



U.S. DEPARTMENT OF COMMERCE

C. William Verity, Jr., Secretary-Designate

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

J. Curtis Mack II, Assistant Secretary, NOAA

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

Thomas N. Pyke, Jr., Assistant Administrator

Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 519 NOVEMBER 1987

DATA FOR
MAY 1987

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

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

For sale through the National Geophysical Data Center, NOAA/NESDIS, E/GC2, 325 Broadway, Boulder, Colorado 80303. 1988 Subscription Prices for the U.S.: \$70.00 annually for both Part I (Prompt Reports) and Part II (Comprehensive Reports) or \$40.00 annually for either Part. Annual supplement containing explanation is included. Foreign subscriptions: For 1988 issues -- \$106.00 annually for both parts or \$58.00 for either Part. We require prepayment for all orders. Please include with your request a check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGDC. Any bank charges should be paid by the subscriber. Payment may be made through an American Express, Mastercard or VISA credit cards. Please include the correct name of credit card holder, card number and expiration date. Prices are subject to change. NGDC phone number: (303)497-6223 (FTS 320-6223).

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA/NESDIS/NGDC, E/GC2, 325 Broadway, Boulder, Colorado 80303 U.S.A.

BACK ISSUES OF "SOLAR-GEOPHYSICAL DATA"

Reel #	Coverage	Medium	Reel #	Coverage	Medium	Reel #	Coverage	Medium
1	Jan 56 - Dec 56	Microfilm	9	Jan 64 - Dec 64	Microfilm	17	Jul 69 - Dec 69	Microfilm
2	Jan 57 - Dec 57	Microfilm	10	Jan 65 - Dec 65	Microfilm	18	Jan 70 - Jun 70	Microfilm
3	Jan 58 - Dec 58	Microfilm	11	Jan 66 - Sep 66	Microfilm	19	Jul 70 - Dec 70	Microfilm
4	Jan 59 - Dec 59	Microfilm	12	Oct 66 - Dec 66	Microfilm	20	Jan 71 - Jun 71	Microfilm
5	Jan 60 - Dec 60	Microfilm	13	Jan 67 - Dec 67	Microfilm	21	Jul 71 - Dec 71	Microfilm
6	Jan 61 - Dec 61	Microfilm	14	Jan 68 - Jun 68	Microfilm	22	Jan 72 - Jun 72	Microfilm
7	Jan 62 - Dec 62	Microfilm	15	Jul 68 - Dec 68	Microfilm	23	Jul 72 - Dec 72	Microfilm
8	Jan 63 - Dec 63	Microfilm	16	Jan 69 - Jun 69	Microfilm		1973 - 1987	Microfiche

Microfilm are available at \$30.00 per reel; microfiche at \$96.00 per year; \$2,130.00 for the above set. Back issues in booklet form are available, as long as the stocks exist, at \$4.00 for either Part. Any entire year of back issues in booklet form is available at the current annual subscription rate, as long as the stocks exist. Please add a ten dollar (\$10.00) handling fee for non-U.S.A. orders. Prices are subject to change.

To standardize referencing these reports in the open literature, the following format is recommended:
Solar-Geophysical Data, 515 Part I (or Part II), pages, July 1987, U.S. Department of Commerce (Boulder, Colorado, USA 80303).

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

NUMBER 519

(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)

	Page
DETAILED INDEX FOR 1987.	2
DATA FOR OCTOBER 1987.	3-26
DATA FOR SEPTEMBER 1987.	27-88
LATE DATA.	89-125
Neutron Monitor Tokyo Jun-Aug 87; Charts of Kiel/Tokyo Apr-Jul 87	
Dst Jul 87	
Geomagnetic Activity Indices Jun 87	
Calcium Plage Regions Mar-Apr 87; Daily Maps Apr-May 87	
Kitt Peak Magnetograms 19 July-31 August 87	
ERRATA: Sudden Commencements Mar 1986; Apr 1987	

PART II (COMPREHENSIVE REPORTS)

	Page
DETAILED INDEX FOR 1987.	2
DATA FOR MAY 1987.	3-62

Published with partial support from ONR (N00014-86-F-0049).

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

CODE	KIND OF OBSERVATION	MAR 87	APR	MAY	JUN	JUL	AUG	SEP	OCT
A.	<u>SOLAR AND INTERPLANETARY EVENTS</u>								
A.1	Sunspot Drawings	513A 37	514A 35	515A 35	516A 38	517A 36	518A 36	519A 34	
A.2aa	Internat. Provisional Sunspot Numbers	512A 7	513A 9	514A 9	515A 7	516A 9	517A 9	518A 9	519A 9
A.2c	American Sunspot Numbers	512A 7	513A 9	514A 9	515A 7	516A 9	517A 9	518A 9	519A 9
A.3a	Mt. Wilson Magnetograms	513A 37	514A 35	515A 35	516A 38	517A 36	518A 36	519A 34	
A.3b	Mt. Wilson Sunspot Magnetic Class	513A 68	514A 65	515A 66	516A 68	517A 67	518A 67	519A 64	
A.3c	Kitt Peak Magnetograms	513A 37	514A 35	515A 35	516A 38	517A 36	519A121	519A 34	
A.3d	Mean Solar Magnetic Field (Stanford)	512A 23	513A 29	514A 27	515A 20	516A 29	517A 26	518A 26	519A 25
A.3e	Stanford Magnetograms	513A 37	514A 35	515A 35	516A 38	517A 36	517A 36	519A 34	
A.4	H-alpha Filtergrams	513A 37	514A 35	515A 35	516A 38	517A 36	517A 36	519A 34	
A.5	Calcium Plage Photographs/Drawings	518A110	519A109	519A114					
A.5a	Calcium Plage Regions	519A101	519A105						
A.5b	Daily Calcium Plage Indices	519A103	519A108						
A.6	H-alpha Synoptic Charts	514A 96	514A 30	515A 24	516A 32	517A 30	518A 30	519A 28	
A.6b	Active Region Carte Synoptique (Paris)	518B 4	519B 4						
A.6c	Stanford Solar Mag Field Synoptic Maps	513A 33	514A 31	515A 26	516A 33	517A 31	518A 31	519A 29	
A.6d	Kitt Peak " Mag Field Synoptic Maps	513A 36	514A 34	515A 32	516A 36	517A 34	518A 34	519A 32	
A.6e	Mass Ejections from the Sun	517B 23	518B 39	519B 55					
A.6f	Active Prominences and Filaments	517B 24	518B 40	519B 56					
A.6g	Sac Peak Coronal Line Synoptic Maps	513A 34	514A 32	515A 28	516A 34	517A 32	518A 32	519A 30	
A.7h	Coronal Line Emission (Sac Peak)	513A 37	514A 35	515A 35	516A 38	517A 46	518A 36	519A 34	
A.8aa	2800 MHz - Solar Flux (Ottawa)	512A 7	513A 9	514A 9	515A 7	516A 9	517A 9	518A 9	519A 9
A.8ac	2800 MHz - Adj. Solar Flux (Ottawa)	512A 7	513A 9	514A 9	515A 7	516A 9	517A 9	518A 9	519A 9
A.8g	Adjusted Daily Solar Fluxes (Sagamore)	512A 7	513A 9	514A 9	515A 7	516A 9	517A 9	518A 9	519A 9
A.10a	Interferometric Chart (164 MHz) Nancy	512A 19	513A 26	515A102	515A 18	517A 92	517A 24	518A 24	519A 23
A.10c	East-West Scans - 21 cm - Fleurs	512A 17	513A 24	514A 23	515A 16	516A 26	517A 23	518A 23	519A 22
A.10d	East-West Scans - 43 cm - Fleurs	512A 18	513A 25	514A 24	515A 17	516A 27	---	---	---
A.10e	East-West Scans - 10 cm - Ottawa	512A 16	513A 23	514A 22	515A 15	516A 25	517A 22	518A 22	519A 21
A.10f	East-West Scans - 3 cm - Toyokawa	512A 15	513A 22	514A 21	515A 14	516A 24	517A 21	518A 21	519A 20
A.11g	Solar X-ray GOES (graphs/event table)	517B 15	518B 31	519A 46					
A.12e	Solar Particles (IMP H & J)	Jan 84-Apr 85 in 505B 34; May-Aug 85 in 510B 26							
A.13e	Solar Plasma (IMP H & J)	Feb-Mar 86 in 509B 34; Mar-Oct 86 in 511B 26; Nov 86-Apr 87 in 517B 31							
A.16a	SMM Solar Irradiance	1980-1985 in 515B 26							
A.16b	NIMBUS Solar Irradiance	Nov 78-Oct 84 in 499B 26							
A.17	Interplanetary Mag Field (Pioneer 12)	517A 95	517A 96	517A 97	518A 96				
A.17c	Inferred Interplanetary Mag Field	Mar 86 in 500A 21; Mar 87 in 512A 21							
B.	<u>IONOSPHERIC RADIO PROPAGATION</u>								
B.52	Field Strength Graphs-North Atlantic	513A 84	514A 92	515A 96	516A 84	517A 88	518A 92	519A 86	
B.53	Quality Indices on Paths to Germany	513A 83	514A 91	515A 95	516A 83	517A 90	518A 91	519A 88	
C.	<u>SOLAR FLARE-ASSOCIATED EVENTS</u>								
C.1a	H-alpha Flares	512A 12	513A 14	514A 14	515A 12	516A 18	517A 14	518A 14	519A 14
C.1ba	H-alpha Flare Groups	517B 6	518B 6	519B 6					
C.1d	Flare Patrol Observations	512A 14	513A 21	514A 20	515A 13	516A 23	517A 20	518A 20	519A 19
C.1d	Flare Patrol Observations	517B 10	518B 16	519B 16					
C.3	Radio Bursts Fixed Freq.	517B 12	518B 18	519B 18					
C.3	Radio Bursts Fixed Freq. Selected	512A 20	513A 27	514A 25	515A 19	516A 28	517A 25	518A 25	519A 24
Q.4d	Radio Bursts Spectral (Culgoora)	513A 75	514A 77	515A 75	514A 77	517A 78	518A 78	519A 75	
C.4e	Radio Bursts Spectral (Weissenau)	513A 75	514A 77	515A 75	516A 74	517A 78	518A 78	519A 75	
C.4f	Radio Bursts Spectral (Sagamore Hill)	513A 75	514A 77	515A 75	516A 74	517A 78	518A 78	519A 75	
C.4i	Radio Bursts Spectral (Bleien)	---	---	---	---	---	---	---	
C.4k	Radio Bursts Spectral (Learmonth)	513A 75	514A 77	515A 75	516A 74	517A 78	518A 78	519A 75	
C.4l	Radio Bursts Spectral (Palehua)	513A 75	514A 77	515A 75	516A 74	517A 78	518A 78	519A 75	
C.6	Sudden Ionospheric Disturbances	513A 73	514A 74	515A 73	516A 72	517A 76	518A 75	519A 73	
D.	<u>GEOMAGNETIC & MAGNETOSPHERIC EVENTS</u>								
D.1a	Geomagnetic Indices	513A 79	514A 86	515A 90	519A100	517A 83	518A 86	519A 81	
D.1ba	27-day Chart of Kp Indices	513A 81	514A 88	515A 92	516A 80	517A 85	518A 88	519A 83	
D.1c	27-day Chart of C9								
D.1cb	Monthly Mean aa Indices	514A 89	514A 89	515A 93	516A 81	517A 86	518A 89	519A 84	
D.1d	Principal Magnetic Storms	513A 82	514A 90	515A 94	516A 82	517A 87	518A 90	519A 85	
D.1f	Sudden Commencements/Flare Effects	515A119	519A125	516A 91	517A101	518A104			
D.1g	Equatorial Indices Dst	515A121	516A 89	516A 90	517A106	519A 99			
F.	<u>COSMIC RAYS</u>								
F.1a	Cosmic Ray Neutron Cts (Deep River)	514A112	514A 81	515A 86					
F.1b	Cosmic Ray Neutron Cts (Climax)	514A102	514A 81	515A 86	516A 78	518A103	518A 84	519A 79	
a.1e	Cosmic Ray Neutron Cts (Alert)	514A102	514A 81	515A 86					
F.1h	Cosmic Ray Neutron Cts (Thule)	513A 78	514A 81	515A 86	517A 99	517A 81	518A 84	519A 79	
F.1i	Cosmic Ray Neutron Cts (Kiel)	513A 78	514A 81	515A 86	516A 78	517A 81	518A 84	519A 79	
F.1j	Cosmic Ray Neutron Cts (Tokyo)	513A 78	514A 81	515A 86	519A 96	519A 97	519A 98	519A 79	
F.1l	Cosmic Ray Neutron Cts (Huancayo)	514A102	514A 81	515A 86	516A 78				
H.	<u>MISCELLANEOUS</u>								
H.60	IUWDS Alert Periods	512A 4	513A 5	514A 5	515A 4	516A 5	517A 5	518A 5	519A 5

The entry "513A 37" under Mar 1987, for example, means that the sunspot drawings for Mar 1987 appear in SOLAR-GEOPHYSICAL DATA No. 513, Part I, and that they begin on page 37. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

CONTENTS

Comprehensive Reports

DATA FOR MAY 1987

Number 519 Part II

MEUDON CARTE SYNOPTIQUE	Page
Active Regions and Filaments.	4
Synoptic Solar Maps	5
SOLAR FLARES	
H-alpha Solar Flare Groups.	6-15
Intervals of No Flare Patrol Observation.	16
Number of Solar Flares August 1966 - present.	17
SOLAR RADIO BURSTS AT FIXED FREQUENCIES.	18-45
INTERPLANETARY SOLAR PARTICLES AND PLASMA (Unavailable at time of publication.)	
SOLAR X-RAY RADIATION FROM GOES SATELLITE Graphs	46-51
Preliminary Event List.	52-53
Preliminary Daily Average Background.	54
MASS EJECTIONS FROM THE SUN.	55
ACTIVE PROMINENCES AND FILAMENTS	56-62
SOLAR IRRADIANCE (Unavailable at time of publication.)	

4
May 87

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 1788

(23 April to 20 May 1987)

Region No.	Coordinates Lat. Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1787	Activity at West Limb
1	6 N 358	1	+1	X		disappeared
2	31 N 345	1	>6	X		decreasing
3	41 S 331	1	+4	X		disappeared
4	3 N 296	2	>6			decreasing
5	12 N 294	1	>6	X		dispersed
6	28 S 280	2	0			decreasing
7	5 N 210	1	>6	X		dispersed
8	7 N 204	1	>6	X		dispersed
9	28 S 174	2	>6		7	decreasing
10	21 N 166	1	+6	X	10	dispersed
11	28 S 131	1	-2	X		stable
12	14 S 130	1	>6	X		dispersed
13	9 S 126	1	>6	X	10	dispersed
14	55 S 123	1	-2	X		stable
15	34 N 121	3	>6			decreasing
16	27 N 118	1	0	X		decreasing
17	31 S 116	3	>6		9	decreasing
18	8 S 115	1	>6	X	12	dispersed
19	36 S 103	1	>6	X		dispersed
20	22 S 84	1	+4	X		dispersed
21	20 S 80	2	-3			decreasing
22	26 N 60	1	>6	X		dispersed
23	25 N 24	1	>6	X	19	disappeared

ERRATA: Return of Regions

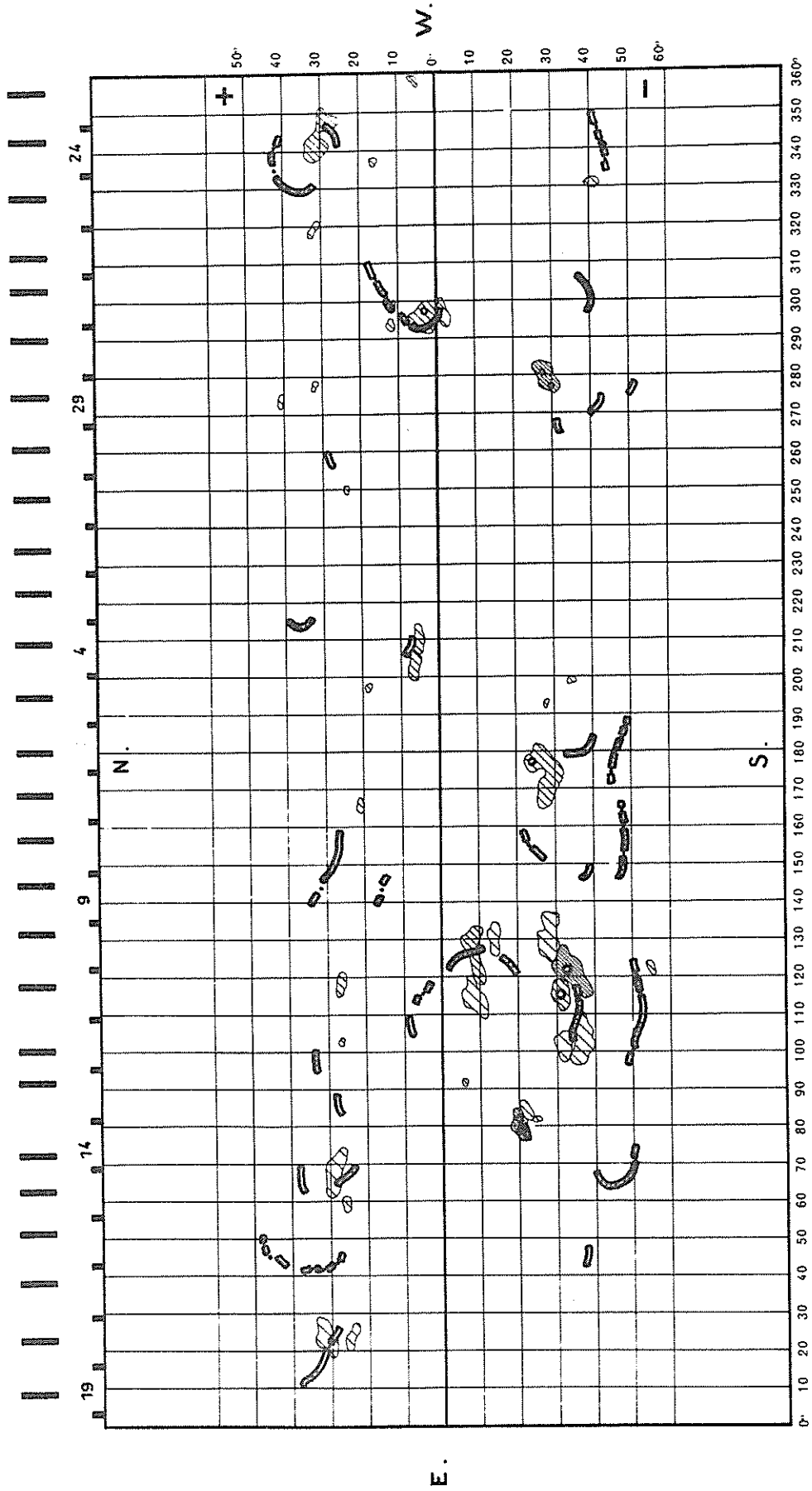
Rotation 1779: Region No. 3 is the return of Region No. 3 in Rotation 1778;
 Rotation 1781: Region No. 13 is the return of Region No. 8 in Rotation 1780;
 Rotation 1782: Region No. 7 is the return of Region No. 2 in Rotation 1781;
 Region No. 11 is the return of Region No. 9 in Rotation 1781;
 Region No. 13 is the return of Region No. 9 in Rotation 1781;
 Rotation 1783: Region No. 7 is the return of Region No. 11 in Rotation 1782;
 Rotation 1784: Region No. 4 is the return of Region No. 5 in Rotation 1783;
 Region No. 7 is the return of Region No. 7 in Rotation 1783;
 Rotation 1785: Region No. 4 is the return of Region No. 4 in Rotation 1784.

CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1788
(23 April to 20 May 1987)

April 1987

Meudon Observatory



Heliographic Longitude

6
May 87

H - ALPHA SOLAR FLARES

MAY 1987

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			Remarks
																Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
			01 0000		0010			No Flare Patrol											
0001	HOLL	01	1835	1836	1839	N02	W54	4797	04	27.8	4	SF		3	C		12		
0002		01	1836	1844	1912	S28	W36	4803	04	29.1	36	SF					52		FH
	HOLL	01	1836	1844	1912	S28	W35	4803	04	29.1	36	SF		3	C		69		FH
	RAMY	01	1843E	1843U	1919D	S28	W36	4803	04	29.1	36D	SF		3	C		35		
0003	HOLL	01	1858	1903	1934	N01	W57	4797	04	27.6	36	1B C	5.9	3	C		182		F
0004	HOLL	01	2118	2119	2123	N02	W55	4797	04	27.9	5	SF		3	C		18		
0005	HOLL	01	2302	2302	2307	N02	W56	4797	04	27.9	5	SF		3	C		26		
0006		02	0031*	0037	0121	N02	W60	4797	04	27.6	50	SN					40	.8	D
	YUNN	02	0031	0037	0115	N02	W60	4797	04	27.6	44	SN			C		32	.7	D
	YUNN	02	0050	0108U	0127	N03	W60	4797	04	27.6	37	SN			P	0108	48	1.0	
0007	YUNN	02	0145	0150	0156	N02	W60	4797	04	27.7	11	1B			C		161	3.3	
0008	YUNN	02	0203	0216	0245	N03	W61	4797	04	27.6	42	2B			C		273	5.8	
			02 1646		1650			No Flare Patrol											
			03 0946		0947			No Flare Patrol											
			04 0734		0959			No Flare Patrol											
			04 2140		2145			No Flare Patrol											
			04 2243		2248			No Flare Patrol											
			04 2306		2324			No Flare Patrol											
			04 2329		2330			No Flare Patrol											
			05 0235		0239			No Flare Patrol											
			05 0253		0259			No Flare Patrol											
0009	HTPR	05	0953	1009	1015	S28	W88	4803	04	28.6	22	SF			C	1009	20		
0010	HTPR	05	1039	1045	1110	S28	W88	4803	04	28.7	31	SN			C	1045	20		E
			05 1456		1506			No Flare Patrol											
			05 1511		1543			No Flare Patrol											
0011		05	1645I	1646	1706	S31	E70	4806	05	11.2	21	SF					32		
	HOLL	05	1645	1646	1712	S31	E71	4806	05	11.3	27	SF		3	C		46		
	RAMY	05	1646	1646	1659	S31	E70	4806	05	11.2	13	SF		3	C		17		
0012	HOLL	05	1906	1909	1911	S31	E68	4806	05	11.2	5	SF		3	C		12		
			05 2229		2232			No Flare Patrol											
			05 2236		2243			No Flare Patrol											
			05 2309		2314			No Flare Patrol											
			05 2334		2341			No Flare Patrol											
0013		06	1118I	1119	1124	S30	E56	4806	05	10.9	6	SF					12		H
	HTPR	06	1118	1119	1124	S30	E56	4806	05	10.9	6	SF			C	1119	10		
	RAMY	06	1119	1119	1123	S30	E57	4806	05	10.9	4	SF		3	C		15		H
0014		06	1200		1218D	S30	E58	4806	05	11.1	18D	SF					15		E
	HTPR	06	1200		1206D	S30	E58	4806	05	11.1	6D	SF			C	1206	20		E
	HTPR	06	1214E		1218D	S30	E58	4806	05	11.1	4D	SF			C	1214	10		
0015		06	13403	13442	1402	S30	E55	4806	05	10.9	22	SN					69		H
	HTPR	06	1340	1344	1355	S30	E53	4806	05	10.7	15	SB			C	1344	70		
	RAMY	06	1342	1345	1406	S30	E57	4806	05	11.0	24	SN		3	C		75		H
	HOLL	06	1343	1346	1404	S29	E56	4806	05	11.0	21	SN		3	C		63		H
0016		06	1513*	1518*	1626	S30	E53	4806	05	10.8	73	SF					20		EK
	HTPR	06	1513	1518	1613	S30	E52	4806	05	10.7	60	SF			C	1518	20		K
	HTPR	06	1608	1619	1629	S30	E56	4806	05	11.1	21	SF			C	1619	20		E
	HTPR	06	1619	1623	1637	S30	E51	4806	05	10.7	18	SF			C	1623	20		
0017	RAMY	06	1813	1817	1821	S30	E53	4806	05	10.9	8	SF		2	C		21		

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		Remarks
																	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
		06	1937		2048			No Flare Patrol											
0018	HTPR	07	0940	0944	0948	S36	E45	4806	05	11.0	8	SF			C	0944	10	.1	E
0019		07	1008*	1036	1042	S34	E50	4806	05	11.4	34	SF					25	.4	E
	HTPR	07	1008	1036	1045	S35	E50	4806	05	11.4	37	SF			C	1036	20	.3	E
	URUM	07	1032	1036	1040	S33	E49	4806	05	11.3	8	SF			C		30	.5	E
0020		07	1152	1154	1204	S31	E44	4806	05	11.0	12	SF					31	.4	D
	KAND	07	1150E		1208	S32	E46	4806	05	11.1	18D	SF			P		42	.6	D
	HTPR	07	1152	1154	1200	S30	E42	4806	05	10.8	8	SF			C	1154	20	.3	
0021		07	1255*	13052	1316	S30	E42	4806	05	10.8	21	SF					24	.4	
	HTPR	07	1255	1307	1326	S30	E41	4806	05	10.8	31	SF			C	1307	30	.4	
	KANZ	07	1305	1305	1313	S30	E41	4806	05	10.8	8	SF		2					
	RAMY	07	1305	1307	1309	S30	E43	4806	05	10.9	4	SF		3	C		18		
0022		07	1331*	1332*	1353	S32	E42	4806	05	10.9	22	SF					16	.2	E
	HTPR	07	1331	1348	1358	S30	E41	4806	05	10.8	27	SF			C	1348	20	.3	E
	KANZ	07	1332	1332	1340	S31	E40	4806	05	10.7	8	SF							
	RAMY	07	1333	1333	1337	S30	E43	4806	05	10.9	4	SF		2	C		17		
	HTPR	07	1355	1401	1417	S36	E42	4806	05	10.9	22	SF			C	1401	10	.1	
0023		08	00351	00352	0042	S31	E36	4806	05	10.9	7	SF					33	.8	CEF
	HOLL	08	0035	0035	0043	S29	E36	4806	05	10.8	8	SF		3	C		25		
	LEAR	08	0036	0037	0040	S30	E35	4806	05	10.8	4	SF		3	C		25		F
	PURP	08	0037E	0037U	0037D	S33	E38	4806	05	11.0	4D	SN			P	0037	50	.8	EC
0024	SVTO	08	0511E	0519U	0525	S30	E33	4806	05	10.8	14D	SF		3	C		36		H
0025	SVTO	08	0751	0756	0804	S35	E34	4806	05	11.0	13	SF		3	C		32		F
		08	1807		1813			No Flare Patrol											
		08	1859		1948			No Flare Patrol											
		08	2130		2254			No Flare Patrol											
		10	2008		2034			No Flare Patrol											
		10	2141		2149			No Flare Patrol											
		10	2222		2240			No Flare Patrol											
0026	LEAR	11	0104E	0104	0108D	S33	E09	4806	05										

8
May 87

H - ALPHA SOLAR FLARES

MAY 1987

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			Remarks
																Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0031		14	0109*	0115*	0134	S22	E01	4808	05	14.1	25	SN					12	.2	DEG
	YUNN	14	0109	0115	0127	S22	E05	4808	05	14.4	18	SN			P		8	.1	DG
	YUNN	14	0122	0127	0141	S22	W03	4808	05	13.8	19	SN			C		16	.2	E
		14	0856		0915	No Flare Patrol													
0032	HTPR	14	1434E		1505	S23	E71	4810	05	20.1	31D	SF			C	1441	10		
		14	2012		2016	No Flare Patrol													
		14	2024		2031	No Flare Patrol													
		14	2037		2240	No Flare Patrol													
		15	0251		0313	No Flare Patrol													
		15	0326		0340	No Flare Patrol													
0033	PALE	15	0410	0417	0430D	S23	E70	4810	05	20.6	20D	SB	C 1.9	1	C		147		FU
0034	KAND	15	0846		0850D	S24	E75	4810	05	21.1	4D	SF			P		21		D
0035	KAND	15	1015	1022	1029	S24	E71	4810	05	20.9	14	SF			P		21		D
0036	KAND	15	1022		1038	N27	E85	4811	05	22.0	16	SN			P		21		A
		15	2050		2111	No Flare Patrol													
		15	2133		2146	No Flare Patrol													
		15	2244		2303	No Flare Patrol													
0037	LEAR	16	0416E	0418U	0440D	S25	E63	4810	05	21.0	24D	SB	C 1.9	3	C		147		FU
0038	HTPR	16	0537E		0550	S35	W53	4806	05	12.0	13D	SN			C	0541	120	1.8	E
0039		16	06194	06241	0635	N28	E62	4811	05	21.1	16	SN					50	1.4	E
	HTPR	16	0619	0624	0636	N28	E62	4811	05	21.1	17	SB			C	0624	70	1.4	E
	SVTO	16	0623	0625	0634	N28	E62	4811	05	21.1	11	SF		3	C		29		
0040	HTPR	16	0926	0928	0929	N32	E65	4811	05	21.5	3	SF			C	0928	10	.2	
0041	HTPR	16	0939	0946	0955	N32	E66	4811	05	21.6	16	SB			C	0946	60	1.4	E
0042		16	1032*	1039*	1111	N29	E70	4811	05	21.9	39	SN	C 1.6				36	.7	AK
	HTPR	16	1032	1040	1115	N32	E65	4811	05	21.6	43	SB			C	1040	30	.7	K
	SVTO	16	1039	1039	1045	N28	E70	4811	05	21.9	6	SB		3	C		35		
	SVTO	16	1054	1057	1106	N29	E71	4811	05	22.0	12	SN		3	C		34		
	RAMY	16	1055	1057	1120	N28	E72	4811	05	22.1	25	SF		3	C		25		
	URUM	16	1107	1112	1121	N28	E70	4811	05	21.9	14	1N			C		53		A
	SVTO	16	1109	1113	1120	N28	E70	4811	05	21.9	11	SN	C 1.6	3	C		37		
0043	HTPR	16	1036	1057	1126	S27	W52	4806	05	12.4	50	SF			C	1057	20	.3	
0044		16	1145	1147*	1208	N29	E69	4811	05	21.9	23	SN	C 1.2				40	1.3	AE
	SVTO	16	1145	1147	1208	N28	E70	4811	05	22.0	23	SB	C 1.2	3	C		46		
	URUM	16	1145	1156	1159D	N27	E68	4811	05	21.8	14D	SN			P		44	1.7	A
	HTPR	16	1145	1157	1208	N32	E65	4811	05	21.6	23	SF			C	1157	40	.9	E
	RAMY	16	1148E	1148U	1201D	N28	E72	4811	05	22.1	13D	SN	C 1.2	3	C		29		
0045		16	1219*	12276	1238	N29	E66	4811	05	21.7	19	SN					28	.7	EF
	HTPR	16	1219	1227	1237	N32	E64	4811	05	21.6	18	SF			C	1227	20	.4	
	SVTO	16	1221	1233	1242	N28	E69	4811	05	21.9	21	SN		3	C		22		
	HTPR	16	1228	1232	1235	N28	E59	4811	05	21.1	7	SF			C	1232	50	1.0	E
	RAMY	16	1229	1233	1237	N28	E73	4811	05	22.2	8	SN		3	C		21		F
0046	HTPR	16	1240		1348D	S20	W40	4808	05	13.5	68D	SF			C	1313	20	.3	E
0047	RAMY	16	1247	1255U	1258	N28	E71	4811	05	22.1	11	SN		3	C		25		
0048	SVTO	16	1328	1329	1336	N27	E64	4811	05	21.5	8	SF		3	C		20		
0049		16	1422	1427	1431	S20	W37	4808	05	13.8	9	SN					66	1.4	EK
	HTPR	16	1421E		1628D	S20	W42	4808	05	13.4	127D	SN			C	1602	110	1.4	EK
	SVTO	16	1422	1427	1431	S20	W32	4808	05	14.1	9	SF		3	C		21		

H - ALPHA SOLAR FLARES

9
May 87

MAY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0050		16	15356	15366	1542	N28	E58	4811	05	21.2	7	SF					18	.4	F
	HTPR	16	1531E		1551D	N28	E58	4811	05	21.2	20D	SN			C	1542	20	.4	
	HOLL	16	1535	1536	1539	N28	E58	4811	05	21.2	4	SF		3	C		17		F
	HOLL	16	1541	1542	1545	N28	E57	4811	05	21.1	4	SF		3	C		18		
0051	HOLL	16	1740	1740	1747	S19	W33	4808	05	14.2	7	SF		3	C		11		
0052		16	18542	1859	1914	S22	E54	4810	05	20.9	20	SF					20		H
	HOLL	16	1854	1859	1918	S21	E49	4810	05	20.5	24	SN		3	C		22		H
	PALE	16	1856	1859	1911	S22	E55	4810	05	21.0	15	SF		3	C		19		
	RAMY	16	1903E	1912U	1918D	S23	E58	4810	05	21.3	15D	SF		3	C		20		
0053	RAMY	16	1948	2020	2040	S20	W38	4808	05	13.9	52	SN		3	C		63		H
		16	2204		2211	No Flare Patrol													
		16	2219		2230	No Flare Patrol													
0054	HOLL	16	2235	2236	2243	S21	E47	4810	05	20.5	8	SF		3	C		43		
0055	HOLL	16	2255	2256	2305	S20	W40	4808	05	13.9	10	SF		3	C		27		
0056	HOLL	16	2344	2350		N33	E63	4811	05	22.0		SF		3	C		55		F
0057	HOLL	17	0033	0041	0053	S19	W36	4808	05	14.3	20	SF		3	C		21		F
0058	PALE	17	0146	0149	0156	N29	E53	4811	05	21.2	10	SB		3	C		83		EF
0059	YUNN	17	0607	0610	0627	S20	W40	4808	05	14.2	20	SN			C		94	1.3	
0060	YUNN	17	0739E	0756U	0758D	S18	W42	4808	05	14.1	19D	SB			P	0756	79	1.1	E
0061		17	08316	0840*	0905	S21	W43	4808	05	14.0	34	SN	C 4.9				80	1.4	EG
	URUM	17	0831	0840	0900	S20	W43	4808	05	14.1	29	SB			C		110	1.7	G
	PEKG	17	0835	0856	0906	S21	W42	4808	05	14.1	31	SN			P	0856	67	1.0	E
	SVTO	17	0837	0845	0910	S21	W45	4808	05	13.9	33	SN	C 4.9	3	C		62		
0062		17	12283	12313	1239	S19	W42	4808	05	14.3	11	SF					20		FH
	RAMY	17	1228	1234	1240	S19	W42	4808	05	14.3	12	SF		3	C		17		FH
	SVTO	17	1231	1231	1238	S19	W43	4808	05	14.2	7	SF		3	C		23		
0063	RAMY	17	1457	1457	1504	N28	E48	4811	05	21.4	7	SF		3	C		28		
0064	RAMY	17	1614	1616	1621	N28	E49	4811	05	21.5	7	SF		3	C		16		
0065	KAND	18	1108	1115	1123	S18	W54	4808	05	14.3	15	SN			P		125	2.1	D
0066	KAND	18	1115	1117	1118	N32	E45	4811	05	22.0	3	SF			P		31	.6	D
0067	RAMY	18	1638	1638	1651	N29	E39	4811	05	21.7	13	SN		3	C		38		
		18	1731		1841	No Flare Patrol													
		18	1854		2249	No Flare Patrol													
0068		18	2321	23242	2335	N24	E32	4811	05	21.4	14	SN	C 1.3				70	1.0	F
	PALE	18	2321	2324	2334	N24	E32	4811	05	21.4	13	SN	C 1.3	3	C		64		F
	PURP	18	2321E	2326	2336	N23	E33	4811	05	21.5	15D	SN			C	2326	75	1.0	
0069		19	0004	00042	0007	S19	W67	4808	05	13.9	3	SN	C 1.0				34		F
	PURP	19	0004E	0004	0016D	S18	W70	4808	05	13.7	12D	SN			P	0004	46		
	PALE	19	0004	0006	0007	S20	W64	4808	05	14.1	3	SF	C 1.0	3	C		23		F
0070	YUNN	19	0119E	0121U	0123D	N24	E31	4811	05	21.4	4D	SN			P	0121	24	.3	D
0071	YUNN	19	0119E	0121U	0205D	S23	W67	4808	05	13.9	46D	SN			P	0121	31		D
0072	LEAR	19	0217	0225	0234	N25	E28	4811	05	21.3	17	SF		3	C		33		F
0073	LEAR	19	0437	0441	0456	N26	E34	4811	05	21.8	19	SF		3	C		20		F

10
May 87

H - ALPHA SOLAR FLARES

MAY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement			Remarks			
						Region	Lat	CMD								Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)				
0074		19	05333	0539*	0602	S19	W67	4808	05	14.1	29	SF					28					
	LEAR	19	0533	0550	0602	S19	W69	4808	05	14.0	29	SF		3	C		35					
	SVTO	19	0536	0539	0603	S19	W65	4808	05	14.3	27	SF		3	C		22					
0075	KANZ	19	0644	0646	0656	N23	E27	4811	05	21.4	12	SF		2								
0076	KANZ	19	0723	0727	0734	N29	E32	4811	05	21.8	11	SF		2								
0077		19	0728*	0730*	0741	S19	W67	4808	05	14.2	13	SF					15					
	SVTO	19	0728	0730	0731	S19	W66	4808	05	14.3	3	SF		3	C		13					
	SVTO	19	0740	0741	0747	S19	W67	4808	05	14.2	7	SF		3	C		19					
	LEAR	19	0741	0741	0744	S19	W69	4808	05	14.0	3	SF		3	C		12					
		19	1025		1029	No Flare Patrol																
0078	HTPR	19	1212E		1234D	N26	E25	4811	05	21.4	22D	SN			C	1233	120	1.3	F			
0079	SVTO	19	1223	1226	1234	S19	W71	4808	05	14.1	11	SF	C 3.2	3	C		31					
0080		19	1252	1257	1307	N28	E26	4811	05	21.6	15	SB	C 2.6				122	1.5	EF			
	SVTO	19	1252	1257	1307	N29	E28	4811	05	21.7	15	SN	C 2.6	3	C		105		F			
	HTPR	19	1254E		1304D	N26	E25	4811	05	21.5	10D	SB			C	1257	140	1.5	E			
0081	KANZ	19	1350	1350	1352	N30	E30	4811	05	21.9	2	SF		2								
0082	PALE	19	1808E	1810	1837	N30	E25	4811	05	21.7	29D	SB	C 9.6	4	C		76		F			
0083	PALE	19	2315	2318	2329	N31	E24	4811	05	21.9	14	SN		3	C		48		F			
0084		20	0040	00417	0100	N27	E20	4811	05	21.6	20	1B					138	1.8	E			
	YUNN	20	0040	0041	0047	N27	E19	4811	05	21.5	7	SB			C		102	1.3	E			
	YUNN	20	0040	0048	0112	N27	E20	4811	05	21.6	32	1N			C		173	2.2	E			
0085	YUNN	20	0207E	0207U	0213	S25	E17	4810	05	21.4	6D	SN			P	0207	31	.4	H			
		20	0501		0506	No Flare Patrol																
0086	YUNN	20	0623E	0623	0633	N32	E21	4811	05	21.9	10D	SN			P		16	.2	D			
0087	YUNN	20	0634	0637	0657	N28	E13	4811	05	21.3	23	SB			C		24	.3	D			
0088	HTPR	20	0853	0857	0920	N24	E13	4811	05	21.4	27	SF			C	0857	20	.2				
0089		20	0923*	0927*	1001	N27	E17	4811	05	21.7	38	SN					42	.4	DEFT			
	KAND	20	0923	0928U	0928D	N30	E18	4811	05	21.8	5D	SN			P				DT			
	HTPR	20	0925	0927	0939	N30	E18	4811	05	21.8	14	SF			C	0927	10	.1				
	SVTO	20	0929E	0941	1004	N24	E15	4811	05	21.5	35D	SN		3	C		46		F			
	HTPR	20	0936	0947	1020	N25	E18	4811	05	21.8	44	SB			C	0947	70	.8	E			
0090		20	1227*	1248*	1346	N27	E15	4811	05	21.7	79	SN	C 1.3				221	1.0	EF			
	HTPR	20	1227	1248	1320	N27	E20	4811	05	22.1	53	SF			C	1248	40	.4	E			
	HTPR	20	1254	1315	1400	N23	E11	4811	05	21.4	66	SB			C	1315	140	1.5	E			
	RAMY	20	1302E	1302	1358	N30	E15	4811	05	21.7	56D	1N	C 1.3	2	C		482		F			
0091	HTPR	20	1414	1417	1435	N23	E11	4811	05	21.4	21	SF			C	1417	40	.4	E			
0092	RAMY	20	1509	1509	1515	N29	E16	4811	05	21.9	6	SF		3	C		11					
0093	RAMY	20	1635	1642	1650	N31	E17	4811	05	22.0	15	SF		3	C		19					
0094	RAMY	20	1916	1923	1939	N29	E12	4811	05	21.7	23	SF		3	C		18					
0095		21	0042*	0045*	0058	N28	E09	4811	05	21.7	16	SN					47	.6	DE			
	YUNN	21	0042	0045	0056	N29	E08	4811	05	21.6	14	SN			P		63	.8	E			
	YUNN	21	0054	0056	0100	N28	E10	4811	05	21.8	6	SN			C		31	.4	D			
0096	YUNN	21	0122	0127	0206	N28	E08	4811	05	21.7	44	SN			C		94	1.1	E			
0097	YUNN	21	0229	0231	0243	N34	E11	4811	05	22.0	14	SN			C		47	.6	D			

