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INSTITUTES FOR ENVIRONMENTAL RESEARCH

Solar-Geophysical Data

Number 274
for May 1967
April 1967
December 1966
& Miscellanea

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

WASHINGTON, D.C.
JUNE 1967

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

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for May 1967 Data

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

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ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MAY 1967

May 1967	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
3	1612	Lockheed, Solar Flare 2B N20E50 031535Z				
8	1540	Athens, Solar Flare 2B S25W60 081124Z				
19	1606	ADALERTPRESTO TENFLARE OTTAWA 250 percent 191520Z				
	1640	Lockheed, Solar Flare 2B N26E70 191520Z				
20	0400		502	Solar Flares	Expected	N27E67
	1536	ADALERTPRESTO TENFLARE Ottawa 550 percent 201508Z				
21	0400		503	Solar Flares	Expected	N27E57
	1937	ADALERTPRESTO TENFLARE Ottawa 470 percent 211919Z				
22	0400		504	Solar Flares	Expected	N25E46
23	0400		505	Solar Flares	Expected	N26E31
	1843	Sac Peak, Solar Flare 3B N25E24 231809Z				
	1920	ADALERTPRESTO TENFLARE Ottawa 900 percent 231834Z				
24	0400		506	Solar Flares	Expected	N26E18
25	0400		507	Solar Flares	Expected	N26E05
			508	Magnetic Storm	Expected	
	1325	AGIWARN, Magnetic Storm Great 251235Z				
26	0400		509	Solar Flares	Expected	N26W07
			510	Magnetic Storm	251019Z	Aurora
			511	Cosmic Event	Exists	Polar Cap Absorption
	1718	ADALERTPRESTO TENFLARE Ottawa 220 percent 261518Z				
27	0400		512	Solar Flares	Expected	N26W20
			513	Magnetic Storm	Ends	
			514	Cosmic Event	Ends	
28	0400		515	Solar Flares	Expected	N26W28
	1220	Carnarvon, Proton Flare N28W30 280527Z				
	1844	ADALERTPRESTO TENFLARE Toyokawa 280 percent 280520Z				
29	0400		516	Solar Flares	Expected	N26W40
			517	Magnetic Storm	Exists	
30	0400		518	Solar Flares	Expected	N26W52
			519	Magnetic Storm	Ends	
			520	Magnetic Storm	Expected	
31	0400		521	Solar Flares	Expected	N26W68
			522	Magnetic Storm	301429Z	

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

DAY	1966 (FINAL) JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	1967 (PROVISIONAL) JAN.	FEB.	MAR.	APR.	MAY
1	71	49	78	44	57	43	35	60	93	172	105	74
2	74	49	74	44	55	42	33	93	88	179	79	77
3	41	54	72	25	50	38	30	124	92	191	54	46
4	60	53	68	18	36	38	57	148	100	172	52	62
5	48	48	60	26	40	20	69	150	72	164	62	66
6	47	46	50	30	44	32	68	148	89	148	63	46
7	40	58	33	36	53	48	64	134	138	137	79	41
8	35	68	13	38	48	55	88	116	109	98	104	18
9	33	60	13	39	44	59	86	111	112	85	67	25
10	25	65	0	37	65	63	112	111	97	86	62	17
11	43	52	16	42	66	72	125	104	96	74	62	25
12	34	62	36	38	64	80	130	90	79	65	51	34
13	34	56	30	33	72	68	118	86	77	49	63	29
14	31	42	37	35	64	66	113	85	58	44	48	38
15	22	34	41	38	60	66	107	56	58	49	51	36
16	40	48	40	57	70	52	116	56	60	58	32	35
17	46	42	41	76	70	59	88	59	60	70	42	38
18	40	49	39	83	70	57	76	72	70	73	58	48
19	36	38	33	76	76	65	57	82	57	58	56	70
20	42	65	28	78	96	74	46	82	60	73	44	74
21	33	55	22	89	91	77	37	102	71	88	60	96
22	35	66	38	86	83	78	34	134	86	108	76	118
23	62	56	65	71	75	76	38	152	84	111	94	137
24	66	70	71	67	64	72	45	122	100	121	74	156
25	80	67	89	68	50	74	60	133	106	131	78	159
26	82	74	95	54	47	67	65	136	123	137	66	174
27	76	65	90	48	39	59	48	130	186	122	55	194
28	52	70	84	42	36	41	48	125	166	120	76	197
29	47	76	89	45	27	37	51	122		130	79	148
30	55	59	76	42	27	37	70	132		130	66	139
31		62	66		35		68	108		115		127
MEAN	47.7	56.7	51.2	50.2	57.2	57.2	70.4	108.5	92.4	108.3	65.3	82.1

1966 Yearly Mean = 47.0

DAILY SOLAR FLUX AT 2800 Mc/s
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

DAY	1966 JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	1967 JAN.	FEB.	MAR.	APR.	MAY
1	104.8	100.1	125.9	116.6	101.4	94.6	92.2	124.4	151.6	194.2	158.6	136.6
2	103.9	98.2	119.6	106.3	102.0	96.7	95.1	143.0*	143.5	197.8	141.0	131.8
3	102.6	99.3	118.2*	103.2	103.2	93.1		154.0	138.7	196.4	133.3	Burst
4	102.0	104.8	116.0*	101.9	100.6*	91.7	104.8	160.7	137.3*	205.9	125.0	125.8
5	101.7	105.0	110.5	100.5	100.0	97.9	110.9*	168.2	146.8*	179.2	122.1	128.1
6	101.9	109.7	106.0	97.9	101.9*	104.7	115.6*	160.5	148.8	177.4	119.0	122.8
7	96.9	112.6	101.5	95.8*	103.1	113.4	117.7	153.6	162.5	163.8	126.2*	119.7
8	99.5	114.4	97.7	96.2*	99.4	116.9	123.7	142.9	148.3	156.1	135.7	116.9
9	98.9	107.8	96.4	95.3	103.5	117.2	146.2	144.7	145.9	157.9	133.3	113.6
10	96.8	108.1*	94.3	93.9	106.5	121.9	157.3*	145.6	140.5	148.4	130.3	109.4
11	96.1	109.0	92.5	96.6	109.8	126.1	162.8*	139.8	133.7	141.6	131.1*	106.1
12	95.9	102.7	92.8	100.8*	114.8	126.2	157.6	139.1	132.9	134.3	129.8*	109.7
13	96.1	100.4	93.2	102.4	122.8*	126.4	155.5	138.1	130.0	129.1	126.8	107.3
14	96.9	99.8	92.8	107.4	120.3	124.0	149.5	135.2	129.2	127.2	133.5	108.6*
15	94.7	101.1	93.7	112.0	120.6	122.6	144.9	126.6	126.4	132.4	124.1	111.0
16	97.9	102.8	95.1	124.6*	120.3*	121.2	135.1	120.2	124.9	132.1	126.1	113.1
17	99.5	101.2	96.8	129.1	120.5*	113.2	124.9*	116.9	122.2*	132.6	125.9	115.4
18	98.2	101.3	97.5	142.6	118.5*	113.4	111.2	117.4	124.2	132.2	128.7	124.8
19	96.9	101.5	100.0	146.6	115.6*	111.0	112.3	116.4	121.0	136.0	126.7	135.6*
20	94.3	101.8	101.6	146.0*	124.1	110.9	107.6	127.0	128.6	140.4	127.1	146.3
21	93.5	103.7	102.7	137.2	120.9*	110.7*	106.5	138.2	131.8*	147.2	134.0	160.3*
22	96.1	106.5	105.5	131.5*	119.8*	116.5	105.5*	139.9	146.0	149.5	131.5	182.7
23	99.2	114.9	114.7	127.5*	111.1	114.7*	110.6*	148.8*	149.3*	155.7	128.0	194.0*
24	103.5	120.6	122.0*	126.0	106.1	113.8	110.5	146.8	162.2	161.9	130.5	200.9
25	104.8*	126.0	126.3*	118.8*	100.8	110.7	111.6	142.7*	159.5*	169.2	132.9	210.7
26	105.6*	127.6	130.2	109.4	97.7	107.3	110.9	154.3	173.3*	163.9	125.4	218.9*
27	100.8	123.8	133.4	102.9	92.0	111.1*	109.6	158.3	176.7	162.8	129.2	213.8
28	101.4	124.2	132.6*	97.9	94.1	104.1	107.5	156.2	180.2	180.7	135.1	202.6
29	99.8	132.9	129.8	98.6	99.7	98.0	109.3	158.2*		178.4	137.5	188.3
30	100.7	128.0	126.1	95.7	95.7	94.6*	115.1	159.0		175.8	135.3	177.4
31		124.6	120.9		97.1		120.5*	156.4		167.6		175.4
MEAN	99.4	110.1	109.2	112.4	107.9	110.8	121.4	143.0	143.4	159.0	130.8	146.9

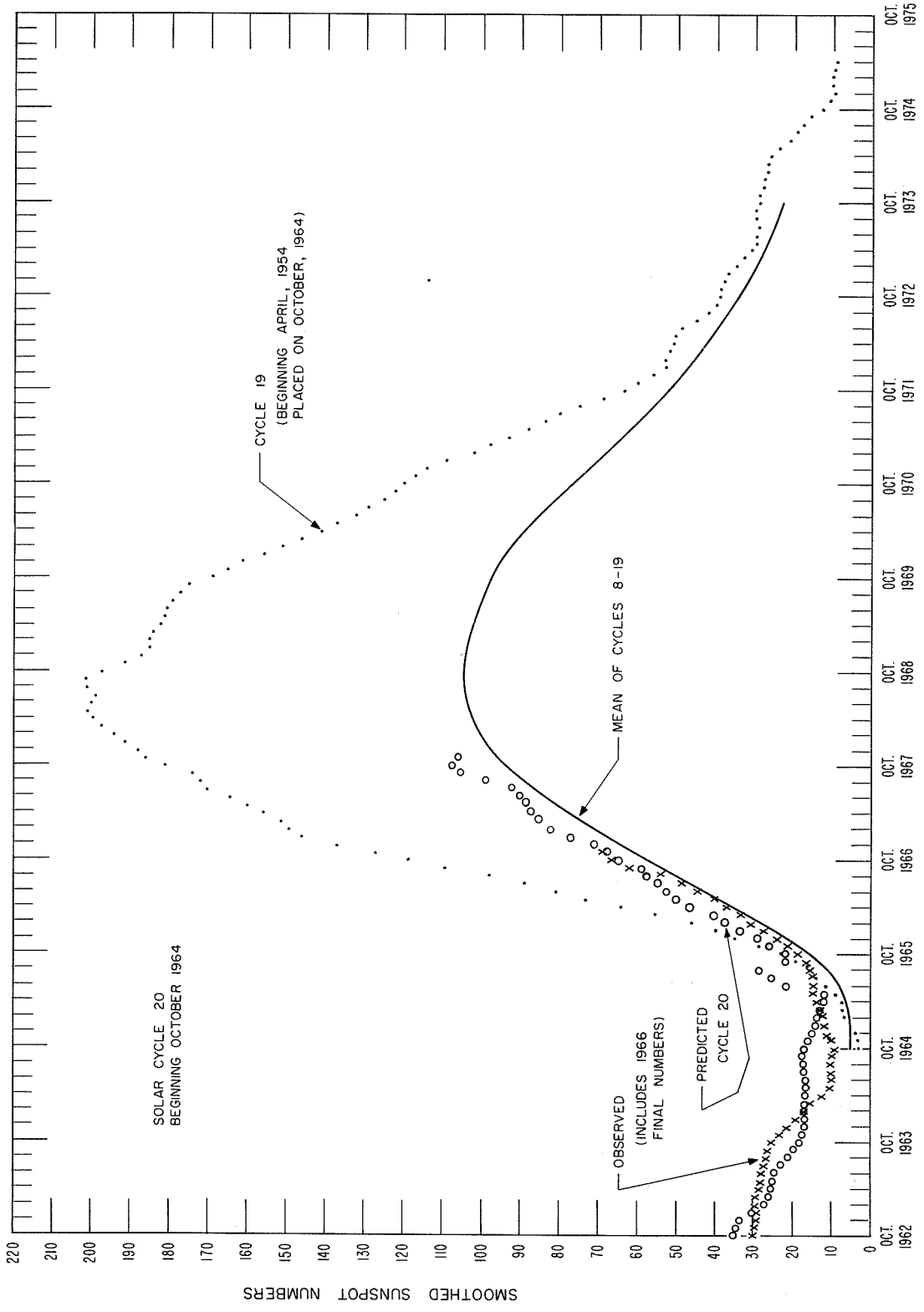
* Adjusted for Burst

DAILY SOLAR INDICES

MAY 1967

MAY 1967	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO 1 A.U.					
			R_Z	$R_{A'}$		AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606
01	121	8	74	87	134.5	301	168	136.6	127.9	83.4	62.2
02	122	9	77	70	129.7	301	171	131.8	129.1	85.0	63.5
03	123	10	46	68	Burst	313	190	Burst	123.6	80.4	61.7
04	124	11	62	60	123.7	293	162	125.8	120.3	79.9	60.1
05	125	12	66	73	125.8	291	164	128.1	120.3	79.3	61.1
06	126	13	46	43	120.6	291	164	122.8	120.9	79.1	58.9
07	127	14	41	26	117.5	291	164	119.7	118.7	74.6	57.3
08	128	15	18	21	114.7	277	158	116.9	113.0	71.9	55.1
09	129	16	25	24	111.5	284	153	113.6	108.9	69.9	53.6
10	130	17	17	17	107.3	273	148	109.4	103.6	65.1	52.9
11	131	18	25	17	104.0	280	146	106.1	100.0	63.5	52.5
12	132	19	34	31	107.5	284	149	109.7	100.4	63.7	53.4
13	133	20	29	32	105.1	280	145	107.3	96.9	63.7	52.3
14	134	21	38	34	106.3*	286	148	108.6*	100.7	66.9	53.4
15	135	22	36	47	108.6	282	149	111.0	105.5	69.0	54.6
16	136	23	35	39	110.6	286	147	113.1	106.5	67.2	55.8
17	137	24	38	42	112.8	288	151	115.4	109.6	69.4	57.5
18	138	25	48	64	121.9	293	158	124.8	116.9	74.5	58.8
19	139	26	70	73	132.4*	303	172	135.6*	130.9	81.8	66.6
20	140	27	74	100	142.9	309	183	146.3	136.9	84.7	62.9
21	141	1	96	107	156.4*	334	213	160.3*	161.8	93.1	68.2
22	142	2	118	127	178.3	370	240	182.7	183.7	94.5	68.4
23	143	3	137	127	189.1*	391	258	194.0*	200.2	101.9	71.6
24	144	4	156	128	195.8	379	256	200.9	202.1	106.3	71.2
25	145	5	159	171	205.4	386	246	210.7	209.5	111.5	76.9
26	146	6	174	178	213.2*	387	265	218.9*	229.2	121.8	77.4
27	147	7	194	194	208.2	345	248	213.8	213.6	113.9	74.5
28	148	8	197	185	197.3	342	228	202.6	198.4	112.7	72.7
29	149	9	148	160	183.2	332	218	188.3	183.2	102.8	69.3
30	150	10	139	182	172.6	327	213	177.4	172.8	97.1	66.3
31	151	11	127	175	170.6	328	216	175.4	175.0	90.3	65.2
MEAN			82.1	87.2	143.6	313	187	146.9	142.6	84.5	62.4

* Adjusted for Burst



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	

CALCIUM PLAGE AND SUNSPOT REGIONS

MAY 1967

May 1967	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA						SUNSPOT DATA		
				CMP VALUES		HISTORY	AGE (ROTATIONS)	DATE FIRST SEEN	DURATION (DAYS)	CMP VALUES		HISTORY
				AREA	INT.					AREA	COUNT	
1.0	N18	8787	8745	1500	2.5	ℓ V ℓ	4	4/24	>12	(10)	(2)	b - ℓ
1.7	N14	8796	New	2100	3.0	b Λ ℓ	1	4/24	13	70	16	(4)
2.3	N37	8797	8751	600	1.5	ℓ / d	5	<4/30	>7			
2.7	N06	8790	New	(200)	(1.0)	b - d	1	4/27	3			
3.4	S20	8791	8753	(4300)	(3.5)	ℓ Λ ℓ	3	4/27	14	100	29	(4)
3.6	N27	8792	8754	(3100)	(2.5)	ℓ Λ ℓ	4	4/27	14	10	2	b - d
5.9	S27	8794	8758	(1900)	(2.0)	ℓ - ℓ	2	4/29	14	10	2	b - d
5.9	N25	8795	New	(1600)	(2.5)	ℓ Γ ℓ	1	4/29	12	(10)	(2)	(4) d
6.6	N11	8799	New	800	2.5	b - ℓ	1	≤5/5	≥8			
7.2	S18	8800	New	100	1.0	b - d	1	≤5/5	≥3			
7.7	N26	8798	8760	2800	3.5	ℓ Γ ℓ	3	4/30	14	280	5	ℓ - ℓ
8.9	N20	8801	8766	(600)	(1.5)	ℓ / d	3	<5/7	>7	(10)	(2)	b - d
11.0	N18	8803	8767	1000	2.0	ℓ Λ ℓ	3	<5/7	>10			
11.7	S19	8805	8768	(1800)	(2.0)	ℓ Λ ℓ	3	<5/9	>9			
13.0	N16	8808	New	500	1.5	b Λ d	1	5/12	6			
13.7	S23	8804	New	200	1.0	ℓ L ℓ	1	5/7	13			
14.8	N24	8806(1)	8771	2000	2.5	ℓ Γ ℓ	7	5/9	12	10	1	b - d
15.2	S24	8807	8777	4000	3.5	ℓ Λ ℓ	2	5/9	13	(10)	(4)	ℓ - d
17.0	S16	8809	New	1800	3.0	ℓ Λ ℓ	1	5/12	12	70	13	b Λ d
17.8	N27	8810	8776	3100	2.0	ℓ ⅂ ℓ	2	5/12	13	110	1	ℓ ⅂ ℓ
18.2	S29	8820	New	(200)	(2.5)	b / ℓ	1	5/20	5	(10)	(4)	b / ℓ
19.4	N17	8811	8778	2700	2.5	ℓ Λ ℓ	4	5/13	13			
19.7	S16	8813	New	900	2.5	ℓ \ ℓ	1	5/13	12	(10)	(3)	ℓ - d
19.8	N29	8812	New	1600	2.5	ℓ ⅂ ℓ	1	5/13	13	(10)	(1)	b - d
21.3	S25	8815	8779	1800	2.0	ℓ Λ ℓ	3	5/14	15	(10)	(1)	b - d
21.3	S14	8816	8781	3000	3.0	ℓ Γ ℓ	2	5/14	14	20 60	2 19	ℓ \ d b Λ d
22.4	N27	8817	8778	2500	2.5	ℓ Γ ℓ	5	5/15	15			
23.8	N05	8826	New	(200)	(2.0)	b Γ ℓ	1	5/24	6	(10)	(3)	b - d
24.7	N13	8827	New	300	2.5	b - d	1	5/24	6	20	7	b - d
25.4	N25	8818(2)	8785	10000	4.0	ℓ Γ ℓ	2	5/18	15	150 010 540	15 4 54	ℓ Γ ℓ ℓ Λ ℓ ℓ Γ ℓ
26.1	S21	8819(3)	8784	3500	3.5	ℓ / ℓ	2	5/19	15	150 130	1 36	ℓ - ℓ b Λ ℓ
27.7	N16	8821	8796	4500	3.5	ℓ Γ ℓ	2	5/21	14	160 80	2 32	ℓ ⅂ ℓ b Λ d
29.6	S20	8825	8791	2100	2.0	ℓ Λ ℓ	4	5/23	13	(10)	(2)	b - d
30.3	N24	8824	New	4000	2.5	ℓ Γ ℓ	1	5/23	14	60 190	7 7	ℓ - ℓ b Λ d
31.1	S19	8828	8791	1500	2.0	ℓ ⅂ ℓ	4	5/25	13			

(1) Region 8806 is a return of regions 8771 and 8774.
(2) Region 8818 is a return of regions 8785 and 8793.
(3) Region 8819 is a return of regions 8784 and 8788. These regions experienced a resurgence of activity during their transit across the disk during the previous rotation.
(4) Sunspot data is currently incomplete for the first part of May 1967.

No calcium spectroheliograms were obtained at the McMath-Hulbert Observatory on May 4, 8 and 11, 1967.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

MAY 1967

May 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	May 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	1410	N26	W43	(β)1	16344	13	1855	N21	W87	αp	16354
		S18	W28	(βp)4	16348			N24	E51	(αp)4	16359
		S20	W30	(βγ)4	16350			S23	E21	(βf)2	16360
		N12	W0E	(βp)4	16351			S16	E48	(αp)1	16361
		N21	E54	(β)1	16353			S15	E73	(αp)2	16362
		N20	E70	(αp)3	16354						
		S22	W41	(βp)2	16355	14	1710	N25	E40	(αp)5	16359
								S24	E03	(αp)1	16360
2	2150	S18	W46	(αp)4	16348			S16	E36	(βp)2	16361
		S20	E09	(βp)4	16350			S14	E60	(αp)2	16362
		N12	W17	(βp)5	16351						
		N20	E58	(αp)5	16354	15	2225	N25	E24	(αp)5	16359
		S21	W58	(β)2	16355			S17	E18	(βp)2	16361
								S15	E45	(αp)2	16362
3	1745	S18	W58	(αp)3	16348			S20	E07	(βf)1	16363
		S21	W01	(βp)3	16350			S13	E66	(αp)3	16364
		N12	W28	(βp)3	16351						
		N20	E47	(αp)5	16354	16	1340	N26	E16	(αp)4	16359
		S22	W69	(βf)2	16355			S15	E10	(βp)3	16361
								S18	W02	(βf)1	16363
4	No Obs.							S13	E57	(βp)3	16364
								N15	E23	(β)2	16365
5	No Obs.							S26	W08	(αf)1	16366
6	1455	S20	W40	(βf)*3	16350	17	1350	N26	E05	(αp)4	16359
		N15	W70	(αf)3	16351			S14	W04	(βp)4	16361
		N12	W74	(βp)3	No number			S14	E24	(αp)1	16362
		N21	E10	(βf)*5	16354			S13	E48	(βp)2	16364
		S17	W60	(βp)1	16356			N24	W27	(β)2	16367
		S23	W12	(βf)2	16357						
						18	1420	N26	W09	(αp)4	16359
7	2155	S21	W56	(αp)2	16350			S15	W17	(βp)3	16361
		N21	W08	(αp)5	16354			S15	E11	(αp)1	16362
								S13	E35	(αp)3	16364
8	1640	S20	W65	(αp)2	16350			N25	E76	βp	16368
		N21	W18	(αp)5	16354			S13	E38	(βγ)3	16369
		S24	E62	(βp)1	16357						
		S24	E80	(αp)1	16358	19	1405	N26	W22	αp	16359
								S16	W30	βp	16361
9	No Obs.							S13	E23	βp	16364
								N25	E65	βp	16368
10	No Obs.							S17	E27	βp	16369
								N27	W60	αp	16370
11	1705	N21	W58	(αp)5	16354			N22	E37	β	16371
		N24	E79	(αp)2	16359			N26	E79	β	16372
12	1425	N21	W68	(αp)5	16354	20	1608	N26	W36	(αp)4	16359
		N25	E67	(αp)3	16359			S15	W46	(αp)1	16361
		S24	E38	(βf)2	16360			S13	E07	(βp)3	16364
								N23	E52	(αp)4	16368
								S16	E13	(βp)4	16369
								N26	E62	(βγ)4	16372
								N21	E54	(βp)2	16373
								S17	E73	(αp)4	16374

* polarities reversed for this cycle.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

MAY 1967

May 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
21	2320	N26	W52	αp	16359
		S15	W09	βp	16364
		N24	E31	(βp)4	16368
		S17	W04	β	16369
		N25	E44	(δ)6	16372
		N22	E37	(αp)4	16373
		S17	E56	αp	16374
		S27	W52	β	16375
		N09	E75	αp	16376
22	1731	N27	W61	(αp)2	16359
		S13	W23	(αp)2	16364
		N23	E22	(βp)5	16368
		S17	W15	(βp)2	16369
		N24	E36	(δ)4	16372
		N21	E30	(βp)4	16373
		S17	E45	(αp)4	16374
		S27	W60	(β)1	16375
		N08	E66	(αp)3	16376
23	No Obs.				
24	1941	N25	W07	(αp)5	16368
		S15	W45	(αp)1	16369
		N23	E07	(δ)4	16372
		N21	W0E	(βp)5	16373
		S17	E18	(αp)5	16374
		N10	E40	(αp)4	16376
		S22	E68	(αp)1	16377
		N13	E41	(βp)2	16378
		S19	E24	(αf)1	16379
		N20	E68	(αp)5	16380
25	1445	N24	W18	(αp)5	16368
		S14	W56	(αp)1	16369
		N26	W07	(δ)5	16372
		N21	W12	(βp)5	16373
		S15	E08	(αp)5	16374
		N13	E28	(αp)5	16376
		S21	E55	(αp)3	16377
		N15	E28	(αf)4	16378
		S17	E14	(βp)3	16379
		N23	E53	(αp)5	16380
		N20	E56	(βf)2	16381
		N24	E58	(βp)2	16382
		N03	W27	(αp)1	16383
26	2205	N27	W31	αp	16361
		N25	W18	δ	16372
		N21	W28	βp	16373
		S16	W11	αp	16374
		N10	E10	αp	16376
		S22	E38	αp	16377
		N13	E10	αf	16378
		S20	W03	β	16379
		N21	E36	αp	16380
26	2205	N19	E40	β	16381
		N25	E44	β	16382
		S19	E68	αp	16384
27	1555	N26	W42	(βp)5	16368
		N26	W28	(δ)5	16372
		N21	W37	(βp)5	16373
		S16	W21	(αp)4	16374
		N10	W0E	(αp)4	16376
		S22	E28	(αp)1	16377
		N13	E01	(β)3	16378*
		S20	W12	(βf)4	16379
		N21	E26	(αp)5	16380
		N19	E30	(β)3	16381
		N25	E35	(βp)3	16382
		S20	E58	(αp)4	16384
		N19	E72	(β)1	16385
		S26	W17	(αp)1	16386
28	1655	N26	W57	(αp)4	16368
		N26	W40	(δ)5	16372
		N21	W51	(βp)5	16373
		S16	W34	(αp)5	16374
		N10	W13	(βp)5	16376
		S23	E16	(αp)1	16377
		N13	W14	(βp)4	16378*
		S20	W26	(βf)4	16379
		N21	E12	(αp)5	16380
		N18	E15	(βf)4	16381
		N24	E16	(αp)3	16382
		S19	E44	(αp)5	16384
		N20	E58	(βp)2	16385*
		N23	E71	(αp)3	16387
		N22	E83	(αp)4	16388
29	1650	N26	W70	(αp)3	16368
		N26	W54	(δ)5	16372
		N20	W69	(αp)4	16373
		S16	W48	(αp)4	16374
		N10	W27	(αp)4	16376
		N13	W27	(βp)4	16378
		S20	W39	(βf)4	16379
		N21	W01	(αp)5	16380
		N19	E02	(βf)4	16381
		N23	E04	(β)2	16382
		S19	E31	(αp)5	16384
		N22	E45	(βp)2	16385
		N22	E58	(αp)3	16387
		N22	E70	(αp)4	16388
		N26	E67	(αf)1	16389
30	No Obs.				
31	No Obs.				

SOLAR FLARES

PRELIMINARY

MAY 1967

OBSERVATORY	DATE 1967 MAY	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
HALE	01	0315	0419	0321	S21	E32	.578	8791	3.5	64	1B	3	C	0321	1.70	2.10			
CAPS	01	0745E	0824		S20	E30	.548	8791	3.6	39D	1N	1							
CAPS	01	1024E	1040		N27	W41	.770	8785	28.4	16D	1N	2		1029	1.40	2.20		189	E
CAPS	01	1100E	1130D		S20	E28	.523		3.6	30D	-N	3		1107	1.20	1.40		164	
WEND	01	1102	1129		S20	E25	.485	8791	3.3	27	1F		V		4.13				
SALO	01	1320	1440	1340	S15	W42	.678	8784	28.4	80	1N		V	1340			1.70		
CAPS	01	1357E	1410D		S21	W38	.650		28.7	13D	-F	2		1358	1.00	1.30			
SALO	01	1320	1440	1340	N20	E00	.410	8796	1.6	80	1N			1340			1.70		
SACP	01	1338	1407	1352	N13	E03	.300		1.8	29	-F		C		.93	.91			
SALO	01	1320	1440	1340	S13	E27	.471	8791	3.6	80	2N		S	1340			1.80		
SACP	01	1341	1447	1346	S20	E28	.523		3.7	66	-N		C		1.50	1.55			
CAPS	01	1343E	1407		S20	E26	.498	8791	3.5	24D	1N	2		1348	3.00	3.50		194	C
CAPF	01	1350E	1410D		S20	E27	.510	8791	3.6	20D	1N		S	1350	1.76	2.05			
SALO	02	0840	1000		S12	W38	.621	8788	29.5	80	1N		S	0930			1.60		
SALO	02	0840	1000		S13	E14	.283	8791	3.4	80	2B		S	0930			1.80		
SACP	02	1418	1444	1425	N17	E61	.897	8798	7.2	26	1N		C		1.41	2.27			
CAPS	03	0935E	0959D		S22	E04	.316	8791	3.7	24D	1N	2		0948	2.20	2.30		170	J
SALO	03	1140	1240		N18	W26	.556	8796	1.5	60	1N		S	1200			1.40		
SALO	03	1140	1240	1200	N25	E56	.879	8798	7.7	60	3B			1200			1.80		
SALO	03	1400	1510		N26	E30	.666	8795	5.8	70	1N		S	1420			1.30		
SALO	03	1400	1520	1430	S12	W02	.144	8791	3.4	80	1N		S	1420			1.50		
MCMA	03	1435	1455	1442	S22	W00	.309	8791	3.6	20	-N		C	1442	.77	.70			E
SACP	03	1437	1454	1442	S21	E02	.294		3.8	17	-N		C		.56	.55			
SALO	03	1520	1620	1550	N23	E55	.866	8798	7.8	60	2B		S	1530			1.70		
SACP	03	1535	1934U	1551	N24	E47	.805	8798	7.2	239U	2N		C		8.31	11.06			
SACP	03			1642U							2N				9.49	13.63			
MCMA	03	1536	1906D	1549	N22	E52	.839	8798	7.6	210D	2B		C	1549	3.09	5.40			FIL
ARCE	03	1542	1622	1550	N19	E47	.784	8798	7.2	40	2B		C	1550	4.15	6.70			CFH
ARCE	03	1542	1707	1550	N17	W50	.805	8787	29.9	85	1B		C	1550	2.55	4.30			CW
ARCE	03										2B			1618	5.06	8.60			
ARCE	03	1618	1728D	1650	N26	E52	.853	8798	7.6	70D	2B		C	1650	4.47	8.70			
HALE	03	1723E	1835U	1723U	N26	E50	.838	8798	7.5	72U	2B	3	P	1723	5.26	9.70			IF
HALE	04	0126	0320D	0212	N33	E25	.692	8798	5.9	114D	2N	1	P	0212	4.38	6.10			CFGS
HALE	04	0303	0320D	0314	N27	E28	.657		6.2	17D	1N	1	P	0314	1.86	2.40			F
SALO	04	1115	1150		S13	W66	.912	8788	29.5	35	1N		V	1130			1.40		
SALO	04	1115	1150		S13	W14	.285	8791	3.4	35	1N		V	1130			1.50		
SALO	04	1115	1150		N20	W41	.729	8787	1.4	35	1N		V	1130			1.30		
SALO	04	1115	1150		N28	E43	.790	8798	7.7	35	1N		V	1130			1.50		
SALO	04	1150	1230		N30	E18	.616	8795	5.8	40	2B		V	1200			1.60		
CAPS	04	1211E	1227D		N20	E20	.514	8795	6.0	16D	1F	1		1218	3.00	3.50		155	E
SALO	05	1110	1150		S15	W80	.983	8788	29.5	40	3N		V	1120			1.40		
SALO	05	1110	1150		S13	W24	.430	8791	3.7	40	1N		V	1120			1.40		
SALO	05	1110	1150		S17	E02	.231	8794	5.6	40	1N		V	1120			1.50		
SALO	05	1110	1150		N14	W60	.884	8787	1.0	40	1N		V	1120			1.40		
SALO	05	1110	1150		N26	E30	.664	8798	7.7	40	1N		V	1120			1.60		
SALO	06	1400	1450		S14	W58	.849	8791	2.2	50	1N		S	1420			1.30		
SALO	06	1400	1450		N18	W67	.936	8787	1.6	50	2N		S	1420			1.40		
CAPS	08	0613E	0641D		S22	W60	.874	8791	3.8	28D	1N	3		0627	1.70	3.40		164	
CAPS	08	1141E	1443D		S23	W58	.860	8791	4.1	182D	3N	2		1202	10.00	19.00		204	IKL
CAPF	08	1200E	1425		S22	W57	.850	8791	4.2	145D	2N		V	1204	4.22	8.12			H
SACP	08	1236E	1255U	1242E	S22	W57	.850	8791	4.2	19U	1N		P		2.56	3.69			
SACP	08	1259U	1445	1335	S23	W60	.876	8791	4.0	106U	1N		C		2.69	4.08			
HERS	08	1308E	1315D	1312	S19	W59	.863	8791	4.1	7D	-N		P	1312	.72	1.50			D
SALO	08	1340	1450		S16	W56	.833	8791	4.4	70	1N		S	1400			1.30		
HOUS	08	1400	1426	1405	S21	W61	.881	8791	4.0	26	1F		C		1.00	2.00		100	EH
SALO	08	1340	1450		N26	W17	.556	8798	7.3	70	1N		S	1400			1.20		
ARCE	10	0815E	0845		S20	W85	.995	8791	4.0	30D	1N		C	0815	.55	2.20			
MCMA	10	1145	1240		S22	W88	.999	8791	3.9	55	2N		C						
CAPS	10	1147E	1235		S23	W85	.995	8791	4.1	48D	2N	3		1155	3.00			216	JK
CAPS	10										2N								
CAPF	10	1150E	1243		S19	W82	.989	8791	4.3	53D	1N		V	1209	1.18				H
SALO	10	1200	1240	1215	S22	W80	.983	8791	4.5	40	2N		V	1215			1.40		
CATA	10	1205E	1230D	1207	S15	W88	.999	8891	3.9	25D	-B			1207	.48			224	
SACP	12	1745	1830	1802	N23	W68	.946	8798	7.6	45	1B		C		2.25	4.34			
HOUS	12	1757	1814U	1800	N26	W68	.950	8798	7.6	17U	1N		C		1.10	2.80		200	EHJ
MCMA	12	1800E	1815D		N27	W67	.946	8798	7.7	15D	-N		C	1800	.41	1.00			
SACP	12	2153	2215	2201	N23	W69	.951	8798	7.7	22	1F		C		1.12	2.26			
HOUS	12	2156	2207	2200	N25	W70	.958	8798	7.7	11	1N		C		.80	2.10		200	I
HALE	12	2201	2205D		N23	W71	.960		7.6	4D	-N	1	P	2202	.41				
SALO	14	1530	1610	1550	S18	E07	.287	8807	15.2	40	1N		V	1550			1.20		
MCMA	14	1534E	1546D		S28	E06	.436	8807	15.1	12D	-N		C	1544	.77	.80			E

SOLAR FLARES

PRELIMINARY

MAY 1967

OBSERV-ATORY	DATE 1967 MAY	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
CAPS	14	1535E	1603D		S27	E12	.451	8807	15.5	28D	1N	2		1544	2.40	2.70		193	E
SACP	14	1535	1630U	1549	S27	E08	.429	8807	15.2	55U	1N		C		3.74	3.79			
CAPF	14	1546E	1600D		S23	E07	.363	8807	15.2	14D	1N		P	1547	2.94	3.13			
HALE	14	1559	1700	1611	S26	E06	.405		15.1	61	-N	2	C	1611	1.65	1.80			IF
CAPF	15	0900	0920D		S13	E79	.981	8816	21.3	20D	1N		P	0900	1.18				
SALO	15	0925	1025		S14	E83	.992	8816	21.6	60	3N		S	0935			1.40		
CAPS	15	0928E	0939D		S15	E80	.984	8816	21.4	11D	1N	2		0934	1.50			170	J
SALO	15	1200	1230		S12	E24	.431	8809	17.3	30	1N		S	1220			1.30		
SALO	17	1100	1150		N20	E08	.403	8810	18.1	50	1N		V	1120			1.20		
MCMA	17	2003E	2029D		N25	E90	1.000	8818	24.6	26D	1		C						
CATA	18	0600E	1200D	0625	N19	E85	.998	8818	24.6	360D	1N			0625	.78			178	
CATA	18	0800E	0835D	0800	N22	E85	.998	8818	24.7	35D	1N			0800	.55			164	
SALO	18	0830	0950		N25	E87	1.000	8818	24.9	80	2B		S				1.50		
ARCE	18	0923E	0928D		N25	E80	.990	8818	24.4	5D	1N		P	0928	.97	3.00			
CAPS	18	1037E	1052D		S21	E27	.533	8815	20.5	15D	1N	1		1040	2.00	2.40		173	E
SACP	18	1855	1913	1901	S18	W18	.400	8809	17.4	18	1N		C		2.24	2.24			
MCMA	18	1856E	1918D	1858	S17	W18	.390	8809	17.4	22D	-N		C	1858	1.03	1.10			EHU
HOUS	18	1933	1953	1935	N23	E78	.985	8818	24.7	20	1N		C		1.70	5.20		200	I
SACP	18	1934	1951	1938	N25	E76	.979	8818	24.5	17	1N		C		1.68	4.18			
MCMA	18	1935E	1947D		N25	E85	.998	8818	25.2	12D	1N		C	1937					Y
CATA	19	0615E	0710D	0615	N25	E80	.990	8818	25.3	55D	1N			0615	.64			186	
SALO	19	0840	1010		N23	E85	.998	8818	25.7	90	2N		S	0855			1.40		
SALO	19	1120	1210		N26	E86	.999	8818	25.9	50	3N		S	1130			1.40		
CAPS	19	1250	1255D		S15	W30	.533	8809	17.3	5D	1N	2		1251	2.50	3.00		176	E
HOUS	19	1253	1308	1255	N23	E65	.928		24.4	15	-N		C		.60	1.40		200	
CAPF	19	1254	1302		N23	E64	.922	8818	24.3	8	1N		V	1256	1.46				
CAPS	19	1255E	1306		N28	E65	.935	8818	24.4	11D	1N	2		1300	1.80			200	J
MCMA	19	1300E	1300D		N25	E66	.936	8818	24.5		-N		P	1300	.41	1.20			E
CAPS	19	1515E	1543D		N25	E62	.913	8818	24.3	28D	1B	2		1538	1.70			256	J
HOUS	19	1527	1554U	1532	N23	E64	.922	8818	24.4	27U	1N		C		1.40	3.10		200	EIJ
HOUS	19			1537							1N								
MCMA	19	1528E	1620	1538	N24	E75	.975	8818	25.3	52D	2B		C	1538	2.06	7.00			CFU
ARCE	19	1603E	1615D		N22	E65	.926	8818	24.5	12D	1N		P	1605	1.52	3.20			
MCMA	19	1713	1750	1716	N23	E77	.981	8818	25.5	37	-N		C	1716	.41	1.70			E
SACP	19	1715	1736	1721	N26	E74	.973	8818	25.3	21	1N		C		1.03	2.40			
ARCE	20	0910	1000	0940	N22	E53	.839		24.4	50	-N		C	0940	.32	.60			E
CAPS	20	0937E	0947D		N22	E51	.822	8818	24.2	10D	1N	2			1.80	3.00			J
CAPS	20	1006E	1012		N25	E53	.848	8818	24.4	6D	1B	2		1009	1.80	3.00		230	CJ
CAPS	20	1509	1610	1523	N22	E51	.822	8818	24.5	61	2B	2		1529	3.50	6.00		318	JV
SACP	20	1514	1552D	1520	N24	E50	.820	8818	24.4	38D	1B		C		1.68	2.29			
CAPF	20	1520E	1615D		N22	E52	.831	8818	24.5	55D	1N		V	1524	2.35	4.33			
MCMA	20	1520E	1638		N24	E50	.820	8818	24.4	78D	1B		C	1528	1.34	2.50			E
HALE	20	1601E	1700	1602U	N22	E53	.839		24.6	59D	-B	1	P	1602	.77	1.40			
ARCE	21	0815E	0940		N25	E60	.899	8818	25.8	85D	1F		C	0840	1.03	2.30			
ARCE	21	1045E	1058D		N21	E45	.762		24.8	13D	-N		P	1045	1.16	1.80			
CAPS	21	1047E	1056D		N21	E41	.722	8818	24.5	9D	1N	2		1050	2.20	3.10		189	E
CAPS	21	1241	1314D		N24	E44	.766	8818	24.8	33D	1N	1							F
SACP	21	1238	1334	1302	N26	E59	.894	8818	26.0	56	1N		C		2.85	4.53			
CAPS	21	1303E	1313D		N26	E60	.901	8818	26.0	10D	2N	1		1305	5.00				C
SACP	21	1440	1510	1443	N29	E34	.706	8818	24.2	30	1N		C		2.81	3.30			
SACP	21	1534	1600	1539	N23	E58	.881	8818	26.0	26	1B		C		2.06	3.16			
SACP	21	1919	2012	1926	N25	E39	.725	8818	24.7	53	2B		C		7.38	8.81			
HALE	21	1921	2025	1926	N24	E39	.719	8818	24.7	64	2B	2	C	1926	5.26	7.60			TUH
MCMA	21	2010E	2030D		N23	E42	.742	8818	25.0	20D	-N		P	2016	.93	1.40			BE
SACP	22	0000E	0027	0012	N24	E54	.852	8818	26.1	27D	2B		C		4.15	5.92			
HALE	22	0005	0023	0011	N23	E52	.833	8818	25.9	18	2B	2	C	0011	3.51	6.30			IV
HOUS	22	0007E	0017D	0010	N22	E53	.838	8818	26.0	10D	1B		C		1.90	3.40		300	
SACP	22	0010	0024	0012	N33	E75	.980	8822	27.6	14	1N		C		1.89				
HALE	22	0011	0012D	0012U	N33	E72	.970	8822	27.4	1D	1N	2	P	0012	.83				G
SALO	23	0740	0830	0800	N28	E35	.706	8818	25.9	50	1N		S	0800			1.20		
HALE	23	1803	1831	1812	N29	E24	.621	8818	25.6	28	2B	2	C	1812	4.54	5.80			FI
SACP	23	1803	1835D	1817	N31	E25	.649	8818	25.6	32D	2B		C		9.38	10.50			
HOUS	23	1807	1811D	1810	N27	E25	.609	8818	25.6	4D	2N		C		5.20	6.60		200	EI
SACP	23	1835	1932D	1844	N28	E24	.611	8818	25.6	57D	3B		C		11.35	12.42			
HALE	23	1836	1915D	1843	N27	E25	.609	8818	25.6	39D	2B	2	P	1843	4.95	6.20			FI
SACP	23	1932	2156U	1947	N28	E28	.644	8818	25.9	144U	2B		C		8.75	9.80			
HOUS	23	1937	2057	1944	N26	E28	.626	8818	25.9	80	2B		C		9.00	11.60		300	EIJ
HOUS	23			1951							2B								
HALE	23	2045E	2235D		N28	E28	.644	8818	26.0	110D	1N	2	P	2045	2.06	2.70			FBI
HOUS	23	2112	2137	2113	N26	E28	.626	8818	26.0	25	1N		C		2.50	3.20		200	EI
SACP	24	0003	0012	0005	N25	E86	.999	8824	30.5	9	1N		C		2.05				

SOLAR FLARES

PRELIMINARY

MAY 1967

OBSERVATORY	DATE 1967 MAY	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION 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
CAPS	24	0833E	0908D		N23	E05	.425		24.7	35D	-B	?		0840	1.20	1.30		196	C
SALO	24	0835	0855		N26	E05	.471	8818	24.7	20	1N		S	0840			1.30		
ARCE	24	0835	0913	0845	N23	E04	.422		24.7	38	-N		C	0845	.94	1.00			
CATA	24	0839E	0915D	0842	N22	E07	.417		24.9	36D	-B			0842	1.49	1.60		214	
ARCE	24	0855	0940	0900	N18	E79	.985	8824	30.3	45	1N		C	0900	.97	3.10			
CAPS	24	0904E	0916D		S19	E75	.967	8825	30.0	12D	1B	2		0910	1.00			210	CJ
CAPS	24	1125E	1143D		S23	E60	.882	8825	29.0	18D	1F	3							CG
SACP	24	1440	1511	1449	N25	E07	.462		25.1	31	-N		C		1.40	1.43			
HOUS	24	1442	1507	1448	N25	E08	.466		25.2	25	-N		C		1.10	1.20		200	E
MCMA	24	1442	1515	1446	N25	E07	.462	8818	25.1	33	-B		C	1446	.72	.80			E
CAPS	24	1444	1510D		N23	E07	.432	8818	25.1	26D	1B	2		1450	2.00	2.20		266	EJ
WEND	24	1450E	1506		N25	E12	.486	8818	25.5	16D	1N		V		3.09				
WEND	24	1450E	1517D		N24	E06	.443	8818	25.1	27D	1B		V		4.13				
HOUS	24	1805	1844U	1808	N24	W02	.434	8818	24.6	39U	1N		C		4.60	5.10		200	EI
HALE	24	1806	1850	1826	N24	W03	.435		24.5	44	-N	2	C	1826	.83	.90			F
MCMA	24	1806	1858	1821	N23	W02	.418	8818	24.6	52	-B		C	1821	.83	1.00			E
SACP	24	1818	1854	1828	N23	W02	.418	8818	24.6	36	1B		C		2.43	2.45			
CAPS	25	0634E	0715D		N26	E10	.488	8818	26.0	41D	1B	1		0637	3.50	4.00		246	CFJL
CATA	25	0645E	0715D	0646	N29	E12	.539	8818	26.2	30D	1B			0646	3.33	3.90		316	
SALO	25	0848	0855		S16	E16	.365	8819	26.6	7	1N		V	0850			1.10		
CAPS	25	1041E	1205D		N20	W04	.373	8818	25.1	84D	2N	1		1048	5.00	5.40		201	CFJ
CATA	25	1044E	1154D	1054	N22	E05	.407	8818	25.8	70D	1B			1054	3.66	4.00		347	
SALO	25	1102	1120		N27	W08	.493	8818	24.9	18	2N		V	1110			1.40		
MCMA	25	1105E	1215D		N22	W05	.407	8818	25.1	70D	1B		C	1108	2.58	2.80			BFL
MCMA	25	2043	2125	2054	N27	E06	.486	8818	26.3	42	1B		C	2054	2.06	2.20			FL
HOUS	25	2045	2123	2050	N28	E03	.495		26.1	38	-N		C		1.10	1.30		200	EIJ
HOUS	25	2050	2102	2056	N32	E09	.568		26.5	12	-N		C		1.10	1.30		200	
HALE	26	0152	0410	0206	N13	E18	.390	8818	27.4	138	2N	2	P	0206	8.46	9.20			
CAPS	26	0707E	0726D		N21	W21	.506	8818	24.7	19D	1F	1		0716	1.80	2.10			C
CAPS	26	0901E	0915D		N17	W22	.476	8818	24.7	14D	1B	1		0903	3.00	3.40		228	C
CAPF	26	0903E	0934D		N19	W22	.496	8818	24.7	31D	1N		V	0905	2.35	2.74			
CAPF	26	0915	0945		S22	W02	.353	8819	26.2	30	1F		V	0930	2.94	3.13			H
SALO	26	1100	1115		N33	W24	.659	8818	24.7	15	1N		S	1105			1.40		
SALO	26	1100	1120		N21	E46	.769	8824	29.9	20	1F		S	1110			1.20		
CAPS	26	1130	1227		N28	W22	.591	8818	24.8	57	1F	3		1142	2.00	2.40		158	E
CAPF	26	1152E	1210D		N29	W22	.602	8818	24.8	18D	-N		V	1156	1.18	1.43			
CAPS	26	1200	1232		N24	W24	.566		24.7	32	-N	3		1203				173	E
HOUS	26	1220E	1245	1225	N27	W24	.597	8818	24.7	25D	1N		C		1.60	2.00		200	E
CAPS	26	1227	1300		N28	W04	.495	8818	26.2	33	1B	3		1239	3.50	4.20		300	V
SACP	26	1228	1257	1239	N29	W05	.512	8818	26.1	29	1N		C		3.96	4.12			
MCMA	26	1228	1307	1238	N31	W05	.541	8818	26.1	39	-B		C	1238	1.29	1.50			F
HOUS	26	1235	1246D	1237	N30	W05	.527	8818	26.1	11D	1N		C		3.60	4.20		200	E
CAPF	26	1239E	1313		N29	W03	.508	8818	26.3	34D	1N		V	1243	2.06	2.40			
HERS	26	1249E	1301D	1249E	N30	W03	.523	8818	26.3	12D	1N		P	1249	1.75	2.10			E
MCMA	26	1338	1500D	1351	N31	W05	.541	8818	26.2	82D	-B		C	1351	1.13	1.30			EW
CAPS	26	1338	1600D		N30	W04	.525	8818	26.3	142D	2F	3		1533	5.00	6.00		164	W
CAPS	26										1N			1349	2.20	2.60		196	FKLC
CAPF	26	1340	1450D		N29	W03	.508	8818	26.3	70D	-N		V	1352	1.46	1.70			
SACP	26	1341	1448	1356	N30	W06	.529	8818	26.1	67	1N		C		3.18	3.33			
HERS	26	1358E	1448D	1358E	N30	W03	.523	8818	26.4	50D	1N		P	1358	3.09	3.70			E
CAPF	26	1408	1450D		N34	E07	.588	8818	27.1	42D	1N		V	1414	2.06	2.60			
SALO	26	1500	1510		N32	E01	.551	8818	26.7	10	1F		S	1500			1.40		
CAPS	26	1510E	1600D		N26	W09	.481	8818	26.0	50D	1N	3		1553	2.20	2.60		170	C
MCMA	26	1517	1700D	1531	N32	W05	.555	8818	26.3	103D	1N		C	1531	2.06	2.50			FK
MCMA	26			1555							1N								
SALO	26	1520	1555		N32	W07	.560	8818	26.1	35	1N		S	1530			1.40		
SACP	26	1550	1731	1606	N30	W05	.527	8818	26.3	101	1N		C		3.37	3.53			
SACP	26	2035	2048	2040	N24	E45	.772		30.2	13	-N		C		1.22	1.53			
HALE	26	2036	2106	2041	N27	E56	.873	8824	31.1	30	1B	1	C	2041	1.03	2.10			
MCMA	26	2037	2044	2040	N26	E51	.832	8824	30.7	7	-B		C	2040	.62	1.10			D
HALE	26	2203	2207D	2207	N29	E51	.843		30.7	4D	-N	1	C	2207	.21	.40			K
MCMA	26	2206	2215	2210	N25	E45	.776	8824	30.3	9	-B		C	2210	.93	1.40			EV
SACP	26	2206	2217	2211	N24	E43	.753	8824	30.1	11	1N		C		1.70	2.11			
HALE	26	2211E	2215	2211	N24	E44	.763		30.2	4D	-B	1	C	2211	.57	.90			
SACP	27	0000	0007	0003	N24	E43	.752	8824	30.2	7	1N		C		2.18	2.70			
ARCE	27	0831	0850	0835	N26	E90	1.000	8830	3.1	19	1N		C	0835	.45	2.60			
SALO	27	1030	1130	1050	N19	W25	.528	8818	25.6	60	1F		S	1050			1.10		
CAPS	27	1052E	1059		N26	W23	.576		25.7	7D	-N	3		1054	.80	1.00		182	C
SALO	27	1100	1110		N13	E03	.252	8821	27.7	10	1N		S	1110			.90		
SALO	27	1110	1120		N12	E04	.240	8821	27.8	10	1F		S	1110			1.10		
MCMA	27	1151E	1247D		N12	E01	.231	8821	27.6	56D	1N		C	1235	1.96	2.00			EK
CAPS	27	1210E	1224D		N11	E03	.219		27.7	14D	-F	3		1218	1.20	1.20		154	C
CAPF	27	1212	1245D		N11	E03	.219	8821	27.7	33D	-N		V	1217	1.18	1.20			
CAPS	27	1235E	1245D		N12	E04	.240	8821	27.8	10D	1N	3		1237	4.00	4.10		195	C
MCMA	27	1257	1323	1302	N23	E46	.776	8824	31.0	26	-N		C	1302	.62	1.00			E
CAPS	27	1303	1326D		N23	E50	.813	8824	31.3	23D	1N	3		1314	2.00	3.40		188	E
SACP	27	1306	1329	1309	N22	E47	.782		31.1	23	-N		C		.85	1.08			

SOLAR FLARES

PRELIMINARY

MAY 1967

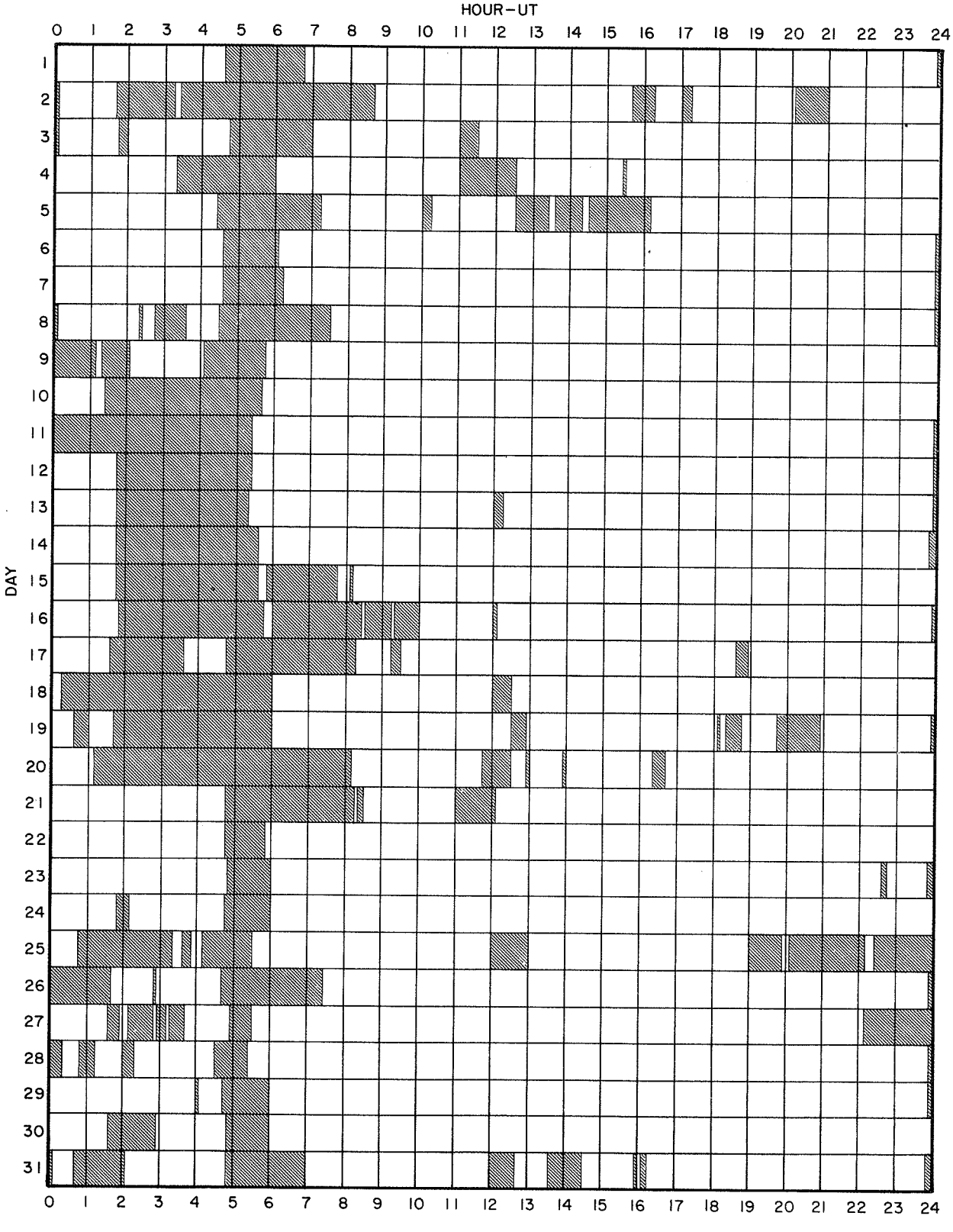
OBSERVATORY	OBSERVED UT DATE 1967 MAY	START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT.	REMARKS
CAPS	27	1309E	1326D		N21	E76	.976	8830	2.2	17D	1N	3		1312	2.00			191	C
SACP	27	1310	1321	1312	N21	E78	.983		2.4	11	-N		C		.75				
MCMA	27	1310	1322	1312	N22	E80	.988	8830	2.5	12	-B		C	1312					E
CAPS	27	1532E	1554D		N21	E74	.968	8830	2.2	22D	1N	3		1541	2.00			179	C
SACP	28	0022	0048D	0035U	N28	W31	.665	8818	25.7	26D	1B		C		3.28	3.72			
WEND	28	0525E	0651		N28	W32	.674	8818	25.8	86D	3B		V		15.47				
CATA	28	0539E	0810D	0543	N28	W33	.683	8818	25.8	151D	2B			0543	6.38	8.80		389	
CAPS	28	0552E	0735		N28	W31	.665	8818	25.9	103D	3B	3		0554	10.00	13.00		460	F
CAPS	28	0718	0820		N23	W42	.737	8818	25.2	62	2B	3		0755	5.00	7.50		277	F
WEND	28	0719	0742		N24	W45	.770	8818	24.9	23	1N		V		3.09				
WEND	28	0755E	0821D		N23	W42	.737	8818	25.2	26D	1F		V		5.16				
ARCE	28	0758E	0810D		N23	W44	.756	8818	25.0	12D	1B		C	0758	2.70	4.10			
SALO	28	1015	1025		N32	W37	.746	8818	25.7	10	1N		S	1020			1.40		
HALE	28	1742	1800	1748	N20	E81	.990		3.8	18	-N	2	C	1748	.26				
SACP	28	1745	1754	1747	N21	E88	1.000	8831	4.3	9	1N		C		.75				
MCMA	28	1746E	1750D		N20	E90	1.000	8831	4.5	4D	-N		P	1747					D
SALO	29	1135	1145		N32	W50	.845	8818	25.7	10	1F		V	1140			1.30		
SALO	29	1400	1420		N15	W25	.492	8821	27.7	20	1F		V	1410			1.50		
SALO	29	1420	1510		N28	W68	.947	8818	24.5	50	2N		V	1430			1.40		
SALO	29	1420	1510		N30	W48	.821	8818	26.0	50	2N		V	1430			1.40		
SALO	29	1450	1520	1455	N23	E08	.427	8824	30.2	30	2N		V	1500			1.50		
SACP	29	1458	1517	1502	N19	E05	.353		30.0	19	-N		C		1.99	1.97			
MCMA	29	1459	1507D		N20	E05	.368	8824	30.0	8D	-B		P	1502	.72	.80			EL
CAPS	29	1500	1510		N20	E08	.382	8824	30.2	10	1N	3		1504	3.80	4.20		182	
SALO	29	1500	1620		S18	W02	.293	8825	29.5	80	1N		V	1600			1.30		
CAPS	29	1512E	1524		S18	E03	.296		29.9	12D	-N	3		1518	1.20	1.30		170	CEL
SACP	29	1512	1526	1518	S18	E02	.293		29.8	14	-F		C		.46	.46			
MCMA	29	1516E	1517D		S19	E02	.310	8825	29.8	1D	-N		P	1517	.41	.41			E
HALE	29	1718	1828	1751	N21	W43	.737	8818	26.5	70	1B	1	C	1751	1.65	2.40			FIJTV
SACP	29	1737	1908	1750	N19	W45	.749		26.4	91	-N		C		1.61	1.98			
MCMA	29	1746E	1800D	1751	N20	W44	.743	8818	26.4	14D	-N		C	1751	.83	1.30			E
SACP	29	1855	1926	1901	N30	W66	.939	8818	24.8	31	1N		C		1.42	2.66			
MCMA	29	1858	1936	1903	N30	W66	.939	8818	24.8	38	-N		C	1903	.36	1.40			E
HALE	29	1858	1945	1907	N31	W68	.950	8818	24.7	47	1N	1	C	1907	1.03				
CAPS	30	1018E	1022		N25	W75	.974	8818	24.8	4D	1N	2		1019	1.00			189	CH
SALO	30	1110	1120	1115	N27	E62	.912		4.1	10	1F		V	1115			1.10		
HALE	30	2022	2058	2040	N26	W74	.971	8818	25.3	36	1N	1	C	2030	.62				IJ
CAPS	31	0844E	0848D		N23	E40	.715	8831	3.4	4D	1F	1		0847	2.00	2.80			C
MCMA	31	1125	1133	1127	N28	W85	.998	8818	25.1	8	-N		C	1127					E
CAPS	31	1125	1134		N30	W80	.990	8818	25.5	9	1N	3		1130	1.50			163	E
MCMA	31	2104	2150D	2108	N28	E40	.743	8831	3.9	46D	1N		C	2108	1.44	2.10			E

An observatory not previously included in the flare listing is:

646 HOUS Houston, Texas, USA

INTERVALS OF NO FLARE PATROL OBSERVATIONS
PROVISIONAL

MAY 1967



Observatories included:

Arcetri
Capri-F (German)
Catania
Haleakala
Herstmonceux
Houston
Salonique
Sacramento Peak
Wendelstein

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1967

MAY 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} (c/s)$^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
1	2800	OTTA	20	1341	1344	9	3.0	2.0		
	2700	PENN	20	1341.9	1345.2	24.1	3.8	1.9		
	2800	OTTA	1	1631	1631.5	2	1.0	0.5		
	2800	OTTA	1	2039	2040	3	1.4	0.7		
3	4995	SGMR	3	1320.2	1320.6	1.6	9.0	3.0		
	2800	OTTA	1	1320.5	1321	1.5	5.0	2.5		
	2700	PENN	1	1320.1	1320.6	2.9	6.0	3.3		
	2695	SGMR	1	1320.4	1320.8	1.7	6.1	2.0		
	4995	SGMR	3	1339.5	1339.9	.8	9.0	3.0		
	2800	OTTA	1	1339.5	1340.2	2	6.4	3.2		
	2700	PENN	1	1339.2	1340	2.2	6.8	3.4		
	2695	SGMR	1	1340.1	1340.2	.5	5.0	2.0		
	2800	OTTA	21	1538	1725	480	20.0	8.0		
	10700	PENN	20	1543	1608	192	21.6	11.7		
	2800	OTTA	23	1541	1554	30	8.2	4.1		
	2800	OTTA	4	1543	1544	8	22.0	11.0		
	2700	PENN	45	1540.6	1543.4	11	96.9	17.9		
	1415	SGMR	45	1536.5	1548	31.5	47.0	12.0		
	960	PENN	45	1543.2	1544.7	9.1	2.9	1.2		
	606	SGMR	45	1536.5	1544.7	35	98.5	24.0		
	486	WASH	45	1541	1545	12	70.0			
	184	BOUL	48	1543	1545	6			2	
	2700	PENN	29	1551.6	1646.5	423.4	15.6	8.5		
	10700	PENN	1	1553.5	1554.1	1.2	4.3	2.2		
	2700	PENN	1	1552.1	1554.1	4.2	3.4	1.6		
	2700	PENN	1	1559.3	1559.8	1.6	1.6	0.8		
	10700	PENN	1	1604.7	1605.8	3.1	4.3	2.2		
	2700	PENN	1	1604.6	1605.3	3	2.8	1.4		
	10700	PENN	20	1613.3	1619	9.7	4.8	2.4		
	10700	PENN	20	1632.2	1635.4	11.8	4.3	3.0		
	4995	SGMR	20	1606	1641	42	19.4	9.0		
	2800	OTTA	22	1613	1620	17	7.4	3.0		
	2800	OTTA	22	1635	1643	14	12.0	6.0		
	2700	PENN	20	1612.5	1619.4	12.8	7.1	3.0		
	2700	PENN	20	1634	1642.8	14.5	10.8	4.6		
	2695	SGMR	20	1606	1643	49.4	21.7	10.0		
	1415	SGMR	20	1608	1640.4	48.6	22.0	10.0		
	960	PENN	20	1637	1640.7	10	1.0	0.5		
	606	SGMR	20	1617	1642.2	39	22.9	11.0		
	2700	PENN	1	1751.9	1752.1	1.2	2.4	1.2		
5	2800	OTTA	20	1130	1235	95	2.8	1.4		
	2800	OTTA		2034.5	2034.5		4.6			SPIKE
	2700	PENN	1	2033.9	2034.4	1	5.0	1.7		
6	2700	PENN	1	2038	2039.4	3.2	4.5	2.2		
	2800	OTTA	20	2105	2111	25	2.0	1.0		
7	2700	PENN	1	1839.3	1839.5	1.2	3.1	1.5		
	2800	OTTA	20	2055	2056.5	65	1.6	0.8		
8	2700	PENT	1	0015	0017.5	4	2.8	1.4		
	2800	OTTA	23	1123	1415	395	11.4	5.7		
	4995	SGMR	4	1128.4	1129.5	3.9	9.2	3.0		
	2800	OTTA	21	1126	1128	13	5.6	2.8		
	2800	OTTA	4	1130.5	1130.7	1.5	9.2	4.6		
	2800	OTTA	2	1517.9	1518	1	1.4	0.7		
	2700	PENN	45	1126.4	1131.7	8,8				DUR. SUNRISE
	2695	SGMR	4	1124.4	1131.2	22.6U	11.7	2.6		
	1415	SGMR	40	1127.7	1131.1	6	18.4	3.9		
	2700	PENN	1	1847.9	1848.2	1	2.6	1.8		
	2800	OTTA	1	2032	2033.2	2	3.6	1.8		
	2800	OTTA	29	2034		15	1.4	0.7		
10	486	WASH	45	0028	0029	2	60.0			
	2800	OTTA	1	1204	1206	4	2.2	1.1		
	10700	PENN	20	1212.8	1225	45.8	7.3	3.7		
	2800	OTTA	20	1220	1233	90	3.4	1.7		
	2700	PENN	20	1223	1235	36.4	2.5	1.3		
	2800	OTTA	1	2131	2131.5	1	2.0	1.0		
	2700	PENN	1	2131	2131.4	1	3.5	1.7		
14	2800	OTTA	20	1535	1610	145	4.0	2.0		
	2800	OTTA	1	2043	2043.5	1.5	1.2	0.6		
16	2700	PENN	1	1922.6	1922.9	1.4	2.8	1.4		
	2700	PENN	1	2028.3	2029.8	2	2.9	1.4		
	10700	PENN	3	2053.7	2053.8	.8	8.0	4.0		
	2700	PENN	1	2053.8	2053.9	.7	2.9	1.6		
17	2700	PENN	1	1944.9	1945.1	1.5	3.2	1.6		
	184	BOUL	42	2332	0037	100			1	
18	4995	SGMR	1	1231.2	1231.3	.7	4.6	1.5		
	2800	OTTA	1	1231.2	1231.3	1	4.0	2.0		
	2700	PENN	1	1230.8	1231.4	1.2	5.1	2.5		
	2695	SGMR	1	1231.2	1231.4	.9	4.3	1.4		
	1415	SGMR	1	1231.2	1231.3	1.3	3.2	1.1		
	606	SGMR	1	1231.2	1231.3	.8	5.6	1.8		
	2800	OTTA	21	1725	1905	370	11.0	5.5		

SOLAR RADIO EMISSION
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MAY 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} (c/s)$^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
18	10700	PENN	3	1830.3	1831	2.2	16.6	8.3		
	10700	PENN	3	1832.6	1833.7	7.2	35.2	12.4		
	8800	SGMR	45	1830.1	1833.7	7.9	40.0	4.3		
	4995	SGMR	45	1828.7	1833.5	9.3	83.3	11.6		
	2800	OTTA	45	1830	1834	10	74.0	25.0		
				1830	1831.5	2.5	30.0			
				1832.5	1834	7.5	74.0			
	2700	PENN	24	1822.8	1830		7.6			
	2700	PENN	3	1830	1831.5	2.6	27.4	15.8		
	2700	PENN	29	1832.6	1832.6	8.2	12.9	6.5		
	2700	PENN	3	1832.6	1834	5.2	56.6	20.1		
	2695	SGMR	45	1829.3	1833.9	8.7	49.8	7.3		
	960	PENN	1	1830.3	1830.6	1	1.2	0.6		
	960	PENN	1	1832.5	1833.6	2.5	1.2	0.6		
	8800	SGMR	29	1838	1849	59	5.2	1.0		
	4995	SGMR	29	1838	1841.8	102	5.5	1.1		
	2695	SGMR	29	1838	1856.8	72	4.4	.8		
	2800	OTTA	40	1841	1852.5	37	6.0			
	2700	PENN	20	1840.8	1842	9.8	7.6	1.7		
	2700	PENN	20	1850.6	1852.3	36.1	7.6	2.9		
	960	PENN	1	1841	1842	2.6	.7	0.3		
	960	PENN	1	1851.1	1852	1.1	1.2	0.6		
	2700	PENT	4	2346	2359.5	30	120.0	50.0		
	2700	PENT	29	2426		75	11.0	4.0		
	486	WASH	3	2354	2356	6	35.0			
	184	BOUL	44	2328	0030	231			2	
19	10700	PENN	45	1105	1105.8	2				DUR. SUNRISE
	8800	SGMR	45	1104.4	1105.9	3	34.0	12.7		
	4995	SGMR	45	1104.2	1105.7	4.9	32.4	9.4		
	2800	OTTA	45	1104	1106	4	20.0	8.0		
	2700	PENN	45	1105	1106	2				DUR. SUNRISE
	2695	SGMR	45	1104.2	1105.9	3.6	20.6	9.5		
	1415	SGMR	45	1104.4	1105.4	10	8.7	2.5		
	606	SGMR	45	1104.5	1108.5	37.1	6.8	1.8		
	2800	OTTA	29	1108		70	2.8	1.8		
	2700	PENN	1	1132.2	1132.3	.3	4.0	2.0		
	2700	PENN	3	1135.8	1135.9	.3	17.0	2.7		
	2700	PENN	1	1223	1223.1	.7	4.5	1.3		
	2700	PENN	1	1248.7	1250.5	3	2.5	1.3		
	10700	PENN	45	1255.1	1255.6	4.7	219.6	26.4		
	8800	SGMR	3	1254.8	1255.3	5.2	205.0	68.3		
	4995	SGMR	3	1254.7	1255.1	6.4	123.6	40.9		
	2700	PENN	3	1255.5	1256	4.5	80.8	19.8		
	2695	SGMR	3	1255	1255.5	6.4	98.8	32.9		
	1415	SGMR	45	1255	1256.9	7	46.5	9.1		
	606	SGMR	45	1254	1255.3	1.2	455.0	85.0		
	2800	OTTA	21	1335	1455	240	4.6	2.3		
	10700	PENN	45	1503.8	1504.2	3	65.7	15.5		
	8800	SGMR	45	1503.8	1504.5	2.8	77.3	23.2		
	4995	SGMR	3	1503.5	1504.3	4.1	62.4	13.6		
	2800	OTTA	3	1503.5	1504.5	4	53.0	15.0		
	2700	PENN	3	1503.7	1504.6	6.3	48.9	10.3		
	2695	SGMR	3	1503.7	1504.5	9.3	55.8	14.1		
	1415	SGMR	45	1503.9	1504.7	5.5	61.9	14.7		
	960	PENN	45	1504	1504.6	2	16.4	4.6		
	606	SGMR	45	1503.9	1504.6	6	130.0	32.3		
	10700	PENN	45	1527.4	1532.7	42	388.2	114.6		
	8800	SGMR	45	1524.7	1533.6	37.8	430.0	132.0		
	4995	SGMR	45	1524.5	1533.5	44.1	600.0	183.3		
	2800	OTTA	4	1524.5	1533	35	345.0	185.0		
	2700	PENN	28	1524.6	1526.3	2.8	25.1	15.2		
	2700	PENN	45	1527.4	1532.9	51	284.6	88.1		
	2695	SGMR	45	1524.7	1533	45.6	352.0	129.2		
	1415	SGMR	45	1523.4	1539.9	56	111.0	34.0		
	960	PENN	1	1524.5	1525.2	1.1	1.3	0.7		
	960	PENN	20	1536.7	1539.2	8.5	2.0	1.0		
	606	SGMR	45	1523.5	1529.2	34.5	171.0	10.1		
	486	WASH	45	1525	1525	22	45.0			
	184	BOUL	48	1528	1528	18			2	
	2800	OTTA	29	1600		55	12.0	4.0		
	1415	SGMR	22	1634	1648.5	32.5	50.2	16.6		
	606	SGMR	40	1628.7	1647.1	61.3	45.6	18.0		
	2700	PENN	1	1940.2	1940.8	5.5	2.9	1.4		
20	184	BOUL	41	0030	0052	48 D			1	
	2800	OTTA	21	1430	1545	160	12.0	6.0		
	10700	PENN	3	1451	1452.9	2.6	13.2	6.1		
	2800	OTTA	1	1452	1452.5	1	3.4	1.7		
	2700	PENN	1	1451	1451.6	3	5.4	2.3		
	10700	PENN	45	1513.7	1520.4	60.3	505.3	111.1		
	8800	SGMR	45	1513.2	1520.2	43.8	677.0	195.0		
	4995	SGMR	45	1512.6	1520.8	46.4	1328.0	360.0		
	2800	OTTA	28	1510		3	6.6	3.6		
	2800	OTTA	3	1513	1521	32	730.0	240.0		
	2700	PENN	24	1503.8	1510.7		9.4			
	2700	PENN	45	1513.7	1520.9	63.9	542.1	98.3		
	2695	SGMR	45	1510.1	1520.8	48.9	819.1	250.0		
	1415	SGMR	45	1509	1520.7	37.2	364.0	120.0		
	960	PENN	28	1512.5	1513.1	.9	1.2	0.6		
	960	PENN	45	1513.4	1519.6	22.6	10.5	3.8		

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MAY 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} (c/s)$^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
20	606	SGMR	45	1510.2	1515.2	39.8	120.0	40.0		
	486	WASH	45	1513	1515	7	100.0			
	184	BOUL	41	1512	1514	16			1	
	10700	PENN	3	1653.1	1653.3	.9	28.0	15.0		
	8800	SGMR	3	1653.4	1653.6	1.2	47.0	12.0		
	4995	SGMR	3	1653	1653.3	1	48.0	12.0		
	2800	OTTA	1	1653.2	1653.7	2	7.0	3.5		
	2700	PENN	3	1653.1	1653.6	.9	8.2	4.7		
	2695	SGMR	3	1653.3	1653.8	1	9.1	3.0		
	2800	OTTA	20	1820	1827	45	3.4	1.7		
	2700	PENN	24	2026	2300		8.8			
	184	BOUL	41	2146	2222	105			2	
	10700	PENN	3	2208.4	2208.5	.4	11.5	5.7		
	10700	PENN	45	2223	2224.4	2.1	50.0	14.2		
	8800	SGMR	41	2222.9	2224.4	2.4	22.4	5.0		
	4995	SGMR	3	2224.1	2224.3	.9	18.4	6.0		
	2800	OTTA	1	2224.4	2224.5	1	7.2	3.6		
	2700	PENN	3	2224	2224.6	1.2	8.9	4.4		
	2695	SGMR	1	2224.4	2224.6	1.1	5.0	1.5		
	1415	SGMR	1	2224.4	2224.6	1.6	5.4	1.5		
	960	PENN	1	2224.3	2224.4	.9	.9	0.3		
	606	SGMR	41	2223.3	2224.5	2.7	40.7	10.0		
	486	WASH	45	2223	2223	3	80.0			
	10700	PENN	29	2225.1	2225.4	9.1	9.6	4.8		
21	1415	SGMR	45	0945.8	0946.7	1.2	9.0	.9		
	606	SGMR	45	0945.8	0946	1.2	80.0	16.0		
	4995	SGMR	3	1042	1042.5	8	7.8	2.3		
	2695	SGMR	3	1041.7	1042.7	5.6	9.5	3.2		
	1415	SGMR	3	1040.2	1042.8	7.8	22.5	7.5		
	606	SGMR	1	1041.6	1043.7	14.1	6.2	2.1		
	2800	OTTA	23	1230	1915	440	12.0	6.0		
	2700	PENN	20	1232	1241.7	91.7	5.9	2.7		
	10700	PENN	45	1304.1E	1304.1	5 D	34.3			DUR. CAL.
	8800	SGMR	45	1237.9	1238.1	1.1	388.0	120.0		
	8800	SGMR	4	1300.1	1301.1	9.9	33.2	6.6		
	4995	SGMR	4	1259.6	1300.8	9.4	23.9	4.8		
	2800	OTTA	40	1300	1302	6	24.0			
	2800	OTTA	29	1306		35	4.2	2.1		
	2700	PENN	45	1252.7	1252.7	.2	12.5	6.8		
	2700	PENN	45	1302.1E	1302.1	26 D	23.7			DUR. CAL.
	2695	SGMR	4	1300	1302	9	19.8	4.0		
	1415	SGMR	1	1300.3	1301	9.7	5.7	1.1		
	960	PENN	45	1308.1E	1308.1	7 D	15.2			DUR. CAL.
	606	SGMR	4	1300.3	1303.3	41.7	210.0	42.0		
	184	BOUL	42	1259		356			1	
	10700	PENN	20	1335.1	1335.9	40.9	10.3	5.1		
	1415	SGMR	2	1340	1343.3	7	2.0	.4		
	960	PENN	1	1415	1415.3	.6	1.4	0.7		
	606	SGMR	2	1340	1343.2	6	4.3	.8		
	960	PENN	1	1358.4	1358.8	.6	2.0	1.0		
	960	PENN	1	1402.6	1402.8	.4	2.0	0.8		
	960	PENN	1	1406.8	1407.2	.8	2.6	0.8		
	10700	PENN	20	1440.2	1444.4	30.2	13.8	7.3		
	4995	SGMR	1	1440.4	1441	25.6	1.6	.3		
	2800	OTTA	20	1440	1445	25	3.2	1.6		
	2700	PENN	20	1440.4	1441.3	18.2	4.8	1.8		
	2695	SGMR	1	1440.2	1441.1	5.8	4.9	.9		
	1415	SGMR	3	1435	1441.6	33	10.2	2.0		
	960	PENN	1	1441.2	1442.4	1.5	2.7	0.7		
	606	SGMR	3	1437	1441.8	6	10.9	2.2		
	10700	PENN	1	1533.4	1536.3	4.8	7.1	3.5		
	10700	PENN	45	1538.2	1539.9	9.6	60.7	4.0		
	8800	SGMR	45	1537.4	1539.1	6.6	41.5	13.0		
	4995	SGMR	45	1535.5	1537.8	8.5	69.0	23.0		
	2800	OTTA	40	1537	1539	5	67.0			
	2700	PENN	45	1538.5	1539.8	7.3	45.5	4.1		
	2695	SGMR	45	1537.7	1539	6.3	38.0	7.5		
	1415	SGMR	45	1537.7	1539.1	7	40.5	12.0		
	960	PENN	1	1532.8	1533	.4	1.9	0.5		
	960	PENN	1	1538.5	1538.8	1.7	3.9	0.4		
	606	SGMR	3	1516.3	1516.6	1.7	11.7	5.3		
	606	SGMR	45	1537.1	1539	10.6	357.0	14.0		
	486	WASH	45	1536	1539	4	125.0D			OFF SCALE
	10700	PENN	3	1614	1614.2	.7	12.7	3.5		
	2800	OTTA	1	1614	1614.5	1.5	6.2	3.1		
	2700	PENN	1	1614.2	1614.5	1.9	6.1	1.8		
	1415	SGMR	3	1614.3	1614.5	1.7	7.5	2.0		
	606	SGMR	45	1614.3	1614.3	1.7	59.8	15.0		
	486	WASH	45	1614	1614	2	125.0D			OFF SCALE
	10700	PENN	20	1738.6	1739.4	8.6	7.4	3.7		
	8800	SGMR	3	1759.5	1800.4	5.3	8.5	2.5		
	4995	SGMR	3	1759.5	1800.4	3.6	64.0	21.0		
	2800	OTTA	1	1740	1741	3	2.0	1.0		
	2800	OTTA	3	1758.5	1800.8	7	13.0	4.0		
	2700	PENN	20	1738.8	1741.5	52.6	3.7	1.2		
	2700	PENN	5	1758.9		11.5				DUR. CAL.
	2695	SGMR	3	1759.4	1800.7	4	12.6	4.0		
	1415	SGMR	3	1758.9	1800.3	2.8	11.0	3.0		
	606	SGMR	45	1758.9	1800.1	2.8	41.0	12.0		
	960	PENN	5	1759.6		3 E				DUR. CAL.

