



**U.S. DEPARTMENT OF COMMERCE**

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**ENVIRONMENTAL DATA SERVICE**

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INSTITUTES FOR ENVIRONMENTAL RESEARCH

# **Solar-Geophysical Data**

**for January 1967**

**December 1966**

**August 1966**

**& Miscellanea**

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

**WASHINGTON, D.C.**

**FEBRUARY 1967**

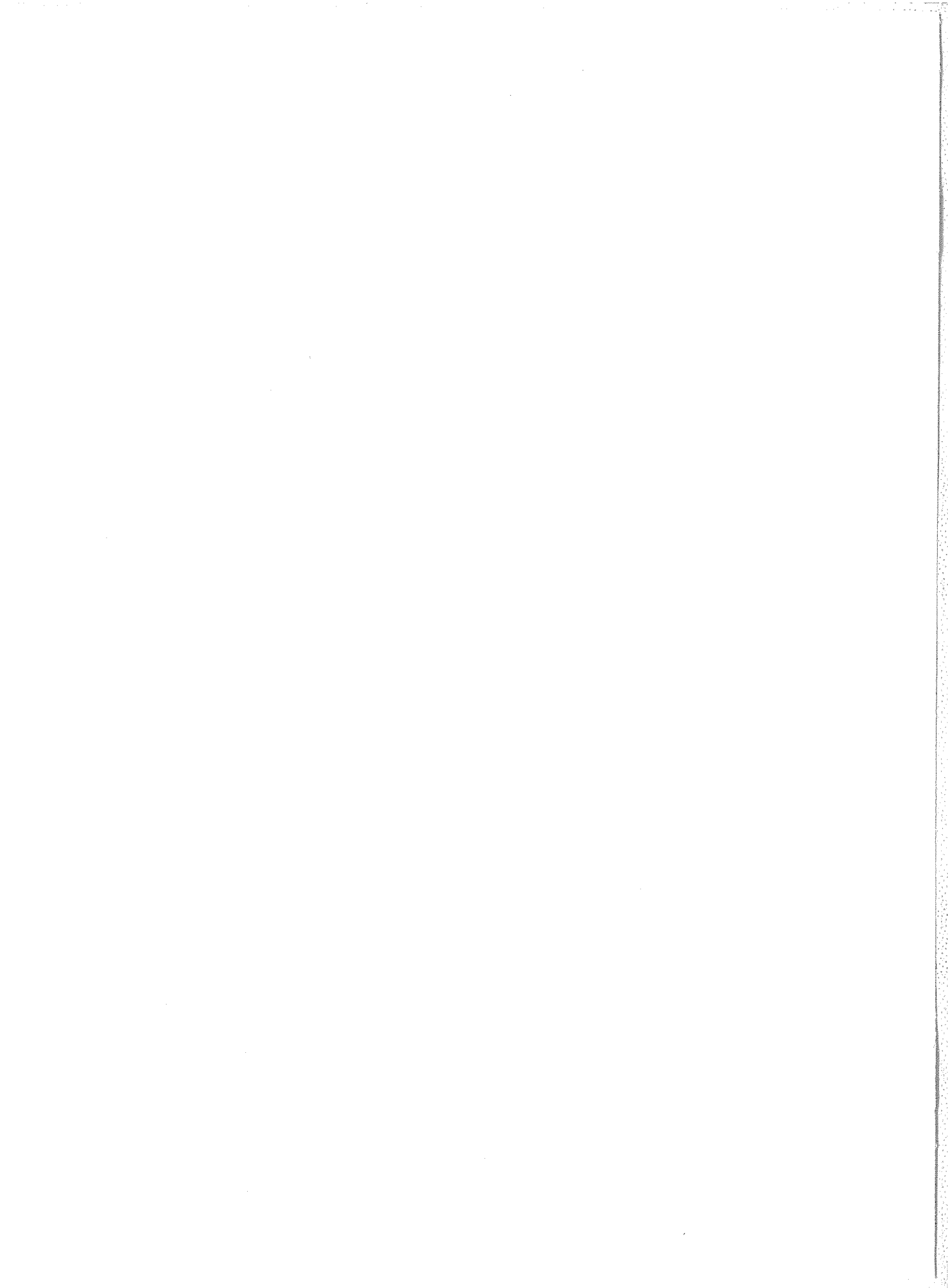
S O L A R - G E O P H Y S I C A L D A T A

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**ALERT PERIODS**  
INTERNATIONAL URSIGRAM  
AND WORLD DAYS SERVICE

JANUARY 1967

Jan. 1967	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
2	2310	Sac Peak, Solar Flare 2B S22E08				
3	0400		450	Solar Flares	Expected	S23W10
4	0400		451	Solar Flares	Expected	S23W23
5	0400		452	Solar Flares	Expected	S23W36
6	0400		453	Solar Flares	Expected	S18W01
7	0400		454	Solar Flares	Alert Ends	
8	0400		455	Magnetic Storm	07/09xxZ	
9	0400		456	Magnetic Storm	Alert Ends	
14	0400		457	Magnetic Storm	13/1202Z	Major
15	0400		458	Magnetic Storm	Alert Ends	
29	0400		459	Magnetic Storm	Expected	
30	0400		460	Solar Flares	Expected	S24W07 N18W66
			461	Magnetic Storm	Expected	
31	0400		462	Solar Flares	Expected	S24W20 N18W79 N28E85
			463	Magnetic Storm	Alert Ends	

# RELATIVE SUNSPOT NUMBERS

ZURICH, R<sub>Z</sub>

1966 (PROVISIONAL)

1967

DAY	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.
1	7	25	64	50	71	49	78	44	57	43	35	60
2	9	11	58	48	74	49	62	44	55	42	33	93
3	20	11	74	57	41	54	65	25	50	33	30	124
4	17	18	74	61	60	53	51	18	36	38	57	148
5	17	12	55	38	43	48	53	26	40	20	69	150
6	17	14	59	23	43	46	50	30	44	32	68	148
7	16	10	70	13	38	58	31	36	53	48	64	134
8	13	9	65	16	35	68	13	38	48	51	88	116
9	10	15	47	8	33	56	7	39	44	56	86	111
10	11	13	37	0	25	58	0	37	65	62	112	111
11	14	10	25	14	43	52	16	42	66	72	125	104
12	8	0	27	14	34	62	36	38	49	80	130	90
13	16	0	24	23	34	56	30	29	72	68	118	86
14	12	0	29	52	31	37	37	35	64	66	113	85
15	16	9	29	46	22	34	41	38	60	62	107	56
16	13	26	35	47	40	48	36	57	70	44	116	56
17	19	44	40	33	46	42	35	76	70	54	74	59
18	24	53	40	27	39	49	35	83	70	51	58	72
19	32	60	24	34	33	38	27	76	66	61	40	82
20	39	54	37	57	42	65	24	78	81	70	37	82
21	41	49	40	80	29	55	22	89	96	72	34	102
22	50	52	56	66	34	66	38	86	81	82	32	134
23	55	40	69	68	59	56	65	71	70	76	38	152
24	42	31	58	68	63	70	71	62	61	72	42	122
25	37	23	56	64	80	67	89	68	50	74	60	133
26	36	18	54	70	78	74	95	54	44	67	65	136
27	35	10	40	66	69	52	90	48	39	59	43	130
28	31	12	40	60	52	61	84	35	28	41	41	125
29		35	48	39	47	76	89	40	25	37	48	122
30		42	52	58	55	63	76	38	24	37	76	132
31		52		56		66	66		35		74	108
MEAN	23.5	24.5	47.5	43.7	46.4	55.7	48.8	49.3	55.3	55.7	68.2	108.5

## DAILY SOLAR FLUX AT 2800 Mc/s OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S<sub>a</sub>

1966

1967

DAY	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.
1	77.6	79.7	106.8*	91.7	104.8	100.1	125.9	116.6	101.4	94.6	92.2	124.4
2	76.9*	76.7	106.3	94.0	103.9	98.2	119.6	106.3	102.0	96.7	95.1	143.0*
3	77.5	75.8	102.1	94.0	102.6	99.3	118.2*	103.2	103.2	93.1		154.0
4	79.0	75.5	102.6	92.5	102.0	104.8	116.0*	101.9	100.6*	91.7	104.8	160.7
5	80.6	74.8	102.0	88.6	101.7	105.0	110.5	100.5	100.0	97.9	110.9*	168.2
6	82.1	75.5	104.2	87.5	101.9	109.7	106.0	97.9	101.9*	104.7	115.6*	160.5
7	82.8	76.2	102.8*	89.9	96.9	112.6	101.5	95.8*	103.1	113.4	117.7	153.6
8	82.3	76.4	107.3*	87.8	99.5	114.4	97.7	96.2*	99.4	116.9	123.7	142.9
9	82.9	78.5	100.3	87.5	98.9	107.8	96.4	95.3	103.5	117.2	146.2	144.7
10	83.8	78.6	94.8	86.6	96.8	108.1*	94.3	93.9	106.5	121.9	157.3*	145.6
11	83.6*	78.0	93.9	88.3	96.1	109.0	92.5	96.6	109.8	126.1	162.8*	139.8
12	83.2	78.3	94.8	92.6	95.9	102.7	92.8	100.8*	114.8	126.2	157.6	139.1
13	83.9	80.0	93.1	92.9	96.1	100.4	93.2	102.4	122.8*	126.4	155.5	138.1
14	83.9	81.4	91.0	97.2	96.9	99.8	92.8	107.4	120.3	124.0	149.5	135.2
15	83.3	87.1*	96.3	99.2	94.7	101.1	93.7	112.0	120.6	122.6	144.9	126.6
16	82.7	92.9*	93.2	100.1	97.9	102.8	95.1	124.6*	120.3*	121.2	135.1	120.2
17	82.1	105.1*	95.2	98.9	99.5	101.2	96.8	129.1	120.5*	113.2	124.9*	116.9
18	82.2	109.6	92.9	98.7	98.2	101.3	97.5	142.6	118.5*	113.4	111.2	117.4
19	81.1	114.6	89.0	107.1*	96.9	101.5	100.0	146.6	115.6*	111.0	112.3	116.4
20	82.8*	111.0	93.5	115.5*	94.3	101.8	101.6	146.0*	124.1	110.9	107.6	127.0
21	85.7	120.3	91.7	123.6	93.5	103.7	102.7	137.2	120.9*	110.7*	106.5	138.2
22	86.0	105.1	93.4	121.0	96.1	106.5	105.5	131.5*	119.8*	116.5	105.5*	139.9
23	82.7*	96.2	98.8	113.9	99.2	114.9	114.7	127.5*	111.1	114.7*	110.6*	148.8*
24	81.9	92.9	103.7	117.7	103.5	120.6	122.0*	126.0	106.1	113.8	110.5	146.8
25	79.3	91.1	103.8*	115.1	104.8*	126.0	126.3*	118.8*	100.8	110.7	111.6	142.7*
26	83.1	84.7	101.3*	112.3	105.6*	127.6	130.2	109.4	97.7	107.3	110.9	154.3
27	83.2	83.1	96.0	108.5	100.8	123.8	133.4	102.9	92.0	111.1*	109.6	158.3
28	84.1	87.6	94.9	**	101.4	124.2	132.6*	97.9	94.1	104.1	107.5	156.2
29		96.1	94.5	106.8	99.8	132.9	129.8	98.6	99.7	98.0	109.3	158.2*
30		99.0	93.3	101.6	100.7	128.0	126.1	95.7	95.7	94.6*	115.1	159.0
31		110.4		105.6		124.6	120.9		97.1		120.5*	156.4
MEAN	82.1	89.4	97.8	100.6	99.4	110.1	109.2	112.4	107.9	110.8	121.4	143.0

\* Adjusted for Burst

\*\* Burst in Progress

# DAILY SOLAR INDICES

JANUARY 1967

Jan. 1967	Year Day	Bartels 27-day Cycle Number	Sunspot Numbers		Observed Flux	Solar Flux Adjusted to 1 A.U.							
			R <sub>Z</sub>	R <sub>A</sub> '		AFCRIL 8800	AFCRIL 4995	Ottawa 2800	AFCRIL 2695	AFCRIL 1415	AFCRIL 606		
1	1	23	60	78	128.7	290	177	124.4	129.1	89.4	56.3		
2	2	24	93	75	147.9*	306	191	143.0*	149.3	97.0	59.6		
3	3	25	124	130	159.3	315	216	154.0	165.7	104.4	60.3		
4	4	26	148	126	166.2	318	212	160.7	168.5	106.7	63.8		
5	5	27	150	145	174.0	320	217	168.2	176.4	110.7	65.7		
6	6	1	148	142	166.0	309	207	160.5	168.7	109.9	65.5		
7	7	2	134	117	158.9	310	200	153.6	162.8	110.6	66.7		
8	8	3	116	90	147.8	305	183	142.9	144.0	106.3	62.5		
9	9	4	111	96	149.6	307	184	144.7	146.1	102.5	62.5		
10	10	5	111	89	150.6	301	184	145.6	152.7	97.8	58.9		
11	11	6	104	88	144.6	298	176	139.8	141.8	93.3	56.3		
12	12	7	90	78	143.9	298	176	139.1	140.3	91.7	57.0		
13	13	8	86	101	142.8	291	168	138.1	139.9	90.1	55.8		
14	14	9	85	72	139.8	289	164	135.2	137.7	86.1	56.2		
15	15	10	56	46	130.9	281	146	126.6	124.5	79.7	51.9		
16	16	11	56	53	124.2	279	149	120.2	124.5	77.3	53.5		
17	17	12	59	54	120.8	276	146	116.9	116.6	76.9	53.1		
18	18	13	72	68	121.3	279	148	117.4	119.6	77.4	51.4		
19	19	14	82	77	120.3	283	154	116.4	128.9	82.1	52.7		
20	20	15	82	102	131.2	284	157	127.0	136.8	84.7	54.3		
21	21	16	102	130	142.8	290	158	138.2	142.1	91.2	55.4		
22	22	17	134	119	144.4	293	161	139.9	145.2	96.6	55.5		
23	23	18	152	150	153.6*	299	166	148.8*	149.6	101.8	56.8		
24	24	19	122	128	151.5	296	166	146.8	144.9	97.6	57.8		
25	25	20	133	115	147.3*	300	168	142.7*	148.2	101.1	58.6		
26	26	21	136	149	159.2	308	171	154.3	149.9	101.4	59.3		
27	27	22	130	104	163.2	318	182	158.3	156.2	101.8	60.6		
28	28	23	125	89	161.0	318	180	156.2	157.5	103.2	60.5		
29	29	24	122	106	163.1*	322	189	158.2*	162.3	103.6	62.1		
30	30	25	132	114	163.9	318	193	159.0	167.2	107.6	63.7		
31	31	26	108	112	161.1	315	182	156.4	158.8	104.9	63.2		
Mean			108.5	101.4	147.7	301	177	143.0	146.8	96.3	58.6		

\* Adjusted for Burst

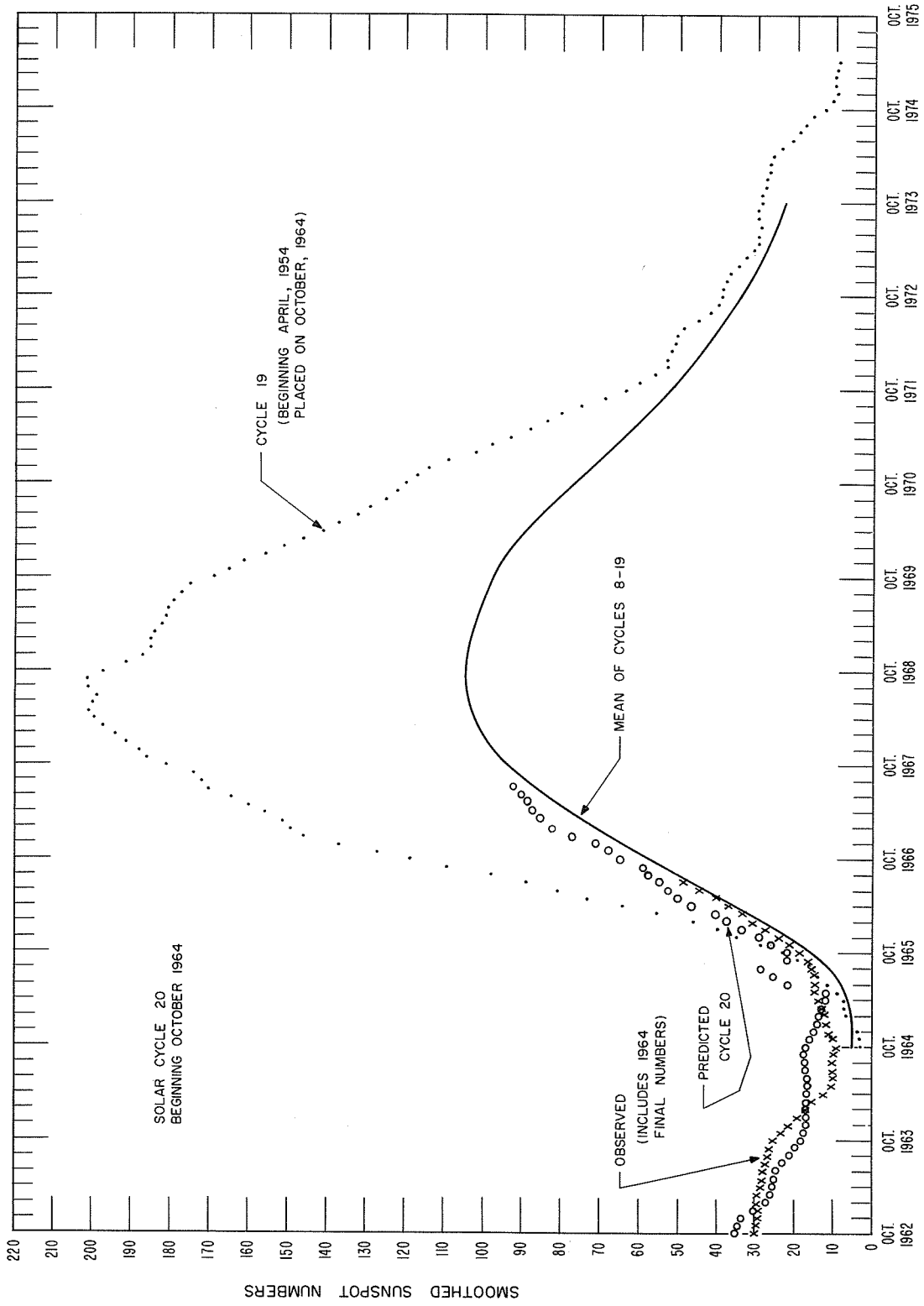


FIG. A PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED SUNSPOT NUMBERS  
ZURICH,  $R_z$ 

	1964	1965	1966
JAN		11.7	27.1
FEB		12.0	30.5
MAR		12.5	33.6
APR		13.6	36.4
MAY		14.6	39.5
JUN		15.0	43.3
JUL		15.4	48.8
AUG		16.2	
SEP		17.1	
OCT	9.6	19.4	
NOV	10.2	21.9	
DEC	11.0	24.0	



# CALCIUM PLAGE AND SUNSPOT REGIONS

JANUARY 1967

Jan. 1967	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
				AREA	INT.					AREA	COUNT	
1.9	N16	8628	8601	(1600)	(2.0)	l A l	2	12/25	15	(10)	(2)	b - d
2.3	S23	8629	New	1800	3.5	b / l	1	≤12/29	≥11	270	56	b / l
4.7	N24	8634	8604	(400)	(2.0)	l A d	3	12/29	11			
5.0	S07	8630	New	(500)	(1.5)	l - d	1	12/29	2			
6.5	N06	8633	8606	(2300)	(3.0)	l A l	5	12/31	13	10	5	l A d
6.7	N20	8631	8607	(8500)	(3.0)	l A l	6	12/29	15	(150)	(13)	l - l
6.9	S23	8632	8609	5800	3.5	l A l	2	12/31	15	500	36	b A l
8.4	N14	8638	New	1000	2.5	? / l	1	≤1/5	≥10	(10)	(2)	b A l
9.4	N32	8637 (1)	New	3000	3.0	l A l	1	1/2	14	20	1	l \ d
9.9	N22	8639	8610	2600	3.5	l A l	2	<1/5	>11	460	2	b / l
10.8	S07	8640	New	(200)	(2.0)	? - d	1	≤1/5	≥1			
10.9	N26	8643	8615	(1900)	(2.0)	l \ l	2	≤1/9	>7			
11.8	N14	8644 (2)	New	700	3.0	b / l	1	1/9	9	10	4	b / d
13.1	N25	8641	8612	2900	2.5	l A l	4.65	1/7	13			
14.2	S15	8642	New	(300)	(1.0)	l - d	1	1/7	2			
14.4	N15	8645	New	500	2.0	b - d	1	1/9	7			
16.0	N26	8646 (3)	8612	1200	1.5	l \ l	4	1/9	13			
16.2	S23	8647	New	2500	3.0	l / l	1	1/11	11	500	5	b A l
17.5	N22	8653	New	(300)	(1.5)	b - d	1	1/18	1			
18.2	N24	8648	New	1000	2.5	l / l	1	1/12	12	50	4	b - l
19.4	N24	8660	New	(600)	(3.0)	b \ d	1	1/21	3			
20.8	N29	8649 (4)	8618	600	2.0	l \ d	4	1/14	12			
21.1	N12	8654	New	1500	3.0	b / l	1	1/18	>8	60	30	b \ d
22.6	N16	8650 (5)	New	(4400)	(3.0)	l A l	1	1/16	13	70	20	l \ l
22.7	N27	8655	New	(600)	(2.5)	b - d	1	1/18	6			
22.9	S17	8651	New	(2400)	(3.0)	l \ l	1	1/16	13	10	3	b - d
23.2	S24	8652	8622	700	2.0	l - l	2	1/16	13			
24.0	N08	8664	New	200	1.5	b - d	1	1/23	3	30	12	b A d
24.8	N30	8658	New	(700)	(1.5)	l \ d	1	1/19	≥7			
25.1	N18	8659 (6)	8625	8900	3.5	l A l	3	1/18	13	40	1	l / l
25.4	N02	8669	New	200	2.5	b A l	1	1/25	6			
25.7	S26	8657 (7)	8624	800	2.0	l \ l	2	1/18	13			
26.1	S18	8661	New	300	2.0	l - ?	1	1/21	>10	10	2	b - d
27.5	S26	8662 (7)	8624	(900)	(1.5)	l - d	2	1/21	>10			
27.5	N19	8663	New	(1100)	(3.0)	l \ d	1	1/21	>10	10	5	l - d
28.5	N15	8666 (8)	8628	600	1.5	l - d	3	<1/23	>6			
29.4	N17	8668 (8)	8628	300	1.5	l \ l	3	1/23	11			
29.7	S24	8667	8629	5200	3.5	l A l	2	1/23	≥12	280	17	l A l
31.7	N21	8670	New	(3600)	(3.5)	l A l	1	1/25	13	30	15	b A l

- (1) Region 8637 is a new plage that has developed near the location of region 8615 of the previous rotation.
- (2) Region 8644 has developed on the disk as a new region, although it is in the same position of region 8616 of the previous rotation.
- (3) Region 8646 is a part of region 8612 of the previous rotation.
- (4) Region 8649 is a part of region 8618 of the previous rotation.
- (5) Region 8650 is primarily a new region, although it has developed over a part of region 8623 of the previous rotation.
- (6) Region 8659 is a return of region 8625, but there has been a resurgence of activity, with the development of additional new plage.
- (7) Regions 8657 and 8662 are parts of region 8624 of the previous rotation.
- (8) Regions 8666 and 8668 are parts of region 8628 of the previous rotation.

No calcium spectroheliograms were secured at the McMath-Hulbert observatory on Jan. 1, 3, 4, 6, 10, 22, 24, 26, 27, 31, 1967.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS  
JANUARY 1967

JAN. 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.		TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	1955	S23	W57	( $\alpha$ p) 3	16198	7	2115	S23	W75	$\beta$	16203
		S22	E02	( $\beta$ p) 4	16203			N18	W32	$\alpha$ p	16204
		N18	E46	( $\alpha$ p) 4	16204			N17	W30	$\beta$ p	16205
		N14	E47	( $\beta$ ) 2	16205			N06	W18	$\alpha$ p	16206
		N05	E60	( $\beta$ p) 2	16206			S19	W23	$\beta$ p	16207
		S20	E62	( $\alpha$ p) 1	16207			N16	W19	$\beta$ p	16208
2	1905	S23	W68	$\alpha$ p	16198	8	2310	N30	E24	$\beta$ p	16209
		S21	W10	$\beta$ p	16203			N16	W70	$\beta$ p	16210
		N19	E35	$\alpha$ p	16204			N22	E23	$\beta$ p	16212
		N15	E35	$\beta$	16205			N12	E02	$\alpha$ p	16213
		N05	E48	$\beta$ p	16206			N22	W10	$\beta$ p	16214
		S19	E47	$\beta$ p	16207			S19	W06	$\alpha$ p	16215
		N17	E51	$\beta$	16208			S25	W88	$\alpha$ f	16203
3	1730	S23	W80	( $\alpha$ p) 2	16198	9	1705	N18	W57	( $\alpha$ p) 4	16204
		S22	W23	( $\beta$ $\gamma$ ) 5	16203			N16	W48	( $\alpha$ p) 1	16205
		N18	E22	( $\alpha$ p) 5	16204			S18	W37	( $\beta$ p) 4	16207
		N15	E21	( $\beta$ f) 2	16205			N17	W37	( $\alpha$ p) 2	16208
		N04	E35	( $\beta$ p) 3	16206			N30	E11	( $\beta$ p) 3	16209
		S21	E33	( $\beta$ p) 3	16207			N22	E09	( $\delta$ ) 4	16212
		N17	E37	( $\beta$ p) 4	16208			N13	W11	( $\beta$ p) 1	16213
		N29	E77	( $\alpha$ p) 3	16209			N22	W25	( $\beta$ f) 1	16214
		N16	W18	( $\beta$ $\gamma$ ) 4	16210			N18	W56	( $\alpha$ p) 5	16204
		4	1915	S23	W36			( $\beta$ $\gamma$ ) 5	16203	10	2045
N18	E07			( $\beta$ p) 5	16204	S18	W46	( $\beta$ p) 4	16207		
N16	E08			( $\beta$ f) 1	16205	N30	W03	( $\alpha$ p) 4	16209		
N04	E20			( $\beta$ $\gamma$ ) 3	16206	N22	W02	( $\beta$ p) 5	16212		
S20	E18			( $\beta$ p) 4	16207	N13	W21	( $\beta$ $\gamma$ ) 4	16213		
N16	E22			( $\beta$ p) 3	16208	N28	E18	( $\alpha$ p) 1	16216		
N29	E62			( $\beta$ p) 3	16209	N14	W14	( $\beta$ p) 2	16217		
N15	W32			( $\beta$ p) 4	16210	N18	W70	( $\alpha$ p) 4	16204		
N28	E31			( $\alpha$ p) 1	16211	N16	W70	( $\alpha$ p) 2	16205		
5	1930			S22	W50	( $\beta$ p) 5	16203	11	1910		
		N18	W06	( $\beta$ p) 5	16204	N30	W18			( $\alpha$ p) 2	16209
		N16	W02	( $\beta$ f) 1	16205	N22	W16			( $\beta$ p) 4	16212
		N04	E07	( $\beta$ $\gamma$ ) 2	16206	N14	W36			( $\beta$ ) 4	16213
		S19	E05	( $\beta$ $\gamma$ ) 5	16207	N15	E14			( $\alpha$ p) 1	16218
		N16	E08	( $\beta$ p) 3	16208	N17	W87			$\alpha$ p	16204
		N30	E51	( $\beta$ p) 3	16209	S18	W75			( $\beta$ p) 2	16207
		N16	W45	( $\beta$ p) 4	16210	N29	W32			( $\alpha$ p) 2	16209
		N23	E50	( $\beta$ p) 2	16212	N23	W28			( $\beta$ p) 4	16212
		N13	E34	( $\beta$ p) 1	16213	N13	W48			( $\beta$ p) 4	16213
6	1715	S24	W61	( $\beta$ p) 5	16203	12	1610	N15	W0E	( $\beta$ p) 3	16218
		N18	W18	( $\alpha$ p) 5	16204			S28	W55	( $\alpha$ p) 1	16219
		N16	W14	( $\beta$ p) 2	16205			S24	E59	( $\beta$ p) 2	16220
		N04	W04	( $\alpha$ p) 1	16206			N29	W44	( $\alpha$ p) 2	16209
		S19	W08	( $\beta$ $\gamma$ ) 5	16207			N23	W41	( $\beta$ p) 4	16212
		N16	W04	( $\beta$ p) 2	16208			N13	W61	( $\beta$ p) 3	16213
		N30	E38	( $\beta$ p) 4	16209			N15	W13	( $\beta$ p) 2	16218
		N15	W57	( $\beta$ p) 4	16210			S23	E45	( $\beta$ p) 4	16220
		N22	E38	( $\beta$ p) 3	16212						
		N13	E21	( $\beta$ p) 2	16213						

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS  
JANUARY 1967

JAN. 1967	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.		TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.		
13	2350	N27	W66	( $\alpha$ p) 2	16209	20	1700	S23	W57	( $\beta$ p) 5	16220		
		N22	W57	( $\beta$ p) 3	16212			N23	W35	( $\alpha$ p) 5	16221		
		N13	W80	( $\beta$ p) 3	16213			N17	E23	( $\beta$ p) 1	16222		
		N15	W28	( $\beta$ p) 3	16218			N16	E30	( $\alpha$ f) 5	16224		
		S32	W78	$\alpha$ p	16219			N15	E50	( $\beta$ p) 4	16226		
		S23	E29	( $\beta$ p) 4	16220			N18	E61	( $\beta$ p) 4	16227		
		N23	E54	( $\alpha$ p) 2	16221			N16	E60	( $\beta$ $\gamma$ ) 3	16229		
14	1620	N28	W73	( $\beta$ p) 1	16209	21	No obs.	S17	E34	( $\alpha$ p) 2	16230		
		N23	W66	( $\beta$ p) 4	16212			22					
		N13	W86	$\alpha$ p	16213			23					
		N16	W38	( $\beta$ p) 4	16218			24					
		S23	E18	( $\beta$ p) 5	16220			26					
		N22	E45	( $\beta$ p) 4	16221			1900					
15	2115	N15	W55	( $\beta$ p) 4	16218	26	1900	N16	W47	( $\beta$ $\gamma$ ) 3	16224		
		S24	E04	( $\beta$ p) 5	16220			N15	W31	( $\alpha$ p) 5	16226		
		N22	E30	( $\beta$ p) 4	16221			N17	W17	( $\beta$ $\gamma$ ) 4	16229		
								N20	W20	( $\beta$ f) 2	16227		
16	2230	N14	W73	( $\alpha$ p) 3	16218	27	1615	N24	W51	( $\beta$ p) 2	16231		
		S25	W10	( $\beta$ p) 5	16220			N21	W03	( $\alpha$ f) 1	16232		
		N21	E16	( $\beta$ p) 4	16221			N02	W21	( $\beta$ f) 2	16233		
		N15	E76	( $\beta$ p) 2	16222			N21	E72	( $\beta$ p) 5	16234		
		S17	E82	$\alpha$ p	16223			S22	E34	( $\alpha$ p) 5	16235		
17	1720	N14	W87	$\alpha$ p	16218	27	1615	N15	W64	( $\beta$ f) 2	16224		
		S25	W21	( $\beta$ p) 5	16220			N17	W42	( $\alpha$ p) 5	16226		
		N21	E06	( $\beta$ p) 4	16221			N21	W28	( $\beta$ f) 5	16227		
		N16	E65	( $\beta$ $\gamma$ ) 3	16222			N19	W30	( $\beta$ p) 5	16229		
		N13	E65	( $\beta$ p) 2	16224			N19	E59	( $\beta$ p) 4	16234		
		S15	E66	$\alpha$ p	16225			S23	E22	( $\alpha$ p) 6	16235		
18	1900	S25	W34	$\beta$ p	16220	28	No obs.	S23	W23	( $\beta$ f) 1	16236		
		N21	W09	$\beta$ p	16221			29					
		N15	E47	$\beta$ f	16222			2100					
		N14	E51	$\beta$	16224			N15	W71	$\alpha$ p	16226		
19	2245	N13	E72	$\alpha$ p	16226	29	2100	N20	W60	$\beta$ f	16229		
		S23	W49	$\beta$ p	16220			N21	W45	$\alpha$ f	16232		
		N23	W25	$\alpha$ p	16221			N20	E31	$\beta$ p	16234		
		N16	E33	$\beta$ f	16222			S22	W07	$\beta$ p	16235		
		N16	E39	$\alpha$ p	16224			N17	E12	$\alpha$ p	16237		
		N14	E58	$\alpha$ p	16226			N16	E47	$\beta$	16238		
		N19	E75	$\beta$	16227			N14	E67	$\beta$	16239		
		N12	E14	$\beta$ f	16228			S25	E56	$\beta$ p	16240		
19	2245					30	No obs.						
								31	1735	N20	W70	( $\beta$ ) 2	16232
										N20	E05	( $\beta$ p) 4	16234
										S21	W30	( $\alpha$ p) 4	16235
										N14	E21	( $\beta$ p) 4	16238
										N13	E47	( $\beta$ ) 1	16239
										S16	E70	( $\alpha$ p) 3	16241
										N26	E70	( $\alpha$ p) 3	16242

# SOLAR FLARES

PRELIMINARY

JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION				DURATION	IM-	OBS.	MEASUREMENTS				REMARKS			
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION				CMP DAY	MIN.	POR-TANCE	COND.		TYPE	TIME - UT	MEAS. AREA Sq. Deg.
1967 JAN																			
MONT	01	0805E	0858		S21	E11	.357	8629	2.2	53D	1F		C	0807	1.55	2.90		OT	
MONT	01	1034	1100	1039	N18	E56	.857	8631	5.6	26	1B		C	1039	.52	2.10		O	
CAPS	01	1037E	1056D		N15	E57	.859		5.7	19D	-N		2	1041	.80	1.50		C	
CATA	01	1045E	1130D	1100	N19	E60	.890		5.9	45D	-N			1100	.66			176	
MONT	01	1109	1150		S21	E10	.349	8629	2.2	41	1F		C	1111	1.55	3.60		162	
SACP	01	2156	2234	2210	S22	E04	.332	8629	2.2	38	1N		C	2207	2.46	2.44		OT	
LOCK	01	2157	2220	2207	S21	E04	.316		2.2	23	-F		C	2207	1.00	1.10		10	
HALE	01	2159	2237	2204U	S22	E03	.329	8629	2.1	38	-N		1	C	2204	1.44	1.50		J
HUAN	01	2202E	2211		S22	E04	.332		2.2	9D	-N		1	P	2205	1.13	1.13		F
MANI	02	0354E	0419	0405	S21	W01	.307	8629	2.1	25D	1N		1	C	0405	3.35	3.50		O
LOCK	02	1733	1753	1737	S28	E67	.929	8632	7.8	20	1F		C	1737	1.00	2.30		10	
HUAN	02	2124	2136D		S22	W11	.370	8629	2.1	12D	1F		1	P	2136	2.37	2.38		
LOCK	02	2128	2156	2140	S25	W10	.405		2.1	28	-N		C	2140	1.40	1.50		20	
SACP	02	2130	2139D				.054		2.9	9D			2	S					
HALE	02	2130	2156	2139	S23	W11	.384	8629	2.1	26	-B		2	C	2139	.93	1.00		
MONT	03	0833	0842	0835	S26	W13	.438		2.4	9	-B		C	0835	.52	1.20		OT	
ARCE	03	0838	0850	0842	S26	W14	.445	8629	2.3	12	1N		C	0842	1.88	2.10		C	
CATA	03	0840E	0900D	0842	S25	W15	.440		2.2	20D	-B		C	0842	1.38	1.60		224	
MONT	03	0842	0850	0845	S26	W13	.438		2.4	8	-B		C	0845	.52	1.20		OT	
MONT	03	1033	1107		N17	W12	.398	8628	2.5	34	1N		C	1035	.93	2.20		OTH	
CATA	03	1040E	1100D	1046	N17	W13	.405		2.4	20D	-N		C	1045	1.55	1.70		174	
CAPS	03	1131E	1227D		N13	E28	.533	8631	5.6	56D	1B		1	C	1139	1.39	1.46		E
HUAN	03	1133E	1211D		N16	E26	.532		5.4	38D	-N		1	C	1140	.83	2.20		O
MONT	03	1137E	1200		N17	E29	.574	8631	5.7	23D	1N		C	1320	.77	1.90		OTH	
MONT	03	1315	1400	1320	S23	W22	.486		1.9	45	-B		C	1320	.77	1.90		E	
HUAN	03	1316	1324	1318	S22	W27	.533		1.5	8	-F		2	C	1318	.88	.92		E
HUAN	03	1329	1352	1336	S22	W27	.533		1.5	23	-N		2	C	1336	.75	.79		E
WEND	03	1336E	1352		S23	W26	.530	8629	1.6	16D	1N		P		4.13			D	
HUAN	03	1351	1358	1354	S24	W17	.446		2.3	7	-B		2	C	1354	.36	.37		D
WEND	03	1352	1400		S24	W16	.436	8629	2.4	8	1F		C		3.09				
CAPS	03	1353	1358		S24	W15	.428		2.5	5	-N		3	C	1355	.50	.60		176
MONT	03	1332E	1349D		N14	W13	.367		2.6	17D	-F		3	C	1337	1.20	1.30		157
HUAN	03	1332	1358	1336	N15	W17	.420		2.3	26	-N		2	C	1336	.83	.83		E
WEND	03	1336E	1356		N14	W18	.429	8628	2.2	20D	1F		P		6.19				
SACP	03	1431	1510	1435	S26	W18	.478	8629	2.3	39	1N		C		2.94	3.01			
SACP	03			1440															
HUAN	03	1432	1440	1434	S26	W17	.470		2.3	8	-N		2	C	1434	.70	.72		E
HUAN	03	1438	1453	1440	S24	W24	.517		1.8	15	-F		1	C	1440	.75	.78		H
LOCK	03	1705	1725	1713	S19	W29	.536		1.5	20	-F		C	1713	.30	.40		10	
LOCK	03	1713	1814	1720	S23	W27	.541		1.7	61	-N		C	1720	1.20	1.40		20	
SACP	03	1734	1811	1754	S21	W28	.538	8629	1.6	37	1B		C		3.35	3.52			
HUAN	03	1738	1753D		S24	W26	.538	8629	1.8	15D	1N		1	P	1746	.79	.83		E
HUAN	03														1753	1.24	1.30		
LOCK	03	1743	1820	1755	S19	W30	.549	8629	1.5	37	1N		C	1755	2.80	3.40		20	
LOCK	03	1820	1910	1853	N29	E82	.996	8637	9.9	50	1N		C	1853	.90	3.10		20	
SACP	03	1832	1905	1842	N31	E79	.991		9.7	33	-N		C		.90				
LOCK	03	1840	1913	1852	N15	W90	1.000	8625	28.0	33	1F		C	1852	1.20	4.80		10	
LOCK	03	2305	0015D	2332	S23	W32	.598	8629	1.6	70D	2F		C	2332	4.00	5.20		H	
MITK	03	2354	2358	2357	S24	W32	.605		1.6	4	-N		C	2357	.93	1.20		10	
MANI	03	2355E	2400		S21	W33	.597		1.5	5D	-N		1	C	2358	.62	.77		E
LOCK	03	2355	0015D	0003	S17	W30	.537		1.7	20D	-N		C	0003	.90	1.10		20	
MITK	04	0001	0015	0005	S22	W30	.567		1.8	14	-N		C	0005	1.24	1.50		EH	
MITK	04	0204	0215	0208	S20	W33	.591	8629	1.6	11	1N		C	0208	3.09	3.90		H	
MANI	04	0212E	0220		S24	W32	.604		1.7	8D	-N		2	C	0214	.93	1.16		
MITK	04	0325	0340	0326	S25	W34	.632	8629	1.6	15	2F		C	0326	4.23	5.40		FH	
BUCA	04	0845E	0910D		S19	W37	.635	8629	1.6	25D	1N		P	0900	3.32	4.30			
ARCE	04	0845	0915	0857	S20	W38	.651	8629	1.5	30	1N		C	0857	1.91	2.50		HC	
MONT	04	0850	0925	0855	S20	W36	.627		1.7	35	-B		C	0855	.62	1.60		OTH	
ARCE	04	0903E			S20	W38	.651		1.5		-N		C	0903	1.12	1.50		O	
ARCE	04	0903E			S22	W35	.626		1.8		-N		P	0903	.96	1.20		O	
ARCE	04	0915E	0940D		S22	W35	.626		1.8	25D	-N		C	0930	.34	.40		D	
SACP	04	1530	1632U	1541	N16	E11	.378	8631	5.5	62U	1N		C		2.16	2.14			
SACP	04			1604															
HUAN	04	1531	1622	1540	N15	E11	.364	8631	5.5	51	1F		2	C	1540	1.86	1.86		E
LOCK	04	1555E	1635	1555U	N15	E11	.364	8631	5.5	40D	1F		C	1555	2.00	2.20		10	
LOCK	04	1822	1845	1830	N35	E82	.997	8637	10.9	23	1F		C	1830	1.30	2.70		10	
SACP	04	1825	1842	1830	N34	E57	.908	8637	9.0	17	1N		C		1.72	2.86			
MITK	05	0117E	0342		S26	E33	.627	8632	7.5	145D	2F		C	0119	7.12	9.20		BFG	
MITK	05	0440	0505	0445	N16	E03	.337	8631	5.4	25	1N		C	0445	2.37	2.50		E	
MANI	07	0015	0034	0021	S22	W68	.929		1.9	19	-F		1	C	0021	.77	1.75		
MITK	07	0019	0042	0032	S22	W68	.929	8629	1.9	23	1F		C	0032	1.24			E	
HALE	07	0020	0048	0024	S23	W66	.917	8629	2.1	28	-N		1	C	0024	.26			
MITK	07	0054	0129	0105	N29	E37	.746	8637	9.8	35	1F		C	0105	1.75	2.70		E	
HALE	07	0100	0127	0105	N29	E39	.762	8637	10.0	27	-N		2	C	0105	.46	.70		
MITK	07	0535	0600D	0552	S26	W79	.980	8629	1.3	25D	2F		C	0552	1.96			H	

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SOLAR FLARES  
PRELIMINARY  
JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	TIME — UT	MEASUREMENTS				REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH FLARE REGION	CMP DAY					MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hu	MAX. INT. %	
MANI	07	0549	0627	0553	S23	W75	.965	8629	1.6	38	1N	1	0553	.93	2.20			
LOCK	07	2139	2150	2145	S26	W90	1.000	8629	1.2	11	1F	C	2145	1.10	4.40	10	H	
HALE	07	2140	2154	2144	S25	W88	.998	8629	1.3	14	B	1	2144	.52			H	
SACP	08	1744	1821	1759	N22	E12	.475	8639	9.6	37	1N	C		2.37	2.43			
LOCK	08	1745	1830	1755	N21	E11	.455	8639	9.6	45	1N	C	1755	2.20	2.40	20		
HALE	08	1758	1814	1801	N25	E14	.528	8639	9.8	16	-N	2	C 1801	.41	.50			
HUAN	08	1810E	1815D		N21	E12	.461		9.7	5D	-F	1	P 1811	1.01	1.03		E	
WEND	09	1150E	1215		N22	E01	.437	8639	9.6	25D	1N			4.13				
CATA	09	1157E	1200D	1158	N24	E02	.469		9.6	3D	-N		1158	1.00	1.60	186		
HALE	09	2018	2054	2047	S22	W88	.998	8629	3.2	36	B	1	C 2047	.62				
LOCK	09	2028	2055	2033	S22	W90	1.000	8629	3.1	27	1N	1	C 2033	1.00	4.00	20		
LOCK	09			2046									2046	1.00	4.00	20	HK	
LOCK	09	2201	2228	2209	S21	W90	1.000	8629	3.2	27	1N	C	2209	.90	3.60	20	H	
HUAN	09	2203	2224	2210	S22	W90	1.000		3.2	21D	-N	1	C 2210	.70				
HALE	09	2204	2218	2209	S23	W88	.998	8629	3.3	14	N	2	C 2209	.46				
HALE	09	2232	2253	2245	S23	W88	.998	8629	3.3	21	B	2	C 2245	.41				
LOCK	09	2236	2257	2245	S21	W90	1.000	8629	3.2	21	2N	C	2245	1.30	5.20	20	H	
MITK	10	0035	0041	0036	N18	W64	.919	8631	5.2	6	1F	C	0036	.93				
HALE	10	0035	0043	0036	N17	W63	.911	8631	5.3	8	-B	1	C 0036	.62				
ARCE	10	0855	0940D	0900	N21	W69	.951	8631	5.2	45D	1N	C	0900	1.03	2.30		H	
LOCK	10	1650	1730	1716	N20	W70	.955	8631	5.5	40	1F	C	1716	1.40	3.80	10	H	
LOCK	10	1935	1955	1943	N21	W75	.976	8631	5.2	20	1F	C	1943	1.10	3.20	10	H	
LOCK	10	2053	2135	2107	N22	W78	.986	8631	5.0	42	2N	C	2107	1.80	5.60	20		
HALE	11	0131	0317D	0259	S26	W47	.766	8632	7.5	106D	3B	1	P 0259	8.25	12.90			
HALE	11	0232	0317D	0251	N20	W76	.979	8631	5.4	45D	1B	1	P 0251	.62				
MANI	11	0344E	0510		S28	W42	.725	8632	8.0	86D	2F	2	C 0348	5.50	8.10		U	
MANI	11	0348E	0352D		N10	W38	.648	8638	8.3	4D	1N	2	C 0348	1.96	2.60			
SACP	11	1424	1444	1428	S20	W75	.964	8632	6.0	20	1N	C		1.16	2.50			
LOCK	11	1629	1641	1634	N21	W82	.995	8631	5.5	12	1N	C	1634	.70	2.40	20	H	
LOCK	11	1640	1710	1647	N15	W82	.993		5.5	30	-N	C	C 1647	.40	1.40	10	H	
HUAN	11	1701	1710		N16	W88	1.000		5.1	9	-N	1	C 1705	.41				
ARCE	12	0815E	1000D		S23	E50	.785	8647	16.1	105D	1N	C	0945	1.40	2.30			
MANI	12	0823E	0833		S22	E50	.783		16.1	10D	-F	2	C 0825	.72	1.14			
MONT	12	1120E	1150		S22	E50	.783	8647	16.2	30D	1N	C	1120	1.03	3.40		OTH	
MONT	13	1220	1235		N28	W60	.914	8637	9.0	15	1B	C	1222	.41	2.80		O	
SACP	13	1819D	1856D	1830	S31	W79	.979	8632	7.8	37D	1N	C		.95	2.60			
HUAN	13	1827E	1905D		S31	W80	.982	8632	7.8	38D	1N	1	P 1832	1.24				
LOCK	13	1833E	1940	1833U	S32	W83	.990	8632	7.5	67D	1N	C	1833	1.20	4.10	20		
MCMA	13	1843E	1850D		S32	W80	.982	8632	7.8	7D	-F	C	C 1845	.52				
LOCK	13	2105	2203	2120	N16	W68	.941	8638	8.8	58	1N	C	2120	1.10	2.80	20		
LOCK	13	2322	2403	2331	S32	W83	.990	8632	7.7	41	1F	C	2331	.90	3.10	10		
MONT	14	1100	1200		N31	E90	1.001	8649	21.2	60	1N	C					O	
CATA	14	1115E	1150D	1130	N32	E90	1.001	8649	21.2	35D	1N		1130	.59		174	AD	
HERS	14	1126E	1148D	1140U	N28	E90	1.001	8649	21.2	22D	1	2	C 1133	1.55			D	
HUAN	14	1143E	1152		N30	E88	1.000		21.1	9D	-N	1	P 1143	.36			L	
LOCK	14	1635	1750	1700	N28	E83	.997	8649	20.9	75	2N	C	1700	2.00	6.80	20		
HUAN	14	1637	1718		N31	E85	.999		21.1	41	-N	1	C 1702	.67				
SACP	14	1640	1723	1703	N29	E77	.987	8649	20.5	43	1N	C		1.87				
SACP	14	1737	1858	1805	N15	W40	.696	8644	11.7	81	1N	C		3.03	3.53			
HUAN	14	1739	1842	1748	N15	W39	.685	8644	11.8	63	1N	1	C 1748	1.91	2.24	30	E	
LOCK	14	1739	1845	1753	N15	W40	.696	8644	11.7	66	1B	C	1753	2.30	3.20			
SACP	14	2314	2359	2325	N23	W69	.954	8639	9.8	45	2N	C		2.67	5.46			
LOCK	14	2320	2405	2326	N20	W70	.956	8639	9.7	45	2B	C	2326	2.10	5.70	30		
ARCE	15	0850E	0910D	0900	N16	W49	.795		11.7	20D	-F	C	0900	1.12	1.80			
MONT	15	0905E	0950		N15	W47	.772	8644	11.9	45D	1N	C	0905	1.03	3.50		O	
BUCA	15	0930E	1029D		N14	W45	.747		12.0	59D	-F	C	0950	.88	1.30			
MONT	15	1047	1105	1050	N16	W42	.724		12.3	18	-B	C	1050	.52	1.70		O	
CAPS	15	1048E	1053D		N17	W41	.718		12.4	5D	-F	3	C 1050	1.00	1.40	147	C	
BUCA	15	1048E	1059D		N16	W40	.702	8644	12.5	11D	1N	P	1050	1.66	2.30			
LOCK	15	2308	2330	2313	N16	E82	.994	8649	22.1	22	1N	C	2313	1.30	4.40	20		
SACP	15	2313	2335	2319	N20	E83	.996		22.2	22	-N	C		.99				
MITK	16	0032	0100	0040	N16	W58	.874	8644	11.7	28	1B	C	0040	1.55	3.30		E	
MANI	16	0034E	0102	0043	N16	W57	.866	8644	11.7	28D	1N	1	C 0043	1.86	3.38			
MITK	17	0036	0041	0038	N15	W82	.994	8644	10.9	5	1F	C	0038	.62			E	
LOCK	17	2307	2335	2320	N17	E61	.899	8650	22.5	28	1N	C	2320	1.00	2.10	20		
MANI	17	2315E	2336	2317	N16	E57	.867	8650	22.2	21D	1N	1	C 2317	1.55	2.85			
HALE	17	2317E	2342	2320	N18	E60	.894	8650	22.5	25D	-N	3	P 2320	.62	1.40		F	
SACP	17	2324E	2342	2325	N17	E60	.892		22.5	18D	-F	C		.97	1.54			
HALE	18	0030E	0049		N19	E59	.889	8650	22.4	19D	1F	2	P 0030	1.03	2.30		F	

