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Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 515 JULY 1987

DATA FOR
JANUARY 1987

Michael A. Chinnery, Director
NATIONAL GEOPHYSICAL DATA CENTER
BOULDER, COLORADO

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NUMBER 515

(Issued in Two Parts)

Co-Editors: Helen E. Coffey
John A. McKinnon

Chief: Joe H. Allen
Solar-Terrestrial Physics Division

Staff: Daniel C. Wilkinson
Viola W. Miller
Carol Weathers
Charles T. Shanks

C O N T E N T S

PART I (PROMPT REPORTS)

PART II (COMPREHENSIVE REPORTS)

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C O N T E N T S

Comprehensive Reports DATA FOR JANUARY 1987 Number 515 Part II

C A R T E S Y N O P T I Q U E
A C T I V E R E G I O N S
CARRINGTON ROTATION 1784

(3 January to 31 January 1987)

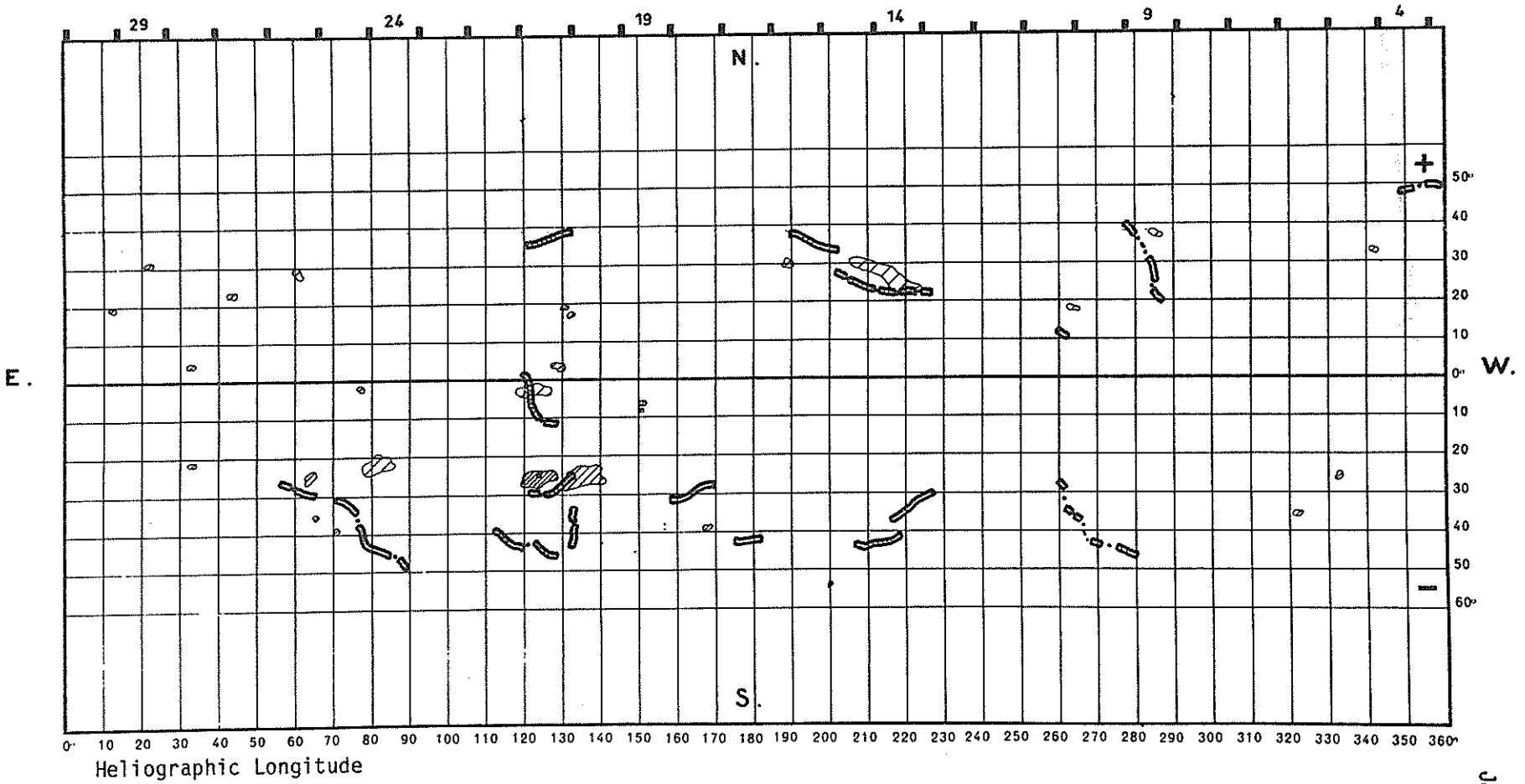
Region No.	Coordinates Lat.	Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1783	Activity at West Limb
1	33°N	342	1	+1	x		disappeared
2	38°N	286	1	>6	x		disappeared
3	19°N	264	1	+4	x		disappeared
4	25°S	137	1	>6	x		dispersed
5	4°N	130	1	+4	x		disappeared
6	25°S	125	2	+5			stable
7	3°S	123	1	>6	x		dispersed
8	22°S	82	1	+5	x		dispersed
9	25°S	65	1	-3	x		dispersed

CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1784
(3 January to 31 January 1987)

Meudon Observatory

January 1987



5 Jan 87

H - ALPHA S O L A R F L A R E S

JANUARY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
		01	1005		1012	No Flare Patrol													
		01	1037		1041	No Flare Patrol													
0001	RAMY	01	1137	1146	1157	N07	E19	4763	01	2.9	20	SF	3	C			41		
0002	KANZ	01	1303	1309	1306	N07	E17	4763	01	2.8	3	SF	1						
		01	1403		1454	No Flare Patrol													
0003	RAMY	01	1455E	1455U	1513	N08	E16	4763	01	2.8	18D	SB	3	C			93		
		01	1607		1608	No Flare Patrol													
0004	HOLL	01	1624	1627	1700	N05	E16	4763	01	2.9	36	SF	3	C			56		FH
0005	HOLL	01	1709	1711	1716	N05	E14	4763	01	2.8	7	SF	3	C			54		F
0006		01	17562	1758*	1811	N07	E14	4763	01	2.8	15	SF					39		F
	PALE	01	1756	1758	1806	N07	E14	4763	01	2.8	10	SF	3	C			28		F
	HOLL	01	1757	1818	1824	N07	E14	4763	01	2.8	27	SF	3	C			46		
	RAMY	01	1758	1759	1803	N07	E14	4763	01	2.8	5	SN	3	C			43		
0007		01	1625*	18561	1909	N06	E14	4763	01	2.8	44	SN					71		F
	HOLL	01	1625	1856	1911	N06	E14	4763	01	2.8	46	SF	3	C			69		F
	RAMY	01	1857	1857	1907	N07	E14	4763	01	2.8	10	SN	3	C			73		
0008	HOLL	01	1953	1955	2001	N07	E13	4763	01	2.8	8	SF	3	C			48		
0009		01	2021	2023	2032	N06	E13	4763	01	2.8	11	SN					23		
	HOLL	01	2021	2023	2035	N07	E13	4763	01	2.8	14	SF	3	C			22		
	RAMY	01	2024E	2024U	2030	N06	E13	4763	01	2.8	6D	SN	3	C			24		
0010	HOLL	01	2120	2124	2132	N07	E13	4763	01	2.9	12	SF	3	C			27		
		03	1500		1504	No Flare Patrol													
		03	1519		1523	No Flare Patrol													
		03	1639		1645	No Flare Patrol													
		05	1414		1435	No Flare Patrol													
		05	1447		1452	No Flare Patrol													
		05	2106		2201	No Flare Patrol													
		06	1629		1651	No Flare Patrol													
		06	1729		1812	No Flare Patrol													
		06	1816		1823	No Flare Patrol													
		06	2029		2110	No Flare Patrol													
		06	2122		2217	No Flare Patrol													
		07	1053		1107	No Flare Patrol													
		07	1114		1129	No Flare Patrol													
		07	1231		1333	No Flare Patrol													
		07	1351		1449	No Flare Patrol													
		08	1520		1526	No Flare Patrol													
		08	1659		1703	No Flare Patrol													
		10	1301		1421	No Flare Patrol													
		11	0409		0426	No Flare Patrol													
		11	0601		0646	No Flare Patrol													
		12	1334		1341	No Flare Patrol													
		14	1015		1029	No Flare Patrol													
		14	1031		1349	No Flare Patrol													
		14	1400		1411	No Flare Patrol													
		14	1425		1519	No Flare Patrol													
		14	1623		1637	No Flare Patrol													
		14	1714		1725	No Flare Patrol													
		14	1733		1752	No Flare Patrol													
		14	2205		2313	No Flare Patrol													
		14	2340		2348	No Flare Patrol													
		15	0254		0306	No Flare Patrol													
		15	0921		0932	No Flare Patrol													
		15	0941		1006	No Flare Patrol													
		15	1033		1034	No Flare Patrol													

H - ALPHA S O L A R F L A R E S

JANUARY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
		15	1151		1242	No Flare Patrol													
		15	1244		1723	No Flare Patrol													
		16	0919		0941	No Flare Patrol													
		16	0943		0955	No Flare Patrol													
		16	0957		1013	No Flare Patrol													
		16	1027		1036	No Flare Patrol													
		16	1038		1111	No Flare Patrol													
		16	1239		1331	No Flare Patrol													
		16	1333		1741	No Flare Patrol													
		16	2018		2044	No Flare Patrol													
		16	2203		2218	No Flare Patrol													
		17	0603		0604	No Flare Patrol													
0011	KHAR	17	0955E	0958U	1005D	S26	E45	4764	01	20.9	10D	SF			V	0958			D
0012	HTPR	17	1324	1337	1355	S27	E55	4765	01	21.8	31	SF			C	1337	10	.2	
		17	2136		2214	No Flare Patrol													
		17	2227		2323	No Flare Patrol													
0013	RAMY	18	1741	1741	1757	S26	E27	4764	01	20.8	16	SF		3	C		26		
0014	HOLL	18	1854	1854	1902	S28	E26	4764	01	20.8	8	SF		3	C		23		
		19	0019		0029	No Flare Patrol													
		19	0522		0539	No Flare Patrol													
		19	2037		2112	No Flare Patrol													
		19	2127		2138	No Flare Patrol													
		20	0722		0744	No Flare Patrol													
		20	0831		0836	No Flare Patrol													
		20	2057		2104	No Flare Patrol													
		20	2108		2143	No Flare Patrol													
		20	2150		2159	No Flare Patrol													
		20	2233		2242	No Flare Patrol													
		20	2314		2319	No Flare Patrol													
		21	0708		0729	No Flare Patrol													
0015	RAMY	21	1126E	1126U	1143	S26	W13	4765	01	20.5	17D	SB		3	C		21		F
0016	HTPR	21	1247E		1308D	S25	E06	4765	01	22.0	21D	SF			C	1259	60	.6	E
0017		21	13302	13311	1348	S27	W03	4765	01	21.3	18	SN					32		
	RAMY	21	1330	1331	1350	S26	W02	4765	01	21.4	20	SN		3	C		32		
	KANZ	21	1332	1332	1347	S28	W04	4765	01	21.2	15	SF		1					
0018	RAMY	21	1357	1402	1408	S26	W02	4765	01	21.4	9	SF		3	C		21		
0019	HOLL	21	1700	1702	1709	S26	W03	4765	01	21.5	9	SF		3	C		27		
0020		21	19582	20001	2009	S26	W04	4765	01	21.5	11	SN					32		
	RAMY	21	1958	2001	2001D	S26	W03	4765	01	21.6	3D	SN		3	C		38		
	HOLL	21	2000	2000	2009	S26	W06	4765	01	21.4	9	SF		3	C		26		
0021	HOLL	21	2237	2237	2242	S26	W05	4765	01	21.5	5	SF		3	C		30		
0022		22	08031	08074	0828	S26	W10	4765	01	21.5	25	SN					134	2.2	EFT
	HTPR	22	0752E		0855D	S27	W07	4765	01	21.8	63D	1N			C	0809	220	2.2	ET
	KANZ	22	0803	0807	0825D	S25	W12	4765	01	21.4	22D	SN		1					
	LEAR	22	0804	0811	0828	S26	W10	4765	01	21.5	24	SF		3	C		49		F
0023		22	1044	1048	1139	S26	W11	4765	01	21.6	55	SN					40	.6	EF
	HTPR	22	1044	1048	1135	S27	W09	4765	01	21.7	51	SF			C	1048	60	.6	E
	RAMY	22	1126E	1126U	1143	S26	W13	4765	01	21.5	17D	SB		3	C		21		F
0024	HTPR	22	1414	1421	1500	S27	W11	4765	01	21.7	46	SF			C	1421	20	.2	E
0025		22	16491	1654	1719	S25	W17	4765	01	21.4	30	SB	C 2.5				165		EF
	HOLL	22	1649	1654	1718	S25	W16	4765	01	21.5	29	SB	C 2.5	3	C		187		FE
	RAMY	22	1650	1654	1720	S25	W18	4765	01	21.3	30	SB	C 2.5	3	C		143		FE