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MAY 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22}Wm^{-2}(c/s)^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
21	10700	PENN	47	1922.7						
	10700	PENN	45	1922.7	1925.3	7.6	1465.0	599.9		
	8800	SGMR	45	1922.8	1925.7	26.2	1966.0	500.0		
	4995	SGMR	45	1922.2	1925.7	25.8	1787.0	447.0		
	2800	OTTA	46	1922	1924.2	26	830.0	226.0		
				1922	1924.2	12	830.0			
				1934	1938.5	14	290.0			
	2700	PENN	24	1842	2146.2		17.7			
	2700	PENN	47	1920.3						
	2700	PENN	45	1920.3	1923.3	13.5	724.5	219.4		
	2695	SGMR	45	1922.5	1923.7	25.5	1048.0	260.0		
	1415	SGMR	45	1921	1924.8	63.6	736.9	180.0		
	960	PENN	45	1921.7	1924.6	10.9	35.6	11.9		
	606	SGMR	45	1922	1923.2	55	1842.0	465.0		
	486	WASH	45	1921		45	125.0D			OFF SCALE
	184	BOUL	49	1922	1922 U	18			3	
	10700	PENN	29	1930.3	1930.3	64.7	52.6	26.3		
	10700	PENN	45	1933.9	1938.2	12.5	255.0	101.1		
	2800	OTTA	40	1959	2001.5	4	22.0			
	2700	PENN	29	1933.8	1933.8	14.2	15.5	7.8		
	2700	PENN	45	1933.8	1938	10.3	253.6	97.6		
	2700	PENN	31	1945.8	1946.8	31.5	6.4	2.7		
	2700	PENN	45	1958.9		4.6				DUR. CAL.
	960	PENN	29	1932.6	1932.6	13.8	1.6	0.8		
	960	PENN	45	1932.6	1934	4	9.3	2.2		
	960	PENN	45	1936.7	1938.2	8.1	6.8	1.6		
	184	BOUL	49	1940	1948	36			2	
	10700	PENN	3	2105.1	2106	2.1	10.9	5.4		
	2800	OTTA	24	2010		30	11.0			
	1415	SGMR	45	2024.5	2025.7	4.5	12.7	3.0		
	1415	SGMR	40	2056	2056.4	4	7.4	2.0		
	606	SGMR	45	2021	2025	11.5	56.5	8.0		
	606	SGMR	45	2036.2	2049.8	67.8	57.6	14.0		
	486	WASH	45	2020		50	125.0D			OFF SCALE
	184	BOUL	41	2050	2126	66			2	
	10700	PENN	3	2149.5	2149.9	2.8	16.3	2.7		
	10700	PENN	45	2153.1	2153.4	3	18.1	6.6		
	2800	OTTA	41	2149.8	2150	6	6.4			
	2700	PENN	1	2149.6	2150	3.6	7.4	1.9		
	2700	PENN	1	2153.2	2153.5	1.2	5.4	2.5		
	2700	PENN	1	2154.8	2155	.8	3.7	1.2		
	1415	SGMR	41	2147.8	2149.8	7.2	14.2	2.0		
	10700	PENN	3	2240.2	2242.2	6.7	22.9	6.9		
	606	SGMR	40	2251.8	2255.3	4.4	11.5	2.5		
22	2700	PENT	4	0009	0010	4	32.0	11.0		
	184	BOUL	6	0007	0008	2			1	
	486	WASH	3	0017	0018	3	125.0D			OFF SCALE
	184	BOUL	41	0103	0130	39 D			2	
	10700	PENN	20	1213.6	1221.2	35.4	10.3	5.2		
	10700	PENN	45	1217.8	1218.5	6.3	20.7	5.4		
	184	BOUL	41	1147	1218	70			2	
	10700	PENN	20	1348.2	1349.5	10.6	9.7	3.5		
	10700	PENN	20	1416.4	1417.4	67	8.2	6.5		
	10700	PENN	3	1524.6	1530.8	7.4	28.0	8.9		
	8800	SGMR	3	1529.6	1530.7	5.6	25.2	8.0		
	4995	SGMR	3	1529.1	1530.8	4.4	13.8	4.0		
	2800	OTTA	1	1529	1531	3	3.2	1.6		
	2700	PENN	20	1529.5	1531.4	14	5.4	1.9		
	1415	SGMR	1	1531.1	1531.8	1.5	1.5	.5		
	10700	PENN	29	1532	1532	23	14.5	5.7		
23	184	BOUL	41	0058	0133	47			2	
	10700	PENN	3	1236.6	1237.8	2.4	41.3	21.2		
	8800	SGMR	3	1236.6	1237.7	6.9	38.0	9.0		
	4995	SGMR	3	1236.3	1237.5	4.7	16.6	4.5		
	10700	PENN	29	1239	1239	40 D	13.8	13.0		
	8800	SGMR	3	1459.9	1501.7	7.1	13.7	4.6		
	4995	SGMR	3	1500.3	1501.3	6.7	9.7	3.2		
	2800	OTTA	21	1500	1830	480	16.0	8.0		
	2695	SGMR	20	1501	1509	14	9.2	2.3		
	606	SGMR	20	1755.3	1813.8	32.9	2.9	1.0		
	8800	SGMR	28	1802.5	1809.6	32.5	130.8	21.8		
	4995	SGMR	28	1757	1809.6	38	108.8	28.0		
	2800	OTTA	3	1808	1809.5	3	27.0	17.0		
	2800	OTTA	29	1811		13	12.0	9.0		
	2695	SGMR	28	1800	1809.7	35.5	33.4	2.5		
	1415	SGMR	28	1802.5	1829.5	33	7.6	2.5		
	8800	SGMR	47	1835	1839.7	112	8100.0	2800.0		
	8800	SGMR	47	1835	1947	112	23000.0	2800.0		
	4995	SGMR	47	1835	1839.2	110	3400.0	2000.0		
	4995	SGMR	47	1835	1948	110	9600.0	2000.0		
	2800	OTTA	28	1834.2		1.3	3.4	3.4		
	2800	OTTA	47	1835.5	1952	127.5	8000.0	1370.0		
				1835.5	1839	54.5	2300.0			
				1930	1952	73	8000.0			
	2695	SGMR	47	1835.5	1839.1	108.5	2500.0	1400.0		
	2695	SGMR	47	1835.5	1951.8	108.5	5400.0	1400.0		
	1415	SGMR	47	1835.5	1840.7	129.5	2000.0	1100.0U		
	1415	SGMR	47	1835.5	1954.1	129.5	28000.0D	1100.0U		
	606	SGMR	47	1835.6	1839.5	159.4	534.0	2000.0U		

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23	606	SGMR	47	1835.6	1948.5	159.4	19200.0D	2000.0U		
	486	WASH		1835		265	100.0D			OFF SCALE
	184	BOUL	49	1833	1833 U	13			3	
				1846	1918 D	278 D			3	
	8800	SGMR	29	2027	2027	138	109.0	54.5		
	4995	SGMR	29	2025	2025	140	78.4	39.2		
	2800	OTTA	30	2043		95	30.0	11.0		
	2800	OTTA	3	2044	2045.5	5	12.0	6.0		
	2800	OTTA	3	2110	2111.7	6	11.0	5.5		
	2695	SGMR	29	2024	2024	141	72.0	24.0		
	1415	SGMR	29	2045	2045	133	45.2	20.0		
	606	SGMR	29	2115	2115	104.4	125.0	41.0		
	2800	OTTA	20	2237	2244	18	11.0	5.5		
	1415	SGMR	20	2237.5	2244.6	15.5	11.0	3.7		
	606	SGMR	20	2211	2243.3	47	241.7	80.6		
	184	BOUL	44	2324	0110	138 D			2	
24	184	BOUL	44	1140 E	1928	843 D			2	
	10700	PENN	3	1221.5	1222	1.8	9.6	4.8		
	10700	PENN	3	1425.1	1426.2	12.2	307.5	31.3		
	10700	PENN	3	1443	1444.3	1.8	17.5	10.1		
	8800	SGMR	3	1425.2	1426.2	12.4	136.7	45.2		
	8800	SGMR	3	1443.2	1444.3	16.2	23.9	7.9		
	4995	SGMR	3	1425.4	1426.2	8.7	28.1	9.3		
	4995	SGMR	3	1442.7	1444.2	15.5	25.7	8.9		
	2800	OTTA	20	1415	1444.5	65	7.6	3.8		
	2700	PENN	20	1416.8	1422	58.4	3.5	2.7		
	2700	PENN	20	1443.2	1444.5	11.8	6.1	1.4		
	10700	PENN	29	1444.8	1444.8	17.2	9.7	4.9		
	2800	OTTA	21	1805	1820	55	5.6	2.8		
	4995	SGMR	3	1811.2	1812.1	17.8	18.4	9.2		
	2800	OTTA	4	1806	1807	4	8.6	4.3		
	2800	OTTA	3	1811	1812	4	14.0	7.0		
	2700	PENN	45	1805.8	1808.3	5	13.6	5.7		
	2700	PENN	3	1810.8	1812	2.6	17.4	8.2		
	2695	SGMR	3	1810.6	1812	5.4	20.0	10.0		
	1415	SGMR	3	1811.1	1812.1	4.9	15.5	7.7		
	606	SGMR	3	1811	1812.1	22	340.0	120.0		
	486	WASH	45	1805	1813	18	95.0D			OFF SCALE
	2700	PENN	29	1813.4	1813.4	21.6	7.5	3.5		
	10700	PENN	1	1905	1905.3	.8	7.2	3.6		
	2700	PENN	5	1905.1	1905.3	1				UNCALIBRATED
	10700	PENN	3	1906	1906.8	2.2	16.0	8.0		
	2700	PENN	5	1906.5	1906.7	1.1				UNCALIBRATED
	10700	PENN	40	1910		20.7				
	10700	PENN	5	1930.1	1931.7	6.2				UNCALIBRATED
	10700	PENN	40	1936.5		17.5				
	10700	PENN	5	1954.7	1957	4.9				UNCALIBRATED
	2700	PENN	5	1931.4	1931.7	.6				UNCALIBRATED
	2700	PENN	5	1956	1956.8	.9				UNCALIBRATED
	10700	PENN	40	2002		19				
	10700	PENN	45	2021.2	2021.8	4				UNCALIBRATED
	2700	PENN	5	2021.3	2021.7	4				UNCALIBRATED
	10700	PENN	40	2027		29				
	10700	PENN	5	2056.7	2057.8	9.1				UNCALIBRATED
	10700	PENN	5	2115.1	2115.4	.6				UNCALIBRATED
	2700	PENN	5	2114.7	2115.4	3.5				UNCALIBRATED
	10700	PENN	3	2147.7	2148.5	2.7	13.5	6.0		
	10700	PENN	40	2151		36				
	10700	PENN	45	2228.2	2230.2	4.9	122.1	41.2		
	10700	PENN	29	2233.1	2233.1	26	15.9	8.9		
25	8800	SGMR	20	1039.4	1109.5	97.7	40.5	13.5		
	4995	SGMR	20	1041.3	1052.6	62.7	43.6	14.5		
	2800	OTTA	3	1114	1115	5	7.6	3.8		
	2700	PENN	1	1146.8	1147.6	1.8	4.4	2.2		
	2695	SGMR	20	1039.4	1047.3	205.6	48.9	16.3		
	1415	SGMR	22	1041.4	1213.8	183.8	126.9	42.3		
	960	PENN	45	1145.2	1147.6	7.4	14.3	5.2		
	960	PENN	45	1154.5	1157	5.3	6.8	2.6		
	606	SGMR	45	1042	1229	226.5	8100.0	2700.0		
	184	BOUL	48	1138 E	1207 D	316 D			3	
	10700	PENN	20	1248.6	1344	77.7	7.5	3.7		
	2800	OTTA	20	1206	1209	11	5.8	2.9		
	2800	OTTA	20	1227	1250	80	6.8	4.0		
	2700	PENN	20	1205	1254	129	5.6	2.8		
	960	PENN	45	1207.6	1213.2	10.1	11.0	4.6		
	960	PENN	45	1218.8	1224.1	7.4	12.8	2.5		
	960	PENN	20	1226.4	1234.6	11.2	4.0	2.0		
	960	PENN	20	1239.1	1242.2	23.7	3.7	1.3		
	2800	OTTA	22	1505	1609	95	10.0	4.8		
	2700	PENN	20	1605	1609	11.8	7.7	3.8		
	606	SGMR	40	1428.5	1648.3	569.5D	298.6	U		SUNSET
	486	WASH	3	1605	1612	8	85.0			
	184	BOUL	44	1654 E		624 D			2	
	10700	PENN	3	1704	1704.6	10.2	157.8	21.7		
	486	WASH	45	1720	1720	3	80.0			
	2800	OTTA	1	1907.5	1907.7	.7	6.0	3.0		
	2800	OTTA	45	1920.3	1926.7	9.7	57.0	30.0		
				1920.3	1920.5	3.7	14.0			
				1924	1924.7	2	56.0			

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25				1926	1926.7	4	57.0			
	1415	SGMR	3	1920	1926.6	16	50.6	17.0		
	606	SGMR	3	1925.5	1926.9	12.5	21.6	7.2		
	486	WASH	45	1919	1919	33	100.0D			OFF SCALE
	2800	OTTA	29	1930		50	19.0	6.5		
	2800	OTTA	21	2035	2115	50	7.8	3.9		
	2800	OTTA	4	2050.5	2050.9	3	17.0	8.0		
	2800	OTTA	2	2101.8	2101.9	.5	2.4	1.2		
	486	WASH	3	2135	2135	5	60.0			
	2800	OTTA	22	2150	2325	200	15.0	7.5		
26	486	WASH	45	1057	2015	20	160.0D			OFF SCALE
	10700	PENN	3	1218.5	1218.8	1	8.7	1.8		
	10700	PENN	20	1226.3	1232.4	167	15.8	5.5		
	10700	PENN	45	1234.7	1238.5	10.8	336.1	45.9		
	4995	SGMR	45	1235.3	1238.4	24.7	106.0	35.3		
	2800	OTTA	21	1225	1242	65	12.0	6.0		
	2800	OTTA	45	1236	1238.7	6	48.0	19.0		
				1236	1237.5	2	29.0			
				1238	1238.7	4	48.0			
	2700	PENN	3	1238.3	1238.7					EQUIP. PRBLMS
	2695	SGMR	45	1236.1	1238.8	23.9	61.1	20.3		
	1415	SGMR	45	1235.4	1238.8	13.6	40.0	13.3		
	960	PENN	45	1236.5	1237.2	3.3	1.3	0.7		
	606	SGMR	45	1236.3	1238.6	7.7	352.0	117.0		
	960	PENN	1	1300.4	1300.6	.5	1.5	0.7		
	10700	PENN	20	1335.9	1357.4	77.1	16.6	8.3		
	4995	SGMR	22	1407	1519.8	183	111.0	22.2		
	2800	OTTA	21	1348	1353	100 D	17.0			
	2700	PENN	20	1339.9	1356.5	89	12.7	6.4		
	2695	SGMR	22	1404.3	1549.5	181.7	17.4	3.3		
	960	PENN	1	1328.8	1329	.3	5.6	2.9		
	606	SGMR	23	1310.3	1350.2	209.7	70.0	14.0		
	1415	SGMR	23	1339.8	1520	205.2	57.9	11.6		
	10700	PENN	3	1424.3	1424.8	1.3	7.9	4.0		
	2800	OTTA	1	1424	1425	2	6.8	3.4		
	2700	PENN	3	1424.4	1424.9	3.3	9.0	3.6		
	960	PENN	1	1424.6	1424.8	1.6	1.0	0.3		
	10700	PENN	3	1444	1444.2	2	10.7	5.4		
	960	PENN	1	1448.2	1448.7	.8	1.3	0.6		
	10700	PENN	1	1518.2	1519.1	6.7	6.3	2.3		
	2800	OTTA	28	1517		19.2	14.0	8.0		
	2700	PENN	20	1515.6	1519.1	16.4	14.3	6.0		
	960	PENN	20	1517	1518	8.3	1.6	0.8		
	10700	PENN	45	1532.4	1600.2	63	134.4	63.8		
	4995	SGMR	45	1533	1541.5	52	279.5	69.0		
	2800	OTTA	4	1532.4	1602	72	256.0	140.0		
	2700	PENN	45	1532.2	1601.9	71.2	229.3	120.4		
	2695	SGMR	45	1532.5	1602.4	56.5	310.5	78.0		
	1415	SGMR	45	1532.3	1542.1	59.7	279.0	69.0		
	960	PENN	45	1532.8	1543.4	53.2	9.1	5.0		
	606	SGMR	45	1532	1541.7	60	185.0	46.0		
	2800	OTTA	30	1645		340	17.0	8.5		
	184	BOUL	44	1742 E		482 D			1	MAINTENANCE
	10700	PENN	1	1856.5	1857.8	3.2	5.8	2.9		
	4995	SGMR	3	1856.5	1857.6	3.5	14.9	7.4		
	2800	OTTA	21	1852	1853	20	3.4	1.7		
	2800	OTTA	3	1857	1858	2	7.6	3.8		
	2700	PENN	1	1857.6	1857.9	1.5	6.7	2.7		
	2695	SGMR	3	1855.5	1857.7	4.5	14.8	7.4		
	1415	SGMR	1	1856.5	1857.6	2.5	7.0	3.5		
	960	PENN	1	1857.8	1858	.4	.7	0.4		
	606	SGMR	1	1857.3	1857.9	2.1	4.6	2.3		
	10700	PENN	3	1948.2	1949.3	3.8	8.3	6.0		
	4995	SGMR	3	1948.7	1948.9	1	14.4	4.5		
	2800	OTTA	3	1949	1949.5	3	14.0	6.0		
	2700	PENN	3	1948.2	1949.4	3.4	12.7	3.2		
	2695	SGMR	3	1947.8	1949.4	3	16.3	4.0		
	1415	SGMR	1	1948.8	1948.9	1.2	3.4	.8		
	960	PENN	1	1949.2	1949.3	.2	5.1	2.0		
	960	PENN	45	2143.9	2144.6	.9	2.4	1.0		
27	10700	PENN	40	1322.3		21.6				
	10700	PENN	1	1431	1433.6	5.8	6.2	3.1		
	2800	OTTA	1	1511	1512	2	4.6	2.3		
	10700	PENN	1	1523.6	1523.9	2.3	2.9	1.5		
	10700	PENN	3	1707.4	1708.4	4.6	8.5	2.8		
	10700	PENN	3	1721.2	1721.5	3.8	8.5	4.2		
	10700	PENN	1	1729.1	1729.4	.8	3.8	1.9		
	4995	SGMR	20	1654.1	1659.1	12.4	7.0	2.0		
	2695	SGMR	20	1657.3	1701.3	11.6	2.3	.7		
	1415	SGMR	20	1647.7	1719.9	40	4.4	1.5		
	960	PENN	1	1711	1711.5	1.2	.5	0.2		
	4995	SGMR	20	1734	1743.1	12	4.8	1.6		
	2695	SGMR	20	1734	1743.6	26	4.2	1.4		
	1415	SGMR	20	1732.7	1740.4	13.3	3.2	1.0		
	1415	SGMR	20	1750.8	1759.7	13.2	2.6	.8		
	10700	PENN	1	1807	1808.4	2.6	4.4	2.2		
	10700	PENN	1	1923.7	1923.9	1.3	4.4	2.2		
	8800	SGMR	3	2204.2	2205.2	2.6	60.0	15.0		
	4995	SGMR	3	2204.5	2205.4	1.7	29.5	7.5		

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27	8800	SGMR	3	2304.9	2305.5	.9	18.0	4.0		
	4995	SGMR	3	2304.5	2305.3	1.8	8.8	2.0		
	8800	SGMR	3	2312.7	2313.2	2.1	90.0	24.0		
	4995	SGMR	3	2312.3	2313.1	3.3	67.5	16.0		
	2800	OTTA	4	2312.8	2313.2	1.3	21.0	10.0		
	2700	PENN	3	2313	2313.3	1				DUR. SUNSET
	2695	SGMR	3	2312.7	2313.3	1.3	31.0	8.0		
28	10700	PENN	3	1506.3	1507.2	5.5	8.3	3.5		
	2800	OTTA	2	1600.7	1602.7	2.5	2.8	1.6		
	2700	PENN	1	1545.4	1545.5	34.2	7.1	2.7		
	10700	PENN	3	1720	1721.2	2	7.8	3.2		
	8800	SGMR	3	1720	1721	11.8	11.1	3.7		
	4995	SGMR	1	1716.9	1719.8	13.2	3.8	1.3		
	2800	OTTA	1	1719	1720	2.5	2.8	1.4		
	2700	PENN	1	1719	1719.8	3	6.4	3.2		
	2695	SGMR	3	1716.2	1720.4	14.8	8.8	2.9		
	1415	SGMR	1	1717.9	1723	15	3.4	1.1		
	10700	PENN	1	1854.7	1855.1	1	4.5	3.7		
	10700	PENN	1	1903	1903.7	3.8	3.8	1.9		
	10700	PENN	1	2024.8	2025.6	3	6.8	3.4		
	10700	PENN	3	2030.4	2030.9	1	15.2	9.0		
	10700	PENN	29	2031.4	2031.4	4.4	5.7	2.4		
	10700	PENN	1	2056.8	2057.3	2	5.7	2.9		
	10700	PENN	20	2139.8	2142.5	11.7	11.5	2.7		
	2800	OTTA		2141.8	2141.8		24.0			SPIKE
	2800	OTTA	20	2205	2230	90	6.4	3.2		
	2700	PENN	3	2141.6	2141.7	.3	15.9	8.0		
	606	SGMR	22	2134	2211.8	107.1	58.1	18.0		
	1415	SGMR	20	2156.8	2213.8	55.4	9.8	4.0		
	486	WASH	45	2200	2212	23	80.0			
29		PENN		1100	2300					HEAVY RAIN
	2700	PENN	20	1329.6	1331.2	10.1	4.1	3.2		
	8800	SGMR	1	1459.9	1500.6	3.6	2.5	.5		
	4995	SGMR	3	1459.6	1500	3.9	15.4	4.0		
	2800	OTTA	3	1500	1500.5	4	18.0	5.0		
	2695	SGMR	3	1459.1	1500.4	6.4	23.2	5.5		
	606	SGMR	45	1501.2	1501.3	.4	17.1	4.0		
	10700	PENN	20	1634	1653.3	21.1	10.6	2.5		
	8800	SGMR	22	1852.9	1902.8	22	22.6	7.5		
	4995	SGMR	22	1849	1900.5	54.5U	18.4	6.1		
	2800	OTTA	21	1852	1853	80	26.0	15.0		
	2800	OTTA	1	1854	1854.5	.7	2.8	1.4		
	2800	OTTA	46	1858.5	1900.8	9	8.8	4.4		
	2700	PENN	20	1852.2	1904.5	18	5.5	2.8		
	2695	SGMR	22	1848.7	1900.8	52.8U	18.8	6.3		
	1415	SGMR	22	1850.2	1854.4	24.4	4.0	1.3		
	486	WASH	3	2023	2023	5	130.0D			OFF SCALE
	2800	OTTA	40	2100	2126.5	34	12.0			
	2700	PENN	40	2056.6		41,2				
	2695	SGMR	22	2059.3	2100.3	4.6	6.8	2.3		
	1415	SGMR	22	2059.3	2124.1	101.2	50.0	16.7		
	960	PENN	40	2122.5		12,9				
	606	SGMR	45	2059.5	2215	109.2	881.0	33.5		
	486	WASH	45	2058	2114	47	95.0			
	10700	PENN	45	2214.3	2215	2.3	106.9	31.5		
	2800	OTTA	3	2215	2215.3	1	8.8	4.4		
	2700	PENN	24	2153.8	2256.8		30.2			
	2700	PENN	3	2215.1	2215.4	2.5	7.8	3.1		
	2695	SGMR	3	2215.1	2215.3	2.8	8.0	2.7		
	1415	SGMR	3	2215	2215.2	4.7	16.4	5.5		
	960	PENN	1	2215	2215.4	1.3	.9	0.4		
	486	WASH	3	2214	2214	2	130.0D			OFF SCALE
	10700	PENN	29	2216.6	2216.8	5.2	13.4	5.0		
	2800	OTTA	29	2216		20	2.8	1.4		
	8800	SGMR	3	2313.7	2314	.7	20.1	6.7		
	4995	SGMR	3	2313	2313.8	5.1	18.0	6.0		
	2800	OTTA	1	2313	2314	2	7.0	3.5		
	2695	SGMR	1	2313.5	2314	4.7	4.8	1.6		
30	2800	OTTA	20	1240	1340	90	2.8	1.4		
	2700	PENN	1	1551.5	1552.3	1.6	3.8	1.9		
	2700	PENN	26	1704	1726.5	114	19.3	7.9		
	10700	PENN	20	1728	1735	31	6.9	3.5		
	8800	SGMR	3	1728	1728.8	6	13.4	6.2		
	4995	SGMR	3	1727.1	1728.5	13.9	36.1	18.0		
	2800	OTTA	3	1727	1729	7	14.0	9.0		
	2800	OTTA	40	1732		30	7.0	3.5		
	2700	PENN	3	1727.2	1728.3	8.8	9.4	3.7		
	2695	SGMR	3	1726.3	1728.8	12.7	15.6	7.8		
	2800	OTTA	21	1910	2100	210	5.6	2.8		
	10700	PENN	1	1955	1955.7	2	4.1	2.0		
	2800	OTTA	1	2200.5	2200.7	1.5	2.4	1.2		
31	2800	OTTA	20	1105	1136	55	5.0	1.7		
	2700	PENN	1	1522.7	1523	1.1	3.6	1.8		
	10700	PENN	3	1633	1634	11	247.0	38.4		
	8800	SGMR	3	U	1634.3	U	191.0	63.4		DRIFT IN
	4995	SGMR	3	U	1634	U	19.3	6.4		PROGRESS
	2800	OTTA	1	1634	1635	3	2.0	1.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

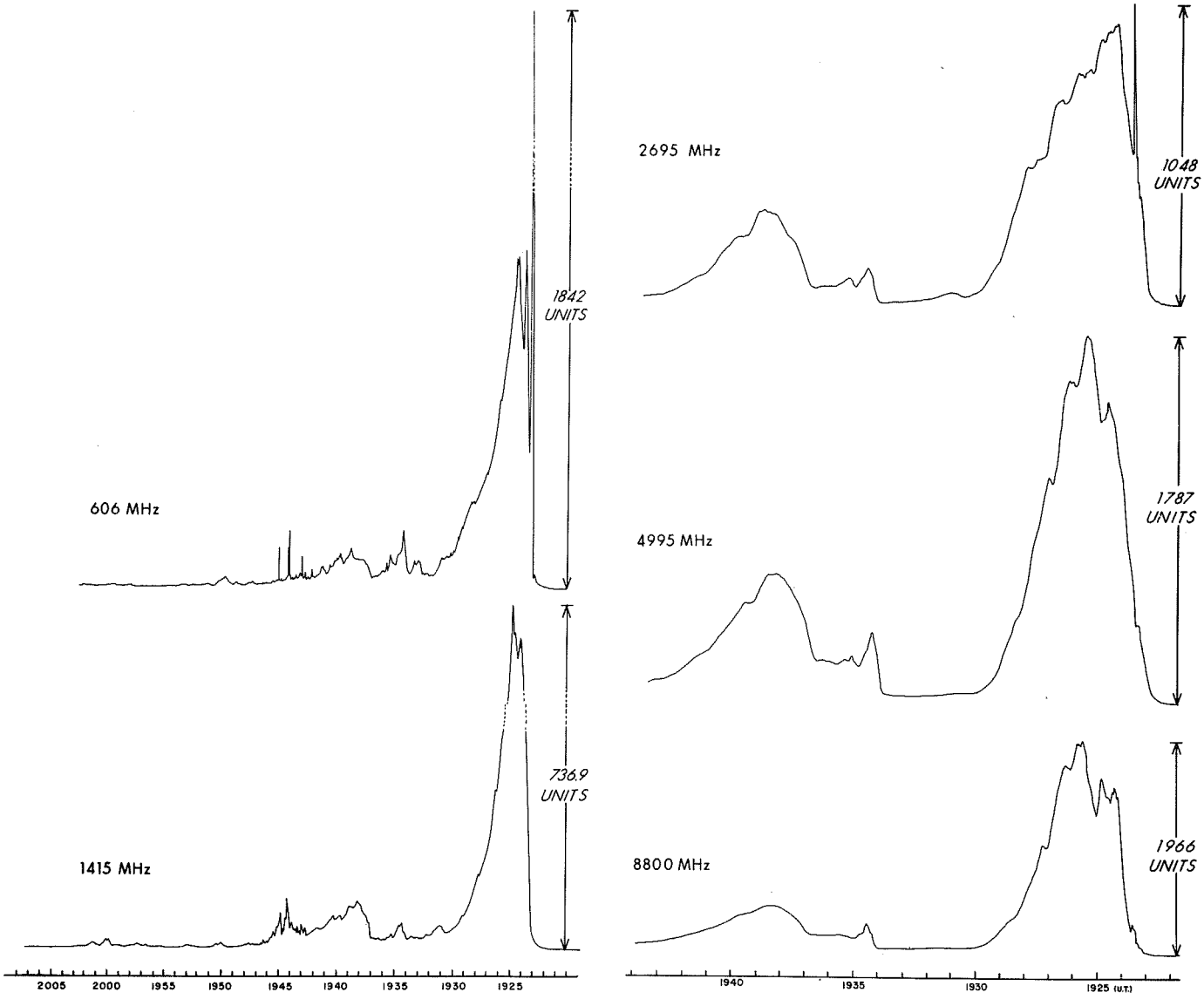
MAY 1967

MAY 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} (c/s)$^{-1}$ PEAK	FLUX DENSITY MEAN	INT.	REMARKS
31	2695	SGMR	3	U	1634.1	U	9.1	3.0		
	10700	PENN	20	1744.6	1746.7	28.4	7.8	2.3		
	10700	PENN	20	1755.1	1756.7	11.7	3.9	1.9		
	8800	SGMR	3	1745	1746.5	7.2	10.2	5.1		
	4995	SGMR	3	1743.1	1746.4	8.3	29.2	14.6		
	2800	OTTA	21	1740	1750	40	3.8	1.9		
	2800	OTTA	2	1744.5	1746.5	3	5.2	3.0		
	2700	PENN	20	1744.6	1746.6	10.5	8.8	2.4		
	2700	PENN	20	1755.1	1756.6	12.6	4.4	2.2		
	2695	SGMR	1	1744.5	1746.3	12.5	7.4	3.2		
	2700	PENN	1	2017.9	2018.1	1.1	3.9	2.3		
	10700	PENN	1	2038.6	2041.2	6.4	4.0	2.0		
	8800	SGMR	1	2040.6	2041	1.8	6.0	3.0		
	4995	SGMR	3	2039	2040.4	5	12.9	6.4		
	2800	OTTA	20	2040	2041	10	3.0	1.5		
	2700	PENN	1	2039.8	2041	4	4.8	2.4		
	2700	PENN	20	2106.2	2112	41.4	3.5	1.8		
	2700	PENN	1	2216.5	2216.6	.2	6.6	3.3		

No data available from Haleakala for May 1967.

SELECTED SOLAR NOISE BURST
AFCRL SAGAMORE HILL

MAY 1967

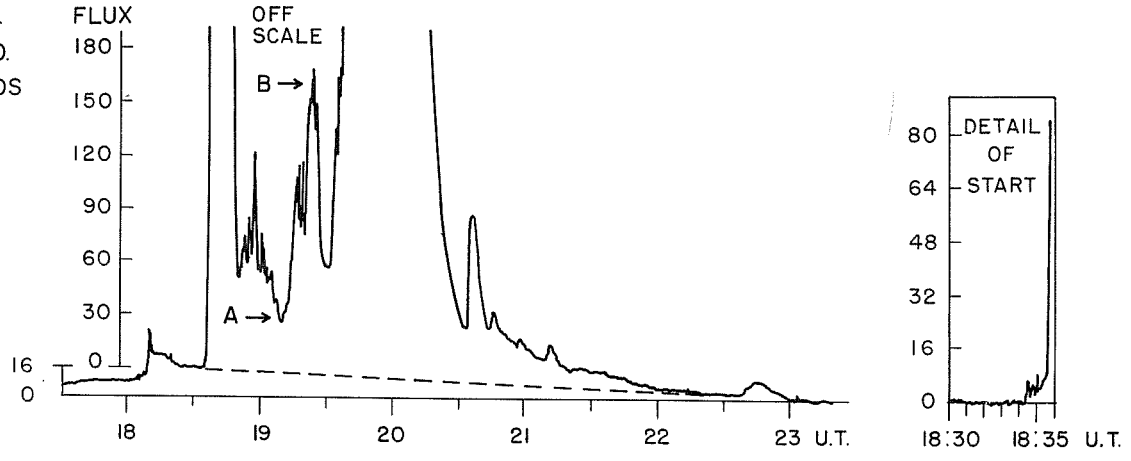


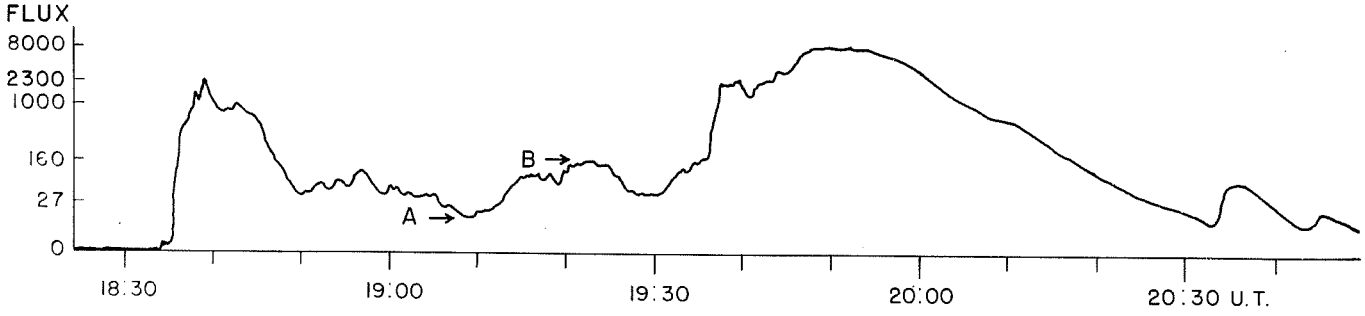
COMPLEX RADIO BURST OBSERVED ON 21 MAY, 1967 AT SAGAMORE HILL RADIO OBSERVATORY (AFCRL) HAMILTON, MASS.

SELECTED SOLAR NOISE BURSTS
ARO-OTTAWA AND DRAO-PENTICTON, CANADA

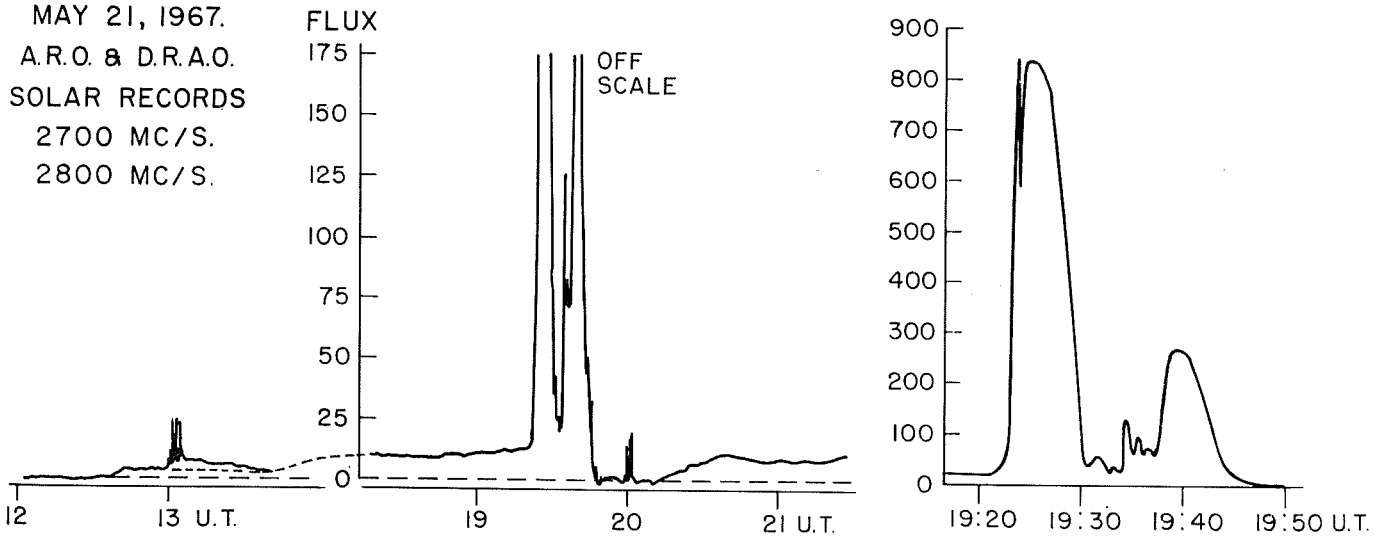
MAY 1967

MAY 23, 1967.
A.R.O. & D.R.A.O.
SOLAR RECORDS
2700 MC/S.
2800 MC/S.

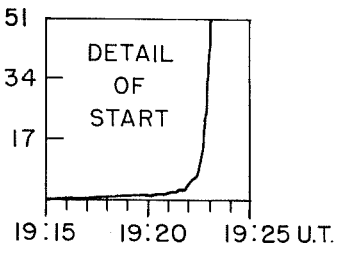




MAY 21, 1967.
A.R.O. & D.R.A.O.
SOLAR RECORDS
2700 MC/S.
2800 MC/S.



START	TYPE
12:30	SIMPLE 3A - 7^H 20^M DURATION
13:00	FLUCTUATIONS
13:06	POST
19:22	COMPLEX F
20:10	RISE

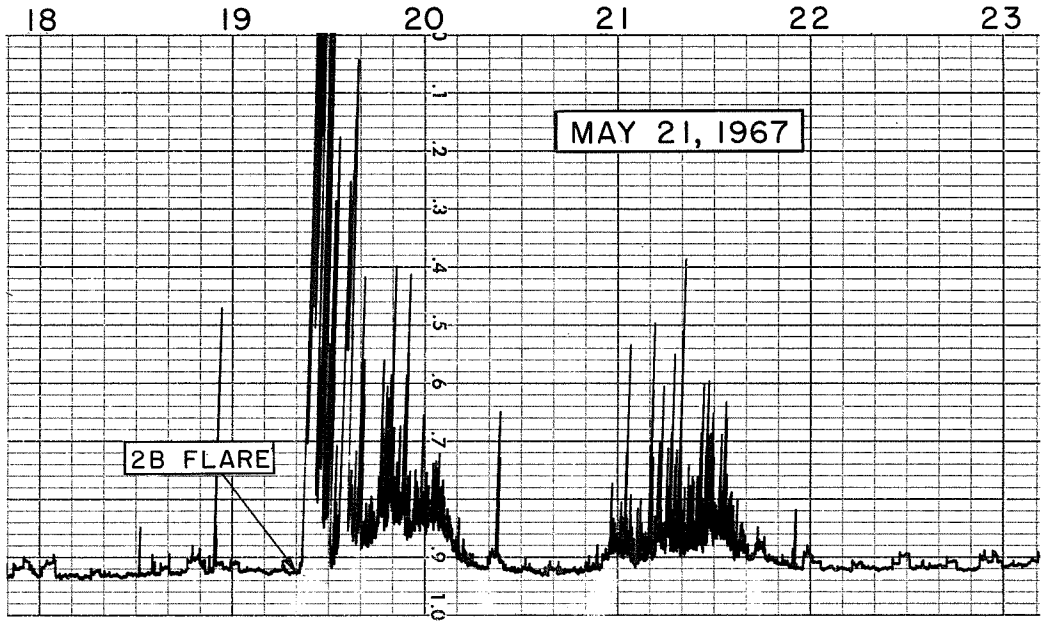


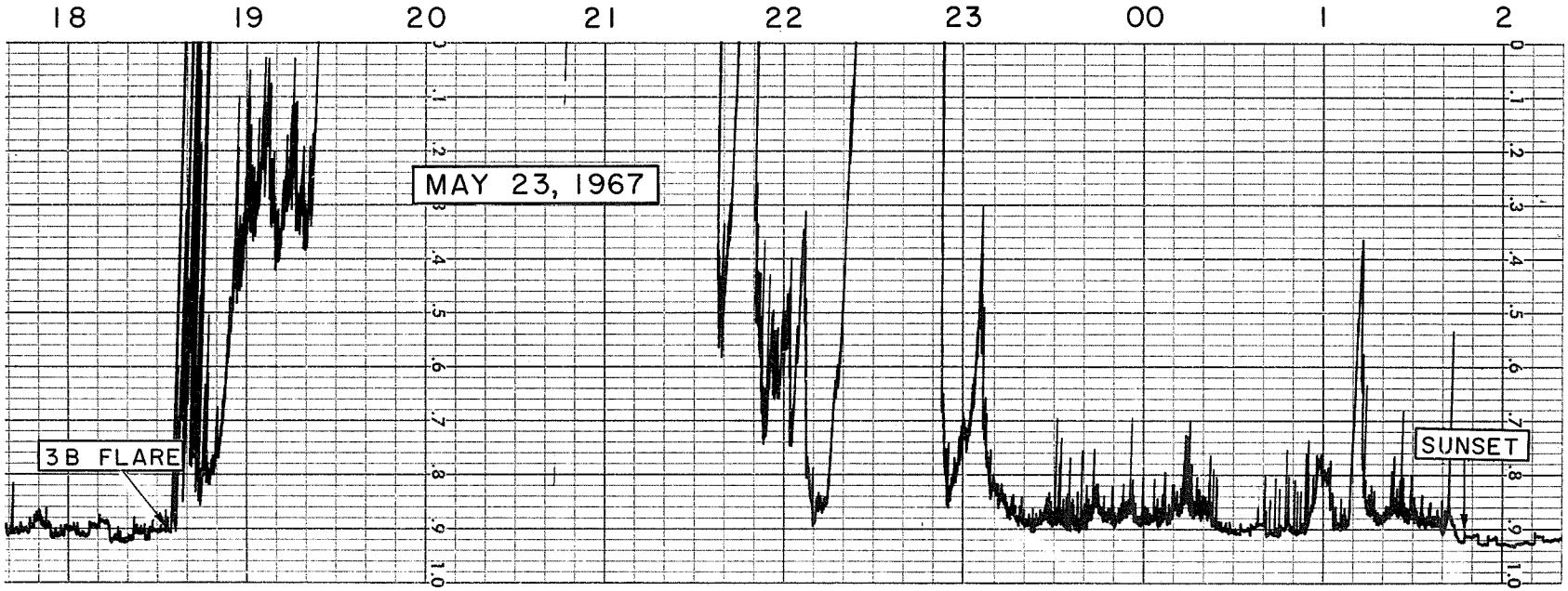
SELECTED NOISE BURSTS

MAY 1967

ESSA – BOULDER

184 Mc/s





27 May 67

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

MAY 1967

University of Colorado

7.6-41 Mc/s

Date May 1967	Bursts				Date May 1967	Bursts			
	Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)		Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
2	IIIg	1827.8-1828.7	1	24-38	19	IIIg	1527.5-1535.5	2	15-41
	III	2034.9-2035.3	1	24-41		IIIg	1536.1-1539.0	2	10-41
3	III	1514.1-1514.4	1	22-41		II	1537.2-1545.8	3	15-41
	III	1534.8-1535.3	1	22-36		IV	1537.2-1615.0	3	11-41
	IIIg	1544.0-1545.1	1	20-41		IV	1615.0-1910.0	3	20-41
	II	1548.0-1603.5	3	11-41		III	2047.4-2047.8	1	28-40
	IIIG	1549.6-1558.6	3	8-41		IIIg	2057.2-2104.5	1	25-41
	IV	1603.5-1650.3	2	13-41		III	2221.9-2222.1	1	24-38
	III	1818.2-1818.7	1	26-36		IIIg	2301.4-2304.0	2	23-41
	III	1846.0-1846.2	2	20-41		III	2403.0-2403.4	3	22-41
	III	1850.7-1851.1	2	21-41		III	2539.0-2539.3	2	23-41
	III	1921.0-1921.4	1	18-28	20	III	1353.8-1354.1	1	22-41
	III	1929.6-1929.9	2	19-41		continuum	1410.0-1513.5	1	24-41
	III	2015.5-2015.8	1	20-34		IIIg	1415.7-1419.0	2	13-41
	III	2025.1-2025.4	1	22-34		IV	1513.5-1600.0	3	9-41
	III	2305.7-2305.9	1	22-41		III	1514.9-1516.0	3	9-41
	IIIg	2339.6-2344.7	1	21-41		II	1527.0-1553.0	3	10-41
6	III	1531.9-1532.2	1	23-38		IV	1600.0-1645.0	2	22-41
	III	1617.1-1617.5	1	26-39		III	1832.1-1832.3	1	28-39
	III	1626.7-1627.1	2	13-41		III	1905.7-1905.9	1	30-40
	III	2325.5-2325.8	1	25-34		III	2028.1-2028.5	2	20-41
	IIIg	2335.4-2339.7	1	22-41		IIIg	2214.2-2215.3	1	27-41
8	IIIg	2138.0-2139.5	2	16-41		III	2224.9-2225.3	2	24-41
	IIIg	2404.5-2405.9	2	20-41		III	2240.5-2240.9	1	28-41
	III	2440.4-2440.8	2	21-41		continuum	2305.7-a2550.0	1	25-41
	III	2453.0-2454.8	3	18-41		IIIg	2523.5-2526.5	2	25-41
	III	2534.7-2535.0	1	24-36	21	continuum	b1636.0-1922.1	1	25-41
11	III	1516.9-1517.1	1	22-36		III	1832.3-1832.9	2	12-41
13	III	2531.2-2531.7	1	25-40		III	1855.5-1856.3	3	9-41
14	III	1536.1-1536.5	1	24-41		IV	1922.1-2008.2	3	9-41
16	III	1714.3-1714.7	1	27-40		IIIG	1923.6-1951.0	3	9-41
	III	1756.3-1756.6	1	20-41		IV	2008.2-2130.6	3	20-41
	IIIg	2009.5-2010.6	1	28-41		continuum	2130.6-a2550.0	2	24-41
	IIIg	2215.4-2217.5	1	20-41		IIIG	2251.2-2256.1	3	13-41
	III	2235.0-2235.2	1	25-41	22	continuum	b1140.0-a2600	1	22-41
	III	2505.5-2505.8	2	34-41		IIIG	1457.3-1505.0	2	24-41
17	III	2406.4-2406.8	2	20-41		IIIG	2155.2-2205.3	3	16-41
	IIIg	2455.5-2456.4	2	16-41	23	III	1142.8-1143.4	1	23-41
	III	2503.6-2503.9	1	22-41		III	1156.4-1156.7	1	30-40
18	IIIg	1229.0-1232.3	3	13-41		III	1200.1-1200.4	1	24-38
	IIIg	1830.6-1831.7	1	12-41		III	1209.1-1209.4	1	22-41
	IV	1848.4-2040.0	2	20-41		IIIg	1218.8-1220.7	1	28-41
	III	2101.5-2101.9	1	25-31		III	1239.0-1239.2	1	29-41
	III	2259.0-2259.3	1	20-36		IIIg	1249.2-1250.1	1	26-41
	III	2317.4-2318.2	2	16-41		continuum	1336.8-1537.0	1	26-41
	IIIg	2322.3-2324.4	1	24-41		IV	1537.0-1900.0	2	24-41
	continuum	2334.5-2536.0	1	23-41		III	1741.9-1742.4	3	12-41
19	IIIg	1312.1-1317.3	1	20-40		III	1837.1-1840.7	3	11-41
	IIIg	1424.2-1427.8	1	24-40		III	1841.2-1843.4	3	11-41
	III	1506.5-1507.2	2	21-41		II	1843.4-1900.0	3	11-41

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

MAY 1967

University of Colorado

7.6-41 Mc/s

Date May 1967	Bursts				Date May 1967	Bursts			
	Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)		Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
23	IV	1900.0-2052.2	3	12-41	29	III	1523.0-1523.3	1	16-35
	IV	2052.2-2400.0	3	24-41		III	1639.8-1640.0	1	14-40
	continuum	2400.0-a2600.0	3	24-41		III	1654.7-1655.1	2	12-39
24	continuum	b1130.0-1604.0	1	24-41		IIIG	1853.4-1904.4	3	8-41
	IIIg	1203.2-1205.2	2	20-41		IV	1904.4-2035.0	2	18-41
	IIIG	1442.0-1451.1	2	23-41		IIIg	1924.5-1927.3	3	10-41
	IIIG	1548.0-1553.3	2	21-41		IIIg	1936.6-1939.1	2	9-41
	continuum	1604.0-1651.0	2	23-41		IIIg	2050.0-2051.7	3	9-41
	continuum	1651.0-1813.0	1	25-41		IIIG	2058.3-2101.7	3	8-41
	III	1804.8-1810.0	3	10-41		continuum	2101.7-2219.5	3	12-41
	IIIg	1811.4-1813.0	3	12-41		IIIg	2214.5-2216.2	3	8-41
	IV	1813.0-1913.2	3	12-41		continuum	2219.5-2405.0	1	16-41
	continuum	1913.2-2240.8	1	25-41		IIIg	2244.7-2248.0	2	8-41
	continuum	2240.8-2450.5	2	21-41		III	2438.6-2439.0	1	20-41
	continuum	2450.5-a2600.0	1	25-41	30	III	1151.2-1151.6	1	22-40
25	continuum	b1136.0-1452.0	2	22-41		IIIg	1157.9-1158.3	1	22-41
	IIIg	1442.8-1443.7	3	12-41		IIIG	1254.2-1300.0	1	24-41
	continuum	1452.0-1605.5	2	24-41		IIIg	1311.1-1315.3	3	16-41
	IIIg	1554.5-1557.7	3	13-41		IIIg	1405.7-1409.4	2	26-41
	continuum	1605.5-1629.8	3	14-41		III	1428.1-1428.5	1	20-35
	continuum	1629.8-1922.4	1	24-41		III	1707.7-1708.0	1	28-41
	IIIG	1720.7-1723.8	3	10-41		III	1717.7-1718.5	3	14-41
	IIIG	1729.0-1738.2	3	12-41		continuum	1824.0-1900.0	1	25-41
	continuum	1922.4-1949.0	3	10-41		IIIg	1915.9-1919.4	3	15-41
	continuum	1949.0-2040.0	1	26-41		III	1955.4-1956.0	1	26-41
	IIIg	2114.5-2116.1	1	22-41		III	2012.2-2012.8	1	26-41
	III	2116.9-2117.2	2	8-41		III	2057.4-2057.8	2	22-41
	III	2146.2-2146.6	1	17-41		IIIg	2103.5-2107.5	2	19-41
	continuum	2416.0-a2500.0	1	27-41		IIIg	2136.2-2138.7	2	20-41
26	IIIg	1411.7-1413.0	1	22-41		IIIg	2159.7-2203.0	3	16-41
	no obser.	1450-0630				III	2229.8-2230.0	1	28-41
27	III	1508.7-1508.9	2	22-41		III	2322.0-2322.3	1	32-40
	IIIG	1519.4-1529.0	1	24-41		III	2337.8-2338.2	2	16-41
	continuum	1615.4-2023.2	1	22-41		IIIg	2350.4-2352.0	1	22-41
	continuum	2023.2-2100.0	1	20-41		III	2519.7-2520.1	1	22-41
	III	2034.4-2035.1	2	12-41	31	III	1221.7-1221.9	1	20-41
	III	2044.5-2045.0	2	13-41		III	1339.8-1340.3	2	19-41
28	continuum	1557.0-1910.0	1	24-41		IIIg	1417.5-1419.1	2	16-41
	continuum	1910.0-1955.5	2	20-41		IIIg	1543.5-1545.6	3	10-41
	IIIg	1954.8-1955.5	2	9-41		III	2026.8-2027.1	1	22-41
	continuum	1955.5-2150.0	3	24-41		III	2148.3-2148.6	1	24-40
	III	2208.3-2208.5	1	24-36		III	2248.8-2249.1	1	25-41
	IIIg	2257.4-2259.2	2	16-40		IIIg	2327.3-2328.0	2	22-41
	III	2504.7-2505.1	1	20-41		IIIg	2416.0-2419.4	2	23-41
29	III	1426.6-1427.1	2	13-41		III	2435.7-2436.0	2	24-41
						IIIg	2515.5-2517.7	1	25-41
						IIIg	2523.4-2525.0	2	20-41
						III	2537.1-2537.6	1	23-34

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

Nançay

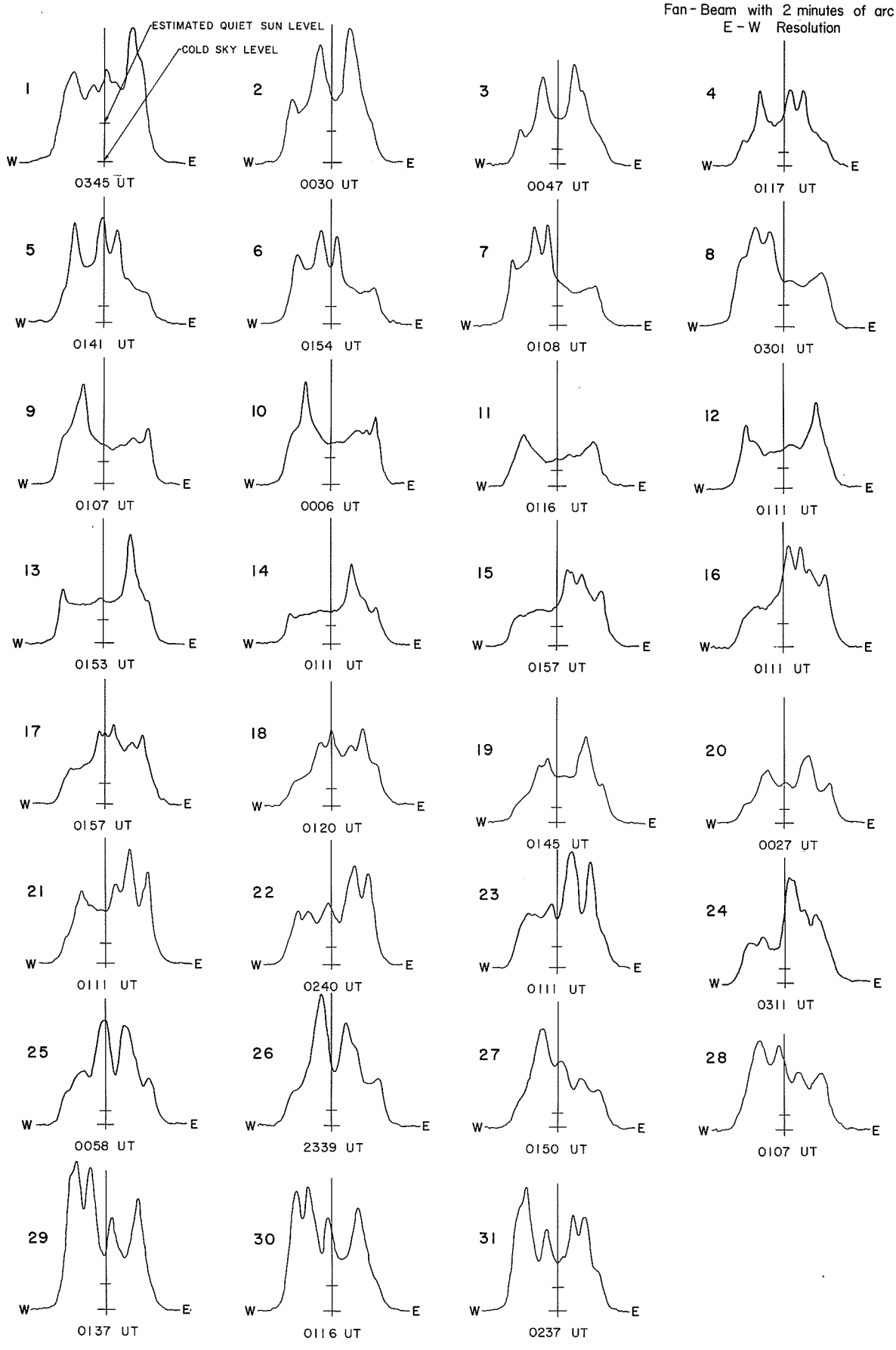
408 Mc/s

A chart for Interferometric Measurements at Nançay at 169 Mc/s will not be prepared for May 1967 as the equipment is undergoing alteration. The chart of 408 Mc/s has also not been received at time of publication.

EAST - WEST SOLAR SCANS
MAY 1967

FLEURS, AUSTRALIA

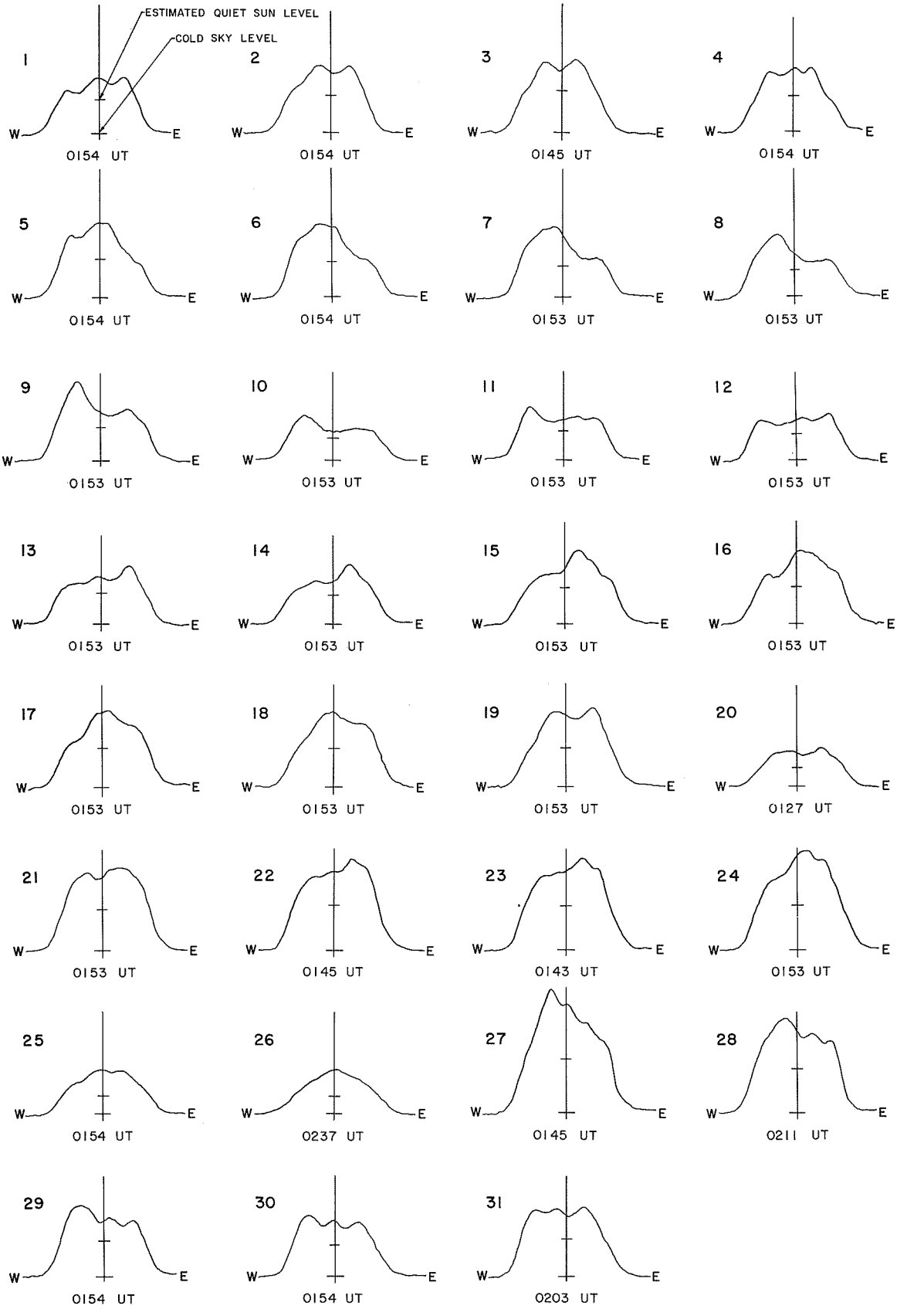
21 cm
Fan - Beam with 2 minutes of arc
E - W Resolution



EAST - WEST SOLAR SCANS
MAY 1967

FLEURS, AUSTRALIA

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



SOLAR PROTON EVENTS
(Provisional)
May, 1967

Event No.	Date May	Time UT	Detector	Activity
1	23	1925(1)	Vela satellite system	increased neutron count
	24	0000	Shepherds Bay riometer	absorption
		0600	Alaskan riometer network, VLF, HF, FWD-scatter circuits	marked absorption, phase advances, fadeouts
		0930(2)	Vela satellite system	maximum neutron count
		2100	Lunar Orbiter satellite	>10 Mev proton flux still increasing
	25	0100	Ft. Churchill satellite experiment	reading 1 RAD/hr. and increasing
		0300	Alaskan riometer network	absorption still increasing
2	25	0715(1)	OGO satellite	3x normal >20 Mev proton flux
		~0500-0700	Lunar Orbiter satellite	reading approx. 2½ RAD/hr.
		0800	Shepherds Bay riometer	marked absorption
		1300	Alaskan riometer network FWD-scatter circuits	≥20 db absorption on riometer
		1353(2)	Vela satellite system	maximum neutron count
	27	0710(3)	Vela satellite system	about normal proton levels
3	28	0605(1)	Shepherds Bay riometer	absorption begins
		0625	Vela satellite system	increased neutron count
		0626	Alaskan riometer network	absorption
		0626	VLF, HF, FWD-scatter circuits	phase advances, fadeouts
		0700	OGO satellite	3x normal >20 Mev proton flux
		1200(2)	Kiruna, Sweden riometer	absorption
	31	0030(3)	Alaskan riometer network	PCA ends

(1) Probable beginning time
(2) Probable maximum time
(3) Probable ending time

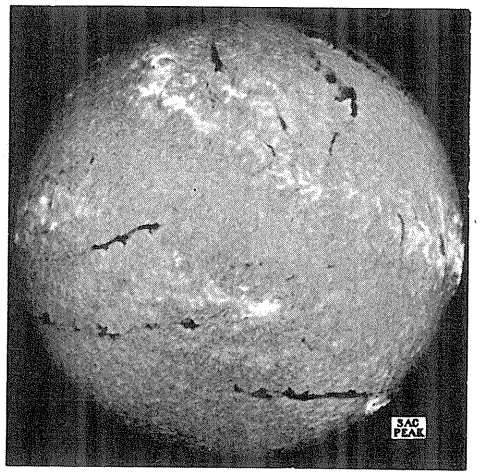
Note: Pioneer space probe system confirmed above events.

