U.S. DEPARTMENT OF COMMERCE
Alexander B. Trowbridge, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

INSTITUTES FOR ENVIRONMENTAL RESEARCH

Solar-Geophysical Data

Number 275

for June 1967
May 1967
January 1967
& Miscellanea

DATA COMPILED BY THE INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY
BOULDER, COLORADO

WASHINGTON, D.C.
JULY 1967

SOLAR-GEOPHYSICAL DATA

Table of Contents
for June 1967 Data

	Page
Alert Periods	
IUWDS Alert Periods	3
Daily Solar Indices	
12-Month Tables Sunspot Numbers, R_z, and 2800 Mc/s Flux Adjusted to 1 A.U.	4
Combined Table Sunspot Numbers and Solar Fluxes	5
Graph of Sunspot Cycle	6
Zürich Smoothed Observed Sunspot Numbers	7
Solar Centers of Activity	
Calcium Plages and Sunspots	8
Magnetic Classification of Sunspots - Mt. Wilson	9-10
Solar Flares	
Flares of Numerical Importance 1 or Greater	11-14
No-Flare-Patrol Chart	15
Solar Radio Waves	
Outstanding Occurrences at Fixed Frequencies	17-20
7.6-41 Mc/s Spectral Observations - University of Colorado	21-23
408 Mc/s Solar Interferometric Chart - Nancay	25
21 cm East-West Solar Scans - Fleurs	26
43 cm East-West Solar Scans - Fleurs	27

For explanations of the data contained herein see "Descriptive Text" published in February 1967.

For obtaining bulletins on a data exchange basis, send request to World Data Center A, Upper Atmosphere Geophysics, ESSA, Boulder, Colorado, 80302.

For sale through the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402. Subscription price: $4.50 annually for domestic mailing. Add $1.00 for foreign mailing. Single issue price 45 cents.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

JUNE 1967

Jun. 1967	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
1	0400		523 524	Solar Flares Magnetic Storm	Alert Ends Ends	
3	0322*	ADALERTPRESTO TENFLARE TOYO-KAWA 250 percent 030240Z				
4	0400		525	Solar Flares	Expected	N25 W03
5	0400 2120	AGIWARN, Magnetic Storm Major 051915Z	526	Solar Flares	Expected	N25 W17
6			527 528	Solar Flares Magnetic Storm	Expected 051915Z	S20 W64 Great
7	0400		529 530	Solar Flare Magnetic Storm	Alert Ends Alert Ends	
		*Time when Alert was relayed by AGIWARN				

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

1966 (FINAL) | 1967 (PROVISIONAL)

	JUL	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE
1	49	78	44	57	43	35	60	93	172	105	74	123
2	49	74	44	55	42	33	93	88	179	79	77	113
3	54	72	25	50	38	30	124	92	191	54	46	92
4	53	68	18	36	38	57	148	100	172	52	62	93
5	48	60	26	40	20	69	150	72	164	62	66	79
6	46	50	30	44	32	68	148	89	148	63	46	76
7	58	33	36	53	48	64	134	138	137	79	41	55
8	68	13	38	48	55	88	116	109	98	104	18	36
9	60	13	39	44	59	86	111	112	85	67	25	22
10	65	0	37	65	63	112	111	97	86	62	17	17
11	52	16	42	66	72	125	104	96	74	62	25	17
12	62	36	38	64	80	130	90	79	65	51	34	19
13	56	30	33	72	68	118	86	77	49	63	29	19
14	42	37	35	64	66	113	85	58	44	48	38	20
15	34	41	38	60	66	107	56	58	49	51	36	30
16	48	40	57	70	52	116	56	60	58	32	35	38
17	42	41	76	70	59	88	59	60	70	42	38	57
18	49	39	83	70	57	76	72	70	73	58	48	60
19	38	33	76	76	65	57	82	57	58	56	70	65
20	65	28	78	96	74	46	82	60	73	44	74	79
21	55	22	89	91	77	37	102	71	88	60	96	61
22	66	38	86	83	78	34	134	86	108	76	118	83
23	56	65	71	75	76	38	152	84	111	94	137	80
24	70	71	67	64	72	45	122	100	121	74	156	92
25	67	89	68	50	74	60	133	106	131	78	159	92
26	74	95	54	47	67	65	136	123	137	66	174	79
27	65	90	48	39	59	48	130	186	122	55	194	52
28	70	84	42	36	41	48	125	166	120	76	197	80
29	76	89	45	27	37	51	122		130	79	148	59
30	59	76	42	27	37	70	132		130	66	139	89
31	62	66		35		68	108		115		127	
MEAN	56.	51.2	50.2	57.2	57.2	70.4	108.5	92.4	108.3	65.3	82.1	62.6

1966 Yearly Mean = 47.0

DAILY SOLAR FLUX AT 2800 Mc/s
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

1966 | 1967

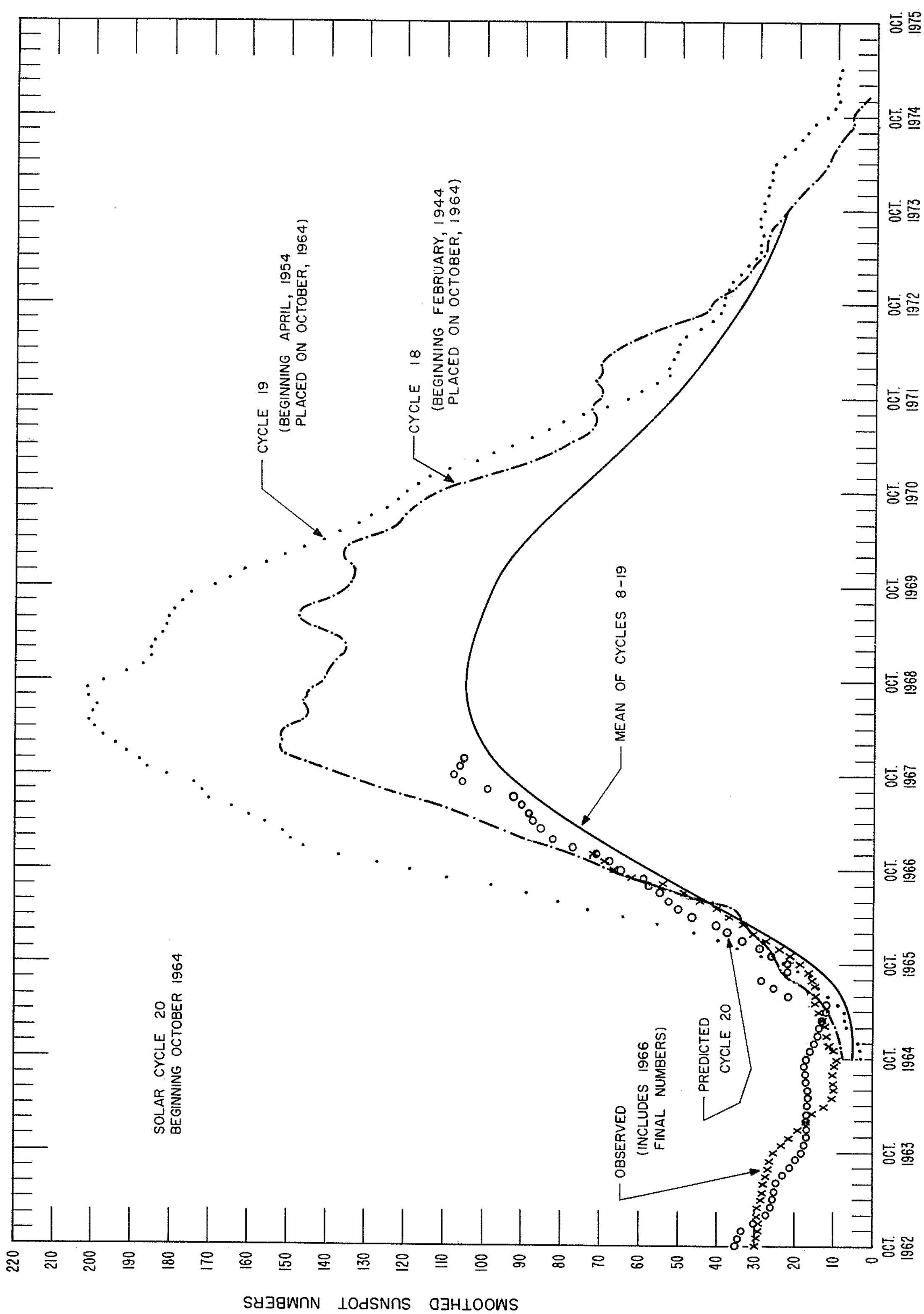
	JUL	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE
1	100.	125.9	116.6	101.4	94.6	92.2	124.4	151.6	194.2	158.6	136.6	174.6
2	98.	119.6	106.3	102.0	96.7	95.1	143.0*	143.5	197.8*	141.0	131.8	158.0*
3	99.	118.2*	103.2	103.2	93.1		154.0	138.7	196.4*	133.3	*	150.4
4	104.	116.0*	101.9	100.6*	91.7	104.8	160.7	137.3*	205.9*	125.0	125.8	148.4
5	105.	110.5	100.5	100.0	97.9	110.9*	168.2	146.8*	179.2*	122.1	128.1	138.7
6	109.	106.0	97.9	101.9*	104.7	115.6*	160.5	148.8	177.4*	119.0	122.8	130.5
7	112.	101.5	95.8*	103.1	113.4	117.7	153.6	162.5	163.8	126.2*	119.7	119.1
8	114.	97.7	96.2*	99.4	116.9	123.7	142.9	148.3	156.1	135.7	116.9	110.1
9	107.	96.4	95.3	103.5	117.2	146.2	144.7	145.9	157.9	133.3	113.6	103.7
10	108. *	94.3	93.9	106.5	121.9	157.3*	145.6	140.5	148.4	130.3	109.4	97.1
11	109.	92.5	96.6	109.8	126.1	162.8*	139.8	133.7	141.6	131.1*	106.1	96.9
12	102.	92.8	100.8*	114.8	126.2	157.6	139.1	132.9	134.3	129.8*	109.7	96.5
13	100.	93.2	102.4	122.8*	126.4	155.5	138.1	130.0	129.1	126.8	107.3	99.8
14	99.	92.8	107.4	120.3	124.0	149.5	135.2	129.2	127.2	133.5	108.6*	103.8
15	101.	93.7	112.0	120.6	122.6	144.9	126.6	126.4	132.4	124.1	111.0	107.2
16	102.	95.1	124.6*	120.3*	121.2	135.1	120.2	124.9	132.1	126.1	113.1	111.8
17	101.	96.8	129.1	120.5*	113.2	124.9*	116.9	122.2*	132.6	125.9	115.4	112.0
18	101.	97.5	142.6	118.5*	113.4	111.2	117.4	124.2	132.2	128.7	124.8	115.4
19	101.	100.0	146.6	115.6*	111.0	112.3	116.4	121.0	136.0	126.7	135.6*	119.0
20	101.	101.6	146.0*	124.1	110.9	107.6	127.0	128.6	140.4	127.1	146.3	121.3
21	103.	102.7	137.2	120.9*	110.7*	106.5	138.2	131.8*	147.2	134.0	160.3*	122.9
22	106.	105.5	131.5*	119.8*	116.5	105.5*	139.9	146.0	149.5*	131.5	182.7	129.6
23	114.	114.7	127.5*	111.1	114.7*	110.6*	148.8*	149.3*	155.7	128.0	194.0*	133.1*
24	120.	122.0*	126.0	106.1	113.8	110.5	146.8	162.2	161.9	130.5	200.9	132.4
25	126.	126.3*	118.8*	100.8	110.7	111.6	142.7*	159.5*	169.2	132.9	210.7	133.1
26	127.	130.2	109.4	97.7	107.3	110.9	154.3	173.3*	163.9*	125.4	218.9*	127.8
27	123.	133.4	102.9	92.0	111.1*	109.6	158.3	176.7	162.8*	129.2	213.8	131.5
28	124.	132.6*	97.9	94.1	104.1	107.5	156.2	180.2	180.7	135.1	202.6	136.7
29	132.	129.8	98.6	99.7	98.0	109.3	158.2*		178.4	137.5	188.3	133.4
30	128.	126.1	95.7	95.7	94.6*	115.1	159.0		175.8	135.3	177.4	126.1
31	124.	120.9		97.1		120.5*	156.4		167.6*		175.4	
MEAN	110.	109.2	112.4	107.9	110.8	121.4	143.0	143.4	159.0	130.8	146.9	124.0

* Adjusted for Burst

DAILY SOLAR INDICES

JUNE 1967

JUN 1967	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO I A. U.					
			R_Z	$R_{A'}$		AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606
01	152	12	123	145	169.7	317	202	174.6	162.9	90.3	61.5
02	153	13	113	119	153.6*	319	200	158.0*	145.9	83.2	61.5
03	154	14	92	98	146.2	314	188	150.4	136.1	76.6	65.6
04	155	15	93	95	144.2	311	188	148.4	142.3	79.4	60.4
05	156	16	79	86	134.7	297	170	138.7	127.2	74.1	58.8
06	157	17	76	69	126.7	292	164	130.5	115.6	69.1	
07	158	18	55	53	115.6	284	148	119.1	106.7	62.8	54.7
08	159	19	36	37	106.9	281	145	110.1	100.2	64.5	56.3
09	160	20	22	20	100.6	274	134	103.7	89.3	56.6	50.3
10	161	21	17	17	94.2	268	129	97.1	79.7	53.8	49.0
11	162	22	17	20	94.0	272	131	96.9	80.5	53.8	49.2
12	163	23	19	12	93.6	263	131	96.5	82.7	54.5	50.2
13	164	24	19	19	96.7	283	135	99.8	86.5	56.2	51.5
14	165	25	20	31	100.6	281	142	103.8	89.0	57.9	51.1
15	166	26	30	29	103.9	285	146	107.2	92.0	60.2	52.5
16	167	27	38	40	108.3	287	146	111.3	92.9	60.8	52.9
17	168	1	57	60	108.5	287	143	112.0	95.9	62.9	54.3
18	169	2	60	61	111.7	287	143	115.4	109.1	65.9	54.8
19	170	3	65	71	115.2	291	156	119.0	105.6	72.6	58.1
20	171	4	79	79	117.4	295	145	121.3	105.6	73.9	60.1
21	172	5	61	74	119.0		156	122.9	109.6	75.8	62.3
22	173	6	83	82	125.5	299	165	129.6	112.2	78.8	62.6
23	174	7	80	74	128.9*	297	169	133.1*	121.0	86.4	64.1
24	175	8	92	99	128.2	277	161	132.4	108.3	77.4	60.5
25	176	9	92	79	128.9	283	156	133.1	106.6	80.2	61.9
26	177	10	79	65	123.6	278	154	127.8	104.3	73.6	60.9
27	178	11	52	51	127.2	280	159	131.5	108.3	74.3	62.5
28	179	12	80	65	132.2	291	163	136.7	114.0	76.4	65.8
29	180	13	59	54	129.0	291	167	133.4	114.2	76.0	65.9
30	181	14	89	66	122.0	289	162	126.1	116.3	73.6	60.2
MEAN			62.6	62.3	120.2	289	157	124.0	108.7	70.5	57.9



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED SUNSPOT NUMBERS
ZURICH, R_Z

	1964	1965	1966
JAN		11.7	27.7
FEB		12.0	31.3
MAR		12.5	34.5
APR		13.6	37.4
MAY		14.6	40.7
JUN		15.0	44.6
JUL		15.5	48.8
AUG		16.4	55.0
SEP		17.4	62.7
OCT	9.6	19.7	66.8
NOV	10.2	22.3	69.0
DEC	11.0	24.5	71.2

CALCIUM PLAGE AND SUNSPOT REGIONS

JUNE 1967

June 1967	LAT.	McMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA: CMP VALUES AREA	CMP VALUES INT.	HISTORY	AGE (ROTATIONS)	DATE FIRST SEEN	DURATION (DAYS)	SUNSPOT DATA: CMP VALUES AREA	CMP VALUES COUNT	HISTORY
1.3	S17	8829	New	1900	3.5	ℓ ⌝ ℓ	1	5/25	14	140	9	ℓ ⌝ ℓ
2.1	N19	8830	8795	900	3.0	ℓ ⌜ ℓ	2	5/27	13	10	1	ℓ - d
2.1	N32	8834	8792	(1700)	(2.0)	ℓ ⌝ ℓ	5	<6/3	>6			
4.0	N26	8831	New	6800	3.0	ℓ / ℓ	1	5/28	14	{ 30	7	ℓ ∧ d
										{ 640	56	ℓ ∧ ℓ
4.9	N18	8842	New	(400)	(2.5)	b - ℓ	1	6/8	3			
5.3	N35	8835	New	1400	2.0	b ∧ d	1	6/3	8			
6.8	N18	8833	New	900	2.0	b ⌟ d	1	6/2	9	(10)	(1)	b - d
7.5	S19	8841	New	300	2.0	b - d	1	6/7	>5			
8.2	N17	8837	New	1400	2.5	b ∧ ℓ	1	6/4	11	20	8	b ∧ d
8.5	S14	8838	New	1300	2.0	b ∧ ℓ	1	6/4	10	10	4	b - d
9.4	S17	8836	New	900	2.5	ℓ ⌟ ℓ	1	6/3	13	10	1	b ∧ ℓ
11.0	N23	8839	8806	1700	1.5	ℓ ∧ ℓ	8	6/4	13			
11.8	S24	8840	8807	1500	1.5	ℓ ∧ ℓ	3	6/5	12			
13.4	N25	8846	8810	1100	1.5	ℓ ∧ ℓ	3	<6/13	>8			
13.8	S15	8847	New	700	1.0	b ∧ d	1	6/12	3			
15.4	N19	8843	8811	1700	2.5	ℓ ∧ ℓ	5	6/9	13	10	2	b - d
15.6	N31	8844	8810	700	2.5	ℓ - ℓ	3	6/10	13			
16.7	S12	8848	8816	800	2.5	ℓ ⌝ ℓ	3	<6/12	>11			
17.5	S23	8851 (1)	8815	(1500)	(2.0)	ℓ ⌜ ℓ	4&3	6/12	12			
17.9	N29	8850	8812	(500)	(2.0)	ℓ ⌜ ℓ	2	6/12	13			
18.4	S14	8857	New	300	2.5	b ⌟ d	1	6/16	8	(10)	(5)	b - d
19.7	N06	8853	8826	400	1.5	ℓ - d	2	6/14	9			
20.0	S19	8852 (2)	8832	1400	3.0	ℓ ⌜ ℓ	2	6/13	13	10	2	b - d
20.0	S09	8855	New	200	1.5	b - d	1	6/15	5			
20.2	N31	8856	New	1400	2.5	b ∧ ℓ	1	6/15	12			
20.2	N17	8859	New	800	3.5	b ⌜ ℓ	1	≤6/18	≥8	20	10	b - d
21.4	S16	8864	New	400	1.0	b - d	1	6/20	4			
22.0	S27	8865	New	500	1.5	b ⌝ d	1	6/20	6			
22.7	N26	8854	8818	7800	3.0	ℓ ⌜ ℓ	3	6/14	≥14	{ 50	8	ℓ ⌝ d
										{ 50	4	ℓ ⌝ ℓ
										{ 10	7	ℓ ⌝ d
23.0	S22	8858	8819	2400	2.5	ℓ ∧ d	3	6/16	>12	(10)	(2)	ℓ ╲ d
24.2	N19	8860	8821	1800	2.5	ℓ ∧ ℓ	3	6/18	13	(10)	(2)	b - d
24.8	S29	8866	New	500	2.0	b ∧ ℓ	1	6/22	9	10	2	b - d
25.7	S17	8862	8825	600	1.5	ℓ - d	5	6/19	12	10	2	b - d
26.0	N22	8863	8824	5000	3.0	ℓ ⌜ ℓ	2	6/19	14	280	33	ℓ ∧ ℓ
27.0	S23	8867	New	2300	3.0	b / ℓ	1	6/22	12	230	28	ℓ ∧ ℓ
27.8	N30	8868	8824	900	1.5	ℓ ╲ d	2	<6/23	>10			
27.8	N20	8869	New	(300)	(2.0)	b ╲ d	1	6/24	3			
28.1	N16	8878	New	(400)	(2.0)	b / ℓ	1	7/1	4			
28.9	S19	8870	8829	(900)	(2.5)	ℓ / ℓ	2	<6/24	>11			

(1) Region 8851 is a return of region 8815 and part of region 8816.
(2) Region 8852 is the return of a small plage that developed on the disk, near the west limb, during the preceding rotation.

No calcium spectroheliograms were secured at the McMath-Hulbert observatory on June 17, 28 and 29, 1967.

MT. WILSON CLASSIFICATION OF SUNSPOTS

JUNE 1967

June 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	No Obs.				
2	1410	N09	W78	(αp) 3	16376
		N12	W81	(αf) 1	16378
		N20	W52	(αp) 4	16380
		N18	W45	(αf) 1	16381
		N23	W48	(αp) 2	16382
		S19	W19	(βp) 5	16384
		N21	W07	(βp) 1	16385
		N24	E13	(βγ) 6	16387
		N24	E22	(αp) 4	16388
		N32	E18	(βp) 1	16390
3	1920	N19	W68	(αp) 3	16380
		N23	W64	(αp) 2	16382
		S19	W33	(βp) 4	16384
		N23	W02	(βp) 6	16387
		N23	E06	(αp) 5	16388
		N32	E03	(β) 1	16390
		N17	E54	(αp) 1	16391
4	1820	N19	W81	αp	16380
		N23	W79	αp	16382
		S19	W46	(βp) 3	16384
		N23	W15	(γ) 6	16387
		N23	W08	(αp) 4	16388
		N17	E41	(βp) 3	16391
		S12	E46	(βp) 2	16392
5	1430	S19	W57	(αp) 3	16384
		N22	W24	(γ) 6	16387
		N22	W18	(αp) 4	16388
		N16	E32	(βγ) 2	16391
		S12	E34	(βf) 2	16392
6	1430	S19	W16	(αp) 2	16384
		N22	W37	(βγ) 6	16387
		N22	W30	(αp) 4	16388
		N16	E18	(βf) 4	16391
		S12	E21	(βf) 1	16392
7	1445	S19	W87	αp	16384
		N22	W50	(βγ) 6	16387
		N22	W44	(αp) 3	16388
		N15	E08	(αp) 3	16391
		S12	E10	(αf) 1	16392
		S17	WOE	(β) 1	16393
		S17	E25	(β) 1	16394

June 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
8	2055	N23	W67	(βp) 5	16387
		N23	W61	(αp) 1	16388
		N14	W09	(βf) 2	16391
		S16	W07	(αp) 1	16393
9	1635	N23	W78	αp	16388
		N14	W21	(βf) 2	16391
		S18	W03	(βf) 1	16394
10	1700	N14	W35	(βf) 2	16391
		S17	W15	(βf) 1	16394
11	1415	N14	W45	(αp) 1	16391
		S17	W27	(β) 2	16394
12	No Obs.				
13	No Obs.				
14	2110	S17	W73	(βp) 2	16394
		N17	E78	(αp) 2	16395
		S20	E68	(β) 2	16396
15	2310	N18	E64	(αp) 3	16395
		S20	E48	(αp) 2	16396
		N24	E69	(αp) 4	16397
16	1745	N18	E56	(αp) 3	16395
		S20	E41	(βp) 2	16396
		N24	E62	(αp) 4	16397
		N24	E78	(βf) 3	16398
		N29	E75	(αp) 1	16399
		S19	E73	(αp) 2	16400
17	1610	N18	E44	(βp) 3	16395
		S19	E30	(βp) 2	16396
		N24	E49	(αp) 4	16397
		N24	E64	(βf) 3	16398
		N30	E65	(βp) 1	16399
		S19	E64	(αp) 2	16400
		N26	E51	(βf) 1	16401
		S15	E14	(αp) 1	16402
18	2020	N18	E28	(αp) 4	16395
		S19	E17	(βp) 1	16396
		S24	E35	(βp) 4	16397
		N24	E54	(αp) 2	16398
		S20	E48	(αp) 3	16400
		N15	E17	(βp) 2	16403
		N10	E67	(αp) 3	16404

MT. WILSON CLASSIFICATION OF SUNSPOTS

JUNE 1967

June 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
19	2045	N18	E15	(αp)3	16395
		N24	E21	(αp)4	16397
		N24	E35	(βf)3	16398
		S20	E35	(αp)2	16400
		N15	E03	(βp)2	16403
		N10	E52	(αp)3	16404
		N24	E46	(βp)2	16405
		N16	E79	(βp)2	16406
		S29	W17	(βp)1	16407
20	No Obs.				
21	0049	N19	W01	(αp)4	16395
		N24	E07	(αp)3	16397
		N24	E25	(βp)2	16398
		N16	W14	(β)1	16403
		N10	E37	(αp)3	16404
		N16	E64	(βp)4	16406
21	2040	N19	W12	(αp)4	16395
		N24	W05	(αp)4	16397
		N25	E12	(αf)1	16398
		N17	W25	(βp)2	16403
		N11	E25	(αp)5	16404
		N27	E53	(βf)5	16406
22	No Obs.				
23	2350	N23	W32	αp	16397
		N11	W02	αp	16404
		N27	E25	β	16406
		S23	E40	βp	16408
24	2200	N23	W42	(αp)4	16397
		N11	W12	(αp)3	16404
		N18	E14	(βγ)5	16406
		S23	E29	(βp)5	16408
		S22	W22	(αf)1	16409
		N23	E72	(αf)4	16410
		S27	E02	(αp)1	16411
		N23	E20	(β)1	16412
25	No Obs.				
26	No Obs.				
27	2140	N16	W31	(αp)5	16406
		S23	W11	(βp)5	16408
		N22	E33	(αp)5	16410
28	2210	N17	W45	αp	16406
		S22	W22	βp	16408
		N23	E22	αp	16410
		N21	E81	αp	16413
29	No Obs.				
30	0125	N17	W61	(αp)5	16406
		S23	W40	(βp)4	16408
		N23	E07	(βp)5	16410
		N20	E61	(βp)4	16413
		N11	W59	(αp)1	16414
		N12	E33	(β)2	16415
		S16	E80	(αp)3	16416

* Carried as 16387 although 16389 is in this group.

SOLAR FLARES
PRELIMINARY

JUNE 1967

OBSERVATORY	DATE 1967 JUNE	OBSERVED UT START	OBSERVED UT END	MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
SACP	01	0013	0025U	0016	N23	E29	.600		3.2	12U	-N		C		1.41	1.53			
IKOM	01	0014E	0025D	0016	N22	E28	.581	8831	3.1	11D	1B		V	0016	1.65	2.00	1.89	125	D
CAPS	01	0959E	1024D		N23	E30	.610	8831	3.7	25D	1N	2		1006	3.00	3.60		180	F
MCMA	01	1117	1144	1122	N25	E28	.607	8831	3.6	27	-B		C	1122	1.03	1.30			EKRV
MCMA	01			1132															
CAPS	01	1119E	1144D		N23	E27	.579	8831	3.5	25D	1B	1		1135	2.00	2.50		155	CEJ
SALO	01	1140E	1210D		S18	E02	.299		1.6	30D	-B		S	1200	.50	.50	1.40		
MCMA	01	1145	1202	1148	S18	W04	.305	8829	1.2	17	-N		C	1148	.83	.90			E
CAPS	01	1148E	1201D		S18	E01	.298	8829	1.6	13D	1N	1		1154	2.00	2.10		190	CE
SALO	01	1155E	1220D	1158	N24	E31	.628	8831	3.8	25D	1N		S	1220	.74	1.00	1.50		
MCMA	01	1155	1227	1159	N25	E28	.607	8831	3.6	32	-N		C	1159	1.13	1.40			F
SALO	01	1325E	1350D		N25	E32	.646	8831	4.0	25D	1N		S	1350	.50	.60	1.60		
MCMA	01	1450	1523	1457	N25	E28	.607	8831	3.7	33	1N		C	1457	1.65	2.10			F
MCMA	01																		
SACP	01	1452	1507	1457	N23	E26	.569	8831	3.6	15	1N		C		2.11	2.25			
HUAN	01	1457E	1458D		N23	E26	.569		3.6	1D	-N	1	P	1457	1.51	1.60			E
CAPS	01	1501E	1512		N22	E24	.539	8831	3.4	11D	1F	2		1504	4.00	4.80		157	BJ
MCMA	01	1551	1629	1554	N22	W32	.624	8824	30.3	38	1B		C	1554	1.65	2.10			E
CAPS	01	1552	1611D		N23	W30	.610	8824	30.4	19D	2N	3		1555	4.50	5.60		227	
SACP	01	1552	1630E	1554	N20	W34	.632	8824	30.1	38D	1N		C		2.73	3.04			
HUAN	01	1553E	1554D		N20	W35	.643		30.0	1D	-B	1	P	1553	1.44	1.62			
LOCK	01	2323	2350	2331	N08	W70	.942	8821	27.7	27	1F		C	2331	1.20	3.00		10	
SACP	01	2329	2345U	2332	N06	W71	.947		27.7	16U	-N		C		.61	1.19			
LOCK	02	0055	0200D	0110	N24	W38	.698	8824	30.2	65D	1N		C	0110	1.60	2.20		20	
MITK	02	0057	0117D	0101	N20	W40	.698	8824	30.0	20D	1N		C	0101	2.58	3.60			E
SACP	02	0100	0142	0106	N20	W38	.676	8824	30.2	42	1N		C		2.42	2.78			
IKOM	02	0102E	0106		N20	W40	.698	8824	30.0	4D	1N		V	0102	1.55	2.20		120	E
CATA	02	0743	0835	0800	N21	W43	.734		30.1	52	-N			0800	1.35	2.00		174	
SALO	02	0810E	0845D		N24	W42	.738	8824	30.2	35D	1F		V	0835	.83	1.20	1.40		
SALO	02	0815E	0842D	0820	N10	W74	.963	8821	27.8	27D	1B		V	0842	.83	2.80	1.50		
CATA	02	0830	0855	0830	N09	W77	.975	8821	27.6	25	1N			0830	1.57			162	
CAPS	02	0830	0856D		N09	W74	.963	8821	27.8	26D	1N	3		0832	2.00			185	
ARCE	02	0836E	0845		N10	W85	.996		27.0	9D	-N		C	0836	.45	1.90			E
SALO	02	0845E	0915D		N21	W43	.734	8824	30.1	30D	1B		V	0910	.83	1.20	1.40		
CAPS	02	0847	0948		N20	W41	.708	8824	30.3	61	1B	3		0854	3.00	4.20		300	FX
CAPS	02	0847	0948		N20	W41	.708	8824	30.3	61	1B			0910	6.00	8.20			
HERS	02	0848E	0910	0852U	N21	W44	.744	8824	30.1	22D	1B		P	0852	1.78	3.60			
ARCE	02	0849	0940	0853	N21	W45	.754	8824	30.0	51	1N		C	0853	3.41	5.00			F
CAPS	02	1256E	1321D		N19	W80	.987	8821	27.5	25D	1F	2		1309	.90				
HUAN	02	1258E	1318		N18	W83	.994		27.3	20D	-N	1	C	1309	.57				CE
MCMA	02	1302	1320	1310	N19	W83	.994	8821	27.3	18	-N		C	1310					E
CATA	02	1305	1320	1308	N18	W85	.997	8821	27.2	15	1B			1308	1.03			218	
MCMA	02	1631	1758D	1647	N25	E23	.558	8831	4.4	87D	1B		C						
MCMA	02													1713	2.06	2.40			FK
LOCK	02	1633	1725	1638	N23	E19	.499		4.1	52	-F		C						
LOCK	02													1710	1.50	1.80		10	
HUAN	02	1634	1745	1709	N24	E18	.502	8831	4.0	71	1N	2	C	1709	2.99	3.10			E
HALE	02	1635	1732	1709	N23	E18	.490		4.0	57	-N	3	C	1709	1.19	1.40			F
SACP	02	1710E	1710D	1710U	N19	E06	.349	8831	3.2		2N		V						
HALE	02	1713	1721	1714	N23	E05	.408		3.1	8	-N	3	C	1714	.26	.30			
LOCK	02	2326E	2340	2326U	N20	W54	.836	8824	29.9	14D	1N		C	2326	1.70	2.90		20	
MANI	03	0243E	0336		N23	E10	.429	8831	3.9	53D	1N	1		0317	3.09	3.36			
IKOM	03	0243E	0350	0305	N25	E15	.489	8831	4.2	67D	1N		V	0305	2.89	3.30	1.56	120	E
HALE	03	0316E	0425		N24	E11	.449		4.0	69D	-N	2	P	0316	1.65	1.80			F
BUCA	03	0755E	0844D		S17	W25	.495	8829	1.5	49D	2N		P	0804	5.54	6.30			F
CAPS	03	0759	0823		S16	W26	.500	8829	1.4	24	1B	3		0802	3.50	4.00		228	U
CATA	03	0800	0818	0800	S18	W27	.527	8829	1.3	18	1B			0800	3.60	4.20		204	
ARCE	03	0800E	0830		S16	W25	.487		1.5	30D	-N		C	0815	1.53	1.70			F
LOCK	04	0000	0200D	0150	S15	W78	.979		29.1	120D	1F		C	0150	.90	2.80		10	
LOCK	04	~~0000~~	0200D	0110	~~S15~~	W78	~~.979~~	8825	~~29.1~~	~~120D~~	~~1F~~		~~C~~	0110	.90	2.80		~~10~~	
LOCK	04	0109	0124	0115	N22	W07	.396		3.5	15	-F		C	0115	.80	.90		10	
MITK	04	0110E	0132D	0113	N23	W08	.416	8831	3.4	22D	1N		C	0113	1.34	1.50			E
MITK	04	0111E	0127D	0115	N25	W65	.925	8824	30.2	16D	1F		C	0115	1.13				
LOCK	04	0113	0125	0120	N28	W63	.917		30.3	12	-F		C	0120	.80	1.70		10	
MITK	04	0235E	0259D	0238	S17	W36	.632	8829	1.4	24D	1F		C	0238	1.13	1.50			E
BUCA	04	0600E	0658D		S17	W85	.996	8825	28.9	58D	1F		C	0630	.89				B
BUCA	04	0731E	0853D	0800	S16	W40	.675	8829	1.3	82D	2N		C	0800	4.98	6.70			F
CATA	04	0758	0840	0758	S17	W40	.679	8829	1.3	42	1B			0758	2.86	3.90		209	
ARCE	04	0803E	0840D		S18	W38	.660	8829	1.5	37D	1N		C	0805	1.86	2.40			F
CAPS	04	0805E	0839D		S16	W38	.651	8829	1.5	34D	2N	1							K
CAPS	04	0825E	0839D		N23	W08	.416	8831	3.8	14D	1N	1							F
BUCA	04	0928E	0951D		N25	W05	.435		4.0	23D	-N		P	0935	1.66	1.80			
CAPS	04	0934E	0940D		N23	W02	.397	8831	4.2	6D	1N	2		0936	3.00	3.30			
CATA	04	0935	0950	0936	N25	W04	.432		4.1	15	-N			0936	.76	.80		178	
CATA	04	0950	1115	0952	N27	W17	.528	8831	3.1	85	1N			0952	1.84	2.10		174	
CAPS	04	0950E	1144D		N25	W16	.495		3.2	114D	-F	2		1048	1.20	1.40		158	

SOLAR FLARES
PRELIMINARY

JUNE 1967

OBSERVATORY	DATE 1967 JUNE	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CATA	04	1015	1045	1027	N28	W15	.527	8831	3.3	30	1N			1027	1.84	2.10		195	
MCMA	04	1129E	1140D		N28	W17	.540	8831	3.2	11D	-B		C	1129	.31	.40			D
IKOM	05	0445E	0545D	0500	S18	W53	.819	8829	1.2	60D	1B		V	0500	1.44	2.60	1.30	130	E
SACP	05	1341	1428	1405	S19	W55	.839		1.4	47	-N		C		1.42	2.00			
HUAN	05	1342	1422		S17	W57	.853		1.3	40	-N	2	C	1402	.77	1.08			E
MCMA	05	1342	1425	1406	S17	W58	.861	8829	1.2	43	-N		C	1406	.83	1.60			E
CAPS	05	1345E	1420D		S15	W60	.875	8829	1.1	35D	1F	2		1403	3.00			157	C
WEND	05	1346E	1426		S18	W59	.871	8829	1.1	40D	1N		V		4.13				
CATA	05	1400	1430	1400	S18	W56	.846	8829	1.4	30	1N			1400	1.94	3.60		182	
SACP	05	1838	1853	1844	S18	W57	.855		1.5	15	-N		C		.71	1.04			
LOCK	05	1839	2030	1844	S16	W58	.860	8829	1.4	111	2N		C						K
LOCK	05			1938										1938	6.50	12.40		20	K
MCMA	05	1840	2036D	1843	S20	W60	.882	8829	1.3	116D	2B		C	1843	.52	1.10			E
MCMA	05			1937										1937	3.61	7.20			F
HUAN	05	1842E	1855		S17	W59	.870		1.4	13D	-N	2	C	1842	.50	.68			E
SACP	05	1858	2032	1939U	S20	W58	.866	8829	1.4	94	2B		C		5.68	8.51			
HUAN	05	1900	2035		S18	W58	.863		1.4	95	2N	1	C	1940	3.63	5.50			
CAPS	06	1057E	1117		N26	W41	.735	8831	3.4	20D	1N	3		1100	2.20	3.10		173	E
HUAN	06	1206	1336	1218	N24	W42	.735	8831	3.4	90	1N	2	C	1218	3.01	3.60			
CAPS	06	1213	1255		N23	W38	.689	8831	3.7	42	1B	3		1220	3.00	4.20		208	
CATA	06	1215	1235	1218	N22	W43	.736	8831	3.3	20	1B			1218	1.92	2.70		302	
WEND	06	1215E	1301		N23	W39	.699	8831	3.6	46D	2F		V		6.19				
CAPF	06	1245E	1345		N22	W36	.662	8831	3.8	60D	1F		P	1248	2.35	3.19			
MCMA	06	1305E	1322D	1306	N23	W41	.720	8831	3.5	17D	-N		P	1306	.62	.90			E
HUAN	06	1537	1541	1538	N24	W38	.695		3.8	4	-F	1	C	1538	.25	.29			D
SALO	06	1540E	1630D		N25	W37	.691	8831	3.9	50D	1F		P	1620	.99	1.30	1.30		
HUAN	06	1617	1622	1619	N24	W45	.764		3.3	5	-F	2	C	1619	.25	.31			D
SACP	07	1450	1518	1456	S22	W83	.994	8829	1.4	28	1N		C		1.63				
HUAN	07	1453	1456D		S21	W88	.999		1.0	3D	-F	1	P	1456	.83				E
LOCK	07	1952	2020	2003	S17	W90	1.000	8829	1.1	28	1F		C	2003	.90	3.60		10	H
SACP	07	1953	2026	2002	S22	W84	.995	8829	1.5	33	1N		C		2.25				
HUAN	07	1959	2008		S17	W90	1.000		1.1	9	-F	1	C	2002	.21				D
MCMA	07	2000E	2006	2002	S18	W90	1.000	8829	1.1	6D	-N		P	2002					D
HUAN	07	2009	2017		S22	W88	.999		1.2	8	-F	1	C	2012	.50				D
CAPS	09	1219E	1240		N22	E80	.987	8843	15.5	21D	1F	3		1228	.80			152	
SACP	09	1221	1235	1226	N20	E90	1.000		16.3	14	-N		C		.72				
CAPF	09	1225E	1306		N23	E80	.987	8843	15.5	41D	1N		P	1238	.52				G
CAPS	11	1108E	1142		N19	E56	.847	8843	15.7	34D	2N	3		1115	3.00	5.40		196	GH
CATA	11	1113	1130	1115	N22	E58	.869	8843	15.8	17	1B			1115	2.38			209	
CAPF	11	1115E	1206		N19	E59	.872	8843	15.9	51D	1N		P	1119	1.18	2.28			GH
HUAN	11	1139E	1153		N19	E57	.855		15.8	14D	-F	1	P	1139	.25	.35			D
								8843											
SACP	13	1457	1509	1502	N15	W76	.971		7.9	12	-F		C		.41	.92			
HUAN	13	1457	1514	1501	N16	W76	.972		7.9	17	-N	2	C	1501	.31				D
MCMA	13	1458	1512	1501	N15	W77	.975	8837	7.8	14	-N		C	1501	.31	1.80			D
CATA	13	1458	1514	1502	N17	W75	.968		8.0	16	-N			1502	.74			162	
CAPS	13	1500E	1507D		N15	W70	.943	8837	8.4	7D	1N	3		1502	1.00			161	CGJ
SALO	13	1550E	1630D		N14	W72	.953	8837	8.3	40D	1N		S	1620	.33	1.10	1.40		
SALO	13	1550E	1630D		S17	W58	.864	8836	9.3	40D	1N		S	1620	.41	.80	1.40		
LOCK	14	1713	1730	1722	N21	E90	1.000	8854	21.5	17	2N		C	1722	2.20	8.80		20	
MCMA	14	1715E	1726		N28	E90	1.000	8854	21.5	11D	-N		C	1721					
LOCK	14	2138	2205	2151	N15	E90	1.000	8854	21.7	27	1F		C	2151	.60	2.40		10	
ARCE	15	0925E	0947		S15	W82	.992	8836	9.2	22D	1N		C	0925	.65	2.30			
LOCK	15	2100	2120	2107	S15	W90	1.000	8836	9.1	20	1F		C	2107	.60	2.40		10	
LOCK	15	2131	2250	2135	S16	W90	1.000	8836	9.1	79	1F		C	2135	.90	3.60		10	K
LOCK	15	2300	2345	2325	S15	W90	1.000	8836	9.2	45	1F		C	2325	.60	2.40		10	
LOCK	16	0020	0047	0026	S15	W90	1.000	8836	9.3	27	1N		C	0026	.70	2.80		20	
MITK	16	0022	0032	0025	S17	W90	1.000	8836	9.3	10	1F		C	0025	.52				
HALE	16	0058	0123	0107	N19	E62	.893	8854	20.7	25	1F	1	C	0107	1.65	3.60			
SACP	16	0106	0109	0107	N19	E62	.893		20.7	3	-F		C		.21	.32			
MANI	16	0407	0432	0412	S17	W89	1.000		9.5	25	-N	2		0412	.46	1.50			
MITK	16	0408E	0418		S17	W90	1.000	8836	9.4	10D	1F		C	0410	.52				
BUCA	16	0645E	0725D		N35	E85	.997	8854	22.7	40D	1F		P	0706	.66				
CAPS	16	0807E	0816D		S20	W90	1.000	8836	9.6	9D	1N	1							
LOCK	16	1830	1910	1842	N30	E82	.991	8854	22.9	40	1N		C	1842	1.50	5.10		20	
SACP	16	1832	1842U	1838U	N35	E85	.997		23.1	10U	-N		C		.61				
HALE	16	1832	1851	1840	N35	E81	.990		22.8	19	-B	2	C	1840	.46				
MCMA	16	1832	1909	1837	N34	E86	.998	8854	23.2	37	-N		C	1837					D
HALE	16	1840	1935	1852	N36	E81	.990	8854	22.9	55	1B	2	C	1852	.52				
SACP	16	1842E	1905U	1847	N36	E80	.988		22.8	23U	-F		C		.61				

SOLAR FLARES

PRELIMINARY

JUNE 1967

OBSERVATORY	DATE 1967 JUNE	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
SALO	17	1040E	1110D		N24	E55	.846	8854	21.6	30D	1N		V	1100	.58	1.10	1.50		
WEND	17	1046E	1106		N21	E53	.822	8854	21.4	20D	1N		V		3.09				
CAPS	17	1059E	1111		N26	E52	.827		21.4	12D	-N	2		1105	.30	.50			D
SALO	17	1105E	1130D		N22	E67	.929	8854	22.5	25D	1N		V	1125	.50	1.50	1.40		
WEND	17	1108E	1130		N24	E70	.947	8854	22.7	22D	1N		V		3.09				
CAPS	17	1109	1130		N25	E72	.957		22.9	21	-N	2		1118	.60			171	
HALE	17	1944	2125	2015	N27	E72	.959	8854	23.2	101	1B	1	C	2015	.62				
SACP	17	1958E	2032	1958	N28	E71	.955		23.2	34D	-F		C		.30	.61			
HALE	17	2122	2223	2125	N28	E63	.912	8854	22.6	61	1B	1	C	2125	.88				
MANI	17	2140E	2215		N28	E64	.918	8854	22.7	35D	1N	1		2141	1.86	3.90			
SACP	17	2142E	2226U	2142E	N29	E64	.919	8854	22.7	44U	1N		C		2.44	4.21			
MANI	18	0119	0209	0124	N25	E62	.900	8854	22.7	50	2B	2		0124	3.71	7.70			
BUCA	18	0720E	0736D		N26	W83	.993	8846	12.1	16D	1F		C	0727	1.11				
SALO	18	1040E	1120D		N24	E55	.846		22.6	40D	-N		V	1110	.41	.80	1.50		
CATA	18	1053	1125	1053	N25	E51	.815		22.3	32	-N			1053	1.09	1.90		191	
WEND	18	1054E	1120D		N23	E50	.799	8854	22.2	26D	1N		V		4.13				
SALO	18	1110E	1130D		N25	E54	.840	8854	22.5	20D	1B		V	1125	.50	1.00	1.50		
CATA	18	1112	1122	1112	N25	E52	.823		22.4	10	-N			1112	.84	1.50		178	
SACP	18	1306	1348	1315	N28	E54	.848	8854	22.6	42	1N		C		2.44	3.52			
CATA	18	1313	1343	1318	N25	E56	.856	8854	22.8	30	2B			1318	3.03	5.80		234	
MCMA	18	1317E	1430D		N27	E56	.861	8854	22.8	73D	1B		C	1317	1.29	2.60			BF
SACP	18	1551	1617	1555	N29	E44	.768	8854	22.0	26	1N		C		2.56	3.21			
MCMA	18	1552	1612	1554	N27	E44	.759	8854	22.0	20	-B		C	1554	1.03	1.60			EH
CATA	18	1559	1608	1600	N25	E46	.769	8854	22.1	9	1B			1600	1.42	2.30		200	
SACP	18	1558	1618	1601	N18	E90	1.000	8863	25.4	20	1N		C		1.02				
MCMA	18	1559	1612	1602	N17	E90	1.000	8863	25.4	13	-B		C	1602					A
LOCK	18	1800E	1928	1835	N13	E90	1.000	8863	25.5	88D	1N		C	1835	1.00	4.00		20	K
MCMA	18	1815	1930		N17	E90	1.000	8863	25.5	75	-F		C						K
LOCK	18	2115	2155	2127	N20	E53	.819		22.9	40	-N		C	2127	1.20	2.00		20	
SACP	18	2116	2146	2122	N28	E52	.832	8856	22.8	30	1N		C		1.84	2.54			
HALE	18	2121E	2136D	2123	N28	E52	.832		22.8	15D	-B	2	P	2123	.67	1.20			
LOCK	18	2308	0015	2345	N12	E90	1.000	8863	25.7	67	1N		C	2345	.80	3.20		20	
LOCK	19	0015	0120D	0035	N13	E90	1.000	8863	25.8	65D	1N		C	0035	1.00	4.00		20	
HUAN	19	1756	1903		N18	E84	.994		26.0	67	-N	1	C	1822	.62				
MCMA	19	1813	1848D	1829	N18	E85	.996	8863	26.1	35D	1N		C	1829					
LOCK	19	1820	1900	1830	N14	E79	.982		25.7	40	-F		C	1830	.60	1.90		10	J
SALO	20	1055E	1107		N15	E75	.966	8863	26.1	12D	2N		V	1100	.33	1.40	1.40		
HALE	20	2008	2020D	2010	N32	E31	.671		23.2	12D	-B	1	P	2010	.62	.80			
HUAN	20	2009	2016	2011	N32	E32	.680		23.2	7	-B	2	C	2011	1.24	1.44			E
LOCK	20	2009	2020	2011	N31	E33	.680		23.3	11	-N		C	2011	1.30	1.80		20	
MCMA	20	2010	2016	2011	N32	E31	.671	8854	23.2	6	-B		C	2011	1.13	1.50			EL
SACP	20	2011E	2016	2011	N34	E30	.680	8854	23.1	5D	1N		C		2.35	2.69			
CATA	22	0610	0700	0612	S21	E67	.936	8867	27.3	50	1N			0612	1.18			192	
CAPS	22	1018E	1035D		S24	E60	.896		26.9	17D	-N	2		1020	1.00			182	J
CAPF	22	1023E	1055D		S23	E57	.872	8867	26.7	32D	1N		P	1027	1.76	3.76			
CAPS	22	1132	1154		N16	E43	.703	8863	25.7	22	1F	3		1140	1.80	2.50		152	EJ
HUAN	22	1143E	1154		N17	E42	.694		25.6	11D	-N	1	P	1143	.93	1.10			E
WEND	22	1147E	1225		N18	E41	.686	8863	25.6	38D	1N		V		5.16				
HUAN	22	1200E	1215		N16	E41	.679		25.6	15D	-N	1	P	1200	.62	.71			
SALO	22	1205E	1220D		N13	E40	.658		25.5	15D	-N		P	1215	.50	.70	1.50		
HUAN	22	1227	1327	1243	N16	E45	.726		25.9	60	-N	1	C	1243	.97	1.20			EH
SACP	22	1228	1311	1242	N16	E42	.691	8863	25.7	43	1F		C		1.87	2.16			
MCMA	22	1230	1318D		N17	E44	.717	8863	25.8	48D	-N		C	1245	.83	1.20			EH
SACP	22	1332	1400	1336	N16	E40	.667		25.6	28	-F		C		1.43	1.62			
HUAN	22	1334	1354	1342	N16	E40	.667		25.6	20	-B	1	C	1342	.95	1.09			E
WEND	22	1334	1403		N17	E39	.659	8863	25.5	29	1N		V		3.09				
MCMA	22	1335	1405	1338	N16	E40	.667	8863	25.6	30	-B		C	1338	.41	.60			E
CAPS	22	1337E	1400		N17	E43	.706		25.8	23D	-B	2		1345	1.00	1.40		216	EJ
CATA	22	1343	1404	1349	N15	E40	.664		25.6	21	-B			1349	.88	1.20		209	
SACP	22	1346	1403	1358	S23	E59	.887		27.0	17	-F		C		1.23	1.89			
CAPS	22	1347E	1410		S24	E62	.909	8867	27.2	23D	1N	2		1353	1.20			176	
HUAN	22	1347	1416	1354	S23	E62	.908		27.2	29	-B	1	C	1354	1.13	1.90			
WEND	22	1347	1418		S23	E59	.887	8867	27.0	31	1N		V		5.16				
MCMA	22	1348	1415D	1354	S24	E62	.909	8867	27.2	27D	1B		C	1354	1.03	2.50			E
CATA	22	1349	1424	1349	S24	E60	.896	8867	27.1	35	1B			1349	1.97			228	
SACP	22	1441	1520	1500	N14	E42	.685	8863	25.8	39	1N		C		2.96	3.42			
HUAN	22	1446	1505	1451	N18	E40	.675		25.6	19	-N	2	C	1451	.55	.63			E
MCMA	22	1446	1610D	1453	N16	E40	.667	8863	25.6	84D	-B		C						
MCMA	22			1504										1504	1.03	1.40			EHK
WEND	22	1448	1506		N17	E39	.659	8863	25.5	18	1N		V		3.09				
HUAN	22	1458	1506	1501	N15	E42	.688		25.8	8	-F	2	C	1501	.45	.52			EH
LOCK	22	1505E	1537	1505U	N14	E40	.661		25.6	32D	-F		C	1505	.50	.70		10	
WEND	22	1558	1626		S23	E58	.880	8867	27.0	28	1N		V		3.09				
HUAN	22	1600	1609	1603	S23	E59	.887		27.1	9	-F	1	C	1603	.25	.38			D
LOCK	22	1600	1615	1604	S25	E57	.877		26.9	15	-F		C	1604	.60	1.10		10	
SALO	22	1600E	1620D		S27	E67	.943	8867	27.7	20D	1B		P	1615	.66	1.70	1.50		

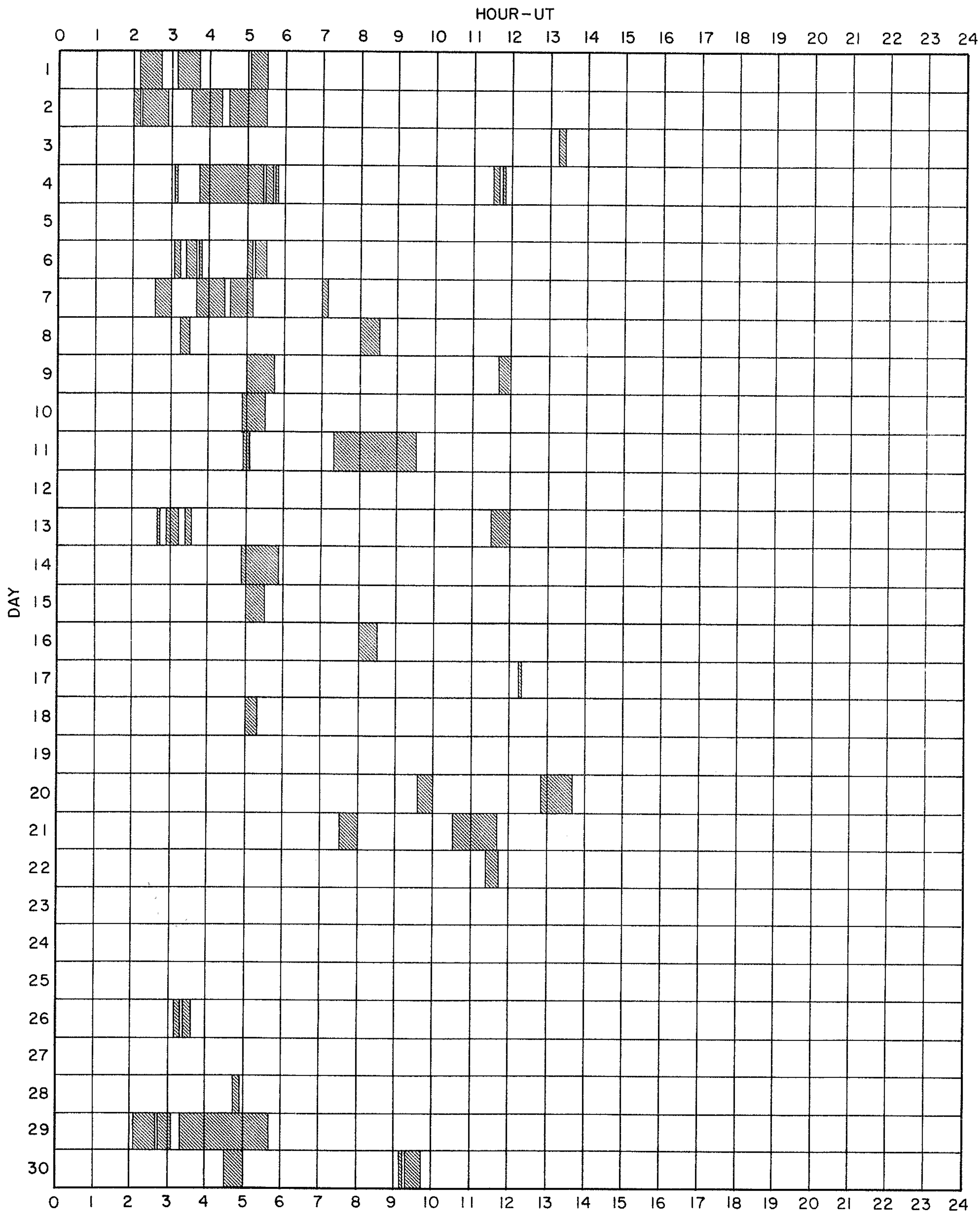
SOLAR FLARES
PRELIMINARY

JUNE 1967

OBSERVATORY	OBSERVED UT DATE 1967 JUNE	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
MCMA	22	1601E	1610D	1603	S24	E62	.909	8867	27.3	9D	-N		C	1603	.62	1.50			E
SACP	22	1811	1842	1828	N16	E37	.631	8863	25.5	31	1N		C		2.45	2.71			
HALE	22	1812	1850	1833	N15	E38	.639		25.6	38	-N	1	C	1833	.31	.40			
LOCK	22	1812	1850	1826	N15	E38	.639		25.6	38	-N		C	1826	1.40	1.80		20	JK
LOCK	22			1840															JK
WEND	22	1814	1847		N17	E37	.635	8863	25.5	33	1N		V		4.13				
HUAN	22	1819	1845	1827	N15	E38	.639		25.6	26	-B	2	C	1827	.88	.97			E
HALE	22	1820	1842	1825	N14	E37	.623		25.5	22	-N	1	C	1842	.31	.40			H
MCMA	22	1836E	1940D	1858	S24	E61	.903	8867	27.4	64D	-B		C	1858	.83	1.90			E
LOCK	22	1837	1925	1853	S25	E55	.862		26.9	48	-N		C	1853	.90	1.70		20	
WEND	22	1848	1908D		S23	E56	.865	8867	27.0	20D	1N		V		4.13				
HUAN	22	1848	1912	1854	S22	E56	.862		27.0	24	-B	2	C	1854	.83	1.26			
HALE	22	1850	1900	1854	S24	E55	.860		26.9	10	-B	1	C	1854	.31	.60			
HUAN	22	1951	2030D		N18	E45	.731		26.2	39D	-F	1	C	1956	.21	.25			D
MCMA	22	2015E	2158D	2047	N18	E43	.709	8863	26.1	103D	-N		C						
MCMA	22			2112										2112	1.03	1.50			EK
LOCK	22	2040	2144	2050	N15	E43	.700		26.1	64	-N		C						
LOCK	22			2111										2111	1.30	1.80		20	
HALE	22	2042	2105D	2050	N14	E38	.636		25.7	23D	-N	1	P	2050	.31	.40			
SACP	22	2047E	2130	2108	N18	E41	.686	8863	25.9	43D	1F		C		2.27	2.61			
HUAN	22	2111E	2125D		N15	E40	.664		25.9	14D	-N	1	P	2115	.56	.66			E
MANI	23	0548E	0622	0551	N16	E31	.554		25.6	34D	-F	1		0551	.93	1.11			
BUCA	23	0559E	0629D		N15	E31	.548		25.6	30D	-F		C	0610	1.11	1.30			
WEND	23	0623E	0647D		N17	E30	.546	8863	25.5	24D	1N		V		3.09				
CAPS	23	0724	0748		S22	E53	.838	8867	27.3	24	1N	2		0732	2.00	3.40		197	EJ
CATA	23	0725	0745	0730	S27	E50	.830		27.1	20	-N			0730	.33	.60		191	
LOCK	23	1840	1932	1905	N18	E21	.440	8863	25.4	52	1B		C	1905	2.10	2.30		30	
HUAN	23	1842	1928	1906	N18	E24	.477		25.6	46	-B	2	C	1906	1.24	1.27			E
HALE	23	1848	1934	1858	N18	E24	.477		25.6	46	-B	3	C	1858	1.08	1.20			EK
MCMA	23	1852	1928	1859	N18	E23	.465	8863	25.5	36	-B		C						
MCMA	23													1909	1.13	1.20			EK
SACP	23	1854	1932	1858	N19	E23	.473	8863	25.5	38	1N		C		3.16	3.24			
HALE	23	1908	1919	1908	N18	E20	.428		25.3	11	-B	3	C	1908	.21	.21			
SACP	23	2012	2022D	2018	N21	E91	1.000	8871	30.7	10D	1N		C		.92				
WEND	24	1242	1256		N14	E13	.301	8863	25.5	14	1N		V		3.09				
HUAN	24	1245	1255	1246	N15	E13	.313		25.5	10	-N	1	C	1246	.62	.62			E
CAPS	24	1247E	1254D		N15	E14	.324		25.6	7D	-F	2		1249	.50	.50			C
HUAN	24	1442	1507	1447	S23	W23	.554		22.9	25	-B	1	C	1447	1.80	1.82			
CAPS	24	1443E	1455		S21	W24	.543	8858	22.8	12D	1N	3		1445	2.00	2.80		188	CF
LOCK	25	0105	0200D	0142	N22	E18	.445	8863	26.4	55D	1B		C	0142	3.30	3.60		30	
HALE	25	0105	0330	0135	N23	E16	.438	8863	26.2	145	1B	1	C	0135	1.80	2.00			FJ
MANI	25	0121E	0140D		N20	E15	.392	8863	26.2	19D	1N	1		0140	2.27	2.49			
SACP	25	0128E	0136D	0132	N23	E16	.438	8863	26.3	8D	1N		C		3.07	3.11			
BUCA	26	0650E	0716D		N26	W64	.912	8854	21.5	26D	1F		C	0657	2.22	5.10			
BUCA	27	0613E	0728D		N37	E90	1.000	8873	4.0	75D	1F		C	0622	.56				
HALE	27	2001	2032	2012	S19	E89	1.000	8875	4.5	31	1B	1	C	2012	.52				
LOCK	27	2001	2034	2015	S21	E90	1.000	8875	4.6	33	2N		C	2015	1.80	7.20		20	
BUCA	28	0720E	0740D		S24	W15	.504	8867	27.2	20D	1F		C	0725	2.22	2.50			
CAPS	28	0721E	0730D		S23	W15	.491		27.2	9D	-F	3		0723	.70	.80		158	C
SALO	28	0940E	0950D		N13	W33	.563	8863	25.9	10D	1N		V	0945	.66	.80	1.40		
LOCK	29	2331	2359	2339	N15	W56	.834	8863	25.8	28	1N		C	2339	1.40	2.50		20	H
IKOM	29	2332E	2350D	2338	N16	W57	.844	8863	25.7	18D	1B		V	2338	1.44	2.60		130	D
BUCA	30	0600E	0737D		S20	W90	1.000	8858	23.5	97D	1F		C	0610	.56				
CAPS	30	0733	0750		N21	E65	.912	8876	5.2	17	1F	3		0737	1.00				E
BUCA	30	0735E	0805D		N21	E66	.918	8863	5.3	30D	1N		C	0738	2.77				
CAPS	30	1047E	1103		S22	W42	.742		27.3	16D	-N	3		1049	1.20	1.70		170	CJ
SALO	30	1048E	1105D		S26	W36	.709	8867	27.7	17D	1N		V	1100	.50	.70	1.30		
SALO	30	1145E	1153D		N28	W46	.772		27.0	8D	-N		V	1150	.33	.60	1.10		
HUAN	30	1145E	1156		N32	W48	.806		26.9	11D	-N	2	C	1149	1.00	1.33			T
CAPS	30	1149E	1156D		N32	W46	.789		27.0	7D	1N	3		1152	1.50	2.30		171	CJ

INTERVALS OF NO FLARE PATROL OBSERVATIONS
PROVISIONAL

JUNE 1967



Observatories included:

Anacapri-F (German) Bucharest Haleakala Huancayo Lockheed Sacramento Peak Wendlestein
Arcetri Catania Herstmonceux Ikomasan Manila Salonique

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1967

JUN. 1967	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} (c/s)$^{-1}$ PEAK	MEAN	INT	REMARKS
1	2800 OTTA	4	0013.2	0013.8	7	33.0	10.0		
	2700 PENN	45	1105.8	1115.1					DUR. SUNRISE
	2800 OTTA	22	1155	1215	115	5.2	2.8		
	2800 OTTA	21	1440	1500	140	4.4	2.2		
	2700 PENN	20	1451.7	1455.4	11.7	2.1	1.2		
	2800 OTTA	1	1503.7	1504	1	2.4	1.2		
	2700 PENN	1	1504	1504.1	1.4	3.3	1.6		
	2800 OTTA	1	1552	1554.2	4	5.2	3.6		
	2700 PENN	1	1551	1553.3	6	5.4	1.8		
	1415 SGMR	3	1553.2	1554.4	3.5	22.4	11.2		
	606 SGMR	41	1553.6	1554.3	1.1	5.0	2.5		
	10700 PENN	20	1741.4	1741.7	23.3	9.4	3.9		
	10700 PENN	1	1759.3	1759.7	4.6	7.4	3.7		
	10700 PENN	3	1809.2	1809.5	.8	8.2	3.1		
	10700 PENN	1	2046.8	2047.7	2.4	7.0	3.5		
	2800 OTTA	21	2135	2146	20	3.4	1.7		
	2800 OTTA	1	2139.5	2140	1	2.4	1.2		
	2700 PENN	1	2139.3	2140	1.3	4.5	2.6		
	2700 PENN	29	2140.6	2140.6	85.5	1.6	0.8		
	8800 SGMR	20	2214	2225.5	27	23.8	11.5		
	4995 SGMR	20	2221	2224.6	16	22.5	10.0		
	2800 OTTA	21	2215	2222	35	4.6	2.3		
	2800 OTTA	4	2221	2224	11	14.0	7.0		
	2700 PENN	45	2219.6	2223.9	10.2	15.8	8.5		
	2695 SGMR	20	2222	2225	14	22.4	10.0		
	2700 PENN	29	2229.8	2229.8	33.5	7.4	3.7		
	2800 OTTA	1	2321	2321.3	2	3.4	1.7		
2	2700 PENT	20	0010	0100	90 D	7.4			
	486 WASH	3	0144	0213	31	110.0			
	10700 PENN	3	1308.9	1310.5	5.9	14.1	5.4		
	2800 OTTA	20	1407	1432	80	4.2	2.1		
	2695 SGMR	1	1517.4	1518.3	1.1	3.6	1.8		
	10700 PENN	3	1519.2	1520	1.2	33.4	14.9		
	8800 SGMR	3	1519.4	1519.5	12.6	30.4	6.1		
	4995 SGMR	45	1519.3	1522.7	11.7	26.1	3.0		
	2800 OTTA	21	1519	1523	60	4.2	2.1		
	2800 OTTA	1	1519.5	1520	1	2.8	1.4		
	2700 PENN	1	1519.5	1520.2	1.2	2.0	1.3		
	10700 PENN	29	1520.4	1520.4	13.6	14.2	7.1		
	2700 PENN	29	1520.7	1520.7	12.3	1.4	0.7		
	10700 PENN	1	1522.8	1523	.6	5.0	2.5		
	2700 PENN	1	1522.6	1522.8	.8	1.0	0.5		
	10700 PENN	3	1633.6	1636.5	6.4	12.8	6.4		
	10700 PENN	1	1706	1708.5	6.6	6.5	3.3		
	8800 SGMR	20	1633.5	1708.5	79.5	19.9	9.0		
	4995 SGMR	20	1631	1707	78	22.0	10.0		
	2800 OTTA	21	1635	1645	185	6.8	3.4		
	2800 OTTA	20	1700	1707	15	4.0	2.0		
	2695 SGMR	20	1634	1708	70	10.4	5.0		
	184 BOUL	6	2048	2050	5			1	
	1415 SGMR	3	2058.5	2100.3	2.5	8.1	4.0		
	606 SGMR	3	2059.6	2100.1	.9	58.9	20.0		
	2800 OTTA	20	2255	2325	65	3.4	1.7		
3	2700 PENT	20		0003	20	2.6	1.3		
	2700 PENT	1	0118	0119	3.5	4.0	2.0		
	2800 OTTA	26	1050		150	9.6			
	10700 PENN	20	1514.3	1515.1	7.9	7.7	3.8		
	8800 SGMR	3	1514.2	1515	4.8	8.7	4.0		
	4995 SGMR	3	1513.6	1515	5.4	12.8	6.0		
	2800 OTTA	3	1514	1515	4	9.0	4.5		
	2700 PENN	3	1513.9	1515.1	8.9	9.5	3.1		
	2695 SGMR	3	1513.5	1515.1	5.5	9.5	4.0		
	1415 SGMR	1	1514	1515.5	5	1.1	.5		
	2800 OTTA	29	1518		10	3.0	1.5		
	8800 SGMR	1	1528.2	1528.8	1.8	3.4	1.7		
	4995 SGMR	1	1527.5	1528.6	5.5	7.2	3.6		
	8800 SGMR	20	1840	1841.1	9.8	5.7	1.9		
	4995 SGMR	3	1839	1842.1	15.7	9.5	3.2		
	2800 OTTA	20	2000	2150	165	6.0	3.0		
	2700 PENN	1	2133.9	2134	.8	3.7	1.8		
	2700 PENT	21	2356	2358	11	2.8	1.4		
	2700 PENT	1	2358.7	2359.2	.2	3.8	1.9		
4	2700 PENT	22	0055	0110	35	3.2	1.6		
	184 BOUL	44	1137 E		864 D			1	
	8800 SGMR	1	1409.9	1410.3	1.3	4.2	2.0		
	4995 SGMR	3	1409.6	1410.2	6.4	9.0	4.0		
	2800 OTTA	21	1505	1510	20	2.4	1.2		
	2800 OTTA	45	1512.5	1514.5	3.5	2.6	1.5		
	960 PENN	1	1634.3	1634.7	1.1	.6	0.3		
	2700 PENN	1	1636.8	1637.2	1	2.7	1.3		
	960 PENN	1	1638.6	1639.3	1.4	1.4	0.5		
	2700 PENN	3	1925.4	1925.4	.6	58.9	3.5		
	960 PENN	1	1925.6	1925.8	.5	3.0	1.5		
	2800 OTTA	21	2040	2055	130	5.6	2.8		
	10700 PENN	20	2045.5	2052.1	13.2	8.8	4.4		
	2800 OTTA	1	2106	2109	6	2.4	1.2		
	2700 PENN	1	2107.8	2108.3	3.3	5.0	2.5		
	10700 PENN	40	2136		84				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1967

JUN. 1967	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} (c/s)^{-1}$ PEAK	MEAN	INT	REMARKS
	2700 PENN	40	2136		84				
	960 PENN	1	2145.2	2146.6	2.1	1.2	0.6		
	10700 PENN	3	2315	2315.6	2				DUR. SUNSET
	2700 PENN	3	2315	2315.9	2				DUR. SUNSET
	960 PENN	1	2316.2	2316.4	.5				
5	2800 OTTA	20	1210 E	1415	265	7.6			
	184 BOUL	44	1137 E		630 D			1	POWER OFF
	2800 OTTA	1	1840	1841	2	6.8	3.4		
	2800 OTTA	29	1842		18	1.2	0.6		
	8800 SGMR	20	1917	2003.6	144.4	13.7	4.6		
	8800 SGMR	3	1925.6	1925.8	.4	36.7	12.2		
	4995 SGMR	20	1900.4	1952.7	164.8	17.6	5.9		
	2800 OTTA	20	1915	1950	195	10.8	5.4		
	2695 SGMR	20	1919.7	1941.5	120.8	13.3	4.4		
	1415 SGMR	20	1915.9	1951.6	215	7.8	2.6		
	1415 SGMR	3	1933.4	1933.7	2.7	12.4	4.1		
	10700 PENN	40	2007.2		18.6				
	2700 PENN	40	2008.8		16.7				
	486 WASH	3	2031	2031	5	90.0			
	2700 PENN	45	2102	2103.9	5.5	28.5	7.3		
	10700 PENN	5	2314.7	2315	.7				DUR. SUNSET
	2700 PENN	5	2314.6	2314.9	.6				DUR. SUNSET
	486 WASH	45	2351	2356	55	60.0			
6	2800 OTTA	20		0020	60	3.8	1.9		
	486 WASH	45	0110	0216	66	80.0			
	2800 OTTA	20	1055	1100	180	5.0	2.5		
	2700 PENN	1	1626.2	1626.8	1	3.2	1.6		
	486 WASH	45	1600	1608	50	30.0			
	486 WASH	45	1700	1735	90	80.0			
	184 BOUL	44	1720 E		S			1	POWER OFF
	2800 OTTA	26	2015		120	5.0			
	2700 PENN	45	2040.4	2043.3	3.9	24.8	9.6		
	486 WASH	45	2020	2132	180	110.0			
	10700 PENN	3	2231.9	2232.3	.9	18.7	9.4		
	2700 PENN	1	2231.8	2232.2	.9	5.0	2.5		
7	486 WASH	45	0114	0114	45	60.0			
	2800 OTTA	20	1120	1135	40	2.4	1.2		
	2800 OTTA	20	1120	1145	70	2.2	1.1		
	2800 OTTA	26	1405		145	4.4			
	2700 PENN	1	1555.5	1557.4	4.1	2.6	1.3		
	2700 PENN	45	1602.2	1602.4	1.8	24.8	8.0		
	486 WASH	45	2106	2136	47	70.0			
8	486 WASH	45	1614	1625	20	60.0			
	2700 PENN	3	1708.4	1708.5	1	33.9	3.4		
	486 WASH	45	1835	1908	36	90.0			
	184 BOUL	6	1915	1916	3			1	
	184 BOUL	6	1940	1942	4			1	
	486 WASH	45	2106	2122	25	70.0			
9	184 BOUL	42	1731	1918	142			2	
10	486 WASH	3	0209	0213	10	60.0			
12	486 WASH	41	1941	2015	110	90.0			
13	486 WASH	2	0212	0217	5	60.0			
14	2700 PENN	3	1839.8	1840.1	2.8	17.8	1.8		
	2800 OTTA	24	2200		65	3.0			
15	10700 PENN	20	1241.5	1319.6	192	16.8	10.4		
	10700 PENN	3	1247.4	1247.6	1.1	8.0	3.0		
	8800 SGMR	3	1247.3	1247.5	1.7	7.8	2.6		
	4995 SGMR	3	1247.3	1247.5	1.7	14.4	3.8		
	2800 OTTA	41	1247.2		4				
	2800 OTTA	1	1247.2	1247.5	1.5	5.8	2.9		
	2700 PENN	45	1247.4	1248.7	1.4	7.1	3.4		
	2695 SGMR	1	1247.3	1247.5	1.7	6.6	2.2		
	1415 SGMR	1	1247.4	1247.5	1.6	3.0	1.0		
	10700 PENN	3	1248.5	1248.6	.2	17.0	8.0		
	10700 PENN	3	1249.4	1249.6	1	23.2	11.6		
	8800 SGMR	3	1249.3	1249.7	1.7	23.4	7.8		
	4995 SGMR	3	1249.3	1249.7	1.7	24.0	8.0		
	2800 OTTA	3	1249.3	1249.8	2.5	17.0	7.0		
	2700 PENN	3	1249.4	1249.8	1	14.5	8.6		
	2695 SGMR	3	1249.3	1249.7	1.7	9.0	3.0		
	1415 SGMR	3	1249.3	1249.4	2.7	20.4	6.5		
	2700 PENN	29	1250.4	1250.4	4.5	4.6	2.3		
	10700 PENN	3	1435	1435.2	2	14.8	3.3		
	8800 SGMR	3	1435.3	1435.8	2.7	15.6	5.2		
	4995 SGMR	3	1435.3	1435.8	3.7	16.8	5.6		
	2800 OTTA	3	1435.3	1435.8	3	11.0	4.0		
	2700 PENN	3	1434.8	1435.5	4.8	9.9	2.4		
	2695 SGMR	3	1435.3	1435.8	3.7	9.0	3.0		
	1415 SGMR	1	1435.3	1435.8	4.7	1.8	.6		
16	2700 PENN	45	1247.4	1248.7	1.4	7.1	3.4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1967

JUN. 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22}Wm^{-2}(c/s)^{-1}$ PEAK	MEAN	INT	REMARKS
	2800	OTTA	1	1334	1334.5	1	2.4	1.2		
	2695	SGMR	1	1333.5	1334.4	3.5	5.5	2.0		
	1415	SGMR	3	1333.4	1334.4	3.1	11.6	4.0		
17	4995	SGMR	40	1049	1050.5	2.2	9.4	2.5		
	2695	SGMR	40	1048	1050.1	3.2	17.5	4.0		
	1415	SGMR	1	1048.6	1049.6	3.4	3.3	1.0		
	606	SGMR	3	1047.7	1048.6	7.3	16.5	4.0		
	2800	OTTA	20	1105	1140	95	3.8	1.9		
	2700	PENN	45	1512	1520.7	11.1	5.2	1.1		
	1415	SGMR	40	1512.1	1516.3	11.3	18.9	6.0		
	606	SGMR	40	1512.6	1513.2	6.4	3.3	1.0		
	4995	SGMR	3	2123	2125.8	4	18.0	9.0		
	2800	OTTA	21	2123	2155	105	5.4	2.7		
	2800	OTTA	3	2125	2125.7	2	18.0	9.0		
	2700	PENN	3	2124.3	2125.7	2.7	18.7	7.8		
	2695	SGMR	3	2124.4	2125.3	4.9	18.3	9.1		
	1415	SGMR	1	2124.6	2125.5	2.4	4.8	2.4		
	606	SGMR	1	2124.5	2125.3	2.5	2.7	1.3		
	2700	PENN	20	2127	2158	33	5.0	4.0		
	606	SGMR	3	2314.5	2314.6	1.2	10.2	3.4		
18	2700	PENT	45	0119	0121.2	4	52.0	30.0		
	2700	PENT	45	0119	0120.2	1.8	50.0			
	2700	PENT	45	0120.8	0121.2	2.2	52.0			
	2700	PENT	29	0123		25 D	7.2			
	2800	OTTA	1	1237	1237.2	1	6.0	3.0		
	2700	PENN	1	1237.1	1237.3	1.4	5.3	2.0		
	10700	PENN	45	1309.4	1313	6.6	42.4	12.5		
	8800	SGMR	45	1308.3	1313	6.7	63.0	20.0		
	4995	SGMR	45	1309	1313	6.5	25.0	8.0		
	2800	OTTA	45	1309	1313	6	17.0	8.0		
	2700	PENN	45	1309.1	1311.7	8.9	11.4	4.4		
	2695	SGMR	45	1309.3	1312.9	9.2	16.9	6.0		
	1415	SGMR	45	1309.6	1310.5	6.9	118.1	20.0		
	606	SGMR	1	1309.8	1309.9	.3	2.9	1.5		
	2800	OTTA	29	1315		75	4.8	3.5		
	2700	PENN	1	1517.5	1517.6	.9	3.1	1.8		
	2800	OTTA	26	1555	1610	60	4.6	2.2		
	2700	PENT	1	1711.5	1712	1	1.4	0.7		
	184	BOUL	6	1818	1819	5			2	
	2800	OTTA	1	1825	1825.8	2	4.8	2.4		
	2700	PENN	1	1824.6	1825.6	2.4	5.3	2.9		
	2800	OTTA	29	1827		20	2.2	1.1		
	2700	PENN	29	1827	1827	38	2.4	2.0		
	2800	OTTA	1	2118	2119.7	3	2.4	1.2		
19	1415	SGMR	40	1223.4	1238.5	7.6	17.6	3.5		
	606	SGMR	40	1223	1237.4	27	14.7	2.9		
	2800	OTTA	20	1720	1815	120	2.6	1.3		
	486	WASH	41	1817	1821	5	85.0			
	486	WASH	45	1900	1902	2	90.0			
20	1415	SGMR	3	1225.3	1227.8	7.7	10.5	2.6		
	606	SGMR	40	1225.3	1226.8	8	9.1	2.0		
	10700	PENN	26	1703	1727.5	34.2				
	2800	OTTA	26	1885	1915	45	4.4	2.2		
	2800	OTTA	21	2008	2010.3	25	4.0	2.0		
	2800	OTTA		2010.5	2010.5		5.6			SPIKE
	2700	PENN	1	2209	2209.8	3.3	6.1	1.8		
	2800	OTTA	26	2302	2310	40	5.2	3.4		
21	2800	OTTA	1	2204	2204.7	1	2.4	1.2		
	184	BOUL	6	2202	2203	3			2	
	2700	PENT	20	2355	2359	35	2.4	1.2		
22	606	SGMR	40	1004.3	1005.4	1.4	7.9	2.5		
	606	SGMR	40	1128.1	1128.7	.9	2.2	.7		
	2800	OTTA	20	1130	1140	20	3.4	1.7		
	606	SGMR	1	1136.3	1136.7	.5	3.5	1.1		
	606	SGMR	1	1158.7	1159	1.3	5.3	1.5		
	184	BOUL	6	1158	1158	1			1	
	2800	OTTA	20	1230	1240	30	2.2	1.1		
	2800	OTTA	1	1318.2	1318.4	.3	2.2	1.1		
	2800	OTTA	1	1319.2	1319.3	.5	2.2	1.1		
	1415	SGMR	22	1338.5	1340.3	4.5	4.2	1.4		
	2700	PENN	20	1347.8	1348.4	11.8	2.4	1.2		
	10700	PENN	3	1447	1448.8	5.5	15.1	8.9		
	8800	SGMR	3	1447.8	1449	8.2	11.0	3.5		
	4995	SGMR	3	1447.8	1448.7	5.7	23.5	7.5		
	2800	OTTA	21	1430		45	2.2	1.1		
	2800	OTTA	4	1447	1448	7	17.0	8.0		
	2700	PENN	45	1446.8	1448.4	4.3	16.7	10.5		
	2695	SGMR	3	1447	1448	6.6	16.1	5.3		
	1415	SGMR	1	1434	1435	2	4.2	1.4		
	1415	SGMR	1	1447.3	1448	3.7	5.6	1.9		
	10700	PENN	29	1449.6	1450.4	13.6	11.2	5.9		
	2700	PENN	29	1451.1	1452.1	3.8	4.6	2.3		
	10700	PENN	1	1454.6	1455	1.2	3.9	2.2		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JUNE 1967

JUN. 1967	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} (c/s)^{-1}$ PEAK	MEAN	INT	REMARKS
	4995 SGMR	1	1455.7	1455.9	1.3	4.7	1.5		
	2800 OTTA	3	1455	1456	2	17.0	6.0		
	2700 PENN	3	1455.4	1456	1.2	7.8	5.2		
	2695 SGMR	3	1455.3	1456	1.7	16.1	5.3		
	1415 SGMR	1	1455.4	1456	1.6	5.6	1.9		
	960 PENN	1	1455.7	1456.1	1	3.7	1.1		
	2700 PENN	29	1455.4	1455.4	2.9	2.0	1.0		
	2800 OTTA	26	1710	1720	25	2.2	1.1		
	2800 OTTA	1	1837	1838	2	1.6	0.8		
	1415 SGMR	45	1840	1840.5	.7	4.2	2.5		
	606 SGMR	1	1840.2	1840.6	.9	5.2	2.0		
	2800 OTTA	1	2252	2252.5	1	3.2	1.6		
	2695 SGMR	1	2252	2252.4	1.9	2.9	1.5		
	1415 SGMR	40	2250.5	2253.3	3.2	5.6	2.0		
	606 SGMR	40	2249.6	2253.3	70.4	4.7	1.5		
23	486 WASH	41	0037	0039	4	80.0			
	2800 OTTA	21	1055		600	8.4	6.2		
	1415 SGMR	3	1117.5	1117.8	.8	10.1	4.5		
	2700 PENN	1	1435.5	1436	1.9	2.6	1.1		
	2700 PENN	1	1635.1	1635.2	.7	1.7	0.8		
	10700 PENN	45	1855.2	1904.4	33	15.6	4.9		
	8800 SGMR	3	1903.3	1904.5	14.8	8.7	2.2		
	4995 SGMR	45	1855.4	1904.3	21.9	51.2	12.8		
	2800 OTTA	45	1856	1904.5	20	38.0	10.0		
	2800 OTTA	45	1856	1859	7	19.0			
	2800 OTTA	45	1903	1904.5	4	38.0			
	2800 OTTA	45	1907	1909	9	26.0			
	2700 PENN	45	1855.2	1904.2	20.8	33.9	11.2		
	2695 SGMR	45	1855.4	1904.8	29.5	37.0	5.2		
	1415 SGMR	45	1855.9	1904	26.1	12.9	1.7		
	184 BOUL	41	1853	1908	17			2	
	2800 OTTA	30	1916		14	2.2	1.1		
3	2700 PENN	9	1916	1916	33.4	3.5	1.8		
23	2700 PENN	1	1917.6	1918.8	3.6	3.5	1.8		
	10700 PENN	45	1932.8	1933.3	1.8	24.4	9.8		
	8800 SGMR	3	1932.9	1933.3	4.1	26.8	13.4		
	4995 SGMR	3	1932.7	1933.4	3.3	40.5	20.2		
	2800 OTTA	1	1928	1929	4	3.2	1.6		
	2800 OTTA	4	1932.5	1933.5	5	8.2	3.2		
	2700 PENN	45	1932.6	1933.4	3.6	7.0	2.7		
	1415 SGMR	1	1932.1	1932.1	.9	1.6	.8		
	606 SGMR	1	1933	1933.3	7	3.7	1.9		
	184 BOUL	41	1931	1933	4			1	
	2800 OTTA	1	2217.5	2217.7	1	6.4	3.0		
	2700 PENN	1	2217.1	2217.7	1.5	6.9	2.3		
	606 SGMR	3	2337.3	2339	6.7	18.4	6.1		
24	606 SGMR	3	0015	0016.9	4.4	29.9	9.9		
	184 BOUL	41	0138 S	0142	5			2	
	4995 SGMR	3	1244.5	1245	.8	9.8	4.9		
	2800 OTTA	2	1244	1245	3	5.4	2.6		
	2700 PENN	45	1244.4	1245	3.6	4.2	1.6		
	2695 SGMR	1	1244.8	1244.9	1.7	2.6	1.3		
	1415 SGMR	1	1244.5	1245.1	1.1	3.9	1.9		
	606 SGMR	3	1244.2	1245	3.8	23.5	11.7		
	184 BOUL	6	1242	1242	3			2	
	2800 OTTA	1	1657.5	1657.8	1	1.6	0.8		
	184 BOUL	6	1655	1656	3			2	
25	2700 PENT	20	0100	0143	50 D	8.0			
	606 SGMR	3	1725.2	1725.3	1.4	12.3	4.0		
	2800 OTTA	1	2239.8	2240	1	2.0	1.0		
	2700 PENN	1	2239.8	2240	.8	1.7	0.9		
	2700 PENT	21	2320	2420	140	3.2	1.6		
	2700 PENT	1	2322.8	2323	1	2.8	1.4		
26	184 BOUL	42	1143 E	1237	135			1	
	184 BOUL	42	1913		267			1	
	184 BOUL	43	2340 S	0128 U	80 D			2	
27	184 BOUL	44	1210 E	1932	655 D			2	
	2700 PENN	1	2055	2055.2	1	2.0	1.5		
	960 PENN	45	2054.4	2055.5	1.8	12.9	4.5		
28	2695 SGMR	3	1001.5	1001.8	1.7	21.1	7.0		
	1415 SGMR	45	1001.2	1002.6	3.4	18.0	5.0		
	606 SGMR	1	1002.5	1003.7	2.9	2.2	1.0		
	10700 PENN	20	1253.4	1332.3	122.5	7.3	3.7		
	184 BOUL	6	1407	1407	3			1	
	486 WASH	45	1650	1651	3	50.0			
	184 BOUL	43	1834	1931	244 D			2	
	10700 PENN	1	2149.8	2150.1	1	6.8	4.2		
	2700 PENN	1	2149.7	2150	1	2.5	1.7		
	960 PENN	1	2149.3	2149.4	.3	1.5	1.0		
29	2700 PENT	22	0040	0100	70 D	9.6			
	2700 PENN	1	1226.3	1626.3	.1	1.6	0.5		
	960 PENN	1	1226.3	1626.3	.1	.9	0.1		
	184 BOUL	6	2111	2111	1			2	
	184 BOUL	42	2132	2238	268 D			1	
30	10700 PENN	1	1857.6	1858	.2	3.9	1.9		
	2700 PENN	1	1857.6	1858	.2	1.8	0.6		
	960 PENN	1	1857.8	1857.9	.4	.9	0.6		
	10700 PENN	1	1917	1917.4	.8	7.6	2.7		
	184 BOUL	6	1957	1957	1			2	
	184 BOUL	6	2136	2136	1			2	
	184 BOUL	6	2140	2141	1			2	

No data available from Haleakala for June 1967.