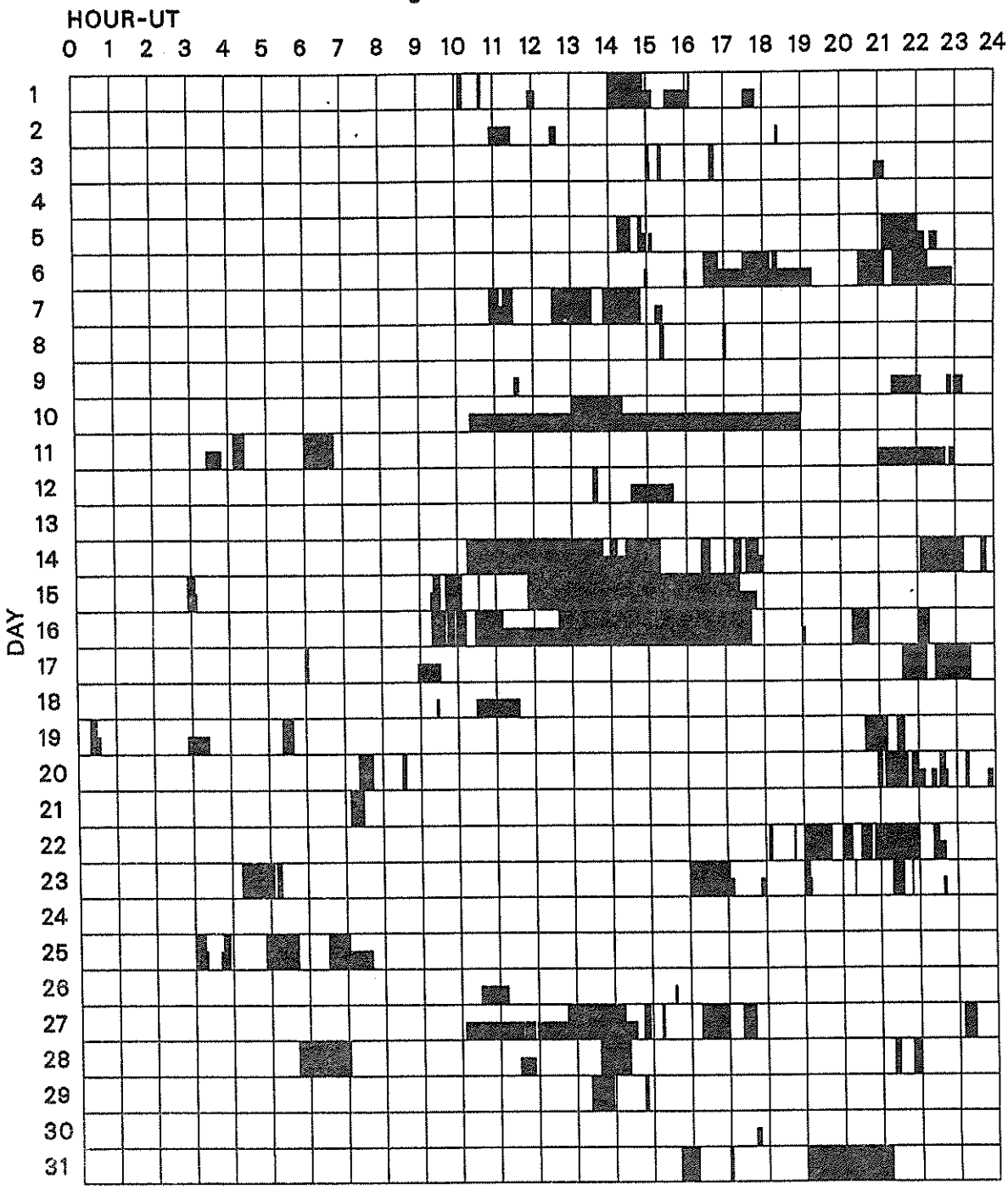
H - ALPHA SOLAR FLARES

JANUARY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Xray	Obs	Type	Time (UT)	Area Measurement Apparent 10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
		22	1805		1810	No Flare Patrol													
		22	1845		1847	No Flare Patrol													
		22	1902		1943	No Flare Patrol													
		22	2000		2016	No Flare Patrol													
0026	HOLL	22	2024	2025	2027	S26	W17	4765	01	21.5	3	SF		3	C		28		F
		22	2030		2046	No Flare Patrol													
		22	2051		2158	No Flare Patrol													
		22	2222		2231	No Flare Patrol													
0027	HOLL	22	2240	2242	2257	S25	W19	4765	01	21.5	17	SF		3	C		50		F
		23	0415		0506	No Flare Patrol													
		23	0511		0518	No Flare Patrol													
0028		23	08431	08451	0904	S27	W21	4765	01	21.7	21	SN					112	1.1	EFT
	LEAR	23	0843	0845	0857	S24	W24	4765	01	21.5	14	SF		2	C		113		F
	HTPR	23	0844	0846	0912	S30	W18	4765	01	21.9	28	SB			C	0846	110	1.1	ET
0029	HTPR	23	1201	1203	1213	S30	W20	4765	01	21.9	12	SF			C	1203	20	.2	E
0030	HTPR	23	1326	1329	1351	S30	W20	4765	01	22.0	25	SF			C	1329	20	.2	E
0031	HTPR	23	1507	1513	1520	S30	W21	4765	01	22.0	13	SF			C	1513	20	.2	E
		23	1603		1703	No Flare Patrol													
		23	1901		1909	No Flare Patrol													
		23	2020		2021	No Flare Patrol													
		23	2119		2136	No Flare Patrol													
		23	2149		2150	No Flare Patrol													
0032		23	2344	2347	2351	S26	W34	4765	01	21.3	7	SN C 1.4					68		F
	LEAR	23	2344	2347	2351	S26	W33	4765	01	21.4	7	SN C 1.4		3	C		81		
	PALE	23	2345E	2347	2351	S25	W34	4765	01	21.3	6D	SN C 1.4		3	C		74		F
		25	0301		0316	No Flare Patrol													
		25	0345		0355	No Flare Patrol													
		25	0452		0543	No Flare Patrol													
		25	0631		0704	No Flare Patrol													
0033	HOLL	25	1418E	1436U	1446	S25	W65	4765	01	20.6	28D	SF		3	C		51		
0034	HOLL	25	2119	2120	2127	S24	W56	4765	01	21.6	8	SF		3	C		21		
0035		26	1412	1421*	1440	S28	W62	4765	01	21.7	28	SF					53	.8	E
	HTPR	26	1412	1421	1436	S30	W60	4765	01	21.9	24	SF			C	1421	40	.8	E
	RAMY	26	1425E	1432	1445	S26	W65	4765	01	21.5	20D	SF		3	C		66		
0036		26	15011	15092	1537	S26	W65	4765	01	21.6	36	SN C 1.4					55	.8	E
	HOLL	26	1501E	1509	1537	S24	W68	4765	01	21.4	36D	SN C 1.4		3	C		38		
	RAMY	26	1501	1511	1557D	S25	W65	4765	01	21.6	56D	SN C 1.4		3	C		86		
	HTPR	26	1502		1535D	S30	W61	4765	01	21.8	33D	SF			C	1506	40	.8	E
		27	1246		1417	No Flare Patrol													
		27	1446		1456	No Flare Patrol													
		27	1515		1518	No Flare Patrol													
		27	1617		1700	No Flare Patrol													
		27	1721		1742	No Flare Patrol													
		27	2307		2326	No Flare Patrol													
		28	0542		0703	No Flare Patrol													
		28	1337		1424	No Flare Patrol													
		28	2119		2127	No Flare Patrol													
		28	2147		2200	No Flare Patrol													
		29	1322		1357	No Flare Patrol													
		29	1446		1451	No Flare Patrol													
		31	1542		1610	No Flare Patrol													
		31	1658		1703	No Flare Patrol													
		31	1859		2113	No Flare Patrol													

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

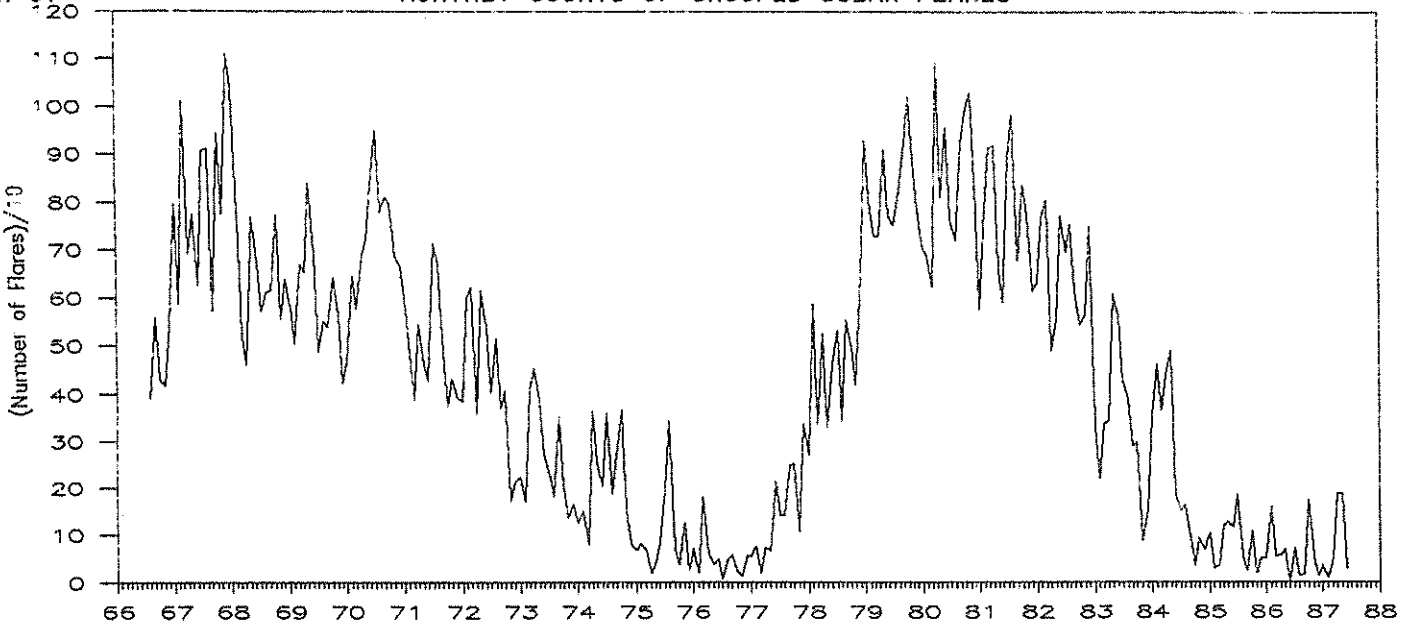
JANUARY 1987



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

Abastumani	Haute-Provence	Learmonth	Purple Mt.	Urumqi
Athens	Holloman	Manila	Ramey	Voroshilov
Bucharest	Kanzelhoehe	Mitaka	San Vito	Wendelstein
Catania	Kharkov	Palehua	Tashkent	Yunnan

MONTHLY COUNTS OF GROUPED SOLAR FLARES*



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1966								391	558	432	417	543	2341
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	53	12	726
1987	36	8	49	188	186	29							496