Table of Contents
for April 1967 Data

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

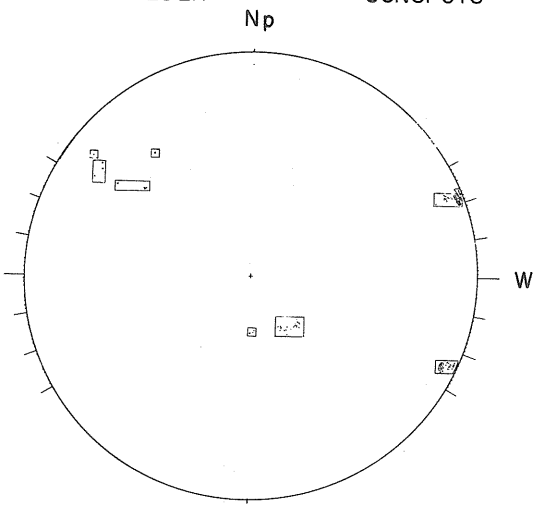
APRIL 1, 1967 (P=-26.20, B_o=-6.55, L_o=227.50)

SACRAMENTO PEAK Hα



2053 UT

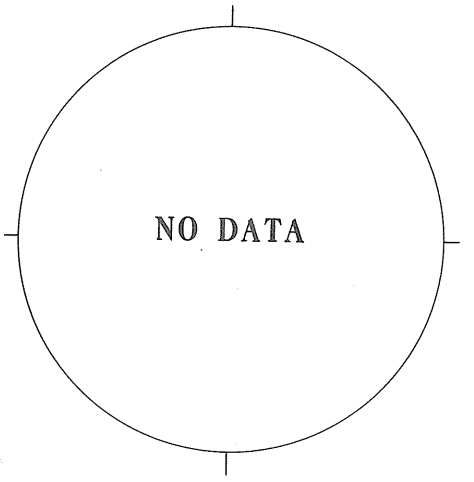
ESSA-BOULDER SUNSPOTS



1535 UT

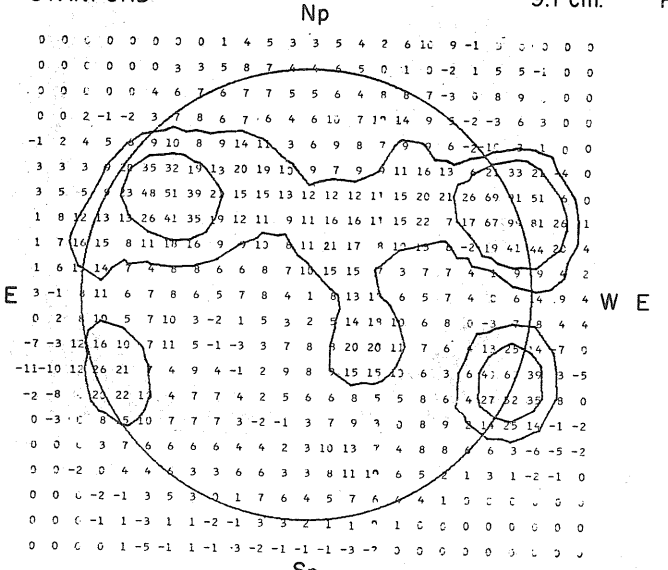
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



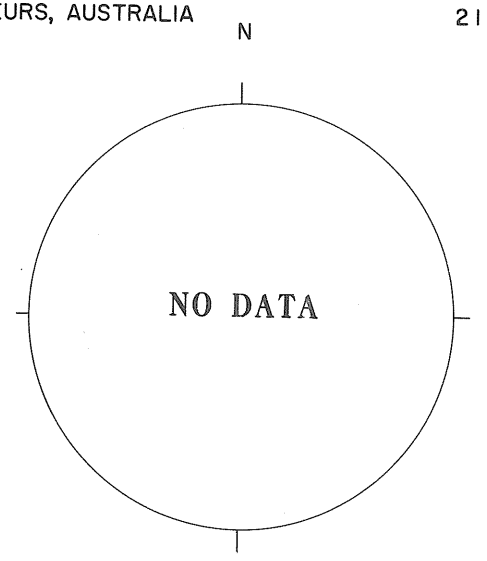
Levels
± 3
± 6
± 10
± 15
±25
±40

STANFORD 9.1 cm.



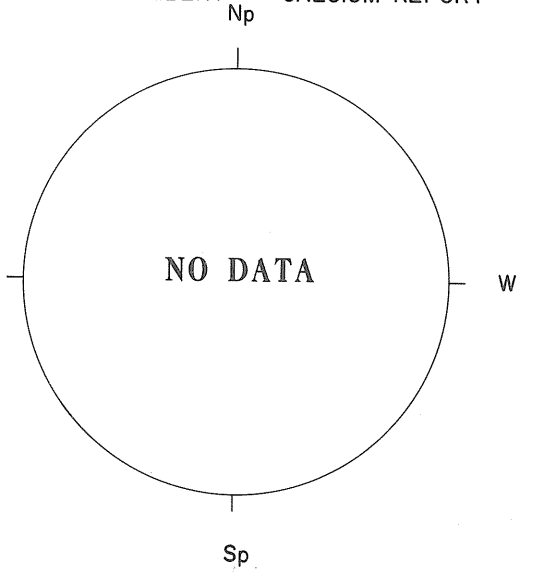
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



APRIL 2, 1967 (P=-26.24, B_o=-6.50, L_o=214.31)

MT. WILSON Np MAGNETOGRAM Solid-Plus Dotted-Minus

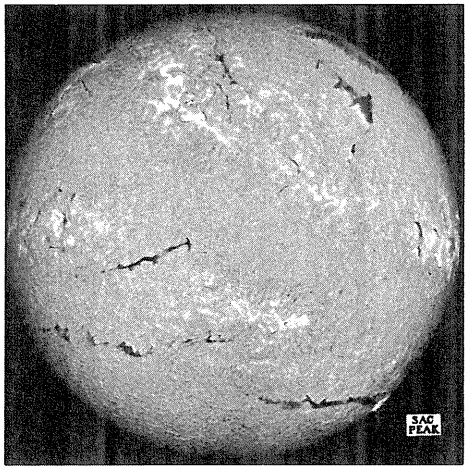
40 Apr 67

SACRAMENTO PEAK Hα

N

E W

S



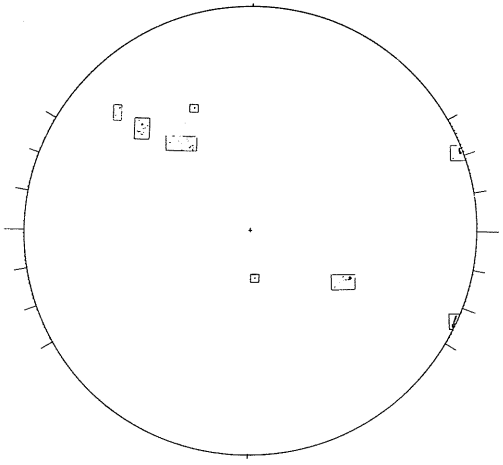
1507 UT

ESSA-BOULDER SUNSPOTS

Np

E W

Sp



2103 UT

E W

NO DATA

Levels
± 3
± 6
±10
±15
±25
±40

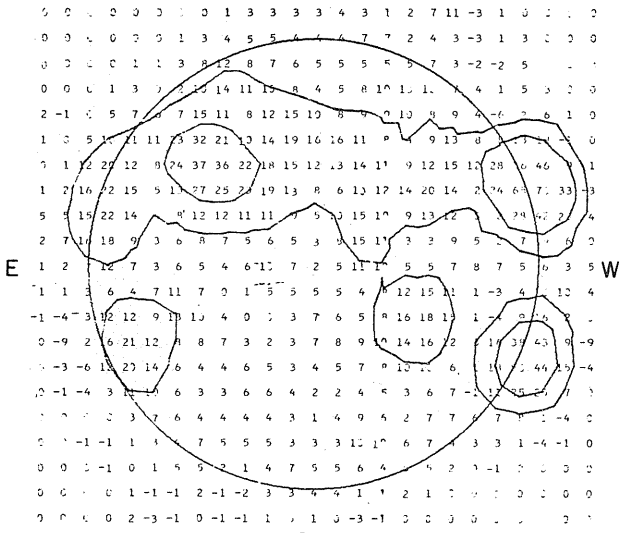
STANFORD 9.1 cm.

Np

E W

Sp

20-21 UT Brightness Unit 5,000° K

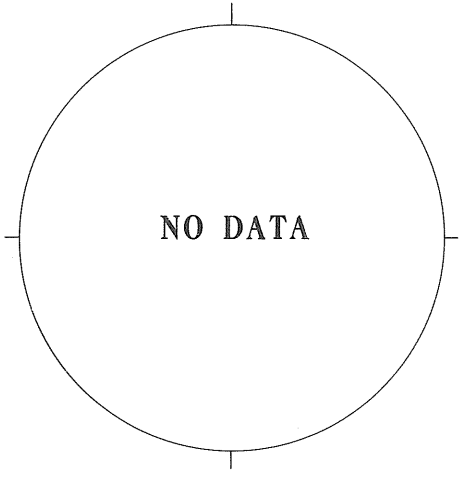


FLEURS, AUSTRALIA 21 cm.

N

E W

S



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

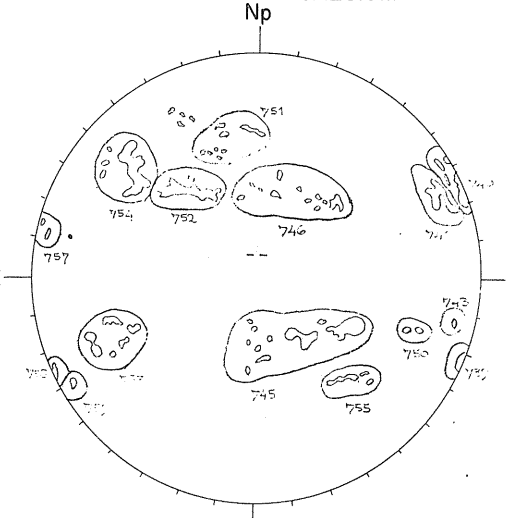
McMATH-HULBERT CALCIUM REPORT

Np

W E W

Sp

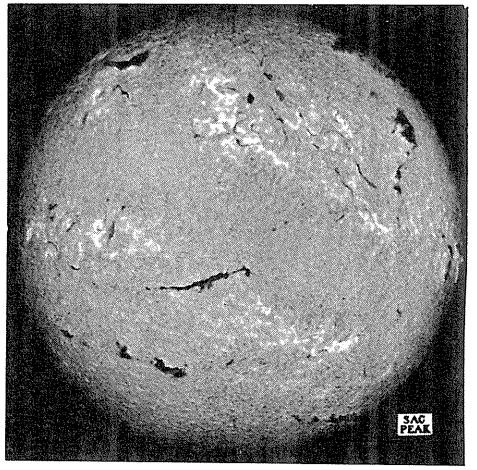
1510 UT



39-20-3.5
40-70-3
41-35-3
45-38-3
52-24-3
53-17-2.5
54-30-3
57-11-2.5
58-10-2.5
59-05-2.5

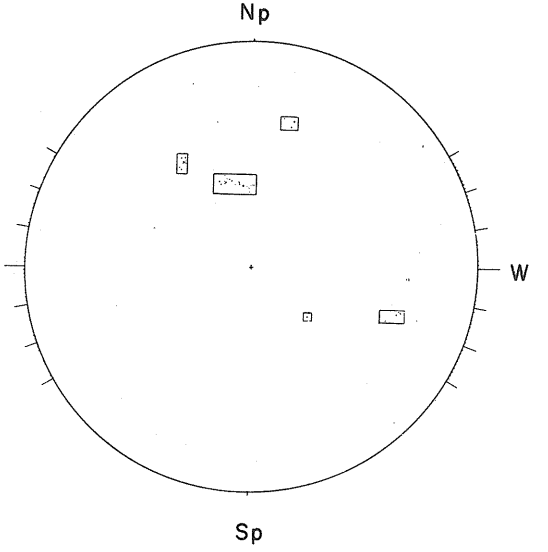
APRIL 3, 1967 (P=-26.28, B_o=-6.44, L_o=201.12)

SACRAMENTO PEAK Hα



1836 UT

ESSA-BOULDER SUNSPOTS

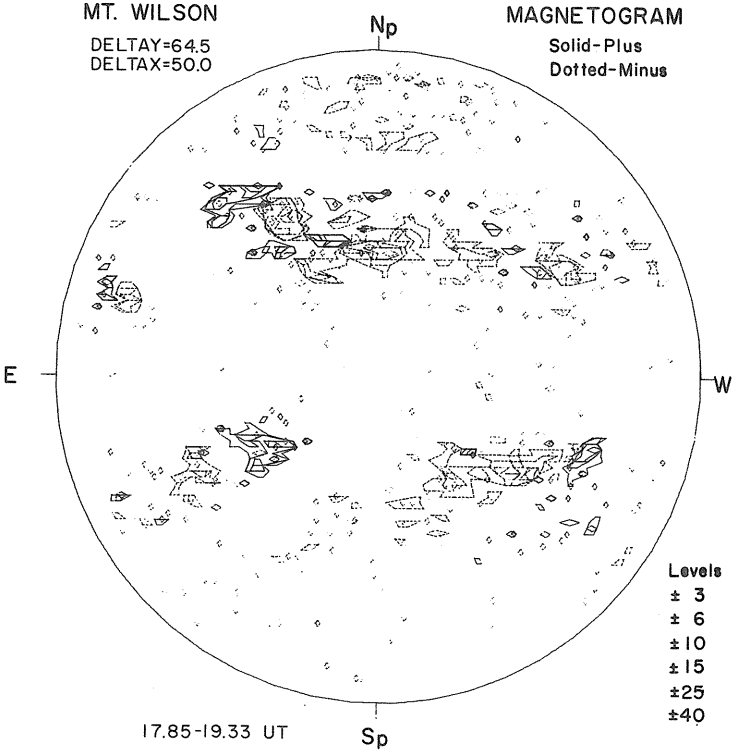


1435 UT

MT. WILSON MAGNETOGRAM

DELTAY=64.5
DELTAX=50.0

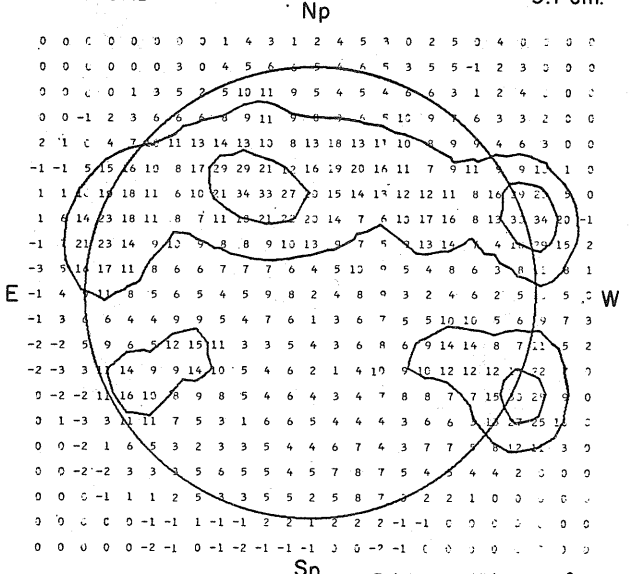
Solid-Plus
Dotted-Minus



Levels
± 3
± 6
±10
±15
±25
±40

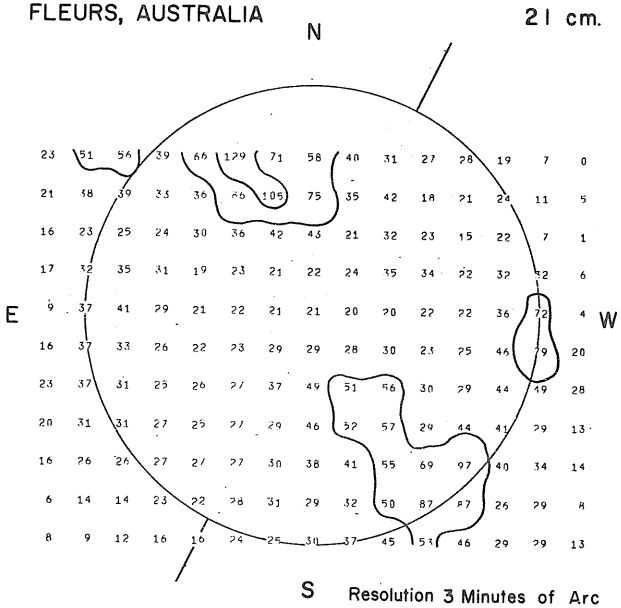
17.85-19.33 UT

STANFORD 9.1 cm.



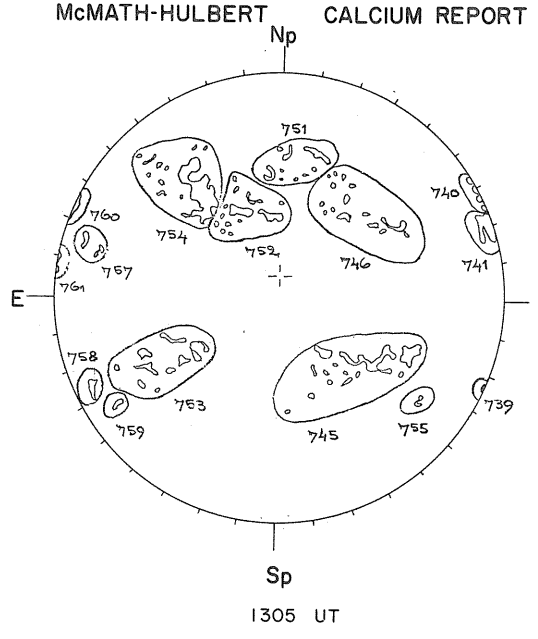
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



41-30-2
45-39-3.5
46-15-2.5
51-14-3
52-21-3
53-19-3
54-39-3
57-08-2.5
58-08-2.5
59-04-2.5
60-11-2.5

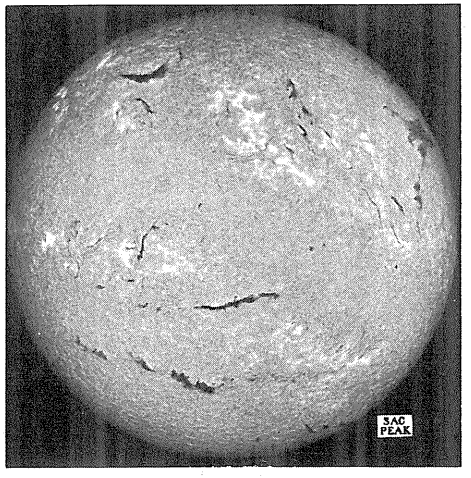
1305 UT

41
Apr 67

APRIL 4, 1967 (P=-26.31, B_o=-6.38, L_o=187.92)

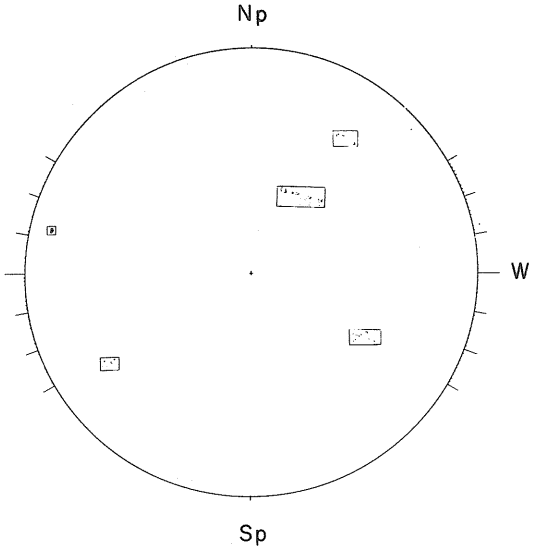
42
Apr 67

SACRAMENTO PEAK Hα



1448 UT

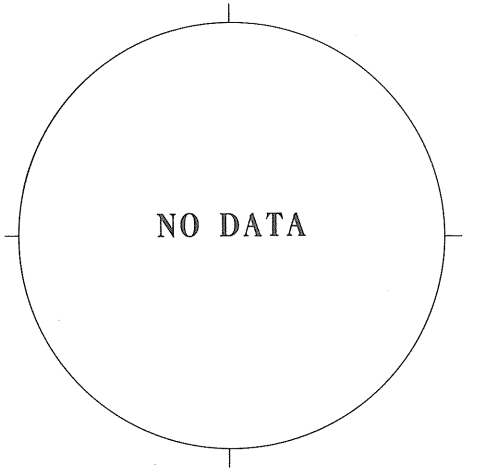
ESSA-BOULDER SUNSPOTS



2130 UT

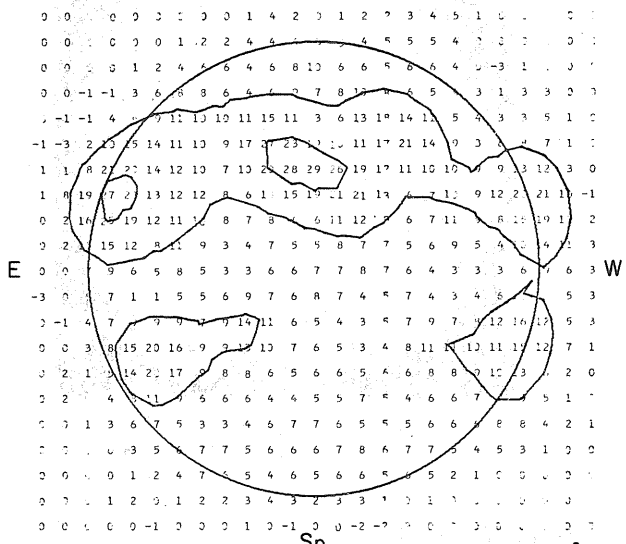
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



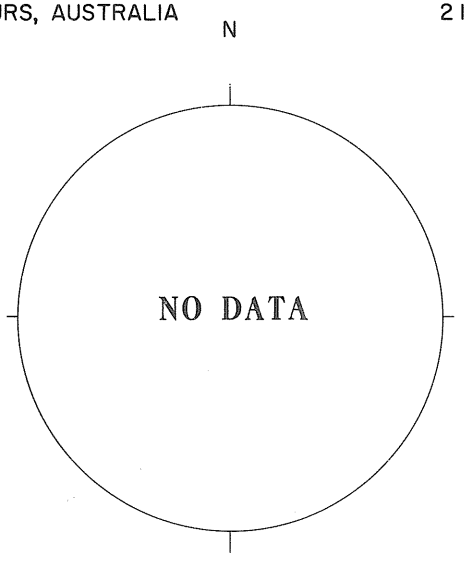
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



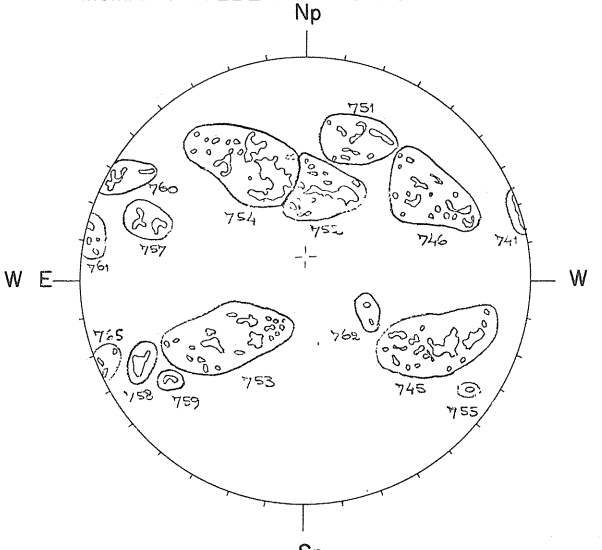
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



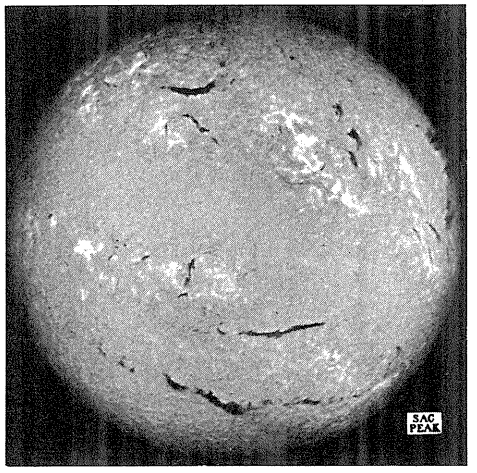
45-37-3.5
51-13-3.5
52-21-3.5
53-27-2.5
54-53-3.5
57-10-2.5
58-11-3.5
60-19-3

1255 UT

APRIL 5, 1967 (P=-26.33, B_o=-6.32, L_o=174.73)

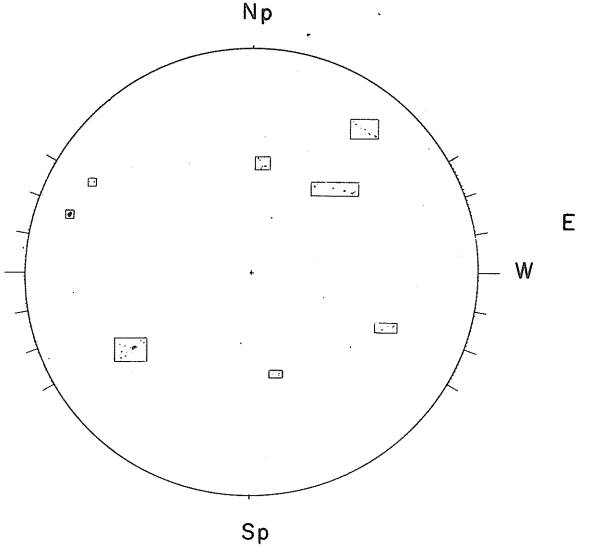
MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

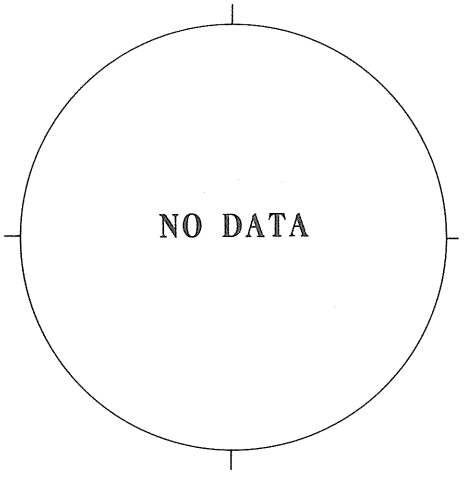


1652 UT

ESSA-BOULDER SUNSPOTS

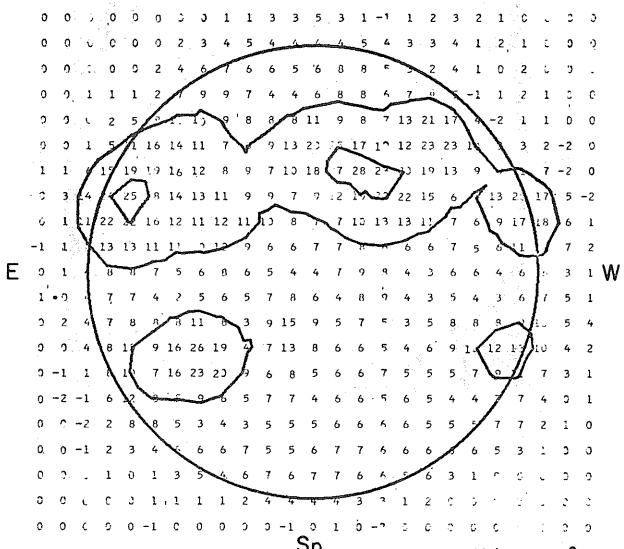


1450 UT



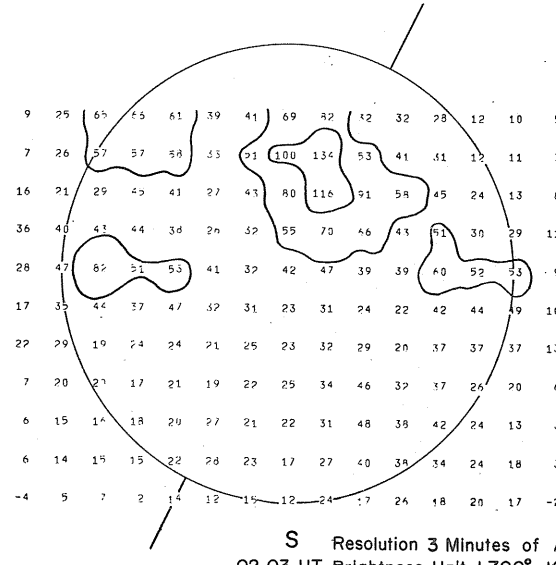
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



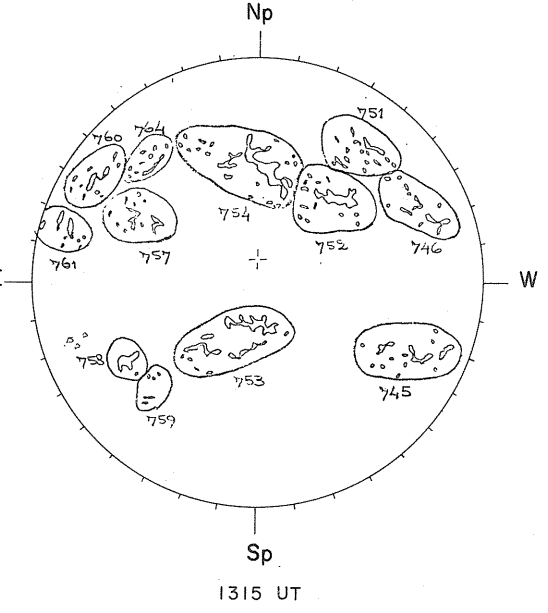
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

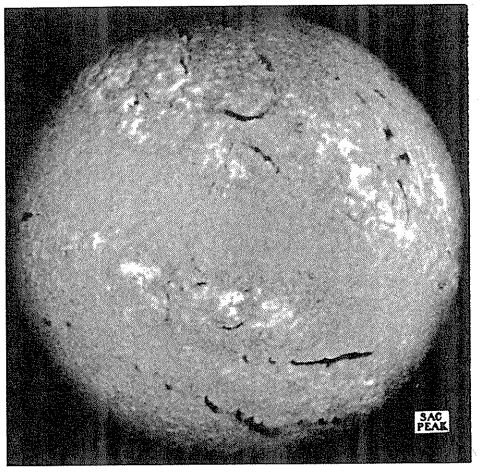


45-23-3.5
51-14-3.5
52-21-3
53-25-2.5
54-39-3.5
57-10-2.5
58-10-3
60-13-3

1315 UT

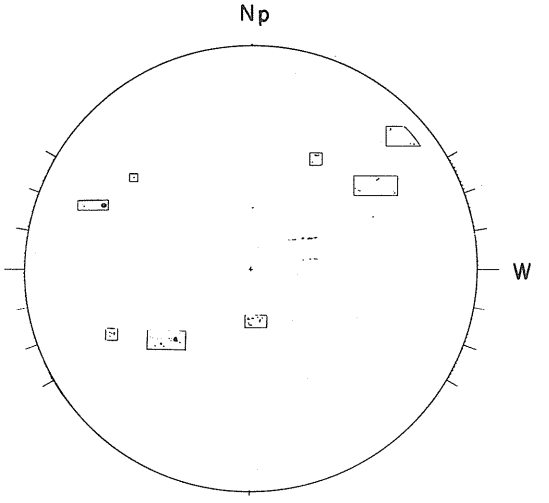
APRIL 6, 1967 (P=-26.34, B_o=-6.26, L_o=161.53)

SACRAMENTO PEAK Hα



2343 UT

ESSA-BOULDER SUNSPOTS

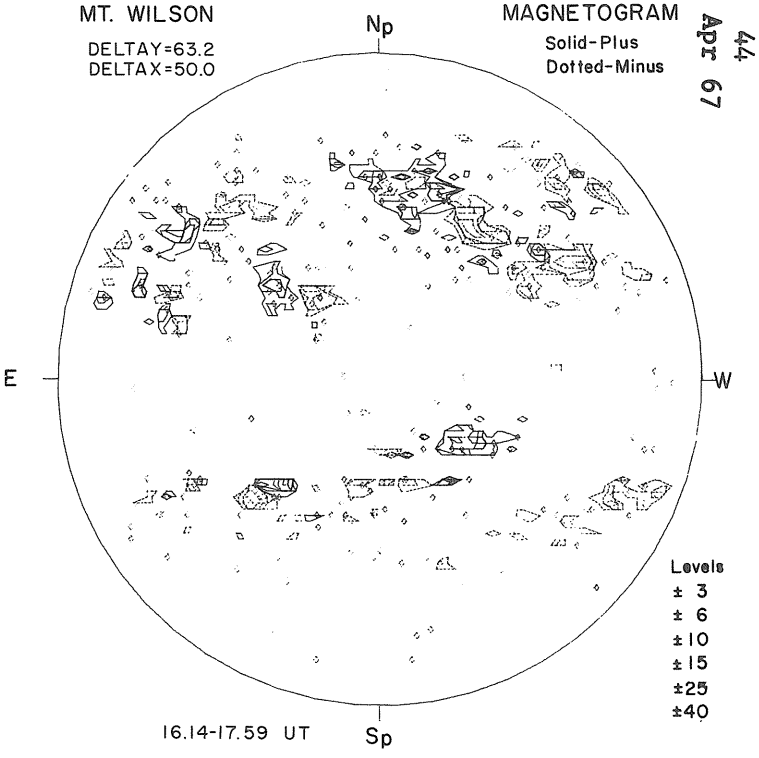


1500 UT

MT. WILSON MAGNETOGRAM

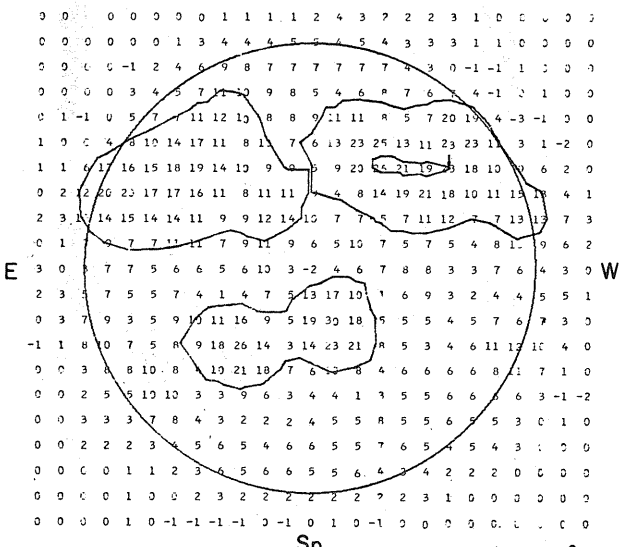
DELTAY=63.2
DELTAX=50.0

Solid-Plus
Dotted-Minus



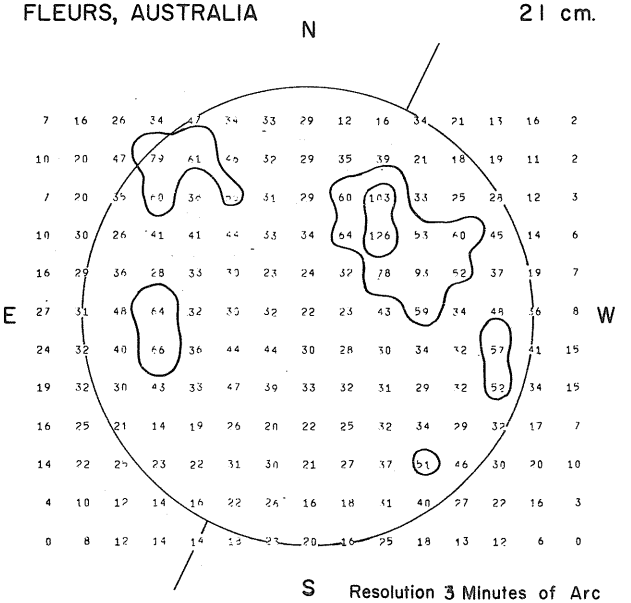
16.14-17.59 UT

STANFORD 9.1 cm.



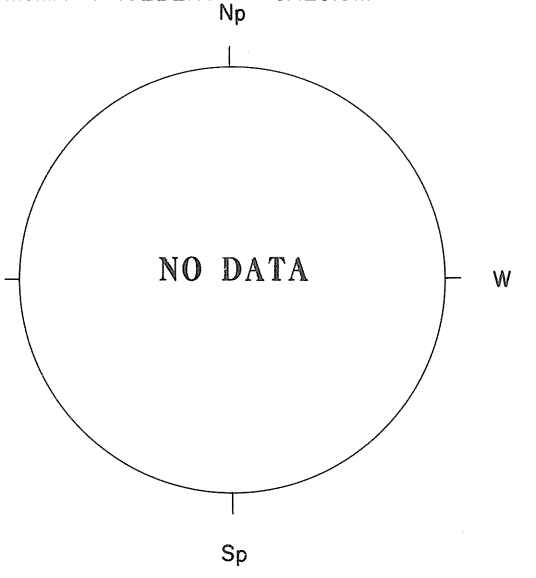
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



APRIL 7, 1967 (P=-26.35, B_o=-6.20, L_o=148.34)

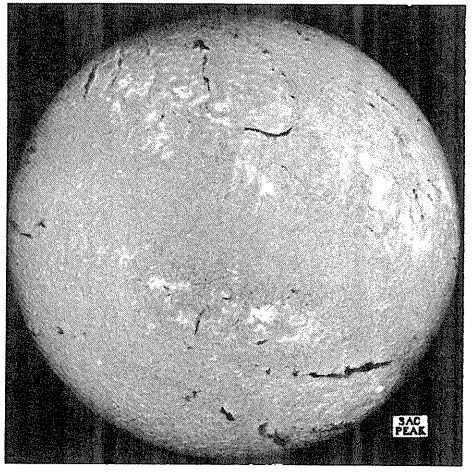
MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

N

E W

S



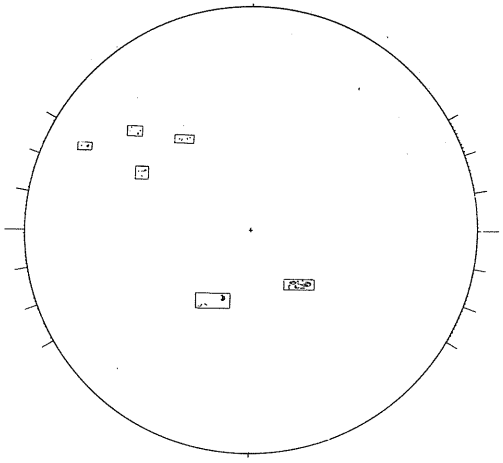
1637 UT

ESSA-BOULDER SUNSPOTS

Np

E W

Sp



1600 UT

NO DATA

E W

Sp

Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.

Np

E W

Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

NO DATA

W E

S

02-03 UT

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

McMATH-HULBERT CALCIUM REPORT

Np

NO DATA

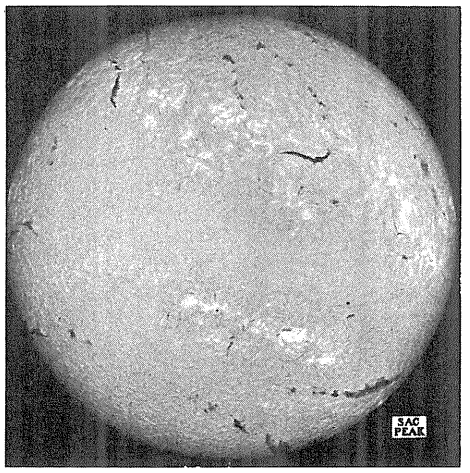
W E

Sp

45
Apr 67

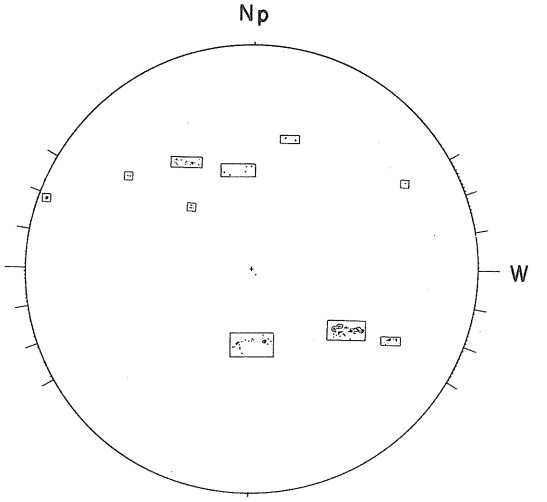
APRIL 8, 1967 (P=-26.35, B_o=-6.13, L_o=135.14)

SACRAMENTO PEAK Hα



1454 UT

ESSA-BOULDER SUNSPOTS

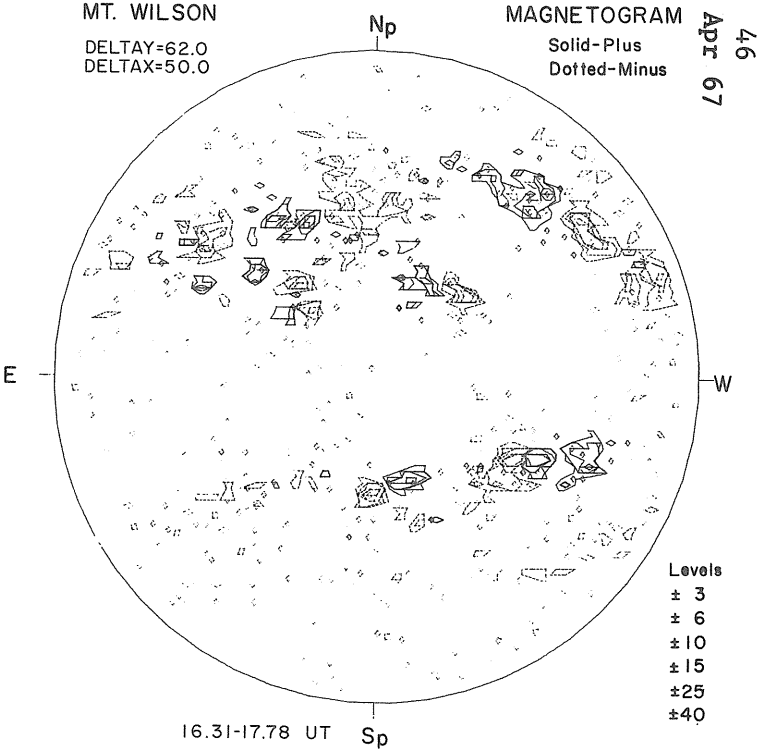


1535 UT

MT. WILSON MAGNETOGRAM

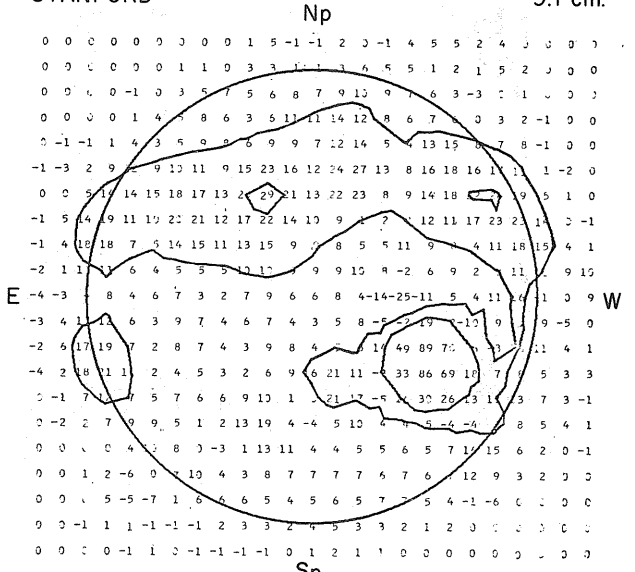
DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus



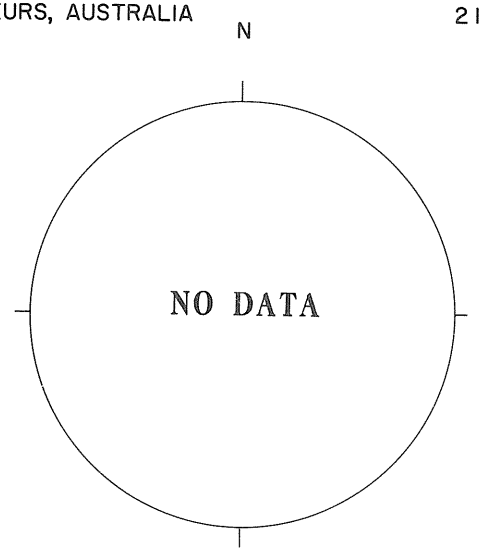
16.31-17.78 UT

STANFORD 9.1 cm.



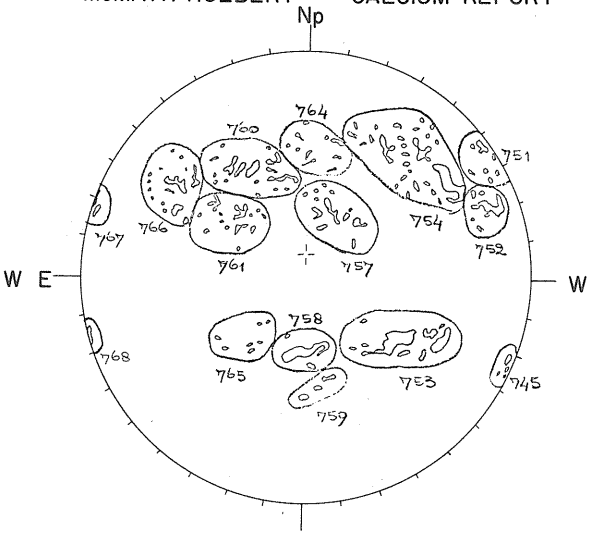
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

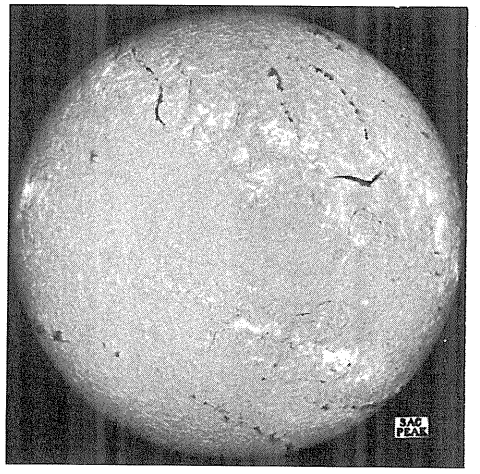


45-09-2.5
51-12-2.5
52-22-2.5
53-34-3.5
54-48-3
57-16-2.5
58-14-2.5
60-24-2.5
61-15-2.5

1310 UT

APRIL 9, 1967 (P=-26.34, B_o=-6.06, L_o=121.94)

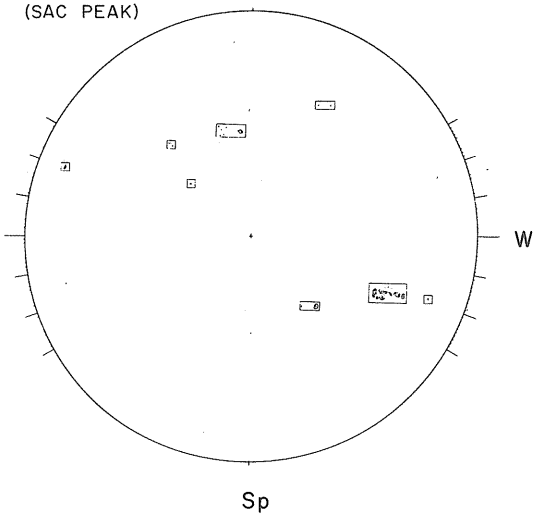
SACRAMENTO PEAK Hα



1646 UT

ESSA-BOULDER SUNSPOTS

(SAC PEAK)

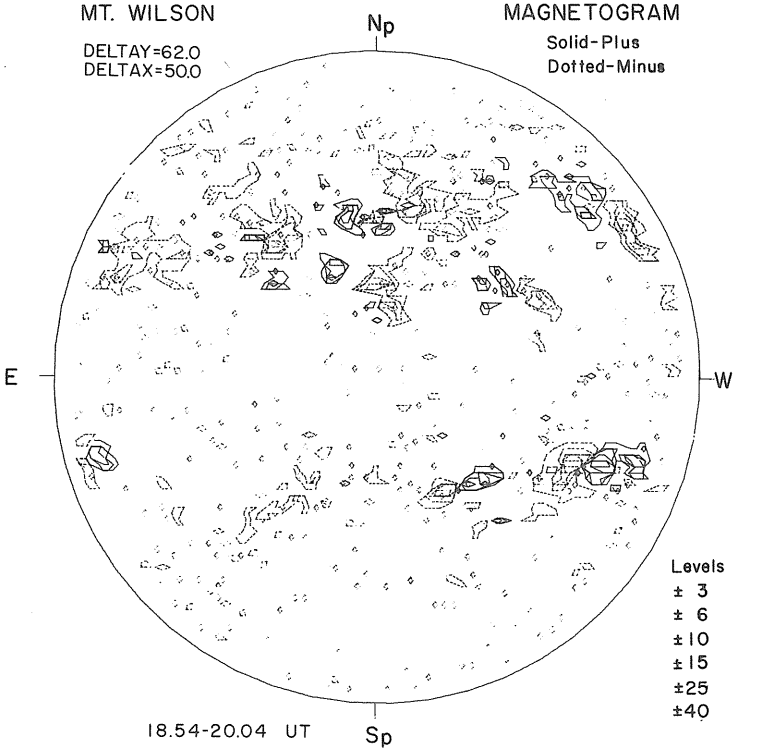


1350 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

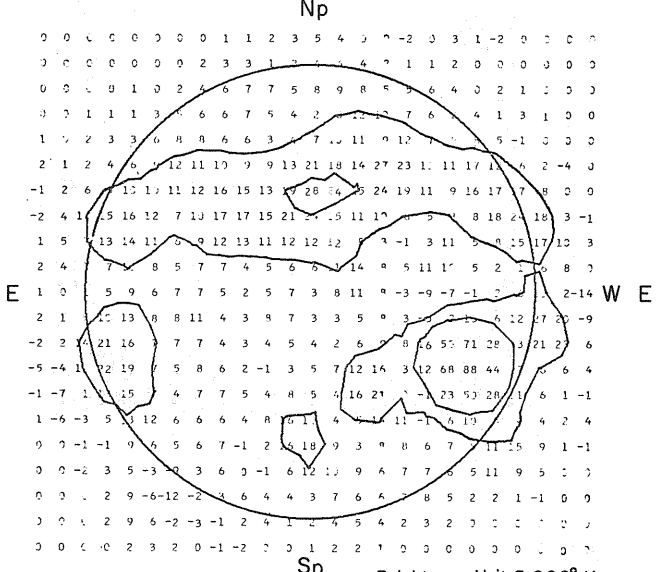
Solid-Plus
Dotted-Minus



Levels
± 3
± 6
±10
±15
±25
±40

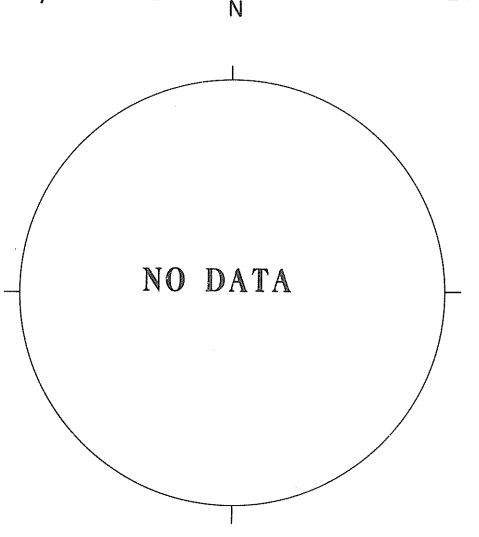
18.54-20.04 UT

STANFORD 9.1 cm.



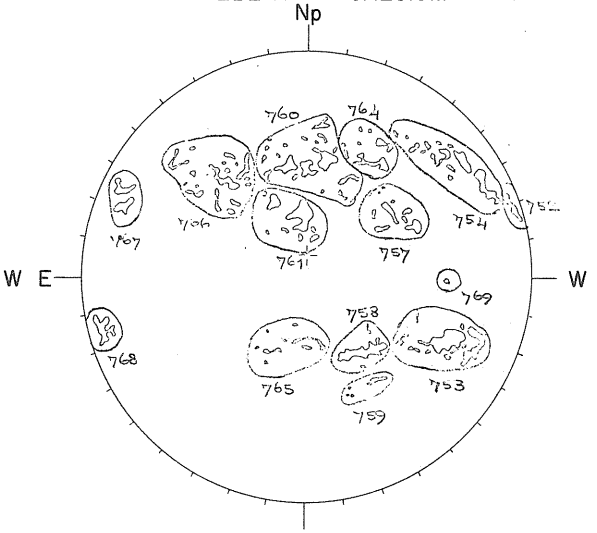
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



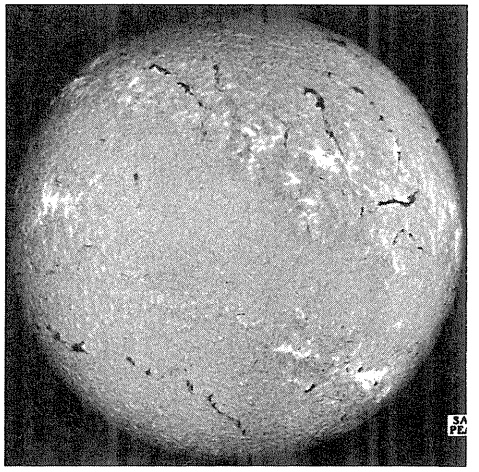
53-38-3.5
54-40-2.5
57-18-2.5
58-13-3
60-30-3
61-20-2.5
66-25-3
68-22-2.5
69-01-2.5

1645 UT

APRIL 10, 1967 (P=-26.33, B_o=-6.00, L_o=108.74)

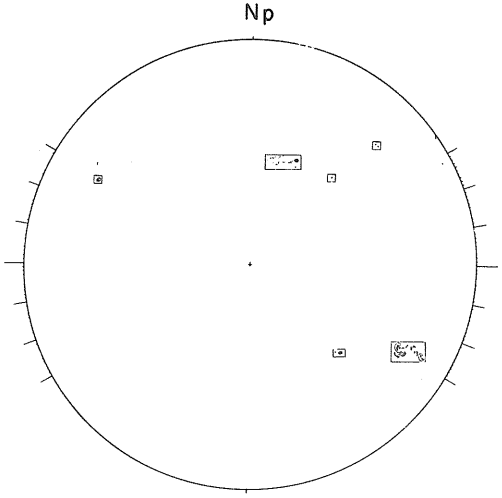
48
Apr 67

SACRAMENTO PEAK Hα



2002 UT

ESSA-BOULDER SUNSPOTS



1410 UT

MT. WILSON MAGNETOGRAM

Np

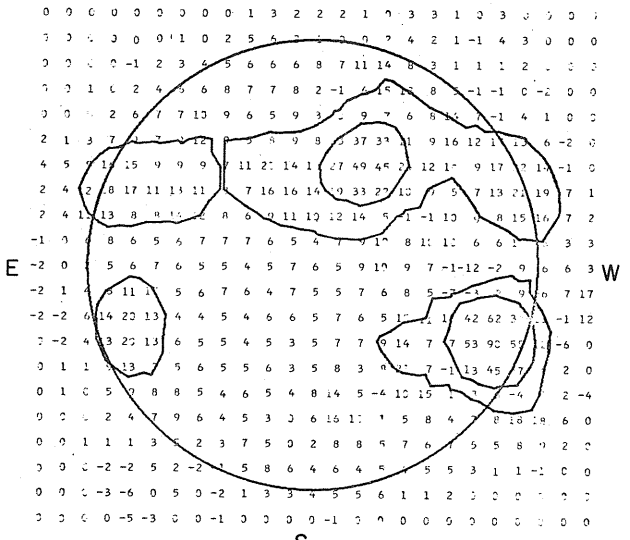
Solid-Plus
Dotted-Minus

NO DATA

E W Sp

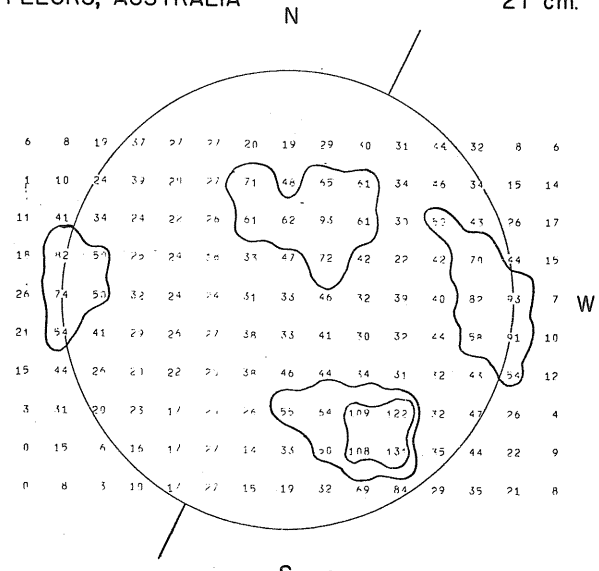
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



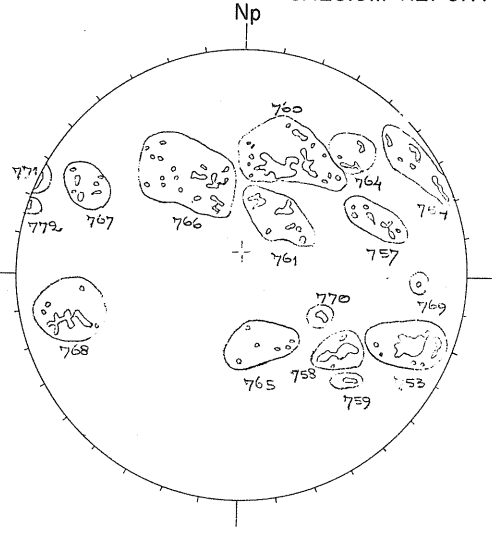
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



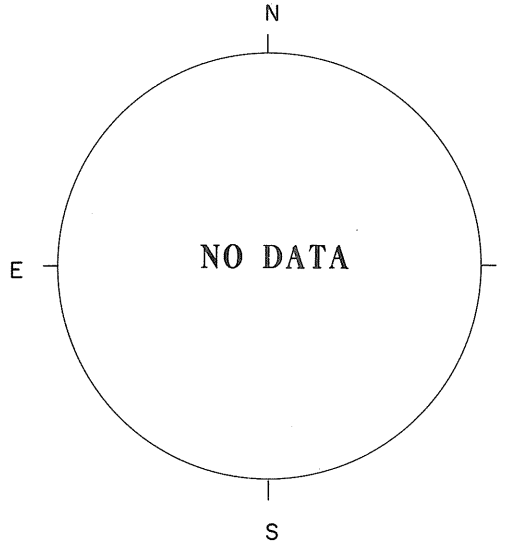
1600 UT

53-43-3.5
54-30-3
58-13-2.5
60-32-3.5
61-14-2.5
66-21-3
67-14-2.5
68-20-2.5

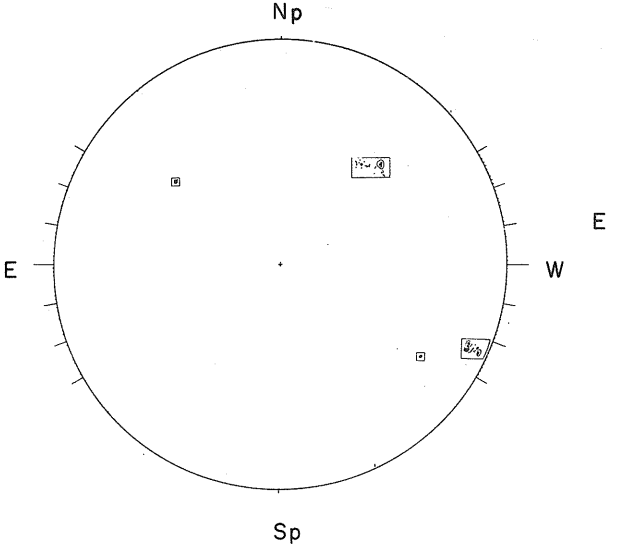
APRIL 11, 1967 (P=-26.30, B_o=-5.93, L_o=95.54)

MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

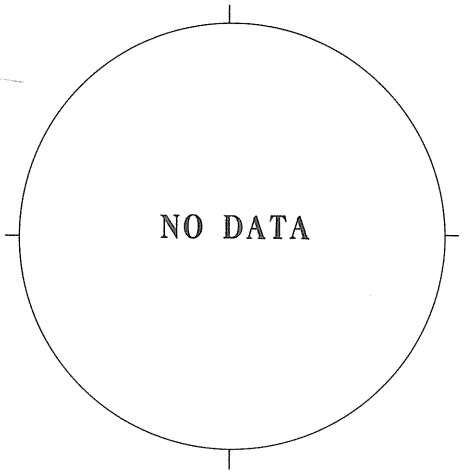
SACRAMENTO PEAK Hα



ESSA-BOULDER SUNSPOTS

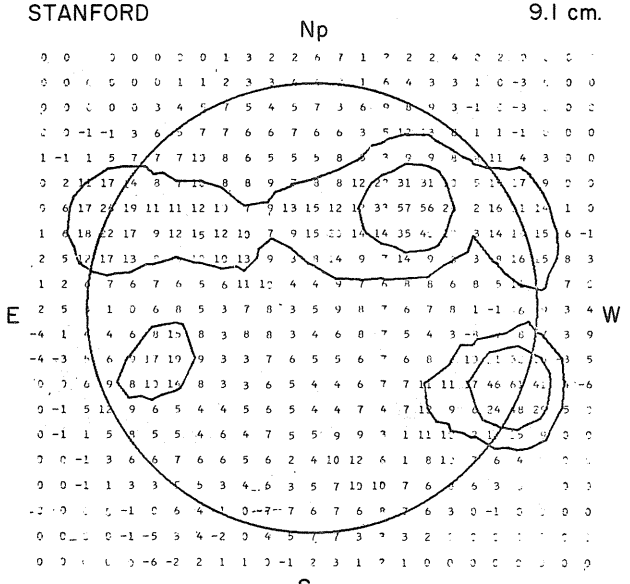


1550 UT



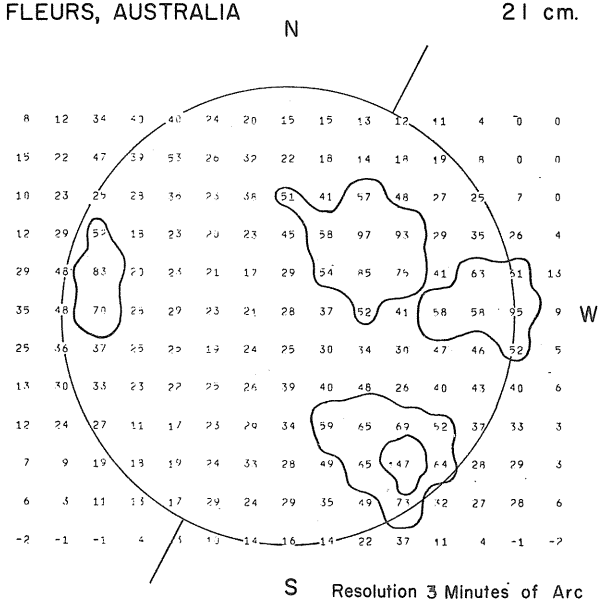
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



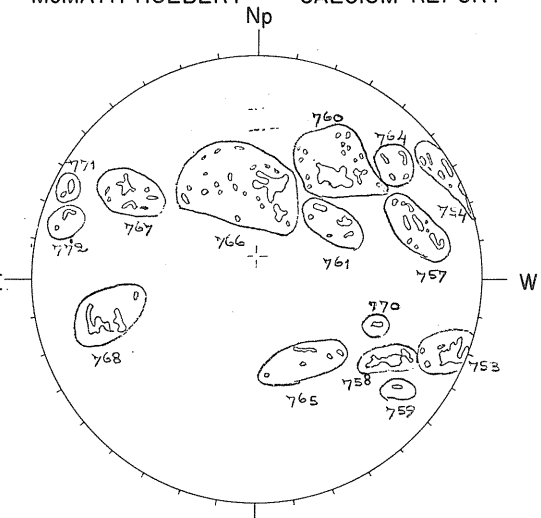
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



1300 UT

53-36-3.5
54-28-2.5
58-14-3
60-35-3.5
61-12-3
66-25-3
67-12-2.5
68-24-2.5
70-02-2.5

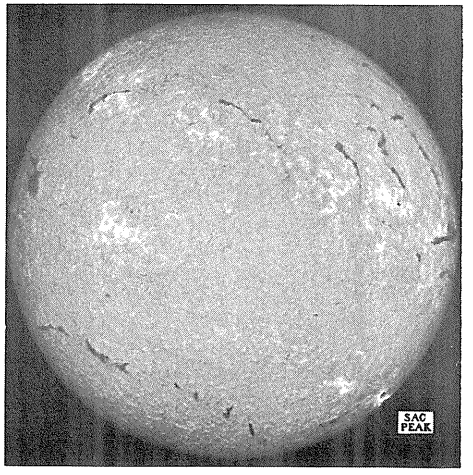
APRIL 12, 1967 (P=-26.27, B_o=-5.85, L_o=82.34)

50
Apr 67

SACRAMENTO PEAK Hα

N

E W



S

1629 UT

ESSA-BOULDER SUNSPOTS

Np

E W

Sp

1600 UT

MT. WILSON MAGNETOGRAM

Np

Solid-Plus
Dotted-Minus

E W

NO DATA

Sp

Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.

