U.S. DEPARTMENT OF COMMERCE
C. William Verity, Jr., Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
William E. Evans, Under Secretary for Oceans and Atmosphere

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

NOVEMBER 1988 NUMBER 531 - Part II

Solar-Geophysical Data comprehensive reports

Data for May 1988

International Standard Serial Number: 0038-0911
Library of Congress Catalog Number: 79-640375 //r81

NATIONAL GEOPHYSICAL DATA CENTER
Michael A. Chinnery, Director
Boulder, Colorado

S O L A R - G E O P H Y S I C A L D A T A

NUMBER 531

(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)

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

CODE	KIND OF OBSERVATION	MAR 88	APR	MAY	JUN	JUL	AUG	SEP	OCT
A.	SOLAR AND INTERPLANETARY EVENTS								
A.1	Sunspot Drawings	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.2aa	Internat. Provisional Sunspot Numbers	524A 11	525A 11	526A 9	527A 11	528A 11	529A 11	530A 13	531A 13
A.2c	American Sunspot Numbers	524A 11	525A 11	526A 9	527A 11	528A 11	529A 11	530A 13	531A 13
A.3a	Mt. Wilson Magnetograms	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.3b	Mt. Wilson Sunspot Magnetic Class	525A 77	526A 74	527A 87	528A 80	529A 76	530A 82	531A 85	
A.3c	Kitt Peak Magnetograms	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.3d	Mean Solar Magnetic Field (Stanford)	524A 39	525A 35	526A 34	527A 45	528A 40	529A 34	530A 40	531A 43
A.3e	Stanford Magnetograms	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.4	H-alpha Filtergrams	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.5	Calcium Plage Photographs/Drawings	Oct 87 in 525A154							
A.5a	Calcium Plage Regions	Aug-Oct 87 in 525A138							
A.5b	Daily Calcium Plage Indices	Aug-Oct 87 in 525A141							
A.6	H-alpha Synoptic Charts	525A 38	526A 36	527A 56	528A 42	529A 36	530A 42		
A.6b	Active Region Carte Synoptique (Paris)	529B 4	530B 4	531B 4					
A.6c	Stanford Solar Mag Field Synoptic Maps	525A 39	526A 37	527A 49	528A 43	529A 38	530A 44	531A 48	
A.6d	Kitt Peak " Mag Field Synoptic Maps	525A 44	526A 42	527A 54	528A 48	529A 44	530A 50	531A 54	
A.6e	Mass Ejections from the Sun	529B 62	530B 50	531B 45					
A.6f	Active Prominences and Filaments	529B 63	530B 51	531B 46					
A.6g	Sac Peak Coronal Line Synoptic Maps	525A 40	526A 38	527A 50	528A 44	529A 38	530A 46	531A 50	
A.7h	Coronal Line Emission (Sac Peak)	525A 46	526A 44	527A 56	528A 50	529A 45	530A 51	531A 55	
A.8aa	2800 MHz - Solar Flux (Ottawa)	524A 11	525A 11	526A 9	527A 11	528A 11	529A 11	530A 13	531A 13
A.8ac	2800 MHz - Adj. Solar Flux (Ottawa)	524A 11	525A 11	526A 9	527A 11	528A 11	529A 11	530A 13	531A 13
A.8g	Adjusted Daily Solar Fluxes (Sagamore)	524A 11	525A 11	526A 9	527A 11	528A 11	529A 11	530A 13	531A 13
A.10a	Interferometric Chart (164 MHz) Nancay	524A 35	---	526A 29	---	529A132	529A 30	530A 34	531A 35
A.10c	East-West Scans - 21 cm - Fleurs	524A 33	525A 29	526A 27	527A 38	528A 35	529A 28	530A 32	531A 33
A.10d	East-West Scans - 43 cm - Fleurs	524A 34	525A 30	526A 28	---	---	529A 29	530A 33	531A 34
A.10e	East-West Scans - 10 cm - Ottawa	524A 32	525A 28	526A 26	527A 37	528A 34	529A 27	530A 31	531A 32
A.10f	East-West Scans - 3 cm - Toyokawa	524A 31	525A 27	526A 25	527A 36	528A 33	529A 26	530A 30	531A 31
A.11g	Solar X-ray GOES (graphs/event table)	529B 52	530B 42	531B 36					
A.11k	Solar UV NOAA-9	May-Dec 86 in 529B 74							
A.12e	Solar Particles (IMP H & J)	Sep 85-May 86 in 525B 60							
A.13e	Solar Plasma (IMP H & J)	Oct 87-Jan 88 in 525B 56							
A.13f	Solar Wind (Pioneer 12)	Feb 84-Dec 87 in 525A114							
A.16a	SMM Solar Irradiance	Feb 80-Oct 87 in 530B 64							
A.16b	NIMBUS Solar Irradiance	Nov 78-Feb 87 in 523B 49							
A.17	Interplanetary Mag Field (Pioneer 12)	Oct 87 in 526A112							
A.17c	Inferred Interplanetary Mag Field	Mar 88 in 524A 40							
B.	IONOSPHERIC RADIO PROPAGATION								
B.52	Field Strength Graphs-North Atlantic	525A110	527A126	527A122	528A128	529A128	530A124	531A138	
B.53	Quality Indices on Paths to Germany	525A109	528A132	527A121	528A130	529A130	531A148	531A137	
C.	SOLAR FLARE-ASSOCIATED EVENTS								
C.1a	H-alpha Flares	524A 16	525A 16	526A 14	527A 16	528A 16	529A 16	530A 18	531A 18
C.1ba	H-alpha Flare Groups	529B 6	530B 6	531B 8					
C.1d	Flare Patrol Observations	524A 30	525A 26	526A 24	527A 35	528A 32	529A 25	530A 29	531A 30
C.1d	Flare Patrol Observations	529B 25	530B 21	531B 22					
C.3	Radio Bursts Fixed Freq.	529B 27	530B 23	531B 24					
C.3	Radio Bursts Fixed Freq. Selected	524A 36	525A 32	526A 30	527A 40	528A 37	529A 31	530A 35	531A 36
C.4d	Radio Bursts Spectral (Culgoora)	525A 95	526A 94	527A102	528A103	529A101	530A107	531A116	
C.4e	Radio Bursts Spectral (Weissenau)	525A 95	526A 94	527A102	530A128	529A101	530A107	531A116	
C.4f	Radio Bursts Spectral (Sagamore Hill)	525A 95	526A 94	527A102	528A103	529A101	530A107	531A116	
C.4i	Radio Bursts Spectral (Bleien)	---	---	---	---	---	---	---	
C.4k	Radio Bursts Spectral (Learmonth)	525A 95	526A 94	527A102	528A103	529A101	530A107	531A116	
C.4l	Radio Bursts Spectral (Palehua)	525A 95	526A 94	527A102	528A103	529A101	530A107	531A116	
C.6	Sudden Ionospheric Disturbances	525A 91	526A 91	527A 99	528A 99	529A 98	530A105	531A113	
D.	GEOMAGNETIC & MAGNETOSPHERIC EVENTS								
D.1a	Geomagnetic Indices	525A104	526A105	527A116	528A122	529A122	530A118	531A132	
D.1ba	27-day Chart of Kp Indices	525A106	526A107	527A118	528A124	529A124	530A120	531A134	
D.1cb	Monthly Mean aa Indices	525A107	526A108	527A119	528A125	529A125	530A121	531A135	
D.1d	Principal Magnetic Storms	525A108	526A109	527A120	528A126	529A126	530A122	531A136	
D.1f	Sudden Commencements/Flare Effects	526A113	526A110	528A136	528A127	529A127	530A123		
D.1g	Equatorial Indices Dst	Jul 87 in 519A 99							
F.	COSMIC RAYS								
F.1a	Cosmic Ray Neutron Cts (Deep River)	527A149	527A150	527A115	529A133	531A137	531A138	531A127	
F.1b	Cosmic Ray Neutron Cts (Climax)	525A103	527A150	527A115	528A117	529A119	530A116	531A127	
F.1e	Cosmic Ray Neutron Cts (Alert)	527A149	527A150	527A115	529A133				
F.1h	Cosmic Ray Neutron Cts (Thule)	525A103	526A104	527A115	528A117	529A119	531A138	531A127	
F.1i	Cosmic Ray Neutron Cts (Kiel)	525A103	526A104	527A115	528A117	529A119	530A116	531A127	
F.1j	Cosmic Ray Neutron Cts (Tokyo)	527A149	527A150	527A115	528A117				
F.1l	Cosmic Ray Neutron Cts (Huancayo)	527A149	527A150	527A115	528A117	529A119	530A116	531A127	
H.	MISCELLANEOUS								
H.60	IUWDS Alert Periods	524A 4	525A 5	526A 4	527A 4	528A 5	529A 5	530A 5	531A 5

The entry "525A 46" under Mar 1988, for example, means that the sunspot drawings for Mar 1988 appear in SOLAR-GEOPHYSICAL DATA No. 525, Part I, and that they begin on page 46. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

C O N T E N T S

Comprehensive Reports DATA FOR **MAY 1988** Number 531 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 1801

(11 April to 8 May 1988)

Region No.	Coordinates Lat.	Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1800	Activity at West Limb
1	20 S	354	1	+3	x		disappeared
2	32 S	345	3	>6			decreasing
3	25 S	337	1	+4	x		disappeared
4	32 S	330	2	>6			decreasing
5	18 S	329	2	>6			decreasing
6	18 N	329	4	>6			decreasing
7	22 N	319	2	>6			decreasing
8	13 S	318	3	>6			decreasing
9	23 S	318	1	>6	x	9	decreasing
10	27 N	312	1	>6	x	6	dispersed
11	17 S	310	2	>6			decreasing
12	22 N	304	1	>6	x		disappeared
13	29 S	299	1	>6	x		disappeared
14	42 S	287	1	+3	x		disappeared
15	22 N	284	4	+2			decreasing
16	24 S	283	1	+4	x		disappeared
17	25 N	273	5	>6			decreasing
18	30 S	256	1	+1	x		disappeared
19	25 S	240	3	>6			decreasing
20	13 S	238	2	+1			decreasing
21	15 S	223	1	-5	x		(?)
22	21 N	206	1	>6	x		dispersed
23	34 S	176	1	>6	x		decreasing
24	4 N	168	1	+3	x		disappeared
25	21 N	159	1	>6	x	19+20+23	dispersed
26	27 S	151	1	>6	x		decreasing
27	22 S	149	1	>6	x	21+22	decreasing
28	20 S	138	1	>6	x		stable
29	19 S	131	3	>6		25	stable
30	17 N	129	1	-2	x		stable
31	21 S	115	4	+1			decreasing
32	19 S	109	3	>6			decreasing
33	32 S	88	3	>6			decreasing
34	14 S	84	1	+2	x		disappeared
35	27 S	37	1	-3	x		stable
36	36 S	35	1	-2	x		decreasing
37	23 N	34	1	>6	x	30	decreasing
38	19 S	31	2	>6			decreasing
39	20 N	30	1	>6	x	31	decreasing
40	25 N	13	2	>6			decreasing
41	27 S	10	1	>6	x		dispersed
42	19 N	8	2	>6			decreasing

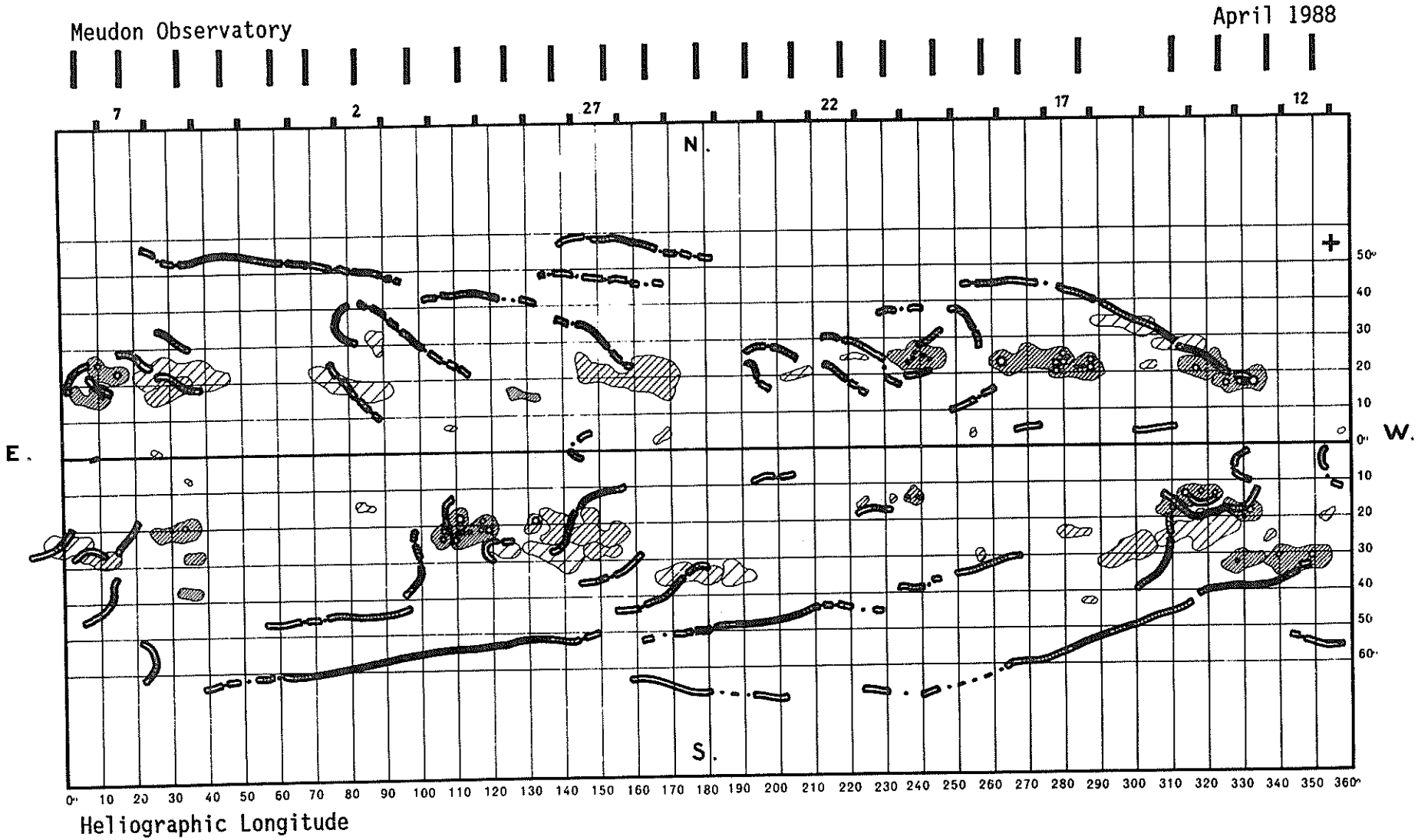
CARTE SYNOPTIQUE
ACTIVE REGIONS
CARRINGTON ROTATION 1802

(8 May to 5 June 1988)

Region No.	Coordinates Lat.	Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1801	Activity at West Limb
1	14 N	359	2	-2			decreasing
2	25 N	357	1	>6	x		dispersed
3	12 S	335	1	+1	x		decreasing
4	20 N	332	2	>6		6	decreasing
5	28 S	331	2	>6			decreasing
6	19 S	329	1	>6	x	5	disappeared
7	16 S	322	3	+3			decreasing
8	24 N	322	1	>6	x	7	decreasing
9	17 S	318	1	>6	x		disappeared
10	27 S	315	1	>6	x	9	dispersed
11	36 S	312	1	>6	x		dispersed
12	29 N	308	1	>6	x	10	decreasing
13	16 N	296	1	+3	x		dispersed
14	26 S	294	1	>6	x		dispersed
15	26 N	294	1	>6	x		dispersed
16	21 S	284	1	+5	x		disappeared
17	17 S	282	2	-1			stable
18	23 N	282	1	>6	x	15	decreasing
19	36 S	280	1	>6	x		dispersed
20	24 N	277	2	0			stable
21	24 N	273	1	>6	x	17	dispersed
22	23 N	260	1	+1	x		stable
23	27 N	254	1	>6	x		decreasing
24	36 S	254	1	0	x		dispersed
25	24 N	240	1	>6	x	19	dispersed
26	8 N	212	1	+5	x		disappeared
27	23 N	167	1	>6	x	25	decreasing
28	37 N	157	1	-5	x		(?)
29	15 N	151	1	+1	x		disappeared
30	25 S	151	1	>6	x		disappeared
31	24 S	135	1	>6	x		decreasing
32	24 S	111	1	>6	x	31+32	decreasing
33	25 S	115	3	+3			decreasing
34	26 S	106	5	>6			stable
35	26 N	93	1	+1	x		disappeared
36	39 N	69	1	-1	x		stable
37	14 N	43	2	-1			decreasing
38	20 S	35	1	>6	x	38	dispersed
39	26 N	32	1	>6	x	37+39	dispersed
40	24 S	29	1	>6	x		decreasing
41	31 S	28	1	>6	x		disappeared
42	38 S	23	1	+3	x		disappeared
43	37 S	17	1	>6	x	36	disappeared
44	24 S	12	3	-1			increasing
45	25 N	12	1	>6	x	40	decreasing
46	16 N	10	1	>6	x	42	disappeared
47	15 N	7	2	>6			decreasing
48	19 N	1	4	>6			decreasing

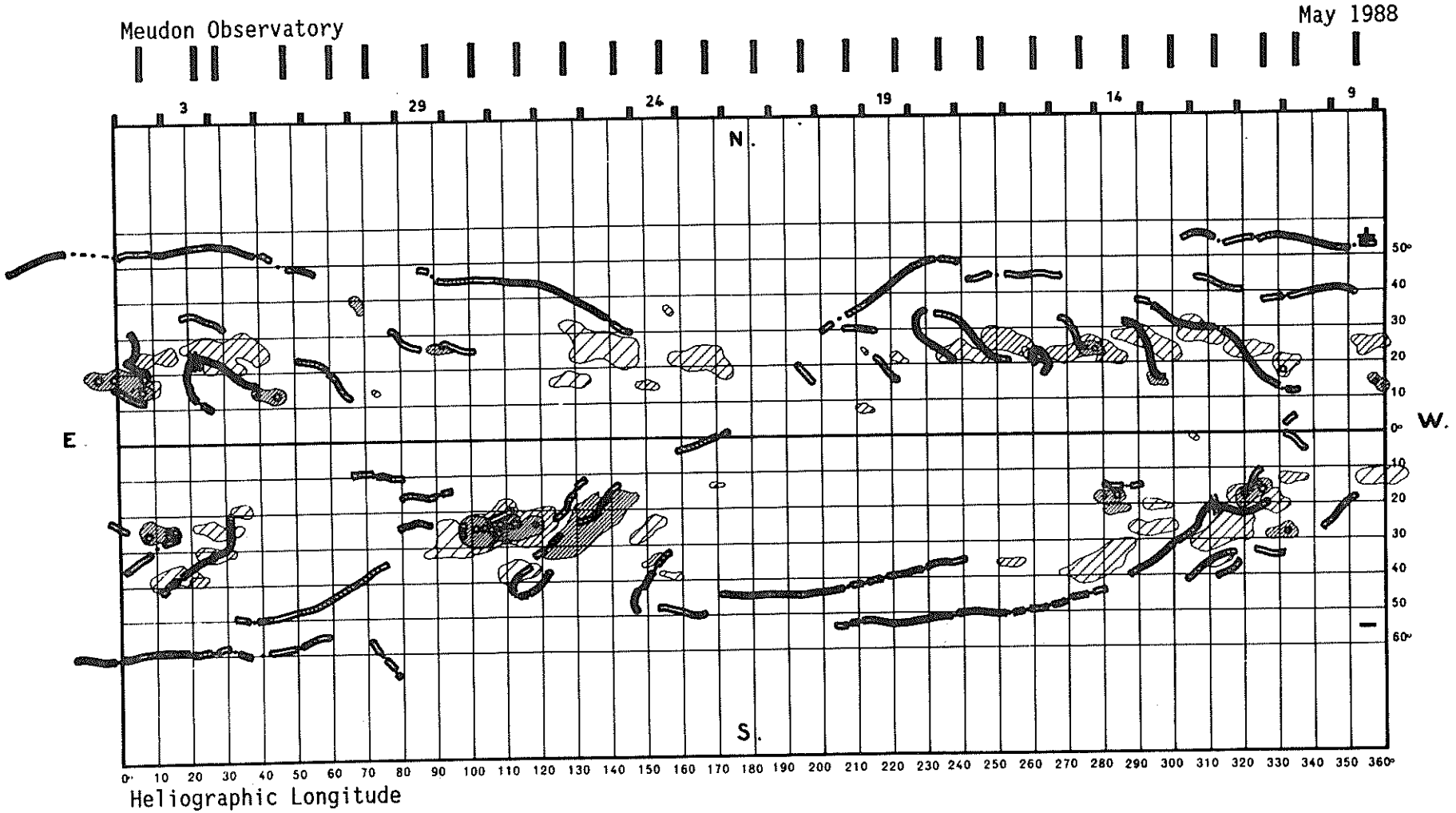
CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1801
(11 April to 8 May 1988)



C A R T E S Y N O P T I Q U E

CARRINGTON ROTATION NUMBER 1802
(8 May to 5 June 1988)



7 May 88

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

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
		01	0631		0637	No Flare Patrol														
		01	0646		0701	No Flare Patrol														
		01	0854		0914	No Flare Patrol														
0001	KHAR	01	0915		0923	S20	E73	5004	05	7.0	8	SF			2	V	0915			D
		01	1113		1122	No Flare Patrol														
0002	RAMY	01	1143	1143	1150	S20	E67	5004	05	6.6	7	SF			3	E		10		
		01	2017		2018	No Flare Patrol														
		01	2045		2104	No Flare Patrol														
0003	HOLL	01	2123	2125	2147	S22	W22	5005	04	30.2	24	SF			2	E		35		
0004	HOLL	01	2124	2124	2142	S18	W14	5002	04	30.8	18	SF			2	E		15		
		01	2129		2133	No Flare Patrol														
0005	RAMY	01	2209	2209	2220	S22	W22	5005	04	30.2	11	SF			3	E		15		
0006	YUNN	02	0123	0133	0153	S20	W26	5002	04	30.1	30	SF				C		80	1.0	
0007	YUNN	02	0311	0316	0321	S21	E66	5004	05	7.2	10	SN				C		24		
0008	ABST	02	0601	0610	0651	N20	E84		05	8.7	50	1F				C	0610	87		DI
0009	KHAR	02	0646	0648	0652	S22	W28	5005	04	30.1	6	SF			2	V	0648			
0010	KHAR	02	0900U		0930U	S25	W55		04	28.2	30U	SF			2	V	0900			E
0011		02	0944	0945	0956	S24	W27	5002A	04	30.3	12	SF						20		E
	SVTO	02	0944	0945	0955	S25	W27	5002A	04	30.3	11	SF			3	E		20		
	KHAR	02	0944	0946U	0958	S24	W27	5002A	04	30.3	14	SF			2	V	0946			E
0012	RAMY	02	1205	1205	1215	S22	W26	5005	04	30.5	10	SF			3	E		11		
0013		02	13511	13541	1418	S22	W31	5005	04	30.2	27	SF	C	1.2				30		F
	RAMY	02	1351	1354	1416	S21	W31	5005	04	30.2	25	SF	C	1.2	3	E		38		
	SVTO	02	1351	1354	1428	S23	W30	5005	04	30.3	37	SF	C	1.2	3	E		19		F
	HOLL	02	1352	1355	1409	S22	W31	5005	04	30.2	17	SF	C	1.2	3	E		32		
0014	HOLL	02	1610	1615	1627	S23	W35	5005	04	30.0	17	SF			3	E		28		
0015	HOLL	02	1654	1658	1703	S19	E50	5004	05	6.5	9	SF			3	E		19		
0016	RAMY	02	2010	2011	2015	N15	E64	5008	05	7.7	5	SF			3	E		15		
		02	2045		2051	No Flare Patrol														
		02	2158		2210	No Flare Patrol														
		03	0005		0009	No Flare Patrol														
0017	HTPR	03	0823E		0830	S22	W36	5005	04	30.6	7D	SF				C	0826	10	0.1	
0018	LEAR	03	0901	0912	0918	S24	W41	5005	04	30.2	17	SF			3	E		18		
0019	RAMY	03	1055	1056	1102	S24	W43	5005	04	30.1	7	SF			3	E		27		
0020	RAMY	03	1133	1135	1140	S20	W40	5005	04	30.4	7	SF			3	E		14		
0021	HOLL	03	1433	1436	1454	S22	W40	5005	04	30.5	21	SF			3	E		17		
0022		03	15361	15396	1615	S20	W40	5005	04	30.6	39	1F	C	5.0				116		F
	RAMY	03	1536	1545	1607	S20	W40	5005	04	30.6	31	1F	C	5.0	3	E		123		F
	HOLL	03	1537	1539	1623	S20	W39	5005	04	30.7	46	1F	C	5.0	3	E		110		F
0023	HOLL	03	1748	1757	1821	S22	W40	5005	04	30.7	33	SN	C	3.4	3	E		97		F
0024	RAMY	03	1803	1803	1815	S17	W38	5002	04	30.9	12	SF			3	E		50		

H - ALPHA SOLAR FLARES

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP	Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
		03	1856		1930	No Flare Patrol														
		03	2018		2022	No Flare Patrol														
		03	2043		2045	No Flare Patrol														
		03	2053		2103	No Flare Patrol														
		03	2114		2128	No Flare Patrol														
		03	2150		2201	No Flare Patrol														
0025	HOLL	03	2216	2255	2314	S22	W50	5005		04	30.1	58	SF		3	E		42		
0026	HOLL	03	2241	2244	2248	S21	W44	5005		04	30.6	7	SF		3	E		14		
0027	LEAR	04	0012	0014	0039	S21	W49	5005		04	30.2	27	SF		3	E		26		
0028		04	02048	02247	0304	S18	W44	5002		04	30.7	60	1N	C 5.1				258	7.2	F
	YUNN	04	0204	0224	0331	S18	W43	5002		04	30.8	87	2N	C 5.1		P		498	7.2	F
	LEAR	04	0212	0231	0238	S18	W45	5002		04	30.7	26	SF	C 5.1	3	E		19		
0029	LEAR	04	0237	0237	0253	S23	W53	5005		04	30.0	16	SF		3	E		17		
0030		04	0617E	0617U	0644	S22	W56	5005		04	30.0	27D	SF					60	1.1	DEK
	ABST	04	0617E	0617U	0645	S21	W57	5005		04	30.0	28D	SF			P	0617	70	1.3	DK
	HTPR	04	0621E		0644	S22	W54	5005		04	30.1	23D	SF			C	0636	50	0.9	E
0031	LEAR	04	0619	0623	0657	S18	W46	5002		04	30.8	38	SF		3	E		38		
0032	HTPR	04	0621E		0643	N17	W68			04	29.2	22D	SF			C	0624	20	0.3	
0033	LEAR	04	0747	0748	0751	S22	W52	5005		04	30.3	4	SF		3	E		18		
0034	ABST	04	0826	0831	0847	S21	W57	5005		04	30.0	21	SF			C	0831	70	1.3	D
0035		04	08502	08562	0904	S23	W55	5005		04	30.1	14	SF	C 3.4				14		EH
	KHAR	04	0850	0856	0904	S24	W57	5005		04	30.0	14	SF		2	V	0856			EH
	LEAR	04	0852	0858	0905	S22	W53	5005		04	30.3	13	SF	C 3.4	3	E		14		
		04	1001		1024	No Flare Patrol														
		04	1127		1145	No Flare Patrol														
		04	1218		1229	No Flare Patrol														
0036	HOLL	04	1542	1542	1551	S23	W58	5005		04	30.2	9	SF		3	E		12		
0037	HOLL	04	1603	1612	1629	S23	W59	5005		04	30.1	26	SF		3	E		39		
		04	1701		1759	No Flare Patrol														
		04	1820		1931	No Flare Patrol														
		04	1937		1946	No Flare Patrol														
		04	1950		2301	No Flare Patrol														
0038	ABST	05	0616	0618	0623	N27	E32	5011		05	7.7	7	SF			C	0618	87	1.3	DI
0039		05	0642	0700	0704	N27	E34	5011		05	7.9	22	SN					78	1.0	DEIK
	ABST	05	0642	0700	0704	N27	E32	5011		05	7.8	22	SN			C	0700	96	1.4	DIK
	HTPR	05	0657E		0740D	N27	E36	5011		05	8.1	43D	SF			C	0659	59	0.6	E
0040		05	07199	0732	0751	N17	E38	5008		05	8.2	32	1F					108	1.4	E
	HTPR	05	0719		0740D	N17	E38	5008		05	8.2	21D	SF			C	0734	60	0.7	E
	ABST	05	0728	0732	0751	N17	E37	5008		05	8.1	23	1F			C	0732	157	2.2	E
0041	ABST	05	0808	0811	0838	S28	E38			05	8.3	30	SN			C	0811	105	1.5	DG
		05	1001		1234	No Flare Patrol														
0042	HOLL	05	1512	1513	1521	S21	W75	5005		04	30.0	9	SF		4	E		29		
0043		05	19443	19462	1958	S22	W74	5005		04	30.1	14	1N	C 8.8				140		
	HOLL	05	1944	1946	2002	S22	W76	5005		04	30.0	18	1N	C 8.8	3	E		138		
	RAMY	05	1947	1948	1955	S22	W72	5005		04	30.3	8	1F	C 8.8	3	E		141		
		05	2148		2149	No Flare Patrol														

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

MAY 1988

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
0044	VORO	05	2231	2235	2250	S23	W80	5005	04	29.9	19	1F		1	C	2235	90		DIJT
0045	YUNN	06	0309E	0309U	0319	N25	E25	5011	05	8.1	10D	SN			P	0309	48	0.6	
0046	ABST	06	0433	0436	0441	N18	E20	5008	05	7.7	8	SN			C	0436	96	1.1	E
0047		06	0829	0831	0853	N26	E22	5011	05	8.1	24	SF					86	1.0	EIKT
	HTPR	06	0604E		0825D	N25	E23	5011	05	8.0	141D	SF			C	0718	40	0.4	EK
	ABST	06	0829	0831	0853	N26	E20	5011	05	7.9	24	SF			C	0831	131	1.7	EIT
		06	1244		1251	No Flare Patrol													
0048	HOLL	06	1435	1438	1442	S18	W87	5005	04	30.0	7	SF		3	E		25		
0049	HOLL	06	1752	1754	1800	S22	W82	5005	04	30.4	8	SF	C 1.3	3	E		31		
		06	2131		2146	No Flare Patrol													
0050	HOLL	06	2248	2249	2302	S29	E53	5010	05	11.1	14	SF		3	E		34		F
0051	LEAR	07	0305	0309	0314	S28	E14		05	8.2	9	SF		3	E		12		F
0052	RAMY	07	1140E	1146	1155	N24	W02	5011	05	7.3	15D	SF		3	E		19		F
		07	1841		1854	No Flare Patrol													
0053	HOLL	07	2316	2318	2327	S17	E50	5014	05	11.8	11	SF		3	E		20		F
0054	YUNN	08	0645	0646	0708	S28	E38	5010	05	11.2	23	SF			P		32	0.5	D
0055	HOLL	08	2143	2144	2155	S15	E37	5014	05	11.7	12	SF		3	E		25		F
0056		09	04358	0435	0445	S18	E33	5014	05	11.7	10	SN					36	0.6	D
	LEAR	09	0435	0435	0445	S19	E33	5014	05	11.7	10	SF		3	E		17		
	TACH	09	0443	0446U	0457D	S18	E33	5014	05	11.7	14D	SB			C	0446	56	0.6	D
0057	HOLL	09	1543	1544	1559	S19	E28	5014	05	11.8	16	SF		3	E		20		
0058	HOLL	09	1650	1653	1706	N24	W25	5011	05	7.8	16	SF		3	E		22		
0059	HOLL	09	2014	2015	2030	S16	E24	5014	05	11.7	16	SF		3	E		36		
0060	HTPR	10	0838	0840	0923	N20	W34	5008	05	7.7	45	SF			C	0846	30	0.4	EK
		10	1147		1154	No Flare Patrol													
		10	1206		1210	No Flare Patrol													
0061		11	0308	0312U	0341D	S38	E46		05	14.8	33D	2N					400	7.1	CGL
	TACH	11	0308	0312U	0341D	S36	E45		05	14.7	33D	2N			C	0312	561	9.9	CG
	MITK	11	0316E		0323D	S39	E46		05	14.9	7D	1F			P	0319	240	4.3	GL
		11	1104		1111	No Flare Patrol													
0062	HOLL	11	1817	1817	1827	N24	W56	5011	05	7.4	10	SF	C 1.1	3	E		28		
0063	URUM	12	0516	0520	0525	N25	W62	5011	05	7.4	9	SN			C		48		D
		13	0804		0819	No Flare Patrol													
		13	0829		0839	No Flare Patrol													
		13	0925		1029	No Flare Patrol													
		13	1728		1741	No Flare Patrol													
		14	0607		0609	No Flare Patrol													
0064	PEKG	14	0721	0725	0729	S18	W36	5014	05	11.6	8	1F			P	0725	168	2.2	C
		14	0931		0954	No Flare Patrol													
		14	1223		1226	No Flare Patrol													
		14	1459		1509	No Flare Patrol													

