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ESSA RESEARCH LABORATORIES

Solar-Geophysical Data

Number 280
for November 1967
October 1967
June 1967
& Miscellanea

DATA COMPILED BY AERONOMY AND SPACE DATA SERVICES
BOULDER, COLORADO

WASHINGTON, D.C.
DECEMBER 1967

IER-FB-280

SOLAR GEOPHYSICAL DATA

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NOTES: 1. Includes Standardized Flare Data beginning September 1966.
2. March-October 1965 in FB-279, November-December 1965 in FB-276.
3. No 18 Mc/s Bursts reported beginning December 1966.
4. 108 Mc/s (Boulder) in 1966.
5. 25-320 Mc/s (Fort Davis) in 1966.

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for November 1967 Data

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

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

NOVEMBER 1967

	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
11	2000	Magstorm exists 112000Z Izmiran				
15	0600	IUWDS Stratalert Tokyo 150600Z Stratwarm - Sea of Okhotsk				
16	2009	Boulder soflare 16/2003Z importance 2B N22 E45				
	2137	Boulder soflare 16/2125Z importance 3B N11 E32				
17	0400		17557	Solar flares	Expected	N11 E28 Delta sunspot
	0847	Carnarvon soflare 17/0820Z importance 2B N12 E28				
18	0400		18558	Solar flares	Expected	N11 E15
19	0400		19559	Solar flares	Expected	N11 E02
20	0400		20560	Solar flares	Expected	N11 W11
21	0400		21561	Solar flares	Expected	N11 W24
22	0400		22562	Solar flares	Ends	
28	0400		28563	Solar flares	Expected	N24 W51
29	0400		29564	Solar flares	Ends	
	1236	Athens soflare 29/1200Z importance 2B N23 W70				
30	0400		30565	Solar flares	Expected	S30 W55

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

(FINAL) 1966 1967 (PROVISIONAL)

DAY	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.
1	35	60	93	172	105	74	123	69	139	120	72	119
2	33	93	88	179	79	77	113	83	119	108	69	117
3	30	124	92	191	54	46	92	87	91	108	96	113
4	57	148	100	172	52	62	93	92	83	112	89	102
5	69	150	72	164	62	66	79	98	90	116	98	81
6	68	148	89	148	63	46	76	97	95	113	92	48
7	64	134	138	137	79	41	55	70	98	97	88	47
8	88	116	109	98	104	18	36	78	119	104	76	29
9	86	111	112	85	67	25	22	67	94	99	80	34
10	112	111	97	86	62	17	17	54	87	95	82	39
11	125	104	96	74	62	25	17	53	79	75	90	31
12	130	90	79	65	51	34	19	59	62	76	66	56
13	118	86	77	49	63	29	19	53	70	50	55	77
14	113	85	58	44	48	38	20	66	56	51	64	95
15	107	56	58	49	51	36	30	80	61	31	47	98
16	116	56	60	58	32	35	38	73	77	34	41	119
17	88	59	60	70	42	38	57	67	95	40	36	121
18	76	72	70	73	58	48	60	78	114	49	50	134
19	57	82	57	58	56	70	65	61	116	53	62	131
20	46	82	60	73	44	74	79	41	108	59	83	111
21	37	102	71	88	60	96	61	62	115	64	80	95
22	34	134	86	108	76	118	83	73	104	59	86	92
23	38	152	84	111	94	137	80	93	110	53	101	105
24	45	122	100	121	74	156	92	90	104	51	93	108
25	60	133	106	131	78	159	92	106	98	61	114	131
26	65	136	123	137	66	174	79	116	105	53	125	101
27	48	130	186	122	55	194	52	122	107	50	125	100
28	48	125	166	120	76	197	80	164	119	72	156	100
29	51	122		130	79	148	59	154	111	58	133	109
30	70	132		130	66	139	89	165	121	68	133	112
31	68	108		115		127		152	124		100	
MEAN	70.4	108.5	92.4	108.3	65.3	82.1	62.6	87.8	99.1	72.6	86.5	91.8

1966 Yearly Mean = 47.0

DAILY SOLAR FLUX AT 2800 Mc/s
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

1966 1967

DAY	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.
1	92.2	124.4	151.6	194.2	158.6	136.6	174.6	125.0	176.6	160.5	139.7	140.3
2	95.1	143.0*	143.5	197.8*	141.0	131.8	158.0*	125.7	166.7	156.6	135.0	140.9
3		154.0	138.7	196.4*	133.3	*	150.4	129.6	163.5	147.0	131.5	137.5
4	104.8	160.7	137.3*	205.9*	125.0	125.8	148.4	127.2	149.3*	140.9	129.9	130.5
5	110.9*	168.2	146.8*	179.2*	122.1	128.1	138.7	123.7	155.4*	138.7	125.7	121.8
6	115.6*	160.5	148.8	177.4*	119.0	122.8	130.5	116.6	155.4	133.8	129.9	119.6
7	117.7	153.6	162.5	163.8	126.2*	119.7	119.1	116.0	150.2	128.4	125.8	113.1
8	123.7	142.9	148.3	156.1	135.7	116.9	110.1	111.8	143.4	133.9	121.5	112.8
9	146.2	144.7	145.9	157.9	133.3	113.6	103.7	109.7	141.2	131.5	122.1	111.1
10	157.3*	145.6	140.5	148.4	130.3	109.4	97.1	105.8	136.7	133.6	127.3	117.3
11	162.8*	139.8	133.7	141.6	131.1*	106.1	96.9	107.1	136.2	131.8	136.5	124.1*
12	157.6	139.1	132.9	134.3	129.8*	109.7	96.5	106.1	138.9*	131.7*	135.4	132.7
13	155.5	138.1	130.0	129.1	126.8	107.3	99.8	113.8	137.5*	127.6	130.8	134.7
14	149.5	135.2	129.2	127.2	133.5	108.6*	103.8	122.4*	130.0	128.0	127.8	136.9
15	144.9	126.6	126.4	132.4	124.1	111.0	107.2	127.6	127.4	130.4	122.6	142.9
16	135.1	120.2	124.9	132.1	126.1	113.1	111.8	130.1	132.9	126.4	118.0	151.8
17	124.9*	116.9	122.2*	132.6	125.9	115.4	112.0	129.6	148.3	126.7	117.3	154.9
18	111.2	117.4	124.2	132.2	128.7	124.8	115.4	131.3	157.1	128.7	113.3	156.9
19	112.3	116.4	121.0	136.0	126.7	135.6*	119.0	128.6	172.3*	127.7	119.3	166.7
20	107.6	127.0	128.6	140.4	127.1	146.3	121.3	135.5	172.9	130.6	131.2	166.0
21	106.5	138.2	131.8*	147.2	134.0	160.3*	122.9	140.2	178.8*	126.6	130.1	161.4
22	105.5*	139.9	146.0	149.5*	131.5	182.7	129.6	152.4	178.5	124.6	137.3	159.4
23	110.6*	148.8*	149.3*	155.7	128.0	194.0*	133.1*	161.8	178.3*	123.8	139.4	156.6
24	110.5	146.8	162.2	161.9	130.5	200.9	132.4	176.4	169.9	131.8	141.3	152.6
25	111.6	142.7*	159.5*	169.2	132.9	210.7	133.1	195.5	170.8	134.1	142.1	154.7
26	110.9	154.3	173.3*	163.9*	125.4	218.9*	127.8	199.9	172.0	134.4	148.2	157.9
27	109.6	158.3	176.7	162.8*	129.2	213.8	131.5	213.2	171.2	137.3	161.1*	155.0*
28	107.5	156.2	180.2	180.7	135.1	202.6	136.7	213.1*	169.9	134.6	177.0	157.2
29	109.3	158.2*		178.4	137.5	188.3	133.4	215.7	172.7	131.7	163.4	150.3*
30	115.1	159.0		175.8	135.3	177.4	126.1	211.6	164.0	131.7	159.5*	144.4*
31	120.5*	156.4		167.6*		175.4		188.9	165.7		148.6	
MEAN	121.4	143.0	143.4	159.0	130.8	146.9	124.0	144.9	157.5	133.5	135.1	142.1

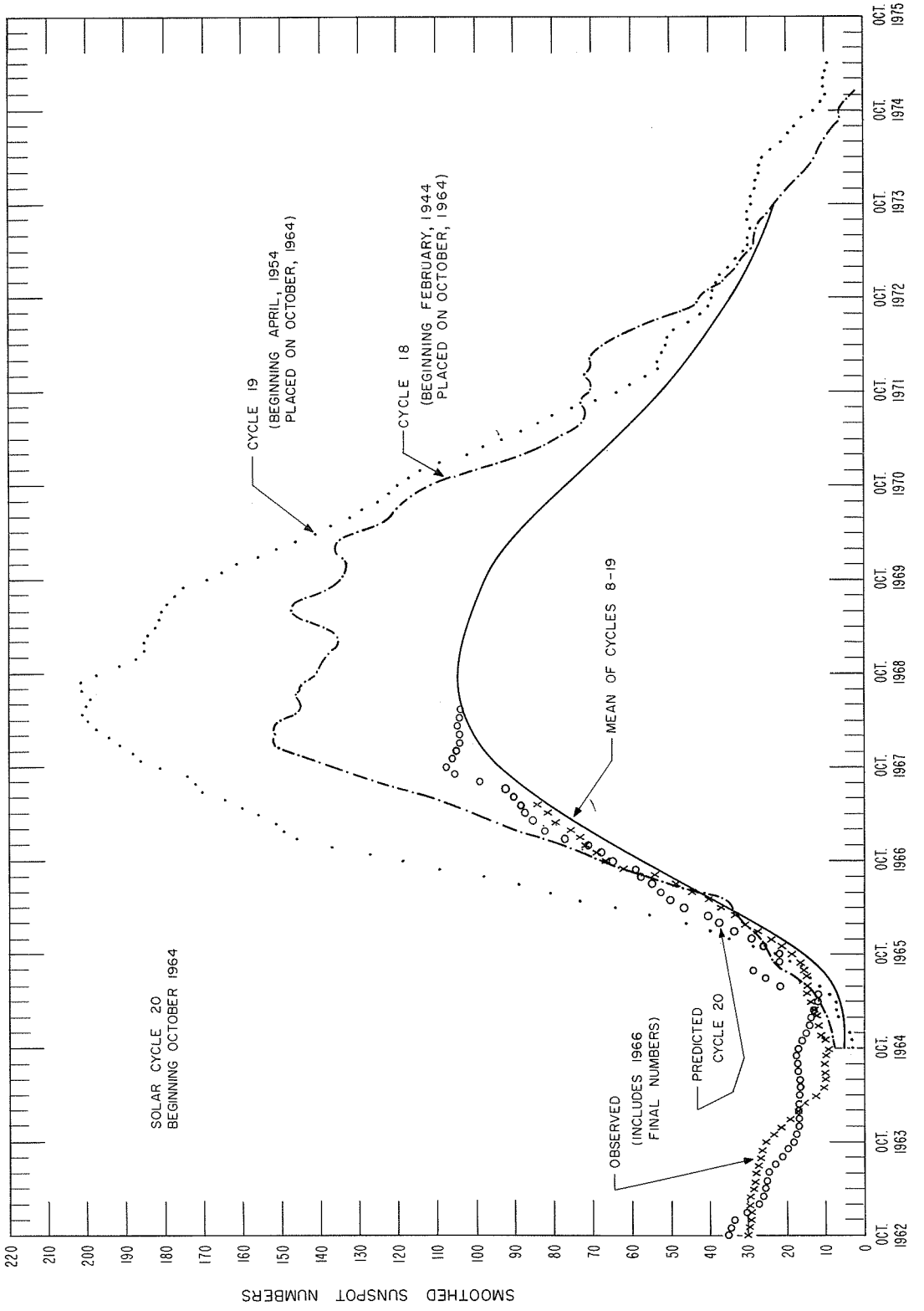
* Adjusted for Burst

DAILY SOLAR INDICES

NOVEMBER 1967

NOV. 1967	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO I A.U.					
			R_Z	$R_{A'}$		AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606
01	305	3	119	109	142.4	308	187	140.3	129.4	90.2	66.6
02	306	4	117	119	143.2	310	190	140.9	131.6	94.3	67.0
03	307	5	113	118	139.7	308	184	137.5	129.1	87.2	61.2
04	308	6	102	76	132.8	308	184	130.5	123.2	83.8	59.3
05	309	7	81	49	123.9	302	177	121.8	117.0	79.2	57.4
06	310	8	48	43	121.8	297	173	119.6	113.8	74.7	56.7
07	311	9	47	35	115.2	296	169	113.1	108.2	73.1	55.2
08	312	10	29	13	115.0	293	168	112.8	107.3	69.1	53.0
09	313	11	34	25	113.3	296	170	111.1	103.4	68.6	51.5
10	314	12	39	26	119.7	302	176	117.3	110.5	66.9	51.5
11	315	13	31	41	126.6*	314	185	124.1*	119.4	73.0	52.4
12	316	14	56	62	135.6	310	192	132.7	121.5	80.3	55.8
13	317	15	77	79	137.6	311	191	134.7	127.3	77.1	57.3
14	318	16	95	72	139.8	310	192	136.9	132.0	81.4	57.9
15	319	17	98	76	146.1	311	195	142.9	136.9	89.4	61.2
16	320	18	119	109	155.2	322	208	151.8	145.2	98.0	63.3
17	321	19	121	88	158.6	326	207	154.9	151.8	99.6	65.4
18	322	20	134	109	160.6	329	214	156.9	151.8	100.0	67.1
19	323	21	131	111	170.8	338	223	166.7	160.2	102.9	69.4
20	324	22	111	89	170.1	335	226	166.0	161.2	101.4	68.9
21	325	23	95	76	165.4	328	223	161.4	153.5	97.9	68.7
22	326	24	92	66	163.5	327	218	159.4	150.4	95.7	67.7
23	327	25	105	79	160.6	319	215	156.6	151.4	95.6	68.2
24	328	26	108	96	156.7	319	211	152.6	145.5	93.3	68.4
25	329	27	131	97	158.8	305	206	154.7	143.3	94.2	68.2
26	330	1	101	113	162.1	326	215	157.9	153.9	101.5	70.7
27	331	2	100	122	159.3*	323	213	155.0*	153.2	96.5	66.3
28	332	3	100	110	161.6	330	220	157.2	150.9	96.2	67.1
29	333	4	109	132	154.5*	318	211	150.3*	146.2	89.8	63.6
30	334	5	112	137	148.6*	319	205	144.4*	138.3	86.9	61.2
MEAN			91.8	82.6	145.3	315	198	142.1	135.6	87.9	62.3

* Adjusted for Burst



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED SUNSPOT NUMBERS
ZURICH, R_Z

	1964	1965	1966	1967
JAN		11.7	27.7	73.1
FEB		12.0	31.3	76.4
MAR		12.5	34.5	79.3
APR		13.6	37.4	81.5
MAY		14.6	40.7	84.2
JUN		15.0	44.6	
JUL		15.5	48.8*	
AUG		16.4	55.0	
SEP		17.4	62.7	
OCT	9.6	19.7	66.8	
NOV	10.2	22.3	69.0	
DEC	11.0	24.5	71.2	

* The smoothed sunspot numbers beginning with July 1966 are calculated using 1967 provisional monthly averages.

CALCIUM PLAGE AND SUNSPOT REGIONS

NOVEMBER 1967

Nov. 1967 CMP	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	MT. WILSON SUNSPOT NO.
				AREA	INT.					AREA	COUNT		
1.4	S25	9045	9017	(1900)	(3.0)	ℓ Λ ℓ	2	<10/28	>9	30	5	b Λ d	16540
1.6	N16	9046	9021	(1100)	(2.5)	ℓ V ℓ	2	<10/28	>12	190	1	ℓ - ℓ	16538
2.3	S28	9053	New	400	3.5	b / ℓ	1	≤11/2	≥6	10	3	b Λ d	16549
3.0	N23	9048	New	2500	3.0	ℓ Γ ℓ	1	10/28	13	30	4	ℓ \ d	16539
3.5	S21	9047	9006 9014	(6200)	(3.5)	ℓ - ℓ	1,2 &3	10/28	14	120 20 290	20 2 19	ℓ ⅂ ℓ ℓ Λ d b Λ ℓ	16542 16543 16544
7.1	S13	9059	New	200	1.0	b - d	1	11/5	4				
7.3	N20	9054	9018	1700	2.5	ℓ Γ ℓ	3	<11/2	>11				
7.7	S11	9056	New	200	1.5	ℓ - d	1	<11/2	>11				
8.3	N16	9060	New	600	1.5	b Γ ℓ	1	11/5	8				
10.1	N17	9061	9020	800	2.0	ℓ Γ ℓ	3	<11/5	>11				
10.1	S16	9057	New	400	1.0	ℓ - d	1	11/4	7				
11.4	N15	9062	New	(1200)	(3.5)	ℓ J ℓ	1	11/5	>12	50	7	b Λ ℓ	16555
12.3	S20	9063	9023	1100	2.0	ℓ - ℓ	3	11/5	14				
13.1	S11	9064	New	(600)	(2.5)	ℓ V ℓ	1	11/7	12	(10)	(1)	b Λ d	16559
13.6	S32	9068	9023	(300)	(1.5)	ℓ Γ ℓ	3	<11/12	>7				
14.0	N17	9065	9025 9027	(1800)	(2.5)	ℓ / ℓ	2&5	11/7	14	(10)	(8)	b - ℓ	16561
14.5	S24	9069	New	(1300)	(2.5)	b / ℓ	1	≤11/12	≥9	10	5	b Λ d	16558
15.8	N20	9066	9027	2500	2.5	ℓ Γ ℓ	5	11/9	>12	100	1	ℓ \ ℓ	16551
16.5	S07	9084	New	(400)	(2.0)	b - ℓ	1	11/23	1				
17.0	S23	9074	9029	800	1.5	ℓ \ d	2	<11/15	>6				
17.1	N18	9067	New	3200	2.5	ℓ - ℓ	1	11/10	>11	40	15	ℓ J ℓ	16553
17.4	N36	9070	9027	(1300)	(1.5)	ℓ ⅂ ℓ	5	<11/12	>12				
19.0	N24	9072	9032	1900	2.0	ℓ Γ ℓ	2	11/12	13	10	4	b - d	16565
19.2	S15	9083	New	(700)	(3.0)	b / ℓ	1	11/20	6				
19.8	S17	9075	9035	(700)	(2.5)	ℓ \ ℓ	3	<11/15	>11	(20)	(10)	b - d	None
19.9	N14	9073	9034	(7800)	(3.5)	ℓ J ℓ	3	11/12	14	(680) 10	(32) 4	ℓ ⅂ ℓ ℓ - d	16557 16564
21.6	N17	9077	New	(1500)	2.5	ℓ ⅂ ℓ	1	≤11/18	>9	(10)	(6)	b - d	16566
21.6	S14	9076	9035	(800)	2.0	ℓ / ℓ	3	11/15	12				
23.3	N20	9078	9037	1200	2.5	ℓ J ℓ	3	<11/18	>9				
24.1	N23	9093	New	(1000)	(3.0)	b / ℓ	1	11/25	6	(10)	(4)	b / ℓ	16571
24.2	S24	9081	9052	900	2.0	ℓ - d	2	<11/20	>7				
24.9	N19	9082	9041	5800	3.5	ℓ ⅂ ℓ	3	<11/18	13	500	32	ℓ ⅂ ℓ	16570
25.9	S28	9091	New	1400	3.5	b / ℓ	1	11/24	>7	80	13	b Γ ℓ	16572
26.1	N11	9085	New	500	3.0	? ⅂ ℓ	1	≤11/23	≥8				
26.2	S16	9087	9043	1000	1.5	ℓ V ℓ	3	<11/23	>8				
26.9	N27	9086	9050	1200	1.5	ℓ Γ ℓ	5	<11/23	>8				
27.2	S28	9096	New	(100)	(2.0)	b - d	1	11/26	3				
28.3	S18	9088	New	3100	3.5	ℓ Λ ℓ	1	≤11/23	≥12	(180)	(15)	ℓ Γ ℓ	16573
28.8	N19	9104	New	(1000)	(3.0)	b / ℓ	1	≤12/3	≥2				
29.1	N17	9089	9046 9048	2600	2.5	ℓ ⅂ ℓ	2&3	11/23	12	(10) 50	(1) 5	b / ℓ ℓ \ d	None 16575
29.7	S24	9090	9053 9047	1700	2.5	ℓ ⅂ ℓ	2	11/23	≥12	(10)	(3)	ℓ - d	16574
30.6	S19	9092	9047	2300	3.0	ℓ / ℓ	3	11/24	13	(80)	(27)	b Λ ℓ	None

No calcium spectroheliograms were obtained at the McMath-Hulbert Observatory on November 1, 3, 6, 11, 13, 14, 17, 19, 21, 22, 27, 1967.

MT. WILSON CLASSIFICATION OF SUNSPOTS

NOVEMBER 1967

Nov. 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	1750	N11	W61	(αp)3	16534
		N18	W50	(βf)4	16537
		N14	W01	(αp)5	16538
		N18	E18	(αp)4	16539
		S28	W08	(βp)3	16540
		S18	E04	(βp)2	16541*
		S19	E07	(βp)4	16542
		S21	E24	(βf)4	16543*
		S22	E35	(βf)5	16544
		N20	W48	(βp)2	16546
		N13	E08	(αp)2	16547
2	No Obs.				
3	2200	N18	W80	(βp)3	16537
		N14	W30	(αp)6	16538
		N18	W10	(αp)3	16539
		S26	W42	(αp)3	16540
		S19	W23	(βp)4	16542
		S22	W03	(αp)4	16543
		S22	E06	(βp)5	16544
		S13	W65	(βf)3	16548
		S28	W24	(βp)4	16549
4	1505	N18	W88	αf	16537
		N14	W39	(αp)5	16538
		N18	W19	(βp)2	16539
		S26	W50	(αp)2	16540
		S18	W32	(βγ)4	16542
		S21	W15	(βp)3	16543
		S22	W05	(βγ)5	16544
		S13	W71	(βp)2	16548*
		S28	W33	(αp)2	16549
5	No Obs.				
6	1755	N14	W69	(αp)3	16538
		N19	W49	(αp)1	16539
		S17	W60	(βγ)3	16542
		S21	W31	(αp)4	16544
7	1725	N14	W80	(αp)4	16538
		N18	W63	(αp)1	16539
		S18	W75	(βγ)1	16542
		S21	W43	(βp)4	16544
		S16	W59	(βp)1	16550
8	1910	S22	W59	(αp)4	16544
		S16	W77	αp	16550
9	1820	S21	W70	(αp)3	16544
		N15	E75	(βp)4	16551
10	1830	S25	W88	αp	16544
		N15	E62	(βp)4	16551
		S15	W06	αp	16552
		N12	E80	(αp)2	16553
		S26	W80	αp	16554
11	1855	N16	E48	(βp)5	16551
		N14	E67	(αp)3	16553
		N12	W06	(βf)5	16555
12	1850	N15	E35	(βf)5	16551
		N12	E53	(αp)4	16553
		N12	W20	(βp)4	16555
		N16	E75	(αp)3	16556
		N08	E85	(αp)4	16557
		S21	E25	(βp)2	16558
		S13	E03	(αp)1	16559
13	1840	N16	E20	(βp)5	16551
		N13	E39	(αp)3	16553
		N12	W34	(βp)5	16555
		N17	E61	(αp)2	16556
		N20	E74	(βf)4	16557
		S21	E09	(βp)1	16558
14	2030	N16	E06	(αp)5	16551
		N13	E24	(αp)4	16553
		N12	W49	(βp)4	16555
		N18	E50	(βp)2	16556
		N10	E59	(δ)6	16557
		S21	W07	(αp)2	16558
		S14	W25	(βp)2	16559
15	1725	N16	W07	(αp)5	16551
		N13	E12	(βp)3	16553*
		N12	W62	(βf)4	16555
		N19	E41	(αf)1	16556
		N10	E47	(δ)6	16557
		S21	W15	(β)1	16558
		S14	W38	(βp)2	16559
16	2240	N14	W23	αp	16551
		N12	W05	βp	16553
		N12	W79	β	16555
		N17	E75	β	16556
		N10	E30	δ	16557
		S14	W54	βp	16559
		N22	W35	βf	16560
		N17	W34	βf	16561
		N12	W18	β	16562
		N10	W08	βf	16563
		N18	E45	βp	16564

* Polarities Reversed

MT. WILSON CLASSIFICATION OF SUNSPOTS

NOVEMBER 1967

Nov. 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
17	1750	N14	W33	(αp)5	16551
		N12	W16	(αp)3	16553
		N13	W83	(αf)1	16555
		N17	E14	(αf)1	16556
		N09	E20	(δ)6	16557
		N16	W44	(β)2	16561
		N12	W29	(βp)3	16562
		N10	W15	(βf)3	16563
		N19	E34	(βp)4	16564
		N20	E15	(β)1	16565
		N18	E52	(αp)2	16566
		N16	E54	(αp)1	16567
		S24	W38	(βp)1	16568
18	1945	N15	W49	αp	16551
		N13	W31	βf	16553
		N09	E04	δ	16557
		N17	W60	βp	16561
		N13	W45	βf	16562
		N11	W32	βp	16563
		N19	E19	βp	16564
		N20	W01	βp	16565
		N18	E38	β	16566
		S24	W54	βp	16568
		S21	W60	β	16569
		N20	E80	αp	16570
19					
20					
21	No Obs.				
22					
23					
24	2146	N11	W77	δ	16557
		N20	W41	αp	16564
		N19	E04	βp	16570
		N24	W10	αp	16571
		S30	E13	βp	16572
		S19	E47	βp	16573
		S27	E60	αp	16574
		N12	E56	αp	16575
25	2200	N21	W51	(αp)2	16564
		N19	W10	(β)6	16570
		N23	W23	(βp)2	16571
		S29	W02	(βp)4	16572
		S19	E33	(βp)4	16573
		S26	E45	(αp)2	16574
		N13	E38	(αp)3	16575
		N13	E35	(β)2	16576
		S27	E73	αp	16577
26	1630	N19	W17	β	16570
		N17	W33	βp	16571
		S30	W11	βp	16572
		S19	E23	βp	16573
		S27	E35	αp	16574
		N13	E27	αp	16575
		N14	E23	βp	16576
		S17	E70	αp	16577
27	1845	N21	W33	(βp)5	16570
		N26	W48	(β)6	16571
		S29	W25	(βp)4	16572
		S10	E06	(βp)5	16573
		N13	E16	(αp)3	16575
		N14	E12	(αp)2	16576
		S27	E55	(αp)3	16577
28	No Obs.				
29	1651	N17	W60	βp	16570
		N22	W75	βp	16571
		S29	W52	βp	16572
		S22	W22	βp	16573
		N12	W10	αp	16575
		S27	E30	αp	16577
		N08	E55	αp	16578
30	No Obs.				

SOLAR FLARES

Partial Listing

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

NOVEMBER 1967

OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 NOV	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. %	
MONT	02	0742E	0800		N20	W58	.853	9041	29.0	18D	1N		C	0742	1.86				
CAPS	02	0852	0913		S17	W02	.365	9047	2.2	21	2B	3		0855	8.00	8.60		402	HV
MONT	02	0852	0920	0855	S18	W02	.381	9047	2.2	28	2B		C	0855	4.64				H
CATA	02	0855	0918	0857	S17	W02	.365	9047	2.2	23	2B			0857	6.19	6.63		288	
HUAN	02	1141	1246		N22	W58	.855	9041	29.1	65	1F	1	C	1153	1.44	2.08			ET
MONT	02	1155	1220	1210	N20	W60	.869	9041	29.0	25	1N		C	1210	1.86				
CAPS	02	1155E	1255		N18	W57	.842	9041	29.2	60D	2F	3			4.90	8.50		170	J
CATA	02	1204	1330	1210	N20	W58	.853	9041	29.2	86	1N			1210	2.09	4.07		180	
MONT	02	1225	1330	1232	N20	W62	.885	9041	28.9	65	1B		C	1232	1.55				
CAPS	02	1551	1553D		N17	W60	.867	9041	29.2	2D	2N	1							
HUAN	02	1552	1559	1554	N19	W64	.899		28.9	7	-N	2	C	1554	.70	1.11			E
CATA	03	1159	1315D	1210	N19	W75	.963	9041	28.9	76D	1B			1210	1.19			232	
CAPS	03	1203E	1204D		N17	W77	.972	9041	28.7	1D	1N	1		1204	1.00			164	
HUAN	03	1233E	1233D		N17	W78	.976	9041	28.7		1F	1	P	1233	1.13				E
HUAN	04	1125	1138	1127	N17	W88	.999		28.9	13	-N	2	C	1127	.33				DT
CAPS	04	1126E	1141		N15	W85	.995	9041	29.1	15D	1B	3		1131	.80			220	
CATA	04	1125	1220	1125	S18	W35	.656	9047	1.9	55	1B			1125	3.03	4.02		234	
MONT	04	1151	1215	1155	S19	W32	.630	9047	2.1	24	1B		C	1155	1.55				
HUAN	04	1151	1220	1153	S18	W33	.634	9047	2.0	29	1N	2	C	1153	2.17	2.42			
HUAN	04	1151	1220	1158	S18	W33	.634	9047	2.0	29	1N	2	C	1158	1.65	1.84			
CAPS	04	1154E	1228		S19	W31	.619	9047	2.2	34D	1B	3		1158	2.30	3.00		290	C
CATA	05	0900	0945	0905	S25	W42	.766	9053	2.2	45	1B			0905	3.29	5.12		200	
HALE	07	2217	2247D	2243U	N27	W64	.908		3.1	30D	-F	1	P	2243	.31				
LOCK	07	2220	2330	2240	N24	W63	.898	9048	3.2	70	1F		C	2240	1.00	2.10		10	L
CATA	10	0845	0910	0852	S26	W80	.992	9047	4.4	25	1B			0852	1.72			246	
MONT	10	0907E	0909D		S25	W76	.981	9047	4.7	2D	1B		C	0907	2.06				
CATA	10	1225	1310	1240	S26	W80	.992		4.5	45	-N			1240	.29			174	
HUAN	10	1242	1403		S27	W85	.999	9047	4.2	81	1N	2	C	1335	.88				
CATA	10	1320	1405D	1330	S25	W87	1.000	9047	4.0	45D	1N			1330	.70			191	
MONT	10	1327E	1350	1330	S25	W78	.987	9047	4.7	23D	1B		C	1330	2.06				
MCMA	10	1343E	1504D		S27	W90	1.000	9047	3.8	81D	1N		C	1343					AB
HUAN	10	1517	1539		S27	W88	1.000	9047	4.0	22	1F	1	C	1530	.80				
LOCK	10	2130	2140	2134	S25	W90	1.000		4.1	10	-N		C	2134	.50	2.00		20	H
HALE	10	2133E	2140	2133	S25	W79	.989	9047	5.0	7D	1B	2	P	2133	.52				
CAPS	11	1214E	1240D		S26	W90	1.000	9047	4.8	26D	2N	3							
MONT	12	0842	0932	0845	N13	W13	.278	9062	11.4	50	1B		C	0845	1.55				
CATA	12	0845	0900	0850	N12	W14	.282		11.3	15	-N			0850	.33	.35		155	
ARCE	12	0848E	0915		N13	W12	.265		11.5	27D	-N		C	0848	1.43	1.50			
MONT	12	0943	1030	0945	N13	W13	.278	9062	11.4	47	1B		C	0945	2.06				
CATA	12	0945	1040	0950	N12	W14	.282		11.4	55	-N			0950	.81	.86		155	
ARCE	12	0946	1000D	0950	N13	W13	.278	9062	11.4	14D	1N		C	0950	2.03	2.10			
CAPS	12	0947E	1031		N11	W13	.260	9062	11.4	44D	1N	3		0949	1.80	2.00		196	J
MONT	12	1045	1120	1100	N13	W14	.292	9062	11.4	35	1N		C	1100	1.55				
CATA	12	1050	1200	1055	N13	W14	.292		11.4	70	-N			1055	.66	.69		162	
CAPS	12	1055	1107		N11	W14	.274		11.4	12	-N	3		1057	.50	.50		170	
MONT	12	1130	1200D	1137	N13	W14	.292	9062	11.4	30D	1B		C	1137	2.06				
CAPS	12	1140E	1155		N11	W17	.318		11.2	15D	-N	3		1147	1.00	1.00		170	
MONT	12	1153	1200D	1155	N11	E56	.829		16.7	7D	-N		C	1155	4.13				
CATA	12	1155	1215D	1210	N12	E55	.820		16.6	20D	-B			1210	.90	1.57		200	
CAPS	12	1204E	1215		N11	E55	.820	9067	16.6	11D	1N	3		1208	1.80	3.10		170	C
CATA	12	1345	1430D	1400	N08	E88	.999	9073	19.2	45D	1F			1400	.59			138	
HUAN	12	1348	1407		N08	E88	.999		19.2	19	-F	1	C	1356	.45				E
CAPS	12	1352E	1406		N10	E85	.995	9073	19.0	14D	1N	3		1400	.80			160	
MCMA	12	1411E	1435D		N10	E86	.997	9073	19.0	24D	-B		C	1411					E
LOCK	12	1648	1710	1651	N11	W20	.363		11.2	22	-N		C	1651	1.00	1.10		20	
HUAN	12	1648	1716	1651	N12	W18	.340	9062	11.4	28	1N	2	C	1651	1.91	1.91			
HALE	12	1650	1717	1653	N13	W19	.361		11.3	27	-B	1	C	1653	1.55	1.70			
CATA	13	1005	1025	1005	N14	E43	.692		16.6	20	-N			1005	1.37	1.94		166	
WEND	13	1242E	1253		N12	W29	.501	9062	11.4	11D	1N		V		3.09				
MONT	13	1245	1300	1248	N13	W30	.519	9062	11.3	15	1N		C	1248	1.86				
HUAN	13	1246	1252		N11	W29	.497		11.4	6	-F	1	C	1248	.31	.32			D
LOCK	13	1805D	1835D	1815U	N10	E70	.938		19.0	30D	-F		C	1815	.60	1.60		10	
HALE	13	1808	1900	1815	N12	E76	.969	9073	19.5	52	1N	1	C	1815	.83				EF
HUAN	13	1810	1913		N11	E75	.965	9073	19.4	63	1F	1	C	1816	1.13				
HOUS	13	1811E	1815D	1812	N10	E74	.960		19.3	4D	-F		C		.60	1.60		100	
HOUS	13	1853E	1907	1855U	N17	E80	.983		19.8	14D	-N		C		.30	.90		200	
BUCA	15	0750E	0835D		N17	W59	.862		10.9	45D	-F		C	0805	.99	1.90			
CATA	15	0805E	0830	0805	N18	W58	.855	9062	11.0	25D	1F			0805	1.11	2.17		138	
CAPS	16	1004E	1112		N11	E38	.624	9073	19.3	68D	2N	3		1008	4.00	5.20		210	C
CAPF	16	1017E	1118D		N11	E37	.610	9073	19.2	61D	2N		P	1027	4.22	5.32			

SOLAR FLARES

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 NOV	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. %	
CAPS	16	1327	1339D		N08	E38	.618	9073	19.4	12D	1N	1		1338	3.00	3.90		170	F
HUAN	16	1328	1335		N10	E37	.608		19.3	7	-F	1	C	1330	.83	.90			E
HUAN	16	2003	2028	2009	N18	E43	.705	9073	20.1	25	1N	1	C	2009	2.37	2.70			H
HALE	16	2004	2020	2008	N18	E43	.705	9073	20.1	16	1B	1	C	2008	2.89	4.10			
LOCK	16	2015	2030U	2015E	N17	E44	.713	9073	20.1	15U	1F		C	2015	1.40	2.10		10	B
HALE	16	2124	2318	2143	N11	E33	.556	9073	19.4	114	3B	1	C	2143	14.85	17.80			
HOUS	16	2137E	2243	2144	N09	E32	.536	9073	19.3	66D	2B		C		5.40	6.30		300	EK
HOUS	16	2137E	2243	2202	N09	E32	.536	9073	19.3	66D	2B								
CATA	17	0820E	0915D	0820	N12	E26	.460	9073	19.3	55D	1B			0820	2.31	2.62		245	
ISTA	17	0823E	1006		N10	E27	.466	9073	19.4	103D	3B								
CAPS	17	0828E	0935		N11	E25	.441	9073	19.2	67D	2N	2		0845	8.00	8.80		220	
MONT	17	0837E	1050		N10	E25	.437	9073	19.2	133D	2B		C	0837	5.16				
BUCA	17	0844E	1007	0844	N11	E26	.456	9073	19.3	83D	2B		P	0844	7.76	88.60			
HUAN	17	1532	1545	1534	N21	E90	1.000	9079	24.4	13	1N	2	C	1534	.88				
HOUS	17	1532	1545	1534	N19	E90	1.000	9079	24.4	13	1N		C		.50	2.00		200	
HALE	17	1713	1901	1741	N14	E46	.729	9073	21.2	108	1N	2	C	1741	1.65	2.40			F
LOCK	17	1715	1900	1800	N16	E47	.745	9073	21.2	105	1F		C	1800	2.50	3.80		10	L
HUAN	17	1726	1803D		N15	E46	.731		21.2	37D	-F	1	C	1731	.25	.30			D
HOUS	17	1737E	1750	1738	N12	E45	.714		21.1	13D	-F		C		.80	1.10		100	L
HALE	17	1759	1841U	1803	N18	E48	.760		21.3	42U	-F	1	C	1803	.31	.50			
HOUS	17	1813U	1850	1816	N18	E48	.760	9077	21.4	37U	1F		C		2.20	3.40		100	
ISTA	19	0735E	0930		N10	E01	.133	9073	19.4	115D	1N								
MONT	19	0737E	0800		N11	W01	.151		19.2	23D	-N		C	0740	1.55				
ISTA	19	0735E	0935D		N10	W38	.622	9067	16.5	120D	1N								
ISTA	19	0745	0855		N19	E78	.978	9078	25.2	70	1N								
CAPS	19	1025E	1037D		N12	W37	.614	9067	16.7	12D	1N	2		1035	3.00	3.90		200	F
MONT	19	1027	1135	1035	N11	W35	.585	9067	16.8	68	1N		C	1035	2.06				
CAPF	19	1039E	1145D		N10	W39	.636	9067	16.5	66D	2N		V	1041	5.88	7.69			H
CATA	19	1110E	1200D	1110	N23	E45	.745	9078	22.8	50D	1F			1110	1.23	2.72		138	
MONT	19	1150	1220	1216	N10	W35	.582	9067	16.9	30	1N		C	1200	2.58				
MONT	20	0813	0830	0815	N11	W53	.802	9067	16.4	17	1F		C	0815	3.09				
WEND	20	1306E	1320		N19	E62	.890	9082	25.2	14D	1N		V		4.13				D
MONT	20	1416	1440	1420	N17	W86	.997	9065	14.1	24	1N		C	1420	1.55				
MONT	20	1442	1500	1450	N21	E58	.861	9082	25.0	18	1N		C	1450	2.58				
MONT	20	1450	1512D		N17	W86	.997	9065	14.2	22D	1N		C	1455	1.50				
HALE	20	1804	1821	1812	N18	W82	.989	9065	14.6	17	1B	2	C	1812	.62				FGJ
MONT	21	1045	1215	1105	N13	W67	.921	9067	16.4	90	1N		C	1105	3.09				
HUAN	21	1055	1125		N10	W69	.933		16.3	30	-N	1	C	1118	.62				ET
HUAN	21	1133	1139		N10	W68	.927		16.4	6	-F	2	C	1135	.25				D
HUAN	21	1143	1150	1146	N10	W68	.927		16.4	7	-N	2	C	1146	.25				D
HUAN	21	1235	1307	1244	N10	W70	.939		16.3	32	-N	2	C	1244	.50				E
MONT	21	1235	1330	1255	N13	W68	.928	9067	16.4	55	1N		C	1255	2.06				
HUAN	21	1450	1509	1456	N10	W70	.939		16.4	19	-B	2	C	1456	.95				
MONT	21	1450	1510D	1456	N13	W68	.928	9067	16.5	20D	1B		C	1456	3.09				
HOUS	21	1454	1508	1458	N11	W70	.939		16.4	14	-F		C		.60	1.40		100	
HUAN	21	1648	1701	1650	N08	W39	.633	9073	18.8	13	1N	2	C	1650	1.91	2.10			
HALE	21	1648E	1703	1650	N10	W38	.623		18.8	15D	-B	3	P	1650	1.13	1.40			
MONT	22	0940	1025	1000	N21	E38	.664	9082	25.3	45	1N		C	1000	2.06				
HUAN	22	1916	1928		S18	E78	.982		28.7	12	-N	1	C	1921	.31				D
LOCK	22	1919	1922D	1922U	S18	E73	.964	9088	28.3	3D	1F		C	1922	.80	2.30		10	
CATA	23	1345	1405D	1350	N19	W57	.851		19.3	20D	-N			1350	.72	1.37		172	
MONT	23	1345	1450	1355	N11	W58	.850	9073	19.2	65	1N		C	1355	1.55				
LOCK	23	1855	1912	1900	N08	W59	.858	9073	19.4	17	1N		C	1900	1.10	2.10		20	
HOUS	23	1857	1911	1859	N10	W63	.892		19.1	14	-N		C		.50	1.00		200	E
CATA	24	0900	0905	0900	N10	E25	.441		26.3	5	-F			0900	.21	.24		135	
MONT	24	0900	1130		N28	E22	.553	9082	26.0	150	1N		C	0945	1.55				
WEND	25	0804E	0818		N19	W03	.302	9082	25.1	14D	1F		V		3.09				
MONT	25	0806E	0840	0810	N21	W01	.332	9082	25.3	34D	1B		C	0810	2.06				
MONT	25	1015	1110	1045	S18	E37	.661	9088	28.2	55	1F		C	1045	2.06				
MONT	25	1230	1255	1237	S28	E06	.503	9091	26.0	25	1B		C	1237	2.06				
MONT	25	1319	1345	1320	N25	W17	.478		24.3	26	-B		C	1320	1.55				
HUAN	25	1321E	1332D		N25	W19	.495		24.1	11D	-N	1	P	1321	1.13	1.18			E
WEND	25	1322	1352		N24	W20	.493	9093	24.1	30	1N		V		3.09				
CAPS	25	1331E	1348D		N25	W20	.504		24.1	17D	-N	1		1335	.60	.70		160	E
MCMA	25	1758	1810D	1803	N25	W20	.504	9093	24.2	12D	-B		C						
MCMA	25	1810	1845	1822	N25	W20	.504	9093	24.3	35	-B		C	1822	1.55	1.60			EH
HALE	25	1809	1905	1820	N25	W20	.504		24.3	56	-N	2	P	1820	1.55	1.80			
LOCK	25	1810	1847	1820	N26	W21	.524	9093	24.2	37	1N		C	1820	1.90	2.30		20	
HOUS	25	1812	1835	1816	N24	W20	.493		24.3	23	-N		C		.90	1.00		200	
HUAN	25	1813E	1835D		N24	W21	.503		24.2	22D	-B	1	P	1818	1.29	1.34			
CATA	26	1335	1420D	1345	N22	W10	.385		25.8	45D	-F			1345	.25	.28		149	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 NOV	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. %	
HUAN	26	1410E	1527D		N22	W09	.379		25.9	77D	-N	1	P	1500	.62	.62			E
MCMA	26	1500E	1640		N22	W10	.385	9082	25.9	100D	1N		C	1505	2.06	2.10			BF
MCMA	27	1602E	1612D		N24	W54	.837	9093	23.6	10D	1N		C	1608	1.29	2.20			
HOUS	27	1602	1620	1610	N23	W54	.835	9093	23.6	18	1F		C		1.70	3.10		100	
LOCK	27	1603E	1625	1610	N26	W53	.834	9093	23.7	22D	1F		C	1610	1.20	2.20		10	
MCMA	29	1607	1650	1613	S31	W45	.803	9091	26.3	43	-N		C	1613	1.29	1.80			
HUAN	29	1609	1655		S30	W48	.822		26.1	46	1N	1	C	1618	1.91	2.60			E
HOUS	29	1614U	1635	1619U	S29	W47	.810		26.2	21U	-N		C		1.00	1.70		200	E
LOCK	29	1615E	1642	1615U	S31	W48	.826		26.1	27D	-N		C	1615	1.20	2.00		20	
HALE	29	1852	1855	1852	S28	W51	.838		26.0	3	-N	1	C	1852	.31	.60			
HOUS	29	1853U	1904D	1902U	S27	W55	.865		25.7	11D	-N		C		.90	1.70		200	E
LOCK	29	1855	1914	1904	S30	W56	.880	9091	25.6	19	1F		C	1904	1.10	2.10		10	
HALE	29	1857	1909	1901	S27	W54	.858	9091	25.7	12	1N	1	C	1901	1.03	2.00			
ISTA	30	0810E	0945D		S28	W62	.914	9091	25.7	95D	2B								
ISTA	30	0853	0945D		S21	W30	.598	9088	28.1	52D	1B								
HUAN	30	1319	1349D		S31	W58	.896	9091	26.2	30D	1N	1	C	1335	1.34	2.12			ET

Remarks

A = Eruptive prominence, base at >90°.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No spots visible in the neighborhood.
H = Flare with high velocity dark surge.
I = Very extensive active region.
J = Plage with flare shows marked intensity variations.
K = Several intensity maxima.
L = Filaments show effects of sudden activation.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H or K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line.
S = Brightening follows disappearance of filament.
T = Region active all day.
U = Close and somewhat parallel bright filaments.
V = Occurrence of an explosive phase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα emission.
Y = Onset of a system of loop-type prominences.
Z = Major sunspot umbra covered by flare.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in previous table.

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01 0216	S18 E11	01 0249	S25 W02	01 0302	N25 W38	01 0319	S16 E14	01 0337	S19 E08	01 1123	S20 E06
01 1255	S31 W03	01 1315E	S31 W01	01 1421	S17 E08	01 1508	S11 E88	01 1554	N17 W52	01 1658	N17 W53
01 2011	S16 E07	01 2113	S16 E07	01 2117	S16 E06	01 2120E	S17 E05	01 2142	N17 W56	01 2234	N17 W56
01 2304	S16 E07	02 0805	S17 W01	02 0810	S18 W02	02 0816	S18 W02	02 0857	N20 E10	02 1212	S19 E27
02 1317	S18 W02	02 1324	N20 W61	02 1330	S17 W04	02 1333	S18 W03	02 1337	S17 W03	02 1340E	S18 W03
02 1402	N20 W62	02 1430	S20 E24	02 1522	S18 W03	02 1732	N20 W64	02 1734	N22 W62	02 1754	S20 E23
02 1755	S20 E24	02 1813	S18 W12	02 1814	S18 W12	02 1835	N20 E04	02 1836	N20 E04	02 1933	S18 W07
02 1959	N18 W65	02 2000	S18 W06	02 2118	N23 W62	02 2119	S17 W07	02 2123	S18 W17	02 2138	N19 E03
02 2139	N20 E03	02 2141	N20 E03	02 2158F	N18 W65	02 2305	S19 E22	03 0008	N18 W64	03 0017	N20 E02
03 0320	S17 W10	03 1020	S18 W14	03 1035	N18 W70	03 1225	S13 W59	03 1232E	S15 W57	03 1352	S19 W20
03 1400E	S16 W28	03 1402	S17 W17	03 1411	S20 E14	03 1537	S18 W17	03 1605E	S18 W17	03 1620	S18 W18
03 1627	S17 W18	03 1652	N14 W77	03 1655	N17 W80	03 1747	N17 W80	03 1748	S17 W22	03 1748	N14 W77
03 1802E	N19 W77	03 1908	S18 W19	03 1940E	S18 W19	03 2039	S17 W20	03 2041	S17 W19	03 2224	S17 W20
03 2226	S16 W21	03 2226	S16 W20	03 2254	S17 E13	04 0735	S19 W17	04 1350	N20 W90	04 1352	N18 W90
04 1352	N18 W88	04 1352	N28 W90	04 1430	N20 W90	04 1444	N18 W90	04 1456	N18 W90	04 1507	N18 W90
04 1527	N18 W88	04 1528	N18 W90	04 1607	S17 W35	04 1607	S17 W35	04 1607	S18 W36	04 1630E	N18 W82
04 1643	S18 W36	04 1643	S16 W35	04 1644	S17 W35	04 1644	S18 W35	04 1716E	S18 W37	04 1752	N16 W90
04 1910	N18 W90	04 2000	N18 W90	04 2149	S18 W38	05 0825	S18 W40	05 1059	S18 W43	05 1100	S17 W45
05 1203	S19 W48	05 1205	S17 W48	05 1215	N17 W30	05 1424	S19 W37	05 1535	S18 W43	05 1536	S19 W44
05 1946	S19 W37	05 2031E	S24 W16	05 2236	S18 W48	06 0900	S19 W63	06 1235E	S16 W55	06 1240	S19 W64
06 1631	S24 W26	06 1651	S32 W70	06 1658E	S26 W74	06 1750	S18 W62	06 1805	S23 W48	06 1819	S30 W53
06 1921	N19 W49	06 1922	N18 W49	06 2006	S23 W29	06 2007	S23 W28	06 2130	S23 W28	06 2131U	S24 W27
06 2330	S17 W47	07 0005	S24 W31	07 0008E	S24 W29	07 0022	S26 W31	07 0042	S14 W48	07 0108	S16 W48
07 0146	S17 W49	07 0157	S14 W49	07 1334	S18 W72	07 1444	S18 W72	07 1537	S24 W40	07 1746	S20 E52
07 1746	S21 E51	07 1748F	S19 E53	07 1748	S20 E51	07 2025	S23 W40	07 2027	S22 W42	07 2029	S22 W41
07 2142	S23 W59	07 2142	S23 W59	07 2156	S22 W59	08 1314	S30 W88	08 1852	S28 W82	08 1910	S16 E38
08 1936E	S18 E36	08 2145	S28 W90	09 1105E	S20 W64	09 1310	N15 W18	09 1645	S27 W64	09 1714	S27 W64
10 0214E	S26 W70	10 0720E	S27 W71	10 0921	S23 W78	10 0955	S25 W80	10 1109E	S27 W82	10 1132	S27 W83
10 1245	S27 E78	10 1625	S26 W86	10 1718	S25 W88	10 1750	N15 E42	10 1752	N16 E42	10 1754	N17 E43
10 1756E	N17 E42	10 1941	S26 W88	10 2043	S25 W90	10 2308	S20 E08	10 2310	S21 E09	10 2357	S25 W79
11 0109	S24 W80	11 0730E	N15 E57	11 0835	N12 E00	11 1020E	S17 E90	11 1035	S25 W90	11 1600	N12 W06
11 1616	N12 W04	11 1738	S26 W90	11 1742	S26 W90	11 1820	N12 W04	11 1842	N12 W05	11 1855	N12 W05
11 1857	N15 E64	11 1957	N12 W06	11 1958	N17 E49	11 2019	N16 E63	11 2109	N11 W07	11 2158	N12 W07
12 0855E	S06 W13	12 1319	N11 W27	12 1340	N16 E55	12 1421E	N13 W17	12 1425E	N12 W16	12 1451	N16 E38
12 1511	N11 E36	12 1515E	N15 E40	12 1527E	N13 W17	12 1607	N11 W19	12 1612	N12 W17	12 1805	N15 E35
12 2105	N12 W20	12 2110	N20 E90	12 2118	N16 E53	12 2201	N20 E90	13 0037	N15 E48	13 0102	N20 E89
13 0226	N12 E82	13 0830	N17 E44	13 0925	N09 E80	13 1305	N10 W32	13 1310	N13 W31	13 1334	N17 E07
13 1337E	N13 W31	13 1400	N13 W31	13 1403	N12 W30	13 1405	N14 W29	13 1523	N12 W31	13 1523	N12 W30
13 1613	N11 W31	13 1614	N12 W30	13 1720	N11 E90	13 2029	N10 E82	13 2114	N10 E82	13 2114	N13 E82
13 2145E	N12 E42	14 1015	S14 W20	14 1516	N10 W47	14 1607	N11 W45	14 1608	N12 W46	14 1912	N11 W49
14 1914	N12 E57	14 2140	N16 E09	14 2145	N13 E54	14 2147	N13 E54	14 2233	S12 E90	15 0009	N14 E07
15 0045	N17 W06	15 0228	N11 W51	15 0830	N15 W52	15 0855	N14 W53	15 1109	S20 W13	15 1110	S19 W15
15 1120	N10 E58	15 1150	S20 W15	15 1340	N11 E52	15 1410	N11 E52	15 1704	N08 E50	15 1704	N11 E47
15 1710U	N10 E40	15 1714	N13 E47	15 1715	N12 E49	15 1831	N12 E43	15 1834	N12 E42	15 1846	N19 E38
15 1847	N19 E40	15 1858	N21 E12	15 1859	N17 E12	15 1859	N21 E13	15 1900	N19 E13	15 1920	S14 W40
15 1956	N11 E09	15 1956	N16 E15	15 2015	N19 E38	15 2037	S15 W38	15 2136	S15 W38	16 1120	N13 E37
16 1245	N09 E38	16 1358	N09 E37	16 1432	N11 E02	16 1434	N10 E01	16 1452	N19 E49	16 1600	N11 E01
16 1600	N10 E03	16 1700	S15 W50	16 1706E	N14 W48	16 1851E	N09 E34	16 2017	S15 W51	16 2146	N20 E47
16 2147E	N11 W80	16 2147E	N14 W53	17 0112	N16 W24	17 1120	N13 E24	17 1447	N15 W28	17 1450	N13 W28
17 1451	N13 W27	17 1608	N18 W43	17 1651	N21 E52	17 1748	N26 E54	17 1748	N25 E54	17 1749	N24 E46
17 1848	N12 E21	17 1849	N10 E19	17 1850	N09 E20	17 1850	N09 E20	17 1921	N14 W30	17 2025	N12 E16
17 2130	N13 W30	17 2150	N21 W49	17 2150	N22 W45	17 2210	N14 W32	17 2210	N14 W33	17 2256	N09 E17
18 0117	S23 W43	18 0928E	S23 W48	18 1106	N18 E21	18 1120	S23 W50	18 1137	N18 E90	18 1143	N09 E12
18 1255	S23 W48	18 1256	S23 W50	18 1335	N08 E06	18 1429	N09 E10	18 1457	S23 W50	18 1810	N11 W29
18 1814E	N11 W26	18 1822E	N12 W28	18 1823	N21 E82	18 1823	N21 E82	18 1825	N20 E90	18 1832	N12 W27
18 1833	N20 E82	18 1835	N20 E90	18 1952	N09 E05	19 0809	S23 W57	19 0810	S24 W57	19 0841	N19 E13
19 0925	N20 E80	19 1045E	N11 W38	19 1214E	N08 W00	19 1215E	N09 W03	19 1415	N10 W02	19 1313	S23 W63
19 1413	N18 E80	19 1417	N09 W40	19 1418	N18 E07	19 1517	N17 E82	19 1518	N17 E80	19 1524	N08 W04
19 1606	N08 W11	19 1625	N12 W43	19 1626	N10 W42	19 1629	N19 F09	19 1704	N15 W74	19 1725	N19 E28
19 1729	N17 E26	19 1742	N08 W05	19 1743	N08 W05	19 1801	N09 W12	19 1803	N08 W13	19 1805	N08 W12
19 1811	N15 W75	19 1835	N16 W75	19 1836	N18 E79	19 1907	N16 W76	19 1912	N17 W78	19 1917	N16 W76
19 1922	N17 W78	19 2009	N17 W78	19 2009	N17 W78	19 2010	N17 W78	19 2011	N11 W43	19 2014	N10 W43
19 2129	N17 W76	19 2214	N11 W46	19 2217E	N09 W49	20 0003D	N22 E61	20 0019	N08 W15	20 0050	N29 E22
20 0115E	N11 W46	20 0136	N11 W45	20 0228	N09 W16	20 0230	N18 E72	20 0250	N19 W00	20 0252	N17 W74
20 0900E	N20 E63	20 1004	N17 W85	20 1100	N18 W05	20 1115	N22 F60	20 1140	N15 W47	20 1247	N17 W86
20 1339	N10 W55	20 1539U	N18 W83	20 1551	N16 E66	20 1702	N23 E53	20 1911E	N07 W23	20 1933	N20 W05
20 1944E	N19 W05	20 2057	N16 W36	20 2210	N17 E61	20 2212	N14 W89	21 0131	N14 W57	21 0157	N18 E58
21 0834	N20 E57	21 1113	N20 E56	21 1142	N18 E52	21 1143	N20 F56	21 1200	N10 W68	21 1220	N17 E52
21 1225	N20 E55	21 1332	N10 W70	21 1336	N09 W32	21 1430E	N11 W72	21 1435	N10 W70	21 1727	N10 W71
21 1900E	N09 W25	21 1951	N09 W39	21 1955	N10 W40	21 2125	N10 W41	21 2137	N11 W37	22 0132	N17 W44

SOLAR FLARES

NOVEMBER 1967

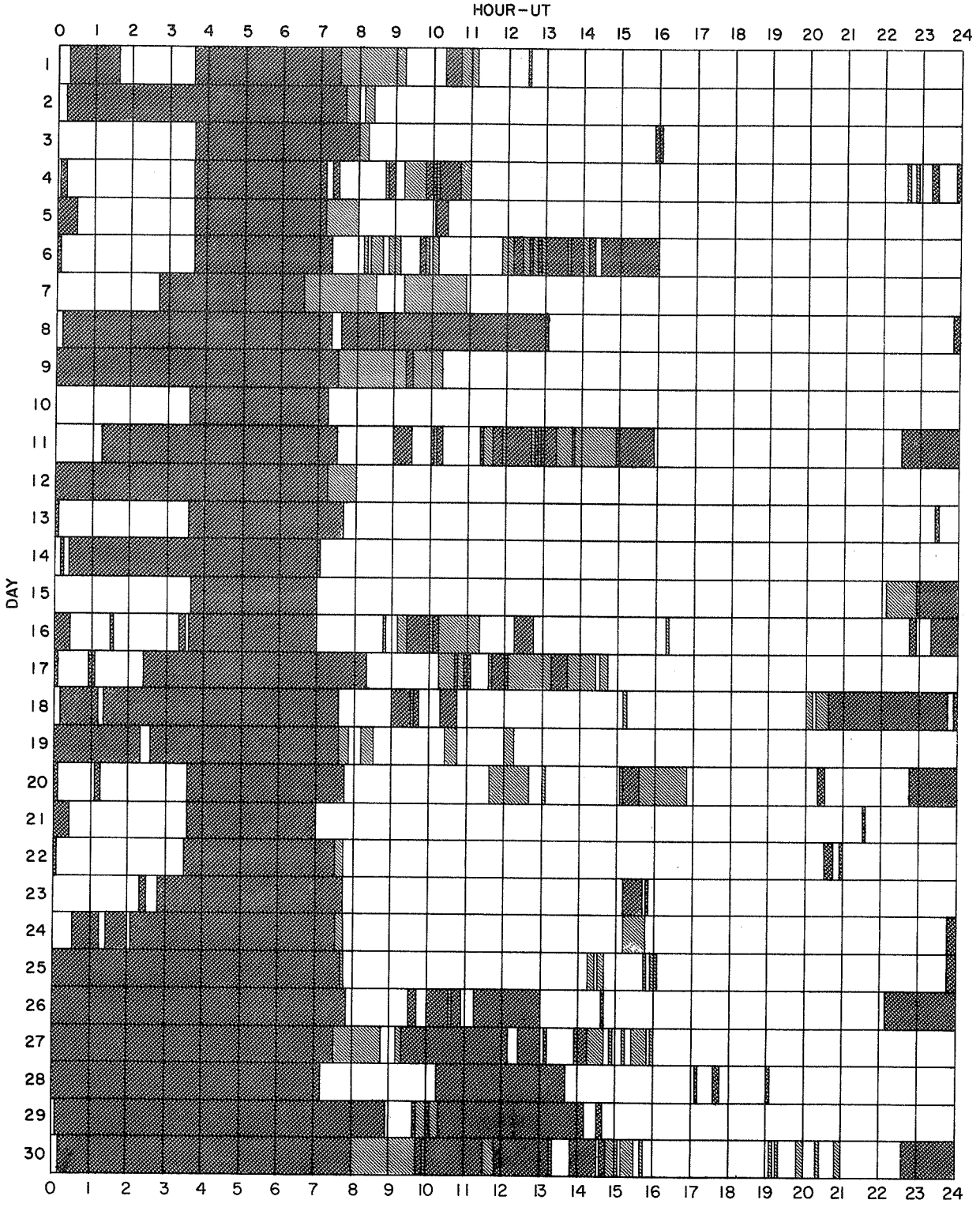
1967
NOV

22 0232	N13 W31	22 0302	N12 W31	22 1327	N10 W46	22 1405	N09 W46	22 1427	N13 W07	22 1432	N19 W12
22 1452	N10 W45	22 1524	N09 W45	22 1531	N09 W88	22 1538	N07 W45	22 1617	N10 W47	22 1656	N19 W13
22 1659	N19 W14	22 1746	N10 W47	22 1747	N11 W49	22 1756E	N22 E36	22 1802	N20 W42	22 1802	N18 W46
22 1904	N07 W47	22 1906	N07 W46	22 1907E	N17 W46	22 1948	N09 W48	22 2100	N09 W47	22 2125	N08 W47
22 2228	N08 W50	22 2228	N07 W49	22 2228	N08 W47	22 2230	N19 W16	22 2230	N19 W15	22 2345	N07 W49
22 2345	N08 W48	22 2358	N07 W49	23 0127	N09 W50	23 0249E	N10 W51	23 0833	N10 E80	23 0840	S21 E67
23 0910	S22 E67	23 0912	N10 E79	23 1110	N10 E38	23 1130	S21 E65	23 1130	N10 E78	23 1340	N10 E77
23 1741	S17 E62	23 1906	S17 E62	23 2045	N29 E35	23 2047	N25 E34	23 2054	N25 E41	23 2108	N11 W63
23 2108	N11 W63	23 2108	N08 W59	23 2155	S28 E25	24 0114F	N09 W65	24 0805	S29 E18	24 1030	N15 W12
24 1155E	S28 E20	24 1910	N22 E06	24 1913E	N19 E08	24 2224	N22 E06	24 2330	N26 W10	25 0806E	S19 E48
25 0923	N11 E11	25 1012	S28 E08	25 1034	N11 E11	25 1136	S27 E06	25 1143	S17 E04	25 1155E	S28 E07
25 1208	N22 W01	25 1418	S28 E06	25 1420E	S27 E08	25 1439E	S28 E07	25 1459	S28 E05	25 1501	S28 E03
25 1541	N24 W19	25 1544	N25 W21	25 1556	S29 E06	25 1603E	N26 W19	25 1615	S27 E04	25 1631E	N23 W20
25 1639	N23 E01	25 1645	N14 E40	25 1706	S29 E03	25 1735	N19 W08	25 1737	N20 W05	25 1739	N15 W14
25 1745E	N17 W08	25 1752E	N17 W09	25 1856	N24 W22	25 1927	N24 W21	25 1930E	N25 W20	25 1939	S29 E02
25 1941E	N24 W22	25 1941E	S28 E04	25 1955	N26 W21	25 2033	N26 W21	25 2127	N26 W21	25 2133	N25 W23
25 2250	N23 W08	25 2325	N26 W21	26 1100	S18 E57	26 1330	N22 W18	26 1350E	N21 W12	26 1653	N23 W18
26 1655	N22 W12	26 1715	S18 E50	26 1846	N11 W78	26 1937	N25 W36	26 1955	S25 E40	26 2042	N11 W78
26 2200U	N24 W37	27 0720E	N23 W44	27 1213	N22 W49	27 1218	N27 W42	27 1300E	N22 W47	27 1327	N22 W48
27 1347	N24 W47	27 1438	N26 W45	27 1840	N23 W46	27 1930	S21 E04	27 2320	N23 W50	28 1530	S20 W06
28 1558E	S22 W07	28 1800E	N24 W64	28 1800E	N19 W43	28 1800E	S28 W39	28 1812	N22 W64	28 1813	N21 W64
28 1934	N25 W59	28 2132	S31 W38	28 2359	S30 W47	29 0945E	S28 W43	29 1455	S28 W55	29 1514	N10 E55
29 1519E	N09 E56	29 1742	S30 W46	29 1750E	S30 W47	29 1803	S30 W46	29 1812E	S32 W46	29 1947	S30 W56
29 1949E	S28 W57	29 1949E	S30 W51	29 2001	S30 W51	29 2020	S26 W56	29 2026E	S28 W58	29 2202	S29 W57
29 2222	S29 W57	29 2253	N10 E50	29 2255	S21 W25	29 2304	S19 E09	30 0905	S20 E04	30 0906	N12 W19
30 1333	S19 E03	30 1431E	S30 W61	30 1529	S22 E02	30 1546E	S30 W62	30 1603	S22 E02	30 1603	S22 E00
30 1623	S21 W36	30 1625	S21 W37	30 1626	N28 W90	30 1626	N28 W90	30 1629E	N27 W90	30 1629E	S22 W35
30 1711E	S30 W60	30 1721	N28 W90	30 1832	S27 W66	30 1832	S30 W62	30 1844	S20 W03	30 2006	S29 W70
30 2006	S28 W70	30 2025	S29 W71	30 2034	N06 E39	30 2054	S28 W66	30 2100E	S30 W65	30 2100E	S32 W64
30 2140	S31 W70										

INTERVALS OF NO FLARE PATROL OBSERVATION

For Preceding Solar Flare Table

NOVEMBER 1967



Observatories included in total patrol:

Arcetri	Catania	Houston	Locarno	Monte Mario
Bucharest	Haleakala	Huancayo	Lockheed	Wendelstein
Capri-F (German)	Herstmonceux	Istanboul	McMath-Hulbert	Zürich

The times when there was no cinematographic or visual patrol are shown by the darker areas. The rest of the shaded areas are times of visual patrol only.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1967

NOV. 1967	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} W_m^{-2} $(c/s)^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
1	408	SANM	3	1548.3	1548.7	.9	47.5	26.0		
	184	BOUL	6	2120	2120.5	2			2	
	184	BOUL	42	2258.6	2311.5	34 D			1	
2	184	BOUL	44	1335 E	1943	475 D			2	
	408	SANM	45	1336.7	1338.4	3.3	44.5	32.0		
	2800	OTTA	1	1337	1337.5	3	2.4	1.2		
	1415	SGMR	4	1337.2	1337.4	10.4	13.6	4.5		
	606	SGMR	4	1337	1337.5	10.8	22.6	7.5		
	8800	SGMR	3	1553.1	1553.5	1.1	15.0	7.5		
	4995	SGMR	3	1553.1	1553.5	1.9	11.5	5.7		
	2700	PENT	21	2116	2120	16	4.2	2.1		
	2700	PENT	1	2118.5	2119	1	2.0	1.0		
3	7000	SAOP	45	1203.1	1206.2	4.7	31.2	62.4		
	8800	SGMR	3	1205.6	1206.2	1.6	50.0	12.0		
	4995	SGMR	3	1205.6	1206.2	1.9	36.0	9.0		
	2695	SGMR	3	1205.6	1206.2	1.5	9.0	2.0		
	1415	SGMR	3	1205.6	1206.2	1.4	9.5	2.0		
	606	SGMR	1	1205.6	1206.2	1.4	1.1	.5		
	7000	SAOP	29	1207.8		26.2				
	2700	PENN	1	1410.6	1411.6	6.2	1.6	0.4		
	2700	PENN	3	1626.9	1628.4	5.6	8.9	2.1		
	10700	PENN	3	1627.9	1628.5	1.8	8.0	4.8		
	2800	OTTA	3	1627.7	1628.5	1.8	8.8	4.4		
	328	PENN	45	1627.1	1628.6	3.3	15.7	4.2		
	960	PENN	1	1628.1	1628.9	2.1	.6	0.3		
	184	BOUL	6	1628	1629	1.5			1	
	2800	OTTA	29	1629.5		4 D	2.4			
	606	SGMR	3	2021.8	2022.7	7.0	16.2	8.1		
	8800	SGMR	1	2022.2	2022.6	3.5	2.9	1.4		
	4995	SGMR	1	2022.1	2022.6	3.5	4.3	2.2		
	2695	SGMR	1	2022.3	2022.9	1.3	1.1	.6		
	1415	SGMR	1	2022.3	2022.5	3.3	.8	.4		
	2700	PENT	3	2327	2328.2	2	8.4	4.0		
	184	BOUL	6	2328	2328.5	2			2	
4	7000	SAOP	45	1150.8	1152	4.7	40.5	81.0		
	8800	SGMR	45	1151.7	1153.1	3.8	15.0D	5.0D		
	4995	SGMR	45	1151.7	1153.1	5.3	115.0	20.0		
	2695	SGMR	45	1151.7	1153.2	6.8	130.0	25.0		
	1415	SGMR	45	1151.7	1153.1	6.5	55.0	12.0		
	606	SGMR	45	1151.8	1153.3	7.2	23.0	5.0		
	7000	SAOP	29	1155.5		8.5				
	408	SANM	27	1234	1252.9	113	50.0	12.0		
	184	BOUL	44	1335 E	1420	228 D			1	
	408	SANM	3	1446.3	1447.4	1.6	66.0	35.5		
	408	SANM	3	1450.6	1451	1	39.0	22.0		
	408	SANM	3	1502.9	1503.3	.8	47.5	26.0		
	2700	PENT	1	2148.5	2150	3	1.6	0.8		
5	408	SANM	42	1121.4	1132	32.8	163.0	51.5		
	408	SANM	45	1723	1724.5	2	246.0	123.0		
	2700	PENN	20	1731.2	1746.6	95	3.1	2.1		
	7000	SAOP	40	1920		200 D				
	408	SANM	45	1950.1	1950.5	1.6	272.0	138.0		
	7000	SAOP	3	2053.5	2054.9		19.2	38.5		
	606	SGMR	4	2120.4	2121.6	2.6	14.5	5.0		
6	2800	OTTA	20	1655	1830	170	4.0	2.0		
				1655	1725	70	2.4			
				1805	1830	100	4.0			
	408	SANM	3	1722.1	1722.5	1	144.0	75.0		
	184	BOUL	6	1749	1749	1			3	
	408	SANM	43	1950	2032.4	50	44.5	11.0		
7	184	BOUL	42	1429	1429	3			1	
8	7000	SAOP	3		1254.5		19.7	39.5		
	8800	SGMR	3	1254	1254.3	1.8	21.5	5.0		
	4995	SGMR	3	1254	1254.3	1.9	35.0	8.0		
	2695	SGMR	3	1254	1254.3	1.9	11.9	3.0		
	1415	SGMR	45	1254.5	1255.2	1.4	40.0	10.0		
	606	SGMR	1	1254	1255.1	3.0	1.5	.5		
	408	SANM	3	1746.3	1746.6	.8	40.0	22.5		
	408	SANM	45	1937.8	1940.9	4.2	22.0	12.0		
10	2800	OTTA	2	1327.2	1327.7	1	2.0	1.0		
	2800	OTTA	21	1355	1455	105	5.2	2.6		
	2700	PENN	1	1455.1	1455.6	1.0	1.5	0.7		
	2800	OTTA	20	1528	1529	7	2.6	1.3		
	2700	PENN	1	1528	1528.8	6.8	3.4	1.4		
	7000	SAOP	40	1600		300 D				
	2800	OTTA	21	1650	1915	220	7.6	3.8		
	10700	PENN	20	1652.8	1728.6	140	6.5	4.1		
	2700	PENN	20	1659.7	1850.3	205	6.9	3.5		
	408	SANM	45	1751.4	1754.6	7	24.5	11.0		
	606	SGMR	21	1809.2	1828.5	80.8	3.5	1.7		
	1415	SGMR	21	1816.5	1834.1	44.5	7.2	3.6		
	4995	SGMR	20	1817	1837.7	50.5	8.3	4.2		
	8800	SGMR	20	1818.5	1834	56.8	12.6	6.3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1967

NOV. 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
	2800	OTTA	45	1821	1834	31	18.4	8.4		
				1821	1824	6	4.0			
				1827	1834	25	18.4			
	2700	PENN	45	1821.6	1833.2	28.6	19.3	9.8		
	1415	SGMR	3	1822.9	1823.8	1.5	16.5	3.3		
	606	SGMR	40	1822.4	1826.7	5.7	18.0	6.0		
	2695	SGMR	20	1823	1834.6	32.7	23.4	11.7		
	960	PENN	1	1823.2	1823.8	.8	1.6	0.8		
	18	BOUL	6	1827	1832	10			1	
	184	BOUL	6	1831.5	1832	2			1	
	18	BOUL	41	1838		10			1	
	18	BOUL	6	1858	1903	5			1	
	18	BOUL	42	2305		48			1	
11	408	SANM	45	1232	1232.8	1.5	46.0	25.5		
	408	SANM	45	1241.3	1242	1.4	37.0	21.0		
	408	SANM	45	1247.2	1247.9	1.5	111.0	58.0		
	2800	OTTA	20	1600	1705	180	4.0	2.0		
	18	BOUL	43	1608		480			1	
12	408	SANM	3	1031.5	1032	.8	192.0	98.0		
	408	SANM	3	1206.3	1206.6	1	253.0	129.0		
	2800	OTTA	25	1330		90	7.8			
	2800	OTTA		1330	1350	55	17.0			INCOMPLETE
	1415	SGMR	4	1339.8	1347.8	48.2	42.3	14.3		
	8800	SGMR	20	1341.8	1350	48.2	7.8	3.9		
	4995	SGMR	20	1341.8	1348.9	46.3	17.5	8.7		
	2695	SGMR	20	1341.8	1348.8	46.2	22.2	11.1		
	606	SGMR	45	1343.2	1348.2	35.2	17.4	7.5		
	7000	SAOP	3	1647.5	1649.5	5.0	15.6	31.1		
	2800	OTTA	1	1648.5	1649.3	2	2.4	1.8		
	408	SANM	3	1835	1835.5	1	69.0	37.0		
	486	WASH	45	2154	2155	2	60.0			
13	18	BOUL	43	1441		574			1	
	2700	PENN	20	1715.8	1807.6	139.3	3.7	1.8		
	2800	OTTA	21	1803	1810	85	4.4	2.2		
	4995	SGMR	20	1806.5	1811.7	34.5	23.4	4.7		
	2700	PENN	20	1807.6	1811.6	36.4	14.3	2.8		
	8800	SGMR	20	1808.9	1811.7	20.1	8.6	1.7		
	2800	OTTA	4	1808	1812	10	13.0	6.5		
	2695	SGMR	20	1808.6	1811.6	25.4	15.6	3.1		
	10700	PENN	20	1809.5	1811.7	20.5	10.5	5.2		
	7000	SAOP	3	1810.7	1812	2.8	11.2	22.4		
	1415	SGMR	1	1810.8	1811.9	5.6	2.8	1.4		
	606	SGMR	40	1810.7	1811.1	.6	2.9	1.4		
	408	SANM	40	1823.1	1824	7.3	27.0	15.0		
14	408	SANM	41	1408.9	1411	2.4	46.0	25.0		
	2700	PENN	24	1555.6	2000	290 D	3.0D			
	2700	PENN	45	1841.6	1842.6	1.6	9.2	3.7		
	184	BOUL	8	1903	1922	25			2	
15	2700	PENN	20	1804.8	1806.3	8.7	4.9	1.2		
	2800	OTTA	1	1805	0806.2	4	3.6	1.4		
	2700	PENN	20	1835.5	1916.8	97.0	2.7	1.3		
16	7000	SAOP	1	0929.2	0930	1.0	6.8	13.6		
	7000	SAOP	28	1003.5	1006	2.5	8.2	16.3		
	7000	SAOP	3	1006.2	1007.8	4.0	43.6	87.2		
	7000	SAOP	29	1010	1010	16.4	13.6	27.2		
	2800	OTTA	25	1310		75	7.8			
	8800	SGMR	28	1327.8	1329	1.2	6.7	3.0		
	4995	SGMR	28	1327.8	1328.9	1.1	5.4	2.0		
	10700	PENN	3	1328	1329.2	9.3				
	4995	SGMR	3	1328.9	1329.1	.6	19.8	5.0		
	8800	SGMR	3	1329	1329.1	1.2	29.4	7.0		
	4995	SGMR	29	1329.5	1329.5	7.0	6.5	3.0		
	2800	OTTA	1	1329	1329.2	.5	1.6	0.8		
	8800	SGMR	29	1330.2	1330.2	10.1	8.4	4.0		
	2800	OTTA	20	1600	1606	20	2.0	1.0		
	2800	OTTA	20	1705	1730	55	3.0	1.5		
	408	SANM	45	1811.6	1813.4	9.4	70.0	23.5		
	2800	OTTA	20	1843	1844.6	13	3.0	1.5		
	18	BOUL	6	1941	1946	8			2	
	18	BOUL	6	1949	1951	3			2	
	2700	PENT	25	2000		10	6.0			
	2700	PENN	40	2001.4		45.6				
	606	SGMR	20	2001	2006.5	21.0	1.3	.5		
	10700	PENN	40	2002		45				
	1415	SGMR	20	2002.8	2006.5	30.1	5.2	2.0		
	8800	SGMR	20	2004.3	2009.5	25.7	4.1	2.0		
	4995	SGMR	20	2004.4	2009.8	22.6	5.8	3.0		
	2695	SGMR	20	2004.4	2006.5	28.6	5.7	2.5		
	2700	PENT	1	2005.8	2006	2	4.8	2.4		
	18	BOUL	6	2028	2031	5			1	
	2700	PENT	1	2054.5	2054.8	1	3.2	1.6		
	2700	PENT	46	2134	2134.2	10	26.0	10.0		
				2134	2134.2	3	26.0			
				2137	2138.8	7	17.0			
	2700	PENT	29	2144		75	4.4	2.2		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1967

NOV. 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
	2700	PENT	1	2146.5	2148	3	4.4	2.2		
17	408	SANM	3	1008.8	1009	.6	37.0	21.0		
	408	SANM	3	1019.3	1019.9	.7	53.0	29.0		
	2800	OTTA	24	1310		80	10.8			
	7000	SAOP	20	1353.5		57.0	11.2	22.3		
	2695	SGMR	3	1449.9	1451.3	3.0	21.7	7.2		
	1415	SGMR	45	1449.1	1451.1	3.4	35.3	8.5		
	606	SGMR	3	1449.9	1450.8	3.2	8.3	2.8		
	2800	OTTA	4	1450	1451.3	2.5	20.0	10.0		
	2800	OTTA	29	1452.5		11	4.2	2.0		
	2695	SGMR	29	1452.9	1452.9	7.2	3.5	1.8		
	1415	SGMR	29	1452.5	1452.5	8.0	3.8	1.9		
	408	SANM	3	1609	1609.6	1.6	162.0	84.0		
	408	SANM	45	1623.6	1624.6	1.6				OFF SCALE
	408	SANM	45	1658.8	1659.5	2.5				OFF SCALE
	408	SANM	45	1727.5	1728.5	2	53.0	29.0		
	606	SGMR	20	1740	1855	120.0	2.9	1.0		
	2800	OTTA	21	1750	1905	240	15.0	7.8		
	1415	SGMR	20	1750.5	1904	109.5	11.2	3.8		
	2700	PENN	20	1753.6	1850.6	106	9.6	4.8		
	2695	SGMR	20	1756.2	1851.5	103.8	15.4	5.1		
	4995	SGMR	21	1805	1851.6	107.5	6.8	2.3		
	8800	SGMR	21	1818.8	1851.5	61.5	7.4	2.5		
	10700	PENN	3	1850.8	1851.6	4.0	24.7	8.1		
	8800	SGMR	3	1850.5	1851.7	14.5	31.0	10.3		
	4995	SGMR	3	1850	1851.6	15.9	17.3	5.8		
	2800	OTTA	20	1850.5	1851.5	15	8.4	3.0		
	2700	PENN	20	1850.3	1851.6	12.9	6.8	3.0		
	7000	SAOP	3	1851.5	1852.5	2.5	19.4	38.9		
	7000	SAOP	29	1855.1		5.8	5.6	11.1		
18	8800	SGMR	20	1423.7	1429.9	10.5	10.6	3.5		
	4995	SGMR	20	1423.6	1429.9	9.0	13.7	4.5		
	408	SANM	3	1427.5	1427.7	.9	43.0	24.0		
	408	SANM	3	1435.7	1436.1	.8	41.0	23.0		
	408	SANM	41	1440	1442	2.9	121.0	39.0		
	408	SANM	3	1450	1450.6	1	69.0	37.0		
	408	SANM	45	1528.2	1530.3	4.3	77.0	46.0		
	408	SANM	41	1715	1715.5	2	57.0	23.5		
	408	SANM	41	1720.9	1722.8	2.5	76.0	31.0		
	2700	PENN	20	1751	1851	122	4.7	2.3		
19	408	SANM	45	1025	1030.5	13.5	34.0	16.0		
	408	SANM	40	1133.2	1134.5	5.7	20.0	15.5		
	15400	SGMR	3	1214.3	1214.6	1	12.0			PERCENT INCR
	8800	SGMR	3	1214.4	1214.8	1.7	53.8	13.5		
	7000	SAOP	3	1214.8	1215.4	3.2	21.3	107.7		
	4995	SGMR	3	1214.2	1214.9	3.9	46.8	9.5		
	7000	SAOP	29	1218		7.2	5.3	10.6		
	408	SANM	3	1325.7	1326.1	.7	41.5	23.0		
	8800	SGMR	3	1517.8	1518.5	1.1	16.0	4.0		
	7000	SAOP	3	1517.8	1518.9	2.7	11.6	23.2		
	4995	SGMR	3	1518.1	1518.4	1	13.0	3.0		
	2800	OTTA	1	1518.2	1518.5	.8	4.4	2.2		
	2695	SGMR	1	1518.2	1518.5	2.1	5.3	2.0		
	184	BOUL	6	1605	1605	.5			1	
	606	SGMR	1	1807.5	1807.6	.7	2.3	.8		
20	408	SANM	3	1234.4	1234.7	.6	62.5	34.0		
	184	BOUL	42	1435	1436	8			1	
	408	SANM	45	1827.2	1827.6	2	52.0	36.0		
	486	WASH	41	2117	2117	3	50.0			
21	7000	SAOP	3	1231.8	1232.2	4.2	10.8	21.6		
	15400	SGMR	1	1232.3	1232.6	.8	1.5			PERCENT INCR
	8800	SGMR	3	1232.1	1232.4	3.1	18.3	9.1		
	4995	SGMR	1	1232.1	1232.3	2.3	7.2	3.6		
	2695	SGMR	1	1318.8	1320.2	4.0	4.8	2.4		
	4995	SGMR	3	1319	1319.6	1.2	8.3	4.1		
	2700	PENN	20	1640	1649.2	27.2	5.4	2.6		
	2800	OTTA	2	1648	1649	4	1.8	0.9		
	606	SGMR	40	1738.8	1941.3	217.2D	57.4	28.7		
	1415	SGMR	40	1802.3	1806.1	22.2	7.0	2.3		
	408	SANM	27	1842	2032.5	168 D	77.0	45.0		
	408	SANM	3	1854	1854.4	1	231.0	118.0		
22	408	SANM	40	1152.5	1210.9	19.3	43.5	21.0		
	2800	OTTA	20	1525	1540	50	4.6	2.3		
	10700	PENN	1	1536.7	1538	4.5	5.5	1.5		
	2700	PENN	20	1536	1538.1	30.3	3.9	1.9		
	2800	OTTA	20	1745	1810	70	2.8	2.0		
	10700	PENN	20	1829.2	1831.5	8.6	5.7	2.9		
	2700	PENN	20	1831.4	1839.4	15.0	2.0	1.0		
	2700	PENN	45	1905.9	1907.4	13.1	109.0D	5.0D		
	10700	PENN	20	1906.8	1909.7	21.2	15.5	3.1		
	4995	SGMR	20	1906	1909	14.5	27.3	13.6		
	2800	OTTA		1906.5	1907.7	3.5	175.0			SPIKES
	2695	SGMR	3	1906.7	1907.4	5.8	66.6	33.3		
	8800	SGMR	3	1907.5	1908.8	2.4	21.1	10.5		
	7000	SAOP	3	1908.5	1910	2.3	13.2	26.3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1967

NOV. 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
	2800	OTTA	29	1910		15	3.4	2.0		
23	2800	OTTA	21	1343	1350	15	2.8	1.4		
	2800	OTTA	1	1344.5	1346	3.5	4.0	2.0		
	10700	PENN	20	1719.5	1815	160	7.6	3.8		
	10700	PENN	3	1857.7	1858.2	5.4	22.4	5.1		
	2700	PENN	1	1857.8	1858.1	1	2.0	1.0		
24	2800	OTTA	41	1456	1542	50	25.0			INTERFERENCE
	1415	SGMR	20	1750	1915.5	146.3	4.0	2.5		
	606	SGMR	20	1811	1915.5	125.5	3.6	2.0		
	2695	SGMR	20	1821	1915	118.2	8.8	6.0		
	4995	SGMR	20	1859	1916.3	77.8	7.4	4.0		
	8800	SGMR	20	1900.1	1915	85.9	8.6	5.5		
	2800	OTTA	20	1900	1915	85	5.4	2.7		
	2700	PENT	20	2050	2105	45	2.4	1.2		
25	408	SANM	42	1235.5	1235.8	5.7	196.0	48.0		
	184	BOUL	6	1420	1420	1			1	
	2800	OTTA	20	1550	1600	60	2.6	1.3		
	2800	OTTA	20	1734	1739	20	3.6	1.8		
	408	SANM	3	2020	2020.5	1	50.5	28.0		
	408	SANM	45	2038.1	2038.6	1.4	68.0	36.5		
26	606	SGMR	40	1330	1432	149	155.0	51.6		
	408	SANM	47	1330	1515 U	140	2750.0			
	184	BOUL	42	1502	1510	16			1	
	1415	SGMR	40	1514	1514.7	45.0	32.3	10.8		
	486	WASH	45	1535		22	500.0D			
	408	SANM	42	1550	1554.5	50	179.0	36.0		
	2800	OTTA	20	1653	1655.5	15	2.6	1.0		
	1415	SGMR	40	1737.5	1751.7	28.3	112.0	37.3		
	408	SANM	45	1746.7	1748	2.3	66.0	35.5		
	4995	SGMR	20	1806.8	1819.1	33.2	5.0	2.5		
	1415	SGMR	20	1816.5	1821.5	18.0	2.8	1.4		
	606	SGMR	40	1816.4	1820.8	16.9	30.0	7.0		
	2800	OTTA	21	1817	1910	75	2.6	2.0		
	2800	OTTA	2	1817.5	1819	4	5.0	3.0		
	2695	SGMR	20	1818	1821.7	15.1	3.1	1.5		
	2800	OTTA	1	1938	1938.5	3	2.8	1.4		
27	606	SGMR	20	1438.8	1451.8	16.2	2.2	1.0		
	4995	SGMR	20	1439.4	1454	21.6	3.6	2.0		
	2695	SGMR	20	1439	1455	18.4	5.4	2.5		
	1415	SGMR	20	1439.8	1449	14.8	2.0	1.0		
	1415	SGMR	20	1551	1613.5	27.2	3.0	1.5		
	606	SGMR	20	1553.5	1614.8	27.5	1.5	.5		
	2700	PENN	20	1558.8		34		2.0D		
	2800	OTTA	20	1559	1604	50	7.0	3.5		
	8800	SGMR	1	1600	1601.8	5.0	6.1	2.5		
	4995	SGMR	22	1600	1602.7	10.2	8.5	4.0		
	2695	SGMR	22	1600.2	1602.8	10.6	16.7	8.0		
	2800	OTTA	46	1601	1601.8	2.5	13.0	6.5		
	2800	OTTA	40	1825	1843	35	5.0			
	408	SANM	40	1845	1935.5	111.7	67.0	19.0		
	1415	SGMR	20	1928	1937.2	26.0	3.4	1.5		
	606	SGMR	40	1928	1937.2	26.0	14.8	5.0		
	184	BOUL	42	1937	2024	49			1	
	2700	PENT	21	2008	2020	50	5.8	2.9		
	8800	SGMR	20	2009	2011.5	8.3	3.0	1.5		
	2695	SGMR	22	2009	2009.5	9.0	5.2	2.0		
	4995	SGMR	20	2010.9	2011.7	15.1	6.3	3.0		
	2700	PENT	2	2010.5	2011	1.5	5.4	2.7		
	408	SANM	45	2036.7	2043.2	8.3	80.0	50.0		
	606	SGMR	45	2039.5	2041.5	7.3	135.0	35.0		
	2800	OTTA	1	2040.5	2048.9	4	4.0	1.6		
	1415	SGMR	4	2040.2	2041.3	4.9	12.3	4.1		
28	2800	OTTA	21	1520	1545	50				
	2700	PENN	20	1520.4	1537.6	46.6	19.2	2.8		
	1415	SGMR	45	1531.4	1538.3	10.3	33.8	10.0		
	606	SGMR	45	1531.4	1537.8	13.9	120.0	25.0		
	7000	SAOP	20	1533	1538.5	38.8	12.3	24.6		
	4995	SGMR	20	1533.7	1537.6	18.5	11.2	5.0		
	2695	SGMR	20	1533.7	1537.6	18.5	22.4	10.0		
	408	SANM	45	1533.4	1538.1	8.1	178.0	91.0		
	2800	OTTA	4	1534	1537.5	10				
	960	PENN	45	1535	1538.3	7.2	6.1	2.1		
	184	BOUL	6	1535	1535	.5			1	
	486	WASH	45	1536	1539	8	240.0			
	328	PENN	5	1536	1537.5	4.3	14.7	7.3		
	184	BOUL	42	1835	1848	16			1	
29	2800	OTTA	20	1325	1335	105	9.8	4.4		
	1415	SGMR	20	1602.6	1612.9	20.6	8.6	2.9		
	10700	PENN	20	1605.6	1611.9	23.8	5.5	2.8		
	2700	PENN	20	1606.4	1612	48.4	17.6	3.0		
	4995	SGMR	20	1607.5	1611.8	18.8	23.4	8.0		
	2800	OTTA	4	1607.5	1612	12.5	19.0	9.0		
	2695	SGMR	20	1608.3	1612	43.7	13.6	4.5		
	2800	OTTA	29	1620		45	4.8	2.4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1967

NOV. 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
	1415	SGMR	3	1722.1	1722.3	1.1	11.4	5.7		
	606	SGMR	1	1722	1722.2	1.0	5.6	2.8		
	2700	PENT	20	1950	2030	90	4.0	2.0		
30	4995	SGMR	20	1327.4	1334	22.1	25.2	12.6		
	2800	OTTA	21	1328	1334	45	7.4	3.0		
	2700	PENN	3	1330.6	1334.2	7.1	8.4	3.0		
	2800	OTTA	3	1333	1334	2	8.6	4.3		
	2695	SGMR	20	1333.3	1334.2	10.7	9.0	4.5		
	2800	OTTA	21	1535	1625	115	5.4	2.4		
				1535	1550	35	3.2			
				1610	1625	80	5.4			
	2700	PENN	20	1620.9	1624.8	71.6	6.4	1.8		
	2800	OTTA	1	1622	1624.5	5	5.0	2.5		
	2800	OTTA	21	1820	1850	130	6.0	4.4		
				1820	1850	75	6.0			
				1935	1955	55	6.0			
	18	BOUL	6	1903	1906	4			1	
	2700	PENN	20	1942.8	1945.6	40.4	4.7	1.5		
	10700	PENN	3	1944.9	1945.7	1.9	9.1	3.8		
	2800	OTTA	1	1945	1945.5	1	2.4	1.8		
	2700	PENT	22	2052	2057	30	3.6	1.3		

SANM - Bursts recorded at 408 Mc/s by the Observatorio De Fisica Cosmica at San Miguel, Argentina.

