.54	2.53	5.17	3.52
10	0.00	0.21	0.00	0.00	0.00	0.00	5.40	0.29	6.19	2.70	1.15	0.93
11	0.00	0.00	1.12	0.00	0.00	0.00	0.00	0.74	9.06	3.85	3.72	0.15
12	0.00	0.40	0.00	0.00	0.00	0.00	0.76	0.81	0.81	11.45	1.29	1.11
13	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.44	3.11	5.13	2.31	0.10
14	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.96	2.42	5.65	0.00	0.00
15	0.00	3.16	0.00	0.00	0.00	0.00	0.00	0.73	3.54	0.35	1.48	0.66
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	22.69	2.22	2.24	0.56
17	0.00	1.15	0.00	0.00	0.00	0.69	0.00	1.19	3.65	0.00	1.50	0.37
18	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	4.83	1.11	1.99	0.30
19	0.00	0.00	0.00	0.00	0.00	0.23	1.71	2.44	20.96	2.58	3.76	2.15
20	0.00	0.00	0.00	0.00	0.00	0.29	0.00	3.32	31.17	1.91	2.48	1.05
21	0.00	0.00	0.00	0.00	0.95	0.00	0.20	0.00	3.30	2.72	3.10	0.00
22	1.22	0.00	0.00	0.00	3.53	0.69	0.00	0.44	3.66	2.70	15.26	3.25
23	0.95	0.00	0.00	0.00	0.00	6.75	0.00	0.08	0.00	1.51	0.46	2.22
24	0.88	0.00	0.15	0.00	0.00	6.30	0.00	2.07	0.37	0.07	0.40	5.56
25	1.27	0.00	0.00	0.00	0.00	4.02	1.00	3.26	5.13	0.00	0.00	1.70
26	0.00	0.00	0.21	0.00	0.00	9.21	1.92	0.00	4.27	0.43	0.00	2.05
27	0.00	0.00	0.00	0.00	0.00	15.47	4.11	0.43	5.62	1.00	0.51	2.59
28	0.59	0.00	0.00	0.00	0.00	4.10	1.94	0.00	1.50	2.95	0.97	1.87
29	0.00		0.00	0.00	2.67	2.21	3.79	0.00	3.79	6.50	0.00	2.16
30	4.02		0.00	0.63	4.17	0.38	3.04	3.88	2.46	0.48	0.36	2.28
31	0.00		0.00		1.37		1.26	5.99		3.00		0.35
Mean	0.47	0.77	0.20	0.08	0.87	1.81	1.49	1.51	5.51	3.48	1.78	1.44

Yearly Mean = 1.62

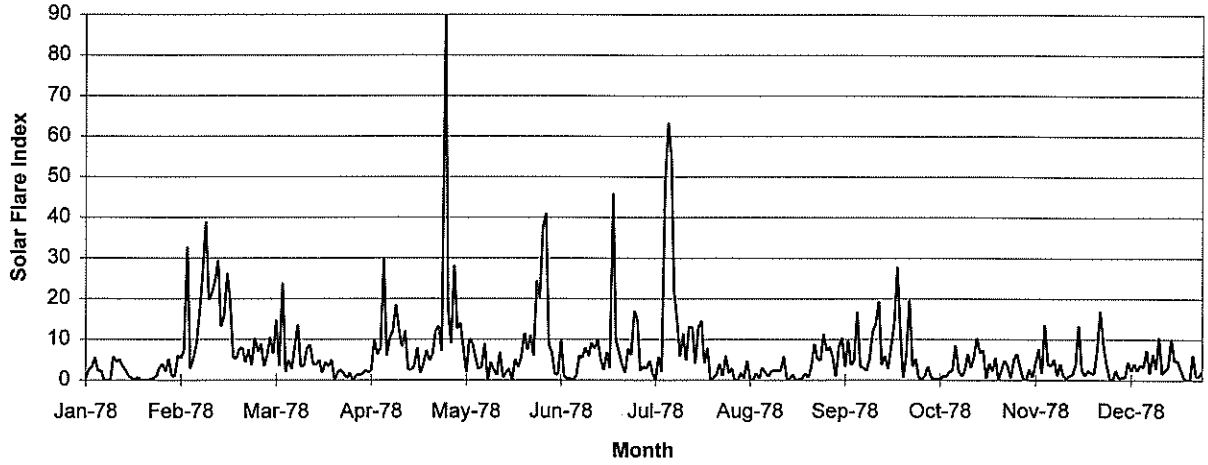
Flare Index of Solar Activity
Southern Hemisphere
1977



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.65	0.00	0.00	0.00	0.29	0.00	1.23	2.39	0.25	0.00	0.53	2.73
2	0.70	0.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.89	1.52	4.35
3	0.03	0.49	0.00	0.00	0.00	2.56	0.00	0.00	0.86	0.00	0.00	0.64
4	0.84	0.00	0.00	0.00	0.00	1.50	1.09	0.00	0.00	0.00	0.00	1.23
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	7.36
6	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	5.61
7	0.00	0.34	0.00	0.00	0.00	0.83	0.00	0.00	0.00	0.20	8.21	14.51
8	0.00	2.25	0.00	0.00	0.33	1.10	0.00	0.21	0.00	0.00	0.87	3.78
9	0.00	0.41	0.00	0.00	1.27	1.81	0.00	0.59	0.00	0.00	1.15	8.32
10	0.00	0.26	0.00	0.00	0.00	2.31	0.00	0.00	0.00	0.00	1.12	15.05
11	0.50	2.73	0.00	1.15	0.08	0.41	0.00	0.00	0.00	0.00	0.00	9.09
12	3.33	0.45	0.00	4.53	1.08	2.13	0.34	0.00	0.00	0.00	0.49	10.54
13	5.78	1.29	0.00	9.24	0.00	3.06	1.58	0.00	0.00	0.00	0.00	3.33
14	0.00	0.91	1.05	3.01	0.00	0.27	3.20	0.00	0.00	0.00	3.88	1.24
15	0.00	0.17	0.00	5.42	0.00	2.25	0.00	0.00	0.00	0.00	4.00	1.22
16	0.24	0.60	0.00	11.17	0.50	0.00	0.09	0.00	0.00	0.00	1.97	1.01
17	0.94	3.22	0.00	2.67	0.00	2.25	0.00	0.00	0.00	0.00	0.45	1.22
18	0.00	0.06	0.00	0.30	0.52	2.97	0.00	0.00	1.03	1.57	0.00	0.00
19	0.45	0.00	0.00	3.57	1.72	0.23	0.00	0.00	1.08	3.05	0.28	0.00
20	0.00	3.74	0.00	2.65	0.30	0.00	0.00	0.00	1.10	5.59	0.00	0.13
21	0.00	0.00	1.61	2.48	0.00	0.05	1.06	0.00	1.05	5.79	0.00	0.00
22	0.00	0.00	0.00	3.45	0.00	0.00	1.83	0.00	1.56	0.75	0.26	0.00
23	0.00	0.00	0.00	0.41	0.00	1.66	2.15	1.44	3.95	1.15	0.00	0.25
24	0.00	0.00	0.00	0.00	0.00	10.90	2.84	2.72	2.79	1.38	0.00	0.28
25	0.00	0.00	0.00	0.00	0.00	1.85	2.38	1.98	4.91	0.26	0.00	2.55
26	0.00	0.00	0.00	0.70	0.00	7.19	1.94	3.04	8.13	0.00	0.00	13.37
27	0.00	0.00	0.00	0.00	0.00	3.41	0.13	0.49	8.01	0.00	0.00	11.67
28	0.47	0.00	0.00	0.00	0.20	3.44	0.00	0.24	2.48	7.52	0.00	5.13
29	0.00		0.00	0.00	0.00	0.21	0.21	0.69	0.00	4.53	0.00	8.11
30	0.00		0.00	0.23	0.00	1.55	0.00	1.02	0.33	1.11	1.30	6.08
31	0.00		0.00		0.00		0.00	0.00		0.00		2.19
Mean	0.51	0.60	0.09	1.70	0.20	2.06	0.65	0.48	1.25	1.09	0.89	4.55

Yearly Mean = 1.17

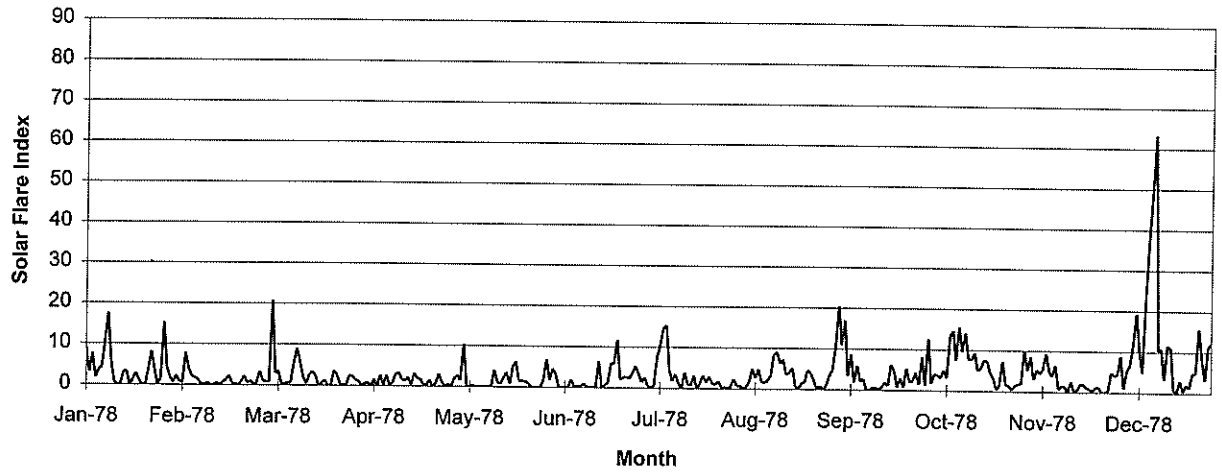
Flare Index of Solar Activity
Northern Hemisphere
1978



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.43	5.32	5.99	1.38	28.25	8.82	2.30	0.00	8.14	0.27	6.48	0.44
2	2.70	7.37	10.48	2.36	12.61	6.73	3.38	0.00	5.76	0.95	3.23	0.00
3	3.23	32.81	6.55	1.99	13.94	1.50	2.81	1.77	0.98	3.29	0.23	2.38
4	5.54	2.89	14.72	2.29	8.10	1.37	4.74	0.44	8.29	0.97	0.00	0.43
5	2.35	5.34	3.51	9.85	1.83	9.70	1.83	4.78	10.28	0.00	2.63	0.70
6	2.41	8.61	23.88	6.34	10.11	1.00	0.10	0.35	3.33	0.49	0.65	0.64
7	0.00	16.55	2.11	7.99	8.97	0.38	5.71	0.09	9.68	0.00	4.18	4.45
8	0.00	26.05	4.89	29.70	5.44	0.42	1.94	1.68	3.69	1.04	7.63	2.28
9	0.00	39.04	2.75	6.00	2.68	0.00	48.38	0.41	4.75	0.82	1.64	4.00
10	5.73	19.77	7.97	10.24	3.34	1.14	63.41	3.03	16.83	2.13	13.66	2.24
11	4.50	21.40	13.57	12.03	8.91	5.98	54.81	1.88	3.28	2.21	3.96	3.82
12	5.07	24.24	3.38	18.56	0.02	5.49	21.88	0.92	3.10	8.50	3.36	3.15
13	3.44	29.45	3.55	12.60	4.37	8.00	14.78	2.18	2.33	2.46	5.13	7.36
14	2.42	13.11	7.88	8.20	2.56	5.89	5.90	2.46	5.04	0.96	1.07	1.62
15	1.03	15.85	8.65	12.04	1.21	9.15	11.43	2.37	12.04	2.27	3.97	6.33
16	0.51	26.34	3.95	2.66	6.85	7.70	4.85	2.23	13.73	6.32	1.17	2.77
17	0.00	19.43	3.81	2.53	0.62	9.92	13.15	5.82	19.39	3.13	0.33	10.53
18	0.68	5.52	4.84	3.39	1.82	5.15	12.92	0.35	3.76	5.65	1.07	1.54
19	0.00	5.38	1.87	7.79	2.80	2.44	4.06	0.42	5.88	10.33	1.20	2.47
20	0.00	7.64	4.42	1.75	0.00	6.77	12.99	1.27	2.80	6.65	3.68	3.16
21	0.00	7.91	3.35	3.88	5.06	3.02	14.66	0.02	8.04	7.36	13.46	10.09
22	0.10	4.31	4.97	7.25	3.15	45.98	4.14	0.15	13.69	0.37	2.59	4.75
23	0.43	7.47	0.00	4.83	5.75	9.88	7.87	0.34	27.87	4.13	1.02	4.83
24	0.97	3.72	1.92	6.42	11.44	6.88	0.26	1.62	11.89	2.18	2.34	2.79
25	3.12	10.28	2.56	12.05	7.38	3.86	0.54	0.63	0.52	5.46	1.77	0.57
26	3.90	7.00	1.64	13.27	11.02	1.78	1.42	3.14	6.27	0.00	1.48	0.00
27	2.19	8.86	0.48	7.02	5.90	7.82	3.96	8.82	19.75	2.73	7.27	0.00
28	5.17	3.46	1.69	91.78	24.42	6.12	1.01	5.15	3.37	4.81	17.06	6.17
29	1.18		0.00	18.12	20.23	17.04	6.00	4.89	5.23	3.33	8.87	0.99
30	0.90		1.13	8.98	37.77	14.91	1.71	11.38	0.67	0.50	3.80	0.98
31	6.00		1.44		41.04		2.91	7.19		5.13		2.26
Mean	2.06	13.75	5.09	11.11	9.60	7.16	10.83	2.44	8.01	3.05	4.16	3.02

Yearly Mean = 6.62

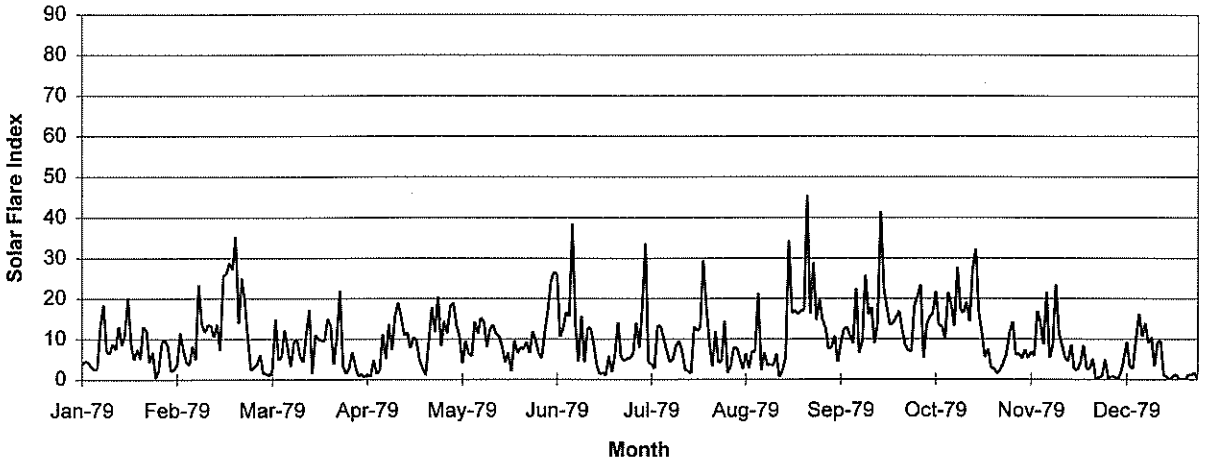
Flare Index of Solar Activity
Southern Hemisphere
1978



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	8.98	0.61	0.80	0.53	2.70	4.55	2.47	0.69	10.59	12.59	9.97	4.26
2	3.10	7.80	20.83	0.70	1.48	3.17	0.50	0.00	20.46	1.79	5.28	8.88
3	7.69	4.23	2.89	0.00	10.30	0.00	0.25	0.41	11.03	3.92	8.58	1.10
4	1.76	2.13	3.44	1.53	0.00	0.12	0.41	1.76	16.96	3.86	3.02	5.34
5	3.66	1.77	0.55	0.00	0.00	0.00	7.50	4.89	3.49	3.16	5.35	6.59
6	4.29	1.35	0.22	2.61	0.30	0.00	10.50	2.70	8.71	4.94	4.47	11.49
7	10.35	0.35	0.66	0.22	0.00	1.92	14.73	4.76	1.86	3.13	5.57	19.26
8	17.54	0.00	0.56	2.59	0.00	0.21	15.40	1.83	5.94	13.25	9.42	10.11
9	5.71	0.52	5.44	0.00	0.00	0.33	4.42	1.60	2.15	14.70	5.00	4.96
10	0.75	0.00	9.03	0.94	0.00	0.21	1.82	2.03	2.69	7.50	3.83	23.87
11	0.00	0.00	5.88	2.79	0.00	0.94	3.36	3.36	0.17	15.58	6.49	38.25
12	0.00	0.54	2.08	3.35	0.23	0.31	1.33	8.40	0.00	9.54	0.68	49.16
13	3.12	0.00	0.39	1.60	4.07	0.00	0.00	9.01	0.63	14.17	1.43	63.47
14	3.38	0.70	2.47	1.23	1.17	0.00	3.79	6.35	0.46	7.88	1.39	10.29
15	0.00	1.21	3.38	2.09	0.71	0.00	1.18	7.17	0.15	7.61	0.00	10.71
16	1.31	2.28	2.47	0.32	2.26	6.41	0.65	3.63	0.72	9.32	2.52	3.27
17	2.79	0.59	0.00	3.07	3.50	0.00	3.08	4.01	1.90	5.06	0.26	11.58
18	1.17	0.20	0.65	1.85	0.79	0.65	0.00	5.18	1.12	5.67	0.48	10.90
19	0.00	0.00	1.24	1.73	5.03	1.33	1.21	0.62	6.21	7.58	1.97	0.74
20	0.00	0.80	0.00	0.38	6.16	5.92	3.20	0.28	4.75	7.37	1.88	0.14
21	3.80	2.18	0.00	0.35	1.57	6.04	1.52	1.40	0.76	4.69	1.23	2.98
22	8.17	0.58	3.55	1.53	1.48	11.63	2.78	1.77	2.91	3.22	0.67	0.42
23	3.82	1.00	2.54	0.00	1.36	2.10	1.33	4.66	0.75	0.47	0.36	1.99
24	0.00	0.15	0.36	0.84	1.01	2.51	0.99	3.85	5.28	1.52	1.19	1.28
25	1.62	0.62	0.00	2.99	0.00	2.65	1.77	2.10	2.01	7.34	1.21	4.74
26	15.28	3.35	0.22	0.92	0.00	2.38	0.25	0.00	2.30	1.70	0.00	4.81
27	4.27	1.14	2.45	0.08	0.00	3.56	0.35	0.86	4.32	1.33	0.00	15.77
28	1.95	0.86	2.24	0.55	0.00	5.30	0.00	0.00	1.44	0.44	0.39	8.34
29	0.61		1.37	0.00	2.02	3.38	0.60	0.94	8.07	1.36	4.84	3.17
30	2.30		1.10	1.94	6.86	1.49	2.35	3.33	1.33	1.92	4.19	11.21
31	0.80		0.09		1.79		0.71	4.77		1.84		12.14
Mean	3.81	1.25	2.48	1.22	1.77	2.24	2.85	2.98	4.31	5.95	3.06	11.65

Yearly Mean = 3.66

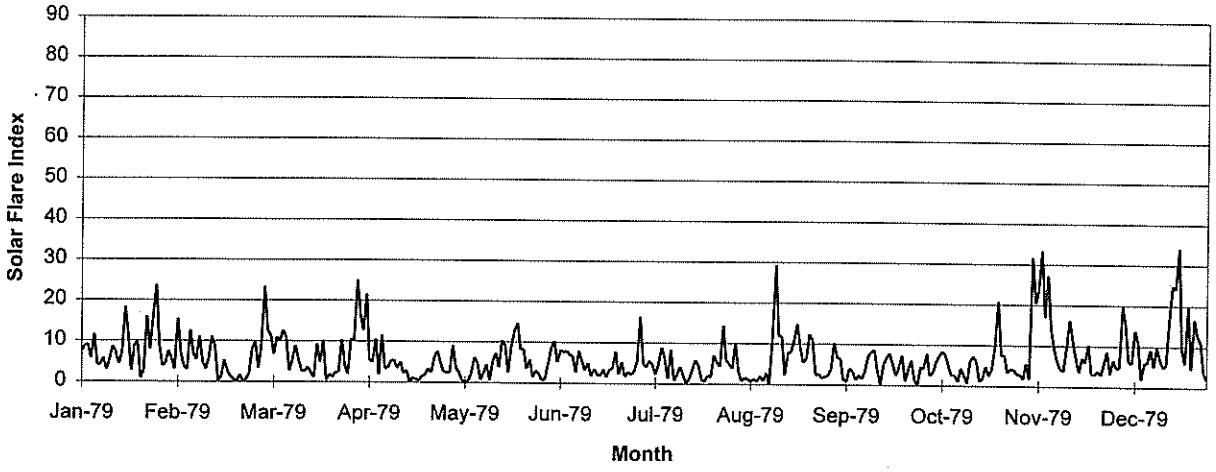
Flare Index of Solar Activity
Northern Hemisphere
1979