H - ALPHA SOLAR FLARES

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0065		14	1715	1715	1719	S14	W40	5014	05	11.7	4	SF					11		F
	RAMY	14	1715	1715	1719	S14	W40	5014	05	11.7	4	SF		3	E		11		F
	HOLL	14	1715	1715	1719	S14	W39	5014	05	11.8	4	SF		3	E		11		
0066		15	01137	0115*	0203	S18	W46	5014	05	11.5	50	SN					70	1.9	E
	LEAR	15	0113	0115	0126	S17	W46	5014	05	11.5	13	SF		3	E		15		
	PEKG	15	0120	0155	0240	S18	W45	5014	05	11.6	80	SB			P	0155	126	1.9	E
		15	0804		0829	No Flare Patrol													
		15	0917		0918	No Flare Patrol													
		15	0931		0953	No Flare Patrol													
		15	1001		1012	No Flare Patrol													
		15	1022		1044	No Flare Patrol													
		15	1112		1141	No Flare Patrol													
		15	1509		1825	No Flare Patrol													
		15	1954		2010	No Flare Patrol													
0067	HOLL	15	2030	2031	2039	S18	W14	5008	05	14.8	9	SF		3	E		12		
		15	2038		2254	No Flare Patrol													
0068	HOLL	15	2359	2404	2419	S16	W58	5014	05	11.6	20	SF		3	E		10		
0069	LEAR	16	0021	0026	0040	S16	W58	5014	05	11.6	19	SF		3	E		19		
0070	LEAR	16	0052	0053	0055	N08	E55	5021	05	20.1	3	SF		3	E		26		
		16	1409		1428	No Flare Patrol													
0071	HOLL	16	1722	1722U	1730	S18	W26	5018	05	14.7	8	SF		2	E		19		
0072	HOLL	16	1827	1829	1835	S17	W67	5014	05	11.7	8	SF		3	E		22		F
		16	2227		2246	No Flare Patrol													
0073	LEAR	16	2324	2328	2417	S17	W30	5018	05	14.7	53	SF		3	E		23		
0074		17	0033	0034*	0046	S18	W31	5018	05	14.7	13	SF					12		H
	LEAR	17	0033	0034	0042	S18	W31	5018	05	14.7	9	SF		3	E		14		
	PALE	17	0047E	0049	0051	S17	W31	5018	05	14.7	4D	SF		2	E		10		H
0075	YUNN	17	0313E	0314	0422	S16	W33	5018	05	14.6	69D	SN			P		64	0.8	E
0076		17	06451	0647	0659	S17	W32	5018	05	14.8	14	SN					58	1.0	DI
	BUCA	17	0645E		0710	S16	W31	5018	05	14.9	25D	SB			C	0645	64	0.8	D
	ABST	17	0645	0647	0654	S17	W33	5018	05	14.8	9	SN			C	0647	87	1.2	DI
	LEAR	17	0646	0647	0654	S18	W33	5018	05	14.8	8	SF		3	E		24		
		17	0921		0932	No Flare Patrol													
0077	HTPR	17	1017	1022	1028	S18	W68	5014	05	12.2	11	SF			C	1022	20	0.5	
0078	RAMY	17	1223	1223	1227	S18	W35	5018	05	14.8	4	SF		3	E		16		
		17	1332		1407	No Flare Patrol													
		17	1558		1602	No Flare Patrol													
		17	1608		1626	No Flare Patrol													
		17	1743		1750	No Flare Patrol													
		17	1843		1857	No Flare Patrol													
0079	HOLL	17	1906	1915	1917	S18	W38	5018	05	14.9	11	SF		3	E		11		F
		17	1927		2022	No Flare Patrol													
		17	2037		2038	No Flare Patrol													
		17	2156		2209	No Flare Patrol													
		17	2233		2244	No Flare Patrol													
0080	PALE	18	0139	0139	0143	S18	W41	5018	05	14.9	4	SF		3	E		16		

H - ALPHA SOLAR FLARES

MAY 1988

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	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0081		18	1054	10561	1105	S18	W48	5018	05	14.8	11	SF	C	1.3				44		H
	SVTO	18	1054	1056	1101	S20	W48	5018	05	14.8	7	SF	C	1.3	3	E		24		
	RAMY	18	1054	1057	1109	S17	W48	5018	05	14.8	15	SF	C	1.3	3	E		63		H
		18	1227		1228	No Flare Patrol														
		18	1554		1603	No Flare Patrol														
0082	RAMY	18	1728	1728	1730	S16	W54	5018	05	14.6	2	SF			3	E		17		
		18	2021		2046	No Flare Patrol														
		18	2051		2138	No Flare Patrol														
		18	2246		2329	No Flare Patrol														
		19	1458		1709	No Flare Patrol														
0083	HOLL	19	1823	1826	1842	S18	W65	5018	05	14.8	19	SF			3	E		42		F
		19	1858		1929	No Flare Patrol														
		19	1942		1949	No Flare Patrol														
		19	1955		2114	No Flare Patrol														
		19	2233		2255	No Flare Patrol														
		20	0114		0120	No Flare Patrol														
		20	0128		0129	No Flare Patrol														
0084		20	0610	06141	0623	S23	E90	5028	05	27.2	13	1B						413		A
	HTPR	20	0610	0615	0627	S24	E90	5028	05	27.2	17	SN				C	0615	30		A
	ATHN	20	0614E	0614	0619	S22	E90	5028	05	27.2	5D	2B				V	0614	796		
0085	HTPR	20	0718	0730	0748	S24	E90	5028	05	27.2	30	1B				C	0730	120		A
0086	HTPR	20	1207	1210	1213	S20	E67	5025	05	25.6	6	SF				C	1210	30	0.7	
0087	HTPR	20	1400	1404	1420	N25	W71		05	15.1	20	SN				C	1404	20	0.5	
0088	HTPR	20	1420	1426	1432	S23	E64	5025	05	25.5	12	SF				C	1426	20	0.4	
0089	HTPR	20	1600	1606	1620	N23	W71		05	15.2	20	SF				C	1606	20	0.5	
0090		20	1730*	1737	1740	S24	E90	5027	05	27.7	10	SN						50		
	HTPR	20	1730	1737	1740	S24	E90	5027	05	27.7	10	SN				C	1737	40		
	HTPR	20	1747		1755D	S24	E90	5027	05	27.7	8D	SN				C	1753	60		
0091	HOLL	20	1853	1854	1858	S19	W78	5018	05	14.8	5	SF			3	E		18		
		20	1931		2001	No Flare Patrol														
		20	2026		2041	No Flare Patrol														
0092	HOLL	20	2354	2358	2403	S15	W71	5026	05	15.6	9	SF			3	E		26		
0093	SVTO	21	0415E	0418U	0435D	S16	W74	5026	05	15.6	20D	SF			1	E		25		H
0094	ABST	21	0523	0525	0530	S19	E80	5028	05	27.3	7	1N				C	0525	87		DKT
0095	HTPR	21	0540E		0605	S25	E90	5027	05	28.2	25D	SN				C	0556	100		AE
0096		21	0616		0726D	S16	W78	5026	05	15.3	70D	SN						30		E
	HTPR	21	0616		0726D	S15	W78	5026	05	15.3	70D	SN				C	0708	30		E
	KHAR	21	0632U		0648U	S17	W77	5026	05	15.4	16U	SF			2	V	0632			
0097		21	07003	0711U	0738	N28	W90		05	14.2	38	SN						40		ADR
	HTPR	21	0700		0726D	N27	W90		05	14.3	26D	SN				C	0710	40		A
	KHAR	21	0703	0711U	0738	N28	W90		05	14.2	35	SN			2	P	0711			DR
0098	KHAR	21	0735	0735	0748	S16	W78	5026	05	15.4	13	SF			2	V	0735			H
0099	KHAR	21	0822	0823	0827	S22	E85	5027	05	27.9	5	SF			2	V	0823			DH
0100		21	1210E	1338	1342	S15	W80	5026	05	15.4	92D	SN						31		ET
	HTPR	21	1210E		1401D	S15	W78	5026	05	15.6	111D	SB				C	1242	50		ET
	HOLL	21	1321E	1322U	1343	S16	W78	5026	05	15.6	22D	SF			3	E		25		
	RAMY	21	1327E	1338	1342	S14	W84	5026	05	15.2	15D	SF			3	E		17		

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

MAY 1988

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
0101		21	1418*	15201	1612	S15	W80	5026	05	15.5	114	SN						30		
	HTPR	21	1418		1545D	S15	W79	5026	05	15.6	87D	SN				C	1506	30		
	HOLL	21	1517	1521	1539	S16	W79	5026	05	15.6	22	SF			4	E		22		
	RAMY	21	1520	1520	1609D	S15	W85	5026	05	15.2	49D	SF			3	E		19		
	HTPR	21	1548E		1645	S15	W79	5026	05	15.7	57D	SB				C	1610	50		
0102	HTPR	21	1519	1520	1531	S22	E55	5025A	05	25.9	12	SB				C	1520	20	0.3	
0103	HTPR	21	1652	1701	1706	S17	E52	5025	05	25.6	14	SF				C	1701	20	0.3	E
0104		21	1728*	1804	1808	S23	E85	5027	05	28.3	40	SN						41		AE
	HTPR	21	1728		1812D	S23	E90	5027	05	28.7	44D	SN				C	1800	30		A
	HTPR	21	1756		1812D	S22	E80	5027	05	27.9	16D	SN				C	1803	60		E
	PALE	21	1801	1804	1808	S23	E85	5027	05	28.3	7	SF			3	E		34		
0105	HOLL	21	1859	1859	1905	S15	W90	5026	05	15.0	6	SF	C	3.8	3	E		18		
0106	HOLL	22	0015	0016	0019	S15	W82	5026	05	15.8	4	SF			4	E		34		
0107	LEAR	22	0109	0112	0127	S28	E82	5027	05	28.4	18	SF			3	E		26		
0108	PALE	22	0137	0147	0202	S19	E45	5025	05	25.5	25	SF	C	1.4	3	E		50		
0109	PALE	22	0219	0227	0229	S26	E77	5027	05	28.1	10	SF			3	E		82		
0110		22	0300*	0307*	0336	S24	E75	5027	05	27.9	36	SF						38		A
	YUNN	22	0300	0307	0315D	S26	E76	5027	05	28.0	15D	SN				P		64		A
	LEAR	22	0300	0314	0321	S27	E78	5027	05	28.2	21	SF			3	E		30		
	PALE	22	0303E	0335	0414D	S24	E72	5027	05	27.7	71D	SF			3	E		37		
	LEAR	22	0335	0342	0350	S21	E75	5027	05	27.9	15	SF			3	E		21		
0111	LEAR	22	0325	0327	0405	S23	E51	5025A	05	26.1	40	SF	C	1.8	3	E		23		F
0112	PALE	22	0332E	0333	0405	S20	E46	5025	05	25.7	33D	SF	C	1.8	3	E		45		
0113	LEAR	22	0423	0429	0437	S21	E74	5027	05	27.8	14	SF			3	E		28		
0114	LEAR	22	0428	0429	0435	S15	W70		05	16.9	7	SF			3	E		19		
0115	ABST	22	0446	0448	0505	S24	E70	5027	05	27.6	19	1N				C	0448	87		DKT
0116	LEAR	22	0558	0559	0604	S25	E74	5027	05	28.0	6	SF			3	E		24		
0117	LEAR	22	0644	0645	0649	S25	E74	5027	05	28.0	5	SF			3	E		15		
0118	SVTO	22	1101	1106	1120	S24	E74	5027	05	28.2	19	1F	C	4.6	3	E		115		
0119	HOLL	22	1613	1615	1622	S25	E67	5027	05	27.9	9	SF	C	1.2	3	E		21		
0120	HOLL	22	1916	1919	1923	S27	E72	5027	05	28.4	7	SF			3	E		22		F
0121		22	1944	19442	2002	S26	E68	5027	05	28.1	18	SF						20		F
	PALE	22	1944	1944	2004	S26	E67	5027	05	28.0	20	SF			3	E		29		F
	HOLL	22	1944	1946	1959	S25	E68	5027	05	28.1	15	SF			4	E		12		F
0122		22	20281	20297	2042	S26	E68	5027	05	28.1	14	SF						22		F
	HOLL	22	2028	2029	2043	S26	E71	5027	05	28.4	15	SF			4	E		27		F
	PALE	22	2029	2036	2040	S25	E66	5027	05	28.0	11	SF			3	E		17		
0123	HOLL	22	2114	2114	2122	S27	E70	5027	05	28.3	8	SF			3	E		20		
0124	HOLL	22	2210	2212	2218	S24	E69	5027	05	28.2	8	SF			3	E		51		F
0125		22	23492	23501	2354	S25	E68	5027	05	28.3	5	SF						26		
	HOLL	22	2349	2350	2355	S25	E68	5027	05	28.3	6	SF			3	E		23		
	PALE	22	2351	2351	2353	S25	E67	5027	05	28.2	2	SF			3	E		29		
0126	HOLL	23	0032	0032	0043	S19	E36	5025	05	25.8	11	SF			3	E		13		F
0127	HOLL	23	0033	0043	0046	S22	E64	5027	05	27.9	13	SF			3	E		19		F

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

MAY 1988

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
0128		23	0056*	0107*	0121	S26	E64	5027	05	28.0	25	SF					14		F
	HOLL	23	0056	0107	0117	S25	E68	5027	05	28.3	21	SF		3	E		17		
	PALE	23	0100	0108	0113	S26	E62	5027	05	27.8	13	SF		3	E		11		F
	LEAR	23	0109	0109	0131	S27	E62	5027	05	27.9	22	SF		3	E		16		
	PALE	23	0118	0121	0123	S25	E63	5027	05	27.9	5	SF		3	E		12		
0129		23	0136*	0200*	0228	S26	E63	5027	05	28.0	52	SF					26		
	LEAR	23	0136	0200	0213	S27	E66	5027	05	28.2	37	SF		3	E		28		
	PALE	23	0136	0227	0231	S25	E61	5027	05	27.8	55	SF		3	E		19		
	LEAR	23	0226	0227	0239	S26	E62	5027	05	27.9	13	SF		3	E		32		
0130		23	02531	03001	0326	S23	E60	5027	05	27.7	33	SN	C 8.6				77		F
	LEAR	23	0253	0301	0327	S24	E60	5027	05	27.7	34	SF	C 8.6	3	E		62		F
	PALE	23	0254	0300	0326	S23	E60	5027	05	27.7	32	SF	C 8.6	3	E		37		F
	TACH	23	0306E	0309U	0357D	S21	E60	5027	05	27.7	51D	1B			C	0309	133		F
0131	LEAR	23	0309	0314	0318	S23	E52	5028	05	27.1	9	SF		3	E		27		
0132	LEAR	23	0353	0353	0359	S26	E62	5027	05	28.0	6	SF		3	E		35		
0133	PALE	23	0414	0415	0416	S25	E59	5027	05	27.7	2	SF		3	E		21		
0134		23	04595	0505	0518	S22	E36	5025A	05	26.0	19	SN					42	1.0	FGU
	TACH	23	0459	0501U	0521	S22	E39	5025A	05	26.2	22	SB			C	0501	71	1.0	GU
	LEAR	23	0504	0505	0515	S22	E34	5025A	05	25.8	11	SF		3	E		14		F
0135		23	0525*	0531*	0605	S24	E62	5027	05	28.0	40	SN	C 7.9				75	1.7	F
	TACH	23	0525	0530U	0544	S25	E61	5027	05	27.9	19	SB			C	0530	76	1.7	F
	LEAR	23	0528	0532	0640	S27	E61	5027	05	28.0	72	1N	C 7.9	3	E		101		
	SVTO	23	0530	0531	0548	S24	E62	5027	05	28.0	18	SN	C 7.9	3	E		58		F
	SVTO	23	0554	0600	0607	S22	E65	5027	05	28.2	13	SF		3	E		64		F
0136	LEAR	23	0537	0547	0606	S21	E32	5025A	05	25.7	29	SF		3	E		35		F
0137	SVTO	23	0543	0545	0558	S19	E33	5025	05	25.7	15	SF		3	E		16		
0138	LEAR	23	0756	0758	0805	S25	E58	5027	05	27.8	9	SN	C 4.0	3	E		17		
0139		23	08245	08303	0908	S24	E59	5027	05	27.9	44	SN	C 6.6				50		F
	LEAR	23	0824	0833	0908	S25	E58	5027	05	27.8	44	SN	C 6.6	3	E		72		F
	SVTO	23	0829	0830	0846D	S24	E60	5027	05	28.0	17D	SF	C 6.6	2	E		29		
		23	0953		1011	No Flare Patrol													
0140		23	1158*	1159*	1215	S25	E55	5027	05	27.7	17	SF	M 1.1				75		EF
	RAMY	23	1138E	1140U	1157	S26	E57	5027	05	27.9	19D	SF		2	E		70		F
	RAMY	23	1158	1159	1204	S24	E50	5027	05	27.4	6	SF	M 1.1	3	E		31		
	RAMY	23	1200	1206	1226	S26	E56	5027	05	27.8	26	1N	M 1.1	2	E		118		FE
	SVTO	23	1200	1209	1227	S24	E57	5027	05	27.9	27	SF	M 1.1	3	E		82		F
	KANZ	23	1208	1208	1222	S26	E53	5027	05	27.6	14	SN		2					E
0141	KANZ	23	1200	1200	1204	S23	E48	5028	05	27.2	4	SF		2					
0142	RAMY	23	1345	1345	1351	S26	E55	5027	05	27.8	6	SF		4	E		11		
0143		23	15062	15085	1524	S23	E48	5028	05	27.3	18	SF	C 3.8				87		FH
	SVTO	23	1506	1513	1525	S21	E49	5028	05	27.4	19	1F		3	E		100		
	HOLL	23	1507	1509	1526	S24	E48	5028	05	27.3	19	SF	C 3.8	3	E		79		FH
	RAMY	23	1507	1509	1526	S24	E48	5028	05	27.3	19	SF	C 3.8	4	E		83		FH
	KANZ	23	1508	1508	1518	S24	E46	5028	05	27.2	10	SN		2					
0144		23	16164	16182	1628	S25	E54	5027	05	27.9	12	SF	C 4.3				22		F
	SVTO	23	1616	1618	1625	S23	E55	5027	05	27.9	9	SF	C 4.3	3	E		13		
	RAMY	23	1616	1618	1631	S26	E54	5027	05	27.9	15	SF	C 4.3	3	E		32		F
	KANZ	23	1620	1620	1629	S26	E52	5027	05	27.7	9	SF		2					
0145		23	1728*	1734*	1803	S26	E57	5027	05	28.1	35	SF	C 6.4				38		F
	HOLL	23	1728	1734	1752	S24	E54	5027	05	27.9	24	SF	C 6.4	3	E		38		F
	RAMY	23	1728	1734	1813	S27	E59	5027	05	28.3	45	SN	C 6.4	3	E		59		
	HOLL	23	1754	1759	1804	S26	E59	5027	05	28.3	10	SF		3	E		17		F

H - ALPHA SOLAR FLARES

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0146	HOLL	23	1839	1845	1855	S23	E55	5027	05	28.0	16	SF	C 1.7	3	E		22		F
0147	PALE	23	1857	1858	1909	S25	E57	5027	05	28.2	12	SF		3	E		24		
0148	HOLL	23	2009	2009	2014	S24	E56	5027	05	28.2	5	SF		3	E		19		F
		23	2140		2155	No Flare Patrol													
0149	HOLL	23	2258	2300	2317	S25	E56	5027	05	28.3	19	SF		3	E		15		F
0150		24	00582	00592	0108	S26	E55	5027	05	28.3	10	SF					16		F
	HOLL	24	0058	0059	0104	S26	E55	5027	05	28.3	6	SF		3	E		17		F
	PALE	24	0100	0101	0112	S27	E55	5027	05	28.3	12	SF		3	E		15		
0151	PALE	24	0129	0129	0133	S26	E52	5027	05	28.1	4	SF		3	E		14		
0152		24	0327*	0334*	0345	S26	E51	5027	05	28.1	18	SF					68		F
	PALE	24	0327	0334	0338	S26	E51	5027	05	28.1	11	SF		3	E		85		F
	PALE	24	0344	0344	0352	S26	E51	5027	05	28.1	8	SF		3	E		52		
0153		24	0550	05502	0600	S27	E55	5027	05	28.5	10	SN	C 2.0				62	1.2	DV
	PEKG	24	0550E	0550	0610	S28	E57	5027	05	28.7	20D	SB	C 2.0		P	0550	63	1.2	D
	ABST	24	0550	0551	0556D	S27	E55	5027	05	28.5	6D	1N			P	0551	87		DV
	LEAR	24	0550	0551	0557	S28	E54	5027	05	28.5	7	SN	C 2.0	3	E		33		
	ATHN	24	0550	0552	0554	S26	E55	5027	05	28.5	4	SF	C 2.0		V	0552	64	1.2	
0154	HTPR	24	0746	0755	0806	S24	E46	5027	05	27.9	20	SN			C	0755	30	0.4	E
0155		24	08088	08164	0851	S25	E46	5027	05	27.9	43	SN	C 4.6				58	1.1	EFI
	HTPR	24	0808	0820	0843	S24	E43	5027	05	27.7	35	SB			C	0820	80	1.1	EI
	LEAR	24	0812	0819	0906	S26	E49	5027	05	28.1	54	SN	C 4.6	3	E		35		F
	KANZ	24	0816	0816	0844	S25	E45	5027	05	27.8	28	SF		2					
0156	HTPR	24	1301	1303	1318	S24	E45	5027	05	28.0	17	SF			C	1303	40	0.6	E
0157		24	13284	13323	1340	S24	E42	5027	05	27.8	12	SN	C 1.5				32	0.9	EF
	HTPR	24	1328	1332	1345	S24	E43	5027	05	27.9	17	SB			C	1332	70	0.9	E
	RAMY	24	1329	1332	1334	S24	E43	5027	05	27.9	5	SF	C 1.5	3	E		13		
	KANZ	24	1331	1335	1340	S25	E39	5027	05	27.6	9	SF		2					
	HOLL	24	1332	1333	1341	S24	E41	5027	05	27.7	9	SF	C 1.5	3	E		14		F
0158		24	15124	15151	1523	S23	E44	5027	05	28.0	11	SF					21	0.4	F
	HTPR	24	1512	1515	1520	S24	E46	5027	05	28.2	8	SN			C	1515	30	0.4	
	HOLL	24	1515	1515	1524	S19	E43	5027	05	27.9	9	SF		3	E		20		
	HOLL	24	1515	1515	1528	S26	E47	5027	05	28.3	13	SF		3	E		14		F
	KANZ	24	1516	1516	1520	S24	E42	5027	05	27.9	4	SF		2					
0159	HTPR	24	1637	1644	1658	S24	E43	5027	05	28.0	21	SF			C	1644	60	0.8	E
0160	PALE	24	1922	1933	1937	S26	E44	5027	05	28.2	15	SF		3	E		21		F
0161	PALE	24	2140E	2140	2149	S26	E42	5027	05	28.2	9D	SF		3	E		18		
0162		24	22312	22331	2238	S24	E37	5027	05	27.8	7	SF	C 2.1				17		F
	PALE	24	2231	2233	2237	S25	E36	5027	05	27.7	6	SF	C 2.1	4	E		20		F
	HOLL	24	2233	2234	2238	S24	E38	5027	05	27.9	5	SF	C 2.1	3	E		14		
0163	HOLL	24	2303	2309	2317	S24	E39	5027	05	28.0	14	SF	C 1.0	3	E		22		F
0164	LEAR	24	2346	2354	2356	S24	E39	5027	05	28.0	10	SF		3	E		21		
0165		25	00345	0043	0048	S26	E41	5027	05	28.2	14	SF					42		E
	PALE	25	0034	0043	0049	S24	E38	5027	05	27.9	15	SF		3	E		57		E
	HOLL	25	0039	0043	0047	S27	E44	5027	05	28.4	8	SF		3	E		28		
0166		25	01071	01091	0113	S26	E41	5027	05	28.2	6	SF	C 1.0				49	1.7	
	YUNN	25	0107	0109	0110	S26	E42	5027	05	28.3	3	SN	C 1.0		C		113	1.7	
	HOLL	25	0107	0109	0118	S25	E40	5027	05	28.1	11	SF	C 1.0	3	E		21		
	LEAR	25	0108	0110	0111	S26	E41	5027	05	28.2	3	SF	C 1.0	3	E		14		

H - ALPHA SOLAR FLARES

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
0167	YUNN	25	0215	0218	0221	S27	E45	5027	05	28.6	6	SN				C		129	2.1	
0168		25	03273	0327	0334	S24	E40	5027	05	28.2	7	SN	C	1.0				54	1.3	DF
	PALE	25	0327	0327	0330	S24	E36	5027	05	27.9	3	SF	C	1.0	3	E		22		F
	TACH	25	0330	0332U	0339	S23	E45	5027	05	28.6	9	SB				C	0332	87	1.3	D
0169	TACH	25	0345E		0353D	S23	E45	5027	05	28.6	8D	SB				C	0345	31	0.5	E
0170	TACH	25	0535E		0547D	S23	E44	5027	05	28.6	12D	SN				C	0535	41	0.6	D
0171		25	0606	06112	0616	S27	E41	5027	05	28.4	10	SF						29		
	LEAR	25	0606	0611	0617	S26	E42	5027	05	28.5	11	SF			3	E		29		
	KANZ	25	0610E	0613	0616	S28	E40	5027	05	28.4	6D	SF			1					
0172	HTPR	25	0655E		0740	S20	E03	5025	05	25.5	45D	SF				C	0659	40	0.4	E
0173	HTPR	25	0655E		0750	S22	E06	5025A	05	25.7	55D	SF				C	0659	40	0.4	E
0174	HTPR	25	0738	0742	0801	S23	E34	5027	05	27.9	23	SN				C	0742	120	1.5	EI
0175	HTPR	25	1154	1202	1230	S20	E31	5027	05	27.9	36	SN				C	1202	30	0.3	
0176	HTPR	25	1232	1235	1242	S23	E25	5028	05	27.4	10	SF				C	1235	50	0.6	E
0177		25	1305*	1322	1334	S24	E34	5027	05	28.2	29	SN	C	1.1				30	0.4	EI
	HTPR	25	1305		1329D	S23	E31	5027	05	27.9	24D	SN				C	1323	40	0.4	EI
	RAMY	25	1319	1322	1334	S26	E36	5027	05	28.3	15	SF	C	1.1	3	E		19		
0178		25	1354	13553	1359	S26	E35	5027	05	28.3	5	SF	C	2.1				24		
	SVTO	25	1354	1355	1359	S25	E34	5027	05	28.2	5	SF	C	2.1	3	E		24		
	KANZ	25	1354	1358	1358D	S27	E36	5027	05	28.4	4D	SF			2					
0179		25	14292	14331	1440	S24	E32	5027	05	28.1	11	SF						16		F
	RAMY	25	1429	1434	1443	S24	E33	5027	05	28.1	14	SF			3	E		19		F
	SVTO	25	1431	1433	1438	S25	E32	5027	05	28.1	7	SF			3	E		12		
0180		25	1509*	1536*	1626	S24	E32	5027	05	28.1	77	SF	C	7.5				49		FH
	HOLL	25	1509	1537	1704	S24	E33	5027	05	28.2	115	SF	C	7.5	3	E		45		FH
	SVTO	25	1510	1536	1544	S25	E33	5027	05	28.2	34	SF	C	7.5	3	E		14		
	RAMY	25	1514	1553	1557D	S24	E31	5027	05	28.0	43D	1F			3	E		100		
	SVTO	25	1548	1556	1629	S25	E31	5027	05	28.1	41	SF			3	E		38		
		25	1948		1958	No Flare Patrol														
0181	PALE	25	2108	2109	2120D	S25	E26	5027	05	27.9	12D	SF	C	2.0	3	E		66		E
		25	2121		2126	No Flare Patrol														
0182	PALE	25	2153	2209	2239	S27	E28	5027	05	28.1	46	SF	C	2.0	3	E		83		F
0183	PALE	25	2250	2254	2311D	S24	E28	5027	05	28.1	21D	SF	C	3.1	3	E		32		F
0184		25	2350*	2402*	2424	S25	E26	5027	05	28.0	34	SF	C	2.5				23		F
	LEAR	25	2350	2402	2420	S25	E24	5027	05	27.8	30	SN	C	2.5	3	E		32		F
	PALE	26	0005	0006	0009D	S25	E24	5027	05	27.9	4D	SF	C	2.5	3	E		14		F
	HOLL	26	0014	0017	0028	S26	E31	5027	05	28.4	14	SF			2	E		23		
0185		26	00583	01013	0149	S27	E30	5027	05	28.4	51	1N	M	1.0				156	3.2	EFU
	YUNN	26	0058	0104	0106D	S27	E30	5027	05	28.4	8D	1B				P		321	4.3	F
	LEAR	26	0100	0101	0150	S28	E30	5027	05	28.4	50	SB	M	1.0	3	E		54		UF
	HOLL	26	0101	0102	0134D	S27	E30	5027	05	28.4	33D	1N	M	1.0	3	E		101		UF
	MITK	26	0101	0103	0141	S25	E30	5027	05	28.4	40	1N				C	0103	160	2.1	E
	PALE	26	0108E	0108U	0155	S27	E29	5027	05	28.3	47D	1F	M	1.0	3	E		144		F
0186	YUNN	26	0245	0255	0312	S24	E22	5027	05	27.8	27	SN	C	2.5		C		113	1.4	E