Np

E W

Sp

20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

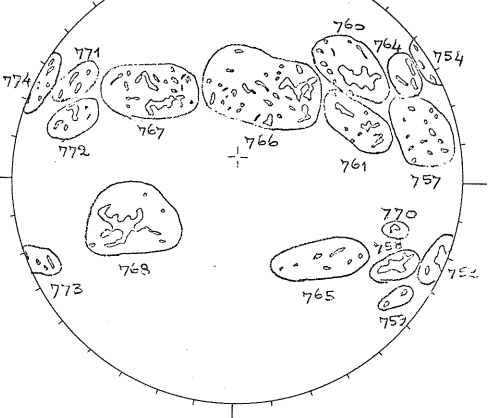
NO DATA

S

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

McMATH-HULBERT CALCIUM REPORT

Np



W E W

Sp

1310 UT

53-35-3.5
58-13-3.5
60-32-3.5
61-12-3
66-32-2.5
67-25-2.5
68-24-2.5
70-03-2.5

APRIL 13, 1967 (P=-26.24, B_o=-5.78, L_o=69.14)

MT. WILSON MAGNETOGRAM

Np

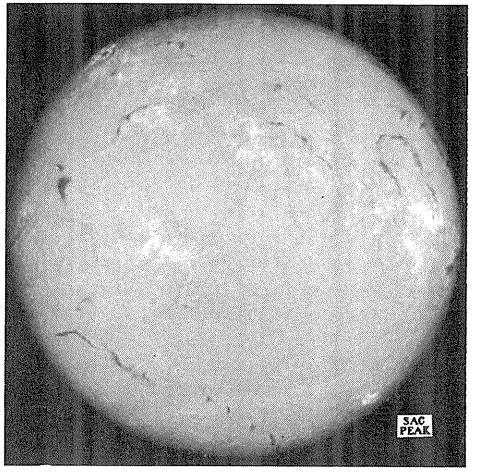
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

N

E W

S



1911 UT

ESSA-BOULDER SUNSPOTS

Np

(SAC PEAK)

E W

Sp

1721 UT

NO DATA

E W

Sp

Levels
± 3
± 6
± 10
± 15
±25
±40

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

NO DATA

E W

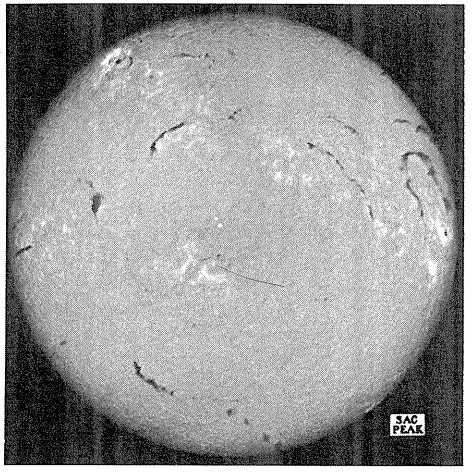
Sp

APRIL 14, 1967 (P=-26.19, B_o=-5.70, L_o=55.94)

52 Apr 67

SACRAMENTO PEAK Hα

N

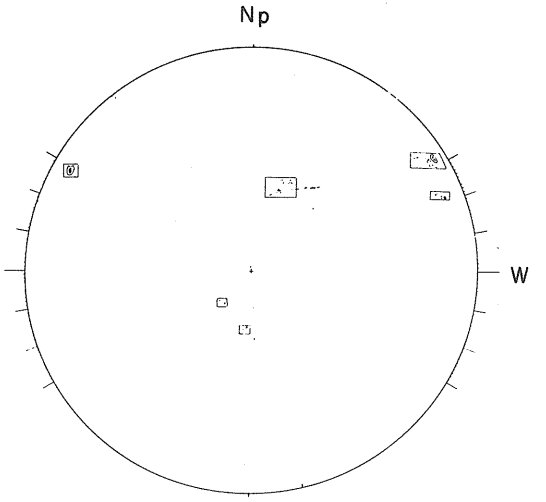


E W

S

1606 UT

ESSA-BOULDER SUNSPOTS

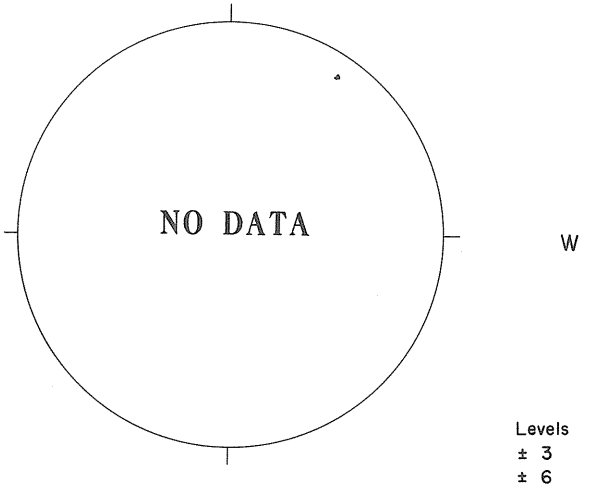


1925 UT

MT. WILSON MAGNETOGRAM

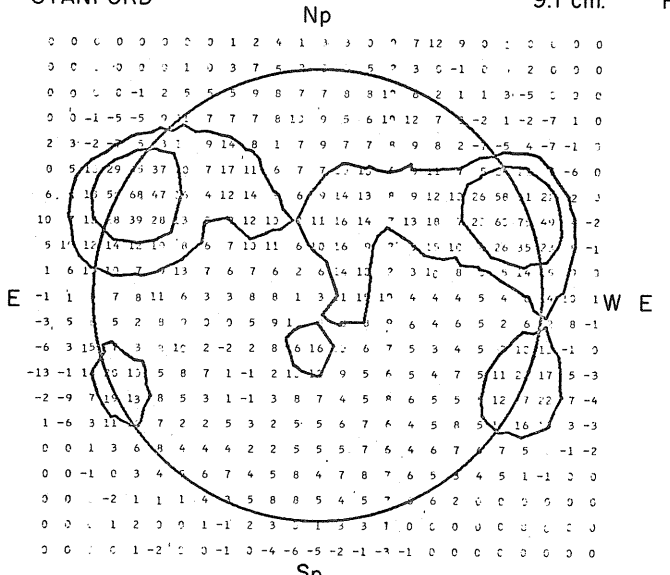
Np

Solid-Plus
Dotted-Minus



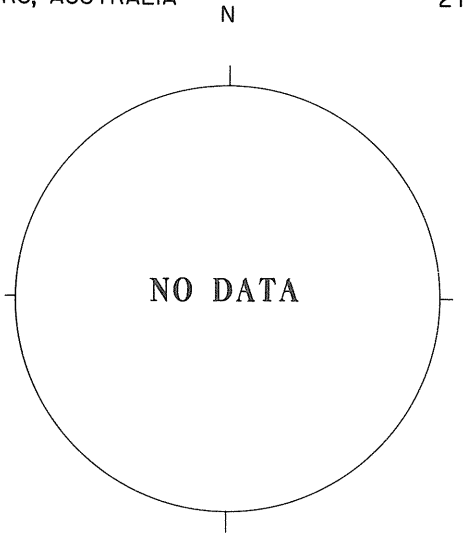
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



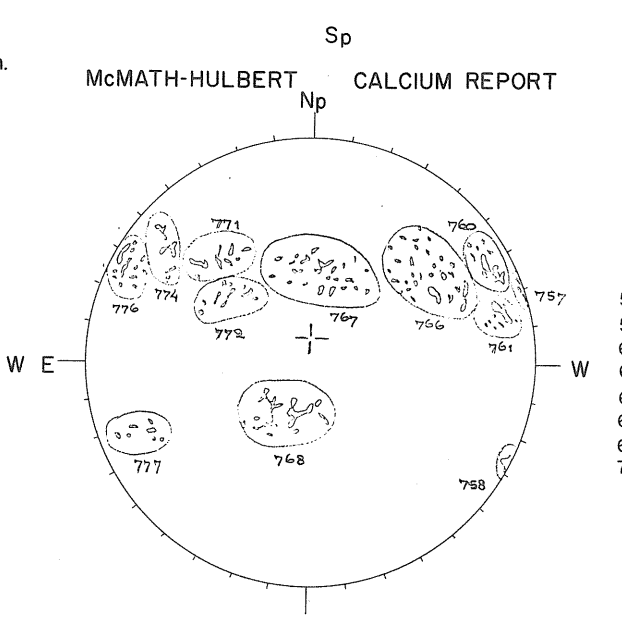
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

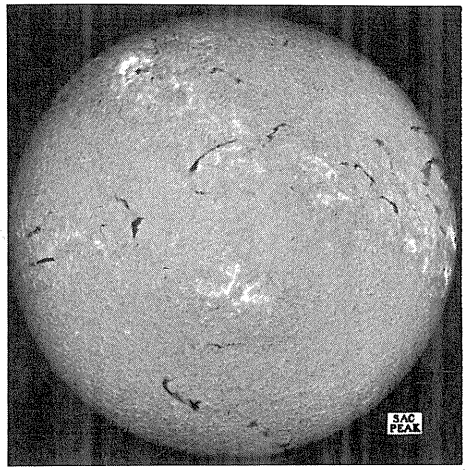


1315 UT

57-05-2.5
58-15-2.5
60-26-3.5
61-13-3.5
66-25-3
67-18-3
68-25-3
76-23-2.5

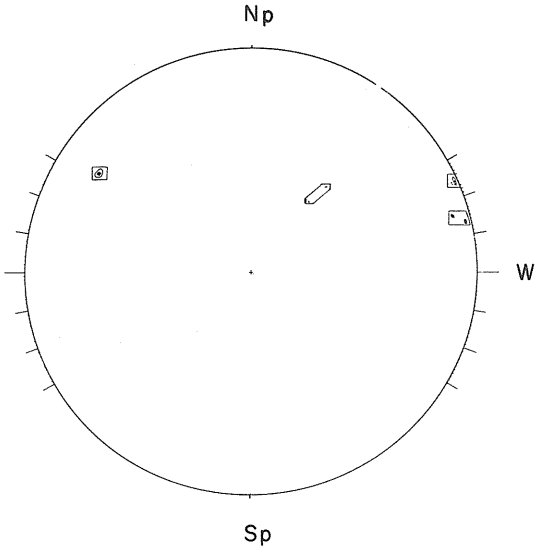
APRIL 15, 1967 (P=-26.14, B_o=-5.63, L_o=42.73)

SACRAMENTO PEAK Hα



1433 UT

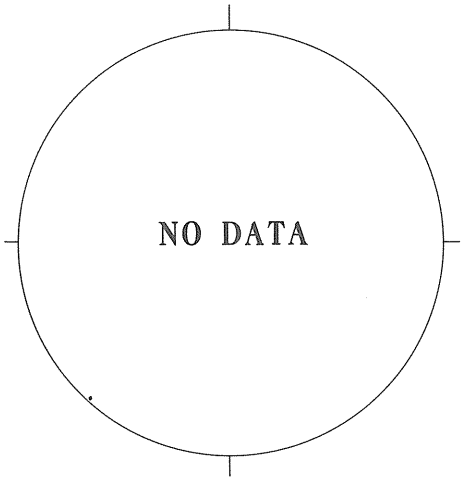
ESSA-BOULDER SUNSPOTS



1400 UT

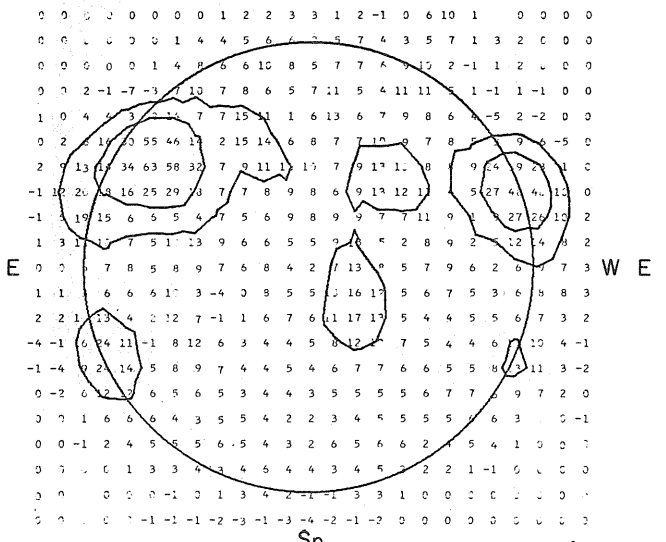
MT. WILSON Np MAGNETOGRAM

Solid-Plus
Dotted-Minus



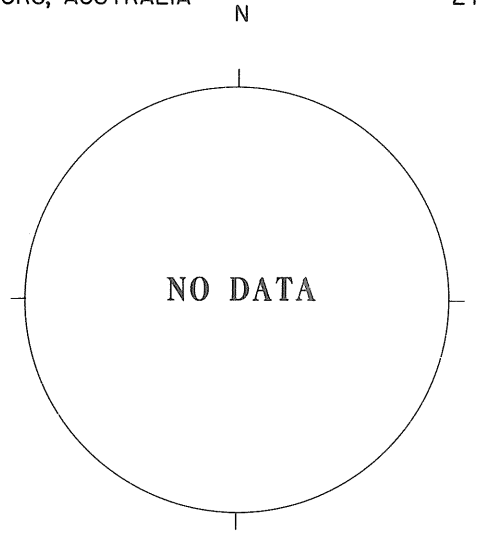
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



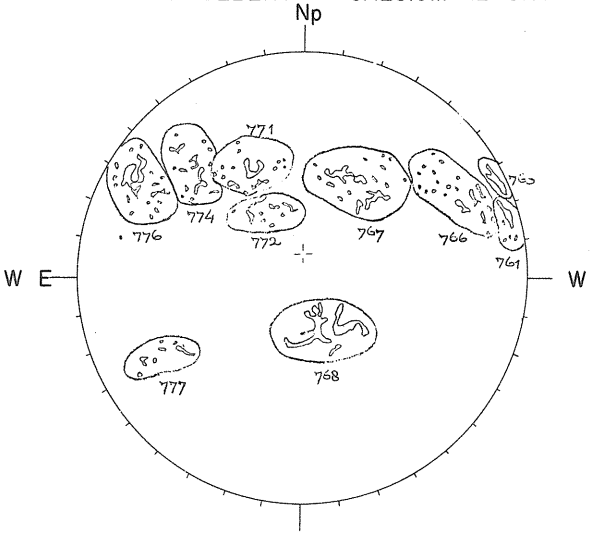
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



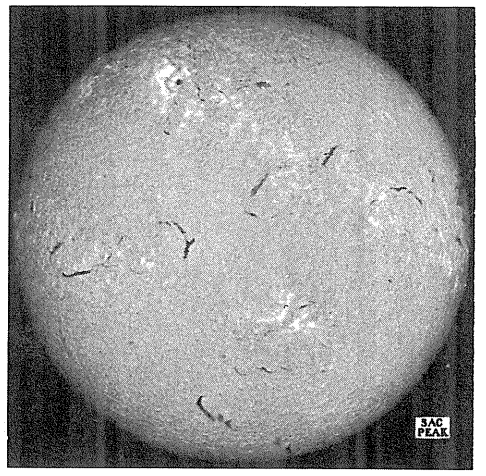
1310 UT

60-17-3.5
61-14-3.5
66-24-3
67-21-3
68-31-2.5
71-12-2.5
74-14-2.5
76-29-2.5

53
Apr 67

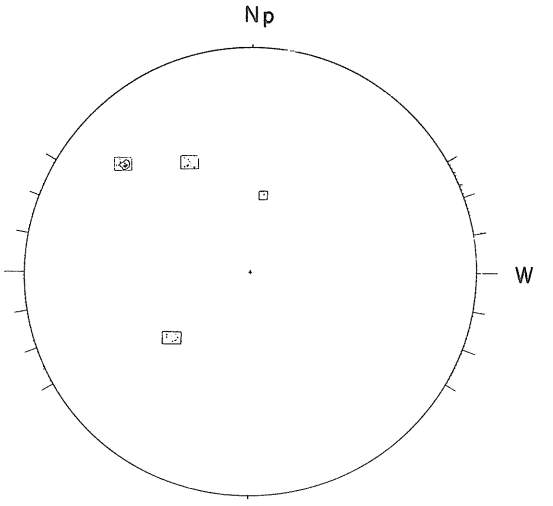
APRIL 16, 1967 (P=-26.08, B_o=-5.55, L_o=29.53)

SACRAMENTO PEAK Hα



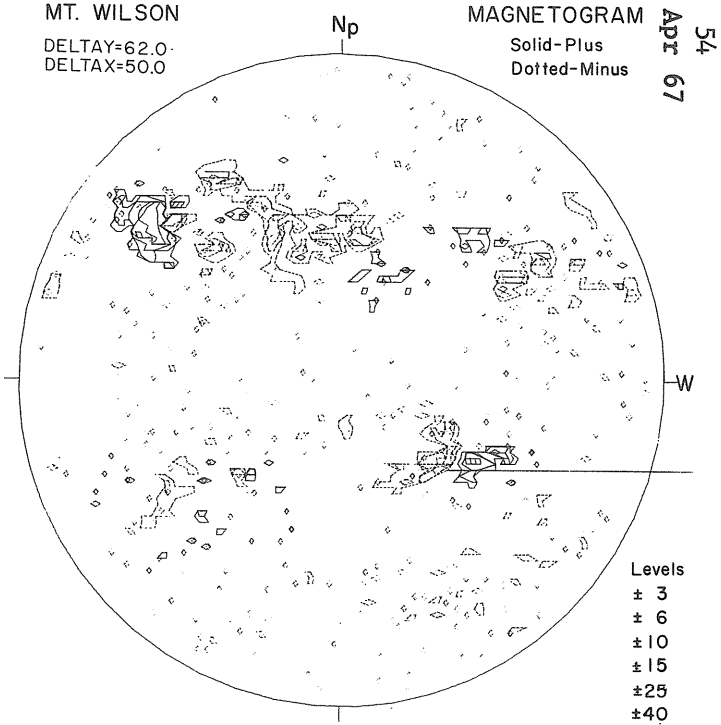
1413 UT

ESSA-BOULDER SUNSPOTS



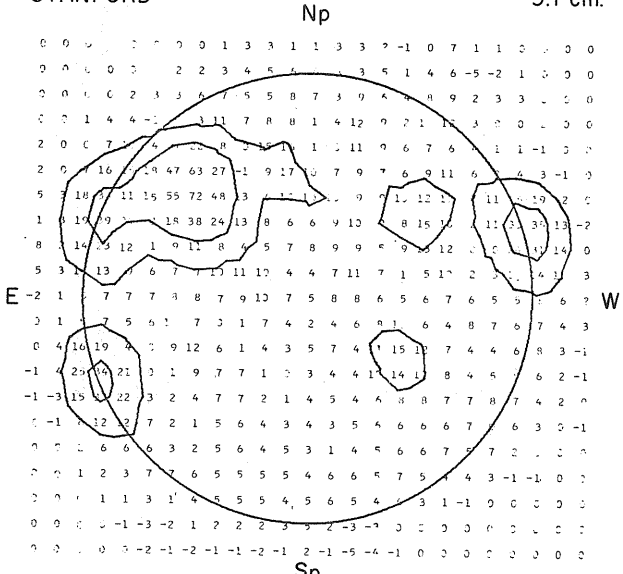
1345 UT

MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus
DELTAY=62.0
DELTAX=50.0



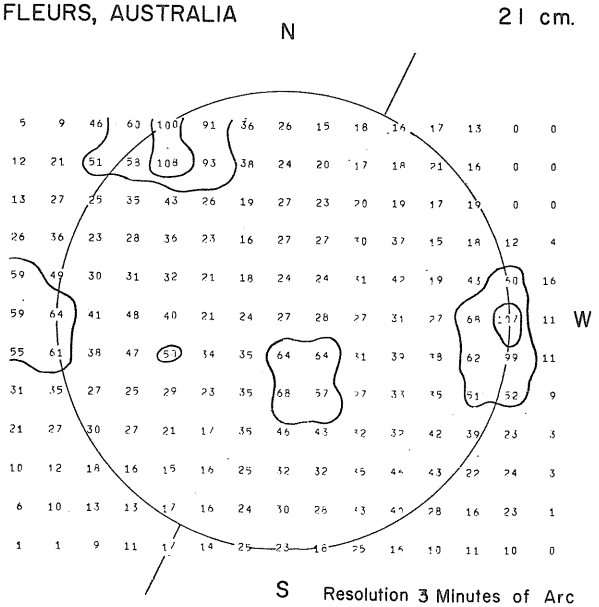
16.54-18.01 UT

STANFORD 9.1 cm.



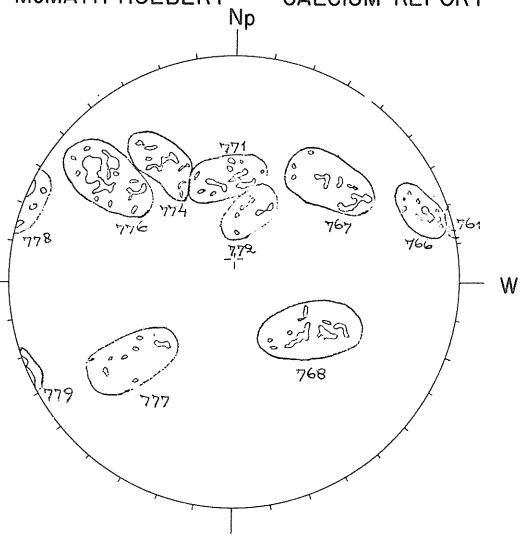
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

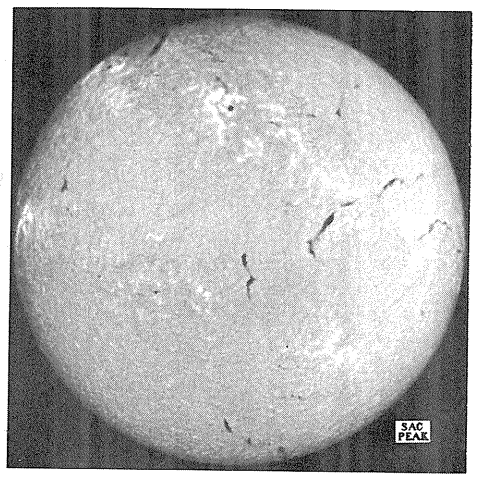


61-05-2.5
66-18-2.5
67-15-3
68-23-3
76-38-3.5
77-09-3
78-14-2.5
79-08-2.5

1550 UT

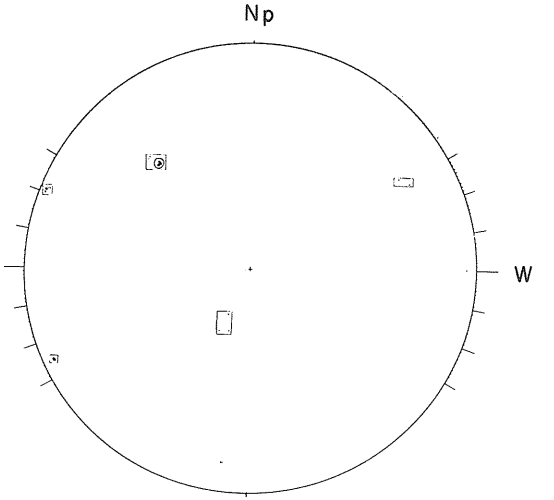
APRIL 17, 1967 (P=-26.02, B_o=-5.47, L_o=16.33)

SACRAMENTO PEAK Hα



2309 UT

ESSA-BOULDER SUNSPOTS

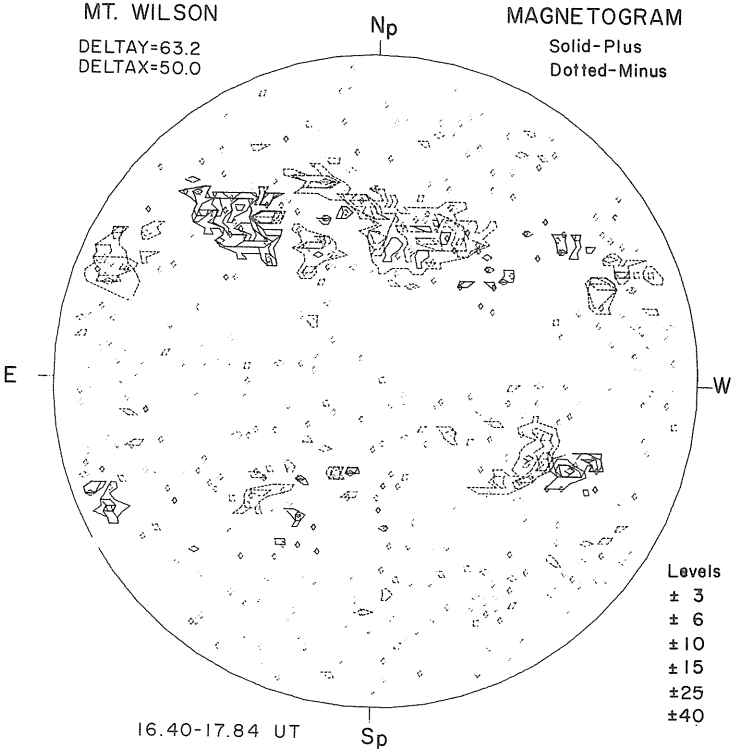


1515 UT

MT. WILSON MAGNETOGRAM

DELTAY=63.2
DELTAX=50.0

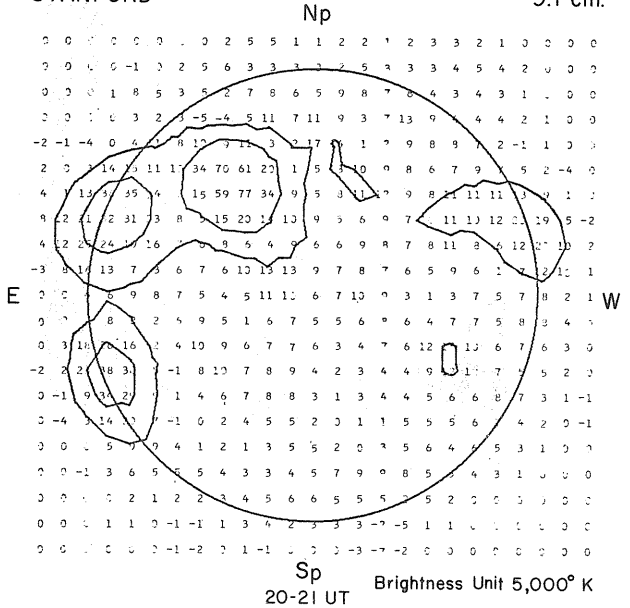
Solid-Plus
Dotted-Minus



Levels
± 3
± 6
±10
±15
±25
±40

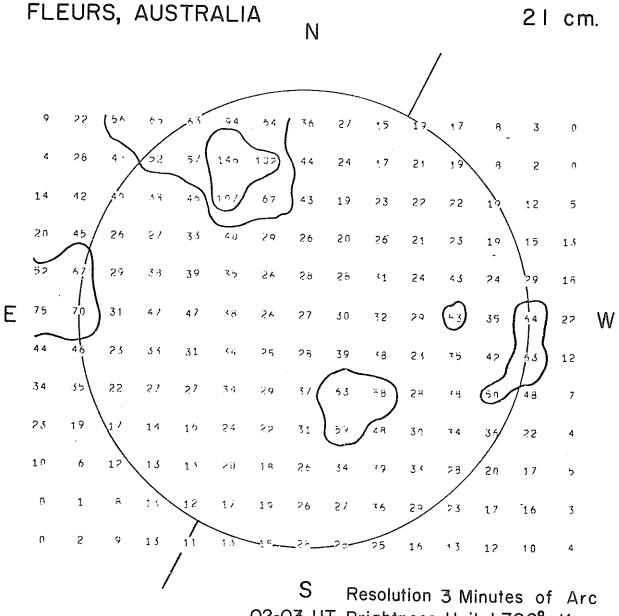
16.40-17.84 UT

STANFORD 9.1 cm.



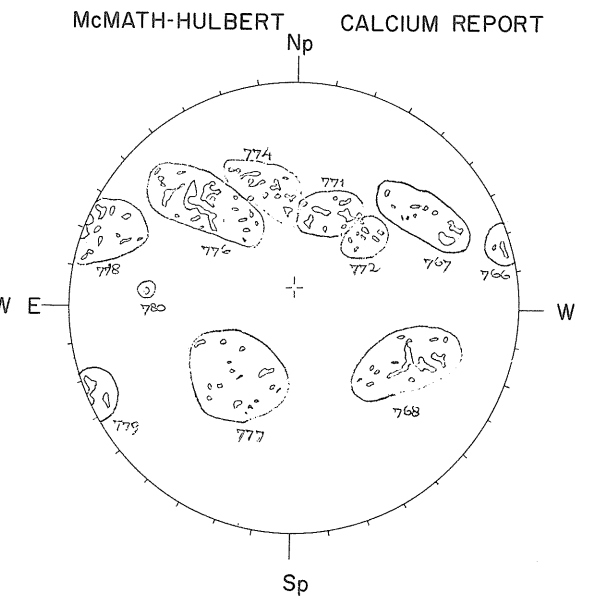
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



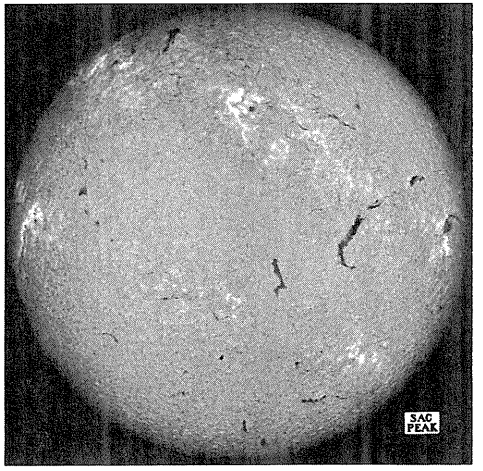
67-14-3
68-18-3
74-12-2.5
76-38-3.5
77-12-3
78-32-2.5
79-21-2.5

1500 UT

APRIL 18, 1967 (P=-25.94, B_o=-5.38, L_o=3.12)

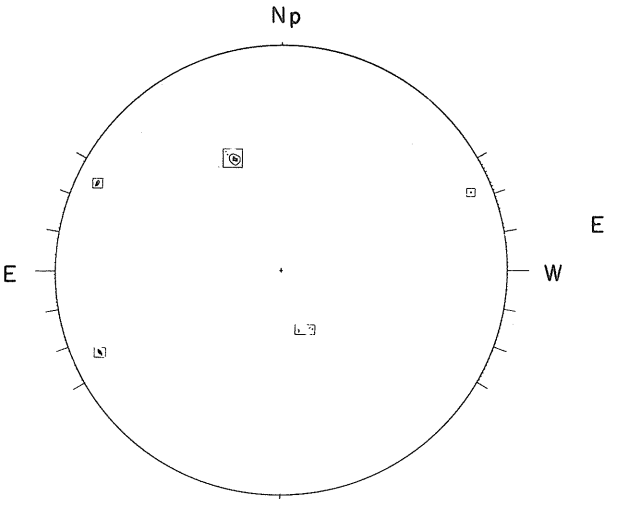
56
Apr 67

SACRAMENTO PEAK Hα



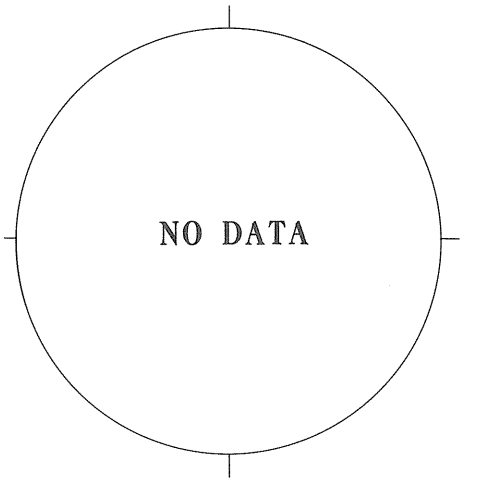
1400 UT

ESSA-BOULDER SUNSPOTS



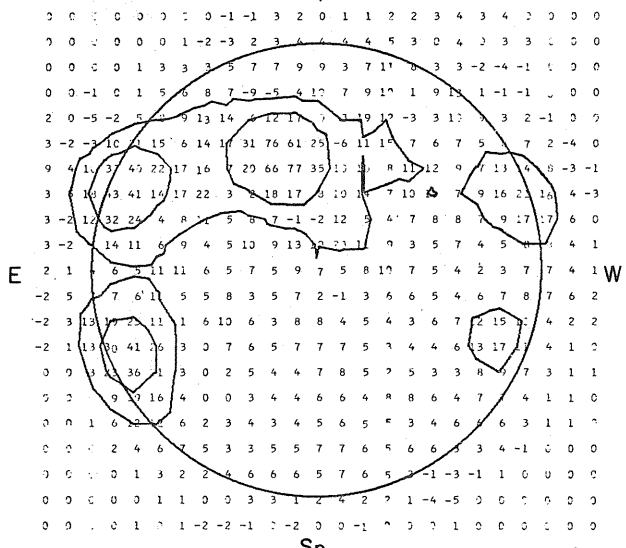
1545 UT

MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus



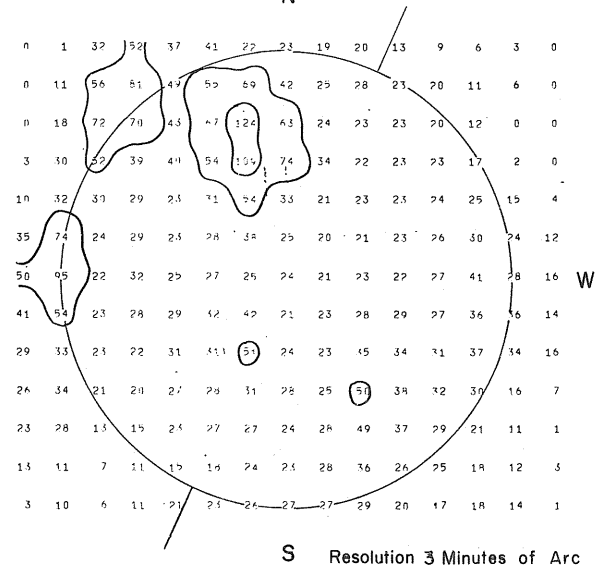
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



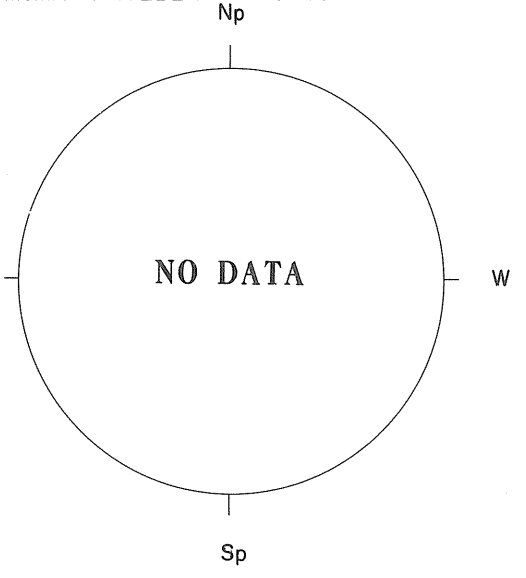
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



APRIL 19, 1967 (P=-25.86, B_o=-5.30, L_o=349.91)

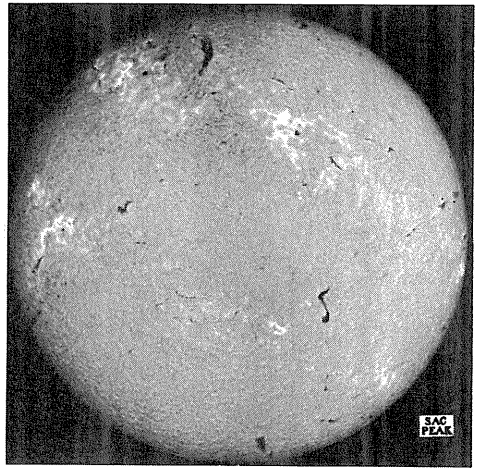
MT. WILSON MAGNETOGRAM

Np

Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

N



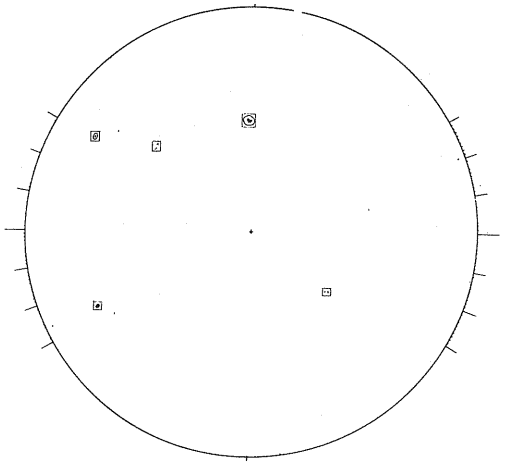
E W

S

1458 UT

ESSA-BOULDER SUNSPOTS

Np



E W

Sp

1600 UT

NO DATA

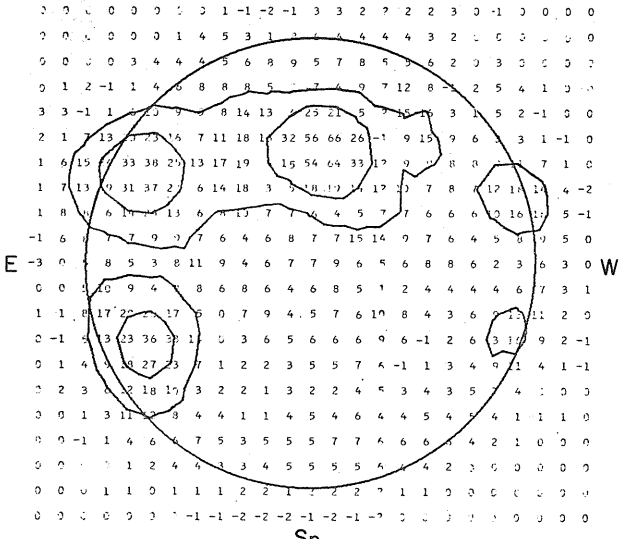
E W

Sp

Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.

Np



E W

Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

NO DATA

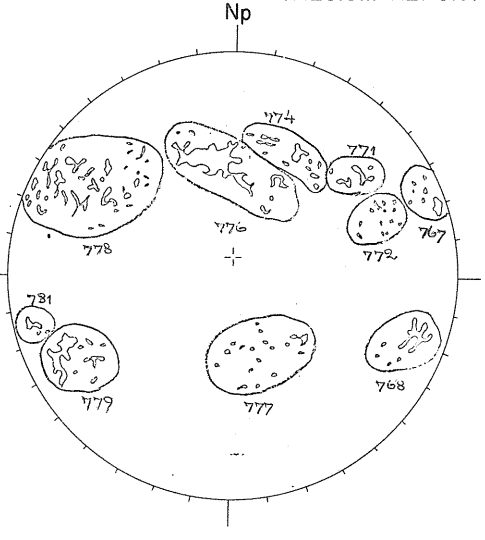
S

02-03 UT

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

McMATH-HULBERT CALCIUM REPORT

Np



W E W

Sp

1310 UT

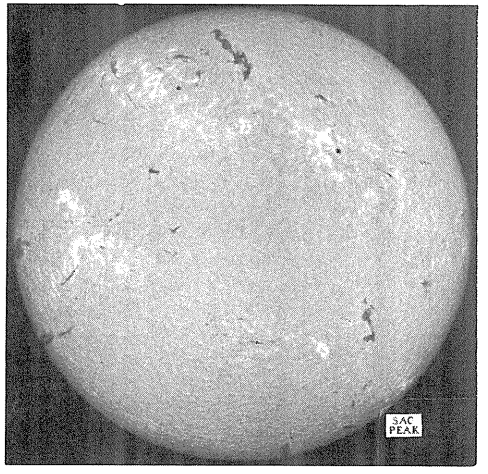
67-16-3.5
68-19-2.5
76-36-3.5
77-10-3
78-48-2.5
79-32-3
81-09-2.5

57
Apr 67

APRIL 20, 1967 (P=-25.77, B_o=-5.21, L_o=336.71)

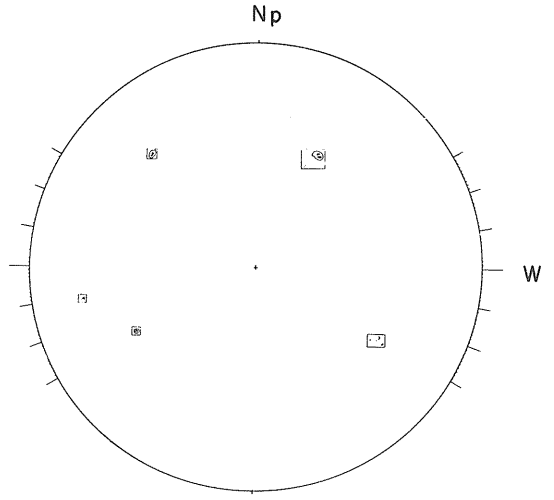
58
Apr 67

SACRAMENTO PEAK Hα



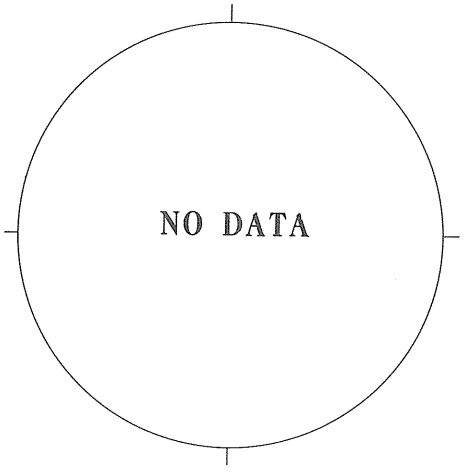
1506 UT

ESSA-BOULDER SUNSPOTS



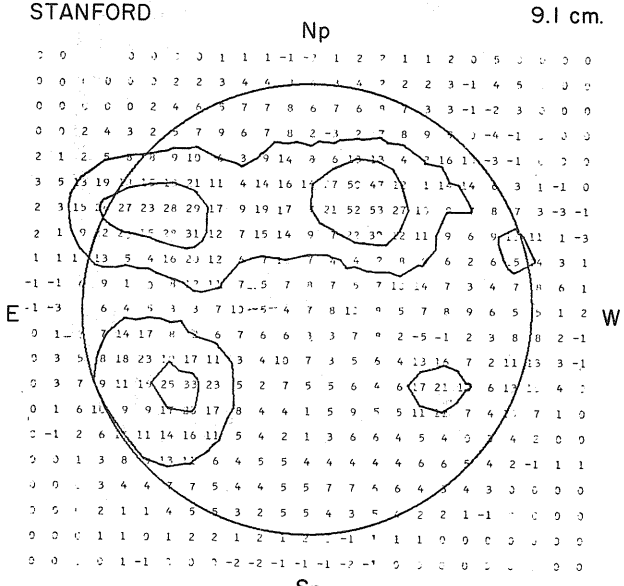
1430 UT

MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus



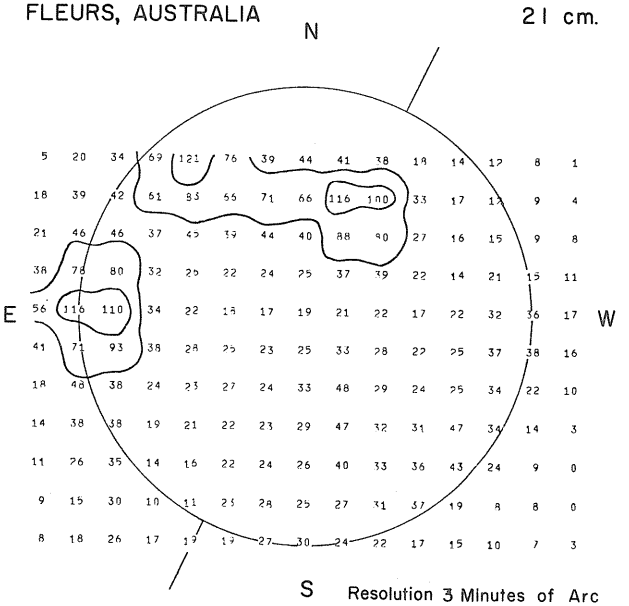
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



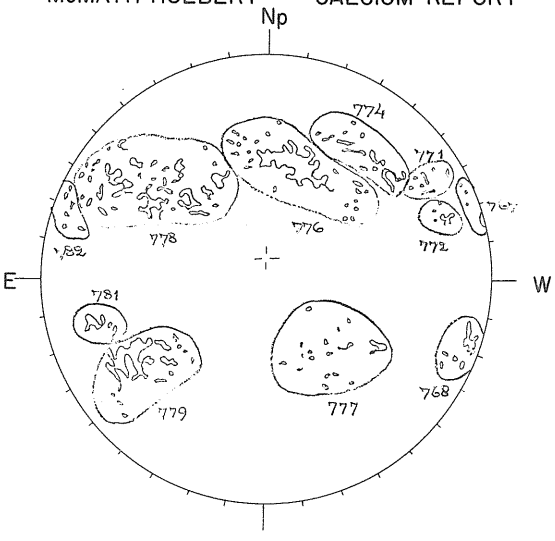
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

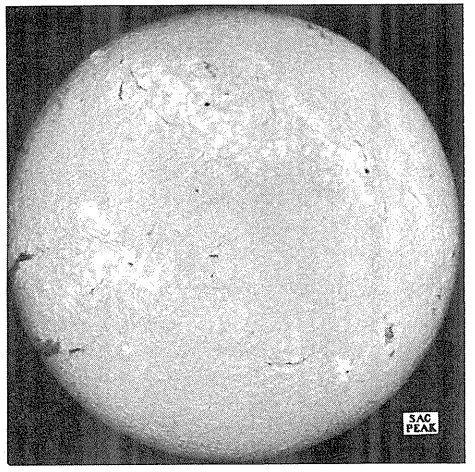


68-18-2.5
71-07-2.5
74-18-2.5
76-41-3.5
77-14-3.5
78-57-2.5
79-41-3
81-10-2.5

1310 UT

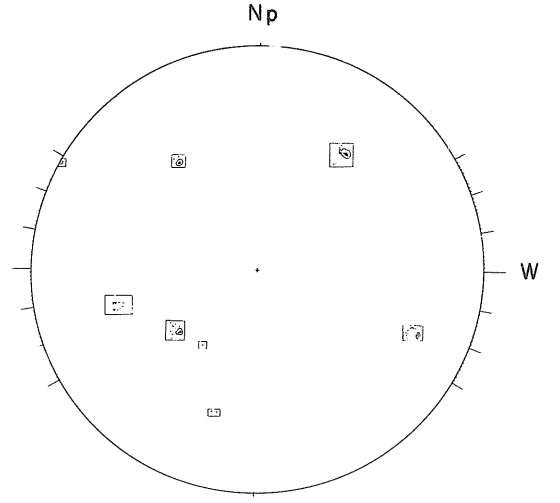
APRIL 21, 1967 (P=-25.68, B_o=-5.13, L_o=323.50)

SACRAMENTO PEAK Hα



1455 UT

ESSA-BOULDER SUNSPOTS

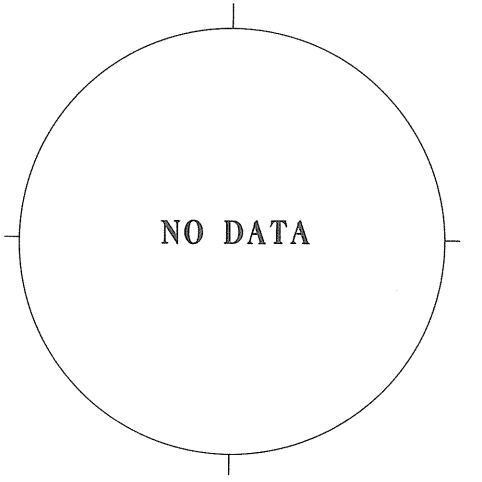


1445 UT

MT. WILSON MAGNETOGRAM

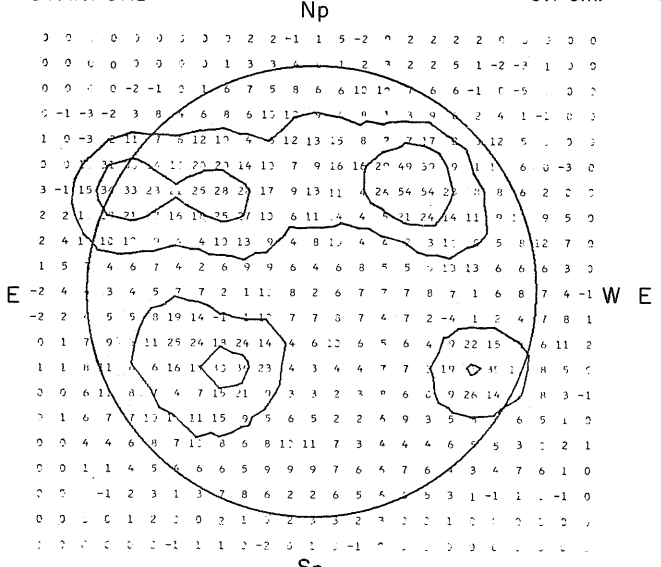
Np

Solid-Plus
Dotted-Minus



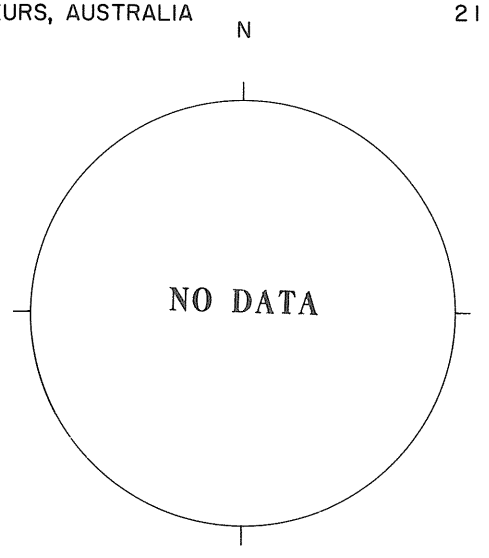
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



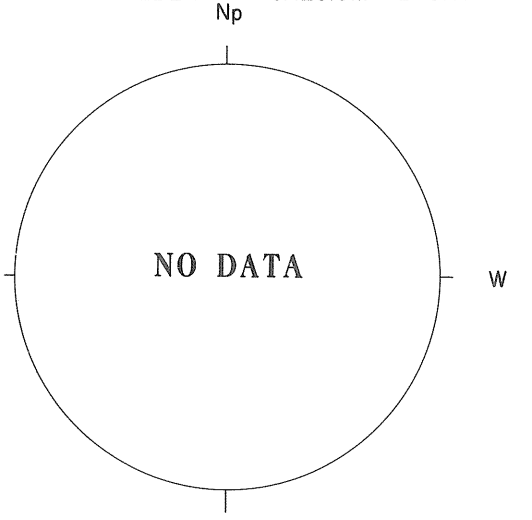
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

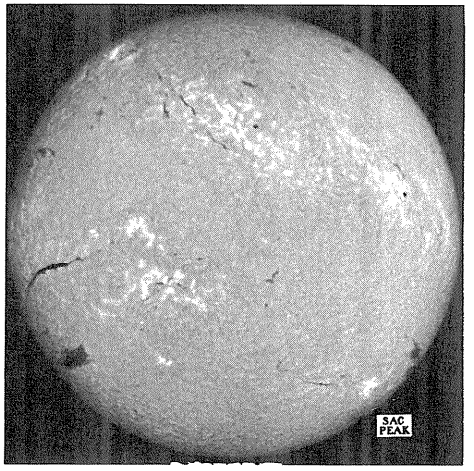


59
Apr 67

APRIL 22, 1967 (P=-25.57, B_o=-5.04, L_o=310.29)

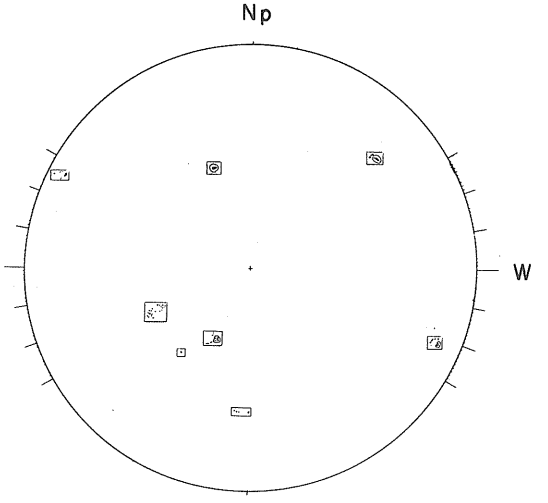
60 Apr 67

SACRAMENTO PEAK Hα



1759 UT

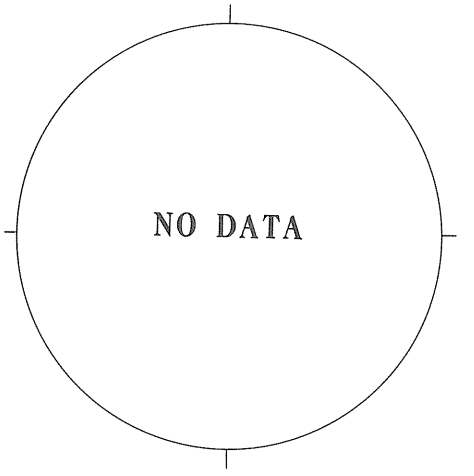
ESSA-BOULDER SUNSPOTS



1600 UT

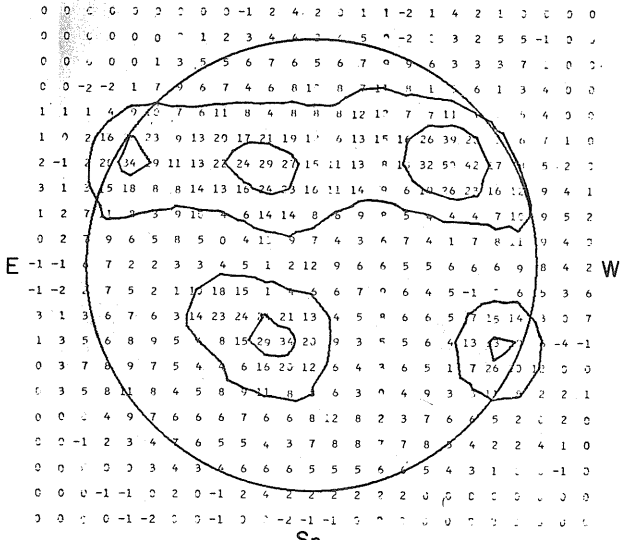
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



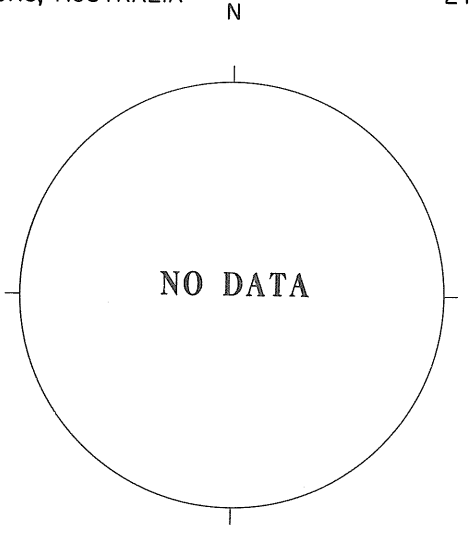
Levels
± 3
± 6
± 10
± 15
±25
±40

STANFORD 9.1 cm.



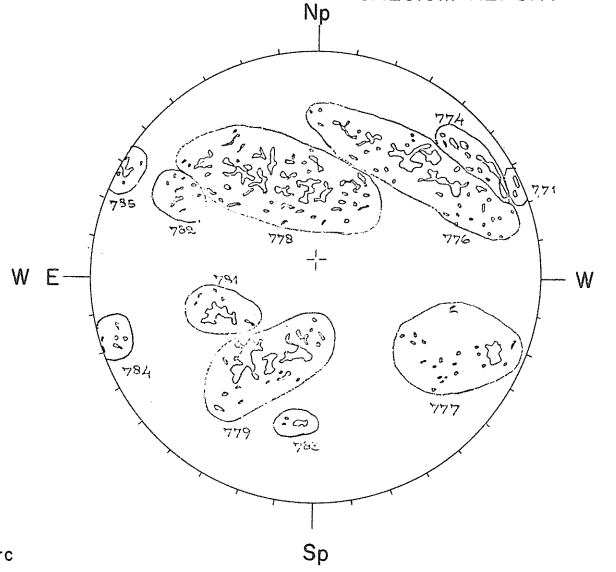
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



74-21-2.5
76-78-3
77-20-3.5
78-76-3
79-58-3
81-16-3
83-05-3
85-13-2.5

1320 UT

APRIL 23, 1967 (P=-25.46, B_o=-4.95, L_o=297.08)

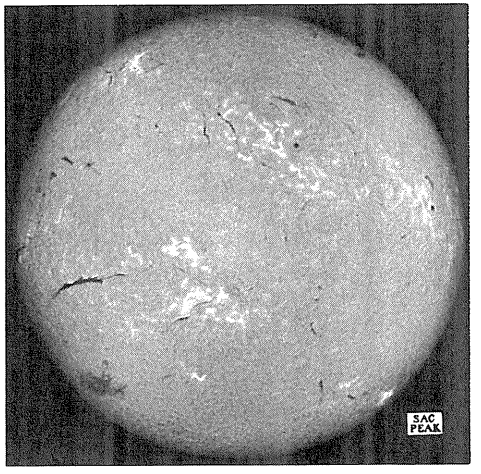
MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

N

E W

S



1503 UT

ESSA-BOULDER SUNSPOTS

Np

(SAC PEAK)

E W E W

Sp

1500 UT

NO DATA

E W

Sp

Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.

Np

E W E

Sp

20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

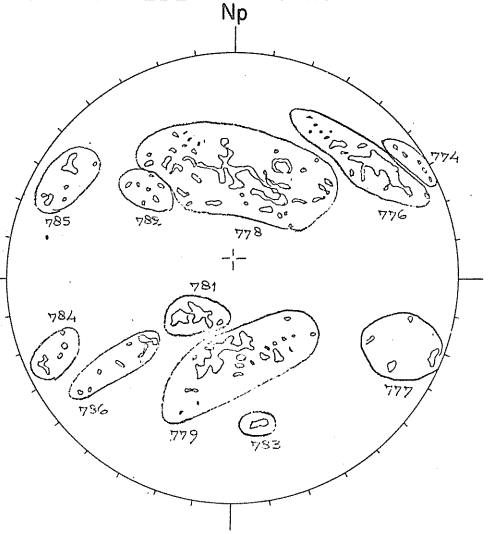
NO DATA

S

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

McMATH-HULBERT CALCIUM REPORT

Np



W E W

Sp

1540 UT

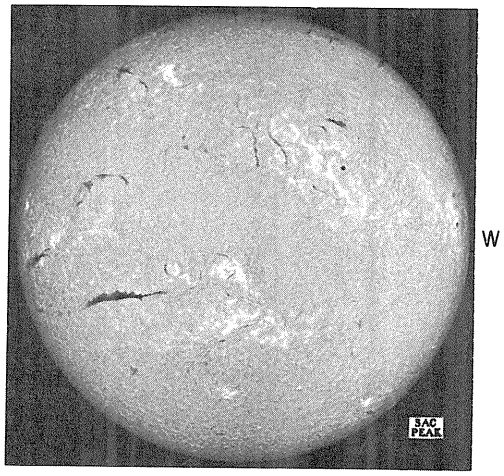
76-65-3
77-17-3.5
78-76-3
79-53-3
81-19-3
83-05-3
85-17-3

61
Apr 67

APRIL 24, 1967 (P=-25.35, B_o=-4.86, L_o=283.87)

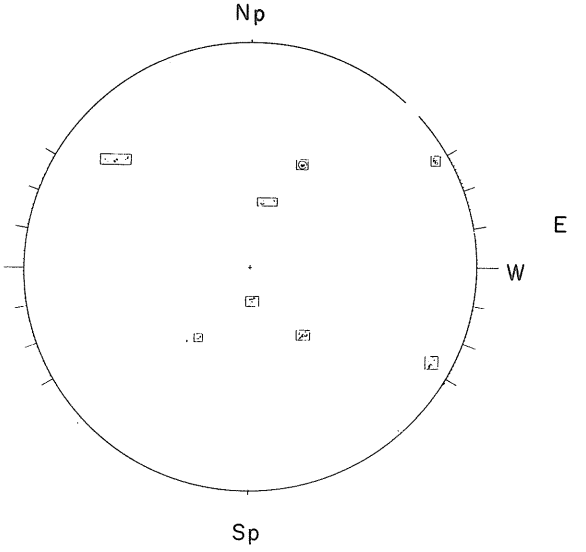
62 Apr 67

SACRAMENTO PEAK Hα



1454 UT

ESSA-BOULDER SUNSPOTS

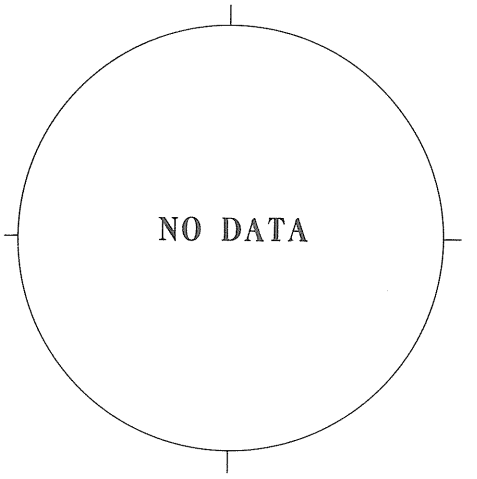


1620 UT

MT. WILSON MAGNETOGRAM

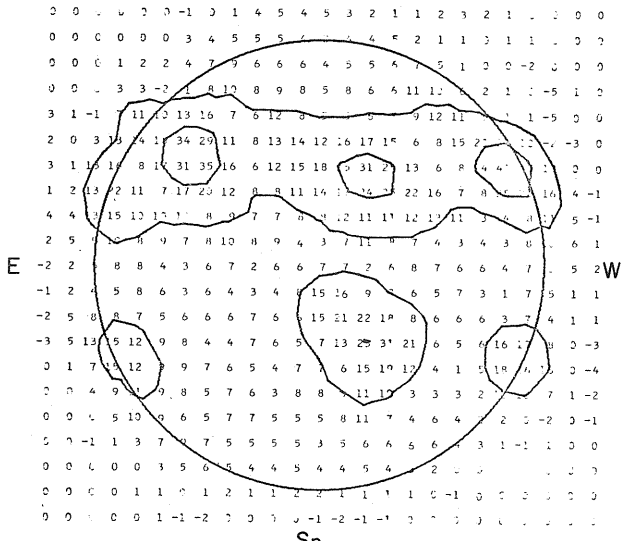
Np

Solid-Plus
Dotted-Minus



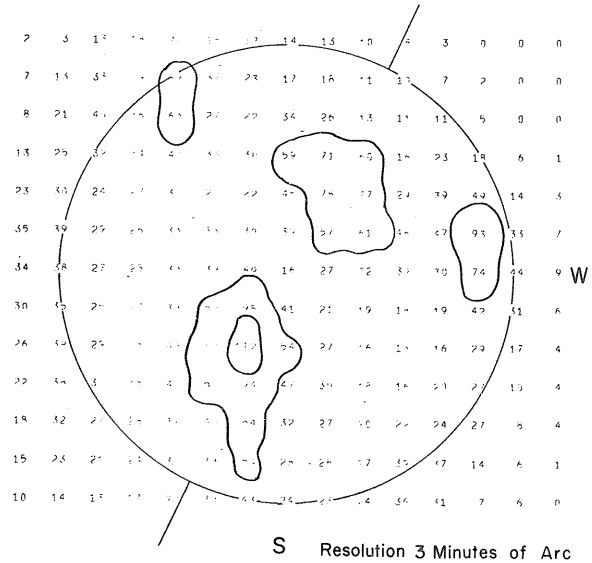
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



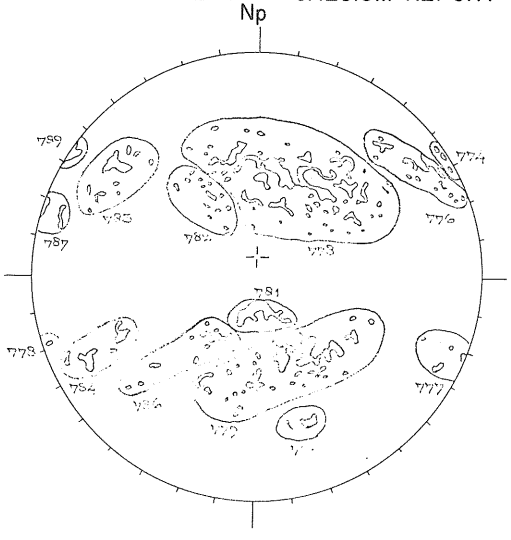
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



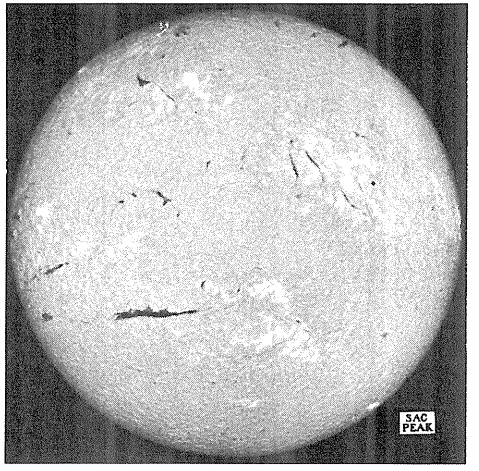
1330 UT

76-45-3
77-13-4
78-80-3
79-51-2.5
81-20-3
83-06-2.5
84-18-2.5
85-28-3.5

APRIL 25, 1967 (P=-25.22, B_o=-4.77, L_o=270.66)

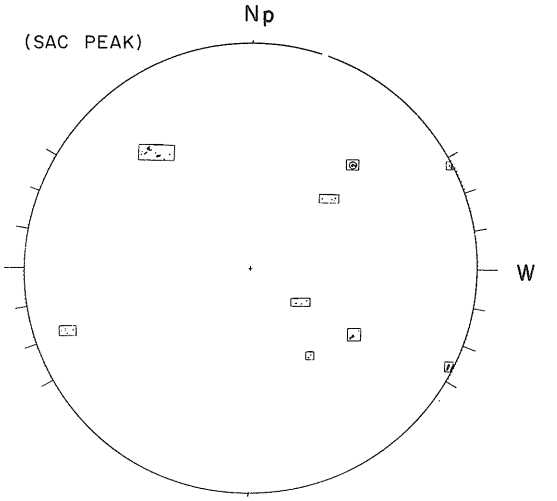
MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

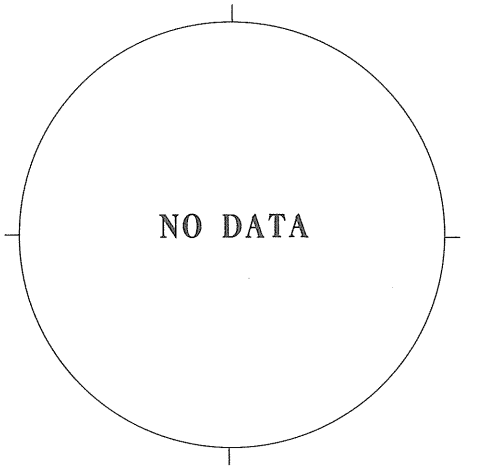


1451 UT

ESSA-BOULDER SUNSPOTS
(SAC PEAK)

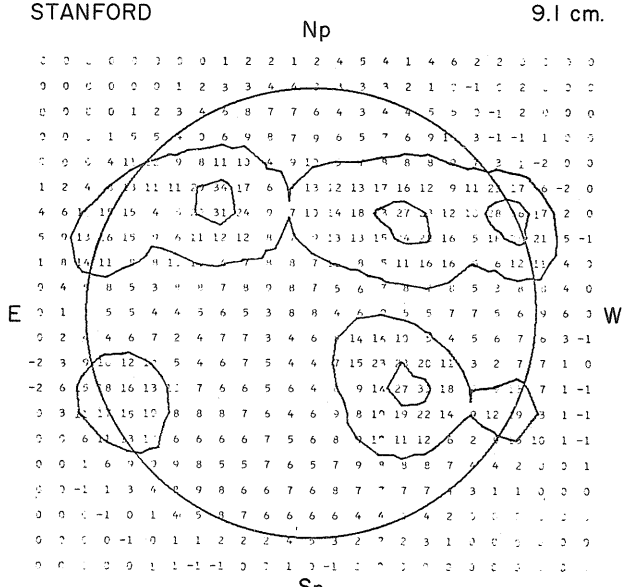


1445 UT



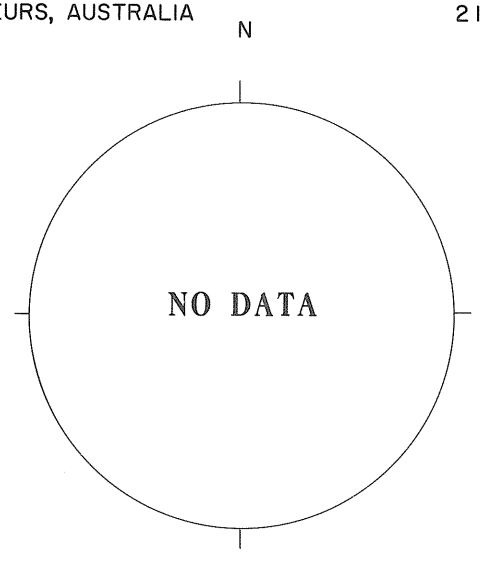
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



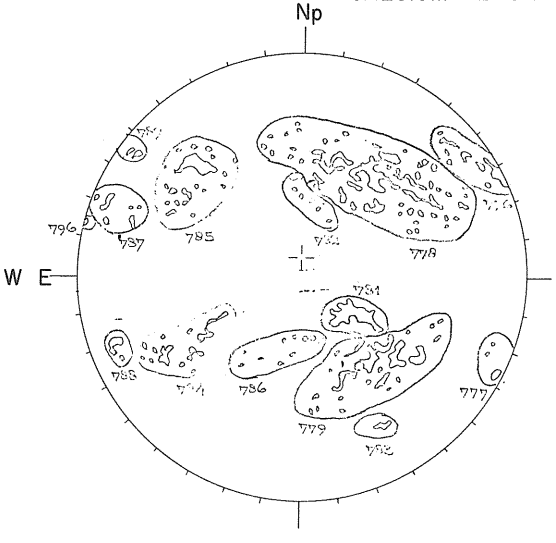
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



1250 UT

76-35-2.5
77-15-4
78-80-3
79-50-3.5
81-22-3
85-31-3.5
86-08-2.5
87-20-2.5
88-09-3

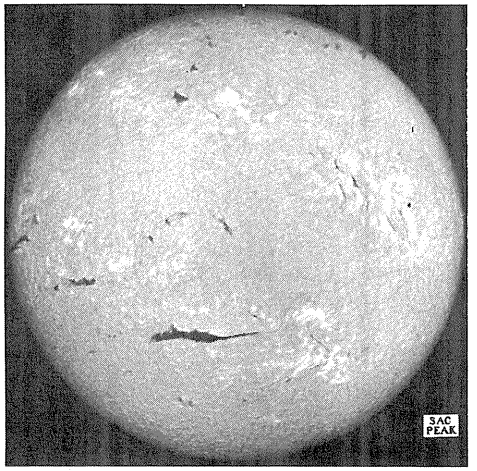
APRIL 26, 1967 (P=-25.09, B_o=-4.67, L_o=257.44)