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

JUNE 1967

University of Colorado — 7.6-41 Mc/s

Date June 1967	Bursts			
	Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
1	continuum	b1130.0-1728.0	1	20-41
	IIIg	1132.6-1134.4	2	16-41
	IIIg	1139.3-1146.5	2	16-41
	III	1150.1-1150.7	3	16-41
	III	1407.4-1408.0	2	20-41
	IIIg	1421.8-1424.3	1	16-41
	III	1447.8-1448.3	1	15-41
	III	1646.5-1646.9	3	24-41
	III	1824.8-1825.1	1	24-41
	continuum	2207.8-2213.8	1	12-41
	IIIG	2207.8-2213.8	2	12-41
	IIIG	2222.8-2230.5	2	12-41
	continuum	2255.0-2410.0	2	24-41
	continuum	2410.0-a2540.0	1	28-41
2	III	1139.1-1139.4	1	24-35
	III	1151.0-1151.2	1	22-39
	IIIg	1157.7-1204.9	2	20-41
	IIIg	1226.3-1229.5	2	21-41
	IIIg	1241.4-1248.3	3	16-41
	III	1255.0-1255.5	3	22-41
	IIIg	1312.6-1319.0	2	20-41
	continuum	1329.5-1638.9	1	23-41
	IIIG	1411.4-1418.1	3	16-41
	IIIg	1425.8-1426.7	3	12-41
	IIIg	1610.4-1610.9	2	9-41
	IIIg	1628.7-1632.0	3	7-41
	continuum	1638.9-2130.8	1	12-41
	III	1734.5-1735.1	1	9-41
	III	2020.9-2021.7	2	12-41
	III	2130.4-2130.8	2	8-41
	continuum	2130.8-a2550.0	1	22-41
	III	2207.8-2210.1	3	10-41
	III	2357.8-2358.9	3	12-41
3	continuum	b1138.5-1429.3	1	19-41
	continuum	1429.3-2236.5	2	12-41
	III	1738.7-1739.2	3	9-41
	IIIg	2234.9-2236.5	3	11-41
	continuum	2236.5-a2555.0	2	16-41
4	continuum	b1128.0-a2542.0	2	16-41
	III	1133.9-1134.5	1	14-41
	III	1333.6-1334.1	2	12-41
	III	1605.6-1606.5	3	12-41
	IIIg	1736.8-1738.4	3	12-41
	IIIg	1809.0-1818.5	3	12-41
	III	1825.3-1825.7	3	11-41
	IIIg	2224.3-2231.0	3	12-41
5	continuum	b1137.3-1416.2	1	20-41
	III	1356.2-1357.2	3	10-41
	IIIg	1414.2-1416.2	3	10-41
	continuum	1416.2-2051.1	1	12-41

Date June 1967	Bursts			
	Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
5	III	1658.0-1659.2	3	16-41
	IIIg	1718.3-1723.3	3	7.6-41
	continuum	2051.1-a2540.0	1	21-41
	IIIg	2331.4-2332.7	2	20-41
6	continuum	b1128.0-1235.7	1	13-41
	IIIg	1217.7-1225.4	3	12-41
	continuum	1235.7-1410.1	2	12-41
	continuum	1410.1-1600.8	1	13-41
	IIIg	1456.6-1509.0	3	11-41
	continuum	1600.8-1737.3	3	12-41
	IIIg	1700.4-1705.2	3	7-41
	III	1712.2-1713.5	3	7-41
	continuum	1737.3-2058.3	1	13-41
	no observ.	1911-1950		
	IIIg	1950.3-1955.7	3	8-41
	III	2057.8-2058.3	2	8-41
	continuum	2058.3-a2546.6	1	16-41
	III	2444.5-2445.3	3	13-41
7	continuum	b1223.0-a2530	1	16-41
	III	1229.3-1230.0	2	14-41
8	III	1415.6-1416.0	1	24-41
	IIIg	1501.5-1508.7	1	22-41
	III	1718.4-1718.8	1	23-41
	III	1751.0-1751.4	1	24-41
	no observ.	1810-2138		
	III	2313.0-2313.4	1	20-39
9	III	1604.2-1604.5	1	24-40
	III	1711.0-1711.5	1	20-41
	III	1835.6-1835.9	1	24-40
	III	2308.9-2309.3	1	20-30
	III	2432.2-2432.8	2	12-40
	* II	2525.0-2543.0	1	22-41
10	III	1737.0-1737.3	1	25-36
	III	2146.4-2146.7	1	26-40
	IIIg	2320.7-2323.9	1	22-40
11	III	1216.4-1216.6	1	22-40
	IIIg	1323.0-1324.6	2	11-40
	IIIg	1345.8-1346.8	1	24-40
	III	1813.8-1814.4	2	15-40
	IIIg	2147.6-2153.6	1	20-40
	III	2545.7-2546.1	1	23-35
12	IIIg	1411.4-1416.6	2	17-40
13	IIIg	1705.3-1705.9	1	20-41
	II	2034.7-2041.1	1	27-39
15	IIIg	1405.3-1406.4	2	16-41
	IIIg	1957.4-1958.3	1	9-41
16	III	1510.0-1510.5	1	30-41
	IIIg	1655.4-1658.7	1	25-41
	III	1730.7-1730.9	1	27-41

* Possibly "continuum".

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

JUNE 1967

University of Colorado

7.6-41 Mc/s

Date June 1967	Bursts Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)	Date June 1967	Bursts Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
16	IIIg	1811.2-1815.0	2	25-41	20	IIIg	1151.7-1156.1	1	20-41
	III	1843.9-1844.5	2	27-41		IIIg	1215.3-1220.8	2	15-41
	III	1918.1-1918.7	2	31-41		IIIG	1225.7-1230.7	2	19-41
	IIIg	1934.5-1936.0	1	26-41		III	1248.6-1248.8	1	26-38
	III	2025.7-2026.1	1	30-41		IIIg	1312.6-1320.6	1	22-41
	IIIg	2153.6-2154.7	1	26-41		IIIg	1352.2-1353.6	3	10-41
	IIIg	2209.3-2211.0	2	26-41		IIIg	1409.5-1412.4	1	24-41
	III	2454.1-2458.2	1	22-41		III	1423.0-1423.2	1	30-41
	III	2532.1-2534.3	1	24-41		IIIg	1518.0-1520.4	2	22-41
17	continuum	1515.6-1523.8	2	17-41		IIIg	1534.5-1540.6	2	24-41
	III	1534.9-1535.2	1	32-41		IIIg	1624.2-1626.2	3	20-41
	IIIg	1652.5-1655.0	1	25-41		III	1633.1-1633.4	1	28-41
	III	1921.2-1921.5	1	25-41		IIIg	1700.2-1706.6	2	22-41
	IIIg	1931.8-1934.1	3	12-41		IIIg	1723.7-1735.4	2	12-41
	III	2028.6-2029.2	1	26-41		III	1834.0-1834.4	1	24-41
	III	2207.5-2207.9	1	23-37		IIIg	1853.3-1858.4	2	10-41
	IIIg	2226.6-2228.0	2	18-41		IIIg	1941.7-1942.8	1	25-41
	III	2300.9-2301.2	1	24-41		IIIg	2300.9-2303.3	2	20-41
	IIIg	2334.6-2336.9	1	25-41		IIIg	2310.1-2314.0	1	24-41
	IIIg	2354.5-2356.8	2	20-41		IIIg	2351.1-2359.0	1	18-41
	III	2438.8-2439.0	1	25-41		III	2541.8-2542.3	1	26-41
18	IIIg	1147.9-1150.1	1	20-41	21	III	1220.5-1220.8	1	22-41
	III	1333.9-1334.3	1	14-41		III	1246.3-1246.5	1	28-41
	IIIg	1430.7-1432.6	2	11-41		no observ.	1259-2000		
	IIIG	1436.6-1446.3	2	16-41		III	2006.6-2006.8	1	26-41
	IIIg	1522.4-1526.0	2	25-41		III	2041.4-2041.6	1	25-39
	III	1537.8-1538.2	1	26-37		continuum	2141.4-2320.0	1	22-41
	II	1600.0-1602.9	1	32-41		IIIg	2204.5-2206.0	2	23-41
	III	1611.0-1611.4	2	22-41		III	2351.2-2352.3	2	16-41
	III	1709.1-1709.5	1	22-41		IIIg	2432.7-2434.5	2	25-41
	III	1731.6-1732.0	3	8-41	22	IIIg	1135.7-1140.3	3	16-41
	IIIG	1812.9-1821.8	3	8-41		III	1146.0-1146.5	1	19-41
	III	1828.3-1828.7	1	22-41		IIIg	1157.5-1201.6	3	15-41
	III	1835.1-1835.4	1	26-37		IIIg	1241.5-1249.6	2	22-41
	IIIG	1905.4-1912.8	3	7-41		IIIg	1258.3-1303.4	2	16-41
	III	1916.8-1917.1	1	26-39		IIIG	1325.4-1342.8	3	12-41
	IIIg	2024.1-2031.8	2	22-41		IIIg	1348.6-1352.7	3	20-41
	III	2207.7-2208.1	1	24-41		IIIg	1400.0-1403.4	1	26-41
	III	2327.2-2327.5	1	22-35		continuum	1431.0-2453.5	1	16-41
	III	2421.4-2421.7	1	24-41		IIIg	1502.4-1503.9	2	16-41
	III	2456.8-2457.1	2	20-41		IIIg	1524.1-1525.8	3	16-41
19	IIIg	1201.3-1207.7	1	19-41		III	1603.6-1604.4	2	8-41
	continuum	1223.2-1320.0	2	17-41		III	1635.6-1637.1	3	7.6-41
	III	1706.1-1706.4	1	28-40		IIIg	1701.1-1702.8	3	11-41
	IIIg	2135.8-2137.1	1	18-41		IIIG	1708.5-1711.7	3	18-41
	IIIg	2328.6-2330.8	3	14-41		III	1719.3-1719.8	3	12-41
	IIIg	2350.5-2354.9	1	25-41		IIIg	1749.2-1754.6	2	10-41
	III	2401.5-2402.0	2	20-41		IIIG	1815.7-1827.2	3	8-41
	III	2509.4-2510.4	3	18-41		III	1837.6-1838.2	3	7.6-41
	III	2544.0-2545.0	1	20-41		III	1934.1-1935.0	3	7.6-41

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

JUNE 1967

University of Colorado — 7.6-41 Mc/s

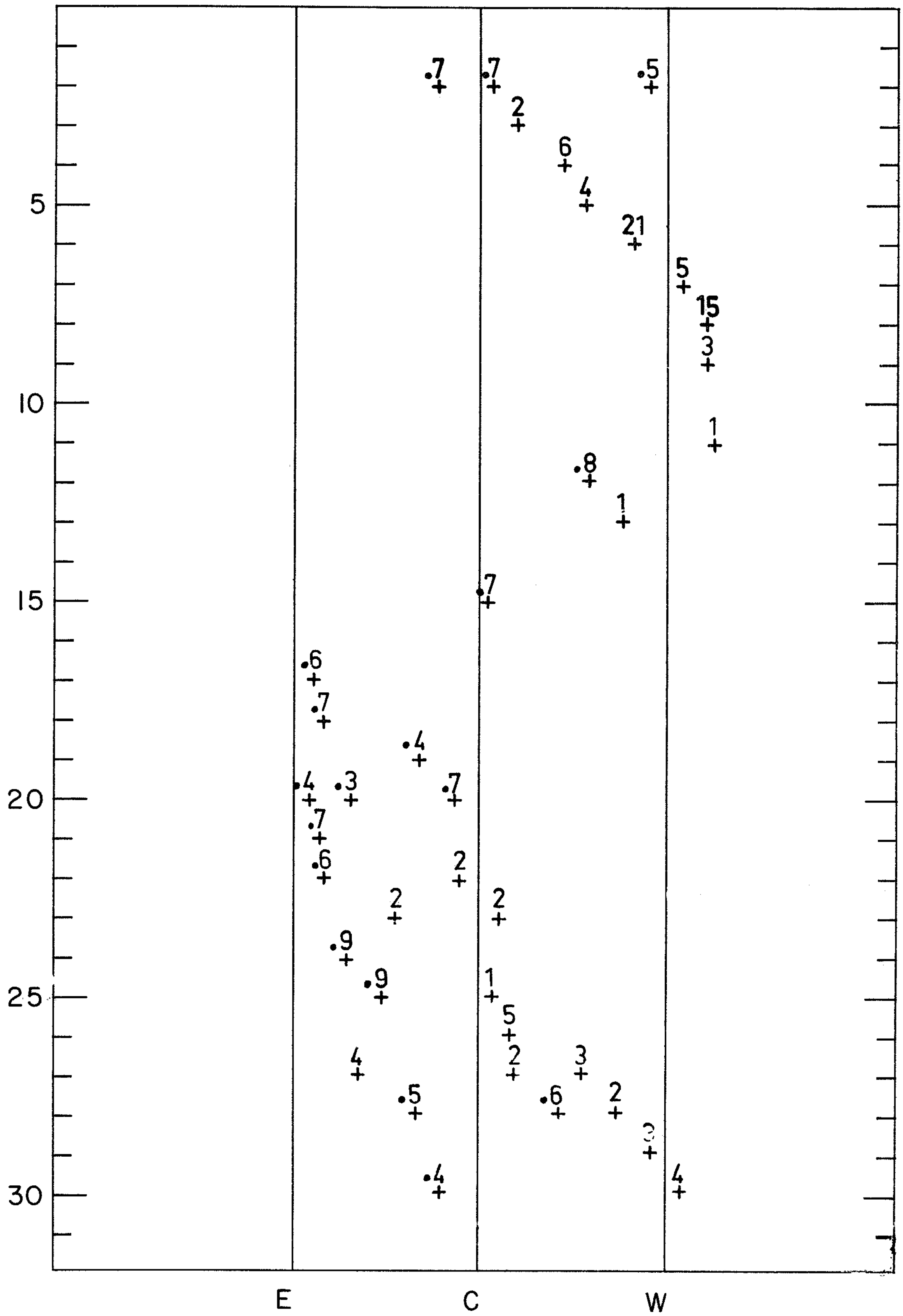
Date June 1967	Bursts: Type	Time (U. T.)	Inten-sity	Frequency Range (Mc/s)
22	IIIg	1941.7-1943.8	3	8-41
	IIIg	2031.3-2035.0	3	12-41
	IIIg	2113.0-2115.4	3	7.6-41
	III	2203.2-2204.9	3	7.6-41
	III	2216.6-2217.0	3	12-41
	III	2225.1-2226.4	3	12-41
	III	2250.0-2259.2	3	10-41
	IIIg	2402.4-2403.8	3	16-41
	IIIg	2434.4-2441.6	3	16-41
	IIIG	2442.2-2451.5	3	16-41
	II	2453.5-2510.0	3	16-41
	III	2455.1-2456.0	3	16-41
	IV	2510.0-a2603	2	21-41
	IIIG	2525.9-2531.5	3	22-41
23	IIIg	1151.7-1153.0	2	20-41
	continuum	1153.0-1702.0	1	20-41
	IIIG	1609.7-1614.0	3	18-41
	continuum	1751.8-1855.5	1	24-41
	IIIg	1855.5-1900.1	3	18-41
	IV	1900.1-2105.8	3	18-41
	IIIg	1932.5-1936.5	3	10-41
	III	2219.3-2219.7	1	30-41
	III	2245.1-2245.4	1	28-41
	IIIg	2250.9-2253.7	2	20-41
	III	2258.6-2259.1	2	19-41
	III	2335.2-2335.4	1	24-41
	III	2340.3-2340.7	2	20-41
	III	2349.5-2350.1	3	22-41
	IIIG	2354.9-2402.6	3	19-41
	IIIg	2424.3-2434.4	2	22-41
	IIIg	2439.5-2443.4	1	22-41
	IIIG	2450.3-2506.4	2	20-41
	IIIg	2516.1-2517.8	2	22-41
	III	2525.7-2526.8	3	18-41
	IIIG	2540.0-2547.0	3	19-41
	IIIg	2551.3-2555.8	2	19-41
	IIIg	2606.9-2609.8	2	18-41
24	III	1125.8-1126.3	2	16-33
	III	1227.7-1228.0	1	20-41
	IIIg	1244.6-1248.8	2	16-41
	III	1321.6-1321.9	1	22-41
	III	1429.4-1429.8	2	17-41
	III	1442.1-1442.5	1	22-41
	IIIg	1514.9-1517.0	1	20-41
	IIIg	1544.9-1546.5	3	7.6-41
	continuum	1546.5-a2630	1	22-41
	IIIG	1557.9-1605.0	3	8-41
	III	1849.9-1850.2	2	7.6-41
	IIIg	1921.3-1926.0	2	7.6-41
	IIIg	1941.7-1943.3	2	7.6-41

Date June 1967	Bursts: Type	Time (U. T.)	Inten-sity	Frequency Range (Mc/s)
24	IIIg	2250.0-2254.2	2	11-41
	IIIG	2349.0-2355.0	3	10-41
25	continuum	1217.0-1249.2	1	22-41
	continuum	1445.2-a2630.0	1	22-41
	IIIg	1642.5-1643.2	2	10-41
	no observ.	1646-1721		
	IIIG	1724.9-1731.1	3	9-41
	IIIg	1756.3-1759.5	3	8-41
	III	2044.0-2044.5	2	12-41
	IIIg	2151.8-2153.2	3	12-41
	III	2232.7-2233.0	2	16-41
26	continuum	b1145.2-1852.0	1	16-41
	IIIg	1318.4-1323.2	2	10-41
	IIIg	1534.4-1540.3	3	10-41
	III	1725.7-1726.6	3	9-41
	IIIg	1736.4-1737.1	3	8-41
	III	1837.8-1838.2	3	10-41
	continuum	1852.0-a2200.0	1	12-41
	IIIg	1921.8-1922.4	2	8-41
	IIIg	2028.0-2029.9	2	9-41
	III	2128.3-2129.1	3	12-41
	IIIg	2204.0-2211.1	2	18-41
	III	2231.2-2231.7	1	24-35
	IIIg	2316.9-2323.3	3	8-41
	III	2429.8-2430.3	2	22-41
	III	2438.2-2438.6	1	22-36
	IIIg	2453.9-2456.3	1	22-41
	IIIG	2527.5-2538.4	2	16-41
	III	2537.7-2538.5	3	16-41
27	continuum	b1137.0-1404.0	1	14-41
	IIIg	1149.0-1150.5	2	11-41
	IIIg	1259.8-1301.7	3	12-41
	continuum	1404.0-1603.2	2	14-41
	continuum	1603.2-a2630.0	1	16-41
	IIIg	2307.3-2308.5	3	8-41
28	continuum	b1140.0-1600.4	1	18-41
	continuum	1600.4-1825.0	2	22-36
	continuum	1825.0-2000.0	1	20-41
	IV	b2041.0-2220.0	3	20-41
	continuum	2220.0-a2610.0	3	16-41
29	continuum	b1127.0-a2610.0	3	16-41
30	continuum	1138.0-2249.8	2	16-41
	continuum	2249.8-a2600.0	1	19-41

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

JUNE 1967

Nançay 408 Mc/s

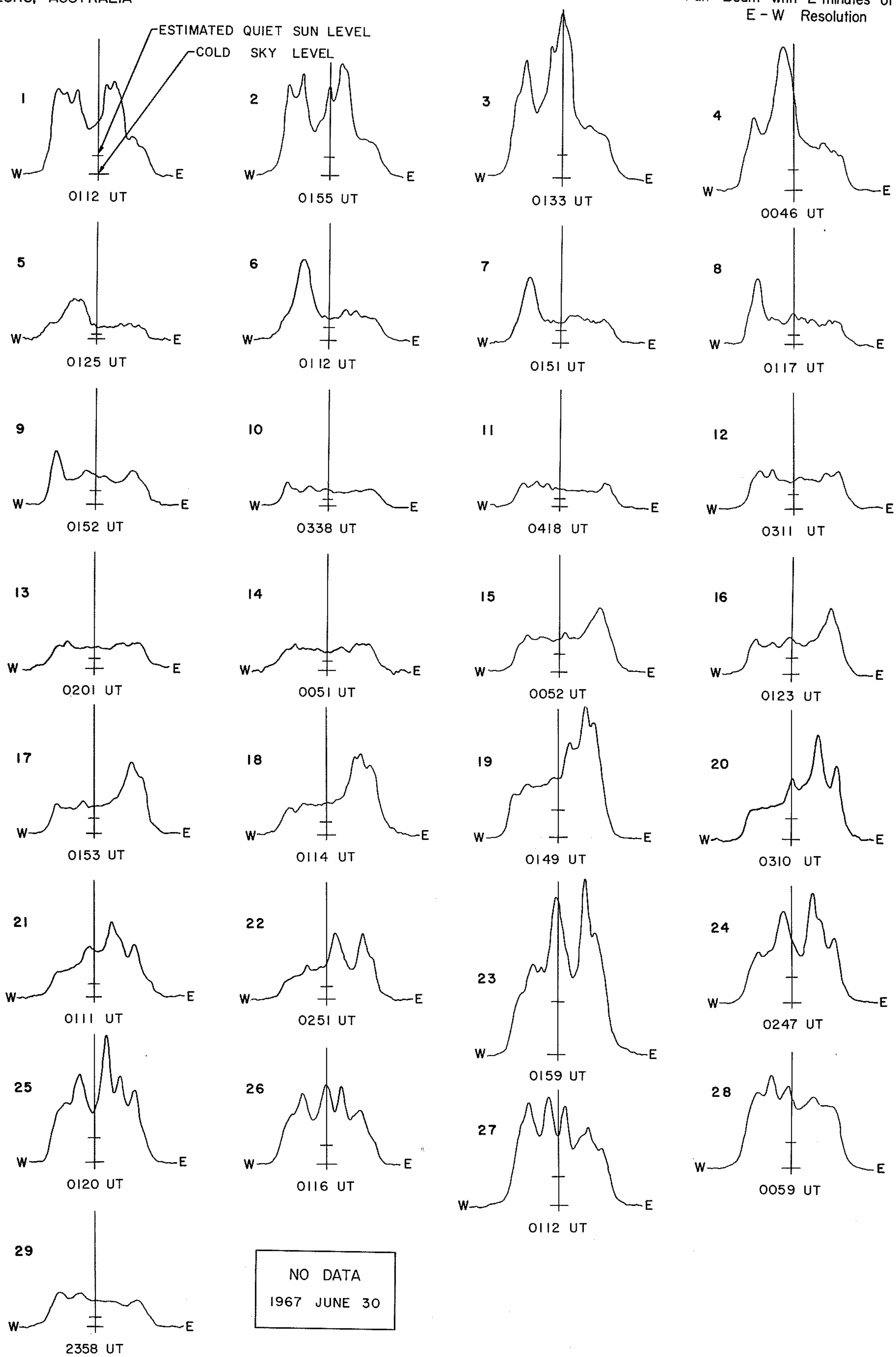


No chart is available for Interferometric Measurements at Nançay at 169 Mc/s for June 1967.

EAST - WEST SOLAR SCANS
JUNE 1967

FLEURS, AUSTRALIA

21 cm
Fan - Beam with 2 minutes of arc
E - W Resolution



EAST - WEST SOLAR SCANS
JUNE 1967

FLEURS, AUSTRALIA

43 cm
Fan - Beam with 4 minutes of arc
E-W Resolution

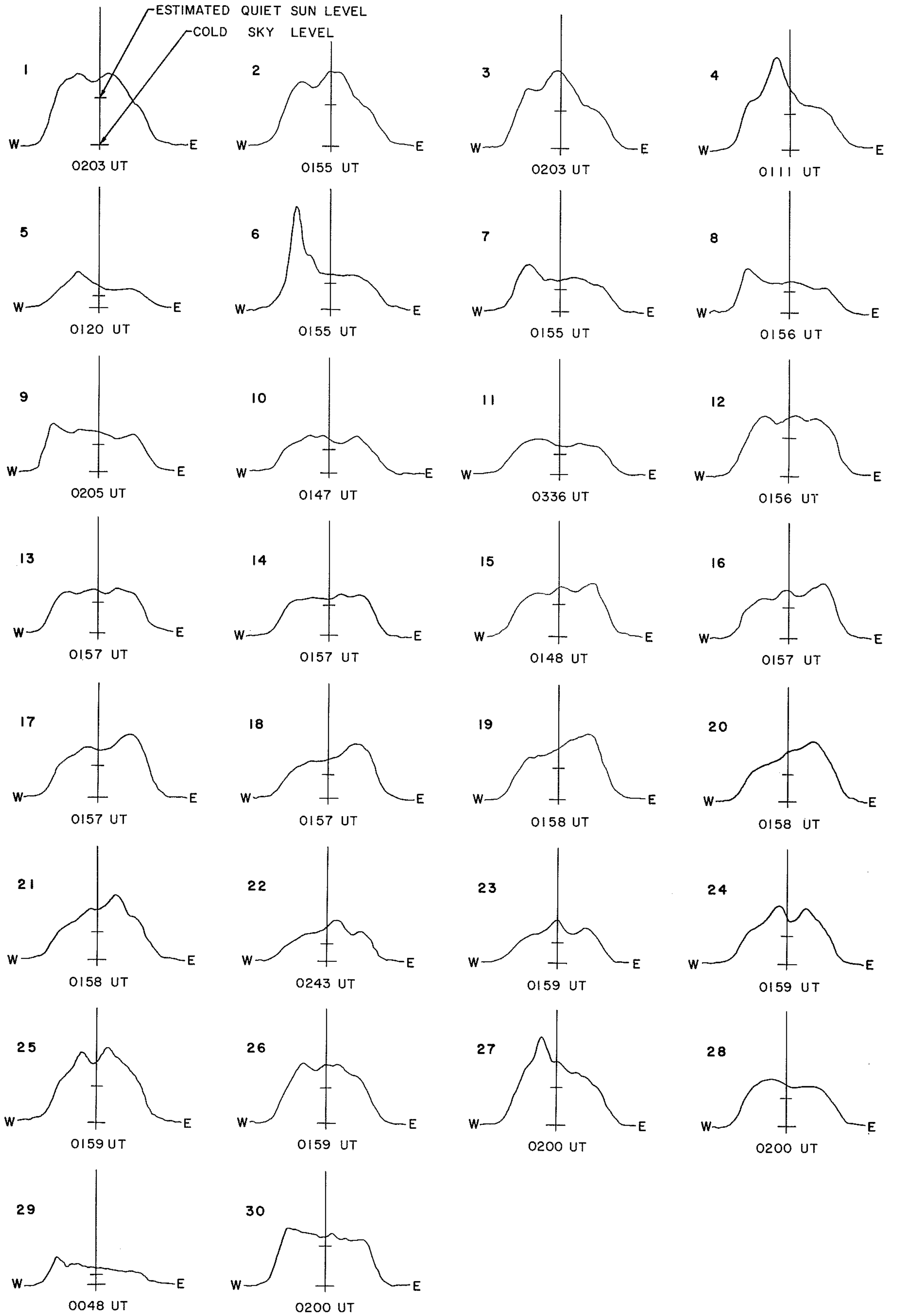


Table of Contents
for May 1967 Data

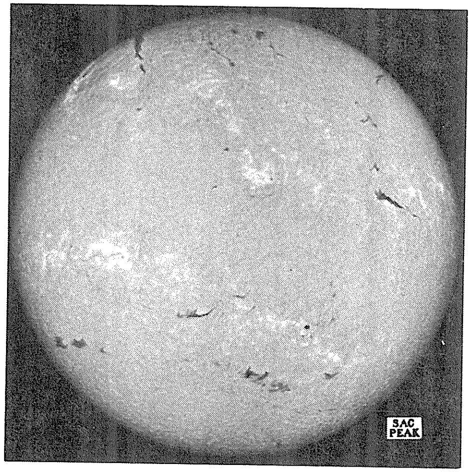
	Page
Daily Solar Activity Centers	
Hα, Sunspots, 9.1 and 21 cm Spectroheliograms, Magnetograms and Calcium Plages	31-61
Coronal Line Emission Indices	63
Sudden Ionospheric Disturbances	
SWF, SCNA, SEA, SPA, SES, SFD	64-67
Ionospheric Absorption Events	
Riometer - South Pole	69
Solar X-ray	
Daily Averages and Outstanding Events	70
Observing Times	71
Cosmic Rays	
Neutron Monitors Daily Values - Deep River, Climax	72
Chart of Variations - Deep River, Alert	73
Geomagnetic Indices	
Table of Indices Kp, Ci, Cp, Ap	74
Chart of Kp by Solar Rotations and 12-Month Table of Daily Average Ap	75
Principal Magnetic Storms	76-77
Radio Propagation Indices	
North Atlantic and North Pacific Quality Figures and Forecasts	78
Charts of North Atlantic Short-term Forecasts and Quality and High Latitude Advance Forecasts	79
Transmission Frequency Ranges - North Atlantic Path	80-81
Selected Solar Noise Burst - AFCRL, Sagamore Hill	82
408 Mc/s Solar Interferometric Chart - Nancay	83

For explanations of the data contained herein see "Descriptive Text" published in February 1967.

MAY 1, 1967 (P=-24.32, B₀=-4.19, L₀=191.37)

SACRAMENTO PEAK Hα

N

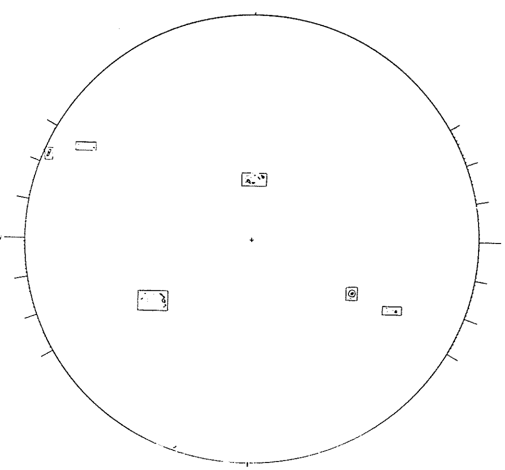
E  W

S

1444 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp

1506 UT

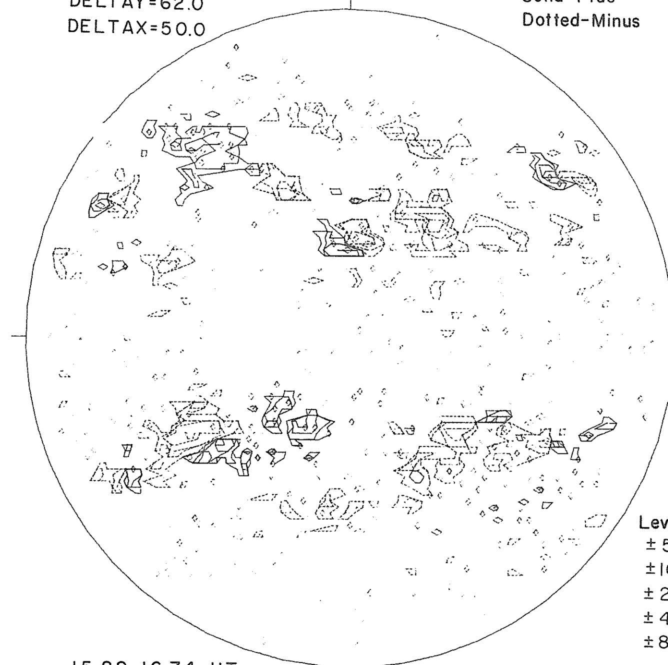
SAC PEAK

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus

Np

E  W

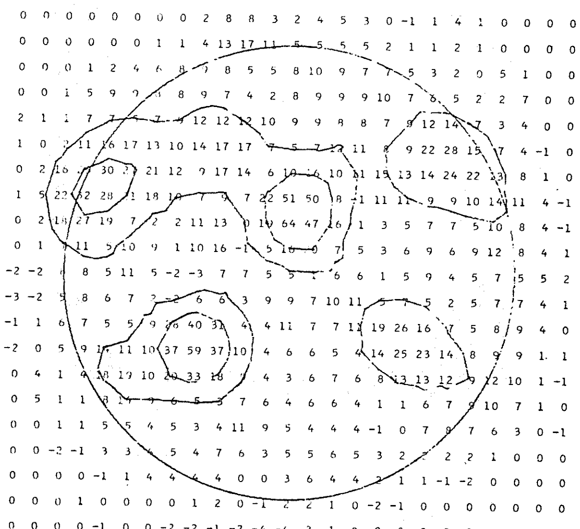
Sp

Levels
±5
±10
±20
±40
±80

15.29-16.74 UT

STANFORD 9.1 cm.

Np

E  W

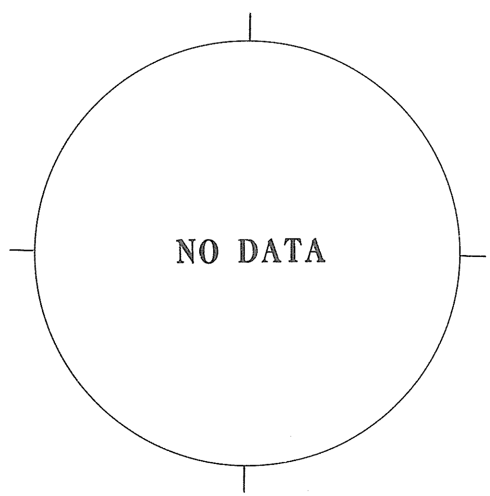
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

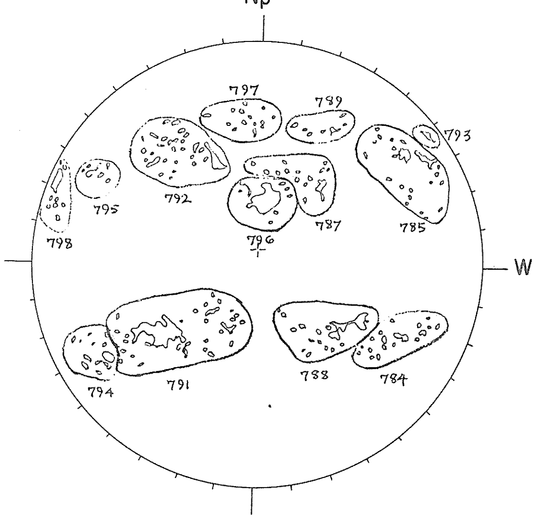
E  W

S

Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

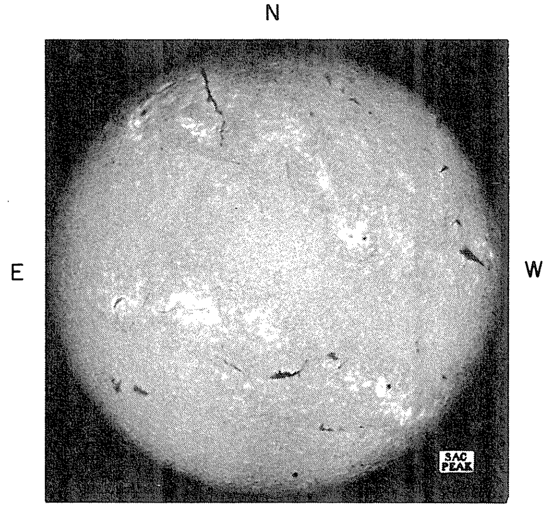
Sp

1800 UT

84-10-3.5
85-31-3
87-12-2.5
88-21-2.5
91-39-3
92-23-2.5
93-06-3
96-21-3

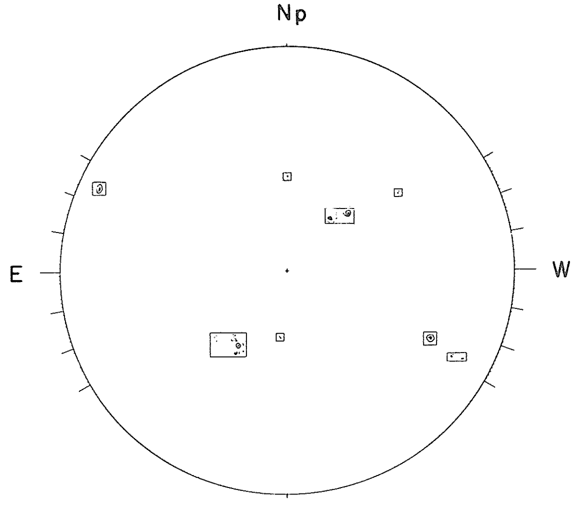
MAY 2, 1967 (P=-24.14, B₀=-4.09, L₀=178.16)

SACRAMENTO PEAK Hα



1724 UT

ESSA-BOULDER SUNSPOTS

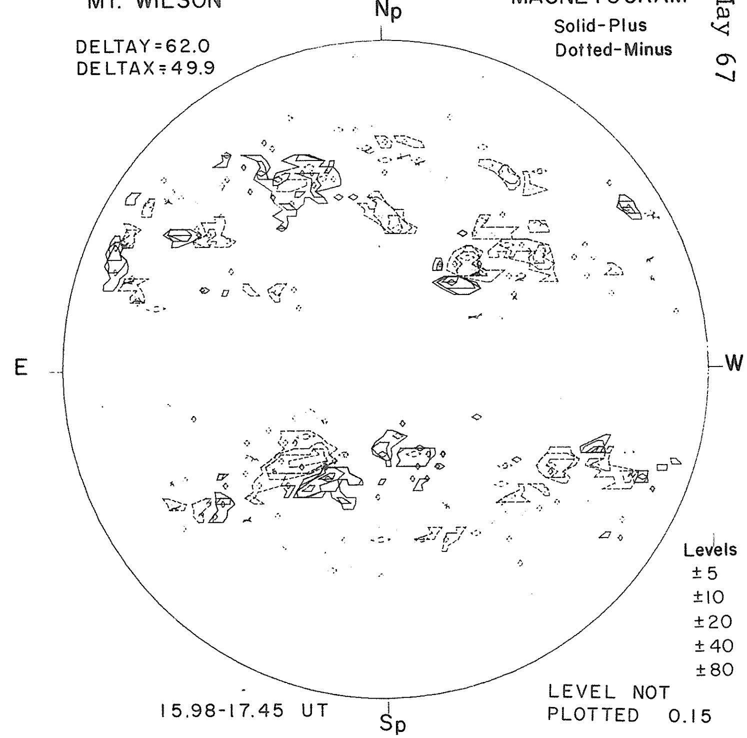


1535 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

DELTAY=62.0
DELTAX=49.9

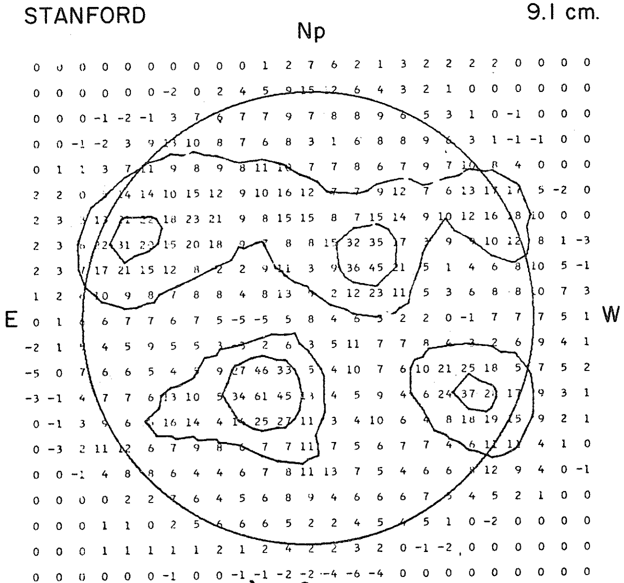


Levels
±5
±10
±20
±40
±80

LEVEL NOT PLOTTED 0.15

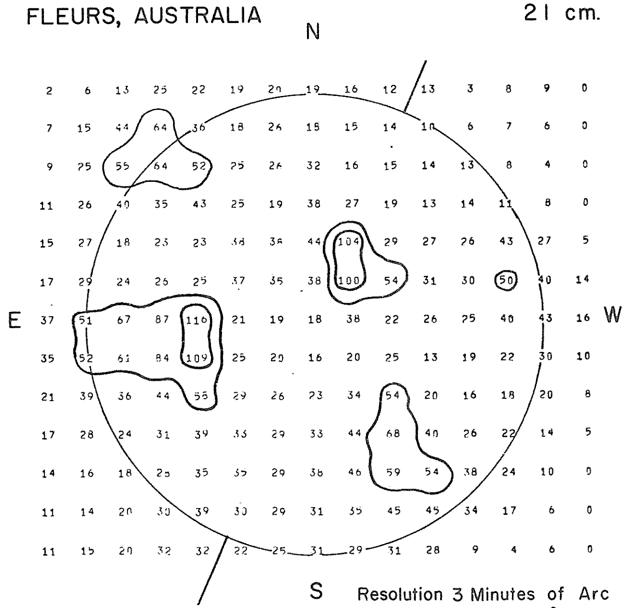
15.98-17.45 UT

STANFORD 9.1 cm.



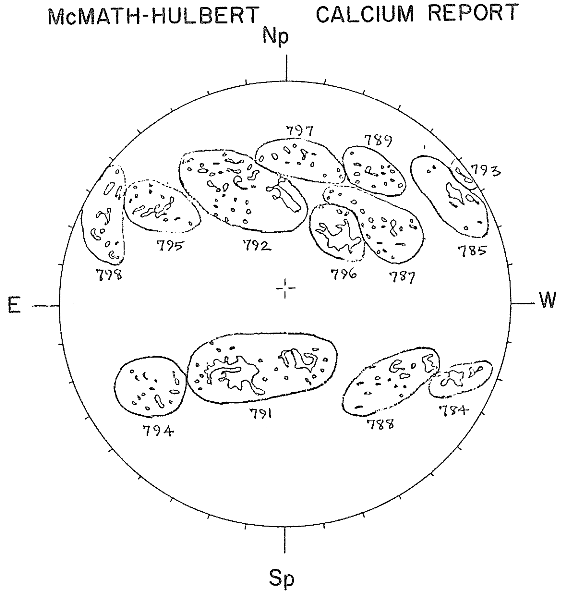
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



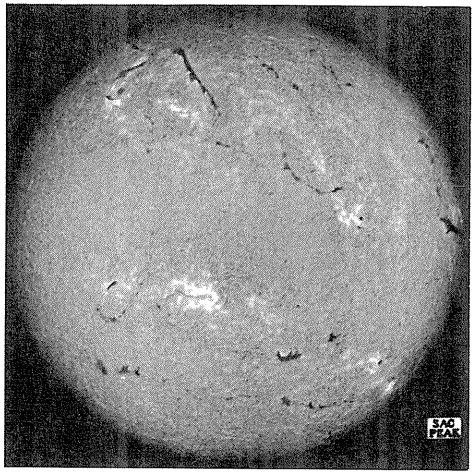
84-18-2.5
85-20-3
88-19-3
91-43-3.5
92-31-2.5
95-16-2.5
96-21-3

1855 UT

MAY 3, 1967 (P=-23.96, B_o=-3.99, L_o=164.94)

SACRAMENTO PEAK Hα

N

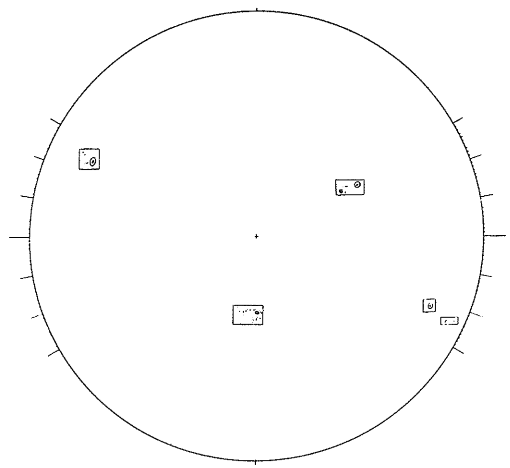
E  W

S

1413 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp

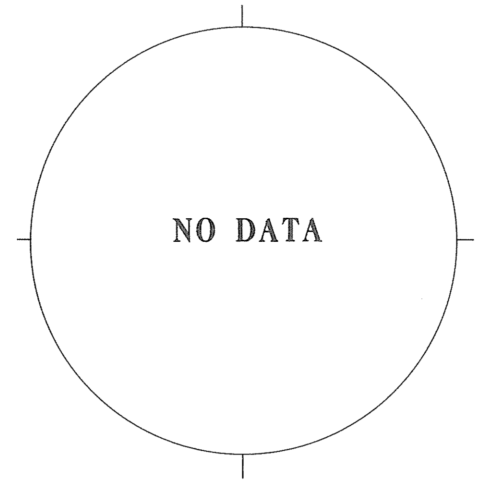
1330 UT

MT. WILSON MAGNETOGRAM

Solid-Plus

Dotted-Minus

Np

E  W

Sp

Levels

±5

±10

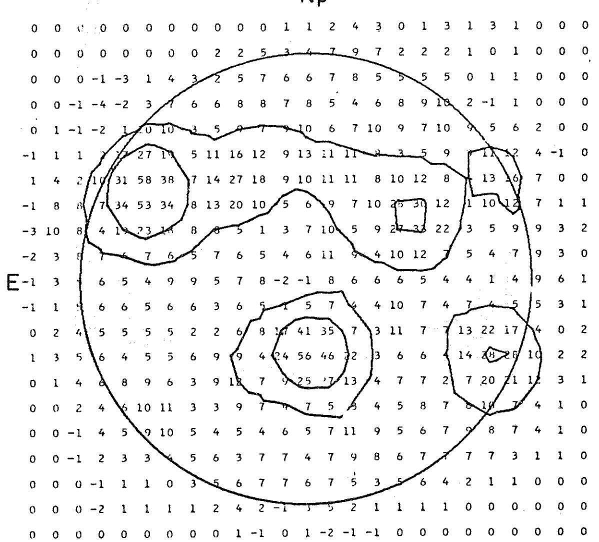
±20

±40

±80

STANFORD 9.1 cm.

Np

E  W

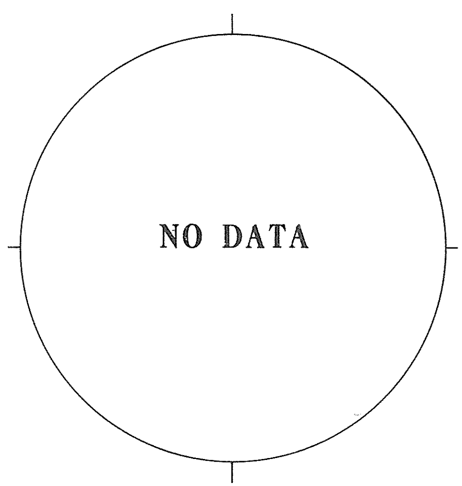
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E  W

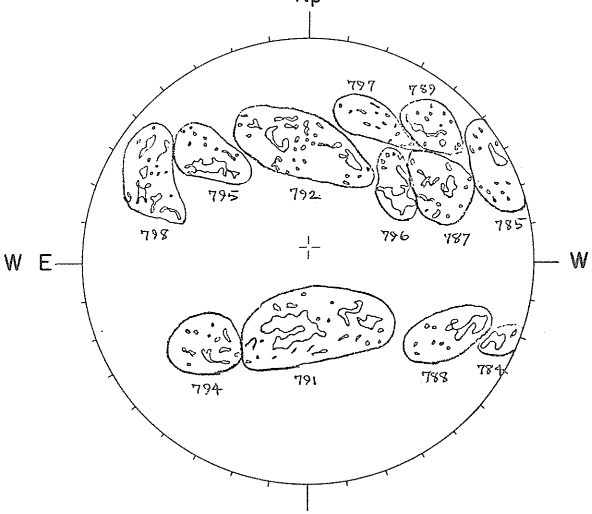
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

Sp

1305 UT

84-16-3

85-21-2.5

87 15 2.5

88-20-3

91-48-3.5

92-32-2.5

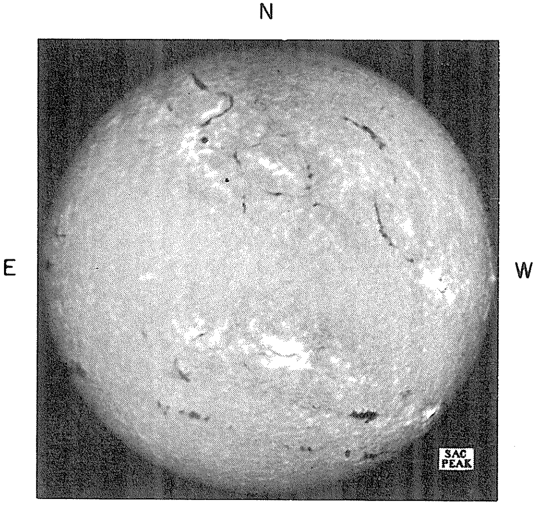
95-18-2.5

96 22 3.5

98 23 2.5

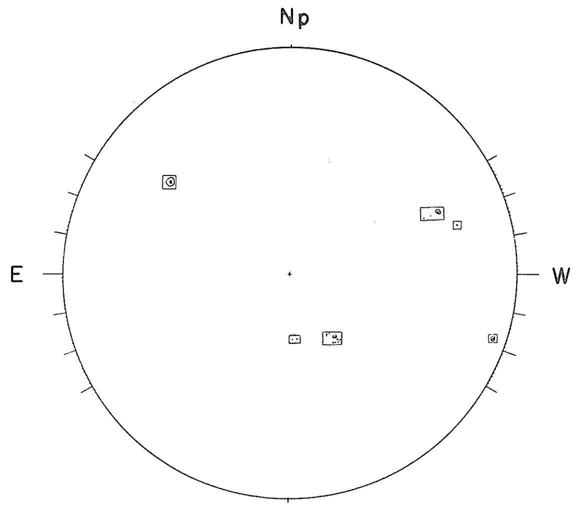
MAY 4, 1967 (P=-23.77, Bo=-3.88, Lo=151.72)

SACRAMENTO PEAK Hα



2140 UT

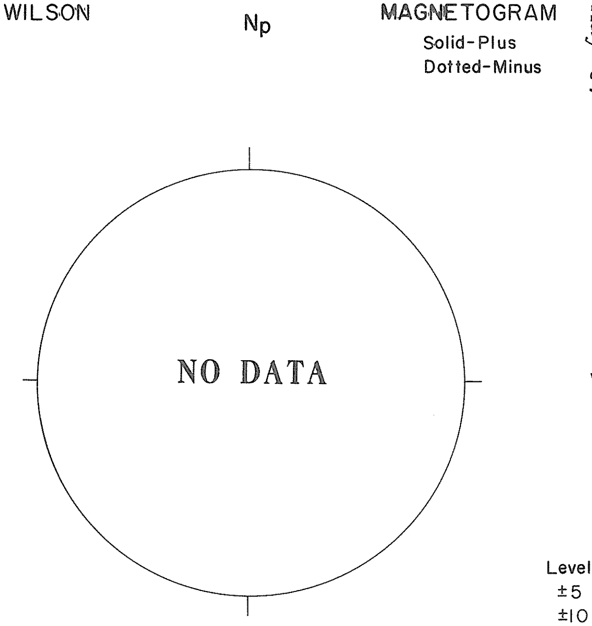
ESSA-BOULDER SUNSPOTS



1700 UT

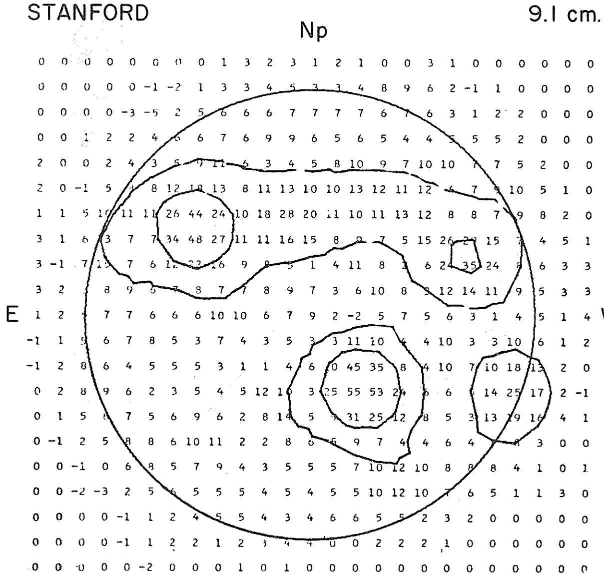
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



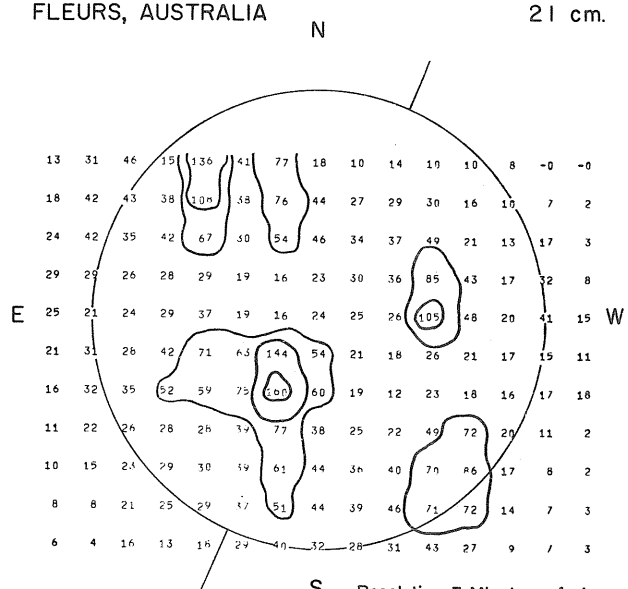
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



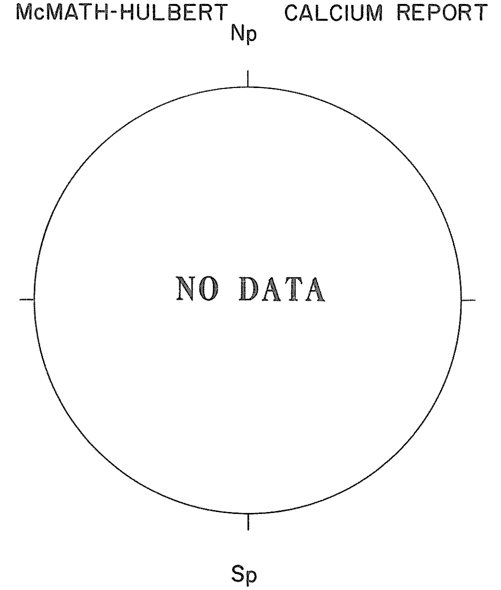
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



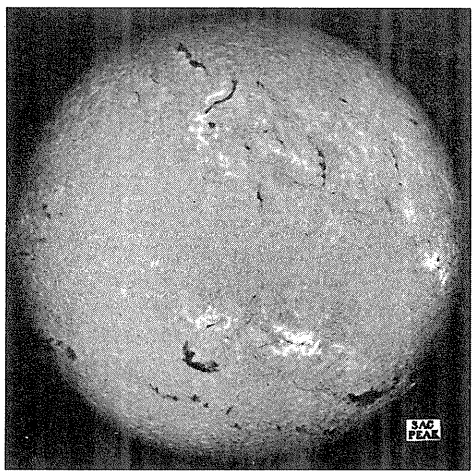
Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



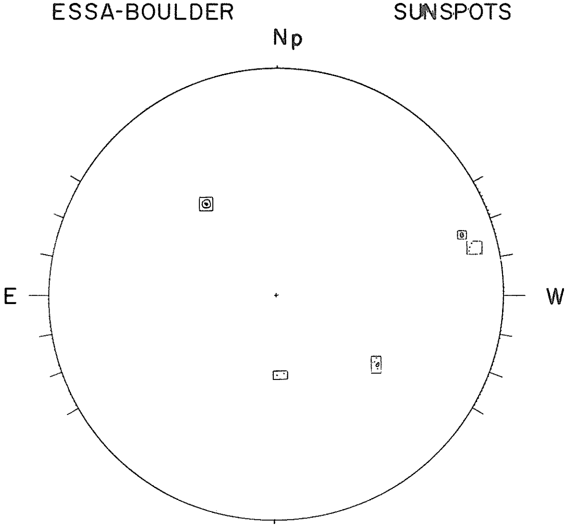
MAY 5, 1967 (P=-23.57, B₀=-3.78, L₀=138.50)

SACRAMENTO PEAK Hα



2111 UT

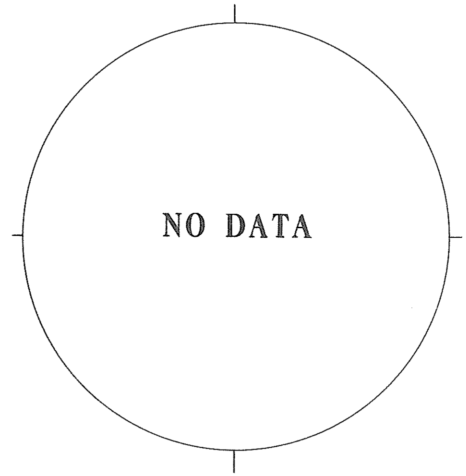
ESSA-BOULDER SUNSPOTS



2005 UT

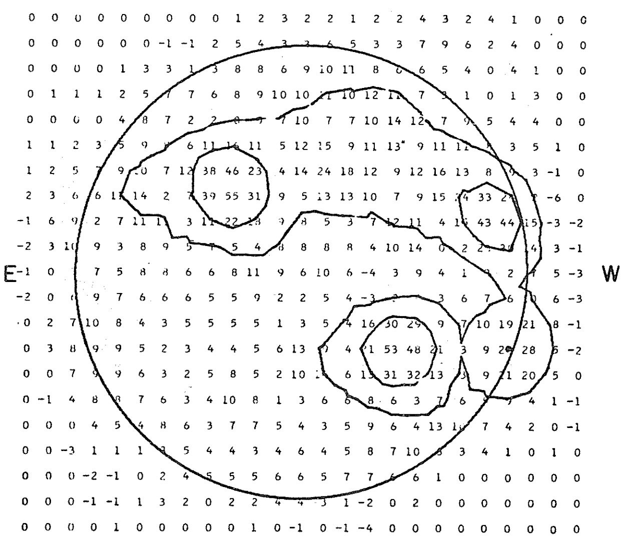
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



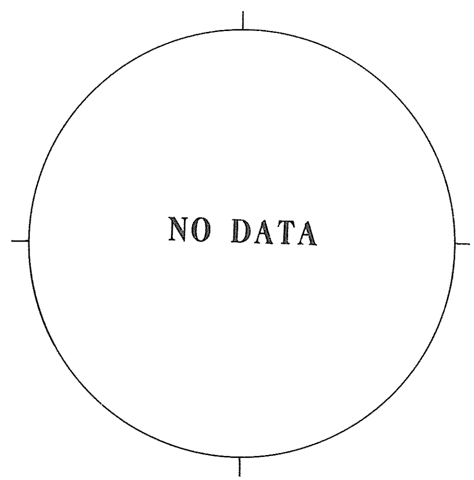
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



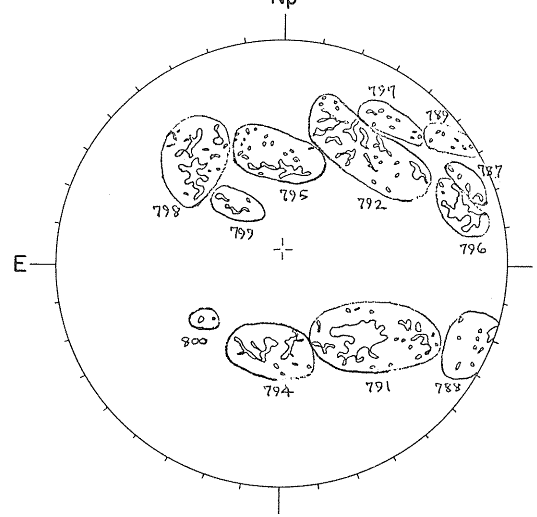
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



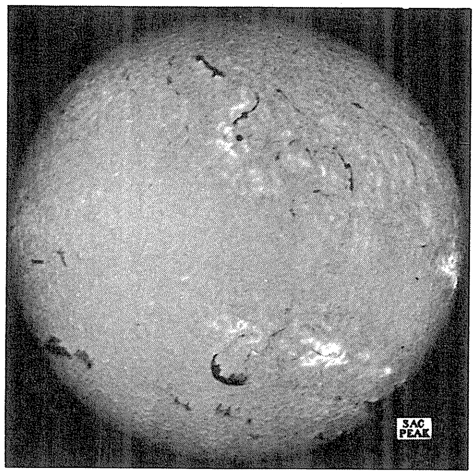
1430 UT

88-23-3
91-51-3.5
96-34-3
98-29-2.5

MAY 6, 1967 (P=-23.36, B_o=-3.67, L_o=125.28)

SACRAMENTO PEAK Hα

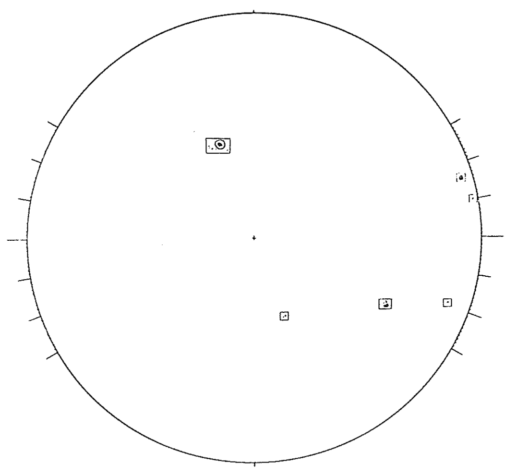
N



S

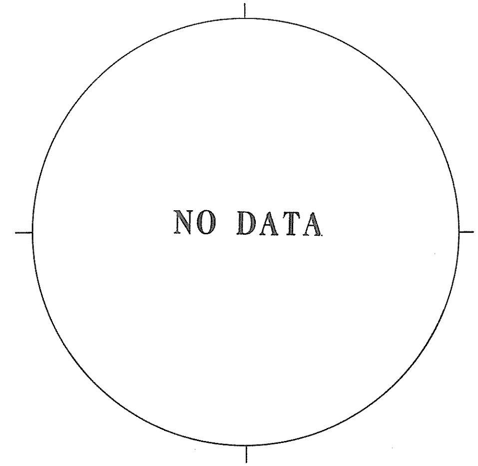
1422 UT

ESSA-BOULDER SUNSPOTS



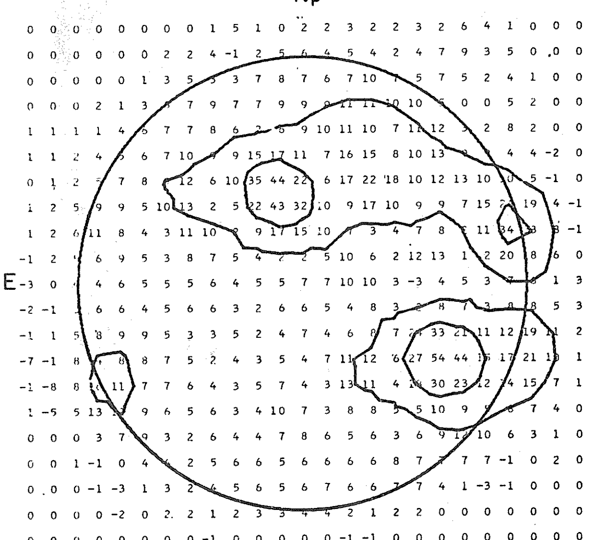
1540 UT

MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus



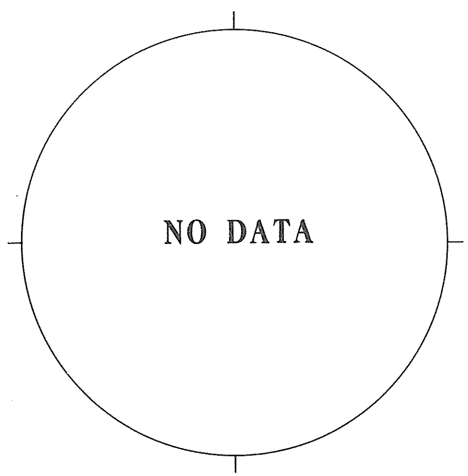
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



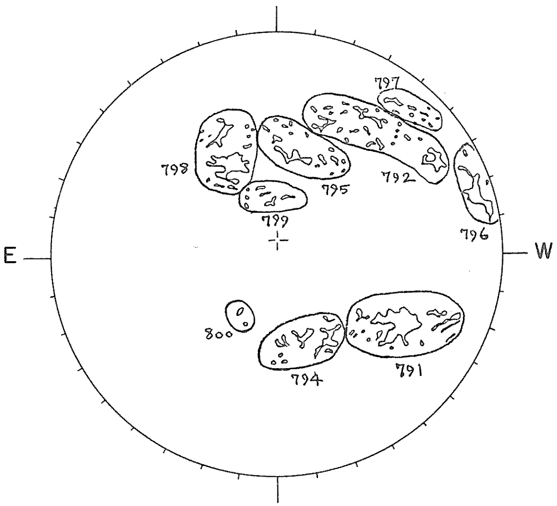
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



1300 UT

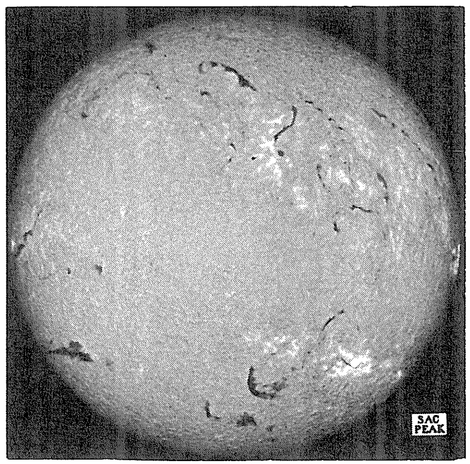
91-56-3.5
92-39-2
95-16-2.5
96-33-3
98-32-3
99-08-2.5

MAY 7, 1967 (P=-23.15, B₀=-3.57, L₀=112.06)

SACRAMENTO PEAK Hα

N

E



W

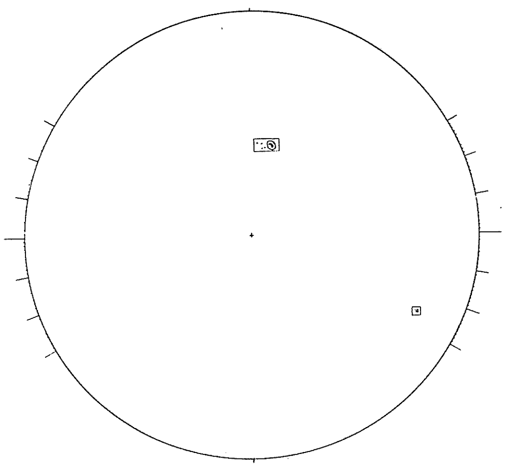
S

1427 UT

ESSA-BOULDER SUNSPOTS

Np

E



W

Sp

1405 UT

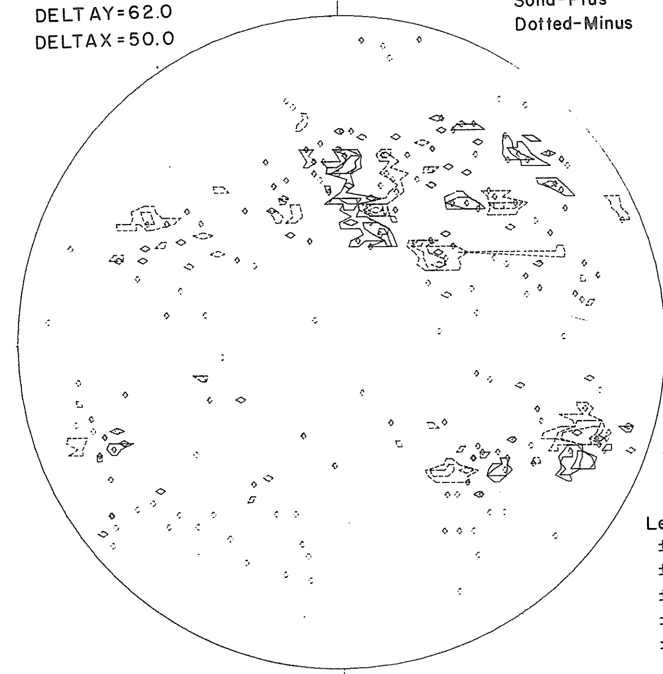
MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus

Np

E



W

Levels
±5
±10
±20
±40
±80

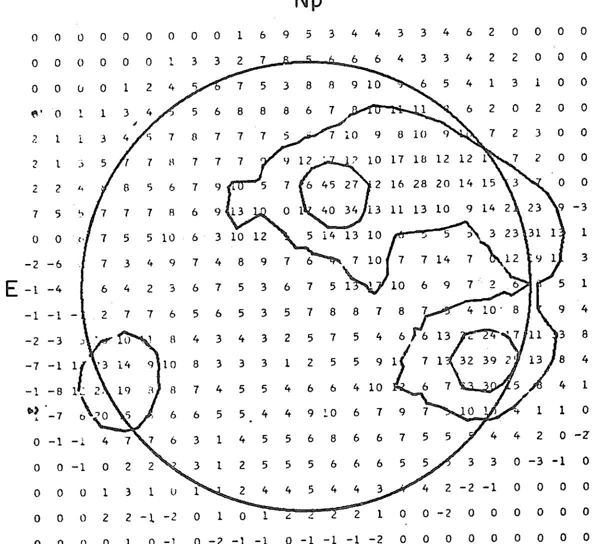
20.08-21.56 UT

Sp

STANFORD 9.1 cm.

Np

E



W

Sp

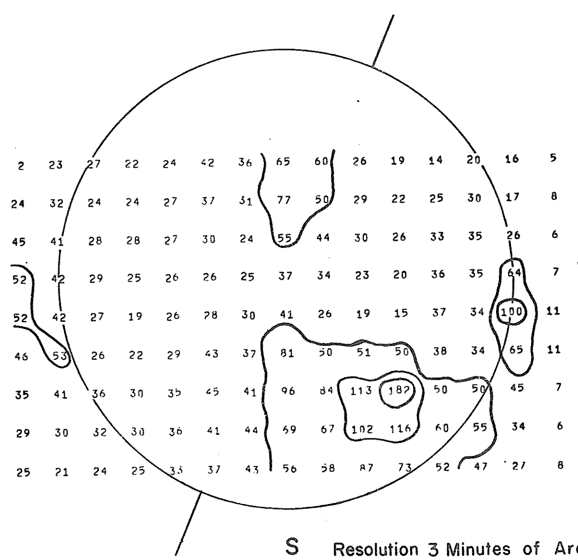
20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E



W

S

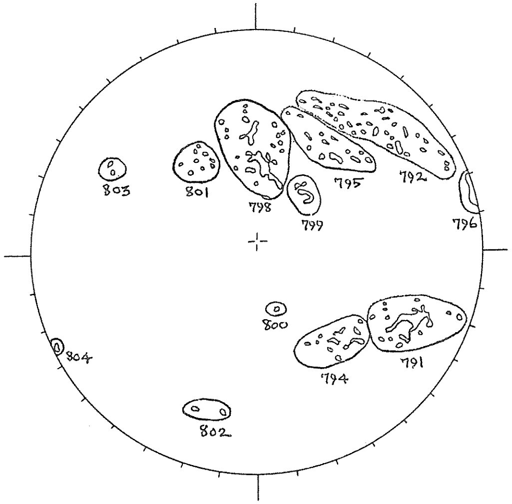
Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E



W

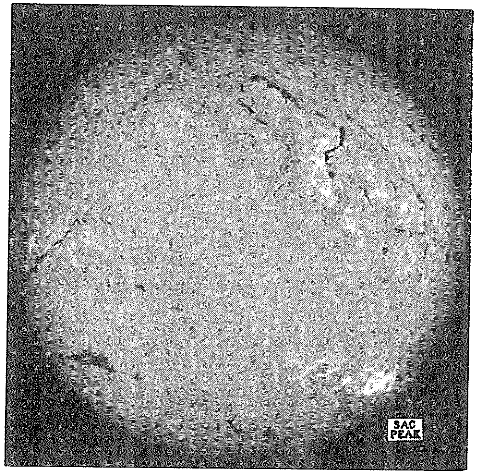
91-30-3.5
94-12-3
95-15-3
96-22-3.5
98-28-3.5
04-06-2.5

Sp

1622 UT

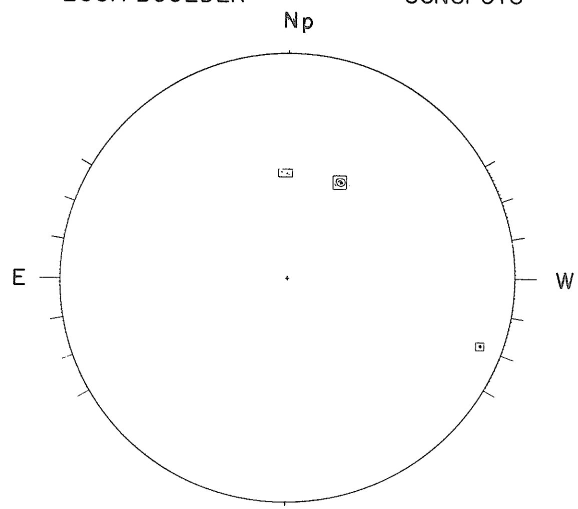
MAY 8, 1967 (P=-22.93, B_o=-3.46, L_o=98.84)

SACRAMENTO PEAK Hα



1423 UT

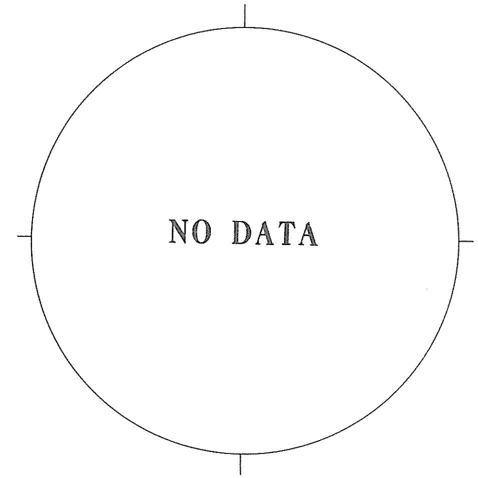
ESSA-BOULDER SUNSPOTS



1500 UT

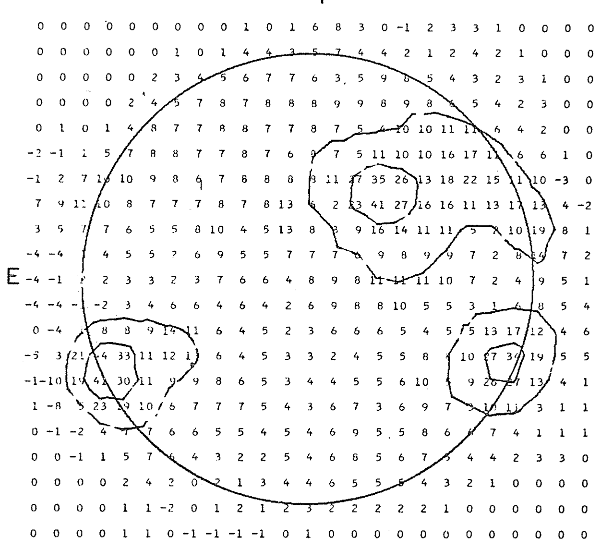
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



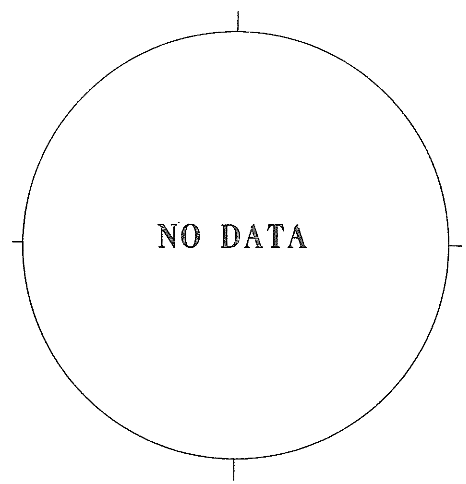
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



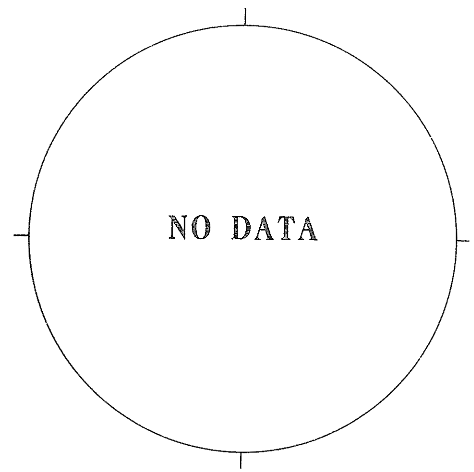
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



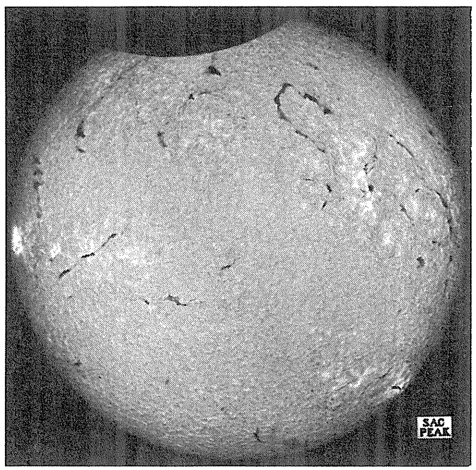
02-03 UT Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



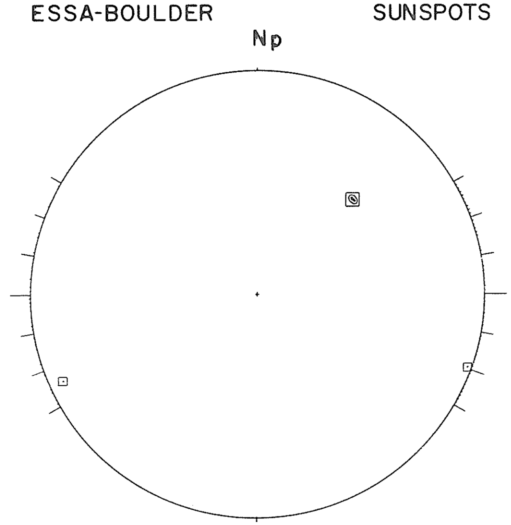
MAY 9, 1967 (P=-22.71, B_o=-3.35, L_o=85.62)

SACRAMENTO PEAK Hα



1404 UT

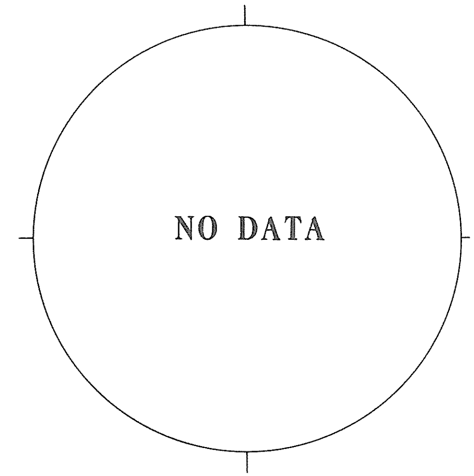
ESSA-BOULDER SUNSPOTS



1240 UT

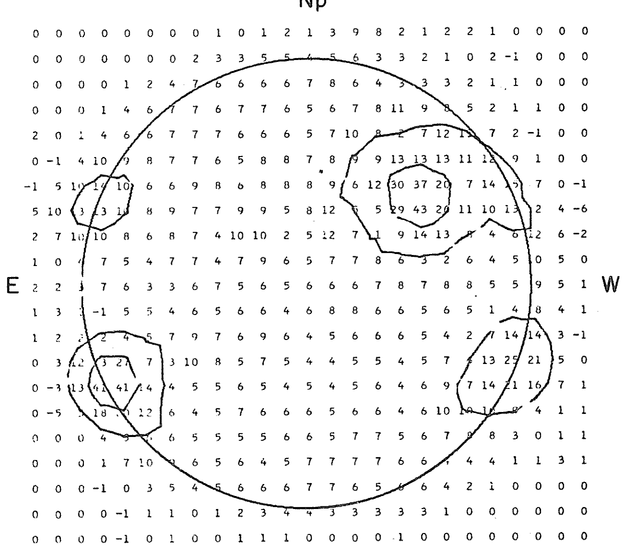
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



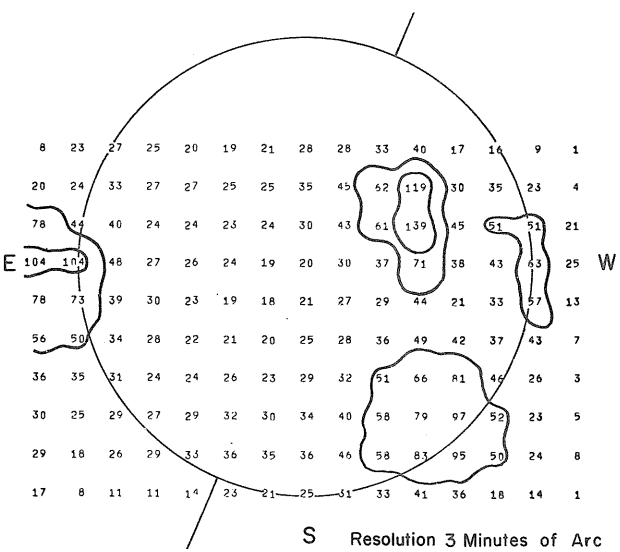
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



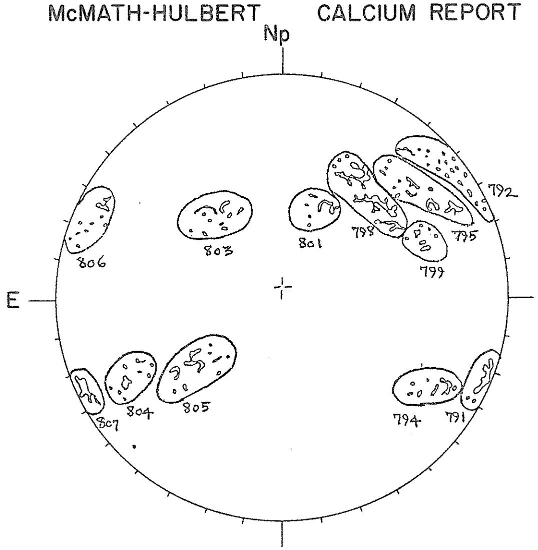
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



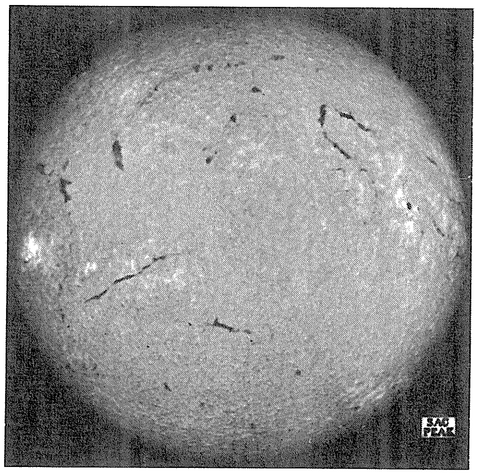
1720 UT

91-19-3.5
94-11-2.5
95-16-2.5
98-25-3.5
99-06 2.5
04-08-2.5
07 18 3.5

MAY 10, 1967 (P=-22.47, B_o=-3.24, L_o=72.40)

SACRAMENTO PEAK Hα

N

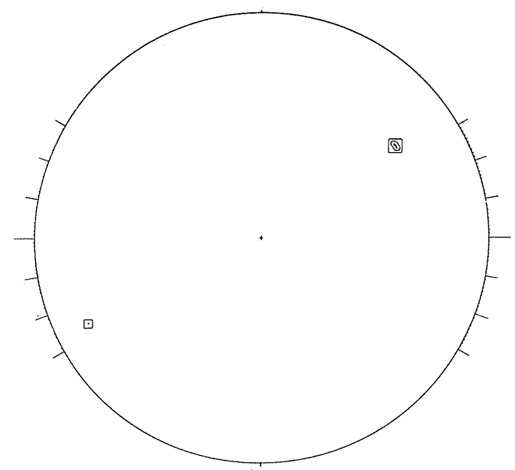
E  W

S

1541 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

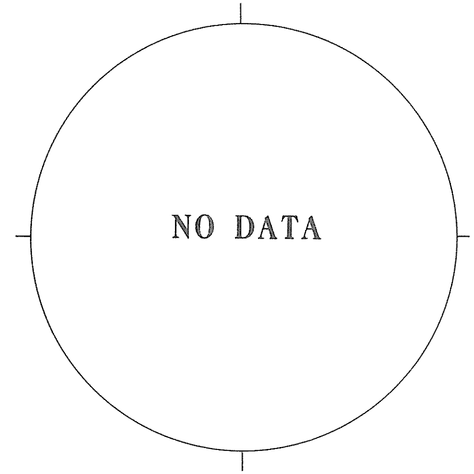
Sp

1450 UT

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Np

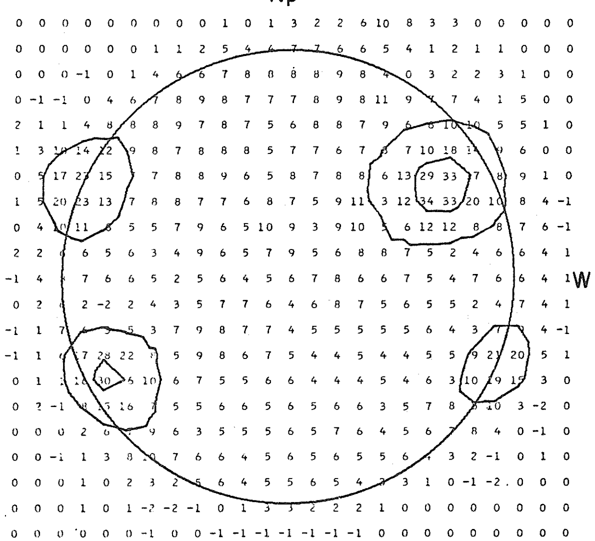
E  W

Sp

Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.