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

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

JANUARY 1987

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	245	LEAR	44	NS	0430.0E	0502.0	150.0D	15.0			QL=5 ST=2 TYP=1
	245	SVTO	44	NS	0636.0E	0701.0	49.0D	10.0			QL=1 ST=2 TYP=1
	245	LEAR	47	GB	0556.0E	0556.0		200.0			QL=5 ST=2 TYP=5
	245	LEAR	8	S	0622.0E	0622.0	1.0D	36.0			QL=5 ST=2 TYP=3
	3000	POTS	1	S	0935.9	0936.5	1.1	2.0			
	245	LEAR	47	GB	0936.0E	0936.0	1.0D	58.0			QL=5 ST=2 TYP=5
	1470	POTS	1	S	0936.0	0936.7	1.5	5.0			
	5900	KISV	1	S	0936.4	0936.7	.5	2.0			
	245	LEAR	47	GB	1011.0E	1011.0	1.0D	430.0			QL=5 ST=2 TYP=5
	1470	POTS	1	S	1012.0	1012.1	.4	2.0			
03	260	ONDR	44	NS	0814.0E	1111.2	276.0D	12.0			
04	810	KRAK	8	S	1043.0	1043.0	.2	4.0			
05	430	KRAK	45	C	1346.0	1347.7	3.8	8.0	4.0		
06	536	ONDR	40	F	1101.7	1112.0	12.0	13.0			
	260	ONDR	40	F	1109.0	1109.0	12.5	19.0			
	260	ONDR	40	F	1132.0	1135.2	6.5	6.5			
	260	ONDR	40	F	1143.8	1145.5	8.0	1.0			
07	808	ONDR	4	S/F	1218.0	1218.5	1.5				
08	430	KRAK	42	SER	1112.7	1120.0	30.5	2.5			
	430	KRAK	41	F	1202.3	1205.0	17.0	38.0	5.0		
	430	KRAK			1202.3	1210.3					
10	430	KRAK	42	SER	0936.0	0955.2	26.7	25.0			
	2800	OTTA	20	GRF	1740.0	1832.0	120.0	1.5	.7		
11	810	KRAK	8	S	1342.0	1342.0	.1	3.0			
	430	KRAK	8	S	1342.0	1342.2	.7	36.0	4.0		
13	536	ONDR	40	F	1213.5	1234.0	24.0	9.0			
	260	ONDR	40	F	1217.5	1232.5	22.5	1.5			
	808	ONDR	8	S	1227.8	1227.9	.1				
	536	ONDR	40	F	1250.5	1253.5	5.0	1.5			
	260	ONDR	40	F	1250.5	1254.2	4.5	3.0			
14	3750	TYKW	20	GRF	0343.0	0400.0	100.0	1.5	0.7		
	2000	TYKW	20	GRF	0343.0	0400.0	100.0	1.0	0.5		
15	810	KRAK	8	S	0840.3	0842.5	3.0	11.0	7.0		
	810	KRAK	7	C	0845.7	0846.7	1.8	12.0	7.0		
16	430	KRAK	1	S	1155.5	1156.3	1.5	3.0	1.0		
18	536	ONDR	42	SER	1211.6	1214.0	5.5	16.0			
	260	ONDR	42	SER	1212.0	1213.5	8.5	2.0			
	808	ONDR	8	S	1213.5	1213.5	.1				
19	430	KRAK	7	C	0908.5	0909.0	1.8	5.0	2.0		
	260	ONDR	8	S	1043.5	1043.5	.2	12.0			
	430	KRAK	1	S	1143.8	1144.2	.7	4.0	2.0		
20	2000	TYKW	20	GRF	0340.0	0410.0	100.0	1.0	.5		
21	2800	OTTA	8	S	1700.3	1700.6	.9	1.6	.8		
	500	HIRA	7	C	2236.8	2238.0	1.9	215.0	20.0		0
22	5900	KISV	2	S/F	0608.0	0609.2	2.5	3.0			
	9300	KISV	2	S/F	0608.1	0609.3	3.0	7.0			
	15000	KISV	2	S/F	0609.1	0609.3	1.5	6.0			
	536	ONDR	8	S	1254.0	1254.8	1.0	6.0			
	2800	OTTA	20	GRF	1330.0E	1420.0	180.0D	1.5	.7		
	2800	OTTA	20	GRF	1643.8	1758.0	136.0	2.6	1.3		
	2800	OTTA	1	S	1652.3	1652.9	2.2	4.4	1.3		
	2700	PENT	20	GRF	2010.0	2052.0	100.0	1.5	.7		
23	3000	POTS	42	SER	0842.5	0843.8	3.5	40.0			

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

JANUARY 1987

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
23	1470	POTS	42	SER	0842.6	0844.0	3.9	2.0			
	5900	KISV	22	GRF	0842.8	0845.9	16.5	2.0			
	3100	CRIM	1	S	0844.0	0845.5	15.0	4.0	1.0		
	260	ONDR	2	S/F	1035.0	1035.3	.5	7.0			
	536	ONDR	8	S	1156.0	1156.0	.2	4.0			
	260	ONDR	8	S	1156.1	1156.1	.2	2.0			
	536	ONDR	8	S	1211.8	1211.9	.3	14.0			
	430	KRAK	28	PRE	1305.8		18.3	7.0	2.0		
	808	ONDR	1	S	1306.8	1307.0	.5				
	430	KRAK	45	C	1324.1	1326.3	14.8	120.0	40.0		
	430	KRAK			1324.1	1329.8					
	2000	TYKW	45	C	2343.0	2344.1	3.0	9.0	1.5		
	3750	TYKW	5	S	2343.0	2344.1	2.0	4.0	1.5		
	500	HIRA	7	C	2343.0	2343.2	1.5	6.0	2.0		WR
	3750	TYKW	29	PBI	2345.0		20.0	1.0	.5		
	2000	TYKW	29	PBI	2346.0		25.0	1.0	.5		
24	260	ONDR	43	NS	1050.8	1050.8	109.2	3.0			
	808	ONDR		S	1202.0	1202.0	.5				
25	245	LEAR	47	GB	0523.0E	0524.0	1.0D	59.0			QL=5 ST=2 TYP=5
	2800	OTTA	240	R	1605.0	1630.0	25.0	1.5	.7		
26	260	ONDR	43	NS	1148.0	1230.8	49.0	5.0			
	245	PALE	49	GB	1105.0E	1106.0	1.0D				QL=5 ST=1 TYP=7
	410	PALE	49	GB	1105.0E	1106.0	1.0D	95000.0			QL=5 ST=1 TYP=7
	536	ONDR	40	F	1148.5	1153.5	14.5	6.0			
	536	ONDR	46	C	1224.5	1228.5	4.5	27.0			
	536	ONDR	46	C	1259.1	1301.1	2.0	39.0			
	260	ONDR	46	C	1259.3	1259.5	2.5	13.0			
	808	ONDR	46	C	1259.8		1.2				
	808	ONDR			1259.8	1300.0					
	808	ONDR			1259.8	1300.8					
	2800	OTTA	240	AR	1330.0	1715.0	225.0	4.1	3.1		
	260	ONDR	42	SER	1343.5	1352.0	17.5	7.0			
	2800	OTTA	20	GRF	1455.0	1527.0	79.0	2.3	1.5		
	245	PALE	49	GB	1605.0E	1606.0	1.0D				QL=5 ST=1 TYP=7
27	260	ONDR	42	SER	1131.5	1141.5	26.0	2.0			
	808	ONDR	1	S	1300.0	1300.2	.5				
	410	PALE	49	GB	2305.0E	2306.0	1.0D	95000.0			QL=5 ST=1 TYP=7
	245	PALE	49	GB	2305.0E	2306.0	1.0D				QL=5 ST=1 TYP=7
28	260	ONDR	8	S	1012.3	1012.3	.5	3.0			
	808	ONDR	8	S	1107.3	1107.3	.2				
	930	BORD	8	S	1156.2	1156.4	.3	26.0	2.0		
	930	BORD	8	S	1159.1	1159.2	.2	982.0	2.0		
	808	ONDR	1	S	1205.0	1205.0	.5				
	808	ONDR	1	S	1212.5	1212.8	.5				
29	430	KRAK	48	C	1023.5	1040.3	38.0	120.0	12.0		
	245	PALE	49	GB	2205.0E	2206.0	1.0D				QL=5 ST=1 TYP=7
	410	PALE	49	GB	2205.0E	2206.0	1.0D	95000.0			QL=5 ST=1 TYP=7
30	2800	OTTA	8	S	1947.8	1948.3	7.0	2.5	1.3		
31	930	BORD	8	S	1008.1	1008.3	.3	12.0	2.0		

Reports are received routinely from the following observatories:

ATHN = Athens
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
LEAR = Learmonth
MANI = Manila
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PALE = Palehua
PEKG = Peking
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SVTO = San Vito
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov

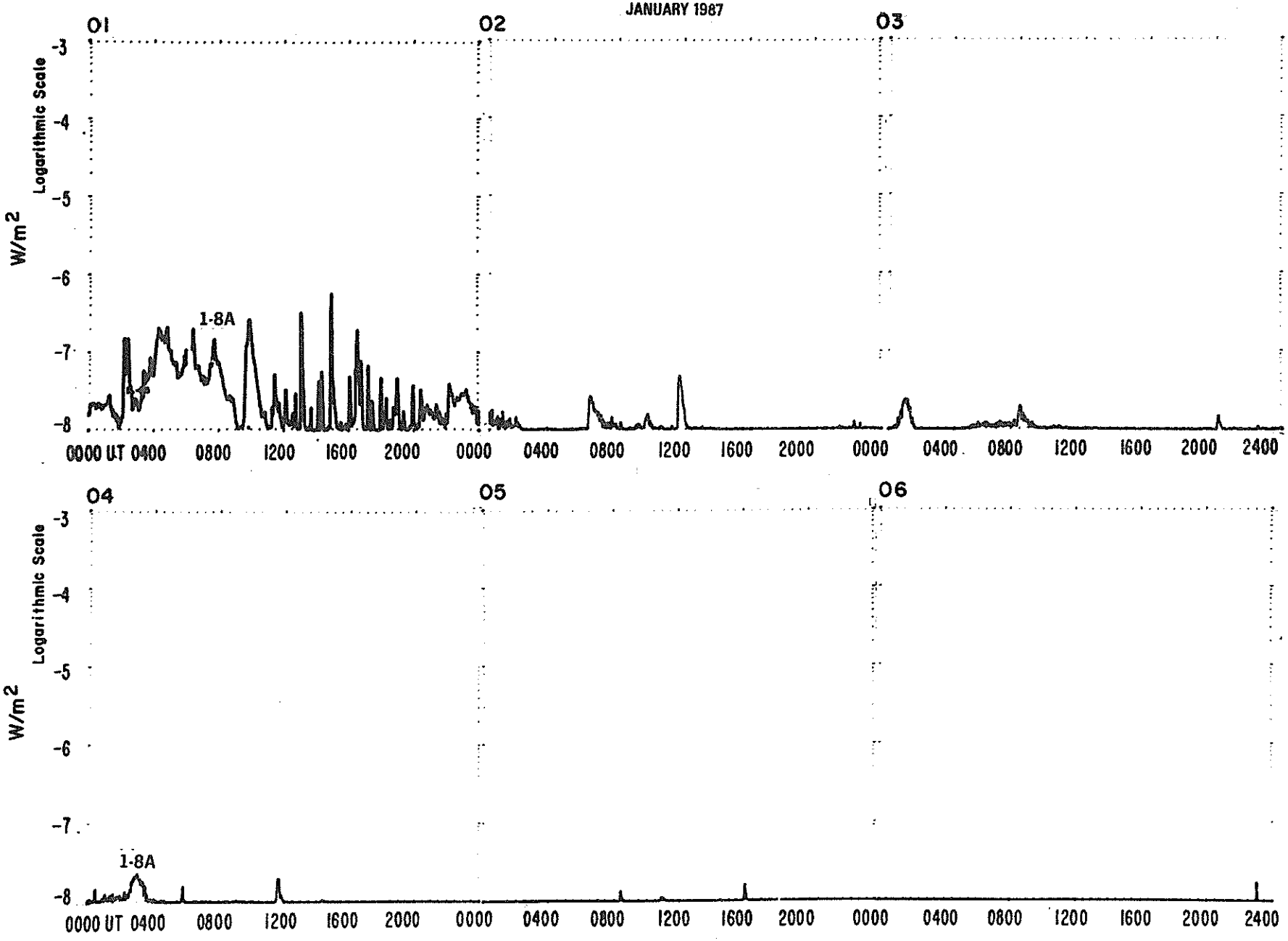
Explanation of Type Code:

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

1A Simple 1A
3A Simple 2A
21A Simple 3A GRF
2A Simple 1AF
4A Simple 2AF
240 Rise only
240F Rise only F
24P Post Rise
24PF Post Rise F
16A Fall A
260 Fall Only
26F Fall F
27F Rise and Fall F
27AF Rise and Fall AF
31A Post Burst Decrease A
32A Absorption A
46F Complex F

