PART B

SOLAR - GEOPHYSICAL DATA

ISSUED

APRIL 1965

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F 248
PART B

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
30 April 1965

SOLAR - GEOPHYSICAL DATA

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The descriptive text was republished in November 1964. Addenda have been given in the introduction to each of the CRPL-F Part B reports, December 1964 through March 1965.

Sunspot Data:

Starting with the Mount Wilson sunspot data for March 1965, the Mount Wilson group number is given for each group. This is the group number of the series which used to be published in the Publications of the Astronomical Society of the Pacific. In the data sent out each month only the groups for which they have magnetic observations are reported. Therefore, the group numbers for the groups for which they do not have magnetic observations will not appear on the monthly data sheets.

Flares:

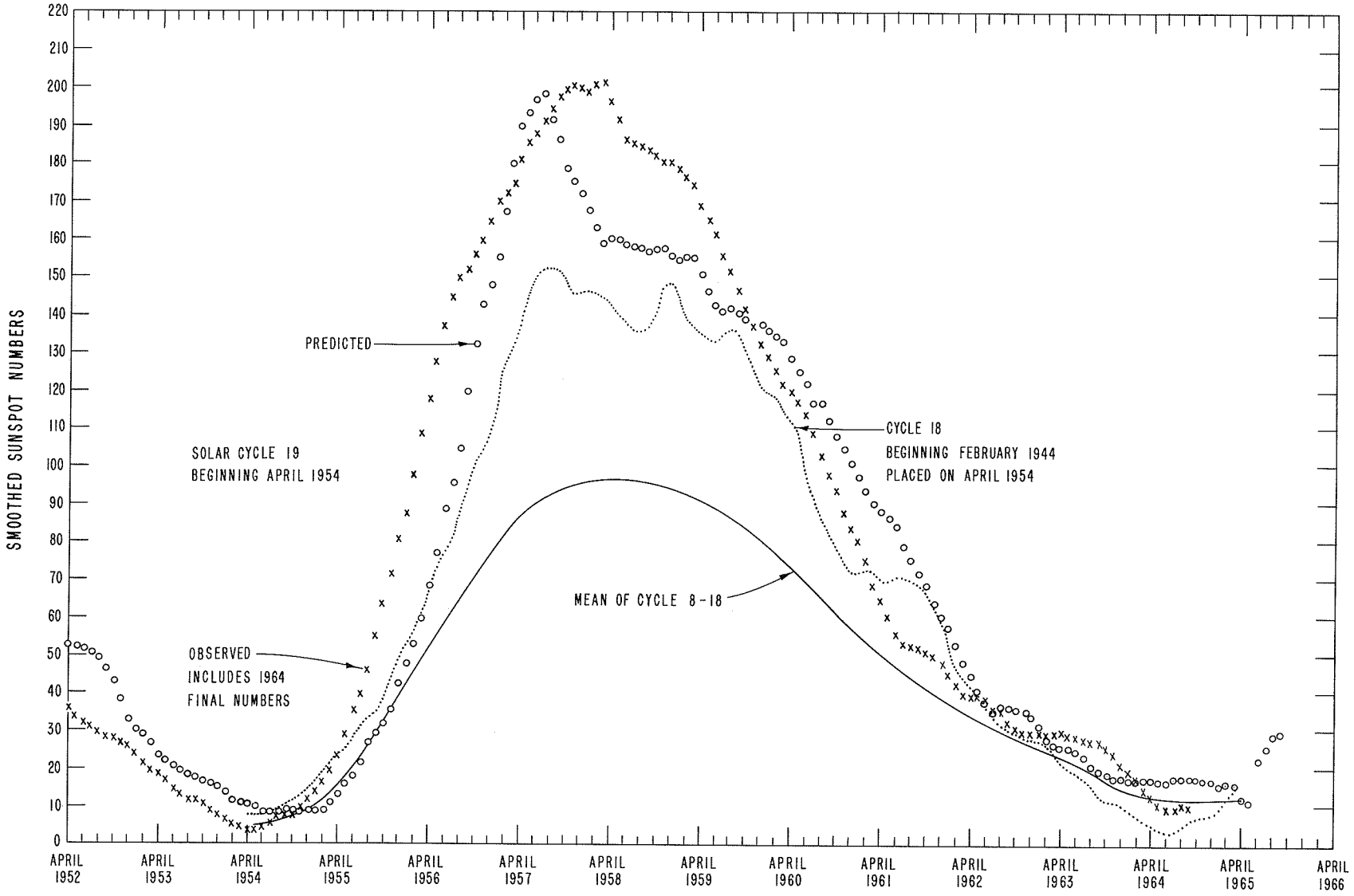
In CRPL-F 244, on text page, "s" flare definition was added to IAU remarks. After consultation with Dr. Michard, a better definition for flare footnote "s" is as follows:

"s" = brightening follows disappearance of filament, occurs in position of former filament.

DAILY SOLAR INDICES

Feb. 1965	American Relative Sunspot Numbers R_A'
1	13
2	12
3	13
4	11
5	10
6	17
7	19
8	20
9	20
10	22
11	21
12	22
13	22
14	22
15	24
16	14
17	10
18	3
19	0
20	0
21	0
22	0
23	0
24	4
25	14
26	19
27	22
28	19
Mean:	13.3

March 1965	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux S	S_A
1	13	76.5	75.1
2	0	75.3	74.0
3	0	75.0	73.7
4	8	75.0	73.8
5	7	76.1	74.8
6	29	76.7	75.5
7	26	77.0	75.8
8	7	74.5	73.4
9	0	73.0	71.9
10	12	73.1	72.1
11	9	71.9	70.9
12	18	73.5	72.6
13	16	75.6	74.6
14	17	74.6	73.7
15	12	72.7	71.9
16	9	71.3	70.5
17	11	71.6	70.8
18	22	75.0	74.3
19	17	77.0	76.3
20	19	74.4	73.8
21	9	74.0	73.4
22	0	72.7	72.1
23	0	73.0	72.5
24	7	72.5	72.0
25	17	73.8	73.4
26	10	73.3	73.0
27	18	72.1	71.8
28	12	71.7	71.4
29	9	72.0	71.7
30	9	71.4	71.2
31	8	71.6	71.4
Mean:	11.3	73.8	73.0



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PREDICTED AND OBSERVED SUNSPOT NUMBERS

CALCIUM PLAGE AND SUNSPOT REGIONS

MARCH 1965

MARCH 1965	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA						SUNSPOT DATA		
				CMP VALUES		HISTORY	AGE (ROTATIONS)	DATE FIRST SEEN (1)	DURATION (DAYS) (1)	CMP VALUES		HISTORY
				AREA	INT.					AREA	COUNT	
2.0	S04	7704 (2)	New	1500	2	ℓ — d	1	2/23	>8			
2.0	S17	7709	New	200	1.5	b — d	1	2/27	≥4			
2.6	S24	7711 (3)	New	100	1	b — d	1	2/28	1			
2.7	N09	7708	7661	1600	2.5	ℓ — ?	2	< 2/26	>5			
2.9	N22	7707	7660	2300	3	ℓ — ?	2	< 2/26	>5	(97)	(1)	b — d
3.5	N30	7714	New	100	2	b — d	1	3/1	>2			
4.5	N29	7710	New	(300)	(1)	ℓ — ?	1	2/27	≥4			
5.7	N28	7712	7664	(400)	(2)	ℓ — ℓ	3	2/28	12	(218)	(2)	b — d
7.8	N19	7716	New	(400)	(2.5)	b — ℓ	1	≤ 3/10	>4	(72)	(3)	b — ℓ
8.9	S34	7719 (3)	New	(200)	(1)	b — d	1	3/12	1			
10.9	N11	7722 (3)	New	(200)	(3)	b — d	1	3/15	1			
12.6	S12	7724 (3)	New	(100)	(1)	b — d	1	3/16	1			
12.7	N23	7717	7674	600	1	?⌒ d	3	< 3/10	>4			
14.4	N16	7726	New	(100)	(1)	b — ℓ	1	3/18	2			
14.6	N24	7720	New	200	2	b — d	1	3/13	3			
15.8	S12	7723 (3)	New	200	1	b — d	1	3/15	1			
16.5	N29	7718 (4)	New	1300	2.5	ℓ / ℓ	1	3/11	12	169	2	b — ℓ
17.7	S11	7728 (3)	New	(100)	(1.5)	b — d	1	3/19	1			
18.5	N16	7729 (3)	New	200	1	b — d	1	3/19	1			
18.7	S30	7730 (3)	New	(100)	(1.5)	b — d	1	3/20	1			
19.3	N02	7731 (3)	New	100	1	b — d	1	3/20	1			
19.7	N30	7733	New	(100)	(1)	b — d	1	3/21	2			
19.8	S18	7721 (3)	New	(300)	(1.5)	ℓ — d	1	3/13	1			
20.0	S01	7725 (3)	New	(100)	(1)	b — d	1	3/16	1			
20.6	S10	7727	New	200	1.5	b ∧ d	1	3/18	4			
23.0	N05	7736	New	(300)	(3)	b — ℓ	1	≤ 3/27	≥2			
24.4	N04	7734 (3)	New	100	1.5	b — d	1	3/24	1			
26.0	N22	7732	New	(400)	(3)	ℓ — d	1	3/20	3			
27.3	N21	7737	New	300	2.5	b — d	1	≤ 3/27	≥4			
27.5	S24	7743 (3)	New	(100)	(1.5)	b — d	1	3/30	~1			
28.3	N28	7738	New	200	2.5	b — d	1	≤ 3/27	≥4			
28.4	S07	7742 (3)	New	100	1.5	b — d	1	3/28	~1			
29.9	S42	7744 (3)	New	100	2	b — d	1	3/30	1			
30.1	N12	7735	7708	1300	3	ℓ — ℓ	3	3/24	13	(121)	(1)	ℓ — d
30.1	N23	7739	7707	500	1.5	b — d	3	≤ 3/27	>5			
30.6	S16	7740 (3)	New	(200)	(1)	b — d	1	3/27	~1			

