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Solar-Geophysical Data

Number 292

for November 1968

October 1968

June 1968

& Miscellanea

**DATA COMPILED BY AERONOMY AND SPACE DATA SERVICES
BOULDER, COLORADO**

**WASHINGTON, D.C.
DECEMBER 1968**

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

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INDEX FOR 1967-1968 DATA PUBLISHED IN IER-FB

	1967						1968											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
American Relative Sunspot Numbers R_A	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
Zürich Provisional Relative Sunspot Numbers R_Z	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
Zürich Final Sunspot Numbers R_Z	282	282	282	282	282	282	282	283	284	285	286	287	288	289	290	291	292	
2800 MHz - Daily Values of Solar Flux (Ottawa)	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
2800 MHz - Daily Values of Solar Flux (Final-Ottawa)	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
2800 MHz - Daily Values of Adjusted Solar Flux (ARO)	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
2800 MHz - Daily Values of Adjusted Solar Flux (Final-Ottawa)	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
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Calcium Plage and Sunspot Regions	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
Coronal Line Emission Indices	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292		
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Flare Patrol Observations	281	282	283	284	285	286	287	288	289	290	291							
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Solar X-Ray Radiation (ESSA-Boulder)	---	278	279	280	281	---	---	---	---	---		---	---	---				
X-Ray (University of Iowa)	281	283	283	284	285	287	287	288	289	290	291	292						
X-Ray (McMath-Hulbert)	281	282	---	---	---	---	---	---	---	---								
Solar Wind Velocities (Ames Research Center)	---	---	---	---	281	281	282	283	284	285	286	287	288	289	290	291	292	
Sudden Ionospheric Disturbances (SWF-SCNA-SEA-SPA-SES-SFD)	277	278	279	280	281	282	283	284	285	286	287	287	288	289	290	291	292	
Sudden Ionospheric Disturbances (Addenda)	---	---	---	---	---	---	287	288	289	290	291	292						
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8800, 4995, 2695, 1415, and 606 MHz Outstanding Occurrences (AFCL, Sagamore Hill)*	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
7000 MHz (Sao Paulo)	---	---	---	---	280	281	282	283	284	285	286	287	288	289	290	291	292	
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486 MHz - Outstanding Occurrences (Washington State Univ.)	276	277	278	279	280	281	---	283	284	---	---	---	---	---	---	---	---	
408 MHz - Outstanding Occurrences (San Miguel)	---	---	---	279	280	281	282	283	284	285	286	287	288	289	290	291	292	
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18 MHz - Bursts (Boulder)	---	---	---	---	280	281	282	283	284	285	286	287	288	289	290	291	292	
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Cosmic Ray Neutron Counts (Alert)	277	278	278	280	281	282	---	284	285	286	287	288	289	290	291	292		
Cosmic Ray Neutron Counts (Churchill)	288	288	288	288	288	282	288	284	285	286	287	288	289	290	291	292		
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10.7 cm Solar Scans (Ottawa-ARO)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

* Also 15400 MHz beginning in FB-280.

** X-Ray Graphs for March - October 1965 in FB-286.

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For explanations of the data contained herein see "Descriptive Text"
published in February 1968.

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

NOVEMBER 1968

NOV. 1968	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
01	0400	Kakioka Magstorm Houston Tenflare 270% 01/2003Z in progress 01/2013Z	01699	Solar Flares	Expected	S14W46
	0400		01700	Magstorm	Begins	31/0650Z Major
	0400		01701	Cosmic Event	Begins	31/1400Z Polar Cap Absorption
	0400		01702	Cosmic Event	Exists	Forbush Decrease
	0915 2013					
02	0400	Canaries Tenflare 520% 02/1011Z in progress 02/1020Z	02703	Solar Flares	Expected	S15W57 Delta
	0400		02704	Magstorm	Exists	Major
	0400		02705	Cosmic Event	Begins	01/1707Z Polar Cap Absorption
	1030					
03	0400		03706	Solar Flares	Expected	S15W74
	0400		03707	Magstorm	Exists	Minor
	0400		03708	Cosmic Event	Ends	Polar Cap Absorption
04	0400	Carnarvon Tenflare 720% 04/0512Z in progress 04/0520Z Toyokawa Tenflare 1270% 04/0513Z end 04/0555Z	04709	Soflare Alert	Ends	
	0400		04710	Magstorm	Ends	
	0525					
	0555					
07	0400		07711	Cosmic Event	Ends	Forbush Decrease
	0400		07712	Magstorm	Expected	Minor
16	0919	Kakioka Magstorm				
17	0400		17713	Magstorm	Begins	16/0919Z Major
18	0400	Meudon Typical Type IV 18/1026Z in progress 18/1050Z Boulder Small Proton Event (PCA) Exists 18/1050Z Canaries Tenflare 1000% 18/1027Z ends 18/1141Z	18714	Magstorm	Exists	Minor
	1050					
	1050					
	1512					
19	0400		19715	Magstorm	Expected	Minor
	0400		19716	Magstorm	Ends	
	0400		19717	Cosmic Event	Begins	18/1050Z Polar Cap Absorption
20	0400	Izmiran Magstorm 20/0905Z	20718	Magstorm	Expected	Minor
	0400		20719	Cosmic Event	Exists	Polar Cap Absorption
	2039					
21	0400		21720	Cosmic Event	Exists	Polar Cap Absorption
22	0400		22721	Cosmic Event	Ends	Polar Cap Absorption
28	0400		28722	Solar Flares	Expected	S07W12
	0400		28723	Magstorm	Expected	Minor
29	0400		29724	Soflare Alert	Ends	

Errata:

The table of Alert Periods on pp 4-5 of IER-FB-291 published last month was for the month of October 1968, not September 1968 as indicated.

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

1967 FINAL		1968 PROVISIONAL										
DAY	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.
1	131	119	208	108	122	126	139	55	98	78	75	85
2	126	117	211	118	108	154	150	37	91	82	73	70
3	89	128	197	83	93	157	121	30	92	130	108	76
4	79	128	162	92	96	138	114	26	94	131	119	93
5	79	147	125	71	89	134	115	28	94	126	118	111
6	89	129	105	56	85	144	129	41	95	96	126	97
7	126	150	86	52	79	135	138	54	100	98	135	92
8	131	166	90	79	82	128	128	89	113	106	112	89
9	117	182	86	69	94	130	99	91	98	128	87	118
10	114	198	82	74	104	117	99	99	90	138	70	131
11	132	150	78	85	95	106	87	124	104	145	103	113
12	135	144	69	87	83	82	113	152	116	150	108	94
13	137	138	67	89	60	91	117	151	142	163	70	94
14	140	93	69	67	96	80	120	147	178	113	76	89
15	151	86	87	59	110	95	111	123	172	88	90	84
16	160	70	74	46	114	103	108	149	174	79	88	79
17	172	56	95	59	91	114	118	117	160	81	82	74
18	170	48	72	59	63	136	131	96	160	86	108	69
19	129	50	65	53	53	138	107	102	144	89	121	76
20	141	53	68	56	63	140	108	93	122	91	114	92
21	130	53	69	70	64	145	113	93	138	95	122	90
22	105	69	70	91	68	139	98	86	155	107	134	85
23	101	73	71	113	50	149	106	93	126	122	136	76
24	91	93	119	132	48	165	122	101	108	153	139	62
25	111	78	162	156	64	146	119	120	86	197	136	80
26	142	60	150	141	50	121	117	134	77	189	133	94
27	140	86	118	146	57	139	102	131	67	183	138	94
28	165	140	127	138	82	133	115	118	49	149	118	72
29	141	175	131	127	71	135	94	129	64	137	112	75
30	124	185	154	154	96	126	98	115	68	91	118	95
31	119	209		134		136		93	63		99	
MEAN	126.4	115.3	107.3	92.4	81.0	128.5	114.5	97.3	110.9	120.7	108.7	88.3

1967 yearly mean = 93.8.

DAILY SOLAR FLUX AT 2800 MHZ OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1967	1968										
	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.
1	140.0	171.4	254.1	162.8	143.8*	144.8	152.0*	128.3	134.2	129.5*	136.5	153.4*
2	131.5	171.8	253.0	164.4	144.1	148.2	145.4	120.3	134.2	134.2	136.3	151.5*
3	120.5	179.3	244.3	150.8	137.1	156.3	143.8	117.2	140.9*	142.8*	145.2	146.1
4	126.3	183.8*	220.3	144.5	131.7	154.5*	144.0	116.0	135.6	143.2	146.1	140.3
5	121.6	191.2	191.4	137.8	129.1*	156.0*	138.3	119.4	135.9	139.6	147.9	132.9
6	130.3	209.7	172.2	136.0	125.1	148.5	145.5	120.1	148.0	136.0	145.3	131.4
7	127.6	223.9	164.2	131.6	124.7	145.4	152.2*	135.0	139.8	141.1	146.9	129.1
8	129.6	230.2	151.5	124.1	130.7	141.6	154.6	147.1*	141.8	149.4	141.6	133.1
9	130.0	222.0	151.7	122.8	141.1	139.8	149.0	153.6	146.7	149.4	137.3	135.4
10	127.7	208.3	155.7	124.1	142.8	139.7	147.9	157.0	146.6	156.2	134.6	135.2
11	136.6	202.5	155.7	128.3*	138.4	133.5	146.5*	162.8	150.7	152.5	133.9	132.6*
12	139.1	198.9	159.1	130.4	142.7	127.3	143.4	166.1	161.6	156.0	136.8	129.3*
13	143.0	197.2	149.1	127.8	141.9	128.3	143.4	155.6	170.8	150.6	127.2	131.5
14	153.4*	187.0	145.7	127.9	138.3	138.2	139.5	155.9	185.1*	146.7	132.1	131.3
15	164.3	176.6	141.8*	125.9	140.0	141.8	139.7	147.9	185.7	135.7	137.0	133.5
16	181.3*	160.8	142.5	128.2	141.0	150.7	138.2*	149.5	179.0	132.0	137.2	127.6
17	202.0	157.4	138.6	135.2	132.2	166.5*	139.6	143.6	169.2	131.5	142.5	140.5
18	212.4*	148.5	135.2*	132.2	127.7	178.4	143.2*	135.2	164.8	128.7	149.6	148.0
19	205.4	141.6	137.5	130.1	125.3*	185.3*	147.5	135.3	159.8	127.3	153.7	141.3
20	201.5	137.3	138.6	129.6	122.4	193.6	151.5	133.9	159.9	127.4	155.5	139.1
21	198.0	132.5	148.5	140.0	123.4	194.6	157.2	133.0	158.6	133.6*	163.3	133.8
22	182.3	135.7	151.8	142.2	115.6	190.3	154.6	139.0	153.8*	127.5	164.8*	131.0
23	164.0	137.9	156.5	145.5	111.7	185.7	163.8	146.1	137.7	126.8	167.0	132.3
24	152.9	148.6	164.6	154.4*	117.5	182.6*	157.5	152.7	130.8	143.0	173.3	134.2
25	159.4	160.1	177.4*	156.0*	119.9	181.0	154.0	158.2	124.2	158.1*	171.7	135.3
26	165.3*	174.0	183.9	156.8	114.3	177.1	146.2	154.4	118.0	160.0*	172.5	135.2
27	177.0*	185.0	175.7	159.2*	119.1	170.9	147.6	146.8	114.5	157.8	172.8*	134.1
28	184.1	213.0	170.7	157.1	128.4	158.1	142.8	143.6	119.4	158.8	171.0	129.6
29	176.5	220.7	167.4	156.2	128.0	150.9	139.1	144.3*	121.7	154.0*	191.1	128.2
30	158.9	229.1*	160.3	160.3	132.8	151.3*	135.9	138.6	125.5	144.3	163.9*	128.6
31	152.6*	239.1*		155.8		148.9		134.7	123.5		159.5	
MEAN	157.9	183.1	168.9	141.2	130.4	158.4	146.8	141.7	145.7	142.5	151.4	135.5

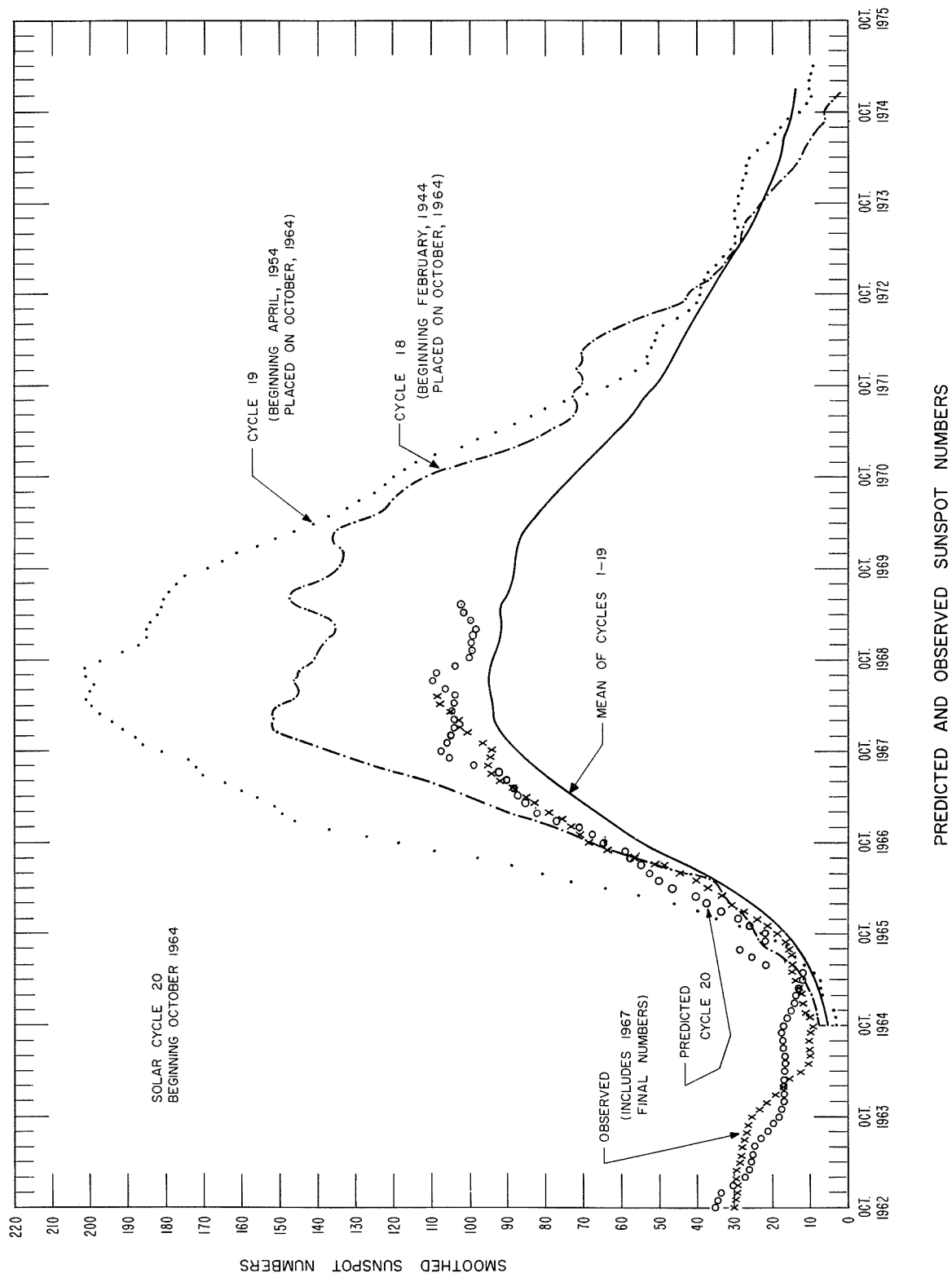
* adjusted for burst

DAILY SOLAR INDICES

NOVEMBER 1968

NOV. 1968	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO 1 A.U.					
			R _Z	R _A		AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606
01	306	18	85	108	155.7*	314	246	153.4*	150.3	105.9	70.0
02	307	19	70	88	154.0*	313	233	151.5*	147.4	104.5	70.6
03	308	20	76	80	148.5	302	220	146.1	138.3	103.2	69.7
04	309	21	93	64	142.7	290	212	140.3	132.4	98.3	67.1
05	310	22	111	102	135.2	286	202	132.9	126.0	96.0	68.1
06	311	23	97	113	133.8	284	197	131.4	118.8	92.9	65.6
07	312	24	92	82	131.5	290	199	129.1	124.1	95.6	64.3
08	313	25	89	92	135.7	294	213	133.1	128.3	96.4	68.0
09	314	26	118	60	138.0	298	215	135.4	130.4	95.2	65.7
10	315	27	131	108	138.0	281	211	135.2	126.5	96.9	63.4
11	316	1	113	110	135.3*	294	220	132.6*	127.5	96.2	66.0
12	317	2	94	67	132.1*	295	216	129.3*	125.9	98.3	66.6
13	318	3	94	65	134.3	293	215	131.5	125.2	99.5	65.4
14	319	4	89	82	134.1	284	208	131.3	120.8	93.6	64.4
15	320	5	84	99	136.5	295	212	133.5	125.9	95.4	65.5
16	321	6	79	84	130.5	297	211	127.6	121.3	94.0	62.5
17	322	7	74	95	143.8	303	222	140.5	134.5	96.1	63.8
18	323	8	69	63	151.5	297	225	148.0	137.9	105.2	63.2
19	324	9	76	73	144.8	287	218	141.3	132.6	95.3	63.1
20	325	10	92	80	142.5	289	217	139.1	131.7	100.7	65.3
21	326	11	90	61	137.1	286	208	133.8	128.4	97.2	65.6
22	327	12	85	50	134.4	286	200	131.0	125.1	94.6	63.7
23	328	13	76	59	135.7	287	198	132.3	125.0	94.9	64.3
24	329	14	62	70	137.8	289	200	134.2	126.7	97.6	65.5
25	330	15	80	79	138.9	295	208	135.3	128.7	100.5	67.7
26	331	16	94	84	138.8	297	218	135.2	127.9	98.8	67.5
27	332	17	94	72	137.8	292	214	134.1	129.3	98.2	66.2
28	333	18	72	59	133.2	286	204	129.6	124.8	97.9	65.0
29	334	19	75	53	131.8	285	200	128.2	118.6	93.2	63.4
30	335	20	95	67	132.3	291	210	128.6	124.6	96.7	65.7
MEAN			88.3	79	138.5	293	212	135.5	128.8	97.6	65.8

* Adjusted for Burst



SMOOTHED OBSERVED SUNSPOT NUMBERS
ZURICH, R_z

	1964	1965	1966	1967	1968
JAN		11.7	27.7	75.0	102.2
FEB		12.0	31.3	78.8	102.6
MAR		12.5	34.5	82.2	104.6
APR		13.6	37.4	84.6	107.2
MAY		14.6	40.7	87.4	107.9
JUN		15.0	44.6	91.3	
JUL		15.5	50.3	93.9*	
AUG		16.4	56.6	94.6	
SEP		17.4	63.1	94.4	
OCT	9.6	19.7	67.6	94.0	
NOV	10.2	22.3	70.2	96.3	
DEC	11.0	24.5	72.7	100.0	

* The smoothed sunspot numbers beginning with July 1967 are calculated using 1968 provisional monthly averages.

CALCIUM PLAGE AND SUNSPOT REGIONS

NOVEMBER 1968

Nov 1968 CMP	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA						SUNSPOT DATA			
				CMP VALUES		HISTORY	AGE (ROTA- TIONS)	DATE FIRST SEEN	DURA- TION (DAYS)	CMP VALUES		HISTORY	MT. WILSON SUNSPOT NO.
				AREA	INT.					AREA	COUNT		
1.0	N15	9761	New	(300)	(2.0)	b - L	1	11/5	>1	(10)	(1)	b - d	17046
2.0	N17	9746	{ 9700 9705	1100	2.0	L A L	6&2	10/26	14	(10)	(1)	b - d	-
2.2	N05	9747	9701	2600	2.5	L \ L	2	10/26	14	{ 50 (10)	1 (1)	L \ L b - d	17037 -
2.9	S16	9749 (1)	{ 9724 9725	4800	3.5	L / L	2	10/27	13	{ 350 (20)	36 (3)	L A L b - d	17038 17047
4.6	N18	9751	9705	1500	2.0	L - L	2	10/29	13	(10)	(8)	b - L	17052
4.8	S22	9755	New	200	1.5	b \ d	1	11/2	4				
4.9	S13	9753	New	400	2.5	L / L	1	10/31	11	10	5	b / L	17041
6.9	N33	9766	New	(400)	(2.5)	b - L	1	≤11/10	≥3	(10)	(1)	b - d	17058
7.1	N35	9756	New	(100)	(1.0)	L \ d	1	11/2	3				
7.5	N11	9754 (2)	New	(2500)	(3.0)	L \ L	1	11/1	13	150	1	L \ L	17040
7.6	S23	9767	New	(1200)	(3.0)	b \ L	1	≤11/10	≥4	(20)	(9)	b / L	17058
7.9	S09	9757	New	(1000)	(2.5)	L A L	1	11/3	11	10	1	b - d	17043
8.5	N17	9770	New	(300)	(1.5)	b - d	1	11/10	3				
9.5	S24	9759	9717	(1200)	(3.0)	L A L	6	11/3	≥11	{ (10) (10)	(1) (1)	L - d b - d	17042 17044
10.1	S15	9758	9722	1700	2.0	L - L	5	11/3	≥11	{ (10) (10) 10	(2) (2) 3	b - d b - d	- 17049
11.5	N18	9760	9736	3000	4.0	L - L	2	11/4	15	{ 800 -	28 -	L / L b - d	17045 17056
12.4	S16	9763	9728	500	2.0	L - ?	2	<11/8	>6	(10)	(2)	b - d	-
14.4	S11	9764	9737	(2000)	(3.0)	L \ L	2	11/8	13	{ 20 (10)	1 (2)	L \ d L - d	17050 17051
14.8	N27	9765	9726	(3000)	(3.0)	L / L	2	11/8	13	10	3	L - d	17048
15.2	N02	9774	New	(100)	(2.0)	b - L	1	≤11/18	≥3	-	-	b - d	17057
16.1	N11	9768	New	(1200)	(3.0)	L - L	1	11/10	12	10	3	L \ d	17055
16.1	N17	9775	New	(1000)	(3.0)	b / L	1	≤11/18	≥4	(10)	(1)	b / L	17059
16.4	S24	9782	New	(500)	(3.0)	b - L	1	11/20	3	(10)	(3)	b - d	-
17.1	S05	9771	9743	(800)	(2.5)	L - L	2	11/11	11				
18.3	S16	9776	9733	800	2.0	L - d	3	<11/18	>5				
18.4	S14	9773	New	(300)	(2.0)	L - d	1	11/13	≥1				
19.4	N15	9772	9735	6300	3.5	L \ L	3	11/12	14	{ 430 20 (10)	29 5 (1)	L A L b - d b - d	17060 17062 17061
21.8	S31	9778	New	(100)	(2.0)	? - d	1	≤11/18	≥1				
22.2	N15	9779	{ 9741 9735	2500	3.0	L \ L	2&4	<11/18	>10	(10)	(3)	b - d	-
22.3	S20	9777	9739	1300	2.0	L \ L	2	<11/18	>10	(10)	(5)	b - d	17063
25.2	S18	9780	9740	4800	3.0	L - L	4	11/18	13	{ 200 (10)	19 (3)	L \ L L - d	17065 17064
26.8	S18	9783	New	(400)	(1.5)	L - ?	1	11/21	>10	(10)	(1)	L - d	17068
27.2	S07	9785	New	1800	3.5	L / L	1	11/21	13	570	4	L / L	17069
27.3	N27	9784 (3)	9744	1000	1.5	L / L	3	11/21	13				
28.1	N07	9787	9747	800	2.0	L / ?	3	11/22	>9				
29.1	N04	9789	9747	(1000)	(2.0)	L / L	3	11/23	13	(10)	(1)	b - d	-
30.1	S18	9790	9749	(2800)	(2.5)	L A L	3	11/23	14	(10)	(1)	b - d	-
30.2	N20	9792	9746	600	1.5	L / L	3	11/24	13				

- (1) Region 9749 also contains some weak remnants of old plage 9702 of the previous rotation.
 (2) Region 9754 is a new plage that has developed near the location of old region 9723.
 (3) Region 9784 is a return of region 9744, which was incorrectly identified in last month's report. It should have been listed as a return of region 9710.

Due to inclement weather conditions, no calcium spectroheliograms were secured at the McMath-Hulbert Observatory on Nov. 6, 7, 9, 14, 15, 16, 17, 26, 28 and 29, 1968.

MT. WILSON CLASSIFICATION OF SUNSPOTS

NOVEMBER 1968

Nov. 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	Nov. 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	1635	S16	W53	(δ) 5	17033	9	2340	N07	W36	(α p) 5	17040
		N04	W02	(β γ) 4	17037			N18	E24	(δ) 5	17045
		S16	E12	(β p) 3	17038			N19	E52	(α p) 2	17048
		N09	E75	(α p) 3	17040			S13	E55	(α p) 3	17050
2	2130	S16	W69	(δ) 5	17033			S12	E66	(β) 1	17051
		N05	W20	(α p) 3	17037			N13	W72	(α p) 2	17052
		S16	W06	(β p)	17038			S22	W33	(β p) 3	17053
		N08	E59	(α p) 4	17040			S23	E07	(α p) 1	17054
3	No Obs.					10	1755	N08	E78	(α p) 2	17055
								N07	W47	(α p) 5	17040
								N19	E14	(δ) 5	17045
								N20	E43	(α p) 2	17048
4	1840	N04	W46	(α p) 2	17037			S11	E48	(β p) 3	17050
		S17	W32	(β γ) 5	17038			S11	E59	(β p) 2	17051
		N08	E34	(α p) 5	17040			N13	W88	(α p) 2	17052
		S13	E01	(β p) 1	17041			S22	W43	(β p) 3	17053
5	1830	S24	E57	(α p) 3	17042			N09	E69	(β p) 3	17055
						11	1735	N17	E05	(β p) 2	17056
		N06	W60	(α p) 1	17037			N07	W61	α p	17040
		S16	W43	(β p) 5	17038			N19	E02	δ	17045
		N08	E21	(β p) 5	17040			N20	E30	α p	17048
		S13	W13	(β f) 4	17041			S12	E31	α p	17050
		S26	E43	(α p) 2	17042			S11	E45	β p	17051
		S13	E26	(β f) 2	17043			S23	W58	β p	17053
		S25	E52	(α p) 1	17044			N09	E58	β p	17055
		N19	E80	(β p) 3	17045			N17	W07	β p	17056
		N15	W60	(α p) 2	17046			N22	E45	α p	17057
								N33	W65	β f	17058
6	2255	S16	W64	(α p) 3	17038						
		N08	E05	(α p) 5	17040						
		S13	W29	(β p) 3	17041						
		S26	E28	(α p) 1	17042						
		S13	E11	(β p) 3	17043						
		N19	E64	(β p) 2	17045						
		S30	W57	(β) 1	17047						
7	1910	S16	W69	(β p) 3	17038	16	1615	N20	W66	δ	17045
		N08	W06	(α p) 6	17040			S11	W35	α p	17050
		S13	W41	(β p) 3	17041			N08	E24	β p	17062
		S26	E34	(α p) 2	17042			N20	W14	α p	17059
		S13	W04	(α p) 2	17043			N13	E32	β p	17060
		N19	E53	(β γ) 3	17045			N15	E37	α p	17061
		S29	W69	(α p) 1	17047			N10	W14	α p	17055
		N20	E87	(α p) 1	17048						
8	1940					17	1730	N20	W76	(δ) 4	17045
		S17	W79	(α p) 2	17038			S12	W48	(α p) 2	17050
		N07	W20	(α p) 5	17040			N07	E07	(β p) 3	17062
		S14	W56	(β) 2	17041			N18	W24	(β p) 2	17059
		N18	E40	(δ) 5	17045			N11	E26	(β γ) 5	17060
		N18	E71	(β p) 2	17048			N17	E23	(α p) 2	17061
		S14	E06	(α p) 1	17049			N09	W24	(β p) 1	17055
		S13	E75	(β p) 3	17050			S24	E66	(β) 1	17063
		S10	E77	(α p) 2	17051						

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Nov 68

MT. WILSON CLASSIFICATION OF SUNSPOTS

NOVEMBER 1968

Nov 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	Nov 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
18	2230	N07	W11	(α p) 2	17062	28	1730	S13	W46	α p	17065
		N17	W38	(β p) 3	17059			S08	W21	β	17069
		N11	E11	(β p) 5	17060			S10	E33	α p	17071
		S16	E85	β p	17064	29	1916	S13	W47	(α p) 4	17065
		S14	E87	α p	17065			S09	W33	(β p) 3	17069
19	1835	N08	W22	(α p) 3	17062	30	No Obs.				
		N18	W50	(β p) 4	17059						
		N11	W0E	(β p) 5	17060						
		S16	E70	(β p) 3	17064						
		S14	E72	(β p) 3	17065						
20	2320	N17	W67	(β p) 3	17059						
		N11	W16	(β p) 4	17060						
		S16	E52	(α p) 3	17064						
		S15	E58	(β p) 4	17065						
		S20	E48	(β) 2	17066						
21	1600	N17	W73	β	17059						
		N12	W26	(β γ) 3	17060						
		S16	E42	(β p) 2	17064*						
		S15	E47	(α p) 4	17065						
		S20	E38	(β) 1	17066						
		S20	E65	α p	17068						
22	No Obs.										
23	2153	N12	W54	β p	17060						
		S16	E13	β p	17064						
		S12	E18	β p	17065						
		S11	E16	β	17067						
		S08	E43	β	17069						
24	1840	N12	W63	(α p) 2	17060						
		S16	W01	(α p) 2	17064						
		S15	E08	(α p) 3	17065						
		S12	E05	(β) 1	17067						
		S09	E23	(β p) 3	17069						
		S22	E01	(α p) 1	17070						
25	2252	S15	W07	β p	17064						
		S13	W10	α p	17065						
		S15	W14	β p	17067						
		S09	E16	β p	17069						
		S23	W15	β p	17070						
26	1914	S13	W18	α p	17065						
		S15	W25	β	17067						
		S09	E07	β p	17069						
		S22	W26	β f	17070						

*Polarities reversed for cycle 20.

The number which appears on the right-hand side of the column labeled "Type" is a coded representation of the largest magnetic field strength measured in the group.

Code	Maximum Field Strength in Gauss	Code	Maximum Field Strength in Gauss
1	100-500	6	2600-3000
2	600-1000	7	3100-3500
3	1100-1500	8	3600-4000
4	1600-2000	9	4100-4500
5	2100-2500	10	>4500

SOLAR FLARES PARTIAL LISTING

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Nov 68

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

NOVEMBER 1968

OBSERVATORY	DATE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	DURATION MIN.	IMPORTANCE	OBS. COND. TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	REMARKS
1968 NOV																	
CATA	01	0755	0905	0810	N03 E08	.153		1.9	70	-N		0810	.75	.76		186	
CATA	01	0755	0835	0810	N04 E02	.059		1.5	40	-B		0810	1.73	1.74		214	Z
BUCA	01	0757	0831	0803	N04 E02	.059	9747	1.5	34	1N	C	0803	3.87	3.80			
CAPF	01	0758	0834		N04 E02	.059		1.5	36	-N	C	0803	1.65	1.68			
CAPF	01	0804	1048	0845	S14 W49	.797	9740	27.7	164	3N	C	0848	8.25	12.80			
BUCA	01	0814	1016D		S16 W47	.786	9740	27.8	122D	2F	C	0850	7.75	12.00			
MONT	01	0814	1044	0911	S18 W46	.785	9740	27.9	150	2B	C	0911	5.67				EH
CAPS	01	0825E	0943D		S16 W45	.766	9740	28.0	78D	1B	3	0845	2.00	3.20		325	PHILW
ARCE	01	0829E	0955D		S15 W47	.782	9740	27.8	86D	2F	C	0928	5.00	7.80			
ISTA	01	0830	0933		S20 W48	.811		27.8	63	-B							
ISTA	01	0830	0924		S13 W46	.763		27.9	54	-B							
CATA	01	0845E	1045D	0905	S18 W48	.803	9740	27.8	120D	2B		0905	6.66	11.35		302	Z
WEND	01	0926E	0958D		S19 W47	.798	9740	27.9	32D	3N	V		16.50				
ONDR	01	1209	1226	1210	S14 W52	.825	9740	27.6	17	1B	V	1210			3.20		CJR
CAPS	01	1210	1224D		S12 W49	.790		27.8	140	-B	3	1213	1.10	1.80		220	
CATA	01	1210E	1220D	1215	S11 W52	.816		27.6	10D	-B		1215	.63	1.09		257	
MONT	01	1210	1224	1214	S12 W51	.810		27.7	14	-F	C	1214	.77				
WEND	01	1214E	1224		S13 W52	.822	9740	27.6	10D	1N	V		3.09				
ONDR	01	1300	1316	1305	S14 W52	.825	9740	27.6	16	1N	V	1305			2.40		CFJKR
MCMA	01	2000	2023		S14 W60	.891	9740	27.3	23	1B	V						
HUAN	01	2001	2014D		S14 W57	.868	9740	27.6	13D	1B	1	2011	2.11	2.97			
HOUT	01	2003	2020	2005	S14 W56	.860	9740	27.6	17	1B	C		2.30	4.30			E
HALE	01	2003E	2019D	2013	S13 W55	.849	9740	27.7	16D	2B	2	2013	3.30	6.10			
HALE	01	2040	2103	2049	S15 W51	.819	9740	28.0	23	1N	2	2049	1.96	3.30			
HUAN	01	2045	2053D		S17 W52	.835		28.0	8D	-N	1	2050	.88	1.16			E
MCMA	01	2046	2050		S14 W60	.891	9740	27.4	4	-N	V						
HOUT	01	2047	2100	2049	S18 W58	.886	9740	27.5	13	1N	C		1.20	2.30			E
HALE	01	2132E	2203		S14 W52	.825	9740	28.0	31D	1N	2	2132	1.44	2.50			
HALE	01	2159	2210	2202	S14 W57	.868		27.6	11	-F	2	2202	.36	.70			
SACP	01	2240	2301	2246	S15 W58	.878	9740	27.6	21	1B	C		1.51	2.26			
MANI	01	2242E	2301	2246	S13 W58	.874	9740	27.6	19D	1N	2	2246	1.24	2.26			
HALE	01	2242	2300	2245	S12 W56	.855	9740	27.7	18	1B	2	2245	2.68	5.10			
MANI	02	0101	0125	0111	S15 W57	.870	9740	27.8	24	1N	2	0111	1.34	2.40			
HALE	02	0102	0122	0112	S13 W60	.889	9740	27.5	20	1B	1	0112	1.03	2.20			F
MANI	02	0339E	0406		S15 W55	.854	9740	28.0	27D	1N	1	0339	1.55	2.78			
ISTA	02	0600	0620		S20 W58	.891	9740	27.9	20	2N							
CATA	02	1000E	1045D	1013	S13 W67	.936	9740	27.4	45D	2B	1	1013	5.51			339	FZ
CAPS	02	1002E	1108D		S15 W63	.914	9740	27.7	66D	2B		1004	3.50			369	
ARCE	02	1010E	1019D		S10 W64	.913	9740	27.6	9D	2F	P	1012	2.63	6.20			B
CATA	02	1025	1045D	1025	S15 W63	.914		27.7	20D	-B		1025	.46	1.10		226	
MONT	02	1026E	1059D	1026	S14 W69	.948	9740	27.3	33D	2F	C	1026	4.13				
SACP	02	1513	1539	1520	S13 W66	.930		27.7	26	-N	C		.90	1.58			
HOUT	02	1518	1525	1521	S13 W66	.930		27.7	7	-F	C		.70	1.50			
MCMA	02	1520E	1540D	1533	S15 W70	.955	9740	27.4	20D	1N	C	1533	1.03	3.00			E
SACP	02	1631	1825	1710	N22 E25	.478	9751	4.6	114	1N	C		3.09	3.21			
HALE	02	1637E	1733D	1659	N21 E24	.458	9751	4.5	56D	2B	2	1659	7.94	9.00			FGLV
HOUT	02	1650	1805	1707	N19 E27	.485	9751	4.7	75	2F	C		3.20	6.00			L
HUAN	02	1753E	1757D		N22 E24	.466		4.5	4D	-F	1	1755	1.50	1.55			EI
HALE	03	0257	0321	0259	S18 W74	.974	9740	27.6	24	1B	2	0259	.72				FK
MANI	03	0257	0318	0302	S17 W75	.977		27.5	21	-N	2	0302	.72	1.71			
HUAN	03	1243E	1305		S18 W80	.992	9740	27.5	22D	1N	1	1244	1.03				T
WEND	03	1438E	1450D		N25 W60	.867	9744	29.1	12D	1F	V		4.13				
SACP	03	1439	1452	1442	N29 W58	.856		29.3	13	-N	C		.80	1.20			
HUAN	03	1441	1447		N30 W57	.850		29.3	6	-F	2	1443	.31	.46			
HUAN	03	1612	1638D		S17 W08	.421		3.1	26D	-B	1	1616	1.50	1.50			
SACP	03	1613	1641	1617	S17 W09	.427	9749	3.0	28	1B	C		3.29	3.29			
MCMA	03	1616	1623		S15 W11	.410	9749	2.9	7	-B	V						
HALE	03	1632E	1642	1636	S16 W07	.401		3.2	10D	-B	3	1636	1.19	1.30			F
HUAN	03	2034	2053		S19 W85	.999	9740	27.5	19	1N	1	2041	1.39				
SACP	03	2034	2055	2041	S19 W81	.994	9740	27.8	21	1B	C		2.60				
HALE	04	0202	0334D		S13 W89	1.000	9740	27.4	92D	1B	2	0206	.62				H
HALE	04	0237	0334D	0239	S19 W89	1.000	9740	27.4	57D	1B	2	0239	.62				H
MONT	04	0932	0937	0935	S19 W90	1.001		27.6	5	-F	C						H
ARCE	04	0934	0940D	0935	S17 W60	1.001	9740	27.6	6D	1F	C	0935	.40	2.30			ACH
CAPS	04	1201E	1218D		N17 E90	.999	9760	11.3	17D	1N	1	1203	1.00				
HALE	07	2005	2018	2007	N07 W79	.979	9747	1.9	13	1F	1	2007	1.44				GJL
HALE	07	2220	2309	2227	S25 E18	.587	9759	9.3	49	1N	1	2227	2.06	2.50			
HALE	08	1734E	1828D		S17 W77	.983	9749	3.0	54D	1N	2	1745	.77				
HUAN	08	1827E	1833		S17 W80	.991		2.8	6D	-F	1	1828	.31				
HALE	09	1804	1833	1811	N17 E21	.393	9760	11.3	29	1N	2	1811	1.96	2.20			EF
SACPI	09	1805	1816	1810	N15 E21	.381		11.3	11	-F	C		.69	.70			
HUAN	09	1805	1818D		N15 E22	.395	9760	11.4	13D	1F	1	1809	2.06	2.06			E
MONT	10	0941	0958	0946	S12 W83	.995		4.2	17	-F	C	0946	.77				

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SOLAR FLARES NOVEMBER 1968

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION	CMP DAY			TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
	1968 NOV																
ARCE	10	0945	1010	0948	S02	W87	.999	9753	3.9	25	1B	C	0948	1.09	5.00		
CAPF	10	1025E	1040		S12	W80	.989	9753	4.4	150	1N	P	1031	.83			H
MONT	10	1025	1033	1027	S12	W83	.995		4.2	8	-F	C	1027	.77			
SACP	10	2213	2235	2220	N05	W47	.729		7.4	22	-F	C		1.00	1.20		
HALE	10	2214	2247D	2220U	N05	W48	.740	9754	7.3	330	1F	1	2220	1.55	2.30		
MANI	10	2215E	2231D	2222	N06	W47	.728	9754	7.4	160	1F	1	2222	1.55	2.28		
SANM	11	1313	1530		N17	E04	.200		11.9	137	-N	C	1326	.80	.83		ETU
SANM	11							9760			1B	C	1450	2.59	2.66		
SACP	11	1415	1419	1416	N18	E04	.216		11.9	4	-N	C		.60	.59		
SACP	11	1429	1433	1430	N18	E04	.216		11.9	4	-F	C		.50	.49		
SACP	11	1438	1512	1444	N18	E02	.208		11.8	34	-B	C		1.59	1.56		
SACP	11	1455	1512	1459	N18	E02	.208		11.8	17	-N	C		.99	.98		
SACP	11			1505													
HUAN	11	1516E	1531		N16	E02	.174		11.8	150	-N	1	1517	1.13	1.13		
HUAN	11								11.9				1526	.55	.55		
SACP	11	1526E	1528	1526	N18	E03	.211		11.9	20	-N	C		.90	.88		
MANI	12	0001	0037	0012	N17	W04	.201	9760	11.7	36	1N	2	0012	2.17	2.18		
HALE	12	0006	0035	0010	N16	W03	.179		11.8	29	-B	1	0010	1.44	1.50		FJ
HUAN	12	1421	1445		N06	W70	.937	9754	7.3	24	1N	1					
SACP	12	1421	1458	1425	N05	W69	.931	9754	7.4	37	1N	C		2.39	4.36		
SACP	12	1421	1458	1430	N05	W69	.931		7.4	37	1N	C					
SANM	12	1421	1455	1427	N05	W75	.964	9754	7.0	34	2B	C	1427	3.88	14.06		I
MONT	13	0846	0925	0916	N15	E90	1.000		20.1	39	-F	C	0916	.77			
ARCE	13	0910	0928	0917	N24	E90	.999	9772	20.1	18	1B	C	0917	.92	5.10		
SANM	13	1410	1433	1414	N14	E90	1.000		20.3	23			1414				A
CAPS	13	1411E	1426D		N22	E80	.980		19.6	150	-B	3					C
MONT	13	1411	1423	1415	N13	E82	.987	9772	19.7	12	1B	C	1415	2.06			
MCMA	13	1420E	1429		N15	E90	1.000	9772	20.3	90	-N	C	1421				
HALE	13	1713	1742D	1719	N17	W29	.506		11.5	290	-B	2	1719	.83	1.00		FT
MCMA	13	1716	1803		N17	W26	.465	9760	11.8	47	-N	C	1728	1.55	1.80		EL
HUAN	13	1716	1803		N17	W28	.492	9760	11.6	47	1N	1	1729	1.96	2.04		L
HUAN	14	2038	2106		N13	E65	.901	9772	19.7	28	1F	1	2045	1.65	2.67		
CATA	15	1030	1145D	1035	N13	E60	.862	9772	19.9	750	2B		1035	2.61	5.38		269
HUAN	15	1127	1135		N16	E59	.854		19.9	8	-F	1	1130	.31	.49		E
HUAN	15	1138	1151		N12	E57	.834		19.8	13	-F	2	1140	.31	.43		E
HUAN	15	1520	1552	1529	N10	E07	.140	9768	16.2	32	1N	2	1529	2.27	2.27		E
SANM	15	1520	1549	1528	N10	E05	.112		16.0	29	1B	C	1528	2.59	2.61		
CAPS	15	1521E	1529D		N10	E05	.112		16.0	80	-B	1	1524	2.00	2.00		220
MANI	16	0034E	0103	0051	N17	W58	.846	9760	11.7	290	1N	2	0051	2.27	4.07		
HALE	16	2154	2206	2158	N16	W65	.902	9760	12.0	12	1N	2	2158	.93			
MANI	16	2357	0018	0001	N21	W70	.935	9760	11.7	21	1F	2	0001	1.03	2.21		
HALE	16	2359	0005	2400	N21	W66	.910		12.0	6	-N	2	2400	.31			
HALE	17	0103	0112	0109	N17	W67	.910	9760	12.0	9	1N	1	0109	.93			
HALE	17	0239	0250	0244	N17	W68	.917		12.0	11	-B	2	0244	.52			H
MANI	17	0239	0257	0245	N18	W71	.936	9760	11.8	18	1F	2	0245	1.13	2.46		
MANI	17	0707	0735	0712	N12	E35	.567	9772	19.9	28	1N	2	0712	1.86	2.30		
MANI	18	0422	0434	0426	S12	E90	1.000	9780	24.9	12	1N	2	0426	.72	2.34		
MANI	18	0426	0448	0431	N21	W80	.980	9760	12.2	22	1F	2	0431	.93	3.24		
MANI	18	0746	0756	0749	N12	E21	.369		19.9	10	-F	2	0749	.93	1.00		
CAPS	18	0747E	0805D		N11	E19	.334	9772	19.7	180	1F	1	0749	2.00	2.10		170
CATA	18	1030E	1050D	1030	N23	W85	.993	9760	12.1	200	1B		1030	1.16			292
MONT	18	1031E	1127	1035	N21	W90	.999	9760	11.7	560	1B	C	1035	3.20			
CAPS	18	1039E	1157D		N21	W87	.996	9760	11.9	780	2N	1	1101	2.00			AV
HUAN	18	1459E	1522		N12	E16	.293		19.8	230	-N	1	1504	1.44	1.44		
SACP	18	1501	1519	1504	N13	E15	.284		19.8	18	-N	C		.98	.97		
CAPS	18	1504E	1513D		N11	E15	.272	9772	19.8	90	1F	1	1507	2.20	2.30		
SACP	18	2311	2320	2312	N20	W91	1.000		12.1	9	-B	C		.20			
HALE	18	2315E	2321		N20	W89	.999	9760	12.3	60	1B	2	2315	.31			
HALE	19	0145	0205	0151	S12	E81	.991	9780	25.1	20	1N	1	0151	.83			F
MANI	19	0151E	0152D		S16	E78	.985	9780	24.9	10	1F	1	0152	1.55	3.90		
HALE	20	0118	0153	0132	S18	E60	.896	9780	24.6	35	1N	2	0132	1.55	3.40		FU
HALE	20	0120	0127	0122	S16	E65	.926		24.9	7	-F	2	0122	.77			F
ISTA	20	0925	1005		S16	E59	.885		24.8	40	-N						
CATA	20	0925	1125	0935	S24	E57	.890	9780	24.7	120	1B		0935	1.51	3.11		269
ARCE	20	0930	0950	0935	S22	E58	.891	9780	24.7	20	1F	C	0935	1.11	2.50		T
SACP	20	1955	2013	1959	S15	E56	.888		25.0	18	-N	C		1.39	1.97		
HALE	20	1956	2012	1958	S16	E55	.853		25.0	16	-B	2	1958	.93	1.70		
HOUT	20	1957	2007	2000	S14	E56	.856	9780	25.0	10	1N	C		1.80	3.20		
HALE	21	0033	0135	0042	N16	W17	.338	9772	19.7	62	1N	1	0042	4.18	4.50		FS

SOLAR FLARES

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION	IM- POR- TANCE	OBS. COND. TYPE	TIME — UT	MEASUREMENTS				REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY	— MIN.	MAX. AREA Sq. Deg.			CORR. AREA Sq. Deg.	MAX. WIDTH H α	MAX. INT. %		
	1968 NOV																	
[HALE	22	0044	0117D	0046	S13	E36	.645		24.7	33D	-N	1 P	0046	.72	.90		W	
[MANI	22	0100	0220	0108	S17	E40	.712	9786	25.0	80	1N	2	0108	2.32	3.50			
[MANI	22	0100	0220	0125	S17	E40	.712	9786	25.0	80	2F		0125	5.16	7.95			
[HALE	22	0107	0117D	0113	S16	E42	.728		25.2	10D	-N	1 P	0113	1.03	1.50		F	
[MONT	23	1321	1354	1324	S15	E22	.496	9780	25.2	33	1N	C	1324	2.37			H	
[HUAN	23	1322	1323D		S16	E21	.496		25.1	1D	-B	1 P	1323	1.24	1.26			
[CAPS	23	1322E	1332D		S16	E24	.528		25.4	10D	-B	3	1325	1.00	1.20	325	CH	
[CATA	23	1325E	1345	1325	S15	E21	.485		25.1	20D	-B		1325	1.27	1.43	371	Z	
[CATA	24	1000E	1025D	1010	S08	E38	.644		27.3	25D	-B		1010	.58	.76	211		
[MONT	24	1001	1131	1047	S07	E40	.666	9785	27.4	90	1N	C	1047	3.61				
[CAPS	24	1040	1056D		S06	E42	.687	9785	27.6	16D	18	3	1044	2.20	3.10	212	HJ	
[CAPS	24	1409	1440		S09	E37	.636		27.4	31	-B	3	1421	1.00	1.30	204	J	
[HUAN	24	1410	1445	1418	S07	E37	.628	9785	27.4	35	1F	2	1418	1.96	2.13			
[SACP	24	1411	1443	1420	S07	E35	.602		27.2	32	-N	C		.60	.65			
[CAPF	24	1418E	1440D		S06	E37	.624	9785	27.4	22D	1N	P	1424	1.86	2.34			
[HUAN	25	1235	1317		S08	E23	.445	9785	27.2	42	1N	2	1239	1.65	1.65			
[HUAN	25	1235	1317		S08	E26	.485	9785	27.5	42	1N		1245	.75	.77			
[CAPS	25	1240E	1313D		S08	E26	.485		27.5	33D	-B	3	1247	1.60	1.80	220	J	
[CAPF	25	1247E	1325D	1302	S07	E24	.451	9785	27.3	38D	1N	P	1304	3.09	3.45			
[HUAN	25	1745	1849D		S08	E21	.418	9785	27.3	64D	1F	1	1753	2.01	2.01		E	
[HALE	25	1820	1830D	1827	S08	E20	.404		27.3	10D	-N	2	1827	1.03	1.10		FE	
WEND	26	1000	1021		S10	E12	.328	9785	27.3	21	1F	V		3.09				
[ONDR	26	1056E	1115	1106	S10	E11	.318	9785	27.3	19D	1F	V	1106			2.00	CJ	
[CAPS	26	1058	1120		S11	E10	.323		27.2	22	-N	3	1108	.80	.80	189	J	
[ARCE	27	0830	0845		S22	W90	1.001	9777	20.6	15	1N	C	0830	.22	1.20			
[CATA	27	0835E	0850	0840	S19	W90	1.000		20.6	15D	-N		0840	.23		155		
[CAPS	27	1116	1138		S21	W35	.682		24.8	22	-B	3	1119	1.50	2.00	204	E	
[MONT	27	1116	1141	1124	S22	W36	.699		24.8	25	-F	C	1124	1.50				
[ONDR	27	1118E	1137	1128	S21	W37	.702	9780	24.7	19D	18	V	1128			2.40	CE	
[CATA	27	1125	1150	1135	S21	W36	.692		24.8	25	-B		1135	.75	1.01	251		
[WEND	27	1128E	1148		S20	W35	.675	9780	24.9	20D	1N	P		3.09				
MANI	30	0014	0040	0023	N15	E80	.982	9798	5.0	26	1N	2	0023	1.03	2.65			

Remarks:

A = Eruptive prominence, base at $>90^\circ$.
 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 H α line.
 S = Brightening follows disappearance of filament (same position).
 T = Region active all day.
 U = Close and somewhat parallel bright filaments (|| or Y shape).
 V = Occurrence of an explosive phase.
 W = Great increase in area after time of maximum intensity.
 X = Unusually wide H α 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 preceding table.

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01 0549E S16 W46	01 0647E S16 E22	01 0915 S18 E22	01 1113 S15 W45	01 1159 S17 E20	01 1355E S14 E12
01 1456 S13 W52	01 1504 S13 W56	01 1507 S14 W58	01 1549E S14 E14	01 1549 S15 E11	01 1656 S12 W61
01 1750 S19 W54	01 1804 S14 W60	01 1808E S18 W55	01 2229 S16 E11	02 0037 S14 W59	02 0037 S13 W57
02 0210 S21 W57	02 0213E S20 W55	02 0219 N04 W15	02 0253 N28 W38	02 0504 S26 E32	02 0519 S15 W61
02 0551 S16 E05	02 0926E S16 W66	02 0935E S09 W62	02 1051E S14 E90	02 1203 S17 E04	02 1210 S13 W64
02 1230E S08 W65	02 1335 S13 W63	02 1351 S15 W61	02 1405 S15 W02	02 1640 N08 E60	02 1659 S14 W67
02 1659 S14 W70	02 1714 S18 W66	02 1911 S14 W68	02 1915E S14 W70	02 1928 S17 W74	02 1928 S19 W68
02 1941 S16 W66	02 2020 S14 W06	02 2022E S14 W07	02 2023 S15 E01	02 2023 S21 W08	02 2034 S14 W06
02 2142 S14 E87	02 2346 S14 W79	03 0208 S15 W70	03 0224 S14 E63	03 0533E S15 W74	03 1113E N11 E18
03 1334 S13 W14	03 1429 S13 W15	03 1451E S17 W77	03 1641 N05 E45	03 1709 S20 W81	03 1709 S19 W83
03 1932 S20 W82	03 2002 S14 W20	03 2011E S13 W18	03 2014 S20 W81	03 2015 S19 W85	03 2021 S24 E66
03 2022 S25 E66	03 2030 N05 E45	03 2030 N08 E44	03 2031 N07 E44	03 2107 S19 W86	03 2138 S15 W85
03 2139 S14 W87	03 2217 N29 W63	03 2338 N29 W65	03 2339 N30 W62	04 0008E N08 E42	04 0408E N18 E15
04 0901 N08 E38	04 0910E N05 E37	04 0920E N05 E44	04 1055E S17 W26	04 1240E S14 W28	04 1242 S15 W27
04 1353E S18 W27	04 1354 S16 E69	04 1517 N07 E34	04 1537 S17 W23	04 2019 S14 W32	04 2019 S13 W33
04 2023 N02 E30	04 2036 N07 E31	04 2037 N07 E30	04 2104 S17 W90	04 2124E N18 E90	04 2349 S16 W39
05 0016 S01 E00	05 0018 S15 W38	05 0900 N14 E79	05 0925 N13 E85	05 0945 N14 E79	05 1338 S17 W39
05 1420E N21 E88	05 1506 S12 W10	05 1526 S12 W09	05 1526 S13 W11	05 1531 S12 W11	05 1750 S13 W13
05 1804 S12 W09	05 2020 S15 W42	05 2024 S16 W42	05 2026 S18 W37	05 2153 S14 E24	05 2250 S19 E23
06 0217E S30 W45	06 0249 S15 W47	06 0813 N17 E74	06 0813 N20 E74	06 0920 S15 W50	06 1226 N21 E75
06 1449E S13 E13	06 1647 S15 W54	06 1648 S15 W55	06 1743 S13 W24	06 1753 N20 E64	06 1814 N21 E68
06 2204 S14 W26	06 2221 N21 E66	06 2254 N15 W27	07 0027 S29 E41	07 0218 S29 E41	07 0246 N08 W67
07 0642 N17 W31	07 0901E S07 E90	07 1105 N15 W90	07 1716 S15 W60	07 1716 S16 W66	07 1832 N18 W35
07 2017 N10 W76	07 2343 N20 E53	08 0111 N20 E50	08 1254E N18 E40	08 1255 N18 E43	08 1351 N19 E40
08 1416E S17 W78	08 1757 S14 W13	08 1818 N21 E38	08 1846 S17 W80	08 1910 S17 W83	08 2055 N21 E38
08 2113 N20 E36	08 2328 N22 E35	09 0630E N20 E34	09 1104 S21 W27	09 1110 N13 W64	09 1122 N13 W65
09 1202 N13 W65	09 1215 N13 W66	09 1216 S21 W27	09 1304 S21 W27	09 1350E N20 W28	09 1427 S20 W30
09 1430 N21 E28	09 1436 N14 W67	09 1438 N21 W66	09 1439 N21 E29	09 1446E N16 W66	09 1451E N13 W67
09 1451E S21 W28	09 1619 N21 E27	09 1652 N13 W67	09 1655 N21 E26	09 1700 N17 E29	09 1701 N17 E29
09 1705 N20 E27	09 1705 N18 E25	09 1705 N21 E27	09 1833 N21 E27	09 1833 N21 E26	09 1837 N17 W62
09 1856 S23 W28	09 2003 S10 E71	09 2022 N12 W69	09 2028 N21 E26	09 2033E N13 W70	09 2035 S12 W75
09 2047 N05 W32	09 2230 N17 E18	10 0028 N21 E23	10 0315 N07 W36	10 0409 N09 W38	10 0554E N09 W39
10 1324 S12 W90	10 1326 N17 E15	10 1345 N16 E16	10 1401 S12 W85	10 1404 S15 W38	10 1505 S13 W87
10 1519 N19 E12	10 1521 N18 E13	10 1522 N18 E12	10 1523 S12 W90	10 1523 S12 W88	10 1527 N16 E13
10 1530 N16 E16	10 1530 N16 E15	10 1531 N18 W15	10 1539 S13 W85	10 1735 S12 W88	10 1756 N33 W50
10 1756 N33 W51	10 1757 N33 W50	10 1758E N34 W62	10 1803 N18 E12	10 1805 N19 E12	10 1819 N07 W43
10 1819 N05 W43	10 1830 S23 W48	10 1848 S24 W44	10 2110 N19 E09	10 2115 N05 W46	10 2115 N05 W46
11 0124 S23 W44	11 0124E S22 W50	11 0434E N17 E08	11 0733E S11 E48	11 0828 N18 E05	11 0828 N18 E05
11 0905 S14 E50	11 0915E S13 E51	11 0935E N19 E07	11 1125 N18 E07	11 1215E N17 E07	11 1215E N17 E07
11 1627E N17 E03	11 1757 N20 W01	11 1906 N17 E02	11 1930 N18 E01	11 1947 N16 W01	11 1949 N17 W01
12 0115 N11 E63	12 0117 N11 E56	12 0205 N19 W02	12 0300 N18 W03	12 0325 S24 W35	12 0751E N20 W07
12 0753 N17 W09	12 0753 N19 W06	12 0830E N17 W07	12 1112 N17 W11	12 1153 N16 W10	12 1347 N19 W06
12 1441 N15 E90	12 1530 N18 W09	12 1543 N18 W10	12 1545 N19 W11	12 1615 N18 W09	12 1639 N18 W10
12 1647 N30 E31	12 1716 N09 W46	12 1716 N10 E46	12 1717 N10 E46	12 1724 N17 W14	12 1725 N17 W15
12 1730 N18 W13	12 1732 N17 W15	12 1915 N20 W11	12 1940 N18 W12	12 1941 N17 W12	12 2122 N17 W13
12 2126 N17 W13	12 2129 N17 W13	12 2136E N17 W13	12 2210 N21 W14	12 2211 N21 W13	12 2248 N21 W14
12 2248 N19 W17	12 2251 N21 W13	12 2321 N16 W19	12 2328E N17 W14	12 2336 N19 W14	13 0016 N17 W15
13 0236 S27 W48	13 0243 N21 W16	13 0335 N21 W15	13 0402 N17 W17	13 0647 N17 W18	13 0932 N15 E90
13 1104 N17 W21	13 1104 N17 W19	13 1246 N17 W22	13 1248 N16 W23	13 1250E N18 W21	13 1636E N17 W25
13 1752 N14 E85	13 2022 N10 E88	13 2047 N18 W23	13 2048 N17 W24	13 2108 N16 E81	13 2114E N13 E85
13 2228 S11 E09	13 2239E S12 E09	13 2311 N16 W33	14 0019 N19 W27	14 1208E S10 E07	14 1320 N21 W34
14 1417 N18 W42	14 1729 N21 W36	14 1800 N17 W37	14 1806 N20 W36	14 1843 N21 W37	14 1931 N08 E13
14 2121 N14 E65	15 0740 N26 W01	15 1224 N18 W52	15 1230E N21 W51	15 1244 N18 W52	15 1510 N19 W46
15 1511 N17 W54	15 1657 N25 W04	15 1911E S12 W17	15 1924 N10 E04	15 1934E N09 E04	15 1934E S11 W19
15 1938 N11 W51	15 1939 N12 E54	15 1949 N06 E25	15 2106 N17 W51	15 2248 N21 W52	16 0129E N14 E51
16 0838E N10 E46	16 0930E N12 E47	16 1115E N24 W59	16 1144 N19 W57	16 1145E N21 W56	16 1156 N19 W58
16 1250 N12 E40	16 1253E N11 E41	16 1257 N10 E32	16 1307 N21 W61	16 1401 N17 W60	16 1455 N21 W62
16 1507 N21 W62	16 1540 N16 W61	16 1625 N21 W63	16 1717 N18 W65	16 1814 N17 W65	17 0040 N21 W66
17 0101 N10 E18	17 0102 N09 E19	17 0224 N12 E32	17 0440 N15 E37	17 1024E N21 W70	17 1402 S17 E82
17 1403 S18 E90	17 1423 N20 W74	17 1511 N21 W75	17 1625 N21 W76	17 1702 N13 E27	17 1717 N21 W76
17 1745 N12 E28	17 1848 N14 E26	17 1850 N10 E11	17 1851 N10 E11	17 1859E N11 E11	17 1914 N13 E26
17 1917E N14 E26	17 1918 N12 E27	17 2124 N10 E09	17 2151 N10 E09	17 2247 N13 E23	17 2315 N13 E23
18 0004E N10 E08	18 0033 N21 W79	18 0056 N13 E22	18 0133 N13 E22	18 0133E N12 E21	18 0252 N17 W79
18 0305 N13 E21	18 0306 N14 E24	18 0400 N21 W80	18 0442 N12 E22	18 0528 N08 E05	18 0542 N12 E22
18 0835E N21 W83	18 1604E N20 W90	18 1630 N18 W55	18 1631 N19 W56	18 1631 N17 W37	18 1812 N15 E13
18 1825 N18 W56	18 1830 S14 E55	18 1855 N19 W85	18 2008E N17 W40	18 2020 N19 W58	18 2023 N21 W90
18 2049 N17 W40	18 2237 N16 E09	18 2238 N16 E08	18 2337 N15 E09	18 2338 N15 E09	18 2340E N15 E12
19 0006 N19 W59	19 0048 S14 W54	19 0105 N17 E07	19 0241 N15 E09	19 0301 N36 W42	19 0320 N10 E09
19 1442 N18 W68	19 1443 N17 W50	19 1747 S22 E67	19 1801 S16 E70	19 1831 S22 E67	19 1842 S16 E69
19 1957 N09 W18	19 1958 N10 W19	19 1958 N10 W19	19 2159 S20 E64	20 0025 S15 E64	20 0323 N12 W10

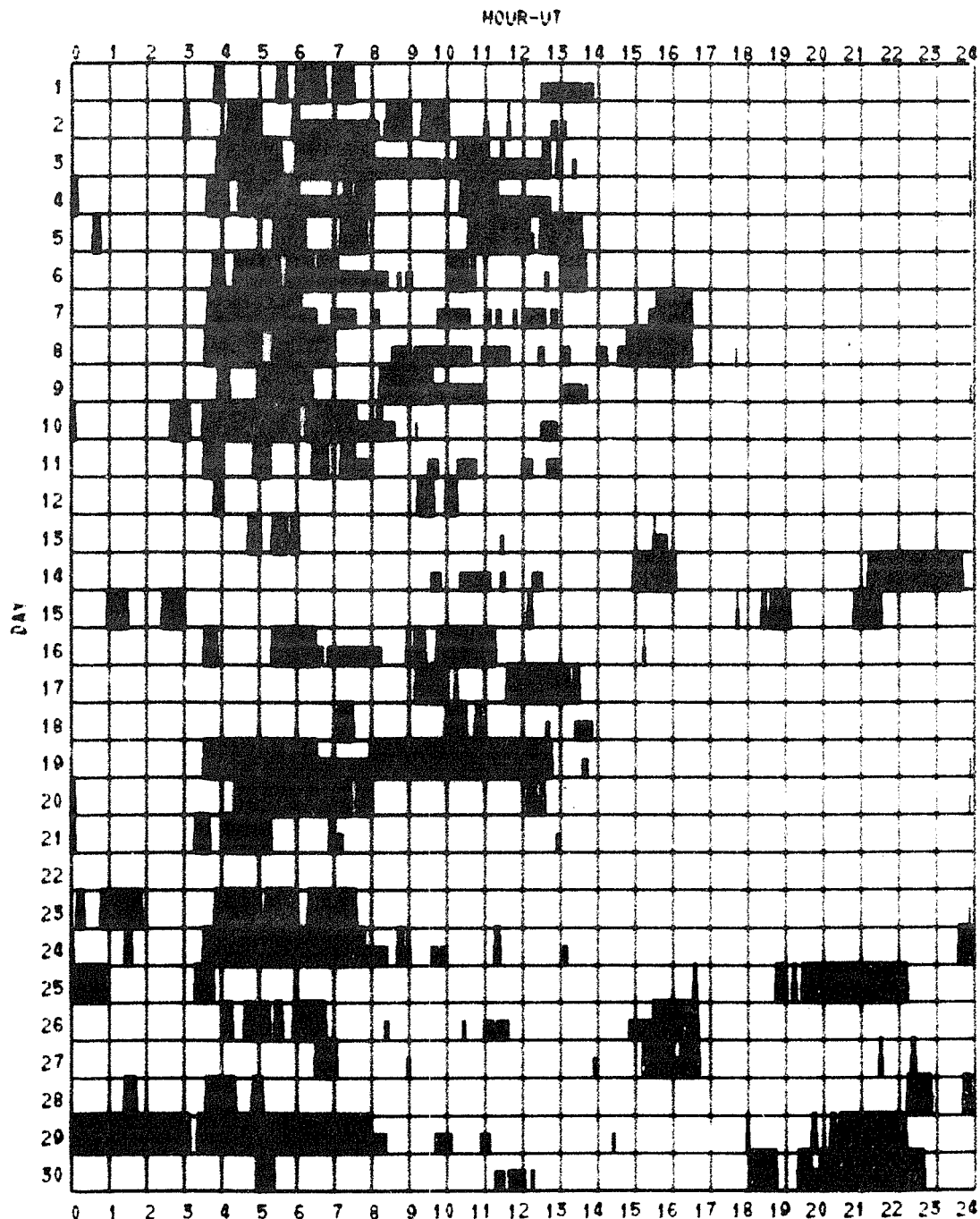
SOLAR FLARES

NOVEMBER 1968

20 0925 N07 W56	20 1230E S19 E59	20 1353 S17 E60	20 1358 S17 E56	20 1359E S17 E58	20 1525 S14 E59
20 1603 S14 E59	20 1710 N16 W12	20 1721 N10 W29	20 1729 S15 E58	20 1737 S16 E56	20 1747 S17 E58
20 1749 S14 E57	20 1829 S20 E53	20 1830 S20 E53	20 2036 S15 E55	20 2036 S15 E55	20 2037 S14 E56
20 2050 S18 E51	20 2050 S19 E49	20 2205 S11 E56	20 2309 N14 W18	20 2310 N15 W18	21 0031 S16 E52
21 0125 S16 E52	21 0315 N12 W18	21 0925 S19 E46	21 1020 S22 E71	21 1220E S22 E70	21 1250 N20 W22
21 1306 S18 E47	21 1334 N11 W24	21 1449 N17 W27	21 1529 S20 E40	21 1640 S19 E39	21 1647 S20 E36
21 1721 S14 E41	21 1835 N11 W24	21 2056 S22 E39	21 2057 S22 E39	22 0054 N11 W29	22 0059 N10 W28
22 1702 S18 E30	22 1703 S18 E29	22 1732 N11 W39	22 1756 S18 E19	22 1757 S17 E17	22 2017 N11 W41
23 0558E S14 E23	23 0806 S05 E55	23 0919E S12 E26	23 0930E S13 E24	23 0930E S12 E24	23 1045E S12 E24
23 1110 S15 E21	23 1110 S12 E25	23 1139 S12 E24	23 1142E S12 E25	23 1145 S13 E23	23 1205 S10 E51
23 1322E S12 E16	23 1325E S11 E14	23 1418 S07 E50	23 1420E S10 E50	23 1600 S15 E19	23 1654 S15 E20
23 1656 S14 E22	23 1833 S07 E46	23 2133 S07 E47	23 2135 N11 W56	23 2241E S07 E45	23 2336 S07 E45
23 2352 S12 E17	24 0021 S14 E14	24 0047 S14 E14	24 0241 S17 E16	24 0850 S10 E40	24 1231 S08 E37
24 1344 S21 E04	24 1644 S20 E03	24 1749 S06 E34	24 1801E S07 E35	24 1804 S18 E05	24 1820 S12 E07
24 2029 S12 E06	24 2040 S12 E07	24 2045 S18 E05	24 2155E S11 E04	25 0210 S16 E06	25 0223 S12 E02
25 0345E S12 W01	25 0441 S19 W01	25 0556 N09 E28	25 0811 N08 E27	25 0847E S09 E25	25 1035E S07 E27
25 1217 S08 E22	25 1328 S08 E22	25 1425 S08 E22	25 1507 S08 E22	26 1233 S11 E09	26 1255 S11 E09
26 1353 S11 E08	26 1927 S17 W22	26 2054 N19 E14	26 2055 S08 E04	26 2140 S08 E04	26 2234 S16 W24
26 2242 S12 W28	26 2333 S18 W18	27 0005E S20 W21	27 0808E S23 W90	27 1237E S17 W33	27 1424 S23 W90
27 1440 S17 W34	27 1742 S04 E15	27 1816 S10 W05	27 1823 S08 W06	27 1823 S07 W05	27 1910 S18 W36
27 1910 S20 W36	27 1920 S12 W42	27 2007 S30 W27	27 2148 S03 E12	28 0048 S18 W37	28 0836 S15 W42
28 0838 S13 W43	28 1501 S07 W16	28 1629 S10 E36	28 1716 S08 E35	28 1930 S18 W51	28 1931 S17 W51
28 1946 S22 W55	28 1946 S22 W54	28 1948 S22 W55	28 2034 S08 E36	29 1315 N12 E88	29 1942E N12 E85
29 2303 S11 W39	30 1236 N13 E71	30 1402E S13 E63	30 1501 N12 E70	30 1534 S22 E90	30 1620 N14 E71
30 1640 S09 E08	30 1907 S20 W51	30 2344E N13 E66			

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INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE
NOVEMBER 1968



Observatories included in total patrol:

Arcetri	Catania	Istanbul	Ondrejov
Bucharest	Haleakala	Manila	Sacramento Peak
Capri-F (German)	Houston	McMath-Hulbert	San Miguel (1-15)
Capri-S (Sweden)	Huancayo	Monte Mario	Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SUDDEN IONOSPHERIC DISTURBANCES

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

NOVEMBER 1968

NOV 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
01	0020		0025					151			HO-YP/ 151 GE-MR/ 82 UP-KR-UP/ 46 MR-GE/ 39 MR-GE/ -9 YP-HO/ -8 UP-KR-UP/ -3 GE-MR/ -4 HO-YP/ -2 MA DA MA NU PU SL (R16-227) DA SL (R16-72) SL (R16-47) SL (R16-83) HN (L20-45) HN (L20--10,013-8) HN (013-5) CP-SA/-266 CP-SA/ 29 HN HN HU WS MC BO MC BO	NF
01	0017		0019						-9			
01	0547	0557	0550	1	S 1-			227				0549E
01	0828	1012	0858	5	G 2+							0814
01	0814		0907	1								
01	1021	1130	1026	1	S 1							NF
01	1015	1100	1030	1				72				1209
01	1208	1233	1211	1				47				1355E
01	1405	1504	1420	1				83				1507
01	1511	1518	1514	1				45				1656
01	1707	1717	1708	1				- 10				1804
01	1808	1847	1813	1				5				
01	1801		1818					-266				
01	1801		1818						29			
01	1847	1859	1848	1	S 1-							
01	1905U	1927	1906	1	S 2							NF
01	2003	2055U	2008	5	S 1+							NF
01	2005	2055	2008	3		52 2						2000
01	2005	2055	2012	1			2					
01	1956U	2127	2010	5				155				
01	2000		2013									
01	1956		2007					36				
01	1957	2106	2011	1					-17			
01	2003	2006	2004	1					2			
01	1959	2127	2043	1				54		48		
01	2247	2304	2250	1	S 1-							
01	2245	2309	2250	5				150				2240
01	2239		2245					262				
01	2244		2246						-24			
01	2242	2246	2244	1						07		
02	0011		0023					252				NF
02	0009		0013						-29			
02	0037	0056	0044	1	SL 1-							
02	0038	0100	0046	1				10				0037
02	0057		0115					327				
02	0040		0043						-8			
02	0033	0100D	0036	1					2			
02	0034	0203	0112	1				90				
02	0110	0124	0114	1	S 1-			15				0101
02	0110	0141	0115	5				104				
02	0104		0110						12			
02	0100		0115									
02	0335	0358	0340	1	S 1							
02	0331	0423	0345	1				48				0339E
02	0330		0340					226				
02	0334		0341						11			
02	0949	1050	1003	5	SL 3-	70 2	1					1000E
02	0950	1100	0957	1								
02	0951		0954	1								
											HO-YP/ 252 GE-MR-GE/ 104 YP-HO/-100 UP-KR-UP/ 82 YP-HO/-29 MR-GE/-12 HO-YP/-10 GE-MR/ -7 UP-KR/ -2 KR-UP/ 2 HN HN (M23-10) MR-GE/ 327 MR-GE/ 97 GE-MR/ 72 MR-GE/ -8 GE-MR/ -3 DV MA (K18-90, M23-72) MA HN (M23-15) WO (K18-90) HO-YP/ 104 GE-MR/ 39 MR-GE/ 12 GE-MR/ 6 HO-YP/ 5 MA MA (K18-48, M23-36) HO-YP/ 226 MR-GE/ 129 GE-MR/ 108 MR-GE/ 11 GE-MR/ 6 NU PU RO A17	

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SUDDEN IONOSPHERIC DISTURBANCES

NOVEMBER 1968

NOV 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
02	0946	1145	1003	5				302			SL (R16-302) UM (C22-169) PU UM DA WS HU PU UM (012-51, C22-48) HN HN (L20-25) HN (M23-5) CP-SA/ -90 CP-SA/ -8 HN (L20-10, M23-5) HN HN (L20-20, M23-12) HA (L20-14) HN (M23-5, L20-10) KR-UP/ -84 HN (M23-5, L20-28)	1051E 1513
02	0950	1045		5					3			
02	1049	1100	1054	1	S 3+							
02	1519	1550	1527	5	SL 1							
02	1516	1603		1			1					
02	1518	1620	1543	1				51				
02	1534	1648	1540	1	SL 1-							
02	1534		1537	1				25				
02	1700		1703	1				5				
02	1703		1716					-90				1659
02	1703		1717						-8			
02	1715	1723	1718	1				10				
02	1912	1924	1915	1	S 1-							
02	1913	1926	1917	5				20				1911
02	1937	1953	1943	1				5				
02	1937		2020						-84			1928
02	2158	2215	2201	1				5				2142
03	0000	0011D	0001	1				47			MA (K18-47)	NF
03	0000	0038	0010	1					1		DV MA	
03	0259	0312	0303	1	S 1-							0257
03	0301		0301					100			MR-GE/ 100 HO-YP/ 72 GE-MR/ 36 MR-GE/ -9 GE-MR/ -3 HO-YP/ -2	
03	0300		0306						-9			
03	1237	1250	1239	5	S 1						DA NU HU PU AN	1243E
03	1232	1417	1320	1		2	2				PU A17 PO LO UM (C22-56)	
03	1235	1313	1245	5				56			A1 UM HN (M23-4, L20-38)	1641
03	1234	1328	1242	1				4	1+		JP-NT-JP/ 79 CP-SA/ -43 CP-SA/ -15 NT-JP-NT/ -5	
03	1235	1310	1240	5				79			WS HN (L20-40, M23-8) JP-NT/ 144 NT-JP/ 100 NT-JP-NT/ -4	1709
03	1641	1654	1642	1							WS HN (L20-45, M23-15) HA (L20-11) JP-NT-JP/ 158 NT-JP-NT/ -11	NF
03	1641		1646						-15		HN (M23-3) HN (M23-5) HN HU WS HN (L20--75, M23-47)	1932 2002 2034
03	1716	1730	1719	1	S 1-			40			HA (L20-36) NT-JP/ 324 JP-NT/ -79 NT-JP/ -18 JP-NT/ -10	
03	1714	1744	1722	1				144			HA (WVH5-1.0, WVH10-0.6)	
03	1710		1719						-4		HN (L20-20) HN (M23-10) HA (L20-7)	2107 2217
03	1715		1729								WS HN (M23-16) MA (M23-36, K18-48) HA (L20-14) MR-GE-MR/ 115 MR-GE/ 10 GE-MR/ -7 DV	NF
03	1810	1822	1812	1	S 1-			45			GE-MR-GE/ 75 MR-GE-MR/ -5	0202
03	1809	1829	1813	5				158			TA UM (C22-16) HO-YP/ 133 GE-MR/ 111 HO-YP/ -4	*
03	1809		1812					3	-11		UM MA CA A17 UM (C22-181) MA (K18-155, M23-144) UM	*
03	1955	2030		1				5			HN (L20--65, 013-25) HA (L20-22)	
03	2034	2053	2041U	5	SL 1			-75				
03	2034	2043	2039	5					-18			
03	2040		2052					324				
03	2040		2047									
03	2037	2043	2039	1						10		
03	2105	2124	2111	1				20				
03	2210	2304	2220	5				10				
03	2326U	2345U	2329	1	S 1-			16				
03	2323	0012	2330	5								
03	2322		2330					115				
03	2320		2331						10			
03	2320	2351	2321	1					1-			
04	0202		0213					75				
04	0201		0215						-5			
04	0350	0420		1			*					
04	0346	0417	0356	1				16				
04	0344		0354					133				
04	0349	0354							-4			
04	0346	0417	0356	1					1			
04	0515	0628	0516	5	S 2							
04	0514		0518	1			1+					
04	0509	0642	0527	5				181				
04	0509	0642	0527	1					3			
04	2106	2117	2109	5				-65				2104

SUDDEN IONOSPHERIC DISTURBANCES

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NOV 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
04	2143	2225	2152	1				20			HN(L20-20)	NF
05	1339	1402	1348	5				65			SL(R16-65) UM(C22-16)	1338
05	1344		1350	1					1		UM	
05	1815		1825					79			CP-SA/-79	1804
05	1800		1818						-13		CP-SA/-13	
05	2013	2305U	2058	1				26			HN(M23-26)	2020
06	1817	1832U	1820	1				10			HN(L20-10,013-8)	1814
06	2306	2312	2309	1				-08			HN(L20--08,M23-5)	NF
06	2308	2322	2309	1					1-		DV	
06	2317		2329	1				-30			HN(L20--30)	2322
07	0205	0340	0240	1				60			TK(G18-60)	0218
08	1254		1309					-144			JP-NT-JP/-144	1255E
08	1250		1303						-20		JP-NT/-20	
08	1412		1443					-273			NT-JP/-5	
08	1412		1432						-8		ST-NW/-273	1416E
08	1443		1450					79			ST-NW/-8	
08	1443		1450								CP-SA/-79	*
08	1508	1618	1600	1				-20	8		SA-CP/-46	
08	2132		2149					356			CP-SA-CP/-8	
08	2126		2132								HN(L20--20)	*
08	2113	2114	2113	1					-16	05	PC-TT/356	2113
09	1807	1818		1	SL 1-						TT-PC/-129	
09	2029	2143	2041	5							TT-PC/-16	
09	2215	2302	2224	1							HA(WWVH5-0.5, WWVH10-0.3)	
10	1234		1257								HU	1804
10	1245		1239					20			HN(M23-20, L20--15)	2028
10	1346		1349					7			HA(L20-18)	NF
10	1346		1348								HN(M23-7,L20--20)	
10	1443		1449					309			ST-NW/309	NF
10	1431		1444						-14		CP-SA/-108	
10	1528		1615								ST-NW/-14	
10	1520		1532								CP-SA/-10	
10	1806		1812					-57			CP-SA/-57	1345
10	1806		1813						10		CP-SA/10	
10	1810		1830					136			ST-NW/136	NF
10	1806		1825						-15		CP-SA/75	
10	2112	2156	2114	1							ST-NW/-15	
10	2109	2111	2110	1				61			CP-SA/-9	
10	2204	2255	2211	5					12		CP-JP/61	1519
11	0825		0830								JP-NT/43	
11	0825		0830								JP-NT/12	
11	1318	1335	1327	1	SL 0			43			CP-JP/-4	
11	1314		1325						-10		CP-SA/43	1805
11	1318		1323					75			CP-SA/-10	
11	1326	1339	1332	1					-19		CP-SA/75	
11	1829	1905	1833	1				5			CP-SA/-19	
12	1421	1435U		1	6					03	HN(M23-5)	2110
12	1546		1547	1				15			HA(WWVH5-0.3, WWVH10-0.1)	
12	1739	1825	1757	1							HN(M23-15)	2213
12	2128	2240	2133	5							HA(L20-14)	
12	2127	2130	2128	1				-129			SK-TT/-129	0828
									-36		PC-TT/115	
											SK-TT/-36	
											PC-TT/-32	
								342			NU	1313
									-12		ST-NW/342	
								35			ST-NW/-12	
								6			HN(L20-35)	
											HN(M23-6,L20-16)	NF
											HU	1421
								10			HN(L20-10)	1545
								10			HN(M23-10)	1732
								18			HN(M23-18,L20-15)	2126
										04	HA(L20-14)	
											HA(WWVH5-0.4, WWVH10-0.2)	

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SUDDEN IONOSPHERIC DISTURBANCES

NOVEMBER 1968

NOV 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
13	0018	0058	0022	5				15			HN(M23-15) MA(K18-47) MR-GE-MR/ 126 GE-MR/ 50 MR-GE/ -28 HN(M23-8) HN WS HN(L20-230, M23-50) HA(L20-40) UP-KR/ 165 UP-KR/ -6	0016
13	0017		0026					126				
13	1716	1743	1724	1				8				1716
13	2108U	2116	2112	3	SL 1-							2108
13	2111	2131	2114	5				230				
13	2108		2114					165				
13	2110		2112						-6			
14	2045U	2052	2049U	5	SL 1-							2038
14	2040		2104U	5				110				
14	2042		2050					180				
14	2042		2100						-15			
14	2115	2135	2121	1				25				2121
15	1032	1047		1	SL 1							1030
15	1033	1116		1			1					
16	1315	1413	1322	1				28				NF
16	1315		1535					208				
16	1315		1525						9			
16	1626	1656	1644	1				16				1625
17	0114		0124					68				NF
17	0114		0117						-1			
17	1443	1600	1506	1				30				NF
17	1440		1450					-72				
17	1430		1440						-10			
17	1612	1815U	1638	1				70				NF
17	1658	1726	1704	1				15				1702
17	1920	2040	1923	5				10				1918
17	2316	2328	2318	1	S 1-							2315
17	2318	2339	2323	1				7				
18	0028	0106	0034	1				8				0033
18	0034		0045					82				
18	0037		0046						-7			
18	0359	0419D	0403	5				36				0400
18	0400		0412					241				
18	0400		0405						-22			
18	0400		0413	5								
18	0427	0449	0433	1	SL 1-				1			0422
18	0418	0503		1			2+					
18	0419	0506	0433	5				65				
18	0417		0439					280				
18	0423		0437						11			
18	0425	0500	0435	1					2			
18	1028	1154	1029	5	S 3	82 2						1030E
18	1024		1043	1			3					
18	1028	1213	1048	5								
18	1026	1220	1050	5				274				
18	1027		1040					72				
18	1028		1030						14			
18	1027	1133		1					2			
18	1114	1236	1135	1				64				NF
18	1102		1125					241				
18	1102		1110						-12			
18	1828		1842	1				7				1825
18	1845	1936U	1857	1				10				1855
18	2046	2134	2052	5				35				2049
18	2045		2052					356				
18	2045		2047						-30			
18	2110	2240	2115	1				40				
18	2313	2338	2317	5	S 1							2311
18	2300	2400		1			*					

SUDDEN IONOSPHERIC DISTURBANCES

NOVEMBER 1968

NOV 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
18	2312	0032	2321	5				60			HN(M23-60,L20-85) WO(K18-125) MA(K18-80) TK(G18-48) MR-GE/ 356 YP-HO/ 86 GE-MR/ 72 HO-YP/ -57 HO-YP/-19 YP-HO/-14 GE-MR/-12	
18	2312		2318					356				
18	2313		2314						-19			
19	0217		0222					61			HO-YP-HO/ 61 GE-MR/ 36 YP-HO-YP/ -3 GE-MR/ -3 MA(R16-34,K18-26) MR-GE/ 237 YP-HO-YP/ 158 GE-MR/ 140 MR-GE/ -7 YP-HO-YP/ -4	NF
19	0215		0220						-3			
19	0309	0435	0316	1				34				0308
19	0310		0316					237				
19	0310		0311						-7			
20	1901	1917	1903	1				15			HN(L20-15)	NF
20	2003	2055	2006	5				12			HN(M23-12) HA(L20-7)	1956
21	0039	0054	0043	1	S 1-						MA	
21	0029	0118	0046	1				41			MA(K18-41,R16-26) MR-GE-MR/ 97 GE-MR/ 4 MR-GE/ -3	0031
21	0034		0045					97				
21	0034		0044						4			
23	1322	1335U	1324	1	SL 1-						HU	NF
23	1323	1351	1330	1							PU	
23	1320	1430	1335	5			2	46			UM(012-46,C22-24) SL(R16-43) UM PU A1 HN HU UM(012-29,C22-24) UM	
23	1322	1400	1327	5					2			
23	1657	1705	1658	5	S 1-							
23	1655	1810	1705	1				29				1654
23	1655	1750	1700	1					2			
24	1417	1456	1431	1				45			HN(L20-45)	1418E
24	1757		1806	1				10			HN(M23-10)	1801E
24	2040	2125	2046	5				15			HN(M23-15,L20-17) HA(L20-18)	2040
25	0335	0413	0353	1				22			MA(K18-22) HO-YP/ 61 MR-GE/ 43 HO-YP/ -3 MR-GE/ -2	0345E
25	0336		0343					61			HU	
25	0337		0344						-3		UM(012-24,C22-16) ST-NW/ -36 ST-NW/-70 UM(C22-28,012-22) CP-SA/ 82 ST-NW/ -57 ST-NW/-90 CP-SA/ 11 DV HU HN(L20-17,M23-12)	1217
25	1240U	1255U		1	G 1-			24				
25	1238	1334	1258	1				-36				
25	1217		1221						-70			NF
25	1215		1219					28				
25	1425	1534	1435	1				82				
25	1412		1415						-90			
25	1417		1424						2+			
25	1406	1459	1408	1							DV	
25	1806U	1835U		1	SL 1-			17			HN(L20-17,M23-12)	NF
25	1823	1858	1829	1								
26	1255	1400	1304	1				13			UM(012-13)	1255
27	1825	1910	1829	1				7			HN(M23-7)	1823
30	2122	2200	2127	1				5			HN(M23-5)	*

STATIONS REPORTING FOR NOVEMBER 1968:

Anchorage	Huancayo	Poitiers
Canberra (T)	Kerguelen Is. (T)	Prague
Darmstadt	Loran-C (T)	Preston (London)
HANDS	Manila	Rome
Hawaii	McMath	Slough
Hirao	Neustrelitz	Tokyo
Hobart (Tasmania)	Paterson	White Sands
	Sao Paulo	Woomera

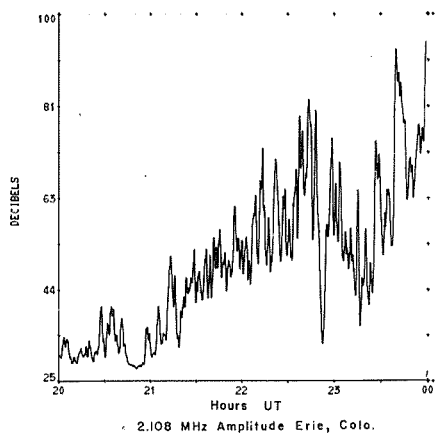
TIME OF NO OBSERVATIONS FOR NOVEMBER 1968:

DATE	TIME (UT)	STATION
04	1300-2400	DV
05	0000-1400	DV
06	2016-2109	HN
07	1413-1750, 2016-2109	HU, HN
09	0000-1856	HN
10	1300-2400	DV
11	0000-2400	DV
14	1300-2400, 1453-1720	DV, HU
15	0000-2400, 1730-2400	DV, RO
16	0000-1400, 0000-1500, 0620-1553	DV, RO, HN
18	2220-2228	HN
20	1300-2400, 2135-2351	DV, HN
21	0000-1745, 1403-1835, 2115-2400	DV, HU, SL
22	0000-1115	SL
23	1400-1804	HN
25	0606-1441	HN
26	0850-1423	HN
28	1510-1706	HN
30	1925-1930, 2020-2200	HU, HU

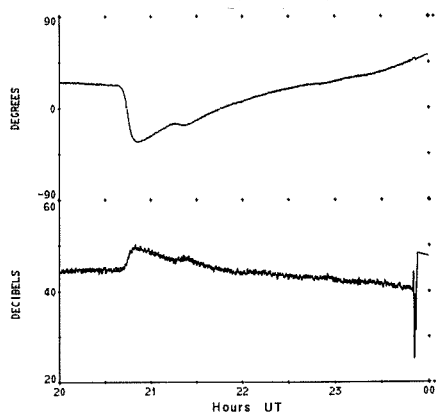
Notes: (T) indicates SID report received in telegraphic form.
Hawaii SCNA-SEA out of operation.
Boulder SFD's being recorded but not scaled until further notice.
The following stations received too late for inclusion in this table:
Trinidad
Athens

SELECTED SID EVENTS RECEIVED BY HANDS

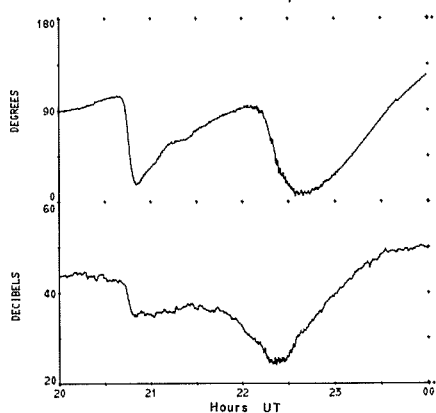
NOVEMBER 1968



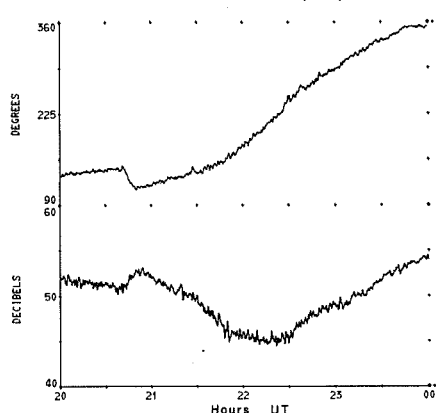
2.108 MHz Amplitude Erie, Colo.