GOES 6 X-RAYS

JANUARY 1987

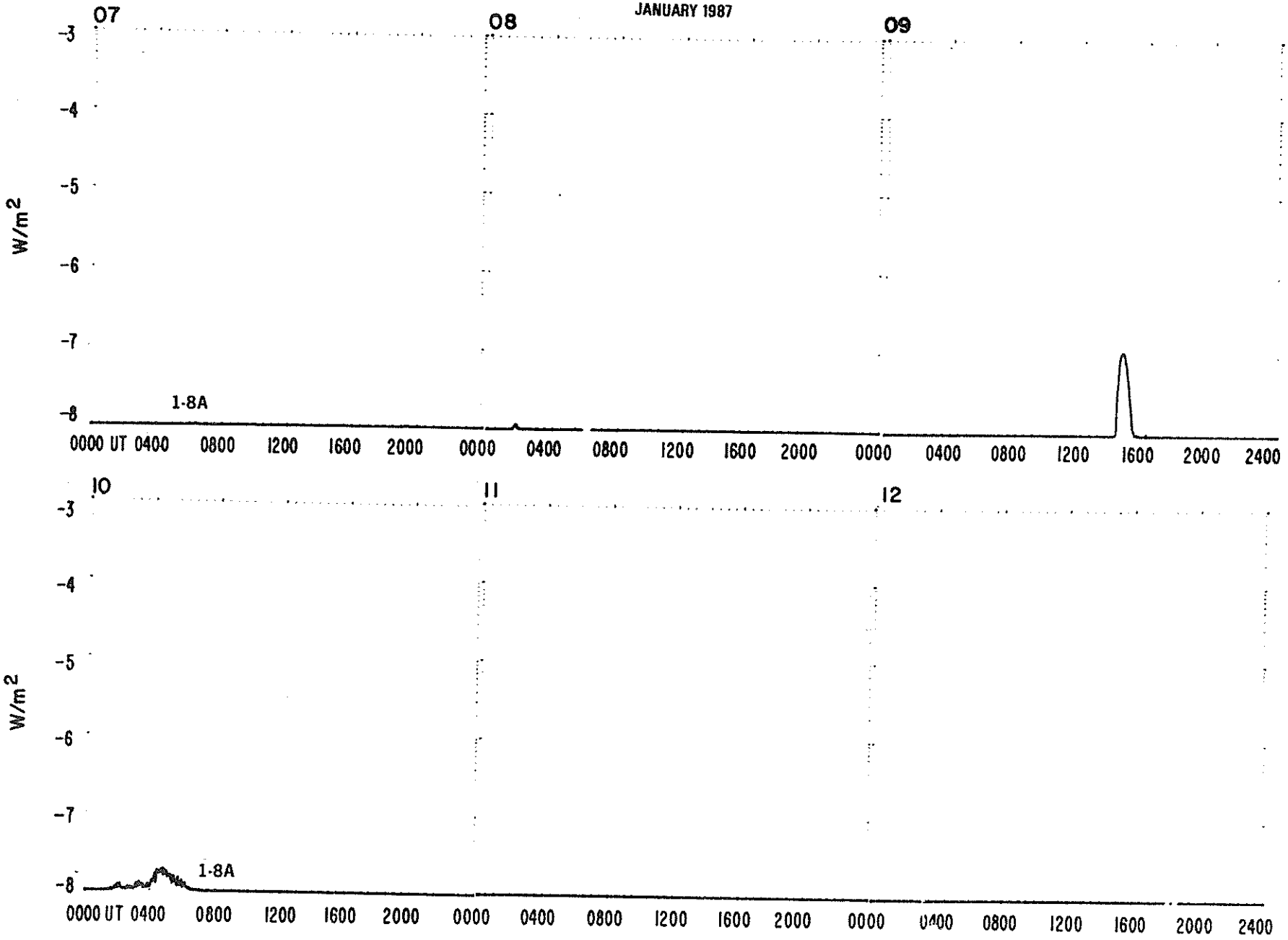


13
Jan 87

GOES 6 X-RAYS

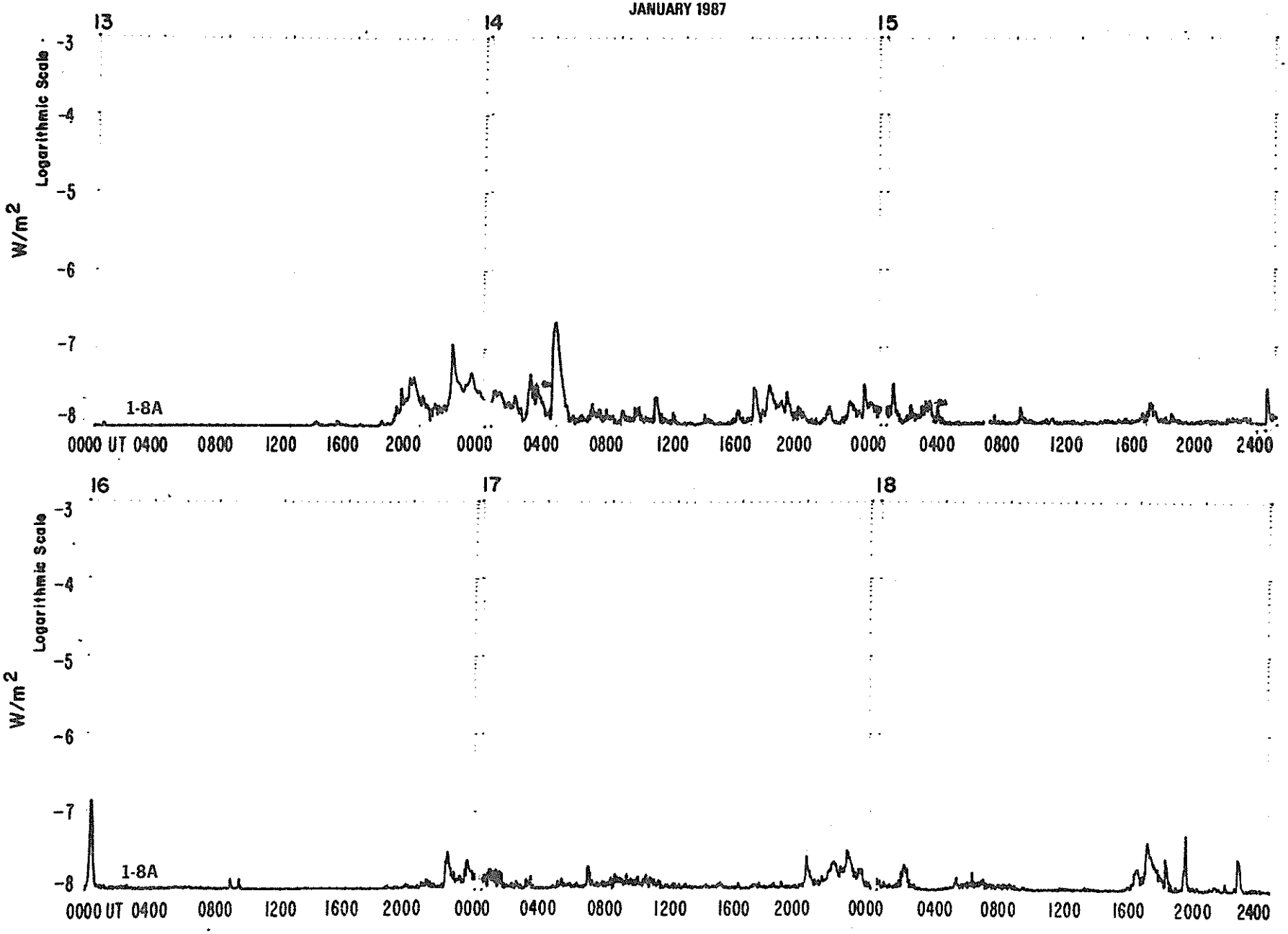
JANUARY 1987

14 Jan 87



GOES 6 X-RAYS

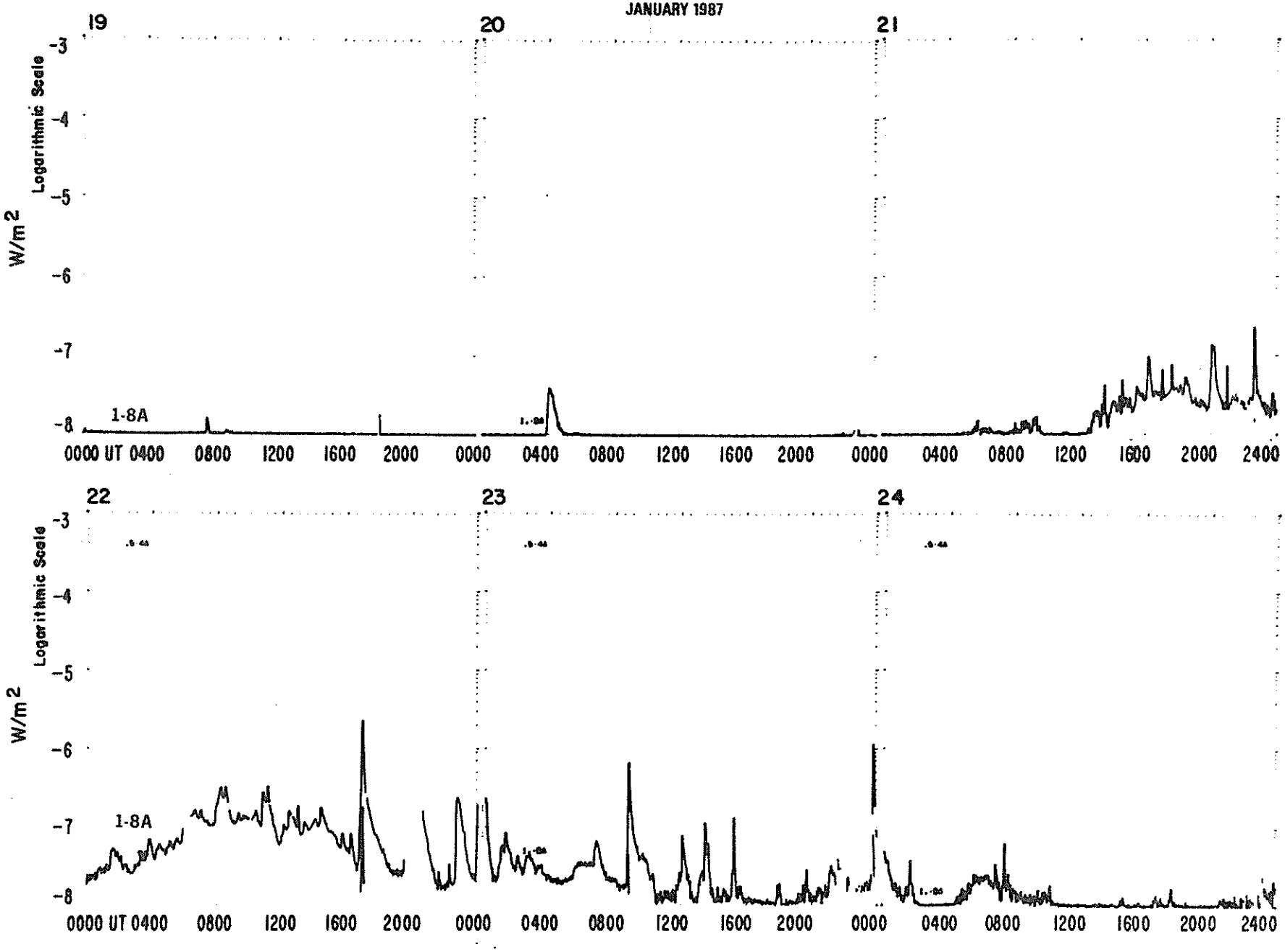
JANUARY 1987



15 Jan 87

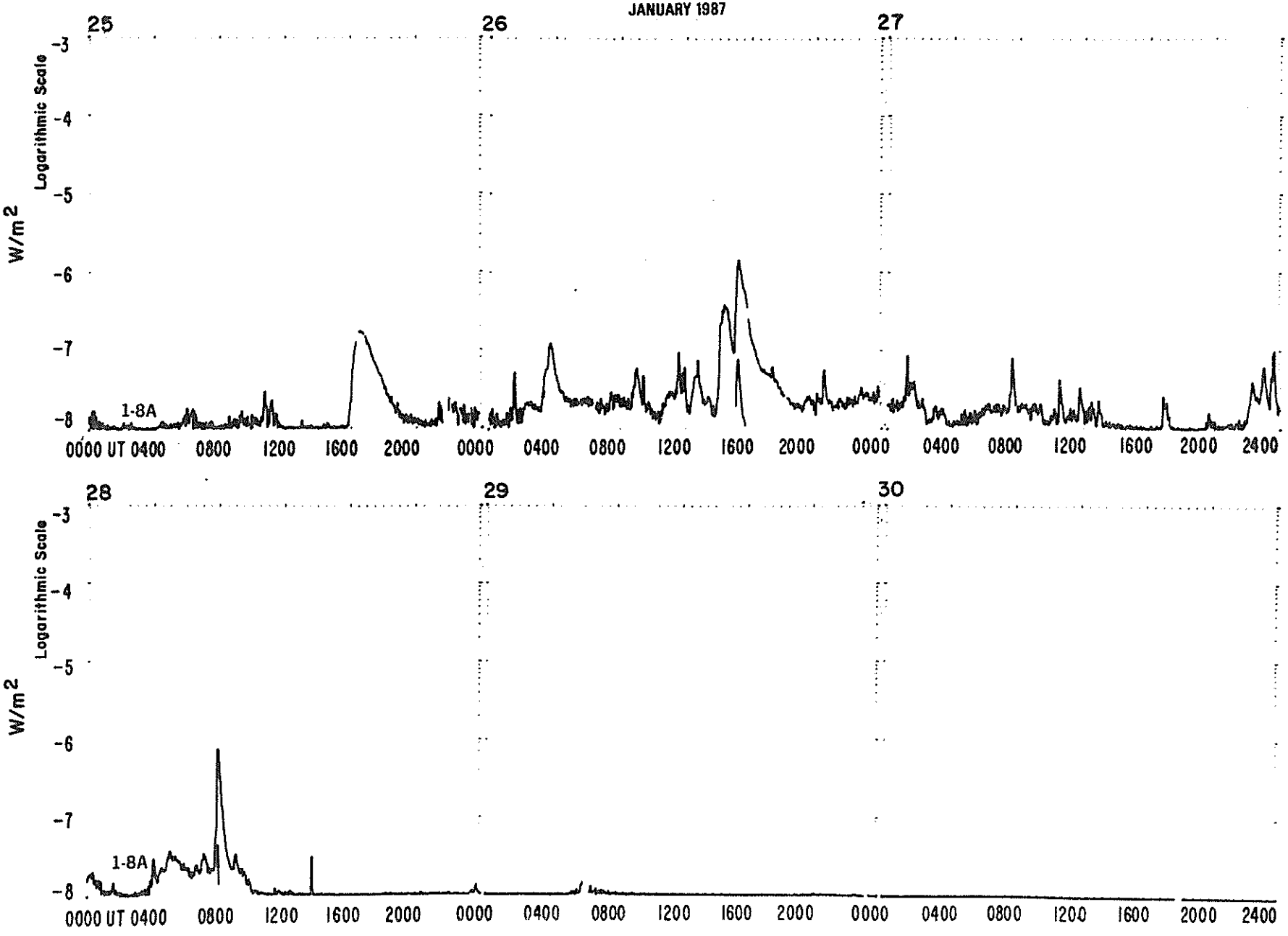
GOES 6 X-RAYS

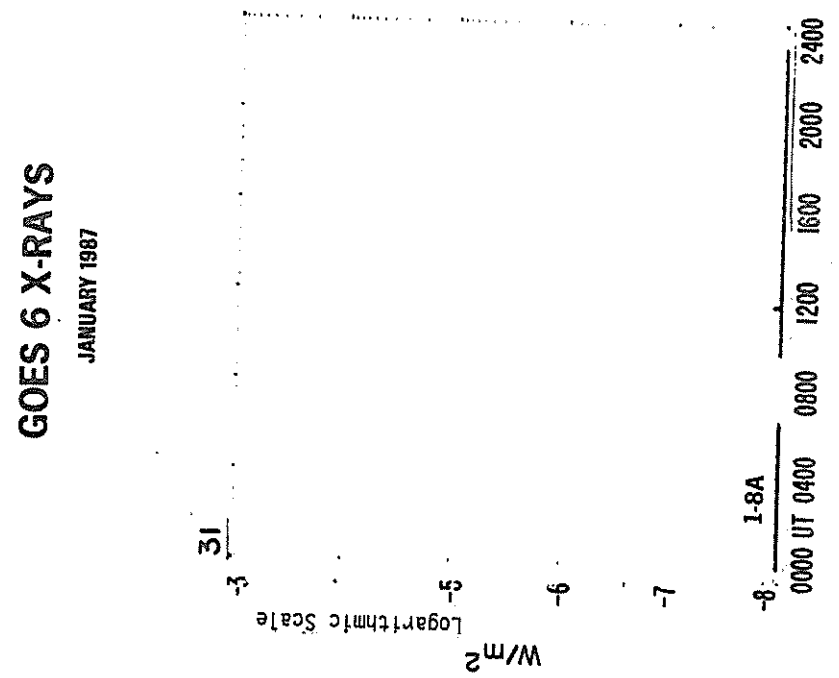
JANUARY 1987



GOES 6 X-RAYS

JANUARY 1987




GOES 6 X-RAYS
JANUARY 1987
W/m2
Logarithmic Scale
-3
-5
-6
-7
-8
31
1-8A
0000 UT 0400 0800 1200 1600 2000 2400

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

Preliminary Listing

January 1987

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp	Opt	Xray
01	0211	0213	0214						B1.6
01	0222	0225	0227						B1.5
01	0405	0419	0428						B2.2
01	0623	0624	0625						B2.0
01	0737	0738	0739						B1.1
01	0742	0743	0744						B1.4
01	0938	0952	0957						B2.6
01	1303	1305	1306						B3.4
01	1455E	1455	1513	N08	E16	4763		SB	B7.9
01	1624	1627	1700	N05	E16	4763		SF	B1.8
13	2159	2201	2202						B1.1
14	0348	0359	0404						B2.1
16	0015	0017	0018						B1.4
21	0322	0323	0324						B1.3
21	1013	1014	1015						B2.5
21	1320	1321	1322						B1.1
21	1612	1614	1615						B1.0
21	1700	1702	1709	S26	W03	4765		SF	B1.0
21	1958	2001	2016	S26	W03	4765		SN	B1.3
21	2237	2237	2242	S26	W05	4765		SF	B2.4
22	0823	0828	0834						B3.2
22	0754	0813	0819						B3.2
22	0804	0811	0828	S26	W10	4765		SF	B3.1
22	1044	1050	1056						B2.7
22	1126E	1126	1143	S26	W13	4765		SB	B3.8
22	1224	1227	1228						B1.6
22	1256	1259	1300						B1.8
22	1418	1422	1426						B1.8
22	1257	1259	1300						B1.8
22	1645	1654	1722	S25	W18	4765		SB	C2.5
22	2024	2025	2027	S26	W17	4765		SF	B2.0
22	2240	2242	2257	S25	W19	4765		SF	B2.3
22	2357	0003	0007						B2.3
23	0845	0847	0848						B7.4
23	1328	1329	1330						B1.1
23	1513	1515	1516						B1.2
23	2344	2347	2351	S26	W33	4765		SN	C1.4
26	1418E	1432	1446	S25	W65	4765		SF	B3.8
26	1501	1511	1557D	S25	W65	4765		SN	C1.4

Preliminary GOES Satellite Data
Daily Average X-ray Background

February 1986 - January 1987

Day	1986 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1987 Jan