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(1) Due to very poor weather conditions, no calcium spectro heliograms were secured at the McMath-Hulbert Observatory on March 3, 4, 5, 6, 7, 8, 9, 14, 17, 23, 25, 26, and 29, 1965.
(2) Region 7704 is a new region, in the same position as the ephemeral plage 7666 of the previous rotation.
(3) These small and ephemeral plages were seen for only one day.
(4) Region 7718 is new, near the position of 7677 of the previous rotation, but not the same.

MARCH 1965

MAR. 1965	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	MAR. 1965	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	1940	S05	W04	αf	15898	16	1800	N30	W05	βf*	15903
2	No Spots					17	No Obs.				
3	1825	N30	E28	αf*	15900	18	1730	N28	W29	βf*	15903
4	1800	N28	E14	αp*	15900			S12	E24	β***	15904
5	1805	N13	W06	βf	15901	19	1830	N30	W33	βf*	15903
		N29	E03	αp**	15900	20	No Obs.				
6-7	No Obs.					21-22	No Spots				
8	No Spots					23-25	No Obs.				
9	No Obs.					26	1800	N23	E08	αp*	15906
10	1855	N20	W38	αp*	15902			N10	E43	βp	15905
		N18	W 37	β +	15900	27	No Obs.				
11-13	No Obs.					28	1715	N11	E12	αp	15905
14	1910	N31	E20	βf*	15903	29-30	No Spots				
15	No Obs.					31	No Obs.				

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* New Cycle
** Other small spots in group below threshold of measurement
*** Old Cycle; reversed polarities
\+ Reversed polarities

FINAL CORONAL LINE EMISSION INDICES

OCTOBER 1964

CMP Oct 1964	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	19	28	11	15	14	18	11	14	9	12	17	28	10	14	17	22
2	26	35	9	20	12	17	2	8	5	6	13	18	13	26	13	20
3	31	55	15	40	5	6	1	9	9	11	19	31	17	52	17	28
4	35	66	x	x	3	4	x	x	9	14	13	16	42	62	12	18
5	16	27	17	23	2	3	8	12	5	8	2	12	48	84	7	17
6	28	36	10	14	9	12	16	25	8	9	15	20	25	51	16	36
7	33	38	x	x	15	18	x	x	3	11	26	29	24	45	2	4
8	x	x	18	25	x	x	17	22	0	0	10	12	0	0	9	12
9	23	29	10	12	0a	0a	10	12	0a	0a	x	x	7a	14a	x	x
10	12	17	11	13	7	10	11	15	21	31	13	20	26	33	12	14
11	4	11	15	20	1	8	21	23	20	25	7	8	21	29	10	16
12	16	22	15	22	12	13	17	26	2	6	14	18	11	15	18	28
13	0	3	12	19	0	1	12	14	0	0	21	25	5	8	22	27
14	12	17	21	35	6	10	19	26	4	6	15	20	9	12	14	18
15	13	16	11	17	11	16	17	21	2	11	18	20	0	0	19	22
16	4	6	11	14	4	5	13	21	6	12	16	20	9	15	14	16
17	10	12	19	28	9	10	15	20	x	x	16	28	x	x	3	18
18	30	51	14	20	18	30	10	14	8	31	30	44	5	22	16	20
19	25	45	9	20	5	17	7	18	8	14	19	24	12	18	25	44
20	12	18	27	44	8	10	17	22	2	4	13	17	5	8	12	16
21	7	14	20	26	2	6	30	38	12	16	12	14	16	19	15	18
22	0	0	16	19	0	0	12	15	27	37	22	26	46	58	16	24
23	0	0	x	x	0	0	x	x	7	8	11	16	6	7	8	10
24	6	8	19	27	4	7	19	26	16	32	10	13	12	15	11	13
25	25	38	17	25	20	29	12	28	18	48	x	x	10	42	x	x
26	13	18	22	32	23	60	23	32	14	31	13	19	7	10	14	22
27	0	0	19	25	21	34	23	30	15	28	x	x	17	18	x	x
28	9	12	17	20	7	9	14	16	23	29	0	0	21	24	12	24
29	28	73	24	40	4	11	19	20	x	x	x	x	x	x	x	x
30	31	63	29	64	6	7	16	20	x	x	18	22	x	x	20	37
31	x	x	35	58	x	x	9	28	3	8	19	21	19	36	18	30

x = no observations * = yellow line emission a = index computed from low weight data

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FINAL CORONAL LINE EMISSION INDICES

NOVEMBER 1964

CMP Nov 1964	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	44	62	23	37	0	0	11	16	19	33	x	x	41	57	x	x
2	21	39	26	32	7	10	26	44	11	12	25	28	28	32	11	17
3	21	39	10	13	1	4	13	16	16	19	32	64	24	38	29	54
4	59	79	11	16	20	24	9	12	8	11	21	36	30	44	14	21
5	50	65	14	25	35	39	12	28	0	0	20	26	13	27	19	26
6	10	13	9	12	4	6	8	8	3	4	23	25	13	20	24	30
7	19	28	17	22	1	7	15	17	x	x	x	x	x	x	x	x
8	7	20	x	x	0	0	x	x	6	8	16	19	14	18	17	20
9	10	16	15	24	4	6	14	16	x	x	x	x	x	x	x	x
10	25	30	x	x	10	11	x	x	9	12	14	20	15	22	22	28
11	20	22	19	34	22	27	8	20	x	x	x	x	x	x	x	x
12	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
13	4	6	16	17	0	3	18	23	3	6	21	28	12	15	25	32
14	7	10	14	16	3	4	25	27	3	4	19	26	14	27	19	24
15	23	28	x	x	15	25	x	x	2	4	25	29	12	31	25	47
16	15	17	16	23	8	10	22	33	3	4	12	16	17	42	14	20
17	25	33	32	53	21	26	36	51	x	x	x	x	x	x	x	x
18	23	31	27	47	14	22	23	35	3	4	25	35	5	6	20	25
19	5	8	24	26	2	4	17	20	5	8	15	17	4	4	15	18
20	4	6	24	30	5	7	17	20	28	36	22	25	26	31	22	35
21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
22	14	24	15	20	13	42	13	25	15	25	11	13	7	9	17	20
23	x	x	x	x	x	x	x	x	10	12	9	10	9	10	23	48
24	10	12	10	14	8	13	8	10	6	9	10	12	11	22	18	27
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
27	18	33	16	20	6	9	18	21	x	x	x	x	x	x	x	x
28	11	27	11	14	3	6	15	18	8	16	14	18	11	16	10	12
29	5	7	19	26	2	4	24	26	3	5	10	12	8	10	8	9
30	8	10	11	12	3	4	12	14	5	7	14	20	7	9	14	16

x = no observations * = yellow line emission a = index computed from low weight data

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FINAL CORONAL LINE EMISSION INDICES

DECEMBER 1964

CMP Dec 1964	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	x	x	x	x	x	x	x	x	0	0	11	12	0	0	12	16
2	8	12	24	27	3	4	24	27	13	15	x	x	16	19	x	x
3	10	12	17	20	3	4	12	15	0	0	13	16	1	6	16	24
4	28	33	15	22	19	21	27	34	2	3	12	14	10	15	13	19
5	x	x	x	x	x	x	x	x	3	4	19	22	11	16	21	26
6	16	30	20	23	2	3	18	21	3	6	14	20	16	21	16	26
7	27	57	21	27	5	6	11	14	2	3	18	20	22	30	22	28
8	35	75	20	33	4	5	14	16	x	x	x	x	x	x	x	x
9	x	x	x	x	x	x	x	x	18	28	7	12	46	82	35	56
10	x	x	x	x	x	x	x	x	13	15	7	8	62	88	18	32
11	x	x	x	x	x	x	x	x	13	14	8	12	37	53	19	29
12	17	36	23	30	6	8	19	22	17	22	9	16	35	53	16	41
13	12	27	12	18	3	4	12	14	x	x	x	x	x	x	x	x
14	8	15	14	16	7	10	18	23	x	x	x	x	x	x	x	x
15	34	55	15	19	34	46	23	30	x	x	x	x	x	x	x	x
16	22	26	x	x	43	73	x	x	22	40	22	30	10	30	28	40
17	3	11	28	33	5	22	26	34	x	x	x	x	x	x	x	x
18	5	6	15	17	11	30	16	21	x	x	x	x	x	x	x	x
19	6	9	18	21	10	21	16	20	10	16	15	16	6	8	23	31
20	5	6	14	18	6	9	13	17	x	x	x	x	x	x	x	x
21	6	8	21	26	5	14	13	16	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
23	32	44	24	38	18	21	11	14	0	0	16	22	0	0	13	17
24	38	73	19	23	14	18	10	19	x	x	x	x	x	x	x	x
25	35	61	26	35	16	28	17	23	x	x	x	x	x	x	x	x
26	43	58	37	50	22	24	36	61	19	23	18	31	25	28	19	28
27	x	x	x	x	x	x	x	x	3	4	16	20	7	12	13	16
28	x	x	x	x	x	x	x	x	27	32	12	15	27	38	14	25
29	x	x	x	x	x	x	x	x	2	3	22	30	21	40	20	25
30	4	5	23	26	1	3	22	30	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	8	10	x	x	33	71	x	x

x = no observations * = yellow line emission a = index computed from low weight data