Explanation of Type Code:

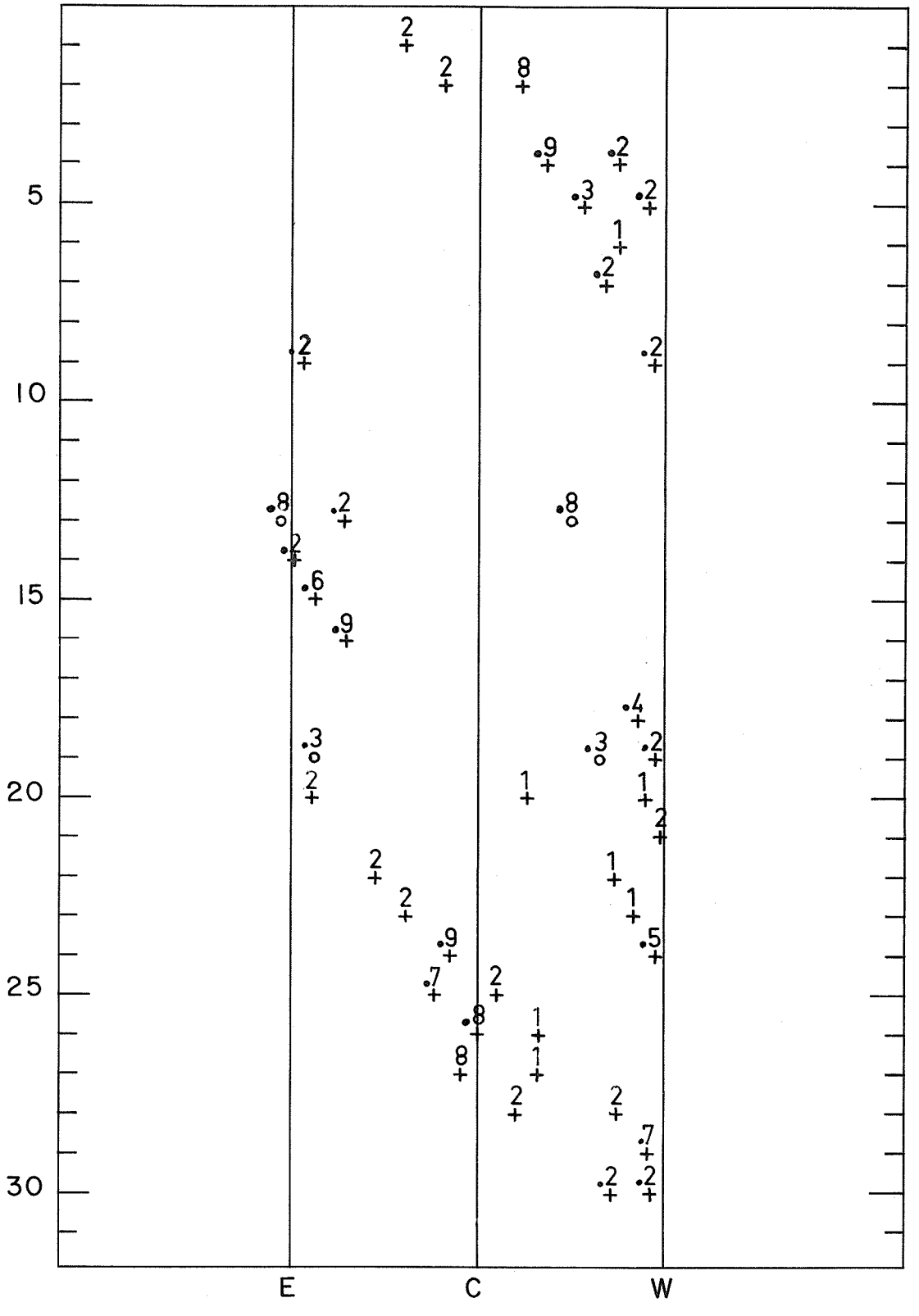
1 Simple 1	6 Minor	23 Simple 3AF	28 Precursor	41 Group of Bursts	46 Complex F
2 Simple 1F	7 Minor +	24 Rise	29 Post Burst Increase	42 Series of Bursts	47 Great Burst
3 Simple 2	20 Simple 3	25 Rise A	30 Post Burst Increase A	43 Onset of Noise Storm	48 Major
4 Simple 2F	21 Simple 3A	26 Fall	31 Post Burst Decrease	44 Noise Storm in Progress	49 Major +
5 Simple	22 Simple 3F	27 Rise and Fall	40 Fluctuations	45 Complex	

Three new frequencies are included in the above listing. Sagamore Hill (SGMR) has begun reporting at 15400 Mc/s. The flux values reported this time on this frequency are in percent increase. 18 Mc/s bursts observed at Boulder are also included. 7000 Mc/s is reported by the Radio Astronomy Group of the Universidade Mackenzie, Sao Paulo, Brazil (SAOP).

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

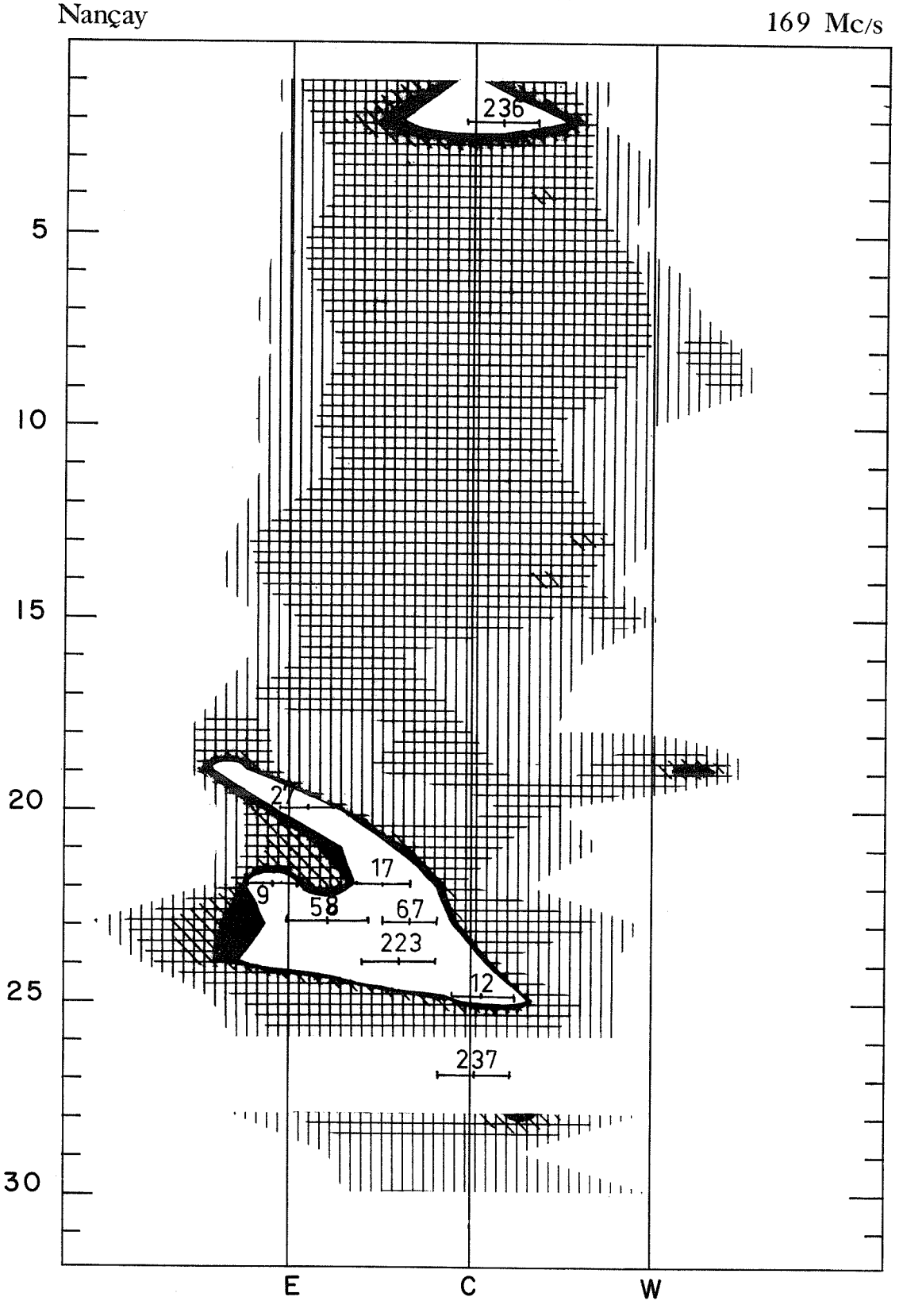
NOVEMBER 1967

Nançay 408 Mc/s



Because of the distance between the main lobes there is sometimes an ambiguity about the position East or West of the Center of Activity. The two possible positions are indicated by circles on the chart.

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION
NOVEMBER 1967

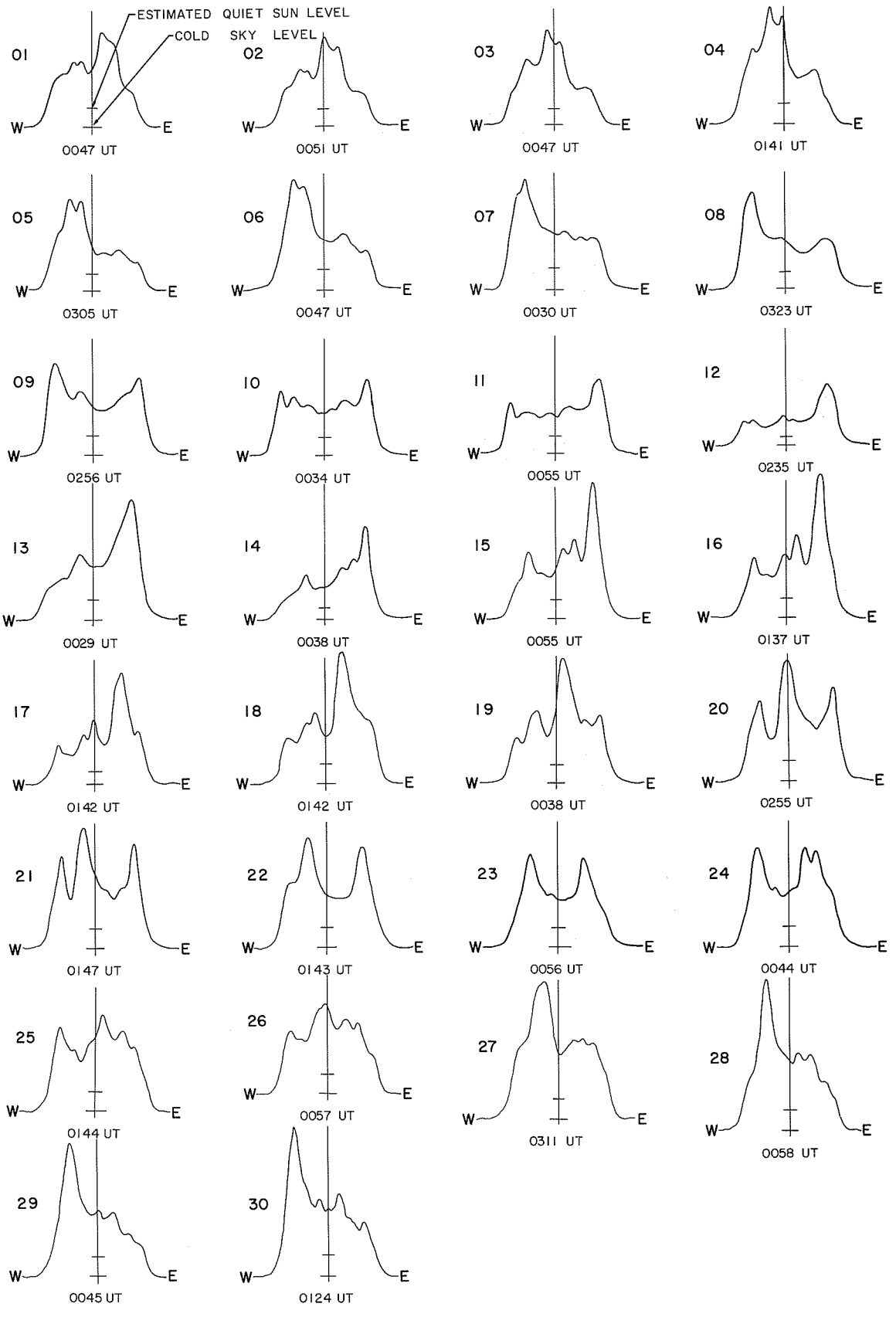


EAST-WEST SOLAR SCANS

NOVEMBER 1967

Fleurs, Australia

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

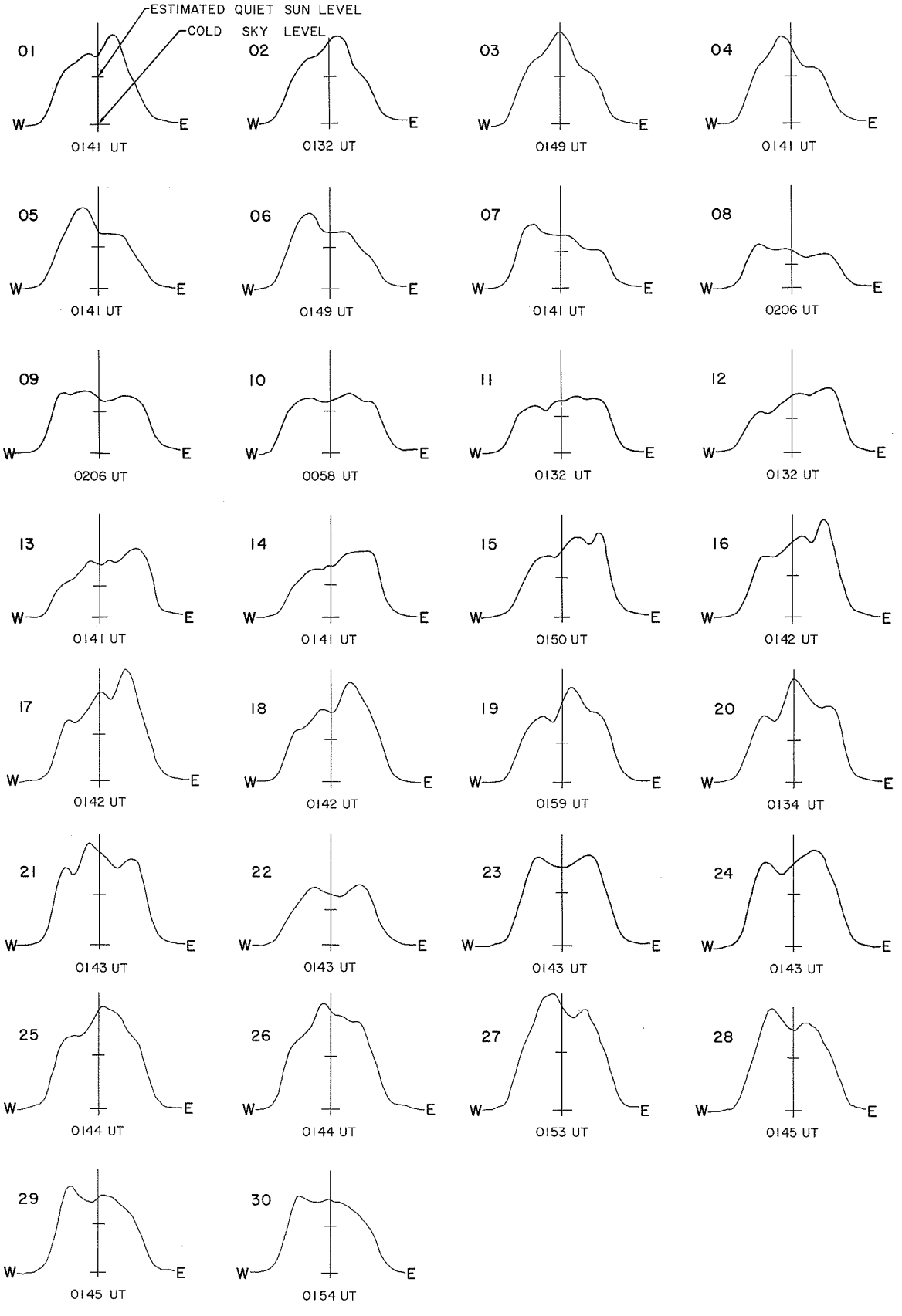


EAST-WEST SOLAR SCANS

NOVEMBER 1967

Fleurs, Australia

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



SOLAR PROTON EVENTS
(Provisional)
November, 1967

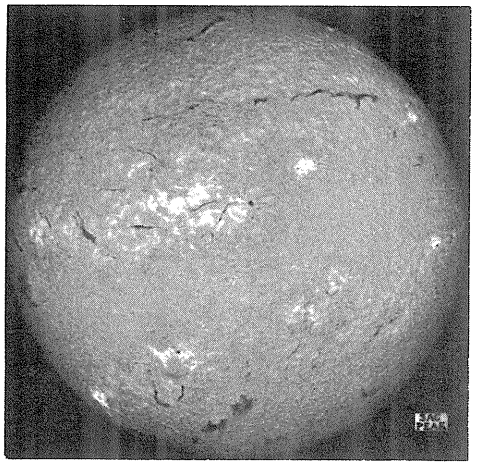
Event No.	Date Nov.	Time UT	Detector	Activity
1	1		Pioneer VI spacecraft 104 solar degrees west of earth	enhanced proton fluxes in energies 0.6-70 Mev greatly enhanced through Nov. 8
	2	0750	HF path - Ft. Monmouth, N. J. to Norway	phase advance increasing to 50 microseconds at maximum
		0718-1800	Vela satellite system	high and medium energy proton enhancement
		1030	Alaskan riometers, VLF paths, forward scatter	begin noise absorption and phase advances
		1800	Alaskan riometers, VLF paths, forward scatter	maximum
	3			event ends in earth's ionosphere
2	10	2123	Pioneer VII spacecraft 35 solar degrees east of the earth	enhanced proton fluxes in energies 0.6-70 Mev greatly enhanced through Nov. 17
	12	0600	HF path - Ft. Monmouth, N. J. to Norway	phase advance starts
		1700	HF path - Ft. Monmouth, N. J. to Norway	maximum
	13			event ends in earth's ionosphere

Table of Contents
for October 1967 Data

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

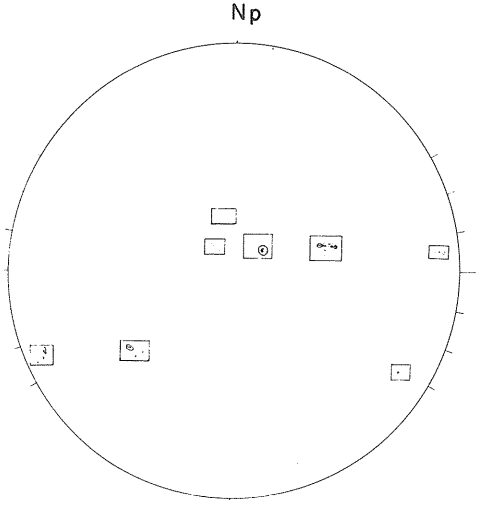
OCTOBER 1, 1967 (P=25.99, B_o=6.73, L_o=328.29)

SACRAMENTO PEAK Hα



1418 UT

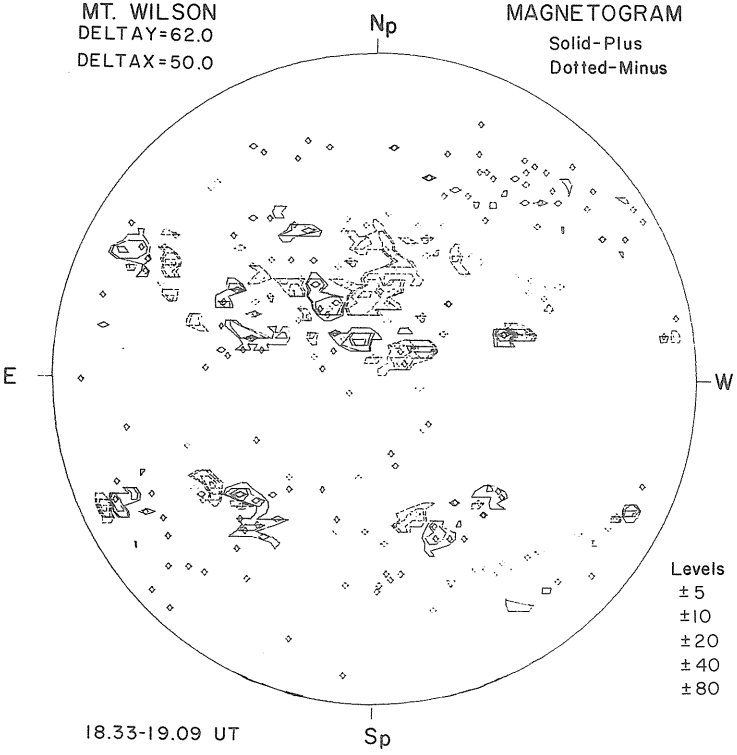
ESSA-BOULDER SUNSPOTS



1610 UT

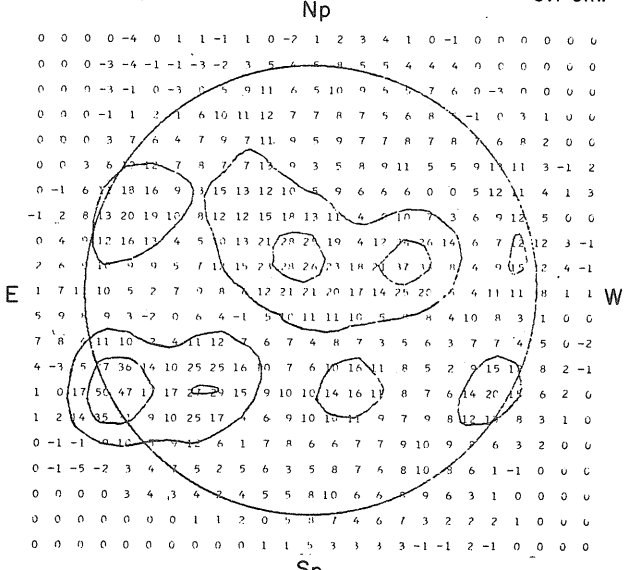
MT. WILSON
DELTAY=62.0
DELTAX=50.0

MAGNETOGRAM
Solid-Plus
Dotted-Minus



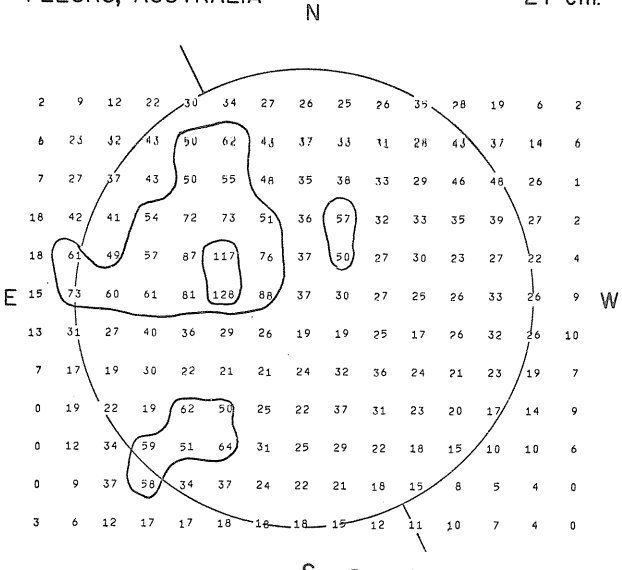
18.33-19.09 UT

STANFORD 9.1 cm.



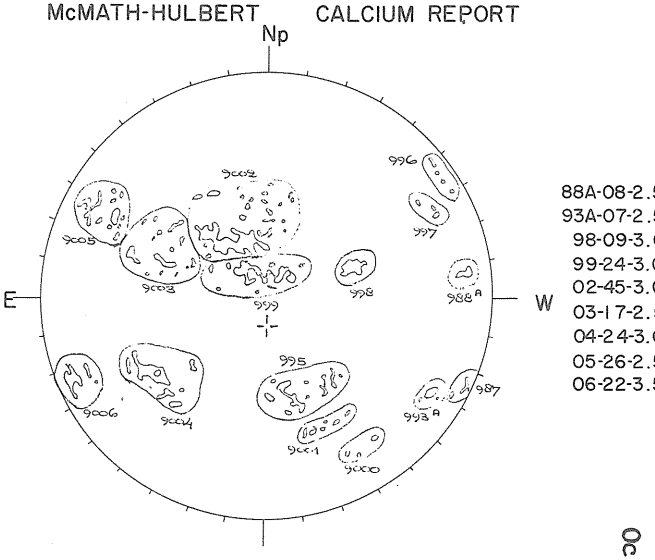
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



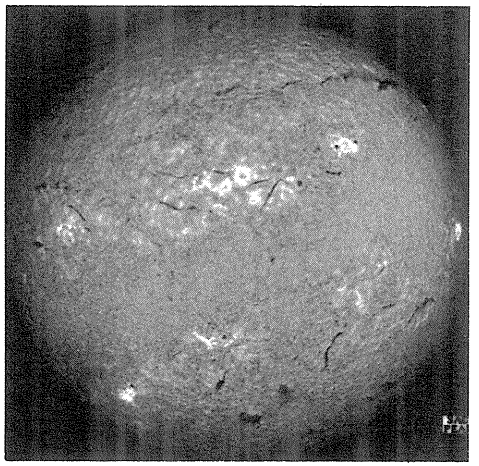
88A-08-2.5
93A-07-2.5
98-09-3.0
99-24-3.0
02-45-3.0
03-17-2.5
04-24-3.0
05-26-2.5
06-22-3.5

1316 UT

OCTOBER 2, 1967 (P=26.06, B_o=6.68, L_o=315.09)

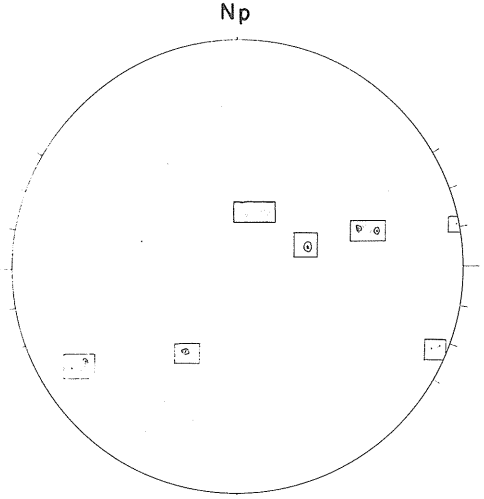
34
Oct 67

SACRAMENTO PEAK Hα



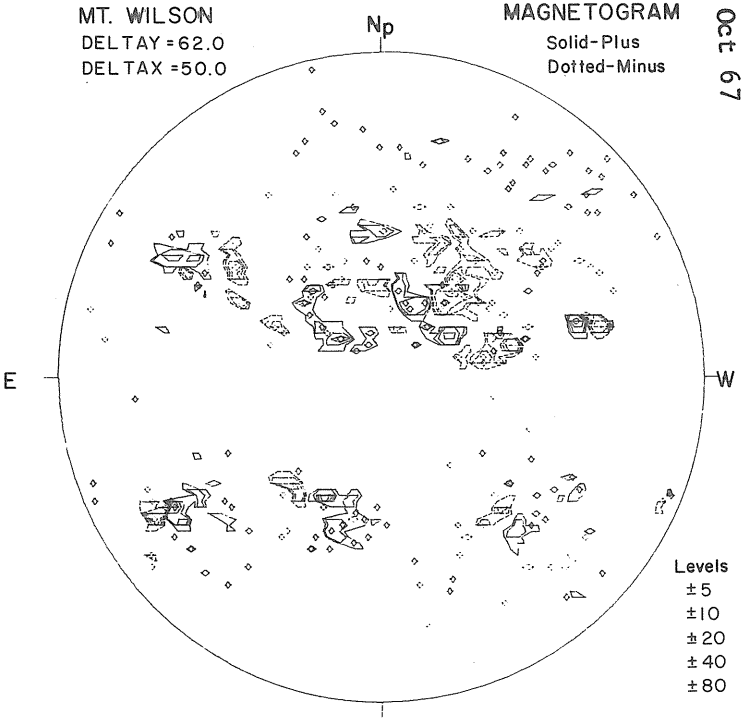
1505 UT

ESSA-BOULDER SUNSPOTS



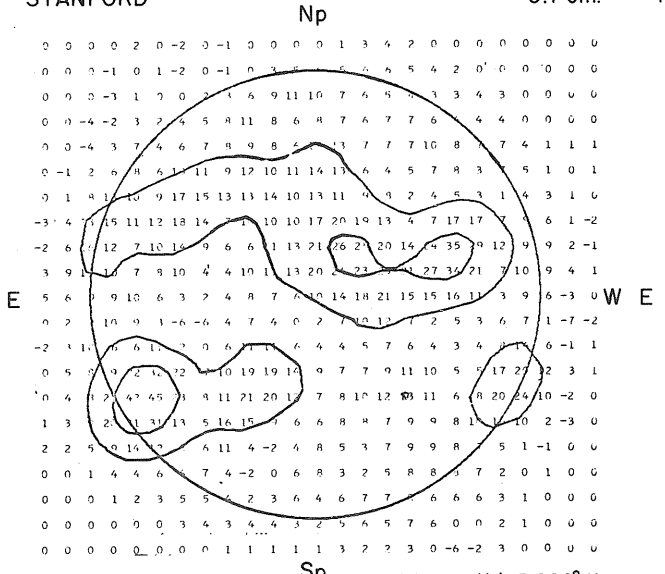
1550 UT

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



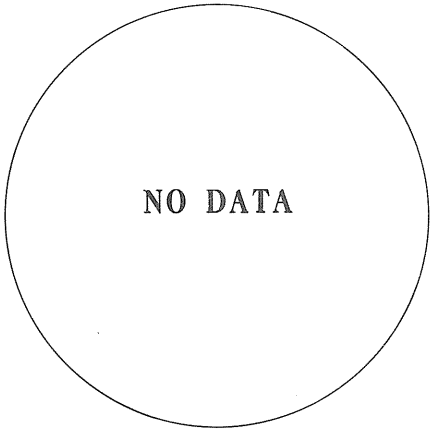
21.76-22.52 UT

STANFORD 9.1 cm.



20-21 UT Brightness Unit 5,000° K

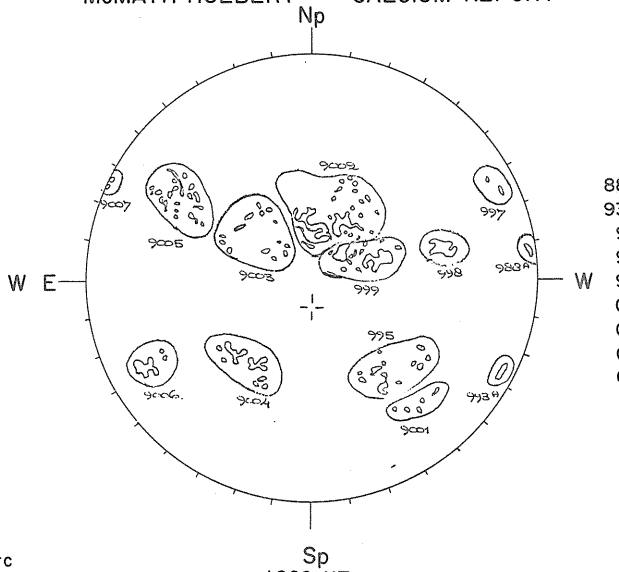
FLEURS, AUSTRALIA



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

21 cm.

McMATH-HULBERT CALCIUM REPORT

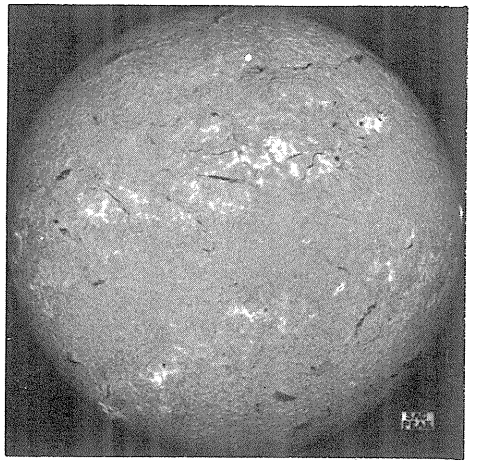


88A-04-2.5
93A-07-3.5
95-14-2.5
98-12-3.0
99-20-2.5
02-35-3.0
04-18-3.0
05 20 2.5
06-16-3.0

1220 UT

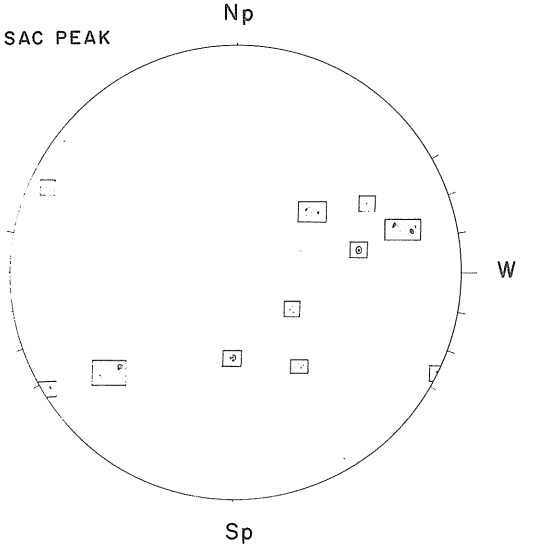
OCTOBER 3, 1967 (P=26.12, B_o=6.63, L_o=301.90)

SACRAMENTO PEAK Hα



1358 UT

ESSA-BOUDLER SUNSPOTS

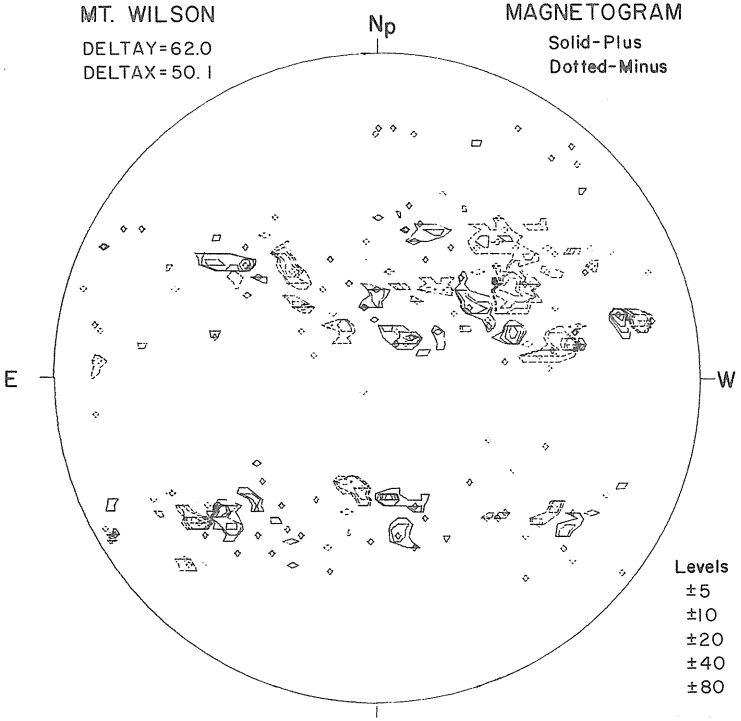


1430 UT

MT. WILSON MAGNETOGRAM

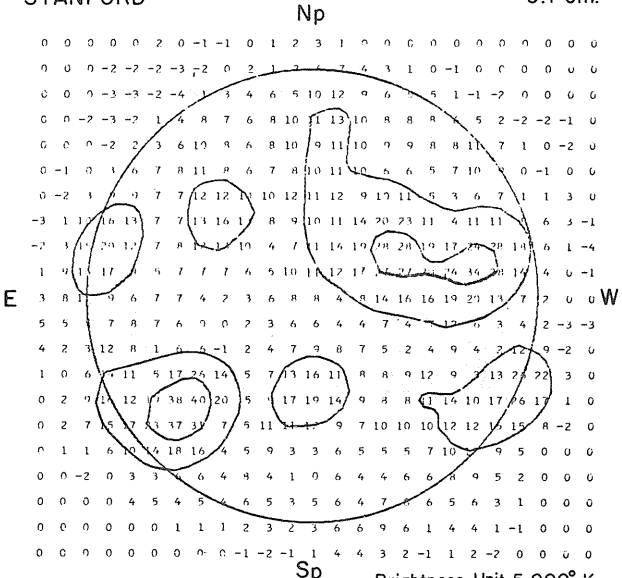
DELTAY=62.0
DELTAX=50.1

Solid-Plus
Dotted-Minus



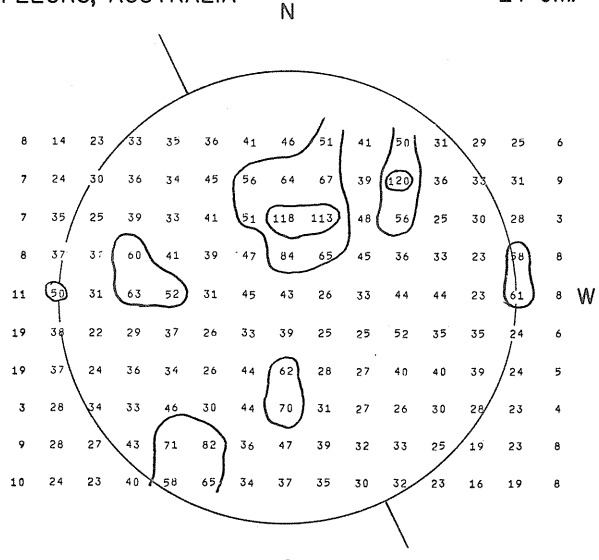
21.27-22.02 UT

STANFORD 9.1 cm.



20-21 UT Brightness Unit 5,000° K

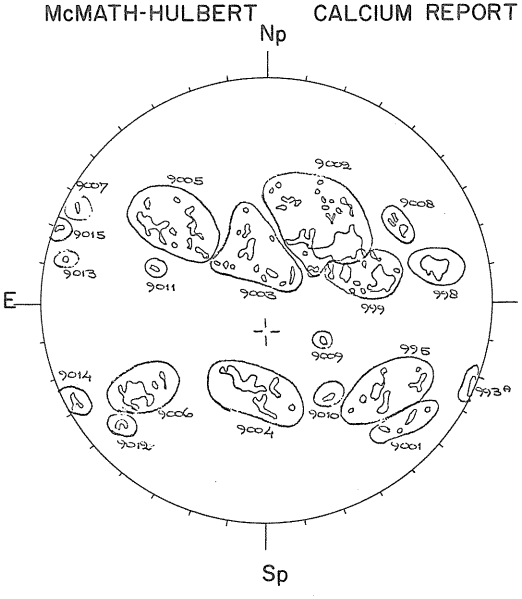
FLEURS, AUSTRALIA 21 cm.



Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

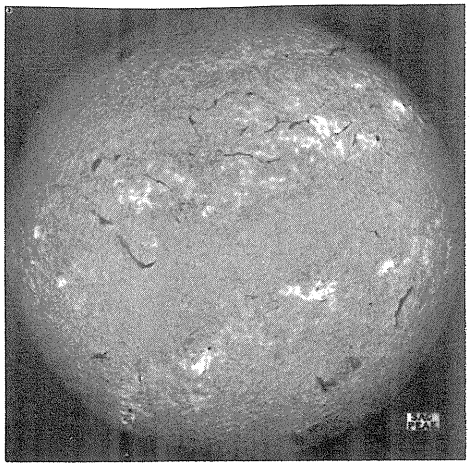


93A-12-4.0
95-21-2.5
98-19-3.5
99-23-3.5
02-47-3.0
04-27-3.0
05-23-2.5
06-24-3.5
07-04-2.5
08-05-2.5
10-02-2.5

1220 UT

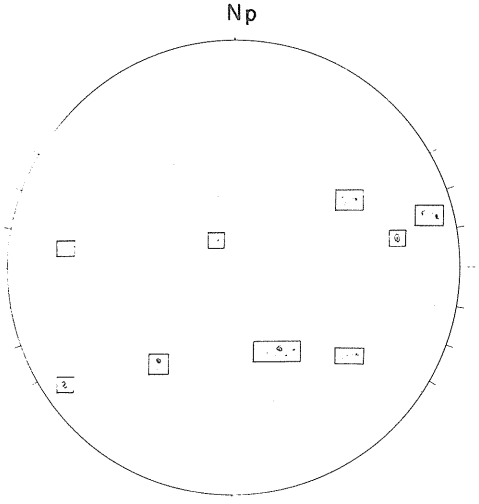
OCTOBER 4, 1967 (P=26.17, B_o=6.58, L_o=288.70)

SACRAMENTO PEAK Hα



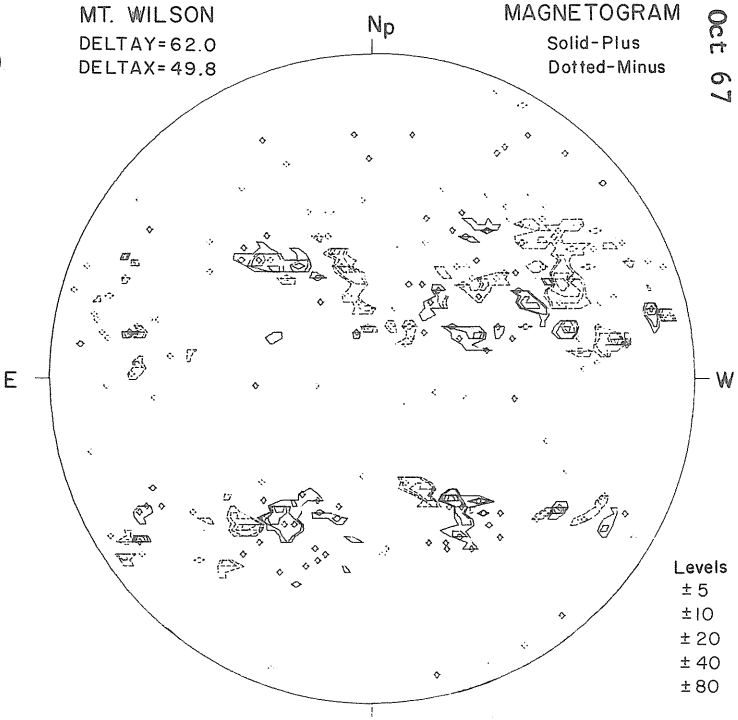
1724 UT

ESSA-BOULDER SUNSPOTS



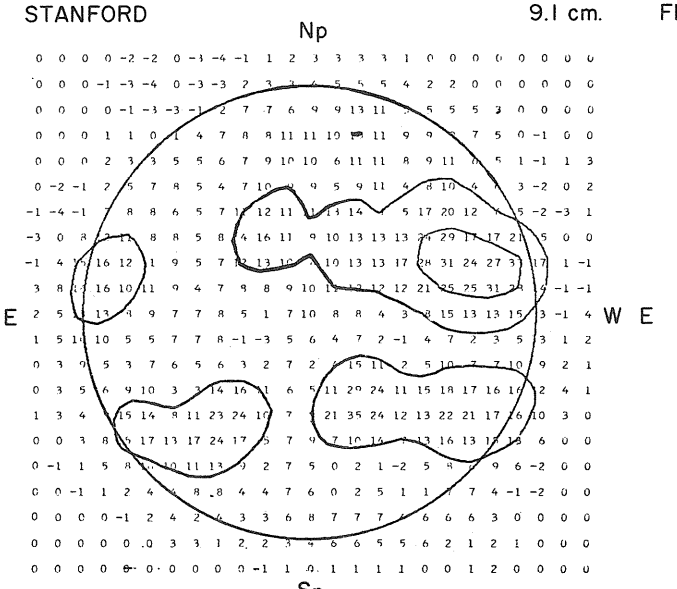
1755 UT

MT. WILSON MAGNETOGRAM
DELTAY=62.0
DELTAX=49.8
Solid-Plus
Dotted-Minus



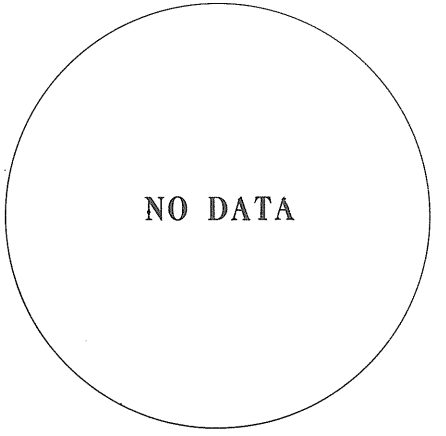
20.19-20.95 UT

STANFORD 9.1 cm.



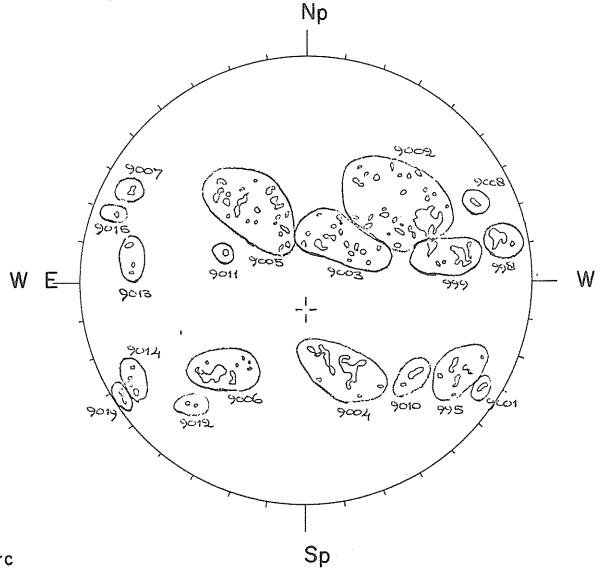
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

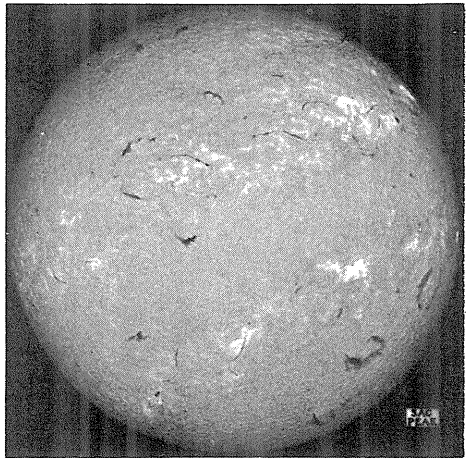


1210 UT

98-12-3.0
99-16-3.0
02-42-3.0
03-16-2.5
04-23-2.5
05-24-2.5
06-20-3.0
07-04-2.5
08-03-3.0
10-03-2.5

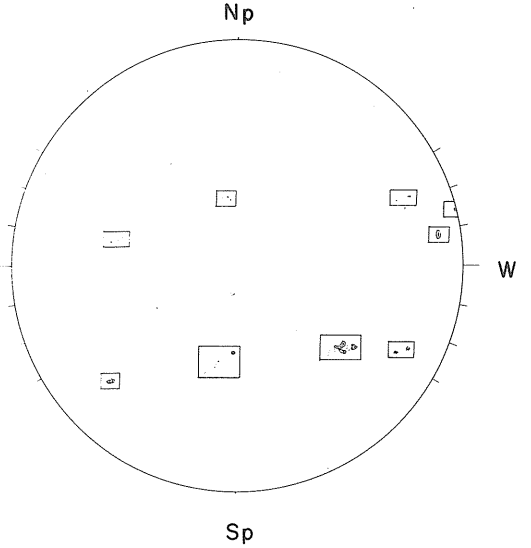
OCTOBER 5, 1967 (P=26.22, B_o=6.53, L_o=275.51)

SACRAMENTO PEAK Hα



1435 UT

ESSA-BOULDER SUNSPOTS

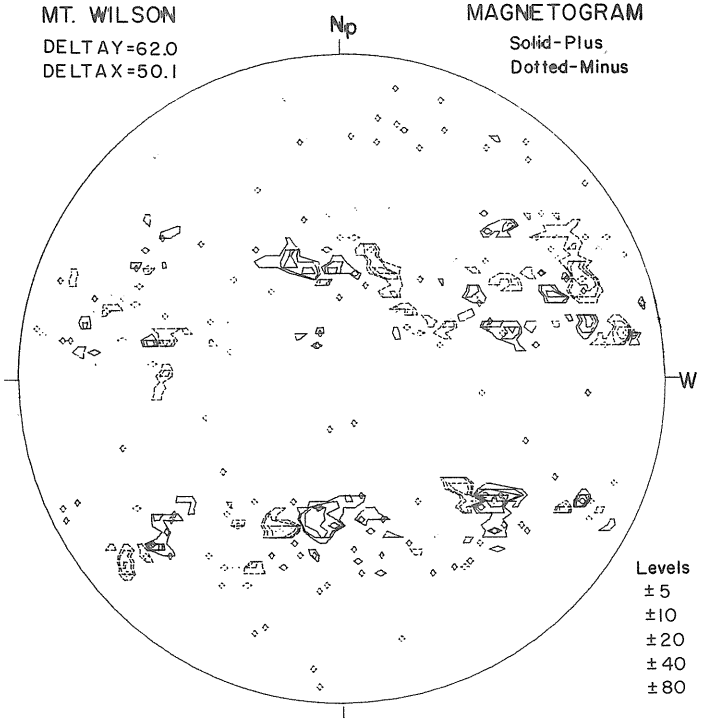


2110 UT

MT. WILSON MAGNETOGRAM

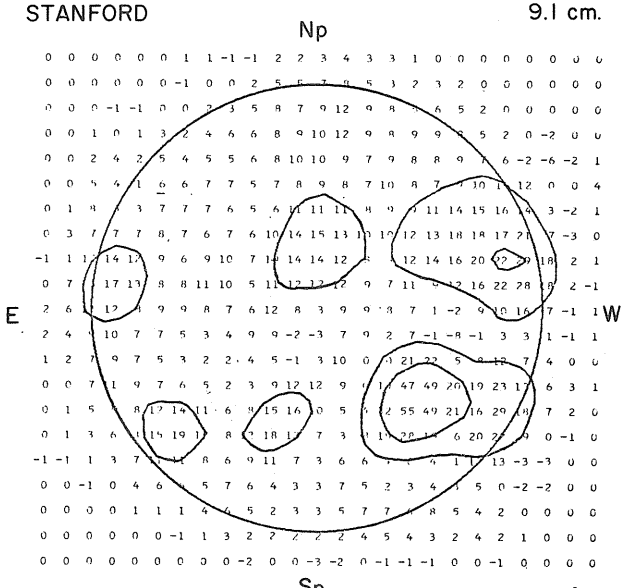
DELTAY=62.0
DELTAX=50.1

Solid-Plus
Dotted-Minus



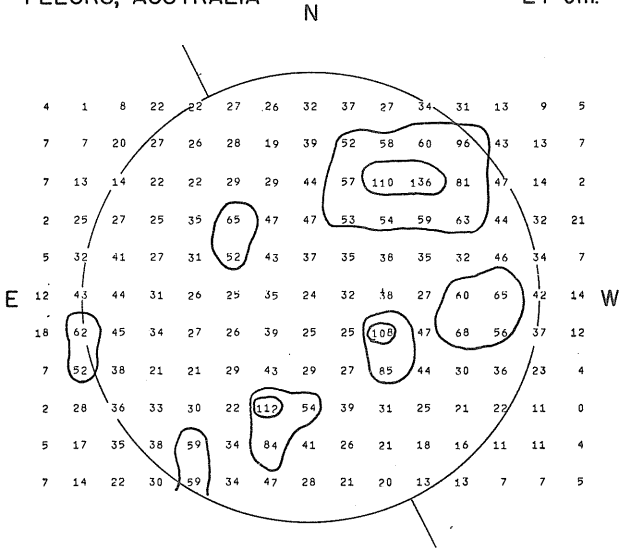
20.21-20.97 UT

STANFORD 9.1 cm.



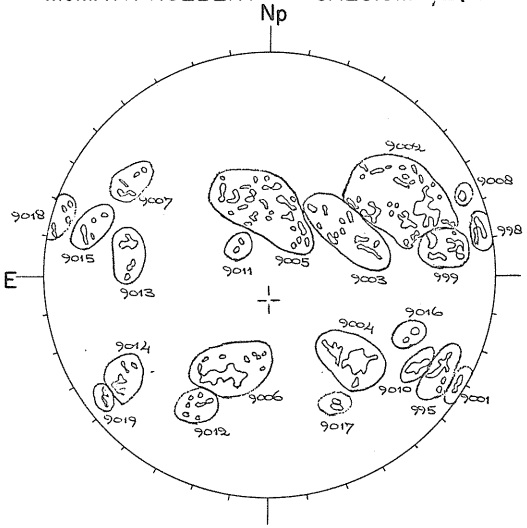
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



98-16-3.0
99-18-3.0
01-05-2.5
02-40-3.0
04-28-4.0
05-27-3.0
06-20-3.0
08-03-3.0
10-09-3.0
13-07-2.5
17-04-2.5

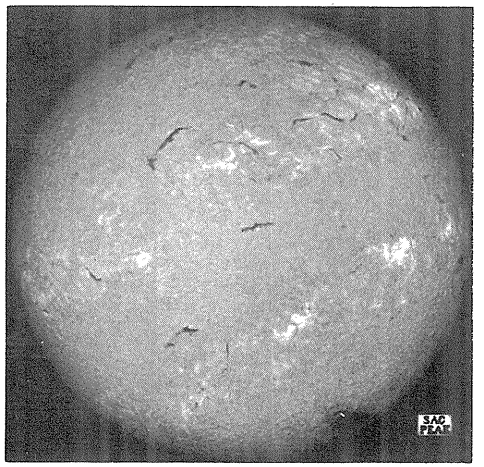
1340 UT

37
Oct 67

OCTOBER 6, 1967 (P=26.26, B_o=6.47, L_o=262.31)

SACRAMENTO PEAK Hα

N



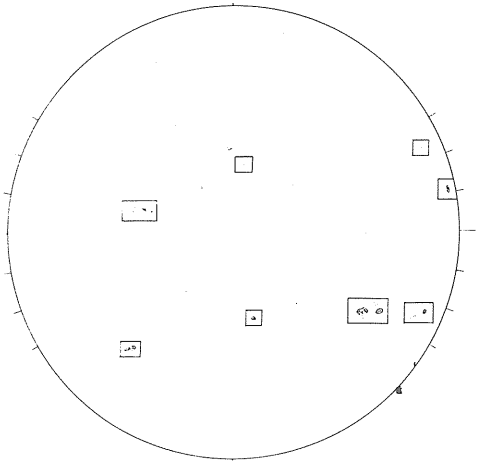
E W

S

1408 UT

ESSA-BOULDER SUNSPOTS

Np



E W

Sp

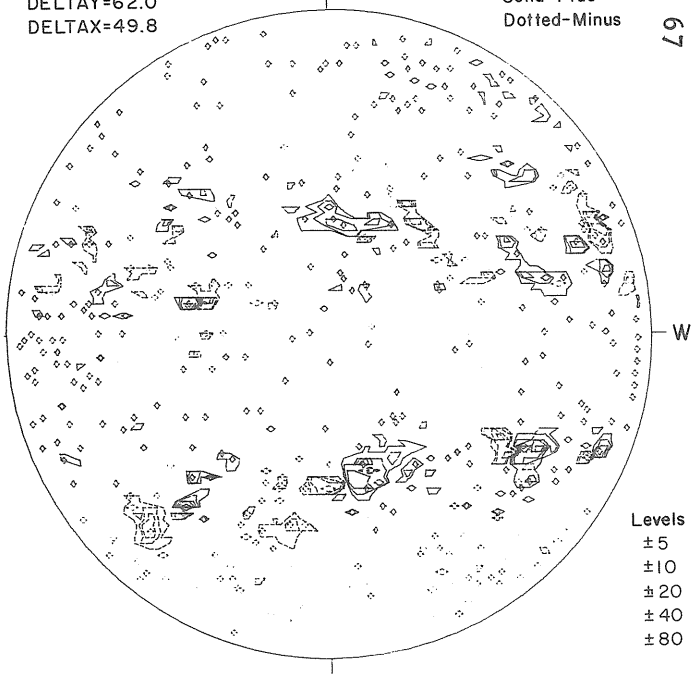
1755 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=49.8

Solid-Plus
Dotted-Minus

Np



E W

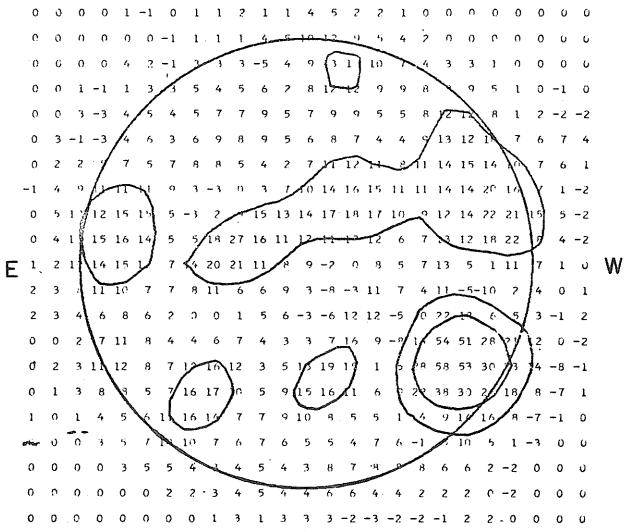
Sp

Levels
±5
±10
±20
±40
±80

15.36-16.11 UT

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

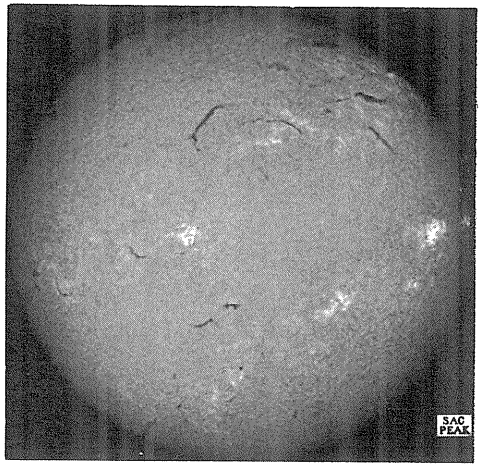
W E

Sp

W

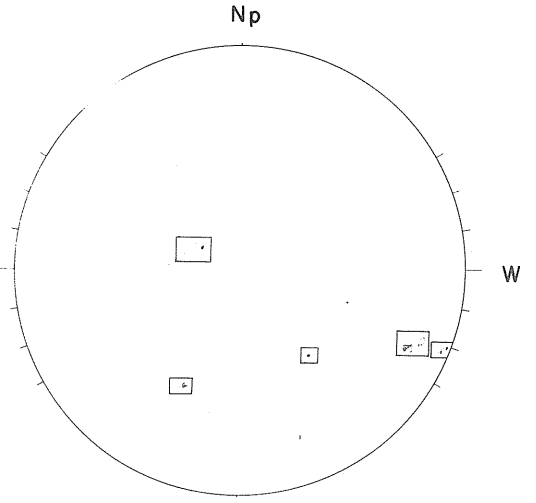
OCTOBER 7, 1967 (P=26.29, B_o=6.41, L_o=249.12)

SACRAMENTO PEAK Hα



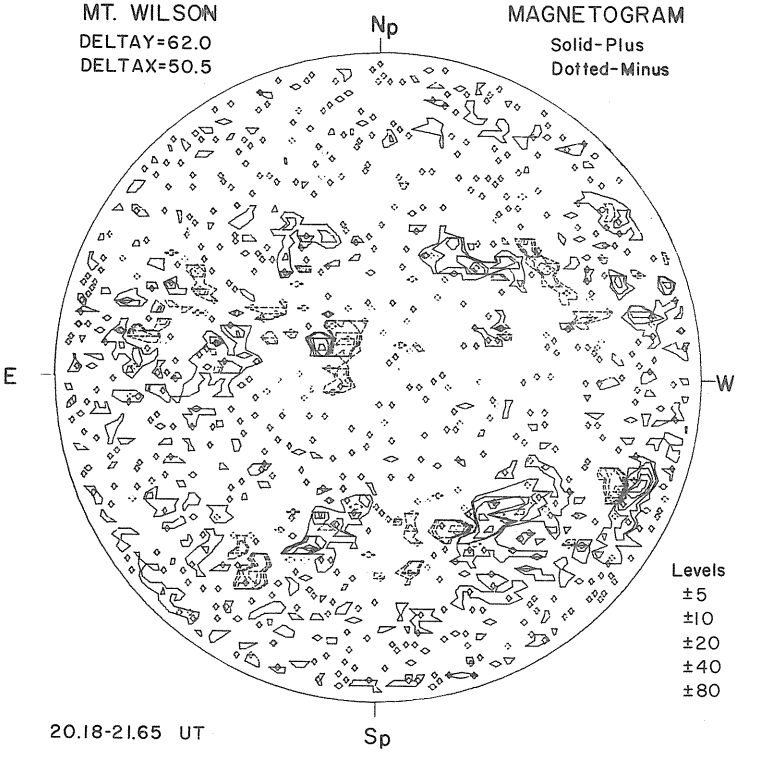
1424 UT

ESSA-BOULDER SUNSPOTS



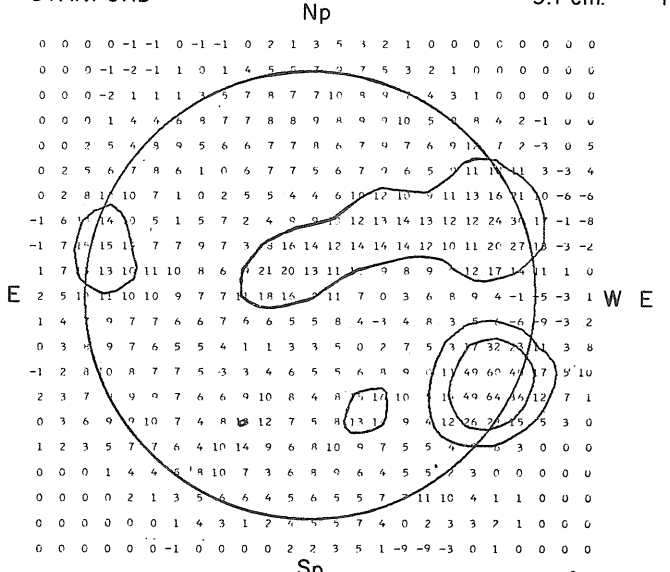
1615 UT

MT. WILSON MAGNETOGRAM
DELTAY=62.0
DELTAX=50.5
Solid-Plus
Dotted-Minus



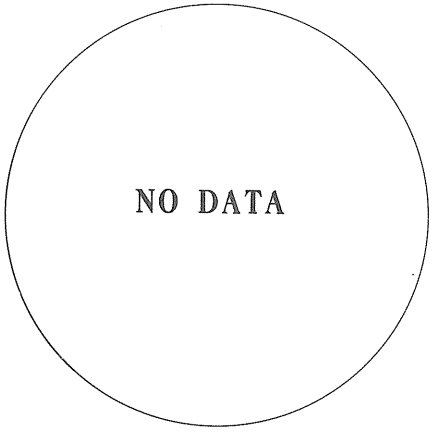
20.18-21.65 UT

STANFORD 9.1 cm.



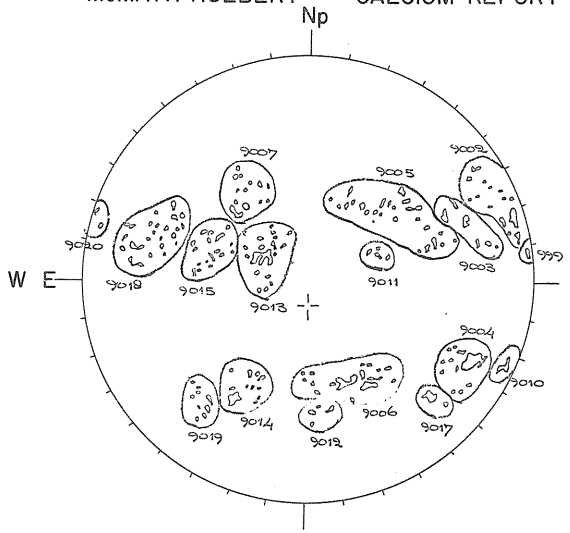
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



99-05-2.5
02-36-2.5
04-20-4.0
05-22-3.0
06-12-3.0
10-10-3.5
13-14-3.5
14-10 2.5
17-04-2.5
19-06-2.5

1345 UT

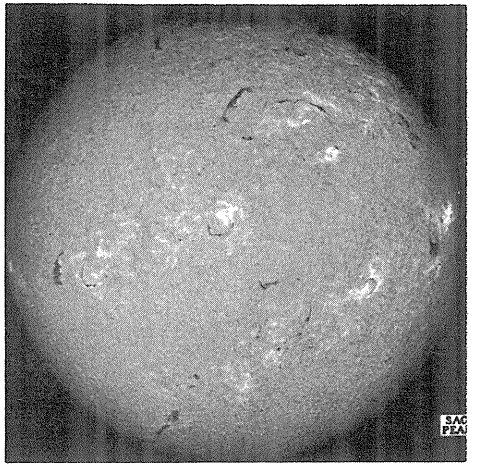
OCTOBER 8, 1967 (P=26.32, B_o=6.35, L_o=235.93)

SACRAMENTO PEAK Hα

N

E W

S



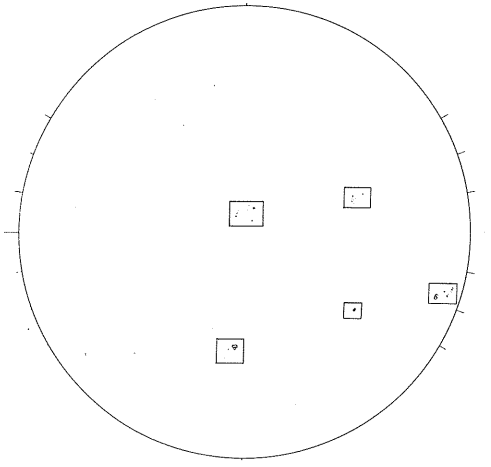
1413 UT

ESSA-BOULDER SUNSPOTS

Np

E W

Sp



1425 UT

MT. WILSON MAGNETOGRAM

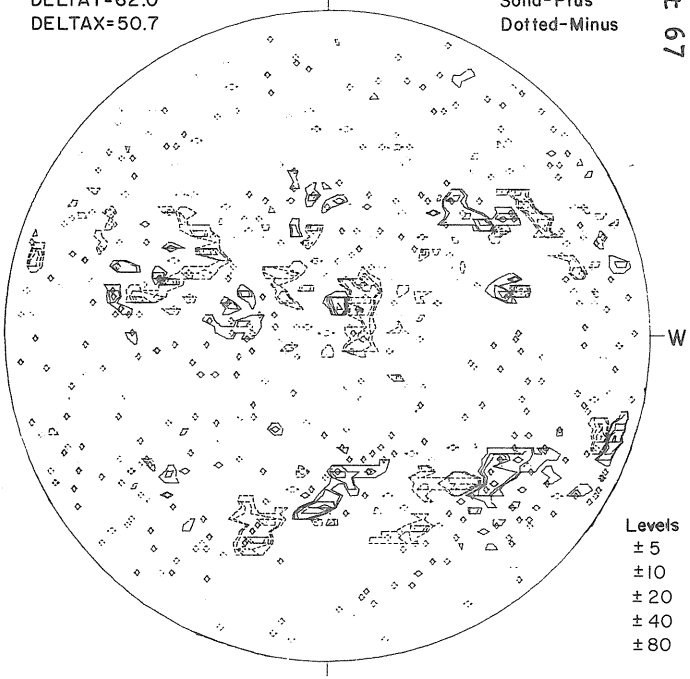
DELTAY=62.0
DELTAX=50.7

Solid-Plus
Dotted-Minus

Np

E W

Sp



Levels
±5
±10
±20
±40
±80

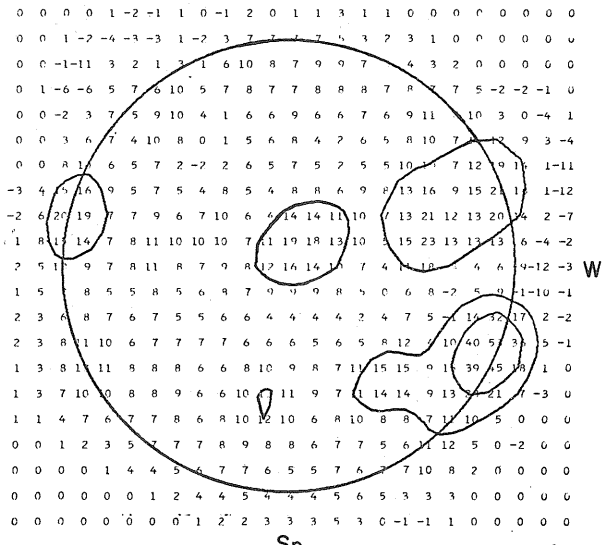
18.34-19.77 UT

STANFORD 9.1 cm.

Np

E W

Sp



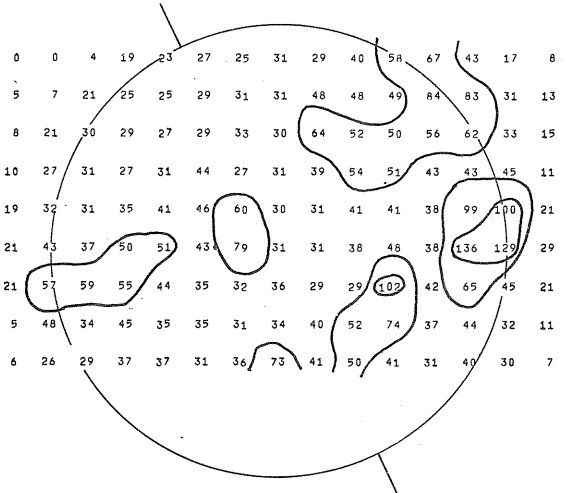
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

E W

S



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

McMATH-HULBERT CALCIUM REPORT

Np

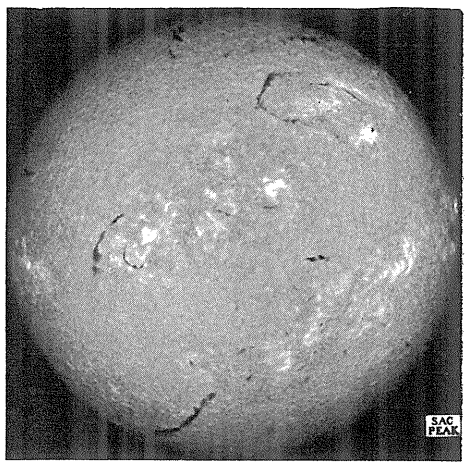
NO DATA

E W

Sp

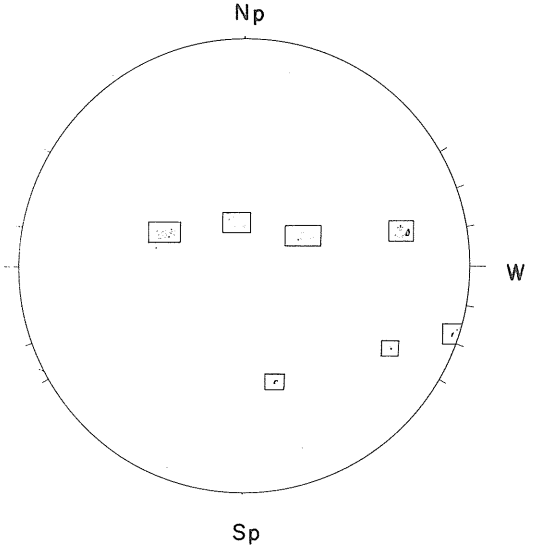
OCTOBER 9, 1967 (P=26.34, B_o=6.29, L_o=222.73)

SACRAMENTO PEAK Hα



1552 UT

ESSA-BOULDER SUNSPOTS

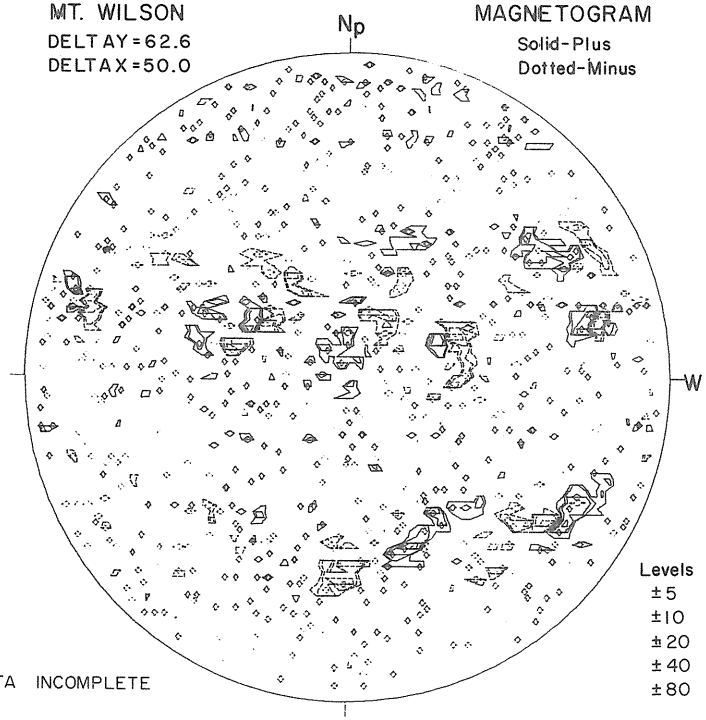


1515 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.6
DELTAX=50.0

Solid-Plus
Dotted-Minus

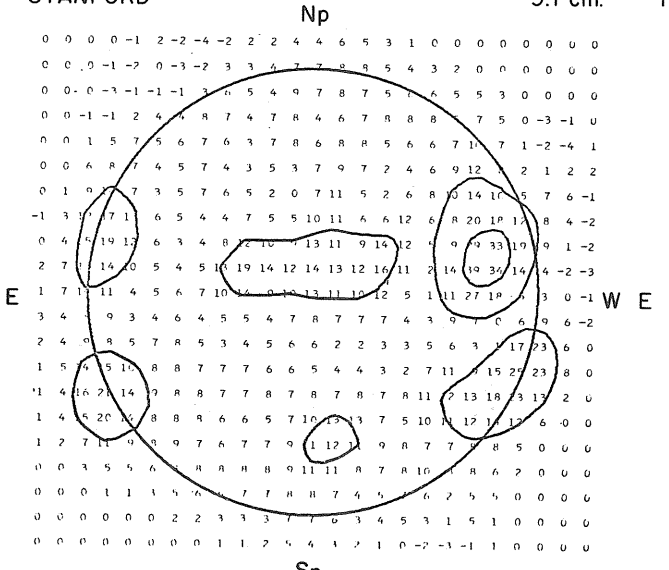


Levels
±5
±10
±20
±40
±80

DATA INCOMPLETE

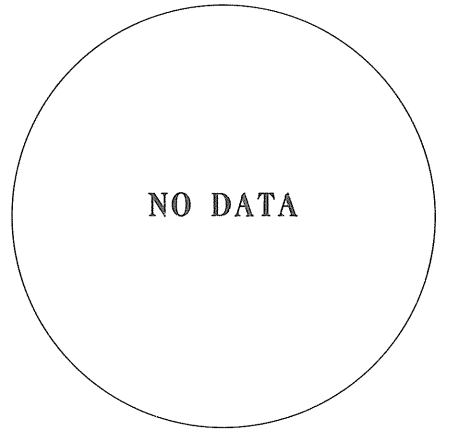
19.19-21.87 UT

STANFORD 9.1 cm.



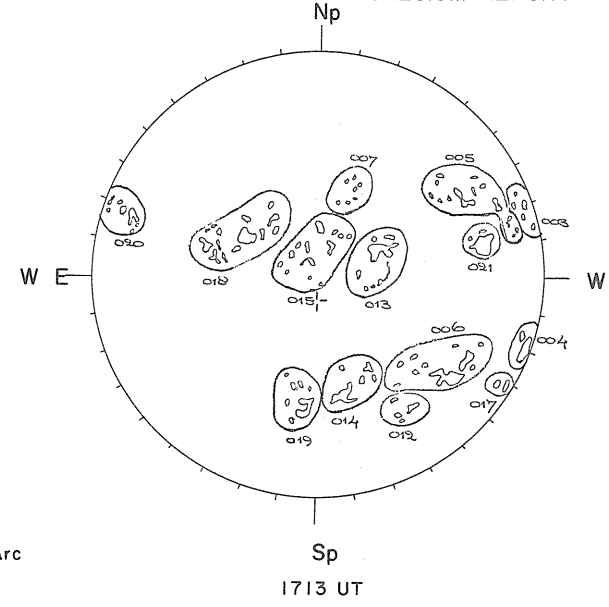
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA



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

21 cm. McMATH-HULBERT CALCIUM REPORT



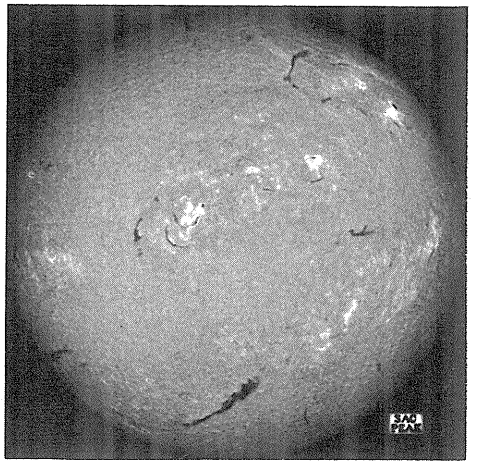
04-23-3.5
05-23-2.5
06-25-3.0
13-16-3.0
14-14-2.5
18-22-2.5
19-13-2.5
20-14-3.0
21-15-3.0

1713 UT

OCTOBER 10, 1967 (P=26.35, B_o=6.23, L_o=209.54)

SACRAMENTO PEAK Hα

N



E W

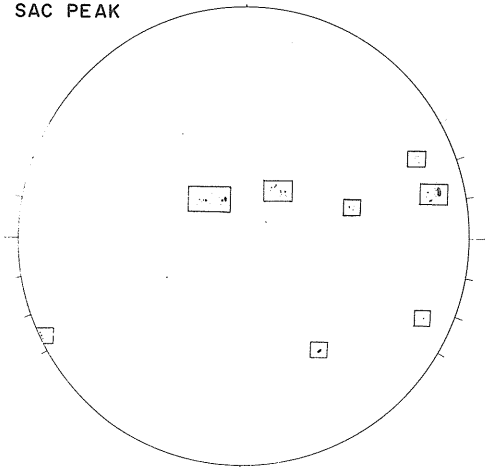
S

1430 UT

ESSA-BOULDER SUNSPOTS

Np

SAC PEAK



E W

Sp

1500 UT

MT. WILSON MAGNETOGRAM

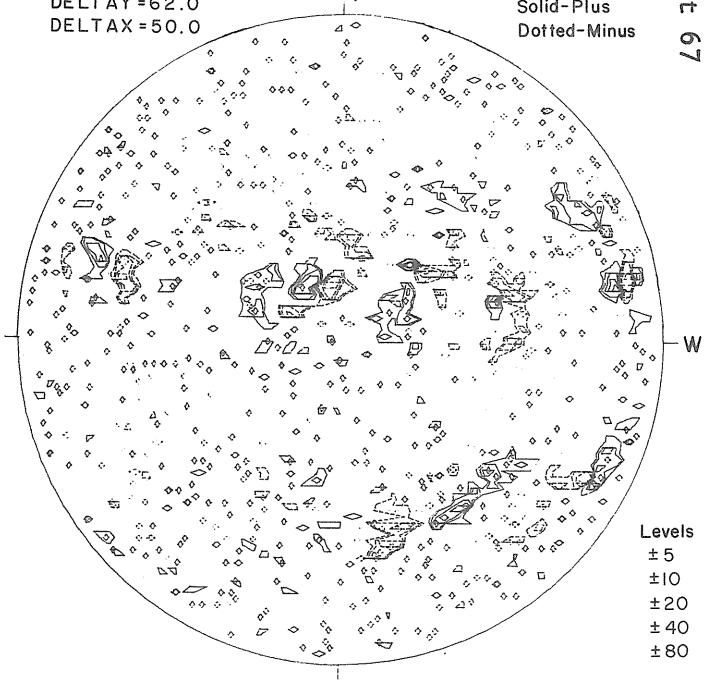
DELTAY=62.0

DELTAX=50.0

Solid-Plus

Dotted-Minus

Np



E W

Sp

Levels

±5

±10

±20

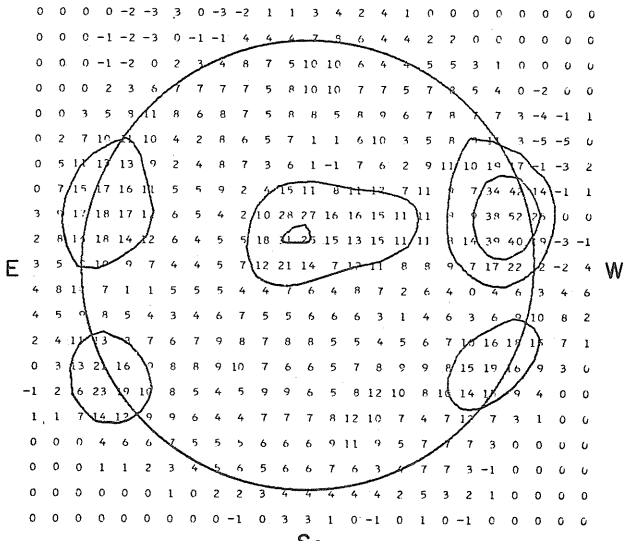
±40

±80

18.33-19.77 UT

STANFORD 9.1 cm.