H - ALPHA SOLAR FLARES

11
May 87

MAY 1987

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		Remarks
																	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0098		21	03144	03217	0354	N24	E04	4811	05	21.4	40	1B	C	7.6		0324	305	5.5	EFITZ
	MITK	21	0314	0324	0400	N24	E03	4811	05	21.4	46	1N			C		290	3.3	E
	LEAR	21	0315	0324	0353	N23	E03	4811	05	21.4	38	1B	C	7.6	3	C	183		ZF
	URUM	21	0317	0328	0350	N24	E05	4811	05	21.5	33	2B			C		661	7.7	FIT
	PALE	21	0318	0321	0353	N23	E07	4811	05	21.7	35	SB	C	7.6	2	C	87		FE
0099	LEAR	21	0517	0520	0530	N29	E05	4811	05	21.6	13	SF			3	C		32	
0100	YUNN	21	0702	0710	0732	N24	E05	4811	05	21.7	30	SN				C	47	.5	DT
0101		21	0755*	08029	0815	N25	E06	4811	05	21.8	20	SN					62	.8	DEFT
	YUNN	21	0755	0802	0816	N27	E05	4811	05	21.7	21	SB			C		126	1.5	ET
	KAND	21	0755	0805	0815	N25	E09	4811	05	22.0	20	SF			P		42	.5	DFT
	YUNN	21	0800	0811	0824	N25	E07	4811	05	21.9	24	SF			C		63	.7	DT
	SVTO	21	0802E	0802U	0809	N27	E03	4811	05	21.6	7D	SN			3	C	50		
	KAND	21	0805		0810	N24	E06	4811	05	21.8	5	SF			P		31	.4	DFT
0102		21	08442	0846	0903	N26	E04	4811	05	21.7	19	SN					60	.6	ET
	YUNN	21	0844	0846	0858D	N26	E03	4811	05	21.6	14D	SN			P		79	.9	ET
	HTPR	21	0846	0846	0903	N25	E05	4811	05	21.7	17	SF			C	0846	40	.4	E
0103		21	0911	09134	0940	N26	E04	4811	05	21.7	29	SN	C	1.0			102	1.8	EF
	LEAR	21	0911	0913	0930	N25	E04	4811	05	21.7	19	SF	C	1.0	3	C	45		F
	HTPR	21	0911	0917	0950	N27	E05	4811	05	21.8	39	SB			C	0917	160	1.8	E
0104	HTPR	21	1137	1139	1143	N29	E07	4811	05	22.0	6	SF			C	1139	40	.4	E
0105	HTPR	21	1423	1425	1438	N29	E06	4811	05	22.1	15	SF			C	1425	30	.3	E
0106		21	15511	15532	1612	N26	W04	4811	05	21.3	21	SF					40	.4	
	HTPR	21	1551	1553	1615	N25	W03	4811	05	21.4	24	SF			C	1553	40	.4	
	KANZ	21	1552	1555	1610	N26	W06	4811	05	21.2	18	SF			2				
		21	1754		1800	No Flare Patrol													
0107	HOLL	21	1831E	1847	1858	N30	E00	4811	05	21.8	27D	SN	C	2.1	3	C	117		
		21	1957		2007	No Flare Patrol													
		21	2018		2037	No Flare Patrol													
		21	2123		2125	No Flare Patrol													
		21	2130		2154	No Flare Patrol													
		21	2218		2223	No Flare Patrol													
0108	HOLL	21	2225E	2241U	2255	N26	E00	4811	05	21.9	30D	SF			3	C	52		
		21	2243		2253	No Flare Patrol													
		21	2311		2316	No Flare Patrol													
0109	HOLL	21	2344E	2348U	2357	N25	W04	4811	05	21.7	13D	SN			3	C	45		F
0110	YUNN	22	0204	0218	0246D	S23	W16	4810	05	20.8	42D	1N			P		193	2.2	E
0111	YUNN	22	0208	0218	0246	N28	W04	4811	05	21.8	38	SN			C		94	1.1	E
0112	LEAR	22	0309	0310	0318	N28	W07	4811	05	21.6	9	SF			3	C	19		
0113	PURP	22	0411	0412	0413	N28	W05	4811	05	21.8	2	SF			C	0412	41	.5	
0114		22	05572	06012	0618	N25	W09	4811	05	21.5	21	SN					104	1.5	EF
	SVTO	22	0557	0603	0615	N26	W07	4811	05	21.7	18	SN			3	C	73		
	LEAR	22	0558	0603	0617	N25	W08	4811	05	21.6	19	SN			3	C	80		F
	HTPR	22	0559	0601	0620	N25	W13	4811	05	21.2	21	SB			C	0601	100	1.1	E
	KANZ	22	0559	0603	0613	N24	W08	4811	05	21.6	14	SN			2				
	YUNN	22	0606E	0607U	0627	N24	W08	4811	05	21.6	21D	SN			P	0607	161	1.9	E
0115	HTPR	22	1021	1023	1024	N29	W06	4811	05	22.0	3	SF			C	1023	20	.2	
0116		22	1213*	12384	1255	N29	W12	4811	05	21.6	42	SN	C	4.8			96	.9	E
	HTPR	22	1213	1242	1254	N29	W12	4811	05	21.6	41	SN			C	1242	80	.9	E
	HOLL	22	1236	1238	1256	N29	W13	4811	05	21.5	20	SN	C	4.8	3	C	113		

12
May 87

H - ALPHA SOLAR FLARES

MAY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF	CMP	Dur	Imp	Obs	Time	Area Measurement		Corr	Remarks		
								Region						Mo	Day			(Min)	Opt
0117	HOLL	22	1309	1314	1318	N28	W11	4811	05	21.7	9	SF		3	C		16		
0118	HTPR	22	1335	1337	1348	N29	W10	4811	05	21.8	13	SN			C	1337	30	.3	
0119	HTPR	22	1628	1634	1648	N30	W14	4811	05	21.6	20	SF			C	1634	40	.4	
0120	HTPR	22	1727		1800D	N30	W15	4811	05	21.5	33D	SN			C	1750	40	.4	
		22	1853		2028	No Flare Patrol													
		22	2035		2040	No Flare Patrol													
		22	2051		2058	No Flare Patrol													
		22	2117		2159	No Flare Patrol													
		22	2218		2254	No Flare Patrol													
		22	2321		2330	No Flare Patrol													
0121	YUNN	23	0135	0139	0153	N29	W15	4811	05	21.9	18	SN			P		24	.3	D
0122	HTPR	23	0954	0956	0959	N28	W24	4811	05	21.5	5	SF			C	0956	10	.1	
0123		23	1137*	1145*	1202	N29	W24	4811	05	21.6	25	SN					64	.8	DE
	HTPR	23	1137		1155D	N29	W25	4811	05	21.5	18D	SB			C	1144	60	.6	E
	URUM	23	1143	1145	1152	N29	W23	4811	05	21.7	9	SN			C		88	1.2	E
	URUM	23	1151	1155	1211	N29	W24	4811	05	21.6	20	SF			C		43	.6	D
0124	HTPR	23	1346	1351	1406	N30	W28	4811	05	21.4	20	SF			C	1351	10	.1	
0125	HTPR	23	1459	1502	1506	N30	W28	4811	05	21.4	7	SF			C	1502	10	.1	
0126		23	1546*	15498	1602	N28	W28	4811	05	21.5	16	SF					32	.2	EF
	HOLL	23	1546	1549	1603	N29	W25	4811	05	21.7	17	SN		3	C		49		F
	HTPR	23	1547	1549	1603	N28	W26	4811	05	21.6	16	SF			C	1549	20	.2	E
	SVTO	23	1557	1557	1601	N28	W32	4811	05	21.2	4	SF		3	C		28		
0127	RAMY	23	1843	1846	1849	N30	W29	4811	05	21.5	6	SF		3	C		43		
0128	HOLL	23	1903	1903	1908	N28	W28	4811	05	21.6	5	SN		3	C		35		
		23	1923		1930	No Flare Patrol													
		23	2103		2112	No Flare Patrol													
		23	2126		2210	No Flare Patrol													
		23	2303		2314	No Flare Patrol													
0129	PURP	23	2327	2333	2346D	N25	W33	4811	05	21.4	19D	SN			C	2333	35	.5	
		23	2347		2400	No Flare Patrol													
		24	0000		0000	No Flare Patrol													
0130	PURP	24	0010E	0010	0015	N26	W30	4811	05	21.7	5D	SN			P	0010	75	1.0	E
0131		24	0101*	0107*	0142	N25	W34	4811	05	21.4	41	SN	C 1.0				65	.8	DEF
	URUM	24	0101	0110	0130	N25	W35	4811	05	21.3	29	SB			C		66	.9	E
	MANI	24	0103		0139	N23	W35	4811	05	21.3	36	1N		2	P				
	LEAR	24	0103	0107	0149	N25	W33	4811	05	21.5	46	1F	C 1.0	3	C		133		F
	URUM	24	0125	0132	0150	N24	W34	4811	05	21.4	25	SB			C		44	.6	D
	PALE	24	0126	0135	0141	N28	W34	4811	05	21.4	15	SF		3	C		17		
0132	PALE	24	0314	0318	0325	N33	W41	4811	05	20.9	11	SN		2	C		100		F
0133		24	0850*	0850*	0912	N30	W35	4811	05	21.6	22	SB	C 1.3				154		
	KANZ	24	0850	0850	0916D	N25	W40	4811	05	21.3	26D	SN		2					
	KANZ	24	0905	0908	0912	N33	W31	4811	05	21.9	7	SB		2					
	SVTO	24	0907	0908	0912	N31	W32	4811	05	21.8	5	SB	C 1.3	3	C		154		
	KANZ	24	0908	0908	0916D	N30	W38	4811	05	21.4	8D	SN		2					
0134	URUM	24	1209	1215	1223D	N26	W37	4811	05	21.6	14D	SF			P		35	.5	E
0135		24	1229	1231	1315D	N24	W41	4811	05	21.3	46D	SN					57		FH
	RAMY	24	1227E	1231U	1250D	N24	W42	4811	05	21.3	23D	SN		3	C		58		H
	SVTO	24	1229	1231	1315D	N24	W40	4811	05	21.4	46D	SF		3	C		56		F

H - ALPHA SOLAR FLARES

13
May 87

MAY 1987

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			Remarks
																Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0136		24	1518	1527	1548	N30	W36	4811	05	21.8	30	1B	M 1.2				288		F
	HOLL	24	1518	1527	1548	N28	W37	4811	05	21.7	30	1B	M 1.2	3	C		387		F
	RAMY	24	1519E	1525U	1549D	N33	W36	4811	05	21.8	30D	1B	M 1.2	3	C		189		F
0137	RAMY	24	1614	1615	1625	N26	W39	4811	05	21.6	11	SF		3	C		40		F
0138		24	1704*	1710*	1741	N24	W44	4811	05	21.3	37	SN					77		F
	RAMY	24	1704	1717	1748	N24	W46	4811	05	21.1	44	1N		2	C		167		F
	PALE	24	1709	1710	1726	N24	W44	4811	05	21.3	17	SN		3	C		23		
	HOLL	24	1720	1744	1750	N24	W43	4811	05	21.4	30	SN		3	C		41		
0139		24	17513	1758*	1821	N25	W39	4811	05	21.7	30	SN	C 2.3				69		F
	HOLL	24	1751	1811	1822	N25	W39	4811	05	21.7	31	SN		3	C		65		F
	RAMY	24	1752	1758	1831	N26	W40	4811	05	21.6	39	SB	C 2.3	2	C		91		F
	PALE	24	1754	1758	1811	N25	W39	4811	05	21.7	17	SN	C 2.3	3	C		52		F
0140		24	19158	1925*	1950	N25	W40	4811	05	21.7	35	SN					125		FH
	RAMY	24	1915	1940	1952	N26	W40	4811	05	21.7	37	SN		3	C		77		FH
	PALE	24	1921	1925	1948	N24	W40	4811	05	21.7	27	1N		3	C		236		FH
	HOLL	24	1923	1940	1949	N25	W41	4811	05	21.6	26	SN		3	C		62		F
0141		24	20396	21126	2127	N26	W44	4811	05	21.4	48	1B	C 2.7				226		FH
	RAMY	24	2039	2112	2133	N25	W46	4811	05	21.3	54	1B	C 2.7	3	C		215		F
	PALE	24	2041	2112	2127	N24	W46	4811	05	21.3	46	1B	C 2.7	3	C		200		FH
	HOLL	24	2045	2118	2120	N29	W40	4811	05	21.7	35	1B	C 2.7	3	C		263		F
0142	LEAR	25	0317	0317	0324	N32	W39	4811	05	22.0	7	SF	C 1.6	2	C		30		F
0143		25	0329*	03422	0356	N30	W48	4811	05	21.4	27	2B	M 1.3				403	3.8	EIT
	LEAR	25	0329	0343	0353D	N30	W47	4811	05	21.4	24D	2B	M 1.3	2	C		434		
	PALE	25	0330	0342	0403	N30	W49	4811	05	21.3	33	2B	M 1.3	2	C		559		
	URUM	25	0340	0344	0350	N31	W47	4811	05	21.4	10	1B			C		215	3.8	EIT
0144		25	0445*	0446*	0522	N25	W49	4811	05	21.4	37	SN					72	1.2	DEFT
	URUM	25	0445	0446	0521	N25	W50	4811	05	21.3	36	SB			C		42	.7	DT
	URUM	25	0445	0504	0521	N25	W49	4811	05	21.4	36	SF			C		22	.4	ET
	URUM	25	0514	0516	0525	N24	W47	4811	05	21.6	11	1N			C		151	2.6	FT
0145	URUM	25	0650E	0650	0656	N31	W49	4811	05	21.4	6D	SB			P		90	1.7	DT
0146		25	07245	07256	0736	N30	W50	4811	05	21.4	12	SN					104	1.8	EKT
	HTPR	25	0724	0725	0737	N29	W50	4811	05	21.4	13	SN			C	0730	120	1.9	EK
	KANZ	25	0726	0729	0735	N31	W50	4811	05	21.4	9	SF		2					
	URUM	25	0729	0731	0736	N31	W49	4811	05	21.4	7	SN			C		88	1.7	ET
0147	LEAR	25	0826	0827	0836	N29	W49	4811	05	21.5	10	SF		3	C		56		
0148	HTPR	25	0923	0946	0958	N29	W51	4811	05	21.4	35	SF			C	0946	70	1.0	E
0149	HTPR	25	1025	1040	1050	N33	W47	4811	05	21.7	25	SF			C	1040	30	.5	E
0150		25	11371	11401	1146	N30	W51	4811	05	21.5	9	SN					26	.3	
	HTPR	25	1137	1141	1147	N30	W51	4811	05	21.5	10	SN			C	1141	20	.3	
	SVTO	25	1138	1140	1145	N30	W51	4811	05	21.5	7	SF		3	C		33		
0151		25	12027	12111	1223	N30	W51	4811	05	21.5	21	SN	C 1.4				124	1.6	EFH
	RAMY	25	1202	1211	1224	N30	W52	4811	05	21.4	22	SN	C 1.4	3	C		99		H
	SVTO	25	1207	1212	1224	N30	W51	4811	05	21.5	17	1N	C 1.4	3	C		172		F
	HTPR	25	1209	1212	1222	N30	W51	4811	05	21.5	13	SN			C	1212	100	1.6	E
0152		25	12267	12332	1240	N26	W48	4811	05	21.8	14	SN					43	.5	EF
	RAMY	25	1226	1234	1243	N26	W49	4811	05	21.7	17	SN		3	C		45		
	SVTO	25	1232	1233	1237	N27	W47	4811	05	21.8	5	SN		3	C		54		F
	HTPR	25	1233	1235	1241	N25	W49	4811	05	21.7	8	SF			C	1235	30	.5	E
0153		25	1303*	13231	1336	N26	W52	4811	05	21.5	33	SF					114	2.9	EF
	HTPR	25	1303	1323	1342	N23	W54	4811	05	21.4	39	1N			C	1323	180	2.9	E
	HOLL	25	1318	1323	1335	N29	W51	4811	05	21.5	17	SF		3	C		69		F
	SVTO	25	1320	1324	1330	N25	W52	4811	05	21.5	10	SF		3	C		92		

14
May 87

H - ALPHA SOLAR FLARES

MAY 1987

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0154		25	13431	13451	1408	N30	W52	4811	05	21.5	25	SN	C 2.2				76	1.1	EF
	HOLL	25	1343	1345	1403	N29	W49	4811	05	21.7	20	SN	C 2.2	3	C		96		F
	SVTO	25	1343	1346	1359	N31	W51	4811	05	21.5	16	SN	C 2.2	3	C		88		F
	RAMY	25	1344		1407	N30	W52	4811	05	21.5	23	SN	C 2.2	2	C		62		F
	HTPR	25	1344	1346	1423	N29	W56	4811	05	21.2	39	SB			C	1346	60	1.1	E
0155	RAMY	25	1435	1449	1510D	N23	E38	4812	05	28.5	35D	SF		3	C		10		
0156		25	15139	1519*	1537	N29	W54	4811	05	21.4	24	1N	C 1.6				135	2.6	EFH
	HOLL	25	1513	1519	1523	N29	W53	4811	05	21.5	10	SN	C 1.6	3	C		99		F
	HTPR	25	1518	1520	1540	N29	W56	4811	05	21.2	22	1N			C	1520	250	4.8	E
	SVTO	25	1518	1520	1542	N31	W53	4811	05	21.4	24	1F	C 1.6	3	C		160		FH
	HTPR	25	1522	1530	1544	N27	W56	4811	05	21.3	22	SB			C	1530	30	.5	
0157		25	1604*	1614*	1701	N29	W54	4811	05	21.4	57	SN	C 4.2				87	1.2	EFHK
	HTPR	25	1604	1614	1655	N30	W55	4811	05	21.3	51	SB			C	1610	120	2.0	EK
	SVTO	25	1609	1622	1706	N31	W54	4811	05	21.4	57	1N	C 4.2	3	C		184		F
	HOLL	25	1613	1615	1638D	N30	W54	4811	05	21.4	25D	SN	C 4.2	3	C		53		FH
	RAMY	25	1613	1615U	1642D	N29	W53	4811	05	21.5	29D	SN	C 4.2	2	C		58		F
	HTPR	25	1658	1659	1702	N25	W55	4811	05	21.4	4	SB			C	1659	20	.3	
0158	HTPR	25	1723	1727	1730	N25	W55	4811	05	21.5	7	SB			C	1727	50	.9	
0159		25	1850	1855	1926	N29	W56	4811	05	21.4	36	1N	C 5.9				110		F
	RAMY	25	1850	1855	1924D	N29	W56	4811	05	21.4	34D	1N	C 5.9	2	C		125		F
	PALE	25	1900E	1905U	1926	N29	W56	4811	05	21.4	26D	SN	C 5.9	2	C		95		F
		25	1950		1955	No Flare Patrol													
		25	2020		2028	No Flare Patrol													
0160		25	22206	2227	2231	N29	W54	4811	05	21.7	11	SN					55		
	RAMY	25	2220	2227	2228D	N29	W55	4811	05	21.6	8D	SN		3	C		65		
	HOLL	25	2226	2227	2231	N29	W53	4811	05	21.8	5	SN		3	C		45		
		25	2229		2312	No Flare Patrol													
0161		25	23592	24043	2414	N30	W53	4811	05	21.8	15	1N	C 1.0				50		H
	LEAR	25	2359	2407	2414	N33	W52	4811	05	21.9	15	1N	C 1.0	3	C		75		H
	PALE	26	0001	0004	0004D	N28	W54	4811	05	21.8	3D	SF	C 1.0	2	C		24		H
0162		26	0059	0103	0109	N27	W58	4811	05	21.5	10	SF	C 1.5				38		F
	PALE	26	0039E	0039U	0111	N25	W57	4811	05	21.6	32D	SF	C 1.5	2	C		42		F
	LEAR	26	0059	0103	0107	N29	W60	4811	05	21.3	8	SF		3	C		33		
0163		26	0557*	0600*	0616	N25	W61	4811	05	21.5	19	SF	C 2.8				22		F
	KANZ	26	0557	0600	0604	N24	W60	4811	05	21.6	7	SF		2					
	KANZ	26	0608	0612	0619	N28	W63	4811	05	21.3	11	SF		2					
	SVTO	26	0610	0607	0624	N24	W59	4811	05	21.7	14	SN	C 2.8	3	C		22		F
0164	KANZ	26	0735	0735	0739	N26	W60	4811	05	21.6	4	SF		2					
0165		26	0743	0743	0750	N30	W62	4811	05	21.4	7	SF	C 1.3				26		F
	LEAR	26	0743	0743	0746	N29	W60	4811	05	21.6	3	SF	C 1.3	3	C		16		
	KANZ	26	0743	0743	0751	N31	W64	4811	05	21.3	8	SF		2					
	SVTO	26	0743	0743	0754	N29	W61	4811	05	21.5	11	SN	C 1.3	3	C		36		F
		26	0943		0948	No Flare Patrol													
		26	0954		0959	No Flare Patrol													
0166	KANZ	26	1554	1558	1602	N25	W66	4811	05	21.5	8	SF		2					
0167		26	16475	1653	1704	N25	W66	4811	05	21.6	17	SN					12		F
	RAMY	26	1647	1702U	1705	N25	W65	4811	05	21.7	18	SN		3	C		13		F
	SVTO	26	1652	1653	1702	N25	W66	4811	05	21.6	10	SF		3	C		12		
0168		26	19411	1946	2008	N28	W70	4811	05	21.3	27	1N	C 8.1				136		F
	HOLL	26	1941	1946	2006	N27	W68	4811	05	21.5	25	1N	C 8.1	3	C		126		F
	PALE	26	1942	1950U	2010	N29	W73	4811	05	21.1	28	1N	C 8.1	2	C		146		
0169	HOLL	26	2356	2356	2405	N28	W71	4811	05	21.4	9	SF	C 2.6	3	C		19		F

H - ALPHA SOLAR FLARES

15
May 87

MAY 1987

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		Remarks
																	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
0170	HOLL	27	0132	0136U	0143	N22	W71	4811	05	21.6	11	SF	C	2.9	2	C	25		
0171	SVTO	27	0509	0531	0611	N26	W70	4811	05	21.8	62	SF			3	C	69		FH
0172	HOLL	27	1754	1756	1803	N30	W80	4811	05	21.4	9	SN	C	2.3	3	C	72		F
0173	PALE	27	1812	1813	1819	N28	W79	4811	05	21.6	7	SF			3	C	60		F
0174		27	1844*	1844*	1855	N28	W78	4811	05	21.7	11	SN					20		
	HOLL	27	1844	1844	1850	N29	W78	4811	05	21.7	6	SN			3	C	20		
	PALE	27	1858	1858	1900	N28	W79	4811	05	21.6	2	SN			3	C	20		
0175	PALE	27	2311	2312	2314	N24	W89	4811	05	21.1	3	SF			3	C	21		
0176	HOLL	28	0115	0115	0125	N26	W77	4811	05	22.1	10	SF			3	C	41		
		28	1749		1752	No Flare Patrol													
		28	2147		2155	No Flare Patrol													
0177	HTPR	29	0852	0853	0904	N30	W90	4811	05	22.3	12	SN			C	0853	10		
		29	2316		2326	No Flare Patrol													
		29	2334		2344	No Flare Patrol													
0178	HTPR	30	0753	0757	0801	N23	E05		05	30.7	8	SF			C	0757	20	.2	
		30	2042		2044	No Flare Patrol													
		30	2134		2143	No Flare Patrol													
		30	2158		2212	No Flare Patrol													
		30	2219		2224	No Flare Patrol													
		30	2238		2243	No Flare Patrol													

"Remarks"

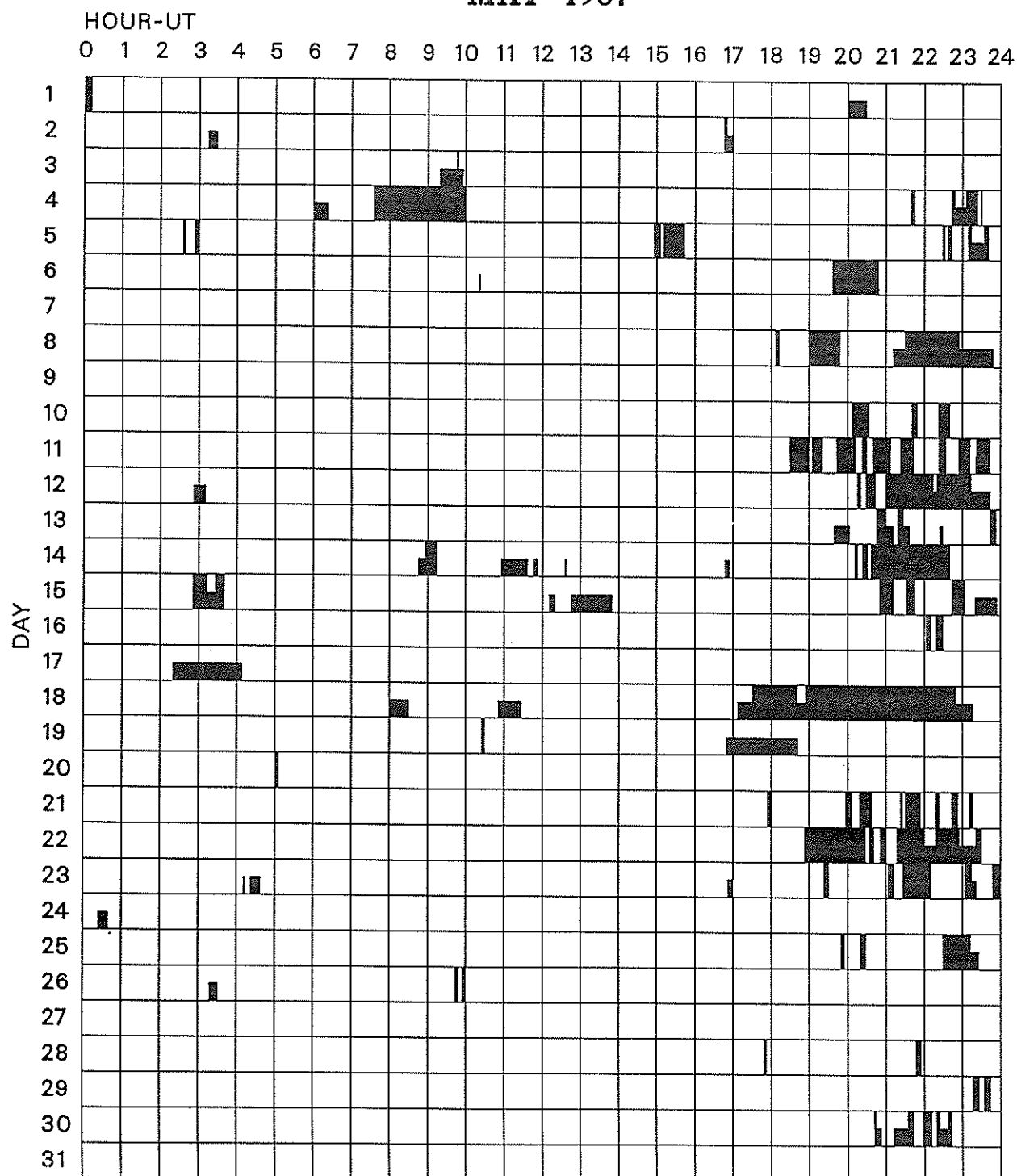
A = Eruptive prominence whose base is less than 90 degrees from central meridian.
 B = Probably the end of a more important flare.
 C = Invisible 10 minutes before.
 D = Brilliant point.
 E = Two or more brilliant points.
 F = Several eruptive centers.
 G = No visible spots in the neighborhood.
 H = 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.

16
May 87

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

MAY 1987



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

Bucharest
Haute-Provence
Holloman

Istanbul
Kandilli
Kanzelhoehe

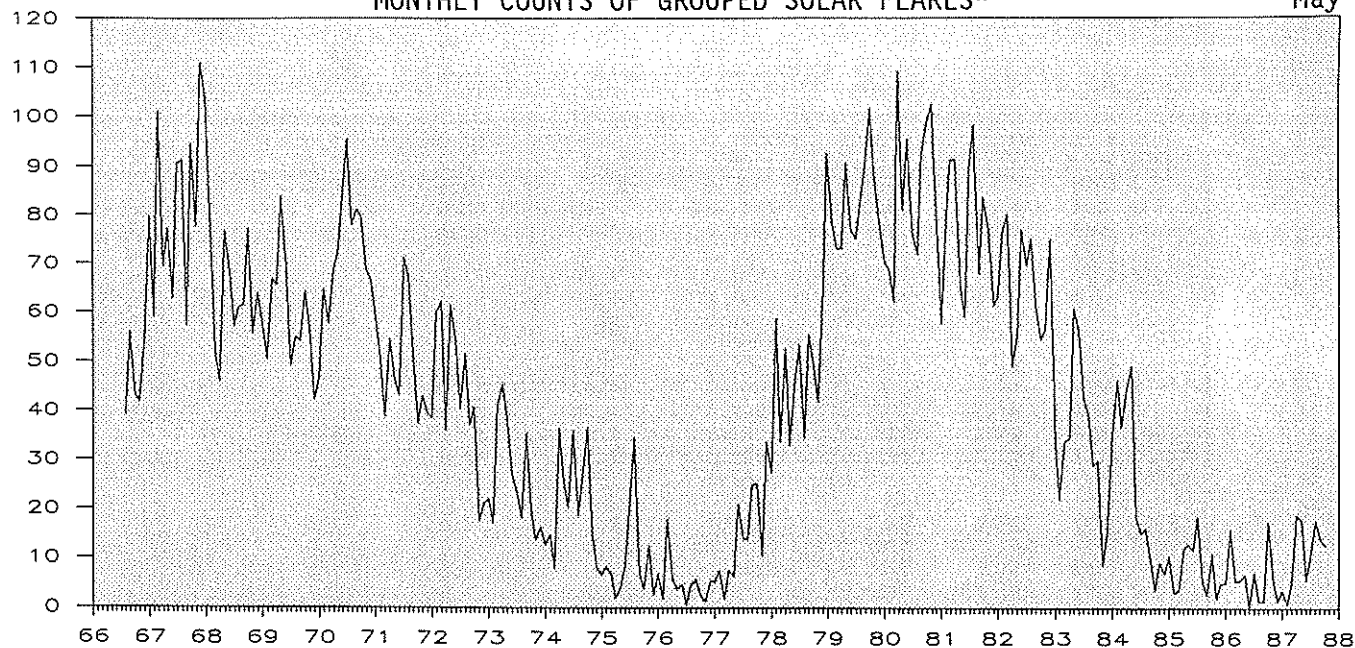
Learmonth
Manila
Mitaka

Palehua
Peking
Purple Mt.

Ramey
San Vito
Urumqi
Yunnan

MONTHLY COUNTS OF GROUPED SOLAR FLARES*

(Number of Flares)/10



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	51	188	178	56	106	175	142	127			1066

*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.

18
May 87

S O L A R R A D I O E M I S S I O N O U T S T A N D I N G O C C U R R E N C E S

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int Remarks
01	930	BORD	41 F	1633.4	1634.0	3.8	47.0	8.0	
	9400	HUAN	21 GRF	1852.6	1909.8	31.6	8.0	5.0	
	2800	OTTA	45 C	1858.0	1901.8	10.0	44.5	8.9	
	610	PALE	46 C	1900.0E	1901.0	2.0D	98.0		QL=5 ST=2 TYP=5
	8800	PALE	8 S	1901.0E	1901.0	1.0D	18.0		QL=5 ST=2 TYP=3
	410	PALE	46 C	1901.0E	1901.0	1.0D	75.0		QL=5 ST=2 TYP=5
	610	SGMR	46 C	1901.0E	1901.0	1.0D	72.0		QL=5 ST=2 TYP=5
	410	SGMR	8 S	1901.0E	1901.0	1.0D	41.0		QL=5 ST=2 TYP=3
	2695	PALE	8 S	1901.0E	1901.0	1.0D	41.0		QL=5 ST=2 TYP=3
	1415	PALE	8 S	1901.0E	1901.0	1.0D	16.0		QL=5 ST=2 TYP=3
	4995	SGMR	8 S	1901.0E	1901.0	1.0D	28.0		QL=5 ST=2 TYP=3
	4995	PALE	8 S	1901.0E	1901.0	1.0D	25.0		QL=5 ST=2 TYP=3
	2695	SGMR	8 S	1901.0E	1901.0	1.0D	31.0		QL=5 ST=2 TYP=3
	9400	HUAN	1 S	1901.1	1901.9	2.9	13.2	3.9	
	15400	PALE	8 S	1904.0E	1905.0	2.0D	43.0		QL=5 ST=2 TYP=3
	3750	TYKW	5 S	2301.0	2302.1	2.5	2.0	.5	
02	3750	TYKW	45 C	0202.0	0204.1	18.0	5.0	2.0	
	9400	TYKW	20 GRF	0202.0	0208.0	80.0	4.0	2.0	
	2000	TYKW	45 C	0203.0	0204.1	17.0	2.0	1.5	
	2000	TYKW	29 PBI	0220.0		110.0	1.5	.7	
	3750	TYKW	29 PBI	0220.0		60.0	1.0	.5	
	9400	TYKW	20 GRF	0503.0	0530.0	80.0	3.0	1.5	
	430	KRAK	8 S	0809.2	0809.3	.3	65.0		
	430	KRAK	41 F	1031.0	1031.7	.8	17.0	1.0	
	536	ONDR	8 S	1145.0	1145.5	1.0	180.0		
	808	ONDR	8 S	1145.5	1145.7	.5			
	260	ONDR	8 S	1145.5	1145.7	.6	43.0		
	536	ONDR	8 S	1220.0	1220.5	.7	47.0		
	260	ONDR	42 SER	1220.0	1224.0	4.0	21.0		
	808	ONDR	8 S	1220.1	1220.3	.6			
	536	ONDR	8 S	1223.5	1224.0	.7	40.0		
	808	ONDR	8 S	1224.3	1224.7	.5			
	260	ONDR	46 C	1235.0	1235.5	1.0	16.0		
	536	ONDR	46 C	1235.0	1235.8	1.0	60.0		
	808	ONDR	4 S/F	1235.2	1236.0	1.0			
	930	BORD	8 S	1710.8	1710.9	.2	25.0	2.0	
	245	SGMR	49 GB	2003.0E	2015.0	237.0D	870.0		QL=1 ST=1 TYP=6
	245	SGMR	49 GB	2011.0E	2024.0	17.0D	1300.0		QL=1 ST=2 TYP=6
03	930	BORD	46 C	0801.2	0801.5	.6	24.0	3.0	
04	3750	TYKW	45 C	0227.0	0230.4	10.0	1.5	.5	
	1415	SVTO	8 S	0931.0E	0931.0	2.0D	33.0		QL=1 ST=2 TYP=3
	2800	OTTA	3 S	1940.4	1941.0	1.0	15.4	6.1	
05	3750	TYKW	5 S	0339.5	0339.9	1.5	1.0	.3	
	2000	TYKW	5 S	0339.5	0340.0	1.5	1.5	.5	
	1000	TYKW	45 C	0339.5	0340.0	1.5	4.0	.3	
	245	SVTO	46 C	0743.0E	0744.0	1.0D	100.0		QL=3 ST=2 TYP=5
	245	LEAR	46 C	0743.0E	0744.0	1.0D	92.0		QL=5 ST=3 TYP=5
	260	ONDR	46 C	0743.5	0744.0	1.5	50.0		
	33	UPIC	4 S/F	0743.6	0744.0	1.0			
	204	IZMI	4 S/F	0744.0	0744.2	1.0	104.0	50.0	
	29	UPIC	4 S/F	0744.1	0744.6	.8			
06	5900	KISV	21 GRF	1149.8	1202.5	70.0D	4.0		
07	5900	KISV	2 S/F	0559.6	0601.2	5.0	3.0		
	1470	POTS	2 S/F	0705.0	0705.6	1.5	5.0		
	204	IZMI	41 F	0730.2	0730.4	5.0	3.0		
	5900	KISV	20 GRF	0736.0	0816.0	55.0	2.0		
	260	ONDR	8 S	0906.0	0906.0		8.0		
	204	IZMI	2 S/F	1055.4	1055.6	.6	13.0	6.0	
	260	ONDR	8 S	1055.5	1055.6	.5	7.0		
	204	IZMI	2 S/F	1111.6	1111.8	.4	26.0	13.0	
	260	ONDR	8 S	1119.7	1119.7	.1	7.0		
	260	ONDR	42 SER	1311.3	1317.0	6.5	13.0		
	33	UPIC	4 S/F	1316.4	1316.7	1.6			
09	3750	TYKW	20 GRF	0020.0	0035.0	70.0	1.0	.5	

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 ⁻²² W/m ² Hz)		Int Remarks
							Peak	Mean	
09	260	ONDR	8 S	1018.0	1018.1	.5	55.0		
	808	ONDR	8 S	1018.0	1018.1	.5			
	536	ONDR	8 S	1018.0	1018.1	.5	121.0		
	2000	TYKW	20 GRF	2250.0	2315.0	90.0	1.0	.5	
10	9400	HUAN	2 S/F	1403.1	1405.3	8.7	8.2	3.6	
11	3750	TYKW	45 C	0101.0	0102.9	5.0	5.0	2.0	
	9400	TYKW	5 S	0102.0	0103.0	15.0	3.0	1.0	
	2000	TYKW	45 C	0102.0	0104.1	5.0	2.5	1.0	
	1000	TYKW	45 C	0102.6	0102.9	.7	8.0	1.0	
	3750	TYKW	29 PBI	0106.0		25.0	1.5	.7	
	2000	TYKW	29 PBI	0107.0		30.0	1.0	.5	
	260	ONDR	8 S	0908.5	0908.6	.2	6.0		
12	260	ONDR	43 NS	0955.0	1050.5	112.5	8.0		
13	200	HIRA	43 NS	2340.0	0730.0	550.00	9.0	5.0	0
	808	ONDR	8 S	0905.0	0905.0	.1			
	536	ONDR	8 S	1147.0	1147.0	.1	13.0		
	2000	TYKW	5 S	2235.6	2235.9	.9	2.0	.7	
	1000	TYKW	45 C	2235.7	2235.9	.7	10.0	1.0	
	3750	TYKW	5 S	2314.3	2315.1	4.0	3.0	1.0	RAIN
	1000	TYKW	45 C	2314.4	2314.8	2.0	28.0	1.5	
	2000	TYKW	5 S	2314.5	2315.0	3.5	5.0	1.0	
	2800	OTTA	1 S	2314.5	2315.0	3.5	4.7	1.4	
	1000	TYKW	45 C	2316.6	2316.9	.5	4.0	.5	
14	260	ONDR	44 NS	0555.0E	1303.0	488.8D	24.0		
	204	IZMI	43 NS	0600.0		360.0	18.0		
	245	SGMR	44 NS	0945.0E	1158.0	708.0D	48.0		QL=5 ST=2 TYP=1
	245	LEAR	44 NS	2306.0E	0009.0	54.0D	23.0		QL=5 ST=2 TYP=1
	1000	TYKW	45 C	0221.0	0222.1	3.0	14.0	.5	
	1470	POTS	8 S	0921.9	0921.9	0.4	5.0		
	2700	PENT	20 GRF	2104.0		285.0D	5.5		
15	245	PALE	44 NS	0006.0E	0009.0	279.0D	22.0		QL=5 ST=2 TYP=1
	260	ONDR	44 NS	0556.0E		492.0D	19.0		
	204	IZMI	43 NS	0600.0		360.0	20.0		
	245	PALE	43 NS	1756.0	0202.0	650.0D	44.0		QL=5 ST=2 TYP=1
	200	HIRA	44 NS	1930.0E	0300.0	840.0D	9.0	7.0	WR
	245	LEAR	43 NS	2301.0	0844.0	633.0D	74.0		QL=5 ST=2 TYP=1
	245	LEAR	44 NS	2306.0E	2327.0	54.0D	33.0		QL=5 ST=2 TYP=1
	2000	TYKW	20 GRF	0025.0	0050.0	100.0	2.0	1.0	
	3750	TYKW	21 GRF	0025.0	0055.0	100.0	2.0	1.0	
	9400	TYKW	20 GRF	0025.0	0110.0	130.0	2.0	1.0	
	4995	PALE	47 GB	0117.0E	0121.0	6.0D	64.0		QL=5 ST=2 TYP=5
	3750	TYKW	5 S	0140.0	0142.0	10.0	1.0	.3	
	3750	TYKW	20 GRF	0210.0	0230.0	50.0	1.0	.5	
	2000	TYKW	20 GRF	0215.0	0230.0	40.0	1.0	.5	
	5900	KISV	21 GRF	0534.0	0542.3	68.0	3.0		
	5900	KISV		0742.9	0744.5		2.0		
	5900	KISV	46 C	0742.9	0746.8	5.0	3.0		
	5900	KISV	4 S/F	0743.0	0747.0	5.0	3.0		QL= ST= TYP=3
	5900	KISV	1 S	0811.1	0811.5	2.0	2.0		
	3750	TYKW	5 S	0826.5	0828.5	5.0	3.0	1.0	
	3000	POTS	1 S	0827.0	0827.5	1.5	2.0		
	536	ONDR	46 C	0827.3	0827.5	1.0	377.0		
	930	BORD	46 C	0827.8	0828.4	2.5	11.0	3.0	
	2950	GORK	1 S	0827.9	0828.5	6.3	4.0	2.0	
	2000	TYKW	5 S	0828.0	0828.5	3.5	6.0	1.0	
	1000	TYKW	45 C	0828.0	0828.5	3.5	7.0	1.5	
	610	LEAR	46 C	0828.0E	0828.0		130.0		5 ST=2 TYP=5
	610	SVTO	46 C	0828.0E	0828.0	3.0D	180.0		QL=1 ST=2 TYP=5
	808	ONDR	8 S	0828.0	0828.1	.2			
	1470	POTS	3 S	0828.0	0828.5	4.0	6.0		
	5900	KISV	2 S/F	0843.1	0844.2	1.5	2.0		
	536	ONDR	8 S	0854.5	0854.5	.1	93.0		
	5900	KISV	2 S/F	0907.5	0908.0	3.0	3.0		
	5900	KISV	4 S/F	0908.0	0908.0	3.0	3.0		QL= ST= TYP=3
	3100	CRIM	1 S	0928.0	0928.5	4.0	5.0	2.0	