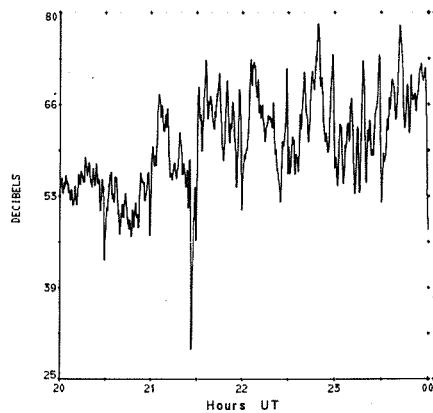
23.4 kHz NPM Oahu, Hawaii



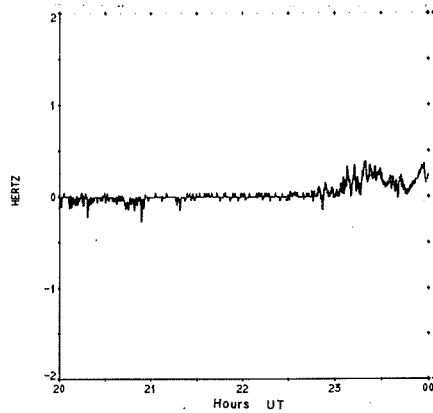
100 kHz Loran-C Jupiter, Fla.



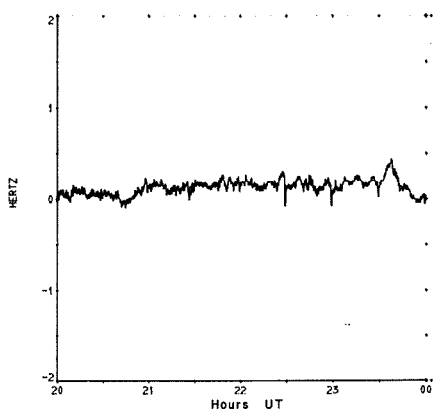
13.6 kHz Omega Trinidad W.I.



8.9 MHz Amplitude Longbranch, Ill.



2.108 MHz Erie, Colorado



8.9 MHz Longbranch, Ill.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

Western Hemisphere

NOVEMBER 1968

NOV. 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
1	10700 PENN	45		1209.8		176.0D			
	2700 PENN	45		1209.9		53.0D			
	960 PENN	45		1210.3		35.0D			
	328 PENN	45		1211.2		270.0D			
	408 SANM	45	1206.6	1210	5.9	840.0	528.0		
	4995 SGMR	45	1207.2	1209.8	7.9	300.0	75.0		
	7000 SAOP	47	1208.8	1210.1	7.4	9256.0			
	2695 SGMR	45	1208.3	1209.9	7.5	82.0	20.0		
	2695 SGMR	45	1208.3	1210.3	7.5	82.0	20.0		
	1415 SGMR	45	1208.7	1209.9	4.4	32.0	8.0		
	606 SGMR	45	1208	1210.2	7	1840.0	215.0		
	15400 SGMR	45	1209.1	1209.7	7.8	111.0	25.0		
	8800 SGMR	45	1209.1	1209.8	7.2	250.0	60.0		
	606 SGMR	1	1247.8	1247.9	.8	7.0	3.0		
	7000 SAOP	21	1255.8						
	1415 SGMR	40	1258	1258.4	17.7	10.4	2.0		
	606 SGMR	41	1258.1	1301.3	4.7	240.0	60.0		
	7000 SAOP	3	1303.9	1305.1	6.9	23.4	11.7		
	4995 SGMR	3	1303.9	1304.8	1.6	10.2	4.0		
	15400 SGMR	1	1304.3	1305.3	2.4	4.9	2.0		
	8800 SGMR	3	1304.6	1304.8	2.7	20.4	8.0		
	606 SGMR	41	1312.6	1314.2	2.2	37.8	7.0		
	7000 SAOP	40	1320	1320	2.6	9.3	4.6		
	8800 SGMR	1	1325.9	1326.6	13.5	5.1	2.0		
	4995 SGMR	1	1326.2	1326.4	4.1	3.4	1.5		
	2695 SGMR	1	1326.3	1326.4	.8	2.3	1.0		
	184 BOUL	44	1330 E	1330	1.9	2.3	1.0		
	15400 SGMR	1	1331.2	1331.9	608 D	4.9	2170.0		
	8800 SGMR	1	1331.3	1331.7	2.8	4.1	2.0		
	4995 SGMR	1	1331.1	1331.5	2.2	6.1	2.5		
	2695 SGMR	1	1331.1	1331.5	2.7	2.3	1.0		
	2800 OTTA	20	1422	1426	3.4	3.4	1.7		
	1415 SGMR	1	1434.5	1435.7	12	3.4	.5		
	606 SGMR	41	1434.5	1435.6	2.6	1.0	.5		
	7000 SAOP	23	1439.3	1439.3	2.5	22.7	5.0		
	2700 PENN	20	1450.9	1455.9	31.8				
	960 PENN	20	1450.9	1456.7	22.7	7.5	3.7		
	10700 PENN	20	1451.8	1455.8	18.8	4.3	1.5		
	8800 SGMR	22	1451.2	1455.6	17.6	7.7	4.1		
	7000 SAOP	3	1451.6	1455.6	22.2	11.2	4.5		
	4995 SGMR	22	1451.1	1455.5	1.4	158.9	79.4		
	2800 OTTA	2	1451.5	1455.5	23.9	11.9	5.0		
	2695 SGMR	2	1451.2	1455.6	6.5	7.2	3.6		
	1415 SGMR	3	1451.2	1455.6	6.6	7.4	3.0		
	606 SGMR	45	1451.1	1451.3	2.9	9.6	4.0		
	1415 SGMR	22	1451.1	1451.7	5.9	260.0	70.0		
	2695 SGMR	21	1459.8	1504	16.2	3.4	1.5		
	2800 OTTA	2	1502.9	1508.6	8.2	6.0	3.0		
	960 PENN	24	1503	1519	8	7.2	3.6		
	606 SGMR	4	1510	1806		3.4			
	408 SANM	40	1514.2	1514.5	.8	17.8	4.0		
	10700 PENN	3	1530	1730	135	10.0	7.8		
	960 PENN	1	1624.9	1630.5	8.1	112.0	27.7		
	328 PENN	45	1624	1624.7	1.2	4.5	0.7		
	2700 PENN	3	1624	1624.8	2	275.0D	35.0D		
	2800 OTTA	21	1625.8	1630.5	7.2	27.6	10.4		
	960 PENN	45	1626	1628.3	20	7.4	3.2		
	7000 SAOP	45	1626	1630.2	12.6	8.3	1.6		
	328 PENN	45	1627.8	1629.4	10.1	18.7	9.3U		
	15400 SGMR	4	1628	1629.8	4.7	37.5	4.0		
	8800 SGMR	4	1629.6	1630.6	5.8	59.0	12.0		
	4995 SGMR	4	1629.5	1630.6	19.5	290.0	55.0		
	2800 OTTA	4	1629.4	1630.6	20.3	240.0	45.0		
	2695 SGMR	4	1629.2	1630.5	5	26.0	11.0		
	1415 SGMR	45	1629.6	1630.6	18.6	47.6	10.0		
	606 SGMR	4	1629.7	1630.3	15.7	9.4	2.5		
	10700 PENN	29	1633	1633	1.3	11.8	3.0		
	2700 PENN	29	1633	1633	13.4	36.0	10.5		
	18 MCMA	6	1659	1701	14.2	5.7	2.9		
	18 BOUL	6	1700	1703	4				
	15400 SGMR	3	1713.9	1714	3	1.0			
	10700 PENN	3	1713.7	1714	2.1	27.4	6.0		
	10700 PENN	40	1730	1730	2.3	33.2	5.3		
	8800 SGMR	21	1747.3	1751.6	40				
	4995 SGMR	21	1747.9	1751.6	72.9	6.1	3.0		
	2695 SGMR	21	1749.7	1802.7	47.8	7.8	3.9		
	8800 SGMR	3	1758.4	1802.2	68.4	2.9	1.5		
	7000 SAOP	3	1758.6	1758.6	1.6	14.1	7.0		
	4995 SGMR	3	1758.4	1759	.8	46.7	23.3		
	2800 OTTA	1	1758.2	1758.6	1.4	10.9	5.4		
	2700 PENN	1	1758.3	1758.6	1.8	4.2	2.1		
	2695 SGMR	1	1758.6	1758.6	2.2	5.0	1.3		
	606 SGMR	45	1802.2	1758.7	2.7	4.0	2.0		
	8800 SGMR	1	1802.2	1802.3	.6	160.0	10.8		
	960 PENN	45	1805.9	1806	3.1	4.7	2.3		
	15400 SGMR	45	1815.6	1819.8	7	6.8	1.6		
	10700 PENN	45	1818.6	1820.8	13.6	14.8	4.9		
	8800 SGMR	45	1818.3	1819.5	7.9	34.2	10.7		
	7000 SAOP	45	1818.5	1819.6	9.6	38.1	12.7		
	4995 SGMR	45	1818.1	1818.8	3.7	37.4	18.7U		
	2800 OTTA	2	1818.8	1819.7	8.7	30.9	10.3		
	2800 OTTA	2	1818.5	1819	4.5	4.0	2.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

Western Hemisphere

NOVEMBER 1968

NOV. 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
1	2700 PENN	20	1818	1820.5	9	6.9	3.6		
	2695 SGMR	45	1818.5	1819.3	8.5	6.4	3.2		
	1415 SGMR	45	1818.3	1819.6	5.9	3.1	1.0		
	1415 SGMR	45	1820.8	1820.8	5.9	3.1	1.0		
	328 PENN	41	1818	1847.3	98	105.0			
	606 SGMR	1	1820.4	1820.5	.6	1.1	.4		
	7000 SAOP	29	1822.7		3				
	4995 SGMR	1	1830.4	1830.6	1.4	1.7	.6		
	2800 OTTA	2	1830.2	1830.5	1	4.2	2.1		
	2700 PENN	1	1830.2	1830.4	2	7.6	0.7		
	2695 SGMR	3	1830.3	1830.4	2.7	7.5	2.5		
	8800 SGMR	3	1928.2	1929.9	6.9	31.5	10.5		
	960 PENN	20	1928.1	1937.3	15.2	2.9	1.2		
	10700 PENN	3	1929.6	1930.2	8.7	23.6	6.3		
	7000 SAOP	4	1929.6	1930.3	1.9	32.7	16.3		
	2700 PENN	20	1929.7	1930.2	11.3	6.6	1.7		
	606 SGMR	1	1929.9	1930.3	1.2	1.6	.5		
	15400 SGMR	1	1930.2	1930.3	1.3	5.1	1.7		
	4995 SGMR	3	1930	1930.4	10	25.5	8.5		
	2800 OTTA	1	1930	1930.2	2	4.2	2.1		
	2695 SGMR	1	1930.2	1930.3	1.7	3.5	1.2		
	1415 SGMR	1	1932.5	1932.6	.5	2.1	.7		
	8800 SGMR	21	1941	1950.4	46.1	6.6	3.3		
	8800 SGMR	1	1944.6	1945.5	1.5	6.6	2.2		
	4995 SGMR	21	1945.2	1956.8	41.9	5.2	1.6		
	4995 SGMR	28	1945.2	2003	17.8	21.4	10.7		
	8800 SGMR	45	1947.9	1949.6	2.2	8.8	2.0		
	1415 SGMR	28	1952.6	2003	10.4	3.1	1.5		
	960 PENN	45	1952.3	2004.1	33	65.0D	7.0U		
	2800 OTTA	21	1955	2008	35	11.4	5.4		
	2695 SGMR	28	1955.9	2003.1	7.2	6.9	3.4		
	606 SGMR	45	1955.6	1957.2	2.9	240.0	20.0		
	15400 SGMR	28	1956.1	2003.1	7	7.4	3.7		
	10700 PENN	45	1956.6	2004.5	18.4	2330.0	229.0		
	8800 SGMR	3	1956.8	1956.9	.7	19.9	6.6		
	7000 SAOP	4	1956.7	1957.5	2.2	308.5	154.5		
	4995 SGMR	3	1956.7	1956.9	2.7	24.8	8.3		
	2700 PENN	45	1956.4	2004.5	16.2	276.0	26.5		
	2695 SGMR	1	1956.3	1956.5	2.1	7.1	2.7		
	8800 SGMR	28	1959.4	2002.8	3.4	20.4	10.2		
	606 SGMR	45	2000.5	2004.5	22.4	2030.0	105.0		
	8800 SGMR	4	2002.8	2004.6	15.6	3390.0	500.0		
	7000 SAOP	45	2002.3	2009.7	19.5	18.7	9.3U		
	184 BOUL	48	2002	2002	8	6480.0D			
	15400 SGMR	4	2003.1	2004.6	19.4	4180.0	550.0		
	4995 SGMR	4	2003	2004.6	20.3	1250.0	215.0		
	2800 OTTA	4	2003	2004.8	6	390.0	44.0		
	2695 SGMR	4	2003.1	2004.6	16.1	380.0	66.0		
	1415 SGMR	4	2003	2004.7	19.8	600.0	100.0		
	328 PENN	45	2003.4	2004.7	8.8	460.0D	30.0D		
	408 SANM	45	2004 E	2005	16 D	552.0	144.0		
	2800 OTTA	46	2009	2011.6	4	42.0	25.0		
	2700 PENN	29	2012.6	2012.6	16.6	5.2	2.6		
	2700 PENN	3	2013.7	2015.1	4.2	10.5	4.3		
	2800 OTTA	2	2014	2015	3	9.8	4.9		
	10700 PENN	29	2015	2015	13.8	43.0	21.5		
	2800 OTTA	4	2020.8	2021	.8	18.0	6.0		
	408 SANM	40	2020	2031	40	19.0	9.0		
	328 PENN	41	2022	2038.6	68	35.2			
	2695 PENT	1	2112	2112.2	1	2.8	1.4		
	2695 PENT	1	2124.5	2124.8	1.5	2.8	1.4		
	2695 PENT	1	2233	2233.5	2	6.4	3.2		
	2695 PENT	4	2242	2242.7	6	21.0	6.0		
2	7000 SAOP	47	0947.5	0956.4	20.5	4731.9			
	408 SANM	45	1010 E		25 D				
	7000 SAOP	29	1013.1		68.5				
	408 SANM	45	1053.8	1054.5	3.7	19.0	12.0		
	7000 SAOP	3	1201.2	1201.5	1.3	11.6	5.8		
	7000 SAOP	3	1204.7	1205.7	1.9	9.7	4.8		
	8800 SGMR	3	1245.5	1245.7	.9	12.9	6.4		
	7000 SAOP	3	1245.9	1247	1.4	15.5	7.7		
	4995 SGMR	1	1245.4	1245.6	1	3.4	1.7		
	184 BOUL	44	1330 E		608 D		362.0		
	15400 SGMR	20	1402.7	1403.1	16.1	8.7	4.4		
	8800 SGMR	20	1402.6	1405	14	7.4	3.7		
	4995 SGMR	20	1404.5	1406	9.5	3.7	1.8		
	1415 SGMR	3	1429.5	1429.6	.3	7.8	4.0		
	606 SGMR	3	1429.3	1429.5	.7	24.8	12.3		
	606 SGMR	1	1436.7	1436.8	3.5	3.8	1.9		
	4995 SGMR	21	1451.7	1522	77.5	13.9	6.9		
	8800 SGMR	21	1452	1523.5	66	17.0	8.5		
	960 PENN	45	1452.7	1457	18.5	14.1	1.9		
	2695 SGMR	21	1454	1525	65	3.2	1.6		
	15400 SGMR	21	1455.8	1522.3	90.2	18.9	9.4		
	1415 SGMR	2	1455	1455.5	2.4	6.2	2.1		
	606 SGMR	1	1455.3	1455.4	.9	6.5	2.3		
	7000 SAOP	41	1511.5		30.2				
	7000 SAOP	28	1511.5		7.4				
	10700 PENN	45	1512.5	1519.7	33.3	155.0	22.2		
	2700 PENN	3	1512.5	1531.4	29.5	31.8	7.4		

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NOV. 1968	FREQUENCY STATION	TYPE	STARTING	TIME OF	DURATION	FLUX DENSITY		INT	REMARKS	
			TIME	MAXIMUM		$10^{22} \text{ Wm}^{-2} \text{ Hz}^{-1}$				
			UT	UT		MINUTES	PEAK			MEAN
2	960 PENN	45	1512.1	1520.1	26.3	23.5	1.5			
	1415 SGMR	41	1513.8	1520	8.1	5.2	1.3			
	606 SGMR	41	1514.2	1519	7.1	17.8	3.6			
	328 PENN	45	1515	1521.1	8.9	47.5	7.5			
	15400 SGMR	45	1518.5	1520	20	115.0	46.0			
	8800 SGMR	3	1518.8	1519.9	3	140.0	67.0			
	7000 SAOP	3	1518.9	1520.2	4.4	132.0	66.0			
	4995 SGMR	3	1519	1520	7.7	105.0	34.0			
	2800 OTTA	41	1519		30					
	2800 OTTA	3	1519	1519.8	2.5	11.0	5.5			
	2695 SGMR	3	1519.5	1520	1.9	8.5	4.2			
	7000 SAOP	45	1523.3	1531.5	11.9	58.2	19.1U			
	2800 OTTA	1	1524.5	1525	1.5	2.2	1.1			
	606 SGMR	45	1524.3	1531.9	22.5	47.5	9.4			
	328 PENN	45	1524.2	1543.5	27.2	266.0D	31.0D			
	4995 SGMR	45	1526.8	1531.5	12.1	87.0	28.0			
	2695 SGMR	45	1526.9	1531.4	14.1	38.0	16.0			
	408 SANM	41	1526.6	1542.9	20.9	696.0	144.0			
	8800 SGMR	45	1527.2	1531.5	9.1	48.8	19.6			
	2800 OTTA	46	1527	1531.5	13	40.0	20.0			
			1527	1528	2.5	20.0				
			1529.5	1531.5	10.5	40.0				
	1415 SGMR	21	1527.1	1533.9	21.9	4.4	2.2			
	7000 SAOP	29	1535.2		6.4					
	1415 SGMR	20	1537.2	1538.1	8.8	1.8	.9			
	960 PENN	20	1541.9	1543.4	32.8	3.0	1.6			
	2800 OTTA	1	1542.5	1544	7.5	9.2	4.2			
	2700 PENN	3	1542.6	1544	4.8	9.4	3.9			
	18 BOUL	6	1557	1559	3	1.0				
	18 MCMA	6	1600	1600	1					
	2800 OTTA	20	1630	1730	205	12.0	6.0			
	10700 PENN	20	1633.2	1659.3	107.8	19.3	5.0			
	8800 SGMR	1	1659.4	1659.5	1.5	5.5	2.8			
	4995 SGMR	20	1659	1728.7	127.4	8.5	4.3			
	2695 SGMR	20	1700.2	1728.7	38.5	4.1	2.1			
	606 SGMR	1	1743.2	1743.3	1.5	2.7	1.4			
	408 SANM	43	1815	1844	120	40.0	11.0			
	10700 PENN	3	1910.9	1913.5	9.1	26.1	7.9			
	15400 SGMR	3	1912	1913.5	4.5	18.9	9.4			
	8800 SGMR	3	1912.7	1913.6	2.1	9.2	4.6			
	10700 PENN	3	1958.7	1959.4	2	13.2	4.8			
	2800 OTTA	20	2018	2021	50	4.0	2.0			
	2695 PENT	1	2146.2	2146.5	.5	4.2	2.1			
	3	4995 SGMR	1	1216	1217.8	2.3	4.4	2.2		
		2695 SGMR	3	1216	1217.3	3.6	7.6	3.0		
1415 SGMR		4	1216.1	1217	2.1	14.0	3.7			
606 SGMR		1	1216.3	1217.8	2.9	3.9	1.9			
606 SGMR		45	1230.4	1239.4	20.5	490.0	31.9			
15400 SGMR		45	1232.6	1233.4	10.2	22.2	10.7			
10700 PENN		45		1233.1		80.0D				
8800 SGMR		45	1232.9	1233.2	8.4	83.0	18.8			
7000 SAOP		41	1232.7		10.3					
7000 SAOP		3	1232.7	1233.4	1.6	79.0	39.5			
4995 SGMR		45	1232.6	1233.3	8.2	120.0	29.9			
2700 PENN		45		1233.2		58.0D				
2695 SGMR		45	1232.8	1233.2	8.6	77.0	27.6			
1415 SGMR		45	1232.6	1239.6	10.5	100.0	35.0			
960 PENN		45		1236.6		300.0D				
328 PENN		45	1232.7	1233	1.2	101.0	15.6			
2800 OTTA			1233 E	1233.5	12.0	72.0				
7000 SAOP		3	1236.1	1236.8	2.1	27.1	13.5			
328 PENN		45	1238.9	1238.9	1.6	130.0	20.0			
7000 SAOP		45	1239.1	1239.6	1.2	38.3	19.1U			
7000 SAOP		29	1240.3		2					
2800 OTTA		20	1310	1325	30	3.0	1.5			
10700 PENN		20	1346.1	1511.6	199.7	32.8	17.1			
2700 PENN		20	1346.1	1535.6	307.4	9.1	4.2			
2800 OTTA		24	1350		20	6.0				
2800 OTTA		22	1425	1450	115	6.0	3.6			
10700 PENN		3	1639.3	1641.1	9.1	61.4	10.1			
8800 SGMR		3	1640	1641.1	4.7	34.0	16.2			
4995 SGMR		20	1640.9	1642.4	8.1	5.8	2.8			
2695 SGMR		1	1640.9	1641.2	.9	1.8	.9			
184 BOUL		6	1640	1640	1	1810.0	900.0			
2700 PENN		1	1641	1641.1	1.6	3.5	1.0			
960 PENN		3	1642.2	1642.3	.6	8.1	1.9			
8800 SGMR		29	1644.7	1644.7	13.1	8.3	4.2			
10700 PENN		20	1708.4	1709.7	17.4	16.4	3.5			
15400 SGMR		3	1709.4	1709.7	1	15.0	7.5			
8800 SGMR		3	1709.2	1709.7	1.4	10.6	5.3			
4995 SGMR		3	1709.3	1709.8	1.6	17.0	8.5			
2800 OTTA		41	1709.2		11					
2800 OTTA		3	1709.2	1710	2	10.6	5.3			
2700 PENN		3	1709.1	1709.8	4.7	13.4	5.1			
2695 SGMR		3	1709.2	1709.8	3	12.7	6.3			
960 PENN		45	1709.2	1709.9	6.8	48.3	6.6			
328 PENN		5	1709.3	1709.5	.3	17.4	11.6			
2700 PENN		3	1714.8	1719.3	5.4	12.2	4.4			
184 BOUL	6	1714	1714	1	2700.0	1300.0				
2800 OTTA	1	1715	1715.5	2	2.0	1.0				

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NOV 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
3	328 PENN	5	1715.1	1715.2	.5	52.0	11.6		
	1415 SGMR	4	1718.7	1719.3	2.5	97.0	33.0		
	606 SGMR	4	1718.3	1719.1	2.2	145.0	36.0		
	15400 SGMR	1	1719.2	1719.6	.8	4.0	2.0		
	8800 SGMR	1	1719.2	1719.5	1	3.7	1.7		
	4995 SGMR	1	1719.3	1719.6	1	5.1	2.5		
	2800 OTTA	1	1719	1719.2	1	9.2	4.6		
	2695 SGMR	3	1719	1719.3	1	9.7	4.3		
	960 PENN	45	1719	1719.4	1.6	52.1	17.4		
	328 PENN	5	1719.2	1719.3	1	8.7	2.3		
	606 SGMR	45	1741.3	1741.6	1.2	170.0	19.6		
	328 PENN	45	1741.2	1741.4	.8	75.2	9.4		
	10700 PENN	3	1803.7	1810.2	21.2	22.4	5.7		
	8800 SGMR	3	1808.9	1810.8	3.5	13.8	6.8		
	15400 SGMR	1	1809.9	1810.5	1.4	5.5	2.8		
	1415 SGMR	1	1810.2	1810.3	.4	2.0	1.0		
	328 PENN	45	1828.7	1829.1	1.1	60.5	20.3		
	960 PENN		1829	1829.1	1	96.0	64.0		
	960 PENN	45	1839.5	1840.3	1.1	28.6	13.8		
	328 PENN	45	1839.7	1840.3	1	39.9	15.2		
	960 PENN	29	1840.6	1841.5	26.4	12.5	4.3		
	184 BOUL	43	1927	2100	115	434.0	220.0		
	2700 PENN	1	1932.3	1934.2	7.3	7.5	2.5		
	15400 SGMR	3	1933.9	1934.3	1.3	11.0	3.7		
	10700 PENN	3	1933.4	1934.2	2	12.3	6.1		
	8800 SGMR	3	1933.9	1934.3	1.1	13.8	4.6		
	4995 SGMR	3	1933.8	1934.3	3.7	10.2	3.4		
	2695 SGMR	1	1933.7	1934.2	4.7	6.2	3.2		
	1415 SGMR	3	1933.8	1934.4	2.9	8.5	4.3		
	960 PENN	3	1933.5	1934.2	3.4	9.2	2.6		
	606 SGMR	4	1933.7	1934.3	1.8	15.7	4.9		
	7000 SAOP	3	1934	1934.4	1.7	13.5	6.7		
	2800 OTTA	1	1934	1934.5	2	5.2	2.6		
	328 PENN	5	1934.2	1934.3	.2	5.5	2.8		
	606 SGMR	4	1952.3	1952.4	1.3	39.2	15.6		
	606 SGMR	45	2032.5	2032.5	1.5	82.0	15.0		
	328 PENN	45	2036.3	2039.3		79.9			
	10700 PENN	3	2037.4	2038.9		25.2			
	8800 SGMR	45	2037.5	2039.5	5.6	30.4	15.0		
	4995 SGMR	45	2037.8	2038.8	5.4	34.0	17.0		
	2800 OTTA	4	2037.5	2038.8	5.5	49.0	11.0		
	2700 PENN	3	2037.4	2038.7		41.4			
	2695 SGMR	4	2037.8	2038.8	5.3	35.2	17.4		
	1415 SGMR	45	2037.6	2038.9	5.6	74.0	30.4		
	960 PENN	45	2037.5	2038.7	5.8	70.2	7.2		
	606 SGMR	45	2037.2	2037.7	5.8	200.0	15.0		
	2800 OTTA	32	2043	2100	53	-7.6	-3.8		
4	408 SANM	41	1010 E	1041.6	60 D	30.5	14.0		
	606 SGMR	22	1257.3	1304.7	16.9	6.2	3.0		
	8800 SGMR	22	1304.1	1306.2	8.2	7.7	3.0		
	7000 SAOP	22	1304.1		3	8.3	4.1		
	4995 SGMR	22	1304.1	1306.4	7.9	11.2	5.0		
	15400 SGMR	2	1305.9	1306.1	6.4	4.5	2.0		
	2800 OTTA	1	1305.5	1306.3	2	2.8	1.4		
	2695 SGMR	22	1306	1306	8.2	3.7	1.5		
	2800 OTTA	26	1700		5	2.4			
	2800 OTTA	1	2104.7	2105	4	3.0	1.5		
	2695 PENT	24	2140		5	2.4			
5	960 PENN	45	1236.1	1238.3	2.7	20.4	2.3		
	10700 PENN	3	1237.4	1238.3	1.8	8.2	2.0		
	2700 PENN	3	1237	1238.3	2.8	9.0	2.8		
	15400 SGMR	1	1238.2	1238.3	.3	5.0	2.5		
	8800 SGMR	1	1238.2	1238.3	.5	1.0	.5		
	4995 SGMR	1	1238.2	1238.3	1.4	7.0	3.5		
	2695 SGMR	3	1238.1	1238.2	.6	8.1	4.0		
	1415 SGMR	3	1238.1	1238.2	.6	110.0	45.0		
	606 SGMR	1	1238.2	1238.3	.5	1.7	1.0		
	15400 SGMR	3	1342.3	1343.3	3.2	33.2	8.0		
	10700 PENN	3	1342.1	1343.3	3.5	46.0	12.6		
	8800 SGMR	3	1342.5	1343.3	8.2	59.0	14.0		
	7000 SAOP	3	1342.6	1343.3	2.8	115.2	57.6		
	4995 SGMR	3	1342.6	1343.3	8	80.0	20.0		
	2800 OTTA	3	1342.5	1343.5	2.5	86.0	22.0		
	2700 PENN	3	1342.5	1343.3	6.8	79.9	10.3		
	2695 SGMR	3	1342.5	1343.3	11	92.0	22.0		
	1415 SGMR	3	1342.6	1343.3	6.4	780.0	190.0		
	960 PENN	3	1342.3	1343	7.2	86.0D	12.0D		
	606 SGMR	45	1342.6	1344	6.4	185.0	15.0		
	2800 OTTA	30	1345		7	3.0	1.5		
	328 PENN	5	1346.4	1346.9	.8	11.0	5.5		
	960 PENN	3	1347.9	1348.2	.9	29.1	7.0		
	2800 OTTA	1	1348	1348.3	1	6.2	2.0		
	2700 PENN	1	1348	1348.1	.9	5.2	2.4		
	2800 OTTA	32	1755	1820	80	-3.8	-1.9		
	2700 PENN	24	1858	2028.3		7.2			
	2800 OTTA	21	2000	2125	150 D	9.4			
	606 SGMR	22	2010.8	2012.1	31.7	8.0	3.0		
	2800 OTTA	1	2011	2012.5	4	2.8	1.4		
	2695 SGMR	22	2011.8	2019.7	26.3	6.9	3.0		

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NOV. 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
6	1415 SGMR	22	2011.4	2018.5	33.7	9.0	4.0		
	4995 SGMR	22	2016.4	2018.6	16.6	5.6	2.5		
	8800 SGMR	22	2018.2	2022.5	14.8	6.3	3.0		
	2800 OTTA	21	2116	2128	25	5.0	2.5		
	2800 OTTA	1	2116	2118.5	5	6.2	3.1		
	7000 SAOP	3	1225.5	1226.2	5.3	439.7	219.8		
	15400 SGMR	3	1226.6	1226.8	1	43.4	22.0		
	8800 SGMR	3	1226.7	1226.9	1.6	59.0	22.5		
	4995 SGMR	45	1226.6	1226.7	3.3	275.0	64.0		
	2695 SGMR	45	1226.6	1226.8	10.7	155.0	21.9		
	1415 SGMR	3	1226.4	1227	8	39.4	13.5		
	15400 SGMR	1	1302.5	1302.8	1.3	6.1	3.3		
	8800 SGMR	1	1302.5	1302.7	.7	4.5	2.4		
	4995 SGMR	1	1302.4	1302.6	2.5	3.4	1.2		
	2695 SGMR	1	1302.5	1302.7	.9	1.8	1.0		
	2700 PENN	1	1650.6	1650.9	.5	2.3	1.7		
	1415 SGMR	3	1650.9	1651	.3	8.3	2.3		
	960 PENN	1	1650.8	1650.9	.3	2.2	1.5		
	606 SGMR	3	1650.7	1650.9	.5	15.4	6.2		
	960 PENN	1	1816.7	1818.3	1.9	3.4	0.7		
	2700 PENN	1	1817.9	1818.2	2.2	3.5	1.2		
	408 SANM	45	1835	1835.5	1	36.0	12.0		
	408 SANM	3	1843.5	1844.5	1.5	40.0	19.0		
	7000 SAOP	3	1513.1	1513.3	.9	15.0	7.5		
	408 SANM	45	1551.2	1553.3	2.9	42.5	19.0		
	7000 SAOP	4	1554.2	1554.7	.7	24.9	12.9		
	7000 SAOP	29	1554.9		1.7				
	2800 OTTA	2	1625.2	1626	1	2.4	1.2		
	408 SANM	45	1442.5	1443.3	1.5	45.5	19.0		
	184 BOUL	43	1627		420 D		360.0		
	184 BOUL	6	1629	1630	1	1370.0	360.0		
	2800 OTTA	24	1940		10	2.4			
	15400 SGMR	3	1216.9	1217.4	4.1	22.0	5.0		
	8800 SGMR	3	1216.9	1217.4	4.1	23.3	5.0		
	7000 SAOP	3	1216.1	1216.7	2.4	13.1	6.6		
	4995 SGMR	1	1217.1	1217.7	2.9	3.4	1.5		
	2700 PENN	24	1840.7	2010.6		7.2			
	184 BOUL	43	2230		55 D		U		
10	184 BOUL	6	1526	1529	3	2880.0	650.0		
	2700 PENN	1	1529.9	1531.6	6.4	4.3	1.8		
	960 PENN	1	1531.1	1531.5	1.9	4.0	1.2		
	2800 OTTA	1	1532.5	1533.2	2.5	3.0	1.5		
	2700 PENN	20	1820.9	1821	22.3	3.5	1.6		
	2800 OTTA	20	2010	2016	15	5.0	2.0		
	2700 PENN	20	2013	2016.4	13.9	6.1	3.0		
	2695 PENT	1	2118	2119.2	3	3.6	1.8		
	184 BOUL	6	2127	2130	8	2170.0	650.0		
	15400 SGMR	45	1224.3	1224.6	.8	29.7	14.8		
	8800 SGMR	45	1224.3	1224.6	1	17.6	8.8		
	4995 SGMR	3	1224.3	1224.5	.6	7.5	3.8		
	2695 SGMR	1	1224.3	1224.5	.6	2.3	1.2		
	1415 SGMR	1	1224.3	1224.5	1.1	3.6	1.8		
11	606 SGMR	3	1224.3	1224.5	1.1	8.3	4.2		
	328 PENN	45	1324.2	1326.1	4.1	248.0	13.2		
	960 PENN	1	1325.7	1326.2	2	6.9	1.8		
	4995 SGMR	3	1326	1326.2	.6	11.9	5.9		
	2700 PENN	3	1326	1326.3	.6	15.0	5.7		
	2695 SGMR	1	1326	1326.2	.6	7.1	3.6		
	1415 SGMR	3	1326	1326.1	.9	8.6	4.3		
	606 SGMR	1	1326	1326.1	1.2	5.7	2.8		
	2800 OTTA	4	1328	1328.3	.5	19.0	9.5		
	184 BOUL	44	1343 E		580 D	2170.0	1085.0		
	8800 SGMR	20	1437.5	1445.7	34	12.2	6.1		
	2700 PENN	20	1437.2	1442.7	48.6	15.3	3.6		
	4995 SGMR	20	1438	1446	31.4	13.6	6.8		
	2695 SGMR	20	1438.8	1446	27.8	4.6	2.3		
	1415 SGMR	20	1438	1441.5	12.9	10.4	5.2		
	2800 OTTA	21	1439	1446	37	9.2	4.0		
	2800 OTTA	1	1439.5	1439.6	1	2.2	1.1		
	960 PENN	45	1441.7	1444.4	5.3	14.9	3.3		
	606 SGMR	45	1441.4	1444.3	7.3	41.6	13.0		
	328 PENN	45	1441.8	1443.5	5.6	109.0	9.9		
	15400 SGMR	1	1442.1	1444	6.2	5.4	2.7		
	2800 OTTA	45	1443.5	1443.9	1.5	9.2	4.6		
	2800 OTTA	2	1447.2	1448	1	2.8	1.8		
	2800 OTTA	1	1528	1528.4	1	2.2	1.1		
	8800 SGMR	20	1551	1558.3	12	6.6	3.3		
	4995 SGMR	20	1551.3	1556	10.2	5.4	2.7		
	2800 OTTA	21	1552	1555	80	4.0	2.4		
	15400 SGMR	1	1555.2	1555.4	1.4	1.6	.8		
	2695 SGMR	1	1555.3	1555.7	.6	2.5	1.3		
	1415 SGMR	1	1555.2	1555.3	.9	3.1	1.6		
	606 SGMR	1	1555.6	1555.8	.6	2.1	1.1		
	10700 PENN	3	1625.7	1626.2	1.8	69.6	11.0		
	8800 SGMR	3	1625.8	1626.2	4	84.0	19.4		

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NOV. 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
11	4995 SGMR	3	1625.7	1626.3	3.9	100.0	32.3		
	2700 PENN	3	1625.5	1626.3	2.5	45.7	11.0		
	2695 SGMR	3	1625.7	1626.3	3.8	44.9	23.0		
	960 PENN	45	1625.4	1626	2.6	47.7	6.4		
	328 PENN	45	1625.5	1626.1	5.4	78.8	11.9		
	15400 SGMR	3	1626.1	1626.3	.4	21.6	10.8		
	2800 OTTA	3	1627.7	1628.2	2	58.0	15.0		
	328 PENN	45	1651.7	1652.3	1	319.00	70.00		
	960 PENN	1	1652.1	1652.3	.4	4.6	1.7		
	960 PENN	1	1816.2	1817.6	1.8	3.0	1.0		
	328 PENN	45	1816	1817.2	2	31.2	9.2		
	10700 PENN	20	1826	1827.2	34	22.9	6.6		
	2700 PENN	20	1826.3	1827.1	19.8	6.0	1.9		
	8800 SGMR	3	1827.5	1828.3	8.9	18.4	7.4		
	4995 SGMR	3	1827.6	1828.2	5.7	17.5	7.0		
	2695 SGMR	1	1827.8	1828	4	5.1	2.5		
	2800 OTTA	1	1829.5	1830	2	6.2	3.1		
	2800 OTTA	29	1831.5		10	2.4	1.2		
	960 PENN	1	1834.7	1834.9	1.1	2.3	0.8		
	328 PENN	5	1834.7	1834.9	1.4	26.2	6.5		
	2700 PENN	20	1927.6	1929	7.8	1.7	0.9		
	10700 PENN	3	1928.8	1929	9.2	16.9	3.2		
	328 PENN	45	1928.8	1930.8	2.6	141.0	13.3		
	15400 SGMR	1	2014.9	2015	.9	5.4	2.7		
	8800 SGMR	1	2014.7	2015	.7	4.5	2.2		
	4995 SGMR	1	2014.8	2015	.9	1.0	.5		
	2695 SGMR	1	2014.9	2015	1	2.1	1.1		
	1415 SGMR	1	2014.9	2015.1	.7	.8	.4		
	606 SGMR	1	2014.7	2015	1.7	2.1	1.1		
	960 PENN	1	2015.9	2016.7	1.3	2.3	0.7		
	328 PENN	5	2016	2016.7	.9	38.4	10.4		
12	184 BOUL	44	1345 E		575 D	1800.0	1085.0		
	2800 OTTA	21	1420	1535	170	7.4	4.5		
	1415 SGMR	45	1421.2	1422.4	6.8	20.4	10.4		
	1415 SGMR	45	1421.2	1425.2	6.8	20.4	10.4		
	606 SGMR	45	1421.8	1426.3	6.5	11.7	6.2		
	2800 OTTA	4	1426.5	1427	2.5	24.0	8.0		
	1415 SGMR	29	1428	1428	14	2.0	1.0		
	606 SGMR	29	1428.3	1428.3	12.7	1.3	.6		
	2800 OTTA	1	1546	1546.5	1	3.2	1.6		
	15400 SGMR	3	1725.4	1725.9	1.4	59.0	19.5		
	8800 SGMR	45	1725.1	1725.6	1.7	83.0	25.0		
	4995 SGMR	45	1725.4	1726.2	1.4	38.2	10.1		
	2695 SGMR	21	1725	1742	51	9.0	4.5		
	2695 SGMR	45	1725.5	1726.3	1.2	4.8	1.8		
	1415 SGMR	U		1725.9	U	8.6	U		
	606 SGMR	U		1726	U	2.8	U		
	8800 SGMR	29	1726.8	1726.8	29.1	9.2	4.6		
	2800 OTTA	21	1727	1755	95	6.8	3.0		
	2800 OTTA	1	1727	1728	2	4.0	2.0		
	2800 OTTA	20	1905	1945	125	4.2	2.1		
	2695 PENT	2	2127.2	2129	3.8	4.0	2.0		
13	8800 SGMR	20	1245.1	1249	12.9	15.0	4.0		
	4995 SGMR	20	1245.1	1249.5	11.3	6.2	2.0		
	2695 SGMR	20	1245.6	1248.9	14.9	4.8	1.5		
	606 SGMR	40	1246.8	1248.6	6.7	20.3	4.0		
	1415 SGMR	1	1247	1248.9	3.3	1.6	.5		
	184 BOUL	44	1348 E		570 D	1600.0	1370.0		
	15400 SGMR	3	1409.9	1410.3	.6	13.4	4.0		
	4995 SGMR	3	1413.9	1414.3	1.3	15.6	4.0		
	15400 SGMR	1	1414.2	1414.3	.8	3.1	1.5		
	8800 SGMR	1	1414.1	1414.4	1.9	7.1	3.0		
	2800 OTTA	1	1414	1414.2	.6	3.8	1.9		
	15400 SGMR	1	1656.2	1656.4	1.3	1.8	.5		
	8800 SGMR	3	1656.5	1656.7	1	10.6	4.0		
	2800 OTTA	21	1700	1817	165	4.4	2.2		
	10700 PENN	45	1713.7	1717.2	19.9	36.0	6.3		
	4995 SGMR	23	1713.9	1720	35.8	9.1	4.0		
	2700 PENN	45	1713.8	1717.4	4.1	14.7	5.4		
	2695 SGMR	23	1713.8	1720	31.8	8.1	4.0		
	606 SGMR	40	1713.6	1714.6	1.4	15.3	2.0		
	15400 SGMR	45	1714.4	1716.9	3.8	13.4	5.0		
	8800 SGMR	23	1714	1720	14	11.4	5.0		
	2800 OTTA	21	1714	1727	30	6.2	3.1		
	2800 OTTA	1	1714	1714.5	2	4.4	2.2		
	8800 SGMR	45	1716.5	1716.8	1.7	29.5	5.0		
	8800 SGMR	45	1716.5	1717.4	1.7	29.5	5.0		
	4995 SGMR	45	1716.5	1716.8	1.7	35.5	6.0		
	4995 SGMR	45	1716.5	1717.4	1.7	35.5	6.0		
	2800 OTTA	45	1716.5	1717	4.5	15.0	4.0		
	2695 SGMR	45	1716.6	1716.8	1.6	12.1	3.0		
	2695 SGMR	45	1716.6	1717.5	1.6	12.1	3.0		
	2700 PENN	29	1717.9	1717.9	17.5	4.6	2.3		
	2700 PENN	1	1718.4	1719.7	2.4	3.1	1.5		
	2695 PENT	21	2015	2140	130	5.2	2.6		
	960 PENN	3	2107.8	2110.3	5.1	30.8	4.1		
	2700 PENN	3	2108.4	2110.3	6.4	59.0	12.9		
	2695 SGMR	3	2108.8	2110.4	4.2	44.0	22.0		
	10700 PENN	3	2109.4	2110.3	2.4	62.5	15.9		

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			UT	UT		PEAK	MEAN		
14	8800 SGMR	3	2109.6	2110.4	2.9	90.0	38.0		
	4995 SGMR	3	2109.3	2110.4	2.9	145.0	62.0		
	2695 PENT	4	2109	2110.5	5	65.0	22.0		
	1415 SGMR	3	2109.3	2110.4	3.4	71.0	16.0		
	606 SGMR	3	2109.5	2110.4	2	38.8	8.0		
	2695 PENT	29	2114		10	2.0	1.0		
	2800 OTTA	20	1527	1543	40	2.0	1.0		
	10700 PENN	3	1540.1	1540.8	2	8.2	3.8		
	2700 PENN	1	1540.3	1541	1.8	3.0	0.8		
	2800 OTTA	20	1800	1820	85	3.6	1.8		
	2700 PENN	45	1843.8	1845.6	4.2	13.5	2.5		
	2700 PENN	8	1908.7	1908.8	.2	12.1	3.5		
	8800 SGMR	1	2030.9	2032	1.7	6.0	3.0		
	4995 SGMR	1	2030.8	2032	1.8	3.8	1.9		
	2695 SGMR	1	2031	2032	1.8	2.5	1.3		
	1415 SGMR	1	2031.4	2032	1.3	1.2	.7		
	606 SGMR	40	2035.8	2044	12.5	16.1	6.8		
	2800 OTTA	4	2037	2045	13	14.0	7.0		
	408 SANM	45	2037	2045	13	19.0	8.5		
	1415 SGMR	22	2040	2047.6	10	5.3	2.7		
	2695 PENT	29	2050		110 D	5.6			
15	1415 SGMR	1	1444.6	1445	1.7	3.5	1.7		
	606 SGMR	1	1444.6	1445	1.1	4.1	2.0		
	8800 SGMR	20	1519.6	1528.9	28.3	6.8	3.4		
	4995 SGMR	20	1519.8	1525	26.8	9.0	4.5		
	2700 PENN	20	1519.2	1522.4	37.3	9.5	2.2		
	2800 OTTA	25	1520		10	2.5			
	2800 OTTA	40	1520	1522.5	7	8.8			
	2695 SGMR	20	1520.4	1522.4	27.5	12.7	6.3		
	1415 SGMR	1	1520.4	1522	6.2	2.1	1.1		
	15400 SGMR	20	1525.2	1530.8	30.3	5.2	2.6		
	15400 SGMR	3	1659.4	1659.5	.7	16.2	8.0		
	10700 PENN	3	1659.2	1659.6	1.4	15.5	4.8		
	8800 SGMR	3	1659.6	1659.8	.8	10.4	5.3		
	184 BOUL	6	1906	1906	1	790.0	300.0		
	2700 PENN		2049.9	2050	.3	70.5	11.8		
	2700 PENN	8	2100.3	2100.3	.2	32.1	3.5		
	184 BOUL	6	2123	2123	2	790.0	200.0		
16	1415 SGMR	1	1155.6	1156.3	1.9	4.6	2.0		
	606 SGMR	45	1155.8	1155.9	3.8	94.0	18.0		
	184 BOUL	6	1811	1811	1	1200.0	500.0		
	184 BOUL	6	2153	2153	2	1500.0	500.0		
17	10700 PENN	3	1342.4	1342.7	1.6	11.0	2.1		
	10700 PENN	1	1422.9	1423.1	.7	6.5	2.4		
	408 SANM	27	1545	1617.6	65	23.0	10.5		
	4995 SGMR	3	1656.6	1657.8	4	42.2	10.0		
	2800 OTTA	3	1656	1657.8	4	12.0	6.0		
	2700 PENN	3	1656.4	1657.7	4.3	10.4	2.7		
	2695 SGMR	20	1656.5	1657.8	19.7	11.0	4.0		
	15400 SGMR	1	1657.6	1657.8	4	5.9	2.5		
	10700 PENN	3	1657.2	1657.7	3.2	15.8	3.1		
	8800 SGMR	3	1657.3	1657.8	4.9	17.5	4.0		
	2800 OTTA	29	1700		20	2.2	1.1		
18	15400 SGMR	3	1501	1504	7.1	14.3	5.8		
	4995 SGMR	3	1502.9	1503.5	16	15.0	5.2		
	8800 SGMR	3	1503.2	1503.9	2.9	11.3	5.0		
	2800 OTTA	23	1745	1830	110	5.0	2.5		
	2800 OTTA	1	1804	1805	2.5	2.2	1.1		
	2800 OTTA	1	1813	1814	3	3.4	1.7		
20	2800 OTTA	4	1956.5	1957.8	3.5	10.2	5.1		
	2700 PENN	20	1956.5	1957	39.8	15.9	1.8		
	4995 SGMR	45	1958.1	1958.6	2.9	10.5	1.8		
	2695 SGMR	45	1958.1	1959.6	5.2	9.0	3.0		
22	408 SANM	27	0950 E	0950	70 D	22.0	15.0		
	2700 PENN	3	1535.1	1535.7	2.2	9.4	1.6		
23	2700 PENN	3	1316.3	1321.9	7.4	58.7	11.0		
	15400 SGMR	3	1321.4	1321.9	5.9	225.0	45.0		
	8800 SGMR	3	1321.7	1321.9	9.3	320.0	58.0		
	4995 SGMR	4	1321.5	1322	7.3	240.0	43.0		
	2695 SGMR	45	1321.6	1321.9	14.7	60.0	20.0		
	1415 SGMR	3	1321.7	1322.2	15	44.8	16.5		
	960 PENN	3	1321.3	1321.7	3.9	33.2	4.6		
	606 SGMR	40	1321.3	1321.5	2	5.5	2.7		
	2700 PENN	29	1323.7	1323.7	109.6	13.1	6.6		
	2700 PENN	3	1324.1	1324.7	3.4	23.2	7.5		
	960 PENN	20	1651.5	1655.3	12	3.5	1.0		
	2700 PENN	3	1653.9	1655.2	6.2	9.9	2.5		
	10700 PENN	3	1654.9	1655.1	4.5	30.6	7.7		
	8800 SGMR	4	1654.8	1655.2	13.3	39.9	8.0		
	4995 SGMR	4	1654.1	1655.2	9.9	71.0	12.0		
	2800 OTTA	40	1654	1655	6	11.0			
	2695 SGMR	4	1654	1655.2	11.3	11.5	5.1		
	1415 SGMR	1	1654.6	1655.4	4.6	5.4	1.8		

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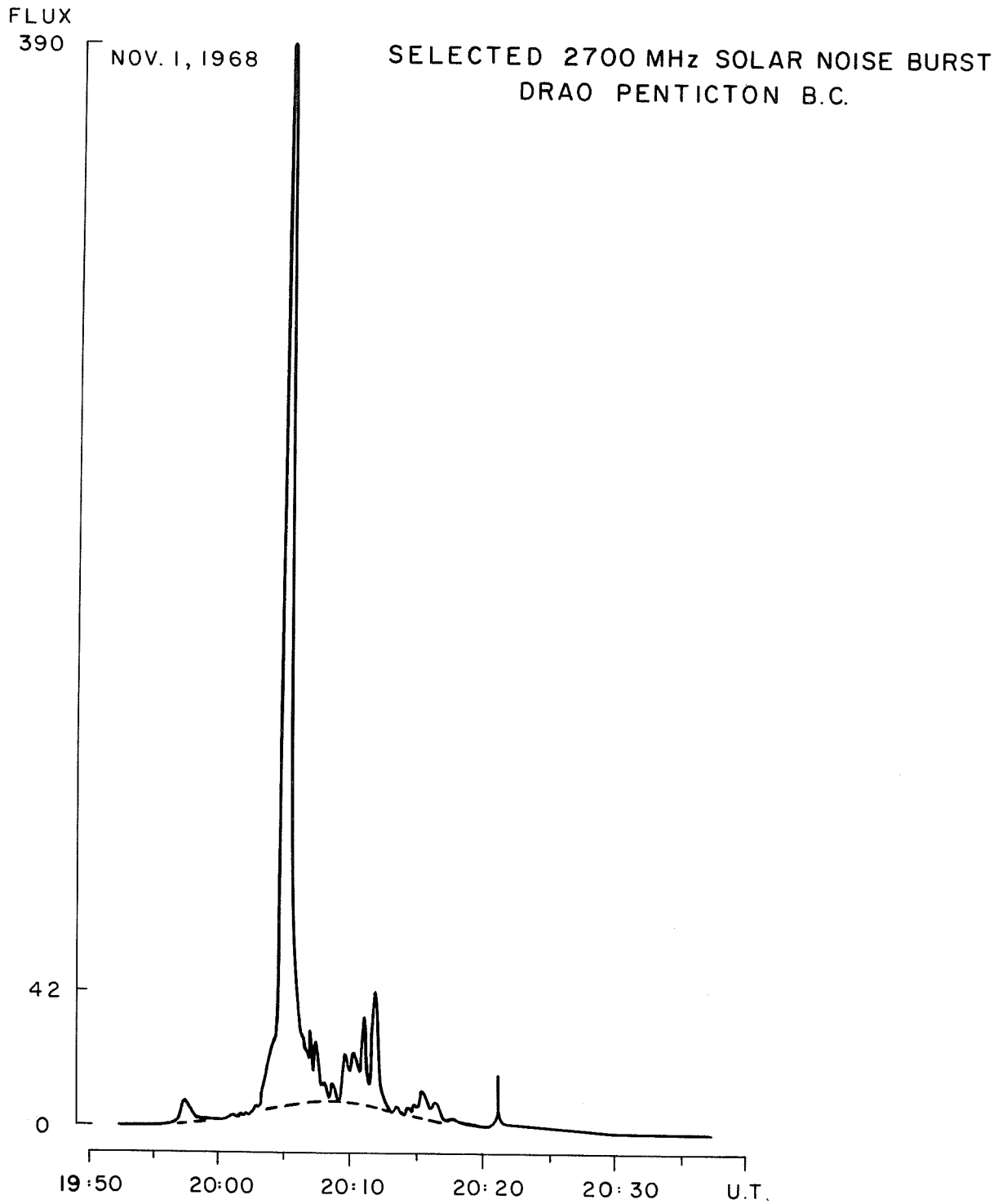
NOV. 1968	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
24	15400 SGMR	4	1655.1	1655.3	5.5	18.9	7.6		
	606 SGMR	40	1655	1655.2	.4	11.2	4.4		
	4995 SGMR	23	1750.7	1804	49.8	3.5	1.0		
	2695 SGMR	23	1750.7	1809	49.8	4.1	1.5		
	8800 SGMR	23	1800.3	1804	38.2	7.6	3.0		
	1415 SGMR	22	1801.9	1802	8.9	2.1	1.0		
	184 BOUL	48	1823	1825	6	5060.0	362.0		
	606 SGMR	40	1825.2	1825.4	5.8	3.4	1.0		
	2800 OTTA	2	1826.5	1827.3	1.5	6.0	3.0		
	8800 SGMR	1	1827.3	1827.4	1.1	2.9	1.0		
	4995 SGMR	1	1827.4	1827.5	1.9	2.3	1.0		
	2695 SGMR	1	1827.4	1827.5	.5	4.4	2.0		
	2800 OTTA	30	1828	1828	7	2.0	1.0		
	2800 OTTA	1	1829.2	1829.3	.5	4.0	2.0		
	2800 OTTA	8	1831	1831		4.0			
	10700 PENN	24	1905	2032		27.9			
	408 SANM	45	2036	2037	4	22.0	12.0		
	184 BOUL	48	2036	2037	6	4340.0	720.0		
	10700 PENN	5		2038.6		27.9			
	8800 SGMR	4	2037.5	2038.6	3.9	37.0	7.0		
	4995 SGMR	46	2037.7	2038.8	3.7	69.0	12.0		
	2800 OTTA	4	2037	2038.6	3	48.0	18.0		
	2700 PENN	45	2037.2	2038.6		49.1			
	2695 SGMR	4	2037.4	2038.8	3.9	36.8	6.0		
	1415 SGMR	46	2037.2	2039.1	4.8	26.7	5.0		
	960 PENN	45	2037.2	2037.7	3.6	106.0E	7.0E		
	606 SGMR	46	2037	2038.6	7.3	30.8	5.0		
	328 PENN	45	2037.2	2038.7	9.4	36.7	9.2		
	2800 OTTA	29	2040		5	3.4	1.7		
	184 BOUL	48	2210		45	6480.0D	6480.0D		
25	4995 SGMR	20	1508	1528.5	33	2.7	1.0		
	2695 SGMR	20	1512.2	1524	37	3.5	1.5		
	15400 SGMR	20	1513	1528.4	35	5.4	2.5		
	8800 SGMR	1	1527.7	1528.5	2.3	6.6	3.0		
	2800 OTTA	20	1610	1616	15	2.0	1.0		
	184 BOUL	48	1750	1755	8	2300.0	650.0		
	2695 PENT	20	2020	2030	30	2.0	1.0		
26	408 SANM	45	1259	1259.5	1	40.0	21.0		
	1415 SGMR	1	1355.7	1356.6	6.7	2.0	1.0		
	8800 SGMR	1	1356.1	1356.5	5.2	7.4	2.5		
	7000 SAOP	3	1356.3	1356.9	2.2	11.3	5.6		
	4995 SGMR	3	1356.1	1356.5	5.9	8.7	2.9		
	2700 PENN	1	1356	1356.5	5.6	5.8	1.5		
	2695 SGMR	1	1356.2	1356.6	5	5.5	1.8		
	606 SGMR	3	1356.2	1356.6	1.6	14.8	7.3		
	2800 OTTA	1	1357	1357.5	2	5.2	2.6		
27	408 SANM	45	1415	1416	5	37.0	20.0		
	2800 OTTA	20	1519	1521	15	2.0	1.0		
	2700 PENN	20	1520.5	1521.7	13.2	3.1	1.6		
	2700 PENN	20	1808.8	1922	130.5	6.8	3.4		
	2800 OTTA	21	1810	1845	150	5.0	2.5		
	15400 SGMR	3	1822.6	1823.1	3.8	36.2	8.1		
	10700 PENN	3	1822.3	1822.9	5.6	98.9	16.9		
	8800 SGMR	3	1822.4	1822.9	1.1	120.0	55.0		
	7000 SAOP	3	1822.4	1823.8	2.5	102.6	51.3		
	4995 SGMR	3	1822.5	1822.9	1	43.2	22.0		
	8800 SGMR	29	1823.5	1823.5	21.9	37.8	18.9		
	4995 SGMR	29	1823.5	1823.5	30.2	13.9	6.9		
	2800 OTTA	22	1910	1910	35	2.4	1.2		
28	408 SANM	27	1007.8	1015	17.2	23.0	19.0		
	408 SANM	27	1025.8	1038.5	24.2	35.0	26.5		
	408 SANM	45	1030.6		1.6				
	2700 PENN	20	1643	1644.3	15	3.2	1.6		
	960 PENN	3	1643.5	1643.7	.3	9.0	5.0		
30	2695 PENT	20	2050	2120	85 D	5.0			

Explanation of Type Code:

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

Observatories:

BOUL = Boulder (ESSA-184 MHz, U. of Colo.-18 MHz) PENT = DRAO - Penticton SGMR = AFCRL - Sagamore Hill
 OTTA = ARO - Ottawa SANM = San Miguel, Argentina MCMA = Mc Math-Hulbert Observatory
 PENN = Pennsylvania State University SAOP = Sao Paulo, Brazil WASH = Washington State University

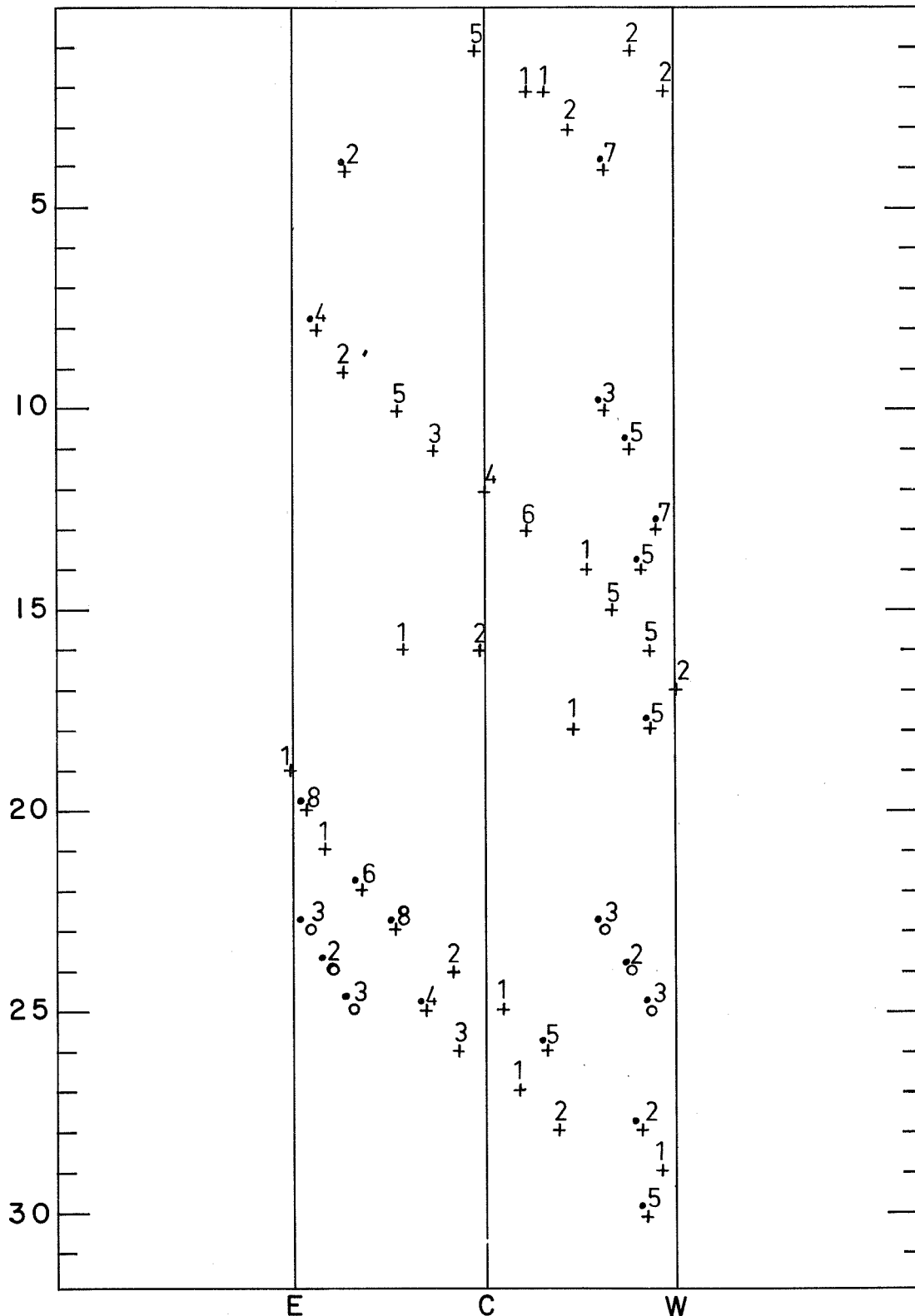


SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

NOVEMBER 1968

Nançay

408 MHz



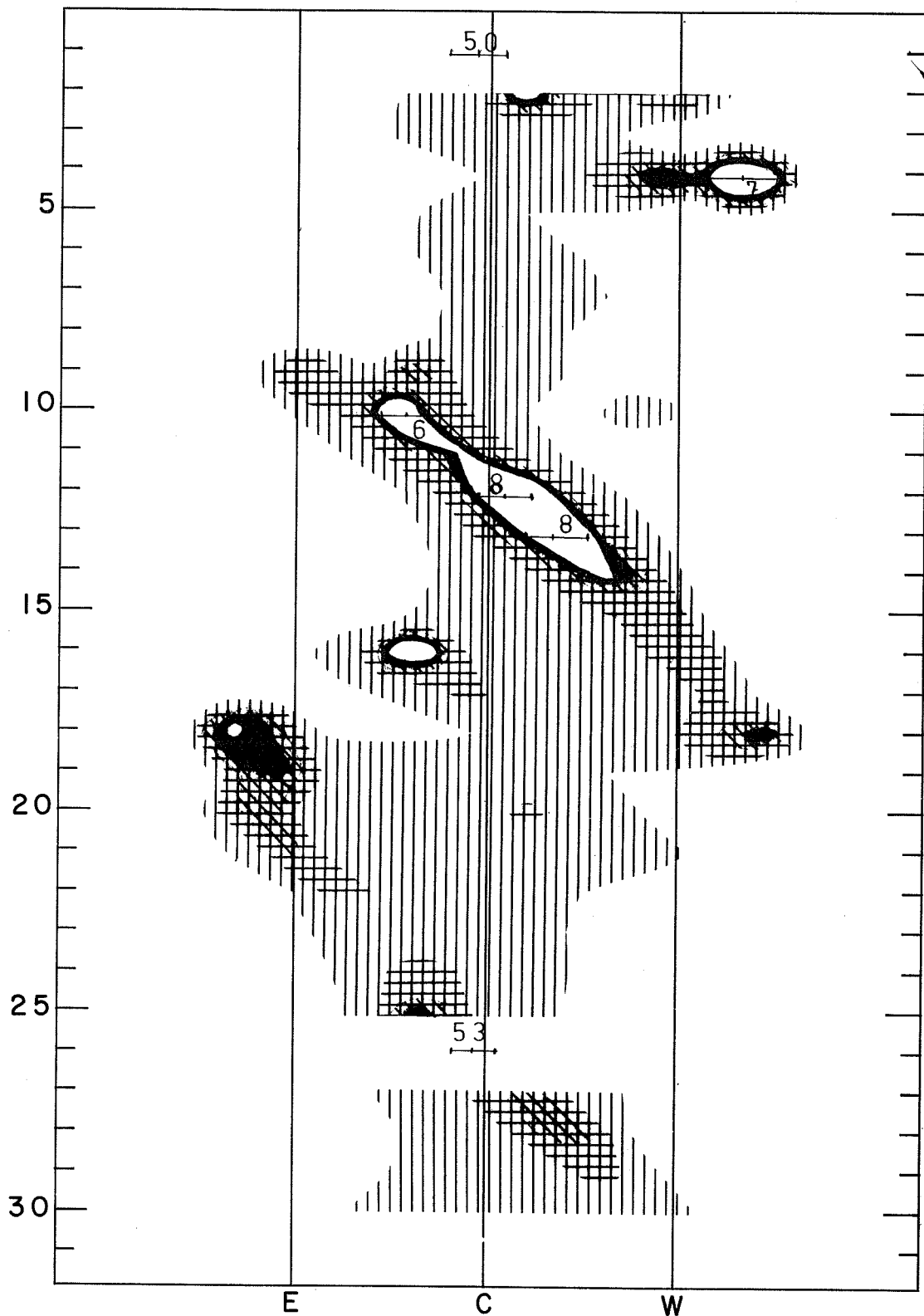
Because of the distance between the main lobes there is sometimes an ambiguity about the position East or West of the Center of Activity. The two possible positions are indicated by circles on the chart.

SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

NOVEMBER 1968

Nançay

169 MHz

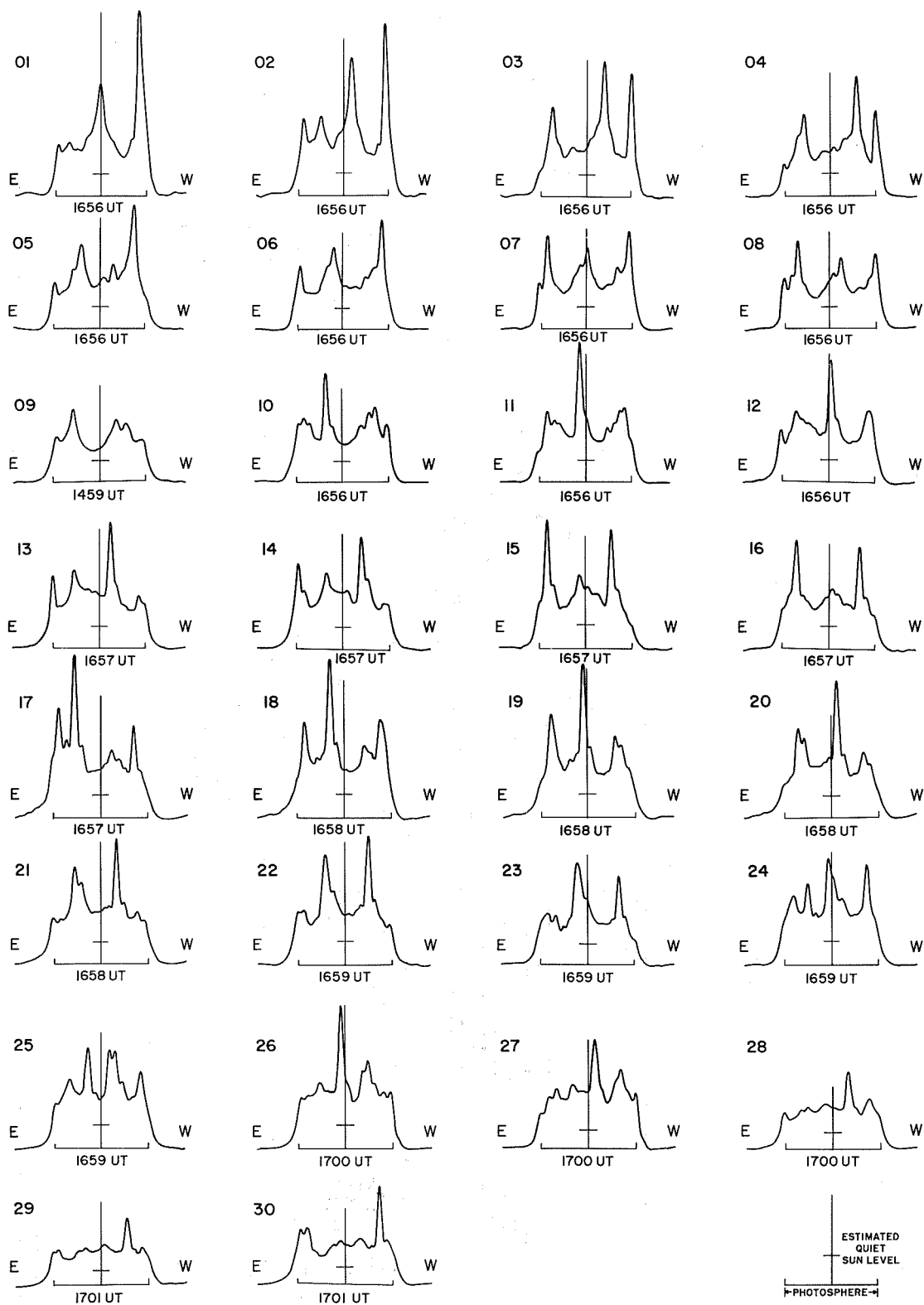


EAST-WEST SOLAR SCANS

November 1968

ALGONQUIN RADIO OBSERVATORY
CANADA

10.7 cm
Fan-Beam with 1.5 minutes of arc
E - W Resolution

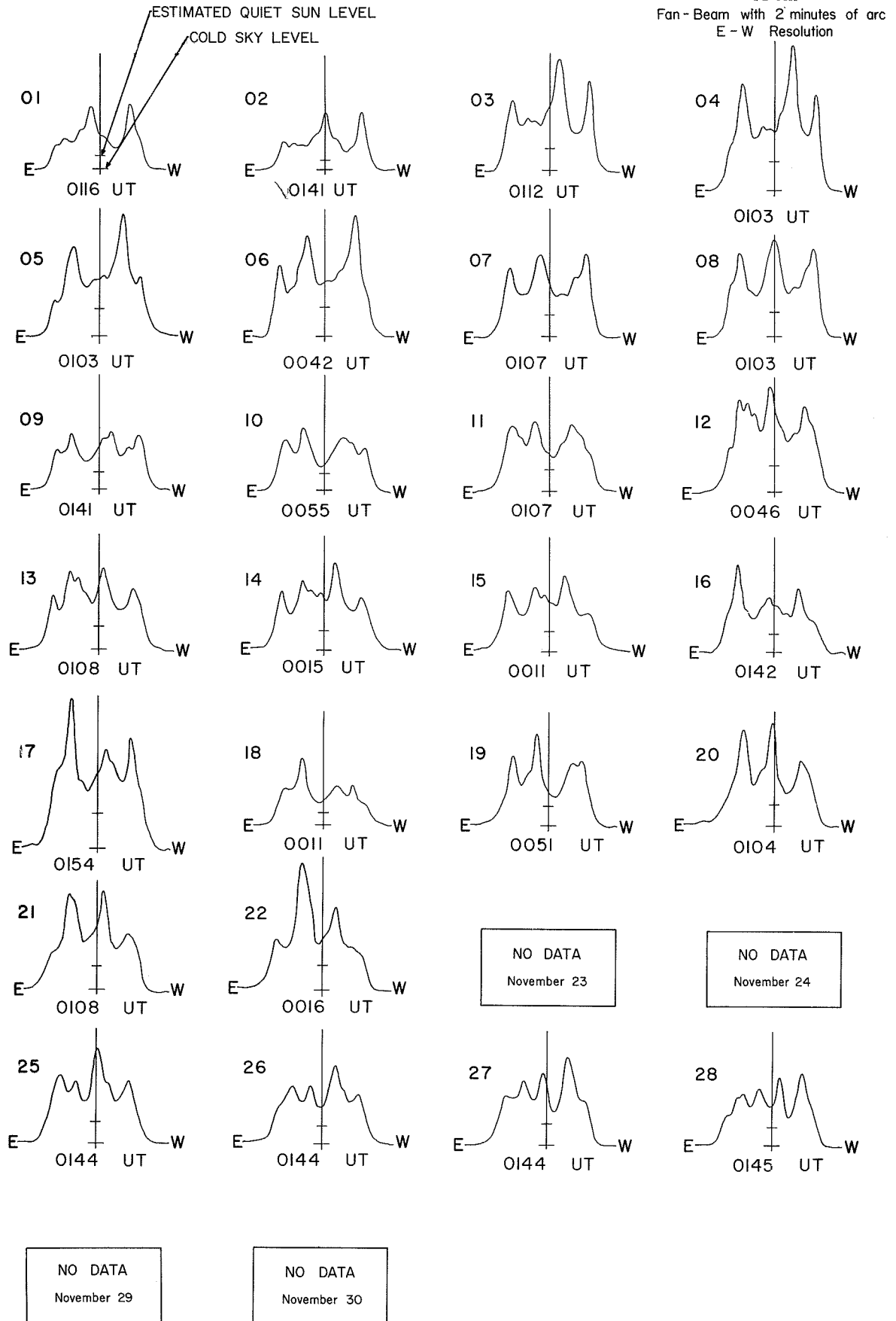


A.

EAST-WEST SOLAR SCANS

NOVEMBER 1968

Fleurs, Australia

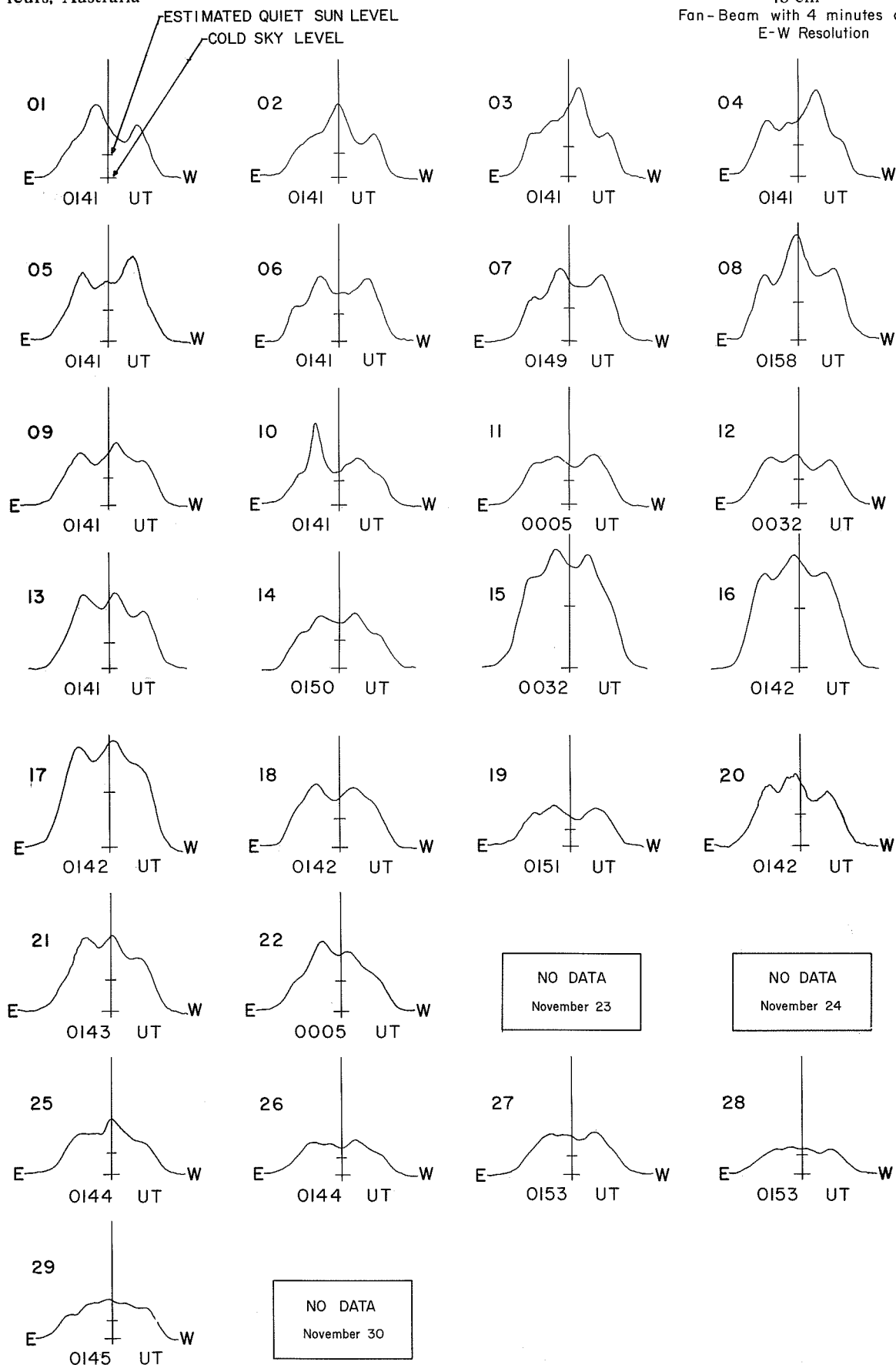


Flours, Australia

NOVEMBER 1968

43 cm

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



SOLAR WIND VELOCITY
and
CO-ROTATION DELAY TIMES

November 1968

DATE 1968	PIONEER VI				PIONEER VII			
	Time (Z)	Pass	U_H^+	TAU	Time (Z)	Pass	U_H^+	TAU
Nov. 1	G1728	1052	414.1	-12.32	G0005	807	400.5	+5.44
2	G1604	1053	424.	-12.35	G2314	809	325.2	+5.4
3	G1521	1054	364.8	-12.27				
4	G1920	1055	410.6	-12.37	G0025	810	360.4	+5.42
5	G1440	1056	426.8	-12.41				
6	G1600	1057	586.	-12.61				
7	G1617	1058	421.6	-12.45				
8								
9								
10								
11								
12					G0021	818	430.1	+5.44
13								
14								
15					G0019	821	352.3	+5.40
16					G0026	822	444.5	+5.45
17					G0016	823	408.9	+5.43
18					G0014	824	407.3	+5.43
19					G0002	825	371.4	+5.41
20					G1918	827	407.4	+5.44
21					G1910	828	432.3	+5.45
22					G2158	829	481.2	+5.47
23								
24								
25								
26					G0042	832	443.1	+5.46
27					G0049	833	411.1	+5.44
28					G0011	834	398.7	+5.44
29					G0000	835	405.7	+5.44
30					G0006	836	437.6	+5.46

SOLAR PROTON EVENT
(Provisional)

November 1968

Date Nov.	Time UT	Detector	Activity
18	1040-1050	Aldra, Norway (12.3 kHz) at Anchorage	187° phase advance Amplitude decrease began 1049Z
		GBR (Rugby, England 16.0 kHz) at Anchorage	274° phase advance Signal decrease began 1049Z
	1045	Deep River and Sulphur Mountain neutron monitors	Rise in counting rates
	~1050	VELA Satellite (3-20 Mev)	Nearly 3 orders of magnitude above background
	1052	Deep River and Sulphur Mountain neutron monitors	Enhancement reached maximum (12% rise at Deep River)
	1055-1102	Aldra VLF path at Ft. Monmouth, Va.	Very rapid phase advance on 2 frequencies
	1113	Pioneer 8 Space- craft (>13.9 Mev)	Enhanced proton flux 1st detected
	1116	Pioneer 9 Space- craft (>13.9 Mev)	Enhanced proton flux 1st detected
	1235	Aldra and GBR VLF paths at Anchorage	Signal strength reached maximum attenuation
	1300	VELA Satellite (3-20 Mev)	Counting rate saturated
	1310	Thule, Greenland (30 MHz Riom.) (20 MHz Riom.)	4-5% decrease in signal strength 10-12% decrease in signal strength
	1425	OGO-3 (>20 Mev)	Counts/sec 90 times normal background
	~1500	VELA Satellite (>25 Mev)	Counting rate maximized at 1.5 orders of magnitude above background
	1528	Pioneer 8 (>13.9 Mev)	Largest value received approximately 2.5 orders of magnitude above back- ground

(Continued on following page)

Date	Time UT	Detector	Activity
19	1900	Fort Churchill (30 MHz Riom.)	Representative daytime absorption value 6.0 db
	2320	College, Alaska (30 MHz Riom.)	Maximum daytime absorption 5.2 db
	2330	Fort Yukon (30 MHz Riom.)	Maximum daytime absorption 5.2 db
	2346	Pioneer 9 (>13.9 Mev)	Largest value received approx- imately 3.5 orders of magnitude above background. (Due to time interval between Pioneer data points those counting rate en- hancements are not necessarily the maxima.)
	1300	VELA (>25 Mev)	Factor of 10 above background
	2000	Fort Churchill (30 MHz Riom.)	Maximum daytime absorption 8.0 db
20	2000	Fort Churchill (30 MHz Riom.)	Absorption very near "quiet-day curve"
	2200	VELA (>25 Mev)	Normal counting rate

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For explanations of the data contained herein see "Descriptive Text"
published in February 1968.