Np



E W

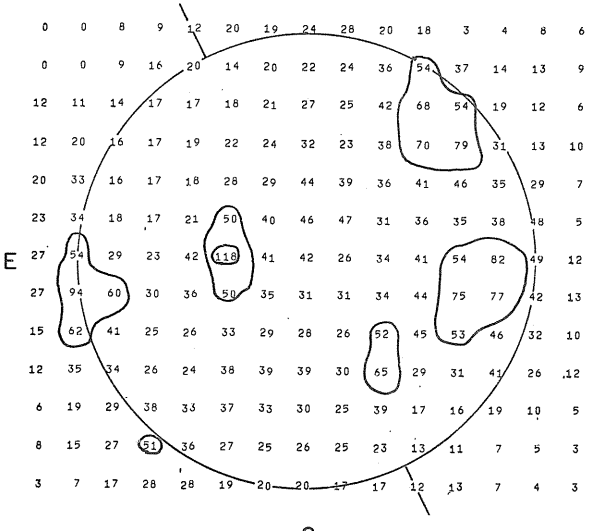
Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N



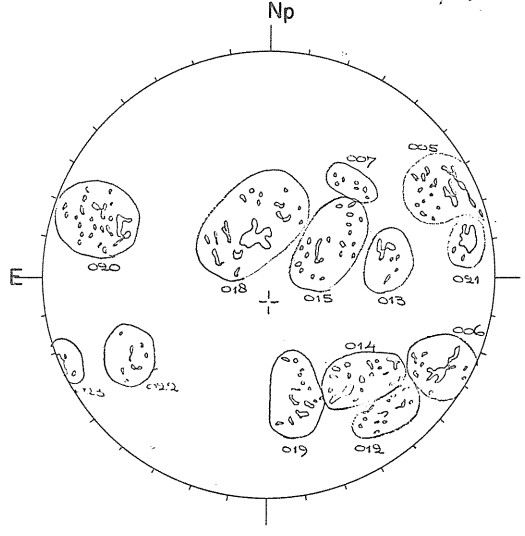
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



W E W

Sp

2050 UT

05-27-3.0

06-18-3.0

13-09-3.0

14-18-3.0

15-14-2.5

18-26-3.0

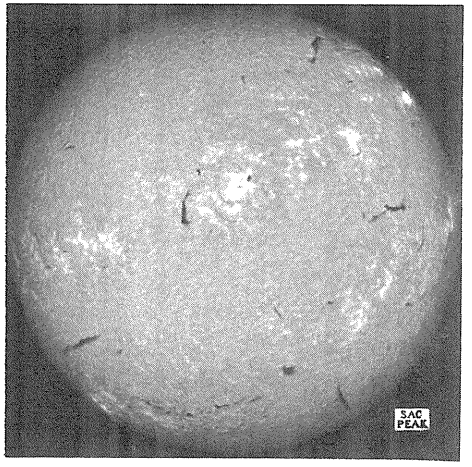
19-10-2.5

20-30-2.5

21-29-3.5

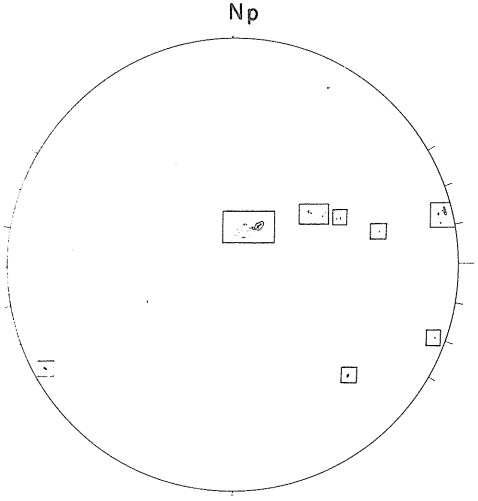
OCTOBER 11, 1967 (P=26.35, B_o=6.17, L_o=196.35)

SACRAMENTO PEAK Hα



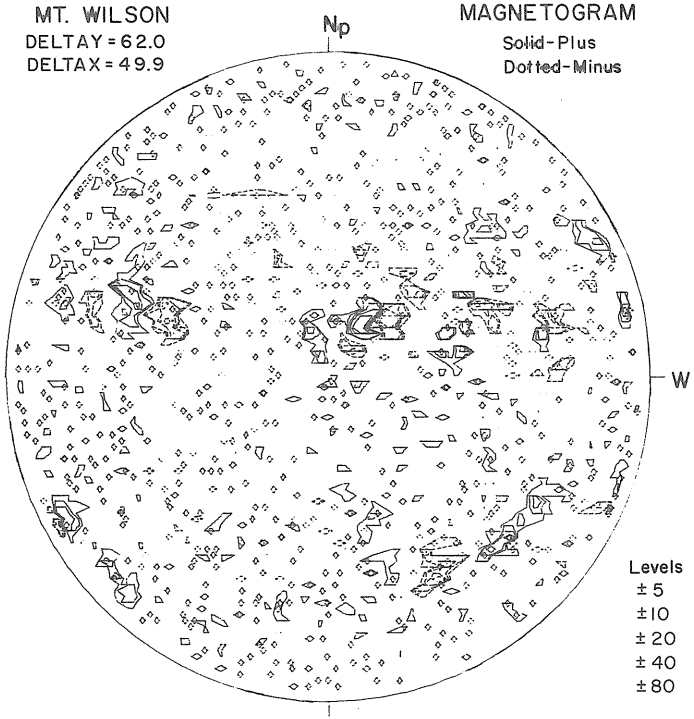
1524 UT

ESSA-BOULDER SUNSPOTS



1500 UT

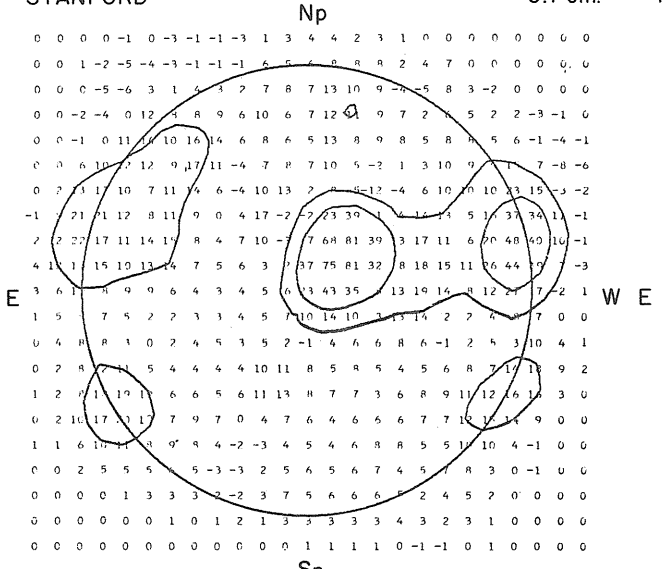
MT. WILSON MAGNETOGRAM
DELTAY = 62.0
DELTAX = 49.9
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

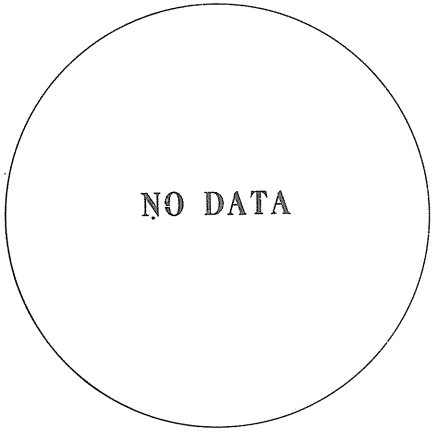
18.34-19.81 UT

STANFORD 9.1 cm.



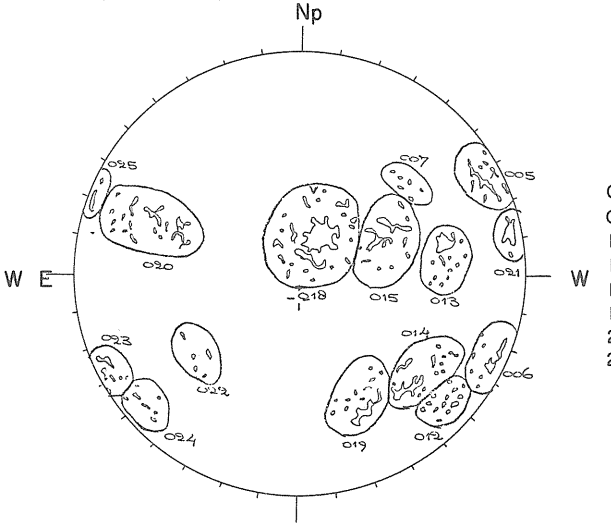
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



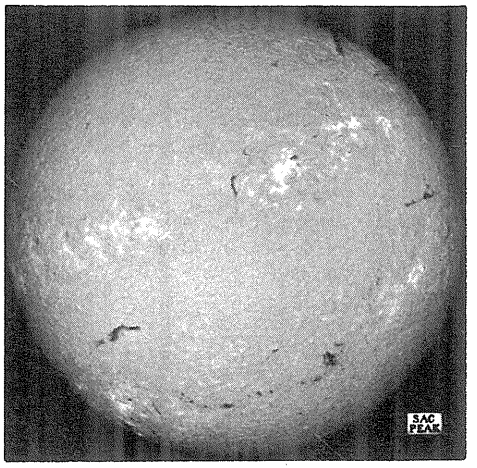
05-28-3.0
06-19-3.0
13-14-2.5
14-19-2.5
15-18-3.0
18-34-3.0
20-23-2.5
21-24-3.0

1400 UT

OCTOBER 12, 1967 (P=26.35, B_o=6.10, L_o=183.16)

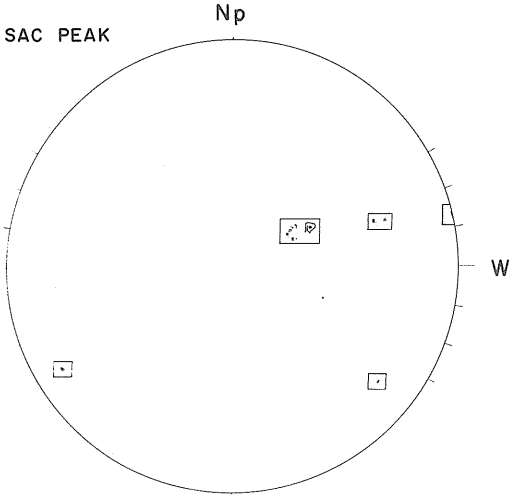
MT. WILSON Np MAGNETOGRAM Oct 67
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

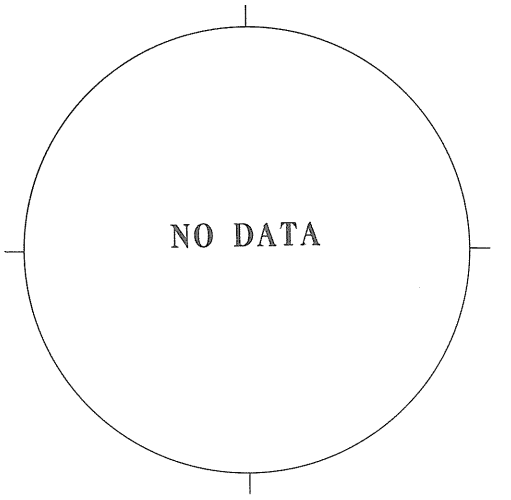


1518 UT

ESSA-BOULDER SUNSPOTS

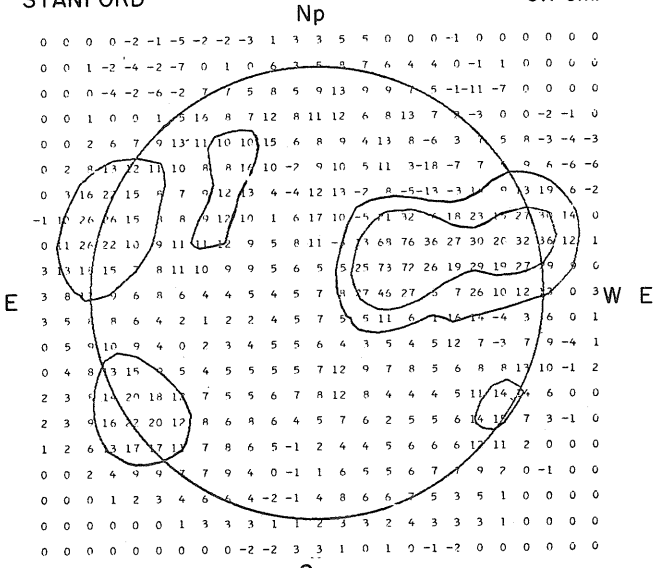


1500 UT



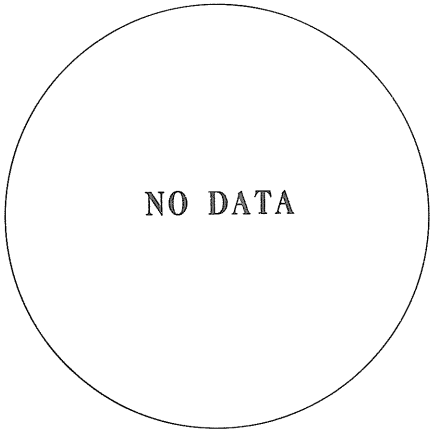
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



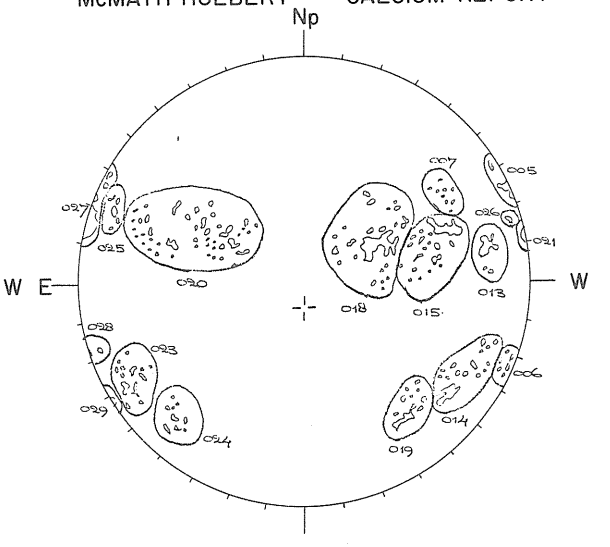
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA N 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

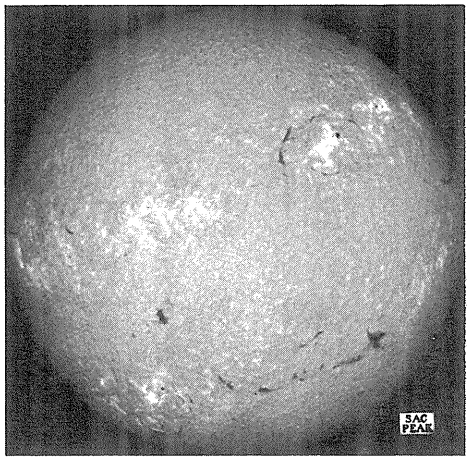


1450 UT

13-13-2.5
14-22-2.5
15-23-3.0
18-35-3.0
19-16-2.5
20-28-3.0
21-11-2.5
23-19-2.5
25-09-2.5
28-08-2.5

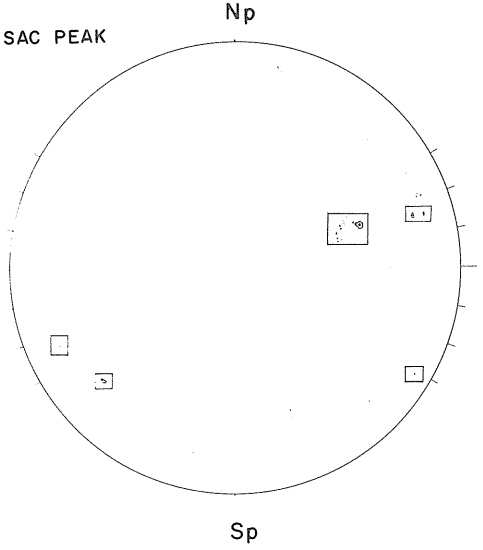
OCTOBER 13, 1967 (P=26.33, B_o=6.03, L_o=169.97)

SACRAMENTO PEAK Hα



1711 UT

ESSA-BOULDER SUNSPOTS

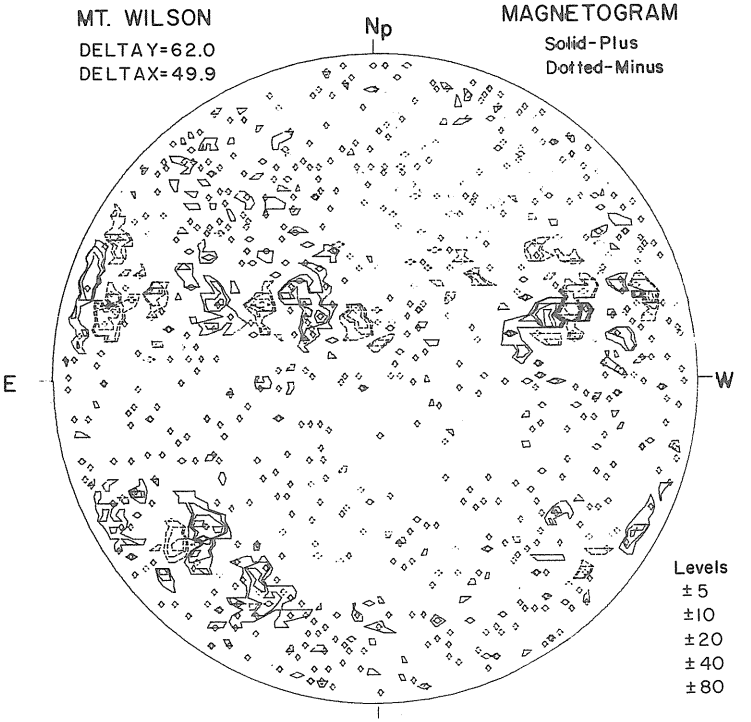


1521 UT

MT. WILSON MAGNETOGRAM

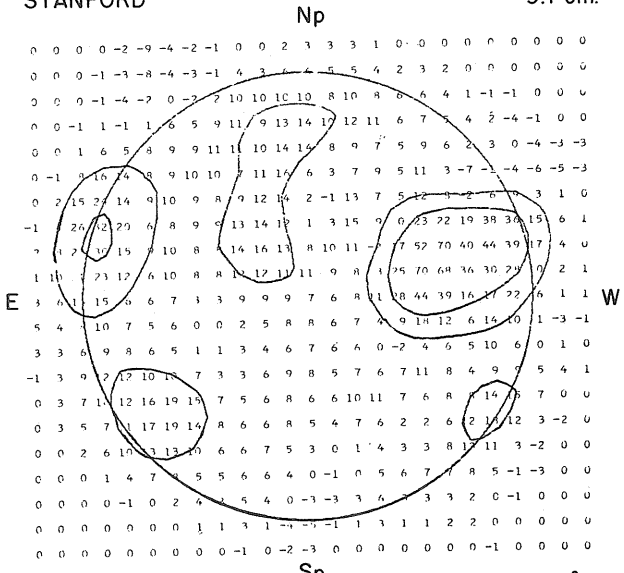
DELTAY=62.0
DELTAX=49.9

Solid-Plus
Dotted-Minus



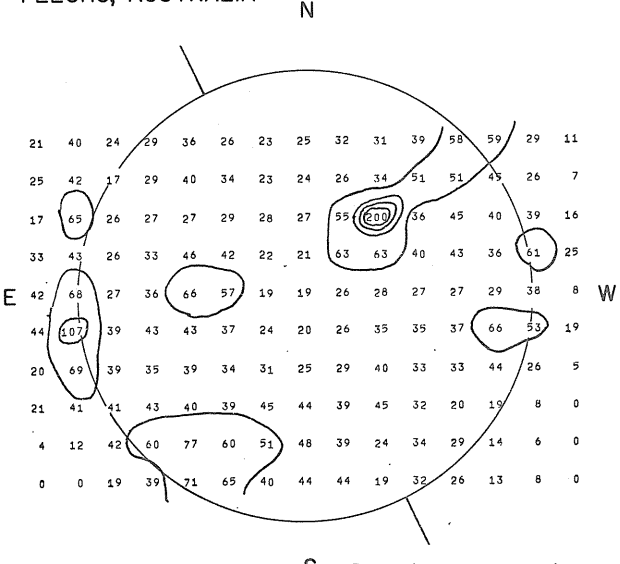
21.79-23.25 UT

STANFORD 9.1 cm.



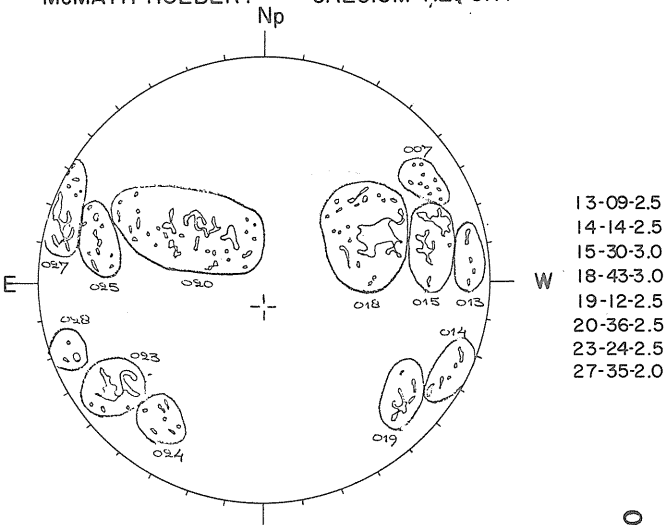
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

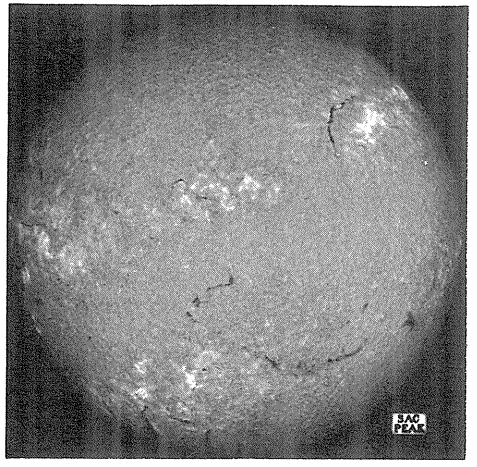
McMATH-HULBERT CALCIUM REPORT



1310 UT

OCTOBER 14, 1967 (P=26.31, B_o=5.96, L_o=156.77)

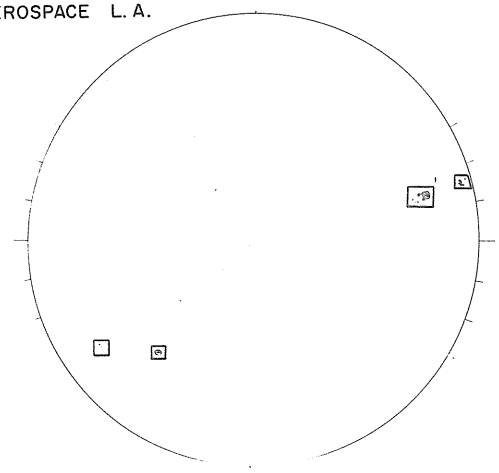
SACRAMENTO PEAK Hα



2117 UT

ESSA-BOULDER SUNSPOTS

AEROSPACE L. A.

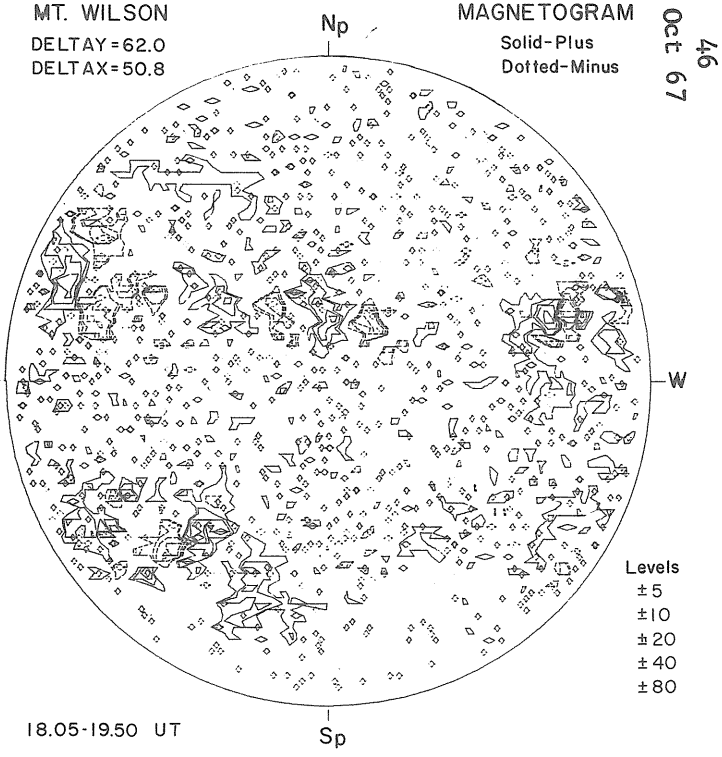


1930 UT

MT. WILSON MAGNETOGRAM

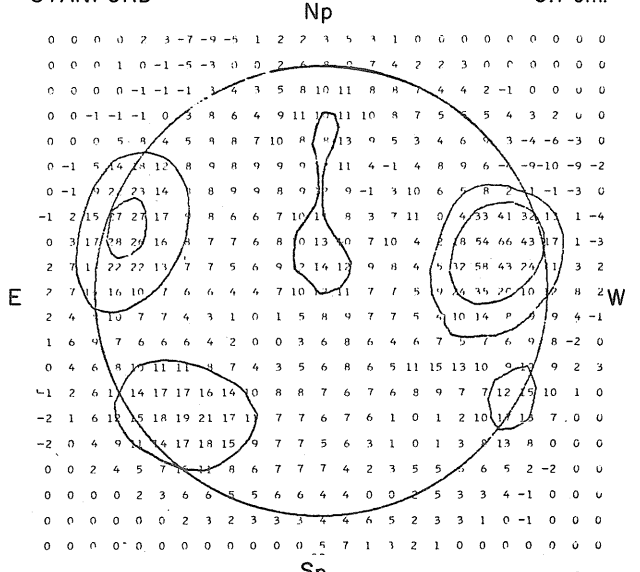
DELTAY=62.0
DELTAX=50.8

Solid-Plus
Dotted-Minus



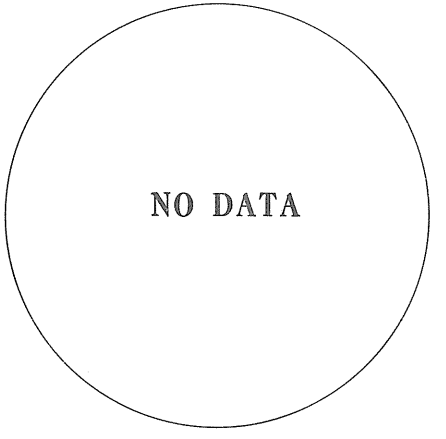
18.05-19.50 UT

STANFORD 9.1 cm.



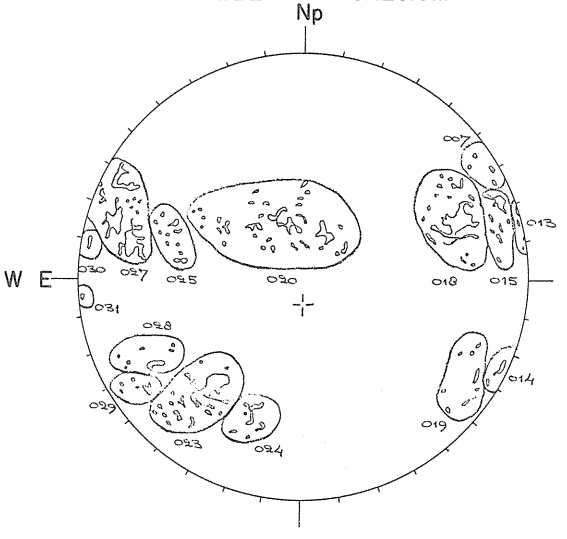
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA



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

21 cm. McMATH-HULBERT CALCIUM REPORT

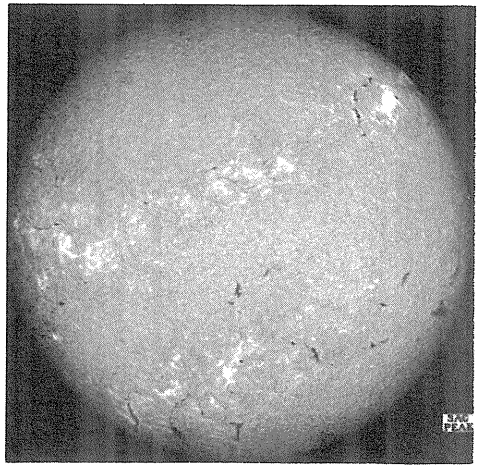


1650 UT

14-13-3.0
15-22-3.0
18-41-3.0
19-11-2.5
20-32-2.5
23-34-2.5
27-49-2.0
29-08-2.5

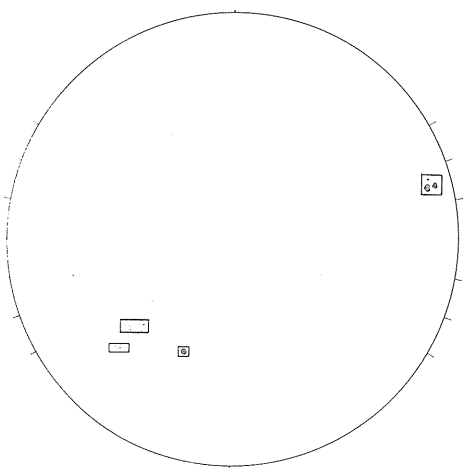
OCTOBER 15, 1967 (P=26.29, B_o=5.89, L_o=143.58)

SACRAMENTO PEAK Hα



1436 UT

ESSA-BOULDER SUNSPOTS

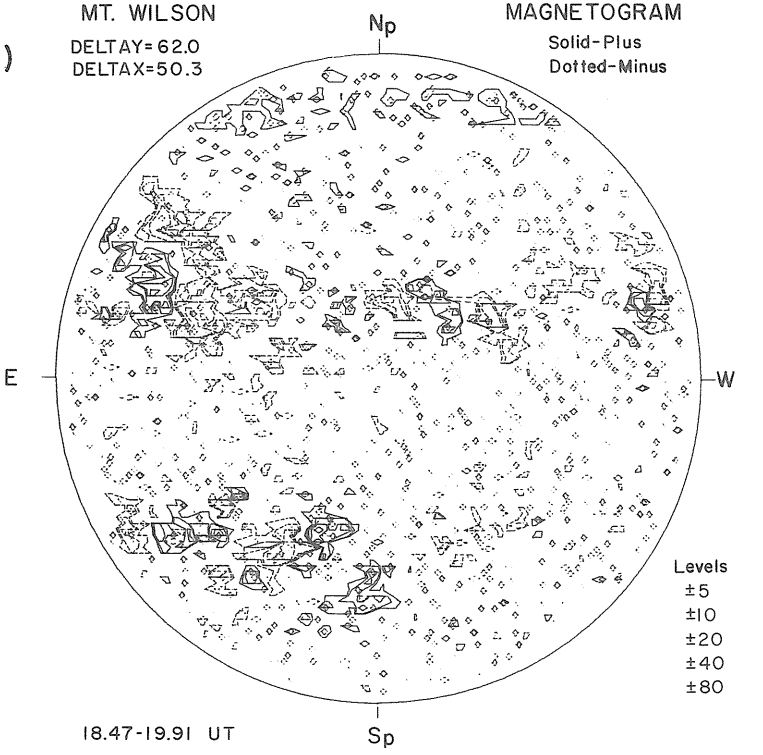


1720 UT

MT. WILSON MAGNETOGRAM

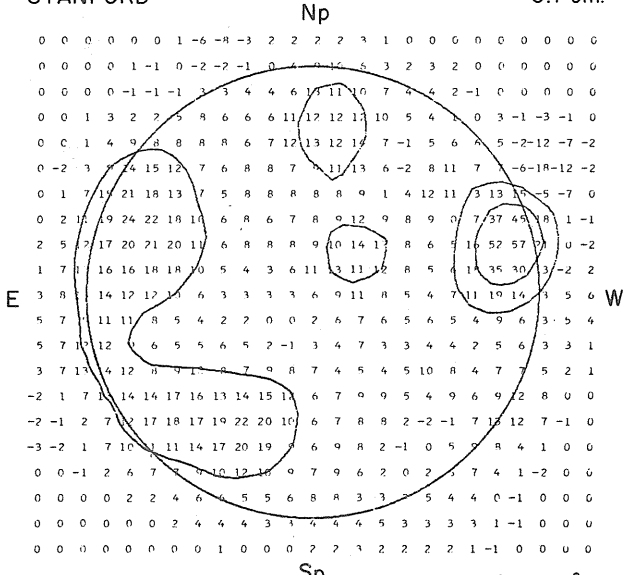
DELTAY=62.0
DELTAX=50.3

Solid-Plus
Dotted-Minus



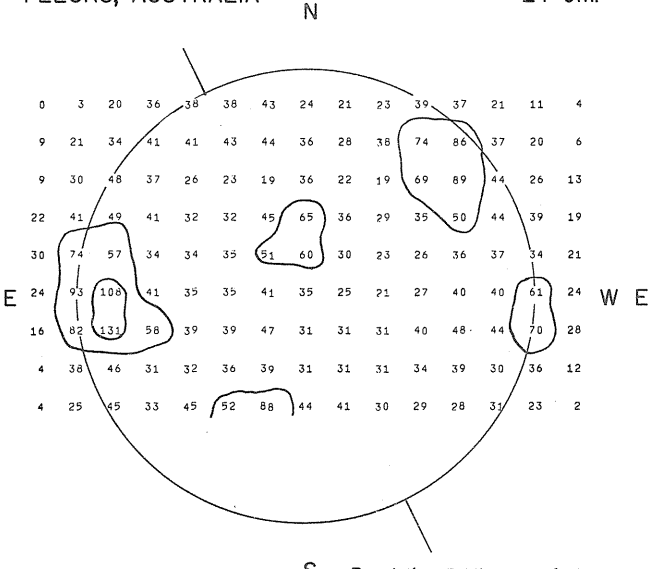
18.47-19.91 UT

STANFORD 9.1 cm.



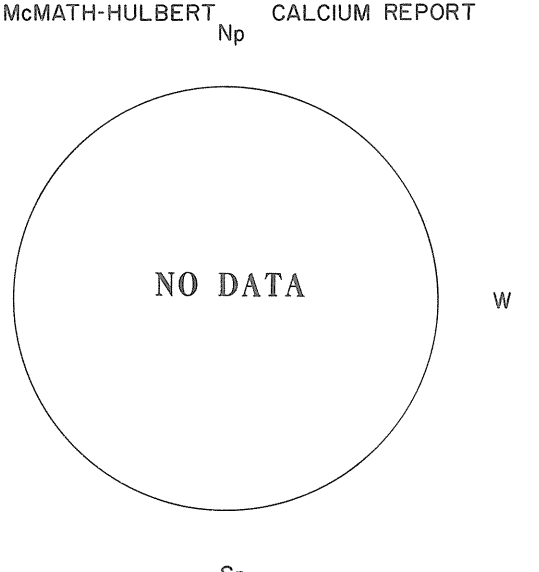
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

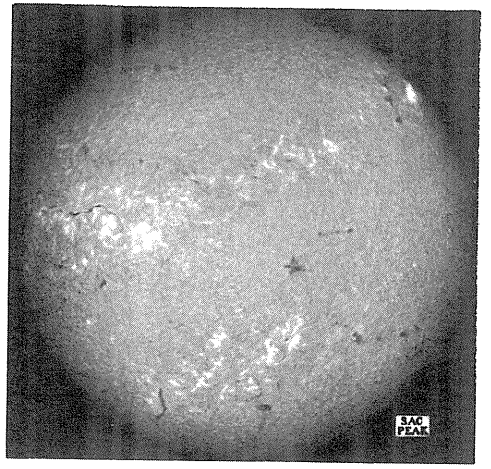


47
Oct 67

OCTOBER 16, 1967 (P=26.25, B_o=5.81, L_o=130.39)

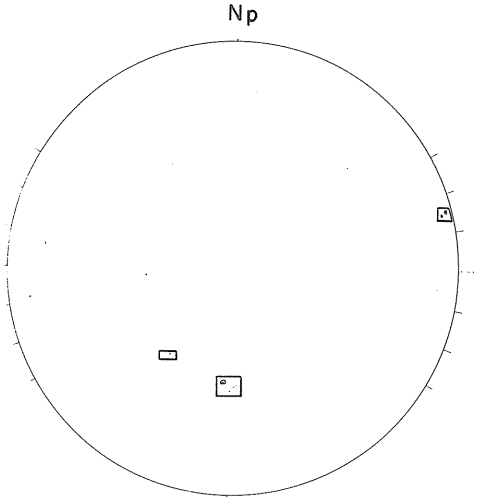
48 Oct 67

SACRAMENTO PEAK Hα



1512 UT

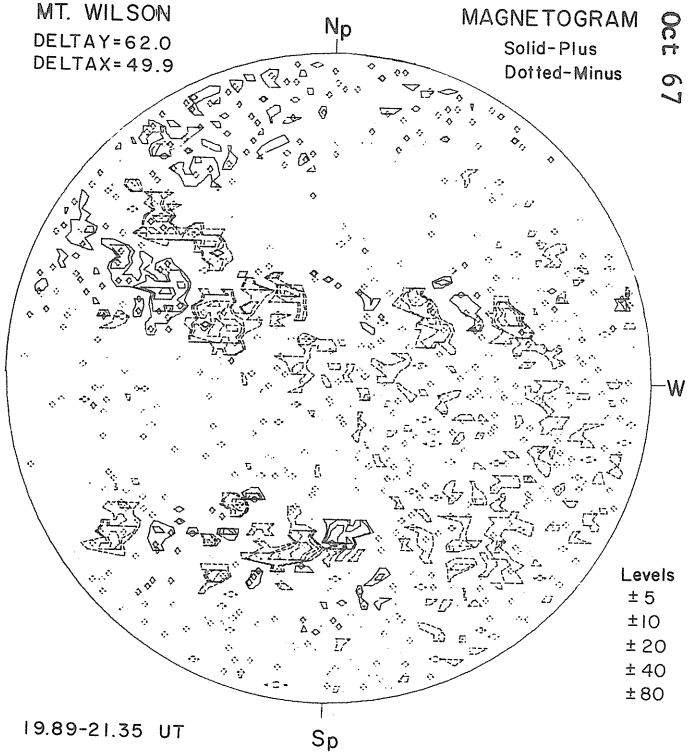
ESSA-BOULDER SUNSPOTS



1510 UT

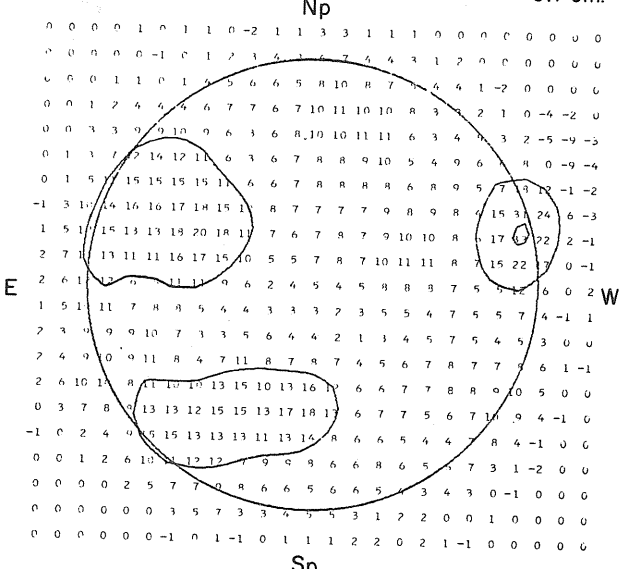
MT. WILSON
DELTAY=62.0
DELTAX=49.9

MAGNETOGRAM
Solid-Plus
Dotted-Minus



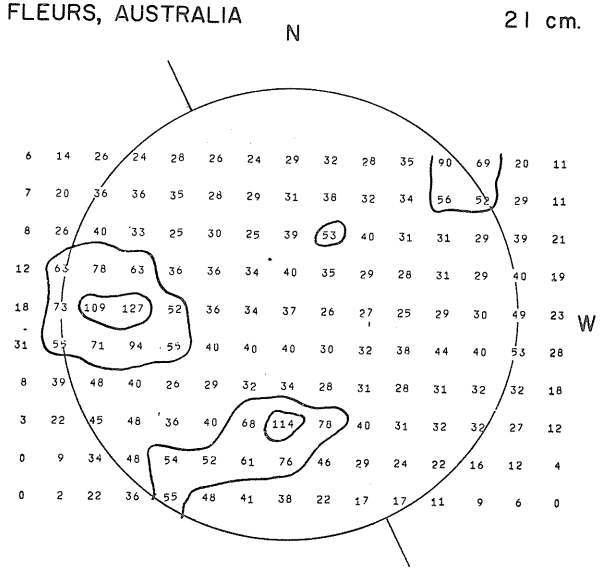
19.89-21.35 UT

STANFORD 9.1 cm.



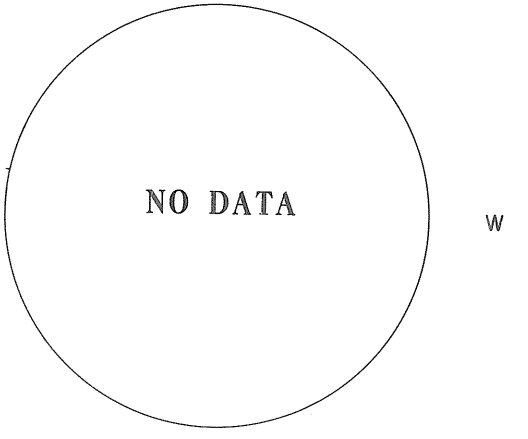
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



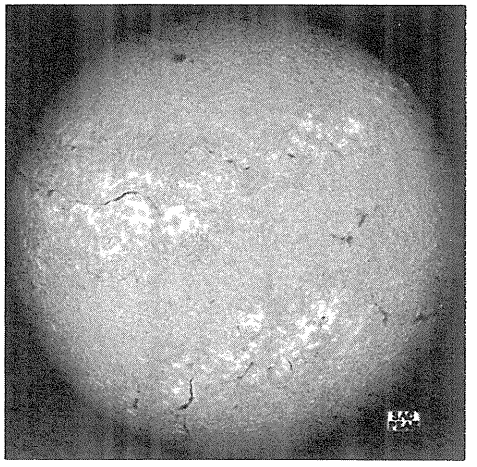
Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT



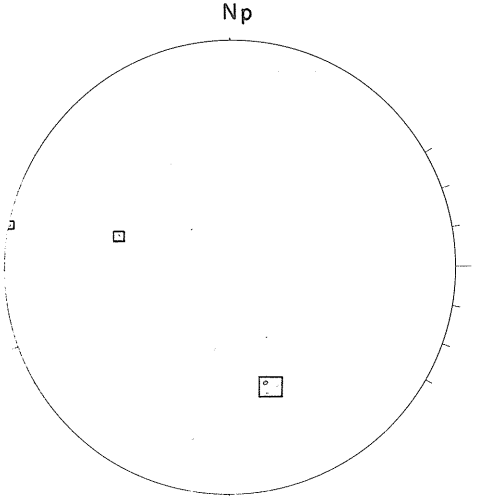
OCTOBER 17, 1967 (P=26.21, B_o=5.74, L_o=117.20)

SACRAMENTO PEAK Hα



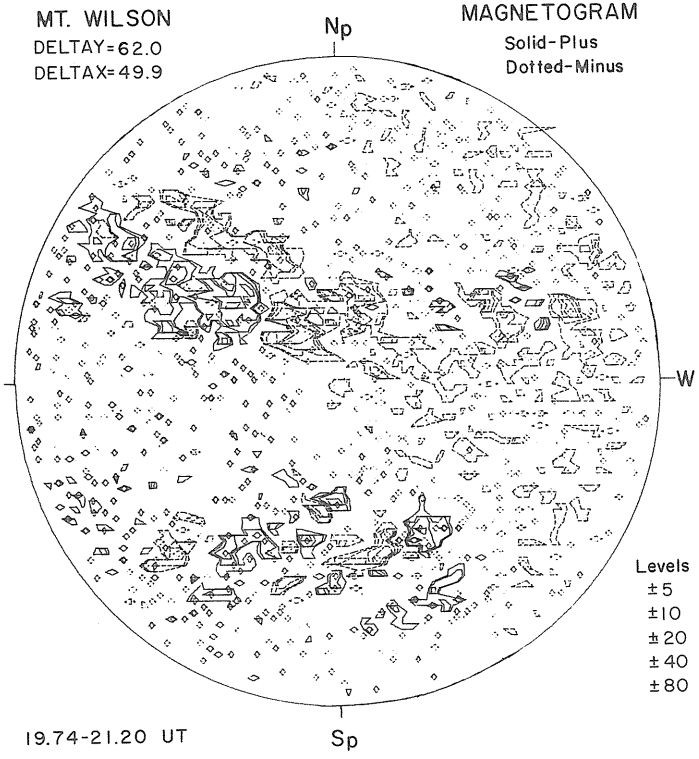
1503 UT

ESSA-BOULDER SUNSPOTS



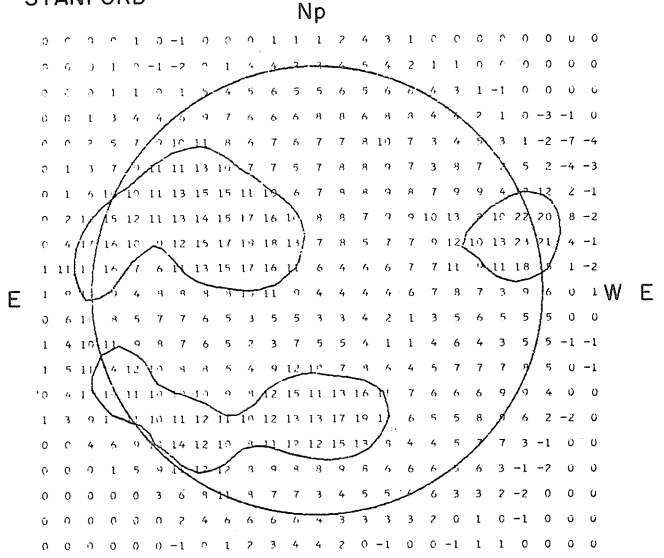
1430 UT

MT. WILSON MAGNETOGRAM
DELTAY=62.0
DELTAX=49.9
Solid-Plus
Dotted-Minus



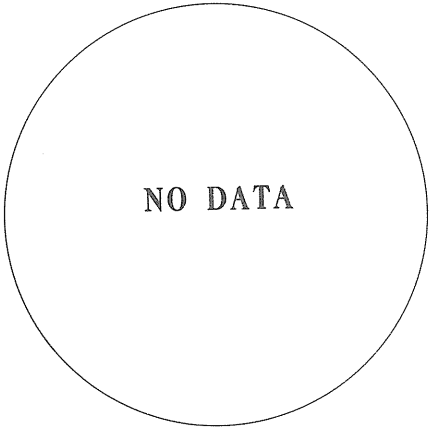
19.74-21.20 UT

STANFORD 9.1 cm.



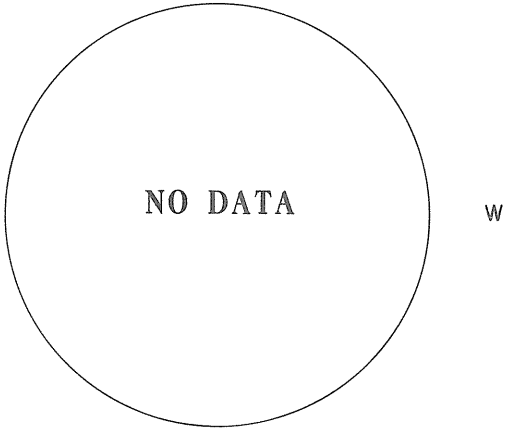
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

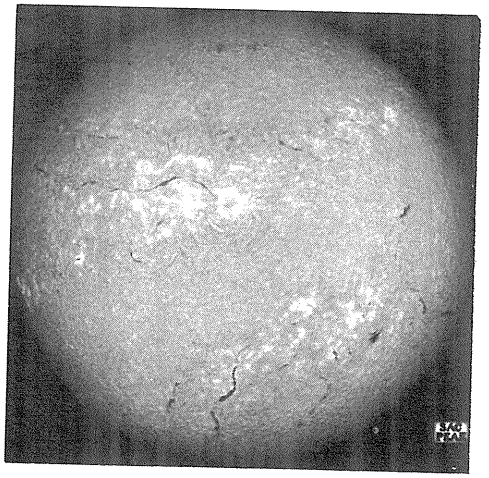


Resolution 3 Minutes of Arc

OCTOBER 18, 1967 (P=26.16, B_o=5.66, L_o=104.01)

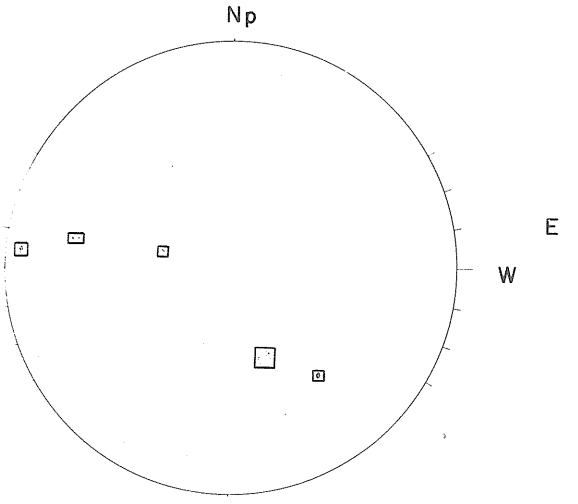
50 Oct 67

SACRAMENTO PEAK Hα



1531 UT

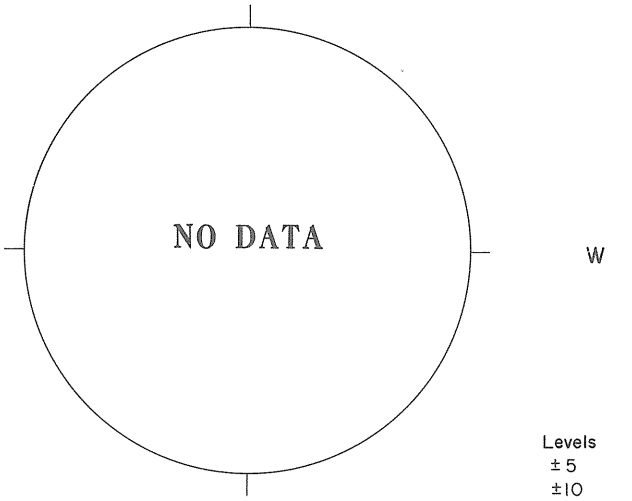
ESSA-BOULDER SUNSPOTS



1440 UT

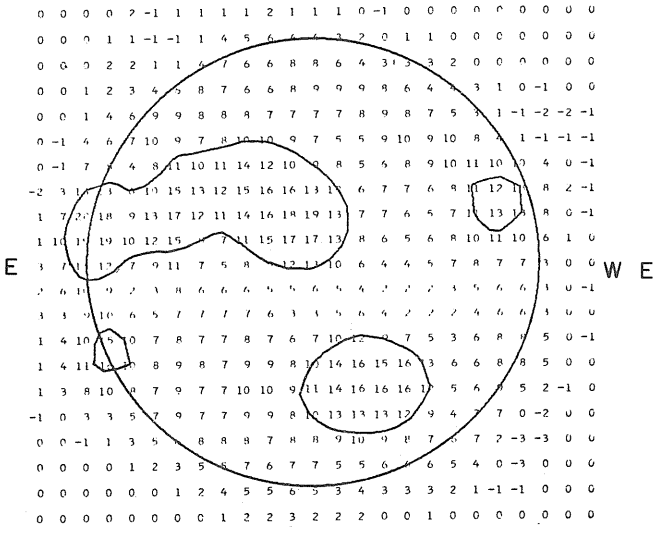
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



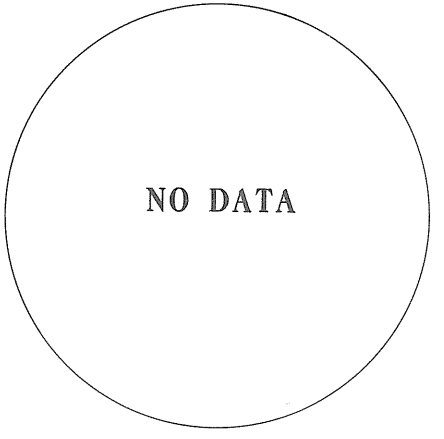
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



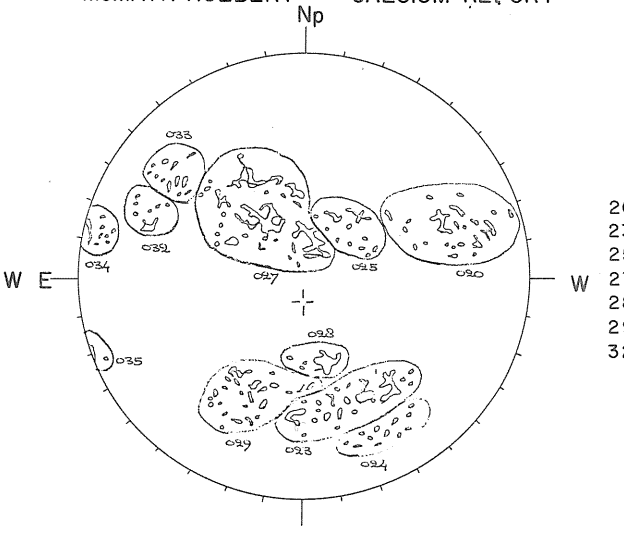
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

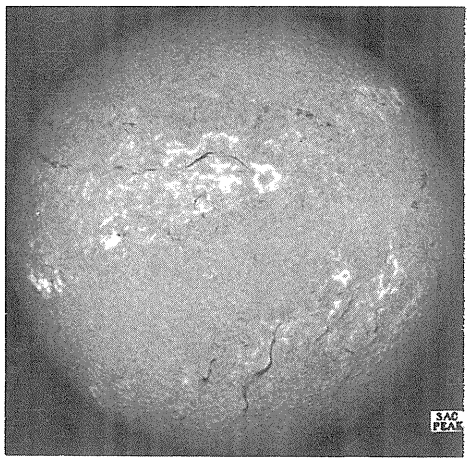


20-28-2.5
23-33-3.0
25-12-2.5
27-52-3.0
28-14-3.0
29-23-2.5
32-09-3.0

1345 UT

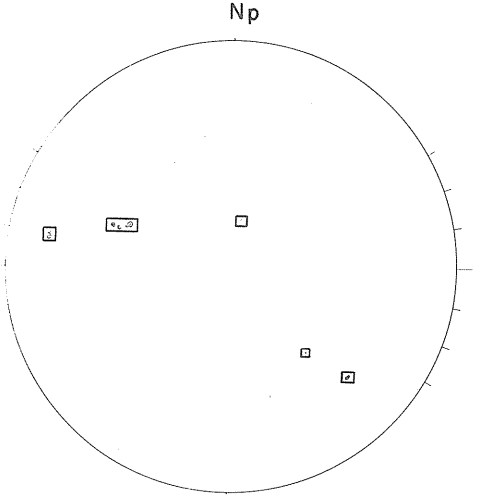
OCTOBER 19, 1967 (P=26.11, B_o=5.58, L_o=90.82)

SACRAMENTO PEAK Hα



1411 UT

ESSA-BOULDER SUNSPOTS

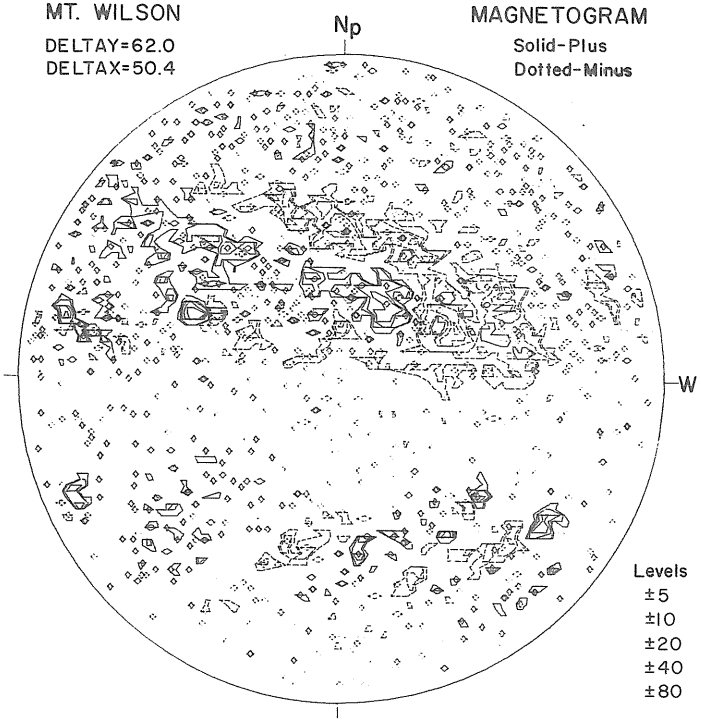


1425 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.4

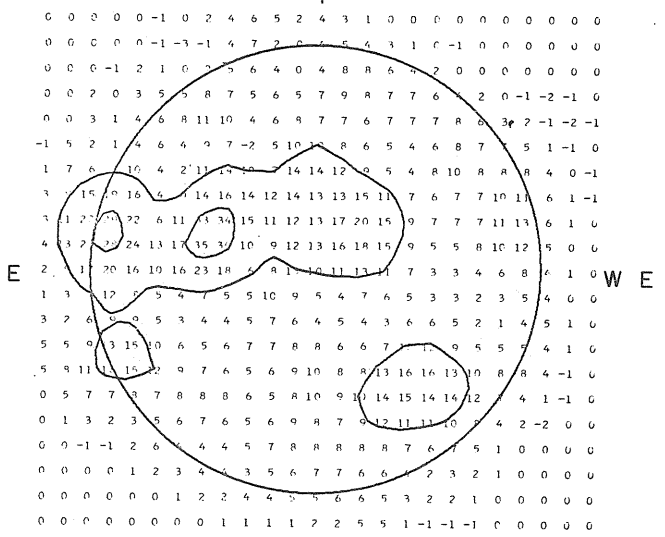
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

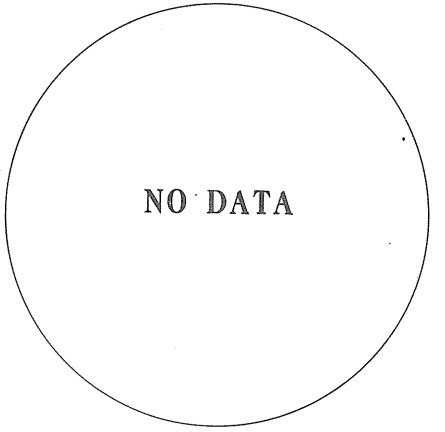
22.05-23.54 UT

STANFORD 9.1 cm.



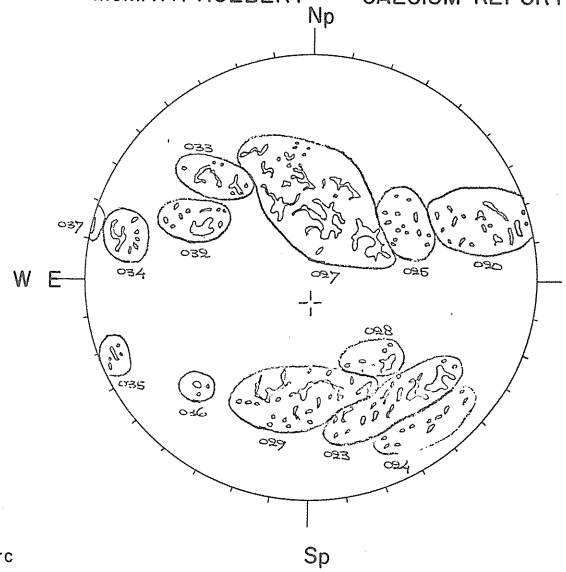
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



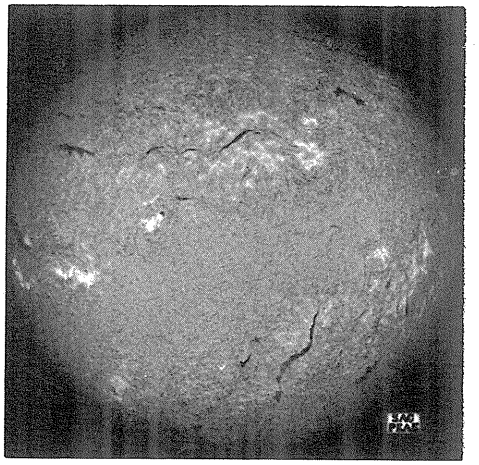
23-38-3.0
27-59-3.0
28-12-3.0
29-28-2.5
32-17-3.0

1525 UT

OCTOBER 20, 1967 (P=26.04, B_o=5.50, L_o=77.63)

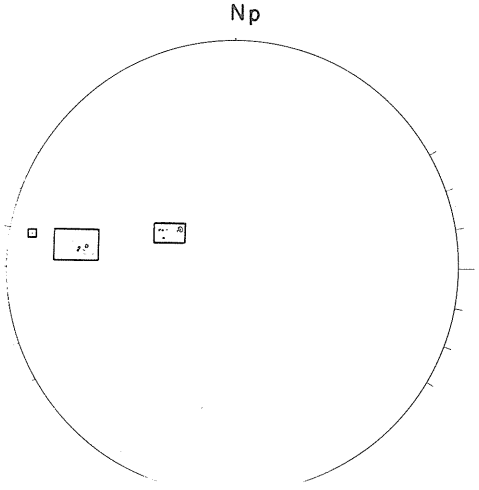
52 Oct 67

SACRAMENTO PEAK Hα



1429 UT

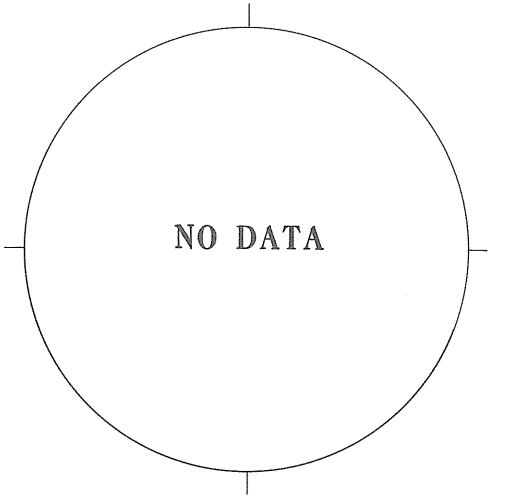
ESSA-BOULDER SUNSPOTS



1420 UT

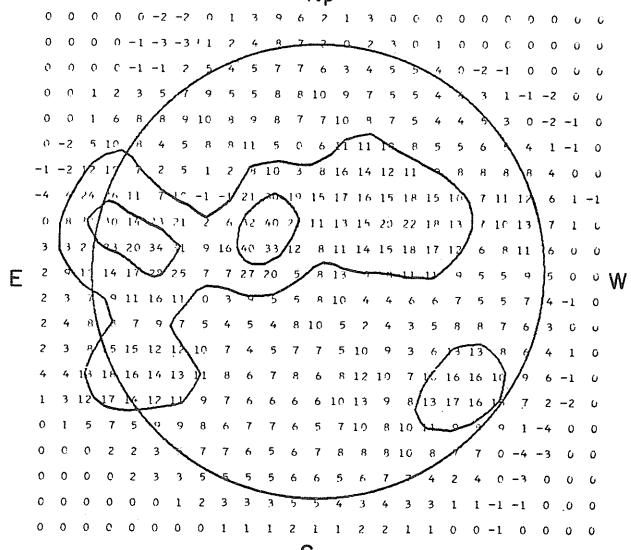
MT. WILSON MAGNETOGRAM

Solid-Plus
Dotted-Minus



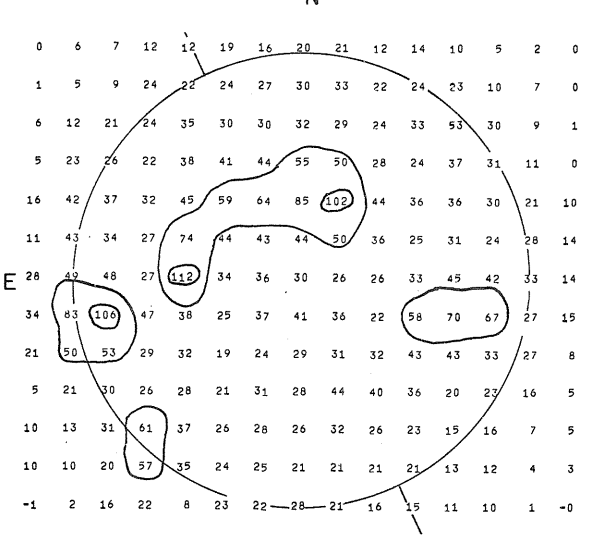
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



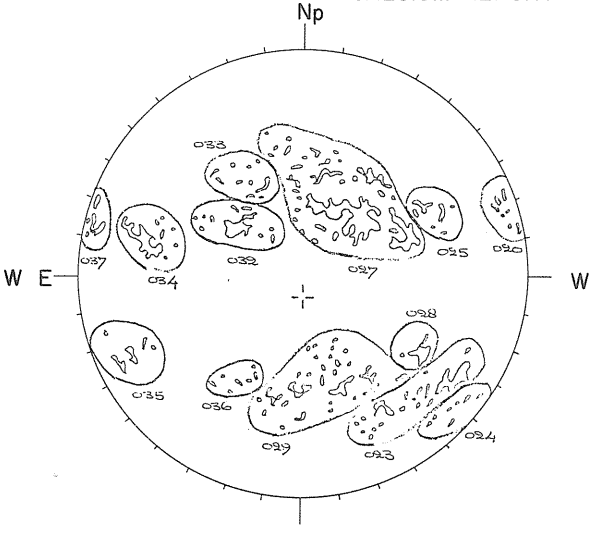
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



1330 UT

23-33-3.0
25-09-2.5
27-65-3.0
28-10-3.0
29-29-2.5
32-18-3.0
34-24-3.0
37-18-2.5

OCTOBER 21, 1967 (P=25.97, B_o=5.42, L_o=64.44)

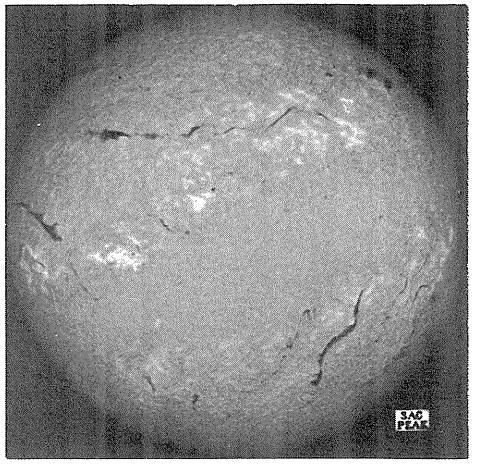
MT. WILSON MAGNETOGRAM

Np

Solid-Plus
Dotted-Minus

SACRAMENTO PEAK Hα

N



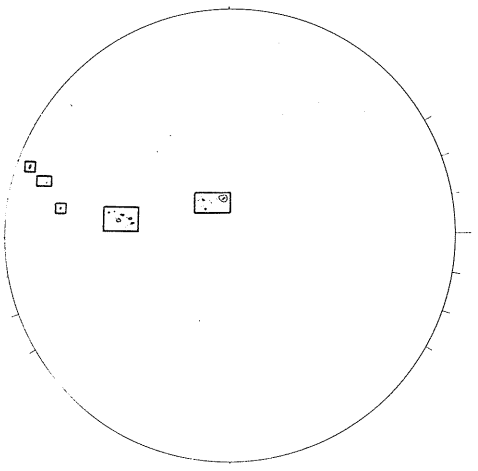
E W

S

1534 UT

ESSA-BOULDER SUNSPOTS

Np



E W

Sp

1700 UT

NO DATA

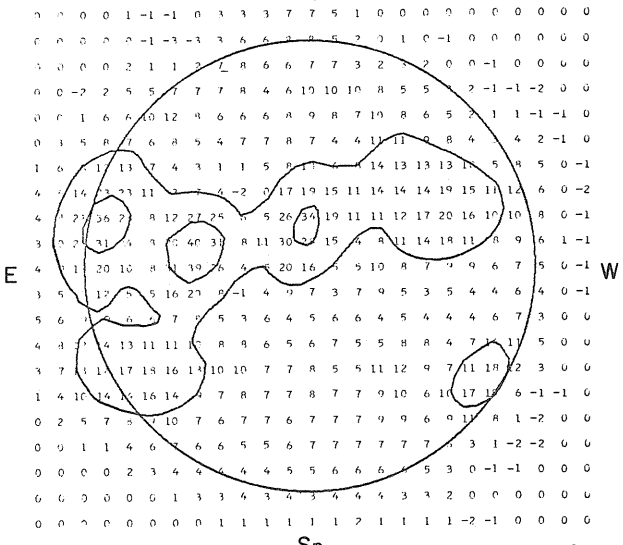
E W

Sp

Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.

Np



E W

Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N

NO DATA

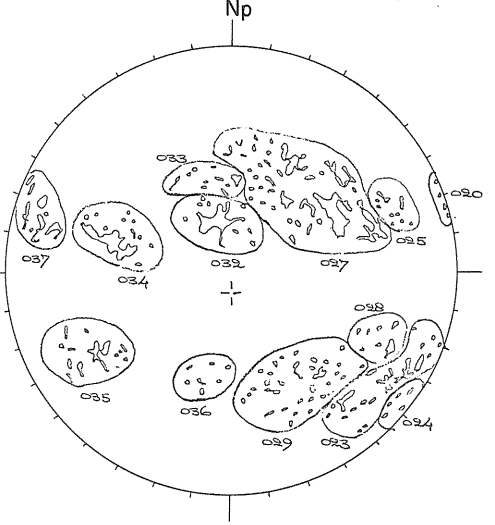
S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



W E W

Sp

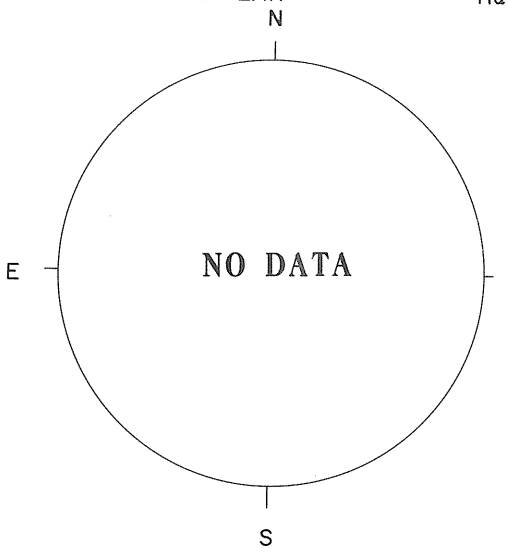
1310 UT

23-27-2.5
25-08-2.5
27-78-3.0
28-09-2.5
32-20-3.0
34-25-3.0
37-27-2.5

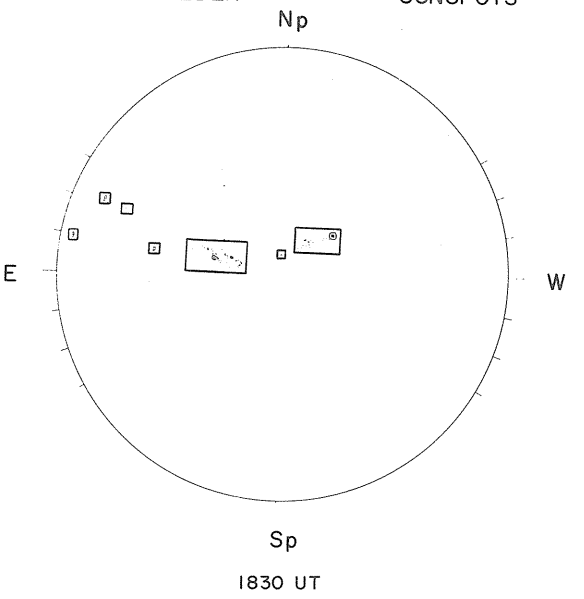
53
Oct 67

OCTOBER 22, 1967 (P=25.89, B_o=5.33, L_o=51.25)

SACRAMENTO PEAK Hα

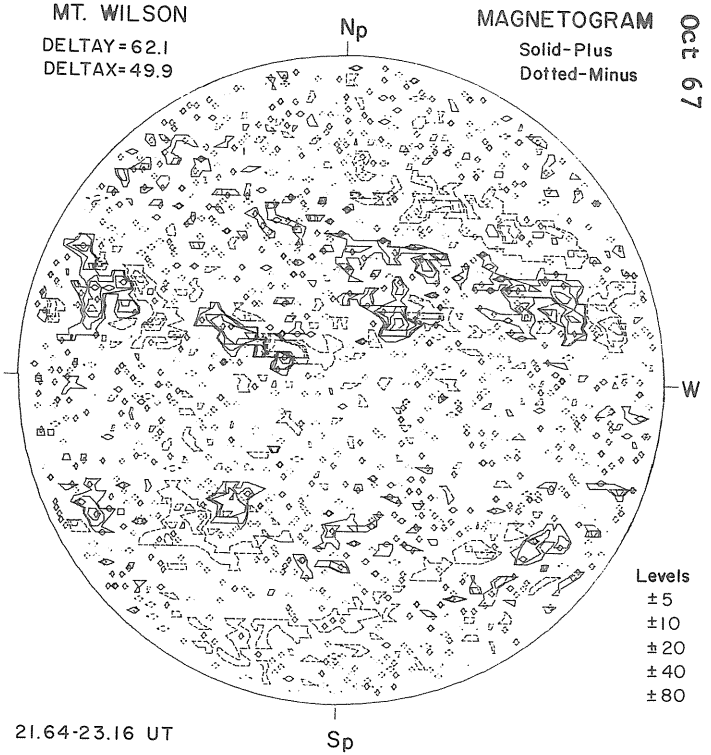


ESSA-BOULDER SUNSPOTS



1830 UT

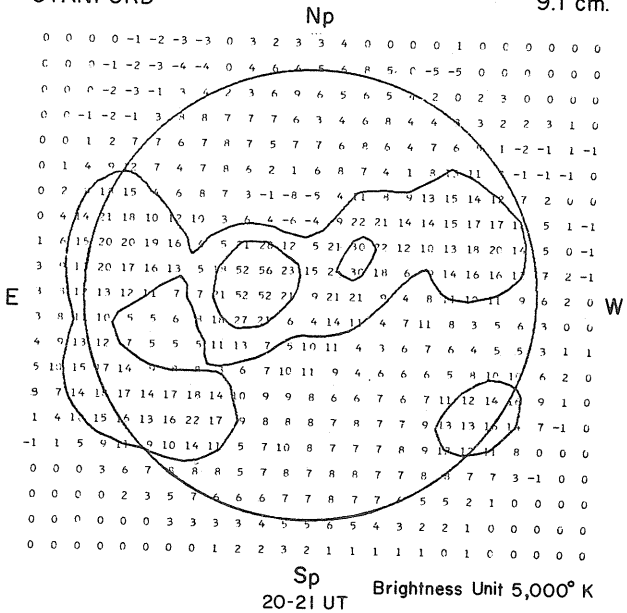
MT. WILSON MAGNETOGRAM
DELTAY=62.1
DELTAX=49.9
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

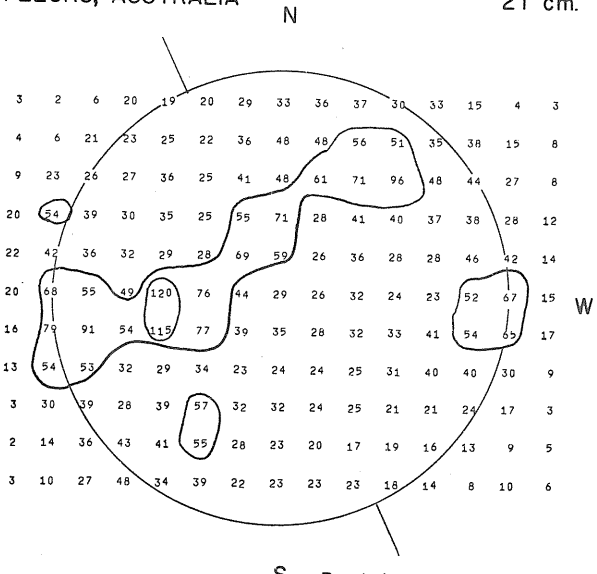
21.64-23.16 UT

STANFORD 9.1 cm.



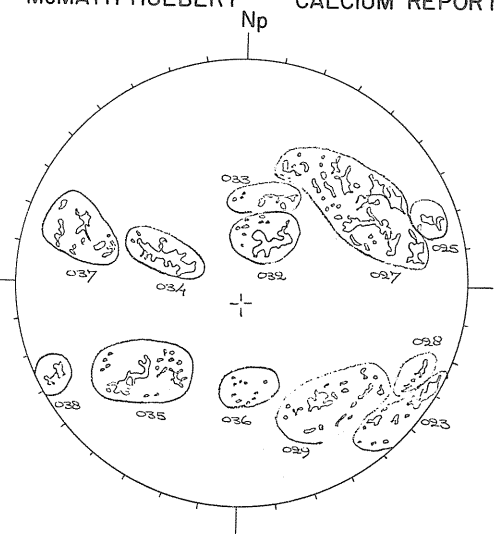
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

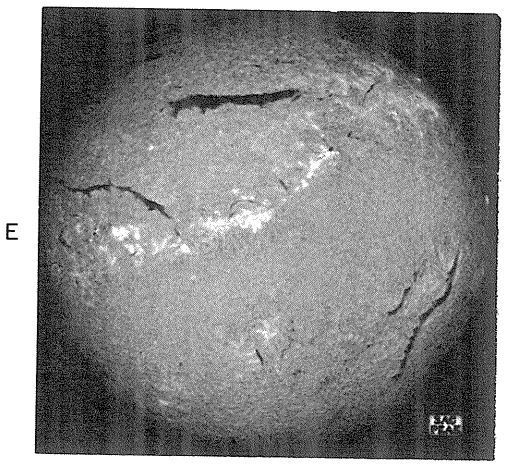


25-08-2.5
27-78-2.5
32-23-3.0
33-07-2.5
34-22-3.0
35-16-2.5
37-22-2.5
38-21-2.5

1350 UT

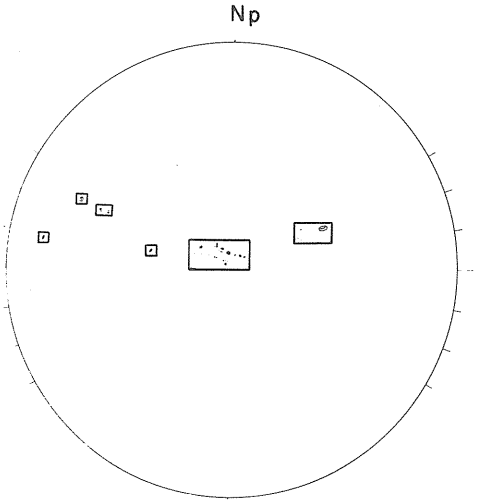
OCTOBER 23, 1967 (P=25.80, B_o=5.25, L_o=38.06)

SACRAMENTO PEAK Hα



1450 UT

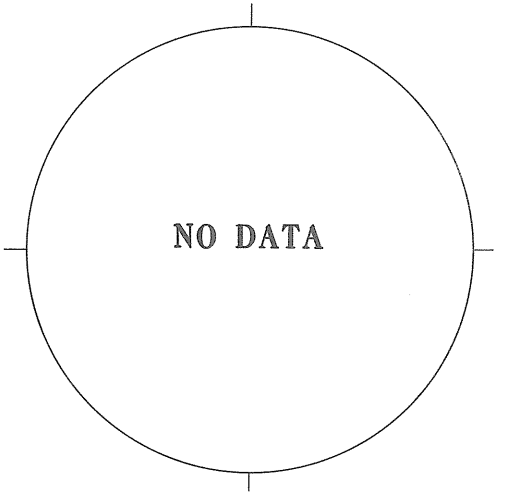
ESSA-BOULDER SUNSPOTS



1445 UT

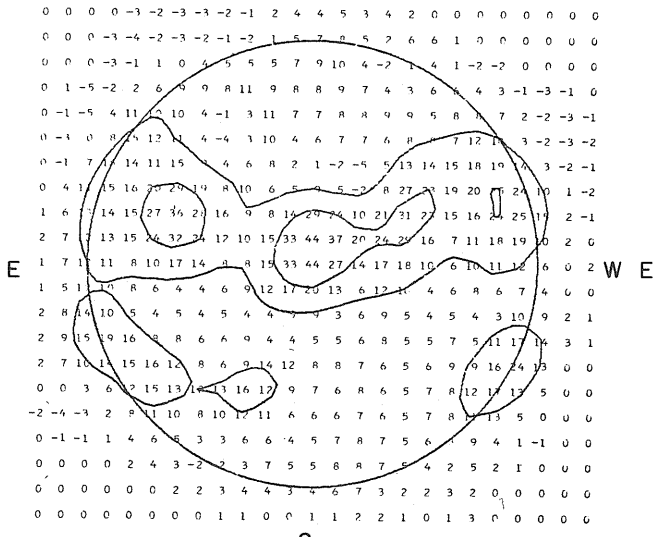
MT. WILSON Np MAGNETOGRAM

Solid-Plus
Dotted-Minus



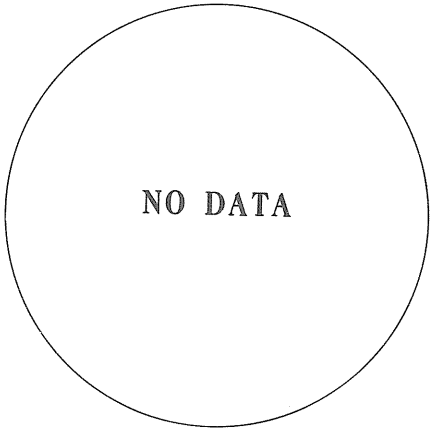
Levels
±5
±10
±20
±40
±80

STANFORD 9.1 cm.