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.76	3.64	1.50	0.80	18.07	12.02	14.05	3.31	12.67	20.56	14.25	4.94
2	4.56	11.52	1.52	1.38	19.04	17.46	7.94	7.79	7.52	23.42	6.06	0.27
3	4.33	7.25	0.83	0.48	13.56	24.48	18.15	7.84	8.08	5.24	6.43	0.79
4	3.27	4.35	2.41	1.24	10.90	26.52	33.72	5.42	10.68	13.48	5.19	0.71
5	2.45	3.65	14.85	0.74	4.06	26.10	4.40	2.59	4.31	15.49	7.30	0.00
6	2.79	8.23	4.83	4.77	9.52	10.52	3.77	6.41	8.82	16.50	5.27	1.52
7	12.72	5.00	5.71	1.46	6.45	12.66	2.73	2.77	12.35	21.71	6.87	4.69
8	18.56	23.44	12.18	2.34	5.79	16.62	13.20	6.88	12.92	13.33	5.77	9.32
9	7.12	13.61	7.52	11.19	14.29	15.62	13.25	6.91	10.88	13.21	16.80	3.17
10	6.42	11.68	3.28	5.08	11.34	38.49	10.10	21.33	8.90	9.88	14.25	2.77
11	8.81	13.51	9.23	13.69	15.25	13.54	7.06	2.33	22.46	21.46	8.66	10.26
12	7.48	13.23	9.98	7.31	14.38	4.45	4.33	6.67	6.55	18.60	21.52	16.29
13	13.15	10.56	5.77	15.71	8.07	15.71	4.98	3.59	9.38	13.22	5.31	10.68
14	8.48	13.59	4.30	18.98	12.48	4.29	8.08	3.75	25.75	27.73	8.52	13.94
15	11.31	7.21	11.01	15.34	13.56	12.65	9.50	3.46	16.08	17.27	23.55	9.01
16	20.19	25.56	17.25	10.89	11.27	12.79	7.33	6.31	17.76	16.44	11.28	10.43
17	8.72	26.17	1.43	11.66	10.60	8.98	2.45	0.53	8.94	19.17	8.62	3.40
18	4.91	28.90	11.03	7.81	8.10	3.56	2.08	2.36	14.05	14.34	5.52	9.29
19	7.52	27.11	10.02	10.38	4.14	1.31	1.55	5.42	41.56	27.60	4.41	9.47
20	5.08	35.38	9.62	9.73	6.67	1.73	13.05	34.33	22.50	32.32	8.59	1.10
21	13.05	13.79	9.60	4.69	2.04	1.06	12.00	16.42	17.84	16.44	2.62	0.75
22	12.14	25.07	14.98	2.94	9.58	5.82	12.80	17.10	13.46	11.41	2.35	0.00
23	4.33	19.21	13.29	1.07	6.50	1.92	29.49	16.19	13.87	5.45	4.20	0.85
24	6.76	10.10	3.80	9.48	7.96	6.35	18.04	16.95	15.23	7.52	8.38	1.30
25	0.41	2.35	10.53	17.86	7.53	14.14	9.77	17.22	16.90	2.92	2.59	0.00
26	2.38	3.12	21.94	11.74	9.24	5.60	3.18	45.52	12.34	2.65	2.67	0.00
27	9.04	3.71	3.35	20.40	6.49	4.61	11.82	16.21	8.54	1.44	5.11	0.00
28	9.96	6.14	1.46	8.36	11.81	5.13	4.21	28.92	7.18	2.46	0.00	1.22
29	8.25		2.82	14.43	9.71	5.34	4.56	14.67	6.86	4.15	0.52	1.07
30	2.10		6.70	11.38	6.39	6.46	14.42	19.71	18.31	6.43	0.84	1.73
31	2.57		3.52		5.29		1.66	14.88		11.71		0.10
Mean	7.50	13.47	7.62	8.44	9.68	11.20	9.80	11.73	13.76	13.99	7.45	4.16

Yearly Mean = 9.87

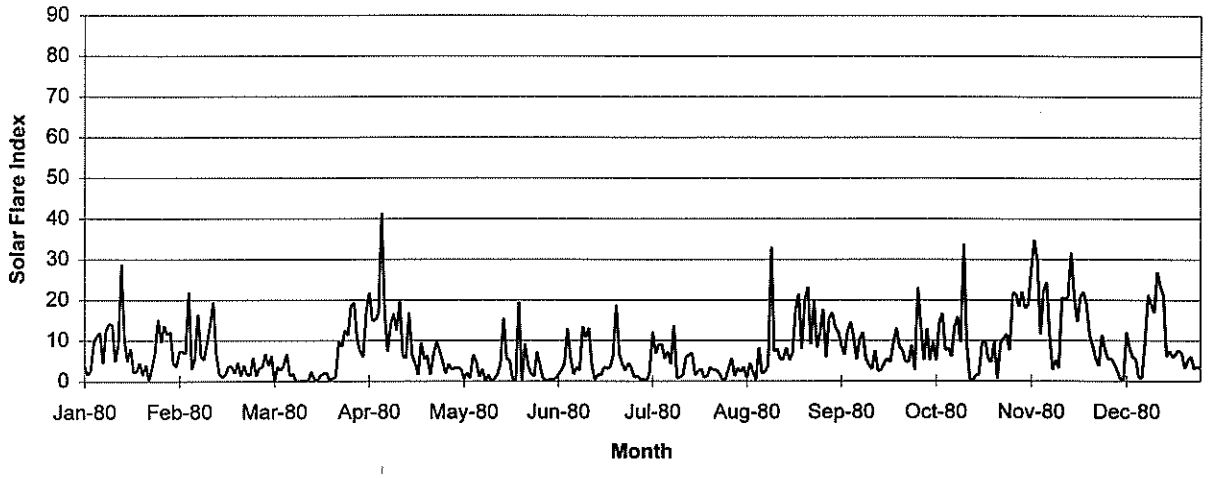
Flare Index of Solar Activity
Southern Hemisphere
1979



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	7.52	15.43	23.38	16.69	9.10	4.79	16.45	10.17	3.96	4.19	2.90	6.58
2	8.78	6.73	12.58	12.71	3.83	8.56	4.88	3.15	10.25	7.75	1.83	4.71
3	9.04	3.89	11.46	21.58	2.52	10.27	4.17	0.82	6.73	2.46	5.59	4.85
4	5.72	2.96	6.79	5.36	0.56	5.21	5.58	1.68	6.41	3.27	1.88	19.79
5	11.63	12.59	10.87	5.02	0.08	8.04	4.81	1.26	1.23	5.79	31.75	15.27
6	4.20	6.79	10.10	10.57	0.48	7.65	2.31	0.86	1.05	7.23	20.48	6.29
7	4.28	5.49	12.58	1.89	2.16	7.87	5.06	1.21	4.06	8.38	23.71	5.81
8	5.76	10.98	11.00	11.62	6.13	7.07	8.87	0.83	3.21	7.63	33.40	13.77
9	2.99	5.02	2.80	3.38	4.94	6.66	6.21	2.02	1.29	4.90	17.02	11.03
10	5.35	3.17	5.27	3.71	0.79	2.72	1.33	0.92	2.42	2.63	27.25	1.95
11	8.67	5.63	8.89	5.28	2.48	7.98	8.36	2.81	1.66	2.65	14.12	5.81
12	7.02	11.03	5.56	5.37	4.46	5.57	0.88	0.00	3.37	1.06	9.33	6.04
13	4.39	8.74	2.85	3.49	0.69	3.21	2.25	11.88	7.00	4.30	6.19	9.17
14	7.15	0.32	2.60	5.04	5.31	4.98	4.19	29.40	8.08	2.58	4.42	5.09
15	18.36	1.32	3.57	2.26	7.19	1.79	2.31	12.02	8.57	0.73	3.89	9.71
16	11.16	5.31	2.29	2.95	3.85	3.52	0.31	11.85	3.70	6.13	9.50	6.94
17	2.67	2.63	1.18	0.00	10.31	2.21	1.23	2.33	0.24	7.19	16.30	4.94
18	8.84	1.31	9.32	1.15	9.13	1.90	3.52	7.70	5.04	6.03	11.27	5.56
19	9.75	0.70	4.81	0.73	2.66	3.42	5.77	8.01	6.77	1.15	6.93	16.26
20	0.95	0.00	10.17	0.52	8.94	1.63	4.48	10.85	7.81	1.89	3.66	24.98
21	2.77	1.76	0.43	1.56	12.60	3.34	1.03	14.85	5.00	4.77	7.03	24.08
22	16.00	0.29	1.88	1.88	14.67	3.72	0.63	9.15	2.47	2.56	5.99	34.27
23	8.05	0.59	1.29	3.38	8.25	7.79	2.14	5.52	4.48	4.25	10.22	9.44
24	15.80	2.10	2.33	2.50	8.29	2.33	1.73	6.34	7.29	9.83	3.16	5.87
25	23.77	7.98	2.45	6.05	3.52	5.25	7.06	12.36	1.10	20.77	3.08	19.88
26	8.94	9.83	10.32	7.66	5.78	1.71	5.39	10.88	3.79	7.60	3.85	4.53
27	3.91	3.42	4.26	5.05	1.52	2.89	4.36	2.42	6.10	7.52	2.95	16.68
28	4.56	8.76	1.94	2.71	3.08	2.20	14.40	2.65	1.36	3.43	5.42	12.61
29	7.44		10.46	2.49	2.21	3.01	6.06	1.69	0.20	4.21	8.69	11.02
30	5.64		10.13	2.36	0.71	5.58	4.92	2.00	4.49	4.14	3.22	3.85
31	3.12		25.07		1.06		3.90	2.29		3.04		1.94
Mean	7.88	5.17	7.38	5.17	4.75	4.76	4.66	6.13	4.30	5.16	10.17	10.60

Yearly Mean = 6.36

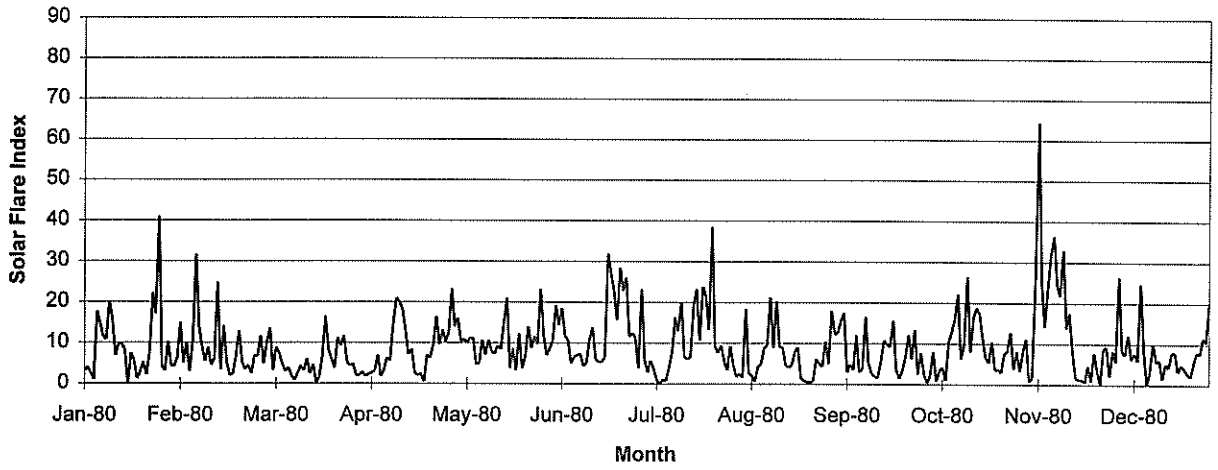
Flare Index of Solar Activity
Northern Hemisphere
1980



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.71	7.29	3.85	5.94	3.29	0.38	0.40	1.25	15.50	13.06	21.61	5.40
2	1.59	7.31	6.16	17.33	3.33	0.46	0.56	3.25	16.93	5.19	18.42	5.56
3	2.81	6.83	0.00	21.79	3.04	0.60	0.00	2.24	13.33	12.92	22.02	4.36
4	9.60	22.06	3.57	14.96	0.67	1.56	2.14	3.50	12.03	5.19	18.02	2.60
5	11.08	3.01	2.70	15.07	2.00	2.72	12.17	0.78	8.86	9.60	18.74	0.54
6	12.05	5.47	3.90	16.67	0.69	4.35	6.77	4.45	6.44	5.04	27.43	0.29
7	4.40	16.53	6.73	41.47	6.43	12.85	8.94	2.38	12.19	14.42	34.79	11.99
8	12.54	6.23	1.40	16.99	4.92	5.77	9.12	0.38	14.60	16.73	29.54	8.17
9	14.16	5.28	1.85	7.21	1.09	1.69	5.56	8.15	11.05	7.58	11.44	5.88
10	13.87	9.41	0.00	13.85	2.92	3.36	7.35	1.83	5.31	8.16	22.28	5.42
11	4.89	13.90	0.00	16.67	0.00	2.63	4.10	2.41	10.23	6.02	24.30	0.82
12	9.04	19.52	0.00	12.44	1.48	13.48	13.71	3.85	11.95	13.35	11.29	0.75
13	28.85	6.43	0.27	19.90	0.00	10.63	0.67	32.97	5.58	15.94	2.83	9.48
14	10.02	1.81	0.13	6.15	0.63	13.06	0.99	7.31	4.03	9.52	5.21	21.34
15	5.02	0.95	2.38	5.63	1.65	3.83	1.65	7.85	2.90	33.82	3.13	18.87
16	8.08	1.67	0.53	16.88	4.46	0.35	5.88	5.32	7.49	9.33	20.62	16.94
17	2.21	3.68	0.00	6.33	15.48	1.65	6.46	5.52	2.46	0.53	20.03	26.90
18	2.44	3.63	1.47	4.55	5.59	1.42	6.96	8.25	2.71	0.29	20.94	23.31
19	4.57	1.97	1.84	1.61	5.13	3.50	1.48	5.19	4.35	1.40	31.75	21.24
20	1.52	4.63	2.12	9.39	0.45	3.08	2.40	6.84	5.52	1.62	20.73	6.08
21	4.06	1.34	0.26	5.37	0.33	3.49	3.02	17.73	4.58	9.15	14.60	7.40
22	0.31	3.85	0.74	6.24	19.55	6.21	0.92	21.54	9.42	10.02	20.81	5.89
23	3.25	1.75	1.05	1.58	0.29	18.81	1.26	8.00	13.01	5.50	22.00	6.69
24	7.13	1.48	9.69	6.36	9.14	6.85	3.44	20.16	8.38	4.60	19.19	7.66
25	15.26	5.81	8.44	9.73	4.02	4.29	2.73	23.21	7.56	9.62	11.24	6.75
26	9.53	1.23	12.51	7.53	1.99	2.65	2.76	9.05	4.81	0.50	8.79	3.21
27	13.66	3.29	11.23	4.89	1.09	4.40	1.81	20.02	4.69	9.38	5.63	5.06
28	11.42	3.42	18.53	1.96	7.10	3.33	0.33	8.29	8.81	10.40	3.77	6.11
29	12.20	6.77	19.37	4.25	3.73	0.94	0.38	11.79	2.65	11.58	11.36	3.04
30	4.39		10.35	2.81	0.71	1.23	3.17	17.73	23.10	7.56	7.84	3.56
31	3.69		7.38		0.00		5.55	5.82		21.77		3.19
Mean	7.98	6.06	4.47	10.72	3.59	4.65	3.96	8.94	8.68	9.35	17.01	8.21

Yearly Mean = 7.79

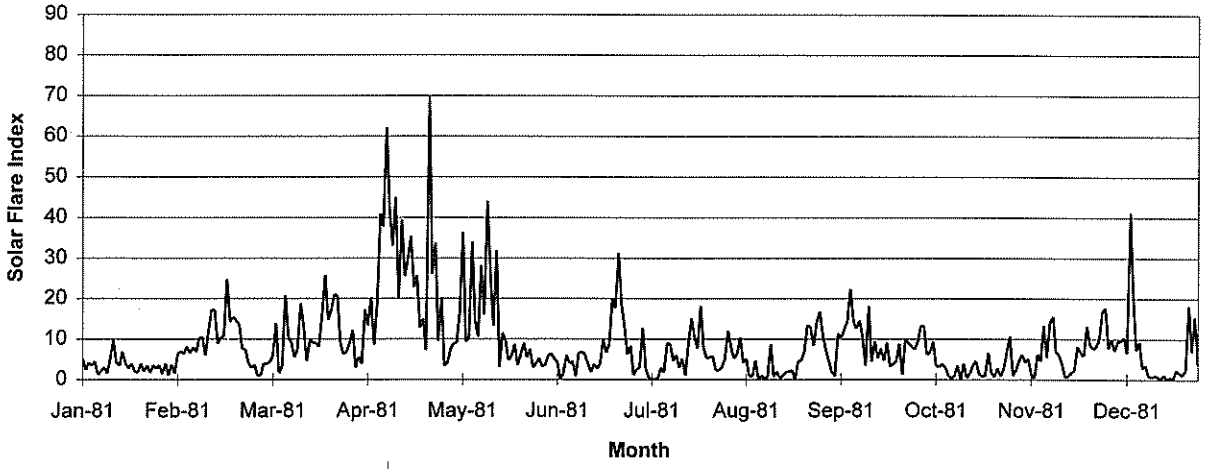
Flare Index of Solar Activity
Southern Hemisphere
1980



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.17	14.98	13.59	1.82	16.08	10.66	6.12	2.48	12.20	0.35	8.02	5.63
2	4.08	5.00	3.26	2.29	10.46	19.23	2.82	1.63	12.78	2.23	11.15	26.46
3	2.73	10.07	8.85	2.71	10.85	14.44	5.69	18.42	15.51	7.94	0.77	8.20
4	1.00	3.02	7.35	3.10	10.06	18.52	3.69	2.61	17.53	0.87	1.54	7.40
5	17.66	10.23	5.02	6.95	11.12	11.81	0.99	2.25	2.97	3.35	25.04	12.21
6	14.73	31.68	3.00	1.84	11.15	10.56	0.00	0.57	4.88	4.29	64.43	6.24
7	11.56	14.02	3.93	3.38	4.83	5.11	1.06	4.35	3.48	1.02	25.46	7.71
8	10.79	9.15	1.99	6.38	5.06	6.60	0.79	4.81	12.02	10.50	14.28	5.91
9	20.17	5.54	0.86	5.69	10.64	7.12	3.92	8.74	3.02	12.94	23.53	24.73
10	15.64	8.83	2.63	15.02	7.13	7.35	7.63	9.72	3.86	16.13	31.76	8.52
11	6.97	4.56	4.31	20.96	10.61	4.46	16.32	21.30	16.58	22.25	36.42	0.00
12	9.63	6.13	3.14	19.92	7.98	5.19	13.02	8.90	5.17	6.33	24.35	3.25
13	9.68	24.85	6.02	18.23	7.37	10.81	20.10	20.41	2.81	9.90	21.77	9.98
14	8.25	3.37	2.51	12.83	9.26	13.77	6.70	9.17	1.99	26.49	33.04	5.63
15	0.00	14.18	4.71	7.17	8.42	6.10	6.17	8.98	1.59	7.94	13.71	6.04
16	7.48	5.24	0.18	8.48	14.90	5.46	6.55	4.68	5.59	16.54	17.57	1.46
17	5.50	2.03	1.65	2.81	21.08	5.40	19.28	4.21	10.77	18.80	8.27	5.15
18	1.21	2.49	6.68	2.06	3.88	6.48	23.27	4.67	9.81	17.35	1.81	4.28
19	2.93	6.69	16.50	2.47	8.67	31.85	10.71	7.93	9.15	11.26	1.19	7.92
20	5.29	12.95	8.28	0.47	3.22	26.81	23.90	9.00	15.63	6.68	1.23	7.89
21	2.13	5.09	6.08	7.10	12.28	22.46	21.51	1.40	3.62	5.44	0.63	3.27
22	7.65	3.48	3.80	6.41	3.74	15.67	13.25	0.82	1.47	10.49	4.63	4.88
23	22.31	4.52	11.28	9.59	6.49	28.44	38.51	0.56	3.47	3.62	0.94	4.00
24	17.08	2.50	9.24	16.47	14.06	22.83	9.27	0.43	6.73	3.77	7.86	2.70
25	40.98	6.92	11.66	9.60	8.82	26.10	7.64	0.86	12.06	2.99	3.53	2.10
26	4.22	6.67	5.36	13.17	11.52	11.58	9.49	6.15	6.30	7.47	0.27	5.29
27	3.24	11.56	4.39	10.30	9.73	12.40	5.79	4.98	13.40	8.15	8.66	7.92
28	10.28	4.94	4.81	12.42	23.28	11.20	3.41	4.34	2.53	12.77	9.32	7.58
29	4.45	10.02	2.01	23.24	11.99	3.87	9.29	10.54	7.73	3.94	2.15	11.46
30	4.32		2.15	13.96	7.08	23.23	4.69	5.04	2.63	8.06	8.23	10.40
31	6.44		2.83		8.67		1.80	18.05		3.42		19.55
Mean	9.08	8.59	5.42	8.89	10.01	13.52	9.79	6.71	7.58	8.81	13.72	7.86

Yearly Mean = 9.15

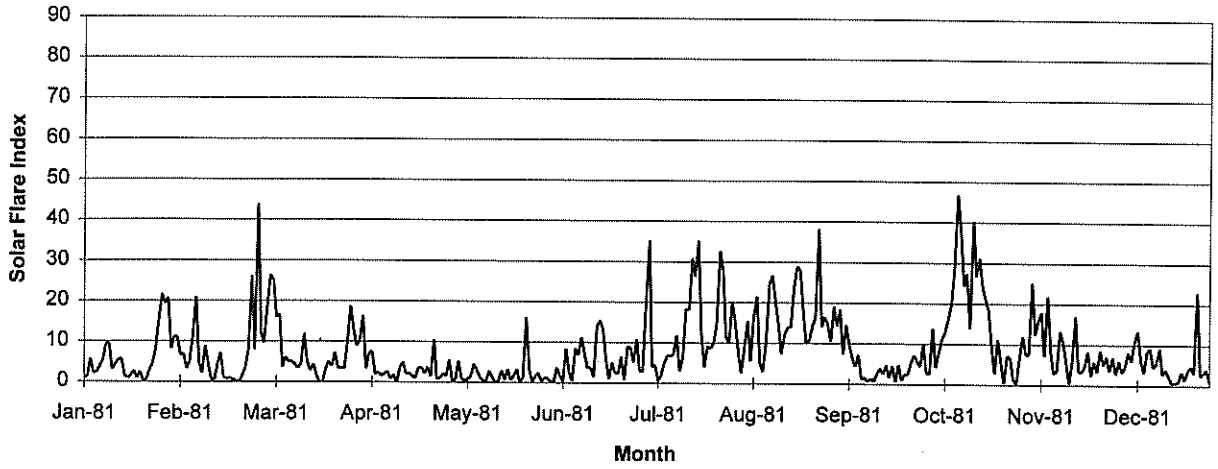
Flare Index of Solar Activity
Northern Hemisphere
1981