Np

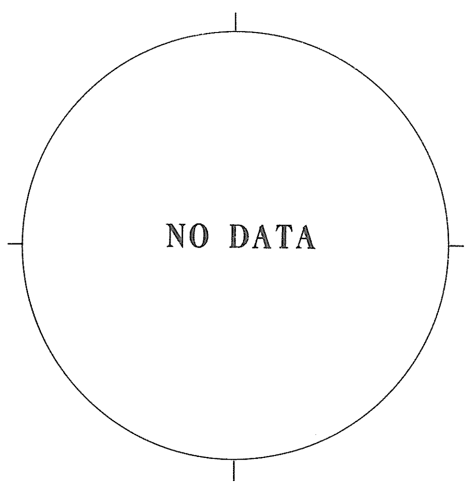
E  W

Sp
20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

W  E

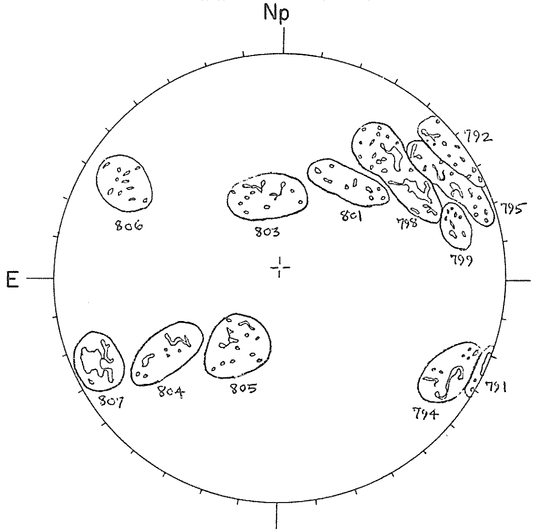
S

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

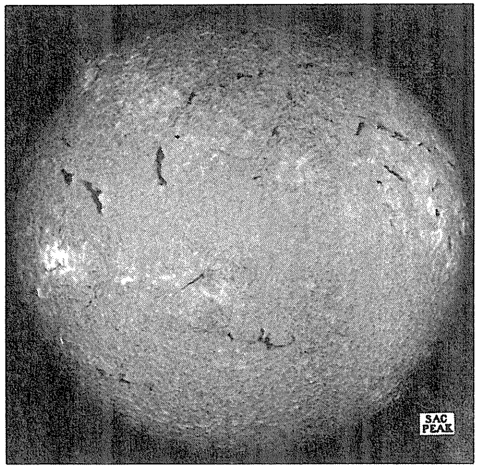
98-27-3.5
07-27-3

Sp

1300 UT

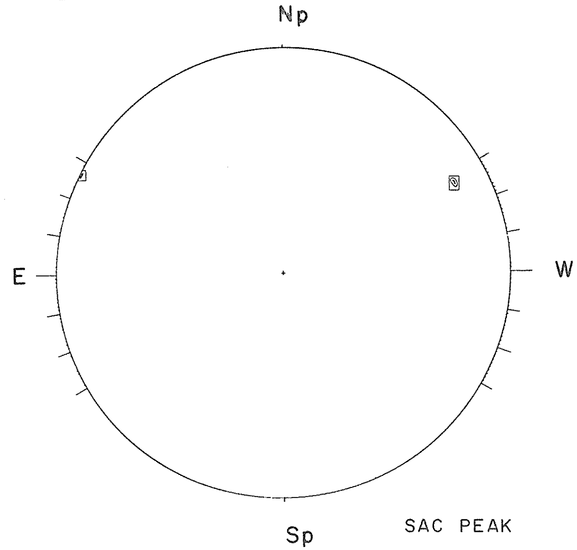
MAY 11, 1967 (P=-22.23, B_o=-3.13, L_o=59.18)

SACRAMENTO PEAK Hα



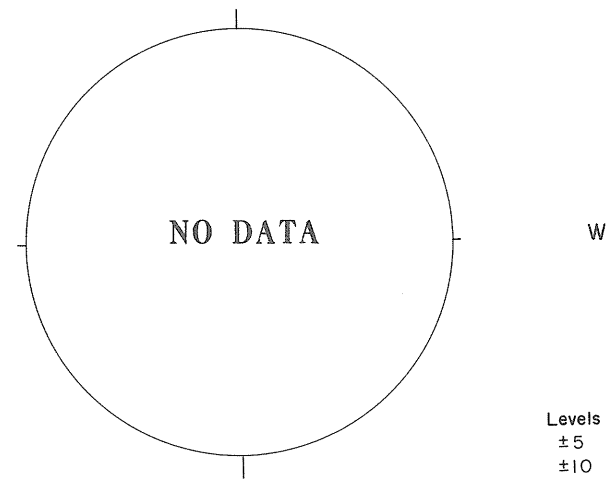
1335 UT

ESSA-BOULDER SUNSPOTS



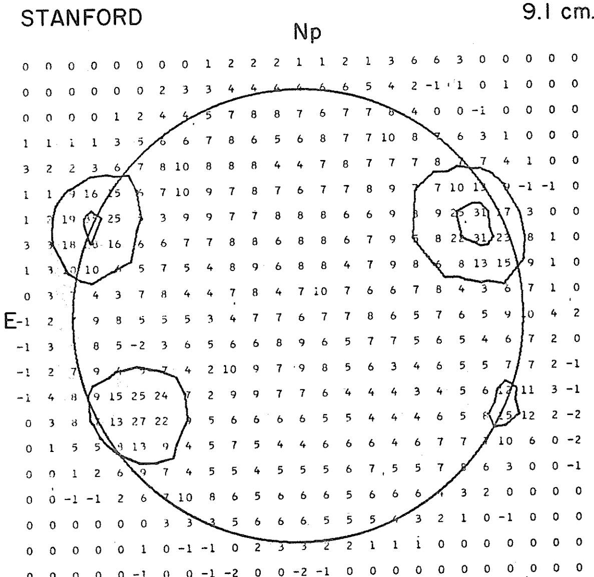
SAC PEAK
1344 UT

MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus



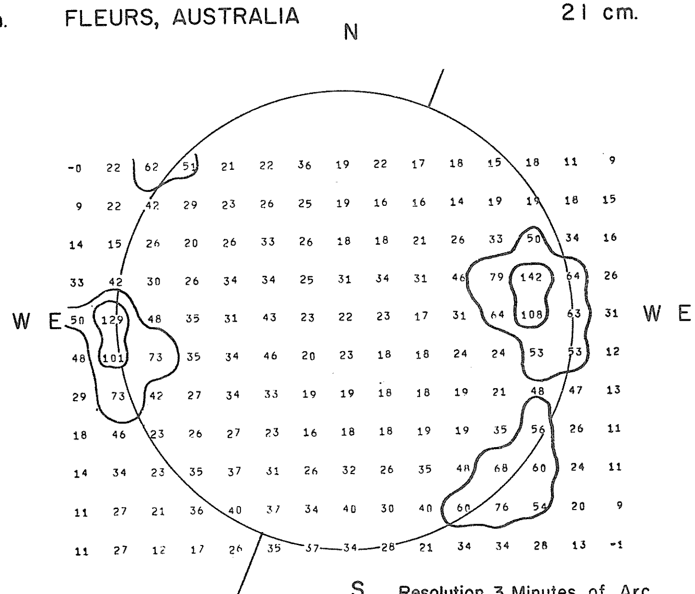
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



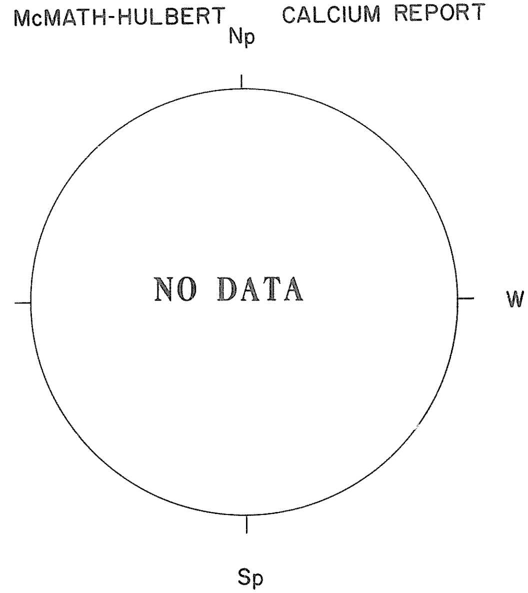
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

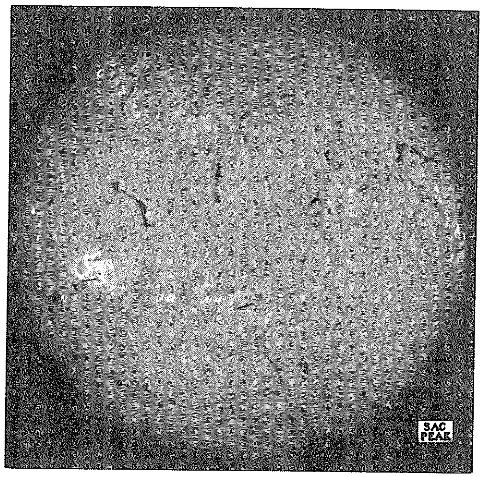
McMATH-HULBERT CALCIUM REPORT



MAY 12, 1967 (P=-21.99, B_o=-3.02, L_o=45.95)

SACRAMENTO PEAK Hα

N

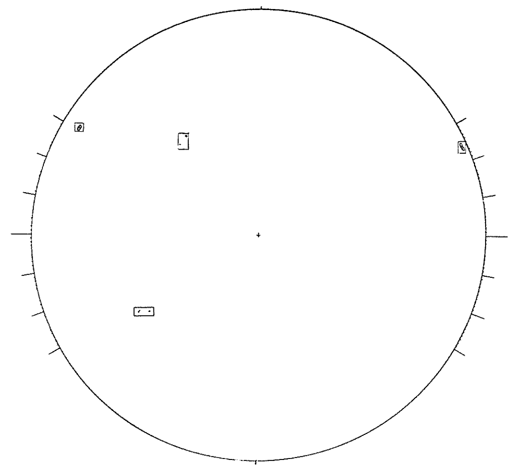
E  W

S

1430 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp

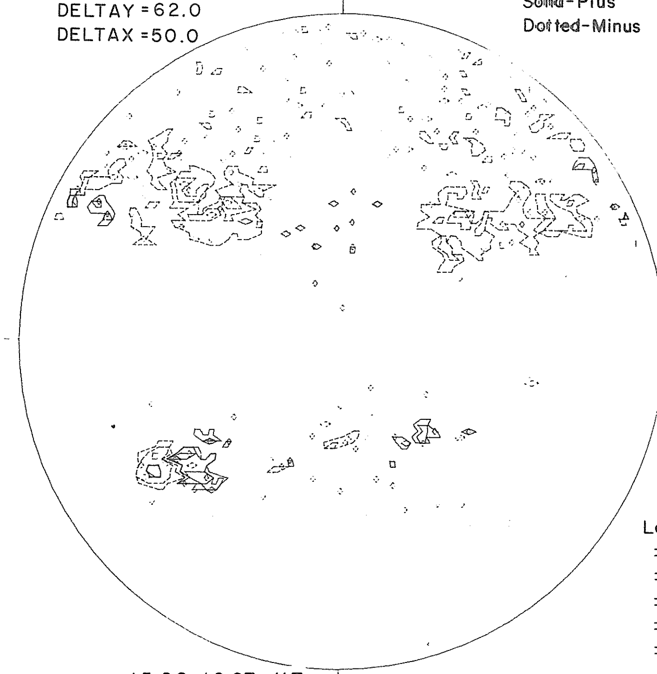
1815 UT

MT. WILSON MAGNETOGRAM

DELTAY = 62.0
DELTAX = 50.0

Solid-Plus
Dotted-Minus

Np

E  W

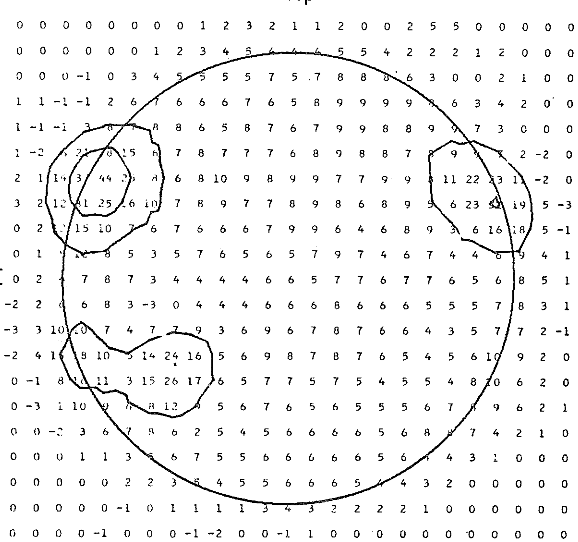
Levels
±5
±10
±20
±40
±80

15.22-16.67 UT

Sp

STANFORD 9.1 cm.

Np

E  W

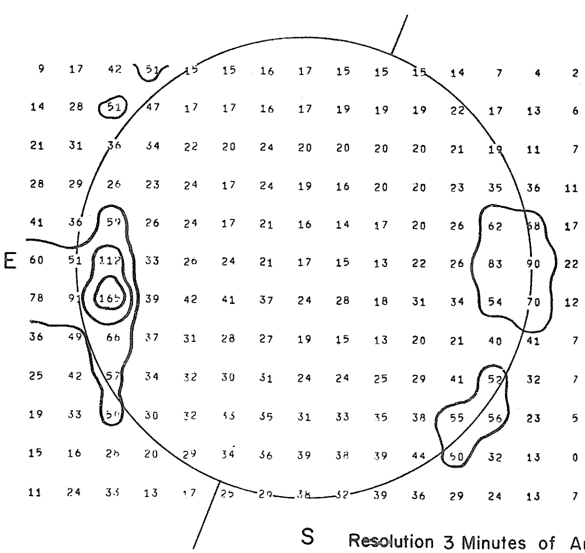
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E  W

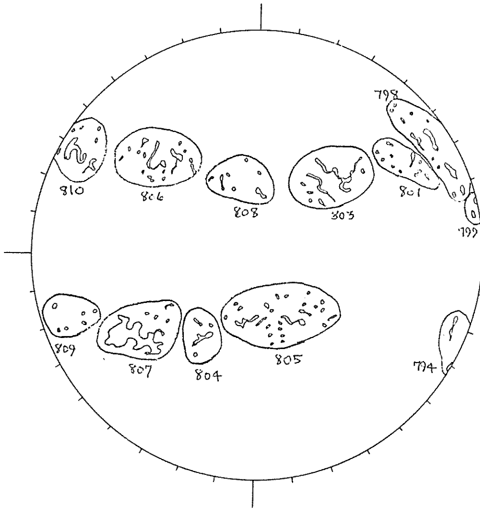
S

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

98-26-3
03-17-2.5
07-38-3

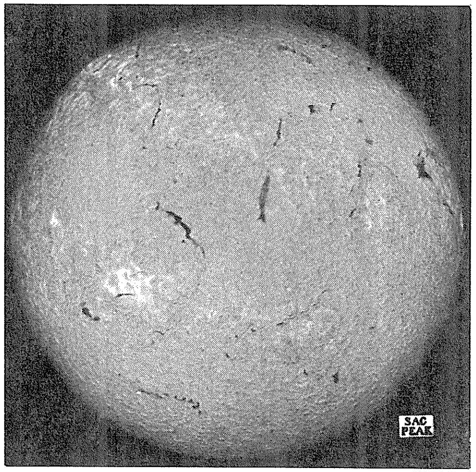
Sp

1305 UT

MAY 13, 1967 (P=-21.73, B₀=-2.91, L₀=32.73)

SACRAMENTO PEAK Hα

N

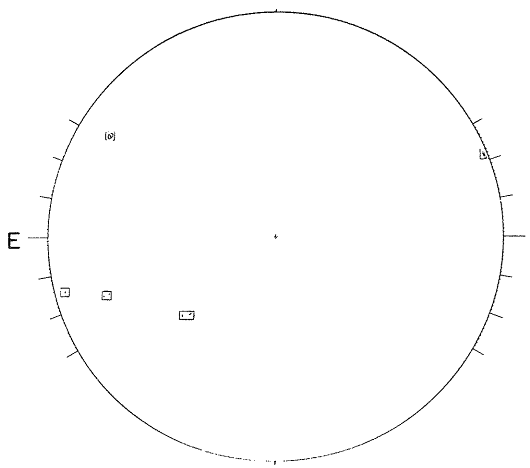
E  W

S

1434 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp SAC PEAK

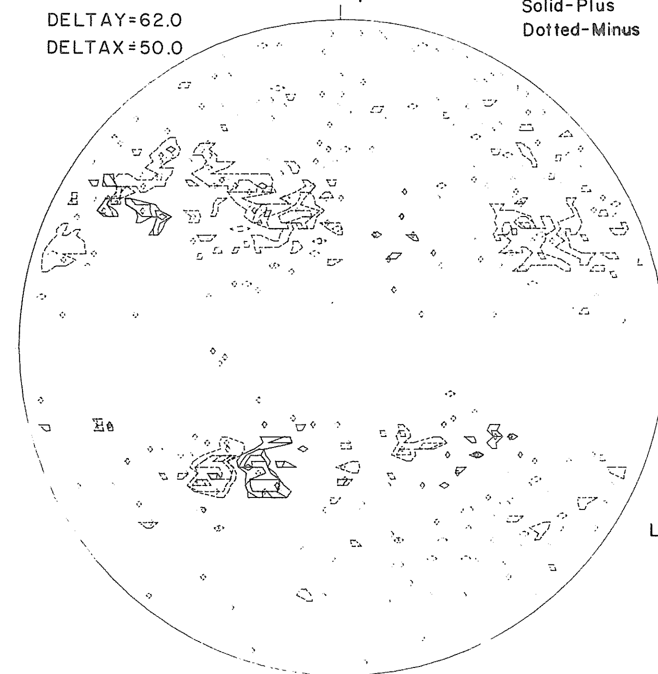
1400 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus

Np

E  W

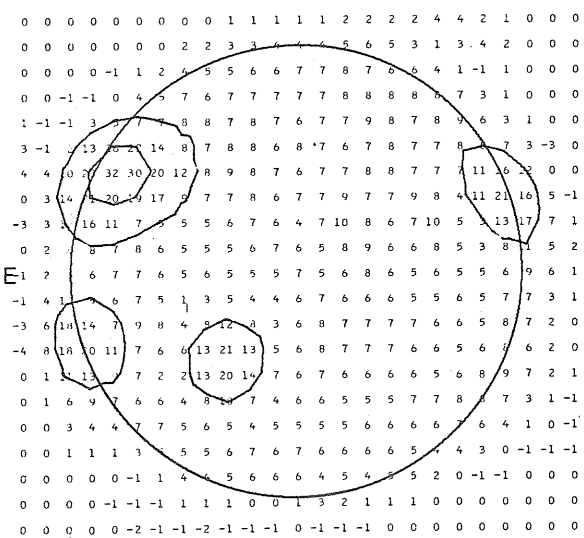
Sp

Levels
±5
±10
±20
±40
±80

16.75-18.20 UT

STANFORD 9.1 cm.

Np

E  W

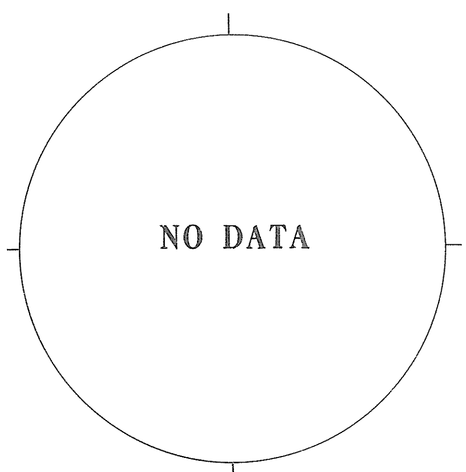
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E  W

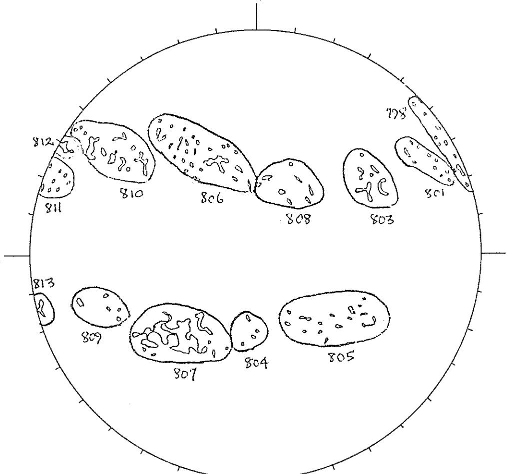
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

Sp

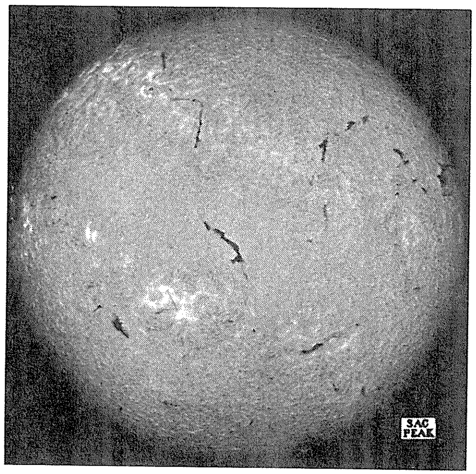
1330 UT

98-13-2.5
06-17-2.5
07-36-3
09-06-2.5

MAY 14, 1967 (P=-21.47, B₀=-2.80, L₀=19.51)

SACRAMENTO PEAK Hα

N

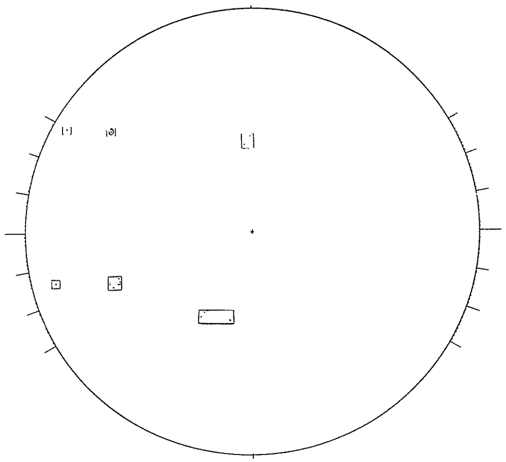
E  W

S

1418 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp

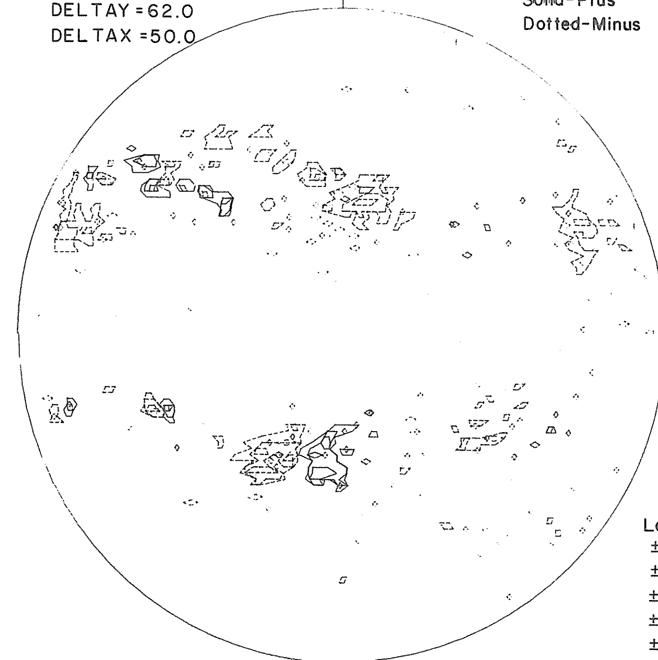
1320 UT

MT. WILSON MAGNETOGRAM

DELTAY = 62.0
DELTAX = 50.0

Solid-Plus
Dotted-Minus

Np

E  W

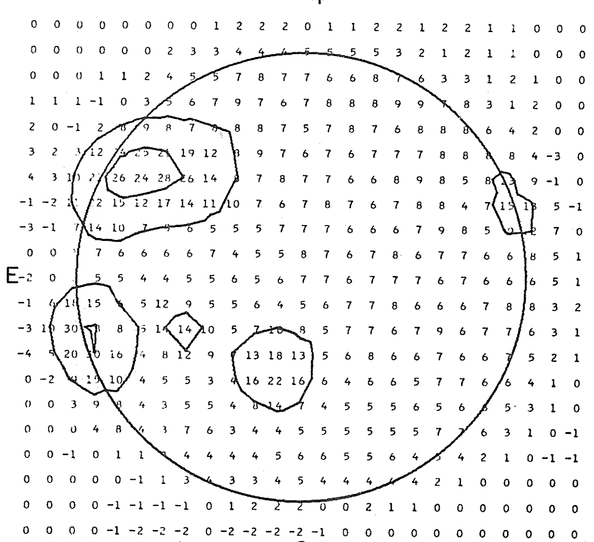
Sp

Levels
±5
±10
±20
±40
±80

17.74-19.19 UT

STANFORD 9.1 cm.

Np

E  W

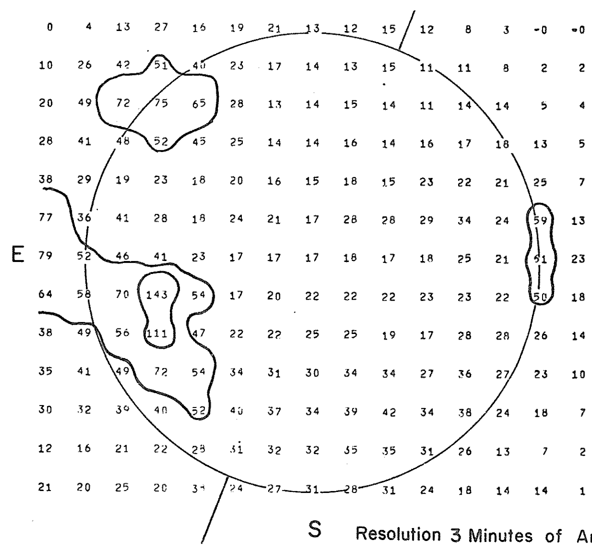
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E  W

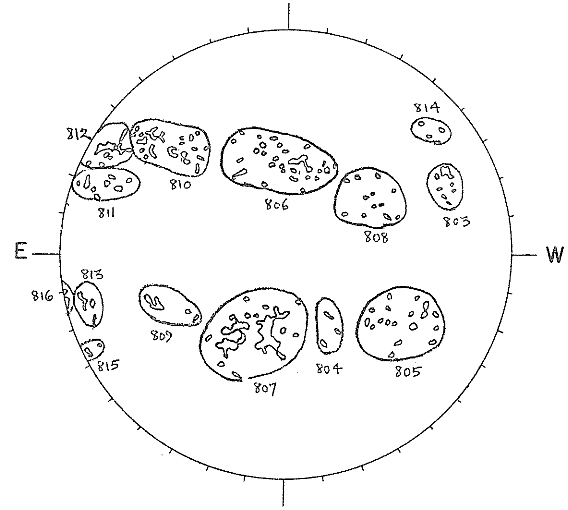
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

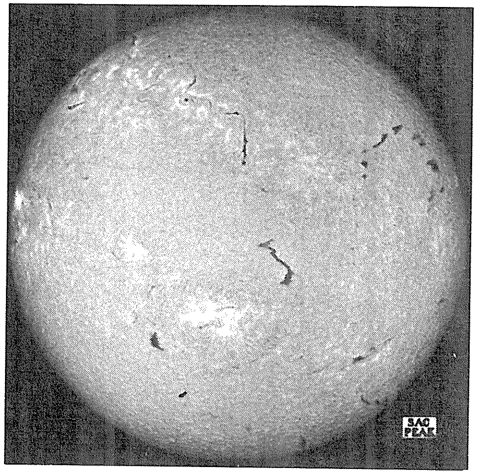
Sp

1510 UT

05-14-2.5
06 20 2.5
07-45-3
09-09-3.5
10-25-2.5
12-20-3
16-06-2.5

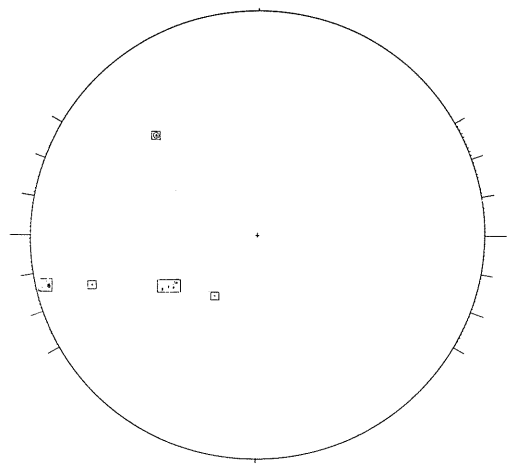
MAY 15, 1967 (P=-21.21, B₀=-2.69, L₀=6.28)

SACRAMENTO PEAK Hα



1354 UT

ESSA-BOULDER SUNSPOTS

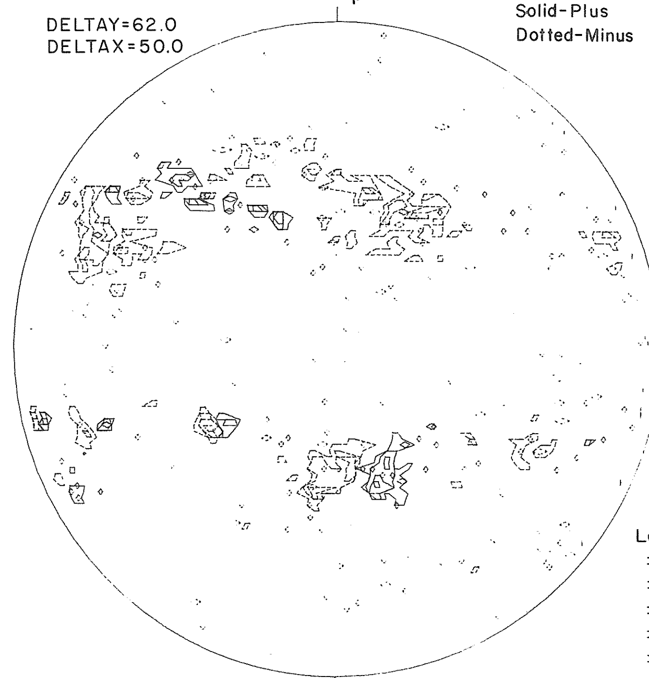


1440 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

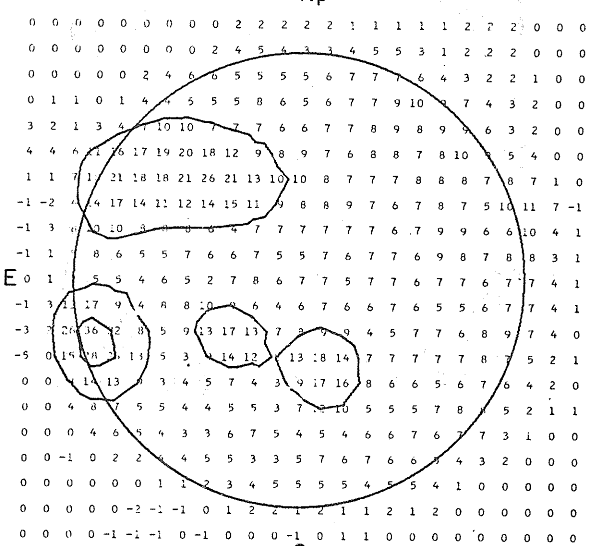
DELTAY=62.0
DELTAX=50.0



Levels
±5
±10
±20
±40
±80

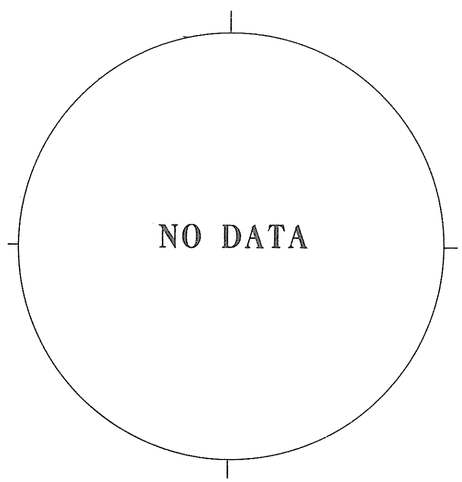
15.57-17.02 UT

STANFORD 9.1 cm.



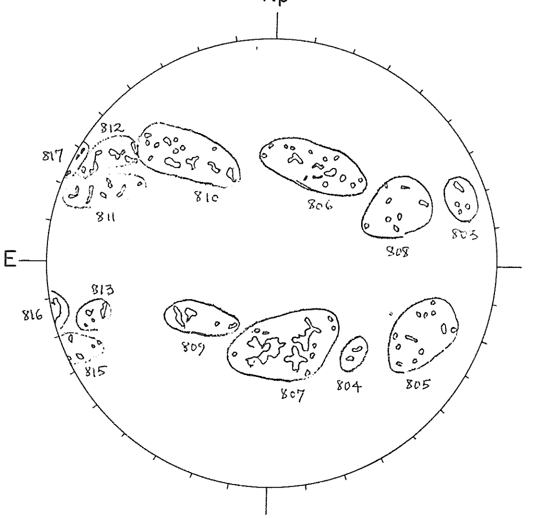
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



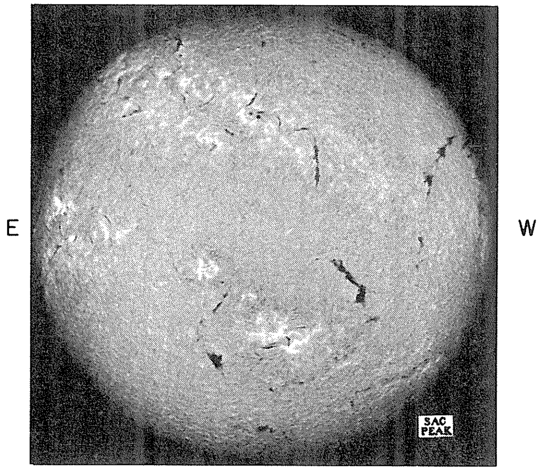
06-19-2.5
07-40-3.5
09-10-3.5
10-18-3
12-17-3
16-30-3
17-09-2.5

1635 UT

MAY 16, 1967 (P=-20.93, B₀=-2.57, L₀=353.06)

SACRAMENTO PEAK Hα

N

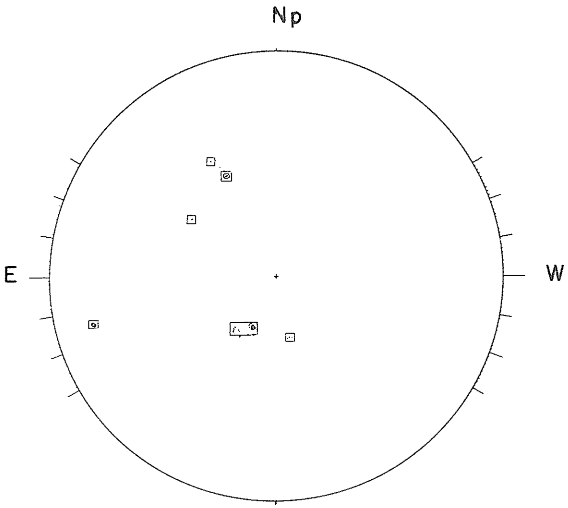


S

1425 UT

ESSA-BOULDER SUNSPOTS

Np



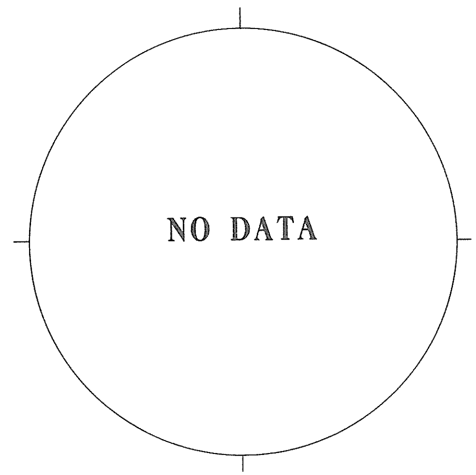
Sp

1930 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

Np

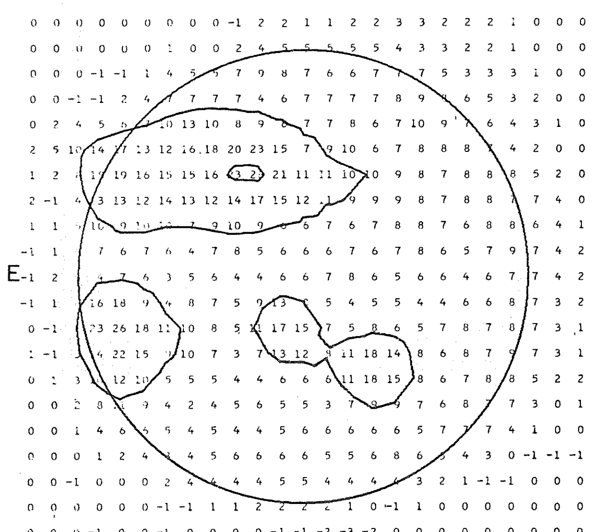


Sp

Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.

Np

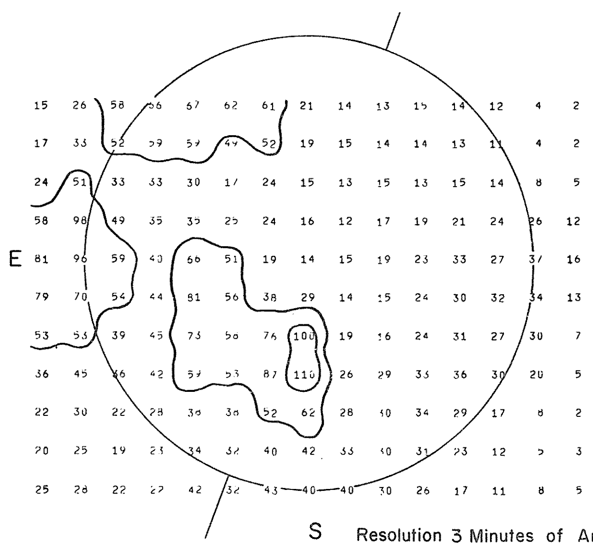


Sp

20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

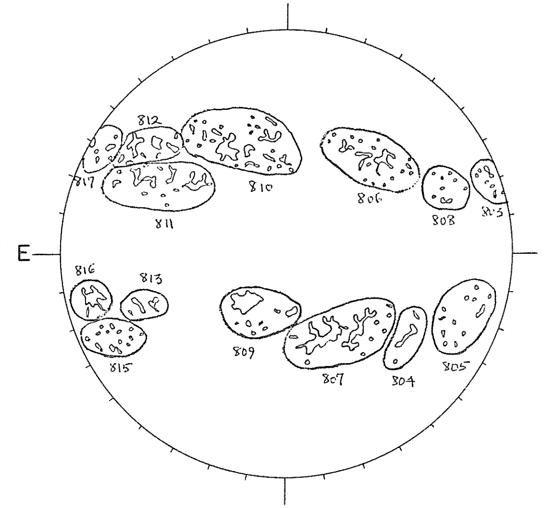


S

Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



Sp

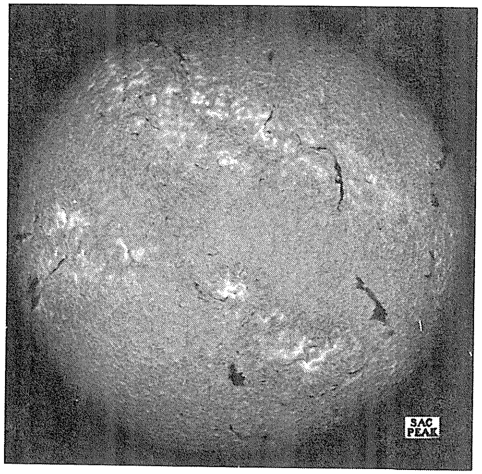
1305 UT

07-41-3
09-18-3
10-34-2.5
11-19-2.5
12-20-2.5
16-21-3

MAY 17, 1967 (P=-20.65, B₀=-2.46, L₀=339.83)

SACRAMENTO PEAK Hα

N



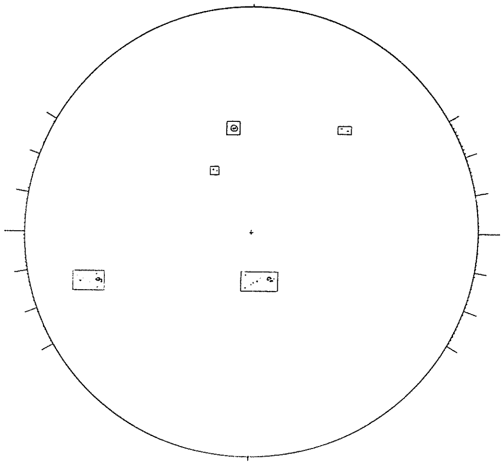
E W

S

1441 UT

ESSA-BOULDER SUNSPOTS

Np



E W

Sp

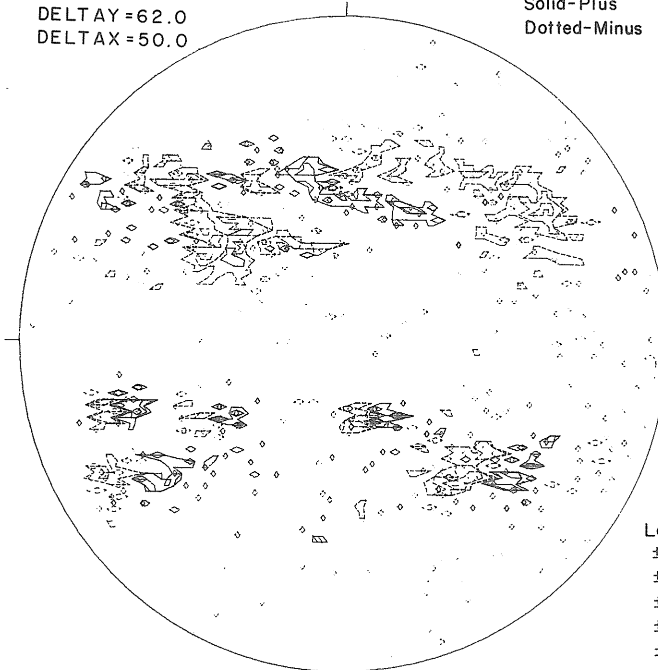
1510 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus

Np



E W

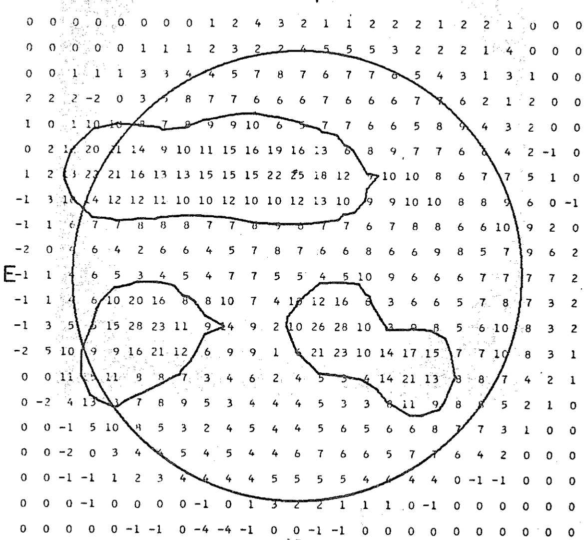
Sp

Levels
±5
±10
±20
±40
±80

16.54-17.99 UT

STANFORD 9.1 cm.

Np



E W

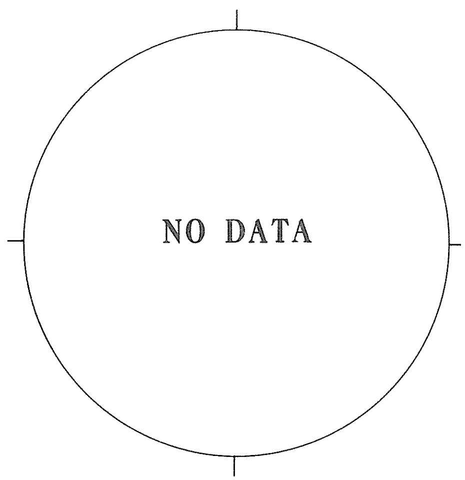
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N



W E

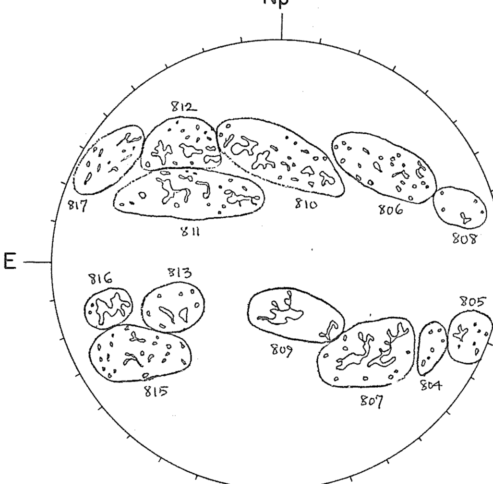
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



W E W

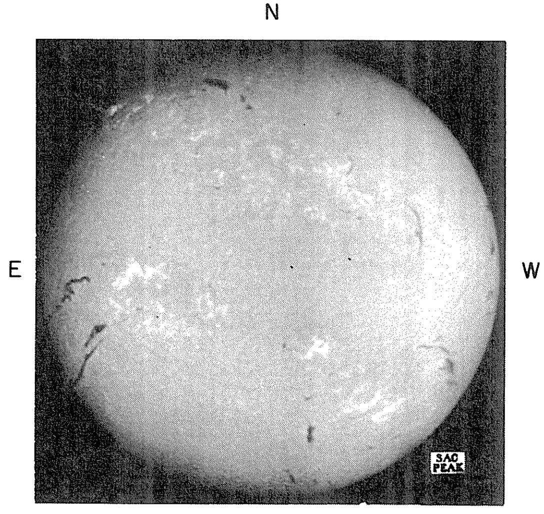
06-14-2.5
07-27-2.5
09-18-3
10-31-2
16-22-3

Sp

1305 UT

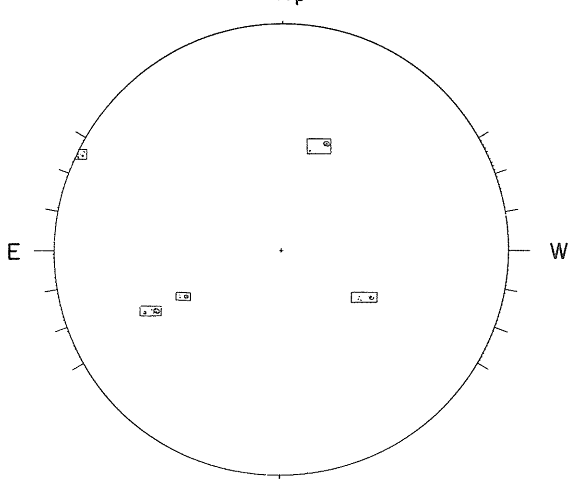
MAY 18, 1967 (P=-20.36, B₀=-2.35, L₀=326.60)

SACRAMENTO PEAK Hα



1900 UT

ESSA-BOULDER SUNSPOTS

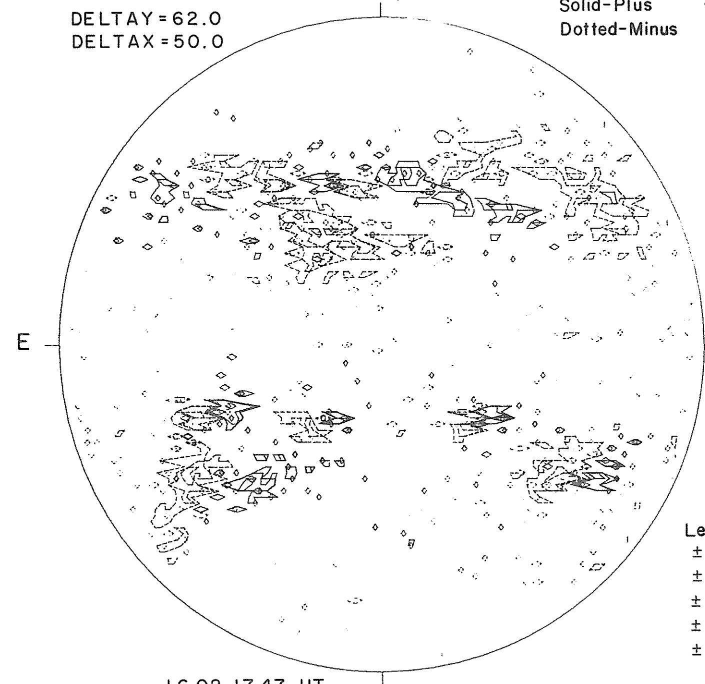


2230 UT

MT. WILSON MAGNETOGRAM

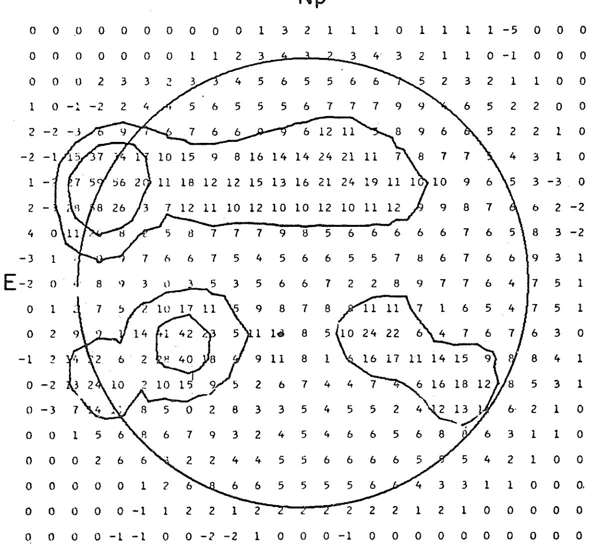
Solid-Plus
Dotted-Minus

DELTAY=62.0
DELTAX=50.0



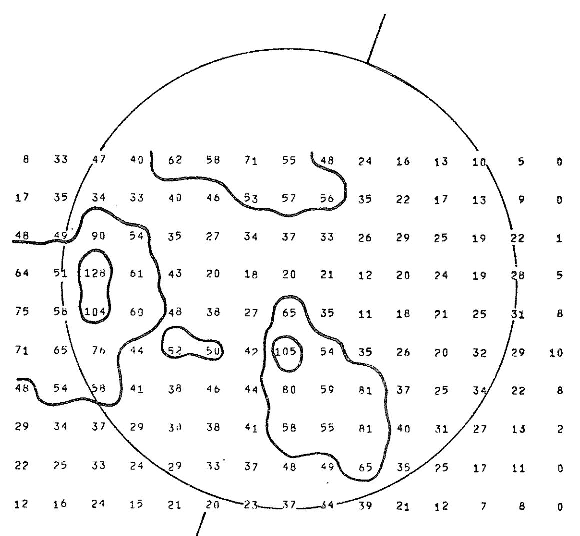
16.02-17.47 UT

STANFORD 9.1 cm.



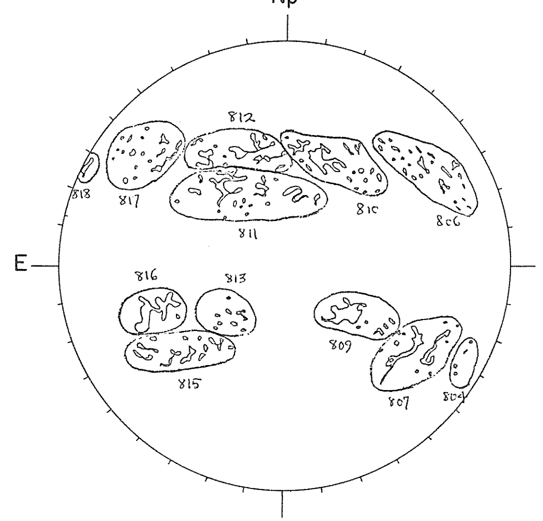
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

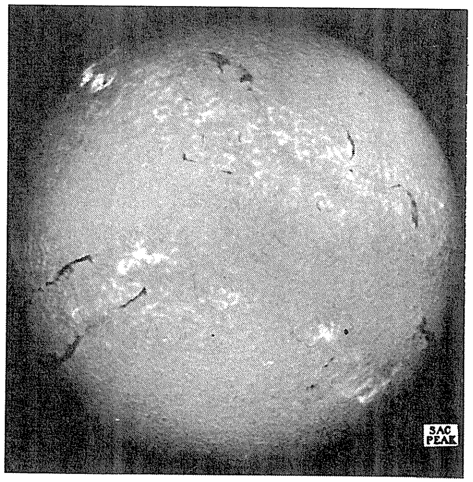


07-22-2.5
09-23-3
10-29-2.5
13-07-2.5
16-22-3
18-12-3.5

1300 UT

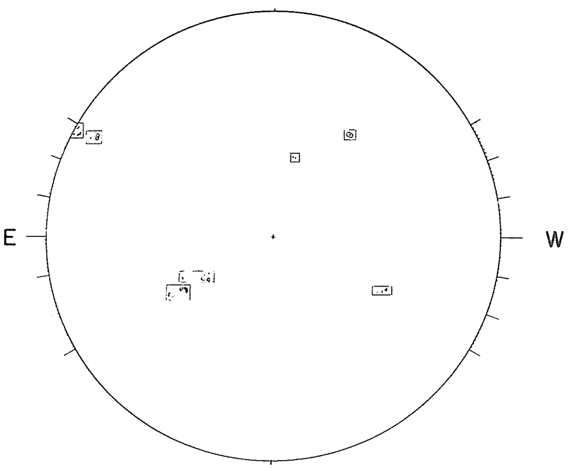
MAY 19, 1967 (P=-20.07, B_o=-2.23, L_o=313.37)

SACRAMENTO PEAK Hα



1709 UT

ESSA-BOULDER SUNSPOTS

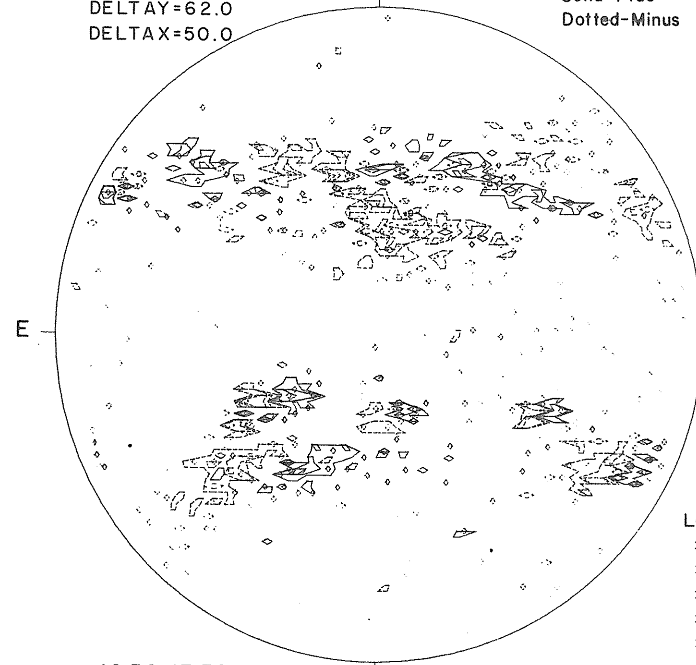


1730 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

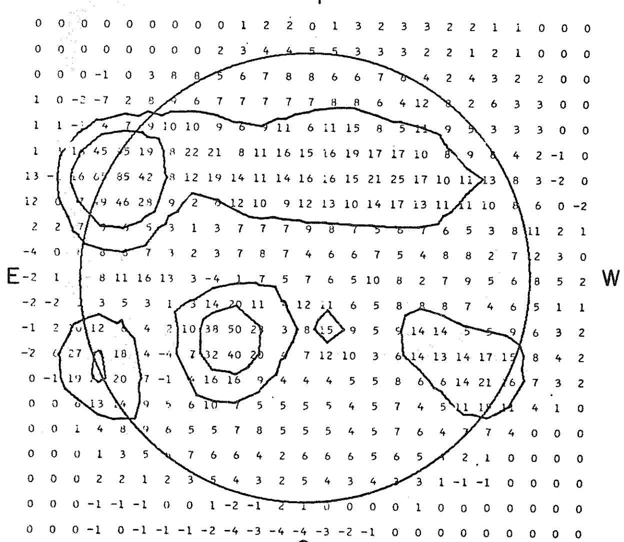
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

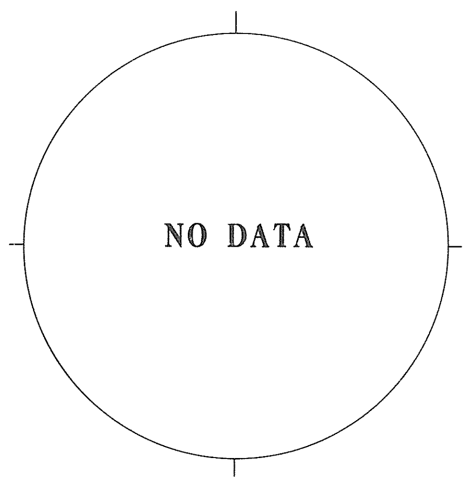
16.36-17.79 UT

STANFORD 9.1 cm.



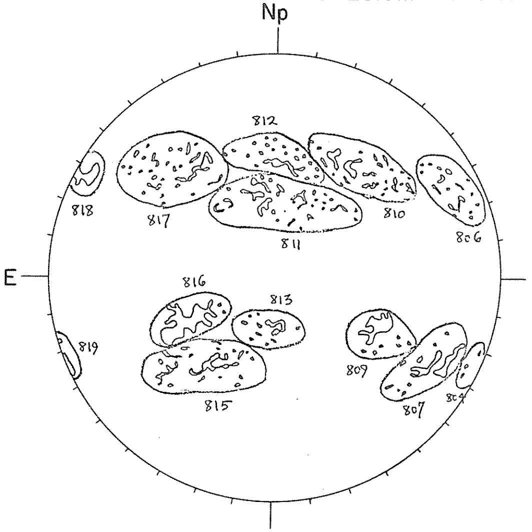
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



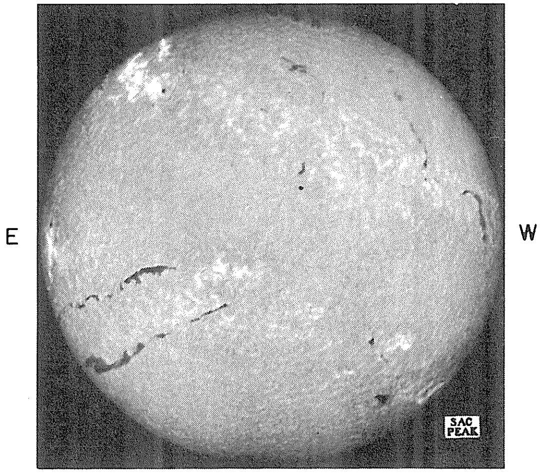
06-16-2.5
07-25-2.5
09-19-3
10-24-2.5
11-27-2.5
12-16-2.5
13-09-2.5
16-28-3.5
18-36-3

1330 UT

MAY 20, 1967 (P=-19.77, Bo=-2.11, Lo=300.15)

SACRAMENTO PEAK Hα

N

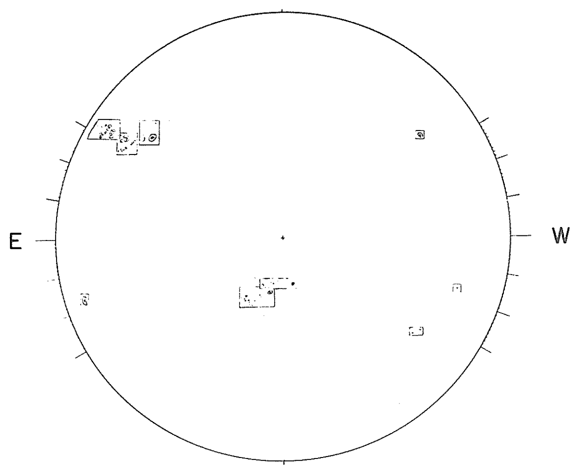


S

1734 UT

ESSA-BOULDER SUNSPOTS

Np



Sp

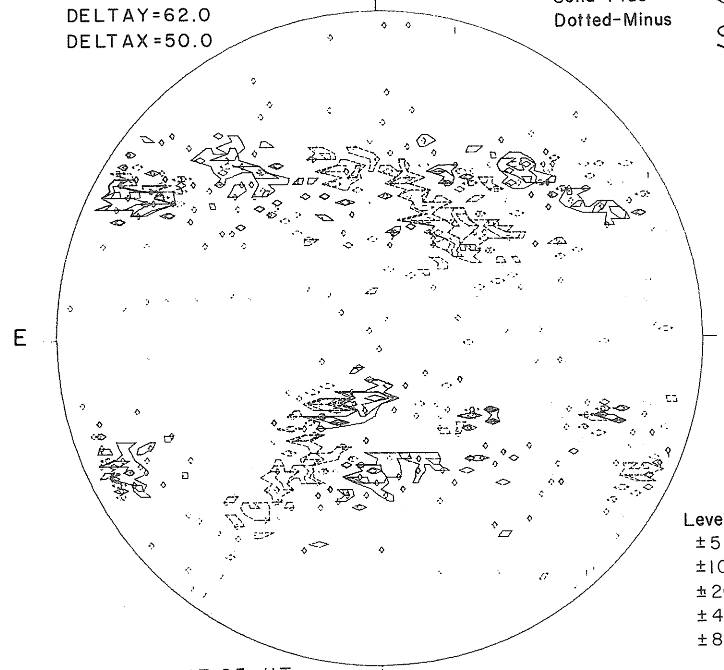
2350 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

DELTAY=62.0
DELTAX=50.0

Np

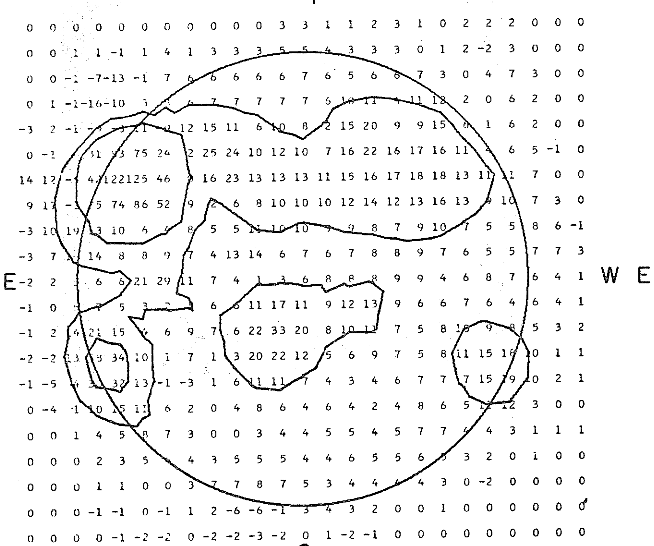


16.40-17.85 UT

Sp

STANFORD 9.1 cm.

Np



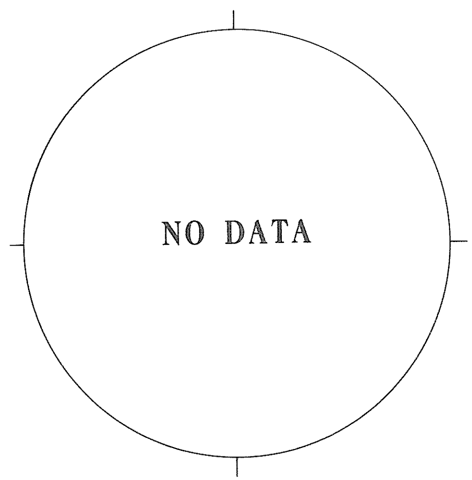
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N



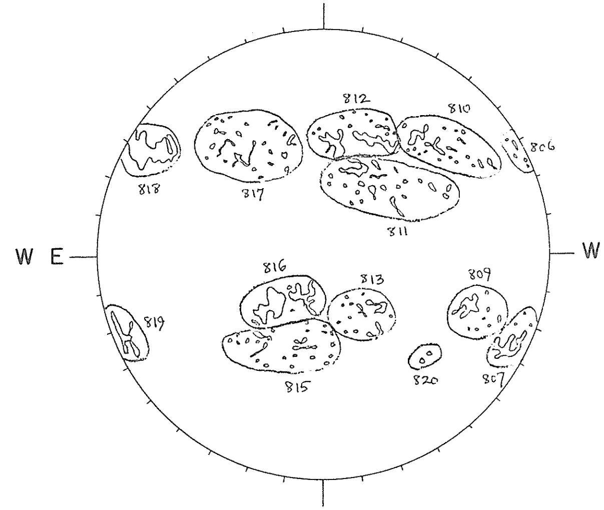
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



07-26-2.5
09-16-3
10-21-2.5
16-32-3
18-67-3
19-23-2.5
20-02-2.5

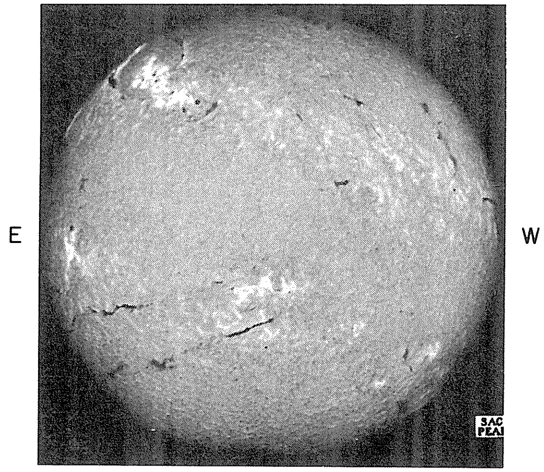
Sp

1250 UT

MAY 21, 1967 (P=-19.47, B_o=-2.00, L_o=286.92)

SACRAMENTO PEAK Hα

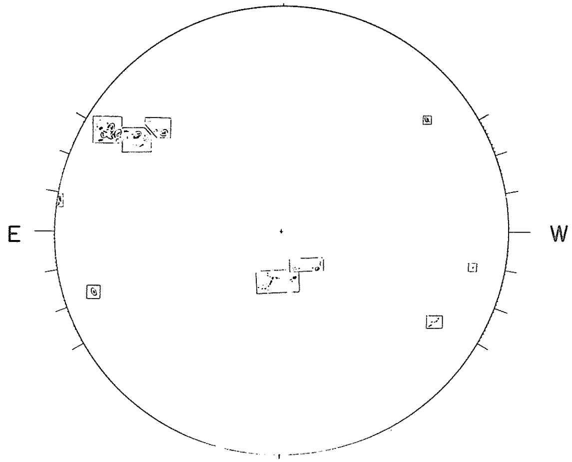
N



S
1555 UT

ESSA-BOULDER SUNSPOTS

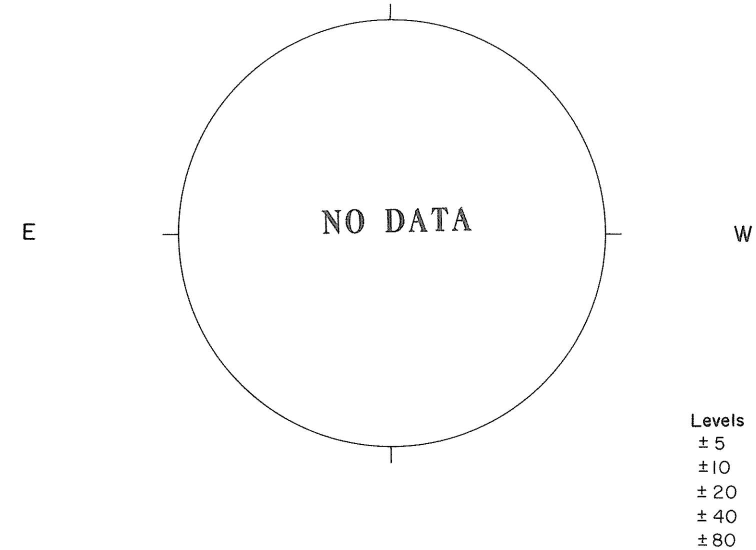
Np



Sp
1550 UT

MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus

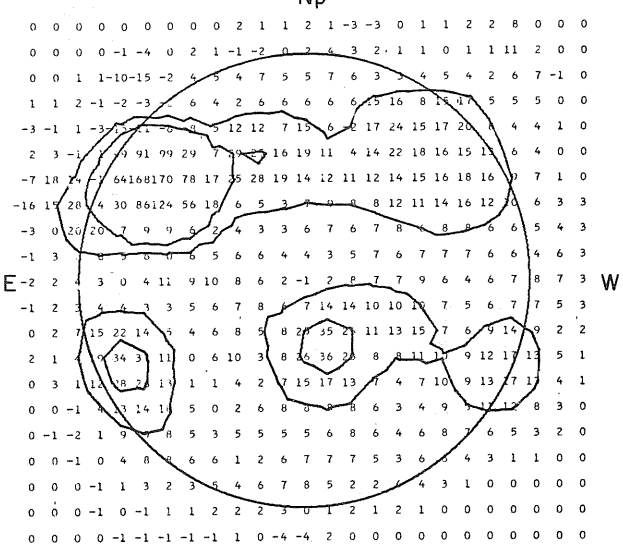
Np



Sp

STANFORD 9.1 cm.

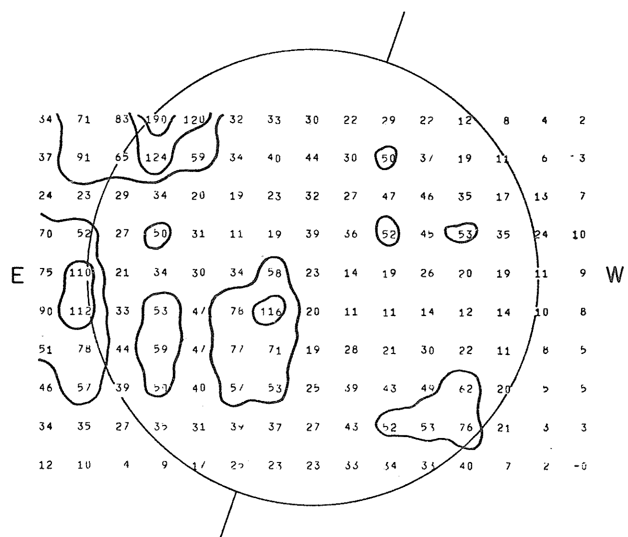
Np



Sp
20-21 UT
Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

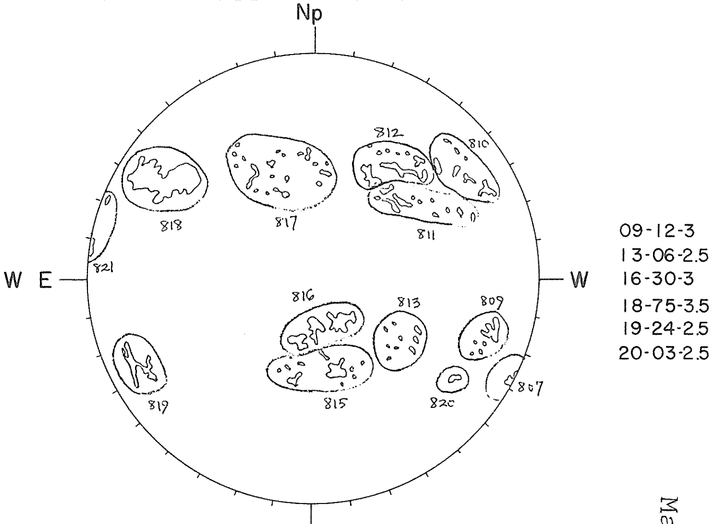
N



S
Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

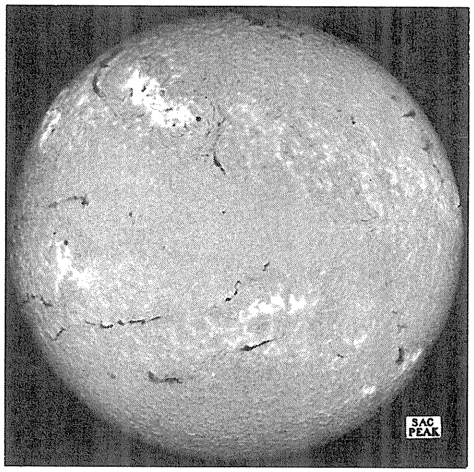
Np



Sp
1220 UT

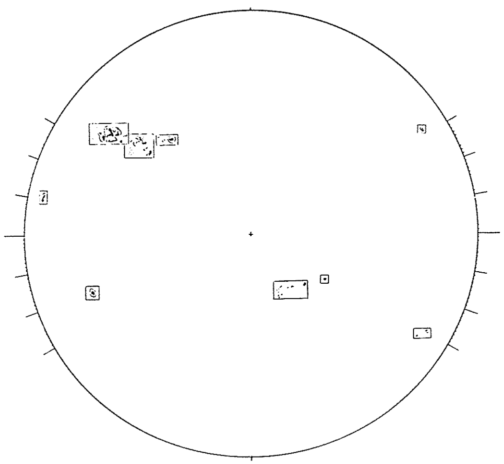
MAY 22, 1967 (P=-19.16, B₀=-1.88, L₀=273.69)

SACRAMENTO PEAK Hα



1436 UT

ESSA-BOULDER SUNSPOTS

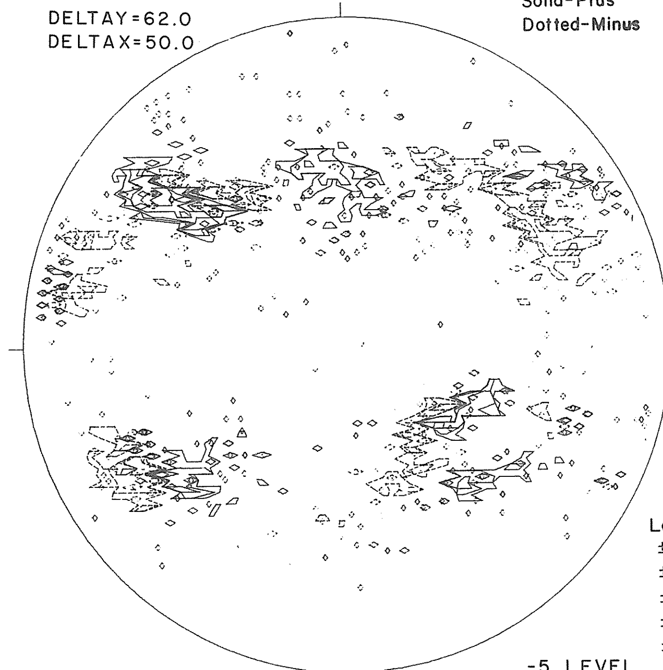


1440 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

DELTAY=62.0
DELTAX=50.0

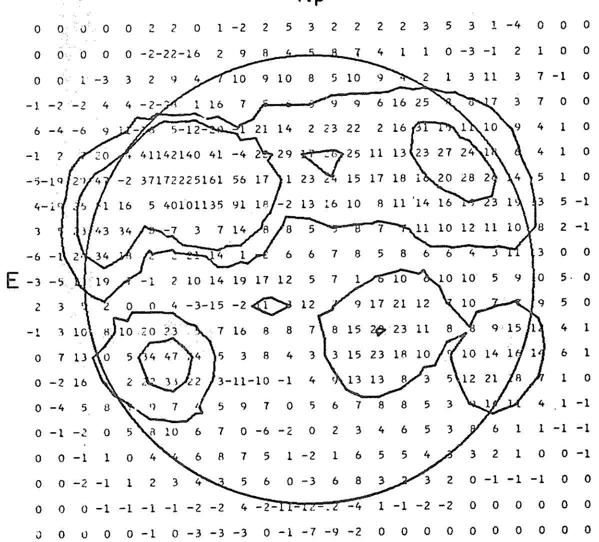


Levels
±5
±10
±20
±40
±80

-5 LEVEL
NOT PLOTTED

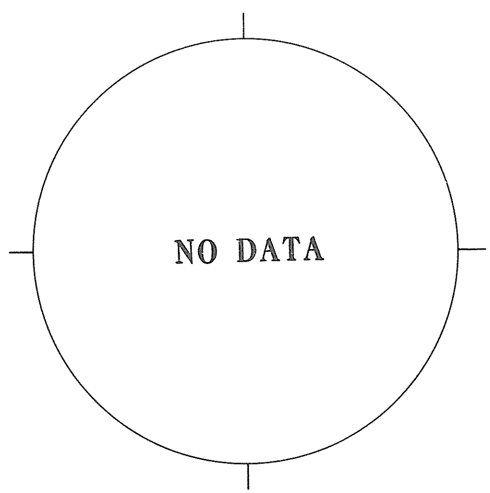
17.93-19.41 UT

STANFORD 9.1 cm.