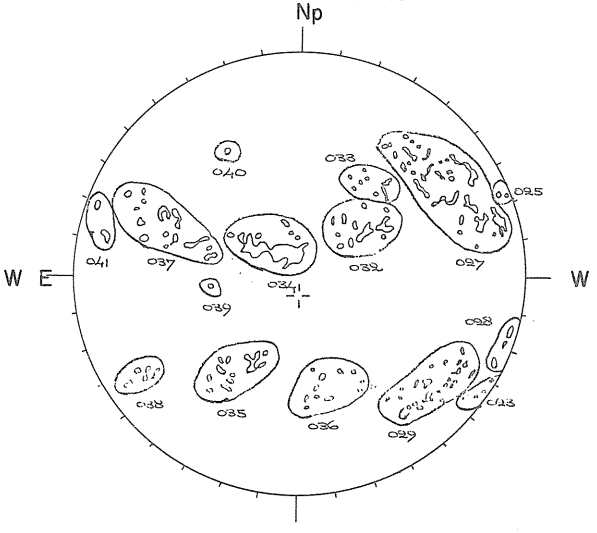
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



1307 UT

27-62-2.5
28-10-3.5
32-18-3.0
33-08-2.5
34-28-3.0
37-25-3.0
40-01-2.5

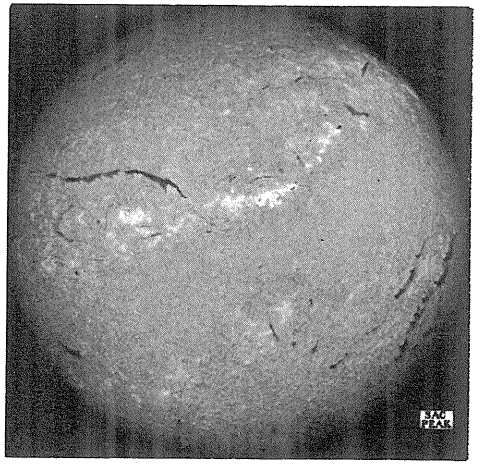
55
Oct 67

OCTOBER 24, 1967 (P=25.71, B_o=5.16, L_o=24.87)

MT. WILSON Np MAGNETOGRAM Solid-Plus Dotted-Minus Oct 67 56

SACRAMENTO PEAK Hα

N



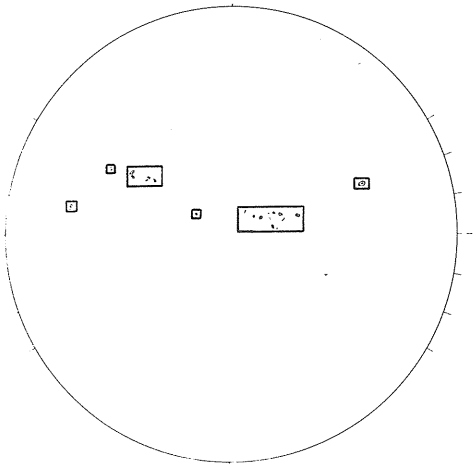
E W E

S

1440 UT

ESSA-BOULDER SUNSPOTS

Np



E W

Sp

1430 UT

NO DATA

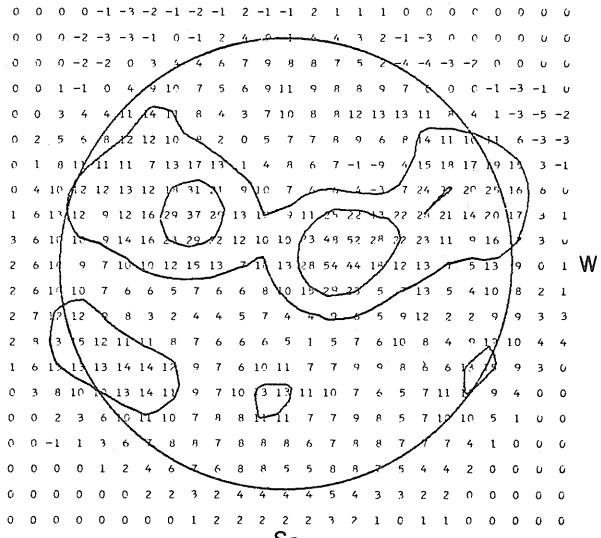
E W

Levels
±5
±10
±20
±40
±80

Sp

STANFORD 9.1 cm.

Np



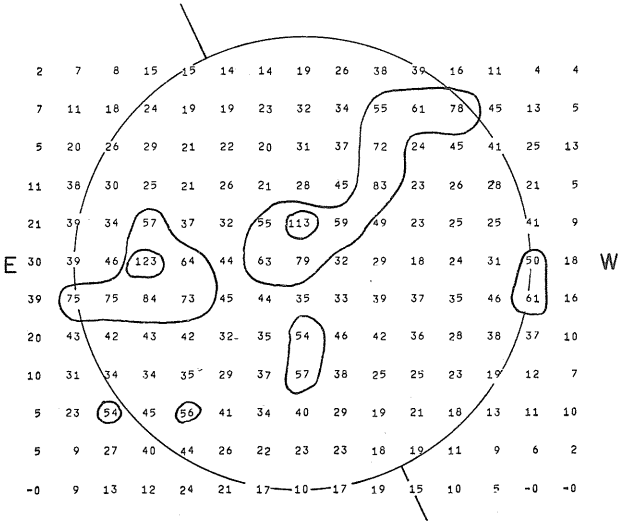
E W

Sp

20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N



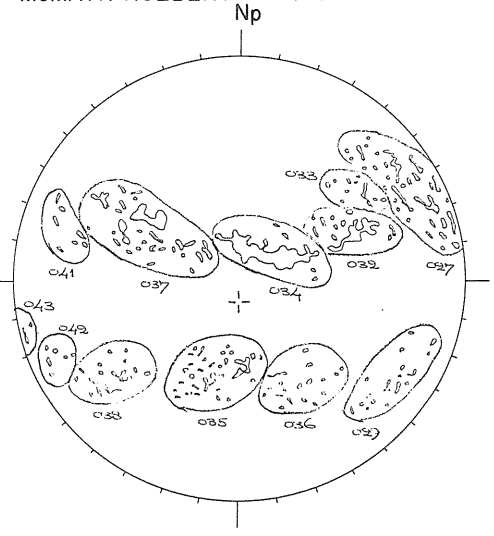
W E

S Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np



W E W

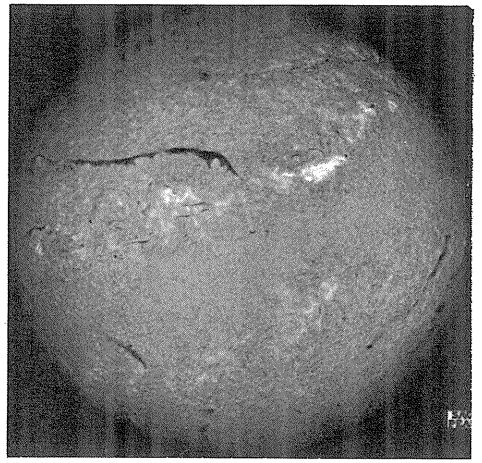
Sp

1350 UT

27-65-2.5
32-22-3.5
33-07-2.5
34-37-3.5
35-18-2.5
37-38-3.0
38-16-2.5

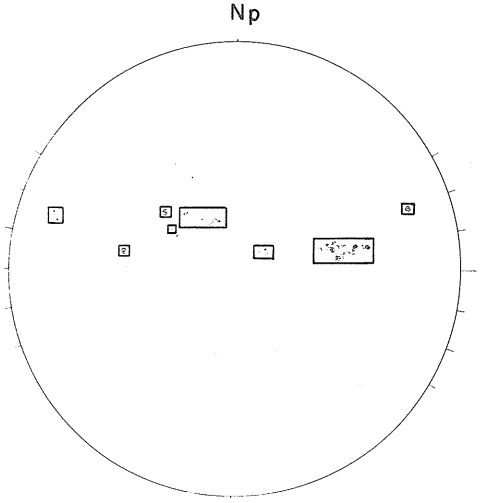
OCTOBER 25, 1967 (P=25.61, B_o=5.07, L_o=11.68)

SACRAMENTO PEAK Hα



1439 UT

ESSA-BOULDER SUNSPOTS

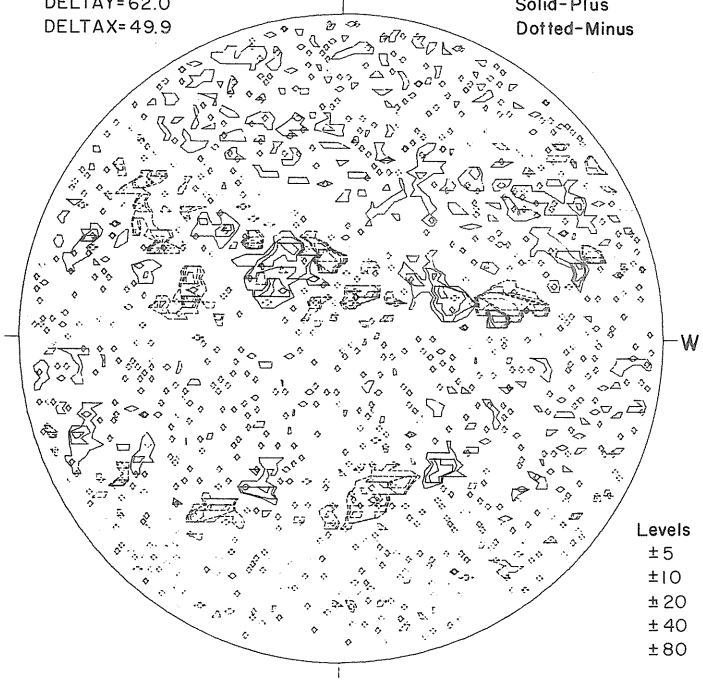


2135 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=49.9

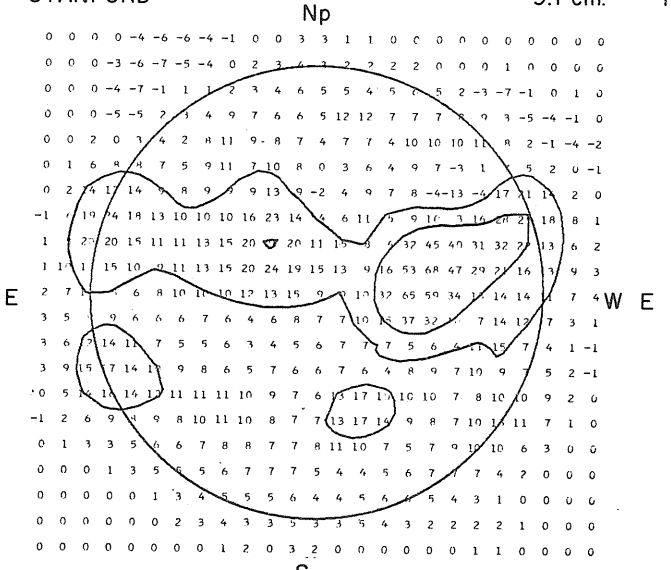
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

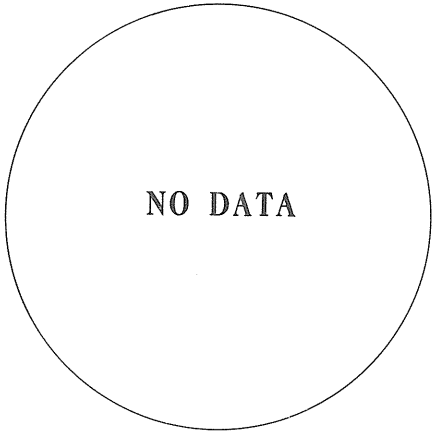
21.88-23.39 UT

STANFORD 9.1 cm.



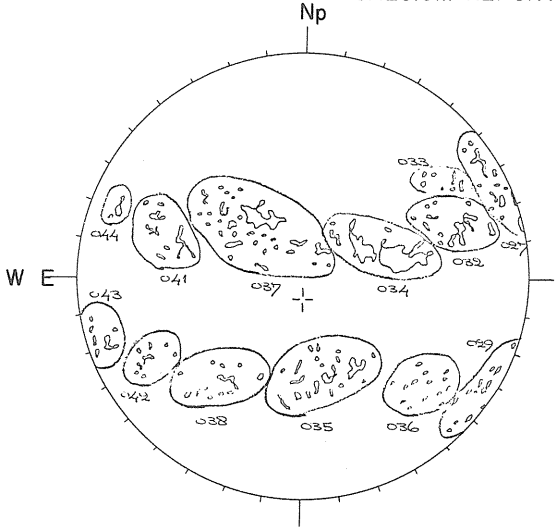
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA N



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

21 cm. McMATH-HULBERT CALCIUM REPORT



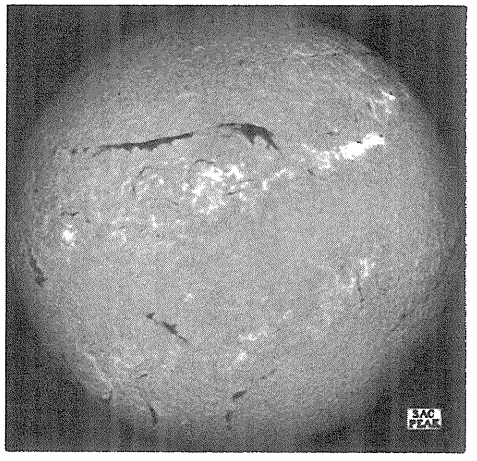
27-32-2.0
32-23-3.0
34-46-3.5
35-21-2.5
37-45-2.5
44-09-2.5

1350 UT

OCTOBER 26, 1967 (P=25.50, B_o=4.98, L_o=358.50)

SACRAMENTO PEAK Hα

N

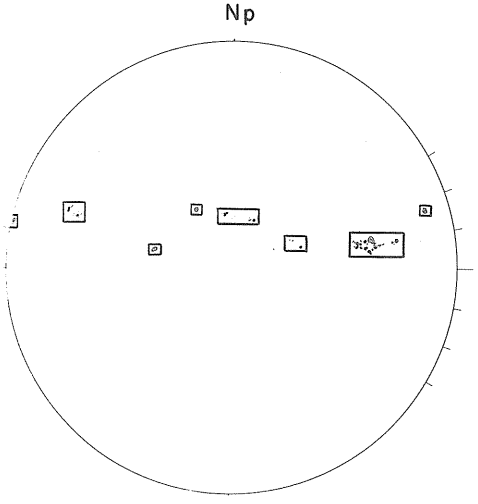


E W

S

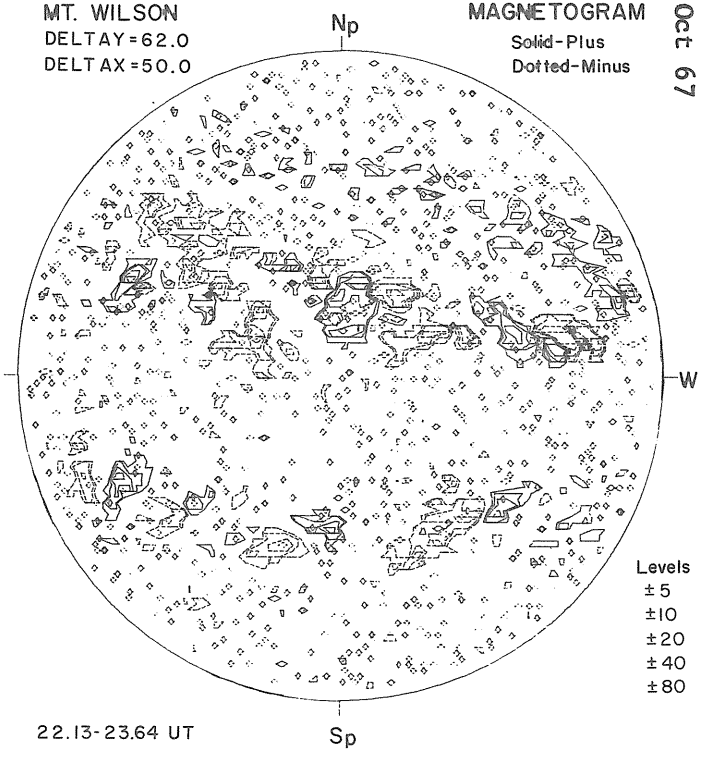
1537 UT

ESSA-BOULDER SUNSPOTS



1520 UT

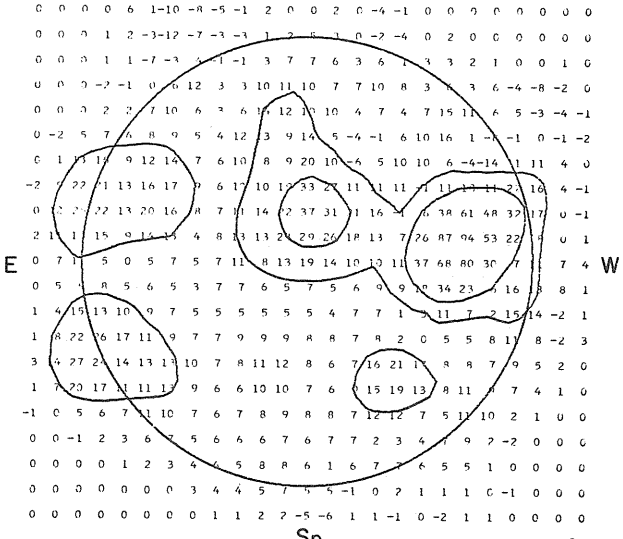
MT. WILSON MAGNETOGRAM
DELTAY=62.0
DELTAX=50.0
Solid-Plus
Dotted-Minus



22.13-23.64 UT

STANFORD 9.1 cm.

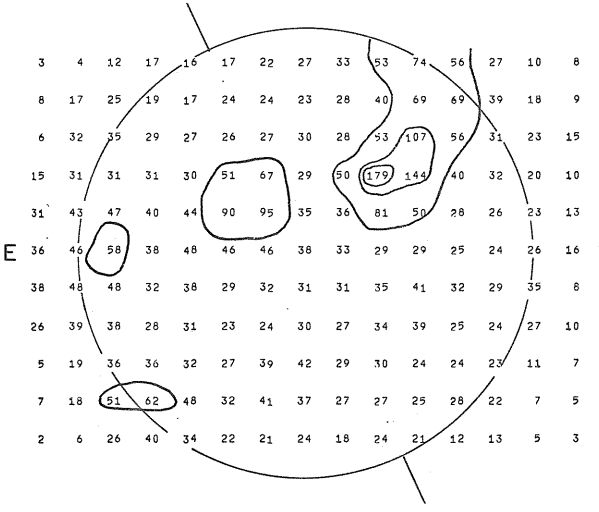
Np



20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.

N



Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT CALCIUM REPORT

Np

NO DATA

E W

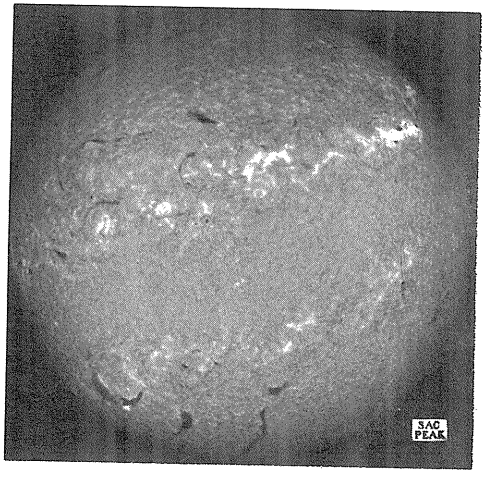
Sp

OCTOBER 27, 1967 (P=25.38, B_o=4.88, L_o=345.31)

SACRAMENTO PEAK Hα

N

E W E

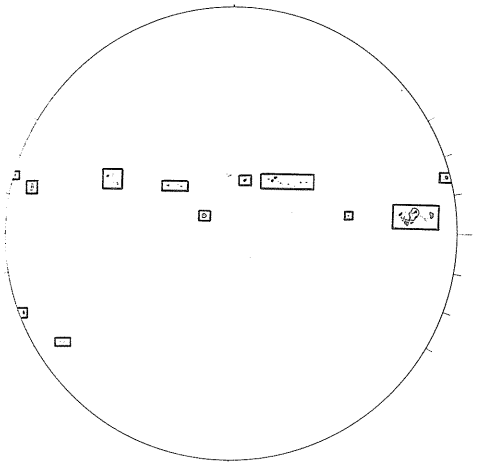


S

1537 UT

ESSA-BOULDER SUNSPOTS

Np



W E W

Sp

1425 UT

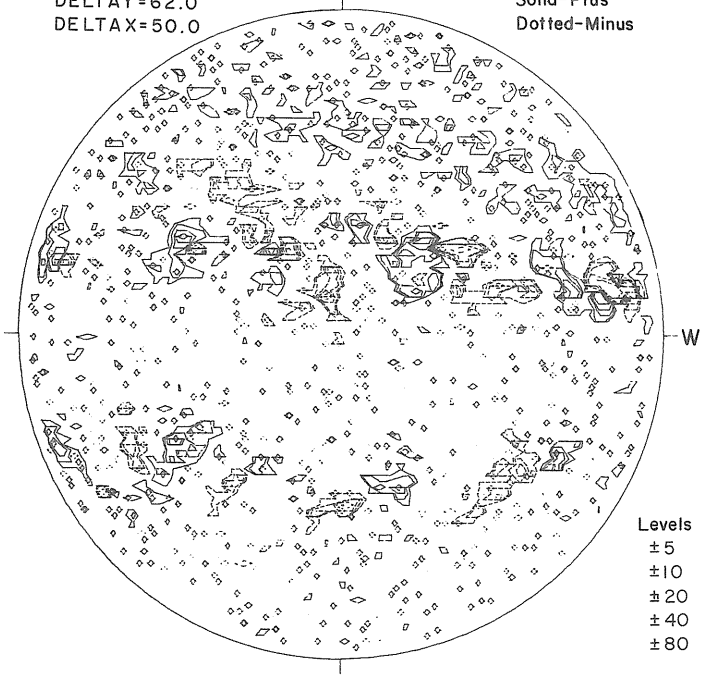
MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

Solid-Plus
Dotted-Minus

Np

E W



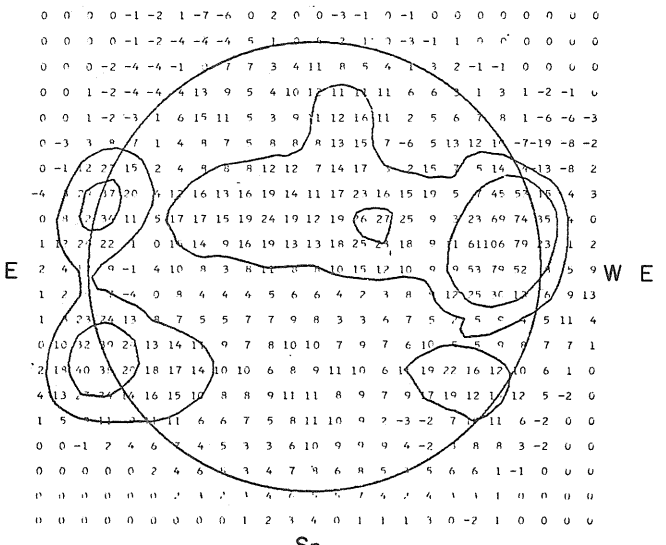
Levels
±5
±10
±20
±40
±80

Sp

21.72-23.22 UT

STANFORD 9.1 cm.

Np



E W E

Sp

20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA

N

NO DATA

W E

S

02-03 UT

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

21 cm.

McMATH-HULBERT CALCIUM REPORT

Np

NO DATA

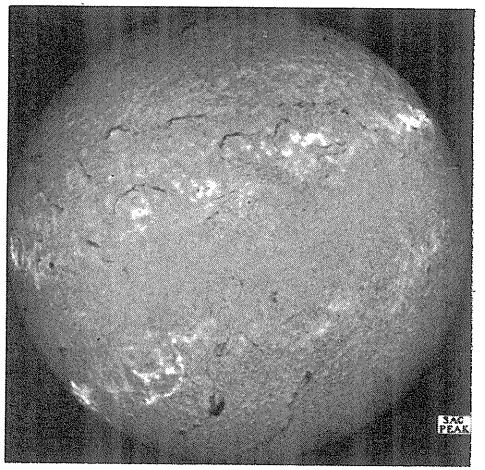
W

Sp

59
Oct 67

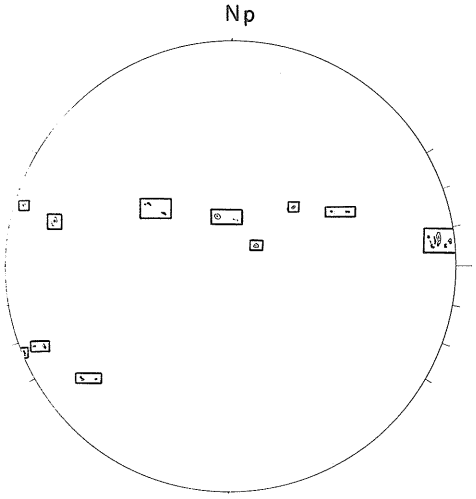
OCTOBER 28, 1967 (P=25.25, B_o=4.79, L_o=332.12)

SACRAMENTO PEAK Hα



1523 UT

ESSA-BOULDER SUNSPOTS



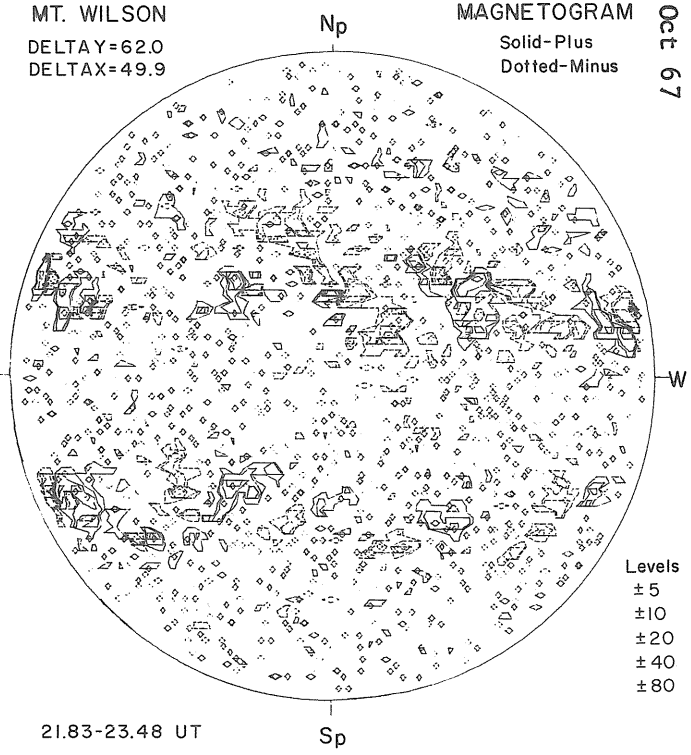
1710 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=49.9

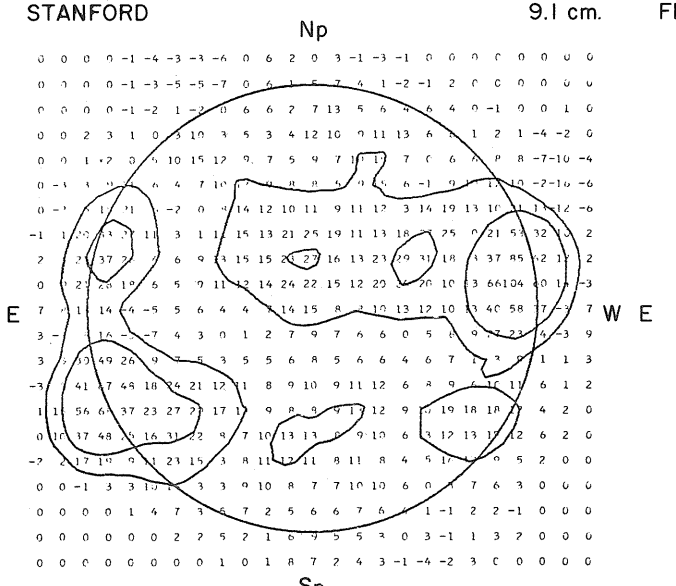
Solid-Plus
Dotted-Minus

Oct 67 60



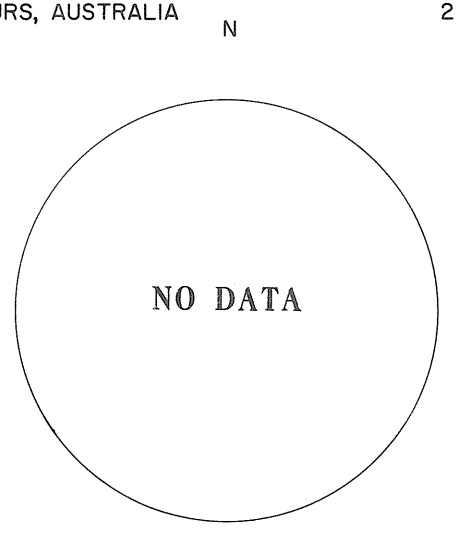
21.83-23.48 UT

STANFORD 9.1 cm.



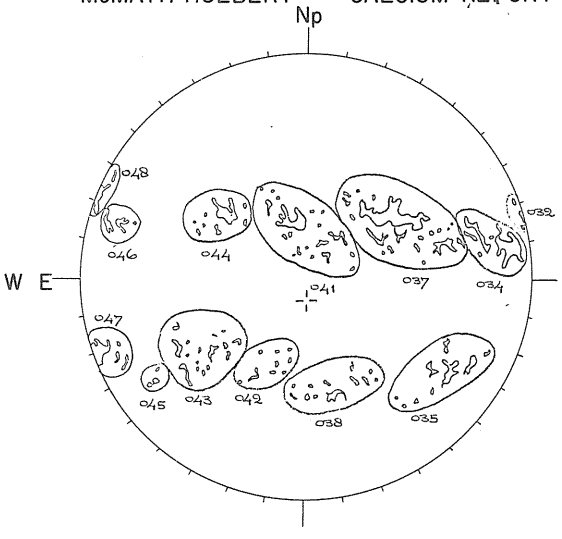
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

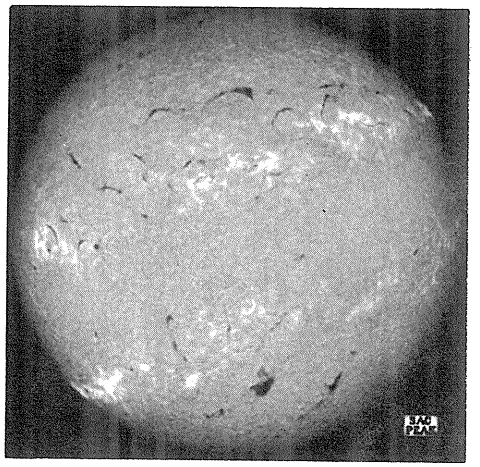


32-09-2.5
34-47-3.0
35-26-2.5
37-49-3.0
41-27-2.5
45-06-2.5
47-40-2.5

1310 UT

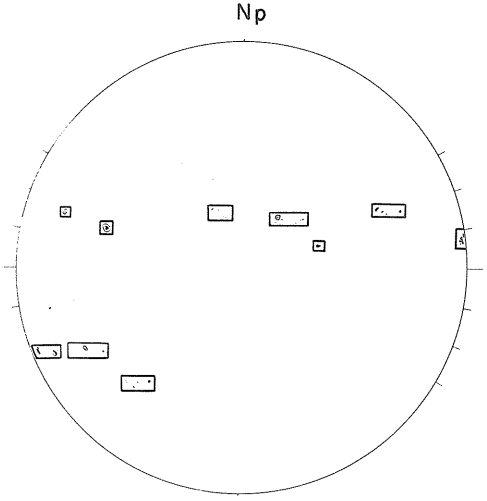
OCTOBER 29, 1967 (P=25.12, B_o=4.70, L_o=318.93)

SACRAMENTO PEAK Hα



2108 UT

ESSA-BOULDER SUNSPOTS

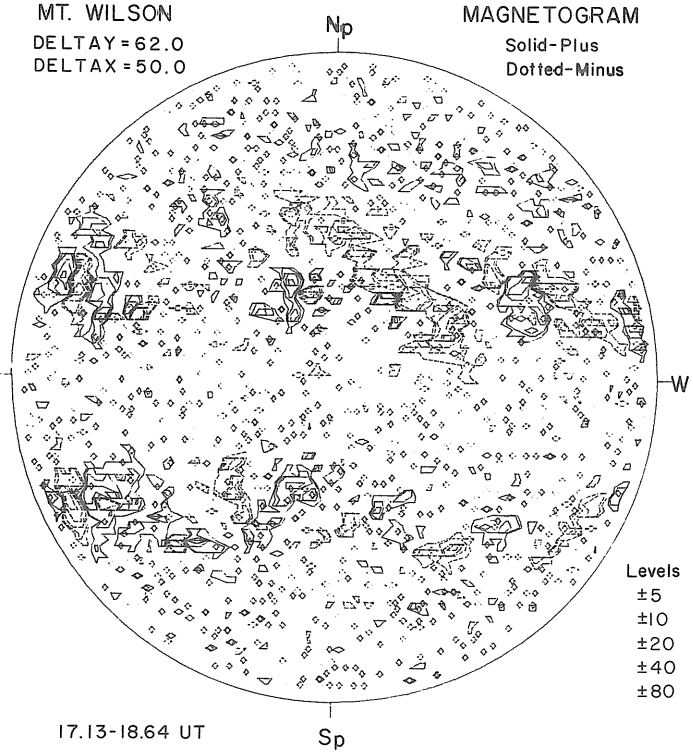


1650 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.0
DELTAX=50.0

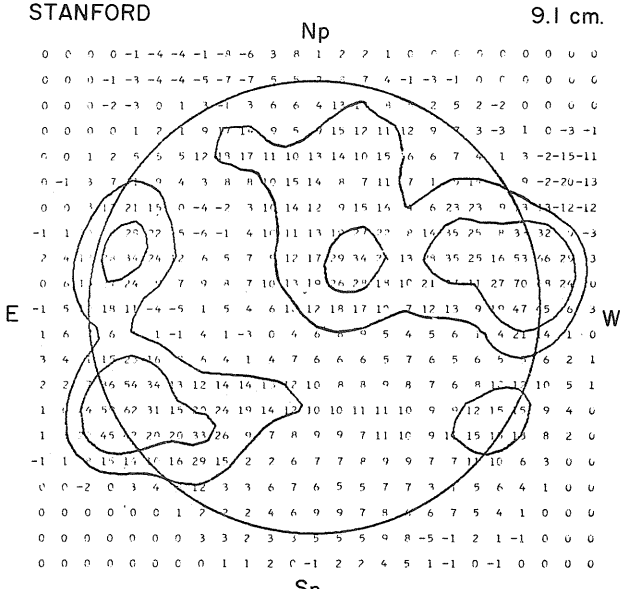
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

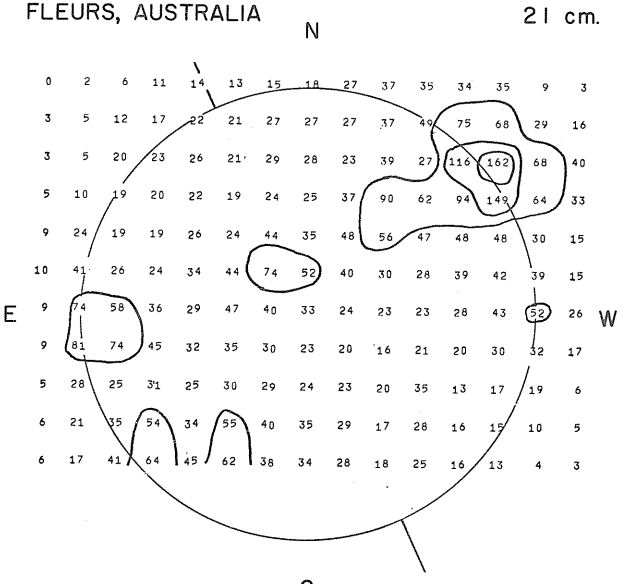
17.13-18.64 UT

STANFORD 9.1 cm.



20-21 UT Brightness Unit 5,000° K

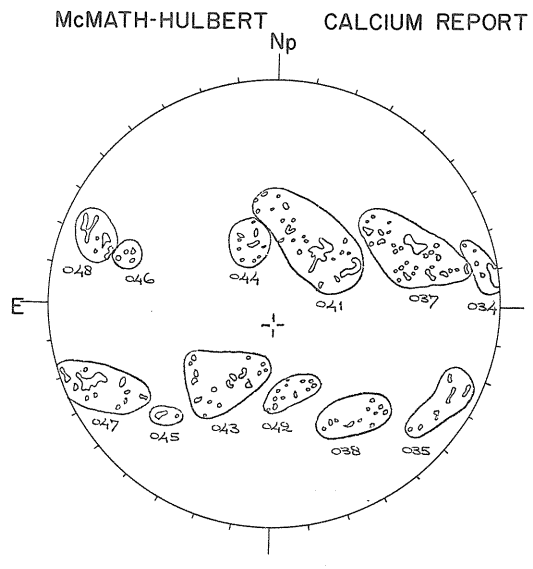
FLEURS, AUSTRALIA 21 cm.



02-03 UT Brightness Unit 1,700° K

Resolution 3 Minutes of Arc

McMATH-HULBERT CALCIUM REPORT



1500 UT

34-40-3.5
37-44-2.5
41-30-3.0
43-12-2.5
44-13-3.0
45-06-3.5
46-05-2.5
47-45-3.0
48-24-2.5

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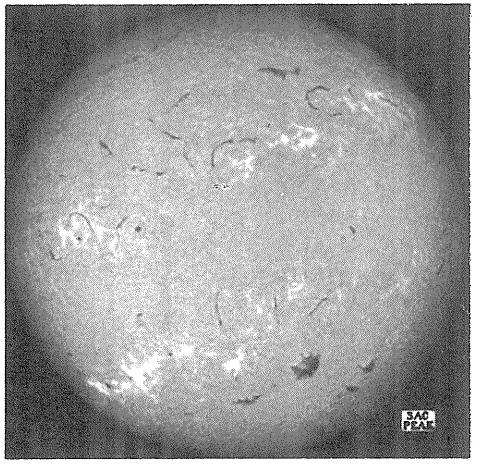
Oct 67

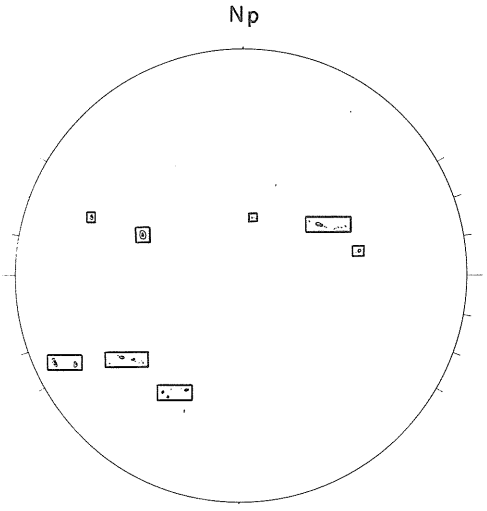
OCTOBER 30, 1967 (P=24.97, B_o=4.60, L_o=305.75)

SACRAMENTO PEAK Hα



2157 UT

ESSA-BOULDER SUNSPOTS

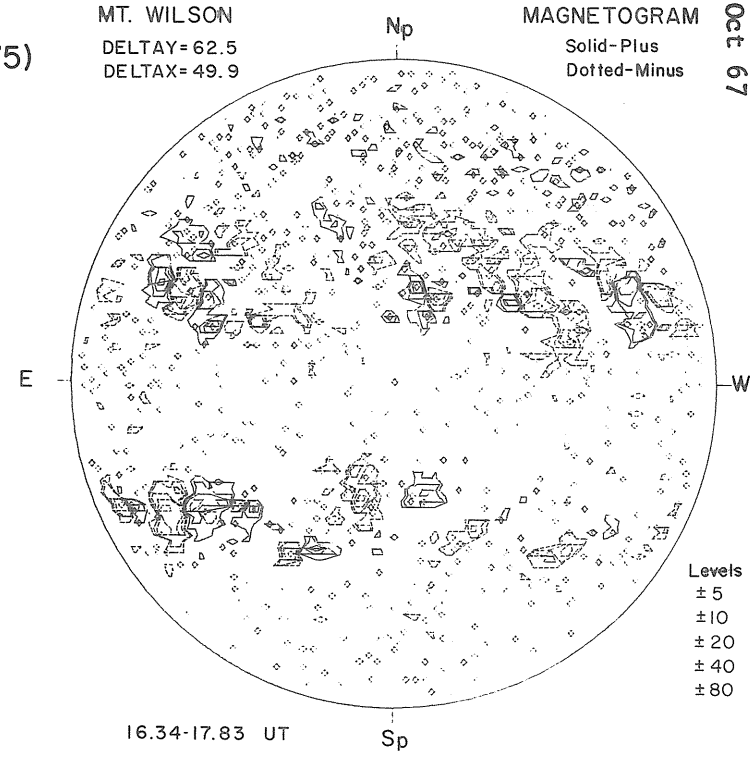


1430 UT

MT. WILSON MAGNETOGRAM

DELTAY=62.5
DELTAX=49.9

Solid-Plus
Dotted-Minus



16.34-17.83 UT

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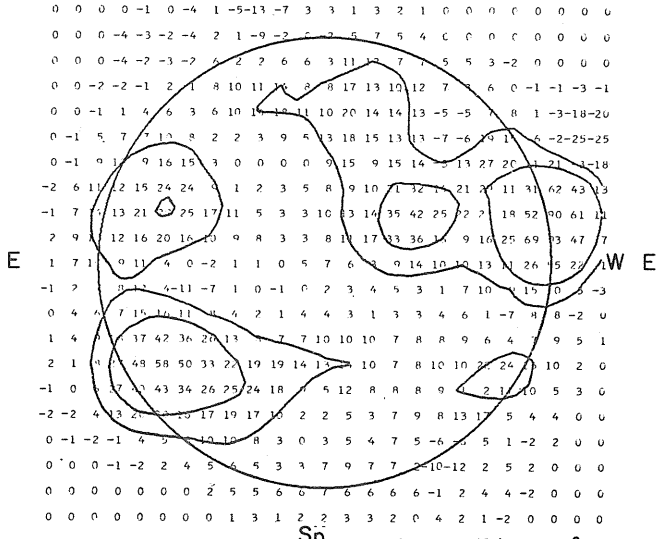
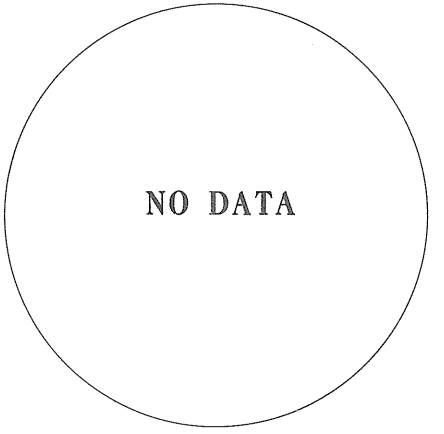
STANFORD 9.1 cm.



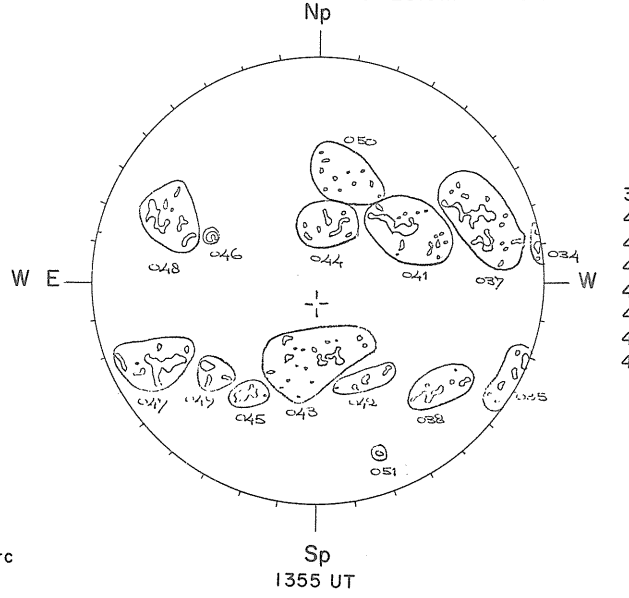
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT

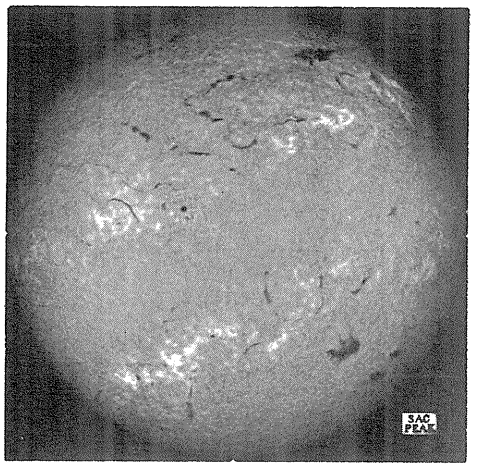


37-37-3.0
41-28-3.0
43-18-2.5
44-10-2.5
45-12-3.0
47-46-3.0
48-21-2.5
49-11-3.0

1355 UT

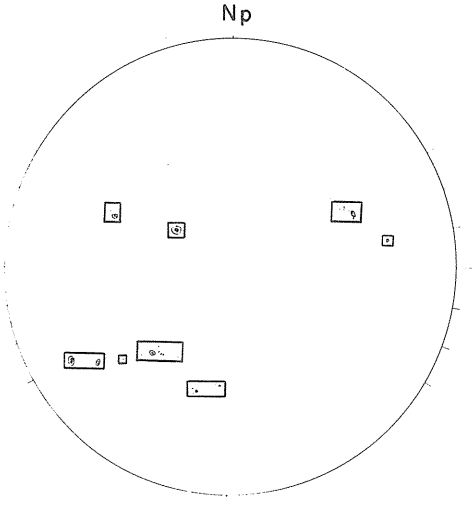
OCTOBER 31, 1967 (P=24.82, B_o=4.50, L_o=292.56)

SACRAMENTO PEAK Hα



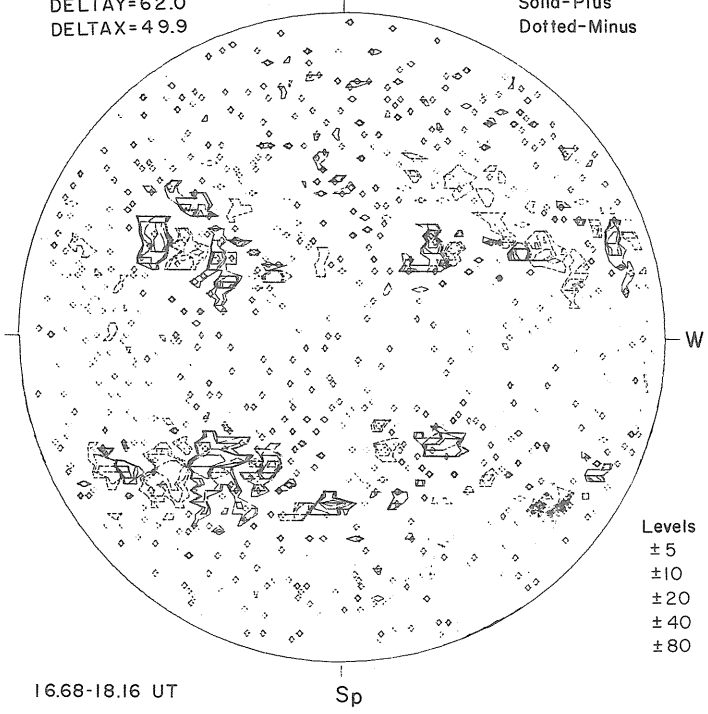
2246 UT

ESSA-BOULDER SUNSPOTS



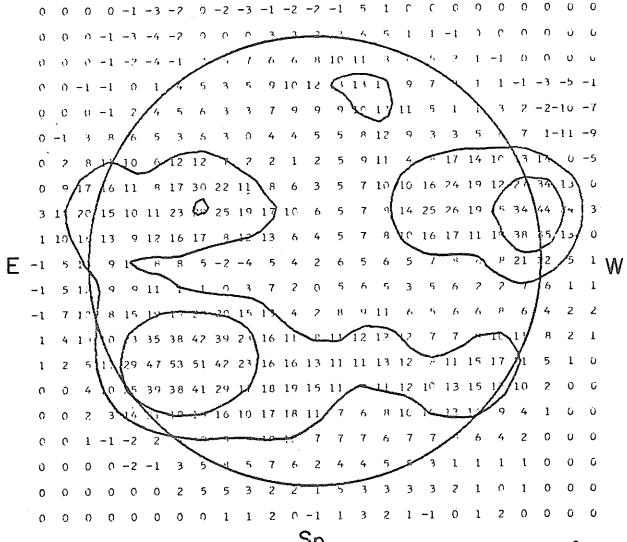
1515 UT

MT. WILSON MAGNETOGRAM
DELTAY=62.0
DELTAX=49.9
Solid-Plus
Dotted-Minus



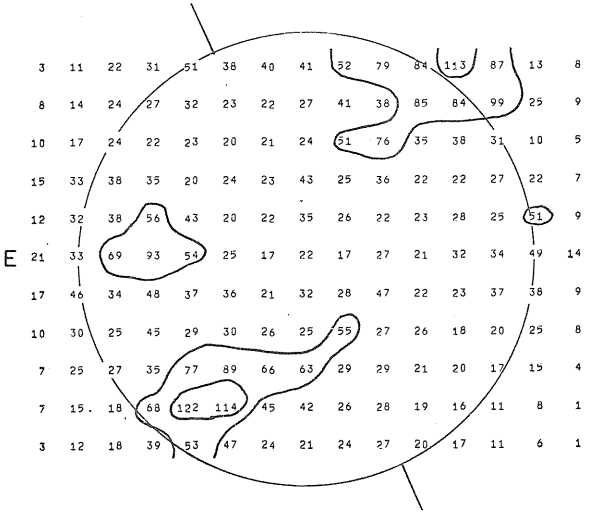
16.68-18.16 UT

STANFORD 9.1 cm.



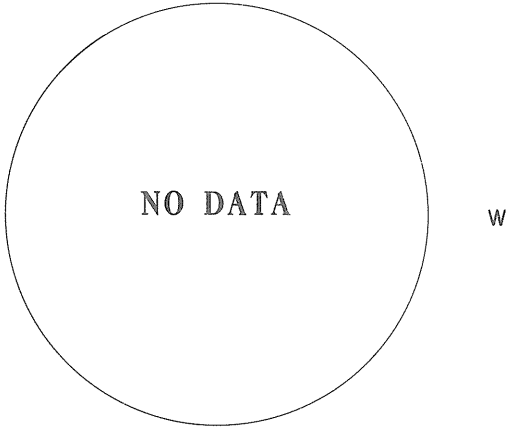
20-21 UT Brightness Unit 5,000° K

FLEURS, AUSTRALIA 21 cm.



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

McMATH-HULBERT CALCIUM REPORT



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Oct 67

FINAL CORONAL LINE EMISSION INDICES

OCTOBER 1967

CMP Oct. 1967	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	83	123	25	75	90	143	20	44	99	169	23	41	94	136	20	36
2	123	156	79	144	68	87	75	156	96	177	22	33	106	168	18	37
3	131	179	x	x	48	74	x	x	101	170	28	48	108	154	19	27
4	x	x	x	x	x	x	x	x	90	127	21	26	98	144	20	31
5	116	156	x	x	79	104	x	x	x	x	x	x	x	x	x	x
6	92	164	x	x	68	93	x	x	50	78	x	x	62	78	x	x
7	61	82	x	x	95	154	x	x	62	88	x	x	64	75	x	x
8	58	72	18	32	88	137	14	25	46	67	9	18	44	50	9	13
9	52	85	20	32	74	108	32	53	57	90	10	20	57	70	13	29
10	x	x	x	x	x	x	x	x	58	91	10	18	65	99	10	28
11	53	94	x	x	42	60	x	x	40	54	x	x	77	109	x	x
12	39	61	24	36	37	45	26	43	x	x	x	x	x	x	x	x
13	39	51	x	x	48	60	x	x	31	34	x	x	38	49	x	x
14	47	65	18	33	48	53	8	10	x	x	x	x	x	x	x	x
15	72	124	17	24	52	69	12	19	x	x	x	x	x	x	x	x
16	71	104	16	29	85	124	13	31	51	60	5	12	62	69	11	17
17	91	125	20	30	102	140	28	48	81	94	20	44	77	85	45	80
18	114	164	27	60	110	166	23	42	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	76	113	10	16	84	128	30	43
20	82	100	26	46	62	75	x	x	x	x	x	x	x	x	x	x
21	88	127	19	36	54	65	19	37	x	x	x	x	x	x	x	x
22	56	71	20	24	64	91	13	29	x	x	x	x	x	x	x	x
23	59	77	43	80	61	77	26	104	x	x	x	x	x	x	x	x
24	67	109	17	38	67	96	15	37	35	45	0	0	51	66	0	0
25	83	140	x	x	92	144	x	x	x	x	x	x	x	x	x	x
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
27	119	149	x	x	64	122	x	x	x	x	x	x	x	x	x	x
28	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	88	112	16	26	87	128	54	94	58	82	x	x	73	91	x	x
31	78	85	20	33	82	106	44	74	65	95	x	x	45	52	x	x

Beginning May 1967 these values have been based upon Pic-du-Midi and Kislovodsk only. Though Climax and Sacramento Peak were observing during this period, the spectra have not yet been reduced. A digital conversion system is in preparation.

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

OCTOBER 1967

OCT 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
01	1307	1437	1322	1					27			UM(NWC15-27,OMEGA13-25)	1315E
01	1307	1437	1322	1						2		UM	
01	1318	1435	1321	5				1+				LO A17	
01	2352	0041	0009	5					30			MA(NPM23-30)	2350
												HA(WWVL20-7)	
02	0724	0822	0735	1					50			MA(NPG18-50)	0735
02	1842	1845	1843	1							02	BO(WWI11-0.2)	1842
02	2152	2156	2154	5							03	BO(WWI11-0.3)	2150
												HA(WWVH5-0.3,	
												WWVH10-0.2)	
02	2155	2355	2200	1					45			HA(WWVB60-45,WWVL20-14)	
02	2157	2207	2200	3	S 1-							MC WS	
05	1357	1502	1406	1					23			UM(OMEGA13-23,NWC19-20)	1355
05	1357	1510	1403	1						2		UM	
05	1358	1424	1406	1	G 1-							TR	
05	1850U	1900U	1856	5	SL 1-							WS MC TR	1842
05	1850	2010	1858	5					34			HA(WWVB60-34,WWVL20-18)	
												BO(NBA24-22)	
05	1850	1955	1858	1						1+		A3	
05	1852	1918	1903	3				1-				BO	
05	2040	2047	2041	1							02	BO(WWI11-0.2)	2037
05	2045	2220	2048	1					23			HA(WWVB60-23,WWVL20-7)	
06	1107	1141		1	S 1-							JU	1101
06	1152	1211	1155	1					18			MA(NPG18-18)	1130
06	1201	1211	1205	1	S 1-							TR	
06	1220	1343	1240	1					74			UM(OMEGA13-74,NWC19-27)	1216
06	1220	1343	1240	1						3		UM	
06	1223	1246	1230	4		20	1					RO JU	
06	1224	1245	1232	5				1				RO LO	
06	2308	0010	2331	5					40			MA(NPM23-40,NPG18-29)	2300
												HA(WWVB60-34,WWVL20-18)	
06	2308	2342	2312	1						1-		A3	
07	1658	1706	1659	1							02	BO(WWI12-0.2)	1653
			1702								02	BO(WWI12-0.2)	
07	2023U	2134	2042U	1					32			UM	2042
07	2046	2051	2049	1							07	HA(WWVH5-0.7,	
												WWVH10-0.4)	
07	2046	2101	2049	1							05	BO(WWI9-0.5)	
08	0808	0821	0811	3	S 1-							MA OK	0800
08	0819	0849		1			1+					KE	
08	2032	2120	2045U	5	G 1							MC BO HU WS	2031
08	2035	2225	2050	1					68			HA(WWVB60-68,WWVL20-36)	
10	1830	1832	1831	1							03	BO(KKE4-0.3)	1831
11	1650	1655	1652	1							02	BO(WWI11-0.2)	1651
13	0813	0910	0837	1					50			MA(NPG18-50)	0810E
13	1903	1907	1904	1							04	BO(WWI11-0.4)	1850E
13	1921	1939	1928	1					43			MA(NPG18-43)	
14	1524	1527	1524	1							02	BO(WWI11-0.2)	1525E
											04	BO(WWI11-0.4)	
14	1526	1532	1528	1	S 1-							TR	
14	2130	2245	2148	1					25			BO(OMEGA10-25)	2148E
17	1503	1507	1504	1							02	BO(WWI8-0.2)	
20	0006	0022	0013	4	SL 1							MA CA	0015E
20	0007	0203	0011	5					94			MA(NPM23-94,GBR16-30,	
												NPG18-72)	
												BO(OMEGA10-43)	
												HA(WWVL20-29)	
			0113	5								MA(NPM23-**)	
20	0008	0013	0009	1							07	HA(WWVH10-0.7,	
												WWVH5-0.3)	
20	0008	0020	0010	1			*					CR	
20	0222	0238	0227	1	S 1-							MA	0226
20	0224	0242	0228	1					32			MA(NPG18-32,GBR16-22,	
												NPM23-27)	
20	0226	0228	0227	1							02	HA(WWVH5-0.2,	
												WWVH10-0.2)	
20	0226	0232	0227	1			*					CR	
20	1132	1220	1140	1					18			UM(NWC15-18,OMEGA13-18)	1126
20	1132	1220	1140	1						2		UM	
21	2100	2210	2105	1					11			HA(WWVL20-11)	2102E
21	2103	2109	2104	1							02	BO(WWI9-0.2)	
21	2225	2238	2230	1					25			MA(NPG18-25)	2221
21	2333	2334	2333	1							05	HA(WWVH5-0.5,	2333
												WWVH10-0.2)	
22	1004		1019	5				2				RO A17	1003

SUDDEN IONOSPHERIC DISTURBANCES

OCTOBER 1967

OCT 1967	UNIVERSAL TIME START	END	MAX	WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE ABS	SCNA	SEA	SPA	SES	SFD	STATIONS	KNOWN FLARE
22	1007	1032	1011	1		18	1					RO	1003
22	1008	1117U	1023	1					59			UM(OMEGA13-59,NWC15-50)	
22	2212	2241	2219	1		16	1					BO	2210
22	2212	2330	2220	5					83			BO(OMEGA10-83) HA(WWVL20-36) MA(NPG18-54,NPM23-62)	
22	2213	2233	2219	5	G 1-							WS HU	
24	1609	1615	1610	1							04	BO(WWI11-0.4)	1605
24	1612	1628	1620	5								WS BE BO HU MC TR	
24	1614	1635	1620	3						2		A20 A1 A18	
24	1615	1700	1625	4				2				A1 A8 A21	
25	2128	2155	2133	1						1-		A3	2128
25	2129	2131	2130	1							04	HA(WWVH5-0.4)	
25	2138		2145	5					14			AN(NPM23-14) HA(WWVL20-7)	
25	2150	2215U	2200	5	SL 1							AN WS	2131
25	2203E		2203	5					35			AN(NPM23-35) HA(WWVL20-25,WWVB60-23)	
25	2230E		2330	1					50			AN(NPM23-50)	*
25	2308	0053	2332	5					99			MA(NPM23-118)	2312
25	2308	0053	2348	5					89			MA(NPM23-89)	
25	2310	0045	2331	5					83			MA(NPG18-83)	
25	2310	0045	2348	5					50			MA(NPG18-50)	
25	2315	0205	2325	5					36			HA(WWVL20-36,WWVB60-34)	
25	2315	2351	2329	5	SL 1							MA CA OK TO	
25	2320	0025	2329	1						1-		A3	
26	0255	0350	0259	1						1-		A3	
26	0258	0432	0324	1					31			MA(NPM23-31)	
26	0309	0340	0325	1	SL 1							MA	
26	0600	0740	0615	1						1		ND	0612E
26	0610	0650	0620	3	SL 1							MA OK	
26	0614E	0645	0616	1		35	1					MA	
26	1014		1020	1				1				RO	1012E
26	1015	1028	1018	1		14	1					RO	
26	1634	1640	1635	1							02	BO(WWI11-0.2)	1634
26	2330E		2330	1	SL 3							AN	2325
26	2340	0010		1				*				TA	
27	1113	1157U	1117	5				1+				A17 KE	1106
27	1644	1652	1646	1						1-		A3	1644
27	1647	1649	1648	1							03	BO(WWI8-0.3)	1648E
27	1942	1954	1944	1						1-		A3	1941
27	1942	2015	1947	5					30			BO(OMEGA10-30) HA(WWVL20-25)	
27	2150	2300	2152	5					14			HA(WWVL20-14) BO(OMEGA10-14)	2148E
28	0843	1014	0912	1				1-				RO	0845
28	0849	0944	0904U	1		20	1-					RO	
29	0258	0355	0306	1						2+		A3	0258
29	0259E	0422	0320	1					99			MA(NPM23-120,GBR16-66, NPG18-50)	
29	0300	0440	0315	1						1		ND	
29	0305	0400U	0330	5	G 2+							OK MA TO	
29	1043		1049	1				1+				RO	*
29	1044	1107	1046	1		24	1					RO	
29	1140	1250	1158	1					61			UM(OMEGA13-61,NWC19-25)	1145
29	1140	1250	1158	1						3		UM	
29	1147	1214	1149	1		23	1					RO	
29	1147	1235	1200U	5				1				RO LO	
29	2326	0057	2356	5					99			MA(NPM23-243,GBR16-90, NPG18-212) AN(NPM23-100) UM(NWC19-31)	2327
29	2337	0052	2345	1						3		A3	
29	2340	0010		5		50	2					MA AN	
29	2342	0108	2346	5	S 2							MA AN OK TO	
29	2346	2358	2350	1							05	HA(WWVH10-0.5)	
29	2356	2357	2356	1							03	BO(WWI13-0.3)	
30	0415	0430D	0420	1						1		A3	*
30	0417	0446	0423	1					50			MA(NPG18-50)	
31	1127	1157		1				1				PO	1123E
31	1128	1241	1140	1					31			UM(OMEGA13-31,NWC22-9)	

No Huancayo SWF ~04 ~07 October 1967.

Rome SCNA-SEA out of operation 11-19 October 1967.

RIOMETER EVENTS

OCTOBER 1967

South Pole — 30 Mc/s

OCT. 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS	OCT. 1967	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS
01	0016	0326	0042	11	6	14	0254	0633	0338	6	6
01	0704	2036	1047	11	15	14	0836				
02	0254	0357	0307	20	7	15		0407	0139	13	13
02	1052	2227	1701	6	12	16	0101	0525	0113	41	6
03	0642	1024	0824	3	4	17	0336	1138	0349	9	12
04	1820		2201			19	0415	0528	0423	5	2
05		0750		6	12	19	1540	2053	1648	6	2
05	1600	1927	1627	4	6	23	1202	2258	1341	4	3
08	1205		1446			24	0926	2219	1453	6	10
09		0308		15	15	27	0640		0927		
09	2204		2349			28		0319		8	15
10		0407		5	9	28	0615		1049		
10	0745		2218			29		0424		19	16
11		0122		15	30	29	0941		1500		
11	0747					30		0039		16	10
12			0124			30	1018		1757		
13		0424		23	25	31		0005		5	6
13	1333		1509			31	0416	1020	0454	4	6
14		0036		8	4						

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

OCTOBER 1967

DAILY AVERAGES FOR OCTOBER 1967			
DATE	44-60 XE-1	8-20 XE-3	0-8 XE-4
6710 1	1.54	14.67	6.41
6710 2	1.49	12.57	6.47
6710 4	1.71	10.02	4.74
6710 6	1.95	13.25	
6710 8	1.62	8.57	3.67
6710 9	1.82	9.88	5.62
671010	1.99	10.82	6.67
671012	2.00	11.57	4.84
671013	1.81	8.20	3.67
671016	1.76	6.51	2.30
671018	1.86	7.64	2.89
671019	2.09	10.44	5.63
671020	2.24	12.21	6.75
671021	2.24	7.45	3.22
671022	2.24	9.07	4.57
671023	2.30	9.65	5.00
671024	2.46	11.18	6.44
671025	2.46	11.16	6.18
671026	2.54	15.03	14.46
671027	2.75	22.41	14.26
671028	2.52	23.44	15.31
671029	2.24	22.99	16.45
671030		22.14	19.76
671031		18.56	18.42

OUTSTANDING EVENTS FOR OCTOBER 1967							
DATE	STA	START	END	8-20 XE-3	0-8 XE-4	0-3 XE-5	COMMENTS
6710 4	NRL	0554	0647	17.64	20.86	2.05	PEAK 0612
6710 8	NRL	1230	1320	12.13	13.05	2.05	
671019	NRL	1715	1758	25.66	26.33	3.25	PEAK 1735
671020	NRL	1052	1145	23.61D	19.85D	13.51D	
671020	NRL	1045	1143	20.78	18.97	2.10	PEAK 1111
671020	NRL	1231	1321	22.04	19.85	2.64	PEAK 1300
671020	NRL	1601	1632	12.59	17.64	3.00	INCREASING
671021	NRL	0018	0115	18.30	36.93	8.96	PEAK 0041
671021	NRL	1407	1452	13.22	15.00	1.20	DECREASING
671022	NRL	1044	1137	20.36	18.70	0.90	DECREASING
671022	NRL	1547	1624	19.94	18.97	9.61	INCREASING
671024	NRL	0717	0816	23.61	19.85D	7.51	PEAK 0748
671024	NRL	1032	1128		18.97	4.20	PEAK 1102
671024	NRL	1203	1304	19.41	16.76	1.20	INCREASING
671024	NRL	1610	1645	65.75	146.74	36.68	DECREASING
671025	NRL	1400	1420	36.27	56.90	5.96	DECREASING
671025	ABRD	1433	1443	11. U	12. U	2. U	
671025	BOUL	2133	2144	13	70	5.7	
671026	NRL	0532	0632		19.85D	13.51D	PEAK 0615
671026	NRL	0848	0901	12.96	29.41	5.21	PEAK 0900
671026	ABRD	1035	1044	12.9 U	10.2 U	.	
671027	NRL	0353	0452	23.61	19.85	13.51	PEAK 0415
671027	NRL	1003	1014	31.17	226.21	5.72	
671027	NRL	1707	1717		138.87	5.91	
671028	NRL	0349	0444	22.56	18.97	9.31	PEAK 0417
671028	NRL	1704	1718	41.69	26.33	2.05	DECREASING
671028	NRL	1753	1838	28.41	20.86	1.44	PEAK 1830
671029	NRL	0200	0310	46.38	146.74	45.21	PEAK 0225
671029	NRL	0345	0443	23.61D	19.85D	13.51	
671029	NRL	2334	0014	720.56	5228.61	1560.00	PEAK 2400
671030	ABRD	1901	1910	23.8 U	41.0 U	15.9 U	
671030	NRL	1907	1911	34.56	246.55	20.00	
671031	ABRD	1134	1140	16.9 D	96.5 U	16.5 U	FLUX DECREASING
671031	ABRD	1647	1658	10.4 U	18.5 U	2.02U	
671031	NRL	1825	1835	47.50	86.85		
671031	ABRD	1831	1842	15.3 D	64.5 U	10.7 U	
671031	BOUL	1831	1843	18 D	70	11.0	
671031	NRL	1914	1955	44.13	76.86		DECREASING

SOLAR RADIATION MONITORING SATELLITE
X-RAY

OCTOBER 1967

OBSERVING TIMES FOR OCTOBER 1967

DATE	STA	START UT	END UT	ASPECT ANGLE	DATE	STA	START UT	END UT	ASPECT ANGLE	DATE	STA	START UT	END UT	ASPECT ANGLE
1	ABRD	0130	0138	10.3	21	NRL	0157	0250	0.0	26	ABRD	1216	1228	21.9
1	NRL	0133	0139	10.0	21	NRL	0729	0828	0.0	26	NRL	1226	1229	22.2
1	ABRD	0314	0319	11.3	21	NRL	0905	1001	0.0	26	BOUL	1402	1410	23
1	NRL	0740	0837	0.0	21	NRL	1046	1141	0.0	26	ABRD	1403	1413	22.7
1	NRL	1614	1627	21.3	21	NRL	1217	1224	0.0	26	NRL	1412	1415	23.4
1	ABRD	1758	1809	22.3	21	NRL	1225	1317	0.0	26	BOUL	1545	1556	24
1	NRL	1759	1811	22.7	21	NRL	1352	1402	0.0	26	ABRD	1551	1559	24.3
1	ABRD	1942	1954	22.8	21	NRL	1407	1452	0.0	26	NRL	1553	1556	24.4
1	NRL	1948	1955	23.0	21	NRL	1528	1543	0.0	26	ABRD	1734	1746	25.7
1	ABRD	2128	2139	22.9	21	NRL	1550	1628	0.0	26	NRL	1736	1751	26.2
1	NRL	2134	2141	23.0	21	NRL	1704	1726	0.0	26	ABRD	1918	1931	26.3
1	ABRD	2315	2325	23.3						26	NRL	1921	1946	26.4
1	NRL	2319	2329	23.5	22	NRL	0410	0505	0.0	26	NRL	2028	2110	0.0
					22	NRL	0725	0823	0.0	26	ABRD	2103	2109	26.5
2	ABRD	0100	0109	23.8	22	NRL	0901	1003	0.0	26	BOUL	2105	2114	26
2	NRL	0103	0110	24.2	22	NRL	1044	1137	0.0					
2	ABRD	0244	0250	24.7	22	NRL	1405	1448	0.0	27	NRL	0353	0452	0.0
4	ABRD	1507	1514	31.5	22	NRL	1516	1624	0.0	27	NRL	0529	0628	0.0
2	NRL	1544	1555	37.7	23	NRL	0546	0640	0.0	27	NRL	0818	0831	27.2
2	NRL	2248	2325	0.0						27	NRL	1003	1014	28.3
					23	NRL	0723	0821	0.0	27	ABRD	1148	1157	29.9
4	NRL	0554	0647	0.0	23	NRL	0857	0956	0.0	27	NRL	1150	1158	29.6
4	NRL	1613	1628	0.0	23	NRL	1037	1132	0.0	27	ABRD	1331	1342	31.2
4	NRL	1710	1741	0.0	23	NRL	1135	1150	0.0	27	NRL	1337	1345	31.6
					23	NRL	1213	1330	0.0	27	NRL	1522	1531	33.1
6	NRL	2050	2105	0.0	23	NRL	1400	1444	0.0	27	NRL	1630	1650	0.0
6	NRL	2148	2200	0.0	23	NRL	1447	1505	0.0	27	NRL	1707	1717	34.9
					23	NRL	1520	1535	0.0	27	NRL	1730	1812	0.0
7	NRL	0017	0023	35.6	23	NRL	1545	1620	0.0	27	NRL	1850	1901	35.4
7	NRL	1458	1509	35.5						27	NRL	1951	2003	0.0
8	NRL	0101	0108	34.6	24	NRL	0541	0640	0.0	27	NRL	2045	2127	0.0
8	NRL	1230	1320	0.0	24	NRL	0717	0816	0.0					
8	NRL	1426	1439	35.5	24	NRL	0854	0952	0.0	28	NRL	0349	0444	0.0
8	NRL	1612	1618	34.8	24	NRL	1032	1128	0.0	28	NRL	0525	0624	0.0
8	NRL	1720	1756	0.0	24	NRL	1203	1304	0.0	28	NRL	1704	1718	0.0
8	NRL	1759	1803	34.0	24	NRL	1325	1326	32.3	28	NRL	1753	1838	0.0
8	NRL	1900	1912	0.0	24	NRL	1340	1439	0.0					
8	NRL	1946	1952	33.5	24	NRL	1512	1532	31.6	29	NRL	0200	0310	0.0
					24	NRL	1610	1645	0.0	29	NRL	0345	0443	0.0
9	NRL	0101	0108	34.6	24	ABRD	1652	1659	32.3	29	NRL	0525	0618	0.0
9	NRL	2242	2320	0.0	24	NRL	2342	2346	0.0	29	NRL	2334	0014	0.0
10	NRL	2208	2223	0.0	25	NRL	0024	0124	0.0	30	NRL	0052	0153	0.0
10	NRL	2304	2344	0.0	25	NRL	0200	0300	0.0	30	NRL	0205	0259	0.0
					25	NRL	0538	0637	0.0	30	NRL	0341	0440	0.0
12	NRL	0135	0230	0.0	25	NRL	0713	0812	0.0	30	NRL	1016	1028	28.4
12	NRL	0315	0348	0.0	25	NRL	0849	0948	0.0	30	NRL	1206	1210	27.9
12	NRL	1406	1500	0.0	25	NRL	1024	1124	0.0	30	NRL	1355	1359	27.5
12	NRL	1543	1610	0.0	25	ABRD	1104	1113	22.9	30	ABRD	1534	1545	27.1
					25	NRL	1206	1259	0.0	30	NRL	1536	1542	27.0
13	NRL	2255	2326	0.0	25	ABRD	1248	1258	22.7	30	NRL	1720	1732	27.1
					25	NRL	1336	1346	0.0	30	ABRD	1901	1910	25.1
16	NRL	0612	0708	0.0	25	NRL	1400	1420	0.0	30	NRL	1907	1911	25.5
					25	ABRD	1433	1443	22.6					
18	NRL	0523	0622	0.0	25	BOUL	1433	1441	23	31	NRL	0020	0054	0.0
					25	NRL	1500	1540	0.0	31	NRL	0132	0254	0.0
19	NRL	1615	1638	0.0	25	BOUL	1619	1627	23	31	NRL	0336	0435	0.0
19	NRL	1715	1758	0.0	25	NRL	1623	1628	23.5	31	NRL	0620	0627	0.0
					25	NRL	1720	1734	0.0	31	NRL	0800	0814	10.9
20	NRL	0733	0833	0.0	25	ABRD	1804	1816	24.6	31	NRL	0946	0958	10.1
20	NRL	0909	1008	0.0	25	NRL	1807	1857	24.3	31	ABRD	1134	1140	9.7
20	NRL	1045	1145	0.0	25	BOUL	1808	1815	24	31	ABRD	1316	1326	9.2
20	NRL	1221	1228	0.0	25	BOUL	1948	2001	24.5	31	NRL	1322	1329	9.4
20	NRL	1231	1321	0.0	25	ABRD	1950	2000	23.5	31	ABRD	1502	1512	9.2
20	NRL	1357	1407	0.0	25	NRL	1953	2000	24.3	31	NRL	1506	1517	9.0
20	NRL	1411	1457	0.0	25	BOUL	2133	2144	24	31	ABRD	1647	1658	8.8
20	NRL	1532	1549	0.0						31	NRL	1649	1703	8.0
20	NRL	1601	1632	0.0	26	NRL	0402	0457	0.0	31	BOUL	1649	1658	9
20	NRL	1647	1704	0.0	26	NRL	0532	0632	0.0	31	NRL	1825	1835	0.0
20	NRL	1745	1825	0.0	26	NRL	0709	0808	0.0	31	ABRD	1831	1842	7.9
20	NRL	2327	2340	0.0	26	NRL	0845	0944	0.0	31	BOUL	1831	1843	8.5
					26	NRL	1024	1119	0.0	31	NRL	1914	1955	0.0
21	NRL	0018	0115	0.0	26	ABRD	1035	1044	21.1	31	BOUL	2017	2024	5.75

At NRL Satellite 1965-93A, OGO-4, and OSO-4 are used as data sources. The data from OGO-4 and OSO-4 were obtained from quick-look strip charts covering approximately one orbit each day for each satellite.