20
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Mean	Int Remarks
15	5900	KISV	1 S	1014.3	1017.5	125.0	4.0		
	536	ONDR	42 SER	1020.0	1020.0	5.0	67.0		
	9400	HUAN	1 S	1334.7	1336.4	2.8	10.1	1.2	
	9400	HUAN	1 S	1402.1	1403.9	3.7	2.9	.7	
	9400	HUAN	21 GRF	1611.2	1631.2	20.0	4.3	2.2	
	9400	HUAN	1 S	1648.5	1650.4	3.3	3.6	1.4	
16	204	IZMI	44 NS	0600.0E		360.0D	25.0		
	260	ONDR	44 NS	0603.0E	1236.5	485.0D	75.0		
	33	UPIC	43 NS	0621.0		570.1			
	245	SVTO	44 NS	1539.0E	1541.0	36.0D	240.0		QL=1 ST=2 TYP=1
	245	SQMR	44 NS	1546.0E	1547.0	494.0D	120.0		QL=5 ST=3 TYP=1
	410	SQMR	44 NS	1559.0E	1559.0	481.0D	55.0		QL=5 ST=1 TYP=1
	245	PALE	43 NS	1628.0	0246.0	738.0D	96.0		QL=5 ST=2 TYP=1
	200	HIRA	44 NS	1930.0E	0530.0	840.0D	20.0	10.0	WR
	245	LEAR	43 NS	2307.0	0552.0	626.0D	570.0		QL=5 ST=2 TYP=1
	245	LEAR	46 C	0241.0E	0241.0	54.0D	79.0		QL=5 ST=2 TYP=5
	245	PALE	4 S/F	0306.0E	0306.0		50.0		QL=5 ST=2 TYP=3
	1000	TYKW	45 C	0317.8	0317.9	.2	53.0	7.0	
	1000	TYKW	45 C	0407.0	0408.8	3.0	50.0	4.0	
	2000	TYKW	21 GRF	0408.0	0418.0	45.0	1.0	.5	
	3750	TYKW	21 GRF	0408.0	0420.0	45.0	2.0	1.0	
	2000	TYKW	5 S	0409.0	0410.4	4.0	2.0	.7	
	3750	TYKW	5 S	0409.0	0410.7	6.0	3.0	1.0	
	9400	TYKW	20 GRF	0409.0	0420.0	40.0	2.0	1.0	
	9300	KISV	40 F	0500.0		360.0			
	2000	TYKW	20 GRF	0505.0	0600.0	140.0	2.0	1.0	
	3750	TYKW	20 GRF	0510.0	0556.0	150.0	2.0	1.0	
	5900	KISV	4 S/F	0534.0	0542.0	68.0	3.0		QL= ST= TYP=3
	9300	KISV	8 S	0551.0	0552.0	2.0	3.0		QL= ST= TYP=3
	9300	KISV		0551.1	0552.0		9.0		
	9300	KISV		0617.5	0620.3		3.0		
	245	LEAR	46 C	0621.0E	0623.0	3.0D	180.0		QL=5 ST=2 TYP=5
	650	GORK	22 GRF	0640.7	0747.4	85.0	6.0		
	810	KRAK	1 S	0718.0	0718.5	1.0	8.0	4.0	
	810	KRAK	48 C	0722.5	0747.2	51.0	213.0	23.0	
	810	KRAK		0722.5	0747.8		211.0		
	810	KRAK		0722.5	0749.0		208.0		
	808	ONDR	40 F	0723.5		18.5			
	950	GORK	23 GRF	0736.7	0750.0U	17.6	3.0		
	808	ONDR	28 PRE	0742.5	0743.5	2.5			
	950	GORK	46 C	0742.8	0743.2	2.0	10.0		
	950	GORK		0742.8	0744.0		20.0		
	808	ONDR	46 C	0745.5	0749.0	10.0			
	5900	KISV	42 SER	0748.7	0749.5	9.0	2.0		
	5900	KISV		0755.4	0755.9		3.0		
	536	ONDR	40 F	0812.5		26.0	6.0		
	650	GORK	23 GRF	0822.2	0838.4	68.0	10.0		
	536	ONDR	8 S	0901.5	0901.5	.1	19.0		
	650	GORK	46 C	0919.2	0919.7	7.5	5.0		
	650	GORK		0919.2	0921.5		4.5		
	650	GORK		0919.2	0924.2		17.0		
	810	KRAK	1 S	0934.7	0935.3	.7	3.0	2.0	
	810	KRAK	1 S	0936.2	0937.2	1.5	7.0	3.0	
	536	ONDR	46 C	0938.0	0940.0	3.0	219.0		
	5900	KISV	8 S	0939.0	0940.0	2.0	2.0		QL= ST= TYP=3
	3000	POTS	1 S	0939.5	0940.2	1.5	4.0		
	1470	POTS	2 S/F	0939.7	0939.9	1.8	7.0		
	5900	KISV	2 S/F	0939.7	0940.1	1.0	2.0		
	536	ONDR	46 C	0945.0	0945.5	2.5	78.0		
	536	ONDR	46 C	1037.5	1037.5	1.0	219.0		
	5900	KISV	20 GRF	1049.0	1057.1	50.0	3.0		
	3000	POTS	8 S	1145.2	1145.7	.8	5.0		
	930	BORD	41 F	1145.3	1145.9	1.6	1122.0	3.0	
	1470	POTS	1 S	1145.5	1145.6	1.2	2.0		
	5900	KISV	1 S	1145.6	1145.8	.5	5.0		
	234	POTS	4 S/F	1226.4	1228.2	5.7	165.0		
	30	POTS	4 S/F	1226.5	1228.1	5.6	4000.0		
	245	SVTO	46 C	1227.0E	1228.0	1.0D	220.0		QL=1 ST=3 TYP=5
	9400	HUAN	1 S	1400.3	1402.6	3.0	5.0	1.4	
	9400	HUAN	1 S	1456.3	1458.2	2.9	6.3	1.8	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
16	245	SCMR	46 C	1534.0E	1534.0	3.0D	90.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	1535.0E	1535.0	2.0D	220.0			QL=1 ST=2 TYP=5
	245	SCMR	46 C	1541.0E	1541.0	506.0D	120.0			QL=5 ST=2 TYP=5
	3750	TYKW	20 GRF	2210.0	2220.0	70.0	1.5	.7		RAIN
	2000	TYKW	20 GRF	2340.0	2350.0	60.0	1.0	.5		
	3750	TYKW	20 GRF	2340.0	2354.0	70.0	2.0	1.0		
17	245	SVTO	43 NS	0353.0	0650.0	583.0D	2900.0			QL=1 ST=3 TYP=1
	260	ONDR	44 NS	0543.0E	0849.0	510.0D	83.0			
	204	IZMI	43 NS	0600.0		360.0	45.0			
	245	PALE	43 NS	1628.0	0303.0	739.0D	55.0			QL=5 ST=2 TYP=1
	245	LEAR	43 NS	2306.0	0844.0		74.0			QL=5 ST=2 TYP=1
	200	HIRA	44 NS	2344.0E	0000.0	600.0D	35.0	15.0		MR
	200	HIRA	8 S	0003.3	0004.2	.9	1650.0			0
	100	HIRA	8 S	0003.6	0004.4U	.9	1000.0D			0
	200	HIRA	42 SER	0023.2	0027.1	12.0	380.0			
	100	HIRA	42 SER	0023.7	0024.6	11.0	840.0			
	245	PALE	46 C	0024.0E	0025.0	4.0D	100.0			QL=5 ST=2 TYP=5
	245	LEAR	46 C	0024.0E	0025.0	3.0D	110.0			QL=5 ST=2 TYP=5
	410	PALE	45 C	0024.0E	0027.0	4.0D	45.0			QL=5 ST=2 TYP=5
	200	HIRA	41 F	0143.0	0146.5	6.0	3200.0			WR
	500	HIRA	41 F	0143.0	0147.2	9.0	130.0			WR
	100	HIRA	41 F	0143.8	0147.0U	5.7	1000.0D			
	1000	TYKW	45 C	0145.0	0146.1	1.5	7.0	1.5		
	410	PALE	46 C	0145.0E	0147.0	4.0D	370.0			QL=5 ST=2 TYP=5
	410	LEAR	46 C	0145.0E	0147.0	2.0D	270.0			QL=5 ST=2 TYP=5
	245	PALE	49 GB	0145.0E	0147.0	4.0D	570.0			QL=5 ST=2 TYP=6
	2000	TYKW	45 C	0145.9	0146.1	.4	3.0	1.0		
	610	LEAR	46 C	0147.0E	0147.0		62.0			QL=5 ST=2 TYP=5
	610	PALE	46 C	0147.0E	0147.0		58.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	0147.3	0147.5	.4	26.0	1.5		
	200	HIRA	42 SER	0218.0	0218.5	40.0	95.0			MR
	245	PALE	46 C	0320.0E	0321.0	1.0D	200.0			QL=5 ST=2 TYP=5
	9400	TYKW	20 GRF	0330.0	0340.0	40.0	2.0	1.0		
	200	HIRA	41 F	0345.5	0345.5	4.0	440.0			WR
	200	HIRA	46 C	0410.0	0410.6	1.6	205.0	85.0		MR
	9300	KISV	22 GRF	0443.0	0514.3	99.0	18.0			
	3750	TYKW	21 GRF	0450.0	0540.0	140.0	3.0	1.5		
	2950	GORK	28 PRE	0457.7	0503.9	6.2	2.2	1.1		
	2000	TYKW	45 C	0500.0	0505.6	14.0	9.0	3.0		
	1000	TYKW	45 C	0502.0	0507.3	13.0	20.0	5.0		
	950	GORK		0503.0E	0507.2		21.0			
	3750	TYKW	45 C	0503.0	0507.8	11.0	4.0	1.0		
	2950	GORK	4 S/F	0503.0	0507.0	48.0	6.0			QL= ST= TYP=3
	950	GORK	4 S/F	0503.0	0508.0	39.0	20.0			QL= ST= TYP=3
	3100	GORK	4 S/F	0503.0	0511.0	75.0	31.0			QL= ST= TYP=3
	950	GORK	46 C	0503.7E	0505.4	18.5D	9.5			
	650	GORK	46 C	0503.7U	0507.2	44.0U	17.0			
	950	GORK		0503.7U	0509.6		14.0			
	650	GORK		0503.7U	0510.6		30.0			
	950	GORK		0503.7U	0512.2		11.5			
	950	GORK		0503.7U	0517.4		7.0			
	650	GORK		0503.7U	0517.5		12.0			
	650	GORK		0503.7U	0527.9		13.0			
	650	GORK		0503.7U	0533.8		8.5			
	2950	GORK	46 C	0503.8	0507.2	8.9	6.6	3.3		
	5900	KISV	20 GRF	0504.3	0533.0	120.0	11.0			
	2950	GORK	29 PBI	0512.7	0512.7	72.0	2.9			
	2000	TYKW	30 PBI	0514.0		90.0	1.5	.7		
	245	LEAR	46 C	0514.0E	0515.0	2.0D	82.0			QL=5 ST=2 TYP=5
	1000	TYKW	30 PBI	0515.0		90.0	1.0	.5		
	9400	TYKW	20 GRF	0515.0U	0540.0U	65.0U	6.0	3.0U		RAIN
	1000	TYKW	45 C	0516.5	0516.7	2.0	4.0	1.5		
	2000	TYKW	5 S	0517.0	0517.4	1.5	2.0	.5		
	410	LEAR	8 S	0517.0E	0517.0	1.0D	45.0			QL=5 ST=2 TYP=3
	950	GORK	20 GRF	0522.2	0527.4	8.7	4.0			
	1000	TYKW	5 S	0527.3	0527.7	1.5	1.5	.5		
	950	GORK	20 GRF	0532.2	0533.9	9.7	2.0			
	950	GORK	1 S	0547.2	0551.0	6.0	1.5			
	650	GORK	29 PBI	0548.0	0548.0U	30.6	2.2			
	200	HIRA	41 F	0549.5	0551.6	2.3	1750.0			0

22
May 87

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
17	100	HIRA	8 S	0550.8	0551.4	0.9	520.0			
	245	SVTO	49 GB	0551.0E	0552.0	2.0D	720.0			QL=1 ST=2 TYP=6
	410	SVTO	8 S	0551.0E	0552.0	1.0D	30.0			QL=1 ST=2 TYP=3
	3100	CRIM	45 C	0603.0	0605.5	11.0	3.5			
	3100	CRIM	47 GB	0603.0	0606.0	11.0	4.0			QL= ST= TYP=5
	3100	CRIM		0603.0	0607.8		4.5	1.5		
	3100	CRIM		0603.0	0610.0		3.0			
	234	POTS	4 S/F	0723.5	0724.7	1.3	190.0	10.0		
	650	GORK	28 PRE	0816.8	0832.4	15.6	3.4			
	204	IZMI		0830.0	0849.3	25.4	54.0	20.0		
	2950	GORK	46 C	0831.5	0849.2	34.0	51.0			
	2000	TYKW	45 C	0832.0	0849.1	30.0	70.0	23.0		
	3750	TYKW	45 C	0832.0	0849.2	32.0	43.0	16.0		
	650	GORK	47 GB	0832.4	0845.5	73.0D	1750.0			
	650	GORK		0832.4	0853.8		937.0			
	650	GORK		0832.4	0905.0		500.0			
	650	GORK		0832.4	0914.9		660.0			
	650	GORK		0832.4	0938.6		150.0			
	1000	TYKW	45 C	0833.0	0841.1	10.0D	100.0	23.0D		
	1470	POTS	45 C	0833.0E	0844.3	47.0D	67.0			
	500	HIRA	46 C	0833.5	0845.1	56.0D	420.0	70.0		UNCERTN
	950	GORK	47 GB	0833.7	0844.6	43.0	110.0			
	950	GORK		0833.7	0852.2		141.0			
	950	GORK	47 GB	0833.7	0915.0	43.0	447.0			
	3000	POTS	45 C	0834.0E	0849.1	71.0D	58.0			
	9500	POTS	45 C	0834.0E	0852.7	81.0D	23.0U			
	430	KRAK	49 GB	0834.0	0842.7	53.0	260.0D	150.0D		
	430	KRAK		0834.0	0845.0U		260.0D			
	430	KRAK		0834.0	0848.3		260.0D			
	430	KRAK		0834.0	0857.7U		260.0D			
	430	KRAK		0834.0	0904.0U		260.0D			
	430	KRAK		0834.0	0908.5		260.0D			
	430	KRAK		0834.0	0911.0U		260.0D			
	430	KRAK		0834.0	0915.0U		260.0D			
	930	BORD	42 SER	0834.0	0915.2	78.0	729.0	18.0		
	430	KRAK		0834.0	0921.3		235.0			
	9100	GORK	45 C	0834.8	0844.1	20.5	27.0			
	9100	GORK		0834.8	0848.8		27.0			
	9100	GORK		0834.8	0852.4		27.0			
	234	POTS	45 C	0835.7	0849.0	94.0	140.0			
	9300	KISV	22 GRF	0836.0	0918.0	140.0	6.0			
	1415	SVTO	46 C	0836.0E	0843.0	30.0D	98.0			QL=5 ST=2 TYP=5
	808	ONDR	46 C	0837.0		20.0				
	810	KRAK	46 C	0837.0	0841.0	25.0D	240.0	64.0U		
	1415	LEAR	46 C	0837.0	0843.0	23.0	83.0			QL=3 ST=2 TYP=5
	610	SVTO	49 GB	0837.0	0845.0	41.0	3000.0			QL=1 ST=2 TYP=6
	610	LEAR	49 GB	0837.0	0845.0	43.0	1600.0			QL=5 ST=2 TYP=6
	2695	SVTO	46 C	0837.0	0848.0	24.0	65.0			QL=5 ST=2 TYP=5
	808	ONDR		0837.0	0848.5					
	2695	LEAR	46 C	0837.0	0849.0	24.0	78.0			QL=5 ST=2 TYP=5
	808	ONDR		0837.0	0852.5					
	410	SVTO	49 GB	0837.0E	0858.0	41.0D	570.0			QL=1 ST=2 TYP=6
	410	LEAR	46 C	0837.0E	0904.0	43.0D	460.0			QL=5 ST=2 TYP=5
	536	ONDR	46 C	0838.0		52.0				
	5900	KISV		0838.0	0839.2		14.0			
	5900	KISV	46 C	0838.0	0841.2	57.0	28.0D			
	536	ONDR		0838.0	0842.0		425.0D			
	245	SVTO	46 C	0838.0E	0848.0	19.0D	150.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0838.0E	0848.0	30.0D	140.0			QL=5 ST=2 TYP=5
	536	ONDR		0838.0	0905.0		407.0			
	536	ONDR		0838.0	0916.0		420.0			
	9300	KISV	46 C	0838.9	0844.3	30.5	24.0			
	9300	KISV		0839.0	0848.7		26.0			
	9300	KISV		0839.0	0853.1		26.0			
	9300	KISV	4 S/F	0839.0	0844.0	33.0	27.0			QL= ST= TYP=3
	4995	SVTO	45 C	0840.0E	0842.0	23.0D	44.0			QL=5 ST=2 TYP=5
	8800	SVTO	45 C	0841.0E	0844.0	26.0D	30.0			QL=5 ST=2 TYP=5
	4995	LEAR	4 S/F	0841.0E	0849.0	40.0D	34.0			QL=5 ST=2 TYP=3
	9100	GORK	29 PBI	0855.2	0855.2	50.0	18.0			
	2000	TYKW	29 PBI	0902.0		3.0D	7.0	7.0D		
	808	ONDR	46 C	0903.5	0903.5	4.0				

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)	Int Remarks
17	3750	TYKW	29 PBI	0904.0		10.00	4.0	3.00	
	2950	GORK	29 PBI	0905.3	0905.3	40.00	6.8		
	808	ONDR	46 C	0910.0	0915.0	8.0			
	410	LEAR	46 C	0920.0E	0921.0	4.00	110.0		QL=5 ST=2 TYP=5
	610	SVTO	46 C	0920.0E	0922.0	3.00	220.0		QL=1 ST=2 TYP=5
	610	LEAR	46 C	0920.0E	0922.0	3.00	120.0		QL=5 ST=2 TYP=5
	410	SVTO	46 C	0920.0E	0922.0	4.00	110.0		QL=1 ST=2 TYP=5
	808	ONDR	46 C	0920.8	0922.5	3.0			
	950	GORK	4 S/F	0921.0	0922.3	2.2	103.0		
	610	SVTO	46 C	0926.0E	0934.0	23.00	270.0		QL=1 ST=2 TYP=5
	430	KRAK	7 C	0928.2	0929.0	2.0	12.0	8.0	
	950	GORK	8 S	0930.0	0930.1	.2	10.0		
	3100	CRIM	28 PRE	0931.0	0940.0	9.0	12.0	4.0	
	410	SVTO	47 GB	0934.0E	0938.0	12.00	190.0		QL=1 ST=2 TYP=5
	430	KRAK	45 C	0934.0	0938.5	12.5	210.0	56.0	
	536	ONDR	46 C	0934.5		10.0	230.0		
	950	GORK	46 C	0934.7	0937.0	10.00	28.0		
	950	GORK		0934.7	0938.2		43.0		
	950	GORK		0934.7	0943.4		28.0		
	808	ONDR	46 C	0935.0	0938.5	10.0			
	3100	CRIM	3 S	0936.5	0937.5	3.0	17.0	5.0	
	3100	CRIM	47 GB	0940.0	0944.3	20.0	54.0		
	3100	CRIM		0940.0	0949.0		63.0	21.0	
	536	ONDR	29 PBI	0944.0	0950.5	36.0	9.0		
	430	KRAK	41 F	0947.0	0950.0	18.00	17.0	3.0	
	3100	CRIM	29 PBI	1000.0	1000.0	50.0	14.0	4.0	
	9300	KISV	25 R	1115.2	1203.8	107.0	13.0		
	536	ONDR	46 C	1210.0			20.0		
	536	ONDR		1213.0	1213.0				
	536	ONDR		1221.0	1221.0		7.0		
	9400	HUAN	1 S	1736.3	1739.1	4.4	6.4	1.8	
	245	PALE	46 C	1816.0E	1816.0		390.0		QL=5 ST=2 TYP=5
	245	SCMR	46 C	1816.0E	1816.0		380.0		QL=5 ST=2 TYP=5
18	204	IZMI	43 NS	0600.0		360.0	30.0		
	260	ONDR	44 NS	0605.0E	1050.5	478.00	127.0		
	33	UPIC	44 NS	0740.0E		369.70			
	29	UPIC	44 NS	0840.0E		309.60			
	245	SCMR	43 NS	0942.0	1050.0	836.00	200.0		QL=5 ST=2 TYP=1
	245	PALE	44 NS	1717.0E	1939.0	690.00	53.0		QL=5 ST=2 TYP=1
	245	LEAR	43 NS	2330.0	0246.0	603.00	110.0		QL=5 ST=2 TYP=1
	200	HIRA	44 NS	2344.0E	0450.0	600.00	50.0	20.0	MR
	9400	TYKW	5 S	0359.0	0359.8	2.0	4.0	1.0	
	2000	TYKW	45 C	0359.0	0359.9	2.0	3.0	.5	
	245	PALE	46 C	0359.0E	0400.0	1.00	95.0		QL=5 ST=2 TYP=5
	1000	TYKW	5 S	0359.5U	0359.9	1.00	4.0	1.0	INTERFERENCE
	3750	TYKW	5 S	0359.5	0359.9	1.5	1.5	.5	
	3750	TYKW	20 GRF	0450.0	0530.0	180.0	3.0	1.5	
	2000	TYKW	20 GRF	0500.0	0530.0	150.0	1.5	.7	
	650	GORK	22 GRF	0537.3		83.0	14.0		
	808	ONDR	8 S	0604.0	0604.1	.5			
	536	ONDR	40 F	0614.5	0616.5	2.0	26.0		
	1470	POTS	8 S	1009.0	1009.0	.5	7.0		
	1470	POTS	8 S	1011.0	1011.1	.9	7.0		
	5900	KISV	20 GRF	1020.7	1038.0	37.0	3.0		
	650	GORK	46 C	1045.2	1047.0	3.7	26.0		
	650	GORK		1045.2	1047.8		12.0		
	536	ONDR	8 S	1127.0	1127.0	.5	7.0		
	204	IZMI	41 F	1154.6	1159.8	6.0	200.0		
	245	SVTO	49 GB	1206.0E	1206.0	1.00	30000.0		QL=1 ST=2 TYP=6
	536	ONDR	46 C	1210.5	1212.5	2.5	17.0		
	808	ONDR	4 S/F	1211.0	1212.0	2.0			
	1470	POTS	8 S	1351.4	1351.5	.4	4.0		
	410	SCMR	46 C	1428.0E	1434.0	8.00	100.0		QL=5 ST=3 TYP=5
	610	SCMR	46 C	1428.0E	1435.0	8.00	180.0		QL=5 ST=3 TYP=5
	410	SCMR	46 C	1429.0E	1431.0	4.00	75.0		QL=5 ST=3 TYP=5
	245	SCMR	4 S/F	1429.0E	1431.0	4.00	25.0		QL=5 ST=3 TYP=3
	610	SCMR	46 C	1430.0E	1430.0	1.00	84.0		QL=5 ST=3 TYP=5
	245	SCMR	46 C	1633.0E	1634.0	9.00	310.0		QL=5 ST=2 TYP=5
	930	BORD	42 SER	1633.0	1640.0	17.0	67.0	5.0	
	2800	OTTA	21 GRF	1633.5	1648.2	18.5	1.9	1.2	

24
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987										
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
18	410	SGMR	46 C	1634.0E	1635.0	8.0D	100.0			QL=5 ST=2 TYP=5
	610	SGMR	8 S	1634.0E	1635.0	2.0D	26.0			QL=5 ST=2 TYP=3
	245	SVTO	46 C	1638.0E	1638.0	4.0D	120.0			QL=1 ST=2 TYP=5
	2800	OTTA	8 S	1642.2	1642.2	.3	2.9	2.9		
	245	SVTO	46 C	1648.0E	1649.0	1.0D	80.0			QL=1 ST=2 TYP=5
	245	PALE	8 S	1808.0E	1808.0	1.0D	48.0			QL=5 ST=2 TYP=3
	245	PALE	46 C	2304.0E	2306.0	3.0D	82.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	2305.0	2306.9	3.0	7.0	1.0		
	410	PALE	8 S	2306.0E	2306.0	1.0D	22.0			QL=5 ST=2 TYP=3
	3750	TYKW	28 PRE	2310.0	2320.0	10.0	2.0	1.0		
	1000	TYKW	45 C	2312.5	2318.6	7.5	9.0	1.0		
	245	PALE	46 C	2314.0	2321.0	12.0	460.0			QL=5 ST=2 TYP=5
	2000	TYKW	45 C	2315.0	2322.5	12.0	31.0	2.0		
	410	PALE	8 S	2315.0E	2315.0	1.0D	32.0			QL=5 ST=2 TYP=3
	1415	SYDN	47 GB	2318.0	2324.0	9.0	108.0			QL= ST= TYP=5
	500	HIRA	46 C	2319.5	2324.0	7.5	220.0	20.0		
	1000	TYKW	45 C	2320.0	2321.5	8.0	230.0	28.0		
	9400	TYKW	45 C	2320.0	2321.5	7.0	21.0	10.0		
	3750	TYKW	45 C	2320.0	2321.8	20.0	11.0	4.0		
	1000	TYKW		2320.0	2324.7		180.0			
	245	LEAR	49 GB	2320.0E	2321.0	2.0D	500.0			QL=5 ST=2 TYP=6
	2700	PENT	45 C	2320.0	2321.5	12.0	13.9	3.5		
	8800	PALE	45 C	2320.0E	2322.0	5.0D	24.0			QL=5 ST=2 TYP=5
	410	LEAR	46 C	2320.0E	2324.0	6.0D	220.0			QL=5 ST=2 TYP=5
	610	PALE	46 C	2320.0E	2324.0	6.0D	450.0			QL=5 ST=2 TYP=5
	610	LEAR	46 C	2320.0E	2324.0	5.0D	470.0			QL=5 ST=2 TYP=5
	245	SGMR	46 C	2321.0E	2321.0		370.0			QL=5 ST=2 TYP=5
	4995	PALE	8 S	2321.0E	2321.0	1.0D	15.0			QL=5 ST=2 TYP=3
	1415	PALE	46 C	2321.0E	2322.0	5.0D	300.0			QL=5 ST=2 TYP=5
	610	SGMR	46 C	2323.0E	2324.0	2.0D	330.0			QL=5 ST=2 TYP=5
	410	SGMR	46 C	2324.0E	2324.0	2.0D	100.0			QL=5 ST=2 TYP=5
	9400	TYKW	29 PBI	2327.0		20.0	4.0	2.0		
	2000	TYKW	29 PBI	2327.0		25.0	1.0	.5		
	1000	TYKW	45 C	2329.0	2340.4	20.0	1.5	1.0		
	3750	TYKW	30 PBI	2340.0		110.0	1.0	.5		
19	245	SVTO	43 NS	0351.0	0630.0	828.0D	66.0			QL=1 ST=3 TYP=1
	260	ONDR	44 NS	0548.0E	0834.0	499.0D	130.0D			
	204	IZMI	44 NS	0600.0E		360.0D	33.0			
	204	IZMI	43 NS	0600.0		360.0	33.0			QL= ST= TYP=1
	650	GORK	43 NS	0619.9		205.0		3.0		
	536	ONDR	43 NS	0634.0		452.0D	16.0			
	245	SGMR	43 NS	0941.0	1825.0	838.0D	310.0			QL=5 ST=2 TYP=1
	650	GORK	44 NS	1045.0E		78.0D		6.0		
	410	PALE	43 NS	1705.0	1938.0	703.0D	24.0			QL=5 ST=2 TYP=1
	245	PALE	43 NS	1705.0	1955.0	703.0D	310.0			QL=5 ST=2 TYP=1
	200	HIRA	44 NS	1927.0E	0800.0	840.0D	70.0	25.0		MR
	100	HIRA	44 NS	1927.0E	2313.0	840.0D	240.0	80.0		
	610	SGMR	43 NS	2153.0	2156.0	106.0D	97.0			QL=5 ST=2 TYP=1
	410	SGMR	43 NS	2153.0	2204.0	106.0D	46.0			QL=5 ST=2 TYP=1
	410	LEAR	43 NS	2308.0	2310.0	624.0	45.0			QL=5 ST=2 TYP=1
	245	LEAR	43 NS	2308.0	2317.0	624.0	150.0			QL=5 ST=2 TYP=1
	610	LEAR	44 NS	2308.0E	2319.0	172.0D	58.0			QL=5 ST=2 TYP=1
	2700	PENT	1 S	0003.0	0005.2	5.0	4.1	2.0		
	1000	TYKW	45 C	0003.5	0004.5	2.0	105.0	10.0		
	2000	TYKW	5 S	0003.5	0004.5	1.5D	7.0	2.0D		
	3750	TYKW	45 C	0004.0	0005.2	3.0	3.0	1.0		
	500	HIRA	46 C	0021.0	0023.5	10.0	35.0	10.0		MR
	245	PALE	46 C	0219.0E	0219.0	1.0D	65.0			QL=5 ST=2 TYP=5
	245	LEAR	46 C	0219.0E	0219.0	1.0D	86.0			QL=5 ST=2 TYP=5
	3750	TYKW	5 S	0223.0	0223.5	3.0	1.5	.5		
	245	PALE	46 C	0245.0E	0246.0	2.0D	120.0			QL=5 ST=2 TYP=5
	200	HIRA	46 C	0305.3	0306.2	1.5	79.0	28.0		MR
	9400	TYKW	20 GRF	0340.0	0405.0	110.0	3.0	1.5		
	3750	TYKW	20 GRF	0355.0	0500.0	220.0	3.0	1.5		
	5900	KISV	46 C	0400.0	0403.8	8.0	3.0			
	1000	TYKW	45 C	0440.0	0453.1	25.0	3.0	1.0		
	950	GORK	22 GRF	0440.7	0452.2	23.5	5.5			
	100	HIRA	41 F	0531.0	0636.0U	92.0	1000.0D			
	200	HIRA	41 F	0624.4	0636.3	40.0	1050.0			WR
	204	IZMI	41 F	0627.4	0637.0	15.5	550.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak Mean (10 -22 W/m 2 Hz)		Int Remarks
19	245	SVTO	46 C	0636.0E	0636.0	1.0D	140.0		QL=1 ST=2 TYP=5
	245	LEAR	46 C	0636.0E	0636.0	1.0D	110.0		QL=5 ST=2 TYP=5
	410	SVTO	4 S/F	0636.0E	0636.0	12.0D	36.0		QL=1 ST=2 TYP=3
	410	LEAR	4 S/F	0636.0E	0636.0	40.0D	22.0		QL=5 ST=2 TYP=3
	245	LEAR	46 C	0643.0E	0643.0		72.0		QL=5 ST=2 TYP=5
	245	SVTO	46 C	0643.0E	0643.0	1.0D	92.0		QL=1 ST=3 TYP=5
	650	GORK	4 S/F	0658.9	0700.0	3.0	21.0	6.0	
	950	GORK	22 GRF	0703.0	0859.0	170.0	7.0		
	1000	TYKW	5 S	0719.0	0719.3	2.0	3.0	.7	
	930	BORD	40 F	0719.0	1141.8	362.0	29.0	4.0	
	204	IZMI	4 S/F	0904.4	0904.5	.6	650.0	325.0	
	5900	KISV	20 GRF	0934.5	0938.4	31.0	3.0		
	430	KRAK	42 SER	0958.5	1032.8	71.0	110.0		
	950	GORK	22 GRF	1029.0	1145.0	91.0	22.0		
	430	KRAK	40 F	1109.5	1117.0	69.5	65.0	7.0	
	810	KRAK	40 F	1124.2	1144.2	55.3	33.0	10.0	
	204	IZMI	21 GRF	1146.4	1146.6	.5	220.0	110.0	
	9300	KISV	21 GRF	1213.7	1226.8	18.5	9.0		
	9300	KISV	4 S/F	1214.0	1227.0	19.0	9.0		QL= ST= TYP=3
	1470	POTS	41 F	1215.0	1226.6	17.0	4.0		
	9500	POTS	21 GRF	1215.0	1226.7	25.0	11.0U		
	3000	POTS	28 PRE	1216.5	1226.7	15.0	6.0		
	15000	KISV	4 S/F	1224.0	1227.0	8.0	13.0		QL= ST= TYP=3
	5900	KISV	8 S	1225.0	1227.0	2.0	7.0		QL= ST= TYP=3
	5900	KISV	2 S/F	1225.4	1226.7	2.0	7.0		
	2800	OTTA	45 C	1225.5	1226.6	4.5	6.6	3.3	
	9500	POTS	21 GRF	1247.0	1252.0	48.0	18.0U		
	5900	KISV		1248.7	1252.1		12.0		
	5900	KISV	46 C	1248.7	1256.1	16.0	13.0		
	5900	KISV		1248.7	1302.4		9.0		
	3000	POTS	22 GRF	1250.7	1255.5	64.0	9.0		
	9300	KISV	45 C	1251.0	1252.0	6.5	20.0		
	9300	KISV		1251.0	1256.2		18.0		
	9300	KISV	29 PBI	1251.0	1257.4	10.5	12.0		
	1470	POTS	22 GRF	1251.5	1255.4	64.0	2.0		
	2800	OTTA	20 GRF	1251.6	1255.5	64.5	4.0	2.0	
	2800	OTTA	8 S	1251.7	1251.7	.2	6.8	6.1	
	2800	OTTA	8 S	1255.7	1255.7	.2	12.5	11.2	
	5900	KISV	29 PBI	1304.9	1304.9	11.5	6.0		
	9400	HUAN	21 GRF	1757.0E	1813.0	39.2D	21.4	11.0	
	245	PALE	49 GB	1759.0E	1804.0	9.0D	760.0		QL=5 ST=2 TYP=6
	2800	OTTA	45 C	1759.5	1804.8	45.0	64.9	13.0	
	8800	PALE	8 S	1801.0E	1802.0	2.0D	40.0		QL=5 ST=2 TYP=3
	9400	HUAN	45 C	1801.0	1802.0	7.5	32.2	28.5	
	410	PALE	46 C	1801.0E	1804.0	7.0D	420.0		QL=5 ST=2 TYP=5
	1415	PALE	46 C	1801.0E	1804.0	6.0D	410.0		QL=5 ST=2 TYP=5
	9400	HUAN		1801.0	1805.0		39.8		
	610	PALE	49 GB	1801.0E	1805.0	6.0D	800.0		QL=5 ST=2 TYP=6
	9400	HUAN	S/F	1801.0	1807.0		36.7		
	4995	SCMR	4 S/F	1802.0E	1802.0	299.0D	39.0		QL=5 ST=2 TYP=3
	410	SCMR	46 C	1802.0E	1805.0	7.0D	450.0		QL=5 ST=2 TYP=5
	245	SCMR	49 GB	1802.0E	1805.0	14.0D	690.0		QL=5 ST=2 TYP=6
	610	SCMR	49 GB	1802.0E	1805.0	6.0D	1000.0		QL=5 ST=2 TYP=6
	2695	PALE	46 C	1803.0E	1805.0	5.0D	60.0		QL=5 ST=2 TYP=5
	2695	SCMR	46 C	1803.0E	1805.0	6.0D	70.0		QL=5 ST=2 TYP=5
	4995	PALE	46 C	1804.0E	1805.0U	4.0D	51.0		QL=5 ST=2 TYP=5
	8800	SCMR	46 C	1804.0E	1810.0	12.0D	68.0		QL=5 ST=2 TYP=5
	15400	SCMR	45 C	1805.0E	1807.0	3.0D	22.0		QL=5 ST=2 TYP=5
	9400	HUAN	2 S/F	1818.0	1819.5	4.1	9.2	4.0	
	9400	HUAN		1818.0	1820.5		10.0		
	500	HIRA	24 R	2045.0		810.0D	200.0D		
	9400	HUAN	1 S	2051.7	2053.3	3.5	4.6	1.3	
	1000	TYKW	45 C	2057.0E	2105.5	35.0D	6.0	1.5D	
	9400	TYKW	45 C	2121.8	2122.4	1.5	7.0	2.0	
	2000	TYKW	5 S	2122.0	2122.5	1.5	1.5	.5	
	1000	TYKW		2134.0	2145.2		16.0		
	1000	TYKW	45 C	2134.0	2202.0	58.0	22.0	5.0	
	610	PALE	46 C	2135.0E	2144.0	49.0D	120.0		QL=3 ST=3 TYP=5
	410	PALE	46 C	2137.0E	2138.0	47.0D	84.0		QL=3 ST=3 TYP=5
	410	SCMR	4 S/F	2139.0E	2140.0	5.0D	36.0		QL=5 ST=2 TYP=3
	610	SCMR	46 C	2139.0E	2145.0	7.0D	110.0		QL=5 ST=2 TYP=5