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

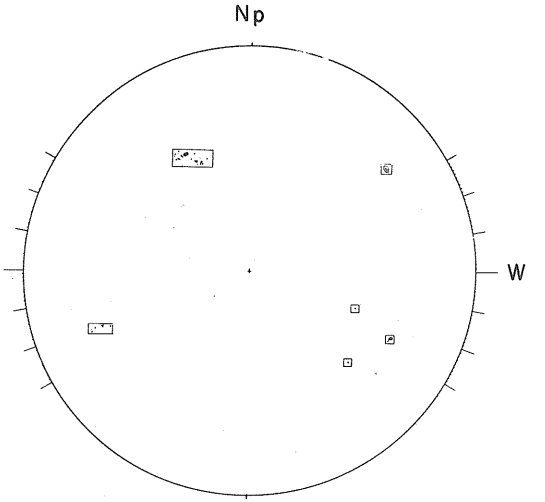
64
Apr 67

SACRAMENTO PEAK Hα

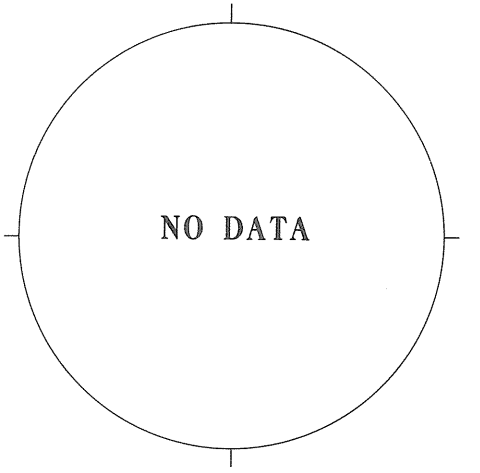


1509 UT

ESSA-BOULDER SUNSPOTS

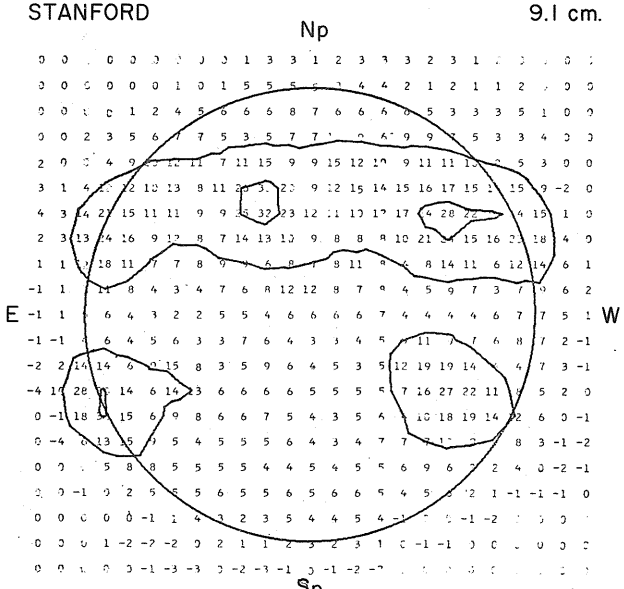


1720 UT



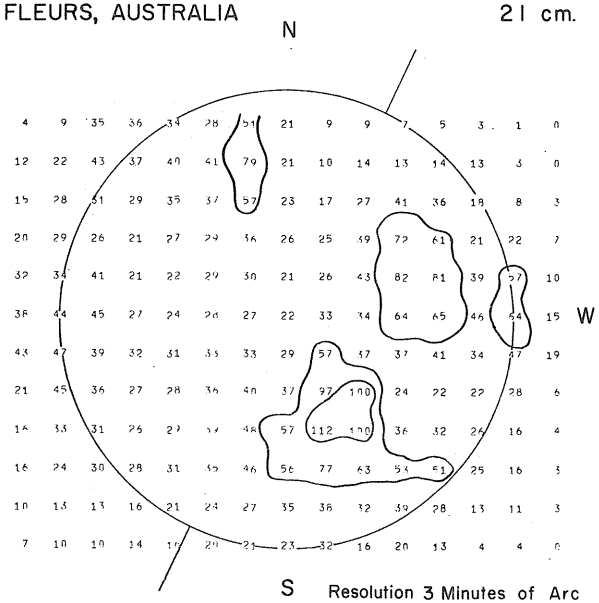
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



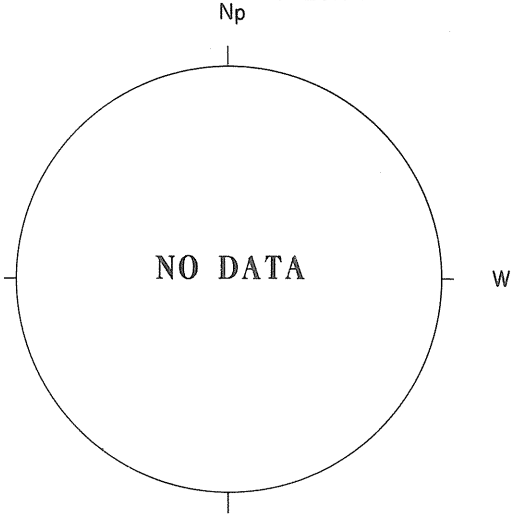
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



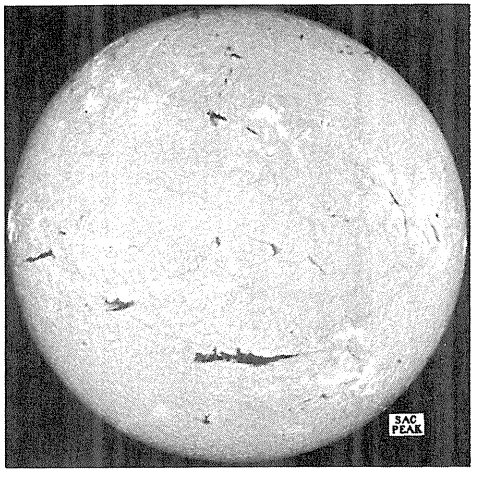
Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



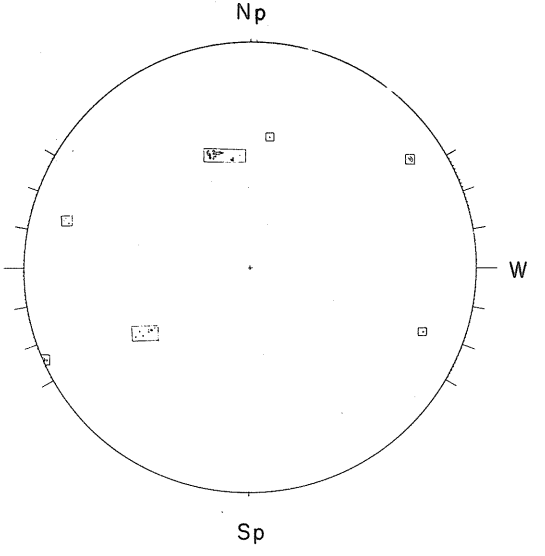
APRIL 27, 1967 (P=-24.95, B_o=-4.58, L_o=244.23)

SACRAMENTO PEAK Hα



1451 UT

ESSA-BOULDER SUNSPOTS

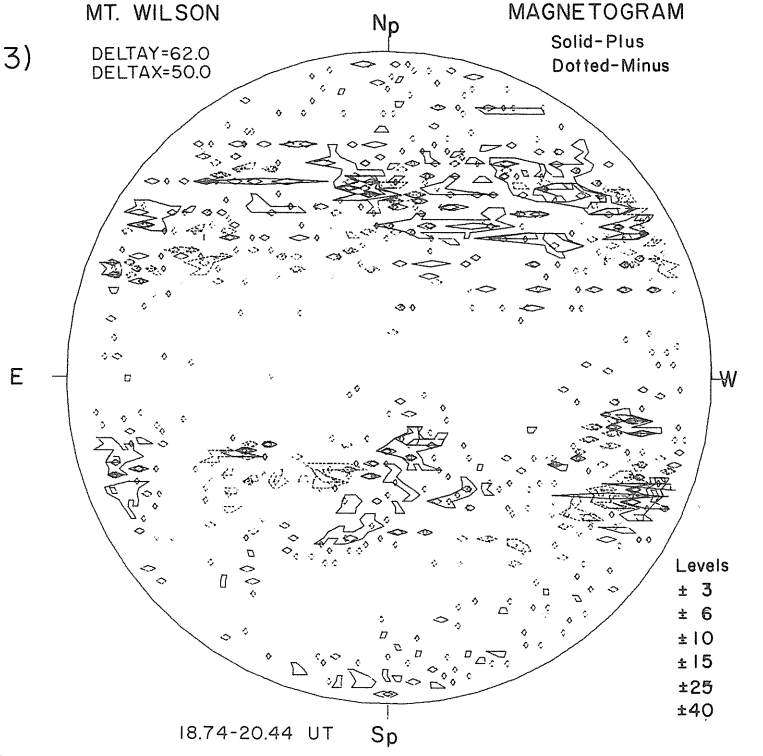


1520 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

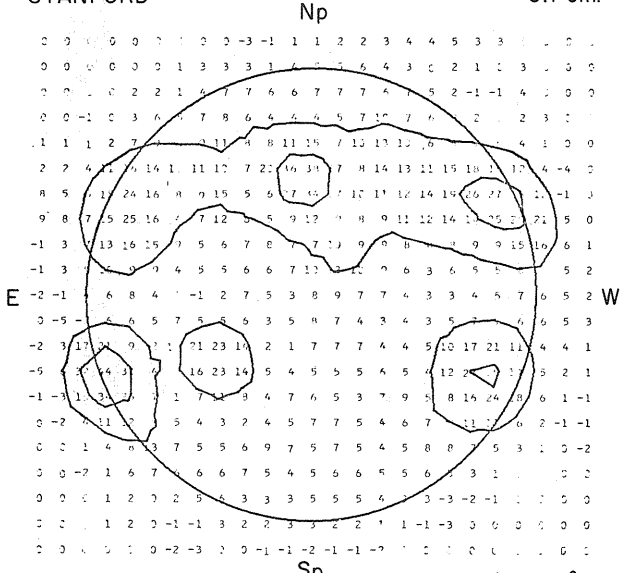
Solid-Plus
Dotted-Minus



Levels
± 3
± 6
±10
±15
±25
±40

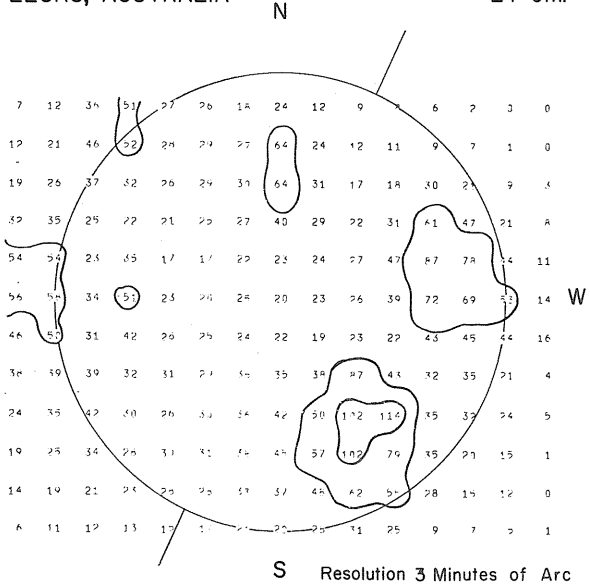
18.74-20.44 UT

STANFORD 9.1 cm.



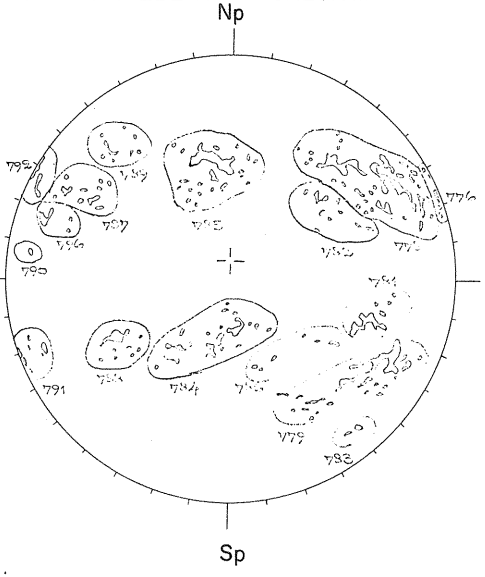
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



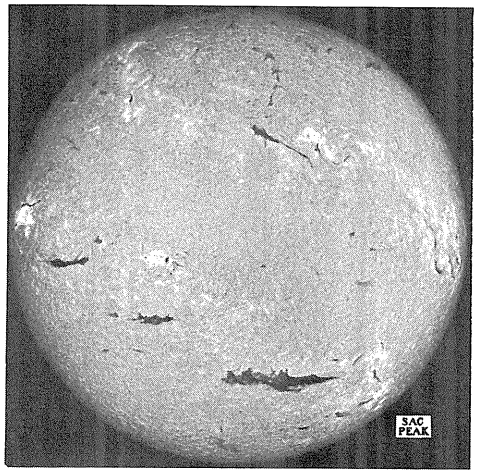
1310 UT

76-13-3.5
78-74-3
79-41-3
81-14-3.5
85-30-3.5
86-04-2.5
88-11-2.5
91-18-3
96-08-2.5

65
Apr 67

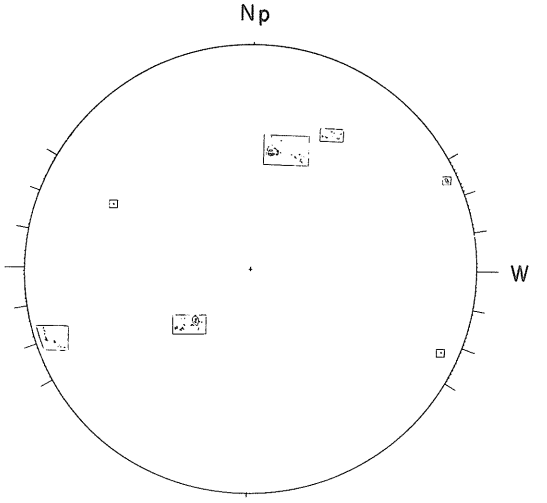
APRIL 28, 1967 (P=-24.80, B_o=-4.48, L_o=231.02)

SACRAMENTO PEAK Hα



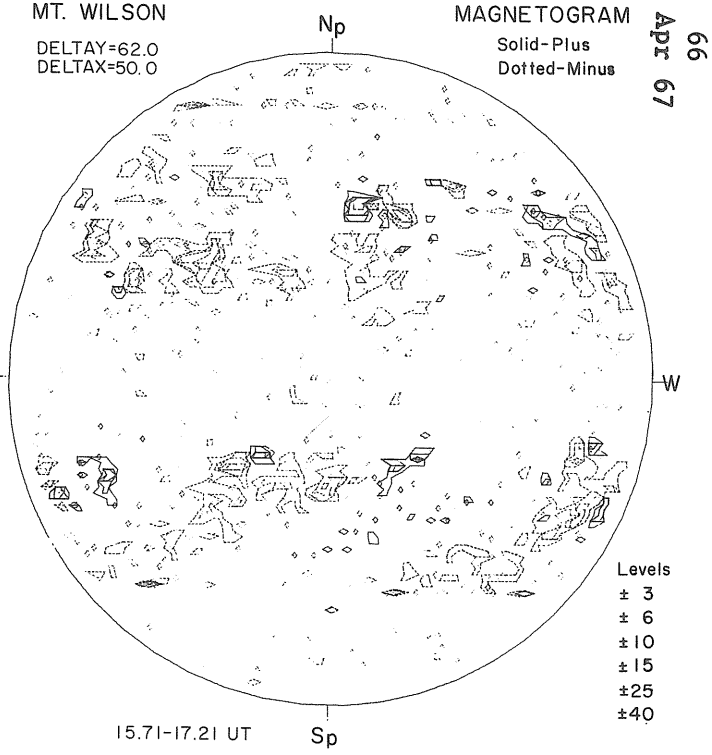
1444 UT

ESSA-BOULDER SUNSPOTS



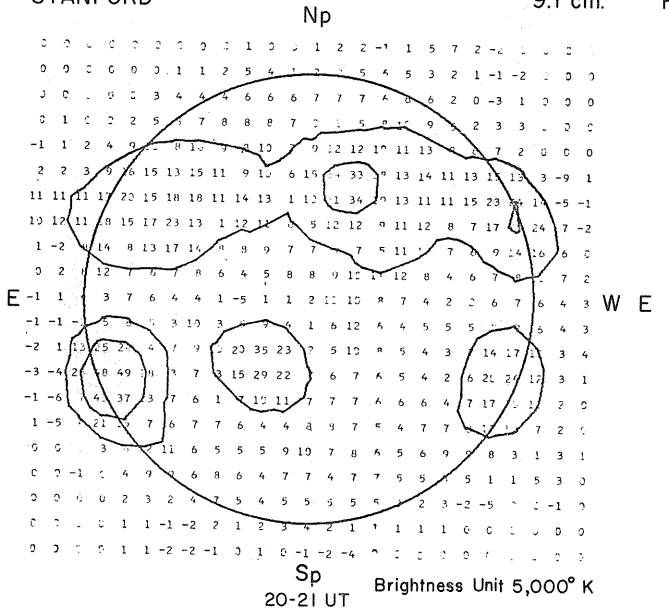
1425 UT

MT. WILSON MAGNETOGRAM
Solid-Plus
Dotted-Minus
DELTAY=62.0
DELTAX=50.0



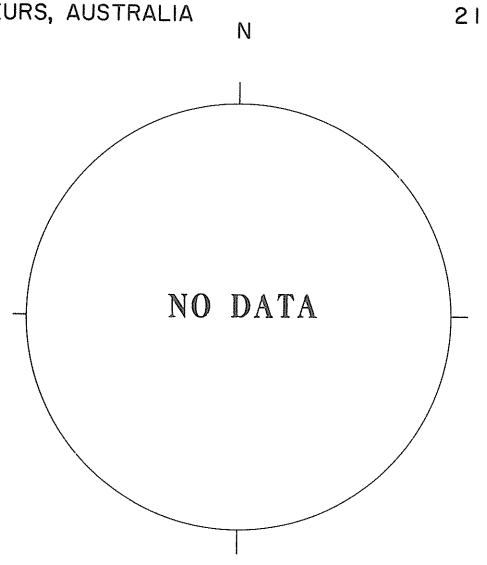
15.71-17.21 UT

STANFORD 9.1 cm.



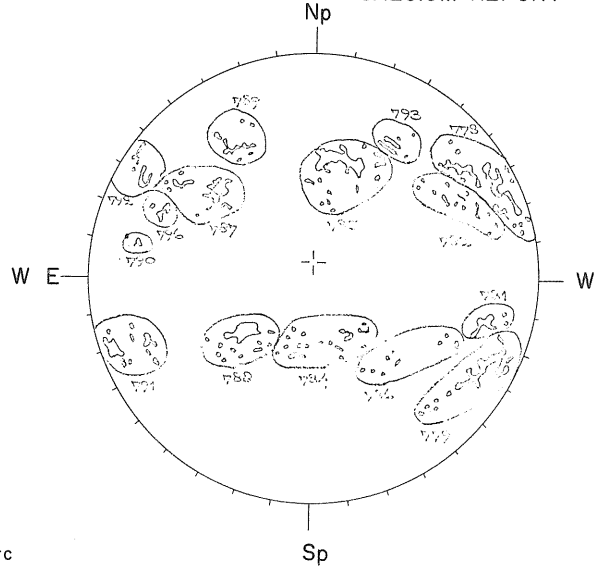
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

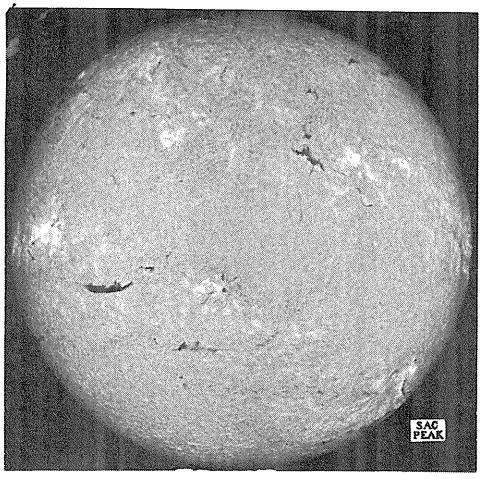


78-62-3
79-36-3
81-13-3.5
85-31-3.5
88-19-3
91-28-3.5
93-09-3
96-08-2.5

1305 UT

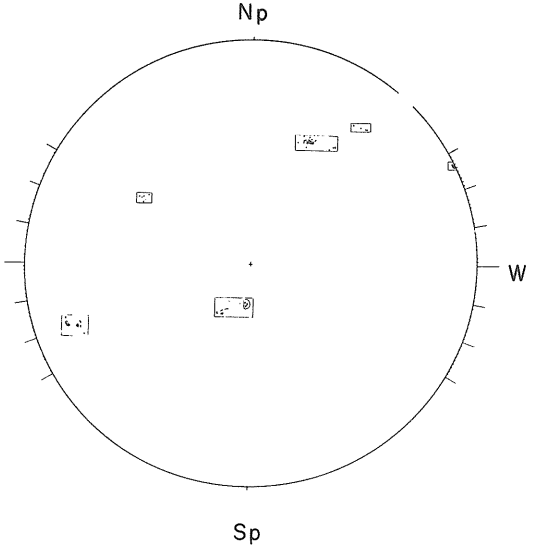
APRIL 29, 1967 (P=-24.65, B_o=-4.39, L_o=217.80)

SACRAMENTO PEAK Hα



1538 UT

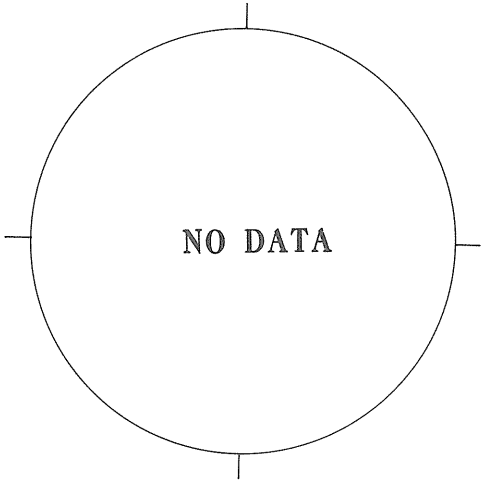
ESSA-BOULDER SUNSPOTS



1430 UT

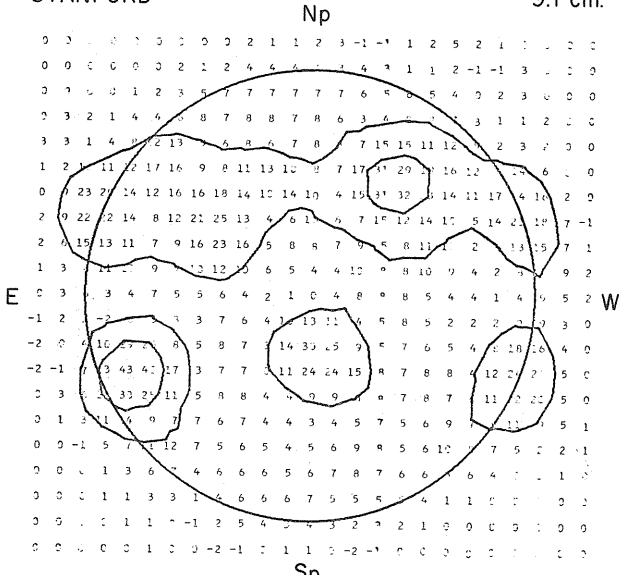
MT. WILSON Np MAGNETOGRAM

Solid-Plus
Dotted-Minus



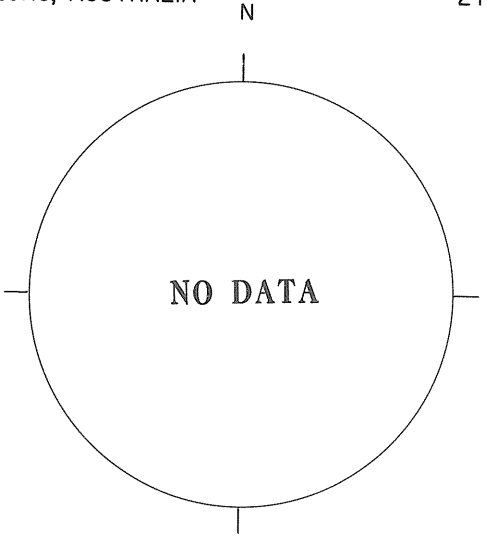
Levels
± 3
± 6
±10
±15
±25
±40

STANFORD 9.1 cm.



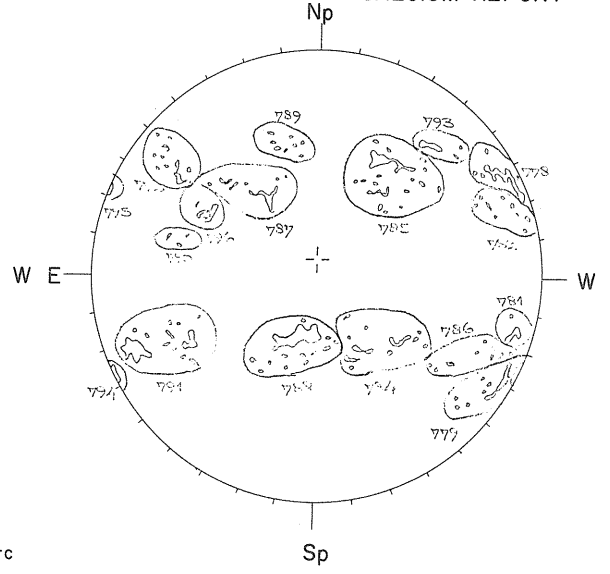
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



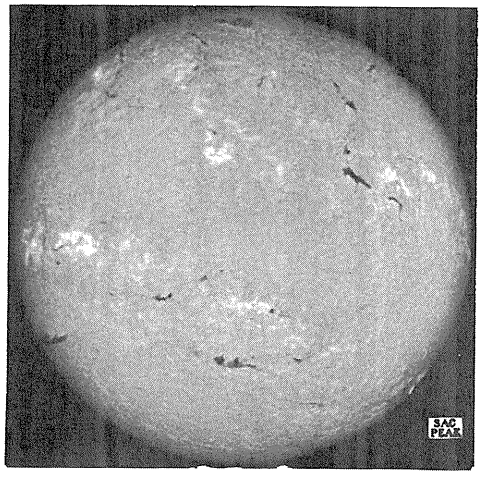
1340 UT

78-39-2.5
79-28-2.5
81-14-3
82-09-2.5
84-12-2.5
85-26-3.5
88-27-3
91-29-3
93-09-3
96-10-3

67
Apr 67

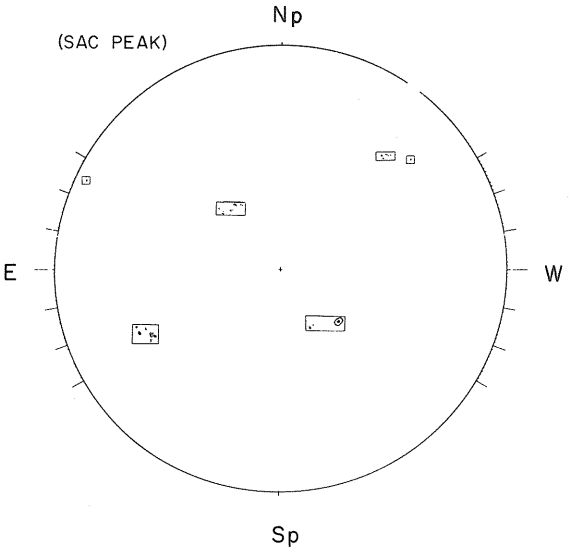
APRIL 30, 1967 (P=-24.49, B_o=-4.29, L_o=204.59)

SACRAMENTO PEAK Hα



1447 UT

ESSA-BOULDER SUNSPOTS

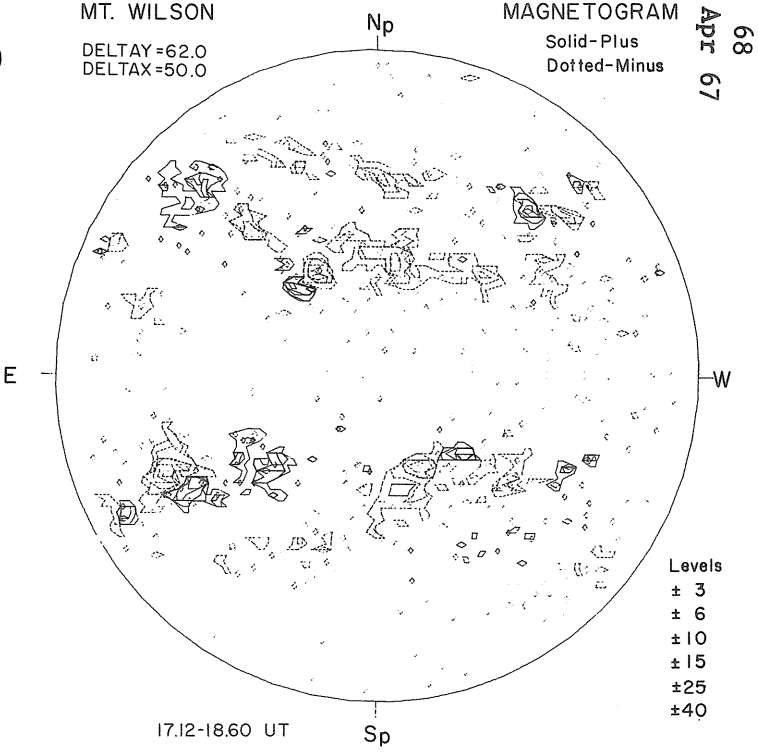


1535 UT

MT. WILSON MAGNETOGRAM

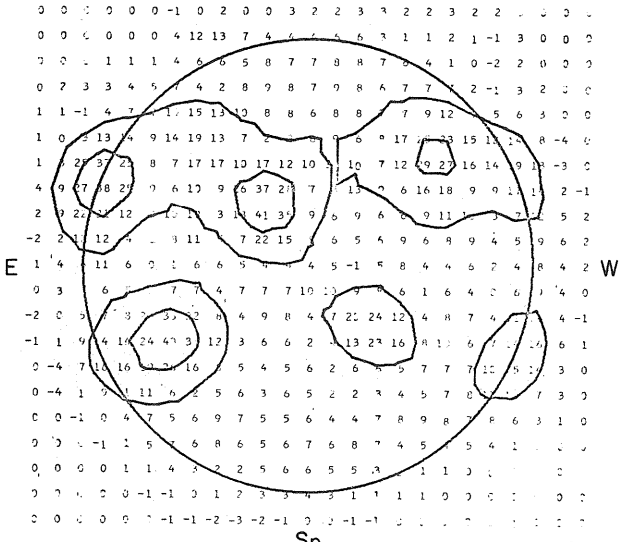
Solid-Plus
Dotted-Minus

DELTAY=62.0
DELTAX=50.0



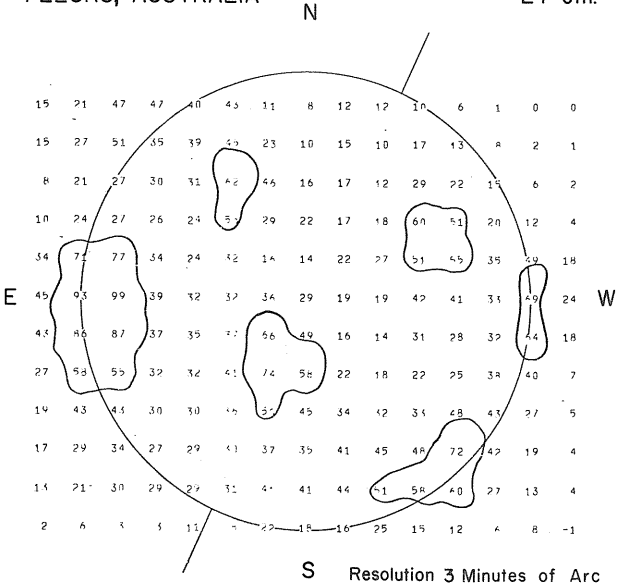
17.12-18.60 UT

STANFORD 9.1 cm.



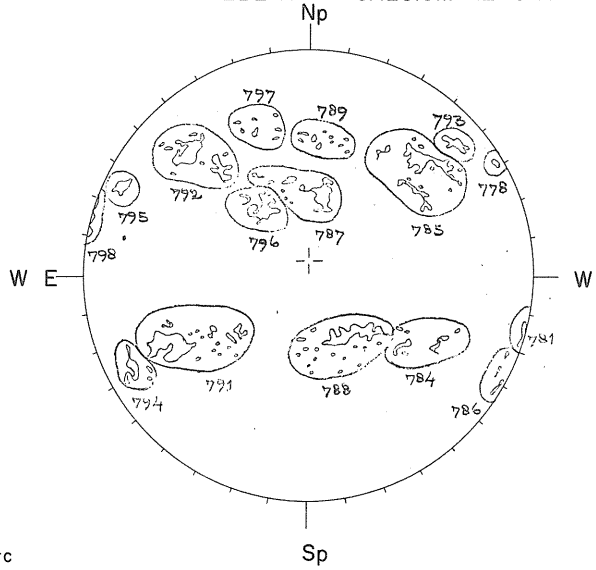
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



84-10-2.5
85-35-3.5
87-15-2.5
88-25-2.5
91-35-3
93-12-3
96-12-3

1900 UT

FINAL CORONAL LINE EMISSION INDICES

Coronal Data is currently incomplete for the month of April 1967. It is expected that it will be published in the Miscellaneous section of the next report.

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

APRIL 1967

APR 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
01	0000E	0017	0010	5					75			MA(NPG18-75)	2335
												AN(NAA17-27,WWVL19-7)	
01	0001	0030	0007	5	SL 1+							AN MA WS	
01	0003	0050	0030	1		36	1					MA	
01	0119	0642	0121	4	S 3							MA TO	0119
01	0120	0235	0131	5					99			MA(NPG18-133)	
												HA(WWVB60-79)	
01	0122	0214	0128	1		42	2					MA	
01	0243	0337	0315	1					32			MA(NPG18-32)	0240
01	0346	0432	0355	1					83			MA(NPG18-83)	0347
01	0347	0412		4	S 1+							TO HK	
01	0617	0647	0623	5					99			SL(GBR16-230)	0617
												MA(NPG18-83)	
01	0618	0635	0625	4	SL 1+							OK HK TO	
01	0618	0703	0625	1		10	2					MA	
01	0619	0640	0627	1				1+				A17	
01	0818	0825D	0825	1					99			SL(GBR16-110)	0810
01	0825D	0945	0840	1					99			SL(GBR16-172)	0835E
01	0834	0848	0841	4	SL 1-							MA TO	
01	0836	0905	0839	5				2				A17 KE	
01	1019	1125	1034	1					76			SL(GBR16-76)	1026E
01	1216	1302	1236	1					39			SL(GBR16-39)	1224E
01	1311	1355	1322	1					65			SL(GBR16-65)	1313E
01	1312	1357		1			1					PO	
01	1409	1440	1412	1						2+		A18	1407E
01	1411			5					99			BO(WWVL20-605)	
												SL(GBR16-260)	
01	1411	1430	1412	1							05	BO(WWI8-0.5)	
01	1411	1430	1413	1							07	BO(WWI8-0.7)	
01	1412	1414	1424	5		25	1					BO MC PO	
01	1412	1430	1416	5	S 1+							MC BE HU TR WS	
01	1414	1449	1421	5				1				BO LO	
01	1620	1632	1621	1							03	BO(WWI11-0.3)	*
01	1620	1632	1623	1							04	BO(WWI11-0.4)	
01	1620	1635	1624	5	S 1-							MC BE WS	
01	1620	1635	1623	1						1		A18	
01	1620	1640	1624	5					99			SL(GBR16-136)	
												BO(WWVL20-140)	
01	1805			1					80			BO(WWVL20-80)	*
01	1815	1818	1816	1							02	BO(WWI13-0.2)	
01	2000	2100	2005	1					34			HA(WWVB60-34,WWVL20-11)	*
01	2003	2007	2004	1							02	BO(KKE42-0.2)	
01	2248	2348	2250	1					23			HA(WWVB60-23,WWVL20-7)	2247E
01	2254	2258	2255	1							02	BO(WWI11-0.2)	
02	0133	0154	0141	1					15			MA(NPG18-15)	0135
02	0136	0220	0200	1	SL 1							MA	
02	0154	0231	0158	1					25			MA(NPG18-25)	
02	0156	0158	0157	1							03	HA(WWVH5-0.3,	
												WWVH10-0.2)	
02	0231	0335	0245	1					72			MA(NPG18-72)	0236E
02	0234	0246	0239	1	S 1-							MA	
02	0413	0440	0420	1					36			MA(NPG18-36)	0407
02	0417	0521	0421	1	S 2							MA	
02	0440	0508	0450	1					35			MA(NPG18-35)	0436
02	0819		0828	1					99			SL(GBR16-124)	0710E
02	1316	1338	1322	3				1				LO PO	1321E
02	1320	1328	1321	1							04	BO(WWI8-0.4)	
02	1321			5					99			BO(WWVL20-145)	
												SL(GBR16-79)	
02	1348	1350	1349	1							02	BO(WWI8-0.2)	
02	1350			5					99			BO(WWVL20-160)	
												SL(GBR16-40)	
02	1635			1					75			BO(WWVL20-75)	1629
02	1702			5					99			BO(WWVL20-160)	1629
												HA(WWVL20-14)	
02	1705	1800	1718	3	G 1							MC BE	
02	1713	1715	1713	1							07	BO(WWI8-0.7)	
02	1903			5					55			BO(WWVL20-55)	
												HA(WWVB60-23,WWVL20-7)	
02	1935	2030	1955	4	G 1+							MC WS	1935
02	1935	2215	1954	5					99			HA(WWVB60-135,	
												WWVL20-54)BO(WWVL20-85)	
02	1949			1					75			BO(WWVL20-75)	
02	2130	2220	2138	1	SL 1-							MC	2131
02	2134			5					99			BO(WWVL20-175)	
												HA(WWVB60-45,WWVL20-14)	
03	0028	0138	0054	5					65			MA(NPG18-65)	0034E
												HA(WWVL20-18)	
03	1429	1519	1452	5				1				BO JU PO	1230E
03	1432	1532	1448	5	SL 2							TR BA BE GS JU MC PU SW	
03	1433			5					99			BO(WWVL20-410)	
												SL(GBR16-193)	
03	1708			1					70			BO(WWVL20-70)	
03	2208	2338	2211	5					45			HA(WWVB60-45,WWVL20-18)	2209E
												MA(NPG18-40)	

SUDDEN IONOSPHERIC DISTURBANCES

APRIL 1967

APR 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
06	1355	1430	1408	1	G 1							MC	1351
08	1555	1559	1556	1							03	BO(WWI12-0.3)	1555
08	1559	1612	1606	1	SL 1-							TR	
09	0147	0215	0158	1	SL 1-							MA	0143
09	0147	0222	0158	1					24			MA(NPG18-24)	
09	1753	1803	1755	5							15	BO(WWI11-1.5)	1752
												HA(WWVH5-0.7)	
09	2035	2056		1	SL 1-							WS	2030
09	2037	2157	2040	1					34			HA(WWVB60-34,WWVL20-14)	
09	2038	2039	2038	5							08	HA(WWVH5-0.8,	
												WWVH10-0.5)	
												BO(WWI11-0.7)	
10	0310	0342	0313	1					60			MA(NPG18-60)	0310
10	0311	0313	0311	1							04	HA(WWVH5-0.4,	
												WWVH10-0.2)	
10	0311	0341	0313	1	S 1							MA	
10	0935	0956		3	S 2							PU DA	0937E
10	0935	1026	0945	1					76			SL(GBR16-76)	
10	0940	1020		1				1+				KE	
10	1508	1704	1615	1					99			UM(NPG18-121)	1504E
10	1600	1631	1610	5				2				LO BO PO	1600
10	1601			5					99			BO(WWVL20-250)	
												HA(WWVB60-34,WWVL20-22)	
												SL(GBR16-162)	
10	1601	1604	1601	1							02	BO(WWI13-0.2)	
10	1601	1626	1612	5	SL 1+							TR BA BE DA HU MC PU WS	
10	1603	1629	1610	4		23	1					BO MC	
11	0745	0845		1				1+				KE	0740E
11	0749	0811		1			2					PU	
11	0749	0825	0803	1					86			SL(GBR16-8L)	
11	0752	0820		3	S 2+							DA PU	
11	1113	1205		3			2					PU JU	1111
11	1114	1216	1129	1					99			SL(GBR16-170)	
11	1115	1209		4	S 2							PU SW	
11	1120	1210		1				2				KE	
11	1343	1347	1343	1							02	BO(WWI11-0.2)	1342
11	1355	1440	1415	1					20			UM(NPG18-20,NSS21-15)	1330
11	1427	1430	1428	1							02	BO(WWI11-0.2)	
11	1440	1545	1454	1					34			UM(NPG18-34,NSS21-23)	1439
11	2106	2119	2108	1							06	HA(WWVH10-0.6)	2104
11	2106	2119	2109	1							12	HA(WWVH10-1.2)	
11	2107	2130	2115	1		10	*					AN	
11	2108	2118	2109	1							09	BO(WWI11-0.9)	
11	2108	2118	2111	1							21	BO(WWI11-2.1)	
11	2108	2118	2112	1							08	BO(WWI11-0.8)	
11	2108	2135	2114	5	S 2							HU AN BE MC TO TR WS	
11	2108	2328	2112	5					99			HA(WWVB60-236,	
												WWVL20-86)AN(WWVL20-40,	
												NAA17-40,GBR16-20)	
												UM(NPG18-107,NSS21-39)	
11	2109	2205	2115	1				1+				A1	
11	2113E		2113	5						2		UM A1	
12	0539	0554	0541	5	S 1-							MA OK TO	0543E
12	0539	0630	0544	1					67			MA(NPG18-67)	
12	0540	0600		1				3				KE	
13	1235	1244	1238	1							03	BO(WWI11-0.3)	1231
13	1935		1940	1					11			HA(WWVL20-11)	1902
13	1936	1939	1937	1							02	BO(WWI8-0.2)	
14	1533	1538	1534	1							02	BO(WWI13-0.2)	*
14	1704	1722	1710	1							12	BO(WWI8-1.2)	1700
14	1708	1745	1718	5	SL 1							AN BE HU MC TR WS	
14	1708	1750	1716	3						1-		A18 A1	
14	1708	1823	1718	5					50			UM(NPG18-50,NSS21-39)	
												AN(WWVL20-14,NPM23-4)	
												HA(WWVL20-18,WWVB60-23)	
												MA(NPG18-18)	
14	1709	1755	1716	1				1-				A1	
14	1711	1726	1720	4		15	1					BO MC	
14	1915	2015	1932	5					34			UM(NPG18-34,NSS21-19)	
												AN(NPM23-21,WWVL20-7)	
												HA(WWVL20-18,WWVB60-34)	
14	1926	1950	1934	3						1		A1 A18	
16	0128	0152	0135	5	SL 1+							MA AN	
16	0128	0200	0145	1				1-				MA	
16	0129	0220	0135	5					62			MA(NPG18-62)	
												AN(NPM23-20)	
												HA(WWVL20-14)	
16	1653	1830	1711	5					47			UM(NPG18-47,NSS21-23)	1704
												AN(WWVL20-14)	

SUDDEN IONOSPHERIC DISTURBANCES

APRIL 1967

APR 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
16	1700	1713	1702	5	S 1-							HA(WWVL20-7,WWVB60-34) TR MC	
16	1835	1935	1840	5					23			HA(WWVB60-23,WWVL20-14) UM(NPG18-13,NSS21-12)	1820
16	1838	1909	1840	5	S 1-							WS MC TR	
23	0026	0055	0028	5	S 1-							MA OK TO	0022
23	0026	0056	0031	1					58			MA(NPG18-58)	
23	1811	1820	1818	1	SL 1-							TR	
23	1829	1835	1831	1							03	BO(WWI8-0.3)	
24	2348	2355	2350	4	S 1-							MA OK	2348
25	0825	0840		3	S 1							KU PU	0825E
25	0826	0900	0832	5					65			SL(GBR16-65) MA(NPG18-28)	
25	0830	0915		1			1+					PO	
25	0921	1037	0943	5					87			SL(GBR16-87) MA(NPG18-75)	0926
25	0929	1004		1	S 1							KU	
25	1113	1154		1			1					JU	1125E
25	1113	1205		1	S 2							JU	
26	1105	1225	1124	5					80			SL(GBR16-80) UM(GBR16-75,OMEGA13-25)	*
26	1110	1200	1123	1						2		UM	
26	1244	1330	1253	1				2				LO	
26	1245	1305	1255	1						2		UM	
26	1246	1333	1255	5					76			SL(GBR16-76) UM(GBR16-75,OMEGA13-34)	
26	2122	2136	2123	1							04	BO(WWI11-0.4)	2115
26	2123	2215	2136	1						1+		A1	
26	2123	2239	2127	5		46	2					BO AN MC	
26	2123	2300	2128	5					99			HA(WWVB60-203, WWVL20-79)AN(NAA17-33, NPM23-55,GBR16-36, WWVL20-36)MA(NPM23-108, NPG18-137,GBR16-37)	
26	2124	2140	2126	5	S 1+							MC AN BE HU TO WS	
26	2124	2239	2132	5				1+				BO A1	
27	1547	1550	1547	1							03	BO(WWI11-0.3)	1547
27	1602	1610	1607	1							02	BO(WWI13-0.2)	1602
27	1605			1					99			BO(WWVL20-130)	
27	2122	2136	2127	1							06	BO(WWI11-0.6)	2100E
28	0436	0504	0450	1					30			MA(GBR16-30)	0437E
28	0747	0900	0835	1					86			AN(NAA17-86,WWVL20-36)	
28	1915	1920	1916	1							03	BO(WWI9-0.3)	1913E
30	1305		1315	1					17			UM(GBR16-17)	1258
30	1305	1307	1305	1							02	BO(WWI8-0.2)	
30	1548	1555	1550	1							03	BO(WWI9-0.3)	1537
30	1634	1639	1634	1							02	BO(WWI11-0.2)	1630
30	1634	1639	1635	1							03	BO(WWI11-0.3)	
30	1952	2001	1953	1							03	BO(WWI11-0.3)	1950
30	2321	2345	2326	5					35			MA(NPG18-35) HA(WWVL20-11, WWVB60-11)	2317
30	2320	2340	2330	1	SL 1-							OK	

Hawaii SCNA-SEA out of operation. Rome SCNA-SEA records not received in time for inclusion in this report.

No SPA observations made at Slough for 0900-1245 UT for the following dates: April 2,9,16 and 23, 1967.

RIOMETER EVENTS

APRIL 1967

South Pole 30 Mc/s

APRIL 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS	APRIL 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS
01	0122	1456	1317	13	8	18	0314	0337	0321	5	1
02	1211	1538	1236	7	5	18	0827	1628	1154	4	3
03	0133	0406	0137	19	5	19	0519	1329	1036	4	2
04	1521	1708	1602	3	3	19	2047	2218	2055	12	5
05	0110	0139	0120	8	4	20	0244	0357	0302	7	2
05	1033	1524	1213	10	6	21	0032	0216	0113	8	14
06	0005	0654	0010	26	6	21	0619	1601	1219	3	2
06	1148	1544	1408	7	3	22	0031	0250	0039	11	3
06	1945	2053	2002	6	1	22	0713	1634	1232	5	4
08	0147	0404	0216	10	6	22	2013	2258	2232	6	5
09	0202	0548	0203	15	4	24	0044	0106	0048	3	1
09	0953	1256	1151	4	1	24	0441	1735	1442	3	5
09	2226	2341	2238	6	3	24	1926	2215	2141	34	4
10	0254	0519	0303	8	2	25	0046	0544	0343	27	8
15	0046	1240	0616	5	2	25	0755	1635	1029	3	2
15	2233		2241			26	1112	1812	1633	4	2
16		0148		9	4	28	0445	0915	0514	4	2
16	0505	1610	0719	3	4	29	0226	0450	0229	5	5
17	0341	1223	0355	4	2	30	0220	1215	0352	3	1

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
APRIL 1967

OUTSTANDING EVENTS FOR APRIL 1967							
DATE	STA	START	STOP	8-20 $x10^{-3}$	0-8 $x10^{-4}$	0-3 $x10^{-5}$	COMMENTS
1	ABRD	0142	0156	65.00D	116.00U	13.60U	
1	ABRD	0329	0339	65.00D	99.00U	9.10U	
1	ABRD	0515	0519	65.00D	91.00U	8.80U	
1	NRL	1958	2013	45.41	64.41	11.83	PEAK
2	ABRD	0300	0309	53.00U	72.50U	9.75U	
2	NRL	0305	0314	52.33	69.15	10.51	
2	ABRD	0448	0449	52.00U	66.50U	9.40U	
2	NRL	1929	1942	45.56	68.78	10.49	PEAK
2	ABRD	2256	2310	44.40U	32.40U	3.06U	FLUX DECREASING
2	NRL	2258	2312	37.46	22.01	2.03	DECREASING
3	ABRD	0042	0053	45.00D	79.00U	11.90U	
3	NRL	0047	0055	50.63	79.79	10.15	
3	ABRD	0229	0239	34.60U	20.60U	32.70U	
3	ABRD	2043	2055	28.40U	14.50U	11.10U	
6	NRL	0102	0111	12.80	7.55	0.33E	
7	NRL	1840	1856	15.95	12.98	0.68	INCREASING
9	NRL	2110	2123	17.84	9.84	0.33E	
10	NRL	0045	0057	14.66	9.85	0.63	
11	BOUL	2149	2204	47 D	54	4.9	
11	ABRD	2155	2207	46.80U	4.07U	3.07U	FLUX DECREASING
11	NRL	2158	2206	46.82	40.49	2.51	
12	ABRD	0125	0137	18.10U	11.00U	1.01U	FLUX DECREASING
12	NRL	0129	0138	18.61	13.48	0.94	DECREASING
14	NRL	2025	2036	15.86	11.05	1.33	DECREASING
15	NRL	1807	1822	50.13	6.53	0.37E	PEAK
16	ABRD	0255	0308	21.80U	15.40U	2.22U	FLUX DECREASING
16	NRL	0256	0303	22.74	17.44	1.49	

NRL SOLAR X-RAY DATA (PRELIMINARY)

DAILY AVERAGES FOR APRIL 1967			
DATE	44-60 $x10^{-1}$	8-20 $x10^{-3}$	0-8 $x10^{-4}$
1		44.67	43.02
2		36.19	26.25
3		29.73	20.36
4	2.21	12.92	4.98
5	2.21	8.74	2.30
6	2.19	7.71	2.02
7	2.22	8.99	2.70
8	2.23	10.65	3.87
9	2.23	10.93	4.60
10		13.03	7.32
11		13.67	6.69
12		14.24	5.85
13		14.25	6.33
14		13.95	6.28
15	2.31	13.22	5.41
16		14.51	6.95
17	2.63	11.30	3.42
18	2.53	9.99	2.86
19	2.68	13.70	3.11
20	3.30	16.39	4.39
21	3.16		

SOLAR RADIATION MONITORING SATELLITE
X-RAY

APRIL 1967

OBSERVING TIMES FOR APRIL 1967

DATE	STA	START	STOP	ASPECT ANGLE
1	NRL	0000	0012	-12.0
1	ABRD	0142	0156	-12.2
1	NRL	0148	0157	-11.5
1	ABRD	0329	0339	-12.0
1	NRL	0334	0343	-11.5
1	ABRD	0515	0519	-12.0
1	NRL	1958	2013	-8.0
1	NRL	2142	2158	-7.6
1	ABRD	2143	2156	-07.8
1	ABRD	2326	2340	-07.8
1	NRL	2328	2339	-7.5
2	ABRD	0112	0126	-07.8
2	NRL	0118	0127	-7.4
2	ABRD	0300	0309	-07.8
2	NRL	0305	0314	-7.4
2	ABRD	0448	0449	-07.3
2	NRL	1929	1942	-3.5
2	NRL	2112	2127	-3.5
2	ABRD	2113	2126	-04.5
2	A+RD	2256	2310	-01.0
2	NRL	2258	2312	-3.5
3	ABRD	0042	0053	-04.0
3	NRL	0047	0055	-3.5
3	ABRD	0229	0239	-04.0
3	NRL	0233	0241	-3.5
3	ABRD	0417	0420	-04.0
3	NRL	1859	1911	-1.5
3	NRL	2041	2057	-1.5
3	BOUL	2042	2053	
3	ABRD	2043	2055	-01.0
3	BOUL	2222	2239	
3	ABRD	2226	2239	-01.0
3	NRL	2227	2241	-1.0
4	ABRD	0010	0025	-01.0
4	NRL	0016	0026	-1.5
4	ABRD	0158	0210	-01.0
4	NRL	0203	0211	-1.5
4	ABRD	0347	0351	-01.0
4	ABRD	0529	0532	-01.0
4	NRL	1830	1841	1.5
4	NRL	2011	2027	1.5
4	BOUL	2013	2023	
4	ABRD	2013	2022	2.0
4	BOUL	2154	2209	
4	ABRD	2155	2210	2.0
4	NRL	2156	2211	3.0
4	ABRD	2342	2355	0.0
4	NRL	2345	2356	1.5
5	ABRD	0127	0139	1.5
5	NRL	0132	0143	1.5
5	ABRD	0314	0321	1.5
5	NRL	0316	0324	1.5
5	ABRD	0458	0502	2.0
5	NRL	1801	1810	3.0
5	NRL	1941	1957	3.0
5	BOUL	2123	2138	
5	ABRD	2125	2137	3.0
5	NRL	2126	2141	3.0
5	BOUL	2307	2322	
5	ABRD	2310	2323	3.0
5	NRL	2314	2325	3.0
6	ABRD	0057	0109	3.0
6	NRL	0102	0111	3.0
6	ABRD	0244	0252	3.0
6	NRL	0247	0253	3.0
6	ABRD	0428	0433	2.0
6	NRL	1732	1739	3.5
6	NRL	1919	1926	3.5
6	BOUL	2052	2108	
6	NRL	2055	2110	3.5
6	ABRD	2055	2108	4.0
6	BOUL	2236	2253	
6	ABRD	2239	2253	4.0
6	NRL	2243	2254	3.5
7	ABRD	0024	0038	3.0
7	NRL	0030	0041	3.0
7	ABRD	0214	0223	3.0
7	NRL	0216	0224	3.0
7	ABRD	0358	0404	3.0
7	NRL	1840	1856	3.5
7	NRL	2025	2040	3.5
7	BOUL	2022	2038	
7	ABRD	2025	2037	4.0
7	BOUL	2206	2222	
7	ABRD	2209	2222	4.0
7	NRL	2214	2224	3.5
7	ABRD	2355	0008	3.0
8	NRL	0000	0010	3.0
8	ABRD	0143	0154	3.0
8	NRL	0146	0154	3.0
8	ABRD	0327	0334	2.5
8	NRL	0330	0335	3.0
8	ABRD	0512	0515	2.5
8	NRL	1812	1826	3.0
8	NRL	1954	2010	3.0
8	ABRD	1955	2007	2.5
8	ABRD	2138	2152	2.5
8	NRL	2141	2154	3.0
8	ABRD	2324	2338	2.5
8	NRL	2330	2340	3.0
9	ABRD	0111	0124	2.5
9	NRL	0116	0128	3.0
9	ABRD	0258	0305	2.5
9	NRL	0300	0307	3.0
9	ABRD	0441	0446	2.5
9	NRL	1741	1755	3.0
9	NRL	1924	1940	3.0
9	ABRD	1925	1939	2.5
9	ABRD	2108	2123	2.5
9	NRL	2110	2123	3.0
9	ABRD	2254	2307	2.0
9	NRL	2258	2309	1.5
10	ABRD	0041	0053	1.5
10	NRL	0045	0057	1.5
10	ABRD	0227	0236	1.5
10	NRL	0229	0237	1.5
10	ABRD	0411	0417	1.0
10	NRL	1711	1725	1.5
10	BOUL	1853	1906	
10	NRL	1853	1909	1.5
10	ABRD	1855	1913	1.0
10	BOUL	2035	2051	
10	ABRD	2037	2052	1.0
10	NRL	2041	2053	1.5
10	BOUL	2221	2235	
10	ABRD	2223	2235	1.0
10	NRL	2228	2238	1.5
11	ABRD	0010	0023	1.0
11	NRL	0015	0026	1.0
11	ABRD	0156	0207	0.5
11	NRL	0159	0208	1.0
11	ABRD	0341	0348	0.0
11	NRL	1641	1653	1.5
11	NRL	1823	1839	1.0
11	BOUL	1824	1839	
11	ABRD	1825	1837	1.5
11	BOUL	2004	2021	
11	NRL	2009	2023	1.0
11	ABRD	2009	2022	1.0
11	BOUL	2149	2204	
11	ABRD	2155	2207	0.0
11	NRL	2158	2206	1.0
11	ABRD	2340	2353	0.0
11	NRL	2345	2354	-1.0
12	ABRD	0125	0137	-00.5
12	NRL	0129	0138	-1.0
12	ABRD	0311	0318	-01.0
12	NRL	0314	0319	-1.5
12	ABRD	0455	0459	-01.0
12	NRL	1612	1623	1.0
12	BOUL	1754	1804	
12	ABRD	1756	1804	00.5
12	NRL	1753	1809	1.0
12	BOUL	1934	1950	
12	ABRD	1938	1952	00.5
12	NRL	1938	1953	1.0
12	BOUL	2119	2135	
12	ABRD	2122	2136	00.5
12	NRL	2127	2137	1.0
12	BOUL	2307	2320	
12	ABRD	2309	2322	-00.5
12	NRL	2314	2325	-1.0
13	ABRD	0055	0108	-01.0
13	NRL	0100	0109	-1.0
13	ABRD	0241	0249	-01.0
13	NRL	0244	0251	-1.0
13	NRL	1543	1552	1.5
13	NRL	1723	1738	1.5
13	ABRD	1726	1734	1.0
13	NRL	1907	1923	1.5
13	BOUL	1908	1919	
13	ABRD	1909	1922	1.0
13	BOUL	2049	2103	
13	ABRD	2052	2106	1.0
13	NRL	2056	2107	1.5
13	BOUL	2236	2248	
13	ABRD	2239	2252	0.0
13	NRL	2243	2254	1.0
14	ABRD	0028	0037	0.5
14	NRL	0029	0041	1.0
14	ABRD	0211	0220	0.0
14	NRL	0212	0222	1.0
14	ABRD	0354	0401	0.0
14	NRL	1654	1708	3.0
14	BOUL	1834	1850	
14	ABRD	1836	1851	2.5
14	NRL	1837	1852	3.0
14	BOUL	2018	2035	
14	ABRD	2021	2034	2.5
14	NRL	2025	2036	3.0
14	BOUL	2206	2219	
14	ABRD	2209	2220	2.5
14	NRL	2213	2223	3.0
14	ABRD	2354	0007	2.5
14	NRL	2358	0011	3.0
15	ABRD	0140	0151	2.5
15	NRL	0142	0152	3.0
15	ABRD	0325	0332	2.5
15	NRL	0328	0332	3.0
15	NRL	1623	1638	5.5
15	ABRD	1807	1821	5.5
15	NRL	1807	1822	5.5
15	ABRD	1951	2004	5.0
15	NRL	1954	2007	5.5
15	ABRD	2137	2149	5.0
15	NRL	2142	2153	5.5
15	ABRD	2324	2336	5.5
15	NRL	2328	2341	5.5
16	ABRD	0110	0122	5.5
16	NRL	0112	0123	5.5
16	ABRD	0255	0308	5.5
16	NRL	0256	0303	5.5
16	NRL	1553	1604	8.6
16	NRL	1736	1752	8.8
16	ABRD	1737	1751	8.9
16	A+RD	1920	1935	8.9
16	NRL	1922	1934	8.8
16	ABRD	2106	2119	8.9
16	NRL	2112	2121	8.7
16	ABRD	2258	2304	8.9
16	NRL	2258	2308	8.7
17	ABRD	0039	0052	8.9
17	NRL	0043	0054	9.0
17	ABRD	0225	0234	9.2
17	NRL	0227	0235	9.2
17	ABRD	0410	0415	9.2
17	NRL	1523	1537	13.0
17	BOUL	1705	1719	
17	NRL	1706	1722	13.0
17	ABRD	1706	1719	13.4
17	BOUL	1847	1904	
17	ABRD	1850	1904	13.2
17	NRL	1852	1906	13.4
17	ABRD	2036	2048	13.0
17	NRL	2041	2051	13.4
17	BOUL	2221	2234	
17	ABRD	2223	2235	13.2
17	NRL	2228	2238	13.5
18	ABRD	0010	0021	13.6
18	NRL	0012	0025	13.5
18	ABRD	0155	0205	14.2
18	NRL	0157	0206	13.5
18	ABRD	0338	0346	14.2
18	NRL	1454	1506	18.4
18	BOUL	1635	1648	
18	NRL	1636	1648	18.6
18	ABRD	1637	1650	19.2
18	BOUL	1817	1833	
18	ABRD	1820	1834	20.2
18	NRL	1822	1834	18.8
18	BOUL	2002	2017	
18	ABRD	2006	2019	20.2
18	NRL	2010	2021	19.0
18	BOUL	2150	2203	
18	ABRD	2152	2204	20.0
18	NRL	2157	2208	19.1
18	NRL	2340	2355	19.2
19	ABRD	0123	0136	21.0
19	NRL	0126	0137	19.6
19	NRL	1424	1436	24.5
19	NRL	1605	1621	24.8
19	ABRD	1608	1618	24.8
19	BOUL	1610	1617	
19	BOUL	1747	1803	
19	ABRD	1749	1803	26.0
19	NRL	1751	1806	25.3
19	BOUL	1933	1947	
19	ABRD	1936	1947	26.0
19	NRL	1939	1949	25.5
19	ABRD	2122	2132	26.0
19	NRL	2127	2137	25.5
19	ABRD	2311	2320	26.0
19	NRL	2311	2326	25.5
20	ABRD	0053	0103	26.8
20	NRL	0055	0108	26.0
20	NRL	1354	1404	31.5
20	NRL	1535	1551	31.8
20	NRL	1720	1735	32.0
20	NRL	1908	1920	32.3
20	NRL	2056	2107	32.2
20	NRL	2241	2255	32.4
21	NRL	0030	0039	33.0
21	NRL	0211	0220	33.4
21	NRL	1325	1334	38.5
21	NRL	1505	1521	38.6
21	NRL	1650	1704	39.0
21	NRL	1838	1849	39.1
21	NRL	2026	2036	39.4

COSMIC RAY INDICES
(Neutron Monitors)

APRIL 1967

APR. 1967	CHURCHILL	DEEP RIVER	CLIMAX	DALLAS
	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR
1	*	6725.6	4057.3	*
2		6636.0	3979.4	
3		6663.5	3969.0	
4		6591.2	3922.3	
5		6583.6	3920.9	
6		6617.5	3940.7	
7		6674.6	3970.7	
8		6695.7	-- (0)	
9		6716.2	-- (0)	
10		6711.2	4028.6 (10)	
11		6749.0	4012.6	
12		6761.9	4042.9	
13		6759.4	4046.5	
14		6713.4	4011.4	
15		6727.8	4015.6	
16		6755.2	4020.1 (14)	
17		6783.8	4067.0 (10)	
18		6770.0	4040.5	
19		6768.7	4057.2	
20		6783.8	4073.0	
21		6822.3	4090.1	
22		6792.8	4056.2	
23		6757.4	4029.6	
24		6806.8	4078.0	
25		6809.2	4074.4	
26		6813.6	4058.3	
27		6827.3	4062.9	
28		6820.4	4060.7	
29		6809.4	4069.8	
30		6713.1	4013.0	

* The data for April 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.

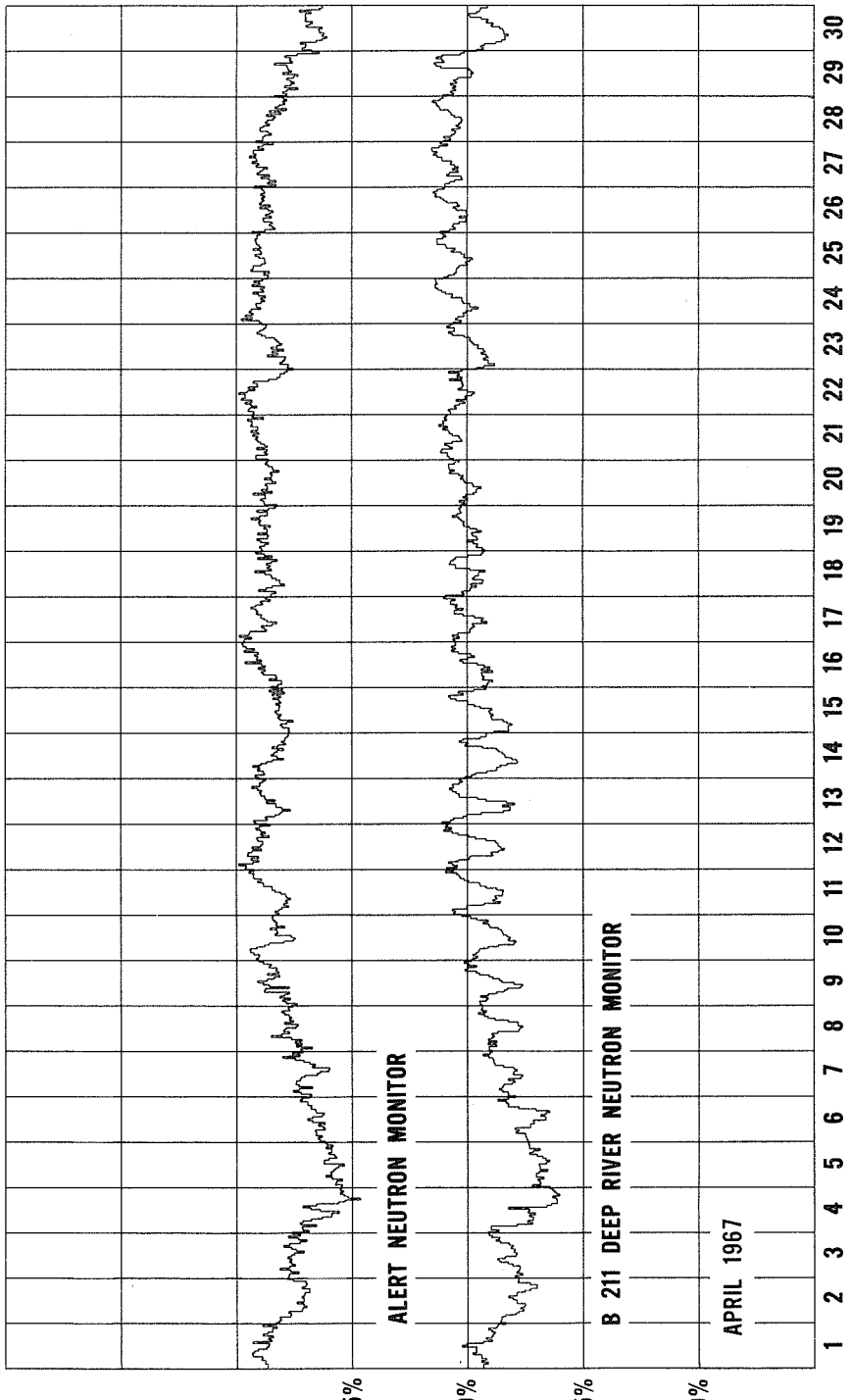
Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

APRIL 1967



GEOMAGNETIC ACTIVITY INDICES

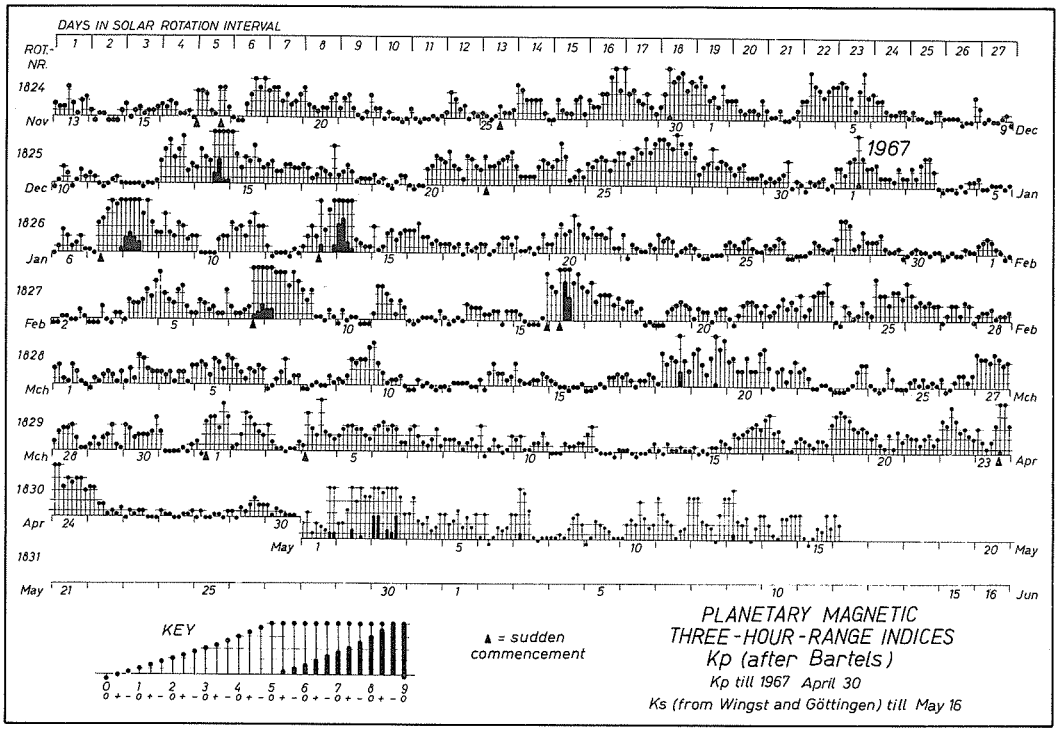
APRIL 1967

DAY		Kp THREE-HOUR RANGE INDICES 1	2	3	4	5	6	7	8	SUM	Ci	Cp	Ap
1	D	1+	0	3+	4-	4-	3-	5-	4-	23	1.2	1.0	18
2		1-	1	2	4	4-	3	2+	2	19-	0.9	0.7	12
3	Q	3	1+	1-	1-	0+	1-	1-	1+	9-	0.3	0.2	5
4		1	4	3-	2	5	2+	2	2-	21-	1.0	0.8	15
5		2	3-	3	3	3-	3-	2	2-	20-	0.6	0.6	11
6		3-	3	3+	3-	3	3-	1+	1+	20	0.6	0.7	12
7		3-	3	2	1+	1	2-	3-	1	15+	0.5	0.4	8
8		2-	2-	2-	1+	1-	1+	2-	1	11	0.2	0.2	5
9		3	0	1-	2-	1	0+	1-	2	9+	0.3	0.2	5
10		2-	2	1-	1-	1+	1+	2+	1+	11+	0.4	0.2	5
11	Q	0+	0+	0+	1+	1	1	1+	1+	7	0.1	0.1	4
12	Q	2+	3	1-	0+	0+	0+	0	1-	8-	0.2	0.2	4
13	QQ	1-	1-	0+	0	0+	0+	1-	1+	4+	0.0	0.0	2
14	QQ	1-	0+	1+	1-	1-	1	1-	1-	6	0.1	0.1	3
15	Q	1	0+	1-	0+	1	1	2-	1+	7+	0.2	0.1	4
16		1	2+	2	2+	3-	3	3+	2-	18+	0.7	0.6	10
17		4-	4	1+	3-	2-	1-	1-	2-	16+	0.5	0.6	10
18		2	2-	1+	1	2-	2-	1+	3+	14	0.5	0.4	7
19	D	4	4+	4	4-	3	3-	3	3-	27+	1.2	1.0	20
20		2	2+	1+	1	2+	1	3-	2-	14+	0.6	0.4	7
21		2+	2	2	1+	2	2+	1+	2	15+	0.4	0.4	7
22	D	4-	3+	5-	4-	3-	3	2+	2	25+	1.0	1.0	18
23	D	3	2-	1	2-	3+	5+	5	3+	24+	1.2	1.1	21
24	D	5	5	3+	4	4-	4	4	3	32	1.4	1.3	29
25		3+	3+	2-	2-	1-	1	1-	1+	14-	0.4	0.4	8
26	QQ	0+	1	1-	1	1	0+	0+	0+	5	0.1	0.1	3
27	QQ	1	1-	1-	0+	0+	1-	1-	1	5+	0.1	0.1	3
28	QQ	0+	1	0+	0+	1-	1-	0+	1	5-	0.1	0.0	3
29		1	0+	1+	1	2-	2+	2-	2-	10	0.4	0.2	5
30	Q	2-	1-	1+	1	1-	1-	1-	0	7-	0.1	0.1	3
										MEAN	0.51	0.44	9

The Kp values given as integers represent the values normally given with a small zero following the number, i.e., 0=0o, 1=1o, etc., because the table is prepared by computer and lower case symbols are not available.