1	B0.2	B2.0	<B0.1	B0.5	B0.2	<B0.1	<B0.1	<B0.1	<A1.0	B2.7	<A1.0	<A1.3
2	B0.3	B1.5	<B0.1	B1.0	<B0.1	<B0.1	<B0.1	<B0.1	<A1.0	A9.0	<A1.0	<A1.0
3	**	B1.9	<B0.1	B1.4	<B0.1	<B0.1	B0.3	<B0.1	<A1.0	A5.1>	<A1.0	<A1.0
4	**	B1.4	<B0.1	B0.5	<B0.1	<B0.1	B0.2	<B0.1	<A1.0	A8.6	<A1.0	<A1.0
5	**	B1.6	<B0.1	B0.2	<B0.1	B0.2	<B0.1	<B0.1	<A1.0	A6.1	<A1.0	<A1.0
6	**	B1.5	<B0.1	<B0.1	<B0.1	B0.4	<B0.1	<B0.1	A1.5	A7.0	<A1.0	<A1.0
7	B7.2	B1.0	B0.2	<B0.1	<B0.1	B0.6	<B0.1	<B0.1	A2.2	A3.6	<A1.0	<A1.0
8	B2.5	B0.8	<B0.1	<B0.1	<B0.1	<B0.1	B0.4	<B0.1	A2.0	A2.5	<A1.0	<A1.0
9	B2.0	B0.9	<B0.1	<B0.1	<B0.1	B0.2	B0.4	<B0.1	A2.4	A2.1	A1.6	<A1.0
10	B2.5	B0.9	<B0.1	<B0.1	<B0.1	B0.9	<B0.1	<B0.1	A2.2	<A1.0	A1.6	<A1.0
11	B9.8	B0.8	<B0.1	<B0.1	<B0.1	B0.5	<B0.1	<B0.1	A1.8	<A1.0	<A1.0	<A1.0
12	B5.7	B0.7	B0.2	<B0.1	<B0.1	B0.4	<B0.1	<B0.1	A4.3	A2.3	<A1.0	<A1.0
13	B6.1	B0.5	<B0.1	<B0.1	<B0.1	B0.7	<B0.1	<B0.1	B1.6	A6.2	<A1.0	<A1.0
14	B0.1	B0.3	<B0.1	<B0.1	<B0.1	B1.0	<B0.1	<B0.1	B2.5	A4.0	<A1.0	<A1.0
15	B5.7	B0.0	B0.4	<B0.1	<B0.1	B0.5	<B0.1	B0.3	B1.5	A4.1	<A1.0	<A1.0
16	B2.1	B0.0	B0.3	B0.2	<B0.1	B0.3	<B0.1	B0.5	B4.0	A3.9	<A1.0	<A1.0
17	B2.3	B0.0	B0.3	B0.3	<B0.1	B0.3	<B0.1	<B0.1	B3.7	A3.2	<A1.0	<A1.0
18	B0.0	B0.0	B0.2	B0.8	<B0.1	B0.3	<B0.1	<B0.1	B2.5	A3.4	<A1.0	<A1.0
19	B0.0	B0.0	B0.2	B0.6	<B0.1	B0.2	<B0.1	<B0.1	B3.8	A3.0	<A1.0	<A1.0
20	B0.0	B0.0	B0.2	B0.6	<B0.1	B0.2	<B0.1	<B0.1	B2.2	A3.3	<A1.0	<A1.0
21	B0.0	B1.9	B0.2	B0.6	<B0.1	B0.1	<B0.1	<B0.1	B1.5	A2.1	<A1.0	<A1.0
22	B0.0	B0.0	B0.2	B0.5	<B0.1	B0.1	<B0.1	<A1.0	B1.6	A2.3	<A1.0	A2.5
23	B0.0	B0.1	B1.2	B0.4	<B0.1	B0.1	<B0.1	<A1.0	B2.1	A2.1	<A1.0	A1.3
24	B0.0	B0.1	B2.8	B0.5	<B0.1	B0.1	<B0.1	<A1.0	B2.1	A4.4	<A1.0	<A1.0
25	B0.1	B0.0	B0.9	B0.8	<B0.1	B0.2	<B0.1	<A1.0	B1.7	A2.9	<A1.0	<A1.0
26	B0.8	B0.1	B1.1	B0.5	<B0.1	B0.2	<B0.1	<A1.0	B1.9	A1.3	<A1.0	A1.7
27	B1.0	B0.1	B1.5	B0.3	<B0.1	B0.1	<B0.1	<A1.0	B1.9	A1.2	<A1.0	<A1.0
28	B1.3	B0.1	B1.0	B0.3	<B0.1	B0.2	<B0.1	<A1.0	B1.8	<A1.0	<A1.0	<A1.0
29		B0.1	B0.5	B0.2	<B0.1	B0.3	<B0.1	<A1.0	B1.6	<A1.0	<A1.0	<A1.0
30		B0.1	B0.6	B0.2	B0.7	<B0.1	<B0.1	<A1.0	B1.8	<A1.0	<A1.0	<A1.0
31		<B0.1		B0.2		<B0.1	<B0.1		B2.1		<A1.0	<A1.0