26
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
19	9400	TYKW	5 S	2140.0	2140.3	1.0	4.0	1.5		
	245	SGMR	45 C	2140.0E	2140.0	1.0D	50.0			QL=5 ST=2 TYP=5
	2000	TYKW	45 C	2147.0	2148.3	4.0	12.0	1.0		
	9400	TYKW	45 C	2147.0	2148.3	5.0	11.0	2.0		
	4995	SYDN	8 S	2147.0	2348.0	200.0U	32.0			QL= ST= TYP=3
	2800	OTTA	42 SER	2147.8	2148.2	20.0	5.2	2.6		
	3750	TYKW	45 C	2148.0	2148.3	2.0	8.0	3.0		
	3750	TYKW	30 PBI	2150.0		30.0	1.5	.7		
	9400	TYKW	45 C	2152.0	2156.8	8.0	9.0	3.0		
	2000	TYKW	5 S	2154.0	2156.2	7.0	2.0	.5		
	3750	TYKW	5 S	2154.0	2156.7	5.0	4.0	2.0		
	3750	TYKW	29 PBI	2159.0		15.0	1.5	.7		
	9400	TYKW	29 PBI	2200.0		15.0	2.0	1.0		
	1000	TYKW	5 S	2233.0	2233.6	1.5	1.0	.3		
	1000	TYKW	45 C	2235.0	2245.3	15.0	4.0	.7		
	1000	TYKW	45 C	2250.0	2310.7	52.0	33.0	6.0		
	3750	TYKW	28 PRE	2257.0	2309.0	12.0	1.5	.7		
	3750	TYKW	5 S	2259.0	2300.6	4.0	3.0	1.0		
	200	HIRA	46 C	2307.9	2310.9	13.0	72.0	34.0		MR
	2000	TYKW	45 C	2308.0	2312.7	12.0	26.0	4.0		
	9400	TYKW	45 C	2308.0	2312.8	12.0	24.0	8.0		
	3750	TYKW	45 C	2309.0	2313.0	20.0	19.0	5.0		
	2700	PENT	3 S	2312.3	2312.5	4.1	46.1	9.2		
	2700	PENT	29 PBI	2316.4	2316.4	23.0	3.7	1.8		
	9400	TYKW	29 PBI	2320.0		25.0	6.0	3.0		
	2000	TYKW	29 PBI	2320.0		60.0	2.0	1.0		
	3750	TYKW	30 PBI	2329.0		50.0	2.0	1.0		
	200	HIRA	46 C	2334.5	2335.6	5.3	26.0	10.0		MR
	1000	TYKW	45 C	2343.0	2351.8	21.0	6.0	1.0		
	3750	TYKW	5 S	2352.0	2356.0	20.0	1.0	.5		
20	650	GORK	44 NS	0255.0E		458.0D		3.0		
	245	SVTO	43 NS	0350.0	1431.0	830.0D	45.0			QL=1 ST=2 TYP=1
	204	IZMI	44 NS	0600.0E		360.0D	34.0			
	33	UPIC	43 NS	0635.8		254.2D				
	29	UPIC	43 NS	0636.0		420.0U				
	260	ONDR	44 NS	0653.0E	0947.0	427.0D	99.0			
	536	ONDR	44 NS	0654.0E	0757.0	429.0D	178.0			
	430	KRAK	44 NS	0702.0E	0757.0	125.0D	235.0	25.0		
	810	KRAK	44 NS	0702.0E	0804.0	115.0D	81.0	18.0		
	430	KRAK	43 NS	0924.0	0946.5	156.0	149.0	4.0		
	245	SGMR	43 NS	0940.0	1317.0	839.0D	180.0			QL=5 ST=2 TYP=1
	410	SGMR	43 NS	0940.0	1335.0	839.0D	42.0			QL=5 ST=2 TYP=1
	610	SGMR	43 NS	0940.0	1335.0	839.0D	41.0			QL=5 ST=2 TYP=1
	245	PALE	43 NS	1627.0	2329.0	741.0D	46.0			QL=5 ST=2 TYP=1
	200	HIRA	44 NS	1927.0E	2121.0	840.0D	37.0	15.0		MR
	100	HIRA	44 NS	1927.0E	2122.0	840.0D	850.0	250.0U		
	410	LEAR	43 NS	2308.0	0925.0	624.0D	33.0			QL=5 ST=2 TYP=1
	245	LEAR	43 NS	2308.0	2329.0	624.0D	57.0			QL=5 ST=2 TYP=1
	1000	TYKW	5 S	0012.4	0012.8	1.0	1.0	.3		
	1000	TYKW		0020.0	0031.8		10.0			
	1000	TYKW	45 C	0020.0	0122.0	120.0	18.0	4.0		
	3750	TYKW	5 S	0038.0	0039.7	4.0	4.0	1.5		
	2000	TYKW	20 GRF	0038.0	0040.0	65.0	1.5	.7		
	9400	TYKW	5 S	0039.4	0039.8	1.0	5.0	1.0		
	3750	TYKW	29 PBI	0042.0		75.0	1.5	.7		
	1000	TYKW	45 C	0220.0	0225.4	16.0	3.0	.5		
	1000	TYKW	45 C	0236.0	0243.8	30.0	13.0	5.0		
	2000	TYKW	20 GRF	0240.0	0320.0	90.0	1.0	.5		
	200	HIRA	42 SER	0240.2	0324.8	46.0	114.0			MR
	650	GORK	46 C	0255.0E	0258.5	15.0D	19.0			
	650	GORK		0255.0E	0303.0		7.5			
	100	HIRA	42 SER	0309.7	0344.0	100.0	790.0			
	1000	TYKW	45 C	0322.0	0325.4	6.0	3.0	1.0		
	950	GORK	2 S/F	0322.7	0325.3	4.3	4.0			
	245	PALE	46 C	0324.0E	0325.0	2.0D	53.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	0336.0	0403.3	140.0	18.0	3.0		
	1000	TYKW		0336.0	0443.2		16.0			
	1000	TYKW		0336.0	0508.1		16.0			
	1000	TYKW		0336.0	0529.7		15.0			
	950	GORK	23 GRF	0337.9	0439.0	146.0	15.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 ⁻²² W/m ² Hz)		Int Remarks
20	410	SVTO	46 C	0350.0	0401.0		100.0		QL=1 ST=3 TYP=5
	610	SVTO	46 C	0350.0	0413.0	23.0D	82.0		QL=1 ST=3 TYP=5
	610	SVTO	46 C	0350.0	0413.0	23.0U	82.0		QL=1 ST=3 TYP=5
	410	PALE	46 C	0358.0E	0403.0	20.0D	120.0		QL=5 ST=2 TYP=5
	650	GORK	46 C	0400.0U	0403.2	15.0U	6.5		
	650	GORK		0400.0U	0405.1		66.0		
	650	GORK		0400.0U	0407.8		50.0		
	245	SVTO	4 S/F	0401.0E	0402.0	7.0D	47.0		QL= ST=3 TYP=3
	245	PALE	46 C	0401.0E	0406.0	6.0D	84.0		QL=5 ST=2 TYP=5
	950	GORK	2 S/F	0401.9	0403.3	3.5	15.0		
	610	PALE	46 C	0402.0E	0403.0	6.0D	48.0		QL=5 ST=2 TYP=5
	410	SVTO	46 C	0419.0E	0420.0	10.0D	160.0		QL= ST=2 TYP=5
	245	SVTO	4 S/F	0422.0E	0422.0	3.0D	160.0		QL= ST=2 TYP=3
	245	PALE	46 C	0422.0E	0422.0	3.0D	110.0		QL=5 ST=2 TYP=5
	410	PALE	8 S	0423.0E	0423.0	2.0D	16.0		QL=5 ST=2 TYP=3
	9400	TYKW	20 GRF	0425.0	0445.0	90.0	3.0	1.5	
	3750	TYKW	20 GRF	0430.0	0443.0	30.0	1.0	.5	
	410	PALE	4 S/F	0432.0E	0433.0	15.0D	18.0		QL=5 ST=2 TYP=3
	245	PALE	46 C	0432.0E	0435.0	15.0D	95.0		QL=5 ST=2 TYP=5
	245	SVTO	46 C	0433.0E	0435.0	4.0D	130.0		QL=1 ST=2 TYP=5
	410	SVTO	8 S	0433.0E	0435.0	2.0D	37.0		QL=1 ST=2 TYP=3
	610	SVTO	46 C	0434.0E	0442.0	10.0D	150.0		QL=1 ST=2 TYP=5
	610	PALE	4 S/F	0435.0E	0435.0	12.0D	20.0		QL=5 ST=2 TYP=3
	5900	KISV	4 S/F	0435.0	0443.0	19.0	6.0		QL= ST= TYP=3
	5900	KISV	20 GRF	0435.3	0443.2	18.5	6.0		
	650	GORK	46 C	0435.4	0439.1	63.0	29.0		
	650	GORK		0435.4	0442.9U		35.0D		
	650	GORK		0435.4	0457.6		38.0		
	650	GORK		0435.4	0507.5		103.0		
	650	GORK		0435.4	0516.9		80.0		
	650	GORK		0435.4	0528.0		31.0		
	950	GORK	2 S/F	0442.2	0443.7	2.2	11.0		
	245	SVTO	46 C	0507.0E	0507.0	4.0D	180.0		QL=1 ST=2 TYP=5
	950	GORK	2 S/F	0507.0	0507.8	2.7	17.0		
	410	SVTO	46 C	0508.0E	0508.0	2.0D	68.0		QL=1 ST=2 TYP=5
	3750	TYKW	20 GRF	0510.0	0521.0	50.0	1.5	.7	
	2000	TYKW	20 GRF	0510.0	0524.0	60.0	1.0	.5	
	5900	KISV	20 GRF	0513.5	0534.8	36.5	5.0		
	950	GORK	46 C	0527.0	0527.9	4.0	11.0		
	950	GORK		0527.0	0529.6		12.0		
	1000	TYKW	5 S	0559.0	0603.0U	10.0	1.5D	.5D	
	5900	KISV	20 GRF	0613.6	0622.3	16.0	6.0		
	950	GORK	22 GRF	0621.0	0628.9	12.0	8.0		
	930	BORD	40 F	0623.0	0801.0	161.0	105.0	5.0	
	1000	TYKW	45 C	0625.0	0629.0	10.0	6.0	1.5	
	650	GORK	46 C	0625.9	0626.3	4.6	39.0		
	650	GORK		0625.9	0628.9		60.0		
	610	LEAR	47 GB	0628.0E	0628.0	1.0D	66.0		QL=5 ST=2 TYP=5
	3750	TYKW	20 GRF	0630.0	0655.0	100.0	2.0	1.0	
	200	HIRA	42 SER	0634.8	0647.5	41.0	405.0		WR
	1000	TYKW		0637.0	0713.6		23.0		
	1000	TYKW	45 C	0637.0	0801.0	115.0	85.0	15.0	
	2000	TYKW	20 GRF	0640.0	0655.0	45.0	1.5	.7	
	950	GORK	23 GRF	0644.0	0815.0	139.0	18.0		
	610	SVTO	46 C	0645.0E	0645.0	3.0D	79.0		QL=1 ST=3 TYP=5
	204	IZMI	23 GRF	0647.0	0647.5	2.2	200.0	100.0	
	245	SVTO	46 C	0652.0E	0652.0	1.0D	54.0		QL=1 ST=2 TYP=5
	610	LEAR	46 C	0652.0E	0653.0	1.0D	75.0		QL=5 ST=2 TYP=5
	610	SVTO	46 C	0653.0E	0657.0	27.0D	460.0		QL=1 ST=2 TYP=6
	808	ONDR	40 F	0655.0E		40.0D			
	410	SVTO	49 GB	0655.0E	0657.0	4.0D	520.0		QL=1 ST=2 TYP=6
	950	GORK	2 S/F	0713.3	0713.5	.8	14.5		
	5900	KISV	25 R	0720.3	0833.0	124.0	5.0		
	610	SVTO	46 C	0727.0E	0731.0	73.0D	85.0		QL=1 ST=3 TYP=5
	410	SVTO	45 C	0728.0E	0728.0	74.0D	27.0		QL=1 ST=3 TYP=5
	650	GORK	46 C	0733.0	0801.0	57.0	140.0		QL= ST= TYP=5
	950	GORK	46 C	0733.0	0801.0	57.0	56.0		QL= ST= TYP=5
	808	ONDR	28 PRE	0735.0	0738.7	5.0			
	950	GORK	46 C	0736.0	0737.8	39.0	48.0		
	950	GORK		0736.0	0757.7		83.0		
	650	GORK	27 RF	0736.3	0801.3	76.0	180.0		

28
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
20	410	LEAR	46 C	0737.0E	0737.0	52.0D	81.0			QL=5 ST=2 TYP=5
	610	LEAR	46 C	0737.0E	0738.0	2.0D	67.0			QL=5 ST=2 TYP=5
	808	ONDR	46 C	0740.0	0801.0	28.0				
	2000	TYKW	20 GRF	0742.0	0757.0	40.0	1.0	.5		
	610	LEAR	46 C	0745.0E	0801.0	22.0D	130.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0746.0E	0748.0	2.0D	46.0			QL=1 ST=3 TYP=5
	1415	LEAR	45 C	0747.0E	0748.0	2.0D	18.0			QL=3 ST=2 TYP=5
	410	LEAR	46 C	0754.0E	0756.0	2.0D	88.0			QL=5 ST=2 TYP=5
	950	GORK		0801.0	0801.0		93.0			
	808	ONDR	29 PBI	0808.0		52.0				
	1000	TYKW	45 C	0834.0	0841.3	10.0D	8.0	2.0D		
	200	HIRA	46 C	0900.0	0901.6	2.2	120.0	64.0		SR
	5900	KISV	4 S/F	0924.0	0941.0	69.0	102.0			QL= ST= TYP=3
	5900	KISV	28 PRE	0924.3	0937.3	13.0	9.0			
	204	IZMI	42 SER	0925.4	0947.2	35.4	1870.0			
	2950	GORK	21 GRF	0925.7	0951.0	51.0	5.4			
	9300	KISV	28 PRE	0928.0	0937.5	9.5	8.0			
	9300	KISV	4 S/F	0928.0	0941.0	43.0	78.0			QL= ST= TYP=3
	9100	GORK	21 GRF	0928.3	0949.3	47.0	9.3			
	930	BORD	40 F	0933.0	0947.0	69.0	518.0	4.0		
	950	GORK	23 GRF	0933.8	0954.0	48.9	8.3			
	810	KRAK	41 F	0935.5	0947.0U	37.0	30.0U	5.0U		
	9300	KISV	46 C	0937.5	0941.1	11.5	78.0			
	5900	KISV	46 C	0937.5	0941.3	12.0	102.0			
	9100	GORK	46 C	0937.6	0941.0	11.7	69.0			
	9100	GORK		0937.6	0941.2		72.0			
	9100	GORK		0937.6	0947.0		46.0			
	2950	GORK	46 C	0937.8	0941.5	11.8	23.0			
	2950	GORK		0937.8	0947.1		20.0			
	610	SVTO	46 C	0939.0E	0940.0	17.0D	83.0			QL=1 ST=3 TYP=5
	410	SVTO	46 C	0939.0E	0940.0	11.0D	59.0			QL=1 ST=3 TYP=5
	245	SVTO	46 C	0939.0E	0941.0	12.0D	220.0			QL=1 ST=3 TYP=5
	950	GORK	4 S/F	0939.3	0941.7	2.8	57.0			
	808	ONDR	28 PRE	0939.5	0941.3	4.0				
	650	GORK	46 C	0939.7	0941.7	16.2	47.0			
	650	GORK		0939.7	0947.5		124.0			
	15400	SVTO	46 C	0940.0E	0940.0	10.0D	69.0			QL=5 ST=3 TYP=5
	1415	SVTO	4 S/F	0940.0E	0940.0		29.0			QL=5 ST=1 TYP=3
	4995	SVTO	46 C	0940.0E	0941.0	10.0D	81.0			QL=5 ST=1 TYP=5
	8800	SVTO	46 C	0940.0E	0941.0	11.0D	98.0			QL=5 ST=3 TYP=5
	2695	SVTO	4 S/F	0940.0E	0941.0	9.0D	40.0			QL=5 ST=3 TYP=3
	808	ONDR	46 C	0943.5	0946.5	6.0				
	950	GORK	4 S/F	0943.8	0946.2U	7.6D	159.0			
	5900	KISV		0946.9	0947.1		60.0			
	9300	KISV	29 PBI	0946.9	0949.2	20.5	14.0			
	610	SGMR	4 S/F	0947.0E	0947.0		36.0			QL=5 ST=2 TYP=3
	245	SGMR	49 GB	0947.0E	0947.0	2.0D	530.0			QL=5 ST=2 TYP=6
	410	SGMR	8 S	0947.0E	0948.0	1.0D	26.0			QL=5 ST=2 TYP=3
	5900	KISV	29 PBI	0949.3	0949.3	44.0	14.0			
	808	ONDR	PBI	0950.0	0954.0	10.0				
	810	KRAK	27 RF	1016.0	1024.2	21.0	8.0	4.0		
	3100	CRIM	45 C	1035.0	1042.0	15.0	41.0			QL= ST= TYP=5
	3100	CRIM		1035.0	1047.1		16.0			
	3100	CRIM	29 PBI	1050.0	1050.0	14.0	4.0	1.0		
	650	GORK	4 S/F	1126.2	1127.6	4.1	22.0			
	650	GORK	8 S	1133.6	1133.7	.3	18.0			
	5900	KISV	25 R	1213.0	1245.0	43.5	3.0			
	9300	KISV	28 PRE	1255.8	1323.0	27.2	14.0			
	5900	KISV		1256.2	1319.3		23.0			
	5900	KISV		1256.2	1324.9		31.0			
	5900	KISV	46 C	1256.2	1335.0	49.0	50.0			
	5900	KISV	29 PBI	1256.2	1345.5	59.3U	13.0			
	2800	OTTA	46F C	1256.5	1334.9	90.0	43.9	8.8		
	930	BORD	40 F	1259.0	1335.0	204.0	230.0	4.0		
	808	ONDR	40 F	1300.0	1325.0	60.0D				
	810	KRAK	41 F	1301.5	1303.5	4.8	11.0	3.0		
	430	KRAK	41 F	1303.0	1306.0	13.0D	45.0	6.0		
	245	SVTO	46 C	1305.0E	1305.0	1.0D	130.0			QL=1 ST=2 TYP=5
	9300	KISV	46 C	1313.0						
	9300	KISV		1323.2	1324.3		31.0			
	9300	KISV		1333.4	1335.1	27.0	56.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987										
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
20	610	SVTO	47 GB	1334.0E	1334.0	1.0D	800.0			QL=1 ST=2 TYP=5
	4995	SVTO	8 S	1334.0E	1335.0	1.0D	30.0			QL=5 ST=2 TYP=3
	410	SCMR	8 S	1334.0E	1335.0	1.0D	41.0			QL=5 ST=2 TYP=3
	4995	SCMR	8 S	1334.0E	1335.0	1.0D	31.0			QL=5 ST=2 TYP=3
	2695	SVTO	8 S	1334.0E	1335.0	1.0D	25.0			QL=5 ST=2 TYP=3
	1415	SVTO	8 S	1334.0E	1335.0	1.0D	15.0			QL=5 ST=2 TYP=3
	15400	SVTO	8 S	1334.0E	1335.0	1.0D	45.0			QL=5 ST=2 TYP=3
	2695	SCMR	8 S	1334.0E	1335.0	1.0D	30.0			QL=5 ST=2 TYP=3
	245	SVTO	8 S	1334.0E	1335.0	1.0D	25.0			QL=1 ST=2 TYP=3
	8800	SVTO	8 S	1334.0E	1335.0	1.0D	35.0			QL=5 ST=2 TYP=3
	15400	SCMR	8 S	1334.0E	1335.0	1.0D	24.0			QL=5 ST=2 TYP=3
	610	SCMR	8 S	1334.0E	1335.0	1.0D	41.0			QL=5 ST=2 TYP=3
	8800	SCMR	8 S	1334.0E	1335.0	1.0D	32.0			QL=5 ST=2 TYP=3
	410	SVTO	8 S	1334.0E	1335.0	1.0D	40.0			QL=1 ST=2 TYP=3
	245	SCMR	8 S	1334.0E	1335.0	2.0D	40.0			QL=5 ST=2 TYP=3
	2695	SCMR	46 C	1753.0E	1802.0		120.0			QL=1 ST=3 TYP=5
	245	PALE	46 C	1912.0E	1918.0	7.0D	63.0			QL=5 ST=2 TYP=5
	3750	TYKW	5 S	2118.0	2121.0	12.0	2.0	1.0		
	1000	TYKW	45 C	2118.0	2122.9	9.0	4.0	1.0		
	2000	TYKW	45 C	2118.0	2123.4	11.0	14.0	2.0		
	2800	OTTA	46F C	2118.5	2123.4	6.5	14.5	2.9		
	245	PALE	46 C	2121.0E	2121.0	1.0D	66.0			QL=5 ST=2 TYP=5
	410	PALE	46 C	2121.0E	2121.0	1.0D	59.0			QL=5 ST=2 TYP=5
	15400	PALE	4 S/F	2123.0E	2123.0	296.0D	31.0			QL=1 ST=2 TYP=3
	2695	PALE	4 S/F	2123.0E	2123.0	5.0D	18.0			QL=5 ST=2 TYP=3
	500	HIRA	4 S/F	2142.0	2156.0	33.0	60.0			QL= ST= TYP=3
	1000	TYKW	45 C	2200.7	2200.8	0.3	2.5	.7		
	2000	TYKW	5 S	2307.0	2307.8	10.0	1.0	.3		
	1000	TYKW	45 C	2310.0	2329.6	60.0	13.0	.5		
	1000	TYKW		2310.0	2338.6		6.0			
	3750	TYKW	20 GRF	2320.0	2335.0	100.0	2.0	1.0		
	100	HIRA	27 RF	2324.0	2336.0U	76.0	1000.0D	290.0U		
	2000	TYKW	21 GRF	2325.0	2335.0	45.0	1.5	.7		
	9400	TYKW	20 GRF	2325.0	2336.0	60.0	4.0	2.0		
	200	HIRA	27 RF	2327.7	2338.9	71.0	41.0	15.0		MR
	2000	TYKW	5 S	2329.0	2329.6	2.0	1.5	.5		
	1000	TYKW		2352.0	0107.3		13.0			
	1000	TYKW		2352.0	0157.5		15.0			
	1000	TYKW		2352.0	0508.1		16.0			
	1000	TYKW		2352.0	0529.7		15.0			
21	410	SVTO	43 NS	0350.0	0905.0	831.0D	66.0			QL=1 ST=2 TYP=1
	245	SVTO	43 NS	0350.0	1704.0	831.0D	250.0			QL=1 ST=2 TYP=1
	204	IZMI	43 NS	0600.0		360.0	30.0			
	245	SCMR	44 NS	0939.0E	1457.0	861.0D	97.0			QL=5 ST=3 TYP=1
	245	PALE	43 NS	1627.0	1638.0	465.0D	35.0			QL=5 ST=3 TYP=1
	200	HIRA	44 NS	1927.0E	0500.0	840.0D	100.0	10.0		MR
	245	LEAR	43 NS	2309.0	0426.0	623.0D	130.0			QL=5 ST=2 TYP=1
	3750	TYKW	5 S	0118.0	0120.0	15.0	1.0	.5		
	100	HIRA	46 C	0119.5	0120.9	2.2	1000.0D	450.0D		
	9400	TYKW	5 S	0206.6	0207.0	1.0	9.0	3.0		
	3750	TYKW	20 GRF	0215.0	0228.0	35.0	1.5	.7		
	3750	TYKW	28 PRE	0303.0E	0313.0	10.0D	2.0	1.0D		
	2000	TYKW	28 PRE	0303.0	0313.0	10.0	1.0	.5		
	100	HIRA	46 C	0308.6	0325.7	20.0	1000.0D	184.0D		
	200	HIRA	46 C	0308.7	0317.0	107.0	470.0	35.0		0
	200	HIRA		0308.7	0346.3		290.0			WR
	2950	GORK	45 C	0309.0	0324.0	51.0	38.0			QL= ST= TYP=5
	2950	GORK	45 C	0309.5	0323.9	53.0	38.0			
	1000	TYKW	45 C	0311.0	0327.8	20.0	72.0	9.0		
	1415	SYDN	45 C	0311.0	0324.0	47.0	42.0			QL= ST= TYP=5
	500	HIRA	46 C	0312.0	0324.7	18.0	140.0	30.0		0
	950	GORK	46 C	0312.0	0325.0	102.0	84.0			QL= ST= TYP=5
	950	GORK	23 GRF	0312.3	0442.0	109.0	6.5			
	950	GORK	4 S/F	0312.8	0313.3	2.0	20.0			
	3750	TYKW	45 C	0313.0	0324.0	45.0	37.0	14.0		
	2000	TYKW	45 C	0313.0	0325.3	25.0	92.0	10.0		
	9400	TYKW	45 C	0313.0	0325.8	45.0	35.0	14.0		
	650	GORK	46 C	0313.0	0321.8	17.4	39.0			
	1415	LEAR	46 C	0313.0E	0325.0	12.0D	79.0			QL=3 ST=2 TYP=5
	650	GORK	46 C	0313.0	0328.0	47.0	91.0			QL= ST= TYP=5

30
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (10 ⁻²² W/m ² Hz)	Int Remarks
21	650	GORK		0313.0	0328.5		93.0		
	9100	GORK	22 GRF	0313.8	0325.1	43.5	32.0	10.5	
	9100	GORK	4 S/F	0314.0	0325.0	40.0	3.0		QL= ST= TYP=3
	2695	LEAR	46 C	0314.0E	0326.0	12.00	59.0		QL=5 ST=2 TYP=5
	245	LEAR	46 C	0315.0E	0317.0	15.00	260.0		QL=5 ST=3 TYP=5
	950	GORK	2 S/F	0316.8	0317.2	1.0	11.0		
	245	PALE	46 C	0317.0E	0317.0	1.00	230.0		QL=5 ST=2 TYP=5
	4995	PALE	45 C	0317.0E	0323.0	19.00	35.0		QL=5 ST=2 TYP=5
	4995	LEAR	4 S/F	0317.0E	0324.0	18.00	49.0		QL=5 ST=3 TYP=3
	2695	PALE	45 C	0317.0E	0325.0	11.00	38.0		QL=5 ST=2 TYP=5
	610	LEAR	45 C	0317.0E	0325.0	12.00	120.0		QL=5 ST=3 TYP=5
	1415	LEAR	45 C	0317.0E	0325.0	11.00	79.0		QL=3 ST=3 TYP=5
	500	HIRA	4 S/F	0317.0	0325.0	13.0	100.0		QL= ST= TYP=3
	8800	LEAR	45 C	0317.0E	0326.0	21.00	50.0		QL=5 ST=3 TYP=5
	8800	PALE	45 C	0318.0E	0327.0	27.00	45.0		QL=5 ST=2 TYP=5
	950	GORK	46 C	0318.3	0321.8	10.4	21.5		
	950	GORK		0318.3	0325.2		42.0		
	950	GORK		0318.3	0327.8		77.0		
	17000	NOBE	20 GRF	0318.8	0326.6	30.0	15.0	13.0	
	1415	PALE	46 C	0320.0E	0325.0	8.00	72.0		QL=5 ST=2 TYP=5
	610	PALE	46 C	0321.0E	0325.0	14.00	90.0		QL=5 ST=2 TYP=5
	15400	LEAR	46 C	0321.0E	0326.0	14.00	210.0		QL=5 ST=3 TYP=5
	410	LEAR	46 C	0321.0E	0326.0	9.00	160.0		QL=5 ST=3 TYP=5
	410	PALE	4 S/F	0323.0E	0324.0	1237.00	27.0		QL=5 ST=1 TYP=3
	1000	TYKW	30 PBI	0331.0		90.0	2.0	1.0	
	100	HIRA	27 RF	0331.0	0440.6	162.0	590.0	180.0	
	650	GORK	30 PBI	0333.4	0333.4	427.0	5.3		
	1000	TYKW	45 C	0334.0	0335.6	5.0	8.0	.5	
	2000	TYKW	30 PBI	0338.0		35.0	4.0	2.0	
	1000	TYKW	45 C	0339.5	0346.1	37.0	227.0	15.0	
	2000	TYKW	45 C	0341.0	0342.6	17.0	63.0	8.0	
	650	GORK	46 C	0341.8	0343.4	29.5	75.0		
	650	GORK		0341.8	0347.3		83.0		
	1415	PALE	46 C	0342.0E	0343.0	9.00	240.0		QL=5 ST=2 TYP=5
	1415	LEAR	46 C	0342.0E	0343.0	9.00	240.0		QL=3 ST=3 TYP=5
	950	GORK	46 C	0342.0	0343.3	9.1	141.0		
	2695	LEAR	4 S/F	0342.0E	0344.0	6.00	27.0		QL=5 ST=3 TYP=3
	500	HIRA	46 C	0342.0	0345.0	15.0	150.0	20.0	WL
	950	GORK		0342.0	0346.3		266.0		
	410	PALE	4 S/F	0342.0E	0347.0	9.00	25.0		QL=5 ST=2 TYP=3
	245	LEAR	46 C	0342.0E	0347.0	9.00	110.0		QL=5 ST=3 TYP=5
	2695	PALE	4 S/F	0343.0E	0344.0	4.00	18.0		QL=5 ST=2 TYP=3
	410	LEAR	4 S/F	0343.0E	0345.0	4.00	33.0		QL=5 ST=3 TYP=3
	610	LEAR	46 C	0343.0E	0347.0	8.00	58.0		QL=5 ST=3 TYP=5
	3750	TYKW	30 PBI	0358.0		120.0	3.0	1.5	
	9400	TYKW	29 PBI	0358.0		30.0	4.0	2.0	
	1000	TYKW	45 C	0420.0	0427.3	10.0	7.0	1.0	
	1000	TYKW	45 C	0430.0	0453.4	30.0	8.0	1.5	
	5900	KISV	42 SER	0449.0	0453.9	9.5	2.0		
	5900	KISV	4 S/F	0449.0	0454.0	10.0	2.0		QL= ST= TYP=3
	3750	TYKW	5 S	0452.0	0453.8	7.0	1.5	.5	
	2000	TYKW	5 S	0452.0	0454.0	5.0	1.0	.3	
	2000	TYKW	20 GRF	0508.0	0518.0	50.0	1.0	.5	
	3750	TYKW	20 GRF	0508.0	0518.0	45.0	1.5	.7	
	1000	TYKW	45 C	0510.0	0515.3	10.0	3.0	.3	
	1000	TYKW	45 C	0533.0	0550.7	40.0	2.5	.7	
	808	ONDR	1 S	0626.5	0626.5	1.5			
	5900	KISV	21 GRF	0704.0	0711.2	14.0	5.0		
	950	GORK	22 GRF	0707.9	0730.0	42.0	3.0		
	1000	TYKW		0711.0	0728.7		3.0		
	1000	TYKW		0711.0	0743.9		4.0		
	1000	TYKW	45 C	0711.5	0804.7	80.0	34.0	1.0	
	650	GORK	41 F	0731.2	0731.5	3.3	9.5		
	650	GORK		0731.2	0734.2		10.0		
	3750	TYKW	21 GRF	0740.0	0752.0	50.0	1.5	.7	
	5900	KISV	21 GRF	0744.5	0801.1	39.0	11.0		
	2950	GORK	21 GRF	0754.0	0803.0	16.7	2.5		
	9300	KISV	4 S/F	0759.0	0801.0	9.0	8.0		QL= ST= TYP=3
	9300	KISV	2 S/F	0759.5	0801.1	9.0	8.0		
	3750	TYKW	45 C	0800.0	0801.0	3.0	6.0	2.0	
	9400	TYKW	5 S	0800.0	0801.1	3.0	9.0	4.0	

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

31
May 87

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
21	2000	TYKW	45 C	0800.5	0801.8	3.5	22.0	1.5		
	2950	GORK	2 S/F	0801.5U	0801.7	.7U	5.0			
	9400	TYKW	29 PBI	0803.0		15.0	4.0	2.0		
	3750	TYKW	29 PBI	0803.0		15.0	1.5	.7		
	950	GORK	1 S	0815.0	0818.6	5.6	3.0			
	950	GORK	41 F	0830.0	0830.1	1.0	5.0			
	650	GORK	41 F	0830.0	0830.1	1.1	3.5			
	950	GORK		0830.0	0830.8		6.0			
	650	GORK		0830.0	0830.9		3.9			
	9100	GORK	26 FAL	0837.2	0839.0	7.0	10.0	3.5		
	200	HIRA	45 C	0842.9	0843.5	1.3	195.0	74.0		WR
	100	HIRA	45 C	0843.0	0843.7	1.6	800.0D	430.0D		
	2950	GORK	21 GRF	0843.8	0925.0	62.0	7.2			
	650	GORK	46 C	0843.9	0844.5	7.0	12.0			
	3000	POTS	3 S	0843.9	0844.5	1.1	8.0			
	950	GORK	4 S/F	0843.9	0845.1	2.0	15.0			
	650	GORK		0843.9	0849.4		4.0			
	3750	TYKW	5 S	0844.0	0844.4	1.5	8.0	3.0		
	2000	TYKW	45 C	0844.0	0844.4	1.5	5.0	1.0		
	9300	KISV	8 S	0844.0	0844.5	1.0	38.0			
	245	SVTO	46 C	0844.0E	0844.0		160.0			QL=1 ST=2 TYP=5
	4995	LEAR	8 S	0844.0E	0844.0	1.0D	25.0			QL=5 ST=2 TYP=3
	410	SVTO	46 C	0844.0E	0844.0		95.0			QL=1 ST=2 TYP=5
	610	LEAR	8 S	0844.0E	0844.0	2.0D	8.0			QL=5 ST=2 TYP=3
	410	LEAR	46 C	0844.0E	0844.0	2.0D	61.0			QL=5 ST=2 TYP=5
	2695	LEAR	8 S	0844.0E	0844.0	2.0D	10.0			QL=5 ST=2 TYP=3
	1415	LEAR	8 S	0844.0E	0844.0	2.0D	8.0			QL=3 ST=2 TYP=3
	4995	SVTO	8 S	0844.0E	0844.0	1.0D	31.0			QL=5 ST=2 TYP=3
	245	LEAR	46 C	0844.0E	0844.0	2.0D	150.0			QL=5 ST=2 TYP=5
	8800	LEAR	4 S/F	0844.0E	0844.0	7.0D	42.0			QL=5 ST=2 TYP=3
	8800	SVTO	4 S/F	0844.0E	0844.0		52.0			QL=5 ST=1 TYP=5
	204	IZMI	4 S/F	0844.0	0844.1	1.0	115.0	50.0		
	430	KRAK	41 F	0844.0	0844.2	3.5	47.0	3.0		
	9500	POTS	3 S	0844.0	0844.3	1.0	33.0U			
	930	BORD	46 C	0844.0	0844.4	1.6	15.0	4.0		
	1470	POTS	1 S	0844.0	0844.5	1.0	5.0			
	810	KRAK	1 S	0844.0	0844.5	1.0	7.0	2.0		
	5900	KISV	21 GRF	0844.0	0844.5	15.0	14.0D			
	5900	KISV	4 S/F	0844.0	0845.0	17.0	14.0			QL= ST= TYP=3
	536	ONDR	40 F	0844.0	0846.0	38.0	14.0			
	9100	GORK	2 S/F	0844.1	0844.4	.8	32.0	10.5		
	2950	GORK	3 S	0844.2	0844.3	.8	7.2			
	808	ONDR	1 S	0844.5	0845.0	1.0				
	3100	CRIM	1 S	0900.8	0901.9	2.5	5.0	2.0		
	3100	CRIM	4 S/F	0901.0	0902.0	3.0	5.0			QL= ST= TYP=3
	3000	POTS	22 GRF	0905.0U	0922.5	43.0U	10.0			
	1470	POTS	22 GRF	0905.0	0924.2	45.0	3.0			
	5900	KISV	46 C	0907.4	0910.5	25.0	24.0			
	9500	POTS	21 GRF	0907.5	0925.0	48.0	14.0U			
	9300	KISV	4 S/F	0908.0	0910.0	60.0	19.0			QL= ST= TYP=3
	9100	GORK	21 GRF	0908.2	0922.2	296.0	9.6	4.7		
	9300	KISV	21 GRF	0908.5	0910.3	40.0	19.0			
	3000	POTS	4 S/F	0909.0	0910.5	2.0	15.0			
	3750	TYKW	45 C	0909.0	0910.9	12.0D	23.0	10.0D		
	2000	TYKW	45 C	0909.0	0912.3	6.0D	12.0	2.0D		
	1415	SVTO	8 S	0909.0	0910.0	1.0	28.0			QL=5 ST=2 TYP=3
	4995	LEAR	8 S	0909.0	0910.0	2.0	39.0			QL=5 ST=2 TYP=3
	950	GORK	4 S/F	0909.0	0910.0	2.8	10.0			
	2695	LEAR	8 S	0909.0	0910.0	1.0	19.0			QL=5 ST=2 TYP=3
	8800	SVTO	8 S	0909.0	0910.0	1.0	23.0			QL=5 ST=2 TYP=3
	4995	SVTO	4 S/F	0909.0E	0910.0	3.0D	31.0			QL=5 ST=2 TYP=3
	2695	SVTO	8 S	0909.0	0910.0	1.0	25.0			QL=5 ST=2 TYP=3
	9500	POTS	4 S/F	0909.0	0910.2	2.0	22.0U			
	1470	POTS	4 S/F	0909.0	0910.4	4.5	21.0			
	2950	GORK	45 C	0909.0	0910.4	4.6	15.2			
	2950	GORK		0909.0	0912.4		4.3			
	930	BORD	40 F	0909.0	0927.1	59.0	25.0	3.0		
	808	ONDR	40 F	0909.0	0927.5	21.0				
	650	GORK	2 S/F	0909.1	0910.2	2.9	7.8			
	9100	GORK	2 S/F	0909.2	0910.2	1.6	14.0	7.0		
	1415	LEAR	8 S	0910.0E	0910.0	2.0D	26.0			QL=3 ST=2 TYP=3