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	5.16	6.29	3.96	5.61	7.55	3.56	2.50	8.05	7.37	9.23	1.04	17.71
2	2.45	6.98	3.87	3.82	8.87	5.90	3.15	5.29	4.63	13.27	2.42	7.82
3	4.15	6.40	4.36	17.28	9.12	6.35	12.73	6.40	1.98	13.18	4.60	9.81
4	3.46	8.13	6.16	13.35	16.75	5.13	2.65	10.42	0.95	6.27	6.16	7.18
5	4.46	6.50	13.84	20.17	36.42	4.32	0.42	4.10	11.33	6.63	4.33	9.40
6	1.23	7.91	1.58	8.57	9.31	0.00	0.04	5.10	10.44	9.35	5.17	9.51
7	2.07	6.89	3.21	18.85	10.35	1.62	0.00	0.85	12.24	3.41	1.23	10.46
8	3.07	10.16	20.74	40.98	34.02	5.90	0.33	0.83	14.44	3.13	0.37	6.60
9	1.52	10.47	10.61	37.85	14.66	3.95	2.87	4.63	22.33	3.79	6.18	41.20
10	5.11	5.94	9.07	62.19	10.52	4.41	1.83	0.17	14.53	3.06	4.60	20.45
11	9.75	12.06	5.59	42.08	28.25	0.81	8.92	0.96	12.59	1.01	13.27	7.32
12	4.32	17.20	7.48	33.06	16.04	6.43	8.79	0.11	14.54	0.31	5.50	9.37
13	3.47	17.13	18.78	45.02	44.06	6.92	4.63	0.61	10.65	1.05	14.01	2.81
14	6.90	8.89	12.99	19.81	26.05	6.27	6.02	8.69	3.43	3.38	15.52	3.57
15	3.93	10.46	4.60	39.44	13.22	3.92	2.92	0.75	18.14	0.00	6.79	0.93
16	2.78	10.60	9.63	25.53	31.89	1.85	5.13	1.94	4.43	3.85	6.07	0.63
17	3.85	24.80	9.17	29.67	3.08	3.69	0.96	0.44	9.40	0.48	3.74	0.96
18	1.98	14.30	8.96	35.47	11.48	2.67	9.24	1.03	5.27	1.46	0.60	0.75
19	1.76	15.41	8.12	22.82	9.46	3.86	15.06	1.81	7.60	3.54	0.91	0.15
20	3.98	14.57	16.17	25.77	4.79	9.76	10.32	1.98	4.71	4.56	1.70	1.22
21	2.01	13.64	25.83	12.75	5.77	6.67	7.76	2.31	9.00	1.46	2.33	0.00
22	3.51	7.67	14.68	14.98	8.67	8.77	18.19	0.00	3.23	0.81	8.17	0.56
23	1.70	7.48	17.35	7.24	3.60	20.15	7.81	4.52	3.84	0.91	6.66	0.15
24	3.54	4.06	20.94	69.60	6.20	17.69	5.23	4.61	4.42	6.61	5.91	2.33
25	2.65	2.93	20.73	26.04	8.93	31.26	5.50	7.05	8.77	1.69	13.21	1.61
26	3.54	3.63	9.06	33.70	5.41	18.64	5.79	13.37	1.23	0.69	8.78	1.11
27	1.43	0.92	6.32	9.48	7.54	13.07	2.25	13.06	9.94	2.77	7.61	2.44
28	3.92	1.07	6.82	20.27	2.92	6.17	2.38	8.33	8.93	0.97	8.10	18.22
29	1.06		8.91	3.29	3.94	8.31	3.04	14.13	8.19	2.58	9.85	6.91
30	3.61		12.19	4.21	5.15	1.15	5.00	16.81	7.44	6.83	16.82	15.55
31	1.50		2.90		3.23		12.04	11.33		10.73		3.65
Mean	3.35	9.37	10.47	24.96	13.14	7.31	5.60	5.15	8.53	4.10	6.39	7.11

Yearly Mean = 8.75

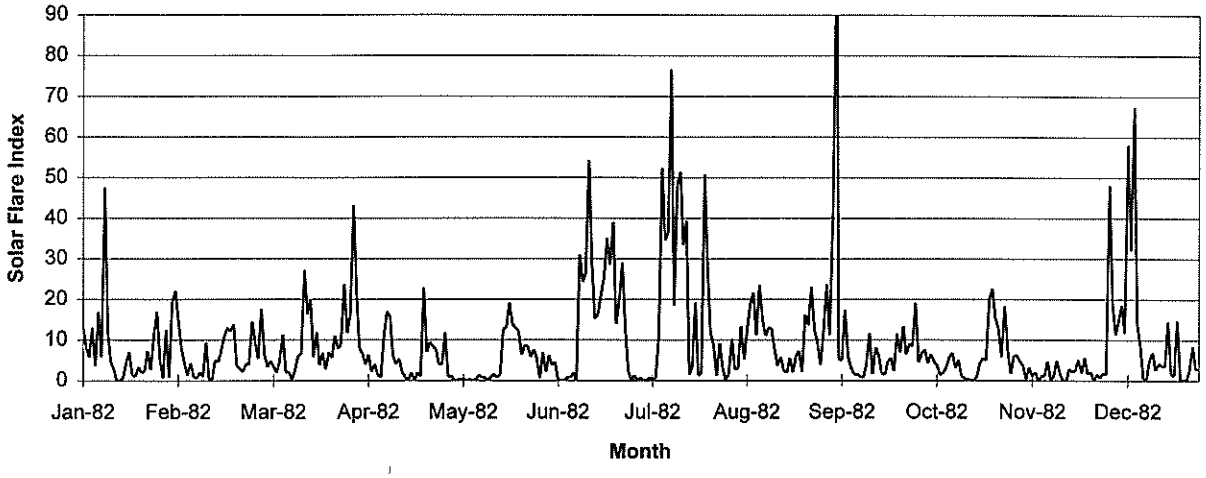
Flare Index of Solar Activity
Southern Hemisphere
1981



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.03	6.69	18.56	16.38	0.70	0.28	2.84	8.20	19.24	2.84	11.85	2.77
2	1.29	6.98	26.42	3.29	5.19	0.31	20.29	2.60	14.27	2.52	7.58	5.98
3	5.75	3.27	25.13	7.19	0.94	3.69	35.27	8.77	18.48	13.79	7.48	3.21
4	2.17	5.04	16.05	7.63	0.54	1.88	4.11	15.44	7.43	4.27	25.23	4.71
5	2.42	11.35	16.70	1.94	0.73	0.30	4.52	5.58	14.54	7.90	12.38	8.10
6	3.93	20.98	3.60	2.36	1.46	8.42	0.57	16.55	9.71	11.19	15.81	5.96
7	5.34	4.89	6.13	1.60	4.50	2.74	2.04	21.48	6.53	12.95	17.89	10.72
8	9.33	2.13	5.00	2.06	2.99	0.44	4.94	5.38	4.44	16.04	7.25	13.45
9	9.46	8.85	5.04	2.60	1.30	8.47	6.85	3.00	7.24	19.83	21.87	6.48
10	3.11	4.49	4.41	0.81	0.40	6.92	6.75	9.98	1.27	28.94	8.25	3.14
11	4.39	0.59	3.36	1.79	0.42	11.21	7.19	24.50	1.64	46.83	2.91	8.36
12	5.39	0.56	4.50	0.00	2.81	7.14	11.83	26.74	0.67	37.59	3.42	9.15
13	5.78	4.46	11.86	3.58	1.21	3.77	2.95	20.27	1.41	24.45	13.33	4.52
14	1.56	7.20	5.13	4.92	0.00	3.85	6.50	14.45	0.72	27.42	10.77	5.53
15	0.92	1.04	2.84	2.06	0.48	1.52	18.42	7.39	2.58	13.90	5.72	9.18
16	1.54	0.79	4.38	2.31	2.93	13.88	18.15	12.04	3.90	40.29	0.41	2.75
17	2.71	0.96	1.66	1.58	0.69	15.40	30.88	13.90	2.65	26.72	6.42	3.90
18	0.96	0.60	0.00	0.96	3.27	13.33	26.37	14.00	4.67	31.24	16.96	2.14
19	2.47	0.14	0.00	3.51	0.63	5.74	35.23	23.81	1.60	24.36	3.30	0.62
20	0.27	0.00	3.20	3.60	1.69	1.06	12.36	28.94	4.50	21.00	3.36	0.74
21	0.56	1.51	5.11	2.18	3.23	4.96	4.05	27.94	0.60	18.42	4.58	0.77
22	2.86	3.52	3.84	3.71	0.00	2.43	9.13	18.27	4.85	9.42	8.35	3.35
23	4.56	8.21	7.31	1.41	1.32	2.39	8.71	10.04	1.05	2.85	2.42	1.44
24	8.17	26.24	3.42	10.42	16.09	6.52	9.85	10.71	2.45	11.22	5.82	3.61
25	15.25	8.00	3.46	0.71	3.29	0.78	14.71	14.23	2.54	5.73	3.33	4.72
26	21.71	43.91	3.31	1.15	0.15	8.97	32.79	16.30	5.17	0.42	8.54	3.15
27	19.34	12.07	9.85	2.04	1.59	8.82	27.60	38.23	7.19	7.15	5.05	23.04
28	20.79	9.60	18.72	1.57	2.39	5.21	11.42	14.02	5.77	6.64	7.03	2.50
29	8.20		12.89	5.48	0.32	10.73	9.83	16.46	4.47	1.50	3.57	3.09
30	11.17		8.92	0.29	1.19	3.00	20.15	14.71	9.91	0.25	6.89	3.97
31	11.10		10.29		1.13		14.83	10.44		6.50		1.24
Mean	6.24	7.29	8.10	3.30	2.05	5.47	13.58	15.30	5.72	15.62	8.59	5.24

Yearly Mean = 8.07

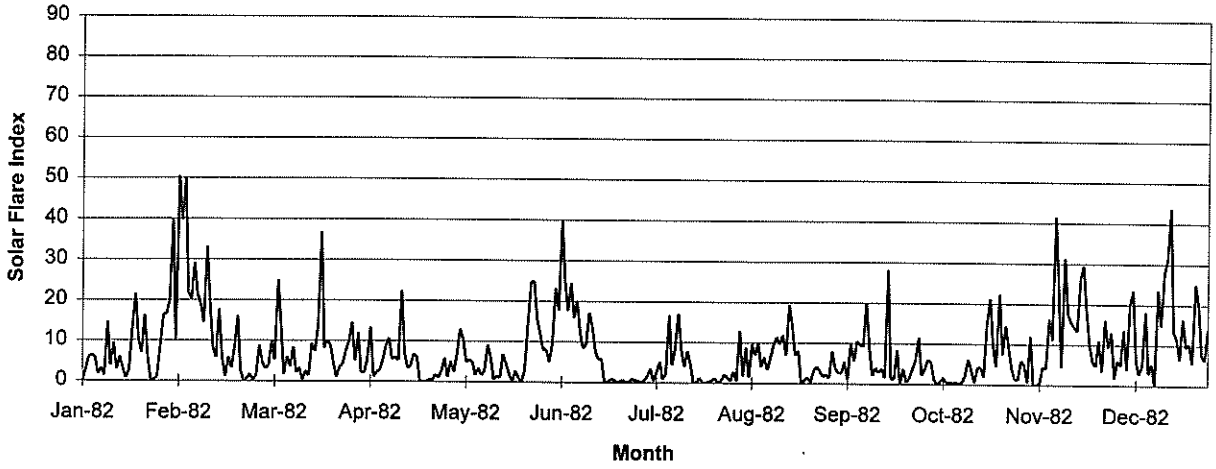
Flare Index of Solar Activity
Northern Hemisphere
1982



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	12.74	14.90	6.62	8.02	1.13	2.17	0.00	10.13	23.71	4.45	6.04	1.57
2	8.21	8.21	3.34	6.77	0.00	6.13	0.63	2.89	11.21	6.63	6.27	48.12
3	5.79	4.26	4.79	4.00	0.08	3.79	0.00	2.83	41.19	7.58	4.79	19.19
4	12.99	1.44	3.44	6.28	0.25	4.56	0.16	13.27	109.60	4.30	3.70	11.42
5	3.71	4.33	2.03	2.08	0.37	0.00	0.61	5.18	5.31	6.42	0.35	14.73
6	16.95	1.04	4.89	4.00	0.00	0.15	0.46	12.47	5.06	4.67	3.16	18.60
7	5.82	0.55	11.21	1.42	0.27	0.00	0.52	18.89	17.46	3.79	1.07	11.68
8	47.58	2.04	2.12	0.79	0.00	0.79	11.04	21.65	5.79	1.41	2.04	58.09
9	12.06	1.02	2.13	10.72	0.24	0.81	52.35	11.22	3.24	1.91	0.00	32.05
10	4.73	9.33	0.31	16.92	1.29	1.86	34.58	23.54	1.57	3.29	1.07	67.49
11	2.76	0.48	2.64	15.77	0.85	0.00	36.44	15.17	1.56	5.71	1.18	14.01
12	0.00	0.33	6.15	5.94	0.65	30.96	76.65	11.02	1.00	6.80	4.75	8.90
13	0.00	5.06	6.50	4.10	0.17	24.23	18.48	12.92	0.74	3.10	0.21	0.41
14	0.65	4.60	27.19	5.28	0.81	26.56	48.21	12.81	3.98	5.00	1.20	0.31
15	4.29	7.66	16.30	2.06	1.52	54.27	51.38	7.54	11.53	1.21	4.87	4.98
16	7.06	10.90	20.06	0.79	0.83	29.02	33.46	3.74	1.60	0.54	1.71	6.90
17	1.35	12.95	5.80	0.19	1.63	15.27	39.38	5.77	8.09	0.38	0.00	2.68
18	1.14	12.09	11.79	1.86	12.63	16.43	1.50	2.58	6.25	0.00	0.00	4.20
19	3.32	13.83	3.81	0.00	13.07	21.02	3.40	2.00	1.75	0.00	2.85	3.69
20	2.07	3.83	6.84	1.95	19.08	25.63	19.21	5.60	1.49	1.05	2.13	3.49
21	2.36	2.87	2.77	1.00	14.06	35.13	1.26	2.04	4.60	4.27	2.44	14.47
22	7.34	2.18	6.95	22.88	12.85	28.53	1.86	5.98	5.57	5.60	5.10	1.59
23	2.64	4.08	5.63	7.06	12.23	39.03	50.70	7.27	2.36	4.98	1.92	1.31
24	10.83	3.93	10.99	9.41	6.42	13.88	27.36	2.22	11.50	19.88	5.60	14.80
25	16.90	14.44	7.82	8.48	8.60	19.89	11.69	16.27	6.91	22.73	1.68	0.00
26	5.31	9.33	9.13	7.69	8.48	29.06	8.76	13.64	13.33	15.44	2.17	0.28
27	0.67	5.41	23.75	4.11	5.81	12.90	1.24	23.02	6.47	12.86	0.00	0.19
28	12.42	17.66	11.70	3.92	7.63	2.42	9.05	12.48	9.06	5.81	1.54	2.64
29	0.85		16.27	11.78	5.43	0.19	3.08	9.52	8.43	18.33	0.65	8.51
30	19.16		43.28	0.96	0.53	1.27	0.00	3.96	19.16	7.72	1.87	2.89
31	22.19		22.37		6.85		1.86	11.92		1.73		2.87
Mean	8.19	6.38	9.96	5.87	4.64	14.86	17.59	9.99	11.65	6.05	2.35	12.32

Yearly Mean = 9.18

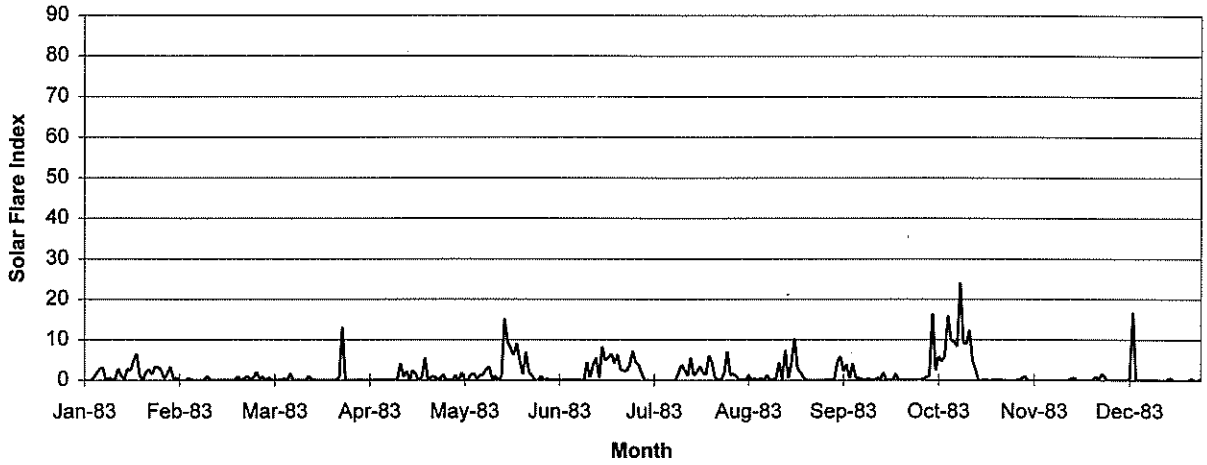
Flare Index of Solar Activity
Southern Hemisphere
1982



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	50.42	3.10	2.34	2.47	5.10	0.00	0.45	7.96	3.93	5.96	1.82
2	2.97	39.71	3.81	2.09	6.49	9.54	0.52	12.91	3.79	6.06	5.02	6.07
3	5.90	50.04	9.79	5.54	12.98	23.25	1.63	1.83	2.67	5.43	0.58	4.93
4	6.36	21.85	5.24	13.28	10.57	17.79	3.39	8.77	2.69	1.07	12.00	13.67
5	5.96	20.33	25.02	1.15	4.95	40.04	0.42	1.48	5.40	0.00	0.00	3.98
6	1.70	29.17	13.48	2.34	5.38	25.25	2.67	9.58	1.15	0.75	0.00	20.17
7	3.31	21.49	1.68	2.88	4.98	17.71	5.08	6.99	10.07	1.69	0.27	23.51
8	1.36	19.14	6.09	5.27	1.69	24.52	0.90	9.94	5.69	0.40	4.45	6.06
9	14.64	14.46	3.56	8.87	3.34	16.02	2.35	4.15	10.50	0.38	4.06	2.88
10	3.80	33.13	8.40	10.65	1.66	20.11	16.69	6.42	9.74	0.33	16.41	5.18
11	9.45	19.78	2.15	5.52	2.79	12.40	4.41	3.35	9.22	0.42	11.13	18.20
12	2.90	8.57	3.25	6.06	9.04	8.50	8.44	6.31	19.96	0.10	41.60	2.95
13	6.02	5.77	0.33	5.25	5.82	9.36	17.02	9.50	9.17	0.58	23.40	5.35
14	3.25	17.74	2.58	22.51	0.46	17.23	8.25	11.40	2.10	2.19	4.50	0.00
15	0.69	5.91	1.37	7.25	1.56	13.68	4.08	9.71	3.95	6.13	31.31	23.69
16	2.89	1.16	9.38	3.33	0.98	7.92	7.76	11.94	2.85	3.44	17.55	14.75
17	13.19	5.85	7.29	3.94	6.79	5.81	4.63	7.00	3.78	0.50	15.55	27.89
18	21.53	3.28	13.62	6.73	4.40	5.95	0.06	19.38	1.56	4.19	14.43	31.18
19	10.19	8.42	36.85	6.20	1.93	0.19	0.00	14.29	28.21	4.24	13.38	43.78
20	7.01	16.10	8.25	0.14	0.00	0.00	1.25	7.02	1.40	1.89	26.44	13.34
21	16.33	2.55	10.04	0.00	2.73	0.83	0.00	8.10	1.26	15.08	29.50	11.59
22	5.80	0.00	8.94	0.00	1.05	0.72	0.00	0.15	8.36	21.29	18.42	6.54
23	0.23	0.72	4.58	0.42	0.00	0.00	0.33	0.81	0.13	9.35	9.95	16.44
24	0.38	1.74	1.05	0.26	2.65	0.27	0.62	1.45	3.74	4.56	5.86	9.52
25	0.93	0.15	3.42	1.69	14.48	0.58	1.10	0.32	0.45	22.38	4.78	10.33
26	8.75	1.56	4.26	0.98	24.83	0.00	0.09	3.16	1.56	7.48	11.04	5.51
27	16.46	8.80	7.56	2.61	24.88	0.21	0.50	4.19	3.78	14.58	3.47	25.06
28	16.46	4.77	9.76	5.77	15.71	0.85	2.08	3.22	5.87	9.37	16.18	19.82
29	19.91		14.47	1.17	11.83	0.54	1.54	1.77	11.44	4.06	9.35	7.63
30	40.00		5.10	5.05	8.09	0.36	0.48	2.21	2.20	1.37	13.07	6.30
31	10.19		11.83		8.15		2.86	1.38		1.24		13.96
Mean	8.34	14.74	7.94	4.64	6.54	9.49	3.20	6.10	6.02	4.98	12.32	12.97