# SOLAR FLARES PRELIMINARY

JANUARY 1967

OBSERVATORY	OBSERVED UT			MAX. PHASE	LOCATION				DURATION MIN.	IMPOR-TANCE	OBS. COND. TYPE	TIME UT	MEASUREMENTS				REMARKS
	DATE	START	END		APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MATH. PLAGE REGION					CMP DAY	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hc	
1967 JAN																	
MITK	18	0616	0640D	0622	N17	E55	.853	8650	22.4	24D	1F	0622	1.34	2.60	F		
	MANI	18	0617	0707	0624	N16	E54	.842	8650	22.3	50	1B	0624	2.17		3.80	
MITK	18	0635E	0649D		N20	E57	.877	8650	22.5	14D	1N	0638	1.55	3.10	FK		
MITK	18	0647E	0700D		N20	E58	.884	8650	22.6	13D	1N	0649	1.13	2.20	F		
SACP	18	2002	2026	2010	N22	E88	1.000	8659	25.4	24	1B		1.05				
LOCK	18	2003	2022	2011	N21	E90	1.000	8659	25.6	19	1N	2011	1.10	4.40	20		
HALE	18	2004	2015	2008	N22	E88	1.000	8659	25.4	11	N	2008	1.03				
MCMA	18	2005E	2017D	2009	N18	E90	1.000	8656	25.6	12D	1B	2009	1.03				
LOCK	18	2119	2134	2122	N14	E82	.993	8659	25.0	15	1N	2122	.70	2.40	20		
LOCK	18	2225	2303	2250	N21	E90	1.000	8659	25.7	38	1F	2250	.60	2.40	10		
LOCK	18	2359	0023	0012	N20	E90	1.000	8659	25.7	24	1F	0012	.60	2.40	10		
MITK	19	0608	0640D	0625	N18	E43	.746	8650	22.5	32D	2N	0625	4.02	6.10	F		
MANI	19	0615	0646	0630	N14	E43	.727	8650	22.5	31	1N	0630	2.89	3.97	F		
SACP	19	1716	1741	1721	N17	E66	.932	24.7	25	-N			.86	1.55			
HUAN	19	1717	1730D		N17	E68	.943	24.8	13D	-B	1	P	1721	.93			
MCMA	19	1718	1752	1721	N18	E66	.933	8656	24.7	34	-B	1	P	1721	.62	1.60	E
HALE	19	1730E	1755	1730U	N18	E69	.950	8659	24.9	25D	1N	1730	.62				
WEND	20	1100E	1120D		S20	W58	.850	8647	16.1	20D	1F		3.09				
WEND	20	1508E	1535D		N16	E62	.905	8659	25.3	27D	1F		4.13				
SACP	20	1511	1554	1543	N15	E62	.903	8659	25.3	43	1N		2.01	3.28			
MCMA	20	1514	1554	1542	N16	E62	.905	8656	25.3	40	1B		1.29	3.00	EKL		
MCMA	20		1527									1527	.93	2.20	EKL		
HALE	20	2043	2138	2049	N24	E62	.920	8659	25.5	55	-N	2	C	2049	.41		F
SACP	20	2044	2114	2052	N23	E64	.930	8659	25.7	30	1N		2.10	3.76			
LOCK	20	2057E	2127	2100U	N22	E63	.922	8659	25.6	30D	1B		1.80	4.00	30		
MITK	21	0425	0506	0435	N19	E56	.867	8659	25.4	41	1N	C	0435	1.75	3.30	E	
MITK	21	0608	0632D		N15	E55	.849	8659	25.4	24D	1F	C	0630	2.27	4.10		
MONT	21	0838	0850D	0841	N16	E55	.851	8659	25.5	12D	1N	C	0841	.62	2.30		
MANI	21	0839E	0903	0841	N14	E49	.791	25.0	24D	-N	2		0841	.57	.91		
MONT	21	1344	1355D	1347	N16	E53	.834	8659	25.5	11D	1F	C	1347	.62	2.30		
LOCK	21	2131	2200	2150	N20	E48	.803	8659	25.5	29	1B	C	2150	2.10	3.60	30	
HUAN	21	2131	2219D		N22	E48	.811	8659	25.5	48D	2N	1	C	2145	4.85	6.35	
HALE	21	2132	2225D	2146	N22	E47	.803	8659	25.4	53D	1B	2	P	2146	2.99	5.00	F
SACP	21	2133	2223	2150	N22	E47	.803	8659	25.4	50	1N	C		3.35	4.43		
HALE	22	0056	0141	0111	N14	E43	.729	8659	25.3	45	-N	1	C	0111	.83	1.20	
MITK	22	0108	0140	0112	N14	E43	.729	8659	25.3	32	1N	C	0112	3.40	5.10		
MONT	22	0829E	0850	0833	N17	E08	.400	23.0	21D	-N			0833	.62	1.40		
CATA	22	0830E	0850D	0835	N16	E04	.368	8650	22.7	20D	1B		0835	2.53	2.70	276	
CAPS	22	0835E	0850D		N14	E07	.349	22.9	15D	-F	2		0837	1.70	1.80	143	
MANI	22	0837E	0855		N15	E08	.370	23.0	18D	-F	2		0839	.83	.89	CE	
SACP	22	2054	2119	2108	N13	E27	.536	8659	24.9	25	1N	C		2.01	2.12		
MANI	23	0717	0731	0722	N12	E27	.529	8659	25.3	14	1F	2		0722	1.96	2.40	F
ONDR	23	1214E	1224D		N14	E25	.521	8659	25.4	10D	1B	V					
HUAN	23	1512	1530D		N11	W31	.572	8654	21.3	18D	1F	1	P	1517	1.80	1.93	E
SACP	23	1512	1546	1518	N10	W31	.566	21.3	34	-N		C		1.72	1.83		
LOCK	23	2028	2100	2037	N14	E19	.454	8659	25.3	32	1N	C	2037	2.10	2.30	20	
HALE	23	2029	2106	2034	N16	E18	.466	25.2	37	-B	1	C	2034	.72	.80		
HALE	23	2335	0013	2339	N14	E21	.476	8659	25.6	38	1B	1	C	2339	1.86	2.10	F
MITK	23	2336	2347	2338	N14	E22	.487	8659	25.6	11	1N	C	2338	2.37	2.70		
SACP	23	2336	2354	2339	N13	E21	.466	25.6	18	-N		C		1.55	1.58		
MANI	23	2337E	2351		N15	E19	.465	25.4	14D	-N	2		2339	.98	1.09		
HALE	24	0343	0404D	0352	S19	E26	.481	26.1	21D	-N	2	P	0352	.83	.90		
MITK	24	0344	0413D	0350	S20	E25	.475	8661	26.0	29D	1F		0350	2.06	2.40	G	
MANI	24	0609	0621D	0615	N20	E18	.514	8659	25.6	12D	1N	2		0615	2.06	2.44	UF
MITK	24	0609	0634D	0614	N23	E15	.529	8659	25.4	25D	1N		0614	2.89	3.40		
SACP	24	2023E	2045D	2027	N22	E10	.486	8659	25.6	22D	1B			3.00	3.08		
HALE	24	2043E	2108U	2043U	N22	E08	.477	25.5	25D	-B	2	P	2043	1.13	1.30		
LOCK	25	2015	2045	2023	N20	E90	1.001	8671	1.6	30	1F	C	2023	.60	2.40	10	
MONT	26	1143	1154D	1150	N15	W18	.457	8659	25.1	11D	1B		1150	1.03	2.40	O	
CATA	26	1143E	1205D	1145	N16	W18	.469	8659	25.1	22D	1B		1145	2.03	2.30	214	
CAPS	26	1147E	1159D		N15	W15	.428	25.4	12D	-N	3		1151	1.60	1.80	147	
CAPS	26	1401E	1422D		N15	W25	.533	8659	24.7	21D	1F	2		1405	2.20	2.60	158
SACP	26	1414	1523	1447	N18	W26	.571	24.6	69	-N		C		1.83	1.95		
CAPP	26	1417E	1440D	1417	N18	W26	.571	24.6	23D	-N		P	1422	1.46	1.71		
SACP	26	2050	2124	2105	N26	E68	.956	8668	1.0	34	1N	C		1.24	2.59		
LOCK	26	2102	2120	2111	N29	E72	.975	8671	1.3	18	1F	C	2111	.90	2.30	10	
SACP	26	2246	2302	2250	N22	E71	.964	1.3	16	-N		C		.86	1.90		
LOCK	26	2247	2259	2250	N24	E72	.970	8671	1.3	12	1N	C	2250	.90	2.40	20	
SACP	27	1511	1550	1520	N20	W59	.894	8650	23.2	39	1N	C		2.21	3.49		
LOCK	27	2002	2032		N26	W32	.699	25.4	30	-N		C		1.10	1.40	20	
SACP	27	2002	2121U	2015U	N16	W31	.609	8659	25.5	79U	1N	C		2.12	2.32		

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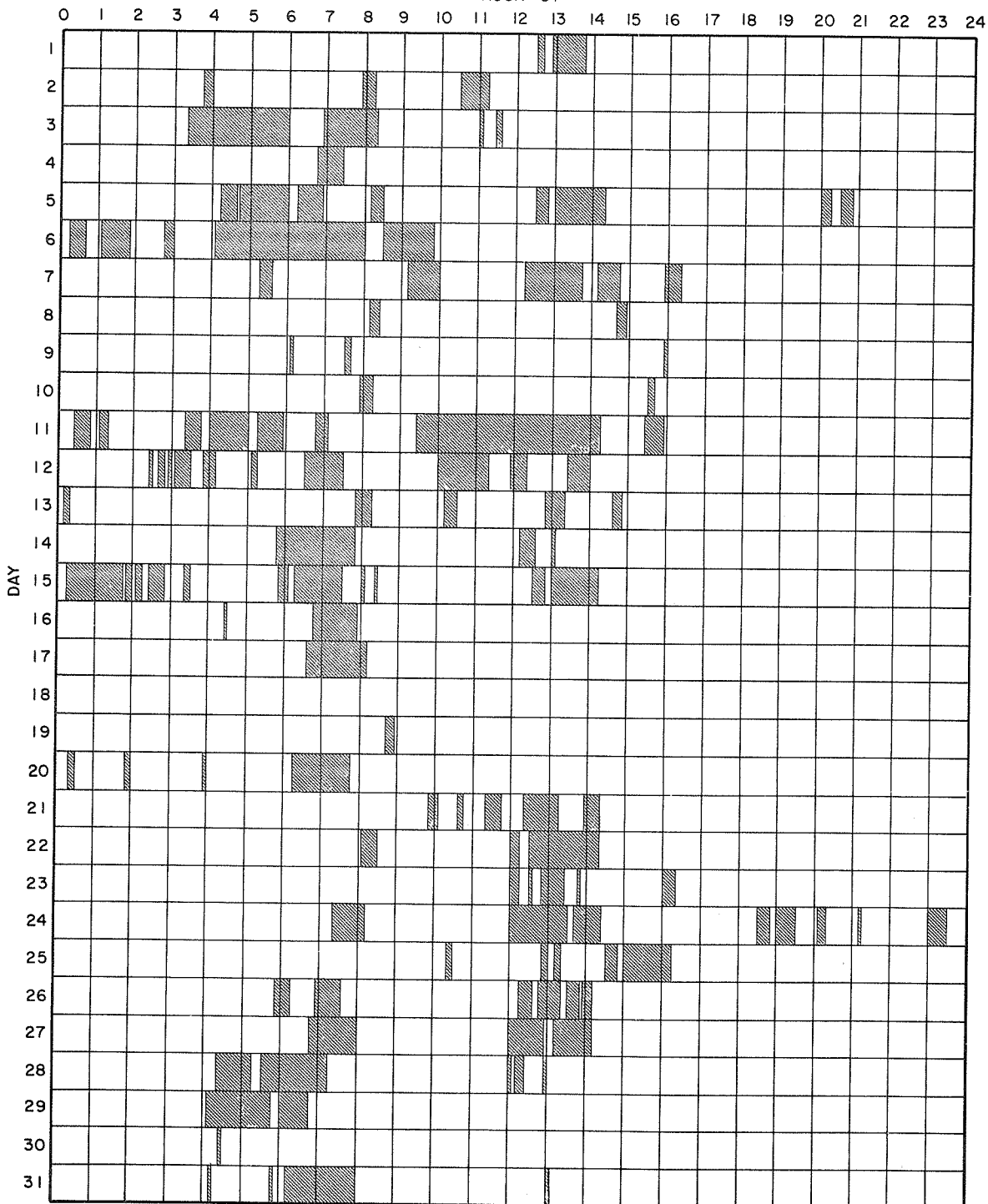
## SOLAR FLARES PRELIMINARY JANUARY 1967

OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS				REMARKS		
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	GEOGRAPHIC REGION			CMP DAY	COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Hg	MAX. INT. %
					LAT.	MER. DIST.													
	1967																		
	JAN																		
[HALE	27	2004	2033	2007	N16	W31	.609	8659	25.5	29	-N	2	C	2007	.72	.90			F
[HUAN	27	2005	2038D		N17	W31	.617	8659	25.5	33D	1F	1	P	2010	2.12	2.33			E
[SACP	27	2317U	2356D	2331U	N16	W32	.620	8659	25.6	39D	1N		C		2.04	2.25			
[LOCK	27	2319	2345D	2326	N25	W35	.717	8659	25.3	26D	1N		C	2326	2.10	2.70		20	
[HALE	27	2322	0009D	2330	N15	W30	.590		25.7	47D	-B	1	P	2330	.93	1.10			F
[MANI	27	2325E	2351	2330	N17	W32	.628	8659	25.6	26D	1N	2		2330	1.75	2.30			
[MONT	28	0728E	1130	0900	S23	E17	.404	8667	29.6	242D	1B		C	0826	2.06	4.80			O
[MANI	28	0753E	0857	0758	S23	E21	.448	8667	29.9	64D	1N	2		0758	1.65	2.10			
[CAPS	28	0804E	0840		S24	E19	.436	8667	29.8	36D	1N	3		0808	2.20	2.40		185	
[CATA	28	0815E	0845D	0815	S22	E17	.393		29.6	30D	-B			0815	1.58	1.70		224	
[CAPF	28	0840E	0912	0840	S22	E19	.416		29.8	32D	-N		S	0840	1.18	1.31			
[CAPS	28	0943E	0955		S24	E19	.436	8667	29.8	12D	1F	3		0950	2.00	2.20		152	
[LOCK	28	2230	2250D	2241	S14	E13	.263	8667	29.9	20D	1N		C	2241	2.50	2.80		20	
[HUAN	28	2232	2241D		S25	E12	.382		29.8	9D	-N	1	P	2238	.62	.62			E
[SACP	28	2233	2312	2240	S25	E12	.382	8667	29.8	39	1N		C		2.10	2.09			
[LOCK	29	1612	1700	1620	S15	E02	.164	8667	29.8	48	2B		C	1620	5.50	6.10		30	L
[SACP	29	1612	1740	1620	S25	E01	.329	8667	29.8	88	2N		C		5.37	5.31			
[MCMA	29	1614	1730	1619	S27	W00	.362	8667	29.7	76	2N		C	1619	5.16	5.40			FL
[HUAN	29	1625E	1704D		S26	E03	.349	8667	29.9	39D	2N	1	P	1625	6.19	6.18			
[HALE	29	1705E	1727D		S26	E02	.347	8667	29.9	22D	1N	2	P	1714	4.54	4.80			
[SACP	29	2039	2046	2042	N15	W62	.905		25.2	7	-F		C		.57	.93			
[HUAN	29	2040	2051		N16	W63	.914		25.1	11	-N	1	C	2043	1.29				E
[HALE	29	2040	2058	2044	N15	W64	.919	8659	25.1	18	1B	2	C	2044	1.44				
[SACP	29	2244	2256D	2248	N18	W59	.890		25.5	12D	-F		C		.58	.91			
[MANI	29	2245E	2256		N19	W64	.925	8659	25.1	11D	1N	1		2245	1.03	2.20			F
[LOCK	29	2245E	2312	2250U	N26	W65	.943		25.1	27D	-F		C	2250	1.50	1.10		10	
[LOCK	29	2352	0025D	0000	N28	W70	.967	8659	24.7	33D	1B		C	0000	1.00	2.30		30	
[SACP	29	2355	2358D	2357	N24	W62	.923		25.3	3D	-F		C		.87	1.53			
[MANI	29	2356E	0021	0000	N24	W63	.928	8659	25.3	25D	1F	2		0000	1.34	21.87			
[HALE	30	0000E	0031	0003	N24	W63	.929		25.3	31D	-N	2	P	0003	.41				F
[MEUD	30	1120	1200		S27	E53	.815		3.4	40	-N		C	1129	1.03	1.80			E
[MONT	30	1121		1125	S25	E55	.828	8673	3.6	1N			C	1125	1.03	4.00			O
[CAPS	30	1130E	1159D		S24	E58	.852	8673	3.8	29D	1F	2		1134	2.00	3.80		158	G
[CATA	30	1134E	1200D	1135	S25	E55	.828		3.6	26D	-N			1135	.64	1.10		191	
[WEND	30	1142E	1205		S27	E60	.872	8673	4.0	23D	2N				6.19				
[MONT	30	1131	1200	1133	S16	W09	.232		29.8	29	-N		C	1133	.26	.50			O
[MEUD	30	1134	1155	1137	S24	W08	.337		29.9	21	-N		C	1137	.72	.73			E
[CATA	30	1134E	1200D	1135	S26	W08	.367		29.9	26D	-N			1135	.56	.60		182	
[CAPS	30	1135E	1140D		S23	W10	.336		29.7	5D	-N	2							E
[WEND	30	1142E	1154		S23	W08	.322	8667	29.9	12D	1N				5.16				
[WEND	30	1142E	1154		S23	W14	.371		29.4	12D	-N								
[MANI	31	0037E	0113		N20	W62	.915	8659	26.4	36D	1B	1		0038	1.86	3.85			U
[MITK	31	0040E	0115D		N18	W50	.817	8663	27.3	35D	1F		C	0054	1.75	2.90			FG
[CAPF	31	0856E	0917	0856	N14	E26	.539	8671	2.3	21D	1N		P	0904	1.76	2.05			H
[MONT	31	0857	0925	0900	N17	E28	.587		2.5	28	-N		C	0900	.52	1.40			O
[ARCE	31	0858	0917D	0900	N12	E28	.546	8671	2.5	19D	1N		C	0900	2.34	2.80			HC
[CAPS	31	0900	0909D		N14	E26	.539		2.3	9D	1F	3		0902	2.00	2.40			
[CAPF	31	0908E	0919	0908	N20	E12	.477		1.3	11D	-N		P	0914	.88	.98		147	
[CAPS	31	0907E	0930D		N20	W65	.933	8659	26.5	23D	1B	3		0912	1.00			200	C
[CAPF	31	0908E	1025D	0908	N21	W69	.955	8659	26.2	77D	1N		P	0914	1.18				
[CAPS	31	0923E	0928D		N28	E80	.995	8680	6.4	5D	1N	3		0925	.60			165	C
[ARCE	31	0925			N24	E80	.993		6.4		-N		C	0925	.31	1.00			DC
[MONT	31	1208	1220	1210	N21	W70	.960	8659	26.3	12	1N		C	1210	.52				O
[CAPS	31	1301	1359		N20	E10	.465		1.3	58	-N			1340	1.30	1.50		164	E
[HUAN	31	1313	1402	1337	N19	E09	.446	8670	1.2	49	1N	2		1337	2.63	2.68			E
[MEUD	31	1330	1342D	1335	N19	E05	.429		31.9	12D	-N		C	1335	.52	.60			E
[SACP	31	1600	1616	1605	N26	E74	.980		6.2	16	1F		C		.86	2.15			
[LOCK	31	1833	1841	1835	N15	W90	1.000	8659	25.0	8	2B		C	1835	2.10	8.40		30	H
[HUAN	31	1833	1842		N16	W90	1.000		25.0	9	-B	1	C	1835	.36				D

# INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

JANUARY 1967

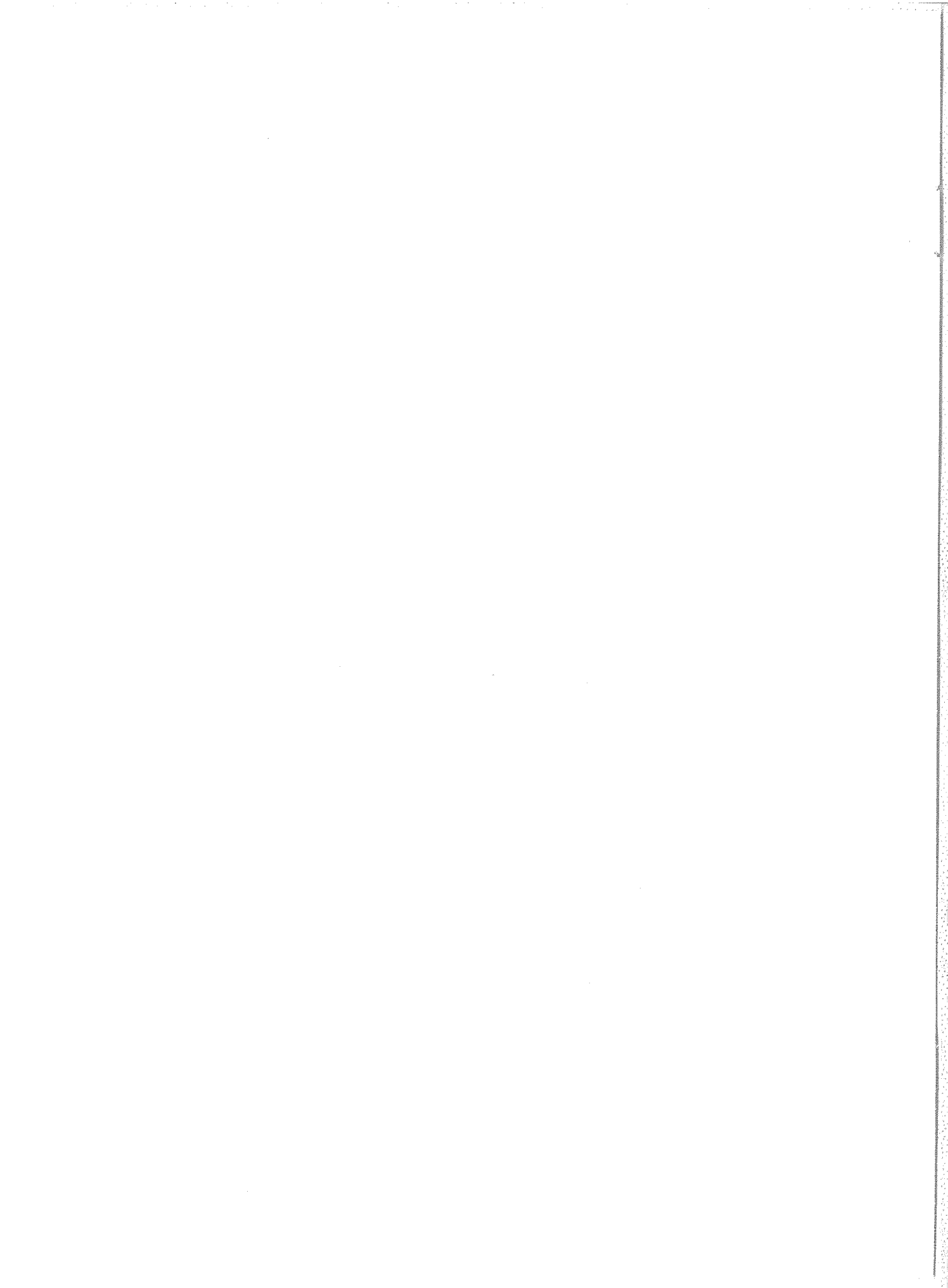
HOUR-UT



Observatories included:

- |                  |              |          |                |             |                 |
|------------------|--------------|----------|----------------|-------------|-----------------|
| Arcetri          | Catania      | Huancayo | Manila         | Mitaka      | Sacramento Peak |
| Bucaresti        | Haleakala    | Istanbul | McMath-Hulbert | Monte Mario | Tortosa         |
| Capri-F (German) | Herstmonceux | Lockheed | Meudon         | Ondrejov    | Wendelstein     |





SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JANUARY 1967

JAN 1967	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{Wm}^{-2} (\text{c/s})^{-1}$		INT.	REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
2	8800 SGMR	45	1237.4	1240.5	8.6	40.8	14.0			
	4995 SGMR	45	1237.4	1240.5	8.6	30.8	12.0			
	2695 SGMR	45	1237.4	1240.5	8.6	37.4	15.0			
	1415 SGMR	45	1237.2	1239.8	5.8	36.5	15.0			
	606 SGMR	45	1237.2	1237.5	4.8	182.5	36.5			
	2700 PENN	1	1411.8	1413.1	3.2	4.5	1.5			
	960 PENN	45	1412.8	1413.2	.6	10.0	1.9			
	2800 OTTA	21	1510	1605	190	6.4	3.2			
	10700 PENN	3	1514.4	1515	3.8	38.5	4.6			
	8800 SGMR	3	1514.2	1514.9	2.8	32.0	10.5			
	4995 SGMR	3	1514.3	1514.9	3.7	16.5	5.5			
	2800 OTTA	3	1514.4	1515	4.5	23.0	9.0			
	2700 PENN	3	1514.6	1515.1	2	23.3	9.4			
	2695 SGMR	3	1514.4	1514.9	6.6	28.6	9.5			
	1415 SGMR	3	1514.4	1514.9	3.6	50.8	18.0			
	960 PENN	45	1514.5	1515	9.1	15.7	1.3			
	606 SGMR	45	1514.4	1514.9	3.6	419.4	85.0			
	2700 PENN	29	1516.6	1516.6	96	5.2	2.9			
	1415 SGMR	29	1518	1518	17	4.4	2.2			
	606 SGMR	29	1518	1518	24	7.7	4.0			
	960 PENN	1	1548.5	1548.6	.6	2.1	0.9			
	2700 PENT	21	2030	2100	55	3.8	1.9			
	10700 PENN	3	2050	2050.4	9.2	11.5	4.0			
	8800 SGMR	3	2049	2050.1	4	10.6	4.0			
	4995 SGMR	3	2049	2050.1	4	26.4	8.5			
	2800 OTTA	1	2049	2050.5	3	6.0	3.0			
	2700 PENN	20	2048.8	2050.6	10.4	8.6	2.2			
	2695 SGMR	3	2049	2050.1	4	7.8	3.0			
	2700 PENT	3	2135.5	2138.5	4	11.0	5.5			
	2800 OTTA	29	2140		15	3.8	1.9			
	3	1415 SGMR	4	1215.3U	1215.5	3.7U	58.0	19.0		
		606 SGMR	45	1215.3U	1216.9	6.7U	69.0	23.0		
		10700 PENN	3	1351.9	1352.1	.3	10.8	5.4		
		8800 SGMR	45	1352.3	1352.6	2.7	13.5	6.5		
		4995 SGMR	45	1352.3	1353.5	2.7	8.8	4.0		
		2800 OTTA	45	1352	1353.3	2	11.2	6.0		
					1352	1352.7	1	7.2		
					1353	1353.3	1	11.2		
		2700 PENN	45	1352	1352.8	3.6	11.4	3.4		
		2695 SGMR	45	1352.3	1353.5	5.7	15.3	4.2		
		1415 SGMR	45	1352.3	1352.6	6.2	4.0	2.0		
1415 SGMR		45	1352.3	1353.5	6.2	4.0	2.0			
2800 OTTA		29	1354		30	2.6	1.3			
2800 OTTA		21	1427	1540	125	4.6	2.3			
10700 PENN		3	1430.9	1431.3	1.1	16.3	7.0			
8800 SGMR		4	1431	1431.9	1.5	20.3	6.5			
4995 SGMR		4	1431	1431.9	2	26.4	9.0			
2800 OTTA		3	1431.4	1432	2	13.6	6.8			
2700 PENN		3	1430.9	1431.4	1.4	13.3	5.5			
2700 PENN		24	1431	1435.5	50.8	1.0	1.0			
2695 SGMR		4	1431	1431.9	2	16.9	5.5			
1415 SGMR		4	1431	1432	2	6.8	2.3			
960 PENN		1	1430.6	1431.4	1.3	.5	0.2			
606 SGMR		4	1431	1431.9	3	37.8	13.0			
10700 PENN		1	1452	1452.1	1.4	5.4	2.7			
2800 OTTA		1	1452.5	1452.8	1	3.4	1.7			
2700 PENN		1	1452.2	1452.4	.8	3.8	1.9			
2700 PENN		26	1521.8	1521.8	3.6	1.0	0.5			
2700 PENN		20	1534.7	1536.9	51	2.4	1.2			
10700 PENN		3	1641.6	1641.6	8.4	8.4	2.9			
2800 OTTA		21	1740	1800	30	3.4	1.7			
10700 PENN		3	1747.8	1748.6	2	8.6	4.0			
2800 OTTA		1	1748.5	1759.3	4	4.0	2.0			
2700 PENN		1	1748	1748.8	2.8	4.1	2.4			
2700 PENN		24	1816	1908	156 D	7.0D	3.0D			
486 WASH		3	2017		.5	86.6				
10700 PENN		3	2118.8	2119.2	.7	9.0	4.5			
2800 OTTA		1	2119	2119.8	2	5.2	2.6			
2700 PENN		1	2118.4	2119.3	1.5	6.6	3.5			
4		606 SGMR	1	1337.1	1338.3	2.4	5.8	.5		
		606 SGMR	40	1612.3	1622.1	10.7	7.6	.5		
	606 SGMR	40	1925.3	1927.3	2.7	9.8	1.0			
	2700 PENT	20	2025	2130	110	6.4	3.2			
	486 WASH	3	2210		1	86.8				
5	606 SGMR	40	1253	1319.8	197	4.4	1.0			
	8800 SGMR	20	1359	1436	51	14.5	5.0			
	4995 SGMR	20	1415	1435	35	4.7	1.0			
	2695 SGMR	20	1344	1426	66	5.0	1.0			
	2800 OTTA	20	1755	1940	200	6.0	3.0			
	1415 SGMR	20	1926	1927.7	4	5.3	1.0			
606 SGMR	20	1925	1927.7	5	3.5	.5				
6	2700 PENN	1	1514.1	1514.4	.3	2.9	1.5			
	2700 PENN	3	1514.8	1514.9	.4	7.7	3.9			
	2700 PENN	40	1516.4	1520.1	4.6	5.1	1.5			
	2800 OTTA	21	2038	2050	40	3.8	1.9			
	2800 OTTA	1	2041	2041.5	1	2.0	1.0			
8	606 SGMR	3	1758.3	1758.6	.7	40.9	8.0			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURENCES

JANUARY 1967

JAN 1967	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$		INT	REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
9	2800 OTTA	1	1801.5	1802.3	2.5	1.6	0.8			
	2700 PENN	20	1525.4	1536	21.6	2.6	1.5			
10	2800 OTTA	20	1825	1835	35	3.2	1.6			
	2800 OTTA	1	1905.5	1905.7	.7	2.2	1.1			
	2700 PENN	1	1906.5	1906.7	.9	2.8	1.9			
	2700 PENN	29	1907.4	1907.4	81.2	1.4	1.1			
	606 SGMR	20	1915	1935	40	3.2	1.6			
	8800 SGMR	3	1917.6	1918.2	1.1	11.0	4.0			
	4995 SGMR	3	1917.6	1918.2	1.1	10.4	3.8			
	2800 OTTA	1	1917.4	1918.1	1	7.2	3.6			
	2700 PENN	1	1917.2	1917.8	1.2	5.6	3.4			
	2695 SGMR	3	1917.6	1918.2	1.1	9.5	3.2			
	8800 SGMR	29	1918.7	1918.7	20.3	3.6	1.8			
	4995 SGMR	29	1918.7	1918.7	20.3	5.2	2.5			
	2800 OTTA	30	1918.5		40	2.8	1.4			
	2700 PENN	29	1918.4	1918.4	36.8	2.8	0.9			
	2695 SGMR	29	1918.7	1918.7	20.3	4.1	2.0			
	960 PENN	1	1918.2	1918.4	.4	1.1	0.6			
	8800 SGMR	1	1928	1929.2	4	4.1	1.5			
	4995 SGMR	3	1928	1929.2	4	10.4	4.0			
	2800 OTTA	1	1928.5	1929.3	1.2	2.8	1.4			
	2700 PENN	1	1928.2	1929.3	4.6	2.8	1.2			
	2695 SGMR	1	1928	1929.2	4	3.6	1.2			
	2800 OTTA	29	1929.7		10	1.4	0.7			
	11	8800 SGMR	3	1237.5	1238.7	2.5	10.6	3.5		
		4995 SGMR	3	1237.5	1238.6	2.5	22.0	7.0		
2695 SGMR		3	1237.5	1238.6	2.5	19.5	6.5			
1415 SGMR		40	1237.5	1239.7	2.5	10.8	3.5			
606 SGMR		40	1237.5	1239.7	2.5	9.9	3.0			
10700 PENN		45	1732.7	1733.9	2.2	43.7	6.4			
8800 SGMR		3	1732.8	1734.2	2.2	54.8	18.5			
4995 SGMR		45	1732.8	1734.2	3.2	42.0	14.0			
2800 OTTA		45	1732.5	1734.2	3	17.4	5.0			
				1732.5	1733.6	1.3	5.8			
				1733.8	1734.2	1.7	17.4			
2700 PENN		45	1732.1	1733.9	5	15.6	2.3			
2695 SGMR		45	1732.8	1734.2	3.2	16.6	5.5			
1415 SGMR		45	1732.8	1734.2	3.2	13.6	4.5			
960 PENN		1	1732.8	1733.9	1.7	.8	0.3			
606 SGMR		3	1732.8	1734.2	3.2	21.0	7.0			
10700 PENN		45	2017.8	2042.5	30	70.4	28.9			
8800 SGMR		45	2018	2042.8	37 U	46.2	15.0			
4995 SGMR		45	2018	2042.8	37 U	45.0	15.0			
2800 OTTA		46	2017	2046	35	32.0	13.0			
				2017	2024.5	14	20.0			
				2031	2035	8	16.3			
				2039	2046	13	32.0			
2700 PENN		45	2017.2	2045.6	34	30.2	11.9			
2695 SGMR		45	2018	2024.4	37 U	43.6	14.0			
1415 SGMR		45	2018	2024.4	37 U	42.3	13.0			
960 PENN		45	2022.2	2034.6	19	9.7	1.0			
606 SGMR		45	2020	2040.5	35 U	45.0	15.0			
10700 PENN		29	2047.8	2047.8	36	27.6	17.8			
2800 OTTA		29	2052		65	5.8	2.9			
2700 PENN		29	2051.2	2051.2	27	6.1	2.9			
2700 PENT		1	2247.5	2248.7	3	5.4	3.0			
12		1415 SGMR	20	1810	1820.6	25	2.4	.5		
	10700 PENN	3	1816.6	1817.3	1	9.9	5.0			
	8800 SGMR	3	1816	1817.5	2	10.4	3.0			
	4995 SGMR	3	1816	1818.5	3.2	7.6	1.5			
	2800 OTTA	1	1816.5	1817.5	2	2.4	1.2			
	2700 PENN	1	1816.6	1817.2	1.9	1.8	0.9			
	13	10700 PENN	20	1743	1747.4	72.4	12.4	10.7		
4995 SGMR		20	1803	1806.2	14	2.6	.5			
4995 SGMR		20	1820	1824.8	17	3.0	.5			
2800 OTTA		20	1740	1825	100	5.2	2.6			
2700 PENN		20	1739	1804.6	69.5	4.1	2.7			
2695 SGMR		20	1802.5	1808.7	17.5	2.1	.5			
2695 SGMR		20	1821	1826.4	20.5	2.5	.5			
2695 SGMR		20	1851	1857.5	18	2.3	.5			
1415 SGMR		20	1850.5	1852.8	7.5	1.7	.5			
2700 PENT		20	2100	2130	75	3.0	1.5			
14		8800 SGMR	1	1259.5	1300.3	2.5	5.3	2.6		
		4995 SGMR	3	1259.5	1300.4	2.5	9.0	4.5		
	2695 SGMR	3	1259.5	1300.5	2.5	8.8	4.4			
	1415 SGMR	1	1259.5	1300.5	2.5	2.4	1.2			
	10700 PENN	20	1742	1800	66	6.4	4.7			
	8800 SGMR	20	1740	1750	40	5.7	2.8			
	4995 SGMR	20	1739	1750	44	6.5	3.2			
	2800 OTTA	20	1739	1810	110	5.4	2.7			
	2700 PENN	20	1739.2	1834.6	76.8	4.2	2.8			
	2695 SGMR	20	1738	1751	42	4.5	2.2			
	1415 SGMR	22	1715	1752.8	65	2.5	1.2			
	606 SGMR	22	1715	1752.8	65	8.9	4.4			
	15	2700 PENN	1	1519.2	1519.5	.8	1.9	0.9		

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES  
JANUARY 1967

JAN. 1967	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$		INT	REMARKS
			UT	UT		MINUTES	PEAK		
	2700 PENN	1	1529.1	1530.8	5.4	1.5	0.7		
	10700 PENN	24	1729.4	1731	66	6.1	6.1		
	2800 OTTA	45	1819.9	1820	.8	2.0	1.0		
	2700 PENN	24	1728.2	1728.3	79	.9	0.9		
	2700 PENN	20	1738	1740.3	52	1.6	0.8		
	2695 SGMR	20	1738	1820.6	46	3.3	1.5		
	1415 SGMR	1	1819.8	1820.6	1.8	2.4	.8		
	606 SGMR	1	1819.8	1820	1.8	2.9	1.0		
	10700 PENN	26	1835.4	1835.4	1.2	6.1	3.0		
	2700 PENN	26	1847.2	1847.2	.1	.9	0.5		
	1415 SGMR	1	2009.5	2009.8	.5	2.3	.6		
	606 SGMR	4	2009	2009.5	1	195.2	40.0		
	606 SGMR	29	2010	2010	7	2.5	1.2		
	2800 OTTA	45	2019.4	2019.5	.7	4.6	2.3		
	10700 PENN	3	2047.4	2047.5	.4	26.7	8.5		
	8800 SGMR	3	2046.5	2047.3	2.5	29.0	9.5		
	4995 SGMR	3	2046.5	2047.3	2.5	10.6	3.2		
	2800 OTTA	3	2046.9	2047.1	1.5	7.6	3.8		
	2700 PENN	1	2047.4	2047.6	2	6.9	2.2		
	2695 SGMR	3	2046.5	2047.3	2.5	10.8	3.2		
	1415 SGMR	3	2046.5	2047.3	2	14.8	3.5		
	960 PENN	1	2047.4	2047.6	.4	1.9	0.9		
	606 SGMR	45	2046	2047	2.5	64.0	15.0		
	2700 PENN	1	2051.2	2052.1	2	1.5	0.9		
16	1415 SGMR	1	1621.3	1621.6	1	2.4	.5		
	606 SGMR	40	1619.7	1622.1	3.3	2.1	.5		
	2800 OTTA	20	1745	1815	135	2.0	1.0		
17	606 SGMR	40	1805.1	1805.3	.7	6.7	1.0		
	2700 PENT	3	2309	2311	5	9.0	4.5		
18	2800 OTTA	20	1500	1507	30	1.8	0.9		
	2800 OTTA	1	1634.5	1635	2	1.6	0.8		
	2700 PENN	1	1634.3	1634.8	1.2	1.9	1.0		
	2800 OTTA	1	1922	1922.2	.4	.8	0.4		
	2700 PENN	1	1921.4	1921.9	1.6	1.1	0.5		
	2700 PENN	1	1930.6	1931.4	1.7	.5	0.3		
	2700 PENN	1	1944	1945.3	2.4	1.1	0.5		
	2800 OTTA	1	2014.2	2014.5	.7	.8	0.4		
	2800 OTTA	20	2021	2050	80	2.4	1.2		
	2700 PENN	1	2020.6	2022	4	1.8	0.9		
	2700 PENN	24	2036	2040	46	1.7	1.6		
19	2800 OTTA	20	1715	1720	40	2.2	1.1		
	2700 PENN	24	1714	1942	260 D	4.0D	3.0D		
	2700 PENN	1	1720	1720.3	.5	3.8	1.9		
20	2700 PENN	1	1504.6	1505	2.2	.8	0.4		
	2700 PENN	1	1507.6	1507.9	.6	.4	0.2		
	2700 PENN	1	1510	1510.4	1	1.1	0.5		
	2700 PENN	1	1512.3	1512.5	.6	.9	0.5		
	2800 OTTA	2	1524	1524.3	1	1.4	0.7		
	2700 PENN	1	1523.9	1524.3	1.1	2.4	1.4		
	10700 PENN	1	1538.6	1540.2	4.4	6.9	3.7		
	8800 SGMR	20	1538.3	1540.1	10.7	3.8	.5		
	4995 SGMR	20	1538.1	1541.6	13.3	9.0	3.0		
	2800 OTTA	45	1538	1542	6	10.8	4.3		
			1538	1539.5	2	5.0			
			1540	1540.5	1.7	9.2			
			1541.7	1542	2.3	10.8			
	2700 PENN	45	1537.4	1541.9	6.3	10.7	4.5		
	2700 PENN	24	1543.7	1543.7	82	.7	0.3		
	2695 SGMR	20	1538	1540.5	11	12.4	4.0		
	960 PENN	1	1540.1	1541.4	2.6	3.0	1.4		
	606 SGMR	3	1645.4	1645.5	.2	12.9	2.5		
	2800 OTTA	2	1753	1758	8	1.6	0.8		
	2700 PENN	1	1756.3	1758.5	3.6	2.0	1.2		
	1415 SGMR	28	1753.8	1755.7	1.9	4.9	2.4		
	1415 SGMR	3	1755.7	1757.6	8.3	41.5	5.0		
	960 PENN	45	1756.6	1759.1	3.2	24.5	8.5		
	606 SGMR	45	1755	1758.6	7.2	108.0	26.0		
	2800 OTTA	20	1810	1823	60	3.2	1.6		
	2700 PENN	1	1820.8	1821.3	6.8	1.5	0.8		
	4995 SGMR	20	2045.4	2047.7	8.6	7.0	2.0		
	2800 OTTA	3	2046	2047.5	11	7.6	3.8		
	2700 PENN	24	2024.6	2046	56 D	2.0D	1.0D		
	2700 PENN	3	2046	2047.4	3.7	7.9	5.3		
	2700 PENN	29	2049.7	2049.7	30 D	4.4	2.6		
	2695 SGMR	20	2041	2046.4	13	9.0	1.0		
	1415 SGMR	22	2045.3	2048.1	8.7	21.8	6.0		
	960 PENN	1	2047.6	2047.9	.4	.9	0.4		
	606 SGMR	22	2046	2047.7	7	8.1	1.0		
	10700 PENN	3	2102.2	2102.4	.9	13.0	6.5		
	8800 SGMR	1	2102	2102.7	2	5.5	.5		
	4995 SGMR	3	2101.5	2102.6	2	10.5	2.0		
	2800 OTTA	1	2102	2102.7	1.2	6.6	3.3		
	2700 PENN	45	2101.9E		1 D				CALIBRATION
	2695 SGMR	22	2100.3	2101.2	4.2	24.0	5.0		
	1415 SGMR	45	2101	2102.3	3.2	82.6	15.0		
	960 PENN	45	2101.9E		1 D				CALIBRATION

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SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JANUARY 1967

JAN. 1967	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$		INT.	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
21	606 SGMR	45	2100.8	2102.7	5.2	34.5	6.0		
	486 WASH	45	2102	2103	3	60.6			
	10700 PENN	3	2106.8	2107.4	1.7	13.6	6.8		
	8800 SGMR	3	2106.8	2107.5	2.2	11.0	1.5		
	4995 SGMR	3	2106.7	2106.7	2.6	21.3	5.0		
	2800 OTTA	3	2106.7	2107.5	3	16.0	8.0		
	2700 PENN	3	2106.4	2107.1	3.3	23.5	9.1		
	2695 SGMR	3	2105.6	2106.2	3.4	29.4	6.0		
	1415 SGMR	45	2106.4	2107.3	2.9	81.0	15.0		
	960 PENN	1	2106.5	2107.4	1.2	3.1	1.0		
	606 SGMR	45	2106.7	2107.4	5.3	32.8	8.0		
	486 WASH	45	2107	2108	3	43.3			
	606 SGMR	3	2125.1	2125.6	3.5	14.6	3.0		
	2800 OTTA	20	1510	1615	90	4.0	2.0		
	2700 PENN	1	1654.3	1654.8	1	1.9	1.0		
	2800 OTTA	1	1855.4	1855.7	1	1.2	0.6		
	2700 PENN	1	1913.3	1913.7	.8	3.8	0.8		
	2700 PENT	28	2128		13	4.4	3.0		
	960 PENN	45	1911.5	1912.8	2.4	4.0	1.3		
	2800 OTTA	46	2141	2144	10	56.0	28.0		
	486 WASH	45	2145	2148	5	77.8			
2800 OTTA	30	2151		35	7.0	3.5			
2800 OTTA	3	2158	2158.5	1.5	17.0	8.5			
22	8800 SGMR	1	1501	1502	3	4.3	1.4		
	4995 SGMR	1	1500	1501.6	7	7.0	2.3		
	2800 OTTA	4	1500.5	1502	3	12.6	6.3		
	2700 PENN	5	1502.1E		3	D			
	2695 SGMR	3	1500	1501.6	7	15.5	5.0		
	1415 SGMR	20	1458	1502	18	2.7	1.3		
	2800 OTTA	29	1503.5		5	2.0	1.0		
	2695 SGMR	1	1736	1737.9	4	1.5	.5		
	1415 SGMR	1	1737.3	1737.9	1.7	5.0	1.8		
	606 SGMR	1	1737.3	1737.7	1.7	3.1	1.1		
	4995 SGMR	22	1828	1909.4	87	6.8	2.5		
	2800 OTTA	1	1909	1909.4	1	3.0	1.5		
	2700 PENN	1	1909	1909.2	.8	3.1	1.5		
	2695 SGMR	22	1833	1909.5	74	5.8	1.5		
	1415 SGMR	22	1830	1924.2	85	2.6	.9		
2800 OTTA	20	1912	1928	50	2.8	1.4			
23	1415 SGMR	4	1208	1210.5	7	12.5	2.8		
	606 SGMR	4	1208	1210.5	7	15.5	4.0		
	2700 PENN	26	1400 E		60	D	4.0D		
	2800 OTTA	21	1632	1715	80	3.8	1.9		
	10700 PENN	3	1635.3	1636.1	8.8	21.1	10.5		
	8800 SGMR	45	1635	1636.2	10	21.6	6.0		
	4995 SGMR	45	1633.5	1636.2	12.5	22.8	6.3		
	2800 OTTA	46	1633.3	1636	8	18.0	9.0		
	2700 PENN	45	1632.3	1635.9	8.8	21.5	6.7		
	2695 SGMR	45	1633.5	1636.2	16.5	17.4	4.5		
	1415 SGMR	45	1633.5	1636.2	16.5	12.5	3.5		
	960 PENN	20	1633.7	1635.7	9.4	.8	0.4		
	606 SGMR	45	1633.3	1636.2	26.7	197.3	40.0		
	8800 SGMR	45	1839.4	1839.6	4.7	3.3	1.1		
	4995 SGMR	45	1836.9	1839.4	3.9	10.2	1.0		
	2800 OTTA	2	1836.7	1837.9	1.5	3.2	1.6		
	2800 OTTA	3	1839.3	1839.5	2	16.0	8.0		
	2700 PENN	20	1830	1915	74	4.8	3.1		
	2700 PENN	1	1835.8	1837	1.4	4.3	2.1		
	2700 PENN	3	1838.4	1838.7	1.8	17.4	7.1		
	2695 SGMR	45	1837.1	1839.6	5.4	19.5	4.3		
	1415 SGMR	45	1836.8	1839.9	5.4	33.5	8.1		
	960 PENN	1	1838.2	1838.6	1.1	1.9	0.9		
	606 SGMR	45	1836.4	1836.7	7.6	23.6	6.0		
	2800 OTTA	21	2015	2040	70	3.2	1.6		
2800 OTTA	1	2028	2028.5	2	2.2	1.1			
2800 OTTA	2	2042	2043	2	2.6	1.3			
24	10700 PENN	40	1940		14				
	2700 PENN	40	1941		11				
	10700 PENN	40	2024		24				
	8800 SGMR	20	2017	2025	15.1	6.3	1.1		
	4995 SGMR	3	2020	2020.6	13.5	7.9	1.4		
	2800 OTTA	3	2019	2021.5	5	15.4	7.7		
	2800 OTTA	29	2024		15	3.2	1.6		
	2700 PENN	3	2018.6	2020.8	3.4	15.7	7.3		
	2700 PENN	29	2022	2022	68	6.6	2.4		
	2700 PENN	40	2024		26				
	2695 SGMR	3	2018.7	2021.4	7.2	15.6	3.9		
	1415 SGMR	3	2018.5	2020.4	4.9	16.2	5.5		
	960 PENN	1	2018.7	2020.4	4.3	2.2	1.0		
	606 SGMR	3	2018.9	2020.6	4.4	8.7	3.0		
	2700 PENT	20	2145	2147	40	3.0	2.0		
2700 PENT	1	2333	2333.8	2	4.4	2.2			
25	2800 OTTA	20	1430	1540	230	5.4	2.7		
			1430	1540	140	5.4			
			1650	1730	90	4.0			
	4995 SGMR	3	1901.8	1902.1	1.2	8.0	1.4		

CALIBRATION

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JANUARY 1967

JAN 1967	FREQUENCY	STATION	TYPE	STARTING	TIME OF	DURATION	FLUX DENSITY		INT.	REMARKS	
				TIME	MAXIMUM		$10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$				
				UT	UT	MINUTES	PEAK	MEAN			
26	2800	OTTA	2	1901.7	1902.3	1					
	2700	PENN	5	1902.2E		1	D	7.4	4.8		
	2695	SGMR	1	1901.4	1901.9	1		6.5	1.0	CALIBRATION	
	1415	SGMR	3	1901.8	1902.4	2		9.2	4.6		
	606	SGMR	1	1901.9	1902.5	2.4		2.1	1.0		
	2700	PENN	24	1918.8	1944.2	116	D	5.0D	4.0D		
	2700	PENN	3	1955.1	1955.2	.6		14.3	7.4		
	2800	OTTA	21	1353	1357.5	33		5.2	2.6		
	2695	SGMR	20	1353.8	1403.4	30.2		7.3	3.6		
	1415	SGMR	20	1344	1358	41.4		7.7	3.8		
	606	SGMR	1	1357.4	1358.5	12.1		1.6	.7		
	2800	OTTA	20	1500	1530	80		3.8	1.9		
	2800	OTTA	20	1700	1830	170	D	5.0	2.5		
	27	2800	OTTA	1	2003	2004	3.5		1.8		0.9
		10700	PENN	1	2022.9	2023.4	1		6.8		4.6
		2800	OTTA	20	2015	2023	20		4.4		2.2
		2700	PENN	20	2020	2023.4	12.4		4.1		1.7
		28	2800	OTTA	21	1513	1516	30			4.6
	10700		PENN	3	1514.7	1515	1.2		31.6		12.0
	8800		SGMR	3	1514.8	1515.1	1.1		39.2		6.0
	8800		SGMR	29	1515.9	1515.9	8.7		5.9		2.0
	4995		SGMR	3	1514.8	1515.1	1.1		28.7		4.0
	4995		SGMR	29	1515.9	1515.9	9.1		5.0		1.5
	2800		OTTA	3	1515	1515.3	1		9.0		4.5
	2700		PENN	3	1514.8	1515.2	.9		7.8		4.1
	2695		SGMR	28	1513.7	1514.9	1.2		3.0		1.5
2695	SGMR		3	1514.9	1515.2	.9		9.7	1.5		
2695	SGMR		29	1515.8	1515.8	15.9		3.5	1.0		
10700	PENN		3	1704.5	1705	1.1		17.2	8.5		
2700	PENN		1	1704.8	1705.2	.8		3.9	1.6		
2700	PENT		3	2134	2136.2	6		8.4	4.2		
2800	OTTA		29	2140		20		3.6	1.8		
2700	PENT		1	2235	2236.5	5		6.6	3.3		
29	2695	SGMR	1	1259.2	1300	2.8		3.0	.5		
	606	SGMR	45	1259.5	1259.9	1.5		59.7	10.0		
		PENN		1510	1700					HEAVY RAIN	
	4995	SGMR	20	1526.7	1527	7.3		5.2	1.0		
	2800	OTTA	3	1526.7	1527.7	2.5		10.0	6.5		
	2700	PENN	20	1526.5	1527.6	10.2		7.6	2.2		
	2695	SGMR	20	1526.6	1527.7	10.5		9.0	3.0		
	1415	SGMR	1	1526.7	1527	2.3		3.6	1.0		
	606	SGMR	22	1526.8	1527.4	5.3		15.8	4.0		
	2800	OTTA	30	1529		10		3.2	1.6		
	2800	OTTA	1	1533	1535	5		2.6	1.3		
	2800	OTTA	21	1558	1655	210		11.2	5.6		
	8800	SGMR	20	1559.6	1617.8	42.4		35.6	9.0		
	4995	SGMR	20	1559.3	1604.2	7.7		11.0	3.0		
	2800	OTTA	4	1558	1601.3	9		19.0	8.0		
	2700	PENN	3	1559.2	1604.1	7.6		9.1	5.8		
	2695	SGMR	20	1557.8	1601.2	10.4		22.5	6.0		
	1415	SGMR	20	1558.2	1601.5	9.8		8.1	2.0		
	606	SGMR	1	1600	1601.2	4		1.4	.5		
	4995	SGMR	20	1612.7	1614.4	27.3		29.6	7.0		
	2800	OTTA	4	1612.5	1618	25		21.0	10.0		
	2700	PENN	20	1606.6	1617.6	29.2		16.6	6.1		
	2700	PENN	29	1606.8	1641	120.8		9.1	5.2		
	2695	SGMR	20	1612.3	1617.5	24.7		22.5	5.0		
	1415	SGMR	40	1612.4	1614.3	8.4		13.1	5.0		
	606	SGMR	3	1613.8	1614.4	1.7		12.2	3.0		
	2800	OTTA	1	1803	1803.3	2		1.0	0.5		
	2800	OTTA	1	2040	2040.8	5		1.8	0.9		
	606	SGMR	40	2041.4	2041.5	.9		25.4	5.0		
486	WASH	3	2042		.5		138.0D				
30	10700	PENN	1	1434	1434.3	.9		7.2	3.6		
	2800	OTTA	20	1428	1432	35		3.2	1.6		
	2700	PENN	1	1431.1	1431.2	.7		2.3	1.2		
	1415	SGMR	40	1430	1431.4	2		4.4	2.0		
	2800	OTTA	21	1558	1605	20		3.2	1.6		
	2800	OTTA	1	1558	1558.5	1.5		4.8	2.4		
	2800	OTTA	2	1600.9	1601	.8		3.0	2.0		
	2700	PENN	1	1557.7	1558.5	1.3		5.5	2.5		
	2695	SGMR	4	1559	1559.6	4		9.0	3.0		
	1415	SGMR	2	1557.8	1558.6	5.5		6.9	2.3		
	606	SGMR	2	1558	1558.2	4		3.4	1.2		
	2800	OTTA	1	1625	1625.5	1		1.8	0.9		
	2700	PENN	1	1624.9	1625.4	1.2		3.0	1.5		
	2800	OTTA	1	1938	1940	4		6.6	3.3		
	2700	PENN	1	1937.7	1939.8	4.9		6.3	2.6		
	2695	SGMR	1	1938.8	1939.8	3.2		6.2	2.0		
	1415	SGMR	3	1937.2	1938.3	4.8		10.6	3.5		
	606	SGMR	4	1934	1938.4	11.3		16.5	5.5		
	2700	PENN	24	2005.8	2134.8	90		8.0	6.0		
	2800	OTTA	1	2031.5	2032.2	1.5		7.2	3.6		
	2700	PENN	1	2031.8	2032.2	1.8		6.7	3.3		
	2695	SGMR	1	2031.9	2032.2	2.1		6.2	2.1		
	1415	SGMR	1	2031.9	2032.5	6.1		6.8	2.3		

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SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JANUARY 1967

JAN. 1967	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{Wm}^{-2} (\text{c/s})^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
31	960 PENN	1	2031.9	2032.4	1	1.6	0.8		
	606 SGMR	1	2031.9	2032.7	5.1	6.6	2.2		
	606 SGMR	40	2038.2	2038.9	.9	9.9	3.3		
	2700 PENT	20	2117	2130	70	6.2	3.1		
	2800 OTTA	3	2251	2252.5	4	12.2	6.1		
	2800 OTTA	1	1626	1626.5	1	1.2	0.6		
	2700 PENN	1	1626.4	1626.6	.8	1.0	0.5		
	2800 OTTA	21	1820	1836	20	3.6	1.8		
	4995 SGMR	45	1831.8	1832	5.2	3.7	1.5		
	4995 SGMR	45	1831.8	1834	5.2	3.7	1.5		
	2800 OTTA	1	1831.7	1832	1.5	6.0	3.0		
	2800 OTTA	1	1834.2	1834.5	1	6.0	3.0		
	2700 PENN	3	1831.6	1831.9	1	7.8	4.6		
	2700 PENN	29	1832.6	1832.6	5	3.7	1.8		
	2700 PENN	1	1834.2	1834.4	1.4	6.8	2.4		
	2695 SGMR	45	1831.8	1832	5.2	6.2	3.0		
	1415 SGMR	45	1831.8	1832.1	5.2	5.4	2.5		
	1415 SGMR	45	1831.8	1834.4	5.2	5.4	2.5		
	606 SGMR	3	1831.8	1832	.4	34.9	11.5		
	2800 OTTA	20	1845	1925	85	2.8	1.4		
	2800 OTTA	1	2022	2022.5	1.2	1.2	0.6		

Note:

It was anticipated by ARO, Ottawa in February 1966, that small rise and fall bursts should be discontinued in their report because of increase in solar activity and difficulty in proper separation of these events. This policy was not put into effect however, until the current report of January 1967. The original intent of not listing such events below 2 flux units is of necessity now being followed. Small impulsive bursts will still be listed.