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987									
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int Remarks
21	15400	SVTO	4 S/F	0910.0E	0910.0		25.0		QL=5 ST=1 TYP=3
	536	ONDR	46 C	0918.0	0920.0	13.0	155.0		
	810	KRAK	41 F	0918.2	0919.0	10.0	27.0	5.0	
	950	GORK	22 GRF	0918.3	0951.0	61.0	7.0		
	650	GORK	46 C	0918.8	0920.8	12.0	8.9		
	650	GORK	46 C	0918.8	0924.7	12.0	70.0		
	610	LEAR	46 C	0919.0E	0919.0	6.0D	76.0		QL=5 ST=2 TYP=5
	2950	GORK	4 S/F	0921.3	0922.4	3.2	3.6	1.5	
	3100	CRIM	1 S	0944.0	0944.4	1.0	7.0	2.0	
	3100	CRIM	29 PBI	0945.0	0945.0	6.0	2.0	1.0	
	3100	CRIM	1 S	1006.0	1010.5	5.0	15.0	5.0	
	3100	CRIM	29 PBI	1011.0	1011.0	38.0	5.0	2.0	
	3100	CRIM	1 S	1012.0	1012.5	1.0	3.0	1.0	
	3100	CRIM	1 S	1014.9	1015.0	2.0	3.0	1.0	
	5900	KISV	21 GRF	1018.5	1019.5	31.5	4.0		
	5900	KISV		1018.5	1030.5		5.0		
	3100	CRIM	1 S	1019.0	1022.5	9.0	4.0	1.0	
	2950	GORK	20 GRF	1107.8	1117.5	53.0D	4.3		
	5900	KISV	21 GRF	1108.5	1117.6	21.0	2.0		
	9300	KISV		1135.0	1135.7		6.0		
	9300	KISV	45 C	1135.0	1136.6	6.0	7.0		
	5900	KISV		1135.1	1135.6		6.0		
	5900	KISV	45 C	1135.1	1136.8	6.0	7.0		
	1470	POTS	45 C	1152.0	1205.5	17.0	62.0		
	930	BORD	46 C	1154.0	1205.5	18.0	23.0	5.0	
	950	GORK	1 S	1154.6	1155.7	2.2	4.0		
	808	ONDR	40 F	1200.0		10.0			
	1415	SVTO	46 C	1204.0E	1205.0	4.0D	73.0		QL=5 ST=2 TYP=5
	410	SVTO	8 S	1205.0E	1205.0	1.0D	21.0		QL=1 ST=2 TYP=3
	3100	CRIM	20 GRF	1206.0	1218.0	31.0	5.0	2.0	
	536	ONDR	40 F	1250.0	1255.0	20.0	16.0		
	1470	POTS	23 GRF	1413.0	1423.0	17.0	6.0		
	245	PALE	46 C	1704.0E	1704.0		130.0		QL=5 ST=2 TYP=5
	930	BORD	40 F	1705.0	1750.7	82.0D	23.0	3.0	
	2800	OTTA	45 C	1752.0	1838.8	128.0	14.2	4.3	
	2695	SGMR	46 C	2003.0E	2004.0	11.0D	110.0		QL=1 ST=2 TYP=5
	1000	TYKW	45 C	2057.0E	2107.4	40.0D	20.0	3.0D	
	200	HIRA	46 C	2100.0	2100.8	8.6	30.0	8.0	MR
	2000	TYKW	5 S	2100.5	2101.3	3.5	6.0	1.5	
	1000	TYKW	45 C	2138.0	2139.9	10.0	2.0	.5	
	1000	TYKW	45 C	2200.0	2212.8	107.0	107.0	11.0	
	1000	TYKW		2200.0	2240.2		47.0		
	1000	TYKW		2200.0	2320.0		15.0		
	1000	TYKW		2200.0	2338.7		21.0		
	2000	TYKW	45 C	2210.0	2213.2	35.0	19.0	3.0	
	200	HIRA	46 C	2210.5	2212.8	91.0	1900.0	21.0	MR
	9400	TYKW	5 S	2212.0	2213.2	2.0	15.0	6.0	
	3750	TYKW	5 S	2212.0	2213.2	2.0	12.0	3.5	
	1415	SYDN	4 S/F	2212.0	2213.0	53.0	48.0		QL= ST= TYP=4
	410	SGMR	47 GB	2212.0E	2213.0	2.0D	140.0		QL=5 ST=2 TYP=5
	2695	SGMR	8 S	2212.0E	2213.0	1.0D	22.0		QL=5 ST=2 TYP=3
	4995	SGMR	8 S	2212.0E	2213.0	1.0D	22.0		QL=5 ST=2 TYP=3
	610	SGMR	47 GB	2212.0E	2213.0	2.0D	130.0		QL=5 ST=2 TYP=5
	500	HIRA	7 C	2212.1	2215.4	40.0	200.0D	15.0	
	100	HIRA	46 C	2212.4	2213.0	2.3	960.0	440.0	
	2800	OTTA	42 SER	2212.7	2213.2	47.0	16.4	3.3	
	245	SGMR	49 GB	2213.0E	2213.0		610.0		QL=5 ST=2 TYP=6
	8800	SGMR	8 S	2213.0E	2213.0	1.0D	39.0		QL=5 ST=2 TYP=3
	15400	SGMR	8 S	2213.0E	2213.0	1.0D	13.0		QL=5 ST=2 TYP=3
	9400	TYKW	30 PBI	2214.0	2214.0	60.0	4.0	2.0	
	3750	TYKW	30 PBI	2214.0		60.0	2.0	1.0	
	3750	TYKW	21 GRF	2230.0	2237.0	40.0	2.0	1.0	
	610	PALE	45 C	2231.0E	2231.0		14.0		QL=5 ST=2 TYP=5
	1415	PALE	45 C	2231.0E	2232.0	1.0D	22.0		QL=5 ST=2 TYP=5
	4995	PALE	4 S/F	2232.0E	2232.0		13.0		QL=5 ST=2 TYP=3
	100	HIRA	41 F	2234.8	2238.0	69.0	350.0		
	9400	TYKW	5 S	2236.0	2240.1	10.0	4.0	1.5	
	3750	TYKW	5 S	2238.0	2240.2	10.0	3.0	1.0	
	2000	TYKW	29 PBI	2245.0		40.0	1.5	.7	
	1000	TYKW		2329.0	0743.9		4.0		
	1000	TYKW		2329.0	2320.0		15.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
21	1000	TYKW		2329.0	2338.7		21.0			
	3750	TYKW	28 PRE	2334.0	2334.7	6.0	1.5	1.0		
	100	HIRA	42 SER	2335.9	2345.5	22.0	1000.0D			
	200	HIRA	42 SER	2339.6	2339.9	6.9	1070.0			0
	3750	TYKW	5 S	2340.0	2340.6	2.0	7.0	2.0		
	3750	TYKW	29 PBI	2342.0		25.0	1.5	.7		
	245	PALE	46 C	2345.0E	2345.0	1.0D	54.0			QL=5 ST=2 TYP=5
	245	LEAR	46 C	2345.0E	2345.0	1.0D	75.0			QL=5 ST=2 TYP=5
	500	HIRA	8 S	2345.1	2345.5	.6	20.0	15.0		WR
	410	LEAR	8 S	2346.0E	2346.0	2.0D	19.0			QL=5 ST=2 TYP=3
	1000	TYKW	45 C	2352.0	2354.3	12.0	2.0	.5D		
22	245	SVTO	43 NS	0349.0	1435.0	833.0D	160.0			QL=1 ST=2 TYP=1
	33	UPIC	43 NS	0528.0		592.8U				
	260	ONDR	44 NS	0553.0E	0808.0	492.0D	65.0			
	204	IZMI	43 NS	0600.0		360.0	30.0			
	245	SGMR	44 NS	0938.0E	1739.0	862.0D	92.0			QL=5 ST=3 TYP=1
	245	PALE	43 NS	1627.0	1638.0	465.0D	35.0			QL=5 ST=1 TYP=1
	200	HIRA	44 NS	1926.0E	2353.0	840.0D	20.0	10.0		WR
	245	LEAR	43 NS	2309.0	0233.0	622.0D	63.0			QL=5 ST=2 TYP=1
	410	LEAR	43 NS	2309.0	2315.0	622.0D	11.0			QL=5 ST=2 TYP=1
	3750	TYKW	21 GRF	0014.0	0020.0	60.0	2.0	1.0		
	2000	TYKW	20 GRF	0044.0	0053.0	40.0	1.0	.5		
	3750	TYKW	5 S	0045.0	0055.0	25.0	1.0	.5		
	1000	TYKW	45 C	0045.0	0058.2	14.0	1.0	.3		
	3750	TYKW	21 GRF	0153.0	0227.0	140.0	3.0	1.5		
	2000	TYKW	21 GRF	0200.0	0214.0	160.0	1.5	.7		
	1000	TYKW	5 S	0202.5	0203.8	4.0	2.0	.5		
	3750	TYKW	45 C	0208.0	0217.2	15.0	4.0	1.5		
	9400	TYKW	20 GRF	0209.0	0219.0	50.0U	4.0	2.0		RAIN
	1000	TYKW	45 C	0227.5	0228.6	6.5	2.0	.5		
	1000	TYKW	45 C	0236.0	0237.1	5.0	2.0	.7		
	650	GORK	21 GRF	0248.0E	0254.2	48.0D	5.8			
	950	GORK	23 GRF	0250.0E	0449.5	255.0D	3.8			
	2950	GORK	22 GRF	0251.0E	0310.0	52.0D	7.5			
	3750	TYKW	21 GRF	0303.0E	0305.0U	60.0D	2.0	1.0D		
	2000	TYKW	5 S	0303.0	0309.7	9.0	5.0	1.5D		
	9400	TYKW	20 GRF	0303.0U	0318.0	70.0U	4.0	2.0		
	3750	TYKW	5 S	0307.0	0309.7	4.0	6.0	2.5		
	3750	TYKW	29 PBI	0311.0		10.0	2.0	1.0		
	2000	TYKW	29 PBI	0312.0		25.0	2.0	1.0		
	200	HIRA	46 C	0312.5	0313.8	4.0	100.0	45.0		MR
	650	GORK	2 S/F	0324.1	0325.6	2.3	3.6			
	500	HIRA	45 C	0324.4	0324.6	2.5	55.0	17.0		MR
	950	GORK	6 S	0324.8	0325.7	2.4	2.9	1.4		
	650	GORK	22 GRF	0344.2	0356.0	56.1	7.5			
	1000	TYKW	45 C	0348.0	0351.5	4.5	2.0	.7		
	5900	KISV	22 GRF	0353.0E	0353.0	20.0D	5.0			
	1000	TYKW	45 C	0353.5	0402.8	29.0	10.0	2.0		
	950	GORK	4 S/F	0353.8	0400.3U	11.0	11.5			
	2000	TYKW	5 S	0402.0	0402.9	2.0	2.0	.3		
	9300	KISV	42 SER	0402.0	0410.7	13.0	5.0			
	5900	KISV		0415.0	0428.3		8.0			
	5900	KISV	46 C	0415.0	0447.2	46.0	10.0			
	5900	KISV	4 S/F	0415.0	0447.0	46.0	9.0			QL= ST= TYP=3
	9300	KISV	21 GRF	0421.0	0447.2	44.0	15.0			
	1000	TYKW	45 C	0426.0	0428.9	13.0	1.5	.3		
	245	SVTO	46 C	0427.0E	0427.0	2.0D	79.0			QL=1 ST=3 TYP=5
	650	GORK	23 GRF	0442.9		87.2		8.0		
	1000	TYKW	45 C	0443.0	0443.4	5.0	1.0	.3		
	9400	TYKW	5 S	0447.0	0447.3	1.0	6.0	2.0		
	245	SVTO	46 C	0451.0E	0452.0	1.0D	220.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0452.0E	0452.0	1.0D	220.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	0453.0	0500.2	25.0	2.0	.5		
	245	SVTO	46 C	0506.0E	0506.0	1.0D	110.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0507.0E	0507.0		73.0			QL=5 ST=2 TYP=5
	2950	GORK	22 GRF	0514.6	0603.0	186.0	4.5			
	1000	TYKW	45 C	0523.0	0532.7	21.0	2.0	.5		
	245	LEAR	46 C	0530.0E	0530.0		250.0			QL=5 ST=2 TYP=5
	650	GORK	2 S/F	0530.0	0530.2	.3	6.0			
	245	SVTO	46 C	0535.0E	0536.0	1.0D	170.0			QL=1 ST=2 TYP=5

34
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
22	245	LEAR	46 C	0535.0E	0536.0	2.0D	140.0			QL=5 ST=2 TYP=5
	2000	TYKW	20 GRF	0550.0	0603.0	40.0	1.5	.7		
	200	HIRA	46 C	0553.6	0556.1	9.2	430.0	84.0		WR
	5900	KISV	23 GRF	0554.0	0602.2	70.0	7.0			
	234	POTS	41 F	0554.5	0601.8	9.1	125.0			
	9300	KISV	20 GRF	0555.0	0558.0	17.0	5.0			
	3750	TYKW	21 GRF	0555.0	0610.0	150.0	4.0	2.0		
	500	HIRA	45 C	0555.2	0557.2	3.0	70.0	10.0		WR
	30	POTS	41 F	0555.3	0600.8	8.6	36000.0			
	1000	TYKW	45 C	0556.0	0557.9	2.5	8.0	1.5		
	245	LEAR	46 C	0556.0E	0557.0	2.0D	170.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0556.0E	0557.0	2.0D	200.0			QL=1 ST=2 TYP=5
	650	GORK	4 S/F	0556.3	0557.8	7.6	20.0			
	950	GORK	4 S/F	0556.4	0557.9	1.8	10.5			
	410	LEAR	8 S	0557.0E	0557.0	1.0D	37.0			QL=5 ST=2 TYP=3
	410	SVTO	46 C	0557.0E	0557.0	1.0D	69.0			QL=1 ST=2 TYP=5
	610	LEAR	8 S	0557.0E	0558.0	1.0D	17.0			QL=5 ST=2 TYP=3
	1000	TYKW	45 C	0559.0	0603.5	8.0	2.0	.5D		
	950	GORK	2 S/F	0600.0	0601.8	3.9	8.0			
	245	LEAR	47 CB	0600.0E	0602.0	2.0D	170.0			QL=5 ST=2 TYP=5
	200	HIRA	27 RF	0605.9	0619.0	63.0	56.0	14.0		MR
	1000	TYKW		0610.0	0618.7		3.0			
	1000	TYKW	45 C	0610.0	0638.4	60.0	9.0	1.5		
	1000	TYKW		0610.0	0701.5		7.0			
	650	GORK	23 GRF	0613.9		28.8	7.6			
	3750	TYKW	20 GRF	0630.0	0705.0	90.0	2.0	1.0		
	950	GORK	40 F	0633.1	0640.0	12.1	7.0			
	2000	TYKW	20 GRF	0637.0	0725.0	120.0	1.5	.7		
	1470	POTS	2 S/F	0637.0	0638.5	3.0	3.0			
	245	LEAR	46 C	0649.0E	0649.0	1.0D	82.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0649.0E	0649.0		110.0			QL=1 ST=2 TYP=5
	950	GORK	6 S	0653.1	0653.3	1.2	3.5	1.5		
	3100	CRIM	20 GRF	0655.5	0703.0	95.0	3.0	1.0		
	1000	TYKW	5 S	0717.0	0717.5	3.0	1.0	.3		
	5900	KISV	22 GRF	0717.0	0728.4	108.0	5.0			
	1000	TYKW	5 S	0727.0	0727.4	1.0	2.0	.5		
	245	SVTO	46 C	0730.0E	0730.0		87.0			QL=1 ST=3 TYP=5
	200	HIRA	41 F	0734.8	0800.0	33.0	310.0			
	204	IZMI	41 F	0737.4	0738.5	35.1	650.0			
	1000	TYKW	45 C	0742.0	0755.2	15.0	4.0	1.0		
	245	SVTO	46 C	0742.0E	0743.0	2.0D	320.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0742.0E	0743.0	2.0D	280.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0754.0E	0757.0	3.0D	130.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0755.0E	0757.0	2.0D	130.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	0759.0	0800.7	8.0	1.5	.5		
	950	GORK	2 S/F	0813.2	0813.3	.6	8.6			
	650	GORK	4 S/F	0813.2	0813.5	.6	21.0			
	245	SVTO	46 C	0817.0E	0818.0	2.0D	140.0			QL=1 ST=2 TYP=5
	430	KRAK	42 SER	0821.5E	0823.7	12.5D	58.0			
	808	ONDR	1 S	0822.0	0822.0	1.0				
	650	GORK	40 F	0842.6		3.1	8.0			
	650	GORK	23 GRF	0848.2		192.0D	5.0			
	650	GORK	4 S/F	0903.7	0904.3	.9	28.0			
	950	GORK	2 S/F	0904.2	0904.3	.4	14.0			
	5900	KISV	22 GRF	0905.0	1011.0	102.0	6.0			
	5900	KISV	4 S/F	0905.0	1011.0	102.0	6.0			QL= ST= TYP=3
	950	GORK	21 GRF	0956.8	1008.6	18.5	5.3	2.5		
	536	ONDR	42 SER	0959.5	1000.0	2.0	8.0			
	808	ONDR	46 C	1004.5	1006.0	7.0				
	950	GORK	4 S/F	1004.8	1006.0	2.3	9.5			
	810	KRAK	41 F	1006.5E	1006.8	6.0D	8.0	3.0		
	810	KRAK		1006.5E	1007.2					
	5900	KISV	1 S	1123.5	1128.9	7.5	2.0			
	3000	POTS	20 GRF	1125.0	1247.0	135.0	10.0			
	1470	POTS	20 GRF	1130.0	1221.0	115.0	2.0			
	9500	POTS	21 GRF	1152.0	1237.5	128.0	33.0D			
	5900	KISV	1 S	1152.9	1153.4	1.5	2.0			
	5900	KISV	28 PRE	1203.6	1206.6	13.0	5.0			
	9300	KISV	4 S/F	1223.0	1225.0	5.0	13.0			QL= ST= TYP=3
	9300	KISV	2 S/F	1223.3	1224.5	4.5	13.0			
	8800	S/TO	20 GRF	1232.0E	1237.0	23.0D	36.0			QL=5 ST=2 TYP=2

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
22	9300	KISV		1232.3	1234.2		16.0			
	9300	KISV	45 C	1232.3	1237.6	27.0	32.0			
	4995	SVTO	20 GRF	1235.0E	1239.0	18.0D	19.0			QL=5 ST=2 TYP=2
	9500	POTS	8 S	1326.4	1326.5	.9	24.0U			
	9500	POTS	3 S	1334.4	1335.0	1.6	22.0U			
	930	BORD	40 F	1512.0	1658.8	160.0	33.0	3.0		
	410	SCMR	8 S	1853.0E	1854.0	1.0D	15.0			QL=5 ST=3 TYP=3
	1000	TYKW	45 C	2057.0E	2058.2	11.0D	19.0	4.0D		
	1000	TYKW	45 C	2115.0	2120.9	11.0	13.0	5.0		
	100	HIRA	46 C	2128.4	2129.6U	2.3	1000.0D	380.0D		
	2000	TYKW	45 C	2129.0	2130.2	2.0	11.0	1.5		
	200	HIRA	45 C	2129.0	2129.7	1.5	2500.0	800.0		0
	3750	TYKW	5 S	2129.5	2130.4	2.5U	4.0	1.5		RAIN
	1000	TYKW	45 C	2129.8	2130.1	1.5	49.0	3.0		
	2800	OTTA	1 S	2129.8	2130.3	1.2	9.6	3.9		
	245	SCMR	46 C	2130.0E	2130.0	3.0D	160.0			QL=5 ST=2 TYP=5
	410	SCMR	4 S/F	2130.0E	2130.0	3.0D	26.0			QL=5 ST=2 TYP=3
	2000	TYKW	29 PBI	2131.0		50.0	1.0	.5		
	610	SCMR	8 S	2131.0E	2131.0	2.0D	3.0			QL=5 ST=2 TYP=3
	2695	SCMR	8 S	2131.0E	2132.0	2.0D	6.0			QL=5 ST=2 TYP=3
	1000	TYKW	45 C	2132.0	2135.8	48.0	13.0	3.0		
	1000	TYKW		2132.0	2206.3		9.0			
	1000	TYKW	45 C	2221.0	2226.8	16.0	3.0	.7		
	1000	TYKW	45 C	2241.0	2243.1	4.0	6.0	1.5		
	1000	TYKW	45 C	2246.0	2247.8	4.0	2.0	.5		
	1000	TYKW	45 C	2258.0	2321.5	35.0	3.0	1.0		
	1000	TYKW	45 C	2343.0	0003.5	60.0	13.0	1.5D		
	1000	TYKW		2343.0	0029.2		5.0			
23	204	IZMI	43 NS	0600.0		360.0	18.0			
	260	ONDR	44 NS	0628.0E		455.0D	6.0			
	245	SCMR	43 NS	0938.0	2337.0	844.0D	290.0			QL=5 ST=2 TYP=1
	200	HIRA	44 NS	1926.0E		840.0D		20.0U		
	245	LEAR	43 NS	2310.0	2326.0	621.0D	90.0			QL=5 ST=2 TYP=1
	1000	TYKW	45 C	0045.0	0050.6	12.0	2.5	.5		
	1000	TYKW	45 C	0058.0	0101.2	7.0	2.0	.5		
	1000	TYKW	45 C	0112.0	0121.3	14.0	3.5	1.0		
	2000	TYKW	45 C	0120.5	0120.9	1.5	2.0	.5		
	1000	TYKW	45 C	0129.0	0142.2	135.0	111.0	3.5		
	1000	TYKW		0129.0	0204.3		11.0			
	1000	TYKW		0129.0	0225.4		8.0			
	1000	TYKW		0129.0	0248.2		21.0			
	9400	TYKW	20 GRF	0130.0U	0145.0U	60.0U	4.0	2.0U		RAIN
	2000	TYKW	45 C	0133.0	0138.2	15.0	58.0	2.5		
	3750	TYKW	5 S	0133.0	0140.0	15.0	4.0	2.0		
	500	HIRA	27 RF	0133.8	0247.8	130.0	48.0	5.0		WR
	2000	TYKW	30 PBI	0148.0		35.0	1.0	.5		
	3750	TYKW	29 PBI	0148.0		120.0	2.0	1.0		
	2000	TYKW	45 C	0154.0	0154.7	2.0	5.0	1.0		
	2000	TYKW	45 C	0200.0	0200.9	1.5	2.0	.7		
	2000	TYKW	45 C	0213.0	0213.8	2.0	1.5	.5		
	2000	TYKW	5 S	0224.0	0225.2	4.0	1.0	.3		
	650	GORK	22 GRF	0243.8	0248.2	58.8	24.0			
	950	GORK	21 GRF	0244.0E	0257.5	193.0D	8.0			
	2000	TYKW	45 C	0246.0	0247.3	6.0D	1.5	.5D		
	950	GORK	46 C	0246.5	0248.0	11.0	13.0			
	950	GORK		0246.5	0250.0		13.0			
	1000	TYKW	5 S	0401.0	0402.4	4.0	2.0	.5		
	3750	TYKW	21 GRF	0406.0	0430.0	70.0	1.5	.7		
	1000	TYKW	45 C	0408.0	0435.4	44.0	14.0	2.5		
	200	HIRA	8 S	0408.8	0409.0	.9	350.0			0
	3750	TYKW	5 S	0409.0	0409.9	2.0	1.5	.5		
	5900	KISV	4 S/F	0409.0	0410.0	6.0	3.0			QL= ST= TYP=3
	5900	KISV	40 F	0409.3	0410.0	6.0	3.0			
	650	GORK	22 GRF	0427.3	0433.3	24.0	6.6			
	950	GORK	2 S/F	0432.1	0435.4	5.4	8.0			
	2000	TYKW	45 C	0438.0	0438.5	7.0	1.5	.3		
	5900	KISV	2 S/F	0449.1	0449.3	2.5	3.0			
	1000	TYKW	45 C	0455.0	0505.0	16.0	1.5	.3		
	1000	TYKW	45 C	0513.0	0516.3	7.0	2.5	.7		
	650	GORK	8 S	0525.1	0525.3	.4	2.3			

36
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
23	1000	TYKW	5 S	0540.0	0540.4	6.0	1.0	.3		
	2000	TYKW	5 S	0541.8	0542.0	.5	2.0	.5		
	1000	TYKW	45 C	0549.0	0551.1	9.0	2.0	.7		
	650	GORK	22 GRF	0626.7	0705.2	75.3	5.0			
	9400	TYKW	20 GRF	0640.0	0700.0	70.00	4.0	2.0		
	3750	TYKW	20 GRF	0645.0	0700.0	90.0	1.5	.7		
	1000	TYKW	45 C	0651.0	0702.0	35.0	10.0	3.0		
	930	BORD	40 F	0654.0	0803.0	173.0	26.0	4.0		
	950	GORK	21 GRF	0654.4	0817.0	167.0	9.8			
	2000	TYKW	45 C	0654.5	0655.2	2.5	4.5	.5		
	2000	TYKW	29 PBI	0657.0		20.0	1.0	.5		
	3000	POTS	20 GRF	0719.0	0815.1	86.0	3.0			
	1000	TYKW	45 C	0726.0	0727.6	4.0	3.0	.7		
	1000	TYKW	45 C	0726.0	0727.6	4.0	3.0	0.7		
	1000	TYKW		0731.0	0754.9		21.0			
	1000	TYKW		0731.0	0814.9		21.0			
	1470	POTS	23 GRF	0737.0	0822.0	118.0	6.0			
	950	GORK	46 C	0754.0	0754.9	2.8	12.0			
	950	GORK		0754.0	0756.0		7.0			
	536	ONDR	40 F	0804.0	0813.5	42.0	15.0			
	1470	POTS	3 S	0806.6	0807.5	1.6	12.0			
	2000	TYKW	5 S	0807.0	0807.5	2.0	3.0	.5		
	2000	TYKW	45 C	0813.0	0814.5	5.0	4.0	.7		
	1470	POTS	4 S/F	0813.0	0814.5	3.4	11.0			
	950	GORK	4 S/F	0813.0	0814.9	4.0	14.0			
	810	KRAK	1 S	0814.0	0815.2	2.0	5.0	2.0		
	950	GORK	46 C	0820.2	0821.3	6.6	8.0			
	950	GORK		0820.2	0824.9		6.0			
	650	GORK	8 S	0821.8	0821.9	.2	12.0			
	9300	KISV	40 F	0822.1	0826.0	5.0	6.0			
	5900	KISV	1 S	0830.8	0833.2	4.0	3.0			
	650	GORK	2 S/F	0919.6	0920.2	.9	6.0			
	930	BORD	40 F	1106.0	1116.2	48.0	11.0	5.0		
	1470	POTS	22 GRF	1110.7	1111.5	45.0	2.0			
	5900	KISV	4 S/F	1125.2	1143.5	36.0	22.0			
	3000	POTS	20 GRF	1132.0	1143.5	77.0	6.0			
	9500	POTS	20 GRF	1135.0	1143.7	70.0	10.00			
	9300	KISV	21 GRF	1139.2	1140.9	16.0	10.0			
	2800	OTTA	20 GRF	1141.0	1143.2	19.0	4.5	2.3		
	536	ONDR	4 S/F	1352.0	1353.0	1.0	12.0			
	930	BORD	40 F	1537.0	1551.5	62.0	48.3			
	930	BORD	40 F	1723.0	1745.8	76.00	115.0	8.0		
	2700	PENT	1 S	1901.0	1902.9	9.0	8.6	4.3		
	1000	TYKW	5 S	2106.9	2107.2	.5	3.0	.7		
	1000	TYKW	45 C	2113.0	2114.1	4.0	5.0	.7		
	1000	TYKW	45 C	2148.0	2148.8	2.5	2.0	.5		
	1000	TYKW	45 C	2254.5	2257.8	8.5	2.0	.7		
	2700	PENT	40 F	2303.0	2447.8	165.00	18.8			
	1000	TYKW	45 C	2311.0	2312.8	4.0	4.0	1.5		
	1000	TYKW	45 C	2318.0	2331.2	19.0	19.0	2.5		
	500	HIRA	45 C	2324.6	2326.0	3.0	23.0	5.0		
	410	SGMR	46 C	2326.0E	2332.0	16.00	180.0			0
	610	SGMR	46 C	2326.0E	2332.0	16.00	58.0			QL=3 ST=2 TYP=5
	245	SGMR	46 C	2326.0E	2337.0	16.00	290.0			QL=3 ST=2 TYP=5
	3750	TYKW	5 S	2330.0	2334.0	20.0	1.5	.7		
	245	LEAR	46 C	2330.0E	2331.0	3.00	220.0			QL=5 ST=2 TYP=5
	500	HIRA	45 C	2330.1	2331.5	2.5	38.0	10.0		WR
	2000	TYKW	45 C	2331.5	2332.2	4.5	3.0	.5		
	610	LEAR	8 S	2332.0E	2332.0	1.00	44.0			QL=5 ST=2 TYP=3
	1000	TYKW		2343.0	0225.4		8.0			
	1000	TYKW		2343.0	0248.2		21.0			
	1000	TYKW		2343.0	0814.9		21.0			
	1000	TYKW	45 C	2346.0	2357.5	25.0	36.0	1.5		
24	650	GORK	43 NS	0405.2		218.8		2.0		
	204	IZMI	43 NS	0600.0		360.0	47.0			
	536	ONDR	44 NS	0606.0E		486.00	29.0			
	260	ONDR	44 NS	0606.0E	1242.0	486.00	100.0			
	650	GORK	44 NS	0754.0E		111.00		5.0		
	430	KRAK	43 NS	0758.5	1021.0	309.00	200.0	50.0		
	234	OTS	43 NS	0844.0	1031.0	358.00	220.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (10 ⁻²² W/m ² Hz)		
24	410	SGMR	43 NS	0937.0	1013.0	459.0D	83.0			QL=5 ST=2 TYP=1
	245	SGMR	43 NS	0937.0	1921.0	846.0	870.0			QL=5 ST=2 TYP=1
	410	SVTO	44 NS	1100.0E	1104.0	403.0D	58.0			QL=1 ST=2 TYP=1
	245	SVTO	44 NS	1100.0E	1104.0	403.0D	120.0			QL=1 ST=2 TYP=1
	810	KRAK	43 NS	1238.0	1303.5	29.0D	144.0	39.0		
	100	HIRA	44 NS	1926.0E	2146.0	840.0D	40.0	10.0		
	200	HIRA	44 NS	1926.0E	2313.0	840.0D	35.0	10.0		MR
	245	LEAR	43 NS	2310.0	0000.0	621.0D	81.0			QL=5 ST=2 TYP=1
	3750	TYKW	28 PRE	0004.0	0009.5	5.5	1.0	.5		
	500	HIRA	45 C	0007.2	0009.6	3.0	5.0	2.0		WR
	2000	TYKW	45 C	0008.0E	0009.9	3.0D	2.5	.5D		
	245	LEAR	47 GB	0009.0E	0010.0	1.0D	72.0			QL=5 ST=2 TYP=5
	9400	TYKW	45 C	0009.5	0009.9	2.5	13.0	3.0		
	3750	TYKW	45 C	0009.5	0009.9	1.5	14.0	5.0		
	3750	TYKW	30 PBI	0011.0		30.0	2.0	1.0		
	3750	TYKW	5 S	0032.0	0032.4	1.5	4.0	1.0		
	1000	TYKW	45 C	0038.5	0046.8	13.0	17.0	.7		
	9400	TYKW	5 S	0039.0	0039.5	2.0	4.0	1.5		
	500	HIRA	45 C	0043.4	0045.7	5.0	28.0	10.0		WR
	3750	TYKW	28 PRE	0044.0	0047.0	3.0	2.0	1.0		
	2000	TYKW	45 C	0045.0	0047.8	5.0	11.0	2.0		
	245	LEAR	47 GB	0045.0E	0047.0	3.0D	54.0			QL=5 ST=2 TYP=5
	3750	TYKW	45 C	0047.0	0047.8	3.0	16.0	4.0		
	9400	TYKW	45 C	0047.0	0047.8	1.5	13.0	1.5		
	3750	TYKW	30 PBI	0050.0		65.0	2.0	1.0		
	2000	TYKW	30 PBI	0050.0		55.0	1.0	.5		
	1000	TYKW	45 C	0052.5	0053.7	6.0	2.5	.5		
	3750	TYKW	5 S	0101.0	0106.4	15.0	3.0	1.0		
	2000	TYKW	5 S	0101.0	0106.5	15.0	1.5	.5		
	9400	TYKW	45 C	0101.0	0107.2	15.0	6.0	2.0		
	500	HIRA	45 C	0101.3	0101.6	8.0	15.0	5.0		WR
	1000	TYKW	45 C	0102.0	0103.4	8.0	14.0	1.0		
	245	LEAR	47 GB	0103.0E	0104.0	3.0D	92.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	0115.0	0118.7	6.0	2.0	.5		
	9400	TYKW	20 GRF	0118.0	0125.0	35.0	2.0	1.0		
	3750	TYKW		0121.0	0125.3		1.5			
	3750	TYKW	45 C	0121.0	0136.6	27.0	2.0	.7		
	2000	TYKW	45 C	0123.0	0123.2	7.0	3.0	.5		
	500	HIRA	42 SER	0123.0	0133.6	25.0	30.0	3.0		0
	1000	TYKW		0124.0	0134.1		5.0			
	1000	TYKW	45 C	0124.0	0156.2	57.0	16.0	1.5		
	1000	TYKW		0124.0	0212.3		13.0			
	245	LEAR	46 C	0134.0E	0134.0	1.0D	120.0			QL=5 ST=2 TYP=5
	2000	TYKW	45 C	0155.5	0156.0	4.5	2.0	.5		
	2000	TYKW	5 S	0201.0	0201.4	1.0	1.5	.5		
	650	GORK	46 C	0215.7	0216.0	65.5	40.0			
	650	GORK		0215.7	0220.9		33.0			
	1000	TYKW	45 C	0227.0	0246.2	40.0	32.0	2.5		
	9400	TYKW	20 GRF	0238.0	0245.0	30.0	2.0	1.0		
	2000	TYKW	45 C	0239.0	0245.8	9.0	35.0	3.0		
	500	HIRA	42 SER	0240.8	0250.5	25.0	40.0	15.0		WR
	3750	TYKW	5 S	0241.0	0244.3	15.0	1.5	.5		
	950	GORK	46 C	0246.0E	0246.1	4.3D	22.0			
	950	GORK		0246.0E	0248.0		20.0			
	2000	TYKW	29 PBI	0248.0		25.0	1.0	.5		
	950	GORK	30 PBI	0250.1	0250.1	12.1	5.5			
	950	GORK	4 S/F	0255.7	0256.2	.7	10.0			
	1000	TYKW	45 C	0409.0	0410.7	13.0	3.0	.5		
	2000	TYKW	21 GRF	0439.0	0455.0	75.0	2.0	1.0		
	9300	KISV	2 S/F	0441.6	0441.9	1.0	8.0			
	5900	KISV	8 S	0443.0	0444.0	1.0	2.0			QL= ST= TYP=3
	5900	KISV	2 S/F	0443.3	0443.5	1.0	2.0			
	3750	TYKW	20 GRF	0445.0	0454.0	70.0	2.0	1.0		
	500	HIRA	27 RF	0450.1	0552.4	72.0	55.0	7.0		WR
	2000	TYKW	5 S	0516.4	0516.6	.5	1.0	.3		
	9100	GORK	1 S	0545.9	0548.8	5.1	5.0	2.5		
	650	GORK	4 S/F	0621.8	0622.4	1.0	24.0			
	2000	TYKW	20 GRF	0640.0	0707.0	60.0	1.5	.7		
	3750	TYKW	20 GRF	0640.0	0708.0	90.0	4.0	2.0		
	5900	KISV	22 GRF	0644.4	0706.9	82.0	7.0			
	9400	TYKW	20 GRF	0650.0	0705.0	60.0	3.0	1.5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (10 ⁻²² W/m ² Hz)		
24	9100	GORK	20 GRF	0654.5	0711.6	41.0	3.8			
	650	GORK	2 S/F	0704.4	0704.5	.6	7.0			
	3100	CRIM	20 GRF	0727.0	0808.0	73.0	3.0	1.0		
	3100	CRIM	4 S/F	0746.0	0809.0	51.0	3.0			QL= ST= TYP=3
	950	GORK	22 GRF	0751.2	0822.8	114.0D	4.6			
	430	KRAK		0758.5	1242.2		220.0			
	1000	TYKW	45 C	0817.0	0822.5	16.0	5.0	2.0		
	245	LEAR	20 GRF	0847.0E	0849.0	3.0D	38.0			QL=5 ST=2 TYP=2
	410	LEAR	20 GRF	0848.0E	0849.0	2.0D	36.0			QL=5 ST=2 TYP=2
	610	SVTO	46 C	0851.0E	1012.0	128.0D	240.0			QL=1 ST=2 TYP=5
	245	SVTO	46 C	0851.0E	1018.0	128.0D	11.0			QL=1 ST=2 TYP=5
	410	SVTO	46 C	0851.0E	1018.0	128.0D	180.0			QL=1 ST=2 TYP=5
	2950	GORK	21 GRF	0852.9	0908.5	52.0D	5.4			
	610	LEAR	4 S/F	0858.0E	0859.0	902.0D	33.0			QL=5 ST=1 TYP=3
	610	LEAR	4 S/F	0902.0E	0903.0	29.0D	34.0			QL=5 ST=2 TYP=3
	410	LEAR	46 C	0902.0E	0925.0	29.0D	74.0			QL=5 ST=2 TYP=5
	245	LEAR	46 C	0902.0E	0928.0	29.0D	89.0			QL=5 ST=2 TYP=5
	9100	GORK	20 GRF	0903.5	0906.4	42.0D	8.5			
	3750	TYKW	45 C	0904.0	0906.5	8.0	24.0	6.0		
	15400	LEAR	4 S/F	0905.0E	0905.0	26.0D	34.0			QL=5 ST=2 TYP=3
	5900	KISV	4 S/F	0905.0	0906.0	6.0	18.0			QL= ST= TYP=3
	4995	SVTO	4 S/F	0905.0E	0906.0	6.0D	29.0			QL=5 ST=2 TYP=3
	2695	SVTO	4 S/F	0905.0E	0906.0	4.0D	23.0			QL=5 ST=2 TYP=3
	9300	KISV	4 S/F	0905.0	0906.0	7.0	10.0			QL= ST= TYP=3
	9500	POTS	1 S	0905.2	0906.0	8.3	7.0U			
	3000	POTS	3 S	0905.2	0906.4	4.3	20.0			
	2950	GORK	3 S	0905.4	0906.4	2.8	17.6	8.0		
	5900	KISV	4 S/F	0905.4	0906.5	6.0	18.0			
	9300	KISV	2 S/F	0905.4	0906.5	7.0	10.0			
	2695	LEAR	4 S/F	0906.0E	0906.0	25.0D	23.0			QL=5 ST=2 TYP=3
	1470	POTS	1 S	0906.0	0907.0	6.0U	2.0			
	1415	LEAR	4 S/F	0921.0E	0921.0	10.0D	6.0			QL=3 ST=2 TYP=3
	245	SCMR	46 C	0935.0E	0948.0	15.0D	68.0			QL=5 ST=2 TYP=5
	410	SCMR	46 C	0935.0E	0948.0	15.0D	51.0			QL=5 ST=2 TYP=5
	410	SCMR	46 C	0950.0E	1004.0	19.0D	76.0			QL=5 ST=2 TYP=5
	245	SCMR	46 C	0950.0E	1007.0	19.0D	120.0			QL=5 ST=2 TYP=5
	610	SCMR	8 S	1001.0E	1001.0	1.0D	18.0			QL=5 ST=2 TYP=3
	3100	CRIM	3 S	1005.5	1006.5	7.0	18.0	6.0		
	410	SCMR	46 C	1009.0E	1013.0	16.0D	83.0			QL=5 ST=2 TYP=5
	245	SCMR	46 C	1009.0E	1021.0	16.0D	140.0			QL=5 ST=2 TYP=5
	610	SCMR	4 S/F	1012.0E	1012.0		12.0			QL=5 ST=2 TYP=3
	1470	POTS	23 GRF	1111.0	1251.0	209.0D	6.0			
	3000	POTS	21 GRF	1122.5	1248.4	173.0	5.0			
	930	BORD	40 F	1130.0	1351.8	366.0	451.0	35.0		
	808	ONDR	46 C	1133.0	1140.5	9.0				
	808	ONDR	29 PBI	1142.0		8.0				
	9500	POTS	20 GRF	1146.5	1240.0	54.0	8.0U			
	610	SVTO	46 C	1153.0E	1212.0	30.0D	240.0			QL=1 ST=2 TYP=5
	610	SCMR	4 S/F	1203.0E	1204.0	11.0D	21.0			QL=5 ST=2 TYP=3
	2695	SCMR	4 S/F	1206.0E	1206.0		14.0			QL=5 ST=2 TYP=3
	2800	OTTA	21 GRF	1211.0E	1211.0	670.0D	5.6	2.9		
	9300	KISV	20 GRF	1211.2	1211.3	8.5	6.0			
	5900	KISV		1211.2	1211.4		5.0			
	5900	KISV		1211.2	1214.2		4.0			
	5900	KISV	46 C	1211.2	1218.2	9.0	5.0			
	245	SVTO	46 C	1212.0E	1214.0	2.0D	85.0			QL=1 ST=2 TYP=5
	1470	POTS	4 S/F	1212.0	1214.4	3.0	18.0			
	808	ONDR	1 S	1213.5	1214.0	1.0				
	410	SVTO	46 C	1214.0E	1214.0		140.0			QL=1 ST=2 TYP=5
	245	SCMR	46 C	1214.0E	1214.0		56.0			QL=5 ST=2 TYP=5
	410	SCMR	46 C	1214.0E	1214.0		83.0			QL=5 ST=2 TYP=5
	5900	KISV	45 C	1236.8	1238.7	8.0	11.0			
	5900	KISV		1236.8	1240.1		10.0			
	2800	OTTA	45 C	1237.0	1239.5	20.0	12.6	5.0		
	245	SCMR	46 C	1237.0E	1241.0	11.0D	200.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	1237.0E	1243.0	20.0D	280.0			QL=1 ST=2 TYP=5
	3000	POTS	4 S/F	1237.5	1239.8	5.5	14.0			
	9300	KISV	20 GRF	1238.1	1251.1	18.5	6.0			
	808	ONDR	46 C	1240.0		38.0				
	610	SCMR	8 S	1240.0E	1241.0	1.0D	19.0			QL=5 ST=2 TYP=3
	410	SVTO	46 C	1240.0E	1243.0	7.0D	180.0			QL=1 ST=2 TYP=5