COMMERCE - STANDARDS - BOULDER

PROVISIONAL CORONAL LINE EMISSION INDICES

FEBRUARY 1965

CMP Feb 1965	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2	8	16	12	15	7	8	12	16	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	29	45	11	16	5	8	16	28	x	x	x	x	x	x	x	x
5	27	59	20	27	6	7	24	33	4	4	6	11	20	36	11	20
6	x	x	x	x	x	x	x	x	1	3	22	32	18	28	22	32
7	22	33	x	x	4	5	x	x	3	5	10	14	9	13	7	9
8	x	x	x	x	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	x	x	x	x
10	x	x	x	x	x	x	x	x	1	4	10	16	9	11	15	17
11	16	36	16	25	1	3	9	17	3	5	13	16	10	18	9	16
12	x	x	14	24	x	x	12	16	0	0	8	9	19	59	10	16
13	x	x	x	x	x	x	x	x	0	0	12	15	15	31	14	21
14	x	x	x	x	x	x	x	x	0	0	19	21	11	28	15	20
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
19	4	7	3	5	3	4	2	3	x	x	x	x	x	x	3	10
20	7	11	14	25	0	0	12	20	x	x	x	x	x	x	x	x
21	5	7	9	12	4	5	6	7	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	7	10	15	20	8	12	8	8
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
24	8	14	15	23	5	7	13	15	x	x	x	x	x	x	x	x
25	17	33	12	14	2	3	15	17	0	0	x	x	8	20	x	x
26	26	62	14	19	0	0	12	16	5	8	12	15	8	16	16	20
27	3	8	12	14	0	0	14	21	4	18	12	13	14	18	7	9
28	2	8	16	20	6	22	16	21	x	x	x	x	x	x	x	x

x = no observations * = yellow line emission a = index computed from low weight data

COMMERCE - STANDARDS - BOULDER

PROVISIONAL CORONAL LINE EMISSION INDICES

MARCH 1965

CMP Mar 1965	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	x	x	x	x	x	x	x	x	x	x	15	24	x	x	11	19
2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6	x	x	x	x	x	x	x	x	2	4	6	7	5	7	4	5
7	x	x	x	x	x	x	x	x	2	3	2	3	9	17	3	4
8	11	20	10	17	8	9	10	18	x	x	11	14	x	x	1	8
9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	x	x	x	x	x	x	x	x	2	3	1	2	4	6	5	6
11	8	11	11	17	9	14	9	12	x	x	x	x	x	x	x	x
12	9	11	11	14	9	19	9	12	x	x	x	x	x	x	x	x
13	7	17	x	x	0	0	x	x	x	x	x	x	x	x	x	x
14	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
15	x	x	11	13	x	x	16	38	x	x	x	x	x	x	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	2	4	6	9	3	4	7	8
20	4	6	5	6	2	4	5	6	3	6	x	x	3	3	x	x
21	2	3	9	11	2	3	8	12	x	x	x	x	x	x	x	x
22	x	x	12	19	x	x	7	8	3	5	16	20	7	9	14	24
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	6	9
24	3	4	3	5	1	2	2	3	4	5	6	8	7	9	10	13
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
27	x	x	x	x	x	x	x	x	3	3	8	10	4	4	9	15
28	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	3	4	x	x	13	20	9	23
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

x = no observations * = yellow line emission a = index computed from low weight data

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE MAR 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
LOCK	01	1800	1823	1807	N02	W32	7713		1-	C	1807	.20	.20		10	
LOCK	01	1821	1834	1826	N18	E01	7707		1-	C	1826	.20	.20		10	
CAPS	02	1253	1309		N31	E38	7712		1-	3	1258	.60	1.00		135	GH
OTTA	02	1549	1612	1556	N21	W00	7707		1-	C	1556	.91	.92			
OTTA	02	1553	1622	1559	S06	E13	7704		1-	C	1559	.31	.31			E
SACP	04	1539	1600	1550	N25	W13	7707		1-	C		.41	.44		17	
HALE	04	1920	1950	1933	N28	E14	7712		1-	3	1933	.20	.20			
SACP	05	0023	0040	0026	N12	E76			1-	C		.34	.84		17	
HALE	05	0024	0049	0032	N12	E80			1-	4	0032	.20				
LOCK	05	0024	0040 D	0031	N29	E11	7712		1-	C	0031	.30	.30		20	
SACP	05	0025	0044	0028	N30	E11	7712		1-	C		.59	.66		18	
HALE	05	0026	0057	0032	N30	E12	7712		1-	2	0032	.80	.90			H
IKOM	05	0028 E	0040		N28	E10	7712	12 D	1	V	0030	1.80	2.20	1.14	110	D
HALE	05	0111	0145	0114	N30	E12	7712		1-	2	0114	.80	.90			FK
HALE	05	0111	0145	0121	N30	E11	7712		1-	2	0121	1.00	1.10			
IKOM	05	0120 E	0128 D		N28	E10	7712	8 D	1	V	0120	2.80	3.50	1.30	100	E
MANI	05	0128	0138	0130	N31	E13	7712		1-	2	0130	.15	.15			
HALE	05	0212	0228	0218	N13	E02			1-	4	0218	.20	.20			
HALE	05	0229	0310	0241	N13	E02			1-	3	0241	.40	.40			H
CAPS	06	0740 E	0756 D		N21	W50	7707		1-	3	0742	.60	1.00		160	DGJ
BUCA	06	0745 E	0811		N24	W50	7707		1-	3			1.00			GS
CATA	06	0745	0915 D	0800	N22	W50	7707		1-	S	0800	.58	.98		159	
BUCA	06	0829 E	0910 D		N24	W50	7707		1-	3			1.50			GS
SACP	06	1814	1920	1849	N32	W11	7712		1-	C		1.51	1.70		18	
HALE	06	1817 E	1848	1839	N30	W13	7712		1-	2	1839	.30	.30			
HALE	06	1817 E	1933	1839	N32	W12	7712		1-	2	1839	.40	.40			
HALE	06	1858	1950	1907	N35	W10	7712		1-	3	1907	.30	.30			
HALE	06	1830	1900	1841	N18	W57	7707		1-	3	1841	.40	.60			
HALE	06	1859	1922	1910	N21	W56	7707		1-	3	1910	.50	.80			
HALE	06	1919	1948	1924	N17	W58	7707		1-	3	1924	.20	.30			
HALE	06	1945	1953	1946	N18	W57	7707		1-	4	1946	.50	.80			
HALE	06	1955	2042	2003	N18	W57	7707		1-	3	2003	1.20	1.90			H
HALE	06	2100	2142	2115	N18	W57	7707		1-	3	2115	1.00	1.60			
HALE	06	2200	2216	2205	N17	W58	7707		1-	3	2205	.40	.60			
HALE	07	0141	0153	0144	N30	W15	7712		1-	3	0144	.80	.90			
SACP	07	1602	1620 U	1611	N21	W67	7707		1-	C		.96	1.88		18	
HUAN	07	1604	1627		N22	W68	7707		1-	P	1611	.20				E
IKOM	07	2305	2321 D		N15	W37		16 D	1	C						D
HUAN	08	1300	1304	1302	N15	W45			1-	C	1302	.10	.15			DG
LOCK	08	1740	1810	1800 U	N19	W90	7707		1-	C	1800	.30	1.50		20	
HALE	08	2240	2254 D	2245	N13	W50			1-	3	2245	.20	.30			
LOCK	08	2351	2359	2355	N26	W45	7712		1-	C	2355	.20	.40		20	
HALE	08	2353	2358	2354	N27	W46	7712		1-	3	2354	.20	.30			
IKOM	08	2354	2357 D		N30	W41	7712		1-	V	2354	.40	.60		70	DG
IKOM	09	0055 E	0100 D		N20	W85	7707		1-	V						