H - ALPHA SOLAR FLARES

MAY 1988

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
0187		26	0418*	0421*	0516	S26	E27	5027	05	28.3	58	SN					94	2.2	EF
	LEAR	26	0418	0421	0440	S27	E27	5027	05	28.3	22	SF		3	E		17		
	TACH	26	0422	0503U	0535	S23	E31	5027	05	28.6	73	1B			C	0503	173	2.3	E
	LEAR	26	0442	0442	0449	S25	E22	5027	05	27.9	7	SF		3	E		17		
	PALE	26	0442	0443	0448	S25	E29	5027	05	28.4	6	SF		2	E		15		F
	PEKG	26	0452	0505	0525	S27	E29	5027	05	28.5	33	1N			V	0520	168	2.1	E
	MITK	26	0454	0500	0617	S27	E27	5027	05	28.3	83	SN			C	0500			E
	ABST	26	0456	0501	0520	S27	E26	5027	05	28.2	24	1N			C	0501	174	2.3	E
0188	SVTO	26	0540	0541U	0610	S25	E12	5028	05	27.2	30	SF		1	E		56		
0189		26	05469	0546*	0608	S27	E25	5027	05	28.2	22	SF					78	1.5	D
	SVTO	26	0546	0546	0603	S24	E23	5027	05	28.0	17	SF		3	E		10		
	LEAR	26	0546	0546	0610	S27	E25	5027	05	28.2	24	SF		3	E		26		
	ABST	26	0548	0551	0605	S27	E26	5027	05	28.3	17	SN			C	0551	87	1.1	D
	PEKG	26	0550	0558	0620	S28	E26	5027	05	28.3	30	SF			P	0558	105	1.3	D
	TACH	26	0555	0556U	0603	S28	E29	5027	05	28.5	8	1N			C	0556	163	2.2	D
	KANZ	26	0559E	0559U	0609	S27	E22	5027	05	28.0	10D	SF		2					
0190		26	07289	0730	0807	S26	E21	5027	05	27.9	39	SF					25	0.3	EF
	LEAR	26	0728	0730	0807	S26	E23	5027	05	28.1	39	SF		3	E		15		F
	HTPR	26	0731E		0804D	S26	E23	5027	05	28.1	33D	SF			C	0735	20	0.2	
	HTPR	26	0737		0804D	S25	E17	5027	05	27.6	27D	SF			C	0747	40	0.4	E
0191	KANZ	26	0943	0943	0947	S26	E25	5027	05	28.3	4	SF		2					
0192	HTPR	26	1117E		1121	S27	E28	5027	05	28.6	4D	SB			C	1119	50	0.5	
0193	RAMY	26	1156	1200	1202	S24	E18	5027	05	27.9	6	SF		3	E		16		
0194	HTPR	26	1625		1640D	S25	E20	5027	05	28.2	15D	SF			C	1629	40	0.4	E
0195		26	2032*	2035*	2208	S26	E16	5027	05	28.1	96	SF	M 1.1				67		F
	PALE	26	2032	2116	2214	S26	E16	5027	05	28.1	102	1F	M 1.1	3	E		113		F
	RAMY	26	2033	2035	2040D	S25	E16	5027	05	28.1	7D	SF	C 5.3	3	E		45		F
	HOLL	26	2033	2112	2156	S24	E15	5027	05	28.0	83	SN	M 1.1	3	E		95		F
	HOLL	26	2211	2212	2215	S27	E18	5027	05	28.3	4	SF		3	E		14		
0196	PALE	26	2309	2317	2326	S27	E18	5027	05	28.4	17	SF	C 1.0	3	E		35		F
		27	0154		0156	No Flare Patrol													
0197	PALE	27	0218	0222	0222D	S25	E13	5027	05	28.1	4D	SF		3	E		17		
0198	TACH	27	0422		0429D	S28	E19	5027	05	28.7	7D	SB			C	0422	56	0.7	EI
0199		27	05382	05459	0610	S26	E14	5027	05	28.3	32	SN	C 5.7				124	2.1	DIU
	TACH	27	0538	0543U	0604D	S25	E15	5027	05	28.4	26D	1B			C	0543	224	2.7	IU
	LEAR	27	0539	0545	0615	S28	E15	5027	05	28.4	36	SN	C 5.7	3	E		87		
	SVTO	27	0540	0541U	0542D	S25	E12	5027	05	28.2	2D	SF	C 5.7	1	E		56		
	ABST	27	0553E	0554	0605	S26	E15	5027	05	28.4	12D	SN			P	0554	131	1.5	D
0200	YUNN	27	0757	0801	0810	S24	E20	5027	05	28.9	13	SN			C		96	1.1	E
0201	RAMY	27	1049	1054	1104	S25	E06	5027	05	27.9	15	SF		3	E		33		
0202	RAMY	27	1126	1134	1258	S26	E13	5027	05	28.5	92	SF	C 7.4	3	E		74		EF
0203		27	13431	13483	1442	S25	E04	5027	05	27.9	59	1B	M 2.0				180		F
	RAMY	27	1343	1348	1450	S25	E05	5027	05	27.9	67	1B	M 2.0	3	E		228		
	HOLL	27	1344	1351	1435	S25	E04	5027	05	27.9	51	1B	M 2.0	3	E		133		F
0204		27	15463	16011	1630	S26	E07	5027	05	28.2	44	SF	C 1.5				28		F
	RAMY	27	1546	1601	1628	S26	E07	5027	05	28.2	42	SF	C 1.5	3	E		29		F
	HOLL	27	1549	1602	1633	S25	E07	5027	05	28.2	44	SF	C 1.5	3	E		28		F
0205		27	18311	18322	1842	S26	E02	5027	05	27.9	11	SF					20		F
	RAMY	27	1831	1832	1846	S26	E01	5027	05	27.8	15	SF		3	E		24		F
	HOLL	27	1832	1834	1839	S25	E03	5027	05	28.0	7	SF		3	E		16		

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

MAY 1988

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	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0206		27	19591	2001	2015	S25	E00	5027	05	27.8	16	SF	C	2.2				45		EF
	HOLL	27	1959	2001	2018	S25	E00	5027	05	27.8	19	SF	C	2.2	3	E		62		F
	PALE	27	2000	2001	2013	S24	E00	5027	05	27.8	13	SF	C	2.2	3	E		44		F
	RAMY	27	2000	2001	2013	S25	E00	5027	05	27.8	13	SF	C	2.2	4	E		28		FE
		27	2302		2311	No Flare Patrol														
		27	2328		2337	No Flare Patrol														
0207	PEKG	27	2345E	2348	2350	S27	E10	5027	05	28.8	5D	SN				P	2348	147	1.7	D
0208		28	00421	00505	0126	S25	W00	5027	05	28.0	44	1N	M	1.1				228	3.6	EF
	YUNN	28	0042	0050	0127D	S24	E01	5027	05	28.1	45D	1B	M	1.1		P		402	4.5	F
	PEKG	28	0042	0055	0126	S26	W02	5027	05	27.9	44	1B	M	1.1		C	0055	252	2.6	E
	PALE	28	0043	0043U	0053D	S24	E00	5027	05	28.0	10D	SF	M	1.1	3	E		30		F
0209	PALE	28	0247	0247	0250	S25	W04	5027	05	27.8	3	SF			3	E		16		
0210	TACH	28	0352	0353U	0357	S27	E04	5027	05	28.5	5	SB				C	0353	20	0.2	DIT
0211		28	04325	0437	0457	S27	E04	5027	05	28.5	25	SN	C	2.5				26	0.4	DHIT
	TACH	28	0432	0436U	0450D	S27	E04	5027	05	28.5	18D	SB				C	0436	35	0.4	DHIT
	LEAR	28	0437	0437	0457	S27	E05	5027	05	28.6	20	SF	C	2.5	2	E		17		
0212	TACH	28	0525	0534U	0555	S27	E08	5027	05	28.8	30	SB				C	0534	35	0.4	DHIT
0213		28	0751*	0802*	0832	S25	W04	5027	05	28.0	41	SN	C	2.3				93	1.1	DEGK
	HTPR	28	0751	0802	0832	S25	W06	5027	05	27.9	41	SB				C	0802	130	1.3	EK
	URUM	28	0752	0805	0815	S25	W08	5027	05	27.7	23	SN				C		64	0.7	D
	KHAR	28	0758	0802	0815	S26	W07	5027	05	27.8	17	SN			2	P	0805	100	1.1	G
	SVTO	28	0759E	0824U	0853	S25	W04	5027	05	28.0	54D	SN	C	2.3	3	E		55		
	HTPR	28	0815	0822	0826	S24	W01	5027	05	28.3	11	SB				C	0822	60	0.6	
	URUM	28	0821	0829	0837	S25	W03	5027	05	28.1	16	SN	C	2.3		C		145	1.6	E
	KHAR	28	0823	0826	0845	S25	W02	5027	05	28.2	22	SN			2	P	0829	100	1.1	
0214		28	08596	0900*	0941	S25	W04	5027	05	28.1	42	SN	C	1.4				122	1.6	EHKU
	SVTO	28	0859	0900	0950	S24	W04	5027	05	28.1	51	SF	C	1.4	3	E		69		U
	KHAR	28	0900	0914U	0937U	S25	W04	5027	05	28.1	37U	SN			2	V	0903			EHK
	URUM	28	0905	0911	0932	S25	W04	5027	05	28.1	27	SN	C	1.4		C		177	2.0	E
	HTPR	28	0921E		0923D	S25	W05	5027	05	28.0	2D	SN				C	0923	120	1.3	E
0215		28	1109	1103*	1146	S25	W05	5027	05	28.1	37	SN	C	2.5				54		EF
	SVTO	28	1102E	1103	1124	S25	W04	5027	05	28.1	22D	SF	C	2.5	3	E		25		
	RAMY	28	1109	1117	1208	S25	W06	5027	05	28.0	59	SN	C	2.5	3	E		84		FE
0216		28	13185	1323	1341	S26	W02	5027	05	28.4	23	SF	C	1.2				49	0.7	EF
	HTPR	28	1318		1329D	S26	E07	5027	05	29.1	11D	SF				C	1323	40	0.4	E
	HTPR	28	1321		1329D	S26	W06	5027	05	28.1	8D	SF				C	1324	90	1.0	E
	RAMY	28	1323	1323	1341	S25	W07	5027	05	28.0	18	SF	C	1.2	3	E		16		F
0217		28	14464	14502	1507	S26	W01	5027	05	28.5	21	SN	C	1.3				51	0.8	EF
	HTPR	28	1446	1450	1459	S26	E06	5027	05	29.1	13	SB				C	1450	100	1.1	E
	HTPR	28	1446	1450	1512	S26	W06	5027	05	28.1	26	SN				C	1450	40	0.4	E
	HOLL	28	1449	1450	1505	S25	W04	5027	05	28.3	16	SN	C	1.3	4	E		41		FE
	SVTO	28	1449	1452	1501	S26	W04	5027	05	28.3	12	SF	C	1.3	3	E		27		
	RAMY	28	1450	1450	1517	S26	E02	5027	05	28.8	27	SB	C	1.3	3	E		45		F
0218		28	16085	1613	1621	S26	W13	5027	05	27.7	13	SF						16	0.2	EF
	HTPR	28	1608		1618D	S26	W15	5027	05	27.5	10D	SF				C	1611	20	0.2	E
	RAMY	28	1613	1613	1621	S26	W11	5027	05	27.8	8	SF			3	E		12		F
0219		28	17491	17493	1758	S24	W08	5027	05	28.1	9	SF						14		F
	PALE	28	1749	1749	1755	S24	W08	5027	05	28.1	6	SF			3	E		11		
	RAMY	28	1749	1752	1802	S25	W07	5027	05	28.2	13	SF			3	E		16		
	HOLL	28	1750	1752	1756	S24	W08	5027	05	28.1	6	SF			3	E		14		F
0220		28	2318	2322	2336	S24	W12	5027	05	28.0	18	SF	C	3.0				31		F
	HOLL	28	2309E	2321U	2340	S24	W13	5027	05	28.0	31D	SF	C	3.0	3	E		34		F
	PALE	28	2318	2322	2332	S24	W12	5027	05	28.0	14	SF	C	3.0	3	E		28		F
0221	HOLL	28	2349	2349	2405	S24	W12	5027	05	28.1	16	SF			3	E		14		F

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

MAY 1988

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
0222		29	0531*	0537*	0609	S24	W16	5027	05	28.0	38	1B	M 1.0				276	3.8	EH
	SVTO	29	0531	0538	0634	S24	W14	5027	05	28.1	63	1N	M 1.0	3	E		170		H
	URUM	29	0534	0537	0550	S24	W16	5027	05	28.0	16	1B	M 1.0		C		337	3.9	E
	URUM	29	0550	0552	0602	S25	W17	5027	05	27.9	12	1B			C		321	3.8	E
0223	SVTO	29	0642	0644	0646	S27	W10	5027	05	28.5	4	SF		3	E		34		
0224	SVTO	29	0728	0728	0737	S26	W17	5027	05	28.0	9	SF	C 1.0	3	E		20		F
0225		29	0909	09112	0948	S24	W18	5027	05	28.0	39	SN	C 2.4				37		EFGH
	KHAR	29	0909		0944	S24	W18	5027	05	28.0	35	SN		2	V	0911			EG
	SVTO	29	0909	0911	0952	S25	W15	5027	05	28.2	43	SF	C 2.4	3	E		37		H
	KANZ	29	0909	0913	0938D	S23	W20	5027	05	27.8	29D	SN		2					EF
0226	KHAR	29	0947	0950	0957	N16	E90	5032	06	5.2	10	SF		2	V	0950			D
0227	RAMY	29	1039	1041	1046	S26	W20	5027	05	27.9	7	SF	C 1.3	3	E		36		
0228	RAMY	29	1247	1249	1256	S26	W22	5027	05	27.8	9	SF		3	E		29		
0229		29	1350	1351	1358	S26	W22	5027	05	27.9	8	SF	C 3.3				48		
	HOLL	29	1350	1351	1357	S26	W22	5027	05	27.9	7	SF	C 3.3	3	E		45		
	RAMY	29	1350	1351	1359	S26	W23	5027	05	27.8	9	SF	C 3.3	3	E		51		
0230	RAMY	29	1413	1414	1509	N14	E85	5032	06	5.0	56	SF		3	E		16		
0231	PALE	29	1731	1736	1744	N18	E79	5032	06	4.7	13	SF		3	E		32		
0232	PALE	29	1750	1757	1808	N18	E79	5032	06	4.7	18	SF		3	E		60		F
0233		29	1835	18353	1842	S25	W18	5027	05	28.4	7	SF	C 1.3				14		
	PALE	29	1835	1835	1840	S24	W21	5027	05	28.1	5	SF	C 1.3	3	E		14		
	HOLL	29	1835	1838	1843	S26	W15	5027	05	28.6	8	SF	C 1.3	3	E		14		
0234	HOLL	29	1933	1933	1942	S23	W25	5027	05	27.9	9	SF		3	E		16		F
0235	HOLL	29	2008	2013	2019	S26	W17	5027	05	28.5	11	SF	C 2.7	3	E		60		HZ
0236	PALE	29	2106	2111	2123D	N24	E78	5031	06	4.9	17D	SF		3	E		59		
0237	VORO	29	2253U	2254	2301	S27	W16	5027	05	28.7	8U	SN		2	C	2254	116	1.4	DHIJT
0238		30	0103	01071	0118	S24	W22	5027	05	28.3	15	1B					269	3.2	FT
	YUNN	30	0103	0107	0116	S24	W22	5027	05	28.3	13	1B			C		338	4.1	FT
	MITK	30	0103	0108	0120	S24	W22	5027	05	28.3	17	1N			C	0108	200	2.4	
0239	YUNN	30	0132	0136	0140	S27	W18	5027	05	28.7	8	SB			C		64	0.8	T
		30	0215		0219	No Flare Patrol													
0240	YUNN	30	0237	0240	0249	S25	W22	5027	05	28.4	12	1B	C 1.6		C		209	2.5	T
0241		30	04383	04421	0459	S24	W24	5027	05	28.3	21	1N	C 1.9				242	4.1	EFHT
	YUNN	30	0438	0443	0445D	S24	W23	5027	05	28.4	7D	2B	C 1.9		P		498	6.1	FT
	SVTO	30	0439	0442	0504	S25	W23	5027	05	28.4	25	SF	C 1.9	3	E		53		FH
	MITK	30	0440	0443	0457	S24	W24	5027	05	28.3	17	SN			C	0443			EH
	ABST	30	0441	0443	0455	S24	W24	5027	05	28.3	14	1N			C	0443	174	2.1	E
0242		30	06122	06183	0632	S24	W24	5027	05	28.4	20	SN	C 1.8				117	2.1	E
	SVTO	30	0612	0620	0630	S25	W24	5027	05	28.4	18	SF	C 1.8	3	E		63		
	ABST	30	0614	0618	0633	S24	W24	5027	05	28.4	19	1N			C	0618	171	2.1	E
	MITK	30	0614	0621	0630D	S24	W24	5027	05	28.4	16D	SN			C	0621			
0243	KHAR	30	0700U		0715U	S28	W33	5027	05	27.7	15U	SF		2	V	0700			E
0244	SVTO	30	0847	0847	0853	S25	W28	5027	05	28.2	6	SF	C 2.7	3	E		11		F
0245	SVTO	30	1101	1104	1106	S25	W25	5027	05	28.5	5	SF	C 1.3	3	E		19		

H - ALPHA SOLAR FLARES

MAY 1988

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0246		30	1332	1333	1339	S28	W26	5027	05	28.5	7	SF					26		
	SVTO	30	1332	1333	1338	S30	W23	5027	05	28.7	6	SF		3	E		26		
	HOLL	30	1332	1333	1340	S26	W28	5027	05	28.4	8	SF		3	E		26		
0247		30	15013	1510	1525	S25	W30	5027	05	28.3	24	SF	C 2.1				70		FH
	RAMY	30	1501	1510	1527	S24	W32	5027	05	28.1	26	SF	C 2.1	3	E		88		
	HOLL	30	1504	1510	1517	S26	W29	5027	05	28.4	13	SF	C 2.1	3	E		48		FH
	SVTO	30	1504	1510	1532	S26	W28	5027	05	28.4	28	SF	C 2.1	3	E		74		
0248	HOLL	30	1708	1710	1715	S26	W38	5027	05	27.8	7	SF		3	E		13		F
0249		30	17238	17328	1744	S24	W36	5027	05	27.9	21	SF					20		EF
	HOLL	30	1723	1732	1743	S24	W37	5027	05	27.9	20	SF		3	E		23		F
	PALE	30	1731	1740	1744	S24	W34	5027	05	28.1	13	SF		3	E		17		E
0250		30	17498	18021	1816	S24	W34	5027	05	28.1	27	SF	C 2.9				55		F
	PALE	30	1749	1802	1818	S24	W34	5027	05	28.1	29	SF	C 2.9	3	E		70		F
	HOLL	30	1757	1803	1813	S24	W34	5027	05	28.1	16	SF	C 2.9	3	E		40		F
		30	1844		1850	No Flare Patrol													
0251		30	1913	1913	1924	N18	E70	5032	06	5.1	11	SF					18		
	HOLL	30	1913	1913	1923	N18	E71	5032	06	5.2	10	SF		3	E		17		
	PALE	30	1913	1913	1924	N19	E69	5032	06	5.1	11	SF		3	E		19		
0252		30	1947	1955*	2021	S24	W38	5027	05	27.9	34	1N	C 8.9				108		EF
	PALE	30	1947	1955	1956	S24	W35	5027	05	28.1	9	SF		3	E		40		
	PALE	30	1947	2018	2046	S23	W40	5027	05	27.7	59	1N	C 8.9	3	E		176		FE
0253	HOLL	30	2142	2215	2235	S25	W34	5027	05	28.3	53	SF	C 2.7	3	E		50		FH
0254	HOLL	30	2334	2340	2345	N18	E68	5032	06	5.2	11	SF		3	E		19		
0255		31	00181	00234	0055	S25	W40	5027	05	27.9	37	SF	C 5.7				132	3.2	EF
	LEAR	31	0018	0026	0053	S24	W39	5027	05	28.0	35	SF	C 5.7	3	E		97		
	HOLL	31	0018	0027	0051	S26	W42	5027	05	27.7	33	SF	C 5.7	3	E		79		F
	MITK	31	0019	0023	0101	S25	W38	5027	05	28.1	42	1F			C	0023	220	3.2	E
0256	SVTO	31	0820	0826	0844	N17	E62	5032	06	5.0	24	SF		3	E		26		
0257	HTPR	31	0901		0907D	N15	E59	5032	06	4.8	6D	SF			C	0903	50	1.0	E
0258	RAMY	31	1053	1055	1101	S24	W47	5027	05	27.8	8	SF		3	E		17		
0259		31	1043*	1050*	1106	N18	E59	5032	06	4.9	23	SF					44		F
	RAMY	31	1043	1050	1054	N17	E57	5032	06	4.8	11	SF		3	E		54		F
	RAMY	31	1055	1059	1113	N17	E59	5032	06	4.9	18	SF		3	E		56		F
	SVTO	31	1100	1103	1110	N19	E61	5032	06	5.1	10	SF		3	E		21		
0260	RAMY	31	1121	1121	1129	N25	E68	5031	06	5.7	8	SF		3	E		29		
0261	SVTO	31	1138	1140	1145	N19	E60	5032	06	5.1	7	SF		3	E		12		
		31	1248		1253	No Flare Patrol													
0262	HOLL	31	1330	1331	1334	N19	E59	5032	06	5.1	4	SF		3	E		20		
0263	HOLL	31	1358	1400	1404	S25	W48	5027	05	27.9	6	SF		3	E		17		F
0264	HOLL	31	1419	1420	1442	S24	W42	5027	05	28.3	23	SF	C 5.4	3	E		58		F
0265	SVTO	31	1435	1435	1442	S32	W42	5027	05	28.3	7	SF		3	E		16		
0266	HOLL	31	1443	1443	1452	N16	E53	5032	06	4.6	9	SF		3	E		14		
0267	HOLL	31	1524	1528	1531	N19	E58	5032	06	5.1	7	SF		3	E		17		
0268	HOLL	31	1616	1627	1633	S24	W49	5027	05	27.9	17	SF		3	E		14		F

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

MAY 1988

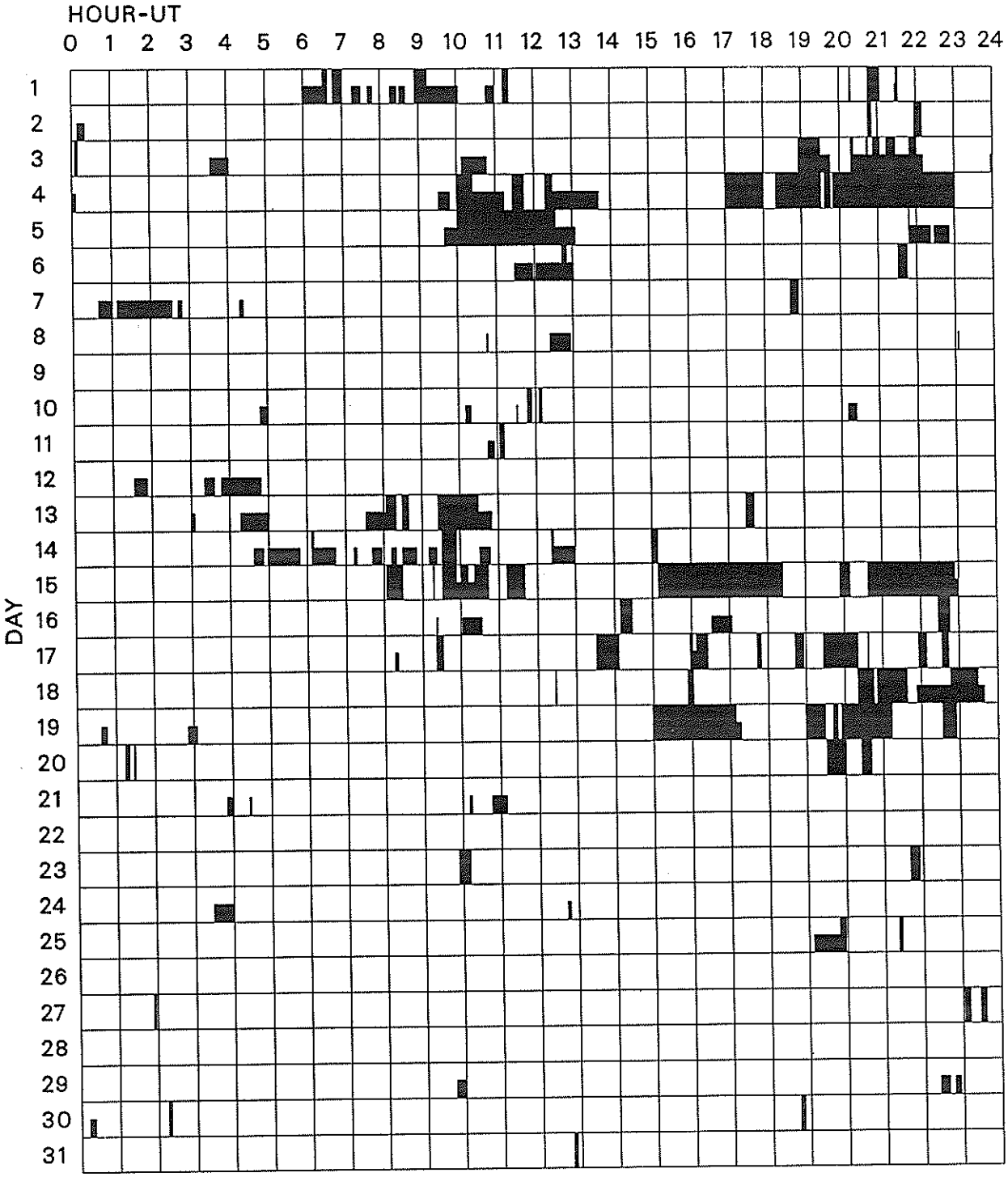
Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0269		31	17358	17462	1804	S24	W46	5027	05	28.2	29	SF					24		F
	RAMY	31	1735	1746	1756	S24	W45	5027	05	28.2	21	SF		3	E		24		F
	HOLL	31	1743	1748	1813	S24	W46	5027	05	28.2	30	SF		3	E		24		F
0270		31	1822*	1825*	1836	N28	E60	5031	06	5.4	14	SF					22		
	RAMY	31	1822	1825	1830	N28	E60	5031	06	5.4	8	SF		3	E		22		
	HOLL	31	1837	1837	1842	N27	E60	5031	06	5.4	5	SF		3	E		22		
0271	HOLL	31	2342	2345	2349	N19	E53	5032	06	5.0	7	SF	C 1.1	3	E		30		

"Remarks"

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

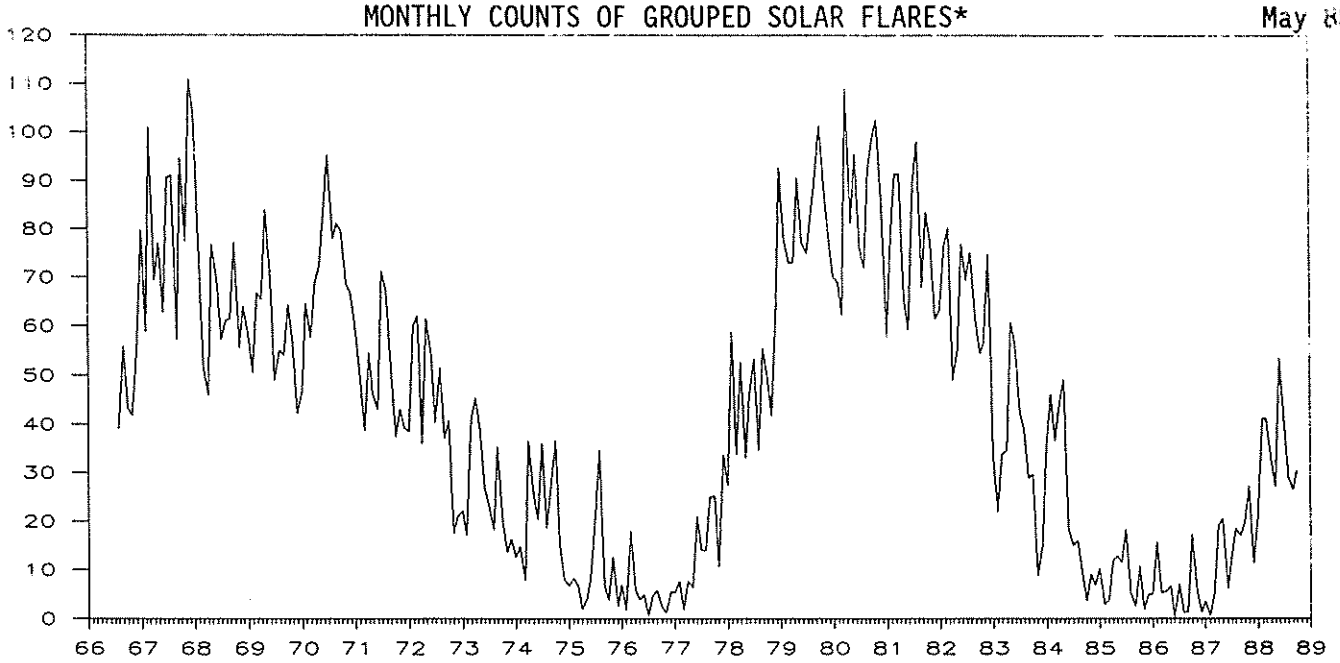
MAY 1988



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	Kharkov	Mitaka	San Vito
Athens	Holloman	Learmonth	Palehua	Tashkent
Bucharest	Istanbul	Lvov	Peking	Urumqi
Catania	Kanzelhoehe	Manila	Ramey	Voroshilov

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	56	13	730
1987	36	7	52	192	205	61	132	185	171	198	273	114	1626
1988	209	412	412	328	271	537	413	291	265	304			3442