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

39
May 87

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)	Int	Remarks
24	808	ONDR		1240.0	1253.0					
	808	ONDR		1240.0	1310.0					
	1470	POTS	4 S/F	1241.5	1241.7	1.5	12.0			
	410	SGMR	46 C	1242.0E	1243.0	3.0D	100.0			QL=5 ST=2 TYP=5
	2695	SGMR	4 S/F	1243.0E	1243.0		13.0			QL=5 ST=2 TYP=3
	610	SGMR	46 C	1301.0E	1301.0		55.0			QL=5 ST=2 TYP=5
	610	SGMR	46 C	1304.0E	1304.0	1.0D	67.0			QL=5 ST=2 TYP=5
	610	SGMR	46 C	1307.0E	1314.0	10.0D	86.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	1310.0E	1311.0	1.0D	66.0			QL=1 ST=2 TYP=5
	610	SGMR	46 C	1325.0E	1325.0	1.0D	60.0			QL=5 ST=2 TYP=5
	808	ONDR	28 PRE	1340.0		6.0				
	808	ONDR	46 C	1346.0		26.0D				
	808	ONDR		1346.0	1348.3					
	808	ONDR		1346.0	1352.0					
	808	ONDR		1346.0	1403.0					
	610	SGMR	46 C	1406.0E	1407.0	1.0D	55.0			QL=5 ST=2 TYP=5
	8800	SGMR	8 S	1524.0E	1524.0	1.0D	49.0			QL=5 ST=3 TYP=3
	8800	SVTO	8 S	1524.0E	1525.0	1.0D	36.0			QL=5 ST=2 TYP=3
	610	SGMR	8 S	1524.0E	1525.0	2.0D	22.0			QL=5 ST=3 TYP=3
	4995	SVTO	46 C	1524.0E	1525.0	14.0D	84.0			QL=5 ST=2 TYP=5
	2695	SGMR	46 C	1524.0E	1525.0	2.0D	63.0			QL=5 ST=3 TYP=5
	2695	SVTO	46 C	1524.0E	1525.0	1.0D	68.0			QL=5 ST=2 TYP=5
	15400	SGMR	8 S	1524.0E	1525.0	1.0D	15.0			QL=5 ST=3 TYP=3
	4995	SGMR	46 C	1524.0E	1525.0	2.0D	68.0			QL=5 ST=3 TYP=5
	2800	OTTA	3 S	1524.5	1525.2	5.5	65.7	32.8		
	610	SVTO	46 C	1525.0E	1525.0	30.0D	95.0			QL=1 ST=2 TYP=5
	1415	SVTO	4 S/F	1525.0E	1525.0	4.0D	33.0			QL=5 ST=2 TYP=3
	15400	SVTO	8 S	1528.0E	1528.0	1.0D	30.0			QL=5 ST=2 TYP=3
	2800	OTTA	29 PBI	1530.0	1530.0	30.0	69.5	4.7		
	245	SGMR	49 GB	1920.0E	1921.0	2.0D	870.0			QL=5 ST=3 TYP=6
	2800	OTTA	41 F	1920.5	1922.0	6.5	6.4	2.6		
	610	SGMR	8 S	1921.0E	1921.0	2.0D	11.0			QL=5 ST=3 TYP=3
	410	SGMR	46 C	1925.0E	1925.0		110.0			QL=5 ST=2 TYP=5
	245	SGMR	49 GB	1925.0E	1926.0	1.0D	510.0			QL=5 ST=2 TYP=6
	2700	PENT	40 F	2031.0	2117.3	320.0D	4.8	2.4		
	100	HIRA	42 SER	2035.6	2116.5	46.0	760.0			
	245	SGMR	46 C	2036.0E	2036.0		160.0			QL=5 ST=2 TYP=5
	245	SGMR	46 C	2039.0E	2039.0	2.0D	86.0			QL=5 ST=2 TYP=5
	500	HIRA	8 S	2039.2	2039.4	.2	30.0			0
	500	HIRA		2048.0	2111.8		140.0			WR
	500	HIRA	45 C	2048.0	2116.7	75.0	150.0	30.0		MR
	2000	TYKW	21 GRF	2100.0E	2114.0	40.0D	3.0	2.0D		
	3750	TYKW	21 GRF	2104.0	2114.0	35.0	3.0	1.5		
	245	SGMR	47 GB	2107.0E	2108.0	3.0D	83.0			QL=5 ST=2 TYP=5
	1000	TYKW		2111.0	2112.2		8.0			
	4995	SGMR	8 S	2111.0E	2112.0	1.0D	16.0			QL=5 ST=2 TYP=3
	410	SGMR	8 S	2111.0E	2112.0	1.0D	49.0			QL=5 ST=2 TYP=3
	410	SGMR	46 C	2111.0E	2117.0	6.0D	51.0			QL=5 ST=2 TYP=5
	1000	TYKW	45 C	2111.5	2117.3	8.5	11.0	1.5		
	200	HIRA	46 C	2115.4	2116.8	2.3	235.0	140.0		0
	3750	TYKW	5 S	2116.0	2117.2	8.0	6.0	1.5		
	245	SGMR	46 C	2116.0E	2117.0	1.0D	170.0			QL=5 ST=2 TYP=5
	610	SGMR	46 C	2116.0E	2117.0	7.0D	83.0			QL=5 ST=2 TYP=5
	9400	TYKW	5 S	2116.5	2116.8	1.5	4.0	1.5		
	2000	TYKW	45 C	2116.5	2117.2	1.5	6.0	1.5		
	1000	TYKW	45 C	2121.0	2121.3	4.0	3.0	1.0		
	2000	TYKW	45 C	2206.8	2207.7	2.0	3.0	.7		
	3750	TYKW	45 C	2207.3	2208.8	2.0	9.0	2.0		
	3750	TYKW	32 ABS	2251.0	2311.0	40.0	-2.0	-1.0		
	2000	TYKW	32 ABS	2251.0	2311.0	40.0	-2.0	-1.0		
	500	HIRA	46 C	2255.5	2312.8	49.0	35.0	15.0		WR
	3750	TYKW	5 S	2339.0	2342.6	16.0	2.0	.7		
	2000	TYKW	5 S	2345.0	2346.1	3.0	1.0	.3		
	1000	TYKW		2346.0	0212.3		13.0			
25	410	SVTO	43 NS	0347.0	0509.0	838.0D	73.0			QL=1 ST=2 TYP=1
	245	SVTO	43 NS	0347.0	1544.0	838.0D	100.0			QL=1 ST=2 TYP=1
	260	ONDR	44 NS	0549.0E	1321.0	501.0D	187.0			
	3750	TYKW	32 ABS	0004.0	0042.0	65.0	-2.0	-1.0		
	2000	TYKW	32 ABS	0010.0	0040.0	55.0	-1.0	.5		
	1000	TYKW	32 ABS	0010.0	0050.0	150.0	-1.0	.5		

40
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 ⁻²² W/m ² Hz)		Int	Remarks
							Peak	Mean		
25	9400	TYKW	32 ABS	0105.0	0200.0	135.0	-2.0	-1.0		
	2000	TYKW	32 ABS	0120.0	0140.0	120.0	-1.0	.5		
	3750	TYKW	32 ABS	0219.0	0225.0	45.0	-1.0	.5		
	3750	TYKW	5 S	0229.0	0230.0	6.0	1.0	.3		
	950	GORK	21 GRF	0256.1E	0456.0	300.00	4.8			
	1000	TYKW	45 C	0307.0	0307.7	2.0	3.5	.5		
	3750	TYKW	45 C	0314.0	0314.7	1.0	1.5	.5		
	2000	TYKW	5 S	0314.5	0314.8	1.0	1.0	.3		
	3750	TYKW	5 S	0317.0	0317.5	5.0	1.5	.5		
	240	SYDN	45 C	0332.0	0339.0	13.0	6.0			QL= ST= TYP=5
	2950	GORK	4 S/F	0333.0	0343.0	57.0	4.0			QL= ST= TYP=3
	2000	TYKW	45 C	0333.5	0334.3	2.0	1.5	.3		
	9400	TYKW	45 C	0340.0	0340.9	5.0	23.0	8.0		
	3750	TYKW	45 C	0340.0	0343.0	4.0	6.0	3.0		
	15400	LEAR	8 S	0340.0E	0341.0	1.00	32.0			QL=5 ST=2 TYP=3
	4995	LEAR	45 C	0340.0E	0341.0	3.00	24.0			QL=5 ST=2 TYP=5
	8800	LEAR	4 S/F	0340.0E	0341.0	3.00	24.0			QL=5 ST=2 TYP=3
	9100	GORK	45 C	0340.0	0341.0	3.8	22.0			
	9100	GORK		0340.0	0341.7		22.0			
	9100	GORK		0340.0	0342.7		14.0			
	17000	NOBE	1 S	0341.0	0341.0	5.0	23.0			
	2950	GORK	1 S	0341.0	0343.0	3.9	2.7			
	2000	TYKW	45 C	0342.3	0342.7	1.0	12.0	1.0		
	650	GORK	1 S	0343.5	0343.7	0.4	2.0			
	9100	GORK	29 PBI	0343.8	0343.8	18.0	5.5			
	3750	TYKW	30 PBI	0344.0		35.0	2.0	1.0		
	9400	TYKW	29 PBI	0345.0		15.0	3.0	1.5		
	650	GORK	2 S/F	0354.3	0355.1	1.2	6.0			
	3750	TYKW	5 S	0407.0	0407.9	2.0	1.5	.5		
	5900	KISV	8 S	0414.0	0415.0	2.0	4.0			QL= ST= TYP=3
	5900	KISV	1 S	0414.7	0415.0	1.0	4.0			
	9400	TYKW	32 ABS	0417.0	0430.0	30.0	-2.0	-1.0		
	2000	TYKW	32 ABS	0419.0	0429.0	15.0	-1.0	.5		
	650	GORK	23 GRF	0425.6U		406.0U	5.0			
	1000	TYKW	45 C	0432.0	0438.8	11.0	63.0	1.5		
	1000	TYKW		0432.0	0440.0		30.0			
	1000	TYKW		0432.0	0441.4		24.0			
	950	GORK	4 S/F	0432.0	0440.0	62.0	27.0			QL= ST= TYP=3
	650	GORK	4 S/F	0432.0	0440.0	62.0	13.0			QL= ST= TYP=3
	500	HIRA	42 SER	0432.1	0440.1	9.0	10.0			WR
	2950	GORK	21 GRF	0432.2	0504.4	61.0	5.9			
	950	GORK	40 F	0432.9	0441.4	8.8	29.6			
	3750	TYKW	45 C	0437.0	0440.0	6.0	7.0	2.0		
	2695	SYDN	8 S	0437.0	0438.0	2.0	10.0			QL= ST= TYP=3
	500	HIRA	4 S/F	0437.0	0440.0	5.0	10.0			QL= ST= TYP=3
	2000	TYKW	5 S	0438.0	0440.2	8.0	7.0	1.5		
	100	HIRA	42 SER	0438.0	0505.1	36.0	960.0			
	2950	GORK	3 S	0439.0	0439.9	4.7	6.7	3.0		
	650	GORK	46 C	0439.2	0439.8	22.0	11.0			
	650	GORK		0439.2	0441.3		11.0			
	5900	KISV	2 S/F	0439.5	0441.2	4.5	4.0			
	3750	TYKW	30 PBI	0443.0		39.0	1.5	.7		
	3750	TYKW	21 GRF	0447.0	0507.0	35.0	4.0	2.0		
	1000	TYKW	45 C	0448.5	0450.1	2.0	12.0	.7		
	2000	TYKW	45 C	0454.0	0456.0	5.5	5.0	1.5		
	2950	GORK	4 S/F	0454.3	0455.9	4.6	9.0	3.0		
	3750	TYKW	45 C	0454.5	0456.0	4.5	5.0	1.5		
	410	LEAR	46 C	0455.0E	0455.0	1.00	250.0			QL=5 ST=2 TYP=5
	9400	TYKW	21 GRF	0458.0	0508.0	25.0	3.0	1.5		
	5900	KISV	20 GRF	0458.3	0511.8	22.0	6.0			
	1000	TYKW	45 C	0459.0	0504.0	15.0	17.0	.7		
	2000	TYKW	45 C	0500.0	0503.6	6.0	8.0	1.0		
	9300	KISV	20 GRF	0500.0	0507.3	21.0	11.0			QL= ST= TYP=3
	9300	KISV	4 S/F	0500.0	0507.0	21.0	11.0			WL
	500	HIRA	41 F	0502.1	0504.5	13.0	50.0			WR
	200	HIRA	46 C	0502.6	0503.6	46.0	340.0	18.0		
	650	GORK	46 C	0502.7	0503.9	3.0	30.0			
	650	GORK		0502.7	0505.0		42.0			
	410	LEAR	46 C	0503.0E	0503.0	2.00	58.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0503.0E	0503.0	2.00	270.0			QL=1 ST=3 TYP=5
	410	SVTO	46 C	0503.0E	0503.0	1.00	81.0			QL=1 ST=2 TYP=5

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

41
May 87

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
25	245	LEAR	46 C	0503.0E	0504.0	2.0D	240.0			
	610	LEAR	8 S	0503.0E	0505.0	2.0D	42.0			QL=5 ST=2 TYP=5
	610	SVTO	46 C	0503.0E	0505.0	2.0D	86.0			QL=5 ST=3 TYP=3
	950	GORK	4 S/F	0503.3	0504.0	2.7	21.0			QL=1 ST=3 TYP=5
	2000	TYKW	30 PBI	0506.0		10.0	1.0	.5		
	410	LEAR	4 S/F	0509.0E	0509.0		39.0			
	245	LEAR	46 C	0509.0E	0509.0		110.0			QL=5 ST=2 TYP=3
	650	GORK	8 S	0511.0	0511.1	.3	11.0			QL=5 ST=2 TYP=5
	950	GORK	3 S	0511.1	0511.1	.6	9.5	4.5		
	245	LEAR	46 C	0513.0E	0513.0	1.0D	62.0			QL=5 ST=2 TYP=5
	2000	TYKW	31 ABS	0516.0	0540.0	110.0	-2.0	-1.0		
	2000	TYKW		0516.0	0620.0		-2.0			
	3750	TYKW		0522.0	0540.0		-2.0			
	3750	TYKW	31 ABS	0522.0	0623.0	110.0	-3.0	-1.5		
	9400	TYKW	31 ABS	0523.0	0540.0	85.0	-3.0	-1.5		
	3100	CRIM	1 S	0537.5	0540.0	5.0	7.0	2.0		
	3100	CRIM	1 S	0555.0	0556.0	2.0	7.0	2.0		
	204	IZMI	41 F	0709.0	0720.0	21.0	92.0			
	650	GORK	1 S	0710.3	0710.9	.6	2.0			
	930	BORD	8 S	0710.6	0711.0	.6	43.0	3.0		
	1000	TYKW	45 C	0710.7	0711.0	.6	47.0	10.0		
	950	GORK	1 S	0726.0	0726.2	.4	3.8	1.8		
	950	GORK	8 S	0740.7	0740.9	.5	32.0	16.0		
	3750	TYKW	32 ABS	0754.0	0810.0	40.0	-3.0	-1.5		
	9300	KISV	2 S/F	0857.0	0857.5	1.5	6.0			
	5900	KISV	2 S/F	0924.6	0928.2	3.6	3.0			
	430	KRAK	4 S/F	1241.5	1243.0	2.0	90.0	22.0		
	1470	POTS	40 F	1310.0	1322.5	32.0	6.0			
	3000	POTS	20 GRF	1312.0	1323.5	26.0	6.0			
	234	POTS	42 SER	1316.2	1321.2	19.0	275.0	5.0		
	2800	OTTA	22 GRF	1316.5	1323.6	22.0	7.2	3.6		
	410	SCMR	46 C	1318.0E	1321.0	5.0D	210.0			QL=5 ST=2 TYP=5
	410	SVTO	46 C	1318.0E	1321.0	5.0D	360.0			QL=1 ST=2 TYP=5
	245	SCMR	46 C	1318.0E	1321.0	5.0D	250.0			QL=5 ST=2 TYP=5
	430	KRAK	4 S/F	1318.5	1321.0	5.3	260.0	56.0		
	430	KRAK		1318.5	1321.3		270.0D			
	30	POTS	42 SER	1318.5	1329.6	12.0	400.0			
	610	SCMR	46 C	1319.0E	1320.0	3.0D	55.0			QL=5 ST=2 TYP=5
	810	KRAK	2 S/F	1319.0	1320.8	4.7	19.0	3.0		
	245	SVTO	46 C	1319.0E	1321.0		310.0			QL=1 ST=2 TYP=5
	810	KRAK		1319.0	1322.2		24.0			
	8800	SCMR	8 S	1321.0E	1321.0	1.0D	27.0			QL=5 ST=2 TYP=3
	3000	POTS	29 PBI	1342.0	1344.1	28.0	6.0			
	2800	OTTA	20 GRF	1342.3	1344.0	12.5	4.0	2.0		
	9500	POTS	29 PBI	1343.0	1343.7	12.0	7.0U			
	4995	SCMR	4 S/F	1343.0E	1343.0		24.0			QL=5 ST=1 TYP=3
	1470	POTS	2 S/F	1403.0	1403.5	1.5	4.0			
	245	SCMR	4 S/F	1507.0E	1507.0		23.0			QL=5 ST=2 TYP=3
	2700	PENT	1 S	1517.5	1518.2	3.5	5.2	2.6		
	245	SCMR	49 GB	1528.0E	1528.0		520.0			QL=5 ST=3 TYP=6
	410	SCMR	8 S	1528.0E	1528.0	1.0D	18.0			QL=5 ST=3 TYP=3
	8800	SCMR	4 S/F	1532.0E	1532.0		24.0			QL=5 ST=2 TYP=3
	2800	OTTA	42 SER	1757.5	1802.5	88.0	2.4	1.0		
	2695	SCMR	46 C	2246.0E	2249.0	74.0D	81.0			QL=5 ST=1 TYP=5
	2695	SCMR	46 C	2256.0E	2257.0	2.0D	130.0			QL=5 ST=2 TYP=5
	2695	SCMR	46 C	2300.0E	2304.0	9.0D	180.0			QL=5 ST=2 TYP=5
26	29	UPIC	43 NS	0457.5		782.5D				
	33	UPIC	43 NS	0458.2		781.8D				
	245	LEAR	44 NS	2311.0E	0022.0	49.0D	120.0			QL=5 ST=1 TYP=1
	2700	PENT	41 F	0002.0	0006.9	50.0	15.5	1.5		
	1415	SYDN	4 S/F	0004.0	0006.0	43.0	10.0			QL= ST= TYP=4
	2695	SYDN	4 S/F	0004.0	0006.0	33.0	14.0			QL= ST= TYP=3
	3750	TYKW	45 C	0005.5	0006.9	5.5	11.0	2.0		
	2695	PALE	8 S	0006.0E	0006.0	1.0D	20.0			QL=5 ST=2 TYP=3
	1000	TYKW	45 C	0006.5	0007.1	3.5	1.5	.5		
	2000	TYKW	45 C	0008.0E	0008.1	4.0D	6.0	1.5D		
	3750	TYKW	28 PRE	0020.0	0033.0	13.0	2.0	1.0		
	15400	LEAR	46 C	0020.0E	0033.0	18.0D	210.0			QL=5 ST=2 TYP=5
26	9400	TYKW	21 GRF	0030.0	0050.0	90.0	2.0	1.0		
	1000	TYKW	45 C	0033.0	0034.0	15.0	22.0	1.0		

42
May 87

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)	Int	Remarks
26	9400	TYKW	45 C	0033.0	0034.3	3.0	54.0	7.0		
	3750	TYKW	45 C	0033.0	0034.4	4.0	14.0	4.0		
	2000	TYKW	45 C	0033.0	0034.4	2.0	8.0	2.0		
	8800	PALE	46 C	0033.0E	0034.0		57.0			QL=5 ST=1 TYP=5
	8800	LEAR	46 C	0033.0E	0034.0	2.0D	69.0			QL=5 ST=2 TYP=5
	500	HIRA	7 C	0033.5	0033.6	4.5	20.0	5.0		WL
	1415	LEAR	4 S/F	0034.0E	0034.0		17.0			QL=3 ST=2 TYP=3
	4995	LEAR	4 S/F	0034.0E	0034.0		27.0			QL=5 ST=2 TYP=3
	4995	PALE	4 S/F	0034.0E	0034.0	88.0D	22.0			QL=5 ST=2 TYP=3
	2695	LEAR	4 S/F	0034.0E	0034.0		14.0			QL=5 ST=2 TYP=3
	610	LEAR	4 S/F	0034.0E	0034.0		23.0			QL=5 ST=2 TYP=3
	2000	TYKW	30 PBI	0035.0		35.0	1.5	.7		
	3750	TYKW	30 PBI	0037.0		125.0	3.0	1.5		
	3750	TYKW	45 C	0041.0	0042.7	12.0	3.0	1.0		
	2000	TYKW	45 C	0042.0	0044.1	7.0	4.0	.7		
	3750	TYKW	21 GRF	0110.0	0117.0	50.0	1.0	.5		
	3750	TYKW	5 S	0112.0	0112.6	3.0	1.0	.3		
	3750	TYKW	5 S	0146.0	0146.5	2.0	1.0	.3		
	3750	TYKW	45 C	0215.0	0218.3	25.0	2.0	.7		
	2000	TYKW	20 GRF	0311.0	0314.0	40.0	1.0	.5		
	3750	TYKW	5 S	0312.0	0313.4	10.0	3.0	1.0		
	3750	TYKW	21 GRF	0312.0	0400.0	120.0	2.0	1.0		
	2000	TYKW	20 GRF	0355.0	0415.0	65.0	1.0	.5		
	15400	PALE	8 S	0435.0E	0436.0	1.0D	44.0			QL=1 ST=2 TYP=3
	8800	PALE	8 S	0435.0E	0436.0	1.0D	30.0			QL=1 ST=2 TYP=3
	4995	PALE	8 S	0435.0E	0436.0	1.0D	17.0			QL=5 ST=2 TYP=3
	9400	TYKW	32 ABS	0450.0	0505.0	50.0	-2.0	-1.0		
	650	GORK	22 GRF	0539.0	0605.5	45.2	8.5			
	2000	TYKW	21 GRF	0540.0	0612.0	90.0	2.0	1.0		
	2950	GORK	2 S/F	0542.1	0547.2	7.0	5.6	2.0		
	3750	TYKW	45 C	0545.0	0547.2	4.0	5.0	1.0		
	3100	CRIM	8 S	0546.0	0547.0	2.0	2.0			QL= ST= TYP=3
	3100	CRIM	1 S	0546.5	0547.0	2.0	2.0	1.0		
	2000	TYKW	5 S	0547.0	0547.2	1.0	1.0	.3		
	9400	TYKW	21 GRF	0550.0	0603.0	55.0	2.0	1.0		
	9400	TYKW	5 S	0555.0	0556.3	4.0	3.0	1.0		
	3750	TYKW	28 PRE	0555.0	0604.0	9.0	2.0	1.0		
	950	GORK	20 GRF	0601.7	0605.0	4.3	4.0			
	2950	GORK	20 GRF	0603.1	0612.5	20.2	2.9	1.3		
	1000	TYKW	45 C	0604.0	0606.6	9.0	4.5	1.0		
	3750	TYKW	45 C	0604.0	0612.2	13.0	7.0	4.0		
	5900	KISV	21 GRF	0604.4	0611.0	22.5	9.0			
	500	HIRA	6 S	0604.5	0604.9	1.5	8.0	4.0		0
	5900	KISV	4 S/F	0605.0	0611.0	23.0	9.0			QL= ST= TYP=3
	9400	TYKW	20 GRF	0610.0	0615.0	30.0	3.0	1.5		
	2000	TYKW	5 S	0612.5	0613.0	1.5	1.0	.3		
	3750	TYKW	29 PBI	0617.0		25.0	3.0	1.5		
	204	IZMI	41 F	0640.0	0640.0	10.0	20.0			
	1000	TYKW	45 C	0652.0	0652.3	1.0	8.0	.5		
	3100	CRIM	1 S	0705.5	0712.5	18.0	3.0	1.0		
	5900	KISV	2 S/F	0729.5	0731.5	4.0	7.0			
	3750	TYKW	45 C	0730.0	0731.5	2.0	3.0	1.0		
	204	IZMI	2 S/F	0731.4	0731.6	.5	27.0	13.0		
	5900	KISV	21 GRF	0741.8	0742.8	22.0	8.0			
	3750	TYKW	5 S	0742.0	0744.3	10.0	4.0	1.5		
	9300	KISV	2 S/F	0743.0	0743.6	2.0	4.0			
	5900	KISV	22 GRF	0821.8	0941.8	151.0	5.0			
	204	IZMI	41 F	0925.0	0929.3	7.4	85.0			
	200	HIRA	8 S	0928.0	0928.3	.5	176.0			0
	1470	POTS	4 S/F	0940.9	0942.7	2.6	7.0			
	5900	KISV	4 S/F	1054.0	1103.0	10.0	6.0			QL= ST= TYP=3
	5900	KISV		1054.3	1055.4		5.0			
	5900	KISV	45 C	1054.3	1103.4	20.0	6.0			
	5900	KISV	21 GRF	1156.7	1157.6	47.0	6.0			
	9300	KISV	1 S	1157.3	1157.7	1.0	3.0			
	1470	POTS	8 S	1435.5	1435.6	.5	3.0			
	2800	O'TA	8 S	1720.0	1720.1	.1	4.7	4.7		
	2800	O'TA	45 C	1939.5	1945.9	10.5	16.2	4.1		
	9400	TYKW	20 GRF	2350.0	0003.0	110.0	4.0	2.0		
	2000	TYKW	20 GRF	2350.0	2355.0	150.0	3.0	1.5		
	3750	TYKW	20 GRF	2350.0	2358.0	150.0	4.0	2.0		

SOLAR RADIO EMISSION,
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)	Int	Remarks
26	2700	PENT	240 R	2350.0	2357.5	110.0D	4.6			
27	260	ONDR	44 NS	0548.0E	1155.0	494.0D	12.0			
	33	UPIC	43 NS	0609.5		710.5D				
	200	HIRA	44 NS	1924.0E	0148.0	840.0D	18.0	10.0		0
	245	LEAR	43 NS	2312.0	0809.0	618.0D	150.0			QL=5 ST=2 TYP=1
	410	LEAR	43 NS	2312.0	0811.0	618.0D	35.0			QL=5 ST=2 TYP=1
	245	LEAR	46 C	0022.0E	0022.0	49.0D	190.0			QL=5 ST=2 TYP=5
	500	HIRA	6 S	0158.0	0158.5	1.5	10.0	5.0		WR
	1000	TYKW	5 S	0158.5	0159.1	1.5	2.0	.3		
	1000	TYKW	45 C	0229.5	0233.7	15.0	7.0	1.5		
	3750	TYKW	5 S	0233.0	0234.0	10.0	1.0	.5		
	2000	TYKW	45 C	0233.0	0235.4	4.0	2.0	.5		
	536	ONDR	46 C	1208.0	1209.5	3.0	19.0			
	930	BORD	3 S	1209.6	1209.9	.7	16.0	4.0		
	810	KRAK	42 SER	1241.5	1255.5	31.5	300.0			
	536	ONDR	8 S	1251.5	1251.5	.1	10.0			
	245	SGMR	4 S/F	1911.0E	1911.0		48.0			QL=5 ST=2 TYP=3
	500	HIRA	41 F	2045.3	2047.1	2.0	25.0			WR
	245	SGMR	46 C	2159.0E	2159.0		130.0			QL=5 ST=2 TYP=5
	245	SGMR	46 C	2220.0E	2220.0		130.0			QL=5 ST=3 TYP=5
28	204	IZMI	43 NS	0600.0		360.0	32.0			
	260	ONDR	44 NS	0600.0E	0812.5	494.0D	131.0			
	29	UPIC	43 NS	0758.0		365.3U				
	33	UPIC	43 NS	0758.0		365.2U				
	245	LEAR	43 NS	2323.0	0411.0	607.0D	32.0			QL=5 ST=2 TYP=1
	245	LEAR	46 C	0006.0E	0006.0	1.0D	110.0			QL=5 ST=2 TYP=5
	100	HIRA	8 S	0006.1	0006.1	.7	1000.0D			
	200	HIRA	46 C	0006.2	0006.3	1.3	330.0	86.0		0
	245	LEAR	8 S	0045.0E	0045.0	1.0D	42.0			QL=5 ST=2 TYP=3
	245	LEAR	46 C	0113.0E	0114.0	1.0D	280.0			QL=5 ST=2 TYP=5
	245	LEAR	46 C	0114.0E	0114.0	1.0D	290.0			QL=5 ST=3 TYP=5
	410	LEAR	49 GB	0258.0E	0259.0	1.0D	1100.0			QL=5 ST=3 TYP=6
	245	LEAR	49 GB	0258.0E	0259.0	1.0D	590.0			QL=5 ST=2 TYP=6
	2000	TYKW	32 ABS	0343.0	0410.0	75.0	-1.5	-.7		
	3750	TYKW	32 ABS	0345.0	0410.0	75.0	-1.5	-.7		
	410	LEAR	8 S	0432.0E	0432.0	1.0D	35.0			QL=5 ST=2 TYP=3
	245	LEAR	46 C	0432.0E	0432.0	1.0D	120.0			QL=5 ST=2 TYP=5
	204	IZMI	2 S/F	0811.1	0811.3	.4	170.0	85.0		
	950	GORK	23 GRF	1042.2	1048.3	12.4	4.0			
	3000	POTS	20 GRF	1043.0	1045.0	8.0	3.0			
	930	BORD	46 C	1044.0	1045.2	12.0	41.0	5.0		
	950	GORK	4 S/F	1044.2	1045.1	1.3	37.0			
	2800	OTTA	20 GRF	1050.0E	1232.0	160.0D	3.7	1.1		
	536	ONDR	46 C	1231.5	1233.0	2.5	10.0			
	3000	POTS	1 S	1233.0	1233.4	1.0	2.0			
	1470	POTS	1 S	1233.0	1233.5	.8	4.0			
	245	SVTO	46 C	1257.0E	1259.0	8.0D	180.0			QL=1 ST=2 TYP=5
	610	SVTO	46 C	1258.0E	1258.0	3.0D	110.0			QL=1 ST=2 TYP=5
	410	SVTO	46 C	1258.0E	1259.0	5.0D	90.0			QL=1 ST=2 TYP=5
	536	ONDR	42 SER	1258.0	1259.0	6.0	13.0			
	245	SGMR	46 C	1259.0E	1259.0	1.0D	130.0			QL=5 ST=2 TYP=5
	410	SGMR	46 C	1259.0E	1259.0	1.0D	480.0			QL=5 ST=2 TYP=5
	3000	POTS	1 S	1259.0	1259.4	1.0	2.0			
	1470	POTS	1 S	1259.0	1259.4	1.0	4.0			
	2000	TYKW	45 C	2308.0	2308.6	2.5	1.5	.5		
	1000	TYKW	45 C	2308.0	2309.3	2.5	2.0	.5		
29	29	UPIC	43 NS	0528.0		413.7U				
	260	ONDR	44 NS	0643.0E	0819.0	441.0D	69.0			
	29	UPIC	44 NS	1230.0E		251.5D				
	33	UPIC	44 NS	1230.0E		250.6D				
	200	HIRA	43 NS	1947.0	2050.0	105.0	15.0	7.0		WR
	100	HIRA	43 NS	1947.0	2134.0	139.0	40.0	15.0		
	245	LEAR	43 NS	2313.0	0752.0U	617.0D	46.0			QL=5 ST=2 TYP=1
	245	LEAR	46 C	0123.0E	0123.0	37.0D	150.0			QL=5 ST=2 TYP=5
	2000	TYKW	45 C	0136.0	0136.5	2.0	1.0	.3		
	1000	TYKW	45 C	0136.0	0136.8	2.0	5.0	1.0		
	1000	TYKW	45 C	0138.7	0139.6	1.5	2.0	.5		
	2000	TYKW	45 C	0139.0	0140.9	3.0	1.5	.3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean (10 ⁻²² W/m ² Hz)	Int	Remarks
29	1000	TYKW	5 S	0140.5	0141.0	2.0	2.5	.7		
	245	LEAR	4 S/F	0313.0E	0313.0		29.0			QL=5 ST=2 TYP=3
	650	GORK	40 F	0421.3		50.2	6.0			
	650	GORK	21 GRF	0830.0	0840.8	28.8	4.5			
	650	GORK	46 C	0841.0	0841.4	2.3	9.3			
	245	LEAR	46 C	0848.0E	0848.0	2.00	370.0			QL=5 ST=2 TYP=5
	410	SVTO	49 GB	0848.0E	0848.0	1.00	990.0			QL=1 ST=2 TYP=6
	245	SVTO	49 GB	0848.0E	0848.0	1.00	600.0			QL=1 ST=2 TYP=6
	100	HIRA	8 S	0848.0	0848.4	.5	1000.00			
	410	LEAR	47 GB	0848.0E	0849.0	2.00	310.0			QL=5 ST=2 TYP=5
	200	HIRA	8 S	0848.2	0848.3	.5	4800.0			0
	536	ONDR	46 C	0848.5	0848.5	3.0	290.0			
	500	HIRA	45 C	0848.6	0848.7	2.0	140.0	40.0		0
	650	GORK		0848.7			7.0			
	234	POTS	4 S/F	0848.7	0848.7	1.3	1000.0	200.0		
	204	IZMI	4 S/F	0848.8	0849.0	.6	3000.0	1500.0		
	30	POTS	4 S/F	0848.8	0849.2	1.2	22000.0	5000.0		
	650	GORK	46 C	0849.7	0849.8	4.6	7.0			
	650	GORK		0849.7	0853.3		15.5			
	245	SVTO	46 C	1230.0E	1231.0	1.00	230.0			QL=1 ST=2 TYP=5
	410	SVTO	46 C	1230.0E	1231.0	1.00	280.0			QL=1 ST=2 TYP=5
	410	SCMR	46 C	1230.0E	1231.0	1.00	280.0			QL=5 ST=2 TYP=5
	245	SCMR	46 C	1230.0E	1231.0	1.00	170.0			QL=5 ST=2 TYP=5
	234	POTS	42 SER	1230.0	1231.2	22.0	200.0			
	536	ONDR	40 F	1230.5	1230.5	4.5	206.0			
	30	POTS	42 SER	1230.7	1250.6	21.0	1400.0			
	410	SVTO	46 C	1249.0E	1250.0	2.00	97.0			QL=1 ST=2 TYP=5
	536	ONDR	40 F	1249.0	1250.0	3.0	19.0			
	410	SCMR	4 S/F	1250.0E	1250.0		46.0			QL=5 ST=2 TYP=3
	245	SVTO	45 C	1255.0E	1256.0	1.00	7.0			QL=1 ST=3 TYP=5
	410	SVTO	46 C	1405.0E	1450.0	46.00	190.0			QL=1 ST=2 TYP=5
	245	SVTO	45 C	1424.0E	1429.0	65.00	22.0			QL=1 ST=2 TYP=5
	1415	SVTO	45 C	1502.0E	1505.0	17.00	36.0			QL=5 ST=2 TYP=5
	610	SVTO	45 C	1505.0E	1507.0	27.00	31.0			QL=1 ST=2 TYP=5
	245	SCMR	8 S	1506.0E	1506.0	1.00	45.0			QL=5 ST=2 TYP=3
	410	SCMR	49 GB	1603.0E	1603.0	1.00	780.0			QL=5 ST=2 TYP=6
	245	SCMR	49 GB	1603.0E	1603.0	534.00	740.0			QL=5 ST=2 TYP=6
	610	SCMR	4 S/F	1603.0E	1603.0		23.0			QL=5 ST=2 TYP=3
	930	BORD	45 C	1603.0	1604.4	6.0	6.0	4.0		
	245	SCMR	46 C	1613.0E	1614.0	3.00	410.0			QL=5 ST=2 TYP=5
	930	BORD	46 C	1613.8	1617.4	5.2	21.0	4.0		
	410	SCMR	4 S/F	1614.0E	1614.0		28.0			QL=5 ST=2 TYP=3
	245	SCMR	49 GB	1621.0E	1622.0	2.00	630.0			QL=5 ST=2 TYP=6
	410	SCMR	46 C	1621.0E	1623.0	2.00	110.0			QL=5 ST=2 TYP=5
	930	BORD	46 C	1621.8	1623.2	4.2	30.0	6.0		
	410	SVTO	46 C	1622.0E	1623.0	1.00	170.0			QL=1 ST=2 TYP=5
	610	SVTO	46 C	1622.0E	1623.0	1.00	120.0			QL=1 ST=2 TYP=5
	1415	SVTO	45 C	1622.0E	1623.0	3.00	50.0			QL=1 ST=2 TYP=5
	2800	OTTA	20 GRF	2015.0	0147.4	330.0	5.3	2.1		
30	260	ONDR	44 NS	0617.0E	0642.0	690.00	5.0			
	245	LEAR	46 C	0029.0E	0029.0	47.00	220.0			QL=5 ST=2 TYP=5
	200	HIRA	8 S	0029.0	0029.3	.4	150.0			0
	1000	TYKW	45 C	0234.0	0234.3	1.0	5.0	.5		
	500	HIRA	8 S	0234.0	0234.1	.6	10.0	6.0		0
	950	GORK	4 S/F	0510.1	0510.6	1.0	47.0			
	950	GORK	4 S/F	0540.0	0540.1	.3	48.0			
	950	GORK	4 S/F	0643.3	0643.5	.5	57.0			
	100	HIRA	42 SER	0706.6	0741.6	39.0	230.0			
	33	UPIC	42 SER	0708.2	0752.4	52.5				
	500	HIRA	7 C	0731.6	0731.8	2.0	13.0	4.0		0
	500	HIRA	8 S	0732.0	0732.0	1.0	15.0			QL= ST= TYP=3
	29	UPIC	42 SER	0737.0U	0752.6	21.0U				
	260	ONDR	46 C	0740.0	0742.5	6.0	6.0			
	100	HIRA	8 S	0742.0	0743.0	1.0	200.0			QL= ST= TYP=3
	200	HIRA	8 S	0742.0	0743.0	1.0	45.0			QL= ST= TYP=3
	200	HIRA	41 F	0748.2	0752.0	7.5	430.0			0
	100	HIRA	41 F	0748.2	0752.1	7.3	510.0			
	260	ONDR	46 C	0748.5	0753.0	8.0	203.0			
	536	ONDR	40 F	0749.0	0752.5	6.0	390.0			
	1470	POTS	40 F	0751.5	0752.9	3.2	4.0			

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

MAY 1987

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
30	610	LEAR	46 C	0752.0E	0752.0	2.0D	130.0			QL=5 ST=2 TYP=5
	245	SVTO	46 C	0752.0E	0752.0	3.0D	490.0			QL=1 ST=2 TYP=5
	410	LEAR	46 C	0752.0E	0752.0	2.0D	310.0			QL=5 ST=2 TYP=5
	410	SVTO	46 C	0752.0E	0752.0	3.0D	430.0			QL=1 ST=2 TYP=5
	245	LEAR	46 C	0752.0E	0752.0	3.0D	420.0			QL=5 ST=2 TYP=5
	610	SVTO	46 C	0752.0E	0752.0	2.0D	110.0			QL=1 ST=2 TYP=6
	808	ONDR	46 C	0752.0	0752.5	3.0				
	500	HIRA	46 C	0752.2	0752.5	4.0	320.0	40.0		
	950	GORK	46 C	0752.3	0752.5	2.8	29.0			
	1000	TYKW	45 C	0752.3	0752.5	4.0	27.0	2.0		
	950	GORK		0752.3	0753.9		18.0			
	430	KRAK	46 C	0752.5	0752.5	3.0	300.0D	11.0		
	810	KRAK	46 C	0752.5	0752.5	3.0	60.0	1.0		
	430	KRAK		0752.5	0753.3		260.0			
	810	KRAK		0752.5	0753.8		40.0			
	260	ONDR	41 F	0906.5	0908.0	2.0	1.0			
	204	IZMI	41 F	0948.0	0950.1	3.2	29.0			
	260	ONDR	41 F	0948.5	0950.5	3.0	3.0			
	260	ONDR	8 S	1217.0	1217.0	.1	7.0			
	29	UPIC	45 C	1331.3	1331.5	1.4				
	33	UPIC	45 C	1331.5	1331.7	1.1				
	33	UPIC	45 C	1407.3	1408.2	1.3				
	29	UPIC	45 C	1407.3	1408.6	1.5				
	33	UPIC	8 S	1520.3	1520.5	.5				
	29	UPIC	8 S	1520.5	1520.7	.6				
	100	HIRA	8 S	2256.0	2256.0	2.0	100.0			QL= ST= TYP=3
	500	HIRA	6 S	2256.4	2256.5	1.0	130.0	40.0		WL
31	5900	KISV	20 GRF	0652.0	0900.0	194.0	3.0			
	430	KRAK	8 S	0736.0	0736.2	.5	58.0			
	260	ONDR	41 F	1058.0	1101.5	13.0	2.0			
	260	ONDR	41 F	1121.5	1123.0	2.0	2.0			

Reports are received routinely from the following observatories:

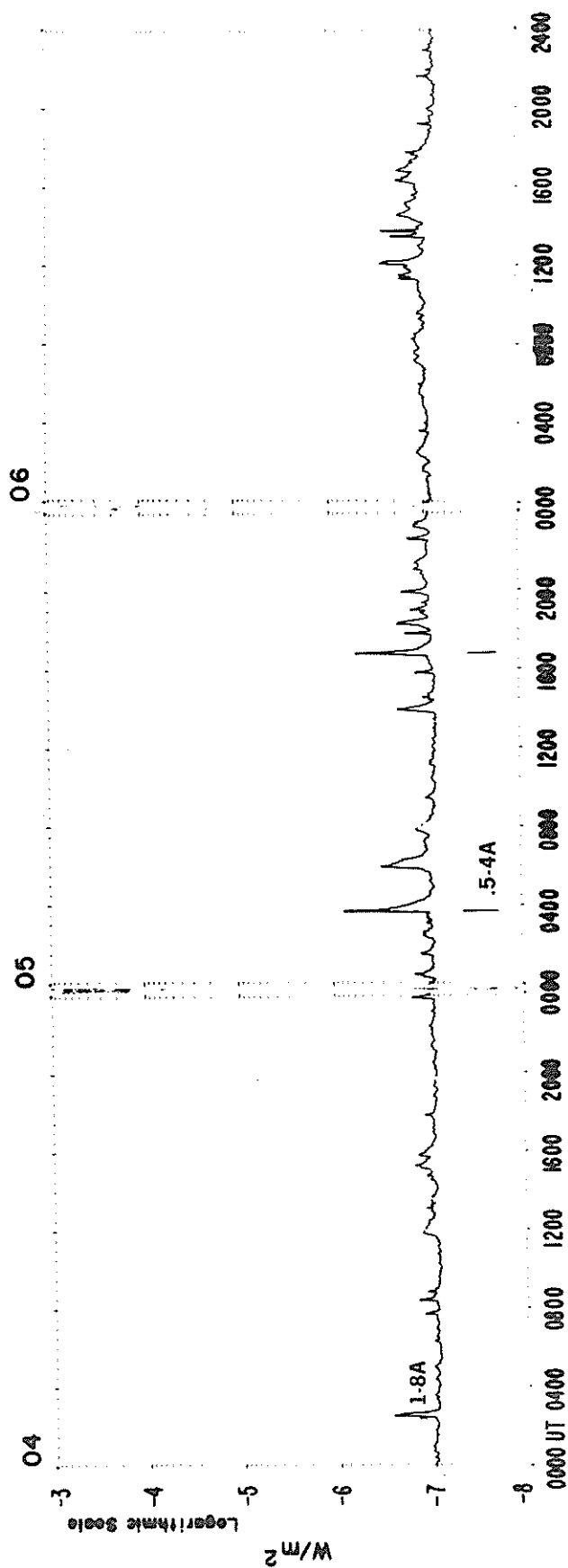
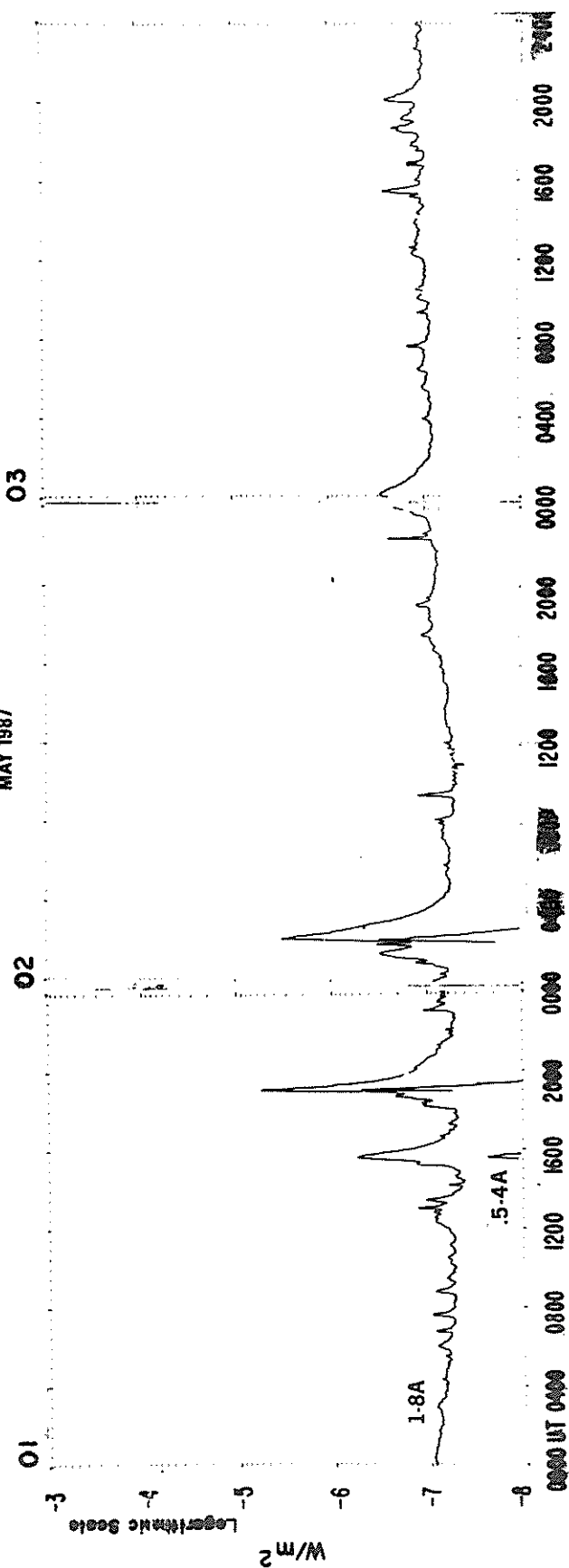
BORD = Bordeaux	KRAK = Krakow	POTS = Potsdam	SVTO = San Vito
CRIM = Simferopol	LEAR = Learmonth	SAOP = Sao Paulo	SYDN = Sydney
GORK = Gorky	NOBE = Nobeyama	SGMR = Sagamore Hill	TORN = Torun
HIRA = Hiraiso	ONDR = Ondrejov	SVTO = San Vito	TYKW = Toyokawa
HUAN = Huancayo	OTTA = Ottawa	TORN = Torun	TRST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

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	240 Rise only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	240F Rise only F	260 Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	24P Post Rise	26F Fall F	32A Absorption A	
			46F Complex F	

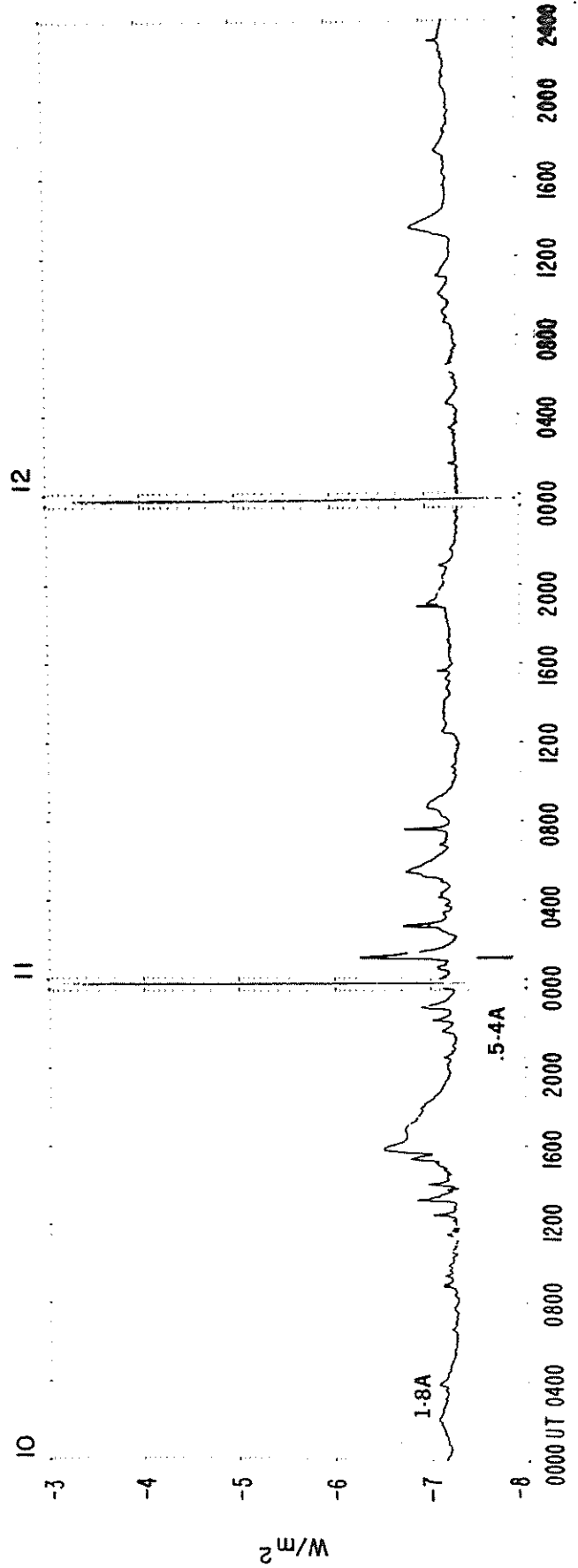
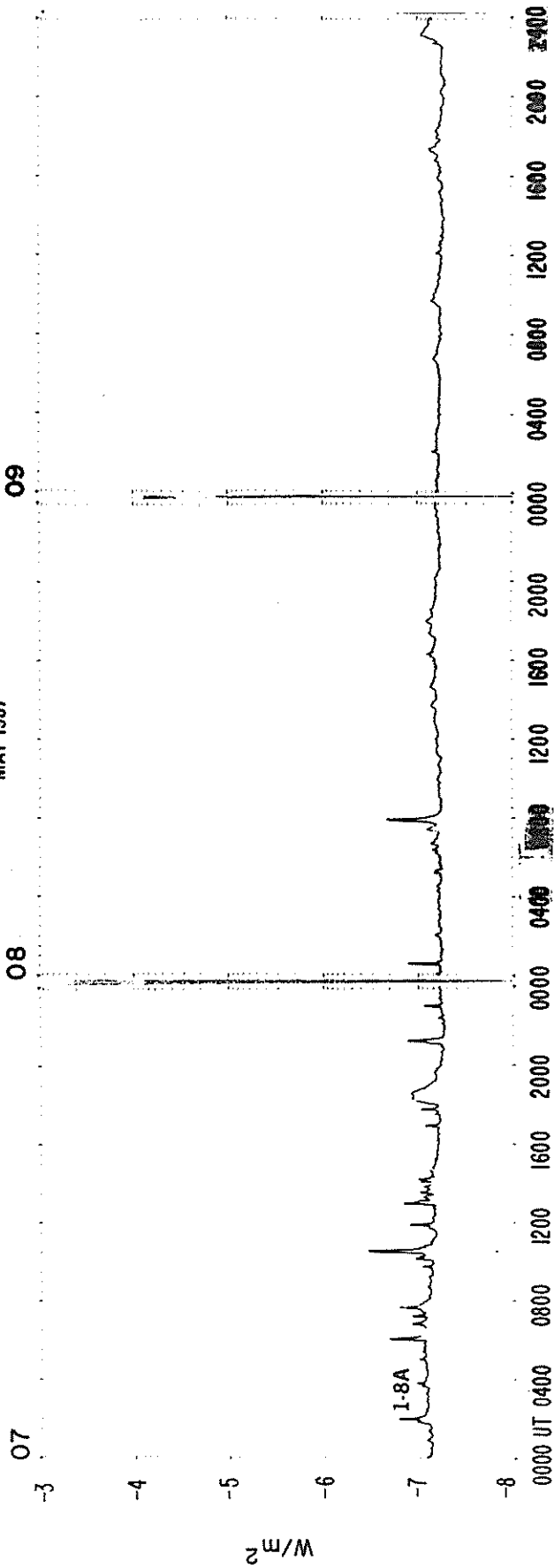
GOES 6 X-RAYS

MAY 1987



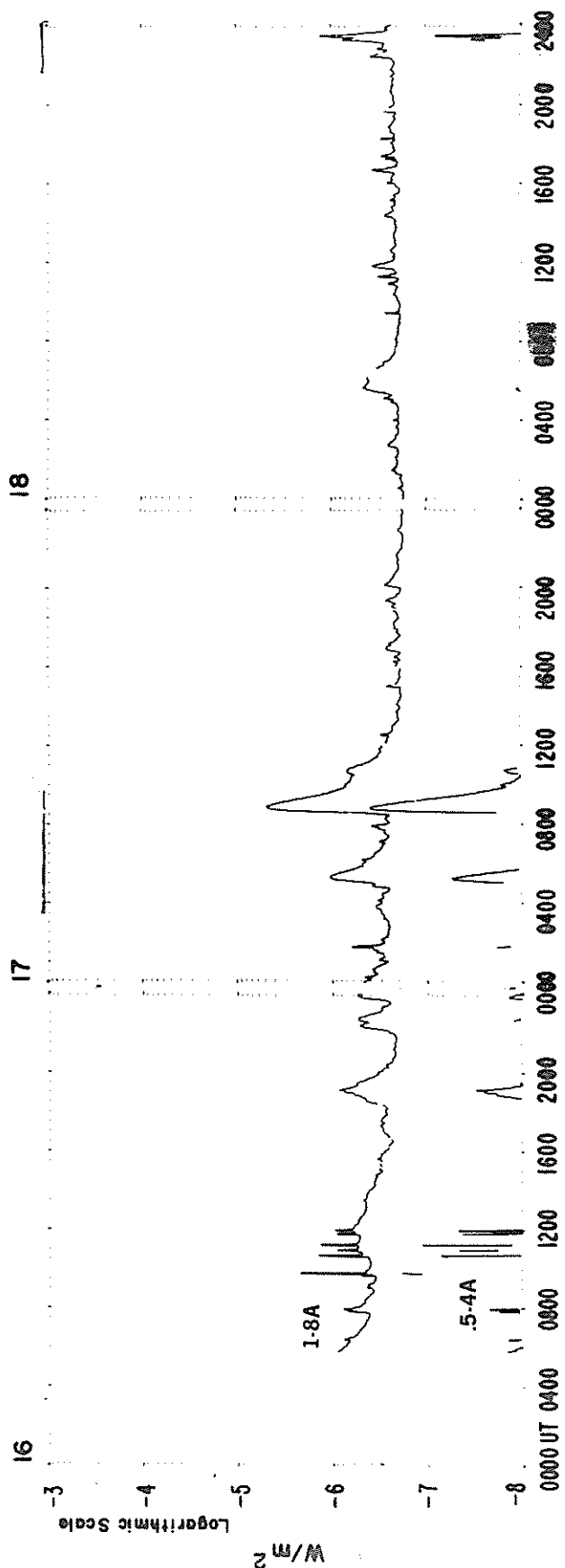
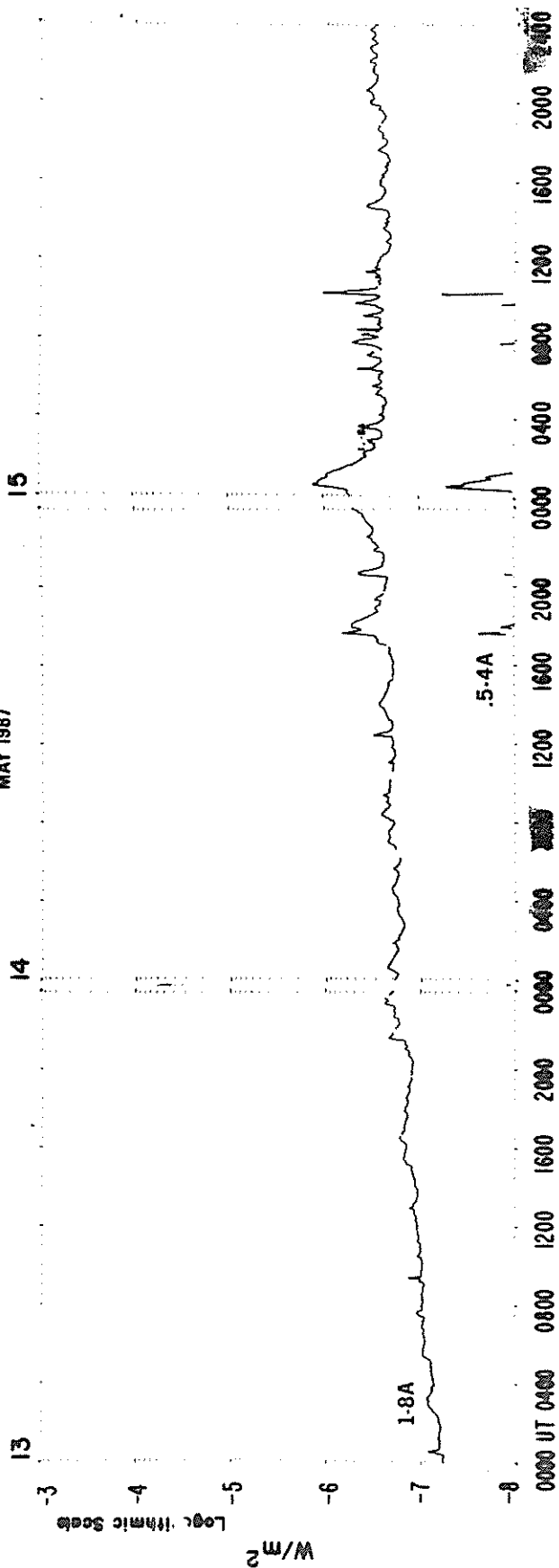
GOES 6 X-RAYS

MAY 1987



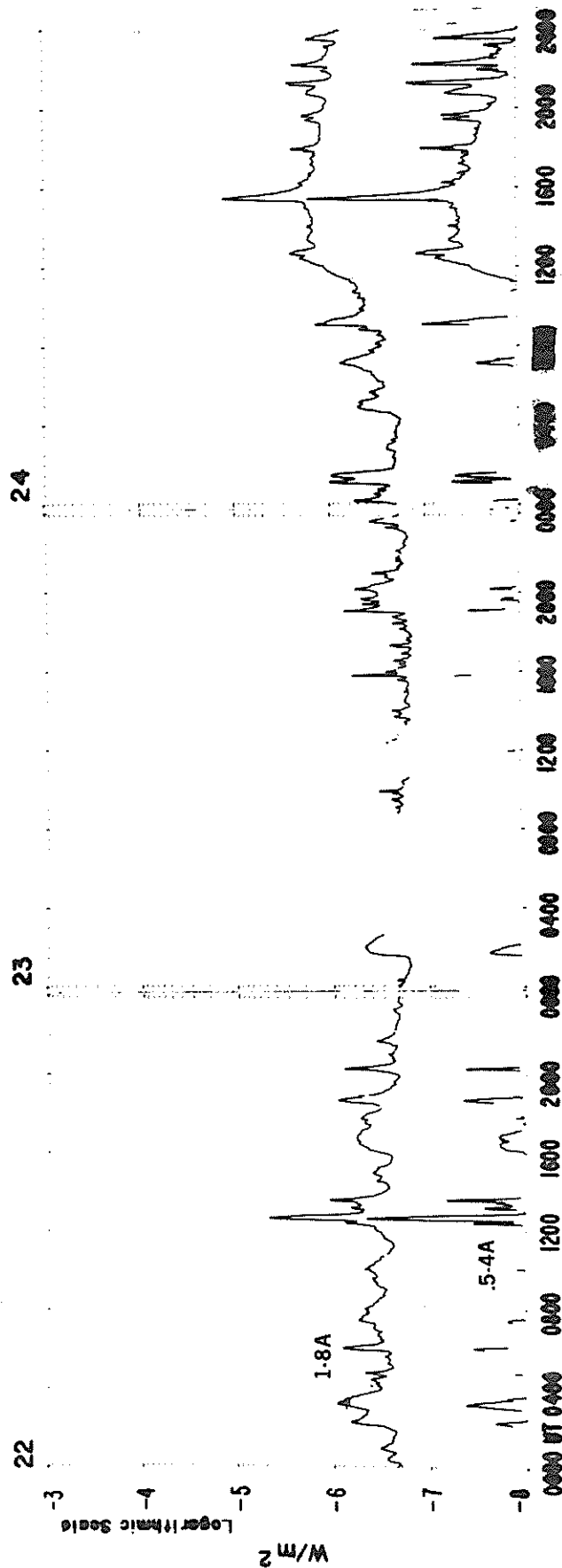
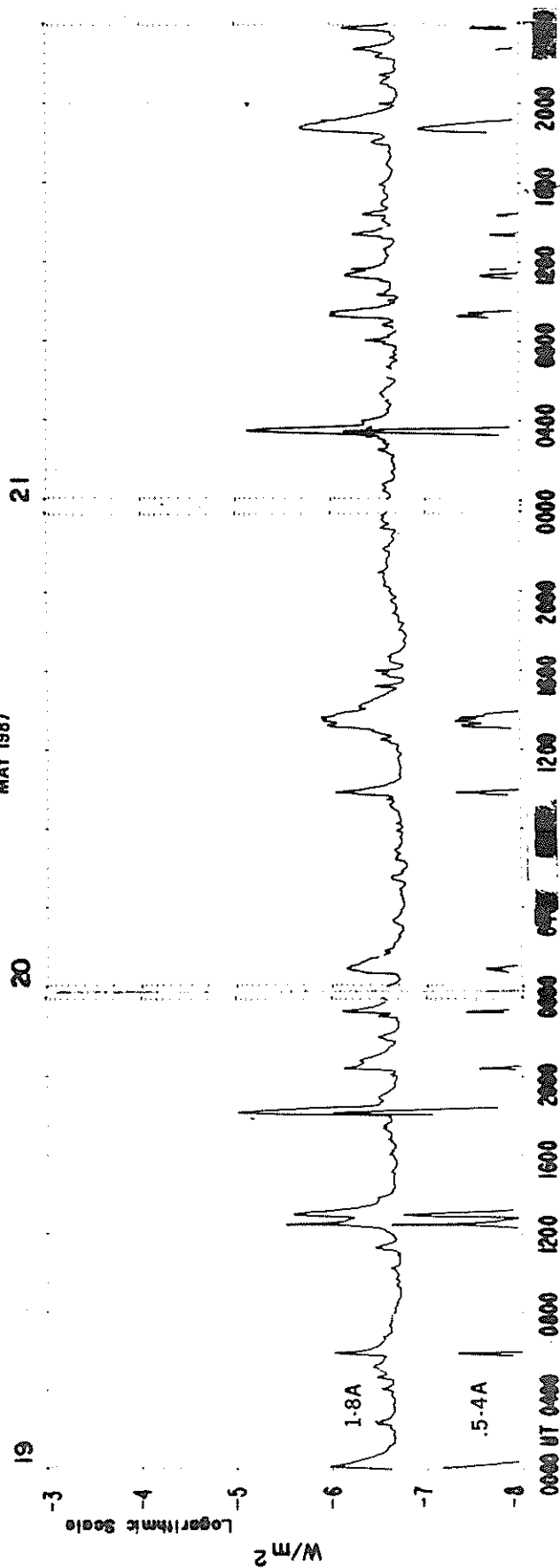
GOES 6 X-RAYS

MAY 1987



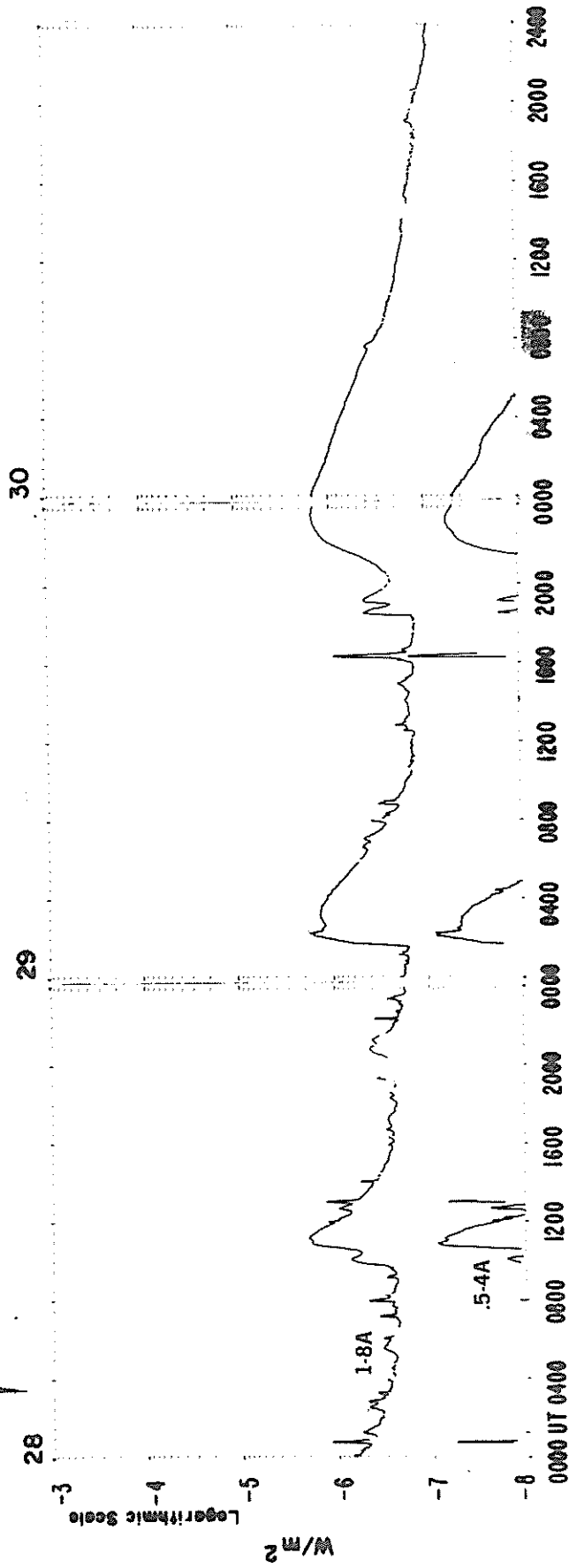
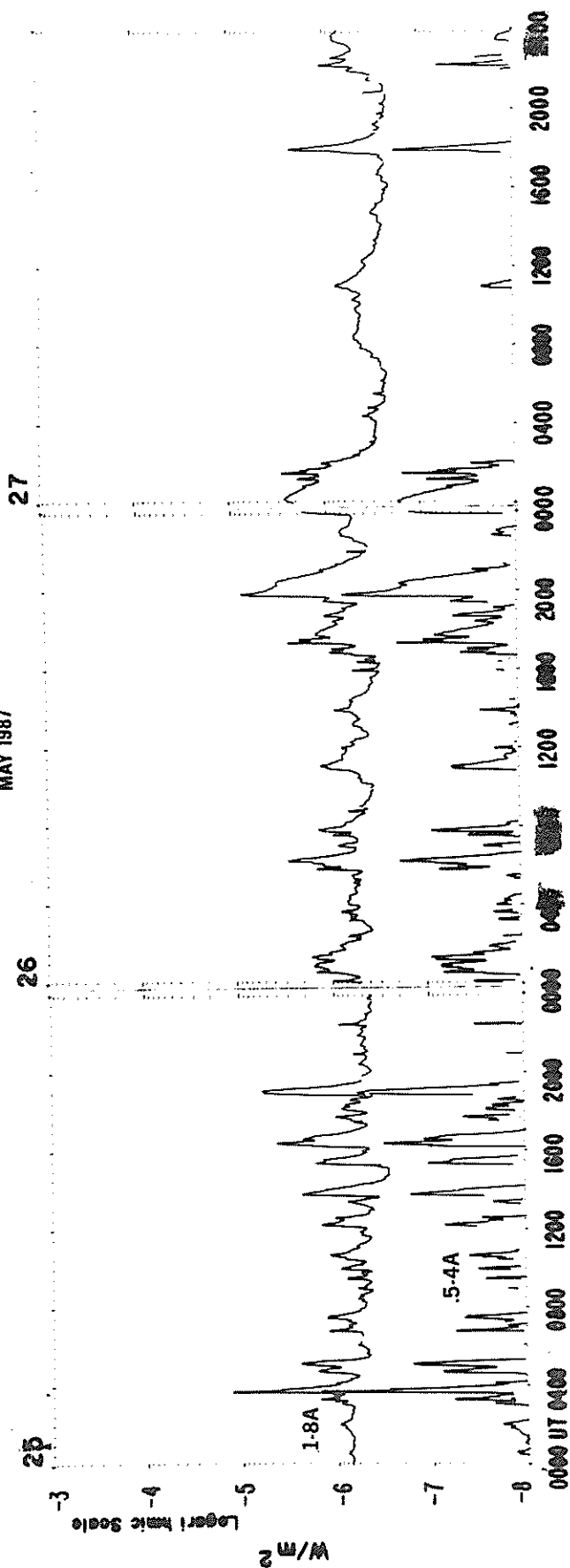
GOES 6 X-RAYS

MAY 1987



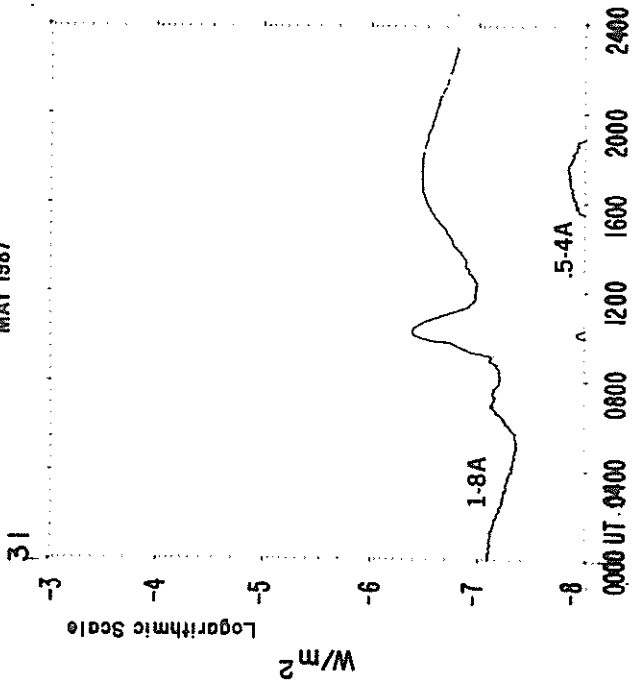
GOES 6 X-RAYS

MAY 1987



GOES 6 X-RAYS

MAY 1987



52
May 87

GOES SOLAR X-RAY FLARES
Preliminary Listing

May 1987

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp Opt	Xray
01	1259	1303	1306					B1.2
01	1510	1539	1552					B5.6
01	1836	1844	1912	S28	W35	4803	SF	B2.1
01	1858	1903	1934	N01	W57	4797	1B	C5.9
02	0055	0059	0104					B1.2
02	0108	0124	0138					B3.0
02	0149	0154	0157					B3.2
02	0201	0208	0220			4797		C3.4
02	0923	0926	0933					B1.2
02	2221	2225	2227					B2.6
03	0735	0739	0743					B1.3
03	1522	1530	1537					B2.6
03	1646	1650	1653					B1.2
03	1957	2007	2017					B2.5
04	0227	0233	0239					B2.8
04	0740	0744	0748					B1.1
04	0822	0826	0830					B1.4
04	2345	2351	2354					B1.5
05	0338	0342	0344					B7.6
05	0551	0557	0609					B3.1
05	1349	1357	1403					B2.0
05	1545	1549	1553					B1.2
05	1645	1646	1712	S31	E71	4806	SF	B6.6
05	1744	1748	1751					B1.6
05	1814	1817	1826					B2.0
05	1906	1909	1911	S31	E68	4806	SF	B1.4
05	1951	1955	1959					B1.7
05	2232	2237	2241					B1.5
06	1119	1119	1123	S30	E57	4806	SF	B1.8
06	1201	1206	1214					B2.8
06	1324	1328	1332					B2.4
06	1342	1345	1406	S30	E57	4806	SN	B2.6
06	2131	2135	2137					B1.0
07	0558	0603	0606					B2.1
07	0710	0714	0717					B1.0
07	0736	0740	0743					B1.5
07	1006	1010	1013			4806		B1.0
07	1027	1033	1037					B3.5
07	1151	1154	1157					B1.4
07	1305	1307	1309	S30	E43	4806	SF	B1.4
07	1333	1333	1337	S30	E43	4806	SF	B1.0
07	1742	1745	1748					B1.0
07	2112	2115	2117					B1.3
08	0035	0035	0043	S29	E36	4806	SF	B1.3
08	0751	0756	0804	S35	E34	4806	SF	B2.2
10	1309	1314	1322					B1.4
10	1359	1402	1407					B1.0
10	1515	1520	1528					B1.6
10	1536	1549	1612			4806		B3.0
10	2256	2304	2311					B1.2
11	0100	0106	0112			4806		B5.7
11	0236	0242	0247					B1.9
11	0735E	0736	0738D	S34	W02	4806	SF	B1.9
11	1852	1855	1857					B1.2
13	0921	0924	0925					B1.3

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp Opt	Xray
14	1223	1227	1235					B3.1
14	1734	1739	1744					B6.6
14	0015	0030	0130					C1.1
14	2031	2042	2051					B4.5
15	0626	0630	0633					B4.6
15	0811	0814	0817					B4.1
15	0907	0911	0915					B3.6
15	0944	0949	0954					B4.8
15	1014	1019	1024					C1.0
16	0410	0417	0430	S23	E60	4810	SB	C1.9
16	0748	0758	0802					B7.4
16	0938	0941	0943					B5.4
16	0944	0947	0949					C2.7
16	1037	1041	1043					C1.5
16	1109	1113	1120	N28	E70	4811	SN	C1.6
16	1145	1147	1208	N28	E70	4811	SB	C1.2
16	1155	1159	1201					B9.4
17	0144	0147	0151	N29	E53	4811	SB	B6.3
17	0837	0845	0910	S21	W45	4808	SN	C4.9
18	0924	0927	0929					B2.7
18	1113	1117	1121					B3.3
18	2221	2226	2231					B3.7
18	2321	2324	2334	N24	E32	4811	SN	C1.3
19	0004	0006	0007	S20	W64	4808	SF	C1.0
19	0217	0225	0234	N25	E28	4811	SF	B3.5
19	0533	0550	0602	S19	W69	4808	SF	B9.6
19	1223	1226	1234	S19	W71	4808	SF	C3.2
19	1252	1257	1307	N29	E28	4811	SN	C2.6
19	1808E	1810	1837	N30	E25	4811	SB	C9.6
19	2018	2024	2034					B7.8
19	2259	2303	2307					B3.2
19	2315	2318	2329	N31	E24	4811	SN	B7.7
20	0037	0054	0117					B7.1
20	0929E	0941	1004	N24	E15	4811	SN	B9.2
20	1302E	1302	1358	N30	E15	4811	1N	C1.3
20	1509	1509	1515	N29	E16	4811	SF	B3.4
21	0315	0324	0353	N23	E03	4811	1B	C7.6
21	0802E	0802	0809	N27	E03	4811	SN	B4.2
21	0911	0913	0930	N25	E04	4811	SF	C1.0
21	1017	1021	1026					B3.3
21	1135	1138	1140					B6.3
21	1317	1324	1330					B5.8
21	1419	1425	1431					B4.5
21	1831E	1845	1845D	N30	W00	4811	1F	C2.1
21	2225E	2241	2255	N26	W00	4811	SF	B5.7
21	2344	2348	2357	N25	W04	4811	SN	B7.4
22	0558	0603	0617	N25	W08	4811	SN	B8.2
22	1222	1227	1231					B7.9
22	1236	1238	1256	N29	W13	4811	SN	C4.8
22	1332	1338	1341					C1.1
22	1833	1843	1851					B9.3
22	2014	2019	2023					B8.1
23	0135	0204	0236					B4.7
23	1130	1138	1140D					C1.6
23	1546	1549	1603	N29	W25	4811	SN	B7.5
23	1713	1719	1723					B2.3

GOES SOLAR X-RAY FLARES
 Preliminary Listing

53
 May 87

May 1987

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp Opt	Xray
23	1903	1903	1908	N28	W28	4811	SN	B7.2
23	2009	2012	2015					B5.6
23	2056	2100	2102					B3.6
23	2330	2336	2343					B3.8
24	0008	0013	0018					B5.6
24	0117	0129	0136	N28	W34	4811	SF	B9.8
24	0103	0107	0149	N25	W33	4811	1F	C1.0
24	0848	0853	0858					B4.8
24	0907	0908	0912	N31	W32	4811	SB	C1.3
24	1518	1527	1548	N28	W37	4811	1B	M1.2
24	1754	1758	1811	N25	W39	4811	SN	C2.3
24	2039	2112	2133	N25	W46	4811	1B	C2.7
24	2207	2214	2218					C2.3
24	2325	2332	2342					C1.6
25	0317	0317	0324	N32	W39	4811	SF	C1.6
25	0330	0342	0403	N30	W49	4811	2B	M1.3
25	0439	0446	0453					C1.6
25	0501	0510	0514					C2.3
25	0646	0650	0652					C1.3
25	0726	0729	0736					C1.2
25	0856	0859	0904			4811		B6.0
25	0926	0930	0934					B7.9
25	0953	0959	1009			4811		B9.0
25	1202	1211	1224	N30	W52	4811	SN	C1.4
25	1343	1345	1403	N29	W49	4811	SN	C2.2
25	1513	1520	1542	N30	W53	4811	1N	C1.6
25	1609	1622	1706	N31	W54	4811	1N	C4.2
25	1724	1727	1729					B6.6
25	1850	1855	1926	N29	W56	4811	1N	C5.9
25	2054	2057	2059					B6.1
25	2220	2227	2231	N29	W54	4811	SN	B9.6
25	2359	0006	0014	N35	W53	4811	1N	C1.0

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp Opt	Xray
26	0039E	0039	0111	N25	W57	4811	SF	C1.5
26	0112	0122	0126					C1.6
26	0545	0549	0553					C1.4
26	0610	0616	0622	N24	W59	4811	SN	C2.8
26	0657	0700	0708					B8.5
26	0730	0734	0737					B9.8
26	0743	0743	0754	N29	W61	4811	SN	C1.3
26	0845	0848	0850					B7.0
26	1054	1105	1112					C1.2
26	1553	1557	1601					B5.7
26	1619	1623	1625					B5.3
26	1647	1702	1705	N25	W65	4811	SN	B9.6
26	1717	1723	1725					C2.7
26	1839	1843	1851					C1.0
26	1941	1946	2010	N28	W70	4811	1N	C8.1
26	2356	2356	0005	N28	W71	4811	SF	C2.6
27	0109	0114	0116					C1.9
27	0132	0136	0143	N22	W71	4811	SF	C2.9
27	1754	1756	1803	N30	W80	4811	SN	C2.3
27	2046	2050	2053					B3.7
27	2209	2214	2220					C1.1
27	2233	2236	2241					B8.2
28	0043	0048	0051					C1.2
28	0709	0712	0715					B3.8
28	0756	0759	0804					B4.7
28	0949	1114	1156					C1.9
28	1258	1304	1306					C1.2
28	1402	1405	1407					B5.2
28	2219	2222	2224					B3.8
29	0138	0218	0432					C1.7
29	0848	0852	0900					B3.2
29	1614	1623	1627					B9.4
29	1825	1834	1851					B4.3

54
May 87

Preliminary GOES Satellite Data
Daily Average X-ray Background

June 1986 - May 1987

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

MASS EJECTIONS FROM THE SUN

55
May 87

MAY 1987

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		LStart	Max	End	RA ^o	R/R _o		
PALE	May 19	1759.0		1833.0			Meter	II
SGMR	May 19	1800.0		1834.0			Meter	II
WEIS	May 19	1809.3		1814.4			160-30 MHz	II Harmonic
CULG	May 21	0323.0		0343.0			Meter	II
PALE	May 21	0330.0		0345.0			Meter	II
LEAR	May 21	0332.0		0345.0			Meter	II
LEAR	May 21	0342.0		0932.0			Meter	IV
SVTO	May 21	0912.0		1743.0			Meter	IV

QUALIFIERS ON START, MAX AND END TIMES

D = event ended after tabulated time
 E = event began before the tabulated time
 U = uncertain time

REPORTING STATIONS

CULG = Culgoora
 LEAR = Learmonth
 PALE = Palehua
 SGMR = Sagamore Hill
 SVTO = San Vito
 WEIS = Weissenau