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE MAR 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
IKOM	09	0516 E	0528 D		N10	W90	7708	12 D	1	V						A
IKOM	09	2306	2340 D		N20	W26	7716		1-	V	2312	.80	1.00		80	
ARCE	10	0850 E	0910 D		N19	W33	7716		1-	3	0910	.39	.48			
CATA	10	0905 E	0925 D	0906	N19	W33	7716		1-	S	0906	.72	.94		129	
MCMA	11	1343	1354	1346	N29	W84	7712		1-	1 C	1346	.20				DH
MANI	12	0825	0838	0828	N31	E61	7718		1-	2	0828	.17	.29			
ARCE	12	0830 E	0919 D		N32	E53	7718	49 D	1	3	0919	1.07	2.02			
ARCE	12	1000 E	▭		N32	E53	7718		1-	3	1000	.78	1.47			
OTTA	12	1213	1226	1217	N31	E52	7718		1-	C	1217	.46	.71			EF
OTTA	12	1242	1317		N29	E43	7718		1-	C	1307	.11	.15			H
MCMA	12	1306 E	1402	1310	N32	E51	7718		1-	2 P	1310	.80	1.70			EHK
KANZ	12	1309 E	1329 D		N32	E54	7718	20 D	1							
KANZ	12	1331 E	1337 D		N32	E54	7718		1-							
KANZ	12	1345 E	1354 D		N32	E54	7718		1-							
SACP	12	1411 E	1422	1416	N28	E47	7718		1-	C		.42	.60		18	
OTTA	12	1414	1421	1416	N29	E48	7718		1-	C	1416	.72	1.02			
MCMA	12	1415	1421	1416	N29	E48	7718		1-	1 C	1416	.30	.60			D
OTTA	12	1450	1512	1458	N31	E50	7718		1-	C	1458	.28	.43			
MCMA	12	1453	1507	1456	N31	E52	7718		1-	1 C	1456	.20	.40			D
HUAN	12	1505 E	1511		N30	E52	7718		1-	P	1508	.16	.32			D
SACP	12	1526	1544	1536 U	N28	E46	7718		1-	C		.46	.65		17	
OTTA	12	1527	1550	1536	N29	E46	7718		1-	C	1536	.28	.40			H
MCMA	12	1528	1539	1535	N29	E47	7718		1-	1 C	1535	.20	.40			DH
HUAN	12	1532 E	1537 D		N28	E50	7718		1-	P	1533	.16	.30			DC
MCMA	12	1618	1626	1624	N29	E46	7718		1-	1 C	1624	.20	.40			DH
HUAN	12	1621	1634	1625	N28	E49	7718		1-	C	1625	.25	.46			D
SACP	12	1621	1636 U	1624 U	N28	E46	7718		1-	C		.37	.52		17	
MCMA	12	1651	1704	1652	N31	E49	7718		1-	1 C	1652	.20	.40			DH
OTTA	12	1651	1707		N31	E47	7718		1-	C	1652					
HALE	12	1939	1956	1947	N27	E44	7718		1-	3	1947	.20	.30			H
HALE	12	2010	2020	2011	N30	E45	7718		1-	3	2011	.50	.75			
HALE	12	2012	2035	2016	N28	E43	7718		1-	3	2016	.40	.60			H
HALE	12	2046	2054 D	2050	N27	E43	7718		1-	3	2050	.20	.30			H
HALE	12	2102	2112 D	2107	N27	E43	7718		1-	2	2107	.20	.30			H
HALE	12	2213 E	2224	2215	N28	E42	7718		1-	4	2215	.40	.60			
SACP	13	2050	2106	2054	N31	E34	7718		1-	C		.92	1.17		20	
LOCK	14	1845	1905	1855	N50	W75			1-	C	1855	.10	.50		10	
OTTA	15	1420	1445	1422	N25	W14	7720		1-	C	1422	.11	.12			H
MCMA	16	1633	1705		N31	E03	7718		1-	2 P	1636	.30	.40			DH
MCMA	16	1826 E	1847 D		N32	W02	7718		1-	1 P	1830	.20	.20			SLH
WEND	18	0825 E	0928 D		N30	W23	7718	63 D	1			4.00				
CATA	18	0830	1200 D	0938	N27	W27	7718	210 D	1	S	0938	2.24	3.11		141	
ARCE	18	0858 E	1000 D		N28	W26	7718		1-	2	0925	1.05	1.41			

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE MAR 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
ONDR	18	0941 E	0959		N28	W24	7718		1-	3	0943			1.70		CEHJKR
CATA	18	1140 E	1200 D	1143	S11	E27	7727		1-	S	1143	.84	.94		112	
WEND	18	1206 E	1254 D		N29	W26	7718	48 D	1			4.00				
SACP	18	1324 E	1350	1335 U	N28	W28	7718		1-	C		1.61	1.88		18	
MCMA	18	1414 E	1517 D		N28	W28	7718		1-	1 P	1429	.70	1.00			E
HUAN	18	1811 E	1816		N29	W31	7718		1-	P	1813	.18	.26			D
SACP	18	1915	1956	1932	N27	W32	7718		1-	C		.92	1.10		17	
IKOM	19	0006	0012		N28	W36	7718	6	1	C					100	E
IKOM	19	0110 E	0128 D		N28	W32	7718		1-	V	0124	.80	1.10	1.18	80	D
CATA	19	0940	1000 D	0941	N29	W36	7718	20 D	1	S	0941	1.40	2.25		132	
HALE	20	0210	0233	0219	S12	E08	7727		1-	3	0219	.50	.50			F
CAPS	20	0755 E	0800 D		N20	E75	7732		1-	1	0755	.50	1.70		190	DG
ARCE	20	0820 E	0850 D		N25	E80	7732		1-	2	0823	.29	.93			
ARCE	20	0910 E	0923 D		N25	E80	7732		1-	2	0910	.26	.83			
HALE	20	1818	1820	1819	N31	W55	7718		1-	4	1819	.10	.20			
SACP	20	1818	1820	1819	N32	W54	7718		1-	C		.29	.48		17	
LOCK	20	1856	1920	1903	S11	W01	7727		1-	C	1903	.30	.30		10	
HALE	20	1858	1917	1907	S13	W02	7727		1-	3	1907	.40	.40			H
SACP	20	1860	1924 U	1909	S12	W02	7727		1-	C		.72	.71		18	
HALE	20	2053	2113	2100	N27	W60	7718		1-	4	2100	.30	.50			
LOCK	21	2204	2224	2211	N28	W75	7718		1-	C	2211	.30	.90		10	
CATA	22	1013 E	1200 D	1026	N28	W90	7718	107 D	1	S	1026	.64	3.64		112	
LOCK	23	2310 E	2320 D	2314	N12	W90			1-	C	2314	.30	1.50		20	
SACP	24	1620	1650 D	1625	N11	E73	7735		1-	C		.38	.84		17	
HUAN	24	1623	1646	1626	N08	E74	7735		1-	C	1626	.10				D
OTTA	24	1646 E	1653 D		N17	E41	7737		1-	C	1650	.16	.19			
KAND	25	1229	1238 D	1230	N11	E67	7735		1-	C						
OTTA	25	1246	1347	1327	N10	E62	7735	61	1	C	1327	2.07	3.23			E
SACP	25	1318	1341	1324	N09	E63	7735		1-	C		.86	1.42		17	
HUAN	25	1323	1343	1328	N08	E62	7735		1-	C	1328	.25	.55			D
OTTA	25	1350	1403	1354	N10	E62	7735		1-	C	1354	.69	1.08			
HUAN	25	1352	1401	1356	N08	E62	7735		1-	C	1356	.10	.22			D
SACP	25	1606	1631	1612	N10	E58	7735		1-	C		.34	.51		18	
OTTA	25	1608	1627	1613	N10	E58	7735		1-	C	1613	.17	.25			HJ
HUAN	25	1612 E	1613 D		N08	E59	7735		1-	P	1613	.18	.36			D
HUAN	25	1621 E	1634		N08	E59	7735		1-	P	1625	.30	.60			H
HUAN	25	1638	1649 D	1642	N09	E59	7735		1-	P	1642	.42	.84			
HALE	25	1811 E	1833	1813	N09	E56	7735		1-	3	1813	.40	.60			
LOCK	25	2223	2250	2235	N09	W53			1-	C	2235	.40	.60		10	J
MANI	26	0003 E	0020		N11	E58	7735		1-	1	0005	.67	.97			
SACP	26	0015	0048	0015 E	N09	E55	7735		1-	P		1.44	2.02		28	
MANI	26	0508 E	0549	0513	N11	E55	7735	41 D	1	2	0513	1.60	2.24			
ARCE	26	0810 E	0842 D		N13	E50	7735	32 D	1	3	0817	1.93	2.97			