Yearly Mean = 8.05

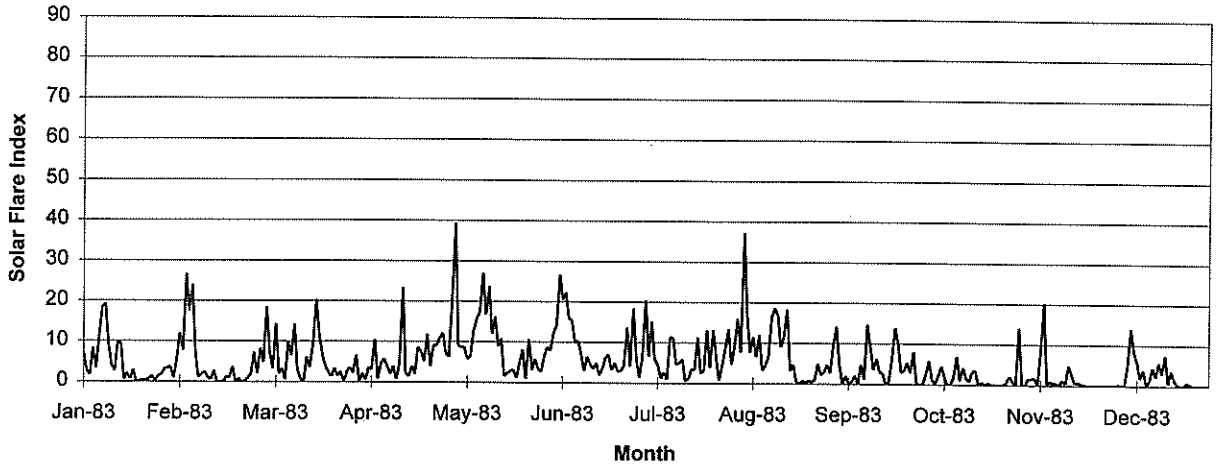
Flare Index of Solar Activity
Northern Hemisphere
1983



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.40	3.69	1.60	0.29	0.00	0.00	0.00
2	0.00	0.00	0.64	0.00	1.23	0.00	1.55	0.89	0.15	0.31	0.13	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.79	0.42	0.00
4	0.59	0.56	0.00	0.00	1.83	0.00	0.00	0.21	4.60	1.06	1.11	0.00
5	1.82	0.00	0.00	0.00	0.15	0.00	0.00	0.00	5.90	16.46	0.00	0.00
6	2.83	0.00	0.00	0.00	0.00	0.00	0.00	1.12	2.25	2.38	0.00	0.00
7	3.11	0.00	0.43	0.00	1.44	0.00	0.00	0.13	3.84	5.86	0.00	0.23
8	0.00	0.00	0.00	0.00	1.58	0.00	0.00	0.42	0.50	4.68	0.00	0.33
9	0.65	0.00	1.65	0.00	0.44	0.00	0.00	0.00	4.15	6.14	0.00	16.77
10	0.15	1.08	0.00	0.00	1.15	0.00	0.00	0.54	0.65	15.90	0.00	0.00
11	0.40	0.00	0.00	0.00	1.41	0.00	0.00	0.00	0.56	9.98	0.00	0.31
12	2.85	0.00	0.00	0.00	2.70	0.00	0.00	1.29	0.28	9.46	0.00	0.00
13	1.05	0.00	0.00	0.29	3.25	0.00	0.00	0.00	0.00	8.32	0.00	0.20
14	0.31	0.00	0.00	4.16	0.25	4.38	1.83	0.09	0.48	24.12	0.00	0.00
15	2.78	0.00	1.02	0.87	1.06	0.68	3.81	0.59	0.00	9.48	0.00	0.21
16	2.42	0.00	0.31	2.27	0.00	3.65	2.65	4.38	0.00	8.88	0.00	0.11
17	4.72	0.00	0.00	0.00	0.96	5.47	1.15	0.29	0.56	12.38	0.00	0.00
18	6.61	0.00	0.00	2.42	15.23	0.58	5.65	7.38	0.29	5.14	0.00	0.00
19	1.31	0.00	0.00	1.52	9.46	8.27	1.28	0.52	1.81	2.72	0.40	0.00
20	0.00	0.90	0.00	0.00	8.02	4.85	2.03	4.27	0.00	0.00	0.67	0.00
21	2.00	0.00	0.00	0.72	6.18	5.60	3.39	10.21	0.00	0.00	0.00	0.67
22	2.71	0.40	0.00	5.49	9.06	6.57	1.94	3.07	0.00	0.25	0.00	0.00
23	1.44	1.02	0.00	0.00	4.77	4.24	1.38	1.91	1.59	0.00	0.00	0.00
24	3.33	0.17	0.00	0.85	1.55	6.37	6.05	0.72	0.00	0.00	0.00	0.00
25	3.28	0.56	0.85	0.94	6.97	2.61	4.41	0.00	0.00	0.23	0.00	0.00
26	2.58	2.02	13.08	0.31	1.95	2.38	0.60	0.00	0.00	0.00	0.00	0.00
27	0.41	0.49	0.00	0.41	1.25	2.37	0.13	0.00	0.00	0.16	0.98	0.00
28	1.63	0.85	0.00	1.36	0.00	3.79	0.10	0.00	0.00	0.00	0.11	0.55
29	3.30		0.00	0.00	0.00	7.19	1.90	0.00	0.00	0.00	1.65	0.00
30	0.44		0.00	0.00	1.00	4.42	7.10	0.00	0.00	0.00	0.70	0.00
31	0.58		0.00		0.00		1.28	0.00		0.00		0.38
Mean	1.72	0.29	0.58	0.72	2.67	2.46	1.67	1.28	0.93	4.67	0.21	0.64

Yearly Mean = 1.50

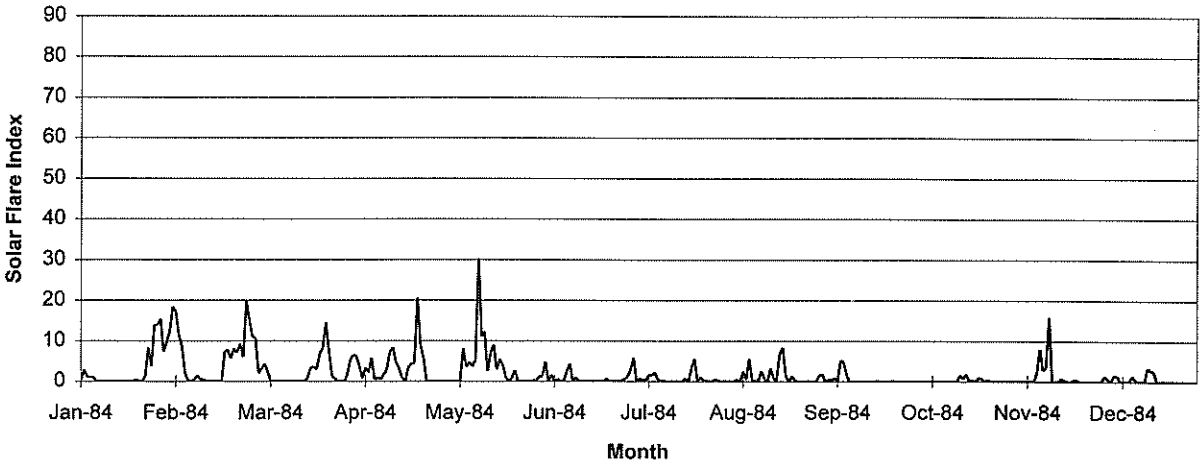
Flare Index of Solar Activity
Southern Hemisphere
1983



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.86	12.04	18.48	2.09	39.47	7.92	6.31	16.08	9.47	2.56	0.00	0.00
2	2.72	7.71	7.26	0.52	9.08	12.23	20.48	7.58	14.19	5.80	0.00	0.23
3	1.67	26.76	3.27	3.52	8.60	14.19	6.49	37.29	4.77	1.16	1.58	0.00
4	8.26	17.57	14.32	3.08	8.61	26.82	15.17	16.94	0.00	0.31	1.53	0.00
5	3.29	24.07	2.05	10.46	5.73	20.50	5.88	7.67	2.03	2.10	1.83	4.75
6	11.67	7.20	3.27	0.79	6.38	22.43	4.59	11.44	0.17	4.48	0.13	14.08
7	18.58	1.13	0.51	4.60	12.75	15.96	1.21	6.59	0.55	2.08	7.88	8.24
8	19.17	1.87	9.75	5.64	15.77	15.42	2.71	11.94	2.04	0.00	20.18	5.90
9	9.07	2.46	6.44	4.08	17.40	9.82	0.90	3.26	0.00	0.11	0.25	1.83
10	4.21	1.15	14.19	2.06	26.98	10.37	11.34	4.46	4.73	1.90	1.02	3.88
11	2.69	0.50	3.04	3.84	16.77	7.13	11.04	6.85	1.15	6.90	0.48	0.17
12	10.00	2.71	0.72	0.72	23.74	2.98	4.63	16.33	14.77	1.06	0.54	1.17
13	9.11	0.00	0.00	4.54	11.98	6.41	5.02	18.71	9.22	4.18	0.00	4.44
14	0.57	0.00	6.09	23.37	16.28	4.56	5.80	16.82	3.56	1.65	1.25	2.23
15	2.13	0.00	3.52	2.31	8.90	3.54	0.54	9.02	6.26	0.79	0.44	5.69
16	0.67	1.22	9.27	1.38	10.83	4.83	1.08	11.69	3.04	3.21	4.89	2.94
17	2.94	1.05	20.31	3.90	1.60	1.94	3.45	18.39	2.67	3.47	2.49	7.40
18	0.00	3.67	11.93	2.02	2.29	3.67	3.27	3.14	0.00	0.00	0.56	0.51
19	0.08	0.13	6.90	8.53	2.83	6.31	11.30	4.79	0.46	0.63	0.73	3.66
20	0.49	0.81	3.98	7.41	3.06	6.90	2.47	0.67	6.00	0.00	0.38	1.29
21	0.39	0.00	2.40	5.13	1.24	3.23	3.11	0.00	13.96	0.38	0.11	0.22
22	0.69	0.17	1.32	11.82	4.94	4.85	13.13	0.74	9.81	0.00	0.00	0.00
23	1.39	1.00	3.33	3.92	8.02	2.91	3.85	0.36	2.95	0.00	0.00	0.00
24	0.17	2.16	1.46	9.08	0.94	2.90	13.18	0.79	3.44	0.00	0.00	0.83
25	1.47	7.19	2.48	8.92	10.61	4.31	6.67	0.45	5.40	0.00	0.00	0.33
26	1.77	2.02	0.17	10.86	3.12	13.72	0.65	0.98	2.83	0.00	0.00	0.00
27	3.20	8.14	2.44	12.09	5.77	4.04	4.51	4.85	7.97	0.61	0.00	0.13
28	3.35	4.77	3.60	7.17	3.49	18.44	8.63	2.20	0.00	2.11	0.00	0.00
29	3.67		2.23	6.15	2.67	5.96	13.41	2.88	0.00	0.90	0.00	0.00
30	0.94		6.57	20.37	6.42	1.38	4.68	4.65	0.00	0.00	0.00	0.00
31	5.48		0.12		8.70		9.50	2.67		14.09		0.00
Mean	4.41	4.91	5.53	6.35	9.84	8.85	6.61	8.07	4.38	1.95	1.54	2.26

Yearly Mean = 5.40

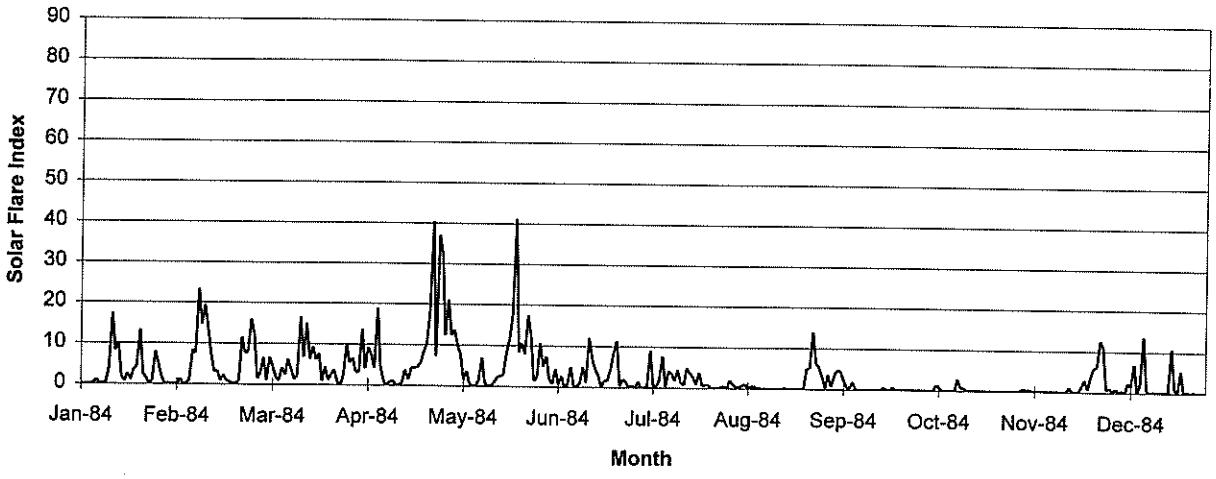
Flare Index of Solar Activity
Northern Hemisphere
1984



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.35	17.21	4.32	3.77	0.00	4.77	0.00	0.00	0.00	0.00	0.00	1.30
2	2.85	11.44	2.43	0.72	0.00	0.00	0.67	0.00	0.52	0.00	0.00	0.57
3	1.17	8.65	0.00	3.31	0.00	1.57	0.38	0.44	0.27	0.00	0.00	0.00
4	1.03	2.21	0.00	2.16	0.00	0.00	0.36	0.00	0.83	0.00	0.00	1.42
5	1.02	0.21	0.00	5.75	8.10	0.55	1.60	2.39	0.21	0.00	0.00	1.48
6	0.00	0.00	0.00	0.42	3.60	0.00	1.42	0.44	5.15	0.00	0.00	0.25
7	0.00	0.39	0.00	0.94	4.70	0.00	2.27	5.58	4.85	0.00	0.00	0.00
8	0.00	1.36	0.00	0.47	3.67	2.32	0.40	0.23	1.50	0.00	0.00	0.00
9	0.00	0.56	0.00	1.64	5.19	4.33	0.28	0.00	0.00	0.00	2.06	0.00
10	0.00	0.42	0.00	3.03	30.25	0.00	0.00	0.19	0.00	0.00	8.00	1.31
11	0.00	0.00	0.00	7.22	11.07	0.94	0.00	2.49	0.00	0.00	2.83	0.50
12	0.00	0.17	0.00	8.31	12.29	0.00	0.00	0.71	0.00	0.00	3.58	0.00
13	0.00	0.00	0.00	4.78	2.58	0.00	0.00	0.00	0.00	0.04	15.95	0.00
14	0.00	0.00	0.00	3.21	6.97	0.00	0.00	3.18	0.00	0.00	0.00	0.00
15	0.00	0.00	0.79	0.90	8.95	0.00	0.00	0.78	0.00	1.57	0.00	3.34
16	0.00	0.00	3.29	0.00	2.94	0.00	0.00	0.28	0.00	0.75	0.00	2.78
17	0.00	7.34	3.60	3.33	5.45	0.00	0.72	6.81	0.00	1.78	0.77	2.48
18	0.00	7.71	2.99	4.32	4.08	0.00	0.00	8.38	0.08	0.15	0.22	0.00
19	0.40	5.74	6.86	4.49	0.88	0.00	3.19	1.42	0.00	0.31	0.00	0.00
20	0.00	8.00	8.21	20.60	0.00	0.00	5.64	0.00	0.00	0.00	0.00	0.00
21	0.00	7.12	14.56	8.91	0.88	0.63	0.00	1.31	0.00	0.89	0.32	0.00
22	1.23	9.22	7.72	5.86	2.64	0.00	1.10	0.33	0.00	0.77	0.37	0.00
23	8.25	5.99	1.40	0.00	0.00	0.00	0.29	0.00	0.13	0.00	0.00	0.00
24	3.83	19.75	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00
25	13.81	15.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	14.00	10.98	0.16	0.00	0.00	0.15	0.00	0.09	0.00	0.00	0.00	0.00
27	15.42	10.72	0.00	0.00	0.00	0.57	0.58	0.00	0.00	0.00	0.00	0.00
28	7.30	2.01	1.46	0.00	0.21	1.22	0.00	0.00	0.00	0.00	0.00	0.00
29	9.71	3.10	5.25	0.00	0.21	2.83	0.00	0.00	0.00	0.00	0.00	0.00
30	12.46		6.46	0.00	1.15	5.85	0.00	1.47	0.00	0.00	0.13	0.00
31	18.41		6.17		1.28		0.00	1.77		0.00		0.00
Mean	3.59	5.44	2.46	3.14	3.78	0.86	0.61	1.23	0.45	0.22	1.14	0.50

Yearly Mean = 1.93

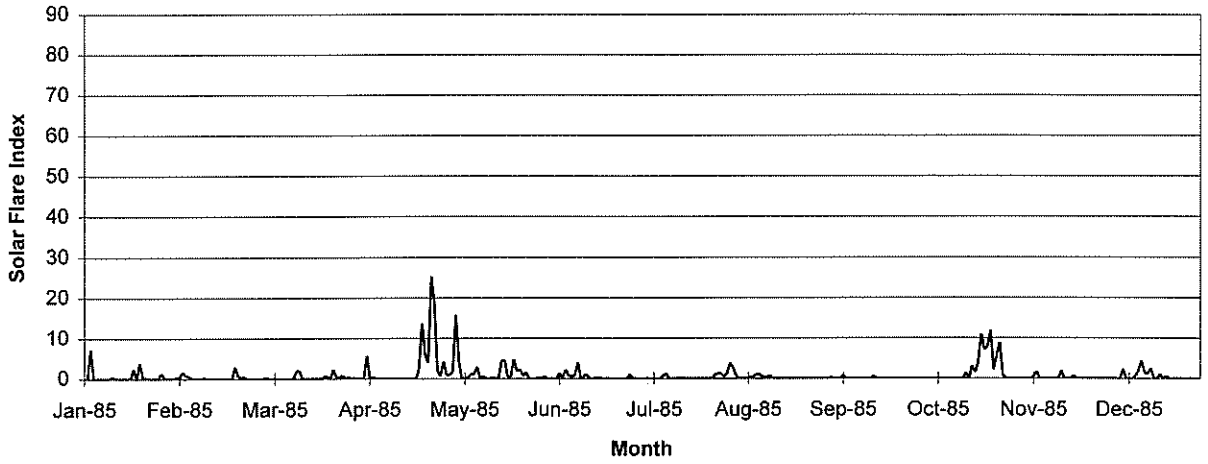
Flare Index of Solar Activity
Southern Hemisphere
1984



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	1.06	13.67	13.78	2.00	0.00	0.35	0.71	0.00	0.00	0.24
2	0.00	1.27	6.67	4.09	9.98	0.76	0.00	0.36	3.50	0.00	0.59	0.86
3	0.00	0.00	4.34	9.29	7.90	4.32	0.10	0.78	4.69	0.00	0.40	0.00
4	0.00	0.00	1.95	7.61	1.56	0.70	9.02	1.04	4.42	0.00	0.41	0.39
5	0.25	1.26	0.93	4.16	3.60	2.55	0.33	0.00	2.42	1.24	0.00	0.00
6	1.13	8.31	4.04	18.86	0.58	0.00	0.47	0.63	0.61	0.88	0.00	2.18
7	0.00	7.56	2.47	4.47	0.00	0.74	1.93	0.43	0.44	0.00	0.24	1.63
8	0.19	23.38	6.12	1.14	0.00	4.85	7.69	0.11	1.88	0.00	0.00	6.88
9	0.18	14.61	3.68	0.00	1.60	0.23	0.33	0.00	0.00	0.00	0.00	0.10
10	4.10	19.42	1.37	0.87	7.00	0.31	4.06	0.00	0.00	0.00	0.00	2.27
11	17.46	13.77	2.22	1.08	0.63	0.92	3.38	0.00	0.00	0.00	0.00	13.70
12	8.21	7.44	16.56	0.15	0.15	4.94	1.79	0.00	0.00	2.85	0.00	0.69
13	10.22	3.09	6.81	0.00	0.23	1.20	4.30	0.00	0.00	0.83	0.00	0.00
14	1.92	3.33	15.09	0.73	0.96	12.07	1.31	0.00	0.00	0.69	0.00	0.25
15	0.76	1.00	6.30	3.77	2.16	7.08	0.73	0.00	0.00	0.00	0.00	0.00
16	2.61	2.16	9.23	1.44	2.54	4.52	4.87	0.00	0.00	0.00	0.00	0.00
17	1.04	1.06	6.21	4.24	2.82	2.98	3.63	0.13	0.00	0.00	1.03	0.00
18	3.67	0.50	7.57	4.38	8.10	0.00	2.75	0.00	0.59	0.00	0.00	0.00
19	4.38	0.19	0.92	4.51	11.64	1.67	1.00	0.00	0.00	0.00	0.00	0.24
20	13.31	0.36	4.44	5.58	17.92	1.68	3.80	0.00	0.00	0.00	0.00	10.79
21	2.48	0.74	1.20	8.19	41.21	4.35	0.65	0.00	0.65	0.00	1.27	0.93
22	1.56	11.57	2.57	10.35	8.46	8.34	0.81	0.00	0.00	0.00	2.96	0.00
23	0.00	7.63	3.65	18.63	10.57	11.42	0.79	0.00	0.00	0.00	0.71	5.29
24	1.03	8.13	0.67	40.38	8.06	0.36	0.00	4.92	0.00	0.00	3.69	0.00
25	7.98	15.92	0.00	7.23	17.50	1.94	0.00	5.09	0.00	0.00	5.92	0.22
26	4.81	12.33	2.42	37.04	12.42	1.42	0.00	14.02	0.00	0.00	6.22	0.00
27	1.94	1.44	9.90	32.35	1.44	0.07	0.21	6.42	0.15	0.00	12.58	0.18
28	0.00	2.77	5.42	12.42	2.44	0.31	0.54	5.38	0.00	0.00	10.98	0.00
29	0.27	6.54	6.62	21.11	10.73	0.00	0.00	3.13	0.00	0.00	0.63	0.00
30	0.00		3.19	12.42	4.90	1.38	1.96	0.36	0.00	0.00	1.05	0.14
31	0.17		3.17		7.43		1.03	3.54		0.00		0.00
Mean	2.89	6.04	4.73	9.67	7.04	2.77	1.85	1.51	0.67	0.21	1.62	1.52