Internal comparison of the observations from ARO, Ottawa and DRAO, Penticton, suggest that the 2700 mc/s flux levels are low due to unexplained operational troubles at the latter station.

18 Mc/s Bursts will no longer be carried in the Sudden Ionospheric Disturbances table. The data is filed in World Data Center A and may be obtained from them.

No data is available from Boulder or Haleakala for January 1967.

SOLAR RADIO EMISSION  
SPECTRAL OBSERVATION

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Jan 67

JANUARY 1967

University of Colorado

7.6-41 Mc/s

Date Jan 1967	Bursts				Date Jan 1967	Bursts			
	Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)		Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)
1	no observ.				9	III	2209-2209:15	1-	27-41
2	III	1410:30-1410:45	1-	28-40	III	2230-2231	1	29-40	
	III	1514:30-1516	2	24-41	10	III	1713:45-1714	1	26-41
	II	1519:45-1529	2	24-41	III	1750:15-1750:45	1+	29-40	
	III	1534:30-1534:45	1-	26-36	IIIg	2043:45-2046:45	1	20-41	
	IIIg	1547-1548:30	1-	26-41	III	2056:45-2057	1-	22-39	
	III	1622:30-1622:45	1-	25-39	III	1616:45-1617	1-	30-41	
	III	1643-1643:30	1-	25-40	continuum	1722-1737	1	24-41	
	III	1651:15-1651:30	1-	26-40	IIIg	1732:15-1734:45	3	23-41	
	III	1706:45-1707:15	1-	20-37	III	1747:45-1748	1-	25-41	
	III	1856:30-1856:45	2-	18-41	III	1838:45-1839:15	1-	25-41	
	III	1856:45-1857:15	1+	18-41	III	2010:30-2011:30	2	18-41	
3	III	1603:45-1604	1-	25-35	III	2019:45-2020	1-	28-38	
	III	1745:40-1746:30	1+	22-41	continuum	2033:15-2059:45	2	23-41	
	III	2119:30-2122:15	2	21-41	III	2033:15-2034	2	22-41	
4	continuum	1555-1915	1-	25-41	IIIg	2044:15-2044:45	2	16-41	
	continuum	1915-2114	1	24-41	II	2059-2109:30	1+	22-41	
	continuum	2114-2153	2	22-41	IV	2119-2205	1	28-41	
	continuum	2153-a2335	1	24-41	III	2138:45-2139	1-	28-41	
5	III	1558:45-1559	1-	28-38	III	2040:45-2041:15	2	25-41	
	III	1612-1612:30	1-	28-40	12	IIIg	1949:30-1951:45	1+	22-41
	III	1746:45-1747:15	1+	24-41	III	1956:45-1957	1-	30-38	
	continuum	1859-2157	1	24-40	III	2028:30-2028:45	1-	22-36	
	III	1914:30-1914:45	2	23-40	III	2148:45-2149	1-	25-41	
	III	1927:30-1928:15	2	22-41	13	continuum	1810-2108	2	25-41
6	no observ.	1523-1630			III	1844:45-1845:15	3	32-38	
	continuum	b1630-2205	1	23-41	IIIg	1953-1954	2+	24-41	
	IIIg	1719-1719:45	2	20-41	14	IIIg	1635:30-1637	1	28-41
	III	2229:45-2230:15	1	24-36	III	1647:45-1648:15	1-	26-41	
	III	2249:30-2249:45	1	18-35	III	1737-1737:15	1-	24-41	
7	IIIg	1636:30-1639:45	1+	22-41	IIIg	1813:15-1814:30	1-	29-40	
	IIIg	1727-1727:30	1+	25-41	III	1906:15-1906:30	1-	24-40	
	continuum	1900-2245	1	27-41	IIIg	1921:15-1923:15	1-	24-38	
	III	1942:30-1942:45	1+	24-41	III	2025:30-2025:45	1-	22-36	
	III	1947-1947:15	1+	31-41	III	2032:30-2034:30	1-	22-41	
	III	2128:15-2128:30	1+	28-41	III	2155:45-2156	1-	27-38	
	III	2142-2142:30	2	22-41	III	2229:45-2230:30	1+	30-41	
	III	2152:45-2153	1+	22-41	III	2250:30-2250:45	1-	26-39	
8	III	1545:30-1546	1	30-41	15	continuum	b1516-1803	1+	24-41
	III	1548-1548:30	1	32-41	III	1553:45-1554	2	22-41	
	III	1559:45-1600:15	1-	25-40	III	1613:15-1613:45	2	19-41	
	III	1643:15-1643:45	1-	27-41	IIIg	1750:30-1751:45	2	18-41	
	III	1735:30-1736	1	23-40	III	1820:15-1820:30	3	20-41	
	III	1802:45-1803	1-	22-36	III	1847-1847:15	1	24-35	
	continuum	1909-2036	1-	25-41	III	1848:15-1848:30	1	19-38	
	III	1926:45-1927:15	1+	25-40	continuum	1902-a2345	1-	22-41	
	III	1939:45-1940:15	2	23-41	IIIg	1904:30-1906	2	21-37	
	IIIg	2013:30-2015:15	2+	25-40	IIIg	1931-1934	2	16-41	
9	III	1551:15-1553:15	3	27-41	IIIg	1940:30-1941:30	2	16-41	
	III	1834-1834:15	1+	30-41	III	1945:15-1945:30	2	16-41	



SOLAR RADIO EMISSION  
SPECTRAL OBSERVATION

JANUARY 1967

University of Colorado

7.6-41 Mc/s

Date Jan 1967	Bursts				Date Jan 1967	Bursts			
	Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)		Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)
15	III	1945:30-1946	2	16-41	20	IIIg	1645:30-1646:30	1	21-40
	III	1946-1946:30	2	16-41		continuum	1755-1804	1	22-41
	III	1946:30-1947:15	2	16-41		III	1833:15-1833:30	1	24-39
	IIIG	1957-2000:45	2	16-41		III	1906-1906:30	1	22-41
	IIIG	2007-2011	3	16-41		III	1911:30-1911:45	1+	22-41
	IIIG	2046:15-2048:45	2	15-41		III	1922:30-1922:45	1	29-40
	III	2241:30-2241:45	2	26-41		III	2016:15-2016:30	1	24-41
	IIIG	2243-2247:45	2	25-41		III	2020:30-2021:45	1	24-36
	IIIG	2250-2253:15	3	22-41		III	2024-2024:15	1+	20-40
	IIIg	2314:30-2318	1	22-41		IIIg	2031:15-2035	3	22-41
16	IIIg	1457:15-1459	2	22-41	continuum	2038:30-2056	1	26-41	
	III	1711:30-1711:45	1	19-38	continuum	2056-2106	2	28-41	
	III	1721:30-1721:45	1	24-41	IIIg	2057-2059:45	2	22-41	
	III	1805:30-1805:45	1	24-41	continuum	2122-2215	1+	28-41	
	III	1827:30-1827:45	2	22-38	III	2207:30-2207:45	1+	25-41	
	III	1834-1834:30	1-	25-40	III	2226:45-2227	1	24-41	
	III	1837:15-1837:45	3	22-40	III	2343:30-2343:45	2	21-41	
	continuum	1847-2025	1-	28-41	21	IIIg	2149:15-2151:15	2	21-41
	III	1916:45-1917	1	24-41		II	2151:15-2157:30	3	28-41
	III	1939:30-1944	1	21-41	IV	2157:30-2221	1-	28-41	
III	2053:30-2053:45	1-	28-38	22	IIIg	2312:30-2314:15	1+	25-41	
III	2102:30-2102:45	1-	22-41		IIIg	1522:15-1523:15	1-	22-41	
III	2111:15-2111:30	1-	26-38	III	1910:15-1910:30	1-	28-38		
III	2119:30-2119:45	1-	25-37	III	1916:30-1916:45	1-	28-39		
III	2204:30-2204:45	1	22-41	continuum	1921-1931	1-	25-41		
continuum	2216-a2322	1-	22-41	continuum	1950-2107	1	28-41		
III	2230:15-2230:30	2	22-41	III	2011:15-2011:30	1	24-41		
III	2258:30-2259:15	3	21-41	23	III	1602:45-1603	1-	22-41	
continuum	b1501-a2325	1+	24-41		continuum	1635-1708	1-	27-41	
17	IIIg	1656:45-1659:30	2	24-41	III	1639:15-1639:30	1	24-41	
	III	1802-1803:45	3	20-41	III	1642:15-1642:30	1	23-41	
18	III	1631:45-1632	1	22-41	III	1647:30-1647:45	1	18-41	
	III	1857:45-1858	1	23-39	III	1714:45-1716:45	1	21-41	
19	III	1524:30-1524:45	1-	30-40	III	1758:15-1758:30	1+	25-41	
	III	1551:45-1552:15	1+	22-41	continuum	1815-2102	1-	28-41	
20	III	1821:45-1822:15	1-	27-39	III	2018:45-2019:30	1+	21-39	
	III	1948:45-1949	1	28-34	IIIg	2027:45-2031	2	17-41	
	IIIg	2210:15-2212	1	26-41	IIIG	2042-2044	1+	22-41	
	III	2222:45-2223	1	23-41	continuum	2102-2200	1	28-41	
	continuum	b1509:30-1538:15	1-	25-41	III	2222:30-2223:30	1-	25-38	
20	III	1510:15-1510:30	1+	25-41	24	III	2229:30-2229:45	1-	25-41
	III	1510:30-1510:45	1+	25-41		III	2311:45-2312	1-	28-39
	III	1512:30-1512:45	2	21-41		continuum	b1505-2019:45	1-	25-41
	III	1512:45-1513	2	21-41		III	1651-1654:30	1+	19-36
	III	1514:30-1514:45	1	21-41		IIIg	1846:45-1849:30	1+	20-41
	III	1517:30-1517:45	2	19-41		IIIG	2019:45-2024:45	3	16-41
	III	1529:15-1529:30	1+	22-41		IV	2025:30-2047	1	28-41
	continuum	1538:15-1548:30	1+	30-41		II	2032-2043	1	25-41
	III	1546:45-1547:30	2	22-41		continuum	2047-a2357	2	27-41
	III	1600:45-1601:15	1	23-41		III	2131:30-2132	2	24-41
				III	2314:15-2314:30	2	22-41		

SOLAR RADIO EMISSION  
SPECTRAL OBSERVATION

JANUARY 1967

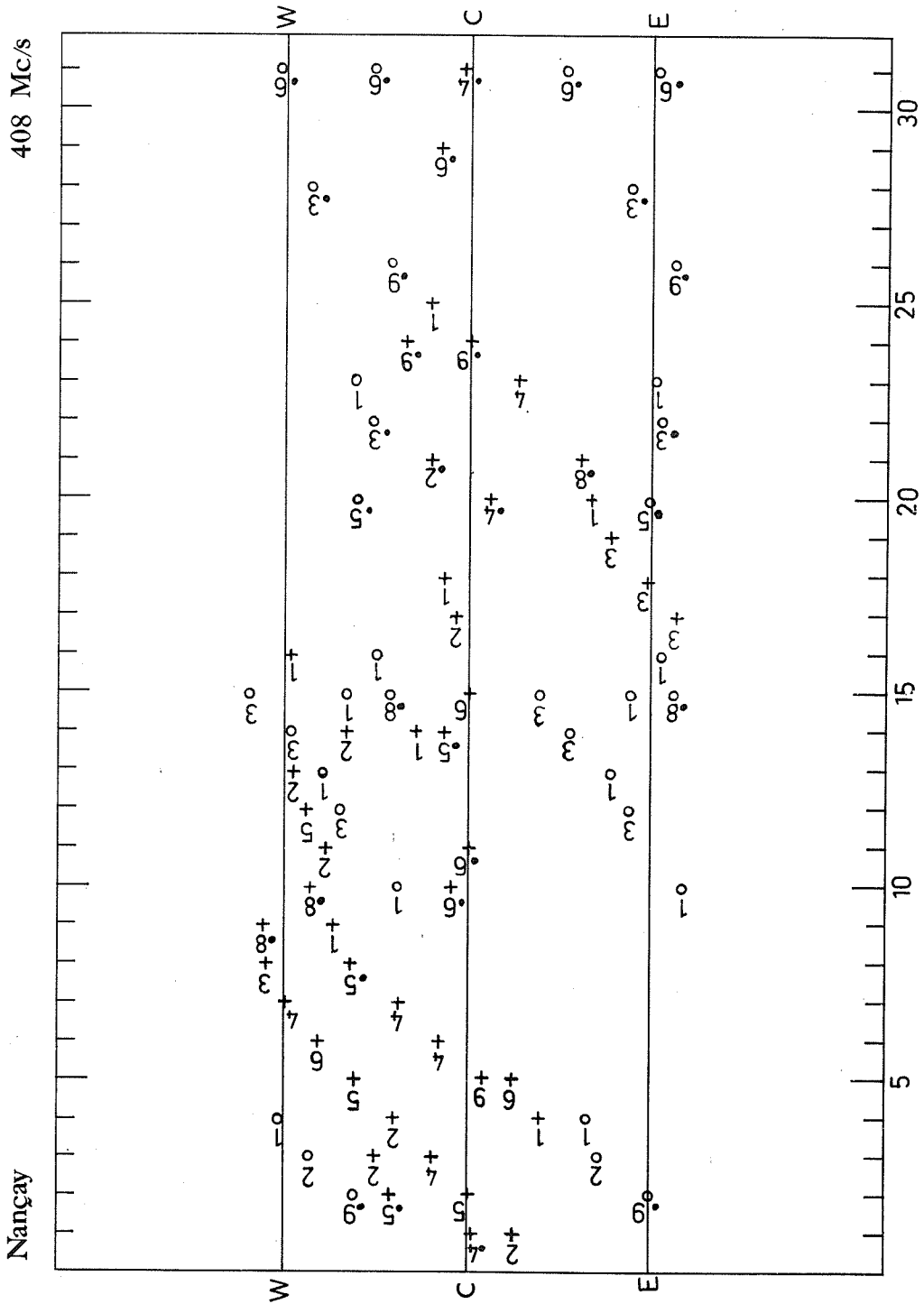
University of Colorado

7.6-41 Mc/s

Date Jan 1967	Bursts				Date Jan 1967	Bursts			
	Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)		Type	Time (U. T.)	Inten- sity	Frequency Range (Mc/s)
25	continuum III IIIg III III	b1520-20000 1643:15-1643:45 1902-1904:45 2220:45-2221:15 2244-2244:15	1- 1+ 2 1+ 1	28-41 20-41 18-41 21-41 20-41	29	continuum III IIIG continuum continuum	2000-2201:30 2142:15-2142:30 2203-2208 2201:30-2245 2245-a 2330	1- 1+ 3 2 1	28-41 16-41 18-41 21-41 28-41
26	continuum III IIIg III III	1615-2110 1732:45-1733:15 1826:45-1830 2205:45-2206 2317:45-2318	1- 1 1+ 1 1-	27-41 20-41 22-40 30-41 22-41	30	continuum III IIIg IIIg III IIIg III	b1405-2251:45 1600:45-1601:15 1601:15-1604:45 1625:30-1627:15 1939-1942  2032-2034:15 2107-2108:30 2246:30-2247:45 2251:45-2257:15 2310-2340	1+ 3 3 3 3 3 3	25-41 28-38 22-41 15-41 20-41  18-41 18-41 24-41 22-41 26-41
27	no observ. continuum III	1510-1835 b1835-a2340 2158-2158:15	 1+ 2	 22-41 22-38		IIIg IIIg III continuum continuum	2340-a2435 b1415-a2136 2136-2350	1' 1+	25-41 26-41
28	continuum continuum  continuum III continuum IIIg continuum	1415-1840 1840-2200  2200-a2403 2259:15-2259:30 b1415-1718 1526:15-1529:45 1718-2000	1+ 2 1+ 2  1+ 2 1 3 1+	25-41 19-41  27-41 25-41 28-41 21-41 20-41	31	no observ.  g Group of 10 G Group of 11	or less type IIIs or more type IIIs		

SOLAR RADIO EMISSION  
INTERFEROMETRIC OBSERVATION

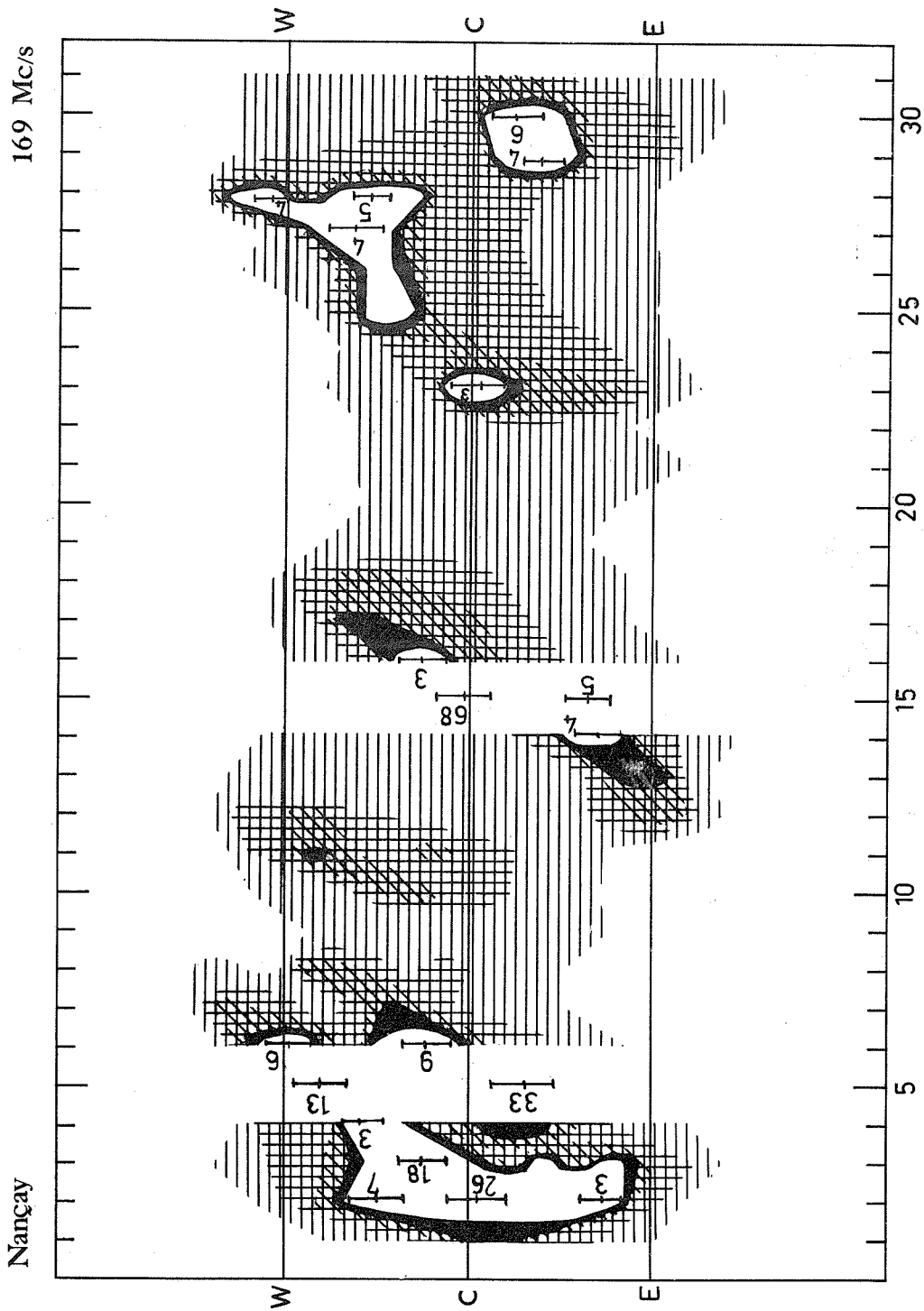
JANUARY 1967



JANUARY 1967

SOLAR RADIO EMISSION  
INTERFEROMETRIC OBSERVATION

JANUARY 1967



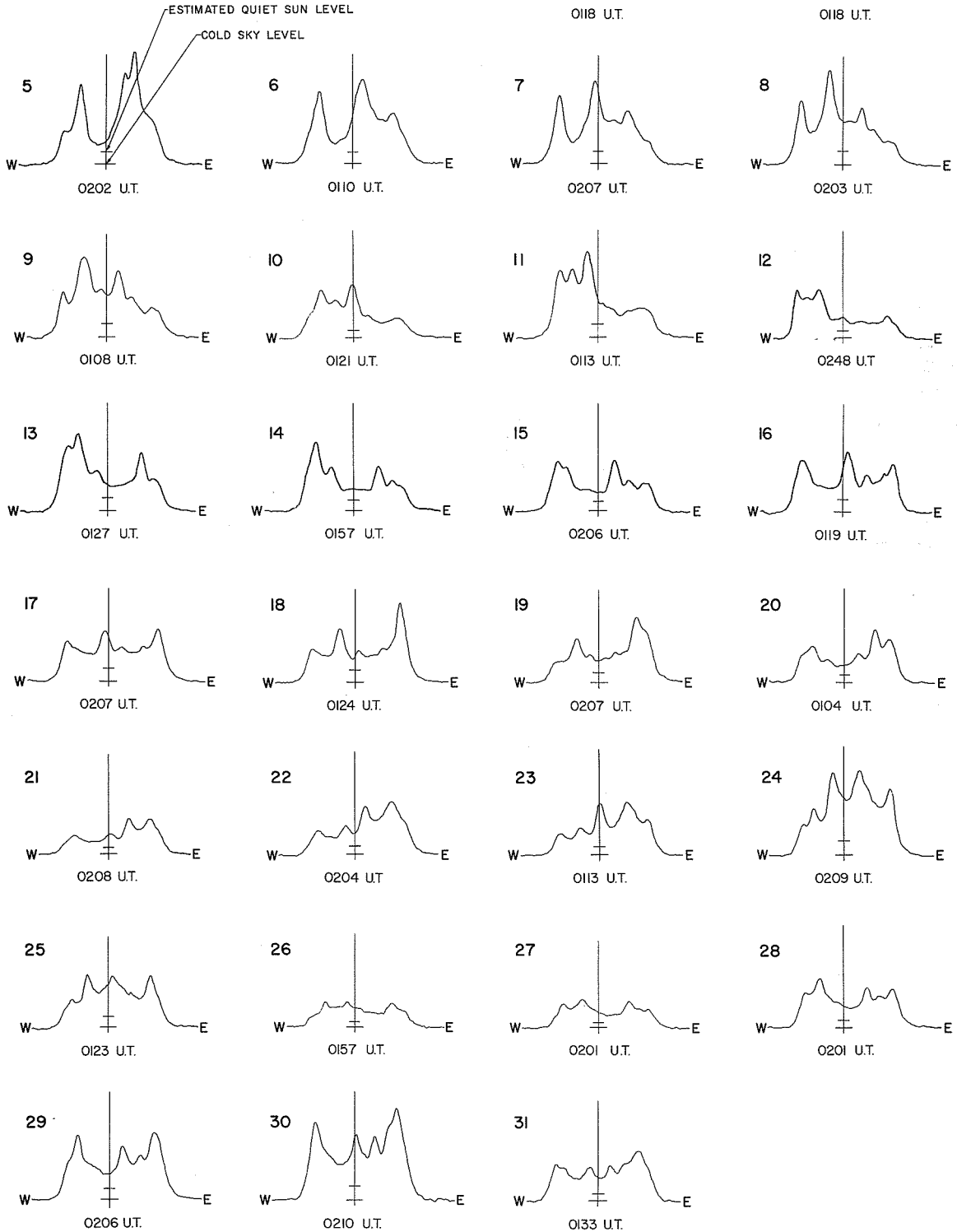
JANUARY 1967

EAST - WEST SOLAR SCANS  
January 1967

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

NO DATA  
1967 January 1

NO DATA  
1967 January 2



EAST - WEST SOLAR SCANS  
January 1967

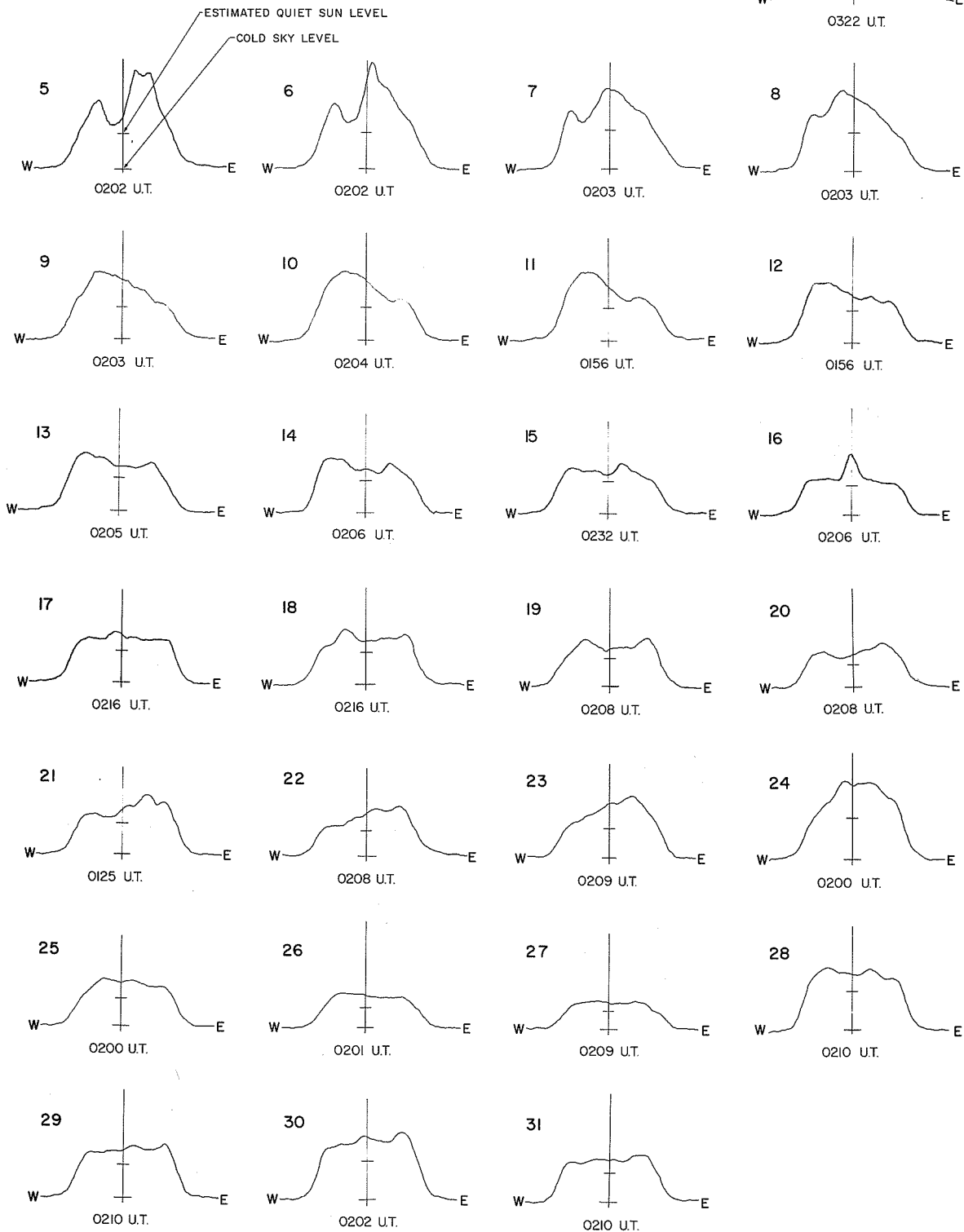
FLEURS, AUSTRALIA

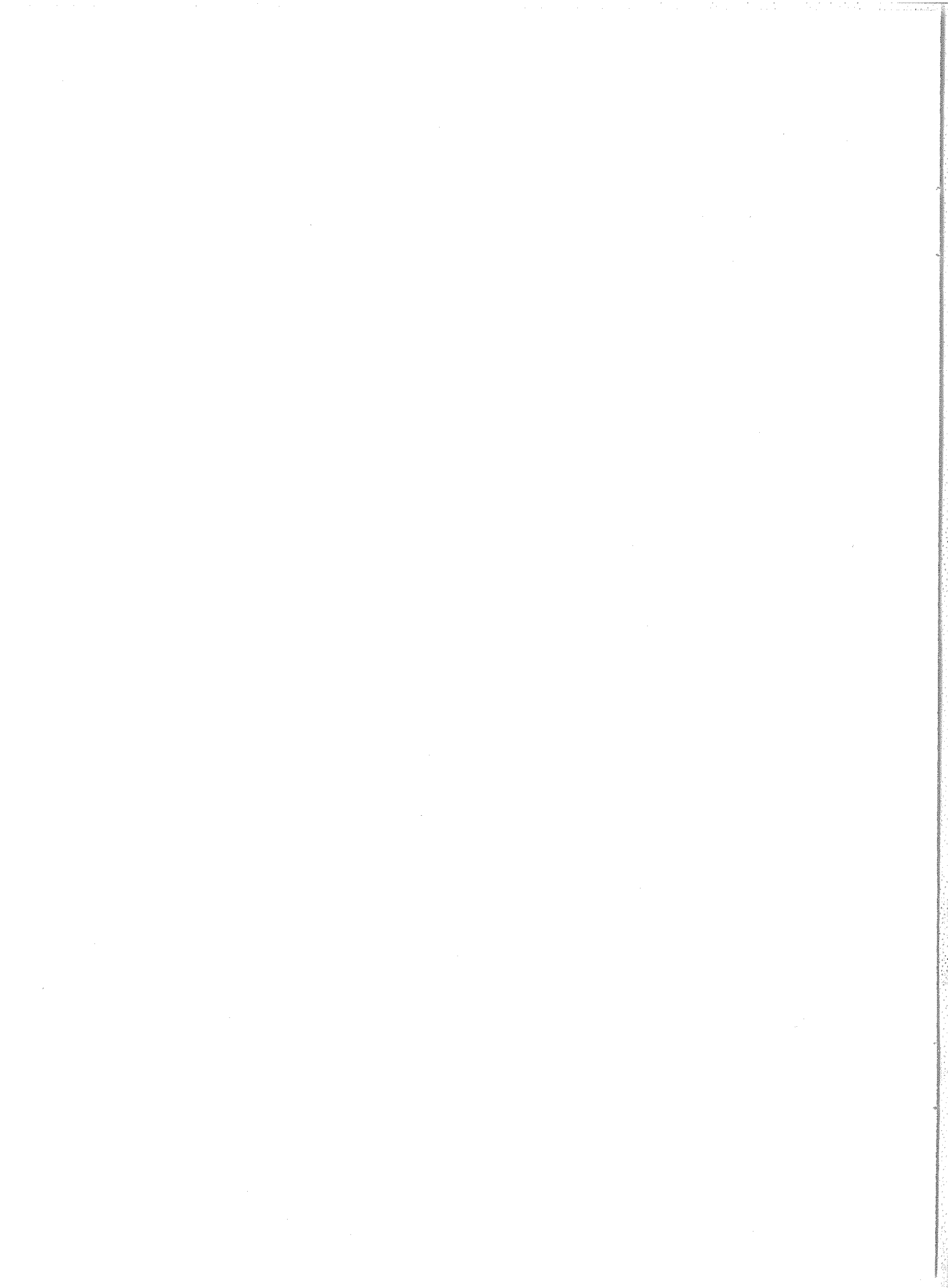
43 cm  
Fan-Beam with 4 minutes of arc  
E-W Resolution

NO DATA  
1967 January 1

NO DATA  
1967 January 2

NO DATA  
1967 January 3





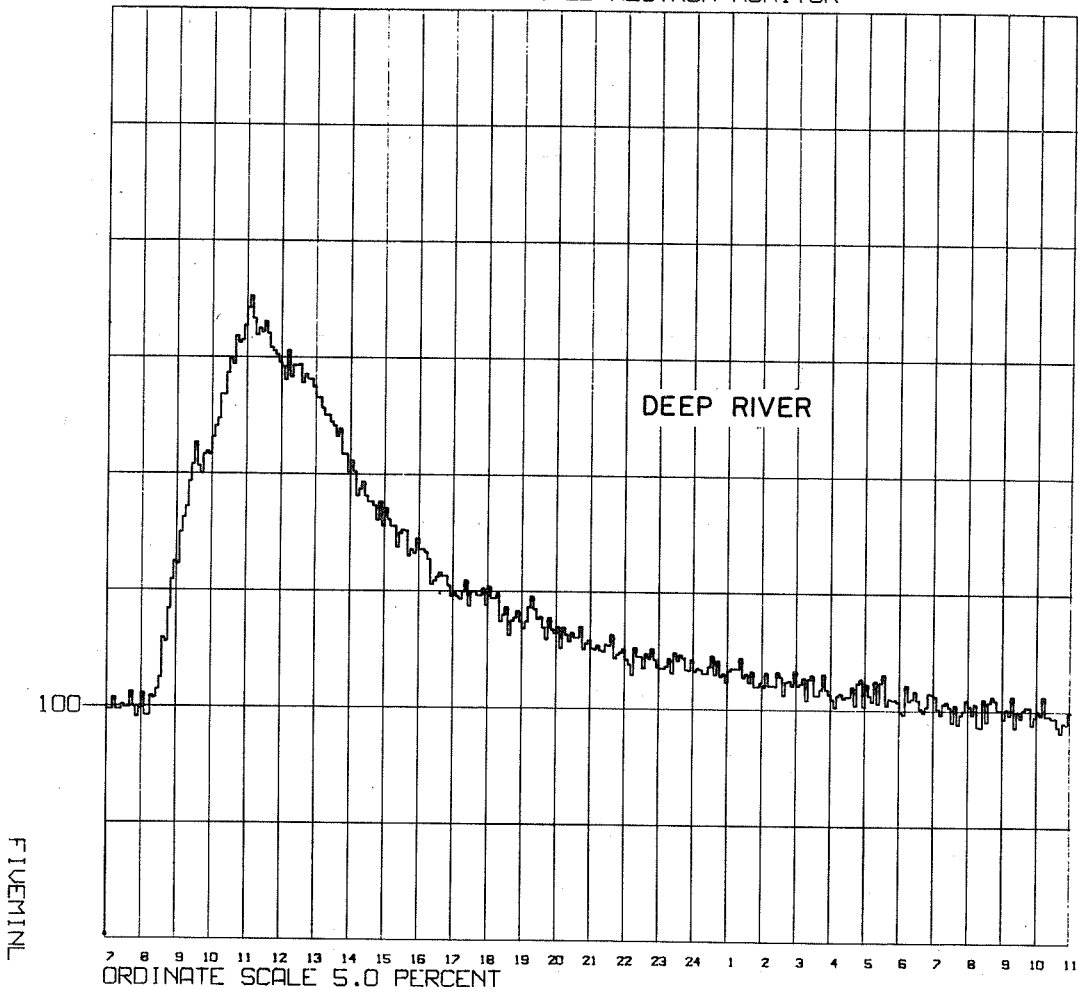
# SOLAR PROTON EVENTS ( Provisional )

	Jan. 28	Jan. 29	Jan. 30	Jan. 31	Feb. 1	Feb. 2
<b>I Absorption</b>						
<b>A. VLF transmission</b>						
1. GBR - Rugby, England to Anchorage, Alaska	start at 0500; amp. to zero at 0600				still affected by PCA when GBR went off air	effects still visible
2. NSS - Annapolis, Md. to Anchorage	start at 0500, 40° phase adv. over 1-2 hrs. max. at 0700				still continuing when transmitter off air at 0000	
3. GBR - Rugby, England to Boulder, Colo.	start at 0200; max. about 1600 360° phase adv.				still continuing	
4. Aldra, Norway - Boulder	start at 0200; max. at 1200 >360° phase adv.					
<b>B. Riometry</b>						
1. College, Alaska	start at 1800; max. of 3 dbs. at 2200	absorption still visible	absorption barely visible	recovery		
2. Barter Is., Alaska	start at 1800; max. of 4 dbs. at 2200	"	"	"		
3. Barrow, Alaska	start at 1820; max. of 4 dbs. at 2200	"	"	"		
4. Antarctica (Byrd Station)	start at 0600 max. of 13 dbs.					some communications restored
<b>C. Forward Scatter</b>						
Barrow to Anchorage path	start at 1800; max. of approx. 10 dbs. at 2100. Also noise absorption of 5 dbs.					
<b>II Particle count mechanisms</b>						
A. Deep River neutron monitor	start at 0839; max. of 16% increase at 1115.	recovery about 0700		(see illustration on other side)		

Several space vehicles reported neutron or proton events during this period.



JANUARY 28-29 1967 CORRECTED NEUTRON MONITOR



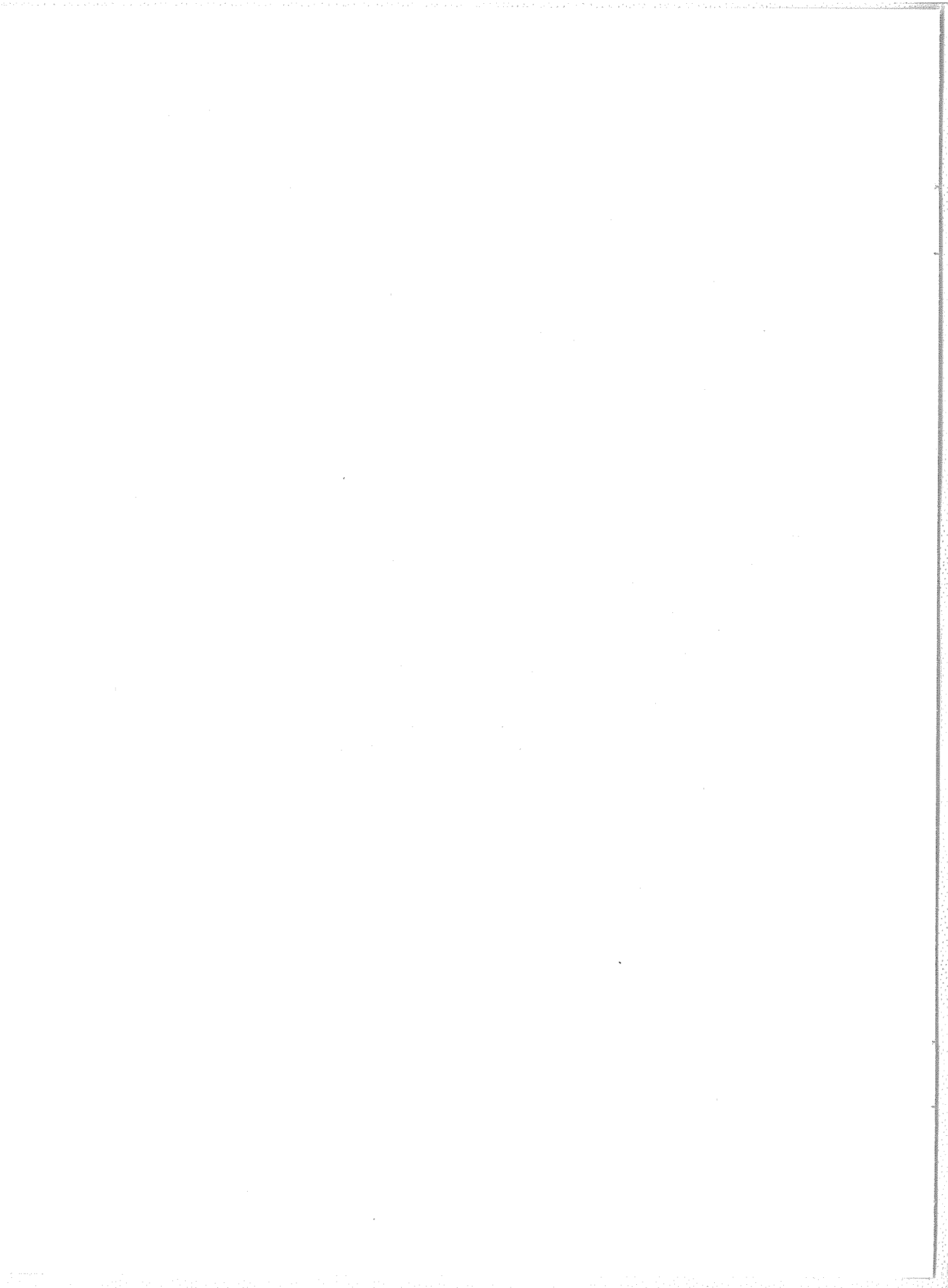
DEEP RIVER

FIVE MIN L

ORDINATE SCALE 5.0 PERCENT

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for December 1966 Data

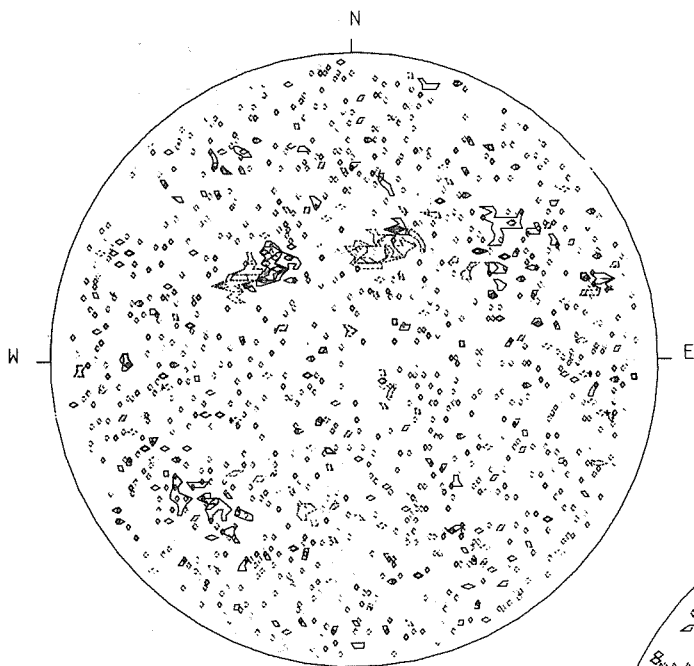
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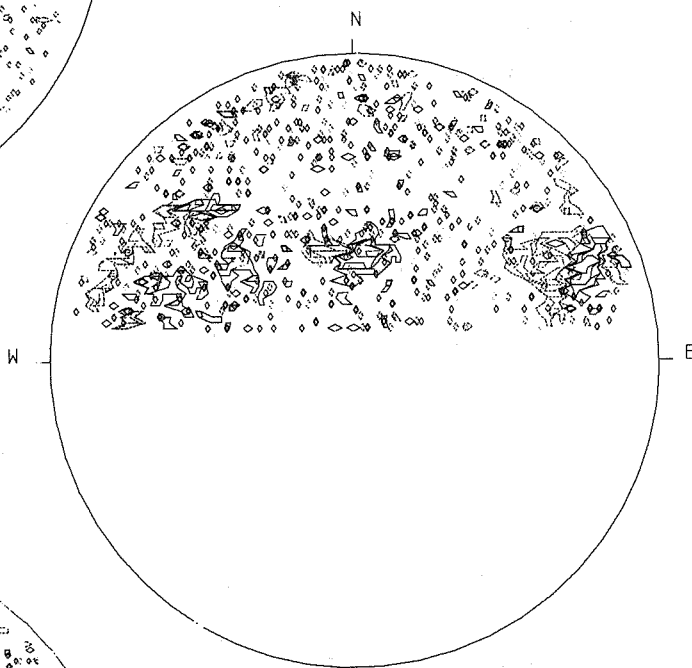
# MOUNT WILSON OBSERVATORY MAGNETOGRAMS

DECEMBER 1966

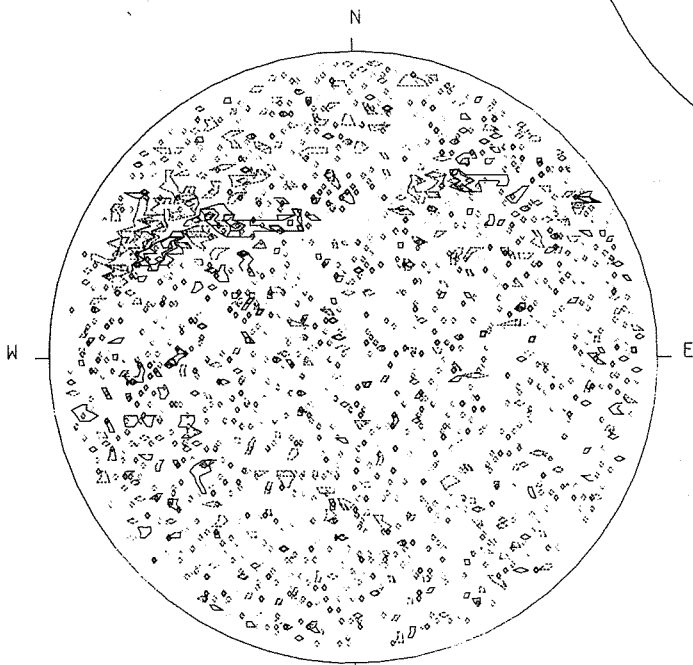
SOLID-PLUS  
DOTTED-MINUS  
LEVELS  
(GAUSS)  
±3.00 ±15.00  
±6.00 ±25.00  
±10.00 ±40.00