*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
OUTSTANDING OCCURRENCES

MAY 1988

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	200	GORK	44	NS	0242.0E		405.0D		60.0		
	100	GORK	44	NS	0248.0E		410.0D		5.0		
	204	IZMI	44	NS	0600.0E		360.0D	80.0			
	234	POTS	43	NS	0600.0	0749.0	253.0D	55.0			
	260	ONDR	44	NS	0708.0E	0711.3U	462.0D	177.0			
	245	PALE	43	NS	1936.0	0122.0	545.0D	140.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1945.0E	0043.0	810.0D	55.0	29.0		ML
	100	HIRA	43	NS	2028.0	2138.0	600.0D	53.0	21.0		
	245	LEAR	43	NS	2300.0	0518.0	641.0D	170.0			QL=5 ST=2 TYP=1
	245	PALE	48	C	0021.0	0024.0	5.0	460.0			QL=5 ST=2 TYP=8
	245	LEAR	48	C	0102.0	0109.0	9.0	1500.0			QL=5 ST=2 TYP=8
	245	PALE	49	GB	0206.0	0206.0		530.0			QL=5 ST=2 TYP=6
	245	PALE	8	S	0417.0	0417.0	1.0	300.0			QL=5 ST=2 TYP=5
	245	PALE	8	S	1828.0	1828.0	1.0	57.0			QL=5 ST=2 TYP=5
02	200	GORK	44	NS	0258.0E		390.0D		35.0		
	100	GORK	44	NS	0259.0E		389.0D		5.0		
	234	POTS	44	NS	0550.0E	0602.0	550.0D	60.0			
	260	ONDR	44	NS	0550.0E	1146.5U	490.0D	1153.0U			
	204	IZMI	44	NS	0600.0E		360.0D	50.0			
	245	PALE	43	NS	1808.0	0056.0	633.0D	84.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1945.0E	0000.0	810.0D	26.0	12.0		ML
	245	LEAR	43	NS	2300.0	0533.0	641.0D	210.0			QL=5 ST=2 TYP=1
	2800	OTTA	22	GRF	1605.0	1642.0	150.0	4.2	2.0		
	245	PALE	8	S	1641.0	1643.0	4.0	24.0			QL=5 ST=2 TYP=3
03	200	GORK	44	NS	0258.0E		542.0D		10.0		
	260	ONDR	44	NS	0550.0E	1326.7U	495.0D	403.0			
	204	IZMI	44	NS	0600.0E		360.0D	20.0			
	245	PALE	43	NS	1638.0	1652.0	723.0D	37.0			QL=5 ST=2 TYP=1
	2800	OTTA	22	GRF	1505.0	1645.0	185.0	11.9	6.0		
	2800	OTTA	22	GRF	1845.0	2120.0	240.0	10.2	5.0		
	200	HIRA	27	RF	2018.0	2043.0	56.0	9.0	3.0		WL
04	260	ONDR	44	NS	0550.0E	1259.3U	495.0D	3.0U			
	500	HIRA	46	C	0202.5	0213.0	27.5	146.0	22.0		WL
	610	LEAR	48	C	0207.0	0213.0	17.0	140.0			QL=5 ST=2 TYP=8
	200	HIRA	46	C	0207.9	0213.2	57.0	130.0	11.0		WL
	245	LEAR	48	C	0208.0	0213.0	12.0	140.0			QL=5 ST=2 TYP=8
	410	LEAR	8	S	0209.0	0209.0	616.0	11.0			QL=5 ST=2 TYP=3
	100	HIRA	7	C	0209.2	0213.2	98.0	870.0	25.0		
	100	HIRA	7	C	0209.2	0256.8		60.0			
	2695	LEAR	8	S	0211.0	0213.0	13.0	92.0			QL=1 ST=2 TYP=5
	4995	LEAR	8	S	0212.0	0213.0	9.0	35.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	0212.0	0213.0	2.0	130.0			QL=5 ST=3 TYP=5
	2950	GORK	20	GRF	0453.0	0630.0	148.0	4.7			
	2950	GORK	20	GRF	0726.0	0910.0	198.0	5.6			
	1470	POTS	20	GRF	0730.0	0911.0	180.0	7.0			
	9500	POTS	20	GRF	0730.0	0907.5	250.0	11.0			
	3000	POTS	20	GRF	0800.0U	0910.0	180.0U	8.0			
05	200	HIRA	43	NS	0200.0	0436.0	300.0	4.0	1.0		0
	200	GORK	43	NS	0255.0		284.0		5.0		
	2950	GORK	22	GRF	0519.6	0521.6	59.0	4.0			
	5900	KISV	22	GRF	0521.0	0522.0	16.0	8.0			
	3100	CRIM	1	S	0521.5	0522.0	1.5	3.0	1.0		
	260	ONDR	42	SER	0555.0	1247.4	470.0	6.0			
	2800	OTTA	24	R	1855.0	1905.0	48.0	2.2	1.0		
	9400	HUAN	3	S	1942.0	1944.2	4.0	33.1	13.3		
	2800	OTTA	22	GRF	1943.0	1946.0	110.0	7.7	3.0		
	9400	HUAN	29	PBI	1946.0	1946.0	33.7	9.7	5.6		
06	650	GORK	41	F	0431.6	0434.1		11.5			
	650	GORK	41	F	0431.6	0431.7	4.2	3.1			
	2950	GORK	22	GRF	0508.6	0511.0	8.1	4.9			
	3100	CRIM	1	S	0510.0	0511.0	2.0	2.0	1.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
06	260	ONDR	41	F	0540.0	1300.0	520.0	168.0U			
	100	HIRA	8	S	0710.8	0710.8	1.0	350.0			
	33	UPIC	45	C	0712.0	0712.5	2.0				
	127	TORN	8	S	0712.1	0712.4	1.2	235.0	120.0		
	29	UPIC	45	C	0712.6	0712.6	1.8				
	2950	GORK	20	GRF	0732.6	0757.0	31.0	2.9			
	29	UPIC	42	SER	0846.0	0852.8	7.0				
	33	UPIC	42	SER	0846.0	0852.8	7.0				
	2950	GORK	20	GRF	0907.6	0936.2	98.0	5.2			
	29	UPIC	8	S	0937.4	0937.5	0.6				
	33	UPIC	8	S	0937.5	0937.5	0.5				
07	260	ONDR	41	F	0620.0		472.0				
	536	ONDR	5	S	1104.1	1104.3	0.8	17.0			
08	245	LEAR	8	S	0912.0	0912.0	1.0	28.0			QL=5 ST=2 TYP=3
	260	ONDR	40	F	1011.2	1014.4	4.4	2.0			
	260	ONDR	40	F	1211.2	1212.3	6.6	1.0			
09	650	GORK	3	S	0820.7	0821.2	0.8	13.0			
	260	ONDR	3	S	1036.4	1036.4	1.3	8.0			
	536	ONDR	42	SER	1104.9	1440.9	216.1U	111.0U			
	260	ONDR	3	S	1349.4	1349.6	1.4	6.0			
10	260	ONDR	42	SER	0841.9	0941.9	172.0	3.0			
	33	UPIC	2	S/F	1030.5	1030.6	0.3				
	29	UPIC	2	S/F	1030.5	1030.7	0.3				
	33	UPIC	45	C	1034.8	1035.0	1.4				
	29	UPIC	45	C	1034.9	1035.0	1.2				
	536	ONDR	41	F	1140.5	1140.5	1.2	99.0			
	9400	HUAN	20	GRF	1350.2	1425.0	60.8	4.0	2.0		
11	260	ONDR	43	NS	0620.0	1202.2U	470.0D	69.0U			
	500	HIRA	6	S	0309.0	0310.5	6.0	3.0			0
	650	GORK	4	S/F	0309.6	0311.1	4.6	8.5			
	950	GORK	4	S/F	0310.1	0311.4	3.3	23.0			
	650	GORK	20	GRF	0406.9E	0416.5	139.1D	3.5			
	536	ONDR	8	S	1034.6	1034.7	0.7	23.0			
	536	ONDR	8	S	1157.0	1157.2	0.5	40.0			
12	260	ONDR	42	SER	0742.9	1033.5	216.0	10.0			
	9300	KISV	2	S/F	0820.8	0821.2	0.8	5.0			
13	260	ONDR	44	NS	0600.0E	0942.0U	480.0D	82.0			
14	2950	GORK	20	GRF	0712.2	0713.8	18.0	1.7			
	260	ONDR	42	SER	1000.0U	1032.2	114.0U	2.0			
15	536	ONDR	8	S	1018.6	1018.8	5.0U	20.0			
	260	ONDR	42	SER	1025.5	1027.3	94.8	214.0			
16	260	ONDR	44	NS	0600.0E	1226.3U	482.0D	157.0U			
	200	GORK	43	NS	0951.0		130.0D		5.0		
	200	HIRA	44	NS	1930.0E	0200.0	840.0D	11.0	5.0		WR
	245	LEAR	8	S	0726.0	0726.0	1.0	52.0			QL=5 ST=2 TYP=5
	204	IZMI	4	S/F	0726.4	0726.5	0.6	78.0	39.0		
	29	UPIC	8	S	0727.2	0727.3	0.9				
	536	ONDR	8	S	1228.2	1228.4	0.6	204.0			
	33	UPIC	8	S	1346.1	1346.2	0.4				
	29	UPIC	8	S	1346.2	1346.4	0.4				
17	200	GORK	44	NS	0238.0E		562.0D		5.0		
	260	ONDR	44	NS	0600.0E	1323.4U	485.0D	325.0U			
	127	TORN	43	NS	0844.0		380.0		2.0		V=1
	245	PALE	43	NS	1626.0	1918.0	741.0D	110.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1930.0E	2055.0	840.0D	37.0	9.0		MR

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
17	245	LEAR	44	NS	2307.0E	0924.0	626.0D	58.0			QL=5 ST=2 TYP=1
	3100	CRIM	20	GRF	0610.0	0710.0	150.0	3.0	1.0		
	204	IZMI	4	S/F	1154.2	1154.4	0.8	144.0	70.0		
	33	UPIC	4	S/F	1155.0	1155.3	0.6				
	29	UPIC	4	S/F	1155.1	1155.5	0.6				
	33	UPIC	4	S/F	1432.8	1433.2	0.7				
	29	UPIC	2	S/F	1433.0	1433.2	0.9				
	245	PALE	48	C	1905.0	1906.0	6.0	510.0			QL=5 ST=3 TYP=8
	9400	HUAN	21	GRF	1927.8	2043.0	113.7	61.4	10.5		
	2800	OTTA	42	SER	2002.0	2027.0	41.0	197.0	80.0		
	9400	HUAN	4	S/F	2006.0	2009.0	9.2	68.2	34.4		
	100	HIRA	46	C	2006.6		16.5	1000.0D			
	200	HIRA	46	C	2006.6	2009.4	4.6	190.0	47.0		WR
	9400	HUAN	3	S	2016.6	2027.5	24.9	75.0	36.7		
	2800	OTTA	29	PBI	2043.0	2043.0	180.0	27.6	13.0		
	9400	HUAN	20	GRF	2125.6	2138.5	20.9	6.8	5.7		
	200	HIRA	46	C	2316.5	2319.1	5.0	150.0			WR
	100	HIRA	46	C	2318.5	2318.7	2.4	280.0			
18	200	GORK	44	NS	0239.0E		546.0D		5.0		
	100	GORK	44	NS	0240.0E		560.0D		5.0		
	204	IZMI	43	NS	0600.0		360.0	17.0			
	260	ONDR	44	NS	0600.0E	1120.0U	498.0D	45.0U			
	127	TORN	43	NS	0747.0		433.0		4.0		V=1
	100	HIRA	41	F	0136.3	0138.3	4.0	450.0			
	500	HIRA	46	C	0213.7	0216.0		35.0			WR
	500	HIRA	46	C	0213.7	0230.5	19.0	305.0	34.0		SR
	100	HIRA	42	SER	0214.5	0215.6	13.2	510.0			
	200	HIRA	46	C	0214.9	0226.5	23.8	310.0	32.0		MR
	410	LEAR	8	S	0215.0	0216.0	2.0	27.0			QL=5 ST=2 TYP=3
	610	LEAR	8	S	0216.0	0216.0		14.0			QL=5 ST=2 TYP=3
	410	LEAR	8	S	0219.0	0219.0	2.0	39.0			QL=5 ST=2 TYP=3
	610	LEAR	8	S	0226.0	0230.0	5.0	140.0			QL=5 ST=2 TYP=5
	245	LEAR	8	S	0226.0	0227.0	5.0	120.0			QL=5 ST=2 TYP=5
	410	LEAR	48	C	0226.0	0230.0	5.0	100.0			QL=5 ST=2 TYP=8
	245	PALE	48	C	0226.0	0227.0	5.0	160.0			QL=5 ST=2 TYP=8
	204	IZMI	23	GRF	0923.0	0924.6	2.0	31.0	15.0		
	5900	KISV	45	C	1051.6	1054.1	25.7	8.0			
	5900	KISV	45	C	1051.6	1055.5		9.0			
	3100	CRIM	3	S	1052.0	1055.5	8.0	5.4	2.0		
	950	GORK	46	C	1052.8	1055.0		7.6			
	950	GORK	46	C	1052.8	1053.8	6.5	9.0			
	2950	GORK	22	GRF	1053.1	1055.5	13.4	5.9			
	9100	GORK	20	GRF	1053.3	1056.9	16.2	4.0			
	650	GORK	41	F	1053.5	1056.8	7.5	4.5			
	234	POTS	8	S	1208.3	1208.6	1.1	2400.0	800.0		
	30	POTS	8	S	1208.6	1208.8	0.8	1600.0	500.0		
	33	UPIC	8	S	1209.0	1209.3	0.5				
	29	UPIC	8	S	1209.2	1209.4	0.4				
	536	ONDR	42	SER	1306.2	1329.6	71.0U	140.0U			
	30	POTS	41	F	1452.2	1458.6	8.9	5800.0			
	234	POTS	4	S/F	1456.6	1457.4	1.6	375.0			
	33	UPIC	46	C	1456.8	1457.9	4.2				
	29	UPIC	46	C	1457.8	1459.3	3.2				
19	260	ONDR	42	SER	0600.0E	1159.0U	487.0D	44.0U			
	536	ONDR	8	S	1116.9	1116.9	0.6	148.0			
	245	PALE	8	S	1926.0	1926.0		150.0			QL=5 ST=2 TYP=5
20	5900	KISV	3	S	0609.8	0612.9	9.0	58.0D			
	3013	IZMI	5	S	0610.0		15.0	737.0			
	3100	CRIM	3	S	0610.0	0613.0	10.0	77.0	26.0		
	2950	GORK	3	S	0610.2	0612.8	7.0	100.0			
	9100	GORK	4	S/F	0610.4	0612.9	4.6	207.0			
	9300	KISV	3	S	0610.6	0612.9	4.0	193.0			
	2695	LEAR	8	S	0611.0	0612.0	5.0	88.0			QL=5 ST=2 TYP=5

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
20	15000	KISV	2	S/F	0611.2	0612.9	5.5	31.0			
	8800	LEAR	8	S	0612.0	0612.0		170.0			QL=5 ST=1 TYP=5
	15400	LEAR	8	S	0612.0	0612.0	3.0	52.0			QL=5 ST=2 TYP=5
	9300	KISV	29	PBI	0614.6	0614.7	72.3	21.0			
	9100	GORK	29	PBI	0615.0	0615.0	90.0	27.0			
	2950	GORK	29	PBI	0617.2	0617.2	70.0	11.2			
	5900	KISV	29	PBI	0618.7	0618.7	70.5	17.0			
	3100	CRIM	29	PBI	0620.0	0620.0	56.0	6.0	2.0		
	260	ONDR	42	SER	0704.3	1203.0U	320.0	165.0			
21	610	LEAR	8	S	0114.0	0114.0		49.0			QL=5 ST=2 TYP=3
	500	HIRA	8	S	0114.2	0114.5	0.6	21.0			0
	260	ONDR	42	SER	0550.0E		512.0D				
	1470	POTS	32	ABS	1109.0	1150.5	61.0	2.0			
	29	UPIC	3	S	1457.5	1457.6	0.4				
	33	UPIC	8	S	1457.5	1457.6	0.3				
	500	HIRA	8	S	2112.9	2113.0	0.7	14.0			0
	200	HIRA	45	C	2323.1	2323.8	1.8	980.0			0
	100	HIRA	46	C	2323.8	2324.4	1.9	1000.0D			
	245	LEAR	8	S	2324.0	2324.0	1.0	430.0			QL=3 ST=3 TYP=5
	410	LEAR	8	S	2324.0	2324.0	2.0	220.0			QL=3 ST=2 TYP=5
	245	PALE	8	S	2324.0	2324.0		350.0			QL=5 ST=3 TYP=5
	500	HIRA	6	S	2324.0	2324.4	1.4	850.0			0
22	200	GORK	44	NS	0300.0E		397.0D		5.0		
	260	ONDR	44	NS	0550.0E	0931.4U	490.0D	167.0			
	245	LEAR	43	NS	2310.0	0223.0	621.0D	130.0			QL=5 ST=2 TYP=1
	430	KRAK	8	S	0718.2	0718.4	0.3	4.0			
	245	LEAR	8	S	0807.0	0807.0	1.0	28.0			QL=5 ST=2 TYP=3
	5900	KISV	45	C	1057.0	1104.7	16.0	8.0			
	3100	BERN	3	S	1058.0	1105.3	16.0	6.0			
	5200	BERN	3	S	1058.0	1105.3	16.0	22.0			
	3100	CRIM	1	S	1101.2	1104.6	6.0	5.0	2.0		
	3100	CRIM	29	PBI	1106.7	1107.3	23.0	2.0	0.5		
	500	HIRA	8	S	2208.5	2209.0	0.7	110.0			0
23	200	HIRA	43	NS	0024.0	0318.0	540.0D	7.0	3.0		0
	100	GORK	44	NS	0357.0E		468.0D		5.0		
	200	GORK	44	NS	0400.0E		465.0D		5.0		
	260	ONDR	44	NS	0545.0E	0842.8U	495.0D	176.0			
	204	IZMI	43	NS	0600.0		360.0	7.0			
	127	TORN	44	NS	1000.0E		300.0D		3.0		V=1
	245	PALE	8	S	0223.0	0223.0		210.0			QL=5 ST=2 TYP=5
	2950	GORK	1	S	0418.3	0419.0	2.7	1.5			
	3100	CRIM	21	GRF	0441.5	0555.0	73.5U	10.0	3.0		
	3100	CRIM	1	S	0501.6	0503.5	4.0	2.0	0.7		
	2950	GORK	4	S/F	0502.3U	0503.2	3.1U	3.1			
	9100	GORK	20	GRF	0531.6	0536.3	54.4	8.3			
	2950	GORK	20	GRF	0534.6	0558.0	58.0	4.9			
	15000	KISV	22	GRF	0754.0	0827.0	60.0	30.0			
	9100	GORK	2	S/F	0755.4	0756.3	6.5	13.0			
	5900	KISV	45	C	0755.4	0756.4	5.6	8.0			
	9300	KISV	45	C	0755.4	0756.4	4.6	16.0			
	9500	POTS	4	S/F	0755.5	0756.4	4.0	11.0			
	2950	GORK	1	S	0755.8	0756.4	8.5	2.4			
	650	GORK	2	S/F	0756.7	0757.3	1.9	1.0			
	9300	KISV	22	GRF	0822.0	0827.4	32.7	13.0			
	5900	KISV	22	GRF	0824.0	0828.4	30.0	7.0			
	9100	GORK	2	S/F	0824.2	0826.0	5.4	10.0			
	3100	CRIM	25	R	1010.0	1210.0		10.0			
	810	KRAK	8	S	1011.6	1011.7	0.2	3.0			
	810	KRAK	8	S	1111.8	1112.0	0.2	9.0			
	9100	GORK	21	GRF	1135.5		28.0D				
	2950	GORK	21	GRF	1148.8	1200.2	14.0D	4.3			
	5900	KISV	1	S	1156.5	1157.7	3.5	21.0			
	9500	POTS	1	S	1156.5	1158.8	2.9	9.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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	3	S	1157.5	1158.7	3.5	18.0			
	3000	POTS	3	S	1157.5	1158.8	2.5	44.0			
	3100	CRIM	3	S	1157.6	1158.8	2.4	32.0	11.0		
	9300	KISV	1	S	1157.7	1158.7	1.5	10.0			
	2950	GORK	3	S	1157.8	1158.7	2.2	47.0			
	3013	IZMI	5	S	1158.0	1159.0	2.0	43.0	20.0		
	237	TRST	46	C	1158.2	1158.5	0.6	138.0			350L
	204	IZMI	4	S/F	1158.2	1158.6	1.2	90.0	45.0		
	950	GORK	5	S	1158.2	1158.7	1.4	16.0			
	9100	GORK	1	S	1158.2	1158.7	1.0	9.8			
	536	ONDR	8	S	1158.2	1158.7	0.9	38.0			
	650	GORK	4	S/F	1158.3	1158.7	0.9	11.0			
	430	KRAK	1	S	1158.3	1158.7	0.7	0.4	0.2		
	810	KRAK	1	S	1158.3	1158.7	0.7	4.0	2.0		
	9300	KISV	45	C	1205.0	1207.2		23.0			
	3100	BERN	46	C	1205.0	1206.3	6.0	8.0			
	5200	BERN	46	C	1205.0	1206.3	12.0	20.0			
	11800	BERN	46	C	1205.0	1206.3	20.0	40.0			
	8400	BERN	46	C	1205.0	1206.3	20.0	56.0			
	9500	POTS	29	PBI	1205.0	1206.4	30.0	31.0			
	9300	KISV	45	C	1205.0	1206.5	4.5	34.0			
	5900	KISV	45	C	1205.6	1207.2		18.0			
	5900	KISV	45	C	1205.6	1206.5	5.5	22.0			
	15000	KISV	45	C	1206.1	1207.2		14.0			
	15000	KISV	45	C	1206.1	1206.5	9.5	20.0			
	9300	KISV	29	PBI	1208.6	1208.6	13.5	9.0			
	5900	KISV	29	PBI	1208.9	1208.9	12.0	7.0			
	2800	OTTA	46	C	1506.0	1507.2	2.8	10.4	5.0		
	2800	OTTA	29	PBI	1509.0	1509.0	28.0	5.3	2.0		
	9400	HUAN	21	GRF	1547.9	1623.1	60.9	6.9	2.7		
	9400	HUAN	2	S/F	1614.0	1616.4	7.2	31.0	11.2		
	3100	BERN	3	S	1615.0	1617.0	8.0	7.0			
	5200	BERN	3	S	1615.0	1617.0	8.0	17.0			
	8400	BERN	3	S	1615.0	1617.0	8.0	54.0			
	11800	BERN	3	S	1615.0	1617.0	8.0	37.0			
	9400	HUAN	21	GRF	1719.2	1739.0	35.8	12.0	6.1		
	9400	HUAN	4	S/F	1728.4	1733.2	7.6	74.0	21.9		
	2800	OTTA	46	C	1728.5	1733.5	6.5	10.6	5.0		
	2800	OTTA	29	PBI	1735.0	1735.0	9.3	2.8	1.0		
	9400	HUAN	20	GRF	1943.8	2011.0	35.5	5.2	3.3		
24	200	GORK	44	NS	0405.0E		448.0D		5.0		
	200	HIRA	41	F	0302.9	0303.4	3.0	28.0			0
	9100	GORK	20	GRF	0354.0	0401.2	42.0	8.3			
	2950	GORK	1	S	0442.7	0443.0	1.0	2.5	1.2		
	9300	KISV	22	GRF	0544.1	0550.1	13.0	7.0			
	9100	GORK	20	GRF	0547.8	0551.8	21.2	6.0			
	2950	GORK	21	GRF	0549.5	0551.2	10.7	3.8			
	5900	KISV	45	C	0549.6	0550.0	5.5	8.0			
	950	GORK	6	S	0549.6	0550.1	1.5	1.6			
	5900	KISV	45	C	0549.6	0551.3		7.0			
	2950	GORK	1	S	0549.8	0550.0	0.7	4.7			
	3100	CRIM	1	S	0549.8	0550.1	1.0	4.0	1.0		
	260	ONDR	42	SER	0550.0E	1027.4	500.0D	6.0			
	1470	POTS	20	GRF	0715.0	0830.0U	195.0	5.0U			
	3000	POTS	20	GRF	0725.0U	0809.0	185.0U	13.0			
	9500	POTS	20	GRF	0740.0	0825.3	165.0	9.0			
	5900	KISV	2	S/F	0749.9	0751.4	3.5	5.0			
	9300	KISV	2	S/F	0750.9	0751.4	1.5	4.0			
	9300	KISV	23	GRF	0807.7	0838.3	76.0	12.0			
	9300	KISV	23	GRF	0807.7	0809.4		10.0			
	9300	KISV	23	GRF	0807.7	0816.6		11.0			
	5900	KISV	23	GRF	0808.0	0810.4	76.0	15.0			
	3100	CRIM	20	GRF	0808.0	0809.5	47.0	5.8	2.0		
	9100	GORK	20	GRF	0808.4	0809.4	48.6	9.0			
	2950	GORK	22	GRF	0808.7	0809.3	20.0	4.5			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
24	810	KRAK	8	S	1039.5	1039.5	0.5	8.0			
	810	KRAK	8	S	1133.5	1133.6	0.2	3.0			
	810	KRAK	8	S	1144.7	1144.8	0.2	4.0			
	5900	KISV	22	GRF	1226.5	1231.5	20.5	5.0			
	9300	KISV	22	GRF	1229.0	1231.2	12.0	6.0			
	127	TORN	41	F	1235.0	1250.5	36.0	120.0	1.0		
	5900	KISV	1	S	1329.5	1331.8	5.5	7.0			
	9400	HUAN	1	S	1329.7	1331.8	6.4	13.3	3.7		
	9300	KISV	21	GRF	1331.0	1332.0	9.0	15.0			
	9500	POTS	3	S	1331.3	1332.0	1.7	14.0			
	9400	HUAN	22	GRF	1441.2	1459.5	39.9	5.0	1.8		
	9400	HUAN	1	S	1636.8	1639.4	9.0	6.6	1.5		
	9400	HUAN	20	GRF	1733.5	1747.2	42.3	7.5	2.8		
25	200	GORK	44	NS	0245.0E		555.0D		5.0		
	127	TORN	44	NS	0620.0E		520.0D		11.0		V=1
	9100	GORK	1	S	0316.2	0316.4	1.4	7.8			
	650	GORK	41	F	0322.2	0326.2		96.0			
	650	GORK	41	F	0322.2	0323.5	6.9	92.0			
	650	GORK	41	F	0322.2	0325.8		193.0			
	650	GORK	41	F	0322.2	0327.9		59.0			
	950	GORK	46	C	0323.2	0325.7	5.9	66.0			
	950	GORK	46	C	0323.2	0327.8		40.0			
	2950	GORK	4	S/F	0325.5	0326.1	3.3	3.6			
	650	GORK	41	F	0530.0	0530.1	11.0	22.5			
	650	GORK	41	F	0530.0	0533.5		28.0			
	650	GORK	41	F	0530.0	0530.8		24.0			
	650	GORK	41	F	0536.5	0536.5		93.0			
	650	GORK	41	F	0536.5	0538.0		53.0			
	260	ONDR	42	SER	0600.0E	1238.0U	484.0D				
	9300	KISV	45	C	0603.5	0612.1		4.0			
	9300	KISV	45	C	0603.5	0608.7	10.5	6.0			
	5900	KISV	46	C	0604.0	0612.2	13.3	10.0			
	650	GORK	4	S/F	0605.6	0606.0	1.3	7.3			
	650	GORK	46	C	0610.7	0612.0		77.0			
	650	GORK	46	C	0610.7	0611.2	4.1	214.0			
	650	GORK	46	C	0610.7	0611.5		267.0			
	410	LEAR	8	S	0611.0	0611.0	1.0	130.0			QL=5 ST=2 TYP=5
	610	LEAR	8	S	0611.0	0612.0	2.0	61.0			QL=5 ST=2 TYP=5
	2695	LEAR	8	S	0611.0	0612.0	5.0	23.0			QL=5 ST=3 TYP=3
	950	GORK	5	S	0611.0	0612.2	2.7	12.0			
	3100	CRIM	1	S	0611.9	0612.2	2.0	13.0	4.0		
	2950	GORK	3	S	0611.9	0612.2	1.3	17.1			
	9100	GORK	1	S	0612.0	0612.2	1.0	3.5			
	3013	IZMI	5	S	0612.0	0612.4	2.8	15.0	6.0		
	2950	GORK	30	PBI	0613.2	0613.3	30.0	2.1	1.0		
	950	GORK	29	PBI	0613.7	0613.9	3.2	2.7			
	9300	KISV	22	GRF	0627.9	0631.0	10.8	5.0			
	5900	KISV	2	S/F	0630.1	0630.9	7.3	6.0			
	9100	GORK	1	S	0630.6	0631.0	1.4	3.5			
	204	IZMI	3	S	0632.0	0632.4	0.6	38.0	19.0		
	237	TRST	45	C	0632.3	0632.4	0.2	45.0			50L
	327	TRST	45	C	0632.3	0632.6	0.4	45.0			40L
	3100	CRIM	20	GRF	0705.0	0721.0	51.0	2.7	1.0		
	810	KRAK	8	S	0713.0	0713.1	0.2	4.0			
	810	KRAK	8	S	0728.0	0728.1	0.2	3.0			
	204	IZMI	5	S	0918.8	0919.0	0.4	44.0	22.0		
	29	UPIC	45	C	0919.6	0920.5	1.9				
	33	UPIC	45	C	0919.8	0920.5	2.0				
	810	KRAK	8	S	0921.7	0921.7	0.1	5.0			
	5900	KISV	45	C	0924.1	0928.3	6.9	31.0			
	2950	GORK	20	GRF	0926.0	0928.3	35.5	9.0			
	9500	POTS	29	PBI	0926.0	0928.5	58.0	22.0			
	3000	POTS	29	PBI	0926.0	0928.5	64.0	12.0			
	3100	CRIM	45	C	0927.0	0931.0		3.8			
	8400	BERN	3	S	0927.0	0929.0	80.0	44.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
25	5200	BERN	3	S	0927.0	0929.0	80.0	25.0			
	3013	IZMI	7	C	0927.0	0929.4	33.0	9.0	4.0		
	3100	CRIM	45	C	0927.0	0928.5	7.0	4.1	1.0		
	9100	GORK	22	GRF	0927.2	0928.5	45.0	22.0			
	9300	KISV	21	GRF	0927.6	0928.5	40.0	26.0			
	1470	POTS	4	S/F	0927.8	0928.2	1.7	9.0			
	5900	KISV	29	PBI	0931.0	0933.3	66.0	14.0			
	33	UPIC	45	C	0932.5	0933.7	3.3				
	810	KRAK	8	S	0933.3	0933.3	0.1	6.0			
	29	UPIC	45	C	0933.5	0934.6	1.4				
	810	KRAK	8	S	0933.8	0933.8	0.1	6.0			
	3100	CRIM	29	PBI	0934.0	0934.0	16.0	2.7	1.0		
	810	KRAK	8	S	0949.3	0949.3	0.1	3.0			
	29	UPIC	45	C	1019.6	1020.1	2.5				
	33	UPIC	45	C	1019.6	1019.9	3.0				
	810	KRAK	8	S	1040.7	1040.7	0.1	3.0			
	810	KRAK	8	S	1046.8	1046.8	0.1	3.0			
	810	KRAK	8	S	1051.8	1051.8	0.1	2.0			
	2950	GORK	1	S	1055.6	1056.0	0.5	3.0	1.0		
	3100	CRIM	1	S	1100.5	1101.0	2.0	4.7	1.5		
	5900	KISV	45	C	1100.5	1101.3		23.0			
	1470	POTS	4	S/F	1100.5	1101.3	1.5	8.0			
	9500	POTS	4	S/F	1100.5	1101.3	1.5	12.0			
	3000	POTS	2	S/F	1100.5	1100.8	1.5	7.0			
	5900	KISV	45	C	1100.5	1100.9	1.7	22.0			
	9100	GORK	45	C	1100.6	1101.3		12.8			
	9100	GORK	45	C	1100.6	1100.9	3.6	15.4			
	9300	KISV	45	C	1100.7	1101.3		15.0			
	810	KRAK	8	S	1100.7	1100.7	0.1	5.0			
	9300	KISV	45	C	1100.7	1100.9	1.3	18.0			
	610	TRST	46	C	1101.2	1101.2	0.1	377.0			120R
	408	TRST	45	C	1101.2	1101.3	0.1	43.0			10R
	810	KRAK	8	S	1107.0	1107.0	0.1	3.0			
	810	KRAK	8	S	1134.7	1134.8	0.3	3.0			
	810	KRAK	8	S	1202.0	1202.1	0.2	6.0			
	5900	KISV	1	S	1217.5	1217.9	1.2	4.0			
	9300	KISV	23	GRF	1258.4	1319.4	26.0	6.0			
	5900	KISV	23	GRF	1258.7	1319.5	34.5	5.0			
	5900	KISV	1	S	1346.0	1346.3	0.6	4.0			
	9400	HUAN	3	S	1354.8	1355.3	5.7	102.3	24.3		
	5900	KISV	4	S/F	1354.9	1355.6	3.0	86.0			
	9500	POTS	3	S	1355.0	1355.6	3.0	89.0			
	9300	KISV	4	S/F	1355.0	1355.7	4.0	10.2D			
	1470	POTS	3	S	1355.0	1355.7	7.5	51.0			
	3000	POTS	3	S	1355.0	1355.7	4.0	36.0			
	5200	BERN	3	S	1355.1	1355.3	1.5	62.0			
	8400	BERN	3	S	1355.1	1355.3	1.5	175.0			
	11800	BERN	3	S	1355.1	1355.3	1.5	103.0			
	15000	KISV	2	S/F	1355.2	1355.6	1.5	41.0			
	2800	OTTA	3	S	1355.2	1355.9	4.3	39.4	12.0		
	33	UPIC	42	SER	1431.6	1432.9	21.0				
	2800	OTTA			1510.0	1553.0	275.0	5.8			
	9400	HUAN	20	GRF	1548.7	1602.3	33.1	8.8	2.5		
	200	HIRA	24	R	1930.0E	2351.0	840.0D	3.0	2.1		WR
	9400	HUAN	42	SER	2054.5	2105.0		12.4			
	9400	HUAN	42	SER	2054.5	2117.2		7.9			
	9400	HUAN	42	SER	2054.5	2056.5	22.7	11.5	6.4		
	100	HIRA	42	SER	2133.0	2135.0	17.0	1000.0D			
26	200	GORK	44	NS	0249.0E		551.0D		5.0		
	100	GORK	44	NS	0250.0E		550.0D		10.0		
	127	TORN	44	NS	0620.0E	1051.0	540.0D	80.0	3.0		V=1
	260	ONDR	44	NS	0850.0E		310.0D				
	245	PALE	43	NS	1804.0	1855.0	647.0D	88.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1930.0E	0757.0	840.0D	17.0	11.0		MR
	245	LEAR	44	NS	2312.0E	0103.0	48.0D	34.0			QL=5 ST=1 TYP=1