Yearly Mean = 3.36

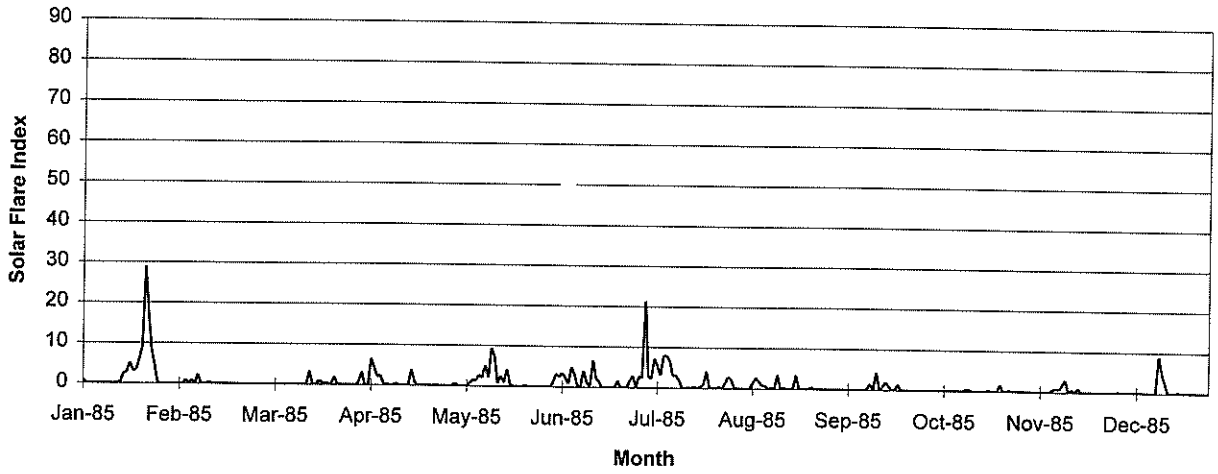
Flare Index of Solar Activity
Northern Hemisphere
1985



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.34	0.36	0.00	1.75	0.00	0.00	2.59	0.00	0.00	0.00	0.00
2	0.00	1.67	0.00	0.20	15.79	0.00	0.00	0.63	0.26	0.00	0.00	0.00
3	7.35	0.72	0.00	5.62	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.42	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.28	0.23	0.00	0.15	0.78	0.00	0.00	2.34
7	0.00	0.00	0.00	0.00	1.07	2.13	0.00	0.32	0.00	0.00	0.46	0.00
8	0.00	0.09	0.00	0.00	1.21	0.79	0.00	0.71	0.00	0.00	1.71	0.00
9	0.00	0.23	0.00	0.00	2.88	0.52	0.71	1.13	0.00	0.00	0.00	0.00
10	0.41	0.00	0.00	0.00	0.00	0.72	1.25	0.79	0.00	0.00	0.00	0.63
11	0.00	0.00	1.96	0.00	0.58	3.93	0.00	0.38	0.00	0.00	0.00	2.06
12	0.00	0.00	1.99	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	4.37
13	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.77	0.00	0.00	0.00	1.42
14	0.00	0.00	0.00	0.00	0.21	0.92	0.13	0.00	0.00	0.00	0.15	1.21
15	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	2.49
16	0.00	0.02	0.00	0.00	0.28	0.00	0.00	0.00	0.54	1.36	1.90	0.17
17	2.46	0.00	0.00	0.00	4.35	0.29	0.00	0.00	0.00	0.02	0.00	0.00
18	0.00	0.00	0.00	0.00	4.58	0.27	0.00	0.00	0.00	3.06	0.00	1.10
19	3.87	2.90	0.00	0.00	0.48	0.00	0.00	0.00	0.00	1.48	0.00	0.00
20	0.23	0.65	0.50	2.17	0.36	0.00	0.00	0.00	0.00	3.85	0.72	0.63
21	0.29	0.36	0.60	13.63	4.77	0.02	0.00	0.00	0.00	10.94	0.00	0.00
22	0.00	0.48	0.00	6.00	1.88	0.00	0.00	0.00	0.00	7.13	0.00	0.00
23	0.00	0.00	2.24	3.87	2.31	0.00	0.00	0.00	0.00	7.88	0.00	0.00
24	0.00	0.00	0.42	25.27	0.71	0.00	0.00	0.00	0.00	11.81	0.00	0.00
25	0.00	0.00	0.33	18.85	1.56	0.00	0.00	0.00	0.00	2.13	0.00	0.00
26	1.36	0.00	0.80	2.03	0.00	0.00	0.90	0.00	0.00	5.72	0.00	0.00
27	0.30	0.00	0.07	0.69	0.00	0.00	1.24	0.00	0.00	8.82	0.00	0.00
28	0.00	0.00	0.48	4.16	0.00	1.02	1.24	0.00	0.00	0.88	0.00	0.00
29	0.00		0.00	0.96	0.33	0.00	0.46	0.00	0.00	0.00	0.00	0.00
30	0.00		0.23	0.96	0.00	0.00	1.36	0.00	0.00	0.00	0.00	0.00
31	0.26		0.00		0.44		3.79	0.00		0.00		0.00
Mean	0.53	0.29	0.32	2.83	1.61	0.43	0.36	0.25	0.05	2.10	0.16	0.53

Yearly Mean = 0.79

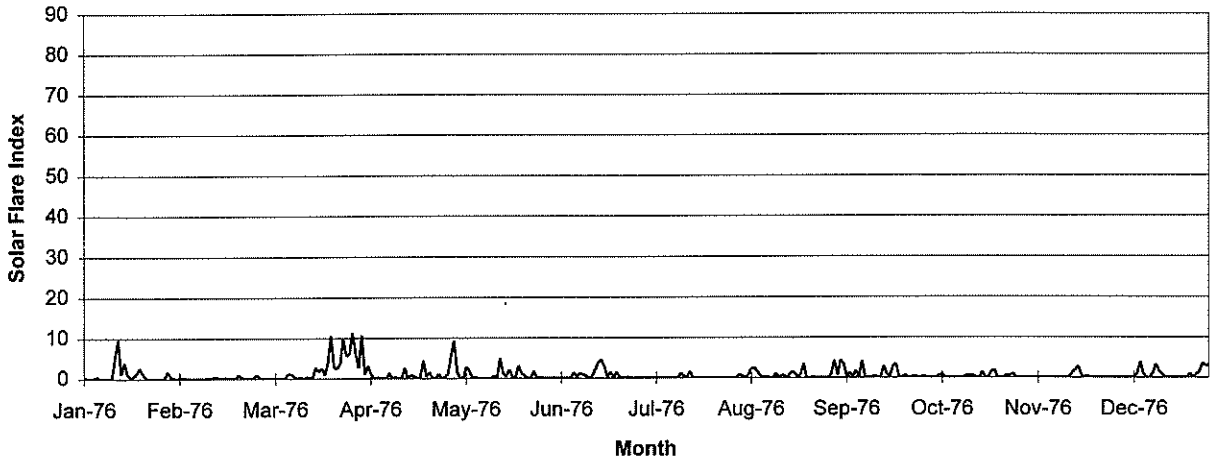
Flare Index of Solar Activity
Southern Hemisphere
1985



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.72	0.00	0.00	3.10	0.63	0.00	2.43	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	1.06	21.31	0.00	0.00	0.00	0.00	0.21
3	0.00	0.99	0.00	0.00	0.00	3.16	2.92	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	6.52	0.00	2.58	2.24	0.00	0.00	0.00	0.00	0.00
5	0.00	1.00	0.00	4.44	0.00	3.42	7.11	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	2.08	0.93	2.32	5.54	1.53	0.00	0.00	0.00	0.00
7	0.00	2.31	0.00	2.38	1.42	0.89	3.17	2.63	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.40	1.40	4.83	7.86	1.90	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.27	2.69	3.12	7.94	0.85	0.00	0.00	0.00	0.00
10	0.00	0.28	0.00	0.00	2.06	0.13	6.89	0.77	0.00	0.00	0.00	0.00
11	0.00	0.35	0.14	0.00	5.06	0.36	3.09	0.00	0.00	0.13	0.73	0.00
12	0.00	0.00	0.00	0.50	2.15	3.96	3.13	0.25	0.30	0.00	0.76	0.00
13	0.40	0.00	0.00	0.00	9.41	1.15	2.01	0.00	1.50	0.00	0.73	0.00
14	2.61	0.00	0.00	0.00	7.44	0.38	0.21	3.43	0.11	0.56	1.74	0.00
15	2.68	0.00	3.28	0.00	0.81	6.62	0.00	0.00	4.40	0.27	3.01	9.01
16	5.11	0.00	0.00	0.00	2.49	2.17	0.15	0.40	0.00	0.00	0.00	5.06
17	3.19	0.00	0.08	3.75	0.95	1.38	0.09	0.00	0.87	0.00	0.64	2.50
18	3.34	0.00	0.92	1.04	4.18	0.00	0.35	0.00	1.99	0.00	0.00	0.00
19	5.92	0.00	0.59	0.00	0.74	0.00	0.00	0.00	1.00	0.00	1.00	0.11
20	9.00	0.00	0.15	0.00	0.00	0.00	0.41	3.37	0.00	0.00	0.00	0.00
21	28.90	0.00	0.35	0.00	0.00	0.00	0.92	0.17	0.26	0.21	0.00	0.29
22	17.40	0.00	0.00	0.00	0.00	0.00	4.21	0.00	1.44	0.00	0.00	0.00
23	8.38	0.00	1.88	0.00	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00
24	4.86	0.00	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.27	0.00	0.00	0.22	0.00	0.00	0.00	0.58	0.00	1.65	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	2.79	1.33	0.00	0.00	0.32	0.00	0.00
29	0.00		0.00	0.00	0.00	0.25	2.78	0.00	0.00	0.00	0.00	0.00
30	0.00		0.00	0.00	0.00	2.75	2.26	0.00	0.00	0.00	0.00	0.00
31	0.00		0.81		0.00		0.31	0.00		0.00		0.00
Mean	2.99	0.18	0.27	0.82	1.37	1.55	2.87	0.51	0.40	0.10	0.29	0.55

Yearly Mean = 1.00

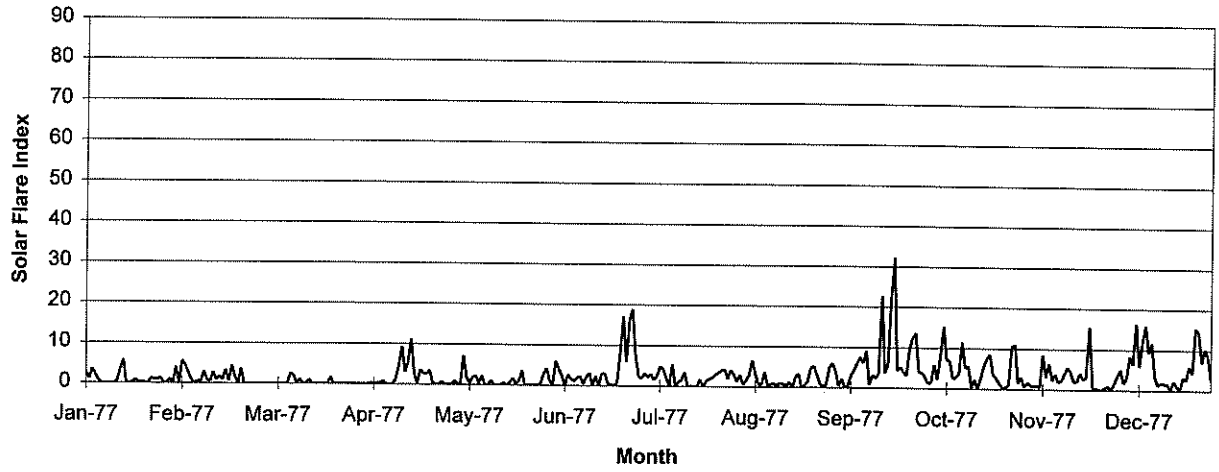
Flare Index of Solar Activity
Full Disk
1976



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.31	0.15	0.00	1.09	1.58	0.00	0.00	0.79	4.26	0.00	0.00	0.00
2	0.00	0.32	0.00	3.12	0.00	0.00	0.00	0.52	0.54	0.00	0.00	0.00
3	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	4.33	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.73	3.35	0.00	0.00	0.00
5	0.55	0.00	0.00	0.21	1.84	0.00	0.00	2.33	0.00	0.60	0.00	0.00
6	0.00	0.00	0.00	0.15	0.00	0.00	0.00	2.44	1.25	0.78	0.00	0.00
7	0.00	0.00	1.10	0.00	0.21	0.00	0.00	1.50	0.35	0.00	0.00	0.00
8	0.00	0.00	1.13	0.00	0.00	1.38	0.00	0.48	1.70	0.00	0.00	1.10
9	0.00	0.00	0.50	1.32	0.00	0.38	0.00	0.11	0.14	0.00	0.00	3.93
10	0.00	0.21	0.00	0.00	0.00	1.25	0.00	0.36	4.20	0.00	0.00	0.98
11	5.32	0.00	0.40	0.33	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
12	9.65	0.41	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00
13	1.08	0.35	0.29	0.00	0.62	0.00	1.19	1.06	0.00	0.14	0.00	1.06
14	3.98	0.09	0.38	2.59	0.00	0.48	0.42	0.00	0.51	0.53	0.00	3.29
15	1.21	0.18	0.00	0.00	4.98	2.11	0.25	0.73	0.00	0.62	0.00	1.69
16	0.31	0.22	2.71	0.84	1.11	3.76	1.54	0.22	0.00	0.60	0.00	0.81
17	0.58	0.16	1.69	0.53	0.45	4.67	0.00	0.32	2.79	0.00	1.17	0.00
18	1.34	0.00	2.64	0.04	2.13	2.79	0.00	1.42	0.88	0.00	1.86	0.00
19	2.69	0.00	0.94	0.28	0.31	0.29	0.00	1.18	0.32	1.46	2.80	0.00
20	1.20	1.03	3.90	4.42	0.00	1.44	0.00	0.42	2.78	0.00	0.62	0.00
21	0.23	0.32	10.53	0.43	3.09	0.22	0.00	0.69	3.42	0.00	0.00	0.00
22	0.00	0.00	2.77	1.50	1.15	1.57	0.00	3.44	0.00	1.65	0.37	0.00
23	0.00	0.00	2.48	0.00	0.71	0.19	0.00	0.00	0.00	1.90	0.00	0.00
24	0.00	0.00	3.70	0.00	0.00	0.00	0.14	0.00	0.62	0.00	0.00	0.00
25	0.00	0.27	9.76	1.03	0.00	0.19	0.00	0.10	0.00	0.00	0.00	0.96
26	0.00	0.94	5.59	0.00	1.79	0.28	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	6.04	0.27	0.00	0.00	0.00	0.00	0.39	0.65	0.00	0.81
28	1.70	0.00	11.33	1.09	0.14	0.00	0.00	0.00	0.17	0.50	0.00	1.38
29	0.41	0.00	6.24	5.44	0.00	0.00	0.00	0.00	0.00	1.02	0.00	3.53
30	0.09		2.60	9.24	0.00	0.00	0.00	0.00	0.41	0.00	0.00	2.97
31	0.00		10.67		0.00		0.00	0.85		0.00		3.00
Mean	0.99	0.17	2.82	1.17	0.74	0.75	0.11	0.64	1.08	0.34	0.23	0.82

Yearly Mean = 0.82

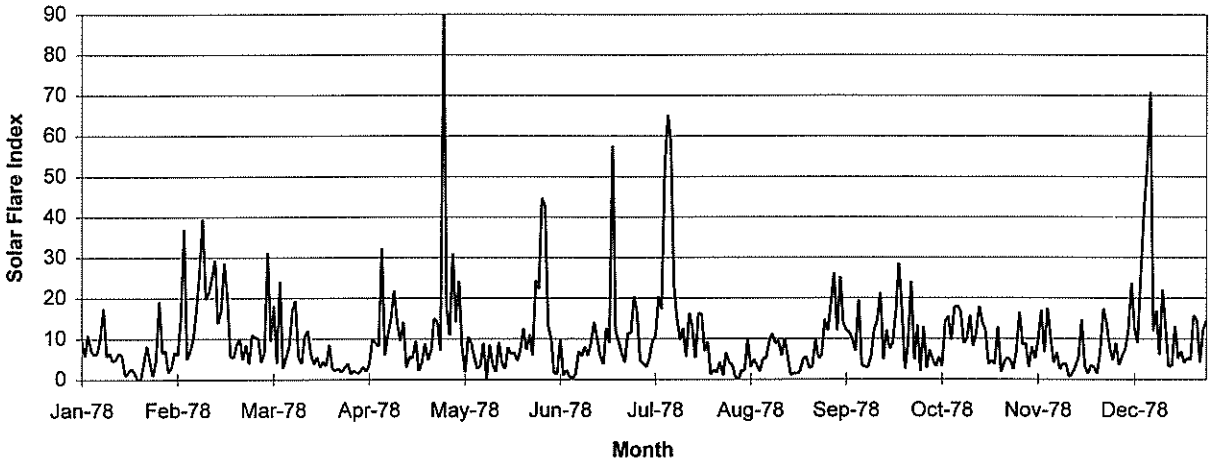
Flare Index of Solar Activity
Full Disk
1977



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.65	5.60	0.00	0.00	0.29	0.00	3.13	2.92	4.09	1.15	0.53	3.40
2	0.99	4.40	0.00	0.00	0.00	6.00	2.13	0.52	0.45	1.58	1.66	5.03
3	3.48	2.52	0.00	0.34	7.11	4.10	2.96	1.66	2.15	5.84	0.97	1.75
4	2.05	0.84	0.00	0.00	1.67	2.38	1.57	2.92	0.00	2.27	0.74	3.03
5	0.62	0.00	0.00	0.32	0.48	0.00	2.41	6.56	0.44	8.08	0.93	8.26
6	0.00	0.61	0.00	0.30	1.83	2.60	4.81	2.96	2.93	15.28	0.60	6.33
7	0.00	0.34	0.00	0.75	2.19	1.65	4.14	0.74	4.39	7.13	8.51	16.48
8	0.00	2.88	2.52	0.00	0.33	1.10	2.17	0.53	6.03	6.78	3.04	5.77
9	0.00	0.85	2.09	0.00	2.20	1.81	0.00	3.65	7.54	2.53	6.32	11.84
10	0.00	0.47	0.00	0.00	0.00	2.31	5.40	0.29	6.19	2.70	2.27	15.98
11	0.50	2.73	1.12	1.15	0.08	0.41	0.00	0.74	9.06	3.85	3.72	9.25
12	3.33	0.85	0.00	4.53	1.08	2.13	1.10	0.81	0.81	11.45	1.78	11.65
13	5.78	1.72	0.00	9.24	0.00	3.06	1.58	0.44	3.11	5.13	2.31	3.44
14	0.00	0.91	1.05	3.01	0.00	0.27	3.43	0.96	2.42	5.65	3.88	1.24
15	0.00	3.33	0.00	5.42	0.00	2.25	0.00	0.73	3.54	0.35	5.48	1.88
16	0.24	0.60	0.00	11.17	0.50	0.00	0.09	0.37	22.69	2.22	4.21	1.58
17	0.94	4.37	0.00	2.67	0.00	2.94	0.00	1.19	3.65	0.00	1.95	1.59
18	0.00	1.73	0.00	0.30	0.52	2.97	0.00	0.00	5.86	2.67	1.99	0.30
19	0.45	0.00	0.00	3.57	1.72	0.46	1.71	2.44	22.04	5.63	4.04	2.15
20	0.00	3.74	0.00	2.65	0.30	0.29	0.00	3.32	32.27	7.50	2.48	1.18
21	0.00	0.00	1.61	2.48	0.95	0.05	1.26	0.00	4.34	8.51	3.10	0.00
22	1.22	0.00	0.00	3.45	3.53	0.69	1.83	0.44	5.22	3.45	15.51	3.25
23	0.95	0.00	0.00	0.41	0.00	8.41	2.15	1.53	3.95	2.66	0.46	2.47
24	0.88	0.00	0.15	0.00	0.00	17.21	2.84	4.78	3.16	1.44	0.40	5.83
25	1.27	0.00	0.00	0.00	0.00	5.88	3.38	5.24	10.04	0.26	0.00	4.25
26	0.00	0.00	0.21	0.70	0.00	16.39	3.85	3.04	12.39	0.43	0.00	15.41
27	0.00	0.00	0.00	0.00	0.00	18.88	4.23	0.91	13.63	1.00	0.51	14.27
28	1.06	0.00	0.00	0.00	0.20	7.54	1.94	0.24	3.98	10.47	0.97	7.00
29	0.00		0.00	0.00	2.67	2.42	4.00	0.69	3.79	11.03	0.00	10.27
30	4.02		0.00	0.85	4.17	1.92	3.04	4.90	2.80	1.59	1.66	8.36
31	0.00		0.00		1.37		1.26	5.99		3.00		2.54
Mean	0.98	1.38	0.28	1.78	1.07	3.87	2.14	1.99	6.77	4.57	2.67	5.99