ACTIVE PROMINENCES AND FILAMENTS

JANUARY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	DSD	0506E	1004D	N06	E20	01	2.7		06	9	9	E	LEAR	4763	
01	DSD	0812E	0914D	N07	E20	01	2.8		01	9	8	E	SVTO	4763	
01	AFS	0921E	1302D	N07	E19	01	2.8		02	9	9	E	SVTO	4763	
01	DSD	0951E	1011D	N06	E20	01	2.9		02	9	9	E	SVTO	4763	
01	SDF	1418E	1120D	S42	W63	12	27.5		14	0	0	E	RAMY		
01	AFS	1513E	2240D	N08	E15	01	2.7		02	9	9	E	HOLL	4763	
01	AFS	1519E	2126D	N07	E16	01	2.8		03	9	9	E	RAMY	4763	
01	DSD	1632E	1649D	N06	E16	01	2.9		03	9	9	E	HOLL	4763	Flare Associated
01	AFS	1722E	0352D	N06	E15	01	2.8		02	9	9	E	PALE	4763	
02	DSD	0225E	0245D	N05	E07	01	2.6	1	02	9	9	E	LEAR	4763	
02	DSD	0245E	0327D	N06	E09	01	2.8	1	03	9	7	E	LEAR	4763	
02	DSD	0342E	1002D	N05	E06	01	2.6	1	04	8	7	E	LEAR	4763	
02	AFS	1003E	1234D	N02	E04	01	2.7		02	8	8	E	SVTO	4763	
02	AFS	1158E	2121D	N06	E05	01	2.9		03	7	6	E	RAMY	4763	
02	DSD	1204E	1246D	N06	E04	01	2.8	2	02	9	9	E	RAMY	4763	
02	AFS	1556E	2050D	N07	E01	01	2.7		02	9	9	E	HOLL	4763	
02	AFS	1829E	0345D	N06	E01	01	2.8	1	02	9	9	E	PALE	4763	
03	AFS	1405E	2014D	N06	W13	01	2.6		02	9	8	E	RAMY	4763	
03	DSD	2259E	0224D	N07	W15	01	2.8		02	9	9	E	PALE	4763	
04	AFS	0420E	0842D	N06	W18	01	2.8	1	01	7	6	E	LEAR	4763	
04	DSD	0805E	1324	N05	W19	01	2.9		05	9	9	E	SVTO	4763	
04	DSD	1141E	1210D	N07	W23	01	2.8	1	02	9	9	E	RAMY	4763	
04	ADF	1328E	1414D	N09	W24	01	2.7	1	09	9	9	E	SVTO	4763	
04	ADF	1441E	1644D	N07	W23	01	2.9	2	03	9	9	E	RAMY	4763	
04	DSD	1845E	2050D	N05	W31	01	2.5		05	8	8	E	HOLL	4763	
05	ADF	0540E	1023D	S04	W34	01	2.7	1	04	9	8	E	LEAR	4763	
05	DSD	1740	1747	N06	W41	01	2.7		01	9	9	E	PALE	4763	
07	APR	0452E	1011D	S38	W90	12	31.0	2		7	5	E	LEAR		
07	ASR	0452E	1011D	S44	W90	12	30.8			9	9	E	LEAR		
07	APR	0455E	1011D	S41	E90	01	14.6	2		8	7	E	LEAR		
09	APR	2208E	2351D	N46	E90	01	17.4	2		9	6	E	PALE		
09	APR	2313E	2353D	N46	E90	01	17.5	2		9	9	E	LEAR		
09	EPL	2351E	2355D	N46	E90	01	17.5	3		0	0	E	PALE		
10	EPL	2353E	0018	N46	E90	01	18.5	2		9	9	E	LEAR		
11	SDF	1929E	1335D	N21	E90	01	18.7	3	04	8	5	E	RAMY		
12	APR	0842E	0902D	N72	E90	01	20.6	3		9	9	E	LEAR		
13	ASR	1650E	2111D	S25	E89	01	20.6	2		9	9	E	RAMY		
13	ASR	1712E	0009D	S25	E90	01	20.7			9	9	E	HOLL		
13	ASR	1758E	0351D	S26	E90	01	20.7	1		9	9	E	PALE		
16	ADF	2000E	2337D	S28	E53	01	21.0	1	08	9	9	E	PALE	4764	
16	ADF	2044E	2135D	S29	E53	01	21.0	2	06	8	8	E	RAMY	4764	
17	AFS	1255E	2049D	S26	E42	01	20.8		02	9	6	E	RAMY	4764	
17	ADF	1744E	2135D	S34	E44	01	21.2	2	05	8	7	E	RAMY	4764	
17	AFS	1805E	2343D	S25	E51	01	21.7		01	9	9	E	PALE	4765	
17	SDF	1919E	1857D	S28	E12	01	18.7		10	0	0	E	PALE		
17	ADF	2127E	2135D	S05	E51	01	21.7	2	06	8	7	E	RAMY		
18	AFS	0135E	0845D	S25	E47	01	21.7		02	9	9	E	LEAR	4765	
18	SDF	0135E	1016D	N40	W14	01	16.9		45	6	4	E	LEAR		
18	DSD	0410E	0845D	S26	E34	01	20.8		03	8	9	E	LEAR	4764	
18	ADF	1218E	1218D	S30	E42	01	21.8	2	07	8	8	E	RAMY	4765	
18	ADF	1428E	2128D	S05	E43	01	21.8	1	08	8	8	E	RAMY		
18	ADF	1640E	1750D	S26	E39	01	21.7	1	05	9	9	E	HOLL	4765	
18	SDF	1745E	1750D	S26	E38	01	21.7		05	0	0	E	HOLL	4765	
18	ADF	1825E	2049D	S26	E38	01	21.7	1	03	9	9	E	PALE	4765	
19	ADF	1230E	2126D	S01	E34	01	22.1	2	09	8	8	E	RAMY		
19	ADF	1348E	2126D	S27	E17	01	20.9	1	02	9	9	E	RAMY	4764	
19	ADF	1534E	2243D	S05	E28	01	21.7	1	09	9	9	E	HOLL		

ACTIVE PROMINENCES AND FILAMENTS

JANUARY 1987

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
19	ADF	1754E	2243D	S28	E15	01	20.9	1	05	9	9	E	HOLL	4764	
19	ADF	1800E	2150D	S22	E67	01	24.9	1	02	9	9	E	HOLL	4765	
20	ADF	1421E	2149D	S01	E19	01	22.0	2	17	9	9	E	RAMY		
20	AFS	1421E	2149D	S06	W15	01	19.5		02	8	8	E	RAMY		
20	ADF	1421E	2149D	S27	E14	01	21.7	2	04	9	9	E	RAMY	4765	
20	ADF	1421E	2149D	S28	E04	01	20.9	2	05	9	9	E	RAMY	4764	
20	ADF	1421E	2149D	S43	E12	01	21.6	1	18	9	9	E	RAMY		
20	ADF	1735E	2259D	S27	E00	01	20.7	1	05	9	9	E	HOLL	4764	
20	AFS	2242E	0014D	S26	E08	01	21.6		05	9	9	E	HOLL	4765	
21	AFS	0340E	1013D	S23	W13	01	20.1		02	9	9	E	LEAR	4765	
21	ADF	1430E	2156D	S06	E03	01	21.8	2	06	9	9	E	RAMY		
21	AFS	1430E	2156D	S25	W01	01	21.5		02	9	9	E	RAMY	4765	
21	ADF	1430E	2156D	S25	W05	01	21.2	2	11	9	7	E	RAMY	4765	
21	ADF	1504E	1710D	S27	W01	01	21.5	1	04	9	9	E	HOLL	4765	
21	AFS	1504E	2220D	S26	W04	01	21.3		02	9	9	E	HOLL	4765	
21	ADF	1606E	2156D	S23	E44	01	25.1	2	03	7	6	E	RAMY	4766	
21	ADF	1610E	2156D	S28	W10	01	20.9	2	08	6	9	E	RAMY	4764	
21	AFS	1722E	2156D	S25	W03	01	21.5		02	9	9	E	RAMY	4765	
21	AFS	1723E	0015D	S25	W03	01	21.5		03	9	9	E	HOLL	4765	
21	SDF	1743E	2035D	S26	W16	01	20.5		08	0	0	E	PALE	4764	
21	AFS	1954E	2346D	S27	W04	01	21.5	2	01	9	9	E	PALE	4765	
21	DSD	2243	2247	S28	W08	01	21.3		01	6	9	E	PALE	4765	
22	DSD	0115E	0720D	S27	W05	01	21.7		02	9	9	E	LEAR	4765	
22	AFS	0115E	1000D	S26	W07	01	21.5		02	9	9	E	LEAR	4765	
22	ADF	0230E	1000D	S23	E38	01	25.0	1	03	9	9	E	LEAR	4766	
22	ADF	0230E	1000D	S28	W07	01	21.5	1	05	9	9	E	LEAR	4765	
22	SDF	0708E	1235D	S24	E31	01	24.7		03	0	0	E	SVTO	4766	
22	AFS	0759E	1248D	S26	W09	01	21.6	1	02	9	8	E	SVTO	4765	
22	ADF	0833E	1248D	S24	W12	01	21.4	1	05	8	9	E	SVTO	4765	
22	DSD	1154E	1226	S29	W14	01	21.4		03	9	9	E	SVTO	4765	
22	AFS	1245E	2050D	S25	W14	01	21.4		02	8	8	E	RAMY	4765	
22	AFS	1245E	2050D	S26	W12	01	21.6		02	9	9	E	RAMY	4765	
22	ADF	1245E	2050D	S30	W12	01	21.6	2	08	9	9	E	RAMY	4765	
22	AFS	1513E	1845D	S26	W16	01	21.4		03	9	8	E	HOLL	4765	
22	DSD	1551E	1638D	S22	E25	01	24.6	2	03	9	9	E	RAMY	4766	
22	ADF	1551E	2050D	S27	E31	01	25.1	2	09	8	7	E	RAMY	4766	
22	DSD	1654	1712D	S27	W17	01	21.4		04	9	9	E	HOLL	4765	Flare Associated
22	DSD	1659E	1659D	S28	W18	01	21.3	2	03	9	9	E	RAMY	4765	Flare Associated
22	AFS	2020E	0328D	S26	W17	01	21.5	1	01	7	9	E	PALE	4765	
22	DSD	2033E	2054D	S25	W16	01	21.6		02	9	9	E	HOLL	4765	
23	AFS	0155E	0328D	N03	W24	01	21.3	1	02	9	9	E	PALE		
23	AFS	0705E	1014D	N02	W27	01	21.3		02	9	9	E	LEAR		
23	AFS	0759E	1248D	S26	W09	01	22.6	1	02	9	8	E	SVTO	4765	
23	ADF	0833E	1248D	S24	W12	01	22.4	1	05	8	9	E	SVTO	4765	
23	AFS	1924E	2232D	S25	W30	01	21.5		02	6	6	E	PALE	4765	
23	ADF	2047E	2148D	S29	W36	01	21.0	2	04	9	8	E	RAMY	4765	
24	AFS	0002E	1002D	S26	W31	01	21.6		03	8	7	E	LEAR	4765	
24	ADF	0320E	1002D	S29	W38	01	21.1	2	05	9	9	E	LEAR	4765	
24	ADF	1404E	2155D	S29	W40	01	21.4	1	04	8	9	E	RAMY	4765	
24	AFS	1615E	2155D	S26	W41	01	21.5		02	7	7	E	RAMY	4765	
24	ASR	1730E	0001D	N11	E89	01	31.4			9	9	E	HOLL		
24	ASR	1740E	1741D	N12	E89	01	31.4			9	9	E	PALE		
24	ADF	1831E	0344D	S23	W44	01	21.4	1	03	9	9	E	PALE	4765	
24	ADF	1840E	0001D	S27	W48	01	21.0	1	03	9	9	E	HOLL	4765	
24	ASR	1930E	2155D	N12	E85	01	31.2	1		9	9	E	RAMY		
25	ADF	1142E	1904D	S29	W56	01	21.1	1	03	9	8	E	RAMY	4765	
26	SDF	0207E	1940D	S41	W64	01	20.8		07	4	3	E	PALE		
26	SDF	0815E	1005D	S04	W63	01	21.6	1	07	5	4	E	LEAR		
28	DSD	0239E	0540D	S37	E64	02	2.3		06	9	9	E	LEAR		
29	AFS	1222E	1555D	S38	E50	02	2.5		02	8	6	E	RAMY	4768	
29	ADF	1430E	1814D	N09	E24	01	31.4	2	04	7	4	E	RAMY	4767	
29	DSD	1859	2059D	N13	E16	01	31.0		03	9	9	E	PALE	4767	