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
26	500	HIRA	41	F	0100.0	0102.0	7.5	460.0			0
	2695	LEAR	8	S	0100.0	0103.0	6.0	74.0			QL=5 ST=2 TYP=5
	8800	LEAR	8	S	0102.0	0103.0	4.0	91.0			QL=5 ST=2 TYP=5
	610	LEAR	8	S	0102.0	0102.0	2.0	41.0			QL=5 ST=2 TYP=3
	410	LEAR	8	S	0102.0	0102.0	1.0	150.0			QL=5 ST=2 TYP=5
	15400	LEAR	8	S	0103.0	0103.0	1.0	56.0			QL=5 ST=2 TYP=5
	9100	GORK	22	GRF	0300.0E	0316.3	250.0D	15.0			
	5900	KISV	22	GRF	0448.0	0503.8	55.5	12.0			
	2950	GORK	20	GRF	0453.5	0501.5	41.0	3.7	1.5		
	5900	KISV	23	GRF	0541.5	0546.3	69.5	12.0			
	9300	KISV	22	GRF	0545.4	0726.0	435.0	12.0			
	3100	CRIM	20	GRF	0622.0	0623.4	23.0	2.3	0.8		
	2950	GORK	20	GRF	0622.3	0623.3	17.5	3.1			
	9300	KISV	21	GRF	0715.0	0728.0	63.0	11.0			
	5900	KISV	22	GRF	0717.4	0746.4	90.6	9.0			
	5900	KISV	1	S	0925.0	0926.0	2.5	2.0			
	204	IZMI	3	S	0929.6	0930.0	0.8	10.0	5.0		
	5900	KISV	21	GRF	0937.8	0942.3	15.5	25.0			
	9300	KISV	45	C	0941.2	0942.0	20.8	33.0			
	9300	KISV	45	C	0941.2	0942.1		23.0			
	9500	POTS	29	PBI	0941.9	0942.0	18.0	18.0			
	9100	GORK	45	C	0942.0	0942.1	3.0	23.0			
	9100	GORK	45	C	0942.0	0942.2		16.0			
	2950	GORK	1	S	0942.0	0942.2	0.8	1.8	0.9		
	3000	POTS	1	S	0942.0	0942.4	1.0	4.0			
	127	TORN	7	C	1022.5	1023.8	3.0	190.0	55.0		
	536	ONDR	42	SER	1025.0	1135.3	215.0	48.0U			
	2950	GORK	1	S	1031.1	1032.0	2.5	1.5	0.7		
	5900	KISV	45	C	1113.1	1114.7	3.2	7.0			
	9300	KISV	1	S	1114.4	1114.7	1.0	9.0			
	100	GORK	46	C	1121.6	1123.5		2000.0			
	100	GORK	46	C	1121.6	1122.7	3.0	1900.0			
	29	UPIC	45	C	1121.7U	1123.2	5.1U				
	33	UPIC	46	C	1122.0	1123.0	7.7				
	200	GORK	46	C	1122.6	1123.8		17.0			
	200	GORK	46	C	1122.6	1122.9	3.0	10.0			
	650	GORK	46	C	1141.0	1142.1	3.2	2.5			
	650	GORK	46	C	1141.0	1143.3		2.5			
	9400	HUAN	1	S	1456.1	1459.4	5.9	4.0	1.4		
	9400	HUAN	1	S	1623.3	1624.8	4.9	3.2	1.8		
	9400	HUAN	20	GRF	1804.3	1832.8	57.1	6.4	2.5		
	9400	HUAN	23	GRF	1926.7	2148.2	171.8	16.1	2.2		
	9400	HUAN	4	S/F	2107.7	2109.8	11.1	54.7	31.2		
27	200	GORK	44	NS	0256.0E		523.0D		10.0		
	100	GORK	44	NS	0300.0E		519.0D		5.0		
	260	ONDR	44	NS	0550.0E	0945.6U	483.0D	94.0			
	204	IZMI	43	NS	0600.0		360.0	22.0			
	127	TORN	44	NS	0620.0E	0902.3	560.0D	970.0	10.0		V=2
	33	UPIC	43	NS	0800.5		377.0				
	29	UPIC	43	NS	0801.5		368.5D				
	245	PALE	43	NS	1626.0	2120.0	745.0D	69.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1930.0E	0515.0	840.0D	16.0	10.0		MR
	245	LEAR	43	NS	2312.0	0636.0	618.0D	25.0			QL=5 ST=2 TYP=1
	245	LEAR	43	NS	2312.0	0330.0	618.0D	41.0			QL=5 ST=2 TYP=1
	2950	GORK	21	GRF	0536.5	0544.0	44.0	11.3			
	9300	KISV	46	C	0537.7	0544.0		20.0			
	9300	KISV	46	C	0537.7	0542.3	11.8	13.0			
	9300	KISV	46	C	0537.7	0547.6		15.0			
	5900	KISV	46	C	0538.0	0544.3	14.7	21.0			
	9100	GORK	20	GRF	0540.4	0544.1	28.6	14.0			
	3100	CRIM	1	S	0541.0	0541.9	1.3	12.6	4.0		
	2950	GORK	3	S	0541.3	0541.8	1.2	12.4			
	3100	CRIM	29	PBI	0542.3	0542.3	28.0	6.3	2.0		
	9300	KISV	29	PBI	0549.5	0549.5	34.5	11.0			
	5900	KISV	29	PBI	0552.7	0552.7	22.6	11.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
27	810	KRAK	8	S	0743.0	0743.0	0.4	6.0			
	810	KRAK	8	S	0746.0	0746.0	0.2	3.0			
	9300	KISV	21	GRF	0827.4	0833.6	8.0	7.0			
	5900	KISV	1	S	0827.8	0828.5	5.6	9.0			
	5900	KISV	1	S	0838.0	0838.7	2.5	3.0			
	810	KRAK	8	S	0848.2	0848.3	0.5	7.0			
	5900	KISV	21	GRF	0857.8	0902.1	30.0	7.0			
	3100	CRIM	20	GRF	0900.0	0908.2	18.0	2.0	1.0		
	810	KRAK	8	S	1054.0	1054.0	0.2	6.0			
	810	KRAK	8	S	1102.2	1102.3	0.5	13.0			
	810	KRAK	8	S	1113.5	1113.5	0.3	3.0			
	9100	GORK	21	GRF	1119.4	1138.9	44.0D	46.0			
	3000	POTS	23	GRF	1120.0U	1133.2	95.0U	23.0			
	9500	POTS	23	GRF	1120.0	1134.7	80.0	32.0			
	5900	KISV	46	C	1121.7	1134.6	14.3	71.0			
	2800	OTTA	22	GRF	1122.0	1135.0	95.0	18.0			
	9300	KISV	45	C	1123.0	1134.6	64.0	46.0			
	9300	KISV	45	C	1123.0	1138.9		36.0			
	2950	GORK	20	GRF	1123.7	1134.5	41.0D	17.7			
	3100	CRIM	45	C	1124.1	1135.0		13.8			
	3100	CRIM	45	C	1124.1	1127.3	16.0	6.0	4.0		
	1470	POTS	20	GRF	1125.0	1134.0	50.0	2.0			
	3013	IZMI	7	C	1125.0	1135.0	740.0	16.0	8.0		
	15000	KISV	22	GRF	1129.0E	1138.9	48.0D	23.0			
	9100	GORK	1	S	1134.4	1134.6	0.5	12.0	6.0		
	5900	KISV	29	PBI	1136.0	1136.0	50.0	44.0			
	3100	CRIM	29	PBI	1140.0	1140.0	52.0	10.0	3.0		
	810	KRAK	8	S	1158.5	1158.5	0.5	11.0			
	5900	KISV	46	C	1203.0	1208.0		6.0			
	5900	KISV	46	C	1203.0	1203.7	13.0	11.0			
	9300	KISV	1	S	1203.5	1203.7	0.8	14.0			
	810	KRAK	8	S	1204.9	1205.5	0.6	3.0			
	9400	HUAN	21	GRF	1255.8	1355.4	86.4	19.1	2.7		
	5900	KISV	21	GRF	1255.9	1257.2	10.0	9.0			
	9300	KISV	2	S/F	1256.6	1257.7	3.0	9.0			
	9500	POTS	1	S	1257.0	1257.2	1.2	7.0			
	9500	POTS	45	C	1342.0	1348.5	63.0	135.0			
	9400	HUAN	45	C	1342.5	1348.4	12.0	135.7	55.4		
	15000	KISV	46	C	1342.6	1348.2		82.0			
	15000	KISV	46	C	1342.6	1343.3	25.0D	61.0			
	9300	KISV	46	C	1342.7	1348.5	23.0D	163.0			
	5900	KISV	46	C	1342.7	1348.5	30.0D	155.0			
	2800	OTTA	20	GRF	1343.0	1351.0	66.0	16.0			
	3000	POTS	29	PBI	1343.0	1350.8	62.0	19.0			
	1470	POTS	20	GRF	1350.0	1416.0	60.0D	4.0			
	9400	HUAN	1	S	1356.8	1357.9	3.4	8.7	2.9		
	5900	KISV	1	S	1357.1	1358.0	2.3	19.0			
	9300	KISV	2	S/F	1357.3	1357.9	2.0	15.0			
	9400	HUAN	22	GRF	1542.3	1601.5	43.5	5.2	3.2		
	9400	HUAN	20	GRF	1823.1	1832.3	23.3	10.4	3.8		
	9400	HUAN	21	GRF	1934.3	2008.5	48.7	7.0	2.6		
	9400	HUAN	2	S/F	1955.5	2000.8	10.5	36.5	9.1		
	100	HIRA	45	C	2344.4		3.5	1000.0D			
	200	HIRA	45	C	2344.6	2344.9	1.8	610.0			0
	2695	LEAR	8	S	2345.0	2345.0	1.0	80.0			QL=5 ST=2 TYP=5
	610	LEAR	8	S	2345.0	2345.0	1.0	15.0			QL=5 ST=2 TYP=3
	8800	LEAR	8	S	2345.0	2345.0		220.0			QL=5 ST=2 TYP=5
	15400	LEAR	8	S	2345.0	2345.0		77.0			QL=5 ST=2 TYP=5
	245	PALE	8	S	2345.0	2345.0		300.0			QL=5 ST=2 TYP=5
	500	HIRA	45	C	2345.0	2345.8	8.0	13.0	6.0		0
28	200	GORK	44	NS	0255.0E		395.0D		10.0		
	100	GORK	44	NS	0256.0E		395.0D		10.0		
	260	ONDR	44	NS	0612.0E	1026.8	505.0D	167.0			
	127	TORN	44	NS	0620.0E		560.0D		26.0		V=1
	200	HIRA	44	NS	1930.0E	2336.0	840.0D	49.0	30.0		MR

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
28	100	HIRA	44	NS	1930.0E	2219.0	840.0D	170.0	64.0		
	245	PALE	43	NS	2218.0	2339.0	393.0D	74.0			QL=5 ST=2 TYP=1
	245	LEAR	43	NS	2313.0	0434.0	616.0D	70.0			QL=5 ST=2 TYP=1
	9100	GORK	1	S	0354.2	0354.9	1.3	3.2	1.5		
	5900	KISV	21	GRF	0429.1	0436.3	19.7	7.0			
	9100	GORK	20	GRF	0433.8	0436.4	8.2	4.0			
	200	HIRA	8	S	0434.8	0435.0	0.9	580.0			WR
	245	LEAR	8	S	0435.0	0436.0	1.0	470.0			QL=5 ST=2 TYP=5
	245	PALE	8	S	0435.0	0436.0	1.0	400.0			QL=5 ST=2 TYP=5
	500	HIRA	6	S	0435.1	0436.3	4.0	4.0			0
	3100	CRIM	1	S	0435.5	0436.2	1.0	3.0	1.0		
	950	GORK	5	S	0435.5	0436.3	2.1	8.0			
	2950	GORK	1	S	0435.6	0436.2	3.6	5.4			
	650	GORK	20	GRF	0435.9	0436.4	8.2	3.6			
	950	GORK	29	PBI	0437.6	0437.6	7.3	3.5			
	5900	KISV	21	GRF	0557.3	0559.1	14.0	8.0			
	2950	GORK	21	GRF	0720.3	0911.5	133.0D	6.4			
	245	LEAR	8	S	0724.0	0724.0	1.0	80.0			QL=5 ST=2 TYP=5
	237	TRST	46	C	0724.6	0724.7	0.2	260.0			130R
	9500	POTS	28	PRE	0752.0	0759.5	18.0	30.0			
	9100	GORK	21	GRF	0752.2	0827.0	49.8	16.0			
	15400	LEAR	8	S	0755.0	0758.0	7.0	25.0			QL=5 ST=2 TYP=3
	5900	KISV	46	C	0758.1	0801.3	11.5U	20.0			
	8800	LEAR	8	S	0759.0	0800.0	3.0	29.0			QL=5 ST=2 TYP=3
	9100	GORK	2	S/F	0759.0	0800.2	3.1	23.0			
	9300	KISV	2	S/F	0759.0	0800.4	4.0U	29.0			
	810	KRAK	8	S	0811.9	0812.0	0.3	4.0			
	5900	KISV	4	S/F	0819.9	0822.7	17.0	63.0D			
	8800	LEAR	8	S	0820.0	0822.0	5.0	84.0			QL=5 ST=2 TYP=5
	9300	KISV	45	C	0820.0	0822.8	7.5	62.0			
	9500	POTS	4	S/F	0820.0	0822.8	15.0	72.0			
	9100	GORK	4	S/F	0820.1	0822.7	6.9	76.0			
	810	KRAK	8	S	0835.0	0835.0	0.1	3.0			
	810	KRAK	8	S	0853.3	0853.3	0.5	7.0			
	5900	KISV	4	S/F	0856.2	0859.8	7.0	67.0			
	9100	GORK	21	GRF	0857.6	0915.5	36.0	20.0			
	9500	POTS	3	S	0858.0	0859.8	4.5	72.0			
	9300	KISV	4	S/F	0858.6	0859.6	4.9	75.0			
	9100	GORK	3	S	0858.8	0859.7	3.4	80.0			
	15000	KISV	2	S/F	0858.8	0859.7	2.0	32.0			
	8800	LEAR	8	S	0859.0	0859.0	1.0	47.0			QL=5 ST=2 TYP=3
	2695	LEAR	8	S	0859.0	0859.0	1.0	12.0			QL=5 ST=2 TYP=3
	3100	CRIM	1	S	0859.1	0859.9	2.0	7.0	2.0		
	2950	GORK	3	S	0859.2	0859.7	1.5	9.4			
	810	KRAK	8	S	0904.7	0904.7	0.5	7.0			
	9500	POTS	4	S/F	0907.5	0909.8	33.0	76.0			
	5900	KISV	3	S	0907.6	0909.8	4.0	71.0			
	9300	KISV	4	S/F	0907.7	0909.6	3.0	82.0			
	9100	GORK	4	S/F	0907.8	0909.7	7.1	82.0			
	8800	LEAR	8	S	0909.0	0909.0	1.0	85.0			QL=5 ST=2 TYP=5
	15000	KISV	2	S/F	0909.1	0909.7	3.9	13.0			
	9300	KISV	29	PBI	0910.7	0910.7	42.3	47.0			
	5900	KISV	29	PBI	0911.6	0911.6	13.8	35.0			
	204	IZMI	4	S/F	1026.4	1027.0	0.6	240.0	120.0		
	536	ONDR	8	S	1032.3	1032.4	0.6	13.0			
	9300	KISV	45	C	1103.6	1113.6	19.2	45.0			
	9300	KISV	45	C	1103.6	1114.8		46.0			
	5900	KISV	46	C	1103.7	1114.8	28.5	28.0			
	9500	POTS	4	S/F	1110.0	1113.5	18.0	37.0			
	9300	KISV	22	GRF	1123.7	1140.4	25.9	13.0			
	3100	CRIM	20	GRF	1133.0	1140.4	17.0	6.0	2.0		
	5900	KISV	22	GRF	1134.8	1140.3	13.8	9.0			
	29	UPIC	45	C	1149.5	1149.7	2.8				
	9400	HUAN	1	S	1236.7	1239.0	4.7	8.2	2.8		
	9300	KISV	4	S/F	1320.8	1322.7	5.6	31.0			
	5900	KISV	4	S/F	1321.2	1322.8	24.5	39.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
28	9400	HUAN	1	S	1321.5	1322.6	5.1	13.2	6.2		
	9500	POTS	3	S	1322.0	1322.8	2.0	17.0			
	33	UPIC	45	C	1449.2	1449.8	3.1				
	9400	HUAN	22	GRF	1601.5	1623.6	66.9	3.3	0.6		
	9400	HUAN	20	GRF	1922.2	1929.5	24.4	3.3	1.6		
	9400	HUAN	1	S	1955.5	1957.0	5.0	8.2	4.4		
29	204	IZMI	43	NS	0600.0		360.0	55.0			
	127	TORN	44	NS	0620.0E		560.0D		30.0		V=1
	260	ONDR	44	NS	0620.0E	0915.4	464.0D	206.0U			
	245	PALE	43	NS	1840.0	2143.0	612.0D	53.0			QL=5 ST=2 TYP=1
	200	HIRA	44	NS	1930.0E	2333.0	840.0D	24.0	11.0		MR
	245	LEAR	43	NS	2313.0	0105.0	616.0D	45.0			QL=5 ST=2 TYP=1
	9100	GORK	20	GRF	0309.0E	0452.3	221.6D	13.3			
	9100	GORK	1	S	0444.1	0444.5	6.5	3.3			
	9100	GORK	23	GRF	0506.0	0543.6	66.0	21.0			
	3100	CRIM	20	GRF	0520.0	0538.5	31.0	2.4	1.0		
	5900	KISV	46	C	0530.3	0538.2	25.5	42.0			
	9300	KISV	46	C	0531.1	0538.3		87.0			
	9300	KISV	46	C	0531.1	0533.4	26.4	21.0			
	9300	KISV	46	C	0531.1	0537.7		75.0			
	9100	GORK	4	S/F	0533.0	0538.3	10.5	79.0			
	15000	KISV	45	C	0534.5	0538.3	11.1	36.0			
	15000	KISV	45	C	0534.5	0535.7		14.0			
	8800	LEAR	8	S	0537.0	0538.0	2.0	60.0			QL=5 ST=2 TYP=5
	2950	GORK	1	S	0537.5	0538.2	3.3	3.9			
	15400	LEAR	8	S	0540.0	0541.0	2.0	22.0			QL=1 ST=2 TYP=3
	9100	GORK	2	S/F	0550.2	0552.2	4.1	30.0			
	204	IZMI	21	GRF	0648.8	0649.0	0.6	170.0	85.0		
	9300	KISV	2	S/F	0712.0	0712.6	1.7	4.0			
	5900	KISV	2	S/F	0712.0	0712.6	6.0	3.0			
	9100	GORK	1	S	0712.2	0712.5	1.8	3.3			
	9100	GORK	22	GRF	0722.6	0726.7	13.3	12.0			
	9300	KISV	46	C	0724.7	0725.8	8.5	13.0			
	5900	KISV	46	C	0724.7	0725.8	12.0	10.0			
	9500	POTS	20	GRF	0725.0	0727.0	20.0	10.0			
	9500	POTS	1	S	0816.5	0817.4	5.5	6.0			
	9100	GORK	20	GRF	0816.6	0817.4	8.1	9.0			
	9100	GORK	23	GRF	0825.3	0926.9	77.0	12.0			
	2950	GORK	21	GRF	0825.8	0912.0	75.0D	7.2			
	33	UPIC	2	S/F	0837.7	0837.9	0.7				
	29	UPIC	2	S/F	0837.8	0838.1	1.0				
	5900	KISV	4	S/F	0904.9	0909.7	10.7	42.0			
	9500	POTS	21	GRF	0905.0	0909.5	52.0	15.0			
	3000	POTS	4	S/F	0906.0	0909.5	14.0U	15.0			
	9300	KISV	23	GRF	0907.7	0909.5	38.0	17.0			
	3013	IZMI	5	S	0908.0	0909.0	6.0	4.0	2.0		
	3100	CRIM	1	S	0908.0	0909.5	3.0	9.3	3.0		
	2950	GORK	3	S	0908.1	0909.5	3.5	12.1	6.0		
	9100	GORK	1	S	0908.8	0909.5	1.8	8.0			
	3100	CRIM	29	PBI	0911.0	0911.0	11.0	3.2	1.0		
	5900	KISV	29	PBI	0915.6	0915.7	31.0	9.0			
	5900	KISV	1	S	0916.8	0919.7	6.8	3.0			
	204	IZMI	21	GRF	0917.0	0917.2	0.8	190.0	90.0		
	5900	KISV	2	S/F	0937.5	0939.0	4.5	6.0			
	9100	GORK	1	S	0937.8	0939.0	1.9	5.6			
	5900	KISV	2	S/F	1110.2	1110.9	1.3	3.0			
	536	ONDR	42	SER	1130.3	1130.4	130.0	131.0			
	9500	POTS	20	GRF	1335.0	1349.3	35.0	15.0			
	9400	HUAN	1	S	1347.1	1349.3	10.5	9.6	2.8		
	9400	HUAN	1	S	1511.0	1515.3	8.9	11.0	3.5		
	9400	HUAN	2	S/F	1532.5	1534.2	5.5	2.8	1.8		
	9400	HUAN	1	S	1543.6	1546.6	6.1	6.9	2.8		
	9400	HUAN	1	S	1755.2	1756.7	4.2	5.5	3.3		
	9400	HUAN	1	S	1831.7	1834.2	7.1	8.3	4.0		
	9400	HUAN	1	S	1902.6	1904.3	4.8	17.9	6.1		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1988

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
29	9400	HUAN	1	S	1931.1	1932.3	3.1	11.7	3.3		
	9400	HUAN	2	S/F	2046.9	2050.5	7.2	9.6	5.1		
	9400	HUAN	1	S	2057.3	2059.8	5.1	5.5	2.9		
30	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0612.0E	0730.2U	473.0D	35.0			
	127	TORN	44	NS	1040.0E		300.0D		2.0		V=17
	200	HIRA	44	NS	1930.0E	0105.0	800.0D	19.0	6.0		MR
	245	LEAR	44	NS	2313.0E	0008.0	47.0D	35.0			QL=5 ST=1 TYP=1
	9100	GORK	20	GRF	0300.0E	0319.8U	288.0D	8.4			
	5900	KISV	22	GRF	0400.0	0408.4	38.0	6.0			
	5900	KISV	23	GRF	0439.8	0452.7	30.5	11.0			
	9300	KISV	21	GRF	0450.4	0452.6	19.0	9.0			
	3100	CRIM	24	R	0555.5	0641.0		5.0			
	5900	KISV	2	S/F	0657.8	0658.5	4.0	7.0			
	9300	KISV	2	S/F	0658.2	0658.6	1.0	6.0			
	5900	KISV	22	GRF	0821.0	0837.7	85.0	12.0			
	9300	KISV	22	GRF	0835.6	0837.3	45.4	8.0			
	2800	OTTA	42	SER	1500.0	1510.0	13.0	21.0			
	9400	HUAN	20	GRF	1750.8	1801.4	29.8	6.7	3.4		
	2800	OTTA	22	GRF	1940.0		80.0				
	9400	HUAN	20	GRF	1945.1	2011.0	73.9	17.3	9.4		
31	260	ONDR	44	NS	0610.0E	0909.0	460.0D	72.0			
	127	TORN	44	NS	0700.0E		480.0D		3.0		V=1
	245	LEAR	43	NS	2313.0	0527.0	616.0D	52.0			QL=5 ST=2 TYP=1
	245	LEAR	8	S	0254.0	0254.0	47.0	46.0			QL=5 ST=2 TYP=3
	650	GORK	22	GRF	0607.4	0648.7	110.6	14.0			
	3100	CRIM	20	GRF	0609.0	0630.0	91.0	3.4	1.0		
	2950	GORK	20	GRF	0616.0	0631.6U	463.0	2.9			
	650	GORK	22	GRF	0806.3	0819.0	108.9	8.0			
	3100	CRIM	20	GRF	0904.0	0908.8	14.0	4.0	1.0		
	2950	GORK	20	GRF	0906.0	0909.8	131.4	4.4			
	3100	CRIM	24	R	1007.0	1150.0		6.8			
	2950	GORK	20	GRF	1020.7	1159.9	99.5D	7.5			
	536	ONDR	41	F	1030.0U	1107.5	200.0U	8.0			
	9100	GORK	20	GRF	1100.0E	1156.5	60.0D	9.0			
	430	KRAK	40	F	1206.5	1243.5	37.0	6.0	1.0		
	2800	OTTA	22	GRF	1357.0			4.6			
	2800	OTTA	22	GRF	1419.0E	1419.0	83.0D	15.7			
	500	HIRA	42	SER	2053.0	2154.0	69.0	24.0			WR
	500	HIRA	27	RF	2300.0	2308.0	74.0	4.0	2.0		WR

Reports are received routinely from the following observatories:

BERN = Berne	IZMI = IZMIRAN	ONDR = Ondrejov	SVTO = San Vito
CRIM = Crimea	KISK = Kislovodsk	OTTA = Ottawa	SYDN = Sydney
GORK = Gorky	KRAK = Krakow	PALE = Palehua	TORN = Torun
HIRA = Hiraiso	LEAR = Learmonth	PENT = Penticton	TRST = Trieste
HUAN = Huancayo	NOBE = Nobeyama	POTS = Potsdam	TYKW = Toyokawa
		SGMR = Sagamore Hill	UPIC = Upice

Explanation of Type Code:

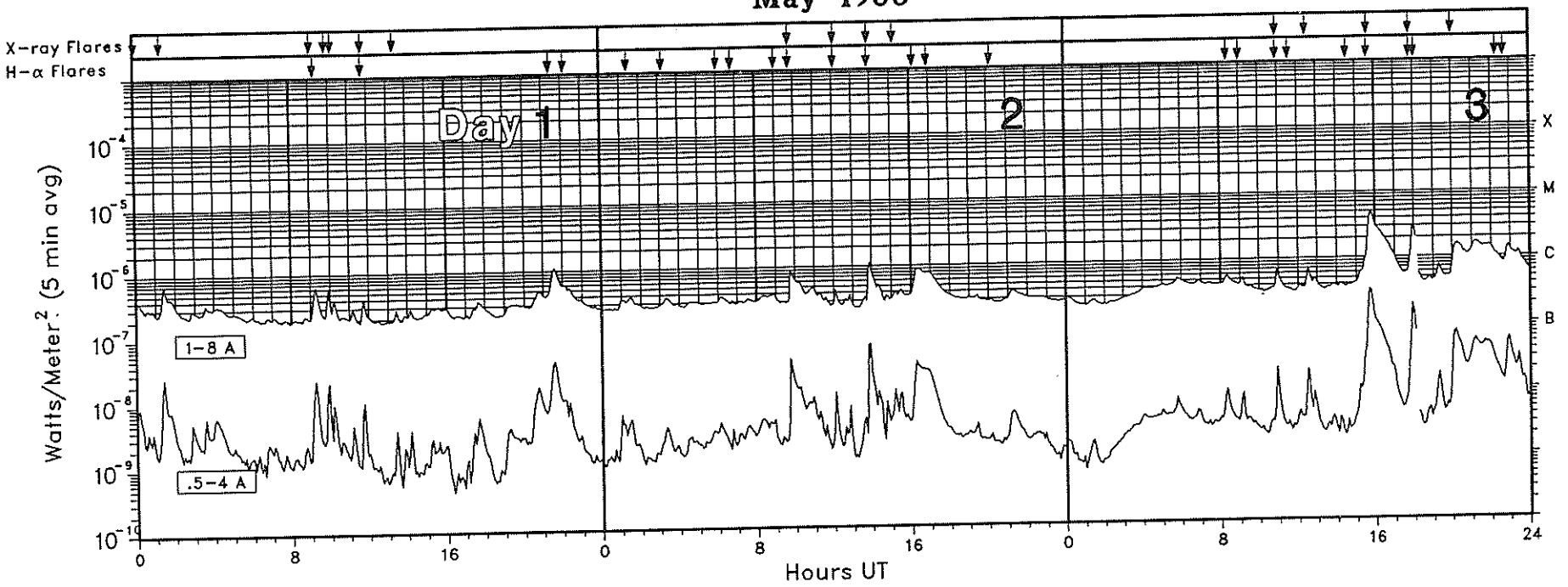
1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple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

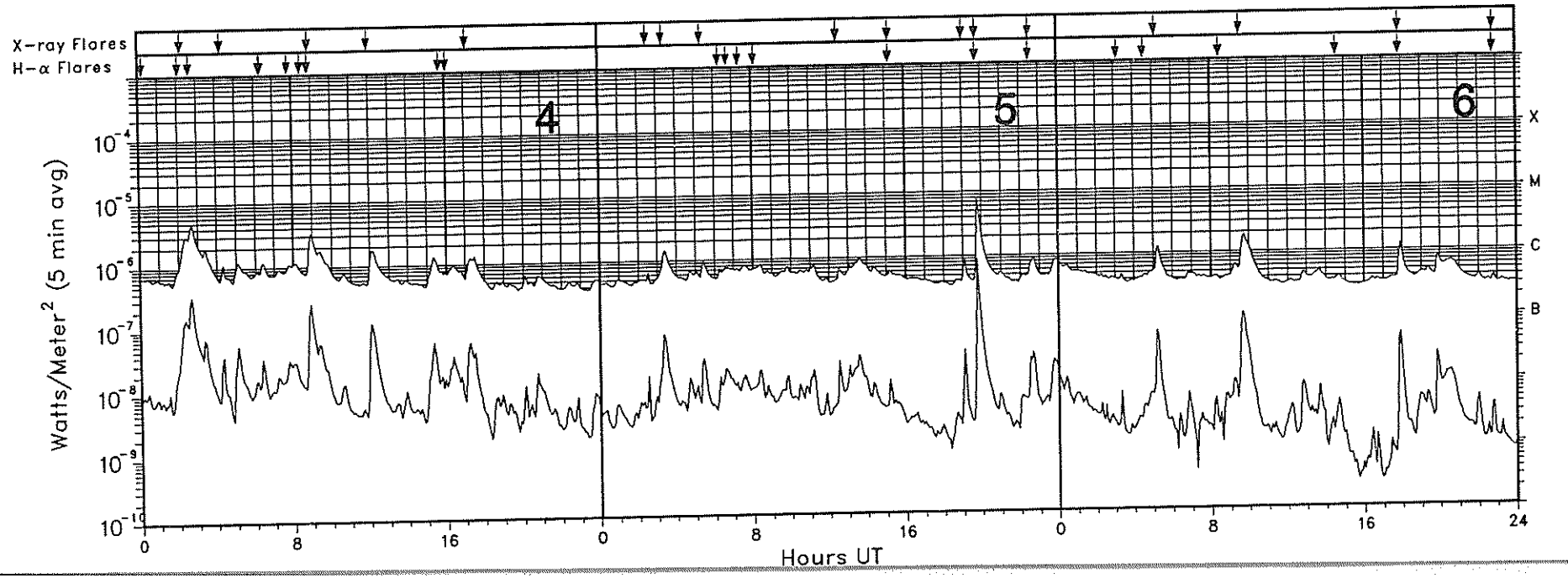
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A
			46F Complex F