MT. WILSON

OCTOBER 1, 1968 (P=26.04, B_o=6.69, L_o=177.53)

BOULDER

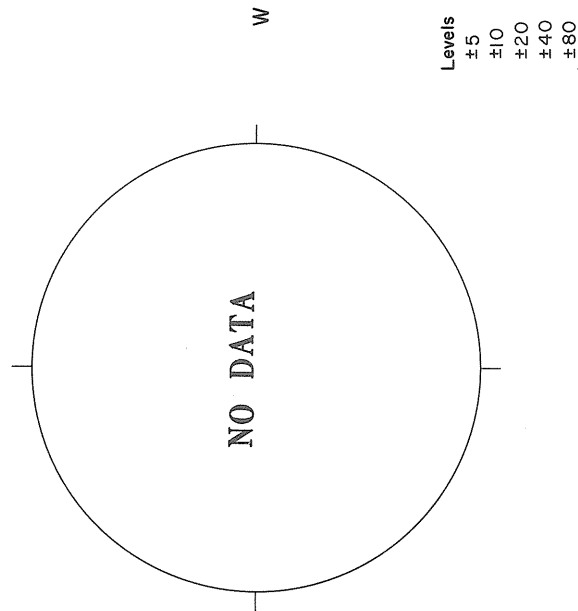
 α

ESSA-BOULDER

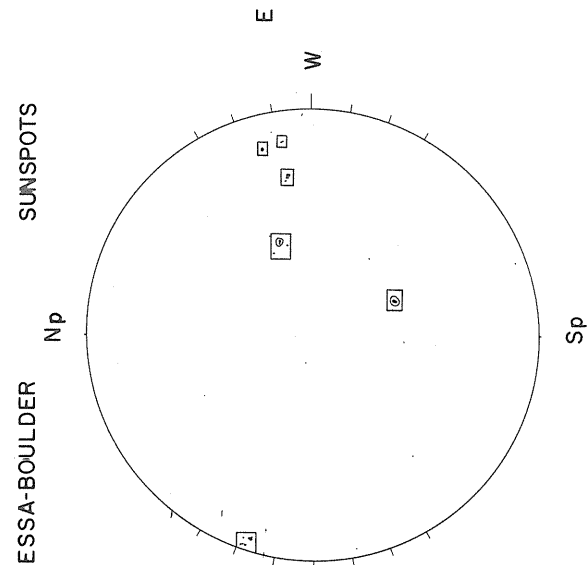
SUNSPOTS

NP

2



Levels
±5
±10
±20
±40
±80



52

2141 UT

1525 UT

STANFORD

9.1 cm.

FLEURS, AUSTRALIA

21 cm.

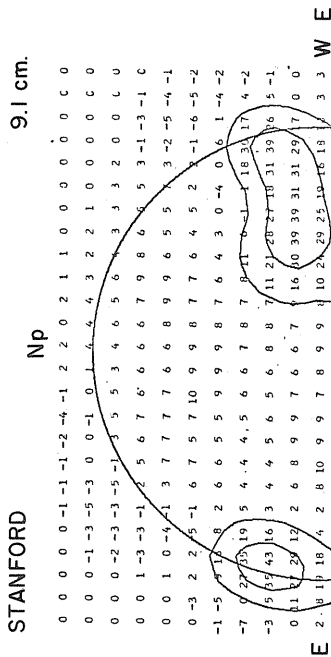
Sp
McMATH-HULBERT
Ca
Nb
CALCIUM REPORT

5

Case 1

1

CALCIUM REFORM



WE

NO DATA

1

2

78-30-2.5
83-12-3.0
87-50-3.0
90-10-3.0
92-36-2.5
02-20-2.5
05-14-3.0
15-04-2.5

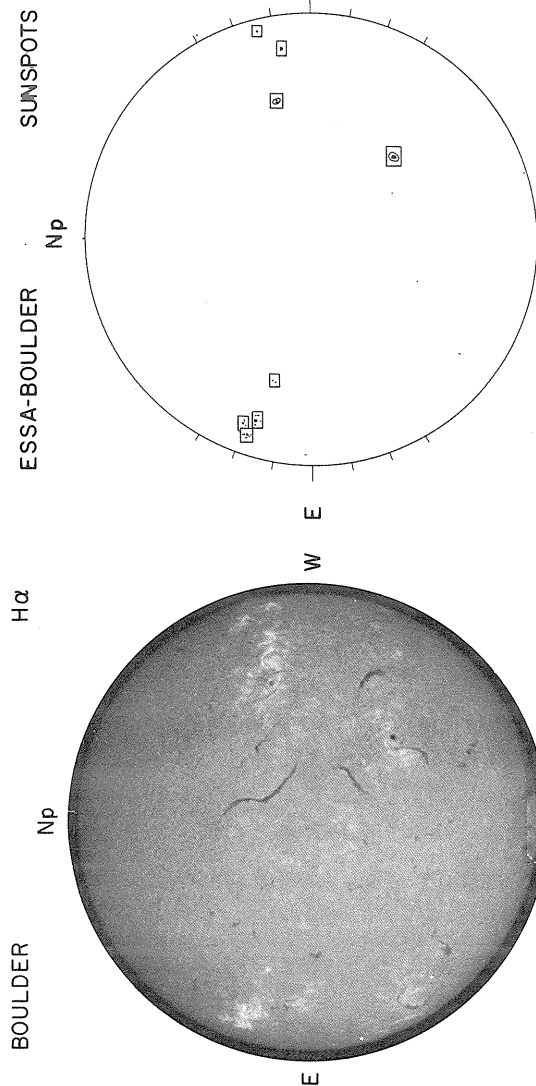
Sp Brightness Unit 5000° K

Sp
20-21 UT

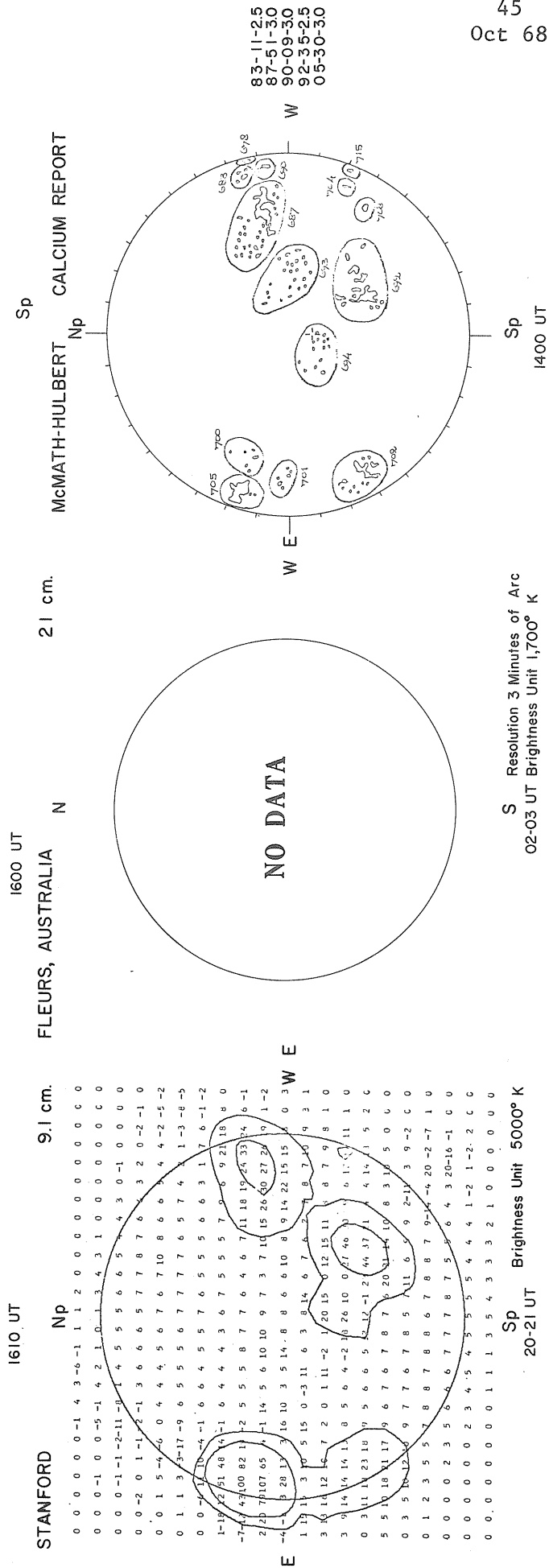
S Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

q/n

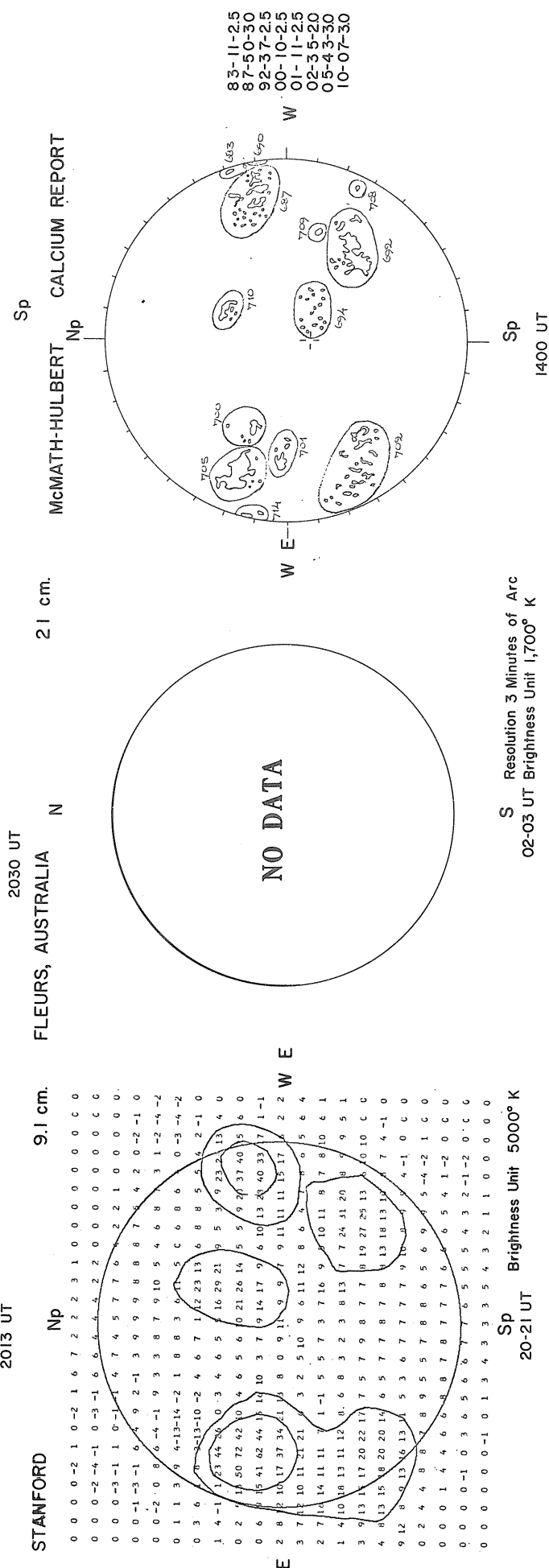
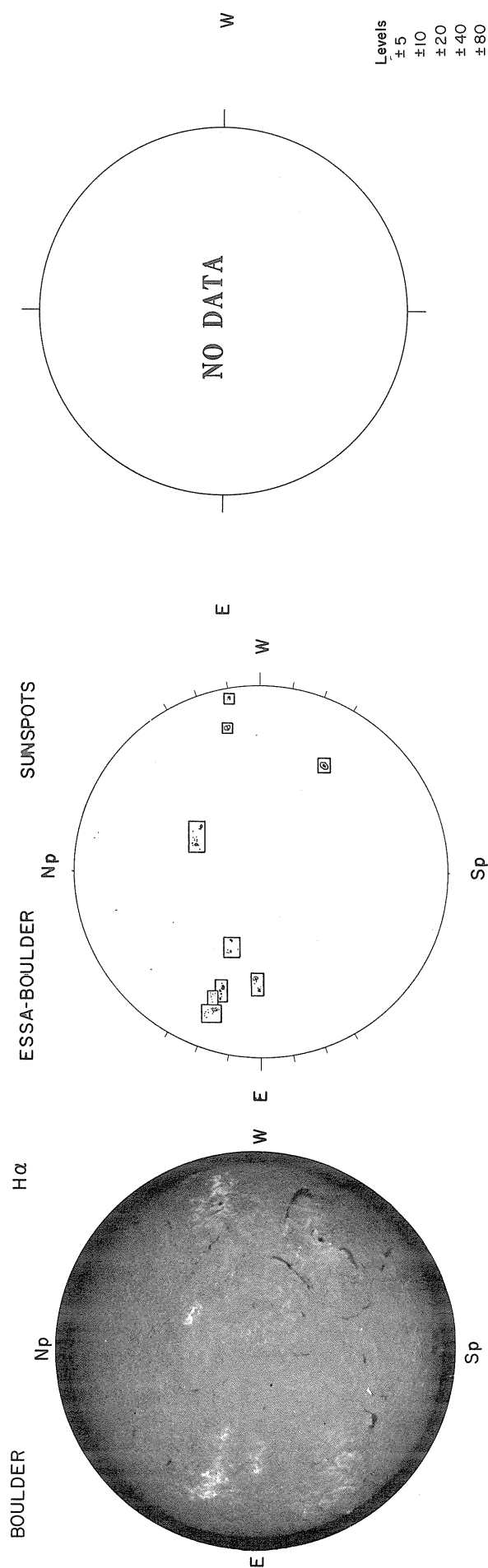
45
Oct 68



Levels
±5
±10
±20
±40
±80



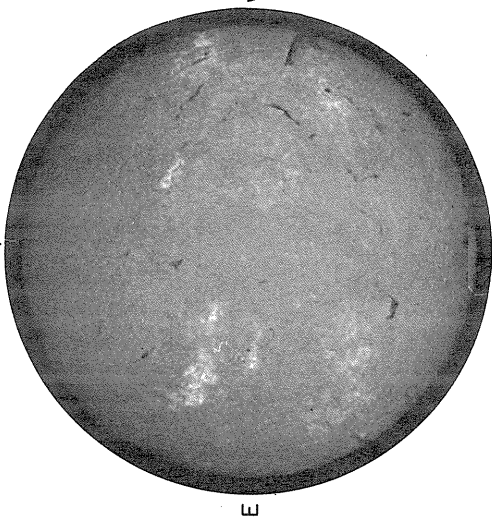
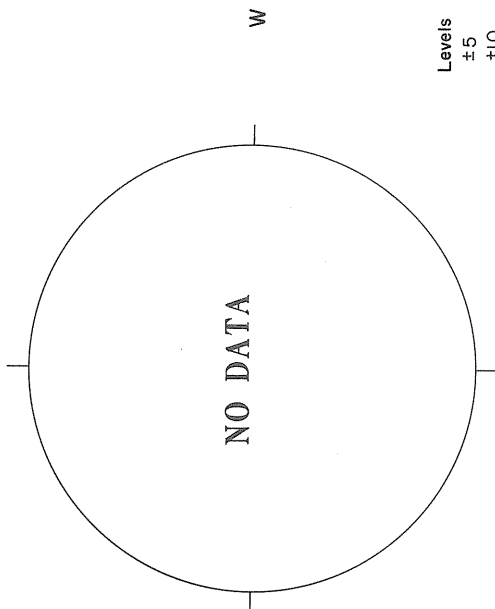
OCTOBER 3, 1968 (P=26.16, B_o=6.59, L_o=151.14)



OCTOBER 4, 1968 (P=26.21, B₀=6.54, L₀=137.95)

MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

BOULDER Np H α ESSA-BOULDER Np SUNSPOTS

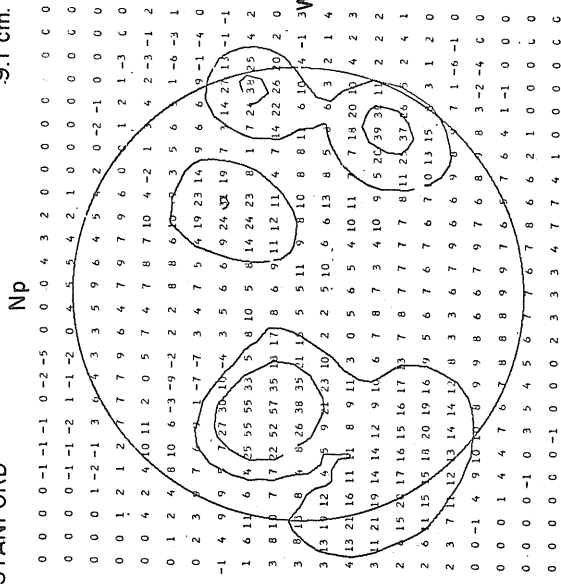


Levels
±5
±10
±20
±40
±80

1405 UT

STANFORD

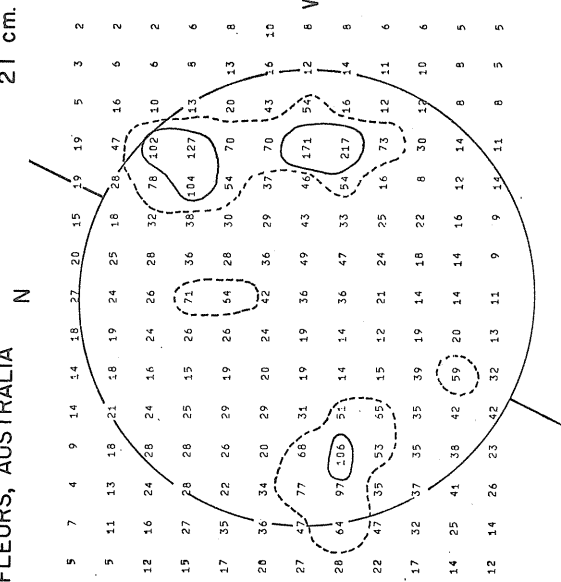
9.1 cm.



1440 UT

FLEURS, AUSTRALIA

21 cm.

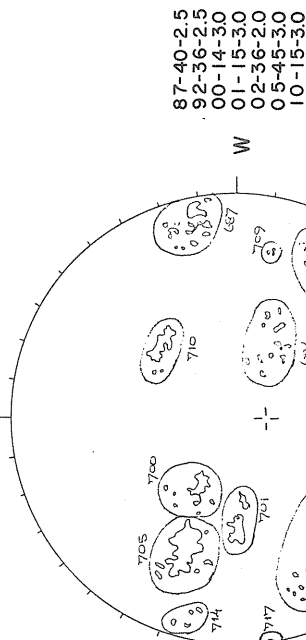


Sp

Np

McMATH-HULBERT

CALCIUM REPORT



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

Sp 20-21 UT
Brightness Unit 5000° K

OCTOBER 8, 1968 (P = 26.33, B₀ = 6.31, L₀ = 85.17)

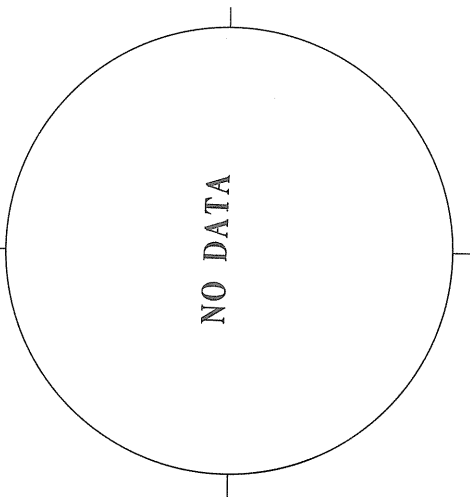
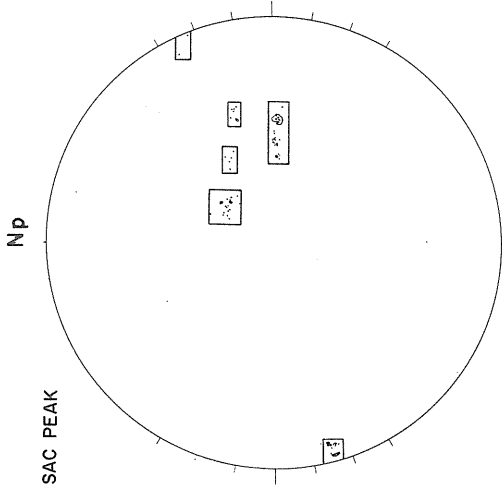
MT. WILSON
Np
MAGNETOGRAM
Solid-Plus
Dotted-Minus

SACRAMENTO PEAK

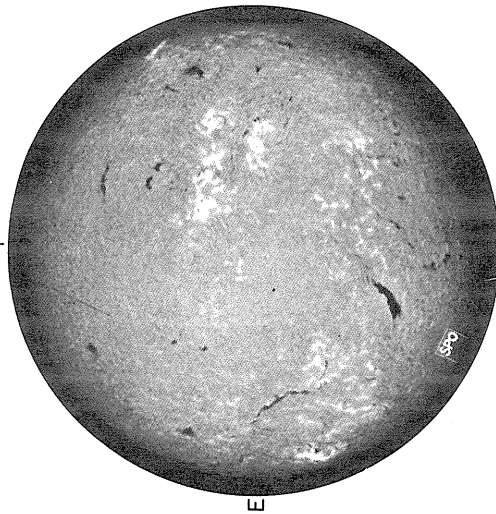
H α

ESSA-BOULDER

SUNSPOTS



Levels
± 5
± 10
± 20
± 40
± 80



1547 UT

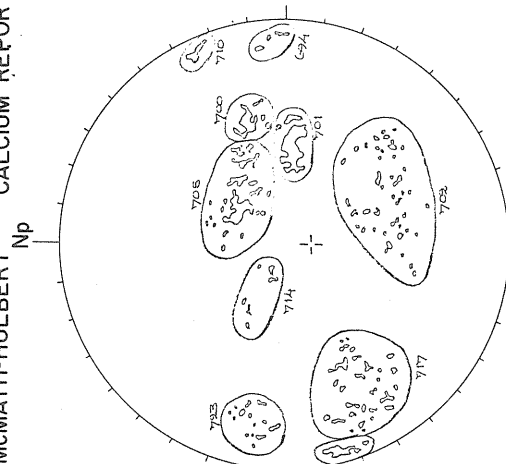
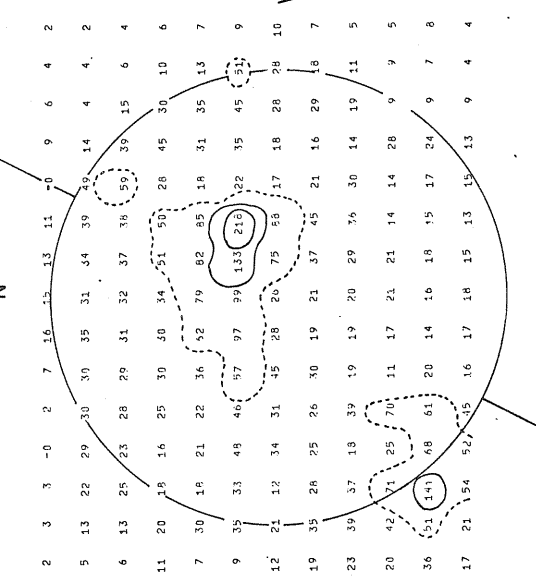
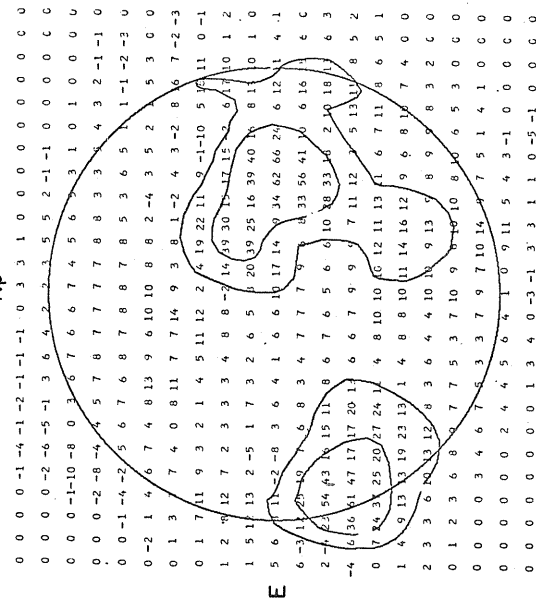
STANFORD

FLEURS, AUSTRALIA

1530 UT

21 cm.

McMATH-HULBERT
Np
Sp
CALCIUM REPORT



00-16-25
01-25-30
05-31-30
10-12-25
17-41-25
22-20-30

51
Oct 68

20-21 UT
Sp
Brightness Unit 5000° K

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

BOULDER

H α

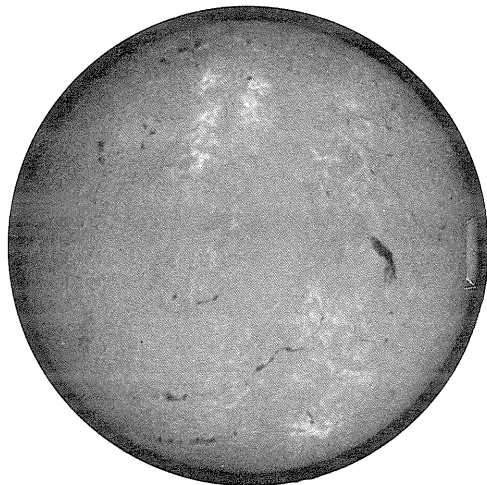
ESSA-BOULDER

SUNSPOTS

Np

E

W



Np

W

E

Np

SUNSPOTS

ESSA-BOULDER

H α

BOULDER

Np

W

E

Np

SUNSPOTS

ESSA-BOULDER

H α

BOULDER

Np

W

E

Np

SUNSPOTS

ESSA-BOULDER

H α

BOULDER

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SUNSPOTS

ESSA-BOULDER

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Np

SUNSPOTS

ESSA-BOULDER

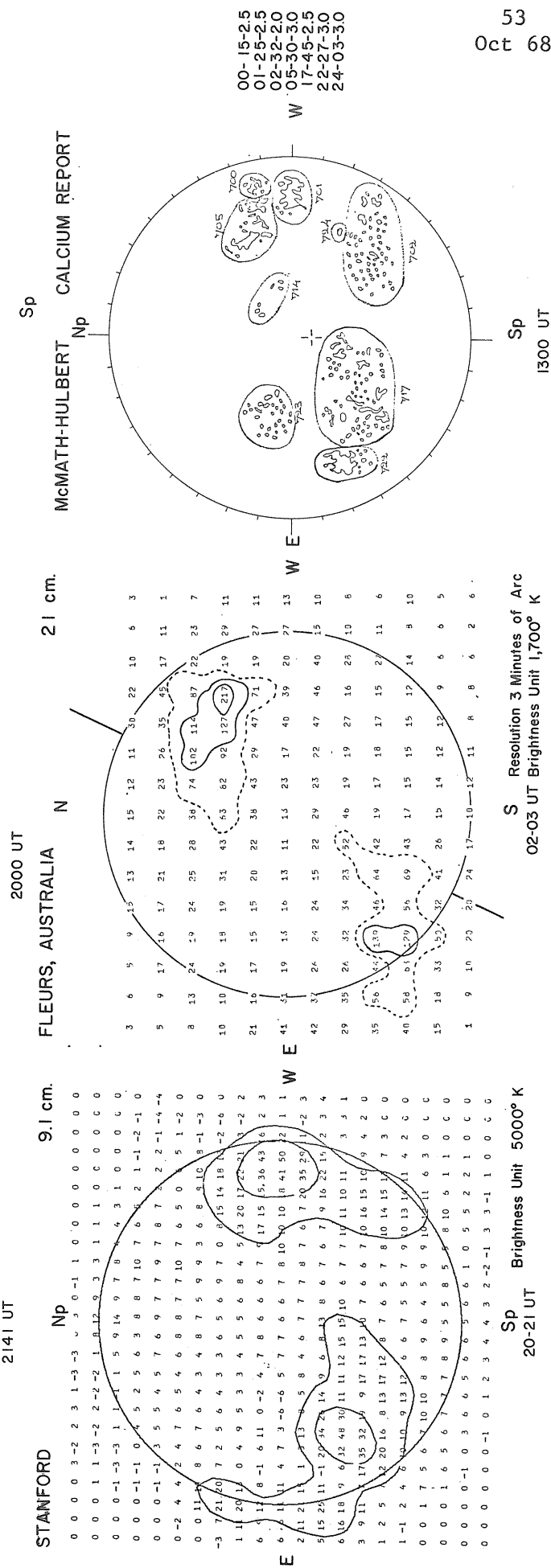
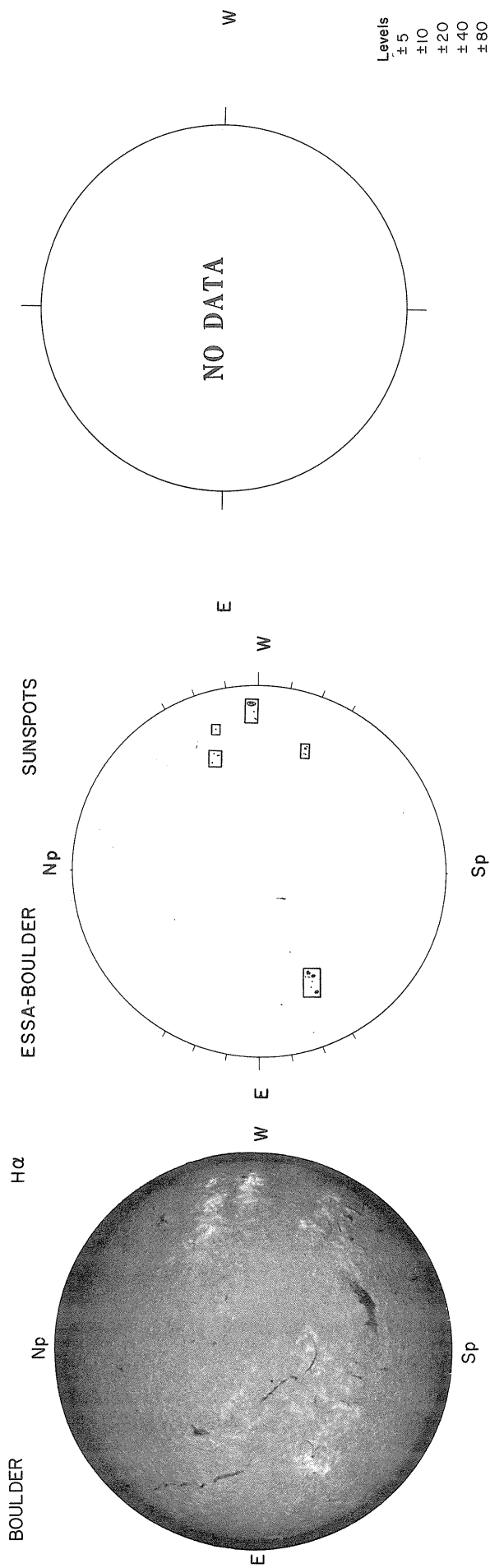
H α

BOULDER

Np

W

E



OCTOBER 11, 1968 (P = 26.35, B₀ = 6.12, L₀ = 45.59)

54
O ct 68
MAGNETOGRAM
Solid-Plus
Dotted-Minus

MT. WILSON

Np

BOULDER

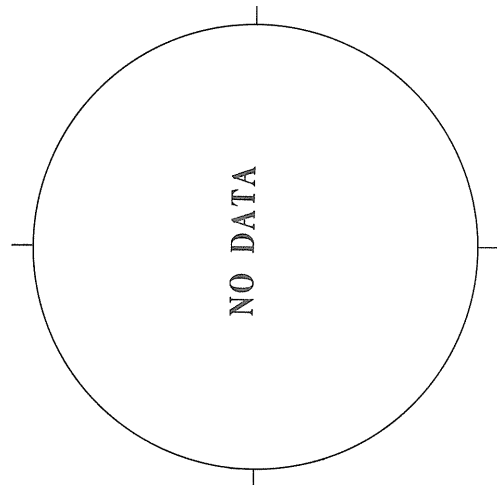
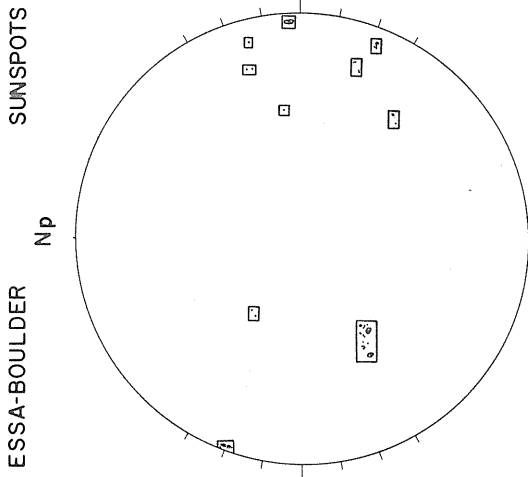
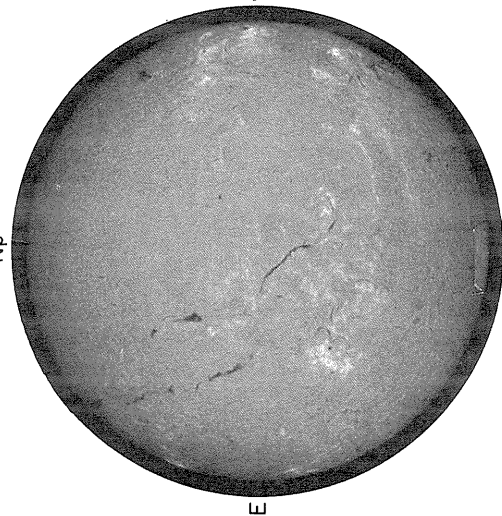
H α

SUNSPOTS

ESSA-BOULDER

Np

Np



Levels
±5
±10
±20
±40
±80

1440 UT

STANFORD

9.1 cm.

FLEURS, AUSTRALIA

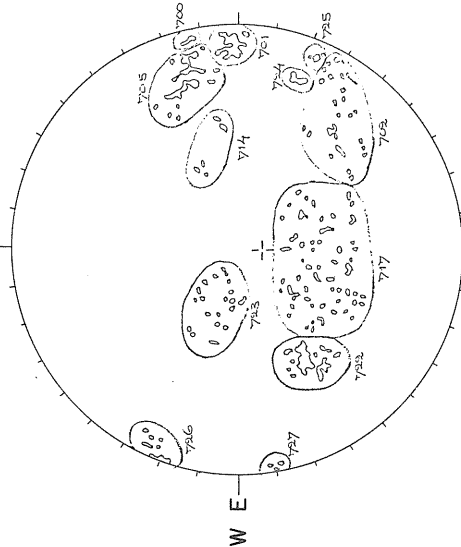
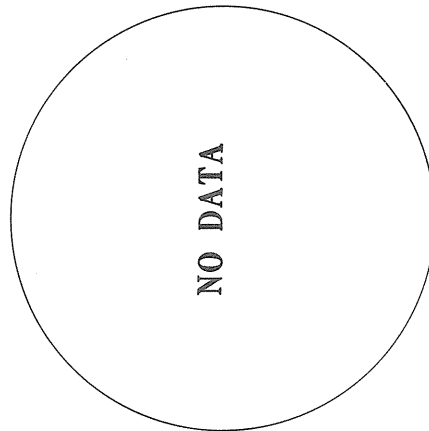
21 cm.

McMATH-HULBERT

CALCIUM REPORT

Sp

Np



01-25-25
02-24-25
05-30-30
17-41-25
22-25-30
24-07-25
25-06-30
26-15-25

Sp
20-21 UT

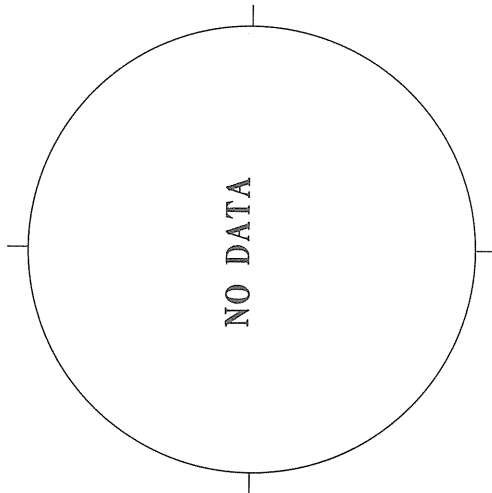
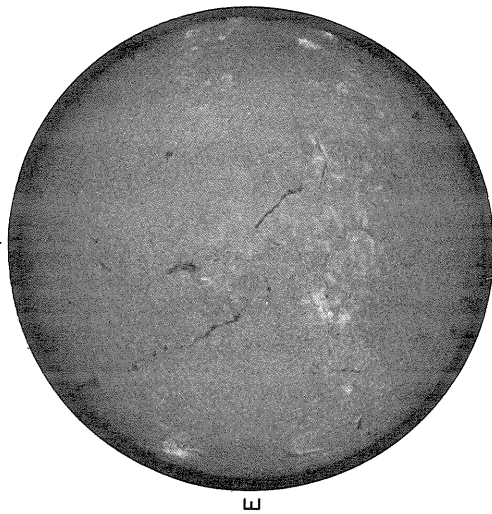
Brightness Unit 5000° K

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

OCTOBER 12, 1968 (P = 26.34, B₀ = 6.05, L₀ = 32.40)

MT. WILSON Np MAGNETOGRAM
Solid-Plus
Dotted-Minus

BOULDER H α Np ESSA-BOULDER Np SUNSPOTS



Levels
± 5
± 10
± 20
± 40
± 80

1430 UT

STANFORD

9.1 cm.

FLEURS, AUSTRALIA

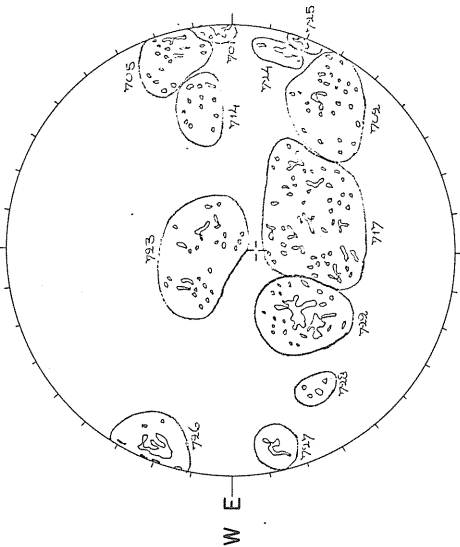
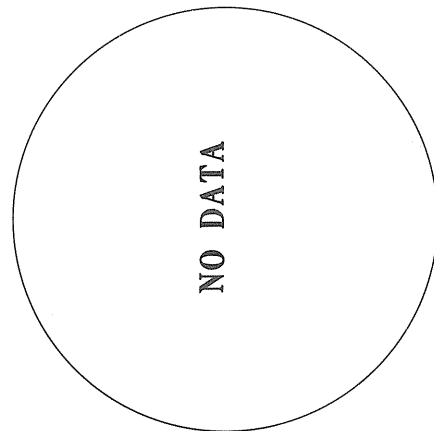
1500 UT

21 cm.

McMATH-HULBERT Np

Sp

CALCIUM REPORT

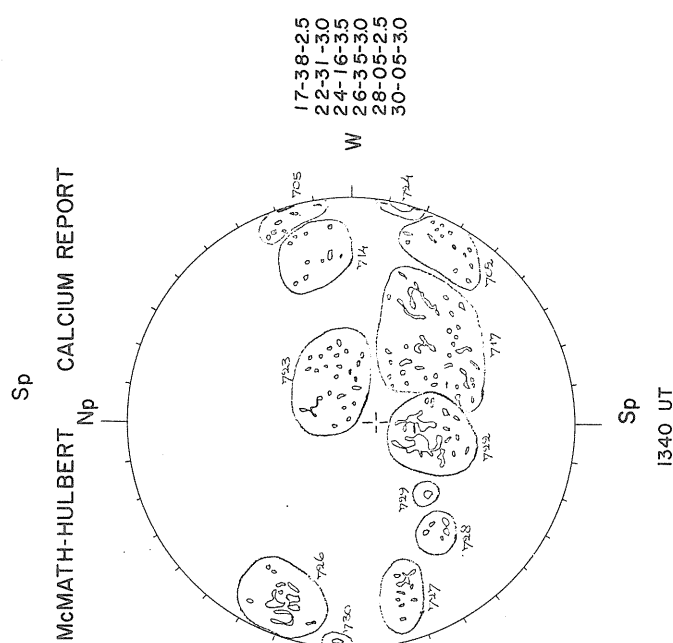
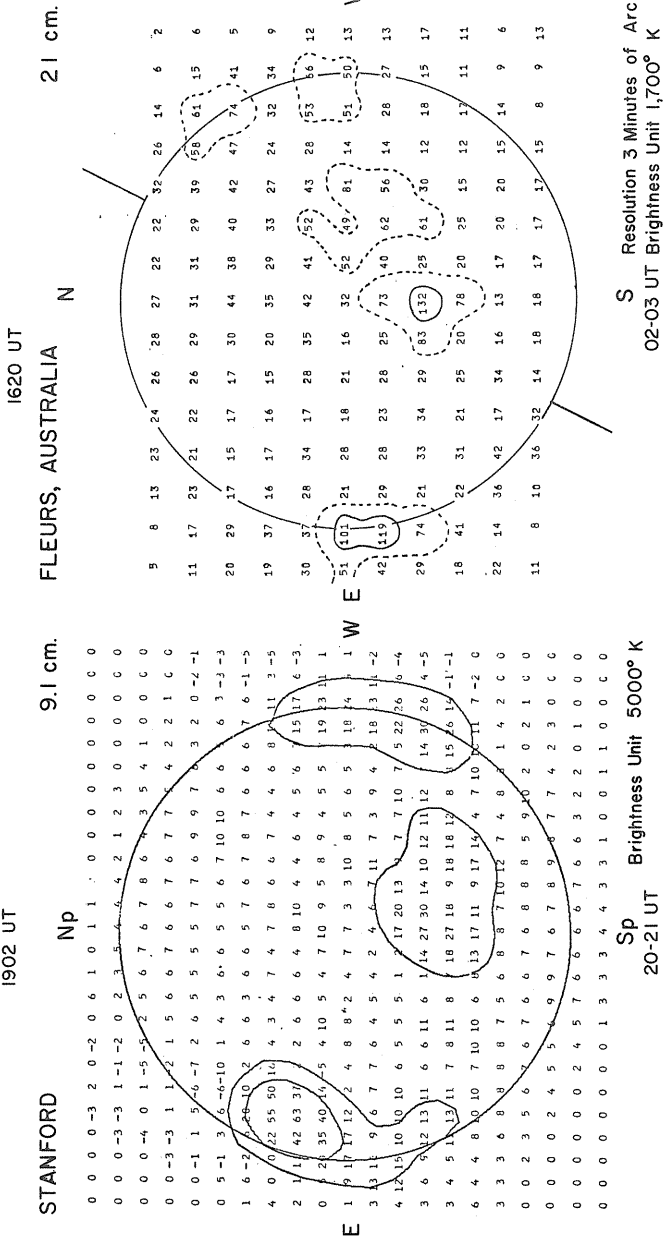


01-13-25
05-24-25
17-39-25
22-29-30
24-14-35
25-12-30
26-39-30
28-05-25

Sp Brightness Unit 5000° K
20-21 UT

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

56
Oct 68



OCTOBER 14, 1968 (P=26.29, B₀=5.91, L₀= 6.02)

MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus

BOULDER

H α

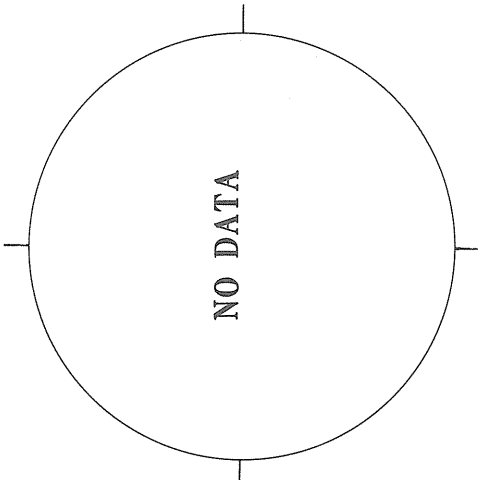
Np

ESSA-BOULDER

Np

SUNSPOTS

Np



Levels
±5
±10
±20
±40
±80



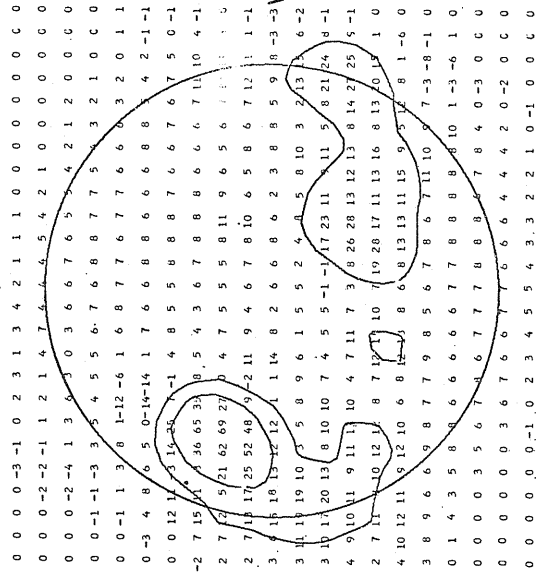
Sp

1409 UT

STANFORD

Np

9.1 cm.



FLEURS, AUSTRALIA

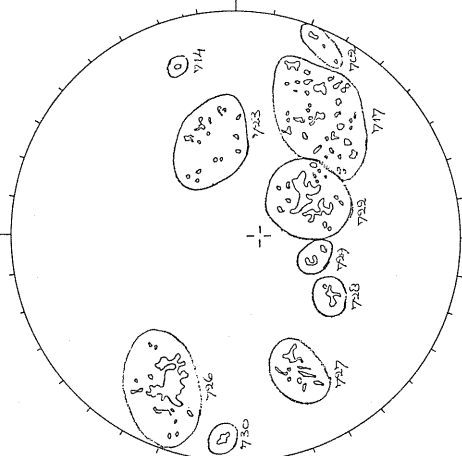
N

21 cm.

Sp

McMATH-HULBERT

CALCIUM REPORT



20-21 UT

Sp

Brightness Unit 5000° K

S

Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

Sp

1400 UT

MT. WILSON
DELTA Y = 62.0
DELTA X = 61.0

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

OCTOBER 15, 1968 (P = 26.26, B₀ = 5.83, L₀ = 352.83)

ESSA-BOULDER

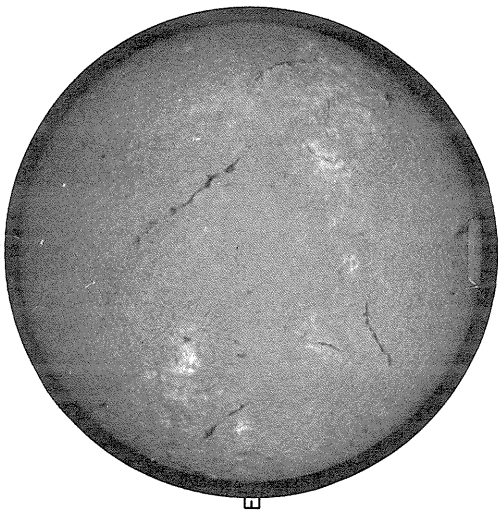
Np

SUNSPOTS

H α

BOULDER

Np



Sp

1425 UT

Sp

1510 UT

FLEURS, AUSTRALIA

N

21 cm.

McMATH-HULBERT

CALCIUM REPORT

22.16-23.46 UT

W

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Sp

1315 UT

W

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Sp

1315 UT

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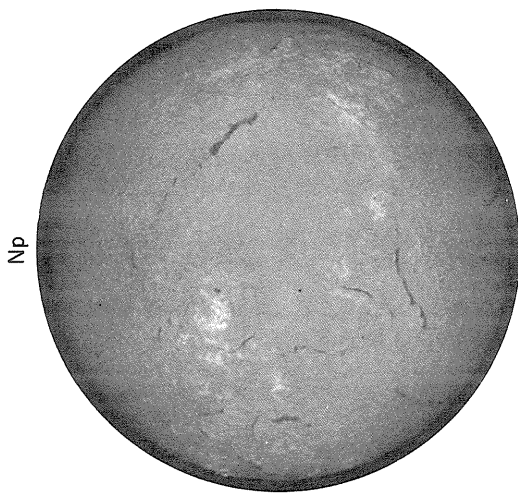
W

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OCTOBER 16, 1968 (P=26.22, B₀=5.76, L₀=339.64)

BOULDER

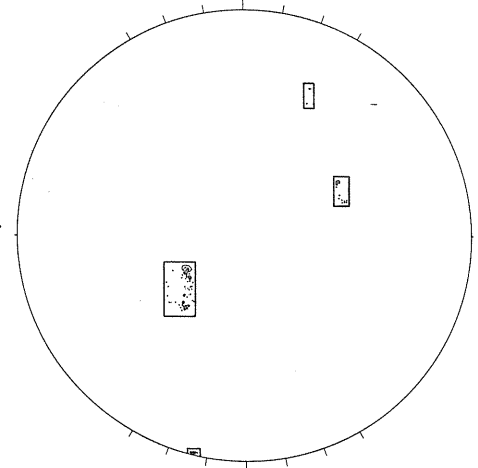
H α



ESSA-BOULDER

Np

SUNSPOTS



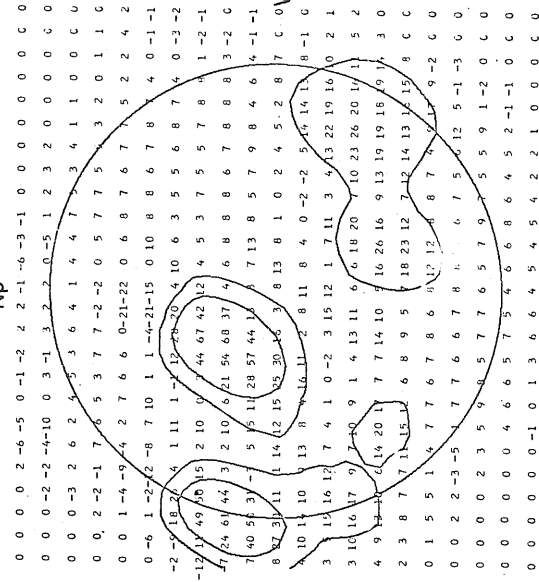
Sp

1446 UT

STANFORD

9.1 cm.

Np



Brightness Unit 5000° K

Sp

20-21 UT

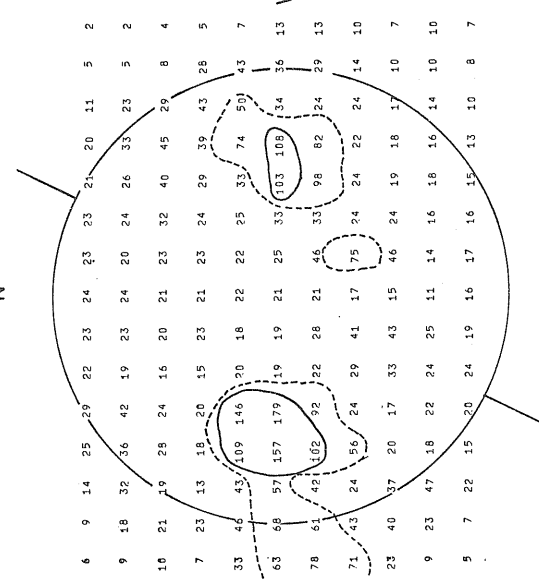
FLEURS, AUSTRALIA

1535 UT

Sp

21 cm.

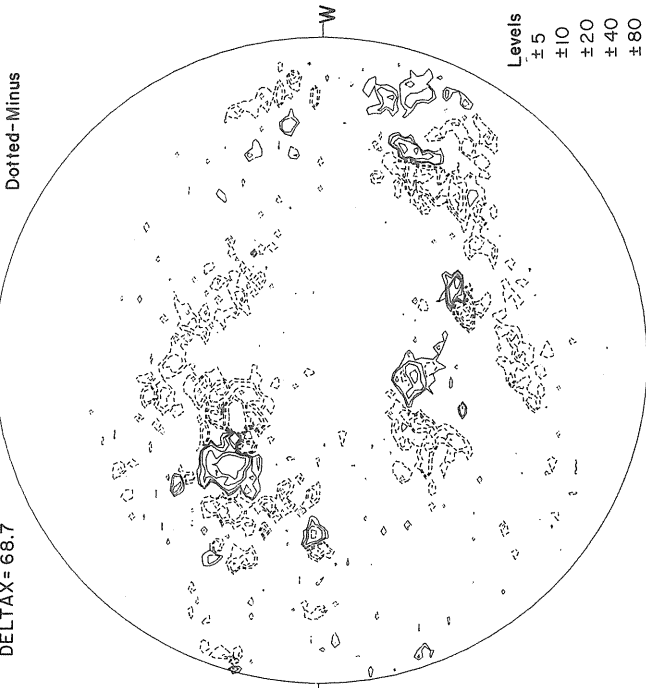
N



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

MT. WILSON
DELTA Y=62.0
DELTA X=68.7

MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

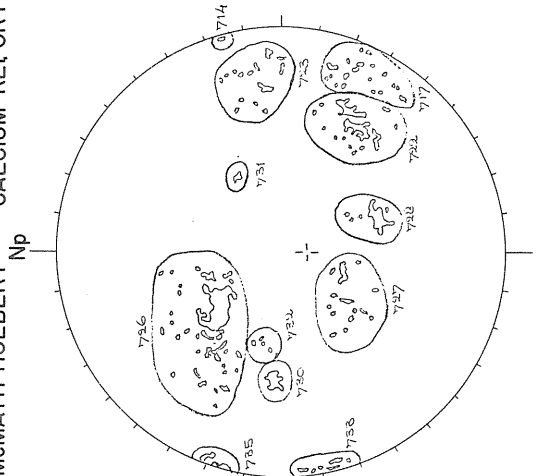
17.65-18.73 UT

Sp

McMATH-HULBERT

Np

CALCIUM REPORT



22-31-30
26-49-30
27-12-25
28-12-30
30-08-30
32-02-25
33-13-25
35-24-30

59
Oct 68

OCTOBER 18, 1968 (P=26.12, B₀=5.60, L₀=313.26)

MT. WILSON
Np
MAGNETOGRAM
Solid-Plus
Dotted-Minus

BOULDER

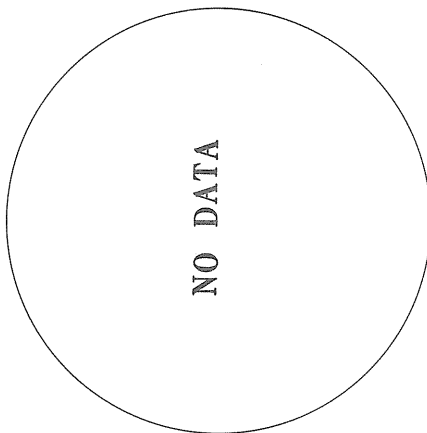
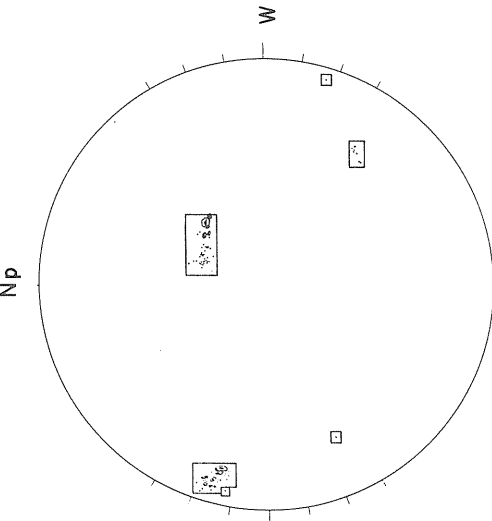
H α

Np

ESSA-BOULDER

Np

SUNSPOTS



Levels
±5
±10
±20
±40
±80



Sp

1453 UT

STANFORD

9.1 cm.

Sp

FLEURS, AUSTRALIA

1500 UT

N

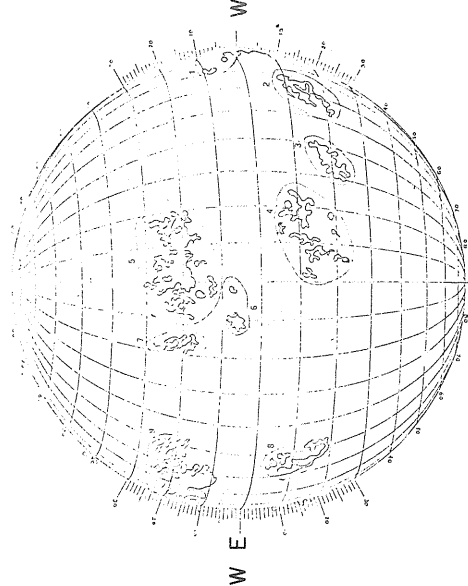
21 cm.

Sp

CALCIUM REPORT

CATANIA

Np



02-34-27
03-19-30
04-56
05-69-37
09-85-43

NO DATA

Sp
20-21 UT

Brightness Unit 5000° K

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

62
Oct 68

MT. WILSON
DELTA X = 62.0
DELTA Y = 72.1

MAGNETOGRAM
Solid-Plus
Dotted-Minus

OCTOBER 19, 1968 (P = 26.06, B₀ = 5.52, L₀ = 300.07)

BOULDER

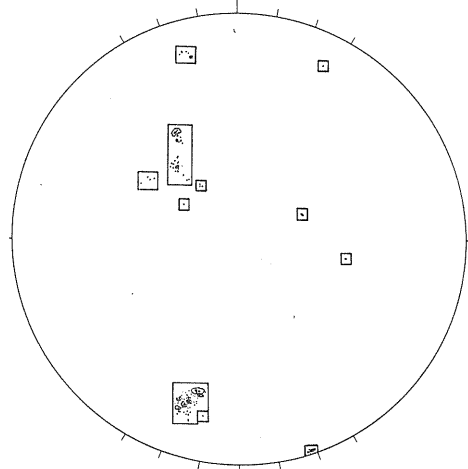
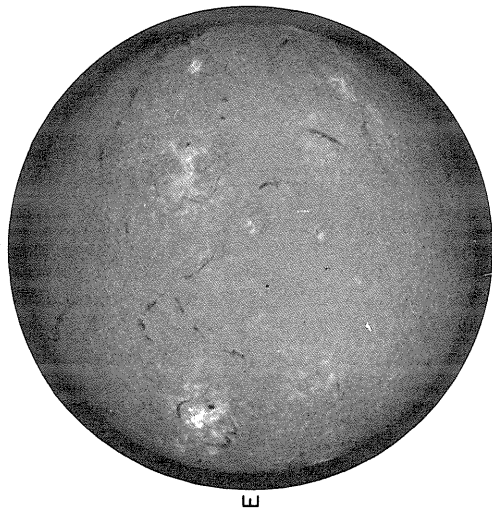
H α

ESSA-BOULDER

SUNSPOTS

Np

Np



Sp

Sp

1500 UT

1545 UT

STANFORD

9.1 cm.

FLEURS, AUSTRALIA

21 cm.

McMATH-HULBERT

CALCIUM REPORT

21.18 - 22.21 UT

Sp

Sp

20-21 UT

Sp

1320 UT

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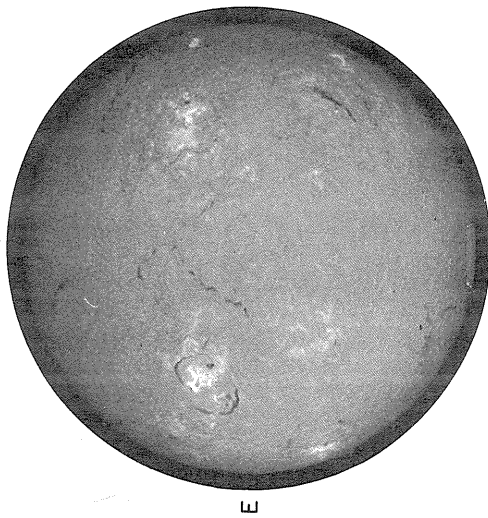
</

OCTOBER 20, 1968 (P = 25.99, B₀ = 5.44, L₀ = 286.88)

BOULDER

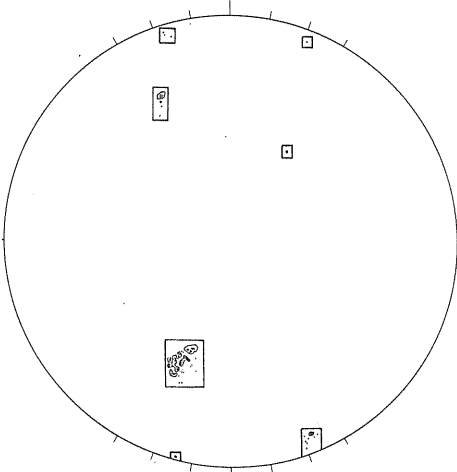
H α

Np



ESSA-BOULDER

Np

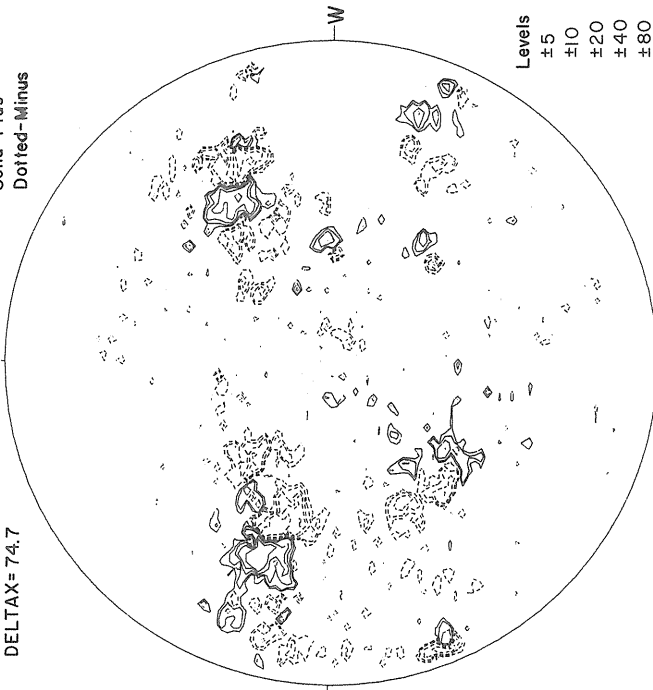


SUNSPOTS

MT. WILSON
DELTA Y = 62.0
DELTA X = 74.7

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Np

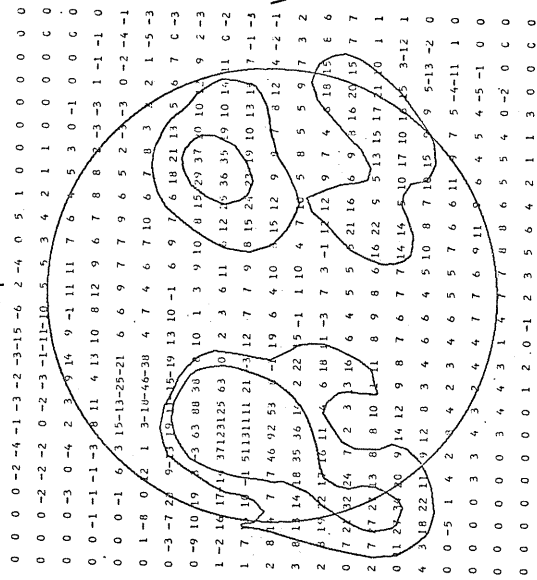


Levels
±5
±10
±20
±40
±80

STANFORD.

1545 UT

Np



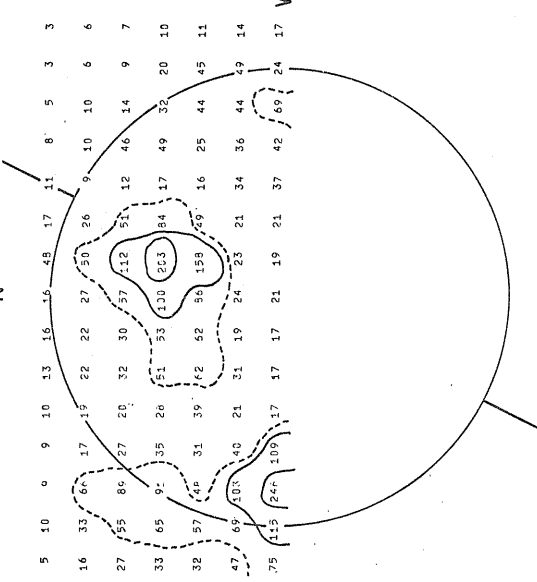
9.1 cm.

FLEURS, AUSTRALIA

1840 UT

N

21 cm.



Brightness Unit 5000° K

Sp

20-21 UT

S Resolution 3 Minutes of Arc

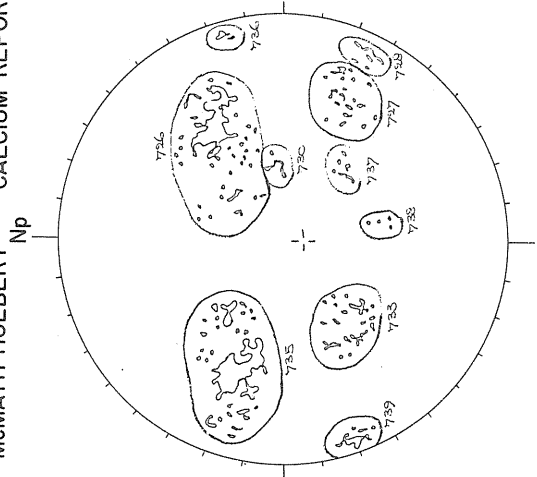
02-03 UT Brightness Unit 1,700° K

McMATH-HULBERT

1987-20.85 UT

Np

CALCIUM REPORT



Sp

1320 UT

26-53-30
28-11-35
30-04-25
33-13-25
35-66-35
36-07-35
39-21-30

63
Oct 68

64
Oct 68

MAGNETOGRAM
Solid-Plus
Dotted-Minus

MT. WILSON
DELTA = 61.4
DELTA T = 80.8

OCTOBER 21, 1968 (P = 25.91, B₀ = 5.35, L₀ = 273.69)

BOULDER

H α

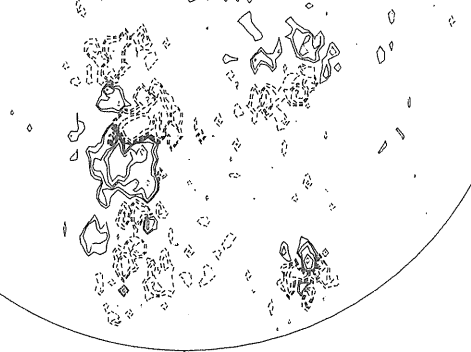
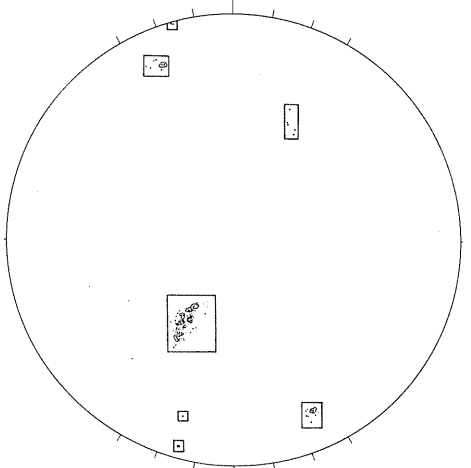
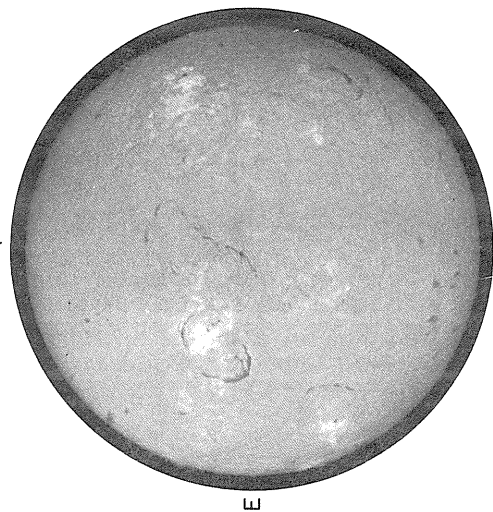
ESSA-BOULDER

SUNSPOTS

Np

Np

Np



Levels
 ± 5
 ± 10
 ± 20
 ± 40
 ± 80

1435 UT

1500 UT

1761-18.54 UT

STANFORD

9.1 cm.

FLEURS, AUSTRALIA

21 cm.

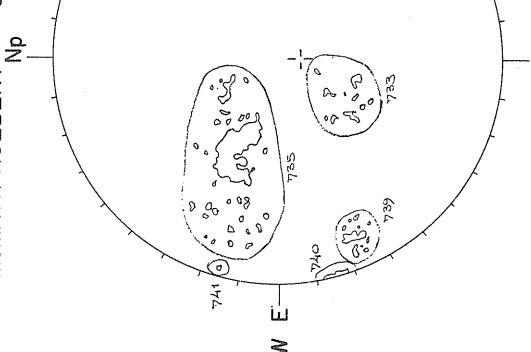
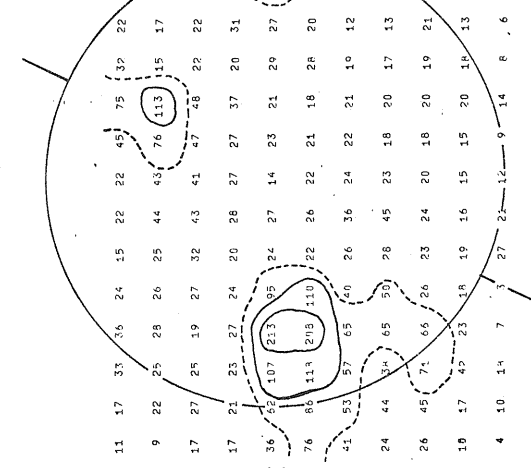
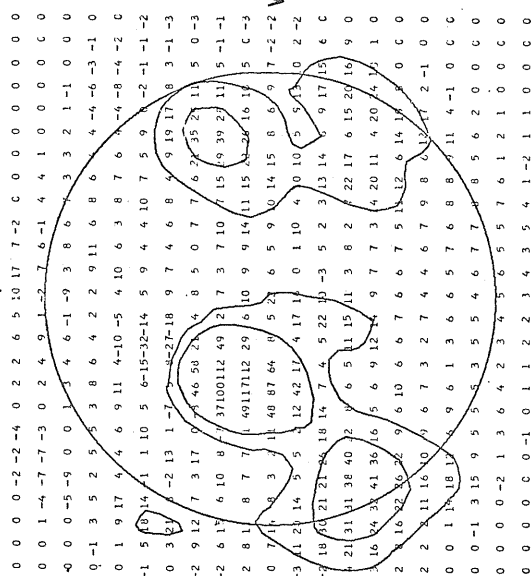
McMATH-HULBERT
CALCIUM REPORT

Np

N

Np

Sp



26-52-30
33-13-25
35-70-40
36-04-25
37-06-25
39-17-35
40-12-25

Brightness Unit 5000° K

Sp

20-21 UT

S Resolution 3 Minutes of Arc

02-03 UT Brightness Unit 1,700° K

Sp

1315 UT

OCTOBER 22, 1968 (P = 25.83, B₀ = 5.27, L₀ = 260.50)

BOULDER

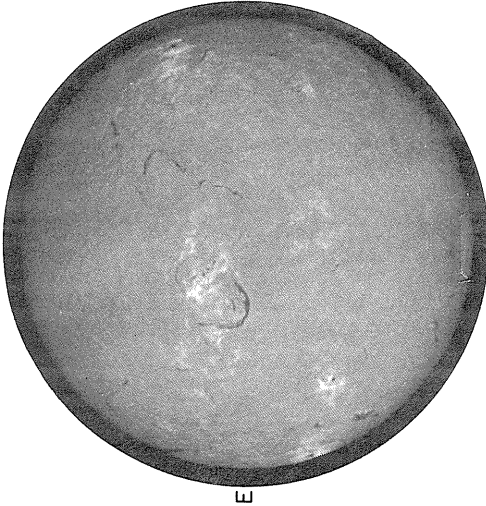
H α

ESSA-BOULDER

SUNSPOTS

Np

Np

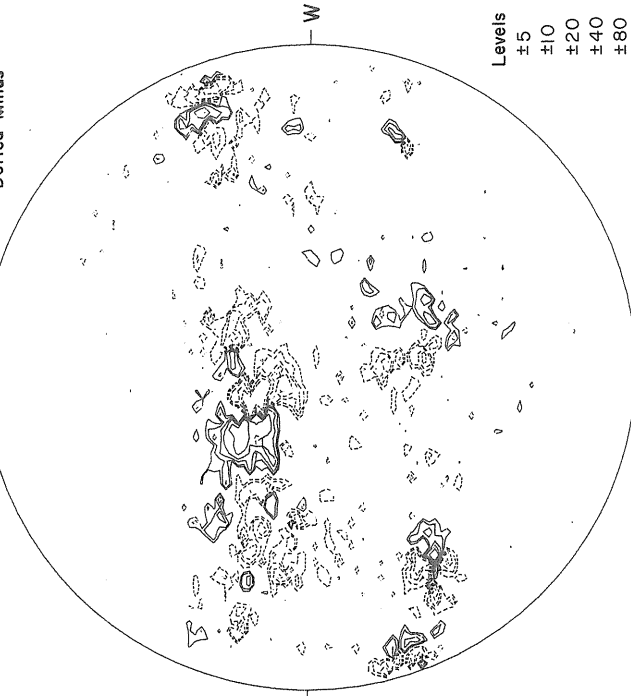


W

E

MAGNETOGRAM
Solid-Plus
Dotted-Minus

MT. WILSON
DELTA Y = 62.0
DELTA X = 80.9



Levels
 ± 5
 ± 10
 ± 20
 ± 40
 ± 80

STANFORD

1451 UT

Np

9.1 cm.

FLEURS, AUSTRALIA

1525 UT

Sp

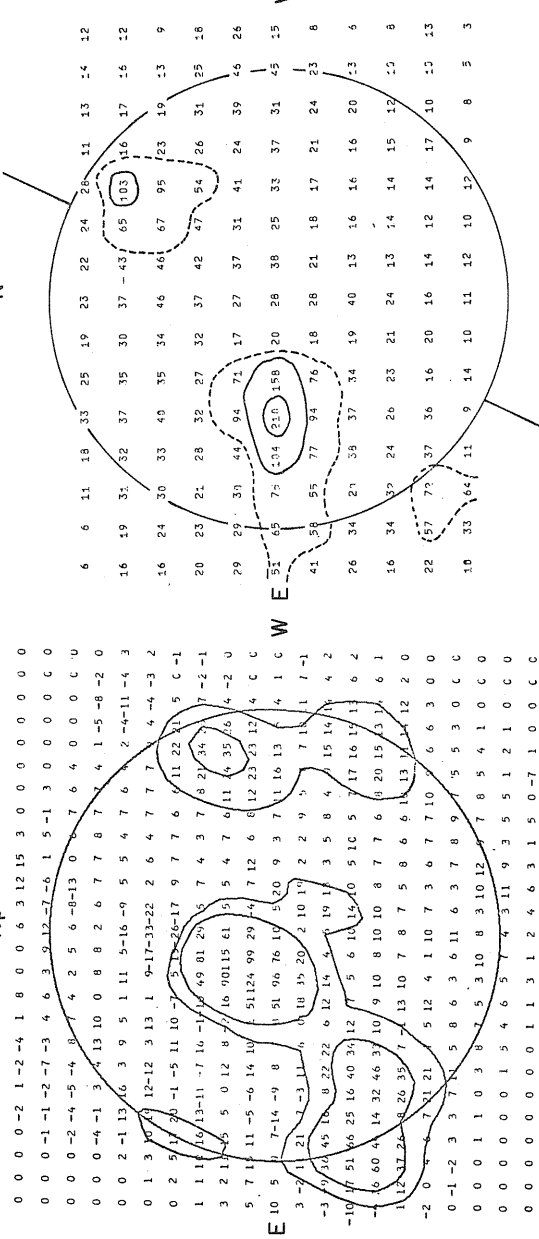
21 cm.

McMATH-HULBERT

1847-1939 UT

Sp

CALCIUM REPORT



26-50-30
35-62-35
37-09-25
39-22-35
40-25-30

W

E

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

Sp Brightness Unit 5000° K
20-21 UT

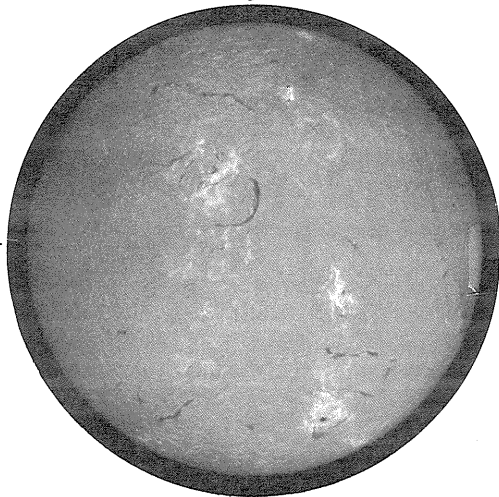
65
Oct 68

OCTOBER 24, 1968 (P = 25.63, B₀ = 5.09, L₀ = 234.13)

BOULDER

H α

Np



E

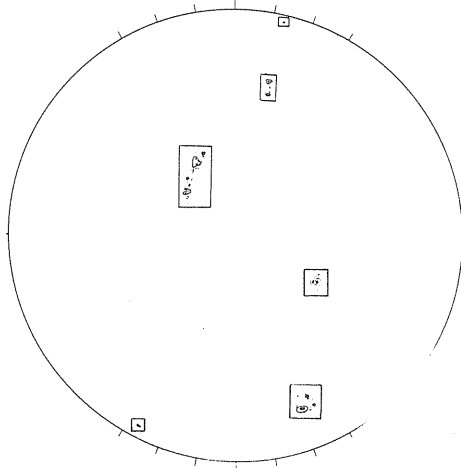
W

E

ESSA-BOULDER

Np

SUNSPOTS



W

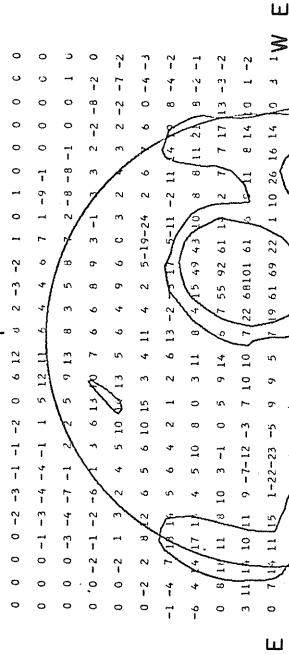
E

W

STANFORD

Np

9.1 cm.



E

W

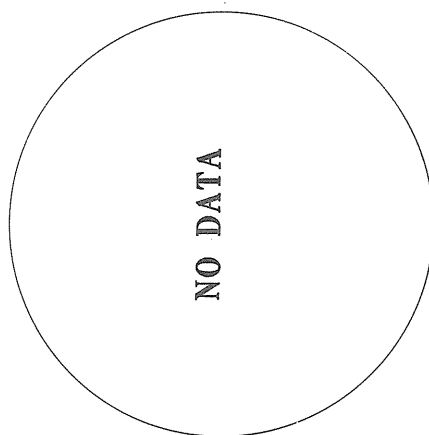
E

FLEURS, AUSTRALIA

N

1418 UT

Sp



NO DATA

21 cm.

21 cm.

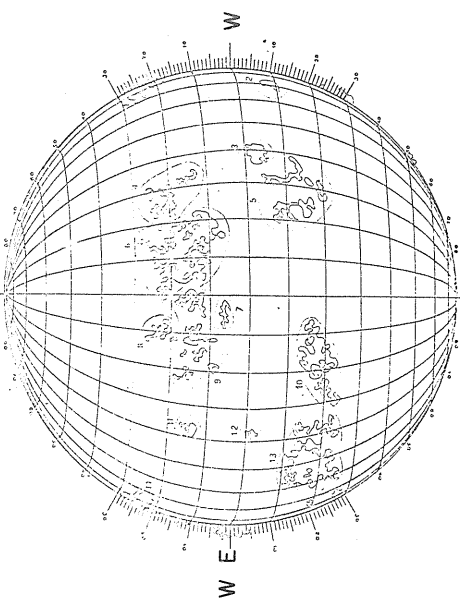
21 cm.