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DATE	TIMES OF OBSERVATION		STATION	IMPORTANT BURSTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 01	0000	0015	HARV										
	0200	0356	CULG				0202	0203	1	0202	0203	1	V
	0522	0705	CULG										
	1255	0100	BOUL							1315 E	1506	2	CONT
	1315	0000	HARV				1500	1800	1				IN
			BOUL							1506.1	1810	1	CONT
			HARV				1800	2200	1				I
			BOUL							1810	2110	1	CONT
			HARV				2008	2009	2	2008	2009	3	IIIG
			BOUL							2008.1	2041.8	3	IIIG
			HARV				2013	2015	2	2013	2015	2	IIIG
			BOUL							2107	2107.4	2	III
			BOUL							2110	2337	1	CONT
	2117	2331	CULG										
			BOUL							2235.8	2237.9	2	IIIG
			BOUL							2315.8	2316.6	3	III
			HARV				2316		1				IIIG
			BOUL							2322.9	2323.5	3	III
	2352	0000	CULG										
10 02	0000	0015	HARV										
	0000	0100	CULG							0006.5		1	IIIB
	0516	0537	CULG										
	1254	0000	BOUL							1311	1311.4	1	III
			BOUL							1317.8	1318	1	III
			BOUL							1423	1425.2	3	IIIG
			BOUL							1445.4	1445.6	1	III
			BOUL							1455.1	1456.7	2	IIIG
			BOUL							1518.7	1519.1	1	III
			BOUL							1547.3	1551.1	1	IIIG
			BOUL							1556.6	1603	3	IIIG
	1315	0000	HARV				1557	1902	2	1557	1902	2	IIIN
			BOUL							1608.2	1608.8	3	III
			BOUL							1616.5	1617.8	3	IIIG
			BOUL							1626.2	1626.4	1	III
			BOUL							1632.3	1632.6	2	III
			BOUL							1701.5	2355 D	1	CONT
			BOUL							1703	1703.4	2	III
			BOUL							1710.9	1711.2	2	III
			BOUL							1737.6	1738	2	III
			BOUL							1747.7	1748.7	2	IIIG
			BOUL							1824.2	1824.4	2	III
			BOUL							1831.5	1831.9	2	III
			BOUL							2101.9	2102.3	2	III
			BOUL							2117.9	2118.2	2	III
			BOUL							2124.9	2125.7	2	IIIG
			HARV				2204		3	2204		3	IIIG
			BOUL							2204.4	2206.3	3	III
	2116	2213	CULG				2204.5		2	2204.5		2	IIIB
			BOUL							2225.3	2225.9	2	III
			BOUL							2311.9	2313.6	3	IIIG
10 03	0000	0015	HARV										
	0000	0100	BOUL							0020.7	0025.2	2	IIIG
	0159	0206	CULG										
	0303	0408	CULG				0347	0351	1	0347	0351	1	IIIG
	0438	0646	CULG										
	1315	0000	HARV				1327	1328	1				IIIG
			HARV				1726	1811	1	1726	1811	2	IIIN
			HARV	1850		2	1848	1851	2	1850		2	IIIGG
	2118	0000	CULG										
	2018	0108	BOUL							2303.1	2304.4	2	IIIG
			BOUL							2323	2323.5	2	III
			BOUL							2331	2331.4	2	III
10 04	0000	0011	HARV										
	0000	0640	CULG										
	1247	0045	BOUL							1319.8	1322.7	2	IIIG
	1315	0000	HARV				1320	1321	1				IIIG
			HARV				1320	1500	1				I
			BOUL							1334.5	1338.3	2	IIIG
			BOUL							1440	1440.2	1	III
			BOUL							1445.9	1452.3	2	IIIGG
			HARV				1447	1449	2	1447	1449	2	IIIG
			BOUL							1459.9	1504.5	2	IIIG
			HARV				1500	1809	1	1500	1809	2	IIIN
			BOUL							1556.4	1556.8	2	III
			HARV				1603	1604	2	1603	1604	2	IIIG
			BOUL							1603.5	1604.4	3	IIIG
			BOUL							1627.8	1630.5	2	IIIG
			BOUL							1654.3	1657.4	2	IIIG
			HARV				1738	1739	3	1738	1739	3	IIIGG
			BOUL							1738.5	1739.4	3	IIIG
			BOUL							1742	1850	1	CONT
			BOUL							1747.5	1747.9	2	III
			HARV				1801	1802	1	1801	1802	1	IIIG
			BOUL							1801.5	1802	2	IIIG
			BOUL							1809.3	1809.6	2	III
			BOUL							1858.1	1858.9	1	III
			BOUL							2000.2	2000.6	1	III
			BOUL							2029	2058	1	CONT

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				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 04			HARV				2031	2038	1	2031	2038	2	IIIG
			BOUL							2031.5	2038.7	3	IIIGG
			CULG										
			BOUL							2152.2	2154.1	2	IIIG
			BOUL							2200	2209.6	3	IIIGG
			HARV	2207		1	2207		2	2207		2	IIIG
			BOUL							2227.3	2227.5	1	III
			BOUL							2237.7	2245.7	2	IIIG
			BOUL							2256.2	2256.4	1	III
			BOUL							2322.3	2326.4	2	IIIG
			HARV				2323	2324	1				IIIG
10 05	0000	0011	HARV										
	0228	0343	CULG										
	0450	0701	CULG										
	1253	0045	BOUL							1313.4	1313.8	1	III
			BOUL							1344.6	1348.1	1	IIIG
			BOUL							1404.7	1404.8	1	III
			BOUL							1419.2	1419.5	1	III
			BOUL							1928.4	1928.7	1	III
			BOUL							2013.7	2013.9	1	III
	2101	2203	CULG										
	1315	0000	HARV				2225	2338	1				IIIN
			BOUL							2225.1	2226.1	2	IIIG
			BOUL							2244.6	2244.8	2	III
			BOUL							2302.9	2303.5	3	III
	2313	0000	CULG										
			HARV				2318		3				IIIG
10 06	0000	0011	HARV										
	0000	0111	CULG										
	0255	0748	CULG										
	1258	0026	BOUL							1300.3	1307.4	2	IIIG
			BOUL							1328	1332.9	2	IIIG
			BOUL							1452.2	1452.4	2	III
			BOUL							1526	1559	1	CONT
	1315	0000	HARV				1553	1555	2	1553	1555	3	IIIG
			HARV				1553	1800	1				IN
			BOUL							1553.1	1556.8	3	IIIG
			BOUL							1625	2256	1	CONT
			HARV				1650	1840	2	1650	1840	3	IIIN
			BOUL							1650.2	1655.1	2	IIIG
			HARV				1654		2	1654		3	IIIG
			BOUL							1713	1715.6	2	IIIG
			BOUL							1720.1	1725.3	3	IIIG
			HARV				1724	1725	2	1724	1725	3	IIIG
			BOUL							1748.3	1748.8	2	III
			HARV				1758	1803	2	1758	1803	3	IIIG
			BOUL							1758.1	1804.3	2	IIIGG
			BOUL							1840.1	1840.8	2	IIIG
			HARV	2024		2	2024		2				IIIG
			HARV				2047	2152	1	2047	2152	1	IIIN
			HARV				2236		3	2236		3	IIIG
			BOUL							2236.4	2237.8	3	IIIG
	2101	0000	CULG				2236.5		1	2236.5		1	IIIB
			HARV				2249	2251	2				IIIGG
			BOUL							2249.1	2252.1	3	IIIG
10 07	0000	0011	HARV										
	0000	0442	CULG				0038	0044	2	0038	0044	2	IIIGV
			CULG				0054.5	0055	1				IIIGU
			CULG				0125.5	0350	1	0025.5	0350	1	IIIN
	0603	0658	CULG				0603.5	0608.5	1	0603.5	0608.5	1	IIIG
	1315	0000	HARV				1320	1720	1				IN
			HARV				1330	1622	1	1330	1622	2	IIIN
	1617	0030	BOUL							1353.7	1353.9	1	III
			BOUL							1525.5	1533	2	IIIG
			HARV				1529	1533	2	1529	1533	3	IIIG
			BOUL							1617 E	2420 D	1	CONT
			BOUL							1619	1620.5	3	IIIG
			HARV				1628	1637	2	1628	1637	3	IIIGGV
			BOUL							1628.7	1637.7	3	IIIGG
			BOUL							1654.9	1704.4	3	IIIGG
			HARV				1655	1704	2	1655	1704	3	IIIG
			BOUL							1726.9	1730.2	3	IIIG
			HARV				1727	1729	2	1727	1729	3	IIIGU
			BOUL							1858.8	1900.3	2	IIIG
			BOUL							1914	1914.5	2	III
			BOUL							1954.4	1955.4	2	IIIG
			BOUL							2005.4	2009.9	3	IIIG
			HARV				2007	2009	3	2007	2009	3	IIIG
			HARV				2047	2051	3	2047	2051	3	IIIGG
			BOUL							2048.5	2052.6	3	IIIG
	2058	2327	CULG										

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				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 08	0000	0010	HARV										
	0146	0216	CULG										
	0312	0339	CULG										
	0432	0700	CULG				0453		1	0451.5	0453	1	IIIG
			CULG							0638.5		1	IIIB
	1247	0030	BOUL							1421.8	1422.6	2	III
			BOUL							1427.2	1430.2	2	IIIG
			BOUL							1503	1506	1	IIIG
	1315	0000	HARV	1505		2	1504	1505	1				IIIG
			BOUL							1607.8	1609.8	3	IIIG
			HARV				1608	1609	1	1608	1609	2	IIIG
			BOUL							1704.5	1704.8	1	III
			BOUL							1722	1739	1	CONT
			BOUL							1837.7	1837.9	1	III
			BOUL							1855.2	1855.5	1	III
			BOUL							2035	2055	1	CONT
	2133	2304	CULG										
			BOUL							2142.2	2142.4	1	III
			CULG										
10 09	0000	0010	HARV										
	0000	0344	CULG				0313	0316	1				IIIG
	0410	0615	CULG										
	1247	0031	BOUL							1354.3	1354.7	2	III
			BOUL							1408.5	1409.9	2	IIIG
			BOUL							1450.7	1451.8	2	IIIG
			BOUL							1458.1	1459.2	1	IIIG
			BOUL							1509.6	1513.9	3	IIIG
	1315	0000	HARV				1511	1512	2	1511	1512	2	IIIG
			BOUL							1554.5	1555.1	2	IIIG
			HARV				1840	2400	1				IN
			BOUL							2014	2015.1	2	IIIG
			BOUL							2020.3	2020.5	1	III
			HARV				2053		2	2053		2	IIIGU
			BOUL							2053.7	2054	2	III
	2110	0000	CULG										
10 10	0000	0008	HARV										
	0000	0110	CULG										
	0233	0503	CULG										
	1247	1555	BOUL										
	1330	0000	HARV	1330	2100	1	1330	2100	1				IN
	2004	0031	BOUL							2030.2	2033.1	2	IIIG
			HARV				2100	0000	2				I
10 11	0000	0008	HARV										
	0504	0652	CULG										
	0654	0658	CULG										
	1330	0000	HARV				1330	1640	1				IC
	1257	0037	BOUL							1415.7	1421.1	2	IIIG
			HARV				1451	1452	1				IIIG
			BOUL							1544.4	1544.7	1	III
			BOUL							1602.9	1607	2	IIIG
			BOUL							1622.1	1622.4	2	III
			HARV				1640	2200	2				IC
			HARV				1700	2000	2	1700	2000	2	IIIN
			BOUL							1701	1725	1	CONT
			HARV				1702	1703	1	1702	1703	3	IIIG
			HARV				1709	1712	2	1709	1712	2	IIIG
			BOUL							1750	2104	2	CONT
			BOUL							2104	2248	1	CONT
			HARV				2200	2306	1				I
			HARV	2306	0000	1	2306	0000	1				IN
10 12	0000	0008	HARV										
	0130	0711	CULG				0134	0236	1				I
			CULG				0135.5	0236	1				IIIN
	1247	0030	BOUL							1315 E	1838	1	CONT
	1330	2358	HARV				1330	2400	2				I
			BOUL							1518.3	1518.7	3	III
			BOUL							1540.6	1541	3	III
			HARV				1541		2	1541		2	IIIG
			BOUL							1834.2	1835.3	3	III
			HARV				1835		2	1835		3	IIIG
			BOUL							1838	2340 D	2	CONT
			HARV				1853	2103	1	1853	2103	1	IIIN
			HARV				2229		1				IIIG
			BOUL							2229.1	2232.4	3	IIIG
	2230	0000	CULG										
			HARV				2237	2238	2	2237		1	IIIG
			BOUL							2237.4	2248	3	IIIG
			HARV				2321	2325	1				UNCLF

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DATE	TIMES OF OBSERVATION		STATION	IMPORTANT BURSTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 13	0000	0723	CULG										
	1247	0032	BOUL							1322	1830	1	CONT
	1330	2358	HARV				1330	1800	1				I
			HARV				1725	1731	1	1725	1731	1	IIIG
			BOUL							1728.8	1732.2	3	IIIG
			HARV				1800	2040	1				IN
			HARV				1830	1930	2	1830	1930	2	IIIS
			BOUL							1830	2120.7	3	CONT
			BOUL							2120.7	2325 D	1	CONT
	2339	0000	CULG										
			HARV	2356		1							IIIG
10 14	0104	0711	CULG										
	1248	0030	BOUL							1312 E	1750	2	CONT
	1330	2358	HARV				1500	1740	1				IN
			HARV				1659		1	1659		1	IIIG
			BOUL							1750	1836	1	CONT
			BOUL							1923.8	1924.1	1	III
			HARV	2031		1	2031		1				IIIG
			BOUL							2034	2034.1	1	III
			BOUL							2127.1	2127.3	1	III
			BOUL							2132.6	2132.9	1	III
			BOUL							2144.7	2153	1	IIIG
			BOUL							2205.8	2206	1	III
			HARV	2236	2238	1	2236	2238	1				IIIG
			BOUL							2236.7	2237	1	III
	2246	0000	CULG										
			BOUL							2255	2400 D	1	CONT
10 15	0000	0709	CULG										
	1247	0030	BOUL							1324.2	1324.4	1	III
	1330	2358	HARV										
	1247	0030	BOUL							1636.5	1636.8	1	III
10 16	0007	0614	CULG										
	1330	2357	HARV										
	1248	0033	BOUL							1931.5	1932.4	2	III
	2215	0000	CULG										
10 17	0000	0053	CULG										
	0226	0557	CULG										
	1330	2356	HARV										
	1256	1705	BOUL							1528.5	1533.5	1	IIIG
	2105	2301	BOUL										
	2245	0000	CULG										
10 18	0000	0039	CULG										
	0151	0625	CULG										
	1243	1846	BOUL							1437.3	1437.6	2	III
			BOUL							1515.6	1517.5	2	IIIG
	1330	2355	HARV				1537	1538	2	1537	1538	2	IIIG
			BOUL							1537.2	1541.5	2	IIIG
			BOUL							1657.5	1657.8	2	III
	2025	0034	BOUL										
	2222	2336	CULG										
10 19	0000	0401	CULG										
	0538	0713	CULG										
	1330	2354	HARV										
	1246	0033	BOUL							1630	1646	1	CONT
	2230	2332	CULG										
	2350	0000	CULG										
10 20	0000	0306	CULG										
	0309	0647	CULG										
	1259	0032	BOUL							1414.2	1414.5	1	III
	1330	2349	HARV				1440	2200	1				IN
			BOUL							1701.2	1701.5	2	III
			BOUL							1705	1745	1	CONT
			BOUL							1835	2259	1	CONT
	2315	0000	CULG										
10 21	0000	0714	CULG										
	1330	2349	HARV				1333	1500	1				IN
			HARV				1755	1756	2	1755	1756	2	IIIG
	1300	0030	BOUL							1755.2	1756.6	3	IIIG
			BOUL							1802.1	1802.5	2	IIIG
			BOUL							1814.3	1814.6	1	III
			BOUL							1827.3	1829	3	IIIG
			HARV				1912		2	1912		1	IIIG
			BOUL							1912	1913.2	2	IIIG
	2226	0000	CULG										
			BOUL							2230.5	2230.7	1	III
			BOUL							2305.1	2305.4	2	III

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				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 22	0000	0950	CULG				0105	0105.5	1				IIIG
			CULG				0159.5	0204	1				IIIG
			CULG				0259.5	0302	2	0259.5	0302	1	IIIGU
	1330	2349	HARV				1328	1402	1				IIIG
	1259	0030	BOUL							1358.3	1401.6	3	IIIG
			BOUL							1549.8	1552.6	2	IIIG
			BOUL							1623.8	1624.3	2	IIIG
			BOUL							1706.9	1708.4	1	IIIG
			BOUL							1731.5	1732.8	2	IIIG
			BOUL							1739.5	1751	2	IIIGG
			HARV				1747	1750	1				IIIG
			BOUL							1817.6	1817.8	2	III
			HARV	1828	1900	1							IN
			BOUL							2037.1	2037.5	1	III
			BOUL							2127.2	2127.5	1	III
			BOUL							2221.3	2222	2	III
10 23	1330	2346	HARV				1743	1744	1				IIIG
	1253	0030	BOUL							2152	2152.3	1	III
	2317	0000	CULG										
10 24	0000	0652	CULG										
	1253	0013	BOUL							1654	1654.2	1	III
			BOUL							1737.3	1737.5	1	III
			BOUL							1821.5	1821.9	2	III
			BOUL							1904.2	1904.4	1	III
	1330	2346	HARV				2009		2	2009		3	IIIG
			BOUL							2009.2	2009.5	3	III
			BOUL							2103.5	2103.8	1	III
			BOUL							2135.7	2135.9	1	III
			HARV				2152		1	2152		2	IIIG
			BOUL							2152.2	2152.6	2	III
	2315	0000	CULG										
10 25	0001	0700	CULG										
	1330	2344	HARV	1338	1405	3	1338	1405	3				IVN
			HARV	1420	1443	3	1420	1443	3				IVN
	1252	0032	BOUL							1436.8	1437.5	2	III
			BOUL							1437.5	1455	1	CONT
			HARV	1443	1454	2	1443	1454	2				IVN
			BOUL							1649	2010	1	CONT
			BOUL							2049.2	2049.4	1	III
	2103	0000	CULG										
			HARV	2321	2326	1	2321	2326	1				IIIG
10 26	0000	0700	CULG				0609.5	0610.5	2	0610	0610.5	2	IIIGV
			CULG				0612.5	0617	2				II
	1252	0030	BOUL							1834.5	1834.8	1	III
			BOUL							1839.5	1839.8	2	III
			BOUL							1845.6	1848.3	2	IIIG
	1330	2344	HARV				1847	1848	1	1847	1848	1	IIIG
			BOUL							2044	2108	1	CONT
	2220	0000	CULG				2356	2359	1	2356	2359	1	IIIG
10 27	0000	0653	CULG				0217.5	0220.5	2	0217.5	0220.5	2	IIIGV
	1330	2343	HARV				1332	1333	1				IIIG
			HARV	2000	2200	1	2000	2300	1				IN
	1253	0033	BOUL							2028.2	2028.4	1	III
			BOUL							2047.6	2047.9	1	III
			BOUL							2051.3	2051.5	1	III
	2259	0000	CULG										
			HARV				2300	2340	2				I
10 28	0000	0038	CULG										
	0109	0702	CULG				0143	0149	1	0143	0149	1	IIIG
			CULG				0215		1				IIIB
	1257	2253	BOUL							1422	1506	1	CONT
	1330	2342	HARV	1430	1807	1	1350	1520	1				IN
			BOUL							1517.7	1518.2	2	III
			BOUL							1657.2	1657.5	1	III
			BOUL							1700.4	1700.6	1	III
			BOUL							1702	1805	1	CONT
			HARV				1800	2330	1				IN
			BOUL							1910.6	1911	2	III
			HARV				1911		1				IIIG
			BOUL							1956.8	1957	2	III
			BOUL							2013.2	2018.8	1	IIIG
			BOUL							2058.5	2116.6	2	CONT
			HARV				2105	2152	2				IIIN
			HARV				2114	2116	2				IIIG
	2124	0000	CULG										
			BOUL							2125.8	2126.4	2	IIIG
			BOUL							2145.8	2152	2	IIIGG
			BOUL							2224.1	2224.3	1	III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

OCTOBER 1967

DATE	TIMES OF OBSERVATION		STATION	IMPORTANT BURSTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
10 29	0000	0648	CULG							0151		1	IIIB
			CULG				0258.5		1	0258.5		1	UNCLF
	1330	2341	HARV				1340	1342	2				IIIG
	1257	0000	BOUL							1407.5	1409.1	2	IIIG
			HARV				1429	1430	2				IIIG
			BOUL							1429.1	1431	3	IIIG
			BOUL							1441.5	1441.9	2	III
			BOUL							1446.9	1447.3	2	III
			BOUL							1508.9	1509.2	2	III
			HARV				1528	1530	1				IIIG
			BOUL							1528.3	1531.9	2	IIIG
			HARV				1540	1600	1				IN
			BOUL							1544.4	1553.6	2	IIIGG
			HARV				1545	1826	1				IIIN
			HARV				1609		2				IIIG
			BOUL							1613.3	1613.8	2	III
			BOUL							1654.9	1655.2	1	III
			BOUL							1710.5	1710.9	2	III
			BOUL							1731.1	1733.2	2	IIIG
			HARV				1741	1744	2	1741	1744	2	IIIG
			BOUL							1741.2	1744.3	3	IIIG
			BOUL							1805.1	1805.4	1	III
			BOUL							1826	1826.2	2	III
			BOUL							1852.3	1853.9	2	IIIG
			BOUL							1859.6	1907.2	3	IIIGG
			HARV				1904	1906	1				IIIG
			BOUL							1910.6	1914.9	3	IIIG
			HARV				1911	1912	1	1911	1912	1	IIIG
			BOUL							1933	1933.3	2	III
			BOUL							1955	1956.3	1	IIIG
			BOUL							2023.6	2023.9	2	III
			BOUL							2038	2044.7	2	IIIG
			HARV				2040	2043	3				IIIGG
			BOUL							2051.2	2052.1	2	IIIG
			BOUL							2128.3	2128.5	1	III
			BOUL							2143	2143.3	1	III
	2145	0000	CULG				2300.5	2302.5	1	2300.5	2302.5	1	IIIGVU
			BOUL							2300.6	2302.8	3	III
			HARV				2301	2302	2				IIIG
			BOUL							2329.1	2332.3	2	IIIG
			CULG				2345	2346	2	2345	2346	2	IIIGV
			BOUL							2345.7	2346	1	III
			CULG				2358		1				UNCLF
10 30	0000	0654	CULG										
	1330	2340	HARV				1330	1900	2				IC
	1327	2348	BOUL							1401 E	1548	2	CONT
			HARV				1429	1530	1				IIIN
			BOUL							1548	1804.2	1	CONT
			BOUL							1840.5	2107.6	1	CONT
			HARV				1900	2340	1				IN
			BOUL							2146.3	2146.6	1	III
	2151	2251	CULG										
	2305	0000	CULG										
10 31	0000	0521	CULG				0145	0147	1				IIIG
			CULG				0153	0157	1				IIIG
			CULG				0211		1				IIIB
	0523	0704	CULG										
	1330	2340	HARV				1330	1502	1				IN
			HARV				1342	1343	1				IIIG
			HARV	1351		3	1351	1352	3				IIIG
			HARV				1357		2				IIIG
	1249	0000	BOUL							1357 E	1612.2	1	CONT
			BOUL							1612.2	1726	1	CONT
			HARV				1658	2339	1				IN
			BOUL							1726	1901.5	2	CONT
			BOUL							1737.7	1738.6	3	IIIG
			HARV				1738		1	1738		2	IIIG
			BOUL							1753.7	1754.3	2	III
			BOUL							1852.8	1853.8	2	III
			HARV				1853		1	1853		1	IIIG
			BOUL							1901.5	2241	1	CONT
			BOUL							2119.4	2122.8	2	IIIG
			BOUL							2131.6	2138.7	2	IIIG

The symbols used in connection with the spectral type in describing the important bursts are as follows:

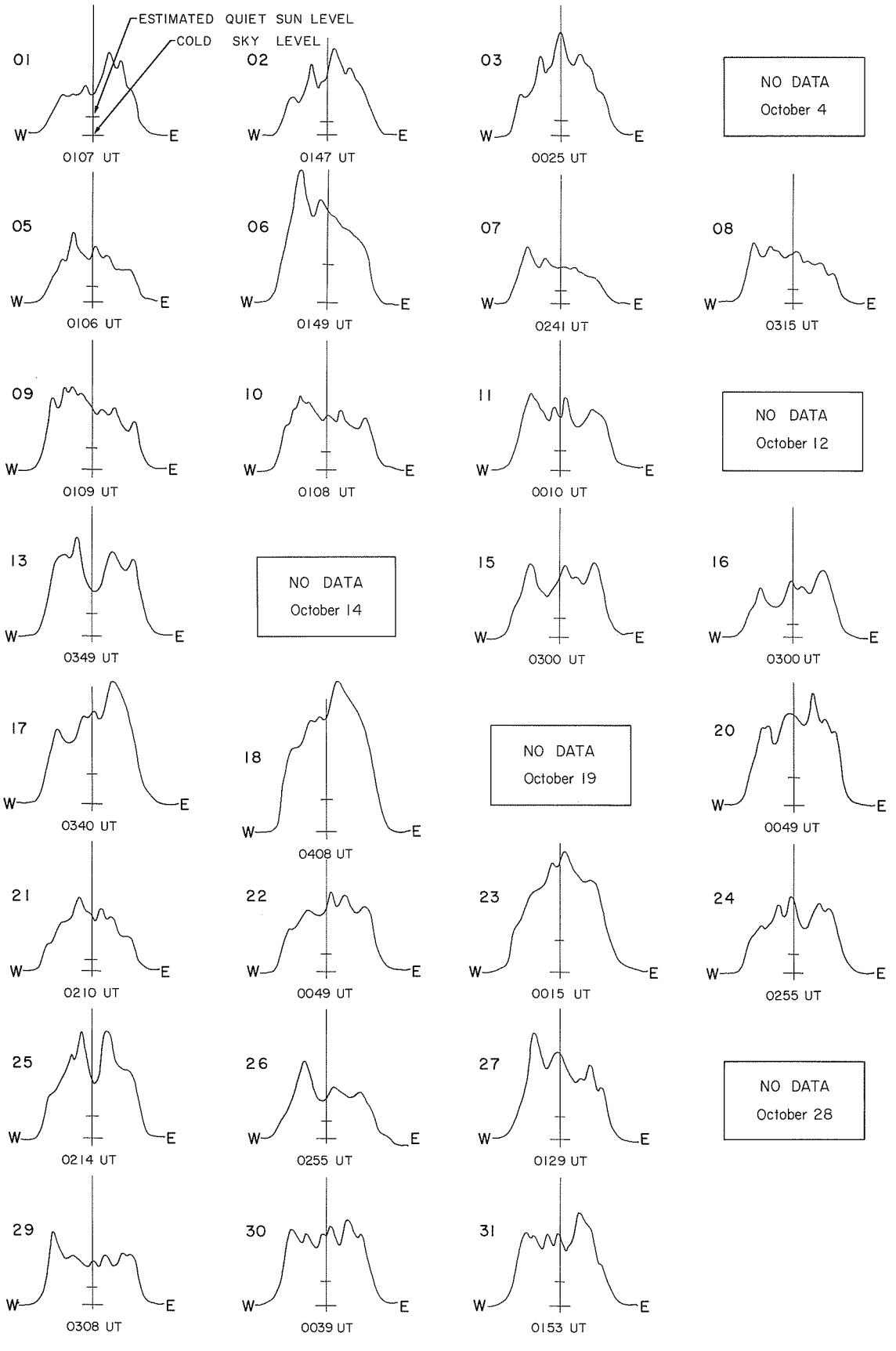
B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period.
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
CONT = Continuum
UNCLF = Unclassified activity

EAST-WEST SOLAR SCANS

OCTOBER 1967

Fleurs, Australia

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

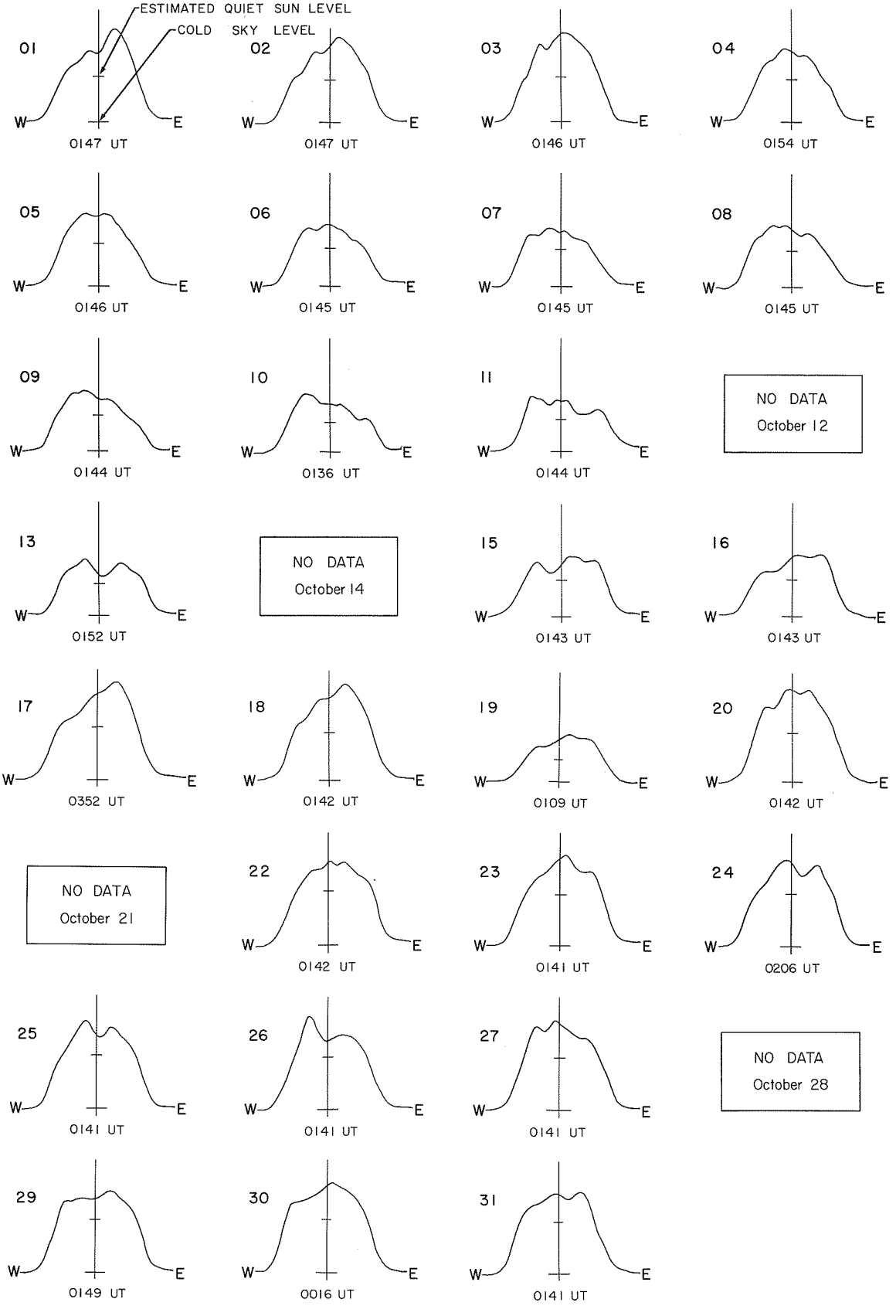


EAST-WEST SOLAR SCANS

OCTOBER 1967

Fleurs, Australia

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



COSMIC RAY INDICES
(Neutron Monitors)

OCTOBER 1967

OCT. 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	*	6667.1	4009.5	6128.3
2		6649.8	4006.6	6114.9
3		6643.8	4003.8	6106.8
4		6634.2	3971.1	6085.2
5		6622.1	3969.9	6082.6
6		6666.6	3994.0	6103.5
7		6669.6	3986.5	6099.7
8		6632.6	3959.0	6091.2
9		6627.9	3968.8	6102.5
10		6600.8	3965.3	6092.8
11		6601.1	3951.9	6071.8
12		6620.2	3960.0	6081.4
13		6636.2	3983.1	6091.6
14		6661.9	4001.5	6111.3
15		6636.7	3987.4	6080.5
16		6611.2	3974.7	6093.6 (18)
17		6647.2	3988.9 (32)	6134.0
18		6662.8	3983.5 (30)	6131.8
19		6702.1	4009.5	6142.1
20		6734.2	4035.7	6177.0
21		6735.5	4035.0	6171.1
22		6728.4	4028.1	6162.5
23		6694.3	4030.7	6154.8
24		6692.7	4023.2	6140.4
25		6695.7	4009.3	6150.2
26		6732.7	4033.4	6159.5
27		6679.5	4009.7	6146.2
28		6612.2	3963.7	6100.1
29		6530.3	3886.1	6006.3
30		6379.5	3820.2	5926.2
31		6414.0	3821.0	5960.6

* The data for October 1967 from Churchill has not been processed. It will be published when it becomes available.

( ) Number of hours for which data are available if less than 24 (or number of section hours if less than 40 for Climax).

Deep River Neutron Monitor, Scaling Factor 300.

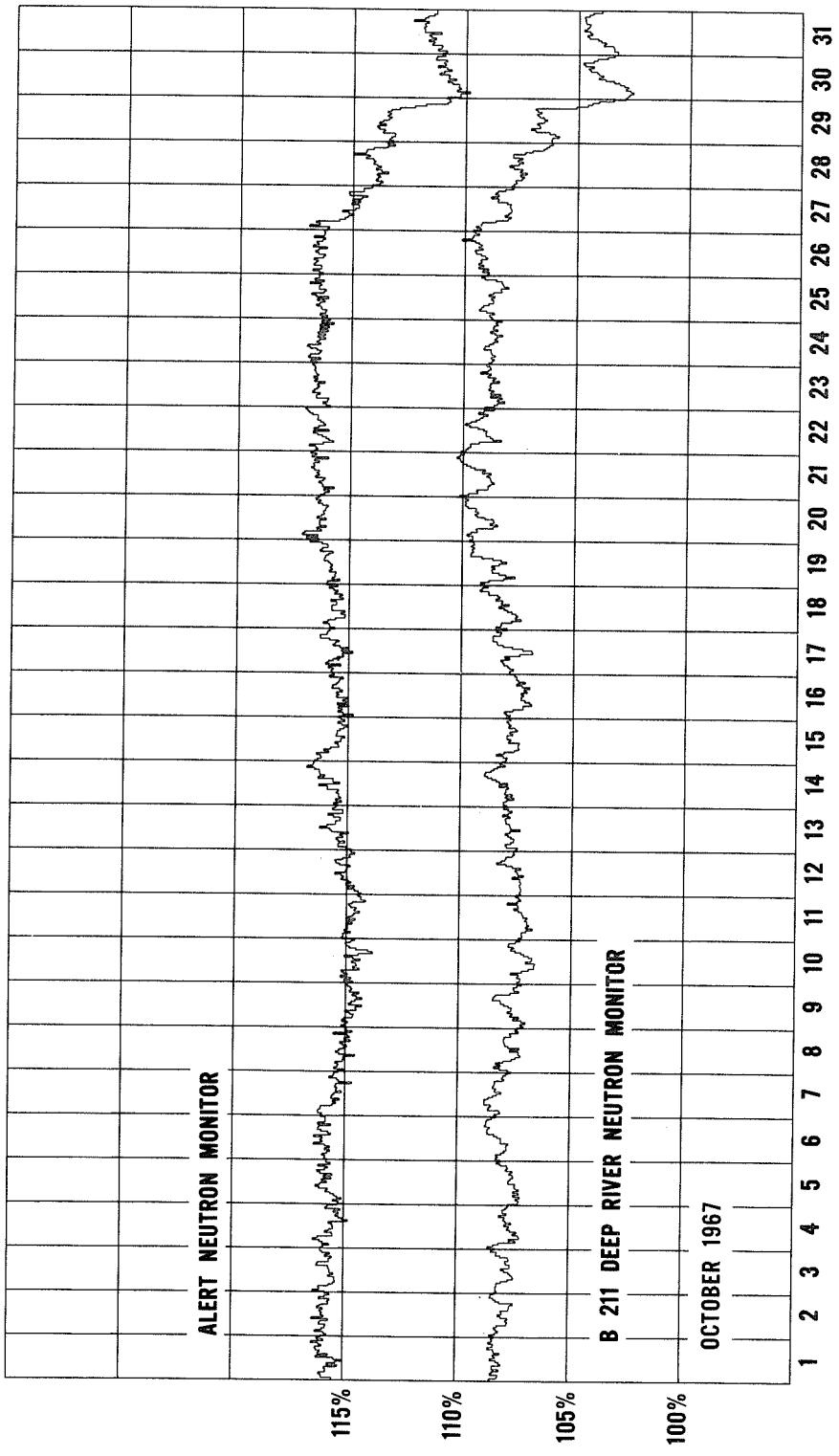
Climax IGC Station B305, Scaling Factor 100.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

OCTOBER 1967



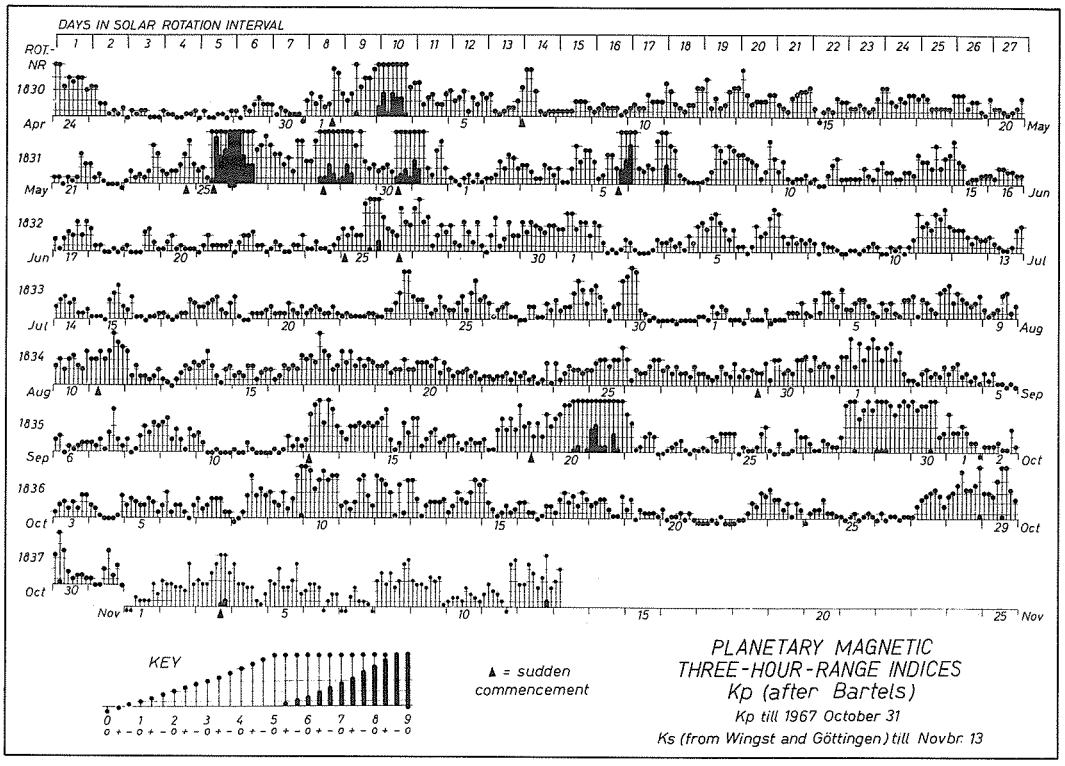
GEOMAGNETIC ACTIVITY INDICES

OCTOBER 1967

DAY		Kp THREE-HOUR RANGE INDICES 1	2	3	4	5	6	7	8	SUM	Ci	Cp	Ap
1		4	2+	2+	3	2+	1+	1+	0	17-	0.5	0.6	10
2	Q	1	1	1	1+	1-	1-	3-	1	9+	0.4	0.2	5
3		1	2-	2	1+	2	1+	3-	3-	15-	0.5	0.4	7
4	Q	2-	1+	1-	0+	0+	0+	1-	3-	8	0.1	0.2	4
5		2-	2+	2	2-	2-	2+	2	1	15-	0.4	0.3	7
6		2-	3	1	2-	2-	1	0+	2-	12	0.2	0.3	6
7		2+	1+	2-	2+	2+	2+	1	1	14+	0.4	0.3	7
8		0	0+	1	3-	4+	3-	3+	3-	17	0.8	0.7	12
9	D	3	2	2-	3	1+	2+	4+	5+	23	1.1	1.0	18
10	D	5	5-	3+	4	5-	4	4+	4+	34+	1.3	1.3	33
11		2-	2	1+	2	4	4+	3-	2-	20-	0.8	0.7	13
12	D	4+	4	4-	3	1-	4-	1	4	24+	1.0	1.0	19
13		4	2+	1-	2-	2	2	2	2+	17	0.8	0.5	9
14		1	2-	3	2+	2	3	4	4-	21-	0.9	0.8	13
15		4	2	1+	1-	1	2-	1	1+	13	0.6	0.4	8
16	Q	2	2	1	1	0+	1-	2-	2-	10+	0.2	0.2	5
17		1	2+	3	2	3-	2-	3	2+	18	0.7	0.5	10
18		2-	2	2+	2+	1+	1-	1-	3-	14-	0.4	0.3	7
19	Q	1+	2+	0+	1+	1	1	1	1-	9	0.1	0.2	4
20	QQ	1+	0+	1-	1-	1	0+	1	0+	6-	0.1	0.1	3
21	QQ	0	0	0	0+	0	1-	0	0	1	0.0	0.0	1
22	Q	0	0+	0+	1	2	2-	3	3-	11	0.2	0.3	6
23		3+	2+	2+	1+	2	1-	2	1+	15+	0.7	0.4	8
24	QQ	0	1	1+	1+	2+	1	1	1-	9-	0.2	0.1	4
25	QQ	1-	0+	1-	1	0+	1-	1	1-	5+	0.1	0.1	3
26	QQ	0+	1	0+	1-	1-	0+	1-	1-	5-	0.1	0.0	3
27		1-	2-	2+	3-	3	3+	3-	2-	18	0.8	0.6	10
28	D	3-	3	4-	5-	3+	3+	4-	5+	30-	1.2	1.2	25
29	D	3	3	3-	4	5+	5	3+	2+	29-	1.2	1.2	25
30		3+	5+	4-	2-	1	1+	1+	1	19-	1.0	0.8	15
31		1	0+	0+	2	4-	1+	2+	0+	11+	0.4	0.3	7
										MEAN	0.55	0.48	10

A preliminary storm sudden commencement (ssc) occurred October 28 at 1637 UT.

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1966		1967									
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	31	17	18	4	5	18	14	4	17	4	25	10
2	14	6	7	2	4	12	25	9	7	2	22	5
3	17	4	10	2	8	5	87	7	4	3	6	7
4	9	19	2	11	6	15	12	13	6	8	6	4
5	9	20	3	15	11	11	10	36	16	8	4	7
6	7	7	6	7	8	12	6	46	8	6	4	6
7	6	4	28	30	5	8	16	22	12	9	9	7
8	7	4	60	46	2	5	5	15	4	11	9	12
9	3	3	12	8	12	5	5	14	3	7	11	18
10	9	4	4	2	8	5	7	7	3	13	3	33
11	6	3	16	11	2	4	10	6	21	24	3	13
12	8	2	2	2	2	4	13	5	8	8	4	19
13	7	20	26	4	5	2	14	6	7	6	29	9
14	2	48	61	4	5	3	10	14	7	10	14	13
15	4	18	9	7	2	4	6	9	8	6	14	8
16	4	8	9	64	3	10	6	6	4	8	11	5
17	11	9	4	15	4	10	11	9	4	19	5	10
18	12	5	5	5	23	7	7	4	7	14	12	7
19	12	3	5	5	26	20	8	5	4	9	18	4
20	8	7	13	5	13	7	6	4	5	11	44	3
21	6	12	9	6	10	7	6	4	5	6	85	1
22	3	14	4	7	4	18	3	5	3	5	10	6
23	2	8	5	14	4	21	9	4	14	5	4	8
24	6	12	2	4	3	29	11	4	8	7	6	4
25	4	14	5	15	4	8	130	24	11	14	6	3
26	10	24	4	11	4	3	146	24	6	10	4	3
27	6	34	4	5	18	3	20	19	4	7	5	10
28	19	14	12	4	8	3	55	10	12	6	36	25
29	15	7	4		6	5	45	9	12	8	45	25
30	28	6	3		11	3	42	14	17	10	35	15
31		3	2		3		43		2	11		7
MEAN	9	11	11	11	7	9	25	12	8	9	16	10

PRINCIPAL MAGNETIC STORMS

OCTOBER 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
10 08	06--	10 10 24	IRKU	40.8N	..	..	..	..	M	10 08	5	5	22	114	32	49
										10 09	7,8	5				49
										10 10	1,5	5				49
	06--	10 09 03	ALIB	9.5N	..	..	..	..	M	10 08	5	5	4	101	54	49
	0610	10 09 02	HYDE	7.6N	..	..	..	..	M	10 08	5	5	5	107	30	49
	06--	10 09 03	ANNA	1.5N	..	..	..	..	M	-- --	-	-	3	156	44	49
	11--	10 10 23	HUAN	0.6S	..	..	..	..	M	10 10	5,6	5	8	331	53	49
	06--	10 09 03	TVAN	1.1S	..	..	..	..	M	-- --	-	-	2	179	85	49
	0610	10 11 00	GNAN	43.2S	SC	+ 1	+ 5	+ 3	M	10 08	5	5	11	78	114	49
										10 10	5,8					49
	1041	-- -- --	KGLN	57.3S	SC	--	--	--	M	10 08	7	4	--	--	--	49
10 09	09--	10 10 24	COLL	64.6N	..	..	..	..	MS	10 10	4,5	6	226	1130	550	49
	17--	10 10 24	WITT	54.1N	..	..	..	..	M	10 09	7,8					49
										10 10	1,6,7 8	5	30	140	100	49
	1700	10 10 23	TUCS	40.4N	..	..	..	..	M	10 09	8	5	9	100	30	49
										10 10	1,2	5				49
	15--	10 11 00	ALIB	9.5N	..	..	..	..	M	10 10	1	5	6	96	38	49
	1500	10 10 23	HYDE	7.6N	..	..	..	..	M	10 10	5,6	5	5	100	20	49
	15--	10 11 00	ANNA	1.5N	..	..	..	..	M	-- --	-	-	3	136	46	49
	15--	10 11 00	TVAN	1.1S	..	..	..	..	M	-- --	-	-	3	156	113	49
	16--	10 10 23	HRMN	33.3S	..	..	..	..	M	10 09	8	5	17	86	78	49
	16--	10 11 00	KGLN	57.3S	..	..	..	..	MS	10 09	8	6	--	--	--	49
10 27	08--	10 30 15	COLL	64.6N	..	..	..	..	MS	10 28	4	7	171	1240	790	50
	09--	10 29 24	IRKU	40.8N	..	..	..	..	MS	10 29	5	6	14	125	47	50
	0300	10 27 21	HYDE	7.6N	..	..	..	..	M	10 27	5	4	3	121	35	50
	11--	10 28 00	HUAN	0.6S	..	..	..	..	M	10 27	5,6	5	6	166	26	50
10 28	1637	10 30 10	WITT	54.1N	SC	- 3	+38	0	MS	10 28	8					50
										10 29	6	6	40	200	50	50
	1638	10 30 12	BOUL	49.0N	SC *	+ 6	-29	- 3	MS	10 29	5	6	27	95	35	50
	1637	10 30 09	TUCS	40.4N	SC *	+ 2	+10	+ 1	MS	10 29	5	6	18	100	10	50
										10 30	2	6				50
	1638	10 30 08	SJUA	29.9N	SC	+ 0.4	+12	+ 3	M	10 28	8	5	9	79	34	50
										10 29	6					50
										10 30	2					50
	1637	10 30 07	MBOR	21.3N	SC *	- 1.8	-29	6	M	10 29	5,6	5	8	70	30	50
	1637	10 30 10	HONO	21.1N	SC	+ 1	+11	+ 5	M	10 28	8	5	7	94	42	50
										10 29	5	5				50
										10 30	2	5				50
	1638	10 30 08	ALIB	9.5N	SC	- 0.4	+26	- 5	M	10 28	6,8	5	4	175	34	50
										10 29	5,6					50
	0230	10 28 16	HYDE	7.6N	..	..	..	..	M	10 28	6	5	2	119	24	50
	1637	10 30 00	HYDE	7.6N	SC	- 0.2	+25	+ 1 *	MS	10 29	5	6	3	158	22	50
	1637	10 30 08	GUAM	4.0N	SC	--	17	06	MS	10 30	2	6	00	80	30	50
	1638	10 30 08	ANNA	1.5N	SC	- 0.7	+29	+14	M	-- --	-	-	5	275	52	50
	09--	10 30 22	HUAN	0.6S	..	..	..	..	MS	10 29	5,6	7	10	405	44	50
	1638	10 30 08	TVAN	1.1S	SC	+ 0.3	+23	+30	M	-- --	-	-	5	287	235	50
	1728	10 30 09	APIA	16.1S	SC	+ 0	+10	- 6	M	09 30	2	5	6	87	84	50
	1638	10 30 10	PMOR	18.6S	SC	0.5	18	17	MS	10 30	2	6	8	14	105	50
	09--	10 30 07	PILR	20.2S	..	..	..	..	MS	10 29	5,6	6	13	154	49	50
										10 30	2	6				50
	06--	10 30 08	HRMN	33.3S	..	..	..	..	M	10 29	5,6	5	28	92	88	50
	06--	10 30 09	GNAN	43.2S	..	..	..	..	MS	10 29	5	6	15	107	142	50
	1636	10 30 10	TOOL	46.7S	SC	3	23	8	MS	10 30	2	6	24	190	36	50
	1638	-- -- --	KGLN	57.3S	SC	--	--	--	M	10 28	8	4	--	--	--	50
10 30	0225	10 30 08	HYDE	7.6N	SC	+ 0.3	-26	+ 3	MS	10 30	2	6	3	103	20	50
	0426	-- -- --	HYDE	7.6N	SI	- 0.6	+45	- 6								50
	0223	10 31 22	KGLN	57.3S	SC	--	--	--	M	10 30	2	4	--	--	--	50
10 31	10--	10 31 22	HUAN	0.6S	..	..	..	..	MS	10 31	5	6	8	205	36	50

Fredericksburg and Sitka reported that no magnetic storms were observed in October 1967. In IER-FB-279, p 76, the amplitude of the H-component of the sudden commencements reported by Alibag for September 13, 1967 at 0345 should have read 18 gammas instead of 1.8 and for September 19 at 1959 should have read 17 instead of 1.7.

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

OCTOBER 1967

North Atlantic, North Pacific

OCT. 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	6-	6	6	7	5-	5-	6+	7-	5	4	6	6	6	6	6	6	3	1	8	6	3	1	9
02	6+	6	6	7	7-	6+	7-	7-	6	6	7	7	6	6	6	6	2	1	4	6	1	1	4
03	6+	6	6	7	6o	6o	7-	7-	7	6	7	7	6	6	6	6	2	2	7	6	1	2	6
04	7-	6	6	7	6+	7-	7-	6+	6	6	7	7	6	6	5	6	1	1	4	6	0	1	2
05	7-	6	6	7	7-	7-	7-	7-	6	6	7	7	6	6	6	6	2	2	8	9	2	1	5
06	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	2	2	6	9	2	1	5
07	7-	6	6	7	7-	7-	7o	7-	7	6	7	7	6	6	6	6	2	2	7	4	2	2	6
08	7-	6	6	7	7-	7-	7-	7-	7	7	7	6	6	6	6	6	1	3	9	4	0	2	7
09	7-	6	6	6	7-	7o	7o	6+	6	6	7	7	6	6	6	5	3	3	13	11	2	2	9
10	6-	6	6	6	5-	5+	6+	6-	6	3	6	6	6	6	6	6	(4)	3	21	20	(4)	(4)	34
11	6+	6	6	5	6+	6-	7-	7-	4	5	6	6	6	6	6	6	2	3	11	15	1	(4)	16
12	6o	6	6	6	6o	6-	7-	7-	7	6	7	7	6	6	6	6	3	2	13	7	3	1	11
13	6+	6	6	7	6-	6o	7o	7-	7	5	7	7	6	6	6	6	2	2	7	7	1	2	6
14	7-	6	6	7	7-	6+	7-	6+	6	6	7	7	6	6	6	6	2	3	11	7	2	2	12
15	7-	6	6	7	6+	6+	7o	7-	6	6	7	7	5	6	6	6	2	2	8	7	1	2	4
16	7-	6	6	7	7-	7-	7o	7-	7	7	7	7	6	6	6	6	1	1	4	11	0	1	3
17	7-	6	6	6	7-	6o	7o	7-	7	7	7	6	6	6	6	6	2	3	10	20	2	2	8
18	6+	6	6	5	7-	6-	7-	7-	7	6	7	7	6	6	6	6	2	2	6	25	2	1	5
19	7-	6	6	6	6+	6+	7-	7-	6	6	7	7	6	6	6	6	1	1	3	15	1	0	3
20	7-	6	6	6	7-	6o	7-	7-	6	6	7	7	6	6	6	6	1	1	2	15	0	0	1
21	7-	6	6	6	7-	6o	7-	7-	6	6	7	7	6	6	6	6	0	0	0	6	0	0	0
22	7-	6	6	7	7-	6+	7-	7-	7	6	7	7	6	6	6	6	1	3	6	6	0	2	4
23	7-	6	6	7	7-	7-	7-	7-	6	6	7	7	6	6	6	6	3	1	9	6	2	1	8
24	7-	6	6	7	7-	6o	7-	7-	7	6	7	7	6	6	6	6	1	1	3	11	1	1	6
25	7-	6	6	5	7-	6+	7-	7-	6	6	7	7	6	6	6	6	1	1	4	25	0	0	1
26	7-	6	6	6	7-	7-	7-	7-	6	6	7	7	6	6	6	6	1	1	2	25	0	0	0
27	7-	6	6	5	7-	7-	7-	7-	7	7	6	7	6	6	6	6	2	3	9	20	2	3	12
28	7-	6	6	5	7-	6+	7-	7-	6	6	6	6	6	6	6	6	3	3	19	12	3	(4)	25
29	7-	6	6	6	7-	7-	7-	7-	5	5	7	6	6	6	5	6	3	(4)	19	6	2	(4)	20
30	7-	-	6	6	6+	7-	7-	7-	5	4	7	7	-	-	-	-	3	2	13	4	3	1	11
31	7-	-	6	7	7-	7-	7-	7-	7	7	7	6	-	-	-	-	1	3	9	4	0	2	4

QUIET	P	10	14	17	28	21		
	S	21	15	11	3	10		
	U	0	1	2	0	0		
	F	0	1	1	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		

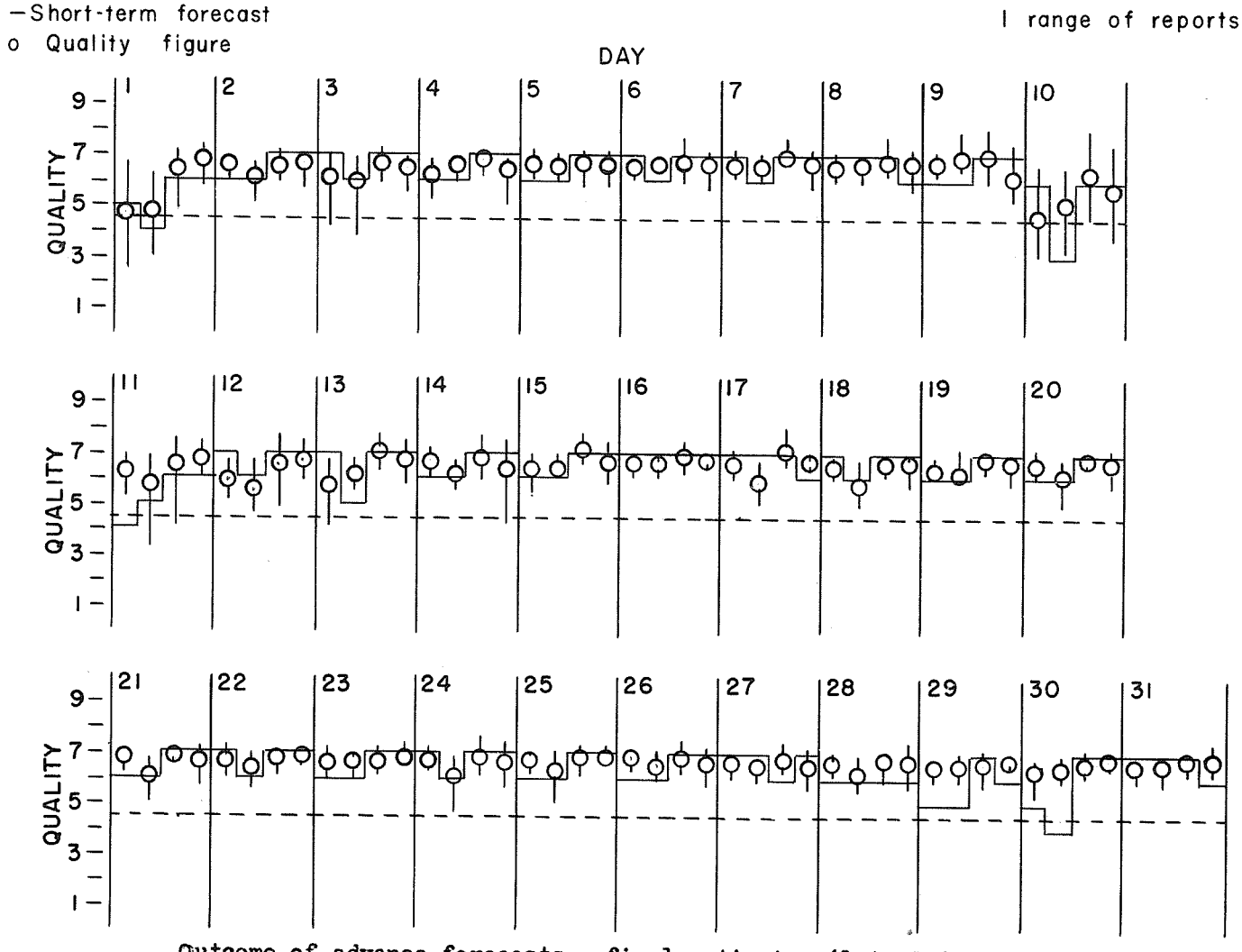
1) THE ADVANCE JC-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES.

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

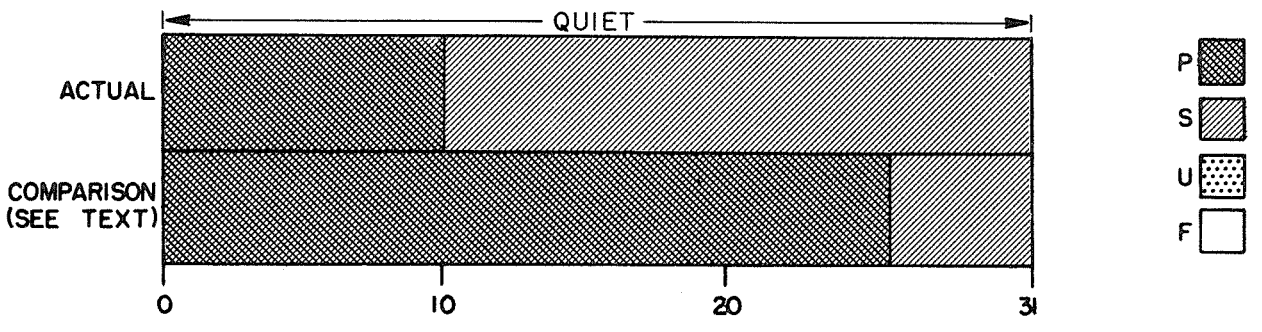
OCTOBER 1967

North Atlantic



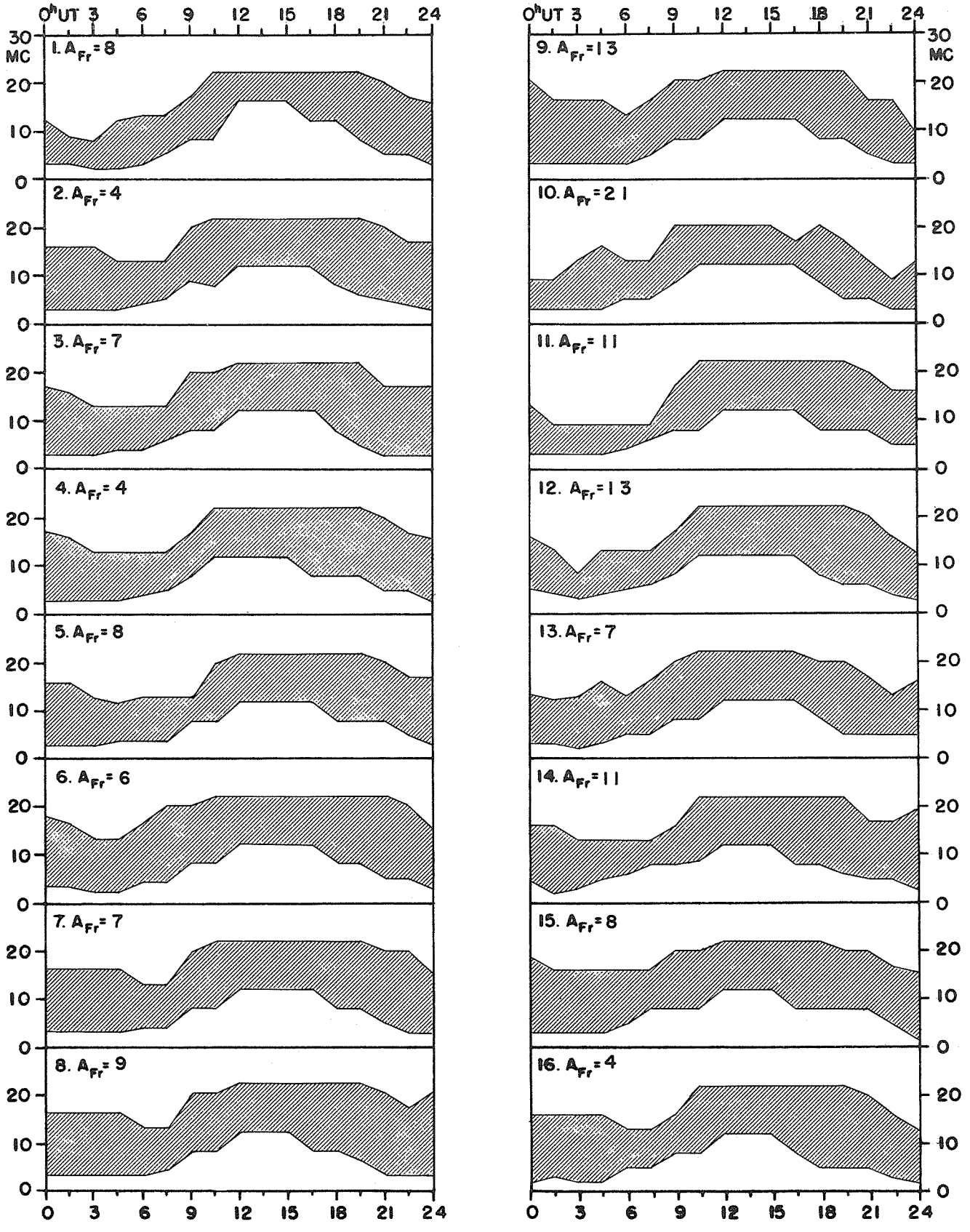
Outcome of advance forecasts - final estimates (1 to 7 days ahead) -
High Latitude radio propagation conditions

HIGH LATITUDE



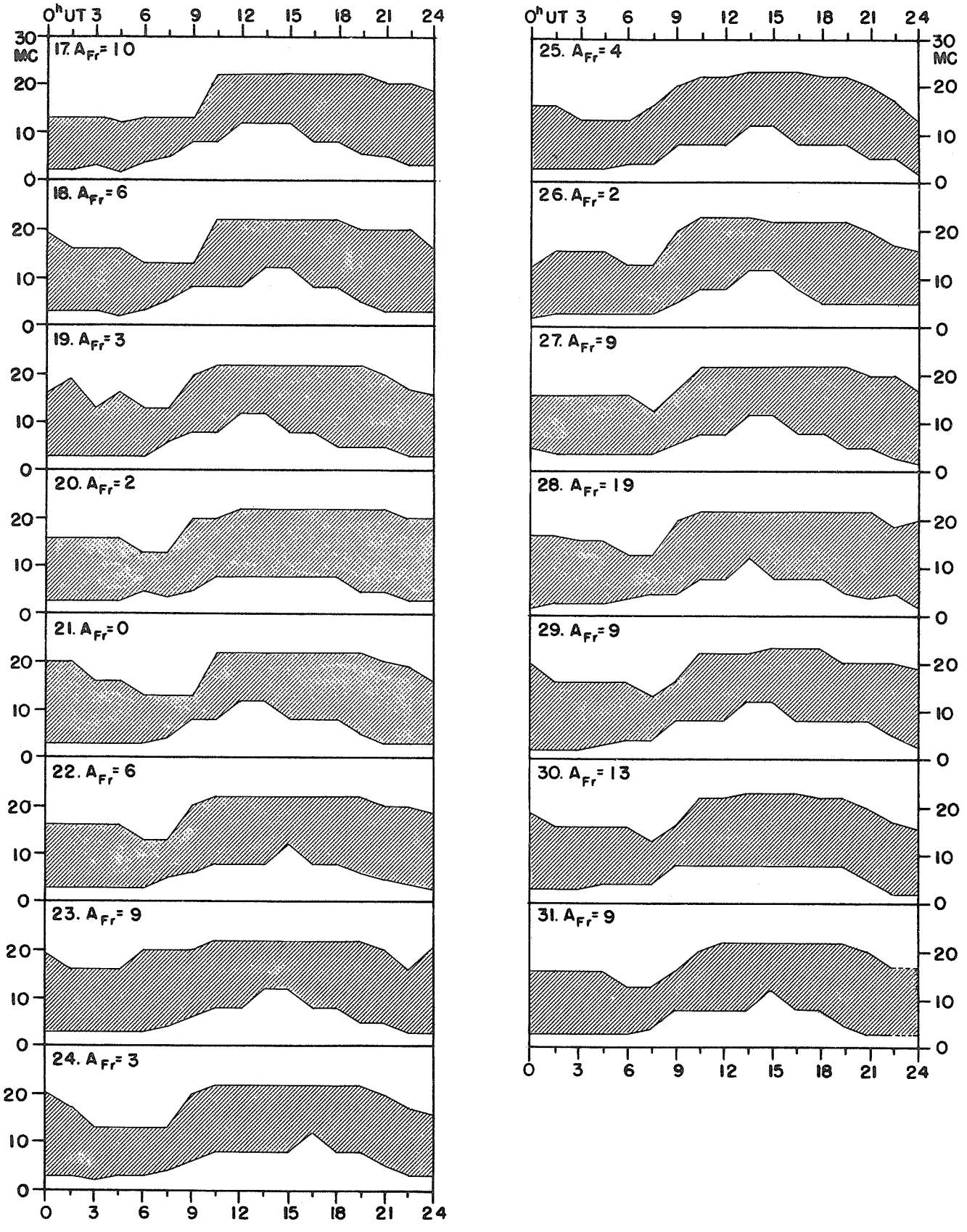
TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

OCTOBER 1967



TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

OCTOBER 1967



Adapted from Observations by Deutsches Bundespost

Table of Contents
for June 1967 Data

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

SOLAR FLARES

Original Reports and Statistical Summaries

JUNE 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6209	01	0013	0024	0016	N22	E32	.624	8831	3.4	11	-N				1.36				4 4 3
CULG	01	0012	0022	0015	N22	E28	.581	8831	3.1	10	-N		C		1.03	1.25			
SACP	01	0013	0025U	0016	N23	E29	.600	8831	3.2	12U	-N		C		1.41	1.53			
IKOM	01	0014E	0025D	0016	N22	E28	.581	8831	3.1	11D	1B		V	0016	1.65	2.00	1.89	125	D
MANI	01	0017E	0021D		N22	E42	.729	8831	4.2	4D	-N	1		0018	.31	.46			
GRP 6210	01	0016	0023	0017	N21	W31	.605	8824	29.7	7	-F				.71				1 1 1
SACP	01	0016	0023	0017	N21	W31	.605	8824	29.7	7	-F		C		.71	.77			
GRP 6211	01	0252	0313	0303	N22	E28	.581	8831	3.2	21	-N				.57				2 2 2
CULG	01	0252	0313	0303	N22	E28	.581	8831	3.2	21	-N		C		.52	.62			
IKOM	01	0303E	0305D		N22	E27	.570	8831	3.2	2D	-N		V	0303	.62	.80			D
GRP 6212	01	0316	0322	0319	N28	W85	.997	8818	25.8	6	-N				.21				2 2 2
CULG	01	0315	0321	0319	N27	W89	1.000	8818	25.5	6	-N		C		.31				
CRON	01	0317	0323	0318	N29	W81	.991	8818	26.1	6	-N		C		.10	.30		200	
GRP 6213	01	0324	0330	0325	N21	E38	.682	8831	4.0	6	-N				.41				1 1 1
CULG	01	0324	0330	0325	N21	E38	.682	8831	4.0	6	-N		C		.41	.56			
GRP 6214	01	0343	0355	0348	N22	E28	.581	8831	3.3	12	-N				.52				2 2 2
CULG	01	0338	0355	0349	N22	E28	.581	8831	3.3	17	-N		C		.52	.62			
IKOM	01	0347	0352D		N22	E27	.570	8831	3.2	5D	-F		V	0347	.52	.60		100	D
GRP 6215	01	0425	0502	0444	N23	E29	.600	8831	3.4	37	-N				.52				2 2 2
CULG	01	0425	0502	0441	N22	E28	.581	8831	3.3	37	-N		C		.62	.75			F
IKOM	01	0443E	0450D		N23	E30	.610	8831	3.4	7D	-F		V	0446	.41	.50			E
GRP 6216	01	0449	0524	0458	N24	W23	.549	8824	30.5	35	-N				.73				2 2 2
CULG	01	0449	0524	0458	N26	W20	.544	8824	30.7	35	-N		C		.52	.60			H
IKOM	01	0458E	0500D		N22	W25	.549	8824	30.3	2D	-F		V	0458	.93	1.10		90	D
GRP 6217	01	0530	0532	0530	N22	E25	.549	8831	3.1	2	-F				.52				1 1 1
IKOM	01	0530E	0532D		N22	E25	.549	8831	3.1	2D	-F		V	0530	.52	.70		70	D
GRP 6218	01	0612	0615	0613	N22	E25	.549	8831	3.1	3	-F				.31				1 1 1
IKOM	01	0612E	0615D		N22	E25	.549	8831	3.1	3D	-F		V	0613	.31	.40			D
GRP 6219	01	0645	0655	0647	N22	E39	.698	8831	4.2	10	-F				.62				1 1 1
IKOM	01	0645E	0655D		N22	E39	.698	8831	4.2	10D	-F		V	0647	.62	.90		80	D
GRP 6220	01	0817	0827	0823	N22	E24	.539	8831	3.1	10	-N				.30				4 4 3
ONDR	01	0815	0825	0821	N21	E24	.529	8831	3.1	10	-B		V	0821			3.30		CDJ
CANA	01	0817	0823D	0820	N22	E24	.539	8831	3.1	6D	-N		C		.31	.40		200	
MEUD	01	0818	0827		N23	E24	.548	8831	3.1	9	-N		C	0821	.26	.30			D
SALO	01	0818E	0828D		N23	E25	.559	8831	3.2	10D	-N		S	0828	.33	.40	1.40		
GRP 6221	01	0858	0920	0905	N24	E29	.608	8831	3.5	22	-N				.57				2 2 2
MEUD	01	0858	0920		N25	E34	.666	8831	3.9	22	-N		C	0908	.83	1.00			E
CANA	01	0901U	0903D	0902U	N22	E24	.539	8831	3.2	2D	-N		C		.31	.40		200	
GRP 6222	01	0958	1022	1004	N25	E33	.656	8831	3.9	24	1N				3.00				2 2 1
CANA	01	0958	1019	1001	N27	E35	.689	8831	4.0	21	-N		C		.52	.70		200	
CAPS	01	0959E	1024D		N23	E30	.610	8831	3.7	25D	1N	2		1006	3.00	3.60		180	F
GRP 6223	01	1038	1044	1039	N33	W90	1.000	8821	25.7	6	-N				.23				1 1 1
CAPE	01	1038	1044	1039	N33	W90	1.000	8821	25.7	6	-N		C	1039	.23				
GRP 6224	01	1117	1140	1122	N26	E31	.644	8831	3.8	23	-N				1.17				3 3 3
CAPE	01	1114	1147	1122	N26	E31	.644	8831	3.8	33	1N		C	1122	2.07	2.70			FKTV
CAPE	01	1114	1147	1125	N26	E31	.644	8831	3.8	33	1N			1125	1.66	2.20			
CAPE	01	1116	1134	1120	N25	E27	.597	8831	3.5	18	-N		C	1120	.55	.70			T
MCMA	01	1117	1144	1122	N25	E28	.607	8831	3.6	27	-B		C	1122	1.03	1.30			EKRV
CANA	01	1120	1129	1122	N26	E34	.673	8831	4.0	9	-N		C		.41	.50		200	HI
GRP 6225	01	1120	1134	1122	N20	W40	.698	8824	29.5	14	-N				.46				1 1 1
CAPE	01	1120	1134	1122	N20	W40	.698	8824	29.5	14	-N		C	1122	.46	.60			CH
GRP 6226	01	1122	1147	1134	N26	E30	.634	8831	3.7	25	-N				1.55				6 6 3
CAPE	01	1114	1147	1134	N29	E34	.695	8831	4.0	33	-B			1134	1.10	1.50			H
MCMA	01	1117	1144	1132	N25	E28	.607	8831	3.6	27	-B								
CAPS	01	1119E	1144D		N23	E27	.579	8831	3.5	25D	1B	1		1135	2.00	2.50		155	CEJ
CANA	01	1130	1153	1133	N26	E34	.673	8831	4.0	23	-N		C		.41	.50		200	HI
KIEV	01	1132	1140D	1133	N29	E25	.617	8831	3.4	8D	1F		C	1133	1.55	2.00		60	DI
ONDR	01	1134E	1140D		N26	E33	.663	8831	4.0	6D	-N		V	1134			3.20		CDJ
GRP 6227	01	1143	1204	1154	S18	W02	.299	8829	1.3	21	-N				1.31				5 5 4
SALO	01	1140E	1210D		S18	E02	.299	8829	1.6	30D	-B		S	1200	.50	.50	1.40		
CAPE	01	1145	1208	1153	S17	W03	.285	8829	1.3	23	-N		C	1153	1.90	2.00			
MCMA	01	1145	1202	1148	S18	W04	.305	8829	1.2	17	-N		C	1148	.83	.90			E
CAPS	01	1148E	1201D		S18	E01	.298	8829	1.6	13D	1N	1		1154	2.00	2.10		190	CE
ONDR	01	1154E	1158		S19	W04	.321	8829	1.2	4D	-F		V	1154			1.40		D
GRP 6228	01	1153	1224	1158	N25	E29	.616	8831	3.7	31	1N				2.04				3 3 3
CAPE	01	1148	1221	1158	N26	E28	.615	8831	3.6	33	2N		C	1158	4.24	5.40			FH
SALO	01	1155E	1220D	1158	N24	E31	.628	8831	3.8	25D	1N		S	1220	.74	1.00	1.50		
MCMA	01	1155	1227	1159	N25	E28	.607	8831	3.6	32	-N		C	1159	1.13	1.40			F
GRP 6229	01	1304	1314	1308	N21	W40	.703	8824	29.5	10	-F				.46				1 1 1
CAPE	01	1304	1314	1308	N21	W40	.703	8824	29.5	10	-F		C	1308	.46	.60			
GRP 6230	01	1305	1314	1307	N29	E33	.686	8831	4.0	9	-F				.48				2 2 2
CAPE	01	1304	1314	1307	N29	E33	.686	8831	4.0	10	-F		C	1307	.55	.80			TH
SACP	01	1306	1313	1307	N29	E33	.686	8831	4.0	7	-F		C		.40	.46			
GRP 6231	01	1318	1324	1319	N08	W64	.902	8821	27.8	6	-F				.28				1 1 1
CAPE	01	1318	1324	1319	N08	W64	.902	8821	27.8	6	-F		C	1319	.28	.70			

SOLAR FLARES

JUNE 1967

OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	START	END	MAX. PHASE	APPROX. LAT.	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 6232	Jun 01	1325	1350	1350	N25	E32	.646	8831	4.0	25	1N				.50				1 1 1
SALO	01	1325E	1350D		N25	E32	.646	8831	4.0	25D	1N		S	1350	.50	.60	1.60		
GRP 6233	01	1333	1358	1342	N22	W31	.613	8824	30.2	25	-N				.46				1 1 1
CAPE	01	1333	1358D	1342	N22	W31	.613	8824	30.2	25D	-N		C	1342	.46	.60			
GRP 6234	01	1406	1411	1408	N28	E34	.687	8831	4.1	5	-N				.46				2 2 2
CANA	01	1405	1410	1407	N27	E35	.689	8831	4.2	5	-N		C		.52	.70		200	
SACP	01	1406	1411	1408	N29	E32	.677	8831	4.0	5	-N		C		.40	.46			
GRP 6235	01	1451	1506	1457	N21	W26	.551	8824	30.7	15	-N				1.34				1 1 1
CANA	01	1451	1506D	1457	N21	W26	.551	8824	30.7	15D	-N		C		1.34	1.60		200	EJ
GRP 6236	01	1451	1512	1458	N23	E26	.569	8831	3.6	21	1N				2.27				5 5 5
MCMA	01	1450	1523	1457	N25	E28	.607	8831	3.7	33	1N		C	1457	1.65	2.10			F
MCMA	01	1450	1523	1503	N25	E28	.607	8831	3.7	33	1N								
MEUD	01	1452	1505	1456	N24	E28	.598	8831	3.7	13	1N		C	1456	2.06	2.40			
SACP	01	1452	1507	1457	N23	E26	.569	8831	3.6	15	1N		C		2.11	2.25			
HUAN	01	1457E	1458D		N23	E26	.569	8831	3.6	1D	-N	1	P	1457	1.51	1.60			E
CAPS	01	1501E	1512		N22	E24	.539	8831	3.4	11D	1F	2		1504	4.00	4.80		157	BJ
GRP 6237	01	1552	1631	1554	N21	W33	.628	8824	30.2	39	1B				2.79				6 5 5
MCMA	01	1551	1629	1554	N22	W32	.624	8824	30.3	38	1B		C	1554	1.65	2.10			E
CAPS	01	1552	1611D		N23	W30	.610	8824	30.4	19D	2N	3		1555	4.50	5.60		227	
SACP	01	1552	1630E	1554	N20	W34	.632	8824	30.1	38D	1N		C		2.73	3.04			
MONT	01	1552	1630	1556	N20	W34	.632	8824	30.1	38	2B		C	1556	3.61				V
HUAN	01	1553E	1554D		N20	W35	.643	8824	30.0	1D	-B	1	P	1553	1.44	1.62			
CATA	01	1612	1636	1615	N23	W33	.641	8824	30.2	24	1N			1615	2.74	3.60		174	
GRP 6238	01	1613	1643	1617	N25	E26	.587	8831	3.6	30	-N				.77				3 3 3
CATA	01	1612	1636	1615	N25	E25	.578	8831	3.5	24	-B			1615	.98	1.20		218	
MCMA	01	1614	1652	1616	N25	E26	.587	8831	3.6	38	-N		C	1616	1.03	1.30			E
HUAN	01	1620E	1642		N26	E28	.615	8831	3.8	22D	-F	1	P	1621	.31	.34			E
GRP 6239	01	1919	1933	1923	N24	E23	.549	8831	3.5	14	-N				1.32				3 3 2
MCMA	01	1913	1934	1922	N24	E26	.578	8831	3.8	21	-N		C	1922	.83	1.00			E
SACP	01	1920	1936	1924	N24	E22	.539	8831	3.5	16	-F		C		1.80	1.90			
HALE	01	1923	1930	1923	N23	E22	.529	8831	3.5	7	-N	2	C	1923	.31	.40			
GRP 6240	01	2009	2027	2013	N24	E24	.558	8831	3.6	18	-N				.93				4 4 4
SACP	01	2008	2023	2013	N25	E22	.550	8831	3.5	15	-N		C		1.31	1.38			
HUAN	01	2009	2023D		N24	E23	.549	8831	3.6	14D	-N	1	C	2013	.77	.82			E
MCMA	01	2010	2030D	2012	N24	E26	.578	8831	3.8	20D	-B		C	2012	.72	.90			E
LOCK	01	2010	2030	2015	N24	E23	.549	8831	3.6	20	-F		C	2015	.90	1.10		10	
GRP 6241	01	2128	2136	2130	N09	W72	.953	8821	27.5	8	-F				.20				1 1 1
HOUS	01	2128	2136	2130	N09	W72	.953	8821	27.5	8	-F		C		.20	.50		100	
GRP 6242	01	2221	2255	2228	N09	W72	.953	8821	27.5	34	-N				.61				2 2 2
MCMA	01	2220	2243D	2224	N10	W72	.953	8821	27.5	23D	-N		C	2224	.41	1.50			E
SACP	01	2221	2255	2232	N08	W72	.953	8821	27.5	34	-N		C		.80	1.61			
GRP 6243	01	2324	2344	2332	N07	W71	.947	8821	27.7	20	-N				.74				3 3 3
CULG	01	2321	2336	2332	N06	W72	.952	8821	27.6	15	-N		C		.41				
LOCK	01	2323	2350	2331	N08	W70	.942	8821	27.7	27	1F		C	2331	1.20	3.00		10	
SACP	01	2329	2345U	2332	N06	W71	.947	8821	27.7	16U	-N		C		.61	1.19			
GRP 6244	01	0022	0045	0030	N25	E23	.559	8831	3.7	23	-F				1.39				3 3 3
CULG	01	2353	0150D	0029	N26	E25	.587	8831	3.9	117D	-N		P		1.65	1.90			FK
LOCK	02	0020	0050	0030	N24	E21	.529	8831	3.6	30	-F		C	0030	.80	1.00		10	
SACP	02	0024	0040	0030	N25	E22	.549	8831	3.7	16	-F		C		1.71	1.81			
GRP 6245	02	0057	0132	0105	N22	W39	.697	8824	30.1	35	1N				1.73				6 6 6
CULG	02	0028	0150D	0103	N22	W38	.687	8824	30.2	82D	-N		P		1.13	1.48			F
LOCK	02	0055	0200D	0110	N24	W38	.698	8824	30.2	65D	1N		C	0110	1.60	2.20		20	
MITK	02	0057	0117D	0101	N20	W40	.698	8824	30.0	20D	1N		C	0101	2.58	3.60			E
SACP	02	0100	0142	0106	N20	W38	.676	8824	30.2	42	1N		C		2.42	2.78			
IKOM	02	0102E	0106		N20	W40	.698	8824	30.0	4D	1N		V	0102	1.55	2.20		120	E
CRON	02	0104U	0115D	0107U	N23	W37	.682	8824	30.3	11D	-N		C		1.10	1.10		200	E
GRP 6246	02	0346	0347	0347	N27	E24	.587	8831	4.0	1	-N				.62				1 1 1
MANI	02	0346E	0347D		N27	E24	.587	8831	4.0	1D	-N	1		0347	.62	.77			
GRP 6247	02	0716	0726	0720	N22	E20	.497	8831	3.8	10	-F				.41				1 1 1
CANA	02	0716	0726	0720	N22	E20	.497	8831	3.8	10	-F		C		.41	.50		100	
GRP 6248	02	0747	0833	0800	N22	W43	.738	8824	30.1	46	1N				1.24				3 3 3
CATA	02	0743	0835	0800	N21	W43	.734	8824	30.1	52	-N			0800	1.35	2.00		174	
MONT	02	0750	0820		N20	W43	.730	8824	30.1	30	1N		C	0800	1.55				
SALO	02	0810E	0845D		N24	W42	.738	8824	30.2	35D	1F		V	0835	.83	1.20	1.40		
GRP 6249	02	0815	0825	0825	N23	E16	.473	8831	3.5	10	-F				.33				1 1 1
SALO	02	0815E	0825D		N23	E16	.473	8831	3.5	10D	-F		V	0825	.33	.30	1.30		
GRP 6250	02	0828	0850	0833	N11	W78	.979	8821	27.5	22	1N				1.31				7 7 7
SALO	02	0815E	0842D	0820	N10	W74	.963	8821	27.8	27D	1B		V	0842	.83	2.80	1.50		
MONT	02	0825	0900		N14	W77	.976	8821	27.6	35	1N		C	0835	1.55				
CANA	02	0826	0839	0830	N12	W79	.983	8821	27.4	13	1N		C		.72	2.10		200	E
CAPE	02	0829	0856	0833	N11	W79	.983	8821	27.4	27	2N		C	0833	2.03				F
CATA	02	0830	0855	0830	N09	W77	.975	8821	27.6	25	1N			0830	1.57			162	
CAPS	02	0830	0856D		N09	W74	.963	8821	27.8	26D	1N	3		0832	2.00			185	
ARCE	02	0836E	0845		N10	W85	.996	8821	27.0	9D	-N		C	0836	.45	1.90			E

SOLAR FLARES

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6251	02	0843	0854	0845	N28	E20	.565	8831	3.9	11	1N				2.07				1 1 1
CAPE	02	0839	0845	0841	N26	E15	.504	8831	3.5	6	1F		C	0841	1.85	2.10			
CAPE	02	0843	0854	0845	N28	E20	.565	8831	3.9	11	1N		C	0845	2.07	2.50			T
GRP 6252	02	0846	0957	0910	N24	W42	.738	8824	30.2	71	1B				6.00				3 2 1
SALO	02	0845E	0915D		N21	W43	.734	8824	30.1	30D	1B		V	0910	.83	1.20	1.40		
CAPS	02	0847	0948		N20	W41	.708	8824	30.3	61	1B			0910	6.00	8.20			
CAPE	02	0955	1006	1000	N32	W41	.773	8824	30.3	11	-F		C	1000	.41	.60			
GRP 6253	02	0847	0928	0854	N20	W44	.740	8824	30.1	41	1N				3.58				11 10 8
CAPE	02	0844	1100	0851	N22	W45	.758	8824	30.0	136	2B		C	0851	7.37	11.20			FV
KODA	02	0845E	0906D	0852	N18	W44	.732	8824	30.1	21D	1F		S	0850	1.93	2.80	1.64		E
CANA	02	0846	0912D	0850	N19	W43	.725	8824	30.1	26D	2N		C		4.74	6.70		200	E
CAPS	02	0847	0948		N20	W41	.708	8824	30.3	61	1B	3		0854	3.00	4.20		300	FX
MONT	02	0847	1030D	0855	N20	W44	.740	8824	30.1	103D	2N		C	0855	3.09				
HERS	02	0848E	0910	0852U	N21	W44	.744	8824	30.1	22D	1B		P	0852	1.78	3.60			
MEUD	02	0848	0915	0852	N20	W46	.761	8824	29.9	27	1N		C	0852	3.30	5.00			F
ONDR	02	0848	0930		N20	W44	.740	8824	30.1	42	2N		V	0855			3.30		CEH
ARCE	02	0849	0940	0853	N21	W45	.754	8824	30.0	51	1N		C	0853	3.41	5.00			F
KHAR	02	0849E	0940D	0855	N19	W44	.736	8824	30.1	51D	3N		V	0903	13.61	19.90			EH
CRON	02	0902E	0908D	0903U	N19	W44	.736	8824	30.1	6D	-N		C		.80	1.20		200	EK
GRP 6254	02	1009	1015	1012	N29	E25	.616	8831	4.3	6	-F				.97				1 1 1
CAPE	02	1009	1015	1012	N29	E25	.616	8831	4.3	6	-F		C	1012	.97	1.20			C
GRP 6255	02	1036	1045	1040	N31	E20	.600	8831	3.9	9	-F				1.01				1 1 1
CAPE	02	1036	1045	1040	N31	E20	.600	8831	3.9	9	-F		C	1040	1.01	1.30			T
GRP 6256	02	1048	1134	1104	N28	E19	.558	8831	3.9	46	1N				2.17				2 2 2
CAPE	02	1043	1054	1047	N25	E19	.522	8831	3.9	11	-N		C	1047	1.24	1.40			
CAPE	02	1048	1128	1054	N31	E20	.600	8831	4.0	40	1N		C	1054	2.07	2.60			KT
CAPE	02	1048	1128	1057	N31	E19	.593	8831	3.9	40	-N			1057	1.47	1.80			
MCMA	02	1104E	1140	1110	N25	E18	.514	8831	3.8	36D	-N		C	1110	1.03	1.20			F
GRP 6257	02	1212	1240	1215	N24	E20	.520	8831	4.0	28	-N				.91				4 4 4
CAPE	02	1212	1225	1214	N25	E21	.540	8831	4.1	13	-N		C	1214	1.21	1.40			F
MCMA	02	1212	1255D	1214	N25	E20	.531	8831	4.0	43D	-N		C	1214	.52	.60			E
CAPS	02	1213E	1227D		N22	E19	.488	8831	3.9	14D	-F	1		1214	1.20	1.20			CEH
HUAN	02	1213E	1251D		N22	E21	.507	8831	4.1	38D	-N	1	C	1219	.70	.73			E
GRP 6258	02	1259	1325	1309	N19	W83	.994	8821	27.3	26	1N				.92				6 6 5
CAPE	02	1249	1348	1309	N19	W86	.998	8821	27.1	59	1N		C	1309	1.06				F
CAPS	02	1256E	1321D		N19	W80	.987	8821	27.5	25D	1F	2		1309	.90				
HUAN	02	1258E	1318		N18	W83	.994	8821	27.3	20D	-N	1	C	1309	.57				CE
MCMA	02	1302	1320	1310	N19	W83	.994	8821	27.3	18	-N		C	1310					E
CANA	02	1303	1320	1309	N19	W80	.987	8821	27.5	17	1N		C		1.03	3.40		200	EJ
CATA	02	1305	1320	1308	N18	W85	.997	8821	27.2	15	1B			1308	1.03			218	
GRP 6259	02	1300	1307	1302	N25	E08	.450	8831	3.1	7	-N				1.29				1 1 1
CAPE	02	1300	1307	1302	N25	E08	.450	8831	3.1	7	-N		C	1302	1.29	1.40			
GRP 6260	02	1310	1327	1313	N24	E12	.457	8831	3.4	17	-N				1.15				4 4 4
CAPE	02	1309	1320	1311	N25	E10	.459	8831	3.3	11	-N		C	1311	1.75	2.00			
MCMA	02	1310	1329	1314	N25	E20	.531	8831	4.0	19	-N		C	1314	.62	.70			EH
HUAN	02	1310	1332	1312	N23	E09	.425	8831	3.2	22	-F	2	C	1312	.62	.68			E
CATA	02	1312	1325	1314	N23	E10	.431	8831	3.3	13	-N			1314	1.62	1.80		195	
GRP 6261	02	1344	1358	1350	N24	E14	.471	8831	3.6	14	-N				.50				3 3 3
CAPE	02	1340	1400D	1349	N25	E11	.465	8831	3.4	20D	-N		C	1349	.78	.90			
MCMA	02	1346	1357	1350	N25	E20	.531	8831	4.1	11	-N		C	1350	.41	.50			DH
HUAN	02	1346	1357	1350	N23	E11	.437	8831	3.4	11	-N	2	C	1350	.31	.31			D
GRP 6262	02	1346	1358	1353	N25	W46	.780	8824	30.1	12	-F				.41				1 1 1
CAPE	02	1346	1358	1353	N25	W46	.780	8824	30.1	12	-F		C	1353	.41	.60			
GRP 6263	02	1356	1415	1400	S17	W17	.398	8829	1.3	19	-N				.52				2 2 2
MCMA	02	1356	1415	1401	S18	W17	.409	8829	1.3	19	-N		C	1401	.72	.80			E
HUAN	02	1356E	1415		S16	W17	.387	8829	1.3	19D	-F	1	C	1359	.31	.31			E
GRP 6264	02	1407	1431	1413	N26	E25	.586	8831	4.5	24	-F				.61				5 5 5
CANA	02	1405	1431	1411	N27	E26	.605	8831	4.5	26	-N		C		.72	.90		200	E
CAPS	02	1406E	1425D		N26	E20	.542	8831	4.1	19D	-N	2		1413	.70	.80		188	CE
MCMA	02	1406	1455	1420	N25	E23	.558	8831	4.3	49	-F		C	1420	1.03	1.20			FK
HUAN	02	1407	1429	1411	N25	E27	.596	8831	4.6	22	-F	2	C	1411	.25	.27			C
MEUD	02	1409	1414		N25	E27	.596	8831	4.6	5	-F		C	1410	.36	.40			C
GRP 6265	02	1518	1533	1522	N24	E20	.520	8831	4.1	15	-N				.88				4 4 4
HUAN	02	1515	1534	1521	N24	E20	.520	8831	4.1	19	-N	2	C	1521	.70	.73			E
MCMA	02	1519	1529	1520	N25	E23	.558	8831	4.4	10	-N		C	1520	.62	.70			E
LOCK	02	1520	1535	1524	N23	E20	.509	8831	4.1	15	-F		C	1524	.40	.50		10	
CAPS	02	1521E	1532D		N22	E16	.461	8831	3.8	11D	-N	3		1522	1.80	1.90			CE
GRP 6266	02	1547	1616	1550	S17	W18	.409	8829	1.3	29	-N				.78				4 4 4
LOCK	02	1545	1615	1551	S16	W18	.399	8829	1.3	30	-F		C	1551	.80	.90		10	
HUAN	02	1546	1614	1550	S16	W17	.387	8829	1.4	28	-N	2	C	1550	.50	.50			E
MCMA	02	1547	1620	1549	S18	W18	.420	8829	1.3	33	-N		C	1549	.62	.70			E
CAPS	02	1548	1600D		S16	W18	.399	8829	1.3	12D	-N	3		1551	1.20	1.30		176	
GRP 6267	02	1549	1610	1554	N24	E17	.494	8831	3.9	21	-N				.71				2 2 2
LOCK	02	1547	1602	1553	N22	E10	.416	8831	3.4	15	-F		C	1553	.80	.90		10	
MCMA	02	1551	1617	1554	N25	E23	.558	8831	4.4	26	-N		C	1554	.62	.70			E