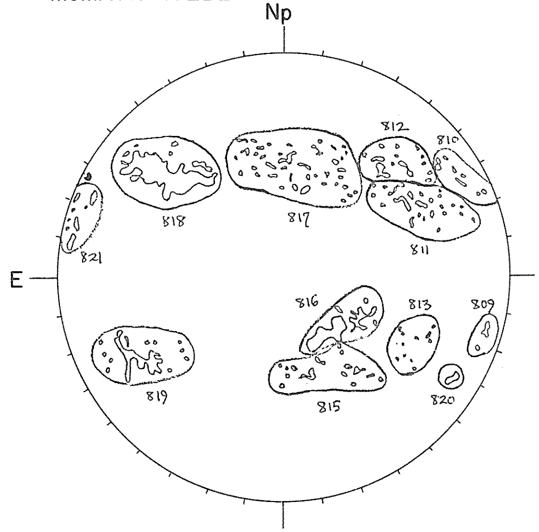
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

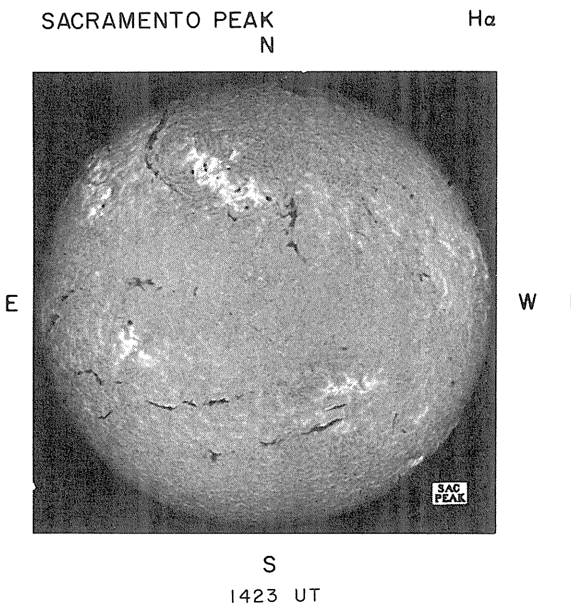


09-06-3.5
13-06-2.5
16-30-3
17-25-2.5
18-85-3.5
19-29-2.5
20-04-3.5
21-20-3

1315 UT

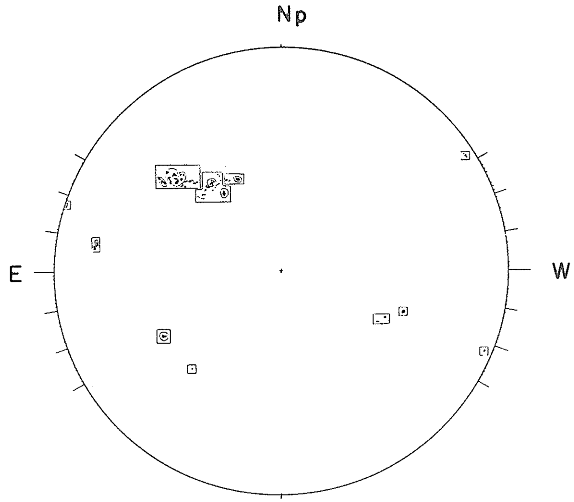
MAY 23, 1967 (P=-18.84, B₀=-1.76, L₀=260.46)

SACRAMENTO PEAK Hα



1423 UT

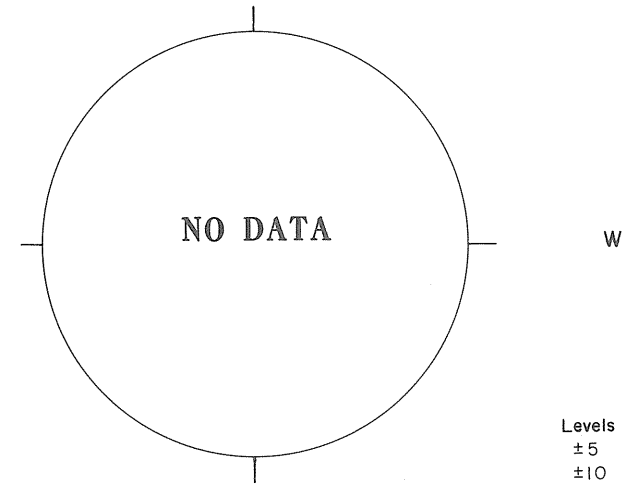
ESSA-BOULDER SUNSPOTS



1440 UT

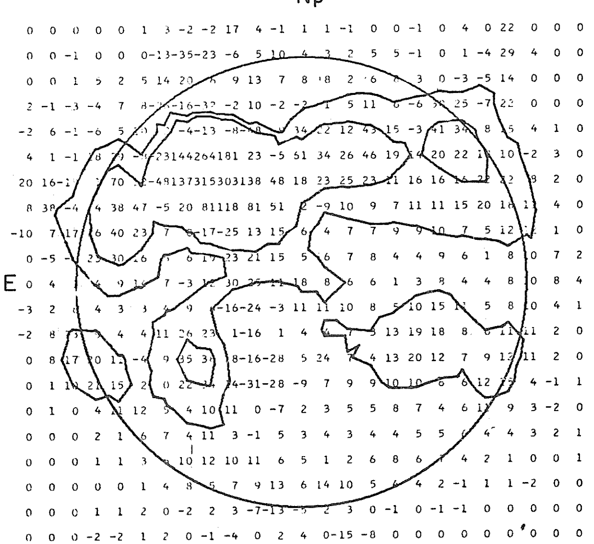
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



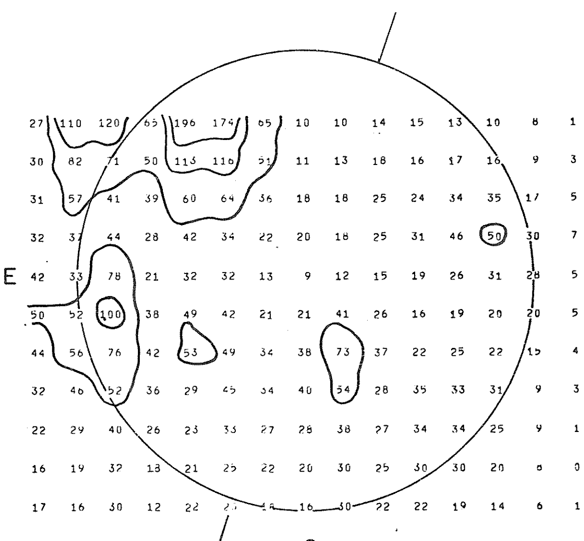
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



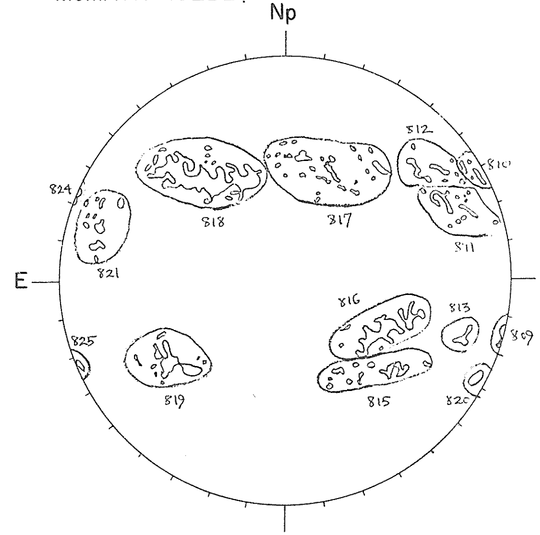
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

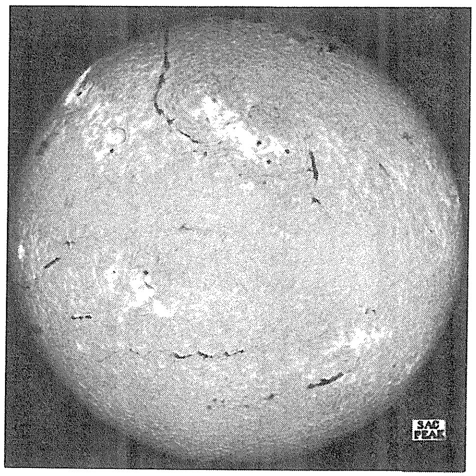


1215 UT

09-08-2.5
10-10-2.5
16-30-3
18-85-4
19-33-3
20-08-3.5
21-21-3

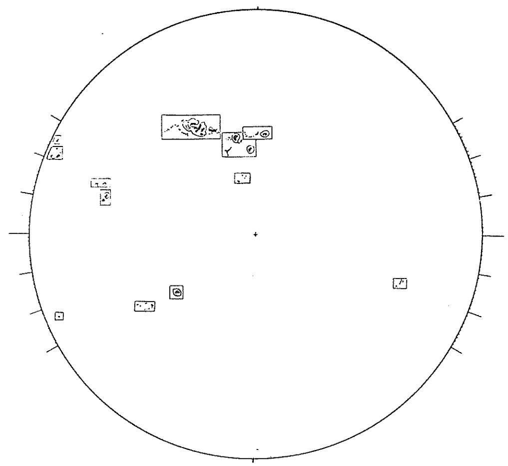
MAY 24, 1967 (P=-18.51, B_o=-1.65, L_o=247.23)

SACRAMENTO PEAK Hα



1442 UT

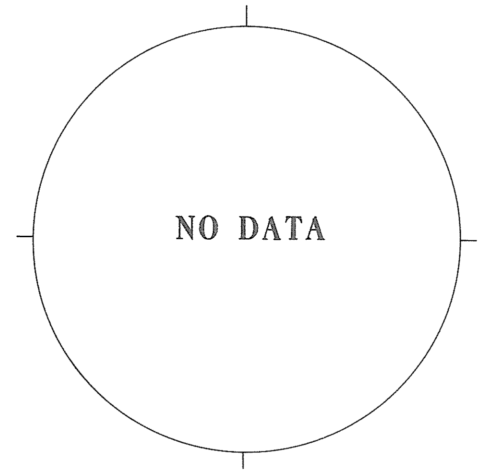
ESSA-BOULDER SUNSPOTS



1500 UT

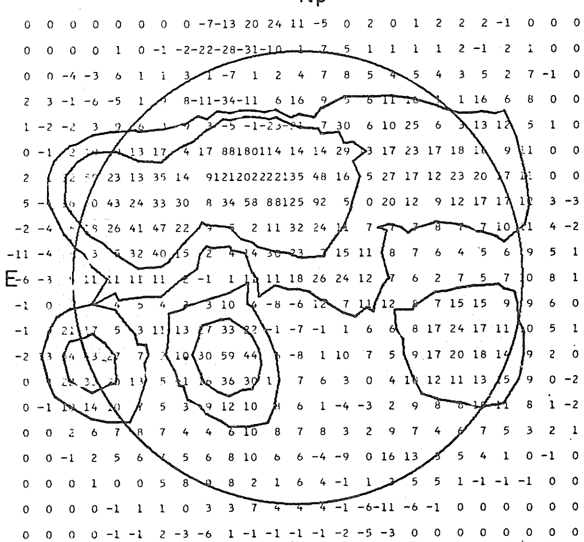
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

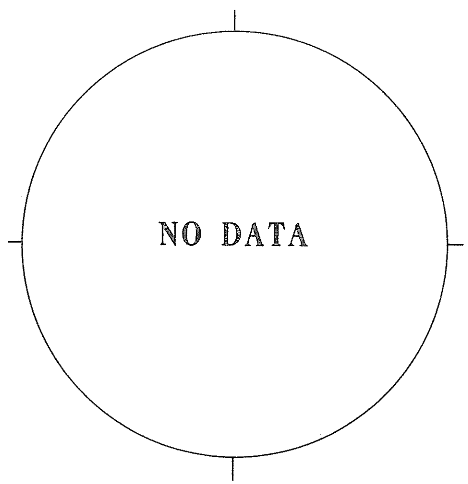
STANFORD 9.1 cm.



Brightness Unit 5,000° K

20-21 UT

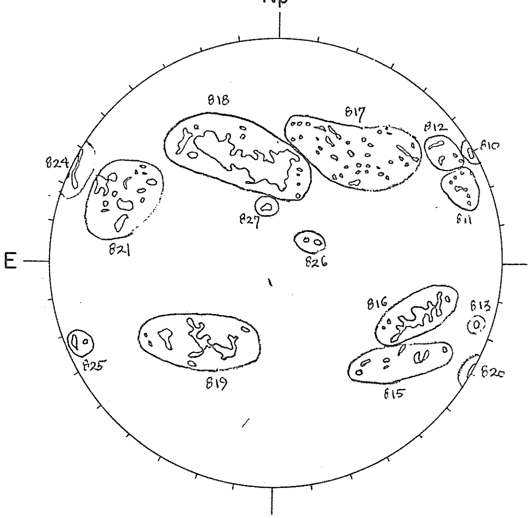
FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

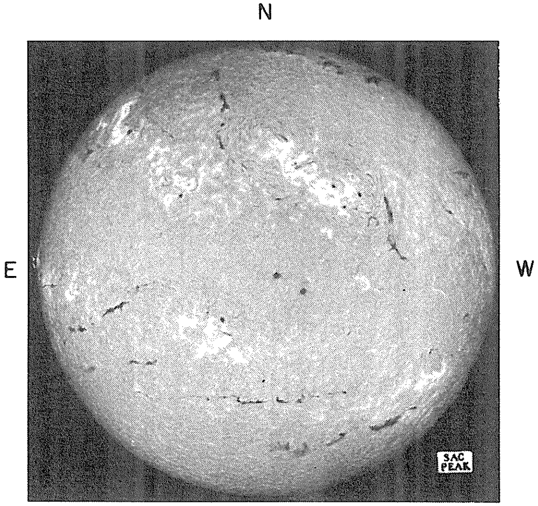


16-25-3
18-90-4
19-29-3
21-25-2.5
24-30-3
25-09-4
27-03-2.5

1310 UT

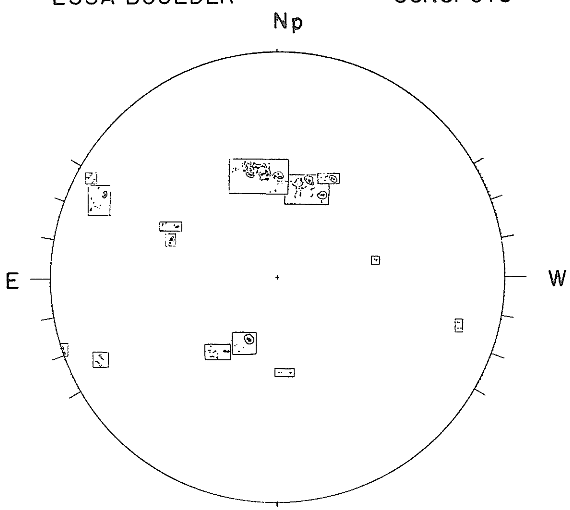
MAY 25, 1967 (P=-18.19, B₀=-1.53, L₀=234.00)

SACRAMENTO PEAK Hα



1453 UT

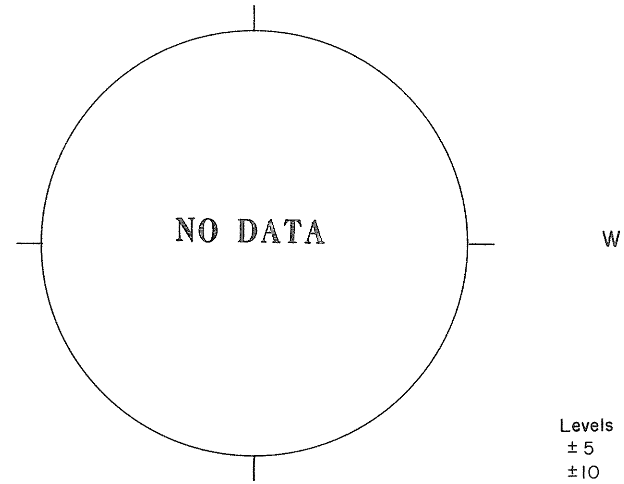
ESSA-BOULDER SUNSPOTS



1425 UT

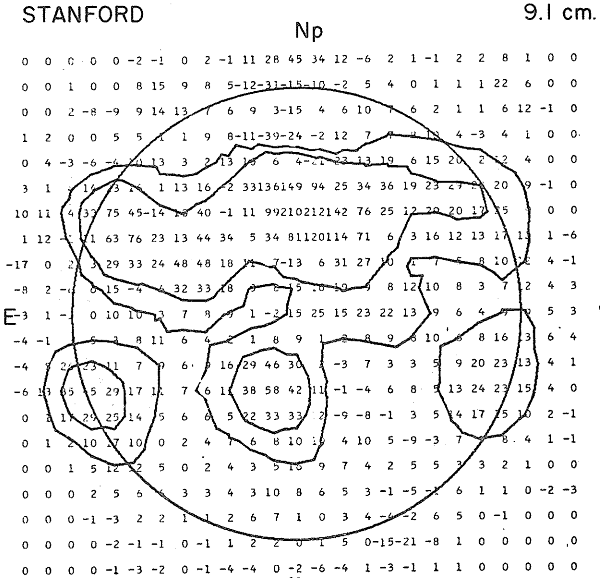
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



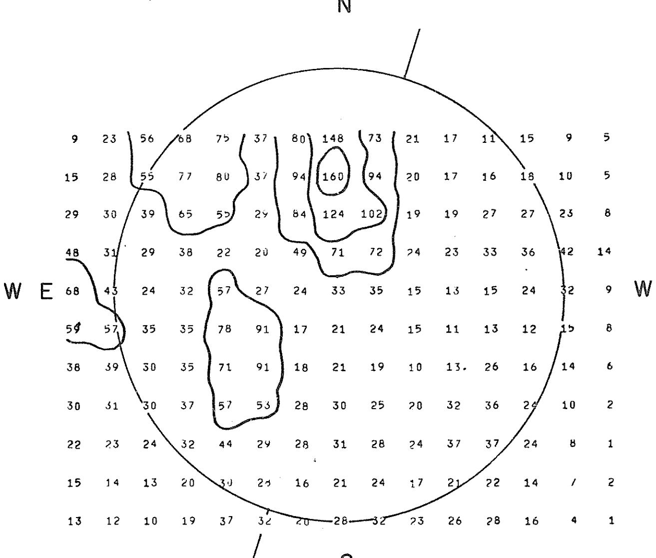
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



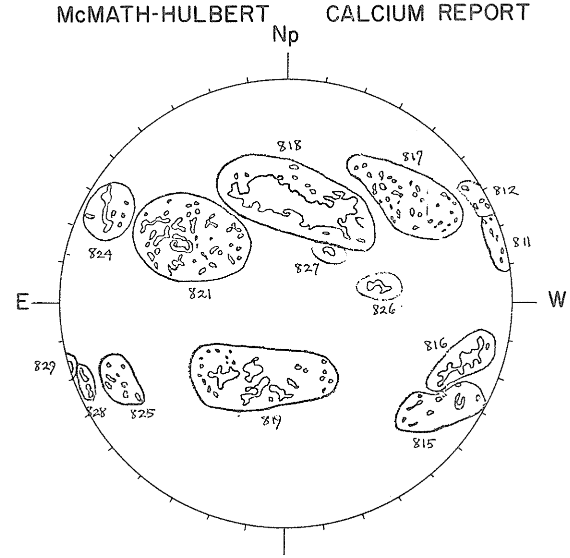
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

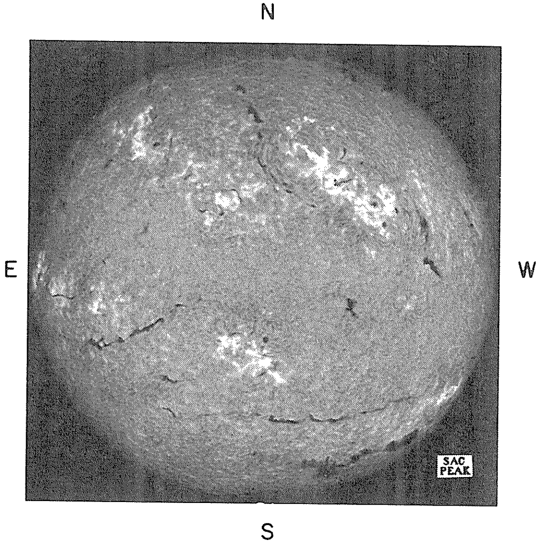


1330 UT

16-25-2.5
18-100-4
19-35-3.5
21-29-3
24-31-4
25-09-3.5
27-03-3.5

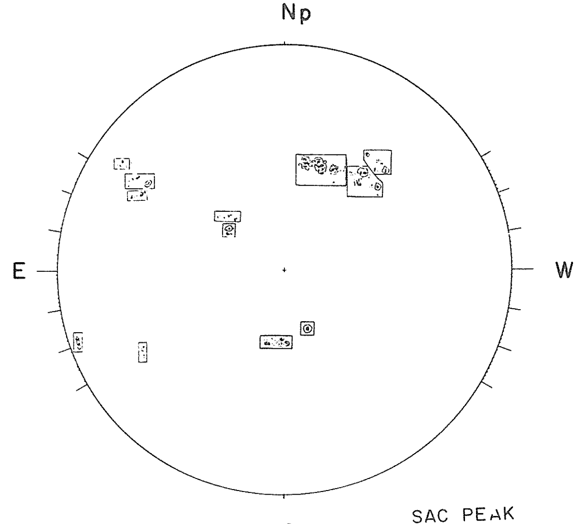
MAY 26, 1967 (P=-17.85, B_o=-1.41, L_o=220.77)

SACRAMENTO PEAK Hα



1421 UT

ESSA-BOULDER SUNSPOTS



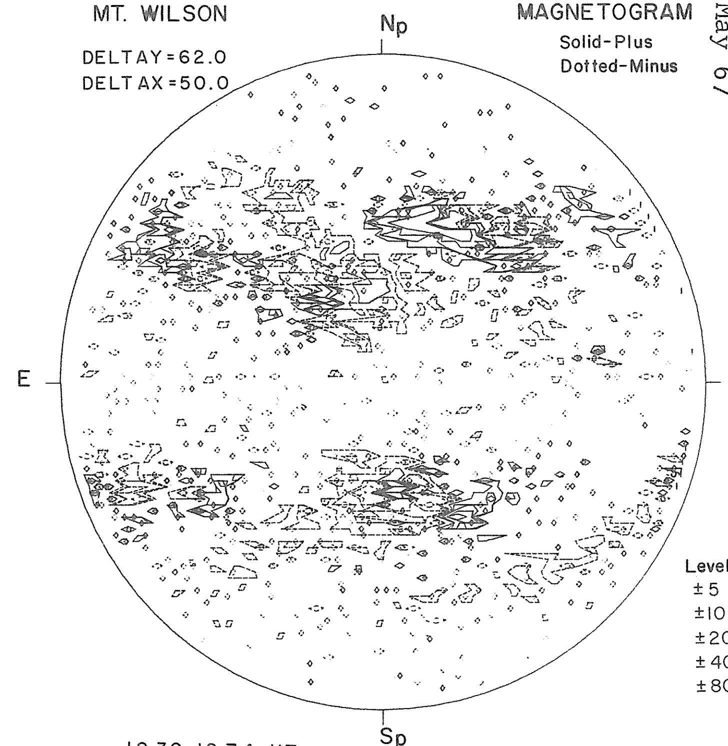
SAC PEAK

1405 UT

MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus

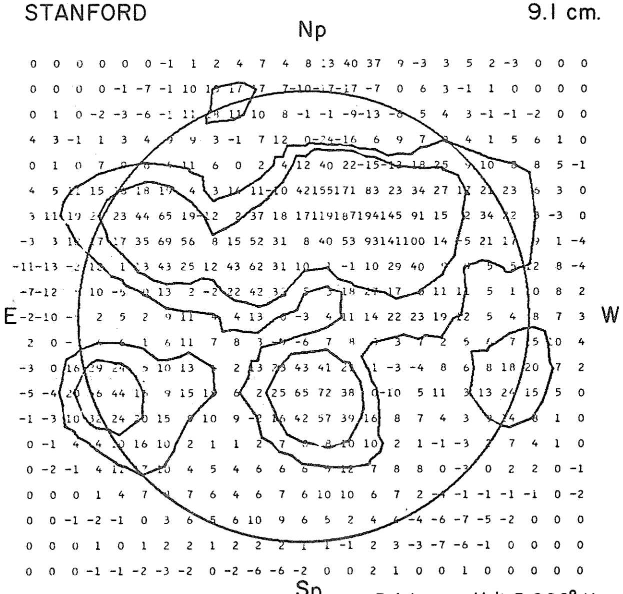
DELTAY=62.0
DELTAX=50.0



Levels
±5
±10
±20
±40
±80

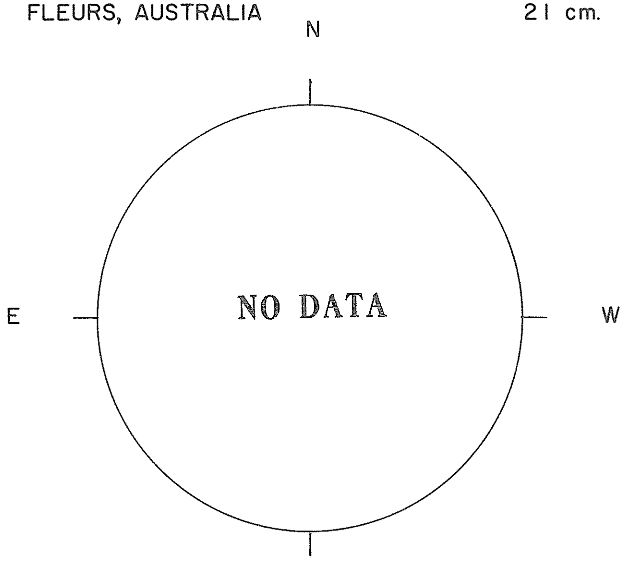
18.30-19.74 UT

STANFORD 9.1 cm.



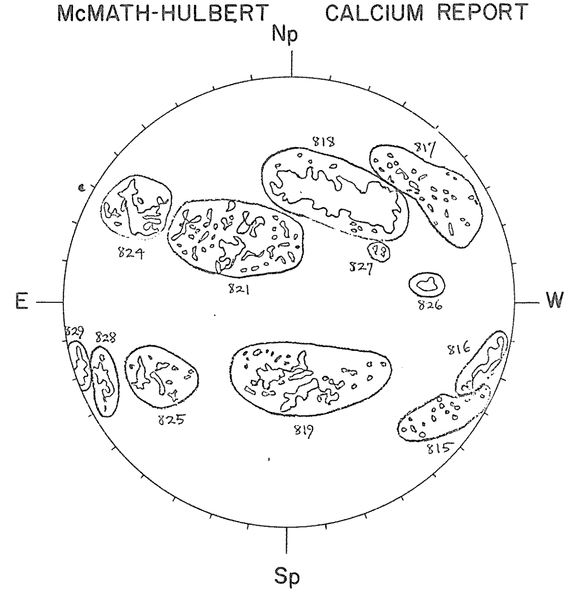
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



1250 UT

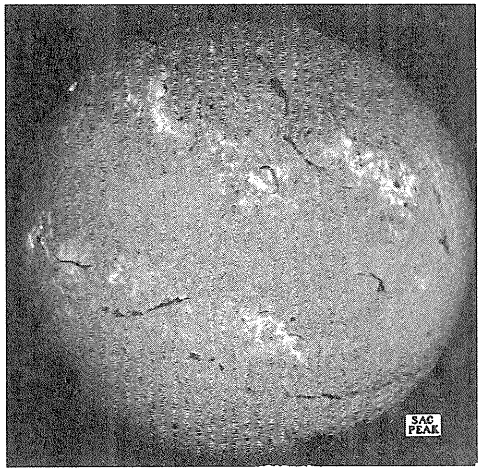
16-25-2.5
18-120-4
19-38-3.5
21-41-3.5
24-37-3.5
25-18-3.5
26-07-2.5
27-03-2.5
29-33-3

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

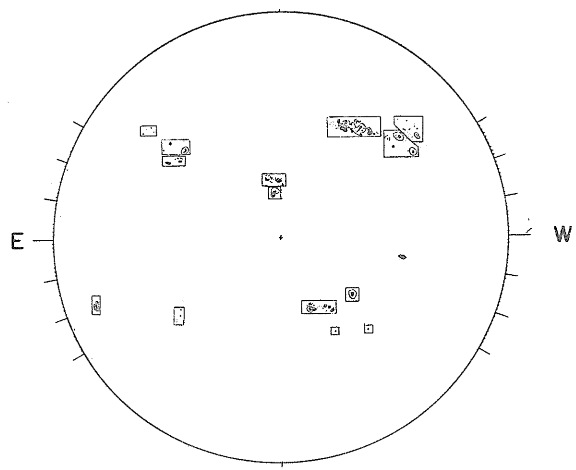
MAY 27, 1967 (P=-17.51, B_o=-1.29, L_o=207.53)

SACRAMENTO PEAK Hα



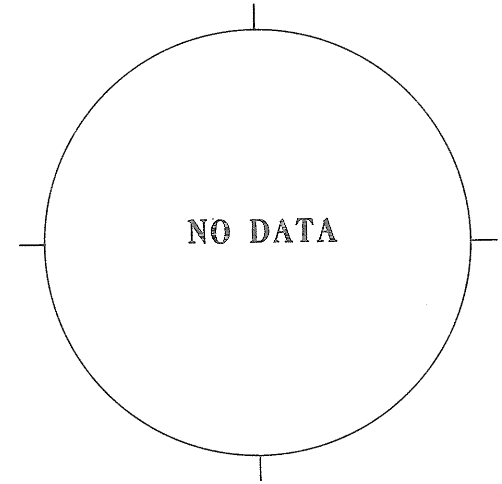
1516 UT

ESSA-BOULDER SUNSPOTS



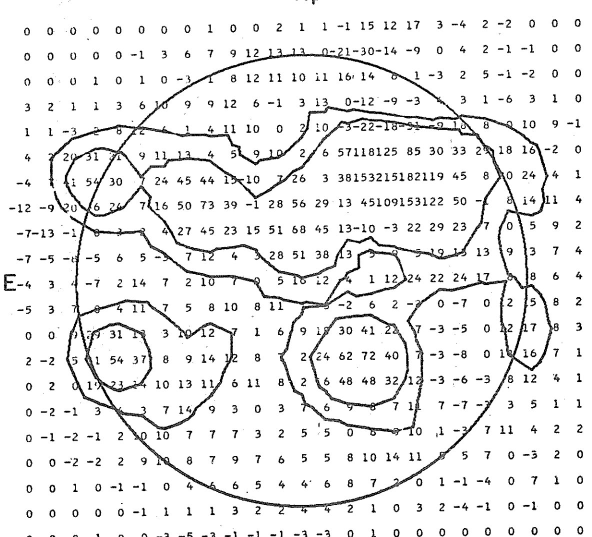
1400 UT

SAC PEAK



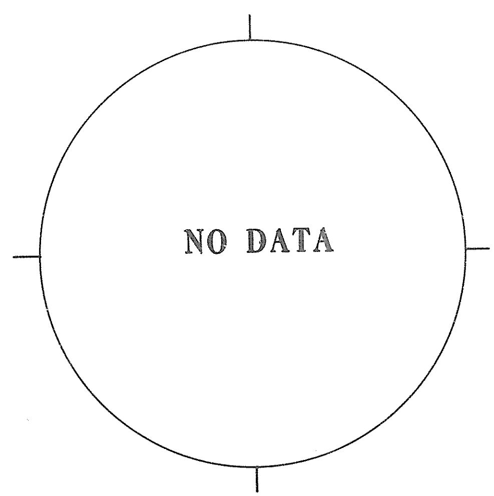
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



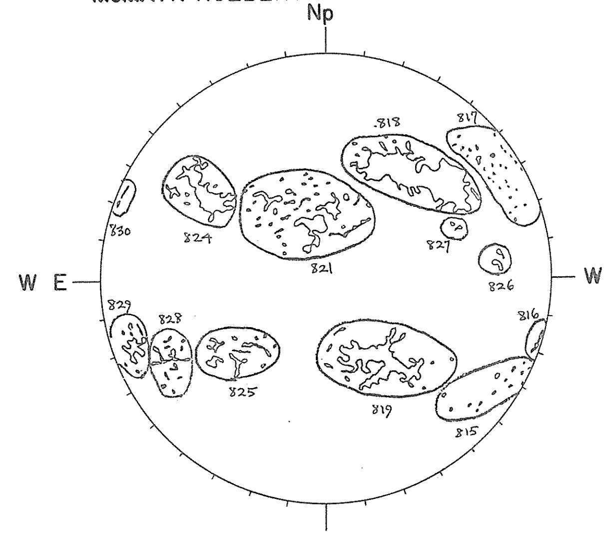
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

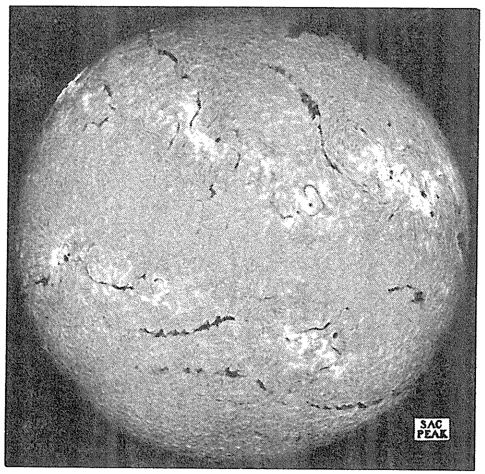


1300 UT

18-124-3.5
19-47-3
21-45-3.5
24-37-2.5
25-19-2.5
29-29-3
30-07-3

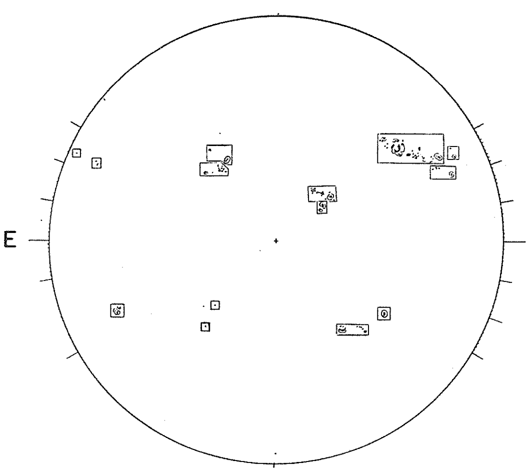
MAY 28, 1967 (P=-17.16, Bo=-1.17, Lo=194.30)

SACRAMENTO PEAK Hα



1410 UT

ESSA-BOULDER SUNSPOTS

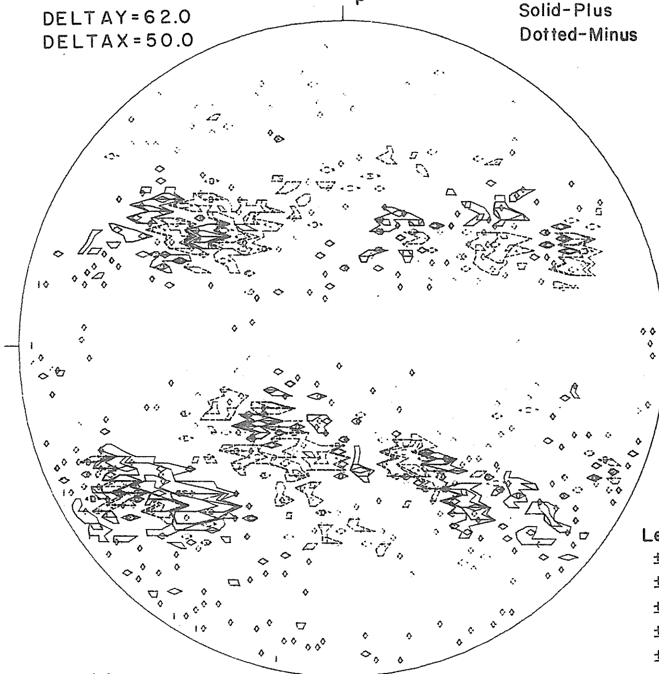


1310 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

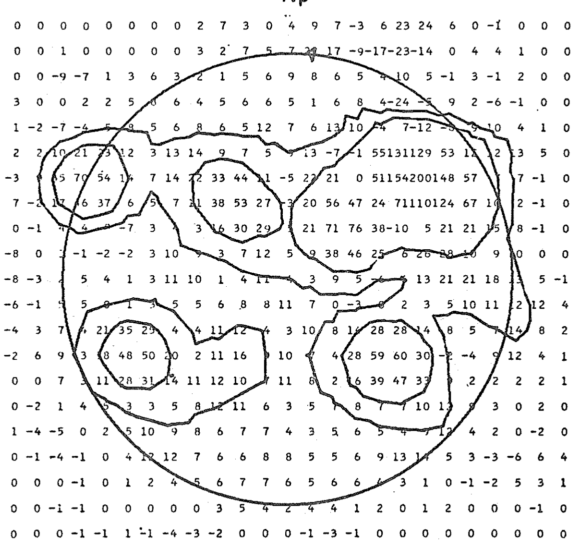
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

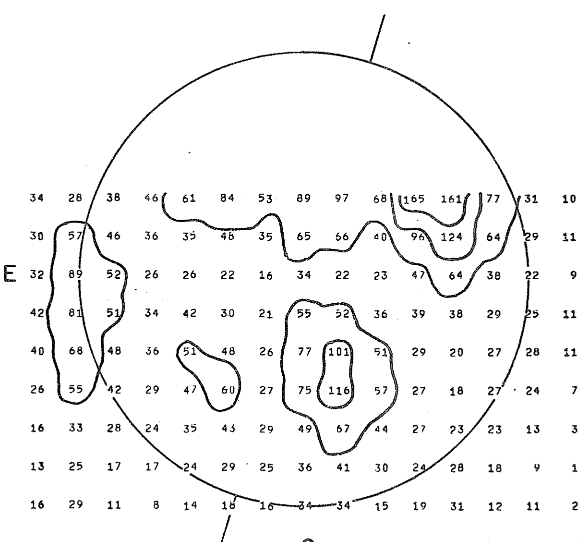
14.90-16.34 UT

STANFORD 9.1 cm.



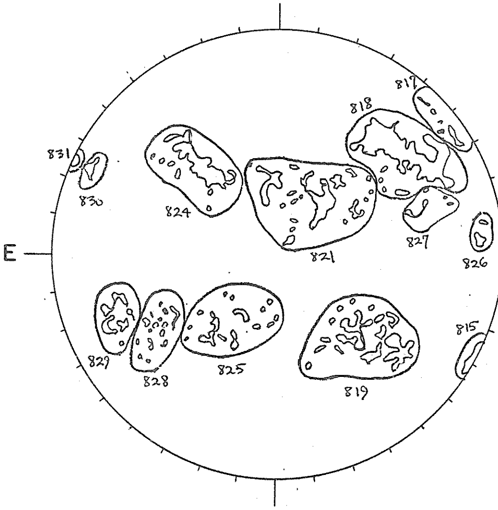
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



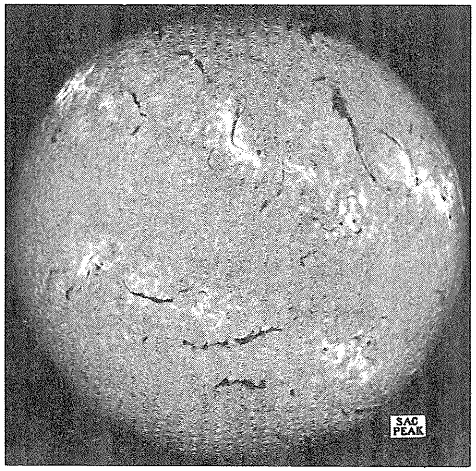
18-120-3.5
19-45-3
21-47-3
24-41-2.5
25-21-2.5
29-30-2.5
30-08-2.5
31-10-2.5

1330 UT

MAY 29, 1967 (P=-16.81, B₀=-1.05, L₀=181.07)

SACRAMENTO PEAK Hα

N

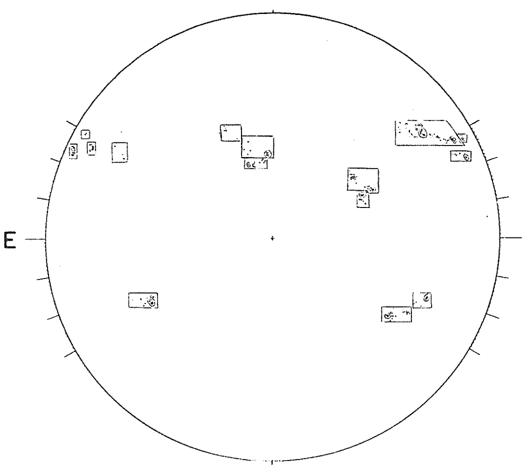
E  W

S

1413 UT

ESSA-BOULDER SUNSPOTS

Np

E  W

Sp

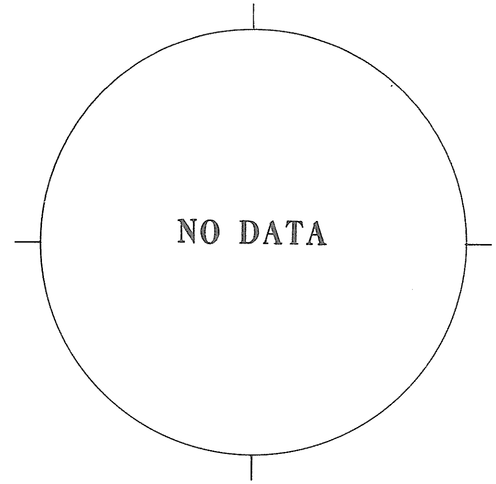
1510 UT

MT. WILSON MAGNETOGRAM

Solid-Plus

Dotted-Minus

Np

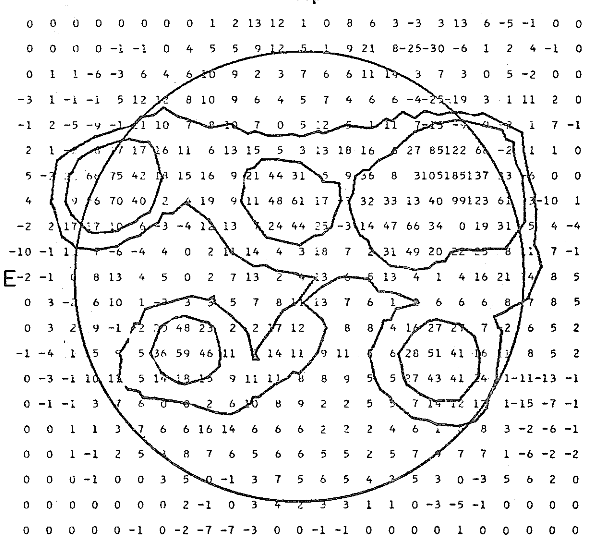
E  W

Sp

Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.

Np

E  W

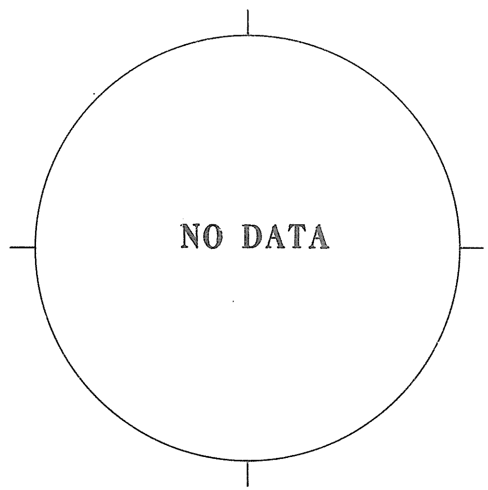
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E  W

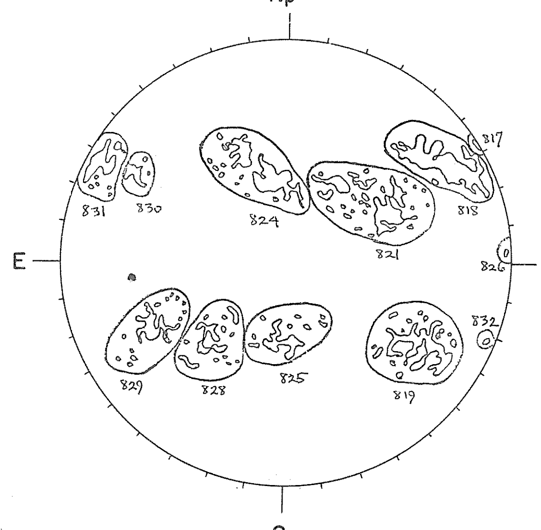
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E  W

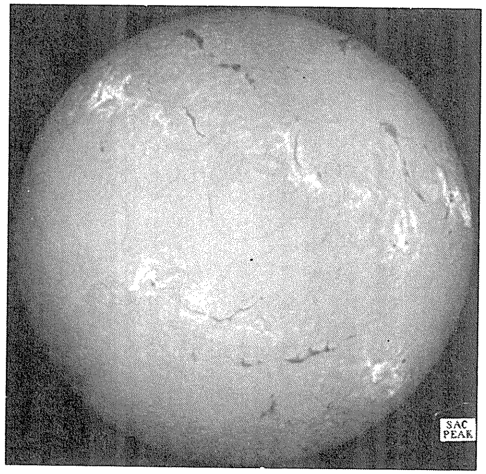
Sp

1310 UT

18-120-3.5
19-51-3
21-55-3.5
24-48-2.5
29-27-3.5
31-45-2.5

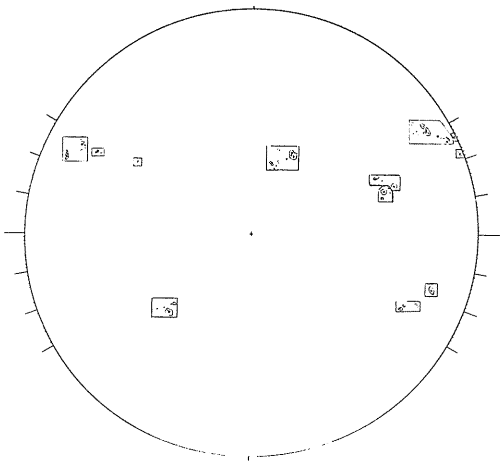
MAY 30, 1967 (P=-16.45, B₀=-0.93, L₀=167.84)

SACRAMENTO PEAK Hα



1717 UT

ESSA-BOULDER SUNSPOTS

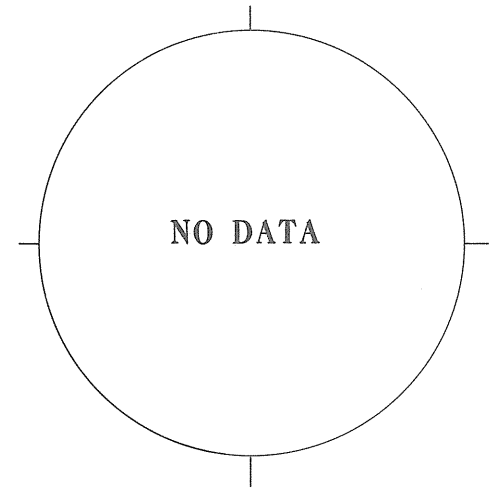


CANARY ISLAND

0700 UT

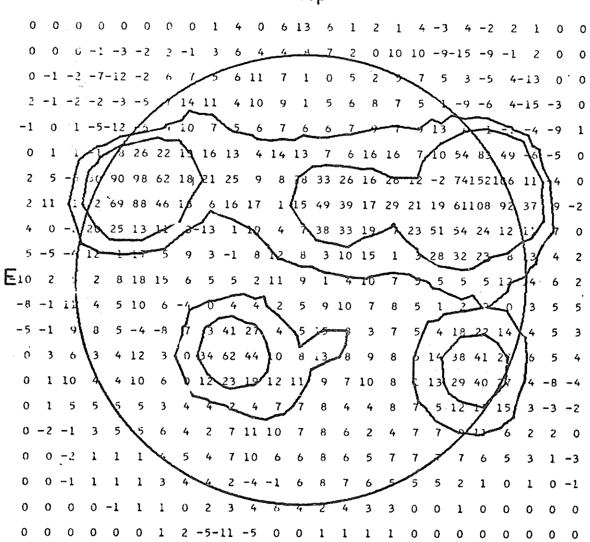
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



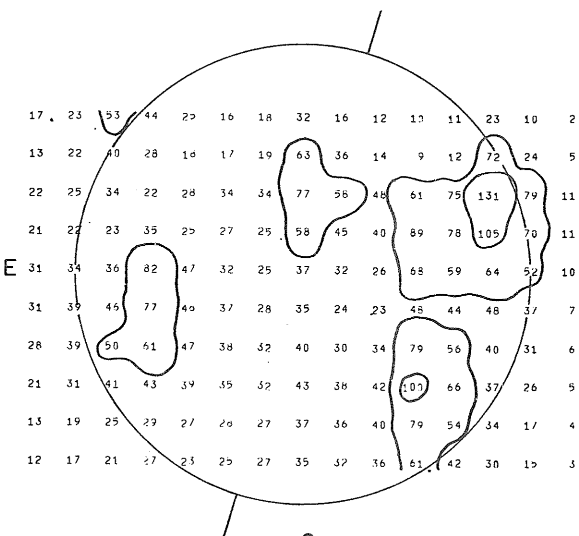
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



20-21 UT Brightness Unit 5,000° K

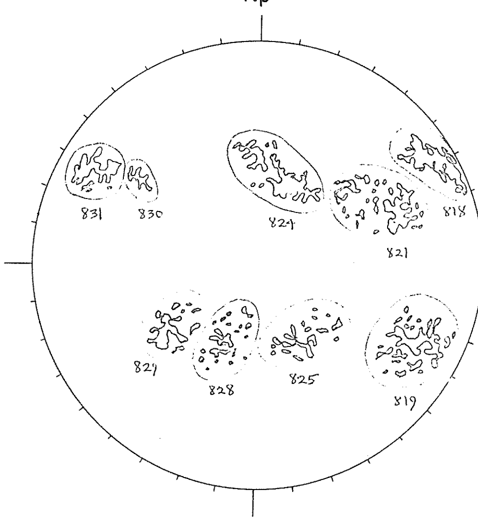
FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



1300 UT

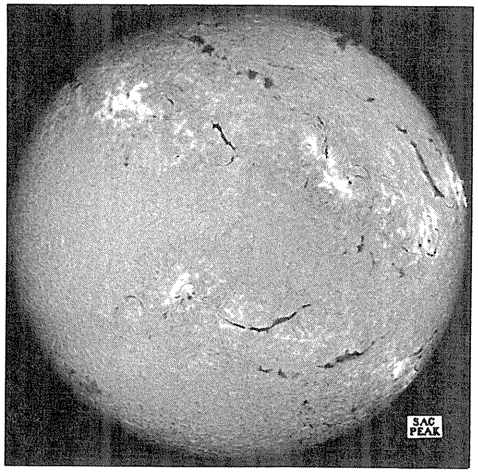
18-110-3
19-48-2.5
21-44-3
24-40-2.5
29-22-3
31-42-3

MAY 31, 1967 (P=-16.09, B₀=-0.81, L₀=154.60)

SACRAMENTO PEAK Hα

N

E



W

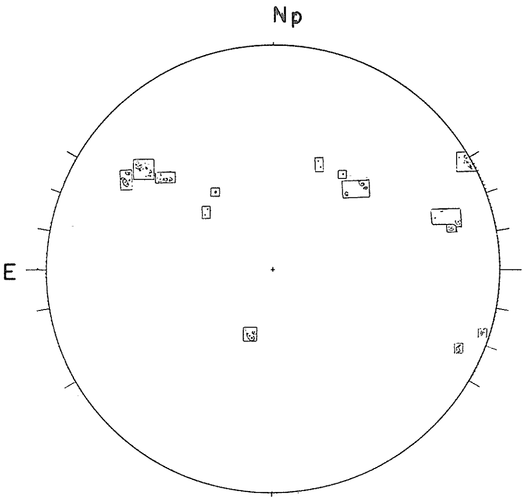
S

1431 UT

ESSA-BOULDER SUNSPOTS

Np

E



W

Sp

1618 UT

SAC PEAK

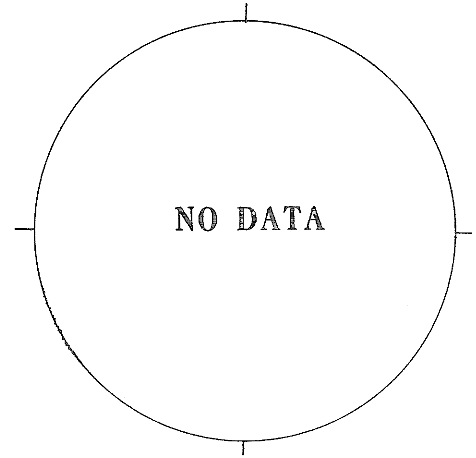
MT. WILSON MAGNETOGRAM

Solid-Plus

Dotted-Minus

Np

E



W

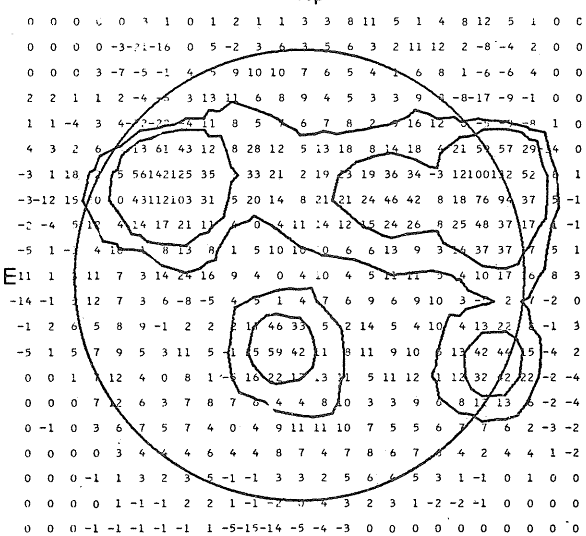
Sp

Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.

Np

E



W

Sp

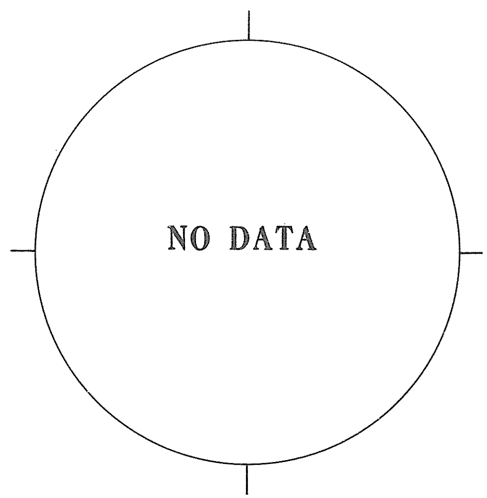
20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E



W

S

02-03 UT

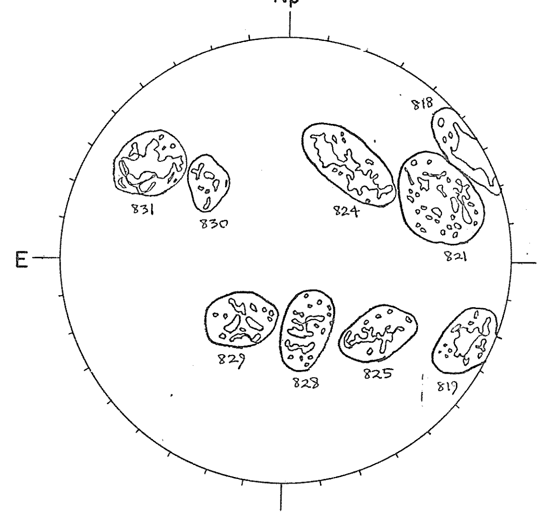
Resolution 3 Minutes of Arc

Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

E



W

Sp

1305 UT

18-85-3
19-45-3
21-45-3.5
24-44-3
29-23-3
31-51-3.5

FINAL CORONAL LINE EMISSION INDICES

MAY 1967

CMP May 1967	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	x	x	x	x	x	x	x	x	66	90	x	x	97	160	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x	69	111	x	x	81	95	x	x
6	117	129	17	27	69	84	28	46	x	x	x	x	x	x	x	x
7	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
8	143	197	22	34	36	42	15	22	17	20	0	0	25	36	0	0
9	x	x	x	x	x	x	x	x	14	23	0	0	22	37	0	0
10	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12	71	82	13	40	87	120	8	17	x	x	x	x	x	x	x	x
13	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
14	x	x	x	x	x	x	x	x	57	96	5	10	32	44	0	0
15	56	70	x	x	100	151	x	x	x	x	x	x	x	x	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	59	76	17	37	64	73	19	32
19	130	213	x	x	73	104	x	x	102	134	12	19	116	172	17	27
20	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
22	106	163	11	35	65	92	5	9	x	x	x	x	x	x	x	x
23	61	116	16	35	67	93	8	27	x	x	x	x	x	x	x	x
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	69	106	25	53	96	127	19	50
26	82	123	x	x	116	178	x	x	x	x	x	x	x	x	x	x
27	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
28	105	148	9	13	101	137	10	16	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

SUDDEN IONOSPHERIC DISTURBANCES

SHORT WAVE RADIO FADEOUTS — SUDDEN PHASE ANOMALIES
SUDDEN COSMIC NOISE ABSORPTION — SUDDEN ENHANCEMENTS OF SIGNAL
SUDDEN ENHANCEMENTS OF ATMOSPHERICS — SUDDEN FREQUENCY DEVIATIONS

MAY 1967

MAY 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
01	0311	0343	0320	1					36			MA(NPM23-36,NPG18-25)	0315
01	0320	0329	0323	1	S 1-							MA	
01	1631	1638	1633	1							02	BO(WWI11-0.2)	
01	1906	1909	1907	1							02	BO(WWI9-0.2)	1852
04	0255	0315	0300	1					36			MA(NPG18-36)	0126
06	0434	0550	0456	1					99			MA(GBR16-172,NPG18-153)	0426
06	0435	0535	0450	5				2				ND TY	
06	0435	0625	0455	1						1		ND	
06	0436	0509	0453	1		37	1					MA	
06	0436	0538	0455	5	SL 2							MA CA HK OK TO	
06	2036	2044	2036	1							02	BO(WWI9-0.2)	2035E
07	2053	2121	2104	3		14	1					BO MC	
07	2058	2318	2103	5					99			HA(WWVB60-113, WWVL20-40)BO(NBA24-30) MA(NPG18-90)	
07	2059	2121	2108	1				1				BO	
07	2155	2230	2200	1					12			BO(NBA24-12)	
07	2200	2232	2201	1	S 1							WS	
08	1128	1227		3	S 1							JU DA	1141E
08	1235	1303		5	S 1-							JU MC	1141E
10	0412	0444	0418	1	G 1-							MA	*
10	1207	1245	1216	1				1-				A1	1145
10	1207	1245	1214	1						1-		A1 UM	
10	1208	1305	1220	5					94			SL(GBR16-94) AN(GBR16-21) BO(GBR16-20) UM(GBR16-89,OMEGA13-39)	
15	1132	1140	1133	1							03	BO(WWI11-0.3)	
18	1602	1723	1609	1	S 1							TR	
18	1605	1608	1605	1							02	BO(WWI8-0.2)	
18	1822		1902	1				2				BO	
18	1825	1930	1842	1						2		UM	
18	1829	1932D	1842	5	G 2							WS TR	
18	1830	2100	1845	5					90			HA(WWVB60-90,WWVL20-36) AN(WWVL19-21,NPM23-44, GBR16-14)BO(NBA24-57, GBR16-25,NPM23-54) UM(GBR16-29,OMEGA13-25)	
18	1833E	1915	1846	3		15	1					BO MC	
18	1855	1901	1857 1859	1							03 03	BO(WWI9-0.3) BO(WWI9-0.3)	1855
18	1931	1955	1935	1						1-		A1	1933
18	1932	1955	1935	5	SL 1-							MC TR WS	
18	1934	1939	1935	5							07	BO(WWI11-0.7) HA(WWVH5-0.7, WWVH10-0.3)	
18	1935	1952	1937	1		16	1					BO	
18	1935	2050U	1940	5					47			BO(NPM23-47,GBR16-30, NBA24-18)AN(GBR16-14, WWVL20-14,NPM23-21) HA(WWVL20-22,WWVB60-45) MA(NPG18-22)	
18	2345	0010		5	SL 1							CA OK	
18	2352	0038		5					45			MA(NPG18-45) AN(NPM23-21) HA(WWVL20-18)	
18	2354	0054	0018	1				2				TY	
19	0257	0324	0345	1				3				TY	*
19	0600	0745	0625	1						1		ND	0615E
19	0610	0637	0620	1					28			MA(NPG18-28)	
19	0830	0850		1				1-				KE	0818E
19	1103	1213	1111	1					46			UM(GBR16-46,OMEGA13-15)	
19	1249	1251	1249	1							01	BO(WWI9-0.1)	1250
19	1254	1303	1256	1							07	BO(WWI8-0.7)	1253
19	1254	1345	1303	5					76			SL(GBR16-76) BO(NBA24-22,GBR16-22) UM(GBR16-86,OMEGA13-37)	
19	1255	1325	1308	1						1		UM	
19	1256	1310	1300	1	S 1-							TR	
19	1413	1418	1414	1							02	BO(WWI8-0.2)	1412
19	1453	1700	1538	5					99			UM(GBR16-144, OMEGA13-73)BO(NBA24-22)	1503
19	1503	1508	1505	1							07	BO(WWI11-0.7)	
19	1504	1515	1510	1	SL 1-							TR	
19	1528	1634	1537	5					99			SL(GBR16-144) AN(WWVL20-21) BO(NPM23-32,GBR16-65, NBA24-83)HA(WWVL20-29, WWVB60-34)	1515E

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1967

MAY 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE	IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
19	1530	1612		1					2				PO	1515E
19	1532	1600	1536	5	S	1							MC AN BA BO BE GS HU WS TR	
19	1712	1730	1719	1						32			UM(OMEGA13-32)	1713
19	1715	1720	1716	1								02	BO(WWI8-0.2)	
20	0233	0300	0242	1					1+				TY	*
20	1512	1650	1532	5						75			UM(GBR16-75,OMEGA13-42) AN(GBR16-21,NAA17-36) BO(NBA24-47,GBR16-22)	1509
20	1513	1523	1514	1								08	BO(WWI11-0.8)	
			1515									04	BO(WWI11-0.4)	
20	1515	1610	1521	5							1-		A1 UM	
20	1519	1630	1535	5	SL	1							MC TR WS	
20	1653	1704	1654	1								03	BO(WWI9-0.3)	1653
20	1820U	1930	1833	5						32			BO(NBA24-32,NPM23-22, GBR16-18)AN(GBR16-8, NAA17-8,NPM23-18) HA(WWVL20-18,WWVB60-23)	1827
20	1826	1836	1827	1								05	BO(WWI8-0.5)	
20	1829	1844	1833	1	S	1-							WS	
20	1953	2038	1958	1						8			AN(NPM23-8)	2002
20	2002	2010	2005	1	S	1-							WS	
20	2002	2012	2004	1								06	BO(WWI11-0.6)	
			2005									04	BO(WWI11-0.4)	
20	2003	2005	2004	1								05	HA(WWVH5-0.5, WWVH10-0.2)	
20	2224	2232	2225	1								03	BO(WWI11-0.3)	
21	0238	0301	0242	1						20			MA(NPG18-20)	0238
21	0239	0250	0242	1	S	1-							OK	
21	0241	0242	0241	1								10	HA(WWVH5-1.0, WWVH10-0.2)	
21	0242	0330	0248	1					1				TY	
21	0329	0330	0329	1								02	HA(WWVH5-0.2)	0329
21	0329	0345	0330	1	S	1-							MA	
21	0946	1059		3	S	1+							JU DA	0946E
21	1241	1352		3	G	1							DA JU	1241
21	1300	1318	1301	1								04	BO(WWI11-0.4)	1238
			1304									06	BO(WWI11-0.6)	
			1305									07	BO(WWI11-0.7)	
21	1300	1420		1					1+				PO	
21	1301	1353		5	SL	1							JU MC	
21	1303	1352	1308	5						90			SL(GBR16-90) BO(GBR16-22,NBA24-14) UM(GBR16-63,OMEGA13-69)	
21	1305	1345	1310	1							1		ND	
21	1437	1448	1441	1								12	BO(WWI11-1.2)	
21	1441	1500		5	S	1							DA BA JU	1440
21	1534	1545	1538	1								14	BO(WWI11-1.4)	1534
			1539									17	BO(WWI11-1.7)	
21	1537	1556	1539	5	S	1+							BE AN DA HU JU MC WS	
21	1537	1632	1545	5						99			SL(GBR16-126) AN(WWVL20-18,GBR16-18) BO(NBA24-58,GBR16-47) UM(GBR16-98,OMEGA13-54)	
21	1538	1558	1540	1			22	1					BO	
21	1538	1647	1543	5					1+				BO PO	
21	1614	1621	1615	1								04	BO(WWI11-0.4)	1613
21	1634	1639	1635	1								02	BO(WWI8-0.2)	1630
21	1733	1847	1801	1					1+				BO	1729
21	1735	1746	1736	1								06	BO(WWI8-0.6)	
21	1847	1851	1848	1								02	BO(WWI9-0.2)	1847
21	1856	1900	1857	1								02	BO(WWI9-0.2)	1854
21	1858	1908	1903	1	S	1-							WS	
21	1905	1910	1906	1								03	BO(WWI9-0.3)	
21	1912			1		1+							GS	
21	1921	1931U	1924	5								18.4	BO(WWI8-18.4) HA(WWVH10-4.5)	1919
21	1923	2013	1932	5						99			SL(GBR16-224) AN(WWVL20-58,WWVL19-58, NPM23-72,GBR16-86, NAA17-69)BO(NPM23-122, NBA24-109,GBR16-94) UM(GBR16-86,OMEGA13-78)	
21	1924	2010	1932	5	S	2							MC AN BE HU TO WS	
21	2050	2130	2058	1						35			UM(GBR16-35)	2052
21	2149	2155	2150	1								02	BO(WWI11-0.2)	2149
			2153									03	BO(WWI11-0.3)	
22	0006	0015	0010	1								12	BO(WWI11-1.2)	0000E
22	0006	0022	0014	5	SL	1							WS AN OK TO	
22	0009E	0112	0020	5						90			MA(NPG18-90) AN(NPM23-30) BO(NPM23-40)	
22	1659	1709	1705	5	SL	1-							WS TR	1702

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1967

MAY 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
22	1946	1949	1947	1							03	BO(WWI11-0.3)	
23	1721	1734	1726	1						1		UM	
	1802	1830D	1815	5					61			BO(NBA24-61,GBR16-58) AN(GBR16-44,NAA17-44) MA(NPG18-43) UM(GBR16-86)	1803
23	1808	1820	1809	1							19	BO(WWI8-1.9)	
23	1809		1819	3		34	2					BO MC	
23	1809		1821	1				2+				BO	
23	1809	2049	1815	5	SL 3							TR AN BE GS HU MC TO WS	
23	1810		1835	1						2		UM	
23	1834	2230		5	S 3+							MC AN BA BE HU SO SW TO TR WS	1835
23	1835		1840	1							164	BO(WWI13-16.4)	
23	1840	1936	1848	1						2		UM	
23	1840	1943	1852	5					99			UM(GBR16-202, OMEGA13-88) AN(GBR16-166,NAA17-80) BO(GBR16-194,NBA24-76) MA(NPG18-180)	
23	1931		1938	1							52	BO(WWI13-5.2)	1932
23	1935	2220	1946	5					99			BO(NBA24-137,GBR16-112) MA(NPG18-72) UM(GBR16-17,OMEGA13-29)	
23	2057	2104	2059	1							03	BO(WWI11-0.3)	1932
23	2058	2135	2104	1					23			UM(GBR16-23)	
23	2250	2254	2251	1							02	BO(WWI11-0.2)	
24	0256	0440	0326	1					79			MA(NPG18-79)	0257
24	0258	0337	0305	5	SL 1-							MA OK TO	
24	0259	0327	0309	1		12	1-					MA	
24	0300	0350	0310	1				1				TY	
24	0621	0628	0624	1	S 1-							MA	0615E
24	0642	0720	0658	1					27			MA(NPG18-27)	
24	1412	1427	1420	1					18			UM(OMEGA10-18)	1424
24	1425	1428	1426	1							04	BO(WWI9-0.4)	
24	1443	1447	1444	1							02	BO(WWI11-0.2)	1440
24	1443	1510	1448	1	SL 1-							MC	
24	1443	1545	1455	5					63			UM(GBR16-63,OMEGA10-22) BO(GBR16-14)	
24	1450	1538	1517	1						2		UM	
24	1744	1902	1757	1					60			MA(NPM23-60)	
24	1755	1855	1825	5	G 1							MC AN DA TR	1805
24	1810	1900	1830	5					44			UM(OMEGA10-44) BO(NBA24-22) AN(NPM23-14)	
24	1811	1820	1812	1							04	BO(WWI11-0.4)	
24	2041	2052	2043	1							02	BO(WWI8-0.2)	2043
24	2229	2232	2230	1							04	BO(WWI9-0.4)	2236E
24	2230	2303	2233	5					46			MA(NPG18-46)BO(NBA24-7, NPM23-26)	
25	0222	0304	0228	1					22			MA(NPG18-22)	*
25	0222	0314	0233	1	SL 1							MA	
25	0630	0823	0650	1						1		ND	0634E
25	0632	0810	0650	1					99			MA(NPG18-155)	
25	0633	0707	0652	5	SL 1+							MA HK OK TO	
25	0633	0708	0648	5		50	2					MA JU	
25	0644	0730	0651	5				1+				A1 KE PO TA TY	
25	1034	1213		1			2					JU	1041E
25	1040	1235	1102	1					99			UM(GBR16-150)	
25	1043	1220	1100	5						1		ND UM	
25	1045	1138	1109	5				2				LO KE PO	
25	1050	1135	1105	5	SL 2							BN BY SO SW	
25	1710	1723	1719	1	SL 1							TR	1705
25	1920	2038	1950	5					40			UM(OMEGA10-40) BO(NPM23-26,NBA24-22)	1924
25	1951	1953	1952	1							02	BO(WWI9-0.2)	1948D
25	2050	2145	2105	5					18			BO(NBA24-18,NPM23-14) UM(OMEGA10-18)	2043
25	2302	2303	2302	1							08	BO(WWI9-0.8)	*
26	0200	0245	0210	5				2				TY KE TA	0152
26	0200	0400	0210	1						1		ND	
26	0203	0235	0219	5					53			MA(NPG18-53) BO(NPM23-22)	
26	0203	0330	0207	5	S 2							MA OK TO	
26	0210	0218	0211	1		10	1-					MA	
26	0648		0754	1				1				MA	0707E
26	0718	0801		1	1-							JU	
26	0727		0744	1		41	2					MA	
26	0833	1020U	0842	5		58	2					MA JU	0901E
26	0835	1018U	0910	1				1				MA	
26	0904	0940		1	1-							JU	
26	1234	1312		1				2				PO	1227

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1967

MAY 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	ABS	IMPORTANCE SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
26	1235	1250		3	1-							JU BY	1227
26	1237	1315	1246	5					99			SL(GBR16-190)	
												UM(GBR16-75,OMEGA10-18)	
26	1238	1249		1			1-					JU	
26	1238	1300	1243	1						1		UM	
26	1338	1515	1355	5					58			UM(GBR16-58)	
												BO(NBA24-22)	
26	1538	1632		1	SL 2							TR	1338
26	1540	1800	1624	1					29			UM(GBR16-29)	
26	1631	1634	1631	1							03	BO(WWI9-0.3)	
26	1719	1723	1721	1							02	BO(WWI9-0.2)	1707
26	1732	1820	1743	1	SL 2							TR	1722E
26	1740	1742	1740	1							02	BO(WWI8-0.2)	
26	1949	1956	1949	1							04	BO(WWI9-0.4)	1948
26	2206	2213	2207	1							02	BO(WWI8-0.2)	2203
			2210								08	BO(WWI8-0.8)	
26	2336	0052	2353	1					50			MA(NPG18-50)	2318
26	2355	0010	0005	5	SL 1							OK MA WS	0000
27	0001	0009	0003	1							08	BO(WWI8-0.8)	
27	0112	0254	0157	1					68			MA(NPG18-68)	0109E
27	0133	0253	0150	4	G 1							MA OK	0129
27	1115	1125	1117	1							10	ND(JJY10-1.0)	1100
27	1442	1500		1	S 1							TR	1450
27	1451	1455	1452	1							04	BO(WWI8-0.4)	
27	1510	1514	1511	1							04	BO(WWI11-0.4)	1509
27	2305	2308	2307	1							02	BO(WWI11-0.2)	*
27	2312	2314	2313	5							10	HA(WWVH5-1.0,	
												WWVH10-0.7)	
												BO(WWI11-0.9)	
28	0015	0126	0038	1						2		UM	0022
28	0028	0030	0029	5							08	HA(WWVH5-0.8,	
												WWVH10-0.5)BO(WWI9-0.2)	
28	0028	0104	0030	5	S 1							MA AN CA OK TO WS	
28	0030	0200	0058	5					99			MA(NPM23-105)	
												AN(NPM23-36,NAA17-15,	
												WWVL19-15)BO(NPM23-61)	
												HA(WWVB60-101,	
												WWVL20-43)	
												UM(OMEGA10-44)	
28	0530	0620	0550	5				1				ND AL TA	0525E
28	0530	0640	0533	5	S 3							MA AN BY CA DA HK JU OK	
												TO SO	
28	0530	0645	0545	1						1		ND	
28	0531			1			3					JU	
28	0534	0700	0553	5					99			MA(NPM23-180)	
												AN(GBR16-47)	
28	0633			1					58			AN(NPM23-58)	0525E
28	0727	0906		3	2							JU DA	0718
28	1856	1857	1856	1							04	BO(WWI9-0.4)	1856
28	2200	2205	2202	1							04	BO(WWI11-0.4)	
29	1500	1504	1500U	1							04	BO(WWI11-0.4)	1450
29	1830	1955	1905	1					25			BO(NBA24-25)	1832
29	1852	1856	1853	1							06	BO(WWI11-0.6)	
29	2214	2217	2215	1							05	BO(WWI11-0.5)	2214
29	2215	2238	2218	1	S 1-							MA	
29	2215	2245	2219	5					14			HA(WWVL20-14)	
												MA(NPG18-10)	
29	2312	2340	2320	1					15			MA(NPG18-15)	2313
29	2313	2316	2314	1							04	BO(WWI8-0.4)	
30	0450	0500	0458	1	SL 1-							OK	*
30	0456	0518	0507	1					18			MA(NPG18-18)	
30	1725	1813	1737	5					70			UM(OMEGA10-70,GBR16-40)	1727
												HA(WWVB60-23,WWVL20-32)	
30	1730	1742	1733	1	S 1-							WS	
30	1815	2140	1822	5					43			BO(NBA24-43)	
												UM(OMEGA10-11)	
30	1902	1905	1903	1							03	BO(WWI11-0.3)	
31	0210	0315	0235	1					99			MA(NPG18-100)	
31	0425	0440	0430	4	S 1-							OK MA	
31	0429	0441	0437	1					15			MA(NPG18-15)	
31	0456	0518	0502	1					30			MA(NPG18-30)	*
31	0500	0520	0515	1	SL 1-							OK	
31	1841	1850	1843	1							06	BO(WWI8-0.6)	1842
31	2105	2152	2115	1					14			BO(NBA24-14)	2104
31	2113	2127	2119	1	SL 1-							WS	

Rome and Hawaii SCNA-SEA out of operation. Hawaii SPA records not received for 1-6 May and 21-27 May 1967.

No SWF data available from Huancayo for 7-18 May and 26-31 May 1967; 15 Mc/s test records used 19-25 May 1967. Boulder SWF records not usable 1-17 May 1967.

RIOMETER EVENTS

MAY 1967

South Pole | 30 Mc/s

MAY 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS	MAY 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS
01	0107	1959	1133	5	2	14	0054	0350	0059	12	3
03	0143	0359	0145	4	1	15	0005	0306	0055	9	13
03	1324	1903	1637	5	10	16	0040	0112	0045	7	2
04	1223	1310	1229	4	1	17	0458	0645	0551	4	2
04	2340					17	2305		2306		
05		0357	0135	13	6	18		0121		11	11
06	0315	0339	0323	5	2	18	0534	1142	0956	9	6
06	2036	2049	2039	3	1	18	1407	1810	1621	4	7
06	2311					19	0631	1637	1551	4	8
07		0556	0202	16	7	20	0102	0309	0134	54	10
09	0328	1309	0624	5	3	21	0000	0000	0000	0	0
10	0019	2006	1651	4	3	23	2126	2301	2204	4	4
11	0116	0439	0214	14	5	24	0007				
11	2302	2342	2309	7	2	25			1309		
12	0248	1644	0330	10	5	27		1456		58	42
12	2211	2244	2227	5	2	28	0005				
13	0014	0734	0030	5	13	31		0706	0543	68	37
13	1219	1542	1345	3	2						

THIS TABULATION SHOWS ALL EVENTS STARTING ON ANY DAY OF THIS MONTH.
SEE PREVIOUS MONTH TABLE FOR EVENTS WHICH MAY NOT HAVE ENDED BY
THE FIRST DAY OF THIS MONTH.
MAX IS THE TIME OF EVENT MAXIMUM.
ABS IS ABSORPTION.
PKS IS PEAKS.

NO DATA ZEROS FOR ALL VALUES OF A DAY.