12/1/66 16.82-18.30  
DELTA Y=62.0 DELTA X=50.0  
-3 LEVEL NOT PLOTTED



12/12/66 22.07-17.51  
DELTA Y=77.6 DELTA X=50.0  
-3 LEVEL NOT PLOTTED

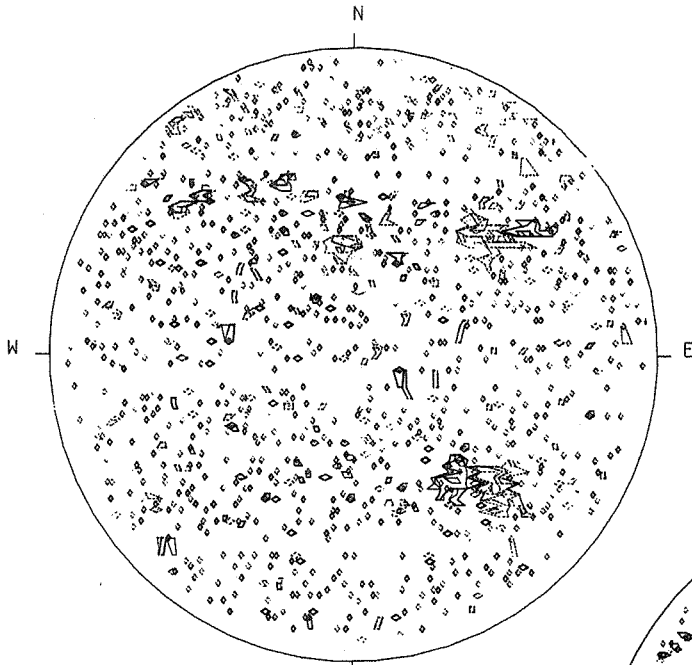


12/20/66 16.72-18.16  
DELTA Y=62.0 DELTA X=981.0

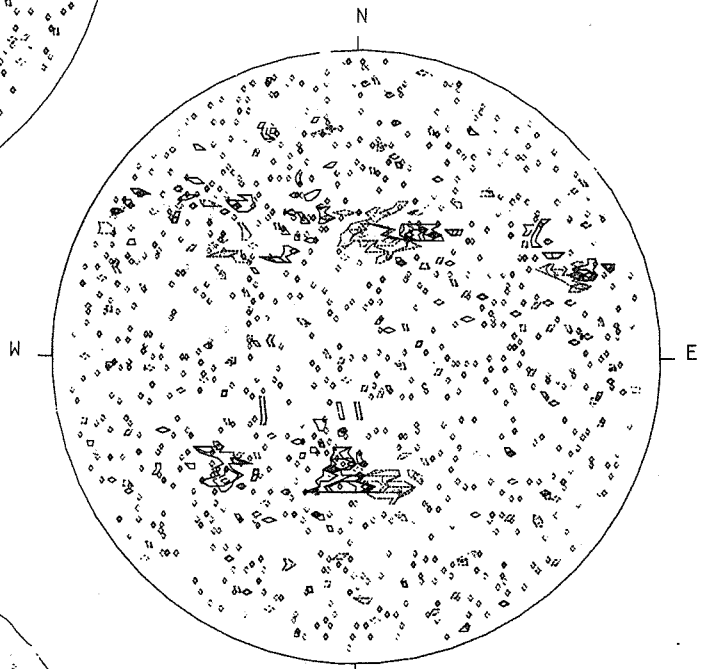
# MOUNT WILSON OBSERVATORY MAGNETOGRAMS

DECEMBER 1966

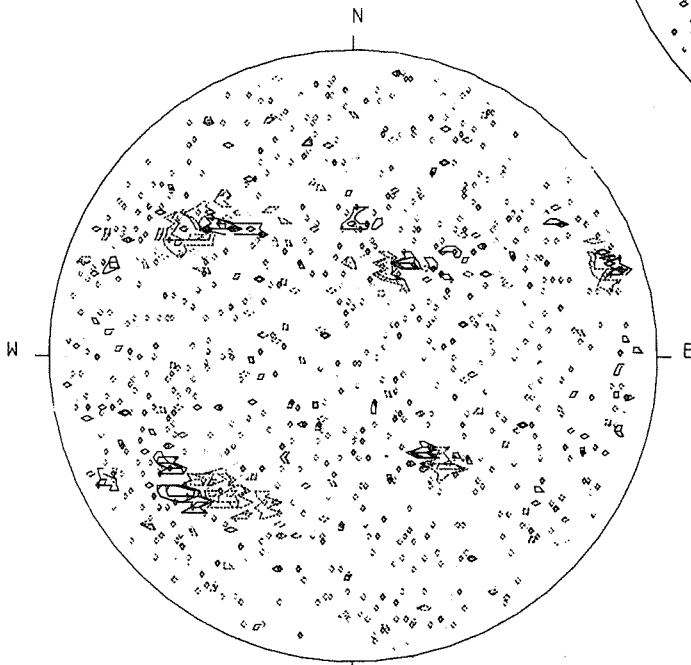
SOLID-PLUS  
DOTTED-MINUS  
LEVELS  
(GAUSS)  
±3.00 ±15.00  
±6.00 ±25.00  
±10.00 ±40.00



12/26/66 18.63-20.17  
DELTAY=67.5 DELTAX=49.1  
±3 LEVEL NOT PLOTTED



12/28/66 17.70-19.17  
DELTAY=63.4 DELTAX=51.9  
-3 LEVEL NOT PLOTTED



12/31/66 17.54-18.99  
DELTAY=62.2 DELTAX=50.6  
-3 LEVEL NOT PLOTTED

# FINAL CORONAL LINE EMISSION INDICES

DECEMBER 1966

CMP December 1966	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 <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub> R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub> R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub> R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub> R <sub>1</sub>
1	65	81	14 35	66	97	4 8	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x
4	54	76	10 13	12	14	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x	x	x	x	x
6	x	x	x	x	x	x	x	x	x	x	x	x
7	x	x	x	x	x	x	x	x	x	x	x	x
8	96	124	10 26	23	37	6 10	37	50	11	79	112	24
9	x	x	x	x	x	x	71	96	25	33	114	27
10	x	x	x	x	x	x	x	x	x	x	x	x
11	x	x	x	x	x	x	59	90	x	x	145	x
12	x	x	x	x	x	x	45	83	x	x	65	x
13	76	114	5 15	29	45	5 15	32	46	13	14	109	41
14	x	x	x	x	x	x	x	x	x	x	x	x
15	x	x	x	x	x	x	24	30	7	15	78	51
16	x	x	x	x	x	x	x	x	x	x	177	x
17	x	x	x	x	x	x	x	x	x	x	97	x
18	x	x	x	x	x	x	x	x	x	x	160	x
19	x	x	x	x	x	x	x	x	x	x	160	x
20	x	x	x	x	x	x	x	x	x	x	122	x
21	x	x	x	x	x	x	x	x	x	x	x	x
22	97	144	18 29	23	27	17 23	14	18	8	20	30	12
23	72	94	13 20	18	22	13 18	x	x	x	x	x	x
24	x	x	x	x	x	x	23	47	5	7	49	17
25	81	146	x	24	29	x	21	28	10	20	45	20
26	71	122	x	x	x	x	29	40	17	24	49	55
27	97	129	16 20	51	73	16 32	46	58	9	23	72	16
28	x	x	x	x	x	x	x	x	x	x	x	x
29	116	181	12 27	77	102	21 33	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x



SUDDEN IONOSPHERIC DISTURBANCES

DECEMBER 1966

DEC	UNIVERSAL TIME			WIDE SPREAD INDEX	SWF TYPE IMP	IMPORTANCE					STATIONS	KNOWN FLARE	
	START	END	MAX			ABS	SCNA	SEA	SPA	SES			SFD
1966													
21	1456			5					99			BO(WWVL20-295) UM(NSS21-108)	
21	1910			5					95			BO(WWVL20-95) HA(WWVL20-11)	1910U
21	1925	2025	1948	1						3		UM BO(WWVL20-280)	
21	1938			5					99			HA(WWVL20-61) MA(NPG18-29)	
21	1938	2015	1949	5	SL 1+							UM(NSS21-62,NBA24-43)	
21	1940	1954	1945	1		9	1					TR HU MC WS BO	
22	0110	0205		3	S 1							CA GH	
22	2229	2241	2232	1					32			MA(NPG18-32)	2210
23	0229	0258	0243	1		13	1-					MA	*
23	0229	0312	0243	1					47			MA(NPG18-47)	*
23	0230	0254	0244	1	S 1							MA	*
23	0754	0815	0807	5	SL 1							MA OK	0752
23	0754	0830	0800	5				2				ND A17 KE	
23	0754	0833	0804	1					36			MA(NPG18-36)	
23	0754	0930	0805	1						1		ND	
23	0755	0825	0803	5		50	2					ND MA RO	
23	1114	1155	1127	1						2		ND	1110
23	1116	1201		1				2+				KE	
23	1305		1330	1					60			UM(NBA24-60)	1303
23	1315	1415	1328	1						2+		UM	
23	1334	1430		1	S 1-							BA	
23	1505	1535	1510	5	SL 1+							HU BA BE MC TR	1506
23	1505	1600	1512	1						2		UM	
23	1506			5					99			BO(WWVL20-295) UM(NBA24-60)	
23	1506	1515	1507	1						03		BO(WWV19-0.3)	
23	1639			1					36			BO(NBA24-36)	1637
23	1640	1719	1646	5	SL 2							BE BA HU TR WS	
23	1640	1752	1652	1						1+		UM	
23	1959			5					35			BO(WWVL20-35)	1956
23	2211	2330	2224	5					25			HA(WWVL20-18) MA(NPG18-25) HA(WWVL20-22)	2135
24	0345	0415	0355	1						1-		ND	0345
24	0348	0409	0354	1		9	1-					MA	
24	0348	0418	0355	1					50			MA(NPG18-50)	
24	0350	0408	0356	1	S 1-							MA	
24	0435	0528	0442	1						1-		ND	0444
24	0441	0512	0458	1		11	1-					MA	
24	0441	0544	0458	5	SL 2							MA OK	
24	0441	0630	0456	1					70			MA(NPG18-70)	
24	1445		1455	1					23			UM(NSS21-23,NBA24-17)	1443
25	2339	2403	2343	5					64			MA(NPG18-64) HA(WWVL20-7)	2311
28	1757	1810	1800	1								BO(WWV18-1.1)	1758
28	1759	1820	1805	1	SL 1-					11		WS	
28	1800			1					42			BO(WWVL20-42)	
30	2233			5					99			BO(WWVL20-110) HA(WWVL20-36) MA(NPG18-68)	2231
31	0844	0901	0853	5				1-				MA TA	0840
31	1652	1703	1654	1						08		BO(WWV18-0.8)	1647
31	1657	1712	1703	1	SL 1							TR	
31	1657	1810	1702	1					62			UM(NSS21-62,NBA24-43)	
31	1657	1810	1702	1								BO(WWVL20-**) )	
31	1700	1725	1707	1						2		UM	
31	1838	1915	1846	5					17			UM(NBA24-17,NSS21-15)	1836
31	1839	1849	1841	5						07		BO(WWVL20-**) ) HA(WWVL20-07) BO(WWV18-0.7) HA(WWVH5-0.4)	

No SWF observations were made at Boulder during the month of December 1966.  
The equipment for recording SCNA-SEA at Rome was out of operation December 1 - 18, 1966.

18 Mc/s Bursts will no longer be carried in the Sudden Ionospheric Disturbances table.  
The data is filed in World Data Center A and may be obtained from them.



RIOMETER EVENTS

DECEMBER 1966

Great Whale River

30 Mc/s

DEC. 1966	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS	DEC. 1966	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS
02	0106	2233	0321	17	6	17		0148		16	10
03	1008	2209	1118	19	1	17	1034		1603		
04	0238	1950	0955	39	6	18		0004		21	2
05	0045	1138	0500	27	11	18	0337	0906	0550	8	3
05	1737	2048	1752	9	10	18	1435		1640		
06	0004		1500			19		0200		3	5
07		0105		7	6	19	*	2257	2151	3	3
07	1700		1737			20	1526				
08		0437		9	3	21			1702		
08	1523		2055			23		0428		41	20
09		0210		5	5	23	1300		1827		
09	1710	2152	1802	4	1	24		0149		16	1
10	0555	1234	1010	10	2	24	0537	2220	1130	21	6
10	1459		2225			25	0400	*	1340	20	13
11		0428		5	4	26	0549	*	1547	57	13
11	2052		2144			27	0058	*	1408	80	11
12		0030		4	3	28	0253	2220	1422	46	14
13	0227	2236	1338	16	15	29	0150	1120	0229	12	3
14	0211					29	1337				
15		0828	0442	24	20	30			1727		
15	1054	2151	1823	33	5	31		2228		20	10
16	0332		1321								

\* TIME NOT KNOWN DUE TO EQUIPMENT FAILURE OR OTHER CAUSE.

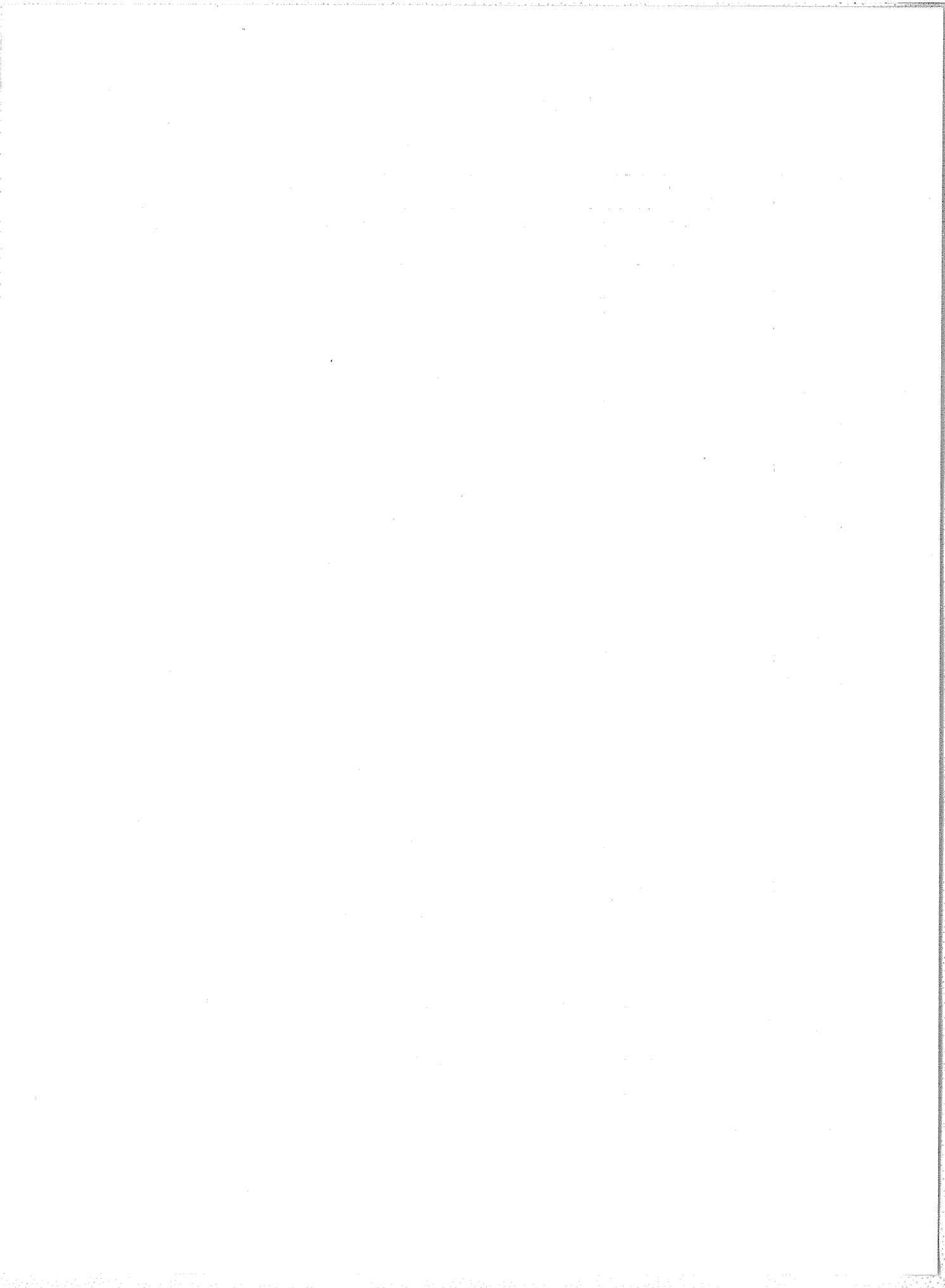
THIS TABULATION SHOWS ALL EVENTS STARTING ON ANY DAY OF THIS MONTH.  
SEE PREVIOUS MONTH TABLE FOR EVENTS WHICH MAY NOT HAVE ENDED BY  
THE FIRST DAY OF THIS MONTH.

MAX IS THE TIME OF EVENT MAXIMUM.

ABS IS ABSORPTION.

PKS IS PEAKS.

NO DATA ZEROS FOR ALL VALUES OF A DAY.



COSMIC RAY INDICES  
(Neutron Monitors)

DECEMBER 1966

DEC. 1966	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	*	6865.4	4121.3	*
2		6866.9	4105.7	
3		6846.2	4096.2	
4		6813.2	4097.2	
5		6795.2	4103.6	
6		6793.4	4104.4	
7		6790.0	4105.0	
8		6810.8	4120.7	
9		6821.7	4108.8	
10		6841.4	4116.1	
11		6846.4	4119.7	
12		6870.7	4125.4	
13		6790.4	4062.5	
14		6671.5	4015.3	
15		6629.0	3995.5	
16		6645.5	3989.7	
17		6702.4	4007.4	
18		6659.0	3958.0	
19		6662.3	3962.5	
20		6719.2	3999.1	
21		6712.5	4016.9	
22		6706.0	4022.0	
23		6748.7	4037.5	
24		6764.6	4050.2	
25		6708.7	4014.8	
26		6707.8	4033.1	
27		6721.9	4070.0	
28		6683.4	4020.9(34)	
29		6688.4	4005.6	
30		6701.9	4021.5	
31		6704.7	4021.0	

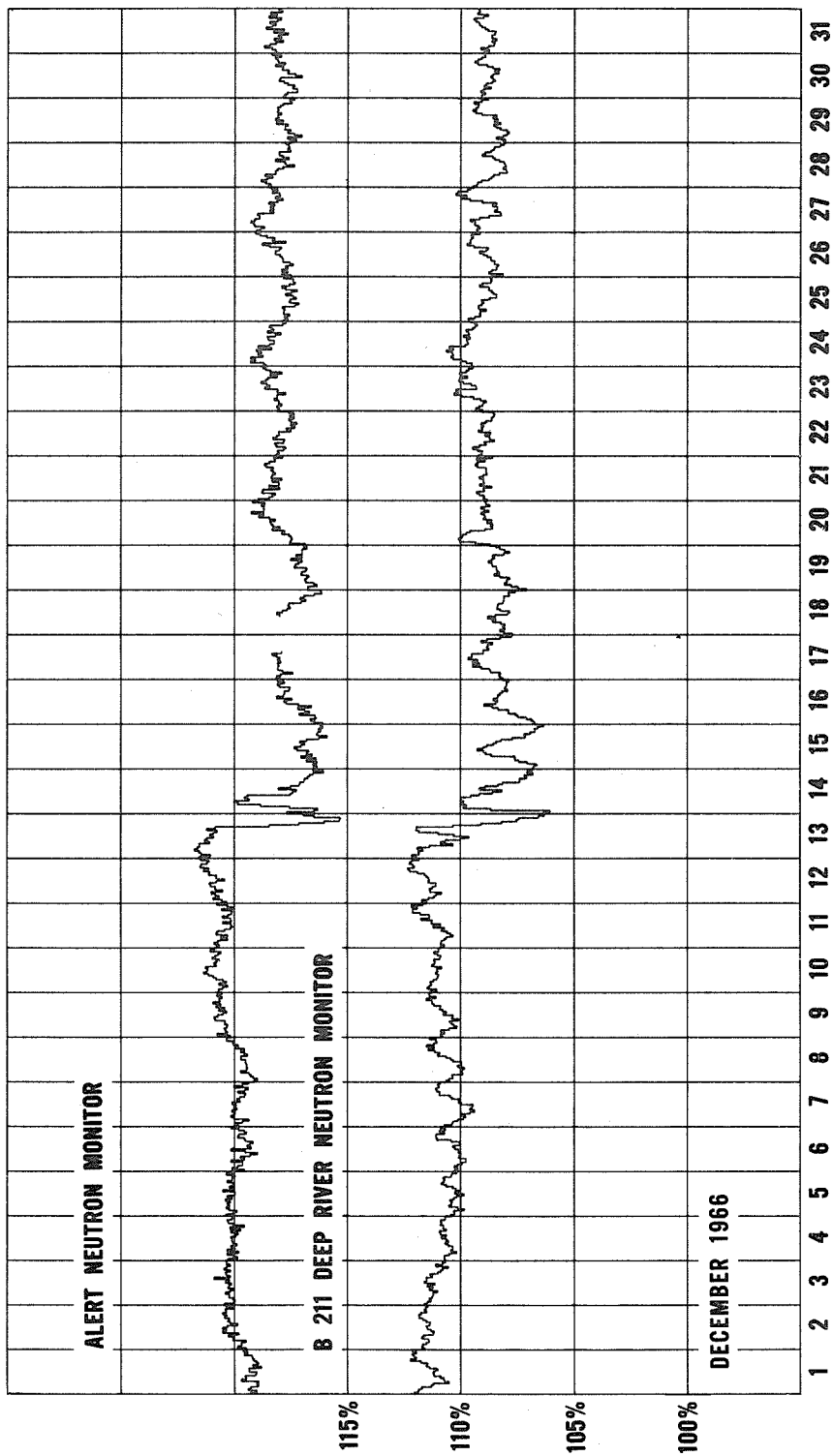
\* The data for December 1966 from Dallas and Churchill have not been processed. It will be published when it becomes available.

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

Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

**COSMIC RAY INDICES**  
(Pressure Corrected Hourly Totals)  
DECEMBER 1966



GEOMAGNETIC ACTIVITY INDICES

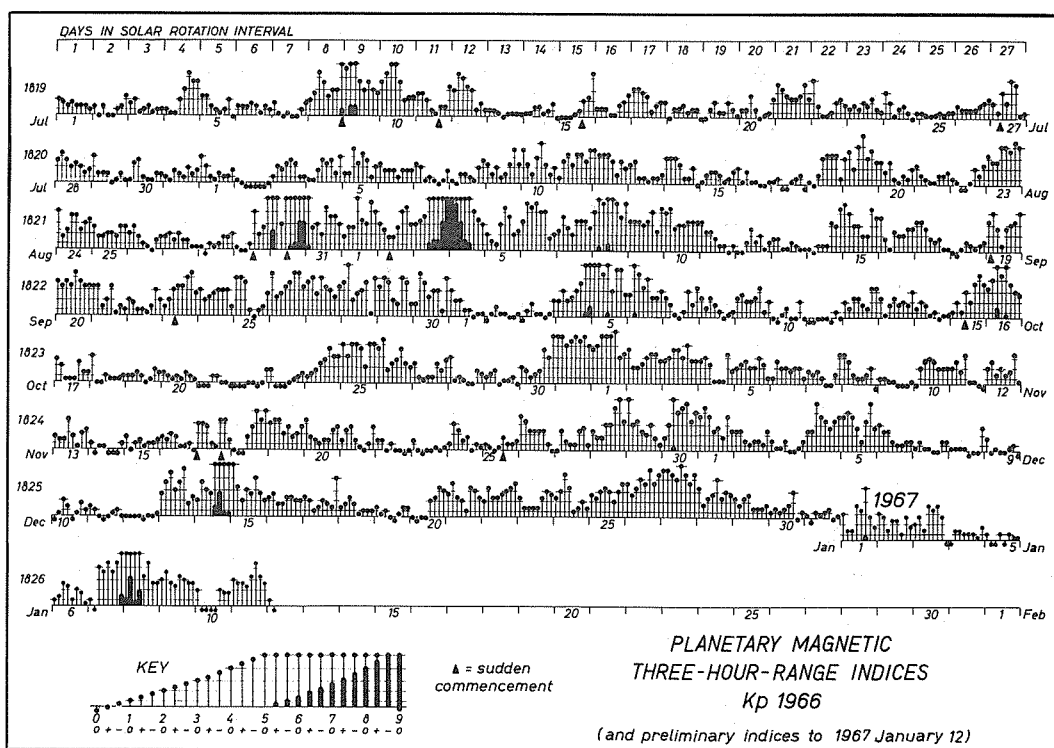
DECEMBER 1966

DAY	Kp								SUM	Ci	Cp	Ap	
	THREE-HOUR RANGE INDICES												
	1	2	3	4	5	6	7	8					
1		4-	4+	4-	2+	3-	2-	4-	2+	24+	1.0	0.9	17
2		2+	2+	1+	1	1+	1+	1	2+	13	0.2	0.3	6
3	QQ	1+	1-	1-	1+	0+	0+	1-	1+	7-	0.1	0.1	4
4		2+	2+	5-	4-	3+	3-	3+	4-	26	1.1	1.0	19
5	D	4-	4	4-	3-	1+	3+	5-	3-	26	1.1	1.0	20
6		3	2+	2+	1+	1	1	1+	1+	14-	0.3	0.4	7
7	Q	1-	1+	1-	1-	0+	0+	1+	1+	7-	0.1	0.1	4
8	Q	1-	1-	1-	1-	0	0+	0+	3-	6	0.1	0.1	4
9	QQ	2-	0+	1-	0+	0+	1-	1	0	5	0.1	0.0	3
10	Q	0	1-	2	1+	0	1-	2-	1	7+	0.1	0.1	4
11	QQ	1+	1	0+	0	0+	1-	1	0+	5	0.1	0.0	3
12	QQ	0+	0+	0+	0+	0	0+	0+	1-	3-	0.0	0.0	2
13	D	3-	4-	4+	3	4-	5-	2-	2+	26	1.2	1.0	20
14	D	2	4-	3	3-	6	7	5+	5+	35	1.7	1.6	48
15		5	3+	2	3	3-	4	3-	2	25-	1.2	1.0	18
16		2+	3-	2-	2-	2+	2+	2	2	17	0.5	0.4	8
17		2+	2	1	1+	2	2-	1+	4	16-	0.7	0.5	9
18	Q	1+	2-	2+	2-	1-	1	1	1	11-	0.1	0.2	5
19	Q	1+	1-	1	0+	0	1-	1+	1+	7-	0.1	0.1	3
20		0+	0	0+	0+	2	2+	3+	3	12-	0.5	0.3	7
21		3-	4-	2+	2	1	3+	3	2+	20+	0.7	0.7	12
22		2	3+	2+	2+	3-	3	3+	4-	23-	1.0	0.8	14
23		2+	1+	1+	1+	1+	2+	3	3-	16-	0.7	0.4	8
24		2+	3	4+	3+	1	1+	2	1+	19-	0.6	0.7	12
25		3-	2+	3	3+	3	2	3	4-	23	0.8	0.8	14
26	D	4-	3-	3+	4	4-	5-	4-	4+	30	1.4	1.2	24
27	D	5-	5-	4+	4	5	4+	4-	4+	35	1.5	1.3	34
28		3+	2-	2+	3-	4	2+	3	3-	22	0.9	0.8	14
29		2+	2-	2+	3-	1+	1+	1+	2-	15-	0.2	0.4	7
30		1	1+	1	1+	2-	3	0+	1	11-	0.5	0.3	6
31	QQ	1-	0	1	1-	1	1+	0+	1-	6-	0.0	0.1	3
MEAN										0.60	0.54	11	

The Kp values given as integers represent the values normally given with a small zero following the number, i.e., 0=00, 1=10, etc., because the table is prepared by computer and lower case symbols are not available.

A preliminary storm sudden commencements (ssc) occurred December 22 at 0441UT.

# GEOMAGNETIC ACTIVITY INDICES



## DAILY AVERAGE INDICES $A_p$

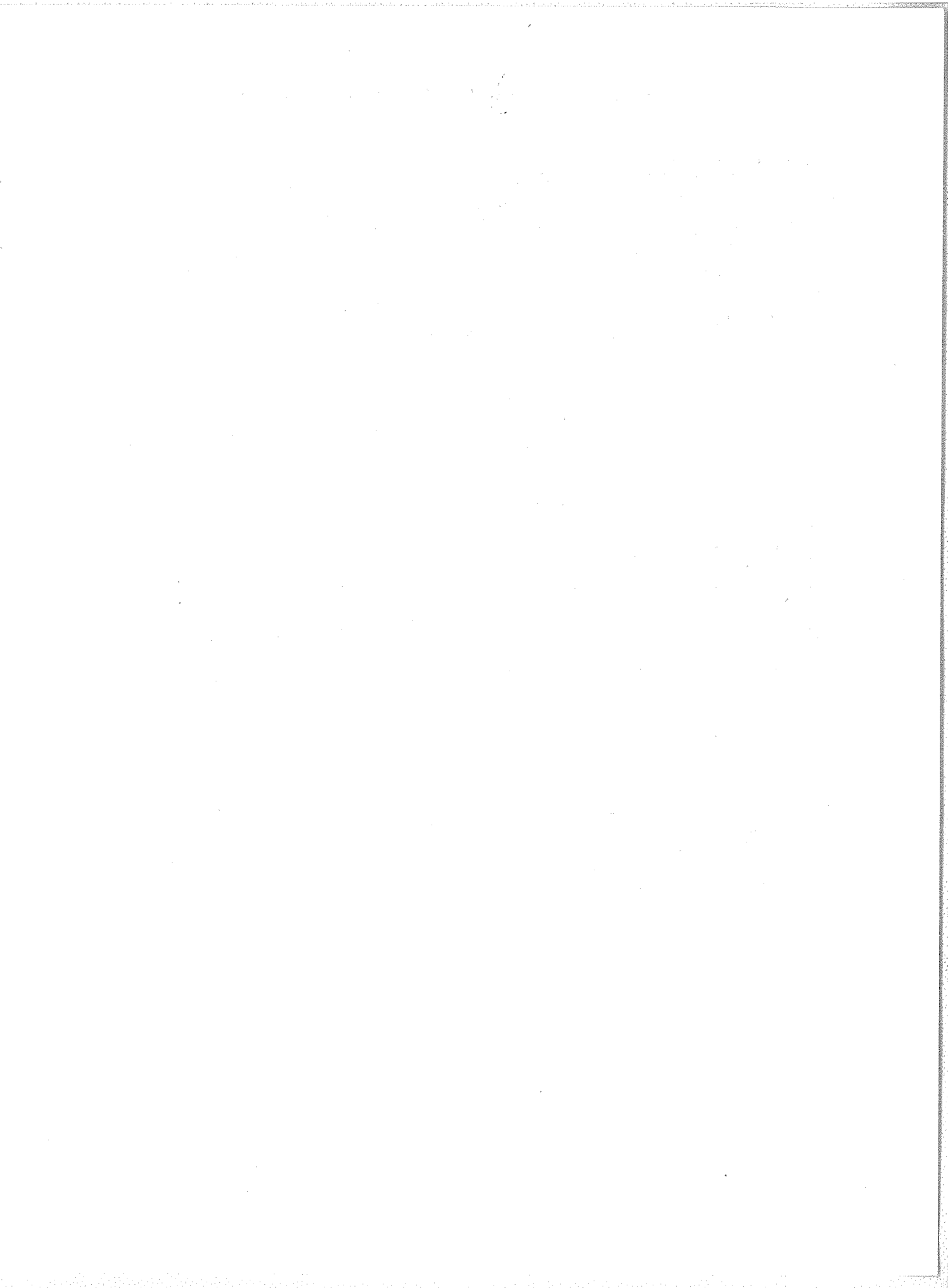
1966

DAY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	2	3	3	18	8	12	5	6	22	6	31	17
2	8	3	3	13	12	10	4	1	15	3	14	6
3	6	11	10	7	5	7	4	7	92	4	17	4
4	11	13	9	8	12	4	14	8	112	26	9	19
5	4	18	5	6	6	5	5	10	13	36	9	20
6	2	8	4	7	7	4	5	6	24	22	7	7
7	7	4	2	10	4	9	4	5	14	8	6	4
8	8	4	3	10	5	4	22	5	42	5	7	4
9	8	3	4	5	5	3	36	9	19	9	3	3
10	7	7	10	5	2	2	25	12	19	3	9	4
11	2	12	6	2	10	3	8	14	7	2	6	3
12	2	5	6	3	6	7	15	14	5	10	8	2
13	2	6	14	15	7	5	3	6	4	8	7	20
14	3	2	64	8	2	4	4	9	10	4	2	48
15	5	4	7	4	2	6	8	5	20	14	4	18
16	0	5	7	3	5	6	6	4	10	20	4	8
17	2	4	6	4	7	4	11	2	9	6	11	9
18	5	3	4	3	5	3	4	10	3	4	12	5
19	3	14	20	2	3	6	5	20	17	4	12	3
20	15	17	10	5	8	7	6	7	21	4	8	7
21	23	4	8	5	4	4	14	5	10	2	6	12
22	27	14	7	13	4	3	8	4	6	2	3	14
23	14	28	67	10	2	17	6	22	17	2	2	8
24	14	19	2	6	2	16	6	16	12	11	6	12
25	11	10	14	3	5	16	4	8	13	22	4	14
26	14	3	20	3	78	6	6	6	22	15	10	24
27	3	4	13	1	5	4	11	5	18	6	6	34
28	7	2	42	4	5	5	10	4	22	5	19	14
29	6		12	6	4	6	5	13	17	4	15	7
30	2		6	10	6	6	6	82	16	13	28	6
31	2		3		48		5	23		34		3
MEAN	7	8	13	7	9	6	9	11	21	10	9	11

PRINCIPAL MAGNETIC STORMS

DECEMBER 1966

DATE 1966 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)
12 04	06--	12 06 03	COLL	64.6N	..	..	..	..	M	12 04	3,4,5	5	85	1060	380	82
	0610	12 05 24	IRKU	40.8N	SC	- 0.1	+ 4	+ 2	M	12 05	3,7	5	15	74	27	82
	0545	12 06 04	MBOR	21.3N	..	..	..	..	M	12 04	3	5	3	103	32	82
	0400	12 06 03	HYDE	7.6N	..	..	..	..	M	12 05	7	5	3	101	26	82
	0602	12 06 03	BANG	04.8N	SC	---	+ 6	---	M	12 04	3	5	---	56	---	82
	1017	12 04 21	HUAN	0.6S	..	..	..	..	M	12 04	6,7	5	7	137	22	82
	06--	12 05 03	HRMN	33.3S	..	..	..	..	M	12 04	5	5	16	91	59	82
	12 12	2330	12 14 00	ALIB	09.5N	..	..	..	..	M	12 13	6	5	5	151	35
2330		12 13 19	HYDE	7.6N	..	..	..	..	---	---	---	---	4	160	23	83
2330		12 14 00	ANNA	01.5N	..	..	..	..	M	---	---	---	5	176	56	83
2330		12 14 00	TVAN	01.1S	..	..	..	..	---	---	---	---	5	179	99	83
12 13	01--	12 15 20	COLL	64.6N	..	..	..	..	S	12 14	6	8	616	2500	1970	83
	01--	12 13 19	IRKU	40.8N	..	..	..	..	M	12 13	2,6	5	9	107	30	83
	0100	12 15 17	TUCS	40.4N	..	..	..	..	MS	12 14	5	6	17	140	10	83
	0103	12 13 19	SJUA	29.9N	..	..	..	..	M	12 13	2,6	5	6	63	22	83
	0107	---	MBOR	21.3N	SC	0	+19	0	M	12 13	6	5	4	84	20	83
	0110	12 13 19	BANG	04.8N	SC	---	+12	---	M	12 13	6	5	---	56	---	83
	0109	12 13 17	GUAM	04.0N	SC	---	+16	---	M	12 13	2	5	1	84	8	83
	0110	12 13 20	HUAN	0.6S	..	..	..	..	MS	12 13	6	7	12	405	30	83
	0106	12 15 19	APIA	16.1S	..	..	..	..	M	12 13	2	5	---	---	---	83
	0110	12 15 18	HRMN	33.3S	..	..	..	..	MS	12 14	6	5	7	163	23	83
	01--	12 15 19	GNAM	43.2S	..	..	..	..	MS	12 14	6	7	42	219	202	83
	0000	12 15 20	TOOL	46.7S	..	..	..	..	MS	12 14	5,6	7	36	128	203	83
	0110	12 13 18	KGLN	57.3S	..	..	..	..	M	12 14	6	7	38	217	79	83
	0110	12 13 18	KGLN	57.3S	..	..	..	..	M	12 13	2	5	---	---	---	83
	12 13	21--	12 15 08	BANG	04.8N	..	..	..	..	MS	12 14	5,6,7	7	---	158	---
1732		12 15 06	GUAM	04.0N	SC	---	+05	-02	M	12 14	5,6	5	2	58	14	84
12 14	02--	12 15 04	SITK	60.0N	..	..	..	..	MS	12 14	4,5	7	120	650	670	84
	12--	12 15 06	FRED	49.6N	..	..	..	..	M	12 14	5,6,8	5	24	163	43	84
	1227	12 15 19	IRKU	40.8N	SC	0	+17	+ 3	MS	12 14	5	6	23	158	27	84
	1225	12 15 18	SJUA	29.9N	..	..	..	..	MS	12 14	5	6	8	119	46	84
	1225	12 16 01	MBOR	21.3N	SC	0	+12	0	MS	12 14	5	7	7	216	17	84
	1226	12 16 18	ALIB	09.5N	SC	- 0.9	+22	- 3	MS	12 14	5	7	3	205	27	84
	0115	12 15 19	HYDE	7.6N	..	..	..	..	MS	---	---	---	3	203	17	84
	1226	12 16 18	ANNA	01.5N	SC	- 0.5	+19	+ 7	MS	---	---	---	3	200	66	84
	1050	12 14 24	HUAN	0.6S	..	..	..	..	MS	12 14	6	7	9	438	44	84
	1226	12 16 18	TVAN	01.1S	SC	0.0	+15	+19	MS	---	---	---	3	233	169	84
	1200	12 15 04	AMBE	47.7S	..	..	..	..	MS	12 14	5,6	7	21	244	---	84
	1230	12 15 17	KGLN	57.3S	..	..	..	..	S	12 14	6	9	---	---	---	84
	12 16	1723	12 17 17	MBOR	21.3N	SC	- 0.3	+12	0	M	12 17	6	3	---	---	---
0441		12 23 05	COLL	64.6N	SC *	3	78	17	M	12 22	5	5	35	420	190	86
12 22	0440	12 22 24	IRKU	40.8N	SC	+ 1.9	+ 5	+ 1	M	12 22	5,6,7	4	8	41	20	86
	0441	12 23 08	MBOR	21.3N	SC	- 0.8	+23	- 2	M	12 22	6	4	---	54	---	86
	0440	12 23 01	HYDE	7.6N	SC	- 0.2	+18	- 1	M	---	---	---	2	64	11	86
	0443	12 23 01	BANG	04.8N	SC	---	+13	---	M	12 23	7,8	4	---	44	---	86
	0443	12 23 01	BANG	04.8N	SC	---	+13	---	M	12 23	7,8	4	---	44	---	86
12 24	04--	12 24 13	COLL	64.6N	..	..	..	..	MS	12 24	4	6	125	840	460	87
12 25	06--	12 28 23	COLL	64.6N	..	..	..	..	MS	12 26	6	7	140	1410	720	88
	0910	12 27 22	HYDE	7.6N	..	..	..	..	M	---	---	---	4	90	15	88
	19--	12 28 01	BANG	04.8N	..	..	..	..	M	12 26	6	5	---	56	---	88
	2305	12 27 22	KGLN	57.3S	..	..	..	..	M	12 26	7	5	---	---	---	88
12 26	0800	12 28 24	IRKU	40.8N	SC	- 0.4	+ 5	0	MS	12 26	8	6	24	92	27	88
										12 27	6	6				88





RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

DECEMBER 1966

NORTH ATLANTIC, NORTH PACIFIC

DEC. 1966	WHOLE DAY INDICES			ADVANCE FORECASTS (Jc-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC				NORTH PACIFIC				GEOMAGNETIC INDICES										
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF:				K <sub>FR</sub>		A <sub>FR</sub>		K <sub>SI</sub>		A <sub>SI</sub>				
					00 TO 06	06 TO 12	12 TO 18	18 TO 24	00 TO 06	06 TO 12	12 TO 18	18 TO 24	HALF DAY (1) (2)		OBSERVED PRE-DICTED		HALF DAY (1) (2)						
01	6o	6	6	6	6-	5+	7-	6o	5	5	6	7	6	6	6	6	3	2	12	15	3	2	13
02	6o	6	6	6	6-	6-	7-	6o	5	5	7	7	6	6	6	6	2	1	4	12	1	1	3
03	6+	6	6	6	6+	6-	7o	6+	6	6	7	7	6	6	6	6	1	1	2	9	0	0	1
04	6+	6	6	6	6+	6o	7-	6+	6	6	7	7	6	7	6	6	2	3	13	6	2	3	16
05	6o	6	6	7	6-	6-	7-	6-	6	5	7	7	6	6	6	6	3	2	13	6	3	2	13
06	6o	6	6	7	5o	5+	7-	7-	6	5	7	6	6	6	7	6	1	1	4	4	1	0	2
07	6+	6	6	7	6-	6o	7-	7-	6	6	7	6	6	6	6	6	0	1	1	4	0	0	0
08	6+	6	6	6	6-	6-	7-	7-	6	5	7	7	6	6	6	6	1	1	2	7	0	0	1
09	6o	6	6	6	6-	6-	7o	6+	6	6	7	7	6	6	6	6	1	1	2	7	0	0	0
10	6+	6	6	6	7-	6-	7-	7-	6	6	7	7	6	6	6	6	1	1	3	7	1	0	2
11	7-	6	6	6	6+	7-	7-	7o	6	6	7	7	6	6	6	6	1	1	2	4	0	0	1
12	7-	6	6	6	6+	6+	7o	7o	6	6	7	7	6	6	6	6	0	0	0	4	0	0	0
13	6+	7	7	6	6o	6-	7-	7-	6	5	7	7	6	7	7	6	3	3	15	4	3	3	20
14	6+	5	6	6	6+	6-	7-	6o	6	5	7	5	6	6	5	5	3	(5)	27	7	3	(6)	50
15	6o	5	6	5	5-	6o	7-	6o	4	4	7	6	5	5	5	5	3	3	13	25	2	2	9
16	6o	5	6	5	6o	6-	7-	6+	6	6	7	7	6	5	5	6	2	2	9	12	2	2	7
17	6+	6	6	6	6-	6o	7-	7-	6	6	7	7	6	6	6	5	2	2	7	6	1	2	4
18	6+	6	6	6	6o	6o	7-	6+	6	6	7	7	5	6	6	6	2	1	5	6	1	0	3
19	6+	6	6	6	6+	6o	7-	6+	6	6	7	7	6	6	6	5	1	1	2	4	0	0	0
20	6+	6	6	6	7-	6-	7-	7-	6	6	7	7	6	6	5	5	0	2	5	4	0	2	4
21	6+	6	6	6	6+	6+	7o	7-	6	6	7	7	6	6	6	6	2	2	9	7	2	2	10
22	6+	6	6	6	6+	6+	7-	7-	6	6	7	6	6	6	6	6	2	3	11	5	2	2	10
23	6+	6	6	6	6+	6o	7-	7-	6	6	7	7	6	6	6	6	1	2	6	7	0	2	3
24	6+	6	6	6	6+	6-	7o	6+	6	6	7	7	6	6	6	6	3	2	14	7	3	1	16
25	6+	6	6	6	6o	6-	7-	7-	6	6	7	7	6	6	6	6	3	3	13	12	3	2	15
26	6+	5	6	6	6o	6-	7-	7-	6	6	7	6	6	5	5	6	3	(4)	17	12	3	(4)	26
27	6o	5	6	6	6-	6-	7-	6-	6	5	6	6	6	6	5	5	(4)	(4)	24	8	(4)	(4)	29
28	6-	6	6	6	6-	5+	6+	6-	6	6	7	6	6	6	6	6	2	3	10	6	2	2	12
29	6o	6	6	6	6o	5+	7-	6+	6	6	7	6	5	6	6	7	3	1	8	6	2	1	5
30	6+	6	6	6	6+	6-	7-	7-	6	6	7	7	6	6	6	7	1	1	4	4	1	1	3
31	7-	6	6	6	6+	6+	7-	7-	6	6	7	7	5	6	6	6	1	0	2	9	1	0	2
QUIET				P	25					25	21	28	16										
				S	6					6	9	3	15										
				U	0					0	0	0	0										
				F	0					0	1	0	0										
DISTURBED				P	0					0	0	0	0										
				S	0					0	0	0	0										
				U	0					0	0	0	0										
				F	0					0	0	0	0										

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

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

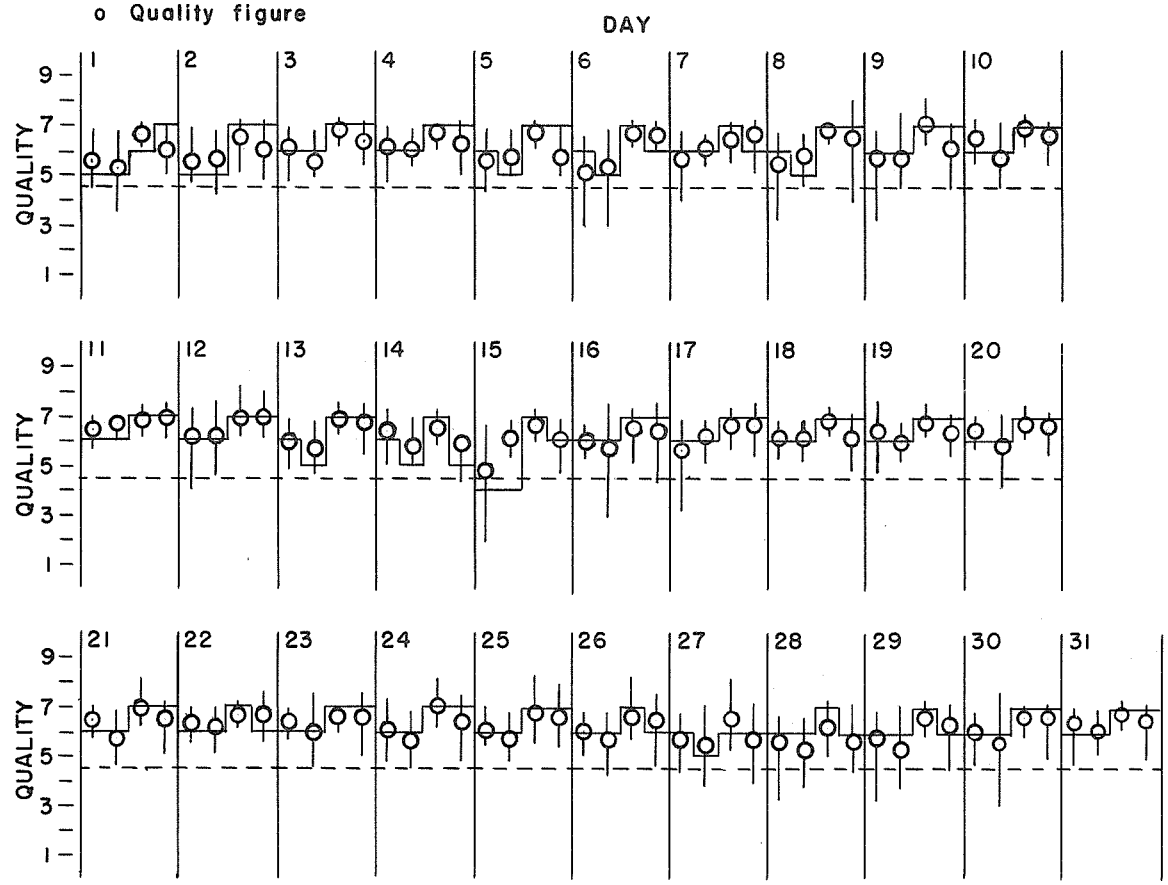
# RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

DECEMBER 1966

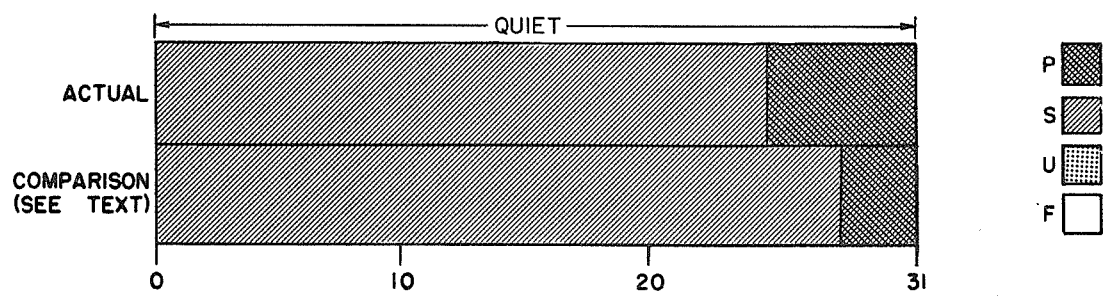
## NORTH ATLANTIC

— Short-term forecast  
o Quality figure

| Range of reports

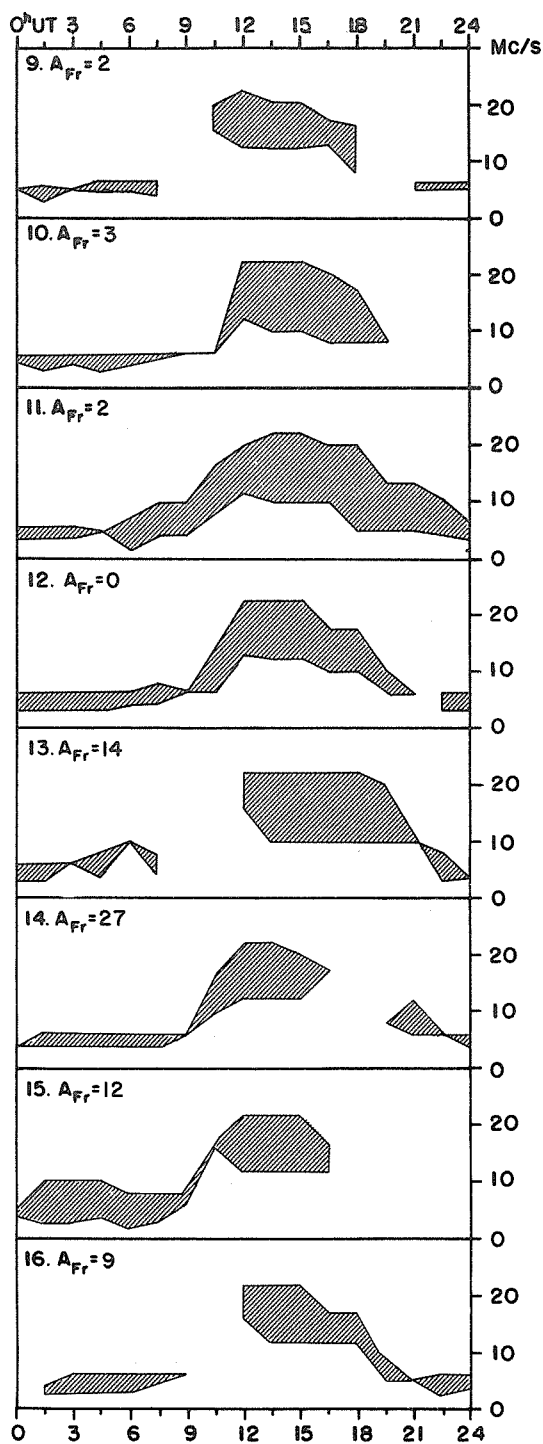
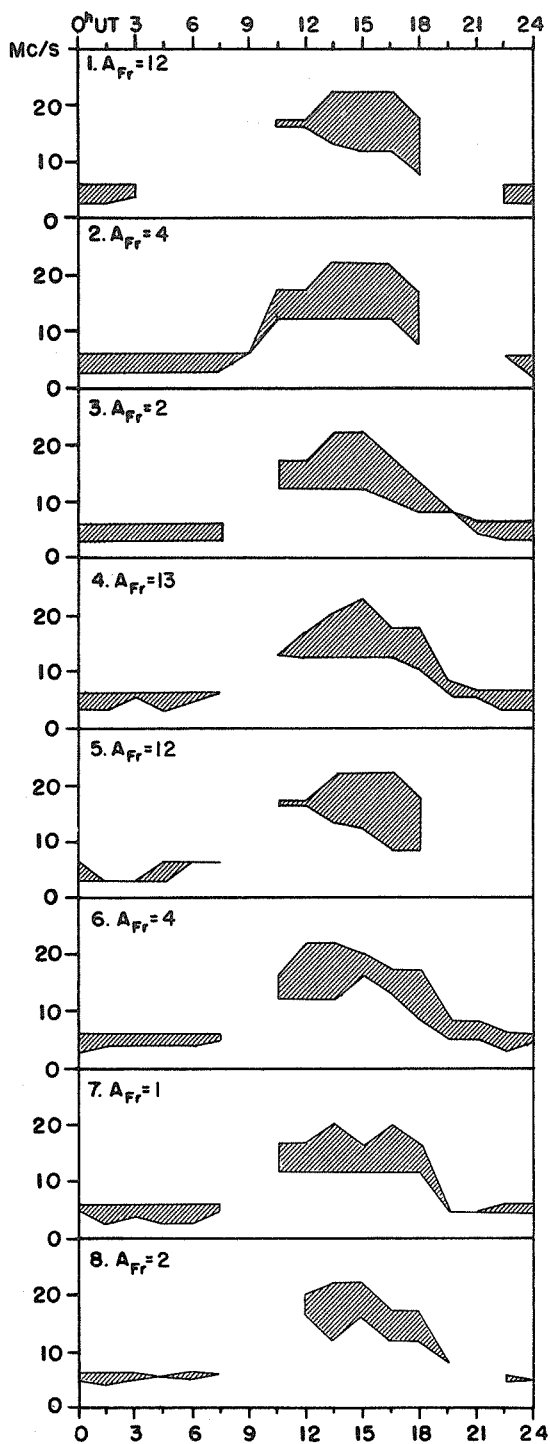