CATANIA

Np

16.50-17.43 UT

Sp



W

E

W

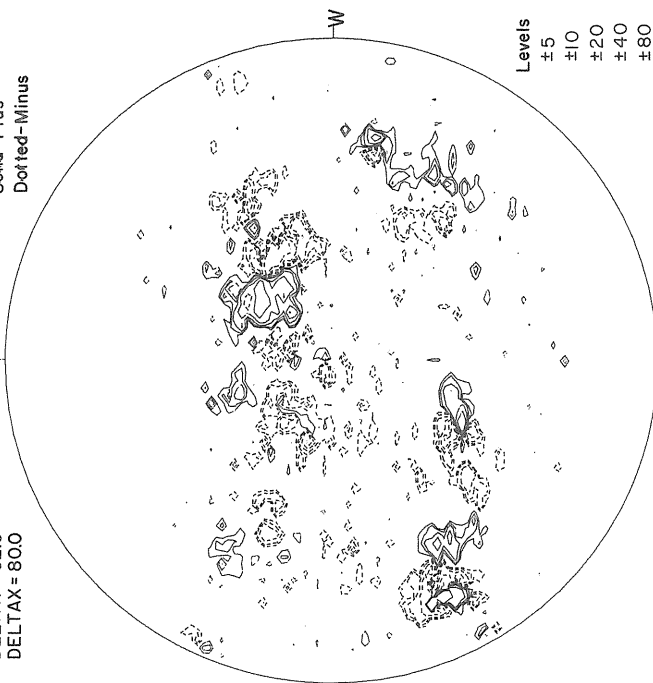
CALCIUM REPORT

MAGNETOGRAM

Solid-Plus
Dotted-Minus

MT. WILSON

DELTA Y = 62.0
DELTA X = 80.0



Levels
±5
±10
±20
±40
±80

01-32
03-08
06-63-43
10-26-36
13-68-36

67
Oct 68

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

Sp Brightness Unit 5000° K
20-21 UT

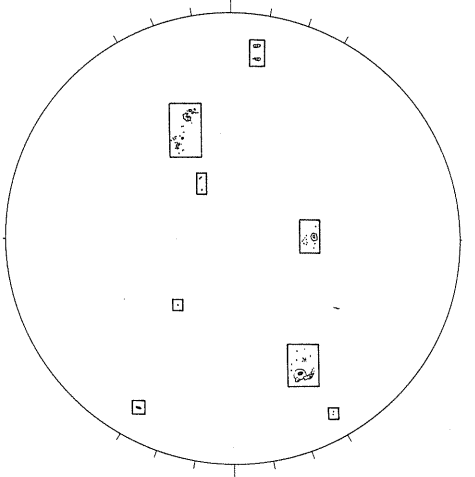
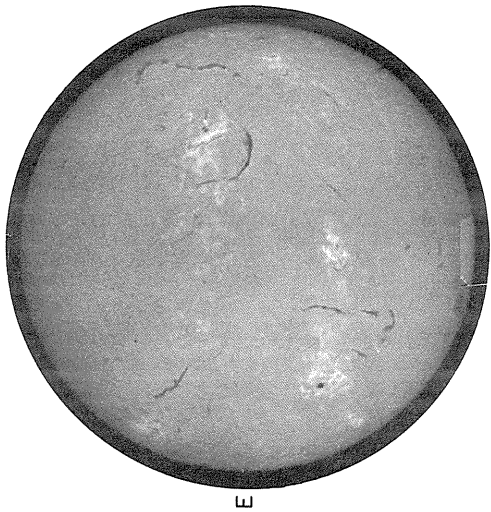
OCTOBER 25, 1968 (P = 25.52, B₀ = 5.00, L₀ = 220.94)

MT. WILSON
DELTA Y = 62.0
DELTA X = 76.9

MAGNETOGRAM
Solid - Plus
Dotted - Minus

Oct 68

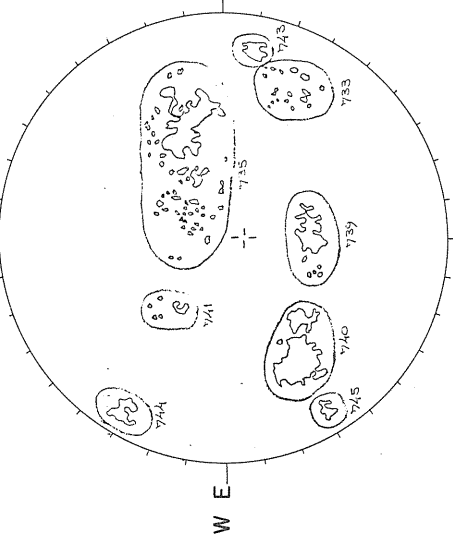
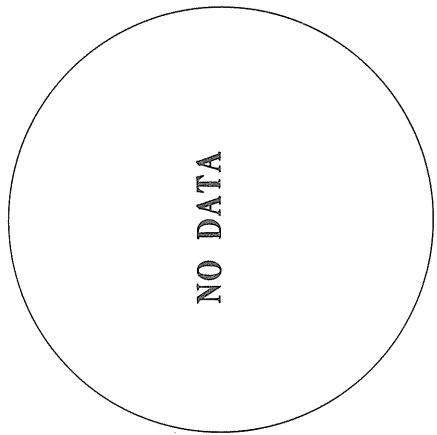
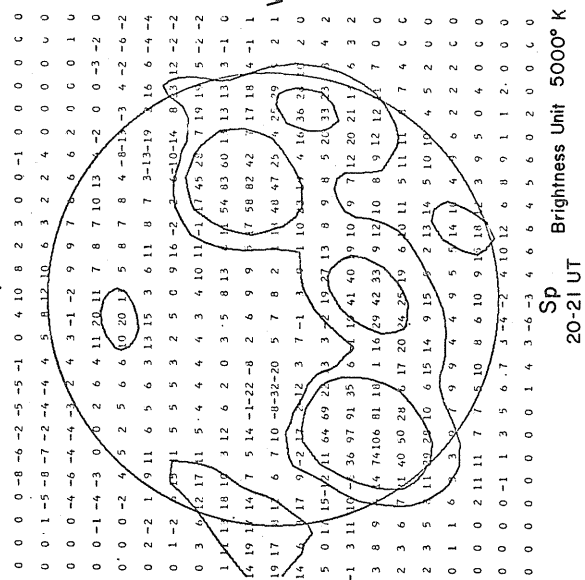
BOULDER H α ESSA-BOULDER Np SUNSPOTS



21.19-22.18 UT
McMATH-HULBERT Np
CALCIUM REPORT

21 cm.
FLEURS, AUSTRALIA N

STANFORD 9.1 cm.

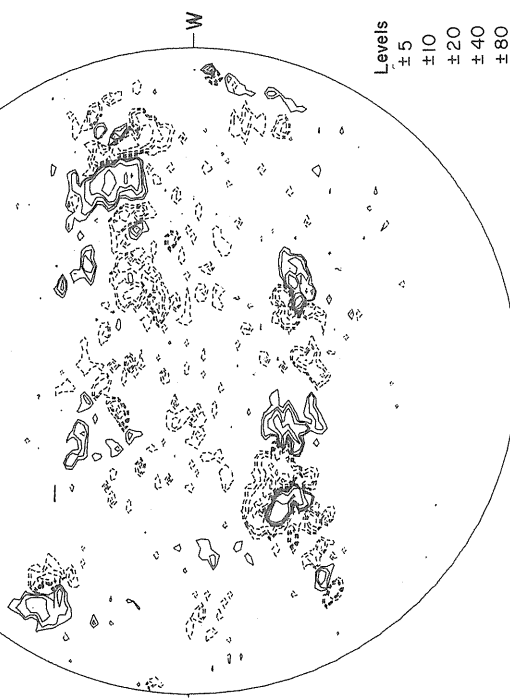


S Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

Sp Brightness Unit 5000° K
20-21 UT

MT. WILSON
DELTA Y = 58.3
DELTA X = 78.5

MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels	±5	±10	±20	±40	±80
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2022 UT

STANFORD

FLEURS, AUSTRALIA

2030 UT

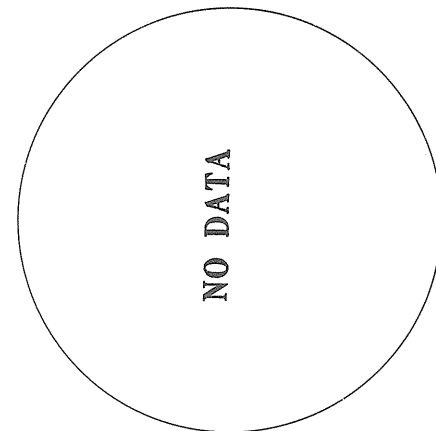
21 cm.

16.24-17.19 UT

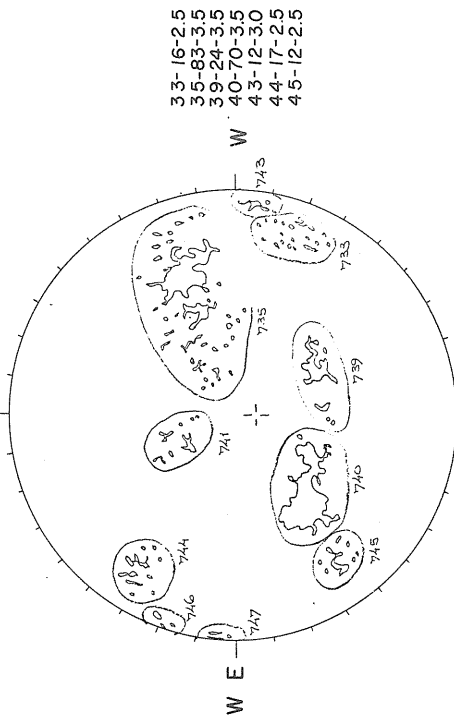
McMATH-HULBERT

CALCIUM REPORT

- 10



NO DATA



33-16-2.5
35-83-3.5
39-24-3.5
40-70-3.5
43-12-3.0
44-17-2.5
45-12-2.5

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

69
et 68

Brightness Unit 5000° K

Sp
20-21 UT

Brightness Unit 5000° K

OCTOBER 27, 1968 (P=25.28, B₀=4.81, L₀=194.56)

70
Oct 68

BOULDER

H α

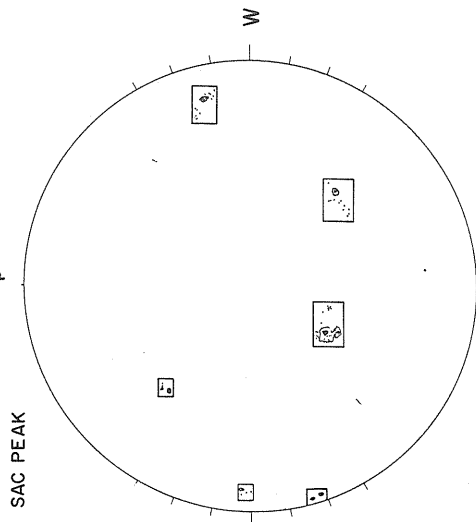
ESSA-BOULDER

SUNSPOTS

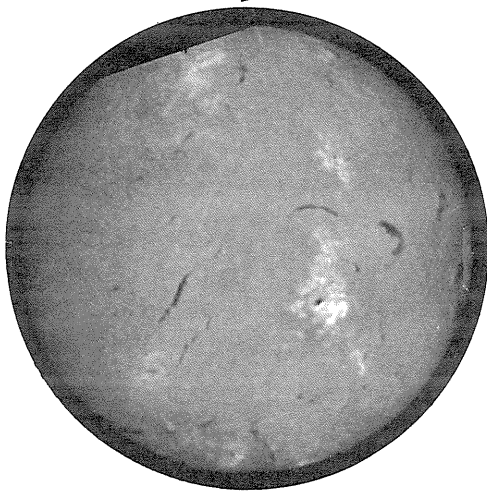
Np

Np

SAC PEAK

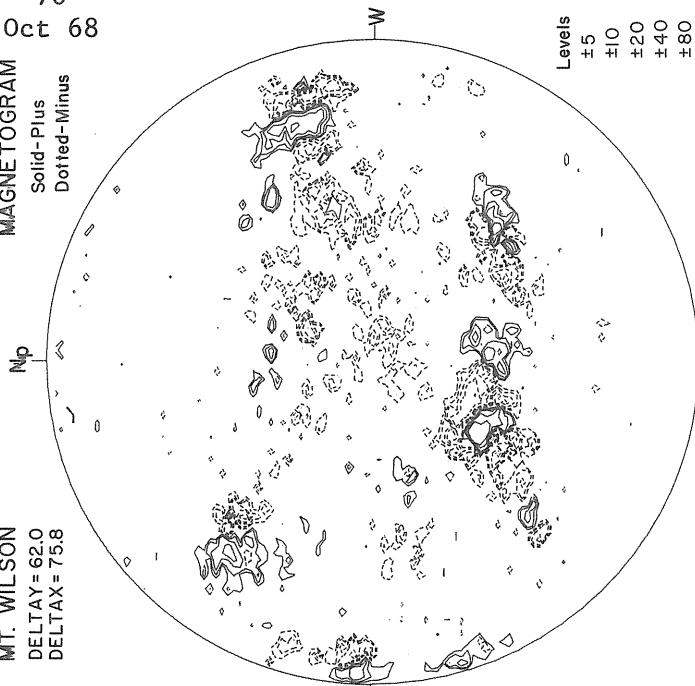


1415 UT
Sp



MT. WILSON
DELTA Y = 62.0
DELTA X = 75.8

MAGNETOGRAM
Solid-Plus
Dotted-Minus

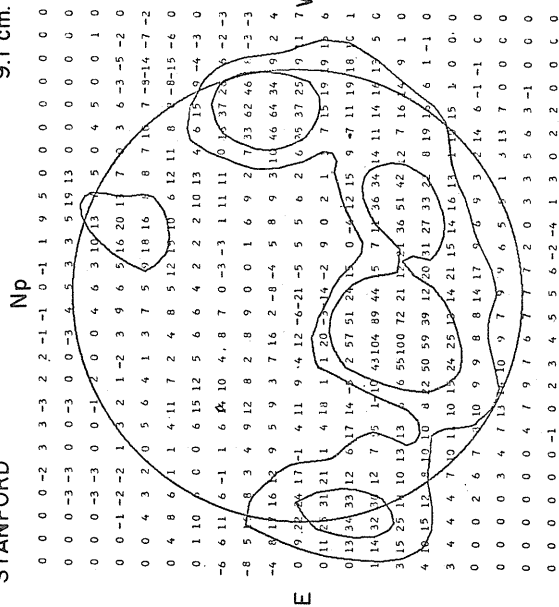


Levels
±5
±10
±20
±40
±80

1415 UT
Sp

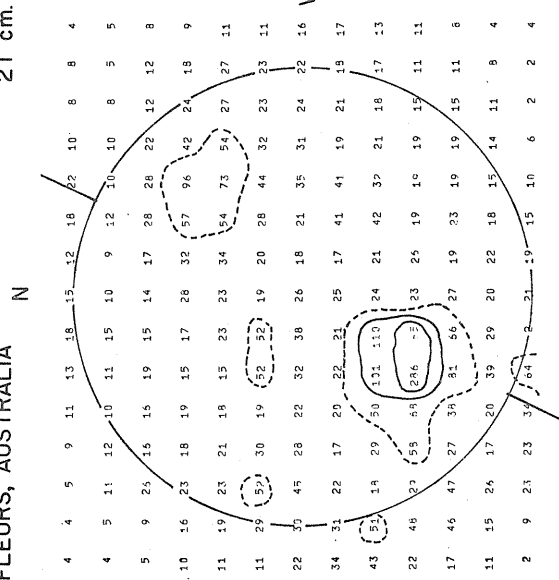
STANFORD

9.1 cm.



FLEURS, AUSTRALIA

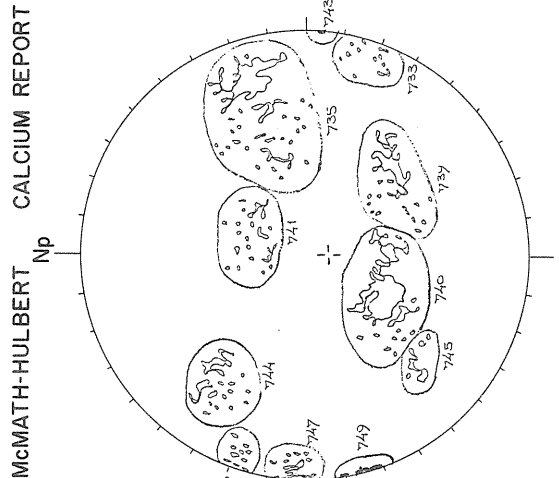
21 cm.



1528 UT
Sp

McMATH-HULBERT
CALCIUM REPORT

17.08-18.05 UT
DATA INCOMPLETE



35-82-3.5
39-28-3.5
40-78-3.5
43-05-3.0
44-21-2.5
45-13-2.5
47-26-2.5
49-18-3.0

Sp
20-21 UT
Brightness Unit 5000° K

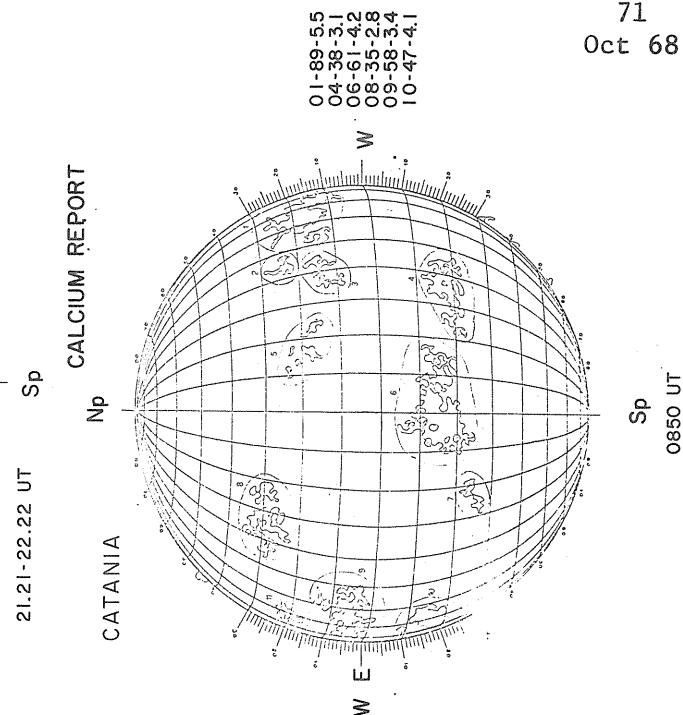
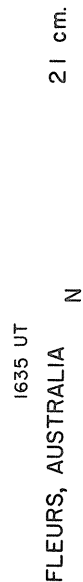
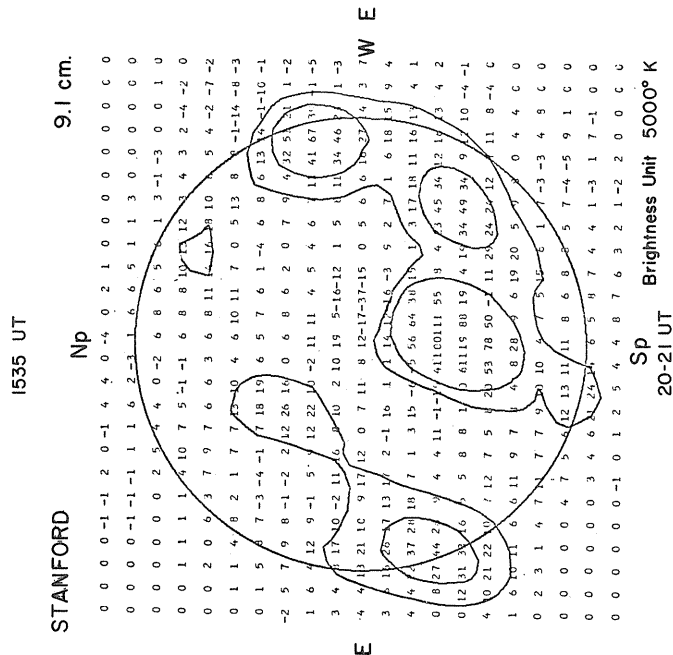
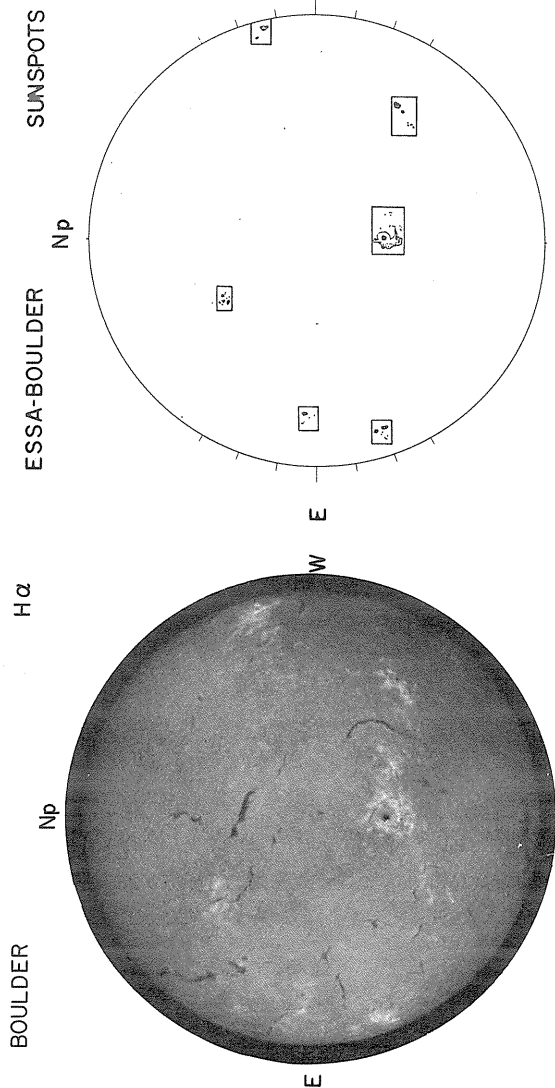
S
Resolution 3 Minutes of Arc
02-03 UT Brightness Unit 1,700° K

MMT. WILSON
DELTA Y = 62.0
DELTA X = 73.8

MAGNETOGRAM

Solid-Plus
Dotted-Minus

Np

A magnetogram plot showing a curved line. A vertical tick mark on the line is labeled 'Np'. The plot is titled 'MAGNETOGRAM' and includes a legend for 'Solid-Plus' and 'Dotted-Minus'. To the left of the plot, the text 'MMT. WILSON' and 'DELTA X = 73.8' is visible.

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

72
Oct 68

MAGNETOGRAM
Solid-Plus
Dotted-Minus

MT. WILSON
DELTA Y = 61.4
DELTA X = 75.9

OCTOBER 29, 1968 (P = 25.01, B₀ = 4.62, L₀ = 168.19)

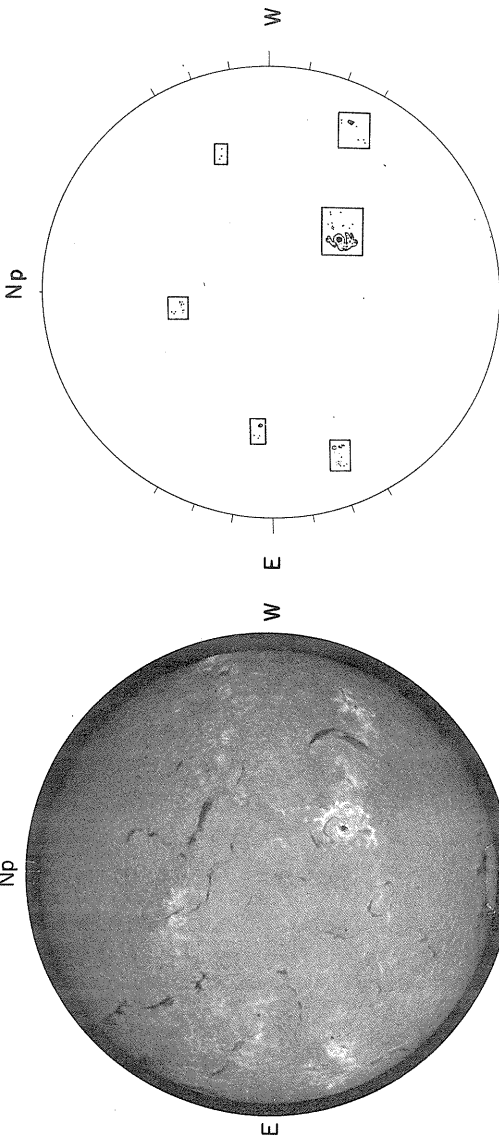
BOULDER

H α

ESSA-BOULDER

SUNSPOTS

Np

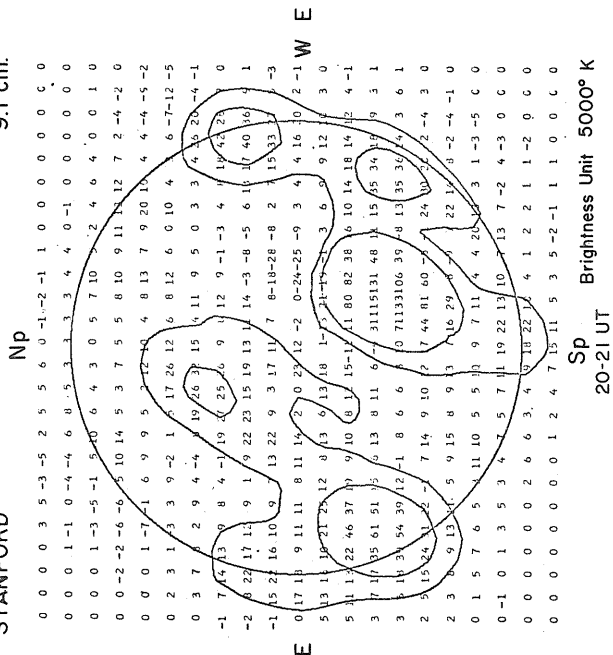


Sp

1534 UT

STANFORD

9.1 cm.



Brightness Unit 5000° K

Sp

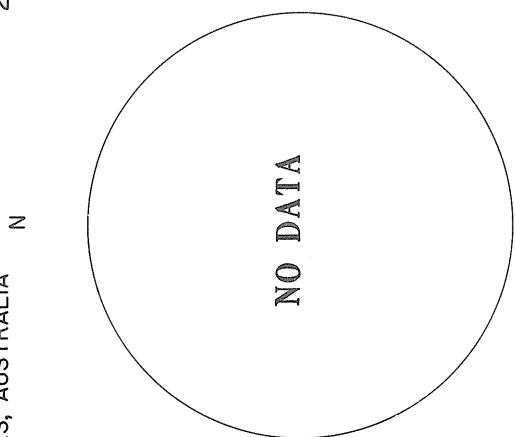
20-21 UT

Sp

1550 UT

FLEURS, AUSTRALIA

21 cm.



S Resolution 3 Minutes of Arc

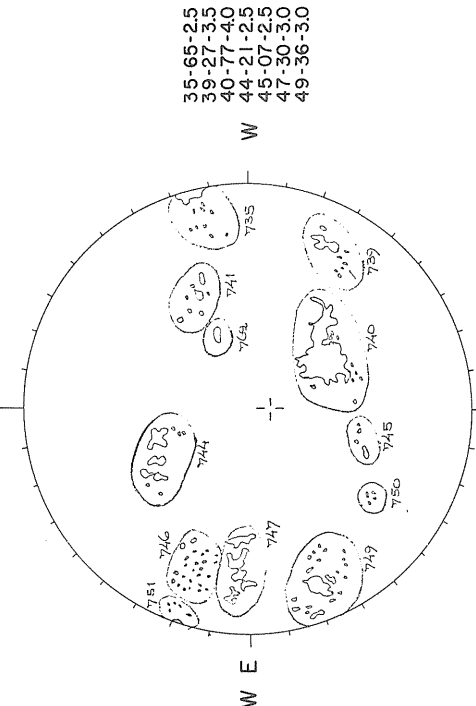
02-03 UT Brightness Unit 1,700° K

Levels
±5
±10
±20
±40
±80

16:93-17:89 UT DATA INCOMPLETE

McMATH-HULBERT CALCIUM REPORT

Np



Sp

1400 UT

OCTOBER 30, 1968 (P=24.86, B₀=4.52, L₀=155.00)

MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus

Np

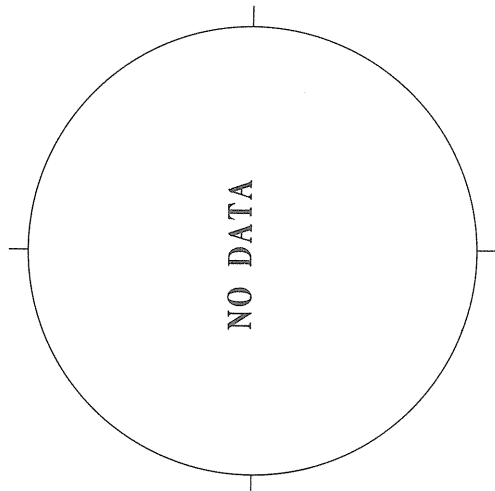
BOULDER

H α

ESSA-BOULDER

SUNSPOTS

Np



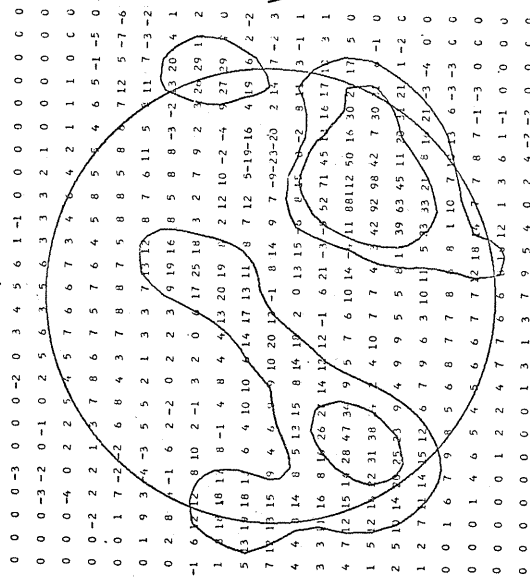
Levels
±5
±10
±20
±40
±80

STANFORD

1507 UT

Np

9.1 cm.

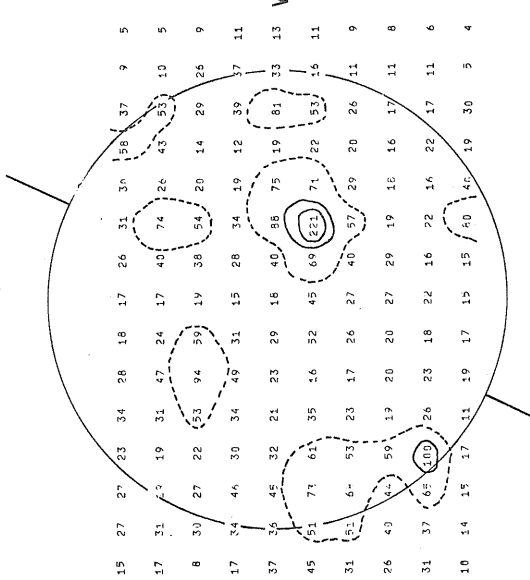


FLEURS, AUSTRALIA

1545 UT

Np

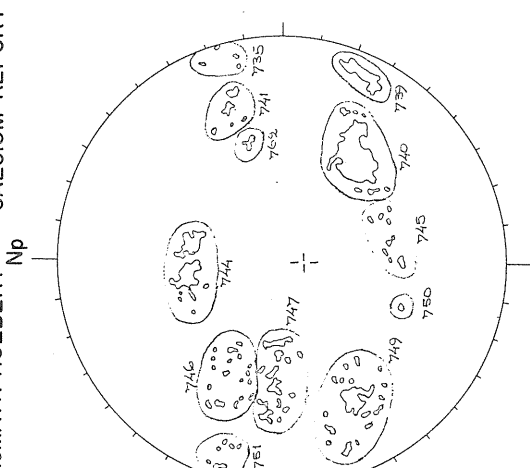
21 cm.



Np

McMATH-HULBERT

CALCIUM REPORT



39-28-30
40-70-40
44-25-30
47-28-30
49-41-35

73
Oct 68

Brightness Unit 5000° K

Sp
20-21 UT

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

Sp
1310 UT

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Np

MT. WILSON

OCTOBER 31, 1968 (P=24.70, B₀=4.43, L₀=141.82)

BOULDER

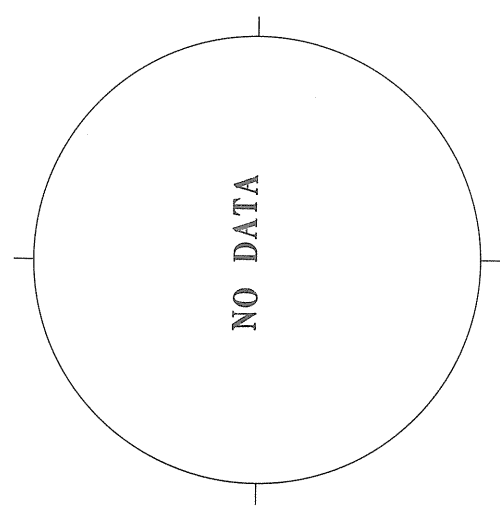
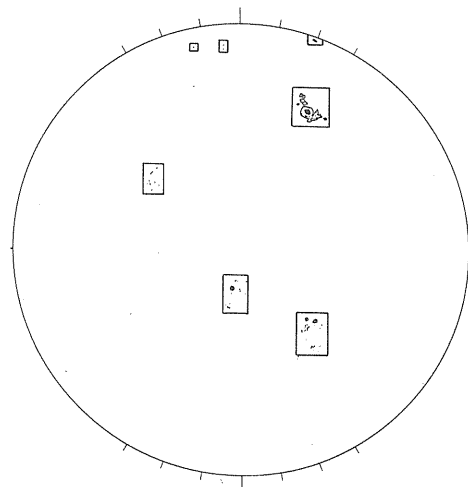
H α

ESSA-BOULDER

SUNSPOTS

Np

Np



Levels
±5
±10
±20
±40
±80

Sp

1532 UT

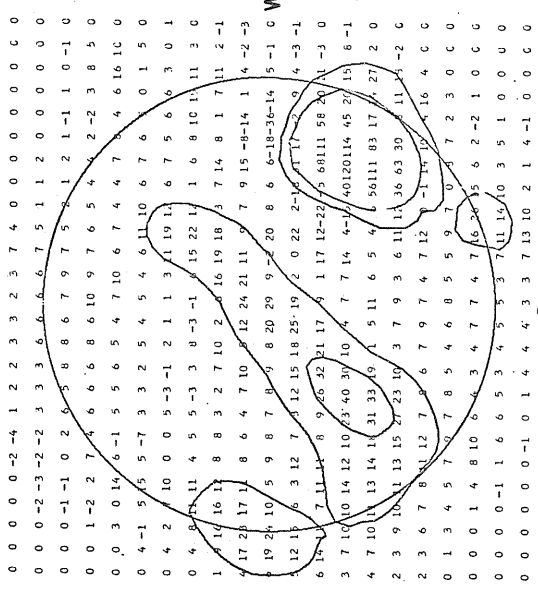
STANFORD

9.1 cm.

FLEURS, AUSTRALIA

21 cm.

McMATH-HULBERT

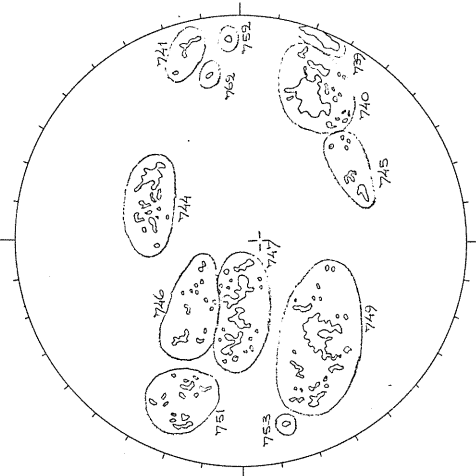


Sp

N

Np

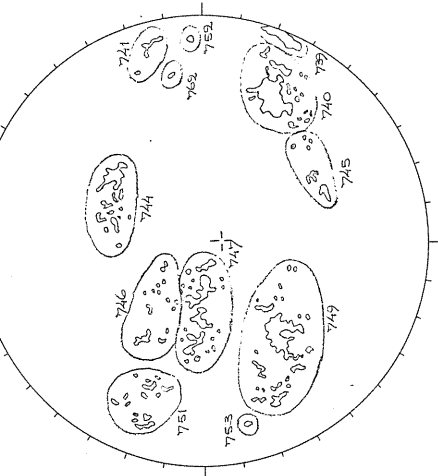
CALCIUM REPORT



Sp

Np

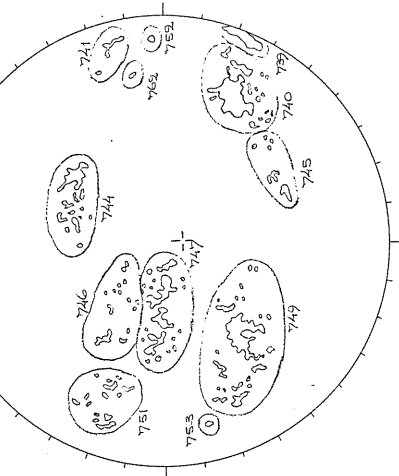
CALCIUM REPORT



Sp

Np

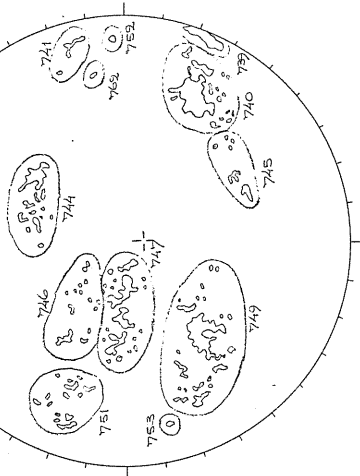
CALCIUM REPORT



Sp

Np

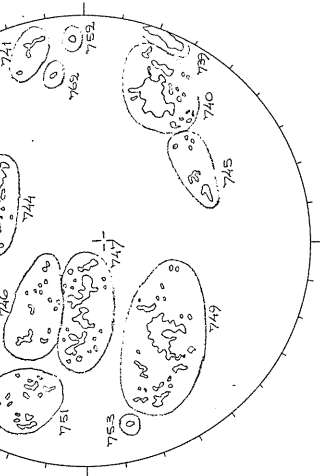
CALCIUM REPORT



Sp

Np

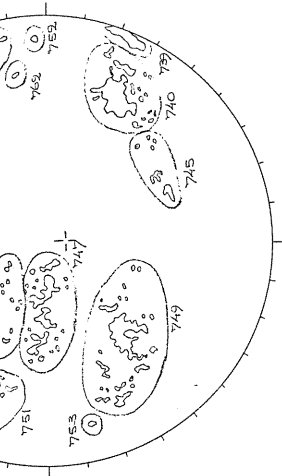
CALCIUM REPORT



Sp

Np

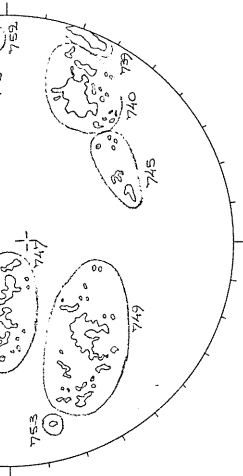
CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

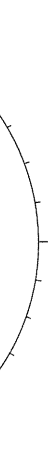
CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

CALCIUM REPORT



Sp

Np

CALCIUM REPORT

Sp

Np

CALCIUM REPORT

Sp

Np

CALCIUM REPORT

Sp

Np

CALCIUM REPORT

Sp

Np

CALCIUM REPORT

CORONAL LINE EMISSION INDICES

OCTOBER 1968

CMP Oct. 1968	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	x	x	x	x	x	67	73	x	x	x	x	x	x	x	x	x
2	86	99	13	15	x	x	24	32	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	49	69	13	84	93	11	24
4	x	x	x	x	x	x	x	x	59	69	0	0	82	101	16	33
5	x	x	x	x	x	x	x	x	81	121	10	12	96	114	21	54
6	x	x	x	x	x	x	x	x	96	146	20	24	100	125	18	28
7	108	147	20	39	87	140	29	43	145	178	x	x	136	171	x	x
8	101	139	21	39	111	158	32	44	68	100	9	16	62	66	17	25
9	56	70	16	32	95	128	15	29	90	163	6	10	64	79	7	9
10	62	75	13	18	108	146	19	28	121	138	12	13	63	92	12	14
11	84	109	17	24	155	189	16	23	x	x	x	x	x	x	x	x
12	96	146	18	35	172	232	29	43	103	136	30	75	69	88	12	21
13	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
14	x	x	x	x	x	x	x	x	108	142	19	27	73	116	5	12
15	x	x	x	x	x	x	x	x	82	156	23	37	62	100	14	20
16	60	79	x	x	166	211	x	x	83	104	18	25	59	89	44	66
17	53	97	25	37	66	84	12	23	x	x	x	x	x	x	x	x
18	97	138	37	73	81	102	23	40	x	x	x	x	x	x	x	x
19	137	180	27	38	58	68	21	44	x	x	x	x	x	x	x	x
20	107	120	30	48	48	58	12	15	72	110	2	12	82	119	24	38
21	92	115	x	x	72	100	x	x	49	74	0	0	112	126	12	28
22	80	116	44	102	110	158	18	36	64	108	0	0	111	160	30	45
23	150	223	28	55	140	227	11	16	x	x	x	x	x	x	x	x
24	136	194	27	40	80	108	21	40	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	x	x	34	54	x	x	34	80
26	92	133	25	29	90	137	17	36	99	174	20	50	62	83	16	32
27	x	x	x	x	x	x	x	x	111	175	x	x	63	79	x	x
28	67	84	17	22	96	128	20	30	67	118	15	23	51	87	21	28
29	90	120	18	26	105	149	17	29	76	104	13	30	71	83	20	31
30	54	65	31	46	95	133	24	39	56	77	6	15	84	134	12	22
31	x	x	x	x	x	x	x	x	64	73	0	0	102	131	16	29

These values are based upon Pic-du-Midi and Kislovodsk only.

Errata:

The following values for September 24-30, 1968 (SW and NW quadrants) were incorrectly reported in IER-FB-291:

24	36	51	0	0	100	147	24	35
25	46	83	0	0	96	143	17	34
26	57	75	8	17	128	193	17	31
27	70	112	9	14	139	192	20	32
28	70	86	10	12	138	178	20	33
29	101	146	x	x	132	186	x	x
30	x	x	x	x	x	x	x	x

SOLAR X-RAYS BY SATELLITE EXPLORER 37 OCTOBER 1968

DAILY AVERAGES FOR OCTOBER 1968

DATE	44-60 XE-1	8-20 XE-3	0-8 XE-4
1	3.30	10.25	6.50
2	3.40	12.70	10.03
3	3.77	13.79	11.19
4	3.70	13.90	11.36
5	3.85	13.62	10.18
6	3.90	12.85	10.35
7	3.22	10.37	7.23
8	3.38	9.85	7.80
9	3.22	9.64	5.88
10	3.38	10.43	7.65
11	3.40	9.80	7.81
12	3.80	13.20	11.41
13	3.68	12.23	9.95
14	3.62	11.53	8.65
15	4.43	18.72	21.30
16	4.24	16.92	18.46
17	4.90	21.20	24.20
18	4.19	18.20	15.32
19	3.62	17.28	16.49
20	3.70	18.78	19.56
21	3.61	18.68	17.10
22	3.95	18.41	16.16
23	3.53	17.13	14.82
24	3.30	15.56	11.79
25	3.15	14.67	10.88
26	3.63	16.69	13.29
27	4.00	19.32	15.32
28	3.67	17.44	14.24
29	5.50	23.00	21.07
30	4.55	20.70	17.50
31	4.30	18.16	14.47

OUTSTANDING EVENTS FOR OCTOBER 1968

DATE	STA	START	END	8-20 XE-3	0-8 XE-4	0-3 XE-5	COMMENTS
1	NRL	0053	0053	100.00	340.00	81.00	PEAK
2	NRL	0317	0327	52.00	130.00	25.00	PEAK
2	NRL	0748	0750	23.00	45.00	5.60	
2	NRL	2014	2014	77.00	470.00	130.00	INCREASING
3	NRL	0236	0242	25.00	35.00	4.50	PEAK
3	NRL	0538	0545	22.00	33.00	6.70	PEAK
3	NRL	1149	1151	20.00	30.00	5.00	PEAK
4	NRL	0010	0011	160.00	600.00	130.00	PEAK
4	NRL	1142	1142	39.00	130.00	48.00	INCREASING
4	NRL	1900	1905	39.00	130.00	30.00	PEAK
4	NRL	2132	2133	90.00	300.00	89.00	
5	NRL	1437	1438	77.00	210.00		DECREASING
6	NRL	1350	1352	20.00	40.00	11.00	PEAK
6	NRL	1541	1542	20.00	48.00		PEAK
6	NRL	1733	1746	34.00	110.00	35.00	PEAK
10	NRL	1121	1150	35.00	56.00	6.70	PEAK
11	NRL	1719	1719	18.00	33.00	3.30	PEAK
11	NRL	2332	2332	26.00	48.00		DECREASING
12	NRL	0142	0143	52.00	170.00	83.00	PEAK
12	NRL	0833	0838	38.00	90.00	43.00	PEAK
12	NRL	1342	1342	39.00	93.00	31.00	INCREASING
12	NRL	2006	2008	52.00	170.00	94.00	PEAK
13	NRL	0344	0345	18.00	41.00	15.00	PEAK
13	NRL	0647	0652	39.00	130.00	86.00	DECREASING
13	NRL	1347	1352	39.00	91.00	18.00	
14	NRL	0453	0454	22.00	36.00	8.90	PEAK
15	NRL	0327	0329	28.00	53.00	12.00	PEAK
15	NRL	0630	0710	20.00	35.00	3.30	
15	NRL	0907	0907	20.00	31.00	3.30	
15	NRL	0941	0953	26.00	38.00	3.30	
15	NRL	1015	1030	25.00	30.00	2.20	
15	NRL	1037	1047	26.00	38.00	3.30	
15	NRL	1120	1145	26.00	30.00	2.20	
15	NRL	1155	1210	22.00	30.00	5.00	
15	NRL	1220	1226	28.00	79.00	27.00	PEAK
15	NRL	1615	1616	22.00	31.00	4.50	DECREASING
15	NRL	1722	1722	23.00	60.00	19.00	INCREASING
15	NRL	1956	2001	24.00	60.00	27.00	PEAK
15	NRL	2038	2040	39.00	91.00	23.00	INCREASING
15	NRL	2149	2154	39.00	170.00	81.00	PEAK
15	NRL	2206	2206	39.00	340.00	110.00	PEAK
15	NRL	2318	2323	38.00	95.00	28.00	PEAK

SOLAR X-RAYS BY SATELLITE

EXPLORER 37

OCTOBER 1968

OUTSTANDING EVENTS FOR OCTOBER 1968

DATE	STA	START	END	8-20 XE-3	0-8 XE-4	0-3 XE-5	COMMENTS	DATE	STA	START	END	8-20 XE-3	0-8 XE-4	0-3 XE-5	COMMENTS
16	NRL	0029	0029	39.00	130.00		DECREASING	21	NRL	1435	1435	110.00	400.00	120.000	PEAK
16	NRL	0454	0454	39.00	210.00	99.00	INCREASING	21	NRL	1528	1528	40.00	68.00	18.00	PEAK
16	NRL	0754	0758	90.00	560.00	130.000	PEAK	21	NRL	1622	1622	30.00	73.00	26.00	PEAK
16	NRL	0916	0916	26.00	92.00	28.00	PEAK	21	NRL	1718	1718	23.00	40.00	12.00	PEAK
16	NRL	1052	1057	48.00	210.00	82.00	PEAK	21	NRL	1734	1734	260.00	1200.00	130.000	PEAK
16	NRL	1206	1206	64.00	300.00	90.00	PEAK	21	NRL	2128	2130	77.00	300.00	130.00	PEAK
16	NRL	1340	1340	23.00	41.00		DECREASING	21	NRL	2215	2216	18.00	61.00	21.00	PEAK
16	NRL	1423	1423	22.00	37.00		DECREASING	22	NRL	0143	0145	52.00	210.00	120.00	PEAK
16	NRL	1518	1518	52.00	170.00	60.00	PEAK	22	NRL	0206	0206	39.00	79.00	33.00	PEAK
16	NRL	1615	1615	24.00	48.00	6.70	PEAK	22	NRL	0330	0332	27.00	44.00	7.80	PEAK
16	NRL	1926	1931	22.00	42.00	5.30	PEAK	22	NRL	0445	0450	52.00	130.00	5.60	PEAK
16	NRL	2031	2036	23.00	38.00	5.00	PEAK	22	NRL	0524	0527	39.00	75.00	29.00	PEAK
16	NRL	2155	2200	28.00	53.00	8.90	PEAK	22	NRL	0731	0732	39.00	170.00	91.00	PEAK
17	NRL	0034	0042	16.00	31.00	8.70		22	NRL	0744	0745	39.00	130.00	38.00	PEAK
17	NRL	0255	0255	26.00	81.00	12.00	PEAK	22	NRL	0908	0909	39.00	60.00	13.00	PEAK
17	NRL	0355	0355	23.00	62.00	17.00	INCREASING	22	NRL	1130	1142	23.00	36.00	7.30	PEAK
17	NRL	0818	0818	28.00	63.00	12.00	PEAK	22	NRL	1214	1218	25.00	40.00	8.90	PEAK
17	NRL	1115	1115	26.00	56.00			22	NRL	1322	1323	39.00	68.00		PEAK
17	NRL	1300	1300	28.00	50.00	4.50	PEAK	22	NRL	1415	1425	27.00	38.00	3.20	PEAK
17	NRL	1348	1348	24.00	50.00	9.00	INCREASING	22	NRL	1520	1538	52.00	80.00	8.00	PEAK
17	NRL	1637	1647	34.00	110.00	46.00	PEAK	22	NRL	1700	1702	77.00	260.00	97.00	PEAK
17	NRL	1815	1815	21.00	34.00	4.50	PEAK	22	NRL	1711	1715	64.00	210.00	91.00	PEAK
17	NRL	1928	1928	27.00	78.00	28.00	PEAK	22	NRL	1859	1900	26.00	48.00		PEAK
17	NRL	2008	2015	23.00	36.00	6.20		22	NRL	1931	1935	28.00	38.00	5.60	PEAK
17	NRL	2132	2132	27.00	64.00	12.00	PEAK	22	NRL	2124	2125	26.00	36.00	6.70	PEAK
18	NRL	0253	0257	21.00	30.00	6.20		22	NRL	2134	2135	29.00	38.00	3.30	PEAK
18	NRL	0338	0338	39.00	200.00	120.00		23	NRL	0016	0019	22.00	39.00	12.00	PEAK
18	NRL	0342	0342	90.00	460.00	95.00		23	NRL	0358	0400	160.00	820.00	130.000	PEAK
18	NRL	0410	0410	110.00	500.00	130.000	PEAK	23	NRL	0901	0903	52.00	86.00	29.00	PEAK
18	NRL	0717	0718	22.00	30.00	5.20	PEAK	23	NRL	0944	0950	26.00	52.00	11.00	PEAK
18	NRL	0742	0743	23.00	34.00	7.70	PEAK	23	NRL	1229	1224	23.00	31.00	5.80	PEAK
18	NRL	0931	0933	24.00	35.00	4.20	INCREASING	23	NRL	1317	1319	28.00	56.00	20.00	PEAK
18	NRL	1000	1003	64.00	170.00	50.00	DECREASING	23	NRL	1743	1746	39.00	78.00	22.00	PEAK
18	NRL	1351	1405	34.00	31.00	2.60		23	NRL	1939	1942	64.00	170.00	68.00	PEAK
18	NRL	2338	2338	38.00	120.00	73.00	PEAK	24	NRL	0014	0025	350.00	1200.00	130.000	PEAK
19	NRL	0105	0105	38.00	53.00	7.70	PEAK	24	NRL	0332	0335	39.00	38.00	3.30	PEAK
19	NRL	0140	0140	38.00	70.00	10.00	PEAK	24	NRL	2115	2125	140.00	400.00	100.00	PEAK
19	NRL	0158	0158	64.00	160.00	46.00	PEAK	25	NRL	1535	1540	28.00	50.00	18.00	PEAK
19	NRL	0340	0340	18.00	27.00	5.60	INCREASING	25	NRL	1911	1914	24.00	45.00	19.00	PEAK
19	NRL	0445	0445	52.00	160.00	41.00	PEAK	26	NRL	0126	0129	39.00	82.00	12.00	PEAK
19	NRL	0515	0515	78.00	210.00	100.00	PEAK	26	NRL	1650	1705	77.00	260.00	110.00	PEAK
19	NRL	1008	1008	78.00	300.00	120.00	INCREASING	27	NRL	0010	0022	100.00	390.00	130.000	PEAK
19	NRL	1218	1218	40.00	42.00		DECREASING	27	NRL	0130	0140	64.00	130.00	33.00	PEAK
19	NRL	1251	1304	25.00	42.00	8.70		27	NRL	1110	1111	39.00	130.00	46.00	PEAK
19	NRL	1433	1446	22.00	33.00	5.80		27	NRL	1145	1151	52.00	130.00	45.00	PEAK
19	NRL	1817	1825	39.00	90.00	53.00	PEAK	27	NRL	1240	1247	230.00	1300.00	130.000	PEAK
19	NRL	1854	1858	52.00	170.00	79.00	PEAK	27	NRL	1334	1337	360.00	1900.00	130.000	PEAK
19	NRL	2005	2015	24.00	51.00	15.00	PEAK	27	NRL	1346	1347	390.00	1500.00	130.000	PEAK
19	NRL	2042	2042	39.00	86.00	51.00	PEAK	27	NRL	2215	2219	77.00	260.00		PEAK
20	NRL	0202	0202	22.00	38.00	10.00	PEAK	28	NRL	0205	0208	52.00	86.00	22.00	PEAK
20	NRL	0248	0248	15.00	30.00	12.00	INCREASING	28	NRL	0508	0510	39.00	86.00	43.00	PEAK
20	NRL	0540	0540	23.00	52.00	16.00	PEAK	28	NRL	1049	1051	24.00	38.00	6.70	PEAK
20	NRL	0617	0617	22.00	33.00	6.70	DECREASING	28	NRL	1400	1400	39.00	52.00	10.00	PEAK
20	NRL	0640	0640	21.00	43.00		PEAK	28	NRL	1614	1615	23.00	30.00	5.60	PEAK
20	NRL	0704	0704	140.00	900.00	120.000	PEAK	28	NRL	1632	1634	39.00	75.00	27.00	PEAK
20	NRL	0815	0815	26.00	39.00	6.70	PEAK	29	NRL	0140	0142	39.00	69.00	15.00	PEAK
20	NRL	0835	0835	26.00	39.00		PEAK	29	NRL	0350	0357	39.00	53.00	6.70	PEAK
20	NRL	1002	1002	21.00	50.00		PEAK	29	NRL	0549	0549	39.00	74.00	22.00	INCREASING
20	NRL	1020	1020	26.00	43.00	10.00	PEAK	29	NRL	0710	0710	17.00	32.00	4.30	PEAK
20	NRL	1058	1058	21.00	43.00	13.00	INCREASING	29	NRL	0747	0800	19.00	34.00	3.30	PEAK
20	NRL	1140	1140	22.00	50.00		PEAK	29	NRL	0905	0908	77.00	260.00	100.00	PEAK
20	NRL	1300	1300	26.00	56.00	12.00	PEAK	29	NRL	0948	0950	64.00	130.00	29.00	PEAK
20	NRL	1322	1322	23.00	48.00	12.00	PEAK	29	NRL	0955	0956	90.00	210.00	76.00	PEAK
20	NRL	1330	1345	23.00	38.00	5.30		29	NRL	1017	1017	40.00	43.00	4.50	PEAK
20	NRL	1656	1656	27.00	63.00	18.00	PEAK	29	NRL	1240	1242	180.00	730.00	130.000	PEAK
20	NRL	1808	1808	30.00	120.00	26.00	PEAK	29	NRL	1601	1606	100.00	210.00	30.00	PEAK
20	NRL	1847	1852	27.00	42.00	5.60	PEAK	29	NRL	2117	2117	25.00	30.00	4.40	PEAK
20	NRL	1915	1915	23.00	55.00	16.00	INCREASING	29	NRL	2201	2201	25.00	39.00	12.00	PEAK
20	NRL	1945	1945	52.00	170.00	36.00	PEAK	30	NRL	0153	0153	26.00	33.00	2.20	DECREASING
20	NRL	2130	2130	80.00	340.00	120.00	PEAK	30	NRL	0805	0805	50.00	60.00	12.00	INCREASING
20	NRL	2311	2312	27.00	51.00	18.00	PEAK	30	NRL	0839	0839	29.00	35.00	3.30	PEAK
20	NRL	2327	2333	28.00	49.00	11.00	PEAK	30	NRL	0925	0930	20.00	65.00	19.00	PEAK
21	NRL	0008	0010	21.00	31.00	5.60	INCREASING	30	NRL	1034	1034	28.00	31.00	3.30	PEAK
21	NRL	0034	0040	26.00	88.00	13.00	PEAK	30	NRL	1121	1122	22.00	36.00	5.60	PEAK
21	NRL	0141	0146	22.00	32.00	5.60	PEAK	30	NRL	1254	1256	90.000	340.00	120.00	PEAK
21	NRL	0202	0206	28.00	73.00	31.00		30	NRL	1345	1350	90.00	260.00	100.00	PEAK
21	NRL	0255	0300	77.00	260.00	110.00	PEAK	30	NRL	1355	1359	100.00	300.00	75.00	PEAK
21	NRL	0432	0437	77.00	300.00	130.000	PEAK	31	NRL	0020	0025	670.00	2500.00	130.000	INCREASING
21	NRL	0505	0510	170.00	900.00	130.000	PEAK	31	NRL	0705	0705	39.00	70.00	16.00	PEAK
21	NRL	0609	0610	450.00	3400.00	130.000	PEAK	31	NRL	0734	0756	52.00	75.00	8.00	DECREASING
21	NRL	0824	0827	39.00	130.00	72.00	PEAK	31	NRL	2309	2309	350.00	1500.00	130.000	PEAK
21	NRL	0925	0925	21.00	39.00	11.00	PEAK								
21	NRL	0938	0939	22.00	40.00	12.00	PEAK								
21	NRL	1128	1130	64.00	210.00	100.00	PEAK								
21	NRL	1310	1310	52.00	220.00	90.00	PEAK								
21	NRL	1416	1416	28.00	44.00	12.00	PEAK								

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

OCTOBER 1968

OCT. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE		
	DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND								
	START UT	END UT		INT.	START UT	END UT	INT.	START UT	END UT	INT.					
01	0000- 0000	0015 0659	HARV CULG CULG CULG				0000 0015.5 0036.5 0046	0010 0037 0105	1 1 1 1		0036.5 0050.5	0037 0105	1 1	IN IIIB IIIG IIIN	
	0615 1000 1315 2040	1720 2400 2400 2400	WEIS SGMR HARV CULG				1324 2109.5	2107	1 1	2109.5		1	IN IIIB		
	02	0000 0000	0014 0706	HARV CULG CULG				0256 0256.5 0639.9	0259 0258 0640.2	2 2 1	0256.5	0258	2	UNCLF IIIG III	
0620		1640	WEIS CULG				0640 1713	0640.5 1714.2	1 1			1	IIIG IIIG		
1247 1315		2435 2400	BOUL HARV BOUL HARV BOUL SGMR				1721 1740.6 1805 2012.1	1722 1741.2 1933 2018.2	1 2 1 3			3	IIIG IIIG IN IIIGG		
1000		2400	HARV HARV BOUL BOUL BOUL	2013 2018	2015 2020	2 2	2012 2018.2 2022 2024.6 2033.6	2018 2054 2029 2031.7 2037.2	3 2 1 2 2	2012.7 2012	2019 2016	3 2 2 2 2	V B IIIGG.V IIIG		
2035		2400	BOUL BOUL BOUL				2054 2151.8 2342.2	2200 2158.4 2343	1 2 2			1 2 2	IV IIIG IIIG		
03		0000 0000	0013 0700	HARV CULG CULG CULG				0032 0440 0619	0039 0443 0619	1 1 1	0032 0440 0619	0039 0443	1 1 1	IIIG IIIG IIIB	
		1247 0615	1915 1640	BOUL WEIS BOUL WEIS				1255 1330 1427.1 1427.3	1355 1445 1427.5 1427.6	1 1 1 1			3	+ONT IS III IIIG	
		1000 1315	2400 2400	SGMR HARV BOUL HARV BOUL	1630	1920	1	1555 1602 1326	1559 1603 2400	1 1 1	1427.5	1428	2	IIIB IIIG IIIG IN	
		2039 2230	2400 2425	CULG BOUL				2359.5 2359.8	2427 2415	1 1	2302.1 2359.5	2310.5 2427	1 2	IIIG CONT	
		04	0000 0000 0000	0701 0012 0701	CULG HARV CULG CULG CULG	0002	0003	1	0000.5 0000 0010	0007 0005	1 1 1	0000.5	0007	1	IIIG IIIGG RS
	1000 1247 1315		2400 2423 2400	SGMR BOUL HARV HARV				0257 1339 1341		1 1 1	0013.5 1230		2	RS IIIB CONT CONT	
	0630		1730	WEIS SGMR HARV BOUL HARV BOUL BOUL	1803	1804	1	1456 1456.1 1512	1500 1459.3 1513	2 2 1	1456 1456.5 1800	1459 1458 2010	1	IN IIIG IIIG IIIG CONT	
	2039		2400	BOUL CULG CULG HARV CULG HARV BOUL	2125		1	1802 1900 1937.8	1803 1902 1942.4	1 2 2	2022.5	2022.8	2 1 3	IIIGG IIIG III CONT	
	05		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG
			1000 1248 1315	2400 1745 2400	SGMR BOUL HARV SGMR				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG
0930			1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG	
06			0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG
			1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG
			0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG
		07	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG
1000 1248 1315			2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG	
0930			1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG	
08			0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	09	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
10		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	11	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
12		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	13	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
14		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	15	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
16		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	17	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
18		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	19	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
0930		1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
20		0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
	1000 1248 1315	2400 1745 2400	SGMR BOUL HARV				1427.3 1428	1433.1 1431	1 1	1300 1429	1530 1430	2 1	CONT IIIG IIIG		
	0930	1810	WEIS BOUL HARV WEIS SGMR HARV BOUL	2134 2135	2135 2145	2 2	1428.1 1435.9 1438 1438.7	1430 1449 1442 1439	1 1 1 1	1428 1439	1432 1441.5	2 2	IIIG IIIGG IIIG IIIG IIIG IIIG		
	21	0000 0000	0011 0700	HARV CULG CULG CULG				0235.5 0415 0419		1 2 2	0235.5 0415 0419		1 2 2	IIIB IIIG IIIG	
1000 1248 1315		2400 1745 2400	SGMR BOUL HARV												

OCT 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
05			BOUL HARV SGMR BOUL HARV CULG HARV HARV				1735.7 1736	1741.6 1742	2	1736 1736	1742 1739	3 2	IIIGG IIIGG+v IIIG
	1808	2422											
	2038	2400		1905	1909	1	1909		1				IIIG
				2305 2340		3 2							IIIG IIIG
06	0000 0000 0800 1530 1315 1248 1000	0011 0636 1505 1645 2400 2517 2400	HARV CULG WEIS WEIS HARV BOUL SGMR HARV BOUL SGMR BOUL CULG HARV HARV				1723 1723.4	1729 1729	3	1723 1724.1 1733	1729 1744	3 3	IIIGG IIIGG IIIG
							1730 1731	1744 1744.3	3			2 3	II II II
							1744.3 2039	1758 2041.7		1732.5	1741	2 2	IV IIIG
	2041	2400		2238	2239	2	2256	2400	1				IIIGG IN
07	0000 0000 1000 0610 1248 1315 2032	0010 0700 2400 1700 2424 2400 2400	HARV CULG SGMR WEIS BOUL HARV CULG BOUL				0023	0023.5	1				IIIG
				1109	1109.4	2	1902.7 1903	1903.4 1904	1	1903	1904	2 1	IIIDP IIIG IIIG
										2127.4	2127.9	2	III
08	0000 0000 0129 0615 1000 1315	0010 0118 0700 1620 2400 2400	HARV CULG CULG WEIS SGMR HARV HARV BOUL WEIS HARV HARV CULG	0820	1508	1	1331 1603 1603.2 1604 1740 2000	1406 1605 1603.8 1604.2 1823 2118	1 2 2 1 1				IN IN IIIGG III IIIG I IN
	1247	2426										2	
	2033	2400											
09	0000 0000 0445 1000 0615 1315	0009 0419 0609 2400 1700 2400	HARV CULG CULG SGMR WEIS HARV WEIS BOUL BOUL CULG HARV CULG HARV BOUL				1218 1527 1527 1527 2147.4 2147.5 2148 2248 2248 2248.2	1218.3 1529 1528.9 1529.2 2148.3 2148.5 2148 2249.5 2250 2248.5	1 2 2 2 1 1 1 2 2	1529		1 3 2	IIIDP IIIGG IIIG IIIG IIIG IIIG IIIG IIIG III
	1248	2423											
	2032	2400										2	
10	0000 0000 1000 0610 1252	0008 0655 2400 1620 2426	HARV CULG CULG SGMR WEIS BOUL BOUL HARV BOUL HARV BOUL BOUL BOUL CULG				0559.5 0605.5		1 1				IIIB IIIB
							1028.2 1401.9	1029.2 1402.6	2 2			2 1	IIIG IIIG IIIG IIIG IIIG IIIG IIIG IIIG
							1548 1548.5 1741 1741.3 1752	1550 1549.7 1742 1741.7 1752.3	1 2 2	1542.6 1741	1543.6 1742	3 1 3 2 1	IIIG IIIG IIIG IIIG IIIG IIIG IIIG IIIG
	2031	2400								1855.9	1858		
11	0000 0000 0208 0610 1247 1330	0006 0045 0615 1705 2430 2400	HARV CULG CULG CULG WEIS BOUL HARV BOUL BOUL HARV SGMR SGMR SGMR				0306.5 0319	0312.5 0320.5	1 1				IIIG IIIG
							1411 1557.8 1708.6 1710	1602 1559.6 1723.8 1724	1 2	1327.9 1710 1710.5 1716.2 1719.8	1328.3 1724 1713 1716.7 1722.8	2 3 3 2	III IN

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OCT. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
11			BOUL BOUL BOUL HARV BOUL				1837 2048.1 2227 2329 2329.9	1846. 2048.3 2227.3 2330 2337.9				2 1 2 1 2	IIIGG III III IIIG IIIG
12	0000 0403 0420 0516 0529	0004 0408 0514 0519 0807	HARV CULG CULG CULG CULG				0403 0545 0600	0404.5 0546.5 0600.5	1 1 1				IIIG IIIG,V IIIG IIIG
	0700 1000	1640 2400	WEIS SGMR WEIS WEIS	0708.5	0711.2	2	1001 1322.9 1503	1547 1323.7 1505	1 2 1				IN IIIDP IIIG IIIGG IIIDP
	1330	2400	HARV HARV WEIS HARV	1517 1518.5	1520 1518.6	1 1	1521	1640	1				IN IIIG
	1519 2210 2358	2412 2306 2400	BOUL CULG CULG				2358.5	2359.5	1	2156.4	2206	1	IIIG
13	0000 0000	0002 0801	HARV CULG CULG CULG CULG CULG CULG CULG CULG CULG				0013 0135.5 0432 0447 0454.5 0521 0524.5 0528 0703.5 0711.5 0712	0013.5 0136.5 0433 0448 0455.5 0522.5 0525.5 0528 0704.5 0716 0712	1 1 1 1 1 2 2 2 2 2 3				IIIB,U IIIG,U I IIIG IIIG IIIG,V IIIB IIIB IIIG,V,U IIIG IIIB IIIB UNCLF UNCLF IIIB IIIG V
	0755	1710	WEIS WEIS WEIS WEIS WEIS	0801.4	0801.5	2	1047.7 1105.9 1120.2 1249.7 1249.8	1048.1 1106.4 1120.4 1252.9 1251	1 1 3 2 2				IIIG IIIG IIIG IIIG IIIG
	1000 1330 1248	2400 2400 2426	SGMR HARV BOUL WEIS SGMR				1331 1331.4 1331.7	1332 1332 1331.9	1 1	1250	1252		IIIG IIIG III
			HARV HARV SGMR HARV HARV BOUL BOUL CULG	1345 1348 1523	1346 1349 1526	1 2 1	1655 1655 1838.2	1655.9 1838.7	1 1	1655		1 3 2	IIIG III III
	2212	2400											
14	0000 1000 0620 1330 2238	0801 2400 1610 2400 2400	CULG SGMR WEIS HARV CULG				0020 1115 1330	 1406 2019	1 1 1	0020		1	IIIB IN IN
15	0000 0128	0124 0754	CULG CULG CULG CULG CULG CULG				0146.5 0317 0336 0441 0536.5 0624	 0318 0337 0442 0541.5 0627	1 1 1 1 1 1	0146.5		1	IIIB IIIG IIIG IIIG IIIG IIIG
	0830 1000 1247	1640 2400 1801	WEIS SGMR BOUL BOUL BOUL				1309 E 1437.3 1514	1514 1441.3 1855	 1			1 2 2	CONT IIIGG CONT
	1330 1829	2358 2434	HARV HARV BOUL BOUL CULG	1604	1608	1	1604 1615	1612 1709	1 1	1615 1855 2134.2	1709 2000 2134.8	1 1 1	IN IIIN CONT IIIG
16	0000	0800	CULG CULG CULG CULG CULG CULG CULG CULG WEIS WEIS WEIS				0159 0219.5 0341 0500.5 0552.5 0625.5 0647.5 0830.7 0902.3 0904.6	0202 0412 0554.5 0630 0700 0831.2 0902.7 0904.9	1 1 1 1 1 1 1 1 1 2	0500.5 0552.5		1 1	IIIG IIIB IIIN IIIB IIIG IIIG IIIN IIIDP IIIB IIIB

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OCT. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE				
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND							
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.					
16	1331	2356	WEIS	1036.1	1036.2	1	0955.2	0955.4	1								IIIB
			WEIS				1331	2350	1						IIIDP,RS		
			HARV				1427	1429.3	1						IN		
	1000	2300	WEIS	1428	1429	1				1427	1430				IIIG		
			SGMR							1429				IIIGG			
			HARV				1519		1	1518	1520	1	1518	1520	1	IIIB	
			HARV	1614	1615	1	1614	1615	2	1614	1615	2	IIIGG				
			SGMR							1614.5	1616.2		IIIG				
			HARV							1617	1956	1				IIIN	
	1652	2432	BOUL							1652 E	2115	1	CONT				
			BOUL				2015.6	2026					IIIGG				
			HARV				2016	2026	2	2024	2026	1	IIIGG				
	2226	2400	CULG				2228	2230	1	2228	2300	1	IIIG				
			BOUL				2249.4	2259.1					IIIGG				
			CULG				2249.5	2300	2	2249.5	2300	2	IIIGG				
	17	0000	0718	CULG				0000	0718	1	0000	0718	1	IIIN			
				CULG				0006.5		2	0006.5		2	IIIB			
				CULG				0019.5	0027	2				IIIGG			
				CULG				0020	0020.5	3	0020.5		3	IIIG			
				CULG				0042	0042.5	1	0042	0042.5	1	IIIG			
				CULG				0138.5	0143	2	0138.5	0143	2	IIIGG			
				CULG				0201.5	0202	2	0201.5	0202	2	IIIG			
				CULG				0204	0204.5	2	0204	0204.5	2	IIIG			
				CULG				0245	0248	2	0245	0248	2	IIIG			
				CULG				0305	0420	1				I			
				CULG				0335.5	0342	1	0335.5	0342	1	IIIG			
CULG				0356				0409	3	0356	0409	3	IIIGG				
			CULG				0420	0718	2				I				
			CULG				0450		1	0450		2	IIIB				
			CULG				0514.5		3	0514.5		3	IIIB				
			CULG				0552	0559	1	0552	0559	1	IIIG				
			CULG				0558		3	0558		3	IIIB				
			CULG				0622	0646	2	0622	0646	2	IIIN				
0650		1630	WEIS				0655	1521	2				IN				
			CULG				0659	0703	2	0659	0703	2	IIIGG,V				
			WEIS				0659.2	0703	3				IIIGG				
			WEIS				0741.3	0742	1				IIIG				
			WEIS				0750	0751.6	1				IIIB				
			WEIS				0813	0813.4	1				IIIG				
			WEIS	0817.7	0820.7	3	0816.4	0819	3				V				
			WEIS										IIIGG,DP				
	WEIS		0826.9				0829.6	2				IIIGG					
		WEIS				0945.7	0946.2	2				UNCLF					
		WEIS				0955.6	0956.2	1				IIIG					
		WEIS										IIIG					
1000	2300	WEIS	1014.7	1015.4	2	1041.9	1042.2	1				IIIGG					
		SGMR				1044.8	1050.6	2				IIIB					
		SGMR							1217.8	1218.2		IIIB					
		WEIS							1240.5	1240.8		IIIB					
		SGMR							1254.2	1259		IIIG					
		SGMR				1254.2	1303.9	3				IIIGG,V					
1330	2354	WEIS							1302	1304		IIIG					
		HARV				1330	1440	1				I					
		HARV				1440	2040	1				IN					
1247	1914	BOUL							1506	1506.3	1	III					
		BOUL							1514.6	1515	2	III					
		BOUL							1521.4	1521.6	1	III					
		WEIS	1525.9	1530.4	3							IIIGG,V					
		BOUL				1526.4	1532.4					IIIGG					
		SGMR							1526.5	1529	3	IIIG					
		HARV	1527	1528	2	1526	1532	3	1527	1530	3	IIIGG					
		BOUL				1553	2335					CONT					
		HARV				1619	1620	1				IIIG					
		HARV				1629	1630	1				IIIG					
		HARV				1758	1846	1				IIIN					
		HARV				1836	1838	2				IIIG					
		SGMR	2009	2010	2	2008	2010	3	2009	2010	3	IIIGG,V					
		BOUL							2009	2011		IIIG					
		HARV				2009.1	2011.7					IIIG					
1952	2229	HARV				2040	2142	1				I					
		BOUL				2055		1				IIIG					
		BOUL				2112.9	2113.8					IIIG					
		HARV				2113		3	2113		2	IIIG					
		HARV				2142	2347	1				IN					
		HARV				2152	2156	3	2155		3	IIIGG					
2214	2400	BOUL				2152.5	2154.1					IIIG					
		CULG				2214	2400	1	2214	2400	1	IIIN					

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OCT. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE			
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND						
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.				
21	0008	0830	CULG				0018	0807	1		0018	0807	1	IIIN		
			CULG				0018	0807	1					I		
			CULG				0030.5		1		0030.5		1	IIIB		
			CULG				0038	0038.5	1		0038	0038.5	1	IIIG		
			CULG				0051	0053	1		0051	0053	1	IIIG		
			CULG				0141	0145	2		0141	0145	2	IIIG		
			CULG				0317	0318	1		0317	0318	1	IIIG		
			CULG				0323	0324.5	1		0323	0324.5	1	IIIG		
			CULG				0328	0332	2		0328	0332	2	IIIG		
			CULG				0329		3		0329		3	IIIB		
			CULG				0352	0353	2		0352	0353	2	IIIG		
			CULG				0354	0354.5	3		0354	0354.5	3	IIIG		
			CULG				0448	0514	1		0448	0514	1	IIIG		
			CULG				0543.5	0546	2		0543.5	0546	2	IIIG		
			CULG				0552	0557	1		0552	0557	1	IIIG		
			CULG				0606	0607.5	1		0606	0607.5	1	IIIG		
			CULG				0616.5	0618.5	1		0616.5	0618.5	1	IIIG		
			CULG				0624	0625.5	1		0624	0625.5	1	IIIG		
			CULG				0629		2		0629		2	IIIG		
			0655	1605	CULG				0703	0704	2		0703	0704	2	IIIG
					WEIS				0703.2	0703.7	1					IIIG
					CULG				0741	0742	2		0741	0742	2	IIIG
					WEIS				0741.2	0741.4	1					IIIG
					CULG				0747	0754	2		0747	0754	2	IIIG
					SGMR											
	HARV						1454	1627	1					IIIN		
	BOUL						1454.1	1454.9					2	IIIG		
	BOUL						1501.5	1501.7					1	III		
	HARV						1753		1		1620	1805	1	CONT		
	1823	2300	SGMR								1753		1	IIIG		
			BOUL								1910.3	1910.6	2	III		
			HARV				1917		1		1917		1	IIIG		
			BOUL				1917.1	1917.3					2	III		
			HARV				2051		1					IIIG		
			BOUL				2051.2	2051.8					2	IIIG		
			BOUL								2059.9	2100.7	2	IIIG		
			HARV				2152	2320	1					IN		
			BOUL								2213.1	2213.4	2	III		
			22	0115	0656	CULG				0153.5	0154	1		0153.5	0154	1
	CULG							0200	0320	1		0200	0320	1	IIIN	
	CULG															

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OCT 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
23			HARV	1357	1433	1	1340		1				IIIG
			WEIS				1340	1340.2	1			IIIB	
			BOUL				1340.1	1340.3			2	III	
			BOUL				1345.8	1352.8			2	IIIGG	
			BOUL				1356.2	1405.6			3	IIIGG	
			HARV									IN	
			HARV				1404	1405	1			IIIG	
			WEIS				1404.2	1405.4	1			IIIG	
			BOUL				1411.4	1421.3			3	IIIGG	
			HARV				1416	1417	1			IIIG	
			WEIS	1416.4	1418	1			IIIG				
			BOUL	1535	1709			1	IIIG				
			BOUL	1545	1545.6			2	CONT				
			HARV	1606	1609	1	1608	1609	1	III			
			BOUL	1606.7	1609			2	IIIG				
			HARV	1640	2000	1			IIIG				
			BOUL	1709	2340 D			2	IN				
			HARV	1928		1		1928	2	CONT			
			BOUL					1	IIIG				
			HARV	1940	1941	1		1940	3	III			
			BOUL					1940	2	IIIG			
			SGMR					1940.2	3	IIIG			
			HARV				2000	2340		IIIG			
			HARV				2051	2052	1	I			
			CULG				2051	2052.5	2	IIIG			
			BOUL				2051.2	2052.3	2	IIIG			
			CULG				2110	2355	1	IIIG			
			CULG				2342	2345	1	I			
			CULG				2353.5	2430	1	IIIG			
			CULG				2356	2357.5	2	IIIGG			
			CULG				2358	2417	2	IIIG.V			
24	0000	0655	CULG				0001	0002.5	2				IIIG.V
			CULG				0003	0055	1	0003	0055	1	IV
			CULG				0244.5	0247	2	0244.5	0247	2	CONT
			SGMR										
	1000	2300	WEIS				1134.4	1134.7	1				IIIB
	0650	1625	HARV				1330	2040	1				IN
	1330	2345	BOUL				1337	1338.8					IIIG
	1317	2335	HARV				1629	1630	2	1630			IIIG
			BOUL				1629.7	1630					III
			BOUL				1650.9	1651.4					IIIG
			HARV				1651		2	1651			IIIG
			BOUL				1719.6	1719.8					III
			BOUL				1827.1	1827.3					III
			HARV				1859	1900	1	1859	1900	1	IIIG
			BOUL				1859	1859.6					IIIG
			BOUL							1908.5	1908.8	1	III
			HARV	2055	2100	3	2059	2106	3				IV
			HARV				2057	2120	2				II
			CULG				2058	2120	2	2104	2120	2	IIH
			BOUL				2058.3	2119.4					II
			CULG				2108		1	2108			
			HARV				2111	2200	2				IIIB
			CULG				2113		1	2113			IC
			BOUL				2119.4	2200					IIIB
			CULG				2122	2135	1				IV
			HARV				2127		1	2127			IIIG
			BOUL				2127	2127.6					IIIG
			CULG				2129	2227	1				IIIG
			HARV				2137	2139	2	2138			IV
			CULG				2137.5	2138.5	2	2137.5	2138.5	1	IIIG
			BOUL				2137.6	2138.2					IIIG
			HARV				2200	2340	1				IIIG
			BOUL				2200	2255					IN
			CULG				2222	2400	1	2222	2400	1	CONT
			BOUL				2245	2246.3					IIIN
			BOUL				2250.2	2251.4					IIIG
			HARV				2302	2303	1	2302	2303	2	IIIG
			CULG				2302	2303	2	2302	2303	2	IIIG
			BOUL				2302.3	2303.1					IIIG
			CULG				2306.5	2307	1	2306.5	2307	1	IIIG
			BOUL							2306.6	2307.3	1	IIIG
			CULG				2345.5		1				IIIB
25	0000	0626	CULG				0000	0440	1	0000	0440	1	IIIN
			CULG				0008.5	0013	2	0018.5	0013	2	IIIG.V
			CULG				0040.5	0041	1	0040.5	0041	1	IIIG
			CULG				0103.5	0105	1	0103.5	0105	1	IIIG
			CULG				0209		2	0209		2	IIIB
			CULG				0322	0342	2	0322	0342	2	IIIGG
			CULG				0340		2				IIIB.U
			CULG				0559	0605	2	0559	0605	2	IIIG
	0629	0653	SGMR										
	1000	2300	WEIS				1012.1	1012.7	1				IIIG
	0650	1545	WEIS				1022.4	1022.6	1				IIIG
			WEIS				1043.6	1043.8	1				IIIG
			WEIS				1345	1514	2				IS
	1330	2344	HARV				1345	1620	1				IN

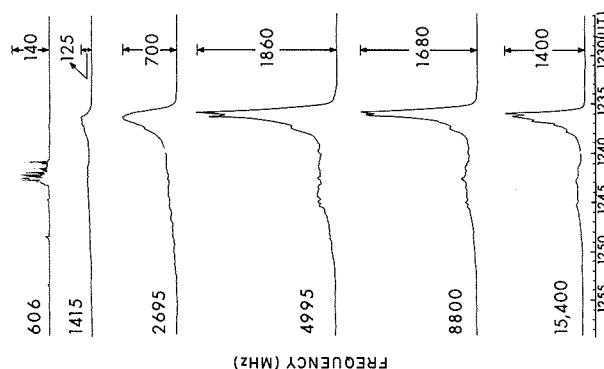
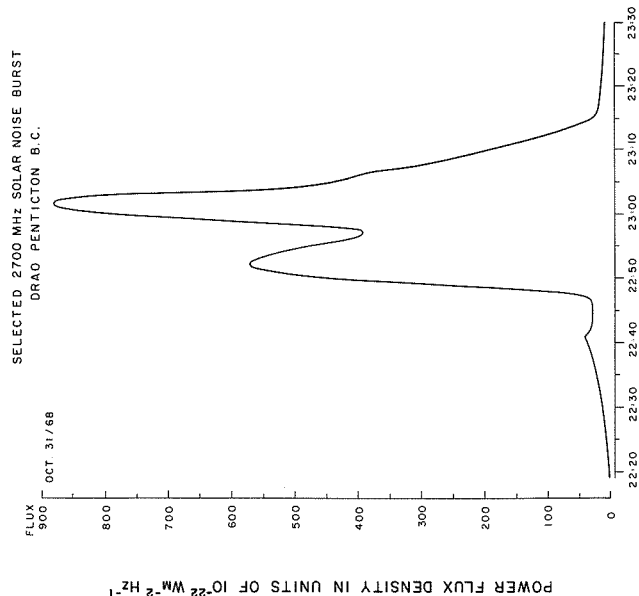
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SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

OCTOBER 1968

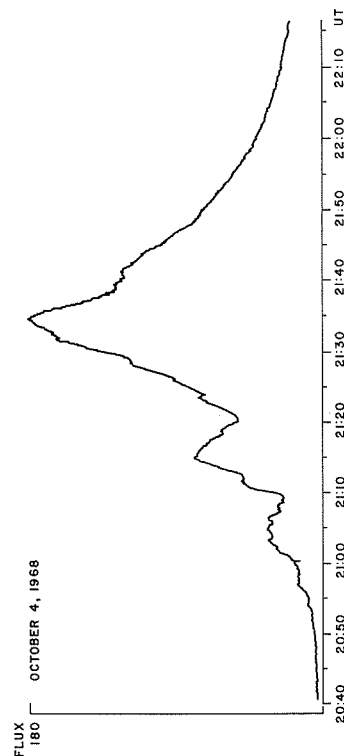
OCT. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT			START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	
29	0000	0633	CULG				0000	0530	1				I
			CULG				0012	0013	1	0012	0013	1	IIIG
			CULG				0014	0015	2	0014	0015	2	IIIG
	CULG				0042	0103	2	0042	0103	2	IIIGG		
	CULG				0117.5	0119	1	0117.5	0119	1	IIIG		
	CULG				0132	0148	1				UNCLF		
	CULG				0226.5		1	0226.5		1	IIIB		
	CULG				0433.5	0445.5	1	0433.5	0445.5	1	IIIG		
	CULG							0517		1	IIIB		
	CULG				0654	0655	2	0654	0655	2	IIIG+V,U		
	0655	1610	WEIS	0700	1517	2							IN
			WEIS	0705.5	0706.1	3							IIIG
			WEIS				0707.7	0707.9	1				IIIG
	1100	2200	WEIS				0952.6	0957	3				IIIG+V
			SGMR							1218	1252		CONT
			WEIS	1225	1540	3				1245.2	1248		IV
	1113	2345	SGMR							1248.5	1252		IIIG
			SGMR							1252	2200		V B
			SGMR										
	1328	2341	BOUL				1311	1524					IV
			HARV	1328	1440	2	1328	1440	3				IV
			HARV	1328	1500	2							IV
	1440	1516	HARV				1328	2120	3				IIIN
			HARV	1440	1516	1	1440	1516	2				IC
			HARV	1454	1456	2	1454	1456	2				IV
	1515.7	1539	WEIS	1515.7	1539	3							IIIG
			HARV	1516	1547	3	1516	1538	3				IV
			BOUL				1524	2125					IV
	2037	2400	CULG				2037	2400	1				CONT
			HARV				2120	2340	2				I
			BOUL							2125	2345	2	IC
	2255.9	2258.3	CONT							2255.9	2258.3	3	CONT
			CULG				2256	2257	1				IIIG
CULG						2330	2400	1				IIIG+V	
30	0000	0425	CULG				0000	0105	1				IIIN
			CULG				0000	0636	1	0000	0636	1	I
			CULG				0105	0600	2				I
	CULG				0600	0636	1				I		
	WEIS				0658	1327	2				IS		
	SGMR							1230	1350		CONT		
	WEIS				1255	1545	2				IV		
	WEIS	1313.2	1409	1									
	HARV				1328	1600	3				IIIGG		
	HARV	1328	1917	2							IC		
	WEIS	1335.5	1337.2	2							IV		
	HARV	1336	1340	3	1337		2				IIIGG		
	SGMR							1350	1630		IIIGG		
	HARV	1358	1432	2							IV		
	BOUL				1400	1740					IIIN		
	WEIS	1405	1405.1	1							CONT		
	HARV				1600	1840	2				IIIB		
	BOUL				1740	1840					IC		
	HARV				1840	2020	1				CONT		
	BOUL				2020	2340	2	2011.5	2014	1	I		
	BOUL							2024.7	2025	1	IIIG		
	BOUL							2049.8	2050	1	IC		
	CULG				2135	2400	1				III		
	HARV	2145	2340	2							III		
	BOUL							2148	2148.2	1	I		
	CULG				2319		1	2319		1	IV		
	CULG				2336	2338	1				III		
	BOUL				2342	2345	1	2341	2344.7	1	IIIB		
	CULG							2344	2355.5	2	UNCLF		
	CULG				2351	2428	1				IIIG		
	CULG				2358	2358.5	2	2358	2358.5	2	IIIG		
	CULG				2359	2405	2	2400	2405	2	IIIG		
	31	0000	0639	CULG				0000	0639	1			
CULG							0002.5	0035	1				IV
CULG							0004	0005	1				IIIG
CULG					0009	0010	3	0009	0010	3	IIIG+V		
CULG					0010	0020	2				UNCLF		
CULG					0010	0025	1	0010	0025	1	IIIGG		
CULG					0013.5	0014	3	0013.5	0014	3	IIIG		
CULG					0017.5	0021	2	0017.5	0021	1	II		
0655		1605	WEIS	0655	1505	2							IC
			WEIS	0711.7	0712.2	2							IIIG
			SGMR										
1100		2200	SGMR										
			WEIS	1312.3	1312.6	1							IIIG
			WEIS										I
1330		2340	HARV				1330	1800	1				IIIG
			HARV	1415	1418	2							I
			HARV	1714	1715	1							IIIG
1317		2349	BOUL							1954	1954.3	1	IIIG
			HARV	2041	2246	1	2041	2335	1				III
			HARV	2049		1	2048	2049	2	2049			IN
2049.3		2049.6	BOUL				2049.3	2049.6					IIIG
			HARV				2055	2056	1	2055			III
			BOUL				2055	2055.6					IIIG
2234.3		2239	BOUL				2234	2234.3					III
			BOUL				2243.1	2329	D				III
			HARV	2247	2315	2	2247	2307	3				CONT
2255		2256	HARV				2255	2256	2				IV
													IIIG

SELECTED SOLAR NOISE BURSTS



COMPLEX AND SIMPLE 2 RADIO BURST
OBSERVED ON 27 OCTOBER, 1968
SAGAMORE HILL RADIO OBSERVATORY
HAMILTON, MASS.