SOLAR RADIATION MONITORING SATELLITE
X-RAY

MAY 1967

OUTSTANDING EVENTS FOR MAY 1967							
DATE	STA	START UT	END UT	8-20 x10^{-3}	0-8 x10^{-4}	0-3 x10^{-5}	COMMENTS
14	NRL	1547	1601		57.50	3.34	
18	NRL	0641	0655	13.18D	10.25	1.35	INCREASING
18	BOUL	1854	1909	49 D	13	13	
19	NRL	0611	0625	49.18D	78.30	12.64	
19	BOUL	0938	0948	44 D	12		
19	NRL	0940	0953	33.44	37.80	6.32	INCREASING
19	BOUL	1455	1507	27	19	1.8	
19	NRL	1500	1514	35.41	43.20	7.90	
19	BOUL	1640	1655	28	16	1.8	
20	NRL	1057	1108	25.31	19.26	1.69	INCREASING
20	NRL	1613	1627	39.49	30.26	2.03	
21	NRL	0838	0852	25.92	20.12	2.30	
21	NRL	1543	1558	52.17	116.71	16.44	DECREASING
21	NRL	1729	1739	30.88	34.16	5.60	INCREASING
22	NRL	1143	1154	29.81	19.93	1.12	
22	NRL	1513	1528	30.88	22.77	1.87	INCREASING
22	BOUL	1653	1709	31	19		
23	NRL	0925	0937	30.88	31.31	6.35	PEAK
23	NRL	1258	1311	33.59	19.74	1.45	
23	BOUL	1440	1452	33	19	1.0	
23	BOUL	1623	1638	45	41	5.8	
23	NRL	1628	1640	43.54	41.27	4.06	
23	BOUL	1808	1820	52 D	14 D	14	
24	NRL	0526	0537	48.29	45.12	5.45	
24	BOUL	1408	1421	29	15	1.4	
25	NRL	0637	0651	50.21D	136.76D	16.58D	
25	NRL	1157	1210	44.07	32.36	2.51	
25	BOUL	1522	1537	37	18	1.8	
25	BOUL	1707	1721	33	18	2.8	
26	BOUL	1452	1507	50 D	60	8.1	
26	NRL	1456	1510	49.28	54.72	7.17	
26	BOUL	1636	1651	50 D	16	1.5	
27	NRL	1241	1256	36.90	22.33	1.01	
28	NRL	0651	0705	49.57D	69.08	10.61	
28	NRL	1211	1225	36.90	22.33	1.69	
29	NRL	0435	0450	29.74	19.34	3.32	

NRL SOLAR X-RAY DATA (PRELIMINARY)

DAILY AVERAGES FOR MAY 1967			
DATE	44-60 x10^{-1}	8-20 x10^{-3}	0-8 XE-4
14	2.85		
15	2.06	9.73	1.54
16	1.97	6.14	1.97
17	2.09	7.48	2.13
18	2.33D	14.10	6.94
19	2.33D	26.47	18.68
20	2.33D	21.90	12.35
21	2.33D	20.91	11.36
22	2.33D	23.38	11.68
23	2.33D	27.24	13.75
24	2.37D	29.11	14.86
25	2.33D	32.75	16.85
26	2.33D	28.64	14.23
27	2.37D	26.24	10.75
28	2.37D	28.88	12.69
29	2.37D	22.14	9.67
30	2.33D	25.58	13.71
31	2.37D	25.49	11.58

SOLAR RADIATION MONITORING SATELLITE
X-RAY

MAY 1967

OBSERVING TIMES FOR MAY 1967

DATE	STA	START UT	END UT	ASPECT ANGLE
14	NRL	0701	0710	34.4
14	NRL	0841	0857	34.3
14	NRL	1026	1041	34.0
14	NRL	1215	1225	33.2
14	NRL	1401	1413	33.0
14	NRL	1547	1601	32.8
14	NRL	1731	1746	32.5
14	NRL	1918	1927	31.8
15	NRL	0632	0639	26.2
15	NRL	0815	0826	25.7
15	NRL	0955	1011	25.4
15	NRL	1143	1155	24.6
15	NRL	1331	1342	24.2
15	NRL	1516	1530	24.6
15	NRL	1700	1716	24.2
15	NRL	1846	1858	23.7
16	NRL	0741	0756	17.6
16	NRL	0925	0940	17.4
16	NRL	1113	1124	16.8
16	NRL	1300	1311	16.6
16	NRL	1446	1459	16.6
16	NRL	1630	1646	16.4
16	NRL	1816	1828	15.6
17	NRL	0711	0726	10.5
17	NRL	0855	0910	10.2
17	NRL	1043	1054	10.0
17	NRL	1229	1240	9.9
17	NRL	1416	1429	9.7
17	NRL	1600	1616	9.5
17	NRL	1745	1759	9.2
18	NRL	0641	0655	3.5
18	NRL	0824	0840	3.5
18	NRL	1011	1024	3.5
18	NRL	1159	1210	3.5
18	NRL	1344	1358	3.5
18	NRL	1530	1544	3.5
18	BOUL	1712	1726	3.5
18	NRL	1714	1729	3.5
18	BOUL	1854	1909	3.0
19	NRL	0611	0625	-1.5
19	NRL	0754	0809	-1.5
19	BOUL	0938	0948	2.75
19	NRL	0940	0953	-1.5
19	NRL	1128	1139	-1.5
19	NRL	1316	1327	-1.5
19	BOUL	1455	1507	-1.5
19	NRL	1500	1514	-1.5
19	BOUL	1640	1655	-1.0
19	NRL	1644	1657	-1.5
19	BOUL	1814	1839	-1.0

DATE	STA	START UT	END UT	ASPECT ANGLE
20	NRL	0541	0553	-5.0
20	NRL	0725	0739	-5.0
20	NRL	0910	0923	-3.5
20	NRL	1057	1108	-3.5
20	NRL	1245	1256	-3.5
20	NRL	1429	1444	-3.5
20	NRL	1613	1627	-3.5
20	NRL	1800	1808	-3.5
21	NRL	0653	0708	-6.0
21	NRL	0838	0852	-6.0
21	NRL	1027	1038	-5.5
21	NRL	1214	1225	-5.5
21	NRL	1358	1413	-5.5
21	NRL	1543	1558	-5.5
21	NRL	1729	1739	-5.5
22	NRL	0623	0639	-6.8
22	NRL	0808	0823	-6.5
22	NRL	0956	1007	-6.0
22	NRL	1143	1154	-5.5
22	NRL	1328	1342	-5.5
22	BOUL	1509	1524	-5.5
22	NRL	1513	1528	-5.5
22	BOUL	1653	1709	-5.5
22	NRL	1658	1709	-5.5
22	BOUL	1839	1851	-5.5
23	NRL	0553	0608	-6.0
23	NRL	0737	0752	-5.5
23	NRL	0925	0937	-5.5
23	NRL	1113	1123	-5.5
23	NRL	1258	1311	-5.0
23	BOUL	1440	1452	-3.5
23	NRL	1445	1458	-3.5
23	BOUL	1623	1638	-3.5
23	NRL	1628	1640	-3.5
23	BOUL	1808	1820	-4.5
23	NRL	1951	2001	-5.0
24	NRL	0526	0537	-5.0
24	NRL	0903	0906	-3.0
24	NRL	1042	1052	-3.0
24	NRL	1228	1240	-3.0
24	BOUL	1408	1421	-5.5
24	NRL	1412	1426	-3.0
24	NRL	1553	1609	-3.0
24	BOUL	1553	1608	-2.5
24	NRL	1735	1748	-3.0
24	BOUL	1737	1715	-2.5
25	NRL	0637	0651	-3.0
25	NRL	0823	0836	-1.5
25	NRL	1012	1022	-1.5
25	NRL	1157	1210	-1.0
25	NRL	1342	1357	0.0

DATE	STA	START UT	END UT	ASPECT ANGLE
25	BOUL	1522	1537	0.5
25	NRL	1527	1540	1.0
25	BOUL	1707	1721	1.0
26	NRL	0423	0436	-1.0
26	NRL	0605	0621	1.0
26	NRL	0753	0805	1.5
26	NRL	0942	0950	1.5
26	NRL	1127	1139	3.0
26	NRL	1313	1327	3.0
26	BOUL	1452	1507	2.6
26	NRL	1456	1510	2.5
26	BOUL	1636	1651	2.5
27	NRL	0536	0552	3.5
27	NRL	0722	0735	3.0
27	NRL	0910	0920	3.0
27	NRL	1056	1108	3.0
27	NRL	1241	1256	3.5
27	NRL	1425	1440	3.5
28	NRL	0506	0521	3.0
28	NRL	0651	0705	3.0
28	NRL	1026	1035	3.5
28	NRL	1211	1225	3.5
28	NRL	1355	1408	3.5
28	NRL	1542	1550	3.5
29	NRL	0435	0450	3.0
29	NRL	0621	0633	3.0
29	NRL	0809	0818	3.0
29	NRL	0956	1007	3.0
29	NRL	1139	1155	3.0
29	NRL	1325	1340	3.0
29	BOUL	1505	1520	2.3
29	NRL	1511	1521	3.0
29	BOUL	1653	1702	1.7
30	NRL	0405	0420	-1.0
30	NRL	0550	0604	-1.0
30	NRL	0738	0749	-1.0
30	NRL	0925	0936	1.0
30	NRL	1109	1124	1.0
30	BOUL	1251	1305	-0.7
30	NRL	1254	1310	-1.0
30	BOUL	1435	4151	-1.0
30	NRL	1439	1451	-1.5
30	BOUL	1620	1631	-1.0
31	NRL	0335	0350	-3.5
31	NRL	0518	0533	-3.5
31	NRL	0707	0718	-3.5
31	NRL	0854	0905	-3.5
31	NRL	1040	1054	-3.5
31	BOUL	1220	1234	-4.5
31	NRL	1224	1240	-5.0
31	BOUL	1404	1420	-5.0
31	NRL	1409	1421	-5.5
31	BOUL	1549	1603	-5.0

COSMIC RAY INDICES
(Neutron Monitors)

MAY 1967

MAY 1967	CHURCHILL DAILY AVERAGE COUNTS PER HOUR	DEEP RIVER DAILY AVERAGE COUNTS PER HOUR	CLIMAX DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR
1	*	6738.5	4027.7	*
2		6546.1	3918.7	
3		6605.4	3961.7	
4		6611.0	3945.2	
5		6656.7	3969.1	
6		6703.9	3992.1	
7		6656.1	3956.3	
8		6671.6	3957.9 (36)	
9		6563.3	3890.3	
10		6565.7	3893.7	
11		6597.4	3932.7	
12		6666.6	3965.6	
13		6703.5	3994.4	
14		6720.0	4010.2	
15		6741.5	4014.1	
16		6783.8	4024.1	
17		6801.2	4045.0	
18		6795.1	4043.5	
19		6789.1	4051.2	
20		6812.3	4055.0	
21		6822.1	4066.8	
22		6845.0	4062.4	
23		6839.0	4070.4	
24		6826.0	4075.0	
25		6637.8	3981.2	
26		6361.9	3854.1	
27		6376.7	3833.4	
28		6436.5	3863.5	
29		6500.8	3909.6 (30)	
30		6534.2	3907.7	
31		6489.2	3903.4	

* The data for May 1967 from Dallas and Churchill have not been processed. It will be published when it becomes available.

( ) Number of section hours for which data are available if less than 40.

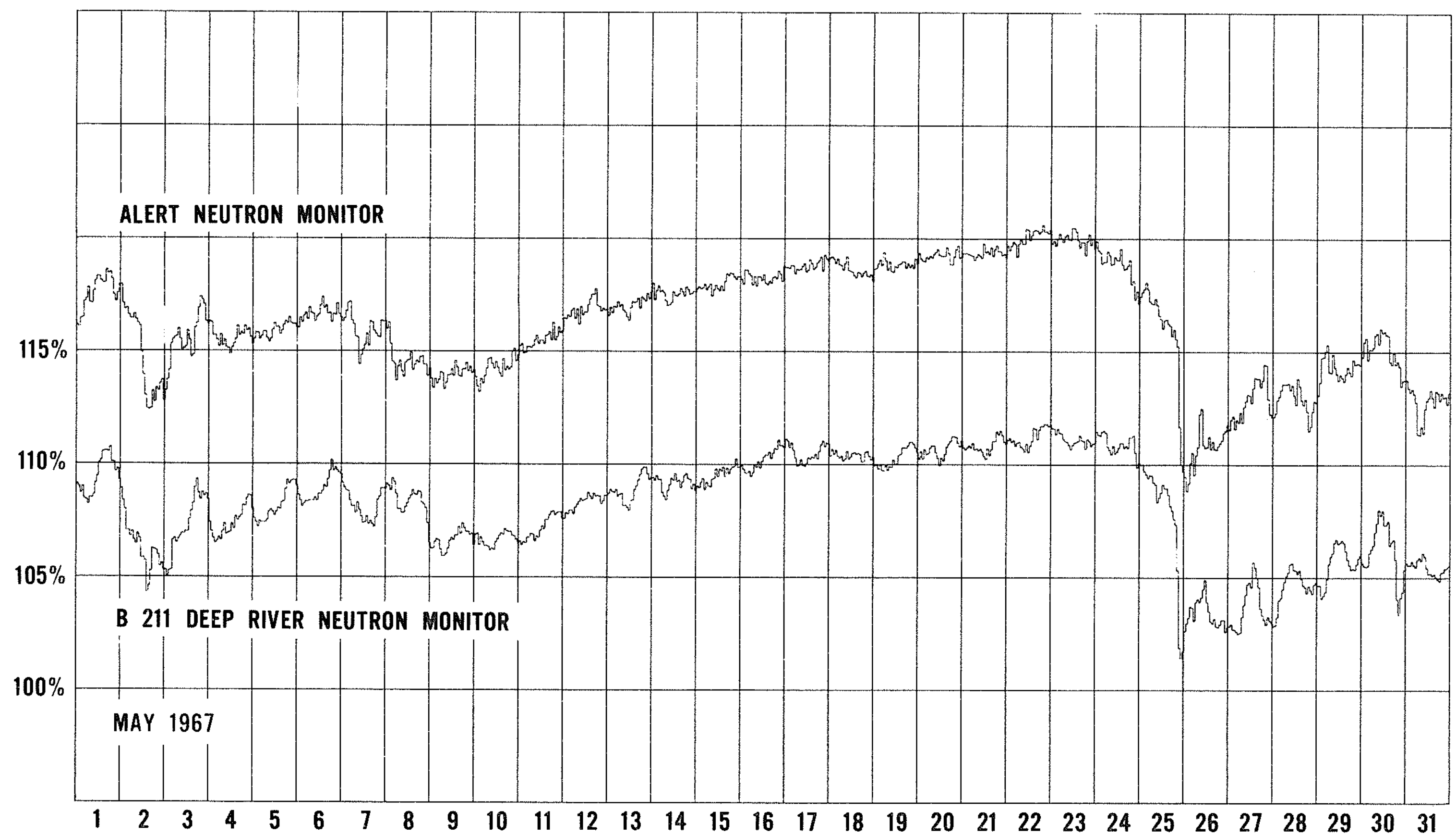
Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

MAY 1967



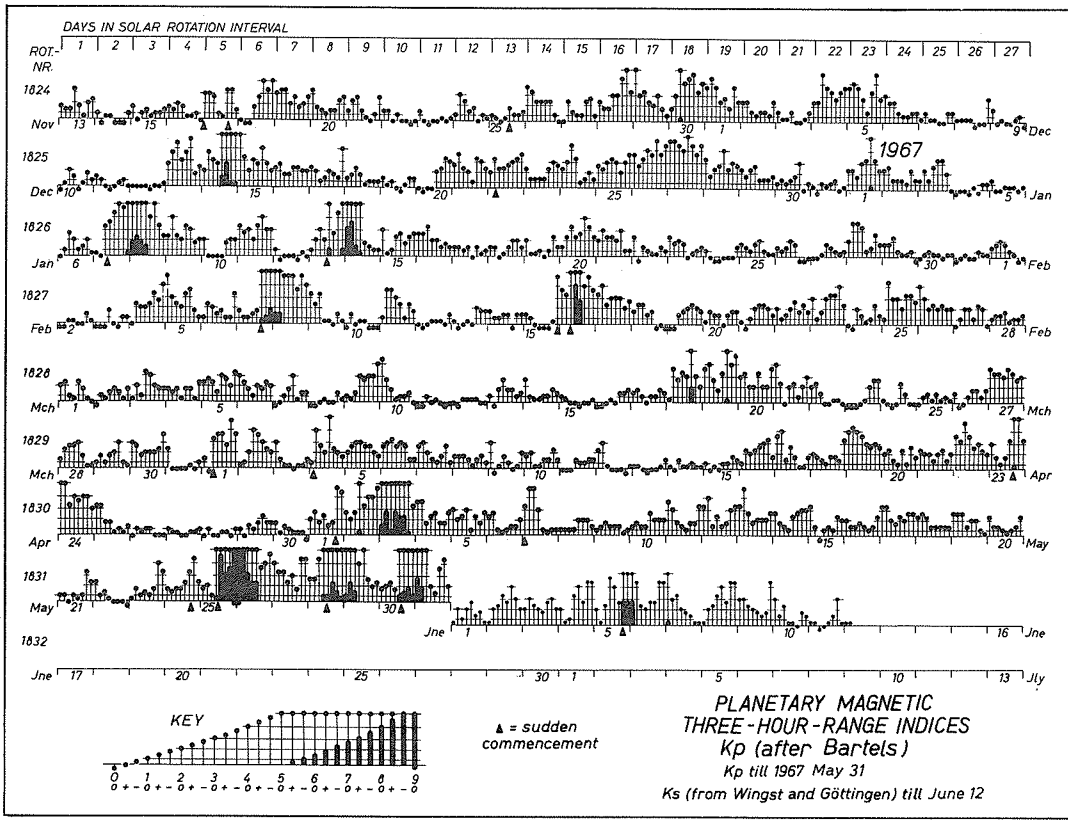
GEOMAGNETIC ACTIVITY INDICES

MAY 1967

DAY		Kp THREE-HOUR RANGE INDICES 1	2	3	4	5	6	7	8	SUM	Ci	Cp	Ap
1		2	3-	2-	2+	1+	2-	5-	4+	21-	0.9	0.8	14
2		3-	2	3-	5+	3+	4	4	5-	29-	1.2	1.2	25
3	D	6	7	5+	7	7-	7-	5+	3+	47+	1.7	1.8	87
4		4-	4-	2-	2+	3-	2-	2-	3-	20	0.9	0.7	12
5		3	2	2+	3	1	2+	2-	3-	18	0.6	0.5	10
6	Q	2+	3-	1	1-	1	1+	1+	2	12+	0.2	0.3	6
7		3+	5-	5-	3	1	1-	1	1	19+	0.8	0.9	16
8	QQ	1	1	1	1	2	2	2	1+	11+	0.3	0.2	5
9	QQ	1	1+	2-	1+	1+	1+	1-	1	10-	0.1	0.2	5
10	Q	1+	2-	1+	1+	3-	2	2	2	14+	0.4	0.3	7
11		4-	3	2-	1+	1	2-	2-	3+	17+	0.6	0.6	10
12		3+	4	1+	2+	1+	2-	3	3+	20+	0.7	0.7	13
13		3+	5-	3-	2-	2	2	2	3-	21	0.7	0.8	14
14		3-	2-	1+	1	2+	3-	3	3	18-	0.6	0.5	10
15	Q	3+	1+	0	1	1+	1	2+	2	12+	0.4	0.3	6
16	QQ	2	1+	1+	2-	1+	1	1+	2+	12+	0.2	0.3	6
17		3+	3+	2	2-	2+	2	3-	3-	20	0.7	0.6	11
18	Q	2+	3-	2+	1+	1+	1+	1+	1+	14	0.5	0.3	7
19		3-	3-	3-	1+	2	2	1	1-	15	0.6	0.4	8
20	QQ	2+	1+	1+	1	1-	1	1+	2+	11+	0.3	0.2	6
21	Q	1	1	0+	1	1-	1	3+	2+	11-	0.3	0.3	6
22	QQ	2+	1	1+	1-	0+	0+	0+	0	6+	0.2	0.1	3
23		1-	2-	1	1+	1	2-	4	3+	15-	0.6	0.5	9
24		2-	1+	2-	2-	2+	3+	4+	2+	19-	1.0	0.7	11
25	D	2-	2	1	5+	8+	7+	8-	9	42+	1.9	1.9	130
26	D	9	9-	7+	7-	7-	4-	4	5-	51-	2.0	2.0	146
27		4	3+	3+	2+	3	2-	4+	4+	26+	1.2	1.0	20
28	D	3-	3-	4+	6-	6-	7-	6	5+	39	1.6	1.6	55
29	D	6-	7-	6	4	5	3-	2	2+	34+	1.5	1.5	45
30		2-	2	2+	2-	6-	6	6+	6-	31+	1.4	1.5	42
31		7	6+	5	2	1+	4-	4+	2	32-	1.4	1.5	43
										MEAN	0.82	0.78	25

Preliminary storm sudden commencements (ssc) occurred May 1 at 1906UT, May 7 at 0105UT, May 24 at 1726UT, May 25 at 1235UT, May 28 at 1302UT and May 30 at 1426UT.

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

1966 | 1967

	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY
1	12	5	6	22	6	31	17	18	4	5	18	14
2	10	4	1	15	3	14	6	7	2	4	12	25
3	7	4	7	92	4	17	4	10	2	8	5	87
4	4	14	8	112	26	9	19	2	11	6	15	12
5	5	5	10	13	36	9	20	3	15	11	11	10
6	4	5	6	24	22	7	7	6	7	8	12	6
7	9	4	5	14	8	6	4	28	30	5	8	16
8	4	22	5	42	5	7	4	60	46	2	5	5
9	3	36	9	19	9	3	3	12	8	12	5	5
10	2	25	12	19	3	9	4	4	2	8	5	7
11	3	8	14	7	2	6	3	16	11	2	4	10
12	7	15	14	5	10	8	2	2	2	2	4	13
13	5	3	6	4	8	7	20	26	4	5	2	14
14	4	4	9	10	4	2	48	61	4	5	3	10
15	6	8	5	20	14	4	18	9	7	2	4	6
16	6	6	4	10	20	4	8	9	64	3	10	6
17	4	11	2	9	6	11	9	4	15	4	10	11
18	3	4	10	3	4	12	5	5	5	23	7	7
19	6	5	20	17	4	12	3	5	5	26	20	8
20	7	6	7	21	4	8	7	13	5	13	7	6
21	4	14	5	10	2	6	12	9	6	10	7	6
22	3	8	4	6	2	3	14	4	7	4	18	3
23	17	6	22	17	2	2	8	5	14	4	21	9
24	16	6	16	12	11	6	12	2	4	3	29	11
25	16	4	8	13	22	4	14	5	15	4	8	130
26	6	6	6	22	15	10	24	4	11	4	3	146
27	4	11	5	18	6	6	34	4	5	18	3	20
28	5	10	4	22	5	19	14	12	4	8	3	55
29	6	5	13	17	4	15	7	4		6	5	45
30	6	6	82	16	13	28	6	3		11	3	42
31		5	23		34		3	2		3		43
MEAN	6	9	11	21	10	9	11	11	11	7	9	25

PRINCIPAL MAGNETIC STORMS

MAY 1967

DATE 1967 MO. DA.	STORM TIME UT START	STORM TIME UT END MO. DA. HR.	OBS.	GEO-MAG. LAT.	SUDDEN COMMENCEMENT TYPE	AMPLITUDES D(')	AMPLITUDES H(γ)	AMPLITUDES Z(γ)	C FIGURE DEGREE OF ACTIVITY	MAXIMAL ACTIVITY ON K-SCALE 0 TO 9 MO. DA.	3-HOUR PERIOD	K INDEX	RANGES D (')	RANGES H (γ)	RANGES Z (γ)	STORM NUMBERS
05 01	1906	05 04 19	COLL	64.6N	SC *	+20	..	-20	MS	05 03	2,6	7	285	1550	1190	21
	1907	05 04 15	SITK	60.0N	SC *	+ *	- *	- *	S	05 03	4,5	9	200	1500	1060	21
	1907	05 04 03	FRED	49.6N	SC *	- 2	60	- 8	MS	05 03	2	6	35	206	149	21
	1906	05 04 11	BOUL	49.0N	SC *	+ 3	+27	- 8	MS	05 03	2	6	30	240	130	21
	1906	05 04 02	IRKU	40.8N	SC	- 4.1	+52	+ 6	MS	05 03	5	7	27	193	110	21
	1906	05 04 04	TUCS	40.4N	SC	- 1	+30	+ 1	MS	05 03	2	6	18	200	60	21
	1906	05 04 04	MBOR	21.3N	SC	- 0.9	+38	- 5	M	05 01	7	5	1	70	5	21
										05 02	4	5	2	70	20	21
										05 03	5	5	4	70	40	21
	1906	05 03 23	HONO	21.1N	SC *	+ 2	+23	+ 5	M	05 03	1	5	8	206	56	21
	1908	05 03 21	ALIB	9.5N	SC	- 0.5	35	- 6	MS	05 03	6	6	8	253	60	21
	1906	05 04 01	HYDE	7.6N	SC	- 0.4	+32	- 1	S	05 03	4	8	8	255	36	21
	1906	05 04 05	GUAM	4.0N	SC	--	20	06		05 03	2,5,6	5	--	70	20	21
	1908	05 03 21	ANNA	1.5N	SC	- 1.0	+39	+20	MS	-- --	-	-	6	315	103	21
	1907	05 02 21	HUAN	0.6S	SC *	1	07	12	M	05 01	7	5	6	247	42	21
	1908	05 03 21	TVAN	1.1S	SC	+ 0.5	+32	+43	MS	-- --	-	-	5	343	164	21
	1907	05 04 15	PMOR	18.6S	SC	- 0.1	+17	+20	MS	05 03	4,6	6	9	260	80	21
	1907	05 04 04	HRMN	33.3S	SC	+ 2	+26	+18	M	05 01	8	5	36	202	116	21
										05 02	4	5				21
										05 03	2,3,5 6	5				21
										05 03	7	5				21
	1907	05 03 21	GNAN	43.2S	SC *	+ 6 *	+22	+31 *	MS	05 03	4,6,7	7	39	168	237	21
	1907	05 03 24	TOOL	46.7S	SC *	+ 4 *	+17	+ 3	MS	05 03	4	7	38	200	91	21
	1906	-- -- --	KGLN	57.3S	SC	--	--	--	M	05 01	8	4	--	--	--	21
05 03	0130	05 04 04	HUAN	0.6S	..	..	..	..	MS	05 03	6	6	8	244	42	21
	03--	05 03 21	AMBE	47.7S	..	..	..	..	MS	05 03	6	6	33	143	--	21
05 07	0105	05 07 13	COLL	64.6N	SC *	+ 8	-20	..	MS	05 07	3	6	74	820	320	22
	0105	05 07 09	MBOR	21.3N	SC	+ 0.9	+19	- 3	M	05 07	1,2	3	2	20	10	22
	0105	05 07 10	HONO	21.1N	SC	--	+ 4	+ 3	M	05 07	3	5	4	76	16	22
	0106	05 07 10	HRMN	33.3S	SC	+ 2	+15	+13	M	05 07	1,2,3	4	13	38	42	22
	0104	05 07 07	KGLN	57.3S	SC	--	--	--	M	05 07	2,3	3	--	--	--	22
05 23	1838	05 31 20	HONO	21.1N	SC	+ 2	+ 1	+ 3	S	05 25	8	8	29	553	134	23
05 24	1726	05 27 06	FRED	49.6N	SC *	- 1	15	- 1	S	05 25	8	9	143	1505	1125	23
										05 26	1,2					23
	1725	05 27 15	IRKU	40.8N	SC	+ 1.0	+15	+ 3	S	05 25	8	8	65	442	218	23
	1724	05 31 07	TUCS	40.4N	SC	+ 1	+ 3	--	S	05 25	8	8	40	550	180	23
										05 26	1,2	8				23
	1726	05 27 04	MBOR	21.3N	SC	+ 1.1	+24	- 6	S	05 25	5,8	8	12	310	80	23
	1725	05 29 18	PMOR	18.6S	SC	+ 0.3	+17	+14	-	-- --	-	-	--	--	--	23
	1727	05 25 06	KGLN	57.3S	SC	--	--	--	M	05 25	2	4	--	--	--	23
05 25	09--	05 31 08	COLL	64.6N	..	..	..	..	S	05 25	5	8	492	2410	1990	24
										05 26	2	8				24
	1234	05 31 21	SITK	60.0N	SC *	- *	+	-	S	05 25	5,8	9	350	2030	1340	24
										05 26	1,2,5	9				24
										05 29	3	9				24
	1019	05 30 01	BOUL	49.0N	SC	- 4	+52	- 6	S	05 25	8	8	80	800	500	24
										05 26	1,2,3	8				24
	1235	05 27 04	SJUA	29.9N	SC	- 1	+61	+18	S	05 25	8	9	23	514	112	24
	1236	05 27 01	ALIB	9.5N	SC	- 1.4	82	24	S	05 25	8	9	11	--	100	24
	1235	05 27 02	HYDE	7.6N	SC	- 1.2	+85	- 7	S	05 25	8	9	12	543	61	24
										05 26	1,2	9				24
	1019	05 27 15	GUAM	4.0N	SC	01	28	10	-	05 25	8	8	06	220	40	24
	1236	05 27 01	ANNA	1.5N	SC	--	--	--	-	-- --	-	-	--	--	--	24
	1020	05 26 24	HUAN	0.6S	..	..	..	..	S	05 26	1	9	17	737	78	24
	1236	05 27 01	TVAN	1.1S	SC	+ 0.2	+94	+39	S	-- --	-	-	8	633	336	24
	1235	05 29 17	APIA	16.1S	SC	- 0.1	+64	-28	S	05 25	8	8	9	538	106	24
										05 26	1	8				24
	1019	05 29 18	PMOR	18.6S	SC	+ 0.3	+26	+20	-	-- --	-	-	--	--	--	24
	1234	05 29 18	PMOR	18.6S	SC	+11.0	+90	+75	S	05 25	5,8	8	13	450	170	24
	1235	05 27 05	HRMN	33.3S	SC	+ 7	+64	+57	S	05 25	8	8	48	395	302	24
										05 26	1					24

PRINCIPAL MAGNETIC STORMS

MAY 1967

DATE 1967 MO. DA.	STORM TIME UT START	UT END MO. DA. HR.	OBS	GEO-MAG. LAT.	SUDDEN COMMENCEMENT TYPE	AMPLITUDES D(')	H(γ)	Z(γ)	C FIGURE DEGREE OF ACTIVITY	MAXIMAL ACTIVITY ON K-SCALE 0 TO 9 MO. DA.	3-HOUR PERIOD	K INDEX	RANGES D (')	H (γ)	Z (γ)	STORM NUMBERS
05 25	1237	05 26 15	GNAN	43.2S	SC *	+ 1	+88 *	+36	S	05 26	1	9	48	446	259	24
	1235	05 29 15	TOOL	46.7S	SC *	+ 1 *	+36 *	+16	-	— —	-	-	85	—	241	24
	1235	05 26 16	AMBE	47.7S	SC *	3.4	31.6	—	S	05 25	5,8	7				24
										05 26	1,2,4	7	54	582	—	24
	1235	05 26 01	KGLN	57.3S	SC	—	—	—	S	05 25	8	9	—	—	—	24
										05 26	1	9				24
05 27	19--	05 29 16	FRED	49.6N	••	—	—	—	MS	05 29	1,3	6	28	178	184	25
	19--	05 28 12	SJUA	29.9N	••	••	••	••	M	05 28	6	5	12	106	27	25
	19--	05 29 16	HYDE	7.6N	••	••	••	••	M	05 28	6	6	5	177	41	25
	18--	05 29 16	HRMN	33.3S	••	••	••	••	M	05 28	6	5	23	99	80	25
										05 29	1,2	5				25
05 28	0548	05 29 16	IRKU	40.8N	SC *	- 0.4	+11	- 3	MS	05 28	6	7	18	165	94	25
	1303	05 29 15	MBOR	21.3N	SC	+ 1	+18	- 6	MS	05 28	6	6	8	120	30	25
	0232	05 29 20	ALIB	9.5N	••	••	••	••	MS	05 28	6	6	6	174	26	25
	0311	05 29 16	GUAM	4.0N	SC	—	08	03	-	05 29	3	5	—	50	10	25
	0232	05 29 20	ANNA	1.5N	••	••	••	••	MS	— —	-	-	4	235	73	25
	0730	05 29 19	HUAN	0.6S	••	••	••	••	MS	05 28	6	7	10	468	61	25
	0232	05 29 20	TVAN	1.1S	••	••	••	••	MS	— —	-	-	3	245	173	25
	18--	05 29 15	AMBE	47.7S	••	••	••	••	M	05 29	2,3,4	5	13	151	—	25
	02--	05 29 18	KGLN	57.3S	••	••	••	••	MS	05 28	7,8	6	—	—	—	25
										05 29	1	6				25
05 30	1427	05 31 21	FRED	49.6N	SC *	+ 2	9	- 1	MS	05 31	1	7	51	218	142	26
	1426	06 01 03	BOUL	49.0N	SC	+ 3	+ 4	0	MS	05 31	1	7	40	120	150	26
	0610	05 31 20	IRKU	40.8N	SC	+ 0.2	+ 3	+ 1	MS	05 30	7	6	24	210	37	26
										05 31	1	6				26
	1427	05 31 21	SJUA	29.9N	SC	+ 1	+10	+ 2	M	05 31	1	6	10	113	36	26
	1426	05 31 20	MBOR	21.3N	SC	- 2.2	+33	-12	M	05 31	1	5	5	70	30	26
	1426	05 31 13	ALIB	9.5N	SC	- 0.6	26	- 7	M	05 30	7,8	5	9	92	43	26
	1426	05 31 21	HYDE	7.6N	SC	- 0.5	+26	- 1	M	05 30	7,8	5	6	86	32	26
										05 31	1	5				26
	1426	05 31 12	GUAM	4.0N	SC	—	22	08	-	05 30	4,7	5	03	50	20	26
	1426	05 31 13	ANNA	1.5N	SC	- 1.1	+31	+11	M	— —	-	-	5	127	57	26
	1257	05 31 06	HUAN	0.6S	••	••	••	••	MS	05 30	6,7	6	7	312	29	26
	1426	05 31 13	TVAN	1.1S	SC	—	—				-	-	—	—	—	26
	1416	05 31 11	APIA	16.1S	SC	+ 0.2	+16	- 5	MS	05 31	1	6	4	140	38	26
	1425	05 31 07	PMOR	18.6S	SC	+ 0.2	+20	+12	M	05 31	1	6	5	160	50	26
	1426	05 31 13	HRMN	33.3S	SC	0	+16	+10	MS	05 31	2	6	28	73	99	26
	14--	05 31 08	TOOL	46.7S	••	••	••	••	M	05 30	5,7	5	19	193	78	26
										05 31	1	5				26
	1427	06 01 05	KGLN	57.3S	SC	—	—	—	MS	05 30	7,8	6	—	—	—	26
										05 31	1	6				26

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

MAY 1967

NORTH ATLANTIC, NORTH PACIFIC

MAY 1967	WHOLE DAY INDICES: NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE	ADVANCE FORECASTS (Jc-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES: 00 TO 06	06 TO 12	12 TO 18	18 TO 24	SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF: 00	06	12	18	NORTH PACIFIC 6-HOURLY QUALITY FIGURES: 00 TO 06	06 TO 12	12 TO 18	18 TO 24	GEOMAGNETIC INDICES: K_{FR} HALF DAY (1)	(2)	A_{FR} OB-SERVED	PRE-DICTED	K_{SI} HALF DAY (1)	(2)	A_{SI}
01	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	2	3	15	6	2	2	10
02	7-	6	6	7	7-	7-	7-	7-	5	6	7	7	6	6	6	6	3	3	17	8	3	3	16
03	(4o)	5	(4)	7	5-	2+	4-	5o	7	5	5	4	5	5	5	5	(5)	(4)	40	8	(7)	(6)	183
04	6-	5	6	5	5+	5-	6o	6+	4	4	6	6	5	6	5	6	3	1	9	$\underline{15}$	(4)	2	19
05	6o	6	6	6	6+	6-	6-	6-	6	6	7	7	5	6	6	6	2	2	10	8	2	1	8
06	6+	6	6	6	6+	6+	7-	7-	6	6	7	7	6	6	6	6	2	1	5	6	2	1	5
07	6+	6	6	7	7-	6o	6+	7-	6	6	6	6	5	6	6	6	3	1	10	3	(4)	1	22
08	6+	6	6	7	7-	6+	6+	7-	6	6	7	7	6	6	6	5	1	1	4	3	1	2	5
09	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	2	1	5	3	2	1	4
10	7-	6	6	7	7-	7-	7-	7-	7	7	7	7	6	6	6	6	2	2	7	6	1	2	5
11	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	3	2	10	$\underline{5}$	2	1	6
12	7-	6	6	7	7-	6o	7-	7-	7	6	7	7	6	6	6	6	3	2	13	5	3	2	12
13	7-	6	6	7	7-	7-	7-	6+	7	6	7	7	6	6	6	6	3	2	16	7	3	2	10
14	7-	6	6	6	7-	6+	7-	6+	7	7	7	7	6	6	6	6	2	3	10	9	1	2	5
15	7-	6	6	6	7-	6+	7-	6+	7	6	7	7	6	6	6	6	1	2	5	9	2	1	6
16	6+	6	6	6	6+	6+	6+	7-	7	6	7	6	6	6	6	6	2	2	8	9	2	1	5
17	6+	6	6	6	7-	6o	6+	7-	7	6	7	7	6	6	6	6	3	3	12	7	2	2	7
18	7-	6	6	7	7-	6+	7-	7-	7	7	7	7	6	6	6	6	3	2	9	$\underline{8}$	2	2	8
19	7-	6	6	7	7-	7-	7-	6+	7	7	7	7	6	6	6	6	3	2	9	11	2	2	11
20	7-	6	6	6	7-	7-	7-	7-	7	7	7	7	6	6	6	6	2	2	6	15	2	1	6
21	7-	6	6	6	7-	7-	7-	7-	7	7	7	7	6	6	6	6	1	2	7	15	1	1	5
22	7-	6	6	6	7-	7-	7-	7-	7	7	7	7	6	6	7	6	2	0	3	8	1	0	2
23	7-	6	6	7	7o	7-	7-	6-	7	7	7	7	6	6	6	5	2	3	14	4	2	2	5
24	7-	6	6	7	7-	7-	6+	7-	7	7	7	7	6	6	6	5	2	3	11	4	2	3	10
25	6o	5	6	5	7-	6+	6+	4+	5	4	5	3	6	6	5	5	3	(7)	112	$\underline{45}$	2	(8)	141
26	(2+)	5	(4)	4	1+	1o	2+	5o	2	1	3	4	5	5	5	5	(8)	(5)	156	45	(8)	(5)	217
27	6o	5	6	4	6o	5o	6+	6+	4	5	6	6	5	5	5	6	3	3	16	20	(4)	3	34
28	6-	5	6	6	6+	5+	6-	5+	6	6	6	4	6	5	5	5	(4)	(5)	35	10	(5)	(5)	65
29	(4o)	5	(4)	3	4o	2+	4o	6-	3	3	5	4	5	5	5	5	(5)	3	35	150	(7)	(4)	126
30	6o	5	6	4	7-	6-	6+	6+	4	4	6	5	6	6	5	5	2	(6)	37	40	3	(5)	38
31	5o	5	5	6	4+	4-	5+	6+	4	2	6	6	5	5	6	6	(4)	3	34	15	(5)	2	56
QUIET			P	10					19	16	21	17											
			S	16					4	9	7	12											
			U	0					3	0	0	0											
			F	2					2	2	0	1											
DISTURBED			P	1					1	1	0	0											
			S	1					2	1	3	1											
			U	0					0	2	0	0											
			F	1					0	0	0	0											

1) THE ADVANCE JC-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES.

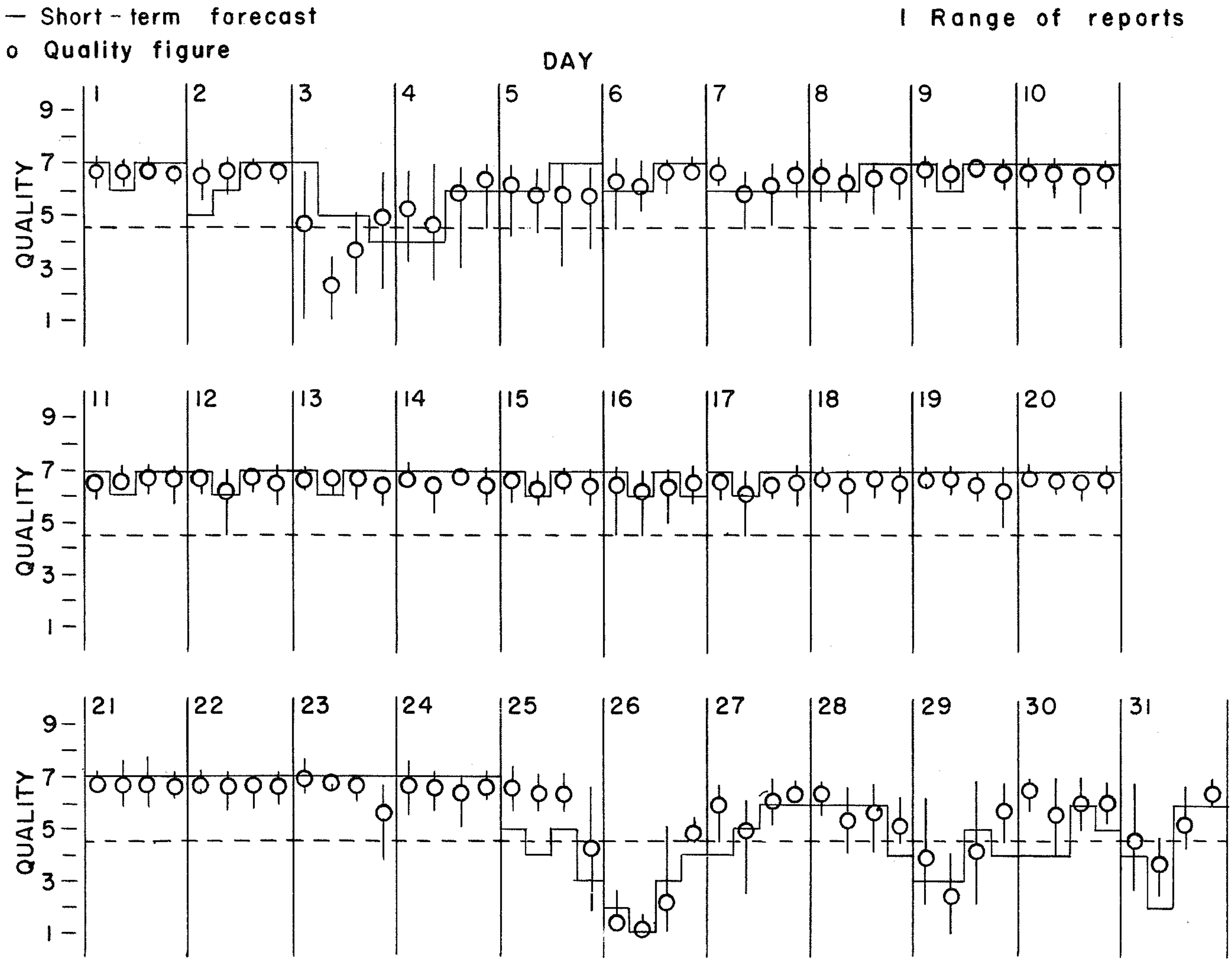
2) THE PREDICTED AFR INDICES ARE ISSUED EACH WEDNESDAY FOR THE COMING SEVEN DAYS. THE VALUE FOR THE FIRST DAY OF EACH PREDICTION PERIOD IS UNDERSCORED.

NOTE: A Special Disturbance Warning (SDW) issued May 28 for the period May 29-31 is included in the chart above. The quality figures originally forecast for the three days were 6, 7, and 7, and the magnetic indices originally forecast were 7, 7, and 7.

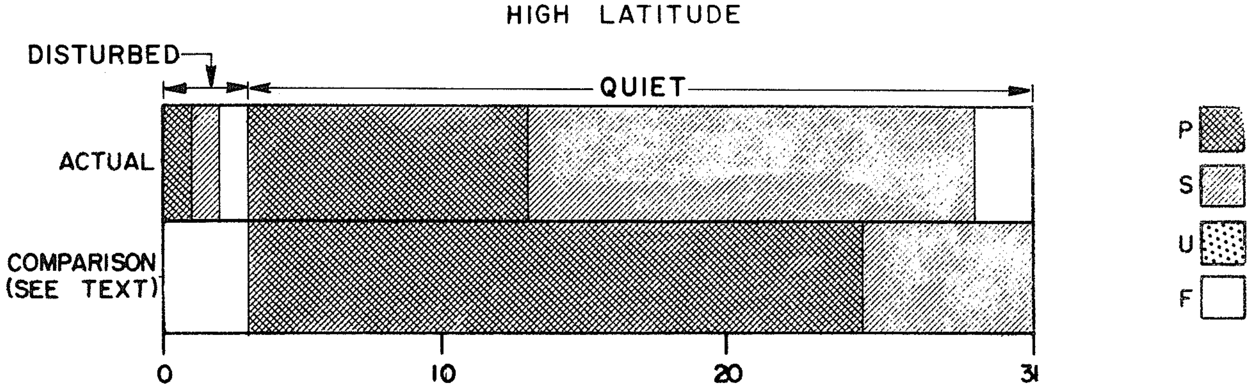
RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

MAY 1967

NORTH ATLANTIC

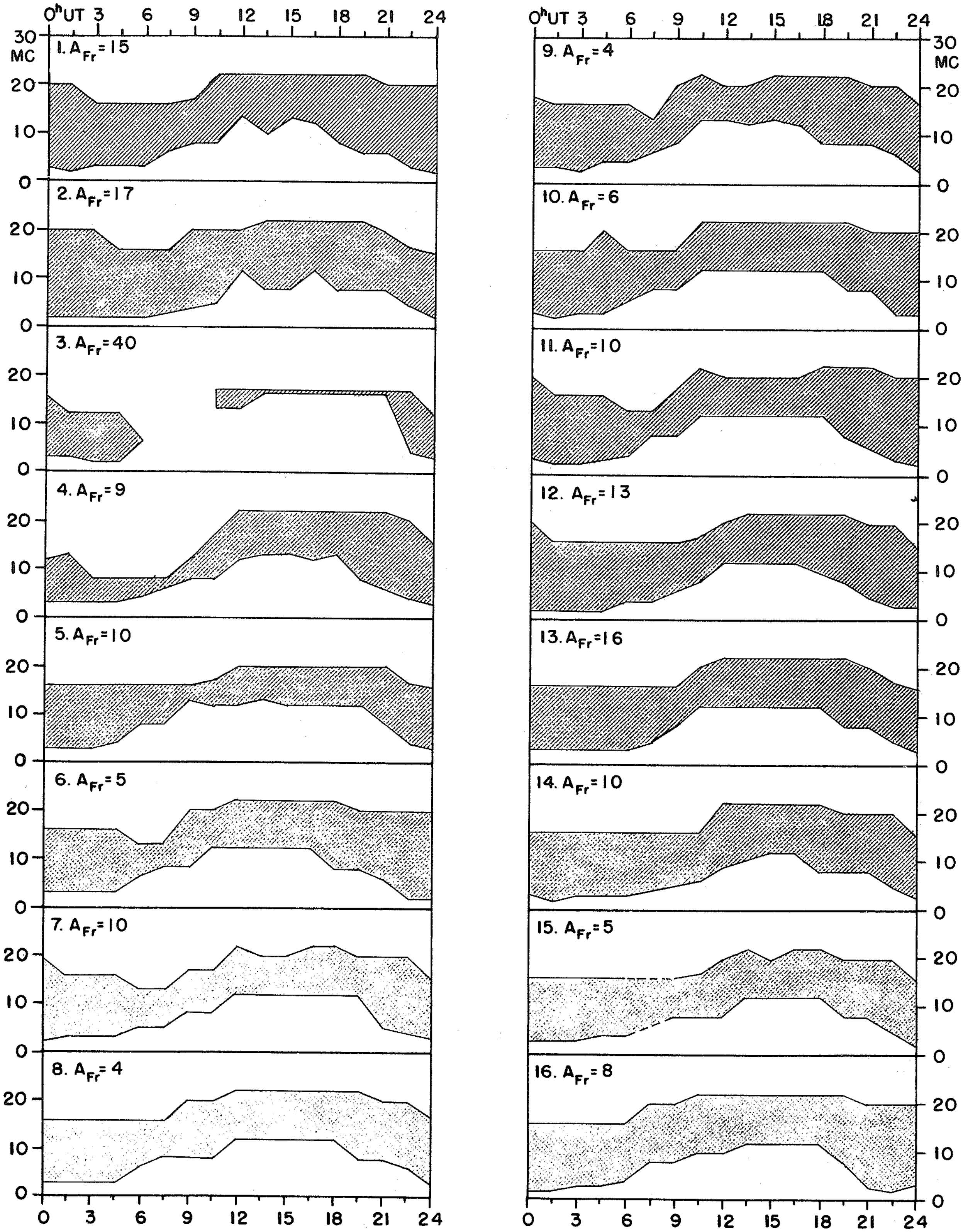


HIGH LATITUDE



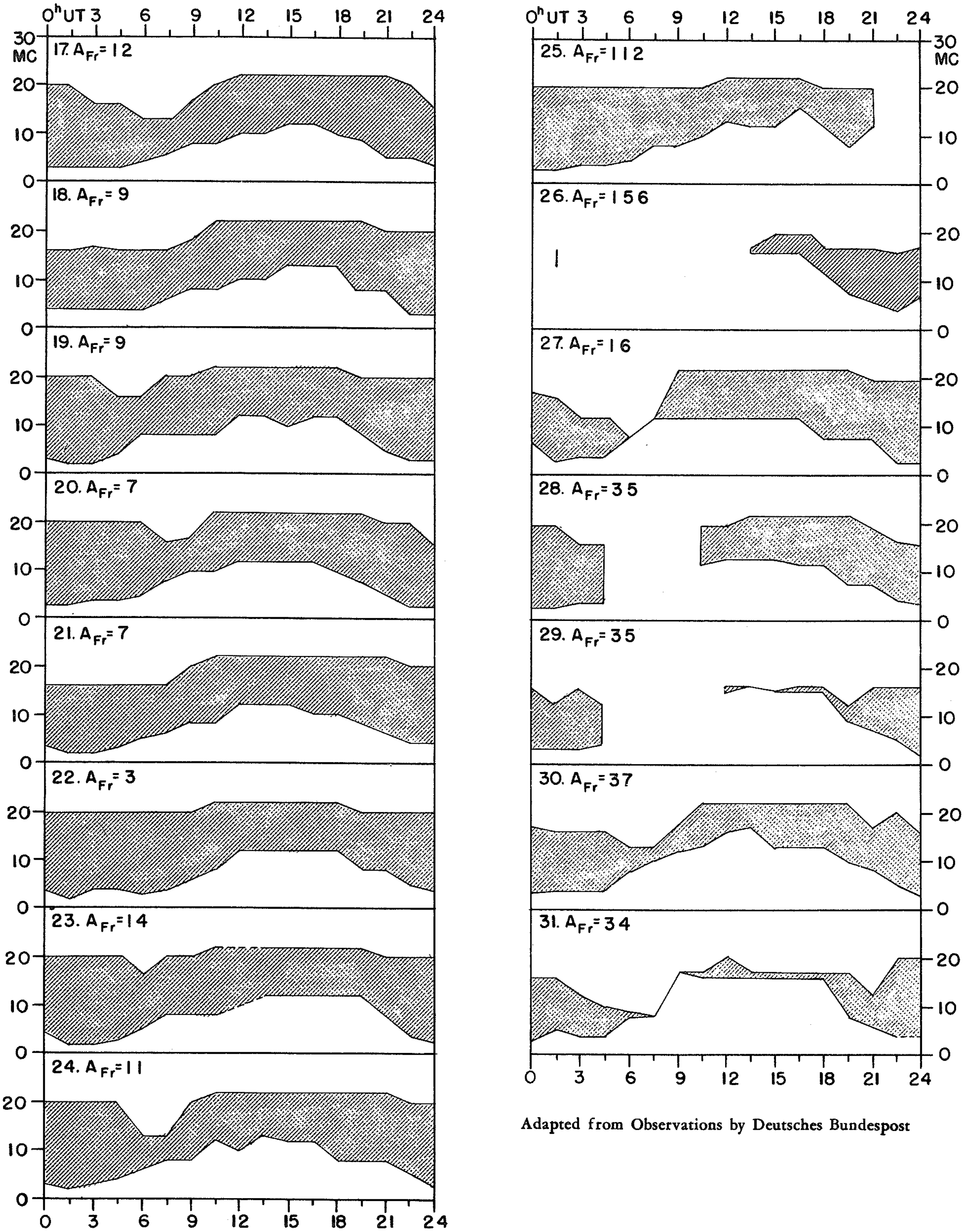
TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

MAY 1967



TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

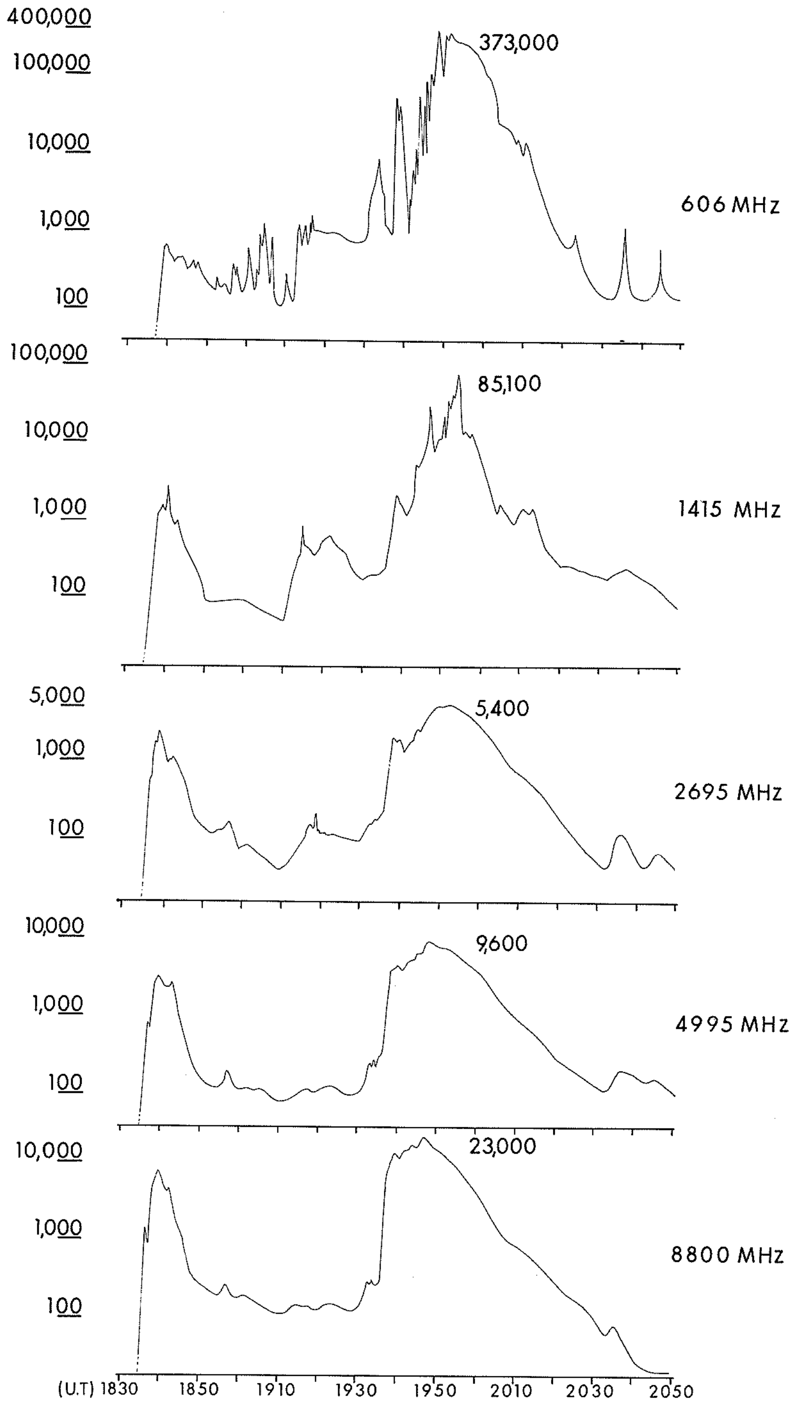
MAY 1967



Adapted from Observations by Deutsches Bundespost

SELECTED SOLAR NOISE BURST
AFCRL SAGAMORE HILL

MAY 1967



GREAT RADIO BURST* OF THE SOLAR PROTON FLARE
23 MAY, 1967 SAGAMORE HILL RADIO OBSERVATORY, HAMILTON, MASS.
(*CHART RECONSTRUCTED-FLUX VALUES PLOTTED AT INTERVALS OF ONE MINUTE OR LESS)
(FLUX DENSITY IN UNITS OF 10^{-22} Wm^{-2} Hz^{-1})

The peak values shown for 606 and 1415 MH_z are the results of a more complete analysis than for those given in IER-FB-274 with the report of Outstanding Occurrences of Solar Radio Emission for May 1967.

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

MAY 1967 408 Mc/s

Nançay

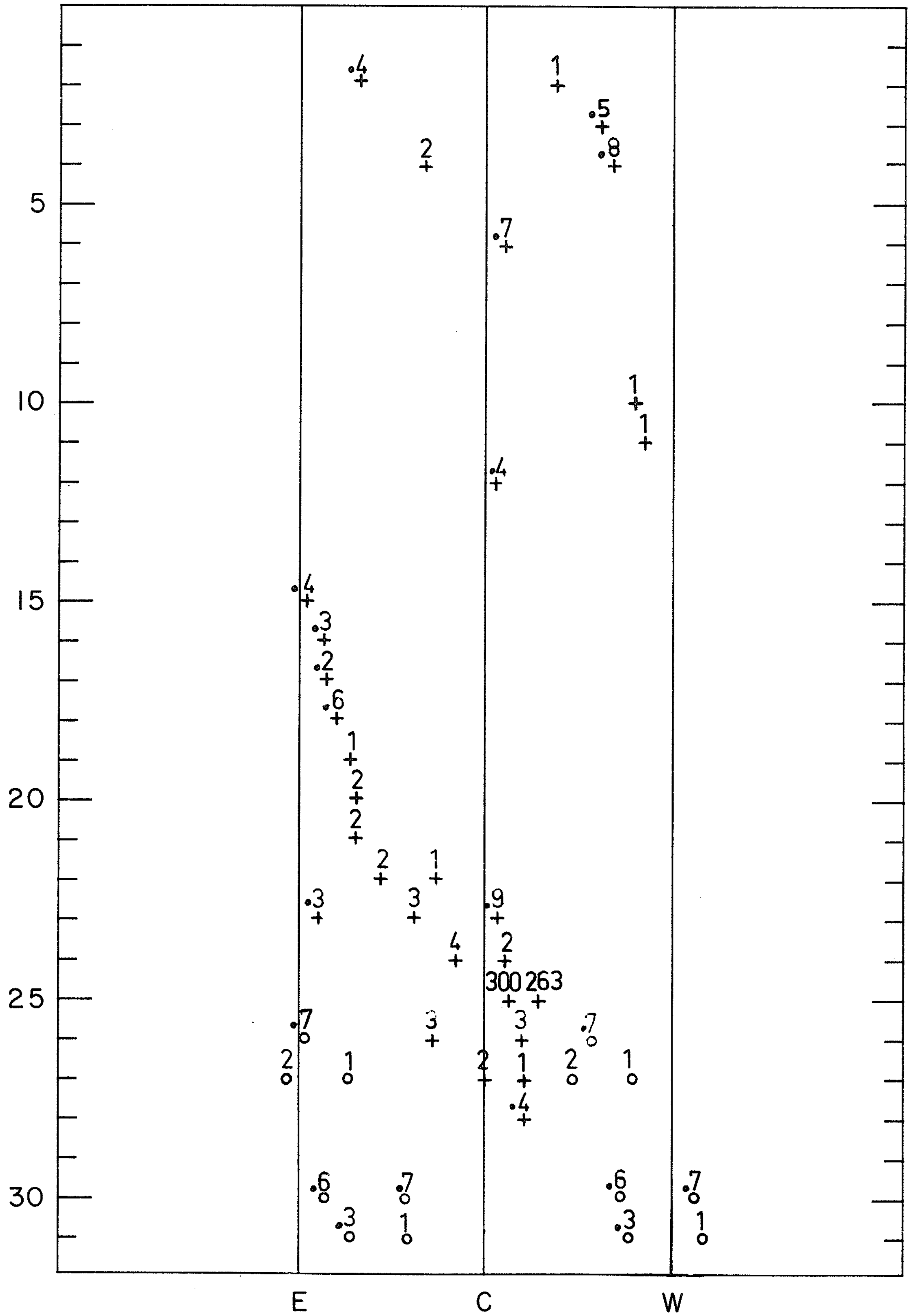


Table of Contents
for January 1967 Data

	Page
Solar Flares	
Standardized Data and Individual Reports	87-117
No-Flare-Patrol Chart	118
Solar X-ray Radiation	
NRL Chart of X-ray Flux	119-120

SOLAR FLARES
REVISED
JANUARY 1967

OBSERVATORY	DATE 1967 JAN	OBSERVED UT START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2342	01	0310	0320	0314	N17	E58	.871	8631	5.5	10	1-				.60				1 1 1
MANI	01	0310	0320	0314	N17	E58	.871	8631	5.5	10	-F	2		0314	.72	1.32			
GRP 2343	01	0410	0431	0416	N23	W39	.720	8625	29.2	21	1-				.79				1 1 1
MANI	01	0410	0431	0416	N23	W39	.720	8625	29.2	21	-F	3		0416	.88	1.29			
GRP 2344	01	0418	0426	0421	N16	E58	.869	8631	5.5	8	1-				.17				1 1 1
MANI	01	0418	0426	0421	N16	E58	.869	8631	5.5	8	-N	3		0421	.21	.38			
GRP 2345	01	0645	0651	0647	S22	E09	.357	8629	2.0	6	1-				.23				1 1 1
MANI	01	0645	0651	0647	S22	E09	.357	8629	2.0	6	-N	3		0647	.26	.27			
GRP 2346	01	0651	0706	0657	N16	E59	.877	8631	5.7	15	1-				.85				4 4 4
ABST	01	0650E	0707D	0658	N15	E60	.883	8631	5.8	17D	-F		C	0658	.91	1.90		69	D
TACH	01	0650	0707	0657	N15	E60	.883	8631	5.8	17	-N		C	0657	.64	1.30	4.80	63	D
MANI	01	0652	0711	0656	N16	E57	.861	8631	5.6	19	-B	3		0656	1.03	1.85			
KODA	01	0653	0701	0655	N16	E60	.885	8631	5.8	8	1F		V	0656	1.29	2.70	2.00		DH
GRP 2347	01	0752	0808	0754	N16	E58	.869	8631	5.7	16	1-				.42				2 2 2
MANI	01	0751	0806	0753	N16	E56	.853	8631	5.5	15	-F	3		0753	.26	.46			
KODA	01	0752	0810	0755	N16	E60	.885	8631	5.8	18	-N		V	0800	.64	1.40	2.08		D
GRP 2348	01	0805	0858		S21	E11	.357	8629	2.2	53	1				1.55				1 1 1
MONT	01	0805E	0858		S21	E11	.357	8629	2.2	53D	1F		C	0807	1.55	2.90			OT
GRP 2349	01	0943	0943		S30	W44	.761	8624	29.1		1-								1 1 0
UCCL	01	0943E	0943D		S30	W44	.761	8624	29.1		-N		P	0943					D
GRP 2350	01	1019	1040		S23	E12	.393	8629	2.3	21	1-				.41				1 1 1
MONT	01	1019E	1040		S23	E12	.393	8629	2.3	21D	-F		C	1020	.41	1.10			OT
GRP 2351	01	1035	1107	1038	N17	E58	.871	8631	5.8	32	1				.81				5 5 5
UCCL	01	1030	1100	1037	N14	E60	.882	8631	5.9	30	1B		C	1037	1.55				EJU
MONT	01	1034	1100	1039	N18	E56	.857	8631	5.6	26	1B		C	1039	.52	2.10			O
CAPS	01	1037E	1056D		N15	E57	.859	8631	5.7	19D	-N	2		1041	.80	1.50		176	C
ATHN	01	1041	1056	1045	N18	E58	.873	8631	5.8	15	1B	2		1045	.99	2.20	2.00		
CATA	01	1045E	1130D		N19	E60	.890	8631	5.9	45D	-N			1100	.66			162	
GRP 2352	01	1109	1150		S21	E10	.349	8629	2.2	41	1				1.55				1 1 1
MONT	01	1109	1150		S21	E10	.349	8629	2.2	41	1F		C	1111	1.55	3.60			OT
GRP 2353	01	2154	2230	2206	S22	E04	.332	8629	2.2	36	1-				1.33				5 5 5
CULG	01	2145	2247	2202	S21	E03	.313	8629	2.1	62	-N		C	2202	.72	.74			L
SACP	01	2156	2234	2210	S22	E04	.332	8629	2.2	38	1N		C		2.46	2.44			
LOCK	01	2157	2220	2207	S21	E04	.316	8629	2.2	23	-F		C	2207	1.00	1.10		10	J
HALE	01	2159	2237	2204U	S22	E03	.329	8629	2.1	38	-N	1	C	2204	1.44	1.50			F
HUAN	01	2202E	2211		S22	E04	.332	8629	2.2	9D	-N	1	P	2205	1.13	1.13			E
GRP 2354	01	2315	2337	2325	S22	E01	.326	8629	2.0	22	1-				.94				1 1 1
LOCK	01	2315	2337	2325	S22	E01	.326	8629	2.0	22	-F		C	2325	.90	1.00		10	
GRP 2355	02	0004	0025	0016	S24	E01	.357	8629	2.1	21	1-				.49				1 1 1
HALE	02	0004	0025	0016U	S24	E01	.357	8629	2.1	21	-N	1	C	0016	.41	.41			
GRP 2356	02	0130	0142	0132	S25	E76	.970	8632	7.8	12	1-				.37				1 1 1
HALE	02	0130	0142	0132	S25	E76	.970	8632	7.8	12	-N	1	C	0132	.31				
GRP 2357	02	0138	0150	0141	S21	E58	.858	8632	6.4	12	1-				.25				1 1 1
HALE	02	0138	0150	0141	S21	E58	.858	8632	6.4	12	-N	1	C	0141	.21	.40			
GRP 2358	02	0153	0203	0155	S22	E01	.324	8629	2.2	10	1-				.31				1 1 1
HALE	02	0153	0203	0155	S22	E01	.324	8629	2.2	10	-N	1	C	0155	.26	.30			H
GRP 2359	02	0228	0239	0230	S25	E01	.373	8629	2.2	11	1-				.58				3 3 3
HALE	02	0226	0241	0229	S25	E02	.374	8629	2.3	15	-B	1	C	0229	.52	.60			
MITK	02	0228	0235	0231	S25	E03	.376	8629	2.3	7	-N		C	0231	.93	1.00			D
MANI	02	0229	0240	0231	S25	W03	.376	8629	1.9	11	-N	2		0231	.52	.56			
GRP 2360	02	0326	0345	0332	S22	E03	.327	8629	2.4	19	1-				.25				1 1 1
HALE	02	0326	0345D	0332	S22	E03	.327	8629	2.4	19D	-N	1	P	0332	.21	.21			
	02	0350	0355	NO FLARE PATROL															
GRP 2361	02	0354	0419	0405	S21	W01	.307	8629	2.1	25	1-				3.35				1 1 1
MANI	02	0354E	0419	0405	S21	W01	.307	8629	2.1	25D	1N	1		0405	3.35	3.50			
GRP 2362	02	0420	0432	0422	S24	E04	.362	8629	2.5	12	1-				.23				1 1 1
MANI	02	0420	0432	0422	S24	E04	.362	8629	2.5	12	-N	3		0422	.26	.27			
GRP 2363	02	0506	0514	0507	S24	E00	.356	8629	2.2	8	1-				.19				1 1 1
MANI	02	0506	0514	0507	S24	E00	.356	8629	2.2	8	-N	3		0507	.21	.22			
GRP 2364	02	0525	0539	0530	S23	W01	.340	8629	2.2	14	1-				.37				1 1 1
CULG	02	0525E	0539D	0530	S23	W01	.340	8629	2.2	14D	-N		P	0530	.41	.42			L
GRP 2365	02	0612	0623	0618	S26	E02	.390	8629	2.4	11	1-				.28				1 1 1
CULG	02	0612E	0623	0618	S26	E02	.390	8629	2.4	11D	-N		P	0618	.31	.32			L
GRP 2366	02	0638	0648	0639	N09	E53	.811	8633	6.3	10	1-				.83				1 1 1
ATHN	02	0638	0648	0639	N09	E53	.811	8633	6.3	10	-F	1		0639	.83	1.40	1.40		
GRP 2367	02	0647	0655		S24	W01	.357	8629	2.2	8	1-				.28				1 1 1
MANI	02	0647E	0655		S24	W01	.357	8629	2.2	8D	-N	2		0648	.31	.33			
GRP 2368	02	0724	0732	0726	S22	W04	.330	8629	2.0	8	1-				.66				1 1 1
ATHN	02	0724	0732	0726	S22	W04	.330	8629	2.0	8	-N	1		0726	.66	.70	1.70		
GRP 2369	02	0725	0727		N24	E00	.456	8628	2.3	2	1-								1 1 0
KAND	02	0725	0727		N24	E00	.456	8628	2.3	2	-N								

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2370	02	0755	0831	0756	N16	E43	.727	8631	5.6	36	1-				1.40				5 3 3
ATHN	02	0753	0843		N17	E43	.731	8631	5.6	50	1N	1		0800	2.64	3.90	1.90		
ABST	02	0755E	0834D	0756	N16	E44	.737	8631	5.6	39D	-F		C	0756	.91	1.30		56	D
KAND	02	0755	0836		N14	E45	.741	8631	5.7	41	-N			0759	1.22	1.49			H
TACH	02	0757	0807	0757	N15	E43	.723	8631	5.6	10	-B		C	0757	.64	.90		108	D
MANI	02	0827E	0837	0828	N17	E42	.720	8631	5.5	10D	-F	1		0828	.31	.46			
GRP 2371	02	0811	0815		N09	E53	.811	8633	6.3	4	1-				.50				1 1 1
ATHN	02	0811E	0815		N09	E53	.811	8633	6.3	4D	-N	1		0811	.50	.80			
GRP 2372	02	0923	0929	0926	S24	W03	.360	8629	2.2	6	1-				1.16				1 1 1
ATHN	02	0923	0929	0926	S24	W03	.360	8629	2.2	6	-N	2		0926	1.16	1.20	1.80		
GRP 2373	02	0923	0933	0924	N09	E52	.801	8633	6.3	10	1-				.33				1 1 1
ATHN	02	0923	0933	0924	N09	E52	.801	8633	6.3	10	-N	2		0924	.33	.50	1.60		
GRP 2374	02	0940	0945	0940	N22	E57	.875	8635	6.7	5	1-				.33				1 1 1
ATHN	02	0940	0945	0940	N22	E57	.875	8635	6.7	5	-N	2		0940	.33	.70	1.90		
GRP 2375	02	0943	0951	0944	S26	W01	.389	8629	2.3	8	1-				.50				1 1 1
ATHN	02	0943	0951	0944	S26	W01	.389	8629	2.3	8	-B	2		0944	.50	.50	2.00		
GRP 2376	02	0946	0953		N14	E45	.741	8631	5.8	7	1-								1 1 0
KAND	02	0946	0953		N14	E45	.741	8631	5.8	7	-N								
GRP 2377	02	0959	1019		N14	E45	.741	8631	5.8	20	1-								1 1 0
KAND	02	0959	1019		N14	E45	.741	8631	5.8	20	-N								
GRP 2378	02	1040	1048	1043	S20	W05	.302	8629	2.1	8	1-				.45				1 1 1
UCCL	02	1040	1048	1043	S20	W05	.302	8629	2.1	8	-N		C	1043	.72	.90			EL
GRP 2379	02	1050	1059	1052	S26	W03	.392	8629	2.2	9	1-				.33				1 1 1
ATHN	02	1050	1059	1052	S26	W03	.392	8629	2.2	9	-N	2		1052	.33	.40	1.90		
GRP 2380	02	1136	1146	1138	S23	W04	.346	8629	2.2	10	1-				.62				3 3 3
ATHN	02	1135	1143	1136	S26	W04	.394	8629	2.2	8	-N	2		1136	.66	.70	1.90		
HUAN	02	1136	1148	1139	S24	W03	.360	8629	2.3	12	-F	1	C	1144	.25	.25			D
UCCL	02	1137	1141D	1139	S20	W04	.298	8629	2.2	4D	-N		P	1139	1.55	1.90			E
GRP 2381	02	1154	1159	1155	S26	W04	.394	8629	2.2	5	1-				.50				1 1 1
ATHN	02	1154	1159	1155	S26	W04	.394	8629	2.2	5	-N	2		1155	.50	.50	1.70		
GRP 2382	02	1210	1231		N24	E00	.456	8628	2.5	21	1-								1 1 0
KAND	02	1210	1231		N24	E00	.456	8628	2.5	21	-F								
GRP 2383	02	1213	1222	1216	S26	W04	.394	8629	2.2	9	1-				.50				1 1 1
ATHN	02	1213	1222	1216	S26	W04	.394	8629	2.2	9	-N	2		1216	.50	.50	1.60		
GRP 2384	02	1232	1251	1241	S26	W03	.392	8629	2.3	19	1-				.96				2 2 2
HUAN	02	1226	1252	1241	S25	W02	.374	8629	2.4	26	-B	2	C	1241	1.03	1.03			H
ATHN	02	1237	1249	1241	S26	W04	.394	8629	2.2	12	-B	2		1241	.99	1.10	2.00		
GRP 2385	02	1358	1423	1410	S25	W04	.378	8629	2.3	25	1-				.73				3 3 3
LOCA	02	1350	1421D	1410	S25	W03	.376	8629	2.4	31D	-N		V	1410	1.26	1.40			
ATHN	02	1355	1422	1356	S26	W05	.397	8629	2.2	27	-N	2		1356	.33	.40	1.80		
HUAN	02	1409	1423	1413	S25	W04	.378	8629	2.3	14	-N	2	C	1413	.88	.88			E
GRP 2386	02	1456	1500	1457	S23	W07	.358	8629	2.1	4	1-				.19				1 1 1
HUAN	02	1456	1500	1457	S23	W07	.358	8629	2.1	4	-F	2	C	1457	.21	.21			D
GRP 2387	02	1510	1542	1516	S25	W04	.378	8629	2.3	32	1-				1.09				2 2 2
SACP	02	1510	1542	1516A	S25	W04	.378	8629	2.3	32	-N		C		1.65	1.65			
HUAN	02	1514E	1538D		S24	W03	.360	8629	2.4	24D	-N	1	P	1515	.75	.75			H
GRP 2388	02	1520	1620	1559	N12	W16	.374	8628	1.4	60	1-				.63				3 2 2
SACP	02	1520	1620	1557	N11	W16	.363	8628	1.4	60	-N		C		.83	.82			
HUAN	02	1521E	1550D		N12	W17	.386	8628	1.4	29D	-F	1	P	1536	.57	.57			E
LOCK	02	1600E	1620	1600E	N12	W16	.374	8628	1.5	20D	-F		C	1600	.80	.90		10	
GRP 2389	02	1547	1625	1605	N15	E38	.666	8631	5.5	38	1-				.73				3 3 3
SACP	02	1547	1627	1610	N16	E38	.671	8631	5.5	40	-N		C		.58	.65			
LOCK	02	1600E	1623	1600U	N15	E38	.666	8631	5.5	23D	-N		C	1600	1.00	1.40		10	
HUAN	02	1602E	1615D		N15	E39	.678	8631	5.6	13D	-N	1	P	1605	.70	.81			E
GRP 2390	02	1600	1610	1605	S23	W07	.358	8629	2.1	10	1-				.94				1 1 1
LOCK	02	1600E	1610	1605	S23	W07	.358	8629	2.1	10D	-F		C	1605	.90	1.00		10	
GRP 2391	02	1651	1656	1653	S20	E47	.753	8632	6.2	5	1-				.50				1 1 1
LOCK	02	1651	1656	1653	S20	E47	.753	8632	6.2	5	-F		C	1653	.50	.80		10	
GRP 2392	02	1653	1716	1659	S25	W06	.385	8629	2.3	23	1-				.60				3 2 2
SACP	02	1651	1718	1658	S26	W06	.400	8629	2.3	27	-N		C		.66	.65			
LOCK	02	1654	1714	1700	S25	W06	.385	8629	2.3	20	-N		C	1700	.60	.70		20	
HUAN	02	1700E	1703D		S25	W06	.385	8629	2.3	3D	-F	1	P	1701	.36	.36			E
GRP 2393	02	1736	1821	1747	S18	E49	.769	8632	6.4	45	1-				.60				2 2 2
LOCK	02	1730	1815	1745	S19	E48	.760	8632	6.3	45	-F		C	1745	.80	1.20		10	
SACP	02	1742	1826	1749	S17	E49	.766	8632	6.4	44	-N		C		.41	.51			
GRP 2394	02	1733	1753	1737	S28	E67	.929	8632	7.8	20	1				.99				1 1 1
LOCK	02	1733	1753	1737	S28	E67	.929	8632	7.8	20	1F		C	1737	1.00	2.30		10	
GRP 2395	02	1756	1800	1758	S25	W04	.378	8629	2.4	4	1-				.19				1 1 1
LOCK	02	1756	1800	1758	S25	W04	.378	8629	2.4	4	-F		C	1758	.20	.21		10	

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2396	02	1807	1826	1815	S26	W06	.400	8629	2.3	19	1-				1.05				2 2 2
SACP	02	1806	1827	1816	S26	W06	.400	8629	2.3	21	-N		C		1.17	1.16			
LOCK	02	1808	1824	1814	S25	W06	.385	8629	2.3	16	-N		C	1814	1.00	1.10		20	
GRP 2397	02	1845	1918	1857	S21	E47	.755	8632	6.3	33	1-				.18				2 1 1
HALE	02	1845E	1919	1857	S21	E46	.745	8632	6.2	34D	-N	2	P	1857	.15	.20			
HUAN	02	1900E	1916		S21	E47	.755	8632	6.3	16D	-F	1	P	1902	.25	.31			D
GRP 2398	02	2010	2043	2025	N25	E90	1.000	8637	9.6	33	1-				.16				1 1 1
LOCK	02	2010	2043	2025	N25	E90	1.000	8637	9.6	33	-F		C	2025	.20			10	
GRP 2399	02	2022	2050	2024	N18	E49	.795	8631	6.5	28	1-				.25				1 1 1
HALE	02	2022	2050	2024	N18	E49	.795	8631	6.5	28	-F	1	C	2024	.21	.30			
GRP 2400	02	2036	2112	2042	N17	E36	.654	8631	5.6	36	1-				.31				2 2 2
HALE	02	2036	2112	2042	N16	E35	.637	8631	5.5	36	-F	1	C	2042	.21	.30			
CULG	02	2038E	2111	2041	N17	E37	.665	8631	5.6	33D	-N		P	2041	.41	.52			
GRP 2401	02	2048	2115	2052	S24	W09	.385	8629	2.2	27	1-				.63				3 3 3
LOCK	02	2047	2117	2052	S24	W09	.385	8629	2.2	30	-F		C	2052	1.00	1.10		10	
CULG	02	2047	2119	2053	S23	W10	.376	8629	2.1	32	-N		C	2053	.52	.53			
HALE	02	2050	2110	2051	S24	W09	.385	8629	2.2	20	-B	2	C	2051	.31	.31			
GRP 2402	02	2100	2125	2107	N25	E90	1.000	8637	9.6	25	1-				.25				1 1 1
LOCK	02	2100	2125	2107	N25	E90	1.000	8637	9.6	25	-F		C	2107	.30	1.20		10	
GRP 2403	02	2109	2127	2116	N31	E66	.947	8631	7.8	18	1-				.53				2 2 2
LOCK	02	2108	2125	2115	N30	E65	.941	8631	7.8	17	-F		C	2115	.80	1.90		10	
CULG	02	2110	2128	2116	N31	E66	.947	8631	7.8	18	-N		C	2116	.31				
GRP 2404	02	2126	2200	2139	S23	W11	.384	8629	2.1	34	1-				1.33				4 4 4
CULG	02	2123	2207	2138	S23	W10	.376	8629	2.1	44	-N		C	2138	.83	.84			
HUAN	02	2124	2136D		S22	W11	.370	8629	2.1	12D	1F	1	P	2136	2.37	2.38			
LOCK	02	2128	2156	2140	S25	W10	.405	8629	2.1	28	-N		C	2140	1.40	1.50		20	
HALE	02	2130	2156	2139	S23	W11	.384	8629	2.1	26	-B	2	C	2139	.93	1.00			
GRP 2405	02	2143	2157	2146	N25	E90	1.000	8637	9.7	14	1-				.16				1 1 1
LOCK	02	2143	2157	2146	N25	E90	1.000	8637	9.7	14	-F		C	2146	.20	.80		10	
GRP 2406	02	2211	2228	2215	N25	E90	1.000	8637	9.7	17	1-				.25				1 1 1
LOCK	02	2211	2228	2215	N25	E90	1.000	8637	9.7	17	-F		C	2215	.30	1.20		10	
GRP 2407	02	2233	2333	2256	S23	W11	.384	8629	2.1	60	1-				1.85				1 1 1
SACP	02	2233	2333	2256	S23	W11	.384	8629	2.1	60	-N		C		2.06	2.05			
GRP 2408	02	2312	2343	2300	N28	E89	1.000	8637	9.6	31	1-				.16				2 1 1
LOCK	02	2250	2335D	2300	N25	E90	1.000	8637	9.7	45D	-F		C	2300	.20	.80		10	
HALE	02	2333	2343	2335	N31	E88	1.000	8637	9.6	10	-N	2	C	2335	.15				
GRP 2409	02	2307	2320	2310	S20	E42	.698	8632	6.1	13	1-				.18				1 1 1
HALE	02	2307	2320	2310	S20	E42	.698	8632	6.1	13	-F	2	C	2310	.15	.20			
GRP 2410	03	0001	0013	0006	N14	W08	.325	8628	2.4	12	1-				.49				1 1 1
HALE	03	0001E	0013	0006U	N14	W08	.325	8628	2.4	12D	-N	1	P	0006	.41	.42			
GRP 2411	03	0050	0130	0055	S26	E64	.908	8632	7.8	40	1-				.33				2 2 2
HALE	03	0050	0130	0054	S25	E63	.901	8632	7.8	40	-N	1	C	0054	.31	.70			
CULG	03	0050	0130	0056	S26	E65	.915	8632	7.9	40	-N		C	0056	.31				L
GRP 2412	03	0105	0109	0106	S19	W16	.378	8629	1.8	4	1-				.22				2 2 2
HALE	03	0105	0109	0106	S19	W16	.378	8629	1.8	4	-F	1	C	0106	.21	.21			
CULG	03	0105	0109	0106	S19	W16	.378	8629	1.8	4	-N		C	0106	.21	.21			
GRP 2413	03	0128	0208	0130	N17	E37	.666	8631	5.8	40	1-				.49				1 1 1
HALE	03	0128	0208	0130	N17	E37	.666	8631	5.8	40	-N	1	C	0130	.41	.50			F
GRP 2414	03	0151	0217	0153	N30	E63	.931	8637	7.8	26	1-				.49				1 1 1
HALE	03	0151	0217	0153	N30	E63	.931	8637	7.8	26	-N	1	C	0153	.41				
GRP 2415	03	0209	0236	0215	S25	W12	.417	8629	2.2	27	1-				.49				1 1 1
HALE	03	0209	0236	0215	S25	W12	.417	8629	2.2	27	-N	1	C	0215	.41	.50			F
GRP 2416	03	0225	0249	0228	N13	W11	.335	8628	2.3	24	1-				.40				2 2 2
HALE	03	0225	0244	0228	N10	W14	.329	8628	2.1	19	-N	1	C	0228	.36	.40			F
CULG	03	0227E	0253	0228	N16	W08	.355	8628	2.5	26D	-N		P	0228	.41	.42			L
GRP 2417	03	0339	0358	0345	S22	W18	.433	8629	1.8	19	1-				.37				1 1 1
CULG	03	0339	0358D	0345	S22	W18	.433	8629	1.8	19D	-N		P	0345	.41	.44			L
GRP 2418	03	0408	0435	0420	S26	W11	.424	8629	2.3	27	1-				.75				1 1 1
CULG	03	0408E	0435D	0420	S26	W11	.424	8629	2.3	27D	-N		P	0420	.83	.88			
GRP 2419	03	0533	0603	0540	N16	E30	.579	8631	5.5	30	1-				1.26				3 3 3
CULG	03	0530	0559	0541	N17	E30	.586	8631	5.5	29	-N		C	0541	.72	.84			
TACH	03	0533	0606	0538	N15	E29	.559	8631	5.4	33	1N		C	0538	2.11	2.50	1.80	72	E
MANI	03	0536	0603D		N15	E30	.572	8631	5.5	27D	-N	1		0540	1.44	1.77			
GRP 2420	03	0557	0613	0601	S24	W14	.419	8629	2.2	16	1-				.45				3 2 2
CULG	03	0552	0610	0601	S25	W12	.417	8629	2.3	18	-N		C	0601	.31	.33			
TACH	03	0558	0603	0600	S25	W13	.424	8629	2.3	5	-N		C	0600	.74	.80	1.90	60	D
MANI	03	0602	0625		S21	W18	.422	8629	1.9	23	-N	1		0602	.62	.68			
GRP 2421	03	0602	0625		N15	W13	.380	8628	2.3	23	1-				.76				1 1 1
MANI	03	0602	0625		N15	W13	.380	8628	2.3	23	-N	1		0602	.83	.90			
GRP 2422	03	0613	0620	0614	S26	W13	.438	8629	2.3	7	1-				.30				1 1 1
TACH	03	0613	0620	0614	S26	W13	.438	8629	2.3	7	-N		C	0614	.36	.40		60	D