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

GOES-7 X-RAY DETECTOR

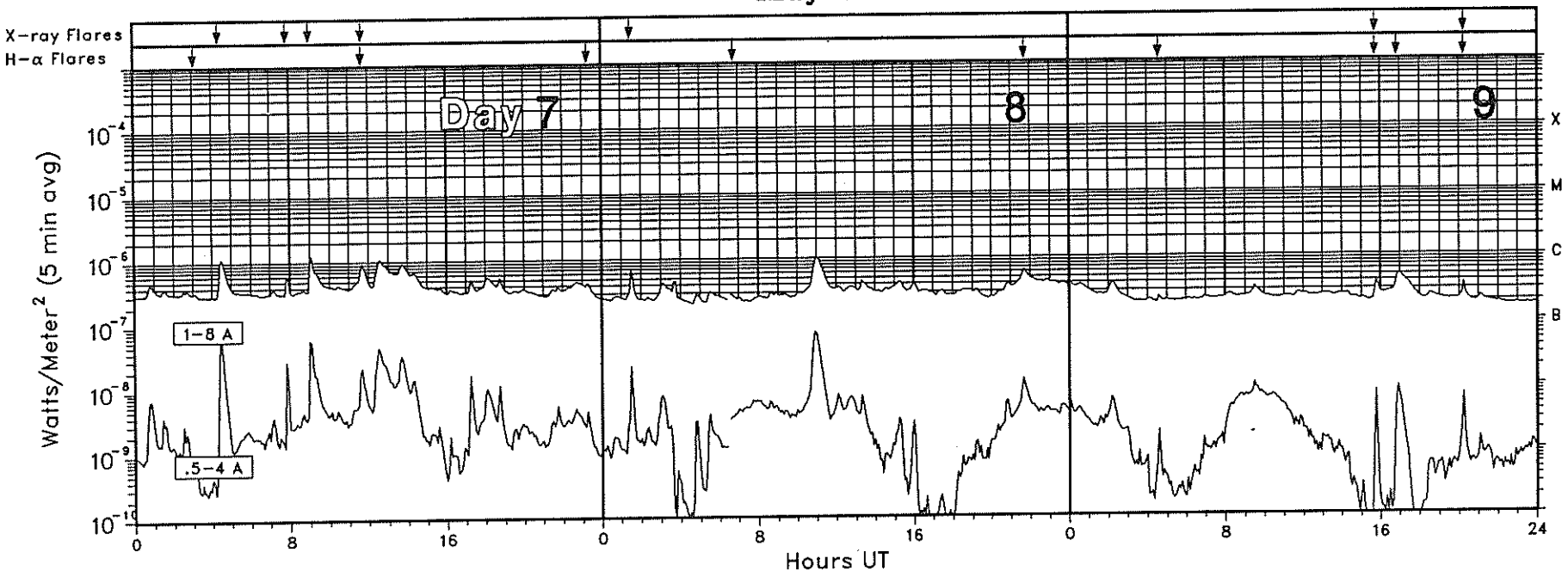
May 1988

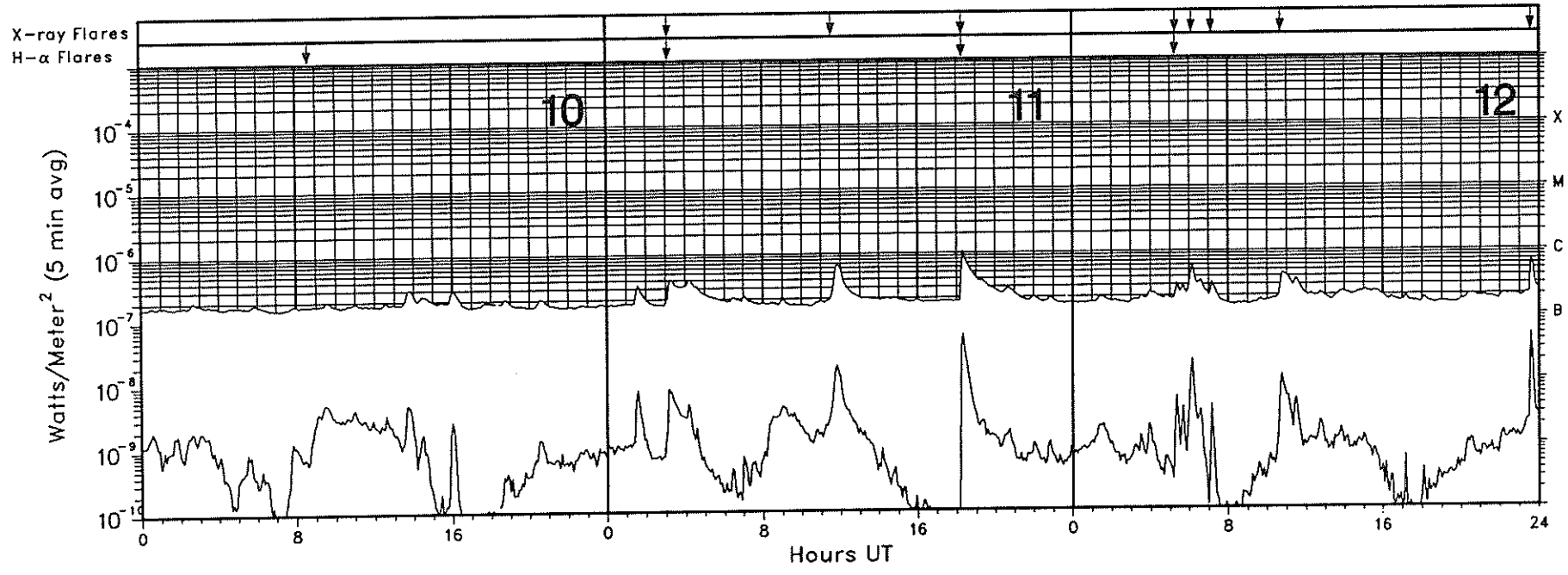




GOES-7 X-RAY DETECTOR

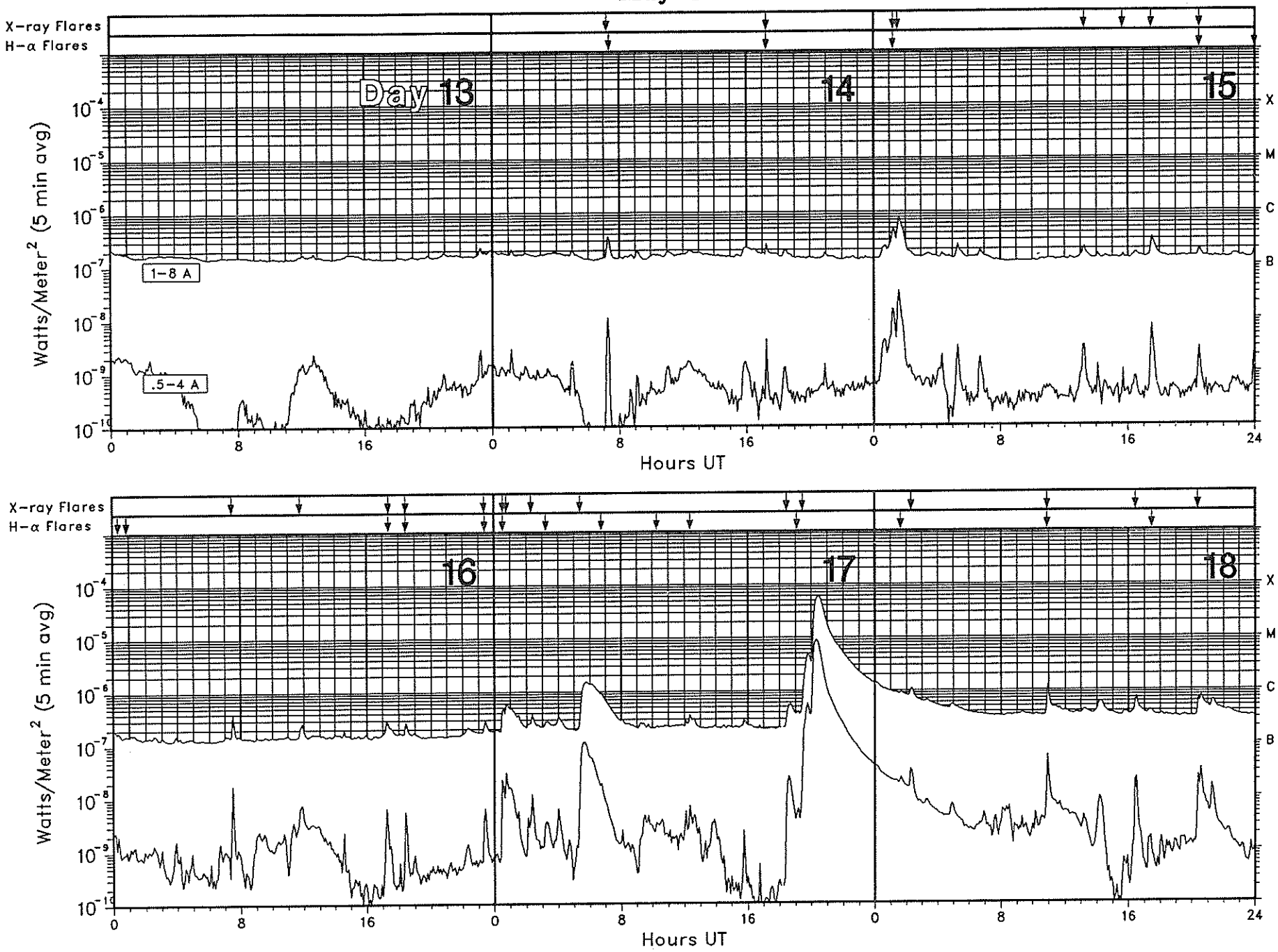
May 1988





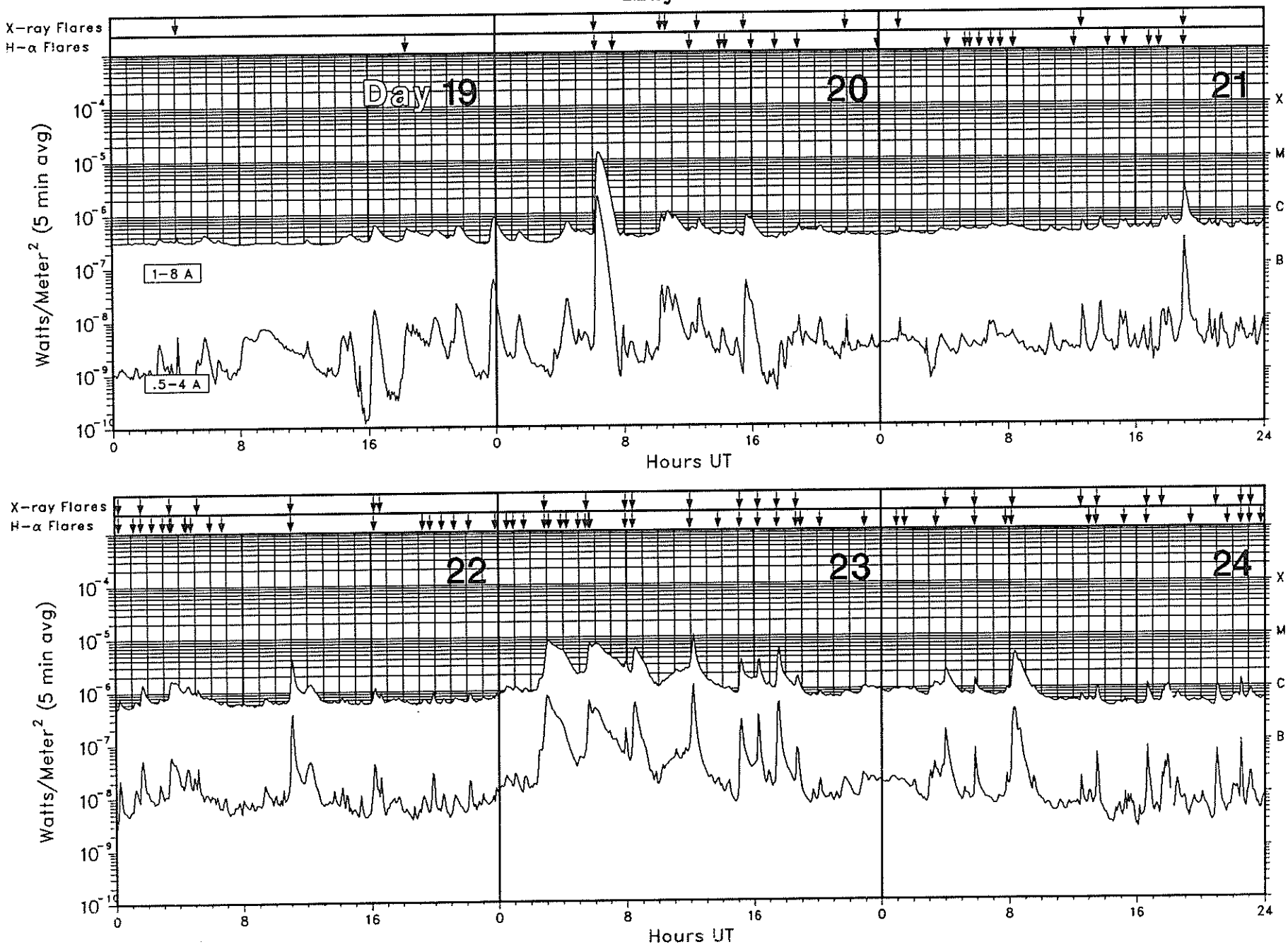
GOES-7 X-RAY DETECTOR

May 1988



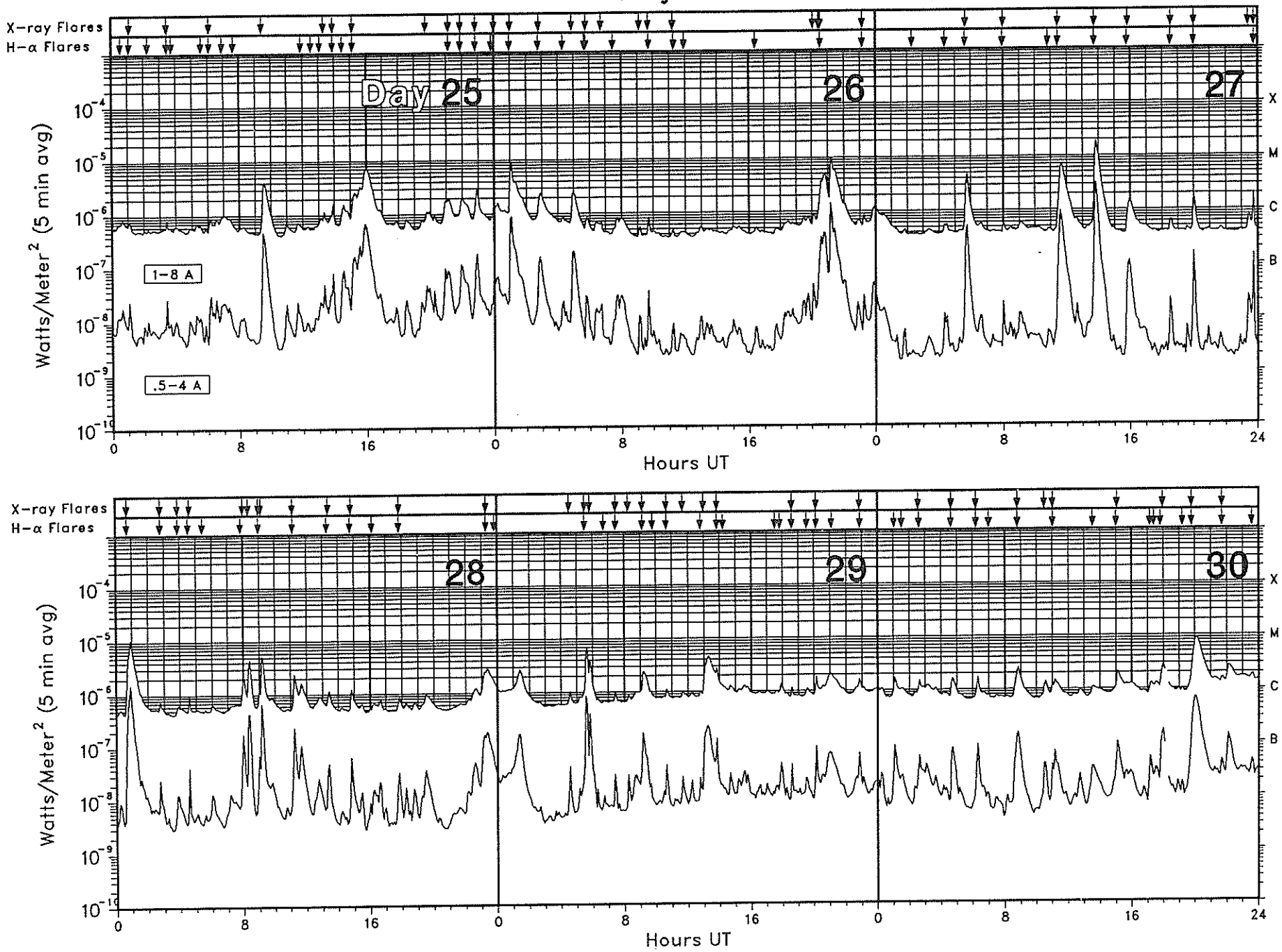
GOES-7 X-RAY DETECTOR

May 1988



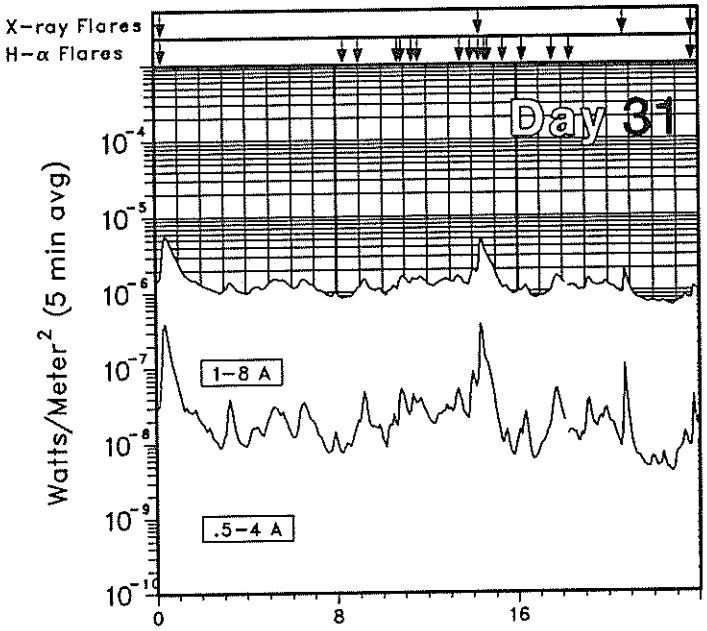
GOES-7 X-RAY DETECTOR

May 1988



GOES-7 X-RAY DETECTOR

May 1988



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

Preliminary Listing

May 1988

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
01	0003	0010	0019				B4.2	
01	0121	0127	0135				B7.2	
01	0906	0919	0925				B6.9	
01	0950	0956	1000				B7.0	
01	1010	1015	1021				B4.4	
01	1143	1143	1150	S20	E67	SF	B4.6	5004
01	1323	1326	1331				B2.9	
02	0944	0945	0955	S25	W27	SF	B9.4	5005
02	1205	1205	1215	S22	W26	SF	B4.8	5005
02	1352	1355	1409	S22	W31	SF	C1.2	5005
02	1510	1514	1517				B5.0	
03	1055	1056	1102	S24	W43	SF	B7.1	5005
03	1227	1233	1241				B7.0	
03	1537	1539	1623	S20	W39	1F	C5.0	5002
03	1748	1757	1821	S22	W40	SN	C3.4	5002
03	2000	2017	2049				C1.5	
04	0212	0231	0238	S18	W45	SF	C5.1	5005
04	0416	0421	0425				C1.2	
04	0852	0858	0905	S22	W53	SF	C3.4	5005
04	1158	1208	1225				C1.8	
04	1706	1731	1736				C1.5	
05	0229	0233	0235				B7.3	
05	0319	0326	0333				C1.5	
05	0520	0525	0536				C1.0	
05	1229	1232	1243				B6.9	
05	1512	1513	1521	S21	W75	SF	B7.6	5005
05	1902	1908	1912				B9.9	
05	1944	1946	2002	S22	W76	1N	C8.8	5005
05	2231	2236	2240				B9.2	
06	0508	0515	0522				C1.3	
06	0933	0947	1004				C1.8	5005
06	1752	1754	1800	S22	W82	SF	C1.3	5005
06	2248	2249	2302	S29	E53	SF	B4.4	5010
07	0422	0430	0433				C1.1	5005
07	0750	0755	0758				B9.0	5005
07	0859	0904	0910				C1.8	5005
07	1140E	1146	1155	N24	W02	SF	B9.1	5011
08	0129	0132	0151	S17	E47	SF	B7.3	5014
09	1543	1544	1559	S19	E28	SF	B4.2	5014
09	2014	2015	2030	S16	E24	SF	B4.6	5014
11	0308	0415	0433				B4.2	
11	1134	1152	1217				B7.5	
11	1817	1817	1827	N24	W56	SF	C1.1	5011
12	0517	0521	0528				B3.5	
12	0608	0612	0617				B6.2	
12	0709	0713	0719				B3.3	
12	1042	1051	1113				B4.4	
12	2334	2338	2341				C1.4	
14	0711	0719	0726				B3.7	
14	1715	1715	1731	S14	W39	SF	B3.2	5014
15	0113	0115	0126	S17	W46	SF	B5.2	5014
15	0130	0138	0147				B8.2	
15	1312	1315	1318				B2.7	5014
15	1538	1541	1543				B2.0	5014
15	1727	1733	1742				B3.4	
15	2030	2031	2039	S18	W14	SF	B2.1	5018
16	0727	0733	0737				B4.4	5018
16	1146	1150	1202				B2.8	
16	1722	1722U	1730	S18	W26	SF	B3.2	5018
16	1827	1829	1835	S17	W67	SF	B3.1	5014
16	2322	2327	2333				B3.0	
17	0033	0034	0042	S18	W31	SF	B6.2	5018
17	0047E	0049	0051	S17	W31	SF	B6.6	5018
17	0218	0222	0225				B4.2	
17	0523	0549	0645				C1.5	
17	1827	1842	1857				B5.7	
17	1927	2030	2205				M6.0	
18	0219	0219	0230	S18	W42	SF	C1.0	5018
18	1054	1057	1109	S17	W48	SF	C1.3	5018
18	1626	1631	1636				B8.0	
18	2023	2039	2049				B7.9	
19	0404	0407	0410				B4.7	
20	0608	0624	0658				M1.3	
20	1016	1022	1031				B9.6	
20	1037	1045	1058				C1.0	
20	1236	1241	1246				B9.1	
20	1531	1540	1610				B8.7	
20	2154	2157	2200				B5.4	
21	0113	0116	0119				B5.5	
21	1238	1244	1254				B6.5	
21	1859	1859	1905	S15	W90	SF	C3.8	5026
22	0015	0016	0019	S15	W82	SF	B8.7	5026
22	0137	0147	0202	S19	E45	SF	C1.4	5025
22	0325	0327	0405	S23	E51	SF	C1.8	5025
22	0510	0514	0517				C1.3	
22	1101	1106	1120	S24	E74	1F	C4.6	5027
22	1613	1615	1622	S25	E67	SF	C1.2	5027
22	1635	1639	1642				C1.0	
23	0253	0301	0327	S24	E60	SF	C8.6	5027
23	0528	0532	0640	S27	E61	1N	C7.9	5027

GOES SOLAR X-RAY FLARES

Preliminary Listing

May 1988

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Imp Opt	Xray	NOAA/ USAF Region
23	0756	0758	0805	S25	E58	SN	C4.0	5027
23	0824	0833	0908	S25	E58	SN	C6.6	5027
23	1200	1206	1226	S26	E56	1N	M1.1	5027
23	1507	1509	1526	S24	E48	SF	C3.8	5028
23	1616	1618	1631	S26	E54	SF	C4.3	5027
23	1728	1734	1813	S27	E59	SN	C6.4	5027
23	1839	1845	1855	S23	E55	SF	C1.7	5027
24	0402	0405	0456	S26	E49	SF	C2.4	5027
24	0550	0551	0557	S28	E54	SN	C2.0	5027
24	0812	0819	0906	S26	E49	SN	C4.6	5027
24	1230	1234	1240				B7.9	
24	1332	1333	1341	S24	E41	SF	C1.5	5027
24	1638	1643	1648				C1.2	
24	1734	1800	1806				C1.1	
24	2057	2104	2111				C1.2	
24	2231	2233	2237	S25	E36	SF	C2.1	5027
24	2308	2308	2311	S24	E39	SF	C1.0	5027
25	0108	0110	0111	S26	E41	SF	C1.0	5027
25	0327	0327	0330	S24	E36	SF	C1.0	5027
25	0606	0611	0617	S26	E42	SF	B9.9	5027
25	0926	0935	0948				C4.2	
25	1319	1322	1334	S26	E36	SF	C1.1	5027
25	1354	1355	1359	S25	E34	SF	C2.1	5027
25	1509	1537	1704	S24	E33	SF	C7.5	5027
25	1943	1947	1951				C1.2	
25	2108	2109	2120D	S25	E26	SF	C2.0	5027
25	2153	2209	2239	S27	E28	SF	C2.0	5027
25	2250	2254	2311D	S24	E28	SF	C3.1	5027
26	0000E	0002	0020	S25	E24	SN	C2.5	5027
26	0100	0101	0150	S28	E30	SB	M1.0	5027
26	0247	0256	0307	S24	E24	SF	C2.5	5027
26	0453	0503	0511				C2.5	
26	0546	0546	0610	S27	E25	SF	B8.9	5027
26	0643	0646	0648				B9.5	
26	0907	0910	0912				B7.8	
26	0940	0944	0947				C1.2	
26	1113	1116	1118				B5.8	
26	2004	2009	2016				B9.9	
26	2025	2052	2101	S24	E15	SN	C5.3	5027
26	2032	2116	2214	S26	E16	1F	M1.1	5027
26	2309	2317	2326	S27	E18	SF	C1.0	5027
27	0539	0545	0615	S28	E15	SN	C5.7	5027
27	0759	0804	0807				B7.3	
27	1126	1134	1258	S26	E13	SF	C7.4	5027
27	1343	1348	1450	S25	E05	1B	M2.0	5027
27	1549	1602	1633	S25	E07	SF	C1.5	5027
27	1832	1834	1839	S25	E03	SF	B7.8	5027
27	2000	2001	2013	S25	W00	SF	C2.2	5027
27	2323	2332	2335				B8.1	
27	2344	2347	2349				C3.5	
28	0043	0043U	0053D	S24	W00	SF	M1.1	5027
28	0247	0247	0250	S25	W04	SF	B8.3	5027
28	0352	0356	0358				B8.0	
28	0437	0437	0457	S27	E05	SF	C2.5	5027
28	0759E	0824U	0853	S25	W04	SN	C2.3	5027
28	0820	0826	0831				C5.2	
28	0859	0900	0950	S24	W04	SF	C1.4	5027
28	0908	0914	0921				C6.0	
28	1109	1117	1208	S25	W06	SN	C2.5	5027
28	1323	1323	1341	S25	W07	SF	C1.2	5027
28	1449	1450	1505	S25	W04	SN	C1.3	5027
28	1750	1752	1756D	S24	W08	SF	B8.6	5027
28	2318	2322	2332	S24	W12	SF	C3.0	5027
29	0432	0437	0442				C1.0	
29	0531	0538	0634	S24	W14	1N	M1.0	5027
29	0550	0554	0557				C5.1	
29	0728	0728	0737	S26	W17	SF	C1.0	5027
29	0815	0818	0822				C1.0	
29	0909	0911	0911D	S25	W15	SF	C2.4	5027
29	1039	1041	1046	S26	W20	SF	C1.3	5027
29	1140	1143	1145				C1.1	
29	1259	1322	1338				C4.6	
29	1350	1351	1357	S26	W22	SF	C3.3	5027
29	1835	1838	1843	S26	W15	SF	C1.3	5027
29	2008	2013	2019	S26	W17	SF	C2.7	5027
29	2251	2255	2257				C2.6	
30	0235	0240	0255	S23	W23	1N	C1.6	5027
30	0439	0442	0504	S25	W23	SF	C1.9	5027
30	0612	0620	0630	S25	W24	SF	C1.8	5027
30	0847	0847	0853	S25	W28	SF	C2.7	5027
30	1029	1037	1044				C1.4	
30	1101	1104	1106	S25	W24	SF	C1.3	5027
30	1504	1510	1517	S26	W29	SF	C2.1	5027
30	1757	1803	1813	S24	W34	SF	C2.9	5027
30	1947	2018	2046	S23	W40	1N	C8.9	5027
30	2142	2215	2235	S25	W34	SF	C2.7	5027
31	0018	0026	0053	S24	W39	SF	C5.7	5027
31	1419	1420	1442	S24	W42	SF	C5.4	5027
31	2043	2048	2054				C2.1	
31	2342	2345	2349	N19	E53	SF	C1.1	5032

Preliminary GOES Satellite Data
Daily Average X-ray Background

June 1987 - May 1988

Day	1987 Jun	Jul	Aug	Sep	Oct	Nov	Dec	1988 Jan	Feb	Mar	Apr	May
1	A4.8	---	B1.2	B1.1	A6.8	B2.2	A7.6	B2.0	B2.5	B1.0	B4.4	B1.9
2	A3.2	A1.7	B1.2	B1.3	A6.8	B3.8	A8.3	B1.4	B2.5	A8.5	B3.5	B2.6
3	A2.7	A1.4	B1.0	B1.3	A7.7	B3.4	A5.2	B4.6	B1.9	B1.1	B3.7	B3.7
4	A2.7	A1.3	A6.7	B1.3	B1.2	B3.4	A4.8	B2.4	B1.5	B1.8	B3.5	B5.1
5	A2.3	A1.2	A6.5	B1.4	B1.1	B2.1	A5.3	B2.3	B1.7	B1.6	B4.2	B4.1
6	A2.0	A1.3	A6.9	B1.4	B1.0	B2.1	A7.8	B2.5	B1.5	B1.4	B4.3	B2.9
7	A1.9	A1.5	B1.7	B2.7	B1.1	B1.7	A8.5	B2.5	B2.4	B1.6	B3.8	B3.1
8	A1.9	A5.0	B2.8	B2.2	B1.7	B1.2	A9.1	B2.7	B1.8	B1.6	B3.9	B2.5
9	A2.8	A3.5	B2.1	B1.6	B2.1	A8.8	B1.4	B2.3	B1.8	B1.6	B3.2	B1.8
10	A6.3	A3.2	B2.3	B1.7	B2.0	A8.8	A9.4	B3.0	B1.5	B1.8	B3.1	B1.6
11	A8.5	A2.7	B2.9	B1.6	B1.8	B1.9	B2.3	B2.1	B1.6	B2.8	B4.5	B1.6
12	A8.7	A1.9	B2.9	B1.3	B1.7	B1.4	B3.2	B3.1	B1.8	B3.4	B5.5	B1.5
13	A8.8	A1.9	B2.6	B1.2	B2.3	B1.4	B1.8	--	B1.8	B3.4	B4.4	B1.4
14	A7.9	A3.3	B1.9	A9.5	B2.1	A8.2	B1.3	B4.0	B1.5	B2.5	B6.0	B1.3
15	A7.3	A4.3	B1.2	A7.1	B2.2	A9.7	B1.4	B3.9	B1.4	B6.0	B7.4	B1.1
16	A7.1	A5.3	B1.4	A4.6	B2.6	B1.1	B1.2	B5.1	B1.2	B6.9	B9.2	B1.3
17	A8.9	A4.0	B1.1	A5.2	B2.1	B1.1	A9.5	B3.6	B1.2	B4.6	B5.3	B2.0
18	A8.6	A5.2	B1.1	A3.8	B2.6	B1.6	A8.9	B2.2	B1.6	B3.0	B3.9	B3.2
19	A7.4	B1.1	B1.2	A4.7	B2.4	B2.7	A7.3	B2.5	B1.4	B3.3	B5.5	B2.9
20	A6.4	B1.8	B1.3	A7.6	B1.7	B5.2	A7.1	B2.3	B1.2	B4.4	B5.1	B3.2
21	A7.7	B2.0	B1.6	A5.9	B1.5	B3.5	A9.8	B2.4	B1.3	B3.8	B4.7	B4.1
22	B1.2	---	B1.6	A5.0	B1.6	B3.6	B1.5	B2.0	A9.9	B3.7	B3.1	B5.8
23	A9.7	B3.9	B1.5	A3.4	B1.4	B3.0	B1.0	B2.0	B1.0	B6.0	B2.2	B8.8
24	B1.1	B3.5	B1.5	A3.7	B1.4	B2.9	B2.3	B3.1	A9.0	B6.8	B2.6	B4.5
25	A9.5	B3.4	B1.4	A3.0	B1.8	B2.9	B4.9	B1.9	A9.0	B6.1	B2.0	B5.3
26	A8.3	B3.6	B1.1	A2.7	B1.9	B2.9	B4.7	B2.2	B9.5	B4.5	B1.5	B3.8
27	A5.5	B3.7	B1.1	A7.6	B2.5	B2.0	B3.4	B4.6	B1.0	B4.0	B1.1	B3.7
28	A4.6	B3.2	A8.6	B1.0	B2.7	B1.7	B2.3	B5.1	B1.2	B3.5	B1.1	B5.0
29	A4.0	B2.2	A6.6	A9.8	B1.9	B1.7	B1.8	B4.4	B2.0	B3.5	B1.1	B7.2
30	A3.9	B1.6	A7.6	A7.0	B2.7	B1.1	B2.5	B2.7		B3.3	B1.6	B8.0
31		B1.4	B1.3		B2.7		---	B2.1		B4.2		B8.5