Yearly Mean = 2.79

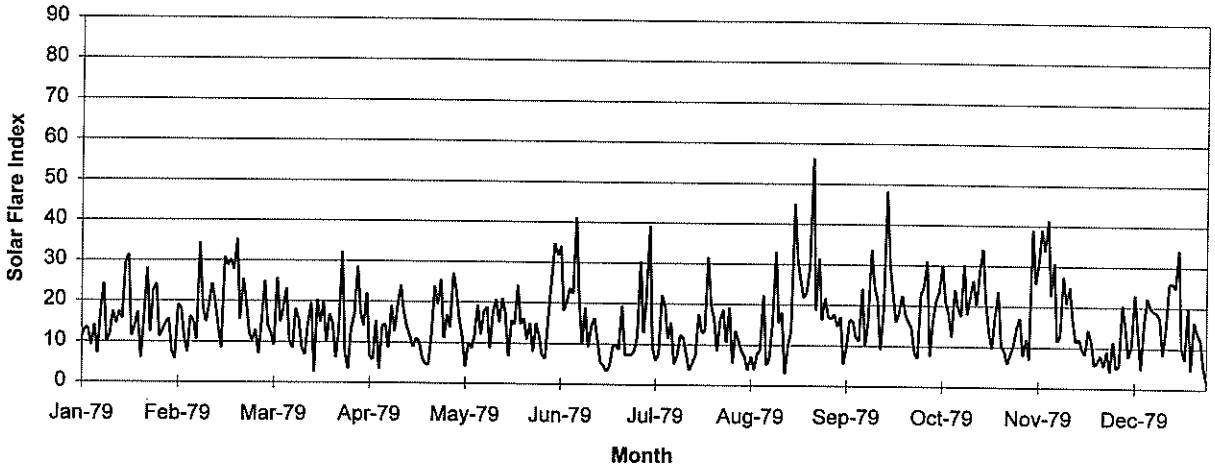
Flare Index of Solar Activity
Full Disk
1978



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9.41	5.93	6.79	1.92	30.95	13.37	4.77	0.69	18.72	12.87	16.46	4.70
2	5.80	15.17	31.31	3.07	14.09	9.90	3.88	0.00	26.22	2.73	8.50	8.88
3	10.92	37.04	9.44	1.99	24.24	1.50	3.06	2.19	12.01	7.21	8.81	3.48
4	7.31	5.02	18.16	3.82	8.10	1.49	5.15	2.20	25.25	4.83	3.02	5.77
5	6.01	7.11	4.06	9.85	1.83	9.70	9.33	9.67	13.78	3.16	7.98	7.29
6	6.70	9.95	24.09	8.95	10.40	1.00	10.60	3.04	12.04	5.42	5.13	12.13
7	10.35	16.90	2.77	8.21	8.97	2.29	20.44	4.85	11.54	3.13	9.75	23.71
8	17.54	26.05	5.45	32.30	5.44	0.63	17.33	3.51	9.63	14.29	17.05	12.39
9	5.71	39.56	8.19	6.00	2.68	0.33	52.79	2.00	6.90	15.51	6.64	8.96
10	6.47	19.77	17.00	11.18	3.34	1.35	65.23	5.06	19.52	9.63	17.49	26.11
11	4.50	21.40	19.45	14.83	8.91	6.91	58.17	5.24	3.45	17.79	10.44	42.07
12	5.07	24.78	5.46	21.91	0.25	5.80	23.21	9.31	3.10	18.04	4.05	52.31
13	6.56	29.45	3.94	14.20	8.44	8.00	14.78	11.19	2.96	16.63	6.56	70.84
14	5.80	13.81	10.35	9.43	3.73	5.89	9.69	8.81	5.50	8.83	2.47	11.91
15	1.03	17.06	12.04	14.13	1.92	9.15	12.62	9.54	12.19	9.87	3.97	17.04
16	1.82	28.62	6.42	2.98	9.11	14.11	5.50	5.85	14.45	15.64	3.69	6.04
17	2.79	20.02	3.81	5.61	4.12	9.92	16.23	9.83	21.30	8.19	0.59	22.10
18	1.85	5.72	5.49	5.25	2.61	5.80	12.92	5.53	4.87	11.32	1.54	12.44
19	0.00	5.38	3.11	9.52	7.83	3.77	5.28	1.04	12.08	17.92	3.18	3.21
20	0.00	8.44	4.42	2.13	6.16	12.69	16.19	1.55	7.55	14.02	5.56	3.30
21	3.80	10.08	3.35	4.23	6.63	9.06	16.18	1.42	8.80	12.04	14.70	13.07
22	8.27	4.89	8.52	8.78	4.62	57.61	6.92	1.92	16.60	3.60	3.25	5.17
23	4.25	8.47	2.54	4.83	7.11	11.98	9.20	5.00	28.62	4.60	1.37	6.82
24	0.97	3.87	2.28	7.26	12.45	9.39	1.24	5.47	17.17	3.70	3.54	4.07
25	4.73	10.90	2.56	15.04	7.38	6.51	2.31	2.74	2.53	12.80	2.98	5.31
26	19.17	10.36	1.86	14.19	11.02	4.17	1.67	3.14	8.57	1.70	1.48	4.81
27	6.46	10.00	2.93	7.10	5.90	11.38	4.30	9.67	24.07	4.06	7.27	15.77
28	7.13	4.32	3.93	92.33	24.42	11.41	1.01	5.15	4.81	5.25	17.45	14.51
29	1.79		1.37	18.12	22.25	20.42	6.60	5.84	13.30	4.69	13.71	4.16
30	3.20		2.22	10.92	44.63	16.40	4.06	14.71	2.00	2.42	7.99	12.19
31	6.80		1.53		42.83		3.62	11.96		6.96		14.40
Mean	5.88	15.00	7.58	12.34	11.37	9.40	13.69	5.42	12.32	9.00	7.22	14.68

Yearly Mean = 10.28

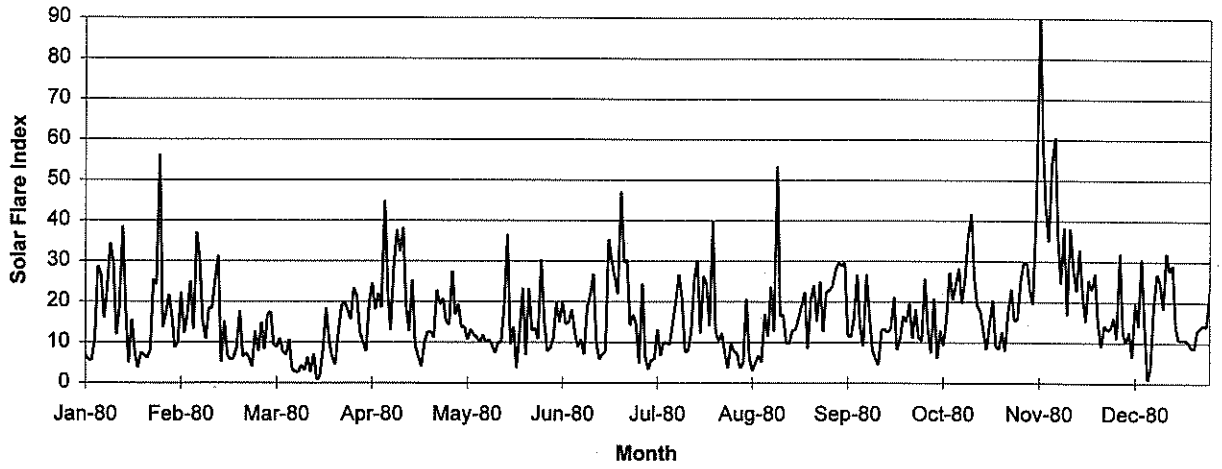
Flare Index of Solar Activity
Full Disk
1979



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	11.28	19.07	24.87	17.49	27.17	16.81	30.51	13.48	16.63	24.75	17.15	11.52
2	13.34	18.25	14.10	14.09	22.87	26.02	12.83	10.94	17.77	31.17	7.90	4.98
3	13.38	11.14	12.28	22.06	16.08	34.75	22.31	8.66	14.81	7.70	12.02	5.65
4	9.00	7.31	9.21	6.61	11.46	31.73	39.31	7.10	17.09	16.75	7.08	20.50
5	14.08	16.24	25.72	5.76	4.14	34.15	9.21	3.85	5.54	21.28	39.05	15.27
6	6.99	15.02	14.94	15.34	10.00	18.17	6.08	7.27	9.87	23.73	25.75	7.81
7	17.00	10.49	18.29	3.35	8.61	20.53	7.79	3.98	16.42	30.08	30.58	10.50
8	24.31	34.42	23.18	13.96	11.92	23.70	22.07	7.71	16.13	20.96	39.17	23.09
9	10.11	18.63	10.33	14.57	19.23	22.28	19.46	8.93	12.17	18.10	33.82	14.20
10	11.77	14.85	8.55	8.79	12.13	41.21	11.44	22.25	11.31	12.50	41.50	4.72
11	17.48	19.14	18.12	18.96	17.73	21.52	15.42	5.15	24.12	24.12	22.78	16.07
12	14.50	24.26	15.54	12.69	18.83	10.02	5.21	6.67	9.92	19.67	30.85	22.33
13	17.54	19.30	8.63	19.20	8.76	18.92	7.23	15.46	16.38	17.52	11.50	19.85
14	15.63	13.91	6.90	24.02	17.79	9.27	12.27	33.15	33.83	30.31	12.94	19.03
15	29.67	8.53	14.58	17.60	20.75	14.44	11.81	15.48	24.64	18.00	27.44	18.73
16	31.35	30.87	19.54	13.84	15.13	16.31	7.65	18.15	21.46	22.56	20.77	17.37
17	11.39	28.80	2.61	11.66	20.92	11.19	3.68	2.86	9.18	26.35	24.91	8.34
18	13.75	30.21	20.34	8.96	17.23	5.46	5.60	10.07	19.10	20.37	16.79	14.85
19	17.27	27.81	14.83	11.10	6.80	4.73	7.32	13.43	48.33	28.75	11.33	25.74
20	6.03	35.38	19.79	10.25	15.60	3.35	17.54	45.19	30.31	34.21	12.25	26.08
21	15.82	15.55	10.03	6.26	14.65	4.40	13.03	31.27	22.84	21.21	9.64	24.82
22	28.14	25.35	16.85	4.82	24.25	9.54	13.43	26.25	15.93	13.97	8.34	34.27
23	12.37	19.80	14.59	4.45	14.75	9.71	31.63	21.71	18.35	9.70	14.42	10.29
24	22.57	12.21	6.13	11.98	16.25	8.69	19.77	23.28	22.52	17.35	11.54	7.17
25	24.18	10.33	12.98	23.91	11.05	19.39	16.82	29.58	18.00	23.69	5.66	19.88
26	11.31	12.95	32.27	19.40	15.02	7.31	8.57	56.40	16.13	10.25	6.51	4.53
27	12.96	7.13	7.61	25.45	8.01	7.50	16.18	18.63	14.65	8.97	8.06	16.68
28	14.51	14.89	3.40	11.08	14.90	7.33	18.60	31.56	8.53	5.89	5.42	13.83
29	15.69		13.28	16.92	11.92	8.35	10.63	16.35	7.06	8.36	9.21	12.09
30	7.75		16.83	13.74	7.10	12.04	19.33	21.71	22.80	10.57	4.06	5.58
31	5.70		28.59		6.35		5.56	17.17		14.75		2.04
Mean	15.38	18.64	15.00	13.61	14.43	15.96	14.46	17.86	18.06	19.15	17.61	14.77

Yearly Mean = 16.22

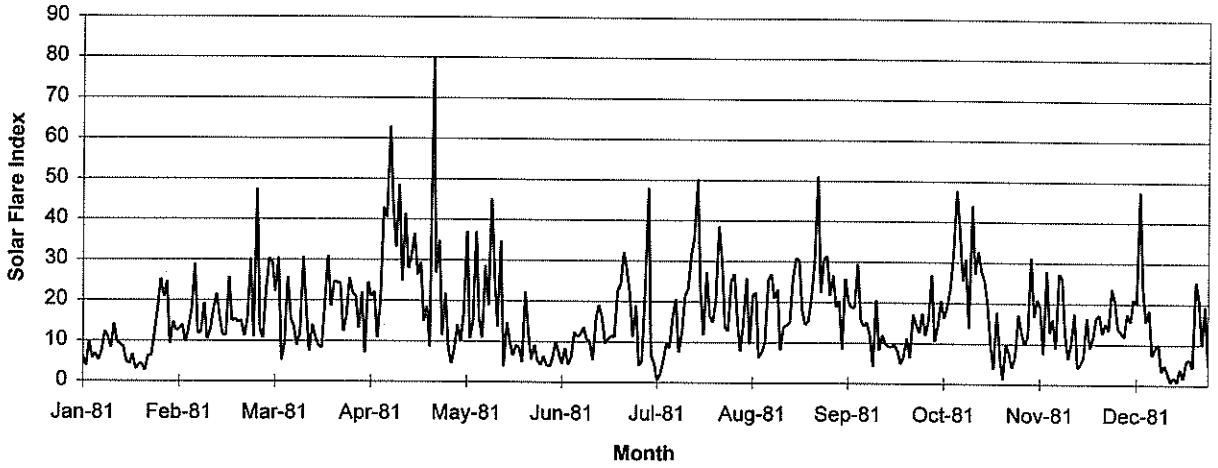
Flare Index of Solar Activity
Full Disk
1980



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.88	22.26	17.44	7.77	19.37	11.04	6.52	3.73	27.70	13.42	29.63	11.02
2	5.67	12.31	9.42	19.62	13.79	19.69	3.38	4.88	29.72	7.42	29.57	32.02
3	5.54	16.90	8.85	24.50	13.89	15.04	5.69	20.66	28.84	20.85	22.79	12.55
4	10.61	25.09	10.92	18.06	10.73	20.08	5.83	6.10	29.56	6.06	19.56	10.00
5	28.73	13.24	7.72	22.01	13.12	14.54	13.15	3.03	11.83	12.94	43.78	12.75
6	26.78	37.15	6.90	18.50	11.83	14.92	6.77	5.02	11.32	9.33	91.86	6.53
7	15.96	30.55	10.66	44.85	11.26	17.95	10.00	6.73	15.67	15.44	60.25	19.71
8	23.33	15.38	3.39	23.36	9.98	12.38	9.91	5.19	26.63	27.23	43.83	14.09
9	34.33	10.82	2.70	12.90	11.73	8.81	9.48	16.89	14.07	20.52	34.97	30.60
10	29.51	18.24	2.63	28.88	10.04	10.71	14.98	11.55	9.17	24.29	54.04	13.94
11	11.86	18.46	4.31	37.63	10.61	7.08	20.42	23.72	26.81	28.26	60.73	0.82
12	18.67	25.65	3.14	32.35	9.46	18.67	26.73	12.75	17.12	19.69	35.65	3.99
13	38.53	31.28	6.29	38.13	7.37	21.44	20.77	53.38	8.38	25.83	24.60	19.45
14	18.27	5.18	2.64	18.98	9.89	26.83	7.68	16.48	6.02	36.01	38.25	26.97
15	5.02	15.13	7.08	12.79	10.07	9.94	7.81	16.83	4.49	41.75	16.83	24.91
16	15.56	6.91	0.71	25.35	19.35	5.81	12.43	10.00	13.08	25.88	38.19	18.40
17	7.71	5.71	1.65	9.15	36.56	7.04	25.74	9.72	13.23	19.33	28.30	32.05
18	3.65	6.12	8.15	6.62	9.47	7.90	30.23	12.92	12.52	17.65	22.76	27.59
19	7.50	8.66	18.35	4.08	13.80	35.35	12.19	13.12	13.50	12.66	32.94	29.16
20	6.81	17.58	10.39	9.86	3.66	29.90	26.29	15.84	21.15	8.30	21.96	13.97
21	6.19	6.43	6.34	12.47	12.61	25.95	24.53	19.13	8.20	14.58	15.23	10.67
22	7.96	7.33	4.54	12.65	23.29	21.88	14.17	22.36	10.88	20.51	25.44	10.77
23	25.56	6.27	12.32	11.17	6.79	47.25	39.77	8.56	16.48	9.12	22.94	10.69
24	24.21	3.98	18.93	22.82	23.20	29.69	12.71	20.59	15.10	8.38	27.05	10.36
25	56.24	12.73	20.10	19.32	12.84	30.40	10.37	24.07	19.62	12.61	14.77	8.85
26	13.75	7.90	17.88	20.71	13.51	14.23	12.26	15.20	11.11	7.97	9.06	8.50
27	16.90	14.85	15.61	15.19	10.82	16.79	7.60	25.00	18.10	17.52	14.29	12.99
28	21.70	8.35	23.34	14.38	30.38	14.53	3.74	12.63	11.35	23.17	13.09	13.70
29	16.65	16.79	21.38	27.49	15.72	4.81	9.67	22.33	10.38	15.52	13.52	14.50
30	8.71		12.50	16.77	7.79	24.46	7.85	22.77	25.73	15.63	16.07	13.96
31	10.13		10.21		8.67		7.34	23.87		25.19		22.74
Mean	17.06	14.66	9.89	19.61	13.60	18.17	13.74	15.65	16.26	18.16	30.73	16.07

Yearly Mean = 16.94

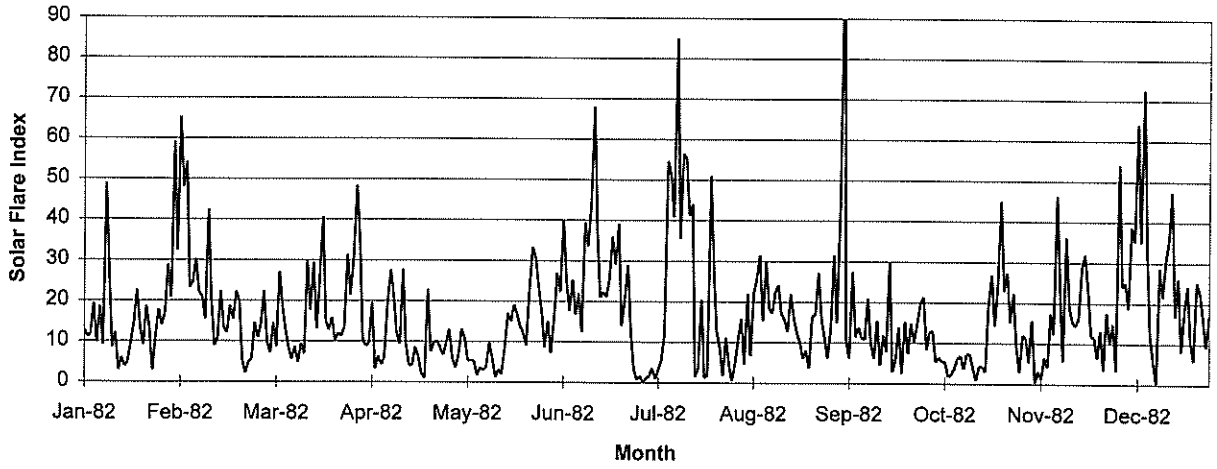
Flare Index of Solar Activity
Full Disk
1981



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.19	12.98	22.52	22.00	8.26	3.84	5.34	16.26	26.62	12.07	12.89	20.48
2	3.73	13.96	30.28	7.11	14.06	6.21	23.44	7.90	18.90	15.79	10.00	13.81
3	9.90	9.67	29.49	24.47	10.06	10.04	48.00	15.17	20.46	26.97	12.08	13.02
4	5.63	13.17	22.21	20.98	17.29	7.00	6.76	25.85	8.38	10.54	31.39	11.89
5	6.88	17.85	30.54	22.10	37.15	4.62	4.94	9.69	25.88	14.52	16.71	17.50
6	5.16	28.89	5.17	10.93	10.77	8.42	0.62	21.65	20.15	20.54	20.98	15.47
7	7.41	11.78	9.33	20.46	14.85	4.37	2.04	22.33	18.77	16.36	19.12	21.18
8	12.40	12.29	25.74	43.04	37.01	6.34	5.27	6.22	18.88	19.17	7.61	20.04
9	10.98	19.32	15.65	40.45	15.96	12.43	9.72	7.63	29.57	23.63	28.05	47.69
10	8.21	10.44	13.48	63.00	10.92	11.33	8.58	10.15	15.80	32.00	12.84	23.59
11	14.14	12.65	8.94	43.88	28.67	12.02	16.10	25.46	14.23	47.84	16.18	15.68
12	9.70	17.75	11.98	33.06	18.85	13.57	20.63	26.85	15.21	37.91	8.92	18.52
13	9.25	21.58	30.63	48.60	45.27	10.69	7.59	20.88	12.06	25.51	27.34	7.33
14	8.46	16.09	18.12	24.73	26.05	10.13	12.52	23.14	4.15	30.79	26.29	9.10
15	4.85	11.50	7.44	41.50	13.70	5.44	21.33	8.14	20.71	13.90	12.51	10.11
16	4.32	11.38	14.01	27.84	34.82	15.73	23.27	13.98	8.33	44.15	6.48	3.38
17	6.56	25.76	10.83	31.24	3.77	19.08	31.83	14.33	12.05	27.20	10.17	4.85
18	2.94	14.90	8.96	36.42	14.75	16.00	35.61	15.02	9.94	32.70	17.56	2.88
19	4.23	15.55	8.12	26.33	10.08	9.61	50.30	25.63	9.21	27.90	4.21	0.77
20	4.24	14.57	19.37	29.38	6.48	10.82	22.68	30.92	9.21	25.56	5.06	1.96
21	2.57	15.15	30.94	14.94	9.00	11.63	11.81	30.25	9.60	19.87	6.92	0.77
22	6.37	11.19	18.53	18.69	8.67	11.21	27.31	18.27	8.08	10.23	16.52	3.91
23	6.27	15.68	24.66	8.65	4.93	22.54	16.52	14.56	4.89	3.76	9.08	1.59
24	11.71	30.31	24.35	80.02	22.29	24.21	15.08	15.32	6.86	17.83	11.72	5.94
25	17.90	10.93	24.19	26.75	12.22	32.04	20.21	21.29	11.31	7.42	16.53	6.33
26	25.25	47.54	12.38	34.85	5.56	27.61	38.58	29.67	6.40	1.11	17.32	4.26
27	20.77	12.99	16.16	11.52	9.12	21.89	29.85	51.29	17.13	9.91	12.66	25.48
28	24.71	10.66	25.54	21.84	5.31	11.38	13.79	22.35	14.71	7.61	15.13	20.72
29	9.26		21.80	8.77	4.27	19.04	12.88	30.58	12.67	4.08	13.43	10.00
30	14.78		21.10	4.50	6.33	4.15	25.15	31.52	17.35	7.09	23.70	19.52
31	12.60		13.19		4.35		26.87	21.77		17.23		4.89
Mean	9.59	16.66	18.57	28.27	15.19	12.78	19.18	20.45	14.25	19.72	14.98	12.34