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2423	03	0630	0652	0635	N16	W09	.362	8628	2.6	22	1-				.37				1 1 1
CULG	03	0630	0652D	0635	N16	W09	.362	8628	2.6	22D	-N		P	0635	.41	.42			L
GRP 2424	03	0646	0659	0651	S26	W13	.438	8629	2.3	13	1-				.67				2 2 2
CULG	03	0643	0652D	0649	S25	W12	.417	8629	2.4	9D	-N		P	0649	.72	.77			
TACH	03	0648	0659	0652	S26	W14	.445	8629	2.2	11	-B		C	0652	.83	.90	2.30	75	D
GRP 2425	03	0713	0724	0716	S26	W12	.431	8629	2.4	11	1-				.66				1 1 1
ATHN	03	0713	0724	0716	S26	W12	.431	8629	2.4	11	-B	1		0716	.66	.70	2.00		
GRP 2426	03	0743	0801	0743	S20	E38	.652	8632	6.2	18	1-				.99				1 1 1
ATHN	03	0743	0801	0743	S20	E38	.652	8632	6.2	18	-N	2		0743	.99	1.30	1.70		
GRP 2427	03	0820	0840		N30	E88	1.000	8637	9.9	20	1				.28				1 1 1
ARCE	03	0820E	0840		N30	E88	1.000	8637	9.9	20D	-N		C	0820	.28	1.40			
GRP 2428	03	0836	0852	0840	S22	W23	.487	8629	1.6	16	1-				.82				4 4 4
MONT	03	0831E	0850	0840	S22	W21	.465	8629	1.8	19D	-N		C	0833	.52	1.20			OT
ARCE	03	0838	0850	0840	S22	W24	.499	8629	1.6	12	-N		C	0840	1.19	1.40			HC
CATA	03	0839E	0900D	0840	S20	W24	.482	8629	1.6	21D	-B			0840	.95	1.10		204	
ATHN	03	0839	0848	0841	S23	W22	.486	8629	1.7	9	-B	2		0841	.50	.50	2.00		
GRP 2429	03	0836	0855	0843	S26	W14	.445	8629	2.3	19	1-				1.24				5 5 5
MONT	03	0833	0850	0835	S26	W13	.438	8629	2.4	17	-B		C	0835	.52	1.20			OT
ABST	03	0834E	0856D	0844	S26	W14	.445	8629	2.3	22D	-F		C	0844	1.36	1.50		69	DJ
ATHN	03	0837E	0858	0842	S27	W12	.444	8629	2.5	21D	-B	2		0842	1.16	1.30	2.00		
ARCE	03	0838	0850	0842	S26	W14	.445	8629	2.3	12	1N		C	0842	1.88	2.10			C
CATA	03	0840E	0900D	0842	S25	W15	.440	8629	2.2	20D	-B			0842	1.38	1.60		224	
GRP 2430	03	0859	1030	0847	N15	W13	.380	8628	2.4	91	1-				.39				2 1 1
ARCE	03	0845	1000D	0847	N13	W13	.354	8628	2.4	75D	-N		C	0847	.40	.40			HC
MONT	03	0912	1030	0918	N17	W13	.406	8628	2.4	78	-F		C	0918	.41	1.00			OT
GRP 2431	03	0902	0915		S22	W24	.499	8629	1.6	13	1-				1.60				1 1 1
ARCE	03	0902E	0915D		S22	W24	.499	8629	1.6	13D	-N		P	0904	1.44	1.60			O
GRP 2432	03	0902	0920	0915	N30	E90	1.000	8637	10.1	18	1				.34				1 1 1
ARCE	03	0902	0920	0915	N30	E90	1.000	8637	10.1	18	-N		C	0915	.34	1.90			C
GRP 2433	03	1020	1025	1022	S23	W25	.519	8629	1.6	5	1-				.76				2 2 2
ATHN	03	1019	1024	1021	S23	W24	.507	8629	1.6	5	-B	2		1021	.99	1.10	2.00		
MONT	03	1020	1025	1022	S22	W25	.510	8629	1.6	5	-B		C	1022	.52	1.30			OTH
GRP 2434	03	1027	1031	1028	S21	W22	.467	8629	1.8	4	1-				.50				1 1 1
ATHN	03	1027	1031	1028	S21	W22	.467	8629	1.8	4	-N	2		1028	.50	.50	1.70		
GRP 2435	03	1034	1102	1043	N16	W13	.393	8628	2.5	28	1-				1.05				5 4 4
LOCA	03	1030E	1058	1040	N14	W12	.358	8628	2.5	28D	-N		V	1040	.85	.90			H
MONT	03	1033	1107		N17	W12	.398	8628	2.5	34	1N		C	1035	.93	2.20			OTH
ATHN	03	1039	1056	1043	N14	W14	.377	8628	2.4	17	-B	2		1043	.99	1.20	2.00		
CATA	03	1040E	1100D	1046	N17	W13	.406	8628	2.5	20D	-N			1046	1.55	1.70		174	
AROS	03	1046E	1105		N16	W16	.421	8628	2.2	19D	-N		V						
GRP 2436	03	1045	1115	1053	S23	W22	.486	8629	1.8	30	1-				.92				5 5 4
ATHN	03	1043	1115	1051	S24	W19	.465	8629	2.0	32	-B	2		1051	.33	.40	2.00		
MONT	03	1045	1120	1047	S22	W25	.510	8629	1.6	35	-B		C	1047	.62	1.50			OT
AROS	03	1046E	1112	1104	S24	W23	.506	8629	1.7	26D	-N		V						
LOCA	03	1046	1114	1102	S22	W20	.454	8629	1.9	28	1N		V	1102	2.10	2.40			H
CATA	03	1050E	1100D	1055	S22	W25	.510	8629	1.6	10D	-N			1055	1.00	1.20		186	
GRP 2437	03	1051	1110	1058	S26	W15	.453	8629	2.3	19	1-								1 1 0
AROS	03	1051	1110	1058	S26	W15	.453	8629	2.3	19	-N		V						
GRP 2438	03	1112	1121	1114	S18	E38	.643	8632	6.3	9	1-				.50				2 2 1
ATHN	03	1109	1122	1112	S19	E38	.647	8632	6.3	13	-N	2		1112	.50	.70	1.70		
AROS	03	1114	1120	1115	S17	E37	.627	8632	6.2	6	-N		V						
GRP 2439	03	1134	1255	1138	N16	E27	.543	8631	5.5	81	1				1.68				5 4 3
CAPS	03	1131E	1227D		N13	E28	.533	8631	5.6	56D	1B	1							
ATHN	03	1132	1210D	1138	N16	E25	.520	8631	5.4	38D	1N	2		1138	2.97	3.10	1.80		
HUAN	03	1133E	1250	1220	N16	E26	.532	8631	5.4	77D	-N	1	C	1139	1.39	1.46			E
MONT	03	1137E	1300		N17	E28	.563	8631	5.6	83D	1N		C	1140	.83	2.20			O
AROS	03	1140	1145D	1144	N17	E26	.540	8631	5.4	5D	-N		V						
GRP 2440	03	1140	1144		S22	W25	.510	8629	1.6	4	1-				.19				1 1 1
HUAN	03	1140	1144		S22	W25	.510	8629	1.6	4	-F	1	C	1141	.21	.22			D
GRP 2441	03	1154	1202	1157	S22	W25	.510	8629	1.6	8	1-				.45				4 3 3
MONT	03	1154	1200	1156	S22	W25	.510	8629	1.6	6	-B		C	1156	.41	1.00			OT
HUAN	03	1154	1203	1157	S22	W25	.510	8629	1.6	9	-N	1	C	1157	.31	.32			D
ATHN	03	1155	1202	1157	S23	W24	.507	8629	1.7	7	-N	2		1157	.66	.70	1.70		
CAPS	03	1158E	1159D		S21	W24	.490	8629	1.7	1D	-N	1							
GRP 2442	03	1202	1208	1204	S25	W15	.440	8629	2.4	6	1-				.45				4 4 3
ATHN	03	1201	1207	1204	S26	W16	.461	8629	2.3	6	-N	1		1204	.66	.70	1.60		
MONT	03	1202	1205D		S26	W14	.445	8629	2.5	3D	-N		C	1205	.41	1.00			OT
HUAN	03	1202	1208	1203	S25	W16	.449	8629	2.3	6	-N	2	C	1203	.31	.32			E
CAPS	03	1204E	1205D		S21	W15	.391	8629	2.4	1D	-N	1							E
GRP 2443	03	1218	1222	1220	S23	W22	.486	8629	1.9	4	1-				.41				1 1 1
MONT	03	1218	1222	1220	S23	W22	.486	8629	1.9	4	-B		C	1220	.41	1.00			OTH

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2444	03	1322	1355	1320	S23	W25	.519	8629	1.7	33	1-				.78				4 2 2
MONT	03	1315	1400	1320	S23	W22	.486	8629	1.9	45	-B		C	1320	.77	1.90			OTH
HUAN	03	1316	1352	1318	S22	W27	.533	8629	1.5	36	-F	2	C	1318	.88	.92			E
ATHN	03	1336	1345D	1337	S23	W25	.519	8629	1.7	9D	-N	2		1337	.99	1.10	1.60		
WEND	03	1336E	1352		S23	W26	.530	8629	1.6	16D	1N		P		4.13				
GRP 2445	03	1333	1357	1336	N14	W16	.398	8628	2.4	24	1-				1.75				4 4 4
CAPS	03	1332E	1349D		N14	W13	.367	8628	2.6	17D	-F	3		1337	1.20	1.30		157	
HUAN	03	1332	1358	1336	N15	W17	.420	8628	2.3	26	-N	2	C	1336	.83	.83			E
ATHN	03	1334	1345D	1336	N14	W17	.409	8628	2.3	11D	-N	2		1336	1.49	1.60	1.70		
WEND	03	1336E	1356		N14	W18	.420	8628	2.2	20D	1F		P		6.19				
GRP 2446	03	1352	1359	1352	S24	W16	.436	8629	2.4	7	1-				.71				4 3 3
LOCA	03	1350E	1400	1350	S25	W16	.449	8629	2.4	10D	-N		V	1350	.63	.70			
HUAN	03	1351	1358	1354	S24	W17	.446	8629	2.3	7	-B	2	C	1354	.36	.37			D
WEND	03	1352	1400		S24	W16	.436	8629	2.4	8	1F				3.09				
CAPS	03	1353	1358		S24	W15	.428	8629	2.5	5	-N	3		1355	.50	.60		176	
GRP 2447	03	1416	1430	1420	S23	W26	.530	8629	1.6	14	1-				.45				2 2 2
HUAN	03	1416	1428	1419	S22	W27	.533	8629	1.6	12	-N	2	C	1419	.25	.26			D
ATHN	03	1420E	1431	1420	S23	W25	.519	8629	1.7	11D	-N	2		1420	.66	.70	1.60		
GRP 2448	03	1431	1449	1434	S26	W17	.470	8629	2.3	18	1-				1.20				4 4 4
ATHN	03	1430	1444	1434	S25	W17	.458	8629	2.3	14	-N	2		1434	.99	1.10	1.60		
LOCA	03	1431	1441	1433	S25	W16	.449	8629	2.4	10	-N		V	1433	.55	.60			
SACP	03	1431	1510	1435A	S26	W18	.478	8629	2.3	39	1N		C		2.94	3.01			
HUAN	03	1432	1440	1434	S26	W17	.470	8629	2.3	8	-N	2	C	1434	.70	.72			E
GRP 2449	03	1442	1453	1445	S24	W24	.517	8629	1.8	11	1-				.68				2 1 1
HUAN	03	1438	1453	1440	S24	W24	.517	8629	1.8	15	-F	1	C	1440	.75	.78			E
ATHN	03	1446	1450D	1449	S24	W23	.506	8629	1.9	4D	-N	2		1449	.50	.50	1.70		
GRP 2450	03	1459	1522		N17	W85	.998	8625	28.2	23	1				.39				1 1 1
HUAN	03	1459	1522		N17	W85	.998	8625	28.2	23	-F	1	C	1506	.62				
GRP 2451	03	1657	1700		N15	W17	.420	8628	2.4	3	1-				.37				1 1 1
HUAN	03	1657	1700D		N15	W17	.420	8628	2.4	3D	-F	1	P	1659	.41	.42			E
GRP 2452	03	1726	1816	1755	S21	W28	.538	8629	1.6	50	1+				2.50				3 3 3
LOCK	03	1705	1820	1755	S20	W28	.530	8629	1.6	75	1N		C	1755	2.80	3.40		20	H
SACP	03	1734	1811	1754	S21	W28	.538	8629	1.6	37	1B		C		3.35	3.52			
HUAN	03	1738	1753D	A	S21	W27	.526	8629	1.7	15D	1N			1753	1.24	1.30			
GRP 2453	03	1745	1752	1747	S22	E33	.603	8632	6.2	7	1-				.40				1 1 1
LOCK	03	1745	1752	1747	S22	E33	.603	8632	6.2	7	-F		C	1747	.40	.50		10	
GRP 2454	03	1805	1809	1807	N22	W81	.992	8625	28.7	4	1-				.16				1 1 1
LOCK	03	1805	1809	1807	N22	W81	.992	8625	28.7	4	-F		C	1807	.20	.70		10	
GRP 2455	03	1805	1953	1852	N15	W86	.999	8625	28.3	108	1-				1.10				1 1 1
LOCK	03	1805	1953	1852	N15	W86	.999	8625	28.3	108	1F		C	1852	1.20	4.80		10	
GRP 2456	03	1826	1908	1853	N30	E81	.994	8637	9.8	42	1-				.81				2 2 2
LOCK	03	1820	1910	1853	N29	E82	.996	8637	9.9	50	1N		C	1853	.90	3.10		20	
SACP	03	1832	1905	1842	N31	E79	.991	8637	9.7	33	-N		C		.90				
GRP 2457	03	1910	2000	1915	S18	W30	.543	8629	1.5	50	1-				.94				1 1 1
LOCK	03	1910	2000	1915	S18	W30	.543	8629	1.5	50	-F		C	1915	.90	1.10		10	H
GRP 2458	03	2056	2141	2113	S20	W31	.567	8629	1.5	45	1-				.81				3 3 3
LOCK	03	2042	2130	2051	S18	W30	.543	8629	1.6	48	-N		C	2115	1.00	1.20		20	H
SACP	03	2102	2157	2113	S21	W31	.573	8629	1.6	55	-N		C		.99	1.05			
HALE	03	2105	2137	2122	S20	W32	.580	8629	1.5	32	-N	1	C	2122	.41	.50			
GRP 2459	03	2058	2122	2107	N17	W32	.609	8628	1.5	24	1-				.39				2 2 2
HALE	03	2057	2119	2108	N16	W29	.567	8628	1.7	22	-F	1	C	2108	.31	.40			
LOCK	03	2059	2125	2105	N18	W35	.650	8628	1.2	26	-F		C	2105	.40	.50		10	
GRP 2460	03	2143	2212	2153	S18	W30	.543	8629	1.7	29	1-				1.05				1 1 1
LOCK	03	2143	2212	2153	S18	W30	.543	8629	1.7	29	-F		C	2153	1.00	1.20		10	H
GRP 2461	03	2330	0010	2332	S21	W32	.585	8629	1.6	40	2				4.80				3 1 1
LOCK	03	2305	0015D	2332	S20	W31	.567	8629	1.6	70D	2F		C	2332	4.00	5.20		10	H
MITK	03	2354	0015	2357	S23	W31	.587	8629	1.7	21	-N		C	2357	.93	1.20			E
MANI	03	2355E	0000		S21	W33	.597	8629	1.5	5D	-N	1		2358	.62	.77			
GRP 2462	03	2315	2324	2318	N22	E78	.985	8637	9.8	9	1-				.34				1 1 1
LOCK	03	2315	2324	2318	N22	E78	.985	8637	9.8	9	-F		C	2318	.40	1.20		10	
GRP 2463	03	2344	2353	2348	N24	W82	.995	8625	28.8	9	1-				.34				1 1 1
LOCK	03	2344	2353	2348	N24	W82	.995	8625	28.8	9	-F		C	2348	.40	1.40		10	H
GRP 2464	04	0204	0218	0208	S22	W33	.602	8629	1.6	14	1-				2.47				2 1 1
MITK	04	0204	0215	0208	S20	W33	.591	8629	1.6	11	1N		C	0208	3.09	3.90			H
MANI	04	0212E	0220		S24	W32	.604	8629	1.7	8D	-N	2		0214	.93	1.16			
GRP 2465	04	0311	0340	0314	S21	W35	.620	8629	1.5	29	1				1.88				2 2 2
CULG	04	0309	0317D	0314	S19	W35	.610	8629	1.5	8D	-N		P	0314	.41	.50			L
MITK	04	0313	0340	0326	S22	W34	.614	8629	1.6	27	2F		C	0326	4.23	5.40			FH
GRP 2466	04	0355	0412	0400	N15	E20	.454	8631	5.7	17	1-				.62				2 2 2
SIBE	04	0354E	0413D	0401	N14	E20	.444	8631	5.7	19D	-N		C	0401	.95	1.00		88	CD
MITK	04	0355	0410	0358	N16	E19	.454	8631	5.6	15	-N		C	0358	.72	.80			E

SOLAR FLARES

REVISED

JANUARY 1967

OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	— MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2467	04	0622	0622		N15	W26	.524	8628	2.3		1-				.69				1 1 1
MANI	04	0622E	0622D		N15	W26	.524	8628	2.3		-N	2		0622	.77	.89			
GRP 2468	04	0816	0830	0818	S20	W36	.627	8629	1.6	14	1-				.41				1 1 1
MONT	04	0816	0830	0818	S20	W36	.627	8629	1.6	14	-N		C	0818	.41	1.20			OT
GRP 2469	04	0847	0924	0856	S20	W37	.639	8629	1.6	37	1-				1.65				4 4 4
BUCA	04	0845E	0910D		S19	W37	.635	8629	1.6	25D	1N		P	0900	3.32	4.30			
ARCE	04	0845	0940D	0857	S21	W35	.620	8629	1.7	55D	1N		C	0857	1.91	2.50			HC
MONT	04	0850	0925	0855	S20	W36	.627	8629	1.7	35	-B		C	0855	.62	1.60			OTH
ATHN	04	0856E	0907	0856	S21	W38	.655	8629	1.5	11D	-B	2		0856	1.32	1.70	2.00		
GRP 2470	04	0935	0950		N17	W90	1.000	8625	28.6	15	1				.28				1 1 1
ARCE	04	0935E	0950D		N17	W90	1.000	8625	28.6	15D	-F		C	0935	.28	1.60			
GRP 2471	04	1000	1000		N17	W90	1.000	8625	28.7		1				.25				1 1 1
ARCE	04	1000E	1000D		N17	W90	1.000	8625	28.7		-N		C	1000	.25	1.40			
GRP 2472	04	1128	1138	1130	S19	E30	.548	8632	6.7	10	1-				.99				1 1 1
ATHN	04	1128E	1138	1130	S19	E30	.548	8632	6.7	10D	-N	2		1130	.99	1.20	1.60		
GRP 2473	04	1146	1152	1147	S19	E29	.535	8632	6.7	6	1-				.50				1 1 1
ATHN	04	1146	1152	1147	S19	E29	.535	8632	6.7	6	-N	2		1147	.50	.60	1.60		
GRP 2474	04	1147	1159	1150	S20	W38	.651	8629	1.6	12	1-				.55				3 3 3
HUAN	04	1146	1159	1152	S19	W39	.658	8629	1.6	13	-N	2	C	1152	.46	.52			E
MONT	04	1146	1200	1148	S20	W38	.651	8629	1.6	14	-N		C	1148	.41	1.20			OT
ATHN	04	1148	1157	1149	S21	W38	.655	8629	1.6	9	-N	2		1149	.83	1.00	1.50		
GRP 2475	04	1200	1209	1202	S23	W36	.642	8629	1.8	9	1-				.79				3 3 3
HUAN	04	1200	1210	1202	S24	W38	.670	8629	1.7	10	-F	2	C	1202	.77	.88			E
MONT	04	1200	1210	1203	S22	W36	.637	8629	1.8	10	-N		C	1203	.52	1.40			OT
ATHN	04	1201	1206	1202	S24	W33	.615	8629	2.0	5	-F	2		1202	1.16	1.40	1.40		
GRP 2476	04	1222	1228		N05	E28	.488	8633	6.6	6	1-				.53				2 2 2
HUAN	04	1222	1227		N06	E26	.463	8633	6.5	5	-F	1	C	1224	.25	.25			D
ATHN	04	1224E	1228		N04	E29	.498	8633	6.7	4D	-N	2		1224	.83	.90	1.40		
GRP 2477	04	1319	1342	1325	S18	E22	.439	8632	6.2	23	1-				.65				3 3 3
HUAN	04	1316	1345	1324	S18	E21	.427	8632	6.1	29	-N	2	C	1324	.25	.25			D
ATHN	04	1318E	1334D		S19	E23	.460	8632	6.3	16D	-B	1		1323	1.16	1.30	2.00		
LOCA	04	1322	1339	1326	S17	E21	.418	8632	6.1	17	-N		V	1326	.63	.70			
GRP 2478	04	1339	1357	1344	N16	E11	.378	8631	5.4	18	1-				.90				3 2 3
HUAN	04	1335	1358	1342	N15	E12	.373	8631	5.5	23	-N	2	C	1342	1.08	1.08			E
LOCA	04	1342	1352	1345	N15	E12	.373	8631	5.5	10	-N		V	1345	.85	.90			
UCCL	04	1343E	1401D		N18	E08	.387	8631	5.2	18D	N		P	1357	1.55	2.50			E
GRP 2479	04	1356	1401		N15	W30	.572	8628	2.3	5	1-				.72				1 1 1
UCCL	04	1356	1401D		N15	W30	.572	8628	2.3	5D	-F		P	1357	1.03	1.70			HJ
GRP 2480	04	1402	1412	1406	S20	W40	.674	8629	1.6	10	1-				.43				2 2 2
HUAN	04	1402	1411	1406	S19	W41	.682	8629	1.5	9	-N	2	C	1406	.44	.51			E
MONT	04	1402	1413	1406	S20	W39	.662	8629	1.7	11	-N		C	1406	.46	1.90			OT
GRP 2481	04	1424	1453	1438	S18	E20	.414	8632	6.1	29	1-				.83				2 2 2
SACP	04	1422	1457	1439	S18	E20	.414	8632	6.1	35	-N		C		1.18	1.18			
HUAN	04	1426	1448	1437	S18	E20	.414	8632	6.1	22	-F	2	C	1437	.67	.68			E
GRP 2482	04	1445	1450	1447	S22	W42	.704	8629	1.5	5	1-				.66				1 1 1
HUAN	04	1445	1450	1447	S22	W42	.704	8629	1.5	5	-F	2	C	1447	.75	.88			E
GRP 2483	04	1501	1524	1503	S18	E20	.414	8632	6.1	23	1-				.45				1 1 1
HUAN	04	1501	1524	1503	S18	E20	.414	8632	6.1	23	-F	2	C	1503	.50	.50			E
GRP 2484	04	1528	1538	1532	S22	W36	.637	8629	1.9	10	1-				.61				2 2 2
SACP	04	1527	1540	1532	S22	W36	.637	8629	1.9	13	-F		C		.99	1.10			
HUAN	04	1529	1535	1531	S22	W35	.626	8629	2.0	6	-F	2	C	1531	.36	.40			
GRP 2485	04	1531	1630	1541	N15	E11	.364	8631	5.5	59	1				1.78				3 2 2
SACP	04	1530	1632U	1541A	N16	E11	.378	8631	5.5	62	1N		C		2.16	2.14			
HUAN	04	1531	1622	1540	N15	E11	.364	8631	5.5	51	1F	2	C	1540	1.86	1.86			E
LOCK	04	1555E	1635	1555U	N15	E11	.364	8631	5.5	40D	1F		C	1555	2.00	2.20		10	
GRP 2486	04	1603	1611	1605	S22	W42	.704	8629	1.5	8	1-				.61				1 1 1
LOCK	04	1603	1611	1605	S22	W42	.704	8629	1.5	8	-F		C	1605	.60	.80		10	
GRP 2487	04	1635	1725	1650	N16	W28	.556	8628	2.6	50	1-				.37				2 2 2
LOCK	04	1635	1725	1650	N16	W28	.556	8628	2.6	50	-F		C	1650	.40	.50		10	
HUAN	04	1646E	1701D		N15	W27	.536	8628	2.7	15D	-F	1	P	1648	.37	.39			E
GRP 2488	04	1722	1823	1727	S18	E19	.402	8632	6.1	61	1-				1.28				3 3 3
LOCK	04	1720	1815	1726A	S18	E19	.402	8632	6.1	55	-N		C	1726	1.10	1.20		20	
SACP	04	1723	1830U	1728U	S19	E20	.423	8632	6.2	67U	-N		C		1.82	1.82			
HUAN	04	1727E	1804D		S18	E19	.402	8632	6.2	37D	-N	1	P	1728	1.13	1.15			E
GRP 2489	04	1733	1744	1738	N15	W31	.585	8628	2.4	11	1-				.50				1 1 1
LOCK	04	1733	1744	1738	N15	W31	.585	8628	2.4	11	-F		C	1738	.50	.60		10	
GRP 2490	04	1815	1830	1824	N16	E14	.404	8631	5.8	15	1-				.61				1 1 1
LOCK	04	1815	1830	1824	N16	E14	.404	8631	5.8	15	-F		C	1824	.60	.70		10	
GRP 2491	04	1822	1845	1830	N35	E82	.997	8637	10.9	23	1-				1.21				1 1 1
LOCK	04	1822	1845	1830	N35	E82	.997	8637	10.9	23	1F		C	1830	1.30	2.70		10	

SOLAR FLARES

REVISED

JANUARY 1967

OBSERV-ATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2492	04	1825	1842	1830	N34	E57	.908	8637	9.0	17	1				1.55				1 1 1
SACP	04	1825	1842	1830	N34	E57	.908	8637	9.0	17	1N		C		1.72	2.86			
GRP 2493	04	1900	1918	1905	N05	E22	.399	8633	6.4	18	1-				.48				2 2 2
LOCK	04	1900	1915	1905	N04	E21	.378	8633	6.4	15	-F		C	1905	.50	.60		10	
SACP	04	1901E	1920	1905U	N05	E22	.399	8633	6.4	19D	-F		C		.50	.49			
GRP 2494	04	2117	2159	2132	S18	E17	.377	8632	6.2	42	1-				.48				4 3 3
SACP	04	2113	2200U	2135U	S18	E18	.389	8632	6.2	47U	-N		C		.50	.49			
LOCK	04	2120	2145	2127	S18	E16	.366	8632	6.1	25	-F		C	2127	.60	.70		10	
CULG	04	2126E	2211	2134	S18	E18	.389	8632	6.2	45D	-N		P	2134	.41	.42			
HUAN	04	2137E	2151D		S17	E17	.367	8632	6.2	14D	-F	1	P	2138	.25	.25			D
GRP 2495	04	2200	2212	2205	S22	W39	.671	8629	2.0	12	1-				.74				4 4 4
CULG	04	2156	2216	2205	S22	W39	.671	8629	2.0	20	-N		C	2205	.52	.65			
LOCK	04	2201	2210	2205	S21	W39	.667	8629	2.0	9	-F		C	2205	1.00	1.40		10	
SACP	04	2202U	2211	2204	S23	W39	.676	8629	2.0	9U	-F		C		.90	1.02			
HUAN	04	2204E	2204D		S22	W39	.671	8629	2.0		-F	1	P	2204	.70	.79			
GRP 2496	04	2246	2311	2250	S17	E15	.343	8632	6.1	25	1-				.85				3 3 3
SACP	04	2245	2320	2250	S17	E15	.343	8632	6.1	35	-N		C		1.40	1.39			
CULG	04	2246	2304	2250	S17	E16	.355	8632	6.1	18	-N		C	2250	.52	.53			
LOCK	04	2247	2308	2251	S17	E15	.343	8632	6.1	21	-F		C	2251	.80	.90		10	
GRP 2497	04	2329	0408	0015	S26	E35	.649	8632	7.6	279	1				2.63				3 2 2
CULG	04	2328	0434D	0135	S25	E35	.643	8632	7.6	306D	2N		P	0135	5.26	6.63			CFLU
LOCK	04	2330	0015D	0015U	S28	E36	.672	8632	7.7	45D	-F		C	0015	.52	.60		10	
MITK	05	0117E	0342		S26	E33	.627	8632	7.5	145D	2F		C	0119	7.12	9.20			BFG
GRP 2498	04	2334	2337	2335	S21	W39	.667	8629	2.1	3	1-				.29				1 1 1
LOCK	04	2334	2337	2335	S21	W39	.667	8629	2.1	3	-F		C	2335	.30	.40		10	
GRP 2499	05	0112	0131	0113	N17	E09	.380	8631	5.7	19	1-				.37				1 1 1
CULG	05	0112	0131	0113	N17	E09	.380	8631	5.7	19	-N		C	0113	.41	.42			
GRP 2500	05	0202	0230	0211	S23	W41	.697	8629	2.0	28	1-				.53				2 2 2
MITK	05	0202	0226	0210	S23	W41	.697	8629	2.0	24	-F		C	0210	.83	1.10			
CULG	05	0202	0233	0212	S22	W41	.693	8629	2.0	31	-N		C	0212	.52	.70			
GRP 2501	05	0440	0505	0445	N16	E03	.337	8631	5.4	25	1-				1.87				1 1 1
MITK	05	0440	0505	0445	N16	E03	.337	8631	5.4	25	1N		C	0445	2.37	2.50			E
	05	0715	0725	NO FLARE PATROL															
GRP 2502	05	1026	1044	1032	S25	W48	.776	8629	1.8	18	1-				1.49				1 1 1
ATHN	05	1026	1044	1032	S25	W48	.776	8629	1.8	18	1N	2		1032	1.49	2.30	1.70		
GRP 2503	05	1027	1034	1031	N20	W55	.856	8628	1.3	7	1+				.72				1 1 1
UCCL	05	1027	1034D	1031	N20	W55	.856	8628	1.3	7D	1B		P	1031	1.03				E
GRP 2504	05	1105	1114	1108	N30	E60	.916	8637	10.0	9	1-				.50				1 1 1
ATHN	05	1105	1114	1108	N30	E60	.916	8637	10.0	9	-N	2		1108	.50	1.30	1.60		
GRP 2505	05	1112	1153	1114	S19	E10	.315	8632	6.2	41	1-				1.16				2 1 1
ATHN	05	1112	1146	1114A	S19	E11	.324	8632	6.3	34	-N	2		1125	1.16	1.20	1.40		
CATA	05	1120E	1200D	1126	S18	E09	.292	8632	6.1	40D	-N			1126	.73	.80		195	
GRP 2506	05	1241	1307	1247	S19	E10	.315	8632	6.3	26	1-				1.49				1 1 1
ATHN	05	1241	1307D	1247	S19	E10	.315	8632	6.3	26D	-F	2		1247	1.49	1.50	1.50		
GRP 2507	05	1256	1300	1258	N05	E13	.267	8633	6.5	4	1-				.50				1 1 1
ATHN	05	1256	1300	1258	N05	E13	.267	8633	6.5	4	-N	2		1258	.50	.50	1.60		
GRP 2508	05	1326	1414	1334	N15	E02	.319	8631	5.7	48	1				2.97				1 1 1
ATHN	05	1326	1414	1334	N15	E02	.319	8631	5.7	48	1N	2		1334	2.97	3.10	1.60		
GRP 2509	05	1423	1430	1425	N15	E41	.702	8638	8.7	7	1-				.50				1 1 1
ATHN	05	1423	1430	1425	N15	E41	.702	8638	8.7	7	-N	2		1425	.50	.90	1.50		
GRP 2510	05	1512	1527	1515	N33	E48	.850	8637	9.2	15	1-				.91				1 1 1
MCMA	05	1512	1527	1515	N33	E48	.850	8637	9.2	15	-N		C	1515	.62	1.20			E
GRP 2511	05	1558	1618	1605	N33	E48	.850	8637	9.3	20	1-				.61				2 2 2
SACP	05	1555	1620	1605	N33	E47	.843	8637	9.2	25	-F		C		.50	.69			
MCMA	05	1600	1616	1605	N33	E48	.850	8637	9.3	16	-N		C	1605	.52	1.00			E
GRP 2512	05	1628	1653	1634	N33	E48	.850	8637	9.3	25	1-				1.09				2 2 2
SACP	05	1625	1652	1634U	N33	E47	.843	8637	9.2	27	-N		C		1.23	1.73			
MCMA	05	1631	1653D	1634	N33	E48	.850	8637	9.3	22D	-N		C	1634	.72	1.40			E
GRP 2513	05	1647	1700		N15	W42	.713	8628	2.5	13	1-				.87				1 1 1
MCMA	05	1647	1700		N15	W42	.713	8628	2.5	13	-N		C	1653	.62	.90			E
GRP 2514	05	1716	1732	1724	N33	E46	.836	8637	9.2	16	1-				1.05				3 3 3
SACP	05	1715	1732	1724	N33	E46	.836	8637	9.2	17	-F		C		1.47	2.05			
MCMA	05	1717	1730	1724	N33	E47	.843	8637	9.2	13	-N		C	1724	.83	1.60			EV
HALE	05	1717	1735	1724	N33	E44	.822	8637	9.0	18	-N	1	C	1724	.52	.90			
GRP 2515	05	1918	1935	1925	S23	W42	.708	8629	2.7	17	1-				.37				1 1 1
HALE	05	1918	1935	1925	S23	W42	.708	8629	2.7	17	-F	1	C	1925	.31	.40			
	05	2000	2015	NO FLARE PATROL															
GRP 2516	05	2020	2028	2023	S18	E02	.253	8632	6.0	8	1-				.37				1 1 1
HALE	05	2020	2028D	2023	S18	E02	.253	8632	6.0	8D	-N	1	P	2023	.31	.31			
	05	2030	2050	NO FLARE PATROL															

SOLAR FLARES

REVISED

JANUARY 1967

OBSERV-ATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2517	05	2050	2105	2053	N16	W45	.750	8628	2.5	15	1-				.19				1 1 1
CULG	05	2050E	2105	2053	N16	W45	.750	8628	2.5	15D	-N		P	2053	.21	.30			
GRP 2518	05	2134	2201	2140	N16	W06	.348	8631	5.4	27	1-				.54				4 3 3
SACP	05	2129E	2145D	2132U	N15	W07	.338	8631	5.4	16D	-N		C		.73	.72			
LOCK	05	2130E	2200	2140	N15	W07	.338	8631	5.4	30D	-F		C	2140	.50	.60		10	
CULG	05	2137E	2203	2140	N17	W05	.359	8631	5.5	26D	-N		P	2140	.52	.53			L
HALE	05	2141U	2159	2141	N16	W04	.340	8631	5.6	18U	-N	1	P	2141	.31	.31			
GRP 2519	05	2203	2237		N24	E50	.827	8637	9.7	34	1-				.42				1 1 1
HUAN	05	2203E	2237		N24	E50	.827	8637	9.7	34D	-F	1	C	2210	.50	.70			D
GRP 2520	05	2240	2307	2248	S25	E04	.373	8632	6.2	27	1-				.71				1 1 1
LOCK	05	2240	2307	2248	S25	E04	.373	8632	6.2	27	-F		C	2248	.70	.80		10	
GRP 2521	06	0200	0210	0202	S22	W52	.805	8629	2.2	10	1-				.31				1 1 1
MANI	06	0200	0210	0202	S22	W52	.805	8629	2.2	10	-F	2		0202	.36	.59			
GRP 2522	06	0239	0310	0248	S22	W53	.814	8629	2.1	31	1-				.51				2 2 2
CULG	06	0239	0310	0248	S22	W54	.824	8629	2.1	31	-N		C	0248	.62	1.02			
MANI	06	0246E	0249D		S21	W52	.803	8629	2.2	3D	-N	2		0247	.52	.85			
GRP 2523	06	0310	0322	0316	N23	E47	.798	8639	9.7	12	1-				.25				1 1 1
HALE	06	0310	0322	0316U	N23	E47	.798	8639	9.7	12	-N	1	C	0316	.21	.30			
GRP 2524	06	0316	0332	0322	S21	W53	.812	8629	2.2	16	1-				.33				2 2 2
CULG	06	0315	0330	0322	S21	W54	.822	8629	2.1	15	-N		C	0322	.31	.51			
HALE	06	0317	0333	0322	S20	W51	.791	8629	2.3	16	-N	1	C	0322	.31	.50			
GRP 2525	06	0343	0349	0344	S19	E01	.266	8632	6.2	6	1-				.49				1 1 1
HALE	06	0343	0349D	0344	S19	E01	.266	8632	6.2	6D	-B	1	P	0344	.41	.42			
GRP 2526	06	0356	0427	0406	S20	W55	.829	8629	2.0	31	1-				.19				1 1 1
CULG	06	0356	0427	0406	S20	W55	.829	8629	2.0	31	-N		C	0406	.21	.34			
GRP 2527	06	0439	0456	0440	S20	W56	.838	8629	2.0	17	1-				.28				1 1 1
CULG	06	0439	0456	0440	S20	W56	.838	8629	2.0	17	-N		C	0440	.31	.51			
GRP 2528	06	0445	0500	0450	N15	W09	.352	8631	5.5	15	1-				.47				1 1 1
CULG	06	0445	0500D	0450	N15	W09	.352	8631	5.5	15D	-B		P	0450	.52	.53			
	06	0505	0535	NO FLARE PATROL															
	06	0715	0735	NO FLARE PATROL															
	06	0850	0855	NO FLARE PATROL															
	06	0900	0950	NO FLARE PATROL															
GRP 2529	06	1237	1249	1239	S23	W61	.883	8629	2.0	12	1-				.55				1 1 1
HUAN	06	1237	1249	1239	S23	W61	.883	8629	2.0	12	-F	2	C	1239	.70	1.12			E
GRP 2530	06	1404	1428		S20	W66	.915	8629	1.6	24	1-				.20				1 1 1
HUAN	06	1404	1428		S20	W66	.915	8629	1.6	24	-F	1	C	1410	.25	.41			D
GRP 2531	06	1515	1526		S24	W64	.905	8629	1.8	11	1-				.20				1 1 1
HUAN	06	1515	1526		S24	W64	.905	8629	1.8	11	-F	1	C	1520	.25	.41			D
GRP 2532	06	1551	1558		S23	W64	.904	8629	1.9	7	1-				.29				1 1 1
HUAN	06	1551	1558		S23	W64	.904	8629	1.9	7	-N	1	C	1553	.36	.58			D
GRP 2533	06	1722	1727	1723	S23	W65	.911	8629	1.8	5	1-				.12				1 1 1
HALE	06	1722	1727	1723	S23	W65	.911	8629	1.8	5	-F	1	C	1723	.10				
GRP 2534	06	1740	1745		S25	W70	.942	8629	1.5	5	1-				.19				1 1 1
HUAN	06	1740	1745		S25	W70	.942	8629	1.5	5	-F	1	C	1741	.25				D
GRP 2535	06	1825	1847	1827	N32	E38	.773	8637	9.6	22	1-				.37				1 1 1
HALE	06	1825	1847	1827	N32	E38	.773	8637	9.6	22	-N	1	C	1827	.31	.50			F
GRP 2536	06	2005	2035	2011	N19	W14	.445	8631	5.8	30	1-				.61				1 1 1
LOCK	06	2005	2035	2011	N19	W14	.445	8631	5.8	30	-F		C	2011	.60	.70		10	
GRP 2537	06	2012	2026	2015	S16	W08	.254	8632	6.2	14	1-				.27				2 2 2
HALE	06	2012	2025	2014	S16	W07	.245	8632	6.3	13	-B	1	C	2014	.21	.21			
LOCK	06	2012	2027	2016	S16	W08	.254	8632	6.2	15	-F		C	2016	.30	.32		10	
GRP 2538	06	2039	2119	2048	S20	W08	.312	8632	6.3	40	1-				1.18				3 3 3
CULG	06	2038	2110D	2048	S20	W09	.319	8632	6.2	32D	-N		P	2048	.72	.74			
LOCK	06	2039	2117	2050	S20	W08	.312	8632	6.3	38	-N		C	2050	1.50	1.70		20	
HALE	06	2040	2120	2046	S20	W08	.312	8632	6.3	40	-B	1	C	2046	1.03	1.10			
GRP 2539	06	2055	2110	2056	N14	W60	.883	8628	2.4	15	1-				.25				1 1 1
HALE	06	2055	2110	2056	N14	W60	.883	8628	2.4	15	-N	1	C	2056	.21	.40			
GRP 2540	06	2208	2230	2214	S20	W09	.319	8632	6.2	22	1-				.75				3 3 3
CULG	06	2206	2221D	2214	S21	W09	.334	8632	6.2	15D	-N		P	2214	.52	.53			
LOCK	06	2209	2225	2214	S20	W08	.312	8632	6.3	16	-F		C	2214	1.00	1.10		10	
HALE	06	2209	2235	2215	S20	W09	.319	8632	6.2	26	-N	1	C	2215	.62	.70			
GRP 2541	06	0004	0024	0011	S18	W12	.319	8632	6.1	20	1-				.73				3 3 3
LOCK	06	2359	0020D	0012U	S17	W11	.296	8632	6.2	21D	-N		C	0012	1.20	1.30		20	
HALE	07	0009	0025	0010	S18	W12	.318	8632	6.1	16	-N	1	C	0010	.26	.30			
MANI	07	0010E	0023		S20	W14	.363	8632	6.0	13D	-N	1		0012	.67	.72			
GRP 2542	07	0018	0041	0023	S22	W67	.923	8629	2.0	23	1-				.61				3 3 3
MANI	07	0015	0034	0021	S22	W68	.929	8629	1.9	19	-F	1		0021	.77	1.75			
MITK	07	0019	0042	0032	S22	W68	.929	8629	1.9	23	1F		C	0032	1.24				E
HALE	07	0020	0048	0024	S23	W66	.917	8629	2.1	28	-N	1	C	0024	.26				

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2543	07	0057	0128	0105	N29	E38	.754	8637	9.9	31	1-				.91				2 2 2
MITK	07	0054	0129	0105	N29	E37	.746	8637	9.8	35	1F		C	0105	1.75	2.70			E
HALE	07	0100	0127	0105	N29	E39	.762	8637	10.0	27	-N	2	C	0105	.46	.70			
GRP 2544	07	0242	0257	0246	S20	W11	.334	8632	6.3	15	1-				.37				1 1 1
HALE	07	0242	0257	0246	S20	W11	.334	8632	6.3	15	-F	1	C	0246	.31	.32			
GRP 2545	07	0418	0431	0423	N22	E30	.629	8639	9.4	13	1-				.65				1 1 1
MITK	07	0418	0431	0423	N22	E30	.629	8639	9.4	13	-F		C	0423	.93	1.20			E
GRP 2546	07	0542	0627	0553	S25	W77	.973	8629	1.5	45	1+				1.12				2 2 2
MITK	07	0535	0600D	0552	S26	W79	.980	8629	1.3	25D	2F		C	0552	1.96				H
MANI	07	0549	0627	0553	S23	W75	.965	8629	1.6	38	1N	1		0553	.93	2.20			
GRP 2547	07	0715	0752	0722	N23	E31	.647	8639	9.6	37	1-				.75				2 1 1.
MANI	07	0715E	0752	0722	N22	E29	.619	8639	9.5	37D	-N	2		0722	.83	1.06			
KAND	07	0728E	0732D		N23	E32	.657	8639	9.7	4D									
	07	0910	0925	NO FLARE PATROL															
	07	0935	0940	NO FLARE PATROL															
	07	0945	1000	NO FLARE PATROL															
	07	1215	1250	NO FLARE PATROL															
	07	1255	1315	NO FLARE PATROL															
	07	1320	1345	NO FLARE PATROL															
	07	1410	1500	NO FLARE PATROL															
	07	1555	1620	NO FLARE PATROL															
GRP 2548	07	1719	1735	1723	N17	W29	.578	8631	5.5	16	1-				.63				3 3 3
LOCK	07	1715U	1735	1723	N19	W29	.594	8631	5.5	20U	-N		C	1723	.80	1.00		20	
MCMA	07	1720	1731	1724	N16	W30	.582	8631	5.5	11	-N		C	1724	.41	.50			E
HALE	07	1721	1740	1723	N17	W29	.578	8631	5.5	19	-B	2	C	1723	.41	.50			
GRP 2549	07	1950	2020	2003	N21	E22	.541	8639	9.5	30	1-				.94				1 1 1
LOCK	07	1950	2020	2003	N21	E22	.541	8639	9.5	30	-F		C	2003	.90	1.10		10	
GRP 2550	07	2116	2131	2121	N22	E24	.571	8639	9.7	15	1-				.83				2 2 2
LOCK	07	2115	2131	2119	N21	E22	.541	8639	9.5	16	-F		C	2119	1.20	1.40		10	
HALE	07	2117	2131	2123	N23	E25	.590	8639	9.8	14	-B	2	C	2123	.31	.40			
GRP 2551	07	2140	2152	2145	S26	W89	.999	8629	1.2	12	1-				.81				2 1 2
LOCK	07	2139	2150	2145	S26	W90	1.000	8629	1.2	11	1F		C	2145	1.10	4.40		10	H
HALE	07	2140	2154	2144	S25	W88	.998	8629	1.3	14	-B	1	C	2144	.52				H
GRP 2552	07	2200	2210	2204	N21	E22	.541	8639	9.6	10	1-				.94				1 1 1
LOCK	07	2200	2210	2204	N21	E22	.541	8639	9.6	10	-F		C	2204	.90	1.10		10	
GRP 2553	07	2240	2253	2242	N24	E24	.591	8639	9.7	13	1-				1.06				3 3 3
HALE	07	2240	2252	2241	N24	E24	.591	8639	9.7	12	-B	1	C	2241	.41	.50			
LOCK	07	2240	2253	2243	N22	E23	.561	8639	9.7	13	-N		C	2243	1.30	1.60		20	
SACP	07	2240	2255	2243	N25	E25	.610	8639	9.8	15	-F		C		1.44	1.58			
GRP 2554	07	2258	2303	2300	S24	W83	.991	8629	1.7	5	1-				.25				1 1 1
LOCK	07	2258	2303	2300	S24	W83	.991	8629	1.7	5	-F		C	2300	.30	1.00		10	
GRP 2555	08	0028	0050	0036	N23	E22	.564	8639	9.7	22	1-				.37				1 1 1
HALE	08	0028	0050	0036	N23	E22	.564	8639	9.7	22	-N	1	C	0036	.31	.40			
GRP 2556	08	0051	0108	0054	N23	E20	.547	8639	9.5	17	1-				1.00				1 1 1
HALE	08	0051	0108	0054	N23	E20	.547	8639	9.5	17	-N	1	C	0054	.83	1.00			E
GRP 2557	08	0200	0210	0203	N23	E21	.555	8639	9.7	10	1-				.31				1 1 1
HALE	08	0200	0210	0203	N23	E21	.555	8639	9.7	10	-N	1	C	0203	.26	.30			
GRP 2558	08	0313	0332	0318	S17	W90	1.000	8629	1.4	19	1-				.19				1 1 1
CULG	08	0313	0332	0318	S17	W90	1.000	8629	1.4	19	-N		C	0318	.21				
GRP 2559	08	0318	0336	0325	N23	E21	.555	8639	9.7	18	1-				.67				3 3 3
CULG	08	0317	0338	0323	N22	E22	.553	8639	9.8	21	-N		C	0323	.31	.36			L
MITK	08	0318	0333	0324	N23	E21	.555	8639	9.7	15	-F		C	0324	1.34	1.60			E
HALE	08	0319	0336	0328	N23	E21	.555	8639	9.7	17	-N	1	C	0328	.67	.80			
GRP 2560	08	0455	0526		S21	E28	.533	8632	10.3	31	1-				.28				1 1 1
CULG	08	0455	0526		S21	E28	.533	8632	10.3	31	-N		C		.31	.35			FK
GRP 2561	08	0513	0528	0519	S24	W90	1.000	8629	1.5	15	1-				.28				1 1 1
CULG	08	0513	0528	0519	S24	W90	1.000	8629	1.5	15	-N		C	0519	.31				
GRP 2562	08	0523	0535	0528	N28	E21	.611	8637	9.8	12	1-				.30				2 2 2
CULG	08	0523	0538	0527	N29	E19	.609	8637	9.6	15	-B		C	0527	.41	.50			
MANI	08	0526E	0531	0528	N27	E22	.608	8637	9.9	5D	-F	2		0528	.26	.35			
GRP 2563	08	0548	0557	0550	N24	E20	.558	8639	9.7	9	1-				.56				2 2 2
MITK	08	0548	0555	0550	N25	E20	.570	8639	9.7	7	-N		C	0550	.93	1.10			
CULG	08	0548	0558	0550	N23	E20	.547	8639	9.7	10	-B		C	0550	.52	.60			
GRP 2564	08	0718	0722	0718	N22	E18	.519	8639	9.7	4	1-				.66				1 1 1
ATHN	08	0718E	0722D	0718	N22	E18	.519	8639	9.7	4D	-N	2		0718	.66	.80	1.90		
GRP 2565	08	0754	0759	0755	N22	E18	.519	8639	9.7	5	1-				.66				1 1 1
ATHN	08	0754	0759	0755	N22	E18	.519	8639	9.7	5	-N	2		0755	.66	.80	1.80		
GRP 2566	08	0836	0842	0837	N23	E18	.531	8639	9.7	6	1-				.33				1 1 1
ATHN	08	0836	0842	0837	N23	E18	.531	8639	9.7	6	-N	2		0837	.33	.40	1.90		
GRP 2567	08	1130	1140	1133	N26	E20	.581	8637	10.0	10	1-				.83				2 2 1
ATHN	08	1130	1142	1133	N24	E21	.567	8637	10.1	12	-N	2		1133	.83	1.00	1.90		
ONDR	08	1132E	1138		N27	E18	.579	8637	9.8	6D	-N		V	1133			2.80		CDHT

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION McMATH PLAGE REGION	LOCATION CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2568	08	1150	1200	1152	N24	E14	.514	8639	9.5	10	1-				1.09				1 1 1
CATA	08	1150E	1200D	1152	N24	E14	.514	8639	9.5	10D	-N			1152	1.09	1.30		182	
GRP 2569	08	1255	1318		N22	E13	.481	8639	9.5	23	1-				.93				1 1 1
HUAN	08	1255E	1318		N22	E13	.481	8639	9.5	23D	-N	1	P	1256	1.03	1.06			E
GRP 2570	08	1323	1325		S22	W84	.993	8629	2.3	2	1				.17				1 1 1
HUAN	08	1323	1325D		S22	W84	.993	8629	2.3	2D	-N	1	P	1324	.25				D
GRP 2571	08	1423	1437		S23	W90	1.000	8629	1.8	14	1				.14				1 1 1
HUAN	08	1423	1437		S23	W90	1.000	8629	1.8	14	-F	1	C	1430	.21				D
GRP 2572	08	1601	1619	1605	N22	E64	.925	8643	13.5	18	1-				.45				1 1 1
SACP	08	1601	1619	1605	N22	E64	.925	8643	13.5	18	-F		C		.50	.86			
GRP 2573	08	1603	1612	1605	S28	W12	.450	8632	7.8	9	1-				.88				2 2 2
SACP	08	1603	1611	1605	S28	W12	.450	8632	7.8	8	-N		C		.90	.91			
LOCK	08	1604E	1613	1605	S28	W11	.444	8632	7.8	9D	-N		C	1605	.90	1.00		20	
GRP 2574	08	1701	1727	1705	N20	E16	.477	8639	9.9	26	1-				.82				1 1 1
LOCK	08	1701	1727	1705	N20	E16	.477	8639	9.9	26	-F		C	1705	.80	.90		10	L
GRP 2575	08	1749	1822	1758	N22	E12	.475	8639	9.6	33	1				1.73				4 3 3
SACP	08	1744	1821	1759	N22	E12	.475	8639	9.6	37	1N		C		2.37	2.43			
LOCK	08	1745	1830	1755	N21	E11	.455	8639	9.6	45	1N		C	1755	2.20	2.40		20	
HALE	08	1758	1814	1801	N25	E14	.528	8639	9.8	16	-N	2	C	1801	.41	.50			
HUAN	08	1810E	1815D		N21	E12	.461	8639	9.7	5D	-F	1	P	1811	1.01	1.03			E
GRP 2576	08	1855	1916	1902	N26	E12	.530	8637	9.7	21	1-				.71				1 1 1
LOCK	08	1855	1916	1902	N26	E12	.530	8637	9.7	21	-F		C	1902	.70	.80		10	
GRP 2577	08	1908	1917	1910	N17	W33	.625	8631	6.3	9	1-				.50				1 1 1
LOCK	08	1908	1917	1910	N17	W33	.625	8631	6.3	9	-F		C	1910	.50	.70		10	
GRP 2578	08	2138	2151	2141	S23	W89	.999	8629	2.2	13	1-				.37				2 2 2
CULG	08	2137	2155	2140	S22	W90	1.000	8629	2.2	18	-N		C	2140	.41				
SACP	08	2138	2147	2141	S23	W88	.998	8629	2.3	9	-F		C		.41				
GRP 2579	08	2157	2211	2200	N25	E13	.522	8637	9.9	14	1-				.60				4 4 4
LOCK	08	2155	2220	2200	N24	E13	.508	8637	9.9	25	-N		C	2200	.90	1.10		20	
HALE	08	2157	2204	2159	N25	E13	.522	8637	9.9	7	-N	1	C	2159	.41	.50			
CULG	08	2157	2207	2200	N25	E12	.516	8637	9.8	10	-N		C	2200	.41	.46			
SACP	08	2157	2211	2200	N25	E12	.516	8637	9.8	14	-N		C		.66	.68			
GRP 2580	08	2257	2312	2300	N22	E09	.458	8639	9.6	15	1-				.71				1 1 1
LOCK	08	2257	2312	2300	N22	E09	.458	8639	9.6	15	-F		C	2300	.70	.80		10	
GRP 2581	08	2322	2349	2326	N17	W34	.636	8631	6.4	27	1-				.28				1 1 1
CULG	08	2322	2349	2326	N17	W34	.636	8631	6.4	27	-N		C	2326	.31	.39			
GRP 2582	09	0040	0045	0042	N23	E03	.455	8639	9.3	5	1-				.22				2 2 2
HALE	09	0039	0044	0042	N23	E03	.455	8639	9.3	5	-N	1	C	0042	.21	.21			
CULG	09	0040	0045	0042	N22	E03	.440	8639	9.3	5	-N		C	0042	.21	.22			
GRP 2583	09	0125	0132	0129	S22	W89	.999	8629	2.4	7	1-				.28				2 1 2
HALE	09	0125	0130	0128	S21	W88	.998	8629	2.5	5	-N	2	C	0128	.31				
CULG	09	0125	0134	0129	S22	W90	1.000	8629	2.3	9	-N		C	0129	.21				
GRP 2584	09	0133	0139	0135	N23	E03	.455	8639	9.3	6	1-				.25				1 1 1
HALE	09	0133	0139	0135	N23	E03	.455	8639	9.3	6	-B	1	C	0135	.21	.21			
GRP 2585	09	0156	0203	0158	N23	E07	.466	8639	9.6	7	1-				.37				1 1 1
HALE	09	0156	0203	0158	N23	E07	.466	8639	9.6	7	-N	1	C	0158	.31	.31			
GRP 2586	09	0252	0351	0258	N14	W14	.385	8638	8.1	59	1-				.25				1 1 1.
HALE	09	0252	0351D	0258	N14	W14	.385	8638	8.1	59D	-B	1	P	0258	.21	.21			
GRP 2587	09	0339	0354	0342	N30	E06	.565	8637	9.6	15	1-				.44				3 3 3
CULG	09	0336	0405	0343	N30	E07	.567	8637	9.7	29	-B		C	0343	.52	.60			L
MITK	09	0340	0348	0342	N30	E05	.563	8637	9.5	8	-N		C	0342	.52	.60			E
HALE	09	0341	0349	0342	N30	E07	.567	8637	9.7	8	-N	1	C	0342	.41	.50			
GRP 2588	09	0415	0432	0417	N32	E03	.588	8637	9.4	17	1-				.37				1 1 1
CULG	09	0415	0432	0417	N32	E03	.588	8637	9.4	17	-N		C	0417	.41	.48			
GRP 2589	09	0451	0501	0452	S29	W90	.999	8629	2.5	10	1-				.19				1 1 1
CULG	09	0451	0501	0452	S29	W90	.999	8629	2.5	10	-N		C	0452	.21				
GRP 2590	09	0502	0542	0509	N23	E62	.915	8644	13.9	40	1-				.28				1 1 1
CULG	09	0502	0542	0509	N23	E62	.915	8644	13.9	40	-F		C	0509	.31	.68			FL
GRP 2591	09	0523	0755	0706	N27	E58	.898	8644	13.6	152	1-				1.49				1 1 1
CULG	09	0523E	0755D	0706	N27	E58	.898	8644	13.6	152D	-N		P	0706	1.65	2.88			FL
GRP 2592	09	0701	0714	0703	N19	W50	.812	8631	5.5	13	1-				.66				1 1 1
ATHN	09	0701	0714	0703	N19	W50	.812	8631	5.5	13	-N	2		0703	.66	1.10	1.70		
GRP 2593	09	0910	0927	0910	N21	W53	.844	8631	5.4	17	1-				.46				2 2 1
ARCE	09	0910	0923	0910	N20	W52	.833	8631	5.5	13	-N		C	0910	.46	.80			
KAND	09	0910	0930		N21	W54	.852	8631	5.3	20	-N								
GRP 2594	09	1010	1020	1015	N14	W18	.427	8638	8.1	10	1-				.46				1 1 1
CATA	09	1010E	1020D	1015	N14	W18	.427	8638	8.1	10D	-N			1015	.46	.50		155	
GRP 2595	09	1010	1020	1015	N23	E03	.455	8639	9.6	10	1-				.33				1 1 1
CATA	09	1010E	1020D	1015	N23	E03	.455	8639	9.6	10D	-N			1015	.33	.40		155	
GRP 2596	09	1057	1110	1059	S19	W43	.702	8632	6.2	13	1-				.72				1 1 1
ATHN	09	1057	1110	1059	S19	W43	.702	8632	6.2	13	-N	2		1059	.72	1.00	1.50		

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2597	09	1150	1214	1158	N23	E02	.454	8639	9.6	24	1-				1.23				3 3 3
WEND	09	1150E	1215		N22	E01	.437	8639	9.6	25D	1N				4.13				
CATA	09	1157E	1200D	1158	N24	E02	.469	8639	9.6	3D	-N			1158	1.00	1.60		186	
ATHN	09	1158E	1212	1158	N22	E03	.440	8639	9.7	14D	-N	2		1158	1.05	1.20	1.40		
GRP 2598	09	1721	1730	1725	N18	W60	.891	8631	5.2	9	1-				.25				1 1 1
HALE	09	1721	1730	1725	N18	W60	.891	8631	5.2	9	-N	2	C	1725	.21	.50			
GRP 2599	09	1738	1746	1741	S26	W90	1.000	8629	3.0	8	1-				.33				1 1 1
LOCK	09	1738	1746	1741	S26	W90	1.000	8629	3.0	8	-F		C	1741	.40	1.60		10	H
GRP 2600	09	1825	1839	1830	N30	W05	.563	8637	9.4	14	1-				.64				3 3 3
HALE	09	1825	1841	1830	N29	W05	.548	8637	9.4	16	-B	1	C	1830	.41	.50			
LOCK	09	1825	1841	1830	N30	W05	.563	8637	9.4	16	-N		C	1830	.90	1.10		20	H
MCMA	09	1828E	1835	1830	N30	W06	.565	8637	9.3	7D	-B		C	1830	.36	.40			D
GRP 2601	09	1914	1937	1921	N24	W03	.470	8639	9.6	23	1-				.59				3 3 3
HALE	09	1910	1937	1922	N24	W03	.470	8639	9.6	27	-N	1	C	1922	.52	.60			
LOCK	09	1915	1936	1923	N24	W03	.470	8639	9.6	21	-N		C	1923	.70	.80		20	
MCMA	09	1916	1922D	1918	N23	W04	.457	8639	9.5	6D	-B		P	1918	.31	.40			D
GRP 2602	09	1920	1940	1924	S18	W32	.564	8632	7.4	20	1-				.82				1 1 1
LOCK	09	1920	1940	1924	S18	W32	.564	8632	7.4	20	-F		C	1924	.80	1.00		10	
GRP 2603	09	1939	2021	1950	N28	E00	.529	8637	9.8	42	1-				1.18				2 2 2
HALE	09	1938	2039	1951	N28	E01	.529	8637	9.9	61	-B	1	C	1951	.77	.90			
MCMA	09	1940	2002	1949	N28	W02	.529	8637	9.7	22	-N		P	1949	1.03	1.30			F
GRP 2604	09	1948	1959	1951	N20	W59	.888	8631	5.4	11	1-				.31				1 1 1
HALE	09	1948	1959	1951	N20	W59	.888	8631	5.4	11	-B	1	C	1951	.26	.60			
GRP 2605	09	2010	2017	2013	S28	W89	.999	8629	3.2	7	1-				.29				2 1 2
HALE	09	2009	2014	2012	S30	W88	.998	8629	3.2	5	-N	2	C	2012	.21				
LOCK	09	2010	2020	2013	S26	W90	1.000	8629	3.1	10	-N		C	2013	.40	1.60		20	H
GRP 2606	09	2022	2102	2047	S22	W89	.999	8629	3.2	40	1				.70				3 3 3
HALE	09	2018	2054	2047	S22	W88	.998	8629	3.2	36	1B	1	C	2047	.62				
CULG	09	2019	2118	2047	S22	W90	1.000	8629	3.1	59	-B		C	2047	.52				
LOCK	09	2028	2055	2033A	S22	W90	1.000	8629	3.1	27	1N		C	2033	1.00	4.00		20	HK
GRP 2607	09	2114	2119	2116	N29	W05	.548	8637	9.5	5	1-				.40				1 1 1
LOCK	09	2114	2119	2116	N29	W05	.548	8637	9.5	5	-F		C	2116	.40	.50		10	
GRP 2608	09	2129	2147	2132	S24	W90	1.000	8629	3.1	18	1-				.17				2 2 2
HUAN	09	2129	2143	2132	S22	W90	1.000	8629	3.1	14	-N	2	C	2132	.25				D
LOCK	09	2129	2150	2132	S25	W90	1.000	8629	3.1	21	-F		C	2132	.20	.80		10	H
GRP 2609	09	2200	2211	2205	N14	W21	.461	8638	8.3	11	1-				.71				1 1 1
LOCK	09	2200	2211	2205	N14	W21	.461	8638	8.3	11	-F		C	2205	.70	.80		10	
GRP 2610	09	2203	2223	2209	S22	W90	1.000	8629	3.2	20	1-				.54				4 3 4
LOCK	09	2201	2228	2209	S21	W90	1.000	8629	3.2	27	1N		C	2209	.90	3.60		20	H
HUAN	09	2203	2224D	2210	S22	W90	1.000	8629	3.2	21D	-N	1	C	2210	.70				
CULG	09	2203	2224	2209	S22	W90	1.000	8629	3.2	21	-N		C	2209	.41				
HALE	09	2204	2218	2209	S23	W88	.998	8629	3.3	14	-N	2	C	2209	.46				
GRP 2611	09	2215	2220	2217	N29	W05	.548	8637	9.6	5	1-				.40				1 1 1
LOCK	09	2215	2220	2217	N29	W05	.548	8637	9.6	5	-F		C	2217	.40	.50		10	
GRP 2612	09	2234	2258	2245	S22	W89	.999	8629	3.3	24	1+				.75				3 3 3
HALE	09	2232	2253	2245	S23	W88	.998	8629	3.3	21	1B	2	C	2245	.41				
LOCK	09	2236	2257	2245	S21	W90	1.000	8629	3.2	21	2N		C	2245	1.30	5.20		20	H
CULG	09	2237E	2304	2245	S22	W90	1.000	8629	3.2	27D	-N		P	2245	.62				
GRP 2613	09	2240	2300	2244	N29	W07	.553	8637	9.4	20	1-				.60				2 2 2
LOCK	09	2240	2252	2245	N27	W05	.519	8637	9.6	12	-N		C	2245	.80	1.00		10	
HALE	09	2240	2307	2242	N30	W08	.570	8637	9.3	27	-N	1	C	2242	.31	.40			
GRP 2614	09	2304	2314	2308	N26	W01	.499	8637	9.9	10	1-				.61				1 1 1
LOCK	09	2304	2314	2308	N26	W01	.499	8637	9.9	10	-N		C	2308	.60	.70		10	
GRP 2615	09	2326	2352	2343	S22	W90	1.000	8629	3.2	26	1-				.40				2 2 2
CULG	09	2322	2358	2345	S22	W90	1.000	8629	3.2	36	-N		C	2345	.41				
LOCK	09	2330	2345	2340U	S21	W90	1.000	8629	3.2	15	-N		C	2340	.50	2.00		10	H
GRP 2616	09	2325	2330	2327	N29	W05	.548	8637	9.6	5	1-				.29				1 1 1
LOCK	09	2325	2330	2327	N29	W05	.548	8637	9.6	5	-F		C	2327	.30	.40		10	
GRP 2617	09	2349	0026	0001	N21	E05	.429	8639	10.4	37	1-				.37				1 1 1
CULG	09	2349	0026	0001	N21	E05	.429	8639	10.4	37	-N		C	0001	.41	.44			
GRP 2618	09	2358	0015	0001	N20	W06	.417	8639	9.5	17	1-				.36				2 2 2
MANI	09	2358	0017		N20	W06	.417	8639	9.5	19	-F	2		0002	.52	.57			
HALE	10	0000E	0013	0001U	N20	W06	.418	8639	9.6	13D	-N	1	P	0001	.21	.21			
GRP 2619	10	0035	0043	0036	N18	W64	.919	8631	5.2	8	1-				.71				3 3 3
CULG	10	0034	0045	0037	N18	W64	.919	8631	5.2	11	-B		C	0037	.83	1.80			
MITK	10	0035	0041	0036	N18	W64	.919	8631	5.2	6	1F		C	0036	.93				
HALE	10	0035	0043	0036	N17	W63	.911	8631	5.3	8	-B	1	C	0036	.62				
GRP 2620	10	0051	0102	0052	N27	W02	.516	8637	9.9	11	1-				.37				1 1 1
HALE	10	0051	0102	0052	N27	W02	.516	8637	9.9	11	-F	1	C	0052	.31	.40			
GRP 2621	10	0300	0609	0321	N26	W27	.640	8637	8.1	189	1-				1.29				2 2 2
CULG	10	0247	0609D	0334	N28	W25	.644	8637	8.2	202D	-N		P	0334	1.75	2.21			FUS
HALE	10	0312	0352D	0321	N24	W29	.640	8637	8.0	40D	-F	1	P	0321	.83	1.10			F

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2622	10	0331	0348	0333	N17	W54	.842	8631	6.1	17	1-				.80				4 4 4
CULG	10	0330	0345D	0334	N17	W54	.842	8631	6.1	15D	-B		P	0334	.83	1.44			
MITK	10	0331	0346	0333	N17	W54	.842	8631	6.1	15	-F		C	0333	.93	1.70			
HALE	10	0331	0349	0333	N16	W52	.821	8631	6.2	18	-B	1	C	0333	.83	1.40			
MANI	10	0333	0338D		N16	W56	.856	8631	5.9	5D	-N	2		0335	.93	1.69			
GRP 2623	10	0405	0420	0406	N14	W27	.534	8638	8.1	15	1-				.36				2 1 1
MITK	10	0405	0420	0406	N14	W26	.522	8638	8.2	15	-F		C	0406	.52	.60			E
MANI	10	0407E	0409D		N14	W27	.534	8638	8.1	2D	-F	1		0408	.41	.49			
GRP 2624	10	0525	0557	0539	N20	W67	.940	8631	5.2	32	1-				.28				1 1 1
CULG	10	0525	0557	0539	N20	W67	.940	8631	5.2	32	-N		C	0539	.31				
GRP 2625	10	0622	0635		S26	W90	1.000	8632	3.5	13	1-				.66				1 1 1
ATHN	10	0622E	0635D		S26	W90	1.000	8632	3.5	13D	-N	1		0622	.66				
GRP 2626	10	0638	0650	0642	N21	W09	.447	8639	9.6	12	1-				.28				1 1 1
MANI	10	0638	0650D	0642	N21	W09	.447	8639	9.6	12D	-N	2		0642	.31	.34			
GRP 2627	10	0855	0940	0900	N21	W69	.951	8631	5.2	45	1				1.03				1 1 1
ARCE	10	0855	0940D	0900	N21	W69	.951	8631	5.2	45D	1N		C	0900	1.03	2.30			H
GRP 2628	10	1400	1405	1401	N21	W07	.437	8639	10.1	5	1-				.33				1 1 1
ATHN	10	1400	1405	1401	N21	W07	.437	8639	10.1	5	-N	1		1401	.33	.30			
	10	1530	1540	NO FLARE PATROL															
GRP 2629	10	1623	1715	1645	N11	W43	.711	8638	7.5	52	1-				1.28				1 1 1
LOCK	10	1623	1715	1645	N11	W43	.711	8638	7.5	52	-N		C	1645	1.20	1.70		20	
GRP 2630	10	1650	1730	1716	N20	W70	.955	8631	5.5	40	1				1.40				1 1 1
LOCK	10	1650	1730	1716	N20	W70	.955	8631	5.5	40	1F		C	1716	1.40	3.80		10	H
GRP 2631	10	1704	1718	1708	N25	W20	.572	8639	9.2	14	1-				.40				1 1 1
LOCK	10	1704	1718	1708	N25	W20	.572	8639	9.2	14	-N		C	1708	.40	.50		20	H
GRP 2632	10	1730	1800	1740	S15	W61	.874	8632	6.2	30	1-				1.05				1 1 1
LOCK	10	1730	1800	1740	S15	W61	.874	8632	6.2	30	-F		C	1740	1.00	2.00		10	
GRP 2633	10	1748	1800	1751	N19	W72	.963	8631	5.3	12	1-				.44				2 2 2
LOCK	10	1748	1800	1751	N18	W70	.953	8631	5.5	12	-F		C	1751	.70	1.90		10	H
HUAN	10	1749E	1754D		N19	W73	.967	8631	5.3	5D	-N	1	P	1750	.31				H
GRP 2634	10	1918	1940	1931	N23	W17	.526	8639	9.5	22	1-				.77				2 2 2
LOCK	10	1917	1942	1931	N23	W18	.533	8639	9.5	25	-N		C	1931	1.00	1.20		20	
HALE	10	1918	1938	1930	N23	W15	.511	8639	9.7	20	-N	1	C	1930	.41	.50			F
GRP 2635	10	1935	1955	1943	N21	W75	.976	8631	5.2	20	1-				1.03				1 1 1
LOCK	10	1935	1955	1943	N21	W75	.976	8631	5.2	20	1F		C	1943	1.10	3.20		10	H
GRP 2636	10	2040	2045	2045	N18	W77	.981	8631	5.1	5	1-				.62				1 1 1
LOCK	10	2040	2045D	2045	N18	W77	.981	8631	5.1	5D	-F		C	2045	.70	2.00		10	H
GRP 2637	10	2053	2135	2107	N22	W78	.986	8631	5.0	42	2-				1.71				1 1 1
LOCK	10	2053	2135	2107	N22	W78	.986	8631	5.0	42	2N		C	2107	1.80	5.60		20	
GRP 2638	10	2111	2125	2115	N30	W17	.612	8637	9.6	14	1-				.29				1 1 1
LOCK	10	2111	2125	2115	N30	W17	.612	8637	9.6	14	-F		C	2115	.30	.40		10	
GRP 2639	10	2155	2205	2200	N21	W75	.976	8631	5.3	10	1-				.26				1 1 1
LOCK	10	2155	2205	2200	N21	W75	.976	8631	5.3	10	-F		C	2200	.30	.90		10	H
GRP 2640	10	2300	2313	2304	N25	W20	.572	8637	9.5	13	1-				.71				1 1 1
LOCK	10	2300	2313	2304	N25	W20	.572	8637	9.5	13	-N		C	2304	.70	.80		20	
	11	0025	0050	NO FLARE PATROL															
	11	0105	0120	NO FLARE PATROL															
GRP 2641	11	0131	0317	0259	S26	W47	.766	8632	7.5	106	3				9.90				1 1 1
HALE	11	0131	0317D	0259	S26	W47	.766	8632	7.5	106D	3B	1	P	0259	8.25	12.90			
GRP 2642	11	0137	0152	0140	N24	W19	.554	8637	9.6	15	1-				.49				1 1 1
HALE	11	0137	0152	0140	N24	W19	.554	8637	9.6	15	-N	1	C	0140	.41	.50			
GRP 2643	11	0232	0317	0251	N20	W76	.979	8631	5.4	45	1+				.74				1 1 1
HALE	11	0232	0317D	0251	N20	W76	.979	8631	5.4	45D	1B	1	P	0251	.62				
GRP 2644	11	0244	0317	0306	N14	W43	.723	8638	7.9	33	1-				.31				1 1 1
HALE	11	0244	0317D	0306	N14	W43	.723	8638	7.9	33D	-F	1	P	0306	.26	.40			
	11	0320	0345	NO FLARE PATROL															
GRP 2645	11	0344	0510		S28	W42	.725	8632	8.0	86	1+				6.46				1 1 1
MANI	11	0344E	0510		S28	W42	.725	8632	8.0	86D	2F	2		0348	5.50	8.10			U
GRP 2646	11	0348	0352		N10	W38	.648	8638	8.3	4	1-				1.81				1 1 1
MANI	11	0348E	0352D		N10	W38	.648	8638	8.3	4D	1N	2		0348	1.96	2.60			
GRP 2647	11	0419	0420		N15	W75	.973	8631	5.6	1	1-				.24				1 1 1
MANI	11	0419E	0420D		N15	W75	.973	8631	5.6	1D	-N	1		0420	.31	.75			
GRP 2648	11	0507	0515	0510	N24	W22	.579	8639	9.6	8	1-				.29				1 1 1
TACH	11	0507	0515	0510	N24	W22	.579	8639	9.6	8	-N		C	0510	.36	.50	2.80	63	D
GRP 2649	11	0542	0554	0544	N16	W87	1.000	8631	4.7	12	1				.55				1 1 1
TACH	11	0542	0554	0544	N16	W87	1.000	8631	4.7	12	1N		C	0544	.63		3.70	75	D
GRP 2650	11	0621	0630	0622	N24	W27	.623	8639	9.2	9	1-				.81				1 1 1
TACH	11	0621	0630	0622	N24	W27	.623	8639	9.2	9	-B		C	0622	1.01	1.30	2.40	75	E
GRP 2651	11	0950	1007		N20	W90	1.000	8631	4.7	17									1 0 0
KAND	11	0950	1007		N20	W90	1.000	8631	4.7	17									
	11	1030	1130	NO FLARE PATROL															

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
	11	1140	1230	NO FLARE PATROL															
	11	1235	1300	NO FLARE PATROL															
GRP 2652	11	1400	1406	1400	S22	E62	.887	8647	16.2	6	1-				.66				1 1 1
ATHN	11	1400E	1406D	1400	S22	E62	.887	8647	16.2	6D	-B	1		1400	.66	1.20	2.00		
GRP 2653	11	1424	1444	1428	S20	W75	.964	8632	6.0	20	1				1.04				1 1 1
SACP	11	1424	1444	1428	S20	W75	.964	8632	6.0	20	1N		C		1.16	2.50			
GRP 2654	11	1428	1514	1446	N17	W76	.978	8631	5.9	46	1-				.51				1 1 1
SACP	11	1428	1514	1446	N17	W76	.978	8631	5.9	46	-N		C		.57	1.38			
GRP 2655	11	1502	1520	1510	S28	W53	.826	8632	7.7	18	1-				.67				1 1 1
SACP	11	1502	1520	1510	S28	W53	.826	8632	7.7	18	-N		C		.74	1.01			
	11	1525	1555	NO FLARE PATROL															
GRP 2656	11	1558	1618		N17	W88	1.000	8631	5.1	20	1				.14				1 1 1
HUAN	11	1558E	1618		N17	W88	1.000	8631	5.1	20D	-F	1	P	1605	.21				D
GRP 2657	11	1609	1622	1613	N28	W26	.653	8637	9.7	13	1-				.51				1 1 1
SACP	11	1609	1622	1613	N28	W26	.653	8637	9.7	13	-N		C		.57	.63			
GRP 2658	11	1629	1641	1634	N21	W82	.995	8631	5.5	12	1-				.61				1 1 1
LOCK	11	1629	1641	1634	N21	W82	.995	8631	5.5	12	1N		C	1634	.70	2.40		20	H
GRP 2659	11	1639	1652	1647	N12	W47	.760	8638	8.2	13	1-				.29				1 1 1
LOCK	11	1639	1652	1647	N12	W47	.760	8638	8.2	13	-F		C	1647	.30	.50		10	H
GRP 2660	11	1651	1710	1647	N16	W85	.998	8631	5.3	19	1-				.34				2 1 1
LOCK	11	1640	1710	1647	N15	W82	.993	8631	5.5	30	-N		C	1647	.40	1.40		10	H
HUAN	11	1701	1710		N16	W88	1.000	8631	5.1	9	-N	1	C	1705	.41				
GRP 2661	11	1726	1830	1735	N14	W84	.996	8631	5.4	64	1-				.89				1 1 1
LOCK	11	1726	1830	1735	N14	W84	.996	8631	5.4	64	-N		C	1735	1.00	1.50		20	H
GRP 2662	11	1728	1747	1737	N12	W47	.760	8638	8.2	19	1-				.57				2 2 2
SACP	11	1727	1747	1737	N12	W46	.749	8638	8.3	20	-N		C		.85	1.04			
HUAN	11	1729	1746		N12	W47	.760	8638	8.2	17	-N	1	P	1736	.41	.51			E
GRP 2663	11	1733	1751	1740	N25	W34	.695	8637	9.2	18	1-				.51				2 2 2
SACP	11	1733	1754	1740	N24	W34	.688	8637	9.2	21	-N		C		.66	.76			
HUAN	11	1736E	1747		N25	W34	.695	8637	9.2	11D	-F	1	P	1738	.46	.54			E
GRP 2664	11	2016	2034		N16	W88	1.000	8631	5.2	18	1				.30				1 1 1
HUAN	11	2016	2034D		N16	W88	1.000	8631	5.2	18D	-B	1	P	2032	.46				
GRP 2665	11	2104	2117	2108	S22	E57	.848	8647	16.2	13	1-				.42				1 1 1
SACP	11	2104	2117	2108	S22	E57	.848	8647	16.2	13	-N		C		.47	.67			
GRP 2666	11	2210	2237	2218	N17	W82	.994	8631	5.8	27	1-				.34				1 1 1
LOCK	11	2210	2237	2218	N17	W82	.994	8631	5.8	27	-F		C	2218	.40	1.40		10	H
GRP 2667	11	2246	2300	2249	N11	W50	.788	8638	8.2	14	1-				.63				3 3 3
LOCK	11	2245	2305	2249	N11	W49	.778	8638	8.3	20	-N		C	2249	.90	1.40		20	H
CULG	11	2246	2259	2249	N12	W50	.791	8638	8.2	13	-N		C	2249	.41	.64			
SACP	11	2247	2256	2249	N11	W50	.788	8638	8.2	9	-N		C		.66	.85			
GRP 2668	11	2245	2355	2252	N17	W82	.994	8631	5.8	70	1-				.34				1 1 1
LOCK	11	2245	2355	2252A	N17	W82	.994	8631	5.8	70	-F		C	2252	.40	1.40		10	H
GRP 2669	11	2306	2318	2310	S24	E55	.834	8647	16.1	12	1-				.94				2 2 2
SACP	11	2304	2320	2309	S23	E55	.832	8647	16.1	16	-N		C		1.03	1.43			
LOCK	11	2307	2316	2310	S24	E54	.825	8647	16.0	9	-F		C	2310	.90	1.60		10	
GRP 2670	11	2327	2340	2331	N22	W32	.653	8639	9.6	13	1-				.40				1 1 1
LOCK	11	2327	2340	2331	N22	W32	.653	8639	9.6	13	-F		C	2331	.40	.50		10	
	12	0225	0230	NO FLARE PATROL															
GRP 2671	12	0231	0305		N16	W90	1.000	8631	5.4	34	1				.79				1 1 1
MITK	12	0231E	0305D		N16	W90	1.000	8631	5.4	34D	1F		P	0234	1.13				AH
	12	0240	0250	NO FLARE PATROL															
	12	0255	0300	NO FLARE PATROL															
	12	0305	0330	NO FLARE PATROL															
	12	0350	0410	NO FLARE PATROL															
GRP 2672	12	0815	0917		S23	E50	.785	8647	16.1	62	1-				1.02				2 2 2
ARCE	12	0815E	1000D		S23	E50	.785	8647	16.1	105D	1N		C	0945	1.40	2.30			
MANI	12	0823E	0833		S22	E50	.783	8647	16.1	10D	-F	2		0825	.72	1.14			
	12	1105	1120	NO FLARE PATROL															
GRP 2673	12	1120	1150		S22	E50	.783	8647	16.2	30	1				1.03				1 1 1
MONT	12	1120E	1150		S22	E50	.783	8647	16.2	30D	1N		C	1120	1.03	3.40			OTH
	12	1155	1220	NO FLARE PATROL															
GRP 2674	12	1220	1230	1225	S22	E49	.773	8647	16.2	10	1-				.52				1 1 1
MONT	12	1220	1230	1225	S22	E49	.773	8647	16.2	10	-N		C	1225	.52	1.70			OT
GRP 2675	12	1235	1325		S22	E49	.773	8647	16.2	50	1-				.52				1 1 1
MONT	12	1235	1325D		S22	E49	.773	8647	16.2	50D	-B		C	1258	.52	1.70			OT
GRP 2676	12	1320	1340	1326	S21	W85	.994	8632	6.2	20	1-				1.53				1 1 1
LOCA	12	1320	1340	1326	S21	W85	.994	8632	6.2	20	1N		V	1326	1.68				A
GRP 2677	12	1405	1411		N16	W90	1.000	8631	5.8	6	1				.17				1 1 1
HUAN	12	1405	1411D		N16	W90	1.000	8631	5.8	6D	-F	1	P	1408	.25				D
GRP 2678	12	1536	1604	1545	N22	W39	.723	8639	9.7	28	1-				.43				1 1 1
SACP	12	1536	1604	1545	N22	W39	.723	8639	9.7	28	-N		C		.48	.62			