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6268	02	1556	1620	1601	N21	W47	.774	8824	30.1	24	-N				.67				3 3 3
LOCK	02	1554	1642	1600	N22	W46	.768	8824	30.2	48	-N		C	1600	1.10	1.80		20	
LOCK	02	1554	1642	1623	N22	W46	.768	8824	30.2	48	-N		C						
MCMA	02	1556	1608	1601	N20	W47	.771	8824	30.1	12	-N		C	1601	.41	.70			E
HUAN	02	1557	1609		N22	W48	.787	8824	30.1	12	-F	1	C	1602	.50	.62			E
GRP 6269	02	1629	1742	1641	N24	E22	.538	8831	4.3	73	-N				.53				3 3 1
LOCA	02	1624	1650	1637	N23	E23	.537	8831	4.4	26	-B		V	1637	.53	.60			
MCMA	02	1631	1758D	1647	N25	E23	.558	8831	4.4	87D	1B		C						
LOCK	02	1633	1725	1638	N23	E19	.499	8831	4.1	52	-F		C						
GRP 6270	02	1633	1740	1710	N23	E17	.482	8831	4.0	67	1N				2.00				5 5 4
MCMA	02	1631	1758D	1713	N25	E23	.558	8831	4.4	87D	1B			1713	2.06	2.40			FK
LOCK	02	1633	1725	1710	N23	E19	.499	8831	4.1	52	-F		C	1710	1.50	1.80		10	
HUAN	02	1634	1745	1709	N24	E18	.502	8831	4.0	71	1N	2	C	1709	2.99	3.10			E
HALE	02	1635	1732	1709	N23	E18	.490	8831	4.0	57	-N	3	C	1709	1.19	1.40			F
SACP	02	1710E	1710D	1710U	N19	E06	.349	8831	3.2		2N		V						
HALE	02	1713	1721	1714	N23	E05	.408	8831	3.1	8	-N	3	C	1714	.26	.30			
GRP 6271	02	1810	1823	1813	N25	W47	.789	8824	30.2	13	-N				.45				2 2 2
HOUS	02	1809	1819	1812	N24	W46	.776	8824	30.3	10	-N		C		.30	.50		200	
LOCK	02	1810	1827	1814	N25	W47	.789	8824	30.2	17	-F		C	1814	.60	1.00		10	
GRP 6272	02	1847	1902	1851	S18	W19	.431	8829	1.4	15	-F				.81				2 2 2
LOCK	02	1845	1905	1852	S17	W20	.433	8829	1.3	20	-F		C	1852	.90	1.00		10	
MCMA	02	1848	1859	1850	S18	W18	.420	8829	1.4	11	-F		C	1850	.72	.80			E
GRP 6273	02	1938	1946	1940	N26	E17	.518	8831	4.1	8	-N				.39				2 2 2
HALE	02	1936	1947	1937	N26	E13	.491	8831	3.8	11	-N	1	C	1937	.26	.30			
MCMA	02	1940	1945	1942	N25	E20	.531	8831	4.3	5	-F		C	1942	.52	.60			E
GRP 6274	02	2021	2037	2024	S18	W20	.443	8829	1.3	16	-F				.76				2 2 2
LOCK	02	2020	2040	2024	S17	W20	.433	8829	1.3	20	-F		C	2024	.90	1.00		10	
MCMA	02	2021	2034	2024	S18	W20	.443	8829	1.3	13	-F		C	2024	.62	.70			E
GRP 6275	02	2057	2112	2101	N22	W50	.806	8824	30.1	15	-N				.89				4 4 4
HOUS	02	2057	2111	2101	N23	W49	.800	8824	30.2	14	1N		C		1.70	2.80		200	
LOCK	02	2057	2118	2103	N21	W50	.803	8824	30.1	21	-N		C	2103	1.00	1.70		20	
HUAN	02	2058	2108	2101	N22	W50	.806	8824	30.1	10	-N	2	C	2101	.55	.72			E
MCMA	02	2059E	2059D		N20	W50	.800	8824	30.1		-N		P	2059	.31	.60			E
GRP 6276	02	2123	2132	2126	N23	E14	.457	8831	3.9	9	-N				.50				1 1 1
LOCK	02	2123	2132	2126	N23	E14	.457	8831	3.9	9	-N		C	2126	.50	.60		10	
GRP 6277	02	2143	2152	2146	N23	E14	.457	8831	4.0	9	-F				.50				1 1 1
LOCK	02	2143	2152	2146	N23	E14	.457	8831	4.0	9	-F		C	2146	.50	.60		10	
GRP 6278	02	2250	2258	2253	N25	W01	.432	8831	2.9	8	-F				.20				1 1 1
LOCK	02	2250	2258	2253	N25	W01	.432	8831	2.9	8	-F		C	2253	.20	.20		10	
GRP 6279	02	2302	2345	2309	N20	W53	.827	8824	30.0	43	1B				1.22				3 2 2
HOUS	02	2302	2338	2311U	N20	W53	.827	8824	30.0	36	1N		C		1.20	2.10		200	
CULG	02	2302	2358	2306	N20	W53	.827	8824	30.0	56	1B		C		1.24	2.10			
LOCK	02	2326E	2340	2326U	N20	W54	.836	8824	29.9	14D	1N		C	2326	1.70	2.90		20	
GRP 6280	02	2324	2336	2327	N25	E02	.433	8831	3.1	12	-F				.46				2 2 2
CULG	02	2324	2339	2328	N25	E02	.433	8831	3.1	15	-F		C		.52	.55			
LOCK	02	2326E	2332	2326U	N24	E02	.417	8831	3.1	6D	-F		C	2326	.40	.40		10	
GRP 6281	03	0002	0030	0007	N25	E13	.475	8831	4.0	28	-F				.41				1 1 1
CULG	03	0002	0030D	0007	N25	E13	.475	8831	4.0	28D	-F		P		.41	.44			
GRP 6282	03	0037	0048	0040	N23	E03	.401	8831	3.3	11	-F				.40				1 1 1
LOCK	03	0037	0048	0040	N23	E03	.401	8831	3.3	11	-F		C	0040	.40	.40		10	
GRP 6283	03	0118	0151	0123	S17	W22	.458	8829	1.4	33	-N				.82				3 3 3
LOCK	03	0117	0140	0121	S15	W23	.454	8829	1.3	23	-F		C	0121	.80	.90		10	
CULG	03	0119	0152	0124	S18	W22	.467	8829	1.4	33	-N		C		1.03	1.15			F
MITK	03	0120E	0200D	0124	S18	W22	.467	8829	1.4	40D	-N		C	0124	.62	.70			E
GRP 6284	03	0243	0342	0302	N24	E14	.469	8831	4.2	59	1N				4.80				5 5 5
CULG	03	0226	0343D	0300	N23	E13	.448	8831	4.1	77D	1B		P		2.68	3.00			F
IKOM	03	0243E	0350	0305	N25	E15	.489	8831	4.2	67D	1N		V	0305	2.89	3.30	1.56	120	E
KODA	03	0252E	0317	0304	N23	E13	.448	8831	4.1	25D	1N		V	0302	2.90	3.30	2.00		IK
CRON	03	0252	0347	0257	N24	E15	.476	8831	4.2	55	-N		C		1.60	1.80		200	
TACH	03	0300E	0351D		N24	E12	.455	8831	4.0	51D	3F		V	0304	13.92	15.40	2.50	69	BE
KODA	03	0346E	0352	0351	N23	E11	.435	8831	4.0	6D	1N		V	0347	2.58	2.90	1.72		I
GRP 6285	03	0316	0350	0316	S19	E85	.996	8838	9.5	34	1N				.93				1 1 1
TACH	03	0316E	0350D		S19	E85	.996	8838	9.5	34D	1N		V	0316	.93		3.60	60	DG
GRP 6286	03	0321	0336	0319	N23	E11	.435	8831	4.0	15	1N				2.44				3 3 3
MANI	03	0243E	0336		N23	E10	.429	8831	3.9	53D	1N	1		0317	3.09	3.36			
HALE	03	0316E	0425		N24	E11	.449	8831	4.0	69D	-N	2	P	0316	1.65	1.80			F
KODA	03	0325	0336	0325	N23	E11	.435	8831	4.0	11	1N		V	0325	2.58	2.90	1.68		I
GRP 6287	03	0516	0540	0525	N25	E06	.440	8831	3.7	24	-N				.98				2 2 2
CULG	03	0508E	0526D	0524	N24	E09	.438	8831	3.9	18D	-N		P		1.34	1.43			F
MANI	03	0523	0540		N25	E03	.432	8831	3.4	17	-F	1		0525	.62	.68			
GRP 6288	03	0600	0620		S18	E85	.996	8838	9.6	20	-N								1 1 0
CAPS	03	0600E	0620D		S18	E85	.996	8838	9.6	20D	-N	2							

SOLAR FLARES

JUNE 1967

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE	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. %	
	1967 JUNE																		
GRP 6289	03	0642	0711	0641	N22	W55	.849	8824	30.2	29	-N				.93				3 3 2
CRON	03	0639	0652	0641	N27	W54	.854	8824	30.2	13	-N		C		.30	.60		200	
CAPS	03	0641	0645D		N20	W58	.869	8824	29.9	4D	-N	1							D
MONT	03	0645	0730		N20	W54	.835	8824	30.2	45	1N		C	0700	1.55				
GRP 6290	03	0751	0801	0754	N25	E01	.430	8831	3.4	10	-N				.61				2 2 2
CAPE	03	0751	0755	0752	N24	W01	.414	8831	3.3	4	-N		C	0752	.78	.90			T
BUCA	03	0755E	0807D		N25	E02	.431	8831	3.5	12D	-F		P	0756	.44	.50			
GRP 6291	03	0753	0805	0754	N22	W60	.888	8824	29.8	12	-N				.32				1 1 1
CAPE	03	0753	0805	0754	N22	W60	.888	8824	29.8	12	-N		C	0754	.32	.70			V
GRP 6292	03	0758	0833	0806	S17	W26	.507	8829	1.4	35	1N				3.33				13 13 11
BUCA	03	0755E	0844D		S17	W25	.495	8829	1.5	49D	2N		P	0804	5.54	6.30			F
CAPE	03	0755	0855	0810	S16	W25	.487	8829	1.5	60	2N		C	0810	5.63	6.50			
MONT	03	0757	0822D	0810	S20	W23	.497	8829	1.6	25D	2N		C	0810	3.61				
ZURI	03	0758	0828	0807	S18	W29	.551	8829	1.2	30	-B		P	0807	1.68	2.00			
CRON	03	0758	0833	0806	S17	W26	.507	8829	1.4	35	-N		C		1.40	1.60		200	E
ONDR	03	0758	0837		S16	W29	.538	8829	1.2	39	1B		V	0801			2.60		C
CAPS	03	0759	0823		S16	W26	.500	8829	1.4	24	1B	3		0802	3.50	4.00		228	U
CATA	03	0800	0818	0800	S18	W27	.527	8829	1.3	18	1B			0800	3.60	4.20		204	
MEUD	03	0800	0823		S17	W26	.507	8829	1.4	23	1N		C	0805	2.27	2.50			
ARCE	03	0800E	0830		S16	W25	.487	8829	1.5	30D	-N		C	0815	1.53	1.70			F
KIEV	03	0800E	0840D	0804	S17	W26	.507	8829	1.4	40D	2N		C	0804	6.19	7.00		70	E
LOCA	03	0805E	0835		S18	W25	.503	8829	1.5	30D	-B		S	0805	1.68	2.00			
KHAR	03	0810E	0835D		S18	W25	.503	8829	1.5	25D	2F		V						
GRP 6293	03	0839	0850	0843	N24	W02	.415	8831	3.2	11	-N				.52				4 4 4
BUCA	03	0834E	0903D		N24	W02	.415	8831	3.2	29D	-F		C	0842	.56	.60			
CAPE	03	0838	0846	0842	N25	W02	.431	8831	3.2	8	-N		C	0842	1.01	1.10			T
CRON	03	0842	0847	0844	N23	W02	.399	8831	3.2	5	-N		C		.20	.21		200	L
MEUD	03	0843	0845	0843	N23	W03	.401	8831	3.1	2	-F		C	0843	.31	.31			D
CAPE	03	0848	0856	0851	N24	W02	.415	8831	3.2	8	-N		C	0851	.46	.50			T
GRP 6294	03	0847	0920	0857	N26	W56	.867	8824	30.2	33	1F				2.39				1 1 1
CAPE	03	0847	0920	0857	N26	W56	.867	8824	30.2	33	1F		C	0857	2.39	4.60			
GRP 6295	03	0853	0917	0903	N27	W55	.862	8824	30.2	24	-N				.09				1 1 1
CAPE	03	0853	0917	0903	N27	W55	.862	8824	30.2	24	-N		C	0903	.09	.20			T
GRP 6296	03	0920	0932	0927	N24	W03	.417	8831	3.2	12	-N				.51				3 3 3
CAPE	03	0852	0932	0902	N27	E01	.461	8831	3.4	40	-N		C	0902	.78	.90			T
CAPE	03	0908	0932	0910	N24	W02	.415	8831	3.2	24	-N		C	0910	.78	.90			KT
CAPE	03	0908	0932	0927	N24	W03	.417	8831	3.2	24	-N			0927	.55	.60			
BUCA	03	0926	0932	0927	N24	W02	.415	8831	3.2	6	-N		C	0927	.56	.60			
MEUD	03	0927	0931	0928	N23	W04	.403	8831	3.1	4	-N		C	0928	.41	.42			D
GRP 6297	03	0926	0941	0931	N26	W55	.859	8824	30.3	15	-N				.22				3 3 3
CAPE	03	0924	0947	0930	N27	W56	.869	8824	30.2	23	-N		C	0930	.14	.30			T
ARCE	03	0925	0940D		N26	W56	.867	8824	30.2	15D	-N		C	0930	.26	.50			D
MEUD	03	0930	0936	0932	N26	W52	.835	8824	30.5	6	-F		C	0932	.26	.50			D
GRP 6298	03	0955	1001	0957	N24	E01	.414	8831	3.5	6	-N				1.24				1 1 1
CAPE	03	0955	1001	0957	N24	E01	.414	8831	3.5	6	-N		C	0957	1.24	1.40			T
GRP 6299	03	1038	1041	1039	N23	W04	.403	8831	3.1	3	-F				.26				1 1 1
MEUD	03	1038	1041	1039	N23	W04	.403	8831	3.1	3	-F		C	1039	.26	.30			D
GRP 6300	03	1054	1110	1103	N26	W55	.859	8824	30.3	16	1N				1.06				4 4 3
SALO	03	1050E	1110D		N25	W56	.864	8824	30.3	20D	1N		V	1105	.67	1.30	1.40		
MEUD	03	1056	1110		N26	W53	.843	8824	30.5	14	-N		C	1102	.46	.90			D
CAPS	03	1056	1107		N24	W54	.846	8824	30.4	11	-F	3							DL
KIEV	03	1100E	1113D	1102	N27	W57	.876	8824	30.2	13D	1N		C	1102	2.06			65	D
GRP 6301	03	1056	1058	1056	N23	W04	.403	8831	3.2	2	-F				.26				1 1 1
MEUD	03	1056	1058	1056	N23	W04	.403	8831	3.2	2	-F		C	1056	.26	.30			D
GRP 6302	03	1114	1127	1118	N24	W04	.419	8831	3.2	13	1B				1.24				4 4 4
SALO	03	1110E	1140D		N23	W03	.401	8831	3.2	30D	-B		V	1135	.72	.90	1.40		
CAPS	03	1113	1121		N22	W03	.385	8831	3.2	8	1B	3		1117	2.10	2.20		256	A
KIEV	03	1117E	1122D	1118	N25	W03	.432	8831	3.2	5D	1N		C	1118	1.55	2.00		70	DI
MEUD	03	1117	1123	1118	N24	W05	.421	8831	3.1	6	-N		C	1118	.57	.60			E
GRP 6303	03	1149	1210	1207	N24	W06	.425	8831	3.0	21	-N				.41				2 2 2
SALO	03	1135E	1205D		N24	W06	.425	8831	3.0	30D	-F		V	1210	.50	.70	1.40		
CAPE	03	1158	1200	1158	N24	W03	.417	8831	3.3	2	-N		C	1158	.28	.30			T
CAPE	03	1202	1210	1203	N24	W05	.421	8831	3.1	8	-N		C	1203	.32	.40			T
GRP 6304	03	1258	1312	1303	N24	W06	.425	8831	3.1	14	-N				.60				2 2 2
CAPE	03	1254	1315	1303	N24	W05	.421	8831	3.2	21	-N		C	1303	.78	.90			T
HUAN	03	1302	1308	1303	N24	W06	.425	8831	3.1	6	-F	2	C	1303	.41	.42			D
GRP 6305	03	1324	1332	1326	N25	W06	.440	8831	3.1	8	-N				.28				1 1 1
CAPE	03	1324	1332	1326	N25	W06	.440	8831	3.1	8	-N		C	1326	.28	.30			T
GRP 6306	03	1338	1400	1350	N24	W06	.425	8831	3.1	22	-N				.69				1 1 1
CAPE	03	1338	1400D	1350	N24	W06	.425	8831	3.1	22D	-N		C	1350	.69	.80			T
GRP 6307	03	1515	1527	1518	N24	E08	.433	8831	4.2	12	-F				.56				2 2 2
LOCK	03	1514	1527	1517	N22	E06	.394	8831	4.1	13	-F		C	1517	.80	.90		10	
HUAN	03	1515	1527	1518	N25	E09	.452	8831	4.3	12	-F	2	C	1518	.31	.31			D

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION — MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
					APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY										
	DATE 1967 JUNE	START	END	MAX. PHASE	LAT.	MER. DIST.						COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 6308	03	1527	1536	1529	N22	W02	.383	8831	3.5	9	-N				.93				6 6 6
LOCA	03	1526	1535	1528	N21	E00	.366	8831	3.6	9	-N		V	1528	.85	.90			
HOUS	03	1527	1534	1529	N22	W02	.383	8831	3.5	7	-N		C		.70	.80		200	EI
LOCK	03	1527	1540	1530	N22	W01	.382	8831	3.6	13	-F		C	1530	.80	.90		10	
HUAN	03	1528	1538	1530	N23	W03	.401	8831	3.4	10	-N	2	C	1530	1.01	1.00			E
MCMA	03	1528	1532	1529	N23	W03	.401	8831	3.4	4	-N		C	1529	.62	.70			E
CAPS	03	1528	1535		N22	W05	.390	8831	3.3	7	-N	3		1530	1.60	1.70		176	J
GRP 6309	03	1529	1540	1533	N28	W59	.892	8824	30.2	11	-N				.35				2 2 2
HOUS	03	1529	1539	1533	N27	W60	.897	8824	30.1	10	-N		C		.30	.60		200	
LOCK	03	1529	1540	1532	N28	W58	.886	8824	30.3	11	-F		C	1532	.40	.80		10	
GRP 6310	03	1538	1547	1539	N25	W06	.440	8831	3.2	9	-N				.40				4 4 3
HOUS	03	1537	1545	1539	N24	W06	.425	8831	3.2	8	-N		C		.50	.60		200	EI
LOCK	03	1537	1547	1540	N26	W06	.455	8831	3.2	10	-F		C	1540	.50	.60		10	
HUAN	03	1538	1555	1538	N25	W05	.437	8831	3.3	17	-N	2	C	1538	.21	.21			D
CAPS	03	1538	1542		N23	W05	.406	8831	3.3	4	-N	3							D
GRP 6311	03	1633	1639	1634	N26	E03	.448	8831	3.9	6	-F				.25				1 1 1
HUAN	03	1633	1639	1634	N26	E03	.448	8831	3.9	6	-F	2	C	1634	.25	.25			D
GRP 6312	03	1705	1711	1707	N23	W04	.403	8831	3.4	6	-F				.21				1 1 1
HUAN	03	1705	1711	1707	N23	W04	.403	8831	3.4	6	-F	2	C	1707	.21	.21			D
GRP 6313	03	1737	1749	1742	N27	W59	.890	8824	30.3	12	-F				.45				3 3 3
HOUS	03	1734	1749	1740	N27	W60	.897	8824	30.2	15	-N		C		.30	.60		200	
HUAN	03	1738	1747	1743	N26	W60	.895	8824	30.2	9	-F	2	C	1743	.25	.39			D
LOCK	03	1739	1752	1742	N28	W58	.886	8824	30.4	13	-F		C	1742	.80	1.60		10	
GRP 6314	03	1741	1744	1742	N26	E02	.447	8831	3.9	3	-F				.50				1 1 1
HUAN	03	1741	1744	1742	N26	E02	.447	8831	3.9	3	-F	2	C	1742	.50	.50			D
GRP 6315	03	1809	1828	1812	N22	E07	.398	8831	4.3	19	-F				.39				2 2 2
HUAN	03	1809	1816	1812	N26	E02	.447	8831	3.9	7	-F	2	C	1812	.37	.38			
LOCK	03	1810	1840	1823	N18	E11	.365	8831	4.6	30	-F		C	1823	.40	.40		10	
GRP 6316	03	1839	1904	1843	N23	W03	.401	8831	3.6	25	-B				1.30				2 2 2
LOCK	03	1838	1900	1844	N23	W02	.399	8831	3.6	22	-N		C	1844	1.20	1.30		20	
HUAN	03	1839	1907	1842	N23	W04	.403	8831	3.5	28	-B	2	C	1842	1.39	1.39			
GRP 6317	03	1912	1943	1918	N26	W06	.455	8831	3.4	31	-N				.24				4 4 4
LOCK	03	1910	1940	1919	N26	W05	.452	8831	3.4	30	-F		C	1919	.30	.30		10	
HALE	03	1910	2000	1913	N25	W05	.437	8831	3.4	50	-N	2	C	1913	.15	.20			
HUAN	03	1913	1942	1920	N26	W06	.455	8831	3.4	29	-F	2	C	1920	.25	.25			D
MCMA	03	1915	1929	1918	N26	W06	.455	8831	3.4	14	-N		C	1918	.26	.30			D
HALE	03	1954	2000	1955	N23	W09	.423	8831	3.2	6	-F	2	C	1955	.26	.30			
GRP 6318	03	1929	1939	1931	N23	W04	.403	8831	3.5	10	-N				.43				4 4 4
LOCK	03	1928	1942	1932	N23	W02	.399	8831	3.7	14	-F		C	1932	.60	.70		10	
HUAN	03	1929	1936	1930	N23	W04	.403	8831	3.5	7	-N	2	C	1930	.45	.45			E
MCMA	03	1929	1937	1930	N23	W05	.406	8831	3.4	8	-N		C	1930	.41	.42			E
HALE	03	1929	1940	1930	N23	W04	.403	8831	3.5	11	-N	2	C	1930	.26	.30			
GRP 6319	03	2057	2108	2100	N25	W70	.952	8824	29.6	11	-F				.30				1 1 1
LOCK	03	2057	2108	2100	N25	W70	.952	8824	29.6	11	-F		C	2100	.30	.80		10	
GRP 6320	03	2101	2116	2106	N15	E56	.843	8837	8.1	15	-F				.41				1 1 1
MCMA	03	2101	2116	2106	N15	E56	.843	8837	8.1	15	-F		C	2106	.41	.70			E
GRP 6321	03	2126	2134	2127	N24	W10	.443	8831	3.1	8	-F				.44				3 3 3
HALE	03	2125	2133	2126	N23	W11	.435	8831	3.1	8	-F	1	C	2126	.31	.32			
HUAN	03	2126	2134	2127	N24	W10	.443	8831	3.1	8	-F	2	C	2127	.50	.50			
MCMA	03	2127	2131D	2128	N25	W10	.458	8831	3.1	4D	-N		C	2128	.52	.52			E
GRP 6322	03	2127	2139	2130	N23	W68	.940	8824	29.8	12	-F				.48				2 2 2
LOCK	03	2125	2140	2130	N25	W70	.952	8824	29.6	15	-F		C	2130	.60	1.50		10	
MCMA	03	2129	2137	2130	N21	W66	.926	8824	29.9	8	-F		C	2130	.36	.80			E
GRP 6323	03	2138	2209	2148	N26	W06	.455	8831	3.5	31	-N				.69				4 4 4
LOCK	03	2136	2215	2150	N26	W06	.455	8831	3.5	39	-F		C	2150	.80	.90		10	
HUAN	03	2139	2219D	2150	N26	W05	.452	8831	3.5	40D	-N	2	C	2150	.62	.63			
HOUS	03	2139U	2152	2144	N27	W05	.467	8831	3.5	13U	-N		C		.50	.60		200	IJ
MCMA	03	2139	2208D	2149	N26	W07	.459	8831	3.4	29D	-B		C	2149	.83	.90			E
HUAN	03	2139	2145	2140	N24	W09	.438	8831	3.2	6	-F	2	C	2140	.45	.46			
GRP 6324	03	2200	2212	2203	N24	W09	.438	8831	3.2	12	-F				1.06				3 3 3
HOUS	03	2159	2203	2201	N25	W08	.448	8831	3.3	4	-N		C		.80	.90		200	EI
HUAN	03	2201	2210	2202	N24	W09	.438	8831	3.2	9	-F	2	C	2202	.55	.55			
SACP	03	2205E	2223	2206	N23	W10	.429	8831	3.2	18D	-F		C		1.82	1.83			
GRP 6325	03	2232	2247	2238	N25	W70	.952	8824	29.7	15	-N				.50				1 1 1
LOCK	03	2232	2247	2238	N25	W70	.952	8824	29.7	15	-N		C	2238	.50	1.30		20	
GRP 6326	03	2305	2325	2310	N25	W70	.952	8824	29.7	20	-F				.40				1 1 1
LOCK	03	2305	2325	2310	N25	W70	.952	8824	29.7	20	-F		C	2310	.40	1.00		10	
GRP 6327	03	2323	2334	2328	N25	W11	.463	8831	3.1	11	-N				.91				2 2 2
LOCK	03	2322	2333	2327	N26	W10	.472	8831	3.2	11	-F		C	2327	.70	.80		10	
SACP	03	2324	2334	2328	N23	W12	.441	8831	3.1	10	-N		C		1.11	1.12			
GRP 6328	03	2325	2350	2335	S12	W30	.529	8829	1.7	25	-F				.90				1 1 1
LOCK	03	2325	2350	2335	S12	W30	.529	8829	1.7	25	-F		C	2335	.90	1.10		10	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6329	03	2356	0031	0003	N27	E05	.467	8831	4.4	35	-N				1.06				2 2 2
LOCK	03	2352	2357	2354	N25	W13	.475	8831	3.0	5	-F		C	2354	.20	.20		10	
LOCK	03	2356	0025	0000	N26	E06	.455	8831	4.4	29	-N		C	0000	1.30	1.40		20	
MITK	04	0005E	0036		N27	E04	.463	8831	4.3	31D	-F		C	0005	.62	.70			E
GRP 6330	04	0054	0110	0056	N26	W15	.501	8831	2.9	16	-F				.57				3 3 3
LOCK	04	0052	0125	0055	N27	W15	.514	8831	2.9	33	-F		C	0055	.50	.60		10	H
MITK	04	0055	0102	0056	N25	W15	.488	8831	2.9	7	-F		C	0056	.62	.70			DH
CRON	04	0055	0102	0057	N27	W14	.507	8831	3.0	7	-N		C		.60	.70		200	
GRP 6331	04	0057	0202	0149	S17	W80	.986	8825	29.0	65	1N				.61				3 3 3
LOCK	04	0000	0200D	0150	S15	W78	.979	8825	29.1	120D	1F		C	0150	.90	2.80		10	
LOCK	04	0000	0200D	0110	S15	W78	.979	8825	29.1	120D	1F		C	0110	.90	2.80		10	
CULG	04	0113E	0209D	0155	S20	W80	.986	8825	29.1	56D	1N		P		.72				
CRON	04	0137	0157	0142	S16	W82	.991	8825	28.9	20	-N		C		.20	.70		200	L
GRP 6332	04	0109	0131	0116	N23	W08	.416	8831	3.4	22	-N				.95				3 3 3
LOCK	04	0109	0124	0115	N22	W07	.396	8831	3.5	15	-F		C	0115	.80	.90		10	
MITK	04	0110E	0132D	0113	N23	W08	.416	8831	3.4	22D	1N		C	0113	1.34	1.50			E
CULG	04	0113E	0136D	0121	N24	W09	.436	8831	3.4	23D	-N		P		.72	.77			F
GRP 6333	04	0114	0126	0119	N26	W65	.926	8824	30.2	12	-F				.74				4 4 4
MITK	04	0111E	0127D	0115	N25	W65	.925	8824	30.2	16D	1F		C	0115	1.13				
CULG	04	0113E	0124	0121	N24	W67	.935	8824	30.0	11D	-N		P		.41				
LOCK	04	0113	0125	0120	N28	W63	.917	8824	30.3	12	-F		C	0120	.80	1.70		10	
CRON	04	0117	0126	0121	N26	W65	.926	8824	30.2	9	-F		C		.60	1.30		100	
GRP 6334	04	0152	0209	0158	N25	E00	.428	8831	4.1	17	-N				.93				1 1 1
CULG	04	0152	0209D	0158	N25	E00	.428	8831	4.1	17D	-N		P		.93	.99			F
GRP 6335	04	0236	0258	0239	S16	W37	.639	8829	1.3	22	1F				.82				2 2 2
MITK	04	0235E	0259D	0238	S17	W36	.632	8829	1.4	24D	1F		C	0238	1.13	1.50			E
CRON	04	0236	0257	0239	S15	W38	.647	8829	1.3	21	-F		C		.50	.70		100	
GRP 6336	04	0600	0658	0630	S17	W85	.996	8825	28.9	58	1F				.89				1 1 1
BUCA	04	0600E	0658D		S17	W85	.996	8825	28.9	58D	1F		C	0630	.89				B
GRP 6337	04	0632	0653	0637	N27	W15	.514	8831	3.1	21	-F				.83				2 1 1
BUCA	04	0600E	0623D		N28	W10	.499	8831	3.5	23D	-N		P	0600	1.10	1.20			
BUCA	04	0608E	0725D		N28	W14	.520	8831	3.2	77D	-F		P	0632	.77	.90			
MITK	04	0632E	0653D	0637	N27	W15	.514	8831	3.1	21D	-F		C	0637	.83	1.00			
GRP 6338	04	0721	0842	0740	N25	W13	.474	8831	3.3	81	-N				1.16				3 3 3
BUCA	04	0720E	0951D		N24	W16	.483	8831	3.1	151D	-N		P	0737	1.33	1.50			
CRON	04	0721	0801	0735	N24	W16	.483	8831	3.1	40	-N		C		.30	.32		200	
CAPE	04	0723	0815		N26	W07	.457	8831	3.8	52	-N		P	0748	.74	.80			
BUCA	04	0725E	0820D		N26	W07	.457	8831	3.8	55D	-F		C	0735	1.10	1.20			
GRP 6339	04	0734	0826	0751	S17	W39	.667	8829	1.4	52	1N				2.62				3 3 2
BUCA	04	0731E	0853D	0800	S16	W40	.675	8829	1.3	82D	2N		C	0800	4.98	6.70			F
MEUD	04	0736	0742	0737	S20	W36	.647	8829	1.6	6	-F		C	0737	.26	.30			D
ONDR	04	0753E	0842		S16	W42	.698	8829	1.2	49D	1N		V	0756			2.40		CHK
GRP 6340	04	0754	0837	0800	S16	W39	.663	8829	1.4	43	1N				2.39				7 7 6
CAPE	04	0751	0849		S17	W40	.679	8829	1.3	58	2N			0805	4.70	6.30			
CAPE	04	0751	0849		S17	W40	.679	8829	1.3	58	1B		C	0758	3.73	5.00			FU
MEUD	04	0753	0825		S18	W39	.672	8829	1.4	32	1N		C	0800	2.37	3.00			FH
UCCL	04	0754	0800D	0756	S10	W39	.642	8829	1.4	6D	1N		P	0756	1.03	2.40			H
CRON	04	0755	0827	0758	S16	W40	.675	8829	1.3	32	1N		C		1.50	2.00		200	E
CATA	04	0758	0840	0758	S17	W40	.679	8829	1.3	42	1B			0758	2.86	3.90		209	
ARCE	04	0803E	0840D		S18	W38	.660	8829	1.5	37D	1N		C	0805	1.86	2.40			F
CAPS	04	0805E	0839D		S16	W38	.651	8829	1.5	34D	2N	1							K
GRP 6341	04	0756	0828	0814	S18	W83	.993	8825	29.1	32	-N				.56				2 2 1
BUCA	04	0747E	0830D		S18	W86	.998	8825	28.9	43D	-N		C	0814	.56				
CAPS	04	0805E	0825D		S18	W80	.986	8825	29.3	20D	-N	1							
GRP 6342	04	0823	0928	0830	N25	W06	.438	8831	3.9	65	1N				3.41				3 3 2
CAPE	04	0804	0855	0839	N28	W09	.494	8831	3.7	51	-F		P	0839	.74	.80			F
BUCA	04	0810E	0951D		N28	W08	.490	8831	3.7	101D	-F		C	0820	1.33	1.50			
CAPS	04	0825E	0839D		N23	W08	.416	8831	3.8	14D	1N	1							F
CAPE	04	0828	0923		N28	W07	.487	8831	3.8	55	-N		P	0836	.87	1.00			
CAPE	04	0834E	0905	0839	N25	W03	.430	8831	4.1	31D	2N		C	0839	4.74	5.30			
GRP 6343	04	0845	0915	0910	N16	E50	.788	8837	8.1	30	-N				.42				1 1 1
ARCE	04	0845E	0915	0910	N16	E50	.788	8837	8.1	30D	-N		C	0910	.42	.70			EH
GRP 6344	04	0853	0933	0904	N25	W14	.481	8831	3.3	40	-N				.70				4 4 3
SALO	04	0850	0915		N26	W16	.508	8831	3.2	25	-N		P	0910	.33	.40	1.40		
CAPE	04	0854	0945	0901	N25	W12	.467	8831	3.5	51	-N		C	0901	.52	.60			
CAPS	04	0854E	0900D		N23	W14	.454	8831	3.3	6D	-N	2							
BUCA	04	0855E	0939D	0900	N25	W13	.474	8831	3.4	44D	-N		C	0900	.56	.60			D
CAPE	04	0855	0907	0857	N36	W22	.665	8831	2.7	12	-F		C	0857	.37	.50			C
CAPE	04	0855	0914	0857	N26	W18	.523	8831	3.0	19	-F		C	0857	.32	.40			C

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
					APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY					TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
	DATE 1967 JUNE	START	END	MAX. PHASE	LAT.	MER. DIST.						COND.	TYPE						
GRP 6345	04	0929	0953	0937	N26	W08	.461	8831	3.8	24	-N				1.35				3 3 3
ARCE	04	0900	1000D	0940	N27	W15	.514	8831	3.3	60D	-N		C	0940	.59	.70			
BUCA	04	0928E	0951D		N25	W05	.435	8831	4.0	23D	-N		P	0935	1.66	1.80			
CAPE	04	0929	0948	0936	N25	W04	.432	8831	4.1	19	-N			0936	1.80	2.00			V
GRP 6346	04	0933	0950	0931	N25	W07	.442	8831	3.9	17	-N				1.70				4 4 3
BUCA	04	0853E	0951D		N27	W18	.535	8831	3.0	58D	-F		C	0922	1.33	1.50			
CAPE	04	0929	0948	0931	N25	W03	.430	8831	4.2	19	-F		C	0931	.37	.40			K
CAPS	04	0934E	0940D		N23	W02	.397	8831	4.2	6D	1N	2		0936	3.00	3.30			
CATA	04	0935	0950	0936	N25	W04	.432	8831	4.1	15	-N			0936	.76	.80		178	
GRP 6347	04	0950	1049	0956	N26	W17	.515	8831	3.1	59	-N				1.27				3 3 3
MEUD	04	0950	1015		N25	W16	.495	8831	3.2	25	-N		C	0958	.52	.60			
CATA	04	0950	1115	0952	N27	W17	.528	8831	3.1	85	1N			0952	1.84	2.10		174	
CAPE	04	0951	1057	0959	N25	W18	.511	8831	3.1	66	-N		C	0959	.23	.30			FK
CAPE	04	0951	1003	0958	N25	W11	.461	8831	3.6	12	-F		C	0958	1.21	1.30			
GRP 6348	04	0954	1107	1028	N31	W19	.590	8831	3.0	73	2N				4.10				2 2 2
CAPE	04	0933	1129D	1018	N34	W23	.650	8831	2.7	116D	2F		C	1018	5.12	6.70			CF
CAPE	04	0951	1057	1028	N26	W18	.523	8831	3.1	66	-N			1028	1.24	1.50			
CATA	04	1015	1045	1027	N28	W15	.527	8831	3.3	30	1N			1027	1.84	2.10		195	
GRP 6349	04	1031	1112	1049	N26	W17	.515	8831	3.2	41	1F				1.85				6 5 4
CAPE	04	0903	1129	1052	N28	W17	.540	8831	3.1	146	-N		C	1052	1.16	1.40			
CAPS	04	0950E	1144D		N25	W16	.495	8831	3.2	114D	-F	2		1048	1.20	1.40		158	
CAPE	04	1037	1101	1053	N24	W14	.467	8831	3.4	24	1F		C	1053	3.83	4.30			
MONT	04	1040E	1125D		N27	W18	.535	8831	3.1	45D	1N		C	1045	2.06				
MEUD	04	1042	1055		N26	W16	.508	8831	3.2	13	-F		C	1047	.31	.32			D
ONDR	04	1047	1057		N27	W19	.543	8831	3.0	10	1N		V	1054			1.80		C
MCMA	04	1129E	1140D		N28	W17	.540	8831	3.2	11D	-B		C	1129	.31	.40			D
GRP 6350	04	1157	1203	1158	N15	E23	.461	8831	6.2	6	-N				.21				1 1 1
MCMA	04	1157	1203	1158	N15	E23	.461	8831	6.2	6	-N		C	1158	.21	.21			D
GRP 6351	04	1356	1420		N15	E47	.754	8837	8.1	24	-N								1 1 0
CAPS	04	1356E	1420D		N15	E47	.754	8837	8.1	24D	-N	1							
GRP 6352	04	1411	1420		N22	W06	.392	8831	4.1	9	-N								1 1 0
CAPS	04	1411	1420D		N22	W06	.392	8831	4.1	9D	-N	1							
GRP 6353	04	1513	1530	1518	N27	W04	.463	8831	4.3	17	-N				.46				4 4 4
MCMA	04	1512	1530	1516	N27	W03	.461	8831	4.4	18	-B		C	1516	.26	.30			D
SACP	04	1512E	1530	1523U	N26	W04	.448	8831	4.3	18D	-N		C		.81	.82			
HUAN	04	1512	1530	1515	N27	W03	.461	8831	4.4	18	-N	2	C	1515	.25	.25			D
LOCK	04	1514	1530	1517	N26	W04	.448	8831	4.3	16	-F		C	1517	.50	.60		10	J
GRP 6354	04	1551	1555	1553	N25	W16	.495	8831	3.5	4	-F				.20				1 1 1
LOCK	04	1551	1555	1553	N25	W16	.495	8831	3.5	4	-F		C	1553	.20	.20		10	
GRP 6355	04	1659	1717	1707	N16	E43	.713	8837	7.9	18	-N				.10				1 1 1
HALE	04	1659	1717	1707	N16	E43	.713	8837	7.9	18	-N	3	C	1707	.10	.11			
GRP 6356	04	1826	1846	1830	N27	W05	.466	8831	4.4	20	-N				.24				3 3 3
HALE	04	1822	1848	1829	N26	W05	.450	8831	4.4	26	-N	1	C	1829	.21	.21			
MCMA	04	1827	1846	1830	N27	W03	.461	8831	4.5	19	-N		C	1830	.26	.30			D
HUAN	04	1828	1844		N27	W06	.468	8831	4.3	16	-F	2	C	1830	.25	.25			D
GRP 6357	04	1905	1916	1908	N27	W07	.472	8831	4.3	11	-F				.21				1 1 1
HUAN	04	1905	1916D		N27	W07	.472	8831	4.3	11D	-F	1	C	1908	.21	.21			D
GRP 6358	04	1939	1955	1949	N25	W28	.603	8831	2.7	16	-N				.36				2 2 2
HALE	04	1935	1955	1948	N24	W27	.584	8831	2.8	20	-N	1	C	1948	.31	.40			
LOCK	04	1942	1955	1949	N25	W28	.603	8831	2.7	13	-F		C	1949	.40	.50		10	
GRP 6359	04	2044	2225	2052	N24	W16	.483	8831	3.7	101	-N				.61				4 4 4
HALE	04	2034	2225	2052	N23	W19	.496	8831	3.4	111	-N	1	C	2052	.52	.60			F
LOCK	04	2045	2112	2055	N26	W16	.508	8831	3.7	27	-N		C	2055	1.10	1.30		20	
HUAN	04	2047	2056D		N23	W15	.462	8831	3.7	9D	-F	1	P	2051	.41	.43			E
MCMA	04	2048	2058D	2050	N23	W14	.454	8831	3.8	10D	-F		C	2050	.41	.50			E
GRP 6360	04	2115	2137	2123	S17	W46	.746	8829	1.4	22	-F				.50				1 1 1
LOCK	04	2115	2137	2123	S17	W46	.746	8829	1.4	22	-F		C	2123	.50	.80		10	
GRP 6361	05	0219	0322	0256	S19	W54	.831	8829	1.0	63	-N				.41				2 2 2
HALE	05	0219	0331	0255	S22	W57	.862	8829	31.8	72	-F	2	C	0255	.21	.40			
CRON	05	0252	0312	0256	S16	W50	.785	8829	1.4	20	-N		C		.60	1.00		200	E
GRP 6362	05	0310	0442	0333	N18	W10	.353	8831	4.4	92	-N				.46				2 2 2
HALE	05	0310	0442D	0333	N18	W10	.353	8831	4.4	92D	-N	1	P	0333	.31	.32			
CRON	05	0317	0339	0320	N18	W10	.353	8831	4.4	22	-N		C		.60	.62		100	
GRP 6363	05	0444	0535	0458	S17	W53	.817	8829	1.2	51	1N				1.22				3 3 2
ONDR	05	0440E	0552D		S18	W52	.810	8829	1.3	72D	2F		V	0500			2.00		FHK
IKOM	05	0445E	0545D	0500	S18	W53	.819	8829	1.2	60D	1B		V	0500	1.44	2.60	1.30	130	E
CRON	05	0447	0509	0455	S16	W53	.815	8829	1.2	22	-N		C		1.00	1.70		200	
CRON	05	0510	0540	0512	S16	W53	.815	8829	1.2	30	-N		C		.40	.60		200	
GRP 6364	05	0751	0817	0754	N27	W24	.583	8831	3.5	26	-N				.65				4 4 4
CAPS	05	0750E	0757		N26	W23	.564	8831	3.6	7D	-F	3		0752	.50	.60		157	CD
CRON	05	0750	0818	0754	N27	W24	.583	8831	3.5	28	-N		C		.50	.60		200	
BUCA	05	0750E	0840D		N27	W24	.583	8831	3.5	50D	-N		P	0752	.56	.60			
CAPF	05	0754	0813		N26	W23	.564	8831	3.6	19	-N		P	0757	1.03	1.25			H

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6365	05	1140	1225	1204	S17	W57	.853	8829	1.2	45	-N				.39				2 2 2
HUAN	05	1140E	1225		S16	W56	.843	8829	1.3	45D	-N	1	C	1203	.25	.35			D
MCMA	05	1204E	1224		S17	W58	.861	8829	1.2	20D	-N		C	1204	.52	1.00			BE
GRP 6366	05	1343	1427	1403	S17	W56	.844	8829	1.4	44	1N				2.00				7 7 7
SACP	05	1341	1428	1405	S19	W55	.839	8829	1.4	47	-N		C		1.42	2.00			
HUAN	05	1342	1422		S17	W57	.853	8829	1.3	40	-N	2	C	1402	.77	1.08			E
MCMA	05	1342	1425	1406	S17	W58	.861	8829	1.2	43	-N		C	1406	.83	1.60			E
LOCA	05	1342E	1430	1344	S18	W50	.791	8829	1.8	48D	1N		V	1344	1.89	3.20			C
CAPS	05	1345E	1420D		S15	W60	.875	8829	1.1	35D	1F	2		1403	3.00			157	C
WEND	05	1346E	1426		S18	W59	.871	8829	1.1	40D	1N		V		4.13				
CATA	05	1400	1430	1400	S18	W56	.846	8829	1.4	30	1N			1400	1.94	3.60		182	
GRP 6367	05	1355	1424	1402	S17	E57	.853	8838	9.9	29	1N				1.34				1 1 1
CANA	05	1355U	1424	1402	S17	E57	.853	8838	9.9	29U	1N		C		1.34	2.30		200	E
GRP 6368	05	1803	1813	1806	S18	W60	.879	8829	1.3	10	-N				.29				2 2 2
SACP	05	1800	1814	1805	S18	W60	.879	8829	1.3	14	-N		C		.31	.47			
MCMA	05	1805	1811	1806	S17	W59	.870	8829	1.3	6	-F		C	1806	.26	.50			D
GRP 6369	05	1839	1853	1843	S18	W59	.871	8829	1.4	14	1N				.58				4 4 3
SACP	05	1838	1853	1844	S18	W57	.855	8829	1.5	15	-N		C		.71	1.04			
LOCK	05	1839	2030	1844	S16	W58	.860	8829	1.4	111	2N		C	1938	6.50	12.40		20	K
MCMA	05	1840	2036D	1843	S20	W60	.882	8829	1.3	116D	2B		C	1843	.52	1.10			E
HUAN	05	1842E	1855		S17	W59	.870	8829	1.4	13D	-N	2	C	1842	.50	.68			E
GRP 6370	05	1846	2030	1937	S18	W58	.863	8829	1.4	104	2N				4.84				5 5 5
LOCK	05	1839	2030	1938	S16	W58	.860	8829	1.4	111	2N		C	1938	6.50	12.40		20	K
MCMA	05	1840	2036D	1937	S20	W60	.882	8829	1.3	116D	2B			1937	3.61	7.20			F
SACP	05	1858	2032	1939U	S20	W58	.866	8829	1.4	94	2B		C		5.68	8.51			
HUAN	05	1900	2035		S18	W58	.863	8829	1.4	95	2N	1	C	1940	3.63	5.50			
HOUS	05	1931E	2016	1933	S17	W58	.861	8829	1.5	45D	2N		C		4.80	9.10		200	E
GRP 6371	05	2129	2142	2133	N22	W34	.641	8831	3.3	13	-F				.25				1 1 1
HUAN	05	2129	2142		N22	W34	.641	8831	3.3	13	-F	1	C	2133	.25	.29			D
GRP 6372	06	1010	1020	1013	N24	W40	.715	8831	3.4	10	-N				.31				1 1 1
MONT	06	1010	1020		N24	W40	.715	8831	3.4	10	-N		C	1013	.31				
GRP 6373	06	1050	1117	1059	N26	W40	.726	8831	3.5	27	1N				1.66				3 3 3
MONT	06	1045	1120	1055	N24	W38	.695	8831	3.6	35	1N		C	1055	1.86				
CANA	06	1055	1115	1101	N27	W40	.732	8831	3.5	20	-N		C		.93	1.30		200	EI
CAPS	06	1057E	1117		N26	W41	.735	8831	3.4	20D	1N	3		1100	2.20	3.10		173	E
CANA	06	1057	1111	1100	N28	W42	.755	8831	3.3	14	-F		C		.41	.60		100	
GRP 6374	06	1212	1246	1218	N23	W41	.720	8831	3.4	34	1N				2.81				10 9 8
ONDR	06	1204E	1245		N20	W43	.727	8831	3.3	41D	2N		V	1217			2.90		CJL
HUAN	06	1206	1336	1218	N24	W42	.735	8831	3.4	90	1N	2	C	1218	3.01	3.60			
CANA	06	1211	1227	1214	N23	W40	.710	8831	3.5	16	1N		C		1.55	2.10		200	IJ
KIEV	06	1211E	1300D		N25	W43	.749	8831	3.3	49D	1F		C	1211	2.06			80	BDI
CAPS	06	1213	1255		N23	W38	.689	8831	3.7	42	1B	3		1220	3.00	4.20		208	
ZURI	06	1214	1240	1221	N25	W38	.701	8831	3.7	26	1F		P	1221	3.16	4.20			
CATA	06	1215	1235	1218	N22	W43	.736	8831	3.3	20	1B			1218	1.92	2.70		302	
MONT	06	1215	1350	1225	N24	W39	.705	8831	3.6	95	1F		C	1225	1.55				
WEND	06	1215E	1301		N23	W39	.699	8831	3.6	46D	2F		V		6.19				
MEUD	06	1233	1245		N22	W43	.736	8831	3.3	12	-F		C	1233	1.34	1.90			
GRP 6375	06	1244	1324	1247	N23	W38	.689	8831	3.7	40	1N				1.93				3 2 2
HOUS	06	1242U	1302	1246	N23	W37	.679	8831	3.8	20U	1N		C		1.50	2.00		200	E
CAPF	06	1245E	1345		N22	W36	.662	8831	3.8	60D	1F		P	1248	2.35	3.19			
MCMA	06	1305E	1322D	1306	N23	W41	.720	8831	3.5	17D	-N		P	1306	.62	.90			E
GRP 6376	06	1535	1541	1538	N26	W40	.726	8831	3.6	6	1N				1.65				2 2 1
CANA	06	1533	1541	1537	N28	W42	.755	8831	3.5	8	1N		C		1.65	2.20		200	E
HUAN	06	1537	1541	1538	N24	W38	.695	8831	3.8	4	-F	1	C	1538	.25	.29			D
GRP 6377	06	1617	1626	1620	N25	W41	.730	8831	3.6	9	1F				.62				2 2 2
SALO	06	1540E	1630D		N25	W37	.691	8831	3.9	50D	1F		P	1620	.99	1.30	1.30		
HUAN	06	1617	1622	1619	N24	W45	.764	8831	3.3	5	-F	2	C	1619	.25	.31			D
GRP 6378	06	1704	1720	1709	N22	W33	.629	8831	4.2	16	-F				.36				2 2 2
HALE	06	1702	1722	1709	N20	W32	.605	8831	4.3	20	-F	2	C	1709	.31	.40			
LOCK	06	1705	1717	1708	N23	W33	.636	8831	4.2	12	-F		C	1708	.40	.50		10	
GRP 6379	06	1726	1739	1731	N25	W46	.777	8831	3.3	13	-N				.89				4 4 4
HOUS	06	1724	1736	1729	N25	W46	.777	8831	3.3	12	-N		C		.80	1.30		200	
LOCK	06	1726	1736	1731	N25	W46	.777	8831	3.3	10	-F		C	1731	1.00	1.60		10	
HALE	06	1726	1739	1731	N24	W46	.773	8831	3.3	13	-B	2	C	1731	.52	.80			
HUAN	06	1726	1746	1731	N24	W46	.773	8831	3.3	20	-B	2	C	1731	1.24	1.56			
GRP 6380	06	1827	1832	1829	N25	W41	.730	8831	3.7	5	-N				.18				2 2 2
HALE	06	1827	1831	1828	N24	W40	.715	8831	3.8	4	-N	2	C	1828	.15	.20			
LOCK	06	1827	1832	1829	N26	W41	.735	8831	3.7	5	-F		C	1829	.20	.30		10	
GRP 6381	06	1909	1918	1913	N24	W46	.773	8831	3.3	9	-F				.31				1 1 1
HUAN	06	1909	1918	1913	N24	W46	.773	8831	3.3	9	-F	2	C	1913	.31	.39			D
GRP 6382	06	1959	2009	2004	N24	W47	.783	8831	3.3	10	-N				.39				4 4 4
LOCK	06	1957	2010	2003	N25	W47	.787	8831	3.3	13	-F		C	2003	.40	.60		10	
HALE	06	2000	2008	2004	N23	W47	.779	8831	3.3	8	-N	2	C	2004	.31	.50			
HUAN	06	2001	2008	2004	N24	W48	.792	8831	3.2	7	-F	2	C	2004	.55	.65			D
MCMA	06	2004E	2004D		N23	W45	.760	8831	3.5		-N		P	2004	.31	.50			D
GRP 6383	07	0748	0812	0754	N27	W47	.794	8831	3.8	24	1F				2.50				1 1 1
CAPE	07	0748	0812D	0754	N27	W47	.794	8831	3.8	24D	1F		C	0754	2.50	4.10			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6384	07	0802	0812	0806	S21	W79	.984	8829	1.4	10	1F				1.10				1 1 1
CAPE	07	0802	0812D	0806	S21	W79	.984	8829	1.4	10D	1F		C	0806	1.10				
GRP 6385	07	0840	0845	0843	S18	W83	.993	8829	1.1	5	1F				.72				1 1 1
CANA	07	0840	0845	0843	S18	W83	.993	8829	1.1	5	1F		C		.72	2.40		100	
GRP 6386	07	0854	0912	0858	S22	W86	.998	8829	31.9	18	1F				.83				1 1 1
CANA	07	0854	0912	0858	S22	W86	.998	8829	31.9	18	1F		C		.83	2.70		100	
GRP 6387	07	0952	1002	0955	S17	E05	.304	8838	7.8	10	-N				.36				2 2 2
CANA	07	0952	1001	0953	S17	E04	.300	8838	7.7	9	-N		C		.21	.21		200	
CAPS	07	0953E	1002D		S16	E05	.289	8838	7.8	9D	-F	2		0957	.50	.50			H
GRP 6388	07	1025	1039	1025	S25	W79	.985	8829	1.5	14	-F				.41				1 1 1
CAPE	07	1025E	1039		S25	W79	.985	8829	1.5	14D	-F		P	1025	.41				
GRP 6389	07	1043	1105	1055	N26	W50	.816	8831	3.7	22	-F				.32				1 1 1
CAPE	07	1043	1105	1055	N26	W50	.816	8831	3.7	22	-F		C	1055	.32	.60			
GRP 6390	07	1127	1150	1132	N21	W44	.741	8831	4.2	23	-N				.46				1 1 1
CAPE	07	1127	1150	1132	N21	W44	.741	8831	4.2	23	-N		C	1132	.46	.70			
GRP 6391	07	1203	1235	1214	S25	W80	.988	8829	1.5	32	-F				.28				1 1 1
CAPE	07	1203	1235	1214	S25	W80	.988	8829	1.5	32	-F		C	1214	.28				
GRP 6392	07	1307	1320	1310	S25	W80	.988	8829	1.5	13	-F				.41				1 1 1
CAPE	07	1307	1320	1310	S25	W80	.988	8829	1.5	13	-F		C	1310	.41				
GRP 6393	07	1328	1344	1336	S22	W89	1.000	8829	31.9	16	-N				.25				2 2 2
CAPE	07	1326	1347	1336	S21	W89	1.000	8829	31.9	21	-N			1336	.28				
CAPE	07	1326	1347	1331	S20	W84	.995	8829	1.3	21	-F		C	1331	.37				JK
HUAN	07	1330	1341		S22	W88	.999	8829	1.0	11	-F	1	C	1335	.21				D
GRP 6394	07	1347	1359	1349	N27	W52	.836	8831	3.7	12	-F				.25				1 1 1
HUAN	07	1347	1359	1349	N27	W52	.836	8831	3.7	12	-F	2	C	1349	.25	.34			D
GRP 6395	07	1451	1511	1455	S21	W85	.997	8829	1.2	20	1F				1.47				3 3 3
SACP	07	1450	1518	1456	S22	W83	.994	8829	1.4	28	1N		C		1.63				
CANA	07	1451	1503	1454	S21	W85	.997	8829	1.2	12	2F		C		1.96	6.40		100	
HUAN	07	1453	1456D		S21	W88	.999	8829	1.0	3D	-F	1	P	1456	.83				E
GRP 6396	07	1556	1612	1600	N26	W53	.841	8831	3.7	16	-N				.81				2 2 2
LOCK	07	1555	1611	1601	N27	W53	.844	8831	3.7	16	-F		C	1601	.80	1.40		10	
SACP	07	1556	1612	1558	N25	W52	.830	8831	3.8	16	-N		C		.81	1.13			
GRP 6397	07	1738	1749	1742	N22	W41	.714	8831	4.7	11	-F				.56				4 4 4
HOUS	07	1737	1745	1742	N23	W42	.729	8831	4.6	8	-F		C		.40	.60		100	E
SACP	07	1738	1749	1742	N21	W41	.709	8831	4.7	11	-F		C		.81	.96			
HALE	07	1738	1753	1742	N21	W40	.699	8831	4.7	15	-N	2	C	1742	.57	.80			
HUAN	07	1738	1748	1742	N22	W41	.714	8831	4.7	10	-F	2	C	1742	.45	.54			E
GRP 6398	07	1747	1805	1754	N25	W53	.838	8831	3.8	18	-N				.69				2 2 2
HALE	07	1746	1805	1753	N25	W53	.838	8831	3.8	19	-N	2	C	1753	.36	.70			
SACP	07	1748	1804	1754	N24	W53	.835	8831	3.8	16	-F		C		1.02	1.43			
GRP 6399	07	1749	1807	1752	N26	W53	.841	8831	3.8	18	-N				.50				2 2 2
HUAN	07	1748	1807	1752	N26	W53	.841	8831	3.8	19	-N	2	C	1752	.50	.71			E
HOUS	07	1749	1758U	1751	N26	W53	.841	8831	3.8	9U	-N		C		.50	.90		200	E
GRP 6400	07	1955	2015	2002	S19	W89	1.000	8829	1.2	20	1N				1.12				4 4 3
LOCK	07	1952	2020	2003	S17	W90	1.000	8829	1.1	28	1F		C	2003	.90	3.60		10	H
SACP	07	1953	2026	2002	S22	W84	.995	8829	1.5	33	1N		C		2.25				
HUAN	07	1959	2008		S17	W90	1.000	8829	1.1	9	-F	1	C	2002	.21				D
MCMA	07	2000E	2006	2002	S18	W90	1.000	8829	1.1	6D	-N		P	2002					D
HUAN	07	2009	2017		S22	W88	.999	8829	1.2	8	-F	1	C	2012	.50				D
GRP 6401	08	1024	1028	1024	N18	W83	.993	8831	2.2	4	1F				1.33				1 1 1
CAPE	08	1024	1028		N18	W83	.993	8831	2.2	4	1F		P	1024	1.33				B
GRP 6402	08	1107	1122	1108	N27	W66	.932	8831	3.5	15	-F				.46				1 1 1
CAPE	08	1107	1122	1108	N27	W66	.932	8831	3.5	15	-F		C	1108	.46	1.20			
GRP 6403	08	1204	1227	1212	N27	W67	.937	8831	3.5	23	-F				.41				1 1 1
CAPE	08	1204	1227	1212	N27	W67	.937	8831	3.5	23	-F		C	1212	.41	1.20			
GRP 6404	08	1339	1358	1343	N19	W67	.929	8831	3.5	19	-F				.09				1 1 1
CAPE	08	1339	1358	1343	N19	W67	.929	8831	3.5	19	-F		C	1343	.09	.20			C
GRP 6405	08	1345	1409	1346	N16	W66	.920	8831	3.6	24	-F				.14				1 1 1
CAPE	08	1345	1409	1346	N16	W66	.920	8831	3.6	24	-F		C	1346	.14	.40			C
GRP 6406	08	1453	1457	1454	N22	W76	.974	8831	2.9	4	-F				.21				1 1 1
CANA	08	1453	1457	1454	N22	W76	.974	8831	2.9	4	-F		C		.21	.60		100	
GRP 6407	09	0106	0117	0108	S17	E06	.313	8836	9.5	11	-F				.61				1 1 1
SACP	09	0106	0117	0108	S17	E06	.313	8836	9.5	11	-F		C		.61	.60			
GRP 6408	09	0953	1007	0954	S18	W34	.617	8841	6.9	14	-N				.44				2 2 2
CANA	09	0951	1001	0953	S18	W44	.731	8841	6.1	10	-N		C		.52	.60		200	EK
CANA	09	0951	1001	0956	S18	W44	.731	8841	6.1	10	-N								
MEUD	09	0954	1012		S17	W24	.489	8841	7.6	18	-F		C	0954	.36	.40			
GRP 6409	09	1220	1246	1230	N21	E83	.993	8843	15.7	26	1N				.59				4 4 4
CAPS	09	1219E	1240		N22	E80	.987	8843	15.5	21D	1F	3		1228	.80			152	
CANA	09	1219	1242	1229	N18	E81	.989	8843	15.6	23	-F		C		.31	1.00		100	
SACP	09	1221	1235	1226	N20	E90	1.000	8843	16.3	14	-N		C		.72				
CAPE	09	1225E	1306		N23	E80	.987	8843	15.5	41D	1N		P	1238	.52				G

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS				REMARKS
	DATE 1967 JUNE	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 6410	09	1408	1428	1412	N20	E90	1.000	8843	16.3	20	-F				.61				1 1 1
SACP	09	1408	1428	1412	N20	E90	1.000	8843	16.3	20	-F		C		.61				
GRP 6411	09	1633	1649	1637	N19	E82	.991	8843	15.8	16	-N				.26				1 1 1
HALE	09	1633	1649	1637	N19	E82	.991	8843	15.8	16	-N	3	C	1637	.26				
GRP 6412	09	1644	1657	1649	N14	W21	.421	8837	8.1	13	-N				.21				1 1 1
HALE	09	1644	1657	1649	N14	W21	.421	8837	8.1	13	-N	3	C	1649	.21	.22			
GRP 6413	10	0545	0610	0550	N27	E77	.979	8844	16.0	25	-N				.51				1 1 1
CATA	10	0545	0610	0550	N27	E77	.979	8844	16.0	25	-N			0550	.51			186	
GRP 6414	10	1554	1607	1557	N19	E73	.960	8843	16.1	13	-F				.30				1 1 1
HOUS	10	1554	1607	1557	N19	E73	.960	8843	16.1	13	-F		C		.30	.80		100	
GRP 6415	10	2144	2155	2148	N18	E68	.934	8843	16.0	11	-F				.44				4 4 4
HOUS	10	2143	2153	2146	N18	E70	.945	8843	16.2	10	-N		C		.30	.70		200	
SACP	10	2144	2157	2148	N20	E67	.929	8843	15.9	13	-F		C		.61	1.09			
LOCK	10	2144	2157	2148	N15	E66	.919	8843	15.9	13	-F		C	2148	.60	1.30		10	
HUAN	10	2146	2153		N20	E68	.935	8843	16.0	7	-F	1	C	2149	.25				D
GRP 6416	10	2209	2215	2211	S16	W18	.410	8836	9.6	6	-F				.21				1 1 1
HUAN	10	2209	2215	2211	S16	W18	.410	8836	9.6	6	-F	2	C	2211	.21	.21			D
GRP 6417	10	2305	2340	2325	N15	E66	.919	8843	15.9	35	-F				.80				1 1 1
LOCK	10	2305	2340	2325	N15	E66	.919	8843	15.9	35	-F		C	2325	.80	1.80		10	
GRP 6418	11	0423	0444	0426	N19	E61	.887	8843	15.8	21	-N				.26				2 2 2
HALE	11	0419	0455D	0424	N20	E60	.881	8843	15.7	36D	-N	1	P	0424	.21	.40			GJKH
CRON	11	0426	0433	0428	N18	E61	.886	8843	15.8	7	-F		C		.30	.60		100	
GRP 6419	11	1109	1148	1116	N19	E58	.864	8843	15.8	39	1N				2.81				6 5 5
KIEV	11	1107E	1140D	1114	N16	E60	.876	8843	16.0	33D	1N		C	1114	5.16			70	D
CAPS	11	1108E	1142		N19	E56	.847	8843	15.7	34D	2N	3		1115	3.00	5.40		196	GH
CAPE	11	1108	1159	1116	N19	E59	.872	8843	15.9	51	1N		C	1116	2.35	4.80			CFH
CATA	11	1113	1130	1115	N22	E58	.869	8843	15.8	17	1B			1115	2.38			209	
CAPF	11	1115E	1206		N19	E59	.872	8843	15.9	51D	1N		P	1119	1.18	2.28			GH
HUAN	11	1139E	1153		N19	E57	.855	8843	15.8	14D	-F	1	P	1139	.25	.35			D
GRP 6420	11	1333	1355	1338	N19	E59	.872	8843	16.0	22	1N				1.06				2 2 2
CAPE	11	1333	1355	1337	N20	E58	.865	8843	15.9	22	1F		C	1337	1.70	3.40			C
MCMA	11	1337E	1355D		N17	E60	.877	8843	16.1	18D	-N		C	1338	.41	.80			E
GRP 6421	11	1610	1615	1612	S17	W30	.564	8836	9.4	5	-F				.31				1 1 1
MCMA	11	1610	1615	1612	S17	W30	.564	8836	9.4	5	-F		C	1612	.31	.40			EV
GRP 6422	11	1900	1905	1901	N19	E56	.847	8843	16.0	5	-F				.21				1 1 1
HUAN	11	1900	1905	1901	N19	E56	.847	8843	16.0	5	-F	2	C	1901	.21	.29			D
GRP 6423	11	2012	2041	2021	N16	W51	.796	8837	8.0	29	-F				.55				4 4 4
HOUS	11	2008	2044	2018	N16	W52	.804	8837	7.9	36	-F		C		.70	1.20		100	E
MCMA	11	2011	2044D	2018	N15	W51	.792	8837	8.0	33D	-N		C	2018	.41	.70			EH
HALE	11	2013	2042	2022	N15	W50	.782	8837	8.1	29	-F	1	C	2022	.57	.90			GJ
HUAN	11	2014	2035		N16	W51	.794	8837	8.0	21	-F	2	C	2025	.52	.68			E
GRP 6424	11	2202	2210	2204	S17	W33	.601	8836	9.4	8	-N				.45				1 1 1
HUAN	11	2202	2210	2204	S17	W33	.601	8836	9.4	8	-N	2	C	2204	.45	.50			E
GRP 6425	12	0139	0147	0142	N16	W53	.814	8837	8.1	8	-F				.26				2 2 2
CRON	12	0139	0149	0142	N16	W54	.823	8837	8.0	10	-F		C		.30	.50		100	
MANI	12	0140E	0145	0141	N15	W51	.792	8837	8.2	5D	-F	3		0141	.21	.33			
GRP 6426	12	0415	0428	0420	N19	E50	.791	8843	15.9	13	-N				.36				2 2 2
MANI	12	0414	0428	0420	N18	E48	.769	8843	15.8	14	-F	3		0420	.41	.63			
HALE	12	0416	0428	0420	N20	E51	.804	8843	16.0	12	-N	1	C	0420	.31	.50			GV
GRP 6427	12	1049	1100	1052	N17	E46	.745	8843	15.9	11	-F				.40				1 1 1
CAPS	12	1049E	1100D		N17	E46	.745	8843	15.9	11D	-F	2		1052	.40	.60		147	
GRP 6428	12	1137	1151	1142	S16	W38	.656	8836	9.6	14	-F				.31				3 3 2
SALO	12	1135	1150		S17	W38	.661	8836	9.6	15	-F		V	1145	.21	.30	1.20		
CANA	12	1138	1151	1138	S16	W39	.668	8836	9.6	13	-F		C		.41	.50		100	
CAPS	12	1146E	1146D		S14	W38	.648	8836	9.6		-N	2							CDH
GRP 6429	12	1449	1502	1453	S15	W40	.676	8836	9.6	13	-F				.17				3 3 3
CANA	12	1447	1500	1452	S15	W41	.688	8836	9.5	13	-F		C		.10	.11		100	
CAPS	12	1450	1455D		S14	W39	.660	8836	9.7	5D	-F	2		1452	.20	.30		140	H
HUAN	12	1451	1504	1454	S16	W41	.692	8836	9.5	13	-F	2	C	1454	.21	.24			D
GRP 6430	12	1610	1618	1612	S17	W42	.707	8836	9.5	8	-N				.48				4 4 4
HUAN	12	1609	1616	1612	S16	W43	.714	8836	9.4	7	-N	2	C	1612	.50	.58			D
HALE	12	1610	1625U	1612U	S18	W40	.689	8836	9.7	15U	-N	2	P	1612	.41	.60			
SACP	12	1611	1615	1612	S17	W42	.707	8836	9.5	4	-N		C		.40	.47			
MCMA	12	1611	1616	1613	S17	W43	.718	8836	9.4	5	-B		C	1613	.62	.90			DH
GRP 6431	12	1709	1728	1720	N19	E40	.686	8843	15.7	19	-N				.15				1 1 1
HALE	12	1709	1728	1720	N19	E40	.686	8843	15.7	19	-N	2	C	1720	.15	.20			CG
GRP 6432	12	1811	1820	1813	S18	W43	.722	8836	9.5	9	-F				.40				3 3 3
SACP	12	1811	1818E	1813D	S18	W43	.722	8836	9.5	7D	-F		C		.31	.36			
HUAN	12	1811	1819	1812	S18	W43	.722	8836	9.5	8	-F	2	C	1812	.62	.75			E
HALE	12	1812	1820	1814	S17	W42	.707	8836	9.6	8	-F	2	C	1814	.26	.40			L
GRP 6433	12	2143	2213	2146	S23	E71	.955	8852	18.2	30	-N				.20				1 1 1
HOUS	12	2143	2213	2146	S23	E71	.955	8852	18.2	30	-N		C		.20	.50		200	
GRP 6434	12	2220	2234	2224	N16	W67	.926	8837	7.9	14	-N				.35				2 2 2
SACP	12	2220	2229	2225	N15	W66	.918	8837	8.0	9	-F		C		.40	.70			
HOUS	12	2222E	2239U	2222	N17	W68	.932	8837	7.8	17U	-N		C		.30	.70		200	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
					APPROX.		CENTRAL	MCMATH PLAGE	CMP										
	DATE 1967 JUNE	START	END	MAX. PHASE	LAT.	MER. DIST.	DISTANCE	REGION	DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 6435	12	2320	2332	2320	N17	W68	.932	8837	7.9	12	-N				.30				1 1 1
HOUS	12	2320E	2332U	2320	N17	W68	.932	8837	7.9	12U	-N		C		.30	.70		200	
GRP 6436	13	1324	1332	1326	N15	W74	.963	8837	8.0	8	-F				.21				1 1 1
HUAN	13	1324	1332	1326	N15	W74	.963	8837	8.0	8	-F	1	C	1326	.21				D
GRP 6437	13	1416	1426	1419	N19	W75	.968	8837	8.0	10	-F				.35				3 3 3
HUAN	13	1407	1423		N16	W75	.968	8837	8.0	16	-F	1	C	1413	.25				D
HOUS	13	1420U	1423	1420	N19	W77	.976	8837	7.8	3U	-F		C		.20	.60		100	
CAPE	13	1421	1432	1424	N21	W73	.961	8837	8.1	11	-F		C	1424	.60	2.30			CL
GRP 6438	13	1457	1513	1502	N16	W75	.968	8837	8.0	16	-N				.55				6 6 6
CANA	13	1454	1514	1501	N17	W77	.976	8837	7.8	20	-N		C		.52	1.40		200	
SACP	13	1457	1509	1502	N15	W76	.971	8837	7.9	12	-F		C		.41	.92			
HUAN	13	1457	1514	1501	N16	W76	.972	8837	7.9	17	-N	2	C	1501	.31				D
MCMA	13	1458	1512	1501	N15	W77	.975	8837	7.8	14	-N		C	1501	.31	1.80			D
CATA	13	1458	1514	1502	N17	W75	.968	8837	8.0	16	-N			1502	.74			162	
CAPS	13	1500E	1507D		N15	W70	.943	8837	8.4	7D	1N	3		1502	1.00			161	CGJ
GRP 6439	13	1550	1630	1620	S17	W58	.864	8836	9.3	40	1N				.41				1 1 1
SALO	13	1550E	1630D		S17	W58	.864	8836	9.3	40D	1N		S	1620	.41	.80	1.40		
GRP 6440	13	1550	1630	1620	S23	W28	.590	8840	11.6	40	-F				.66				1 1 1
SALO	13	1550E	1630D		S23	W28	.590	8840	11.6	40D	-F		S	1620	.66	.80	1.30		
GRP 6441	13	1550	1630	1620	N14	W72	.953	8837	8.3	40	1N				.33				1 1 1
SALO	13	1550E	1630D		N14	W72	.953	8837	8.3	40D	1N		S	1620	.33	1.10	1.40		
GRP 6442	13	1650	1657	1652	S20	W29	.576	8836	11.5	7	-F				.41				1 1 1
HUAN	13	1650	1657	1652	S20	W29	.576	8836	11.5	7	-F	2	C	1652	.41	.44			E
GRP 6443	13	1711	1734		N28	E90	1.000	8854	20.5	23	-N								1 1 0
MCMA	13	1711E	1734		N28	E90	1.000	8854	20.5	23D	-N		C						R
GRP 6444	13	2008	2014	2008	S00	E82	.990	8854	20.0	6	-N				.20				1 1 1
HOUS	13	2008E	2014	2008	S00	E82	.990	8854	20.0	377	-N		C		.20	.70		200	
GRP 6445	13	2148	2206	2153	S00	E82	.990	8854	20.1	18	-N				.20				1 1 1
HOUS	13	2148	2206	2153	S00	E82	.990	8854	20.1	18	-N		C		.20	.70		200	
GRP 6446	14	1301	1311	1304	S18	W70	.947	8836	9.3	10	-F				.21				1 1 1
HUAN	14	1301	1311	1304	S18	W70	.947	8836	9.3	10	-F	2	C	1304	.21				D
GRP 6447	14	1422	1440	1426	S17	W71	.952	8836	9.3	18	-F				.21				1 1 1
HUAN	14	1422	1440		S17	W71	.952	8836	9.3	18	-F	1	C	1426	.21				D
GRP 6448	14	1713	1728	1722	N25	E90	1.000	8854	21.5	15	1N				2.20				2 2 1
LOCK	14	1713	1730	1722	N21	E90	1.000	8854	21.5	17	2N		C	1722	2.20	8.80		20	
MCMA	14	1715E	1726		N28	E90	1.000	8854	21.5	11D	-N		C	1721					
GRP 6449	14	1826	1834	1828	N19	E82	.991	8854	20.9	8	-F				.10				1 1 1
HALE	14	1826	1834	1828	N19	E82	.991	8854	20.9	8	-F	1	C	1828	.10				CG
GRP 6450	14	1939	1946	1941	S16	W74	.965	8836	9.3	7	-F				.21				1 1 1
HUAN	14	1939	1946	1941	S16	W74	.965	8836	9.3	7	-F	1	C	1941	.21				D
GRP 6451	14	2138	2205	2151	N15	E90	1.000	8854	21.7	27	1F				.60				1 1 1
LOCK	14	2138	2205	2151	N15	E90	1.000	8854	21.7	27	1F		C	2151	.60	2.40		10	
GRP 6452	15	0006	0009	0007	N14	E75	.967	8854	20.6	3	-F				.20				1 1 1
LOCK	15	0006	0009	0007	N14	E75	.967	8854	20.6	3	-F		C	0007	.20	.60		10	
GRP 6453	15	0530	0700	0641	S24	W80	.988	8836	9.2	90	-N				.21				1 1 1
CATA	15	0530	0700	0641	S24	W80	.988	8836	9.2	90	-N			0641	.21			166	
GRP 6454	15	0730	0908	0745	S22	W84	.996	8836	9.0	98	1N				.15				3 2 1
CATA	15	0730	0800	0745	S24	W80	.988	8836	9.3	30	-N			0745	.15			158	
KHAR	15	0730E	1016D		S20	W88	1.000	8836	8.7	166D	2F		V						O
ARCE	15	0925E	0947		S15	W82	.992	8836	9.2	22D	1N		C	0925	.65	2.30			
GRP 6455	15	1130	1213	1145	N34	W34	.717	8846	12.9	43	-F				.52				1 1 1
CAPE	15	1130	1213	1145	N34	W34	.717	8846	12.9	43	-F		C	1145	.52	.70			C
GRP 6456	15	1247	1250	1248	S17	W90	1.000	8836	8.8	3	-F				.21				1 1 1
HUAN	15	1247	1250	1248	S17	W90	1.000	8836	8.8	3	-F	2	C	1248	.21				D
GRP 6457	15	1432	1437	1435	S17	W85	.997	8836	9.2	5	-N				.33				4 4 2
MONT	15	1400	1430		S18	W70	.947	8836	10.3	30	-N		C						
HOUS	15	1431	1438	1434	S16	W90	1.000	8836	8.9	7	-N		C		.40	1.60		200	
HUAN	15	1432	1438	1434	S17	W90	1.000	8836	8.9	6	-N	2	C	1434	.25				D
MCMA	15	1434	1440	1436	S17	W90	1.000	8836	8.9	6	-N		C	1436					
GRP 6458	15	1620	1658	1626	S19	E58	.869	8852	20.0	38	-B				.41				1 1 1
HALE	15	1620	1658	1626	S19	E58	.869	8852	20.0	38	-B	3	C	1626	.41	.80			GV
GRP 6459	15	1753	1807	1757	S15	W90	1.000	8836	9.0	14	1F				.90				1 1 1
HOUS	15	1753	1807	1757	S15	W90	1.000	8836	9.0	14	1F		C		.90	3.60		100	I
GRP 6460	15	1928	1937	1931	S17	W90	1.000	8836	9.1	9	-F				.21				1 1 1
HUAN	15	1928	1937	1931	S17	W90	1.000	8836	9.1	9	-F	1	C	1931	.21				D
GRP 6461	15	2102	2120	2106	S16	W90	1.000	8836	9.1	18	1F				.50				2 2 2
LOCK	15	2100	2120	2107	S15	W90	1.000	8836	9.1	20	1F		C	2107	.60	2.40		10	
HOUS	15	2103	2119	2105	S16	W90	1.000	8836	9.1	16	-F		C		.40	1.60		100	I
GRP 6462	15	2103	2112	2106	S12	E11	.292	8851	16.7	9	-F				.57				3 3 3
LOCK	15	2100	2115	2106	S12	E11	.292	8851	16.7	15	-F		C	2106	.50	.60		10	
HUAN	15	2104	2109	2105	S12	E11	.292	8851	16.7	5	-F	2	C	2105	.50	.49			E
SACP	15	2104	2111	2106	S12	E11	.292	8851	16.7	7	-N		C		.72	.70			

SOLAR FLARES

JUNE 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967	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. %	
	JUNE																		
GRP 6463	15	2131	2217	2135	S16	W90	1.000	8836	9.1	46	1N				.65				2 2 2
HOUS	15	2131	2143	2134	S15	W90	1.000	8836	9.1	12	-N		C		.40	1.60		200	EI
LOCK	15	2131	2250	2135	S16	W90	1.000	8836	9.1	79	1F		C	2135	.90	3.60		10	K
HOUS	15	2230	2249U	2233	S16	W90	1.000	8836	9.2	19U	-F		C		.40	1.60		100	I
GRP 6464	15	2324	2343	2329	S16	W90	1.000	8836	9.2	19	1N				.55				2 2 2
LOCK	15	2300	2345	2325	S15	W90	1.000	8836	9.2	45	1F		C	2325	.60	2.40		10	
HOUS	15	2324	2340	2332	S16	W90	1.000	8836	9.2	16	1N		C		.50	2.00		200	I
GRP 6465	15	2351	0001	2352	N29	E79	.985	8854	21.9	10	-N				.23				2 2 2
HOUS	15	2350	0001	2351	N28	E80	.987	8854	22.0	11	-F		C		.20	.70		100	
HALE	15	2352	2357D	2353	N30	E77	.979	8854	21.8	5D	-N	2	P	2353	.26				V
GRP 6466	16	0022	0036	0027	S16	W90	1.000	8836	9.3	14	1N				.71				3 3 3
HOUS	15	0044	0054	0054	S15	W81	.989	8836	9.0	450	-N		C		.40	1.40		200	I
LOCK	16	0020	0047	0026	S15	W90	1.000	8836	9.3	27	1N		C	0026	.70	2.80		20	
MITK	16	0022	0032	0025	S17	W90	1.000	8836	9.3	10	1F		C	0025	.52				
HOUS	16	0023	0030	0030	S16	W90	1.000	8836	9.3	447	1N		C		.50	2.00		200	I
GRP 6467	16	0102	0116	0107	N19	E62	.893	8854	20.7	14	1F				1.65				2 2 1
HALE	16	0058	0123	0107	N19	E62	.893	8854	20.7	25	1F	1	C	0107	1.65	3.60			
SACP	16	0106	0109	0107	N19	E62	.893	8854	20.7	3	-F		C		.21	.32			
GRP 6468	16	0258	0303	0258	S15	W90	1.000	8836	9.4	5	1F				.66				1 1 1
SIBE	16	0258	0303D	0258	S15	W90	1.000	8836	9.4	5D	1F		P	0258	.66			55	CD
GRP 6469	16	0407	0425	0411	S17	W90	1.000	8836	9.4	18	1N				.49				2 2 2
MANI	16	0407	0432	0412	S17	W89	1.000	8836	9.5	25	-N	2		0412	.46	1.50			
MITK	16	0408E	0418		S17	W90	1.000	8836	9.4	10D	1F		C	0410	.52				
GRP 6470	16	0645	0725	0706	N35	E85	.997	8854	22.7	40	1F				.66				1 1 1
BUCA	16	0645E	0725D		N35	E85	.997	8854	22.7	40D	1F		P	0706	.66				
GRP 6471	16	0807	0816		S20	W90	1.000	8836	9.6	9	1N								1 1 0
CAPS	16	0807E	0816D		S20	W90	1.000	8836	9.6	9D	1N	1							
	16	0825	0830	NO FLARE PATROL															
GRP 6472	16	1302	1307	1304	N34	E88	.999	8854	23.1	5	-F								1 1 0
MCMA	16	1302	1307	1304	N34	E88	.999	8854	23.1	5	-F		C	1304					E
GRP 6473	16	1336	1350	1337	N27	E76	.975	8854	22.3	14	-N				.73				6 6 5
HOUS	16	1332E	1340U	1333	N25	E74	.966	8854	22.1	8U	1N		C		.70	2.00		200	
HUAN	16	1333	1344	1334	N26	E73	.962	8854	22.0	11	-N	2	C	1334	.57				D
MCMA	16	1334	1345	1335	N27	E76	.975	8854	22.3	11	-B		C	1335					DV
ZURI	16	1334	1350	1336	N28	E80	.987	8854	22.6	16	-N		P	1336	1.05				
SACP	16	1339E	1355	1340	N28	E75	.971	8854	22.2	16D	-N		C		.40	.94			
CATA	16	1344	1355	1345	N27	E75	.971	8854	22.2	11	-F			1345	.92			145	
GRP 6474	16	1439	1453	1442	N26	E72	.958	8854	22.0	14	-N				.65				4 4 3
HUAN	16	1439	1452	1440	N25	E70	.948	8854	21.9	13	-F	1	C	1440	.83				E
MCMA	16	1439	1455	1441	N26	E78	.981	8854	22.5	16	-N		C	1441					EL
SACP	16	1441E	1453	1443	N27	E70	.950	8854	21.9	12D	-F		C		.61	1.21			
HOUS	16	1442U	1450	1443	N26	E70	.949	8854	21.9	8U	-N		C		.50	1.30		200	
GRP 6475	16	1512	1518	1513	N33	E80	.988	8854	22.6	6	-N				.30				1 1 1
HOUS	16	1512U	1518D	1513	N33	E80	.988	8854	22.6	6D	-N		C		.30	1.00		200	
GRP 6476	16	1520	1524	1520	N30	E78	.982	8854	22.5	4	-F				.10				1 1 1
SACP	16	1520	1524	1520	N30	E78	.982	8854	22.5	4	-F		C		.10				
GRP 6477	16	1711	1748	1718	S20	E44	.743	8852	20.0	37	-N				.26				2 2 2
HOUS	16	1708	1725	1713	S20	E44	.743	8852	20.0	17	-N		C		.20	.30		200	
HALE	16	1713	1810	1723	S20	E43	.733	8852	19.9	57	-N	1	C	1723	.31	.50			
GRP 6478	16	1834	1918	1842	N34	E84	.995	8854	23.1	44	1N				.88				4 4 3
LOCK	16	1830	1910	1842	N30	E82	.991	8854	22.9	40	1N		C	1842	1.50	5.10		20	
SACP	16	1832	1842U	1838U	N35	E85	.997	8854	23.1	10U	-N		C		.61				
MCMA	16	1832	1909	1837	N34	E86	.998	8854	23.2	37	-N		C	1837					D
HALE	16	1832	1851	1840	N35	E81	.990	8854	22.8	19	-B	2	C	1840	.46				
HALE	16	1840	1935	1852	N36	E81	.990	8854	22.9	55	1B	2	C	1852	.52				
SACP	16	1842E	1905U	1847	N36	E80	.988	8854	22.8	23U	-F		C		.61				
GRP 6479	16	1922	1949	1933	S19	E43	.729	8852	20.0	27	-N				.92				1 1 1
SACP	16	1922	1949U	1933	S19	E43	.729	8852	20.0	27U	-N		C		.92	1.10			
GRP 6480	16	1955	2004	1959	N20	E64	.908	8854	21.6	9	-F				.30				1 1 1
LOCK	16	1955	2004	1959	N20	E64	.908	8854	21.6	9	-F		C	1959	.30	.60		10	
GRP 6481	16	2059	2115	2103	S22	E42	.732	8852	20.0	16	-F				.63				2 2 2
LOCK	16	2059	2115	2103	S23	E42	.737	8852	20.0	16	-F		C	2103	.90	1.40		10	
MCMA	16	2101E	2104D	2102	S21	E42	.727	8852	20.0	3D	-F		C	2102	.36	.60			E
GRP 6482	16	2132	2140	2136	S24	E83	.995	8858	23.1	8	-F				.20				1 1 1
LOCK	16	2132	2140	2136	S24	E83	.995	8858	23.1	8	-F		C	2136	.20	.70		10	
GRP 6483	17	0046	0053	0049	N17	E51	.794	8854	20.9	7	-F				.41				2 2 2
SACP	17	0046	0052	0048	N19	E50	.789	8854	20.8	6	-F		C		.31	.39			
LOCK	17	0046	0054	0049	N15	E51	.790	8854	20.9	8	-F		C	0049	.50	.90		10	
GRP 6484	17	0125	0140	0125	N28	E64	.918	8854	21.9	15	1F				2.64				1 1 1
SIBE	17	0125E	0140D		N28	E64	.918	8854	21.9	15D	1F		P	0125	2.64	6.90		80	CE
GRP 6485	17	0202	0234	0202	N35	E75	.975	8854	22.7	32	-N				.31				1 1 1
CULG	17	0202E	0234	0202	N35	E75	.975	8854	22.7	32D	-N		P		.31				