ACTIVE PROMINENCES AND FILAMENTS

JANUARY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
29	DSD	1944E	2057D	N12	E17	01	31.1		03	9	9	E	HOLL	4767	
29	DSD	2315E	0302D	S39	E44	02	2.5		03	6	8	E	LEAR	4768	
30	ADF	0514E	1019D	S39	E41	02	2.5	2	04	8	9	E	LEAR	4768	
30	DSD	1450E	1512D	S37	E33	02	2.3		01	9	9	E	HOLL	4768	
30	ADF	1916E	2028D	N15	E05	01	31.2	2	06	8	9	E	RAMY	4767	
30	AFS	2234E	2348D	S38	E32	02	2.5		02	9	9	E	HOLL	4768	
31	ADF	0240E	0825D	S37	E31	02	2.6	1	04	8	6	E	LEAR	4768	
31	SDF	0255E	0320	S37	E28	02	2.4		03	0	0	E	PALE	4768	

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

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

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

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

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

C O N T E N T S

Comprehensive Reports MISCELLANEOUS DATA Number 515 Part II

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m2

1980

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	---	---	1369.0	1368.6	1368.2	1368.3	1368.3	1368.3	1366.9	1368.3	1368.0	1368.1
02	---	---	1368.8	1368.6	1368.2	1368.2	1368.4	1368.3	---	1368.5	1367.9	1367.8
03	---	---	1368.8	1368.7	1367.7	1368.2	1368.3	1368.5	1366.4	1368.7	1367.5	1368.1
04	---	---	1368.8	1368.6	1367.8	1368.3	1368.2	1368.5	1366.5	1368.7	1367.2	1368.5
05	---	---	1368.8	1368.1	1368.2	1368.4	1368.2	1368.5	1367.0	1368.6	1366.9	1368.5
06	---	---	1368.6	1367.4	1368.4	1368.4	1368.3	1368.4	1367.6	1368.7	1366.7	1368.6
07	---	---	1368.6	1366.6	1368.7	1368.4	1368.3	1368.4	1368.2	1368.7	1366.6	1368.9
08	---	---	1368.6	1366.3	1368.9	1368.4	1368.2	1368.3	1368.6	1368.6	1366.4	1369.0
09	---	---	1368.4	1366.5	1369.0	1368.6	---	1368.4	1368.9	1368.2	1366.5	1369.0
10	---	---	1368.6	1366.8	1368.9	1368.5	1368.2	1368.4	1368.7	1367.9	1366.6	1368.4
11	---	---	1368.6	---	---	1368.5	1368.2	1368.5	1368.8	1367.3	1366.6	1368.3
12	---	---	1368.8	1367.1	1368.4	1368.4	1368.0	1368.7	1368.7	1367.1	1366.8	---
13	---	---	1368.7	1367.5	1368.3	1368.4	1367.8	1368.7	1368.6	1367.1	1367.0	---
14	---	---	1368.8	1367.7	1368.2	1368.4	1367.8	1368.7	1368.4	1367.2	---	---
15	---	---	1368.6	1368.1	1368.7	1368.3	1368.0	1369.0	1368.3	1368.0	---	1367.4
16	---	1367.8	1368.8	1368.5	1368.8	1368.4	1368.0	1368.9	1368.4	1368.5	---	1365.3
17	---	1367.9	1368.8	1368.9	1368.6	1368.6	1368.0	1368.6	1368.5	1368.8	---	1366.2
18	---	1368.1	1368.9	1369.1	1368.6	1368.8	1367.9	1368.5	1368.4	1368.7	1367.8	1366.0
19	---	---	1368.9	1369.2	1368.5	1369.0	1367.9	1368.4	1368.6	1368.3	1368.0	1366.2
20	---	1368.2	1368.8	1369.2	1368.3	1368.8	1368.1	1368.2	1368.4	1367.8	1368.0	---
21	---	1368.4	1368.6	1368.8	1368.1	1368.6	1368.1	1368.3	1368.2	1367.6	1368.2	1366.0
22	---	1368.3	1368.7	1368.4	1367.8	1368.3	1368.2	1368.5	1368.1	1367.3	1368.3	1365.0
23	---	1368.2	1368.7	1368.3	1367.5	1368.0	1368.5	1368.4	1367.7	1367.3	---	1366.3
24	---	1368.0	1368.7	1368.3	1367.2	1368.0	1368.6	1368.3	1367.8	1367.6	---	1367.3
25	---	1368.0	1369.0	1368.4	1367.1	1368.1	1369.2	1368.2	1367.9	1368.1	---	1367.9
26	---	1368.3	1369.1	1368.6	1367.2	1368.3	1369.3	1368.1	1368.4	1368.1	---	---
27	---	1368.5	1369.1	1368.6	1367.4	1368.4	1369.2	1368.1	1368.6	1368.3	---	1367.8
28	---	1369.8	1369.0	1368.7	1367.6	1368.5	1369.0	1368.0	1368.5	1368.3	---	1367.4
29	---	1369.0	1368.9	1368.6	1367.9	1368.4	1369.0	1368.0	1368.3	1368.3	---	1367.3
30	---		1368.6	1368.5	1368.2	1368.2	---	1367.5	1368.4	1368.3	---	1367.8
31	---		1368.4		1368.4		1368.4	1367.0		1368.0		1367.9

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m^2

1981

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	1368.2	---	1367.3	1368.2	1368.0	1367.8	1366.8	1367.1	1368.2	1368.2	1367.4	1368.2
02	1368.7	1367.4	1367.9	1368.5	1368.8	1366.9	1366.5	1367.3	1368.1	1368.1	1367.1	1368.2
03	1367.9	1367.6	1367.8	1368.6	1368.3	1367.8	1367.4	1367.2	1368.0	1368.4	1366.9	1368.5
04	1368.8	1368.2	1367.6	1368.6	1367.7	1368.4	1367.6	1366.9	1367.6	1368.1	1366.8	---
05	1367.9	1368.2	1368.1	1368.5	1367.7	1367.9	1368.1	1366.9	1367.4	1368.1	1367.4	---
06	1368.9	1366.1	1367.7	1367.8	1367.1	---	1368.1	1366.8	1366.7	1366.7	1367.8	1368.2
07	1369.2	1367.7	1367.3	1367.8	1367.7	1368.0	1367.7	1366.6	1366.8	1367.6	1367.9	1367.1
08	---	1367.6	1367.4	1367.6	1367.6	1367.9	1367.6	1366.4	1365.1	1368.0	1368.1	1366.9
09	---	1367.8	1367.7	1367.6	1367.9	1368.2	1367.8	1366.4	1367.2	1367.7	1368.2	1366.1
10	1369.3	1367.5	1367.8	1367.0	1367.8	1367.7	1367.9	1366.8	1367.6	1367.8	1367.2	1366.5
11	1369.0	1367.9	1367.8	1367.3	1367.2	1367.7	1367.5	1366.8	---	1367.2	1367.7	1367.2
12	---	1367.6	1368.0	1366.4	---	1367.6	1367.8	1367.6	1367.1	1366.7	1367.4	1367.5
13	---	1367.9	1368.2	1366.5	1367.6	1367.8	1367.4	1368.1	---	1366.3	1367.0	1367.8
14	1368.6	1367.4	1368.0	1367.0	1368.2	1367.5	1367.5	1368.2	1367.7	1365.8	1367.7	1368.1
15	---	1367.7	1367.0	1367.6	1367.3	1367.3	1367.6	1367.6	1368.0	1365.9	1368.0	1368.0
16	1367.9	1367.3	1367.7	1367.9	---	1367.3	1367.1	1367.4	1367.7	1365.8	1368.2	1368.0
17	1369.1	1367.7	1368.0	1367.0	---	1367.2	1367.4	1367.2	1367.9	1365.8	1368.4	1367.6
18	1369.0	1367.1	1368.2	1367.2	1367.6	1367.6	1365.8	1367.3	1367.3	1366.1	1367.7	1368.0
19	1368.6	1368.1	1367.6	1367.8	---	1367.9	1367.1	1366.6	1367.3	1366.4	1367.7	1368.0
20	1367.8	1368.0	1367.7	1367.8	1366.8	1368.1	1366.7	1367.0	1367.9	1366.9	1367.9	1367.8
21	1368.5	1368.2	1367.0	1367.9	---	1367.7	1366.8	1367.7	1368.2	1367.6	1368.0	1367.8
22	1368.9	1367.4	1367.3	1367.9	1367.9	1367.8	1365.7	1367.5	1367.7	1368.2	1367.8	1368.2
23	1368.6	1367.2	1367.8	1367.3	1367.6	1367.6	1365.0	1367.2	1367.7	1368.3	1368.4	1367.8
24	---	1368.2	1367.9	1367.6	---	1367.3	1364.8	1367.2	1368.3	1368.2	1368.9	1367.6
25	1368.0	1367.6	1367.4	1368.1	1368.6	1367.3	1364.6	1367.3	1368.4	1368.2	1367.6	1367.7
26	1368.6	1367.0	1367.8	1368.4	1368.0	1367.7	1364.9	1366.9	1368.3	1368.5	1368.0	1367.7
27	1368.3	1367.6	1367.7	1368.2	1367.7	1367.0	---	1367.0	1368.7	1368.4	1368.2	1367.7
28	1368.5	1367.3	1367.6	1368.0	1367.7	1367.1	---	1367.7	1367.9	1368.7	1368.2	1368.0
29	1368.6		1367.9	1368.1	1368.1	1367.2	---	1367.7	1367.6	1368.4	1367.5	---
30	1368.1		1368.0	1368.3	1368.2	1367.2	---	1368.0	1367.9	1368.4	1367.8	---
31	---		1368.4		1367.4		---	1367.8		1368.1		---

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m2

1982

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	1368.4	1366.4	1366.8	1368.0	1367.6	1368.1	1367.4	1368.0	1367.9	1367.1	1368.4	1367.4
02	1368.1	1366.6	1366.4	1368.1	1367.7	1367.7	1367.9	1367.6	1367.7	1367.4	1369.0	1367.0
03	1368.1	1367.2	1367.4	1368.3	1367.5	1367.3	1368.5	1367.4	1367.5	1367.9	1368.1	1367.0
04	1368.4	1367.2	1367.4	1367.9	1367.5	1367.7	1367.9	1367.2	1367.7	1368.4	1368.5	1366.9
05	1368.1	1367.6	1367.3	1367.7	1367.2	1367.3	1367.5	1366.9	1367.6	1368.5	1368.1	1366.8
06	1368.3	1367.2	1367.8	1367.7	1367.2	1366.4	1367.9	1367.1	1368.2	1368.2	1367.4	1367.2
07	1368.3	1366.6	1367.9	1367.9	1367.1	1366.3	1368.0	1366.9	1368.1	1368.1	1368.0	---
08	1367.9	1365.8	1368.0	1368.2	1367.2	1365.8	1366.9	1366.8	1368.0	1367.8	1368.1	1367.8
09	1368.3	1366.0	1367.9	1367.7	1367.6	1366.3	1367.6	1367.1	1368.1	1367.7	1367.8	1367.5
10	1367.8	1365.2	1367.9	1367.5	1367.0	1366.4	1367.3	1367.1	---	1367.8	1368.0	1367.5
11	1368.2	1365.6	1367.7	1367.2	1367.7	1366.7	1366.9	1367.5	1368.0	1367.8	1367.4	1367.2
12	1368.3	1366.2	1367.6	1367.2	1367.9	1366.8	1366.5	1367.8	1367.7	1367.8	1367.0	1367.1
13	1367.7	1366.5	1367.6	1367.1	1367.7	1366.4	1366.3	1367.8	1367.8	1367.3	1366.6	1366.7
14	1368.0	1366.8	1367.4	1367.0	1367.3	1366.1	1365.8	1367.8	1367.4	1367.3	---	1366.4
15	1367.5	1367.0	1365.1	1367.5	1367.3	1365.9	1366.1	1367.3	---	1367.3	---	1366.9
16	1367.5	1366.9	1364.2	1367.5	1367.2	1365.9	1365.7	1367.1	1367.1	1367.2	1367.3	1367.0
17	1367.8	1366.2	1364.7	1367.4	1367.2	1365.2	1366.1	1367.8	1367.5	1367.4	1367.1	1368.1
18	1367.8	1366.9	1364.5	1367.7	1367.1	1365.1	1367.0	1366.8	1366.7	1367.3	1367.7	1368.5
19	1368.1	1366.5	1365.6	1367.2	1367.4	1365.9	1368.0	1367.1	1367.4	1367.3	1367.1	1368.1
20	1368.4	1367.2	1366.4	1367.2	1367.5	1365.6	1368.5	1366.6	1366.6	1367.7	1367.3	1368.2
21	1368.4	1367.3	1366.8	1367.4	1367.4	1366.2	1368.1	1367.1	1367.6	1367.7	1368.1	1367.9
22	1368.3	1367.6	1367.1	1367.6	1367.3	1366.4	1368.3	1366.6	1367.6	1367.7	1366.7	1367.7
23	1368.6	1367.9	1367.0	1366.9	1367.9	1367.0	1368.0	1366.8	1368.1	1368.2	1366.7	1367.5
24	1368.2	1368.0	1366.5	1366.9	1367.8	1367.1	1367.5	1366.7	1367.3	1367.5	1367.0	---
25	1368.5	1368.0	1366.7	1366.8	1368.1	1367.3	1367.4	1366.5	1367.5	1367.6	1367.7	1367.7
26	1368.4	1368.1	1366.5	1367.2	1367.6	1367.8	1367.5	1366.3	1368.0	1367.6	1367.8	---
27	1368.5	1367.8	1366.5	1367.6	1367.6	1368.7	1367.5	1366.6	1367.4	1367.5	1368.0	---
28	1368.0	1367.3	1366.4	1368.4	1367.7	1367.3	1367.1	1367.0	1366.9	1368.3	1367.6	1367.1
29	1366.6		1367.1	1368.2	1367.3	1367.0	1367.3	1367.0	1367.0	1368.2	1367.2	1367.6
30	1366.3		1367.3	1367.8	1367.6	1367.6	1367.3	1367.5	1367.1	1368.2	1366.7	---
31	1365.4		1367.2		1367.4		1367.6	1367.6		1367.7		1367.5