SELECTED 2700 MHz SOLAR NOISE BURST DRAO PENTICTON B.C.



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COSMIC RAY INDICES
(Neutron Monitors)
OCTOBER 1968

Oct 1968	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	5885.66	6322.6	3758.6	5888.29
2	5789.37	6268.1	3710.2	5841.33
3	5692.37	6154.8	3634.7	5743.38
4	5734.08	6241.1	3680.2	5815.13
5	5773.04	6302.9	3725.0	5853.92
6	5774.21	6285.3	3712.0	5844.96
7	5764.20	6275.4	3732.7	5860.29
8	5785.42	6274.2	3724.2	5830.25
9	5839.62	6349.7	3760.8	5890.52 (23)
10	5878.54	6388.0	3779.4	5924.13
11	5902.33 (12)	6401.8	3786.5	5912.04
12	5940.62	6435.4	3854.2	5965.96
13	5960.17	6468.8	3872.8	5998.25
14	5979.71	6472.8	3885.0 (36)	6010.04
15	5981.92	6463.3	3880.6 (20)	6000.25
16	5939.62	6443.4	3858.1 (32)	5986.96
17	5881.25	6375.2	3801.1	5935.08
18	5863.66	6367.5	3793.6	5941.92
19	5889.54	6379.0	3804.1	5947.83
20	5883.50	6385.8	3796.3	5944.41
21	5906.17	6422.1	3820.6	5972.17
22	5936.08	6450.5	3834.4	6002.84 (19)
23	5949.50	6472.9	3850.0	6020.17
24	5889.16	6400.7	3783.2	5949.00
25	5920.58	6444.6	3817.3	5985.58
26	5926.54	6468.9	3816.0	5990.38
27	5854.46	6373.1	3770.2	5936.08
28	5912.88	6448.8	3800.5	5991.21
29	5648.83	6152.0	3601.4	5740.83
30	5398.04	5881.0	3442.5	5520.58
31	5453.91	5958.9	3499.5	5609.79

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

Churchill Super Neutron Monitor, Scaling Factor 120.

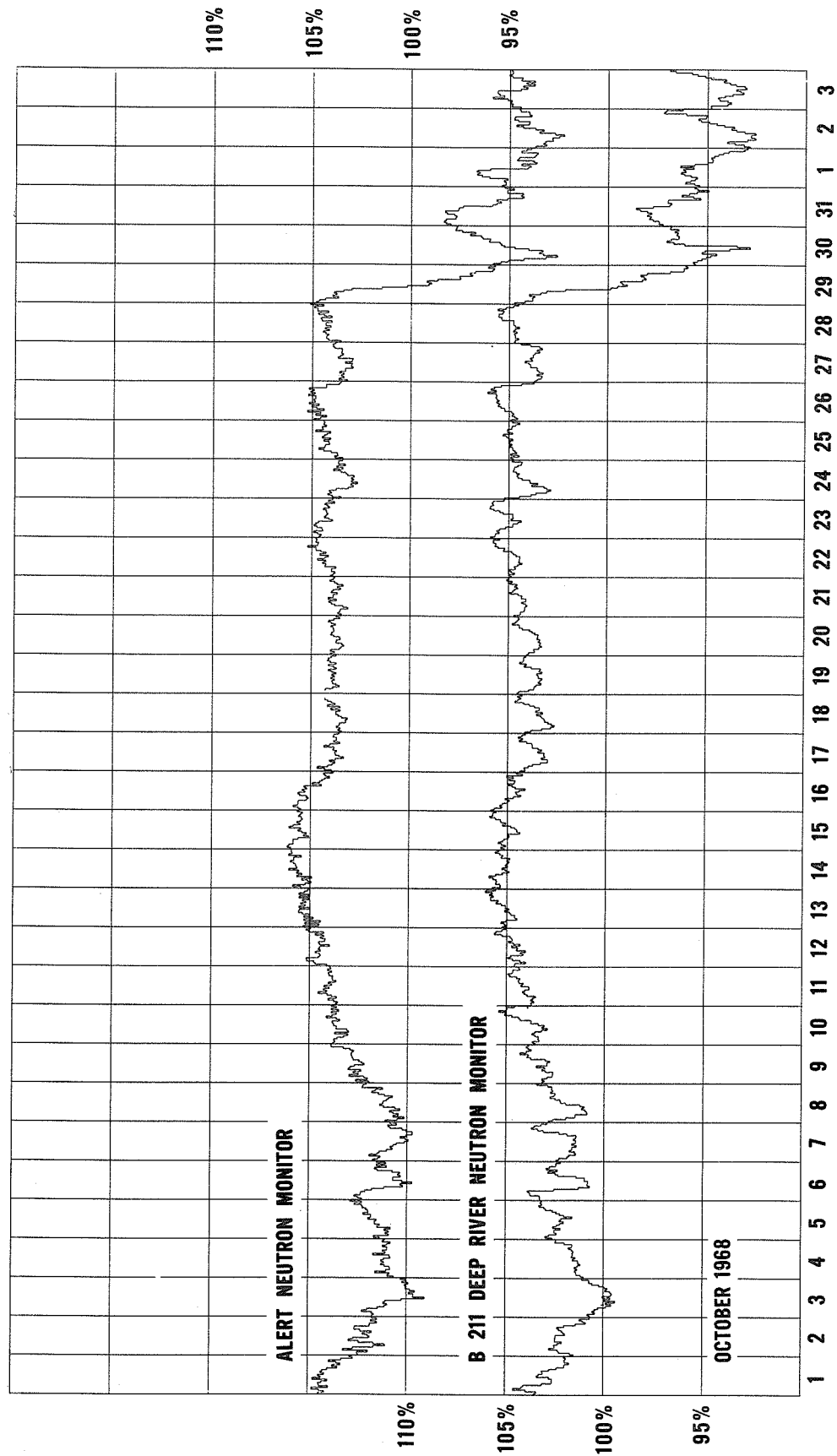
Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES
(Pressure Corrected Hourly Totals)

OCTOBER 1968



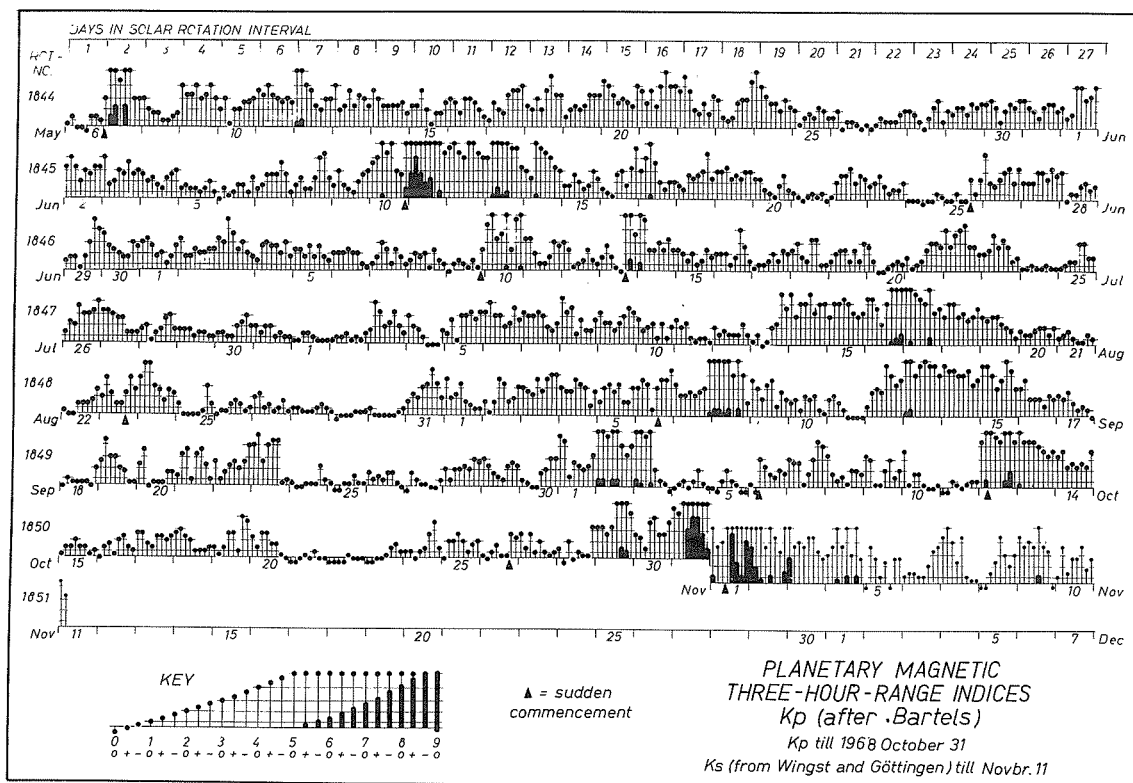
GEOMAGNETIC ACTIVITY INDICES

OCTOBER 1968

DAY		K _p THREE-HOUR RANGE INDICES								SUM	C _i	C _p	A _p
		1	2	3	4	5	6	7	8				
1		5-	4+	1+	3-	2+	2	2+	3+	23	1.0	0.9	16
2	D	6-	6-	5-	6-	6-	4	3+	4	39-	1.5	1.5	47
3		6-	5+	5-	5+	2	1	1-	0	25-	1.3	1.3	29
4	Q	0+	1-	1	0+	1	2	1-	0+	6+	0.2	0.1	3
5	QQ	0+	0	1	2	1	1-	0	0	5	0.0	0.0	2
6		1-	0	3	2+	2-	1+	2	2-	13-	0.3	0.3	6
7		3	3-	3-	1-	2-	3	4+	4	22	1.0	0.9	15
8		3+	2-	1	1+	1-	2	2	2-	14-	0.4	0.4	7
9		3+	3	1-	1-	2	3	1+	2	16	0.5	0.5	9
10		4-	1-	2-	2-	1-	0+	0+	1-	10-	0.2	0.3	6
11	QQ	0	0	1	1-	0+	1-	1	1	5-	0.1	0.0	2
12	D	4+	6-	5	5-	4+	6-	6+	4+	40+	1.7	1.6	51
13	D	5+	4+	4+	4+	4	4-	3+	4-	33	1.3	1.3	30
14		3+	4-	2+	3-	2+	3-	2+	4-	23	0.9	0.8	14
15	Q	1-	1+	1+	2	1+	1+	1-	1	10-	0.2	0.2	5
16	Q	0+	1+	2-	1-	2	2+	1+	1	11-	0.3	0.2	5
17		3-	3-	2-	1+	2+	2+	2	2+	17+	0.4	0.5	9
18		3-	3	2+	2	1	1	1	1+	14+	0.4	0.4	8
19		1+	1-	1+	3-	3-	1	4	4-	17+	0.8	0.6	11
20		2+	1+	3-	3-	2-	2-	1-	0+	13+	0.3	0.3	7
21	QQ	0	0	0+	1-	0+	1	0+	0+	3	0.1	0.0	2
22	QQ	0	0	0	0	1-	0+	0+	0+	2-	0.0	0.0	1
23	QQ	0	0	0+	0+	1-	1+	2-	1	5+	0.1	0.0	3
24		1	1	0+	1	1+	3-	4-	1+	12+	0.6	0.4	7
25		0+	2	2	3-	2	1	2-	2	14-	0.4	0.3	6
26	Q	1-	0+	1	2-	1-	1-	3-	2+	10	0.3	0.2	5
27		3-	1+	3-	1	2	1	1-	1	12+	0.3	0.3	6
28	Q	1+	0	2	0+	1	1-	1-	3+	9+	0.4	0.2	5
29	D	3+	3+	3-	3+	5	6	6-	4+	34-	1.6	1.4	37
30		3-	2+	1+	4-	4	3-	3-	4-	23	1.0	0.9	15
31	D	5-	4+	5	7+	8	8	7	6	50+	1.9	1.9	112
MEAN 0.63											0.57	16	

Preliminary storm sudden commencements (ssc) occurred October 6 at 0628UT, October 12 at 0618UT, October 26 at 1832UT and October 29 at 0909UT.

Errata: On September 9, 1968 the A_p should be 14 instead of 12 and the C_p 0.8 instead of 0.7. On September 11 the A_p should be 4 instead of 6 and the C_p 0.1 instead of 0.2.

DAILY AVERAGE INDICES A_p

DAY	1967		1968									
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	3	33	26	10	10	26	13	17	10	4	9	16
2	10	18	35	19	9	12	14	17	9	4	10	47
3	23	8	9	16	14	13	11	14	16	12	18	29
4	9	7	7	17	16	9	6	9	10	6	14	3
5	11	13	10	8	17	34	4	5	8	12	12	2
6	4	21	16	2	7	36	3	5	6	16	19	6
7	3	20	8	4	5	11	53	11	7	13	18	15
8	18	26	6	14	4	3	7	13	6	14	48	7
9	10	10	3	19	4	2	21	9	4	13	12	9
10	4	6	5	36	15	6	10	36	35	7	6	6
11	17	3	10	51	8	10	17	103	10	6	6	2
12	22	6	13	14	8	11	27	38	7	6	19	51
13	17	5	9	18	5	23	14	48	22	11	43	30
14	11	4	12	5	23	26	11	26	22	27	29	14
15	10	10	10	25	28	14	9	8	6	22	30	5
16	9	8	13	14	26	14	11	13	9	41	10	5
17	2	11	13	18	12	10	15	18	6	39	6	9
18	3	19	10	24	12	8	17	12	10	19	3	8
19	3	30	13	12	11	3	11	14	8	10	12	11
20	2	32	15	35	20	2	19	7	5	6	7	7
21	5	16	8	24	7	4	24	3	9	4	13	2
22	13	12	9	10	5	8	16	10	19	5	11	1
23	8	16	10	5	9	12	13	6	11	11	22	3
24	20	5	10	7	22	8	18	2	3	19	4	7
25	11	3	4	4	19	5	6	4	7	4	2	6
26	9	7	13	4	14	26	4	14	15	4	4	5
27	8	9	9	8	16	20	4	11	11	5	3	6
28	17	5	14	30	12	16	6	6	8	4	8	5
29	15	6	16	18	14	14	9	13	5	2	9	37
30	13	9	11		27	7	10	11	7	3	7	15
31		59	8		16		10		5	14		112
MEAN	10	14	11	16	13	13	13	17	10	12	14	16

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PRINCIPAL MAGNETIC STORMS

OCTOBER 1968

DATE 1968 MO. DA.	STORM TIME		OBS.	GEO- MAG. LAT.	SUDDEN COMMENCEMENT				C FIGURE DEGREE OF AC- TIVITY	MAXIMAL ACTIVITY ON K-SCALE 0 TO 9			RANGES			STORM NUMBERS	
	UT START	UT END MO. DA. HR			TYPE	AMPLITUDES				MO. DA	3-HOUR PERIOD	K INDEX	D (^o)	H (γ)	Z (γ)		
						D(^o)	H(γ)	Z(γ)									
10 01	23--	10 03 12	TOOL	46.7S	..	..	..	..	M	10 02 10 03	4,5 1,3,4	5 5	25	177	55	46 46	
10 02	0018	10 03 12	COLL	64.6N	SC *	+ 6	+33	--	MS M	10 03	3	7	203	2010	1160	46	
	0017	10 03 12	NEWP	55.1N	SC *	+ 2	23	5		10 02	2,4,5	6	52	185	285	46	
	0019	10 03 11	WITT	54.1N	SC	- 2	+32	0		10 02	1,2,4	5				46	
										10 02	5,8	5				46	
										10 03	1,2	5	30	180	80	46	
	00--	10 03 11	FRED	49.6N	..	..	..	..	M	10 02	1,2,4,5	5	27	97	72	46	
	0018	10 03 15	BOUL	49.0N	SC *	--	+21	+ 2	MS	10 02	2,4	6	27	90	80	46	
	0016	10 03 10	IRKU	40.8N	SC	- 0.9	+ 9	+ 3	MS	10 02	5	6				46	
										10 03	1	6	26	86	41	46	
	0000	10 03 11	TUCS	40.4N	..	..	..	..	MS	10 02	4,5	6	15	100	10	46	
	0018	10 03 20	MBOR	21.3N	SC	--	+17	--	M	10 03	1	5	2	65	23	46	
	0018	10 03 12	HONO	21.1N	SC	+ 0	+14	+ 6	M	10 02	2,3,4,5	5	8	76	41	46	
	0017	10 03 11	ALIB	9.5N	SC	- 0.5	+ 9	- 5	M	10 03	4	5	5	109	51	46	
	0018	10 03 12	HYDE	7.6N	SC	- 0.3	+ 9	+ 1 *	M	10 02	5	5	6	111	33	46	
										10 03	4					46	
	0034	10 02 14	GUAM	4.0N	SC	01	33	09	M	10 02	1,4,5	5	--	50	10	46	
	0017	10 03 11	ANNA	1.5N	SC	- 0.5	+ 9	+ 8	-	--	--	-	4	182	92	46	
	0028	10 03 06	HUAN	0.6S	SC	1	19	4	MS	10 02	5,6	6	6	247	31	46	
	0017	10 03 11	TVAN	1.1S	SC	- 0.3	+ 5	+ 5	-	--	--	-	3	205	121	46	
	0018	10 03 11	APIA	16.1S	SC	+ 6	+15	- 8	M	10 02	2,4	5	7	159	33	46	
	0017	10 03 12	PMOR	18.6S	SC	- 0.5	+21	+18	M	10 02	2,3,4,5	5	8	140	90	46	
										10 03	1,4	5				46	
	0018	10 03 14	HRMN	33.3S	SC	+ 1.3	+18	+13	M	10 02	1,2,4	5	18	110	76	46	
										10 03	1	5				46	
	0016	10 03 11	GNAN	43.2S	SC *	- 6 *	- 5 *	-20 *	M	10 02	1,2,3	5	19	80	107	46	
										10 02	4,5	5				46	
										10 03	1,4	5				46	
	00--	10 03 15	KGLN	57.3S	..	..	..	..	MS	10 02	1	7	--	--	--	46	
10 03	0039	10 03 10	GUAM	4.0N	SC	--	44	05	M	10 03	1	5	--	40	10	46	
10 06	0628	10 07 08	HYDE	7.6N	SC	- 0.4	+44	- 3	M	10 06	3	5	7	117	35	47	
	0628	10 07 08	HRMN	33.3S	SC	- 2.5	+25	+ 7	M	10 06	3	4	18	58	49	47	
10 11	24--	10 14 17	COLL	64.6N	..	..	..	..	MS	10 12	6,7	7	278	1600	800	48	
	0030	10 14 06	MBOR	21.3N	..	..	..	..	M	10 02	6	6	--	95	--	48	
	17--	10 13 19	ALIB	9.5N	..	..	..	..	M	10 12	4,6,7	5	5	107	66	48	
										10 13	6	5				48	
	17--	10 13 19	ANNA	1.5N	..	..	..	..	-	--	--	-	3	155	79	48	
	17--	10 13 19	TVAN	1.1S	..	..	..	..	-	--	--	-	3	198	101	48	
17--	10 14 18	TOOL	46.7S	..	..	..	..	M	10 12	3,4,6,7	5	28	144	71	48		
10 12	00--	10 14 09	NEWP	55.1N	..	..	..	..	MS	10 12	2,6,7	6	36	235	228	48	
	01--	10 14 23	WITT	54.1N	..	..	..	..	MS	10 12	6,7	6	50	180	80	48	
	01--	10 14 05	FRED	49.6N	..	..	..	..	M	10 13	1	5	22	169	54	48	
	00--	10 14 16	BOUL	49.0N	..	..	..	..	M	10 12	2,4,5	5	24	190	60	48	
										10 12	6,7					48	
										10 13	1					48	
	00--	10 13 19	IRKU	40.8N	..	..	..	..	MS	10 12	7	6	21	147	48	48	
	0100	10 14 05	TUCS	40.4N	..	..	..	..	MS	10 12	7	6	11	140	10	48	
	0030	10 13 24	SJUA	29.9N	..	..	..	..	M	10 12	1,3,7	5	10	102	42	48	
	0000	10 13 19	HYDE	7.6N	..	..	..	..	M	10 12	6,7	5	5	111	40	48	
	00--	10 13 16	GUAM	4.0N	..	..	..	..	MS	10 12	4,7	5	--	50	10	48	
	0030	10 13 22	HUAN	0.6S	..	..	..	..	M	10 12	5,6,7	5	8	283	42	48	
	0120	10 14 09	APIA	16.1S	..	..	..	..	M	10 12	4	5	11	158	25	48	
	03--	10 14 00	PMOR	18.6S	..	..	..	..	M	10 12	4,6,7	5	7	150	60	48	
	00--	10 14 23	HRMN	33.3S	..	..	..	..	M	10 12	4,6,7	5	27	137	125	48	
	01--	10 13 18	GNAN	43.2S	..	..	..	..	MS	10 12	7	6	19	104	124	48	
	00--	10 14 00	KGLN	57.3S	..	..	..	..	MS	10 12	7	7	--	--	--	48	
	10 26	1833	10 27 01	HRMN	33.3S	SC	+ 1.1	+ 9	+ 6	M	10 26	7,8	3	4	25	23	49
10 28	21--	-- -- --	COLL	64.6N	..	..	..	..	S	10 31	4	9				50	
	2301	10 29 23	IRKU	40.8N	SC	+ 0.8	+ 7	- 2	MS	10 29	6,7	6	29	150	28	50	
	2200	11 03 14	TUCS	40.4N	..	..	..	..	S	11 01	5	8	40	290	70	50	
	2130	10 29 23	SJUA	29.9N	..	..	..	..	MS	10 29	6	7	10	126	40	50	
	2125	10 29 23	MBOR	21.3N	..	..	..	..	MS	10 29	6	7	7	210	34	50	
	21--	10 29 23	TOOL	46.7S	..	..	..	..	M	10 29	4,6	5	19	150	40	50	
																50	
10 29	0909	11 04 23	COLL	64.6N	SC *	- 4	-48	-38		11 01	5	9	565	3280	1700	50	
	0909	11 04 22	SITK	60.0N	SC	-	+	+	S	10 31	4,5,6	9	370	3780	2360	50	
										11 01	5,6	9				50	
	0908	11 03 18	NEWP	55.1N	SC	6	40	6	S	10 31	4,5	9	135	1267	1059	50	
										11 01	5	9				50	
	0909	10 29 23	WITT	54.1N	SC	+ 6	+18	0	MS	10 29	6,7	6	40	200	110	50	
	0909	10 29 22	FRED	49.6N	SC *	6	18	3	MS	10 29	6	6	32	160	50	50	
	0909	10 30 00	BOUL	49.0N	SC *	- 5	+29	+ 4	MS	10 29	6	7	47	170	40	50	
	0908	10 30 01	HONO	21.1N	SC	- 0	+30	+11	MS	10 29	6	6	9	90	34	50	
	0909	10 29 23	ALIB	9.5N	SC	- 0.4	+39	-10	MS	10 29	6	7	5	234	36	50	
	0645	-- -- --	HYDE	7.6N	SC	- 0.1	+19	- 1								50	

PRINCIPAL MAGNETIC STORMS

OCTOBER 1968

DATE 1968 MO. DA.	STORM TIME		OBS	GEO- MAG. LAT.	SUDDEN COMMENCEMENT				C FIGURE DEGREE OF AC- TIVITY	MAXIMAL ACTIVITY ON K-SCALE 0 TO 9			RANGES			STORM NUMBERS
	UT START	UT END MO. DA. HR.			TYPE	AMPLITUDES				MO. DA.	3-HOUR PERIOD	K INDEX	D (°)	H (γ)	Z (γ)	
						D(°)	H(γ)	Z(γ)								
10 29	0909	10 29 23	HYDE	7.6N	SC	- 0.5	+41	- 3	M	10 29	6	7	5	217	17	50
	0909	10 30 04	GUAM	4.0N	SC	--	37	11	MS	10 29	4,6,8	5	--	60	10	50
	0909	10 29 23	ANNA	1.5N	SC	- 1.4	+68	+23	--	--	--	--	3	259	79	50
	0909	10 29 23	HUAN	0.6S	SC	1	41	7	S	10 29	6	8	20	761	49	50
	0909	10 29 23	TVAN	1.1S	SC	+ 0.5	+68	+87	--	--	--	--	3	264	196	50
	0904	10 30 12	APIA	16.1S	SC	0	+35	-14	M	10 29	7	5	7	90	17	50
	0646	10 30 00	PMOR	18.6S	SC	+ .4	+14	+14	M	10 29	4,6,7,8	5	7	110	80	50
	0909	10 29 23	HRMN	33.3S	SC	+ 1.6	+35	+26	MS	10 29	6	7	25	171	225	50
	0909	10 29 23	GNAN	43.2S	SC	+ 4	+42	+17	MS	10 29	6,7	6	22	98	104	50
	0909	10 29 22	KGLN	57.3S	SC	--	--	--	MS	10 29	6	7	--	--	--	50
10 30	23--	11 01 03	FRED	49.6N	..	..	..	..	S	10 31	5	8	40	374	165	51
	0839	11 03 19	BOUL	49.0N	..	..	..	..	S	11 01	5	8	84	320	410	51
	1700	11 03 12	SJUA	29.9N	..	..	..	..	S	10 31	5	8	19	348	96	51
10 31	0900	11 01 03	WITT	54.1N	SC	+10	-45	0	MS	10 31	4,6	7	60	300	290	51
	0720	11 03 18	MBOR	21.3N	..	..	..	..	S	10 31	6	8	9	280	49	51
	0900	11 01 04	HONO	21.1N	SC	- 0	+39	+13	MS	10 31	5	6	6	165	47	51
	0858	10 31 22	ALIB	9.5N	SC	- 0.9	+49	-13	S	10 31	5	8	5	348	40	51
	0900	11 01 03	HYDE	7.6N	SC	- 0.7	+52	- 5	MS	10 31	5,6,7	8	5	357	22	51
	0859	11 01 08	GUAM	4.0N	SC	01	47	15	MS	10 31	5	8	--	225	30	51
	0858	10 31 22	ANNA	1.5N	SC	- 2.0	+70	+27	--	--	--	--	5	--	70	51
	0859	11 01 03	HUAN	0.6S	SC	1	19	5	MS	10 31	5,6	7	14	703	51	51
	0858	10 31 22	TVAN	1.1S	SC	+ 0.5	+65	+98	--	--	--	--	3	379	245	51
	0852	11 03 18	APIA	16.1S	SC	+ 1	+43	-18	MS	10 31	5	7	9	200	56	51
	0858	11 01 06	PMOR	18.6S	SC	+ 0.9	+60	+50	S	10 31	5	8	8	300	150	51
	0858	11 01 03	HRMN	33.3S	SC	+ 1.5	+31	+19	MS	10 31	4,5	7	58	265	320	51
	0859	11 01 02	GNAN	43.2S	SC	+ 5	+72	+32	S	10 31	4,5	8	38	300	225	51
	0859	11 03 18	TOOL	46.7S	SC	- 4	+03	+19	S	11 01	6	8	74	476	252	51
	0855	10 31 22	KGLN	57.3S	SC	--	--	--	S	10 31	5,6,7,8	9	--	--	--	51

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

OCTOBER 1968

North Atlantic, North Pacific

OCT. 1968	WHOLE DAY			ADVANCE FORECASTS (JC- REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								NORTH PACIFIC				GEOMAGNETIC INDICES							
	INDICES				6-HOURLY				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				6-HOURLY				K _{FR}		A _{FR}		K _{SI}		A _{SI}	
					QUALITY FIGURES								QUALITY FIGURES											
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		00 TO 06	06 TO 12	12 TO 18	18 TO 24	00 06 12 18	00 06 12 18	00 06 12 18	00 06 12 18	00 06 12 18	00 06 12 18	HALF DAY (1) (2)	OBSERVED	HALF DAY (1) (2)							
01	6+	6	6+	6	60	60	7-	7-	6	5	6	6	6	3	2	10	3	2	13					
02	6-	6	6-	6	50	50	7-	6+	6	6	6	5	6	(5) (4)	33	(6) (3)	68							
03	6-	5	5+	4	5-	40	7-	7-	4	4	5	6	6	(4) 1	19	(6) 1	38							
04	6+	6	6+	5	7-	5+	70	6+	6	6	6	7	6	0 1	2	0 0	1							
05	6+	6	6+	6	7-	5+	70	7-	7	6	6	7	6	1 0	2	1 0	3							
06	7-	6	6+	6	7-	60	70	70	7	6	7	7	6	2 2	7	1 1	3							
07	7-	6	60	6	6+	7-	7-	7-	7	6	7	6	6	2 3	12	2 2	10							
08	7-	6	6+	7	7-	6+	70	7-	6	5	7	7	6	2 1	6	2 1	6							
09	7-	6	6+	7	7-	6+	70	7-	7	6	7	7	6	2 2	6	1 2	5							
10	7-	6	6+	6	6+	7-	70	7-	7	6	7	7	6	2 1	6	2 0	3							
11	7-	6	6+	6	7-	6+	70	7-	7	7	7	7	6	0 1	2	0 0	1							
12	60	6	60	6	60	5+	7-	60	7	6	6	6	6	(4) (4)	30	(6) (5)	70							
13	6-	6	6-	7	50	4+	6+	7-	5	5	6	6	6	(4) 3	22	(5) 3	39							
14	6+	6	6+	7	6+	6-	7-	7-	6	5	6	7	6	3 2	10	3 2	11							
15	6+	6	6+	7	6+	6-	7-	70	6	6	7	7	6	1 1	4	1 0	3							
16	7-	6	6+	7	7-	6-	70	7-	7	6	7	7	6	1 2	6	1 2	6							
17	7-	6	6+	7	7-	6+	70	7-	7	6	7	7	6	2 2	8	1 2	4							
18	7-	6	6+	7	7-	6+	70	7-	7	6	7	7	6	2 1	6	2 0	4							
19	7-	6	6+	7	7-	7-	70	70	7	6	7	7	6	1 2	7	1 2	6							
20	7-	6	6+	7	7-	6-	70	70	7	7	7	7	6	2 1	7	2 0	4							
21	7-	6	6+	7	7-	7-	70	70	7	6	7	7	6	0 1	1	0 0	1							
22	7-	6	6+	7	7-	6+	70	70	7	6	7	7	6	0 0	1	0 0	0							
23	7-	6	6+	7	7-	7-	70	70	7	6	7	7	6	0 1	2	0 1	2							
24	7-	6	6+	6	70	60	70	70	7	6	7	7	6	1 2	6	0 2	4							
25	6+	6	6+	6	7-	6-	7-	6+	7	6	7	7	6	2 1	5	2 2	11							
26	6+	6	6+	6	7-	6-	70	6+	7	6	7	7	6	1 2	5	2 1	5							
27	7-	6	6+	7	6+	7-	7-	70	6	6	7	7	6	2 1	5	1 0	5							
28	7-	6	6+	7	7-	6+	70	7-	6	6	7	7	6	1 2	6	0 0	2							
29	6+	5	60	7	60	60	6+	7-	7	6	7	5	6	3 (5)	31	2 (4)	20							
30	6+	6	6+	7	7-	5+	6+	7-	4	6	6	6	6	2 3	13	2 3	15							
31	5-	5	50	5	6-	50	40	3+	6	5	6	4	6	(5) (6)	73	(6) (8)	189							
QUIET				P	12																			
				S	19																			
				U	0																			
				F	0																			

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

OCTOBER 1968

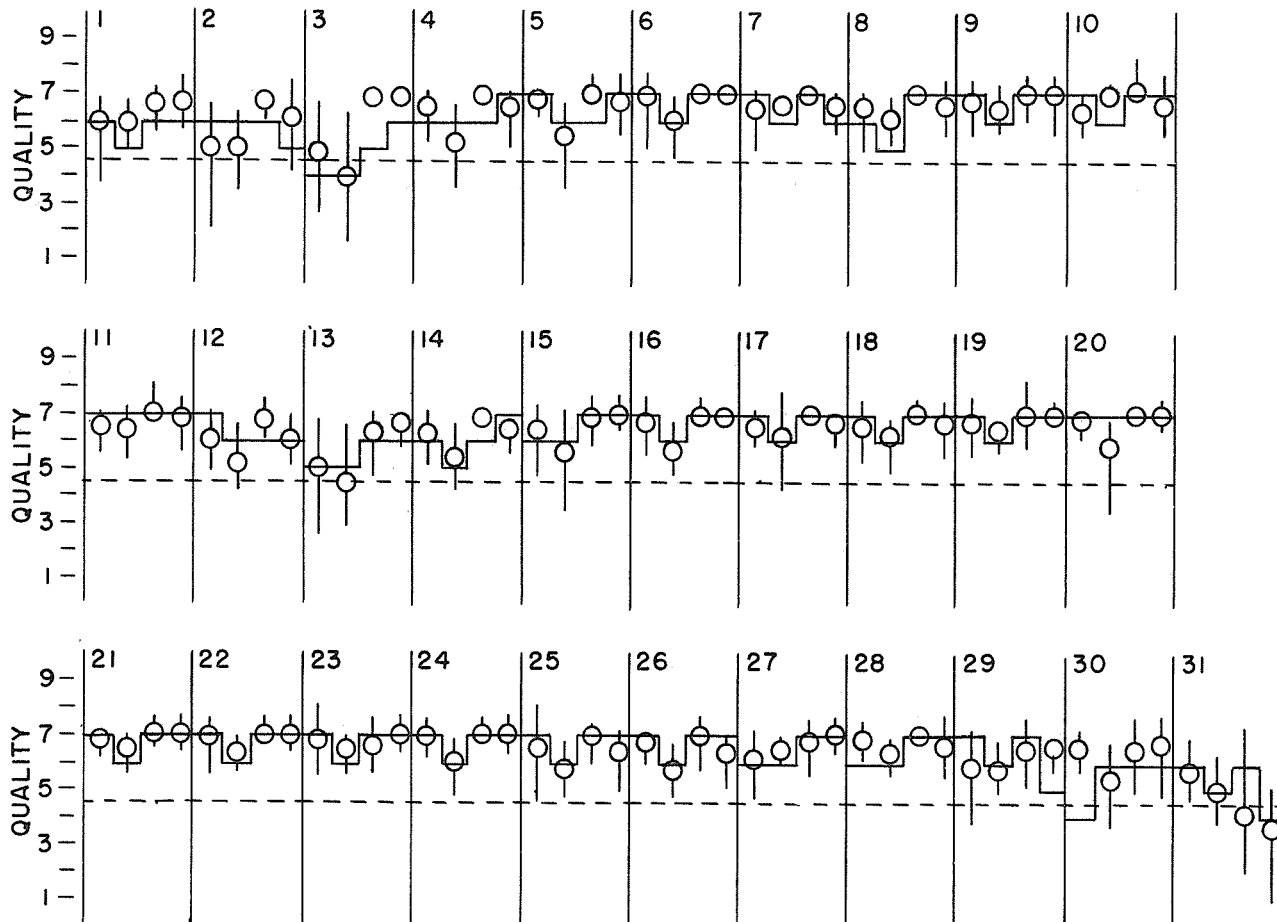
North Atlantic

- Short-term forecast

| range of reports

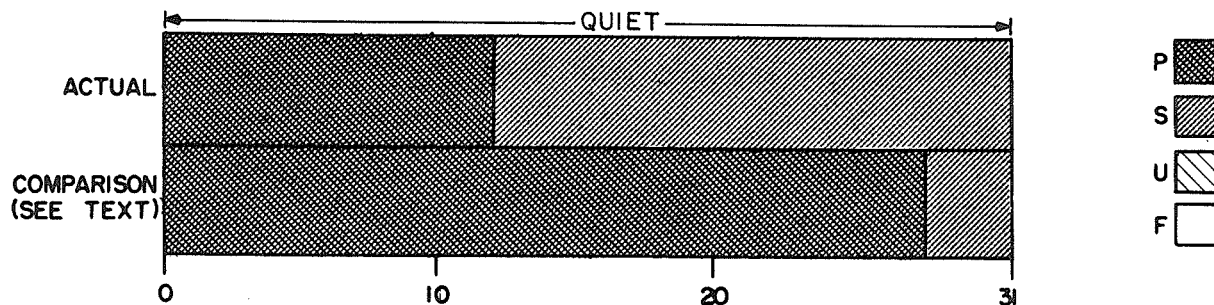
o Quality figure

DAY



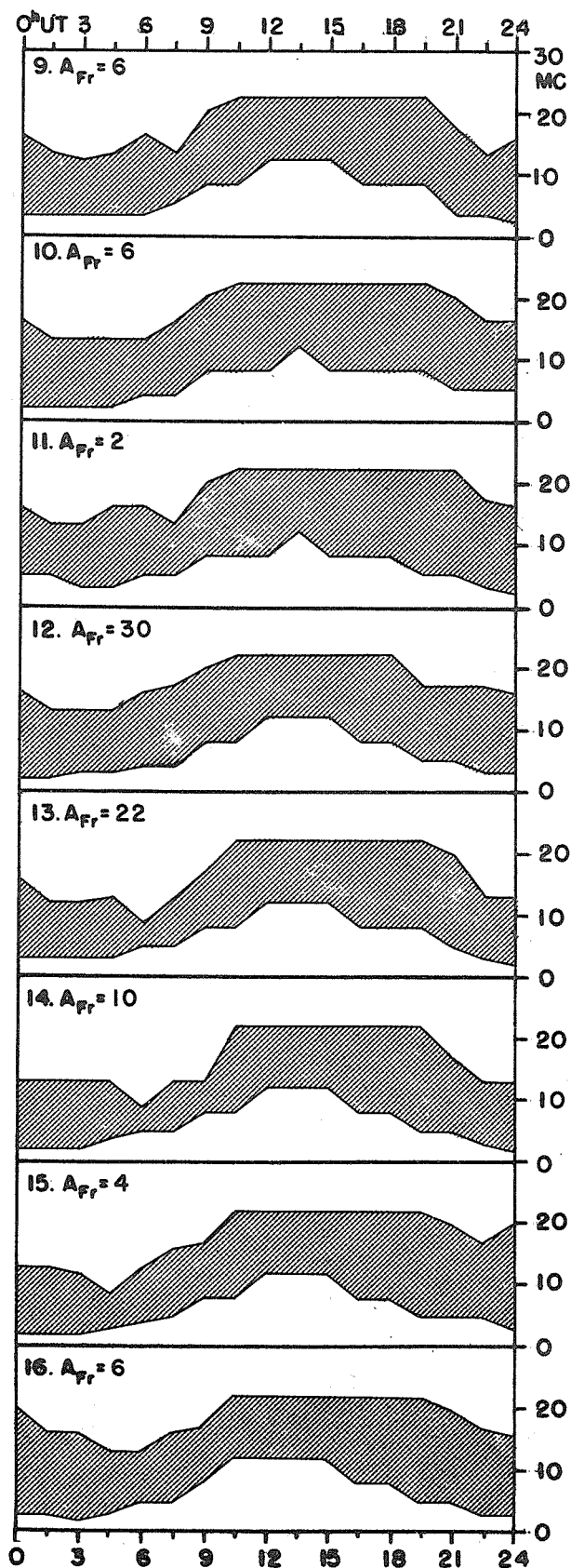
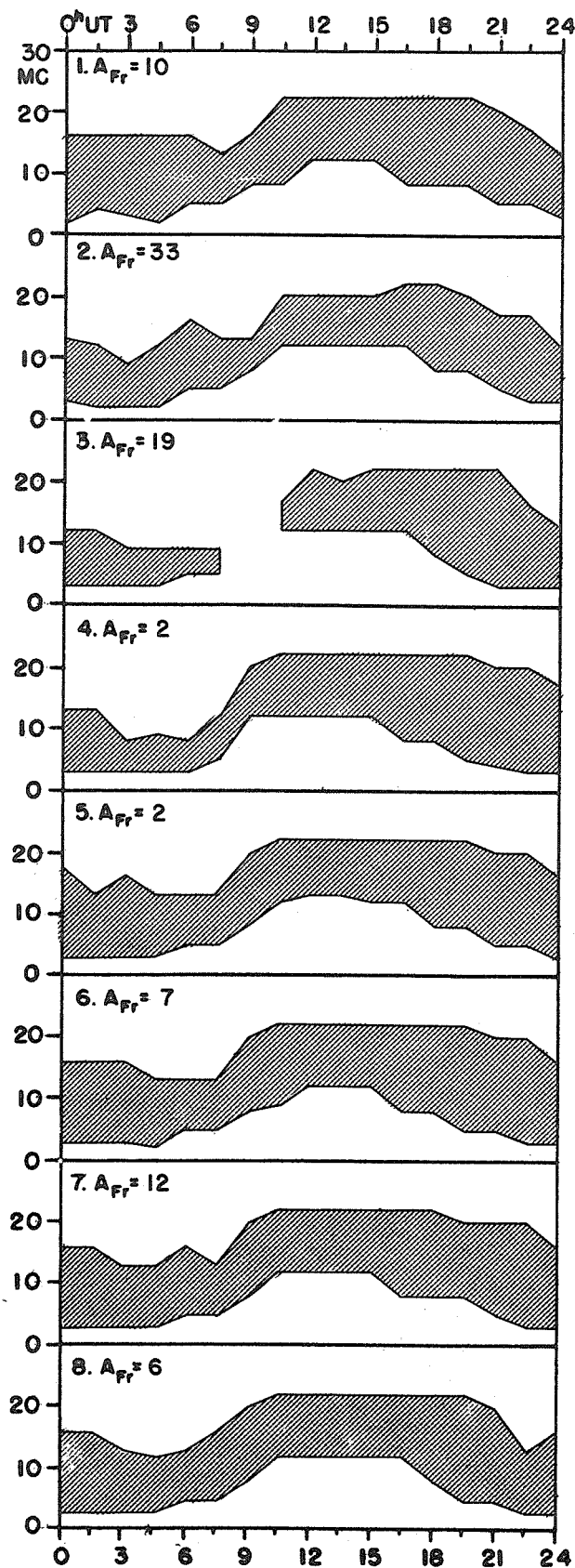
Outcome of advance forecasts - final estimates (1 to 7 days ahead) -
High latitude radio propagation conditions

HIGH LATITUDE



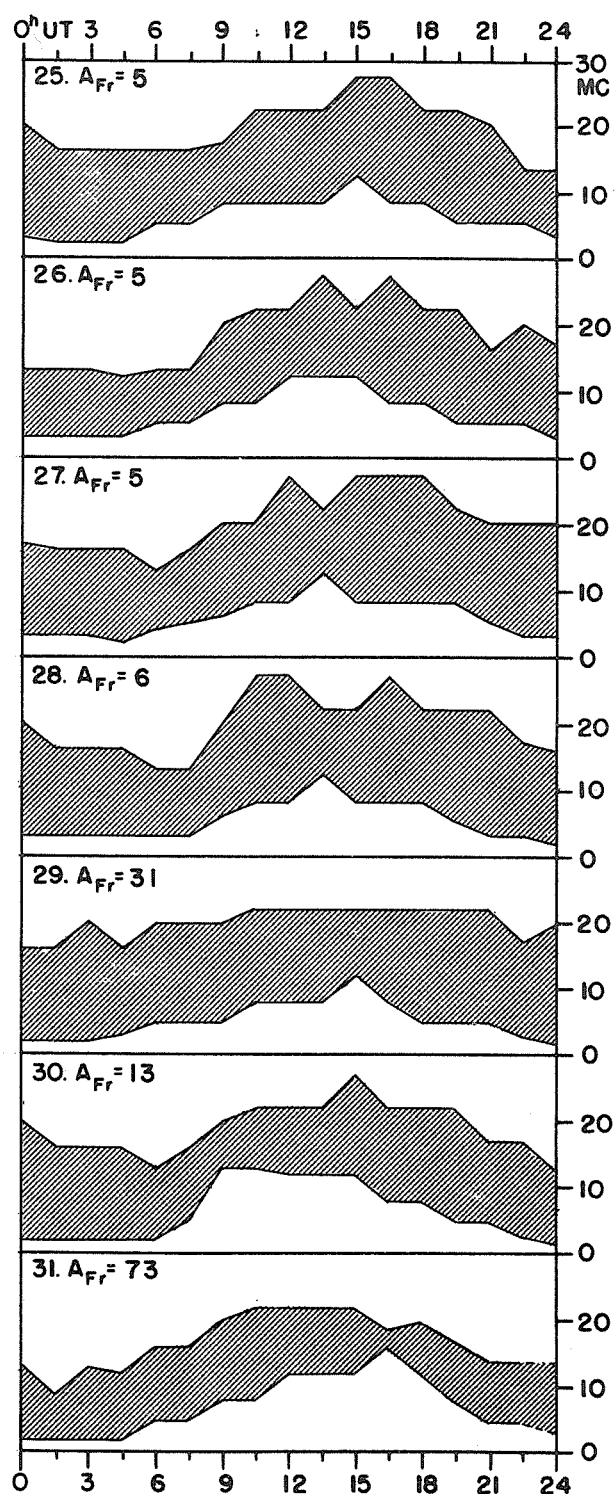
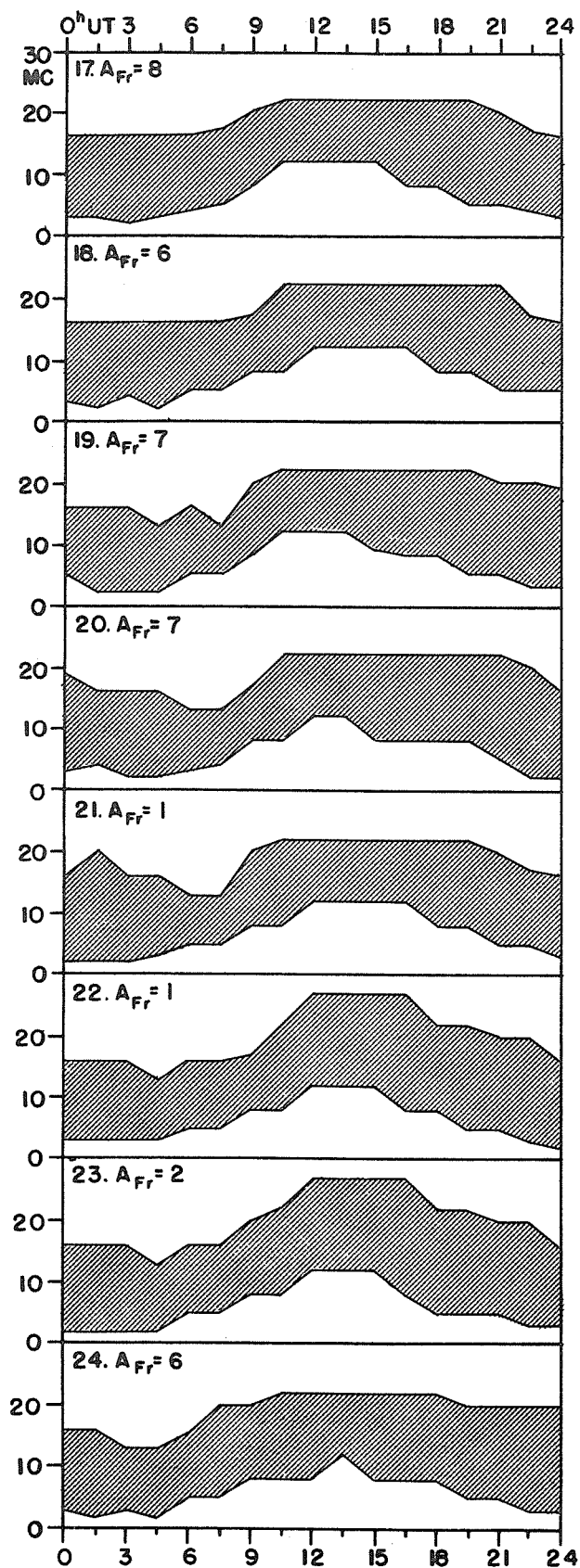
TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

OCTOBER 1968



TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

OCTOBER 1968



IER-FB-292

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For explanations of the data contained herein see "Descriptive Text" published in February 1968.

100
Jun 68

SOLAR FLARES

Confirmed

JUNE 1968

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	
	1968 JUNE																
GRP15615	01	0526	0539	0528	N09	E08	.217	9419	1.8	13	-N			1.11			4 4 4 8
MANI	01	0524	0540	0527	N09	E10	.240	9419	2.0	16	-N	2	0527	.72	.74		
CATA	01	0525	0540	0525	N09	E08	.217	9419	1.8	15	-N		0525	.34	.36	178	
CRON	01	0527	0538	0529	N10	E08	.231	9419	1.8	11	-N			1.40	1.40		H
ABST	01	0527	0857D	0530	N08	E07	.193	9419	1.8	210D	1N	C	0530	1.98	2.02	66	EK
GRP15618	01	0733	0802	0739	S12	E10	.260	9418	2.1	29	1N			2.81			5 5 5 7
CATA	01	0720	0810	0730	S14	E06	.252	9418	1.8	50	-F		0730	.46	.48	144	
BUCA	01	0730E	0811D	0739	S10	E11	.248	9418	2.1	41D	1F	P	0739	4.42	4.50		
CATA	01	0730	0815	0740	S13	E10	.272	9418	2.1	45	-N		0740	2.32	2.40	158	
CANR	01	0733	0804	0737	S14	E11	.296	9418	2.1	31	-N	C		2.00	2.00		L
CRON	01	0735	0753	0739	S11	E11	.259	9418	2.1	18	1N	C		2.30	2.30		E
CAPS	01	0736	0753D		S12	E10	.260	9418	2.1	17D	1F	3	0739	3.00	3.20	152	H
GRP15619	01	0836	0859	0843	N08	E07	.193	9419	1.9	23	-N			1.20			3 3 3 6
CAPE	01	0835	0854D	0845	N09	E07	.207	9419	1.9	19D	1N	P	0845	2.22	2.30		H
CATA	01	0835	0900	0840	N08	E07	.193	9419	1.9	25	-N		0840	.58	.60	162	T
CAPS	01	0838	0858		N08	E06	.183	9419	1.8	20	-B	3	0840	.80	.80	197	HJ
GRP15620	01	0902	0912	0904	N24	W27	.588	9413	30.4	10	-N			1.27			3 3 3 6
CAPS	01	0901E	0910D		N22	W27	.570	9413	30.4	9D	-N	1	0903	1.70	2.00	166	
CANR	01	0902	0910	0904	N23	W26	.569	9413	30.4	8	-F	C		.90	1.00		
CAPE	01	0903E	0916D		N26	W27	.606	9413	30.4	13D	-N	P	0904	1.21	1.50		F
GRP15628	01	1627	1646	1631	N08	E04	.166	9419	2.0	19	-B			1.21			7 7 7 9
HALE	01	1611	1651	1630	N09	E04	.182	9419	2.0	40	-B	3	1630	1.03	1.00		FH
SANM	01	1611	1642D		N08	E02	.155	9419	1.8	31D	-N	P	1629	.65	.66		E
BOUL	01	1625	1643	1629	N06	E04	.136	9419	2.0	18	-N	C		1.30	1.30		H
HUAN	01	1626	1647	1630	N09	E03	.176	9419	1.9	21	-B	2	1630	1.39	1.39		H
SACP	01	1628	1650	1630	N09	E04	.182	9419	2.0	22	1B	C		2.58	2.53		
CANR	01	1630	1641	1632	N08	E04	.166	9419	2.0	11	-B	C		1.10	1.10		EMI
HOUT	01	1633E	1647	1633U	N08	E05	.174	9419	2.1	14D	-N	C		.40	.40		
GRP15636	02	0657	0817	0704	N10	W04	.196	9419	2.0	80	-F			1.61			5 4 4 10
BUCA	02	0655E	0735	0704	N10	W04	.196	9419	2.0	40D	-N	C	0704	1.32	1.30		
CAPS	02	0657E	0714D		N12	W05	.234	9419	1.9	17D	-F	1	0700	.80	.80	145	
ABST	02	0658	0722D	0702	N09	W05	.187	9419	1.9	24D	1N	C	0702	2.35	2.38	72	EJ
SIBE	02	0705E	0714D	0707	N09	W03	.174	9419	2.1	9D	-F	P	0707	1.98	2.00	73	DI
ISTA	02	0715E	0817		N08	W05	.172	9419	1.9	62D	-N						
GRP15643	02	1333	1429	1347	S32	E07	.532	9420	3.1	56	1N			3.66			7 7 7 7
SACP	02	1329	1436	1346	S31	E08	.520	9420	3.2	67	1N	C		4.14	4.32		
LOCA	02	1333	1435	1350	S33	E08	.549	9420	3.2	62	1N	V	1350	3.99	4.90		H
CAPE	02	1333	1420	1350	S31	E07	.517	9420	3.1	47	1N	C	1350	3.87	4.60		FH
HUAN	02	1333	1456	1346	S31	E08	.520	9420	3.2	83	1N	2	1346	2.99	3.14		L
CAPS	02	1334	1411		S31	E07	.517	9420	3.1	37	2N	2	1350	5.00	6.00	225	MIKL
MCMA	02	1334	1437	1349	S33	E07	.546	9420	3.1	63	1B	C	1349	2.84	3.20		FL
CANR	02	1337	1405	1339	S34	E07	.560	9420	3.1	28	1N	C		2.80	3.40		K
CANR	02	1337	1405	1347	S34	E07	.560	9420	3.1	28	1N						
GRP15652	03	0255	0329	0300	N09	W15	.304	9419	2.0	34	-B			2.43			6 6 6 6
HALE	03	0252	0327	0300	N09	W15	.304	9419	2.0	35	-B	2	0300	1.86	1.90		H
CULG	03	0253	0345D	0300	N10	W14	.299	9419	2.1	52D	1N	2	P	3.61	3.50		H
MANI	03	0255	0322	0303	N10	W11	.261	9419	2.3	27	1B	2	0303	2.15	2.23		
KODA	03	0257E	0316	0257	N09	W16	.318	9419	1.9	19D	-B	P	0258	1.93	2.00	3.08	H
TACH	03	0258	0354	0300	N08	W16	.310	9419	1.9	56	-N	C		1.83	1.90		EH
CRON	03	0300E	0310	0300U	N09	W15	.304	9419	2.0	10D	1N	C	0300	3.20	3.20	64	B
5 STATIONS REPORTING GROUP 15654. 2 STATIONS OBSERVING AND NOT REPORTING.																	
GRP15654	03	1124	1223	1145	N19	E27	.543	9423	5.5	59	-N			1.39			3 2 2 6
MONT	03	1120	1200		N21	E26	.548	9423	5.4	40	1F		1120	2.06			
MCMA	03	1123	1225	1145	N18	E26	.523	9423	5.4	62	-N	C	1145	.93	1.10		E
CAPE	03	1125	1220	1145	N19	E27	.543	9423	5.5	55	1N	C	1145	1.85	2.20		F
15654	03	1135	1214	(1156)	N19	E27	.543	9423	5.5	39	-F			.45			2 2 1 8
ONDR	03	1135	1212		N19	E26	.531	9423	5.4	37	-F	V	1156			1.40	C
HUAN	03	1152E	1215		N19	E27	.543	9423	5.5	23D	-F	1	1155	.45	.48		E
GRP15655	03	1226	1240	1228	S22	W90	1.000	9412	27.8	14	-N			.37			3 3 1 7
MCMA	03	1226	1240	1228	S22	W90	1.000	9412	27.8	14	-N	C	1228				A
HUAN	03	1226	1239		S22	W90	1.000	9412	27.8	13	-N	1	1228	.37			E
MONT	03	1230E	1240		S22	W90	1.000	9412	27.8	10D	1B						
GRP15658	03	1606	1616	1609	S21	W90	1.000	9412	27.9	10	-N			.39			4 4 3 10
HALE	03	1604	1618	1611	S22	W90	1.000	9412	27.9	14	-N	2	1611	.41			
MCMA	03	1606	1614	1607	S22	W90	1.000	9412	27.9	8	-N	C	1607				A
HUAN	03	1606	1616	1608	S21	W90	1.000	9412	27.9	10	-N	2	1608	.37			
BOUL	03	1606	1615	1609	S20	W90	1.000	9412	27.9	9	-N	C		.40	1.60		

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Ha
	1968 JUNE																
GRP15660	03	1912	1924	1916	S15	E67	.925	9429	8.8	12	-N			.54			3 3 3 4
HALE	03	1912	1926	1914	S15	E66	.919	9429	8.8	14	-F	2	C	1914	.41		
BOUL	03	1915U	1922	1918	S16	E67	.926	9429	8.8	70	-N		C		.80	1.80	
MCMA	03	1916E	1918D		S15	E68	.931	9429	8.9	2D	-N		P	1916	.41	1.20	E
GRP15667	03	2331	0011	2343	S30	W15	.542	9420	2.9	40	1N			2.94			6 5 5 6
CULG	03	2329	0022	2346	S29	W15	.529	9420	2.9	53	1N	2	C		2.94	3.42	FL
HALE	03	2329	0005	2341	S29	W16	.536	9420	2.8	36	1B	2	C	2341	2.48	2.90	
MANI	03	2331	0007	2337	S30	W15	.542	9420	2.9	36	-N	1		2337	.62	.74	
VORO	03	2333	0011	2345	S30	W14	.536	9420	2.9	38	2B		C	2345	6.70	7.90	250 EKL
SACP	03	2334E	2336D	2335U	S31	W15	.555	9420	2.9	20	1N		C		1.97	2.09	
CRON	03	2355E	0005	2356U	S30	W18	.561	9420	2.6	100	-N		C		1.20	1.40	B
HALE	04	0008E	0027		S28	W15	.518	9420	2.9	19D	-N	1	C	0008	.83	1.00	
GRP15670	04	0440	0452	0442	N28	W66	.934	9413	30.2	12	-N			.92			3 3 3 9
TACH	04	0438	0458	0440	N28	W66	.934	9413	30.2	20	1N		C	0440	1.64		2.10 64 EH
CRON	04	0439	0446	0440	N28	W68	.945	9413	30.1	7	-N		C		.80	1.90	
MANI	04	0443	0445D	0445	N29	W65	.930	9413	30.3	2D	-F	2		0445	.31	.68	
GRP15672	04	0659	0726	0703	S30	W22	.592	9420	2.6	27	1N			2.63			8 8 7 12
CATA	04	0655	0740	0702	S31	W21	.596	9420	2.7	45	1N			2.02	2.51		182 Z
CAPE	04	0657	0720	0704	S28	W23	.579	9420	2.6	23	1F		C	0704	2.39	3.00	F
MANI	04	0658	0741	0704	S30	W23	.600	9420	2.6	43	-N	2		0704	1.55		
CRON	04	0659	0707	0700	S30	W23	.600	9420	2.6	8	1N		C		1.20	1.60	EH
CAPS	04	0701	0718D		S30	W19	.570	9420	2.9	17D	1F	2		0704	3.00	3.60	157 HJ
MONT	04	0701E	0830		S30	W25	.616	9420	2.4	89D	-N			0701	1.03		
WEND	04	0702E	0742		S30	W21	.585	9420	2.7	40D	2N		P		7.22		
MANI	04	0703E	0723	0706	S30	W23	.600	9420	2.6	20D	-F	2		0706	.46	.58	
ONDR	04	0705E	0716	0707	S28	W24	.587	9420	2.5	11D	1F		V	0707			1.70 CHJ
GRP15674	04	0851	0917	0856	S12	E61	.880	9429	8.9	26	1N			2.39			7 7 7 8
CAPE	04	0850	0918	0856	S13	E60	.873	9429	8.9	28	1N		C	0856	1.33	2.70	F
WEND	04	0850	0920		S13	E57	.847	9429	8.6	30	2N		P		8.25		
CATA	04	0850	0920	0855	S11	E61	.879	9429	8.9	30	-B			0855	.58	1.23	240
CATA	04	0850	0935	0855	S12	E57	.846	9429	8.6	45	-B			0855	.29	.55	200
MANI	04	0851	0917D	0856	S13	E67	.924	9429	9.4	26D	-N	2		0856	.77	1.47	
CRON	04	0853	0902	0855	S12	E58	.854	9429	8.7	9	-N		C		.90	1.70	E
MONT	04	0853	0920	0856	S13	E65	.911	9429	9.2	27	1B			0856	3.09		
CAPS	04	0902E	0923D		S11	E58	.853	9429	8.7	21D	1N	1		0903	1.80	3.20	BJ
GRP15675	04	1018	1058	1027	S12	E60	.872	9429	8.9	40	1N			2.04			7 6 5 8
CAPS	04	1015	1055		S11	E58	.853	9429	8.8	40	1N	2		1020	1.80	3.20	195 J
MONT	04	1017	1110	1020	S13	E63	.896	9429	9.2	53	1N			1020	3.09		
CAPE	04	1019E	1100	1023	S12	E60	.872	9429	8.9	41D	1N		P	1023	2.49	5.00	F
ONDR	04	1020E	1040		S12	E62	.888	9429	9.1	20D	2F		V	1023			2.10 209 CJL
CATA	04	1020	1100D	1020	S12	E58	.854	9429	8.8	40D	1B			1020	1.16	2.25	
LOCA	04	1022E	1104	1030	S13	E60	.873	9429	8.9	42D	1N		V	1030	1.68	3.40	
CANR	04	1038E	1052U	1040U	S14	E59	.865	9429	8.9	14D	1N		C		1.20	2.30	
GRP15681	04	1748	1814	1755	S13	E57	.847	9429	9.0	26	-N			.90			5 5 5 6
HALE	04	1744	1816D	1753	S12	E54	.817	9429	8.8	32D	-B	2	P	1753	1.13	2.00	
MCMA	04	1748	1817	1753	S13	E59	.864	9429	9.2	29	-N		C	1753	.77	1.60	E
HUAN	04	1749	1810	1754	S13	E56	.838	9429	8.9	21	-N	2		1754	.88	1.21	
CANR	04	1751	1812	1754	S14	E58	.857	9429	9.1	21	-F		C		.70	1.30	
SACP	04	1756E	1815U	1759	S11	E56	.835	9429	8.9	19D	-N		C		1.03	1.44	
GRP15691	04	2307	0000	2314	S31	W27	.642	9420	2.9	53	-B			2.08			3 2 2 3
SACP	04	2307	2356D	2315D	S31	W27	.642	9420	2.9	49D	1B		C		2.91	3.25	
HALE	04	2307	0000	2312	S30	W27	.633	9420	2.9	53	-B	1		2312	1.24	1.60	
MANI	04	2336E	2349	2337	S31	W30	.667	9420	2.7	13D	-N	1		2337	1.34	1.80	
GRP15700	05	1222	1245	1227	S38	W29	.722	9420	3.3	23	-N			1.11			6 6 6 7
SACP	05	1221	1245	1227	S39	W28	.725	9420	3.4	24	-N			1.16	1.38		
MCMA	05	1221	1255	1229	S39	W28	.725	9420	3.4	34	-B		C	1229	1.03	1.40	E
CAPE	05	1221	1255	1229	S38	W28	.716	9420	3.4	34	1N		C	1229	1.61	2.30	V
HUAN	05	1223	1234	1226	S38	W28	.716	9420	3.4	11	-N	2		1226	.67	.80	
KIEV	05	1224	1245	1226	S38	W32	.742	9420	3.1	21	-N		C	1226	1.55		65 DI
HTPR	05	1225E	1226D		S38	W29	.722	9420	3.3	1D	-B			1226	.62	.90	C
HTPR	05	1231E	1235D		S38	W29	.722	9420	3.3	4D	-N						B
GRP15711	05	1943	2001	1946	S15	E38	.647	9429	8.7	18	-N			.85			4 4 4 5
HALE	05	1942	2013	1944	S15	E36	.623	9429	8.5	31	1B	2		1944	1.65	2.10	FJL
HOUT	05	1943U	1953	1944U	S15	E39	.660	9429	8.7	10D	-N		C		.30	.40	
MCMA	05	1944	1955	1947	S15	E38	.647	9429	8.7	11	-N		C	1947	.62	.80	E
SACP	05	1949E	2002	1949	S14	E40	.668	9429	8.8	13D	-N		C		.84	.95	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	MAX. INT. %	
GRP15715	05	2048	2108	2053	S16	E38	.652	9429	8.7	20	1B			2.87			6 6 6 6	
MCMA	05	2038	2120	2052	S15	E38	.647	9429	8.7	42	1B	C	2052	2.37	3.10		FV	
HOUT	05	2049	2104	2050	S16	E39	.664	9429	8.8	15	-N	C		.90	1.30			
HALE	05	2049	2102D	2053	S14	E37	.620	9429	8.6	130	2B	2	C	2053	6.19	7.90		FJV
SACP	05	2049	2113	2055	S14	E39	.656	9429	8.8	24	1B	C		4.16	4.69			
HUAN	05	2050	2111	2054	S15	E40	.672	9429	8.9	21	-B	2	C	2054	1.50	1.72		E
BOUL	05	2051	2100	2052	S16	E37	.640	9429	8.6	9	1N	C		2.10	2.70		H	
GRP15719	05	2307	2345	2312	N21	E84	.995	9443	12.3	38	1N			1.11			3 3 3 3	
HALE	05	2306	2326	2312	N21	E81	.989	9443	12.0	20	1B	2	C	2312	1.55			CGK
SACP	05	2307	2323	2312	N22	E84	.995	9443	12.3	16	-N	C		.84				
CULG	05	2307	2357	2312	N22	E88	1.000	9443	12.6	50	1F	2	C		.93			
HALE	05	2342	2354	2347	N19	E81	.989	9443	12.1	12	-B	2	C	2347	.41			CG
GRP15738	06	0932	0952	0935	S17	E33	.597	9429	8.9	20	-N			.66			4 4 4 7	
CAPE	06	0930	0950	0934	S15	E34	.598	9429	8.9	20	-N	C	0934	.92	1.20		F	
ARCE	06	0931E	0955D		S19	E35	.632	9429	9.0	24D	-N	C	0937	.38	.50			
ZURI	06	0934	0952	0935	S14	E31	.555	9429	8.7	18	-N	C	0935	1.05	1.30			
CAPS	06	0936E	0948D		S20	E30	.580	9429	8.6	12D	-N	2		.30	.40	182	C	
GRP15742	06	1525	1738	1539	S13	E30	.536	9429	8.9	133	1B			2.51			3 2 2 4	
MCMA	06	1525	1720	1534	S14	E29	.528	9429	8.8	115	1B	C	1534	2.84	3.30		F	
SACP	06	1525	1630U	1543U	S12	E30	.531	9429	8.9	65D	1N	C		2.18	2.28			
HALE	06	1543E	1738		S12	E28	.504	9429	8.8	115D	2B	3	C	1602	7.53	8.70		BU
GRP15755	07	0139	0151	0142	N19	E67	.929	9443	12.1	12	-N			.86			4 4 4 5	
VORO	07	0138	0148	0141	N19	E70	.946	9443	12.3	10	1N	C	0141	1.96	5.24	206	DH	
HALE	07	0139	0150	0142	N19	E67	.929	9443	12.1	11	-B	1	C	0142	.21			
MANI	07	0140	0149	0142	N17	E66	.921	9443	12.0	9	-F	2	C	0142	.62	1.28		
SACP	07	0143E	0155	0143U	N19	E66	.923	9443	12.0	12D	-N	P		.63	1.10			
GRP15757	07	0317	0410	0327	S13	E23	.442	9429	8.9	53	1B			2.85			4 3 3 4	
CRON	07	0316U	0410U	0332U	S13	E22	.429	9429	8.8	54D	1N	C		2.40	2.60			
HALE	07	0316	0417	0324	S13	E24	.456	9429	8.9	61	-B	1	C	0324	1.60	1.80		IJW
MANI	07	0317	0453D	0340	S13	E23	.442	9429	8.9	96D	1N	2	C	0340	3.63	3.68		
TACH	07	0318	0402	0324	S12	E24	.449	9429	8.9	44	2B	C	0324	4.56	5.20	2.70 176	FJU	
760 CRON	07	0455	0502	0457	N18	E65	.916	9443	12.1	7	-N	C		.60	1.30		2	
GRP15763	07	0655	0719	0700	S14	W51	.792	9422	3.5	24	-N			.62			3 3 2 4	
ISTA	07	0654	0723	0659	S10	W50	.774	9422	3.5	29	-N							
BUCA	07	0655E	0720D		S14	W52	.802	9422	3.4	25D	-N	C	0702	.66	1.10			
CATA	07	0655	0715	0700	S17	W52	.808	9422	3.4	20	-N		0700	.58	.99	186		
GRP15767	07	1119	1142	1121	N22	E14	.436	9428	8.5	23	-N			2.45			4 4 4 4	
HTPR	07	1117	1140	1122	N21	E15	.432	9428	8.6	23	-N		1122	1.86	2.00			
KIEV	07	1119	1330	1121	N21	E16	.441	9428	8.7	131	1N	C	1121	3.61	4.00	65	EI	
CATA	07	1119E	1145	1121	N21	E13	.415	9428	8.4	26D	-B		1121	1.73	1.92	224		
KHAR	07	1119	1140D	1120	N23	E13	.442	9428	8.4	21D	1F	P	1123	2.58	2.70	1.80	D	
GRP15768	07	1220	1247	1223	N21	E14	.423	9428	8.6	27	-N			1.07			3 3 3 5	
HUAN	07	1220	1239		N21	E14	.423	9428	8.6	19	-N	1	C	1227	1.03	1.04		E
HTPR	07	1220	1245	1223	N21	E15	.432	9428	8.6	25	-N		1223	1.24	1.30			
MCMA	07	1226E	1257		N21	E13	.415	9428	8.5	31D	-N	P	1228	.93	1.00		E	
8 STATIONS REPORTING GROUP 15769. 0 STATIONS OBSERVING AND NOT REPORTING.																		
GRP15769	07	1306	1356	1323	S14	E17	.373	9429	8.8	50	1N			3.81			4 4 4 8	
ZURI	07	1306E	1400	1314	S13	E16	.351	9429	8.7	54D	2N	C	1314	8.41	9.00			
HOUT	07	1320E	1335	1321U	S14	E17	.373	9429	8.8	15D	1N	C		2.30	2.50			
LOCA	07	1325E	1413	1330	S13	E16	.351	9429	8.8	48D	1N	C	1330	2.73	2.90			
CANR	07	1326E	1327D	1326U	S14	E17	.373	9429	8.8	1D	-F	C		1.80	2.00		B	
15769	07	1225	1515	1319	S13	E17	.363	9429	8.8	170	*1B			3.30			5 2 2 6	
HTPR	07	1225	1400	1250	S12	E16	.341	9429	8.7	95	1B		1250	3.51	3.60			
MCMA	07	1226E	1515		S13	E18	.376	9429	8.9	169D	1B	C	1248	3.09	3.60		FJ	
KIEV	07	1226	1240	1229	S14	E16	.361	9429	8.7	14	1N	C	1229	3.09	3.50		EI	
HUAN	07	1227	1410		S13	E15	.338	9429	8.6	103	1N	1	C	1301	2.73	2.75		EI
HOUT	07	1436E	1440	1438U	S14	E15	.349	9429	8.7	4D	-N	C		.40	.50			
GRP15770	07	1328	1341	1332	N18	E60	.880	9443	12.1	13	-N			.62			4 4 4 8	
HOUT	07	1325	1340	1329	N18	E59	.872	9443	12.0	15	-N	C		.80	1.60			
MCMA	07	1327	1440	1332	N18	E60	.880	9443	12.1	73	-N	C	1332	.83	1.60		EK	
HUAN	07	1328	1340		N17	E59	.870	9443	12.0	12	-F	1	C	1330	.21	.31		D
LOCA	07	1330	1344	1335	N17	E60	.878	9443	12.1	14	-N	V	1335	.63	1.30			