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

56
May 87

ACTIVE PROMINENCES AND FILAMENTS

MAY 1987													
Day	Event Type	Start (UT)	End (UT)	Lat	CMD	Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta NOAA/USAF Reg# Remarks
01	AFS	0211E	0907D	S28	W27	04	29.1		02	5	5	E	LEAR 4803
01	AFS	0620E	1702D	S01	W47	04	27.8		02	9	9	E	SVTO 4797
01	AFS	0758E	1702D	S29	W29	04	29.1		02	9	9	E	SVTO 4803
01	BSL	0813	0835	N25	E90	05	8.3	1				C	ABST
01	ADF	0826E	1223D	S27	E74	05	7.1	1	04	9	9	E	SVTO 4804
01	AFS	1120E	1838D	N02	W52	04	27.7		03	9	9	E	RAMY 4797
01	AFS	1120E	1946D	S28	W35	04	28.8		03	9	9	E	RAMY 4803
01	ADF	1225E	1838D	N02	W49	04	27.9	2	26	9	9	E	RAMY 4797
01	ADF	1340E	0110D	N02	W54	04	27.6	1	03	9	9	E	HOLL 4797
01	AFS	1342E	0139D	S29	W33	04	29.1	1	02	8	8	E	HOLL 4803
01	AFS	1525E	1838D	N00	W53	04	27.8		03	9	9	E	RAMY 4797
01	ADF	1530E	1838D	S31	W35	04	29.0	2	04	8	7	E	RAMY 4803
01	DSD	1902E	2100D	S28	W35	04	29.1		03	9	9	E	HOLL 4803 Flare Associated
01	SDF	1934E	0127D	N12	W56	04	27.7		12	0	0	E	HOLL 4800
01	AFS	2229E	0440D	S28	W38	04	29.1	1	01	5	6	E	PALE 4803
02	AFS	0130E	0313D	S28	W40	04	29.0		03	6	6	E	LEAR 4803
02	ADF	0517E	1710D	S01	W60	04	27.8	1	06	9	9	E	SVTO 4797
02	AFS	0534E	1710D	S29	W42	04	29.0		03	9	9	E	SVTO 4803
02	AFS	0710E	1710D	N06	E27	05	4.3		02	9	9	E	SVTO
02	ADF	1120E	1550D	S33	W46	04	28.9	2	03	9	9	E	RAMY 4803
02	ADF	1120E	2112D	N01	W63	04	27.9	2	24	8	9	E	RAMY 4797
02	AFS	1120E	2112D	S28	W44	04	29.1		02	9	9	E	RAMY 4803
02	ADF	1340E	0110D	N02	W54	04	28.6	1	03	9	9	E	HOLL 4797
02	AFS	1410E	1614D	S29	W46	04	29.1		02	9	7	E	HOLL 4803
02	DSD	1902E	2100D	S28	W35	04	30.0		03	9	9	E	HOLL 4803 Flare Associated
02	SDF	1934E	0127D	N12	W56	04	28.7		12	0	0	E	HOLL 4800
02	AFS	2220E	2330D	N05	E20	05	4.4		03	7	8	E	HOLL 4805
02	DSD	2235	2330D	N01	W72	04	27.7		06	9	9	E	HOLL 4797
03	AFS	0759E	1659D	S29	W56	04	29.0		03	9	9	E	SVTO 4803
03	ADF	0800E	1230D	S28	E47	05	7.0	1	05	9	7	E	SVTO 4804
03	AFS	0809E	1230D	N34	W34	04	30.6		02	9	9	E	SVTO 4801
03	DSD	1109E	1535D	S26	W59	04	29.0		02	9	9	E	RAMY 4803
03	AFS	1109E	1856D	S28	W57	04	29.1		02	9	9	E	RAMY 4803
03	ASR	1650E	0136D	S30	E90	05	10.8		8	8	8	E	HOLL
03	ASR	1720E	1856D	S31	E89	05	10.7	1	7	8	8	E	RAMY
03	ASR	1840E	0249D	S31	E90	05	10.9		7	8	8	E	PALE
04	SDF	0215E	0310	N32	W41	04	30.8		03	0	0	E	PALE 4801
04	DSD	1220E	1411D	S30	E32	05	7.0		02	9	9	E	RAMY 4804
04	ADF	1220E	2115D	N32	W43	05	1.1	2	04	8	8	E	RAMY 4801
04	ASR	1245E	2115D	S32	E90	05	11.6		9	9	9	E	RAMY 4806
04	SDF	1356E	1135D	N32	W58	04	30.0		04	0	0	E	RAMY 4801
04	DSD	1520	1840D	S31	E83	05	11.2		06	9	9	E	HOLL
05	APR	0552	0901	N36	E90	05	12.5	1				C	ABST
05	BSL	0609	0901	N05	E90	05	12.0	1				C	ABST
05	ADF	0720E	0827D	S32	E76	05	11.3	1	07	9	9	E	SVTO 4806
05	ADF	0755E	0827D	N05	W11	05	4.5	2	08	9	9	E	SVTO 4805
05	AFS	1115E	1740D	N04	W16	05	4.3		02	7	9	E	RAMY 4805
05	ADF	1115E	2146D	N03	W14	05	4.4	2	03	8	6	E	RAMY 4805
05	ADF	1115E	2146D	N07	W13	05	4.5	2	07	9	9	E	RAMY 4805
05	ADF	1115E	2146D	S33	E70	05	11.0	2	04	9	7	E	RAMY 4806
05	ASR	1250E	1258	S31	E89	05	12.5		9	9	9	E	HOLL 4806
05	AFS	1613E	0008D	S33	E75	05	11.6		02	9	9	E	HOLL 4806
05	SDF	1834E	1834D	N17	E50	05	9.6		05	0	0	E	PALE
05	SDF	1834E	1834D	N33	E46	05	9.4		08	0	0	E	PALE
05	SDF	1834E	1834D	N38	W21	05	4.1		04	0	0	E	PALE
05	SDF	1834E	1834D	N43	W49	05	1.7		06	0	0	E	PALE
05	DSD	2132	2345D	S32	E72	05	11.6		02	9	9	E	PALE 4806
05	AFS	2350E	0059D	S31	E73	05	11.7		02	9	9	E	PALE 4806
06	DSD	0754E	0922D	S30	E57	05	10.8		04	9	9	E	LEAR 4806
06	SDF	0906E	2334D	N36	W28	05	4.1	3	60	0	0	E	LEAR
06	DSD	1051E	1901D	S29	E59	05	11.1		06	9	9	E	RAMY 4806
06	ADF	1051E	1901D	S30	E59	05	11.1	2	05	9	8	E	RAMY 4806
06	ADF	1051E	1901D	S31	E06	05	6.9	2	05	9	9	E	RAMY 4804
06	ADF	1115E	1901D	N03	W28	05	4.4	2	04	8	7	E	RAMY 4805
06	SDF	1315E	1335D	N15	E46	05	10.0		11	0	0	E	HOLL
06	SDF	1335E	1335D	N28	E40	05	9.7		17	0	0	E	HOLL

ACTIVE PROMINENCES AND FILAMENTS

57
May 87

MAY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
06	DSD	1349	1617D	S30	E57	05	11.0		06	9	9	E	HOLL	4806	Flare Associated
06	AFS	1735E	0324D	S30	E56	05	11.1		03	9	9	E	PALE	4806	
07	AFS	0524E	1740D	S34	E50	05	11.2		02	7	9	E	SVTO	4806	
07	ASR	0850E	1740D	N32	W90	04	30.2			8	9	E	SVTO	4801	
07	ADF	1125E	1822D	S30	W11	05	6.6	2	03	9	5	E	RAMY	4804	
07	AFS	1125E	1822D	S34	E48	05	11.3		03	9	9	E	RAMY	4806	
07	ADF	1125E	1822D	S35	E44	05	11.0	2	04	8	7	E	RAMY	4806	
07	DSD	2346E	0049D	S07	E30	05	10.2		04	9	9	E	LEAR		
07	DSD	2346E	0049D	S07	E30	05	10.2		04	9	9	E	LEAR		
08	DSD	0001E	0008D	S09	E31	05	10.3		03	6	9	E	PALE		
08	AFS	0049E	0919D	S34	E38	05	11.1		02	9	9	E	LEAR	4806	
08	DSD	0235E	0400D	S30	W16	05	6.8		06	9	9	E	LEAR	4804	
08	DSD	0512E	0537	S30	E33	05	10.8		03	9	9	E	SVTO	4806	
08	DSD	0520	0538D	S30	E32	05	10.7		04	9	9	E	LEAR	4806	
08	AFS	0615E	0837D	S32	E36	05	11.1		03	9	9	E	SVTO	4806	
08	AFS	0836E	1104D	S34	E33	05	11.0	1	02	9	9	E	SVTO	4806	
08	AFS	0915E	1508D	S32	E35	05	11.1	1	02	9	9	E	SVTO	4806	
08	ADF	1110E	1858D	S06	E31	05	10.8	2	07	9	8	E	RAMY		
08	ADF	1110E	1858D	S28	E44	05	11.9	2	04	8	6	E	RAMY	4806	
08	AFS	1110E	1858D	S34	E34	05	11.2		03	9	9	E	RAMY	4806	
08	ADF	1110E	1858D	S35	E43	05	11.9	2	04	9	8	E	RAMY	4806	
08	ADF	1110E	1858D	S36	E32	05	11.0	2	03	8	6	E	RAMY	4806	
08	ADF	1110E	1858D	S37	W22	05	6.7	2	05	7	7	E	RAMY	4804	
08	AFS	1510E	1723D	S33	E32	05	11.2	1	03	6	9	E	SVTO	4806	
09	AFS	0021E	0721D	S34	E27	05	11.2		04	9	9	E	LEAR	4806	
09	ADF	0529E	0610D	S06	E19	05	10.6	2	04	9	9	E	SVTO		
09	DSD	0605E	0635D	S32	E24	05	11.1		03	9	9	E	SVTO	4806	
09	ADF	1112E	2207D	S04	E18	05	10.8	2	07	8	7	E	RAMY	4807	
09	ADF	1753E	2207D	S35	E27	05	11.9	2	07	9	7	E	RAMY	4806	
09	SDF	2207E	1100D	S06	E05	05	10.3		09	0	0	E	RAMY	4807	
10	SDF	0020E	1227D	S04	E02	05	10.2		09	0	0	E	HOLL	4807	
10	AFS	0121E	0500D	S28	W43	05	6.7		03	9	9	E	LEAR	4804	
10	AFS	0121E	0838D	S34	E13	05	11.1		03	9	9	E	LEAR	4806	
10	BSD	0138	0155	S32	E18	05	11.5		02	9	9	E	LEAR	4806	
10	ADF	0505E	0859D	S31	E16	05	11.5	1	05	9	9	E	LEAR	4806	
10	DSD	0510E	0529D	S27	E07	05	10.8		03	9	9	E	SVTO	4806	
10	ADF	0510E	0529D	S28	E08	05	10.8	1	02	9	9	E	SVTO	4806	
10	AFS	0620E	0800D	S20	E47	05	13.8		02	6	9	E	SVTO		
10	ADF	0715E	1541D	S31	E16	05	11.6	1	06	9	9	E	SVTO	4806	
10	DSD	0945E	1730D	S29	E06	05	10.9		03	9	9	E	SVTO	4806	
10	SDF	1025E	1025D	S10	W02	05	10.3	3	08	0	0	E	SVTO	4807	
10	ADF	1059E	2221D	S35	E22	05	12.2	2	08	9	9	E	RAMY	4806	
10	DSD	1240E	2221D	S32	E12	05	11.5		03	8	8	E	RAMY	4806	
10	ADF	1257E	1550D	S35	E15	05	11.7	1	09	9	9	E	HOLL	4806	
10	SDF	1540E	1550D	S35	E15	05	11.8		09	0	0	E	HOLL	4806	
10	SDF	1555E	1619D	S33	E12	05	11.6	3	06	0	0	E	SVTO	4806	
10	AFS	2050E	0002D	S30	E04	05	11.2		02	7	9	E	PALE	4806	
10	SDF	2207E	1100D	S06	E05	05	11.3		09	0	0	E	RAMY	4807	
10	SDF	2221E	1322D	S18	W08	05	10.3		03	0	0	E	RAMY	4807	
11	ADF	0112E	0909D	S16	W02	05	10.9	1	08	8	7	E	LEAR		
11	AFS	0115E	0909D	S32	E07	05	11.6		03	9	9	E	LEAR	4806	
11	AFS	0240E	0446D	S31	W01	05	11.0		02	9	9	E	PALE	4806	
11	SSB	0245		227	W07	05	13.1			0	0	E	PALE		
11	DSD	0418	0909D	S22	E33	05	13.7		03	9	9	E	LEAR	4808	
11	ADF	1122E	1655D	S35	E06	05	11.9	1	03	9	9	E	SVTO	4806	
11	AFS	1311E	1655D	S21	E30	05	13.8		01	9	9	E	SVTO	4808	
11	ADF	1330E	2320D	S35	E05	05	12.0	2	05	8	7	E	HOLL	4806	
11	ADF	1330E	2122D	S35	E06	05	12.0	2	05	9	7	E	RAMY	4806	
11	ADF	1344E	2122D	S26	E02	05	11.7	2	04	6	7	E	RAMY	4806	
11	ADF	1349E	2122D	S15	W11	05	10.7	2	08	8	4	E	RAMY	4807	
11	AFS	1530E	1550D	S29	E00	05	11.6		02	8	8	E	HOLL	4806	
11	ADF	1554E	1638D	S22	E29	05	13.9		03	7	9	E	HOLL	4808	
12	AFS	0235E	0720D	S21	E22	05	13.8		01	8	9	E	LEAR	4808	
12	ADF	0700E	0718D	N38	E14	05	13.4	1				V	KHAR		
12	ADF	0728E	1702D	S32	W13	05	11.3	1	05	9	9	E	SVTO	4806	

ACTIVE PROMINENCES AND FILAMENTS

MAY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
12	ADF	0728E	1702D	S35	W03	05 12.1	1	08	9	9	E	SVTO	4806	
12	DSD	0858E	0908D	N34	E13	05 13.4	1				V	KHAR		
12	AFS	0930E	1618D	S21	E19	05 13.8		02	9	9	E	SVTO	4808	
12	AFS	0930E	1702D	N27	W13	05 11.4		02	9	9	E	SVTO		
12	AFS	1148E	1702D	S55	W22	05 10.6		02	9	9	E	SVTO		
12	DSD	1413E	1506D	N27	W16	05 11.3		02	9	9	E	SVTO		
12	SDF	1418E	1438D	S13	W11	05 11.8		07	0	0	E	HOLL	4807	
12	ADF	1430E	2101D	S32	W05	05 12.2	1	05	8	8	E	RAMY	4806	
12	ADF	1432E	2101D	S32	W05	05 12.2	1	04	9	7	E	RAMY	4806	
12	AFS	1435E	2101D	N26	W17	05 11.3		02	8	6	E	RAMY	4809	
12	AFS	1437E	2101D	N25	W17	05 11.3		04	9	9	E	RAMY	4809	
12	ADF	1440E	2101D	S16	W23	05 10.9	1	03	7	4	E	RAMY	4807	
12	AFS	1451E	2015D	N26	W17	05 11.3		02	9	9	E	HOLL	4809	
12	AFS	1634E	1638D	N26	W16	05 11.4		02	9	9	E	PALE	4809	
12	AFS	1647E	2028D	S55	W25	05 10.5		02	8	8	E	PALE		
13	BSL	0756	0840	S47	E90	05 20.9	1				C	ABST		
13	DSD	0926E	1038D	S35	W28	05 11.1		02	9	9	E	SVTO	4806	
13	ADF	1129E	1435D	S57	W30	05 10.9	2	03	9	9	E	RAMY		
13	ADF	1133E	1729D	S30	W18	05 12.1	2	08	8	7	E	RAMY	4806	
13	ADF	1133E	1729D	S32	W29	05 11.2	2	03	9	9	E	RAMY	4806	
13	ADF	1133E	1729D	S33	W26	05 11.4	2	02	9	7	E	RAMY	4806	
13	ADF	1133E	1729D	S35	W32	05 10.9	2	04	8	7	E	RAMY	4806	
13	ADF	1133E	2014D	S36	W23	05 11.6	2	08	9	9	E	RAMY	4806	
13	SDF	1330E	1435D	S57	W30	05 10.9	3	03	0	0	E	RAMY		
13	ADF	1410E	2324D	S33	W30	05 11.2	1	04	9	9	E	HOLL	4806	
14	BSL	0844E	0856D	N37	E90	05 21.6	1				V	KHAR		
14	ADF	0936E	1448D	S32	W41	05 11.1	1	04	9	9	E	SVTO	4806	
14	ASR	1325E	2023D	N33	E90	05 21.7	2		9	9	E	RAMY	4811	
14	ASR	1328E	1448D	N27	E90	05 21.6			9	9	E	SVTO		
14	SDF	1745E	0018D	N24	W03	05 14.5		05	0	0	E	HOLL		
14	SDF	1745E	0018D	S42	E36	05 17.7		06	0	0	E	HOLL		
14	ASR	1755E	0018D	N29	E90	05 21.8			9	9	E	HOLL	4811	
14	AFS	1930E	0018D	N24	E46	05 18.4	1	01	9	9	E	HOLL		
15	BSL	1024	1032	N10	E90	05 22.2	1				C	ABST		
15	ASR	1222E	1547D	N31	E90	05 22.6			8	7	E	RAMY	4811	
15	ASR	1534E	2216D	N28	E76	05 21.6			8	8	E	RAMY	4811	
15	ADF	1547E	2216D	S35	W45	05 12.0	2	02	9	8	E	RAMY	4806	
15	ADF	1547E	2216D	S40	W45	05 12.0	2	05	8	7	E	RAMY	4806	
15	ASR	1809E	2304D	N29	E90	05 22.8			9	8	E	HOLL	4811	
15	ASR	1815E	0430D	N30	E81	05 22.1			9	9	E	PALE	4811	
15	DSD	2155E	2304D	N27	E68	05 21.2		02	9	9	E	HOLL	4811	
16	BSL	0403	0600	N26	E90	05 23.2	1				C	ABST		
16	DSD	0418E	0505D	S26	E62	05 21.0		03	9	9	E	LEAR	4810	Flare Associated
16	BSL	0528	0840	N45	E90	05 23.7	1				C	ABST		
16	BSL	0620	0840	N33	W90	05 9.1	1				C	ABST		
16	APR	0826E	0945D	N46	E90	05 23.8	1				V	KHAR		
16	ADF	0912E	0933D	N35	E73	05 22.2	1				V	KHAR		
16	ADF	0924	1015D	S27	E68	05 21.7	1				V	KHAR		
16	ASF	0930E	0955D	S17	E60	05 20.9	1				V	KHAR		
16	BSL	0942	1008D	N33	E90	05 23.5	1				V	KHAR		
16	ASR	1056E	2218D	N28	E72	05 22.1			9	9	E	RAMY	4811	
16	AFS	1128E	1710D	N30	E68	05 21.8	1	03	9	9	E	SVTO	4811	
16	AFS	1255E	2218D	N28	E69	05 21.9		02	9	9	E	RAMY	4811	
16	ADF	1258E	1710D	S25	E59	05 21.1	1	07	9	9	E	SVTO	4810	
16	AFS	1307E	1710D	S20	W31	05 14.2	1	02	9	9	E	SVTO	4808	
16	AFS	1317E	2218D	S20	W30	05 14.2		02	8	8	E	RAMY	4808	
16	AFS	1427E	0143D	S20	W31	05 14.2		01	9	9	E	HOLL	4808	
16	DSD	1527E	2218D	S19	W30	05 14.3		02	9	9	E	RAMY	4808	
16	DSD	1804E	0219D	N28	E58	05 21.3		08	9	9	E	PALE	4811	
16	AFS	1808E	0219D	S20	W34	05 14.1		02	9	9	E	PALE	4808	
16	DSD	1855	2123D	S21	E49	05 20.5		02	9	9	E	HOLL	4810	
16	DSD	2035E	2218D	S20	W37	05 14.0		04	9	9	E	RAMY	4808	
17	DSD	0150E	0219D	S17	W41	05 14.0		06	9	9	E	PALE	4808	
17	AFS	0420E	0508D	S20	W41	05 14.0		02	9	9	E	LEAR	4808	
17	DSD	0923E	1118D	N26	E48	05 21.1	1	05	9	9	E	SVTO	4811	
17	ADF	0928E	1423D	S26	E53	05 21.5	1	06	9	9	E	SVTO	4810	

ACTIVE PROMINENCES AND FILAMENTS

59
May 87

MAY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
17	ADF	0932E	1423D	S18	W42	05 14.2	1	05	9	9	E	SVTO	4808	
17	AFS	1050E	1330D	S19	W41	05 14.3		02	9	9	E	RAMY	4808	
17	ADF	1050E	1600D	S19	W39	05 14.5	2	04	9	9	E	RAMY	4808	
17	ADF	1107E	2016D	S23	E47	05 21.1	2	04	8	7	E	RAMY	4810	
17	ADF	1126E	2016D	N24	E50	05 21.3	2	06	9	9	E	RAMY	4811	
17	ADF	1132E	2016D	S36	W74	05 11.5	2	06	9	6	E	RAMY	4806	
17	DSD	1206E	1229D	S19	W42	05 14.3		03	9	9	E	RAMY	4808	
17	DSD	1206E	1720D	N24	E55	05 21.7		05	9	8	E	RAMY	4811	
17	DSD	1240E	1357D	S19	W43	05 14.2		08	9	9	E	RAMY	4808	
17	ADF	1243E	2016D	N34	E55	05 21.9	1	07	9	9	E	RAMY	4811	
17	ADF	1310E	2340D	S18	W42	05 14.3	1	09	9	9	E	HOLL	4808	
17	DSD	1330E	1423D	N27	E46	05 21.1	1	05	9	9	E	SVTO	4811	
17	DSD	1400E	1508D	N27	E46	05 21.2		02	9	9	E	HOLL	4811	
17	DSD	1420E	1600D	S18	W43	05 14.3		05	9	9	E	RAMY	4808	
17	ADF	1420E	2016D	S22	W47	05 14.0	1	04	9	9	E	RAMY	4808	
17	DSD	1431E	1720D	N26	E45	05 21.1		03	8	9	E	RAMY	4811	
17	DSD	1550E	1657D	N27	E45	05 21.2		02	9	9	E	HOLL	4811	
17	SDF	1600E	1610D	S19	W41	05 14.5		04	0	0	E	RAMY	4808	
17	DSD	1850E	2019D	S27	E44	05 21.2		04	9	9	E	PALE	4811	
17	ADF	1901E	0447D	S26	E51	05 21.7	1	03	9	8	E	PALE	4811	
18	ADF	0130E	0908D	S19	W52	05 14.1	1	05	9	9	E	LEAR	4808	
18	AFS	0134E	0615D	N26	E47	05 21.7		03	9	9	E	LEAR	4811	
18	DSD	0245E	0447D	N27	E42	05 21.4		06	9	9	E	PALE	4811	
18	ADF	0540E	1527D	S24	E35	05 20.9	1	05	9	9	E	SVTO	4810	
18	ADF	0542E	1527D	S21	W58	05 13.8	1	06	9	9	E	SVTO	4808	
18	ADF	0543E	1730D	N33	E44	05 21.7	1	13	9	9	E	SVTO	4811	
18	BSL	0800	0828	N33	W90	05 11.2	1				C	ABST		
18	BSL	0800	0906	S40	W90	05 11.0	1				C	ABST		
18	ASF	0818	0858D	N25	E38	05 21.3	1				V	KHAR		
18	DSD	0845E	0900D	N36	E44	05 21.9	1				V	KHAR		
18	DSD	0915E	0925D	N27	E39	05 21.4	1				V	KHAR		
18	ASF	0915E	1035D	N26	E40	05 21.5	1				V	KHAR		
18	BSL	0942E	1005D	S36	W90	05 11.2	1				V	KHAR		
18	DSD	0950	1022	S35	W85	05 11.6	1				V	KHAR		
18	DSD	1004	1016	S21	W56	05 14.1	1				V	KHAR		
18	ASF	1050	1110D	N27	E41	05 21.6	1				V	KHAR		
18	ADF	1327E	1706D	N24	E34	05 21.2	2	04	9	9	E	RAMY	4811	
18	ADF	1327E	1706D	N30	E43	05 21.9	1	03	9	9	E	RAMY	4811	
18	ADF	1327E	1706D	S22	W60	05 13.9	2	02	8	9	E	RAMY	4808	
18	APR	1345E	1706D	S42	W90	05 11.2	2		8	9	E	RAMY	4806	
18	DSD	1519E	1535D	N29	E34	05 21.3		02	9	9	E	SVTO	4811	
18	ADF	1915E	0447D	N31	E40	05 21.9	1	03	7	9	E	PALE	4811	
18	DSD	1915E	2210	N27	E34	05 21.4		03	9	8	E	PALE	4811	
18	AFS	2100E	2150	N31	E39	05 21.9		02	9	7	E	PALE	4811	
19	ADF	0110E	0529D	S24	E25	05 21.0	2	03	7	9	E	LEAR	4810	
19	ADF	0122E	0921D	N29	E37	05 21.9	2	04	9	9	E	LEAR	4811	
19	ADF	0122E	0921D	N43	E52	05 23.3	2	09	8	8	E	LEAR		
19	ASR	0238	0637D	S31	W90	05 12.0			9	8	E	LEAR		
19	BSL	0423	0740	S50	W90	05 11.5	1				C	ABST		
19	ADF	0515E	1510D	N37	E34	05 21.9	1	13	9	9	E	SVTO	4811	
19	ADF	0627E	1510D	S24	E22	05 21.0	1	03	7	9	E	SVTO	4810	
19	ADF	0752E	0905D	N25	E27	05 21.4	1				V	KHAR		
19	DSD	0850	1020	N24	E24	05 21.2	2				V	KHAR		
19	DSD	0852E	0905D	S21	W69	05 14.1	1				V	KHAR		
19	DSD	0919E	1510D	N23	E25	05 21.3		04	9	9	E	SVTO	4811	
19	AFS	1510E	1532D	N12	E03	05 19.8		02	8	9	E	SVTO	4810	
19	ADF	1530E	1635D	N29	E24	05 21.5	1	04	9	9	E	SVTO	4811	
19	DSD	1530E	1655D	N22	E24	05 21.5		04	9	9	E	SVTO	4811	
19	ADF	1609E	1617D	N22	E25	05 21.6	1	04	9	9	E	RAMY	4811	
19	ADF	1609E	1617D	N28	E31	05 22.1	1	05	8	9	E	RAMY	4811	
19	ADF	1915E	0447D	N31	E40	05 22.9	1	03	7	9	E	PALE	4811	
19	ADF	2052	2103D	N25	E24	05 21.7	1	03	7	5	E	PALE	4811	
19	SDF	2108	2113	N26	E25	05 21.8		03	9	9	E	PALE	4811	
19	DSD	2344	0115D	N26	E22	05 21.7		04	9	8	E	PALE	4811	
20	DSD	0212E	0449D	S26	E16	05 21.3		05	9	6	E	LEAR	4810	
20	ADF	0215E	0914D	N46	E37	05 23.2	2	09	8	7	E	LEAR		
20	ADF	0603E	1350D	N23	E15	05 21.4	2	04	8	9	E	SVTO	4811	
20	ADF	0744E	1441D	S21	E08	05 20.9	2	05	9	9	E	SVTO	4810	

60
May 87

ACTIVE PROMINENCES AND FILAMENTS

MAY 1987													
Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg# Remarks
20	DSD	0950E	1350D	S24	E11	05 21.2		02	9	9	E	SVTO	4810
20	ASR	1034E	1441D	S20	W90	05 13.5			9	9	E	SVTO	
20	ADF	1350E	1441D	N30	E13	05 21.6	2	06	9	9	E	SVTO	4811
20	ADF	1450E	2101D	N25	E08	05 21.2	2	04	9	6	E	RAMY	4811
20	ADF	1450E	2101D	N25	E13	05 21.6	2	03	8	6	E	RAMY	4811
20	ADF	1450E	2101D	N34	E16	05 21.9	2	06	9	9	E	RAMY	4811
20	ADF	1450E	2101D	S20	E07	05 21.1	2	07	9	8	E	RAMY	4810
20	ADF	1450E	2101D	S26	E06	05 21.1	2	05	9	9	E	RAMY	4810
20	ASR	1540E	2101D	S10	W90	05 13.9	2		9	9	E	RAMY	4808
20	AFS	1720E	2101D	N30	E12	05 21.7		01	8	9	E	RAMY	4811
20	ASR	1741E	0400D	S20	W90	05 13.8			9	9	E	PALE	4808
20	AFS	1850E	0400D	N26	E12	05 21.7		04	9	9	E	PALE	4811
20	DSO	1959E	2101D	N30	E10	05 21.6		02	9	9	E	RAMY	4811
20	ADF	2315E	0400D	N25	E08	05 21.6	1	05	9	9	E	PALE	4811
20	ADF	2315E	0400D	N30	E08	05 21.6	2	11	9	9	E	PALE	4811
21	DSD	0335E	0400D	N24	E07	05 21.7		03	9	9	E	PALE	4811 Flare Associated
21	DSD	0642E	0722	N33	E04	05 21.6	1				V	KHAR	
21	ADF	0655	0728	N25	W01	05 21.2	1				V	KHAR	
21	BSL	0700	0802	S40	E90	05 28.6	1				C	ABST	
21	DSD	0725	0738	N26	E05	05 21.7	1				V	KHAR	
21	DSD	0750E	0955D	N23	E00	05 21.3		03	9	9	E	SVTO	4811
21	ADF	0750E	0955D	N26	E01	05 21.4	2	07	9	9	E	SVTO	4811
21	ADF	0750E	0955D	N30	E03	05 21.6	2	07	9	9	E	SVTO	4811
21	AFS	0815E	0926D	N29	E07	05 21.9		03	9	9	E	LEAR	4811
21	DSO	0920	0935D	N35	E06	05 21.9	1				V	KHAR	
21	ADF	1359E	2122D	N22	E03	05 21.8	2	02	9	9	E	RAMY	4811
21	ADF	1359E	2122D	N24	E01	05 21.6	2	02	9	9	E	RAMY	4811
21	ADF	1359E	2122D	N28	E03	05 21.8	2	06	8	9	E	RAMY	4811
21	DSD	1915E	2258D	N27	W05	05 21.4		02	9	9	E	HOLL	4811
22	DSD	0040E	0516D	N29	W01	05 21.9		02	9	9	E	LEAR	4811
22	SDF	0432E	0432D	N52	E17	05 23.6		10	0	0	E	SVTO	
22	BSL	0501	0850	S38	E90	05 29.5	1				C	ABST	
22	ADF	0515E	1722D	S21	W21	05 20.6	2	08	9	9	E	SVTO	4810
22	DSD	0545E	0623D	N22	W07	05 21.7		04	9	9	E	SVTO	4811
22	DSD	0725E	0726D	N25	W05	05 21.9		05	9	9	E	SVTO	4811
22	DSD	0831E	0909D	N25	W07	05 21.8		04	8	9	E	LEAR	4811
22	ADF	1300E	1800D	N31	W11	05 21.7		05	9	9	E	HOLL	4811
22	ADF	1536E	2139D	N22	W15	05 21.5	2	03	8	5	E	RAMY	4811
22	ADF	1536E	2139D	N32	W13	05 21.6	2	03	9	6	E	RAMY	4811
22	ADF	2100E	2139D	S24	W26	05 20.9	2	07	9	6	E	RAMY	4810
23	ADF	0250E	0747D	N23	W14	05 22.0	2	04	9	9	E	LEAR	4811
23	BSL	0451	0859	S41	W90	05 15.8	1				C	ABST	
23	ADF	0507E	1719D	N31	W19	05 21.7	1	07	9	9	E	SVTO	4811
23	ADF	0511E	1719D	S24	W30	05 20.9	1	08	9	9	E	SVTO	4810
23	AFS	0524E	0747D	N02	E24	05 25.0		02	9	9	E	LEAR	
23	BSL	0645	0859	N42	W90	05 15.9	1				C	ABST	
23	BSL	0645	0859	S18	W90	05 16.4	1				C	ABST	
23	AFS	0650E	0747D	N25	W23	05 21.5		03	9	9	E	LEAR	4811
23	ADF	1137E	2125D	N25	W27	05 21.4	2	05	7	9	E	RAMY	4811
23	ADF	1137E	2125D	N36	W21	05 21.8	2	12	9	9	E	RAMY	4811
23	ADF	1137E	2125D	S24	W34	05 20.8	2	08	9	9	E	RAMY	4810
23	AFS	1248E	2125D	N01	E21	05 25.1		02	7	7	E	RAMY	
23	DSD	1252E	1400D	N30	W28	05 21.3		02	9	9	E	RAMY	4811
23	DSD	1620E	2102D	N26	W27	05 21.6		03	9	9	E	HOLL	4811
23	ADF	1831E	0449D	N27	W31	05 21.3	1	02	9	9	E	PALE	4811
24	ADF	0042E	1436D	S25	W43	05 20.7	1	08	9	9	E	SVTO	4810
24	ADF	0217E	0903D	S21	W43	05 20.8	1	07	9	9	E	LEAR	4810
24	ADF	0251	0406D	N25	W29	05 21.9	2	06	9	9	E	LEAR	4811
24	APR	0356E	0903D	N40	E90	05 31.5	1		9	9	E	LEAR	
24	BSL	0526	0806	S46	W90	05 16.7	1				C	ABST	
24	DSD	0544E	0745D	N28	W36	05 21.4		04	9	9	E	LEAR	4811
24	AFS	0548E	1436D	N02	E10	05 25.0		02	8	8	E	SVTO	
24	ADF	0903E	1436D	N29	W32	05 21.9	1	10	9	9	E	SVTO	4811
24	ADF	1215E	2250D	S22	W50	05 20.7	2	12	9	8	E	RAMY	4810
24	ADF	1224E	2250D	N23	W45	05 21.0	2	05	8	8	E	RAMY	4811
24	ADF	1224E	2250D	N24	W36	05 21.7	2	07	9	9	E	RAMY	4811
24	ADF	1224E	2250D	N32	W37	05 21.6	2	07	7	8	E	RAMY	4811

ACTIVE PROMINENCES AND FILAMENTS

61
May 87

MAY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
24	DSD	1230E	1344D	N22	W40	05 21.4		04	9	9	E	RAMY	4811	Flare Associated
24	DSD	1325E	0020D	N26	W41	05 21.4		02	9	9	E	HOLL	4811	
24	DSD	1344E	1910D	N25	W44	05 21.2		06	9	9	E	RAMY	4811	Flare Associated
24	DSD	1910E	2250D	N24	W42	05 21.5		03	9	8	E	RAMY	4811	
25	ADF	0753E	0906D	N23	E37	05 28.2	1				V	KHAR		
25	DSB	0756E	0836D	N27	W47	05 21.7		02	9	9	E	LEAR	4811	
25	BSL	0757E	0812D	N22	W90	05 18.4	1				V	KHAR		
25	BSB	0840E	0900D	N23	E35	05 28.0	1				V	KHAR		
25	ADF	1100E	1959D	S27	W62	05 20.6	2	10	7	7	E	RAMY	4810	
25	ADF	1100E	2013D	N36	W53	05 21.2	2	04	9	8	E	RAMY	4811	
25	ADF	1100E	2228D	N24	W54	05 21.3	2	06	9	9	E	RAMY	4811	
25	DSD	1210E	1443D	N30	W53	05 21.3		03	9	9	E	RAMY	4811	Flare Associated
25	AFS	1310E	2318D	N23	E38	05 28.5		01	9	9	E	HOLL	4812	
25	DSD	1311E	1556D	N26	W49	05 21.7	2	05	9	9	E	HOLL	4811	
25	ADF	1325E	1722D	N27	W48	05 21.8		03	9	9	E	SVTO	4811	
25	DSD	1325E	1732D	N26	W52	05 21.5		05	9	9	E	SVTO	4811	
25	AFS	1350E	1732D	N23	E37	05 28.4		02	9	9	E	SVTO		
25	DSD	1534E	1556D	N28	W55	05 21.3		07	9	9	E	SVTO	4811	
25	DSD	1613	1714D	N22	W55	05 21.4		08	8	7	E	HOLL	4811	Flare Associated
25	DSD	1652E	0434D	N29	W49	05 21.9		01	8	9	E	PALE	4811	
25	DSD	1727	0434D	N26	W55	05 21.4		03	9	9	E	PALE	4811	
25	AFS	1733E	0434D	N22	E35	05 28.4		02	9	9	E	PALE	4812	
25	DSD	1820E	2228D	N24	W58	05 21.3		03	9	9	E	RAMY	4811	
25	AFS	1838E	2228D	N23	E35	05 28.5		02	9	9	E	RAMY	4812	
26	DSD	0011	0017D	N33	W52	05 21.9		05	9	9	E	LEAR	4811	Flare Associated
26	ADF	0430	0509	N25	W60	05 21.5	1				C	ABST		
26	ADF	0440E	1724D	N26	W58	05 21.7	1	05	9	9	E	SVTO	4811	
26	AFS	0446E	1724D	N22	E31	05 28.6		02	9	9	E	SVTO	4812	
26	ADF	0506E	1724D	N36	W49	05 22.3	1	10	9	9	E	SVTO	4811	
26	SDF	0856E	2313D	S25	W42	05 23.1		07	0	0	E	LEAR	4810	
26	DSD	1340E	2149D	N26	W68	05 21.3		04	5	9	E	RAMY	4811	
26	ADF	1340E	2209D	N23	E20	05 28.1	2	04	9	8	E	RAMY	4811	
26	AFS	1725E	0151D	N22	E23	05 28.5		01	9	9	E	HOLL	4812	
26	AFS	1748E	2209D	N24	W64	05 21.8		02	9	9	E	RAMY	4812	
26	AFS	1751E	0450D	N22	E22	05 28.4		02	9	9	E	PALE	4812	
27	AFS	0112E	0802D	N23	E18	05 28.4		02	9	9	E	LEAR	4812	
27	ADF	0431E	0802D	N18	W57	05 22.8	1	16	8	9	E	LEAR	4811	
27	BSB	0447	0507D	S25	W82	05 20.8		02	9	9	E	LEAR	4810	
27	AFS	0455E	1712D	N23	E16	05 28.4	2	03	9	9	E	SVTO	4812	
27	DSD	0509	0715D	N30	W69	05 21.8		05	9	9	E	SVTO	4811	
27	BSL	0607	0848	N45	W90	05 19.8	2				C	ABST		
27	ADF	0650E	0705D	N24	W76	05 21.4	1				V	KHAR		
27	ADF	0650E	0838D	N23	E13	05 28.3	1				V	KHAR		
27	ADF	0715E	1712D	N29	W73	05 21.6	2	04	9	9	E	SVTO	4811	
27	DSD	0852E	1207D	N30	W71	05 21.8		04	9	9	E	SVTO	4811	
27	AFS	1228E	2237D	N24	E13	05 28.5		02	9	9	E	RAMY	4812	
27	ADF	1228E	2237D	N26	W72	05 21.9	1	11	9	8	E	RAMY	4811	
27	ASR	1228E	2237D	N33	W79	05 21.2			9	6	E	RAMY	4811	
27	ASR	1400E	1800D	S25	W90	05 20.6			9	9	E	HOLL	4810	
27	ASR	1450	2000D	N26	W79	05 21.5			9	9	E	HOLL	4811	
27	AFS	1739E	0451D	N23	E08	05 28.3		02	7	8	E	PALE	4812	
27	ASR	2125E	0451D	N27	W90	05 20.9			7	7	E	PALE	4811	
27	ASR	2140E	0134D	N28	W87	05 21.1			9	9	E	HOLL	4811	
27	APR	2314	2436	N24	E90	06 3.9	1				V	VORO		
28	AFS	0145E	0624D	N21	E08	05 28.7		03	9	9	E	LEAR	4812	
28	ASR	0215E	0624D	N26	W90	05 21.1			9	9	E	LEAR	4811	
28	BSL	0250	0300	N33	E90	06 4.3	1				V	VORO		
28	APR	0535E	0822D	N22	W86	05 21.6	2		9	9	E	SVTO	4811	
28	ASR	0558	0632D	S26	W90	05 21.2			9	9	E	SVTO	4810	
28	AFS	1255E	0134D	N23	E12	05 29.5		03	8	8	E	HOLL	4812	
28	ASR	1330E	0152D	N29	W90	05 21.5			9	9	E	HOLL	4811	
28	APR	1405E	1805	N37	W90	05 21.3	1		8	8	E	HOLL		
28	AFS	1715E	1850D	N22	W03	05 28.5		03	7	9	E	HOLL	4812	
28	APR	1715E	2350D	S24	W90	05 21.8	1		8	9	E	HOLL	4810	
28	AFS	1753E	2002D	N22	W05	05 28.4		02	9	9	E	PALE	4812	
28	EPL	1805	2055D	N37	W90	05 21.5			9	9	E	HOLL		
28	APR	2340E	2359D	N19	W90	05 22.1			9	9	E	LEAR	4811	

62
May 87

ACTIVE PROMINENCES AND FILAMENTS

MAY 1987

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
28	ASR	2342E	0200D	N26	W90	05 22.0			9	9	E	LEAR	4811	
29	ASR	0010E	0046D	N30	W90	05 21.9			9	9	E	LEAR	4811	
29	ASR	0020E	0152D	N37	W90	05 21.8			9	9	E	HOLL		
29	ASR	0112E	0308D	N33	W90	05 21.9			8	7	E	PALE	4811	
29	ASR	0141E	0207D	N33	W90	05 21.9			9	9	E	LEAR	4811	
29	APR	0238E	0310D	N35	W90	05 21.9	2		9	9	E	LEAR	4811	
29	ASR	0311	0910D	N33	W90	05 22.0			9	9	E	LEAR	4811	
29	AFS	0342E	0530D	N05	W07	05 28.6		02	9	9	E	LEAR		
29	APR	0810E	0910D	N00	W90	05 22.6	2		7	9	E	LEAR	4811	
29	ASR	0851E	0910D	N25	W90	05 22.4			9	9	E	LEAR	4811	Bright Emission 1/3
29	AFS	1158E	1545D	N21	W14	05 28.4		01	9	8	E	RAMY	4812	
29	ASR	1301E	1911D	N22	W79	05 23.5			9	9	E	RAMY	4811	
29	APR	1330E	2240D	N20	W90	05 22.7	2		9	8	E	HOLL	4811	
29	APR	1710E	0058D	N28	W90	05 22.7	2		9	9	E	PALE	4811	
30	BSL	0434	0747	N24	W90	05 23.2	1				C	ABST		
30	BSL	0515	0747	S20	E90	06 6.1	1				C	ABST		
30	DSD	1220E	1255D	N24	W24	05 28.6		03	5	5	E	RAMY	4812	
30	ADF	2250E	0012D	N23	W33	05 28.4	1	02	8	9	E	HOLL	4812	
31	BSL	0442	0900	N27	W90	05 24.2	1				C	ABST		
31	AFS	1053E	1723D	N25	W37	05 28.6		04	9	9	E	SVTO	4812	
31	ASR	1125E	2025D	N39	W90	05 24.2	2		9	9	E	RAMY		
31	AFS	1136E	1530D	N21	W35	05 28.8		03	9	9	E	RAMY	4812	
31	DSD	1632E	1811D	N22	W48	05 28.0		03	9	9	E	RAMY	4812	
31	AFS	2025E	2231D	N24	W43	05 28.5		03	9	9	E	RAMY	4812	

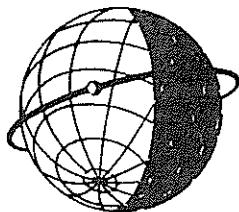
ADF = Active Dark Filament	BSL = Bright Surge on Limb	LPS = Loops
AFS = Arch Filament System	CAP = CAP Prominence (Tandberg-Hanssen)	MDP = Mound Prominence
APR = Active Prominence	CRN = Coronal Rain	SDF = Sudden Disappearing Filament
ASR = Active Surge Region	DSD = Dark Surge on Disk	SPY = Spray
BSD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

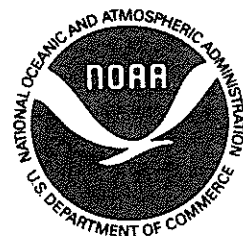
Observation Type: C= Cinematographic, E= Electronic, P= Photographic, V= Visual.



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."