Yearly Mean = 16.83

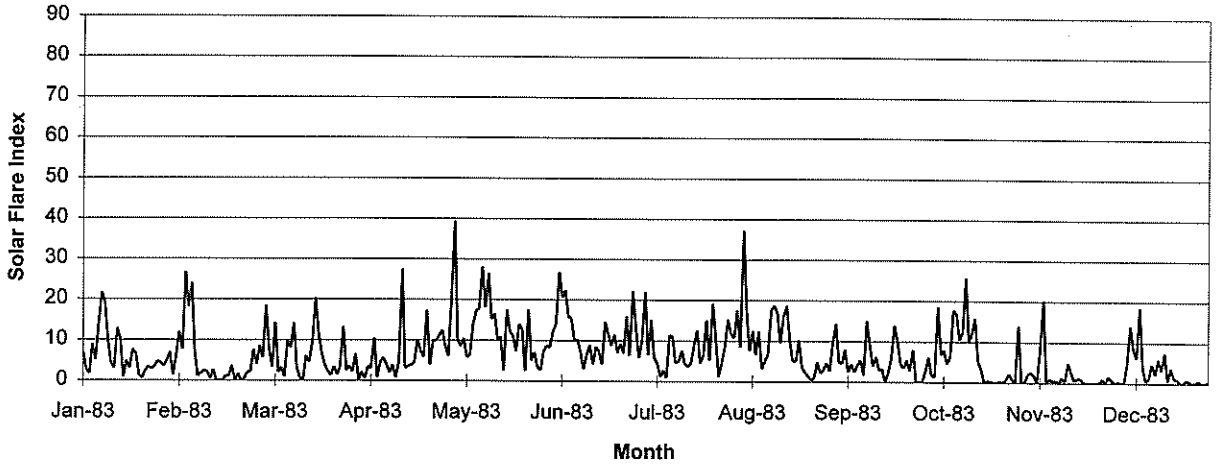
Flare Index of Solar Activity
Full Disk
1982



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	12.74	65.31	9.72	10.37	3.60	7.27	0.00	10.58	31.67	8.38	12.00	3.38
2	11.18	47.92	7.16	8.87	6.49	15.67	1.15	15.81	15.00	12.69	11.29	54.19
3	11.70	54.30	14.58	9.54	13.06	27.04	1.63	4.66	43.85	13.01	5.38	24.12
4	19.35	23.29	8.68	19.56	10.82	22.35	3.55	22.04	112.30	5.36	15.70	25.08
5	9.67	24.67	27.05	3.23	5.32	40.04	1.04	6.67	10.71	6.42	0.35	18.71
6	18.65	30.22	18.38	6.34	5.38	25.40	3.13	22.05	6.21	5.42	3.16	38.77
7	9.13	22.04	12.90	4.30	5.25	17.71	5.60	25.88	27.52	5.49	1.34	35.19
8	48.94	21.19	8.21	6.07	1.69	25.31	11.94	31.58	11.48	1.81	6.49	64.16
9	26.70	15.48	5.69	19.58	3.58	16.83	54.71	15.37	13.74	2.29	4.06	34.93
10	8.52	42.46	8.71	27.56	2.95	21.96	51.27	29.96	11.32	3.63	17.48	72.67
11	12.21	20.26	4.79	21.29	3.65	12.40	40.86	18.52	10.78	6.13	12.31	32.21
12	2.90	8.90	9.40	12.00	9.69	39.46	85.08	17.33	20.95	6.89	46.35	11.86
13	6.02	10.84	6.83	9.35	6.00	33.58	35.50	22.42	9.91	3.69	23.60	5.76
14	3.90	22.34	29.77	27.79	1.27	43.79	56.46	24.21	6.08	7.19	5.69	0.31
15	4.98	13.57	17.67	9.31	3.08	67.95	55.46	17.25	15.48	7.33	36.19	28.67
16	9.96	12.06	29.44	4.13	1.81	36.94	41.22	15.68	4.45	3.98	19.25	21.65
17	14.54	18.79	13.09	4.13	8.42	21.08	44.00	12.77	11.87	0.88	15.55	30.57
18	22.67	15.36	25.40	8.59	17.02	22.37	1.57	21.96	7.81	4.19	14.43	35.38
19	13.51	22.25	40.66	6.20	15.00	21.21	3.40	16.29	29.96	4.24	16.23	47.47
20	9.08	19.94	15.08	2.08	19.08	25.63	20.46	12.63	2.89	2.94	28.56	16.83
21	18.69	5.42	12.81	1.00	16.79	35.96	1.26	10.14	5.86	19.35	31.94	26.06
22	13.14	2.18	15.89	22.88	13.89	29.26	1.86	6.13	13.93	26.90	23.52	8.13
23	2.87	4.80	10.21	7.48	12.23	39.03	51.03	8.08	2.49	14.33	11.87	17.75
24	11.21	5.67	12.04	9.67	9.06	14.15	27.98	3.68	15.24	24.44	11.47	24.32
25	17.82	14.58	11.24	10.17	23.08	20.47	12.79	16.59	7.35	45.10	6.46	10.33
26	14.06	10.90	13.40	8.67	33.31	29.06	8.85	16.80	14.89	22.92	13.22	5.78
27	17.13	14.21	31.31	6.72	30.69	13.10	1.73	27.21	10.25	27.44	3.47	25.25
28	28.88	22.43	21.46	9.69	23.33	3.27	11.13	15.70	14.93	15.18	17.71	22.46
29	20.76		30.74	12.95	17.26	0.73	4.62	11.29	19.87	22.38	10.00	16.15
30	59.16		48.37	6.01	8.62	1.62	0.48	6.17	21.36	9.09	14.94	9.19
31	32.38		34.20		15.00		4.72	13.29		2.97		16.83
Mean	16.53	21.12	17.90	10.52	11.17	24.35	20.79	16.09	17.67	11.03	14.67	25.30

Yearly Mean = 17.24

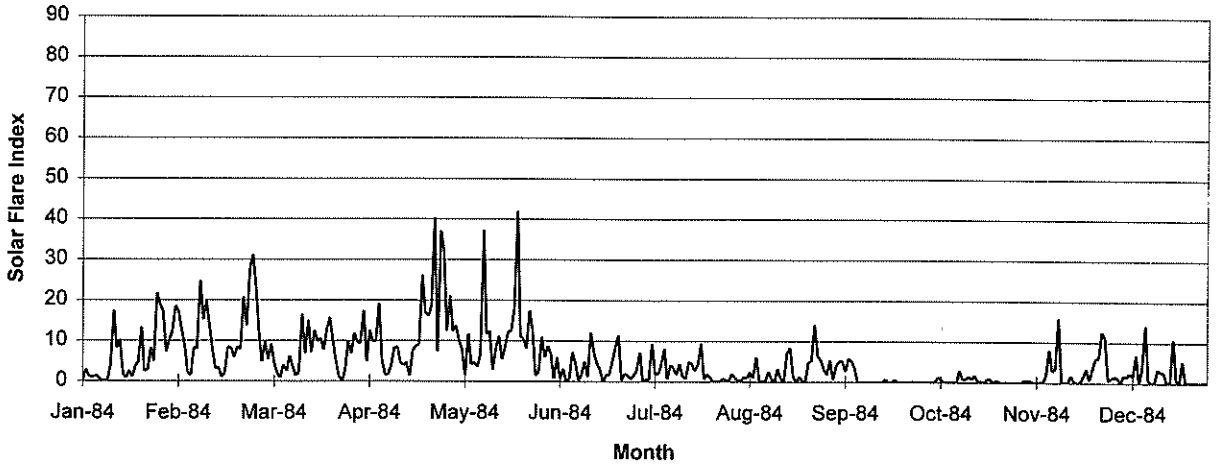
Flare Index of Solar Activity
Full Disk
1983



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.86	12.04	18.48	2.09	39.47	8.31	10.00	17.68	9.77	2.56	0.00	0.00
2	2.72	7.71	7.90	0.52	10.31	12.23	22.03	8.47	14.33	6.12	0.13	0.23
3	1.67	26.76	3.27	3.52	8.60	14.19	6.49	37.29	4.92	1.95	2.00	0.00
4	8.85	18.13	14.32	3.08	10.44	26.82	15.17	17.15	4.60	1.37	2.63	0.00
5	5.12	24.07	2.05	10.46	5.88	20.50	5.88	7.67	7.93	18.56	1.83	4.75
6	14.50	7.20	3.27	0.79	6.38	22.43	4.59	12.56	2.42	6.85	0.13	14.08
7	21.69	1.13	0.94	4.60	14.19	15.96	1.21	6.72	4.38	7.94	7.88	8.47
8	19.17	1.87	9.75	5.64	17.35	15.42	2.71	12.35	2.54	4.68	20.18	6.23
9	9.72	2.46	8.08	4.08	17.83	9.82	0.90	3.26	4.15	6.24	0.25	18.60
10	4.36	2.23	14.19	2.06	28.13	10.37	11.34	5.00	5.38	17.80	1.02	3.88
11	3.08	0.50	3.04	3.84	18.18	7.13	11.04	6.85	1.71	16.88	0.48	0.48
12	12.85	2.71	0.72	0.72	26.44	2.98	4.63	17.63	15.04	10.52	0.54	1.17
13	10.17	0.00	0.00	4.83	15.23	6.41	5.02	18.71	9.22	12.50	0.00	4.64
14	0.88	0.00	6.09	27.52	16.53	8.94	7.63	16.91	4.04	25.77	1.25	2.23
15	4.91	0.00	4.55	3.18	9.96	4.22	4.35	9.61	6.26	10.26	0.44	5.90
16	3.08	1.22	9.58	3.65	10.83	8.48	3.73	16.07	3.04	12.08	4.89	3.05
17	7.66	1.05	20.31	3.90	2.56	7.40	4.60	18.68	3.23	15.85	2.49	7.40
18	6.61	3.67	11.93	4.44	17.52	4.25	8.92	10.53	0.29	5.14	0.56	0.51
19	1.40	0.13	6.90	10.05	12.29	14.58	12.57	5.31	2.27	3.34	1.13	3.66
20	0.49	1.71	3.98	7.41	11.08	11.75	4.50	4.94	6.00	0.00	1.04	1.29
21	2.38	0.00	2.40	5.85	7.42	8.83	6.50	10.21	13.96	0.38	0.11	0.89
22	3.40	0.56	1.32	17.31	14.00	11.43	15.06	3.81	9.81	0.25	0.00	0.00
23	2.83	2.02	3.33	3.92	12.79	7.15	5.23	2.27	4.55	0.00	0.00	0.00
24	3.49	2.33	1.46	9.94	2.49	9.27	19.23	1.52	3.44	0.00	0.00	0.83
25	4.75	7.74	3.33	9.85	17.58	6.92	11.08	0.45	5.40	0.23	0.00	0.33
26	4.35	4.04	13.25	11.16	5.06	16.10	1.25	0.98	2.83	0.00	0.00	0.00
27	3.61	8.63	2.44	12.50	7.02	6.41	4.64	4.85	7.97	0.77	0.98	0.13
28	4.98	5.62	3.60	8.53	3.49	22.23	8.73	2.20	0.00	2.11	0.11	0.55
29	6.98		2.23	6.15	2.67	13.15	15.31	2.88	0.00	0.90	1.65	0.00
30	1.37		6.57	20.37	7.43	5.79	11.78	4.65	0.00	0.00	0.70	0.00
31	6.06		0.12		8.70		10.78	2.67		14.09		0.38
Mean	6.13	5.20	6.11	7.07	12.51	11.32	8.29	9.35	5.32	6.62	1.75	2.89

Yearly Mean = 6.90

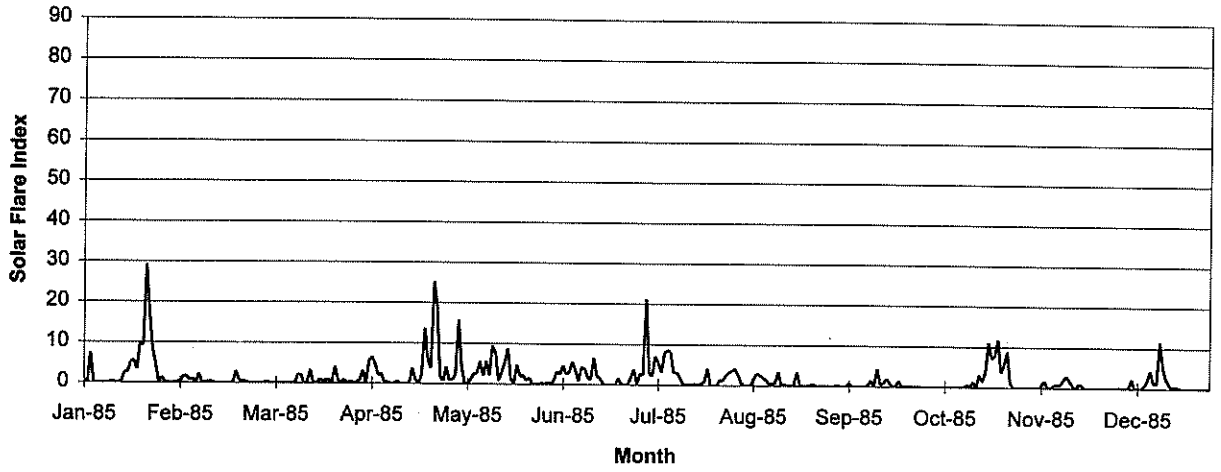
Flare Index of Solar Activity
Full Disk
1984



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.35	17.21	5.38	17.44	13.78	6.77	0.00	0.35	0.71	0.00	0.00	1.54
2	2.85	12.71	9.11	4.81	9.98	0.76	0.67	0.36	4.02	0.00	0.59	1.43
3	1.17	8.65	4.34	12.61	7.90	5.90	0.48	1.22	4.96	0.00	0.40	0.00
4	1.03	2.21	1.95	9.76	1.56	0.70	9.37	1.04	5.25	0.00	0.41	1.81
5	1.27	1.46	0.93	9.92	11.71	3.10	1.93	2.39	2.63	1.24	0.00	1.48
6	1.13	8.31	4.04	19.28	4.19	0.00	1.90	1.06	5.75	0.88	0.00	2.44
7	0.00	7.95	2.47	5.40	4.70	0.74	4.20	6.01	5.29	0.00	0.24	1.63
8	0.19	24.74	6.12	1.62	3.67	7.16	8.08	0.34	3.38	0.00	0.00	6.88
9	0.18	15.17	3.68	1.64	6.79	4.56	0.61	0.00	0.00	0.00	2.06	0.10
10	4.10	19.84	1.37	3.89	37.25	0.31	4.06	0.19	0.00	0.00	8.00	3.58
11	17.46	13.77	2.22	8.29	11.69	1.85	3.38	2.49	0.00	0.00	2.83	14.20
12	8.21	7.60	16.56	8.46	12.44	4.94	1.79	0.71	0.00	2.85	3.58	0.69
13	10.22	3.09	6.81	4.78	2.81	1.20	4.30	0.00	0.00	0.87	15.95	0.00
14	1.92	3.33	15.09	3.94	7.93	12.07	1.31	3.18	0.00	0.69	0.00	0.25
15	0.76	1.00	7.09	4.67	11.11	7.08	0.73	0.78	0.00	1.57	0.00	3.34
16	2.61	2.16	12.52	1.44	5.48	4.52	4.87	0.28	0.00	0.75	0.00	2.78
17	1.04	8.40	9.81	7.57	8.28	2.98	4.35	6.94	0.00	1.78	1.79	2.48
18	3.67	8.21	10.56	8.70	12.19	0.00	2.75	8.38	0.68	0.15	0.22	0.00
19	4.77	5.94	7.78	9.00	12.52	1.67	4.19	1.42	0.00	0.31	0.00	0.24
20	13.31	8.36	12.65	26.18	17.92	1.68	9.44	0.00	0.00	0.00	0.00	10.79
21	2.48	7.86	15.76	17.09	42.09	4.98	0.65	1.31	0.65	0.89	1.58	0.93
22	2.79	20.78	10.29	16.20	11.10	8.34	1.91	0.33	0.00	0.77	3.33	0.00
23	8.25	13.62	5.04	18.63	10.57	11.42	1.08	0.00	0.13	0.00	0.71	5.29
24	4.86	27.88	1.33	40.38	8.06	0.36	0.00	4.92	0.00	0.48	3.69	0.00
25	21.79	31.10	0.00	7.23	17.50	1.94	0.00	5.09	0.00	0.00	5.92	0.22
26	18.81	23.31	2.58	37.04	12.42	1.56	0.00	14.11	0.00	0.00	6.22	0.00
27	17.35	12.16	9.90	32.35	1.44	0.64	0.79	6.42	0.15	0.00	12.58	0.18
28	7.30	4.78	6.88	12.42	2.65	1.53	0.54	5.38	0.00	0.00	10.98	0.00
29	9.98	9.64	11.87	21.11	10.94	2.83	0.00	3.13	0.00	0.00	0.63	0.00
30	12.46		9.65	12.42	6.04	7.23	1.96	1.83	0.00	0.00	1.17	0.14
31	18.58		9.33		8.72		1.03	5.31		0.00		0.00
Mean	6.48	11.49	7.20	12.81	10.82	3.63	2.46	2.74	1.12	0.43	2.76	2.01

Yearly Mean = 5.29

Flare Index of Solar Activity
Full Disk
1985



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.72	0.34	0.36	3.10	2.38	0.00	2.43	2.59	0.00	0.00	0.00	0.00
2	0.00	1.67	0.00	0.20	15.79	1.06	21.31	0.63	0.26	0.00	0.00	0.21
3	7.35	1.71	0.00	5.62	4.21	3.16	2.92	0.00	0.00	0.00	0.00	0.00
4	0.00	0.69	0.00	6.52	0.00	2.58	2.24	0.00	0.00	0.00	0.00	0.00
5	0.00	1.00	0.00	4.85	0.00	4.73	7.11	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	2.08	1.21	2.55	5.54	1.68	0.78	0.00	0.00	2.34
7	0.00	2.31	0.00	2.38	2.49	3.02	3.17	2.94	0.00	0.00	0.46	0.00
8	0.00	0.09	0.00	0.40	2.60	5.63	7.86	2.60	0.00	0.00	1.71	0.00
9	0.00	0.23	0.00	0.27	5.56	3.64	8.65	1.98	0.00	0.00	0.00	0.00
10	0.41	0.28	0.00	0.00	2.06	0.85	8.14	1.56	0.00	0.00	0.00	0.63
11	0.00	0.35	2.10	0.00	5.65	4.29	3.09	0.38	0.00	0.13	0.73	2.06
12	0.00	0.00	1.99	0.50	2.15	3.96	3.13	0.50	0.30	0.00	0.76	4.37
13	0.40	0.00	0.00	0.00	9.41	1.88	2.01	0.77	1.50	0.00	0.73	1.42
14	2.61	0.00	0.00	0.00	7.65	1.29	0.33	3.43	0.11	0.56	1.89	1.21
15	2.68	0.00	3.28	0.00	0.81	6.62	0.21	0.00	4.40	0.27	3.01	11.50
16	5.11	0.02	0.00	0.00	2.77	2.17	0.15	0.40	0.54	1.36	1.90	5.23
17	5.65	0.00	0.08	3.75	5.30	1.67	0.09	0.00	0.87	0.02	0.64	2.50
18	3.34	0.00	0.92	1.04	8.76	0.27	0.35	0.00	1.99	3.06	0.00	1.10
19	9.79	2.90	0.59	0.00	1.22	0.00	0.00	0.00	1.00	1.48	1.00	0.11
20	9.24	0.65	0.66	2.17	0.36	0.00	0.41	3.37	0.00	3.85	0.72	0.63
21	29.19	0.36	0.96	13.63	4.77	0.02	0.92	0.17	0.26	11.15	0.00	0.29
22	17.40	0.48	0.00	6.00	1.88	0.00	4.21	0.00	1.44	7.13	0.00	0.00
23	8.38	0.00	4.11	3.87	2.31	1.58	0.00	0.00	0.00	7.88	0.00	0.00
24	4.86	0.00	0.65	25.27	0.94	0.00	0.00	0.00	0.00	11.81	0.00	0.00
25	0.27	0.00	0.33	19.07	1.56	0.00	0.00	0.58	0.00	3.77	0.00	0.00
26	1.36	0.00	0.80	2.03	0.00	0.00	1.28	0.00	0.00	5.72	0.00	0.00
27	0.30	0.00	0.07	0.69	0.00	1.67	1.24	0.00	0.00	8.82	0.00	0.00
28	0.00	0.00	0.48	4.16	0.00	3.81	2.57	0.00	0.00	1.20	0.00	0.00
29	0.00		0.00	0.96	0.33	0.25	3.24	0.00	0.00	0.00	0.00	0.00
30	0.00		0.23	0.96	0.00	2.75	3.62	0.00	0.00	0.00	0.00	0.00
31	0.26		0.81		0.44		4.10	0.00		0.00		0.00
Mean	3.53	0.47	0.59	3.65	2.99	1.98	3.24	0.76	0.45	2.20	0.45	1.08