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
GRP15772	07	1511	1533	1516	N21 E13	.415	9428	8.6	22	-N			1.14				6 6 6 6
MCMA	07	1505	1540	1517	N21 E12	.407	9428	8.5	35	-N	C	1517	1.03	1.10			E
HUAN	07	1509	1535		N21 E12	.407	9428	8.5	26	-N	1 C	1518	.88	.88			E
CANR	07	1510	1530	1513	N21 E13	.415	9428	8.6	20	-F	C		1.10	1.20			
HOUT	07	1513	1521	1515	N21 E12	.407	9428	8.5	8	-N	C		1.00	1.10			
LOCA	07	1513	1538	1516	N20 E15	.419	9428	8.8	25	-N	C	1516	1.26	1.40			
HTPR	07	1515	1535	1518	N20 E13	.402	9428	8.6	20	-F	C	1518	1.55	1.60			
GRP15774	07	1607	1704	1616	N22 W35	.650	9423	5.0	57	1N			1.91				7 7 7 7
MCMA	07	1603	1750	1619	N21 W35	.644	9423	5.0	107	1B	C	1619	1.80	2.30			E
CANR	07	1604	1635	1609	N22 W35	.650	9423	5.0	31	1N	C		1.80	2.30			K
HTPR	07	1605	1720	1620	N20 W35	.638	9423	5.0	75	1N		1620	2.37	3.00			
SACP	07	1608	1717	1616U	N21 W35	.644	9423	5.0	69D	1N	C		1.97	2.20			
HOUT	07	1609	1627	1614	N21 W36	.655	9423	5.0	18	1N	C		1.60	2.10			
HUAN	07	1611	1728		N24 W35	.663	9423	5.0	77	-N	2 C	1619	1.44	1.64			E
BOUL	07	1620E	1640	1620U	N22 W35	.650	9423	5.1	20D	1N	C		2.40	3.10			BE
6 STATIONS REPORTING GROUP 15799. 0 STATIONS OBSERVING AND NOT REPORTING.																	
GRP15799	08	1755	1857	1803	S14 E01	.245	9429	8.8	62	1N			4.06				4 4 4 6
MCMA	08	1730	1902D	1805	S16 E00	.278	9429	8.7	92D	1N		1805	4.13	4.40			FL
HUAN	08	1744E	1851D		S13 E01	.228	9429	8.8	67D	1F	1 C	1807	3.76	3.76			EI
HOUT	08	1755	1820	1802	S13 E02	.230	9429	8.9	25	1N	C		3.50	3.50			E
SACP	08	1803E	1926	1803U	S13 E01	.228	9429	8.8	83D	1N	C		4.86	4.77			
15799	08	1733	1830	1747	S15 W01	.262	9429	8.7	57	*1N			5.25				2 2 2 4
HALE	08	1726	1854	1744	S14 E00	.244	9429	8.7	88	2N	3 C	1744	6.70	6.90			U
BOUL	08	1740	1805	1749	S15 W01	.262	9429	8.7	25	1N	C		3.80	3.80			E
GRP15804	08	2252	2314	2255	S14 W02	.247	9429	8.8	22	-N			1.84				3 3 3 6
SACP	08	2251	2322	2257	S14 W02	.247	9429	8.8	31	1N	C		2.37	2.33			
HALE	08	2251	2315	2254	S13 W02	.230	9429	8.8	24	-N	2 C	2254	1.75	1.80			HF
BOUL	08	2253	2305	2255	S14 W03	.250	9429	8.7	12	-N	C		1.40	1.40			H
GRP15805	09	0026	0156	0039	N15 E39	.659	9443	11.9	90	2B			4.65				6 4 4 6
CULG	09	0024	0253	0036	N14 E38	.643	9443	11.9	149	2N	2 C		4.07	5.43			FU
HALE	09	0025	0157	0038	N16 E39	.663	9443	11.9	92	1B	2 C	0038	3.61	4.80			
SACP	09	0026	0154	0037	N15 E40	.671	9443	12.0	88	2B	C		6.12	6.97			
MANI	09	0027E	0117	0049	N14 E39	.655	9443	11.9	50D	1N	1 C	0046	3.09	4.11			EK
BOUL	09	0029	0105	0035	N14 E37	.631	9443	11.8	36	2N	C		4.80	6.20			E
MITK	09	0122E	0209		N13 E37	.627	9443	11.8	47D	1N	C	0135	2.17	2.80			
GRP15821	09	0835	1017	0856	S14 W08	.281	9429	8.8	102	3B			19.02				11 10 9 11
CAPE	09	0830	0905D		S15 W07	.289	9429	8.8	350	3N	P	0905	15.58	16.20			F
HTPR	09	0830	1030	0855	S13 W13	.317	9429	8.4	120	3B		0855	18.56	18.20			
MANI	09	0831E	0855D	0850	S14 W10	.299	9429	8.6	240	2N	1 C	0850	4.64	4.86			
ISTA	09	0832	0945D	0848	S14 W07	.274	9429	8.8	73D	2B							
BUCA	09	0840E	1021D	0904	S13 W10	.285	9429	8.6	101D	2B	P	0904	9.96	10.30			
CATA	09	0840	1120	0857	S15 W08	.296	9429	8.8	160	4B		0857	34.81	36.20			372 F
CRON	09	0843	0920	0854	S16 W06	.298	9429	8.9	37	3B	C		20.80	21.80			
UCCL	09	0850E	0942D		S12 W07	.244	9429	8.8	52D	4B	P	0856	24.90	28.60			
MONT	09	0850E	0918D	0855	S13 W04	.240	9429	9.1	28D	3B		0855	11.34				
KHAR	09	0903E	1030D	0905	S14 W08	.281	9429	8.8	87D	4N	P	0907	30.63	32.00	2.70		EHDQ
CAPS	09	0924E	1045D		S14 W10	.299	9429	8.6	81D	2B	1 C	0951	8.00	8.40		237	
7 STATIONS REPORTING GROUP 15824. 0 STATIONS OBSERVING AND NOT REPORTING.																	
GRP15824	09	1025	1058	1028	N20 W12	.390	9428	8.5	33	1N			3.91				5 4 4 5
CAFF	09	0905E	1055		N10 W12	.265	9428	8.5	110D	3N	C	0909	18.81	19.15			H
HTPR	09	1023	1050	1031	N20 W12	.390	9428	8.5	27	1N		1031	1.96	2.10			
CATA	09	1025	1105	1025	N19 W11	.368	9428	8.6	40	1N		1025	2.02	2.19			166
MONT	09	1026E	1044D		N21 W11	.396	9428	8.6	18D	1N		1030	2.58				
KHAR	09	1027	1100D	1027	N18 W13	.372	9428	8.5	33D	2N	P	1030	9.08	9.80	1.90		E
15824	09	1036	1045	1040	N19 W08	.347	9428	8.8	9	*1N			3.81				3 3 3 8
CAPS	09	1036E	1045D		N18 W11	.354	9428	8.6	9D	2B	2 C	1039	7.00	7.30		239	B
CAFF	09	1038E	1045		N21 W04	.360	9428	9.1	7D	1N	C	1041	2.94	3.13			
CANR	09	1040E	1043D	1040U	N18 W10	.346	9428	8.7	3D	-N	C		1.50	1.70			
GRP15827	09	1341	1412	1349	S27 W73	.966	9436	4.1	31	-N			.72				3 3 3 8
CAPE	09	1338	1415	1350	S28 W75	.974	9436	3.9	37	-N	C	1350	.92				F
CAPS	09	1343E	1400D		S23 W69	.945	9436	4.4	17D	-F	1 C	1346	.70				J
SACP	09	1343	1409	1348	S30 W74	.972	9436	4.0	26	-N	C		.53	1.20			
GRP15828	09	1547	1557	1550	S21 W77	.978	9436	3.9	10	-N			.44				3 3 3 9
HOUT	09	1542E	1555	1545U	S21 W78	.981	9436	3.8	13D	-N	C		.50	1.50			
SACP	09	1547	1558	1552	S22 W75	.971	9436	4.0	11	-F	C		.42	.97			
BOUL	09	1551	1557	1554	S21 W79	.984	9436	3.7	6	-N	C		.40	1.20			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _a	MAX. INT. %	
GRP15830	09	1826	1837	1829	S28 W76	.977	9436	4.1	11	-N			.72			5 5 5 7	
BOUL	09	1826	1835	1829	S27 W78	.983	9436	3.9	9	1N	C		1.20	3.60		I	
MCMA	09	1826	1840	1829	S28 W80	.989	9436	3.8	14	-N		1829	.77			E	
HALE	09	1827	1838	1828	S29 W74	.971	9436	4.2	11	1N	2 C	1828	.93				
HOUT	09	1829E	1833D	1830U	S28 W75	.974	9436	4.1	4D	-N	C		.50	1.70			
HUAN	09	1833E	1835D		S28 W75	.974	9436	4.1	2D	-F	1 P	1834	.21			D	
GRP15833	10	0037	0055	0040	S28 W79	.986	9436	4.1	18	-N			.31			2 2 2 4	
HALE	10	0036	0053	0039	S28 W77	.981	9436	4.2	17	-N	1 C	0039	.31				
SACP	10	0038	0056	0041	S28 W81	.991	9436	4.0	18	-N	P		.31				
GRP15841	10	0625	0700	0635	N12 W12	.286	9430	9.4	35	-N			1.27			2 2 2 5	
BUCA	10	0620E	0655D		N12 W11	.274	9430	9.4	35D	-N	C	0632	1.66	1.70			
CATA	10	0630	0700	0635	N11 W12	.275	9430	9.4	30	-N		0635	.87	.90		155	
GRP15866	10	2007	2027	2011	S14 E41	.683	9449	13.9	20	-N			1.05			3 3 3 4	
HALE	10	2007	2023	2011	S14 E40	.671	9449	13.8	16	-B	1 C	2011	1.34	1.80		J	
HUAN	10	2007	2018D		S15 E41	.686	9449	13.9	11D	-N	1 P	2015	.25	.29		D	
SACP	10	2007	2030	2011	S13 E41	.679	9449	13.9	23	-N	C		1.56	1.80			
GRP15870	10	2206	2230	2211	S15 E40	.675	9449	13.9	24	1B			2.22			3 3 3 3	
HALE	10	2205	2222	2212	S14 E40	.671	9449	13.9	17	1B	1 C	2212	1.55	2.10		F	
BOUL	10	2206	2226	2209	S17 E40	.683	9449	13.9	20	1N	C		2.40	3.40		H	
SACP	10	2207	2241	2211	S14 E40	.671	9449	13.9	34	1B	C		2.70	3.09			
GRP15873	11	0029	0058	0035	S14 E38	.647	9449	13.9	29	1N			2.64			2 2 2 6	
SACP	11	0029	0059	0036	S14 E38	.647	9449	13.9	30	1N	C		1.98	2.22			
MITK	11	0029	0057	0033	S14 E37	.635	9449	13.8	28	1N	C	0033	3.30	4.30		E	
GRP15874	11	0310	0332	0319	S14 E37	.635	9449	13.9	22	1N			2.59			5 5 5 5	
MITK	11	0309	0337	0315	S14 E37	.635	9449	13.9	28	2N	C	0315	4.02	5.20		F	
TACH	11	0310E	0314D		S14 E36	.622	9449	13.8	4D	1N	P	0312	2.44	3.00		87 CJY	
MANI	11	0310	0331	0321	S14 E36	.622	9449	13.8	21	-B	2	0321	1.53	1.97			
CRON	11	0311	0325	0316	S14 E37	.635	9449	13.9	14	1N	C		2.50	3.30		I	
SIBE	11	0322E	0336	0323	S14 E37	.635	9449	13.9	14D	1N	P	0323	2.48	3.10		90 DT	
GRP15881	11	0934	0957	0936	S14 E34	.597	9449	13.9	23	1B			2.77			5 5 5 6	
HTPR	11	0932	0955	0935	S15 E35	.615	9449	14.0	23	-B		0935	1.55	1.80		H	
MEUD	11	0934	0950	0937	S15 E34	.602	9449	13.9	16	1B		0937	3.09	3.70			
CANR	11	0935	0948	0937	S15 E34	.602	9449	13.9	13	1N	C		2.10	2.70		E	
UCCL	11	0936	0959	0936	S12 E31	.548	9449	13.7	23	2B	C	0936	4.15	6.40			
CAPF	11	0938E	1015D		S14 E32	.571	9449	13.8	37D	1N	P	0940	2.94	3.70			
UCCL	11	0956	1010	0956	S13 E35	.605	9449	14.0	14	1N	C	0956	2.08	3.60		E	
GRP15883	11	0952	1007	0958	S13 W37	.631	9429	8.6	15	-N			.86			4 3 3 7	
HTPR	11	0950	1015	0958	S13 W44	.715	9429	8.1	25	-F		0958	.41	.50			
MEUD	11	0953	1007		S13 W34	.592	9429	8.9	14	-N		0957	.41	.50		E	
CAPF	11	0954E	0959		S13 W34	.592	9429	8.9	5D	1N	P	0958	1.76	2.14			
CAPS	11	0957E	1009D		S18 W28	.547	9429	9.3	12D	-N	2	1002	.80	1.00		168 CE	
GRP15884	11	1044	1103	1050	N12 E45	.720	9445	14.8	19	1N			1.33			4 4 4 4	
HTPR	11	1040	1110	1048	N09 E48	.749	9445	15.0	30	-F		1048	.72	1.00			
CANR	11	1046	1058	1048	N11 E43	.694	9445	14.7	12	-N	C		1.10	1.50		K	
CANR	11	1046	1058	1051	N11 E43	.694	9445	14.7	12	-N							
UCCL	11	1047	1103	1054	N10 E43	.692	9445	14.7	16	2N	C	1054	2.60	6.10			
CAPS	11	1052E	1102D		N16 E44	.720	9445	14.8	10D	-N	2	1055	.90	1.30		189 H	
GRP15885	11	1049	1056	1050	S14 E34	.597	9449	14.0	7	-N			1.46			2 2 2 4	
HTPR	11	1047	1053	1049	S15 E33	.590	9449	13.9	6	-F		1049	.83	.90			
UCCL	11	1051	1058	1051	S12 E35	.601	9449	14.1	7	1B	C	1051	2.08	3.60			
GRP15886	11	1216	1241	1222	S15 E33	.590	9449	14.0	25	-N			1.63			6 6 6 9	
HTPR	11	1215	1235	1217	S15 E33	.590	9449	14.0	20	-N		1217	.83	.90			
SACP	11	1215E	1251	1220	S13 E32	.566	9449	13.9	36D	-N	P		1.49	1.59			
CAPS	11	1216	1237		S17 E34	.613	9449	14.1	21	-N	3	1220	1.60	1.90		190 J	
KIEV	11	1217	1235	1220	S14 E33	.584	9449	14.0	18	1F	C	1220	3.61	4.30		60 I	
MCMA	11	1222E	1250		S16 E32	.583	9449	13.9	28D	-B	P	1229	1.03	1.30		E	
CATA	11	1230E	1235	1230	S13 E32	.566	9449	13.9	5D	-N		1230	1.22	1.47		186 E	
GRP15891	11	1552	1630	1603	S14 E29	.533	9449	13.8	38	-N			1.00			5 5 5 5	
MCMA	11	1545	1644D	1614	S15 E28	.526	9449	13.8	59D	-N	C	1614	1.03	1.30			
BOUL	11	1553	1557D	1556	S14 E29	.533	9449	13.8	4D	-N	C		1.20	1.40		EI	
CANR	11	1554	1618	1557	S14 E29	.533	9449	13.8	24	-N	C		.90	1.10		K	
CANR	11	1554	1618	1604	S14 E29	.533	9449	13.8	24	-N							
SACP	11	1555	1638	1605U	S13 E29	.527	9449	13.8	43	-N	C		1.25	1.31			
HUAN	11	1605E	1618D		S14 E29	.533	9449	13.8	13D	-N	1 P	1605	.62	.65		E	
MCMA	11	1644	1700D	1646	S15 E28	.526	9449	13.8	16D	-N	C	1646	.77	1.00		EK	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %		
GRP15894	11	1859	1936	1905	S15	E27	.513	9449	13.8	37	-N			.97				4 4 4 7
MCMA	11	1854E	1902D		S15	E27	.513	9449	13.8	8D	-N	P	1902	.52	.60			E
BOUL	11	1901	1915	1905	S14	E28	.519	9449	13.9	14	-N	C		1.40	1.70			I
HALE	11	1903	1957	1904	S15	E26	.500	9449	13.7	54	-B	2 C	1904	1.34	1.50			F
HUAN	11	1911E	1911D		S14	E27	.506	9449	13.8		-F	1 P	1911	.62	.64			E
GRP15900	12	0717	0738	0722	S14	E20	.417	9449	13.8	21	-N			1.68				7 7 6 7
BUCA	12	0700E	0752D		S13	E19	.395	9449	13.7	52D	1N	C	0720	2.76	3.00			
SIBE	12	0715	0735	0722	S14	E23	.455	9449	14.0	20	-F	C	0722	1.16	1.20		62	CET
ISTA	12	0715	0735	0720	S14	E20	.417	9449	13.8	20	-F							
AROS	12	0716E	0724D		S13	E20	.408	9449	13.8	8D	-N	P	0724	1.24	1.40			
CANR	12	0716	0732	0721	S15	E21	.438	9449	13.9	16	-N	C		1.30	1.40			
ZURI	12	0720	0732	0724	S13	E18	.382	9449	13.7	12	1N	P	0724	2.31	2.50			
MANI	12	0720E	0744D	0725	S14	E22	.442	9449	14.0	24D	-N	2	0725	1.29	1.42			
GRP15901	12	1647	1700	1649	S16	E14	.369	9449	13.7	13	-N			1.26				3 3 3 3
HUAN	12	1647	1657	1649	S16	E15	.379	9449	13.8	10	-N	1 C	1649	1.13	1.14			E
SACP	12	1647	1703	1650	S16	E14	.369	9449	13.7	16	-N	C		1.25	1.25			
CANR	12	1648	1659	1649	S17	E14	.381	9449	13.8	11	-N	C		1.40	1.50			E
GRP15905	12	2324	2341	2326	S15	E10	.317	9449	13.7	17	1N			2.50				3 3 3 4
VORO	12	2322	2337	2326	S15	E10	.317	9449	13.7	15	2N	C	2326	5.62	5.85		172	EJ
MANI	12	2325E	2347	2325	S14	E10	.304	9449	13.7	22D	-N	2	2325	1.03	1.08			
SACP	12	2325	2339	2327	S17	E09	.338	9449	13.7	14	-N	C		.84	.83			
GRP15907	12	2347	0002	2350	S15	E11	.326	9449	13.8	15	-N			2.15				2 2 2 4
VORO	12	2347	0002	2350	S15	E11	.326	9449	13.8	15	1N	C	2350	3.56	3.86		163	E
SACP	12	2347	2355D	2350	S15	E11	.326	9449	13.8	8D	-N	C		.73	.73			
4 STATIONS REPORTING GROUP 15908.					1 STATIONS OBSERVING AND NOT REPORTING.													
GRP15908	13	0028	0040	0030	S13	E83	.993	9458	19.2	12	-F			.57				2 2 2 5
SACP	13	0028	0040	0030	S13	E82	.991	9458	19.2	12	-N	C		.52				
MANI	13	0030E	0040	0030	S13	E84	.995	9458	19.3	10D	-F	2	0030	.62	1.76			
15908	13	0010	0207	0052	S22	E75	.972	9458	18.6	117	*2N			2.53				2 1 1 5
CULO	13	0010	0207	0052	S22	E75	.972	9458	18.6	117	2N	1 C		2.53				L
HALE	13	0118	0124	0120	S21	E70	.949	9458	18.3	6	-N	1 C	0120	.41				
GRP15911	13	0357	0410	0403	S17	E08	.333	9449	13.8	13	-N			1.02				2 2 2 5
HALE	13	0357	0405D		S16	E08	.318	9449	13.8	8D	-B	3 P	0400	.72	.80			FJV
HALE	13	0401	0405D		S16	E04	.296	9449	13.5	4D	-N	2 P	0404	.36	.40			H
SIBE	13	0402E	0410	0403	S17	E09	.340	9449	13.8	8D	-F	P	0403	1.32	1.40		55	DT
GRP15917	13	1033	1054	1037	S14	W62	.892	9429	8.8	21	1B			2.13				4 4 3 7
MONT	13	1032	1105D	1036	S13	W54	.822	9429	9.4	33D	1B			1.86				
CAPE	13	1034	1047	1038	S13	W64	.906	9429	8.6	13	1B	C	1036					
ONDR	13	1036E	1049D		S15	W65	.914	9429	8.6	13D	1B	V	1039	2.02	5.00		2.80	V
CAPS	13	1040E	1053		S16	W66	.922	9429	8.5	13D	1N	2	1044	2.50			176	CH
GRP15923	13	1715	1725	1719	S14	W68	.933	9429	8.6	10	-N			.55				3 3 3 6
HOUT	13	1715	1723	1717	S13	W70	.944	9429	8.5	8	-N	C		.40	1.00			
BOUL	13	1715	1726	1720	S14	W66	.920	9429	8.8	11	-N	C		.70	1.50			
HUAN	13	1715	1726		S14	W68	.933	9429	8.6	11	-N	1 C	1718	.55				E
GRP15925	13	1731	1744	1737	S30	E57	.885	9455	18.0	13	-N			.54				5 5 5 6
BOUL	13	1726	1738	1730	S31	E60	.907	9455	18.2	12	-N	C		.60	1.30			
MCMA	13	1728	1750	1735	S30	E56	.879	9455	17.9	22	-N	C	1735	.52	1.10			E
HOUT	13	1731	1741	1733	S30	E57	.885	9455	18.0	10	-N	C		.50	1.00			E
HUAN	13	1733	1740		S30	E57	.885	9455	18.0	7	-F	1 C	1734	.37	.57			E
CANR	13	1738	1751	1742	S31	E55	.875	9455	17.9	13	-N	C		.70	1.40			
GRP15926	13	1915	1941	1924	S30	E55	.872	9455	17.9	26	-N			.82				5 5 5 6
SACP	13	1908	1945	1929	S28	E54	.859	9455	17.8	37	-N	C		.83	1.21			
MCMA	13	1915	1945	1922	S30	E55	.872	9455	17.9	30	-N	C	1922	.72	1.50			EL
HOUT	13	1916	1943	1919	S30	E55	.872	9455	17.9	27	-N	C		.50	1.00			E
HUAN	13	1916	1937		S30	E58	.892	9455	18.2	21	-N	1 C	1922	.45	.72			E
BOUL	13	1920	1937	1927	S30	E55	.872	9455	17.9	17	1N	C		1.60	3.00			
GRP15927	13	2007	2036	2015	S30	E54	.865	9455	17.9	29	-N			.86				4 4 4 4
SACP	13	2003	2035	2017	S28	E54	.859	9455	17.9	32	-N	C		.52	.76			
HOUT	13	2007	2023D	2009	S31	E54	.868	9455	17.9	16D	-N	C		.80	1.50			K
BOUL	13	2009	2027	2017	S31	E55	.875	9455	18.0	18	1N	C		1.30	2.40			
MCMA	13	2009	2046	2015	S30	E54	.865	9455	17.9	37	-B	C	2015	.83	1.60			E
GRP15929	13	2130	2153	2140	S14	W68	.933	9429	8.8	23	1N			.79				3 3 3 4
MCMA	13	2130	2155	2136	S15	W68	.934	9429	8.8	25	1B	C	2136	1.03	3.10			VDK
CULO	13	2137E	2153	2137	S14	W67	.927	9429	8.9	16D	1N	1 P		1.03				
HOUT	13	2144E	2150	2146	S13	W70	.944	9429	8.7	6D	-N	C		.30	.70			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMA PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
GRP15932	14	0710	0722	0713	S13	E63	.899	9458	19.0	12	-N			.82				6 6 5 11
ONDR	14	0709E	0722		S13	E60	.875	9458	18.8	13D	1N	V	0711			2.10		CJ
CRON	14	0709	0718	0711	S14	E63	.900	9458	19.0	9	-N	C		.80	1.70			E
MANI	14	0709	0723	0714	S13	E65	.913	9458	19.2	14	-N	2	0714	.52	1.00			
CAPE	14	0709	0723	0711	S14	E64	.907	9458	19.1	14	-F	C	0711	.84	2.10			
AROS	14	0710	0723	0715	S13	E63	.899	9458	19.0	13	1N	P	0715	1.65	3.60			
HTPR	14	0712	0725	0713	S12	E63	.898	9458	19.0	13	-F		0713	.31	.70			
8 STATIONS REPORTING GROUP 15937. 4 STATIONS OBSERVING AND NOT REPORTING.																		
GRP15937	14	0942	1122 (0951)		S16	W07	.313	9449	13.9	100	1F			3.99				3 3 3 12
BUCA	14	0905E	1122D		S14	W07	.283	9449	13.9	137D	-F		0951	1.36	1.40			
WEND	14	0931	1016D		S17	W08	.334	9449	13.8	45D	2F	V		8.25				
CAPP	14	0942	1000D		S16	W07	.313	9449	13.9	18D	1F	C	0950	2.35	2.74			H
15937	14	0930	1115	0935	S16	W13	.362	9449	13.4	105	*-N			.57				3 3 3 12
CAPS	14	0929E	1010D		S15	W18	.404	9449	13.0	41D	-B	3	0933	.20	.20			CHJ
CAPS	14	0929E	1010D		S15	W18	.404	9449	13.0	41D	-B		0955	2.00	2.10			W
ARCE	14	0930E	1000D		S18	W10	.363	9449	13.6	30D	-N	C	0940	1.29	1.40			
CATA	14	0930	1115	0935	S15	W10	.321	9449	13.6	105	-N		0935	.23	.25	158		Z
15937	14	1056	1118	1100	S17	W12	.366	9449	13.6	22	*-F			.93				2 2 2 8
CAPE	14	1052	1120	1100	S17	W10	.349	9449	13.7	28	-N	C	1100	1.24	1.30			F
HTPR	14	1100	1115		S17	W13	.375	9449	13.5	15	-F		1100	.62	.60			
GRP15945	14	1610	1637	1618	S31	E47	.817	9455	18.2	27	1N			1.53				5 5 5 7
SACP	14	1531	1647	1619	S30	E47	.813	9455	18.2	76	1N			2.07	2.79			
MCMA	14	1605	1640	1609	S32	E48	.829	9455	18.3	35	-N	C	1609	.77	1.40			EW
BOUL	14	1614	1630	1617	S33	E45	.811	9455	18.1	16	1N	C		1.80	3.10			EH
HOUT	14	1615E	1626	1617U	S31	E49	.832	9455	18.4	11D	1N	C		2.00	3.40			
HUAN	14	1625E	1640D		S31	E48	.825	9455	18.3	15D	-F	1	1625	.99	1.35			E
GRP15947	14	2001	2015	2009	S32	E44	.799	9455	18.1	14	-N			.68				3 3 3 3
MCMA	14	2000E	2012D		S32	E48	.829	9455	18.4	12D	-N		2010	.41	.70			E
SACP	14	2000	2023	2010	S31	E42	.777	9455	18.0	23	-N	C		.83	1.05			
HOUT	14	2004	2010	2007	S34	E43	.802	9455	18.1	6	-N	C		.80	1.30			
14 2040 2042 NO FLARE PATROL																		
948 BOUL	14	2136	2152	2143	S32	E39	.759	9455	17.8	16	-N	C		1.20	1.60			1
14 2256 2300 NO FLARE PATROL																		
GRP15960	15	0851	0902	0855	S14	E51	.795	9458	19.2	11	1N			1.16				7 7 6 11
CRON	15	0850	0857	0852	S13	E50	.783	9458	19.1	7	1N			1.50	2.40			
CATA	15	0850	0905	0855	S12	E50	.781	9458	19.1	15	1N	C		1.33	2.17	193		
MONT	15	0850	0905	0855	S13	E51	.793	9458	19.2	15	-B		0855	1.55				H
CAPS	15	0852E	0902D		S15	E55	.836	9458	19.5	10D	-N	2	0852	.20	.30			CE
ONDR	15	0852E	0901		S18	E48	.776	9458	19.0	9D	1N	V		0853			2.00	CH
CAPE	15	0852	0904	0856	S13	E50	.783	9458	19.1	12	1N	C		0856	1.53	2.50		H
MEUD	15	0852	0903	0855	S12	E50	.781	9458	19.1	11	-N		0855	.83	1.30			
GRP15974	15	2149	2221	2156	S13	W31	.556	9449	13.6	32	-B			2.06				5 5 5 5
SACP	15	2144	2234	2157	S13	W31	.556	9449	13.6	50	1N	C		2.90	3.08			
HALE	15	2146	2231	2155	S12	W30	.537	9449	13.7	45	-B	1	2155	1.55	1.80			FHJV
HUAN	15	2150	2220D		S13	W31	.556	9449	13.6	30D	-B	1	2156	1.50	1.58			E
BOUL	15	2154	2205	2155	S12	W31	.551	9449	13.6	11	1B	C		2.80	3.40			
MANI	15	2155E	2216	2156	S14	W30	.549	9449	13.7	21D	-N	2	2156	1.55	1.85			
15 2348 0005 NO FLARE PATROL																		
GRP15983	16	1157	1245	1209	S12	W39	.655	9449	13.6	48	-N			1.21				5 4 4 9
MCMA	16	1156	1244	1203	S12	W39	.655	9449	13.6	48	-N		1203	.88	1.20			E
CAPS	16	1157	1231D		S12	W39	.655	9449	13.6	34D	-N	2	1204	1.20	1.60	180		E
HTPR	16	1158	1245	1203	S13	W37	.634	9449	13.7	47	-F		1203	.52	.60			
CAPE	16	1205E	1246		S12	W40	.667	9449	13.5	21D	1N	P	1205	2.22	3.00			F
SACP	16	1220E	1241	1222	S11	W39	.651	9449	13.6	21D	-N	C		.42	.47			
GRP15985	16	1555	1621	1606	S14	W43	.709	9449	13.4	26	-N			.77				2 2 2 5
HALE	16	1554	1611D	1606	S13	W42	.694	9449	13.5	17D	-N	1	1606	1.13	1.60			
SACP	16	1556	1621	1606	S15	W43	.713	9449	13.4	25	-N	C		.41	.49			
GRP15986	16	1635	1725	1651	S17	W39	.676	9449	13.8	50	-N			1.14				3 2 2 6
SACP	16	1635	1725	1651	S17	W39	.676	9449	13.8	50	-N	C		1.03	1.18			
MCMA	16	1640E	1708D		S16	W39	.671	9449	13.8	28D	-N	C	1651	1.24	1.70			E
HUAN	16	1708E	1708D		S16	W41	.694	9449	13.6		-F	1	1708	.31	.36			
GRP15987	16	2118	2231	2212	S17	W41	.698	9449	13.8	73	-B			1.99				2 2 2 4
SACP	16	2118	2231	2211	S17	W41	.698	9449	13.8	73	-N			1.56	1.83			
HALE	16	2200	2227D	2213	S16	W41	.694	9449	13.8	27D	1B	1	2213	2.42	3.40			

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMPATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	MAX. INT. %		
					LAT.	MER. DIST.													
	1968 JUNE																		
GRP15989	17	0217	0233	0221	N13	E48	.754	9462	20.7	16	1N			2.22			3 3 3 4		
SIBE	17	0216	0232	0220	N13	E49	.765	9462	20.8	16	2F	C	0220	3.47	5.40	61	T		
CULG	17	0217	0234	0221	N12	E48	.752	9462	20.7	17	1N	2	C	1.44	2.24				
MITK	17	0218	0234	0222	N14	E48	.756	9462	20.7	16	1B	C	0222	1.75	2.70				
GRP15990	17	0220	0310	0228	S21	W04	.384	9465	16.8	50	-N			1.38			3 2 2 6		
MITK	17	0220	0310D		S21	W04	.384	9465	16.8	50D	-N	C	0254	.83	.90				
MANI	17	0227E	0302	0228	S20	W02	.364	9465	17.0	35D	-F	2	C	1.03	1.10				
KODA	17	0246E	0246D		S21	W03	.381	9465	16.9		1N	P	0246	1.93	2.10		BC		
GRP15992	17	0250	0407	0309	N26	E38	.697	9459	20.0	77	1N			2.74			6 6 6 7		
CULG	17	0240	0527		N22	E40	.696	9459	20.1	167	1N		0321	4.69	7.83				
CULG	17	0240	0527	0307	N22	E40	.696	9459	20.1	167	1N	2	C	3.30	4.80		STLUW		
MITK	17	0247	0310D		N28	E42	.746	9459	20.3	23D	1N	C	0310	3.30	4.90		F		
MANI	17	0250	0324	0309	N27	E28	.605	9459	19.2	34	1N			2.06	2.90				
MANI	17	0250	0324D	0302	N27	E28	.605	9459	19.2	34D	1N	2	C	1.03	1.70				
KODA	17	0255	0326	0258	N25	E40	.711	9459	20.1	31	-N	V	0256	1.29	1.80	1.68	EH		
SIBE	17	0300	0410	0312	N25	E42	.731	9459	20.3	70	2F	C	0312	3.96	5.90	52	EFT		
HALE	17	0306E	0404	0315	N31	E38	.727	9459	20.0	58D	-N	2	P	0315	1.13	1.70			
HALE	17	0306E	0404	0343	N31	E41	.753	9459	20.2	58D	-N	2	P	0343	1.13	1.70		FK	
GRP16002	17	1255	1311	1257	S16	W54	.829	9449	13.5	16	-B			.73			2 2 2 4		
SACP	17	1254	1311	1257	S15	W54	.827	9449	13.5	17	-N	C		.84	1.15				
MCMA	17	1255	1310	1256	S16	W54	.829	9449	13.5	15	-B	C	1256	.62	1.30		EV		
GRP16010	17	2056	2100	2058	N16	W79	.982	9443	11.9	4	-N			.56			2 2 2 2		
BOUL	17	2056	2100	2058	N16	W80	.985	9443	11.9	4	1N	C		.80	2.40		E		
MCMA	17	2058E	2059D		N15	W78	.978	9443	12.0	1D	-N	P	2059	.31	1.30		D		
	17	2059	2110	NO FLARE PATROL															
GRP16011	17	2105	2126	2109	S12	W59	.866	9449	13.5	21	-N			.71			2 2 2 3		
BOUL	17	2105	2116	2109U	S11	W60	.874	9449	13.4	11	-N	C		.70	1.40		E		
MCMA	17	2113E	2135		S13	W58	.859	9449	13.5	22D	-N	P	2113	.72	1.40		BE		
GRP16029	18	1918	1945	1932	N14	E23	.439	9462	20.5	27	-N			1.00			4 4 4 5		
HUAN	18	1854	1945		N13	E23	.432	9462	20.5	51	-N	2	C	1.24	1.25		E		
SACP	18	1914	1956	1933	N14	E21	.412	9462	20.4	42	-N	C		.84	.84				
HALE	18	1921	1939	1929	N15	E22	.433	9462	20.5	18	-N	2	C	.62	.70				
BOUL	18	1933E	1940	1933U	N13	E24	.446	9462	20.6	7D	-N	C		1.30	1.40		I		
GRP16031	18	2032	2056	2039	N13	E23	.432	9462	20.6	24	-B			1.32			3 3 3 3		
HUAN	18	2032	2107	2041	N13	E22	.418	9462	20.5	35	-B	2	C	1.24	1.25				
HALE	18	2032	2052	2039	N14	E22	.425	9462	20.5	20	-B	2	C	.83	.90		F		
BOUL	18	2032	2049	2038	N13	E24	.446	9462	20.7	17	1N	C	2039	1.90	2.10		EI		
GRP16032	18	2153	2201	2156	N12	E23	.425	9462	20.6	8	-N			1.33			3 3 3 3		
HALE	18	2152	2200	2155	N12	E23	.425	9462	20.6	8	-B	2	C	1.03	1.10				
CULG	18	2153	2203	2157	N12	E23	.425	9462	20.6	10	1N	1	C	2.17	2.31				
HUAN	18	2155	2200	2156	N12	E24	.440	9462	20.7	5	-N	2	C	.80	.82		E		
033 HALE	18	2246	2301	2257	N14	E22	.425	9462	20.6	15	-N	2	C	2257	1.13	1.30		3	
GRP16036	19	0406	0432	0412	N13	E19	.376	9462	20.6	26	-N			1.44			3 3 3 7		
KODA	19	0400	0422	0412	N14	E20	.397	9462	20.7	22	1N	P	0418	1.93	2.10	1.92	EJ		
TACH	19	0408	0549	0412	N15	E18	.380	9462	20.5	101	-N	C	0412	1.09	1.20	2.10	63	JK	
MANI	19	0409	0422	0412	N11	E19	.361	9462	20.6	13	-N	2	C	0412	1.31	1.40			
MANI	19	0433D	0442	0437	N10	E18	.339	9462	20.5	9D	-F	2	C	0437	.28	.30			
GRP16037	19	0620	0655	0628	S29	W03	.509	9455	19.0	35	1N			3.88			5 5 5 9		
MANI	19	0619D	0644	0625	S30	W03	.524	9455	19.0	25D	-F	2	C	1.24	1.40				
CRON	19	0620	0650	0625	S28	W04	.496	9455	19.0	30	2N	C		4.50	5.40		EL		
CATA	19	0620	0820	0635	S29	W03	.509	9455	19.0	120	1B		0635	3.76	4.35		F		
CULG	19	0623E	0651D	0625	S29	W02	.508	9455	19.1	28D	1N	1	P	2.89	3.22		L		
CAPS	19	0624E	0716D		S30	W01	.522	9455	19.2	52D	2N	3	C	7.00	8.40		194	CFI	
GRP16039	19	0640	0743	0657	N14	E18	.371	9462	20.6	63	-N			2.37			6 4 4 11		
BUCA	19	0634	0800D	0654	N14	E18	.371	9462	20.6	86D	1N	P	0654	2.76	2.90				
CAPS	19	0637E	0746D		N13	E19	.376	9462	20.7	69D	1N	2	C	0653	4.00	4.30		CH	
CATA	19	0650	0805	0655	N13	E20	.389	9462	20.8	75	-B		0655	.93	1.00		218	T	
CATA	19	0650	0745	0655	N13	E14	.310	9462	20.3	55	-B		0655	.58	.61		218	ZT	
CRON	19	0651	0705	0654	N14	E07	.247	9462	19.8	14	-F	C		1.70	1.90			I	
CANR	19	0700E	0711U	0700E	N15	E17	.367	9462	20.6	11D	-N	C		1.20	1.30			EI	
ZURI	19	0703E	0720	0704	N13	E14	.310	9462	20.3	17D	2N	C	0704	7.56	8.00				
GRP16041	19	0955	1020	1009	N13	E17	.349	9462	20.7	25	-B			1.77			3 2 2 9		
CAPS	19	0939E	1042D		N13	E16	.335	9462	20.6	63D	1N	2	C	0945	4.00	4.30		168	HJ
UCCL	19	0949E	1018D	1009	N13	E18	.362	9462	20.8	29D	1B	P	1009	3.12	3.60			E	
MEUD	19	1000	1020		N13	E16	.335	9462	20.6	20	-N		1003	.41	.40			EZ	

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
GRP16042	19	1021	1041	1026	N13 E15	.322	9462	20.6	20	-N			1.02				3 3 3 9
CATA	19	1015E	1130	1020	N13 E18	.362	9462	20.8	75D	-B		1020	.52	.56			209 T
CATA	19	1015E	1130	1030	N13 E12	.285	9462	20.3	75D	-N		1030	.69	.72			197 TWZ
CAPE	19	1020	1041	1029	N14 E14	.320	9462	20.5	21	-N	C	1029	1.93	2.00			
MEUD	19	1027	1040	1030	N13 E15	.322	9462	20.6	13	-N		1030	.62	.60			EZ
GRP16047	19	1747	1818	1754	N14 E13	.308	9462	20.7	31	-B			.93				5 4 3 6
MCMA	19	1736E	1751D	1741	N12 E12	.274	9462	20.6	15D	-B	C	1741	.93	1.00			EK
HALE	19	1739	1813	1751	N14 E12	.297	9462	20.6	34	-B	2 C	1751	.72	.80			E
HUAN	19	1751	1813	1755	N14 E12	.297	9462	20.6	22	-N	2 C	1755	1.08	1.08			
MCMA	19	1751	1820D	1755	N12 E12	.274	9462	20.6	29D	-B	C						
CANR	19	1753E	1808	1753U	N14 E14	.320	9462	20.8	15D	-N	C		1.00	1.10			
SACP	19	1802E	1834	1808	N14 E11	.286	9462	20.6	32D	-N	C		.73	.72			
GRP16048	19	2040	2115	2047	N14 E10	.275	9462	20.6	35	-B			1.45				2 2 2 3
HUAN	19	2040	2115	2047	N14 E10	.275	9462	20.6	35	1N	2 C	2047	1.86	1.85			E
HALE	19	2040	2052D	2046	N14 E10	.275	9462	20.6	12D	-B	1 P	2046	1.03	1.10			
GRP16050	19	2220	2248	2230	N12 E10	.250	9462	20.7	28	-N			1.86				2 2 2 2
CULG	19	2217	2258	2229	N12 E10	.250	9462	20.7	41	1B	1 C		2.89	2.80			L
MANI	19	2222	2237	2230	N12 E09	.239	9462	20.6	15	-F	2	2230	.83	.85			
GRP16051	19	2335	0022	2344	N14 E09	.265	9462	20.7	47	-N			1.41				3 3 3 5
HALE	19	2335	0032E	2339	N14 E09	.265	9462	20.7	57D	1B	1 P	2339	2.27	2.30			
MANI	19	2341E	0012	2345	N13 E09	.252	9462	20.7	31D	-N	2	2345	1.03	1.07			
SACP	19	2348E	2358D	2348U	N14 E08	.256	9462	20.6	10D	-N	C		.94	.93			
GRP16054	20	0222	0247	0229	N14 E07	.245	9462	20.6	25	1N			2.71				5 5 5 6
CULG	20	0220	0300	0229	N14 E06	.238	9462	20.5	40	1N	1 C		2.17	2.10			L
KODA	20	0220	0239	0229	N14 E06	.238	9462	20.5	19	1B	C	0236	2.58	2.70	2.24		I
CRON	20	0224	0239	0226	N14 E07	.245	9462	20.6	15	-B	C		1.90	1.90			EI
HALE	20	0225	0249	0227	N14 E07	.245	9462	20.6	24	1B	1 C	0227	1.96	2.00			FJV
SIBE	20	0233E	0402	0233	N13 E07	.231	9462	20.6	89D	2F	P	0233	4.95	5.20		58	TI
GRP16055	20	0319	0339	0323	N14 E08	.254	9462	20.7	20	-N			1.32				4 4 4 8
TACH	20	0304	0352	0325	N15 E06	.253	9462	20.6	48	1N	C	0325	2.46	2.60	2.30	87	E
CRON	20	0316	0337	0323	N15 E07	.260	9462	20.7	21	1B	C		2.10	2.10			EI
MANI	20	0320	0325D	0323	N12 E08	.226	9462	20.7	5D	-F	2	0323	.41				
HALE	20	0320	0329	0321	N15 E09	.277	9462	20.8	9	-N	1 C	0321	.31	.30			F
GRP16057	20	0454	0535	0501	N14 E07	.245	9462	20.7	41	1N			2.50				7 6 6 7
CULG	20	0447	0533	0500	N13 E05	.215	9462	20.6	46	1N	2 C		2.22	2.15			L
HTPR	20	0455E	0525	0458	N14 E06	.238	9462	20.7	30D	-N		0458	1.44	1.40			
SIBE	20	0455	0534	0503	N13 E07	.231	9462	20.7	39	1F	C	0503	4.79	5.00		55	IT
CRON	20	0455	0530	0500	N17 E09	.305	9462	20.9	35	1N	C		2.50	2.50			EHI
TACH	20	0456	0553	0500	N14 E06	.238	9462	20.7	57	1N	C	0500	2.83	2.90		80	Y
MANI	20	0500E	0521D	0505	N13 E08	.240	9462	20.8	21D	-N	2	0505	1.24	2.70			
CATA	20	0515E	0530	0515	N13 E04	.209	9462	20.5	15D	-B		0515	.15	.16		214	D
CATA	20	0520	0535	0520	N14 E07	.245	9462	20.7	15	-B		0520	.17	.18		209	
GRP16062	20	0913	0941	0921	N13 E04	.209	9462	20.7	28	1N			2.69				8 8 7 8
HTPR	20	0907	0950	0920	N14 E05	.231	9462	20.8	43	-N		0920	1.03	1.00			
CAPS	20	0907	0934		N12 E05	.200	9462	20.8	27	1B	1	0921	3.00	3.00		220	HJKU
CRON	20	0909	0920D	0918U	N15 E02	.234	9462	20.5	11D	-N	C		1.60	1.60			
CANR	20	0910	0925	0918	N13 E04	.209	9462	20.7	15	-N	C		1.80	1.80			EHI
MANI	20	0910	0945	0920	N13 E05	.215	9462	20.8	35	-B	2	0920	2.37	2.42			
KIEV	20	0915	0945	0920	N13 E03	.204	9462	20.6	30	2F	C	0920	6.70	6.80		65	HI
KHAR	20	0922	0929		N14 E05	.231	9462	20.8	7	1F	P	0922			1.10		BEH
HERS	20	0923	1000	0928	N13 E03	.204	9462	20.6	37	1B	P	0925	2.32	2.40			EH
GRP16066	20	1321	1340	1326	N13 E03	.204	9462	20.8	19	-N			1.27				9 9 8 11
SACP	20	1319	1341	1327	N13 E02	.201	9462	20.7	22	-N	C		1.04	1.02			
CAPS	20	1320E	1334		N15 E06	.253	9462	21.0	14D	-N	3	1324	.50	.50		179	C
HTPR	20	1320	1345	1325	N14 E05	.231	9462	20.9	25	-F		1325	.83	.80			
HUAN	20	1321	1355	1325	N13 E02	.201	9462	20.7	34	-N	2 C	1325	1.05	1.05			E
MCMA	20	1322	1345	1326	N13 E02	.201	9462	20.7	23	-B	C	1326	.62	.60			E
KIEV	20	1322	1335	1325	N14 E03	.221	9462	20.8	13	1F	C	1325	3.09	3.00		60	I
CANR	20	1322	1331	1326	N13 E04	.209	9462	20.9	9	-N	C		1.20	1.20			I
MEUD	20	1323	1335	1326	N13 E02	.201	9462	20.7	12	-N		1326	1.86	1.80			
LOCA	20	1330E	1335D		N13 E02	.201	9462	20.7	5D	1N	S						
GRP16072	20	1618	1650	1625	N13 E00	.198	9462	20.7	32	-N			1.28				4 4 4 5
SACP	20	1610	1642	1620	N13 E00	.198	9462	20.7	32	-F	C		.63	.61			
MCMA	20	1618	1704D	1627	N13 W01	.199	9462	20.6	46D	1N	C	1627	2.06	2.10			E
HTPR	20	1622	1652D	1625	N14 E02	.218	9462	20.8	30D	-N		1625	1.03	1.00			
CANR	20	1622	1640	1626	N13 W01	.199	9462	20.6	18	-N	C		1.40	1.40			I

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OBSERV- ATORY	OBSERVED UT				LOCATION				DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %
GRP16073	20	1702	1738	1708	N13	W01	.199	9462	20.6	36	-N			1.04			3 3 3 4
SACP	20	1658	1751	1711	N13	W02	.201	9462	20.6	53	-N	C		1.35	1.33		
CANR	20	1704	1714	1707	N13	W01	.199	9462	20.6	10	-N	C		1.00	1.00		I
MCMA	20	1704	1750	1707	N13	W01	.199	9462	20.6	46	-B	C	1707	.77	.80		EL
GRP16077	20	2108	2136	2110	N13	W03	.204	9462	20.7	28	-B			1.60			5 5 5 6
SACP	20	2050	2155	2111	N13	W03	.204	9462	20.6	65	1B	C		2.69	2.64		
HALE	20	2107	2130D		N13	W03	.204	9462	20.7	23D	-B	1 P	2108	.62	.60		
BOUL	20	2107	2117	2110	N13	W03	.204	9462	20.7	10	-N	C		1.80	1.80		
MCMA	20	2108	2145	2110	N13	W02	.201	9462	20.7	37D	-N	C	2110	1.13	1.20		EK
MCMA	20	2108	2145	2119	N13	W02	.201	9462	20.7	37	-N	C					
HUAN	20	2108	2133	2110	N13	W02	.201	9462	20.7	25	-B	2 C	2110	1.75	1.75		E
HUAN	20	2148	2206	2151	N12	W03	.188	9462	20.7	18	-F	2 C	2151	.35	.35		D
GRP16079	21	0341	0402	0343	N13	W09	.248	9462	20.5	21	-F			2.11			2 2 2 4
CRON	21	0340	0405	0342	N14	W09	.262	9462	20.5	25	1N	C		2.70	2.70		
MANI	21	0341	0359	0344	N12	W09	.235	9462	20.5	18	-F	2	0344	1.52	1.55		
8 STATIONS REPORTING GROUP 16092. 0 STATIONS OBSERVING AND NOT REPORTING.																	
GRP16092	21	2358	0040	0012	S15	E52	.810	9474	25.9	42	-N			1.33			7 7 7 8
MITK	21	2356	0045	0012	S15	E53	.819	9474	26.0	49	1N	C	0012	1.96	3.40		E
CULG	21	2358	0159	0006	S15	E53	.819	9474	26.0	121	1N	2 C		1.55	2.62		
VORO	21	2358	0039	0015	S12	E54	.823	9474	26.0	41	1N	C	0015	2.42	4.23		87 EGJ
MANI	22	0001	0040	0007	S16	E52	.813	9474	25.9	39	-N	2	0007	.67	1.14		
HALE	22	0003E	0043	0012	S16	E53	.822	9474	26.0	40D	-B	1 C	0012	.67	1.20		
SIBE	22	0007E	0034	0010	S16	E50	.793	9474	25.8	27D	-F	1 P	0010	1.16	1.90		64 E
CRON	22	0013E	0036	0019U	S16	E52	.813	9474	25.9	23D	-N	C		.90	1.50		E
16092	21	2357	0015	0002	S16	E52	.812	9474	25.9	18	*-N			.92			2 2 2 8
HALE	21	2355	2359D		S15	E52	.810	9474	25.9	4D	-N	2 P	2359	.83	1.40		
BOUL	21	2358	0015	0002	S17	E52	.815	9474	25.9	17	-N	C		1.00	1.70		
GRP16116	23	0320	0340	0329	S15	W53	.820	9458	19.2	20	-N			.78			2 2 2 6
MANI	23	0318	0343	0327	S14	W52	.808	9458	19.2	25	-N	2 C	0327	1.03	1.72		
HALE	23	0321	0336	0331	S16	W54	.832	9458	19.1	15	-N	2 C	0331	.52	.90		
GRP16118	23	0808	0821	0816	N14	E46	.732	9473	26.8	13	-N			1.00			3 3 3 7
CAPE	23	0806	0823	0816	N15	E47	.745	9473	26.9	17	-F	C	0816	.84	1.20		
CATA	23	0810	0820	0815	N13	E46	.729	9473	26.8	10	-N		0815	1.16	1.73		186
CAPS	23	0812E	0821D		N13	E45	.718	9473	26.7	9D	-N	2	0814	1.00	1.40		170 C
GRP16134	23	2136	2206	2149	N15	W43	.699	9462	20.7	30	1N			1.81			4 4 4 7
HALE	23	2134	2203	2147	N14	W41	.673	9462	20.8	29	1N	2 C	2147	1.96	2.60		EI
HUAN	23	2136	2205	2149	N16	W43	.702	9462	20.7	29	1N	2 C	2149	1.75	2.06		
MCMA	23	2137	2202D	2150	N16	W43	.702	9462	20.7	25D	1N	C	2150	1.44	2.10		E
SACP	23	2138	2211	2150	N14	W43	.697	9462	20.7	33	1N	C		2.07	2.42		
GRP16136	24	0005	0009	0006	S17	W66	.926	9458	19.1	4	-B			.49			2 2 2 6
HALE	24	0004	0008	0005	S19	W65	.922	9458	19.1	4	-B	1 C	0005	.31			
MANI	24	0005	0010	0007	S14	W66	.923	9458	19.1	5	-N	2	0007	.67	1.41		
GRP16140	24	0813	0824	0817	N11	W55	.822	9462	20.2	11	-N			1.02			2 2 2 6
CAPE	24	0812	0822	0817	N11	W55	.822	9462	20.2	10	1N	C	0817	1.33	2.30		V
CRON	24	0814	0825	0816	N10	W54	.811	9462	20.3	11	-N	C		.70	1.20		
GRP16141	24	0946	1008	0954	N12	W49	.761	9462	20.7	22	1N			1.72			4 4 4 8
CANR	24	0944	1000	0947	N11	W48	.748	9462	20.8	16	1N	C		1.50	2.30		
CAPS	24	0945E	1018D		N10	W45	.712	9462	21.0	33D	1N	1 C	0953	3.00	4.20		179 F
CAPF	24	0948E	1005		N12	W50	.772	9462	20.7	17D	1F	P	0950	1.76	2.91		
LOCA	24	0948	1007	1000	N13	W52	.794	9462	20.5	19	-N	V	1000	.63	1.00		
GRP16142	24	1136	1150	1137	N12	W51	.783	9462	20.7	14	-N			1.05			2 2 2 6
HTPR	24	1135	1150	1136	N11	W50	.771	9462	20.7	15	-N		1136	.93	1.40		
CAPE	24	1137	1150	1137	N12	W51	.783	9462	20.7	13	-N	C	1137	1.16	1.90		FV
GRP16152	24	2038	2102	2044	N15	W53	.807	9462	20.9	24	-N			.95			3 3 3 4
SACP	24	2035	2104	2044	N15	W53	.807	9462	20.9	29	-F	C		.73	.98		
HALE	24	2039	2102	2045	N15	W52	.797	9462	21.0	23	-N	1 C	2045	.72	1.20		J
HUAN	24	2040	2059	2044	N15	W55	.826	9462	20.7	19	-N	2 C	2044	1.39	1.89		E
GRP16155	25	0351	0428	0400	N15	E24	.453	9473	27.0	37	-B			1.58			2 2 2 5
HALE	25	0349	0436	0353	N15	E24	.453	9473	27.0	47	-B	2 C	0353	.72	.80		
HALE	25	0349	0436	0405	N15	E24	.453	9473	27.0	47	1B	3 C	0405	2.06	2.30		FJ
CRON	25	0352	0420	0355	N15	E24	.453	9473	27.0	28	-N	C		1.10	1.20		E
4 STATIONS REPORTING GROUP 16157. 1 STATIONS OBSERVING AND NOT REPORTING.																	
GRP16157	25	0657	0755	0738	N18	W58	.857	9462	20.9	58	-N			.76			3 3 3 5
MONT	25	0655E	0755	0740	N22	W60	.879	9462	20.8	60D	-N		0740	.83			
CAPE	25	0659	0750	0735	N18	W60	.873	9462	20.8	51	-N		0735	.84	1.80		
CAPS	25	0732	0800D		N15	W55	.826	9462	21.2	28D	-B	3	0740	.60	1.20		194

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION	CMP DAY			TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
16157	25	0659	0755	0704	N17	W59	.864	9462	20.9	56	*-F		.66				3 3 3 8
BUCA	25	0659E	0800D		N18	W60	.873	9462	20.8	61D	-F	0705	.55	1.10			D
CAPE	25	0659	0750	0704	N18	W60	.873	9462	20.8	51	-F	0704	.92	2.00			K
CAPS	25	0659	0720D		N16	W56	.837	9462	21.1	21D	-N	0700	.50	1.00		161	
GRP16158	25	0858	0917	0903	N18	W60	.873	9462	20.9	19	-N		.92				6 6 6 8
ARCE	25	0855E	0910D		N19	W59	.867	9462	20.9	15D	-N	0855	.68	1.30			
CAPE	25	0857	0924	0904	N18	W61	.881	9462	20.8	27	-N	0904	.92	2.00			V
LOCA	25	0858	0913	0900	N17	W60	.872	9462	20.9	15	-N	0900	.85	1.80			
CAPS	25	0858E	0915D		N16	W57	.846	9462	21.1	17D	-N	0900	1.00	2.00		176	
CATA	25	0900	0920	0905	N17	W62	.888	9462	20.7	20	-B	0905	.87	1.98		234	
CAPP	25	0905E	0913		N18	W58	.857	9462	21.0	8D	1N	0907	1.18	2.28			H
GRP16168	25	1739	1749	1742	S31	E90	1.000	9490	2.5	10	-N		.34				3 3 3 4
HALE	25	1738	1750	1742	S30	E89	1.000	9490	2.4	12	-B	1742	.31				
BOUL	25	1740	1749	1743	S31	E90	1.000	9490	2.5	9	-N		.30	1.20			
CANR	25	1740	1748	1742	S31	E90	1.000	9490	2.5	8	-F		.40	1.60			
GRP16171	25	2216	2230	2223	N13	W65	.908	9462	21.1	14	-B		.57				2 2 2 2
SACP	25	2215	2230	2223	N13	W64	.900	9462	21.1	15	-N		.73	1.19			
HALE	25	2217	2230	2223	N13	W65	.908	9462	21.1	13	-B	1	.41				J
GRP16176	26	0028	0051	0035	S14	E55	.837	9484	30.1	23	-N		.93				3 3 3 4
SACP	26	0022	0056	0036	S14	E54	.828	9484	30.1	34	-N		.73	1.00			
VORO	26	0027	0049	0030	S12	E57	.852	9484	30.3	22	-B		1.07	1.92		95	DEJ
CRON	26	0034	0049	0040	S15	E55	.840	9484	30.1	15	-N		1.00	1.70			
GRP16181	26	0507	0532	0514	N14	W68	.928	9462	21.1	25	-B		1.52				8 7 7 8
HTPR	26	0505	0535	0513	N15	W68	.928	9462	21.1	30	-B		.83				
KODA	26	0508E	0516D	0512	N13	W65	.907	9462	21.3	8D	1B	P	0513	1.29	3.00	2.80	H
MANI	26	0509	0532	0514	N13	W69	.934	9462	21.0	23	-B	2	0508	.84	1.80		E
TACH	26	0513E	0531	0515	N14	W71	.946	9462	20.9	18D	-B		0514	.73		3.80	81
WEND	26	0514E	0526D		N13	W67	.921	9462	21.2	12D	1N	P	0515	5.16			D
CATA	26	0515E	0625	0515	N12	W67	.921	9462	21.2	70D	-F		0515	.69			148
CRON	26	0515E	0529	0515U	N15	W72	.951	9462	20.8	14D	1B	C		1.10	2.60		K
CAPS	26	0611E	0622D		N13	W66	.914	9462	21.3	11D	-N	3	0613	.80			J
GRP16182	26	0703	0709	0704	N14	W71	.946	9462	21.0	6	-N		.40				2 2 2 8
MONT	26	0701	0707	0703	N14	W72	.951	9462	20.9	6	-N		.21				
CATA	26	0705	0710	0705	N13	W69	.934	9462	21.1	5	-N		.58			162	
GRP16191	26	1234	1252	1242	S14	E46	.748	9484	30.0	18	-B		1.16				7 6 6 11
CAPS	26	1226E	1300		S13	E50	.787	9484	30.3	34D	-N	2	1228	.90	1.30		216
CAPE	26	1230	1255	1244	S13	E46	.745	9484	30.0	25	1N	C	1244	1.66	2.50		CGU
SACP	26	1233	1256	1241	S13	E45	.734	9484	29.9	23	-N		.84	1.02			
CATA	26	1235	1250D	1240	S16	E47	.765	9484	30.0	15D	1N		1240	1.29	2.00		195
MEUD	26	1236	1241		S14	E47	.759	9484	30.0	5	-F		1237	.93	1.40		
HUAN	26	1240E	1254		S14	E47	.759	9484	30.1	14D	-N	1	1240	.50	.61		E
CAPP	26	1244E	1258		S13	E44	.722	9484	29.8	14D	1N	P	1246	1.76	2.56		
GRP16197	26	2031	2055	2036	S14	W16	.386	9474	25.7	24	-N		.96				2 2 2 3
SACP	26	2029	2103	2038	S14	W15	.375	9474	25.7	34	-N		1.45	1.45			
HALE	26	2033	2047	2034	S13	W16	.375	9474	25.7	14	-N	1	.46	.50			
6 STATIONS REPORTING GROUP 16199. 0 STATIONS OBSERVING AND NOT REPORTING.																	
GRP16199	26	2243	2353	2301	S38	E65	.951	9485	1.8	70	1N		2.28				4 4 4 5
CULG	26	2237	0151	2304	S40	E65	.955	9485	1.8	194	2N	1	3.92				UW
SACP	26	2241	2354D	2255	S36	E63	.939	9485	1.7	73D	1N		1.76	3.31			
HALE	26	2250	2351		S39	E64	.949	9485	1.8	61	1N	1	1.13				
MANI	26	2302E	2341	2304	S38	E68	.963	9485	2.1	39D	2F	1	2.32	5.40			
16199	26	2237	0151	2339	S40	E65	.955	9485	1.8	194	*2N		4.18				3 1 1 6
CULG	26	2237	0151		S40	E65	.955	9485	1.8	194	2N		4.18				
BOUL	26	2252U	2320D	2254	S50	E73	.988	9485	2.4	28D	2N	C	2337	2.60	8.80		EHK
BOUL	26	2252U	2307D	2307	S50	E73	.988	9485	2.4	15D	2N						
CRON	27	0023E	0100	0023U	S40	E61	.939	9485	1.6	37D	2F	C		3.30	7.90		BE
GRP16200	26	2328	2345	2334	N14	W78	.977	9462	21.1	17	1B		1.10				3 3 3 4
SACP	26	2323	2347	2334	N14	W78	.977	9462	21.1	24	1B		1.14	2.79			
CULG	26	2324	2346	2329	N14	W77	.974	9462	21.2	17	1B	2	1.03				
MANI	26	2331	2343	2334	N13	W78	.977	9462	21.1	12	1N	2	1.13	2.81			

SOLAR FLARES

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JUNE 1968

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
12 STATIONS REPORTING GROUP 16203. 3 STATIONS OBSERVING AND NOT REPORTING.																	
GRP16203	27	0726	0753	0729	N15	W87	.998	9462	20.8	27	1B			1.07			8 8 7 12
SIBE	27	0723	0750	0727	N15	W87	.998	9462	20.8	27	1N	C	0727	.83		116	D
HTPR	27	0723	0815	0729	N15	W88	.999	9462	20.7	52	1B						
BUCA	27	0725	0805D	0730	N14	W85	.996	9462	20.9	40D	1B	C	0730	1.10			
CATA	27	0725	0905	0730	N14	W89	1.000	9462	20.6	100	1N		0730	1.16		186	
CAPS	27	0727E	0813D		N17	W85	.995	9462	20.9	46D	1N	2	0731	.90		195	C
CAPE	27	0727	0755	0730	N15	W86	.997	9462	20.9	28	1B	C	0730	1.61			KV
CRON	27	0728	0735	0728	N15	W90	1.000	9462	20.6	7	1B	C		1.10	4.40		HI
CANR	27	0729	0735	0730	N16	W83	.992	9462	21.1	6	1N	C		.60	2.10		H
16203	27	0728	0805	0744	N16	W88	.999	9462	20.7	37	*1N			1.40			3 3 2 13
CAPE	27	0727	0755	0743	N14	W86	.997	9462	20.9	28	1N		0743	1.33			
MONT	27	0728	0814	0745	N18	W90	1.000	9462	20.6	46	1N						
ZURI	27	0742E	0900	0744	N15	W87	.998	9462	20.8	78D	1N	P	0744	1.47			
16203	27	0800	0838	0805	N15	W84	.994	9462	21.0	38	*-N			.32			2 2 1 17
LOCA	27	0800E	0838	0805	N13	W82	.989	9462	21.2	38D	1N	V	0805		4.10		AF8
ARCE	27	0800E	0825D		N16	W85	.995	9462	21.0	25D	-N	C	0800	.32	1.30		
GRP16204	27	0824	0850	0827	N16	W88	.999	9462	20.8	26	-N			.60			6 6 4 13
BUCA	27	0822E	0845	0825	N14	W85	.996	9462	21.0	23D	-B	C	0825	.43			
HTPR	27	0822	0825D		N17	W88	.999	9462	20.7	3D	-B						
CRON	27	0824	0833	0827	N14	W90	1.000	9462	20.6	9	1N	C		.60	2.40		I
CAPE	27	0824	0900	0828	N15	W87	.998	9462	20.8	36	-N	C	0828	.92			K
CAPE	27	0824	0900	0852	N15	W87	.998	9462	20.8	36	-F	C	0852	.60			
ARCE	27	0825E	0830D		N19	W87	.998	9462	20.8	5D	-N	C	0830	.45	2.10		
MONT	27	0826	0900		N18	W90	1.000	9462	20.6	34	1N						
GRP16223	27	1809	1833	1815	S14	E30	.559	9484	30.0	24	-N			1.31			3 3 3 3
SACP	27	1807	1842	1818	S13	E30	.552	9484	30.0	35	-N	C		1.14	1.22		
BOUL	27	1810	1823	1814	S15	E31	.577	9484	30.1	13	1F	C		1.80	2.20		
HUAN	27	1810	1833	1814	S14	E30	.559	9484	30.0	23	-B	2	1814	1.00	1.06		E
28 0204 0300 NO FLARE PATROL																	
228 MANI	28	0433	0501	0442	S13	W33	.591	9474	25.7	28	-N	2	0442	1.55	2.03		4
GRP16231	28	0747	0813	(0758)	N10	W19	.347	9473	26.9	26	-N			1.34			3 3 3 11
BUCA	28	0745E	0809D		N11	W20	.368	9473	26.8	24D	-F	C	0757	.66	.70		
CAPS	28	0746E	0808D		N10	W17	.317	9473	27.0	22D	-B	3	0756	1.00	1.20	212	C
CAPF	28	0749	0813		N10	W20	.362	9473	26.8	24	1N	P	0801	2.35	2.51		
GRP16234	28	0907	0951	0917	N15	W20	.396	9473	26.9	44	-N			1.40			10 9 8 10
CATA	28	0905	1040	0910	N14	W21	.402	9473	26.8	95	-N			.93	1.02		
ONDR	28	0907	0957D		N13	W21	.395	9473	26.8	50D	1N	V	0910			197	C
MANI	28	0907	0938	0912	N15	W14	.319	9473	27.3	31	-N	2	0912	1.24	1.31		
CAPS	28	0908E	1022D		N14	W18	.361	9473	27.0	74D	1B	3	0909	2.20	2.30	243	CFK
MONT	28	0908	0950	0914	N17	W25	.477	9473	26.5	42	-N		0914	1.03			
CANR	28	0908	0925	0908	N16	W20	.405	9473	26.9	17	-N	C		1.00	1.10		
CAPE	28	0909	0940	0912	N16	W21	.418	9473	26.8	31	-N	C	0912	1.29	1.40		F
CAPF	28	0910E	1035		N16	W20	.405	9473	26.9	85D	1N	P	0913	2.94	3.28		
ARCE	28	0910E	0940D		N13	W19	.367	9473	27.0	30D	-N	C	0915	.55	.60		
LOCA	28	0930E	1025	0945	N08	W19	.337	9473	27.0	55D	1F	V	0945	2.94	3.20		
GRP16252	28	2325	2341	2329	S16	W46	.756	9474	25.5	16	-N			.83			2 2 2 6
SACP	28	2324	2345	2332	S16	W44	.734	9474	25.7	21	-N	C		1.03	1.25		
HALE	28	2325	2336	2326	S16	W47	.766	9474	25.5	11	-N	2	2326	.62	1.00		E
GRP16257	29	0835	0849	0836	S16	W33	.610	9486	26.9	14	-N			1.60			5 5 5 7
CAPE	29	0833	0852	0835	S16	W34	.621	9486	26.8	19	1N	C	0835	2.39	3.00		FV
CRON	29	0833	0840	0834	S16	W35	.633	9486	26.7	7	-N	C		1.50	2.00		
MONT	29	0835	0850	0837	S18	W27	.554	9486	27.3	15	-B		0837	1.03			
MEUD	29	0837	0845		S15	W34	.616	9486	26.8	8	-N		0837	1.65	2.00		E
ARCE	29	0839E	0900D		S14	W35	.622	9486	26.7	21D	-N	C	0839	1.41	1.80		
GRP16259	29	1105	1128	1110	S15	W50	.794	9474	25.7	23	1N			1.16			3 3 3 7
MONT	29	1025	1130D	1107	S15	W48	.773	9474	25.8	65D	1N		1107	1.55			
MONT	29	1025	1130D	1055	S15	W50	.794	9474	25.7	65D	1N		1055	1.55			
MONT	29	1025	1130D	1030	S15	W50	.794	9474	25.7	65D	1N		1030	1.55			
CAPE	29	1102	1140	1112	S15	W51	.803	9474	25.6	38	1N	C	1112	1.53	2.60		
MEUD	29	1108	1114		S14	W50	.791	9474	25.7	6	-F		1111	.41	.60		

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SOLAR FLARES

Confirmed

JUNE 1968

OBSERVATORY	OBSERVED UT				LOCATION				DURATION	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS		
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Ha	MAX. INT.
1968 JUNE																		
GRP16266	29	1557	1613	1600	S29	E30	.679	9490	1.9	16	-N			1.72			7 7 7 8	
HALE	29	1555	1650	1602	S29	E29	.670	9490	1.8	55	1B	3	1602	2.78	3.70		I	
SACP	29	1555	1604D	1602	S29	E31	.687	9490	2.0	9D	1N			3.18	3.68			
HOUT	29	1556	1615	1558	S28	E29	.661	9490	1.8	19	-N			1.20	1.70			
CANR	29	1557	1610	1600	S30	E31	.695	9490	2.0	13	-N			1.20	1.70			
HUAN	29	1557	1632		S30	E32	.703	9490	2.1	35	1F	1	1609	1.96	2.30		E	
BOUL	29	1558E	1610	1600U	S30	E30	.687	9490	1.9	12D	-F			.80	1.10			
MEUD	29	1559	1604		S29	E30	.679	9490	1.9	5	-F		1602	.93	1.30		E	
3 STATIONS REPORTING GROUP 16271. 1 STATIONS OBSERVING AND NOT REPORTING.																		
GRP16271	29	2016	2101	2022	N30	W23	.574	9476	28.1	45	-N			1.13			2 2 2 3	
HUAN	29	2016	2100		N30	W23	.574	9476	28.1	44	-N	2	2017	.50	.53		E	
HALE	29	2016	2102	2022	N30	W23	.574	9476	28.1	46	1N	2	2022	1.75	2.10		T	
16271	29	2023	2057	2036	N31	W22	.576	9476	28.2	34	*-N			.79			2 2 2 4	
HUAN	29	2016	2100		N30	W23	.574	9476	28.1	44	-N		2030	.75	.80			
SACP	29	2029	2053	2036	N31	W21	.568	9476	28.3	24	-N			.83	.88			
GRP16276	30	0025	0054	0032	S31	E27	.675	9485	2.0	29	-F			2.00			2 2 2 5	
SACP	30	0022	0052	0032	S31	E27	.675	9485	2.0	30	-F			1.42	1.64			
HALE	30	0027	0056	0031	S31	E26	.667	9485	2.0	29	1N	1	0031	2.58	3.50		FG	
GRP16285	30	0843	0901	0847	N30	W28	.616	9476	28.3	18	-N			1.11			6 6 6 9	
CAPS	30	0825	0900		N30	W23	.572	9476	28.6	35	-B	3	0847	.60	.70		204 C	
CAPE	30	0842	0905	0846	N30	W30	.634	9476	28.1	23	-N		0846	1.33	1.70		F	
MEUD	30	0843	0858	0848	N30	W30	.634	9476	28.1	15	-F		0848	.52	.60		E	
ARCE	30	0845E	0900D		N30	W28	.616	9476	28.3	15D	-N		0845	.80	1.00			
LOCA	30	0847E	0900	0847	N30	W27	.607	9476	28.3	13D	-N		0847	1.05	1.30			
CAPP	30	0850E	0902		N30	W28	.616	9476	28.3	12D	1N	P	0855	2.35	2.85			
GRP16291	30	1431	1448	1435	S15	W74	.967	9474	25.1	17	1N			1.02			12 12 11 13	
SACP	30	1429	1458	1440	S15	W73	.963	9474	25.1	29	1B			1.12	2.46			
LOCA	30	1429	1448	1434	S17	W74	.968	9474	25.1	19	1B	V	1434	1.05	3.80			
HOUT	30	1430	1440	1433	S15	W77	.979	9474	24.8	10	1B	C		1.00	2.80			
CAPE	30	1431	1437D	1435	S15	W77	.979	9474	24.8	6D	1N	P	1435	1.16			V	
CANR	30	1431	1443	1432	S15	W77	.979	9474	24.8	12	1N	C		.80	2.40			
MCMA	30	1431	1447	1433	S15	W72	.958	9474	25.2	16	-B		1433	.41	1.60		D	
MCMA	30	1431	1447	1443	S15	W72	.958	9474	25.2	16	-B							
MEUD	30	1432	1445	1434	S14	W72	.958	9474	25.2	13	-N		1434	.41	1.20			
BOUL	30	1432	1447	1435	S13	W78	.981	9474	24.8	15	-N			.40				
CAPS	30	1432E	1447D		S12	W73	.961	9474	25.1	15D	1N	3	1438	3.00			194 C	
HUAN	30	1433	1448	1435	S14	W73	.962	9474	25.1	15	-N	2	1435	.57				
CATA	30	1435	1500D	1440	S16	W74	.968	9474	25.1	25D	1B		1440	1.27			251	
ONDR	30	1437E	1447		S13	W72	.957	9474	25.2	10D	-F	V	1438			1.80	CD	
GRP16294	30	1838	1922	1850	N11	W52	.790	9473	26.9	44	1N			1.46			5 5 5 6	
SACP	30	1831	1924	1856	N08	W54	.809	9473	26.7	53	1N			1.94	2.59			
HUAN	30	1836	1925	1847	N12	W52	.791	9473	26.9	49	1N	2	1847	1.60	2.06		E	
MCMA	30	1839	1930D	1848	N12	W52	.791	9473	26.9	51D	-B		1848	1.03	1.70		E	
HALE	30	1840	1926	1850	N11	W52	.790	9473	26.9	46	1B	1	1850	1.55	2.50		FW	
BOUL	30	1845	1904	1849	N12	W52	.791	9473	26.9	19	-N			1.20	1.90			
GRP16295	30	1901	1923	1905	S16	W70	.949	9474	25.5	22	-N			.46			5 5 5 6	
HALE	30	1900	1925	1903	S17	W68	.939	9474	25.7	25	-B	1	1903	.62			FG	
MCMA	30	1900	1929	1905	S15	W74	.967	9474	25.2	29	-B		1905	.41	1.70		E	
SACP	30	1901	1925	1906	S17	W69	.945	9474	25.6	24	-N			.52	1.00			
HUAN	30	1902	1923	1906	S15	W68	.937	9474	25.7	21	-N	1	1906	.37			E	
BOUL	30	1902	1914	1904	S14	W71	.953	9474	25.5	12	-N			.40	1.00			
GRP16299	30	2026	2040	2028	S29	E14	.566	9485	1.9	14	-N			1.36			5 5 5 5	
HALE	30	2024	2047	2027	S29	E13	.561	9485	1.8	23	1B	1	2027	1.96	2.40		FGJL	
SACP	30	2026	2042	2028	S28	E15	.559	9485	2.0	16	-N			1.53	1.63			
BOUL	30	2027	2034	2029	S30	E14	.579	9485	1.9	7	-N			1.30	1.60			
MCMA	30	2027	2030D	2028	S30	E14	.579	9485	1.9	3D	-B		2028	.77	.90		E	
HUAN	30	2027	2037		S29	E14	.566	9485	1.9	10	-N	1	2029	1.24	1.32		E	

Note:

A line of explanation has been added before each flare event having more than one maxima. The total number of stations reporting some part of the event is given. The number of stations observing at the time of the principal maximum but not reporting the event is given in the second statement. Care should be exercised in utilizing the numbers in the remarks column. The first number is the number of stations reporting the individual maximum, and not the total number of stations reporting some part of the flare event. The last number is the number of stations reporting at the time of the individual maximum and not necessarily the total number of stations observing during the flare event. GRP numbers may appear several times in order to indicate secondary maxima. An asterisk beside an importance indicates a secondary maximum. The word "GRP" has also been omitted to aid in pointing to this condition.

When it is impossible to determine the time of Maximum Phase from the individual reports the time of Area Measurements is used. This time appears in parentheses. For Flares reported by only one station the last 3 digits of the group number appear to the left of the station code.

SOLAR FLARES
Small or Unconfirmed

JUNE 1968

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	
GRP15605	01	0000	0010	0001	N11 E12	.287	9419	1.9	10	-N			.21			2 2 2 8
SACP	01	0000E	0006	0001U	N11 E11	.276	9419	1.8	6D	-N	P		.21	.20		
HALE	01	0002E	0013		N11 E12	.287	9419	1.9	11D	-N	1 C	0002	.21	.20		H
606 SACP	01	0001U	0019	0010	S11 E20	.381	9418	2.5	18D	-F	C		.21	.21		9
GRP15607	01	0016	0042	0023	S36 E29	.700	9420	3.2	26	-F			.62			3 3 3 10
HALE	01	0015	0042	0021	S36 E29	.700	9420	3.2	27	-N	1 C	0021	.21	.30		
SACP	01	0016	0037U	0022U	S36 E29	.700	9420	3.2	21D	-F	C		.62	.73		
MITK	01	0017E	0036D	0025	S37 E30	.715	9420	3.3	19D	-F	C	0025	1.03	1.50		F
GRP15608	01	0029	0044	0032	S19 W69	.939	9412	26.8	15	-F			.62			6 6 6 9
MANI	01	0028	0047	0031	S18 W67	.927	9412	27.0	19	-F	2	0031	.57	1.18		
BOUL	01	0029	0036	0030	S14 W69	.937	9412	26.8	7	-N	C		.70	1.60		
VORO	01	0029	0051	0032	S22 W70	.947	9412	26.8	22	1N	C	0032	.90	2.42		66 D
SACP	01	0029	0047	0033	S20 W68	.934	9412	26.9	18	-N	C		.31	.57		
MITK	01	0029	0045	0032	S19 W69	.939	9412	26.8	16	1F	C	0032	.72			D
CRON	01	0032	0039	0033	S18 W69	.939	9412	26.8	7	-F	C		.50	1.10		
GRP15609	01	0113	0142	0124	S31 E21	.591	9420	2.6	29	-N			.69			4 4 4 6
HALE	01	0105	0157	0125	S30 E22	.588	9420	2.7	52	-N	1 C	0125	.52	.60		
SACP	01	0114U	0137D	0128U	S30 E22	.588	9420	2.7	23D	-N	P		.63	.68		
MANI	01	0115	0131	0119	S35 E19	.624	9420	2.5	16	-F	2	0119	.67	.85		
MITK	01	0118	0141	0125	S30 E22	.588	9420	2.7	23	-N	C	0125	.93	1.10		
GRP15610	01	0118	0141	0125	N12 E12	.299	9419	2.0	23	-F			.47			2 2 2 6
HALE	01	0113	0141	0125	N12 E12	.299	9419	2.0	28	-N	1 C	0125	.62	.60		
SACP	01	0122	0137D	0124	N11 E11	.276	9419	1.9	15D	-F	P		.31	.31		
GRP15611	01	0253	0318	0300	S37 E27	.695	9420	3.1	25	-N			.31			2 2 2 8
HALE	01	0251	0325	0302	S37 E28	.702	9420	3.2	34	-N	2 C	0302	.31	.40		
MANI	01	0255	0310	0258	S36 E25	.672	9420	3.0	15	-N	2	0258	.31	.42		
612 HALE	01	0303	0323	0310	S23 W70	.948	9412	26.9	20	-F	1 C	0310	.21			6
GRP15613	01	0316	0341	0318	N09 E11	.253	9419	2.0	25	-F			.57			2 2 2 6
HALE	01	0315	0342	0318	N09 E11	.253	9419	2.0	27	-N	2 C	0318	.62	.60		H
MANI	01	0316	0340	0318	N09 E11	.253	9419	2.0	24	-F	2	0318	.52	.54		
GRP15614	01	0405	0418	0409	N11 E11	.276	9419	2.0	13	-F			.36			2 2 2 8
HALE	01	0405	0418	0409	N12 E11	.288	9419	2.0	13	-N	2 C	0409	.31	.30		H
MANI	01	0410E	0412D		N09 E10	.240	9419	1.9	2D	-F	3		.41	.42		
616 CATA	01	0615	0635	0620	S17 W72	.954	9412	26.9	20	-N		0620	.58			195 10
617 ISTA	01	0620E	0702		N23 W27	.579	9413	30.2	42D	-N						8
GRP15621	01	1025	1040	1025	N08 E06	.183	9419	1.9	15	-F			.58			2 1 1 5
CATA	01	1025	1040	1025	N08 E06	.183	9419	1.9	15	-F		1025	.58	.59		146 T
CAPS	01	1033E	1038D		N08 E05	.174	9419	1.8	5D	-F	2	1036	.70	.70		157 J
622 UCCL	01	1031	1035		S08 E10	.214	9418	2.2	4	-N	C	1033	1.56	1.60		E 5
GRP15623	01	1203	1219	1210	N08 E05	.174	9419	1.9	16	-N			.56			3 3 3 5
CAPS	01	1202E	1217D		N08 E04	.166	9419	1.8	15D	-N	1	1207	.60	.60		182 CJ
HUAN	01	1203	1218	1210	N08 E06	.183	9419	2.0	15	-N	2 C	1210	.50	.50		ET
CATA	01	1205	1220	1210	N08 E05	.174	9419	1.9	15	-N		1210	.58	.59		166 T
624 HUAN	01	1230	1237		N13 E11	.301	9419	2.3	7	-F	2 C	1232	.21	.21		D 6
GRP15625	01	1235	1244	1237	S19 W76	.973	9412	26.8	9	-N			.23			2 2 2 6
SACP	01	1234	1246	1237	S19 W76	.973	9412	26.8	12	-N	C		.21	.48		
HUAN	01	1235	1242	1237	S18 W76	.972	9412	26.8	7	-N	2 C	1237	.25			D
GRP15626	01	1411	1436	1415	N08 E04	.166	9419	1.9	25	-N			.90			5 5 5 5
HUAN	01	1407	1441	1413	N08 E05	.174	9419	2.0	34	-B	2 C	1413	1.00	1.00		EL
SACP	01	1410	1429U	1415U	N09 E04	.182	9419	1.9	19D	-N	C		.41	.40		
CATA	01	1410	1440	1415	N08 E04	.166	9419	1.9	30	-N		1415	.58	.59		155 T
BOUL	01	1413	1431	1415	N07 E03	.144	9419	1.8	18	-N	C		1.40	1.40		H
CANR	01	1413	1431	1416	N07 E04	.151	9419	1.9	18	-F	C		1.10	1.10		I
GRP15627	01	1612	1632	1615	N08 E03	.160	9419	1.9	20	-N			.44			4 4 4 9
HUAN	01	1611	1621	1615	N08 E03	.160	9419	1.9	10	-N	2 C	1615	.50	.50		E
SANMI	01	1611	1642D		N08 E02	.155	9419	1.8	31D	-N	P	1616	.48	.50		O
SACP	01	1611	1624	1614	N08 E02	.155	9419	1.8	13	-N	C		.31	.30		
CATA	01	1615	1640	1615	N08 E03	.160	9419	1.9	25	-B		1615	.46	.47		224 T

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	
GRP15629	01	1911	1920	1914	N08 E01	.152	9419	1.9	9	-F			.41			2 2 2 3
HUAN	01	1909	1917	1912	N09 E01	.169	9419	1.9	8	-F	2 C	1912	.41	.41		E
HALE	01	1913	1923	1915	N07 E01	.135	9419	1.9	10	-N	2 C	1915	.41	.40		F
GRP15630	01	1931	1936	1932	N09 E00	.168	9419	1.8	5	-F			.31			2 2 2 4
HUAN	01	1931	1936	1932	N08 E00	.151	9419	1.8	5	-F	2 C	1932	.31	.31		D
SACP	01	1931	1934D	1932U	N09 E00	.168	9419	1.8	3D	-N	P		.31	.30		
GRP15631	01	1959	2009	2000	S17 W78	.979	9412	27.0	10	-F			.38			2 2 2 3
BOUL	01	1959	2010	2000	S16 W78	.979	9412	27.0	11	-N	C		.40	1.20		
HUAN	01	1959	2008		S18 W78	.980	9412	27.0	9	-F	1 C	2002	.35			
GRP15632	01	2018	2028	2020	N08 E01	.152	9419	1.9	10	-N			.58			4 4 4 4
HALE	01	2015	2021	2016	N12 E01	.220	9419	1.9	6	-N	1 C	2016	.21	.20		H
HUAN	01	2017	2027	2019	N08 E00	.151	9419	1.8	10	-N	2 C	2019	.41	.41		E
SACP	01	2018E	2028	2021U	N08 E00	.151	9419	1.8	10D	-N	P		.41	.41		
BOUL	01	2018	2027	2019	N07 E01	.135	9419	1.9	9	-N	C		1.20	1.20		
HALE	01	2018	2030	2022	N07 E01	.135	9419	1.9	12	-N	1 C	2022	.31	.30		F
633 SACP	01	2318	2339	2320U	S30 E15	.539	9420	3.1	21	-F	C		.21	.22		7
634 HALE	02	0018	0035	0024	N13 W33	.580	9413	30.5	17	-F	1 C	0024	.21	.30		9
635 HALE	02	0309	0335	0311	S13 E26	.479	9422	4.1	26	-B	1 C	0311	.31	.40		E 7
637 ISTA	02	0715E	0725D		S34 E10	.570	9420	3.1	10D	1F						9
638 ISTA	02	0718E	0725D		N18 W34	.619	9413	30.8	7D	-N						9
639 ISTA	02	0842	0920D		S17 E90	1.000	9429	9.1	38D	-N						7
GRP15640	02	1044	1105 (1052)		S15 W03	.254	9418	2.2	21	-F			.20			3 2 1 6
CAPE	02	1028	1147	1106	S13 W04	.226	9418	2.1	79	-F	C	1106	.92	1.00		F
LOCA	02	1044E	1104D		S15 W02	.251	9418	2.3	20D	-N	S					
CAPS	02	1046E	1105D		S15 W04	.258	9418	2.1	19D	-F	2	1052	.20	.20		157
GRP15641	02	1123	1208	1138	S28 E03	.463	9420	2.7	45	-F			.79			2 2 2 4
CAPE	02	1120	1208	1138	S28 E04	.465	9420	2.8	48	-F	C	1138	.78	.90		
CAPS	02	1125	1201D		S27 E02	.446	9420	2.6	36D	-F	2	1132	.80	.90		147 E
GRP15642	02	1247	1256	1249	S31 E05	.512	9420	2.9	9	-F			.49			2 2 2 7
MCMA	02	1247	1255	1249	S32 E05	.527	9420	2.9	8	-N	C	1249	.52	.60		E
HUAN	02	1249E	1257		S30 E04	.495	9420	2.8	8D	-F	2 C	1250	.45	.47		CE
GRP15644	02	1610	1628	1613	N10 W09	.239	9419	2.0	18	-F			.39			2 2 2 7
HUAN	02	1610	1626	1611	N10 W08	.229	9419	2.1	16	-F	2 C	1611	.41	.41		E
HALE	02	1610	1629	1614	N09 W09	.227	9419	2.0	19	-N	1 C	1614	.36	.40		
645 HALE	02	2010	2025	2012	S13 E78	.979	9429	8.7	15	-F	1 C	2012	.21			2
646 HALE	02	2101	2113	2106	N19 E69	.942	9428	8.1	12	-F	1 C	2106	.21			4
647 HALE	02	2134	2149	2137	N09 W09	.227	9419	2.2	15	-F	1 C	2137	.15	.20		5
648 MCMA	02	2158	2208D	2204	S30 W01	.492	9420	2.8	10D	-N	C	2204	.41	.50		E 7
649 HALE	02	2241	2259	2253	N11 W40	.661	9413	30.9	18	-F	1 C	2253	.15	.20		5
650 HALE	02	2258	2359	2328	S29 W02	.477	9420	2.8	61	-N	1 C	2328	.26	.30		4
651 HALE	02	2307	2318	2308	N11 W40	.661	9413	31.0	11	-F	1 C	2308	.15	.20		5
653 MONT	03	0735	0800		S13 E76	.971	9429	9.0	25	-F		0740	.52			7
656 HUAN	03	1246	1253	1248	S13 W15	.333	9418	2.4	7	-F	2 C	1248	.21	.21		D 8
GRP15657	03	1302	1324	1305	S13 E72	.953	9429	8.9	22	-F			.26			2 2 2 11
HUAN	03	1301	1316		S13 E72	.953	9429	8.9	15	-F	2 C	1305	.25			D
MCMA	03	1303	1331	1305	S13 E72	.953	9429	8.9	28	-N	C	1305	.26	.80		D
GRP15659	03	1614	1643	1623	S12 E70	.942	9429	8.9	29	-F			.30			4 4 4 9
SACP	03	1610	1659	1623	S11 E69	.936	9429	8.8	49	-F	C		.21	.38		
MCMA	03	1614E	1650		S13 E71	.948	9429	9.0	36D	-N	C	1623	.36	1.00		E
HALE	03	1615	1631	1622	S12 E68	.930	9429	8.8	16	-F	2 C	1622	.41			
HUAN	03	1616	1633		S13 E70	.942	9429	8.9	17	-F	2 C	1620	.21			D
GRP15661	03	1939	2010 (1942)		S15 E68	.931	9429	8.9	31	-F			.26			2 1 1 5
MCMA	03	1939E	2010D		S15 E68	.931	9429	8.9	31D	-F	P	1942	.26	.80		D
HUAN	03	1942	2015		S15 E65	.912	9429	8.7	33	-F	2 C	1954	.25	.42		D

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMA PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H α	MAX. INT. %	
662 HUAN	03	2104	2118	2107	N15	E11	.324	9423	4.7	14	-F	2 C	2107	.21	.21		D	4
GRP15663	03	2104	2124	2112	S36	W09	.595	9420	3.2	20	-F			.29			3 3 3	5
SACP	03	2057	2135	2115	S36	W09	.595	9420	3.2	38	-F	C		.31	.34			
HUAN	03	2105	2120	2111	S36	W10	.598	9420	3.1	15	-N	2 C	2111	.25	.27		DH	
HALE	03	2110	2117	2111	S36	W09	.595	9420	3.2	7	-F	2 C	2111	.31	.40			
GRP15664	03	2139	2146	2140	S36	W10	.598	9420	3.2	7	-F			.28			2 2 2	7
HALE	03	2138	2146	2140	S36	W09	.595	9420	3.2	8	-F	2 C	2140	.31	.40			
HUAN	03	2140	2145		S36	W10	.598	9420	3.2	5	-F	2 C	2141	.25	.27		DH	
665 HUAN	03	2209	2217		S36	W08	.592	9420	3.3	8	-F	2 C	2211	.21	.22		D	7
666 HALE	03	2248	2252	2248	S34	W15	.593	9420	2.8	4	-F	2 C	2248	.21	.30			5
668 HALE	04	0055	0105	0057	S34	W16	.600	9420	2.8	10	-N	1 C	0057	.21	.30			8
669 HALE	04	0239	0300	0240	S15	E62	.891	9429	8.8	21	-N	2 C	0240	.26	.60			7
671 CAPE	04	0658	0703	0700	N19	E14	.402	9423	5.3	5	-F	C	0700	1.47	1.60		V	12
673 AROS	04	0700	0739	0708	S20	W22	.487	9418	2.6	39	-N	P	0708	1.03	1.30			12
GRP15676	04	1122	1133	1125	N20	E12	.398	9423	5.4	11	-F			.72			2 2 2	7
CAPE	04	1122	1130	1125	N19	E11	.377	9423	5.3	8	-F	C	1125	.84	.90		V	
CAPS	04	1128E	1135D		N20	E12	.398	9423	5.4	7D	-N	2	1128	.60	.70		166	J
677 MONT	04	1245	1515		S37	W13	.624	9420	3.6	150	1N		1250	2.58				8
678 HUAN	04	1402	1413		N30	W83	.995	9413	29.4	11	-F	2 C	1405	.31			D	8
GRP15679	04	1608	1630	1614	S13	E59	.864	9429	9.1	22	-F			.43			2 2 2	7
HUAN	04	1607	1629		S13	E58	.856	9429	9.0	22	-F	2 C	1615	.45	.65		E	
MCMA	04	1609	1630	1614	S13	E59	.864	9429	9.1	21	-F	C	1614	.41	.80		E	
680 HUAN	04	1706	1717	1708	S36	W18	.635	9420	3.4	11	-F	2 C	1708	.37	.42		E	6
GRP15682	04	1757	1808	1800	N18	W51	.802	9413	31.9	11	-N			.36			3 3 3	6
HALE	04	1755	1815	1800	N18	W51	.802	9413	31.9	20	-N	2 C	1800	.31	.50			
SACP	04	1757	1807	1759	N17	W52	.810	9413	31.8	10	-N	C		.41	.55			
HUAN	04	1758	1803	1800	N18	W51	.802	9413	31.9	5	-F	2 C	1800	.37	.49		E	
GRP15683	04	1845	1911	1852	S31	W26	.634	9420	2.8	26	-N			.68			4 4 4	6
HUAN	04	1838	1908	1849	S30	W27	.633	9420	2.8	30	-N	2 C	1849	.35	.39		D	
MCMA	04	1846	1909	1854	S31	W26	.634	9420	2.8	23	-N	C	1854	.83	1.10		E	
HALE	04	1847	1921	1850	S29	W26	.615	9420	2.8	34	-N	1 C	1850	.41	.50			
SACP	04	1848	1904	1855	S31	W25	.626	9420	2.9	16	-F	C		1.13	1.25			
HUAN	04	1914	1920	1915	S35	W23	.653	9420	3.1	6	-F	2 C	1915	.25	.28		D	
GRP15684	04	1938	1952	1942	S36	W23	.664	9420	3.1	14	-F			.26			2 2 2	5
MCMA	04	1937	1954	1939	S37	W23	.674	9420	3.1	17	-N	C	1939	.26	.30		D	
HUAN	04	1938	1949	1945	S35	W23	.653	9420	3.1	11	-F	2 C	1945	.25	.28		D	
685 HUAN	04	2006	2019		N19	E08	.356	9423	5.4	13	-F	2 C	2015	.25	.25		D	5
GRP15686	04	2020	2031	2023	S13	E54	.819	9429	8.9	11	-N			.34			4 4 4	5
HALE	04	2019	2033	2020	S12	E53	.808	9429	8.8	14	-N	2 C	2020	.21	.40			
HUAN	04	2020	2024D		S13	E54	.819	9429	8.9	4D	-F	2 P	2022	.21	.28		D	
SACP	04	2020	2030	2024U	S12	E54	.817	9429	8.9	10	-N	C		.41	.57			
MCMA	04	2020	2029	2024	S13	E56	.838	9429	9.0	9	-N	C	2024	.52	.90		E	
687 HUAN	04	2100	2104D		N19	E07	.350	9423	5.4	4D	-F	2 P	2104	.21	.21		D	4
GRP15688	04	2128	2151	2131	N17	E06	.314	9423	5.3	23	-N			.62			3 3 2	4
HUAN	04	2127	2140D	2131	N18	E06	.330	9423	5.3	13D	-N	2 C	2131	.83	.83		E	
HALE	04	2128	2140	2130	N17	E06	.314	9423	5.3	12	-N	1 C	2130	.41	.40			
MCMA	04	2130	2212	2132	N16	E06	.299	9423	5.3	42	-N	C						
GRP15689	04	2148	2213	2154	N19	E06	.345	9423	5.4	25	-N			.87			3 3 3	3
MCMA	04	2130	2212	2156	N16	E06	.299	9423	5.3	42	-N	C	2156	1.03	1.10		EK	
HALE	04	2143	2218	2153U	N21	E06	.377	9423	5.4	35	-N	1 P	2153	.57	.60		F	
BOUL	04	2152	2209	2154	N19	E07	.350	9423	5.4	17	-N	C		1.00	1.10			
GRP15690	04	2239	2248	2242	S12	E53	.808	9429	8.9	9	-F			.42			2 2 2	3
HALE	04	2239	2247	2241	S12	E53	.808	9429	8.9	8	-F	1 C	2241	.31	.50			
SACP	04	2239	2248	2242	S12	E53	.808	9429	8.9	9	-N	C		.52	.70			
692 MANI	04	2348E	0013	2349	S30	W15	.544	9436	3.9	25D	-B	2	2349	1.55				3