## HIGH LATITUDE



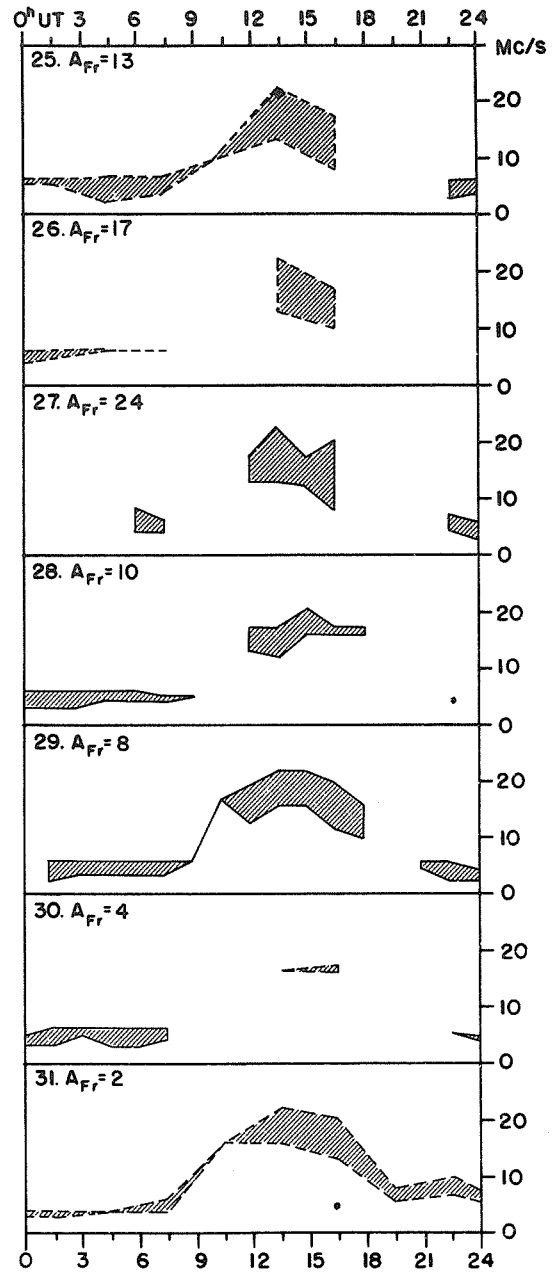
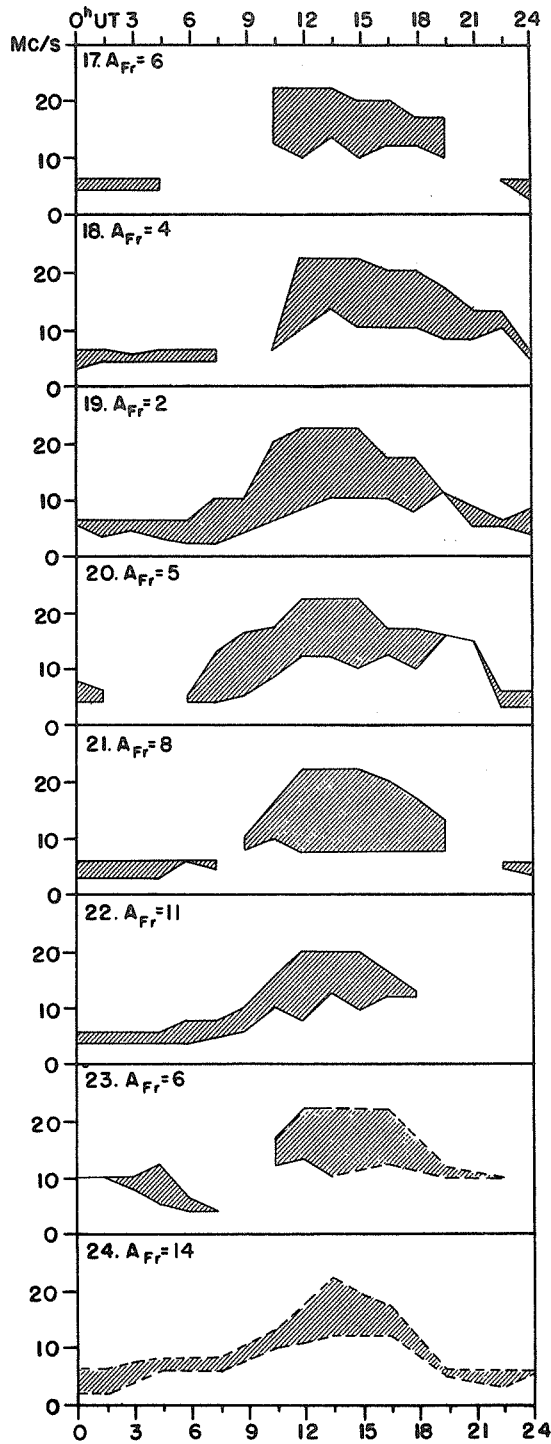
TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

DECEMBER 1966



TRANSMISSION FREQUENCY RANGES--NORTH ATLANTIC PATH

DECEMBER 1966



Adapted from Observations by Deutsche Bundespost

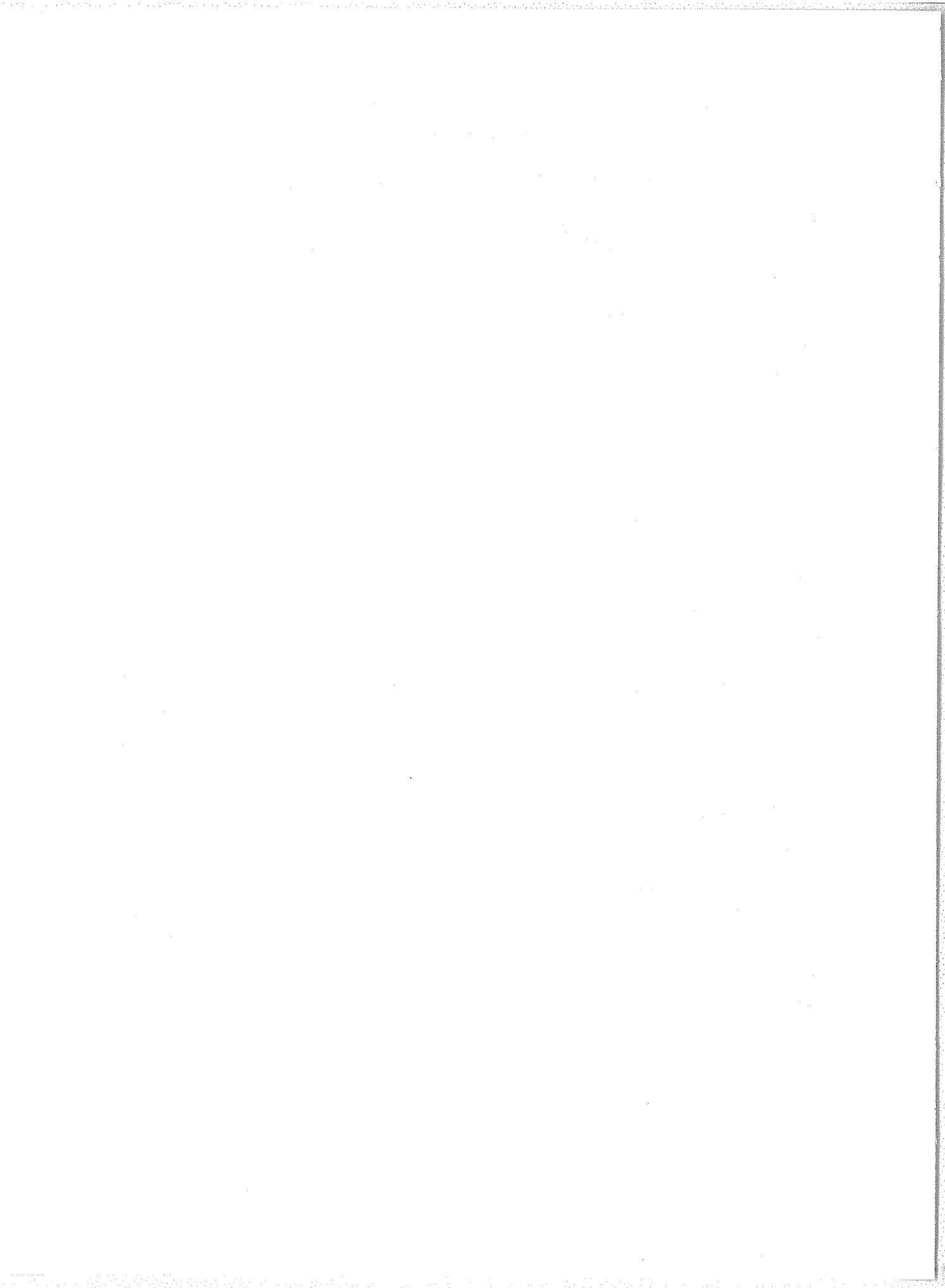


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Solar Flares

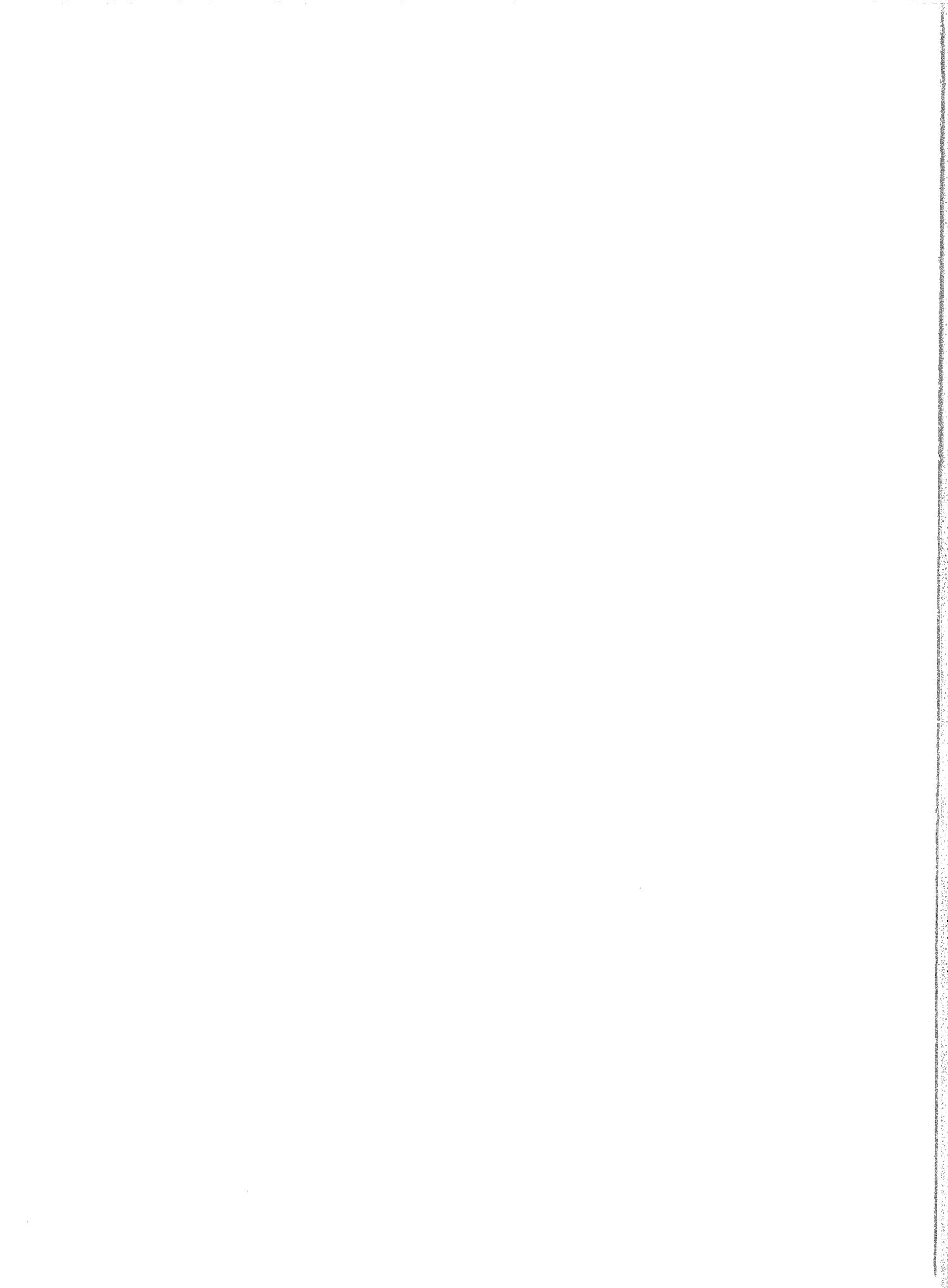
Standardized Data and Individual Reports

No-Flare-Patrol Chart

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### SOLAR FLARES REVISED AUGUST 1966

OBSERVATORY	OBSERVED UT			LOCATION				DURATION — MIN.	IM-POR-TANCE	OBS.	MEASUREMENTS					REMARKS				
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION				CMP DAY	COND. TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH H <sub>c</sub>	MAX. INT. %		
1	01	0302	0317	0309	N34	E37	.699	8415	3.9	15	1-									
CULG	01	0302	0317	0309	N34	E37	.699	8415	3.9	15	-N	C	0309	.28					1 1 1	
2	01	0848	0918		N25	E10	.366	8414	2.1	30	1-								CG	
ARCE	01	0830	0910		N25	E10	.366	8414	2.1	40	-N	C	0835	.32	.47				2 2 1	
KAND	01	0906	0926		N24	E10	.352	8414	2.1	20	-F								C	
3	01	1118	1208	1135	N35	E34	.680	8415	4.0	50	1-			2.72					4 3 2	
CAPS	01	1100	1155		N33	E33	.656	8415	3.9	55	1N	3	1134	1.80	2.30		175			
KIEV	01	1110E	1200D	1135	N34	E35	.681	8415	4.1	50D	1F		1135	3.61	6.00		60		EG	
KHAR	01	1118E	1210D		N36	E32	.671	8415	3.9	52D	1F		1155			1.80			EO	
MCMA	01	1136	1230		N35	E34	.680	8415	4.0	54	-B	C	1136	.83	1.10				BEG	
4	01	1103	1144	1106	N26	E29	.563	8415	3.6	41	1-			.33					1 1 1	
ATHN	01	1103	1144	1106	N26	E29	.563	8415	3.6	41	-B	2	1106	.34	.70	1.80				
5	01	1644	1659	1652	N35	W19	.560	8413	31.3	15	1-			.16					1 1 1	
SACP	01	1644	1659	1652	N35	W19	.560	8413	31.3	15	-F	C		.18	.18					
6	01	1810	1833	1821	N29	W02	.396	8413	1.6	23	1+			2.30					2 1 1	
LOCK	01	1810	1825	1818	N29	W02	.396	8413	1.6	15	1N	C	1818	2.00	2.20		20			
SACP	01	1823E	1840	1823	N29	W02	.396	8413	1.6	17D	-N	P		1.75	1.76					
7	01	2030	2045	2038	N33	W31	.638	8415	30.5	15	1-			.40					1 1 1	
LOCK	01	2030	2045	2038	N33	W31	.638	8415	30.5	15	-F	C	2038	.40	.50		10			
8	01	2136	2150	2140	N25	E21	.467	8415	3.5	14	1-			.51					2 2 2	
LOCK	01	2133	2145	2139	N23	E20	.436	8415	3.4	12	-F	C	2139	.70	.80		10			
HALE	01	2138	2155	2140	N26	E22	.487	8415	3.6	17	-N	1	C 2140	.31	.40					
9	02	0618	0654	0629	N26	E16	.427	8415	3.5	36	1-			1.21					3 3 3	
BUCA	02	0610E	0702D		N26	E15	.418	8415	3.4	52D	-N	C	0636	1.10	1.20		188		E	
CATA	02	0620E	0630D	0630	N26	E17	.437	8415	3.5	10D	-N		0630	.50	.56					
ATHN	02	0625	0646	0627	N25	E16	.415	8415	3.5	21	1N	2	0627	1.98	2.20	1.80				
10	02	0724	0731	0725	N26	E14	.410	8415	3.4	7	1-			.70					1 1 1	
ATHN	02	0724E	0731	0725	N26	E14	.410	8415	3.4	7D	-B	2	0725	.66	.70	2.00				
11	02	1459	1500		N24	W10	.351	8414	1.9	1	1-								1 1 0	
UCCL	02	1459E	1500D		N24	W10	.351	8414	1.9	1D	-F	P							E	
12	02	1502	1518	1504	N22	E15	.370	8415	3.8	16	1-			.20					1 1 1	
CLMX	02	1502	1518	1504	N22	E15	.370	8415	3.8	16	-B	C	1504	.30	.32					
13	02	1525	1531	1526	N22	E15	.370	8415	3.8	6	1-			.20					1 1 1	
CLMX	02	1525	1531	1526	N22	E15	.370	8415	3.8	6	-B	C	1526	.30	.32					
14	02	1545	1557	1542	N25	E10	.365	8415	3.4	12	1-			.41					4 2 2	
UCCL	02	1535E	1558D		N25	E09	.359	8415	3.3	23D	-N	P	1542	.52	.60				D	
ATHN	02	1540E	1548D	1542	N24	E08	.337	8415	3.3	8D	-N	2	1542	.46	.60					
CAPS	02	1552	1556		N26	E13	.402	8415	3.6	4	-F	3	1554	.90	1.00		145		D	
HUAN	02	1553	1558		N26	E08	.367	8415	3.3	5	-F	1	P 1554	.25	.25				D	
02	1600	1620			NO FLARE PATROL															
15	02	1645	1645		N27	E07	.378	8415	3.2		1-								1 1 0	
UCCL	02	1645E	1645D		N27	E07	.378	8415	3.2		-N	P							E	
16	02	1736	1813	1757	N26	E06	.358	8415	3.2	37	1-			.63					1 1 1	
SACP	02	1736	1813D	1757	N26	E06	.358	8415	3.2	37D	-F	P		.70	.69					
17	02	1743	1756		N35	E20	.566	8415	4.2	13	1-			.36					1 1 1	
MCMA	02	1743	1756		N35	E20	.566	8415	4.2	13	-B	C	1745	.26	.30				D	
18	02	1815	1819		N26	E07	.362	8415	3.3	4	1-			.23					1 1 1	
HUAN	02	1815	1819		N26	E07	.362	8415	3.3	4	-F	1	P 1817	.25	.25				D	
02	1850	1855			NO FLARE PATROL															
19	02	1917	1935	1925	N37	W30	.662	8413	31.6	18	1-			1.44					1 1 1	
MCMA	02	1917	1935	1925	N37	W30	.662	8413	31.6	18	-N	C	1925	1.03	1.40				E	
02	1955	2005			NO FLARE PATROL															
02	2045	2145			NO FLARE PATROL															
20	02	2146	2205		N38	W32	.686	8413	31.5	19	1-			1.74					1 1 1	
MCMA	02	2146	2205		N38	W32	.686	8413	31.5	19	-N	P	2155	1.24	1.70				FL	
21	03	0357	0442	0401	N35	W51	.820	8413	30.3	45	1			2.58					1 1 1	
HALE	03	0357	0442	0401	N35	W51	.820	8413	30.3	45	1F	1	C 0401	2.58	4.50					
22	03	0637	0709	0648	N20	E31	.548	8422	5.6	32	1			1.84					6 5 5	
KAND	03	0630	0653		N19	E30	.530	8422	5.5	23	1N		0644	2.38	2.50				C	
BUCA	03	0635E	0721D	0645	N20	E30	.535	8422	5.5	46D	-B	C	0645	1.10	1.30				EF	
CATA	03	0640E	0715D	0648	N22	E30	.547	8422	5.5	35D	1B		0648	1.80	2.16					
ATHN	03	0640E	0716	0650	N20	E32	.561	8422	5.7	36D	1B	2	0650	2.81	3.30	2.00				
CAPS	03	0643	0709		N21	E30	.541	8422	5.5	26	-B	3	0650	1.30	1.60				201	
BAKO	03	0657E	0706		N20	E35	.599	8422	5.9	9D	1	P	0702	2.16	2.69		50			
23	03	1418	1523	1425	N32	W22	.548	8413	2.0	65	1			2.28					7 4 4	
MCMA	03	1415	1605	1420	N30	W20	.509	8413	2.1	110	1B	C	1420	2.06	2.40				FKL	
CAPS	03	1416	1506		N32	W22	.548	8414	1.9	50	1N	3	1425	2.50	2.90		170		FIJ	
UCCL	03	1420E	1529D	1455	N33	W24	.575	8413	1.8	69D	2N	P	1455	3.63	7.00				EJJ	
HUAN	03	1420	1505		N32	W22	.548	8414	1.9	45	1N	1	P 1425	1.91	1.90				E	
ATHN	03	1428E	1509	1430	N35	W36	.696	8413	31.9	41D	-B	2	1430	.54	1.10	1.50				
WEND	03	1452	1458		N32	W20	.531	8413	2.1	6	1F	5		5.16						
LOCK	03	1517E	1540	1517E	N34	W23	.577	8413	1.9	23D	-F	C	1517	.70	.80				10	
24	03	1615	1628	1621	N21	E24	.465	8422	5.5	13	1-			.40					1 1 1	
LOCK	03	1615	1628	1621	N21	E24	.465	8422	5.5	13	-F	C	1621	.40	.40				10	



SOLAR FLARES  
REVISED  
AUGUST 1966

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION	OMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %			
25	03	1634	1735	1653	N33	W23	.567	8413	2.0	61	1-							3 3 3		
MCMA	03	1628	1735	1650	N33	W24	.575	8413	1.9	67	1N	C	1650	2.06	2.50			E		
LOCK	03	1635	1745	1655	N33	W22	.558	8413	2.0	70	-F		C	1655	1.60	1.90		10		
HUAN	03	1640	1724		N32	W24	.565	8414	1.9	44	-F	1	C	1653	.50	.51		E		
26	03	1710	1745	1725	N21	E24	.465	8422	5.5	35	1-				.82			1 1 1		
LOCK	03	1710	1745	1725	N21	E24	.465	8422	5.5	35	-N	C	1725	.80	.90			10		
27	03	1946	2001	1951	N21	E22	.440	8422	5.5	15	1-				.36			2 2 2		
LOCK	03	1945	1958	1951	N21	E24	.465	8422	5.6	13	-F	C	1951	.40	.40			10		
HALE	03	1947	2004	1950	N20	E20	.407	8422	5.3	17	-F	1	C	1950	.31	.30				
28	03	2034	2110	2042	N21	E25	.478	8422	5.7	36	1-				1.03					
LOCK	03	2032	2105	2040	N21	E24	.465	8422	5.7	33	-F	C	2040	.60	.70			10		
MCMA	03	2035	2115	2043	N20	E25	.471	8422	5.7	40	-F	C	2043	1.03	1.10					
29	03	2214	2223	2216	N21	E22	.440	8422	5.6	9	1-				.86			FH		
LOCK	03	2213	2223	2216	N19	E23	.437	8422	5.7	10	-F	C	2216	.60	.70			10		
HALE	03	2214	2220	2216	N21	E21	.428	8422	5.5	6	-N	1	C	2216	.52	.60				
MCMA	03	2215	2226	2216	N22	E23	.461	8422	5.7	11	-N	C	2216	1.03	1.10				FH	
30	04	0439	0511	0445	N20	E17	.369	8422	5.5	32	1-				1.37					
ATHN	04	0435E	0514	0443	N19	E17	.359	8422	5.5	39D	1N	2		0443	2.08	2.20	1.80		4 3 3	
MANI	04	0442	0507	0446	N19	E21	.411	8422	5.8	25	-B	1		0446	1.44	1.58				
HALE	04	0444E	0444D		N20	E16	.357	8422	5.4		-	1		0444	.52	.60				
TACH	04	0503E	0511D		N21	E14	.346	8422	5.3	8D	1N		P	0503	3.65	3.80	2.90	63	E	
31	04	0619	0655	0634	N26	W27	.539	8414	2.2	36	1-				1.25					
BUCA	04	0606E	0702D	0632	N25	W28	.543	8414	2.2	56D	-B	C	0632	1.66	1.90			4 4 4		
ATHN	04	0625E	0656	0634	N24	W26	.512	8414	2.3	31D	-B	2		0634	1.32	1.50	2.00			
CAPS	04	0626	0646		N26	W27	.539	8414	2.2	20	1N	3		0637	1.20	1.40		195		
CATA	04	0630E	0650D	0635	N28	W27	.556	8414	2.2	20D	-B			0635	1.16	1.41		229		
32	04	0645	1221	0706	N25	W58	.853	8427	30.9	336	1-				.80					
KAND	04	0645	1221		N25	W58	.853	8427	30.9	336	1F			0700	1.73	2.50			C	
BUCA	04	0647E	0746D	0706	N24	W58	.852	8427	30.9	59D	-F	C	0706	.56	1.00					
33	04	0815	0840		N24	E15	.392	8422	5.5	25	1-				.63				1 1 1	
ARCE	04	0815	0840		N24	E15	.392	8422	5.5	25	-N	C	0820	.62	.67				H	
34	04	0911	1206		N28	W31	.598	8414	2.1	175	1-								1 1 0	
KAND	04	0911	1206		N28	W31	.598	8414	2.1	175	-N								C	
35	04	1045	1135	1055	N19	E16	.347	8422	5.6	50	1-				1.02				4 3 2	
KAND	04	1040	1203		N18	E18	.363	8422	5.8	83	-B								C	
ATHN	04	1046E	1114	1050	N19	E15	.335	8422	5.6	28D	-N	2		1050	.99	1.10	1.70			
CAPS	04	1049	1127		N20	E15	.346	8422	5.6	38	-N	3		1055	.90	1.00		180		
KIEV	04	1100E	1140D	1100	N20	E15	.346	8422	5.6	40D	1F	C	1100	6.19	6.50			60	DI	
36	04	1320	1329	1320	N19	E14	.323	8422	5.6	9	1-				.28				1 1 1	
ATHN	04	1320E	1329	1320	N19	E14	.323	8422	5.6	9D	-B	2		1320	.27	.30	2.00			
37	04	1522	1550	1530	N33	W31	.636	8414	2.3	28	1-				1.05				1 1 1	
LOCK	04	1522	1550	1530	N33	W31	.636	8414	2.3	28	-N	C	1530	1.00	1.30			20	H	
38	04	1554	1641	1615	N33	W33	.654	8414	2.2	47	1-				.81				3 3 3	
HUAN	04	1553	1634		N32	W35	.666	8414	2.0	41	-F	1	C	1609	.37	.41				E
MCMA	04	1553	1700	1615	N33	W32	.645	8413	2.3	67	-N	C	1615	.83	1.10				E	
LOCK	04	1555	1630	1615	N33	W33	.654	8414	2.2	35	-N	C	1615	.90	1.20			10		
39	04	1626	1633	1628	N23	W62	.882	8427	31.0	7	1-				.44				2 2 2	
ATHN	04	1626E	1632	1627	N23	W59	.859	8427	31.3	6D	-N	2		1627	.33	.70	1.60			
MCMA	04	1626	1634	1628	N23	W65	.904	8427	30.8	8	-N	C	1628	.36	.80				E	
40	04	2048	2111	2059	N28	W37	.661	8414	2.1	23	1-				.87				1 1 1	
MCMA	04	2048	2111	2059	N28	W37	.661	8414	2.1	23	-F	C	2059	.62	.80				F	
41	04	2120	2158	2129	N29	W37	.667	8414	2.1	38	1-				1.29				2 2 2	
LOCK	04	2117	2150	2127	N31	W36	.669	8414	2.2	33	-N	C	2127	1.20	1.60			20		
MCMA	04	2122	2205	2130	N27	W37	.656	8414	2.1	43	-N	C	2130	.93	1.20				FJ	
42	04	2205	2221	2208	N27	W37	.656	8414	2.1	16	1-				1.44				1 1 1	
MCMA	04	2205	2221	2208	N27	W37	.656	8414	2.1	16	-N	C	2208	1.03	1.40				FJ	
43	05	0120	0214	0137	N27	W38	.666	8414	2.2	54	1-				.77				3 3 3	
LOCK	05	0105	0200	0135	N31	W36	.668	8414	2.3	55	-F	C	0135	.80	1.00			10		
CULG	05	0119	0228D	0140	N23	W41	.681	8414	2.0	69D	-N	C	0140	1.13	1.43				F	
MANI	05	0135	0215	0137	N28	W38	.671	8414	2.2	40	-F	2		0137	.67	.90				
44	05	0355	0424	0406	N27	W41	.698	8414	2.1	29	1-				1.14				2 2 2	
CULG	05	0355	0424D	0406	N28	W41	.702	8414	2.1	29D	-N	P	0406	.83	1.12					
TACH	05	0404E	0407D		N25	W40	.678	8414	2.2	3D	1N	V		1.83	2.50	1.50	63		EL	
45	05	0610	0720		N22	E03	.279	8422	5.5	70	1-				.64				1 1 1	
BUCA	05	0610E	0720D		N22	E03	.279	8422	5.5	70D	-N	C	0705	.92	.90					
46	05	1051	1232		N19	E05	.239	8422	5.8	101	1-								1 1 0	
KAND	05	1051	1232		N19	E05	.239	8422	5.8	101	-N								C	
47	05	1150	1219	1206	N29	W45	.746	8414	2.1	29	1-				1.50				3 3 3	
KAND	05	1125	1301		N28	W44	.732	8414	2.2	96	1N			1300	3.40	4.20				C
MCMA	05	1148	1220	1206	N30	W46	.759	8413	2.0	32	1N	C	1206	1.03	1.60				EK	
HUAN	05	1152	1218		N30	W45	.750	8414	2.1	26	-N	1	P	1209	.37	.46				D

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS			
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT.	CENTRAL MER. DIST.	MCMATH PLAGE REGION	OMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %		
48	05	1222	1251	1238	N32	W50	.802 8413	1.8	29	1-									
KAND	05	1220	1252		N36	W51	.823 8413	1.7	32	1F									
MCMA	05	1220	1246	1230	N32	W50	.802 8414	1.8	26	1N		C	1230	2.06	3.60			5 5 4	
HUAN	05	1226	1252	1244	N34	W55	.847 8413	1.4	26	-N		2 C	1244	.62	.88			C E K E	
ATHN	05	1239E	1355	1232	N27	W42	.708 8414	2.4	860	1N		2	C	1232	3.30	4.70	1.70		
SACP	05	1239E	1252U	1245	N33	W53	.829 8413	1.6	130	1N		P		1.87	2.56				
49	05	1305	1442	1326	N28	W46	.752 8414	2.1	97	1+				4.13				8 6 6	
HUAN	05	1226	1446	1327	N27	W46	.748 8414	2.1	140	1N		2 C	1327	2.37	2.94				
SACP	05	1239E	1519	1320U	N26	W44	.725 8414	2.2	1600	2N		P		4.36	5.21				
LOCA	05	1255	1437	1330	N25	W46	.742 8414	2.1	102	1N		V	1330	3.57	5.00				
MCMA	05	1306	1450	1330	N32	W50	.802 8414	1.8	104	1B		C	1330	2.32	4.00			F	
KIEV	05	1310E	1407U	1325	N26	W51	.793 8414	1.7	570	2N		C	1325	10.31			70	I	
CAPS	05	1314	1402		N25	W45	.732 8414	2.2	48	1N			1316	2.50	3.60		176	J	
UCCL	05	1355E	1400U		N31	W45	.754 8414	2.2	50	1N		P	1358	2.06				E	
SACP	05	1445E	1515	1445E	N32	W46	.767 8414	2.2	300	-N		C	1445	.70	1.10		10		
50	05	2222	2228	2224	N26	W50	.784 8414	2.2	6	1-				.24				2 2 2	
CULG	05	2221	2228	2223	N26	W50	.784 8414	2.2	7	-N		C	2223	.31	.48				
HUAN	05	2222	2227	2224	N25	W50	.782 8414	2.2	5	-F		2 C	2224	.21	.26			D	
51	06	0320	0429	0359	N23	W85	.993 8427	30.8	69	1-				.31				3 3 3	
CULG	06	0316	0414U	0405	N25	W86	.994 8427	30.7	580	-N		P	0405	.21					
MANI	06	0324	0408	0352	N24	W85	.992 8427	30.8	44	-B		2	0327	.21	.58				
TACH	06	0327E	0506U		N21	W85	.993 8427	30.8	990	1N		V	0328	.73		2.10	63	D	
52	06	0455	0550	0502	N22	W90	.999 8427	30.5	55	1				4.13				1 1 1	
KIEV	06	0455E	0550U	0502	N22	W90	.999 8427	30.5	550	1N		C	0502	4.13			70	A	
53	06	0736	0822	0803	N25	W90	.999 8427	30.6	46	1-				.61				6 6 4	
KAND	06	0620	0815		N24	W90	.999 8427	30.5	115	1N								PV	
ISTA	06	0740	0905		N27	W90	.999 8427	30.6	85	-									
CAPS	06	0759	0809		N25	W90	.999 8427	30.6	10	1N		3	0803	1.00			165	C	
ATHN	06	0800E	0814	0803	N24	W90	.999 8427	30.6	140	-N		2	0803	.33			1.40		
ARCE	06	0800	0817		N25	W88	.997 8427	30.7	17	1N		C	0807	.72	3.50				
MANI	06	0803	0812		N23	W89	.998 8427	30.7	9	-N		1	0804	.52	1.67				
54	06	0827	0915	0833	N25	W89	.998 8427	30.7	48	1+				1.11				2 2 2	
ATHN	06	0827	0853U	0833	N24	W90	.999 8427	30.6	260	1N		2 C	0833	.99			1.80		
ARCE	06	0827	0915		N25	W88	.997 8427	30.8	48	2N		C	0837	1.14	5.59				
55	06	0830	0835	0835	N35	W90	.998 8413	30.6	5	1-				.52				1 1 1	
CATA	06	0830E	0835U	0835	N35	W90	.998 8413	30.6	50	-F			0835	.52			144		
56	06	1235	1254	1235	N24	W90	.999 8427	30.8	19	1-				.75				1 1 1	
ATHN	06	1235E	1254	1235	N24	W90	.999 8427	30.8	190	1N		2	1235	.66			1.80		
57	06	1640	1748	1656	N38	W33	.691 8415	4.2	68	1-				.64				2 2 2	
LOCK	06	1635	1740	1655	N38	W33	.691 8415	4.2	65	-F				.70	1.00		10		
MCMA	06	1644	1755	1657	N37	W33	.683 8415	4.2	71	-N		C	1657	.41	.60			E	
58	06	1903	1935	1908	N21	W17	.378 8422	5.5	32	1-				1.93				5 4 4	
LOCK	06	1900	1945	1910	N22	W17	.388 8422	5.5	45	-B		C	1910	1.60	1.80		30		
SACP	06	1901	1940	1913	N21	W17	.378 8422	5.5	39	-N		P		1.74	1.73				
MCMA	06	1902	1928	1905	N21	W17	.378 8422	5.5	26	1B		C	1905	2.06	2.20			EH	
HALE	06	1903	1925	1905	N21	W16	.366 8422	5.6	22	-B		1 C	1905	1.55	1.70				
HUAN	06	1909	1936		N21	W17	.378 8422	5.5	27	-N		1 P	1911	.95	.95			E	
59	06	2018	2023		N29	W65	.908 8414	2.0	5	1-				.79				1 1 1	
MCMA	06	2018	2023		N29	W65	.908 8414	2.0	5	-N		C	2022	.52	1.20			D	
60	06	2105	2157	2145	N37	W90	.998 8427	31.1	52	2-				1.59				1 1 1	
LOCK	06	2105	2157	2145	N37	W90	.998 8427	31.1	52	2F		C	2145	1.70	5.80		10	H	
61	07	0010	0108	0029	N34	W66	.918 8415	2.1	58	1				1.64				2 2 2	
LOCK	07	0005	0055	0030	N34	W65	.913 8415	2.1	50	1N		C	0030	2.20	4.80		10	L	
HALE	07	0015	0120	0027	N34	W66	.918 8415	2.1	65	1N		1 C	0027	.83				T	
62	07	0103	0134	0110	N22	W18	.399 8422	5.7	31	1-				.83				2 2 2	
SACP	07	0101	0134	0110	N21	W19	.401 8422	5.6	33	-F		C		1.04	1.05				
LOCK	07	0105	0115U	0110	N22	W17	.388 8422	5.8	100	-N		C	0110	.70	.80		10		
63	07	0901	0941		N26	W55	.829 8415	3.3	40	1-								1 1 0	
KAND	07	0901	0941		N26	W55	.829 8415	3.3	40	-N								C	
64	07	0908	0915		N21	W13	.333 8422	6.4	7	1-								1 1 0	
KAND	07	0908	0915		N21	W13	.333 8422	6.4	7	-N								C	
65	07	1538	1622	1548	N22	W77	.969 8414	1.9	44	1-				.97				3 3 2	
LOCK	07	1532	1630		N23	W77	.969 8414	1.9	58	1N		C	1600	.80	2.20		10		
ATHN	07	1539E	1615	1548	N21	W75	.960 8414	2.0	360	1N		1	1548	1.16			1.50		
MCMA	07	1543	1620	1547	N22	W80	.980 8414	1.7	37	-N		C	1603					EHK	
66	07	1620	1640	1625	N25	W61	.876 8415	3.1	20	1-				.51				2 2 2	
LOCK	07	1616	1640	1623	N25	W60	.868 8415	3.2	24	-F		C	1623	.40	.80		10		
MCMA	07	1623	1639	1627	N25	W62	.883 8415	3.0	16	-N		C	1627	.41	.90			D	
67	07	1802	1825	1812	N25	W60	.868 8415	3.3	23	1-				.40				1 1 1	
LOCK	07	1802	1825	1812	N25	W60	.868 8415	3.3	23	-F		C	1812	.40	.80		10		
68	07	2000	2015	2005	N23	W30	.551 8422	5.6	15	1-				.50				1 1 1	
LOCK	07	2000	2015	2005	N23	W30	.551 8422	5.6	15	-F		C	2005	.50	.60		10		
69	08	0120	0128	0123	N27	W84	.990 8414	1.8	8	1-				.41				1 1 1	
HALE	08	0120	0128	0123	N27	W84	.990 8414	1.8	8	-N		1 C	0123	.41	.41				





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OBSERV. ATORY	OBSERVED UT			LOCATION					DURA- TION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MC <sup>2</sup> MATH FLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %			
128	16	1335	1410		N23	W02	.283	8438	16.4	35	1-							1 1 1	
MCMA	16	1335	1410		N23	W02	.283	8438	16.4	35	-N	C	1354	1.44	1.00			E	
129	16	1546	1632	1600	N26	E91	.999	8443	23.5	46	1			1.03				3 3 2	
LOCK	16	1538	1640	1601	N27	E90	.999	8443	23.4	62	2N	C	1601	1.60	6.40		20	L	
MEUD	16	1550	1645		N22	E90	.999	8443	23.4	55	-N								
SACP	16	1551	1612	1559	N29	E92	1.000	8443	23.6	21	-N	C		.85					
130	16	1757	1813	1755	N25	E02	.316	8438	16.9	16	1-			.29				2 1 1	
LOCK	16	1751	1810	1755	N26	E01	.331	8438	16.8	19	-F	C	1755	.30	.30		10		
MCMA	16	1802	1816		N23	E02	.283	8438	16.9	14	-N	C	1802	.83	.90			E	
131	16	2021	2111	2036	N23	W04	.288	8438	16.5	50	1-			.92				2 2 2	
MCMA	16	2017	2122	2036	N23	W04	.288	8438	16.5	65	-N	C	2036	1.03	1.00			FL	
LOCK	16	2025	2100	2035	N22	W04	.272	8438	16.6	35	-F	C	2035	.40	.40		10		
132	16	2025	2040	2030	S20	W46	.794	8429	13.4	15	1-			.29				1 1 1	
LOCK	16	2025	2040	2030	S20	W46	.794	8429	13.4	15	-F	C	2030	.30	.80		10	H	
133	16	2124	2132	2126	S21	W65	.937	8429	12.0	8	1			.82				3 3 3	
LOCK	16	2123	2138	2125	S21	W63	.925	8429	12.2	15	1B	C	2125	1.10	2.60		30	H	
MCMA	16	2124	2125		S22	W69	.958	8429	11.7	1	-B	P	2125	.62	1.80			DV	
HALE	16	2125	2134	2127	S19	W62	.915	8429	12.2	9	-N	1	C	2127	.36				
134	16	2230	2300	2237	N14	W05	.153	8438	16.6	30	1-			.40				1 1 1	
LOCK	16	2230	2300	2237	N14	W05	.153	8438	16.6	30	-F	C	2237	.40	.40		10		
135	16	2246	2257	2249	N27	W04	.353	8438	16.6	11	1-			.21				1 1 1	
MANI	16	2246	2257	2249	N27	W04	.353	8438	16.6	11	-F	2	2249	.31	.33				
136	16	2303	2340	2301	N25	E84	.990	8442	23.3	37	1-			.38				2 1 1	
SACP	16	2255	2310	2301	N30	E87	.995	8442	23.5	15	-F	C		.42					
LOCK	16	2310	0010	2350	N20	E80	.979	8443	23.0	60	-F	C	2350	.30	.90		10		
137	16	2334	2343	2337	N19	E82	.986	8443	23.1	9	1-			.06				1 1 1	
MANI	16	2334	2343	2337	N19	E82	.986	8443	23.1	9	-N	2	2337	.10	.27				
138	17	0022	0029	0025	N22	E80	.979	8443	23.0	7	1-			.08				1 1 1	
LOCK	17	0022	0029	0025	N22	E80	.979	8443	23.0	7	-F	C	0025	.10	.30		10	H	
139	17	0030	0045	0034	S22	W67	.949	8429	12.0	15	1+			1.18				3 3 3	
LOCK	17	0028	0046	0033	S21	W66	.942	8429	12.1	18	1B	C	0033	1.60	4.00		30		
MANI	17	0030	0047	0035	S24	W64	.937	8429	12.2	17	1B	3	0035	1.51	3.18				
HALE	17	0031	0042	0034	S21	W72	.970	8429	11.6	11	1B	1	C	0034	.83				
140	17	0447	0501	0455	N20	E78	.972	8443	23.0	14	1-			.43				3 3 3	
HALE	17	0445E	0450		N19	E80	.980	8443	23.2	5D	-N	1	P	0449	.21			1.30	
ATHN	17	0445E	0502		N21	E75	.959	8443	22.8	17D	-N	2	0445	.66					
MANI	17	0452	0510	0455	N19	E79	.976	8443	23.1	18	-N	2	0455	.62	1.56				
141	17	0548	0602	0550	N20	E76	.964	8443	22.9	14	1-			.46				1 1 1	
ATHN	17	0548	0602	0550	N20	E76	.964	8443	22.9	14	-F	2	0550	.41			1.30		
142	17	0800	0814		N27	E18	.447	8440	18.7	14	1-							1 1 0	
KAND	17	0800	0814		N27	E18	.447	8440	18.7	14	-F							C	
143	17	0927	1051	0946	N23	W11	.332	8438	16.6	84	1+			6.02				11 10 8	
KAND	17	0900	1130	0950	N20	W15	.337	8438	16.3	150	2N	C	0953	10.49	10.40			C	
UCCL	17	0900	1100	0950	N25	W10	.352	8438	16.6	120	2N	C	0950	8.82	10.20			E	
ONDR	17	0933	1040		N22	W10	.310	8438	16.6	67	2N	V	0933				2.50	CFHK	
MEUD	17	0933	1130	0941	N25	W10	.352	8438	16.6	117	2N	C	0941	8.46	8.90			H	
NERA	17	0936E	0962U		N22	W12	.328	8438	16.5	26D	1	2							
ATHN	17	0936	1041	0943	N23	W10	.324	8438	16.6	65	2N	2	0943	6.11	6.40	1.80			
KHAR	17	0937	1040	0945	N23	W11	.332	8438	16.6	63	2N	V	0947	11.34	12.10	1.80		FHOV	
CAPS	17	0939	1038		N24	W10	.338	8438	16.7	59	1B	3	0945	4.30	4.60		220	L	
MANI	17	0940	1005	0945	N23	W08	.309	8438	16.8	25	1N	1	0945	3.61	3.90				
CATA	17	0940E	1050D	0942	N22	W15	.359	8438	16.3	70D	1N		0942	4.26	4.54		180		
ABST	17	1014E	1055	1014	N22	W14	.349	8438	16.4	41D	1	C	1014	1.79	1.91		78	D	
144	17	1117	1150		N17	E85	.993	8447	23.8	33				.72				1 0 1	
UCCL	17	1117	1150		N17	E85	.993	8447	23.8	33		C	1132	1.03				D	
145	17	1123	1134	1129	S27	W05	.560	8441	17.1	11	1-			.32				3 3 1	
KAND	17	1120	1130		S25	W03	.528	8441	17.2	10	-N							P	
UCCL	17	1122	1134	1129	S27	W10	.575	8441	16.7	12	-N	C						E	
ATHN	17	1127	1137	1128	S30	W01	.598	8441	17.4	10	-N	2	1128	.33	.70	1.30			
146	17	2120	2210	2140	N27	E90	.999	8442	24.6	50	1-			.89				1 1 1	
LOCK	17	2120	2210	2140	N27	E90	.999	8442	24.6	50	1-	C	2140	1.00	2.70		10		
147	18	0020	0028	0026	S21	E70	.961	8452	23.3	8	1-			.21				1 1 1	
HALE	18	0020	0028	0026	S21	E70	.961	8452	23.3	8	-F	1	C	0026	.21				
148	18	0126	0155	0140	N26	W16	.415	8438	16.9	29	1-			.31				1 1 1	
HALE	18	0126	0155	0140	N26	W16	.415	8438	16.9	29	-F	1	C	0140	.31	.30			D
149	18	0139	0234	0147	N20	E67	.914	8443	23.1	55	1-			.65				2 2 2	
MITK	18	0134	0235	0147	N20	E67	.914	8443	23.1	61	1F	C	0147	.83					
HALE	18	0143	0233	0207	N20	E66	.908	8443	23.0	50	-B	1	C	0207	.72				
150	18	0609	0621	0611	N29	E07	.394	8444	18.8	12	1-			.18				1 1 1	
MANI	18	0609	0621	0611	N29	E07	.394	8444	18.8	12	-F	2	0611	.26	.29				
151	18	1124	1139		N23	W30	.546	8438	16.2	15	1-							1 1 0	
UCCL	18	1124E	1139U		N23	W30	.546	8438	16.2	15D	-N	P						E	
152	18	1730	1815	1750	S13	E64	.918	8452	23.5	45	1-			.28				1 1 1	
LOCK	18	1730	1815	1750	S13	E64	.918	8452	23.5	45	-F	C	1750	.30	.70		10		