SOLAR FLARES

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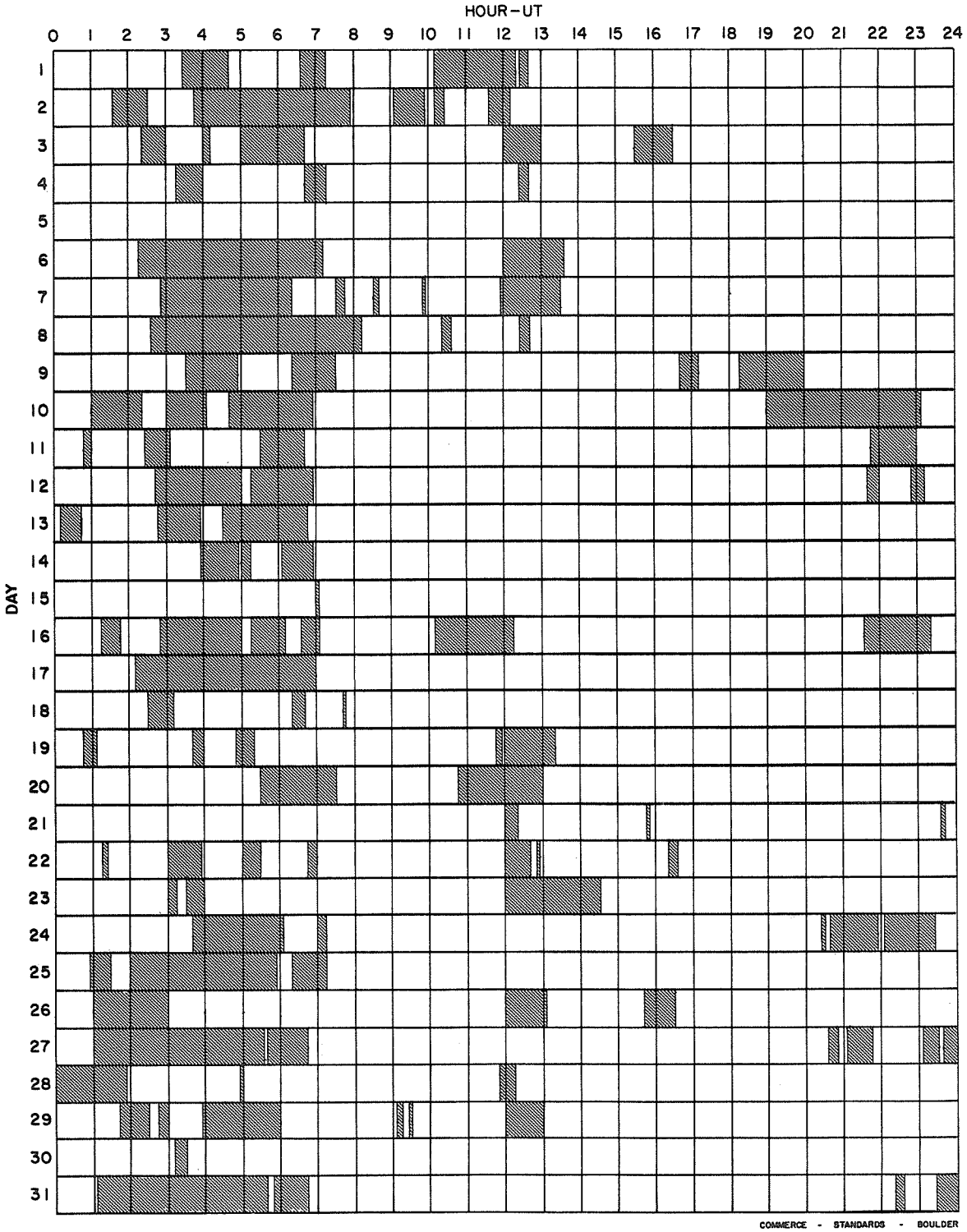
OBSERVATORY	DATE MAR 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CAPS	26	0816	0829		N08	E47	7735	13	1	3	0819	1.50	2.40		200	EHJ
MANI	26	0816	0831	0819	N11	E54	7735		1-	2	0819	.33	.46			
MANI	26	0850	0913	0858	N11	E53	7735		1-	2	0858	.33	.44			
ARCE	26	0855 E	1000 D		N13	E50	7735		1-	2	0951	1.01	1.55			
SALT	26	0945 E	1010 D		N10	E48	7735		1-	3		1.00	1.50			
CAPS	26	0949 E	1005 D		N08	E46	7735		1-	3	1000	.60	1.00		150	CJ
CATA	26	1000 E	1130 D	1007	N10	E50	7735		1-	S	1007	1.02	1.64		151	
CAPS	26	1314	1336		N08	E45	7735	22	1	3	1324	1.80	2.60		216	EFJ
SACP	26	1314 E	1336	1320	N09	E45	7735		1-	C		1.67	2.03		28	
SACP	26	1429	1455	1435	N10	E46	7735		1-	C		.68	.84		21	
CAPS	26	1430	1444		N08	E46	7735		1-	3	1435	.70	1.10		190	EJ
HUAN	26	1537	1547	1541	N09	E45	7735		1-	C	1541	.16	.25			D
SACP	26	2036	2058	2045	N11	E42	7735		1-	C		.76	.90		19	
OTTA	27	1220	1421	1229	N12	E34	7735	121	1	C	1229	1.10	2.13			EF
CAPS	27	1227 E	1310		N09	E38	7735	43 D	1	3	1231	1.90	2.50		190	CE
MCMA	27	1302 E	1345 D		N12	E38	7735		1-	2 C	1308	.40	.50			E
OTTA	28	1526	1552		N24	E90			1-	C	1539	.29				
MCMA	28	1844	1853	1845	N12	E20	7735		1-	2 C	1845	.20	.20			D
LOCK	28	2232	2245	2236	N18	W32			1-	C	2236	.40	.40		10	
SACP	29	0040	0058	0051	N01	W66	7736		1-	C		.60	1.02		18	
OTTA	30	1541	1549		N09	E67			1-	C	1545	.11	.21			
OTTA	30	1703	1710		N15	E23			1-	C	1707	.15	.15			H
SACP	30	2247	2304 D	2248	N12	W17	7735		1-	C		.34	.34		17	

INTERVALS OF NO FLARE PATROL OBSERVATIONS
PROVISIONAL

MARCH 1965



Observatories included:

Arcetri	Haleakala	Kandilli	Manila	Sacramento Peak	Zürich
Arosa	Herstmonceux	Kanzelhöhe	McMath-Hulbert	Salonique	
Bucharest	Ikomasan	Locarno	Ondrejov	Tortosa	
Catania	Istanboul	Lockheed	Ottawa	Wendelstein	

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE NOV 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
	01	0215	0235	NO FLARE	PATROL											
	01	0330	0500	NO FLARE	PATROL											
CLMX	01	1702	1708	1704	N28	W21	7538		1-	C	1704	.60	1.00			
MCMA	01	1703	1708	1704	N29	W19	7538		1-	1 C	1704	.60	.70			SL
SYDN	03	0137 E	0148	0139	N29	W38	7538		1-	P	0139	1.20	1.70			GH
	03	1230	1235	NO FLARE	PATROL											
	03	1245	1250	NO FLARE	PATROL											
	03	1300	1310	NO FLARE	PATROL											
SACP	03	1629	1650	1640	S12	W53	7548		1-	C		.41	.55		16	
	04	0400	0430	NO FLARE	PATROL											
	05	0310	0330	NO FLARE	PATROL											
	05	0355	0450	NO FLARE	PATROL											
ARCE	05	0830 E	0912 D		N35	E70	7562		1-	2	0838	.38	1.01			
	05	1100	1115	NO FLARE	PATROL											
	05	1320	1325	NO FLARE	PATROL											
	05	1345	1355	NO FLARE	PATROL											
	06	0020	0105	NO FLARE	PATROL											
	06	0155	0205	NO FLARE	PATROL											
	06	0325	0410	NO FLARE	PATROL											
	06	0505	0555	NO FLARE	PATROL											
	06	0640	0700	NO FLARE	PATROL											
UCCL	06	1122	1126		N33	E59	7562		1-	3						E
	07	0225	0300	NO FLARE	PATROL											
	07	0900	0920	NO FLARE	PATROL											
	08	0910	0915	NO FLARE	PATROL											
	08	0930	0935	NO FLARE	PATROL											
	08	1355	1415	NO FLARE	PATROL											
	08	1540	1545	NO FLARE	PATROL											
SYDN	08	2134	2146	2139	S30	W09			1-	C	2139	.60	.72			CG
	09	0650	0700	NO FLARE	PATROL											
UCCL	09	0937	0945		N33	E17	7562		1-	2						E
UCCL	09	1027	1032		N33	E17	7562		1-	2						E
UCCL	09	1246	1251 D		N33	E17	7562		1-	2						E
	09	1435	1550	NO FLARE	PATROL											
	09	1715	1840	NO FLARE	PATROL											
	09	1850	1920	NO FLARE	PATROL											
	09	1950	2000	NO FLARE	PATROL											
	09	2125	2150	NO FLARE	PATROL											
	10	0340	0345	NO FLARE	PATROL											
	10	0355	0400	NO FLARE	PATROL											
UCCL	10	1014	1027		N33	E03	7562		1-	2						DK
	10	1415	1445	NO FLARE	PATROL											
	10	1620	1630	NO FLARE	PATROL											