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMA PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hr	MAX. INT. %	
693 HALE	05	0044	0054	0046	S33	W32	.701	9420	2.6	10	-B	2 C	0046	.52	.70			J 3
694 HALE	05	0131	0135	0132	S33	W32	.701	9420	2.7	4	-B	2 C	0132	.41	.60			J 3
695 MANI	05	0503	0511	0506	S35	W25	.668	9420	3.3	8	-F	2	0506	.31	.42			4
GRP15696	05	0628	0632	0629	S36	W27	.691	9420	3.2	4	-F			.87				2 2 2 7
SIBE	05	0628	0631	0629	S35	W29	.695	9420	3.1	3	-F	C	0629	.83	1.10		59	CD1
CAPS	05	0630E	0633D		S37	W24	.682	9420	3.5	3D	-N	2	0632	.90	1.30		176	
697 ISTA	05	0645E	0745D		S37	W22	.670	9420	3.6	60D	-N							10
GRP15698	05	0704	0800	(0718)	N16	E01	.280	9423	5.4	56	-F			1.66				2 2 1 7
BUCA	05	0700E	0710D		N14	W01	.246	9423	5.2	10D	-F	C	0702	.88	.90			
ISTA	05	0707	0745D		N16	E01	.280	9423	5.4	38D	-N							
BUCA	05	0715E	0800D		N17	E00	.296	9423	5.3	45D	-F	C	0718	1.66	1.70			
699 HTPR	05	0903	0925	0911	S38	W28	.716	9420	3.3	22	-F		0911	1.13	1.60			3
GRP15701	05	1223	1229	1225	N20	W03	.349	9423	5.3	6	-N			.56				5 5 5 7
SACP	05	1223	1230	1225	N20	W03	.349	9423	5.3	7	-N	C		.64	.63			
CAPE	05	1223	1230	1224	N20	W04	.352	9423	5.2	7	-N	C	1224	.78	.80			V
MCMA	05	1223	1229	1225	N20	W04	.352	9423	5.2	6	-N	C	1225	.62	.70			E
HUAN	05	1223	1227	1225	N20	W02	.347	9423	5.4	4	-F	2 C	1225	.37	.37			D
HTPR	05	1225E	1226D		N20	W03	.349	9423	5.3	1D	-N		1225	.41	.40			C
702 SACP	05	1426	1430	1427	S11	E43	.695	9429	8.8	4	-F	C		.52	.61			6
703 MCMA	05	1511E	1534	1518	S28	W22	.572	9436	4.0	23D	-B	C	1518	.41	.50			EH 6
GRP15704	05	1532	1547	1536	S13	W21	.414	9422	4.1	15	-N			.52				3 3 3 6
SACP	05	1530	1548U	1537	S13	W21	.414	9422	4.1	18D	-N	C		.72	.73			
MCMA	05	1531	1550	1534	S13	W20	.400	9422	4.1	19	-N	C	1534	.62	.70			E
HUAN	05	1535	1544		S13	W22	.427	9422	4.0	9	-F	1 C	1539	.21	.21			D
705 MCMA	05	1605	1715	1610	S28	W23	.580	9436	3.9	70	-N	C	1610	.31	.30			DH 8
706 MCMA	05	1632	1641	1635	S39	W24	.702	9420	3.9	9	-N	C	1635	.31	.40			DH 9
GRP15707	05	1735	1751	1740	S12	E42	.686	9429	8.9	16	-N			.49				4 4 4 6
HALE	05	1728	1748	1734	S11	E41	.671	9429	8.8	20	-B	3 C	1734	.21	.30			
MCMA	05	1736	1757	1741	S13	E42	.689	9429	8.9	21	-N	C	1741	1.03	1.40			E
SACP	05	1736	1750	1739	S11	E41	.671	9429	8.8	14	-N	C		.41	.48			
HUAN	05	1738	1747		S12	E42	.686	9429	8.9	9	-F	1 C	1742	.31	.34			E
708 MCMA	05	1736	1750	1738	S36	W32	.725	9420	3.3	14	-N	C	1738	.41	.60			E 6
GRP15709	05	1737	1750	1739	S18	W76	.973	9435	31.0	13	-F			.21				2 2 2 6
MCMA	05	1737	1755	1739	S17	W74	.964	9435	31.2	18	-N	C	1739	.21	.80			D
HUAN	05	1737	1744		S18	W77	.977	9435	31.0	7	-F	1 C	1738	.21				D
GRP15710	05	1810	1819	1813	S14	E42	.692	9429	8.9	9	-F			.43				3 3 3 5
MCMA	05	1808	1820	1811	S15	E43	.707	9429	9.0	12	-N	C	1811	.31	.40			E
SACP	05	1811	1820U	1815	S14	E42	.692	9429	8.9	9D	-F	C		.73	.85			
HUAN	05	1812	1817	1813	S14	E42	.692	9429	8.9	5	-F	2 C	1813	.25	.29			D
712 HALE	05	1945	2032	1954	N19	E81	.989	9443	11.9	47	-B	2 C	1954	.41				CG 5
713 HALE	05	2007	2014	2009	N18	E81	.989	9443	11.9	7	-N	2 C	2009	.31				CG 5
4 STATIONS REPORTING GROUP 15714. 1 STATIONS OBSERVING AND NOT REPORTING.																		
GRP15714	05	2013	2042	2018	S16	W51	.796	9418	2.0	29	-N			.29				3 3 3 5
HALE	05	2010	2102D	2015	S16	W50	.785	9418	2.1	52D	-B	2 C	2015	.31	.50			W
HUAN	05	2014	2033	2018	S15	W51	.793	9418	2.0	19	-F	2 C	2018	.25	.32			D
MCMA	05	2015	2032	2020	S16	W51	.796	9418	2.0	17	-F	C	2020	.31	.50			D
15714	05	2026	2100	2042	S16	W51	.796	9418	2.0	34	-F			.73				2 2 2 6
SACP	05	2017U	2100U	2042	S16	W50	.785	9418	2.1	43D	-F	C		.94	1.21			
MCMA	05	2035	2100	2041	S16	W52	.805	9418	2.0	25	-N	C	2041	.52	.80			E
716 HUAN	05	2112	2126	2113	N19	E37	.657	9428	8.7	14	-F	2 C	2113	.21	.23			D 7
GRP15717	05	2146	2155	2147	S15	E41	.684	9429	9.0	9	-N			.41				3 3 3 7
HALE	05	2145	2157	2146	S15	E41	.684	9429	9.0	12	-B	1 C	2146	.36	.50			
HUAN	05	2146	2154	2147	S15	E41	.684	9429	9.0	8	-F	2 C	2147	.45	.53			E
SACP	05	2146	2155	2147	S15	E40	.672	9429	8.9	9	-N	C		.41	.48			
718 HALE	05	2205	2215	2208	N19	E81	.989	9443	12.0	10	-N	2 C	2208	.41				CG 7

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
720 SACP	06	0002E	0015	0005	S15	E38	.648	9429	8.9	13D	-N	C		.72	.81			5
721 HALE	06	0007E	0014		N20	E81	.989	9443	12.1	7D	-F	1 C	0010	.21				5
722 HALE	06	0100	0130	0104	S16	W37	.640	9422	3.3	30	-F	1 C	0104	.21	.30		H	4
723 HALE	06	0132	0223	0141	S16	E38	.652	9429	8.9	51	-N	2 C	0141	.31	.40		K	7
724 HALE	06	0144	0203	0156	N18	E81	.989	9443	12.1	19	-N	1 C	0156	.21				7
725 HALE	06	0148	0226	0157	N19	E32	.598	9428	8.5	38	-N	2 C	0157	1.24	1.50		F	7
726 HALE	06	0152	0230	0205	S28	W28	.625	9436	4.0	38	-N	1 C	0205	.52	.70		H	8
727 HALE	06	0237	0310	0252	S15	W38	.648	9422	3.3	33	-F	1 C	0252	.62	.80		H	7
728 HALE	06	0244	0338	0252	N18	E81	.989	9443	12.2	54	1N	1 C	0252	.52			KW	7
729 HALE	06	0300	0308	0301	S37	W38	.776	9420	3.3	8	-N	1 C	0301	.31	.50			8
730 HALE	06	0321	0341	0324	S15	E36	.623	9429	8.8	20	-N	2 C	0324	.67	.90			6
731 HALE	06	0343	0351	0346	N18	E90	1.000	9443	12.9	8	-F	1 C	0346	.15				7
GRP15732	06	0414	0600	0420	N18	W76	.973	9413	31.5	106	-N			.75			2 2 2	7
TACH	06	0414	0600D	0419	N17	W76	.973	9413	31.5	106D	1B	C	0419	1.09		4.00 117	DGK	
TACH	06	0414	0600D	0508	N17	W76	.973	9413	31.5	106D	1B							
TACH	06	0414	0600D	0526	N17	W76	.973	9413	31.5	106D	1B							
MANI	06	0420E	0425	0420	N19	W75	.970	9413	31.6	5D	-F	2	0420	.41				
GRP15733	06	0425	0438	0427	S36	W43	.805	9420	3.0	13	-F			.26			2 2 2	7
HALE	06	0424	0437	0426	S36	W39	.777	9420	3.3	13	-N	1 C	0426	.31	.50			
MANI	06	0425	0438	0427	S36	W46	.827	9420	2.7	13	-F	2	0427	.21	.33			
734 HALE	06	0432	0440	0433	N18	E78	.980	9443	12.0	8	-N	2 C	0433	.21				7
GRP15735	06	0600	0715	(0609)	S14	E34	.594	9429	8.8	75	1F			3.32			2 1 1	10
BUCA	06	0600E	0715D		S14	E34	.594	9429	8.8	75D	1F	P	0609	3.32	4.10			
CAPS	06	0610E	0735D		S15	E30	.547	9429	8.5	85D	1F	2	0620	2.50	3.00		157	C
736 BUCA	06	0734E	0755D		S35	W38	.763	9420	3.5	21D	-F	C	0736	.43	.60		D	9
GRP15737	06	0836	0856	0837	S11	E32	.554	9429	8.8	20	-N			.60			3 3 3	8
CAPE	06	0835	0856	0836	S11	E33	.567	9429	8.8	21	-F	C	0836	.97	1.20		FV	
MONT	06	0836	0840D	0838	S10	E33	.563	9429	8.8	4D	-N		0838	.41				
ARCE	06	0839E	0845D		S13	E30	.536	9429	8.6	6D	-N	C	0841	.42	.50			
GRP15739	06	1153	1212	1159	S34	W43	.795	9420	3.3	19	-N			.60			3 3 3	9
CAPE	06	1150	1220	1200	S33	W44	.797	9420	3.2	30	-N	C	1200	.97	1.60			
MCMA	06	1154	1210	1157	S36	W42	.798	9420	3.3	16	-N	C	1157	.52	.90		E	
HUAN	06	1154	1207		S34	W44	.802	9420	3.2	13	-F	1 C	1155	.31	.39			
740 CAPE	06	1250	1321	1310	N18	E38	.663	9430	9.4	31	-F	C	1310	1.29	1.60			8
741 SACP	06	1449	1513	1454	S11	E31	.540	9429	8.9	24	-N	C		.73	.77			3
743 SACP	06	1542	1554	1544	S17	W43	.714	9422	3.4	12	-N	C		.21	.25			4
GRP15744	06	1619	1635	1622	N20	E73	.962	9443	12.2	16	-F			.26			2 2 2	4
HALE	06	1618	1638	1623	N20	E73	.962	9443	12.2	20	-N	2 C	1623	.21				
SACP	06	1620	1631	1621	N20	E73	.962	9443	12.2	11	-F	C		.31	.66			
745 HALE	06	1655	1729	1656	S33	W45	.805	9420	3.3	34	-N	2 C	1656	.31	.50			5
746 HALE	06	1716	1753	1719	S35	W43	.800	9420	3.5	37	-F	2 C	1719	.21	.30			5
747 HALE	06	1725	1800	1738	N17	E26	.512	9428	8.7	35	-N	2 C	1738	.72	.80		S	5
GRP15748	06	1937	1948	1939	S35	W47	.829	9420	3.3	11	-N			.40			4 4 4	6
HUAN	06	1937	1946	1938	S34	W49	.839	9420	3.1	9	-F	2 C	1938	.25	.35		D	
HALE	06	1937	1950	1938	S34	W48	.831	9420	3.2	13	-N	1 C	1938	.21	.40			
SACP	06	1937	1947	1940	S36	W46	.827	9420	3.4	10	-N	C		.52	.71			
MCMA	06	1937	1947	1939	S36	W45	.820	9420	3.4	10	-N	C	1939	.62	1.10		E	
749 HUAN	06	1948	1955	1949	S27	W36	.692	9436	4.1	7	-F	1 C	1949	.21	.24		D	6
750 HALE	06	2022	2042	2024	N18	E71	.951	9443	12.2	20	-N	1 C	2024	.21				6
751 HALE	06	2123	2145	2130	S12	E26	.476	9429	8.8	22	-N	2 C	2130	.41	.50			6

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMA TH PLAGE REGION	CMP DAY	TIME UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H ₀	MAX. INT. %		
752 HALE	06	2205	2223	2210	S15 W49	.773	9422	3.2	18	-F	2 C	2210	.21	.30			7	
GRP15753 HALE SACP	06	2303	2315	2306	S16 W49	.776	9422	3.3	12	-F			.26				2 2 2 5	
	06	2302	2315	2305	S15 W49	.773	9422	3.3	13	-F	2 C	2305	.31	.50				
	06	2304	2315	2306	S16 W48	.765	9422	3.4	11	-N	C		.21	.26				
754 HALE	06	2330	0007	2344	N17 E64	.908	9443	11.8	37	-F	1 C	2344	.31				4	
756 CRON	07	0251	0310	0254	N17 E65	.915	9443	12.0	19	-N	C		.50	1.10			3	
758 HALE	07	0330	0337	0331	N20 E67	.930	9443	12.2	7	-F	1 C	0331	.15				4	
759 HALE	07	0401	0405	0401	S34 W53	.867	9420	3.2	4	-B	1 C	0401	.21	.40			4	
GRP15761 ISTA BUCA	07	0611	0630	0615	S17 E24	.487	9429	9.1	19	-F			1.10				2 2 1 5	
	07	0611	0630	0615	S17 E24	.487	9429	9.1	19	-N								
	07	0614E	0625N		S16 E23	.466	9429	9.0	110	-F	C	0616	1.10	1.20				
762 CATA	07	0645	0700	0645	N20 E69	.942	9443	12.5	15	-N		0645	.23			166	4	
764 CATA	07	0745E	0750	0745	S12 E22	.422	9429	9.0	50	-N		0745	.40	.44		166	8	
765 CATA	07	0850	0900	0850	S13 E19	.389	9429	8.8	10	-F		0850	.11	.13		148	5	
766 HTPR	07	0907	0913	0910	N14 E63	.898	9443	12.1	6	-F		0910	.41				6	
771 MCMA	07	1413	1422	1414	N13 W32	.563	9423	5.2	9	-N	C	1414	.31	.40			EH 6	
GRP15773 SACP HUAN MCMA LOCA	07	1539	1548	1542	N17 E58	.862	9443	12.0	9	-N			.38				4 4 4 7	
	07	1539E	1545	1541U	N17 E57	.854	9443	11.9	60	-N	P		.10	.15				
	07	1539	1544		N16 E58	.860	9443	12.0	5	-F	1 C	1541	.25	.35				
	07	1539	1555	1544	N17 E57	.854	9443	11.9	16	-N	C	1544	.52	.90				
	07	1540	1547	1541	N17 E60	.878	9443	12.2	7	-N	V	1541	.63	1.30				
GRP15775 HTPR SACP MCMA	07	1629	1644	1632	N17 E65	.915	9443	12.6	15	-F			.77				3 3 3 7	
	07	1628	1645	1631	N15 E65	.913	9443	12.6	17	-F		1631	.52	.70				
	07	1629E	1644U	1634U	N18 E65	.916	9443	12.6	150	-F	P		1.03	1.76				
	07	1629	1644	1630	N18 E64	.909	9443	12.5	15	-N	C	1630	.77	1.80				
GRP15776 MCMA SACP HUAN	07	1733	1742	1735	N17 E56	.845	9443	11.9	9	-N			.42				3 3 3 7	
	07	1733	1750	1735	N17 E56	.845	9443	11.9	17	-N	C	1735	.52	.90				
	07	1733	1738D	1736U	N17 E56	.845	9443	11.9	50	-N	P		.52	.73				
	07	1733	1737	1734	N16 E57	.852	9443	12.0	4	-F	1 C	1734	.21	.30				
777 HUAN	07	1856	1900D		N18 E57	.855	9443	12.1	40	-F	1 C	1857	.31	.45			D 4	
778 HALE	07	2016	2019	2017	S13 E11	.292	9429	8.7	3	-N	1 C	2017	.31	.30			4	
GRP15779 SACP HALE	07	2017	2029	2020	S34 W61	.916	9420	3.3	12	-F			.24				2 2 2 4	
	07	2013	2031D	2019U	S35 W59	.907	9420	3.4	180	-F	P		.21	.35				
	07	2020	2027	2021	S33 W62	.919	9420	3.2	7	-F	1 C	2021	.26					
780 HALE	07	2024	2034	2024	N21 E09	.387	9428	8.5	10	-F	1 C	2024	.36	.40			5	
781 HALE	07	2159	2208	2200	S12 E20	.394	9429	9.4	9	-F	1 C	2200	.21	.20			7	
782 HALE	07	2230	2238	2231	S15 W63	.899	9422	3.2	8	-N	1 C	2231	.21	.50			T 8	
783 HALE	07	2249	2307	2251	S33 W62	.919	9420	3.3	18	-F	1 C	2251	.21				7	
784 HALE	07	2337	2345	2338	S15 W63	.899	9422	3.3	8	-F	1 C	2338	.41	.90			T 7	
785 HALE	08	0027	0035	0028	N16 E52	.806	9443	11.9	8	-N	2 C	0028	.52	.90			5	
786 MITK	08	0252	0313	0255	N20 E05	.349	9428	8.5	21	-N	C	0255	1.34	1.40			E 6	
787 HALE	08	0322	0327	0323	N15 E51	.794	9443	12.0	5	-F	2 C	0323	.41	.70			6	
GRP15788 HTPR HALE MANI	08	0445	0508	0451	N15 E50	.783	9443	11.9	23	-F			.36				3 3 3 8	
	08	0445E	0510	0450	N13 E50	.779	9443	11.9	250	-F		0450	.31	.50				
	08	0446E	0448D	0447U	N15 E50	.783	9443	11.9	20	-N	2 P	0447	.31	.50				
	08	0450E	0505	0455	N17 E50	.788	9443	12.0	150	-F	2	0454	.47	.75				
789 HTPR	08	0502	0510	0503	S13 E06	.249	9429	8.7	8	-F		0503	.62	.60			6	
790 HTPR	08	0515	0532		N09 E90	1.000	9445	15.0	17	-F							6	
791 HTPR	08	0822	0840	0832	S18 W58	.864	9422	4.0	18	-F		0832	.41	.80			D 7	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS			
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %					
792 CAPE	08	0834	0840	0835	N18	E50	.791	9443	12.1	6	-N	C	0835	.74	1.20			HV	7		
793 CAPS	08	1119E	1122D		N20	E85	.997	9445	14.8	3D	-F	2	1121	.80			153	C	4		
3 STATIONS REPORTING GROUP 15794. 7 STATIONS OBSERVING AND NOT REPORTING.																					
GRP15794	08	1308	1351	1325	N11	E16	.330	9430	9.7	43	-F			1.14				3	3	3	10
SANM	08	1306	1515D		N11	E22	.413	9430	10.2	129D	-F	P	1321	.65	.68			E			
CAPE	08	1310	1351	1325	N12	E13	.301	9430	9.5	41	1N	C	1325	2.39	2.50			FH			
HUAN	08	1325E	1340D		N11	E13	.290	9430	9.5	15D	-F	1	1327	.37	.37			E			
15794	08	1306	1515	(1426)	N11	E22	.413	9430	10.2	129	*-F			1.13				2	1	1	6
SANM	08	1306	1515D		N11	E22	.413	9430	10.2	129D	-F	P	1426	1.13	1.19			E			
HUAN	08	1511	1552D		N10	E12	.267	9430	9.5	41D	-N	1	1512	.25	.25			D			
795 BOUL	08	1344	1350D	1348	S28	W75	.974	9420	2.9	6D	-N	C		.60	1.80						9
796 HUAN	08	1448	1456		S34	W70	.959	9420	3.4	8	-F	1	1451	.25				D			6
GRP15797	08	1511	1518	1513	S27	W61	.902	9436	4.1	7	-F			.31				3	3	3	6
SANM	08	1511	1515D		S26	W59	.887	9436	4.2	4D	-F	P	1513	.32	.73			D			
MCMA	08	1511	1518	1513	S27	W62	.909	9436	4.0	7	-N	C	1513	.31	.70			D			
HUAN	08	1511	1517D		S27	W62	.909	9436	4.0	6D	-F	1	1512	.31	.51			D			
798 SACP	08	1642E	1659D	1646	S14	E01	.245	9429	8.8	17D	-N	C		1.13	1.12						4
800 HALE	08	1838E	1846	1838U	N21	W02	.357	9428	8.6	8D	-N	3	1838	.72	.80						5
801 HUAN	08	1958	2005		N10	E09	.230	9430	9.5	7	-F	1	2000	.25	.25			D			4
802 HALE	08	2035	2052	2037	S37	W75	.979	9420	3.2	17	1N	2	2037	.83							3
803 HALE	08	2136	2148	2138	N19	W03	.327	9428	8.7	12	-N	2	2138	1.03	1.10						5
806 MITK	09	0131E	0159		S15	W06	.282	9429	8.6	28D	-N	C	0135	.62	.60			D			7
807 MITK	09	0133	0159	0135	S27	W67	.938	9436	4.0	26	-N	C	0135	.52				E			7
808 MITK	09	0136	0147	0137	N12	E06	.227	9430	9.5	11	-N	C	0137	1.75	1.80			E			6
809 MITK	09	0241	0250	0243	N12	E06	.227	9430	9.6	9	1N	C	0243	2.17	2.20			E			5
810 MITK	09	0247	0313	0251	N19	W04	.328	9428	8.8	26	-N	C	0251	.52	.50						5
811 MITK	09	0248	0255	0250	S27	W69	.948	9436	3.9	7	-N	C	0250	.52				D			5
812 MITK	09	0335	0351D	0336	S27	W70	.953	9436	3.9	16D	-N	C	0336	.52				D			4
813 MITK	09	0400	0417	0402	N11	E03	.193	9430	9.4	17	-F	C	0402	1.24	1.30						5
814 MITK	09	0445	0512	0448	N11	E03	.193	9430	9.4	27	-N	C	0448	1.55	1.60			E			6
GRP15815	09	0528	0618	0601	N18	W54	.828	9423	5.2	50	-F			1.13				2	2	2	10
CRON	09	0528	0608	0601	N17	W53	.817	9423	5.3	40	-F	C		.70	1.20						
MITK	09	0558	0627	0600	N19	W55	.839	9423	5.1	29	1N	C	0600	1.55	2.80			E			
816 MITK	09	0557	0620	0600	N13	E04	.230	9430	9.5	23	-N	C	0600	1.34	1.40						10
GRP15817	09	0635	0740	0700	N11	E03	.193	9430	9.5	65	-N			.83				3	2	1	9
ISTA	09	0635E	0805D		N11	E03	.193	9430	9.5	90D	-N										
MITK	09	0658	0715	0700	N11	E02	.189	9430	9.4	17	-N	C	0707	.83	.80			D			
MONT	09	0801E	0826D		N13	E05	.236	9430	9.7	25D	-N		0805	1.03							
GRP15818	09	0635	0823	0747	S27	W70	.953	9436	4.0	108	-N			.83				2	2	1	7
ISTA	09	0635E	0850D		S26	W69	.947	9436	4.1	135D	-N										
MONT	09	0744	0755	0747	S28	W70	.954	9436	4.1	11	1N		0747	.83							
GRP15819	09	0709	0720	0711	S15	W08	.296	9429	8.7	11	-N			1.24				2	2	1	7
ISTA	09	0708	0725		S14	W07	.274	9429	8.8	17	-N										
MITK	09	0709	0715	0711	S15	W09	.304	9429	8.6	6	-N	C	0711	1.24	1.30						
820 MONT	09	0810	0826D	0820	S28	E70	.954	9446	14.6	16D	-N		0820	.83							6
822 UCCL	09	0903	0946D	0908	N10	E03	.177	9430	9.6	43D	1F	P	0908	2.08	2.10			E			9
823 CATA	09	1025	1105	1025	N12	E01	.204	9430	9.5	40	-B		1025	1.39	1.42		204				6
825 CAPE	09	1206	1216	1210	S20	W75	.970	9436	3.9	10	-N	C	1210	.84							7
826 MCMA	09	1246E	1320D		S15	W11	.322	9429	8.7	34D	-N	C	1246	1.29	1.40			E			7

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H α	MAX. INT. %	
829 MCMA	09	1704	1715	1708	S15 E56	.842	9449	13.9	11	-F	C	1708	.26	.50		D	6
831 SACP	09	1826	1841	1830	S31 W78	.984	9420	3.9	15	-B	C		.73				6
GRP15832	10	0003	0025	0004	N17 W19	.423	9428	8.6	22	-B			.21			2 2 2	5
HALE	10	0003	0022	0004	N19 W19	.444	9428	8.6	19	-B	1 C	0004	.31	.30		JGV	
HOUT	10	0003	0011	0004	N19 W19	.444	9428	8.6	8	-N	C		.10	.10			
HOUT	10	0022	0028	0024	N12 W17	.350	9428	8.7	6	-N	C		.30	.30			
GRP15834	10	0043	0048	0044	S14 W17	.377	9429	8.8	5	-B			.31			2 2 2	5
SACPI	10	0043	0048	0045	S14 W17	.377	9429	8.8	5	-N	C		.31	.31			
HALE	10	0043E	0047	0043	S14 W17	.377	9429	8.8	4D	-B	1 P	0043	.31	.30			
835 HALE	10	0151E	0228	0151	S21 W81	.990	9436	4.0	37D	-N	1 P	0151	.31				6
836 HALE	10	0249	0303	0250	S14 E48	.762	9449	13.7	14	-B	2 C	0250	.15	.20		DJL	6
837 HALE	10	0300	0317	0307	N19 W64	.909	9423	5.3	17	-N	2 C	0307	.52			F	7
838 HALE	10	0339	0357	0341	S26 W81	.990	9436	4.1	18	-N	1 C	0341	.21			J	6
839 KIEV	10	0600	0604	0603	N22 E80	.987	9460	16.3	4	-F	C	0603	1.03			60 DI	6
GRP15840	10	0615	0700	0625	N20 W23	.498	9428	8.5	45	-F			.84			2 2 2	5
CATA	10	0615	0700	0625	N19 W23	.488	9428	8.5	45	-F		0625	.58	.67		144	
BUCA	10	0625E	0648D		N21 W22	.496	9428	8.6	23D	-F	C	0629	1.10	1.30			
842 CATA	10	0710	0720	0710	N13 E60	.872	9445	14.8	10	-N		0710	.63	1.40		174	9
843 ISTA	10	0810E	0816D		N11 W10	.251	9430	9.6	6D	-N							10
844 LOCA	10	0830E	0844		S28 W83	.995	9436	4.1	14D	1N	S					A	11
845 CATA	10	0835	0910	0845	N11 E61	.879	9445	14.9	35	-N		0845	.52	1.15		155	11
846 ARCE	10	0845E	0910D		N07 W60	.868	9448	5.9	25D	-N	C	0845	.35	.70			11
847 MONT	10	0850	0940	0905	S13 E28	.512	9457	12.5	50	IF		0905	2.58				10
848 ISTA	10	0850E	0857D		S13 W20	.406	9429	8.9	7D	-N							12
849 CATA	10	0910	0930	0915	S13 E45	.726	9449	13.8	20	-N		0915	.40	.62		155	10
850 MONT	10	0910	0920	0915	S28 W90	1.000	9420	3.6	10	-N							10
GRP15851	10	1337	1350	1340	S28 W90	1.000	9436	3.8	13	-N			.21			2 2 1	8
HTPR	10	1335	1350		S27 W90	1.000	9436	3.8	15	-N							
SACP	10	1338	1349	1340	S29 W90	1.000	9436	3.8	11	-N	C		.21				
852 CATA	10	1435	1510	1435	N16 E16	.378	9443	11.8	35	-N		1435	.58	.63		182	5
GRP15853	10	1502	1529	1512	N20 W72	.956	9423	5.2	27	-F			.26			2 1 1	8
MCMA	10	1502	1529	1512	N20 W72	.956	9423	5.2	27	-F	C	1512	.26			E	
BOUL	10	1519E	1530	1523	N21 W71	.952	9423	5.3	11D	-N	C		.50	1.30			
GRP15854	10	1529	1542	1533	S27 W90	1.000	9436	3.9	13	-N			.40			2 2 1	8
MCMA	10	1528	1545	1533	S27 W90	1.000	9436	3.9	17	-N	C	1533				E	
BOUL	10	1530	1539	1533	S27 W90	1.000	9436	3.9	9	-N	C		.40	1.60			
855 HALE	10	1635	1650	1636	N09 E49	.761	9445	14.4	15	-N	3 C	1636	.10	.20		D	8
856 HALE	10	1659	1708	1701	N14 E18	.381	9443	12.1	9	-N	3 C	1701	.10	.10		DL	5
857 HALE	10	1705	1717	1707	S29 E58	.888	9446	15.1	12	-F	2 C	1707	.31	.70		GJ	6
GRP15858	10	1705	1724	1708	S15 E42	.698	9449	13.9	19	-N			.47			4 4 4	6
HALE	10	1703	1723	1711	S15 E42	.698	9449	13.9	20	-B	2 C	1711	.72	1.00		FHJ	
MEUD	10	1705	1711D	1706	S15 E43	.710	9449	13.9	6D	-F		1706	.31	.40		D	
SACP	10	1706	1725	1708	S14 E43	.706	9449	13.9	19	-N	C		.52	.61			
MCMA	10	1710E	1710D		S16 E40	.679	9449	13.7		-N	P	1710	.31	.40		D	
GRP15859	10	1738	1747	1739	S14 E42	.695	9449	13.9	9	-F			.36			2 2 2	6
HALE	10	1736	1747	1739	S14 E41	.683	9449	13.8	11	-N	1 C	1739	.41	.60		J	
HUAN	10	1739	1741D		S14 E43	.706	9449	14.0	2D	-F	1 P	1740	.31	.36		D	
GRP15860	10	1812	1818	1813	S14 E42	.695	9449	13.9	6	-N			.23			2 2 2	6
HALE	10	1811	1818	1813	S14 E41	.683	9449	13.8	7	-B	1 C	1813	.21	.30		J	
HUAN	10	1812	1818	1813	S14 E43	.706	9449	14.0	6	-F	1 C	1813	.25	.29		D	

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH FLARE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
861 HALE	10	1812	1822	1816	N15 E18	.391	9443	12.1	10	-N	1 C	1816	.15	.20			L 6
862 HALE	10	1830	1845	1836	S11 E37	.623	9449	13.5	15	-F	1 C	1836	.62	.80			CF 6
GRP15863	10	1851	1904	1852	N19 W74	.965	9423	5.2	13	-F			.36				2 2 2 5
SACP	10	1851	1905	1852	N18 W72	.955	9423	5.4	14	-N	C		.41	.86			
HUAN	10	1852E	1903		N19 W75	.969	9423	5.2	11D	-F	1 P	1858	.31				
864 HALE	10	1910	1915	1911	S15 E40	.675	9449	13.8	5	-B	1 C	1911	.21	.30			J 5
865 HALE	10	1942	2004	1946	S29 E58	.888	9446	15.2	22	-N	1 C	1946	.21	.50			GJ 3
GRP15867	10	2108	2124	2112	N11 W14	.301	9430	9.8	16	-B			.63				2 2 2 3
HALE	10	2106	2124	2111	N11 W13	.288	9430	9.9	18	-B	1 C	2111	.41	.40			FHJ
SACP	10	2109	2124	2113	N11 W14	.301	9430	9.8	15	-N	C		.84	.82			
868 HALE	10	2113	2119	2114	N15 E17	.379	9443	12.2	6	-B	1 C	2114	.31	.30			L 3
869 HALE	10	2159	2207	2202	S29 E57	.881	9446	15.2	8	-N	1 C	2202	.21	.40			G 3
871 HALE	10	2339	2352	2340	S14 E39	.659	9449	13.9	13	-B	2 C	2340	.41	.50			F 3
GRP15872	10	2358	0027	0000	N11 E51	.785	9445	14.8	29	-F			1.06				3 3 3 7
MITK	10	2358	0020	2358	N11 E51	.785	9445	14.8	22	1F	C	2358	1.55	2.50			F
SACP	11	0000E	0046U	0000E	N11 E52	.795	9445	14.9	46D	-N	P		.84	1.09			
CRON	11	0000U	0015	0003	N11 E50	.774	9445	14.8	15D	-F	C		.80	1.30			
875 MITK	11	0434	0441	0435	S15 E36	.627	9449	13.9	7	-F	C	0435	.83	1.10			E 5
876 MITK	11	0518	0525	0519	S15 E36	.627	9449	13.9	7	-F	C	0519	1.24	1.60			E 7
GRP15877	11	0605	0631	0609	S14 E35	.610	9449	13.9	26	-F			.57				3 3 2 9
MITK	11	0603E	0649	0609	S14 E35	.610	9449	13.9	46D	-N	C	0609	.93	1.20			E
ISTA	11	0605E	0633		S13 E35	.605	9449	13.9	28D	-F							
MEUD	11	0608	0612	0609	S14 E35	.610	9449	13.9	4	-F		0609	.21	.20			
878 ISTA	11	0610	0614		N08 E43	.688	9445	14.5	4	-F							9
879 MITK	11	0658	0821D	0754	S14 E34	.597	9449	13.8	83D	-F	C	0754	.93	1.20			E 9
880 CAPS	11	0714E	0724D		S07 E35	.584	9453	13.9	10D	-N	2	0714	.20	.20		182	CD 8
882 CAPS	11	0938E	0957		S04 E35	.577	9453	14.0	19D	1B	1	0938	2.30	2.80			6
887 CATA	11	1345E	1355	1345	S14 E28	.519	9449	13.7	10D	-N		1345	.29	.34		157	7
888 MCMA	11	1354	1415	1358	N22 W22	.505	9430	9.9	21	-N	C	1358	.21	.30			D 7
889 LOCA	11	1440	1455	1446	S14 E31	.559	9449	13.9	15	-F	V	1446	.63	.70			5
890 MCMA	11	1452	1520	1455	S14 W39	.659	9429	8.7	28	-N	C	1455	.41	.50			E 5
892 MCMA	11	1740	1805	1750	S18 E26	.524	9449	13.7	25	-F	C	1750	.52	.60			EH 6
893 HALE	11	1841	1850	1845	N10 E38	.629	9445	14.6	9	-F	1 C	1845	.21	.30			6
GRP15895	11	1927	2006	1939	S13 E27	.500	9449	13.8	39	-N			1.32				3 3 3 4
SACP	11	1903	2025	1942	S13 E27	.500	9449	13.8	82	-N	C		1.46	1.51			
HOUT	11	1927	1953	1933	S14 E27	.506	9449	13.8	26	-N	C		1.40	1.70			
BOUL	11	1940E	2000	1943U	S13 E27	.500	9449	13.8	20D	-N	C		1.10	1.30			EI
896 HALE	11	1939	1944	1940	N10 E39	.642	9445	14.7	5	-F	2 C	1940	.21	.30			4
GRP15897	11	2116	2151	2121	S14 E26	.493	9449	13.8	35	-N			.52				2 2 2 4
SACP	11	2116	2151	2121	S14 E26	.493	9449	13.8	35	-N	C		.62	.64			
HUAN	11	2119E	2126D		S14 E26	.493	9449	13.8	7D	-N	1 P	2120	.41	.43			E
898 HALE	11	2327	2332	2329	S16 E19	.423	9449	13.4	5	-F	2 C	2329	.21	.20			H 3
GRP15899	12	0515	0554	0532	S14 W46	.741	9429	8.8	39	-N			.93				3 2 1 7
CATA	12	0515E	0525	0515	S14 W46	.741	9429	8.8	10D	-N		0515	.29	.42		190	
MANI	12	0519	0532	0532	S14 W45	.730	9429	8.8	13	-F	2	0525	.93	1.37			
ISTA	12	0530E	0615		S13 W47	.750	9429	8.7	45D	-B							
902 BOUL	12	1844	1900	1847	S12 E80	.986	9458	18.8	16	-F	C		.40	1.40			6
903 HALE	12	1903	1912D	1904	S30 E33	.693	9446	15.3	9D	-F	1 P	1904	.21	.30			6

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCARTH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H α	MAX. INT. %	
GRP15904	12	2031	2045	2034	S15 E13	.346	9449 13.8	14	-F				.71				3 3 3 4
HOUT	12	2027	2040	2031	S15 E14	.357	9449 13.9	13	-F				1.20	1.30			
HUAN	12	2033	2035D		S15 E12	.336	9449 13.8	2D	-F	1	P	2034	.41	.41			E
SACP	12	2033	2049	2037	S15 E12	.336	9449 13.8	16	-F		C		.53	.52			
906 MANI	12	2343	2355		S14 E85	.997	9458 19.4	12	-N	2			.31	.90			4
GRP15909	13	0130	0149	0139	S14 E13	.335	9449 14.0	19	-N				.68				3 2 2 6
SACP	13	0130	0156D	0153	S13 E11	.302	9449 13.9	26D	-N		C		.43	.43			
HALE	13	0131	0149D	0134	S13 E13	.323	9449 14.0	18D	-B	1	P	0134	.36	.40			J
SIBE	13	0143E	0149	0143	S14 E13	.335	9449 14.0	6D	-F		P	0146	.99	1.00		55	DT
910 HALE	13	0305	0317D	0310	S15 E04	.280	9449 13.4	12D	-N	1	P	0310	.21	.20			H
912 MITK	13	0412E	0415D		S15 E08	.303	9449 13.8	3D	-F		P	0412	1.03	1.10			E
913 MANI	13	0548	0607	0555	S17 E80	.987	9458 19.2	19	-F	3		0555	.31	.80			6
914 CATA	13	0745	0755	0750	S16 E06	.305	9449 13.8	10	-N			0750	.11	.12		182	10
GRP15915	13	0843	0925	0852	S16 E06	.305	9449 13.8	42	-N				.54				4 4 4 7
MONT	13	0843	0910	0848	S15 E05	.284	9449 13.7	27	-N			0848	.41				
BUCA	13	0845E	0940D		S16 E07	.311	9449 13.9	55D	-N		C		.60	.60			
ARCE	13	0850E	0900D		S17 E07	.326	9449 13.9	10D	-N		C	0851	.58	.60			
CATA	13	0855E	0900D	0855	S15 E05	.284	9449 13.7	5D	-N			0855	.58	.60		182	
GRP15916	13	1012	1155	1023	S16 E05	.300	9449 13.8	103	-F				.39				2 2 2 8
BUCA	13	1010E	1155D		S16 E06	.305	9449 13.9	105D	-F		C	1015	.37	.40			
MONT	13	1013	1050	1023	S15 E04	.280	9449 13.7	37	-N			1023	.41				
GRP15918	13	1247	1304	1249	S16 E03	.293	9449 13.8	17	-N				.43				3 3 3 6
HUAN	13	1246	1255	1247	S17 E03	.309	9449 13.8	9	-F	2	C	1247	.41	.41			E
CAPS	13	1246	1302D		S15 E05	.284	9449 13.9	16D	-N	3		1248	.70	.70		160	E
CATA	13	1250	1315	1250	S16 E02	.290	9449 13.7	25	-N			1250	.17	.18		158	Z
919 HOUT	13	1335	1343	1338	N17 E76	.972	9461 19.3	8	-N		C		.20	.60			H
920 HUAN	13	1432	1440	1435	S17 E03	.309	9449 13.8	8	-F	2	C	1435	.25	.25			D
GRP15921	13	1557	1607 (1600)		S30 E57	.885	9455 17.9	10	-F				.56				2 2 2 7
HUAN	13	1557	1607		S30 E58	.892	9455 18.0	10	-F	1	C	1559	.31	.49			
CAPS	13	1557	1600D		S29 E56	.876	9455 17.9	3D	-F	3		1600	.80			152	
922 MCMA	13	1627	1632	1628	S15 E03	.276	9449 13.9	5	-F		C	1628	.26	.30			D
GRP15924	13	1724	1749	1731	N08 E14	.271	9445 14.8	25	-F				1.05				3 3 3 6
SACP	13	1721	1806	1731	N08 E13	.256	9445 14.7	45	-N		C		.62	.61			
BOUL	13	1724	1740	1730	N08 E15	.286	9445 14.8	16	-F		C		1.90	1.90			
MCMA	13	1727	1742	1731	N08 E14	.271	9445 14.8	15	-F		C	1731	.62	.70			E
928 MCMA	13	2051	2103	2056	S15 W68	.934	9429 8.8	12	-N		C	2056	.31	.90			D
930 HOUT	13	2238	2256	2240	N16 E80	.985	9462 19.9	18	-F		C		.20	.70			6
GRP15931	14	0405	0414	0408	S18 W08	.349	9449 13.6	9	-F				.78				2 2 2 4
SIBE	14	0404	0415	0407	S19 W07	.359	9449 13.6	11	-F		C	0407	.83	.90		70	CEK
TACH	14	0406	0412	0409	S17 W08	.334	9449 13.6	6	-N		C	0409	.73	.80	2.10	57	EJT
933 CATA	14	0730	0820	0735	S15 W05	.286	9449 13.9	50	-F			0735	.17	.18		135	Z
GRP15934	14	0830	0903	0843	S14 W13	.337	9449 13.4	33	-N				.58				5 5 5 14
HTPR	14	0830	0900	0842	S14 W15	.359	9449 13.2	30	-F			0842	.31	.30			H
CATA	14	0830	0905	0840	S15 W12	.339	9449 13.5	35	-N			0840	.93	.99		170	
BUCA	14	0840E	0848D		S13 W12	.314	9449 13.5	8D	-F		P		.45	.50			
CAPS	14	0840E	0850D		S15 W13	.349	9449 13.4	10D	-N	2		0840	.70	.70			CH
AROS	14	0844E	0852D	0847	S15 W12	.339	9449 13.5	8D	-N		P	0847	.52	.50			
935 CATA	14	0900	0935	0915	N21 E88	.999	9459 21.0	35	1N			0915	.69			178	13
GRP15936	14	0908	0929	0919	S17 W10	.349	9449 13.6	21	-F				1.39				5 4 4 12
HTPR	14	0905	1035	0922	S17 W13	.375	9449 13.4	90	-F			0922	.72	.70			
CAPS	14	0905E	0913D		S17 W08	.334	9449 13.8	8D	-F	2							C
CAPE	14	0914	0930	0916	S17 W09	.341	9449 13.7	16	-N			0916	1.06	1.10			
WEND	14	0917E	0926		S18 W10	.363	9449 13.6	9D	1F		V		3.09				
ARCE	14	0920E	0930D		S18 W10	.363	9449 13.6	10D	-N		C	0920	.68	.70			
GRP15938	14	1144	1200	1150	S15 W08	.305	9449 13.9	16	-F				.39				2 2 2 5
BUCA	14	1142E	1151D		S14 W08	.290	9449 13.9	9D	-F			1144	.60	.60			
CATA	14	1145	1200	1150	S15 W08	.305	9449 13.9	15	-N			1150	.17	.18		170	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
	1968 JUNE																	
GRP15939	14	1329	1350	1335	S16	W11	.343	9449	13.7	21	-F			.59			4 4 4 11	
SACP	14	1325	1403	1333	S15	W10	.321	9449	13.8	38	-N	C		.72	.72			
HOUT	14	1327	1343	1333	S17	W12	.366	9449	13.7	16	-N	C		1.20	1.30			
HUAN	14	1331	1342		S14	W09	.298	9449	13.9	11	-F	2 C	1333	.25	.25		D	
SANM	14	1331	1350	1339	S16	W11	.343	9449	13.7	19	-F	C	1339	.17	.17		D	
940 HOUT	14	1332	1336	1334	S12	E61	.882	9458	19.1	4	-N	C		.40	.80		11	
GRP15941	14	1336	1348	1340	N26	E74	.967	9459	20.1	12	-F			.34			4 4 4 12	
SACP	14	1333	1354	1340	N26	E73	.963	9459	20.0	21	-F	C		.52	1.13			
HOUT	14	1334	1343	1336	N25	E75	.971	9459	20.2	9	-F	C		.30	.90			
HUAN	14	1335	1344		N25	E72	.958	9459	20.0	9	-F	1 C	1339	.25			D	
CATA	14	1340	1350	1345	N26	E74	.967	9459	20.1	10	-F		1345	.29		148		
942 SANM	14	1339	1344	1340	S14	E60	.877	9458	19.1	5	-F	C	1340	.17	.33		D 12	
943 HUAN	14	1422	1427	1423	S17	W10	.349	9449	13.8	5	-F	2 C	1423	.45	.45		E 11	
944 HOUT	14	1520	1527	1523	S18	E55	.841	9458	18.8	7	-N	C		.40	.70		11	
GRP15946	14	1747	1807	1749	S17	W13	.375	9449	13.8	20	-F			1.21			3 3 3 3	
BOUL	14	1746	1755D	1748U	S17	W13	.375	9449	13.8	90	IF	1 C		2.00	2.20			
HUAN	14	1747	1749D		S17	W12	.366	9449	13.8	20	-F	1 P	1748	1.00	1.00		E	
MCMA	14	1747E	1807D	1749	S17	W13	.375	9449	13.8	200	-N	C	1749	.62	.70		E	
949 MANI	15	0025	0053	0028	S32	E46	.815	9455	18.5	28	-F	2	0028	.31	.49		2	
GRP15950	15	0026	0041	0029	S17	W16	.406	9449	13.8	15	-N			.78			2 2 2 2	
MANI	15	0025E	0039	0029	S15	W15	.372	9449	13.9	140	-N	2	0029	.62	.67			
SACP	15	0027	0043	0029	S18	W17	.428	9449	13.7	16	-N	C		.93	.94			
951 CRON	15	0503	0530	0508	N15	W43	.703	9443	12.0	27	IN	C		1.50	2.10		3	
952 MANI	15	0510	0515	0511	S16	W17	.405	9449	13.9	5	-F	2	0511	.31	.34		4	
GRP15953	15	0532	0549	0537	S15	W19	.418	9449	13.8	17	-B			.60			2 2 2 5	
MANI	15	0532	0548	0534	S16	W17	.405	9449	14.0	16	-N	2	0534	.62	.67			
CATA	15	0535E	0620D	0540	S15	W20	.430	9449	13.7	45D	-B		0540	.58	.65	218	Z	
CATA	15	0535E	0550	0540	S12	W23	.443	9449	13.5	15D	-N		0540	.29	.32	166		
954 CAPS	15	0600E	0627		N15	W35	.606	9443	12.6	27D	IF	2	0613	2.30	3.00	157	6	
955 CAPS	15	0616E	0627		S32	E28	.673	9455	17.4	11D	-F	2	0616	.70	.90	157	CD 4	
956 MEUD	15	0633	0648		N20	W34	.620	9443	12.7	15	-F		0635	.41	.50		8	
957 CAPS	15	0750E	0802D		N10	W55	.823	9439	11.2	12D	-F	2	0755	1.00	1.70	157	C 10	
GRP15958	15	0757	0811	0803	S11	W24	.449	9449	13.5	14	-N			.74			7 7 7 12	
CATA	15	0750	0810D	0800	S13	W24	.464	9449	13.5	20D	-B		0800	.69	.78	209		
CRON	15	0758	0805	0801	S12	W25	.470	9449	13.5	7	-N	C		.90	1.00		H	
MEUD	15	0759	0806		S11	W25	.463	9449	13.5	7	-N		0802	.31	.30		H	
CAPE	15	0800	0814	0805	S11	W24	.449	9449	13.5	14	-F	C	0805	1.21	1.30		H	
CAPS	15	0802E	0810D		S10	W22	.415	9449	13.7	8D	-F	2	0802	.70	.80	147	C	
MANI	15	0802E	0822	0807	S13	W22	.437	9449	13.7	20D	-N	2	0807	.93	1.02			
ARCE	15	0807E	0809D		S09	W27	.480	9449	13.3	2D	-N	C	0807	.45	.50			
959 CAPS	15	0843E	0847D		N10	W55	.823	9439	11.2	4D	-F	2	0843	.40	.70	157	C 10	
GRP15961	15	0944	0957	0944	S12	W26	.483	9449	13.5	13	-F			.74			3 2 2 8	
MONT	15	0918	0955	0925	S13	W24	.464	9449	13.6	37	-N		0925	1.03			H	
MEUD	15	0942	0948	0943	S11	W26	.477	9449	13.5	6	-F		0943	.31	.30		E	
CATA	15	0945	1005	0945	S13	W25	.477	9449	13.5	20	-F		0945	1.16	1.30	135		
962 CATA	15	0945	1005	0955	S10	E45	.721	9458	18.8	20	-N		0955	.12	.18	155	8	
963 MONT	15	1048	1100D		N12	W60	.870	9439	11.0	12D	-N		1052	.15			8	
964 MONT	15	1237E	1257D		N10	W58	.851	9439	11.2	20D	IN		1240	2.06			8	
965 BOUL	15	1315	1330	1321	S34	E30	.706	9455	17.8	15	-F	C		.80	1.10		8	
966 CAPS	15	1321E	1324D		S16	W25	.500	9449	13.7	3D	-N	3	1323	.50	.60	175	C 8	
967 CATA	15	1325	1330	1325	S17	W26	.520	9449	13.6	5	-F		1325	.23	.27	135	8	
968 HUAN	15	1438	1446D		S15	W24	.479	9449	13.8	8D	-F	1 C	1439	.21	.21		D 7	
969 MONT	15	1455	1500D		S18	W24	.505	9449	13.8	5D	-F		1456	.83			7	

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
970 HALE	15	1813	1821	1817	N26 E55	.852	9459	19.9	8	-F	2 C	1817	.93	1.80		J	4
971 HALE	15	1921E	1940		S29 E54	.863	9455	19.9	19D	-N	1 P	1921	.26	.50		F	5
972 HUAN	15	2106	2116		N12 W67	.923	9439	10.9	10	-F	1 C	2108	.25			D	5
973 SACP	15	2134	2156	2146	N27 E54	.847	9459	19.9	22	-F	C		.52	.73			5
975 HALE	15	2209	2223	2214	S27 E45	.783	9455	19.3	14	-N	1 C	2214	.52	.80		CG	5
GRP15976	15	2312	2333	2315	S14 W32	.574	9449	13.6	21	-N			.62			2 2 2 2	
HALE	15	2310	2336	2313	S14 W33	.587	9449	13.5	26	-B	1 C	2313	.72	.90		F	
MANI	15	2313	2329	2317	S14 W31	.562	9449	13.6	16	-F	2	2317	.52	.60			
GRP15977	15	2332	2348	2337	S14 W29	.536	9449	13.8	16	-N			.36			2 2 2 2	
HALE	15	2332	2348D	2333	S13 W30	.543	9449	13.7	16D	-B	1 P	2333	.46	.60		V	
MANI	15	2340E	2348	2341	S15 W28	.530	9449	13.9	8D	-F	3	2341	.26	.30			
978 SACP	16	0136	0145	0143	S30 E42	.774	9455	19.2	9	-N	C		.21	.27			5
979 MANI	16	0206E	0232	0209	S29 E40	.751	9455	19.1	26D	-F	2	0209	.31				4
980 HALE	16	0325	0334	0326U	S16 W32	.587	9449	13.7	9	-N	1 C	0326	.31	.40			7
981 MANI	16	0407E	0421	0410	S13 W34	.596	9449	13.6	14D	-N	2	0410	.83	1.01			7
GRP15982	16	0500	0537	0511	S12 W35	.604	9449	13.6	37	-N			.79			3 3 3 6	
HTPR	16	0500	0535	0510	S13 W36	.621	9449	13.5	35	-F		0510	.62	.70		E	
TACH	16	0500	0543	0510	S12 W35	.604	9449	13.6	43	-B	C	0510	.93	1.10	2.20	111	EJ
SIBE	16	0505E	0532	0513	S12 W34	.591	9449	13.7	27D	-F	C	0513	.83	1.00		57	E
GRP15984	16	1250	1300	1254	S14 W38	.650	9449	13.7	10	-F			.55			4 4 4 9	
MCMA	16	1248	1256D	1254	S14 W38	.650	9449	13.7	8D	-F	C	1254	.83	1.00		EH	
HTPR	16	1248	1257	1250	S14 W35	.613	9449	13.9	9	-F		1250	.31	.40			
SACP	16	1251	1301	1256	S14 W40	.674	9449	13.5	10	-N	C		.31	.36			
CAPE	16	1251	1302	1255	S13 W40	.671	9449	13.5	11	-F	C	1255	.74	1.00		H	
GRP15988	16	2323	2359	2332	S12 W45	.726	9449	13.6	36	-N			.95			4 3 3 5	
CULG	16	2320	0013	2327	S12 W45	.726	9449	13.6	53	1N	2 C		1.80	2.63		H	
MANI	16	2325	2345	2329	S12 W46	.738	9449	13.5	20	-N	2	2329	.52				
HALE	16	2332E	2358		S11 W45	.724	9449	13.6	26D	-B	1 P	2332	.52	.70			
SACP	16	2338E	2340D	2339	S12 W45	.726	9449	13.6	2D	-N	P		.62	.74			
HALE	16	2350	0002D	2355	S15 W46	.746	9449	13.5	12D	1F	2 P	2355	2.06	3.10			
991 MITK	17	0240	0310D	0258	N08 W34	.567	9445	14.6	30D	-F	C	0258	.83	1.00		E	7
993 HALE	17	0310	0311	0310	S16 W48	.771	9449	13.5	1	-F	2 C	0310	.31	.50			8
994 HALE	17	0341	0401	0344	S15 W46	.747	9449	13.7	20	1B	2 C	0344	1.34	2.00		H	6
995 HALE	17	0409	0413	0410	S14 W44	.721	9449	13.9	4	-F	2 C	0410	.83	1.20			7
996 MITK	17	0524E	0547		S17 W47	.764	9449	13.7	23D	-N	C	0525	.72	1.10		E	8
997 HTPR	17	0555	0615	0601	S24 W06	.437	9465	16.8	20	-F		0601	.41	.40			9
GRP15998	17	0618	0635	0620	S14 W50	.786	9449	13.5	17	-F			.86			2 2 2 9	
HTPR	17	0617	0633	0619	S14 W50	.786	9449	13.5	16	-F		0619	.62	.90			
BUCA	17	0618	0636	0620	S14 W49	.776	9449	13.6	18	-N	C	0620	1.10	1.70			
999 HTPR	17	0720	0735	0725	N12 E50	.774	9462	21.1	15	-F		0725	.83	1.10			9
000 CAPS	17	1134E	1147		S10 W45	.721	9453	14.1	13D	-N	1	1138	.30	.40		166	C 7
GRP16001	17	1141	1247	(1213)	N11 E46	.728	9462	20.9	66	-N			.75			2 2 2 6	
CAPS	17	1141E	1234		N10 E48	.749	9462	21.1	53D	-N	1	1141	1.20	1.70		166	C
MCMA	17	1155E	1300		N12 E43	.694	9462	20.7	65D	-N	C	1210	1.29	1.80		BEL	
CAPS	17	1215E	1234		N10 E48	.749	9462	21.1	19D	-N	1	1215	.20	.30		168	E
003 CAPS	17	1420E	1425		N10 E48	.749	9462	21.2	5D	-F	2	1420	.20	.30		153	E 7
004 HUAN	17	1426	1438		N12 E41	.670	9462	20.7	12	-F	1 C	1428	.21	.24		D	7
GRP16005	17	1451	1515	1502	N15 W75	.967	9443	12.0	24	-F			.39			3 3 3 7	
SACP	17	1442	1528	1504	N14 W74	.962	9443	12.1	46	-F			.41	.90			
HUAN	17	1456	1511		N15 W73	.958	9443	12.1	15	-F	1 C	1459	.25			D	
BOUL	17	1456	1507	1500	N16 W78	.979	9443	11.8	11	-N	C		.50	1.40			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMA PLAGE REGION	CMP DAY	TIME UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %		
GRP16006	17	1510	1537	1516	S15 W52	.808	9449	13.7	27	-F				.23				2 2 2 6
SACP	17	1503	1549	1513	S15 W52	.808	9449	13.7	46	-F		C		.21	.27			
HUAN	17	1416	1525	1519	S14 W52	.806	9449	13.7	9	-F	2	C	1519	.25	.33		D	
007 HUAN	17	1728	1746		N12 E40	.657	9462	20.7	18	-F	1	C	1732	.50	.56			5
GRP16008	17	1949	1959	1952	S15 W57	.854	9449	13.6	10	-N				.46				3 3 3 4
HUAN	17	1949	1957		S14 W58	.861	9449	13.5	8	-N	1	C	1952	.55	.80			
SACP	17	1949	2002	1952	S16 W57	.856	9449	13.6	13	-F		C		.41	.61			
MCMA	17	1950	1959	1952	S16 W57	.856	9449	13.6	9	-N		C	1952	.41	.80		E	
GRP16009	17	2020	2049	2027	N08 W41	.661	9445	14.8	29	-N				.58				2 2 2 2
MCMA	17	2019	2051	2026	N08 W41	.661	9445	14.8	32	-N		C	2026	.62	.80		E	
SACP	17	2021	2046	2028	N08 W41	.661	9445	14.8	25	-N		C		.53	.59			
012 HALE	18	0000	0005	0001	S16 W60	.881	9449	13.5	5	-F	1	P	0001	.62	1.30		B	4
013 MANI	18	0151E	0201	0154	N12 E36	.605	9462	20.8	100	-F	2		0154	.72	.89			4
014 CATA	18	0550	0600	0550	S18 W62	.898	9449	13.6	10	-N			0550	.52	1.23	178		8
GRP16015	18	0648	0708	0651	N12 E32	.551	9462	20.7	20	-N				.41				3 3 3 14
MANI	18	0648	0658	0651	N11 E35	.589	9462	20.9	10	-N	2		0651	.31	.39			
MONT	18	0648E	0730		N13 E32	.556	9462	20.7	420	-N			0648	.62				
CATA	18	0650E	0655	0650	N12 E30	.524	9462	20.5	50	-N			0650	.29	.34	178		
GRP16016	18	0749	0801	0750	N13 E30	.529	9462	20.6	12	-N				.61				3 3 3 12
MONT	18	0747	0750D		N13 E32	.556	9462	20.7	30	-N			0748	1.03				
CATA	18	0750	0800	0750	N14 E29	.520	9462	20.5	10	-N			0750	.21	.24	166		
BUCA	18	0750	0802		N12 E30	.524	9462	20.6	12	-F		C	0756	.60	.70			
017 CATA	18	1040	1105	1045	N13 E27	.487	9462	20.5	25	-N			1045	1.16	1.33	158	Z	8
018 CATA	18	1055	1125	1100	S29 E05	.511	9455	18.8	30	-N			1100	1.04	1.21	151		10
GRP16019	18	1125	1210	1130	N13 E28	.501	9462	20.6	45	-N				.75				2 2 2 10
MCMA	18	1120	1205D	1130	N12 E28	.496	9462	20.6	45D	-N		C	1130	1.03	1.30		EL	
CATA	18	1130	1140	1130	N14 E27	.493	9462	20.5	10	-N			1130	.46	.53	164		
CATA	18	1155	1210	1200	N12 E29	.510	9462	20.7	15	-N			1200	.29	.53	178		
020 MONT	18	1212	1230		N13 E28	.501	9462	20.6	18	-N			1216	1.03				13
021 HUAN	18	1245	1325	1249	N13 E27	.487	9462	20.6	40	-F	2	C	1249	.25	.26		DT	10
GRP16022	18	1416	1434	1424	N14 E30	.534	9462	20.8	18	-F				.53				4 4 4 8
SACP	18	1410	1450	1430	N15 E29	.526	9462	20.8	40	-F		C		.31	.32			
MONT	18	1415	1435	1420	N13 E37	.622	9462	21.4	20	-N			1418	1.03				
HUAN	18	1418	1426	1421	N13 E27	.487	9462	20.6	8	-N	2	C	1421	.25	.26		D	
MEUD	18	1421	1426		N13 E27	.487	9462	20.6	5	-F			1421	.52	.60		D	
GRP16023	18	1425	1446	1431	N21 W72	.955	9443	13.2	21	-F				.31				2 2 2 8
SACP	18	1421	1452	1431	N22 W74	.964	9443	13.0	31	-F		C		.31	.68			
MONT	18	1428	1440		N20 W70	.944	9443	13.4	12	-N			1428	.31				
GRP16024	18	1649	1714	1656	N14 E25	.466	9462	20.6	25	-F				.54				2 2 2 4
HUAN	18	1648	1715		N13 E25	.460	9462	20.6	27	-F	2	C	1656	.55	.56		E	
SACP	18	1649	1712	1656	N14 E24	.452	9462	20.5	23	-N		C		.52	.53			
025 HUAN	18	1708	1718	1710	S20 W27	.559	9465	16.7	10	-F	2	C	1710	.45	.48		E	4
026 HALE	18	1736	1739	1737	N14 E23	.439	9462	20.5	3	-F	3	C	1737	.31	.30			3
027 HALE	18	1804	1815	1808	N02 E13	.225	9464	19.7	11	-F	3	C	1808	.21	.20			4
028 HUAN	18	1824	1832	1826	N13 E24	.446	9462	20.6	8	-F	2	C	1826	.21	.21		D	4
GRP16030	18	2021	2033	2025	N15 E26	.486	9462	20.8	12	-F				.31				2 2 2 3
HALE	18	2020	2033	2025	N15 E26	.486	9462	20.8	13	-N	2	C	2025	.31	.40			
HUAN	18	2021	2033	2024	N14 E26	.479	9462	20.8	12	-F	2	C	2024	.31	.32		D	
034 HALE	18	2321	2332	2321	N15 E23	.446	9462	20.7	11	-N	2	C	2321	.41	.50			3
035 HALE	19	0148E	0217	0154	N14 E18	.371	9462	20.4	29D	-N	1	P	0154	.67	.70			6
GRP16038	19	0620	0720	0645	S27 W05	.483	9455	18.9	60	1N				4.02				3 3 3 12
BUCA	19	0620	0725	0649	S27 W04	.481	9455	19.0	65	1N		C	0649	2.76	3.10			
ZURI	19	0635E	0710	0641	S27 W07	.489	9455	18.7	35D	2N		P	0641	7.56	8.70			
CAPE	19	0647E	0725		S26 W05	.468	9455	18.9	38D	-F		P	0655	1.75	2.00		F	

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hq	MAX. INT. %	
GRP16040	19	0915	0954	0917	N13 E18	.362	9462	20.7	39	-F			.78				2 2 2 10
ARCE	19	0915E	1000D		N12 E17	.340	9462	20.7	45D	-N	C	0915	1.35	1.40			
MEUD	19	0915	0925	0917	N13 E19	.376	9462	20.8	10	-F		0917	.21	.20			D
MEUD	19	0932	0948	0934	N13 E18	.362	9462	20.7	16	-F		0934	.31	.30			E
GRP16043	19	1309	1347	1322	N12 E15	.313	9462	20.7	38	-N			.87				3 3 3 8
MCMA	19	1300	1345	1320	N12 E14	.299	9462	20.6	45	-N	C	1320	2.06	2.10			E
CATA	19	1310E	1355	1320	N13 E11	.273	9462	20.4	45D	-N		1320	.34	.36		158	Z
CATA	19	1315	1355	1325	N13 E13	.297	9462	20.5	40	-N		1325	.29	.30		170	
HUAN	19	1318	1340	1321	N12 E17	.340	9462	20.8	22	-N	2	1321	.25	.25			DT
CATA	19	1320	1355	1325	N13 E16	.335	9462	20.8	35	-B		1325	.29	.31		204	
GRP16044	19	1322	1330	1323	S15 W78	.981	9449	13.7	8	-F			.18				2 2 2 8
MCMA	19	1321	1330	1322	S16 W78	.981	9449	13.7	9	-N	C	1322	.15	.70			D
HUAN	19	1322	1329	1323	S14 W78	.981	9449	13.7	7	-F	2	1323	.21				D
GRP16045	19	1439	1451	1440	N13 E12	.285	9462	20.5	12	-F			.55				4 4 4 8
SACP	19	1436	1454	1440	N14 E12	.297	9462	20.5	18	-N	C		.63	.62			
HUAN	19	1438	1450	1439	N14 E12	.297	9462	20.5	12	-N	2	1439	.70	.70			E
MCMA	19	1440E	1450D		N12 E14	.299	9462	20.7	10D	-F	C	1445	.52	.50			E
CATA	19	1440	1450	1440	N12 E13	.286	9462	20.6	10	-F		1440	.36	.38		143	
CATA	19	1440	1445	1440	N13 E10	.262	9462	20.4	5	-F		1440	.21	.21		143	
GRP16046	19	1632	1648	(1635)	N13 E13	.297	9462	20.7	16	-F			.54				2 2 2 6
MCMA	19	1630	1650		N12 E12	.274	9462	20.6	20	-F	C	1632	.83	.90			E
HUAN	19	1634	1645		N14 E13	.308	9462	20.7	11	-F	2	1637	.25	.25			D
049 HUAN	19	2154	2202	2155	N13 E11	.273	9462	20.7	8	-N	2	2155	.62	.62			E
GRP16052	20	0146	0225		N21 E11	.377	9459	20.9	39	-F			.77				2 2 2 6
HALE	20	0145	0224	0149	N19 E13	.368	9459	21.0	39	-F	1	0149	1.13	1.20			F
HALE	20	0146	0210	0149	N24 E07	.397	9459	20.6	24	-N	1	0149	.41	.40			
MANI	20	0217E	0225D	0217	N21 E11	.377	9459	20.9	8D	-F	2	0217	.41				
053 HALE	20	0209	0219	0210	N19 W41	.692	9479	17.0	10	-F	1	0210	.52	.70			F
056 HALE	20	0425	0435	0426	N13 E06	.223	9462	20.6	10	-N	1	0426	.21	.20			J
GRP16058	20	0547	0556	0550	N14 E04	.225	9462	20.5	9	-F			.79				3 3 3 8
CATA	20	0540	0555D	0550	N15 E01	.233	9462	20.3	15D	-N		0550	.21	.21		158	
CATA	20	0545	0555D	0550	N15 E04	.242	9462	20.5	10D	-N		0550	.21	.21		166	
MANI	20	0547E	0553	0549	N13 E06	.223	9462	20.7	6D	-F	2	0549	.83	.85			
SIBE	20	0548	0601	0550	N13 E04	.209	9462	20.5	13	-F	C	0550	1.32	1.40		54	ETI
059 MANI	20	0605	0618	0611	N12 E89	1.000	9473	26.9	13	-F	2	0618	.31	.98			
GRP16060	20	0626	0647	0635	N13 E06	.223	9462	20.7	21	-N			.55				2 2 2 7
CATA	20	0625	0645	0630	N14 E05	.231	9462	20.6	20	-N		0630	.29	.30		178	
MANI	20	0627	0648	0630	N12 E08	.226	9462	20.9	21	-N	2	0630	.41	.42			
CATA	20	0635	0700	0640	N14 E02	.218	9462	20.4	25	-N		0640	.69	.71		162	Z
GRP16061	20	0705	0724	0709	N14 E05	.231	9462	20.7	19	-N			.88				6 6 6 9
CRON	20	0702E	0720	0702U	N14 E04	.225	9462	20.6	18D	-N	C		1.20	1.20			
SIBE	20	0705	0714	0710	N13 E04	.209	9462	20.6	9	-F	C	0710	1.65	1.70		55	ETI
HTRP	20	0705	0720	0707	N14 E04	.225	9462	20.6	15	-F		0707	.21	.20			
MANI	20	0706	0717	0708	N13 E08	.240	9462	20.9	11	-N	2	0708	.77	.80			
BUCA	20	0706	0730		N14 E04	.225	9462	20.6	24	-N	C	0714	.60	.60			
CATA	20	0710E	0745D	0710	N15 E03	.237	9462	20.5	35D	-B		0710	.83	.85		229	
063 LOCA	20	1020	1035	1025	N14 E03	.221	9462	20.7	15	-F	V	1025	.63	.60			
GRP16064	20	1140	1211	1203	N13 E03	.204	9462	20.7	31	-F			.46				3 3 3 7
CAPS	20	1140E	1214		N12 E03	.188	9462	20.7	34D	-F	3	1157	.60	.60		157	CE
MCMA	20	1140	1158	1144	N13 E00	.198	9462	20.5	18	-N	C	1144	.52	.50			ET
HUAN	20	1201	1209	1202	N13 E04	.209	9462	20.8	8	-F	2	1202	.25	.25			DT
MCMA	20	1201	1209	1204	N13 E03	.204	9462	20.7	8	-N	C	1204	.52	.50			E
GRP16065	20	1214	1237	1216	N13 E03	.204	9462	20.7	23	-N			.85				5 5 5 7
HTRP	20	1213	1220	1217	N14 E05	.231	9462	20.9	7	-F		1217	.52	.50			
CANR	20	1213	1222	1215	N13 E04	.209	9462	20.8	9	-N	C		1.60	1.60			I
MCMA	20	1215	1255	1217	N13 E00	.198	9462	20.5	40	-B	C	1217	.72	.70			E
HUAN	20	1215	1257		N13 E02	.201	9462	20.7	42	-N	2	1217	.93	.93			EK
CAPS	20	1216E	1230		N14 E06	.238	9462	21.0	14D	-B	3	1222	.50	.50		197	C
GRP16067	20	1347	1415	1351	N13 W03	.204	9462	20.3	28	-N	C	1351	.72	.70			2 1 1 10
MCMA	20	1347	1415	1351	N13 W03	.204	9462	20.3	28	-N			.72	.70			EK
HUAN	20	1405	1411	1406	N14 E01	.216	9462	20.7	6	-F	2	1406	.62	.62			E
068 CATA	20	1425	1430D	1425	N14 E03	.221	9462	20.8	5D	-N		1425	.26	.26		174	

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OBSERV- ATORY	OBSERVED UT				LOCATION						DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT	MEAS. AREA Sq. Deg.				CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %		
GRP16069	20	1437	1452	1440	N14	W01	.216	9462	20.5	15	-N			.31				2 2 2 10
MCMA	20	1437	1452	1438	N13	E02	.201	9462	20.8	15	-F	C	1438	.41	.40		E	
CATA	20	1440E	1445D	1442	N14	W03	.221	9462	20.4	5D	-B		1442	.21	.21		204	
GRP16070	20	1456	1510	1503	N13	E02	.201	9462	20.8	14	-F			.97			3 3 3 10	
HUAN	20	1437	1509		N13	E02	.201	9462	20.8	32	-N	2 C	1501	.83	.83		E	
SACP	20	1453	1513	1502	N13	E01	.199	9462	20.7	20	-F	C		1.56	1.53			
MCMA	20	1459	1509	1503	N13	E02	.201	9462	20.8	10	-F	C	1503	.52	.50		E	
GRP16071	20	1526	1601	1539	N13	E02	.201	9462	20.8	35	-F			.76			3 3 3 7	
SACP	20	1521	1554	1539	N13	E00	.198	9462	20.6	33	-F	C		.63	.61			
CAPS	20	1528	1552		N12	E07	.217	9462	21.2	24	-N	1	1546	.40	.40		182	C
MCMA	20	1529	1618D	1539	N13	W01	.199	9462	20.6	49D	-F	C	1539	1.24	1.30		E	
GRP16074	20	1938	1953	1939	N13	W03	.204	9462	20.6	15	-B			.59			2 2 2 4	
HUAN	20	1937	1947	1938	N13	W02	.201	9462	20.7	10	-N	2 C	1938	.55	.55		E	
MCMA	20	1938	1959D	1939	N13	W03	.204	9462	20.6	21D	-B	C	1939	.62	.60		E	
GRP16075	20	1948	2003	1953	N11	E82	.990	9473	27.0	15	-F			.23			3 3 2 4	
SACP	20	1943	2004	1951	N12	E81	.987	9473	26.9	21	-F	C		.21				
HUAN	20	1950	2003		N10	E83	.992	9473	27.1	13	-F	1 C	1953	.25			D	
MCMA	20	1951	2001	1954	N11	E82	.990	9473	27.0	10	-F	C	1954				D	
076 SACP	20	2040	2121D	2109	N12	E79	.981	9473	26.8	41D	-N	C		.52				6
078 SACP	21	0103	0154D	0109	N13	W07	.229	9462	20.5	51D	-N	C		.95	.93			6
GRP16080	21	0510	0535	0515	N14	W10	.272	9462	20.5	25	-B			.57			2 2 2 7	
CATA	21	0510E	0535	0515	N14	W09	.262	9462	20.5	25D	-B		0515	.21	.21		200	E
MITK	21	0512E	0518D		N14	W10	.272	9462	20.5	60	-N	P	0513	.93	1.00			
CATA	21	0515	0535	0515	N13	W11	.270	9462	20.4	20	-N		0515	.23	.24		182	
081 MANI	21	0627E	0645D	0638	N12	W09	.235	9462	20.6	18D	-F	2	0638	.41				6
GRP16082	21	0845	0925	0850	N14	W14	.317	9462	20.3	40	-N			.46			2 1 1 8	
CATA	21	0845	0925	0850	N14	W14	.317	9462	20.3	40	-N		0850	.46	.49		182	Z
LOCA	21	0857E	0925		N14	W13	.305	9462	20.4	28D	-N	S						
GRP16083	21	1000	1044	1008	N14	W11	.283	9462	20.6	44	-B			1.34			2 2 2 8	
CAPS	21	0958E	1057D		N14	W08	.252	9462	20.8	59D	-B	2	1005	1.00	1.00		197	CK
LOCA	21	1002	1030	1008	N14	W13	.305	9462	20.4	28	-N	V	1008	1.68	1.80			
084 CAPS	21	1044E	1115D		S30	W20	.602	9455	19.9	31D	1F	2	1051	2.00	2.40		133	F
085 HUAN	21	1338	1343	1340	N15	W16	.352	9462	20.4	5	-F	2 C	1340	.21	.21		D	10
GRP16086	21	1420	1436	1424	N14	W13	.305	9462	20.6	16	-N			.61			5 5 5 12	
HTRP	21	1415	1435	1421	N13	W10	.259	9462	20.8	20	-F		1421	.41	.40		E	
CATA	21	1420	1440	1425	N14	W12	.294	9462	20.7	20	-N		1425	.87	.91		158	E
HUAN	21	1421	1433	1423	N14	W13	.305	9462	20.6	12	-F	2 C	1423	.31	.31			
LOCA	21	1422	1433	1425	N14	W14	.317	9462	20.5	11	-N	V	1425	.63	.60			
SACP	21	1425E	1440U	1428	N13	W14	.307	9462	20.6	15D	-N	C		.84	.83			
GRP16087	21	1635	1651	1637	N31	W18	.557	9459	20.3	16	-N			.74			4 4 4 8	
MONT	21	1634	1700D		N32	W15	.551	9459	20.6	26D	-N		1645	1.86				
HTRP	21	1635	1645	1636	N30	W18	.545	9459	20.3	10	-N		1636	.31	.40		E	
SACP	21	1635	1655	1637	N30	W19	.553	9459	20.3	20	-N	C		.42	.44			
HUAN	21	1636	1645	1638	N32	W18	.569	9459	20.3	9	-N	2 C	1638	.37	.40		E	
GRP16088	21	1643	1648	1645	N16	W16	.363	9462	20.5	5	-N			.45			3 3 3 8	
MONT	21	1642	1645		N16	W14	.340	9462	20.6	3	-N		1643	.52				
SACP	21	1643	1651	1645	N15	W17	.365	9462	20.4	8	-N	C		.41	.42			
HUAN	21	1644	1647	1645	N16	W16	.363	9462	20.5	3	-N	2 C	1645	.41	.41			
089 HUAN	21	1738	1810		N14	W17	.355	9462	20.5	32	-F	2 C	1743	.25	.25		D	6
090 HUAN	21	1913	1934		N14	W18	.369	9462	20.5	21	-F	2 C	1915	.25	.25		D	5
091 SACP	21	1947	1958	1949	N13	W17	.346	9462	20.5	11	-F	C		.63	.62			4
093 HALE	22	0022	0045	0024	N13	E67	.922	9473	27.0	23	-N	1 C	0024	.41				9
GRP16094	22	0102	0121	0105	N12	W19	.365	9462	20.6	19	-N			.52			3 3 3 9	
HALE	22	0101	0120	0105	N12	W20	.379	9462	20.5	19	-N	1 C	0105	.41	.40			
SACP	22	0102E	0130U	0103	N12	W19	.365	9462	20.6	28D	-N	C		.84	.83			
MANI	22	0104	0113	0108	N13	W19	.373	9462	20.6	9	-F	2	0108	.31	.30			
095 HALE	22	0210	0247	0211	N12	W20	.379	9462	20.6	37	-N	1 C	0211	.36	.40		J	6

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hq	MAX. INT. %	
GRP16096	22	0404	0424	0412	N13 W21	.400	9462	20.6	20	-N			.52			3 3 3 7	
HALE	22	0402	0428	0409	N13 W20	.386	9462	20.7	26	-B	1	C	0409	.52	.60	E	
MITK	22	0406	0427	0414	N15 W23	.442	9462	20.4	21	-N		C	0414	.72	.80	E	
MANI	22	0410E	0416	0413	N12 W21	.394	9462	20.6	6D	-F	2		0413	.31	.33		
097 MANI	22	0458	0511	0501	N12 W22	.408	9462	20.6	13	-N	2		0501	1.24	1.20	6	
098 MONT	22	0648E	0700D		N15 E62	.887	9473	26.9	12D	-N			0648	1.55		9	
099 CATA	22	0715	0725	0715	N16 E58	.855	9473	26.7	10	-N			0715	.23	.45	174 8	
100 MONT	22	0737E	0805D		N15 E62	.887	9473	27.0	28D	-F			0737	1.55		9	
101 MONT	22	0737E	0805D		N32 W23	.604	9459	20.6	28D	-N			0737	1.55		9	
GRP16102	22	0806	0827	0811	N11 W28	.489	9462	20.2	21	-N				.55		3 3 3 9	
CATA	22	0805	0825	0810	N11 W27	.475	9462	20.3	20	-B			0810	.52	.60	204	
CAPE	22	0806	0825	0811	N11 W28	.489	9462	20.2	19	-N		C	0811	.92	1.10		
HTPR	22	0806	0830	0812	N10 W30	.514	9462	20.1	24	-F			0812	.21	.20		
103 MONT	22	0837E	0855D		N15 E62	.887	9473	27.0	18D	-N			0837	1.55		10	
104 MONT	22	0920E	0936D		N15 E62	.887	9473	27.0	16D	-N			0920	1.55		11	
105 HUAN	22	1534	1537	1535	N18 W32	.578	9462	20.2	3	-F	2	C	1535	.25	.26	D 9	
106 SACP	22	1640	1645	1641	N11 E52	.792	9473	26.6	5	-N		C		.41	.54	6	
GRP16107	22	1649	1723	1655	N15 W26	.482	9462	20.8	34	-N				.72		3 3 3 5	
SACP	22	1649	1721	1655U	N16 W25	.476	9462	20.8	32	-F		C		.94	.96		
HUAN	22	1649	1713	1654	N17 W25	.483	9462	20.8	24	-N	2	C	1654	.70	.73	E	
HTPR	22	1650	1720	1655	N16 W23	.450	9462	21.0	30	-N			1655	.52	.60		
HUAN	22	1715	1728	1717	N12 W33	.563	9462	20.2	13	-F	2	C	1717	.21	.22	D	
108 HUAN	22	1846	1854		S15 W39	.670	9458	19.9	8	-F	2	C	1848	.41	.52	E 4	
109 HALE	22	1847E	1852	1847	S16 W50	.485	9464	19.0	5D	-F	1	P	1847	.31	.40	4	
110 HALE	22	2000	2017	2003	S16 W50	.485	9464	19.1	17	-N	1	C	2003	.31	.40	3	
111 HUAN	22	2004	2014		S15 W40	.682	9458	19.8	10	-F	2	C	2007	.31	.40	E 3	
112 HALE	22	2147	2201	2149	S16 W50	.485	9464	19.2	14	-N	1	C	2149	.41	.50	6	
GRP16113	22	2149	2156	2151	S16 W51	.803	9458	19.1	7	-F				.41		2 2 2 6	
SACP	22	2149	2158	2150	S17 W50	.796	9458	19.2	9	-N		C		.21	.27		
BOUL	22	2149	2154	2151	S14 W51	.798	9458	19.1	5	-F		C		.60	1.00		
114 SACP	23	0125	0152	0136	N33 E60	.899	9476	27.6	27	-F		C		.32	.51	4	
GRP16115	23	0314	0329	0315	N12 E51	.783	9473	27.0	15	-F				.26		2 2 2 6	
HALE	23	0312	0334	0313	N13 E52	.795	9473	27.0	22	-F	2	C	0313	.31	.50		
MANI	23	0315	0324	0317	N11 E50	.771	9473	26.9	9	-F	2		0317	.21	.32		
117 MANI	23	0444	0453	0446	S15 W53	.820	9458	19.2	9	-F	2		0446	.41	.70	7	
119 CATA	23	0840	0905	0845	N13 E49	.763	9473	27.0	25	-N			0845	.46	.72	174 8	
GRP16120	23	1003	1010	1004	N13 E50	.774	9473	27.2	7	-N				.31		2 2 2 8	
MONT	23	1002	1010	1004	N13 E50	.774	9473	27.2	8	-N			1004	.31			
CAPS	23	1003	1010		N13 E50	.774	9473	27.2	7	-N	3		1005	.30	.40	160 D	
GRP16121	23	1251	1308	1254	N10 E45	.712	9473	26.9	17	-F				.31		2 2 2 8	
SACP	23	1251	1314	1254	N09 E45	.711	9473	26.9	23	-F		C		.42	.50		
CAPS	23	1252E	1302		N10 E45	.712	9473	26.9	10D	-F	2		1255	.20	.30	147 CE	
122 HUAN	23	1452	1456	1453	N14 W38	.635	9462	20.8	4	-F	2	C	1453	.41	.46	ET 9	
123 HUAN	23	1454	1506	1456	N17 E25	.482	9471	25.5	12	-F	2	C	1456	.35	.36	E 9	
GRP16124	23	1519	1527	1521	N10 W45	.712	9462	20.3	8	-F				.34		2 2 2 8	
SACP	23	1518	1530	1521	N09 W45	.711	9462	20.3	12	-N		C		.42	.49		
HUAN	23	1519	1523	1520	N10 W45	.712	9462	20.3	4	-F	2	C	1520	.25	.29	D	
GRP16125	23	1625	1631	1627	N13 W39	.645	9462	20.8	6	-N				.41		3 3 3 7	
SACP	23	1624	1634	1628	N13 W39	.645	9462	20.8	10	-F		C		.31	.35		
HALE	23	1626	1629	1627	N13 W39	.645	9462	20.8	3	-N	2	C	1627	.52	.70		
HUAN	23	1626	1631	1627	N14 W40	.660	9462	20.7	5	-N	2	C	1627	.41	.46		