MASS EJECTIONS FROM THE SUN

MAY 1988

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R$_o$	Freq or Wavelength	Kind of Event
CULG	May 04	0210		0347			Meter	IV Continuum
CULG	May 04	0223		0237			Meter	II
PALE	May 04	0224.0		0230.0			Meter	II
LEAR	May 04	0224.0		0236.0			Meter	II
CULG	May 04	0245.0		0340.0			Meter	IV
LEAR	May 04	0245.0		0515.0			Meter	IV
KHAR	May 04	0853		0906	244	0.84	H-alpha	S
SGMR	May 11	1143.0		1203.0			Meter	II
WEIS	May 11	1144.0		1203.0			86-30 MHz	II Harmonic
KHAR	May 15	0846 E		0905 D	260	0.88	H-alpha	S
KHAR	May 15	1013 E		1021 D	290	1.00	H-alpha	S
KHAR	May 16	1040		1046	248	0.88	H-alpha	S
PALE	May 17	2009.0		2041.0			Meter	IV
SGMR	May 17	2007.0		2023.0			Meter	IV
CULG	May 18	0215		0217.5			Meter; dekameter	II Herringbone
KHAR	May 21	0630 E		0658	108	1.00	H-alpha	S
KHAR	May 21	0635 E		0707 D	112	1.00	H-alpha	S
KHAR	May 21	0707		0734	108	1.00	H-alpha	S
KHAR	May 21	0735		0815	112	1.00	H-alpha	S
KHAR	May 21	0735		0802 D	251	1.00	H-alpha	S
KHAR	May 21	0755		0815	108	1.00	H-alpha	S
KHAR	May 21	0820		0933 D	108	1.00	H-alpha	S
KHAR	May 21	0830		0850 D	112	1.00	H-alpha	S
KHAR	May 21	0907		0933 D	298	1.00	H-alpha	S
WEIS	May 25	0929.7		0939.9			86-30 MHz	II Harmonic
SGMR	May 25	0931.0		0937.0			Meter	II
SGMR	May 25	1441.0		1554.0			Meter	II
WEIS	May 25	1441.3		1452.2			Meter	II
CULG	May 25	2142		2153			Meter; dekameter	II
SGMR	May 25	2143.0		2151.0			Meter	II
SGMR	May 26	1137.0		1142.0			Meter	II
WROC	May 27	0800		0821	223	0.3	H-alpha	Q
KHAR	May 28	0900		0907 D	171-177	0.43-0.41	H-alpha	S
SGMR	May 28	1443.0		1453.0			Meter	IV
KHAR	May 29	0800		0820 D	075	1.00-1.03	H-alpha	S
KHAR	May 29	1040		1050	303	1.00-1.02	H-alpha	S
CULG	May 29	2100		2125			Meter	IV Continuum
VORO	May 29	2257 E	2302 U	2309 D	192	0.5	H-alpha	S
KHAR	May 30	0822		0834	217	0.53	H-alpha	S
KHAR	May 31	0730 E		0755	244	0.83	H-alpha	S
KHAR	May 31	0736		0800	109	1.00	H-alpha	S

QUALIFIERS ON START, MAX AND END TIMES
- D = event ended after tabulated time
- E = event began before the tabulated time
- U = uncertain time

TYPE OF EVENT
- A = eruptive active region prominence
- CB = coronal cloud bubble
- D = coronal depletions
- E = coronal enhancement
- EL = coronal expanding loop
- II = Type II radio burst
- IVm = moving Type IV radio burst
- Q = eruptive quiescent prominence
- R = coronal ray or streamer
- S = flare-surge if there is a known flare association
- SP = flare-spray if there is a known flare association
- * = movement may be caused by ionospheric refraction

REPORTING STATIONS
- CULG = Culgoora
- KHAR = Kharkov
- LEAR = Learmonth
- PALE = Palehua
- SGMR = Sagamore Hill
- VORO = Voroshilov
- WEIS = Weissenau
- WROC = Wroclaw

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

Day	Event Type	Start (UT)	End (UT)	Lat	CMP CMD	Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
01	APR	0605E	0630D	S28	E90	05	8.3	1				V	KHAR		
01	BSL	0701	0715	S70	W90	04	23.2	1-				C	CATA		
01	AFS	0808E	1147D	S21	W14	04	30.3		04	9	9	E	SVTO	5005	
01	SDF	1055E	0723D	S12	W49	04	27.9	1				C	CATA		
01	ADF	1200E	2222D	S18	W10	04	30.7	2	04	9	9	E	RAMY	5002	
01	AFS	1200E	2222D	S20	E18	05	2.9		02	8	9	E	RAMY	5005	
01	DSD	1200E	2222D	S23	W16	04	30.3		03	9	9	E	RAMY	5005	
01	DSD	1223E	1450D	S16	W12	04	30.6		02	9	9	E	RAMY	5002	
01	ADF	1223E	1550D	S23	W12	04	30.6	2	02	9	9	E	RAMY	5002	
01	AFS	1459E	2222D	N18	W33	04	29.2		02	9	9	E	RAMY	5007	
01	AFS	1615E	0118D	N16	W35	04	29.1		02	9	9	E	HOLL	5007	
01	AFS	1815	1843	N00	W47	04	28.3	0				P	MANI		
01	AFS	1815	1843	S19	E00	05	1.8	0				P	MANI		
01	AFS	1905E	0118D	S23	W22	04	30.1		01	7	6	E	HOLL	5005	
02	ADF	0610E	1650D	S17	W19	04	30.8	1	06	9	9	E	SVTO	5002	
02	SDF	0656E	0037D	S30	W53	04	28.2		28	0	0	E	LEAR		
02	ADF	0727E	0905	S24	E66	05	7.4	1				V	KHAR		
02	BSL	0925	0930	S76	W90	04	24.2	1-				C	CATA		
02	AFS	0939E	1540D	S21	W28	04	30.2		04	9	9	E	SVTO	5005	
02	ADF	1048E	2152D	S12	W24	04	30.6	2	09	9	9	E	RAMY	5002	
02	SDF	1234E	1633D	S07	W72	04	27.2		21	0	0	E	HOLL		
02	AFS	1411E	2152D	S21	W32	04	30.1		02	8	6	E	RAMY	5005	
02	ADF	1411E	2152D	S25	W28	04	30.4	1	03	9	9	E	RAMY	5005	
02	AFS	1551	1603	N34	E13	05	3.7	0				P	MANI		
02	AFS	1551	1603	N55	E42	05	6.3	0				P	MANI		
02	AFS	1551	1603	S13	W59	04	28.3	0				P	MANI		
02	SDF	1600E	1610	S18	W23	04	30.9		05	0	0	E	HOLL	5002	
02	AFS	1720E	1912D	S17	W49	04	29.1		02	9	9	E	PALE	5001	
02	AFS	1720E	1912D	S22	W30	04	30.4		04	9	9	E	PALE	5005	
02	AFS	1816E	1912D	S21	E50	05	6.6		02	9	9	E	PALE	5004	
02	ASR	1900E	2351	N23	E79	05	8.9			9	9	E	HOLL		
03	ADF	0823E	0850	S23	W45	04	30.0	1				V	KHAR		
03	APR	0906E	0925	N53	E90	05	11.1	1				V	KHAR		
03	BSL	0914	0920	S52	E90	05	11.1	1-				C	CATA		
03	DSD	1100E	2017D	S20	W42	04	30.2		03	9	9	E	RAMY	5005	
03	AFS	1100E	2017D	S21	W39	04	30.5		02	9	9	E	RAMY	5005	
03	BSL	1119E	1130	S36	E90	05	10.7	1-				C	CATA		
03	ASR	1510E	0109D	S32	E90	05	10.7			9	9	E	HOLL		
03	DSD	1530E	2149D	S20	W45	04	30.2		04	9	9	E	HOLL	5005	
03	ASR	1530E	2017D	S32	E90	05	10.8			9	9	E	RAMY		
03	SDF	1650E	0854D	S60	E22	05	5.6		72	0	0	E	SVTO		
03	AFS	1826	1830	N29	W19	05	2.3	0				P	MANI		
03	AFS	1826	1830	N49	E26	05	6.0	0				P	MANI		
03	AFS	2037E	0140D	S19	W49	04	30.1	1	02	7	6	E	HOLL	5005	
04	SDF	0140E	1343D	S44	W20	05	2.4	2	15	0	0	E	HOLL		
04	SDF	0140E	1343D	S65	W12	05	3.0	2	78	0	0	E	HOLL		
04	SDF	0243E	0630D	S70	E12	05	5.2		99	0	0	E	LEAR		
04	ADF	0710E	0820	N16	W72	04	28.9	1				V	KHAR		
04	ADF	0746E	0807	S27	W52	04	30.3	1				V	KHAR		
04	DSD	0853	0906	S23	W58	04	30.0	1				V	KHAR		
04	BSL	0924	0930D	S56	E90	05	12.2	1-				C	CATA		
04	APR	0927E	0936D	S12	E90	05	11.2	1				V	KHAR		
04	ADF	1108E	1120D	S21	W58	04	30.0	1	03	9	9	E	RAMY	5005	
04	SDF	1140E	0745D	S45	W12	05	3.5	1				C	CATA		
04	SDF	1140E	0745D	S58	W20	05	2.7	3				C	CATA		
04	BSL	1142E	1142D	N03	W90	04	27.9	1-				C	CATA		
04	AFS	1556	1601	N32	W29	05	2.4	0				P	MANI		
04	AFS	1556	1601	N55	E21	05	6.5	0				P	MANI		
04	AFS	1556	1601	S23	W48	05	1.0	0				P	MANI		
04	AFS	1556	1601	S25	E52	05	8.7	0				P	MANI		
04	AFS	1633E	2313D	S24	W57	04	30.3		02	9	9	E	HOLL	5005	
05	APR	0000E	0118D	N32	W90	04	28.0	1				C	VORO		
05	APR	0010	0118D	S55	W90	04	27.3	1				C	VORO		
05	ASR	0055E	0500D	S21	W87	04	28.5			9	9	E	LEAR	5001	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
05	APR	0108	0118D	N54	E90	05	12.8	1				C	VORO		
05	AFS	0210E	0939D	N24	E35	05	7.8		02	9	9	E	LEAR	5011	
05	APR	0430E	0826D	N34	W90	04	28.1	1				C	ABST		
05	APR	0430E	0826D	S57	W90	04	27.4	1				C	ABST		
05	BSL	0703E	0826D	N50	W90	04	27.8	1				C	ABST		
05	AFS	1400E	2325D	N25	E30	05	7.9		03	7	9	E	HOLL	5011	
05	ASR	1404E	2035D	S20	W90	04	28.8			8	7	E	HOLL	5001	
05	AFS	1458E	1700D	S24	W18	05	4.2		02	9	9	E	HOLL		
05	AFS	1620	1630	N26	W51	05	1.7	0				P	MANI		
05	AFS	1620	1630	N52	E02	05	5.8	0				P	MANI		
05	AFS	1620	1630	S23	W61	05	1.0	0				P	MANI		
05	AFS	1620	1630	S28	E43	05	9.0	0				P	MANI		
05	DSD	1645E	2030D	N17	E33	05	8.2		03	9	9	E	RAMY	5008	
05	AFS	1645E	2030D	N24	E29	05	7.9		03	9	9	E	RAMY	5011	
05	DSD	1711E	1811D	N16	E32	05	8.1		03	9	9	E	HOLL	5008	
05	ADF	2002	0128D	N21	E08	05	6.4		02	9	9	E	HOLL	5006	
05	APR	2217	0012D	N42	W90	04	28.6	1				C	VORO		
05	ADF	2225	0012D	N60	W80	04	29.0	1				C	VORO		
05	APR	2247	0012D	N41	E90	05	13.3	1				C	VORO		
05	BSL	2254	2321	S16	W90	04	29.2	1				C	VORO		
06	AFS	0105E	0938D	N24	E25	05	8.0		02	9	9	E	LEAR	5011	
06	ASR	0110E	0128D	S19	W90	04	29.3			9	9	E	HOLL	5001	
06	ASR	0110E	0938D	S21	W90	04	29.2			9	9	E	LEAR	5001	
06	APR	0516E	0907D	N42	W90	04	28.9	1				C	ABST		
06	BSL	0702E	0710	S21	W90	04	29.5	1-				C	CATA		
06	BSL	0717	0720D	S15	W90	04	29.6	1-				C	CATA		
06	BSL	0720	0720D	S20	W90	04	29.5	1-				C	CATA		
06	BSL	0746E	0750D	S21	W90	04	29.5	1-				C	CATA		
06	BSL	0841E	0854	S44	E90	05	13.8	1-				C	CATA		
06	BSL	0841E	0905	S17	W90	04	29.6	1				C	CATA		
06	BSL	0841E	0905	S21	W90	04	29.6	1-				C	CATA		
06	ADF	1140E	1433D	N15	E17	05	7.8	1	04	9	9	E	RAMY	5008	
06	ADF	1140E	1433D	N22	E26	05	8.5	1	12	9	9	E	RAMY	5008	
06	DSD	1147E	1433D	N25	E17	05	7.8		03	9	9	E	RAMY	5011	
06	ADF	1147E	1433D	N26	E15	05	7.6	1	11	8	9	E	RAMY	5011	
06	ASR	1305E	0142D	S19	W88	04	29.9			9	9	E	HOLL	5005	
06	ASR	1317E	1433D	S20	W90	04	29.8			9	7	E	RAMY	5005	
06	AFS	1625	1629	N32	W57	05	2.2	0				P	MANI		
06	AFS	1625	1629	N53	W13	05	5.6	0				P	MANI		
06	AFS	1625	1629	S25	E37	05	9.5	0				P	MANI		
06	AFS	1625	1629	S28	W59	05	2.1	0				P	MANI		
06	ASR	2220E	0142D	S35	E90	05	14.1			9	9	E	HOLL		
07	APR	0104	0202D	S38	E90	05	14.3	1				C	VORO		
07	APR	0104E	0202D	N30	W90	04	30.0	1				C	VORO		
07	APR	0104E	0202D	S18	W90	04	30.2	1				C	VORO		
07	AFS	0325E	0926D	S30	E13	05	8.2		02	9	9	E	LEAR		
07	AFS	0616E	1639D	N25	E08	05	7.9		02	9	9	E	SVTO	5011	
07	APR	0622E	1639D	S34	E90	05	14.4	2		9	9	E	SVTO		
07	ASR	0702E	1639D	S24	W90	04	30.3			9	9	E	SVTO	5005	
07	BSL	0845	0855	S20	W90	04	30.5	1-				C	CATA		
07	ASR	1120E	1816D	S16	W90	04	30.6			8	9	E	RAMY	5005	
07	ASR	1120E	1816D	S22	W90	04	30.5			7	8	E	RAMY	5005	
07	ADF	1127E	1816D	N17	E08	05	8.1	1	10	5	8	E	RAMY	5008	
07	AFS	1135E	1625D	N24	E07	05	8.0		03	9	9	E	RAMY	5011	
07	DSD	1143E	1430D	N02	W07	05	7.0		02	8	9	E	RAMY	5013	
07	APR	1151E	1816D	S37	E90	05	14.7	2		9	9	E	RAMY		
07	AFS	1303E	1705D	N24	E05	05	7.9		02	8	9	E	HOLL	5011	
07	ASR	1340E	2203D	S21	W90	04	30.7			9	9	E	HOLL	5005	
07	DSD	2125	2254D	S16	E49	05	11.6		03	9	9	E	HOLL		
08	SDF	0139E	1358D	S19	W06	05	7.6		05	0	0	E	HOLL	5008	
08	AFS	0611E	1610D	N20	E00	05	8.2		02	9	9	E	SVTO	5008	
08	AFS	0611E	1610D	N24	W08	05	7.6		03	7	7	E	SVTO	5011	
08	AFS	0611E	1610D	S36	W31	05	5.8		03	9	9	E	SVTO		
08	APR	0625E	1010D	S60	W90	04	30.3					V	ATHN		
08	AFS	1106E	1520D	S18	E43	05	11.7		02	8	6	E	RAMY	5014	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
08	ADF	1106E	1520D	S21	E54	05	12.6	1	08	9	9	E	RAMY	5014	
08	BSL	1107	1125	S24	E90	05	15.4	1-				C	CATA		
08	ADF	1125E	1520D	N18	W04	05	8.2	2	03	9	9	E	RAMY	5008	
08	AFS	1129E	1520D	N24	W10	05	7.7		02	9	9	E	RAMY	5011	
08	AFS	1311E	1520D	S21	W28	05	6.4		02	9	9	E	RAMY	5004	
08	AFS	1311E	1520D	S35	W35	05	5.7		01	9	9	E	RAMY	5015	
08	AFS	1323E	0144D	S16	E42	05	11.7		03	9	9	E	HOLL	5014	
08	ADF	1323E	2114D	S20	E53	05	12.6	1	13	9	9	E	HOLL	5014	
08	ADF	1325E	1750D	N17	W07	05	8.0	2	03	9	8	E	HOLL	5008	
08	AFS	1326E	0144D	S36	W34	05	5.8		02	9	9	E	HOLL	5015	
08	AFS	1808	1820	N18	E00	05	8.7	0				P	MANI		
08	AFS	1808	1820	N24	E52	05	12.8	0				P	MANI		
08	AFS	1808	1820	N50	E25	05	10.9	0				P	MANI		
08	AFS	2250E	0144D	N23	W19	05	7.5		01	9	9	E	HOLL	5011	
08	AFS	2306E	0936D	S17	E39	05	11.9		02	9	9	E	LEAR	5014	
09	ADF	0755E	1711D	N24	W21	05	7.7	1	06	7	7	E	SVTO	5011	
09	AFS	0756E	1711D	S17	E31	05	11.7		04	9	9	E	SVTO	5014	
09	AFS	1419E	0144D	S16	E27	05	11.6		04	9	9	E	HOLL	5014	
09	ADF	1613E	0144D	S19	E26	05	11.6	2	19	9	9	E	HOLL	5014	
09	AFS	1613	1618	N15	E36	05	12.4	0				P	MANI		
09	AFS	1613	1618	N33	E59	05	14.4	0				P	MANI		
09	AFS	1613	1618	N51	W41	05	6.2	0				P	MANI		
09	AFS	1613	1618	N54	E18	05	11.2	0				P	MANI		
09	ADF	1655E	0337D	N24	W20	05	8.1	1	05	9	9	E	PALE	5011	
09	AFS	1655E	0337D	N25	W28	05	7.5		02	9	9	E	PALE	5011	
09	AFS	1655E	0420D	S18	E25	05	11.6		02	9	9	E	PALE	5014	
09	AFS	1730E	2215D	N26	W24	05	7.9		02	9	8	E	RAMY	5011	
09	AFS	1745E	2215D	S17	E24	05	11.6		03	9	9	E	RAMY	5014	
09	AFS	1815E	0144D	N24	W29	05	7.5		05	7	6	E	HOLL	5011	
09	AFS	2317E	0520D	S21	W47	05	6.4		02	9	9	E	LEAR	5004	
09	AFS	2317E	0531D	S17	E24	05	11.8		05	9	9	E	LEAR	5014	
09	AFS	2317E	0531D	S29	E16	05	11.2		03	9	9	E	LEAR	5010	
10	ADF	0254E	0531D	S14	E36	05	12.8	2	11	9	9	E	LEAR	5014	
10	APR	0434E	0838D	S40	W90	05	2.8	1				C	ABST		
10	BSL	0745	0755	S60	E90	05	18.2	1-				C	CATA		
10	BSL	0800	0800D	N70	E90	05	18.5	1-				C	CATA		
10	AFS	1229E	1650D	N13	E44	05	13.8		01	9	9	E	SVTO		
10	AFS	1306E	0147D	S16	E14	05	11.6		03	9	9	E	HOLL	5014	
10	DSD	1307E	1353	S29	W60	05	5.8		05	9	9	E	HOLL	5016	
10	DSD	1308E	1350D	N18	W28	05	8.4		02	9	9	E	HOLL	5011	
10	ADF	1310E	1400D	S27	W62	05	5.7	2	06	9	9	E	HOLL	5016	
10	SDF	1330E	1410D	S26	W59	05	6.0		06	9	9	E	SVTO	5016	
10	DSD	1401	1433	S29	W61	05	5.8		03	9	9	E	HOLL	5016	
10	AFS	1542	1546	N20	E50	05	14.5	0				P	MANI		
10	AFS	1542	1546	N22	E22	05	12.3	0				P	MANI		
10	AFS	1542	1546	N54	E09	05	11.4	0				P	MANI		
10	AFS	1542	1546	S20	E21	05	12.3	0				P	MANI		
10	AFS	1542	1546	S32	E42	05	14.0	0				P	MANI		
10	AFS	1725E	0147D	S28	W62	05	5.9		02	6	6	E	HOLL	5016	
11	AFS	0240E	0915D	N11	E35	05	13.7		02	9	9	E	LEAR	5019	
11	AFS	0722E	1706D	N13	E32	05	13.7		02	9	9	E	SVTO	5019	
11	AFS	0724E	1706D	N13	W30	05	9.0		01	9	9	E	SVTO		
11	DSD	0726E	0900D	N20	W06	05	10.8		02	9	9	E	SVTO	5012	
11	AFS	1250E	1619D	N11	E30	05	13.8		03	8	9	E	RAMY	5019	
11	AFS	1306E	0147D	S16	E14	05	12.6		03	9	9	E	HOLL	5014	
11	DSD	1409E	1526D	N26	W51	05	7.6		03	9	9	E	HOLL	5011	
11	AFS	1658	1735	N21	E35	05	14.4	0				P	MANI		
11	AFS	1658	1735	N27	W33	05	9.1	0				P	MANI		
11	AFS	1658	1735	N54	W06	05	11.2	0				P	MANI		
11	AFS	1658	1735	S17	W14	05	10.6	0				P	MANI		
11	AFS	1725E	0147D	S28	W62	05	6.9		02	6	6	E	HOLL	5016	
11	AFS	1825E	0147D	N13	E27	05	13.8		02	9	9	E	HOLL	5019	
11	AFS	1850E	0147D	N14	W38	05	8.9		02	9	9	E	HOLL		
11	AFS	1855E	0109D	S28	E65	05	16.9		02	5	5	E	PALE	5016	
11	AFS	1915E	2343D	N16	W38	05	8.9		02	9	9	E	PALE	5008	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
11	DSD	2020E	2253D	N24	W55	05	7.6		03	9	9	E	HOLL	5011	
11	AFS	2025E	2343D	N16	E26	05	13.8		03	5	5	E	PALE	5019	
12	AFS	0806E	0807D	N15	W44	05	9.0		03	9	9	E	SVTO		
12	DSD	1140E	2143D	N23	W64	05	7.5		02	9	9	E	RAMY	5011	
12	AFS	1140E	2143D	N27	W48	05	8.7		03	9	9	E	RAMY	5020	
12	ADF	1140E	2143D	S30	W17	05	11.1	1	03	8	9	E	RAMY	5010	
12	AFS	1533	1537	N20	E23	05	14.4	0				P	MANI		
12	AFS	1533	1537	N21	W01	05	12.6	0				P	MANI		
12	AFS	1533	1537	N27	W42	05	9.4	0				P	MANI		
12	AFS	1533	1537	S32	E12	05	13.6	0				P	MANI		
12	ASR	1605E	0147D	S29	W84	05	6.1			9	9	E	HOLL	5016	
12	ASR	1623E	2143D	S29	W90	05	5.6			8	9	E	RAMY	5016	
12	AFS	1635E	0147D	N14	W50	05	8.9		02	9	9	E	HOLL	5020	
12	AFS	1750E	0117D	N16	W51	05	8.9		03	9	9	E	PALE	5020	
12	ASR	1843E	0413D	S28	W79	05	6.6			9	9	E	PALE	5016	
12	APR	2300	0201D	N42	E90	05	20.3	1				C	VORO		
12	SDF	2328	0138	N26	E13	05	14.0	2				C	VORO		
13	ASR	0050E	0144D	S29	W90	05	6.0			9	9	E	HOLL		
13	AFS	0820E	0924D	S16	W22	05	11.7		03	9	9	E	LEAR	5014	
13	ADF	1113E	2230D	S23	W21	05	11.8	2	06	8	7	E	RAMY	5014	
13	ADF	1333E	2347D	S18	W27	05	11.5	1	02	9	9	E	HOLL	5014	
13	AFS	1555	1615	N17	E09	05	14.3	0				P	MANI		
13	AFS	1555	1615	N18	W18	05	12.3	0				P	MANI		
13	AFS	1555	1615	N41	W41	05	10.3	0				P	MANI		
13	AFS	1555	1615	N54	W24	05	11.6	0				P	MANI		
13	AFS	1555	1615	S30	E02	05	13.8	0				P	MANI		
13	SSB	1637		434	W38	05	10.9			0	0	E	HOLL		
13	AFS	1659E	0144D	N16	W37	05	10.9		01	6	8	E	HOLL	5012	
13	AFS	1725E	2230D	N13	W34	05	11.2		02	9	9	E	RAMY	5012	
13	AFS	1802E	1855D	N14	W64	05	8.9		04	9	9	E	HOLL	5020	
13	AFS	1830E	1918D	N17	W39	05	10.8		01	9	9	E	PALE	5012	
13	ASR	2020E	2110D	S37	W90	05	6.6			8	8	E	HOLL	5015	
13	ASR	2112E	2230D	S29	W90	05	6.8			9	8	E	RAMY	5015	
14	AFS	0117E	0144D	S17	W32	05	11.6		03	9	9	E	HOLL	5014	
14	ADF	0810E	0838	S14	W34	05	11.8	1				V	KHAR		
14	AFS	0958E	1015D	S18	W36	05	11.7		02	9	9	E	SVTO	5014	
14	BSL	1000	1030D	S87	W90	05	6.0	1				C	CATA		
14	BSL	1021	1030D	N57	E90	05	22.3	1-				C	CATA		
14	BSL	1050E	1056D	S87	E90	05	22.9	1				C	CATA		
14	BSL	1110E	1120D	S87	E90	05	22.9	1				C	CATA		
14	AFS	1140E	1807D	S17	W35	05	11.8		03	9	9	E	RAMY	5014	
14	ADF	1345E	1821D	N30	W21	05	12.9	2	06	9	9	E	HOLL		
14	ADF	1422E	1807D	N30	W22	05	12.9	1	04	9	9	E	RAMY		
14	ADF	1427E	1807D	N28	W07	05	14.0	1	13	9	9	E	RAMY		
14	AFS	1746E	1807D	N23	E21	05	16.3		02	9	9	E	RAMY	5023	
14	AFS	1832E	0132D	N24	E21	05	16.4		02	9	9	E	PALE		
14	AFS	2017	2335	N23	E20	05	16.4		01	9	9	E	HOLL	5023	
14	AFS	2017E	0139D	N24	E02	05	15.0		02	9	9	E	HOLL	5022	
14	AFS	2133E	0132D	N25	E00	05	14.9		03	9	9	E	PALE	5022	
14	AFS	2210E	0139D	S17	W43	05	11.6		03	5	6	E	HOLL	5014	
14	SDF	2314E	0037D	N30	W11	05	14.1		08	0	0	E	HOLL		
14	AFS	2326E	0916D	N23	E01	05	15.0		02	9	9	E	LEAR	5022	
14	AFS	2326E	0916D	S19	W44	05	11.6		03	9	9	E	LEAR	5014	
14	AFS	2326E	0916D	S25	W07	05	14.4		03	9	9	E	LEAR	5018	
15	ASR	0500E	0830D	N20	W90	05	8.3			9	9	E	LEAR	5008	
15	BSL	0521E	0657D	N19	W90	05	8.3	1				C	ABST		
15	ADF	0735	0742	S53	E55	05	20.0	1				V	KHAR		
15	DSD	0846E	0905D	S11	W62	05	10.7	1				V	KHAR		
15	BSL	1013E	1021D	N20	W90	05	8.5	1				V	KHAR		
15	ASR	1025E	1400D	N19	W90	05	8.6			9	9	E	SVTO	5008	
15	ASR	1221E	1508D	N20	W90	05	8.6			9	8	E	RAMY	5008	
15	DSD	1223E	1508D	S17	W52	05	11.6		04	7	5	E	RAMY	5014	
15	ASR	1244E	1450	N21	W90	05	8.6			9	9	E	HOLL	5008	
15	DSD	1245E	1332D	S17	W50	05	11.7		03	6	6	E	HOLL	5014	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
15	AFS	1245E	1600D	S19	W52	05	11.6		03	9	9	E	SVTO	5014	
15	AFS	1312E	1508D	S16	W51	05	11.7		02	8	9	E	RAMY	5014	
15	AFS	1332E	0145D	S18	W52	05	11.6		03	7	8	E	HOLL	5014	
15	AFS	1413E	1508D	S18	W10	05	14.8		02	7	9	E	RAMY	5018	
15	ADF	1423E	1508D	N32	E30	05	18.0	1	12	5	8	E	RAMY		
15	AFS	1510E	0145D	S18	W11	05	14.8		02	9	9	E	HOLL	5018	
15	DSD	1530E	1655	S14	W52	05	11.7		09	9	6	E	HOLL	5014	
15	AFS	1533E	1600D	S18	W11	05	14.8		02	9	9	E	SVTO	5018	
15	AFS	1550	1657	S37	W17	05	14.3		01	5	7	E	HOLL		
15	ASR	1655	1750	N20	W90	05	8.8			9	9	E	HOLL	5008	
15	DSD	1758	1825	S18	W13	05	14.7		02	9	9	E	HOLL	5018	
15	AFS	2011E	0426D	S17	W14	05	14.8		02	9	9	E	PALE	5018	
15	AFS	2012E	0426D	S16	W56	05	11.6		03	9	9	E	PALE	5014	
15	AFS	2316E	0932D	N24	W10	05	15.2		03	9	9	E	LEAR	5022	
15	AFS	2316E	0932D	S18	W17	05	14.7		02	9	9	E	LEAR	5018	
15	AFS	2316E	0932D	S19	W55	05	11.8		03	9	9	E	LEAR	5014	
16	AFS	0155E	0932D	S37	E11	05	17.0		02	9	9	E	LEAR		
16	ADF	0540E	0730D	S18	W17	05	14.9	1	04	9	9	E	LEAR	5018	
16	DSD	0615E	1422D	S16	W19	05	14.8		04	9	9	E	SVTO	5018	
16	BSL	0653	0711	S31	W90	05	9.2	1-				C	CATA		
16	ASF	0710E	0930D	S16	W20	05	14.8	1				V	KHAR		
16	DSD	0720E	0808D	S16	W19	05	14.9	1-				C	CATA		
16	DSD	0730	0748	S18	W19	05	14.9	1-				C	CATA		
16	DSD	0730E	0808D	S16	W21	05	14.7	1				C	CATA		
16	DSD	0730E	0932D	S18	W19	05	14.9		02	9	9	E	LEAR	5018	
16	ADF	0813E	0850D	N30	E19	05	17.8	1				V	KHAR		
16	DSD	0823E	0836	S15	W22	05	14.7	1				C	CATA		
16	DSD	0823E	0836D	S15	W19	05	14.9	1				C	CATA		
16	DSD	0823E	0836D	S18	W20	05	14.8	1-				C	CATA		
16	DSD	0855E	0916D	S15	W19	05	14.9	1				C	CATA		
16	DSD	0855E	0916D	S15	W22	05	14.7	1				C	CATA		
16	DSD	0855E	0916D	S17	W19	05	14.9	1-				C	CATA		
16	DSD	0928E	1001	S18	W19	05	14.9	1-				C	CATA		
16	DSD	0928E	1001D	S15	W19	05	14.9	1				C	CATA		
16	DSD	0928E	1001D	S15	W22	05	14.7	1-				C	CATA		
16	DSD	1040	1046D	S20	W60	05	11.8	1				V	KHAR		
16	AFS	1114E	1631D	S18	W22	05	14.8		02	9	9	E	RAMY	5018	
16	DSD	1114E	1631D	S19	W20	05	14.9		03	9	9	E	RAMY	5018	
16	ADF	1114E	1631D	S22	W65	05	11.5	1	12	9	9	E	RAMY	5014	
16	AFS	1130E	1631D	S37	E06	05	17.0		02	6	9	E	RAMY	5024	
16	SDF	1131E	0637D	N16	E70	05	21.8	1				C	CATA		
16	SDF	1131E	0637D	N32	E55	05	20.8	1				C	CATA		
16	DSD	1138E	1631D	N22	W20	05	14.9		03	9	9	E	RAMY	5022	
16	DSD	1305E	1351	S18	W23	05	14.8		03	9	9	E	HOLL	5018	
16	AFS	1306E	0140D	S18	W23	05	14.8		02	9	9	E	HOLL	5018	
16	DSD	1309E	1722D	S17	W22	05	14.9		02	9	9	E	HOLL	5018	
16	AFS	1429	0140D	S37	E04	05	16.9		02	9	6	E	HOLL	5024	
16	AFS	1444E	1629D	S35	E03	05	16.8		03	9	9	E	SVTO		
16	AFS	1514	1518	N20	W28	05	14.5	0				P	MANI		
16	AFS	1514	1518	N29	W06	05	16.2	0				P	MANI		
16	AFS	1514	1518	N29	W48	05	12.9	0				P	MANI		
16	AFS	1514	1518	N30	E05	05	17.0	0				P	MANI		
16	AFS	1514	1518	N34	E52	05	20.8	0				P	MANI		
16	AFS	1514	1518	N52	W51	05	12.3	0				P	MANI		
16	AFS	1514	1518	S41	E53	05	21.0	0				P	MANI		
16	AFS	1514	1518	S51	E20	05	18.3	0				P	MANI		
16	SDF	1545E	1855D	N30	W09	05	15.9		13	0	0	E	HOLL		
16	DSD	1622E	1629D	S27	W17	05	15.3		03	9	9	E	SVTO	5018	
16	DSD	1740E	0430D	S17	W27	05	14.7		03	9	9	E	PALE	5018	
16	AFS	1740E	0430D	S36	E02	05	16.9		02	9	9	E	PALE	5024	
16	AFS	2312E	0917D	S17	W29	05	14.8		02	9	9	E	LEAR	5018	
17	AFS	0001E	0917D	S37	W01	05	16.9		01	5	6	E	LEAR	5024	
17	BSL	0453E	0546D	N40	E90	05	24.5	1				C	ABST		
17	BSL	0725E	0737D	N20	W90	05	10.4	1-				C	CATA		
17	BSL	0743	0754	N72	E90	05	25.5	1-				C	CATA		
17	BSL	0916E	0920D	N73	W90	05	9.1	1-				C	CATA		