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE NOV 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. °b	REMARKS
	10	1800	1820	NO FLARE	PATROL											
	10	1825	1855	NO FLARE	PATROL											
	10	1905	1910	NO FLARE	PATROL											
	10	2005	2110	NO FLARE	PATROL											
	10	2130	2200	NO FLARE	PATROL											
	10	2215	2235	NO FLARE	PATROL											
	11	1200	1335	NO FLARE	PATROL											
MCMA	11	1608	1622	1615	N30	E11	7568		1-	2 C	1615	.30	.30			EH
	11	1950	2135	NO FLARE	PATROL											
	11	2355	2400	NO FLARE	PATROL											
	12	0000	0035	NO FLARE	PATROL											
	12	0445	0500	NO FLARE	PATROL											
CAPS	12	0940	1008 D		N29	E02	7568		1-	2	0958	1.50	1.60			DFGHJ
CATA	12	0945 E	1150 D	0955	N30	E03	7568	125 D	1	S						
ARCE	12	1420			N29	W01	7568		1-	3	1420	.77	.88			
	13	0050	0055	NO FLARE	PATROL											
	13	0135	0225	NO FLARE	PATROL											
	13	0245	0350	NO FLARE	PATROL											
	13	0400	0410	NO FLARE	PATROL											
LOCK	13	2100	2122	2104	N32	W18	7568		1-	C	2104	.30	.30		10	J
LOCK	13	2204	2214	2210	N32	W18	7568		1-	C	2210	.20	.20		10	J
SYDN	14	0039	0058	0046	N34	W21	7568		1-	C	0046	.40	.48			DG
MITK	14	0042 E	0055	0047	N32	W20	7568		1-	C						D
CATA	14	0820 E	□		N30	W25	7568		1-	S						
ARCE	14	0920	□		N30	W27	7568		1-	2	0920	.56	.70			
SYDN	15	0404	0417	0410	N32	W39	7568		1-	C	0410	.30	.42			GH
KANZ	15	0853 E	0857 D	0853	N30	W38	7568	4 D	1-		0853			2.20		
UCCL	15	1104	1107 D		N32	W44	7568		1-	3						D
LOCK	15	1638	1647	1641	N32	W38	7568		1-	C	1641	.20	.20		10	
SYDN	16	0250	0258	0254	N31	W53	7568		1-	C	0254	.40	.72			DGH
MITK	16	0251	0255	0253	N32	W52	7568		1-	C						H
	16	1430	1445	NO FLARE	PATROL											
	16	1500	1530	NO FLARE	PATROL											
	16	1535	1540	NO FLARE	PATROL											
	16	1600	2055	NO FLARE	PATROL											
SACP	16	1729 E	1733 D	1730	N20	W12	7581		1-	P		.27	.27		18	
SACP	16	2100 E	2101 U	2100 E	N19	W13	7581		1-	P		1.92	1.81		18	
SACP	16	2122	2127 D	2125	N19	W16	7581		1-	C		.27	.27		19	
SACP	16	2255	2308 D	2308	N20	W17	7581		1-	P		.35	.35		19	
IKOM	16	2305	2315 D		N18	W15	7581		1-		2310	3.60	3.90		100	E
IKOM	16	2338 E	2351 D		N18	W16	7581		1-		2338	1.80	1.90	.78	100	D
MITK	16	2349 E	0034	0006	N18	W14	7581	45 D	1	V	0006	2.46	2.68	2.49	134	LE
SYDN	16	2353	0035	0014	N22	W17	7581		1-	C	0014	.60	.66			L
IKOM	17	0015 E	0040 D		N18	W15	7581	25 D	1		0018	3.20	3.50		100	E

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE NOV 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
VORO	17	0105 E	0224 D		N18	W18	7581		1-	C	0113	1.35	1.43		30	EH
IKOM	17	0110 E	0135 D		N18	W15	7581	25 D	1						100	E
IKOM	17	0343	0350 D		N18	W16	7581		1-						80	D
MITK	17	0345 E	0354	0345	N20	W18	7581	9 D	1	V	0345	.98	1.08	1.64	96	E
SYDN	17	0527	0604	0542	N17	E64	7582	37	2	C	0542	4.00	9.00			GJ
CATA	17	0851 E	▭		N18	W24	7581		1-	S						
SACP	17	1724	1746	1734	S10	W58	7579		1-	C		.21	.31		17	
SACP	17	1750	1800	1755	N18	W26	7581		1-	C		.41	.43		17	
SACP	17	2208	2229	2215	N20	W31	7581		1-	C		.41	.43		16	
SACP	17	2224	2235	2227	N19	W28	7581		1-	C		.55	.58		19	
SYDN	17	2224	2235	2226	N20	W28	7581		1-	C	2226	1.40	1.61			H
TACH	18	0727	0753	0739	N17	E49	7582	26	1	C	0739	2.10	3.20		55	E
SACP	18	1507	1516	1511	N19	W36	7581		1-	C		.25	.27		17	
MITK	20	0223	0317	0250	N37	W45	7587		1-	C						DG
MITK	21	0334	0347	0339	N21	W75	7581	13	1	C						
LOCK	21	2128	2134	2130	N17	W85	7581		1-	C	2130	.20	.60		10	H
LOCK	21	2339	2357	2344	N26	E62	7592		1-	C	2344	.20	.30		10	J
	22	0700	0745	NO FLARE	PATROL											
LOCK	22	1830	1930	1845	N37	W80	7587		1-	C	1845	.40	1.00		10	J
LOCK	22	2235	2250	2239	N37	W80	7587		1-	C	2239	.20	.50		10	J
LOCK	22	2302	2327	2310	N37	W80	7587		1-	C	2310	.20	.60		10	
LOCK	22	2333	0030	2400	N37	W85	7587	57	1	C	2400	1.60	4.80		20	L
MITK	23	0003	0028	0021	N37	W84	7587	25	1	C				4.95		G
SYDN	23	0012	0019	0015	N38	W90	7587			C						G
SYDN	23	0408	0427	0416	N36	W90	7587			C						G
MITK	23	0411	0426	0410	N37	W86	7587	15	1	C				3.65		G
	24	0620	0640	NO FLARE	PATROL											
LOCK	24	1728	1745	1733	N28	E28	7592		1-	C	1733	.30	.30		10	L
LOCK	24	2341	0030	2350	N29	E26	7592	49	1	C	2350	2.00	2.00		20	L
SYDN	24	2343	0004	2351	N27	E25	7592	21	2	C	2351	7.00	8.40			GHJ
SACP	24	2343	2355 D	2347	N28	E26	7592		1-	C		1.40	1.50		19	
LOCK	25	1655	1709	1658	N29	E15	7592		1-	C	1658	.20	.20		10	
LOCK	25	2150	2201	2155	S11	W28	7585		1-	C	2155	.30	.30		10	
LOCK	25	2217	2232	2221	N25	E09	7592		1-	C	2221	.30	.30		10	
	26	1210	1220	NO FLARE	PATROL											
	26	1235	1255	NO FLARE	PATROL											
	26	1305	1325	NO FLARE	PATROL											
	26	1335	1350	NO FLARE	PATROL											
SACP	26	1616	1704	1623	N27	E03	7592		1-	C		.82	.84		19	
	26	1935	1950	NO FLARE	PATROL											
HUAN	27	1313 E	1328		N28	W10	7592		1-	P	1314	.31	.35			E
SACP	27	2140	2200	2150	N26	W13	7592		1-	C		.31	.31		16	