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
126 HALE	23	1721	1722	1721	N14	W38	.635	9462	20.9	1	-B	2 C	1721	.41	.50			I 5
GRP16127	23	1725	1730	1727	N14	W41	.673	9462	20.7	5	-F			.21				2 1 1 5
HUAN	23	1725	1730	1727	N14	W41	.673	9462	20.7	5	-F	2 C	1727	.21	.23			D
SACP	23	1729	1758	1740	N10	W46	.724	9462	20.3	29	-F	2 C		.21	.25			
128 HUAN	23	1852	1857	1853	S35	W70	.965	9455	18.5	5	-F	1 C	1853	.21				D 6
GRP16129	23	1915	1936	1922	N17	E22	.444	9471	25.5	21	-N			.26				3 3 3 5
SACP	23	1908	1941	1922	N17	E22	.444	9471	25.4	33	-N	C		.31	.32			
HUAN	23	1918	1933	1922	N17	E22	.444	9471	25.5	15	-N	2 C	1922	.25	.25			D
HALE	23	1920	1935	1921	N17	E22	.444	9471	25.5	15	-N	2 C	1921	.21	.20			
GRP16130	23	1944	2008	2000	N14	W42	.685	9462	20.7	24	-F			.39				2 2 2 5
SACP	23	1942	2011	2000	N13	W43	.694	9462	20.6	29	-F	C		.52	.60			
HUAN	23	1946	1953	1948	N14	W40	.660	9462	20.8	7	-F	2 C	1948	.21	.23			D
HUAN	23	1957	2005	2000	N16	W42	.691	9462	20.7	8	-F	2 C	2000	.25	.29			D
GRP16131	23	2025	2032	2028	N15	W42	.688	9462	20.7	7	-F			.27				3 3 3 5
HALE	23	2024	2032	2026	N14	W42	.685	9462	20.7	8	-F	2 C	2026	.31	.40			
HUAN	23	2025	2032	2028	N16	W42	.691	9462	20.7	7	-F	2 C	2028	.25	.29			D
MCMA	23	2026	2032	2029	N16	W42	.691	9462	20.7	6	-N	C	2029	.26	.40			D
132 HALE	23	2051	2058	2052	N14	E38	.635	9473	26.7	7	-F	2 C	2052	.21	.30			4
133 HUAN	23	2100	2110	2105	N16	W43	.702	9462	20.6	10	-N	2 C	2105	.31	.36			E 5
GRP16135	23	2332	2352	2334	N22	E65	.915	9481	28.9	20	-N			.58				4 4 4 6
MANI	23	2331	2356	2334	N20	E65	.913	9481	28.9	25	-N	2	2334	.67	1.08			
SACP	23	2331	2352	2335	N22	E65	.915	9481	28.9	210	-N	C		.63	1.07			
MITK	23	2332	2353	2333	N22	E63	.901	9481	28.7	21	-N	C	2333	.62	1.40			D
HALE	23	2332	2348	2333	N22	E66	.921	9481	28.9	16	-B	2 C	2333	.41				
137 MANI	24	0045	0112	0049	S15	E82	.992	9484	30.2	27	-F	2	0049	.26	.74			5
138 HALE	24	0055	0125	0100	S20	E38	.686	9486	26.9	30	-F	2 C	0100	.31	.40			CG 5
GRP16139	24	0122	0140	0126	N13	W43	.694	9462	20.8	18	-F			.59				3 3 3 4
SACP	24	0120	0144	0128	N13	W43	.694	9462	20.8	24	-F	C		.84	.97			
MITK	24	0123	0135	0126	N14	W44	.708	9462	20.8	12	-N	C	0126	.52	.70			D
HALE	24	0124	0140	0125	N13	W42	.682	9462	20.9	16	-F	1 C	0125	.41	.60			
143 HUAN	24	1413	1421	1414	N13	W54	.814	9462	20.5	8	-F	2 C	1414	.31	.40			8
144 SACP	24	1510	1554	1527	S12	E70	.945	9484	29.9	44	-F	C		.41	.81			7
145 CATA	24	1525	1530	1525	S16	W74	.967	9458	19.1	5	-F		1525	.11		148		7
146 SACP	24	1531	1539	1535	N14	W49	.764	9462	21.0	8	-N	C		.21	.26			7
147 SACP	24	1703	1711	1706	S12	E68	.933	9484	29.8	8	-N	C		.21	.38			6
148 HALE	24	1821	1830	1822	S21	E26	.564	9486	26.7	9	-N	2 C	1822	.15	.20			GHV 4
149 HUAN	24	1929	1941		N13	E28	.497	9473	26.9	12	-F	2 C	1932	.25	.26			D 4
GRP16150	24	2011	2028	2015	N11	W56	.832	9462	20.6	17	-F			.52				4 4 4 4
SACP	24	2007	2025	2014	N10	W56	.831	9462	20.6	18	-F	C		.53	.72			
HUAN	24	2012	2024	2016	N12	W57	.842	9462	20.6	12	-F	2 C	2016	.41	.63			
HALE	24	2012	2035	2015	N10	W56	.831	9462	20.6	23	-F	1 C	2015	.62	1.10			FJ E
MCMA	24	2014	2018	2016	N13	W55	.824	9462	20.7	40	-F	C	2016	.52	.90			
151 HUAN	24	2029	2042		S16	E24	.497	9486	26.7	13	-F	2 C	2031	.21	.21			D 4
GRP16153	24	2242	2252	2244	N13	W58	.852	9462	20.6	10	-N			.33				3 3 3 5
SACP	24	2239	2301	2245	N13	W57	.843	9462	20.7	22	-F	C		.31	.44			
HALE	24	2242	2250	2242	N13	W56	.833	9462	20.7	8	-B	1 C	2242	.46	.80			J
MANI	24	2244	2245	2245	N13	W60	.869	9462	20.4	1	-F	2	2245	.21				
154 HALE	25	0227	0247	0232	N14	W60	.869	9462	20.6	20	-N	1 C	0232	.21	.40			J 5
GRP16156	25	0609	0715	(0624)	N13	W62	.885	9462	20.6	66	-B			.57				2 2 2 6
CAPS	25	0609	0655		N13	W61	.877	9462	20.7	46D	-B	3	0623	.70		208		D
BUCA	25	0615E	0715D		N13	W62	.885	9462	20.6	60D	-N	C	0625	.43	.90			D
159 CAPS	25	1004	1015D		S15	E08	.324	9474	26.0	11D	-N	3	1005	.50	.50	164		EH 9
160 CAPS	25	1019	1027D		S15	E08	.324	9474	26.0	8D	-N	3	1021	.50	.50	164		EH 6

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS			
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %				
					LAT.	MER. DIST.															
	1968 JUNE																				
161 HUAN	25	1235	1253	1240	N16	E05	.253	9473	25.9	18	-F	2	C	1240	.37	.37		E	8		
GRP16162 MONT HUAN	25	1331	1334	1332	N16	W60	.871	9462	21.1	3	-F				.21			2	2	2	10
	25	1330	1333		N16	W59	.863	9462	21.1	3	-F			1331	.21						
	25	1331	1334	1332	N15	W60	.870	9462	21.1	3	-F	1	C	1332	.21	.32		D			
GRP16163 HUAN CATA	25	1335	1348	1335	N18	W70	.942	9462	20.3	13	-F				.42			2	2	2	10
	25	1334	1346		N18	W71	.947	9462	20.2	12	-F	1	C	1336	.31			D			
	25	1335	1350	1335	N18	W69	.936	9462	20.4	15	-F			1335	.52			144			
GRP16164 SACP MONT HUAN CAPS CATA	25	1358	1407	1404	N14	W59	.861	9462	21.2	9	-N				.40			5	5	5	9
	25	1356	1410	1402	N14	W60	.869	9462	21.1	14	-N		C		.41	.62					
	25	1358	1405		N14	W60	.869	9462	21.1	7	-F			1400	.31						
	25	1400	1406		N15	W61	.878	9462	21.0	6	-N	1	C	1401	.31	.47		E			
	25	1401E	1405D		N15	W56	.835	9462	21.4	40	-F	3		1402	.40	.80		147	CD		
	25	1405E	1410	1405	N14	W60	.869	9462	21.1	5D	-N			1405	.58	1.20		158	Z		
GRP16165 SACP CATA	25	1410	1421	1414	S15	E04	.303	9474	25.9	11	-F				.42			2	2	2	8
	25	1405	1421	1413	S15	E04	.303	9474	25.9	16	-F		C		.31	.31					
	25	1415	1420D	1415	S14	E04	.287	9474	25.9	5D	-N			1415	.52	.54		170			
166 HUAN	25	1411	1419	1413	N15	E03	.228	9473	25.8	8	-N	1	C	1413	.31	.31		D			8
167 MONT	25	1435	1520	1450	N12	W65	.907	9462	20.7	45	IF			1450	2.27						6
169 HALE	25	2003	2011	2006	S28	W31	.674	9469	23.5	8	-N	1	C	2006	.21	.30		G			3
170 HALE	25	2055	2107	2059	S14	E46	.747	9484	29.3	12	-F	1	C	2059	1.03	1.60		G			3
GRP16172 SACP HALE HALE	25	2311	2325	2320	N13	W64	.900	9462	21.2	14	-F				.41			2	2	2	2
	25	2309	2325	2319	N13	W64	.900	9462	21.2	16	-F		C		.41	.68					
	25	2313	2325	2320	N13	W64	.900	9462	21.2	12	-F	1	C	2320	.41	.90		FH			
	25	2313	2325	2314	N13	W64	.900	9462	21.2	12	-F	1	C	2314	.21	.50					
GRP16173 SACP HALE	25	2333	2346	2337	N13	W65	.908	9462	21.1	13	-F				.36			2	2	2	3
	25	2330	2349	2337	N13	W65	.908	9462	21.1	19	-F		C		.41	.69					
	25	2335	2342	2337	N13	W64	.900	9462	21.2	7	-F	1	C	2337	.31	.70		J			
174 VORO	26	0010	0015	0013	N11	E66	.914	9489	1.0	5	IF		C	0013	.99	2.26		69	D		7
175 HALE	26	0026	0055	0038	S44	W33	.818	9469	23.5	29	-B	1	C	0038	.36	.60					4
177 SACP	26	0103	0120	0109	N13	W65	.907	9462	21.2	17	-F		C		.63	1.05					5
GRP16178 SACP HALE	26	0127	0136	0129	S27	E74	.974	9490	1.6	9	-N				.18			2	2	2	5
	26	0126	0139	0130	S27	E74	.974	9490	1.6	13	-N		C		.21	.49					
	26	0127	0133	0127	S27	E73	.970	9490	1.5	6	-N	1	C	0127	.15						
179 VORO	26	0302	0310	0305	N11	E65	.907	9489	1.0	8	1N		C	0306	1.34	3.01		74	D		3
180 MANI	26	0436E	0446	0437	S14	E50	.790	9484	29.9	10D	-F	1		0437	.26	.40					3
183 MONT	26	0720	0725	0722	N14	W72	.951	9462	20.9	5	-N			0722	.21						10
GRP16184 MONT CAPE	26	0757	0809	0758	N19	W72	.952	9462	20.9	12	-F				.76			2	2	2	10
	26	0756	0807	0758	N20	W67	.925	9462	21.3	11	-N			0758	.83						
	26	0757	0810	0758	N17	W76	.970	9462	20.6	13	-F		C	0758	.69			FV			
185 CATA	26	0910E	0930	0920	N11	W72	.951	9462	21.0	20D	-F			0920	.14			132			11
GRP16186 CAPE CAPE MONT	26	1007	1105	1057	N12	W78	.977	9462	20.6	58	-N				.84			2	2	2	7
	26	1007	1105	1057	N12	W82	.990	9462	20.3	58	-N			1057	.84						
	26	1007	1105	1031	N12	W82	.990	9462	20.3	58	-N		C	1031	.55			K			
	26	1014E	1028D		N11	W74	.961	9462	20.9	14D	-N			1014	.83						
187 MONT	26	1014E	1040		S13	W13	.342	9474	25.5	26D	-N			1014	1.03						8
188 MONT	26	1135	1215	1145	N11	W75	.965	9462	20.9	40	-N			1145	.83						8
189 CAPS	26	1139E	1209		N27	E27	.585	9476	28.5	30D	-F	2		1144	.50	.60		157	CFG		8
190 MONT	26	1210	1248	1216	N12	W75	.965	9462	20.9	38	-N			1216	.72						7
GRP16192 MONT HUAN LOCA CAPS CATA	26	1320	1329	1323	N14	W72	.951	9462	21.2	9	-N				.33			5	5	5	12
	26	1318	1337	1327	N15	W76	.970	9462	20.9	19	-N			1327	.31						
	26	1319	1326	1321	N15	W74	.961	9462	21.0	7	-F	1	C	1321	.25			E			
	26	1320	1327	1322	N13	W70	.940	9462	21.3	7	-N		V	1322	.53	1.50					
	26	1320E	1327		N13	W65	.907	9462	21.7	7D	-N	2		1323	.20			173	CE		
	26	1322	1330D	1322	N14	W73	.956	9462	21.1	8D	-F			1322	.34			138			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	TIME UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %		
GRP16193	26	1436	1454	1440	S14 W10	.327	9474	25.9	18	-F				.81				
SACP	26	1434	1453	1440	S15 W10	.341	9474	25.9	19	-F		C		.72	.72		4 4 4 9	
HUAN	26	1437	1446D		S13 W10	.313	9474	25.9	90	-F	2	P	1442	.31	.31		E	
CATA	26	1440E	1455D	1440	S14 W10	.327	9474	25.9	150	-N			1440	.40	.43		C	
CAPS	26	1440E	1454		S15 W08	.326	9474	26.0	140	-F	2		1449	1.80	1.80	195 147	CF	
194 MONT	26	1445	1515		N13 W78	.977	9462	20.8	30	-N			1455	.83			6	
8 STATIONS REPORTING GROUP 16195. 1 STATIONS OBSERVING AND NOT REPORTING.																		
GRP16195	26	1552	1617	1558	N29 E16	.511	9476	27.9	25	-N				.85			6 5 5 8	
SACP	26	1545	1628	1600	N30 E15	.517	9476	27.8	43	-N		C		1.25	1.30			
CAPS	26	1545E	1600D		N27 E27	.585	9476	28.7	150	-N	1		1554	.80	1.00	182	G	
MONT	26	1550	1615	1600	N29 E17	.519	9476	27.9	25	-N			1600	.93				
HUAN	26	1551	1622	1556	N29 E16	.511	9476	27.9	31	-N	2	C	1556	.57	.59		E	
BOUL	26	1555U	1616	1557U	N28 E17	.506	9476	27.9	210	-N		C		1.00	1.20			
MEUD	26	1558	1605		N28 E17	.506	9476	27.9	7	-F			1558	.52	.60		CE	
16195	26	1607	1624	1613	N29 E16	.511	9476	27.9	17	-F				.28			3 3 3 8	
HALE	26	1606	1627	1611	N29 E15	.504	9476	27.8	21	-N	2	C	1611	.26	.30			
MEUD	26	1607	1620		N28 E17	.506	9476	27.9	13	-F			1615	.31	.30		D	
CATA	26	1615E	1625D	1615	N29 E15	.504	9476	27.8	100	-F			1615	.26	.30	141		
GRP16196	26	1630	1644	1635	S14 W12	.345	9474	25.8	14	-F				.26			2 2 2 8	
HALE	26	1629	1647	1635	S14 W12	.345	9474	25.8	18	-N	2	C	1635	.26	.30			
HUAN	26	1630	1641		S14 W12	.345	9474	25.8	11	-F	2	C	1633	.25	.25		D	
198 SACP	26	2127	2141	2135	N14 W76	.970	9462	21.2	14	-F		C		.41	.96		4	
201 SACP	27	0105	0143	0124	S17 W01	.333	9486	27.0	38	-F		C		.32	.31		5	
GRP16202	27	0153	0208	0155	N12 W03	.175	9473	26.9	15	-F				.94			2 2 2 6	
HALE	27	0151	0210	0154	N13 W02	.187	9473	26.9	19	-N	1	C	0154	.72	.70		F	
SIBE	27	0154	0205	0156	N11 W03	.158	9473	26.9	11	-F		P	0156	1.16	1.20	53	E	
205 ARCE	27	0840E	0900D		N27 E11	.450	9476	28.2	200	-N		C	0840	.35	.40		12	
206 MONT	27	1100	1120	1108	S17 W06	.347	9486	27.0	20	-F			1108	1.03			7	
207 MONT	27	1133	1155	1140	S17 W06	.347	9486	27.0	22	-N			1140	1.03			6	
GRP16208	27	1158	1212	1200	S15 E34	.614	9484	30.0	14	-F				.59			2 2 2 8	
CAPE	27	1158E	1215	1200	S14 E33	.596	9484	30.0	170	-F		P	1200	.97	1.20		H	
HUAN	27	1200E	1209		S15 E35	.626	9484	30.1	90	-F	1	C	1201	.21	.23		D	
GRP16209	27	1211	1227	1215	S18 W22	.496	9474	25.9	16	-N				.69			5 5 5 8	
CAPE	27	1206	1240	1214	S16 W23	.489	9474	25.8	34	-F		C	1214	1.10	1.30		F	
MONT	27	1208	1230	1215	S18 W22	.496	9474	25.9	22	-N			1215	.83				
CAPS	27	1214E	1223D		S20 W18	.478	9474	26.2	90	-F	2		1217	.50	.60			
HUAN	27	1214E	1220		S17 W23	.498	9474	25.8	60	-N	2	C	1214	.25	.26		CD	
CATA	27	1215	1220	1215	S18 W23	.507	9474	25.8	5	-N			1215	.75	.85	182		
GRP16210	27	1228	1245	1240	S17 W08	.357	9486	26.9	17	-F				.62			2 2 2 8	
HUAN	27	1227	1244	1240	S16 W08	.342	9486	26.9	17	-F	2	C	1240	.21	.21		D	
MONT	27	1228	1245		S17 W08	.357	9486	26.9	17	-N			1235	1.03				
GRP16211	27	1246	1258	1251	N29 E08	.464	9476	28.1	12	-F				.37			2 2 2 8	
SACP	27	1243	1301	1251	N29 E08	.464	9476	28.1	18	-N		C		.53	.53			
HUAN	27	1249	1255	1250	N29 E08	.464	9476	28.1	6	-F	2	C	1250	.21	.21		D	
212 MONT	27	1305	1317		N29 E05	.454	9476	27.9	12	-N			1310	.62			9	
GRP16213	27	1317	1442	1414	S14 W27	.521	9474	25.5	85	-F				.63			2 1 1 10	
SACP	27	1317	1442	1414	S14 W27	.521	9474	25.5	85	-F		C		.63	.65			
HUAN	27	1320	1335	1322	S12 W25	.480	9474	25.7	15	-F	2	C	1322	.21	.21		D	
GRP16214	27	1402	1502	1429	S16 W08	.342	9486	27.0	60	-F				.58			3 3 3 10	
SACP	27	1358	1502	1429	S15 W09	.335	9486	26.9	64	-F		C		.63	.62			
HUAN	27	1405	1433D		S16 W09	.349	9486	26.9	280	-N	2	P	1431	.31	.31			
CAPS	27	1427E	1440D		S18 W05	.358	9486	27.2	130	-F	1		1428	.80	.80	160	C	
215 SACP	27	1444	1503	1453	N30 E05	.470	9476	28.0	19	-N		C		.63	.64		8	
216 MONT	27	1530	1535	1531	S18 W22	.496	9474	26.0	5	-N			1531	.52			7	
217 SACP	27	1535	1553	1542	S15 W10	.342	9486	26.9	18	-N		C		.63	.62		7	
218 SACP	27	1557	1612	1602	N16 W11	.299	9473	26.8	15	-N		C		.73	.72		7	

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OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS		
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCNATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g		MAX. INT. %	
					LAT.	MER. DIST.													
GRP16219 SACP HUAN	27 27 27	1615 1613 1617	1631 1630 1631	1623 1623 1623	S15 S15 S15	W11 W10 W11	.351 .342 .351	9486 9486 9486	26.9 26.9 26.9	16 17 14	-N -N -N		C C 2 C		.97 .94 1.00		.93 1.00		2 2 2 7 E
220 MONT	27	1631	1700D		S14	E29	.546	9484	29.9	29D	-F			1640	1.55				7
GRP16221 SACP HUAN	27 27 27	1632 1631 1632	1642 1644 1640	1634 1634 1633	S14 S15 S13	W28 W28 W28	.533 .541 .527	9474 9474 9474	25.6 25.6 25.6	10 13 8	-F -F -F		C C 2 C		.52 .53 .50		.55 .52		2 2 2 6 E
GRP16222 SACP HUAN	27 27 27	1739 1735 1742	1806 1807 1805	1749 1749 1749	S15 S15 S14	W12 W11 W12	.359 .351 .346	9486 9486 9486	26.8 26.9 26.8	27 32 23	-N -N -N		C C 2 C		.90 1.04 .75		1.03 .75		2 2 2 4 E
GRP16224 SACP HUAN	27 27 27	1854 1851 1856	1909 1912 1906	1902 1902 1902	S15 S16 S14	W12 W11 W12	.359 .364 .346	9486 9486 9486	26.9 27.0 26.9	15 21 10	-F -F -F		C C 2 C		.46 .41 .50		.42 .50		2 2 2 4 E
225 HUAN	27	1907	1916	1909	N16	W12	.309	9473	26.9	9	-F	2	C	1909	.21	.21			D 4
GRP16226 SACP HUAN	27 27 27	1918 1916 1919	1926 1928 1924	1921 1921 1920	N30 N30 N30	E02 E02 E02	.464 .464 .464	9476 9476 9476	28.0 28.0 28.0	8 12 5	-N -N -N		C C 2 C		.67 .84 .50		.85 .51		2 2 2 4
227 SACP	28	0112	0126	0114	N15	W16	.344	9473	26.8	14	-N		C		.61	.61			3
GRP16229 MANI CATA CATA	28 28 28 28	0505 0505 0510E 0515	0545 0530 0600 0655	0512 0513 0510 0520	S28 S30 S29 S24	E49 E50 E49 E45	.830 .845 .834 .779	9490 9490 9490 9490	1.9 2.0 1.9 1.6	40 25 50D 100	-N -N -N -N	2		0513 0510 0520	.52 .62 .41 .14		1.08 .78 .22	195 170	2 2 2 5
230 CAPS	28	0614	0625		S13	W30	.553	9474	26.0	11	1N	3		0616	1.80	2.20		170	6
232 CAPS	28	0750	0802D		S13	W38	.653	9474	25.5	12D	-F	3		0758	.40	.50		157	C 11
233 MONT	28	0820	0845	0832	S15	W20	.445	9486	26.8	25	-N			0832	.83				10
235 CAPS	28	1010	1017D		S14	W39	.670	9474	25.5	7D	-F	3		1010	.40	.50			F 9
236 CAPS	28	1049E	1059D		N10	W17	.317	9473	27.2	10D	-N	3		1052	.80	.80		170	C 7
237 MONT	28	1118	1125	1120	S15	W21	.457	9486	26.9	7	-N			1120	.83				6
GRP16238 CAPE CAPS MONT CATA HUAN HUAN	28 28 28 28 28 28 28	1149 1147 1148E 1150 1150 1155E 1155E	1231 1225 1219D 1240 1235 1225 1225	1155 1154 1219D 1155 1155 1225 1225	N16 N17 N15 N17 N15 N16 N11	W22 W22 W20 W26 W22 W21 W22	.431 .439 .396 .490 .423 .418 .397	9473 9473 9473 9473 9473 9473 9473	26.8 26.8 27.0 26.5 26.8 26.9 26.8	42 38 31D 50 45 30D 30D	-N -N -N -N -N -N -N		C C 3 1 P	1154 1152 1155 1155 1158 1213	.79 .92 1.00 1.03 .63 .37 .25		1.00 1.00 .70 .37 .25	176 195	5 5 5 7 CFK E
GRP16239 CATA HUAN CAPS MONT SACP	28 28 28 28 28 28	1232 1205 1230 1232 1233 1233E	1241 1245 1240 1239D 1240 1240	1233 1230 1231 1239D 1240 1233	N10 N11 N11 N10 N10 N10	W23 W23 W23 W20 W24 W23	.407 .412 .412 .362 .422 .407	9473 9473 9473 9473 9473 9473	26.8 26.8 26.8 27.0 26.7 26.8	9 40 10 7D 7 7D	-N -N -N -F -N -N		C C 3 C	1230 1231 1232 1235	.38 .17 .31 .60 .52 .31		.19 .31 .60 .60 .31	166 158	5 5 5 12 E
240 MONT	28	1252	1315	1255	S13	W43	.712	9474	25.3	23	-N			1255	1.03				11
GRP16241 SACP MONT HUAN	28 28 28 28	1301 1258 1301 1303	1315 1312 1320 1313	1305 1305 1320 1305	S16 S17 S15 S16	W21 W21 W21 W21	.467 .477 .457 .467	9486 9486 9486 9486	27.0 27.0 27.0 27.0	14 14 19 10	-N -N -N -F		C C 2 C		.55 .51 .83 .31		.52 .31		3 3 3 11 E
242 MONT	28	1335	1350		S13	W44	.723	9474	25.3	15	-N			1340	1.03				10
GRP16243 HUAN MONT	28 28 28	1354 1353 1355	1419 1357 1440	1356 1354 1358	S13 S13 S13	W42 W40 W44	.701 .677 .723	9474 9474 9474	25.4 25.6 25.3	25 4 45	-F -F -N	2	C	1354 1358	.72 .41 1.03		.48		2 2 2 10 E
GRP16244 SACP HUAN	28 28 28	1414 1413 1415	1422 1422 1421	1416 1416 1416	S17 S17 S16	W22 W21 W22	.488 .477 .478	9486 9486 9486	26.9 27.0 26.9	8 9 6	-F -F -F		C C 2 C		.26 .31 .21		.31 .21		2 2 2 9 D
245 HUAN	28	1446	1453		S13	W42	.701	9474	25.5	7	-F	2	C	1448	.31	.36			E 8
246 HUAN	28	1727	1735	1729	N15	W24	.450	9473	26.9	8	-F	2	C	1729	.21	.21			D 5

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMAH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	
GRPI6247	28	1759	1810	1803	S17	W24	.510	9486	26.9	11	-F			.44			3 3 3 5
SACPI	28	1756	1817	1803	S17	W24	.510	9486	26.9	21	-N	C		.71	.75		
HALE	28	1800	1807	1802	S18	W23	.508	9486	27.0	7	-F	3 C	1802	.41	.50		
HUAN	28	1801	1806	1803	S16	W24	.501	9486	27.0	5	-F	2 C	1803	.21	.21		D
248 HALE	28	2005	2009	2007	N29	W08	.463	9476	28.2	4	-F	2 C	2007	.31	.30		5
249 HUAN	28	2035	2043	2038	N12	W27	.475	9473	26.8	8	-F	2 C	2038	.25	.26		D
GRPI6250	28	2202	2214	2207	S14	W48	.770	9474	25.3	12	-N			.49			3 3 3 5
HUAN	28	2201	2213		S13	W48	.767	9474	25.3	12	-N	1 C	2207	.45	.57		E
SACPI	28	2201	2215	2206	S15	W48	.773	9474	25.3	14	-N	C		.41	.52		
HALE	28	2203	2215	2208	S14	W48	.770	9474	25.3	12	-N	2 C	2208	.62	1.00		
GRPI6251	28	2205	2210	2206	N30	W09	.482	9476	28.2	5	-F			.28			3 3 3 5
HALE	28	2204	2208	2205	N29	W08	.463	9476	28.3	4	-F	2 C	2205	.31	.30		
HUAN	28	2205	2208	2206	N30	W08	.477	9476	28.3	3	-F	2 C	2206	.21	.21		D
SACPI	28	2205	2214	2207	N30	W10	.486	9476	28.2	9	-F	C		.31	.32		
253 SACPI	29	0045	0101	0050	N31	W12	.508	9476	28.1	16	-N	C		.31	.32		6
254 SACPI	29	0055	0113	0104	S16	W41	.702	9474	26.0	18	-F	C		.21	.24		6
GRPI6255	29	0101	0114	0104	S16	W28	.550	9486	26.9	13	-F			.57			2 2 2 6
SACPI	29	0101	0113	0106	S16	W28	.550	9486	26.9	12	-F	C		.72	.77		
HALE	29	0101	0114	0102	S16	W27	.538	9486	27.0	13	-F	1 C	0102	.41	.50		
256 HALE	29	0210	0241	0215	S17	W28	.558	9486	27.0	31	-N	2 C	0215	.52	.60		E
1 STATIONS REPORTING GROUP 16258. 9 STATIONS OBSERVING AND NOT REPORTING.																	
258 MONT	29	0915	1005	0926	S15	W50	.794	9474	25.6	50	-N		0926	1.55			10
258 MONT	29	0915	1005	0950	S15	W50	.794	9474	25.6	50	*1N		0950	1.55			8
GRPI6260	29	1228	1247	1235	S15	W51	.803	9474	25.7	19	-N			.84			5 5 5 9
SACPI	29	1226	1247	1236	S15	W51	.803	9474	25.7	21	-N	C		.94	1.23		
CAPE	29	1227	1254	1234	S14	W52	.811	9474	25.6	27	-N	1N C	1234	1.75	2.90		
HUAN	29	1229	1246		S14	W50	.791	9474	25.8	17	-N	1 C	1235	.57	.74		ET
MEUD	29	1231	1242		S14	W51	.801	9474	25.7	11	-F	C	1232	.41	.60		E
MCMA	29	1236	1240		S16	W51	.806	9474	25.7	40	-F	P	1236	.52	.90		E
261 HUAN	29	1301	1310	1303	S13	W55	.836	9474	25.4	9	-F	2 C	1303	.21	.28		D
262 SACPI	29	1321	1346	1327	S17	W35	.639	9486	26.9	25	-F	C		.31	.35		10
GRPI6263	29	1331	1353	1335	S15	W52	.813	9474	25.7	22	-F			.96			3 3 3 10
CAPE	29	1325	1350	1334	S14	W53	.820	9474	25.6	25	-F	1 C	1334	1.66	2.90		
HUAN	29	1334	1403		S14	W51	.801	9474	25.7	29	-F	1 C	1337	.70	.94		E
MCMA	29	1334	1345	1335	S16	W51	.806	9474	25.7	11	-F	C	1335	.52	.90		E
264 CATA	29	1400	1420	1410	N26	W23	.532	9476	27.9	20	-N		1410	.29	.35	166	7
265 HUAN	29	1522	1541		N28	W24	.562	9476	27.8	19	-F	2 C	1528	.37	.39		E
267 HUAN	29	1610	1624		S13	W56	.845	9474	25.5	14	-F	1 C	1614	.37	.53		5
GRPI6268	29	1618	1635	1621	N30	W18	.534	9476	28.3	17	-F			.28			2 2 2 5
HOUT	29	1617	1635	1621	N29	W18	.522	9476	28.3	18	-F	C		.30	.40		
HUAN	29	1619	1633		N30	W18	.534	9476	28.3	140	-N	1 C	1625	.25	.26		D
269 SACPI	29	1849	1907	1855	S16	W54	.834	9474	25.7	18	-N	C		.31	.43		5
270 HUAN	29	1850	1905		N30	W22	.565	9476	28.1	15	-F	2 C	1853	.45	.48		E
272 HUAN	29	2044	2109	2047	S13	W57	.854	9474	25.6	25	-N	2 C	2047	.50	.72		E
GRPI6273	29	2213	2229	2218	S15	W57	.858	9474	25.7	16	-N			.56			2 2 2 5
SACPI	29	2211	2239	2218	S16	W56	.851	9474	25.7	28	-N	C		.81	1.19		
HOUT	29	2215	2219	2218	S14	W57	.856	9474	25.7	4	-N	C		.30	.50		
274 HALE	29	2245	2253	2246	S18	W53	.830	9474	26.0	8	-F	1 C	2246	.62	1.10		5
275 HOUT	29	2300	2306	2302	S11	W67	.927	9474	24.9	60	-N	C		.30	.70		5
GRPI6277	30	0051	0111	0055	N31	W25	.599	9476	28.2	20	-N			.72			2 2 2 7
CRON	30	0050	0115	0057	N31	W24	.591	9476	28.2	25	-N	C		.60	.70		
MITK	30	0052	0106	0053	N30	W25	.589	9476	28.2	14	-N	C	0053	.83	1.00		E
278 HALE	30	0152	0202	0155	S20	E89	1.000	9493	6.8	10	-N	1 C	0155	.31			G

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Jun 68

SOLAR FLARES Small or Unconfirmed JUNE 1968

OBSERV- ATORY	OBSERVED UT				LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE 1968 JUNE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H α	MAX. INT. %	
279 HALE	30	0156	0208	0157	S15	W60	.883	9474	25.6	12	-N	1 C	0157	.31	.70			GJK 6
280 HALE	30	0221	0242	0225	N23	W30	.580	9476	27.8	21	-N	1 C	0225	.41	.50			FJ 5
281 HALE	30	0320	0335	0323	S14	W63	.904	9474	25.4	15	-B	1 C	0323	.21	.50			G 5
282 CATA	30	0510E	0520	0510	N29	W30	.626	9476	28.0	10D	-N		0510	.46	.60		162	5
283 CAPE	30	0806	0812	0807	S17	W48	.780	9486	26.7	6	-F	C	0807	1.24	2.00			FV 9
GRP16284	30	0834	0849	0836	N29	W29	.617	9476	28.2	15	-F			.62				2 2 2 8
MEUD	30	0833	0838	0834	N30	W30	.634	9476	28.1	5	-F		0834	.41	.50			
MONT	30	0835	0900	0837	N28	W28	.598	9476	28.3	25	-N		0837	.83				
GRP16286	30	0903	0913	0905	S15	W46	.753	9486	26.9	10	-N			1.09				2 2 2 10
CAPP	30	0902	0911		S15	W46	.753	9486	26.9	9	1N	P	0905	1.76	2.74			
MONT	30	0904	0915	0905	S15	W46	.753	9486	26.9	11	-N		0905	.41				
287 MONT	30	0955	1015		N28	W29	.608	9476	28.2	20	-N		0958	.83				9
288 MONT	30	1104	1130D	1110	N28	W29	.608	9476	28.3	26D	-N		1110	1.03				6
289 HUAN	30	1153	1202		S14	W48	.771	9486	26.9	9	-F	1 C	1154	.21	.26			D 8
GRP16290	30	1423	1429	1424	N31	W29	.634	9476	28.4	6	-F			.52				4 4 4 12
HUAN	30	1422	1427	1423	N31	W29	.634	9476	28.4	5	-F	2 C	1423	.25	.28			
MEUD	30	1422	1427	1423	N31	W31	.652	9476	28.3	5	-F		1423	.31	.40			
MCMA	30	1423	1431	1425	N32	W29	.643	9476	28.4	8	-F	C	1425	.52	.70			
CAPS	30	1423	1430D		N30	W26	.598	9476	28.6	7D	-F	3	1426	1.00	1.20		145	
292 HOUT	30	1509	1515	1511	S10	W76	.973	9474	24.9	6	-F	C		.50	1.50			10
GRP16293	30	1654	1717	1657	N28	W36	.677	9476	28.0	23	-F			.28				2 2 2 7
MCMA	30	1653	1725D	1657	N28	W36	.677	9476	28.0	32D	-F	C	1657	.31	.40			
HUAN	30	1655	1708	1657	N28	W36	.677	9476	28.0	13	-F	2 C	1657	.25	.28			
GRP16296	30	2010	2019	2012	S13	W77	.978	9474	25.1	9	-B			.26				2 2 2 4
MCMA	30	2010	2020	2012	S12	W78	.981	9474	25.0	10	-B	C	2012	.26	1.50			
HUAN	30	2010	2017	2012	S13	W76	.974	9474	25.1	7	-N	1 C	2012	.25				
297 HALE	30	2013	2022	2014	S25	W48	.811	9486	27.2	9	-N	1 C	2014	.31	.50			G 4
298 HALE	30	2023	2037	2026	S15	W72	.958	9474	25.4	14	-F	1 C	2026	.52				FG 5
300 HALE	30	2301	2314	2304	N29	W35	.674	9476	28.3	13	-N	1 C	2304	.41	.60			W 2
301 HALE	30	2312	2319	2314	S18	W50	.803	9486	27.2	7	-F	1 C	2314	.62	1.00			GJ 1

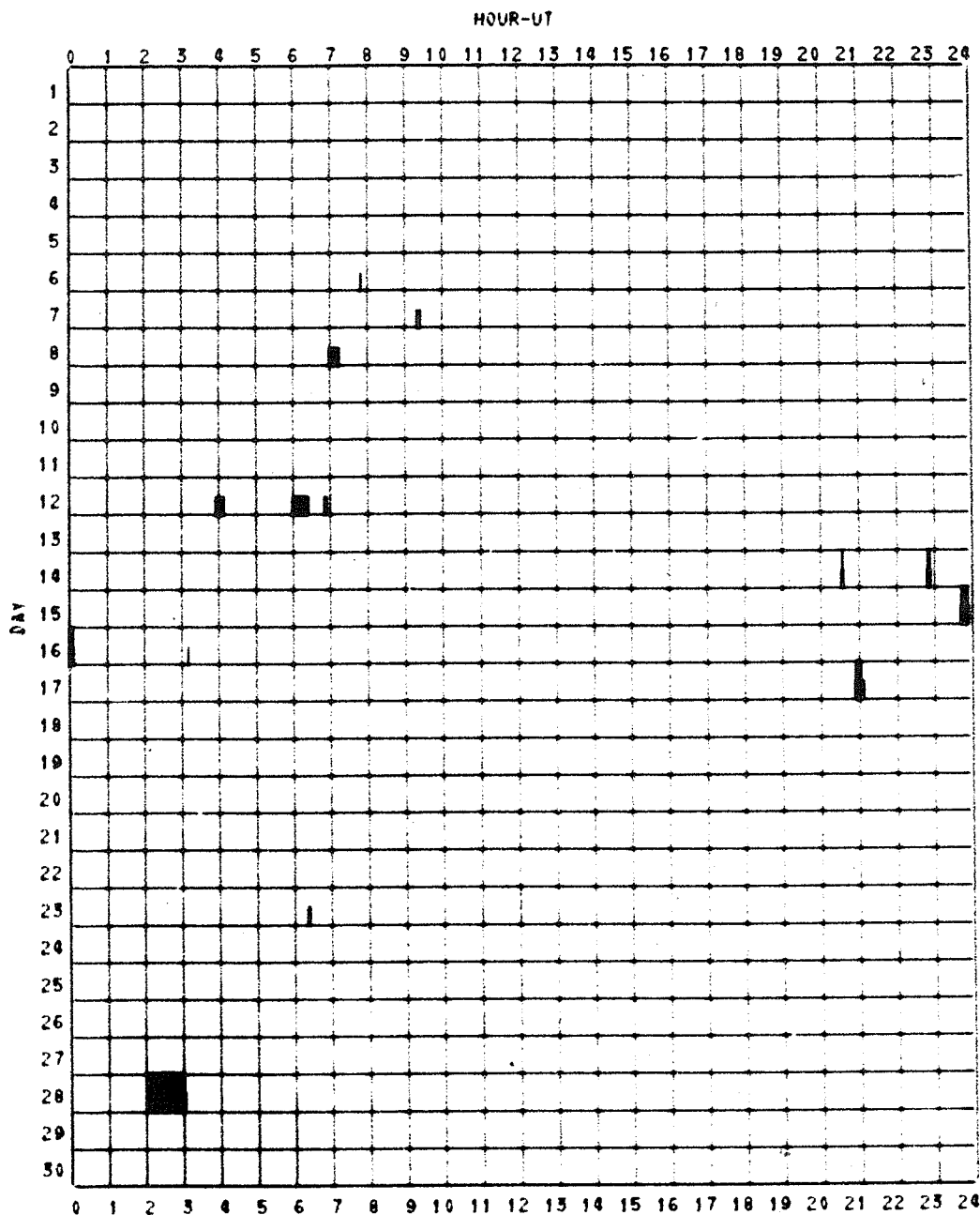
"Remarks":

A = Eruptive prominence, base at $>90^\circ$.
 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 H α line.
 S = Brightening follows disappearance of filament (same position).
 T = Region active all day.
 U = Close and somewhat parallel bright filaments (|| or Y shape).
 V = Occurrence of an explosive phase.
 W = Great increase in area after time of maximum intensity.
 X = Unusually wide H α 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 1968



Observatories included in total patrol:

Abastumani	Capri-F (German)	Herstmonceux	Locarno	Sacramento Peak
Arcetri	Capri-S (Swedish)	Houston	Manila	San Miguel
Arosa	Carnarvon	Huancayo	McMath	Siberie
Boulder	Catania	Istanbul	Meudon	Tachkent
Bucharest	Culgoora	Kiev	Mitaka	Voroshilov
Canary Islands	Haleakala	Kharkov	Monte Mario	Wendelstein
Capetown	Haute-Provence	Kodaikanal	Ondrejov	Zürich

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

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Jun 68

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

ADDITIONS AND AMENDMENTS
 JUNE 1968

JUN 1968	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE
	START	END	MAX			ABS SCNA	SEA	SPA	SES	SFD		
[05 05	0907 0907	0918 0945	0911 0912	1 1	SL 1			32			PU SL (R16-32)	0903
[07 07 07 07	0458 0500 1510 1604	 1548 1700	0503 0505 1520 1625	 1 1				-93 32 54	30		YP-H0/ -93 YP-H0/ 30 SL (R16-32) SL (R16-54)	0455 1510 1604
09 09	0748 0803	0830 0814	0822 0809	1 1	S 1+		1-				AT AT	0744 0801E
11	0955	1200	1000	1				175			DE (AA17-175)	0953
[12 12 12	0052 0048 0047	0232	0110 0109 0107	1				10 172			HN (M23-10) YP-H0/ 172 YP-H0/ 20	NF
[13 13 13 13	0323 0320 0322 0400	0358	0330 0325 0328 0406	1				16 72	20		MA (K18-16) YP-H0/ 72 YP-H0/ 20 YP-H0/ -28	NF 0401
[16 16 16 16	0513 0512 0514 1945	0535	0517 0524 0521 1947	1 1	S 1			-57	20		MA YP-H0/ -57 YP-H0/ 20 BO (WWI11-0.2)	0505E NF
19 19 19 19 19	0932 1004 1029 1433 2154	0950	0936 1010 1034 1437 2156	1 1 1 1 1				40 32 50			SL (R16-40) SL (R16-32) SL (R16-50) A21 BO (WWI9-0.2)	0932 1000 1020 1436 2154
20 20	0708 1215	0735 1315	0714 1226	1 1				50 40			SL (R16-50) SL (R16-40)	0706 1215
[24 24	0045 0048		0058 0048					115	20		YP-H0/ 115 YP-H0/ 20	0045
29	1614	1700	1623	1				29			SL (R16-29)	1610

Observing Times for June 1968 of stations reporting in time for publication in IER-FB-287 were given on page 24 of that issue.
 The following stations were also observing during the month of June 1968: Debra Zeith, Okinawa and Slough.

SOLAR X-RAY FLARES (2-12A°)
SATELLITES EXPLORER 33 and 35

June 1968

University of Iowa

Date 1968	Onset UT	Maximum UT	Peak- Ratio to Quiet Sun	Remarks
1 June	1627	1631	4	Rapid rise, rapid decline
3 June	0256	0300	6	
	2331	2341	6	Complex structure
4 June	> 0847	0904	7	Onset not observed
	1015	1027	10	
	2306	2329	4-	Complex structure
5 June	1223	1228	4	
	2048	2055	6	
7 June	0254	0336	6	Slow rise, complex structure
	--	1306	4	Slow rise, slow decline, onset not observed
8 June	1727	1823	4-	Slow rise, slow decline
	2033	2039	4	
9 June	0025	0042	10	
	0834	0901	18	
10 June	2206	2212	4	Complex structure
11 June	0306	0319	6	
	0932	0938	15	
13 June	1033	1039	4	
14 June	2325	2655	4-	Very slow rise and decline
15 June	2148	2201	7	
17 June	0247	0309	5	Complex structure
18 June	2022	2040	5	
19 June	1726	1756	6	(Uncertain)
	2040	2052	4	
	2224	2230	8	
	2336	2348	4-	
20 June	0225	0229	4	
	0904	0924	4	
	1703	1708	4	
27 June	0725	0729	5	
30 June	1832	1907	5	Complex structure

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)

JUNE 1968

PROTON ENERGY GREATER THAN 60 MEV. HOURLY AVERAGES. IMP. F. SOLAR PROTON MONITOR. JHU/APL AND GSFC

YEAR-1968

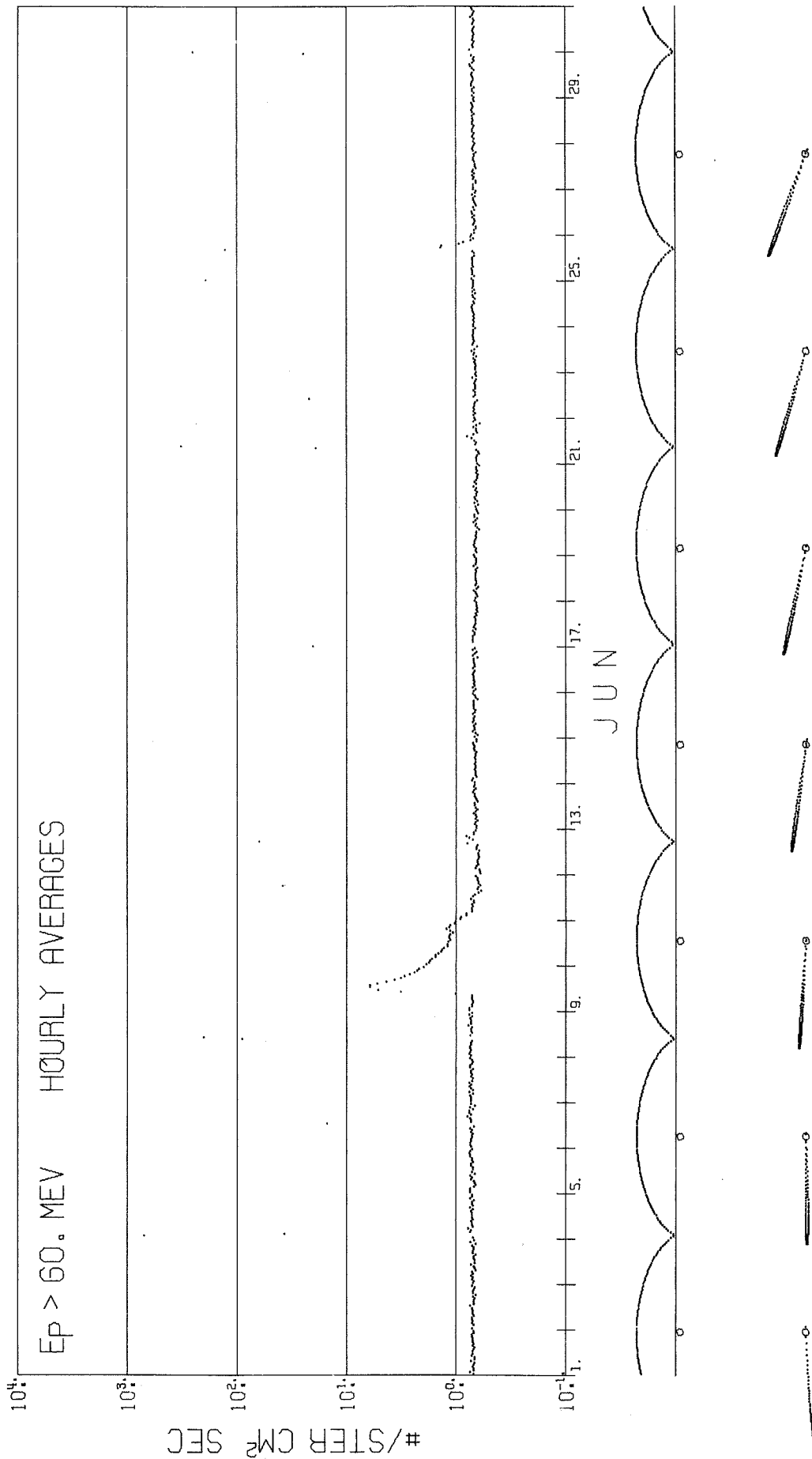
DATE DAY
OF

HOUR

YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
6 1	153	0.62	0.75	0.65	0.69	0.70	0.69	0.67	0.72	0.68	0.68	0.71	0.70	0.71	0.68	0.70	0.68	0.70	0.70	0.70	0.71	0.72	0.69	0.60
6 2	154	0.72	0.59	0.71	0.71	0.71	0.72	0.69	0.70	0.71	0.70	0.71	0.74	0.68	0.69	0.69	0.68	0.71	0.67	0.70	0.70	0.69	0.67	0.72
6 3	155	0.76	0.68	0.72	0.70	0.73	0.70	0.71	0.66	0.68	0.68	0.72	0.68	0.68	0.69	0.69	0.67	0.70	0.70	0.69	0.72	0.66	0.74	0.68
6 4	156	0.71	704	37.5	0.74	0.73	0.77	0.70	0.71	0.71	0.72	0.70	0.72	0.72	0.73	0.71	0.74	0.70	0.71	0.72	0.69	0.74	0.71	0.71
6 5	157	0.74	0.75	0.74	0.68	0.67	0.68	0.65	0.73	0.72	0.74	0.68	0.71	0.71	0.73	0.73	0.70	0.72	0.71	0.74	0.75	0.76	0.74	0.72
6 6	158	0.72	0.74	0.74	0.73	0.74	0.72	0.72	0.71	0.73	0.72	0.75	0.69	15.2	0.73	0.72	0.75	0.79	0.73	0.75	0.76	0.74	0.67	0.73
6 7	159	0.73	0.73	0.73	0.75	0.70	0.75	0.70	0.73	0.75	0.73	0.76	0.71	0.70	0.73	0.71	0.73	0.73	0.70	0.74	0.74	0.72	0.70	0.71
6 8	160	0.73	0.75	0.74	0.73	0.74	0.74	0.73	0.73	0.71	90.2	202	0.74	0.72	0.74	0.73	0.71	0.77	0.72	0.72	0.74	0.71	0.75	0.71
6 9	161	0.76	0.75	0.72	0.71	0.70	0.70	0.71	0.72	0.71	1.02	3.12	5.12	6.13	5.27	4.34	3.64	3.20	2.94	2.62	2.38	2.26	2.18	1.97
6 10	162	1.87	1.78	1.74	1.67	1.55	1.53	1.44	1.38	1.34	1.28	1.21	1.19	1.18	1.14	1.15	1.15	1.14	1.08	1.14	1.23	1.16	1.14	1.04
6 11	163	0.52	0.90	0.81	0.80	0.72	0.72	0.72	0.70	0.71	0.69	0.65	0.72	0.70	0.67	0.62	0.52	0.64	0.62	0.60	0.63	0.62	0.63	0.64
6 12	164	0.60	0.60	0.62	0.67	0.65	0.63	0.64	0.64	0.62	0.62	0.62	0.63	0.62	0.65	0.64	0.64	0.79	62.0	0.71	0.76	0.80	0.65	0.69
6 13	165	0.65	0.64	0.67	0.66	0.64	0.66	0.65	0.67	0.69	0.66	0.64	0.67	0.67	0.67	0.64	0.65	0.66	0.67	0.68	0.70	0.69	0.67	0.68
6 14	166	0.65	0.72	0.70	0.55	0.66	0.66	0.66	0.67	0.65	0.67	0.67	0.67	0.66	0.68	0.66	0.67	0.65	0.67	0.69	0.67	0.68	0.70	0.66
6 15	167	0.68	0.64	0.66	0.70	0.67	0.68	0.65	0.67	0.70	0.69	0.68	0.67	0.70	0.68	0.66	0.69	0.68	0.69	0.69	0.69	0.69	0.69	0.69
6 16	168	0.65	0.66	0.70	0.69	0.65	0.67	0.65	0.69	0.68	0.69	0.68	0.68	0.70	0.68	0.68	0.69	0.64	0.64	0.70	0.69	0.65	0.70	0.68
6 17	169	20.1	0.70	0.67	0.70	0.70	0.67	0.67	0.68	0.70	0.66	0.68	0.68	0.67	0.67	0.67	0.68	0.64	0.66	0.64	0.65	0.64	0.64	0.65
6 18	170	0.67	0.67	0.64	0.64	0.66	0.69	0.66	0.63	0.65	0.55	0.65	0.66	0.66	0.66	0.65	0.67	0.63	0.69	0.67	0.65	0.65	0.65	0.67
6 19	171	0.65	0.65	0.66	0.65	0.67	0.69	0.67	0.67	0.67	0.66	0.65	0.65	0.65	0.62	0.63	0.66	0.65	0.68	0.66	0.64	0.67	0.67	0.64
6 20	172	0.64	0.66	0.62	0.68	0.63	0.66	0.67	0.65	0.65	0.63	0.66	0.65	0.69	0.66	0.67	0.65	0.63	0.64	0.62	0.65	0.64	0.65	0.65
6 21	173	0.63	0.65	0.65	0.65	0.63	0.61	0.63	0.65	12.2	21.7	0.67	0.65	0.68	0.71	0.78	0.68	0.64	0.65	0.65	0.65	0.60	0.69	0.67
6 22	174	0.67	0.65	0.66	0.68	0.68	0.69	0.67	0.67	0.65	0.64	21.7	0.69	0.66	0.66	0.68	0.65	0.67	0.67	0.66	0.65	0.70	0.64	0.66
6 23	175	0.65	0.66	0.66	0.65	0.66	0.68	0.66	0.60	0.65	0.68	0.67	0.71	0.68	0.64	0.70	0.69	0.67	0.68	0.68	0.70	0.69	0.69	0.67
6 24	176	0.65	0.68	0.68	0.68	0.68	0.65	0.68	0.63	0.70	0.70	0.71	0.70	0.68	0.69	0.67	0.69	0.70	0.67	0.71	0.68	0.71	0.69	0.69
6 25	177	0.69	0.72	0.67	0.71	0.70	0.70	0.71	0.69	0.70	0.70	0.70	0.70	0.68	0.68	0.68	0.71	12.7	1.34	0.03	0.03	0.73	0.68	0.73
6 26	178	0.71	0.68	0.68	0.65	0.65	0.68	0.68	0.66	0.68	0.70	0.68	0.70	0.71	0.68	0.69	0.65	0.66	0.68	0.69	0.67	0.70	0.67	0.64
6 27	179	0.68	0.65	0.65	0.65	0.64	0.65	0.68	0.70	0.67	0.71	0.65	0.65	0.66	0.66	0.68	0.68	0.67	0.68	0.65	0.69	0.71	0.69	0.68
6 28	180	0.66	0.68	0.68	0.70	0.65	0.67	0.70	0.71	0.69	0.68	0.70	0.70	0.69	0.70	0.70	0.68	0.70	0.71	0.70	0.69	0.70	0.72	0.68
6 29	181	0.67	0.71	0.67	0.70	0.70	0.68	0.72	0.72	0.71	0.68	0.68	0.71	0.72	0.70	0.67	0.70	0.72	0.74	0.70	0.67	0.69	0.72	0.72
6 30	182	25.1	0.75	0.68	0.71	0.65	0.67	0.70	0.69	0.68	0.68	0.69	0.70	0.69	0.68	0.70	0.68	0.67	0.59	0.73	0.70	0.69	0.68	0.70

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)

JUNE 1968



IMP F SPME

JHU/APL - NASA/GSFC

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)*

JUNE 1968

PRECIPITATION ENERGY GREATER THAN 30 MEV. HOURLY AVERAGES. IMP F SOLAR PROTON MONITOR. JHU/APL AND GSEC

YEAR 1968

DATE DAY

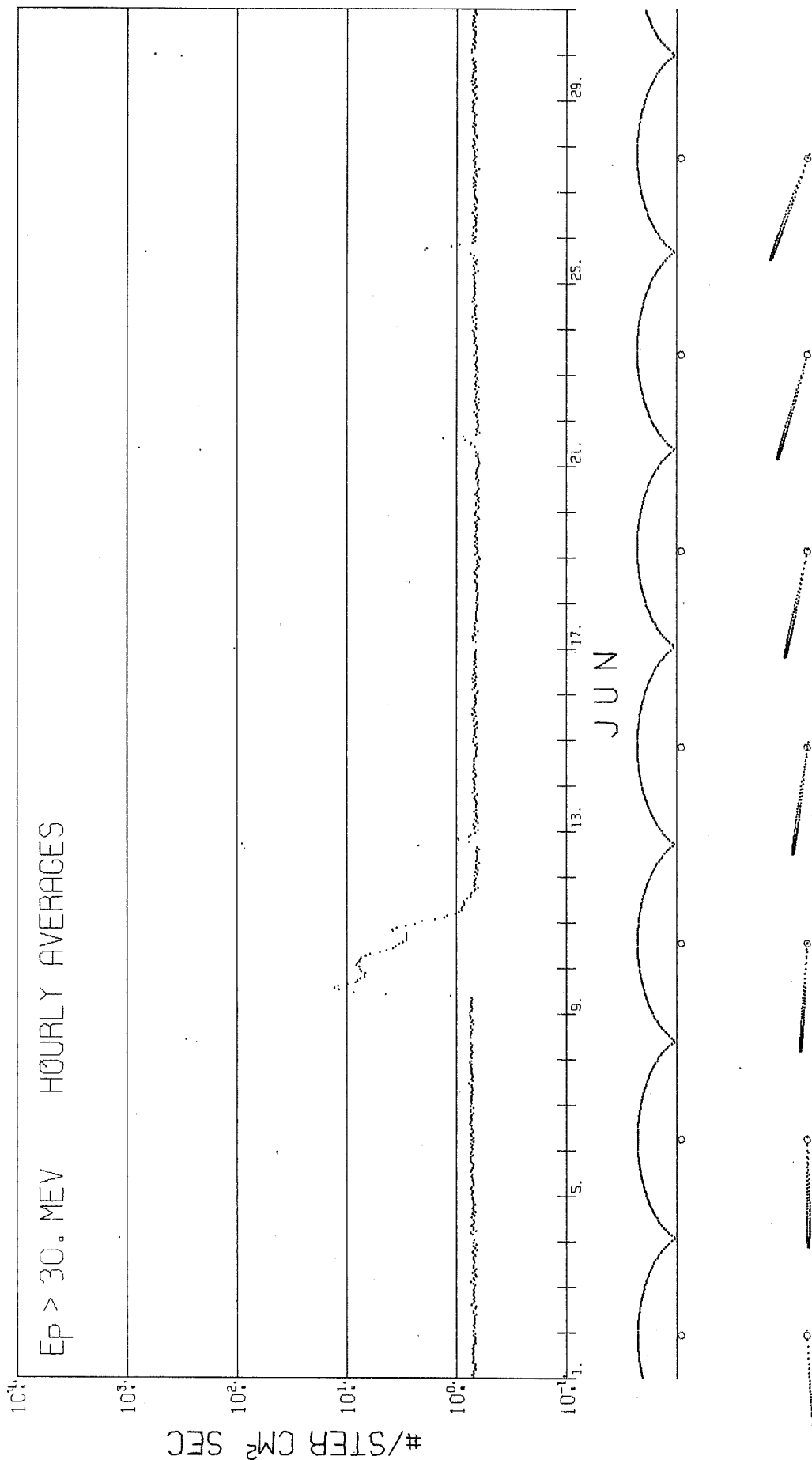
OF

HOURLY

YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
6 1	153	0.65	0.73	0.70	0.70	0.68	0.68	0.68	0.72	0.70	0.70	0.70	0.71	0.70	0.70	0.71	0.70	0.70	0.68	0.69	0.68	0.68	0.70	0.69
6 2	154	0.70	0.69	0.70	0.69	0.69	0.69	0.69	0.68	0.67	0.70	0.70	0.68	0.67	0.73	0.70	0.69	0.71	0.69	0.70	0.70	0.69	0.70	0.69
6 3	155	0.66	0.70	0.75	0.69	0.71	0.67	0.68	0.71	0.68	0.66	0.70	0.69	0.68	0.70	0.70	0.68	0.70	0.71	0.65	0.68	0.70	0.67	0.70
6 4	156	0.69	1.187	0.44	0.67	0.74	0.67	0.70	0.72	0.70	0.69	0.70	0.73	0.69	0.71	0.67	0.70	0.71	0.71	0.67	0.71	0.71	0.71	0.71
6 5	157	0.73	0.72	0.71	0.74	0.72	0.69	0.70	0.71	0.71	0.73	0.72	0.74	0.73	0.71	0.70	0.70	0.73	0.74	0.74	0.74	0.71	0.74	0.72
6 6	158	0.72	0.72	0.73	0.74	0.71	0.73	0.70	0.73	0.74	0.72	0.71	0.73	0.73	0.76	0.74	0.73	0.73	0.75	0.72	0.71	0.75	0.75	0.74
6 7	159	0.72	0.72	0.73	0.73	0.72	0.71	0.73	0.72	0.73	0.72	0.72	0.72	0.73	0.72	0.72	0.73	0.73	0.73	0.72	0.74	0.73	0.75	0.73
6 8	160	0.73	0.74	0.73	0.71	0.72	0.74	0.73	0.71	0.74	2.35	2.88	0.74	0.75	0.73	0.73	0.72	0.74	0.74	0.70	0.72	0.72	0.74	0.75
6 9	161	0.76	0.73	0.71	0.73	0.74	0.73	0.72	0.73	1.13	4.44	8.70	11.7	13.1	12.0	9.92	8.40	7.96	7.54	6.92	5.91	6.75	7.50	7.52
6 10	162	0.70	8.18	8.08	7.77	7.64	7.44	6.69	6.10	4.92	4.32	3.81	3.58	3.35	3.09	2.85	2.84	2.87	2.86	2.86	3.81	3.88	3.50	2.91
6 11	163	2.04	1.58	1.30	1.22	1.03	0.96	0.90	0.90	0.87	0.84	0.85	0.87	0.80	0.75	0.74	0.73	0.69	0.67	0.64	0.69	0.67	0.59	0.67
6 12	164	0.68	0.66	0.67	0.64	0.67	0.66	0.66	0.62	0.67	0.65	0.65	0.65	0.66	0.66	0.67	0.65	0.68	0.69	0.67	0.68	0.67	0.75	0.68
6 13	165	0.64	0.63	0.67	0.70	0.64	0.66	0.68	0.65	0.56	0.55	0.69	0.66	0.66	0.67	0.65	0.66	0.68	0.69	0.65	0.72	0.58	0.67	0.69
6 14	166	0.68	0.65	0.69	0.70	0.68	0.67	0.68	0.71	0.58	0.69	0.70	0.68	0.69	0.69	0.68	0.67	0.67	0.67	0.66	0.65	0.63	0.68	0.70
6 15	167	0.70	0.66	0.69	0.67	0.67	0.67	0.66	0.69	0.65	0.70	0.69	0.69	0.66	0.71	0.67	0.68	0.71	0.69	0.68	0.66	0.67	0.67	0.67
6 16	168	0.65	0.63	0.71	0.69	0.67	0.66	0.70	0.67	0.71	0.66	0.70	0.67	0.68	0.69	0.66	0.69	0.69	0.67	0.67	0.67	0.68	0.67	0.67
6 17	169	1.04	0.74	0.66	0.70	0.70	0.71	0.68	0.69	0.63	0.67	0.67	0.67	0.68	0.67	0.64	0.65	0.66	0.66	0.66	0.65	0.65	0.65	0.64
6 18	170	0.66	0.66	0.66	0.64	0.64	0.64	0.66	0.65	0.65	0.65	0.67	0.68	0.65	0.65	0.67	0.69	0.67	0.69	0.67	0.65	0.63	0.66	0.61
6 19	171	0.62	0.68	0.65	0.64	0.65	0.66	0.68	0.65	0.53	0.55	0.65	0.67	0.66	0.66	0.65	0.65	0.67	0.65	0.68	0.64	0.63	0.64	0.68
6 20	172	0.66	0.64	0.63	0.66	0.66	0.63	0.63	0.64	0.68	0.64	0.63	0.63	0.64	0.64	0.64	0.64	0.63	0.65	0.65	0.64	0.66	0.65	0.63
6 21	173	0.63	0.61	0.62	0.62	0.62	0.64	0.67	2.15	7.68	0.67	0.75	0.72	0.83	1.32	0.87	0.66	0.62	0.65	0.66	0.64	0.63	0.65	0.65
6 22	174	0.64	0.65	0.66	0.65	0.68	0.63	0.65	0.65	0.66	0.62	0.67	0.63	0.66	0.66	0.65	0.64	0.67	0.63	0.66	0.67	0.66	0.63	0.65
6 23	175	0.66	0.63	0.66	0.65	0.66	0.67	0.67	0.66	0.65	0.65	0.69	0.66	0.67	0.65	0.65	0.66	0.69	0.67	0.66	0.69	0.69	0.69	0.72
6 24	176	0.66	0.67	0.66	0.71	0.70	0.67	0.72	0.67	0.68	0.69	0.68	0.69	0.67	0.69	0.72	0.69	0.70	0.69	0.68	0.69	0.68	0.69	0.69
6 25	177	0.67	0.68	0.69	0.69	0.70	0.67	0.64	0.63	0.68	0.70	0.67	0.67	0.65	0.70	0.69	0.74	6.77	1.93	1.83	1.12	0.93	0.71	0.67
6 26	178	0.68	0.71	0.70	0.66	0.67	0.70	0.69	0.67	0.65	0.68	0.67	0.69	0.65	0.71	0.67	0.66	0.69	0.68	0.65	0.65	0.67	0.68	0.69
6 27	179	0.69	0.67	0.70	0.67	0.70	0.67	0.68	0.70	0.65	0.67	0.69	0.66	0.63	0.68	0.67	0.67	0.70	0.69	0.66	0.68	0.68	0.69	0.71
6 28	180	0.72	0.68	0.69	0.70	0.65	0.66	0.69	0.63	0.63	0.69	0.72	0.68	0.70	0.69	0.68	0.69	0.66	0.69	0.71	0.71	0.70	0.69	0.71
6 29	181	0.70	0.66	0.68	0.69	0.70	0.72	0.69	0.66	0.72	0.69	0.72	0.68	0.71	0.72	0.71	0.68	0.70	0.68	0.69	0.69	0.71	0.71	3.19
6 30	182	557	0.73	0.73	0.69	0.66	0.72	0.68	0.59	0.70	0.69	0.67	0.68	0.68	0.70	0.67	0.71	0.72	0.69	0.71	0.69	0.70	0.66	0.68

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)

JUNE 1968



IMP F SPME

JHU/APL - NASA/GSFC

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)

JUNE 1968

PROTON ENERGY GREATER THAN 10 MEV. HOURLY AVERAGES. IMP F SOLAR PROTON MONITOR. JHU/APL AND GSFC

YEAR 1968

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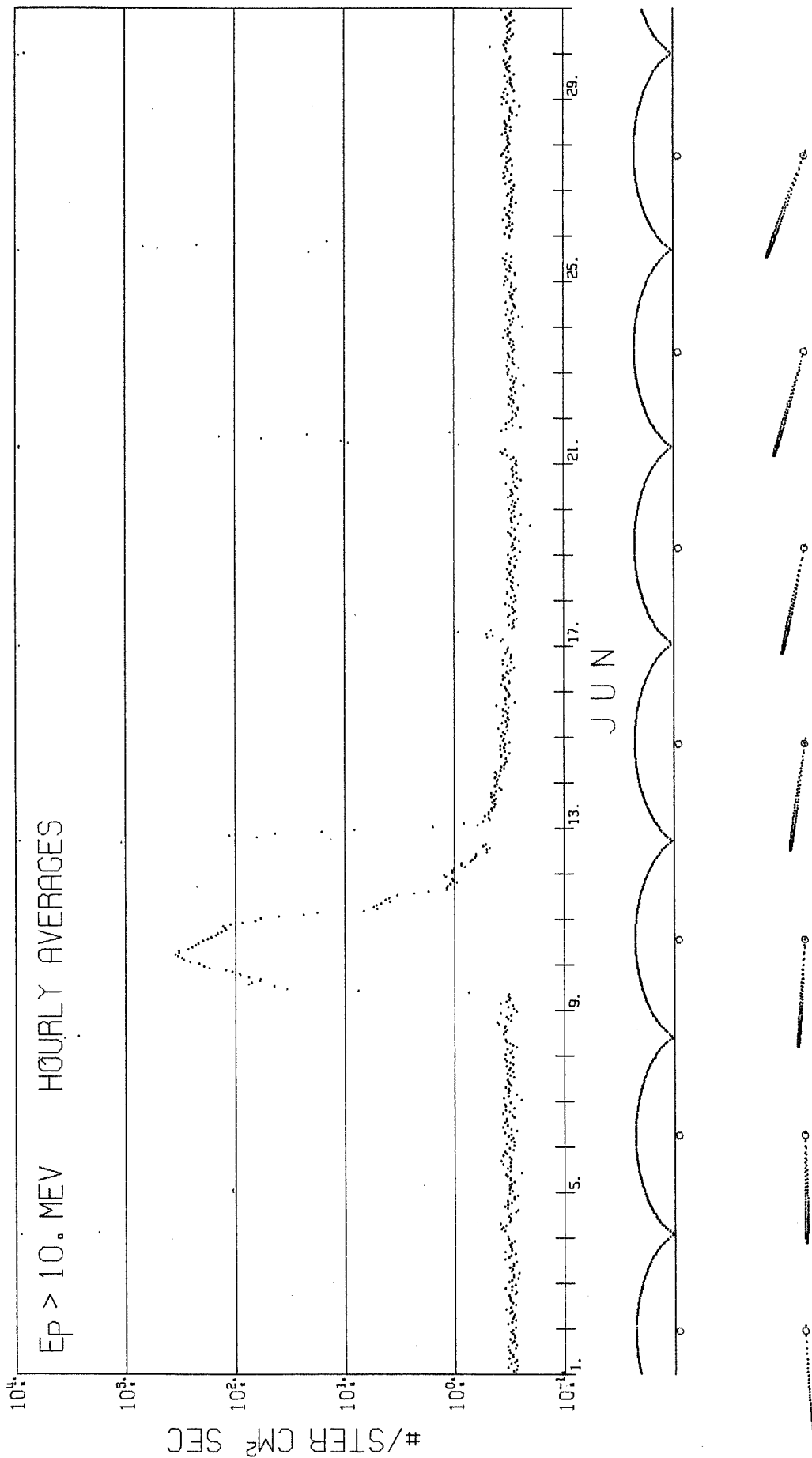
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YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
6	1	153	0.26	0.30	0.28	0.33	0.27	0.31	0.29	0.28	0.32	0.30	0.32	0.33	0.29	0.33	0.28	0.31	0.30	0.32	0.29	0.29	0.30	0.31	0.30	
6	2	154	0.29	0.32	0.31	0.29	0.30	0.29	0.32	0.30	0.32	0.31	0.28	0.30	0.31	0.32	0.32	0.32	0.29	0.29	0.31	0.35	0.31	0.28		
6	3	155	0.33	0.30	0.27	0.30	0.27	0.31	0.30	0.32	0.29	0.29	0.35	0.32	0.31	0.28	0.35	0.31	0.31	0.31	0.32	0.31	0.29	0.32		
6	4	156	0.33	0.33	0.35	0.38	0.36	0.34	0.39	0.32	0.32	0.32	0.33	0.31	0.28	0.27	0.33	0.35	0.33	0.31	0.33	0.29	0.29	0.32		
6	5	157	0.30	0.32	0.31	0.32	0.31	0.29	0.32	0.31	0.33	0.35	0.25	0.31	0.33	0.31	0.37	0.32	0.38	0.31	0.32	0.36	0.34	0.35	0.32	
6	6	158	0.29	0.34	0.29	0.31	0.30	0.33	0.31	0.35	0.27	0.31	0.36	0.33	0.35	0.34	0.34	0.29	0.30	0.37	0.32	0.34	0.34	0.35	0.31	
6	7	159	0.25	0.36	0.32	0.28	0.33	0.32	0.33	0.35	0.40	0.32	0.32	0.33	0.30	0.32	0.33	0.30	0.32	0.31	0.34	0.29	0.34	0.35	0.29	
6	8	160	0.34	0.31	0.30	0.33	0.27	0.29	0.31	0.34	0.35	0.36	0.36	0.34	0.33	0.35	0.35	0.39	0.41	0.31	0.32	0.34	0.31	0.38	0.27	
6	9	161	0.29	0.32	0.28	0.38	0.34	0.32	0.31	0.32	0.32	0.33	0.37	0.43	0.75	1.6	50.6	59.1	75.4	90.2	91.0	107.1	122.1	172.1	192.1	
6	10	162	213.1	258.1	298.1	308.1	324.1	354.1	325.1	271.1	249.1	229.1	198.1	178.1	165.1	152.1	146.1	134.1	123.1	124.1	130.1	112.1	86.6	65.7	43.8	
6	11	163	55.6	40.0	23.7	17.9	6.71	5.04	5.43	5.20	4.71	3.84	4.25	3.97	3.30	2.36	1.72	1.18	1.16	1.08	0.55	1.02	1.05	1.20	1.24	
6	12	164	1.06	1.01	0.81	0.87	0.87	0.72	0.69	0.65	0.63	0.63	0.50	0.48	0.54	0.52	0.42	0.46	0.44	0.46	0.42	0.37	0.39	0.42	0.41	
6	13	165	1.56	0.61	0.82	0.55	0.48	0.49	0.52	0.48	0.49	0.45	0.46	0.44	0.43	0.45	0.44	0.46	0.44	0.46	0.42	0.37	0.35	0.31	0.36	
6	14	166	0.41	0.40	0.42	0.39	0.41	0.42	0.38	0.35	0.33	0.35	0.33	0.34	0.37	0.37	0.37	0.37	0.37	0.35	0.38	0.35	0.31	0.36	0.35	
6	15	167	0.37	0.34	0.36	0.33	0.35	0.33	0.32	0.36	0.34	0.32	0.33	0.36	0.32	0.34	0.36	0.32	0.41	0.34	0.28	0.34	0.32	0.31	0.32	
6	16	168	0.33	0.34	0.34	0.37	0.31	0.32	0.36	0.34	0.36	0.32	0.33	0.31	0.28	0.33	0.35	0.35	0.31	0.30	0.30	0.34	0.32	0.32	0.32	
6	17	169	22400	0.37	0.36	0.49	0.45	0.50	0.46	0.46	0.29	0.28	0.32	0.29	0.28	0.27	0.32	0.31	0.29	0.28	0.29	0.30	0.31	0.34	0.28	
6	18	170	0.28	0.30	0.28	0.32	0.29	0.30	0.30	0.30	0.26	0.29	0.30	0.32	0.29	0.31	0.30	0.33	0.28	0.28	0.30	0.31	0.27	0.30	0.28	
6	19	171	0.32	0.26	0.26	0.28	0.29	0.26	0.26	0.26	0.28	0.30	0.31	0.32	0.28	0.29	0.29	0.26	0.29	0.30	0.30	0.28	0.25	0.30	0.29	
6	20	172	0.31	0.28	0.30	0.28	0.29	0.30	0.30	0.30	0.29	0.30	0.26	0.27	0.33	0.28	0.24	0.26	0.29	0.28	0.27	0.29	0.29	0.29	0.27	
6	21	173	0.27	0.27	0.27	0.29	0.36	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	
6	22	174	0.29	0.27	0.28	0.26	0.26	0.26	0.26	0.31	0.28	0.28	0.30	0.31	0.29	0.27	0.30	0.29	0.23	0.28	0.28	0.30	0.27	0.29	0.32	
6	23	175	0.32	0.31	0.25	0.33	0.28	0.29	0.32	0.29	0.31	0.32	0.32	0.29	0.28	0.31	0.29	0.30	0.35	0.32	0.32	0.31	0.34	0.32		
6	24	176	0.23	0.30	0.29	0.31	0.28	0.25	0.33	0.29	0.29	0.32	0.28	0.28	0.33	0.29	0.30	0.30	0.29	0.31	0.23	0.27	0.30	0.34	0.29	
6	25	177	0.34	0.32	0.33	0.27	0.28	0.30	0.33	0.30	0.31	0.33	0.30	0.33	0.35	0.29	0.33	0.21	0.35	0.01	4.93	66.9	217.1	14.3	0.99	0.30
6	26	178	0.31	0.34	0.30	0.29	0.32	0.31	0.25	0.31	0.25	0.31	0.32	0.29	0.31	0.34	0.29	0.30	0.30	0.36	0.35	0.31	0.34	0.31	0.30	
6	27	179	0.28	0.30	0.28	0.33	0.31	0.30	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	
6	28	180	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	
6	29	181	0.36	0.36	0.32	0.35	0.28	0.33	0.29	0.30	0.32	0.30	0.34	0.34	0.28	0.31	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	
6	30	182	8173	0.33	0.33	0.46	0.34	0.32	0.33	0.31	0.32	0.30	0.32	0.31	0.30	0.32	0.31	0.30	0.28	0.32	0.33	0.30	0.31	0.29	0.37	

SOLAR PROTONS BY SATELLITE
EXPLORER 34 (1967-51A)

JUNE 1968



IMP F SPME

JHU/APL - NASA/GSFC

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SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

SEPTEMBER 1968

SEP. 1968	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE		
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND					
				START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.			
02	0805	1800	WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS				0949.2 1038.1 1053.9 1130.6 1138.5 1204.4 1220.7 1241 1312.9 1329 1516.7 1523.1 1531.3 1659.7	0952.6 1041. 1056.3 1131.1 1141.3 1205.3 1221.3 1255.9 1314.3 1333.3 1517 1524 1533.2 1703.5	1 2 1 2 2 1 1 1 2 2 1 1 2 3				IIIG IIIGG IIIGG IIIG IIIGG IIIDP IIIG IIIGG IIIG IIIGG IIIB IIIG IIIGG IIIGG		
03	0629	1750	WEIS	0629	1700	2									IC,N
04	1120	1750	WEIS WEIS WEIS WEIS WEIS WEIS WEIS				1120 1122.7 1243.5 1451.8 1508.6 1617.1 1720.7	1705 1123.9 1244 1453.3 1516.2 1617.7 1722.3	3 1 1 2 1 1 1				IC,S IIIG IIIG IIIG IIIGG IIIG IIIGG		
05	0615	1740	WEIS WEIS WEIS WEIS	0615	1705	3	1000.2 1016.8 1252.5 1612.6	1001.7 1017. 1254.3 1613.1	1 1 2 2				IC,S IIIG IIIB IIIGG IIIG		
06	0620	1755	WEIS WEIS WEIS	0645 1509.8	1650 1510	3 2	0916.1	0918.1	3				IN IIIGG IIIG		
07	0635	1740	WEIS WEIS	0635	1645	3							IC IIIG		
08	0715	1700	WEIS WEIS WEIS WEIS				1112.1 0738 1107.9 1130	1112.4 0738.4 1108.5 1131.1	1 1 1 1				IIIG IIIDP IIIDP IIIDP		
09	0605	1735	WEIS WEIS WEIS				1051.7 1150.7 1214	1052.2 1156.6 1547	1 2 2				IIIG IIIGG IN		
10	0610	1900	WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS				0857.3 1036.9 1056 1105 1145.6 1231.2 1233.1 1317.1 1428.8	0857.6 1038.3 1056.3 1105.3 1147.9 1231.5 1234.6 1317.2 1429.8	2 2 1 2 1 2 2 2 2				IIIG IIIG IIIB IIIG,RS IIIG IIIB IIIGG IIIB IIIGG		
11	0610	1815	WEIS				1356.1	1356.3	2				IIIG		
12	0610	1725	WEIS	1435.8	1435.9	1							IIIB		
13	0610	1730	WEIS				1230	1315	1				IS		
14	0855	1710	WEIS				1536.2	1537.5	1				IIIG		
15	0730	1750	WEIS WEIS				1009.6 1228.1	1009.9 1228.7	1 2				UNCL IIIB		
16	0655	1755	WEIS												
17	0650	1825	WEIS												
18	0640	1700	WEIS												
19	0645	1721	WEIS WEIS				1127 1543	1127.2 1543.2	1 1				IIIB II		
20	0640	1715	WEIS				0805	1008	1				IN		
21	0840	1735	WEIS WEIS				0855 1115	0930 1625	1 2				I I		
22	0755	1720	WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS WEIS				0839.6 0855.8 1105.4 1403.7 1410.7 1429.3 1446.8 1452.3	0855 0901 1105.8 1403.9 1411.3 1429.6 1450.7 1454.8	1 3 1 1 2 2 1 2				IIIGG IIIGG IIIG IIIGG IIIB IIIG IIIB IIIG,DP IIIG		

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

SEPTEMBER 1968

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SEP. 1968	TIMES OF OBSERVATION		STATION	EVENTS									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.		
22	0755	1720	WEIS				1615.6	1615.8	1				IIIB			
23	0655	1830	WEIS				1155.3	1155.5	2				IIIB			
			WEIS			1215	1215.3	1				IIIG				
			WEIS			1348.7	1355.2	1				IIIGG				
24	0700	1800	WEIS				0839	0839.2	1				IIIB			
			WEIS			1315	1505	1				IN				
25	0615 0800 1000	0705 0910 1700	WEIS													
			WEIS													
			WEIS			1114.4	1117.5	2					IIIGG			
			WEIS			1119.5	1120.2	1					IIIG			
			WEIS			1457.3	1504.2	2					IIIGG,DP			
			WEIS			1506.8	1507.5	1					IIIG			
			WEIS			1509.8	1513.2	2					IIIG			
			WEIS			1559.2	1601.1	1					IIIG			
			WEIS			1621.7	1621.9	1					IIIB			
			WEIS			1642.4	1643	1					IIIG			
26	0610	1700	WEIS				0610	1331	1				IN			
			WEIS			0610	0628	1					IIIG			
			WEIS			0630.3	0631.1	2					IIIG,V			
			WEIS			0639.4	0641.5	1					IIIG			
			WEIS			0658.5	0702.4	2					IIIG			
			WEIS			0806.7	0806.9	1					IIIB			
			WEIS			0841.9	0845	2					IIIG			
			WEIS			0853.7	0901.7	2					IIIGG			
			WEIS			1028.6	1030.7	2					IIIGG			
			WEIS			1209.2	1209.4	3					IIIDP			
			WEIS			1233.4	1234.9	2					IIIG			
			WEIS			1237.7	1252.3	1					II			
			WEIS			1336	1410	1					IIIGG			
			WEIS			1432.3	1432.5	3					IIIB			
			WEIS			1558	1558.2	1					IIIB			
			WEIS			1612.2	1613.8	1					IIIG			
			27	0600	1700	WEIS				0658	1055	2				IS
						WEIS			0715.3	0717	2					V,UNCL
WEIS	0720.4	0722.4				2							IIIGG			
WEIS						0800	0801.5	2					IIIG			
WEIS						0806.5	0809.3	1					IIIG			
WEIS						0818.3	0819.9	2					IIIG,V			
WEIS						0856.6	0902.8	2					IIIG			
WEIS						0922.1	0928.5	2					IIIGG,V			
WEIS	1033.5	1038.4				3							IIIGG,V			
WEIS						1039.5	1040.8	1					IIIG			
WEIS						1043	1044.5	1					IIIGG			
WEIS						1146	1149.8	1					III,V,DP			
WEIS						1210	1357	2					IN			
WEIS						1223	1224.5	1					IIIG			
28	0640	1715	WEIS	0704	0810	2							IS			
			WEIS	0824.5	0825	1							IIIB			
			WEIS			0857.5	0858	1					IIIG			
			WEIS			1058.5	1107	1					IIIG			
			WEIS			1229.5	1230.5	1					IIIDP			
			WEIS			1316	1316.2	1					IIIB			
			WEIS			1318	1318.5	2					IIIB,V			
			WEIS			1444	1445	1					IIIG			
			WEIS			1447.5	1448	1					IIIB			
			29	0715	1715	WEIS				0814	0815	1				IIIG
WEIS						0906.5	0907	1					IIIB			
WEIS	0930.2	0934				3							IIIGG,V			
WEIS	0931.3	0946				2							IV			
WEIS						0942.5	0943.7	1					III			
WEIS						0951	0955	1					II			
30	0605	1715	WEIS				1618.5	1630	3				II			
			WEIS			0627	1135	1					IN			
			WEIS	0650	0744	2							IV			
			WEIS				0758	0759	1				IIIG			
			WEIS				0926.7	0926.9	1				IIIB			

Publication Notice

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