Preliminary storm sudden commencements (ssc) occurred April 1 at 0807 UT, April 4 at 0304 UT and April 23 at 1426 UT.

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

DAY	1966 MAY	1966 JUNE	1966 JULY	1966 AUG.	1966 SEPT.	1966 OCT.	1966 NOV.	1966 DEC.	1967 JAN.	1967 FEB.	1967 MAR.	1967 APR.
1	8	12	5	6	22	6	31	17	18	4	5	18
2	12	10	4	1	15	3	14	6	7	2	4	12
3	5	7	4	7	92	4	17	4	10	2	8	5
4	12	4	14	8	112	26	9	19	2	11	6	15
5	6	5	5	10	13	36	9	20	3	15	11	11
6	7	4	5	6	24	22	7	7	6	7	8	12
7	4	9	4	5	14	8	6	4	28	30	5	8
8	5	4	22	5	42	5	7	4	60	46	2	5
9	5	3	36	9	19	9	3	3	12	8	12	5
10	2	2	25	12	19	3	9	4	4	2	8	5
11	10	3	8	14	7	2	6	3	16	11	2	4
12	6	7	15	14	5	10	8	2	2	2	2	4
13	7	5	3	6	4	8	7	20	26	4	5	2
14	2	4	4	9	10	4	2	48	61	4	5	3
15	2	6	8	5	20	14	4	18	9	7	2	4
16	5	6	6	4	10	20	4	8	9	64	3	10
17	7	4	11	2	9	6	11	9	4	15	4	10
18	5	3	4	10	3	4	12	5	5	5	23	7
19	3	6	5	20	17	4	12	3	5	5	26	20
20	8	7	6	7	21	4	8	7	13	5	13	7
21	4	4	14	5	10	2	6	12	9	6	10	7
22	4	3	8	4	6	2	3	14	4	7	4	18
23	2	17	6	22	17	2	2	8	5	14	4	21
24	2	16	6	16	12	11	6	12	2	4	3	29
25	5	16	4	8	13	22	4	14	5	15	4	8
26	78	6	6	6	22	15	10	24	4	11	4	3
27	5	4	11	5	18	6	6	34	4	5	18	3
28	5	5	10	4	22	5	19	14	12	4	8	3
29	4	6	5	13	17	4	15	7	4		6	5
30	6	6	6	82	16	13	28	6	3		11	3
31	48		5	23		34		3	2		3	
MEAN	9	6	9	11	21	10	9	11	11	11	7	9

PRINCIPAL MAGNETIC STORMS

APRIL 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
04 01	0807	04 03 03	COLL	64.6N	SC *	- 5.0	+39	-21	MS	04 01	4	7	198	1130	550	16
										04 02	4	7				16
	0807	04 02 01	BOUL	49.0N	SC *	- 2	+28	0	M	04 01	4,5	5	18	75	40	16
	0807	04 01 24	IRKU	40.8N	SC *	+ 0.5	+24	- 2	M	04 01	3,4,5	5	13	83	28	16
	0807	04 02 00	TUCS	40.4N	SC	- 1	+29	+ 2	M	04 01	7	5	8	70	5	16
	0806	04 03 03	MBOR	21.3N	SC	- 0.8	+25	- 2	M	04 01	7	5	2	106	13	16
	0807	04 02 21	HYDE	7.6N	SC	- 0.8	+35	- 3	M	-- --	-	-	4	129	17	16
	0808	04 01 24	HRMN	33.3S	SC	- 3.0*	+26.3	+12.5	M	04 01	4,7	5	18	95	111	16
	0808	04 03 03	KGLN	57.3S	SC	--	--	--	M	04 01	7,8	3	--	--	--	16
										04 02	4,5,6	3				16
04 04	0304	04 06 18	COLL	64.6N	SC *	-12.7	+51	-20	MS	04 04	5	6	90	760	330	17
	0304	04 06 17	IRKU	40.8N	SC	- 4.1	+14	- 1	M	04 04	2,5	5	16	99	26	17
	0304	04 06 09	TUCS	40.4N	SC	- 2	+34	+ 2	M	04 04	2,5	5	10	80	5	17
	0303	04 04 21	MBOR	21.3N	SC	+ 0.7	+25	- 3	M	04 04	5	5	4	83	18	17
	0304	04 04 18	HONO	21.1N	SC *	- 1	+22	+ 9	M	04 04	5	5	2	45	16	17
	0304	04 04 18	HYDE	7.6N	SC	- 0.1	+39	- 5 *	M	-- --	-	-	4	128	19	17
	1247	-- -- --	HYDE	7.6N	SI	+ 0.8	-37	- 4	-	-- --	-	-	--	--	--	17
	0303	04 04 06	GUAM	4.0N	SC *	--	+42	-07	M	04 04	0,2	5	--	54	14	17
	0304	04 04 16	HRMN	33.3S	SC	+ 3.7*	+18.2	+18.1	M	04 04	5	5	17	68	71	17
	0305	04 04 23	KGLN	57.3S	SC	--	--	--	M	04 04	2,5,6	3	--	--	--	17
04 15	1615	04 16 21	HYDE	7.6N	..	..	..	..	M	-- --	-	-	4	113	24	18
04 18	20--	04 19 23	TUCS	40.4N	..	..	..	..	M	04 19	1,2,3 4	4	8	70	5	19
04 21	2130	04 25 05	TUCS	40.4N	..	..	..	..	M	04 22	3	5	13	80	5	20
	21--	04 25 06	MBOR	21.3N	..	..	..	..	M	04 23	6,7	4	3	107	20	20
04 22	01--	04 23 03	COLL	64.6N	..	..	..	..	MS	04 22	3	6	128	750	720	20
	0500	04 22 20	IRKU	40.8N	SC	+ 0.8	+ 5	- 1.5	M	04 22	1,3,5 6	4	12	53	33	20
04 23	14--	04 25 11	COLL	64.6N	..	..	..	..	MS	04 23	6	6	160	1220	650	20
										04 24	4					20
	1426	04 24 24	WITT	54.1N	SC	- 2	+19	0	M	04 23	6,7	5	25	150	95	20
										04 24	1,6,7	5				20
	14--	04 25 05	FRED	49.6N	..	..	..	..	M	04 24	1,2	5	30	114	44	20
	07--	04 25 06	IRKU	40.8N	..	..	..	..	M	04 23	6,7	5	--	--	--	20
										04 24	1	5	22	108	45	20
	0130	04 24 23	HYDE	7.6N	..	..	..	..	M	-- --	-	-	7	161	27	20
	09--	04 25 05	PILR	20.2S	..	..	..	..	M	04 24	1	5	8	116	45	20
	14--	04 25 05	HRMN	33.3S	..	..	..	..	MS	04 23	6	6	12	87	77	20
	1500	04 23 23	HRMN	33.3S	BAY	..	-	..	-	-- --		-	--	--	--	20
	14--	04 25 10	GNAN	43.2S	..	..	..	..	M	04 23	6,7	5	13	33	78	20
										04 24	4,5,6					20
	1425	04 25 11	KGLN	57.3S	..	..	..	..	M	04 23	7	5	--	--	--	20

The following observatories reported that no principal magnetic storms occurred during the month of April 1967:

Apia
Amberley
Port Moresby
San Juan
Sitka
Toolangi

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

APRIL 1967

NORTH ATLANTIC, NORTH PACIFIC

APR 1967	WHOLE DAY INDICES: NORTH ATLANTIC	WHOLE DAY INDICES: NORTH PACIFIC	WHOLE DAY INDICES: 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	NORTH ATLANTIC 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} OBSERVED	PREDICTED	K_{SI} HALF DAY (1)	(2)	A_{SI}
01	7-	6	6	7	7-	7-	7-	7-	7	7	7	7	6	6	6	6	2	3	14	9	2	(4)	26
02	7-	6	6	7	7-	7-	7-	7o	6	6	7	7	6	6	6	6	2	3	14	9	2	3	23
03	7-	6	6	7	7-	7-	7-	7o	7	7	7	7	6	6	6	6	1	1	3	4	0	0	2
04	7-	6	6	7	7-	7-	7-	7o	7	6	7	7	6	6	6	6	2	3	11	4	2	3	12
05	7-	6	6	7	7o	7-	7-	7-	7	7	7	7	6	6	6	6	3	2	10	6	2	2	9
06	7-	6	6	7	7-	6+	7-	7o	7	6	7	7	6	6	6	6	3	2	10	6	3	2	11
07	7-	6	6	7	7-	7-	7-	7o	7	6	7	7	6	6	6	6	3	2	10	4	2	1	7
08	7-	6	6	7	7o	7-	7-	7-	7	7	7	7	6	6	6	6	2	1	4	2	1	1	3
09	7-	6	6	7	7-	7-	7-	7o	7	6	7	7	6	6	6	6	1	1	3	5	1	1	3
10	7-	6	6	7	7-	7-	7-	7o	7	7	7	7	6	6	6	6	2	2	6	5	1	1	3
11	7-	6	6	7	7-	6+	7-	7o	7	7	7	7	6	6	6	5	0	1	2	3	0	1	2
12	7-	6	6	7	7-	7-	7-	7o	7	6	7	7	6	6	6	6	2	0	4	3	0	0	1
13	7o	7	7	7	7o	7-	7o	7+	7	7	7	7	7	7	7	6	1	1	2	8	0	0	0
14	7-	7	7	7	7o	7-	7-	7o	7	7	7	7	7	7	7	6	1	1	2	11	0	0	1
15	7o	6	7	7	7o	7-	7o	7o	7	7	7	7	6	7	7	6	1	2	3	15	0	1	2
16	7-	6	6	7	7o	7-	7-	7o	7	7	7	7	6	6	6	6	2	2	8	11	2	2	6
17	7-	6	6	7	6+	7-	7-	7o	7	6	7	7	6	6	6	6	3	1	10	8	2	0	7
18	7-	6	6	7	7-	7-	6+	7o	7	6	7	7	6	6	6	6	1	2	7	4	2	2	6
19	7-	6	6	7	6+	7-	7-	7-	7	6	7	7	6	6	6	6	(4)	3	21	4	(4)	2	17
20	7-	6	6	6	7-	7-	7-	7o	6	6	7	7	6	6	6	6	2	2	9	12	2	1	5
21	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	2	2	7	7	2	1	7
22	6+	6	6	7	6+	6o	7-	7o	7	7	7	7	6	6	6	6	(4)	2	17	7	(4)	2	28
23	7-	6	6	7	6+	6+	7-	7-	6	6	7	7	6	6	6	6	2	(4)	14	4	1	3	13
24	7-	6	6	7	7-	6o	7-	7-	6	6	7	6	6	6	6	6	(4)	3	23	4	(4)	3	24
25	7-	6	6	7	6+	6o	7-	7o	6	6	7	7	6	6	6	6	2	1	7	7	2	0	6
26	7-	6	7	7	7-	7-	7-	7o	7	6	7	7	6	7	6	6	1	1	2	7	1	0	2
27	7-	6	7	7	7-	6+	7-	7o	7	6	7	7	6	7	6	6	1	1	2	5	1	0	1
28	7-	6	7	7	7-	6+	7-	7o	7	7	7	7	6	7	6	6	1	1	2	10	0	0	2
29	7-	6	6	7	7-	6+	7-	7o	7	6	7	7	6	6	6	6	1	2	6	10	1	1	3
30	7-	6	7	7	7-	6+	7-	7o	6	6	7	7	6	7	6	6	2	1	4	8	2	0	3
QUIET			P	8					23	16	29	29											
			S	22					7	14	1	1											
			U	0					0	0	0	0											
			F	0					0	0	0	0											
DISTURBED			P	0					0	0	0	0											
			S	0					0	0	0	0											
			U	0					0	0	0	0											
			F	0					0	0	0	0											

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

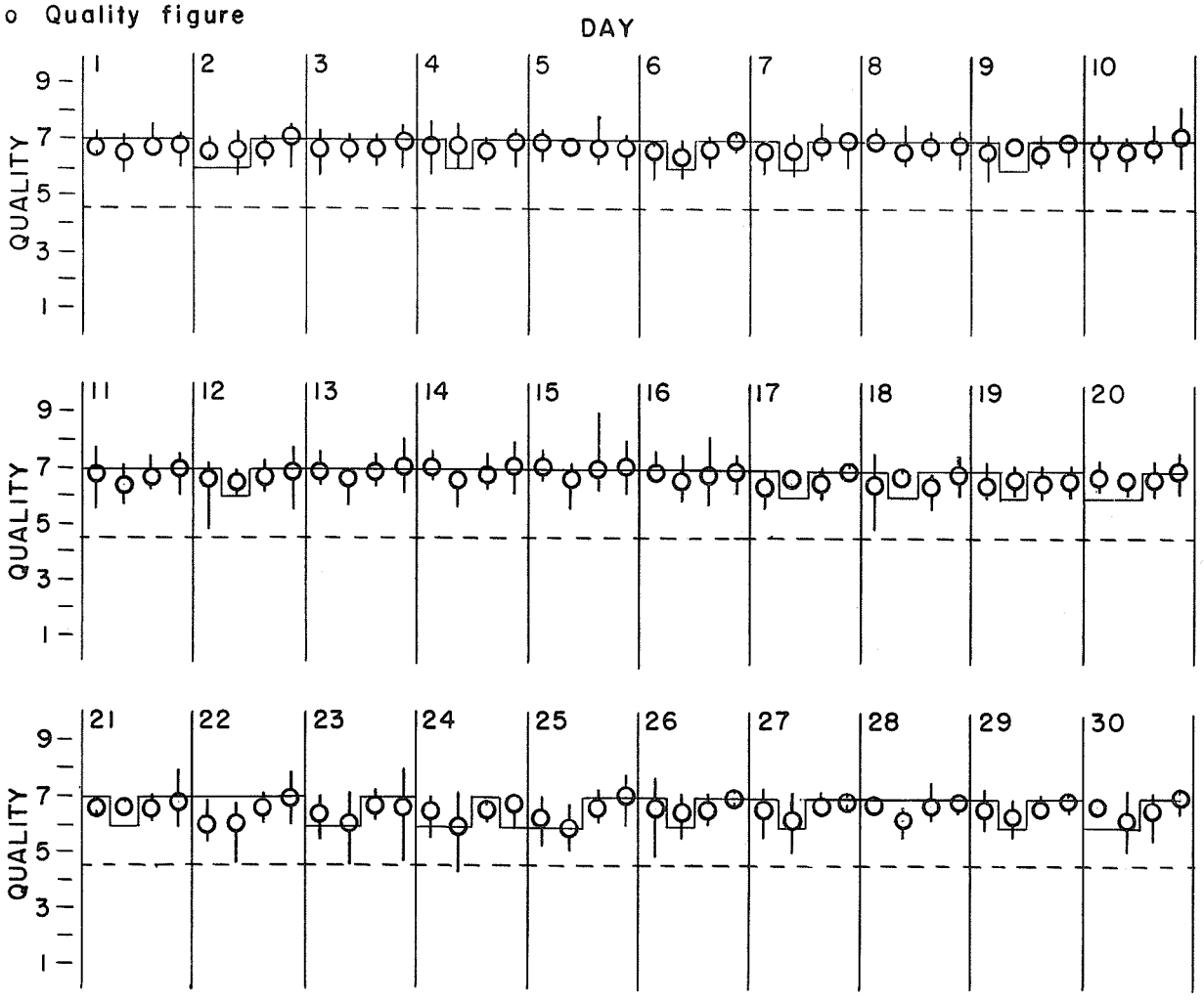
2) THE PREDICTED AFR INDICES ARE ISSUED EACH WEDNESDAY FOR THE COMING SEVEN DAYS. THE VALUE FOR THE FIRST DAY OF EACH PREDICTION PERIOD IS UNDERSCORED.

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

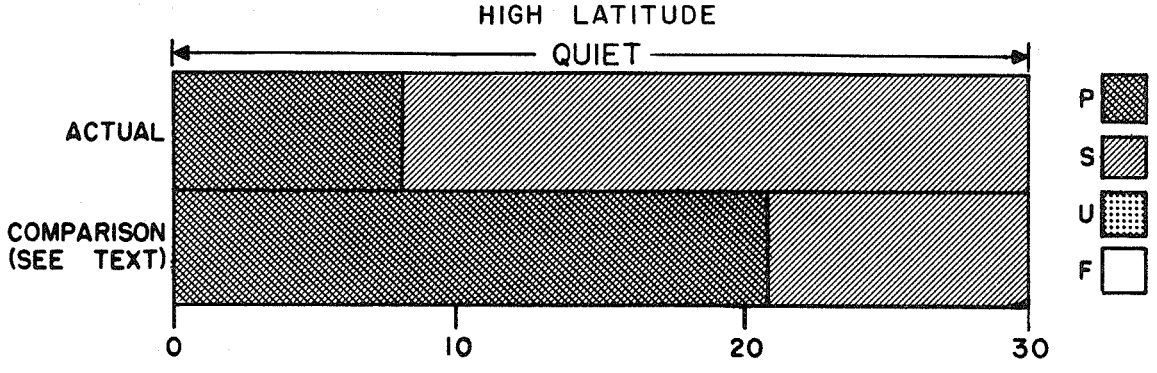
APRIL 1967

NORTH ATLANTIC

— Short-term forecast
o Quality figure
I Range of reports

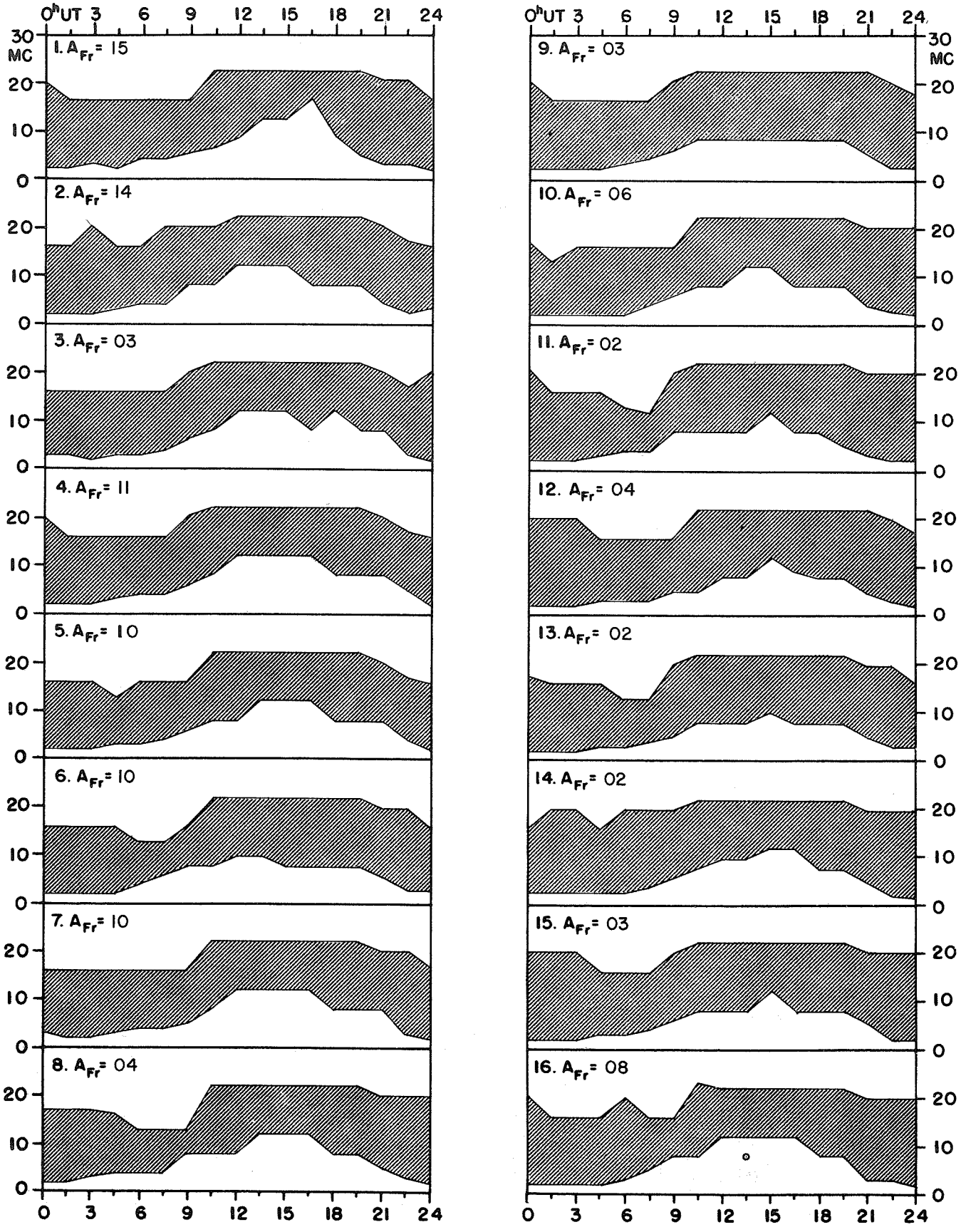


Outcome of advance forecasts - final estimates (1 to 7 days ahead) - High Latitude radio propagation conditions



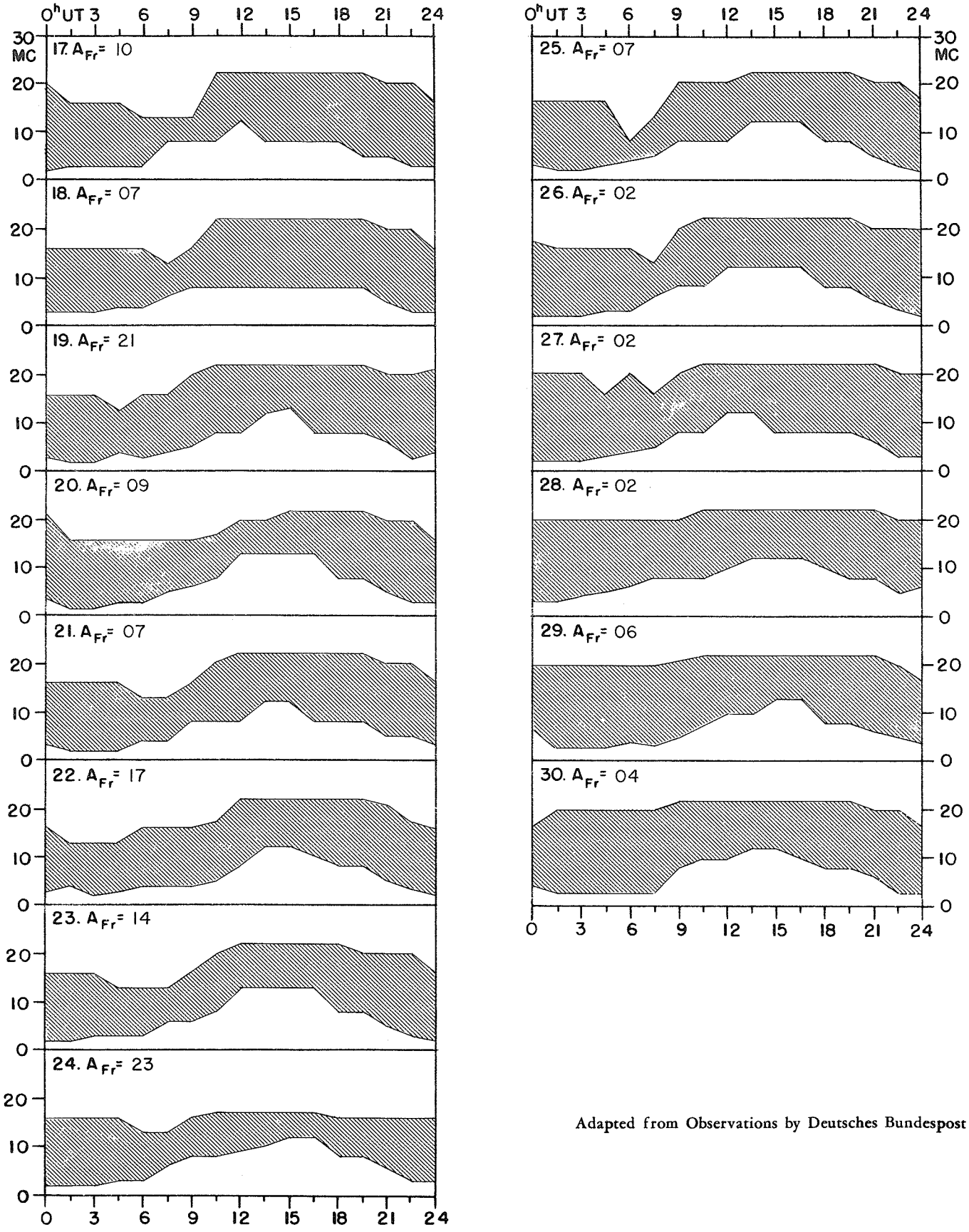
TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

APRIL 1967



TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

APRIL 1967



Adapted from Observations by Deutsches Bundespost

Table of Contents
for December 1966 Data

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

SOLAR FLARES

REVISED

DECEMBER 1966

OBSERV-ATORY	DATE 1966 DEC	OBSERVED UT START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT.	REMARKS
GRP 1799	01	1333	1339	1335	N32	W80	.988	8586	25.6	6	1-				.50				1 1 1
ATHN	01	1333	1339	1335	N32	W80	.988	8586	25.6	6	-N	1		1335	.50		1.30		
	01	1515	1525	NO FLARE PATROL															
GRP 1800	01	1743	1824	1754	N26	E10	.452	8594	2.5	41	1-				1.89				4 4 4
LOCK	01	1730	1820	1755	N27	E11	.472	8594	2.6	50	-N		C	1755	1.60	1.80		20	
HALE	01	1746	1830	1752	N24	E09	.418	8594	2.4	44	-B	3	C	1752	1.03	1.10			
HUAN	01	1747	1820	1756	N27	E10	.466	8594	2.5	33	-N	2	C	1756	1.44	1.47			E
SACP	01	1747	1827	1754	N26	E10	.452	8594	2.5	40	1N		C		3.49	3.54			
GRP 1801	01	2131	2155	2138	N26	E06	.434	8594	2.3	24	1-				.28				1 1 1
CULG	01	2131	2155	2138	N26	E06	.434	8594	2.3	24	-N		C	2138	.31	.33			
GRP 1802	01	2205	2220	2208	N27	E07	.453	8594	2.4	15	1-				.28				1 1 1
CULG	01	2205	2220	2208	N27	E07	.453	8594	2.4	15	-N		C	2208	.31	.33			
GRP 1803	02	0317	0335	0322	N18	W25	.500	8593	30.3	18	1-				.67				2 2 2
HALE	02	0313	0328D	0320	N18	W24	.488	8593	30.3	15D	-N	1	P	0320	.52	.60			
MITK	02	0320	0335	0323	N17	W25	.492	8593	30.3	15	-F		C	0323	1.03	1.20			E
	02	0450	0515	NO FLARE PATROL															
	02	0655	0700	NO FLARE PATROL															
GRP 1804	02	0745	0805		N21	E90	1.000	8605	9.1	20	1-								1 1 0
ISTA	02	0745	0805		N21	E90	1.000	8605	9.1	20	-N								
GRP 1805	02	1112	1117	1113	N16	W27	.510	8593	30.4	5	1-				.50				1 1 1
ATHN	02	1112	1117	1113	N16	W27	.510	8593	30.4	5	-F	2		1113	.50	.60	1.20		
GRP 1806	02	1425	1453	1430	N16	W31	.561	8593	30.3	28	1-				1.22				4 4 3
HUAN	02	1424	1444		N17	W32	.580	8593	30.2	20	-N	1	C	1432	.77	.83			E
ATHN	02	1425	1443D	1429	N16	W29	.536	8593	30.4	18D	1N	1		1429	1.98	2.30	1.70		
CAPS	02	1426E	1440D		N16	W30	.548	8593	30.4	14D	-F	1							
SACP	02	1426	1501	1430	N16	W32	.574	8593	30.2	35	-N		C		1.09	1.16			
GRP 1807	02	1628	1649	1633	N13	W34	.585	8593	30.1	21	1-				.37				1 1 1
SACP	02	1628	1649	1633	N13	W34	.585	8593	30.1	21	-F		C		.41	.44			
GRP 1808	02	1802	1830	1810	N15	W36	.620	8593	30.1	28	1-				.45				1 1 1
SACP	02	1802	1830	1810	N15	W36	.620	8593	30.1	28	-F		C		.50	.54			
	02	2320	2335	NO FLARE PATROL															
	02	2355	0000	NO FLARE PATROL															
GRP 1809	03	0143	0209	0147	N16	W39	.661	8593	30.1	26	1-				.18				1 1 1
HALE	03	0143	0209	0147	N16	W39	.661	8593	30.1	26	-F	1	C	0147	.15	.20			
GRP 1810	03	0151	0307	0219	S10	E51	.786	8602	6.9	76	1-				.18				1 1 1
HALE	03	0151	0307	0219	S10	E51	.786	8602	6.9	76	-N	1	C	0219	.15	.30			
GRP 1811	03	0243	0300	0248	N14	W04	.241	8594	2.8	17	1-				.18				1 1 1
HALE	03	0243	0300	0248	N14	W04	.241	8594	2.8	17	-N	1	C	0248	.15	.20			G
GRP 1812	03	0312	0326	0318	S10	E51	.786	8602	7.0	14	1-				.18				1 1 1
HALE	03	0312	0326	0318	S10	E51	.786	8602	7.0	14	-F	1	C	0318	.15	.30			
GRP 1813	03	0356	0405		N17	W40	.677	8593	30.2	9	1-				.36				1 1 1
MITK	03	0356	0405		N17	W40	.677	8593	30.2	9	-F		C	0359	.52	.70			E
GRP 1814	03	0809	0850		N18	W41	.693	8593	30.3	41	1-				1.20				2 2 1
KAND	03	0809	0850		N17	W42	.700	8593	30.2	41	-N		C						
ARCE	03	0820E	0845D		N19	W40	.686	8593	30.3	25D	-B		C	0820	1.17	1.60			E
GRP 1815	03	0813	0830		N20	W32	.599	8593	30.9	17	1-				1.32				1 1 1
ATHN	03	0813E	0830		N20	W32	.599	8593	30.9	17D	-N	1		0815	1.32	1.60	1.50		
GRP 1816	03	0845	0945	0910	N04	E90	1.000	8606	10.1	60	2				2.36				1 1 1
ARCE	03	0845E	0945D	0910	N04	E90	1.000	8606	10.1	60D	2N		C	0910	2.36				A
GRP 1817	03	0910	0925		N26	E90	1.000	8607	10.1	15	1				.61				1 1 1
ARCE	03	0910E	0925D		N26	E90	1.000	8607	10.1	15D	1N		C	0925	.61				
GRP 1818	03	1350	1415	1352	S15	E90	1.000	8609	10.3	25	1-				.25				2 2 2
HUAN	03	1349	1414	1352	S15	E90	1.000	8609	10.3	25	-N	2	C	1352	.25				D
ATHN	03	1351	1415D	1351	S15	E90	1.000	8609	10.3	24D	-N	1		1351	.33		1.70		
GRP 1819	03	1639	1645	1640	S19	E33	.614	8602	6.2	6	1-				.19				1 1 1
HUAN	03	1639	1645	1640	S19	E33	.614	8602	6.2	6	-F	2	C	1640	.21	.22			D
GRP 1820	03	1749	1802	1756	N28	E85	.997	8607	10.1	13	1-				.31				2 2 2
HALE	03	1744	1802	1755	N29	E88	.999	8607	10.3	18	-N	2	C	1755	.21				
SACP	03	1753	1801	1756	N27	E82	.992	8607	9.9	8	-F		C		.41				
GRP 1821	03	1903	1913	1907	N28	E88	.999	8607	10.4	10	1-				.25				1 1 1
HALE	03	1903	1913	1907	N28	E88	.999	8607	10.4	10	-N	2	C	1907	.21				
GRP 1822	03	2212	2222	2216	N27	E82	.992	8607	10.1	10	1-				.36				2 2 2
SACP	03	2212	2220	2215	N28	E84	.995	8607	10.2	8	-F		C		.41				
LOCK	03	2212	2223	2216	N26	E79	.984	8607	9.9	11	-F		C	2216	.40	1.20		10	H
GRP 1823	03	2223	2230	2226	N16	E78	.979	8606	9.8	7	1-				.26				1 1 1
LOCK	03	2223	2230	2226	N16	E78	.979	8606	9.8	7	-F		C	2226	.30	.60		10	
GRP 1824	03	2240	2305	2252	N26	W21	.536	8594	2.4	25	1-				.40				1 1 1
LOCK	03	2240	2305	2252	N26	W21	.536	8594	2.4	25	-F		C	2252	.40	.50		10	J
GRP 1825	04	0720	0825	0755	N15	W57	.849	8593	30.0	65	1+				2.66				1 1 1
BUCA	04	0720E	0825D	0755	N15	W57	.849	8593	30.0	65D	2F		C	0755	3.32	6.37			
GRP 1826	04	0936	1000		N16	W54	.823	8593	30.4	24	1-				.69				2 2 2
BUCA	04	0920E	1005D		N15	W56	.840	8593	30.2	45D	1F		C	0938	1.10	2.02			
MONT	04	0951	0955		N17	W52	.806	8593	30.5	4	-N		C	0953	.60	.80			

SOLAR FLARES

REVISED

DECEMBER 1966

OBSERV-ATORY	DATE 1966 DEC	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 1827	04	1030	1036		N15	W57	.849	8593	30.2	6	1-				.63				1 1 1
MONT	04	1030E	1036D		N15	W57	.849	8593	30.2	6D	-N		C	1035	.62	.90			
GRP 1828	04	1220	1259		N16	W58	.859	8593	30.2	39	1-				.26				1 1 1
HUAN	04	1220E	1259		N16	W58	.859	8593	30.2	39D	-N	2	C	1228	.31	.44			E
GRP 1829	04	1609	1636	1619	N06	E75	.966	8606	10.3	27	1-				.30				1 1 1
SACP	04	1609E	1636	1619	N06	E75	.966	8606	10.3	27D	-F		C		.33	.72			
GRP 1830	04	1713	1722	1718	N08	E76	.971	8606	10.4	9	1-				.24				2 2 2
HALE	04	1712	1720	1717	N08	E74	.962	8606	10.3	8	-N	2	C	1717	.21				
SACP	04	1713	1724	1719	N08	E77	.975	8606	10.5	11	-F		C		.25	.58			
GRP 1831	04	1823	1842		N16	W60	.876	8593	30.3	19	1-				.30				1 1 1
HUAN	04	1823	1842		N16	W60	.876	8593	30.3	19	-F	1	C	1825	.36	.52			E
GRP 1832	04	1900	1913	1905	N27	W42	.746	8594	1.6	13	1-				.60				2 2 2
HALE	04	1900	1908	1905	N27	W41	.736	8594	1.7	8	-F	2	C	1905	.31	.50			
SACP	04	1902E	1918	1905	N27	W42	.746	8594	1.6	16D	-F		C		.91	1.11			
GRP 1833	04	1949	1956	1952	N16	W62	.891	8593	30.2	7	1-				.25				1 1 1
HALE	04	1949	1956	1952	N16	W62	.891	8593	30.2	7	-F	1	C	1952	.21	.50			
GRP 1834	04	2147	2310	2202	N12	E71	.947	8606	10.2	83	1-				.63				2 2 2
HALE	04	2147	2244	2157	N12	E73	.958	8606	10.4	57	-N	2	C	2157	.62				E
SACP	04	2150E	2335D	2207U	N12	E68	.930	8606	10.0	105D	-F		P		.58	1.18			
GRP 1835	04	2248	2308	2255	N17	W63	.900	8593	30.2	20	1-				.31				1 1 1
HALE	04	2248	2308	2255	N17	W63	.900	8593	30.2	20	-N	1	C	2255	.26	.60			
	04	2335	0000	NO FLARE PATROL															
GRP 1836	05	0327	0332	0329	N19	W63	.902	8593	30.4	5	1-				.31				1 1 1
HALE	05	0327	0332D	0329	N19	W63	.902	8593	30.4	5D	-N	1	P	0329	.26	.60			E
	05	0335	0405	NO FLARE PATROL															
GRP 1837	05	0406	0429	0412	N16	W68	.932	8593	30.1	23	1-				.47				1 1 1
CULG	05	0406E	0429	0412	N16	W68	.932	8593	30.1	23D	-B		P	0412	.52				F
GRP 1838	05	0446	0451	0448	N29	E68	.944	8607	10.3	5	1-				.19				1 1 1
CULG	05	0446	0451	0448	N29	E68	.944	8607	10.3	5	-N		C	0448	.21				
	05	0450	0500	NO FLARE PATROL															
GRP 1839	05	0649	0659	0649	S26	E78	.983	8609	11.1	10	1-				.50				1 1 1
ATHN	05	0649E	0659	0649	S26	E78	.983	8609	11.1	10D	-N	2		0649	.50		1.60		
GRP 1840	05	0710	0722	0714	N16	W66	.920	8593	30.3	12	1-				.66				1 1 1
ATHN	05	0710	0722	0714	N16	W66	.920	8593	30.3	12	-N	2		0714	.66		1.70		
GRP 1841	05	0721	0750	0724	S26	E78	.983	8609	11.2	29	1-				.66				1 1 1
ATHN	05	0721	0750	0724	S26	E78	.983	8609	11.2	29	-B	2		0729	.66		1.80		
GRP 1842	05	0735	0825	0737	N16	W68	.932	8593	30.2	50	1-				.50				2 1 1
ATHN	05	0735	0754	0737	N15	W68	.932	8593	30.2	19	-N	2		0737	.50		1.60		
BUCA	05	0745E	0855D		N16	W68	.932	8593	30.2	70D	2F		P	0745	2.21	5.67			
GRP 1843	05	0804	0913	0810	N13	E58	.855	8606	9.7	69	1-				1.51				3 2 2
BUCA	05	0740E	0915D	0812	N12	E58	.854	8606	9.7	95D	1F		P	0812	2.21	4.09			
ATHN	05	0800	0855	0810	N14	E55	.830	8606	9.5	55	1N	2		0810	1.32	2.30	1.80		
ARCE	05	0831	0930D	0838	N12	E60	.871	8606	9.9	59D	-N		C	0838	.46	1.00			D
GRP 1844	05	0823	0832	0823	N29	E60	.898	8607	9.8	9	1-				.50				1 1 1
ATHN	05	0823E	0832	0823	N29	E60	.898	8607	9.8	9D	-B	2		0823	.50	1.10	2.00		
GRP 1845	05	0920	1001		N09	E58	.851	8606	9.7	41	1-								1 1 0
KAND	05	0920E	1001		N09	E58	.851	8606	9.7	41D	-N		V						
GRP 1846	05	1015	1022	1015	N27	E62	.907	8607	10.1	7	1-				.50				2 2 1
ATHN	05	1015E	1021	1015	N29	E60	.898	8607	9.9	6D	-N	2		1015	.50	1.10	1.70		
KAND	05	1015	1022		N25	E64	.916	8607	10.2	7	-N		V						
GRP 1847	05	1045	1100	1047	N15	W72	.954	8593	30.0	15	1-				.66				1 1 1
ATHN	05	1045E	1100	1047	N15	W72	.954	8593	30.0	15D	-N	1		1047	.66		1.40		
GRP 1848	05	1141	1152	1146	N29	E59	.891	8607	9.9	11	1-				.20				2 1 1
HUAN	05	1141	1152	1146	N28	E60	.896	8607	10.0	11	-N	1	C	1146	.25	.39			D
ATHN	05	1147E	1152		N29	E58	.884	8607	9.8	5D	-N	1		1150	.66	1.40	1.40		
	05	1520	1610	NO FLARE PATROL															
GRP 1849	05	1613	1636	1624	N13	E55	.828	8606	9.8	23	1-				.52				1 1 1
SACP	05	1613E	1636	1624U	N13	E55	.828	8606	9.8	23D	-N		C		.58	.80			
	05	1635	1700	NO FLARE PATROL															
GRP 1850	05	1916	1930	1921	N13	E56	.838	8606	10.0	14	1-				.20				2 2 2
HALE	05	1916	1929	1920	N13	E56	.838	8606	10.0	13	-N	1	C	1920	.21	.40			
SACP	05	1916	1930	1922	N13	E55	.828	8606	9.9	14	-F		C		.17	.22			
GRP 1851	05	1925	1936	1930	N30	E53	.851	8607	9.8	11	1-				.59				1 1 1
SACP	05	1925	1936	1930U	N30	E53	.851	8607	9.8	11	-N		C		.66	.95			
GRP 1852	05	1948	2000	1953	N29	E54	.856	8607	9.9	12	1-				.23				1 1 1
SACP	05	1948	2000	1953U	N29	E54	.856	8607	9.9	12	-F		C		.25	.35			
GRP 1853	05	2117	2131	2122	N32	E55	.872	8607	10.0	14	1-				.25				2 2 2
CULG	05	2115E	2136	2122	N32	E57	.885	8607	10.2	21D	-N		P	2122	.21	.38			L
SACP	05	2118	2125	2122U	N32	E53	.858	8607	9.9	7	-F		C		.33	.48			
GRP 1854	05	2140	2152	2143	S24	E60	.891	8609	10.4	12	1-				.19				2 2 2
HALE	05	2140	2149	2142	S24	E58	.877	8609	10.3	9	-F	1	C	2142	.15	.30			
CULG	05	2140	2154	2143	S23	E61	.896	8609	10.5	14	-N		C	2143	.21				
GRP 1855	05	2201	2226	2210	S23	E74	.968	8609	11.5	25	1-				.19				1 1 1
CULG	05	2201	2226D	2210	S23	E74	.968	8609	11.5	25D	-N		P	2210	.21				

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OBSERV-ATORY	DATE 1966 DEC	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	TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT.	REMARKS
GRP 1856	06	0036	0117	0042	N29	E49	.817	8607	9.7	41	1-				.43				1 1 1
HALE	06	0036	0117D	0042	N29	E49	.817	8607	9.7	41D	-N	1	P	0042	.36	.70			
GRP 1857	06	0217	0225	0218	N05	E51	.779	8606	9.9	8	1-				.25				1 1 1
HALE	06	0217	0225	0218	N05	E51	.779	8606	9.9	8	-N	1	C	0218	.21	.30			
GRP 1858	06	0232	0250	0241	N05	E54	.810	8606	10.2	18	1-				.49				1 1 1
HALE	06	0232	0250	0241	N05	E54	.810	8606	10.2	18	-N	1	C	0241	.41	.70			
GRP 1859	06	0339	0425	0345	N12	E49	.766	8606	9.8	46	1-				.94				1 1 1
MITK	06	0339	0425	0345	N12	E49	.766	8606	9.8	46	1N		C	0345	1.34	2.10			EK
GRP 1860	06	0446	0506	0455	N14	E52	.801	8606	10.1	20	1-				.43				1 1 1
MITK	06	0446	0506	0455	N14	E52	.801	8606	10.1	20	-N		C	0455	.62	1.00			E
	06	0520	0705	NO FLARE PATROL															
GRP 1861	06	0801	0812	0803	N23	E90	1.000	8610	13.1	11	1-				.83				1 1 1
ATHN	06	0801	0812	0803	N23	E90	1.000	8610	13.1	11	-N	2		0803	.83				
GRP 1862	06	0809	0816	0811	N17	W56	.844	8594	2.1	7	1-				.50				1 1 1
ATHN	06	0809	0816	0811	N17	W56	.844	8594	2.1	7	-N	2		0811	.50	.90	1.50		
GRP 1863	06	0844	0851	0846	N15	W81	.988	8593	30.3	7	1-				.50				1 1 1
ATHN	06	0844	0851D	0846	N15	W81	.988	8593	30.3	7D	-N	1		0846	.50	1.10	1.70		
	06	0855	0900	NO FLARE PATROL															
GRP 1864	06	1249	1257		N12	E41	.673	8606	9.6	8	1-				1.32				1 1 1
ATHN	06	1249E	1257		N12	E41	.673	8606	9.6	8D	-N	2		1250	1.32	1.80	1.30		
	06	1310	1330	NO FLARE PATROL															
	06	1615	1700	NO FLARE PATROL															
GRP 1865	06	1701	1723	1707	N22	E88	.999	8610	13.3	22	1-				.25				1 1 1
HALE	06	1701E	1723	1707	N22	E88	.999	8610	13.3	22D	-N	1	P	1707	.21				
GRP 1866	06	1732	1755	1736	N22	E88	.999	8610	13.3	23	1-				.37				1 1 1
HALE	06	1732	1755	1736	N22	E88	.999	8610	13.3	23	-B	1	C	1736	.31				
GRP 1867	06	1755	1823	1804	N16	W61	.884	8594	2.2	28	1-				.49				1 1 1
HALE	06	1755	1823	1804	N16	W61	.884	8594	2.2	28	-N	1	C	1804	.41	.90			
GRP 1868	06	1820	1846	1832	N22	E88	.999	8610	13.4	26	1-				.43				1 1 1
HALE	06	1820	1846	1832	N22	E88	.999	8610	13.4	26	-N	1	C	1832	.36				
GRP 1869	06	1905	1920	1917	N22	E88	.999	8610	13.4	15	1-				.49				1 1 1
HALE	06	1905	1920D	1917	N22	E88	.999	8610	13.4	15D	-N	1	P	1917	.41				
GRP 1870	06	1915	1920	1920	S21	E56	.854	8609	11.0	5	1-				.31				1 1 1
HALE	06	1915	1920D	1920U	S21	E56	.854	8609	11.0	5D	-N	1	P	1920	.26	.50			
GRP 1871	06	2011	2032	2017	N12	E41	.673	8606	9.9	21	1-				.75				1 1 1
CULG	06	2011E	2032	2017	N12	E41	.673	8606	9.9	21D	-B		P	2017	.83	1.04			
GRP 1872	06	2030	2044	2034	N12	E90	1.000	8610	13.6	14	1-				.19				1 1 1
CULG	06	2030	2044	2034	N12	E90	1.000	8610	13.6	14	-B		C	2034	.21				
GRP 1873	06	2137	2142		S22	E57	.864	8609	11.2	5	1-				.21				1 1 1
HUAN	06	2137	2142D		S22	E57	.864	8609	11.2	5D	-F	1	P	2140	.25	.36			D
GRP 1874	06	2151	2201	2152	N27	E49	.810	8607	10.6	10	1-				.25				1 1 1
HALE	06	2151	2201	2152	N27	E49	.810	8607	10.6	10	-B	1	C	2152	.21	.40			
	06	2330	2335	NO FLARE PATROL															
	06	2340	2345	NO FLARE PATROL															
	07	0135	0155	NO FLARE PATROL															
GRP 1875	07	0322	0350	0330	N13	E37	.627	8606	9.9	28	1-				1.41				2 2 2
MITK	07	0322	0350	0330	N13	E36	.615	8606	9.8	28	1N		C	0330	2.58	3.30			F
MANI	07	0325E	0327D		N12	E38	.636	8606	10.0	2D	-N	2		0326	.83	1.07			
	07	0505	0525	NO FLARE PATROL															
	07	0650	0705	NO FLARE PATROL															
	07	0720	0755	NO FLARE PATROL															
GRP 1876	07	0815	0830		S26	W85	.997	8597	1.0	15	1				.50				1 1 1
ARCE	07	0815E	0830D		S26	W85	.997	8597	1.0	15D	1F		C	0820	.50	2.00			
GRP 1877	07	0817	0850		N22	E87	.999	8610	13.9	33	1				.60				2 2 2
ARCE	07	0815E	0840D		N21	E85	.997	8610	13.7	25D	1N		C	0825	.59	2.40			
MONT	07	0819	0850		N23	E89	1.000	8610	14.0	31	1B		C	0825	.60	3.00			
GRP 1878	07	0840	0855	0845	S23	E50	.807	8609	11.1	15	1-				.65				1 1 1
ARCE	07	0840	0855	0845	S23	E50	.807	8609	11.1	15	-N		C	0845	.65	1.10			
GRP 1879	07	0855	0902		N22	E84	.995	8610	13.7	7	1-				.23				1 1 1
MANI	07	0855E	0902		N22	E84	.995	8610	13.7	7D	-N	2		0857	.29	.81			
GRP 1880	07	0950	1000		S24	E50	.810	8609	11.2	10	1-				.31				1 1 1
ARCE	07	0950E	1000D		S24	E50	.810	8609	11.2	10D	-N		C	0950	.31	.50			D
GRP 1881	07	1000	1000		N21	E85	.997	8610	13.8		1				.53				1 1 1
ARCE	07	1000E	1000D		N21	E85	.997	8610	13.8		1N		C	1000	.53	2.10			
GRP 1882	07	1005	1040		S20	E55	.843	8609	11.5	35	1				1.77				1 1 1
MONT	07	1005	1040		S20	E55	.843	8609	11.5	35	1F		C	1010	1.76	2.50			
GRP 1883	07	1036	1050	1043	N23	E84	.995	8610	13.7	14	1				.69				4 3 2
LOCA	07	1032E	1052		N22	E80	.987	8610	13.4	20D	1N		S						
MONT	07	1036	1050	1044	N23	E88	.999	8610	14.0	14	1B		C	1044	.73	3.00			
KODA	07	1040	1047	1042	N21	E82	.991	8610	13.6	7	-N		V	1042	.65		1.68		D
KHAR	07	1044E	1050		N24	E85	.997	8610	13.8	6D	2F		V	1047			3.20		D
	07	1300	1315	NO FLARE PATROL															
GRP 1884	07	1457	1502		N23	E82	.992	8610	13.8	5	1								1 1 0
CAPS	07	1457E	1502D		N23	E82	.992	8610	13.8	5D	1N	1							C

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	07	1505	1600	NO FLARE PATROL															
GRP 1885	07	1633	1645	1637	N25	E75	.972	8610	13.3	12	1-				.93				1 1 1
LOCK	07	1633	1645	1637	N25	E75	.972	8610	13.3	12	1N		C	1637	1.00	2.90		20	
GRP 1886	07	1731	1742	1732	N24	E76	.975	8610	13.4	11	1				.53				2 2 2
LOCK	07	1730	1745	1732	N25	E75	.972	8610	13.4	15	1B		C	1732	.90	2.60		30	
HUAN	07	1732	1739		N23	E76	.975	8610	13.4	7	-N	1	C	1734	.31				D
GRP 1887	07	1747	1803		S25	W88	1.000	8597	1.1	16	1				.21				1 1 1
HUAN	07	1747E	1803		S25	W88	1.000	8597	1.1	16D	-N	1	P	1754	.31				D
GRP 1888	07	1755	1825	1801	N20	E18	.447	8604	9.1	30	1-				.40				1 1 1
LOCK	07	1755	1825	1801	N20	E18	.447	8604	9.1	30	-F		C	1801	.40	.40		10	
GRP 1889	07	1757	1813	1800	N12	E28	.503	8606	9.8	16	1-				.82				1 1 1
LOCK	07	1757	1813	1800	N12	E28	.503	8606	9.8	16	-N		C	1800	.80	1.00		10	
GRP 1890	07	1818	1836		S25	W88	1.000	8597	1.2	18	1				.17				1 1 1
HUAN	07	1818E	1836D		S25	W88	1.000	8597	1.2	18D	-F	1	P	1820	.25				D
GRP 1891	07	1820	1837	1824	N25	E39	.709	8607	10.7	17	1-				.82				1 1 1
LOCK	07	1820	1837	1824	N25	E39	.709	8607	10.7	17	-N		C	1824	.80	1.10		10	
GRP 1892	07	2021	2030	2023	N23	E75	.971	8610	13.5	9	1-				.63				1 1 1
LOCK	07	2021	2030	2023	N23	E75	.971	8610	13.5	9	-N		C	2023	.70	2.00		20	
GRP 1893	07	2027	2035	2030	N28	E34	.680	8607	10.4	8	1-				.29				1 1 1
LOCK	07	2027	2035	2030	N28	E34	.680	8607	10.4	8	-F		C	2030	.30	.40		10	
GRP 1894	07	2100	2121	2102	N23	E71	.954	8610	13.2	21	1				.85				1 1 1
LOCK	07	2100	2121	2102	N23	E71	.954	8610	13.2	21	1N		C	2102	.90	2.40		20	
GRP 1895	07	2150	2225	2205	N20	E75	.970	8610	13.5	35	1-				.26				1 1 1
LOCK	07	2150	2225	2205	N20	E75	.970	8610	13.5	35	-F		C	2205	.30	.90		10	
GRP 1896	07	2235	2249	2239	N23	E75	.971	8610	13.6	14	1				.70				2 2 2
LOCK	07	2233	2250	2237	N23	E71	.954	8610	13.3	17	1B		C	2237	.80	2.10		30	
MANI	07	2237	2247	2240	N23	E79	.984	8610	13.9	10	-N	1		2240	.77	1.99			
GRP 1897	07	2246	2258	2248	S22	E44	.746	8609	11.2	12	1-				.82				1 1 1
LOCK	07	2246	2258U	2248	S22	E44	.746	8609	11.2	12U	-F		C	2248	.80	1.20		10	
GRP 1898	07	2255	2258	2258	N27	E34	.673	8607	10.5	3	1-				.82				1 1 1
LOCK	07	2255	2258D	2258U	N27	E34	.673	8607	10.5	3D	-N		C	2258	.80	1.00		20	
	08	0530	0600	NO FLARE PATROL															
GRP 1899	08	0704	0709		N28	E34	.681	8607	10.8	5	1-				.28				1 1 1
MANI	08	0704E	0709		N28	E34	.681	8607	10.8	5D	-N	2		0704	.31	.42			
GRP 1900	08	0757	0801	0758	S23	E37	.678	8609	11.1	4	1-				.66				1 1 1
ATHN	08	0757	0801	0758	S23	E37	.678	8609	11.1	4	-N	2		0758	.66	.90	1.60		
GRP 1901	08	0820	0829	0822	N06	E23	.402	8606	10.1	9	1-				.33				1 1 1
ATHN	08	0820	0829	0822	N06	E23	.402	8606	10.1	9	-N	2		0822	.33	.40	1.30		
GRP 1902	08	0852	0858	0854	N30	E38	.731	8607	11.2	6	1-				.66				1 1 1
ATHN	08	0852E	0858	0854	N30	E38	.731	8607	11.2	6D	-B	2		0854	.66	.90	2.00		
GRP 1903	08	0855	0902	0856	S23	E37	.678	8609	11.1	7	1-				.83				1 1 1
ATHN	08	0855	0902	0856	S23	E37	.678	8609	11.1	7	-B	2		0856	.83	1.10	2.00		
GRP 1904	08	0900	0938	0910	N28	E34	.681	8607	10.9	38	1+				2.41				1 1 1
ATHN	08	0900	0938	0910	N28	E34	.681	8607	10.9	38	1B	1		0910	2.41	3.30	2.00		
GRP 1905	08	1209	1250		S23	E35	.657	8609	11.1	41	2				4.87				1 1 1
MONT	08	1209	1250D		S23	E35	.657	8609	11.1	41D	2N		C	1215	4.86	5.50			
	08	1615	1630	NO FLARE PATROL															
GRP 1906	08	1655	1725	1703	N22	E66	.926	8610	13.7	30	1				.89				1 1 1
LOCK	08	1655	1725	1703	N22	E66	.926	8610	13.7	30	1F		C	1703	.90	2.10		10	J
GRP 1907	08	1803	1817	1807	N23	E67	.933	8610	13.8	14	1-				.42				2 2 2
LOCK	08	1803	1817	1807	N22	E66	.926	8610	13.7	14	-F		C	1807	.50	1.20		10	J
HALE	08	1805E	1816	1807	N23	E68	.939	8610	13.9	11D	-N	2	P	1807	.31				
GRP 1908	08	1839	1918	1847	N24	E60	.890	8610	13.3	39	1-				.90				2 2 2
HALE	08	1835	1940	1934	N22	E60	.886	8610	13.3	65	-N	2	C	1934	.62				J
LOCK	08	1842	1856	1847	N25	E59	.884	8610	13.2	14	-F		C	1847	1.00	2.00		10	
GRP 1909	08	1910	1924	1914	S22	E32	.618	8609	11.2	14	1-				.18				1 1 1
HALE	08	1910	1924	1914	S22	E32	.618	8609	11.2	14	-F	2	C	1914	.15	.20			
GRP 1910	08	1929	2000	1937	N23	E65	.921	8610	13.7	31	1				1.14				3 2 2
LOCK	08	1920	1958	1925	N21	E65	.919	8610	13.7	38	1N		C	1925	1.00	2.20		20	J
SACP	08	1923	1955	1937	N24	E65	.922	8610	13.7	32	1N		C		1.40	2.46			
HALE	08	1945	2008	1947	N24	E66	.928	8610	13.8	23	-N	2	C	1947	.52				J
GRP 1911	08	2109	2125	2116	N23	E66	.927	8610	13.8	16	1-				.53				2 2 2
HALE	08	2105	2125D	2116	N24	E66	.928	8610	13.8	20D	-N	1	P	2116	.31				J
LOCK	08	2112	2125	2115	N21	E65	.919	8610	13.8	13	-F		C	2115	.70	1.50		10	J
GRP 1912	08	2115	2205	2129	N29	E31	.662	8607	11.2	50	1-				.82				1 1 1
LOCK	08	2115	2205	2129	N29	E31	.662	8607	11.2	50	-N		C	2129	.80	1.00		20	
GRP 1913	08	2155	2220	2211	N23	E64	.915	8610	13.7	25	1-				.64				2 2 2
LOCK	08	2155	2220	2207	N21	E65	.919	8610	13.8	25	-F		C	2207	.80	1.80		10	J
HALE	08	2204E	2220	2215	N24	E63	.910	8610	13.6	16D	-N	1	P	2215	.41				J
GRP 1914	08	2210	2240	2230	N17	E49	.779	8610	12.6	30	1-				.82				1 1 1
LOCK	08	2210	2240	2230	N17	E49	.779	8610	12.6	30	-F		C	2230	.80	1.30		10	
GRP 1915	08	2229	2250	2232	N22	E64	.914	8610	13.7	21	1-				.50				2 2 2
LOCK	08	2228	2240	2232	N21	E65	.919	8610	13.8	12	-F		C	2232	.70	1.50		10	J
HALE	08	2229	2300D	2300D	N23	E63	.908	8610	13.7	31D	-N	1	P	2300	.26				J

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GRP 1916	08	2249	2256	2253	N29	E30	.653	8607	11.2	7	1-				.18				1 1 1
HALE	08	2249	2256	2253	N29	E30	.653	8607	11.2	7	-N	1	C	2253	.15	.20			
GRP 1917	08	2252	2306	2258	N22	E59	.879	8610	13.4	14	1-				.93				2 1 1
LOCK	08	2252	2307	2256	N22	E61	.893	8610	13.5	15	-N		C	2256	.90	1.90		20	
MANI	08	2259E	2304	2300	N22	E57	.863	8610	13.2	5D	-N	2		2300	.46	.83			
GRP 1918	08	2324	0000	2351	N30	E31	.670	8607	11.3	36	1-				.39				2 2 2
HALE	08	2258	2351D	2351D	N30	E31	.670	8607	11.3	53D	-N	1	P	2351	.31	.40			J
IKOM	08	2350	0000		N30	E31	.670	8607	11.3	10	-F		V	2350	1.13	1.60			DO
GRP 1919	08	2309	2327	2316	N21	E57	.861	8610	13.2	18	1+				1.53				1 1 1
LOCK	08	2309	2327	2316	N21	E57	.861	8610	13.2	18	1N		C	2316	1.40	2.70		20	J
GRP 1920	08	2334	2344	2339	N10	W70	.942	8599	3.7	10	1				1.24				1 1 1
SACP	08	2334	2344D	2339	N10	W70	.942	8599	3.7	10D	1N		C		1.38	2.61			
GRP 1921	08	2335	2351	2341	N24	E57	.867	8610	13.3	16	1-				.25				1 1 1
HALE	08	2335E	2351D	2341	N24	E57	.867	8610	13.3	16D	-N	1	P	2341	.21	.40			
GRP 1922	09	0015	0026	0018	N23	E63	.909	8610	13.7	11	1-				.39				2 2 2
MANI	09	0014	0022	0018	N22	E63	.907	8610	13.7	8	-N	3		0018	.36	.65			
HALE	09	0016	0030	0017	N23	E63	.909	8610	13.7	14	-N	2	C	0017	.41				
GRP 1923	09	0031	0036	0032	N22	E55	.847	8610	13.1	5	1-				.37				1 1 1
HALE	09	0031	0036U	0032	N22	E55	.847	8610	13.1	5U	-N	2	C	0032	.31	.60			
GRP 1924	09	0115	0148	0112	N23	E64	.915	8610	13.9	33	1-				.18				2 1 1
HALE	09	0111	0119D	0112	N23	E63	.909	8610	13.8	8D	-N	1	P	0112	.15				
IKOM	09	0118	0148D		N23	E64	.915	8610	13.9	30D	-N		V	0120	.52	1.30			D
GRP 1925	09	0150	0202	0155	N24	E59	.883	8610	13.5	12	1-				.41				3 3 3
IKOM	09	0150E	0200		N24	E60	.890	8610	13.6	10D	1N		V	0150	1.13	2.30		100	E
HALE	09	0150	0203	0156	N24	E57	.868	8610	13.4	13	-N	2	C	0156	.21	.40			
MITK	09	0150	0204	0154	N24	E60	.890	8610	13.6	14	-F		C	0154	.83	1.60			E
GRP 1926	09	0211	0224	0215	N23	E63	.909	8610	13.8	13	1-				.48				2 2 2
HALE	09	0210	0225	0215	N23	E63	.909	8610	13.8	15	-N	2	C	0215	.31				
MANI	09	0212	0222	0214	N22	E62	.901	8610	13.7	10	-F	3		0214	.72	1.42			
GRP 1927	09	0211	0225	0212	N08	E24	.427	8606	10.9	14	1-				.12				1 1 1
HALE	09	0211	0225	0212	N08	E24	.427	8606	10.9	14	-N	2	C	0212	.10	.12			
GRP 1928	09	0301	0319	0307	N23	E59	.881	8610	13.6	18	1-				.83				3 3 3
HALE	09	0257	0320	0307	N24	E57	.868	8610	13.4	23	-N	2	C	0307	.52	1.00			
MANI	09	0259	0323	0307	N22	E60	.884	8610	13.6	24	1N	3		0307	1.24	2.36			
MITK	09	0306	0314	0308	N22	E60	.884	8610	13.6	8	1N		P	0308	1.13	2.40			D
GRP 1929	09	0325	0334	0326	N21	E48	.781	8610	12.7	9	1-				.18				1 1 1
HALE	09	0325	0334D	0326	N21	E48	.781	8610	12.7	9D	-F	2	P	0326	.15	.30			
GRP 1930	09	0613	0618		N22	E57	.864	8610	13.5	5	1-				.43				1 1 1
MANI	09	0613E	0618D		N22	E57	.864	8610	13.5	5D	-N	1		0614	.52	1.00			
GRP 1931	09	0801	0806		N24	E50	.810	8610	13.1	5	1-				.67				1 1 1
MONT	09	0801	0806		N24	E50	.810	8610	13.1	5	-B		C	0802	.67	.90			
GRP 1932	09	0810	0827	0814	N22	E58	.871	8610	13.7	17	1-				1.02				3 3 3
ARCE	09	0808E	0830D		N22	E58	.871	8610	13.7	22D	1N		C	0808	1.33	2.40			
ATHN	09	0809F	0827	0813	N22	E56	.854	8610	13.5	18D	-N	3		0813	1.02	2.00	1.90		
MONT	09	0813	0825	0815	N23	E59	.881	8610	13.8	12	-B		C	0815	.71	1.10			
GRP 1933	09	0857	0901	0900	S25	E27	.589	8609	11.4	4	1-				.22				1 1 1
UCCL	09	0857	0901	0900	S25	E27	.589	8609	11.4	4	-N		C	0900	.31	.50			D
GRP 1934	09	0910	0916	0912	N22	E58	.871	8610	13.7	6	1-				1.51				5 5 5
MONT	09	0908	0915	0911	N23	E59	.881	8610	13.8	7	1B		C	0911	2.79	4.30			
ATHN	09	0910E	0918	0911	N21	E58	.869	8610	13.7	8D	-N	3		0911	.93	1.90	1.50		
UCCL	09	0911	0914	0913	N20	E67	.930	8610	14.4	3	1N		C	0913	1.55				E
ARCE	09	0912	0916	0914	N22	E59	.879	8610	13.8	4	-N		C	0914	.84	1.70			
CAPS	09	0912E	1005D		N23	E58	.873	8610	13.7	53D	1N	3		0935	1.90	3.70		165	CK
GRP 1935	09	0921	1004	0923	N22	E58	.871	8610	13.7	43	1-				1.06				-0 5 5
MONT	09	0918	1030	0920	N23	E58	.873	8610	13.7	72	-N		C	0920	.86	1.30			
UCCL	09	0922	1000	0924	N20	E67	.930	8610	14.4	38	1N		C	0924	1.55				EK
ATHN	09	0922	1013	0945	N21	E57	.861	8610	13.7	51	-N	3		0925	.93	1.90	1.90		
ARCE	09	0925	1010	0940	N22	E57	.864	8610	13.7	36	1N		C	0940	1.30	2.60			
NERA	09	0926	0933		N22	E62	.901	8610	14.0	7	2N	3							
GRP 1936	09	0955	1030	1003	N24	E49	.801	8610	13.1	35	1+				2.58				1 1 1
MONT	09	0955	1030	1003	N24	E49	.801	8610	13.1	35	1B		C	1003	2.58	3.40			
GRP 1937	09	1015	1032	1020	N30	E29	.654	8607	11.6	17	1-				1.01				1 1 1
ARCE	09	1015	1032D	1020	N30	E29	.654	8607	11.6	17D	-N		C	1020	.99	1.30			
GRP 1938	09	1045	1110	1050	N28	E28	.627	8607	11.5	25	1				2.44				1 1 1
MONT	09	1045	1110	1050	N28	E28	.627	8607	11.5	25	1N		C	1050	2.44	2.70			
GRP 1939	09	1045	1110	1050	S22	E22	.510	8609	11.1	25	1				2.00				2 2 2
MONT	09	1045	1110	1050	S22	E22	.510	8609	11.1	25	1N		C	1050	2.98	3.10			
CAPS	09	1046E	1049D		S21	E21	.489	8609	11.0	3D	-F	2		1047	1.00	1.10		157	
GRP 1940	09	1126	1129	1127	N23	E59	.881	8610	13.9	3	1				1.61				2 2 2
MONT	09	1124	1126D	1126	N23	E58	.873	8610	13.8	2D	1B		C	1126	2.71	4.10			
ATHN	09	1127	1129D	1128	N22	E59	.879	8610	13.9	2D	-N	1		1128	.50	1.10	1.70		
GRP 1941	09	1125	1130	1130	S22	E22	.510	8609	11.1	5	1				2.41				1 1 1
MONT	09	1125	1130D	1130	S22	E22	.510	8609	11.1	5D	1N		C	1130	2.40	2.50			
	09	1150	1200	NO FLARE PATROL															
	09	1215	1230	NO FLARE PATROL															
GRP 1942	09	1421	1439	1424	N23	E49	.798	8610	13.3	18	1-				.79				2 2 2
SACP	09	1420	1430	1425	N22	E44	.746	8610	12.9	10	-N		C		1.01	1.25			