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2679	12	1619	1627	1621	S25	E45	.742	8647	16.1	8	1-				.94				1 1 1
LOCK	12	1619	1627	1621	S25	E45	.742	8647	16.1	8	-F		C	1621	.90	1.40		10	
GRP 2680	12	1640	1703	1645	S22	E44	.721	8647	16.0	23	1-				.69				1 1 1
SACP	12	1640	1703U	1645U	S22	E44	.721	8647	16.0	23U	-F		C		.77	.98			
GRP 2681	12	1704	1715		N16	W90	1.000	8631	6.0	11	1				.24				1 1 1
HUAN	12	1704F	1715D		N16	W90	1.000	8631	6.0	11D	-N	1	P	1706	.36				D
GRP 2682	12	1730	1750	1742	S25	E45	.742	8647	16.1	20	1-				1.05				1 1 1
LOCK	12	1730	1750	1742	S25	E45	.742	8647	16.1	20	-N		C	1742	1.00	1.50		20	
GRP 2683	12	1755	1830	1825	S21	W90	1.000	8632	6.0	35	1-				.33				1 1 1
LOCK	12	1755	1830	1825A	S21	W90	1.000	8632	6.0	35	-F		C	1825	.40	1.40		10	K
GRP 2684	12	1855	1905	1857	N19	W46	.776	8639	9.3	10	1-				.50				1 1 1
LOCK	12	1855	1905	1857	N19	W46	.776	8639	9.3	10	-F		C	1857	.50	.80		10	
GRP 2685	12	1907	1927	1918	S21	E44	.718	8647	16.1	20	1-				.70				2 2 2
LOCK	12	1907	1925	1917	S22	E44	.721	8647	16.1	18	-N		C	1917	.70	1.10		20	
SACP	12	1907	1929	1918	S20	E44	.715	8647	16.1	22	-N		C		.77	.99			
GRP 2686	12	1948	2018	1953	S22	E44	.721	8647	16.1	30	1-				.57				3 3 3
HALE	12	1945	2033	1951	S21	E44	.718	8647	16.1	48	-F	1	C	1951	.31	.40			
LOCK	12	1948	2010	1955	S24	E45	.739	8647	16.2	22	-F		C	1955	.80	1.20		10	
SACP	12	1950	2011	1953	S21	E43	.707	8647	16.1	21	-N		C		.58	.73			
GRP 2687	12	2032	2040	2035	S19	W89	.999	8632	6.2	8	1-				.20				3 2 3
LOCK	12	2031	2040	2035	S18	W90	1.000	8632	6.1	9	-N		C	2035	.30	1.20		20	
HALE	12	2032	2039	2035	S20	W88	.998	8632	6.3	7	-N	2	C	2035	.15				
HUAN	12	2035F	2035D		S19	W90	1.000	8632	6.1		-F	1	P	2035	.25				D
GRP 2688	12	2052	2100	2055	S25	E45	.742	8647	16.2	8	1-				.61				1 1 1
LOCK	12	2052	2100	2055	S25	E45	.742	8647	16.2	8	-F		C	2055	.60	.90		10	
GRP 2689	12	2107	2135	2115	N14	W14	.389	8644	11.8	28	1-				.60				2 2 2
LOCK	12	2107	2134	2115	N14	W14	.389	8644	11.8	27	-F		C	2115	.90	1.00		10	J
HALE	12	2107	2135	2115	N14	W14	.389	8644	11.8	28	-F	1	C	2115	.21	.21			
GRP 2690	12	2155	2204	2158	S23	E40	.681	8647	15.9	9	1-				.19				1 1 1
LOCK	12	2155	2204	2158	S23	E40	.681	8647	15.9	9	-N		C	2158	.20	.30		20	
GRP 2691	12	2216	2234	2223	S19	W89	.999	8632	6.3	18	1-				.37				2 1 2
HALE	12	2213	2235	2222	S20	W88	.998	8632	6.3	22	-N	2	C	2222	.26				
LOCK	12	2218	2233	2223	S18	W90	1.000	8632	6.2	15	-N		C	2223	.50	2.00		20	H
GRP 2692	12	2235	2245	2239	S23	E40	.681	8647	15.9	10	1-				.19				1 1 1
LOCK	12	2235	2245	2239	S23	E40	.681	8647	15.9	10	-N		C	2239	.20	.30		20	
GRP 2693	12	2243	2310	2253	N13	W68	.938	8638	7.8	27	1-				.40				2 2 2
HALE	12	2241	2322D	2255	N13	W67	.932	8638	7.9	41D	-N	1	P	2255	.36				
LOCK	12	2245	2258	2251	N12	W69	.942	8638	7.8	13	-F		C	2251	.40	.90		10	
GRP 2694	12	2300	0000	2330	N23	E68	.949	8648	18.1	60	1-				.46				1 1 1
LOCK	12	2300	0000U	2330	N23	E68	.949	8648	18.1	60U	-F		C	2330	.50	1.40		10	J
GRP 2695	13	0059	0114	0102	S20	E41	.680	8647	16.1	15	1-				.37				2 2 2
HALE	13	0059	0112	0102	S20	E40	.669	8647	16.0	13	-N	1	C	0102	.31	.40			
CULG	13	0059	0115	0102	S19	E41	.677	8647	16.1	16	-N		C	0102	.41	.56			
GRP 2696	13	0147	0239	0159	N32	W51	.871	8637	9.2	52	1-				.64				3 3 3
CULG	13	0145	0315	0205	N31	W51	.867	8637	9.2	90	-N		C	0205	.62	1.20			
HALE	13	0147	0230	0153	N32	W49	.857	8637	9.4	43	-N	1	C	0153	.83	1.60			
MITK	13	0149	0211	0159	N33	W53	.887	8637	9.1	22	-N		C	0159	.52	1.10			E
GRP 2697	13	0242	0358	0314	N13	W16	.399	8644	11.9	76	1-				.49				1 1 1
HALE	13	0242E	0358	0314	N13	W16	.399	8644	11.9	76D	-N	1	P	0314	.41	.42			
GRP 2698	13	0345	0353	0347	S19	E40	.665	8647	16.2	8	1-				.66				3 3 3
MITK	13	0345	0349	0346	S20	E40	.669	8647	16.2	4	-B		C	0346	1.03	1.40			D
MANI	13	0345E	0354	0348	S17	E39	.646	8647	16.1	9D	-N	1		0348	.67	.99			
CULG	13	0346	0355D	0347	S19	E41	.677	8647	16.2	9D	-N		P	0347	.72	.98			
GRP 2699	13	0345	0353	0346	S27	E34	.637	8647	15.7	8	1-				.74				1 1 1
HALE	13	0345	0353D	0346	S27	E34	.637	8647	15.7	8D	-B	1	P	0346	.62	.80			
GRP 2700	13	0423	0431	0425	S23	E41	.692	8647	16.3	8	1-				.37				1 1 1
CULG	13	0423	0431	0425	S23	E41	.692	8647	16.3	8	-N		C	0425	.41	.56			
GRP 2701	13	0519	0530		S23	E62	.888	8647	17.9	11	1-				.64				1 1 1
MANI	13	0519E	0530D		S23	E62	.888	8647	17.9	11D	-F	1		0523	.77	1.50			
GRP 2702	13	0537	0547	0540	S22	E40	.676	8647	16.2	10	1-				.37				1 1 1
CULG	13	0537E	0547	0540	S22	E40	.676	8647	16.2	10D	-N		P	0540	.41	.56			
GRP 2703	13	0735	0751	0746	N27	E68	.954	8648	18.4	16	1-				.19				1 1 1
CULG	13	0735	0751	0746	N27	E68	.954	8648	18.4	16	-N		C	0746	.21				J
GRP 2704	13	0805	0820	0810	S28	E39	.694	8647	16.3	15	1-				.19				1 1 1
CULG	13	0805	0820D	0810	S28	E39	.694	8647	16.3	15D	-N		P	0810	.21	.28			L
GRP 2705	13	0915	0925		N24	E66	.941	8648	18.3	10	1-				.63				1 1 1
ARCE	13	0915E	0925D		N24	E66	.941	8648	18.3	10D	-N		C	0920	.63	1.30			
GRP 2706	13	0915	1000		S23	E38	.658	8647	16.2	45	1-				.46				1 1 1
ARCE	13	0915E	1000D		S23	E38	.658	8647	16.2	45D	-N		C	1000	.46	.60			H
GRP 2707	13	1046	1100		S20	E35	.609	8647	16.1	14	1-				.41				1 1 1
MONT	13	1046	1100		S20	E35	.609	8647	16.1	14	-B		C	1048	.41	1.10			O

SOLAR FLARES
REVISED

JANUARY 1967

OBSERV-ATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURA-TION — MIN.	IM-POR-TANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2708	13	1220	1235		N28	W60	.914	8637	9.0	15	1-				.41				1 1 1
MONT	13	1220	1235		N28	W60	.914	8637	9.0	15	-B		C	1222	.41	.50			O
GRP 2709	13	1425	1435		S24	W90	1.000	8632	6.9	10	1				.17				1 1 1
HUAN	13	1425	1435		S24	W90	1.000	8632	6.9	10	-F	1	C	1427	.25				D
	13	1435	1450	NO FLARE PATROL															
GRP 2710	13	1652	1702	1657	S21	E33	.589	8647	16.2	10	1-				.50				1 1 1
LOCK	13	1652	1702	1657	S21	E33	.589	8647	16.2	10	-F		C	1657	.50	.70		10	
GRP 2711	13	1802	1826	1805	N17	W86	.999	8638	7.3	24	1-				.22				2 2 2
HUAN	13	1802	1818		N17	W90	1.000	8638	7.0	16	-F	1	C	1804	.25				D
SACP	13	1803E	1834D	1805U	N17	W82	.994	8638	7.6	31D	-N		C		.29				
GRP 2712	13	1803	1838	1807	S22	E32	.583	8647	16.2	35	1-				.52				1 1 1
SACP	13	1803E	1838	1807	S22	E32	.583	8647	16.2	35D	-N		C		.58	.66			
GRP 2713	13	1819	1940	1832	S32	W81	.985	8632	7.7	81	1				.80				4 2 2
SACP	13	1819U	1856D	1830	S31	W79	.979	8632	7.8	37D	1N		C		.95	2.60			
HUAN	13	1827E	1905D		S31	W80	.982	8632	7.8	38D	1N	1	P	1832	1.24				
LOCK	13	1833E	1940	1833U	S32	W83	.990	8632	7.5	67D	1N		C	1833	1.20	4.10		20	
MCMA	13	1843E	1850D		S32	W80	.982	8632	7.8	7D	-F		C	1845	.52				
GRP 2714	13	1824	1840	1827	N16	W27	.553	8644	11.7	16	1-				.61				1 1 1
SACP	13	1824	1840D	1827	N16	W27	.553	8644	11.7	16D	-N		C		.68	.77			
GRP 2715	13	1845	1854	1847	N16	W28	.564	8644	11.7	9	1-				.74				4 4 4
LOCK	13	1842	1854	1847	N16	W29	.576	8644	11.6	12	-N		C	1847	.90	1.10		20	
HUAN	13	1845	1850D		N16	W27	.553	8644	11.8	5D	-F	1	P	1846	.77	.82			E
SACP	13	1845	1856D	1846U	N16	W27	.553	8644	11.8	11D	-N		C		.76	.87			
MCMA	13	1846	1851		N16	W28	.564	8644	11.7	5	-N		C	1847	.46	.60			E
GRP 2716	13	1848	1855	1849	N29	W62	.928	8637	9.1	7	1-				.28				1 1 1
LOCK	13	1848	1855	1849	N29	W62	.928	8637	9.1	7	-F		C	1849	.30	.70		10	
GRP 2717	13	1940	2030	1947	N26	W66	.944	8637	8.9	50	1-				.46				1 1 1
LOCK	13	1940	2030	1947	N26	W66	.944	8637	8.9	50	-F		C	1947	.50	1.30		10	J
GRP 2718	13	2015	2031	2018	N16	W26	.542	8644	11.9	16	1-				.34				2 2 2
LOCK	13	2015	2027	2018	N15	W26	.533	8644	11.9	12	-F		C	2018	.40	.50		10	
CULG	13	2015	2035	2017	N16	W26	.542	8644	11.9	20	-N		C	2017	.31	.35			
GRP 2719	13	2039	2110	2044	N26	W66	.944	8637	8.9	31	1-				.46				1 1 1
LOCK	13	2039	2110	2044	N26	W66	.944	8637	8.9	31	-F		C	2044	.50	1.30		10	J
GRP 2720	13	2104	2156	2121	N16	W73	.966	8638	8.4	52	1-				.73				2 2 2
CULG	13	2103	2149	2122	N15	W78	.984	8638	8.0	46	-N		C	2122	.41				
LOCK	13	2105	2203	2120	N16	W68	.941	8638	8.8	58	1N		C	2120	1.10	2.80		20	
GRP 2721	13	2105	2130	2118	S31	W84	.992	8632	7.6	25	1-				.52				1 1 1
LOCK	13	2105	2130	2118	S31	W84	.992	8632	7.6	25	-F		C	2118	.60	2.00		10	
GRP 2722	13	2149	2225	2200	N14	W28	.549	8644	11.8	36	1-				.42				2 2 2
LOCK	13	2145	2220	2200	N15	W29	.568	8644	11.7	35	-F		C	2200	.50	.60		10	
SACP	13	2153	2229	2159	N12	W27	.521	8644	11.9	36	-N		C		.38	.43			
GRP 2723	13	2319	2352	2334	S32	W85	.994	8632	7.6	33	1-				.50				2 2 2
CULG	13	2315	2341	2337	S32	W87	.996	8632	7.4	26	-N		C	2337	.21				
LOCK	13	2322	0003	2331	S32	W83	.990	8632	7.7	41	1F		C	2331	.90	3.10		10	
GRP 2724	13	2323	2355	2334	S23	E29	.554	8647	16.1	32	1-				.82				1 1 1
LOCK	13	2323	2355	2334	S23	E29	.554	8647	16.1	32	-N		C	2334	.80	1.00		20	
GRP 2725	13	2359	0025	0007	N25	E54	.866	8648	18.0	26	1-				.29				1 1 1
LOCK	13	2359	0025U	0007	N25	E54	.866	8648	18.0	26U	-F		C	0007	.30	.60		10	
GRP 2726	14	0118	0133	0126	S31	W89	.998	8632	7.4	15	1-				.19				1 1 1
CULG	14	0118	0133	0126	S31	W89	.998	8632	7.4	15	-N		C	0126	.21				
GRP 2727	14	0142	0152	0145	S31	W89	.998	8632	7.4	10	1-				.19				1 1 1
CULG	14	0142	0152	0145	S31	W89	.998	8632	7.4	10	-N		C	0145	.21				
GRP 2728	14	0327	0358	0334	N15	W77	.980	8638	8.4	31	1				.78				2 2 2
CULG	14	0321	0405	0333	N15	W80	.989	8638	8.1	44	-B		C	0333	.41				
KODA	14	0333	0350	0335	N14	W74	.969	8638	8.6	17	1B		V	0335	1.29		2.48		DB
GRP 2729	14	0352	0423	0406	N29	W75	.982	8637	8.5	31	1-				.28				1 1 1
CULG	14	0352	0423D	0406	N29	W75	.982	8637	8.5	31D	-N		P	0406	.31				
GRP 2730	14	0409	0417	0412	S31	W89	.998	8632	7.5	8	1-				.28				1 1 1
CULG	14	0409	0417	0412	S31	W89	.998	8632	7.5	8	-N		C	0412	.31				
GRP 2731	14	0645	0717	0706	N23	W64	.928	8639	9.5	32	1-				.37				1 1 1
CULG	14	0645	0717	0706	N23	W64	.928	8639	9.5	32	-N		C	0706	.41				
GRP 2732	14	0750	0810		S22	E20	.441	8647	15.8	20	1-				.31				1 1 1
MONT	14	0750	0810		S22	E20	.441	8647	15.8	20	-N		C	0754	.31	.70			O
GRP 2733	14	0955	1008	0959	N29	E85	.999	8649	20.8	13	1-				.50				1 1 1
ATHN	14	0955	1008	0959	N29	E85	.999	8649	20.8	13	-N	1		0959	.50		1.30		
GRP 2734	14	1027	1047	1031	N13	W78	.983	8638	8.6	20	1				.85				2 2 2
CAPS	14	1027	1039		N14	W80	.989	8638	8.4	12	1N	3		1031	.70			182	
ATHN	14	1027E	1054	1031	N12	W76	.976	8638	8.7	27D	1B	1		1031	.99		2.00		

SOLAR FLARES
REVISED
JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2735	14	1058	1142	1130	N30	E88	1.000	8649	21.1	44	1				1.19				4 4 3
ATHN	14	1056	1124	1115	N30	E83	.998	8649	20.7	28	-N	1		1115	.50		1.90		
MONT	14	1100	1200		N31	E90	1.001	8649	21.2	60	1N		C						O
CATA	14	1115E	1150D	1130	N32	E90	1.001	8649	21.2	35D	1N			1130	.59			174	
HERS	14	1126E	1148D	1140U	N28	E90	1.001	8649	21.2	22D	1	2		1133	1.55				AD
GRP 2736	14	1143	1152		N30	E88	1.000	8649	21.1	9	1				.24				1 1 1
HUAN	14	1143E	1152		N30	E88	1.000	8649	21.1	9D	-N	1	P	1143	.36				D
GRP 2737	14	1305	1328	1307	N14	W37	.657	8644	11.8	23	1-				1.16				1 1 1
ATHN	14	1305E	1328	1307	N14	W37	.657	8644	11.8	23D	-N	1		1307	1.16	1.50	1.50		
GRP 2738	14	1514	1601	1549	N29	E80	.993	8649	20.6	47	1-				1.04				1 1 1
SACP	14	1514	1601	1549	N29	E80	.993	8649	20.6	47	-N		C		1.16				
GRP 2739	14	1536	1547	1539	S22	E17	.408	8647	15.9	11	1-				.20				2 2 2
SACP	14	1534	1550	1539	S22	E17	.408	8647	15.9	16	-N		C		.18	.17			
HUAN	14	1537	1544		S21	E17	.397	8647	15.9	7	-F	1	C	1539	.25	.25			D
GRP 2740	14	1611	1634	1620	N30	E84	.999	8649	21.0	23	1-				.54				2 2 2
SACP	14	1610	1635	1620	N29	E79	.992	8649	20.6	25	-N		C		.98				
HUAN	14	1612	1632		N30	E88	1.000	8649	21.3	20	-F	1	C	1620	.31				D
GRP 2741	14	1637	1730	1702	N29	E82	.996	8649	20.8	53	1				.13				3 3 3
LOCK	14	1635	1750	1700	N28	E83	.997	8649	20.9	75	2N		C	1700	2.00	6.80		20	L
HUAN	14	1637	1718		N31	E85	.999	8649	21.1	41	-N	1	C	1702	.67				
SACP	14	1640	1723	1703	N29	E77	.987	8649	20.5	43	1N		C		1.87				
GRP 2742	14	1650	1730	1700	S22	E16	.398	8647	15.9	40	1-				.50				1 1 1
LOCK	14	1650	1730	1700	S22	E16	.398	8647	15.9	40	-F		C	1700	.50	.60		10	
GRP 2743	14	1735	1830	1750	S22	E16	.398	8647	15.9	55	1-				.29				1 1 1
LOCK	14	1735	1830	1750A	S22	E16	.398	8647	15.9	55	-F		C	1750	.30	.33		10	
GRP 2744	14	1738	1848	1753	N15	W40	.696	8644	11.7	70	1+				2.32				3 3 3
SACP	14	1737	1858	1805	N15	W40	.696	8644	11.7	81	1N		C		3.03	3.53			
HUAN	14	1739	1842	1748	N15	W39	.685	8644	11.8	63	1N	1	C	1748	1.91	2.24			E
LOCK	14	1739	1845	1753	N15	W40	.696	8644	11.7	66	1B		C	1753	2.30	3.20		30	
GRP 2745	14	1917	1926	1919	N15	W40	.696	8644	11.8	9	1-				.40				1 1 1
LOCK	14	1917	1926	1919	N15	W40	.696	8644	11.8	9	-F		C	1919	.40	.60		10	
GRP 2746	14	2005	2020	2017	N20	W68	.946	8639	9.7	15	1-				.36				1 1 1
LOCK	14	2005	2020	2017	N20	W68	.946	8639	9.7	15	-F		C	2017	.40	1.00		10	
GRP 2747	14	2011	2022	2014	N29	W78	.990	8637	9.0	11	1-				.25				1 1 1
LOCK	14	2011	2022	2014	N29	W78	.990	8637	9.0	11	-F		C	2014	.30	.90		10	
GRP 2748	14	2110	2148	2140	N23	W69	.954	8639	9.7	38	1-				.47				2 2 2
LOCK	14	2110	2150	2140	N22	W68	.948	8639	9.8	40	-F		C	2140	.50	1.30		10	
HUAN	14	2118E	2146		N23	W69	.954	8639	9.7	28D	-F	1	P	2123	.70				J
GRP 2749	14	2257	2306	2300	N26	W70	.962	8637	9.7	9	1-				.23				3 3 3
SACP	14	2256	2307	2300	N25	W68	.952	8637	9.9	11	-N		C		.27	.54			
LOCK	14	2257	2304	2300	N26	W69	.958	8637	9.8	7	-N		C	2300	.30	.80		10	
CULG	14	2258	2307	2300	N27	W72	.971	8637	9.6	9	-N		C	2300	.21				
GRP 2750	14	2317	0011	2325	N22	W71	.962	8639	9.6	54	2-				2.27				3 2 2
SACP	14	2314	2359	2325	N23	W69	.954	8639	9.8	45	2N		C		2.67	5.46			
LOCK	14	2320	0005	2326	N20	W70	.956	8639	9.7	45	2B		C	2326	2.10	5.70		30	
CULG	14	2329E	0029	0002	N24	W75	.979	8637	9.4	60D	-N		P	0002	.83				
GRP 2751	15	0043	0145	0053	N24	W75	.979	8637	9.4	62	1-				.56				1 1 1
CULG	15	0043	0145	0053	N24	W75	.979	8637	9.4	62	-N		C	0053	.62				
GRP 2752	15	0316	0404	0322	N27	E80	.993	8649	21.1	48	1-				.65				1 1 1
CULG	15	0316	0404	0322	N27	E80	.993	8649	21.1	48	-F		C	0322	.72				
GRP 2753	15	0436	0502	0442	N16	W47	.775	8644	11.7	26	1-				1.37				1 1 1
MITK	15	0436	0502	0442	N16	W47	.775	8644	11.7	26	1F		C	0442	1.86	2.80			E
GRP 2754	15	0757	0818		N15	W48	.782	8644	11.7	21	1-				.92				1 1 1
BUCA	15	0757E	0818D		N15	W48	.782	8644	11.7	21D	1F		C	0814	1.32	2.10			
GRP 2755	15	0850	1010	0905	N15	W47	.772	8644	11.8	80	1-				1.08				4 2 2
ARCE	15	0850E	0910D	0900	N16	W49	.795	8644	11.7	20D	-F		C	0900	1.12	1.80			
MONT	15	0905E	0950		N15	W47	.772	8644	11.9	45D	1N		C	0905	1.03	3.50			O
ATHN	15	0906E	0929D	0909	N13	W48	.775	8644	11.8	23D	1N	2		0909	1.65	2.40			
BUCA	15	0930E	1029D		N14	W45	.747	8644	12.0	59D	-F		C	0950	.88	1.30			
GRP 2756	15	0947	1013		S22	E04	.307	8647	15.7	26	1-				.39				1 1 1
BUCA	15	0947E	1013D		S22	E04	.307	8647	15.7	26D	-F		C	0956	.55	.60			
GRP 2757	15	1046	1104	1049	N16	W41	.713	8644	12.4	18	1-				1.13				4 4 4
ATHN	15	1045	1103	1048	N15	W40	.697	8644	12.4	18	1N	2		1048	1.82	2.50	1.80		
MONT	15	1047	1105	1050	N16	W42	.724	8644	12.3	18	-B		C	1050	.52	1.70			O
CAPS	15	1048E	1053D		N17	W41	.718	8644	12.4	5D	-F	3		1050	1.00	1.40		147	C
BUCA	15	1048E	1059D		N16	W40	.702	8644	12.5	11D	1N		P	1050	1.66	2.30			
GRP 2758	15	1054	1105	1056	S20	E02	.269	8647	15.6	11	1-				.33				1 1 1
ATHN	15	1054	1105	1056	S20	E02	.269	8647	15.6	11	-N	2		1056	.33	.30	1.40		
GRP 2759	15	1250	1255	1251	S22	E03	.304	8647	15.8	5	1-				.26				1 1 1
ATHN	15	1250	1255	1251	S22	E03	.304	8647	15.8	5	-N	2		1251	.26	.30	1.80		

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	OBSERVED UT START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2760	15	1610	1630	1618	S22	W01	.300	8647	15.6	20	1-				.82				1 1 1
LOCK	15	1610E	1630	1618	S22	W01	.300	8647	15.6	20D	-F		C	1618	.80	.90		10	H
GRP 2761	15	1634	1644	1638	N13	W51	.805	8644	11.9	10	1-				.40				1 1 1
LOCK	15	1634	1644	1638	N13	W51	.805	8644	11.9	10	-F		C	1638	.40	.70		10	
GRP 2762	15	1732	1805	1742	S25	E09	.378	8647	16.4	33	1-				.29				1 1 1
LOCK	15	1732	1805	1742	S25	E09	.378	8647	16.4	33	-N		C	1742	.30	.32		20	
GRP 2763	15	1737	1748	1740	N13	W52	.814	8644	11.8	11	1-				.29				1 1 1
LOCK	15	1737	1748	1740	N13	W52	.814	8644	11.8	11	-F		C	1740	.30	.50		10	
GRP 2764	15	1819	1828	1821	S22	W02	.302	8647	15.6	9	1-				.40				1 1 1
LOCK	15	1819	1828	1821	S22	W02	.302	8647	15.6	9	-N		C	1821	.40	.42		20	H
GRP 2765	15	1820	1835	1823	N16	E90	1.000	8650	22.5	15	1-				.25				1 1 1
LOCK	15	1820	1835	1823	N16	E90	1.000	8650	22.5	15	-F		C	1823	.30	1.20		10	H
GRP 2766	15	1925	1945	1945	S22	W02	.302	8647	15.7	20	1-				.50				1 1 1
LOCK	15	1925	1945D	1945	S22	W02	.302	8647	15.7	20D	-F		C	1945	.50	.60		10	H
GRP 2767	15	1957	2005	2000	S22	W02	.302	8647	15.7	8	1-				.50				1 1 1
LOCK	15	1957	2005	2000	S22	W02	.302	8647	15.7	8	-N		C	2000	.50	.60		20	
GRP 2768	15	2009	2014	2010	S22	W00	.300	8647	15.8	5	1-				.41				1 1 1
SACP	15	2009	2014	2010	S22	W00	.300	8647	15.8	5	-N		C		.45	.44			
GRP 2769	15	2027	2033	2030	S22	W02	.302	8647	15.7	6	1-				.40				1 1 1
LOCK	15	2027	2033	2030	S22	W02	.302	8647	15.7	6	-N		C	2030	.40	.42		20	
GRP 2770	15	2047	2103	2048	S22	W01	.300	8647	15.8	16	1-				.50				3 3 3
LOCK	15	2046	2055	2048	S22	W02	.302	8647	15.7	9	-B		C	2048	.70	.80		30	
HUAN	15	2047	2050		S22	W00	.300	8647	15.9	3	-F	1	C	2048	.46	.47			D
CULG	15	2047	2125	2048	S21	W01	.284	8647	15.8	38	-B		C	2048	.41	.42			L
GRP 2771	15	2051	2058	2053	S27	E11	.419	8647	16.7	7	1-				.40				1 1 1
LOCK	15	2051	2058	2053	S27	E11	.419	8647	16.7	7	-F		C	2053	.40	.42		10	
GRP 2772	15	2123	2130	2126	S22	W04	.307	8647	15.6	7	1-				.29				1 1 1
LOCK	15	2123	2130	2126	S22	W04	.307	8647	15.6	7	-F		C	2126	.30	.80		10	
GRP 2773	15	2242	2304	2251	S22	W02	.302	8647	15.8	22	1-				.71				1 1 1
LOCK	15	2242	2304	2251	S22	W02	.302	8647	15.8	22	-F		C	2251	.70	.80		10	
GRP 2774	15	2306	2327	2316	N24	W90	1.001	8637	9.2	21	1-				.32				2 2 2
LOCK	15	2303	2315	2305	N28	W90	1.001	8637	9.2	12	-F		C	2305	.20	.80		10	
CULG	15	2308	2339	2316	N20	W90	1.000	8639	9.2	31	-B		C	2316	.52				
GRP 2775	15	2311	2333	2316	N18	E83	.996	8650	22.2	22	1-				1.05				2 2 2
LOCK	15	2308	2330	2313	N16	E82	.994	8650	22.1	22	1N		C	2313	1.30	4.40		20	
SACP	15	2313	2335	2319	N20	E83	.996	8650	22.2	22	-N		C		.99				
GRP 2776	15	2311	2340	2320	N14	W59	.878	8644	11.5	29	1-				.50				1 1 1
LOCK	15	2311	2340	2320	N14	W59	.878	8644	11.5	29	-N		C	2320	.50	1.00		20	
GRP 2777	16	0032	0101	0042	N16	W58	.874	8644	11.7	29	1				1.38				2 2 2
MITK	16	0032	0100	0040	N16	W58	.874	8644	11.7	28	1B		C	0040	1.55	3.30			E
MANI	16	0034E	0102	0043	N16	W57	.866	8644	11.7	28D	1N	1		0043	1.86	3.38			
GRP 2778	16	0331	0353	0338	S22	W06	.314	8647	15.7	22	1-				.33				2 2 2
CULG	16	0324E	0353	0338	S21	W06	.298	8647	15.7	29D	-N		P	0338	.31	.32			L
HALE	16	0337	0342D	0338	S22	W06	.314	8647	15.7	5D	-N	3	P	0338	.31	.32			F
GRP 2779	16	0950	1000		N17	E88	1.000	8650	23.0	10	1				.31				1 1 1
ARCE	16	0950E	1000D		N17	E88	1.000	8650	23.0	10D	-N		C	0950	.31	1.50			
GRP 2780	16	1031	1045	1037	S27	E00	.380	8647	16.4	14	1-				.30				2 2 2
MONT	16	1025	1050		S26	E02	.366	8647	16.6	25	-N		C	1030	.26	.60			O
UCCL	16	1036	1040	1037	S27	W02	.382	8647	16.3	4	-N		C	1037	.52	.60			EIL
GRP 2781	16	1146	1200		S25	E01	.348	8647	16.6	14	1-				.36				1 1 1
MONT	16	1146	1200		S25	E01	.348	8647	16.6	14	-F		C	1150	.36	.80			O
GRP 2782	16	1230	1330		N19	E85	.998	8650	22.9	60	1				.17				1 1 1
HUAN	16	1230E	1330D		N19	E85	.998	8650	22.9	60D	-F	1	C	1242	.25				E.
GRP 2783	16	1245	1308		N26	W90	1.001	8644	9.8	23	1				.53				1 1 1
HUAN	16	1245	1308		N26	W90	1.001	8644	9.8	23	-N	1	C	1254	.88				
GRP 2784	16	1251	1258	1254	N19	W90	1.000	8644	9.8	7	1				.42				1 1 1
HUAN	16	1251	1258	1254	N19	W90	1.000	8644	9.8	7	-N	2	C	1254	.67				
GRP 2785	16	1457	1500	1459	S27	W02	.382	8647	16.5	3	1-				.77				1 1 1
SACP	16	1457	1500	1459	S27	W02	.382	8647	16.5	3	-N		C		.86	.86			
GRP 2786	16	1514	1517	1516	S21	W12	.343	8647	15.7	3	1-				.43				1 1 1
SACP	16	1514	1517	1516	S21	W12	.343	8647	15.7	3	-F		C		.48	.47			
GRP 2787	16	1527	1534	1530	S27	W01	.381	8647	16.6	7	1-				.94				1 1 1
SACP	16	1527	1534	1530	S27	W01	.381	8647	16.6	7	-F		C		1.04	1.04			
GRP 2788	16	1813	1828	1820	N27	W88	1.000	8644	10.2	15	1-				.34				1 1 1
SACP	16	1813	1828U	1820	N27	W88	1.000	8644	10.2	15U	-N		C		.38				
GRP 2789	16	1933	2000	1943	S28	W03	.399	8647	16.6	27	1-				.86				3 3 3
LOCK	16	1930	2000	1945	S28	W03	.399	8647	16.6	30	-N		C	1945	.80	.90		20	H
SACP	16	1931	2009	1943	S28	W03	.399	8647	16.6	38	-N		C		1.17	1.16			
HUAN	16	1939	1951	1942	S28	W03	.399	8647	16.6	12	-F	1	C	1942	.80	.81			D

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2790	16	2006	2022	2011	N19	E82	.994	8650	23.0	16	1-				.23				3 3 3
LOCK	16	2005	2027	2012	N19	E82	.994	8650	23.0	22	-N		C	2012	.40	1.40		20	H
SACP	16	2006	2012	2009	N19	E80	.991	8650	22.8	6	-N		C		.20				
HUAN	16	2006	2026		N20	E85	.999	8650	23.2	20	-N	1	C	2009	.25				E
GRP 2791	16	2105	2134	2114	N14	E78	.983	8650	22.7	29	1-				.34				1 1 1
LOCK	16	2105	2134	2114	N14	E78	.983	8650	22.7	29	-N		C	2114	.40	1.20		10	H
GRP 2792	16	2234	2252	2237	N15	E79	.987	8650	22.9	18	1-				.53				2 2 2
LOCK	16	2233	2251	2237	N14	E78	.983	8650	22.8	18	-N		C	2237	.60	1.90		20	H
SACP	16	2234	2253	2236	N15	E79	.987	8650	22.9	19	-N		C		.58				
GRP 2793	17	0036	0041	0038	N15	W82	.994	8644	10.9	5	1				.43				1 1 1
MITK	17	0036	0041	0038	N15	W82	.994	8644	10.9	5	1F		C	0038	.62				E
GRP 2794	17	0313	0320		N16	W79	.987	8644	11.2	7	1-				.32				1 1 1
MANI	17	0313E	0320		N16	W79	.987	8644	11.2	7D	-N	2		0315	.41	1.10			
GRP 2795	17	0854	0911	0859	N13	E55	.843	8650	21.5	17	1-				.65				4 4 4
ARCE	17	0850	0910	0900	N13	E54	.834	8650	21.4	20	-N		C	0900	.60	1.00			
UCCL	17	0855	0915		N11	E57	.856	8650	21.6	20	1N		P	0906	1.03				D
ATHN	17	0856	0908	0858	N12	E53	.822	8650	21.3	12	-N	1		0858	.76	1.30	1.90		
CATA	17	0858E	0906D	0900	N15	E54	.839	8650	21.4	8D	-N			0900	.51	1.00		166	
GRP 2796	17	0922	0927	0925	S22	W27	.520	8647	15.4	5	1-				.71				1 1 1
UCCL	17	0922	0927	0925	S22	W27	.520	8647	15.4	5	-N		C	0925	1.03	1.50			DI
GRP 2797	17	1025	1033	1027	N20	W85	.999	8644	11.1	8	1-				.72				1 1 1
UCCL	17	1025	1033	1027	N20	W85	.999	8644	11.1	8	1N		C	1027	1.03				D
GRP 2798	17	1237	1243	1239	S25	E80	.981	8652	23.5	6	1-				.72				1 1 1
UCCL	17	1237E	1243	1239	S25	E80	.981	8652	23.5	6D	1N		P	1239	1.03				EG
GRP 2799	17	1254	1254		N28	E58	.904	8655	21.9		1-								1 1 0
CAPS	17	1254E	1254D		N28	E58	.904	8655	21.9		-F	2							G
GRP 2800	17	1455	1510	1502	N15	E71	.956	8650	22.9	15	1-				.46				2 2 2
SACP	17	1453	1510	1502	N14	E71	.956	8650	22.9	17	-N		C		.77	1.58			
HUAN	17	1457	1510	1502	N15	E71	.956	8650	22.9	13	-F	1	C	1502	.31				E
GRP 2801	17	1650	1657	1653	S26	W28	.562	8647	15.6	7	1-				.63				3 3 3
LOCK	17	1648	1658	1653	S26	W27	.551	8647	15.7	10	-N		C	1653	1.00	1.20		20	
HUAN	17	1650E	1656D	1652	S26	W28	.562	8647	15.6	6D	-F	2	C	1652	.31	.33			E
MCMA	17	1652	1656	1653	S27	W28	.570	8647	15.6	4	-N		C	1653	.41	.50			E
GRP 2802	17	1740	1750	1743	N18	E65	.927	8650	22.6	10	1-				.51				3 3 3
SACP	17	1740	1750	1743	N19	E64	.922	8650	22.5	10	-F		C		.76	1.34			
LOCK	17	1740	1750	1743	N17	E66	.932	8650	22.7	10	-F		C	1743	.70	1.60		10	H
HUAN	17	1741	1749		N19	E66	.934	8650	22.7	8	-F	1	C	1743	.25				E
GRP 2803	17	1820	1838	1826	N17	W84	.997	8644	11.5	18	1-				.33				4 3 3
LOCK	17	1820	1837	1825	N16	W82	.994	8644	11.6	17	-F		C	1825	.40	1.40		10	
SACP	17	1820	1840	1827	N18	W81	.992	8644	11.7	20	-F		C		.48				
HUAN	17	1821	1838		N18	W88	1.000	8644	11.2	17	-N	1	C	1826	.31				E
MCMA	17	1828E	1830D		N15	W85	.998	8644	11.4	2D	-F		C	1829	.31				D
GRP 2804	17	2059	2110	2103	N14	E67	.934	8650	22.9	11	1-				.47				3 3 3
SACP	17	2058	2110	2103	N15	E67	.935	8650	22.9	12	-N		C		.67	1.22			
HUAN	17	2059	2109		N15	E68	.941	8650	23.0	10	-F	1	P	2102	.31				E
LOCK	17	2059	2110	2102	N13	E67	.933	8650	22.9	11	-B		C	2102	.60	1.40		20	
GRP 2805	17	2115	2135	2123	S26	E70	.939	8652	23.1	20	1-				.47				1 1 1
LOCK	17	2115	2135	2123	S26	E70	.939	8652	23.1	20	-F		C	2123	.50	1.20		10	
GRP 2806	17	2239	2305	2245	N20	E60	.898	8650	22.4	26	1-				.29				1 1 1
LOCK	17	2239	2305	2245	N20	E60	.898	8650	22.4	26	-F		C	2245	.30	.60		10	
GRP 2807	17	2307	2339	2321	N17	E60	.892	8650	22.5	32	1				1.06				4 3 3
LOCK	17	2307	2335	2320	N17	E61	.899	8650	22.5	28	1N		C	2320	1.00	2.10		20	
MANI	17	2315E	2336	2317	N16	E57	.867	8650	22.2	21D	1N	1		2317	1.55	2.85			
HALE	17	2317E	2342	2320	N18	E60	.894	8650	22.5	25D	-N	3	P	2320	.62	1.40			F
SACP	17	2324E	2342	2325	N17	E60	.892	8650	22.5	18D	-F		C		.97	1.54			
GRP 2808	18	0030	0049		N19	E59	.889	8650	22.4	19	1				1.24				1 1 1
HALE	18	0030E	0049		N19	E59	.889	8650	22.4	19D	1F	2	P	0030	1.03	2.30			F
GRP 2809	18	0123	0355	0142	N16	E63	.911	8650	22.8	152	1-				.55				1 1 1
HALE	18	0123	0355D	0142U	N16	E63	.911	8650	22.8	152D	-N	3	P	0142	.46				F
GRP 2810	18	0138	0146	0142	S25	E65	.909	8652	22.9	8	1-				.12				1 1 1
HALE	18	0138	0146	0142	S25	E65	.909	8652	22.9	8	-N	3	C	0142	.10				
GRP 2811	18	0252	0300		S26	E62	.889	8652	22.8	8	1-				.16				1 1 1
MANI	18	0252	0300		S26	E62	.889	8652	22.8	8	-F	2		0253	.21	.40			
GRP 2812	18	0256	0310	0259	S26	W24	.518	8647	16.3	14	1-				.74				1 1 1
HALE	18	0256	0310	0259U	S26	W24	.518	8647	16.3	14	-F	3	C	0259	.62	.70			F
GRP 2813	18	0450	0512	0453	N15	W87	1.000	8644	11.7	22	1-				.42				1 1 1
MANI	18	0450E	0512	0453	N15	W87	1.000	8644	11.7	22D	-N	2		0453	.52	1.60			
GRP 2814	18	0616	0654	0623	N18	E56	.864	8650	22.5	38	1				1.60				4 4 4
MITK	18	0616	0640D	0622	N17	E55	.853	8650	22.4	24D	1F		C	0622	1.34	2.60			F
ATHN	18	0616E	0645	0616	N18	E58	.879	8650	22.6	29D	1B	1		0616	1.65	3.20	2.00		
SIBE	18	0617E	0650D	0624	N17	E56	.861	8650	22.5	33D	1N		C	0624	1.90	3.50		84	EC
MANI	18	0617	0707	0624	N16	E54	.842	8650	22.3	50	1B	2		0624	2.17	3.80			FK

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2815	18	0636	0705	0652	N24	E58	.894	8650	22.6	29	1+				1.65				2 2 2
MITK	18	0635E	0700D		N20	E58	.884	8650	22.6	25D	1N		C	0638	1.55	3.10			F
KODA	18	0637	0705	0652	N27	E58	.902	8650	22.6	28	2N		C	0642	2.26	5.30	2.08		
GRP 2816	18	0741	0755	0745	N14	W88	1.000	8644	11.7	14	1-				.20				1 1 1
MANI	18	0741E	0755	0745	N14	W88	1.000	8644	11.7	14D	-F	2		0745	.26	.80			
GRP 2817	18	1127	1136	1129	S22	W28	.531	8647	16.4	9	1-				.26				2 2 2
HUAN	18	1126	1136	1128	S21	W32	.574	8647	16.1	10	-F	2	C	1128	.21	.22			E
ATHN	18	1128	1136	1130	S23	W24	.492	8647	16.7	8	-F	2		1130	.33	.40	1.10		
GRP 2818	18	1131	1141	1135	N16	W90	1.000	8644	11.7	10	1				.24				1 1 1
HUAN	18	1131	1141	1135	N16	W90	1.000	8644	11.7	10	-F	2	C	1135	.36				E
GRP 2819	18	1435	1452		N19	E53	.842	8650	22.6	17	1-				.43				1 1 1
HUAN	18	1435	1452		N19	E53	.842	8650	22.6	17	-F	1	C	1439	.52	.72			E
GRP 2820	18	1520	1532		S17	E57	.839	8651	22.9	12	1-				.76				1 1 1
MCMA	18	1520E	1532		S17	E57	.839	8651	22.9	12D	-F		C	1526	.52	1.00			EL
GRP 2821	18	1618	1623	1620	N21	E90	1.000	8659	25.4	5	1-				.25				1 1 1
LOCK	18	1618	1623	1620	N21	E90	1.000	8659	25.4	5	-F		C	1620	.30	1.20		10	
GRP 2822	18	1633	1652	1637	S23	W32	.585	8647	16.3	19	1-				1.06				2 2 2
LOCK	18	1631	1655	1637	S23	W33	.597	8647	16.2	24	-N		C	1637	1.10	1.40		20	
MCMA	18	1635	1648	1637	S23	W30	.562	8647	16.4	13	-N		C	1637	.67	.90			E
GRP 2823	18	1658	1712	1702	N18	E53	.839	8650	22.7	14	1-				.61				1 1 1
LOCK	18	1658	1712	1702	N18	E53	.839	8650	22.7	14	-N		C	1702	.60	1.10		20	
GRP 2824	18	1755	1807	1800	S17	E55	.821	8651	22.9	12	1-				.40				1 1 1
LOCK	18	1755	1807	1800	S17	E55	.821	8651	22.9	12	-F		C	1800	.40	.70		10	
GRP 2825	18	2003	2021	2010	N21	E89	1.000	8659	25.5	18	1				1.22				4 3 4
SACP	18	2002	2026	2010	N22	E88	1.000	8659	25.4	24	1B		C		1.05				
LOCK	18	2003	2022	2011	N21	E90	1.000	8659	25.6	19	1N		C	2011	1.10	4.40		20	
HALE	18	2004	2015	2008	N22	E88	1.000	8659	25.4	11	1N	3	C	2008	1.03				
MCMA	18	2005E	2017D	2009	N18	E90	1.000	8659	25.6	12D	1B		P	2009	1.03				
GRP 2826	18	2011	2017	2014	N14	E51	.809	8650	22.7	6	1-				.29				1 1 1
LOCK	18	2011	2017	2014	N14	E51	.809	8650	22.7	6	-F		C	2014	.30	.50		10	
GRP 2827	18	2021	2032	2024	S24	W36	.637	8647	16.1	11	1-				.50				2 2 2
LOCK	18	2021	2027	2022	S25	W36	.643	8647	16.1	6	-F		C	2022	.80	1.00		10	
HALE	18	2021	2037	2026	S23	W35	.620	8647	16.2	16	-N	3	C	2026	.15	.20			
GRP 2828	18	2033	2044	2038	N28	E54	.879	8655	22.9	11	1-				.27				2 2 2
LOCK	18	2029	2045	2037	N27	E54	.875	8655	22.9	16	-F		C	2037	.30	.60		10	
HALE	18	2037	2042	2038	N28	E53	.872	8655	22.8	5	-F	3	C	2038	.21	.40			
GRP 2829	18	2039	2055	2042	N20	E51	.828	8650	22.7	16	1-				.61				1 1 1
LOCK	18	2039	2055	2042	N20	E51	.828	8650	22.7	16	-F		C	2042	.60	1.00		10	
GRP 2830	18	2052	2101	2054	N17	E76	.979	8659	24.6	9	1-				.35				1 1 1
LOCK	18	2052	2101	2054	N17	E76	.979	8659	24.6	9	-F		C	2054	.40	1.10		10	
GRP 2831	18	2100	2115	2112	N14	E51	.809	8650	22.7	15	1-				.26				1 1 1
SACP	18	2100	2115	2112	N14	E51	.809	8650	22.7	15	-F		C		.29	.38			
GRP 2832	18	2114	2129	2120	S16	E53	.800	8651	22.9	15	1-				.71				1 1 1
LOCK	18	2114	2129	2120	S16	E53	.800	8651	22.9	15	-F		C	2120	.70	1.20		10	
GRP 2833	18	2119	2135	2122	N15	E85	.998	8659	25.3	16	1-				.40				2 2 2
CULG	18	2118	2135	2122	N15	E87	1.000	8659	25.4	17	-N		C	2122	.21				
LOCK	18	2119	2134	2122	N14	E82	.993	8659	25.0	15	1N		C	2122	.70	2.40		20	
GRP 2834	18	2225	2303	2250	N21	E90	1.000	8659	25.7	38	1-				.51				1 1 1
LOCK	18	2225	2303	2250	N21	E90	1.000	8659	25.7	38	1F		C	2250	.60	2.40		10	
GRP 2835	18	0002	0023	0010	N20	E83	.996	8659	25.2	21	1-				.57				2 2 2
LOCK	18	2359	0023	0012	N20	E90	1.000	8659	25.7	24	1F		C	0012	.60	2.40		10	
SACP	19	0004	0011D	0008	N20	E76	.980	8659	24.7	7D	-N		C		.70				
GRP 2836	19	0612	0648	0629	N17	E44	.751	8650	22.6	36	1+				2.71				5 5 5
CULG	19	0605	0823D		N20	E45	.774	8650	22.6	138D	1B		C		1.55	2.25			
MITK	19	0608	0640D	0625	N18	E43	.746	8650	22.5	32D	2N		C	0625	4.02	6.10			F
ATHN	19	0613E	0648	0617	N17	E45	.761	8650	22.6	35D	1B	2		0617	2.48	3.70	2.00		
MANI	19	0615	0646	0630	N14	E43	.727	8650	22.5	31	1N	1		0630	2.89	3.97			F
SIBE	19	0620	0651	0631	N16	E43	.736	8650	22.5	31	2N		C	0631	4.17	6.10		111	E
GRP 2837	19	0759	0805	0801	N28	E45	.813	8655	22.7	6	1-				.33				1 1 1
ATHN	19	0759	0805	0801	N28	E45	.813	8655	22.7	6	-N	2		0801	.33	.60	1.50		
GRP 2838	19	1456	1510	1501	S23	W47	.752	8647	16.1	14	1-				.52				1 1 1
SACP	19	1456	1510	1501	S23	W47	.752	8647	16.1	14	-F		C		.58	.71			
GRP 2839	19	1717	1749	1721	N18	E67	.939	8659	24.7	32	1-				.79				4 3 3
SACP	19	1716	1741	1721	N17	E66	.932	8659	24.7	25	-N		C		.86	1.55			
HUAN	19	1717	1730D		N17	E68	.943	8659	24.8	13D	-B	1	P	1721	.93				
MCMA	19	1718	1752	1721	N18	E66	.933	8659	24.7	34	-B		C	1721	.62	1.60			E
HALE	19	1730E	1755	1730U	N18	E69	.950	8659	24.9	25D	1N	1	P	1730	.62				
GRP 2840	19	1730	1920	1850	N12	E19	.428	8654	21.2	110	1-				.37				1 1 1
HALE	19	1730E	1920	1850	N12	E19	.428	8654	21.2	110D	-N	1	P	1850	.31	.32			
GRP 2841	19	1820	1828	1823	N19	E44	.760	8650	23.1	8	1-				.25				1 1 1
HALE	19	1820	1828	1823	N19	E44	.760	8650	23.1	8	-F	1	C	1823	.21	.30			

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	LOCATION CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT. %	REMARKS
GRP 2842	19	1910	1930	1914	N30	W53	.879	8646	15.8	20	1-				.25				1 1 1
HALE	19	1910	1930	1914	N30	W53	.879	8646	15.8	20	-N	1	C	1914	.21	.40			
GRP 2843	19	2052	2116	2103	S17	E48	.749	8651	23.5	24	1-				.19				1 1 1
LOCK	19	2052	2116	2103	S17	E48	.749	8651	23.5	24	-F		C	2103	.20	.30		10	
GRP 2844	19	2107	2125	2110	N12	E15	.384	8654	21.0	18	1-				.50				1 1 1
LOCK	19	2107	2125	2110	N12	E15	.384	8654	21.0	18	-F		C	2110	.50	.60		10	
GRP 2845	19	2112	2125	2117	N21	E90	1.000	8659	26.6	13	1-				.25				1 1 1
LOCK	19	2112	2125	2117	N21	E90	1.000	8659	26.6	13	-F		C	2117	.30	1.20		10	
GRP 2846	20	0237	0303	0250	N11	E14	.362	8654	21.2	26	1-				.49				1 1 1
HALE	20	0237	0303	0250	N11	E14	.362	8654	21.2	26	-B	2	C	0250	.41	.42			F
GRP 2847	20	0706	0718	0707	N18	E31	.619	8650	22.6	12	1-				.47				1 1 1
CULG	20	0706	0718	0707	N18	E31	.619	8650	22.6	12	-N		C	0707	.52	.65			F
GRP 2848	20	0829	0837		N11	E07	.300	8654	20.9	8	1-								1 1 0
WEND	20	0829E	0837D		N11	E07	.300	8654	20.9	8D	-F								
GRP 2849	20	1103	1119		S21	W60	.868	8647	16.0	16	1-				1.24				2 2 1
WEND	20	1100E	1120D		S20	W58	.850	8647	16.1	20D	1F				3.09				
KAND	20	1105	1118		S21	W61	.876	8647	15.9	13	-N								
GRP 2850	20	1511	1554	1543	N16	E62	.905	8659	25.3	43	1				1.81				3 3 3
WEND	20	1508E	1535D		N16	E62	.905	8659	25.3	27D	1F				4.13				
SACP	20	1511	1554	1543	N15	E62	.903	8659	25.3	43	1N		C		2.01	3.28			
MCMA	20	1514	1554	1542A	N16	E62	.905	8659	25.3	40	1B		C	1542	1.29	3.00			EKL
GRP 2851	20	1525	1552	1535	N18	E27	.576	8650	22.7	27	1-				.43				1 1 1
SACP	20	1525	1552	1535	N18	E27	.576	8650	22.7	27	-N		C		.48	.51			
GRP 2852	20	1644	1658	1647	N16	E60	.891	8659	25.2	14	1-				.71				1 1 1
LOCK	20	1644	1658	1647	N16	E60	.891	8659	25.2	14	-N		C	1647	.70	1.40		20	
GRP. 2853	20	1740	1754	1744	N17	E28	.579	8650	22.8	14	1-				.36				2 2 2
SACP	20	1737	1759	1742U	N18	E28	.587	8650	22.8	22	-F		C		.58	.62			
LOCK	20	1743	1748	1745	N15	E28	.562	8650	22.8	5	-F		C	1745	.20	.22		10	
GRP 2854	20	1752	1816	1759	N16	E61	.898	8659	25.3	24	1-				.85				4 4 4
LOCK	20	1751	1819	1758	N17	E61	.900	8659	25.3	28	-N		C	1758	.90	1.90		20	H
HALE	20	1752	1814	1759	N15	E62	.903	8659	25.4	22	-N	2	C	1759	.31	.70			
SACP	20	1752	1815	1800	N15	E61	.896	8659	25.3	23	-N		C		1.14	1.84			
MCMA	20	1756E	1816	1800	N16	E60	.891	8659	25.2	20D	-N		C	1800	.72	1.60			EL
GRP 2855	20	2044	2130	2050	N23	E63	.924	8659	25.6	46	1-				1.10				4 3 3
HALE	20	2043	2138	2049	N24	E62	.920	8659	25.5	55	-N	2	C	2049	.41				F
SACP	20	2044	2114	2052	N23	E64	.930	8659	25.7	30	1N		C		2.10	3.76			
CULG	20	2045	2139	2049	N23	E64	.930	8659	25.7	54	1N		C	2049	1.03	2.25			FH
LOCK	20	2057E	2127	U	N22	E63	.922	8659	25.6	30D	1B		C	2100	1.80	4.00		30	
GRP 2856	20	2123	2150	2130	N16	E61	.898	8659	25.5	27	1-				.47				2 2 2
CULG	20	2119	2200	2129	N16	E61	.898	8659	25.5	41	-N		C	2129	.62	1.20			J
HALE	20	2126	2139	2131	N16	E60	.891	8659	25.4	13	-B	2	C	2131	.31	.70			
GRP 2857	20	2203	2220	2211	N11	W01	.276	8654	20.8	17	1-				.51				3 3 3
SACP	20	2200	2223U	2211	N11	W01	.276	8654	20.8	23U	-F		C		.67	.65			
LOCK	20	2204	2220	2211	N11	W01	.276	8654	20.8	16	-F		C	2211	.50	.60		10	
HALE	20	2205	2218	2210	N12	W01	.293	8654	20.8	13	-N	2	C	2210	.36	.40			
GRP 2858	20	2205	2330	2230	S17	E33	.566	8651	23.4	85	1-				.40				1 1 1
LOCK	20	2205	2330	2230	S17	E33	.566	8651	23.4	85	-F		C	2230	.40	.50		10	J
GRP 2859	20	2216	2240	2224	N16	E63	.912	8659	25.7	24	1-				.48				2 2 2
HALE	20	2215	2235	2222	N17	E67	.938	8659	26.0	20	-N	2	C	2222	.21				F
LOCK	20	2217	2245	2225	N14	E58	.871	8659	25.3	28	-F		C	2225	.70	1.40		10	
GRP 2860	20	2231	2244	2235	N21	W36	.693	8648	18.2	13	1-				.40				1 1 1
LOCK	20	2231	2244	2235	N21	W36	.693	8648	18.2	13	-F		C	2235	.40	.60		10	
GRP 2861	20	2320	2340	2325	N16	E62	.905	8659	25.6	20	1-				.78				2 2 2
LOCK	20	2320	2330	2325U	N14	E58	.871	8659	25.3	10	-F		C	2325	.70	1.40		10	
CULG	20	2320	2350	2341	N18	E65	.928	8659	25.8	30	-F		C	2341	.93				
GRP 2862	21	0120	0127	0123	N16	E61	.898	8659	25.6	7	1-				.37				1 1 1
CULG	21	0120	0127	0123	N16	E61	.898	8659	25.6	7	-N		C	0123	.41	.80			
GRP 2863	21	0216	0238	0223	N17	E61	.900	8659	25.7	22	1-				.43				2 2 2
CULG	21	0214	0238	0223	N18	E63	.915	8659	25.8	24	-N		C	0223	.41	1.40			
HALF	21	0217	0237	0223	N16	E58	.876	8659	25.4	20	-F	1	C	0223	.41	.90			
GRP 2864	21	0219	0238	0221	N15	E23	.506	8650	22.8	19	1-				.66				2 2 2
MITK	21	0218	0233	0222	N15	E23	.506	8650	22.8	15	-N		C	0222	.83	1.00			E
HALF	21	0219	0242	0220	N15	E22	.495	8650	22.7	23	-N	1	C	0220	.62	.70			F
GRP 2865	21	0321	0342	0330	N16	E55	.851	8659	25.3	21	1-				.55				2 2 2
CULG	21	0320	0332D	0330	N16	E56	.860	8659	25.3	12D	-N		P	0330	.41	.72			
MITK	21	0322	0342	0330	N16	E53	.834	8659	25.1	20	-N		C	0330	1.03	2.00			
GRP 2866	21	0425	0503	0437	N18	E56	.865	8659	25.4	38	1-				.74				3 3 3
CULG	21	0425	0459	0438	N18	E56	.865	8659	25.4	34	-N		C	0438	.83	1.62			F
MITK	21	0425	0506	0435	N19	E56	.867	8659	25.4	41	1N		C	0435	1.75	3.30			E
IKOM	21	0434E	0443D		N16	E55	.851	8659	25.3	9D	-F		V	0434	.62	1.20			D

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2867	21	0531	0608	0537	N15	E24	.517	8650	23.0	37	1-				1.09				1 1 1
MITK	21	0531	0608	0537	N15	E24	.517	8650	23.0	37	-F		C	0537	1.55	1.80			
GRP 2868	21	0608	0632		N15	E55	.849	8659	25.4	24	1-				1.76				1 1 1
MITK	21	0608	0632D		N15	E55	.849	8659	25.4	24D	1F		C	0630	2.27	4.10			
GRP 2869	21	0723	0750	0735	N12	W04	.302	8654	21.0	27	1-				.86				2 2 2
CULG	21	0723	0753D	0738	N12	W05	.306	8654	20.9	30D	-N		P	0738	.62	.60			
ATHN	21	0730E	0746	0732	N12	W02	.296	8654	21.2	16D	-N	1		0732	1.16	1.20	1.70		
GRP 2870	21	0838	0905	0841	N15	E54	.840	8659	25.4	27	1-				.76				4 4 3
MONT	21	0838	0850D	0841	N16	E55	.851	8659	25.5	12D	-N		C	0841	.62	.80			
KAND	21	0838	0908		N12	E57	.859	8659	25.6	30	-N								
MANI	21	0839E	0903	0841	N14	E49	.791	8659	25.0	24D	-N	2		0841	.57	.91			
ATHN	21	0839	0905	0842	N16	E54	.843	8659	25.4	26	1B	2		0842	1.16	2.10	2.00		
GRP 2871	21	0926	0937	0921	N16	E55	.851	8659	25.5	11	1-				.83				2 1 1
ATHN	21	0920	0931	0921	N16	E54	.843	8659	25.4	11	-N	2		0921	.83	1.50	1.70		
MONT	21	0931	0943	0934	N16	E55	.851	8659	25.5	12	-N		C	0934	.52	2.00			
GRP 2872	21	1344	1355	1347	N16	E53	.834	8659	25.5	11	1-				.62				1 1 1
MONT	21	1344	1355D	1347	N16	E53	.834	8659	25.5	11D	-F		C	1347	.62	.80			
GRP 2873	21	1423	1443	1425	N16	E50	.807	8659	25.3	20	1-				.59				1 1 1
MCMA	21	1423E	1443D	1425	N16	E50	.807	8659	25.3	20D	-N		C	1425	.41	.70			E
GRP 2874	21	1523	1605	1525	N16	E50	.807	8659	25.4	42	1-				.89				1 1 1
MCMA	21	1523E	1605D	1525	N16	E50	.807	8659	25.4	42D	-N		C	1525	.62	1.10			E
GRP 2875	21	1655	1735	1703	N11	W10	.325	8654	21.0	40	1-				1.13				3 1 1
SACP	21	1655	1720	1703	N10	W10	.311	8654	21.0	25	-F		C		1.25	1.23			
HALE	21	1714E	1750	1716U	N12	W11	.347	8654	20.9	36D	-N	1	P	1716	.83	.90			F
MCMA	21	1715E	1723D		N12	W10	.339	8654	21.0	8D	-F		C	1715	.31	.32			D
GRP 2876	21	1734	1747	1736	N18	E13	.445	8650	22.7	13	1-				.57				1 1 1
MCMA	21	1734E	1747	1736	N18	E13	.445	8650	22.7	13D	-F		P	1736	.41	.50			E
GRP 2877	21	1749	1812	1800	N18	E37	.685	8659	24.5	23	1-				.47				2 2 2
HALE	21	1749	1815	1756	N17	E35	.657	8659	24.4	26	-N	1	C	1756	.31	.40			F
MCMA	21	1800E	1809	1803	N18	E38	.695	8659	24.6	9D	-F		P	1803	.41	.60			EH
GRP 2878	21	1840	1928	1859	N16	E48	.788	8659	25.4	48	1-				.61				3 3 3
MCMA	21	1833E	1905D		N18	E46	.776	8659	25.2	32D	-N		C	1840	.36	.60			E
LOCK	21	1840	1915	1900	N14	E49	.791	8659	25.5	35	-F		C	1900	.80	1.30		10	
HALE	21	1847	1940	1857	N17	E48	.791	8659	25.4	53	-N	1	C	1857	.41	.60			F
GRP 2879	21	1845	1917	1901	S17	W82	.987	8647	15.6	32	1-				.25				1 1 1
LOCK	21	1845	1917	1901	S17	W82	.987	8647	15.6	32	-F		C	1901	.30	1.00		10	
GRP 2880	21	1901	1914	1905	N15	E90	1.000	8663	28.5	13	1-				.25				1 1 1
LOCK	21	1901	1914	1905	N15	E90	1.000	8663	28.5	13	-F		C	1905	.30	1.20		10	
GRP 2881	21	1903	1920	1907	N19	E13	.459	8650	22.8	17	1-				.76				2 2 2
LOCK	21	1901	1930	1907	N19	E12	.452	8650	22.7	29	-N		C	1907	.90	1.00		20	
MCMA	21	1904	1910	1906	N18	E13	.445	8650	22.8	6	-N		C	1906	.41	.50			E
GRP 2882	21	1910	1927	1915	N19	E54	.851	8659	25.8	17	1-				.71				1 1 1
LOCK	21	1910	1927	1915	N19	E54	.851	8659	25.8	17	-N		C	1915	.70	1.30		20	
GRP 2883	21	1930	2000	1940	S17	W82	.987	8647	15.7	30	1-				.25				1 1 1
LOCK	21	1930	2000	1940	S17	W82	.987	8647	15.7	30	-F		C	1940	.30	1.00		10	
GRP 2884	21	2001	2024	2008	N15	E48	.784	8659	25.4	23	1-				.67				2 2 2
LOCK	21	2000	2020	2010	N15	E49	.794	8659	25.5	20	-F		C	2010	.70	1.10		10	J
HALE	21	2001	2028	2006	N15	E46	.764	8659	25.3	27	-B	1	C	2006	.52	.80			F
GRP 2885	21	2025	2115	2029	N17	E12	.424	8650	22.8	50	1-				.49				1 1 1
HALE	21	2025	2115	2029	N17	E12	.424	8650	22.8	50	-N	1	C	2029	.41	.50			
GRP 2886	21	2131	2224	2149	N23	E47	.807	8659	25.4	53	2-				3.14				5 5 5
CULG	21	2128	2250	2149	N24	E48	.820	8659	25.5	82	1B		C	2149	3.09	4.80			F
LOCK	21	2131	2200	2150	N20	E48	.803	8659	25.5	29	1B		C	2150	2.10	3.60		30	
HUAN	21	2131	2219D		N22	E48	.811	8659	25.5	48D	2N	1	C	2145	4.85	6.35			
HALE	21	2132	2225D	2146	N22	E47	.803	8659	25.4	53D	1B	2	P	2146	2.99	5.00			F
SACP	21	2133	2223	2150	N25	E45	.800	8659	25.3	50	1N		C		3.35	4.43			
GRP 2887	21	2307	2320	2312	N20	E72	.966	8659	27.4	13	1-				.69				1 1 1
SACP	21	2307	2320	2312	N20	E72	.966	8659	27.4	13	-N		C		.77	1.71			
GRP 2888	21	2321	2346	2322	N18	E41	.726	8659	25.0	25	1-				1.12				1 1 1
HALE	21	2321	2346	2322	N18	E41	.726	8659	25.0	25	-F	1	C	2322	.93	1.40			F
GRP 2889	22	0030	0137	0112	N27	E40	.770	8659	25.0	67	1				1.40				1 1 1
CULG	22	0030	0137	0112	N27	E40	.770	8659	25.0	67	1N		C	0112	1.55	2.40			F
GRP 2890	22	0055	0141	0112	N15	E41	.712	8659	25.1	46	1-				1.86				2 2 2
HALE	22	0042	0141	0111	N16	E38	.684	8659	24.9	59	-N	1	C	0111	.83	1.20			
MITK	22	0108	0140	0112	N14	E43	.729	8659	25.3	32	1N		C	0112	3.40	5.10			
GRP 2891	22	0125	0147		N15	E46	.764	8659	25.5	22	1-				.23				1 1 1
IKOM	22	0125	0147D		N15	E46	.764	8659	25.5	22D	-F		V	0125	.72	1.10		75	E
GRP 2892	22	0128	0133	0129	S36	W76	.969	8647	16.4	5	1-				.18				1 1 1
HALE	22	0128	0133	0129	S36	W76	.969	8647	16.4	5	-F	1	C	0129	.15				

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2893	22	0153	0222	0159	N21	E74	.975	8663	27.6	29	1-				.28				2 2 2
HALE	22	0151	0228	0158	N20	E73	.970	8663	27.6	37	-N	1	C	0158	.31				
CULG	22	0154	0216	0159	N21	E75	.978	8663	27.7	22	-N		C	0159	.21				
GRP 2894	22	0633	0638	0635	S23	E90	.999	8667	29.0	5	1-				.37				1 1 1
MANI	22	0633E	0638D	0635	S23	E90	.999	8667	29.0	5D	-N	2		0635	.46	1.51			
GRP 2895	22	0750	0759	0752	N14	E44	.740	8659	25.6	9	1-				.17				1 1 1
ATHN	22	0750	0759	0752	N14	E44	.740	8659	25.6	9	-N	2		0752	.17	.20			
GRP 2896	22	0831	0850	0835	N15	E07	.364	8650	22.9	19	1-				1.58				5 4 4
MONT	22	0829E	0850	0833	N17	E08	.400	8650	23.0	21D	-N		C	0833	.62	1.40			
CATA	22	0830E	0850D	0835	N16	E04	.368	8650	22.7	20D	1B			0835	2.53	2.70		276	
ATHN	22	0833	0845	0836	N15	E06	.359	8650	22.8	12	-N	2		0836	1.32	1.40			
CAPS	22	0835E	0850D		N14	E07	.349	8650	22.9	15D	-F	2		0837	1.70	1.80		143	CE
MANI	22	0837E	0855		N15	E08	.370	8650	23.0	18D	-F	2		0839	.83	.89			
GRP 2897	22	0829	0900		N17	E43	.742	8659	25.6	31	1-				.52				1 1 1
MONT	22	0829E	0900		N17	E43	.742	8659	25.6	31D	-N		C	0829	.52	1.60			
GRP 2898	22	0918	0945	0922	N17	E40	.711	8659	25.4	27	1-				.52				1 1 1
MONT	22	0918	0945	0922	N17	E40	.711	8659	25.4	27	-N		C	0922	.52	1.50			
GRP 2899	22	1046	1053		N10	W15	.364	8650	21.3	7	1-				.26				1 1 1
ATHN	22	1046	1053		N10	W15	.364	8650	21.3	7	-N	2		1047	.26	.30			
GRP 2900	22	1108	1127	1110	N20	E38	.708	8659	25.3	19	1-				.59				2 2 2
MONT	22	1107	1138	1110	N20	E40	.728	8659	25.5	31	-N		C	1110	.52	1.70			
ATHN	22	1109	1115		N19	E36	.681	8659	25.2	6	-N	2		1111	.66	.90			
GRP 2901	22	1500	1526	1505	N16	E36	.662	8659	25.3	26	1-				.61				1 1 1
SACP	22	1500	1526	1505	N16	E36	.662	8659	25.3	26	-N		C		.68	.76			
GRP 2902	22	1638	1704	1656	N17	E31	.613	8659	25.0	26	1-				1.20				1 1 1
SACP	22	1638	1704	1656	N17	E31	.613	8659	25.0	26	-N		C		1.33	1.46			
GRP 2903	22	1800	1816	1805	N18	E23	.537	8659	24.5	16	1-				.31				1 1 1
HALE	22	1800	1816	1805	N18	E23	.537	8659	24.5	16	-N	1	C	1805	.26	.30			
GRP 2904	22	1900	1930	1915	N23	E04	.477	8650	23.1	30	1-				.62				2 2 2
SACP	22	1858	1928	1915	N24	E05	.494	8650	23.2	30	-F		C		.96	.98			
HALE	22	1901	1932	1914	N22	E02	.458	8650	22.9	31	-N	1	C	1914	.31	.31			
GRP 2905	22	2003	2029	2009	N16	W30	.595	8654	20.6	26	1-				.45				2 2 2
SACP	22	2003	2020	2010	N16	W30	.595	8654	20.6	17	-N		C		.58	.62			
HALE	22	2008E	2038	2008U	N15	W30	.587	8654	20.6	30D	-N	1	P	2008	.31	.40			
GRP 2906	22	2035	2043	2038	N14	E35	.639	8659	25.5	8	1-				.52				1 1 1
SACP	22	2035	2043	2038	N14	E35	.639	8659	25.5	8	-N		C		.58	.64			
GRP 2907	22	2054	2119	2108	N13	E27	.536	8659	24.9	25	1				1.81				1 1 1
SACP	22	2054	2119	2108	N13	E27	.536	8659	24.9	25	1N		C		2.01	2.12			
GRP 2908	22	2123	2157	2139	N13	E26	.524	8659	24.8	34	1-				.43				1 1 1
HALE	22	2123	2157	2139	N13	E26	.524	8659	24.8	34	-N	1	C	2135	.36	.40			
GRP 2909	22	2228	2233	2230	N22	E49	.820	8659	26.6	5	1-				.18				1 1 1
SACP	22	2228	2233	2230	N22	E49	.820	8659	26.6	5	-N		C		.20	.26			
GRP 2910	22	2228	2241	2232	N10	W26	.501	8650	21.0	13	1-				.25				1 1 1
HALE	22	2228	2241	2232	N10	W26	.501	8650	21.0	13	-F	1	C	2232	.21	.22			
GRP 2911	22	2252	2305	2257	N10	W27	.514	8654	20.9	13	1-				.70				2 2 2
HALE	22	2251	2304	2257	N10	W27	.514	8654	20.9	13	-N	1	C	2257	.52	.60			
SACP	22	2252	2306	2257	N10	W27	.514	8654	20.9	14	-F		C		.87	.90			
GRP 2912	22	2253	2303	2258	N21	W63	.921	8648	18.2	10	1-				.25				1 1 1
HALE	22	2253	2303	2258	N21	W63	.921	8648	18.2	10	-N	1	C	2258	.21				
GRP 2913	23	0015	0020	0015	N15	E00	.347	8650	23.0	5	1-				.61				2 2 2
HALE	23	0014	0023	0015	N15	E00	.347	8650	23.0	9	-N	1	C	0015	.41	.42			F
MITK	23	0015	0017	0015	N15	E00	.347	8650	23.0	2	-F		C	0015	1.03	1.10			D
GRP 2914	23	0056	0131	0113	N20	E31	.637	8659	25.4	35	1-				.75				3 3 3
HALE	23	0034	0135	0114U	N19	E31	.630	8659	25.3	61	-N	1	C	0114	.52	.70			
MANI	23	0102	0135	0111	N20	E28	.607	8659	25.1	33	-F	2		0111	.93	1.16			F
MITK	23	0111	0122	0113	N22	E35	.692	8659	25.7	11	-F		C	0113	1.13	1.50			E
GRP 2915	23	0224	0240	0227	N16	E33	.629	8659	25.6	16	1-				.37				1 1 1
HALE	23	0224	0240	0227	N16	E33	.629	8659	25.6	16	-N	1	C	0227	.31	.40			
GRP 2916	23	0309	0325	0311	S22	E77	.970	8667	28.9	16	1-				.25				1 1 1
HALE	23	0309	0325	0311	S22	E77	.970	8667	28.9	16	-B	1	C	0311	.21				
GRP 2917	23	0641	0703	0646	N12	W32	.591	8654	20.9	22	1-				.60				1 1 1
MANI	23	0641	0703	0646	N12	W32	.591	8654	20.9	22	-N	2		0646	.67	.83			
GRP 2918	23	0707	0714	0710	N12	W32	.591	8654	20.9	7	1-				.26				1 1 1
MANI	23	0707	0714	0710	N12	W32	.591	8654	20.9	7	-N	2		0710	.29	.36			
GRP 2919	23	0717	0731	0722	N12	E27	.529	8659	25.3	14	1-				1.86				1 1 1
MANI	23	0717	0731	0722	N12	E27	.529	8659	25.3	14	1F	2		0722	1.96	2.40			F
GRP 2920	23	0719	0730	0723	N12	W32	.591	8654	20.9	11	1-				.32				1 1 1
MANI	23	0719	0730	0723	N12	W32	.591	8654	20.9	11	-N	2		0723	.35	.44			
GRP 2921	23	0815	0826	0818	N12	W33	.603	8654	20.9	11	1-				.56				1 1 1
MANI	23	0815	0826	0818	N12	W33	.603	8654	20.9	11	-N	2		0818	.62	.78			

SOLAR FLARES

REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN.	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2922	23	1115	1122		N10	W36	.629	8654	20.8	7	1-								1 1 0
ONDR	23	1115E	1122		N10	W36	.629	8654	20.8	7D	-N		V						CH
	23	1200	1215	NO FLARE PATROL															
GRP 2923	23	1214	1224		N14	E25	.521	8659	25.4	10	1+								1 1 0
ONDR	23	1214E	1224D		N14	E25	.521	8659	25.4	10D	1B		V						
	23	1230	1235	NO FLARE PATROL															
	23	1305	1320	NO FLARE PATROL															
GRP 2924	23	1324	1359		N24	E26	.626	8659	25.5	35	1-				.43				1 1 1
HUAN	23	1324	1359		N24	E26	.626	8659	25.5	35	-N	1	C	1328	.48	.54			D
GRP 2925	23	1512	1546	1518	N11	W31	.572	8654	21.3	34	1-				1.55				2 2 2
HUAN	23	1512	1530D		N11	W31	.572	8654	21.3	18D	1F	1	P	1517	1.80	1.93			E
SACP	23	1512	1546	1518	N10	W31	.566	8654	21.3	34	-N		C		1.72	1.83			
GRP 2926	23	1524	1539	1528	N17	W13	.434	8650	22.7	15	1-				.60				1 1 1
SACP	23	1524	1539	1528	N17	W13	.434	8650	22.7	15	-F		C		.67	.68			
GRP 2927	23	1554	1601	1557	S24	E67	.920	8667	28.7	7	1-				.68				1 1 1
SACP	23	1554	1601D	1557	S24	E67	.920	8667	28.7	7D	-N		C		.76	1.31			
GRP 2928	23	1602	1616		N23	W10	.499	8650	22.9	14	1-				.79				1 1 1
HUAN	23	1602E	1616D		N23	W10	.499	8650	22.9	14D	-F	1	P	1610	.88	.90			E
	23	1615	1620	NO FLARE PATROL															
GRP 2929	23	1633	1650	1639	N14	E25	.521	8659	25.6	17	1-				.63				3 3 3
MCMA	23	1633	1635D		N14	E25	.521	8659	25.6	2D	-B		P	1635	.41	.50			E
HUAN	23	1633	1649D		N14	E26	.533	8659	25.6	16D	-N	1	C	1637	.57	.59			E
LOCK	23	1635E	1650	1639U	N13	E25	.513	8659	25.6	15D	-B		C	1639	.80	1.00		30	
GRP 2930	23	1645	1800	1707	S25	E71	.943	8667	29.0	75	1-				.48				2 2 2
HUAN	23	1644E	1649D		S23	E71	.942	8667	29.0	5D	-F	1	P	1647	.25				D
LOCK	23	1645	1800	1707	S26	E70	.938	8667	28.9	75	-N		C	1707	.80	1.80		20	
GRP 2931	23	1652	1706	1658	N10	W38	.654	8654	20.9	14	1-				.61				1 1 1
LOCK	23	1652	1706	1658	N10	W38	.654	8654	20.9	14	-F		C	1658	.60	.80		10	
GRP 2932	23	1723	1728	1724	N15	W12	.399	8650	22.8	5	1-				.37				1 1 1
HALE	23	1723	1728	1724	N15	W12	.399	8650	22.8	5	-F	2	C	1724	.31	.32			
GRP 2933	23	1804	1828	1812	N16	E20	.486	8659	25.3	24	1-				.94				1 1 1
LOCK	23	1804	1828	1812	N16	E20	.486	8659	25.3	24	-F		C	1812	.90	1.00		10	
GRP 2934	23	1819	1847	1832	S26	E70	.938	8667	29.0	28	1-				.47				1 1 1
LOCK	23	1819	1847	1832	S26	E70	.938	8667	29.0	28	-F		C	1832	.50	1.20		10	J
GRP 2935	23	1837	1901	1839	N14	E24	.510	8659	25.6	24	1-				.90				2 2 2
LOCK	23	1836	1900	1838	N13	E24	.501	8659	25.6	24	-B		C	1838	1.10	1.30		30	
HALE	23	1837	1902	1840	N14	E23	.498	8659	25.5	25	-B	1	C	1840	.52	.60			F
GRP 2936	23	1858	1907	1900	N11	W41	.694	8654	20.7	9	1-				.30				2 2 2
HALE	23	1857	1908	1900	N11	W41	.694	8654	20.7	11	-B	1	C	1900	.26	.40			
LOCK	23	1858	1905	1900	N10	W41	.690	8654	20.7	7	-F		C	1900	.30	.40		10	
GRP 2937	23	1907	1920	1910	N16	E20	.486	8659	25.3	13	1-				.71				1 1 1
LOCK	23	1907	1920	1910	N16	E20	.486	8659	25.3	13	-F		C	1910	.70	.80		10	
GRP 2938	23	1941	1958	1943	N16	E02	.365	8659	24.0	17	1-				.71				3 2 2
MCMA	23	1940	2002	1942	N16	E03	.366	8659	24.0	22	-N		C	1942	.83	.90			E
HALE	23	1941	1951	1943	N16	E01	.363	8659	23.9	10	-N	1	C	1943	.21	.21			
HUAN	23	1949E	2002		N16	E03	.366	8659	24.1	13D	-F	1	P	1952	.31	.31			D
GRP 2939	23	1957	2012	2001	N10	W36	.629	8650	21.1	15	1-				.19				1 1 1
LOCK	23	1957	2012	2001	N10	W36	.629	8650	21.1	15	-F		C	2001	.20	.30		10	
GRP 2940	23	2024	2036	2028	S20	E66	.911	8667	28.8	12	1-				.25				1 1 1
HALE	23	2024	2036	2028	S20	E66	.911	8667	28.8	12	-N	1	C	2028	.21				
GRP 2941	23	2029	2103	2036	N15	E19	.465	8659	25.3	34	1				1.65				2 2 2
LOCK	23	2028	2100	2037	N14	E19	.454	8659	25.3	32	1N		C	2037	2.10	2.30		20	
HALE	23	2029	2106	2034	N16	E18	.466	8659	25.2	37	-B	1	C	2034	.72	.80			
GRP 2942	23	2039	2050	2041	N17	W14	.442	8650	22.8	11	1-				.62				1 1 1
HALE	23	2039	2050	2041	N17	W14	.442	8650	22.8	11	-B	1	C	2041	.52	.60			
GRP 2943	23	2259	2307	2300	N10	W43	.713	8654	20.7	8	1-				.49				1 1 1
HALE	23	2259	2307	2300	N10	W43	.713	8654	20.7	8	-N	1	C	2300	.41	.60			
GRP 2944	23	2321	2333	2325	N24	E21	.584	8659	25.5	12	1-				.49				1 1 1
HALE	23	2321	2333	2325	N24	E21	.584	8659	25.5	12	-N	1	C	2325	.41	.50			F
GRP 2945	23	2336	2356	2339	N14	E21	.476	8659	25.6	20	1-				1.60				4 4 4
HALE	23	2335	0013	2339	N14	E21	.476	8659	25.6	38	1B	1	C	2339	1.86	2.10			F
MITK	23	2336	2347	2338	N14	E22	.487	8659	25.6	11	1N		C	2338	2.37	2.70			
SACP	23	2336	2354	2339	N13	E21	.466	8659	25.6	18	-N		C		1.55	1.58			
MANI	23	2337E	2351		N15	E19	.465	8659	25.4	14D	-N	2		2339	.98	1.09			
GRP 2946	23	2352	0005	2355	N18	W12	.440	8650	23.1	13	1-				.49				1 1 1
HALE	23	2352	0005	2355	N18	W12	.440	8650	23.1	13	-F	1	C	2355	.41	.50			
GRP 2947	24	0100	0120	0104	N22	E20	.554	8659	25.5	20	1-				.93				3 3 3
HALE	24	0059	0124	0103	N23	E21	.574	8659	25.6	25	-B	2	C	0103	.93	1.10			H
MITK	24	0100	0116	0103	N23	E22	.582	8659	25.7	16	-N		C	0103	1.13	1.40			EH
MANI	24	0100	0121	0106	N20	E18	.514	8659	25.4	21	-N	3		0106	.98	1.07			H

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION MIN.	IMPORTANCE	OBS. COND.	TYPE	MEASUREMENTS TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2948	24	0158	0218	0205	N10	W44	.725	8654	20.8	20	1-				.52				3 3 3
CULG	24	0156	0210	0205	N10	W45	.736	8654	20.7	14	-N		C	0205	.41	.60			H
HALE	24	0158	0225	0205	N11	W43	.717	8654	20.9	27	-N	2	C	0205	.46	.70			H
MITK	24	0200	0219D	0204	N10	W45	.736	8654	20.7	19D	-N		C	0204	.93	1.30			D
GRP 2949	24	0211	0233	0214	N13	E21	.466	8659	25.7	22	1-				.98				5 4 4
CULG	24	0209	0240	0214	N13	E21	.466	8659	25.7	31	-N		C	0214	1.24	1.32			
HALE	24	0209	0243	0213	N14	E21	.476	8659	25.7	34	-B	2	C	0213	1.24	1.40			H
IKOM	24	0213E	0226D		N13	E22	.478	8659	25.7	13D	-B		V	0214	1.03	1.20		115	D
MANI	24	0214	0228	0216	N15	E18	.455	8659	25.4	14	-N	3		0216	1.03	1.15			
KODA	24	0216E	0220		N12	E22	.469	8659	25.7	4D	-F		P	0217	.64	.70			
GRP 2950	24	0324	0328	0325	N17	W12	.428	8650	23.2	4	1-				1.49				1 1 1
HALE	24	0324	0328	0325	N17	W12	.428	8650	23.2	4	-B	2	C	0325	1.24	1.40			
GRP 2951	24	0344	0413	0351	S20	E26	.488	8661	26.1	29	1-				1.28				2 2 2
HALE	24	0343	0404D	0352	S19	E26	.481	8661	26.1	21D	-N	2	P	0352	.83	.90			
MITK	24	0344	0413D	0350	S20	E25	.475	8661	26.0	29D	1F		C	0350	2.06	2.40			G
GRP 2952	24	0609	0644	0614	N22	E16	.523	8659	25.5	35	1				2.34				4 4 4
TACH	24	0608	0644	0613	N23	E16	.536	8659	25.5	36	1B		C	0613	2.75	3.20	2.10	136	E
MANI	24	0609	0621D	0615	N20	E18	.514	8659	25.6	12D	1N	2		0615	2.06	2.44			U
MITK	24	0609	0634D	0614	N23	E15	.529	8659	25.4	25D	1N		C	0614	2.89	3.40			F
SIBE	24	0610	0626D	0626	N22	E15	.516	8659	25.4	16D	1F		P	0626	3.23	3.70		75	
GRP 2953	24	0615	0633	0619	S19	E25	.468	8661	26.1	18	1-				.72				1 1 1
MITK	24	0615	0633	0619	S19	E25	.468	8661	26.1	18	-N		C	0619	1.03	1.20			EG
	24	1200	1250	NO FLARE PATROL															
GRP 2954	24	1250	1332	1250	N13	E14	.392	8659	25.6	42	1-				1.57				1 1 1
LOCA	24	1250	1332	1250	N13	E14	.392	8659	25.6	42	-N		V	1250	1.89	2.10			
	24	1345	1405	NO FLARE PATROL															
	24	1415	1425	NO FLARE PATROL															
GRP 2955	24	1430	1443	1436	N22	E12	.497	8659	25.5	13	1-				.23				1 1 1
HUAN	24	1430	1443D	1436	N22	E12	.497	8659	25.5	13D	-F	1	C	1436	.25	.25			D
GRP 2956	24	1531	1547	1534	N21	E22	.560	8659	26.3	16	1-				.52				1 1 1
SACP	24	1531	1547	1534	N21	E22	.560	8659	26.3	16	-F		C		.58	.61			
GRP 2957	24	1650	1724	1702	N22	E12	.497	8659	25.6	34	1-				1.21				1 1 1
SACP	24	1650	1724	1702	N22	E12	.497	8659	25.6	34	-N		C		1.34	1.38			
	24	1830	1850	NO FLARE PATROL															
	24	1900	1920	NO FLARE PATROL															
	24	1925	1930	NO FLARE PATROL															
	24	2005	2020	NO FLARE PATROL															
GRP 2958	24	2023	2108	2027	N22	E09	.481	8659	25.5	45	1+				2.73				2 1 1
SACP	24	2023E	2045D	2027	N22	E10	.486	8659	25.6	22D	1B		C		3.00	3.08			
HALE	24	2043E	2108U	2043U	N22	E08	.477	8659	25.5	25U	-B	2	P	2043	1.13	1.30			
	24	2110	2115	NO FLARE PATROL															
	24	2255	2330	NO FLARE PATROL															
GRP 2959	25	0014	0039	0021	N22	E07	.474	8659	25.5	25	1-				.49				1 1 1
HALE	25	0014	0039	0021	N22	E07	.474	8659	25.5	25	-N	1	C	0021	.41	.50			
GRP 2960	25	0059	0121	0105	S23	E61	.876	8667	29.6	22	1-				.34				2 2 2
MANI	25	0058	0116	0101	S23	E59	.861	8667	29.5	18	-F	3		0101	.52	.93			
HALE	25	0100	0125	0109	S22	E62	.883	8667	29.7	25	-N	1	C	0109	.21	.40			
GRP 2961	25	0245	0300	0251	S22	E61	.876	8667	29.7	15	1-				.42				2 2 2
HALE	25	0245	0300	0251	S21	E57	.841	8667	29.4	15	-B	1	C	0251	.46	.90			
MANI	25	0248E	0300	0250	S22	E65	.905	8667	30.0	12D	-N	3		0250	.36	.70			
GRP 2962	25	0523	0604	0527	S24	E59	.862	8667	29.6	41	1-				.71				4 4 4
SIBE	25	0520E	0618D	0525	S25	E60	.871	8667	29.7	58D	1F		C	0525	1.90	4.10		78	
MANI	25	0524	0550	0535	S22	E57	.843	8667	29.5	26	-N	3		0535	.52	.89			
MITK	25	0524	0602D	0529	S24	E62	.885	8667	29.9	38D	-N		C	0529	.72	1.50			E
IKOM	25	0525	0606D	0527	S23	E56	.835	8667	29.4	41D	-N		V	0525	.62	1.20	.86	100	D
GRP 2963	25	0613	0642		N15	W23	.510	8650	23.5	29	1-				.65				1 1 1
MITK	25	0613E	0642D		N15	W23	.510	8650	23.5	29D	-F		C	0617	.93	1.20			E
GRP 2964	25	0620	0705	0623	N21	E03	.448	8659	25.5	45	1-				.66				4 4 4
MANI	25	0619	0705	0622	N22	E04	.466	8659	25.6	46	-N	3		0622	.62	.69			
IKOM	25	0620E	0630D	0627	N21	E05	.453	8659	25.6	10D	-F		V	0627	.83	.90			D
SIBE	25	0620E	0640D	0622	N21	E00	.446	8659	25.3	20D	-F		C	0622	1.13	1.30		71	
MITK	25	0621	0642D	0622	N20	E02	.431	8659	25.4	21D	-B		C	0622	1.34	1.50			E
GRP 2965	25	0743	0838	0745	N17	W31	.616	8650	23.0	55	1-				.26				2 1 1
MONT	25	0743	0800	0745	N13	W33	.611	8650	22.8	17	-F		C	0745	.26	.70			O
KAND	25	0755E	0916		N21	W29	.627	8650	23.2	81D	-F								
GRP 2966	25	1539	1600		S20	E55	.822	8667	29.8	21	1-				.60				1 1 1
CAPS	25	1539	1600D		S20	E55	.822	8667	29.8	21D	-F	2		1547	.60	1.00			
	25	1600	1615	NO FLARE PATROL															
GRP 2967	25	1620	1635	1620	S22	E55	.825	8667	29.8	15	1-				.94				1 1 1
LOCK	25	1620E	1635	1620E	S22	E55	.825	8667	29.8	15D	-F		C	1620	.90	1.50		10	
GRP 2968	25	1833	1853	1839	N23	W03	.479	8659	25.5	20	1-				.61				1 1 1
LOCK	25	1833	1853	1839	N23	W03	.479	8659	25.5	20	-F		C	1839	.60	.70		10	