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS				REMARKS
	DATE 1967 JUNE	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 6486	17	0245	0327	0301	N33	E74	.970	8854	22.7	42	1N				1.02				3 3 3
CULG	17	0235	0319	0256	N35	E75	.975	8854	22.7	44	-N		C		.62				
TACH	17	0255	0342		N30	E70	.952	8854	22.4	47	1N		V	0303	1.75		2.10	63	D
CRON	17	0305U	0319	0305U	N34	E78	.983	8854	23.0	14U	1F		C		.70	2.10		100	
GRP 6487	17	0513	0527	0523	N25	E62	.901	8854	21.9	14	-N				.41				1 1 1
CULG	17	0513	0527	0523	N25	E62	.901	8854	21.9	14	-N		C		.41	.90			L
GRP 6488	17	0626	0649	0633	N26	E71	.953	8854	22.6	23	-B				.18				2 2 2
MANI	17	0625	0649	0631	N26	E72	.958	8854	22.7	24	-N	3		0631	.21	.48			
CULG	17	0626	0647D	0634	N25	E70	.948	8854	22.5	21D	-B		P		.15				
GRP 6489	17	0704	0710	0706	N28	E64	.918	8854	22.1	6	1F				1.00				1 1 1
CRON	17	0704	0710	0706	N28	E64	.918	8854	22.1	6	1F		C		1.00	2.20		100	
GRP 6490	17	0903	0910	0905	N24	E53	.830	8854	21.4	7	-F				.10				2 2 1
CRON	17	0903	0909	0904	N26	E62	.902	8854	22.0	6	-F		C		.10	.20		100	
ONDR	17	0903E	0910		N22	E44	.738	8854	20.7	7D	-F		V	0905			1.90		CDH
GRP 6491	17	1049	1107	1059	N23	E52	.818	8854	21.4	18	1N				1.84				4 4 2
SALO	17	1040E	1110D		N24	E55	.846	8854	21.6	30D	1N		V	1100	.58	1.10	1.50		
WEND	17	1046E	1106		N21	E53	.822	8854	21.4	20D	1N		V		3.09				
ONDR	17	1049E	1100		N21	E49	.785	8854	21.1	11D	-B		V	1051			2.50		CE
CAPS	17	1059E	1111		N26	E52	.827	8854	21.4	12D	-N	2		1105	.30	.50			D
GRP 6492	17	1107	1130	1122	N24	E70	.947	8854	22.7	23	1N				1.40				3 3 3
SALO	17	1105E	1130D		N22	E67	.929	8854	22.5	25D	1N		V	1125	.50	1.50	1.40		
WEND	17	1108E	1130		N24	E70	.947	8854	22.7	22D	1N		V		3.09				
CAPS	17	1109	1130		N25	E72	.957	8854	22.9	21	-N	2		1118	.60			171	
GRP 6493	17	1111	1128	1122	N18	E46	.745	8854	20.9	17	-N				.32				2 2 2
SALO	17	1110E	1130D		N17	E47	.753	8854	21.0	20D	-N		V	1125	.33	.50	1.40		
CAPS	17	1111	1125		N18	E44	.723	8854	20.8	14	-F	2		1118	.30	.40			D
GRP 6494	17	1412	1435	1418	N19	E43	.716	8854	20.8	23	-F				.52				5 5 5
SACP	17	1410	1438	1415	N19	E43	.716	8854	20.8	28	-N		C		.61	.72			
CAPS	17	1411	1434		N18	E43	.712	8854	20.8	23	-F	3		1422	.30	.40		142	D
CAPE	17	1411	1435	1418	N19	E43	.716	8854	20.8	24	-F		C	1418	.64	.90			C
HOUS	17	1415	1434	1420	N17	E43	.709	8854	20.8	19	-N		C		.40	.60		200	
CATA	17	1415	1435	1416	N20	E43	.720	8854	20.8	20	-F			1416	.66	.90		129	
GRP 6495	17	1446	1454	1448	N15	E75	.967	8854	23.2	8	-F				.26				2 2 2
HOUS	17	1445	1452	1446	N14	E75	.967	8854	23.2	7	-F		C		.20	.60		100	
SACP	17	1446	1455	1449	N15	E75	.967	8854	23.2	9	-F		C		.31	.68			
GRP 6496	17	1454	1504	1459	N35	E71	.960	8854	22.9	10	-N				.71				2 2 2
SACP	17	1453	1507	1500	N35	E70	.956	8854	22.9	14	-N		C		.92	1.89			
HOUS	17	1454	1501	1458	N34	E71	.959	8854	22.9	7	-N		C		.50	1.40		200	EI
GRP 6497	17	1514	1529	1518	N31	E59	.892	8854	22.1	15	-F				.31				2 2 2
HOUS	17	1511	1519	1513	N38	E69	.955	8854	22.8	8	-F		C		.30	.80		100	
SACP	17	1516	1538	1523	N23	E49	.791	8854	21.3	22	-F		C		.31	.39			
GRP 6498	17	1653	1708	1657	N29	E51	.828	8854	21.5	15	-B				.59				2 2 2
HALE	17	1652	1713	1657	N28	E50	.816	8854	21.5	21	-B	1	C	1657	.46	.80			
SACP	17	1653	1703	1657	N29	E51	.828	8854	21.5	10	-N		C		.71	.97			
GRP 6499	17	1944	2125	2007	N28	E72	.959	8854	23.2	101	1N				.57				2 2 2
HALE	17	1944	2125	2015	N27	E72	.959	8854	23.2	101	1B	1	C	2015	.62				
SACP	17	1958E	2032	1958	N28	E71	.955	8854	23.2	34D	-F		C		.30	.61			
SACP	17	2051D	2054D	2052U	N28	E71	.955	8854	23.2	3D	-F		P		.51	1.04			
GRP 6500	17	2121	2224	2126	N28	E62	.905	8854	22.5	63	1B				.75				2 2 2
CULG	17	2120E	2225	2126	N27	E61	.897	8854	22.5	65D	-N		P		.62	1.55			L
HALE	17	2122	2223	2125	N28	E63	.912	8854	22.6	61	1B	1	C	2125	.88				
GRP 6501	17	2141	2221	2142	N29	E64	.919	8854	22.7	40	1N				2.15				2 2 2
MANI	17	2140E	2215		N28	E64	.918	8854	22.7	35D	1N	1		2141	1.86	3.90			
SACP	17	2142E	2226U	2142E	N29	E64	.919	8854	22.7	44U	1N		C		2.44	4.21			
GRP 6502	17	2223	2239	2227	N26	E45	.764	8854	21.3	16	-N				.48				5 5 5
SACP	17	2220	2241	2228	N28	E46	.782	8854	21.4	21	-N		C		.61	.78			
CULG	17	2221	2243	2228	N28	E46	.782	8854	21.4	22	-N		C		.52	.80			L
HOUS	17	2224	2236D	2226	N26	E47	.783	8854	21.5	12D	-N		C		.40	.60		200	
HALE	17	2224	2239	2227	N27	E46	.778	8854	21.4	15	-B	2	C	2227	.57	.90			E
MANI	17	2226	2235	2228	N20	E41	.698	8854	21.0	9	-B	2		2228	.31	.40			
GRP 6503	17	2311	2334	2318	N18	E38	.655	8854	20.8	23	-N				.87				4 4 4
MANI	17	2307	2321	2312	N17	E38	.650	8854	20.8	14	-N	3		2312	.72	1.00			
CULG	17	2310	2336	2320	N18	E38	.655	8854	20.8	26	-N		C		.62	.78			L
HALE	17	2312	2336	2320	N19	E38	.659	8854	20.8	24	-B	2	C	2320	1.03	1.40			
SACP	17	2313	2341	2320	N19	E38	.659	8854	20.8	28	-N		C		1.11	1.26			
GRP 6504	18	0101	0153	0114	N26	E62	.902	8854	22.7	52	1N				.90				2 2 2
MANI	18	0056	0118	0100	N24	E64	.912	8854	22.8	22	-F	3		0100	.36	.74			
CULG	18	0106	0227	0128	N28	E60	.892	8854	22.5	81	1B		P		1.44	3.15			L
GRP 6505	18	0120	0154	0123	N26	E63	.908	8854	22.8	34	2B				2.31				2 2 2
MANI	18	0119	0209	0124	N25	E62	.900	8854	22.7	50	2B	2		0124	3.71	7.70			
CRON	18	0120	0138	0121	N27	E64	.916	8854	22.9	18	1N		C		.90	2.00		200	E
GRP 6506	18	0620	0654	0631	N27	E65	.922	8854	23.1	34	-F				.33				1 1 1
BUCA	18	0620E	0654D		N27	E65	.922	8854	23.1	34D	-F		C	0631	.33	.90			
GRP 6507	18	0720	0736	0727	N26	W83	.993	8846	12.1	16	1F				1.11				1 1 1
BUCA	18	0720E	0736D		N26	W83	.993	8846	12.1	16D	1F		C	0727	1.11				

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS		
	DATE 1967 JUNE	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 6508	18	0720	0749	0735	N26	E40	.715	8854	21.3	29	-F				1.11				1	1	1
BUCA	18	0720E	0749D		N26	E40	.715	8854	21.3	29D	-F		C	0735	1.11	1.60					
GRP 6509	18	1032	1121	1047	N21	E44	.733	8854	21.7	49	1N				1.86				4	4	4
SALO	18	1000E	1050D		N12	E21	.397	8854	20.0	50D	-B		V	1040	.66	.70	1.40				
SALO	18	1010E	1040D		N16	E33	.583	8854	20.9	30D	-N		V	1035	.33	.40	1.40				
CANA	18	1043	1118	1047	N24	E53	.829	8854	22.4	35	1N		C		1.24	2.10		200	EI		
CATA	18	1053	1125	1053	N25	E51	.815	8854	22.3	32	-N			1053	1.09	1.90		191			
WEND	18	1054E	1120D		N23	E50	.799	8854	22.2	26D	1N		V		4.13						
GRP 6510	18	1052	1116	1055	N20	E41	.697	8854	21.5	24	-N				.90				3	3	2
ONDR	18	1051E	1115		N24	E48	.784	8854	22.1	24D	-B		V	1055			2.70		CDH		
CANA	18	1053	1104	1056	N21	E53	.822	8854	22.4	11	-F		C		.83	1.40		100			
CATA	18	1053	1130	1053	N16	E21	.428	8854	20.0	37	-N			1053	.96	1.10		162			
GRP 6511	18	1111	1126	1111	N25	E53	.832	8854	22.4	15	1B				.67				2	2	2
SALO	18	1040E	1120D		N24	E55	.846	8854	22.6	40D	-N		V	1110	.41	.80	1.50				
SALO	18	1110E	1130D		N25	E54	.840	8854	22.5	20D	1B		V	1125	.50	1.00	1.50				
CATA	18	1112	1122	1112	N25	E52	.823	8854	22.4	10	-N			1112	.84	1.50		178			
GRP 6512	18	1149	1205	1150	N18	E32	.581	8854	20.9	16	-N				.94				4	4	2
ONDR	18	1148E	1201		N18	E29	.544	8854	20.7	13D	-N		V	1152			2.20		CE		
CANA	18	1148	1207	1149	N18	E32	.581	8854	20.9	19	-N		C		.72	.90		200			
CATA	18	1150	1207	1150	N18	E32	.581	8854	20.9	17	-N			1150	1.16	1.40		186			
CAPS	18	1153E	1204D		N17	E33	.588	8854	21.0	11D	-N	1									
GRP 6513	18	1308	1359	1314	N26	E54	.843	8854	22.6	51	1N				2.12				8	8	6
HOUS	18	1305	1356U	1307	N25	E55	.848	8854	22.7	51U	-N		C		.90	1.70		200	EI		
HOUS	18	1305	1356U	1310	N25	E55	.848	8854	22.7	51U	-N										
SACP	18	1306	1348	1315	N28	E54	.848	8854	22.6	42	1N		C		2.44	3.52					
KIEV	18	1307E	1400D	1312	N25	E59	.879	8854	23.0	53D	1N		C	1312	1.03			60	EI		
LOCA	18	1308	1415	1315	N27	E53	.837	8854	22.5	67	2N		P	1315	3.57	7.40					
ONDR	18	1309E	1328D		N24	E46	.765	8854	22.0	19D	1N		V	1312			2.90				
CANA	18	1310	1344	1315	N26	E53	.834	8854	22.5	34	1N		C		1.34	2.30		200	E		
CATA	18	1313	1343	1318	N25	E56	.856	8854	22.8	30	2B			1318	3.03	5.80		234			
MCMA	18	1317E	1430D		N27	E56	.861	8854	22.8	73D	1B		C	1317	1.29	2.60			BF		
GRP 6514	18	1502	1521	1509	N26	E54	.843	8854	22.7	19	-N				1.14				4	4	3
MCMA	18	1458	1523	1507	N27	E56	.861	8854	22.8	25	-N		C	1507	.83	1.60			F		
SACP	18	1502	1516	1505	N28	E53	.840	8854	22.6	14	-F		C		.92	1.28					
LOCA	18	1503	1520	1507	N25	E53	.832	8854	22.6	17	1N		V	1507	1.68	3.50					
ONDR	18	1503E	1525		N25	E52	.823	8854	22.5	22D	-F		V	1515			2.10		CD		
GRP 6515	18	1552	1610	1555	N28	E46	.781	8854	22.1	18	1B				1.73				6	6	6
HOUS	18	1549	1552D	1552	N27	E45	.768	8854	22.0	3D	1B		C		1.80	2.80		300	EI		
MEUD	18	1551	1603	1554	N30	E48	.807	8854	22.3	12	1N		C	1554	1.86	2.80					
LOCA	18	1551	1612	1555	N30	E48	.807	8854	22.3	21	1B		P	1555	1.68	3.20			H		
SACP	18	1551	1617	1555	N29	E44	.768	8854	22.0	26	1N		C		2.56	3.21					
MCMA	18	1552	1612	1554	N27	E44	.759	8854	22.0	20	-B		C	1554	1.03	1.60			EH		
CATA	18	1559	1608	1600	N25	E46	.769	8854	22.1	9	1B			1600	1.42	2.30		200			
GRP 6516	18	1556	1620	1600	N17	E90	1.000	8860	25.4	24	1B				1.02				3	3	1
LOCA	18	1552	1630	1558	N17	E90	1.000	8860	25.4	38	1B		V	1558							
SACP	18	1558	1618	1601	N18	E90	1.000	8860	25.4	20	1N		C		1.02						
MCMA	18	1559	1612	1602	N17	E90	1.000	8860	25.4	13	-B		C	1602					A		
GRP 6517	18	1808	1929	1835	N15	E90	1.000	8863	25.5	81	1N				1.00				2	2	1
LOCK	18	1800E	1928	1835	N13	E90	1.000	8863	25.5	88D	1N		C	1835	1.00	4.00		20	K		
MCMA	18	1815	1930		N17	E90	1.000	8863	25.5	75	-F		C						K		
GRP 6518	18	1822	1847	1827	N26	E54	.843	8854	22.8	25	-N				.87				5	5	5
MCMA	18	1819	1845D	1826	N26	E54	.843	8854	22.8	26D	-N		C	1826	.72	1.40			E		
LOCK	18	1820	1845	1826	N21	E55	.839	8854	22.9	25	-F		C	1826	.90	1.60		10			
HOUS	18	1824	1839D	1829	N28	E55	.856	8854	22.9	15D	-N		C		.70	1.30		200	EI		
SACP	18	1824	1841	1828	N28	E53	.840	8854	22.7	17	-F		C		1.12	1.57					
HALE	18	1825	1855	1828	N28	E53	.840	8854	22.7	30	-N	2	C	1828	.93	1.70					
GRP 6519	18	1905	1923	1911	N18	E27	.520	8854	20.8	18	-N				.80				4	4	4
HALE	18	1904	1927	1914	N19	E27	.527	8854	20.8	23	-B	2	C	1914	.67	.80					
LOCK	18	1905	1922	1911	N17	E28	.525	8854	20.9	17	-N		C	1911	.90	1.10		20			
MCMA	18	1906	1921	1911	N17	E26	.500	8854	20.7	15	-N		C	1911	.52	.60			E		
SACP	18	1906	1923	1909	N20	E27	.535	8854	20.8	17	-N		C		1.12	1.17					
GRP 6520	18	1935	2010	1942	N26	E54	.843	8854	22.9	35	-F				.54				3	3	3
HALE	18	1934	2015	1940	N29	E54	.851	8854	22.9	41	-N	2	C	1940	.52	1.00					
LOCK	18	1935	2005	1945	N22	E53	.824	8854	22.8	30	-F		C	1945	.70	1.30		10			
MCMA	18	1937	2010		N26	E54	.843	8854	22.9	33	-F		C	1940	.41	.80			E		
GRP 6521	18	2024	2100	2037	N24	E53	.829	8854	22.8	36	-F				.96				2	2	2
SACP	18	2020	2100	2038	N26	E51	.818	8854	22.7	40	-F		C		.92	1.23					
LOCK	18	2028	2100	2035	N21	E55	.839	8854	23.0	32	-F		C	2035	1.00	1.80		10			
GRP 6522	18	2116	2151	2124	N25	E52	.823	8854	22.8	35	-N				1.27				3	3	3
LOCK	18	2115	2155	2127	N20	E53	.819	8854	22.9	40	-N		C	2127	1.20	2.00		20			
SACP	18	2116	2146	2122	N28	E52	.832	8854	22.8	30	1N		C		1.84	2.54					
HALE	18	2121E	2136D	2123	N28	E52	.832	8854	22.8	15D	-B	2	P	2123	.67	1.20					
GRP 6523	18	2204	2213	2206	N12	E90	1.000	8860	25.7	9	-F				.20				1	1	1
LOCK	18	2204	2213	2206	N12	E90	1.000	8860	25.7	9	-F		C	2206	.20	.80		10			

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION — MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS		
	DATE 1967 JUNE	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 6524	18	2210	2233	2215	N24	E48	.784	8854	22.5	23	-F				1.16				2	2	2
LOCK	18	2157	2208	2202	N24	E33	.631	8854	21.4	11	-F		C	2202	.50	.70		10			
LOCK	18	2208	2240	2215	N21	E48	.774	8854	22.5	32	-F		C	2215	1.00	1.60		10			
SACP	18	2211	2226	2215	N26	E47	.782	8854	22.4	15	-F		C		.81	1.04					
GRP 6525	18	2308	0015	2345	N12	E90	1.000	8860	25.7	67	1N				.80				1	1	1
LOCK	18	2308	0015	2345	N12	E90	1.000	8860	25.7	67	1N		C	2345	.80	3.20		20			
GRP 6526	19	0010	0032	0016	S23	E53	.839	8858	23.0	22	-N				.74				3	3	3
LOCK	19	0010	0027	0015	S26	E52	.840	8858	22.9	17	-F		C	0015	.90	1.60		10			
SACP	19	0010	0037	0018	S21	E52	.825	8858	22.9	27	-N		C		.91	1.23					
HALE	19	0011	0031	0016	S21	E54	.842	8858	23.1	20	-N	1	C	0016	.41	.80					
GRP 6527	19	0015	0120	0035	N13	E90	1.000	8863	25.8	65	1N				1.00				1	1	1
LOCK	19	0015	0120D	0035	N13	E90	1.000	8863	25.8	65D	1N		C	0035	1.00	4.00		20			
GRP 6528	19	0128	0143	0134	N24	E45	.755	8854	22.4	15	-N				.81				1	1	1
SACP	19	0128	0143D	0134	N24	E45	.755	8854	22.4	15D	-N		C		.81	1.00					
GRP 6529	19	0247	0325	0259	N41	W05	.640	8850	18.7	38	-N				.21				1	1	1
HALE	19	0247	0325	0259	N41	W05	.640	8850	18.7	38	-N	2	C	0259	.21	.30			CG		
GRP 6530	19	0256	0402	0400	N16	E90	1.000	8863	25.9	66	-N				.41				1	1	1
CULG	19	0256E	0402D	0400	N16	E90	1.000	8863	25.9	66D	-N		P		.41				K		
GRP 6531	19	0409	0421	0412	S22	E51	.819	8858	23.0	12	-N				.21				1	1	1
HALE	19	0409	0421	0412	S22	E51	.819	8858	23.0	12	-N	2	C	0412	.21	.40					
GRP 6532	19	1107	1124	1109	N17	E88	.999	8863	26.1	17	-N				.21				3	3	1
CANA	19	1106	1125	1108	N15	E90	1.000	8863	26.2	19	-N		C		.21	.80		200	I		
MCMA	19	1107	1123	1108	N17	E90	1.000	8863	26.2	16	-B		C	1108					A		
ONDR	19	1110E	1125		N18	E85	.996	8863	25.8	15D	-N		V	1111			2.30		ACD		
GRP 6533	19	1202	1209	1206	N18	E79	.982	8863	25.4	7	-F				.21				1	1	1
CANA	19	1202	1209	1206	N18	E79	.982	8863	25.4	7	-F		C		.21	.60		100			
GRP 6534	19	1236	1310	1240	N23	E23	.515	8854	21.3	34	-F				.64				4	3	2
ONDR	19	1235	1315	1240	N22	E22	.495	8854	21.2	40	-F		V	1240			1.80		CH		
SACP	19	1236	1306	1239	N24	E23	.525	8854	21.3	30	-F		C		.81	.84					
MCMA	19	1236	1310	1240	N24	E24	.535	8854	21.3	34	-N		C	1240	.46	.60			E		
CATA	19	1257	1308	1300	N23	E24	.526	8854	21.3	11	-N			1300	.59	.70		166			
GRP 6535	19	1427	1440	1430	N27	E37	.691	8854	22.4	13	-F				.31				1	1	1
MCMA	19	1427	1440	1430	N27	E37	.691	8854	22.4	13	-F		C	1430	.31	.40			EH		
GRP 6536	19	1441	1447	1443	N19	E87	.998	8863	26.1	6	-N				.60				2	2	1
SACP	19	1441	1446	1443	N19	E84	.994	8863	25.9	5	-N		C		.60						
MCMA	19	1441	1447	1443	N19	E90	1.000	8863	26.4	6	-N		C	1443					D		
GRP 6537	19	1501	1514	1504	N28	E39	.716	8854	22.6	13	-F				.41				1	1	1
MCMA	19	1501	1514	1504	N28	E39	.716	8854	22.6	13	-F		C	1504	.41	.50			E		
GRP 6538	19	1651	1703	1653	N29	E42	.749	8854	22.9	12	-F				.32				3	3	3
LOCK	19	1650	1705	1655	N29	E44	.767	8854	23.0	15	-F		C	1655	.40	.60		10			
HALE	19	1651	1703	1652	N30	E43	.763	8854	22.9	12	-N	2	C	1652	.21	.30					
MCMA	19	1652	1702	1653	N28	E39	.716	8854	22.6	10	-F		C	1653	.36	.40			E		
GRP 6539	19	1700	1735	1707	S23	E36	.679	8858	22.4	35	-N				.34				3	3	3
HOUS	19	1700	1722	1705	S23	E37	.689	8858	22.5	22	-N		C		.30	.40		200			
HALE	19	1700	1747	1708	S21	E35	.655	8858	22.3	47	-B	2	C	1708	.21	.30			CG		
LOCK	19	1701	1707D	1707	S24	E36	.685	8858	22.4	6D	-F		C	1707	.50	.70		10			
GRP 6540	19	1714	1745	1725	N27	E36	.681	8854	22.4	31	-N				.41				2	2	2
HALE	19	1708	1745	1724	N27	E34	.661	8854	22.3	37	-N	2	C	1724	.31	.40					
LOCK	19	1720	1745	1726	N26	E37	.685	8854	22.5	25	-F		C	1726	.50	.70		10			
GRP 6541	19	1817	1902	1827	N17	E83	.992	8863	26.0	45	-N				.61				3	3	2
HUAN	19	1756	1903		N18	E84	.994	8863	26.0	67	-N	1	C	1822	.62						
MCMA	19	1813	1848D	1829	N18	E85	.996	8863	26.1	35D	1N		C	1829							
LOCK	19	1820	1900	1830	N14	E79	.982	8863	25.7	40	-F		C	1830	.60	1.90		10	J		
GRP 6542	19	2009	2028	2013	N16	E04	.260	8854	20.1	19	-N				.42				4	4	4
LOCK	19	2007	2022	2013	N15	E04	.244	8854	20.1	15	-F		C	2013	.50	.60		10			
HUAN	19	2009	2017D	2012	N15	E04	.244	8854	20.1	8D	-N	2	C	2012	.45	.45			E		
HALE	19	2009	2036	2012	N16	E03	.256	8854	20.1	27	-B	1	C	2012	.31	.31			CG		
MCMA	19	2012	2025	2014	N16	E04	.260	8854	20.1	13	-F		C	2014	.41	.41			EH		
GRP 6543	19	2040	2046	2042	N25	E43	.739	8854	23.1	6	-N				.61				2	2	2
LOCK	19	2039	2047	2042	N24	E44	.745	8854	23.2	8	-F		C	2042	.90	1.40		10			
HALE	19	2041	2044	2041	N26	E41	.724	8854	22.9	3	-B	1	C	2041	.31	.40					
GRP 6544	19	2139	2145	2141	N26	E41	.724	8854	23.0	6	-N				.31				1	1	1
HALE	19	2139	2145	2141	N26	E41	.724	8854	23.0	6	-N	1	C	2141	.31	.40					
GRP 6545	20	0056	0103	0057	N16	E82	.990	8863	26.2	7	-N				.21				1	1	1
HALE	20	0056	0103	0057	N16	E82	.990	8863	26.2	7	-N	1	C	0057	.21						
GRP 6546	20	0100	0111	0105	N30	E47	.797	8854	23.6	11	-F				.41				2	2	2
LOCK	20	0100	0110	0104	N29	E43	.757	8854	23.3	10	-F		C	0104	.60	.90		10			
MANI	20	0100	0112	0105	N30	E50	.821	8854	23.8	12	-F	2		0105	.21	.34					
GRP 6547	20	0114	0123	0117	N26	E37	.684	8854	22.8	9	-F				.41				1	1	1
HALE	20	0114	0123	0117	N26	E37	.684	8854	22.8	9	-F	1	C	0117	.41	.60					
GRP 6548	20	0238	0243	0240	N16	W02	.251	8854	20.0	5	-N				.36				2	2	2
HALE	20	0238	0242	0239	N15	W02	.234	8854	20.0	4	-N	2	C	0239	.41	.42					
MANI	20	0238	0243	0240	N16	W01	.249	8854	20.0	5	-F	3		0240	.31	.32					
GRP 6549	20	0250	0257	0251	N15	W02	.234	8854	20.0	7	-N				.21				1	1	1
HALE	20	0250	0257	0251	N15	W02	.234	8854	20.0	7	-N	1	C	0251	.21	.21					

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6550	20	0407	0425	0410	N25	E29	.594	8854	22.3	18	-N				.41				1 1 1
HALE	20	0407	0425	0410	N25	E29	.594	8854	22.3	18	-N	1	C	0410	.41	.50			
GRP 6551	20	1052	1108	1056	N17	E76	.971	8863	26.2	16	1N				.48				4 4 3
CAPE	20	1051	1102	1054	N18	E76	.971	8863	26.2	11	-N		C	1054	.60	2.30			V
CANA	20	1052	1102	1053	N16	E76	.971	8863	26.2	10	-N		C		.52	1.40		200	I
SALO	20	1055E	1107		N15	E75	.966	8863	26.1	12D	2N		V	1100	.33	1.40	1.40		
ONDR	20	1101E	1119D		N18	E75	.967	8863	26.1	18D	-F		V	1007			1.70		
GRP 6552	20	1142	1152	1145	N17	E75	.967	8863	26.1	10	-F				.28				2 2 2
CANA	20	1142	1152	1143	N16	E77	.975	8863	26.3	10	-F		C		.21	.60		100	
HUAN	20	1146E	1149D		N18	E72	.953	8863	25.9	3D	-F	1	P	1147	.35				E
GRP 6553	20	1504	1511	1506	S33	E42	.794	8858	23.8	7	-F				.25				1 1 1
HUAN	20	1504	1511	1506	S33	E42	.794	8858	23.8	7	-F	2	C	1506	.25	.32			D
GRP 6554	20	1604	1633	1625	S24	E80	.989	8867	26.7	29	-N				.21				1 1 1
HALE	20	1604	1633	1625	S24	E80	.989	8867	26.7	29	-N	1	C	1625	.21				
GRP 6555	20	1619	1635	1626	N15	W10	.287	8854	19.9	16	-F				.21				1 1 1
HALE	20	1619	1635	1626	N15	W10	.287	8854	19.9	16	-F	1	C	1626	.21	.21			
GRP 6556	20	1704	1720	1710	N26	E08	.432	8854	21.3	16	-F				.40				1 1 1
LOCK	20	1704	1720	1710	N26	E08	.432	8854	21.3	16	-F		C	1710	.40	.40		10	
GRP 6557	20	1722	1731	1725	N16	W10	.300	8854	20.0	9	-F				.25				1 1 1
HUAN	20	1722	1731	1725	N16	W10	.300	8854	20.0	9	-F	2	C	1725	.25	.25			D
GRP 6558	20	1734	1801	1739	N17	E70	.942	8863	26.0	27	-F				.59				2 2 2
LOCK	20	1732	1810	1740	N16	E70	.942	8863	26.0	38	-F		C	1740	.80	1.80		10	K
HUAN	20	1736	1752	1738	N18	E70	.943	8863	26.0	16	-F	1	C	1738	.37				
GRP 6559	20	1741	1807	1753	N17	E67	.924	8863	25.8	26	-F				.51				2 2 2
LOCK	20	1732	1810	1754	N16	E70	.942	8863	26.0	38	-F		C	1754	.80	1.80		10	K
HALE	20	1749	1803	1752	N17	E63	.897	8863	25.5	14	-F	1	C	1752	.21	.50			
GRP 6560	20	1850	1906	1853	N16	E65	.910	8863	25.7	16	-N				.31				2 2 2
HALE	20	1850	1904	1852	N17	E63	.897	8863	25.5	14	-N	1	C	1852	.21	.50			
LOCK	20	1850	1907	1854	N14	E67	.923	8863	25.8	17	-F		C	1854	.40	.80		10	
GRP 6561	20	1915	1955	1930	N14	E36	.611	8860	23.5	40	-F				.60				1 1 1
LOCK	20	1915	1955	1930	N14	E36	.611	8860	23.5	40	-F		C	1930	.60	.80		10	
GRP 6562	20	2009	2018	2011	N32	E31	.671	8854	23.2	9	-B				1.29				6 6 6
HOUS	20	2007	2021	2009	N33	E31	.679	8854	23.2	14	-N		C		1.10	1.50		200	
HALE	20	2008	2020D	2010	N32	E31	.671	8854	23.2	12D	-B	1	P	2010	.62	.80			
HUAN	20	2009	2016	2011	N32	E32	.680	8854	23.2	7	-B	2	C	2011	1.24	1.44			E
LOCK	20	2009	2020	2011	N31	E33	.680	8854	23.3	11	-N		C	2011	1.30	1.80		20	
MCMA	20	2010	2016	2011	N32	E31	.671	8854	23.2	6	-B		C	2011	1.13	1.50			EL
SACP	20	2011E	2016	2011	N34	E30	.680	8854	23.1	5D	1N		C		2.35	2.69			
GRP 6563	20	2033	2045	2036	S33	E37	.756	8858	23.6	12	-F				.20				1 1 1
HOUS	20	2033	2045	2036	S33	E37	.756	8858	23.6	12	-F		C		.20	.30		100	
GRP 6564	20	2125	2135	2130	N14	E70	.941	8863	26.1	10	-F				.31				2 2 2
HALE	20	2121	2135	2129	N16	E70	.942	8863	26.1	14	-F	1	C	2129	.21				
LOCK	20	2128	2135	2130	N12	E69	.934	8863	26.1	7	-F		C	2130	.40	.90		10	
GRP 6565	20	2154	2208	2200	N16	E70	.942	8863	26.2	14	-F				.21				1 1 1
HALE	20	2154	2208	2200	N16	E70	.942	8863	26.2	14	-F	1	C	2200	.21				
GRP 6566	20	2259	2307	2302	N17	E61	.882	8863	25.5	8	-N				.74				3 3 3
HALE	20	2258	2306	2301	N17	E61	.882	8863	25.5	8	-N	1	C	2301	.31	.70			H
LOCK	20	2259	2307		N14	E60	.871	8863	25.5	8	-B		C		.80	1.60		30	
SACP	20	2301	2308	2303	N19	E61	.884	8863	25.5	7	-N		C		1.12	1.72			
GRP 6567	20	2311	2319	2315	S28	E77	.983	8867	26.7	8	-F				.20				1 1 1
LOCK	20	2311	2319	2315	S28	E77	.983	8867	26.7	8	-F		C	2315	.20	.60		10	
GRP 6568	21	0008	0016	0011	N29	E26	.600	8854	23.0	8	-F				.50				2 2 2
HOUS	21	0008	0013	0010	N29	E26	.600	8854	23.0	5	-F		C		.60	.80		100	
LOCK	21	0008	0018	0012	N29	E25	.591	8854	22.9	10	-F		C	0012	.40	.50		10	
GRP 6569	21	0328	0337	0331	N17	E67	.924	8863	26.2	9	-F				.30				1 1 1
CRON	21	0328	0337	0331	N17	E67	.924	8863	26.2	9	-F		C		.30	.70		100	
GRP 6570	21	0744	0759	0750	N16	E58	.856	8863	25.7	15	-F				.56				2 2 2
ABST	21	0743	0800	0749	N16	E58	.856	8863	25.7	17	-F		P		.90	1.60			DJ
CANA	21	0745	0758	0750	N15	E57	.846	8863	25.6	13	-F		C		.21	.40		100	
GRP 6571	21	0756	0814	0800	N19	E64	.906	8863	26.1	18	-F				.67				6 6 6
CANA	21	0755	0804D	0757	N17	E64	.904	8863	26.1	9D	-F		C		.62	1.30		100	
ABST	21	0756	0825	0758	N20	E67	.926	8863	26.4	29	-F		P		1.35				DJ
CAPE	21	0758	0807	0759	N20	E64	.907	8863	26.1	9	-F		C	0759	.46	1.10			
ARCE	21	0800E	0820D		N19	E65	.912	8863	26.2	20D	-N		C	0800	.48	1.00			
CRON	21	0803E	0808	0803U	N19	E62	.891	8863	26.0	5D	-F		C		.40	.80		100	
CAPS	21	0803E	0812		N18	E63	.898	8863	26.1	9D	-N	3		0804	.70				CE
GRP 6572	21	0858	0925	0902	S27	E10	.504	8852	22.1	27	-N				.47				2 2 2
CANA	21	0855	0920	0903	S26	E09	.485	8852	22.0	25	-F		C		.41	.50		100	
ARCE	21	0900	0930	0900	S28	E10	.518	8852	22.1	30	-N		C	0900	.52	.60			EH
GRP 6573	21	1234	1248	1238	N17	W20	.421	8854	20.0	14	-F				.52				1 1 1
HUAN	21	1234	1248	1238	N17	W20	.421	8854	20.0	14	-F	2	C	1238	.52	.51			E
GRP 6574	21	1254	1259	1256	N15	E48	.757	8863	25.1	5	-F				.52				3 3 3
SACP	21	1253	1259	1257	N15	E48	.757	8863	25.1	6	-F		C		.81	1.01			
HOUS	21	1253	1259	1255	N14	E47	.744	8863	25.1	6	-N		C		.50	.80		200	
HUAN	21	1255	1258	1256	N15	E48	.757	8863	25.1	3	-F	2	C	1256	.25	.31			D

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6575	21	1327	1337	1331	S19	E12	.404	8858	22.5	10	-F				.31				2 2 2
HUAN	21	1327	1335	1330	S18	E12	.390	8858	22.5	8	-F	2	C	1330	.21	.21			D
CAPE	21	1327	1338	1331	S19	E11	.397	8858	22.4	11	-F		C	1331	.41	.40			H
GRP 6576	21	1347	1359	1351	N16	E59	.864	8863	26.0	12	-F				.32				1 1 1
CAPE	21	1347	1359	1351	N16	E59	.864	8863	26.0	12	-F		C	1351	.32	.60			
GRP 6577	21	1532	1545	1535	N17	W22	.446	8854	20.0	13	-F				.55				1 1 1
HUAN	21	1532	1545	1535	N17	W22	.446	8854	20.0	13	-F	2	C	1535	.55	.55			E
GRP 6578	21	1630	1645	1635	S21	E56	.860	8867	25.9	15	-N				.15				1 1 1
HALE	21	1630	1645	1635	S21	E56	.860	8867	25.9	15	-N	2	C	1635	.15	.30			
GRP 6579	21	1722	1755	1735	S26	E69	.951	8867	26.9	33	-F				.30				1 1 1
LOCK	21	1722	1755	1735	S26	E69	.951	8867	26.9	33	-F		C	1735	.30	.80		10	
GRP 6580	21	1810	1840	1820	S21	E56	.860	8867	26.0	30	-N				.15				1 1 1
HALE	21	1810	1840	1820	S21	E56	.860	8867	26.0	30	-N	2	C	1820	.15	.30			
GRP 6581	21	1832	1849	1836	S22	E15	.467	8858	22.9	17	-F				.45				3 3 3
LOCK	21	1831	1846	1836	S22	E13	.452	8858	22.7	15	-F		C	1836	.70	.80		10	
HALE	21	1832	1857	1835	S23	E15	.480	8858	22.9	25	-N	2	C	1835	.41	.50			F
HUAN	21	1834	1843	1836	S21	E16	.463	8858	23.0	9	-F	2	C	1836	.25	.25			E
GRP 6582	21	1921	1927	1923	N18	E50	.784	8863	25.6	6	-F				.29				3 3 3
HALE	21	1921	1926	1923	N18	E50	.784	8863	25.6	5	-N	2	C	1923	.26	.40			
HUAN	21	1921	1926	1923	N18	E50	.784	8863	25.6	5	-F	2	C	1923	.21	.22			D
SACP	21	1921	1928	1923	N19	E51	.797	8863	25.6	7	-F		C		.41	.53			
GRP 6583	21	2023	2036	2023	N16	E50	.780	8863	25.6	13	-N				.26				2 2 2
HOUS	21	2020	2033U	2022	N16	E51	.790	8863	25.7	13U	-F		C		.20	.30		100	J
HUAN	21	2023	2028	2024	N18	E50	.784	8863	25.6	5	-F	2	C	2024	.21	.22			D
HOUS	21	2033E	2043U	2034	N14	E50	.776	8863	25.6	10U	-N		C		.30	.50		200	
GRP 6584	21	2109	2120	2112	S24	E70	.954	8867	27.1	11	-F				.25				1 1 1
HUAN	21	2109	2120		S24	E70	.954	8867	27.1	11	-F	1	C	2112	.25				D
GRP 6585	21	2203	2212	2205	N18	E49	.774	8863	25.6	9	-B				.84				4 4 4
HOUS	21	2202	2209D	2204	N17	E48	.761	8863	25.5	7D	-B		C		.90	1.40		300	
SACP	21	2202	2214	2205	N19	E49	.777	8863	25.6	12	-N		C		1.12	1.43			
HUAN	21	2203	2209D	2206	N18	E49	.774	8863	25.6	6D	-N	2	C	2206	.72	.91			D
HALE	21	2204	2210	2205	N18	E49	.774	8863	25.6	6	-B	2	C	2205	.62	1.00			
GRP 6586	21	2235	2245	2235	S23	E13	.466	8858	22.9	10	-F				.31				1 1 1
HALE	21	2235	2245	2235	S23	E13	.466	8858	22.9	10	-F	1	C	2235	.31	.40			
GRP 6587	21	2240	2301	2243	S27	E68	.947	8867	27.0	21	1N				.90				1 1 1
HOUS	21	2240	2301	2243	S27	E68	.947	8867	27.0	21	1N		C		.90	2.40		200	J
GRP 6588	21	2332	0100	2344	S24	E59	.889	8867	26.4	88	-N				.63				2 2 2
LOCK	21	2330	0100	2347	S27	E64	.926	8867	26.8	90	-F		C	2347	.80	1.80		10	J
LOCK	21	2330	0100	0035	S27	E64	.926	8867	26.8	90	-F		C						J
HALE	21	2333	2356D	2340	S21	E54	.843	8867	26.0	23D	-B	2	P	2340	.46	.90			
GRP 6589	22	0235	0251	0239	N19	E49	.776	8863	25.8	16	-N				.34				2 2 2
MANI	22	0233	0252	0238	N19	E50	.786	8863	25.9	19	-N	2		0238	.46	.75			
HALE	22	0236	0250	0240	N18	E47	.753	8863	25.6	14	-N	2	C	0240	.21	.30			
GRP 6590	22	0243	0304	0247	S25	E65	.929	8867	27.0	21	-N				.26				1 1 1
MANI	22	0243	0304	0247	S25	E65	.929	8867	27.0	21	-N	2		0247	.26	.55			
GRP 6591	22	0307	0321	0311	S25	E65	.929	8867	27.0	14	-N				.36				1 1 1
MANI	22	0307	0321	0311	S25	E65	.929	8867	27.0	14	-N	2		0311	.36	.77			
GRP 6592	22	0350	0411	0355	N15	E47	.745	8863	25.7	21	-B				.31				1 1 1
HALE	22	0350	0411	0355	N15	E47	.745	8863	25.7	21	-B	2	C	0355	.31	.50			
GRP 6593	22	0444	0500	0444	S17	W49	.786	8852	18.5	16	-B				.31				1 1 1
HALE	22	0444E	0500D	0444	S17	W49	.786	8852	18.5	16D	-B	2	P	0444	.31	.50			
GRP 6594	22	0444	0500	0448	N14	E50	.776	8863	25.9	16	-B				.41				1 1 1
HALE	22	0444E	0500D	0448	N14	E50	.776	8863	25.9	16D	-B	2	P	0448	.41	.70			
GRP 6595	22	0453	0456	0454	N17	E46	.739	8863	25.7	3	-B				.31				1 1 1
HALE	22	0453	0456	0454	N17	E46	.739	8863	25.7	3	-B	2	C	0454	.31	.50			
GRP 6596	22	0610	0700	0612	S21	E67	.936	8867	27.3	50	1N				1.18				1 1 1
CATA	22	0610	0700	0612	S21	E67	.936	8867	27.3	50	1N			0612	1.18			192	
GRP 6597	22	0655	0715	0700	N16	E45	.726	8863	25.7	20	-N				.46				1 1 1
CATA	22	0655	0715	0700	N16	E45	.726	8863	25.7	20	-N			0700	.46	.70		186	
GRP 6598	22	0725	0737	0727	N18	E44	.720	8863	25.6	12	-F				.40				5 5 5
CANA	22	0723	0735	0724	N16	E44	.714	8863	25.6	12	-F		C		.31	.40		100	
MEUD	22	0724	0735		N20	E45	.738	8863	25.7	11	-F		C	0728	.41	.60			EH
CAPE	22	0725	0732D		N19	E44	.724	8863	25.6	7D	-F		C	0726	.37	.50			
CAPS	22	0727	0742D		N17	E45	.728	8863	25.7	15D	-F	3		0729	.70	1.00		150	E
MANI	22	0728	0737	0730	N18	E42	.698	8863	25.5	9	-N	2		0730	.21	.28			E
GRP 6599	22	0758	0853	0813	N18	E54	.823	8863	26.4	55	1N				1.42				2 2 2
MEUD	22	0756	0806	0756	N17	E44	.717	8863	25.6	10	-F		C	0756	.26	.40			
MEUD	22	0756	0806	0803	N17	E44	.717	8863	25.6	10	-F		C						
MONT	22	0800	0940		N18	E64	.904	8863	27.1	100	1N		C	0830	2.58				H
GRP 6600	22	0841	0854	0846	N16	E43	.703	8863	25.6	13	-F				.55				2 2 2
CANA	22	0836	0855	0846	N15	E43	.700	8863	25.6	19	-F		C		.83	1.10		100	EHI
MEUD	22	0845	0852	0845	N17	E43	.706	8863	25.6	7	-F		C	0845	.26	.40			

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
					APPROX.		CENTRAL	MCMATH PLAGE	CMP										
	DATE 1967 JUNE	START	END	MAX. PHASE	LAT.	MER. DIST.	DISTANCE	REGION	DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 6601	22	0903	0920	0906	N18	E47	.753	8863	25.9	17	1N				2.12				2 2 1
MEUD	22	0900	0909	0902	N17	E44	.717	8863	25.7	9	-F		C	0902	.26	.40			DH
CAPE	22	0906	0931D	0909	N18	E50	.784	8863	26.1	25D	1N		C	0909	2.12	3.40			L
GRP 6602	22	1005	1009	1006	N18	E43	.709	8863	25.6	4	-F				.36				1 1 1
MEUD	22	1005	1009		N18	E43	.709	8863	25.6	4	-F		C	1006	.36	.50			
GRP 6603	22	1010	1015	1010	N15	E42	.688	8863	25.6	5	-N				.42				1 1 1
ARCE	22	1010	1015D		N15	E42	.688	8863	25.6	5D	-N		C	1010	.42	.60			E
GRP 6604	22	1016	1039	1022	S24	E60	.896	8867	26.9	23	-N				1.06				4 4 3
CANA	22	1014	1034	1018	S24	E60	.896	8867	26.9	20	-N		C		.41	.80		200	
MEUD	22	1017	1030		S24	E62	.909	8867	27.1	13	-F		C						
CAPS	22	1018E	1035D		S24	E60	.896	8867	26.9	17D	-N	2		1020	1.00			182	J
CAPF	22	1023E	1055D		S23	E57	.872	8867	26.7	32D	1N		P	1027	1.76	3.76			
GRP 6605	22	1041	1053	1047	N16	E43	.703	8863	25.7	12	-N				.88				3 3 3
CANA	22	1040	1056	1048	N14	E43	.697	8863	25.7	16	-N		C		.72	1.00		200	EHI
MEUD	22	1042	1050		N16	E43	.703	8863	25.7	8	-N		C	1047	.72	1.00			
CAPS	22	1044E	1052D		N17	E44	.717	8863	25.7	8D	-F	2		1047	1.20	1.70		152	C
GRP 6606	22	1131	1200	1140	N17	E42	.694	8863	25.6	29	-N				2.15				5 5 4
MEUD	22	1128	1152	1138	N18	E42	.698	8863	25.6	24	-N		C	1138	.72	1.00			EK
CAPS	22	1132	1154		N16	E43	.703	8863	25.7	22	1F	3		1140	1.80	2.50		152	EJ
CANA	22	1134	1154	1137	N17	E42	.694	8863	25.6	20	-N		C		.41	.60		200	
HUAN	22	1143E	1154		N17	E42	.694	8863	25.6	11D	-N	1	P	1143	.93	1.10			E
WEND	22	1147E	1225		N18	E41	.686	8863	25.6	38D	1N		V		5.16				
GRP 6607	22	1157	1211	1200	N16	E41	.679	8863	25.6	14	-N				.51				4 4 4
CANA	22	1155	1203	1159U	N16	E40	.667	8863	25.5	8	-N		C		.41	.50		200	EI
MEUD	22	1159	1206	1200	N17	E42	.694	8863	25.6	7	-N		C	1200	.52	.70			
HUAN	22	1200E	1215		N16	E41	.679	8863	25.6	15D	-N	1	P	1200	.62	.71			
SALO	22	1205E	1220D		N13	E40	.658	8863	25.5	15D	-N		P	1215	.50	.70	1.50		
GRP 6608	22	1205	1225	1220	S14	W32	.580	8852	20.1	20	-F				.33				1 1 1
SALO	22	1205E	1225D		S14	W32	.580	8852	20.1	20D	-F		P	1220	.33	.50	1.20		
GRP 6609	22	1228	1319	1243	N16	E44	.714	8863	25.8	51	-N				1.22				3 3 3
HUAN	22	1227	1327	1243	N16	E45	.726	8863	25.9	60	-N	1	C	1243	.97	1.20			EH
SACP	22	1228	1311	1242	N16	E42	.691	8863	25.7	43	1F		C		1.87	2.16			
MCMA	22	1230	1318D		N17	E44	.717	8863	25.8	48D	-N		C	1245	.83	1.20			EH
GRP 6610	22	1317	1327	1319	N15	E42	.688	8863	25.7	10	-N				.74				4 4 4
CANA	22	1315	1326	1320	N14	E43	.697	8863	25.8	11	-N		C		.83	1.10		200	EI
HOUS	22	1316	1326	1319	N13	E43	.695	8863	25.8	10	-N		C		1.10	1.50		200	HIJ
MEUD	22	1318	1325	1318	N16	E41	.679	8863	25.6	7	-N		C	1318	.72	1.00			
MCMA	22	1318	1329	1319	N16	E40	.667	8863	25.6	11	-B		C	1319	.31	.40			DS
GRP 6611	22	1335	1356	1340	N16	E39	.655	8863	25.5	21	-N				.75				10 10 8
HOUS	22	1330	1349	1336	N16	E38	.643	8863	25.4	19	-N		C		.50	.70		200	HI
CANA	22	1332	1345	1335	N16	E40	.667	8863	25.6	13	-N		C		.41	.50		200	EI
SACP	22	1332	1400	1336	N16	E40	.667	8863	25.6	28	-F		C		1.43	1.62			
HUAN	22	1334	1354	1342	N16	E40	.667	8863	25.6	20	-B	1	C	1342	.95	1.09			E
WEND	22	1334	1403		N17	E39	.659	8863	25.5	29	1N		V		3.09				
MEUD	22	1335	1349	1341	N17	E40	.671	8863	25.6	14	-N		C	1341	.41	.50			E
MCMA	22	1335	1405	1338	N16	E40	.667	8863	25.6	30	-B		C	1338	.41	.60			E
CAPS	22	1337E	1400		N17	E43	.706	8863	25.8	23D	-B	2		1345	1.00	1.40		216	EJ
ONDR	22	1340E	1349		N13	E28	.498	8863	24.7	9D	-N		V	1341			1.60		DH
CATA	22	1343	1404	1349	N15	E40	.664	8863	25.6	21	-B			1349	.88	1.20		209	
GRP 6612	22	1347	1412	1351	S24	E61	.903	8867	27.1	25	1N				1.62				10 10 8
SACP	22	1346	1403	1358	S23	E59	.887	8867	27.0	17	-F		C		1.23	1.89			
CANA	22	1346	1405	1349U	S24	E60	.896	8867	27.1	19	-N		C		.41	.80		200	
HOUS	22	1346	1412	1349	S25	E60	.898	8867	27.1	26	-N		C		.80	1.70		200	
ONDR	22	1346E	1420		S25	E62	.911	8867	27.2	34D	1N		V	1346			2.20		CH
MEUD	22	1347	1400	1348	S24	E60	.896	8867	27.1	13	-F		C						
CAPS	22	1347E	1410		S24	E62	.909	8867	27.2	23D	1N	2		1353	1.20			176	
HUAN	22	1347	1416	1354	S23	E62	.908	8867	27.2	29	-B	1	C	1354	1.13	1.90			
WEND	22	1347	1418		S23	E59	.887	8867	27.0	31	1N		V		5.16				
MEUD	22	1347	1400	1354	S24	E60	.896	8867	27.1	13	-F		C						
MCMA	22	1348	1415D	1354	S24	E62	.909	8867	27.2	27D	1B		C	1354	1.03	2.50			E
CATA	22	1349	1424	1349	S24	E60	.896	8867	27.1	35	1B			1349	1.97			228	
GRP 6613	22	1445	1506	1449	N17	E39	.659	8863	25.5	21	-N				1.07				9 9 7
LOCA	22	1440	1515	1445	N15	E39	.652	8863	25.5	35	-N		V	1445	1.05	1.50			H
CANA	22	1444	1505	1448	N18	E40	.675	8863	25.6	21	-N		C		.52	.70		200	EH
ZURI	22	1445	1500	1448	N18	E41	.686	8863	25.7	15	-N		P	1448	.91	1.20			
MEUD	22	1446	1502	1450	N18	E40	.675	8863	25.6	16	-N		C	1450	.57	.80			E
HUAN	22	1446	1505	1451	N18	E40	.675	8863	25.6	19	-N	2	C	1451	.55	.63			E
MCMA	22	1446	1610D	1453	N16	E40	.667	8863	25.6	84D	-B		C						
ONDR	22	1447	1504		N16	E27	.502	8863	24.6	17	-N		V	1449			1.80		CEHJ
HOUS	22	1447	1510	1450	N17	E41	.683	8863	25.7	23	-N		C		.80	1.10		200	EHI
WEND	22	1448	1506		N17	E39	.659	8863	25.5	18	1N		V		3.09				
GRP 6614	22	1450	1517	1502	N14	E41	.673	8863	25.7	27	-N				1.07				5 5 5
SACP	22	1441	1520	1500	N14	E42	.685	8863	25.8	39	1N		C		2.96	3.42			
MCMA	22	1446	1610D	1504	N16	E40	.667	8863	25.6	84D	-B			1504	1.03	1.40			EHK
CANA	22	1456	1504	1458	N13	E42	.683	8863	25.8	8	-F		C		.41	.50		100	HI
HUAN	22	1458	1506	1501	N15	E42	.688	8863	25.8	8	-F	2	C	1501	.45	.52			EH
LOCK	22	1505E	1537	1505U	N14	E40	.661	8863	25.6	32D	-F		C	1505	.50	.70		10	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION — MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6615	22	1539	1556	1541	N16	E40	.667	8863	25.7	17	-F				.63				4 4 4
LOCK	22	1538	1553	1540	N14	E40	.661	8863	25.7	15	-F		C	1540	.60	.80		10	
HUAN	22	1538	1554		N16	E39	.655	8863	25.6	16	-F	1	C	1541	.35	.39			E
MEUD	22	1539	1542	1540	N17	E39	.659	8863	25.6	3	-F		C	1540	.62	.80			
CATA	22	1541	1615	1541	N16	E40	.667	8863	25.7	34	-N			1541	.96	1.30		155	
GRP 6616	22	1558	1607	1601	N14	E42	.685	8863	25.8	9	-N				.37				4 4 4
LOCK	22	1556	1615	1559	N13	E42	.683	8863	25.8	19	-F		C	1559	.70	1.00		10	
MEUD	22	1557	1604	1601	N16	E41	.679	8863	25.7	7	-F		C	1601	.31	.40			D
HALE	22	1559E	1604	1601	N13	E42	.683	8863	25.8	5D	-N	1	P	1601	.21	.30			
HUAN	22	1559	1605	1601	N15	E42	.688	8863	25.8	6	-N	2	C	1601	.25	.29			DH
GRP 6617	22	1559	1616	1603	S24	E61	.903	8867	27.2	17	-N				1.24				5 5 4
WEND	22	1558	1626		S23	E58	.880	8867	27.0	28	1N		V		3.09				
HUAN	22	1600	1609	1603	S23	E59	.887	8867	27.1	9	-F	1	C	1603	.25	.38			D
LOCK	22	1600	1615	1604	S25	E57	.877	8867	26.9	15	-F		C	1604	.60	1.10		10	
SALO	22	1600E	1620D		S27	E67	.943	8867	27.7	20D	1B		P	1615	.66	1.70	1.50		
MCMA	22	1601E	1610D	1603	S24	E62	.909	8867	27.3	9D	-N		C	1603	.62	1.50			E
GRP 6618	22	1623	1630	1626	N16	E39	.655	8863	25.6	7	-F				.31				1 1 1
HUAN	22	1623	1630	1626	N16	E39	.655	8863	25.6	7	-F	2	C	1626	.31	.35			D
GRP 6619	22	1637	1658	1642	N16	E38	.643	8863	25.5	21	-N				.48				5 5 5
LOCK	22	1635	1658	1644	N15	E38	.639	8863	25.5	23	-F		C	1644	.80	1.00		10	
HUAN	22	1636	1659	1641	N16	E38	.643	8863	25.5	23	-N	2	C	1641	.50	.55			
HALE	22	1637	1657	1642	N15	E38	.639	8863	25.5	20	-B	1	C	1642	.31	.40			
MCMA	22	1637	1715D	1643	N16	E38	.643	8863	25.5	38D	-N		C	1643	.52	.70			EK
MEUD	22	1640	1643	1641	N17	E39	.659	8863	25.6	3	-F		C	1641	.26	.30			D
GRP 6620	22	1701	1716	1707	N16	E38	.643	8863	25.6	15	-N				1.93				5 5 3
MCMA	22	1637	1715D	1709	N16	E38	.643	8863	25.5	38D	-N			1709					
SACP	22	1659	1718	1708	N17	E37	.635	8863	25.5	19	1N		C		4.20	4.67			
LOCK	22	1701	1714	1706	N15	E38	.639	8863	25.6	13	-F		C	1706	.80	1.00		10	
HALE	22	1702	1715	1706	N17	E37	.635	8863	25.5	13	-B	1	C	1706	.41	.50			H
HUAN	22	1703	1718	1708	N17	E38	.647	8863	25.6	15	-N	2	C	1708	.80	.90			E
GRP 6621	22	1746	1806	1752	N16	E38	.643	8863	25.6	20	-F				.84				5 5 4
LOCK	22	1742	1807	1750	N15	E38	.639	8863	25.6	25	-F		C	1750	.80	1.00		10	JK
HALE	22	1743	1756	1749	N15	E38	.639	8863	25.6	13	-N	1	C	1749	.31	.40			
MCMA	22	1745	1858D	1754	N16	E40	.667	8863	25.7	73D	-N		C						
HUAN	22	1749	1812	1753	N17	E38	.647	8863	25.6	23	-F	2	C	1753	1.00	1.10			E
SACP	22	1749	1810	1803	N17	E37	.635	8863	25.5	21	-F		C		1.24	1.36			
GRP 6622	22	1754	1806	1757	S23	E01	.420	8858	22.8	12	-N				.76				3 3 3
SACP	22	1754	1804	1757	S23	E01	.420	8858	22.8	10	-F		C		.93	.93			
HALE	22	1754	1810	1756	S23	E00	.420	8858	22.7	16	-B	1	C	1756	.31	.31			
HUAN	22	1755	1804	1757	S22	E01	.404	8858	22.8	9	-N	2	C	1757	1.05	1.05			E
GRP 6623	22	1810	1847	1826	N16	E38	.643	8863	25.6	37	-N				1.80				6 6 6
MCMA	22	1745	1858D	1825	N16	E40	.667	8863	25.7	73D	-N			1825	1.65	2.20			E
SACP	22	1811	1842	1828	N16	E37	.631	8863	25.5	31	1N		C		2.45	2.71			
HALE	22	1812	1850	1833	N15	E38	.639	8863	25.6	38	-N	1	C	1833	.31	.40			
LOCK	22	1812	1850	1826	N15	E38	.639	8863	25.6	38	-N		C	1826	1.40	1.80		20	JK
LOCK	22	1812	1850	1840	N15	E38	.639	8863	25.6	38	-N		C						JK
WEND	22	1814	1847		N17	E37	.635	8863	25.5	33	1N		V		4.13				
HUAN	22	1819	1845	1827	N15	E38	.639	8863	25.6	26	-B	2	C	1827	.88	.97			E
HALE	22	1820	1842	1825	N14	E37	.623	8863	25.5	22	-N	1	C	1842	.31	.40			H
GRP 6624	22	1845	1915	1854	S24	E57	.875	8867	27.1	30	-B				1.60				6 6 5
MCMA	22	1836E	1940D	1858	S24	E61	.903	8867	27.4	64D	-B		C	1858	.83	1.90			E
LOCK	22	1837	1925	1853	S25	E55	.862	8867	26.9	48	-N		C	1853	.90	1.70		20	
HUAN	22	1848	1912	1854	S22	E56	.862	8867	27.0	24	-B	2	C	1854	.83	1.26			
WEND	22	1848	1908D		S23	E56	.865	8867	27.0	20D	1N		V		4.13				
HOUS	22	1849	1905	1853	S25	E56	.870	8867	27.0	16	1N		C		1.30	2.50		200	I
HALE	22	1850	1900	1854	S24	E55	.860	8867	26.9	10	-B	1	C	1854	.31	.60			
GRP 6625	22	1941	2000	1947	N16	E40	.667	8863	25.8	19	-F				.51				2 2 2
LOCK	22	1939	1957	1945	N15	E38	.639	8863	25.7	18	-F		C	1945	.60	.80		10	
HUAN	22	1943	2003	1948	N16	E37	.631	8863	25.6	20	-F	2	C	1948	.21	.23			D
HUAN	22	1951	2030D		N18	E45	.731	8863	26.2	39D	-F	1	C	1956	.21	.25			D
GRP 6626	22	2001	2020	2008	S24	E57	.875	8867	27.1	19	-N				.45				4 4 4
HUAN	22	1954	2017	2007	S24	E56	.867	8867	27.0	23	-N	1	C	2007	.37	.54			E
HALE	22	1958	2019	2008	S24	E55	.860	8867	27.0	21	-B	1	C	2008	.31	.60			
LOCK	22	2005	2014	2007	S25	E55	.862	8867	27.0	9	-F		C	2007	.60	1.10		10	
MCMA	22	2006	2028	2008	S24	E60	.896	8867	27.3	22	-N		C	2008	.52	1.20			E
GRP 6627	22	2040	2144	2112	N17	E42	.694	8863	26.0	64	-N				1.29				4 4 4
MCMA	22	2015E	2158D	2112	N18	E43	.709	8863	26.1	103D	-N			2112	1.03	1.50			EK
LOCK	22	2040	2144	2111	N15	E43	.700	8863	26.1	64	-N		C	2111	1.30	1.80		20	
SACP	22	2047E	2130	2108	N18	E41	.686	8863	25.9	43D	1F		C		2.27	2.61			
HUAN	22	2111E	2125D		N15	E40	.664	8863	25.9	14D	-N	1	P	2115	.56	.66			E
GRP 6628	22	2041	2151	2049	N16	E41	.679	8863	25.9	70	-N				.31				3 3 1
MCMA	22	2015E	2158D	2047	N18	E43	.709	8863	26.1	103D	-N		C						
LOCK	22	2040	2144	2050	N15	E43	.700	8863	26.1	64	-N		C						
HALE	22	2042	2105D	2050	N14	E38	.636	8863	25.7	23D	-N	1	P	2050	.31	.40			

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OBSERV-ATORY	OBSERVED UT				LOCATION						DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6629	22	2200	2230	2206	N15	E36	.614	8863	25.6		30	-F				.43				2 2 2
LOCK	22	2200	2230	2206	N15	E35	.601	8863	25.5		30	-F		C	2206	.60	.80		10	
HUAN	22	2204E	2221D		N15	E36	.614	8863	25.6		17D	-F	1	P	2221	.25	.27			D
GRP 6630	22	2218	2250	2230	S25	E55	.862	8867	27.1		32	-F				.50				1 1 1
LOCK	22	2218	2250	2230	S25	E55	.862	8867	27.1		32	-F		C	2230	.50	1.00		10	
GRP 6631	22	2248	2310	2256	N15	E35	.601	8863	25.6		22	-F				.60				1 1 1
LOCK	22	2248	2310	2256	N15	E35	.601	8863	25.6		22	-F		C	2256	.60	.80		10	
GRP 6632	22	2359	0018	0008	N15	E35	.601	8863	25.6		19	-F				.80				1 1 1
LOCK	22	2359	0018	0008	N15	E35	.601	8863	25.6		19	-F		C	0008	.80	1.00		10	
GRP 6633	23	0037	0100	0040	N15	E35	.601	8863	25.7		23	-N				1.45				3 3 2
LOCK	23	0036	0110	0039	N15	E35	.601	8863	25.6		34	-B		C						K
HOUS	23	0036	0047D	0039	N15	E27	.495	8863	25.0		11D	-N		C		1.00	1.10		200	
CRON	23	0038	0050	0040	N18	E35	.614	8863	25.7		12	-N		C		.50	.60		200	
HOUS	23	0038	0047D	0042	N13	E34	.580	8863	25.6		9D	-N		C		1.40	1.70		200	EI
GRP 6634	23	0039	0108	0050	N15	E34	.588	8863	25.6		29	1N				2.39				5 5 4
LOCK	23	0036	0110	0052	N15	E35	.601	8863	25.6		34	-B		C	0052	1.60	1.90		30	K
SACP	23	0037	0112	0047	N16	E33	.579	8863	25.5		35	1N		C		3.57	3.84			
SIBE	23	0038	0105	0052	N14	E33	.570	8863	25.5		27	1N		P	0052	2.31	2.90		130	CEFT
MANI	23	0040	0108D	0051	N15	E33	.575	8863	25.5		28D	1B	1		0051	2.06	2.52			U
CRON	23	0046	0107	0055	N14	E34	.583	8863	25.6		21	-N		C		.70	.90		200	EIJ
CRON	23	0046	0107	0049	N14	E34	.583	8863	25.6		21	-N								
GRP 6635	23	0127	0148	0131	N16	E33	.579	8863	25.5		21	-B				.61				2 2 2
LOCK	23	0126	0145	0131	N15	E33	.575	8863	25.5		19	-N		C	0131	.80	1.00		20	
HALE	23	0128	0150	0130	N17	E33	.584	8863	25.5		22	-B	1	C	0130	.41	.50			
GRP 6636	23	0132	0139	0133	N18	W34	.602	8854	20.5		7	-N				.26				1 1 1
MANI	23	0132E	0139D		N18	W34	.602	8854	20.5		7D	-N	1		0133	.26	.32			
GRP 6637	23	0305	0320	0310	N16	E32	.567	8863	25.5		15	1B				1.07				2 2 2
HALE	23	0304	0320	0311	N18	E31	.565	8863	25.5		16	-B	2	C	0311	.31	.40			H
SIBE	23	0306	0320	0310	N16	E32	.567	8863	25.5		14	1N		P	0310	1.82	2.30		94	CET
HALE	23	0310	0326	0310	N15	E33	.575	8863	25.6		16	-B	2	C	0310	.31	.40			
GRP 6638	23	0452	0506	0453	N15	E31	.548	8863	25.5		14	1N				2.81				2 2 1
HALE	23	0450	0501D	0452	N16	E31	.554	8863	25.5		11D	-B	2	P	0452	.31	.40			
SIBE	23	0453	0506	0454	N14	E31	.543	8863	25.5		13	1F		C	0454	2.81	3.40		60	CET
GRP 6639	23	0549	0620	0551	N15	E32	.562	8863	25.6		31	-F				1.38				2 2 2
MANI	23	0548E	0622	0551	N16	E31	.554	8863	25.6		34D	-F	1		0551	.93	1.11			
SIBE	23	0550E	0617		N14	E32	.557	8863	25.6		27D	-F		C	0550	1.82	1.20		60	CET
GRP 6640	23	0601	0629	0607	N15	E30	.535	8863	25.5		28	-N				.76				4 3 2
ONDR	23	0533E	0621	0603	N15	E28	.508	8863	25.3		48D	-N		V	0603			2.10		CHJ
BUCA	23	0559E	0629D		N15	E31	.548	8863	25.6		30D	-F		C	0610	1.11	1.30			
CRON	23	0603	0619	0608	N14	E31	.543	8863	25.6		16	-N		C		.40	.50		200	
WEND	23	0623E	0647D		N17	E30	.546	8863	25.5		24D	1N		V		3.09				
GRP 6641	23	0725	0747	0731	S25	E52	.840	8867	27.2		22	1N				2.00				2 2 1
CAPS	23	0724	0748		S22	E53	.838	8867	27.3		24	1N	2		0732	2.00	3.40		197	EJ
CATA	23	0725	0745	0730	S27	E50	.830	8867	27.1		20	-N			0730	.33	.60		191	
GRP 6642	23	1015	1045	1030	S24	E49	.811	8867	27.1		30	-N				.75				1 1 1
LOCA	23	1015	1045	1030	S24	E49	.811	8867	27.1		30	-N		V	1030	.75	1.40			
GRP 6643	23	1034	1205	1124	N29	E48	.799	8863	27.0		91	1N				4.18				3 3 3
CAPE	23	1032	1149		N30	E48	.803	8863	27.0		77	3N		P	1122	7.70	12.50			CFK
CAPE	23	1032	1149		N30	E48	.803	8863	27.0		77	2N		P	1130	7.33	11.90			
CAPE	23	1032	1149		N30	E48	.803	8863	27.0		77	2N		P	1125	6.59	10.70			
CANA	23	1035	1205U	1119	N27	E45	.764	8863	26.8		90U	1F		C		2.27	3.40		100	E
CAPE	23	1115	1133	1121	N16	E30	.541	8863	25.7		18	-N		C	1121	1.53	1.80			V
MCMA	23	1130E	1220D		N30	E50	.819	8863	27.2		50D	-N		C	1132	1.03	1.80			BFL
GRP 6644	23	1138	1153	1140	S27	E51	.838	8867	27.3		15	-N				.35				2 2 2
MCMA	23	1138	1150	1140	S25	E50	.823	8867	27.2		12	-N		C	1140	.36	.60			E
SALO	23	1140E	1155		S28	E51	.842	8867	27.3		15D	-N		P	1155	.33	.60	1.40		
GRP 6645	23	1219	1249	1223	S25	E49	.815	8867	27.2		30	-N				.44				2 2 2
MCMA	23	1218E	1311	1245	S25	E50	.823	8867	27.3		53D	-N			1245	.62	1.10			EK
MCMA	23	1218E	1311	1225	S25	E50	.823	8867	27.3		53D	-N		C						
HUAN	23	1220	1226	1221	S24	E48	.802	8867	27.1		6	-F	2	C	1221	.25	.32			D
GRP 6646	23	1315	1327	1317	S24	E49	.811	8867	27.2		12	-N				.36				2 2 2
HUAN	23	1314	1321	1316	S23	E48	.798	8867	27.2		7	-F	2	C	1316	.31	.40			D
MCMA	23	1315	1333	1318	S25	E50	.823	8867	27.3		18	-N		C	1318	.41	.70			E
GRP 6647	23	1420	1434	1424	N26	E01	.408	8860	23.7		14	-N				.50				1 1 1
CAPS	23	1420	1434		N26	E01	.408	8860	23.7		14	-N	3		1424	.50	.60			EGJ
GRP 6648	23	1605	1620	1614	N14	E25	.462	8863	25.5		15	-N				1.18				2 2 2
CATA	23	1559	1621	1615	N12	E25	.450	8863	25.5		22	-N			1615	.92	1.00		186	
SACP	23	1611	1618	1613	N15	E24	.455	8863	25.5		7	-F		C		1.43	1.45			
GRP 6649	23	1606	1625	1617	S25	E45	.780	8867	27.0		19	-N				.55				2 2 2
CATA	23	1559	1621	1615	S27	E44	.780	8867	27.0		22	-N			1615	.29	.50		182	
SACP	23	1613	1628	1618	S23	E45	.771	8867	27.1		15	-F		C		.81	1.03			

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6650	23	1613	1651	1619	N29	W10	.480	8854	22.9	38	-N				1.19				5 5 5
SACP	23	1611	1657	1616	N28	W12	.477	8854	22.8	46	-N		C		1.53	1.57			
HUAN	23	1612	1650		N28	W12	.477	8854	22.8	38	-F	2	P	1619	1.13	1.15			E
CATA	23	1615	1630	1621	N30	W08	.486	8854	23.1	15	-N			1621	1.25	1.40		190	
MCMA	23	1615	1650	1600	N28	W09	.461	8854	23.0	35	-N		C	1620	.93	1.10			E
LOCK	23	1620E	1710	1620E	N30	W10	.494	8854	22.9	50D	-F		C	1620	1.10	1.30		10	B
GRP 6651	23	1847	1928	1901	N18	E23	.465	8863	25.5	41	1B				1.94				6 6 5
LOCK	23	1840	1932	1905	N18	E21	.440	8863	25.4	52	1B		C	1905	2.10	2.30		30	
HUAN	23	1842	1928	1906	N18	E24	.477	8863	25.6	46	-B	2	C	1906	1.24	1.27			E
HALE	23	1848	1934	1858	N18	E24	.477	8863	25.6	46	-B	3	C	1858	1.08	1.20			EK
MCMA	23	1852	1928	1909	N18	E23	.465	8863	25.5	36	-B			1909	1.13	1.20			EK
MCMA	23	1852	1928	1859	N18	E23	.465	8863	25.5	36	-B		C						
SACP	23	1854	1932	1858	N19	E23	.473	8863	25.5	38	1N		C		3.16	3.24			
HOUS	23	1856E	1913	1859	N18	E24	.477	8863	25.6	17D	1N		C		2.10	2.40		200	E
HALE	23	1908	1919	1908	N18	E20	.428	8863	25.3	11	-B	3	C	1908	.21	.21			
GRP 6652	23	1934	1949	1937	N15	E22	.428	8863	25.5	15	-B				.87				6 6 6
SACP	23	1933	1948	1937	N15	E22	.428	8863	25.5	15	-N		C		1.12	1.13			
HOUS	23	1933	1951	1936	N14	E22	.420	8863	25.5	18	-N		C		.80	.90		200	E
LOCK	23	1933	1952	1936	N14	E23	.434	8863	25.5	19	-B		C	1936	1.00	1.10		30	
HALE	23	1934	1950	1937	N14	E23	.434	8863	25.5	16	-B	3	C	1937	.72	.80			E
HUAN	23	1935	1943D	1937	N14	E22	.420	8863	25.5	8D	-N	1	P	1937	.95	.95			E
MCMA	23	1935	1945	1937	N16	E20	.410	8863	25.3	10	-B		C	1937	.62	.70			E
GRP 6653	23	2012	2022	2018	N21	E91	1.000	8871	30.7	10	1N				.92				1 1 1
SACP	23	2012	2022D	2018	N21	E91	1.000	8871	30.7	10D	1N		C		.92				
GRP 6654	23	2035	2049	2040	N19	E21	.450	8863	25.4	14	-F				.49				3 3 3
LOCK	23	2033	2051	2038	N18	E21	.440	8863	25.4	18	-F		C	2038	.90	1.00		10	
HALE	23	2035	2048	2042	N19	E22	.461	8863	25.5	13	-N	3	C	2042	.21	.21			
MCMA	23	2037	2048	2040	N19	E20	.438	8863	25.4	11	-F		C	2040	.36	.40			E
GRP 6655	23	2142	2148	2145	N14	E24	.448	8863	25.7	6	-F				.40				1 1 1
LOCK	23	2142	2148	2145	N14	E24	.448	8863	25.7	6	-F		C	2145	.40	.40		10	
GRP 6656	23	2217	2227	2219	N16	E28	.514	8863	26.0	10	-N				.31				3 3 3
LOCK	23	2216	2233	2219	N17	E27	.508	8863	26.0	17	-F		C	2219	.50	.60		10	
HALE	23	2218	2224	2218	N17	E25	.482	8863	25.8	6	-B	3	C	2218	.21	.21			
MANI	23	2218	2225	2220	N14	E31	.543	8863	26.3	7	-N	2		2220	.21	.25			
GRP 6657	23	2243	2254	2246	N14	E24	.448	8863	25.7	11	-N				.56				2 2 2
LOCK	23	2241	2255	2245	N14	E24	.448	8863	25.7	14	-F		C	2245	.70	.80		10	
HALE	23	2244	2253	2246	N14	E23	.434	8863	25.7	9	-B	3	C	2246	.41	.50			
GRP 6658	23	2346	0026	0016	S22	E36	.676	8867	26.7	40	-F				.30				2 2 2
LOCK	23	2257	2340	2310	S25	E42	.752	8867	27.1	43	-F		C	2310	.50	.80		10	J
LOCK	23	2340	0030	0015	S25	E42	.752	8867	27.1	50	-F		C	0015	.50	.80		10	
HOUS	23	2353	0022	2355	S20	E31	.609	8867	26.3	29	-F		C		.30	.40		100	J
HOUS	23	2353	0022	0018	S20	E31	.609	8867	26.3	29	-F								
GRP 6659	23	2348	0006	2354	N15	E21	.415	8863	25.6	18	-N				.56				4 4 4
HALE	23	2346	2356D	2353	N14	E20	.393	8863	25.5	10D	-B	3	C	2353	.31	.32			
LOCK	23	2348	0006	2354	N14	E21	.407	8863	25.6	18	-F		C	2354	.60	.70		10	
HOUS	23	2349	0006	2352	N14	E21	.407	8863	25.6	17	-N		C		.50	.52		200	E
MITK	23	2350E	0006D	2358	N16	E20	.410	8863	25.5	16D	-F		C	2358	.83	.90			E
GRP 6660	24	0023	0029	0025	N17	E19	.405	8863	25.4	6	-F				.15				1 1 1
HALE	24	0023	0029	0025	N17	E19	.405	8863	25.4	6	-F	2	C	0025	.15	.20			
GRP 6661	24	0140	0155	0143	N15	E19	.387	8863	25.5	15	-N				.44				3 3 3
LOCK	24	0140	0151	0143	N14	E19	.379	8863	25.5	11	-N		C	0143	.40	.40		20	
HALE	24	0140	0205	0142	N15	E18	.374	8863	25.4	25	-N	2	C	0142	.21	.22			
SACP	24	0141	0148	0144	N15	E19	.387	8863	25.5	7	-F		C		.71	.71			
GRP 6662	24	0208	0220	0210	N14	E18	.365	8863	25.4	12	-N				.36				2 2 2
HALE	24	0207	0225	0209	N14	E17	.352	8863	25.4	18	-N	2	C	0209	.41	.42			H
CRON	24	0209	0214	0210	N14	E18	.365	8863	25.4	5	-N		C		.30	.32		200	
GRP 6663	24	0302	0335	0322	N18	E20	.427	8863	25.6	33	-N				.47				2 2 2
HALE	24	0247	0339	0322	N19	E19	.425	8863	25.5	52	-B	2	C	0322	.41	.50			H
HALE	24	0315	0337	0317	N16	E22	.435	8863	25.8	22	-B	2	C	0317	.15	.20			
MANI	24	0316	0330	0321	N17	E20	.418	8863	25.6	14	-F	1		0321	.52	.57			
GRP 6664	24	0408	0416	0412	N14	E19	.379	8863	25.6	8	-N				.15				1 1 1
HALE	24	0408	0416	0412	N14	E19	.379	8863	25.6	8	-N	2	C	0412	.15	.20			H
GRP 6665	24	0627	0854	0703	N24	W13	.427	8854	23.3	147	1N				3.21				2 2 2
BUCA	24	0627E	0730D	0702	N22	W11	.385	8854	23.4	63D	-F		P	0702	1.11	1.20			
CAPE	24	0659	0854		N25	W14	.448	8854	23.2	115	2N		P	0703	5.30	5.90			BFI
GRP 6666	24	0712	0732	0719	N19	E17	.403	8863	25.6	20	-F				.56				1 1 1
BUCA	24	0712E	0732D		N19	E17	.403	8863	25.6	20D	-F		C	0719	.56	.60			
GRP 6667	24	0938	0951	0942	N18	E15	.370	8863	25.5	13	-N				.48				5 5 4
CAPE	24	0933	1003	0941	N19	E15	.381	8863	25.5	30	1N		C	0941	3.68	4.00			V
CANA	24	0936	0946	0938	N18	E15	.370	8863	25.5	10	-F		C		.31	.32		100	
MEUD	24	0939	0945	0942	N18	E14	.359	8863	25.5	6	-F		C	0942	.31	.32			D
ARCE	24	0940	0950D		N19	E16	.392	8863	25.6	10D	-N		C	0944	.48	.50			D
CAPS	24	0941	0950		N18	E15	.370	8863	25.5	9	-N	3		0943	.80	.90		182	D

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6668	24	0942	1045	1001	N17	E17	.381	8863	25.7	63	1N				2.31				3 3 3
CAPE	24	0905	1150	0956	N23	E25	.530	8863	26.3	165	2N		C	0956	4.66	5.50			FLT
CANA	24	0958	1005	1001	N14	E14	.314	8863	25.5	7	-F		C		.31	.32		100	HIJ
CAPE	24	0959	1024	1004	N15	E13	.313	8863	25.4	25	-N		C	1004	.60	.60			JKLH
CAPS	24	1003	1021		N15	E13	.313	8863	25.4	18	-N	3		1005	1.00	1.10		152	HK
CAPE	24	1041	1059	1043	N19	E19	.425	8863	25.9	18	-F		C	1043	.37	.40			
GRP 6669	24	1008	1021	1016	N15	E14	.324	8863	25.5	13	-N				.64				6 6 5
CAPE	24	0959	1024	1016	N15	E13	.313	8863	25.4	25	-N		C	1016	1.10	1.20			
CAPS	24	1003	1021		N15	E13	.313	8863	25.4	18	-N			1016				170	
SALO	24	1010E	1020D		N13	E15	.316	8863	25.5	10D	-N		V	1015	.50	.50	1.40		
CANA	24	1011	1020	1014	N14	E14	.314	8863	25.5	9	-F		C		.31	.32		100	HIJ
ABST	24	1011	1020	1016	N14	E14	.314	8863	25.5	9	-F		P		.90	1.40			DL
SALO	24	1015E	1022		N12	E17	.335	8863	25.7	7D	-F		V	1015	.41	.42	1.30		
MEUD	24	1016	1020	1016	N16	E12	.314	8863	25.3	4	-F		C	1016	.41	.42			
GRP 6670	24	1010	1020	1015	S27	E40	.746	8867	27.4	10	-F				.33				1 1 1
SALO	24	1010E	1020D		S27	E40	.746	8867	27.4	10D	-F		V	1015	.33	.50	1.20		
GRP 6671	24	1056	1151	1115	S21	W60	.891	8852	20.0	55	1N				.97				1 1 1
CAPE	24	1056	1151	1115	S21	W60	.891	8852	20.0	55	1N		C	1115	.97	2.20			H
GRP 6672	24	1114	1153	1128	S18	W63	.907	8852	19.7	39	1N				1.47				1 1 1
CAPE	24	1114	1153	1128	S18	W63	.907	8852	19.7	39	1N		C	1128	1.47	3.60			J
GRP 6673	24	1244	1255	1246	N15	E13	.313	8863	25.5	11	-N				1.17				7 7 5
CANA	24	1242	1253	1245	N14	E14	.314	8863	25.6	11	-N		C		.31	.32		200	
WEND	24	1242	1256		N14	E13	.301	8863	25.5	14	1N		V		3.09				
HOUS	24	1243	1253	1245	N15	E14	.324	8863	25.6	10	-N		C		.50	.52		200	E
ONDR	24	1244	1251		N17	E13	.336	8863	25.5	7	-N		V	1246			2.10		C
HUAN	24	1245	1255	1246	N15	E13	.313	8863	25.5	10	-N	1	C	1246	.62	.62			E
CAPE	24	1245	1300	1247	N16	E12	.314	8863	25.4	15	-N		C	1247	1.16	1.20			V
CAPS	24	1247E	1254D		N15	E14	.324	8863	25.6	7D	-F	2		1249	.50	.50			C
GRP 6674	24	1329	1340	1332	N29	W21	.553	8854	23.0	11	-F				1.11				1 1 1
CAPE	24	1329	1340	1332	N29	W21	.553	8854	23.0	11	-F		C	1332	1.11	1.80			I
GRP 6675	24	1348	1425	1356	S17	W66	.926	8852	19.6	37	1F				.84				1 1 1
CAPE	24	1348	1425	1356	S17	W66	.926	8852	19.6	37	1F		C	1356	.84	2.20			F
GRP 6676	24	1353	1402	1355	N15	E16	.349	8863	25.8	9	-N				1.36				4 4 3
HOUS	24	1352	1358U	1353	N14	E16	.339	8863	25.8	6U	-N		C		.20	.21		200	I
HUAN	24	1353	1358	1355	N14	E15	.326	8863	25.7	5	-N	2	C	1355	.50	.50			E
CAPE	24	1353	1402	1355	N15	E14	.324	8863	25.6	9	1N		C	1355	2.54	2.70			H
CAPF	24	1355E	1410D		N16	E18	.384	8863	25.9	15D	-N		P	1358	1.03	1.15			
GRP 6677	24	1442	1458	1445	S22	W24	.553	8858	22.8	16	-N				1.77				3 3 3
HOUS	24	1442	1451	1444	S22	W25	.563	8858	22.7	9	-N		C		1.50	1.80		200	E
HUAN	24	1442	1507	1447	S23	W23	.554	8858	22.9	25	-B	1	C	1447	1.80	1.82			
CAPS	24	1443E	1455		S21	W24	.543	8858	22.8	12D	1N	3		1445	2.00	2.80		188	CF
GRP 6678	24	1513	1523	1516	N19	E12	.352	8863	25.5	10	-N				.60				4 4 4
LOCA	24	1512	1525	1515	N18	E10	.321	8863	25.4	13	-N		V	1515	.73	.80			
HUAN	24	1514	1520		N19	E12	.352	8863	25.5	6	-F	1	C	1516	.25	.25			D
CAPS	24	1516E	1523		N18	E12	.339	8863	25.5	7D	-F	3		1517	.40	.40		157	
CAPF	24	1516E	1525D		N19	E12	.352	8863	25.5	9D	-N		P	1517	1.03	1.15			
GRP 6679	24	1550	1612	1604	N18	E12	.339	8863	25.6	22	-N				.59				3 3 3
LOCK	24	1540	1615	1604	N17	E12	.326	8863	25.6	35	-F		C	1604	.70	.80		10	H
HUAN	24	1559	1608	1603	N18	E12	.339	8863	25.6	9	-N	1	C	1603	.75	.75			
MCMA	24	1602E	1612	1605	N18	E12	.339	8863	25.6	10D	-N		C	1605	.31	.32			EH
GRP 6680	24	1605	1615	1609	N29	W21	.553	8854	23.1	10	-N				.84				1 1 1
LOCA	24	1605	1615	1609	N29	W21	.553	8854	23.1	10	-N		V	1609	.84	1.00			
GRP 6681	24	1630	1647	1638	N17	E12	.326	8863	25.6	17	-F				.60				1 1 1
LOCK	24	1630	1647	1638	N17	E12	.326	8863	25.6	17	-F		C	1638	.60	.70		10	
GRP 6682	24	1704	1715	1709	S14	E35	.619	8867	27.3	11	-F				.20				1 1 1
LOCK	24	1704	1715	1709	S14	E35	.619	8867	27.3	11	-F		C	1709	.20	.30		10	
GRP 6683	24	1705	1714	1710	N13	E33	.566	8863	27.2	9	-N				.20				1 1 1
HOUS	24	1705	1714	1710	N13	E33	.566	8863	27.2	9	-N		C		.20	.22		200	
GRP 6684	24	1718	1800	1749	N16	E16	.359	8863	25.9	42	-F				.41				2 2 2
LOCK	24	1718	1800	1749E	N16	E16	.359	8863	25.9	42	-F		C	1749	.50	.60		10	
MCMA	24	1720E	1755	1725	N16	E15	.347	8863	25.8	35D	-F		C	1725	.31	.32			E
GRP 6685	24	1821	1830	1825	N13	W70	.940	8854	19.5	9	-F				.20				1 1 1
LOCK	24	1821	1830	1825	N13	W70	.940	8854	19.5	9	-F		C	1825	.20	.50		10	
GRP 6686	24	1920	1950	1926	N17	E12	.326	8863	25.7	30	-F				.60				1 1 1
LOCK	24	1920	1950	1926	N17	E12	.326	8863	25.7	30	-F		C	1926	.60	.70		10	J
GRP 6687	24	2003	2051	2010	N22	W47	.764	8854	21.3	48	-N				.31				2 2 2
HALE	24	2000	2122	2023	N29	W25	.587	8854	23.0	82	-N	2	C	2023	.21	.30			K
LOCK	24	2005	2020	2010	N15	W69	.935	8854	19.7	15	-F		C	2010	.40	.90		10	J
GRP 6688	24	2025	2030	2026	S26	E27	.620	8867	26.9	5	-F				.36				2 2 2
LOCK	24	2024	2029	2026	S26	E26	.611	8867	26.8	5	-F		C	2026	.40	.50		10	H
HALE	24	2025	2030	2026	S25	E27	.611	8867	26.9	5	-F	2	C	2026	.31	.40			
GRP 6689	24	2033	2059	2041	N20	W56	.843	8854	20.7	26	-F				.30				3 3 3
HALE	24	2000	2122	2042	N28	W28	.605	8854	22.7	82	-F	2	C	2042	.21	.30			
HOUS	24	2031	2044	2039	N16	W70	.941	8854	19.6	13	-N		C		.30	.70		200	
LOCK	24	2035	2050	2041	N15	W69	.935	8854	19.7	15	-F		C	2041	.40	.90		10	