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OBSERV-ATORY	DATE 1966 DEC	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
ATHN	09	1421	1447D	1422	N23	E54	.841	8610	13.6	26D	-N	2		1422	.66	1.20	1.70		
GRP 1943	09	1450	1503	1453	N23	E51	.814	8610	13.4	13	1-				1.06				1 1 1
SACP	09	1450	1503	1453	N23	E51	.816	8610	13.4	13	-N		C		1.18	1.58			
GRP 1944	09	1605	1619	1605	N23	E51	.816	8610	13.5	14	1-				.40				1 1 1
LOCK	09	1605E	1619	1605U	N23	E51	.816	8610	13.5	14D	-F		C	1605	.40	.70		10	
GRP 1945	09	1615	1625	1620	N28	E19	.552	8607	11.1	10	1-				.59				1 1 1
SACP	09	1615	1625	1620	N28	E19	.552	8607	11.1	10	-N		C		.66	.70			
GRP 1946	09	1755	1851	1806	N22	E50	.804	8610	13.5	56	2				6.12				2 2 2
LOCK	09	1755	1835U	1805	N21	E50	.800	8610	13.5	40U	2B		C	1805	5.20	8.80		30	
SACP	09	1759E	1907	1806	N23	E49	.798	8610	13.4	68D	2B		C		6.81	8.97			
GRP 1947	09	2006	2038	2007	N12	W00	.210	8606	9.8	32	1				1.49				4 2 2
SACP	09	1954	2032	2007	N12	W00	.210	8606	9.8	38	1F		C		2.25	2.20			
HUAN	09	2000E	2036		N13	W01	.227	8606	9.8	36D	-N	1	C	2005	1.05	1.05			E
HALE	09	2017	2041		N12	W01	.210	8606	9.8	24	-N	3	C	2017	.72	.73			
LOCK	09	2029E	2044	2029U	N12	E01	.210	8606	9.9	15D	-F		C	2029	.90	.90		10	
GRP 1948	09	2012	2028	2022	S24	E19	.503	8609	11.3	16	1-				.47				2 2 2
HUAN	09	2003	2031		S23	E20	.500	8609	11.3	28	-F	1	C	2012	.62	.64			E
HALE	09	2020	2025	2022	S24	E18	.494	8609	11.2	5	-F	2	C	2022	.31	.40			
GRP 1949	09	2019	2043	2027	N23	E90	1.000	8612	16.6	24	1-				.33				4 3 3
CULG	09	2017	2050	2028	N23	E90	1.000	8612	16.6	33	-N		C	2028	.41				
HALE	09	2019	2037	2023	N23	E88	1.000	8612	16.4	18	-N	2	C	2023	.31				
HUAN	09	2020	2035		N23	E90	1.000	8612	16.6	15	-N	1	C	2025	.36				D
LOCK	09	2029E	2050	2029U	N22	E90	1.000	8612	16.6	21D	1N		C	2029	1.00	4.00		20	H
GRP 1950	09	2100	2125	2117	N25	E44	.759	8610	13.2	25	1-				.19				1 1 1
CULG	09	2100	2125	2117	N25	E44	.759	8610	13.2	25	-N		C	2117	.21	.30			L
GRP 1951	09	2110	2114	2111	S22	E15	.443	8609	11.0	4	1-				.25				1 1 1
HALE	09	2110	2114	2111	S22	E15	.443	8609	11.0	4	-F	2	C	2111	.21	.22			
GRP 1952	09	2133	2154	2137	N22	E90	1.000	8612	16.6	21	1-				.19				1 1 1
CULG	09	2133	2154	2137	N22	E90	1.000	8612	16.6	21	-N		C	2137	.21				
GRP 1953	09	2235	2310	2250	N29	E19	.564	8607	11.4	35	1-				.71				1 1 1
LOCK	09	2235	2310	2250	N29	E19	.564	8607	11.4	35	-F		C	2250	.70	.80		10	
GRP 1954	09	2246	2248	2246	S22	E17	.461	8609	11.2	2	1-				.25				1 1 1
HALE	09	2246	2248	2246	S22	E17	.461	8609	11.2	2	-F	2	C	2246	.21	.22			
GRP 1955	09	2338	2344	2342	N22	E56	.856	8610	14.2	6	1-				.37				1 1 1
CULG	09	2338	2344	2342	N22	E56	.856	8610	14.2	6	-N		C	2342	.41	.72			L
GRP 1956	09	2347	2350		S23	E19	.491	8609	11.4	3	1-				.28				1 1 1
IKOM	09	2347	2350D		S23	E19	.491	8609	11.4	3D	-N		V	2347	.83	.90			DO
GRP 1957	09	2348	2354	2349	N21	E54	.836	8610	14.0	6	1-				.19				3 3 3
IKOM	09	2347	2351D		N21	E53	.828	8610	14.0	4D	-F		V	2348	.31	.50			DO
CULG	09	2348	2356	2349	N22	E56	.856	8610	14.2	8	-N		C	2349	.41	.72			L
HALE	09	2349	2351	2349	N21	E52	.819	8610	13.9	2	-F	2	C	2349	.10	.20			
GRP 1958	10	0018	0059	0021	N22	E90	1.000	8612	16.8	41	1-				.19				1 1 1
CULG	10	0018	0059	0021	N22	E90	1.000	8612	16.8	41	-N		C	0021	.21				
GRP 1959	10	0109	0204	0125	N23	E48	.789	8610	13.6	55	1-				.95				2 2 2
CULG	10	0101	0203	0124	N22	E51	.813	8610	13.9	62	-N		C	0124	.93	1.53			
HALE	10	0117	0205	0125	N23	E45	.761	8610	13.4	48	-N	1	C	0125	.88	1.40			
GRP 1960	10	0116	0139	0120	N22	E90	1.000	8612	16.8	23	1-				.19				1 1 1
CULG	10	0116	0139	0120	N22	E90	1.000	8612	16.8	23	-N		C	0120	.21				
GRP 1961	10	0117	0127	0120	S22	E15	.442	8609	11.2	10	1-				.62				1 1 1
HALE	10	0117	0127	0120	S22	E15	.442	8609	11.2	10	-N	1	C	0120	.52	.60			
GRP 1962	10	0218	0230	0222	N28	E15	.525	8607	11.2	12	1-				.50				2 2 2
CULG	10	0217	0229	0221	N28	E15	.525	8607	11.2	12	-N		C	0221	.62	.69			
HALE	10	0219	0231	0222	N28	E14	.519	8607	11.1	12	-N	1	C	0222	.36	.40			
GRP 1963	10	0237	0247	0238	N22	E40	.706	8610	13.1	10	1-				.31				1 1 1
HALE	10	0237	0247	0238	N22	E40	.706	8610	13.1	10	-N	1	C	0238	.26	.40			
GRP 1964	10	0254	0310	0256	S23	E15	.454	8609	11.2	16	1-				.62				1 1 1
HALE	10	0254	0310	0256	S23	E15	.454	8609	11.2	16	-N	1	C	0256	.52	.60			H
GRP 1965	10	0329	0335	0331	N20	E37	.663	8610	12.9	6	1-				.31				1 1 1
HALE	10	0329	0335D	0331	N20	E37	.663	8610	12.9	6D	-B	2	P	0331	.26	.40			
GRP 1966	10	0439	0454	0447	N17	E90	1.000	8612	16.9	15	1-				.19				1 1 1
CULG	10	0439	0454	0447	N17	E90	1.000	8612	16.9	15	-N		C	0447	.21				
GRP 1967	10	0515	0530	0520	N23	E90	1.000	8612	17.0	15	1-				.19				1 1 1
CULG	10	0515	0530	0520	N23	E90	1.000	8612	17.0	15	-N		C	0520	.21				
GRP 1968	10	0532	0539	0535	N21	E51	.810	8610	14.1	7	1-				.28				1 1 1
CULG	10	0532	0539	0535	N21	E51	.810	8610	14.1	427	-N		C	0535	.31	.48			L
GRP 1969	10	0604	0612	0609	N21	E50	.801	8610	14.0	8	1-				.19				1 1 1
CULG	10	0604	0612	0609	N21	E50	.801	8610	14.0	8	-N		C	0609	.21	.32			L
GRP 1970	10	0611	0618	0613	S22	E13	.425	8609	11.2	7	1-				.33				1 1 1
ATHN	10	0611	0618	0613	S22	E13	.425	8609	11.2	7	-N	1		0613	.33	.40	1.50		
GRP 1971	10	0643	0650	0646	N22	E51	.813	8610	14.1	7	1-				.28				1 1 1
CULG	10	0643	0650	0646	N22	E51	.813	8610	14.1	7	-N		C	0646	.31	.48			L
GRP 1972	10	0729	0748	0733	N23	E46	.770	8610	13.8	19	1-				.50				2 1 1
ATHN	10	0729	0745	0733	N23	E46	.770	8610	13.8	16	-N	2		0733	.50	.80	1.70		
MONT	10	0741E	0750		N23	E45	.761	8610	13.7	9D	-B		C	0745	.64	.80			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1966 DEC	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 1973	10	0759	0805	0801	N21	E49	.792	8610	14.0	6	1-				.84				2 2 2
MANI	10	0758	0804D	0801	N20	E49	.788	8610	14.0	6D	-N	1		0801	.93	1.48			
MONT	10	0759	0805	0801	N21	E49	.792	8610	14.0	6	-B		C	0801	.84	1.10			
GRP 1974	10	0805	0820		N23	E45	.761	8610	13.7	15	1-				.64				1 1 1
MONT	10	0805	0820		N23	E45	.761	8610	13.7	15	-N		C	0808	.64	.80			
GRP 1975	10	0900	0930		N21	E48	.782	8610	14.0	30	1-				.16				1 1 1
MONT	10	0900	0930		N21	E48	.782	8610	14.0	30	-F		C	0905	.15	.20			
GRP 1976	10	0919	0950		S22	E12	.418	8609	11.3	31	1-				1.06				2 2 2
MONT	10	0919	0950		S22	E12	.418	8609	11.3	31	-N		C	0921	1.19	1.20			
ARCE	10	0940E	0945D		S22	E11	.411	8609	11.2	5D	-N		P	0940	.87	.90			E
GRP 1977	10	1040	1120		N23	E44	.751	8610	13.7	40	1-				1.46				1 1 1
MONT	10	1040	1120		N23	E44	.751	8610	13.7	40	-N		C	1045	1.45	1.80			
GRP 1978	10	1048	1107	1050	S22	E11	.411	8609	11.3	19	1-				.99				1 1 1
ATHN	10	1048	1107	1050	S22	E11	.411	8609	11.3	19	-N	2		1050	.99	1.00	1.80		
GRP 1979	10	1122	1141	1125	S23	E09	.413	8609	11.1	19	1-				.93				2 2 2
MONT	10	1120	1150		S23	E08	.408	8609	11.1	30	-N		C	1125	1.19	1.20			
ATHN	10	1123	1132	1125	S22	E09	.398	8609	11.1	9	-B	2		1125	.66	.80	2.00		
GRP 1980	10	1213	1333	1210	N23	E43	.741	8610	13.7	80	1				1.98				4 2 2
ATHN	10	1208	1328	1210	N23	E42	.731	8610	13.7	80	1N	2		1228	1.98	2.80	1.70		
MONT	10	1210E	1240D		N22	E43	.736	8610	13.7	30D	1B		C	1215	1.97	2.40			
HUAN	10	1217	1338		N23	E45	.761	8610	13.9	81	1N	1	C	1240	2.04	2.52			E
CAPS	10	1227E	1320D		N24	E42	.736	8610	13.7	53D	2F	2		1230	4.00	5.90		170	J
GRP 1981	10	1213	1231		S23	E12	.432	8609	11.4	18	1-				.74				2 2 2
MONT	10	1210E	1240		S22	E11	.411	8609	11.3	30D	-N		C	1215	1.19	1.20			
HUAN	10	1216	1222		S23	E12	.432	8609	11.4	6	-F	1	C	1218	.31	.31			D
GRP 1982	10	1220	1230		N32	E15	.577	8607	11.6	10	1-				.65				1 1 1
MONT	10	1220	1230		N32	E15	.577	8607	11.6	10	-B		C	1222	.65	.70			
GRP 1983	10	1343	1424	1352	S23	E09	.413	8609	11.2	41	1-				1.22				4 3 3
LOCA	10	1342	1420	1355	S23	E09	.413	8609	11.2	38	1N		V	1355	2.73	3.00			
HUAN	10	1344	1416	1351	S23	E09	.413	8609	11.2	32	-F	1	C	1351	.21	.21			D
ATHN	10	1350E	1410	1350	S23	E11	.425	8609	11.4	20D	-B	2		1350	.83	1.00	2.00		
SACP	10	1414E	1450	1426	S24	E08	.423	8609	11.2	36D	1F		C		2.68	2.70			
GRP 1984	10	1427	1546	1425	N23	E39	.700	8610	13.5	79	1+				2.15				4 1 1
ATHN	10	1419	1500D	1425	N23	E41	.721	8610	13.7	41D	1B	1		1436	2.15	3.00	2.00		
SACP	10	1430	1538U	1440	N23	E38	.690	8610	13.5	68U	2B		C		6.40	7.47			
HUAN	10	1432	1553		N22	E40	.706	8610	13.6	81	2N	1	C	1439	4.13	5.05			E
CAPS	10	1438E	1450D		N23	E38	.690	8610	13.5	12D	2N	2		1442	4.90	6.80		230	FJ
GRP 1985	10	1424	1434	1427	N30	E10	.526	8607	11.4	10	1-				.53				3 3 3
ATHN	10	1421	1428	1424	N31	E11	.544	8607	11.4	7	-N	1		1424	.50	.60	1.60		
HUAN	10	1426	1435	1428	N29	E10	.511	8607	11.4	9	-F	1	C	1428	.46	.48			E
SACP	10	1426	1438	1428	N30	E10	.526	8607	11.4	12	-F		C		.75	.79			
GRP 1986	10	1425	1448		S23	E08	.408	8609	11.2	23	1-				1.46				1 1 1
HUAN	10	1425	1448		S23	E08	.408	8609	11.2	23	-F	1	C	1430	1.65	1.66			
GRP 1987	10	1517	1528	1520	S24	E11	.439	8609	11.5	11	1-				.33				1 1 1
HUAN	10	1517	1528	1520	S24	E11	.439	8609	11.5	11	-N	1	C	1520	.37	.38			D
GRP 1988	10	1520	1528		N28	E09	.493	8607	11.3	8	1-				.23				1 1 1
HUAN	10	1520	1528		N28	E09	.493	8607	11.3	8	-F	1	C	1524	.25	.26			D
GRP 1989	10	1555	1611		N29	E10	.511	8607	11.4	16	1-				.19				1 1 1
HUAN	10	1555	1611		N29	E10	.511	8607	11.4	16	-F	1	C	1557	.21	.21			D
GRP 1990	10	1614	1637	1617	S25	E10	.447	8609	11.4	23	1-				.94				2 2 2
HUAN	10	1613	1628		S24	E10	.433	8609	11.4	15	-N	1	C	1615	.79	.81			E
LOCK	10	1614	1645	1617	S25	E09	.442	8609	11.4	31	-N		C	1617	1.10	1.20		20	
GRP 1991	10	1626	1705	1640	N30	E11	.530	8607	11.5	39	1-				.73				2 2 2
SACP	10	1625	1721U	1640U	N31	E12	.548	8607	11.6	56U	-F		C		1.16	1.22			
HUAN	10	1626	1648		N29	E10	.511	8607	11.4	22	-F	1	C	1634	.46	.48			E
GRP 1992	10	1659	1706		S23	E10	.419	8609	11.5	7	1-				.52				1 1 1
HUAN	10	1659	1706		S23	E10	.419	8609	11.5	7	-F	1	C	1701	.58	.58			E
GRP 1993	10	1737	1819	1747	S24	E08	.423	8609	11.3	42	1				1.97				3 2 2
HUAN	10	1736	1742D		S23	E08	.408	8609	11.3	6D	1F	1	P	1740	1.65	1.66			E
SACP	10	1737	1820U	1746	S24	E07	.418	8609	11.3	43U	1F		C		2.72	2.73			
LOCK	10	1748E	1817	1748U	S25	E09	.442	8609	11.4	29D	-N		C	1748	1.40	1.50		20	
GRP 1994	10	1839	1853	1841	N23	E41	.721	8610	13.9	14	1-				.72				2 2 2
LOCK	10	1838	1850	1842	N23	E42	.731	8610	13.9	12	-N		C	1842	.60	.90		20	
SACP	10	1839	1855	1840	N23	E39	.700	8610	13.7	16	-N		C		.91	1.07			
GRP 1995	10	1856	1908	1900	N29	E09	.507	8607	11.5	12	1-				.32				2 2 2
LOCK	10	1854	1905	1859	N29	E10	.511	8607	11.5	11	-F		C	1859	.40	.50		10	
SACP	10	1857U	1910U	1900U	N29	E08	.503	8607	11.4	13U	-F		C		.25	.25			
GRP 1996	10	1943	1954	1945	S24	E06	.414	8609	11.3	11	1-				.62				2 2 2
LOCK	10	1942	1954	1945	S24	E07	.418	8609	11.3	12	-N		C	1945	.60	.70		20	
HALE	10	1944	1954	1945	S24	E05	.411	8609	11.2	10	-N	1	C	1945	.52	.60			
GRP 1997	10	2004	2020	2011	N17	E86	.998	8612	17.3	16	1-				.57				2 2 2
LOCK	10	1959	2020	2005	N18	E90	1.000	8612	17.6	21	1F		C	2005	1.00	4.00		10	
HALE	10	2008	2140	2017	N16	E81	.989	8612	16.9	92	-N	1	C	2017	.21				

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OBSERVATORY	DATE 1966 DEC	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 1998	10	2046	2138	2104	N15	E82	.991	8612	17.0	52	1-				.54				3 3 3
HALE	10	2008	2140	2116	N16	E81	.989	8612	16.9	92	-B	1	C	2116	.41				
SACP	10	2043U	2112D	2050U	N16	E80	.986	8612	16.9	29D	-N		C		.58				
LOCK	10	2048	2137	2103	N14	E85	.997	8612	17.2	49	1N		C	2103	.70	2.40		10	L
GRP 1999	10	2008	2020	2011	S21	E04	.360	8609	11.1	12	1-				.37				1 1 1
HALE	10	2008	2020	2011	S21	E04	.360	8609	11.1	12	-F	1	C	2011	.31	.32			
GRP 2000	10	2015	2222	2120	N29	E09	.507	8607	11.5	127	1-				.49				1 1 1
HALE	10	2015	2222	2120	N29	E09	.507	8607	11.5	127	-N	1	C	2120	.41	.50			
GRP 2001	10	2024	2118	2039	N23	E39	.700	8610	13.8	54	1-				1.10				3 3 3
LOCK	10	2023	2056	2030	N23	E42	.731	8610	14.0	33	-N		C	2030	.90	1.30		20	
SACP	10	2024E	2112D	2044U	N24	E38	.696	8610	13.7	48D	-F		C		1.39	1.62			
HALE	10	2024	2140	2039	N23	E37	.680	8610	13.6	76	-B	1	C	2039	.93	1.30			
GRP 2002	10	2043	2130	2100	S19	E05	.332	8609	11.2	47	1-				1.39				3 3 3
HALE	10	2029	2140	2100	S21	E06	.368	8609	11.3	71	-B	1	C	2100	.77	.80			
SACP	10	2050	2112D	2059	S23	E05	.395	8609	11.2	22D	1N		C		2.45	2.45			
LOCK	10	2050	2120	2100	S14	E05	.252	8609	11.2	30	-N		C	2100	1.00	1.10		10	
GRP 2003	10	2040	2045	2045	S25	E08	.437	8609	11.5	5	1-				.31				1 1 1
HALE	10	2040	2045D	2045	S25	E08	.437	8609	11.5	5D	-B	1	C	2045	.26	.30			HK
GRP 2004	10	2130	2153	2140	N23	E29	.595	8610	13.1	23	1-				.50				1 1 1
LOCK	10	2130	2153	2140	N23	E29	.595	8610	13.1	23	-N		C	2140	.50	.60		20	J
GRP 2005	10	2143	2203	2148	S19	E04	.328	8609	11.2	20	1-				.84				2 2 2
LOCK	10	2142	2200	2148	S14	E05	.252	8609	11.3	18	-F		C	2148	.90	1.00		10	
HALE	10	2144	2205	2148	S23	E03	.390	8609	11.1	21	-N	1	C	2148	.62	.70			
GRP 2006	10	2217	2230	2220	N15	E81	.989	8612	17.0	13	1-				.25				2 2 2
LOCK	10	2216	2228	2220	N14	E85	.997	8612	17.3	12	-N		C	2220	.30	.70		10	L
HALE	10	2217	2232	2219	N16	E76	.973	8612	16.6	15	-N	1	C	2219	.21				
GRP 2007	10	2229	2241	2231	N24	E27	.583	8610	13.0	12	1-				.49				2 2 2
LOCK	10	2228	2239	2230	N23	E29	.595	8610	13.1	11	-N		C	2230	.60	.70		20	
HALE	10	2230	2242	2232	N24	E25	.563	8610	12.8	12	-N	1	C	2232	.31	.40			
GRP 2008	10	2305	2335	2320	N21	E90	1.000	8612	17.7	30	2-				1.83				1 1 1
LOCK	10	2305	2335	2320	N21	E90	1.000	8612	17.7	30	2N		C	2320	2.00	8.00		20	
GRP 2009	10	2342	2350	2344	S23	E05	.395	8609	11.4	8	1-				.43				1 1 1
HALE	10	2342	2350	2344	S23	E05	.395	8609	11.4	8	-N	1	C	2344	.36	.40			
GRP 2010	11	0002	0045	0002	N20	E32	.607	8610	13.4	43	1-				.18				1 1 1
HALE	11	0002E	0045	0002E	N20	E32	.607	8610	13.4	43D	-N	2	P	0002	.15	.20			
GRP 2011	11	0003	0102	0022	N21	E25	.537	8610	12.9	59	1-				.25				1 1 1
HALE	11	0003	0102	0022	N21	E25	.537	8610	12.9	59	-N	2	C	0022	.21	.22			
GRP 2012	11	0021	0033	0025	N16	E86	.998	8612	17.5	12	1				.67				2 2 2
MITK	11	0020	0033	0024	N15	E90	1.000	8612	17.8	13	1N		C	0024	1.03				H
HALE	11	0022	0033	0025	N17	E81	.989	8612	17.1	11	1B	2	C	0025	.52				
GRP 2013	11	0021	0043	0030	S23	E05	.393	8609	11.4	22	1-				.31				1 1 1
HALE	11	0021	0043	0030	S23	E05	.393	8609	11.4	22	-N	2	C	0030	.26	.30			
GRP 2014	11	0117	0215	0155	N16	E81	.989	8612	17.1	58	1-				.31				1 1 1
HALE	11	0117	0215	0155	N16	E81	.989	8612	17.1	58	-F	1	C	0155	.26				
GRP 2015	11	0120	0126	0124	N20	E26	.539	8610	13.0	6	1-				.18				1 1 1
HALE	11	0120	0126	0124	N20	E26	.539	8610	13.0	6	-F	1	C	0124	.15	.20			
GRP 2016	11	0140	0157	0147	N20	E26	.539	8610	13.0	17	1-				.18				1 1 1
HALE	11	0140	0157	0147	N20	E26	.539	8610	13.0	17	-F	1	C	0147	.15	.20			
GRP 2017	11	0158	0205	0200	N22	E29	.588	8610	13.3	7	1-				.18				1 1 1
HALE	11	0158	0205	0200	N22	E29	.588	8610	13.3	7	-F	1	C	0200	.15	.20			
GRP 2018	11	0213	0222	0214	S24	E05	.409	8609	11.5	9	1-				.18				1 1 1
HALE	11	0213	0222	0214	S24	E05	.409	8609	11.5	9	-N	1	C	0214	.15	.20			
GRP 2019	11	0215	0222	0218	N20	E32	.607	8610	13.5	7	1-				.18				1 1 1
HALE	11	0215	0222	0218	N20	E32	.607	8610	13.5	7	-N	2	C	0218	.15	.20			
GRP 2020	11	0216	0326	0315	N22	E25	.546	8610	13.0	70	1-				.18				1 1 1
HALE	11	0216	0326	0315	N22	E25	.546	8610	13.0	70	-F	2	C	0315	.15	.20			
GRP 2021	11	0226	0248	0228	N28	E03	.477	8607	11.3	22	1-				.18				1 1 1
HALE	11	0226	0248	0228	N28	E03	.477	8607	11.3	22	-F	2	C	0228	.15	.20			
GRP 2022	11	0322	0332	0327	S24	E03	.404	8609	11.4	10	1-				.42				2 2 2
HALE	11	0322	0332	0327	S23	E02	.386	8609	11.3	10	-F	2	C	0327	.31	.32			
MANI	11	0322E	0328D		S24	E03	.404	8609	11.4	6D	-N	2		0325	.52	.57			
GRP 2023	11	0512	0514		S22	E01	.369	8609	11.3	2	1-				.23				1 1 1
MANI	11	0512E	0514D		S22	E01	.369	8609	11.3	2D	-N	2		0513	.26	.28			
GRP 2024	11	0537	0609	0542	N18	E77	.977	8612	17.0	32	1-				1.14				1 1 1
MANI	11	0537	0609D	0542	N18	E77	.977	8612	17.0	32D	1N	2		0542	1.30	3.10			
GRP 2025	11	0627	0640		N19	E81	.989	8612	17.3	13	1-				.50				1 1 1
MANI	11	0627E	0640D		N19	E81	.989	8612	17.3	13D	-N	2		0628	.62	1.66			
GRP 2026	11	0648	0656	0650	N24	E35	.666	8610	13.9	8	1-				.33				1 1 1
ATHN	11	0648	0656	0650	N24	E35	.666	8610	13.9	8	-N	2		0650	.33	.40	1.90		
GRP 2027	11	0705	0728	0708	N23	E33	.639	8610	13.8	23	1-				.66				2 1 1
ATHN	11	0705	0721	0708	N24	E35	.666	8610	13.9	16	-N	2		0708	.66	.90	1.70		
MANI	11	0713E	0735		N22	E31	.610	8610	13.6	22D	-F	2		0715	.72	.90			

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OBSERV-ATORY	1966 DEC	OBSERVED UT START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT.	REMARKS
GRP 2028	11	0746	0750	0747	S22	W01	.369	8609	11.2	4	1-				.33				1 1 1
ATHN	11	0746	0750	0747	S22	W01	.369	8609	11.2	4	-B	2		0747	.33	.40	2.00		
GRP 2029	11	0850	0920		N12	W23	.438	8606	9.6	30	1-				.59				1 1 1
MONT	11	0850	0920		N12	W23	.438	8606	9.6	30	-B		C	0855	.59	.60			
GRP 2030	11	0949	1010	0950	N10	W18	.353	8606	10.1	21	1-				.83				1 1 1
ATHN	11	0949E	1010	0950	N10	W18	.353	8606	10.1	21D	-N	2		0950	.83	1.30	1.50		
GRP 2031	11	1022	1030		N23	E30	.607	8610	13.7	8	1-				.92				1 1 1
MONT	11	1022	1030D		N23	E30	.607	8610	13.7	8D	-N		C	1024	.91	1.00			
GRP 2032	11	1204	1209	1204	S21	W06	.366	8609	11.1	5	1-				.17				1 1 1
ATHN	11	1204E	1209	1204	S21	W06	.366	8609	11.1	5D	-N	2		1204	.17	.20	1.80		
GRP 2033	11	1244	1251	1245	N18	W02	.317	8607	11.4	7	1-				.27				1 1 1
ATHN	11	1244	1251	1245	N18	W02	.317	8607	11.4	7	-N	2		1245	.27	.30	1.40		
GRP 2034	11	1245	1307	1248	N23	E28	.586	8610	13.6	22	1-				1.32				1 1 1
ATHN	11	1245	1307D	1248	N23	E28	.586	8610	13.6	22D	-N	2		1248	1.32	1.40	1.70		
GRP 2035	11	1423	1520	1458	N25	E24	.565	8610	13.4	57	1				1.47				2 2 2
SACP	11	1423	1525	1458	N24	E23	.545	8610	13.3	62	1N		C		2.32	2.45			
HUAN	11	1455E	1514		N25	E24	.565	8610	13.4	19D	-N	1	P	1459	.95	1.00			EH
GRP 2036	11	1624	1657	1634	N22	E26	.556	8610	13.6	33	1-				.95				2 2 2
SACP	11	1624	1708	1635	N22	E25	.546	8610	13.6	44	-N		C		1.31	1.39			
LOCK	11	1632E	1645	1632U	N21	E27	.559	8610	13.7	13D	-F		C	1632	.70	.80		10	
GRP 2037	11	1644	1651	1647	N16	E76	.973	8612	17.4	7	1-				.44				1 1 1
LOCK	11	1644	1651	1647	N16	E76	.973	8612	17.4	7	-F		C	1647	.50	1.50		10	
GRP 2038	11	1703	1727	1712	S18	W08	.331	8609	11.1	24	1-				.94				1 1 1
LOCK	11	1703	1727	1712	S18	W08	.331	8609	11.1	24	-F		C	1712	.90	1.00		10	
GRP 2039	11	1838	1902	1846	S27	W14	.498	8609	10.7	24	1-				1.05				1 1 1
SACP	11	1838	1902	1846	S27	W14	.498	8609	10.7	24	-N		C		1.17	1.19			
GRP 2040	11	1910	2004	1920	S20	W09	.367	8609	11.1	54	1				2.14				4 3 3
SACP	11	1904	1941	1923	S22	W10	.402	8609	11.0	37	1B		C		3.30	3.31			
LOCK	11	1911	2012	1920	S15	W08	.286	8609	11.2	61	-N		C	1920	1.50	1.70		20	
HUAN	11	1914	1951D	1921	S23	W09	.411	8609	11.1	37D	1N	1	C	1921	1.96	1.98			H
HALE	11	1940E	2019	1955	S20	W07	.355	8609	11.3	39D	-B	2	P	1955	.31	.33			
GRP 2041	11	1940	2015	1940	N23	E19	.497	8610	13.2	35	1-				.18				1 1 1
HALE	11	1940E	2015	1940E	N23	E19	.497	8610	13.2	35D	-N	2	P	1940	.15	.20			
GRP 2042	11	2017	2049	2024	S21	W07	.370	8609	11.3	32	1-				.99				3 3 3
SACP	11	2013	2051	2026	S24	W08	.421	8609	11.2	38	-N		C		1.98	1.98			
LOCK	11	2018	2035	2025	S16	W07	.294	8609	11.3	17	-N		C	2025	.90	1.00		20	
HALE	11	2019	2102	2022	S24	W05	.409	8609	11.5	43	-N	2	C	2022	.21	.22			F
GRP 2043	11	2340	2359	2354	S18	W09	.338	8609	11.3	19	1				3.05				3 3 3
SACP	11	2323	2356D	2353	S20	W11	.381	8609	11.1	33D	1N		C		3.34	3.34			
LOCK	11	2345	2355D	2355U	S14	W08	.272	8609	11.4	10D	1N		C	2355	3.70	4.10		20	
HALE	11	2352	2359D	2354	S20	W09	.367	8609	11.3	7D	-N	2	P	2354	1.24	1.30			
GRP 2044	12	0033	0041	0036	S23	W11	.421	8609	11.2	8	1-				.80				1 1 1
HALE	12	0033	0041	0036	S23	W11	.421	8609	11.2	8	-N	2	C	0036	.67	.70			
GRP 2045	12	0033	0051	0039	N23	E20	.508	8610	13.5	18	1-				.37				1 1 1
HALE	12	0033	0051	0039	N23	E20	.508	8610	13.5	18	-F	1	C	0039	.31	.40			
GRP 2046	12	0120	0142	0123	N22	E14	.443	8610	13.1	22	1-				.55				1 1 1
HALE	12	0120	0142	0123	N22	E14	.443	8610	13.1	22	-F	1	C	0123	.46	.50			
GRP 2047	12	0205	0214	0209	N22	E19	.487	8610	13.5	9	1-				.31				1 1 1
HALE	12	0205	0214	0209	N22	E19	.487	8610	13.5	9	-N	2	C	0209	.26	.30			
GRP 2048	12	0214	0313	0230	S23	W11	.421	8609	11.3	59	1-				.37				1 1 1
HALE	12	0214	0313	0230	S23	W11	.421	8609	11.3	59	-F	1	C	0230	.31	.33			
GRP 2049	12	0707	0716	0709	S23	W15	.451	8609	11.2	9	1-				.50				1 1 1
ATHN	12	0707	0716	0709	S23	W15	.451	8609	11.2	9	-N	1		0709	.50	.50	1.70		
GRP 2050	12	0728	0744	0731	N23	E15	.464	8610	13.4	16	1-				.99				1 1 1
ATHN	12	0728	0744	0731	N23	E15	.464	8610	13.4	16	-N	1		0731	.99	1.10	1.90		
GRP 2051	12	0822	0827	0822	N08	W29	.502	8606	10.2	5	1-				.66				1 1 1
ATHN	12	0822E	0827	0822	N08	W29	.502	8606	10.2	5D	-N	2		0822	.66	.70	1.40		
GRP 2052	12	0926	0951	0929	S23	W16	.459	8609	11.2	25	1-				1.65				1 1 1
ATHN	12	0926	0951	0929	S23	W16	.459	8609	11.2	25	-N	2		0929	1.65	1.80	1.60		
GRP 2053	12	1242	1305	1242	N20	E15	.426	8610	13.7	23	1				1.98				1 1 1
ATHN	12	1242E	1305	1242	N20	E15	.426	8610	13.7	23D	1N	2		1242	1.98	2.20	1.50		
GRP 2054	12	1323	1335	1325	N08	W38	.627	8606	9.7	12	1-				.99				1 1 1
ATHN	12	1323	1335	1325	N08	W38	.627	8606	9.7	12	-N	2		1335	.99	1.20	1.40		
GRP 2055	12	1550	1555	1551	S25	W18	.501	8609	11.3	5	1-				.43				1 1 1
MCMA	12	1550	1555	1551	S25	W18	.501	8609	11.3	5	-F		C	1551	.31	.40			D
GRP 2056	12	1653	1705	1656	S21	W28	.562	8609	10.6	12	1-				.50				2 2 2
LOCK	12	1652	1705	1657	S20	W23	.497	8609	11.0	13	-F		C	1657	.50	.60		10	
MCMA	12	1654	1704	1655	S22	W33	.625	8609	10.2	10	-N		C	1655	.36	.40			DH
GRP 2057	12	1845	1852	1849	N25	E06	.441	8610	13.2	7	1-				.71				1 1 1
LOCK	12	1845	1852	1849	N25	E06	.441	8610	13.2	7	-F		C	1849	.70	.80		10	
GRP 2058	12	1903	1923	1904	N29	W19	.568	8607	11.4	20	1-				.40				2 1 1
LOCK	12	1900	1911	1904	N31	W18	.585	8607	11.4	11	-F		C	1904	.40	.50		10	
SACP	12	1906	1934	1921	N27	W20	.553	8607	11.3	28	-F		C		1.40	1.49			

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OBSERV-ATORY	DATE 1966 DEC	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 2059	12	1912	1924	1917	S20	W23	.497	8609	11.1	12	1-				.60				1 1 1
LOCK	12	1912	1924	1917	S20	W23	.497	8609	11.1	12	-F		C	1917	.60	.70		10	
GRP 2060	12	1920	2058	1951	S22	W23	.516	8609	11.1	98	1				2.24				1 1 1
SACP	12	1920	2058	1951	S22	W23	.516	8609	11.1	98	1F		C		2.49	2.60			
GRP 2061	12	1953	2000	0000	S22	W23	.516	8609	11.1	7	1-				1.44				1 1 1
MCMA	12	1953E	2000D		S22	W23	.516	8609	11.1	7D	-N		P	1958	1.03	1.20			F
GRP 2062	12	1925	2000	1943	N21	E72	.958	8612	18.2	35	1-				.26				1 1 1
LOCK	12	1925U	2000	1943	N21	E72	.958	8612	18.2	35U	-F		C	1943	.30	.80		10	J
GRP 2063	12	2053	2106	2057	N19	E03	.337	8610	13.1	13	1-				.50				1 1 1
LOCK	12	2053	2106	2057	N19	E03	.337	8610	13.1	13	-N		C	2057	.50	.60		20	
GRP 2064	12	2141	2148	2143	N24	E05	.422	8610	13.3	7	1-				.86				1 1 1
HALE	12	2141	2148	2143	N24	E05	.422	8610	13.3	7	-N	2	C	2143	.72	.80			
GRP 2065	12	2203	2225	2214	N21	E72	.958	8612	18.3	22	1-				.26				1 1 1
LOCK	12	2203	2225	2214	N21	E72	.958	8612	18.3	22	-F		C	2214	.30	.80		10	
GRP 2066	12	2239	2248	2241	S21	W27	.550	8609	10.9	9	1-				.94				1 1 1
LOCK	12	2239	2248	2241	S21	W27	.550	8609	10.9	9	-F		C	2241	.90	1.10		10	
GRP 2067	12	2302	2310	2303	N24	W00	.415	8610	13.0	8	1-				.74				1 1 1
HALE	12	2302	2310	2303	N24	W00	.415	8610	13.0	8	-F	2	C	2303	.62	.70			
GRP 2068	12	2330	2343	2333	S21	W27	.550	8609	11.0	13	1-				.82				1 1 1
LOCK	12	2330	2343	2333	S21	W27	.550	8609	11.0	13	-F		C	2333	.80	1.00		10	
GRP 2069	13	0017	0025	0019	S26	W20	.528	8609	11.5	8	1-				.37				1 1 1
HALE	13	0017	0025	0019	S26	W20	.528	8609	11.5	8	-N	1	C	0019	.31	.40			
GRP 2070	13	0110	0123	0112	S22	W28	.568	8609	10.9	13	1-				.94				1 1 1
MITK	13	0110	0123	0112	S22	W28	.568	8609	10.9	13	-N		C	0112	1.34	1.60			E
GRP 2071	13	0112	0121	0114	S23	W39	.694	8609	10.1	9	1-				1.02				1 1 1
MANI	13	0112	0121D	0114	S23	W39	.694	8609	10.1	9D	-N	2		0114	1.13	1.41			
GRP 2072	13	0221	0229	0224	N24	W00	.417	8610	13.1	8	1-				.49				1 1 1
HALE	13	0221	0229	0224	N24	W00	.417	8610	13.1	8	-N	2	C	0224	.41	.50			
GRP 2073	13	0308	0334	0316	N19	E50	.797	8612	16.9	26	1-				.86				1 1 1
HALE	13	0308	0334D	0316	N19	E50	.797	8612	16.9	26D	-N	2	P	0316	.72	1.20			F
GRP 2074	13	0316	0334	0319	S21	W29	.572	8609	11.0	18	1-				.49				1 1 1
HALE	13	0316	0334D	0319	S21	W29	.572	8609	11.0	18D	-N	1	P	0319	.41	.50			
	13	0415	0430	NO FLARE PATROL															
GRP 2075	13	0655	0709	0659	S22	W31	.602	8609	11.0	14	1-				.63				2 2 2
ATHN	13	0655	0710	0659	S23	W31	.609	8609	11.0	15	-B	2		0659	.66	.80	2.00		
MANI	13	0658E	0708		S20	W31	.588	8609	11.0	10D	-N	2		0659	.67	.83			
GRP 2076	13	0715	0726	0717	N29	W28	.642	8607	11.2	11	1-				.83				1 1 1
ATHN	13	0715	0726	0717	N29	W28	.642	8607	11.2	11	-N	2		0717	.83	1.00	1.60		
GRP 2077	13	0749	0755	0750	N22	E03	.388	8610	13.6	6	1-				.33				1 1 1
ATHN	13	0749	0755	0750	N22	E03	.388	8610	13.6	6	-N	2		0750	.33	.40	1.70		
GRP 2078	13	0840	0846	0840	N29	W29	.650	8607	11.2	6	1-				1.16				1 1 1
ATHN	13	0840E	0846	0840	N29	W29	.650	8607	11.2	6D	-N	2		0840	1.16	1.40	1.70		
GRP 2079	13	0912	0945	0915	S22	W33	.624	8609	10.9	33	1-				1.38				2 2 2
KAND	13	0910	0953		S20	W34	.622	8609	10.8	43	1N		P	0920	2.33	2.57			
ATHN	13	0913	0937	0915	S23	W32	.620	8609	11.0	24	-B	2		0915	.99	1.20	2.00		
GRP 2080	13	1012	1036		S20	W34	.622	8609	10.9	24	1-								1 1 0
KAND	13	1012	1036		S20	W34	.622	8609	10.9	24	-N		V						
GRP 2081	13	1210	1217	1212	N29	W32	.677	8607	11.1	7	1-				.66				1 1 1
ATHN	13	1210	1217	1212	N29	W32	.677	8607	11.1	7	-N	2		1212	.32	.40	1.70		
GRP 2082	13	1213	1217	1214	S22	W30	.591	8609	11.3	4	1-				.99				1 1 1
ATHN	13	1213	1217	1214	S22	W30	.591	8609	11.3	4	-N	2		1214	.99	1.20	1.80		
GRP 2083	13	1220	1230	1223	S24	W27	.575	8609	11.5	10	1-				.66				1 1 1
ATHN	13	1220	1230	1223	S24	W27	.575	8609	11.5	10	-N	2		1223	.66	.80			
GRP 2084	13	1414	1449	1419	S24	W29	.595	8609	11.4	35	1-				1.59				2 2 2
SACP	13	1414	1449	1420	S24	W32	.627	8609	11.2	35	1N		C		2.05	2.27			
ATHN	13	1418E	1423D	1418	S24	W25	.554	8609	11.7	5D	-B	2		1418	1.32	1.60	2.00		
GRP 2085	13	1626	1657	1631	S21	W36	.651	8609	11.0	31	1-				.71				3 2 2
SACP	13	1626	1657	1632	S21	W36	.651	8609	11.0	31	-N		C		.66	.73			
LOCK	13	1630E	1657	1630U	S21	W37	.662	8609	10.9	27D	-F		C	1630	.80	1.10		10	
HUAN	13	1639E	1658D		S22	W36	.657	8609	11.0	19D	-N	1	P	1640	.70	.80			E
GRP 2086	13	1720	1759	1731	S21	W36	.651	8609	11.0	39	1-				1.30				4 4 4
SACP	13	1715	1754	1732	S22	W35	.646	8609	11.1	39	-N		C		1.65	1.84			
LOCK	13	1720U	1757	1732	S20	W37	.657	8609	10.9	37U	-N		C	1732	1.20	1.60		20	
HALE	13	1725	1807	1730	S21	W32	.606	8609	11.3	42	-B	2	C	1730	1.03	1.30			
HUAN	13	1729E	1738D		S21	W38	.673	8609	10.9	9D	-B	1	P	1730	1.39	1.56			
GRP 2087	13	1835	1920	1840	N32	W26	.654	8607	11.8	45	1-				.74				1 1 1
HALE	13	1835	1920	1840	N32	W26	.654	8607	11.8	45	-N	2	C	1840	.62	.80			E
GRP 2088	13	1902	1916	1903	N19	E44	.736	8612	17.1	14	1-				.43				1 1 1
HALE	13	1902	1916	1903	N19	E44	.736	8612	17.1	14	-N	2	C	1903	.36	.50			F
GRP 2089	13	1922	1942	1927	S22	W38	.678	8609	11.0	20	1-				.81				2 2 2
SACP	13	1920	1946	1928	S22	W38	.678	8609	11.0	26	-N		C		1.25	1.42			
HALE	13	1923	1937	1925	S22	W37	.668	8609	11.0	14	-N	2	C	1925	.41	.60			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS				REMARKS
	DATE 1966 DEC	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2090	13	2001	2012	2006	S27	W37	.698	8609	11.1	11	1-				.84				3 3 3
LOCK	13	2000U	2012U	2005	S24	W36	.669	8609	11.1	12U	-N		C	2005	.90	1.30		20	
SACP	13	2001	2015	2007	S27	W33	.659	8609	11.4	14	-N		C		1.07	1.21			
HALE	13	2003	2009	2006	S30	W41	.752	8609	10.8	6	-N	2	C	2006	.52	.80			F
GRP 2091	13	2023	2045	2026	S20	W37	.657	8609	11.1	22	1-				.74				1 1 1
HALE	13	2023	2045	2026	S20	W37	.657	8609	11.1	22	-N	1	C	2026	.62	.80			
GRP 2092	13	2156	2233	2206	N21	E44	.745	8612	17.2	37	1-				.75				2 2 2
SACP	13	2155	2231	2209	N21	E44	.745	8612	17.2	36	-F		C		.83	1.00			
HALE	13	2156	2235	2202	N20	E43	.730	8612	17.1	39	-N	2	C	2202	.62	.90			F
GRP 2093	13	2203	2215	2210	S22	W37	.668	8609	11.1	12	1-				.62				1 1 1
HALE	13	2203	2215	2210	S22	W37	.668	8609	11.1	12	-N	1	C	2210	.52	.70			
GRP 2094	13	2252	2310	2258	S34	W68	.949	8608	8.9	18	1-				.37				2 2 2
SACP	13	2252	2312	2258	S34	W69	.953	8608	8.8	20	-N		C		.41	.83			
HALE	13	2254E	2308	2257	S34	W66	.939	8608	9.0	14D	-B	1	P	2257	.31				
GRP 2095	13	2302	2354	2310	N25	E56	.865	8612	18.2	52	2+				4.41				2 2 2
SACP	13	2300	2357D	2311	N24	E54	.846	8612	18.0	57D	2B		C		4.72	6.74			
HALE	13	2303	2350	2308	N25	E58	.880	8612	18.3	47	2B	2	C	2308	3.59	7.90			
GRP 2096	13	2308	2317	2310	N28	E45	.785	8612	17.3	9	1-				.55				1 1 1
HALE	13	2308	2317	2310	N28	E45	.785	8612	17.3	9	-N	2	C	2310	.46	.80			FJ
GRP 2097	14	0021	0024	0042	N24	W11	.453	8610	13.2	3	1-				.25				1 1 1
HALE	14	0021	0024	0042	N24	W11	.453	8610	13.2	3	-N	2	C	0022	.21	.22			
GRP 2098	14	0039	0047	0040	S23	W36	.662	8609	11.3	8	1-				.18				1 1 1
HALE	14	0039	0047	0040	S23	W36	.662	8609	11.3	8	-N	2	C	0040	.15	.20			
GRP 2099	14	0118	0136	0125	N22	W08	.408	8610	13.5	18	1-				1.59				2 2 2
MITK	14	0117	0137	0124	N22	W08	.408	8610	13.5	20	1N		C	0124	2.06	2.20			F
HALE	14	0119	0135	0125	N21	W08	.393	8610	13.5	16	-N	2	C	0125	1.34	1.50			
GRP 2100	14	0242	0325	0249	S21	W41	.705	8609	11.0	43	1-				.43				1 1 1
HALE	14	0242	0325	0249	S21	W41	.705	8609	11.0	43	-N	2	C	0249	.36	.50			
GRP 2101	14	0851	0910		S24	W38	.689	8609	11.5	19	1-				.69				1 1 1
MONT	14	0851	0910		S24	W38	.689	8609	11.5	19	-N		C	0855	.69	.80			
GRP 2102	14	0936	0951	0939	N17	W02	.307	8610	14.3	15	1-				.50				1 1 1
ATHN	14	0936E	0951	0939	N17	W02	.307	8610	14.3	15D	-N	2		0939	.50	1.70	.60		
GRP 2103	14	0945	1004	0951	N23	E53	.836	8612	18.4	19	1-				.83				2 2 2
MONT	14	0945	1005		N23	E50	.810	8612	18.2	20	-B		C	0948	.67	.90			
ATHN	14	0950E	1003	0951	N22	E55	.850	8612	18.5	13D	-N	2		0951	.99	1.80	1.80		
GRP 2104	14	0957	1001	0958	S24	W45	.759	8609	11.0	4	1-				.66				1 1 1
ATHN	14	0957	1001	0958	S24	W45	.759	8609	11.0	4	-N	2		0958	.66	1.00	1.60		
GRP 2105	14	1033	1054	1035	N17	W03	.309	8610	14.2	21	1-				.33				1 1 1
ATHN	14	1033	1054	1035	N17	W03	.309	8610	14.2	21	-N	2		1035	.33	.40	1.50		
GRP 2106	14	1146	1152	1146	S22	W46	.761	8609	11.0	6	1-				.81				2 2 2
MONT	14	1146	1151		S20	W48	.774	8609	10.9	5	-B		C	1148	.63	.80			
ATHN	14	1146E	1153	1146	S23	W44	.745	8609	11.2	7D	-N	2		1146	.99	1.70	1.50		
GRP 2107	14	1410	1427	1418	S24	W50	.806	8609	10.8	17	1-				.94				2 2 2
SACP	14	1410E	1427	1419	S22	W48	.780	8609	11.0	17D	-N		C		1.35	1.72			
ATHN	14	1417E	1421D	1417	S25	W52	.826	8609	10.7	4D	-N	1		1417	.66	1.70	1.70		
GRP 2108	14	1653	1658	1655	S24	W46	.768	8609	11.3	5	1-				.23				1 1 1
HUAN	14	1653	1658	1655	S24	W46	.768	8609	11.3	5	-F	1	C	1655	.25	.31			D
GRP 2109	14	1742	1754	1750	S20	W53	.822	8609	10.8	12	1				1.56				1 1 1
SACP	14	1742	1754	1750	S20	W53	.822	8609	10.8	12	1N		C		1.73	2.34			
GRP 2110	14	1847	1853	1849	S19	W53	.819	8609	10.8	6	1-				.86				1 1 1
HALE	14	1847	1853	1849	S19	W53	.819	8609	10.8	6	-N	3	C	1849	.72	1.30			
GRP 2111	14	1922	1937	1924	S27	W46	.781	8609	11.4	15	1-				.77				2 2 2
LOCK	14	1921E	1940	1921E	S25	W47	.782	8609	11.3	19D	-N		C	1921	1.00	1.60		10	
HALE	14	1922	1934	1927	S28	W45	.776	8609	11.4	12	-N	2	C	1927	.41	.70			
GRP 2112	14	2059	2142	2113	S26	W47	.786	8609	11.3	43	1-				.71				3 3 3
SACP	14	2057	2151	2111	S27	W46	.781	8609	11.4	54	-N		C		.99	1.27			
LOCK	14	2100	2132	2114	S24	W47	.778	8609	11.3	32	-F		C	2114	.70	1.10		10	
HUAN	14	2111E	2112D		S26	W47	.786	8609	11.4	1D	-N	1	P	2111	.62	.80			E
GRP 2113	15	0002	0010		S33	W85	.997	8609	8.6	8	1-				.20				1 1 1
MANI	15	0002E	0010D		S33	W85	.997	8609	8.6	8D	-N	2		0003	.26	.75			
GRP 2114	15	0007	0021	0011	N16	E27	.523	8612	17.0	14	1-				.79				1 1 1
MANI	15	0007	0021	0011	N16	E27	.523	8612	17.0	14	-F	2		0011	.88	1.03			
GRP 2115	15	0457	0500	0500	S26	W53	.837	8609	11.2	3	1-				.37				1 1 1
CULG	15	0457	0500D	0500	S26	W53	.837	8609	11.2	3D	-N		P	0500	.41	.58			
GRP 2116	15	0522	0649	0544	N20	E37	.667	8612	18.0	87	1+				2.78				1 1 1
CULG	15	0522	0649	0544	N20	E37	.667	8612	18.0	87	1B		C	0544	3.09	3.60			L
GRP 2117	15	0523	0601	0539	N20	E25	.533	8612	17.1	38	1				2.54				4 3 3
MITK	15	0523	0606D		N20	E25	.533	8612	17.1	43D	1N		C	0530	3.20	3.80			F
IKOM	15	0524E	0607D	0538	N18	E24	.504	8612	17.0	43D	1B		V	0538	3.61	4.30	1.46	130	EO
KODA	15	0530E	0555	0539	N22	E25	.551	8612	17.1	25D	1F		P	0552	2.89	3.40	1.76		E
MANI	15	0549E	0555D		N19	E27	.547	8612	17.3	6D	1N	1		0550	2.27	3.30			
GRP 2118	15	0556	0618	0602	N24	W21	.532	8610	13.7	22	1-				.56				1 1 1
CULG	15	0556	0618	0602	N24	W21	.532	8610	13.7	22	-N		C	0602	.62	.69			

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1966 DEC	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2119	15	0642	0721	0649	N16	E22	.462	8612	16.9	39	1-				.65				2 1 1
CULG	15	0642	0727	0649	N16	E22	.462	8612	16.9	45	-N		C	0649	.72	.77			L
MANI	15	0706E	0714		N16	E22	.462	8612	16.9	8D	-F	1		0708	.62	.69			
GRP 2120	15	0805	0820		N21	W25	.542	8610	13.5	15	1-				.94				1 1 1
ARCE	15	0805E	0820D		N21	W25	.542	8610	13.5	15D	-N		C	0810	.90	1.00			
GRP 2121	15	0839	0848	0843	N17	E22	.471	8612	17.0	9	1-				.41				2 2 2
MANI	15	0838	0845	0840	N16	E22	.462	8612	17.0	7	-F	1		0840	.31	.35			
ARCE	15	0840	0850	0845	N17	E21	.459	8612	16.9	10	-N		C	0845	.53	.60			
GRP 2122	15	1000	1006	1002	N18	W13	.388	8613	14.4	6	1-				.33				1 1 1
ATHN	15	1000	1006	1002	N18	W13	.388	8613	14.4	6	-N	2		1002	.33	.40	1.80		
GRP 2123	15	1017	1031	1018	N23	W19	.503	8610	14.0	14	1-				.33				1 1 1
ATHN	15	1017E	1031	1018	N23	W19	.503	8610	14.0	14D	-N	2		1018	.33	.40	1.70		
GRP 2124	15	1521	1535	1526	N10	W71	.948	8606	10.3	14	1-				.20				2 2 2
SACP	15	1520	1536	1527	N10	W70	.943	8606	10.4	16	-F		C		.25	.48			
HUAN	15	1521	1533	1525	N10	W71	.948	8606	10.3	12	-F	2	C	1525	.21				D
GRP 2125	15	1650	1730	1659	N25	E33	.657	8612	18.2	40	1-				1.00				2 2 2
SACP	15	1649	1734	1700	N24	E33	.650	8612	18.2	45	-F		C		1.18	1.31			
LOCK	15	1650	1725	1657	N25	E33	.657	8612	18.2	35	-F		C	1657	.90	1.30		10	
GRP 2126	15	1945	2156	2053	N21	E27	.563	8612	17.8	131	1+				2.73				2 2 2
SACP	15	1935	2202	2055	N21	E26	.553	8612	17.8	147	1N		C		2.06	2.18			
LOCK	15	1955	2150	2050	N20	E27	.555	8612	17.9	115	1N		C	2050	3.00	3.60		20	
GRP 2127	15	1958	2009	2001	S18	W62	.892	8609	11.2	11	1-				.29				1 1 1
LOCK	15	1958	2009	2001	S18	W62	.892	8609	11.2	11	-F		C	2001	.30	.60		10	
GRP 2128	16	0014	0039	0015	S22	W71	.951	8609	10.7	25	1-				.25				1 1 1
HALE	16	0014	0039	0015	S22	W71	.951	8609	10.7	25	-F	1	C	0015	.21				
GRP 2129	16	0224	0243	0228	S21	W67	.929	8609	11.1	19	1-				.28				2 2 2
CULG	16	0223	0239	0227	S21	W66	.923	8609	11.1	16	-N		C	0227	.21				
HALE	16	0225	0246	0228	S20	W67	.928	8609	11.1	21	-B	1	C	0228	.31				
GRP 2130	16	0232	0246	0233	N28	W64	.926	8607	11.3	14	1-				.36				2 2 2
HALE	16	0232	0242	0233	N27	W63	.918	8607	11.4	10	-N	1	C	0233	.36				H
CULG	16	0232	0249	0233	N28	W65	.931	8607	11.2	17	-N		C	0233	.31				
GRP 2131	16	0301	0316	0303	S27	W66	.929	8609	11.2	15	1-				.25				1 1 1
HALE	16	0301	0316	0303	S27	W66	.929	8609	11.2	15	-N	1	C	0303	.21				
GRP 2132	16	0947	0957	0947	N19	E20	.470	8612	17.9	10	1-				.50				2 1 1
ATHN	16	0947E	0957	0947	N20	E20	.481	8612	17.9	10D	-N	1		0947	.50	.60	1.70		
ARCE	16	0951E	0956D		N17	E20	.449	8612	17.9	5D	-N		C	0951	1.56	1.70			
GRP 2133	16	0947	0958	0948	N18	E08	.351	8612	17.0	11	1-				1.32				1 1 1
ATHN	16	0947	0958	0948	N18	E08	.351	8612	17.0	11	-N	1		0948	1.32	1.40	1.80		
GRP 2134	16	1050	1110	1054	N19	E09	.373	8612	17.1	20	1-				1.10				3 3 3
ATHN	16	1050	1110	1054	N18	E08	.351	8612	17.1	20	-N	1		1054	.83	.90	1.80		
WEND	16	1051E	1112		N18	E08	.351	8612	17.1	21D	1F				4.13				
CAPS	16	1054F	1107		N20	E10	.394	8612	17.2	13D	-F	3		1057	.80	.90			
GRP 2135	16	1721	1808	1731	N19	E04	.348	8612	17.0	47	1-				1.96				3 3 3
LOCK	16	1718	1805	1733	N19	E03	.346	8612	16.9	47	-N		C	1733	1.80	2.00		20	
HALE	16	1721	1807D	1730	N19	E04	.348	8612	17.0	46D	-B	1	P	1730	1.34	1.40			
SACP	16	1725	1811	1731	N19	E05	.352	8612	17.1	46	1N		C		2.50	2.48			
GRP 2136	16	1827	1841	1832	N22	E21	.512	8612	18.3	14	1-				.69				2 2 2
SACP	16	1827	1838	1830	N21	E21	.502	8612	18.3	11	-F		C		.74	.77			
LOCK	16	1827	1844	1834	N22	E20	.503	8612	18.3	17	-F		C	1834	.70	.80		10	
GRP 2137	16	2001	2023	2007	N20	E04	.364	8612	17.1	22	1-				.66				2 2 2
LOCK	16	2001	2016	2005	N19	E03	.346	8612	17.1	15	-F		C	2005	.80	.90		10	
HALE	16	2003E	2030	2009	N20	E05	.368	8612	17.2	27D	-N	1	P	2009	.41	.43			
GRP 2138	16	2042	2130	2057	N18	E02	.327	8612	17.0	48	1-				1.59				3 3 3
CULG	16	2038E	2153	2100	N18	E03	.329	8612	17.1	75D	-N		P	2100	1.55	1.57			
LOCK	16	2040	2113	2057	N19	E03	.346	8612	17.1	33	-N		C	2057	1.50	1.70		10	
HALE	16	2049	2125	2053	N17	E01	.310	8612	16.9	36	-B	1	C	2053	1.44	1.50			
GRP 2139	16	2126	2135	2129	N16	W16	.394	8612	15.7	9	1-				.19				1 1 1
LOCK	16	2126	2135	2129	N16	W16	.394	8612	15.7	9	-F		C	2129	.20	.20		10	
GRP 2140	16	2356	0009	0005	S20	W79	.983	8609	11.1	13	1-				.19				1 1 1
CULG	16	2356	0009	0005	S20	W79	.983	8609	11.1	13	-N		C	0005	.21				
GRP 2141	17	0005	0037	0014	N18	E02	.330	8612	17.2	32	1-				.72				3 3 3
CULG	17	0002	0051	0016	N18	E02	.330	8612	17.2	49	-N		C	0016	.52	.52			
HALE	17	0008	0035	0011	N18	E01	.328	8612	17.1	27	-N	1	C	0011	.62	.70			
MITK	17	0009E	0025		N19	E02	.346	8612	17.2	16D	-F		C	0010	1.34	1.40			E
GRP 2142	17	0109	0130	0115	N18	E00	.328	8612	17.0	21	1-				.43				3 2 2
CULG	17	0108	0133	0116	N17	E00	.311	8612	17.0	25	-N		C	0116	.31	.31			
MITK	17	0109	0127	0113	N17	W01	.312	8612	17.0	18	-F		C	0113	.83	.90			E
MANI	17	0117E	0118D		N19	E01	.345	8612	17.1	1D	-N	1		0117	.26	.27			
GRP 2143	17	0205	0242	0211	N17	W00	.311	8612	17.1	37	1-				.55				1 1 1
HALE	17	0205	0242	0211	N17	W00	.311	8612	17.1	37	-F	1	C	0211	.46	.50			
GRP 2144	17	0328	0340	0330	N23	W46	.775	8610	13.7	12	1-				.49				1 1 1
HALE	17	0328	0340	0330	N23	W46	.775	8610	13.7	12	-N	2	C	0330	.41	.70			

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OBSERV-ATORY	DATE 1966 DEC	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 2145	17	0350	0422	0356	N19	E00	.344	8612	17.2	32	1-				1.57				3 3 3
CULG	17	0348	0434	0356	N19	E02	.346	8612	17.3	46	-N		C	0356	1.34	1.36			
MITK	17	0352	0420	0354	N20	W00	.361	8612	17.2	28	1F		C	0354	1.96	2.10			F
MANI	17	0356E	0412	0358	N19	W01	.345	8612	17.1	16D	1F	2		0358	2.06	2.18			
GRP 2146	17	0654	0723	0659	N19	E00	.344	8612	17.3	29	1-				.99				3 3 3
ATHN	17	0654	0720	0657	N18	E00	.328	8612	17.3	26	-N	1		0657	1.65	1.70	1.70		
CULG	17	0654	0732D	0701	N20	E00	.361	8612	17.3	38D	-N		P	0701	.83	.84			
MANI	17	0659E	0716		N20	E00	.361	8612	17.3	17D	-F	2		0700	.62	.66			
GRP 2147	17	0735	0804	0739	N18	E00	.328	8612	17.3	29	1-				.99				1 1 1
ATHN	17	0735	0804	0739	N18	E00	.328	8612	17.3	29	-N	1		0739	.99	1.00	1.50		
GRP 2148	17	0811	0850	0816	N19	W02	.346	8612	17.2	39	1+				3.77				5 5 5
ATHN	17	0808E	0853	0816	N18	W01	.328	8612	17.3	45D	1B	2		0816	3.63	3.80	2.00		
CAPS	17	0811E	0834D		N18	W01	.328	8612	17.3	23D	2N	2		0818	5.00	5.20		185	A
MONT	17	0811	0910	0816	N21	W02	.378	8612	17.2	59	1N		C	0816	2.20	2.20			
MANI	17	0812	0823D	0819	N19	W03	.348	8612	17.1	11D	1B	2		0819	4.13	4.36			
KODA	17	0813E	0828	0813	N17	W03	.315	8612	17.1	15D	1B		S	0823	1.93	2.04	1.32		EB
GRP 2149	17	0949	1124	1010	N21	W02	.378	8612	17.3	95	2+				12.04				6 6 6
MONT	17	0943	1140	1010	N21	W02	.378	8612	17.3	117	3N		C	1010	20.02	20.00			
ATHN	17	0948	1148	0957	N18	W02	.330	8612	17.3	120	2B	2		1014	6.27	6.60	2.00		
CATA	17	0955E	1055D	1010	N21	W05	.385	8612	17.0	60D	3B		C	1010	22.41	24.20			
CAPF	17	0955	1110D	1010	N21	E02	.378	8612	17.6	75D	3N		C	1008	13.52	14.40			
CAPS	17	1007E	1045		N22	W03	.396	8612	17.2	38D	2N	3		1011	6.00	6.60		220	FCWA
MEUD	17	1008E	1040D		N20	W03	.364	8612	17.2	32D	1B		C	1010	3.40	3.60			F
GRP 2150	17	1210	1219	1213	N17	W04	.318	8612	17.2	9	1-				.50				1 1 1
ATHN	17	1210	1219	1213	N17	W04	.318	8612	17.2	9	-N	2		1213	.50	.50	1.60		
GRP 2151	17	1227	1322	1237	N20	W01	.361	8612	17.4	55	1+				4.44				4 3 3
ATHN	17	1223E	1322	1237	N17	W03	.315	8612	17.3	59D	1B	2		1240	2.54	2.70	2.00		
MONT	17	1230	1330	1240	N21	W02	.378	8612	17.4	60	1B		C	1240	3.50	3.50			
CAPS	17	1240E	1313		N22	W02	.394	8612	17.4	33D	1N	3		1242	3.80	4.00		176	FL
CAPF	17	1235E	1313D	1235	N20	E03	.364	8612	17.7	38D	2N		C	1236	8.23	8.70			
GRP 2152	17	1238	1250	1240	N22	E12	.437	8612	18.4	12	1-				.99				1 1 1
ATHN	17	1238	1250	1240	N22	E12	.437	8612	18.4	12	-B	2		1240	.99	1.10	2.00		
GRP 2153	17	1405	1420	1409	S18	W90	1.000	8609	10.8	15	1				.83				1 1 1
ATHN	17	1405E	1420	1409	S18	W90	1.000	8609	10.8	15D	1B	1		1409	.83		2.00		
GRP 2154	17	1421	1427	1422	N25	E11	.473	8612	18.4	6	1-				.50				1 1 1
ATHN	17	1421	1427	1422	N25	E11	.473	8612	18.4	6	-F	1		1422	.50	.80	1.40		
GRP 2155	17	1634	1745	1649	N22	W05	.401	8612	17.3	71	1-				3.09				2 2 2
SACP	17	1634	1745	1649	N22	W04	.398	8612	17.4	71	1F		C		5.04	5.05			
LOCK	17	1650E	1703D	1700U	N21	W06	.389	8612	17.3	13D	-F		C	1700	1.40	1.50		10	
GRP 2156	17	2053	2112	2102	N23	E01	.409	8612	17.9	19	1-				.50				1 1 1
LOCK	17	2053	2112	2102	N23	E01	.409	8612	17.9	19	-F		C	2102	.50	.60		10	
GRP 2157	17	2156	2219	2206	N23	W00	.409	8612	17.9	23	1-				.37				3 3 3
CULG	17	2150	2225D	2206	N24	W01	.425	8612	17.8	35D	-N		P	2206	.41	.44			
HALE	17	2159	2216	2205	N22	W01	.393	8612	17.8	17	-F	1	C	2205	.21	.20			
LOCK	17	2200	2215	2206	N23	E01	.409	8612	18.0	15	-F		C	2206	.50	.60		10	
GRP 2158	17	2339	2355	2348	N19	W10	.381	8612	17.2	16	1-				.45				3 3 3
CULG	17	2337	2353D	2349	N18	W12	.383	8612	17.1	16D	-N		P	2349	.41				
LOCK	17	2337	2355D	2350U	N21	W06	.389	8612	17.5	18D	-F		C	2350	.50	.60		10	
HALE	17	2343	2354	2346	N17	W13	.378	8612	17.0	11	-N	1	C	2346	.41	.43			
GRP 2159	18	0130	0149	0135	N28	E65	.932	8618	22.9	19	1-				.18				1 1 1
HALE	18	0130	0149	0135	N28	E65	.932	8618	22.9	19	-F	1	C	0135	.15				
GRP 2160	18	0348	0411	0352	N24	W64	.920	8610	13.4	23	1-				.29				2 2 2
MANI	18	0348	0400	0352	N24	W65	.926	8610	13.3	12	-N	2		0352	.15	.32			
CULG	18	0348	0421	0352	N24	W63	.914	8610	13.4	33	-N		C	0352	.52	1.12			F
GRP 2161	18	0647	0711	0654	N23	W67	.936	8610	13.3	24	1-				.82				2 2 2
CULG	18	0647	0713	0655	N23	W66	.931	8610	13.3	26	-N		C	0655	.62				
MANI	18	0651E	0708	0653	N23	W68	.942	8610	13.2	17D	1N	2		0653	1.24	2.65			
GRP 2162	18	1311	1331	1312	N24	W60	.894	8610	14.0	20	1-				.50				1 1 1
ATHN	18	1311E	1331	1312	N24	W60	.894	8610	14.0	20D	-N	1		1312	.50	1.20	1.40		
GRP 2163	18	1409	1503	1410	N23	W62	.906	8610	13.9	54	1-				.85				3 2 2
ATHN	18	1408	1411D	1409	N24	W62	.908	8610	13.9	3D	-N	1		1409	.83	1.90	1.90		
HUAN	18	1409	1503	1410	N23	W64	.919	8610	13.8	54	1N	1	C	1410	1.22	1.95			H
CAPS	18	1425E	1441D		N21	W61	.896	8610	14.0	16D	-F	3		1428	1.00			155	
GRP 2164	18	1643	1700	1650	N22	W61	.897	8610	14.1	17	1-				.57				2 2 2
SACP	18	1643	1700	1650	N22	W62	.904	8610	14.0	17	-N		C		.58	.95			
LOCK	18	1643	1700	1650	N22	W60	.890	8610	14.2	17	-N		C	1650	.60	1.30		20	
GRP 2165	18	1820	1923	1855	N25	W09	.464	8612	18.1	63	1				2.81				3 3 3
SACP	18	1817	1916	1854	N25	W11	.475	8612	17.9	59	2N		C		5.12	5.25			
LOCK	18	1822	1930	1855	N24	W09	.450	8612	18.1	68	-N		C	1855	1.80	2.00		20	
HUAN	18	1841E	1853D		N27	W07	.486	8612	18.3	12D	1F	1	P	1843	2.06	2.10			E
GRP 2166	18	2033	2047	2037	N22	W12	.439	8612	18.0	14	1-				.60				2 2 2
LOCK	18	2033	2044	2037	N22	W12	.439	8612	18.0	11	-F		C	2037	.80	.90		10	
CULG	18	2033	2050	2036	N22	W12	.439	8612	18.0	17	-N		C	2036	.41	.44			
GRP 2167	18	2243	2253	2246	N17	W27	.534	8612	16.9	10	1-				.50				1 1 1
LOCK	18	2243	2253	2246	N17	W27	.534	8612	16.9	10	-F		C	2246	.50	.60		10	