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2969	25	1857	1919	1909	N21	W07	.459	8659	25.3	22	1-				1.05				1 1 1
LOCK	25	1857	1919	1909	N21	W07	.459	8659	25.3	22	-N		C	1909	1.00	1.10		20	
GRP 2970	25	2015	2045	2023	N20	E90	1.001	8671	1.6	30	1-				.51				1 1 1
LOCK	25	2015	2045	2023	N20	E90	1.001	8671	1.6	30	1F		C	2023	.60	2.40		10	H
GRP 2971	25	2052	2120	2106	N17	W03	.385	8659	25.6	28	1-				.82				1 1 1
LOCK	25	2052	2120	2106	N17	W03	.385	8659	25.6	28	-F		C	2106	.80	.90		10	
GRP 2972	25	2117	2137	2125	N22	W04	.466	8659	25.6	20	1-				.71				1 1 1
LOCK	25	2117	2137	2125	N22	W04	.466	8659	25.6	20	-F		C	2125	.70	.80		10	
GRP 2973	25	2207	2216	2211	N20	E90	1.001	8671	1.7	9	1-				.25				1 1 1
LOCK	25	2207	2216	2211	N20	E90	1.001	8671	1.7	9	-F		C	2211	.30	1.20		10	
GRP 2974	25	2208	2227	2212	N30	W21	.653	8659	24.3	19	1-				.50				1 1 1
LOCK	25	2208	2227	2212	N30	W21	.653	8659	24.3	19	-F		C	2212	.50	.70		10	
GRP 2975	25	2237	2318	2249	N22	W06	.471	8659	25.5	41	1-				1.78				1 1 1
LOCK	25	2237	2318	2249	N22	W06	.471	8659	25.5	41	-N		C	2249	1.60	1.80		20	
GRP 2976	25	2339	0000	2346	N25	W07	.518	8659	25.5	21	1-				.50				1 1 1
LOCK	25	2339	0000	2346	N25	W07	.518	8659	25.5	21	-F		C	2346	.50	.60		10	
GRP 2977	26	0048	0135	0107	N19	W15	.480	8659	24.9	47	1-				.56				3 3 3
IKOM	26	0040E	0140D		N19	W16	.487	8659	24.8	60D	-F		V	0100	.72	.80		70	D
MITK	26	0055	0140	0110	N17	W19	.490	8659	24.6	45	-N		C	0110	.72	.80			D
MANI	26	0100E	0126	0104A	N20	W11	.466	8659	25.2	26D	-N	2		0104	1.03	1.10			F
GRP 2978	26	0100	0103		N21	W07	.461	8659	25.5	3	1-				.36				1 1 1
IKOM	26	0100E	0103D		N21	W07	.461	8659	25.5	3D	-F		V	0101	1.03	1.20			E
GRP 2979	26	0813	0824		N15	W08	.375	8659	25.7	11	1-				1.25				1 1 1
CAPS	26	0813E	0824		N15	W08	.375	8659	25.7	11D	-F	3		0820	1.20	1.30		147	E
GRP 2980	26	0813	0845		N12	W73	.964	8654	20.9	32	1-				.26				1 1 1
MONT	26	0813	0845		N12	W73	.964	8654	20.9	32	-N		C	0813	.26				O
GRP 2981	26	0917	0927		N20	W09	.455	8659	25.7	10	1-				1.01				1 1 1
CAPS	26	0917	0927		N20	W09	.455	8659	25.7	10	-N	3		0921	1.00	1.10		170	E
GRP 2982	26	1020	1115	1025	N19	W24	.560	8659	24.6	55	1-				.31				1 1 1
MONT	26	1020	1115	1025	N19	W24	.560	8659	24.6	55	-N		C	1020	.31	.80			O
GRP 2983	26	1110	1126	1113	S27	E46	.751	8667	29.9	16	1-				.51				2 2 2
MONT	26	1110	1130	1113	S27	E46	.751	8667	29.9	20	-F		C	1113	.52	1.70			O
CAPS	26	1111E	1121		S26	E45	.738	8667	29.8	10D	-F	3		1113	.50	.70		140	CE
GRP 2984	26	1144	1205	1148	N15	W18	.457	8659	25.1	21	1				1.58				4 4 3
MONT	26	1143	1154D	1150	N15	W18	.457	8659	25.1	11D	1B		C	1150	1.03	2.40			O
CATA	26	1143E	1205D	1145	N16	W18	.469	8659	25.1	22D	1B			1145	2.03	2.30		214	
NERA	26	1145U	1155D		N12	W21	.458	8659	24.9	10D	1N	2							
CAPS	26	1147E	1159D		N15	W15	.428	8659	25.4	12D	-N	3		1151	1.60	1.80		147	C
GRP 2985	26	1250	1300		N16	W46	.770	8650	23.1	10	1-								1 1 0
NERA	26	1250U	1300D		N16	W46	.770	8650	23.1	10D	1N	3							
	26	1300	1320	NO FLARE PATROL															
	26	1330	1350	NO FLARE PATROL															
	26	1355	1400	NO FLARE PATROL															
GRP 2986	26	1408	1523	1417	N17	W26	.562	8659	24.6	75	1-				1.58				3 3 3
CAPS	26	1401E	1422D		N15	W25	.533	8659	24.7	21D	1F	2		1405	2.20	2.60		158	B
SACP	26	1414	1523	1447	N18	W26	.571	8659	24.6	69	-N		C		1.83	1.95			
CAPF	26	1417E	1440D	1417	N18	W26	.571	8659	24.6	23D	-N		P	1422	1.46	1.71			
GRP 2987	26	1447	1456		N15	W08	.375	8659	26.0	9	1-								1 1 0
CAPS	26	1447E	1456D		N15	W08	.375	8659	26.0	9D	-N	2		1453				173	
GRP 2988	26	1705	1716	1707	N26	W18	.589	8659	25.4	11	1-				.82				1 1 1
LOCK	26	1705	1716	1707	N26	W18	.589	8659	25.4	11	-N		C	1707	.80	.90		20	
GRP 2989	26	1714	1728	1717	N26	W52	.861	8650	22.8	14	1-				.61				1 1 1
LOCK	26	1714	1728	1717	N26	W52	.861	8650	22.8	14	-N		C	1717	.60	1.00		20	
GRP 2990	26	1732	1755	1739	N26	W52	.861	8650	22.8	23	1-				.40				1 1 1
LOCK	26	1732	1755	1739	N26	W52	.861	8650	22.8	23	-F		C	1739	.40	.70		10	
GRP 2991	26	1811	1818	1814	N27	W16	.588	8659	25.6	7	1-				.40				1 1 1
LOCK	26	1811	1818	1814	N27	W16	.588	8659	25.6	7	-F		C	1814	.40	.42		10	
GRP 2992	26	1855	1938	1911	S27	E39	.680	8667	29.7	43	1-				.99				2 2 2
SACP	26	1850	1931	1909	S31	E38	.692	8667	29.6	41	-F		C		1.14	1.32			
LOCK	26	1900	1945	1912	S22	E40	.669	8667	29.8	45	-F		C	1912	.90	1.40		10	
GRP 2993	26	1943	1952	1946	N13	W82	.994	8654	20.7	9	1-				.25				1 1 1
LOCK	26	1943	1952	1946	N13	W82	.994	8654	20.7	9	-F		C	1946	.30	1.00		10	
GRP 2994	26	2032	2053	2036	N20	E74	.974	8670	1.4	21	1-				.39				2 2 2
SACP	26	2031	2048	2036	N19	E72	.966	8670	1.3	17	-N		C		.38	.84			
LOCK	26	2032	2057	2035	N21	E76	.982	8670	1.6	25	-N		C	2035	.50	1.50		20	
GRP 2995	26	2039	2050	2042	N34	W59	.929	8650	22.4	11	1-				.47				1 1 1
LOCK	26	2039	2050	2042	N34	W59	.929	8650	22.4	11	-F		C	2042	.50	1.00		10	
GRP 2996	26	2056	2122	2108	N28	E70	.967	8670	1.1	26	1-				.98				2 2 2
SACP	26	2050	2124	2105	N26	E68	.956	8670	1.0	34	1N		C		1.24	2.59			
LOCK	26	2102	2120	2111	N29	E72	.975	8670	1.3	18	1F		C	2111	.90	2.30		10	

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT DATE 1967 JAN	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 2997	26	2054	2110	2102	N26	W27	.656	8659	24.8	16	1-				.40				1 1 1
LOCK	26	2054	2110	2102	N26	W27	.656	8659	24.8	16	-F		C	2102	.40	.50		10	
GRP 2998	26	2119	2143	2126	S12	W47	.729	8669	23.4	24	1-				.82				1 1 1
LOCK	26	2119	2143	2126	S12	W47	.729	8669	23.4	24	-F		C	2126	.80	1.20		10	
GRP 2999	26	2222	2227	2224	S09	E38	.613	8667	29.8	5	1-				.50				1 1 1
LOCK	26	2222	2227	2224	S09	E38	.613	8667	29.8	5	-F		C	2224	.50	.70		10	
GRP 3000	26	2247	2301	2250	N23	E72	.969	8670	1.3	14	1-				.80				2 2 2
SACP	26	2246	2302	2250	N22	E71	.964	8670	1.3	16	-N		C		.86	1.90			
LOCK	26	2247	2259	2250	N24	E72	.970	8670	1.3	12	1N		C	2250	.90	2.40		20	
GRP 3001	26	2300	2306	2303	S12	E30	.505	8667	29.2	6	1-				.19				1 1 1
LOCK	26	2300	2306	2303	S12	E30	.505	8667	29.2	6	-F		C	2303	.20	.22		10	
GRP 3002	26	2305	2330	2318	N27	W19	.607	8659	25.5	25	1-				1.17				1 1 1
LOCK	26	2305	2330	2318	N27	W19	.607	8659	25.5	25	-N		C	2318	1.10	1.20		20	
GRP 3003	26	2357	0023	0006	N22	W23	.582	8659	25.3	26	1-				.51				3 3 3
CULG	26	2353	0023	0006	N22	W23	.582	8659	25.3	30	-N		C	0006	.62	.75			
IKOM	27	0000	0010D		N20	W23	.562	8659	25.3	10D	-F		V	0002	.52	.60		75	E
SACP	27	0004E	0020D	0005U	N23	W22	.585	8659	25.4	16D	-F		C		.89	.95			
GRP 3004	26	2359	0022	0003	N35	W25	.730	8659	25.1	23	1-				.94				1 1 1
LOCK	26	2359	0022	0003	N35	W25	.730	8659	25.1	23	-N		C	0003	.90	1.20		20	
GRP 3005	27	0007	0016	0010	S13	E29	.493	8667	29.2	9	1-				.29				1 1 1
LOCK	27	0007	0016	0010	S13	E29	.493	8667	29.2	9	-F		C	0010	.30	.40		10	
GRP 3006	27	0201	0213	0203	N15	W29	.579	8659	24.9	12	1-				.36				2 2 2
MANI	27	0200	0216	0203	N16	W29	.587	8659	24.9	16	-N	3		0203	.31	.39			
MITK	27	0201	0210	0203	N14	W29	.571	8659	24.9	9	-N		C	0203	.62	.80			E
GRP 3007	27	0208	0218	0209	S22	E32	.573	8667	29.5	10	1-				.31				2 2 2
MITK	27	0207	0218	0209	S20	E31	.550	8667	29.4	11	-F		C	0209	.62	.70			D
IKOM	27	0208	0212D		S23	E32	.579	8667	29.5	4D	-F		V	0208	.62	.70		70	D
	27	1200	1255	NO FLARE PATROL															
	27	1310	1410	NO FLARE PATROL															
GRP 3008	27	1511	1550	1520	N20	W59	.894	8650	23.2	39	1				1.99				1 1 1
SACP	27	1511	1550	1520	N20	W59	.894	8650	23.2	39	1N		C		2.21	3.49			
GRP 3009	27	1558	1630	1607	N23	W31	.665	8659	25.3	32	1-				1.20				1 1 1
SACP	27	1558	1630	1607	N23	W31	.665	8659	25.3	32	-N		C		1.33	1.51			
GRP 3010	27	1821	1836	1823	N19	W31	.632	8659	25.4	15	1-				.28				1 1 1
HUAN	27	1821	1836	1823	N19	W31	.632	8659	25.4	15	-F	2	C	1823	.31	.35			E
GRP 3011	27	1839	1850	1844	N16	E77	.982	8670	2.6	11	1-				.34				1 1 1
LOCK	27	1839	1850	1844	N16	E77	.982	8670	2.6	11	-F		C	1844	.40	1.20		10	J
GRP 3012	27	2002	2032		N26	W32	.699	8659	25.4	30	1-				1.17				1 1 1
LOCK	27	2002	2032		N26	W32	.699	8659	25.4	30	-N		C		1.10	1.40		20	
GRP 3013	27	2004	2122	2011	N16	W31	.609	8659	25.5	78	1				1.49				3 3 3
SACP	27	2002	2121U	2015U	N16	W31	.609	8659	25.5	79U	1N		C		2.12	2.32			
HALE	27	2004	2122	2007	N16	W31	.609	8659	25.5	78	-N	2	C	2007	.72	.90			F
HUAN	27	2005	2038D		N17	W31	.617	8659	25.5	33D	1F	1	P	2010	2.12	2.33			E
GRP 3014	27	2010	2018	2013	N16	E77	.982	8670	2.6	8	1-				.34				1 1 1
LOCK	27	2010	2018	2013	N16	E77	.982	8670	2.6	8	-N		C	2013	.40	1.20		20	
GRP 3015	27	2026	2033		S24	E26	.515	8667	29.8	7	1-				.23				1 1 1
HUAN	27	2026E	2033		S24	E26	.515	8667	29.8	7D	-F	1	P	2026	.25	.26			D
GRP 3016	27	2145	2215	2147	N16	E72	.963	8670	2.3	30	1-				.26				1 1 1
LOCK	27	2145	2215U	2147	N16	E72	.963	8670	2.3	30U	-F		C	2147	.30	.90		10	
GRP 3017	27	2223	2234	2226	N27	W68	.958	8650	22.8	11	1-				.66				2 2 2
SACP	27	2222	2234	2225	N25	W65	.941	8650	23.1	12	-N		C		.97	1.82			
LOCK	27	2223	2234	2227	N29	W71	.972	8650	22.6	11	-F		C	2227	.50	1.30		10	
GRP 3018	27	2320	2359	2330	N16	W31	.609	8659	25.6	39	1				1.52				3 3 3
SACP	27	2317U	2356D	2331U	N16	W32	.620	8659	25.6	39D	1N		C		2.04	2.25			
HALE	27	2322	0009D	2330	N15	W30	.590	8659	25.7	47D	-B	1	P	2330	.93	1.10			F
MANI	27	2325E	2351	2330	N17	W32	.628	8659	25.6	26D	1N	2		2330	1.75	2.30			
GRP 3019	27	2319	2345	2326	N25	W35	.717	8659	25.3	26	1+				2.44				1 1 1
LOCK	27	2319	2345D	2326	N25	W35	.717	8659	25.3	26D	1N		C	2326	2.10	2.70		20	
GRP 3020	28	0158	0225	0207	N19	W65	.931	8650	23.2	27	1-				.18				1 1 1
HALE	28	0158	0225	0207	N19	W65	.931	8650	23.2	27	-F	2	C	0207	.15				F
GRP 3021	28	0303	0328	0307	N18	W33	.646	8659	25.7	25	1-				.49				1 1 1
HALE	28	0303	0328	0307	N18	W33	.646	8659	25.7	25	-N	2	C	0307	.41	.50			F
GRP 3022	28	0456	0509	0458	N17	W32	.628	8659	25.8	13	1-				.65				1 1 1
MANI	28	0456	0509	0458	N17	W32	.628	8659	25.8	13	-N	2		0458	.72	.93			
GRP 3023	28	0514	0605		N17	E59	.887	8670	1.6	51	1				1.32				2 2 2
MANI	28	0514E	0531D		N17	E58	.880	8670	1.6	17D	-N	1		0514	.52	.97			
SIBE	28	0520E	0605D		N17	E60	.895	8670	1.7	45D	2F		P	0528	2.46	5.30		68	C
GRP 3024	28	0537	0616	0546	N17	W50	.813	8659	24.5	39	1-				.70				1 1 1
TACH	28	0537	0616	0546	N17	W50	.813	8659	24.5	39	-N		C	0546	.83	1.40	2.50	69	D
GRP 3025	28	0645	0702		N22	W53	.855	8659	24.3	17	1-				.65				1 1 1
MANI	28	0645E	0702		N22	W53	.855	8659	24.3	17D	-N	1		0646	.77	1.41			

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	LOCATION CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 3026	28	0743	0856	0754	S23	E19	.426	8667	29.7	73	1-				1.72				5 4 4
TACH	28	0743	0820D	0751	S24	E19	.436	8667	29.7	37D	-B		C	0751	1.56	1.70	1.90	87	E
MANI	28	0753E	0857	0758	S23	E21	.448	8667	29.9	64D	1N	2		0758	1.65	2.10			
CAPS	28	0804E	0840		S24	E19	.436	8667	29.8	36D	1N	3		0808	2.20	2.40		185	
CATA	28	0815E	0845D	0815	S22	E17	.393	8667	29.6	30D	-B			0815	1.58	1.70		224	
CAPF	28	0840E	0912	0840	S22	E19	.416	8667	29.8	32D	-N		S	0840	1.18	1.31			
GRP 3027	28	0943	0955		S24	E19	.436	8667	29.8	12	1				2.17				1 1 1
CAPS	28	0943E	0955		S24	E19	.436	8667	29.8	12D	1F	3		0950	2.00	2.20		152	C
GRP 3028	28	1007	1014		N22	W33	.676	8659	25.9	7	1-				1.00				1 1 1
CAPS	28	1007	1014		N22	W33	.676	8659	25.9	7	-N	3		1008	1.00	1.30			E
GRP 3029	28	1705	1722	1710	S28	E15	.445	8667	29.8	17	1-				1.22				3 1 1
SACP	28	1705	1722	1710	S28	E14	.438	8667	29.8	17	-N		C		1.36	1.38			
HUAN	28	1711E	1713D		S29	E15	.458	8667	29.8	2D	-N	1	P	1712	.31	.32			D
MCMA	28	1716E	1722		S28	E15	.445	8667	29.8	6D	-N		P	1716	.31	.40			D
GRP 3030	28	1732	1738	1733	S27	E14	.425	8667	29.8	6	1-				.37				1 1 1
HALE	28	1732	1738	1733	S27	E14	.425	8667	29.8	6	-N	3	C	1733	.31	.31			F
GRP 3031	28	1740	1757	1744	N21	E48	.810	8670	1.3	17	1-				.45				2 1 1
MCMA	28	1740	1758	1744	N22	E47	.806	8670	1.3	18	-F		C	1744	.31	.50			D
HUAN	28	1751E	1756		N19	E48	.802	8670	1.3	5D	-F	1	P	1752	.25	.32			D
GRP 3032	28	1854	1911	1859	S23	E05	.308	8667	29.2	17	1-				.60				1 1 1
SACP	28	1854	1911	1859	S23	E05	.308	8667	29.2	17	-F		C		.67	.66			
GRP 3033	28	1900	1931	1920	N17	E65	.928	8671	2.7	31	1-				.40				1 1 1
MCMA	28	1900	1931	1920A	N17	E65	.928	8671	2.7	31	-N		C	1903	.26	.70			D
GRP 3034	28	1904	1920	1908	N30	W54	.890	8659	24.7	16	1-				.94				1 1 1
LOCK	28	1904	1920	1908	N30	W54	.890	8659	24.7	16	-F		C	1908	.90	1.50		20	
GRP 3035	28	1946	2018	1952	S23	E05	.308	8667	29.2	32	1-				.18				1 1 1
HALE	28	1946	2018	1952	S23	E05	.308	8667	29.2	32	-F	1	C	1952	.15	.20			
GRP 3036	28	2132	2215	2140	N27	W48	.836	8659	25.3	43	1-				.61				1 1 1
LOCK	28	2132	2215	2140	N27	W48	.836	8659	25.3	43	-N		C	2140	.60	1.00		20	
GRP 3037	28	2133	2213	2141	N19	W46	.784	8659	25.4	40	1-				.63				3 3 3
HALE	28	2132	2225	2144	N19	W47	.793	8659	25.4	53	-B	2	C	2144	.41	.70			F
SACP	28	2133	2205	2141	N19	W45	.774	8659	25.5	32	-N		C		1.05	1.34			
HUAN	28	2135	2209	2138	N18	W47	.789	8659	25.4	34	-N	1	C	2138	.50	.67			E
GRP 3038	28	2208	2329	2151	S25	E10	.367	8667	29.7	81	1-				.57				4 2 2
HALE	28	2143	2359D	2152	S23	E04	.304	8667	29.2	136D	-N	1	P	2152	.52	.52			
HUAN	28	2148	2241D	2151	S24	E08	.339	8667	29.5	53D	-F	2	C	2151	.57	.57			E
CULG	28	2226	2317	2239	S28	E14	.438	8667	30.0	51	-N		C	2239	.72	.77			
SACP	28	2233	2312	2240	S25	E12	.382	8667	29.8	39	1N		C		2.10	2.09			
GRP 3039	28	2230	2250	2241	S14	E13	.263	8667	29.9	20	1+				3.00				1 1 1
LOCK	28	2230	2250D	2241	S14	E13	.263	8667	29.9	20D	1N		C	2241	2.50	2.80		20	
GRP 3040	28	2251	2326	2310	N16	W50	.809	8659	25.2	35	1-				.56				1 1 1
CULG	28	2251	2326	2310	N16	W50	.809	8659	25.2	35	-N		C	2310	.62	.96			F
GRP 3041	29	0003	0038	0019	N23	W45	.794	8659	25.6	35	1-				.37				1 1 1
CULG	29	0003	0038	0019	N23	W45	.794	8659	25.6	35	-N		C	0019	.41	.64			
GRP 3042	29	0132	0201	0138	N23	W45	.794	8659	25.7	29	1-				.92				1 1 1
HALE	29	0132	0201	0138	N23	W45	.794	8659	25.7	29	-N	2	C	0138	.77	1.30			
GRP 3043	29	0143	0155	0147	N15	E61	.898	8671	2.6	12	1-				.31				1 1 1
HALE	29	0143	0155	0147	N15	E61	.898	8671	2.6	12	-B	2	C	0147	.26	.60			
GRP 3044	29	0418	0433	0423	N17	W55	.856	8659	25.1	15	1-				.93				1 1 1
CULG	29	0418	0433	0423	N17	W55	.856	8659	25.1	15	-N		C	0423	1.03	1.90			
GRP 3045	29	0608	0635	0619	S24	W01	.313	8667	29.2	27	1-				.56				1 1 1
CULG	29	0608	0635	0619	S24	W01	.313	8667	29.2	27	-N		C	0619	.62				
GRP 3046	29	0637	0654	0643	N21	W49	.819	8659	25.6	17	1-				.47				1 1 1
CULG	29	0637	0654	0643	N21	W49	.819	8659	25.6	17	-N		P	0643	.52	.85			
GRP 3047	29	0814	0828	0817	N16	W55	.854	8659	25.2	14	1-				.25				2 2 1
CAPS	29	0813E	0828D		N15	W55	.851	8659	25.2	15D	-N	1							
MANI	29	0814	0828	0817	N17	W55	.856	8659	25.2	14	-F	2		0817	.31	.56			
GRP 3048	29	1154	1156	1154	S22	W05	.291	8667	29.1	2	1-				.24				1 1 1
MEUD	29	1154	1156	1154	S22	W05	.291	8667	29.1	2	-F		C	1154	.31	.31			E
GRP 3049	29	1209	1213	1210	S27	E60	.872	8673	3.0	4	1-				.24				1 1 1
MEUD	29	1209	1213	1210	S27	E60	.872	8673	3.0	4	-F		C	1210	.31	.70			D
GRP 3050	29	1300	1316	1301	N18	W57	.875	8659	25.3	16	1-				.32				3 1 1
MEUD	29	1300	1310	1301	N16	W60	.893	8659	25.0	10	-N		C	1301	.41	.90			E
KAND	29	1302E	1320D		N23	W52	.851	8659	25.6	18D	-N								
HUAN	29	1304E	1317		N16	W59	.885	8659	25.1	13D	-F	1	C	1308	.62	.91			E
GRP 3051	29	1527	1548	1528	S24	W06	.327	8667	29.2	21	1-				.79				3 3 3
SACP	29	1526	1549	1528	S23	W06	.312	8667	29.2	23	-N		C		1.16	1.13			
MCMA	29	1527	1545	1528	S25	W06	.343	8667	29.2	18	-N		C	1528	.46	.50			EH
HUAN	29	1527E	1549		S24	W06	.327	8667	29.2	22D	-N	1	P	1529	.75	.75			E

SOLAR FLARES
REVISED
JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	— MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 3052	29	1558	1619	1604	N20	E37	.702	8670	1.4	21	1-				1.37				2 2 2
SACP	29	1557	1619	1605	N20	E37	.702	8670	1.4	22	-N		C		1.43	1.68			
MCMA	29	1558	1619	1603	N20	E37	.702	8670	1.4	21	-B		C	1603	1.03	1.50			E
GRP 3053	29	1600	1620	1602	N30	E40	.793	8670	1.7	20	1-				1.53				1 1 1
LOCK	29	1600F	1620	1602	N30	E40	.793	8670	1.7	20D	-B		C	1602	1.40	2.00		30	
GRP 3054	29	1613	1723	1620	S24	E02	.314	8667	29.8	70	2-				6.28				5 3 3
LOCK	29	1612	1700	1620	S15	E02	.164	8667	29.8	48	2B		C	1620	5.50	6.10		30	L
SACP	29	1612	1740	1620	S25	E01	.329	8667	29.8	88	2N		C		5.37	5.31			
MCMA	29	1614	1730	1619	S27	W00	.362	8667	29.7	76	2N		C	1619	5.16	5.40			FL
HUAN	29	1625E	1704D		S26	E03	.349	8667	29.9	39D	2N	1	P	1625	6.19	6.18			
HALE	29	1705E	1727D		S26	E02	.347	8667	29.9	22D	1N	2	P	1714	4.54	4.80			
GRP 3055	29	1645	1655	1649	N28	W60	.920	8659	25.2	10	1-				.38				1 1 1
LOCK	29	1645	1655	1649	N28	W60	.920	8659	25.2	10	-F		C	1649	.40	.80		10	
GRP 3056	29	1800	1812	1804	N25	E36	.727	8670	1.5	12	1-				.37				2 2 2
HUAN	29	1800	1809	1803	N20	E33	.662	8670	1.2	9	-F	1	C	1803	.25	.28			D
LOCK	29	1800	1815	1805	N29	E38	.771	8670	1.6	15	-F		C	1805	.50	.70		10	
GRP 3057	29	1800	1820	1805	N28	W62	.931	8659	25.1	20	1-				.47				1 1 1
LOCK	29	1800	1820	1805	N28	W62	.931	8659	25.1	20	-F		C	1805	.50	1.00		10	
GRP 3058	29	1830	1845	1833	S19	E57	.838	8673	3.0	15	1-				.29				1 1 1
LOCK	29	1830	1845	1833	S19	E57	.838	8673	3.0	15	-F		C	1833	.30	.60		10	
GRP 3059	29	1932	1944	1936	N12	E48	.776	8671	2.4	12	1-				.50				1 1 1
LOCK	29	1932	1944	1936	N12	E48	.776	8671	2.4	12	-F		C	1936	.50	.80		10	
GRP 3060	29	1945	2010	1953	N28	W60	.920	8659	25.3	25	1-				.48				1 1 1
LOCK	29	1945	2010	1953	N28	W60	.920	8659	25.3	25	-N		C	1953	.50	1.00		20	
GRP 3061	29	2032	2043	2035	N22	E29	.639	8670	1.0	11	1-				.71				2 2 2
HALE	29	2032	2043	2035	N22	E28	.630	8670	1.0	11	-N	2	C	2035	.62	.80			
HUAN	29	2034E	2036D		N21	E30	.640	8670	1.1	2D	-F	1	P	2034	.75	.85			E
GRP 3062	29	2040	2052	2043	N15	W63	.912	8659	25.1	12	1				1.04				3 3 3
SACP	29	2039	2046	2042	N15	W62	.905	8659	25.2	7	-F		C		.57	.93			
HUAN	29	2040	2051		N16	W63	.914	8659	25.1	11	-N	1	C	2043	1.29				E
HALE	29	2040	2058	2044	N15	W64	.919	8659	25.1	18	1B	2	C	2044	1.44				
GRP 3063	29	2128	2136	2133	N18	W63	.917	8659	25.2	8	1-				.18				1 1 1
HALE	29	2128	2136D	2133	N18	W63	.917	8659	25.2	8D	-N	1	P	2133	.15				
GRP 3064	29	2244	2304	2249	N21	W63	.923	8659	25.2	20	1-				.62				3 3 3
SACP	29	2244	2256D	2248	N18	W59	.890	8659	25.5	12D	-F		C		.58	.91			
MANI	29	2245E	2256		N19	W64	.925	8659	25.1	11D	1N	1		2245	1.03	2.20			F
LOCK	29	2245E	2312	2250U	N26	W65	.943	8659	25.1	27D	-F		C	2250	.50	1.10		10	
GRP 3065	29	2245	2325	2253	N26	E90	1.001	8674	5.7	40	1-				.25				1 1 1
LOCK	29	2245E	2325	2253	N26	E90	1.001	8674	5.7	40D	-F		C	2253	.30	1.20		10	
GRP 3066	29	2354	0026	0001	N25	W65	.941	8659	25.1	32	1				.85				5 4 4
LOCK	29	2352	0025D	0000	N28	W70	.967	8659	24.7	33D	1B		C	0000	1.00	2.30		30	
SACP	29	2355	2358D	2357	N24	W62	.923	8659	25.3	3D	-F		C		.87	1.53			
MANI	29	2356E	0021	0000	N24	W63	.928	8659	25.3	25D	1F	2		0000	1.34	21.87			
HALE	30	0000E	0031	0003	N24	W63	.929	8659	25.3	31D	-N	2	P	0003	.41				F
CULG	30	0004E	0020D	0004	N25	W67	.951	8659	25.0	16D	-N		P	0004	.83				
GRP 3067	29	0011	0059	0003	N24	E35	.711	8670	1.6	48	1-				.99				3 2 2
LOCK	29	2355	0020	0003	N31	E37	.777	8670	1.8	25	-F		C	0003	.60	.80		10	
HALE	30	0000E	0121	0033	N21	E32	.660	8670	1.4	81D	-B	2	P	0033	1.13	1.50			F
MANI	30	0027	0115	0033	N21	E35	.690	8670	1.6	48	-N	2		0033	1.24	1.74			
GRP 3068	30	0037	0043	0037	N14	W61	.896	8659	25.5	6	1-				.86				1 1 1
HALE	30	0037	0043	0037	N14	W61	.896	8659	25.5	6	-N	1	C	0037	.72	1.70			F
GRP 3069	30	0045	0056	0050	S23	E64	.897	8673	3.8	11	1-				.37				1 1 1
HALE	30	0045	0056	0050	S23	E64	.897	8673	3.8	11	-N	1	C	0050	.31	.70			
GRP 3070	30	0050	0103	0052	N30	E87	1.000	8680	5.6	13	1-				.25				1 1 1
HALE	30	0050	0130	0052	N30	E87	1.000	8680	5.6	13	-N	2	C	0052	.21				
GRP 3071	30	0148	0226	0202	N14	E45	.753	8671	2.5	38	1-				.49				1 1 1
HALE	30	0148	0226	0202	N14	E45	.753	8671	2.4	38	-N	1	C	0202	.41	.60			
GRP 3072	30	0221	0241	0223	N20	E31	.643	8670	1.4	20	1-				.86				4 2 2
MANI	30	0218	0228	0221	N21	E35	.690	8670	1.7	10	-F	2		0221	.88	1.23			
HALE	30	0219	0245	0222	N16	E26	.556	8670	1.0	26	-B	1	C	0222	.77	.90			FH
MITK	30	0225	0230	0226	N21	E31	.651	8670	1.4	5	-N		C	0226	.62	.80			E
CULG	30	0230E	0259	0231	N23	E33	.686	8670	1.6	29D	-F		P	0231	1.13	1.43			
GRP 3073	30	0230	0243	0234	S23	W11	.344	8667	29.3	13	1-				.40				2 2 2
HALE	30	0227	0246	0233	S24	W11	.358	8667	29.3	19	-N	2	C	0233	.36	.40			F
MANI	30	0232	0239	0234	S22	W10	.322	8667	29.4	7	-F	3		0234	.41	.44			
GRP 3074	30	0604	0613	0605	N12	E44	.734	8671	2.6	9	1-				.65				1 1 1
MITK	30	0604	0613D	0605	N12	E44	.734	8671	2.6	9D	-N		C	0605	.93	1.30			D
GRP 3075	30	0921	0945	0923	S12	W14	.261	8667	29.3	24	1-				.21				1 1 1
MONT	30	0921	0945	0923	S12	W14	.261	8667	29.3	24	-N		C	0923	.21	.50			O
GRP 3076	30	1007	1015	1009	N20	E28	.613	8670	1.5	8	1-				.20				1 1 1
MEUD	30	1007	1015	1009	N20	E28	.613	8670	1.5	8	-N		C	1009	.26	.30			

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
GRP 3077	30	1120	1203	1135	S26	E56	.839	8673	3.7	43	1-				1.53				6 5 5
KIEV	30	1120E	1154D	1135	S28	E57	.850	8673	3.7	34D	1N		C	1135	3.09			60	DHI
MEUD	30	1120	1200		S27	E53	.815	8673	3.4	40	-N		C	1129	1.03	1.80			E
MONT	30	1121	1125D	1125	S25	E55	.828	8673	3.6	4D	1N		C	1125	1.03	4.00			O
CAPS	30	1130E	1159D		S24	E58	.852	8673	3.8	29D	1F	2		1134	2.00	3.80		158	G
CATA	30	1134E	1200D	1135	S25	E55	.828	8673	3.6	26D	-N			1135	.64	1.10		191	
WEND	30	1142E	1205		S27	E60	.872	8673	4.0	23D	2N				6.19				
GRP 3078	30	1125	1134	1126	N13	E38	.672	8671	2.3	9	1-				.16				1 1 1
MEUD	30	1125	1134	1126	N13	E38	.672	8671	2.3	9	-F		C	1126	.21	.30			
GRP 3079	30	1131	1200	1133	S16	W09	.232	8667	29.8	29	1-				.26				1 1 1
MONT	30	1131	1200	1133	S16	W09	.232	8667	29.8	29	-N		C	1133	.26	.50			O
GRP 3080	30	1134	1156	1136	S24	W09	.343	8667	29.8	22	1-				.58				4 3 2
MEUD	30	1134	1155	1137	S24	W08	.337	8667	29.9	21	-N		C	1137	.72	.73			F
CATA	30	1134E	1200D	1135	S26	W08	.367	8667	29.9	26D	-N			1135	.56	.60		182	
CAPS	30	1135E	1140D		S23	W10	.336	8667	29.7	5D	-N	2							E
WEND	30	1142E	1154		S23	W11	.344	8667	29.7	12D	1N				5.16				
GRP 3081	30	1411	1422	1415	N28	E90	1.001	8680	6.3	11	1-				.42				2 2 1
MCMA	30	1410	1420	1415	N28	E90	1.001	8680	6.3	10	-B		C	1415					
MEUD	30	1412	1423D		N27	E90	1.001	8680	6.3	11D	-N		C	1420	.52				
GRP 3082	30	1428	1446	1433	S28	W08	.397	8667	30.0	18	1-				.81				5 5 5
CAPF	30	1423	1445D	1425	S29	W08	.412	8667	30.0	22D	-N		P	1425	.88	.98			
LOCA	30	1425	1445	1435	S26	W05	.353	8667	30.2	20	-N		V	1435	.63	.70			
SACP	30	1430E	1450	1432	S30	W12	.448	8667	29.7	20D	-N		C		1.54	1.56			
MEUD	30	1431	1443		S27	W08	.382	8667	30.0	12	-N		C	1432	.46	.50			E
MCMA	30	1431	1447	1433	S29	W08	.412	8667	30.0	16	-B		C	1433	.93	1.10			E
GRP 3083	30	1559	1613	1604	S24	W17	.413	8667	29.4	14	1-				1.26				2 2 2
SACP	30	1558	1615	1605	S23	W19	.424	8667	29.2	17	-N		C		1.82	1.83			
MCMA	30	1600	1611	1603	S24	W14	.384	8667	29.6	11	-N		C	1603	.62	.70			EH
GRP 3084	30	1713	1742	1715	N16	E39	.699	8671	2.6	29	1-				.43				2 1 1
MCMA	30	1713	1735	1715	N14	E39	.688	8671	2.6	22	-N		C	1715	.31	.40			D
HALE	30	1717E	1749	1728	N17	E38	.694	8671	2.6	32D	-N	2	P	1728	.41	.60			F
GRP 3085	30	1715	1742	1730	S22	W62	.882	8661	26.1	27	1-				.25				1 1 1
HALE	30	1715	1742	1730	S22	W62	.882	8661	26.1	27	-N	2	C	1730	.21	.40			
GRP 3086	30	1719	1755	1735	N18	W52	.835	8663	26.8	36	1-				.49				1 1 1
HALE	30	1719E	1755D	1735	N18	W52	.835	8663	26.8	36D	-F	2	P	1735	.41	.70			F
GRP 3087	30	1719	1755	1720	N18	W63	.917	8659	26.0	36	1-				.31				1 1 1
HALE	30	1719E	1755D	1720	N18	W63	.917	8659	26.0	36D	-N	2	P	1720	.26				F
GRP 3088	30	1730	1755	1733	S26	E48	.766	8673	3.3	25	1-				.31				1 1 1
HALE	30	1730	1755D	1733	S26	E48	.766	8673	3.3	25D	-F	2	C	1733	.26	.40			
GRP 3089	30	1824	1837	1830	N20	E23	.564	8670	1.5	13	1-				.68				1 1 1
SACP	30	1824	1837	1830	N20	E23	.564	8670	1.5	13	-F		C		.76	.81			
GRP 3090	30	1942	2002	1949	N18	W60	.897	8659	26.3	20	1-				.95				2 2 2
MCMA	30	1940	2000D	1948	N18	W60	.897	8659	26.3	20D	-F		C	1948	.62	1.50			EH
SACP	30	1943	2002	1950	N18	W59	.890	8659	26.4	19	-N		C		1.05	1.66			
GRP 3091	30	2030	2042	2033	N18	W77	.983	8659	25.1	12	1-				.40				2 2 2
CULG	30	2029	2044	2033	N18	W79	.989	8659	24.9	15	-N		C	2033	.31				
SACP	30	2030	2040	2033	N17	W75	.976	8659	25.2	10	-F		C		.58	1.40			
GRP 3092	30	2101	2150	2117	N20	W63	.921	8659	26.2	49	1-				.59				2 2 2
CULG	30	2050	2117D	2117	N19	W63	.919	8659	26.1	27D	-N		P	2117	.62	.75			
HALE	30	2112	2150	2130	N20	W63	.921	8659	26.2	38	-N	1	C	2130	.52				
GRP 3093	30	2106	2202	2118	S24	W16	.403	8667	29.7	56	1-				1.09				2 2 2
SACP	30	2102	2146	2113	S24	W17	.413	8667	29.6	44	-N		C		1.25	1.24			
HALE	30	2109	2217	2123	S24	W15	.393	8667	29.8	68	-N	2	C	2130	.62	.70			F
GRP 3094	30	2200	2208	2203	N20	E15	.497	8670	1.0	8	1-				.37				1 1 1
HALE	30	2200	2208	2203	N20	E15	.497	8670	1.0	8	-F	1	C	2203	.31	.40			
GRP 3095	30	2206	2220	2210	S25	E45	.733	8673	3.3	14	1-				.31				1 1 1
HALE	30	2206	2220	2210	S25	E45	.733	8673	3.3	14	-N	1	C	2210	.26	.40			H
GRP 3096	30	2255	2323	2241	N27	E80	.994	8680	6.0	28	1-				.60				2 1 1
SACP	30	2236	2321	2241	N27	E81	.996	8680	6.0	45	-N		C		.67				
HALE	30	2313	2325D	2317	N27	E78	.990	8680	5.8	12D	-N	1	P	2317	.41				F
GRP 3097	30	2321	2335	2326	N21	E20	.549	8670	1.5	14	1-				.59				2 2 2
SACP	30	2320	2335	2327	N20	E20	.537	8670	1.5	15	-F		C		.76	.80			
HALE	30	2322	2325D	2324	N22	E19	.552	8670	1.4	3D	-N	1	P	2324	.41	.50			F
GRP 3098	31	0004	0019	0008	N20	E16	.505	8670	1.2	15	1-				1.40				1 1 1
SACP	31	0004	0019D	0008	N20	E16	.505	8670	1.2	15D	-N		C		1.56	1.60			
GRP 3099	31	0018	0028	0021	N18	W62	.911	8663	26.4	10	1-				.36				1 1 1
MITK	31	0018	0028	0021	N18	W62	.911	8663	26.4	10	-N		C	0021	.52				D
GRP 3100	31	0024	0034		N20	E18	.521	8670	1.4	10	1-				.18				1 1 1
HALE	31	0024E	0034D		N20	E18	.521	8670	1.4	10D	-F	1	P	0024	.15	.20			
GRP 3101	31	0037	0113		N20	W62	.915	8663	26.4	36	1+				1.67				1 1 1
MANI	31	0037E	0113		N20	W62	.915	8663	26.4	36D	1B	1		0038	1.86	3.85			U

SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	DATE 1967 JAN	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	LOCATION CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT. %	REMARKS
GRP 3102	31	0040	0115		N18	W50	.817	8663	27.3	35	1-				1.27				1 1 1
MITK	31	0040E	0115D		N18	W50	.817	8663	27.3	35D	1F		C	0054	1.75	2.90			FG
GRP 3103	31	0204	0222	0213	N28	E90	1.001	8680	6.8	18	2+				2.56				1 1 1
MITK	31	0204	0222	0213	N28	E90	1.001	8680	6.8	18	3F		C	0213	3.20				
GRP 3104	31	0247	0309	0252	S26	W18	.445	8667	29.8	22	1-				1.58				3 2 2
HALF	31	0246E	0304D	0251	S25	W19	.444	8667	29.7	18D	-N	2	P	0251	1.65	1.80			FZ
MITK	31	0248	0312D	0252	S25	W18	.434	8667	29.8	24D	-N		C	0252	1.65	1.80			F
KODA	31	0253E	0305	0253	S27	W18	.456	8667	29.8	12D	1B		C	0253	1.93	2.20	1.60		
GRP 3105	31	0405	0423	0416	N28	E90	1.001	8680	6.9	18	1-				.37				1 1 1
CULG	31	0405	0423	0416	N28	E90	1.001	8680	6.9	18	-N		C	0416	.41				
GRP 3106	31	0446	0501	.0449	N21	E17	.525	8670	1.5	15	1-				.51				2 2 2
CULG	31	0445	0510	0448	N21	E17	.525	8670	1.5	25	-N		C	0448	.41	.46			
MITK	31	0447	0452	0450	N20	E17	.513	8670	1.5	5	-N		C	0450	.93	1.10			
GRP 3107	31	0512	0530	0516	N18	W90	1.001	8659	24.5	18	1-				.37				1 1 1
CULG	31	0512	0530	0516	N18	W90	1.001	8659	24.5	18	-N		C	0516	.41				
GRP 3108	31	0625	0640	0628	N28	E90	1.001	8680	7.0	15	1-				.28				1 1 1
CULG	31	0625	0640	0628	N28	E90	1.001	8680	7.0	15	-N		C	0628	.31				
GRP 3109	31	0744	0801	0746	N28	E90	1.001	8680	7.1	17	1-				.37				1 1 1
CULG	31	0744	0801	0746	N28	E90	1.001	8680	7.1	17	-N		C	0746	.41				
GRP 3110	31	0850	0945	0909	N21	W68	.950	8663	26.3	55	1				.92				3 3 3
ARCE	31	0850	0920	0910	N22	W70	.961	8663	26.1	30	-N		C	0910	.75	1.90			C
CAPS	31	0907E	0930D		N20	W65	.933	8663	26.5	23D	1B	3		0912	1.00			200	C
CAPF	31	0908E	1025D	0908	N21	W69	.955	8659	26.2	77D	1N		P	0914	1.18				
GRP 3111	31	0858	0921	0859	N14	E27	.550	8671	2.4	23	1-				1.33				4 3 3
CAPF	31	0856E	0917	0856	N14	E26	.539	8671	2.3	21D	1N		P	0904	1.76	2.05			H
MONT	31	0857	0925	0900	N17	E28	.587	8671	2.5	28	-N		C	0900	.52	1.40			O
ARCE	31	0858	0917D	0900	N12	E28	.546	8671	2.5	19D	1N		C	0900	2.34	2.80			HC
CAPS	31	0900	0909D		N14	E26	.539	8671	2.3	9D	1F	3		0902	2.00	2.40		147	
GRP 3112	31	0908	0919	0908	N20	E12	.477	8671	1.3	11	1-				.44				1 1 1
CAPF	31	0908E	0919	0908	N20	E12	.477	8671	1.3	11D	-N		P	0914	.88	.98			
GRP 3113	31	0924	0928		N26	E80	.994	8680	6.4	4	1				.46				2 2 2
CAPS	31	0923E	0928D		N28	E80	.995	8680	6.4	5D	1N	3		0925	.60			165	C
ARCE	31	0925	0925D		N24	E80	.993	8680	6.4		-N		C	0925	.31	1.00			DC
GRP 3114	31	0953	0955	0953	N19	W90	1.001	8659	24.7	2	1				.33				1 1 1
ARCE	31	0953	0955	0953	N19	W90	1.001	8659	24.7	2	-N		C	0953	.33	1.90			AC
GRP 3115	31	1040	1100		N15	W90	1.000	8659	24.7	20									1 0 0
CAPF	31	1040E	1100D		N15	W90	1.000	8659	24.7	20D			P						A
GRP 3116	31	1208	1220	1210	N21	W70	.960	8663	26.3	12	1				.52				1 1 1
MONT	31	1208	1220	1210	N21	W70	.960	8663	26.3	12	1N		C	1210	.52				O
GRP 3117	31	1234	1300		N15	W90	1.000	8659	24.8	26									1 0 0
CAPF	31	1234E	1300D		N15	W90	1.000	8659	24.8	26D			P						A
GRP 3118	31	1315	1401	1336	N19	E08	.441	8670	1.2	46	1-				1.27				3 3 3
CAPS	31	1301	1359		N20	E10	.465	8670	1.3	58	-N	3		1340	1.30	1.50		164	E
HUAN	31	1313	1402	1337	N19	E09	.446	8670	1.2	49	1N	2	C	1337	2.63	2.68			E
MEUD	31	1330	1342D	1335	N19	E05	.429	8670	31.9	12D	-N		C	1335	.52	.60			E
GRP 3119	31	1419	1458		N20	E08	.456	8670	1.2	39	1-				.91				1 1 1
HUAN	31	1419	1458	A	N20	E08	.456	8670	1.2	39	-N	1	C	1424	1.01	1.03			E
GRP 3120	31	1600	1616	1605	N26	E74	.980	8680	6.2	16	1-				.77				1 1 1
SACP	31	1600	1616	1605	N26	E74	.980	8680	6.2	16	1F		C		.86	2.15			
GRP 3121	31	1816	1819		N21	E06	.463	8670	1.2	3	1-				.28				1 1 1
HUAN	31	1816	1819D		N21	E06	.463	8670	1.2	3D	-F	1	P	1817	.31	.31			D
GRP 3122	31	1833	1842	1835	N16	W90	1.000	8659	25.0	9	1+				1.08				2 2 2
LOCK	31	1833	1841	1835	N15	W90	1.000	8659	25.0	8	2B		C	1835	2.10	8.40		30	H
HUAN	31	1833	1842		N16	W90	1.000	8659	25.0	9	-B	1	C	1835	.36				D
GRP 3123	31	1908	1917	1911	N20	W77	.985	8663	26.0	9	1-				.17				1 1 1
LOCK	31	1908	1917	1911	N20	W77	.985	8663	26.0	9	-F		C	1911	.20	.60		10	
GRP 3124	31	1920	1935	1927	S16	W24	.432	8667	30.0	15	1-				.50				1 1 1
LOCK	31	1920	1935	1927	S16	W24	.432	8667	30.0	15	-F		C	1927	.50	.60		10	
GRP 3125	31	1955	2001	1957	N33	E07	.636	8670	1.4	6	1-				.40				1 1 1
LOCK	31	1955	2001	1957	N33	E07	.636	8670	1.4	6	-F		C	1957	.40	.42		10	
GRP 3126	31	2040	2047	2042	N33	E07	.636	8670	1.4	7	1-				.61				1 1 1
LOCK	31	2040	2047	2042	N33	E07	.636	8670	1.4	7	-N		C	2042	.60	.70		20	
GRP 3127	31	2040	2049	2043	N18	W78	.986	8663	26.0	9	1-				.17				1 1 1
LOCK	31	2040	2049	2043	N18	W78	.986	8663	26.0	9	-F		C	2043	.20	.60		10	
GRP 3128	31	2040	2054	2043	N20	E06	.448	8670	1.3	14	1-				.86				1 1 1
SACP	31	2040	2054	2043	N20	E06	.448	8670	1.3	14	-F		C		.96	.97			
GRP 3129	31	2100	2125	2110	S16	W25	.446	8667	30.0	25	1-				.71				1 1 1
LOCK	31	2100	2125	2110	S16	W25	.446	8667	30.0	25	-F		C	2110	.70	.80		10	
GRP 3130	31	2107	2116	2111	N20	W78	.987	8663	26.0	9	1-				.34				1 1 1
LOCK	31	2107	2116	2111	N20	W78	.987	8663	26.0	9	-F		C	2111	.40	1.20		10	

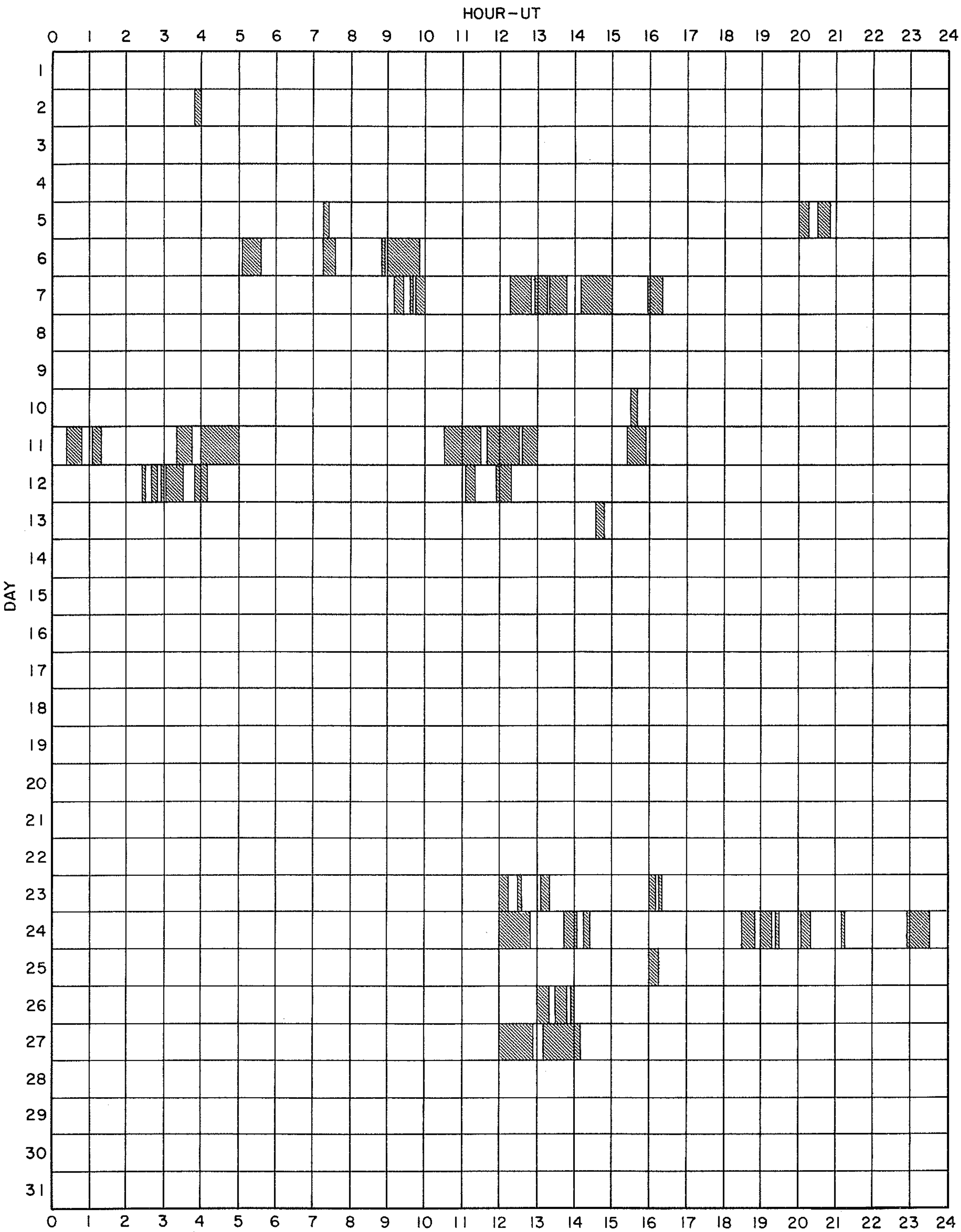
SOLAR FLARES
REVISED

JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 3131	31	2131	2145	2135	N17	W76	.980	8663	26.2	14	1-				.26				1 1 1
LOCK	31	2131	2145	2135	N17	W76	.980	8663	26.2	14	-F		C	2135	.30	.90		10	
GRP 3132	31	2150	2225	2156	S14	W29	.495	8667	29.7	35	1-				.71				1 1 1
LOCK	31	2150	2225	2156A	S14	W29	.495	8667	29.7	35	-N		C	2207	.70	.80		20	K
GRP 3133	31	2157	2205	2159	N15	W90	1.000	8663	25.2	8	1-				.25				1 1 1
LOCK	31	2157	2205	2159	N15	W90	1.000	8663	25.2	8	-F		C	2159	.30	1.20		10	H
GRP 3134	31	2214	2236	2221	N26	E70	.966	8680	6.2	22	1-				.78				1 1 1
SACP	31	2214	2236	2221	N26	E70	.966	8680	6.2	22	-F		C		.87	1.92			
GRP 3135	31	2216	2231	2222	N20	E33	.663	8671	3.4	15	1-				.61				1 1 1
LOCK	31	2216	2231	2222	N20	E33	.663	8671	3.4	15	-F		C	2222	.60	.70		10	
GRP 3136	31	2238	2315	2246	S16	E30	.516	8673	3.2	37	1-				1.05				1 1 1
LOCK	31	2238	2315	2246	S16	E30	.516	8673	3.2	37	-F		C	2246	1.00	1.30		10	
GRP 3137	31	2318	2339	2323	S26	W34	.618	8667	29.4	21	1-				1.35				2 2 2
SACP	31	2317	2339	2323	S25	W33	.600	8667	29.5	22	-N		C		1.74	1.89			
CULG	31	2318	2339	2323	S26	W34	.618	8667	29.4	21	-N		C	2323	1.24	1.50			HL

INTERVALS OF NO FLARE PATROL OBSERVATIONS

JANUARY 1967



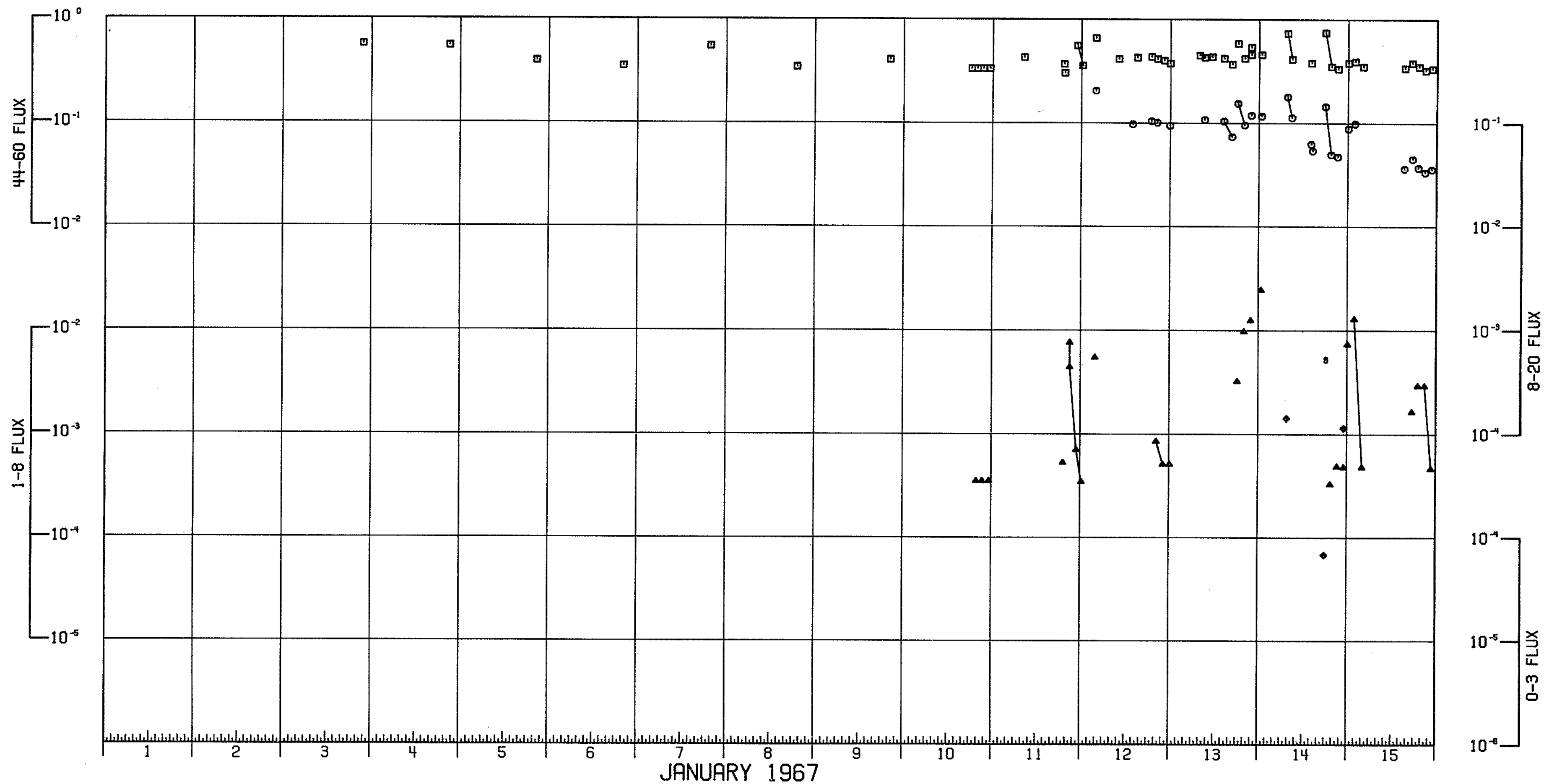
Observatories included:

Abastumani
Arcetri
Arosa
Athenes
Bakou
Bucharest
Capri-F (German)
Capri-S (Swedish)
Catania
Culgoora
Haleakala
Herstmonceux
Huancayo
Ikomasan
Istanboul
Kandilli
Kharkov
Kiev
Kodaikanal
Locarno
Lockheed
Lvov
Manila
Meudon
McMath-Hulbert
Mitaka
Monte Mario
Ondrejov
Sacramento Peak
Siberie
Simeiz
Tachkent
Tortosa
Uccle
Wendelstein
Zürich

SOLAR RADIATION MONITORING SATELLITE
X-RAY

NRL

JANUARY 1967



SOLAR RADIATION MONITORING SATELLITE
X-RAY

NRL

JANUARY 1967

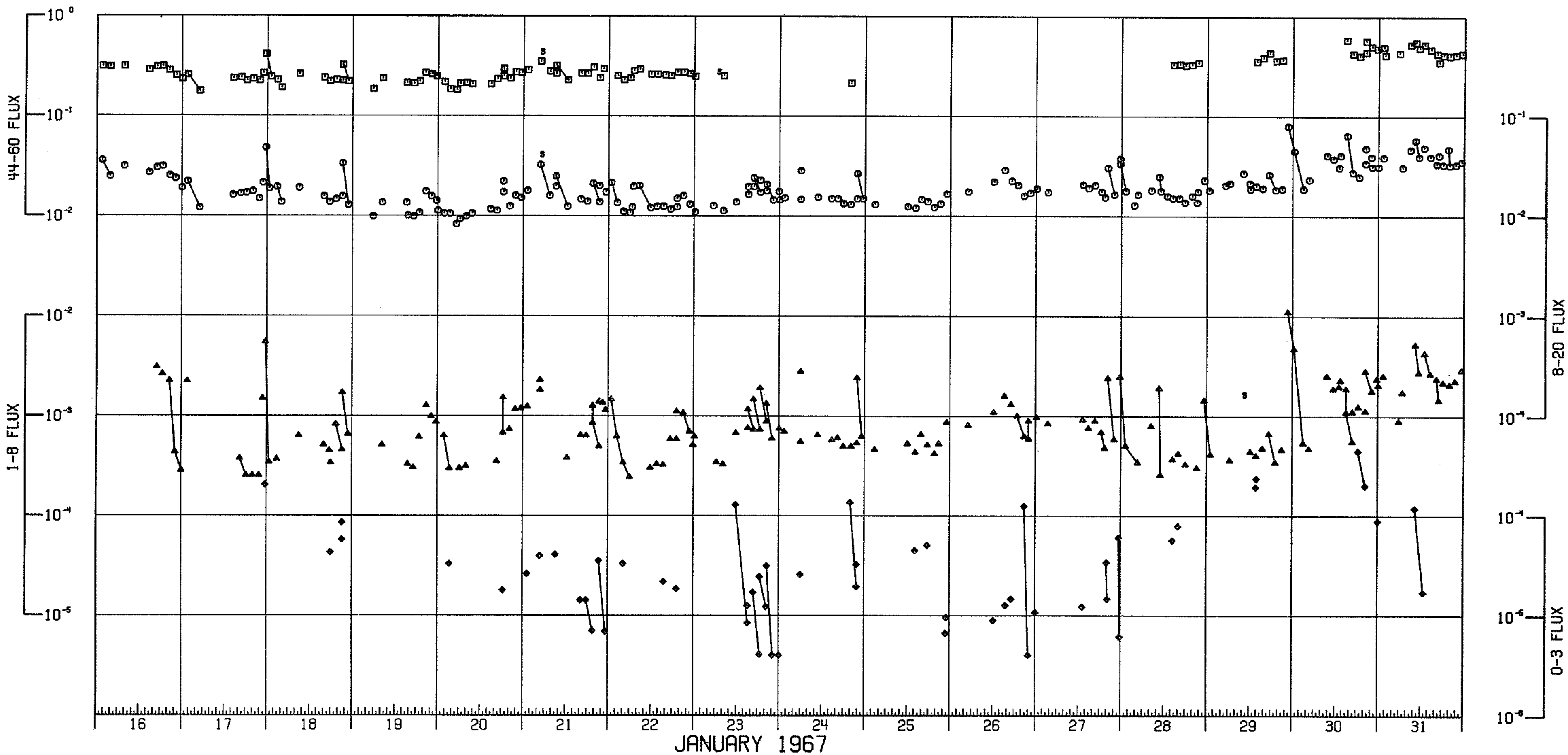


Table of Contents
for Miscellaneous Data

	Page
Coronal Line Emission Indices - April 1967	123
Cosmic Ray Indices - Dallas, Texas, U.S.A. April - September 1966	124
Solar X-ray Radiation - Satellite Explorer 33 July - November 1966	125-128

FINAL CORONAL LINE EMISSION INDICES

APRIL 1967

CMP Apr 1967	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	115	161	18	33	80	110	15	31	x	x	x	x	x	x	x	x
2	116	152	x	x	77	104	x	x	25	49	3	18	30	45	10	19
3	169	225	22	54	68	75	9	23	80	95	10	12	133	180	26	34
4	x	x	x	x	x	x	x	x	97	122	8	9	122	149	28	50
5	x	x	x	x	x	x	x	x	41	47	3	7	47	64	8	20
6	117	159	9	25	101	165	5	12	54	68	x	x	57	85	x	x
7	138	203	33	50	54	91	32	43	56	103	7	16	53	92	4	13
8	82	131	31	103	46	90	12	16	x	x	x	x	x	x	x	x
9	50	63	19	30	28	41	19	32	x	x	x	x	x	x	x	x
10	146	192	20	40	44	64	14	24	x	x	x	x	x	x	x	x
11	126	172	31	74	35	46	17	19	x	x	x	x	x	x	x	x
12	91	125	x	x	45	62	x	x	25	32	5	16	45	64	5	9
13	84	128	x	x	52	66	x	x	87	119	12	19	98	141	18	37
14	55	92	21	72	67	122	4	11	135	219	x	x	110	152	x	x
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	60	99	19	24	62	109	8	22	x	x	x	x	x	x	x	x
17	81	106	26	44	42	46	11	16	x	x	x	x	x	x	x	x
18	125	162	32	42	59	80	18	33	x	x	x	x	x	x	x	x
19	156	241	34	53	40	74	14	28	x	x	x	x	x	x	x	x
20	82	115	x	x	48	54	x	x	x	x	x	x	x	x	x	x
21	114	161	27	46	56	74	26	49	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	68	100	15	33	121	144	20	32
23	x	x	x	x	x	x	x	x	106	178	0	0	68	133	0	0
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
26	93	163	15	32	100	116	3	10	x	x	x	x	x	x	x	x
27	107	160	23	41	69	84	13	15	99	127	0	0	77	110	6	16
28	93	120	x	x	62	93	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

COSMIC RAY INDICES
(Neutron Monitor)

Dallas, Texas, U.S.A.
April-September 1966

Daily Average Counts per Hour

	Apr	May	June	July	Aug	Sept
1	6320.2	6326.6	6168.0	6249.5	6223.5	5997.0
2	6352.0	6339.0	6215.0	6234.5	6262.3	6034.1
3	6349.4	6352.6	6230.9	6267.9	6275.5	6016.1
4	6352.7	6360.1	6257.0	6289.3	6218.8	5970.8
5	6336.4	6343.8	6267.3	6312.1	6231.2	5978.4
6	6334.0	6381.1	6298.1	6304.0	6277.5	6003.8
7	6359.6	6363.0	6312.0	6303.9	6286.8	6024.8
8	6383.2	6370.3	6309.1	6292.8	6286.2	6128.8
9	6364.7	6400.7	6293.5	6211.5	6295.1	6175.5
10	6367.9	6375.1	6321.7	6247.7	6288.9	6215.8
11	6351.7	6345.5	6358.9	6268.7	6287.3	6236.2
12	6361.9	6342.7	6402.8	6260.8	6288.4	6242.6
13	6394.9	6366.1	6395.1	6240.1	6279.5	6244.5
14	6388.0	6352.7	6352.7	6241.0	6252.1	6183.1
15	6402.7	6348.3	6355.6	6244.7	6235.7	6079.3
16	6413.4	6357.1	6358.9	6255.2	6254.0	6038.8
17	6371.5	6380.6	6352.2	6249.8	6273.8	6042.1
18	6361.1	6402.1	6335.7	6259.6	6293.5	6053.3
19	6356.4	6395.8	6322.5	6264.0	6276.8	6028.7
20	6380.3	6378.9	6311.1	6268.5	6263.3	6050.0
21	6411.7	6389.9	6324.0	6259.5	6269.3	6087.3
22	6369.1	6397.0	6327.7	6276.8	6271.2	6097.1
23	6339.2	6391.8	6329.3	6262.6	6226.0	6087.3
24	6318.5	6395.7	6288.8	6261.7	6219.1	5909.4
25	6320.8	6411.4	6257.9	6248.6	6233.8	5912.0
26	6336.7	6418.6	6268.1	6256.6	6268.8	5975.2
27	6343.6 (22)	6335.1 (20)	6302.2	6265.9	6273.9	6022.2
28	6336.7 (15)	6363.3	6301.5	6230.0	6267.0	6058.9
29	6348.6	6349.5	6234.1	6209.1	6270.3	6057.9
30	6331.7	6335.6	6241.2	6223.5	6202.5	6067.3
31		6309.7		6216.4	5952.3	

Dallas Super Neutron Monitor, Scaling Factor 120.

( ) Number of hours for which data are available if less than 24.

A CATALOG OF SOLAR X-RAY FLARES (2 - 12 A°) WHOSE PEAK INTENSITY EXCEEDS THAT OF THE AMBIENT QUIET SUN BY A FACTOR GREATER THAN FOUR

by

J. A. Van Allen
University of Iowa, Iowa City

Explanatory Notes

Three mica-window neon-filled Geiger tubes on the satellite Explorer 33 are used to monitor soft x-ray emission of the whole disc of the sun. [See J. A. Van Allen and N. F. Ness, J. Geophys. Res., 72, 935-942, 1967, for fuller description of the apparatus.] The observations began on 1 July 1966 and provide one measurement each 81.8 seconds essentially continuously, with the exception of four 20-day periods per year during which no one of the three detectors views the sun. The absolute photon efficiency and the absolute energy flux efficiency for an x-ray beam parallel to the axis of the detector are shown in Figures 1 and 2, respectively. A geometric obliquity factor $f(\alpha)$ has been determined experimentally for each detector as a function of the angle α between the spin axis of the satellite and the satellite-sun line. The application of this factor and Figure 2 converts the counting rate of a detector to absolute energy flux units (ergs/cm^2 sec) for any assumed spectral distribution. Sensitivity of the detectors is typically about 2×10^{-6} ergs/cm^2 sec ($2 < \lambda < 12$ A°) and the dynamic range is 10^5.

The detectors are insensitive to solar ultraviolet.

The present listing of x-ray flares is independent of $f(\alpha)$ since the flares are characterized by a ratio of peak intensity to that of the ambient quiet sun. Continuous plots of all data are available.

The listings will be continued for the useful life of the satellite which is already known to exceed one year.

SATELLITE EXPLORER 33
X-RAY

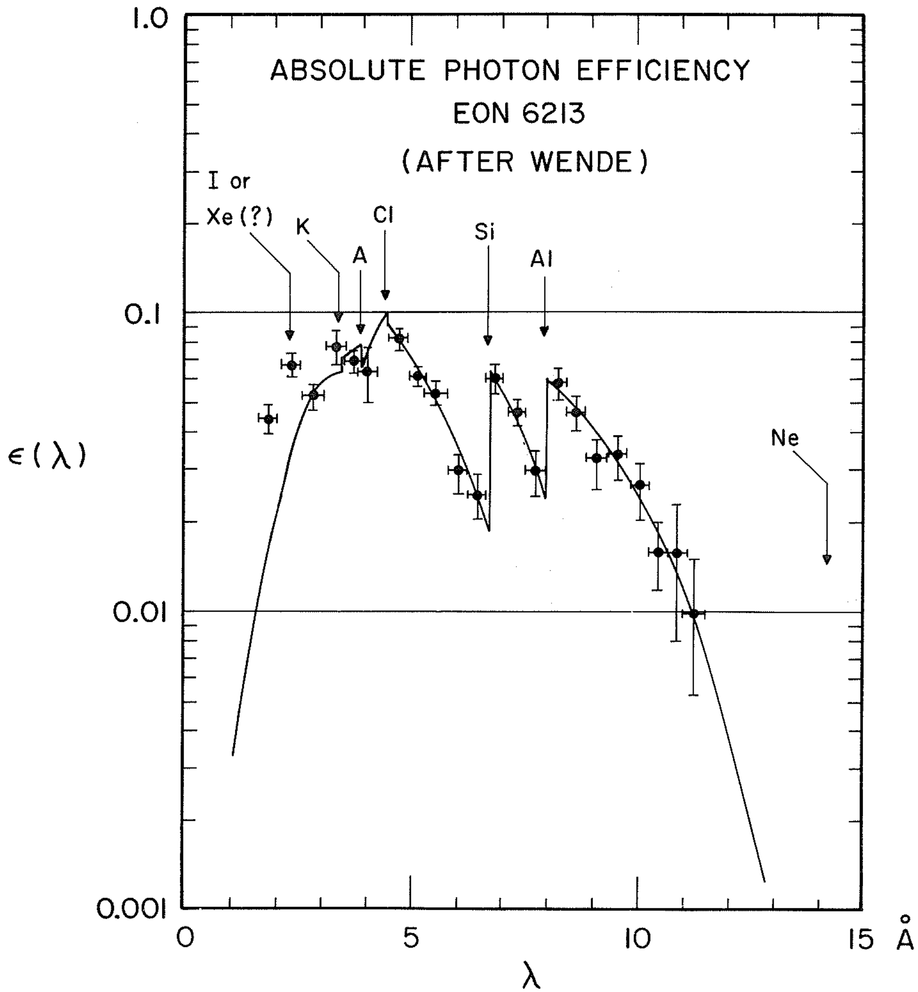


Figure 1

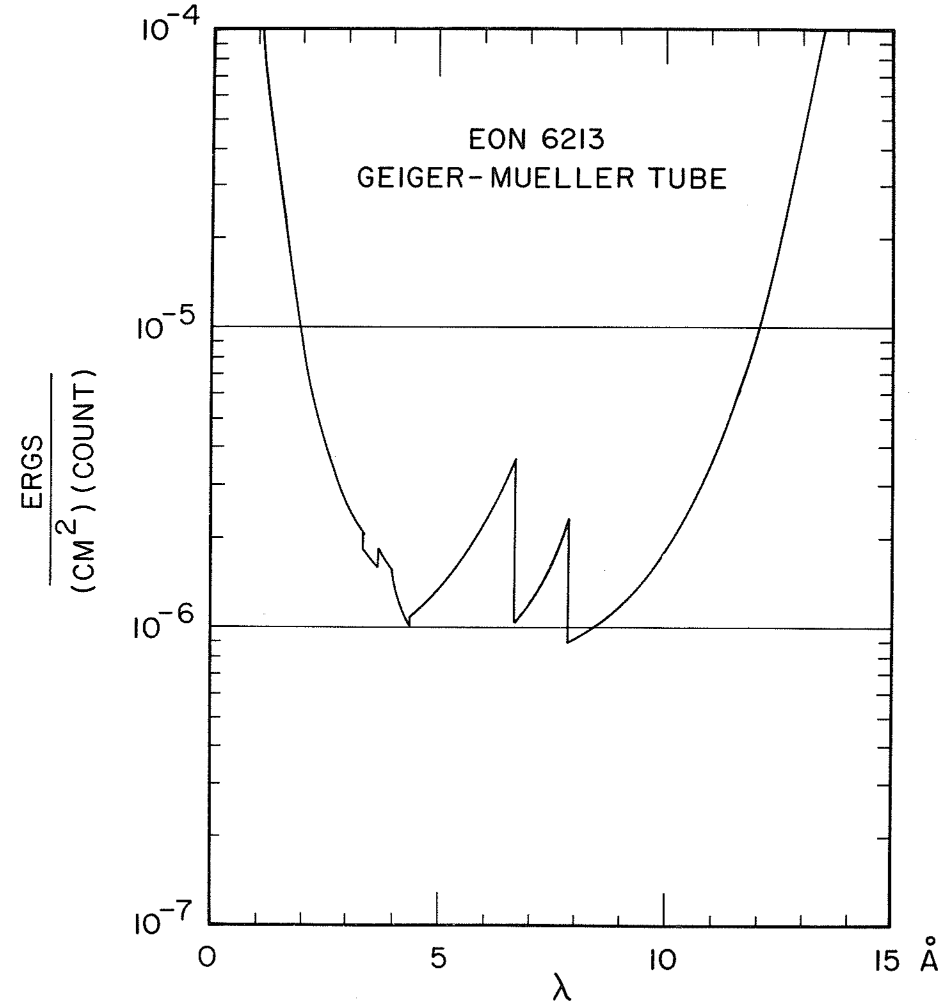


Figure 2

SATELLITE EXPLORER 33
X-RAY

Date 1966	Onset UT	Maximum UT	Peak-Ratio to Quiet Sun	Remarks
7 July	0025	0042	28	
10 July	0707	0721	5	
10 July	1142	1151	4	
11 July	0857	0946	6	
21 July	1517	1526	4	Onset time uncertain
23 July	0240	0246	8	
	0931	0939	5	
25 July	1337	1400	4	
26 July	0030	0037	5	Numerous small events
	0125	0138	4	
	1007	1105	4	
	1441	1450	4	
28 July	2215	2324	13	Long decay
2 Aug.	2123	2131	7	
3 Aug.	0638	0653	4	
	1045	1104	4	
	1411	1423	4	Long flat maximum
4 Aug.				Numerous small events
5 Aug.	1150	1339	8	Slow rise, slow decay
16 Aug.	0030	0032	19	Rapid rise, rapid decay
17 Aug.	0928	1000	10	
18 Aug.	1818	1825	8	
19 Aug.	0433	0437	12	Rapid rise, rapid decay
20 Aug.	1841	1903	4	
22 Aug.				Small events
23 Aug.				Many small events
25 Aug.	0618	0624	8	
	1354	1402	7	
26 Aug.	1726	1837	5	slow rise, slow decay
	2155	2226	4	Broad max.
				Numerous small events
27 Aug.				Numerous small events
	1959	2104	4	Slow rise, slow decay
28 Aug.				Numerous small events
	1522	1531	70	
29 Aug.	0534	0545	4	
30 Aug.	1447	1509	10	
31 Aug.	0043	0101	11	
	--	0355	5	Onset time uncertain
	1825	1910	5	Slow rise, slow decay
				Numerous small events
1 Sept.				Numerous small events
2 Sept.				Numerous small events
	0546	0558	60	
3 Sept.	0325	0328	6	Rapid rise, long decay
	1358	1359	50	Rapid rise, long decay
10 Sept.				Numerous small events
12 Sept.	0907	1008	10	Numerous small events

SATELLITE EXPLORER 33
X-RAY

Date 1966	Onset UT	Maximum UT	Peak-Ratio to Quiet Sun	Remarks
14 Sept.	1011	1023	14	
19 Sept.	1158	1213	7	
	1521	1528	7	
No observations from September 20, 1400UT to October 9, 0920UT.				
9 Oct.	1045	1108	4	
13 Oct.				Numerous small events
	1313	1344	21	Rapid rise, rapid decay
14 Oct.	0520	0531	33	Rapid rise, rapid decay
	--	1315	6	Onset time uncertain
				Numerous small events
15 Oct.	--	0421	4	Onset time uncertain
	1907	1925	10	Numerous small events
16 Oct.				Numerous small events
17 Oct.	0238	0315	4	
	1010	1022	7	Numerous small events
18 Oct.				Numerous small events
20 Oct.	0547	0642	4-	Slow rise, slow decay
22 Oct.				Numerous small events
	--	2220	6	Rapid rise, rapid decay
23 Oct.	0234	0240	7	Rapid rise, rapid decay
	0849	1026	17	Slow rise, complex structure
	1334	1347	4	Rapid rise, rapid decay
	1415	1436	15	
	1919	1949	4	
	2051	2108	12	
24 Oct.				Numerous small events
	2222	2301	8	
25 Oct.	0415	0426	6	
26 Oct.				Numerous small events
27 Oct.	1420	1434	4	
29 Oct.	1016	1136	9	Complex structure
30 Oct.	0140	0321	8	Complex structure
				Several small events
31 Oct.	1858	1902	4-	
1 Nov.	1052	1107	5	
2 Nov.	1703	1729	6	
5 Nov.				Numerous small events
6 Nov.	1032	1040	5	Rapid rise, rapid decay
	1331	1346	4	
7 Nov.				Numerous small events
	1731	1858	6	Slow rise, slow decay
14 Nov.	1223	1235	5	
15 Nov.	0023	0033	4	

USCOMM--ESSA--ASHEVILLE--7-31-67-1000