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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MATH. PLAGE REGION	CMP DAY	TIME — UT				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H <sub>α</sub>	MAX. INT. %			
178	21	1615	1640	1618	N35 W85	.990	8435	15.3	25	1+							1 1 1		
HALE	21	1615E	1640	1618	N35 W85	.990	8435	15.3	25D	1B	2	P	1618	.52				KJT	
179	21	1650	1701	1655	N35 W85	.990	8435	15.3	11	1-				.31			1 1 1		
HALE	21	1650	1701	1655	N35 W85	.990	8435	15.3	11	-N	2	C	1655	.31				JT	
180	21	1718	1740	1725	N24 E80	.978	8459	27.7	22	1-				.41			1 1 1		
HALE	21	1718E	1740D	1725	N24 E80	.978	8459	27.7	22D	-N	3	P	1725	.41					
181	21	2319	2337	2325	N34 W88	.995	8435	15.4	18	1-				.33			2 1 1		
LOCK	21	2310	2332	2320	N35 W90	.998	8435	15.2	22	-F		C	2320	.40	1.60			20	
HALE	21	2327	2341	2329	N33 W86	.992	8435	15.5	14	-N	3	C	2329	.21				T	
182	22	0403	0435	0416	N23 E90	.999	8461	28.9	32	1				1.64			1 1 1		
TACH	22	0403	0435	0416	N23 E90	.999	8461	28.9	32	1F		C	0416	2.00		3.20		54	
183	22	0534	0543	0536	N21 E90	.999	8461	29.0	9	1-				.08			1 1 1		
MANI	22	0534	0543	0536	N21 E90	.999	8461	29.0	9	-N	2		0536	.15	.50				
184	22	0612	0620	0616	N23 E77	.968	8461	28.0	8	1-				.38			1 1 1		
MANI	22	0612	0620	0616	N23 E77	.968	8461	28.0	8	-F	2		0616	.62	1.50				
185	22	0658	0708		N20 W85	.992	8438	15.9	10	1-				.32			1 1 1		
BUCA	22	0658E	0708D		N20 W85	.992	8438	15.9	10D	-N		C		.45				G	
186	22	0718	0750		N42 E56	.870	8457	26.5	32	1-				.78			1 1 1		
BUCA	22	0718E	0750D		N42 E56	.870	8457	26.5	32D	1F		C	0724	1.12	2.30				
187	22	0735	0743		N24 W90	.999	8438	15.6	8	1-							1 1 0		
KAND	22	0735	0743		N24 W90	.999	8438	15.6	8	-B								C	
188	22	0752	0820		N23 E90	.999	8461	29.1	28	1-				.39			1 1 1		
BUCA	22	0752E	0820D		N23 E90	.999	8461	29.1	28D	1F		C	0755	.56					
189	22	1018	1050		N32 E84	.988	8460	28.7	32	1-							1 1 0		
KAND	22	1018	1050		N32 E84	.988	8460	28.7	32	-N								P	
190	22	1417	1432	1417	N23 E72	.944	8459	28.0	15	1-				.35			2 1 1		
ATHN	22	1416E	1429	1417	N22 E70	.933	8459	27.8	13D	-N	2		1417	.33		1.80			
CAPS	22	1418	1435		N24 E74	.954	8459	28.1	17	-B	3		1420	.50				194	
191	22	2126	2224	2145	N28 E59	.861	8459	27.3	58	1-				1.62			5 5 5		
LOCK	22	2113	2220	2145	N28 E59	.861	8459	27.3	67	2N		C	2145	2.80	5.30			20	
CULG	22	2122	2253D	2145	N23 E57	.839	8459	27.2	91D	-N		P	2145	1.03	1.90				
HALE	22	2125	2220	2144	N30 E58	.857	8459	27.2	55	1B	1	C	2144	1.03	2.10				
HUAN	22	2132	2207		N29 E60	.870	8459	27.4	35	-F	1	C	2143	1.24	1.80			S	
MCMA	22	2137	2221		N28 E60	.869	8459	27.4	44	1N		P	2145	1.24	2.50			F	
192	22	2258	2328	2307	N39 E49	.813	8457	26.6	30	1				1.51			2 2 2		
LOCK	22	2258	2330	2306	N38 E48	.802	8457	26.6	32	1N		C	2306	1.90	3.20			20	
CULG	22	2305E	2325	2307	N40 E50	.824	8457	26.7	20D	-N		P	2307	.93	1.44				
193	22	2330	2358	2344	N24 E65	.902	8459	27.9	28	1-				.72			1 1 1		
MITK	22	2330E	2358	2344	N24 E65	.902	8459	27.9	28D	1F		C	2344	1.03	2.40				
194	23	0036	0117		N23 E65	.901	8459	27.9	41	1-				1.18			1 1 1		
MITK	23	0036E	0117D		N23 E65	.901	8459	27.9	41D	1F		C	0048	1.65	3.80				
195	23	0611	0831	0628	N22 E62	.879	8459	27.9	140	1-				1.64			10 7 7		
ATHN	23	0451E	0630	0451	N22 E66	.908	8459	28.2	99D	-B	2		0451	.66		1.90			
CULG	23	0511	0647D	0628	N24 E64	.895	8459	28.0	96D	-N		P	0628	.72	1.75				
ARST	23	0608	0738	0625	N23 E62	.879	8459	27.9	90	1		C	0625	2.25				DJK	
CATA	23	0615E	0840D	0800	N24 E62	.880	8459	27.9	145D	-B		C	0800	.72	1.50			85	
KIEV	23	0625E	0655D	0630	N18 E65	.900	8459	28.1	30D	1N		C	0630	5.16				70	
CAPS	23	0625	0808		N24 E61	.872	8459	27.8	103	1N	1		0745	2.00	4.00			182	
MANI	23	0627	0647	0628	N23 E60	.864	8459	27.8	20	-N	2		0628	.72	1.31				
KAND	23	0655	1310		N23 E61	.872	8459	27.9	375	1N			0800	3.31	5.00			C	
ISTA	23	0720	0825		N17 E62	.877	8459	28.0	65	1									
BUCA	23	0812E	0900D		N24 E57	.840	8459	27.6	48D	1F		C	0831	1.12	2.10				
196	23	0655	1229	0700	N06 E12	.207	8454	24.2	334	1-				1.24			4 2 2		
KAND	23	0655	1229		N06 E13	.224	8454	24.3	334	1N				0914	2.54	2.50			C
CATA	23	0659E	0710D	0700	N06 E12	.207	8454	24.2	11D	-F			0700	.44	.46			148	
BUCA	23	0824E	1030D		N08 E10	.173	8454	24.1	126D	1N		C	1020	2.25	2.30				
KHAR	23	0855E	0940D		N05 E12	.210	8454	24.3	45D	1F		V	0905	2.27	2.40		2.60		
197	23	0900	0943		N23 E59	.855	8459	27.8	43	1				.91			2 2 2		
KHAR	23	0900E	0932D		N22 E60	.863	8459	27.9	32D	2F		V	0905	2.84	5.80		2.40		
BUCA	23	0917E	0943D		N24 E57	.840	8459	27.7	26D	-F		C	0922	.90	1.70				
198	23	0952	1153	1004	N22 E67	.914	8461	28.4	121	1				1.70			5 4 4		
KAND	23	0950	1220		N20 E72	.944	8461	28.8	150	1B			1002	2.28	4.40			C	
BUCA	23	0951E	1054D		N22 E68	.921	8461	28.5	63D	1F		C	1007	1.68					
CAPS	23	0954	1130		N24 E62	.880	8459	28.1	96	2N	2		1100	2.50			215		
ATHN	23	1001E	1150	1004	N23 E69	.927	8461	28.6	109D	1N	2		1004	1.49	3.70		1.70		
CATA	23	1007E	1101D	1030	N22 E64	.894	8459	28.2	54D	1N			1030	2.22				146	
199	23	1308	1320	1310	N24 E61	.872	8459	28.1	12	1-				.58			4 4 4		
ATHN	23	1306	1317	1308	N22 E64	.894	8459	28.3	11	-N	2		1308	.50	1.10		1.80		
CAPS	23	1307	1323		N26 E59	.859	8459	28.0	16	-N	3		1311	.80				166	
HUAN	23	1308	1321	1311	N23 E60	.864	8459	28.0	13	-N	2		C	1311	.31	.44			
MCMA	23	1310	1320		N23 E60	.864	8459	28.0	10	-B		C	1310	.52	1.00				
200	23	1623	1636	1631	N27 E52	.800	8459	27.6	13	1-				.21			1 1 1		
HALE	23	1623E	1636D	1631	N27 E52	.800	8459	27.6	13D	-N	1	P	1631	.21	.30				

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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	MCMATH PLAGE REGION				CMP DAY	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Ha
	1966																
	AUG																
201	23	1749	1801		N24	E59	.856	8459	28.2	12	1-			.40			2 2 2
MCMA	23	1746	1753		N23	E60	.864	8459	28.2	7	-B	P	1753	.41	.80		E
HUAN	23	1752	1809		N24	E58	.848	8459	28.1	17	-F	2 C	1759	.21	.29		D
202	23	2234	2247	2237	N22	E51	.781	8459	27.8	13	1-			.34			1 1 1
MANI	23	2234	2247	2237	N22	E51	.781	8459	27.8	13	-N	2	2237	.50	.79		
203	24	0333	0333		N20	E60	.861	8461	28.6		1-			.65			1 1 1
MITK	24	0333E	0333D		N20	E60	.861	8461	28.6		-F	P	0333	.93	1.80		D
204	24	0530	0535		N20	E60	.861	8461	28.7	5	1-			.13			1 1 1
MANI	24	0530	0535		N20	E60	.861	8461	28.7	5	-N	2	0531	.21	.38		
205	24	0732	0801	0743	N22	E51	.781	8461	28.1	29	1-			.67			1 1 1
ATHN	24	0732	0801	0743	N22	E51	.781	8461	28.1	29	-N	2	0743	.66	1.20	1.40	
206	24	0810	1124	0823	N26	E90	.999	8467	31.1	194	1+			.66			3 3 2
BUCA	24	0805E	0859D		N27	E90	.998	8467	31.1	54D	1F	C	0823	.90			
ARCE	24	0810	0833	0823	N27	E90	.998	8467	31.1	23	1N	C	0823	.69	3.90		
KAND	24	0815	1415		N25	E90	.999	8467	31.1	360	2B						P
207	24	0838	1002	0846	N23	E53	.802	8461	28.3	84	1			1.34			4 2 1
ARCE	24	0823	0847	0846	N23	E50	.773	8461	28.1	24	1N	C	0846	1.34	2.18		
ONDR	24	0843	0852		N24	E53	.804	8461	28.3	9	1N	V	0843			2.10	
UCCL	24	0846E	0847U		N23	E54	.811	8461	28.4	1D		P					H
KAND	24	0847	1226		N22	E53	.800	8461	28.3	219	-N						E
208	24	0915	1205		N06	W04	.071	8454	24.1	170	1-			2.48			2 2 2
KAND	24	0910	1415		N07	W01	.017	8454	24.3	305	1N		0957	4.61	4.60		P
ARCE	24	0920	0955		N05	W07	.126	8454	23.9	35	-F	C	0950	.72	.72		H
209	24	1010	1035		N39	E20	.598	8457	25.9	25	1-						1 1 0
KAND	24	1010	1035		N39	E20	.598	8457	25.9	25	-N						
210	24	1219	1406	1253	N25	E59	.857	8461	28.9	107	1-			.46			P
KAND	24	1100	1415		N23	E59	.855	8461	28.9	195	-B						3 2 1
MCMA	24	1248	1420	1253	N25	E58	.849	8461	28.9	92	-F	C	1306	.31	.60		P
CAPS	24	1308	1344		N26	E01	.874	8461	29.1	36	-F	3	1312	.70	1.40		DMK JD
211	24	1345	1410		N19	W24	.442	8447	22.8	25	1-						1 1 0
KAND	24	1345	1410		N19	W24	.442	8447	22.8	25	-F						P
212	24	1425	1431		N08	W09	.156	8447	23.9	6	1-			.23			1 1 1
HUAN	24	1425	1431		N08	W09	.156	8447	23.9	6	-F	1 P	1428	.25	.25		D
213	24	1434	1450	1438	N25	E59	.857	8461	29.0	16	1-			.48			3 3 3
MCMA	24	1430	1450	1440	N25	E58	.849	8461	29.0	20	-F	C	1440	.41	.80		3
ATHN	24	1433	1449	1435	N25	E58	.849	8461	29.0	16	-N	2	1435	.33	.60	1.80	DH
CAPS	24	1438	1452		N26	E01	.874	8461	29.2	14	-N	2	1439	.50			DJ
214	24	1453	1546	1504	N23	E55	.820	8461	28.7	53	1-			2.01			2 2 2
MCMA	24	1453	1550		N23	E56	.829	8461	28.8	57	-F	C	1504	.83	1.60		EH
ATHN	24	1500E	1542	1504	N23	E54	.811	8461	28.7	42D	1N	2	1504	2.64	4.60	1.70	
215	24	1621	1655	1625	N23	E58	.847	8461	29.0	34	1-			.60			1 1 1
MCMA	24	1621	1655	1625	N23	E58	.847	8461	29.0	34	-F	C	1625	.41	.80		D
216	24	1858	1904		N24	E40	.668	8459	27.8	6	1-			1.08			1 1 1
MCMA	24	1858	1904		N24	E40	.668	8459	27.8	6	-N	P	1903	.77	1.50		EH
217	24	2212	2243	2217	N06	W15	.258	8454	23.8	31	1-			1.23			2 2 2
CULG	24	2212	2241	2215	N05	W15	.260	8454	23.8	29	-B	C	2215	.62	.66		F
LOCK	24	2212	2245	2219	N06	W15	.258	8454	23.8	33	-N	C	2219	1.70	1.70		20
218	24	2300	2335		N07	W15	.257	8454	23.8	35	1-			.12			1 1 1
IKOM	24	2300	2350		N07	W15	.257	8454	23.8	35D	-F	V	2300	.41	.42		D
219	25	0023	0036	0025	N31	E48	.775	8460	28.6	13	1-			.10			1 1 1
MANI	25	0023	0036	0025	N31	E48	.775	8460	28.6	13	-N	2	0025	.15	.24		
220	25	0341	0353	0344	N23	E33	.581	8459	27.6	12	1-			.18			2 2 2
HALE	25	0340	0358	0344	N24	E35	.610	8459	27.8	18	-N	1 C	0344	.26	.30		
MANT	25	0342	0347	0343	N22	E30	.538	8459	27.4	5	-B	2	0343	.15	.18		
221	25	0549	0608	0553	N22	E28	.513	8459	27.3	19	1-			.29			1 1 1
MANI	25	0549	0608	0553	N22	E28	.513	8459	27.3	19	-N	2	0553	.41	.48		
222	25	0618	0647	0622	N24	W20	.432	8443	23.8	29	1-			1.88			1 1 1
ABST	25	0618	0647	0622	N24	W20	.432	8443	23.8	29	1N	C	0622	2.69	2.90		DJK
223	25	0621	0642	0627	N07	W20	.340	8454	23.8	21	1			2.63			4 3 3
ATHN	25	0620	0642	0622	N07	W18	.307	8454	23.9	22	-B	2	0622	1.16	1.20	2.00	
CAPS	25	0621	0632	0627	N06	W22	.373	8454	23.6	11	18	2	0623	2.50	2.60		240
MANT	25	0622	0653	0629	N07	W19	.323	8454	23.8	31	18	2	0629	4.23	4.47		J
CATA	25	0629E	0650D	0630	N07	W22	.372	8454	23.6	21D	-B		0630	1.31	1.42		209
224	25	0905	1025		N22	E45	.718	8461	28.8	80	1-						1 1 0
KAND	25	0905	1025		N22	E45	.718	8461	28.8	80	-N						C
225	25	0945	0952		N21	E29	.520	8459	27.6	7	1-						1 1 0
KAND	25	0945	0952		N21	E29	.520	8459	27.6	7	-N						C
226	25	0955	1025		N08	W17	.290	8454	24.1	30	1-						1 1 0
KAND	25	0955	1025		N08	W17	.290	8454	24.1	30	-N						C
227	25	1040	1106		N33	E47	.773	8460	29.0	26	1-						2 2 0
KAND	25	1040	1105		N32	E47	.769	8460	29.0	25	-F						C
UCCL	25	1040E	1107U		N34	E46	.768	8460	28.9	27D	-N	P					D
228	25	1040	1103	1058	N08	E23	.388	8459	27.2	23	1-			1.42			1 1 1
UCCL	25	1040E	1103D	1058	N08	E23	.388	8459	27.2	23D	1F	P	1058	2.60	3.10		E





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OBSERVATORY	OBSERVED UT				LOCATION				DURATION	IMPORENTANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCNATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %	
253 HUAN	26	1549	1601	1552	N08 W36	.583	8454	24.0	12	1-			.23				1 1 1
254 HUAN	26	1730	1752	1742	N26 E23	.484	8461	28.5	22	2	C	1552	.25	.27			E 3 3 3
255 MCMA	26	1806	1952	1822	N24 E22	.466	8461	28.4	106	2-			6.12				E 5 5 5
256 SACP	26	2031	2049	2038	N23 E55	.820	8467	31.0	18	1-			.73				E 2 2 2
257 MCMA	26	2138	2150	2148	N22 E57	.837	8467	31.2	12	1-			.76	.80			E 1 1 1
258 SACP	26	2153	2313	2213	N24 E29	.538	8461	29.1	80	1+			3.76				E 3 3 3
259 HUAN	26	2330	2351	2324	N23 E23	.458	8461	28.7	21	1-			1.71				E 2 1 1
260 HUAN	26	2342	2352	2324	N24 E19	.421	8461	28.4	33	-F			1.90	1.91			E 2 1 1
261 HUAN	27	0047	0053	0047	N07 W54	.804	8454	23.0	6	1-			.26	.30			E 1 1 1
262 HUAN	27	0211	0237	0217	N24 E29	.538	8461	29.3	26	1-			1.13				E 4 4 4
263 HUAN	27	0210	0238	0216	N24 E30	.550	8461	29.3	28	-B			1.20	1.30			E 4 4 4
264 HUAN	27	0211	0240	0218	N24 E29	.538	8461	29.3	29	-N			.72	.80			E 4 4 4
265 HUAN	27	0212	0233	0218	N22 E29	.525	8461	29.3	21	-F			1.52	1.95			E 6 5
266 HUAN	27	0214E	0218D		N24 E29	.538	8461	29.3	40	1N			1.94	2.33			E 6 5
267 HUAN	27	0519	0539	0520	N26 E11	.369	8459	28.0	20	1-			.28				E 1 1 1
268 HUAN	27	0519E	0539	0520	N26 E11	.369	8459	28.0	200	-N			.31	.32			E 1 1 1
269 HUAN	27	0610	0618		N09 W38	.611	8454	24.4	8	1-			1.04				E 1 1 1
270 HUAN	27	0610E	0618		N09 W38	.611	8454	24.4	8D	-N			.99	1.40	1.80		E 1 1 1
271 HUAN	27	0625	0648	0627	N09 W14	.393	8459	26.2	23	1-			.47				E 1 1 1
272 HUAN	27	0625	0648	0627	N26 W14	.393	8459	26.2	23	-N			.52	.55			E 1 1 1
273 HUAN	27	0707	0720	0717	N25 W11	.355	8459	26.5	13	1-			.56				E 1 1 1
274 HUAN	27	0707	0720D	0717	N25 W11	.355	8459	26.5	13D	-N			.62	.66			E 1 1 1
275 HUAN	27	0830	1012		N17 E21	.387	8461	28.9	102								E 1 0 0
276 HUAN	27	0830	1012		N17 E21	.387	8461	28.9	102								E 1 0 0
277 HUAN	27	0854	0930		N07 W47	.727	8454	23.8	36	1-			.75				E 4 3 1
278 HUAN	27	0830	1012		N08 W45	.702	8454	24.0	102								E 4 3 1
279 HUAN	27	0900	0908		N08 W48	.738	8454	23.8	8	-							E 4 3 1
280 HUAN	27	0903	0916		N07 W46	.715	8454	23.9	13	-N							E 4 3 1
281 HUAN	27	0903	0923		N06 W49	.751	8454	23.7	20	-N			.75	1.15			E 4 3 1
282 HUAN	27	0904	0916	0906	N08 W40	.638	8454	24.4	12	1-			.86				E 1 1 1
283 HUAN	27	0904	0916	0906	N08 W40	.638	8454	24.4	12	-N			.83	1.10	1.80		E 1 1 1
284 HUAN	27	1049	1128	1100	N07 W43	.678	8454	24.2	39	1-			1.39				E 3 3 3
285 HUAN	27	1037	1127	1102	N09 W41	.651	8454	24.4	50	-N			1.05	1.40	2.00		E 3 3 3
286 HUAN	27	1054	1147	1059	N08 W46	.714	8454	24.0	53	-N			1.79				E 71 DJK
287 HUAN	27	1054	1147	1059	N08 W46	.714	8454	24.0	53	-N			1.79				E 71 DJK
288 HUAN	27	1056	1109	1100	N04 W43	.681	8454	24.2	13	1N			1.86	2.60			E 71 DJK
289 HUAN	27	1257	1321	1303	N21 E14	.332	8461	28.6	24	1			2.06				E 5 5 5
290 HUAN	27	1256	1335	1306	N22 E12	.324	8461	28.4	39	1N			4.64	4.58			E 5 5 5
291 HUAN	27	1256	1337	1305	N22 E12	.324	8461	28.4	41	1B			1.24	2.10			E 5 5 5
292 HUAN	27	1257	1305	1259	N21 E13	.322	8461	28.5	8	-N			.57	.57			E 5 5 5
293 HUAN	27	1258	1325		N21 E12	.311	8461	28.4	27	1B			4.13				E 5 5 5
294 HUAN	27	1259	1302		N19 E19	.374	8461	29.0	3	-N			1.80	2.00			E 5 5 5
295 HUAN	27	1308	1322	1310	N20 E24	.448	8461	29.3	14	1-			1.43				E 165
296 HUAN	27	1308E	1322	1310	N20 E24	.448	8461	29.3	140	-N			1.29	1.40	1.80		E 165
297 HUAN	27	1310	1322		N08 W54	.804	8454	23.5	12	1-							E 1 1 1
298 HUAN	27	1310	1322		N08 W54	.804	8454	23.5	12	-N							E 1 1 0
299 HUAN	27	1434	1451	1437	N09 W49	.749	8454	23.9	17	1-			.57				E 3 3 2
300 HUAN	27	1433	1455	1437	N07 W50	.762	8454	23.9	22	-B			.52	.70			E 3 3 2
301 HUAN	27	1434	1449		N09 W50	.761	8454	23.9	15	-N							E 3 3 2
302 HUAN	27	1434	1450	1436	N10 W48	.738	8454	24.0	16	-N			.45	.57			E 3 3 2
303 HUAN	27	1443	1458	1445	N09 W42	.664	8454	24.5	15	1-			.97				E 1 1 1
304 HUAN	27	1443	1458	1445	N09 W42	.664	8454	24.5	15	-N			.93	1.20	1.60		E 1 1 1
305 HUAN	27	1603	1618	1611	N22 E15	.355	8461	28.8	15	1-			1.30				E 4 4 3
306 HUAN	27	1600	1618	1611	N22 E12	.324	8461	28.6	18	-B			1.55	1.60			E 4 4 3
307 HUAN	27	1601	1615		N21 E15	.344	8461	28.8	14	-F			.45	.45			E 4 4 3
308 HUAN	27	1603	1623		N21 E16	.355	8461	28.9	20	-F							E 4 4 3
309 HUAN	27	1609	1616	1610	N22 E15	.355	8461	28.8	7	-N			1.46	1.45			E 4 4 3
310 HUAN	27	1656	1715	1701	N24 E44	.712	8467	31.0	19	1-			.77				E 1 1 1
311 HUAN	27	1656	1715	1701	N24 E44	.712	8467	31.0	19	-F			.86	1.01			E 1 1 1

SOLAR FLARES  
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OBSERVATORY	OBSERVED UT			LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	MCMATH FLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Hr
277	27	1704	1715	1708	N22 E12	.324	8461	28.6	11	1-						1 1 1
MCMA	27	1704	1715	1708	N22 E12	.324	8461	28.6	11	-N	C	1708	.87	.62	.70	E
278	27	1707	1714	1708	N08 W53	.794	8454	23.7	7	1-						1 1 1
HUAN	27	1707	1714	1708	N08 W53	.794	8454	23.7	7	-F	2 C	1708	.19	.21	.26	D
279	27	1802	1818	1812	N22 E14	.344	8461	28.8	16	1-						2 2 2
MCMA	27	1756	1820	N22 E11	.314	8461	28.6	24	-N	C	1756	.90	.77	.80	E	
LOCK	27	1808	1816	1812	N21 E16	.355	8461	29.0	8	-N	C	1812	.70	.70	.70	20
280	27	1800	1822	1803	N07 W52	.783	8454	23.9	22	1-						1 1 1
MCMA	27	1800	1822	1803	N07 W52	.783	8454	23.9	22	-N	C	1803	.74	.52	.70	E
281	27	1845	1900	1850	N22 E12	.324	8461	28.7	15	1-						3 3 3
MCMA	27	1844	1857	1848	N22 E10	.305	8461	28.5	13	-N	C	1848	.86	.52	.60	E
HUAN	27	1845	1854	1849	N21 E13	.322	8461	28.8	9	-F	2 C	1849	.50	.50	.50	E
SACP	27	1846	1910U	1854U	N22 E13	.334	8461	28.8	24U	-N	P		1.55	1.53		
282	27	1855	1927	1909	N07 W52	.783	8454	23.9	32	1						3 3 3
MCMA	27	1855	1923	N06 W53	.795	8454	23.8	28	1B	C	1908	1.79	1.55	2.50	F	
HUAN	27	1855	1927	1858	N07 W53	.794	8454	23.8	32	-N	2 C	1858	.83	1.03		E
SACP	27	1859E	1932	1909	N07 W51	.773	8454	24.0	33D	1F	P		2.69	3.40		
283	27	1932	1939	1935	N10 W56	.823	8447	23.6	7	1-						1 1 1
SACP	27	1932	1939	1935	N10 W56	.823	8447	23.6	7	-F	C		.16	.18	.23	
284	27	2008	2138	2035	N22 E12	.324	8459	28.7	90	1-						4 4 4
LOCK	27	1955	2150	2040	N23 E13	.346	8459	28.8	115	-N	C	2040	2.62	1.60	1.80	20
MCMA	27	2007	2206	2035	N22 E10	.305	8459	28.6	119	1N	C	2035	1.01	2.27	2.30	F
HUAN	27	2015	2059	2035	N21 E15	.344	8461	29.0	44	-N	1 P	2035	4.94	4.88		E
SACP	27	2015	2137	2030	N22 E11	.314	8461	28.7	82	1N	C		.94			
285	27	2200	2250	2210	N24 E13	.359	8461	28.9	50	1-						1 1 1
LOCK	27	2200	2250	2210	N24 E13	.359	8461	28.9	50	-N	C	2210	.90	.90	.90	20
286	27	2245	2347	2251	N22 E08	.289	8461	28.5	62	1						1 1 1
SACP	27	2245	2347U	2251	N22 E08	.289	8461	28.5	62D	1N	P		2.55	2.77	2.73	
287	27	2324	2339	2327	N21 E07	.267	8459	28.5	15	1-						1 1 1
MANI	27	2324	2339	2327	N21 E07	.267	8459	28.5	15	-N	2	2327	.28	.41	.43	
288	28	0007	0015	N05 W57	.836	8454	23.7	8	1-							1 1 0
MITK	28	0007E	0015D	N05 W57	.836	8454	23.7	8D	-N	V						
289	28	0046	0108	0050	N06 W54	.805	8454	24.0	22	1-						2 2 2
MITK	28	0045	0106	0050	N05 W53	.796	8454	24.1	21	-F	C	0050	.59	1.24	2.00	E
MANI	28	0047	0110	0050	N07 W54	.804	8454	24.0	23	-B	2 C	0050	.46	.76		
290	28	0324	0339	0326	N25 E05	.318	8461	28.5	15	1-						3 2 2
MITK	28	0318	0340	0324	N25 E03	.311	8461	28.4	22	-F	C	0324	.67	1.34	1.40	
MANI	28	0323	0340	0326	N25 E08	.333	8461	28.7	17	-N	1 C	0326	.57	.60	.60	
TACH	28	0330	0337	0329	N26 E05	.334	8461	28.5	7	1F	C		5.47	5.80	1.90	57
291	28	0511	0534	0518	N07 W56	.825	8454	24.0	23	1						4 3 3
ABST	28	0508	0531	0516	N07 W55	.815	8454	24.1	23	1	C	0516	1.03	1.34		71
MITK	28	0512	0533	0515	N07 W55	.815	8454	24.1	21	1N	C	0515	1.44	2.50		
MANI	28	0512	0540	0518	N06 W60	.862	8454	23.7	28	1B	2 C	0518	1.44	2.63		
TACH	28	0521E	0531	0523	N07 W54	.804	8454	24.2	10D	1N	C	0523	2.29	3.80	1.80	60
292	28	0644	0706	0647	N21 E03	.245	8461	28.5	22	1-						6 4 3
ABST	28	0637	0700	0644	N20 E02	.226	8461	28.4	23	1	C	0644	1.18	1.07	1.09	65
MITK	28	0643	0705	0645	N21 E02	.242	8461	28.4	22	-N	C	0645	1.96	2.00		
CAPS	28	0644	0645	N20 E04	.233	8461	28.6	1	-N	1						D
BUCA	28	0645E	0730U	0651	N20 E01	.224	8461	28.4	45D	-N	C	0651	1.68	1.70		E
CATA	28	0650E	0705U	0655	N21 E03	.245	8461	28.5	15D	-N		0655	1.10	1.14		191
KAND	28	0650	0734	N21 E06	.260	8461	28.7	44	1N		0654	3.05	3.00			
293	28	0645	0703	0646	N09 E09	.158	8461	29.0	18	1-						1 1 1
ATHN	28	0645E	0703	0646	N09 E09	.158	8461	29.0	18D	-N	1		.99	1.10	1.80	
294	28	0712	0732	0719	N07 W58	.844	8454	24.0	20	1-						3 3 2
KAND	28	0709	0734	N08 W55	.814	8454	24.2	25	-N	-N			.32			
CAPS	28	0715	0730	N06 W58	.844	8454	24.0	15	-F	2	0720	.30	.50		157	
ATHN	28	0717E	0733	0719	N07 W60	.862	8454	23.8	16D	-N	1	0719	.33	.90	1.50	
295	28	0832	0850	0837	N23 E33	.580	8467	30.8	18	1-						2 2 2
BUCA	28	0830E	0850U	N23 E30	.543	8467	30.6	20D	-F	C	0836	.47	.90	1.10		
UCCL	28	0834	0850	0837	N22 E35	.600	8467	31.0	16	-N	C	0837	.43	1.00		E
296	28	0900	1005	0916	N25 W02	.309	8461	28.2	65	1-						1 1 1
BUCA	28	0900E	1005U	0916	N25 W02	.309	8461	28.2	65D	1N	C	0916	1.74	2.25	2.40	E
297	28	0935	0945	0937	N25 E35	.614	8467	31.0	10	1-						1 1 1
ATHN	28	0935E	0945U	0937	N25 E35	.614	8467	31.0	10D	-N	1	0937	.32	.33	.40	1.60
298	28	0949	1021	0958	N07 W65	.902	8454	23.5	32	1						10 10 9
ABST	28	0946	1026	1007	N06 W68	.924	8454	23.3	40	1	C	1007	1.27	1.44		76
BUCA	28	0946E	1039	0956	N07 W65	.902	8454	23.5	53D	1N	C	0956	1.57	3.60		D
UCCL	28	0946	1033	1000	N08 W64	.894	8454	23.6	47	1B	C	1000	1.56			DW
ATHN	28	0950E	1021	1008	N08 W58	.843	8454	24.1	31D	1N	1	0952	1.16	2.30	1.90	
WEND	28	0950	1022	N07 W66	.910	8454	23.5	32	1N	4			4.13			
ONDR	28	0951	1008	N08 W63	.886	8454	23.7	17	1N	V	1000			2.70		C
MEUD	28	0952	1000	0959	N06 W65	.903	8454	23.5	8	-B		0959	1.00			
CAPS	28	0952	1013	N06 W65	.903	8454	23.5	21	1N	3	1000	1.20			192	JG
HERS	28	0952	1025	0955	N07 W68	.923	8454	23.3	33	1N	P	0958	.93	2.50		DH
CATA	28	0955E	1015U	0958	N05 W66	.911	8454	23.5	20D	1B		0958	1.71			219

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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	MCMA <sup>TH</sup> PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hc	MAX. INT. %				
299	28	1021	1034	1022	N23	E73	.949	8474	2.9	13	1-									2 2 2	
ATHN	28	1021	1031	1022	N25	E75	.959	8474	3.1	10	-F	1	1022	.50			1.50				
HUCA	28	1021E	1036U	1021	N21	E71	.938	8474	2.8	150	1N	P	1021	1.12						CG	
300	28	1101	1114		N25	W01	.308	8461	28.4	13	1-			.81						1 1 1	
UCCL	28	1101	1114U		N25	W01	.308	8461	28.4	130	1N	C	1110	1.30	1.80					E	
301	28	1127	1135	1130	N08	W56	.824	8454	24.3	8	1-			.53						1 1 1	
ATHN	28	1127	1135	1130	N08	W56	.824	8454	24.3	8	-N	1	1130	.53	1.00	1.60				1 1 1	
302	28	1127	1152		N25	W02	.309	8459	28.3	25	1-			.57							
ATHN	28	1127E	1152		N25	W02	.309	8459	28.3	250	-N	1	1130	.53	.60	1.70					
303	28	1153	1205	1157	N06	W58	.844	8454	24.1	12	1-			1.26						5 4 3	
NERA	28	1150	1200U		N05	W58	.845	8454	24.1	10D	1	1									
ABST	28	1151	1207	1158	N05	W60	.863	8454	24.0	16	1		1158	2.25				68		D	
HUAN	28	1153	1209	1157	N08	W60	.861	8454	24.0	16	-N	2	C	1157	.77	1.13				E	
ATHN	28	1153	1210	1156	N09	W58	.842	8454	24.1	17	1B	1	1156	1.32	2.30	2.00					
MEUD	28	1200	1200U		N03	W55	.818	8454	24.4	17	1B			.77		1.13					
304	28	1242	1313	1245	N07	W65	.902	8454	23.7	31	1-			.92						2 2 2	
WEND	28	1241	1336		N07	W61	.870	8454	24.0	55	1N			4.13							
HUAN	28	1243	1250	1245	N07	W68	.923	8454	23.4	7	-F	2	C	1245	.25					D	
305	28	1247	1259	1252	N22	E32	.563	8467	30.9	12	1-			.50						2 2 1	
WEND	28	1244	1258		N21	E28	.506	8467	30.6	14	-N										
ATHN	28	1250	1259	1252	N23	E35	.605	8467	31.2	9	-N	1	1252	.50	.60	1.50					
306	28	1302	1350		N17	W60	.860	8447	24.0	48	1-			.46						1 1 1	
MCMA	28	1302	1350		N17	W60	.860	8447	24.0	48	-B	C	1312	.31	.80					BE	
307	28	1309	1322		N26	W03	.327	8461	28.3	13	1-									1 1 0	
WEND	28	1309	1322		N26	W03	.327	8461	28.3	13	-F										
308	28	1523	1812	1532	N22	E04	.265	8459	28.9	169	2+			11.99						9 8 8	
MCMA	28	1522	2000	1529	N23	E04	.281	8459	28.9	278	3B	C	1529	12.38	12.70					ITUV	
ATHN	28	1523	1617U	1527	N20	E10	.278	8461	29.4	54D	2B	1	1527	7.59	7.90	2.00					
CAPS	28	1523	1702		N22	E06	.275	8461	29.1	99	2B	3	1540	7.40	7.70			305		FIUG	
HUAN	28	1523	1925	1529	N22	E04	.265	8461	28.9	242	2B	2	C	1529	6.50	6.50					HU
WEND	28	1525	1600	1538	N21	E05	.254	8461	29.0	35	4B	2		26.81							
LOCA	28	1530E	1637U	1530	N22	E03	.262	8461	28.9	67D	2B	S	1530	5.88	6.20						
LOCK	28	1530E	1700	1530U	N21	E04	.249	8461	28.9	90D	2B	C	1530	10.30	10.30			30			
SACP	28	1531E	1945U	1537	N22	E01	.257	8461	28.7	254D	3F	P		19.56	19.22						
HALE	28	1640E	1945	1640U	N21	E01	.241	8461	28.8	185D	1B	2	P	1640	2.89	3.00					
309	28	1641	1655	1645	N08	W60	.861	8454	24.2	14	1			1.22						6 6 5	
SACP	28	1637	1657	1646	N07	W61	.870	8454	24.1	20	1N	C		2.43	3.66						
HUAN	28	1638	1656	1643	N08	W62	.878	8454	24.0	18	-N	2	C	1643	.57	.87					E
HALE	28	1640E	1646	1643	N08	W59	.852	8454	24.3	6D	1B	1	P	1643	1.34	2.50					
MCMA	28	1640	1657	1643	N07	W65	.902	8454	23.8	17	1B	C	1643	.93	2.10						EH
CAPS	28	1644	1653		N06	W60	.862	8454	24.2	9	1N	2	C								G
LOCK	28	1645	1658	1648	N09	W55	.814	8454	24.6	13	-B	2	C	1648	.70	1.30			30		
310	28	1755	1817	1758	N05	W70	.937	8454	23.5	22	1+			1.03						1 1 1	
HALE	28	1755	1817	1758	N05	W70	.937	8454	23.5	22	1B	1	C	1758	1.03						
311	28	2047	2107	2048	N25	E30	.556	8467	31.1	20	1-			1.41						2 2 2	
HALE	28	2046	2115	2047	N25	E29	.544	8467	31.0	29	-N	1	C	2047	.93	1.10					
MCMA	28	2047	2059	2049	N25	E30	.556	8467	31.1	12	-F	C	2049	1.34	1.50					F	
312	28	2048	2103	2051	N23	E03	.276	8461	28.7	15	1-			.75						2 2 2	
HALE	28	2047	2100	2050	N22	W00	.257	8461	28.9	13	-B	1	C	2050	.62	.60					
MCMA	28	2049	2105	2052	N23	E04	.281	8461	29.2	16	-B	C	2052	.62	.60					E	
313	28	2049	2057	2051	N18	E13	.287	8461	29.8	8	1-			.20						1 1 1	
CLMX	28	2049	2057	2051	N18	E13	.287	8461	29.8	8	-N	C	2051	.30	.32						
314	28	2112	2133	2117	N07	W69	.930	8454	23.7	21	1-			.96						3 3 3	
HALE	28	2110	2125	2115	N06	W69	.930	8454	23.7	15	-B	1	C	2115	.52						
MCMA	28	2112	2136	2118	N07	W68	.923	8454	23.8	24	-N	C	2118	.62	1.50					E	
SACP	28	2114U	2139	2118	N07	W71	.942	8454	23.6	25U	1N	P		1.56	2.98						
315	28	2114	2118	2115	N46	W61	.906	8442	24.3	4	1-			.27						1 1 1	
CLMX	28	2114	2118	2115	N46	W61	.906	8442	24.3	4	-B	C	2115	.40	.64						
316	28	2127	2150	2134	N23	E02	.276	8461	29.0	23	1-			1.63						2 2 2	
MCMA	28	2123	2150	2135	N23	E03	.278	8461	29.1	27	-N	C	2135	1.29	1.40					E	
HALE	28	2130	2150	2133	N22	E00	.257	8461	28.9	20	-B	1	C	2133	1.44	1.50					
317	28	2132	2142	2133	N18	E13	.287	8461	29.9	10	1-			.27						1 1 1	
CLMX	28	2132	2142	2133	N18	E13	.287	8461	29.9	10	-N	C	2133	.40	.42						
318	28	2212	2226	2214	N22	E00	.257	8361	28.9	14	1-			1.16						4 3 3	
MCMA	28	2210	2223	2215	N23	E03	.278	8361	29.1	13	-N	C	2215	1.03	1.10					E	
HALE	28	2210	2232	2213	N22	E00	.257	8461	28.9	22	-B	1	C	2213	.83	.90					
CULG	28	2211	2232	2213	N21	W01	.241	8461	28.8	21	-N	C	2213	1.34							
MANI	28	2215	2218		N23	W02	.276	8461	28.8	3	-N	2		.26	.67						
319	28	2217	2225	2219	N05	W74	.959	8454	23.4	8	1-			.50						4 4 4	
MANI	28	2216	2224	2219	N05	W73	.954	8454	23.5	8	-N	2		.36	.80						
CULG	28	2217	2232	2219	N04	W75	.964	8454	23.3	15	-B	C	2219	.62							
MCMA	28	2218	2222	2219	N07	W72	.948	8454	23.5	4	-B	C	2219	.52	1.50					D	
HALE	28	2218	2222	2219	N05	W74	.959	8454	23.4	4	-B	1	C	2219	.41						
320	28	2235	2255	2239	N23	E03	.278	8461	29.2	20	1-			1.44						1 1 1	
MCMA	28	2235	2255	2239	N23	E03	.278	8461	29.2	20	-F	C	2239	1.03	1.10					E	



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OBSERVATORY	OBSERVED UT			LOCATION				DURATION MIN.	IMPOR-TANCE	OBS. COND. TYPE	TIME UT	MEASUREMENTS				REMARKS	
	DATE 1966 AUG	START	END	MAX. PHASE	APPROX. LAT. MER. DIST.	CENTRAL DISTANCE	CMATH PLAGE REGION					CMP DAY	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %
344	29	1333	1352	1339	N18 W78	.972	8447	23.7	19	1-		.33				3 3 2	
HUAN	29	1332	1348	1338	N19 W80	.979	8447	23.6	16	-F	2 C	.25				D	
SACP	29	1332	1401	1340	N20 W77	.968	8447	23.8	29	-N	C	.53	1.18				
CAPS	29	1334	1347		N15 W77	.969	8447	23.8	13	-F	3					D	
345	29	1437	1444		S16 W90	1.001	8479	22.9	7	1-						1 1 0	
ONDR	29	1437	1444		S16 W90	1.001	8479	22.9	7	1F	V			1.50		AG	
346	29	1446	1529	1456	N21 E53	.799	8474	2.6	43	1-		.78				1 1 1	
SACP	29	1446	1529	1456	N21 E53	.799	8474	2.6	43	-F	C	.87	1.14				
347	29	1545	1615	1548	N21 W11	.300	8461	28.8	30	1-		.73				1 1 1	
MCMA	29	1545	1615	1548	N21 W11	.300	8461	28.8	30	-N	C	.52	.50			E	
348	29	1645	1735	1710	S22 W90	1.001	8479	22.9	50	1-		.51				1 1 1	
LOCK	29	1645E	1735	1710	S22 W90	1.001	8479	22.9	500	1F	C	.60	2.20			10	
349	29	1656	1701	1657	N08 W75	.962	8454	24.1	5	1-		.15				1 1 1	
HUAN	29	1656	1701	1657	N08 W75	.962	8454	24.1	5	-F	2 C	.21				D	
350	29	1819	1917	1839	N22 W11	.313	8461	28.9	58	1-		1.02				3 3 3	
LOCK	29	1810	1920	1908	N22 W12	.323	8461	28.9	70	-N	C	1.40	1.50			10	
MCMA	29	1828	1910		N21 W10	.291	8461	29.0	42	-B	C	.83	.90			E	
HALE	29	1830E	1921	1839	N23 W10	.318	8461	29.0	510	-B	2 P	.36	.40				
351	29	1951	2006	1953	N21 E54	.808	8474	2.9	15	1-		.56				2 2 2	
HALE	29	1950	2011	1953	N21 E53	.799	8474	2.8	21	-N	2 C	.52	.90				
MCMA	29	1952	2000	1953	N20 E55	.817	8474	3.0	8	-N	C	.41	.70			E	
352	29	2024	2201	2039	N24 W17	.398	8461	28.6	97	2-		3.50				3 3 3	
HALE	29	2021	2201	2043	N24 W16	.388	8461	28.6	100	2B	2 C	5.16	5.60			EIXJ	
MCMA	29	2023	2200	2035	N23 W14	.355	8459	28.8	97	1B	C	2.10	2.10			F	
SACP	29	2028	2111D	2038	N25 W21	.452	8459	28.3	430	1N	P	2.88	2.92				
353	29	2058	2136	2120	N07 W90	1.000	8454	23.1	38	1-		.89				1 1 1	
LOCK	29	2058	2136	2120	N07 W90	1.000	8454	23.1	38	1F	C	1.00	3.80			10	
354	29	2222	2339	2236	N06 W84	.993	8454	23.6	77	1		1.03				3 3 3	
LOCK	29	2214	0110	2235	N05 W90	1.000	8454	23.2	176	2N	C	1.60	6.40			20	
SACP	29	2223	2250	2239	N06 W81	.986	8454	23.9	27	-F	C	1.09					
HALE	29	2230	2258	2235	N06 W81	.986	8454	23.9	28	1N	2 C	.62					
355	30	0120	0134	0122	N06 W77	.972	8454	24.3	14	1-		.21				1 1 1	
HALE	30	0120	0134	0122	N06 W77	.972	8454	24.3	14	-N	1 C	.21					
356	30	0212	0258	0236	N12 W28	.470	8461	28.0	46	1+		4.13				1 1 1	
HALE	30	0212	0258	0236	N12 W28	.470	8461	28.0	46	1B	1 C	4.13	4.70			FIL	
357	30	0232	0247	0236	N24 W27	.513	8461	28.1	15	1-		2.94				3 3 3	
VORO	30	0231E	0242	0235	N24 W23	.466	8461	28.4	110	2F	C	5.50	6.22			50	
MITK	30	0231	0257	0237	N22 W27	.499	8459	28.1	26	1N	C	0237	3.71	4.20			FHJ
MANI	30	0233	0243	0236	N25 W30	.556	8459	27.9	10	-N	1	0236	.52	.63			F
358	30	0235	0258	0239	N25 W17	.409	8461	28.8	23	1-		.83				1 1 1	
HALE	30	0235	0258	0239	N25 W17	.409	8461	28.8	23	-N	1 C	.83	.90				
359	30	0248	0312	0253	N30 W26	.551	8459	28.2	24	1-		.72				1 1 1	
HALE	30	0248	0312	0253	N30 W26	.551	8459	28.2	24	-B	1 C	.72	.90				
360	30	0855	0905		N06 W90	1.000	8454	23.6	10	1-						1 1 0	
ISTA	30	0855	0905		N06 W90	1.000	8454	23.6	10	1							
361	30	1132	1140	1135	N25 W20	.441	8461	29.0	8	1-		.94				4 4 4	
ATHN	30	1131E	1141		N23 W20	.421	8461	29.0	100	-N	2	1133	.72	.80			1.70
BUCA	30	1131E	1144D	1135	N26 W18	.430	8461	29.1	130	-N	C	1.07	1.10				
CAPS	30	1132	1137		N24 W19	.420	8461	29.1	5	-R	2	1135	1.50	1.60			198
UCCL	30	1132	1137	1135	N26 W22	.472	8461	28.8	5	1N	C	1.03	1.30				
362	30	1143	1146		N08 W90	1.000	8454	23.7	3	1-		.39				1 1 1	
ATHN	30	1143E	1146		N08 W90	1.000	8454	23.7	30	-F	2	1143	.33				
363	30	1350	1415	1353	N22 W27	.499	8461	28.6	25	1-		1.28				2 2 2	
MCMA	30	1347	1417	1353	N22 W27	.499	8461	28.5	30	-N	C	1353	1.55	1.70			F
CAPS	30	1352	1413		N21 W26	.480	8461	28.6	21	-N	2	1402	.40	.50			176
364	30	1450	1602	1457	N22 W27	.499	8461	28.6	72	1+		7.01				6 4 4	
MCMA	30	1450	1546	1458	N22 W27	.499	8461	28.6	56	1B	C	2.89	3.20			1.85	
ATHN	30	1450	1602	1458	N20 W27	.487	8461	28.6	72	2N	C	1458	6.27	7.00			FL
HUAN	30	1451	1557	1456	N24 W25	.489	8461	28.7	66	1N	2 C	1456	1.86	1.85			EH
SACP	30	1451	1621	1512	N21 W27	.493	8461	28.6	90	2N	C	9.95	10.26				
MEUD	30	1500	1500D		N11 W25	.422	8461	28.8		2N	C	5.05	5.50				
LOCK	30	1525E	1525D	1525D	N21 W28	.506	8461	28.5		2N	C	5.00	6.00			20	
365	30	1545	1608	1549	N27 W27	.536	8461	28.6	23	2-		3.70				3 3 2	
SACP	30	1545	1607	1548	N26 W26	.517	8461	28.7	22	2R	C	5.19	5.40				
LOCK	30	1545	1605	1551	N28 W30	.576	8461	28.4	20	1N	C	1551	2.30	2.70			
MCMA	30	1546	1615	1548	N26 W26	.517	8461	28.7	29	1R	C					FL	
366	30	1546	1600		N09 W90	1.000	8454	23.9	14	1-		1.07				1 1 1	
ATHN	30	1546E	1600		N09 W90	1.000	8454	23.9	140	-B	2	1547	.99				2.00
367	30	1850	1908	1900	N27 W28	.547	8461	28.7	18	1-		.71				1 1 1	
LOCK	30	1850	1908	1900	N27 W28	.547	8461	28.7	18	-F	C	1900	.70	.80			10
368	30	1949	1956	1952	N26 W24	.494	8461	29.0	7	1-		.21				1 1 1	
HALE	30	1949	1956	1952	N26 W24	.494	8461	29.0	7	-N	1 C	1952	.21	.20			