Yearly Mean = 1.79

EARTH RADIATION BUDGET SATELLITE (ERBS) TOTAL SOLAR IRRADIANCE MEASUREMENTS

OCTOBER 1984 THROUGH OCTOBER 1997

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From 1984 to the present, total solar irradiance values were obtained from the solar monitor on the Earth Radiation Budget Satellite (ERBS) nonscanner instrument. The ERBS solar monitor is an active cavity radiometer similar in design to the Active Cavity Radiometer Irradiance Monitors (ACRIM) which have flown on the NASA Solar Maximum Mission (SMM), Upper Atmosphere Research Satellite (UARS), and Atmospheric Laboratory for Applications and Science (ATLAS) spacecraft missions. The ERBS satellite was placed into orbit on October 5, 1984 and the solar monitor is operating properly. In Figure 1 and in the data, the ERBS solar monitor time series covers the period from October 25, 1984 through October 8, 1997. The measurement precision is approximately 0.01 percent while the accuracy is 0.2 percent. The ERBS data reduction model is described in considerable detail in Reference 1. In Reference 2, analyses of the ERBS time series have been presented as well as intercomparisons of the ERBS time series with those of the ACRIM Solar Maximum Mission and the Nimbus 7 Earth Radiation Budget (ERB) Channel 10c pyrheliometers as well as those from the Nimbus 6, Mariner VI, Mariner VII, Space Lab I, ERBS, NOAA-9 and NOAA-10 pyrheliometers. Digital files of the solar irradiance values are available on-line at www.ngdc.noaa.gov/stp in the format:

Column 1: Calibration date - year/month/day
Column 2: Measurement time (universal) - hour:min:sec
Column 3: Total Solar Irradiance (Watts/meters squared) at 1 AU
Corrected for Off-axis viewing and normalized to
Astronomical Almanac Earth-Sun Distance tables
Column 4: Standard Deviation of averaged samples (Watts/meters squared)
0.0 indicates 1 sample or very close instantaneous samples

In Figure 1, the individual total solar irradiance values represent orbital averages of the instantaneous measurements which are corrected for the angle between the instrument optical axis and the Sun and which are normalized to the mean Earth/Sun distance. At least once every 2 weeks, the Sun is observed by the monitor for several 64-second measurement intervals. Each interval is separated into two 32-second periods. During the first period, the Sun drifts across the 9.2-degree unocculted field of view, and its radiation field is measured. During the second period, a low-emittance shutter, representative of a near-zero irradiance source, is cycled into the field of view, and the low irradiance from the back of

ERBS SOLAR MONITOR

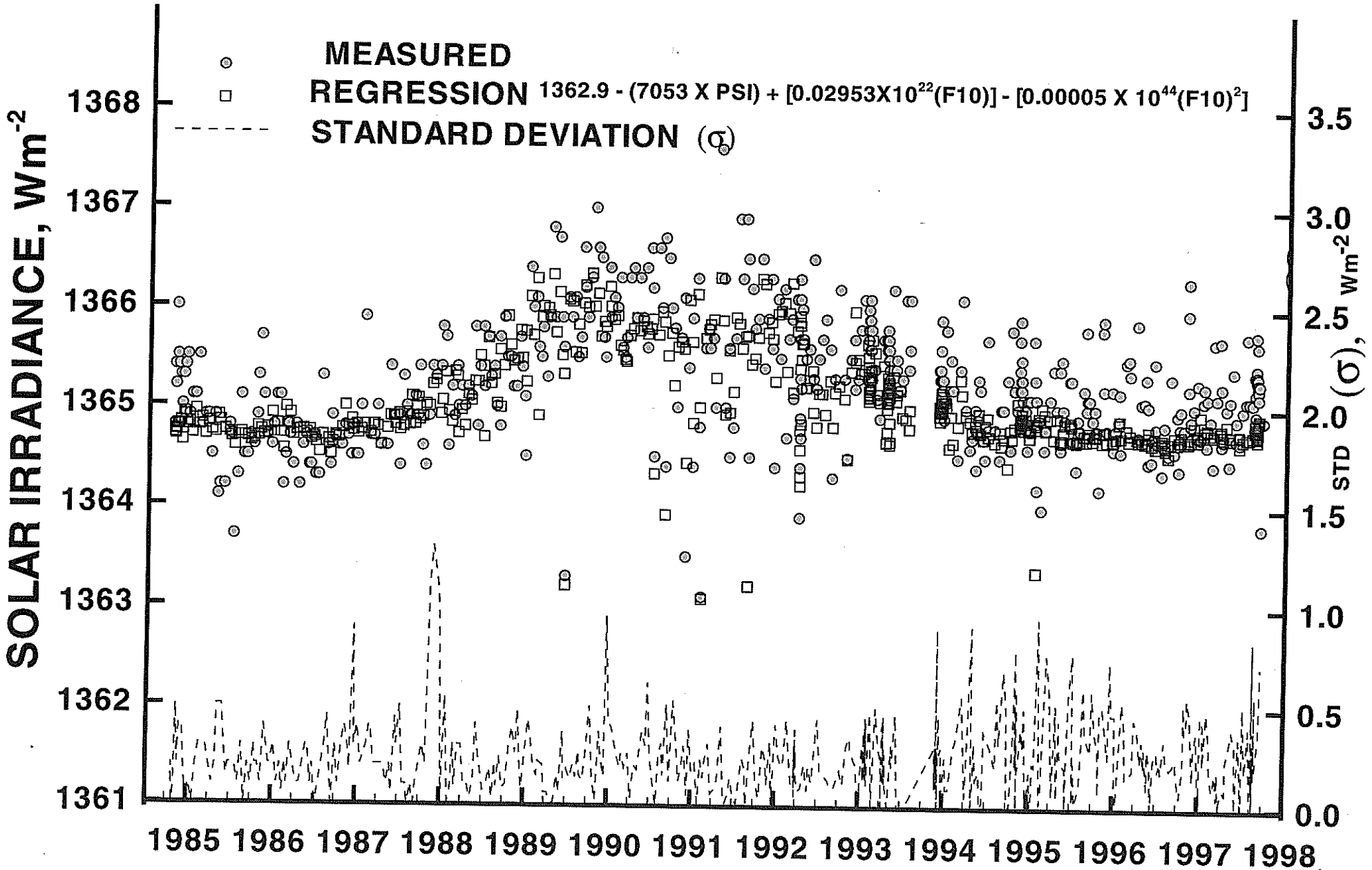

Figure 1. Earth Radiation Budget Satellite (ERBS) total solar irradiance values and the standard deviations for each value with an empirical model fit represented by solid line.

TABLE 1 ERBS Nonscanner Instrument Days of Operation up to October 8, 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jun 93	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Jul 93	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x									
Aug 93																															
Sep 93																															
Oct 93																															
Nov 93																						x	x	x	x	x	x	x	x	x	
Dec 93	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jan 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							x		x	x	x	x	x	x	x	x
Feb 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x			
Mar 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
Apr 94				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
May 94	x					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jun 94	x	x	x	x	x	x	x	x	x	x	x						x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Jul 94	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Aug 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						x	x	x	x	x	x
Sep 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						x	
Oct 94	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Nov 94				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Dec 94	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jan 95	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Feb 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x	x	x	x	x			
Mar 95	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x
Apr 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
May 95		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jun 95	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Jul 95	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Aug 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Sep 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	
Oct 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Nov 95	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Dec 95	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jan 96	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Feb 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x	x			
Mar 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x
Apr 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	
May 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jun 96	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Jul 96	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Aug 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sep 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	
Oct 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x
Nov 96	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Dec 96	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jan 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Feb 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Mar 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Apr 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
May 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jun 97	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Jul 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Aug 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sep 97	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Oct 97	x	x	x	x	x	x	x	x																							

the shutter is measured. The resulting measurements from the two different periods are used to define the irradiance, using the model that is described in Reference 1. Typically, two to eight values of the irradiance are determined during an orbit. Considering that these irradiance values are derived typically during a single orbit for a few minutes, the averaged irradiance values represent an almost instantaneous level, and not a daily average.

Between 1984 and 1993, the solar monitor was operated continuously with the exception of the July 2-3, 1987, September 4-9, 1992, and July 2-3, 1993 when spacecraft attitude control or battery cell failure problems caused the monitor to be turned off. Between July 18, 1993 and November 21, 1993, the monitor was turned off because the spacecraft battery system and the flight operations procedures could not provide sufficient power to all of the spacecraft sensors. Therefore, there are no data available for this period. The 14-day measurement schedule was resumed after November 22, 1993 when flight procedures were revised to provide sufficient power to the monitor. In Table 1, the solar monitor power-on days in 1993, 1994, 1995 and thru December 1996 are presented. In the data and in Figure 1, the measurement standard deviations (STD) increased significantly when the power was turned off for 1 to 8 day [an average of 4 days] periods every 22 to 40 days [an average of 30 days].

In Figure 1, the ERBS irradiance values are compared with an empirical regression fit which serves as a quality assurance diagnostic tool. The fit was derived from least squares analyses between the ERBS irradiances, photometric sunspot index (PSI), and 10.7-cm solar flux (F10), using March 1985 thru August 1989 values. PSI is a proxy for irradiance decreases which are caused by the presence of large groups and numbers of sunspots. F10 is a proxy for irradiance brightening which is caused by the presence of faculae. Lee et al. (1995) describes the derivation of the regression fit.

Specialized irradiance measurement missions were conducted during March 23, 1992 through April 2, 1992, January 16, 1993 through January 30, 1993, April 6, 1993 through April 22, 1993, November 4, 1994 through December 13, 1994 and August 8, 1997 through August 25, 1997. The specialized missions included increased measurement opportunities over three to six orbits each day compared to the typical single orbit measurements. The missions were extended to as much as 10 consecutive days of measurements.

References

[1] R. B. Lee III, B. R. Barkstrom, and R. D. Cess, "Characteristics of the Earth Radiation Budget Experiment Solar Monitors," Appl. Optics, 26 (15) 3090-3096, 1987.

[2] R. B. Lee III, M. A. Gibson, R. S. Wilson, S. Thomas, "Long-term Total Solar Irradiance Variability During Sunspot Cycle 22," Journal of Geophysical Research, Vol. 100, No. A2, pp. 1667-1675, February 1, 1995.

1997 SOLAR IRRADIANCE INSTANTANEOUS VALUES
EARTH RADIATION BUDGET EXPERIMENT

NASA LANGLEY RESEARCH CENTER

WATTS/m^2

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.

International Geophysical Calendar 1998 (Final)

EXPLANATIONS

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

The definitions of the designated days remain as described on previous Calendars. Universal Time (UT) is the standard time for all world days. Regular Geophysical Days (RGD) are each Wednesday. Regular World Days (RWD) are three consecutive days each month (always Tuesday, Wednesday and Thursday near the middle of the month). Priority Regular World Days (PRWD) are the RWD which fall on Wednesdays. Quarterly World Days (QWD) are one day each quarter and are the PRWD which fall in the World Geophysical Intervals (WGI). The WGI are fourteen consecutive days in each season, beginning on Monday of the selected month, and normally shift from year to year. In 1998 the WGI will be January, April, July and October.

The **Solar Eclipses** are:

- **26 February 1998 (total) eclipse** with totality visible in the Pacific Ocean from the Galápagos to Colombia and Panama, in Venezuela, in the islands of Aruba and Curaçao, and across the Caribbean to the islands of Antigua, Montserrat, and Guadeloupe. Totality up to 4 min 8 s. Partial phases will be visible in the U.S. southeast of a line drawn approximately from San Diego to Chicago and as far south as northern Chile, Bolivia, and the northern half of Brazil. Partially eclipsed sunset seen from Portugal, northwestern Spain, and West Africa; partially eclipsed sunrise seen from east coast of island of Hawaii.
- **21-22 August 1998 (annular) eclipse** with annularity visible in parts of Sumatra, peninsular Malaysia, and northern Borneo. Partial phases will be visible in southern China, SE Asia, southern Japan, and extending to the south past Australia and New Zealand.

(Descriptions by Dr. Jay M. Pasachoff, Williams College (jmp@williams.edu)--Hopkins Observatory, Chair of the Working Group on Eclipses of the International Astronomical

Union, based on "Fifty-Year Canon of Solar Eclipses: 1986-2035," by Fred Espenak, NASA Goddard Space Flight Center, NASA Reference Publication 1178 Revised.) See web site http://umbra.gsfc.nasa.gov/eclipse/predictions/eclipse-paths.html.

Meteor Showers (selected by R. Hawkes, Mount Allison Univ, Canada, rhawkes@mta.ca) include the most prominent regular showers. The dates for Northern Hemisphere meteor showers are: Jan 3-5 (Quadrantid); Apr 21-23 (Lyrid); May 4-6 (Eta-Aquarid); Jun 6-11 (Arietid, Zeta-Perseid); Jun 27-29 (Beta-Taurid); Aug 11-14 (Perseid); Oct 21-23 (Orionid); Nov 16-19 (Leonid); Dec 13-15 (Geminid); Dec 22-24, 1998 (Ursid); and Jan 3-5, 1999 (Quadrantid). The dates for Southern Hemisphere meteor showers are: May 4-6 (Eta-Aquarid); Jun 6-11 (Arietid, Zeta-Perseid); Jun 27-29 (Beta-Taurid); Jul 27-Aug 2 (S. Delta-Aquarid, Alpha-Aurigid); Oct 21-23 (Orionid); Nov 16-19 (Leonid); and Dec 13-15, 1998 (Geminid). Particular attention is drawn to the Leonid shower which is expected to produce storm conditions of thousands to tens of thousands of visual meteors per hour at approximately 17 UT +/- 4 hours on November 17, 1998.

The occurrence of **unusual solar or geophysical conditions** is announced or forecast by the ISES through various types of geophysical **"Alerts"** (which are widely distributed by telegram and radio broadcast on a current schedule). Stratospheric warmings (STRATWARM) are also designated. The meteorological telecommunications network coordinated by WMO carries these worldwide Alerts once daily soon after 0400 UT. For definitions of Alerts see ISES "Synoptic Codes for Solar and Geophysical Data", March 1990 and its amendments. Retrospective World Intervals are selected and announced by MONSEE and elsewhere to provide additional analyzed data for particular events studied in the ICSU Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) programs.

RECOMMENDED SCIENTIFIC PROGRAMS

FINAL EDITION

(The following material was reviewed in 1997 by spokesmen of IAGA, WMO and URSI as suitable for coordinated geophysical programs in 1998.)

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

Atmospheric Electricity. Non-continuous measurements and data reduction for continuous measurements of atmospheric electric current density, field, conductivities, space charges, ion number densities, ionosphere potentials, condensation nuclei, etc.; both at ground as well as with radiosondes, aircraft, rockets; should be done with first priority on the RGD each Wednesday, beginning on 7 January 1998 at 0000 UT, 14 January at 0600 UT, 21 January at 1200 UT, 28 January at 1800 UT, etc. (beginning hour shifts six hours each week, but is always on Wednesday). Minimum program is at the same time on PRWD beginning with 14 January at 1800 UT. Data reduction for continuous measurements should be extended, if possible, to cover at least the full RGD including, in addition, at least 6 hours prior to indicated beginning time. Measurements prohibited by bad weather should be done 24 hours later. Results on sferics and ELF are wanted with first priority for the same hours, short-period measurements centered around the minutes 35-50 of the hours indicated. Priority Weeks are the weeks which contain a PRWD; minimum priority weeks are the ones with a QWD. The World Data Centre for Atmospheric Electricity, 7 Karbysheva, St. Petersburg 194018, USSR, is the collection point for data and information on measurements.

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

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

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

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

For the **incoherent scatter observation program**, every effort should be made to obtain measurements at least on the Incoherent Scatter Coordinated Observation Days, and intensive series should be attempted whenever possible in WGIs, on Dark Moon Geophysical Days (DMGD) or the Airglow and Aurora Periods. The need for collateral VI observations with not more than quarter-hourly spacing at least during all observation periods is stressed.
Special programs include:
CADITS/MLTCS -- Coupling and Dynamics of the Ionosphere-Thermosphere System/Mesosphere, Lower-Thermosphere Coupling Study -- combined local E and F region measurements, including vector velocities, with 15 minute time resolution. Latitudinal coverage may be sacrificed to meet this goal.
(Contacts are: Casandra Fesen - fesen@tides.dartmouth.edu and Roberta Johnson - rjohnson@dexter.sprl.umich.edu);
DATABASE -- Incoherent Scatter Database -- emphasis on broad latitudinal coverage of the F region (Anthony van Eyken - tony@eiscat.no);
POLITE -- Plasmaspheric Observations of Light Ions in the Topside Exosphere -- global coordinated measurements of topside light ions. Simultaneous optical

observations of neutral hydrogen and helium are highly desirable where possible (Phillip Erickson - pje@hyperion.haystack.edu);
WLS -- Wide-Latitude Substorm Dynamics (John Foster - jcf@hyperion.haystack.edu).
Special programs: Dr. Anthony P. van Eyken, EISCAT Scientific Association, Ramfjordmoen, N-9027 Ramfjordbotn, Norway. Tel. +47 77692166; Fax +47 77692380; e-mail: tony@eiscat.no; URSI Working Group G.5.

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

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

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

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

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

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

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

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

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

Global Atmosphere Watch (GAW) The World Meteorological Organizations (WMO) GAW integrates many monitoring and research activities involving measurement of atmospheric composition. Serves as an early warning system to detect further changes in atmospheric concentrations of greenhouse gases, changes in the ozone layer and in the long range transport of pollutants, including acidity and toxicity of rain as well as of atmospheric burden of aerosols (dirt and dust particles). Contact WMO, 41, avenue Giuseppe-Motta, P.O. Box 2300, 1211 Geneva 2, Switzerland.

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

ISCS (International Solar Cycle Studies). Program within the SCOSTEP (Scientific Committee on Solar-Terrestrial Physics): 1998-2002. Its focus is on observations and basic research directed toward understanding the underlying and resulting processes associated with the rising and maximum phase of a solar cycle. Contacts are S.T. Wu, Univ of Alabama, Huntsville Dept. Mech. Eng. & Ctr. for Space Plasma & Aeron. Res., Huntsville, AL 35899 USA, (205)895-6413, Fax (205)895-6328, wu@cspar.uah.edu, and V. Obridko, IZMIRAN, Solar Physics Department, 142092 Troitsk, Moscow, Russia, 095-344-0926, Fax 095-334-0124, obridko@lars.izmiran.troitsk.su.

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

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

This Calendar for 1998 has been drawn up by H.E. Coffey, of the ISES Steering Committee, in association with spokesmen for the various scientific disciplines in SCOSTEP, IAGA and URSI and other ICSU organizations. Similar Calendars are issued annually beginning with the IGY, 1957-58, and are published in various widely available scientific publications.

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Additional copies are available upon request to ISES Chairman, Dr. R. Thompson, IPS Radio and Space Services, Department of Administrative Services, P.O. Box 1386, Haymarket, NSW 1240, Australia (FAX number (61)(2)9213 8060; e-mail richard@ips.gov.au), or ISES Secretary for World Days, Miss H.E. Coffey, WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder, Colorado 80303, USA (FAX number (303)497-6513; e-mail hcoffey@ngdc.noaa.gov).

The calendar is available on-line at http://www.sec.noaa.gov/ises/ises.html.

Footnotes to front of calendar --

NOTES on other dates and programs of interest:

1. Days with **significant meteor shower activity** are: Northern Hemisphere 3-5 Jan; 21-23 Apr; 4-6 May; 6-11, 27-29 Jun; 11-14 Aug; 21-23 Oct; 16-19 Nov; 13-15, 22-24 Dec 1998; 3-5 Jan 1999. Southern Hemisphere 4-6 May; 6-11, 27-29 Jun; 27 Jul-2 Aug; 21-23 Oct; 16-19 Nov; 13-15 Dec 1998. These can be studied for their own geophysical effects or may be "geophysical noise" to other experiments. Particular attention is drawn to the Leonid shower which is expected to produce storm conditions of thousands to tens of thousands of visual meteors per hour at approximately 17 UT +/- 4 hours on 17 Nov 1998.

2. **Global Atmosphere Watch (GAW)** -- early warning system for changes in greenhouse gases, ozone layer, and long range transport of pollutants. (See Explanations.)

3. **ISCS (International Solar Cycle Studies)** Observing Program 1998-2002: SCOSTEP Study of processes associated with the rising and maximum phase of the solar cycle. (See Explanations.)

4. **+ Incoherent Scatter Coordinated Observations Days** (see Explanations) starting at 1600 UT on the first day of the intervals indicated, and ending at 1600 UT on the last day of the intervals: 20-21 Jan DATABASE: 23-27 Mar MLTCS/CADITS; 27-29 Apr WLS; 26-28 May POLITE; 23-24 Jun DATABASE; 18-19 Aug DATABASE; 21-25 Sep MLTCS/CADITS; 19-21 Oct WLS; 16-19 Nov POLITE; 8-9 Dec DATABASE

where **CADITS** = Coupling and Dynamics of the Ionosphere-Thermosphere System
(Contacts are C. Fesen -- fesen@tides.dartmouth.edu;
R. Johnson -- rjohnson@dexter.sprl.umich.edu);
DATABASE = Incoherent Scatter Database (A. van Eyken -- tony@eiscat.no);
MLTCS = Mesosphere, Lower-Thermosphere Coupling Study
(Same contacts as CADITS);
POLITE = Plasmaspheric Observations of Light Ions in the Topside Exosphere
(P. Erickson -- pje@hyperion.haystack.edu);
WLS = Wide-Latitude Substorm Dynamics (J. Foster --
jcf@hyperion.haystack.edu).

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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."