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m2

1983

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	---	1367.6	1367.6	1367.2	1366.8	1367.2	1366.7	1366.9	1367.5	---	---	---
02	1368.4	1367.7	1366.9	1366.6	1367.6	1367.2	1367.1	1366.7	1367.2	---	1366.6	---
03	1367.4	1367.6	1367.5	1366.1	1367.4	1366.7	1366.8	1366.3	1367.5	1367.2	1367.6	---
04	1367.3	1367.9	1366.3	1367.1	1367.6	1366.5	1367.4	1366.8	1367.3	1367.5	---	1367.3
05	1367.0	1367.1	1366.7	1367.5	1367.7	1366.1	1367.4	1367.3	1367.4	1367.4	---	---
06	1368.2	1367.1	1366.8	1367.8	1367.2	1366.0	1367.4	1367.4	1366.8	1366.8	---	---
07	1367.8	1366.5	1367.2	1366.6	1367.2	1366.2	1367.4	1367.4	---	1367.0	---	---
08	1366.8	1367.1	1365.7	1366.7	1367.5	1366.0	1367.1	1367.8	1367.4	1366.3	---	---
09	1367.5	1367.8	1367.3	1366.9	1366.7	1366.3	1366.6	1367.6	1367.4	1367.3	---	---
10	1368.2	1368.0	1367.6	1367.2	1366.7	1366.8	1367.5	1366.6	1367.4	1367.3	---	---
11	1367.1	1368.1	1367.5	1366.9	1366.4	1366.6	1367.0	1367.4	1367.8	1367.3	---	---
12	1367.5	1368.0	1367.4	1367.2	1365.8	---	1367.1	1367.0	1367.8	1367.5	---	---
13	1368.2	1368.4	1367.2	1366.7	1366.3	1366.5	1367.2	1367.2	1367.2	1367.5	---	---
14	1367.8	1367.7	1366.8	1367.8	1366.5	1367.7	1367.1	1367.4	1367.4	1367.7	---	---
15	1367.1	1367.8	1366.1	1367.4	1366.7	1367.4	1367.1	1367.6	1367.3	---	---	---
16	1366.9	1367.5	---	1367.1	1366.7	1367.5	1367.3	1366.8	1367.1	---	---	---
17	1367.3	1367.0	1367.6	1366.6	1367.3	1367.6	1366.3	1367.9	1367.3	1367.5	---	---
18	1366.6	1366.6	1367.2	1367.0	1368.4	1367.1	1367.8	1367.8	1367.2	1366.9	---	---
19	1366.9	1365.9	1367.3	1367.4	1366.9	1367.1	1367.7	1367.7	1366.4	1366.6	---	---
20	1366.9	1367.6	1367.3	1367.3	1367.5	1367.8	1367.8	---	1367.4	1367.2	---	1367.5
21	1366.8	1366.0	1367.0	1367.5	1366.4	1367.5	1367.5	1367.2	1367.6	1366.8	---	1368.0
22	1367.5	1367.9	1366.9	1367.1	1366.2	1364.1	1367.2	1367.4	1367.7	1367.4	---	---
23	1367.0	1367.7	1368.0	1367.6	1366.6	1367.4	1367.3	1367.0	---	1367.2	---	---
24	1367.8	1367.6	1367.7	1367.4	1367.2	---	1367.5	1367.8	---	1366.6	---	---
25	1368.0	1367.5	1368.2	1366.8	1367.1	1367.4	1367.2	1367.5	---	1366.9	---	1367.6
26	1367.8	1366.8	1367.9	1367.1	1367.5	1367.6	1367.3	1367.0	---	1366.6	---	---
27	1367.4	1367.0	1366.8	1367.2	1367.3	1367.8	1367.7	1367.5	---	1367.3	---	---
28	1367.4	1367.1	1367.6	1367.1	1367.8	1367.2	1367.2	1367.3	---	1367.0	---	---
29	1367.5		1367.2	1367.1	1368.0	1367.1	1367.3	1367.2	---	1366.7	---	---
30	1367.3		1366.4	---	1368.1	1367.0	1367.2	1367.3	---	1367.1	---	---
31	1367.5		1367.2		1368.0		1366.9	1367.2		1367.5		---

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m2

1984

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	---	---	---	---	1365.8	1366.8	1367.0	1367.1	---	1366.9	1366.7	1366.9
02	---	---	---	---	---	1367.0	1367.2	1367.2	---	1366.9	1366.7	1366.9
03	---	---	---	---	1366.8	1367.1	1367.1	1367.1	---	1366.9	1366.7	1366.9
04	---	---	---	---	1367.1	1367.3	1367.2	1367.2	---	1366.9	1366.7	1366.8
05	---	---	---	---	1367.1	1367.3	1367.2	1367.2	---	1366.9	1366.8	1366.7
06	---	---	---	---	1367.1	1367.3	1367.2	1367.2	1367.1	1366.9	1366.8	1366.8
07	---	---	---	---	1366.9	1367.2	1367.2	1367.1	1367.1	1366.9	1367.8	1366.7
08	---	---	---	---	1366.6	1367.2	1367.2	1367.0	1367.1	1366.9	1366.7	1366.7
09	---	---	---	---	1366.1	1367.2	1367.2	1366.9	1367.1	1366.8	1366.7	1366.8
10	---	---	---	---	1365.8	1367.4	1367.1	1366.9	1367.1	1366.7	1366.7	1366.8
11	---	---	---	---	1365.6	1367.4	1367.0	1367.0	1367.1	1366.7	1366.7	1366.6
12	---	---	---	---	1365.7	1367.4	1367.1	1367.1	1366.9	1366.7	1366.8	1366.6
13	---	---	---	---	---	1367.3	1367.2	1367.1	1366.8	1366.7	1366.4	1366.6
14	1366.3	---	---	---	1366.2	1367.2	1367.2	1367.1	1366.7	1366.7	1366.8	1366.7
15	---	---	---	---	---	1367.0	1367.2	1367.0	1366.7	1366.7	---	1366.7
16	1366.4	---	---	---	1367.1	1367.1	1367.1	1366.9	1366.7	1366.6	1366.8	1366.6
17	---	---	---	---	1367.2	1367.1	1367.1	1366.8	1366.8	1366.6	1366.8	1366.7
18	---	1367.1	---	---	1367.4	1367.0	1367.0	1366.8	1366.8	1366.7	1366.8	1366.7
19	---	---	---	---	1367.3	1366.8	1367.0	1366.7	1366.8	1366.7	1366.9	1366.8
20	---	1366.8	---	---	1367.3	1366.8	1367.0	1366.7	1366.8	1366.7	1366.8	1366.8
21	---	1366.1	---	---	1367.2	1366.9	1366.9	1366.7	1366.8	1366.7	1366.7	1366.7
22	---	1366.3	---	---	1367.0	1366.9	1366.9	1366.8	1366.8	1366.8	1366.7	1366.7
23	---	---	---	---	1366.8	1366.9	1366.9	1366.7	1366.9	1366.8	1366.6	---
24	1365.4	---	---	---	1366.7	1366.9	1366.9	1366.8	1366.9	1366.8	1366.6	1366.6
25	1365.4	---	---	---	1366.7	---	1366.9	1366.7	1366.9	1366.8	1366.4	1366.7
26	---	---	---	1364.5	1366.9	---	1366.9	1366.8	1366.9	1366.8	1366.3	1366.7
27	---	---	---	---	1367.2	1366.8	1366.9	1366.8	1366.9	1366.8	1366.3	1366.7
28	---	---	---	---	1367.3	1366.8	1366.9	1366.8	1366.9	1366.8	1366.4	---
29	---	---	---	---	1367.2	1366.9	1367.0	1366.7	1366.9	1366.7	1366.6	1366.7
30	---		---	---	1367.1	1367.0	1367.1	---	1366.9	1366.7	1366.7	---
31	---		---		1366.8		1367.1	---		1366.7		1366.8

SOLAR IRRADIANCE (Daily Mean)
SOLAR MAXIMUM MISSION (ACRIM I)
Jet Propulsion Laboratory

Watts/m2

1985

DAY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	1366.9	1366.6	1366.6	1366.5	1366.7	1366.5						
02	1366.9	1366.5	1366.7	1366.6	1366.7	1366.5						
03	1366.8	1366.6	1366.5	1366.5	1366.6	1366.5						
04	1366.9	1366.7	1366.5	1366.5	1366.6	1366.5						
05	1366.9	1366.7	1366.5	1366.5	1366.5	1366.5						
06	---	1366.7	1366.5	1366.5	1366.5	1366.5						
07	1366.8	1366.7	1366.5	1366.5	1366.5	1366.4						
08	---	1366.7	1366.5	1366.5	1366.4	1366.5						
09	1366.7	1366.8	1366.5	1366.5	1366.4	1366.3						
10	1366.7	1366.8	1366.6	1366.5	1366.3	1366.3						
11	1366.7	1366.7	1366.5	1366.5	1366.1	1366.3						
12	1366.7	1366.7	1366.6	1366.4	1366.1	1366.5						
13	1366.6	1366.7	1366.6	1366.5	1366.0	1366.6						
14	1366.5	1366.7	1366.6	1366.5	1366.1	---						
15	1366.5	1366.7	1366.5	1366.5	1366.2	1366.7						
16	1366.5	1366.6	1366.5	1366.5	1366.4	1366.7						
17	1366.5	1366.7	1366.5	1366.6	1363.8	1366.7						
18	1366.6	1366.7	1366.6	1366.5	1363.8	1366.6						
19	1366.5	1366.7	1366.6	1366.5	1366.6	1366.6						
20	1366.3	1366.7	1366.6	1366.6	1366.4	1366.5						
21	1366.2	1366.6	1366.6	1366.5	1366.4	1366.5						
22	1366.4	1366.6	1366.6	1366.3	1366.4	1366.5						
23	1366.6	1366.6	1366.6	1366.0	1366.5	1366.4						
24	1366.7	1366.6	1366.6	1365.8	1366.5	1366.4						
25	1366.6	1366.5	1366.5	1365.8	1366.5	1366.4						
26	1366.6	1366.5	1366.4	1365.8	1366.6	1366.4						
27	1366.6	1366.5	1366.4	1366.0	1366.6	1366.3						
28	1366.6	1366.6	1366.4	1366.2	1366.5	1366.4						
29	1366.6		1366.4	1366.3	1366.4	1366.4						
30	1366.6		1366.4	1366.4	1366.4	1366.5						
31	1366.6		1366.5		1366.6							

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."