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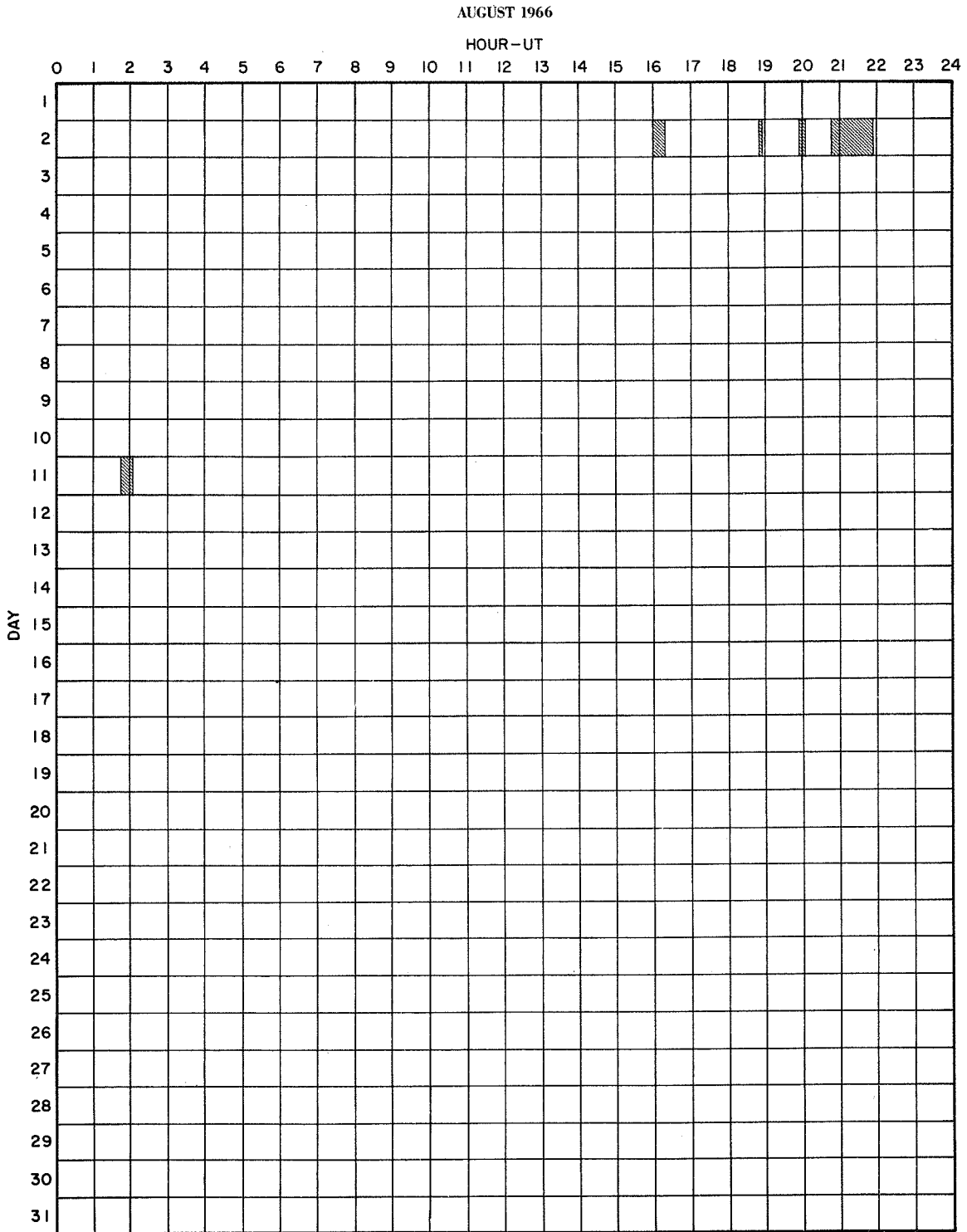
OBSERVATORY	OBSERVED UT			LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS			
	DATE	START	END	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %		
369	30	2017	2034	2020	N23	W25	.482	8461	29.0	17	1-			.50				2 2 2	
MCMA	30	2017	2032	2020	N22	W27	.499	8461	28.8	15	-N	C	2020	.46	.50			EH	
HALE	30	2017	2035	2019	N23	W22	.445	8461	29.2	18	-N	1 C	2035	.36	.40			1 1 1	
370	30	2151	2158	2153	N25	W25	.497	8461	29.0	7	1-			.26				1 1 1	
HALE	30	2151	2158	2153	N25	W25	.497	8461	29.0	70	-N	1 P	2153	.26	.30			1 1 1	
371	31	0002	0021		N22	W30	.537	8461	28.8	19	1-			2.47				F	
MITK	31	0002E	0021U		N22	W30	.537	8461	28.8	190	1N	P	0020	3.09	3.80			7 6 6	
372	31	0037	0127	0109	N21	W30	.532	8461	28.8	50	2-			4.65				TFKJ	
HALE	31	0036	0123	0059	N22	W29	.525	8461	28.8	47	1R	1 C	0059	2.06	2.40			F	
SIBE	31	0037	0126	0109	N23	W30	.543	8461	28.8	49	2N	C	0109	6.45	8.40		142	F	
LOCK	31	0038	0118	0113	N20	W31	.540	8461	28.7	400	2N	C	0113	7.20	8.60		20		
CULG	31	0059E	0119U	0111	N20	W30	.527	8461	28.8	200	2B	P	0111	6.70	7.47				
MANI	31	0112	0347		N20	W30	.527	8461	28.8	155	2B	1		0114	5.00	5.90			F
IKOM	31	0115	0133		N22	W28	.512	8461	29.0	180	1N	V	0117	3.09	3.60		115	F	
MITK	31	0130E	0154U		N21	W33	.570	8461	28.6	240	1N	C	0131	3.09	3.80			F	
374	31	0154	0235	0210	N23	W29	.531	8461	28.9	41	1-			1.77				3 3 3	
SIBE	31	0154	0325	0211	N23	W29	.531	8461	28.9	910	1N	C	0211	3.41	4.50		84	E	
HALE	31	0155	0235	0210	N23	W29	.531	8461	28.9	40	-B	1 C	0210	1.03	1.20			ITKJ	
IKOM	31	0200E	0305		N22	W28	.512	8461	29.0	650	1N	V	0247	2.89	3.30	1.38	125	F	
374	31	0226	0308	0229	N21	E36	.608	8474	2.8	42	1-			.31				1 1 1	
HALE	31	0226	0308	0229	N21	E36	.608	8474	2.8	42	-F	1 C	0229	.31	.40				
375	31	0226	0348	0234	N22	W29	.525	8461	28.9	56	1+			2.76				4 2 3	
MANI	31	0112	0347	0240	N20	W30	.527	8461	28.8	155			0240	4.13	4.90				
TACH	31	0250E	0435	0252	N22	W32	.562	8461	28.7	1050	2N	C	0252	5.93	7.10	2.60	96	EZ	
HALE	31	0255	0420	0256	N26	W27	.528	8461	29.1	850	-N	1 C	0256	.21	.20			T	
MITK	31	0301E	0348U		N21	W28	.532	8461	29.0	470	2F	C	0344	4.33	5.20			F	
376	31	0348	0428	0353	N22	W31	.550	8461	28.8	40	1-			2.18				3 2 2	
TACH	31	0250E	0435	0352	N22	W32	.562	8461	28.7	1050									
MANI	31	0348	0421	0355	N22	W30	.537	8461	28.9	33	-N	1		0355	3.61	4.30			
HALE	31	0349	0420	0353	N22	W31	.550	8461	28.8	310	1B	1 C	0353	1.44	1.70			TKIF	
377	31	0550	0559	0552	N25	W52	.795	8459	27.3	9	1-			.79				1 1 1	
ATHN	31	0550E	0559U	0552	N25	W52	.795	8459	27.3	90	-N	2	0552	.78	1.50				
378	31	0604	0613	0607	N22	W58	.845	8459	26.9	9	1-			.86				1 1 1	
ATHN	31	0604E	0613	0607	N22	W58	.845	8459	26.9	90	-N	2	0607	.85	1.70				
379	31	0604	0620		N27	W32	.591	8461	28.9	16	1			3.09				1 1 1	
KIEV	31	0604E	0620U		N27	W32	.591	8461	28.9	160	1N	P	0604	3.09	4.00		65	EI	
380	31	0946	1004		N22	W37	.624	8461	28.6	18	1-			.87				5 5 4	
ARCE	31	0938	1000	0951	N21	W37	.620	8461	28.6	22	-N	C	0951	.81	1.05				
ATHN	31	0946F	1002U	0947	N22	W39	.648	8461	28.5	160	-N	2	0947	.99	1.30				
KHAR	31	0948E	1005U		N23	W38	.640	8461	28.6	170	1F	V	0948			2.00		DO	
CAPS	31	0952	1010		N23	W35	.604	8461	28.8	18	-N	2	0953	.80	1.00		216	E	
BUCA	31	0956E	1255U		N22	W37	.624	8461	28.6	1790	-N	P		1.16	1.50			BE	
381	31	1006	1227		N26	W01	.323	8467	31.3	141	1-			.94				2 2 1	
BUCA	31	0956E	1327U		N26	W04	.329	8467	31.1	210	-N	P		1.34	1.40			EG	
KAND	31	1015	1127		N25	E03	.310	8467	31.7	72	-N							5 5 5	
382	31	1135	1215	1145	N22	W36	.612	8461	28.8	40	1-			3.60					
KAND	31	0736	1405		N22	W33	.575	8461	28.8	389	1N		0817	5.59	6.00				
BUCA	31	1104E	1220U	1144	N22	W35	.608	8461	28.8	760	1N	C	1144	2.68	3.40			E	
CAPS	31	1135	1215		N23	W36	.616	8461	28.8	40	1N	2	1144	2.00	2.50		175	GL	
KIEV	31	1136E	1210U	1145	N26	W35	.619	8461	28.9	340	1F	C	1145	5.16	6.00		65	I	
ATHN	31	1146E	1211	1146	N19	W38	.626	8461	28.6	250	1N	2	1146	3.30	4.40	1.60		6 6 6	
383	31	1250	1315	1254	N21	W37	.620	8461	28.8	25	1-			1.10					
CAPS	31	1247	1335		N21	W36	.608	8461	28.8	48	-B	2	1256	.90	1.10		201	FK	
MCMA	31	1249	1312	1254	N21	W39	.645	8461	28.6	23	-B	C	1254	.83	1.00			EK	
ATHN	31	1250	1304	1252	N19	W39	.638	8461	28.6	14	-N	2	1252	1.32	1.80	1.50			
HERS	31	1250	1304	1253	N21	W35	.595	8461	28.9	14	-N	P	1253	.72	.90			E	
BUCA	31	1250E	1324U	1258	N22	W36	.612	8461	28.8	340	1N	C	1258	1.92	2.50			E	
HUAN	31	1252	1309	1255	N22	W37	.624	8461	28.8	17	-F	2	1255	.57	.64			E	
384	31	1312	1333	1318	N22	W38	.636	8461	28.7	21	1			2.56				6 6 5	
SACP	31	1307	1325	1315	N22	W39	.648	8461	28.6	18	1F	C		2.01	2.25				
HUAN	31	1310	1332	1318	N22	W40	.660	8461	28.5	22	-N	2	1318	.25	.28			D	
MCMA	31	1312	1357	1316	N21	W41	.668	8461	28.5	45	-B	C						EK	
MEUD	31	1314	1335	1320	N20	W38	.629	8461	28.7	21	1N		1320	2.89	3.80				
ATHN	31	1315	1324	1318	N20	W39	.641	8461	28.6	9	-N	2	1318	.99	1.30	1.70			
KIEV	31	1319E	1325U	1319	N26	W35	.619	8461	28.9	60	2N	C	1319	7.22	9.00		70	I	
385	31	1540	1615	1600	N21	W31	.545	8461	29.3	35	1-			.50				1 1 1	
LOCK	31	1540	1615	1600	N21	W31	.545	8461	29.3	35	-F	C	1600	.50	.60				
386	31	1705	1708	1706	N21	W41	.668	8461	28.6	3	1-			.19				1 1 1	
HUAN	31	1705	1708	1706	N21	W41	.668	8461	28.6	3	-F	2	1706	.21	.23			D	
387	31	1830	1844	1832	N26	W36	.631	8461	29.1	14	1-			.42				3 3 3	
MCMA	31	1830	1848	1833	N26	W36	.631	8461	29.1	18	-B	C	1833	.52	.70			D	
HUAN	31	1831	1841	1832	N26	W36	.631	8461	29.1	10	-N	2	1832	.31	.34			D	
HALE	31	1831	1844	1832	N26	W36	.631	8461	29.1	13	-R	1	1832	.26	.30			T	

SOLAR FLARES  
REVISED  
AUGUST 1966

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	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. ?
388	31	1845	1949	1908	N22	W37	.624 8461	29.0	64	1+			3.25				5 5 5
SACP	31	1835E	2009	1917	N21	W39	.645 8461	28.8	94D	2F			6.90	7.70			
LOCK	31	1840	2020	1905	N21	W39	.645 8461	28.9	80	2B			4.80	6.20		30	
HALE	31	1847	1946	1908	N22	W37	.624 8461	29.0	59	-N	1	C	1908	1.44	1.90		TFI
HUAN	31	1849	1922	1902	N22	W35	.600 8461	29.2	33	1F	2	C	1902	.77	.84		
MCMA	31	1853	1908		N25	W36	.625 8461	29.1	15	1N		P	1905	1.55	2.10		E
389	31	2014	2028	2018	N22	W43	.694 8461	28.6	14	1-			.59				2 2 2
MCMA	31	2013	2029		N23	W41	.675 8461	28.8	16	-N		P	2014	.62	.80		E
HALE	31	2015	2027	2018	N21	W44	.703 8461	28.5	12	-N	1	C	2018	.31	.40		T
390	31	2036	2043	2038	N21	W43	.692 8461	28.6	7	1-			.38				2 2 2
HALE	31	2035	2044	2038	N21	W44	.703 8461	28.6	9	-N	1	C	2038	.52	.70		T
HUAN	31	2037	2041	2038	N21	W42	.680 8461	28.7	4	-F	2	C	2038	.25	.29		D
391	31	2116	2126	2118	N21	W43	.692 8461	28.7	10	1-			.68				3 3 3
HALE	31	2114	2130	2118	N20	W44	.701 8461	28.6	16	-N	1	C	2118	.72	1.00		T
HUAN	31	2117	2122	2118	N21	W43	.692 8461	28.7	5	-F	2	C	2118	.50	.58		
MCMA	31	2117	2125	2118	N23	W42	.686 8461	28.7	8	-N		C	2118	.62	.80		E



# INTERVALS OF NO FLARE PATROL OBSERVATIONS



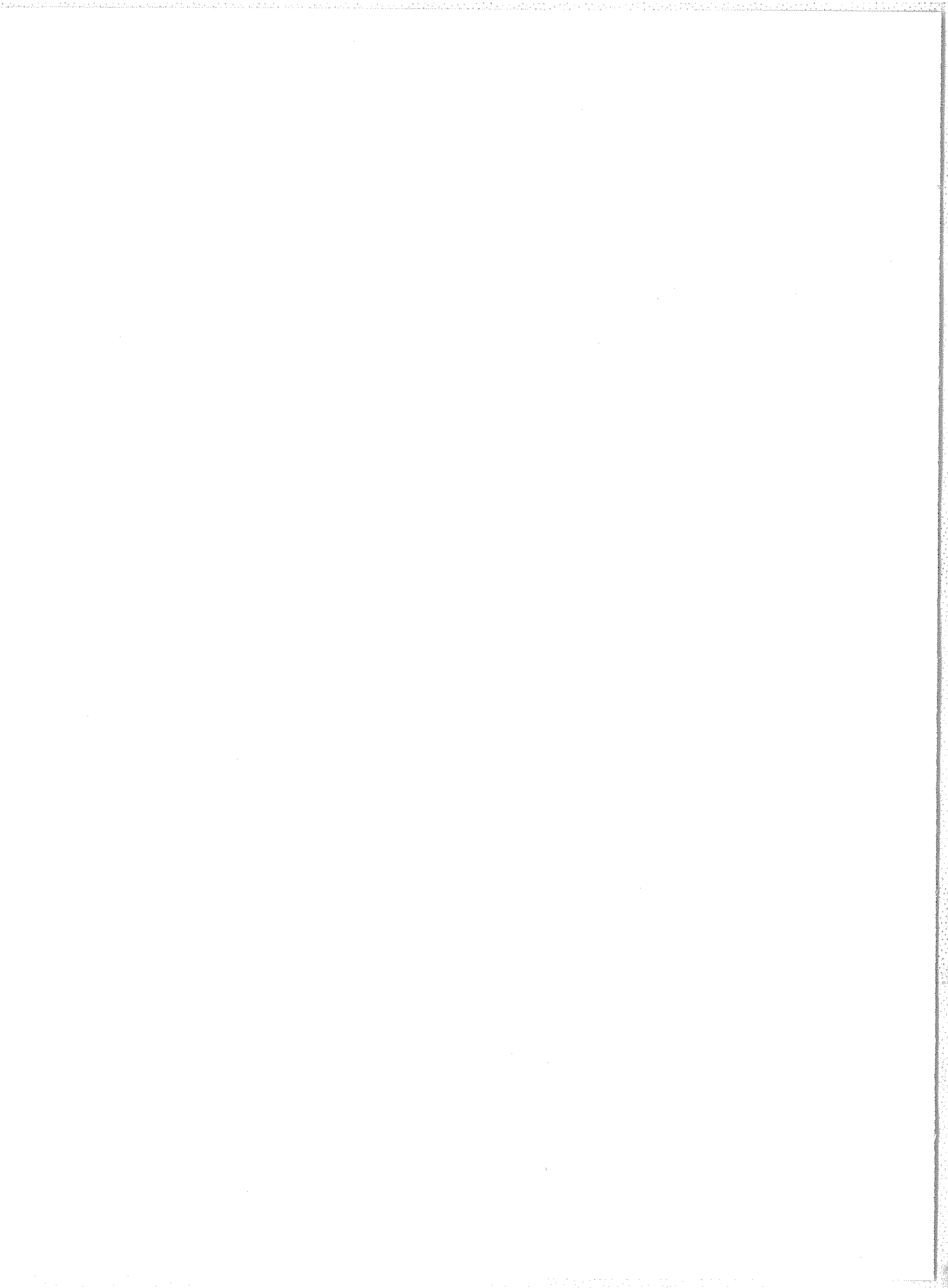
Observatories included:

Abastumani	Bucaresti	Haleskala	Kandilli	Lockheed	Ondrejev	Uccle
Arcetri	Capri-S	Herstmonceux	Kharkov	Manila	Sacramento Peak	Voroshilov
Arosa	Catania	Huancayo	Kiev	Meudon	Siberie	Wendelstein
Athens	Climax	Ikomasan	Kodaikanal	McMath-Hulbert	Tachkent	Zürich
Bakou	Culgoora	Istanboul	Locarno	Mitaka	Tortosa	

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# IUWDS International Geophysical Calendar for 1967

## 1967 JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## 1967 FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

## 1967 MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

## 1967 APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

## 1967 MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## 1967 JUNE

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

## 1967 JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## 1967 AUGUST

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

## 1967 SEPTEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

## 1967 OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## 1967 NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

## 1967 DECEMBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

## 1968 JANUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

⑰ Regular World Day (RWD)

⑨ Day of Solar Eclipse

3 Day with unusual meteor shower activity

13 14 World Geophysical Interval (WGI)

⑮ Quarterly World Day (QWD) also a PRWD and RGD

⑱ Priority Regular World Day (PRWD)

④ Regular Geophysical Day (RGD)

SUDDEN COMMENCEMENTS AND SOLAR-FLARE  
EFFECTS, JANUARY - SEPTEMBER 1966

Preliminary Report of Sudden Commencements

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

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

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

1966 January 07d 15h 01m: fifty-one (ssc: 38 [A:11; B:22; C:5]; si: 12 [A:1; B:8; C:3]; sfe: Ir). -20d 02h 03m: fifty-seven (ssc: 54 [A:15; B:33; C:6]; si: 2; bps: 1). -21d 07h 59m: sixteen (ssc: 10 [A:1; B:7; C:2]; si: 6). -22d 05h 01m: Ma Lg IK Tl Mc (si: Te; pc5: Es).

1966 February 03d 05h 58m: Me Ag (pi2: Tu; pc5: Te). -11d 07h 50m: Ks Ap (si: Te). -19d 11h 00m: V1 Pr? Hb Lg Gn. -22d 14h 21m: Wn Pr Hb Tf TC (si: Od Lg; bs: Ir; bp: Kv?; bps: Mo).

1966 March 08d 10h 16m: Co Tk (pc4: Te). -09d 10h 56m: twenty-four (ssc: 19 [A:1; B:8; C:10]; si: 3; bp: 1; sfe: Od). -13d 06h 00m: Ir Ag (pi2: Tu; pc5: Te). -13d 12h 04m: Wn Pr. -13d 13h 51m: V1 Ci. -17d 18h 04m: Lg TC (si: Ks). -19d 02h 08m: twenty-one (ssc: 12 [A:1; B:6; C:5]; si: 2; bp: 1; pi2: 6). -23d 07h 48m: twenty-five (ssc: 19 [A:5; B:10; C:4]; si: 6). -24d 23h 37m: fourteen (ssc: 12 [B:7; C:5]; si: 2). -26d 09h 58m: Hb Su Tf Pe Bi Lu (si: Od Tk Te; pi2: SJ?). -27d 19h 35m: forty-one (ssc: 26 [A:6; B:12; C:8]; si: 11 [A:5; B:6]; b: 1; bs: 1; sfe: Tl Ks).

1966 April 01d 12h 37m: fifty-five (ssc: 50 [A:15; B:31; C:4]; si: 4; bp: 1). -06d 23h 20m: Hb Tf SF Ks TC SJ Gu (si: V1 Pr Lg Eb Mc Tn; bs: Bi Hu; bp: Ma Hr). -13d 03h 44m: Ir Tk Mc Ap (si: Ky; b: Hu; bp: V1; pi2: MB). -13d 07h 55m: V1 SF (pi2: Si). -14d 08h 57m: seventeen (ssc: 11 [A:1; B:4; C:6]; si: 4; b: 1; bp: 1). -20d 06h 06m: Co Ae SF SJ To (si: Bi Lu PM; bp: Hu). -21d 19h 57m: thirty-one (ssc: 29 [A:2; B:11; C:16]; si: 2).

1966 May 08d 09h 57m: So Ma Hb? Ag MB? Mc Bi (si: Hl; bp: PM Hu; bps: Ap; pi2: Ho; pc5: Te). -25d 23h 27m: fifty-three (ssc: 51 [A:22; B:25; C:4]; si: 1; b: 1). -30d 19h 13m: MB Mc. -31d 03h 42m: forty-three (ssc: 42 [A:14; B:23; C:5]; si: 1).

1966 June 02d 02h 36m: Tl Ae (si: Hl). -05d 12h 15m: Su Tf (sfe: Tl). -23d 07h 49m: Ir SM. -23d 09h 22m: Sw Hb Tf TC (si: Mb Tk Eb; sfe: Ir Bi). -24d 08h 44m: Od Tf. -24d 13h 55m: thirty-nine (ssc: 22 [A:4; B:18]; si: 16 [A:6; B:5; C:5]; pc5: 1).

1966 July 07d 21h 55m: T1? Ae. -08d 21h 02m: forty (ssc: 30 [A:15; B:11; C:4]; si: 5; bp: 2; bps: 2; pc4:1). -11d 15h 43m: twenty (ssc: 18 [A:2; B:9; C:7]; si: 2). -15d 15h 00m: forty-three (ssc: 39 [A:11; B:17; C:11]; si: 3; bp: 1). -27d 06h 03m: forty-six (ssc: 43 [A:9; B:28; C:6]; si: 3). -27d 12h 51m: Hb Su IK Pe SF Ks Ta PM (si: Mo CF Od Lg Eb Bi; sfe: Ir).

1966 August 03d 09h 51m: twenty (ssc: 11 [A:2; B:7; C:2]; si: 9). -18d 11h 43m: V1 Hb? Tf SF (si: Lg). -23d 07h 15m: V1 T1? (bs: Ir). -29d 13h 15m: fifty-four (ssc: 53 [A:39; B:14]; si: 1). -30d 11h 12m: fifty-three (ssc: 48 [A:35; B:12; C:1]; si: 5).

1966 September 02d 08h 23m: thirty-three (ssc: 29 [A:4; B:16; C:9]; si: 3; sfe: Eb?). -03d 04h 41m: Ma Hb Ci Bi (si: Ni SF Te). -03d 10h 31m: CF Mb Ka Ky Ta (si: Te Mc Ac; pi2: SJ). -06d 03h 03m: Ag Fr SJ; si: Te; bps: Hu; pi2:MB Ac). -14d 15h 11m: forty-three (ssc: 34 [A:5; B:21; C:8]; si: 4; bs: 2; bp: 1; bps: 1; sfe: MB?). -19d 02h 51m: forty-three (ssc: 32 [A:7; B:18; C:7]; si:11 [A:2; B:4; C:5]). -23d 08h 56m: forty-eight (ssc: 47 [A:25; B:21; C:1]; si: 1).

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

1966 January 02d 02h 14m: Mb Ka Ky (ssc: Gu PM; b: Pe; bps: Hr). -06d 12h 25m: Lg TC. -14d 07h 25m: twenty-four (si: 14 [B:8; C:6]; ssc: 6; bp: 1; bps: 1; sfe: Od Tk). -18d 09h 35m: Es Lg (ssc: Hb?; pi2: Ci). -20d 09h 49m: Es V1 CF T1 Hr (ssc: Lu; sfe: Ir). -21d 15h 42m: Lg Eb Lu. -22d 12h 54m: Es V1 Te. -24d 14h 09m: TC (ssc: Hu). -25d 06h 50m: So (pi2 + pc4: Tw). -28d 19h 53m: Tn (ssc: Tf). -28d 22h 22m: forty-three (si: 34 [A:21; B:11; C:2]; ssc: 3; bs: 4; bp: 1; sfe: Ir).

1966 February 04d 15h 42m: Lg Mc. -11d 14h 25m: Es Wn V1 Pr. -11d 17h 52m: Lg (ssc: Tf). -11d 18h 26m: V1 Od Lg Eb T1 Ae SF Ks Te. -15d 19h 27m: T1 Ae (pg:SM). -19d 17h 40m: CF Hb Mb Lg Ka Ky Te (ssc: TC). -23d 08h 48m: Lg SF. -25d 12h 54m: V1 CF Lg Ae TC.

1966 March 07d 10h 07m: TC Hr (sfe: Tn). -08d 08h 42m: Es Ae (sfe: Od). -14d 16h 00m: Mb Ka Ky Hu (bs: Ir; bp: Hr). -17d 21h 15m: Od Te (ssc: Tf; sfe: Ir). -17d 23h 34m: Mb Ka Ky Te (ssc: Tf). -19d 03h 08m: Mb Ka Ky Te. -23d 00h 12m: twenty-nine (si: 22 [A:10; B:10; C:2]; ssc: 7). -23d 11h 34m: Mo Ma Db Ho Te Gu Mc Hu Ap (ssc: Wn Wi Pr Fu IK T1 Tw; pi2: SJ). -23d 12h 26m: CF Lg Te Mc. -25d 11h 42m: Wi V1 T1? SF Hr (ssc: TC). -25d 12h 25m: thirty-one (si: 18 [A:9; B:6; C:3]; ssc: 13 [A:4; B:8; C:1]). -25d 14h 32m: Es Te. -26d 12h 42m: Es V1 CF T1 SF Mc Hu (ssc: Ci Lu; bp: To). -26d 22h 14m: Te (ssc: Tf).

1966 April 08d 03h 50m: Lg Bi. -09d 23h 37m: Co PM Hr (bs: Bi). -13d 10h 14m: Mo H1 Hb Od Pe Te (ssc: Tf TC; bs: Ir). -13d 11h 36m: Es (ssc: H1). -22d 08h 02m: Te Mc Bi (ssc: Ir Tf TC). -22d 14h 14m: Mo Es V1 Pr (sfe: Hu). -24d 10h 38m: H1 Ae.

Misc.

1966 May 11d 12h 18m: Wn Be Pr Od Su Hr (ssc:Tf TC; sfe: Ir Lg Tl). -  
19d 20h 04m: St Wn Be Pr Fu Hb Tn (ssc: So SF; bp: Eb; bps: V1 Mc Hr;  
 pi2: MB; pc4: Wi). -20d 21h 35m: Lg (bs: H1). -23d 18h 17m: H1 (sfe:  
 Hu?). -26d 08h 35m: Es Te. -26d 09h 38m: Co Te Am (ssc: Si). -26d 10h  
18m: Es Wn Db Pr CF Od Ho Te Ap (ssc: So Wi; bps: Mo). -26d 12h 09m:  
 CF Te (bps: Ir). -26d 14h 15m: CF Hb Od Mb Ci Ka Ky Ho Te (bps: Ir). -  
 31d 15h 07m: Od Bi (ssc: TC).

1966 June 01d 06h 44m: V1 CF Te (bp: Ir). -02d 03h 53m: H1 Be. -02d  
 09h 00m: Mb Tk Ka Ky (ssc: Od Ks; sfe: Ir). -02d 09h 25m: Mo Te (sfe:  
 Ir). -02d 11h 36m: Mo Mb Ka Ky (ssc: Tf). -02d 14h 34m: Mo Lg T1 Ae  
 (pg: Es). -03d 18h 22m: Tn (ssc: Tf). -05d 01h 12m: H1 T1. -05d 02h  
 46m: Co T1 Ae (pi2: CF Bi). -09d 11h 47m: St V1 Ae. -16d 00h 01m:  
 twenty-nine (si: 20 [A:4; B:14; C:2]; ssc: 2; bs: 6; sfe: Sw). -23d  
11h 32m: eighteen (si: 11 [A:3; B:5; C:3]; ssc: 6; sfe: Ir). -23d 13h  
 46m: Es Wn Pr CF Hb? (ssc: Tf). -23d 22h 31m: Fr Te (b: Gu; sfe: T1). -  
 24d 09h 11m: Mb Ka Ky Te PM (ssc: Tf TC). -24d 17h 19m: eighteen (si:  
 15 [A:3; B:6; C:6]; ssc: 3).

1966 July 08d 05h 29m:Si (pg: Db). -08d 07h 31m: Te Mc Hr (ssc: UB;  
 bps: Ir). -08d 23h 03m: Mo Hb Te (sfe: Ir). -09d 05h 13m: ten [A:2;  
 B:7; c:1]. -09d 07h 51m: Wn Pr. -10d 15h 41m: Ks Bi. -12d 20h 03m:  
 Co Lg. -15d 21h 31m: Mo Ma Od Lg Te Tn (ssc: Tf; bp: Kv?; sfe: Ir). -  
 15d 22h 23m: Te (ssc: Ta). -15d 23h 08m: thirty-three (si: 30 [A:11;  
 B:14; C:5]; ssc: 2; bp: 1). -19d 14h 01m: Lg Ae. -20d 08h 00m: So Le  
 Wn V1 Ae Te (bp: PM; bps: Bi; sfe: Ir Ma). -21d 08h 25m: V1 Bi. -27d  
 14h 43m: CF Te. -29d 15h 57m: Wn V1 Fu Lg Eb (ssc: So Ma).

1966 August 01d 00h 03m: thirty-five (si: 19 [A:8; B:10; C:1]; ssc:  
 7; bs: 8; sfe: Gn). -03d 11h 34m: Es Ma T1. -08d 07h 38m: Bi Tn (ssc:  
 Lg Gu; b: Hu). -09d 17h 51m: Tk (ssc: Tf). -10d 01h 50m: thirty-five  
 (si: 28 [A:12; B:10; C:6]; ssc: 1; bs: 3; bps: 1; pi2: 2). -11d 12h  
 30m: Mo T1 Ae. -18d 11h 59m: Le Wn Pr Hb (ssc: Ma). -18d 12h 12m: Le  
 T1 PM (ssc: Ae; bp: Ir). -18d 17h 26m: twelve (si: 11 [A:2; B:6; C:3];  
 ssc: 1). -23d 13h 48m: Le (ssc: Tf). -23d 14h 18m: Le Mo Hb?. -24d 14h  
 25m: Le T1 Ae (ssc: Tf SF). -29d 22h 19m: Ho Ta Te Mc. -30d 16h 35m:  
 Es Ac. -30d 19h 59m: Le Es (bp: Ir). -30d 23h 08m: CF Te Gu. -31d 00h  
 46m: Te Gu (ssc: Vi Am). -31d 01h 34m: Vi CF Te Gu. -31d 02h 07m: Te  
 Gu. -31d 02h 56m: Te Gu. -31d 06h 28m: So Mo Ir CF Te (ssc: Tf). -31d  
 08h 19m: Ir (ssc: Tf). -31d 09h 28m: Mo Od Lg (sfe: Ir). -31d 13h 33m:  
 Le Mo Ir V1 CF Lg T1 (ssc: Ma Tf). -31d 13h 46m: nineteen (si:17 [A:9;  
 B:8]; ssc: 2). -31d 18h 06m: Ir Te.

1966 September 01d 12h 12m: Ni V1 Ma Lg Eb T1 Ae (ssc: SF). -01d 11h  
 46m: Ma Mc (bps: Bi). -01d 15h 24m: twelve (si: 11 [A:4; B:7]; ssc: 1).  
 -01d 04h 34m: IK Te Ac. -02d 16h 38m: Le Ac. -02d 18h 06m: Le Es Ma CF  
 MB Ac. -02d 22h 43m: Te Gu (pc5: Fr). -03d 11h 37m: Mb Ky (si: Te). -  
 03d 12h 29m: Ta Mc. -03d 21h 14m: Co CF Lg IK T1 Ta Ho Mc (ssc: Vi Te). -  
 04d 06h 35m: Te (ssc: Vi). -06d 07h 31m: Le Wn V1 Pr CF Ae. -06d 07h 52m:  
 V1 Ma CF Lg. -06d 08h 24m: Mb Ka Ky Te Ac. -20d 13h 44m: Le Es Wn Ni Ma  
 Pr Hb? Bi (sfe: Ks). -24d 06h 24m: Te Bi. -24d 15h 28m: Es Hb. -24d 16h  
 51m: Es Ma CF Ci T1 Ae Ky Ta Te. -24d 17h 30m: Es Ma. -24d 18h 05m:  
 seventeen [A:5; B:9; C:3]. -26d 12h 41m: Es Lg (ssc: V1; sfe: Hu). -

27d 10h 22m: seventeen (si: 11 [A:3; B:5; C:3]; ssc: 6). -27d 10h 58m: V1 Mc Tn (ssc: CF). -27d 13h 13m: V1 CF. -27d 14h 26m: V1 Mb Te Ac. -  
27d 15h 17m: eleven [A:3; B:8].

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

Effects confirmed by ionospheric or solar observations are underlined.

1966 January 14d 08h 28m: Ir (si:TC). -17d 14h 53m: Hu (ssc: Tf). -  
19d 16h 39m: Hu (bp: Eb). -20d 00h 23m: Mb Ka Ky. -27d 14h 48m - 14h  
54m: Hu. -28d 13h 20m: Od.

1966 February 02d 15h 44m - 16h 00m: Hu. -07d 09h 59m: Od. -07d 15h  
13m - 15h 21m: Od SM Hu. -09d 11h 04m - 11h 26m: Tn. -18d 20h 34m: Od  
Hu. -26d 14h 20m: Od. -27d 03h 10m: Od. -27d 18h 50m - 19h 02m: Ks. -  
28d 03h 50m - 04h 10m: Mb Ka Ky PM. -28d 14h 50m - 15h 07m: Hu.

1966 March 01d 09h 55m: Od. -06d 12h 23m: Tk (b: AK). -16d 09h 12m:  
Hr. -17d 06h 42m: Od. -19d 03h 40m: Mb Ka Ky. -20d 09h 54m - 10h 18m:  
Wn Wi Cm Pr CF Aq Tk Eb Ci Tl Pe Ks Tn Hr (ssc: Ma Su Tf SF TC; si:  
Nu Mo Es St V1 Hb Od Lg Ae Tl Mc Bi). -24d 02h 28m - 02h 33m: Mb Ka  
Ky Gn (ssc: PM; b: Ir). - 24d 09h 56m - 10h 00m: Tn. -25d 10h 05m -  
10h 13m: Wn Pr Eb Hr (ssc: SF; si: Hb?). -28d 08h 20m: Tk. -29d 03h  
27m - 03h 40m: Mb Ka Ky Gn (si: Ir; bp: Te To). -29d 09h 49m: Eb Hr.  
-29d 10h 55m: Tn Eb Hr. -30d 10h 07m: Od. -30d 12h 46m - 13h 41m:  
Le Wn? Wi V1 Pr Aq IK Eb Tl Pe Ks Tn Hr (si: Od SF TC Mc Bi; b: Es;  
bps: Ae).

1966 April 02d 11h 35m: Le Eb Tn Hr (si: Mc Bi Lu). -04d 13h 59m -  
14h 12m: Hu. -06d 15h 43m - 16h 00m: Hu (ssc: Tf; si: TC; b: SJ?).  
-09d 19h 09m - 19h 14m: Hu. -11d 10h 02m - 10h 10m: Eb Hr. -11d 13h  
06m - 13h 20m: Hu. -12d 17h 18m - 17h 39m: Eb Fr Te Hu (ssc: SJ MB?;  
si: Ag SM).

1966 May 01d 16h 08m - 16h 20m: (ssc: Hb?). -02d 08h 31m: Ir (pi2: Bi).  
-08d 13h 34m - 13h 50m: Hu. -21d 01h 44m: Ir. -21d 10h 36m: Tn. - 21d  
14h 30m - 14h 40m: Hu. -25d 10h 35m - 10h 58m: So. -27d 06h 35m: Ir.

1966 June 06d 12h 56m - 13h 11m: T1 Hu. -11d 17h 09m - 17h 23m: Hu. -  
13d 15h 20m - 15h 38m: Hu. -14d 07h 50m: Od (bp: Hu). -18d 01h 05m:  
Od (si: H1). -21d 04h 54m - 05h 05m: Tn. -21d 09h 33m: Od (si: So). -  
24d 10h 05m: Ir.

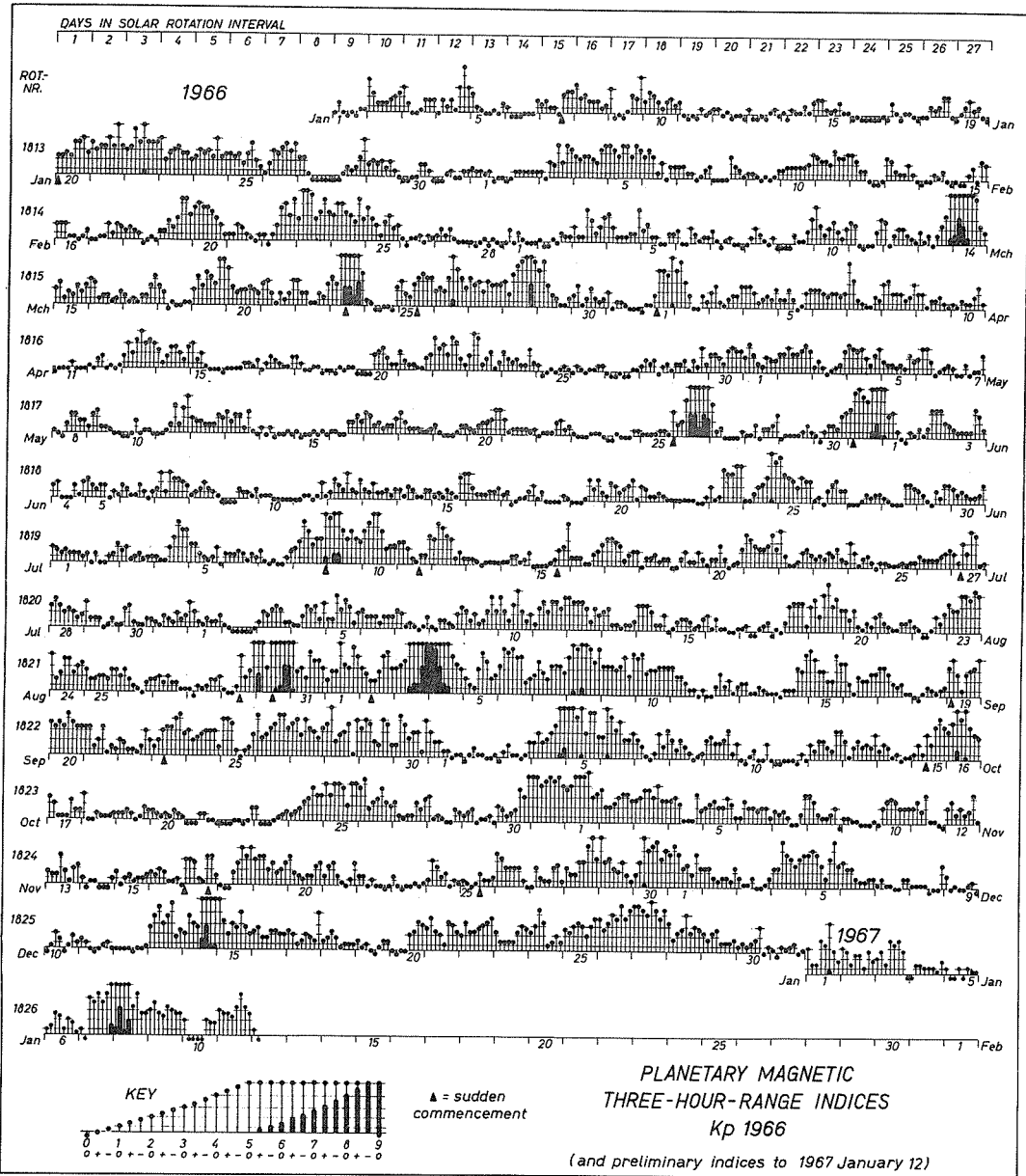
1966 July 06d 14h 16m - 14h 28m: Hu. -07d 00h 26m: Mb Ka Ky (ssc: Gu).  
-08d 12h 43m - 13h 02m: Ir Hu (si: Ae). -09d 02h 50m: Ir (si: Mo). -  
09d 03h 39m: Ir (si: Te). -12d 14h 12m: Ir. -16d 09h 18m: Ir. -17d 03h  
12m: Ir. -24d 09h 50m - 09h 56m: IK. -25d 04h 58m: Ky. -27d 13h 44m: Ir.

1966 August 05d 08h 03m: Ir. -07d 12h 44m - 13h 06m: IK. -09d 06h 27m:  
Ir. -10d 14h 50m - 15h 07m: Hu. -28d 15h 24m - 16h 10m: Le? Es Wn Wi  
V1 Ma Db Pr CF Hb Aq Eb Fr Pe SJ Hr (ssc: Tf Ae Hu; si: Ci SF Tu Ac; b:  
Te; bps: Tw).



Misc.

1966 September 02d 05h 50m - 06h 42m?: Wn Wi Ni V1 Pr Hb Mb Eb? Ka Ky  
 Hr (ssc: Ma T1 Ae; si: Mc Bi Tn?). -05d 20h 42m - 20h 59m: Hu (ssc: Bi;  
 b: IK). -10d 14h 31m - 14h 50m: Hu. -12d 09h 28m - 11h 00m: Ni. -12d  
09h 42m: Hr. -12d 11h 35m: Ma. -14d 10h 13m - 10h 37m: Es Wn Ni Pr Hb  
 IK Eb Hr (ssc: Lg Mc Bi; si: Tn). -15d 14h 38m - 14h 50m: Hu. -16d 16h  
30m - 16h 50m: Hu (bp: V1). -18d 14h 54m - 15h 15m: Es Wn Ni V1 Ma Pr  
 Hb Eb T1 Fr Ae SJ MB Bi Hr (ssc: SF). -19d 12h 07m - 12h 38m: Es Wn Ni  
 Hb Eb? Hr (si: Mc; bp: Bi). -21d 09h 31m - 09h 47m: Es Wn Wi Ni V1 Ma  
 Pr Hb Eb Bi Hr (si: Mc; bs: Nu). -25d 16h 40m - 16h 57m: Hu.



### DAILY GEOMAGNETIC CHARACTER FIGURES C9 AND SUNSPOT NUMBERS R

R	Rot-Nr.	1st day	C9
778	19	J 13	776 533 56 3 2 36 2 12 2 47
878	57	F 9	2 2 47 322 454 656 7 2 1 4 864 442 447 222
888	M 8	4 7	222 36 433 455 536 477 755 545 566 36
887	1694	A 4	566 36 743 3 5 477 744 36 255 543 433 222
778	95	M 1	433 223 335 321 311 343 121 362 16 211
888	96	M 20	16 211 666 6 2 1 2 5 4 564 442 477 45 1
888	124	477 45 5 77 637 422 1 1 2 1 42 363 63 2 1 1	
888	1897	J 24	63 3 1 213 121 263 362 242 56 221 23 35 1
888	98	J 21	23 35 1 253 666 637 3 14 2 12 164 333
888	99	A 17	164 333 55 4 333 7 7 36 5 2 287 535 32 1 2 554 673
1700	01	S 10	554 673 2 1 256 552 223 454 222 3 1 565 665
888	02	N 6	565 665 435 53 6 2 1 2 367 764 364 326 663
888	03	S 3	3 26 653 557 652 545 355 4 1 145 1 1 577 5 1
888	04	O 30	577 5 1 1 332 344 444 563 565 535 422 422
878	19	J 26	422 422 221 466 665 5 7 55 466 666 652 1 12
887	F 22	652 2 1 2 4 1 566 665 555 775 546 676 655 666	
888	58	M 21	655 666 443 655 656 654 221 2 1 566 776 44 1
1708	A 17	776 44 243 336 665 3 3 32 335 246 664 453	
778	09	M 14	664 453 1 2 2 665 737 76 1 24 746 654 245
887	1710	J 10	654 245 3 1 1 2 7 645 422 78 4 4 53 1 7 447 445
888	11	J 7	7 445 44 4 46 657 5 5 5 36 323 443 3 1 1 3 1
888	12	A 3	3 1 1 3 244 331 237 53 1 64 754 733 2 1 1 78
888	13	A 30	2 1 1 78 7 4 563 1 1 7 4 1 1 1 1 6 22 54
888	14	S 26	6 2 1 54 35 334 3 1 1 1 22 222 1 7 773 366
888	15	O 23	773 366 553 43 2 1 1 342 1 222 1 1 1 12
631	16	N 19	1 1 2 322 53 5 2 763 1 33 2 753 466 542
763	1717	J 12	666 543 23 1 33 423 2 1 1 6 655 674 322 245
888	19	J 16	322 245 53 1 2 55 224 343 556 653 35 655
678	59	F 8	35 655 667 5 3 1 4 4 7767 765 43 1 3 1 15
888	M 7	3 1 1 5 32 1 1 1 1 32 678 775 53 1 1 1 25	
888	1721	A 3	3 1 1 25 785 322 2 2 1 1 2 7 655 436 522 246
778	22	A 30	5 2 2 16 1 6 416 84 664 543 343 76 1 1 1 52
888	23	M 27	1 1 1 5 45 432 353 6 1 221 222 223 46 1 66
888	24	J 23	46 1 666 76 4 4 434 453 763 487 886 544 366
778	25	J 20	544 366 66 2 2 4 545 5 2 5 445 4 1 1 6 886 566
888	26	A 16	886 566 665 4 2 1 32 556 686 523 24 445 545
877	27	S 12	445 545 667 776 565 552 2 75 776 742 1 1 1 2
667	28	O 9	1 1 1 3 4 464 2 5 2 56 3 1 667 776 653 323
788	29	N 5	653 323 1 1 3 6 343 44 622 447 476 673 74 1
887	30	D 2	673 74 1 2 1 45 764 234 1 1 642 667 54 1 1 1
878	1731	O 29	54 1 1 352 1 1 764 376 445 477 555 2 12 13
888	19	J 25	2 12 13 24 555 53 1 12 36 265 655 532 1 1
566	F 21	532 1 1 5 4 555 443 33 562 125 753 3 2 1 14	
788	M 19	3 2 1 14 1 1 455 877 766 454 466 664 666 5 1	
877	1735	A 15	666 5 1 1 775 677 674 2 13 778 437 534 74
777	36	M 12	534 74 1 1 1 6 655 457 536 27 664 65 1 1 1
788	37	J 8	65 1 1 1 43 244 243 336 576 676 445 43 1 2
876	38	J 5	43 1 1 2 333 637 446 633 2 2 1 666 45 1 1 1
425	39	A 1	45 1 1 2 45 455 242 784 566 42 1 4 477 4 5
675	1740	A 20	677 4 5 638 665 444 354 1 2 4 1 224 6 12 4 4
863	41	S 24	4 2 4 4 677 166 165 634 1 4 1 633 2 1 577
555	42	O 21	2 1 577 676 663 457 3 1 1 578 778 5 1 2 76
654	43	N 17	5 1 276 346 455 2 1 8 2 356 552 254 76 264
764	1743	O 14	76 264 565 442 475 544 2 1 1 256 1 1 2 15
324	44	J 10	1 1 1 2 15 324 675 5 5 532 3 2 1 1 376 532 2 2
442	45	F 6	532 2 2 5 2 266 756 552 2 1 232 2 1 46 1 17
332	46	M 5	46 1 1 7 1 2 665 436 433 221 254 131 446 1 12
564	1748	A 1	446 1 1 2 6 563 477 4 1 2 223 243 2 12 45 1
663	49	A 20	2 12 45 256 534 254 53 6 2 24 342 6 2 3 2 2
433	1750	M 25	6 2 3 2 566 322 454 1 2 1 33 423 772 1 2 1
754	51	J 21	772 1 2 1 6 33 447 442 242 88 656 355 634
655	52	J 18	855 634 345 852 2 12 755 2 1 4 3 5 1 221 1 12
753	53	A 14	32 1 1 2 1 1 2 221 466 633 1 3 1 2 34 26 1
476	54	S 10	34 26 1 232 2 1 7 656 1 6 8 1 1 1 1 1 35
454	55	O 7	1 1 35 4 1 1 1 5 2 1 1 1 26 86 1 1 1 1 1
354	56	N 3	1 5 475 3 1 4 3 1 4 733 2 2 1 1 1 1 1 1 1
553	57	A 30	777 2 3 4 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1
532	1758	O 27	1 54 4 2 2 1 1 7 3 3 373 4 2 1 1 22 1 23

R	Rot-Nr.	1st day	C9
665	19	J 23	23 12 1 5 1 5 1 35 443 64 1 2 432
776	F 19	432 244 22 2 4 6 2 33 42 1 2 243 4 1	
465	M 18	243 4 1 1 1 1 1 3 243 27 636 5 2 1 22 232	
655	1762	A 74	22 232 356 3 3 322 1 2 1 2 5 2 1 1 2 3 442
322	63	M 11	2 3 442 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
333	84	J 7	2 5 4 2 1 23 1 1 1 1 3 34 1 25 444 222 543 2 12
222	85	J 4	543 23 222 321 1 1 343 224 476 5 2 1 363 3 1
1 1 1	86	J 31	363 3 12 556 53 1 1 2 555 54 1 64 542 1 4 466
1 35	87	A 27	1 4 666 676 454 433 75 342 2 6 435 4 1 6 27
444	88	S 23	4 1 6 2 5 47 533 343 665 6 23 635 246 345 566
333	89	O 20	345 566 665 342 244 5 4 5 4 2 1 3 1 6 6 2 1 5
53 2 13 43	1770	N 16	6 2 1 5 654 5 12 226 2 4 2 1 1 63 433 67
2 13 2 1 23 1	D 13	433 67765 3 4 1 1 1 1 3 1 2 1 1 66	
1 23 2 1 223	J 9	66 665 45 1 1 2 32 1 1 67 1 1 1 1 1 7	
43 2 22 2 1 1	F 5	2 7 556 5 2 1 1 1 1 1 1 1 1 1 1 2 1 2 1 65	
232 2 1 2 1 1	M 4	1 65 753 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2 24 444 2 1	1775	M 31	2 56 542 2 1 234 4 1 432 32 1 1 2 1 566
1 22 444 553	76	A 27	2 566 45 2 13 445 253 1 1 1 1 1 1 1 1 245
223 225 64 2	77	M 24	2 245 323 3 1 1 47 32 1 1 1 1 1 253 32 1 1 5
1 22 22 1 12	78	J 20	3 2 1 5 643 23 1 4 553 343 1 1 1 2 4 2 1 63
1 2 244 4 2 1	79	J 17	4 2 1 63 564 44 65 442 333 2 1 2 2 1 2 1 2 1 6
1 23 422 232	1780	A 13	2 2 76 676 533 34 643 462 2 1 2 2 1 4 4 2 5 4 7
236 552 1 1 2	81	S 9	4 5 4 2 7 667 46 787 576 675 3 1 1 34 1 25
233 433 434	82	O 6	1 34 2 5 666 44 1 4 2 7 742 1 7 6 2 44 1 36
3 2 1 2 332	83	N 2	44 1 36 766 44 1 1 4 1 1 1 1 1 54 1 1 25 366
1 1 2 2 2 1 1	84	N 29	2 5 366 654 4 2 1 2 3 2 1 533 4 2 1 3 4 1
1 1 2 2 2 2 1	1785	O 26	1 3 4 1 75 5 2 1 5 5 2 1 664 2 1 1 3 4 1
1 1 2 1 1 1 1 1	19	J 22	3 4 1 533 632 33 645 42 1 662 232 1 36 454
1 1 2 1 1 1 1 1	F 18	36 454 2 1 6 2 2 764 352 24 233 23 1 23	
1 1 2 1 1 1 1 1	64	M 16	2 2 2 3 665 43 1 6 76 533 34 2 4 1 1 2 24
1 1 2 1 1 1 1 1	1789	A 12	1 2 24 554 2 1 33 664 353 1 1 1 1 1 1 55 56
1 1 2 1 1 1 1 1	1790	M 9	55 56 652 1 1 1 1 56 32 1 1 1 1 1 1 2 27
1 1 2 1 1 1 1 1	91	J 5	2 2 2 7 632 1 1 1 2 4 2 1 3 1 1 1 1 1 2 1 5
1 1 2 1 1 1 1 1	92	J 2	5 2 1 5 543 1 1 1 2 564 2 1 1 1 1 1 4 4 2 1 1
1 1 2 1 1 1 1 1	93	J 20	44 2 1 1 64 3 2 1 64 1 1 1 1 1 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	94	A 25	2 3 2 1 1 35 2 2 1 365 4 2 1 1 1 1 1 1 1 1 2 1
1 1 2 1 1 1 1 1	95	S 21	7 2 2 1 1 6 5 2 365 344 4 4 2 1 1 1 363 4 1
1 1 2 1 1 1 1 1	96	O 18	363 4 1 1 5 1 1 1 4 312 2 1 253 1 2 1 3 2 1 1
1 1 2 1 1 1 1 1	97	N 14	3 2 1 1 1 5 1 3 3 3 2 1 1 1 1 1 1 1 1 1 1 24
1 1 2 1 1 1 1 1	1798	O 11	1 2 2 4 4 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	19	J 7	4 2 1 3 3 1 1 3 1 2 3 5 2 1 1 1 1 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	65	F 3	3 2 464 333 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	M 2	65 1	
1 1 2 1 1 1 1 1	1802	M 29	1 1
1 1 2 1 1 1 1 1	03	A 25	1 1
1 1 2 1 1 1 1 1	04	M 22	1 1
1 1 2 1 1 1 1 1	05	J 18	1 1
1 1 2 1 1 1 1 1	06	J 15	1 1
1 1 2 1 1 1 1 1	07	A 11	1 1
1 1 2 1 1 1 1 1	08	S 7	1 1
1 1 2 1 1 1 1 1	09	O 4	1 1
1 1 2 1 1 1 1 1	1810	O 31	1 1
1 1 2 1 1 1 1 1	11	N 27	1 1
1 1 2 1 1 1 1 1	12	O 24	2 3 3 4 2 1 1 1 2 1 2 2 1 2 2 1 1 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	19	J 20	4 5 6 4 4 3 4 1 1 1 1 3 3 2 1 2 3 1 1 1 1 1 1 1
1 1 2 1 1 1 1 1	66	F 18	1 1
1 1 2 1 1 1 1 1	1816	A 11	1 1
1 1 2 1 1 1 1 1	17	M 8	1 1
1 1 2 1 1 1 1 1	18	J 4	1 1
1 1 2 1 1 1 1 1	19	J 1	1 1
1 1 2 1 1 1 1 1	1820	J 20	1 1
1 1 2 1 1 1 1 1	21	A 24	1 1
1 1 2 1 1 1 1 1	22	S 20	5 2 4 33 555 44 1 6 65 2 1 2 2 2 1 46 1 2 3 3
1 1 2 1 1 1 1 1	23	O 17	1 1
1 1 2 1 1 1 1 1	24	N 13	1 1
1 1 2 1 1 1 1 1	25	O 10	1 1

For explanation and previous years see J. Bartels:  
„Abhandlungen der Akademie der Wissenschaften, Göttingen,  
Beiträge zum I.G.I., Heft 3 (1958).“  
(may be requested from Geophysikalisches Institut,  
Herzberger Landstrasse 180, 34 Göttingen (Germany).)