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OBSERV-ATORY	DATE 1966 DEC	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 2168	19	0102	0114	0110	N13	W63	.900	8613	14.3	12	1-				.28				1 1 1
CULG	19	0102	0114	0110	N13	W63	.900	8613	14.3	12	-N		C	0110	.31	.66			
GRP 2169	19	0230	0301	0236	N19	W27	.551	8612	17.1	31	1-				.47				1 1 1
CULG	19	0230	0301	0236	N19	W27	.551	8612	17.1	31	-N		C	0236	.52	.57			
	19	0305	0330	NO FLARE PATROL															
GRP 2170	19	0935	0942	0936	N23	W72	.961	8610	14.0	7	1-				.33				1 1 1
ATHN	19	0935	0942	0936	N23	W72	.961	8610	14.0	7	-N	2		0936	.33		1.90		
GRP 2171	19	1108	1119	1109	N25	W60	.897	8615	15.0	11	1-				.33				1 1 1
ATHN	19	1108	1119	1109	N25	W60	.897	8615	15.0	11	-F	1		1109	.33	.70	1.30		
	19	1125	1140	NO FLARE PATROL															
	19	1150	1155	NO FLARE PATROL															
	19	1210	1220	NO FLARE PATROL															
	19	1355	1420	NO FLARE PATROL															
GRP 2172	19	1419	1444	1424	N13	W67	.927	8613	14.6	25	1				1.22				1 1 1
SACP	19	1419E	1444	1424U	N13	W67	.927	8613	14.6	25D	1N		C		1.36	2.43			
GRP 2173	19	1620	1637	1624	N19	W34	.631	8612	17.1	17	1-				1.30				2 2 2
LOCK	19	1620	1635	1623	N19	W34	.631	8612	17.1	15	-B		C	1623	1.00	1.30		30	
SACP	19	1620	1638	1624	N18	W34	.625	8612	17.1	18	-N		C		1.72	1.90			
GRP 2174	19	1734	1740	1738	N23	W77	.980	8610	14.0	6	1-				.25				1 1 1
HALE	19	1734	1740	1738	N23	W77	.980	8610	14.0	6	-B	1	C	1738	.21				
GRP 2175	19	1746	1800	1755	N24	W66	.932	8615	14.8	14	1-				.18				1 1 1
HALE	19	1746	1800	1755	N24	W66	.932	8615	14.8	14	-F	1	C	1755	.15				
GRP 2176	19	1756	1814	1806	N31	E62	.921	8620	24.4	18	1-				.25				1 1 1
HALE	19	1756	1814	1806	N31	E62	.921	8620	24.4	18	-F	1	C	1806	.21				
GRP 2177	19	1802	1816	1810	N14	W52	.806	8616	15.9	14	1-				.37				1 1 1
HALE	19	1802	1816	1810	N14	W52	.806	8616	15.9	14	-F	1	C	1810	.31	.50			
GRP 2178	19	1827	1909	1905	N32	E63	.928	8620	24.5	42	1-				.18				1 1 1
HALE	19	1827	1909	1905	N32	E63	.928	8620	24.5	42	-F	1	C	1905	.15				
GRP 2179	19	1840	1859	1850	N22	W79	.986	8610	13.9	19	1-				.42				3 3 3
HALE	19	1832	1902	1850	N22	W81	.991	8610	13.7	30	-B	1	C	1850	.21				
LOCK	19	1842	1856	1849	N23	W78	.983	8610	13.9	14	-N		C	1849	.40	1.20		10	H
SACP	19	1845	1858	1850	N22	W79	.986	8610	13.9	13	-N		C		.75				
GRP 2180	19	1922	2115	1928	S39	E50	.857		23.6	113	1-				.25				1 1 1
HALE	19	1922	2115	1928	S39	E50	.857		23.6	113	-N	1	C	1928	.21	.40			CG
GRP 2181	19	1930	1947	1937	N20	W66	.928	8615	14.9	17	1-				.25				1 1 1
HALE	19	1930	1947	1937	N20	W66	.928	8615	14.9	17	-N	1	C	1937	.21				
GRP 2182	19	1955	2135	2056	N20	W66	.928	8615	14.9	100	1-				.37				1 1 1
HALE	19	1955	2135	2056	N20	W66	.928	8615	14.9	100	-N	1	C	2056	.31				
GRP 2183	19	2026	2057	2028	N14	W52	.806	8616	16.0	31	1-				.18				1 1 1
HALE	19	2026	2057	2028	N14	W52	.806	8616	16.0	31	-F	1	C	2028	.15	.30			
GRP 2184	19	2119	2204	2137	N32	E63	.928	8620	24.6	45	1-				.25				1 1 1
HALE	19	2119	2204	2137	N32	E63	.928	8620	24.6	45	-N	1	C	2137	.21				
GRP 2185	19	2227	2235	2230	N22	W85	.997	8610	13.6	8	1-				.25				1 1 1
LOCK	19	2227	2235	2230	N22	W85	.997	8610	13.6	8	-F		C	2230	.30	1.00		10	H
GRP 2186	19	2307	2341	2317	N21	W67	.934	8615	14.9	34	1-				.49				2 2 2
LOCK	19	2307	2322	2313	N21	W68	.940	8615	14.9	15	-F		C	2313	.70	1.70		10	
HALE	19	2307	2359D	2320	N20	W66	.928	8615	15.0	52D	-N	1	P	2320	.26				
GRP 2187	19	2312	2339	2325	N25	E89	1.000	8621	26.6	27	1-				.18				1 1 1
HALE	19	2312	2339	2325	N25	E89	1.000	8621	26.6	27	-F	1	C	2325	.15				
GRP 2188	20	0041	0055	0044	N18	W39	.683	8612	17.1	14	1-				.37				2 2 2
MITK	20	0040	0055	0044	N17	W40	.689	8612	17.0	15	-F		C	0044	.62	.90			E
HALE	20	0041	0055	0044	N18	W38	.671	8612	17.2	14	-N	1	C	0044	.26	.30			
GRP 2189	20	0128	0152	0135	N21	W38	.688	8612	17.2	24	1-				.31				1 1 1
HALE	20	0128	0152	0135	N21	W38	.688	8612	17.2	24	-B	1	C	0135	.26	.40			H
GRP 2190	20	0306	0329	0313	N24	W64	.921	8615	15.3	23	1-				.50				1 1 1
MANI	20	0306	0329	0313	N24	W64	.921	8615	15.3	23	-F	2		0306	.62	1.37			
GRP 2191	20	0438	0554	0445	N22	W75	.973	8615	14.6	76	1-				.56				1 1 1
CULG	20	0438	0554	0445	N22	W75	.973	8615	14.6	76	-N		C	0445	.62				J
GRP 2192	20	0610	0635	0617	N20	W40	.704	8612	17.3	25	1-				.67				3 3 3
CULG	20	0604	0619D	0617	N18	W43	.726	8612	17.0	15D	-N		P	0617	.41	.56			
MANI	20	0615	0632	0619	N20	W40	.704	8612	17.3	17	-F	2		0619	.72	1.04			
ATHN	20	0616E	0638	0616	N22	W38	.693	8612	17.4	22D	-N	1		0616	.26	.40	1.90		
GRP 2193	20	0830	0840		N27	E90	1.000	8621	27.1	10	1-				.39				1 1 1
BUCA	20	0830	0840		N27	E90	1.000	8621	27.1	10	1F		C	0830	.55				
GRP 2194	20	0850	0910		N27	E87	.999	8621	26.9	20	1-				.39				1 1 1
BUCA	20	0850E	0910D		N27	E87	.999	8621	26.9	20D	1F		C	0852	.55				
GRP 2195	20	0925	1000		N27	E87	.999	8621	26.9	35	1-				.77				1 1 1
BUCA	20	0925E	1000D		N27	E87	.999	8621	26.9	35D	1N		C	0925	1.10				
GRP 2196	20	1130	1146		N25	W90	1.000	8615	13.7	16									1 0 0
KAND	20	1130	1146		N25	W90	1.000	8615	13.7	16	N		P						
	20	1230	1310	NO FLARE PATROL															
	20	1325	1330	NO FLARE PATROL															
	20	1335	1355	NO FLARE PATROL															

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1966 DEC	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2197	20	1552	1602		N26	E78	.985	8621	26.5	10	1				.45				1 1 1
HUAN	20	1552	1602D		N26	E78	.985	8621	26.5	10D	-F	1	P	1555	.70				E
GRP 2198	20	1719	1725	1722	N31	E61	.916	8620	25.3	6	1-				.26				2 2 2
HUAN	20	1718	1723		N30	E62	.919	8620	25.4	5	-F	1	C	1720	.25				D
HALE	20	1720	1727	1722	N31	E60	.910	8620	25.2	7	-N	2	C	1722	.26				
GRP 2199	20	1738	1750	1739	N24	W39	.715	8612	17.8	12	1-				.49				1 1 1
HALE	20	1738	1750	1739	N24	W39	.715	8612	17.8	12	-N	1	C	1739	.41	.60			
GRP 2200	20	2053	2102	2055	N30	E51	.847	8620	24.7	9	1-				.25				1 1 1
HALE	20	2053	2102	2055	N30	E51	.847	8620	24.7	9	-F	1	C	2055	.21	.40			
	21	0340	0425	NO FLARE PATROL															
	21	0450	0520	NO FLARE PATROL															
	21	0525	0530	NO FLARE PATROL															
GRP 2201	21	0534	0600		N29	E56	.880	8620	25.4	26	1-				1.09				1 1 1
MANI	21	0534E	0600		N29	E56	.880	8620	25.4	26D	1N	2		0537	1.24	2.36			
	21	0825	0900	NO FLARE PATROL															
	21	1120	1125	NO FLARE PATROL															
GRP 2202	21	1241	1252	1243	N22	W90	1.000	8615	14.8	11	1				.14				1 1 1
HUAN	21	1241	1252	1243	N22	W90	1.000	8615	14.8	11	-F	2	C	1243	.21				D
	21	1415	1420	NO FLARE PATROL															
GRP 2203	21	1511	1534		N26	E66	.936	8621	26.6	23	1-				.19				1 1 1
HUAN	21	1511	1534		N26	E66	.936	8621	26.6	23	-F	1	C	1518	.25				D
GRP 2204	21	1650	1707		N26	E66	.936	8621	26.7	17	1-				.16				1 1 1
HUAN	21	1650E	1707		N26	E66	.936	8621	26.7	17D	-F	1	P	1654	.21				D
GRP 2205	21	1911	1939	1945	N20	E90	1.000	8625	28.5	28	1-				.39				2 2 2
LOCK	21	1910U	2000	1945	N19	E90	1.000	8625	28.5	50U	1F		C	1945	.60	2.40		10	
HUAN	21	1911	1917		N21	E90	1.000	8625	28.5	6	-F	1	C	1912	.41				
GRP 2206	22	0015	0047	0014	N23	E90	1.000	8625	28.8	32	1-				.08				2 1 1
MANI	22	0009	0024D	0014	N22	E90	1.000	8625	28.8	15D	-N	1		0014	.10	.34			
CULG	22	0021	0047	0032	N23	E90	1.000	8625	28.8	26	-N		C	0032	.21				
GRP 2207	22	0219	0235	0224	N28	E56	.878	8621	26.3	16	1-				.39				2 2 2
CULG	22	0215	0239	0224	N28	E57	.885	8621	26.4	24	-N		C	0224	.31	.60			
HALE	22	0222	0230	0224	N27	E55	.868	8621	26.2	8	-N	1	C	0224	.41	.80			
GRP 2208	22	0251	0317	0255	N30	E42	.778	8621	25.3	26	1-				.90				3 3 3
CULG	22	0250	0314D	0255	N30	E42	.778	8620	25.3	24D	-N		P	0255	.72	1.06			
MITK	22	0252	0312	0255	N30	E43	.786	8620	25.3	20	1F		C	0255	1.34	2.20			E
HALE	22	0252	0321	0256	N30	E42	.778	8620	25.3	29	-B	1	C	0256	.93	1.50			
GRP 2209	22	0532	0604	0539	N21	E90	1.000	8625	29.0	32	1-				.39				2 2 2
MANI	22	0530	0607	0539	N22	E90	1.000	8625	29.0	37	-N	2		0539	.62	2.00			
CULG	22	0534	0601	0538	N20	E90	1.000	8625	29.0	27	-N		C	0538	.31				
GRP 2210	22	0848	0940	0930	N19	E90	1.000	8625	29.1	52	1				1.12				1 1 1
ARCE	22	0848E	0940D	0930	N19	E90	1.000	8625	29.1	52D	1N		C	0848	1.12				O
GRP 2211	22	1000	1000		N19	E90	1.000	8625	29.2		1				.64				1 1 1
ARCE	22	1000E	1000D		N19	E90	1.000	8625	29.2		1N		C	1000	.64				
GRP 2212	22	1025	1103		N21	E90	1.000	8625	29.2	38	1+								1 1 0
MONT	22	1025	1103		N21	E90	1.000	8625	29.2	38	1B		C						
GRP 2213	22	1126	1230		N21	E90	1.000	8625	29.2	64	1+								1 1 0
MONT	22	1126	1230		N21	E90	1.000	8625	29.2	64	1B		C						
GRP 2214	22	1826	1835	1828	N32	E32	.712	8620	25.2	9	1-				.25				1 1 1
HALE	22	1826	1835	1828	N32	E32	.712	8620	25.2	9	-N	1	C	1828	.21	.30			
GRP 2215	22	1833	1850	1835	N16	E82	.992	8625	28.9	17	1-				.25				1 1 1
LOCK	22	1833	1850	1835	N16	E82	.992	8625	28.9	17	-F		C	1835	.30	1.00		10	H
GRP 2216	22	1927	1942	1933	N16	E82	.992	8625	29.0	15	1-				.71				1 1 1
LOCK	22	1927	1942	1933	N16	E82	.992	8625	29.0	15	1F		C	1933	.80	2.70		10	H
GRP 2217	22	2028	2210	2120	N18	E85	.997	8625	29.2	102	1-				.59				2 2 2
LOCK	22	2028	2210	2120	N16	E82	.992	8625	29.0	102	1N		C	2120	1.00	3.40		20	HK
HUAN	22	2040E	2140D		N20	E88	1.000	8625	29.5	60D	-F	1	P	2055	.41				E
GRP 2218	22	2210	2247	2220	N16	E82	.992	8625	29.1	37	1-				.43				1 1 1
LOCK	22	2210	2247	2220	N16	E82	.992	8625	29.1	37	-F		C	2220	.50	1.70		10	H
GRP 2219	22	2305	2355	2312	N16	E77	.978	8625	28.7	50	1-				.26				1 1 1
LOCK	22	2305	2355	2312	N16	E77	.978	8625	28.7	50	-F		C	2312	.30	.90		10	
GRP 2220	22	2343	2356	2348	S28	E77	.977	8624	28.8	13	1-				.48				1 1 1
SACP	22	2343	2356	2348	S28	E77	.977	8624	28.8	13	-N		C		.53	1.29			
GRP 2221	23	0152	0210		N20	E75	.973	8625	28.7	18	1-				.59				1 1 1
MANI	23	0152E	0210		N20	E75	.973	8625	28.7	18D	-F	3		0154	.72	1.79			
GRP 2222	23	0228	0255	0232	N20	E74	.969	8625	28.7	27	1-				.42				1 1 1
MANI	23	0228	0255	0232	N20	E74	.969	8625	28.7	27	-N	3		0232	.52	1.27			
GRP 2223	23	0752	0850	0810	N23	E77	.981	8625	29.1	58	1				.91				3 3 3
MONT	23	0752	0850	0810	N25	E80	.990	8625	29.3	58	1B		C	0810	1.32	3.90			
MANI	23	0806E	0836D		N21	E74	.969	8625	28.9	30D	-B	2		0807	.52	1.25			
ARCE	23	0810E	0815D		N23	E78	.984	8625	29.2	5D	1N		C	0810	.98	2.90			

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	DATE 1966 DEC	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 2224	23	0815	0952	0843	N29	E25	.630	8620	25.2	97	1				2.11				6 4 4
KODA	23	0800E	0858D		N29	E25	.630	8620	25.2	58D	1B		P	0847	2.58	3.40	2.92		EB
ARCE	23	0830	0940D	0843	N28	E26	.629	8620	25.3	70D	1N		C	0843	2.43	3.10			C
CAPS	23	0840E	0902D		N29	E25	.630	8620	25.2	22D	1F	3		0847	2.00	2.60		150	ACF
MANI	23	0840E	0912	0850	N29	E24	.623	8620	25.2	32D	-N	2		0850	1.34	1.76			
ABST	23	0858E	0904D		N29	E25	.630	8620	25.2	6D	1F		P	0900	1.80	2.34			E
CATA	23	0900E	1045D		N29	E25	.630	8620	25.3	105D	1N			0900	3.83	5.00		190	
GRP 2225	23	0830	1020	0845	N19	E22	.501	8620	25.0	110	1				1.93				1 1 1
MONT	23	0830	1020	0845	N19	E22	.501	8620	25.0	110	1N		C	0845	1.93	2.00			
GRP 2226	23	1019	1030	1023	N21	E79	.986	8625	29.4	11	1				.95				2 1 1
MONT	23	1019	1030	1023	N19	E79	.986	8625	29.4	11	1N		C	1023	.94	2.60			
ARCE	23	1025E	1025D		N23	E78	.984	8625	29.3		-N		P	1025	.52	1.50			
GRP 2227	23	1046	1058	1050	N18	E80	.988	8625	29.4	12	1				.88				1 1 1
MONT	23	1046	1058	1050	N18	E80	.988	8625	29.4	12	1N		C	1050	.88	2.50			
GRP 2228	23	1110	1155	1115	S27	E73	.961	8624	28.9	45	1				1.85				2 2 2
MONT	23	1110	1155	1115	S26	E75	.969	8624	29.1	45	1N		C	1120	2.20	5.00			
CAPS	23	1112E	1130D		S27	E70	.948	8624	28.7	18D	1F	3		1114	1.50			158	
GRP 2229	23	1210	1225	1212	N19	E78	.983	8625	29.4	15	1				.95				1 1 1
MONT	23	1210	1225	1212	N19	E78	.983	8625	29.4	15	1F		C	1213	.95	2.50			
GRP 2230	23	1334	1413	1312	N21	E79	.986	8625	29.5	39	1				1.41				2 1 1
MONT	23	1303	1414D	1312	N19	E79	.986	8625	29.5	71D	1N		C	1315	1.40	3.70			
MCMA	23	1405	1412	1406	N23	E78	.984	8625	29.4	7	-N		C	1406	.52				DH
GRP 2231	23	1506	1550	1509	N21	E71	.956	8625	29.0	44	1				1.25				1 1 1
SACP	23	1506	1550	1509	N21	E71	.956	8625	29.0	44	1N		C		1.39	2.89			
GRP 2232	23	1613	1705	1620	S28	E75	.970	8624	29.3	52	1-				.23				1 1 1
SACP	23	1613	1705	1620	S28	E75	.970	8624	29.3	52	-N		C		.25	.55			
GRP 2233	23	1639	1735	1656	N22	E74	.970	8625	29.2	56	1				1.22				5 4 4
LOCK	23	1637	1730	1655	N19	E72	.960	8625	29.1	53	1N		C	1655	.90	2.60		20	H
SACP	23	1639	1735	1706	N22	E72	.962	8625	29.1	56	1N		C		1.89	4.01			
HUAN	23	1640	1714D		N22	E77	.981	8625	29.5	34D	1N	1	P	1701	1.60				E
MCMA	23	1640	1732	1648	N24	E80	.989	8625	29.7	52	1B		C	1648	.83				EK
HALE	23	1715E	1743	1728	N24	E71	.959	8625	29.0	28D	-B	2	P	1728	.52				ET
GRP 2234	23	1850	1910	1903	N23	E71	.958	8625	29.1	20	1				1.00				1 1 1
HALE	23	1850	1910	1903	N23	E71	.958	8625	29.1	20	1F	2	C	1903	.83				T
GRP 2235	23	1900	1906	1902	S29	E60	.891	8624	28.3	6	1-				.38				2 2 2
LOCK	23	1859	1906	1902	S31	E60	.895	8624	28.3	7	-F		C	1902	.40	.80		10	
HALE	23	1900	1905	1902	S26	E60	.886	8624	28.3	5	-N	2	C	1902	.31	.70			
GRP 2236	23	1925	1944	1930	N21	E69	.947	8625	29.0	19	1				1.17				3 3 3
HALE	23	1925	1945	1928	N22	E70	.952	8625	29.1	20	1B	2	C	1928	.57				T
LOCK	23	1925	1945	1928	N18	E67	.932	8625	28.8	20	-N		C	1928	.70	1.80		20	
SACP	23	1926	1941	1933	N22	E69	.948	8625	29.0	15	1N		C		2.39	4.75			
GRP 2237	23	1957	2014	2002	N20	E71	.956	8625	29.2	17	1-				.91				3 3 3
HALE	23	1956	2010	2001	N21	E74	.969	8625	29.4	14	1B	2	C	2001	.93				ET
LOCK	23	1956	2020	2003	N18	E67	.932	8625	28.9	24	-N		C	2003	.80	2.00		20	
SACP	23	1958	2013	2002	N22	E72	.962	8625	29.2	15	-F		C		.91	1.94			
GRP 2238	23	2029	2100	2033	S30	E62	.906	8624	28.5	31	1-				.81				1 1 1
LOCK	23	2029	2100	2033	S30	E62	.906	8624	28.5	31	-F		C	2033	.80	1.80		10	
GRP 2239	23	2030	2210	2100	S06	W22	.380	8619	22.2	100	1-				1.17				1 1 1
LOCK	23	2030	2210	2100	S06	W22	.380	8619	22.2	100	-N		C	2100	1.10	1.20		20	
GRP 2240	23	2106	2112	2110	N20	E70	.951	8625	29.1	6	1-				.51				3 3 3
HALE	23	2102	2112	2109	N21	E70	.952	8625	29.1	10	-B	2	C	2109	.41				T
LOCK	23	2108	2112	2110	N18	E67	.932	8625	28.9	4	-N		C	2110	.40	1.00		20	
SACP	23	2108	2113	2110	N22	E72	.962	8625	29.3	5	-F		C		.74	1.57			
GRP 2241	23	2139	2240	2140	N20	E68	.940	8625	29.0	61	1-				.67				2 1 1
LOCK	23	2135	2250	2140	N17	E65	.919	8625	28.8	75	-F		C	2140	.70	1.80		10	
HALE	23	2142	2230	2159	N22	E70	.952	8625	29.2	48	-N	1	C	2159	.52				T
GRP 2242	23	2241	2252	2245	N22	E67	.937	8625	29.0	11	1-				.68				1 1 1
HALE	23	2241	2252	2245	N22	E67	.937	8625	29.0	11	-N	2	C	2245	.57				T
GRP 2243	23	2352	2356	2353	N20	E68	.940	8625	29.1	4	1-				.43				1 1 1
HALE	23	2352	2356	2353	N20	E68	.940	8625	29.1	4	-N	2	C	2353	.36				T
GRP 2244	24	0036	0050	0044	N21	E69	.947	8625	29.2	14	1-				.45				3 3 3
HALE	24	0032	0049	0047	N21	E66	.930	8625	29.0	17	-N	2	C	0047	.41				
MANI	24	0034E	0052		N21	E69	.947	8625	29.2	18D	-F	2		0036	.62	1.36			
MITK	24	0039	0048	0041	N21	E73	.966	8625	29.5	9	-N		C	0041	.52				D
GRP 2245	24	0307	0324	0317	N21	E68	.942	8625	29.2	17	1-				.56				3 2 2
HALE	24	0303	0306D	0305U	N21	E64	.918	8625	28.9	3D	-B	2	P	0305	.10				
MANI	24	0304	0325	0315	N21	E69	.947	8625	29.3	21	-F	2		0315	.83	1.76			
MITK	24	0314	0322	0318	N22	E70	.953	8625	29.4	8	-N		C	0318	.62				D
GRP 2246	24	0346	0418	0354	N21	E65	.924	8625	29.0	32	1-				1.08				3 2 2
MITK	24	0345	0407	0353	N21	E65	.924	8625	29.0	22	1N		C	0353	1.86				F
MANI	24	0347	0417	0354	N20	E65	.923	8625	29.0	30	-N	1		0354	.93	1.95			
KODA	24	0355E	0430	0355	N22	E65	.926	8625	29.0	35D	1B		V	0400	1.93	4.90	1.76		J

SOLAR FLARES

REVISED

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OBSERV-ATORY		DATE 1966 DEC	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	OBS. TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT.	REMARKS		
GRP	2247	24	0444	0605	0504	N22	E65	.926	8625	29.1	81	1+				1.59				3	3	3
	MANI	24	0441	0549	0503	N21	E66	.930	8625	29.1	68	1N	2		0503	1.39	2.94					
	MITK	24	0444	0500D		N22	E65	.926	8625	29.1	160	1N		C	0458	1.34						
	KODA	24	0448	0620	0504	N22	E65	.926	8625	29.1	92	2B		V	0457	2.58	6.60	3.08		I		
GRP	2248	24	0815	0857	0819	N22	E63	.913	8625	29.1	42	1-				.56				1	1	1
	ATHN	24	0815	0857	0819	N22	E63	.913	8625	29.1	42	-N	1		0819	.56	1.40	1.70				
GRP	2249	24	1042	1059	1045	N21	E62	.905	8625	29.1	17	1-				.76				1	1	1
	ATHN	24	1042	1059	1045	N21	E62	.905	8625	29.1	17	-N	1		1045	.76	1.70	1.60				
GRP	2250	24	1111	1128	1115	S23	E60	.881	8624	29.0	17	1-				.50				1	1	1
	ATHN	24	1111	1128	1115	S23	E60	.881	8624	29.0	17	-N	1		1115	.50	1.00	1.60				
GRP	2251	24	1443	1501	1452	N22	E56	.863	8625	28.8	18	1-				1.16				2	2	1
	LOCA	24	1443	1501D	1452	N21	E57	.869	8625	28.9	180	1N		V	1452	1.26	2.90					
	CAPS	24	1450E	1459D		N22	E55	.855	8625	28.7	9D	-N	1									
		24	1500	1510	NO FLARE PATROL																	
GRP	2252	24	1640	1652	1644	N20	E56	.858	8625	28.9	12	1-				.29				1	1	1
	LOCK	24	1640	1652	1644	N20	E56	.858	8625	28.9	12	-N		C	1644	.30	.60		10			
GRP	2253	24	1741	1753	1745	N20	E56	.858	8625	28.9	12	1-				.40				1	1	1
	LOCK	24	1741	1753	1745	N20	E56	.858	8625	28.9	12	-F		C	1745	.40	.80		10			
GRP	2254	24	1747	1830	1800	S04	W34	.559	8619	22.2	43	1-				.82				1	1	1
	LOCK	24	1747	1830	1800	S04	W34	.559	8619	22.2	43	-F		C	1800	.80	1.00		10			
GRP	2255	24	1935	2009	1945	N22	E57	.871	8625	29.1	34	1-				.76				2	2	2
	LOCK	24	1930	2020	1945	N21	E57	.869	8625	29.1	50	-N		C	1945	1.00	1.90		20	H		
	HUAN	24	1940	1958		N22	E57	.871	8625	29.1	18	-N	1	C	1949	.57	.85			E		
GRP	2256	24	2325	2342	2333	N20	E51	.815	8625	28.8	17	1-				.77				2	2	2
	LOCK	24	2325	2342D	2333	N18	E53	.828	8625	29.0	170	-N		C	2333	1.10	2.00		20			
	HALE	24	2332E	2336D	2332U	N22	E49	.804	8625	28.7	4D	-N	2	P	2332	.31	.50					
		24	2350	2355	NO FLARE PATROL																	
GRP	2257	25	0037	0047	0040	N21	E54	.845	8625	29.1	10	1-				.37				1	1	1
	CULG	25	0037	0047	0040	N21	E54	.845	8625	29.1	10	-N		C	0040	.41	.52					
GRP	2258	25	0137	0200	0141	N21	E57	.869	8625	29.3	23	1-				.37				1	1	1
	CULG	25	0137	0200	0141	N21	E57	.869	8625	29.3	23	-N		C	0141	.41	.57					
GRP	2259	25	0205	0318	0224	N22	E54	.848	8625	29.1	73	1+				1.21				2	1	1
	CULG	25	0205	0320	0224	N22	E55	.856	8625	29.2	75	1B		C	0224	1.34	2.34			F		
	MANI	25	0247E	0316		N21	E53	.836	8625	29.1	29D	1F	1		0249	1.44	2.53					
GRP	2260	25	0236	0246	0240	S23	E42	.716	8624	28.3	10	1-				.28				1	1	1
	CULG	25	0236	0246	0240	S23	E42	.716	8624	28.3	10	-N		C	0240	.31	.42					
GRP	2261	25	0304	0347	0327	N32	E06	.568	8620	25.6	43	1-				.28				1	1	1
	CULG	25	0304	0347	0327	N32	E06	.568	8620	25.6	43	-N		C	0327	.31				L		
GRP	2262	25	0910	0920	0910	S30	E53	.842	8624	29.4	10	1				1.66				1	1	1
	CATA	25	0910E	0920D	0910	S30	E53	.842	8624	29.4	100	1F		C	0910	1.66	3.10		140			
GRP	2263	25	0937	1042	0947	N25	E53	.848	8625	29.4	65	1				1.35				3	2	2
	CATA	25	0930E	1040D	0945	N25	E53	.848	8625	29.4	70D	1N		C	0945	1.21	2.40		170			
	ATHN	25	0944	1042D	0949	N23	E50	.817	8625	29.2	58D	1N	2		1003	1.49	2.60	1.90				
	MONT	25	1006E	1035D		N28	E55	.873	8625	29.5	29D	-F		C	1010	.66	1.00					
GRP	2264	25	1105	1140	1107	N23	E45	.772	8625	28.8	35	2-				2.94				1	1	1
	CATA	25	1105E	1140D	1107	N23	E45	.772	8625	28.8	35D	2F		C	1107	2.94	5.60		130			
		25	1150	1205	NO FLARE PATROL																	
		25	1215	1235	NO FLARE PATROL																	
GRP	2265	25	1816	1910	1823	N21	E49	.801	8625	29.4	54	1-				1.24				2	2	2
	LOCK	25	1812	1823D	1823	N19	E49	.794	8625	29.4	110	-F		C	1823	.70	1.20		10			
	HUAN	25	1820	1910		N22	E49	.805	8625	29.4	50	1F	1	C	1835	2.37	3.10					
GRP	2266	25	2306	0013	2325	N21	E47	.782	8625	29.5	67	1-				.47				2	2	2
	CULG	25	2301	0013	2322	N21	E49	.801	8625	29.6	72	-N		C	2322	.62	.96					
	HALE	25	2311	2334D	2328U	N21	E45	.763	8625	29.3	23D	-N	2	P	2328	.31	.50					
GRP	2267	25	2334	0002	2341	S30	E46	.785	8624	29.4	28	1-				1.07				2	2	2
	CULG	25	2334	0002	2341	S29	E47	.789	8624	29.5	28	-N		C	2341	1.24	1.92					
	MANI	25	2341E	2359D		S30	E45	.776	8624	29.4	180	-N	1		2343	1.13	1.77					
GRP	2268	26	0441	0501	0451	S29	E43	.753	8624	29.4	20	1-				.19				1	1	1
	CULG	26	0441	0501D	0451	S29	E43	.753	8624	29.4	20D	-N		P	0451	.21	.30					
GRP	2269	26	0536	0552	0544	S27	E45	.762	8624	29.6	16	1-				.28				1	1	1
	CULG	26	0536	0552	0544	S27	E45	.762	8624	29.6	16	-N		C	0544	.31	.45					
GRP	2270	26	0536	0553	0544	N27	W29	.649	8626	24.1	17	1-				.28				1	1	1
	CULG	26	0536	0553	0544	N27	W29	.649	8626	24.1	17	-N		C	0544	.31	.45					
GRP	2271	26	0847	0900		N20	E35	.655	8625	29.0	13	1-				.39				1	1	1
	BUCA	26	0847E	0900D		N20	E35	.655	8625	29.0	13D	-F		C	0851	.55	.75					
GRP	2272	26	0905	0925	0915	N20	E40	.708	8625	29.4	20	1-				.68				1	1	1
	MONT	26	0905	0925	0915	N20	E40	.708	8625	29.4	20	-F		C	0915	.67	.80					
GRP	2273	26	1136	1153	1140	S29	E36	.688	8624	29.2	17	1-				.94				2	2	2
	ATHN	26	1133	1156	1140	S27	E36	.675	8624	29.2	23	-B	2		1140	1.16	1.60	2.00				
	UCCL	26	1138	1150		S30	E35	.685	8624	29.1	12	1N		C	1144	1.03	2.10			E		
GRP	2274	26	1349	1359		N21	W90	1.000		19.8	10	1				.24				1	1	1
	HUAN	26	1349E	1359D		N21	W90	1.000		19.8	10D	-N	1	P	1350	.36				D		
		26	1550	1610	NO FLARE PATROL																	

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OBSERV-ATORY	DATE 1966 DEC	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 H α	MEASUREMENTS MAX. INT.	REMARKS
GRP 2275	26	2018	2110	2040	N22	E31	.627	8625	29.2	52	1-				1.05				1 1 1
LOCK	26	2018	2110	2040	N22	E31	.627	8625	29.2	52	-N		C	2040	1.00	1.30		10	
	26	2340	2350	NO FLARE PATROL															
	26	2355	0000	NO FLARE PATROL															
	27	0000	0230	NO FLARE PATROL															
GRP 2276	27	0345	0413	0359	S26	E17	.482	8624	28.4	28	1-				.37				1 1 1
CULG	27	0345	0413	0359	S26	E17	.482	8624	28.4	28	-N		C	0359	.41	.44			L
GRP 2277	27	0834	0851	0836	N20	E30	.600	8625	29.6	17	1-				1.83				2 2 2
ATHN	27	0834E	0851	0836	N20	E31	.611	8625	29.7	17D	-N	1		0836	.99	1.20	1.50		
BUCA	27	0835E	0842D		N20	E28	.578	8625	29.5	7D	1N		P	0835	3.32	4.06			
GRP 2278	27	1006	1040		N21	E27	.576	8625	29.4	34	1				1.91				3 3 3
CAPS	27	1006	1037		N22	E25	.565	8625	29.3	31	-N	3		1014	1.50	1.80		164	
ATHN	27	1011E	1043D		N21	E29	.597	8625	29.6	32D	1B	1		1014	1.82	2.20	2.00		
MONT	27	1016E	1039D		N21	E28	.587	8625	29.5	23D	1N		C	1017	2.41	2.60			
GRP 2279	27	1011	1027		N26	W43	.769	8620	24.2	16	1-				.33				1 1 1
ATHN	27	1011E	1027D		N26	W43	.769	8620	24.2	16D	-N	1		1015	.33	.50	1.70		
	27	1310	1315	NO FLARE PATROL															
GRP 2280	27	1512	1516	1513	N27	W52	.848	8626	23.7	4	1-				.42				1 1 1
HUAN	27	1512	1516	1513	N27	W52	.848	8626	23.7	4	-N	?	C	1513	.50	.70			
GRP 2281	27	1818	1832	1822	S25	E15	.453	8624	28.9	14	1-				.50				1 1 1
LOCK	27	1818	1832	1822	S25	E15	.453	8624	28.9	14	-N		C	1822	.50	.60		20	
GRP 2282	27	1837	1853	1841	S24	E14	.433	8624	28.8	16	1-				1.68				4 4 4
LOCK	27	1834	1900	1840	S23	E14	.420	8624	28.8	26	-B		C	1840	1.50	1.70		30	
SACP	27	1837U	1854	1843	S24	E14	.433	8624	28.8	17U	1N		C		3.06	3.10			
MCMA	27	1838	1848	1840	S24	E15	.441	8624	28.9	10	-N		C	1840	.93	1.00			EL
HUAN	27	1838	1848	1841	S23	E14	.420	8624	28.8	10	-N	?	C	1841	1.05	1.06			E
GRP 2283	27	2130	2146	2140	S23	E14	.420	8624	28.9	16	1-				.19				1 1 1
LOCK	27	2130	2146	2140	S23	E14	.420	8624	28.9	16	-F		C	2140	.20	.20		10	
GRP 2284	28	0745	0756		N27	W60	.905	8626	23.8	11	1-								1 1 0
KAND	28	0745	0756		N27	W60	.905	8626	23.8	11	-N		C						
GRP 2285	28	0930	0953		N29	W56	.884	8626	24.2	23	1-								1 1 0
KAND	28	0930	0953		N29	W56	.884	8626	24.2	23	-N		C						
GRP 2286	28	1408	1425	1412	S28	E10	.458	8624	29.3	17	1-				.83				1 1 1
ATHN	28	1408	1425	1412	S28	E10	.458	8624	29.3	17	-F	1		1412	.83	.90	1.40		
GRP 2287	28	1444	1452		S28	E10	.458	8624	29.4	8	1-				.83				1 1 1
ATHN	28	1444E	1452		S28	E10	.458	8624	29.4	8D	-F	1		1445	.83	.90	1.50		
GRP 2288	28	1538	1601	1540	N23	E15	.491	8625	29.8	23	1-				.45				1 1 1
SACP	28	1538	1601	1540	N23	E15	.491	8625	29.8	23	-N		C		.50	.51			
GRP 2289	28	1542	1622	1556	N27	W29	.651	8621	26.5	40	1-				.52				1 1 1
SACP	28	1542	1622	1556	N27	W29	.651	8621	26.5	40	-F		C		.58	.64			
GRP 2290	28	1600	1641	1616	S25	W26	.554	8622	26.7	41	1-				.52				1 1 1
SACP	28	1600	1641	1616	S25	W26	.554	8622	26.7	41	-F		C		.58	.61			
GRP 2291	28	1724	1747	1727	N27	W62	.917	8626	24.1	23	1-				.41				2 2 2
LOCK	28	1724	1747	1727	N26	W62	.915	8626	24.1	23	-F		C	1727	.40	.80		10	
HUAN	28	1726E	1727D		N27	W61	.911	8626	24.2	1D	-N	1	P	1726	.57				E
GRP 2292	28	1740	1759	1745	N19	E43	.736	8628	1.0	19	1-				.45				1 1 1
SACP	28	1740	1759	1745	N19	E43	.736	8628	1.0	19	-N		C		.50	.59			
GRP 2293	28	1751	1836	1811	N21	E09	.424	8625	29.4	45	1-				1.93				3 3 3
SACP	28	1744	1836D	1808	N20	E08	.404	8625	29.3	52D	1N		C		3.12	3.13			
LOCK	28	1745	1840	1811	N21	E10	.430	8625	29.5	55	-N		C	1811	1.60	1.80		20	
HALE	28	1804	1832U	1813	N21	E10	.430	8625	29.5	28U	-B	1	C	1813	.93	1.00			F
GRP 2294	28	1758	1830	1802	N25	W63	.920	8626	24.0	32	2-				2.96				3 3 3
LOCK	28	1758	1830	1803	N26	W63	.921	8626	24.0	32	2B		C	1803	2.90	6.40		30	
SACP	28	1758	1836D	1800	N24	W62	.912	8626	24.1	38D	2B		C		3.71	6.25			
HALE	28	1759	1825	1802	N25	W63	.920	8626	24.0	26	1B	1	C	1802	1.65				
GRP 2295	28	2053	2120	2058	N21	E10	.430	8625	29.6	27	1-				.82				1 1 1
LOCK	28	2053	2120	2058	N21	E10	.430	8625	29.6	27	-N		C	2058	.80	.90		20	
GRP 2296	28	2239	2259	2247	N25	W65	.931	8626	24.1	20	1-				.37				1 1 1
SACP	28	2239	2259	2247	N25	W65	.931	8626	24.1	20	-F		C		.41	.74			
GRP 2297	28	2306	2320	2310	N21	E10	.430	8625	29.7	14	1-				.50				1 1 1
LOCK	28	2306	2320	2310	N21	E10	.430	8625	29.7	14	-N		C	2310	.50	.60		20	
GRP 2298	28	2331	2355	2337	S27	E00	.415	8624	29.0	24	1-				.95				2 2 2
SACP	28	2330	2359D	2338	S28	E00	.431	8624	29.0	29D	-N		C		1.19	1.19			
LOCK	28	2331	2350U	2336	S25	W01	.383	8624	28.9	19U	-N		C	2336	.80	.90		20	
	29	0000	0010	NO FLARE PATROL															
GRP 2299	29	0238	0248		N28	W66	.941	8620	24.2	10	1-				.16				1 1 1
MANI	29	0238E	0248		N28	W66	.941	8620	24.2	10D	-F	3		0239	.21	.44			
GRP 2300	29	0344	0401	0348	S27	W06	.423	8624	28.7	17	1-				1.16				2 2 2
MITK	29	0344	0355	0348	S27	W08	.431	8624	28.6	11	-F		C	0348	1.75	1.90			
MANI	29	0347E	0446D		S27	W04	.418	8624	28.9	19D	-N	?		0400	1.12	1.22			
GRP 2301	29	0911	1007		N28	E90	1.000	8631	5.1	56									1 0 0
KAND	29	0911E	1007		N28	E90	1.000	8631	5.1	56D	B		C						
GRP 2302	29	1045	1100		N20	W01	.385	8625	29.4	15	1-				.65				1 1 1
ARCE	29	1045E	1100D		N20	W01	.385	8625	29.4	15D	-F		P	1055	.64	.70			H

SOLAR FLARES

REVISED

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OBSERV-ATORY		DATE 1966 DEC	OBSERVED UT START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	TYPE	TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT.	REMARKS
GRP	2303	29	1437	1527		N15	E42	.709	8628	1.8	50	1				1.13				2 2 2
	HUAN	29	1437	1527D		N14	E37	.646	8628	1.4	50D	1F	1	P	1500	1.75	1.99			H
	CAPS	29	1439E	1448D		N16	E46	.756	8628	2.1	9D	-N	2		1442	.80	1.20		163	CE
GRP	2304	29	1717	1820	1742	N23	E01	.433	8625	29.8	63	1-				1.05				1 1 1
	LOCK	29	1717	1820	1742	N23	E01	.433	8625	29.8	63	-N		C	1742	1.00	1.10		20	
GRP	2305	29	1945	2025	2000	N32	W56	.893	8620	25.6	40	1-				.50				1 1 1
	LOCK	29	1945	2025	2000	N32	W56	.893	8620	25.6	40	-F		C	2000	.50	1.00		10	
GRP	2306	29	2050	2116	2101	S31	W09	.494	8624	29.2	26	1-				.50				1 1 1
	LOCK	29	2050	2116	2101	S31	W09	.494	8624	29.2	26	-F		C	2101	.50	.60		10	
GRP	2307	29	2154	2233	2212	N21	W06	.412	8625	29.5	39	1-				1.40				3 3 3
	CULG	29	2149	2222	2212	N21	W08	.421	8625	29.3	33	-N		C	2212	1.03	1.10			L
	SACP	29	2154	2232	2210	N20	W05	.393	8625	29.5	38	-N		C		1.80	1.80			
	LOCK	29	2159	2245	2213	N22	W04	.421	8625	29.6	46	-B		C	2213	1.50	1.70		30	
GRP	2308	29	2239	2302	2247	S27	W16	.482	8624	28.7	23	1-				.58				3 3 3
	CULG	29	2237	2302	2248	S28	W15	.487	8624	28.8	25	-N		C	2248	.41	.44			
	LOCK	29	2240	2300	2246	S26	W16	.469	8624	28.7	20	-N		C	2246	.80	.90		20	
	MANI	29	2247E	2305		S28	W16	.494	8624	28.7	18D	-N	1		2249	.62	.68			
GRP	2309	30	0415	0430	0422	S28	W15	.485	8624	29.1	15	1-				.85				1 1 1
	MANI	30	0415E	0430D	0422	S28	W15	.485	8624	29.1	15D	-N	3		0422	.93	1.05			
GRP	2310	30	0540	0605	0550	S27	W18	.496	8624	28.9	25	1-				.41				1 1 1
	MANI	30	0540	0605	0550	S27	W18	.496	8624	28.9	25	-N	3		0550	.46	.54			
GRP	2311	30	0603	0617	0606	S21	E40	.682	8629	2.3	14	1-				.51				1 1 1
	MANI	30	0603	0617	0606	S21	E40	.682	8629	2.3	14	-N	3		0606	.57	.78			
GRP	2312	30	0649	0700		S21	E40	.682	8629	2.3	11	1-				.28				1 1 1
	MANI	30	0649E	0700D		S21	E40	.682	8629	2.3	11D	-N	3		0650	.31	.42			
GRP	2313	30	0735	0747		S21	E39	.671	8629	2.2	12	1-				.23				1 1 1
	MANI	30	0735E	0747		S21	E39	.671	8629	2.2	12D	-F	3		0736	.26	.35			
GRP	2314	30	0850	0858		N22	E85	.998	8631	5.7	8	1-				.11				1 1 1
	MANI	30	0850E	0858D		N22	E85	.998	8631	5.7	8D	-N	1		0852	.15	.44			
GRP	2315	30	1240	1251	1244	S24	E37	.663	8629	2.3	11	1-				.28				1 1 1
	HUAN	30	1240	1251	1244	S24	E37	.663	8629	2.3	11	-F	2	C	1244	.31	.35			D
GRP	2316	30	1333	1348	1341	S23	E35	.636	8629	2.2	15	1-				.51				1 1 1
	HUAN	30	1333	1348	1341	S23	E35	.636	8629	2.2	15	-F	2	C	1341	.57	.63			E
GRP	2317	30	1717	1728	1721	N20	E77	.981	8631	5.5	11	1-				.42				2 2 2
	HUAN	30	1715	1723D		N19	E78	.984	8631	5.6	8D	-N	1	P	1721	.62				
	SACP	30	1718	1728	1721	N20	E76	.978	8631	5.4	10	-F		C		.48	1.20			
GRP	2318	30	1750	1755		N22	W20	.523	8625	29.2	5	1-				.73				1 1 1
	MCMA	30	1750E	1755D		N22	W20	.523	8625	29.2	5D	-N		C	1755	.52	.60			E
GRP	2319	30	1816	1900	1826	N20	W15	.455	8625	29.6	44	1-				1.36				2 2 2
	LOCK	30	1815E	1900	1826	N19	W15	.443	8625	29.6	45D	-F		C	1826	1.30	1.40		10	
	SACP	30	1816	1900	1826	N21	W15	.468	8625	29.6	44	-N		C		1.46	1.50			
GRP	2320	30	1930	2010	1954	S28	W25	.570	8624	28.9	40	1-				.67				2 2 2
	HUAN	30	1929	2000D		S27	W25	.560	8624	28.9	31D	-F	1	C	1940	.70	.75			E
	LOCK	30	1930	2010	1954	S29	W25	.580	8624	28.9	40	-N		C	1954	.70	.80			
GRP	2321	30	2041	2113	2048	S23	E34	.625	8629	2.4	32	1-				.55				2 2 2
	LOCK	30	2040	2115		S23	E34	.625	8629	2.4	35	-F		C	2100	.50	.70		10	
	SACP	30	2041	2111	2048	S23	E33	.613	8629	2.3	30	-F		C		.66	.71			
GRP	2322	30	2107	2117	2110	N19	W26	.553	8625	28.9	10	1-				.37				1 1 1
	SACP	30	2107	2117	2110	N19	W26	.553	8625	28.9	10	-F		C		.41	.43			
GRP	2323	30	2130	2200	2135	S24	E27	.554	8629	1.9	30	1-				.50				1 1 1
	LOCK	30	2130	2200	2135	S24	E27	.554	8629	1.9	30	-F		C	2135	.50	.60		10	
GRP	2324	30	2130	2230	2140	N15	E75	.971	8631	5.5	60	1-				.26				1 1 1
	LOCK	30	2130	2230	2140	N15	E75	.971	8631	5.5	60	-F		C	2140	.30	.90		10	
GRP	2325	30	2135	2220	2152	N25	W22	.574	8625	29.2	45	1+				3.00				1 1 1
	LOCK	30	2135	2220	2152	N25	W22	.574	8625	29.2	45	1N		C	2152	2.50	3.00		20	
GRP	2326	30	2213	2220	2216	S23	E32	.602	8629	2.3	7	1-				.50				1 1 1
	LOCK	30	2213	2220	2216	S23	E32	.602	8629	2.3	7	-F		C	2216	.50	.70		10	
GRP	2327	30	2231	2254	2235	S23	E32	.602	8629	2.3	23	2-				3.12				1 1 1
	LOCK	30	2231	2254	2235	S23	E32	.602	8629	2.3	23	1B		C	2235	2.60	3.40		30	
GRP	2328	30	2305	2332	2313	N11	E90	1.000	8633	6.7	27	1-				.60				1 1 1
	LOCK	30	2305	2332	2313	N11	E90	1.000	8633	6.7	27	1F		C	2313	.70	2.80		10	
GRP	2329	31	0410	0415		N17	E69	.945	8631	5.3	5	1-				.11				1 1 1
	MANI	31	0410E	0415D		N17	E69	.945	8631	5.3	5D	-N	2		0412	.15	.33			
		31	0500	0515	NO FLARE PATROL															
		31	0525	0535	NO FLARE PATROL															
GRP	2330	31	0842	0859	0845	S20	E27	.521	8629	2.4	17	1				1.68				6 5 5
	MONT	31	0840	0858	0843	S22	E22	.480	8629	2.0	18	-N		C	0843	.87	.90			
	MANT	31	0842	0900	0847	S17	E26	.488	8629	2.3	18	-B	1		0847	1.44	1.68			
	CAPS	31	0842	0856		S21	E28	.541	8629	2.5	14	1N	3		0849	2.10	2.50		176	
	ARCE	31	0844	0857	0845	S20	E27	.521	8629	2.4	13	1B		C	0845	2.07	2.40			C
	ATHN	31	0844E	0903	0844	S22	E31	.583	8629	2.7	19D	1B	2		0844	1.65	2.20	2.00		
	ONDR	31	0848E	0857D		S20	E26	.509	8629	2.3	9D	1N		V	0853			2.40		

SOLAR FLARES

REVISED

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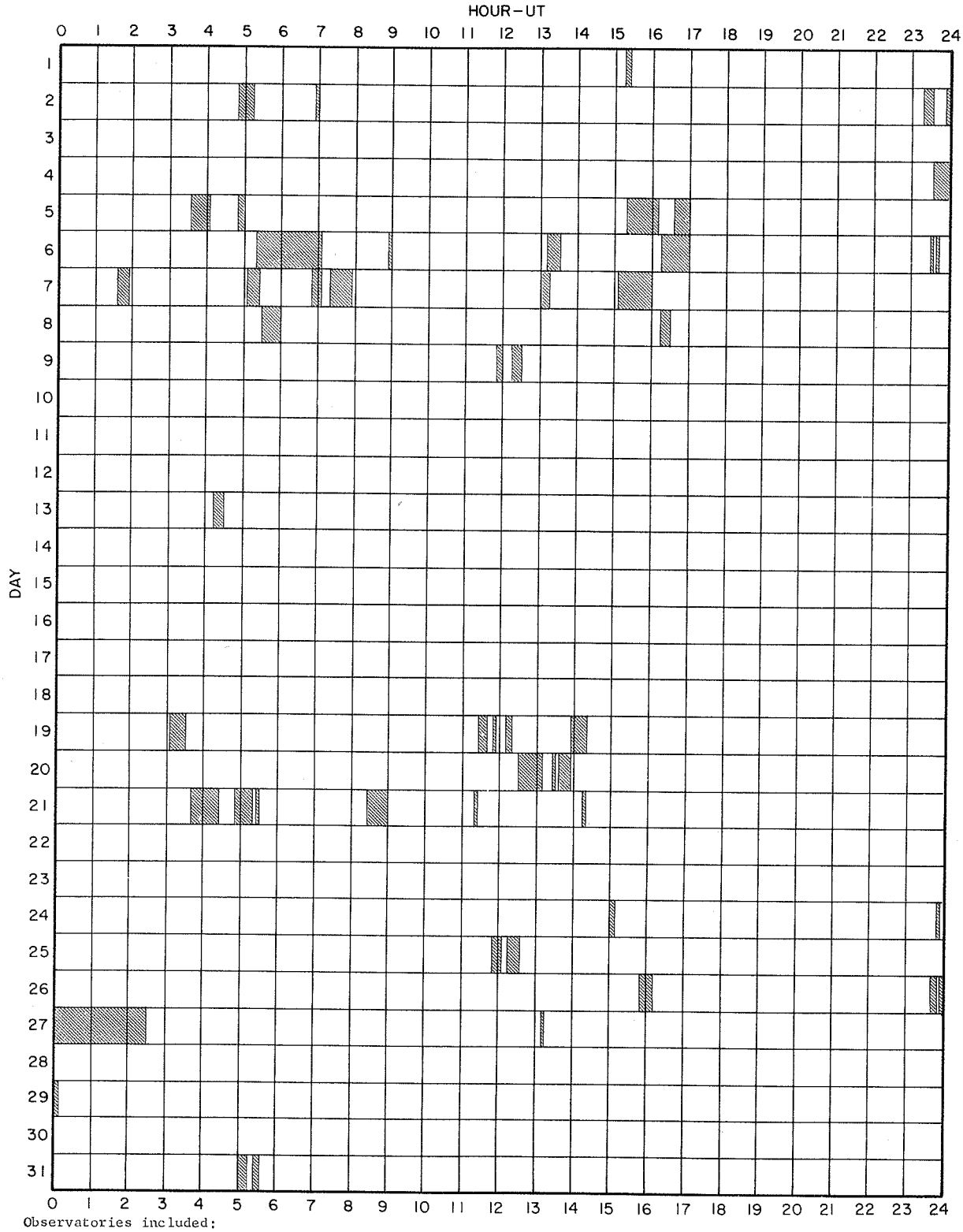
OBSERV-ATORY	DATE 1966 DEC	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT.	REMARKS		
GRP 2331	31	1137	1207	1140	S22	E25	.514	8629	2.4	30	1-				1.42				4	3	3
MONT	31	1135	1210	1140	S22	E21	.469	8629	2.1	35	-N		C	1140	1.17	1.20					
CAPS	31	1138	1204		S19	E25	.489	8629	2.4	26	1N	2		1153	2.00	2.30		170			
HUAN	31	1139E	1145D		S22	E26	.525	8629	2.4	6D	-B	1	P	1145	1.05	1.10			E		
ATHN	31	1200E	1208D		S23	E29	.567	8629	2.7	8D	-N	1		1200	1.32	1.60	1.60				
GRP 2332	31	1456	1503		S23	E90	1.000	8632	7.4	7	1				.29				1	1	1
HUAN	31	1456	1503		S23	E90	1.000	8632	7.4	7	-F	1	C	1500	.44				D		
GRP 2333	31	1516	1525	1518	S21	E22	.470	8629	2.3	9	1-				.32				1	1	1
HUAN	31	1516	1525	1518	S21	E22	.470	8629	2.3	9	-F	2	C	1518	.36	.37			D		
GRP 2334	31	1618	1702	1625	N25	W29	.637	8625	29.5	44	1				1.89				3	2	2
LOCK	31	1610	1700	1625	N27	W28	.646	8625	29.6	50	1N		C	1625	2.00	2.60		20			
HUAN	31	1611	1652D		N24	W28	.619	8625	29.6	41D	1F	1	P	1615	1.75	1.92			E		
MCMA	31	1632	1704D		N23	W32	.650	8625	29.3	32D	-N		C	1635	.52	.70			E		
GRP 2335	31	1649	1712	1655	S22	E23	.491	8629	2.4	23	1				1.57				3	3	3
LOCK	31	1647	1710	1655	S21	E22	.470	8629	2.3	23	1B		C	1655	2.50	2.80		30			
HUAN	31	1649	1714D		S22	E23	.491	8629	2.4	25D	-N	1	P	1706	.31	.32			D		
MCMA	31	1652	1704D	1655	S23	E24	.511	8629	2.5	12D	-B		C	1655	1.03	1.20			EV		
GRP 2336	31	1650	1710	1658	N06	E84	.995	8633	7.0	20	1-				.34				1	1	1
LOCK	31	1650	1710	1658	N06	E84	.995	8633	7.0	20	-F		C	1658	.40	1.40		10	H		
GRP 2337	31	1807	1918	1846	S23	E23	.500	8629	2.5	71	2-				2.44				2	1	1
LOCK	31	1807	1915	1842	S23	E22	.490	8629	2.4	68	1B		C	1842	2.10	2.30		30	H		
SACP	31	1847E	1920	1850	S22	E23	.491	8629	2.5	33D	-N		C		1.31	1.35					
GRP 2338	31	1828	1855	1837	S04	E53	.798	8630	4.7	27	1-				.50				1	1	1
LOCK	31	1828	1855	1837	S04	E53	.798	8630	4.7	27	-F		C	1837	.50	.90		10			
GRP 2339	31	1845	1919	1855	N15	E76	.975	8633	6.5	34	1-				.59				2	2	2
LOCK	31	1845	1925	1855	N14	E75	.971	8633	6.4	40	-N		C	1855	.50	1.50		20			
SACP	31	1847E	1913	1907	N15	E76	.975	8633	6.5	26D	-N		C		.81	1.95					
GRP 2340	31	2124	2145	2127	S24	E21	.489	8629	2.5	21	1-				.50				1	1	1
LOCK	31	2124	2145	2127	S24	E21	.489	8629	2.5	21	-N		C	2127	.50	.60		20			
GRP 2341	31	2230	2243	2234	S24	E21	.489	8629	2.5	13	1-				.40				1	1	1
LOCK	31	2230	2243	2234	S24	E21	.489	8629	2.5	13	-F		C	2234	.40	.40		10	H		

INTERVALS OF NO FLARE PATROL OBSERVATIONS

DECEMBER 1966



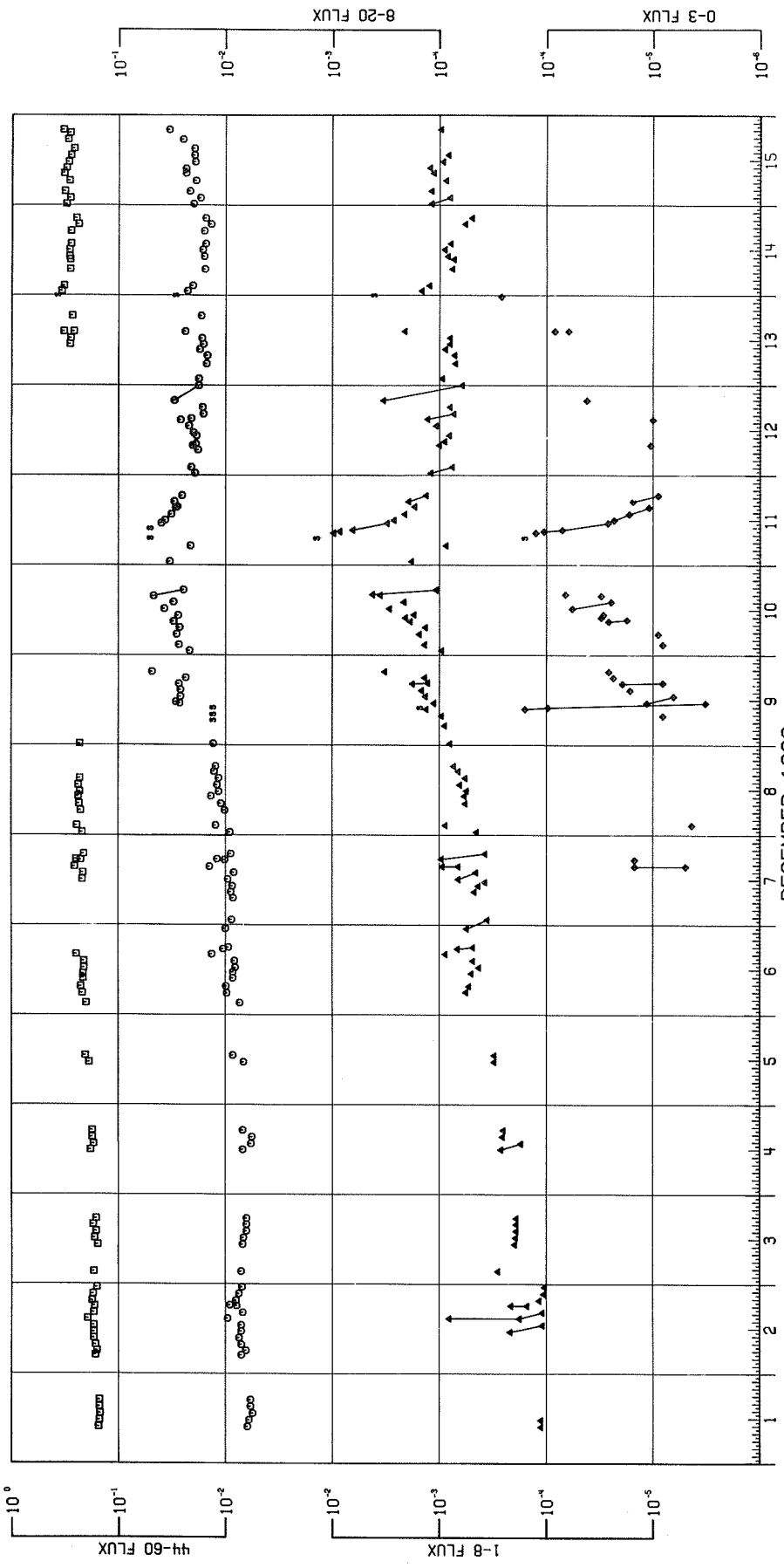
Observatories included:

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

SOLAR RADIATION MONITORING SATELLITE
X-RAY

DECEMBER 1966

NRL



SOLAR RADIATION MONITORING SATELLITE
X-RAY

DECEMBER 1966

NRL

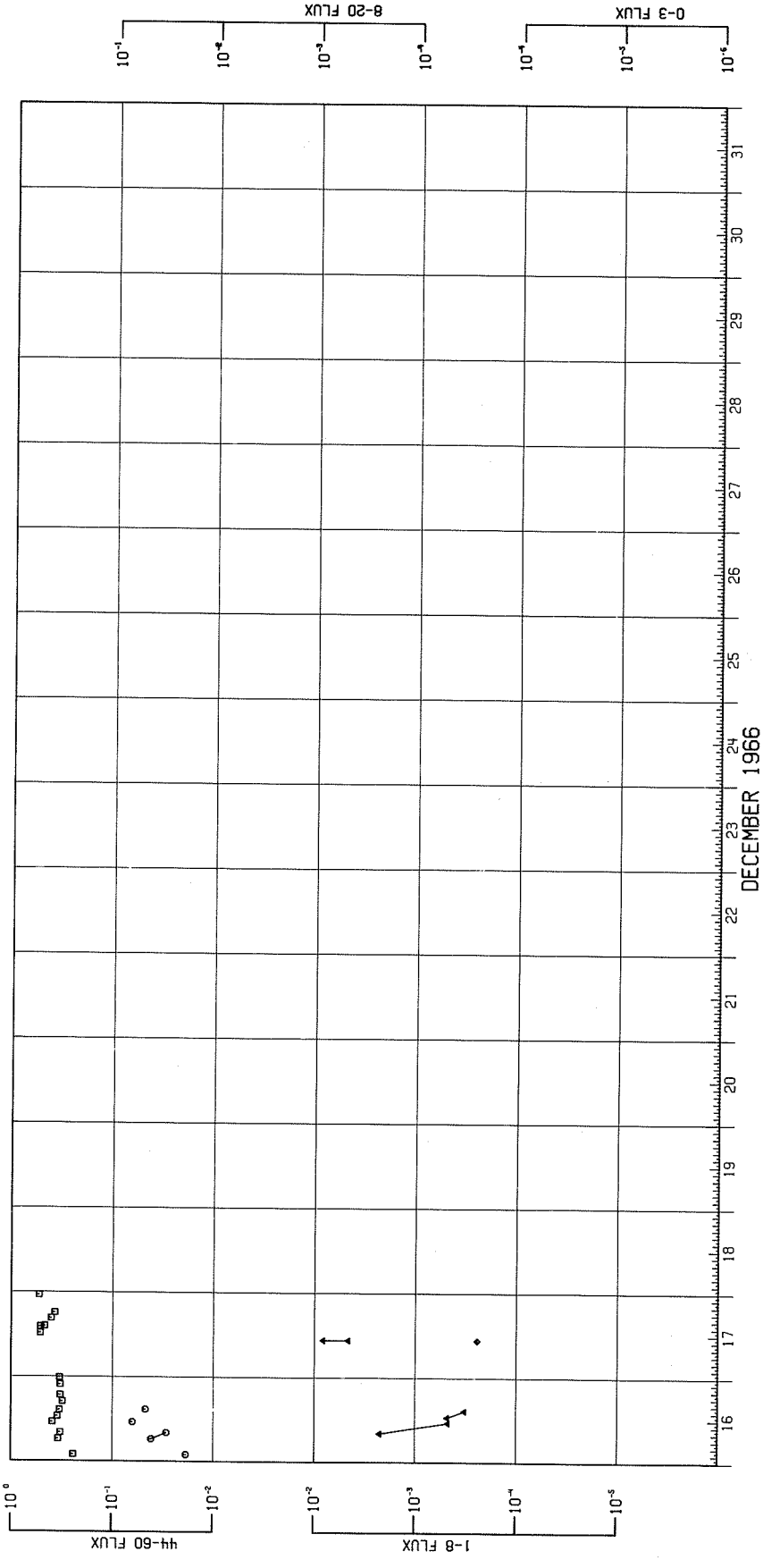


Table of Contents
for Miscellaneous Data

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

SOLAR RADIO EMISSION
SPECTRAL OBSERVATION

JULY 1966

University of Colorado — 7.6-41 Mc/s

Date July 1966	Bursts				Date July 1966	Bursts			
	Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)		Type	Time (U. T.)	Intensity	Frequency Range (Mc/s)
30	III	1254:15-1254:30	1	22-41	30	III	1403:15-1403:30	1	25-41
	III	1254:30-1254:45	1	18-41		III	1409:00-1409:15	1	25-40
	III	1254:45-1255:00	1	26-41		III	1455:00-1455:15	1	23-40
	III	1302:45-1303:00	2	15-41		III	1531:30-1531:45	2	22-41
	III	1303:45-1304:00	2	20-41		III	1551:30-1552:45	1	24-41
	III	1304:45-1305:15	1	25-41		III	1609:30-1610:00	3	22-41
	III	1306:45-1307:00	2	24-41		III	1615:45-1616:00	1	23-36
	III	1309:15-1309:30	1	26-36		III	1627:15-1627:30	2	27-41
	III	1309:45-1310:00	1	26-36		III	1636:30-1637:00	3	20-41
	III	1317:15-1317:30	1	27-41		III	1640:00-1640:15	2	25-38
	continuum	1318:30-1324:30	1	24-41		III	1641:00-1641:15	2	25-36
	III	1318:45-1319:15	2	19-41		III	1643:15-1643:30	2	22-41
	III	1319:30-1320:00	2	18-41		III	1644:00-1644:15	2	22-41
	III	1320:15-1320:30	1	25-41		continuum	1645:00-1724:00	1	20-41
	III	1320:30-1320:45	1	25-41		III	1645:30-1645:45	1	25-41
	III	1321:30-1321:45	1	25-41		III	1646:15-1646:30	2	28-41
	III	1322:30-1323:00	1	26-41		III	1646:30-1646:45	1	25-41
	III	1323:00-1323:15	2	26-41		III	1647:15-1647:30	1	24-41
	III	1323:45-1324:15	2	23-41		III	1650:15-1650:30	2	22-41
	III	1328:45-1329:15	1	25-41		III	1700:00-1700:15	1	22-41
	III	1332:15-1332:30	1	20-31		III	1713:30-1713:45	1	22-40
	III	1332:30-1332:45	1	20-31		III	1713:45-1714:00	1	28-40
	III	1332:45-1333:15	1	20-37		III	1714:15-1714:30	1	28-40
	III	1334:45-1335:00	2	20-41		III	1714:45-1715:00	1	22-37
	III	1335:30-1335:45	2	24-41		III	1715:15-1715:30	1	28-40
	III	1336:30-1336:45	2	24-41		III	1718:15-1718:45	3	8-41
	III	1339:15-1339:30	1	25-36		III	1719:00-1719:45	3	8-41
	III	1346:00-1346:15	2	24-41		III	1721:45-1723:15	3	8-41
	III	1346:30-1346:45	2	24-39					
	III	1347:00-1347:15	1	25-38					
	III	1347:15-1347:30	2	25-38					
	III	1347:30-1347:45	1	25-41					
	III	1348:15-1348:30	2	25-38					
	III	1348:30-1349:00	2	25-38					
	III	1355:30-1355:45	1	25-41					

The above data for July 30, 1966 from 1200-1800 UT was not available at the time of publication of the rest of the July data in CRPL-FB-264.

COSMIC RAY INDICES
(Neutron Monitor)

Ft. Churchill, Canada
April-December 1966

Daily Average Counts per Hour

	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1	6315.5	6439.1	6222.5	6334.4	6316.1	6010.7	6100.3	6298.0	6303.3
2	6332.1	6437.9	6247.8	6315.9	6344.5	6038.8	6081.5	6294.8	6281.7
3	6312.0	6428.9	6295.0	6343.7	6341.8	6001.9	6085.6	6291.5	6257.8
4	6326.1	6438.8	6327.4	6359.4*	6292.5	5871.8	6150.7	6285.4	6273.3
5	6323.6	6458.5	6344.0	6388.1	6289.2	5931.7	6189.6	6289.1	6283.7
6	6328.2	6453.4	6366.5	6410.5	6347.2	5982.1	6221.2	6311.6	6276.2
7	6320.0	6451.2	6366.2	6435.1	6347.0	6023.1	6248.5	6321.3	6290.3
8	6364.6	6436.1	6362.0	6402.8	6346.4	6118.2	6233.0	6333.5	6293.1
9	6397.2	6462.6	6402.9	6266.3	6345.2	6220.7	6236.5	6330.3	6315.4
10	6386.0	6460.9	6429.7	6290.0	6351.5	6245.4	6228.6	6314.1	6339.6
11	6388.0	6549.0	6452.7	6315.3	6344.9	6254.7	6231.0	6317.0	6332.5
12	6394.2	6428.7	6453.8	6305.5	6369.2	6271.3	6226.7	6329.9	6347.7
13	6422.1	6454.5	6473.8	6289.0	6373.2	6307.3	6204.2	6292.6	6253.7
14	6420.5	6468.7	6470.4	6309.0	6352.8	6262.3	6221.8	6303.9	6139.2
15	6413.3	6481.1	6485.5	6313.7	6343.2	6133.1	6219.1	6313.8	6103.1
16	6443.9	6511.1	6486.9	6335.3	6369.6	6081.5	6149.8	6342.4	6155.0
17	6431.7	6520.3	6473.6	6348.5	6382.8	6080.3	6194.6	6289.0	6208.5
18	6452.4	6524.8	6466.1	6364.5	6386.0	6077.0	6262.7	6237.7	6153.7
19	6464.4	6515.6	6467.9	6359.1	6380.2	6015.0	6357.9	6279.7	6148.2
20	6479.3	6510.7	6407.1	6352.9	6347.7	6068.2	6373.3	6284.5	6195.8
21	6479.8	6523.0	6420.7	6342.4	6355.6	6091.7	6384.5	6288.2	6200.9
22	6429.5	6519.2	6421.4	6387.9	6361.4	6112.1	6386.9	6318.1	6185.4
23	6412.5	6525.8	6427.9	6374.9	6306.6	6054.7	6395.5	6331.1	6190.4
24	6410.8	6535.2	6381.5	6365.4	6295.1+	5846.2	6327.1	6321.0	6215.1
25	6420.1	6534.6	6343.8	6353.1	6308.0*	5890.1	6301.2	6334.9	6158.4
26	6423.4	6469.5	6348.8	6352.6	6328.6	5976.2	6200.8	6331.9	6170.5
27	6422.7	6396.5	6383.4	6319.7	6342.8	6045.0	6143.6	6329.2	6194.6
28	6417.9	6383.5	6391.1	6294.5	6364.3	6065.3	6174.3	6318.2	6178.4
29	6461.8	6386.0	6315.4	6292.8	6364.1	6066.5	6219.5	6302.7	6169.7
30	6447.2	6373.6	6299.9	6320.7	6237.3	6087.8	6270.7	6313.1	6189.4
31		6337.1		6312.4	5936.7		6288.5		6202.9

* Data available for only 22 hours
\+ Data available for only 23 hours

Churchill Super Neutron Monitor, Scaling Factor 120.

USCOMM-ESSA-ASHEVILLE--6-30-67-1000