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	DATE 1967 JUNE	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 6690	24	2137	2159	2144	N19	E17	.403	8863	26.2	22	-N				.38				2 2 2
LOCK	24	2137	2153	2144	N16	E13	.324	8863	25.9	16	-F		C	2144	.50	.60		10	
HALE	24	2151	2205	2201	N22	E20	.467	8863	26.4	14	-N	2	C	2201	.26	.30			
GRP 6691	24	2141	2152	2144	N15	W70	.941	8854	19.7	11	-N				.35				4 4 4
HOUS	24	2140	2153	2143	N15	W70	.941	8854	19.7	13	-N		C		.30	.70		200	
LOCK	24	2140	2155	2145	N15	W69	.935	8854	19.7	15	-F		C	2145	.50	1.20		10	
HALE	24	2142	2149	2143	N15	W70	.941	8854	19.7	7	-N	2	C	2143	.26				J
HUAN	24	2142	2149		N15	W70	.941	8854	19.7	7	-F	1	C	2145	.33				D
GRP 6692	24	2209	2234	2214	N19	E15	.381	8863	26.0	25	-F				.38				2 2 2
HALE	24	2206	2234	2213	N19	E13	.361	8863	25.9	28	-F	1	C	2213	.21	.21			
HUAN	24	2211	2222D		N19	E17	.403	8863	26.2	11D	-F	2	C	2215	.55	.55			E
GRP 6693	24	2230	2252	2240	N16	W70	.941	8854	19.7	22	-N				.40				2 2 2
HOUS	24	2230	2242D	2239	N16	W70	.941	8854	19.7	12D	-N		C		.30	.70		200	
LOCK	24	2230	2252	2240	N15	W69	.935	8854	19.8	22	-F		C	2240	.50	1.20		10	
GRP 6694	24	2320	2345	2331	N15	W69	.935	8854	19.8	25	-F				.40				1 1 1
LOCK	24	2320	2345	2331	N15	W69	.935	8854	19.8	25	-F		C	2331	.40	.90		10	
GRP 6695	24	2349	0012	2354	N19	E07	.314	8863	25.5	23	-N				.86				2 2 2
LOCK	24	2348	0006	2354	N19	E07	.314	8863	25.5	18	-F		C	2354	1.00	1.10		10	H
HALE	24	2349	0017	2354	N18	E07	.298	8863	25.5	28	-B	1	C	2354	.72	.80			H
GRP 6696	25	0030	0044	0033	N29	W26	.595	8854	23.1	14	-N				.71				2 2 2
HALE	25	0030	0042	0032	N28	W25	.576	8854	23.1	12	-N	1	C	0032	.41	.50			G
LOCK	25	0030	0046	0034	N30	W26	.604	8854	23.1	16	-F		C	0034	1.00	1.30		10	
GRP 6697	25	0105	0131	0110	S25	E27	.612	8867	27.1	26	-B				.21				1 1 1
HALE	25	0105	0131	0110	S25	E27	.612	8867	27.1	26	-B	1	C	0110	.21	.30			
GRP 6698	25	0105	0330	0135	N23	E11	.397	8863	25.9	145	1N				2.37				5 5 5
LOCK	25	0105	0200D	0142	N22	E18	.445	8863	26.4	55D	1B		C	0142	3.30	3.60		30	
HALE	25	0105	0330	0135	N23	E16	.438	8863	26.2	145	1B	1	C	0135	1.80	2.00			FJ
CRON	25	0116U	0230U	0127U	N26	W10	.434	8863	24.3	74U	-N		C		1.40	1.60		200	
MANI	25	0121E	0140D		N20	E15	.392	8863	26.2	19D	1N	1		0140	2.27	2.49			
SACP	25	0128E	0136D	0132	N23	E16	.438	8863	26.3	8D	1N		C		3.07	3.11			
GRP 6699	25	0513	0529	0516	N16	E08	.274	8863	25.8	16	-N				.36				1 1 1
MANI	25	0513	0529	0516	N16	E08	.274	8863	25.8	16	-N	2		0516	.36	.37			
GRP 6700	25	0747	0759	0750	N19	E04	.297	8863	25.6	12	-N				.84				1 1 1
CAPE	25	0747	0759	0750	N19	E04	.297	8863	25.6	12	-N		C	0750	.84	.90			
GRP 6701	25	0754	0937	0830	N02	W79	.981	8854	19.4	103	-F				.37				1 1 1
CAPE	25	0754	0937	0830	N02	W79	.981	8854	19.4	103	-F		C	0830	.37	2.00			
GRP 6702	25	0830	0850	0840	S27	E20	.573	8867	26.9	20	-F				.33				1 1 1
SALO	25	0830E	0850D		S27	E20	.573	8867	26.9	20D	-F		V	0840	.33	.40	1.30		
GRP 6703	25	0901	0920	0906	N17	E07	.281	8863	25.9	19	-N				.62				3 3 3
CAPS	25	0900E	0913D		N16	E08	.274	8863	26.0	13D	-F	2		0907	.70	.70			C
CAPE	25	0902	0914	0906	N17	E06	.275	8863	25.8	12	-N		C	0906	.60	.60			J
ARCE	25	0905E	0925D	0905	N17	E06	.275	8863	25.8	20D	-N		C	0905	.56	.60			
CAPE	25	0924	0940	0932	N18	E06	.291	8863	25.8	16	-N		C	0932	.64	.70			J
GRP 6704	25	0938	0942	0939	N17	E03	.261	8863	25.6	4	-F				.55				1 1 1
CAPE	25	0938	0942	0939	N17	E03	.261	8863	25.6	4	-F		C	0939	.55	.60			
GRP 6705	25	0952	1131	1046	N02	W80	.985	8854	19.4	99	-F				.55				1 1 1
CAPE	25	0952	1131	1046	N02	W80	.985	8854	19.4	99	-F		C	1046	.55	3.20			
GRP 6706	25	0955	1019	0959	N17	E09	.297	8863	26.1	24	-N				.64				2 2 2
CANA	25	0955	1018D	0959	N17	E09	.297	8863	26.1	23D	-N		C		.31	.32		200	
CAPE	25	0955	1019	0959	N17	E08	.289	8863	26.0	24	-N		C	0959	.97	1.00			F
GRP 6707	25	1227	1238	1231	N16	W01	.240	8863	25.4	11	-N				.71				3 3 3
CAPE	25	1223	1231	1225	N15	E01	.223	8863	25.6	8	-F		C	1225	.74	.80			
CANA	25	1226	1236	1230	N15	W01	.223	8863	25.4	10	-N		C		.52	.52		200	H
HOUS	25	1227	1239	1231	N16	W01	.240	8863	25.4	12	-N		C		.70	.72		200	
CAPE	25	1229	1240	1233	N16	W02	.241	8863	25.4	11	-N		C	1233	.92	1.00			H
GRP 6708	25	1347	1356	1352	N14	E01	.206	8863	25.6	9	-N				1.09				2 2 2
HOUS	25	1346	1355	1351	N13	E01	.189	8863	25.6	9	-N		C		.60	.62		200	
CAPE	25	1348	1357	1353	N15	E00	.222	8863	25.6	9	-F		C	1353	1.57	1.60			
GRP 6709	25	1516	1522	1518	N17	W78	.978	8854	19.8	6	-F				.21				1 1 1
HUAN	25	1516	1522	1518	N17	W78	.978	8854	19.8	6	-F	1	C	1518	.21				D
GRP 6710	25	1524	1544	1529	N17	E02	.258	8863	25.8	20	-F				.48				3 3 3
LOCK	25	1520	1547	1530	N17	E03	.261	8863	25.9	27	-F		C	1530	.40	.40		10	
LOCA	25	1525	1545	1530	N17	E02	.258	8863	25.8	20	-N		V	1530	.63	.60			
HUAN	25	1526	1541	1528	N17	E02	.258	8863	25.8	15	-F	1	C	1528	.41	.41			E
GRP 6711	25	1647	1711	1649	N16	W81	.987	8854	19.6	24	-N				.20				1 1 1
HOUS	25	1647	1711	1649	N16	W81	.987	8854	19.6	24	-N		C		.20	.70		200	
GRP 6712	25	1712	1722	1718	N17	E78	.978	8871	1.6	10	-F				.30				1 1 1
LOCK	25	1712	1722	1718	N17	E78	.978	8871	1.6	10	-F		C	1718	.30	.90		10	
GRP 6713	25	1727	1738	1731	N18	W02	.275	8863	25.6	11	-F				.20				1 1 1
LOCK	25	1727	1738	1731	N18	W02	.275	8863	25.6	11	-F		C	1731	.20	.20		10	
GRP 6714	25	1826	1835	1827	N36	W26	.663	8854	23.8	9	-B				.31				1 1 1
HALE	25	1826	1835	1827	N36	W26	.663	8854	23.8	9	-B	1	C	1827	.31	.40			G

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6715	25	1946	2007	1952	N17	E00	.256	8863	25.8	21	-N				.55				5 5 5
LOCK	25	1945	2010	1951	N17	E01	.257	8863	25.9	25	-F		C	1951	.80	.80		10	
HALE	25	1946	2010	1949	N17	E00	.256	8863	25.8	24	-B	1	C	1949	.41	.42			F
HUAN	25	1947	1957D	1953	N17	E00	.256	8863	25.8	10D	-N	2	C	1953	.45	.45			E
HOUS	25	1947	2002	1953U	N17	W02	.258	8863	25.7	15	-N		C		.70	.72		200	
MCMA	25	1947	2005	1954	N17	E02	.258	8863	26.0	18	-B		C	1954	.41	.42			EL
GRP 6716	25	2142	2149	2143	N18	W03	.277	8863	25.7	7	-F				.35				3 3 3
LOCK	25	2141	2150	2143	N18	W03	.277	8863	25.7	9	-F		C	2143	.50	.60		10	
HUAN	25	2142	2146	2143	N18	W03	.277	8863	25.7	4	-F	2	C	2143	.25	.25			D
HALE	25	2142	2152	2143	N17	W04	.265	8863	25.6	10	-N	1	C	2143	.31	.31			
GRP 6717	25	2154	2204	2157	N18	W04	.281	8863	25.6	10	-N				.39				3 3 3
HUAN	25	2153	2200D		N18	W04	.281	8863	25.6	7D	-F	2	C	2157	.35	.35			E
HOUS	25	2154	2203	2156	N19	W03	.294	8863	25.7	9	-N		C		.40	.42		200	E
HALE	25	2155	2204D	2157	N18	W04	.281	8863	25.6	9D	-N	1	P	2157	.41	.42			
GRP 6718	25	2205	2250	2221	N23	E64	.908	8871	30.7	45	-N				.51				2 2 2
CULG	25	2200E	2250	2222	N23	E61	.888	8871	30.5	50D	-N	1	P		.62	1.50			H
LOCK	25	2210	2220D	2220	N23	E66	.921	8871	30.9	10D	-F		C	2220	.40	.90		10	
GRP 6719	25	2239	2251	2241	S28	E18	.570	8867	27.3	12	-N				.66				2 2 2
LOCK	25	2238	2251	2241	S26	E18	.546	8867	27.3	13	-F		C	2241	.70	.80		10	
CULG	25	2240	2250	2240	S30	E18	.594	8867	27.3	10	-N	1	C		.62	.72			V
GRP 6720	25	2317	2336	2324	S28	E18	.570	8867	27.3	19	-N				.66				2 2 2
CULG	25	2312	2336	2323	S30	E18	.594	8867	27.3	24	-N	1	C		.62	.72			
LOCK	25	2321	2335	2324	S26	E18	.546	8867	27.3	14	-F		C	2324	.70	.80		10	
GRP 6721	25	2339	0002	2344	N19	W02	.291	8863	25.8	23	-N				.66				2 2 2
LOCK	25	2338	2358	2341	N21	W02	.324	8863	25.8	20	-F		C	2341	.60	.70		10	
CULG	25	2339	0006	2347	N17	W01	.257	8863	25.9	27	-N		C		.72	.70			F
GRP 6722	26	0048	0054	0051	N15	W04	.230	8863	25.7	6	-F				.30				1 1 1
LOCK	26	0048	0054	0051	N15	W04	.230	8863	25.7	6	-F		C	0051	.30	.30		10	
GRP 6723	26	0645	0655	0653	N17	W09	.295	8863	25.6	10	-N				.82				2 2 2
MANI	26	0645	0654	0647	N16	W08	.273	8863	25.7	9	-N	2		0647	.52	.54			
BUCA	26	0645E	0656	0654	N18	W09	.310	8863	25.6	11D	-F		C	0654	1.11	1.20			
MANI	26	0645	0654	0652	N16	W08	.273	8863	25.7	9	-N								
GRP 6724	26	0650	0716	0657	N26	W64	.912	8854	21.5	26	1F				2.22				1 1 1
BUCA	26	0650E	0716D		N26	W64	.912	8854	21.5	26D	1F		C	0657	2.22	5.10			
GRP 6725	26	1108	1118	1110	N14	W08	.244	8863	25.9	10	-B				.41				1 1 1
SALO	26	1108E	1118		N14	W08	.244	8863	25.9	10D	-B		V	1110	.41	.42	1.40		
GRP 6726	26	1345	1359	1350	S23	E04	.432	8867	26.9	14	-F				.21				1 1 1
HUAN	26	1345	1359		S23	E04	.432	8867	26.9	14	-F	2	C	1350	.21	.21			D
GRP 6727	26	1538	1550	1541	N19	W15	.379	8863	25.5	12	-F				.30				1 1 1
LOCK	26	1538	1550	1541	N19	W15	.379	8863	25.5	12	-F		C	1541	.30	.30		10	
GRP 6728	26	1543	1555	1546	S22	E03	.414	8867	26.9	12	-F				.21				1 1 1
HUAN	26	1543	1555	1546	S22	E03	.414	8867	26.9	12	-F	2	C	1546	.21	.21			D
GRP 6729	26	1728	1752	1738	S26	W02	.475	8867	26.6	24	-F				.20				1 1 1
LOCK	26	1728	1752	1738	S26	W02	.475	8867	26.6	24	-F		C	1738	.20	.20		10	H
GRP 6730	26	1921	1924	1922	N18	W16	.378	8863	25.6	3	-N				.21				1 1 1
HALE	26	1921	1924D	1922	N18	W16	.378	8863	25.6	3D	-N	1	P	1922	.21	.21			
GRP 6731	26	1924	1939	1935	N12	W39	.641	8860	23.9	15	-N				.20				1 1 1
HOUS	26	1924	1939	1935	N12	W39	.641	8860	23.9	15	-N		C		.20	.30		200	
GRP 6732	26	2015	2030	2019	N11	W40	.651	8860	23.8	15	-N				.40				2 2 2
HOUS	26	2014	2031	2018	N11	W40	.651	8860	23.8	17	-N		C		.30	.40		200	
LOCK	26	2015	2029	2019	N11	W39	.638	8860	23.9	14	-F		C	2019	.50	.70		10	
GRP 6733	26	2038	2045	2040	S25	W01	.459	8867	26.8	7	-N				.38				2 2 2
LOCK	26	2037	2045	2040	S25	W01	.459	8867	26.8	8	-F		C	2040	.50	.60		10	
MCMA	26	2039	2044	2040	S25	E00	.458	8867	26.9	5	-N		C	2040	.26	.30			D
GRP 6734	26	2055	2112	2102	S25	E00	.458	8867	26.9	17	-F				.38				2 2 2
LOCK	26	2053	2112	2102	S25	W01	.459	8867	26.8	19	-F		C	2102	.50	.60		10	
HUAN	26	2057	2111	2101	S25	E01	.459	8867	26.9	14	-F	2	C	2101	.25	.25			D
GRP 6735	26	2111	2119	2114	N23	W24	.517	8863	25.1	8	-N				.44				2 2 2
HUAN	26	2111	2118	2114	N18	W17	.389	8863	25.6	7	-N	2	C	2114	.37	.37			D
HOUS	26	2111	2120	2113	N28	W30	.622	8863	24.6	9	-N		C		.50	.60		200	
GRP 6736	26	2127	2142	2132	S25	E03	.461	8867	27.1	15	-N				.71				3 3 3
LOCK	26	2126	2140	2131	S24	E02	.444	8867	27.0	14	-N		C	2131	.80	.90		20	
HUAN	26	2127	2148	2132	S23	E03	.430	8867	27.1	21	-N	2	C	2132	.80	.81			E
CULG	26	2129	2139	2132	S28	E04	.508	8867	27.2	10	-N	1	C		.52	.55			
GRP 6737	26	2206	2217	2209	N19	W18	.411	8863	25.6	11	-F				.30				1 1 1
LOCK	26	2206	2217	2209	N19	W18	.411	8863	25.6	11	-F		C	2209	.30	.30		10	
GRP 6738	26	2235	2314	2253	N32	W70	.950	8854	21.7	39	-F				.20				1 1 1
HOUS	26	2235	2314	2253	N32	W70	.950	8854	21.7	39	-F		C		.20	.50		100	
GRP 6739	27	0141	0204	0148	N18	W20	.424	8863	25.6	23	-N				.47				2 2 2
SACP	27	0140	0155	0149	N18	W20	.424	8863	25.6	15	-N		C		.73	.73			
HALE	27	0142	0213	0147	N18	W20	.424	8863	25.6	31	-N	2	C	0147	.21	.21			H
GRP 6740	27	0153	0215	0201	S26	W04	.480	8867	26.8	22	-N				.27				2 2 2
SACP	27	0151	0202D	0200	S26	W04	.480	8867	26.8	11D	-F		C		.32	.32			
HALE	27	0155	0215	0201	S26	W04	.480	8867	26.8	20	-N	2	C	0201	.21	.21			

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6741	27	0211	0333	0250	N20	W65	.912	8854	22.2	82	-N				.31				1 1 1
CULG	27	0211	0333D	0250	N20	W65	.912	8854	22.2	82D	-N		P		.31				
GRP 6742	27	0233	0253	0235	N10	W42	.674	8863	24.0	20	-B				.26				1 1 1
HALE	27	0233	0253	0235	N10	W42	.674	8863	24.0	20	-B	3	C	0235	.26	.30			G
GRP 6743	27	0600	0622	0606	N27	E62	.899	8871	1.9	22	-F				.56				1 1 1
BUCA	27	0600E	0622D		N27	E62	.899	8871	1.9	22D	-F		C	0606	.56	1.30			
GRP 6744	27	0613	0728	0622	N37	E90	1.000	8876	4.0	75	1F				.56				1 1 1
BUCA	27	0613E	0728D		N37	E90	1.000	8876	4.0	75D	1F		C	0622	.56				
GRP 6745	27	1219	1243	1223	N22	W18	.443	8863	26.2	24	-F				.57				2 2 2
SACP	27	1217	1234	1222	N22	W16	.423	8863	26.3	17	-F		C		.42	.42			
MCMA	27	1220	1252	1223	N21	W19	.442	8863	26.1	32	-F		C	1223	.72	.80			E
GRP 6746	27	1259	1308	1301	N20	W26	.513	8863	25.6	9	-F				.37				1 1 1
CAPE	27	1259	1308	1301	N20	W26	.513	8863	25.6	9	-F		C	1301	.37	.40			
GRP 6747	27	1427	1442	1428	S24	W08	.462	8867	27.0	15	-F				.31				2 2 2
MCMA	27	1423E	1430D		S25	W08	.477	8867	27.0	7D	-F		P	1423	.41	.42			E
HUAN	27	1430	1442	1432	S23	W07	.443	8867	27.1	12	-F	2	C	1432	.21	.21			DT
GRP 6748	27	1513	1530	1518	S25	W08	.477	8867	27.0	17	-F				.41				1 1 1
MCMA	27	1513E	1530D		S25	W08	.477	8867	27.0	17D	-F		P	1518	.41	.42			E
GRP 6749	27	1556	1606	1601	S22	W13	.462	8867	26.7	10	-F				.40				1 1 1
LOCK	27	1556	1606	1601	S22	W13	.462	8867	26.7	10	-F		C	1601	.40	.40		10	
GRP 6750	27	1601	1611	1604	N19	W29	.543	8863	25.5	10	-F				.38				2 2 2
LOCK	27	1600	1611	1603	N19	W29	.543	8863	25.5	11	-F		C	1603	.50	.60		10	H
HUAN	27	1602	1610	1604	N18	W28	.524	8863	25.6	8	-F	2	C	1604	.25	.26			DT
GRP 6751	27	1657	1711	1702	N17	W26	.491	8863	25.8	14	-N				.41				4 4 4
SACP	27	1655	1709	1702	N17	W26	.491	8863	25.8	14	-N		C		.61	.63			
LOCK	27	1656	1708	1702	N17	W27	.504	8863	25.7	12	-F		C	1702	.40	.50		10	
HUAN	27	1658	1718	1703	N17	W26	.491	8863	25.8	20	-N	2	C	1703	.41	.43			D
HALE	27	1659	1710	1700	N18	W26	.498	8863	25.8	11	-B	3	C	1700	.21	.21			
GRP 6752	27	1715	1805	1740	S23	W10	.457	8867	27.0	50	-F				.50				1 1 1
LOCK	27	1715	1805	1740	S23	W10	.457	8867	27.0	50	-F		C	1740	.50	.60		10	
GRP 6753	27	2001	2033	2014	S20	E90	1.000	8875	4.6	32	2B				1.16				2 2 2
HALE	27	2001	2032	2012	S19	E89	1.000	8875	4.5	31	1B	1	C	2012	.52				
LOCK	27	2001	2034	2015	S21	E90	1.000	8875	4.6	33	2N		C	2015	1.80	7.20		20	
GRP 6754	27	2041	2105	2049	N18	W27	.511	8863	25.8	24	-N				.36				5 5 5
LOCK	27	2040	2054	2045	N17	W29	.530	8863	25.7	14	-F		C	2045	.50	.60		10	
SACP	27	2041	2052E	2044	N17	W28	.517	8863	25.8	11D	-F		C		.41	.42			
HALE	27	2042	2107	2045	N17	W29	.530	8863	25.7	25	-N	1	C	2045	.21	.21			
HUAN	27	2053E	2110		N17	W28	.517	8863	25.8	17D	-N	1	C	2054	.35	.36			D
MCMA	27	2055E	2107		N21	W20	.453	8863	26.4	12D	-N		P	2056	.31	.32			D
GRP 6755	27	2103	2111	2106	S19	W56	.857	8858	23.7	8	-F				.36				2 2 2
LOCK	27	2102	2112	2106	S19	W56	.857	8858	23.7	10	-F		C	2106	.50	1.00		10	
HUAN	27	2103	2109	2105	S18	W56	.855	8858	23.7	6	-F	1	C	2105	.21	.30			D
GRP 6756	27	2122	2132	2125	N14	W33	.568	8863	25.4	10	-N				.41				2 2 2
LOCK	27	2121	2132	2125	N14	W33	.568	8863	25.4	11	-F		C	2125	.50	.60		10	H
HALE	27	2123	2131	2125	N14	W32	.554	8863	25.5	8	-B	1	C	2125	.31	.40			H
GRP 6757	27	2135	2146	2137	S23	W14	.482	8867	26.8	11	-F				.48				2 2 2
LOCK	27	2134	2146	2137	S23	W14	.482	8867	26.8	12	-F		C	2137	.40	.40		10	
HUAN	27	2135	2145	2137	S23	W14	.482	8867	26.8	10	-F	1	C	2137	.55	.62			E
GRP 6758	27	2216	2231	2217	S12	E90	1.000	8875	4.7	15	-N				.20				1 1 1
HOUS	27	2216	2231	2217	S12	E90	1.000	8875	4.7	15	-N		C		.20	.80		200	
GRP 6759	27	2216	2233	2220	N33	E82	.990	8876	4.1	17	-F				.40				1 1 1
LOCK	27	2216	2233	2220	N33	E82	.990	8876	4.1	17	-F		C	2220	.40	1.40		10	H
GRP 6760	27	2241	2258	2243	N15	W30	.532	8863	25.7	17	-N				.51				3 3 3
LOCK	27	2240	2250	2244	N15	W31	.546	8863	25.6	10	-F		C	2244	.20	.20		10	
HALE	27	2242	2305	2243	N18	W29	.536	8863	25.8	23	-B	2	C	2243	.62	.70			H
CULG	27	2242E	2359	2242	N13	W29	.509	8863	25.8	77D	-N	1	P		.72	.84			H
GRP 6761	27	2342	0015	2345	S20	W16	.460	8867	26.8	33	-N				.87				4 4 4
CULG	27	2340	0025	2345	S28	W13	.543	8867	27.0	45	-N	1	C		.83	.95			
LOCK	27	2341	0005	2346	S23	W13	.475	8867	27.0	24	-N		C	2346	1.00	1.10		20	
HOUS	27	2342	2358D	2346	S06	W27	.473	8867	26.0	16D	-N		C		1.20	1.40		200	E
HALE	27	2343	2347D	2344	S23	W11	.463	8867	27.2	4D	-N	1	P	2344	.46	.50			F
GRP 6762	28	0037	0044	0040	N69	W80	.995	8854	22.0	7	-N				.20				1 1 1
HOUS	28	0037	0044	0040	N69	W80	.995	8854	22.0	7	-N		C		.20	.70		200	J
GRP 6763	28	0047	0115	0055	N19	W27	.517	8863	26.0	28	-F				.30				1 1 1
LOCK	28	0047	0115	0055	N19	W27	.517	8863	26.0	28	-F		C	0055	.30	.40		10	
GRP 6764	28	0324	0414	0338	N16	W30	.537	8863	25.9	50	-N				.70				2 2 2
CULG	28	0319	0427	0346	N13	W29	.508	8863	26.0	68	-N		C		1.13	1.32			F
HALE	28	0328	0400	0330	N19	W31	.567	8863	25.8	32	-N	2	C	0330	.26	.30			
GRP 6765	28	0342	0400	0347	N17	W31	.555	8863	25.8	18	1N				1.27				2 2 2
TACH	28	0339	0349		N17	W32	.568	8863	25.8	10	1N		V	0348	2.28	3.50	2.00	72	
HALE	28	0344	0410	0346	N17	W30	.542	8863	25.9	26	-N	1	C	0346	.26	.30			
HALE	28	0348	0357	0350	N15	W31	.545	8863	25.8	9	-N	1	C	0350	.19	.20			
GRP 6766	28	0357	0418	0359	S18	E89	1.000	8875	4.8	21	-N				.31				1 1 1
HALE	28	0357	0418	0359	S18	E89	1.000	8875	4.8	21	-N	1	C	0359	.31				

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE	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. %	
	1967 JUNE																		
GRP 6767	28	0510	0517	0511	N11	W31	.528	8863	25.9	7	-N				.83				1 1 1
CULG	28	0510	0517	0511	N11	W31	.528	8863	25.9	7	-N		C		.83	.96			
GRP 6768	28	0718	0825	0740	N19	W36	.628	8863	25.6	67	-N				.43				2 2 2
CAPE	28	0718	0825	0722	N19	W35	.616	8863	25.7	67	-N		C	0722	.41	.50			K
CAPE	28	0718	0825	0740	N20	W35	.621	8863	25.7	67	-F		C	0740	1.29	1.70			F
BUCA	28	0728E	0755D		N19	W36	.628	8863	25.6	27D	-N		C	0739	.44	.50			D
GRP 6769	28	0719	0742	0723	S24	W15	.504	8867	27.2	23	1F				1.37				4 4 4
CAPE	28	0718	0749	0722	S24	W16	.511	8867	27.1	31	1F		C	0722	1.93	2.20			F
CANA	28	0720	0736	0722	S24	W15	.504	8867	27.2	16	-N		C		.62	.70		200	EH
BUCA	28	0720E	0740D		S24	W15	.504	8867	27.2	20D	1F		C	0725	2.22	2.50			
CAPS	28	0721E	0730D		S23	W15	.491	8867	27.2	9D	-F	3		0723	.70	.80		158	C
GRP 6770	28	0942	0950	0945	N16	W34	.589	8863	25.9	8	1N				1.13				3 3 3
SALO	28	0940E	0950D		N13	W33	.563	8863	25.9	10D	1N		V	0945	.66	.80	1.40		
CAPE	28	0943	0946D		N19	W34	.603	8863	25.9	3D	1F		P	0946	2.30	2.80			F
ARCE	28	0945E	0953D		N17	W36	.619	8863	25.7	8D	-N		C	0945	.42	.50			
CAPE	28	0951	1001		N19	W31	.567	8863	26.1	10	-F		P	0953	1.47	1.80			
GRP 6771	28	0950	1013	0955	N23	E30	.582	8871	30.7	23	1F				1.87				2 2 2
SALO	28	0950E	1005D		N19	E29	.542	8871	30.6	15D	-F		V	0955	.33	.40	1.20		
KHAR	28	1000E	1020		N26	E31	.615	8871	30.7	20D	1F		V	1010	3.40	4.31	2.10		D
GRP 6772	28	1002	1048	1009	N17	W36	.619	8863	25.7	46	-N				1.67				5 5 5
CAPE	28	0953	1058	1006	N18	W36	.623	8863	25.7	65	-B		C	1006	1.33	1.70			
CAPE	28	1001	1022	1003	N17	W39	.655	8863	25.5	21	-N		C	1003	.28	.40			
CAPS	28	1002	1039		N18	W33	.586	8863	25.9	37	-F	3		1003	1.20	1.60		159	
SALO	28	1005E	1024D		N12	W39	.640	8863	25.5	19D	-B		V	1010	.41	.60	1.40		
CATA	28	1007	1045	1015	N20	W35	.621	8863	25.8	38	-B			1015	1.33	1.70		234	
KHAR	28	1008E	1050		N16	W39	.652	8863	25.5	42D	1N		V	1010	4.08	5.20	1.80		EHO
GRP 6773	28	1052	1117	1056	S19	W62	.903	8858	23.8	25	1F				.92				1 1 1
CAPE	28	1052	1117	1056	S19	W62	.903	8858	23.8	25	1F		C	1056	.92	2.30			
GRP 6774	28	1102	1144	1113	N21	W34	.614	8863	25.9	42	1N				1.29				2 2 2
MONT	28	1101	1200	1115	N22	W28	.551	8863	26.4	59	1B		C	1115	2.06				
CAPE	28	1103	1127	1111	N20	W40	.679	8863	25.5	24	-F		C	1111	.52	.70			L
GRP 6775	28	1259	1319	1302	S23	W19	.523	8867	27.1	20	1F				1.71				2 2 2
CAPE	28	1258	1327	1302	S23	W20	.532	8867	27.0	29	1F		C	1302	2.62	3.10			F
HUAN	28	1300	1310	1302	S22	W18	.503	8867	27.2	10	-F	2	C	1302	.80	.84			E
GRP 6776	28	1336	1348	1337	S24	W19	.535	8867	27.1	12	-F				.21				1 1 1
HUAN	28	1336	1348	1337	S24	W19	.535	8867	27.1	12	-F	2	C	1337	.21	.21			D
GRP 6777	28	1338	1353	1347	S22	W74	.971	8858	23.0	15	-F				.36				1 1 1
HUAN	28	1338	1353		S22	W74	.971	8858	23.0	15	-F	1	C	1347	.36				D
GRP 6778	28	1428	1438	1429	S22	W75	.975	8858	23.0	10	-F				.25				1 1 1
HUAN	28	1428	1438	1429	S22	W75	.975	8858	23.0	10	-F	2	C	1429	.25				D
GRP 6779	28	1433	1449	1438	N22	W29	.563	8863	26.4	16	1N				2.06				1 1 1
MONT	28	1433E	1449D	1438	N22	W29	.563	8863	26.4	16D	1N		C	1438	2.06				
GRP 6780	28	1540	1553	1544	S22	W64	.921	8858	23.9	13	-N				.55				2 2 2
LOCK	28	1537	1553	1542	S19	W66	.929	8858	23.7	16	-F		C	1542	.50	1.20		10	
CATA	28	1543	1552	1545	S25	W61	.907	8858	24.1	9	-B			1545	.59			204	
GRP 6781	28	1747	1756	1749	N16	W41	.676	8863	25.7	9	-F				.25				1 1 1
HUAN	28	1747	1756	1749	N16	W41	.676	8863	25.7	9	-F	2	C	1749	.25	.28			DT
GRP 6782	28	1827	1858	1836	N17	W40	.667	8863	25.8	31	-N				.31				1 1 1
HUAN	28	1827	1858	1836	N17	W40	.667	8863	25.8	31	-N	2	C	1836	.31	.35			D
GRP 6783	28	1840	1915	1858	S24	W30	.635	8867	26.5	35	-F				.50				1 1 1
LOCK	28	1840	1915	1858	S24	W30	.635	8867	26.5	35	-F		C	1858	.50	.70		10	
GRP 6784	28	2037	2042	2038	N18	W46	.739	8863	25.4	5	-N				.38				2 2 2
SACP	28	2036	2044	2038	N17	W46	.736	8863	25.4	8	-N		C		.51	.61			
HUAN	28	2037	2040	2038	N18	W46	.739	8863	25.4	3	-F	2	C	2038	.25	.30			D
GRP 6785	28	2047	2057	2051	N16	W48	.756	8863	25.3	10	-F				.40				1 1 1
LOCK	28	2047	2057	2051	N16	W48	.756	8863	25.3	10	-F		C	2051	.40	.60		10	H
GRP 6786	28	2112	2123	2116	N16	W47	.745	8863	25.4	11	-F				.34				3 3 3
LOCK	28	2107	2122	2114	N16	W48	.756	8863	25.3	15	-F		C	2114	.50	.80		10	H
HUAN	28	2112	2120	2115	N16	W47	.745	8863	25.4	8	-F	2	C	2115	.21	.25			D
SACP	28	2116	2128	2118	N16	W46	.734	8863	25.4	12	-F		C		.31	.37			
GRP 6787	28	2133	2142	2135	N18	E85	.995	8876	5.3	9	-F				.40				1 1 1
SACP	28	2133	2142	2135	N18	E85	.995	8876	5.3	9	-F		C		.40				
GRP 6788	28	2143	2158	2149	S22	W25	.568	8867	27.0	15	-F				.49				3 3 3
LOCK	28	2122	2140	2125	S24	W27	.606	8867	26.9	18	-F		C	2125	.40	.50		10	
LOCK	28	2132	2155	2145	S21	W27	.579	8867	26.9	23	-F		C	2145	.30	.40		10	
SACP	28	2148	2202U	2152	S23	W24	.568	8867	27.1	14U	-F		C		.92	.98			
HUAN	28	2149	2156	2151	S22	W25	.568	8867	27.0	7	-F	2	C	2151	.25	.27			D
GRP 6789	28	2329	2339	2333	N28	E21	.536	8871	30.6	10	-N				.76				2 2 2
LOCK	28	2328	2338	2333	N28	E21	.536	8871	30.6	10	-F		C	2333	.70	.80		10	H
SACP	28	2329	2340	2332	N27	E20	.516	8871	30.5	11	-N		C		.81	.84			
GRP 6790	28	2356	0013	0003	S20	W82	.993	8858	22.8	17	-F				.50				1 1 1
LOCK	28	2356	0013	0003	S20	W82	.993	8858	22.8	17	-F		C	0003	.50	1.70		10	

SOLAR FLARES

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	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 6791	29	0030	0205	0110	S24	W14	.498	8867	28.0	95	-N				1.68				2 2 2
LOCK	29	0030	0205D	0110	S19	W13	.424	8867	28.0	95D	-N		C	0110	1.60	1.90		20	
SACP	29	0117	0133	0128	S28	W14	.551	8867	28.0	16	-F		C		1.75	1.85			
GRP 6792	29	0042	0125	0100	N15	W46	.731	8863	25.6	43	1F				2.51				2 2 2
LOCK	29	0040	0130	0100	N18	W46	.739	8863	25.6	50	-F		C	0100	1.00	1.50		10	
MITK	29	0044	0120	0059	N12	W46	.725	8863	25.6	36	2F		C	0059	3.71	5.40			F
LOCK	29	0123	0135	0127	N11	W66	.913	8863	24.1	12	-F		C	0127	.30	.60		10	
GRP 6793	29	0053	0110	0100	S20	W82	.993	8858	22.9	17	-F				.30				1 1 1
LOCK	29	0053	0110	0100	S20	W82	.993	8858	22.9	17	-F		C	0100	.30	1.00		10	
GRP 6794	29	0120	0145	0130	S20	W82	.993	8858	22.9	25	-F				.20				1 1 1
LOCK	29	0120	0145	0130	S20	W82	.993	8858	22.9	25	-F		C	0130	.20	.70		10	
GRP 6795	29	0347	0359	0350	S22	W37	.691	8867	26.4	12	-N				.70				1 1 1
CRON	29	0347	0359	0350	S22	W37	.691	8867	26.4	12	-N		C		.70	1.00		200	
GRP 6796	29	0434	0440	0435	S20	W74	.970	8858	23.6	6	-F				.20				1 1 1
CRON	29	0434E	0440	0435	S20	W74	.970	8858	23.6	6D	-F		C		.20	.60		100	
GRP 6797	29	0841	0859	0848	N18	W54	.820	8863	25.3	18	-N				.53				2 2 2
CANA	29	0837	0857	0847	N18	W52	.801	8863	25.5	20	-N		C		.31	.50		200	
ARCE	29	0845	0900D		N17	W55	.828	8863	25.2	15D	-N		C	0848	.75	1.30			H
GRP 6798	29	0952	1016	0958	N15	W54	.815	8863	25.4	24	-N				.74				1 1 1
CAPE	29	0952	1016	0958	N15	W54	.815	8863	25.4	24	-N		C	0958	.74	1.30			C
GRP 6799	29	1231	1254	1237	S22	W38	.701	8867	26.7	23	-N				.43				4 4 4
CAPE	29	1226	1256		S21	W38	.696	8867	26.7	30	-N		P	1237	.46	.60			
SACP	29	1233	1300	1236	S22	W38	.701	8867	26.7	27	-N		C		.52	.60			
HUAN	29	1234	1257	1237	S21	W37	.685	8867	26.7	23	-N	2	C	1237	.41	.48			DT
MEUD	29	1236E	1243		S22	W37	.691	8867	26.8	7D	-F		C	1236	.31	.40			C
GRP 6800	29	1349	1432	1406	S22	W35	.671	8867	27.0	43	-F				1.28				3 3 2
HUAN	29	1345	1425		S22	W35	.671	8867	26.9	40	-F	2	C	1402	.88	1.01			E
ZURI	29	1353	1450	1405	S22	W33	.650	8867	27.1	57	-F		P	1405	1.68	2.20			
ONDR	29	1407E	1422		S22	W37	.691	8867	26.8	15D	1F		V	1412			1.80		
GRP 6801	29	1330	1413	1350	S21	W36	.675	8867	26.9	43	-N				.45				2 2 2
CATA	29	1330	1416	1345	S19	W37	.673	8867	26.8	46	-N			1345	.37	.50		170	
MEUD	29	1351	1410		S22	W35	.671	8867	27.0	19	-N		C	1354	.52	.70			E
GRP 6802	29	1406	1413	1407	N26	E19	.495	8871	1.0	7	-F				.40				2 2 2
HUAN	29	1404	1412	1405	N27	E17	.490	8871	30.9	8	-F	2	C	1405	.36	.37			D
CATA	29	1407	1413	1408	N25	E20	.493	8871	1.1	6	-F			1408	.44	.50		141	
GRP 6803	29	1544	1558	1549	N33	W39	.737	8863	26.7	14	-F				.20				1 1 1
LOCK	29	1544	1558	1549	N33	W39	.737	8863	26.7	14	-F		C	1549	.20	.30		10	
GRP 6804	29	1613	1631	1617	N16	W55	.826	8863	25.6	18	-N				1.14				5 5 4
LOCA	29	1612	1635	1617	N15	W54	.815	8863	25.6	23	1N		P	1617	1.68	2.60			
LOCK	29	1613	1626	1617	N15	W56	.834	8863	25.5	13	-F		C	1617	1.10	1.90		10	
CATA	29	1614	1628	1615	N20	W53	.814	8863	25.7	14	-B			1615	.39	.70		219	
HUAN	29	1614	1631	1619	N14	W54	.814	8863	25.6	17	-B	2	C	1619	1.39	1.85			E
ONDR	29	1614	1637		N16	W56	.835	8863	25.5	23	1N		V	1618			2.00		CL
GRP 6805	29	1650	1656	1652	N15	W54	.815	8863	25.7	6	-F				.52				3 3 3
LOCK	29	1625	1657	1640	N18	W59	.864	8863	25.3	32	-F		C	1640	.30	.60		10	
LOCK	29	1648	1657	1651	N15	W56	.834	8863	25.5	9	-F		C	1651	.50	.90		10	
SACP	29	1651E	1655	1653	N15	W53	.806	8863	25.7	4D	-F		C		.81	1.08			
HUAN	29	1651	1656	1653	N16	W53	.807	8863	25.7	5	-F	2	C	1653	.25	.32			D
GRP 6806	29	1757	1815	1801	S22	W37	.691	8867	27.0	18	-F				.36				1 1 1
HUAN	29	1757	1815	1801	S22	W37	.691	8867	27.0	18	-F	2	C	1801	.36	.42			D
GRP 6807	29	1858	1923	1902	S22	W37	.691	8867	27.0	25	-F				.31				1 1 1
HUAN	29	1858	1923		S22	W37	.691	8867	27.0	25	-F	2	C	1902	.31	.36			D
GRP 6808	29	1910	1925	1912	N33	W40	.745	8863	26.8	15	-F				.30				1 1 1
LOCK	29	1910	1925	1912	N33	W40	.745	8863	26.8	15	-F		C	1912	.30	.50		10	H
GRP 6809	29	1957	2012	2000	N32	W41	.748	8863	26.8	15	-F				.33				1 1 1
HUAN	29	1957	2012	2000	N32	W41	.748	8863	26.8	15	-F	2	C	2000	.33	.41			E
GRP 6810	29	2059	2110	2101	S22	W38	.701	8867	27.0	11	-F				.25				1 1 1
HUAN	29	2059	2110	2101	S22	W38	.701	8867	27.0	11	-F	2	C	2101	.25	.30			E
GRP 6811	29	2151	2225	2210	S21	W33	.643	8867	27.4	34	-F				.30				1 1 1
LOCK	29	2151	2225	2210	S21	W33	.643	8867	27.4	34	-F		C	2210	.30	.50		10	
GRP 6812	29	2217	2229	2220	N22	E13	.393	8871	30.9	12	-N				.35				2 2 2
LOCK	29	2214	2230	2220	N27	E13	.460	8871	30.9	16	-F		C	2220	.40	.40		10	
HOUS	29	2219	2227	2220	N16	E13	.318	8871	30.9	8	-N		C		.30	.31		200	
GRP 6813	29	2333	2359	2339	N16	W57	.844	8863	25.7	26	1N				1.35				3 3 3
LOCK	29	2331	2359	2339	N15	W56	.834	8863	25.8	28	1N		C	2339	1.40	2.50		20	H
IKOM	29	2332E	2350D	2338	N16	W57	.844	8863	25.7	18D	1B		V	2338	1.44	2.60		130	D
HOUS	29	2335	2352D	2339	N16	W57	.844	8863	25.7	17D	1N		C		1.20	2.20		200	
GRP 6814	30	0344	0459	0400	N23	W50	.793	8863	26.4	75	1F				1.24				1 1 1
CULG	30	0344	0459	0400	N23	W50	.793	8863	26.4	75	1F		C		1.24	2.16			FL
GRP 6815	30	0600	0737	0610	S20	W90	1.000	8858	23.5	97	1F				.56				1 1 1
BUCA	30	0600E	0737D		S20	W90	1.000	8858	23.5	97D	1F		C	0610	.56				
GRP 6816	30	0600	0609		S21	E52	.831	8875	4.2	9	-N								1 1 0
CAPS	30	0600E	0609		S21	E52	.831	8875	4.1	9D	-N	2							D

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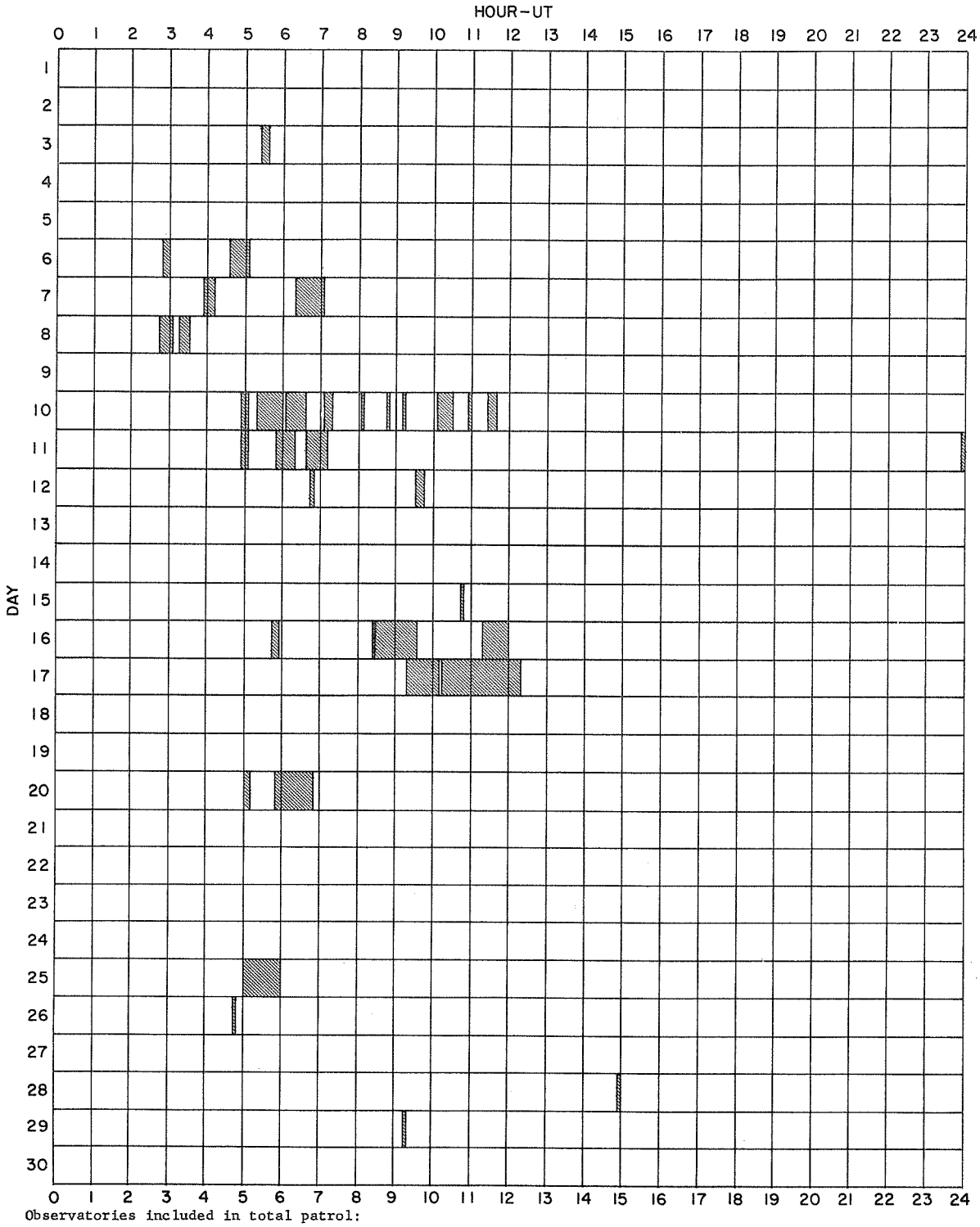
OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1967 JUNE	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	— MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP 6817	30	0622	0817	0715	N31	W43	.759	8863	27.0	115	-F				1.11				2 1 1
BUCA	30	0622E	0817D		N32	W47	.798	8863	26.7	115D	-F		C	0715	1.11	1.80			
MANI	30	0750	0800	0753	N30	W38	.709	8863	27.5	10	-F	1		0753	.31	.46			
GRP 6818	30	0733	0758	0738	N21	E66	.918	8876	5.3	25	1N				1.89				2 2 2
CAPS	30	0733	0750		N21	E65	.912	8876	5.2	17	1F	3		0737	1.00				E
BUCA	30	0735E	0805D		N21	E66	.918	8876	5.3	30D	1N		C	0738	2.77				
GRP 6819	30	0900	0930	0900	N32	W47	.798	8863	26.9	30	-N				.65				1 1 1
ARCE	30	0900	0930D	0900	N32	W47	.798	8863	26.9	30D	-N		C	0900	.65	1.10			
GRP 6820	30	0940	0950	0943	N30	W34	.671	8863	27.9	10	-N				1.03				1 1 1
MONT	30	0940	0950		N30	W34	.671	8863	27.9	10	-N		C	0943	1.03				
GRP 6821	30	1010	1020	1012	N30	W34	.671	8863	27.9	10	-N				1.03				1 1 1
MONT	30	1010	1020		N30	W34	.671	8863	27.9	10	-N		C	1012	1.03				
GRP 6822	30	1045	1113	1053	S24	W41	.743	8867	27.4	28	-N				1.06				3 3 3
ZURI	30	1045	1130	1050	S23	W45	.775	8867	27.1	45	-F		P	1050	1.47	2.30			
CAPS	30	1047E	1103		S22	W42	.742	8867	27.3	16D	-N	3		1049	1.20	1.70		170	CJ
SALO	30	1048E	1105D		S26	W36	.709	8867	27.7	17D	1N		V	1100	.50	.70	1.30		
GRP 6823	30	1144	1200	1149	N33	W47	.802	8863	27.0	16	-N				1.03				5 5 5
CAPE	30	1142	1203	1147	N32	W50	.822	8863	26.7	21	-B		C	1147	1.01	1.80			
SALO	30	1145E	1153D		N28	W46	.772	8863	27.0	8D	-N		V	1150	.33	.60	1.10		
HUAN	30	1145E	1156		N32	W48	.806	8863	26.9	11D	-N	2	C	1149	1.00	1.33			T
CANA	30	1145	1206	1147	N39	W44	.809	8863	27.2	21	-N		C		.83	1.40		200	H
CAPS	30	1149E	1156D		N32	W46	.789	8863	27.0	7D	1N	3		1152	1.50	2.30		171	CJ
CAPE	30	1154	1222	1157	N15	W65	.907	8863	25.6	28	-N		C	1157	.46	1.10			F
GRP 6824	30	1215	1245	1219	N34	W48	.814	8863	26.9	30	-N				.75				4 4 4
CAPE	30	1213	1242	1219	N32	W50	.822	8863	26.8	29	-B		C	1219	.60	1.00			V
CANA	30	1215	1236	1218	N39	W44	.809	8863	27.2	21	-N		C		.83	1.40		200	H
SACP	30	1216E	1242U	1218	N31	W47	.794	8863	27.0	26U	-N		C		.96	1.24			
HUAN	30	1217	1300	1220	N32	W49	.814	8863	26.8	43	-N	2	C	1220	.62	.82			D
GRP 6825	30	1225	1312	1240	N34	W51	.837	8863	26.7	47	-N				.53				3 2 2
CATA	30	1216	1254	1245	N35	W49	.826	8863	26.8	38	-N			1245	.44	.80		155	
MCMA	30	1234E	1330		N32	W52	.837	8863	26.6	56D	-N		C	1234	.62	1.20			E
CAPE	30	1242	1300	1252	N19	W69	.935	8863	25.4	18	-F		C	1252	.46	1.20			
CAPE	30	1301	1304	1302	N18	W70	.941	8863	25.3	3	-N		C	1302	.28	.80			
GRP 6826	30	1234	1345	1240	S23	W47	.794	8867	27.0	71	-N				.93				2 1 1
MCMA	30	1234E	1345		S24	W47	.798	8867	27.0	71D	-N		C	1240	.93	1.60			E
HUAN	30	1329	1344		S22	W47	.790	8867	27.0	15	-F	2	C	1334	.36	.47			ET
GRP 6827	30	1408	1429	1413	N19	W71	.946	8863	25.3	21	-N				.71				3 3 3
CAPE	30	1406	1414D	1411	N20	W70	.941	8863	25.3	8D	1N		P	1411	1.43	4.20			
SACP	30	1407	1434	1414	N18	W70	.941	8863	25.3	27	-N		C		.41	.77			
HOUS	30	1411	1424	1414	N19	W73	.957	8863	25.1	13	-N		C		.30	.80		200	I
GRP 6828	30	1414	1450	1418	S24	W48	.807	8867	27.0	36	-N				.52				1 1 1
MCMA	30	1414	1450	1418	S24	W48	.807	8867	27.0	36	-N		C	1418	.52	.90			E
GRP 6829	30	1500	1525	1510	N17	W73	.956	8863	25.2	25	-N				.32				2 2 2
SALO	30	1500E	1520D		N16	W63	.893	8863	25.9	20D	-N		V	1510	.33	.70	1.30		
SACP	30	1516	1530	1523	N18	W83	.991	8863	24.4	14	-N		C		.31				
GRP 6830	30	1612	1630	1615	S25	E52	.843	8875	4.6	18	-F				.40				1 1 1
LOCK	30	1612	1630	1615	S25	E52	.843	8875	4.6	18	-F		C	1615	.40	.70		10	
GRP 6831	30	1744	1803	1748	N21	E57	.851	8876	5.0	19	-N				.20				1 1 1
HOUS	30	1744	1803	1748	N21	E57	.851	8876	5.0	19	-N		C		.20	.40		200	
GRP 6832	30	2011	2019	2014	S22	W51	.825	8867	27.0	8	-F				.25				1 1 1
HUAN	30	2011	2019	2014	S22	W51	.825	8867	27.0	8	-F	2	C	2014	.25	.34			D
GRP 6833	30	2105	2128	2115	N33	E37	.719	8876	3.7	23	-F				.50				1 1 1
LOCK	30	2105	2128	2115	N33	E37	.719	8876	3.7	23	-F		C	2115	.50	.70		10	J
GRP 6834	30	2109	2120	2114	S15	W40	.687	8867	27.9	11	-N				.31				1 1 1
HUAN	30	2109	2120	2114	S15	W40	.687	8867	27.9	11	-N	2	C	2114	.31	.36			D
GRP 6835	30	2148	2201	2152	S21	W52	.831	8867	27.0	13	-F				.25				1 1 1
HUAN	30	2148	2201	2152	S21	W52	.831	8867	27.0	13	-F	2	C	2152	.25	.35			D
GRP 6836	30	2306	2314	2309	N17	W71	.946	8863	25.6	8	-N				.20				1 1 1
HOUS	30	2306	2314	2309	N17	W71	.946	8863	25.6	8	-N		C		.20	.50		200	
GRP 6837	30	2325	2331	2327	N21	E57	.851	8876	5.3	6	-N				.20				1 1 1
HOUS	30	2325	2331	2327	N21	E57	.851	8876	5.3	6	-N		C		.20	.40		200	

Remarks

A = Eruptive prominence, base at >90°.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No spots visible in the neighborhood.
H = Flare with high velocity dark surge.
I = Very extensive active region.
J = Plage with flare shows marked intensity variations.
K = Several intensity maxima.
L = Filaments show effects of sudden activation.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H or K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line.
S = Brightening follows disappearance of filament.
T = Region active all day.
U = Close and somewhat parallel bright filaments.
V = Occurrence of an explosive phase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα emission.
Y = Onset of a system of loop-type prominences.
Z = Major sunspot umbra covered by flare.

INTERVALS OF NO FLARE PATROL OBSERVATION
For Preceding Solar Flare Table

JUNE 1967



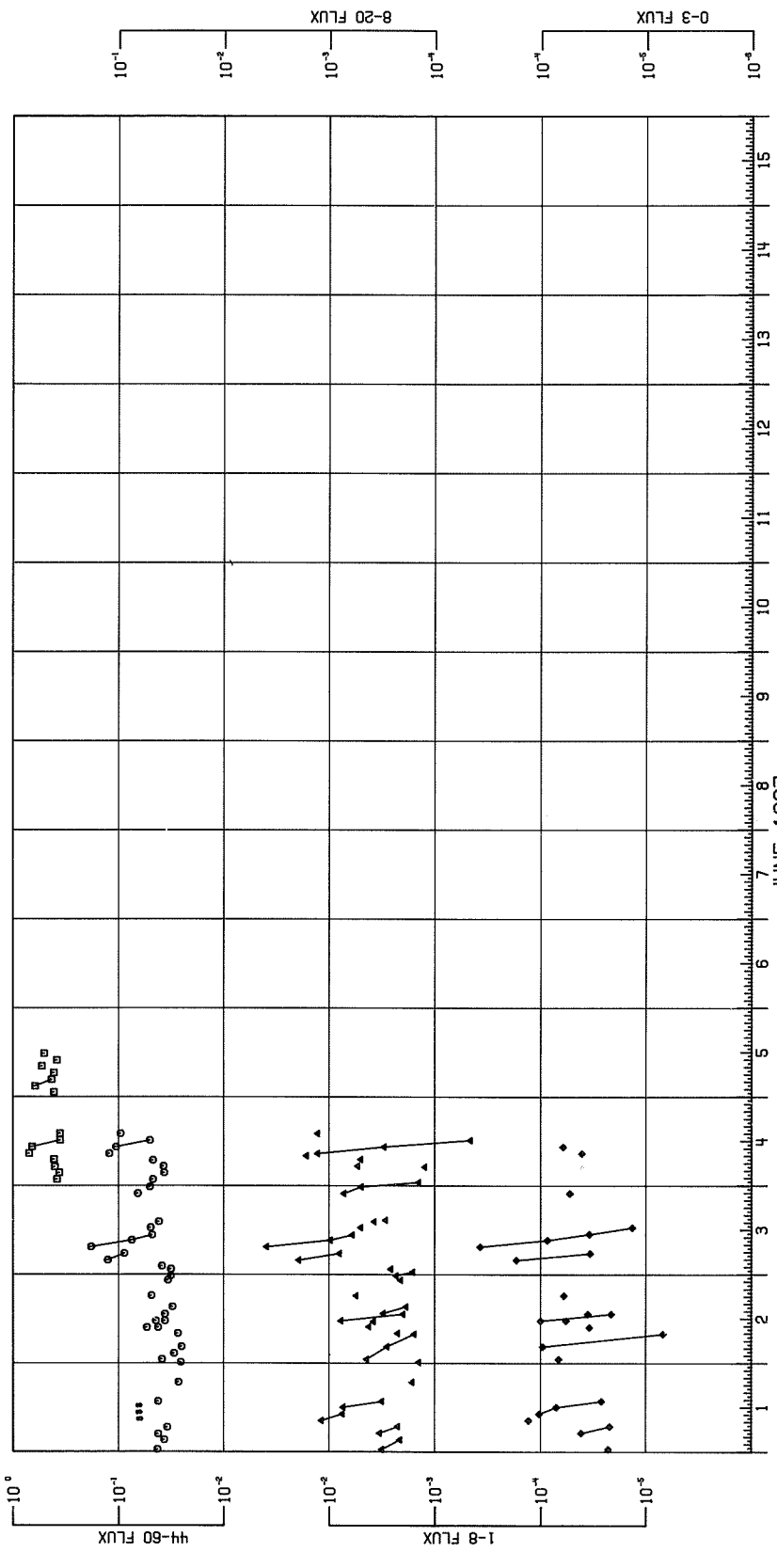
Observatories included in total patrol:

Abastumani	Capetown	Herstmonceux	Kodaikanal	Meudon	Siberie
Arcetri	Capri-F (German)	Houston	Locarno	Monte-Mario	Tachkent
Arosa	Capri-S (Swedish)	Huancayo	Lockheed	Ondrejov	Uccle
Bucharest	Catania	Ikomasan	Manila	Sacramento Peak	Wendelstein
Carnarvon	Culgoora	Kharkov	McMath-Hulbert	Salonique	Zürich
Canary Islands	Haleakala	Kiev			

The times when there was no cinematographic or visual patrol are shown by the darker areas.
The rest of the shaded areas are times of visual patrol only.

SOLAR RADIATION MONITORING SATELLITE
X-RAY

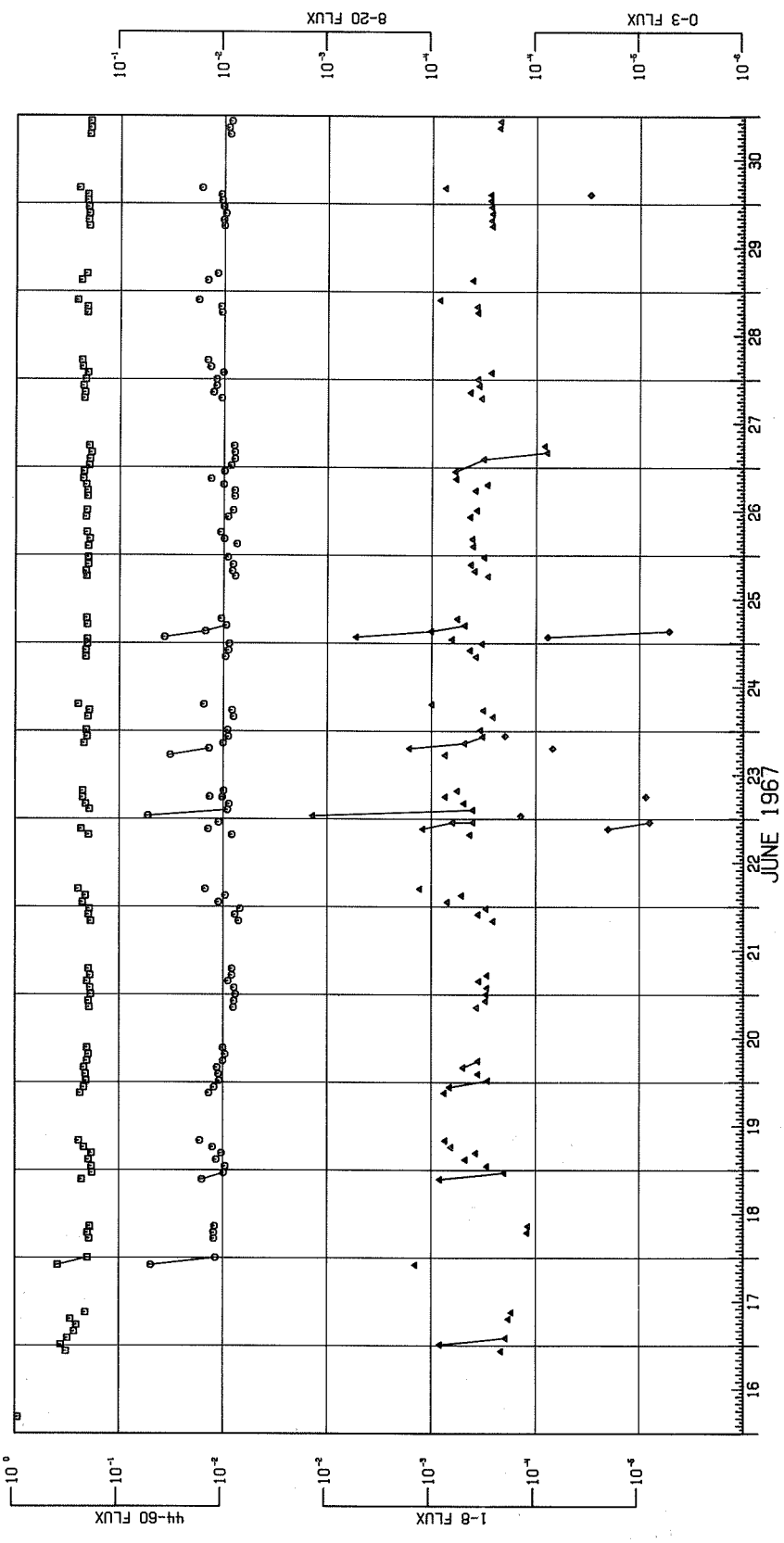
JUNE 1967



NRL

SOLAR RADIATION MONITORING SATELLITE
X-RAY

JUNE 1967



SATELLITE OSO-III, X-RAY

JUNE 1967

Date	Observing Hours Start U.T.	Observing Hours End U.T.	Lowest Flux Reached E(8,12) ergs cm^{-2} sec^{-1}	Remarks*
June 1	0015	0108	0.0156	(1,6)
1	1501	1536	.0156	(1,2)
1	1611	1711	.0127	(4)
1	1747	1847	.0106	(4)
1	1922	2022	.0095	(7)
1	2058	2158	.0095	(6)
1	2234	2334	.0127	(7)
June 2	0010	0103	.0095	(7)
2	1454	1530	.0106	(5)
2	1605	1705	.0106	(7)
2	1741	1841	.0156	(1,7)
2	1917	2017	.0084	(2)
2	2052	2152	.0073	(6)
2	2228	2328	.0084	(4)
June 3	0003	0056	.0084	
3	1447	1524	.0084	
3	1559	1700	.0073	
3	1735	1835	.0073	
3	1911	2011	.0084	(6,9)
3	2046	2146	.0106	(2)
3	2222	2322	.0084	(2)
3	2356	0049	.0084	(4)
June 4	1441	1518	.0044	
4	1555	1654	.0054	
4	1729	1829	.0054	
4	1905	2005	.0054	
4	2041	2141	.0054	(6)
4	2216	2302	.0054	(4)
June 5	1252	1337	.0054	
5	1412	1512	.0044	(2)
5	1623	1648	.0037	
5	1724	1824	.0036	
5	1859	1959	.0064	(4)
5	2035	2135	.0062	(5,8)
5	2210	2246	.0043	(2,8)
June 6	1248	1331	0.0073	
6	1406	1506	.0043	(6)
6	1542	1642	.0042	
6	1717	1818	.0040	
6	1853	1953	.0034	(8)
6	2029	2129	.0031	(8)
6	2204	2227	.0032	
June 7	1241	1325	.0026	
7	1400	1501	.0028	
7	1536	1636	.0026	(8)
7	1712	1812	.0028	(8)
7	1847	1948	.0029	(8)
7	2023	2040	.0032	
June 8	1236	1318	.0024	
8	1355	1455	.0022	
8	1530	1631	.0021	
8	1706	1806	.0022	(8)
8	1842	1942	.0023	(8)
8	2017	2034	.0022	
June 9	1230	1314	.0018	
9	1349	1449	.0019 U	
9	1525	1625	.0018	
9	1700	1800	.0017	(8)
9	1836	1936	.0017	(8)
9	2011	2026	.0018	
June 10	1040	1132	.0014	
10	1208	1308	.0014	
10	1343	1443	.0014	
10	1519	1619	.0014	
10	1655	1755	.0015	(8)
10	1830	1930	.0015	
10	2006	2043	.0013	(8)
June 11	1035	1126	.0011	
11	1202	1302	.0011	
11	1338	1438	.0011	
11	1513	1613	.0011	
11	1649	1749	.0010	
11	1824	1925	.0010	(8)
11	2000	2012	.0010	
June 12	1534	1607	0.0011	
12	1643	1743	.0011	(8)
12	1819	1919	.0012	(8)
12	1954	2031	.0010	(8)
June 13	1021	1114	.0012	
13	1150	1250	.0011	
13	1325	1425	.0011	
13	1501	1601	.0011	(8)
13	1637	1737	.0013	(8)
13	1812	1840	.0013	(8)
June 14	0833	0933	.0012	
14	1008	1108	.0013	
14	1144	1244	.0013	
14	1319	1419	.0015	(4,8)
14	1455	1555	.0020	(8)
14	1631	1731	.0017	(8)
14	1806	1821	.0043	
June 15	0827	0927	.0024	
15	1002	1102	.0022	
15	1138	1238	.0023	
15	1313	1413	.0028	(8)
15	1449	1549	.0028 U	(8)
15	1625	1725	.0028	(8)
15	1800	1831	.0030	(8)
June 16	0824	0921	.0027	
16	0956	1056	.0037	(4)
16	1132	1232	.0031	(6)
16	1307	1407	.0030	(4,8)
16	1443	1543	.0052	(5)
16	1619	1719	.0033	(8)
16	1754	1821	.0038	(2)
June 17	0815	0915	.0021	
17	0950	1050	.0021	
17	1126	1226	.0023	(2)
17	1301	1401	.0021	(8)
17	1437	1537	.0020	(8)
June 18	0633	0733	0.0024	
18	0808	0909	.0020	
18	0944	1044	.0020	
18	1120	1220	.0028	(8)
18	1255	1355	.0052	(7)
18	1431	1531	.0026	(8)
18	1606	1628	.0032	(4)
June 19	0627	0727	.0030	
19	0802	0903	.0033	(6)
19	0938	1038	.0028	
19	1113	1213	.0033	
19	1249	1348	.0029	(8)
19	1425	1525	.0029	(8)
June 20	0621	0722	.0028	
20	0757	0857	.0029	
20	0932	1033	.0028	
20	1108	1208	.0026	
20	1243	1344	.0025	(8)
20	1419	1520	.0027	(8)
June 21	0615	0716	.0026	
21	0750	0850	.0026	
21	0926	1027	.0026	
21	1102	1202	.0023	
21	1237	1338	.0020	(8)
June 22	0609	0710	.0027	
22	0744	0845	.0027	
22	0920	1021	.0034	
22	1055	1157	.0030	(8)
22	1231	1332	.0030	(8)
June 23	0427	0528	.0026	
23	0602	0704	.0027	
23	0738	0839	.0027	
23	0914	1015	.0026	
23	1049	1151	.0038	(3)
23	1225	1326	.0073	(8)
23	1400	1415	.0063	
June 24	0421	0523	0.0025	
24	0556	0658	.0025	(3)
24	0732	0833	.0032 U	(2)
24	0908	1010	.0031	
24	1043	1145	.0032 U	(8)
24	1218	1321	.0028	(8)
June 25	0414	0517	.0030	
25	0553	0655	.0031	
25	0725	0827	.0028	
25	0901	1004	.0033	
25	1037	1140	.0031	(8)
25	1212	1315	.0025	(8)
June 26	0408	0512	.0027	
26	0544	0647	.0030	
26	0719	0822	.0024	(8)
26	0855	0957	.0025	(8)
26	1030	1134	.0026	(8)
June 27	0227	0331	.0023	
27	0402	0507	.0022	
27	0538	0643	.0022	
27	0713	0818	.0022	
27	0849	0954	.0025	(8)
27	1025	1130	.0026	(8)
June 28	0221	0326	.0030	
28	0356	0502	.0039	
28	0532	0538	.0029	
28	0707	0813	.0029	
28	0843	0949	.0027	(8)
28	1019	1125	.0030	(8)
June 29	0215	0322	.0034	
29	0350	0457	.0028	
29	0526	0633	.0027	
29	0702	0809	.0028	
29	0837	0945	.0028	(8)
29	1011	1120	.0028	(8)
June 30	0209	0316	.0027	
30	0345	0454	.0028	
30	0520	0629	.0029	
30	0656	0805	.0030	(4)
30	0831	0940	.0029	(8)
30	1007	1013	.0028	

* See "Remarks" in IER-FB-279 on page 124.

SATELLITE OSO-III, X-RAY

Outstanding Events (Preliminary)

June 1967

Date 1967	Start U.T.	Max. U.T.	End U.T.	Base Level at Start E(8,12) ergs cm^{-2} sec^{-1}	Max. Flux E(8,12) ergs cm^{-2} sec^{-1}
June 1	1501E	1501E	1536D	-	$\geq$ 0.0230
1	1611E	1624	1711D	$\leq$ 0.0156	.0232
1	1747E	1753	1820	$\leq$ .0127	.0167
1	1922E	1925	1957	$\leq$ .0106	.0178
1	2011	2015	2022D	.0095	.0156
1	2234E	2240	2334D	-	.0178
June 2	0024	0031	0103D	.0095	.0145
2	1620	1639		.0106	.0199
		1705D	1705D		$\geq$ .0251
2	1741E	1753		-	.0242
		1819	1841D		.0189
2	2306	2323U	2328D	.0084	.0148
June 5	1859E	1947U	2100D	$\leq$ .0064	.0189
June 16	0956E	1017	1056D	$\leq$ .0036	.0084
June 18	1255E	1313U		$\leq$ .0052	$\geq$ .0302
		1318	1355D		.0310

The description of the X-ray data from OSO-III as reported by McMath-Hulbert appeared in IER-FB-278, September 1967, p 121. Data for March 1967 appeared on pp 122-123. Data for April 1967 was published in IER-FB-279 on pp 142-143 and for May 1967 on pp 123-125.

Table of Contents
for Miscellaneous Data

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

SUDDEN COMMENCEMENTS AND SOLAR-FLARE EFFECTS
April - June 1967

Preliminary Report of Sudden Commencements

These reports are provided by Dr. A. Romana for the International Association of Geomagnetism and Aeronomy Commission IV: Magnetic Activity and Disturbances.

S.c.'s given by ten or more stations are underlined. Times are mean values obtained from normal magnetograms. When the names of the observatories are not given, the letters in square brackets indicate the quality of the observations.

Sudden commencements followed by a magnetic storm or a period of storminess (s.s.c.)

1967 April 01d 08h 07m: fifty-five (ssc: 52 [A:24; B:22; C:6]; si: 3). 04d 03h 04m: fifty-seven (ssc: 56 [A:31; B:21; C:4]; si: 1). -16d 10h 18m: Tr (sfe: Mc?). -18d 20h 37m: Ma Hb?. -23d 14h 25m: twelve (ssc: 11 [A:1; B:6; C:4]; bp: 1).

1967 May 01d 00h 36m: Hl Wn Vl. -01d 19h 07m: fifty-seven (A:39; B:18). 02d 08h 53m: Ma Ta (si: Te). -07d 01h 05m: forty-seven (ssc: 44 [A:13; B:26; C:5]; si: 3). -24d 17h 26m: forty-seven (ssc: 40 [A:11; B:18; C:11]; si: 6; bps: 1). -25d 10h 21m: nineteen (ssc:13 [A:5; B:8]; si: 4; sfe: Eb Tl). -25d 12h 35m: fifty (ssc: 45 [A:41; B:4]; si: 5). -28d 13h 03m: nineteen (ssc: 18 [A:4; B:9; C:5]; si: 1). -30d 14h 26m: forty-six (ssc: 43 [A:18; B:24; C:1]; si: 2; pc4: 1)

1967 June 04d 11h 21m: Ni Be Pr Pe Ae (si: Lg Eb MB Ba; bs: Hu). -04d 09h 53m: Su Ba Mc (sfe: Tn). -05d 19h 15m: forty-seven (ssc: 44 [A:29; B:13; C:2]; si: 2; pc4: 1). -08d 18h 20m: So Ta MB. -25d 02h 22m: fifty-five (ssc: 54 [A:20; B:32; C:2]; si: 1). -25d 09h 29m: Gu Ba Gn (si: Lg). -25d 15h 21m: Lg Ta TC Ba (si: Ap Tn). -26d 14h 59m: forty-three (ssc: 35 [A:17; B:18]; si: 8).

Sudden impulses found in the magnetograms (s.i.)

1967 April 01d 18h 42m: Hb Tl? (cr: MB). -04d 12h 07m: Te Tn (ssc: Gu Ba; sfe: Bi?). -04d 12h 47m: thirty-five (si: 34 [A:21; B:11; C:2]; bps: 1). 14d 07h 19m: Hl Be Mb Lg Eb Ky Te Bi PM; ssc: Vi Ks Tu Ta SJ Ba Mc Ac; bp: SM; sfe: Wn Ni). -15d 16h 15m: Lg MB (ssc: Ba?; pi2: Tu; pc5: Te). -18d 19h 56m: Lg (ssc: Ba). -22d 07h 09m: eighteen (si: 15 [A:3; B:10; C:2]; ssc: 2; pi2: 1).

1967 May 02d 10h 30m: Lg Tl TC Te. -02d 11h 16m: Le Te. -03d 11h 40m: PM (bs: Gu). -07d 07h 36m: Te Ba. -23d 04h 00m: Mc PM (ssc: Tn; b: SJ). 23d 21h 35m: Lg Fr Ks Te PM (ssc: Su; bs: Hl; bps: Hb). -25d 12h 58m: Ho Te. 25d 21h 14m: Le Es CF Ci SF Te Gu (ssc: Lg). -25d 23h 53m: Es CF Lg. -26d 05h 12m: Le Te. -26d 18h 35m: Lg Tl. -26d 20h 17m: Lg Tl Te. -28d 13h 54m: fifteen (si: 10 [A:4; B:5; C:1]; ssc: 5). -28d 15h 00m: Ni CF Lg Tl Mc.

28d 16h 07m: Ni Be Ma CF Lg Te. -28d 16h 21m: thirteen (A:6; B:7). -28d 18h 25m: Ni Ma CF Hb Ho Te (ssc: Vi). -28d 19h 05m: Ni Lg (ssc: So; bps: Am). -29d 04h 37m: Le Te. -30d 14h 56m: Lg SF. -30d 17h 10m: CF Te Mc Ac. 30d 19h 55m: SF Te Ac. -31d 06h 15m: Te (ssc: SF). -31d 15h 47m: Wn Ba (ssc: Ma Pe). -31d 17h 25m: Wn Ma Pr. -31d 18h 58m: Wn Ma Pr Lg Te.

1967 June 03d 16h 00m: Vl (cr: MB). -03d 17h 36m: ten. -03d 23h 45m: Ba (cr: Sw). -04d 15h 51m: TC (cr: MB). -17d 17h 05m: Lg TC. -19d 15h 30m: Ae MB. -21d 06h 59m: Wn Ni Hb? Ae Hr (ssc: So; bs: Vl; pg: Le Aq; sfe: Hl; cr: MB). -25d 03h 04m: Ma (ssc: Es). -25d 17h 37m: Lg Tl Te Ba (ssc: SM TC). -26d 15h 39m: Tl Ac. -26d 16h 47m: Te PM Tn Ac. -28d 09h 02m: Lg Ks TC Mc (sfe: Ba). -30d 11h 50m: Lg TC. -30d 13h 30m: Lg MB. -30d 18h 17m: fifteen (si: 12[A:5; B:7]; ssc:3). -30d 20h 53m: Lg TC.

Preliminary report on solar-flare effects (s.f.e.)

Effects confirmed by ionospheric or solar observations are underlined.

1967 April 01d 03h 47m - 04h 00m: PM. -01d 06h 17m: Mb Ka Ky. -01d 14h 07m - 14h 28m: Hb (pc4: Ni). -01d 14h 40m - 14h 50m: Hu. -07d 00h 19m - 00h 22m: Ho. -08d 10h 12m - 10h 24m: Hb. -08d 17h 50m - 18h 00m: Hu. 11d 10h 07m - 10h 18m: Tn. -11d 11h 45m - 12h 14m: Tn. -12d 05h 40m: Ky. -15d 09h 30m - 09h 48m: Tn. -17d 14h 09m - 14h 23m: Hu (b: Hl). 26d 21h 22m - 21h 52m: Mb Ka Ky Hu. - 27d 15h 27m - 15h 40m: Hb (si: Hl).

1967 May 11d 08h 11m: Le? Hl. -14d 18h 04m - 18h 21m: Lg? Tl (si: MB). 16d 11h 24m: Hl Vl (si: Hb?). -16d 12h 08m: Hl. -19d 15h 27m - 16h 00m: Wi Hb Eb Hu. -20d 13h 01m - 13h 09m: Hu. -21d 10h 50m: Ba. -21d 13h 02m - 13h 13m: Wn Ni Pr Hb Aq Eb. -21d 15h 35m - 15h 54m: Hb Eb. -21d 19h 21m - 19h 30m: Hb Ag? Fr Tu Te (si: Vl Ho Hu). -22d 00h 08m - 00h 14m: Ho. 22d 06h 12m: Hl (si: Vl). -23d 18h 09m - 18h 30m: Hb. -23d 18h 36m - 18h 48m: Hb Fr Te (ssc: Ho; SJ; si: Lg; bps: Tl). -25d 06h 33m - 06h 42m: Hb Eb?. -28d 05h 37m: Mb Ka Ky.

1967 June 02d 14h 26m - 14h 57m: Hb. -02d 15h 06m - 15h 22m: Eb Hu (ssc: Su; si: Vl MB). -03d 09h 18m: Su. -13d 16h 49m - 17h 01m: Hu. -18d 13h 10m: Eb. -22d 10h 12m - 10h 26m: Hb. -23d 09h 14m: Ba. -24d 10h 41m: Hl. 24d 13h 51m - 14h 03m: Hu.

Sudden Commencements and Solar Flare Effects for Jan. 1966-Sept. 1966 were published in the Miscellanea Section of IER-FB-270 pp 74-78, for Oct. 1966-Dec. 1966 in IER-FB-273 pp 109-110 and for Jan. 1967-Mar. 1967 in IER-FB-277 pp 133-134. Previously the data appeared in Journal of Geophysical Research.

SATELLITE EXPLORER 33
SOLAR X-RAY FLARES (2-12A°)

Date 1967	Onset UT	Maximum UT	Peak-Ratio to Quiet Sun	Remarks
31 March	2337	2409	~ 5	
1 April	0118	0131	~ 4	Also several small flares
	1409	1415	~ 8	
3 April	1434	1443	~ 7	
No observations from 2000 UT 3 April to 0000 UT 21 April due to unfavorable aspect.				
22 April	--	--	--	Several small flares
25 April	0827	0832	4-	Rapid rise, rapid decay
	0927	0936	5	
26 April	1110	1119	8	
	1243	1254	6	
	> 2119	< 2128	≳ 28	Onset and peak not observed
29 April	--	--	--	Numerous small flares
30 April	2255	2326	6	Slow rise, complex structure. Also numerous small flares
1 May	0315	0322	4-	
	0507	0522	4-	Slow rise
	1045	1048	5	Rapid rise, rapid decay Also numerous small flares
2 May	--	--	--	Numerous small flares
3 May	0153	0201	4	
	1434	1445	4	Complex structure
	1535	1600	18	Broad peak, slow decay Also numerous small flares

SATELLITE EXPLORER 33
SOLAR X-RAY FLARES (2-12A°)

Date 1967	Onset UT	Maximum UT	Peak-Ratio to Quiet Sun	Remarks
No observations 0908 to 2152 UT 4 May due to magnetospheric traversal.				
5 May	1542	1545	5	Rapid rise, rapid decay
6 May	0427	0457	74	
7 May	2053	2103	10	
8 May	1122	1347	7	Complex structure
	2032	2039	4-	
	2252	2326	4-	Complex structure
10 May	0711	0748	4-	Complex structure
	1141	1214	20	Complex structure
11 May	0929	0947	4-	
14 May	1526	1556	4-	Slow rise Numerous small flares
15 May	1008	1011	7	Rapid rise, rapid decay Also numerous small flares
16 May	--	--	--	Several small flares
17 May	--	--	--	Several small flares
18 May	0258	0344	6	Slow rise, complex structure
	1724	1858	8	Slow rise, complex structure
	2310	2401	5	Slow rise, complex structure
19 May	--	0625	4-	Onset not observed
	1524	1536	15	Also numerous small flares
20 May	1510	1530	5	Also numerous small flares
21 May	1238	1306	8	Complex structure
	1440	1444	4-	Rapid rise, rapid decay
	1534	1541	6	Rapid rise, rapid decay
	1921	1927	45	F(2-12A) = 0.18 ergs $(cm^2\ sec)^{-1}$ Most intense flare observed with Explorer 33 to date

SATELLITE EXPLORER 33
SOLAR X-RAY FLARES (2-12A)

Date 1967	Onset UT	Maximum UT	Peak-Ratio to Quiet Sun	Remarks
21 May	2349	2417	7	
22 May	--	--		Also numerous small flares Numerous small flares

Notes:

1. Observations are essentially continuous with 81.8 sec (before 4 April) or 163.6 sec (after 21 April) time resolution except as noted.

2. Only flares whose peak intensity exceeds that of the ambient quiet sun by a factor greater than four are listed.

3. Detailed plots of the absolute intensity F(2-12A) as a function of time for specific events will be supplied by the University of Iowa upon request (see IER-FB-275).

X-ray data from Explorer 33 have been published in the Miscellanea Section of IER-FB-275 pp 125-128, IER-FB-276 pp 135-136 and IER-FB-277 pp 118-120.