Symbol	1	2	3	4	5	6	7	8	9		
R =	0	1	16	31	46	61	81	101	131	171	
C9 =	0	1	2	3	4	5	6	7	8	9	
Cp =	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.5	1.9	2.0	
Ap =	0	4	5	9	11	14	18	25	41	92	141



PRINCIPAL MAGNETIC STORMS

AUGUST, SEPTEMBER 1966

DATE 1966 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)
08 29	1316	08 30 07	TVAN 01.1S	SC	+ 0.3	+28	+37	M	---	---	---	5	133	69	61	
	1316	08 30 07	ANNA 01.5N	SC	- 0.9	+36	+18	M	---	---	---	5	109	49	61	
	1315	08 30 06	BINZ 03.4S	SC	+ 1.3	+27	- 1	M	08 29	8	5	6	131	26	61	
	1315	---	PMOR 18.6S	SC	4	30	6	MS	08 30	8	7	11	140	79	61	
	1315	09 01 24	PILR 20.2S	SC	---	17	---	M	08 29	8	6	5	169	24	61	
	1315	08 30 04	HRMN 33.3S	SC	+ 2	+14	+10	M	08 29	8	5	16	56	66	61	
	1317	08 30 09	GNAN 43.2S	SC *	+ 2	+51 *	+ 9	M	08 29	8	5	17	82	91	61	
	1317	08 30 04	AMBE 47.7S	SC *	1.1	36.3	---	M	08 29	5.8	3	11	114	---	61	
	1310	08 30 04	KGLN 57.3S	SC	---	---	---	M	08 29	8	5	---	---	---	61	
									08 30	1.2						61
08 30	1112	08 31 06	FRED 49.6N	SC *	+ 1	+13	- 3	MS	08 30	8	6	39	170	147	62	
	1112	09 01 24	IRKU 40.8N	SC *	+ 3.0	+77	+15	MS	08 30	6.7.8	6	22	219	62	62	
	1112	09 01 01	MBOR 21.3N	SC	- 1.6	+40	---	MS	08 30	8	6	5	140	22	62	
	1112	09 01 00	ALIB 09.5N	SC	- 0.8	+31	-10	MS	08 30	6.7.8	6	10	142	61	62	
	1112	09 02 00	HYDE 7.6N	SC	- 0.5	+31	+ 1 *	M	---	---	---	10	138	41	62	
	1115	09 01 03	BANG 04.8N	SC	---	+39	---	MS	08 30	6.7.8	7	---	158	---	62	
	1111	08 31 24	GUAM 04.0N	SC	---	+30	-10	MS	08 30	8	7	2	124	23	62	
	1112	09 01 00	ANNA 01.5N	SC	- 1.5	+44	+10	MS	---	---	---	7	159	78	62	
	1112	08 31 19	HUAN 0.6S	SC	2	13	4	MS	08 30	6.8	6	8	345	58	62	
	1112	09 01 00	TVAN 01.1S	SC	- 0.5	+43	+48	MS	---	---	---	7	190	145	62	
	1050	09 02 05	BINZ 03.4S	SC *	+ 1.5	+42	- 4	MS	08 30	6	7	9	273	30	62	
									08 31	1	4					62
	1112	08 31 19	APIA 16.1S	SC	---	+19	- 9	MS	08 31	8	6	4	118	93	62	
	1112	08 31 24	HRMN 33.3S	SC *	+ 2	+29	+23	MS	08 30	6.7.8	6	31	163	164	62	
	1114	08 31 19	GNAN 43.2S	SC	+ 1	+41	+14	MS	08 30	7.8	7	33	143	139	62	
	1113	08 31 21	TOOL 46.7S	SC *	+ 2	+54	+ 8	MS	08 30	6.7.8	6	30	225	59	62	
	1115	08 30 24	AMBE 47.7S	SC *	3.4	42.1	---	MS	08 30	6.7	6	24	184	---	62	
	1110	08 31 03	KGLN 57.3S	SC	---	---	---	S	08 30	7.8	9	---	---	---	62	
	08 31	0049	08 31 17	AMBE 47.7S	SC *	1.3	33.1	---	M	08 31	1	4	7	97	---	62
09 01	07--	09 02 07	BANG 04.8N	**	**	**	**	M	09 01	7.8	5	---	---	---	63	
	1205	09 02 03	KGLN 57.3S	**	**	**	**	MS	09 01	7	6	---	---	---	63	
	0300	09 04 20	TOOL 46.7S	**	**	**	**	MS	09 03	8	7	46	338	149	63	
09 02	0826	09 10 21	COLL 64.6N	SC *	- 4	+31	-14	MS	09 03	6.7.8	7	597	2410	1960	64	
									09 04	2.3.5					64	
	08--	09 04 18	SITK 60.0N	**	**	**	**	S	09 04	4					64	
	0823	09 04 14	FRED 49.6N	SC *	- 1	+ 8	- 2	S	09 04	1.2	9	255	2170	1115	64	
	0824	09 06 18	IRKU 40.8N	SC *	- 0.8	+18	+ 4	MS	09 03	8	7	45	304	159	64	
	0822	09 04 16	TUCS 40.4N	SC	+ 1	+ 8	+ 1	MS	09 03	8	7	37	250	100	64	
									09 04	1	7				64	
	0823	09 05 03	MBOR 21.3N	SC *	- 0.2	+11	---	MS	09 04	1.2	6	8	92	49	64	
	0823	09 05 01	ALIB 09.5N	SC	- 0.4	+ 5	- 6	MS	09 04	1	7	14	226	83	64	
	0823	09 05 04	HYDE 7.6N	SC	- 0.3	+ 8	- 0.4	MS	---	---	---	13	248	54	64	
	0824	---	BANG 04.8N	SC	---	+16	---	M	09 02	7	5	---	44	---	64	
	0823	09 04 18	GUAM 04.0N	SC	---	+06	-02	MS	09 03	8	6	2	89	22	64	
	0823	09 05 01	ANNA 01.5N	SC *	- 0.8	+13 *	+ 5	MS	---	---	---	10	298	148	64	
	0823	09 05 01	TVAN 01.1S	SC *	- 0.3	+17 *	+20 *	MS	---	---	---	11	340	199	64	
	0823	09 05 04	BINZ 03.4S	SC	+ 0.5	+13	- 1	MS	09 03	5	6	13	216	39	64	
									09 04	2	6				64	
	0823	09 04 17	APIA 16.1S	SC	---	---	---	MS	09 04	8	7	---	---	---	64	
	1000	09 06 17	PMOR 18.6S	SC	0	6	5	MS	09 03	8	7	---	---	---	64	
	0822	09 04 20	PILR 20.2S	SC	---	9	---	MS	09 04	1	7	8	294	96	64	
	0823	09 04 23	HRMN 33.3S	SC	0	+ 7	+ 1	MS	09 04	1	7	20	293	49	64	
	0824	09 04 14	GNAN 43.2S	SC *	+ 1	+ 6	+ 4	MS	09 03	7.8	7	40	187	148	64	
									09 04	1	7	29	346	121	64	
	0325	09 04 14	AMBE 47.7S	SC *	0.4	9	---	MS	09 03	8	6	38	274	---	64	
								09 04	2.3.4	6					64	
0819	09 02 21	KGLN 57.3S	SC	---	---	---	M	09 02	7	4	---	---	---	64		
09 03	1027	09 05 04	BANG 04.8N	SC *	---	+19	---	MS	09 03	7.8	7	---	136	---	64	
	1130	09 04 19	HUAN 0.6S	**	**	**	**	MS	09 04	1.2	6	9	374	50	64	
	0540	09 04 23	KGLN 57.3S	**	**	**	**	S	09 03	8	8	---	---	---	64	
								09 04	1						64	
09 05	2043	09 06 18	BINZ 03.4S	SC	- 0.2	+10	- 1	M	09 06	2.3	4	6	70	22	65	
09 06	0303	09 06 16	FRED 49.6N	SC	+ 2	+70	-16	M	09 06	2	5	18	126	34	65	
09 08	0243	09 09 12	FRED 49.6N	SC	+ 1	+ 5	- 1	M	09 08	2.3.4.8	5	24	97	78	66	
	06--	09 08 24	IRKU 40.8N	**	**	**	**	MS	09 08	6	6	20	116	44	66	
	03--	09 09 16	GNAN 43.2S	**	**	**	**	M	09 08	4.5.6	5	11	65	93	66	
	0955	09 09 01	KGLN 57.3S	**	**	**	**	M	09 08	5.6	5	---	---	---	66	
09 14	1510	09 16 05	COLL 64.6N	SC *	- 6	+62	-24	M	09 15	4	5	83	470	330	67	
	1512	09 15 24	IRKU 40.8N	SC	- 1.0	+39	+ 5	M	09 14	6	5	12	111	28	67	
	1010	09 15 11	BINZ 03.4S	SC	+ 0.2	+ 4	0	M	09 14	6	5	7	76	25	67	
	1515	09 15 01	GNAN 43.2S	SC	+ 1	+ 5	+ 2	M	09 15	1	5	7	36	37	67	
	1507	09 15 12	KGLN 57.3S	SC	---	---	---	M	09 14	8	5	---	---	---	67	
								09 15	1						67	

PRINCIPAL MAGNETIC STORMS

SEPTEMBER, OCTOBER 1966

DATE 1966 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)	
09 18	2247 2100	09 19 22 09 21 15	BINZ TOOL	03.4S 46.7S	..	..	..	..	M	09 19	1	5	6	87	25	68	
					..	..	..	..	M	09 20	5	5	20	94	29	68	
09 19	0251 0252	09 20 01 09 20 --	BANG GNAN	04.8N 43.2S	SC	--	+21	--	M	09 19	8	4	--	34	--	68	
					SC	+ 1	+ 8	+ 4	M	09 19	4	5	14	73	89	68	
09 20	08--	09 20 22	COLL	64.6N	..	..	..	..	MS	09 20	5	7	133	1460	650	68	
09 23	0856 0857 0856 0858 0856 0857 0858 0857 0858 0857 0858 0856	09 24 19 09 24 20 09 24 21 09 24 23 09 25 11 09 24 21 09 24 23 09 23 22 09 24 23 09 25 10	COLL IRKU MBOR ALIB HYDE BANG ANNA HUAN TVAN BINZ	64.6N 40.8N 21.3N 09.5N 7.6N 04.8N 01.5N 0.6S 01.1S 03.4S	SC *	- 9	-63	-35	M	09 23	6,7	5	53	610	340	69	
					SC *	- 1.7	+48	+ 6	M	09 23	6,7	5	18	116	16	69	
					SC	--	--	--	M	--	--	--	--	--	--	69	
					SC	- 0.6	+29	- 8	M	09 23	6,7	5	5	132	40	69	
					SC	- 0.4	+29	- 1	M	--	--	--	--	5	129	30	69
					SC	--	+41	--	MS	09 23	6,7	6	--	107	--	69	
					SC *	- 1.1	+41 *	+16	M	--	--	--	--	4	168	60	69
					SC	--	16	4	MS	09 23	5,6,7	5	4	259	28	69	
					SC *	- 0.3	+43 *	+51 *	M	--	--	--	--	3	205	115	69
					SC	+ 1.0	+41	- 6	MS	09 23	6	6	6	206	18	69	
					SC *	+ 1	+27	+11	M	09 24	4,6	4	4	69	69		
					SC *	+ 1	+ 6	+ 3	M	09 23	6,7	5	20	138	112	69	
					SC	--	--	--	M	09 23	4	5	14	42	74	69	
SC	--	--	--	M	09 23	7	5	--	--	--	69						
09 25	16-- 21-- 16	09 29 10 09 26 17 09 29 08	BANG GUAM BINZ	04.8N 04.0N 03.4S	..	..	..	..	M	09 26	7	5	--	68	--	70	
					..	..	..	..	M	09 26	6	5	--	38	7	70	
					..	..	..	..	M	09 26	7	5	8	133	33	70	
					..	..	..	..	M	09 27	4,6	5	5	42	74	70	
..	..	..	..	M	09 26	7	5	16	78	75	70						
09 26	07--	09 28 19	COLL	64.6N	..	..	..	..	MS	09 28	6	6	108	920	490	70	
					..	..	..	..	MS	09 28	6	6	108	920	490	70	
09 27	1020 1425	09 27 21 09 28 06	HUAN KGLM	0.6S 57.3S	..	..	..	..	MS	09 27	6	6	5	225	29	70	
					SC	--	--	--	M	09 28	1,2	4	--	--	--	70	
09 28	01--	09 28 06	HRMN	33.3S	BAY	..	..	..	M	09 28	2	5	15	16	27	70	
09 30	04--	10 01 14	COLL	64.6N	..	..	..	..	MS	09 30	3	6	106	820	550	71	
10 03	1930 0424	10 05 22 10 07 00	HYDE PHOR	7.6N 18.6S	..	..	..	..	M	-- --	-	-	5	152	29	72	
					SC	0	3	2	M	10 04	8	5	7	151	56	72	
					SC	0	3	2	M	10 05	4	5	7	151	56	72	
10 04	03-- 04-- 18-- 13-- 13-- 1600 1300 1320U 09-- 1322 1510 13-- 13-- 0000 2015	10 06 23 10 06 16 10 05 12 10 06 15 10 06 10 10 05 24 10 05 21 10 06 17 10 05 17 10 05 02 10 05 16 10 05 24 10 05 12 10 06 16 10 05 20	COLL SITK FRED IRKU TUCS TUCS MBOR SJUA MBOR BANG GUAM HUAN APIA HRMN GNAN TOOL KGLM	64.6N 60.0N 49.6N 40.8N 40.4N 29.9N 21.3N 04.8N 04.0N 0.6S 16.1S 33.3S 43.2S 46.7S 57.3S	..	..	..	..	MS	10 05	4	7	222	1400	830	72	
					..	..	..	..	MS	10 05	4	7	85	570	600	72	
					..	..	..	..	M	10 04	8	5	29	143	81	72	
					..	..	..	..	M	10 04	7,8	5	18	167	55	72	
					..	..	..	..	M	10 05	4,7	5	5	72	72		
					..	..	..	..	M	10 06	5	5	5	72	72		
					..	..	..	..	M	10 04	7,8	5	16	150	20	72	
					..	..	..	..	M	10 05	4	5	5	72	72		
					..	..	..	..	MS	10 06	2	6	12	132	37	72	
					..	..	..	..	MS	10 04	7	6	2	134	--	72	
					..	..	..	..	MS	10 04	7,8	7	--	158	--	72	
					..	..	..	..	M	10 04	8	5	--	51	7	72	
					..	..	..	..	M	10 04	7,8	5	5	307	33	72	
..	..	..	..	M	10 05	7	5	3	142	96	72						
..	..	..	..	MS	10 04	7,8	6	23	114	136	72						
..	..	..	..	M	10 04	7,8	5	12	127	98	72						
..	..	..	..	M	10 04	8	5	16	139	50	72						
..	..	..	..	MS	10 04	8	7	--	--	--	72						
10 15	0955 0954 0954 0954 0955 0955 0955 0955 0955 0955 0954 0955 0955 0955 0952	10 16 18 10 16 25 10 16 21 10 16 22 10 16 15 10 16 22 10 16 22 10 16 22 10 16 18 10 17 02 10 16 21 10 16 21 10 16 22 10 16 19	SITK FRED IRKU TUCS MBOR ALIB BANG ANNA TVAN APIA PHOR HRMN GNAN TOOL AMBE KGLN	60.0N 49.6N 40.8N 40.4N 21.3N 09.5N 04.8N 01.5N 01.1S 16.1S 18.6S 33.3S 43.2S 46.7S 47.7S 57.3S	SC	--	--	--	S	10 16	3,5	8	155	775	550	73	
					SC *	- 2	+ 8	- 3	M	10 16	3,5	5	22	117	69	73	
					SC *	- 1.6	+22	+ 5	MS	10 16	3	6	26	145	44	73	
					SC	+ 1	+ 5	--	MS	10 16	3	6	20	90	10	73	
					SC	0	+25	- 8	M	10 15	4,7	4	3	40	15	73	
					SC	--	--	--	M	10 16	3	4	4	30	16	73	
					SC	- 0.3	+15	- 3	MS	10 16	3	6	7	184	65	73	
					SC	--	+27	--	--	--	--	--	--	--	--	73	
					SC	- 0.6	+18	--	MS	-- --	--	--	5	241	70	73	
					SC *	0.0	+21	+25	MS	-- --	--	--	3	289	170	73	
					SC	--	+ 9	- 6	M	10 16	3,5	5	2	130	14	73	
					SC	0.1	19	17	MS	10 16	3	6	6	157	73	73	
					SC *	+ 1.5	+19.2	+14.0	M	10 16	3,5	5	20	111	52	73	
SC *	+ 1	+16 *	+ 4	MS	10 16	5	6	23	104	151	73						
SC	- 1	+30	+ 4	M	10 16	3,5	5	23	111	56	73						
SC *	0.5	27.6	..	M	10 16	3	5	19	88	--	73						
SC	--	--	--	M	10 16	5,6	5	--	--	--	73						
10 16	06--	10 16 19	COLL	64.6N	..	..	..	..	MS	10 16	3,5	7	264	1600	1200	73	

PRINCIPAL MAGNETIC STORMS

OCTOBER, NOVEMBER 1966

DATE 1966	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		
	MO. DA.	UT START			UT END MO. DA. HR.	TYPE	AMPLITUDES			MO. DA.	3-HOUR PERIOD	K INDEX	D (°)	H (°)		Z (°)	
							D(°)		H(°)								Z(°)
10 16	0308	10 16 23	GUAM	04.0N	SC	---	+19	-06	M	10 16	3	5	---	41	6	73	
10 23	1500 1502	10 26 22	HYDE BANG	7.6N 04.8N	** **	** **	** **	** **	M -	--- ---	- -	- -	4	106	18	74 74	
10 24	12-- 1145	10 27 03 10 24 24	COLL HUAN	64.6N 0.6S	** **	** **	** **	** **	MS MS	10 25 10 24	3,4 6	6 6	98 6	820 185	450 27	74 74	
10 25	18--	10 26 06	HRMN	33.3S	BAY	**	**	**	M	10 25	8	5	12	51	60	74	
10 30	16--	10 02 03	COLL	64.6N	**	**	**	**	MS	10 31 11 01	4,5,6 4,5,6	6 6	218	1360	900	75 75	
	13-- 12-- 1100	11 01 15 11 01 20 11 01 18	FRED IRKU TUCS	49.6N 40.8N 40.4N	** ** **	** ** **	** ** **	** ** **	M MS M	10 31 10 31 10 31	1 6 1	5 6 5	22 19 12	83 113 100	46 33 10	75 75 75	
	1200 12--	10 31 12 11 02 03	SJUA MBOR	29.9N 21.3N	** **	** **	** **	** **	M M	10 30 10 30 10 31 11 01	6 8 1,4,5,7 4,6	5 4 4 4	7 3 1 4	133 36 44 50	29 14 18 10	75 75 75 75	
	0045 0048 1300 11--	11 01 22 10 31 24 10 30 20 11 01 24	HYDE BANG HUAN HRMN	7.6N 04.8N 0.6S 33.3S	** ** ** **	** ** ** **	** ** ** **	** ** ** **	M M MS M	10 30 10 30 10 31 11 01	7,8 6 5 6	4 6 5 5	---	---	---	75 75 75 75	
	1500	11 01 21	KGLN	57.3S	**	**	**	**	MS	10 31	7	6	---	---	---	75	
11 03	05--	11 04 03	COLL	64.6N	**	**	**	**	MS	11 03	4	7	177	1160	380	76	
11 17	0016 0016 1720 1720	11 17 09 11 17 10 11 17 21 11 18 09	MBOR BANG HUAN MBOR	21.3N 04.8N 0.6S 21.3N	SC SC SC * SC *	0 ---	+12 +12	0 ---	M M MS M	11 17 11 17 11 17 11 17	1 1 6 7	3 4 6 4	---	24 22 299 39	---	77 77 77 77	
11 18	12-- 11-- 09-- 1102 1135	11 19 23 11 18 24 11 20 04 11 18 22 11 19 06	COLL IRKU BANG HUAN KGLN	64.6N 40.8N 04.8N 0.6S 57.3S	** ** ** ** **	** ** ** ** **	** ** ** ** **	** ** ** ** **	M MS M MS M	11 19 11 18 11 18 11 18 11 18	5 6 6 6 6,7,8	5 6 5 6 4	57 8 ---	560 94 39	230 19 ---	78 78 78 78 78	
11 25	1339	11 26 20	MBOR	21.3N	SC *	---	+ 6	0	M	11 25 11 26	8 1,2,3,4	3 3	---	---	---	79 79 79	
	1339 1340	11 26 18 11 26 21	HYDE BANG	7.6N 04.8N	SC SC	- 0.1 ---	+ 9 +10	- 1 ---	M M	11 26 11 26	5 4	- 4	3	74 96	12 ---	79 79	
11 27	1630	11 29 02	HYDE	7.6N	**	**	**	**	M	---	-	-	3	90	15	80	
11 28	06-- 05--	11 29 20 11 29 22	COLL IRKU	64.6N 40.8N	** **	** **	** **	** **	MS M	11 29 11 28	4 5,6,7,8	6 4	79 14	810 71	320 25	80 80	
	15-- 1150	11 29 03 11 29 01	HRMN KGLN	33.3S 57.3S	BAY **	** **	** **	** **	M M	11 28 11 28	1,6 7	4 5	10	55	65	80 80	
11 30	06-- 04-- 0300	12 01 24 11 30 24 12 01 23	COLL IRKU HYDE	64.6N 40.8N 7.6N	** ** **	** ** **	** ** **	** ** **	MS M M	11 30 11 30 ---	4 3,4,5,6 -	7 5 -	149 16 3	1230 107 96	750 24 26	81 81 81	

Note: Principal Magnetic Storms will usually appear in the white section two months after observation.  
See Descriptive Text published in February 1967 for explanation of columns and observatory code.

SOLAR RADIATION MONITORING SATELLITE  
X-RAY

DECEMBER 1965, JANUARY FEBRUARY 1966

ESSA, Boulder

FLUX MEASUREMENTS					
Date	Times of Observation	0-3 A ( $\times 10^{-5}$ )	0-8 A ( $\times 10^{-4}$ )	8-20 A ( $\times 10^{-3}$ )	44-60 A ( $\times 10^{-2}$ )
1965					
17 Dec	2308-2322	---	0.56	1.4	---
20 Dec	2139-2154	---	.56	1.4	---
21 Dec	2110-2124	---	.56	1.1	---
22 Dec	2041-2055	---	---	0.29	2.7
23 Dec	1306-1310	---	---	0.29	2.7
	2011-2026	---	---	0.29	2.7
27 Dec	1958-2012	1.0	5.2	4.4	7.9
28 Dec	1929-1943	---	1.3	1.9	6.6
29 Dec	1715-1729	---	5.2	6.3	9.1
	1859-1913	---	2.9	3.5	6.6
30 Dec	1830-1844	0.8	6.5	5.8	8.7
1966					
3 Jan	1632-1646	---	0.65	0.59	4.1
	1816-1831	---	---	0.59	4.1
4 Jan	1933-1943	---	---	0.70	4.5
5 Jan	1718-1732	---	---	0.70	4.5
6 Jan	1648-1703	---	---	0.94	4.5
7 Jan	1619-1633	---	---	0.70	4.5
10 Jan	1635-1650	---	---	0.59	4.1
11 Jan	1606-1621	---	1.5	1.9	5.5
12 Jan	1537-1552	---	2.0	2.3	6.2
13 Jan	1654-1704	---	2.4	3.4	7.4
14 Jan	1438-1453	---	2.8	4.0	8.5
15 Jan	1409-1424	---	3.9	5.1	9.1
	1554-1606	---	2.9	4.9	9.0
16 Jan	1339-1354	---	2.9	4.7	9.1
17 Jan	1455-1509	1.3	13.0	>10.5	18.0
18 Jan	1426-1440	2.8	13.0	>10.5	18.5
19 Jan	1356-1410	---	5.9	9.0	---
20 Jan	1327-1340	---	2.6	3.6	---
21 Jan	1257-1310	---	1.6	2.7	---
24 Jan	1316-1327	---	2.0	2.7	---
31 Jan	0057-0112	---	---	0.9	---
1 Feb	0029-0043	---	<0.14	<0.9	---
2 Feb	0000-0015	---	1.6	1.8	---
	2331-2346	---	2.0	2.25	---
3 Feb	2302-2316	---	0.65	0.90	---
5 Feb	0015-0032	---	0.35	0.90	---
6 Feb	2317-2333	---	0.30	0.90	---
7 Feb	2247-2304	---	0.60	0.90	---
8 Feb	2218-2234	---	0.33	0.90	---
9 Feb	2149-2205	---	0.65	1.8	---
	2333-2350	---	1.30	2.7	---
10 Feb	2303-2320	---	0.65	1.8	---
11 Feb	2234-2250	---	0.98	2.25	---
14 Feb	2108-2122	---	0.82	2.25	---



SOLAR RADIATION MONITORING SATELLITE  
X-RAY

FEBRUARY, MARCH 1966

ESSA, Boulder

FLUX MEASUREMENTS					
Date 1966	Times of Observation	0-3 A ( $\times 10^{-5}$ )	0-8 A ( $\times 10^{-4}$ )	8-20 A ( $\times 10^{-3}$ )	44-60 A ( $\times 10^{-2}$ )
15 Feb	2036-2052	---	0.65	1.8	---
16 Feb	2151-2207	---	0.33	1.4	5.8
17 Feb	2308-2322	---	0.33	0.92	5.4
18 Feb	2052-2109	---	0.65	1.5	5.8
21 Feb	1923-1940	---	0.98	1.7	6.0
22 Feb	1853-1910	---	1.6	2.3	6.4
23 Feb	1823-1840	---	1.6	2.8	6.6
	2009-2025	---	1.6	2.2	6.25
24 Feb	1754-1811	---	0.64	1.4	5.6
25 Feb	1909-1925	---	1.5	2.1	5.8
26 Feb	1840-1856	---	1.1	2.1	5.8
27 Feb	1809-1826	---	4.9	4.7	8.3
28 Feb	1740-1756	1.1	9.4	10.0	---
	1926-1941	---	5.0	6.8	---
1 Mar	1710-1726	0.66	4.5	4.5	---
	1856-1911	1.0	11.0	14.0	---
2 Mar	1640-1657	---	0.65	1.9	---
3 Mar	1755-1811	---	---	0.45	5.14
4 Mar	1726-1741	---	---	0.60	4.4
5 Mar	1655-1712	---	---	0.63	4.3
6 Mar	1626-1642	---	---	0.69	5.0
7 Mar	1556-1612	---	---	0.69	4.2
8 Mar	1526-1543	---	---	0.69	4.4
9 Mar	2201-2217	---	3.4	1.2	5.0
10 Mar	2131-2147	---	---	0.70	4.6
11 Mar	2101-2117	---	---	0.70	5.0
12 Mar	1512-1529	---	---	0.75	5.1
13 Mar	2147-2203	---	1.9	3.3	7.5
14 Mar	2117-2133	---	2.7	5.2	9.6
	2302-2316	0.33	3.34	5.4	9.6
15 Mar	1902-1917	1.84	11.9	11.0	16.4
	2147-2157	0.34	3.86	9.75	13.4
	2232-2246	0.65	6.7	10.0	13.6
16 Mar	1647-1659	0.33	5.0	9.0	---
	1833-1846	---	4.35	8.1	---
	2203-2216	0.66	5.7	9.9	---
17 Mar	1803-1817	13.4	35.0	40.4	18.7
	1948-2004	---	7.4	11.0	---
18 Mar	1733-1747	---	5.4	9.9	---
19 Mar	2033-2049	0.33	7.1	11.0	---
20 Mar	2004-2020	10.3	61.0	40.0	---
21 Mar	1934-1950	0.33	9.8	17.0	---
22 Mar	1720-1734	---	3.1	6.5	---
	1904-1921	---	3.7	7.4	---
	2049-2103	---	5.1	9.5	---
23 Mar	1834-1850	---	1.7	4.1	8.1
	2019-2034	3.4	13.0	10.0	16.0
24 Mar	1805-1821	0.6	6.2	7.0	11.0
	1950-2005	3.1	8.1	7.3	12.0
25 Mar	1735-1751	---	2.2	4.1	8.1
	1920-1927	0.6	3.4	4.5	8.5
26 Mar	1850-1904	9.9	>14.0	>11.0	>19.0
27 Mar	1820-1836	---	6.3	7.5	12.0

SOLAR RADIATION MONITORING SATELLITE  
X-RAY

MARCH APRIL 1966

ESSA, Boulder

FLUX MEASUREMENTS					
Date 1966	Times of Observation	0-3 A ( $\times 10^{-5}$ )	0-8 A ( $\times 10^{-4}$ )	8-20 A ( $\times 10^{-3}$ )	44-60 A ( $\times 10^{-2}$ )
28 Mar	1751-1807	0.4	5.9	9.5	12.0
	1938-1948	11.0	>20.0	36.0	>19.0
29 Mar	1721-1737	2.6	19.0	22.0	---
30 Mar	1507-1521	1.5	19.0	25.0	---
	1651-1709	1.1	11.0	16.0	---
31 Mar	1621-1637	1.0	12.0	17.0	---
	1807-1821	1.95	12.0	17.0	---
1 Apr	1552-1608	1.64	10.4	11.4	15.7
	1741-1752	2.8	16.0	>11.6	>20.6
2 Apr	1522-1538	---	6.75	8.36	11.1
3 Apr	1638-1651	---	2.56	4.42	8.3
4 Apr	1423-1439	---	3.62	5.46	9.4
	1608-1624	---	2.8	4.4	8.5
5 Apr	1538-1552	---	1.54	3.28	7.85
	1724-1735	---	1.60	3.28	7.85
6 Apr	1508-1524	---	2.56	4.9	9.5
7 Apr	1439-1455	---	3.8	6.6	11.8
	1624-1637	---	4.6	7.3	11.8
8 Apr	1409-1425	---	6.4	8.65	12.8
	1554-1608	---	5.8	9.2	13.4
9 Apr	1524-1539	---	4.65	7.05	12.5
10 Apr	1455-1510	---	6.35	9.3	13.7
11 Apr	1425-1440	1.94	12.2	14.3	---
12 Apr	1355-1411	---	4.94	8.4	12.3
13 Apr	1325-1341	---	3.5	6.3	10.8
	1511-1522	---	4.96	9.25	13.3
14 Apr	1255-1312	---	8.64	9.10	12.8
	1441-1453	1.66	1.41	4.5	---
15 Apr	1225-1242	---	4.95	8.03	---
	1411-1424	---	2.96	6.22	---
16 Apr	1341-1355	---	1.0	2.58	7.85
17 Apr	1311-1326	---	1.28	2.68	---
18 Apr	1241-1256	2.46	14.7	>10.5	---
20 Apr	0252-0309	---	1.0	3.06	7.9
21 Apr	0153-0209	---	1.28	3.28	8.9
	0223-0239	---	1.85	8.3	9.3
22 Apr	0123-0139	---	1.6	4.2	9.9
	2309-2325	---	1.17	2.48	8.6
23 Apr	0054-0109	---	3.84	8.25	12.4
25 Apr	0025-0040	---	3.24	8.47	13.7
	2356-0009	---	3.84	7.7	13.6
27 Apr	0108-0124	---	1.75	5.2	11.6
28 Apr	0039-0055	---	2.24	4.67	10.3
29 Apr	0009-0025	---	2.88	5.36	10.3
	2332-2355	---	1.92	3.58	---



# FINAL CORONAL LINE EMISSION INDICES

NOVEMBER 1966

CMP November 1966	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 <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>
1	x	43	x	x	x	x	x	13	50	67	9	14
2	36	69	x	x	107	x	x	4	x	x	x	x
3	51	x	9	13	63	107	9	15	47	43	14	21
4	x	x	x	x	74	x	x	9	x	x	15	34
5	x	x	x	x	x	x	x	x	17	96	x	x
6	x	x	x	x	x	x	x	x	x	x	x	x
7	x	x	x	x	x	x	x	x	x	x	x	x
8	x	x	x	x	x	x	x	x	x	x	x	x
9	x	x	x	x	x	x	x	x	x	x	x	x
10	x	x	x	x	x	x	x	x	x	x	x	x
11	41	49	1	3	15	17	8	9	18	24	9	17
12	159	193	5	12	52	58	8	3	17	21	3	15
13	120	193	7	13	26	62	3	1	x	x	1	1
14	x	x	x	x	x	x	x	x	x	x	x	x
15	126	143	6	16	31	60	7	x	13	20	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x
17	43	47	7	11	19	23	12	3	x	x	x	1
18	78	94	9	11	30	52	17	19	x	x	x	x
19	83	112	13	27	48	58	15	25	x	x	x	x
20	x	x	x	x	x	x	x	x	37	54	x	x
21	x	x	x	x	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	x	x	x	x
23	x	x	x	x	x	x	x	x	23	28	1	7
24	x	x	x	x	x	x	x	x	x	x	x	30
25	69	185	32	46	18	21	20	27	x	x	x	x
26	98	169	42	70	18	29	11	21	x	x	x	x
27	x	x	22	31	x	x	5	6	x	x	x	x
28	x	x	x	x	x	x	x	x	46	58	1	3
29	56	71	x	x	x	x	x	x	x	x	6	11
30	x	x	x	x	x	x	x	x	x	x	x	x

# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

OCTOBER 1966

Fort Davis

25-320 Mc/s

Oct. 1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE Mc.	REMARKS		
		TYPE	TIMES U.T.	INT.				
Oct. 1	1319-2252 2257-2345	IIIg	1406	2	>180-<50			
		IIIb	1451	1	>180-<50			
		IIIg	1523	1	>180-100			
		IIIg	1528-1529	2	180-<50			
		IIIg	1625-1627	2	>180-<50			
		IIIb	1643	2	>200-100			
		IIIg	1644-1645	2	280-100			
		IIIb	1647	3	100-25			
		IIIg	1812	2	>180-90			
	IIIg	2109	3	>180-65				
	2	1319-2345	IIIg	1605	2	125-<25		
			IIIg	1746-1747	1	50-<25		
			IIIg	1758	2	75-<25		
			IIIg	2115-2116	1	90-<25		
			IIIg	2118-2119	3	150-<25		
			IIIg	2131	1	75-<25		
	3	1319-2345	IIIb	2134	1	65-<25		
			IIIb	1430	1	180-<50		
IIIb			1444	2	180-<50			
IIIg			1800	2	50-<25			
IIIg			1810-1812	1	75-<25			
4	1319-2345	IIIg	2102-2104	1	280-180			
		I	1848-1851	1	180-170			
5	1319-2345	IIIg	1441	3	180-<50	1319-1700: Weak I		
		IIIb	1620	1	100-<50			
		IIIg	1628-1630	3	150-<50			
		IIIb	1648	2	75-<50			
		IIIg	1651	1	100-<50			
		IIIb	1822	1	150-100			
		IIIg	2003-2004	2	165-<50			
		IIIg	2011-2012	1	180-75	2011: U-burst		
		IIIg	2014	1	180-100			
		IIIg	2131	3	280-150			
6	1319-2345	IIIg	1538-1541	3	240-<50	1439: U-burst		
		IIIg	1915	1	150-<50			
		IIIg	2205	1	125-<50			
		IIIg	2209	3	135-<25			
7	1319-2345	IIIg	1654	1	280-100			
8	1319-2345				Weak I throughout day			
9	1319-2345				Weak I throughout day			
10	1319-2345	IIIb	1606	1	100-<50	Weak I throughout day		
		IIIg	2208	3	320-125	1710-2005: Sporadic Type III, 50-<25 Mc/s.		
		IIIb	2327	2	280-100	1904: Reverse drift pair		
11	1319-2345	IIIb	1827	2	50-<25			
12	1319-2345	IIIg	1428-1431	2	>50-<25			
		IIIg	1434	2	>50-<25			
		IIIg	1437-1438	2	180-<25			
		IIIb	1446	2	>50-<25			
		IIIg	1801	2	>50-<25			
		IIIg	1901-1904	3	180-<25	1902: Type V		
		IIIg	1905-1910	3	240-<25	1907: Type V		
		IIIg	2115	3	>50-<25			
		IIIg	2343-2345	2	230-125			
13	1319-2345	IIIg	1336-1341	3	>320-<25			
		IIIg	1344-1346	3	>320-<50			
		IIIb	1649	2	50-<25			
		IIIg	1744	2	320-150			
		IIIg	1747-1748	2	50-<25			
		IIIb	1839	2	100-<25			
		IIIg	1852	1	320-180			
		IIIb	1910	1	150-<50			
		IIIb	1914	1	100-<25			
		IIIg	1941-1943	3	>50-<25			
		IIIb	2010	2	>50-<25			
		IIIg	2013-2015	3	200-<25			
		IIIg	2018-2021	3	>320-<25			
		IIIg	2023	3	280-<25			
		IIIg	2026	1	240-<25			
		IIIg	2031	3	180-<25	2031: U-burst		
14	1319-2345	IIIg	1721-1723	3	>320-<25	1722: Type V		
		IIIg	1753	3	125-<25	1722: U-burst		
		IIIb	1758	1	100-<25			
		IIIb	1805	1	50-<25			
		IIIb	1807	1	50-<25			
		IIIg	1812-1814	3	135-<25	1813: Type V		
		IIIg	1816	3	125-<25			
		IIIg	1831	2	75-<25			
		IIIg	1847	2	>50-<25			
		IIIg	2001	2	75-<25			
		15	1319-2345	IIIg	1504	2	150-<100	Weak I during day 1835-2132: Sporadic Type III, 100-<25 Mc/s.
16	1319-2345	IIIg	2201	2	>320-100	Weak I throughout day		
		IIIg	2313	2	>320-115	1549-2144: Sporadic Type III, 100-<25 Mc/s.		

# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

OCTOBER, NOVEMBER 1966

Fort Davis

25-320 Mc/s

Oct.-Nov. 1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS
		TYPE	TIMES U. T.	INT.		
17	1319-2345	IIIb	1409	1	100-<50	Weak I throughout day 1637-1759: Sporadic Type III, 100-<25 Mc/s.
		IIIb	1536	1	125-<50	
		IIIb	1541	2	125-<50	
		IIIb	1905	1	150-100	
		IIIg	2048	2	>320-180	
		IIIb	2154	1	90-<50	
		IIIg	2342	2	>320-180	
18	1319-2345	IIIb	1504	1	100-<50	1319-1800: Sporadic Weak I 1742: U-burst  1941: Type V
		IIIg	1742-1743	2	125-<25	
		IIIg	1842-1844	3	160-<25	
		IIIg	1940-1942	3	230-<25	
		IIIg	2121-2122	1	200-<50	
		IIIb	2129	2	240-125	
		IIIb	2144	1	280-180	
19	1319-2345	IIIg	1447	2	180-100	1900-2340: Sporadic Weak I
		I	2045-2152	2	280-180	
20	1319-2345	I	1319-1906	3	320-75	1907-2345: Sporadic Weak I        2155: Type V
		IIIb	1408	2	180-<50	
		IIIg	1532	2	100-<25	
		IIIg	1534-1535	2	125-<25	
		IIIg	1612-1613	2	>320-<25	
		IIIb	1726	2	100-<25	
		IIIb	1747	1	100-<25	
		IIIb	1755	2	50-<25	
		IIIg	1902-1904	2	>320-180	
		IIIg	2154-2156	3	>320-<25	
21	1319-2345	I	1400-1500	1-	250-200	
		IIIg	1501	1	280-135	
		I	1920-2340	1	250-200	
22	1319-2345	I	1319-1520	2	280-125	
		I	1520-1825	1	280-150	
		IIIg	1620	1	>320-240	
		IIIg	2007	1	>320-170	
		IIIg	2144-2147	2	290-175	
23	1319-2345	IIIg	1345-1346	1	320-180	
		IIIg	1609	3	320-180	
		IIIb	1806	2	150-<25	
24	1320-2345	I	1325-1440	1	280-140	1503: Type V
		IIIg	1320	2	320-<125	
		IIIg	1401	3	>320-180	
		IIIg	1430	2	>320-200	
		IIIg	1502-1504	3	>320-90	
		II	1505-1514	2	>320-<50	
		IIIb	1520	2	>320-180	
IIIb	2238	2	280-180			
25	1319-2345	IIIg	2055	1	280-<50	
26	1319-2345	IIIg	1959-2000	2	100-<25	
27	1319-2345					
28	1319-2345	IIIb	1354	2	100-<50	
29	1319-2345	IIIb	1707	1	100-<25	Weak I throughout day
30	1319-2345					
31	1319-2345					1600-2345: Sporadic Weak I
<u>Nov.</u>						
1	1353-2330					
2	1353-2330	IIIg	1617	1	>320-150	
		IIIg	1707	1	280-180	
		IIIg	1722-1724	2	200-<50	
		I	1743-1746	1	180-100	
3	1353-2330	IIIg	1527-1528	2	180-<50	1904: Type V 1908: Reverse drift pair
		IIIg	1530-1533	3	220-<25	
		IIIg	1857-1859	2	240-<25	
		IIIg	1903-1906	3	240-<25	
		IIIb	2038	1	240-200	
4	1353-2330	IIIg	1436	2	240-125	1436: U-burst
		IIIg	1630-1631	3	240-<25	
		IIIg	2008	2	>320-<25	
		IIIg	2145-2146	2	75-<25	
		IIIg	2148-2149	3	>320-<50	
		IIIg	2157	3	75-<25	
		IIIg	2201	1	75-<50	
IIIb	2324	1	75-<50			
6	1353-2330	IIIg	1543	3	75-<25	
		IIIg	1948	1	50-<25	
		IIIg	1951	3	75-<25	
		IIIg	2104-2106	2	320-<25	
		IIIg	2108	2	80-<25	

# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

NOVEMBER, DECEMBER 1966

Fort Davis

25- 320 Mc/s

Nov.-Dec. 1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS
		TYPE	TIMES U. T.	INT.		
		IIIg	2120-2121	3	200-<25	
		IIIg	2126-2127	2	280-200	
		IIIg	2129-2134	2	>320-<25	
		III	2208	1	150-100	
		IIIg	2247	1	80-<25	
		IIIg	2254	3	200-<25	
		IIIg	2311-2312	1	280-125	
7	1354-2330	IIIg	1715	2	>180-110	
8	1353-2330	IIIb	1524	3	>100-<50	
		IIIg	1533	3	150-<25	
		IIIg	2049	1	180-<50	
		IIIb	2129	1	180-125	
9	1353-2330	IIIg	2111	1	140-<50	
10	1353-2330	IIIb	1621	3	100-<25	
		IIIg	1625	3	125-<25	
		IIIb	1701	3	280-220	
		IIIg	2104	3	315-260	2121-2230: Sporadic Type III, 315-260 Mc/s.
11	1353-2300	IIIb	1409	2	75-<25	1546-2330: Sporadic Weak I
		IIIg	1634	3	180-<25	
		IIIg	1650	3	100-<25	
		IIIg	2127	2	280-200	
		IIIg	2254	3	125-<25	
12	1353-2330	IIIg	1925	2	280-180	Weak I throughout day
		IIIg	1959	1	35-<25	
13	1353-2330					
14	1353-2330	IIIg	1356	2	250-165	
		IIIg	1359	2	260-165	
		IIIg	1544-1545	2	300-150	
		IIIg	2022-2023	2	280-160	
		IIIg	2025-2027	1	280-160	
		IIIb	2108	1	240-180	
		IIIg	2116-2118	3	>320-150	
15	1353-2330	IIIg	1928	1	280-200	
16	1353-2330					
17	1353-2330	IIIg	2036	3	280-<25	
		IIIb	2158	2	75-<50	
18	1353-2330					
19	1353-2330	IIIb	1540	2	150-100	
20	1353-2330					
21	1353-2330					2100-2330: Sporadic Weak I
22	1353-2330	I	1909-1914	2	50-<25	1753: U-burst 1900-2330: Sporadic Weak I
23	1353-2330					
24	1353-2330	IIIb	1525	1	180-100	
		IIIb	2131	1	240-125	
		IIIg	2137	1	280-100	
		IIIg	2155-2156	1	240-100	
		IIIg	2212-2215	3	>320-<25	
25	1353-2330	IIIg	1420	1	280-180	
		IIIg	1451-1452	2	280-180	
		IIIb	1526	1	280-160	
		IIIg	1547	2	280-200	
		IIIg	1626	3	>320-150	
		IIIg	1709	1	300-200	
		IIIg	1742-1746	2	>320-170	
		IIIg	2012-2013	2	50-<25	
		IIIg	2248	2	300-190	
26	1353-2330	IIIg	1616-1620	1	180-50	
		IIIg	1621-1624	1	180-50	
27	1353-2330	IIIg	1631-1634	2	80-<25	
		IIIb	1637	2	80-<25	
		IIIg	1823-1827	2	180-<25	
		IIIg	2321-2322	2	>320-<50	
28	1353-2330					
29	1353-2330	IIIg	1708	3	240-<25	
		IIIg	1714-1716	2	>320-<25	
30	1353-2330	IIIg	1631-1632	2	50-<25	
Dec. 1	1353-2330	IIIg	1748-1750	3	>320-<25	
		I	1755-1757	1	140-110	
		IIIg	2303	1	280-180	
2	1353-2330	IIIg	1811-1812	3	50-<25	

# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 1966

Fort Davis

25-320 Mc/s

Dec. 1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS
		TYPE	TIMES U. T.	INT.		
3	1353-2330	IIIB	1535	3	100-<25	
		IIIB	1538	3	125-<25	
		IIIB	1754	1	200-125	
4	1353-2330	IIIG	1410	1	190-100	
		IIIG	1714	1	190-<25	
5	1353-2330	IIIG	1416	1	150-50	
		IIIB	1654	1	50-<25	
		IIIG	1928-1929	2	280-100	
6	1353-2330	IIIG	1410-1413	3	200-100	
		IIIG	1844-1846	3	290-<25	
		IIIB	2102	2	180-<25	
7	1353-2330	IIIG	1710-1711	2	50-<25	
		IIIG	1800	1	>320-220	
		IIIG	2038-2030	3	150-<25	
8	1353-2330	IIIG	2048	1	180-<25	1854-2330: Sporadic Weak I
9	1353-2330	I	1800-1848	1	300-90	Weak I throughout day
		IIIG	1945	1	190-<100	
		I	2052-2330	1	240-115	
		IIIG	2127	2	240-<50	
10	1353-2338	IIIB	1604	1	>320-180	Sporadic Weak I throughout day
		IIIG	1607	2	>320-180	
		IIIG	1931-1932	1	190-<25	
		IIIB	2048	1	50-<25	
		IIIG	2139-2140	2	>320-<25	
		IIIG	2229-2230	3	>320-<25	
		IIIG	2327-2329	2	280-<100	
		II	(2329-2331 2334-2337)	3 2	150-<100 125-<100	
11	1353-2330	IIIB	1513	1	75-<50	Weak I throughout day
		IIIG	1839-1840	1	100-<50	
12	1353-2330	I	1407-2330	1	240-75	Type I has background continuum
13	1353-2330	I	1405-2330	1	180-75	Type I has background continuum
		II	2308-2310	2	>320-150	
14	1353-2330	I	1417-1423	1	180-100	
		IIIB	1544	1	250-180	
15	1353-2330	IIIG	1507	1	180-150	Sporadic Weak I during day
		IIIG	1539	1	180-<25	
		IIIB	2236	1	125-<25	
16	1353-2330					
17	1353-2330					
18	1353-2330					
19	1353-2330	IIIG	1655	1	290-200	
20	1353-2330	IIIG	1440	1	280-100	
		IIIG	1453	1	90-<25	
		IIIG	1500-1501	3	280-150	
		IIIG	1507-1511	2	280-<25	
		IIIG	1519	3	280-<25	
		IIIB	1523	1	280-200	
		IIIG	1525	1	280-180	
		IIIG	1602-1603	3	280-<25	
		IIIG	1605-1606	2	240-125	
		IIIG	1608	1	280-50	
		IIIG	1650-1651	3	100-<25	
		IIIG	1743-1746	3	150-<25	
		IIIG	1825	2	280-125	
		IIIB	1916	3	100-<25	
		IIIG	2030-2032	3	200-<25	
		IIIG	2113-2114	2	290-100	
IIIG	2116-2117	2	>320-<25			
IIIG	2220-2226	2	>320-<25			
21	1353-2330	IIIB	1441	1	240-180	
		IIIG	1451	1	240-180	
		IIIG	1452-1455	3	290-<25	
		IIIB	1544	1	240-180	
		IIIG	1705-1706	3	150-<25	
		IIIG	1719	2	200-<25	
		IIIG	1733	1	280-100	
		IIIG	1817-1821	2	100-<25	
		IIIG	1822-1823	2	280-<25	
		IIIG	1911-1912	5	280-<25	
		IIIG	1938-1940	3	>320-<25	
		IIIG	1940-1946	1	>320-<25	
		IIIB	1952	3	50-<25	
		IIIB	1955	1	50-<25	
		IIIG	2120	1	280-50	
		IIIG	2143	2	280-100	
IIIG	2245	1	180-75			
22	1353-2330	IIIG	1932	2	50-<25	



# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 1966

Fort Davis

25-320 Mc/s

Dec. 1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS			
		TYPE	TIMES U. T.	INT.					
23	1353-2330	IIIg	1816	2	300-200				
		IIIg	1853	3	60-<25				
		IIIB	1855	3	60-<25				
		IIIB	2023	1	50-<25				
		IIIg	2108	3	200-<25				
		IIIg	2144-2145	2	180-<25				
24	1353-2330	IIIg	1622-1623	2	50-<25	1722: Type V			
		IIIG	1721-1724	3	200-<25				
		I	1759-1803	3	55-<25				
		I	1809	2	50-30				
		IIIg	1831	3	50-<25				
		IIIg	2119	2	50-<25				
25	1353-2330	IIIg	1813-1815	1	50-<25				
		IIIg	1818	2	50-<25				
26	1353-2330	IIIG	2139-2140	3	280-<25				
		IIIg	2142	1	180-100				
27	1353-2330	IIIg	1419-1421	1	280-200				
		IIIG	1422-1425	2	240-160				
		IIIB	1953	1	50-<25				
		IIIg	2002	1	280-200				
		IIIG	2150-2151	1	180-<25				
		IIIg	2257	1	240-180				
29	1353-2330	IIIg	1442	1	240-100	1442: U-burst			
		Unc1.	1535-1538	2	170-135				
		Unc1.	1555-1557	2	170-135	1708: Type V			
		IIIG	1559-1600	2	240-<25				
		IIIg	1707-1708	3	190-<25				
		IIIg	1709-1711	3	240-<25				
		IIIB	1720	1	50-<25				
		IIIg	1740	2	100-<25				
		IIIB	1921	2	50-<25				
		IIIg	1936	2	240-100				
		IIIB	2045	1	50-<25				
		IIIB	2201	1	280-<100				
		30	1353-2330	IIIg	1509-1510		2	300-100	Sporadic Weak I during day
				IIIg	1527-1528		3	300-100	
IIIg	1616-1617			3	290-125	1841-2130: Sporadic Type III, 50-<25Mc/s.			
IIIg	1711-1712			2	280-170				
IIIg	2106-2109			3	240-<25				
IIIg	2115-2116			3	300-150				
IIIg	2118-2119			3	>320-180				
IIIG	2144-2148			3	200-<25				
IIIG	2214-2215			3	290-<50				
IIIg	2233-2236			3	>320-<25				
II	2236-2247			3	280-50				
31	1353-2330			IIIB	1509		2	200-100	
				IIIG	1510-1511		3	240-<50	
		IIIB	1521	1	75-<50				
		IIIB	1527	2	240-100				
		IIIB	1606	2	240-100				
		IIIg	1610-1612	1	180-<25				
		IIIB	1613	1	50-<25				
		IIIB	1615	1	50-<25				
		IIIg	1618-1619	1	50-<25				
		IIIG	1653-1656	3	310-<25				
		II	1656-1705	3	>320-<25				
		IIIG	1840-1844	3	>320-<25				
		I	1846-1848	1	180-115				
		IIIg	1850-1852	2	50-<25				
		IIIB	1915	3	180-<25				
		IIIg	2014-2015	3	50-<25				
		IIIg	2122-2123	2	280-<25				
IIIg	2139-2140	3	180-<25						