SOLAR FLARES

NOVEMBER 1964

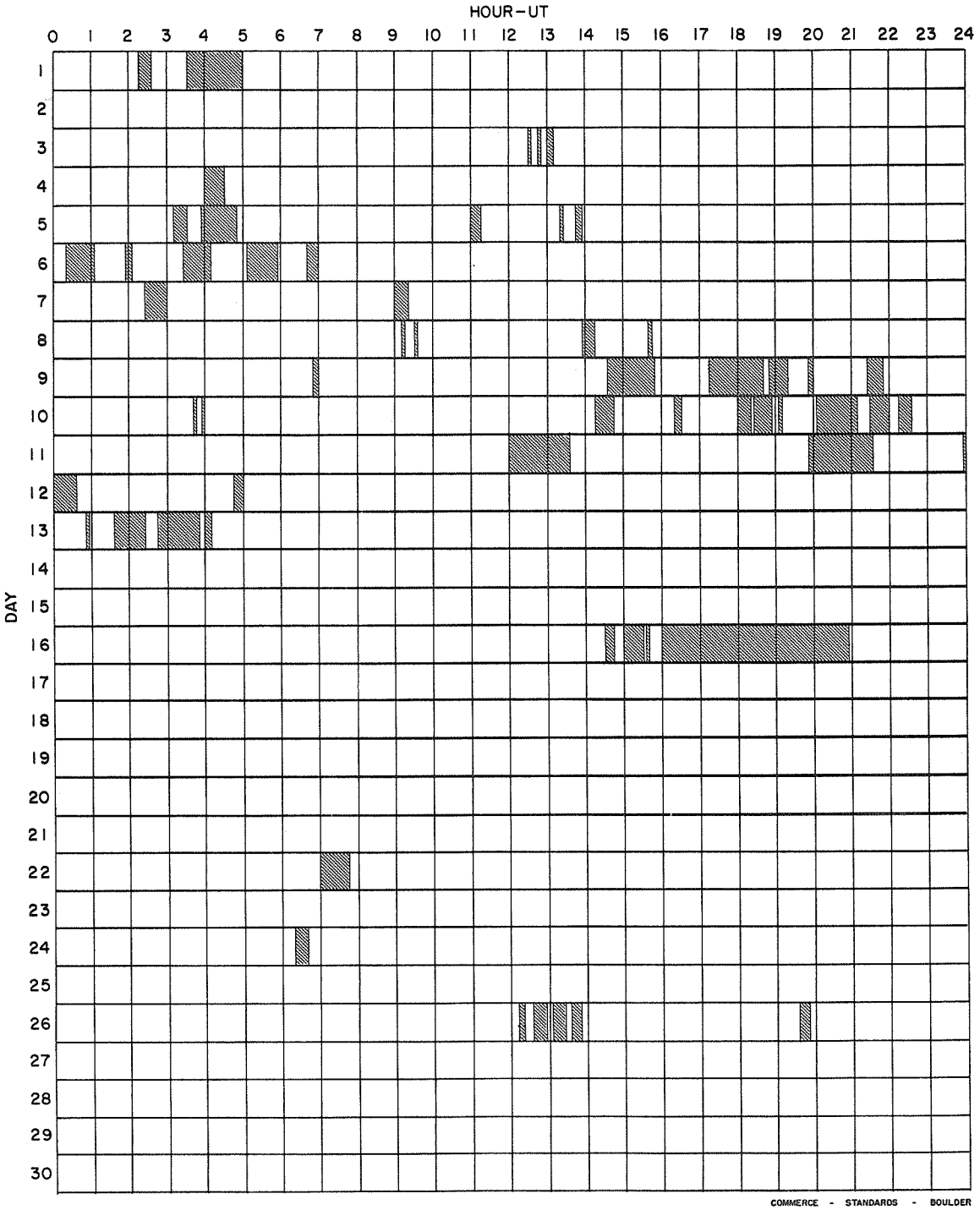
OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME			LOCATION			DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS					REMARKS
					APPROX.		McMATH PLAGE REGION									
	NOV 1964	START	END	MAX. PHASE	LAT.	MER. DIST.					TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
SACP	27	2248	2300	2250	N27	W16	7592		1-	C		.43	.45		18	
SACP	27	2303	2316 D	2305	N30	W17	7592		1-	P		.54	.56		17	
UCCL	28	1121	1125		N18	W50	7596		1-	3						DH
CAPE	28	1315	1338	1319	N28	W26	7592		1-		1319	.80	1.00			H
SACP	28	1357	1424	1403	N28	W25	7592		1-	C		.21	.23		18	
LOCK	28	1634	1655	1642	N28	W28	7592		1-	C	1642	.30	.30		10	H
LOCK	28	1820	1830	1824	N28	W28	7592		1-	C	1824	.20	.20		10	H
LOCK	28	2120	2155	2133	S11	W90	7585		1-	C	2133	.20	1.00		10	
LOCK	29	1602 E	1618	1607	N07	E70	7602		1-	C	1607	.50	1.00		10	
LOCK	29	1637	1645	1640	N30	W13	7600		1-	C	1640	.30	.30		10	L
LOCK	29	1827	1850	1830	N33	E05	7601		1-	C	1830	.30	.30		10	L
HUAN	30	1716 E	1743	1732	N18	W82	7596		1-	P	1732	.25				CG

COMMERCE - STANDARDS - BOULDER

These flares are addenda to the November 1964 flares published in CRPL-F 244 for December 1964.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

NOVEMBER 1964



Observatories included:

Abastumani	Capri-F (German)	Herstmonceux	Kiev-Ko	McMath-Hulbert	Siberie
Arcetri	Capri-S (Sweden)	Huancayo	Kodaikanal	Mitaka	Sydney
Athenes	Catania	Ikomasan	Locarno	Nizamiah	Tachkent
Bakou	Climax	Istanboul	Lockheed	Ondrejov	Tortosa
Bucharest	Crimee	Izmiran	Lvov	Sacramento Peak	Uccle
Capetown	Haute-Provence	Kanzelhöhe	Manila	Salonique	Voroshilov
					Zürich

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE DEC 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
	01	0005	0015	NO FLARE	PATROL											
	01	0205	0225	NO FLARE	PATROL											
CAPS	01	1055 E	1111 D		N23	W66	7592		1-	2	1105	.30	.70		165	DG
SACP	01	1426	1447	1440	N26	W66	7592		1-	C		.41	.74		19	
	01	1550	1605	NO FLARE	PATROL											
	01	2120	2155	NO FLARE	PATROL											
	01	2210	2215	NO FLARE	PATROL											
	01	2315	2335	NO FLARE	PATROL											
	01	2350	2400	NO FLARE	PATROL											
	02	1925	1950	NO FLARE	PATROL											
	02	2005	2010	NO FLARE	PATROL											
	02	2020	2045	NO FLARE	PATROL											
	02	2150	2155	NO FLARE	PATROL											
	03	1405	1440	NO FLARE	PATROL											
	03	1520	1635	NO FLARE	PATROL											
	03	1650	1705	NO FLARE	PATROL											
	03	1710	1900	NO FLARE	PATROL											
	03	1910	1915	NO FLARE	PATROL											
	03	1930	2115	NO FLARE	PATROL											
SYDN	04	0032	0049	0037	N36	E63	7606		1-	C	0037	.80	2.00			G
MANI	04	0753 E	0810	0757	N30	E84	7606		1-	2	0757	.30	.81			
CAPS	04	0827	0856		N38	E80	7606	29	2	3	0838	6.00			185	G
ABST	04	0829 E	0855 D	0831	N32	E85	7606	26 D	1+	C	0831	2.20	7.90			
LOCA	04	0840 E	1000 D		N28	E80	7606	80 D	2	S						H
ARCE	04	0935 E	0955 D		N33	E80	7606	20 D	2	2	0945	2.13	6.82			O
KANZ	04	0958 E	1003 D		N29	E72	7606		1-							
CAPS	04	0958	1015 D		N32	E80	7606		1-	3	1008	.80			151	G
ARCE	04	1000 E	□		N34	E80	7606		1	2	1000	.72	2.31			O
	04	1500	1505	NO FLARE	PATROL											
HUAN	04	1536	1548	1541	N29	E78	7606		1-	C	1541	.20			30	CD
SYDN	04	2312	2334	2315	N31	E74	7606	22	2	C	2315	1.40	5.60			GH
SYDN	05	0112	0124 D	0119	N32	E74	7606		1-	P	0119	.60	2.10			G
SYDN	05	0456	0502	0457	N29	E67	7606		1-	C	0457	.20	.50			GH
LOCK	05	1740	1800	1747	N30	E33	7606		1-	C	1747	.20	.20		10	
LOCK	05	2003	2024	2010	N24	W26			1-	C	2010	.20	.20		10	
LOCK	05	2054	2107	2059	N48	E12			1-	C	2059	.20	.30		10	
LOCK	05	2130	2149	2140	N32	E30	7606		1-	C	2140	.10	.10		10	
	06	0320	0325	NO FLARE	PATROL											
	06	0515	0520	NO FLARE	PATROL											
	07	0400	0410	NO FLARE	PATROL											
CATA	07	1008 E	1025 D		N32	E45	7606	17 D	1		1015					
CAPS	07	1017 E	1038		N34	E46	7606	21 D	1	3	1027	1.80	2.90		176	FG
KANZ	07	1018 E	1042 D		N33	E47	7606	24 D	1				5.00			
CAPS	07	1019 E	1022		N22	E75	7611		1-	3	1020	.30			150	G
SYDN	07	2344	0011	2357	N23	E03	7605		1-	C	2357	.80	.88			GL