MAY 1988

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
17	BSL	0933E	0940	N68	E90	05	25.5	1-				C	CATA		
17	BSL	0933E	0940	N72	W90	05	9.2	1-				C	CATA		
17	BSL	1046	1115	N73	W90	05	9.2	1-				C	CATA		
17	BSL	1120	1125	N58	E90	05	25.3	1-				C	CATA		
17	DSD	1140E	1242D	S34	W05	05	17.1		02	9	9	E	RAMY	5024	
17	DSD	1207E	1520D	S37	W04	05	17.2		04	9	9	E	SVTO	5024	
17	DSD	1208E	1627D	S18	W33	05	15.0		03	9	9	E	SVTO	5018	
17	DSD	1238E	1514D	S16	W32	05	15.1		03	9	9	E	RAMY	5018	
17	DSD	1446E	0043D	S18	W35	05	14.9		03	9	9	E	HOLL	5018	
17	SDF	1534E	2012D	N21	E25	05	19.6		05	0	0	E	HOLL		
17	SDF	1534E	2012D	N28	E43	05	21.0		12	0	0	E	HOLL		
17	AFS	1706	1734	N43	W53	05	13.3	0				P	MANI		
17	AFS	1706	1734	S26	W57	05	13.3	0				P	MANI		
17	AFS	1706	1734	S49	W10	05	16.9	0				P	MANI		
17	AFS	1706	1764	N30	E44	05	21.2	0				P	MANI		
17	AFS	1918E	0043D	N21	W18	05	16.4		02	7	9	E	HOLL	5023	
17	SDF	1922E	2118D	N40	E22	05	19.6		16	0	0	E	PALE		
17	LPS	2045E	0043D	S17	E90	05	24.7			9	9	E	HOLL		
17	LPS	2046E	0220D	S19	E90	05	24.7			9	9	E	PALE		
17	AFS	2050E	0220D	N23	W19	05	16.4		03	9	5	E	PALE	5023	
17	LPS	2053E	2053D	S21	E90	05	24.8			9	9	E	RAMY		
17	ASR	2100E	0220D	S18	E90	05	24.7			9	9	E	PALE		
17	ASR	2345E	0931D	S17	W82	05	11.7			9	9	E	LEAR	5014	
18	AFS	0115E	0931D	N21	W21	05	16.4		02	9	9	E	LEAR	5023	
18	ADF	0140E	0931D	N33	W03	05	17.8		11	9	9	E	LEAR		
18	APR	0140E	0931D	S24	E87	05	24.8	2		8	3	E	LEAR		
18	APR	0600	1548D	N20	W90	05	11.4	1		9	9	E	SVTO		
18	BSL	0628E	0908D	N40	E90	05	25.6	1				C	ABST		
18	BSL	0642E	0705	S30	E90	05	25.3	2				C	CATA		
18	BSL	0720	0745D	S24	E90	05	25.2	1				C	CATA		
18	BSL	0729E	0908D	N25	W90	05	11.3	1				C	ABST		
18	EPL	0806E	0824	S47	E90	05	25.9	1				C	CATA		
18	DSD	0944	1548D	S18	W43	05	15.1		03	9	9	E	SVTO	5018	
18	BSL	1007	1007D	S70	W90	05	10.2	1-				C	CATA		
18	DSD	1100	1113D	S17	W48	05	14.8		05	9	9	E	RAMY	5018	Flare Associated
18	APR	1115E	2234D	N26	W90	05	11.5	2		9	9	E	RAMY		
18	DSD	1115E	2234D	S14	W45	05	15.1		04	9	9	E	RAMY	5018	
18	ASR	1115E	2234D	S19	E90	05	25.3			9	6	E	RAMY		
18	SDF	1200E	1400D	N26	W90	05	11.5		06	9	9	E	RAMY		
18	AFS	1310E	1850D	S17	W51	05	14.7		02	9	9	E	RAMY	5018	
18	AFS	1640	1653	N22	W52	05	14.7	0				P	MANI		
18	AFS	1640	1653	N25	W05	05	18.3	0				P	MANI		
18	AFS	1640	1653	N42	E17	05	20.1	0				P	MANI		
18	AFS	1640	1653	S42	E47	05	22.5	0				P	MANI		
18	APR	1801E	0130D	N26	W90	05	11.7	1		9	9	E	HOLL		
18	DSD	1945E	1945D	S18	W59	05	14.3		03	9	9	E	RAMY	5018	
19	ASR	0420E	1457D	S18	E90	05	26.0			9	9	E	SVTO		
19	ASR	0430E	0856D	S21	E90	05	26.1			9	9	E	LEAR		
19	AFS	0451E	1457D	S20	W58	05	14.8		02	9	9	E	SVTO	5018	
19	APR	0608E	0907D	S21	E90	05	26.1	1		9	9	E	SVTO		
19	AFS	1016	1457D	N23	W03	05	19.2		02	9	9	E	SVTO		
19	BSL	1033	1046	N87	E90	05	27.8	1-				C	CATA		
19	AFS	1122E	1321D	S18	W62	05	14.7		02	9	9	E	RAMY	5018	
19	ADF	1126E	1321D	N24	W44	05	16.1	1	05	9	5	E	RAMY	5023	
19	AFS	1630	1640	N24	W63	05	14.8	0				P	MANI		
19	AFS	1630	1640	N28	W14	05	18.6	0				P	MANI		
19	AFS	1630	1640	N43	E05	05	20.1	0				P	MANI		
19	AFS	1630	1640	S40	E34	05	22.4	0				P	MANI		
19	ASR	1735E	1828D	S27	E87	05	26.5			7	9	E	HOLL		
19	ASR	1832E	1941D	S30	E87	05	26.6			8	5	E	HOLL		
20	BSL	0405E	0845D	N44	E90	05	27.6	1				C	ABST		
20	ASR	0425E	0732D	S33	E90	05	27.3			9	9	E	LEAR		
20	BSL	0454E	0845D	S40	W90	05	12.9	1				C	ABST		
20	APR	0613E	1234D	S22	E90	05	27.2	1		9	9	E	SVTO		
20	ASR	0614E	0732D	S23	E90	05	27.2			9	9	E	LEAR		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
20	BSL	0629	0845D	S25	E90	05	27.2	1				C	ABST		
20	EPL	0732E	0931D	S24	E90	05	27.3	2		9	9	E	LEAR		
20	APR	0800E	1100D	S22	E90	05	27.2					V	ATHN		
20	APR	0805E	1100D	N42	E90	05	27.7					V	ATHN		
20	APR	0810E	1100D	S31	W90	05	13.2					V	ATHN		
20	BSL	0906E	0919	S37	W90	05	13.1	1-				C	CATA		
20	BSL	0939	1011	N25	E90	05	27.4	2				C	CATA		
20	BSL	1110	1115	N17	E90	05	27.3	1-				C	CATA		
20	ASR	1244E	1558D	S23	E90	05	27.5			9	6	E	RAMY		
20	APR	1438E	1732D	N31	W90	05	13.5	1		9	9	E	RAMY		
20	ASR	1510E	0148D	S23	E90	05	27.6			9	9	E	HOLL		
20	BSL	2238	2312	S21	E90	05	27.8	2				C	VORO		
20	ASR	2240E	0448D	S23	E90	05	27.9			9	9	E	PALE		
21	ASR	0055E	0148D	S18	W85	05	14.6			9	9	E	HOLL	5018	
21	ASR	0135E	0558D	S25	E89	05	28.0			9	9	E	LEAR		
21	DSD	0426E	0435D	S16	W74	05	15.6		03	9	9	E	SVTO	5026	Flare Associated
21	ASR	0515E	1456D	S22	E90	05	28.1			9	9	E	SVTO		
21	BSL	0516E	0902D	N40	E90	05	28.5	1				C	ABST		
21	BSL	0630E	0640	N80	E90	05	29.6	1-				C	CATA		
21	ASR	0630E	0658D	S19	E57	05	25.6	1				V	KHAR		
21	ADF	0630E	0725D	S18	E57	05	25.6	1				V	KHAR		
21	ASR	0635	0707	S25	E90	05	28.2	1				V	KHAR		
21	BSL	0700	0902D	S35	W90	05	14.1	1				C	ABST		
21	ASR	0707	0734	S19	E90	05	28.2	1				V	KHAR		
21	BSL	0735	0802	S19	W90	05	14.4	1				V	KHAR		
21	ASR	0735	0815	S25	E90	05	28.3	1				V	KHAR		
21	BSL	0751	0811	S84	E90	05	29.7	1-				C	CATA		
21	ASR	0755	0815	S19	E90	05	28.2	1				V	KHAR		
21	BSL	0806	0813	S89	E90	05	29.7	1-				C	CATA		
21	BSL	0812E	0902D	S25	E90	05	28.3	1				C	ABST		
21	BSL	0820	0920D	S21	E90	05	28.2	2				C	CATA		
21	SPY	0820	0933D	S19	E90	05	28.2	2				V	KHAR		
21	ASR	0830	0850	S25	E90	05	28.3	1				V	KHAR		
21	BSL	0840	0901	N86	W90	05	12.9	1-				C	CATA		
21	BSL	0845	0920D	S84	E90	05	29.8	1-				C	CATA		
21	BSL	0907	0933D	N28	W90	05	14.3	1				V	KHAR		
21	ADF	0922E	1456D	S20	E60	05	26.0	1	07	9	9	E	SVTO	5025	
21	ASR	1022E	2142D	S21	E85	05	27.9			9	9	E	RAMY	5027	
21	APR	1345	1549D	S14	W90	05	14.8			9	9	E	HOLL	5026	
21	ASR	1400E	0140D	S25	E90	05	28.5			9	9	E	HOLL	5027	
21	ADF	1415E	2225D	S19	E55	05	25.8	2	05	9	9	E	HOLL	5025	
21	APR	1420	1728D	N24	W83	05	15.2			9	9	E	HOLL	5022	
21	ASR	1440	0140D	S17	W78	05	15.7			9	9	E	HOLL	5026	
21	AFS	1550	1554	N26	W29	05	19.4	0				P	MANI		
21	AFS	1550	1554	N29	W40	05	18.5	0				P	MANI		
21	AFS	1550	1554	N39	W17	05	20.3	0				P	MANI		
21	AFS	1550	1554	S24	E64	05	26.6	0				P	MANI		
21	ASR	1648E	0414D	S26	E90	05	28.7			9	9	E	PALE	5027	
21	ASR	1736E	0414D	S16	W90	05	14.9			9	9	E	PALE	5026	
22	ASR	0103E	0925D	S15	W85	05	15.6			9	9	E	LEAR	5026	
22	ASR	0415E	0845D	S26	E76	05	28.1			9	9	E	LEAR	5027	
22	BSL	0427E	0845D	S10	W90	05	15.4	1				C	ABST		
22	AFS	0430E	0925D	S25	E69	05	27.5		05	9	9	E	LEAR	5027	
22	ASR	0525E	1619D	S17	W90	05	15.4			9	9	E	SVTO	5026	
22	BSL	0657E	0716	S17	W90	05	15.4	1-				C	CATA		
22	BSL	0710	0716	S15	W90	05	15.5	1-				C	CATA		
22	BSL	0725E	0745	S17	W90	05	15.5	1-				C	CATA		
22	AFS	0730E	0925D	S22	E57	05	26.7		02	9	9	E	LEAR		
22	BSL	0750	0816	S15	W90	05	15.5	1-				C	CATA		
22	BSL	0750	0823	S18	W90	05	15.5	1-				C	CATA		
22	AFS	0814E	1619D	S23	E48	05	26.0		03	9	9	E	SVTO	5025	
22	AFS	0815E	1619D	S20	E56	05	26.6		03	9	9	E	SVTO		
22	BSL	0836	0902	S17	W90	05	15.5	1-				C	CATA		
22	BSL	0902	0902D	N14	W90	05	15.6	1-				C	CATA		
22	ADF	0930E	1619D	S18	E45	05	25.8	1	07	9	9	E	SVTO	5025	
22	DSD	0931E	1025D	S25	E74	05	28.1		06	9	9	E	SVTO	5027	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
22	BSL	1120E	1140	S11	W90	05	15.7	1-				C	CATA		
22	ASR	1220E	1747D	S16	W90	05	15.7			9	9	E	HOLL	5026	
22	ASR	1542E	1730D	S15	W90	05	15.8			9	9	E	RAMY	5026	
22	DSD	1740E	2149D	S19	E40	05	25.8		04	8	8	E	HOLL	5025	
22	ASR	1906E	0151D	S15	W83	05	16.5			8	9	E	HOLL	5026	
22	ASR	1907E	2145D	S25	E85	05	29.4			6	4	E	HOLL	5027	
22	DSD	1934	2000D	S21	E59	05	27.3		03	9	9	E	HOLL	5027	
22	SDF	1934E	1901D	S03	E10	05	23.6		08	0	0	E	PALE		
22	SDF	1934E	1901D	S12	E44	05	26.1		05	0	0	E	PALE		
22	AFS	2155E	0151D	S21	E51	05	26.8		03	6	9	E	HOLL	5028	
23	SDF	0000E	1901D	S03	E10	05	23.7		08	0	0	E	PALE		
23	SDF	0000E	1901D	S12	E44	05	26.3		05	0	0	E	PALE		
23	AFS	0207E	0923D	S25	W37	05	20.2		02	9	4	E	LEAR	5025	
23	AFS	1022	1030	N31	W42	05	20.1	0				P	MANI		
23	AFS	1022	1030	N37	E32	05	26.0	0				P	MANI		
23	ADF	1047E	1708D	S19	E57	05	27.8	1	06	9	9	E	SVTO	5027	
23	ADF	1054E	1708D	S20	E31	05	25.8	1	05	9	9	E	SVTO	5025	
23	AFS	1140E	1828D	S24	E49	05	27.3		02	9	9	E	RAMY	5028	
23	AFS	1224E	1708D	S23	E51	05	27.4		02	9	9	E	SVTO	5028	
23	ADF	1300E	1828D	S23	E31	05	25.9	1	08	9	9	E	RAMY	5025	
23	DSD	1305E	1828D	S23	E56	05	27.9		03	9	9	E	RAMY	5027	
23	AFS	1415E	1828D	S27	E59	05	28.2		02	9	9	E	RAMY	5027	
23	DSD	1516	1538D	S25	E49	05	27.4		05	9	9	E	HOLL	5028	Flare Associated
23	DSD	1516	1525	S25	E49	05	27.4		05	9	9	E	RAMY	5028	Flare Associated
23	ASR	1800E	1845D	S39	W78	05	17.4			9	9	E	HOLL	5024	
23	AFS	1813E	0144D	S23	E47	05	27.4		03	9	9	E	HOLL	5028	
23	APR	1824E	0144D	S52	W86	05	16.4	1		8	9	E	HOLL		
23	AFS	1858	0144D	S25	E58	05	28.3		04	9	4	E	HOLL	5027	
23	DSD	1858E	2058D	S22	E53	05	27.9		02	9	3	E	HOLL	5027	
23	ASR	1901E	0448D	S14	W90	05	17.0			9	9	E	PALE	5026	
23	AFS	1901E	0448D	S21	E51	05	27.7		01	8	8	E	PALE		
23	AFS	1908E	0410D	S23	E44	05	27.2		02	9	9	E	PALE	5028	
23	ASR	1914E	2257D	S37	W85	05	16.9			9	9	E	PALE	5024	
23	DSD	2059	0017D	S24	E49	05	27.7		05	9	7	E	HOLL	5027	
23	ADF	2239	0144D	S20	E25	05	25.8	1	03	9	9	E	HOLL	5025	
23	ASR	2311	0144D	S22	W90	05	17.0			4	9	E	HOLL		
23	AFS	2335E	0345D	S24	E43	05	27.3		02	8	8	E	LEAR	5028	
24	AFS	0019E	0144D	S25	E51	05	28.0		06	6	6	E	HOLL	5027	
24	ASR	0020E	0144D	S19	W84	05	17.6			6	9	E	HOLL		
24	ADF	0040E	0807D	S22	E26	05	26.0	1	04	9	9	E	LEAR	5025	
24	ASR	0200E	0350D	S21	W90	05	17.2			9	9	E	LEAR		
24	APR	0500E	0830D	S34	E90	05	31.4					V	ATHN		
24	APR	0505E	0640D	S65	W90	05	16.1					V	ATHN		
24	ADF	0510E	0730D	N55	E35	05	27.2					V	ATHN		
24	AFS	1315E	2125D	S24	E36	05	27.3		03	7	6	E	RAMY	5028	
24	ADF	1315E	2125D	S24	E46	05	28.1	1	06	8	9	E	RAMY	5027	
24	ADF	1320E	2125D	S22	E18	05	25.9	1	06	9	9	E	RAMY	5025	
24	AFS	1420E	2005D	S25	E46	05	28.2		02	9	9	E	RAMY	5027	
24	AFS	1538E	2024D	S23	E35	05	27.3		04	6	7	E	HOLL	5028	
24	AFS	1551	1606	N41	E32	05	27.3	0				P	MANI		
24	AFS	1551	1606	N43	W53	05	20.3	0				P	MANI		
24	SDF	1800E	1734D	S03	W02	05	24.6		05	0	0	E	HOLL		
24	SDF	1850E	1836D	S16	W18	05	23.4		06	0	0	E	PALE		
24	AFS	1905	0435D	S26	E43	05	28.1		01	6	6	E	PALE	5027	
24	DSD	2059	0017D	S24	E49	05	28.7		05	9	7	E	HOLL	5027	
25	APR	0005E	0130D	N35	W90	05	17.8			8	9	E	HOLL		
25	DSD	0035E	0130D	S27	E44	05	28.4		04	9	9	E	HOLL	5027	
25	DSD	0050E	0825D	S24	E39	05	28.0		05	9	9	E	LEAR	5027	
25	ADF	0450E	1724D	S23	E33	05	27.7	1	04	9	9	E	SVTO	5027	
25	DSD	0541E	0658D	S24	E44	05	28.6		03	9	9	E	SVTO	5027	
25	BSL	0818E	0840	N63	W90	05	17.3	1-				C	CATA		
25	ADF	1345E	2108D	S25	E35	05	28.3	1	12	9	9	E	RAMY	5027	
25	DSD	1633E	0041D	S25	E33	05	28.2		08	8	9	E	HOLL	5027	Flare Associated
25	APR	1636E	0118D	N28	W74	05	19.9	2		6	8	E	HOLL		
25	DSD	1808	0041D	S24	E30	05	28.1		07	8	9	E	HOLL	5027	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
26	DSD	0110E	0240D	S27	E33	05	28.6		03	9	9	E	LEAR	5027	
26	DSD	0210E	0451D	S26	E20	05	27.6		03	9	9	E	PALE	5027	
26	BSL	0440E	0826D	N27	W90	05	19.2	1				C	ABST		
26	BSL	0506E	0823D	S44	W90	05	18.8	1				C	ABST		
26	DSD	0542E	0620D	S23	E19	05	27.7		02	9	9	E	SVTO	5027	
26	AFS	0620E	0915D	N35	W29	05	23.9		02	6	8	E	LEAR		
26	DSD	0924E	1612D	S27	E21	05	28.0		03	9	9	E	SVTO	5027	
26	ADF	1050E	2040D	S22	W06	05	26.0	1	11	9	7	E	RAMY	5025	
26	ADF	1050E	2040D	S25	E21	05	28.1	1	06	8	5	E	RAMY	5027	
26	ADF	1632E	0451D	S27	E18	05	28.1	1	05	9	9	E	PALE	5027	
26	AFS	1824E	0005D	S25	E19	05	28.2		03	9	9	E	HOLL	5027	
26	CAP	2230E	0140D	S26	E90	06	2.9		02	9	9	E	PALE		
26	ASR	2355E	0140D	S26	E90	06	3.0			9	9	E	PALE		
27	DSD	0210E	0451D	S26	E20	05	28.6		03	9	9	E	PALE	5027	
27	AFS	0602E	0855D	S26	E13	05	28.3		03	9	9	E	LEAR	5027	
27	BSL	0631E	0651	S06	W90	05	20.5	1-				C	CATA		
27	APR	0723E	0830D	S50	E90	06	3.9	1				C	ABST		
27	EPL	0742	0901D	S50	W90	05	19.7	3				C	CATA		
27	BSL	0755	0810	N84	E90	06	4.7	1-				C	CATA		
27	DSD	1255	1840D	S25	E13	05	28.5		07	9	9	E	HOLL	5027	
27	DSD	1534E	1549D	S27	E15	05	28.8		07	9	9	E	RAMY	5027	
27	AFS	1645E	0442D	N27	E20	05	29.2		02	9	9	E	PALE		
27	ADF	1720E	0442D	S20	W28	05	25.6	1	08	9	9	E	PALE	5025	
27	DSD	1720E	0442D	S26	E08	05	28.3		02	9	9	E	PALE	5027	
27	AFS	1824E	0005D	S25	E19	05	29.2		03	9	9	E	HOLL	5027	
27	AFS	1915E	2111D	S25	E03	05	28.0		03	9	9	E	RAMY	5027	
27	ASR	2355E	0420D	S25	E90	06	4.0			9	7	E	LEAR		
28	ADF	0635E	0710	S43	E42	05	31.7	1				V	KHAR		
28	DSD	0900	0907	S25	E03	05	28.6	1				V	KHAR		
28	ASR	1035E	1626D	N19	E90	06	4.3			9	9	E	SVTO		
28	DSD	1039E	1045D	S26	E03	05	28.7	1-				C	CATA		
28	BSL	1039E	1046D	N18	E90	06	4.3	1-				C	CATA		
28	DSD	1125E	1215D	S26	W07	05	27.9		04	9	9	E	RAMY	5027	Flare Associated
28	DSD	1125E	1844D	S28	E01	05	28.5		02	9	9	E	RAMY	5027	
28	DSD	1135E	1350	S26	E01	05	28.6		03	9	0	E	SVTO	5027	
28	DSD	1215E	1844D	S27	E02	05	28.7		03	9	9	E	RAMY	5027	
28	AFS	1325E	1553D	N27	E09	05	29.3		02	9	9	E	RAMY	5030	
28	AFS	1402E	1535	N27	E08	05	29.2		02	9	9	E	HOLL	5030	
28	DSD	1412E	1604	S25	E01	05	28.7		02	9	9	E	HOLL	5027	
28	DSD	1412E	1606D	S25	E02	05	28.7		07	9	9	E	HOLL	5027	
28	AFS	1416E	0150D	S24	W06	05	28.1		03	6	8	E	HOLL	5027	
28	ASR	1430E	1541	N18	E90	06	4.4			9	9	E	HOLL		
28	DSD	1519	1547	S26	E01	05	28.7		04	9	9	E	SVTO	5027	
28	DSD	1550E	1844D	S26	W10	05	27.9		04	9	9	E	RAMY	5027	
28	DSD	1606E	1655D	S26	W02	05	28.5		03	9	9	E	HOLL	5027	
28	ASR	1700E	1750	N17	E90	06	4.5			9	9	E	HOLL		
28	ASR	1720E	0308D	N17	E90	06	4.6			9	9	E	PALE		
28	DSD	1735E	0308D	S26	W01	05	28.6		03	9	9	E	PALE	5027	
28	ASR	2025E	0150D	N19	E81	06	4.0			9	9	E	HOLL		
29	ADF	0014E	0150D	N62	E23	05	31.0	1	07	9	9	E	HOLL		
29	APR	0031	0150D	N32	E90	06	5.1	1				C	VORO		
29	APR	0039	0150D	S28	E90	06	5.1	1				C	VORO		
29	ASR	0545E	1704D	N19	E90	06	5.1			9	9	E	SVTO	5031	
29	AFS	0605E	0758D	S28	W06	05	28.8			9	9	E	SVTO	5027	
29	AFS	0605E	1704D	S27	W09	05	28.5		04	9	9	E	SVTO	5027	
29	DSD	0615E	0758D	S23	W21	05	27.6		05	9	9	E	SVTO	5027	Flare Associated
29	DSD	0758E	0902D	S07	W26	05	27.4		02	9	9	E	SVTO	5027	
29	DSD	0758E	0902D	S26	W07	05	28.8		02	9	9	E	SVTO	5027	
29	BSL	0800	0820D	N15	E90	06	5.1	1				V	KHAR		
29	BSL	0828	0835	N17	E90	06	5.2	1-				C	CATA		
29	BSL	0845	0925	N27	E90	06	5.4	1				C	CATA		
29	DSD	0858	0922	S26	W13	05	28.4	1				V	KHAR		
29	AFS	0902E	1156D	N27	W04	05	29.1		03	9	9	E	SVTO	5030	
29	DSD	0927E	1554D	S27	W08	05	28.8		02	9	9	E	SVTO	5027	
29	BSL	1001E	1019	N27	E90	06	5.4	1-				C	CATA		

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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	BSL	1040	1050	N33	W90	05	22.3	1				V	KHAR		
29	DSD	1045E	1810D	S27	W10	05	28.7		03	9	9	E	RAMY	5027	
29	BSL	1100E	1106	N16	E90	06	5.3	1-				C	CATA		
29	ADF	1105E	1810D	S19	W51	05	25.6	1	05	8	8	E	RAMY	5025	
29	BSL	1115	1136	N17	E90	06	5.3	1-				C	CATA		
29	BSL	1115	1136	N37	W90	05	22.2	1				C	CATA		
29	ASR	1115E	1415D	N26	E85	06	5.1			7	9	E	RAMY		
29	ASR	1115E	1810D	N16	E85	06	4.9			8	9	E	RAMY	5032	
29	ASR	1115E	1810D	N35	W90	05	22.3			9	9	E	RAMY		
29	ASR	1321E	1358	N21	E80	06	4.7			9	9	E	HOLL		
29	ASR	1321E	1540D	N17	E80	06	4.6			9	9	E	HOLL		
29	ASR	1325E	1350D	N20	E90	06	5.4			9	9	E	RAMY		
29	AFS	1335E	1810D	S25	W16	05	28.3		03	9	9	E	RAMY	5027	
29	AFS	1416E	0150D	S24	W06	05	29.1		03	6	8	E	HOLL	5027	
29	DSD	1540E	1802D	S26	W13	05	28.6		02	9	9	E	HOLL	5027	
29	ASR	1545E	1704	N34	W90	05	22.5			9	9	E	HOLL	5029	
29	ASR	1614E	1704D	N32	W90	05	22.5			9	9	E	SVTO	5029	
29	DSD	1644E	1704D	S25	W11	05	28.8		02	9	9	E	SVTO	5027	
29	ASR	1704E	1716	N18	E81	06	4.9			8	9	E	PALE	5032	
29	DSD	2020	2049	S27	W16	05	28.6		11	9	9	E	HOLL	5027	Flare Associated
29	ASR	2024E	2052D	S17	E76	06	4.6			9	6	E	HOLL	5032	
29	ASR	2025E	0150D	N19	E81	06	5.0			9	9	E	HOLL		
29	DSD	2048E	2206D	S24	W19	05	28.4		05	9	9	E	HOLL	5027	
29	ASR	2055E	2347D	S26	E80	06	5.1			9	9	E	HOLL	5031	
29	DSD	2059	2207D	S25	W28	05	27.7		07	5	8	E	HOLL	5027	
29	APR	2252	0131D	N55	E90	06	6.7	1				C	VORO		
29	DSD	2257	2309D	S28	W17	05	28.6	2				C	VORO		
29	DSD	2300E	2320	S26	W17	05	28.6		06	9	9	E	HOLL	5027	
29	APR	2322	0131D	N08	E90	06	5.7	1				C	VORO		
30	DSD	0440	0512	S27	W20	05	28.6		05	9	9	E	SVTO	5027	
30	DSD	0515	0535	S20	W17	05	28.9		02	9	9	E	SVTO	5027	
30	ASR	0527E	0908D	N28	E90	06	6.3			9	9	E	SVTO	5031	
30	BSL	0625E	0634D	N30	E90	06	6.3	1-				C	CATA		
30	BSL	0658E	0704D	N30	E90	06	6.4	1-				C	CATA		
30	BSL	0727E	0905D	S54	E90	06	7.0	1				C	ABST		
30	DSD	0735	0826	S23	W20	05	28.8		02	9	9	E	SVTO	5027	
30	DSD	0811E	1721D	S26	W21	05	28.7		04	9	9	E	SVTO	5027	
30	DSD	0822	0834	S26	W21	05	28.7	1				V	KHAR		
30	DSD	0825E	1001D	N25	W17	05	29.0		02	9	9	E	SVTO	5030	
30	BSL	0908	0930D	N35	E90	06	6.6	1-				C	CATA		
30	BSL	1026	1032	N25	E90	06	6.4	1-				C	CATA		
30	BSL	1135	1145D	N84	E90	06	7.9	1-				C	CATA		
30	DSD	1235E	1424D	S25	W27	05	28.4		03	9	9	E	RAMY	5027	
30	DSD	1512	1527	S26	W29	05	28.4		13	9	9	E	HOLL	5027	Flare Associated
30	ASR	1624E	1825D	N24	E79	06	5.8			7	7	E	HOLL	5032	
30	ASR	1630E	2201D	S22	E78	06	5.7			8	8	E	HOLL		
30	SDF	1809E	1929D	N18	E08	05	31.4		14	0	0	E	PALE		
30	DSD	2215E	2321D	S25	W30	05	28.6		04	9	9	E	HOLL	5027	Flare Associated
31	AFS	0115E	0756D	N38	W06	05	30.6		01	9	7	E	LEAR		
31	DSD	0541	0740D	S26	W26	05	29.2		03	9	9	E	SVTO	5027	
31	APR	0545E	0800D	S32	W90	05	24.1					V	ATHN		
31	ADF	0551E	0950D	N13	E60	06	4.8	2	05	9	9	E	SVTO	5032	
31	ADF	0551E	1715D	N21	E62	06	5.0	1	03	9	9	E	SVTO	5032	
31	ASR	0552E	1715D	S19	E90	06	7.1			9	9	E	SVTO		
31	AFS	0654E	1715D	N20	E63	06	5.1		03	9	9	E	SVTO	5032	
31	ADF	0655E	0715	S24	W24	05	29.4	1				V	KHAR		
31	DSD	0730E	0755D	S22	W55	05	27.1	1				V	KHAR		
31	BSL	0736	0800	S19	E90	06	7.2	1				V	KHAR		
31	AFS	1116E	2028D	N18	E60	06	5.0		03	9	9	E	RAMY	5032	
31	AFS	1128E	2028D	S24	W41	05	28.3		03	9	8	E	RAMY	5027	
31	ASR	1133E	2028D	S15	W90	05	24.7			9	9	E	RAMY	5025	
31	ASR	1324E	0158D	S17	W83	05	25.2			7	9	E	HOLL	5025	
31	ASR	1326E	0158D	S21	E81	06	6.8			7	6	E	HOLL		
31	SDF	1414E	2359D	N25	W01	05	31.5		13	0	0	E	HOLL		
31	DSD	1521E	1523D	N23	E62	06	5.4		05	9	9	E	HOLL	5032	
31	DSD	1521E	1523D	N23	E62	06	5.4		05	9	9	E	HOLL	5032	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1988

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
31	DSD	1521E	2246D	N23	E62	06	5.4		05	9	9	E	HOLL	5032	
31	DSD	1616E	1625	N27	E56	06	5.0		11	9	9	E	HOLL	5031	
31	ASR	1617E	2028D	S26	E90	06	7.7			9	8	E	RAMY		
31	ADF	1635E	2028D	N21	E58	06	5.1	1	08	9	9	E	RAMY	5032	
31	APR	1805E	0158D	N29	W87	05	24.9			9	9	E	HOLL	5029	
31	DSD	1822	2020D	S23	W57	05	27.4		12	9	9	E	HOLL	5028	
31	DSD	1822E	2028D	S24	W61	05	27.0		07	9	9	E	RAMY	5028	
31	AFS	1914E	0448D	S22	W46	05	28.3		02	9	9	E	PALE	5027	

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.

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."