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE DEC 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
LOCK	08	1828	1842	1835	N47	W28			1-	C	1835	.30	.40		10	
	09	0630	0650	NO FLARE	PATROL											
	09	0705	0725	NO FLARE	PATROL											
ARCE	09	1510 E	1514 D		S05	E90	7613	4 D	1	2	1514	.70	3.98			O
LOCK	09	1742	1830	1752	S06	E80	7613		1-	C	1752	.50	1.50		10	HJ
LOCK	09	1940	2030	2000	S06	E90	7613	50	1	C	2000	.50	2.50		10	HJ
LOCK	09	2115	2210	2135	S06	E80	7613	55	1	C	2135	.70	2.10		10	J
LOCK	09	2214	2222	2217	S07	E90	7613	8	1	C	2217	.50	2.50		10	J
LOCK	09	2252	2310	2257	S06	E80	7613		1-	C	2257	.30	.30		10	
	10	0525	0540	NO FLARE	PATROL											
ARCE	10	0945 E	1000 D		S06	E79	7613		1-	2	1000	.33	1.01			O
UCCL	10	1033	1034		S27	W80			1-	3						D
CAPS	10	1120	1138		S03	E78	7613	18	1	3	1127	1.80			166	
CAPS	10	1152 E	1203		S03	E78	7613		1-	3	1158	1.50			150	
CAPS	10	1227 E	1234		S03	E75	7613		1-	3	1228	.30			142	
CAPS	10	1353	1400		N30	E05	7606		1-	3	1357	.20	.20		148	DGH
LOCK	10	2030	2245	2125	N32	W29	7605		1-	C	2125	1.00	1.10		10	L
SACP	10	2332	2355 D	2344	N38	W60			1-	C		.67	1.13		16	
CATA	11	0925 E	0955 D		S11	E69	7613		1-		0932					
CATA	11	1110 E	1147 D		S08	E69	7613		1-		1128					
	11	1755	1810	NO FLARE	PATROL											
CAPE	12	0720	0733	0726	S09	E58	7613		1-	C	0726	1.10	2.10			
CATA	12	0850 E	1210 D		S08	E65	7613	200 D	1		0855					
SACP	12	1425	1430	1427	S05	E43	7613		1-	C		.74	.89		17	
SYDN	13	0448	0504	0453	S05	E40	7613		1-	C	0453	.80	1.04			J
CAPS	13	0915 E	0926		N27	W32	7606		1-	3	0919	.20	.30		149	DG
CAPS	13	1224	1247		N22	W12	7614		1-	3	1238	1.00	1.10		154	
SACP	13	1850	1907	1856	S08	E27	7613		1-	C		.68	.74		18	
LOCK	14	1835	1859	1848	N33	W52	7606		1-	C	1848	.30	.40		10	L
	15	0020	0125	NO FLARE	PATROL											
	15	0700	0755	NO FLARE	PATROL											
LOCK	15	2125	2230	2150	S51	E48			1-	C	2150	.20	.40		10	
	16	1915	2020	NO FLARE	PATROL											
	16	2025	2055	NO FLARE	PATROL											
	16	2100	2115	NO FLARE	PATROL											
	16	2225	2400	NO FLARE	PATROL											
	17	0000	0225	NO FLARE	PATROL											
CAPS	17	1310 E	1421 D		S08	E56	7619		1-	1	1330	2.00	3.50		157	
	17	1430	1450	NO FLARE	PATROL											
	17	1500	1505	NO FLARE	PATROL											
MCMA	17	1732	1740	1735	S09	E54	7619		1-	1 C	1735	.40	.70			D
LOCK	17	2315	2340 D	2326	N23	E12	7618		1-	C	2326	.60	.60		20	

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE DEC 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
	18	0700	0705	NO FLARE	PATROL											
	18	1900	2320	NO FLARE	PATROL											
MITK	19	0146	0214	0149	S10	W35	7613		1-	C						G
MITK	19	0241	0248	0243	N06	W38	7624		1-	C						DG
MITK	19	0527	0617 D	0534	N06	W38	7624		1-	C						G
	19	0915	0935	NO FLARE	PATROL											
	19	1420	1445	NO FLARE	PATROL											
	19	1830	1845	NO FLARE	PATROL											
	19	1930	2050	NO FLARE	PATROL											
	19	2100	2110	NO FLARE	PATROL											
	19	2220	2315	NO FLARE	PATROL											
	20	0320	0335	NO FLARE	PATROL											
KODA	20	0338 E	0345	0338	S10	E18	7619		1-	V	0338			1.60	88	
	20	0545	0615	NO FLARE	PATROL											
	20	1750	1850	NO FLARE	PATROL											
MITK	21	0005	0045	0023	S12	E06	7619	40	1	C						
CATA	21	0945 E	1140 D		S09	E03	7619	115 D	1		0950					
OTTA	21	1724	1739	1728	N35	E36	7622		1-	C	1728	.22	.29			F
	22	0245	0325	NO FLARE	PATROL											
MITK	22	0500	0550	0513	S12	W07	7619	50	1	C						
MITK	22	0547	0610 D	0548	N06	W90	7624		1-	C						
	22	1525	1530	NO FLARE	PATROL											
	22	1540	1550	NO FLARE	PATROL											
	22	1705	1710	NO FLARE	PATROL											
	22	1720	1730	NO FLARE	PATROL											
	22	2010	2020	NO FLARE	PATROL											
	22	2030	2045	NO FLARE	PATROL											
	22	2050	2310	NO FLARE	PATROL											
	23	0205	0330	NO FLARE	PATROL											
	23	0500	0615	NO FLARE	PATROL											
	24	0400	0410	NO FLARE	PATROL											
	24	0620	0630	NO FLARE	PATROL											
UCCL	24	1200	1203		S12	W43	7619		1-	4						D
HUAN	24	1248	1303	1251	N37	E05	7622		1-	C	1251	.20	.25			CD
CAPE	24	1250	1300	1251	N38	E05	7622		1-	C	1251	.80	1.00			D
HUAN	24	1406	1436		N37	E05	7622		1-	C	1415	.10	.10			CD
HUAN	24	1645	1707 D	1652	N37	E05	7622		1-	P	1652	.30	.40			CD
HUAN	24	1719 E	1721 D		N37	E05	7622		1-	P	1720	.10	.10			CD
	24	2035	2220	NO FLARE	PATROL											
	25	0405	0520	NO FLARE	PATROL											
	25	1555	1850	NO FLARE	PATROL											
LOCK	25	2200	2230	2215	N30	E08	7622		1-	C	2215	.20	.20		10	
SYDN	26	0026	0032	0029	N33	W23	7622		1-	C	0029	.40	.52			H

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE DEC 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
	26	0340	0345	NO FLARE	PATROL											
	26	0640	0700	NO FLARE	PATROL											
	26	2245	2315	NO FLARE	PATROL											
SYDN	27	0129 E	0138	0132	S00	E57	7627		1-	P	0132	1.00	1.90			G
	27	0330	0425	NO FLARE	PATROL											
UCCL	27	1041	1044		N01	E60	7627		1-	3						E
UCCL	27	1113	1116		N01	E60	7627		1-	3						D
UCCL	27	1120	1122		N01	E60	7627		1-	3						D
UCCL	27	1128	1141		N01	E60	7627		1-	3						D
	27	2020	2200	NO FLARE	PATROL											
KODA	28	0609 E	0612	0609	N25	E43	7626		1-	V	0609			1.20	88	
KODA	28	0650 E	0655	0650	N25	E43	7626		1-	V	0650			1.20	88	
CAPE	28	1252	1321	1259	S00	E40	7627		1-	C	1259	1.00	1.30			
UCCL	28	1254	1326	1305	S01	E42	7627	32	1	3						E
HUAN	28	1258 E	1337 D	1306	S01	E39	7627		1-	P	1305	.50	.65			CE
SACP	28	1705	1711	1706	N23	E32	7626		1-	C		.80	.90		17	
SACP				1708					1-							
	28	1920	2335	NO FLARE	PATROL											
SYDN	29	0229	0252	0237	S02	E34	7627		1-	C	0237	1.40	2.08			G
SYDN	29	0306	0323	0314	S00	E29	7627	17	1	C	0314	1.60	3.40			GH
BUCA	29	0850	0918 D		N34	W67	7622		1-	2						
BUCA	29	0915	0918 D		N03	E24	7627		1-	2						
	29	1550	1555	NO FLARE	PATROL											
	29	1825	1830	NO FLARE	PATROL											
	29	2120	2330	NO FLARE	PATROL											
MITK	30	0242	0302	0243	N03	E03	7625	20	1	C						
CAPS	30	0846 E	1050 D		N34	W80	7622	124 D	1	1	0902	3.00			157	
ATHN	30	0920	0929		N22	E09	7626		1-	2	0922	.70	.70			
CATA	30	0922 E	1148 D		N20	E14	7626	146 D	1+		0923					
HTPR	30	0925	0940	0928	N23	E16	7626		1-		0928	.30	.40			D
CAPS	30	1027 E	1050 D		N22	E10	7626	23 D	1	1	1040	2.00	2.20		150	
HTPR	30	1032	1040	1034	N22	E12	7626		1-		1034	.60	.70			E
CAPE	30	1138	1150	1139	N23	E11	7626		1-	C	1139	1.10	1.20			EJ
HUAN	30	1141 E	1253		N21	E10	7626		1-	P	1141	.60	.70			E
HTPR	30	1143	1148	1146	N22	E10	7626		1-		1146	.60	.70			E
HUAN	30	1146	1207	1157	N31	W80	7622		1-	C	1157	.40				D
HUAN	30	1308 E	1323 D	1317	N31	W80	7622		1-	P	1317	.20				D
CAPS	30	1318	1326		N34	W80	7622		1-	3	1322	1.00			145	
SACP	30	1609	1620	1615	S12	W87	7623		1-	C		.27			17	
	30	2155	2210	NO FLARE	PATROL											
	30	2245	2330	NO FLARE	PATROL											
MANI	31	0216 E	0225	0218	N23	E01	7626		1-	2	0218	.25	.25			
MITK	31	0217	0226	0218	N22	E02	7626		1-	C						
MANI	31	0600	0609	0605	N23	W00	7626		1-	2	0605	.20	.20			
CAPS	31	0826 E	1144		N20	W00	7626	198 D	1	3	0825	4.00	4.30		171	K
MANI	31	0855	0904	0857	N23	W01	7626		1-	2	0857	.17	.17			

SOLAR FLARES

DECEMBER 1964

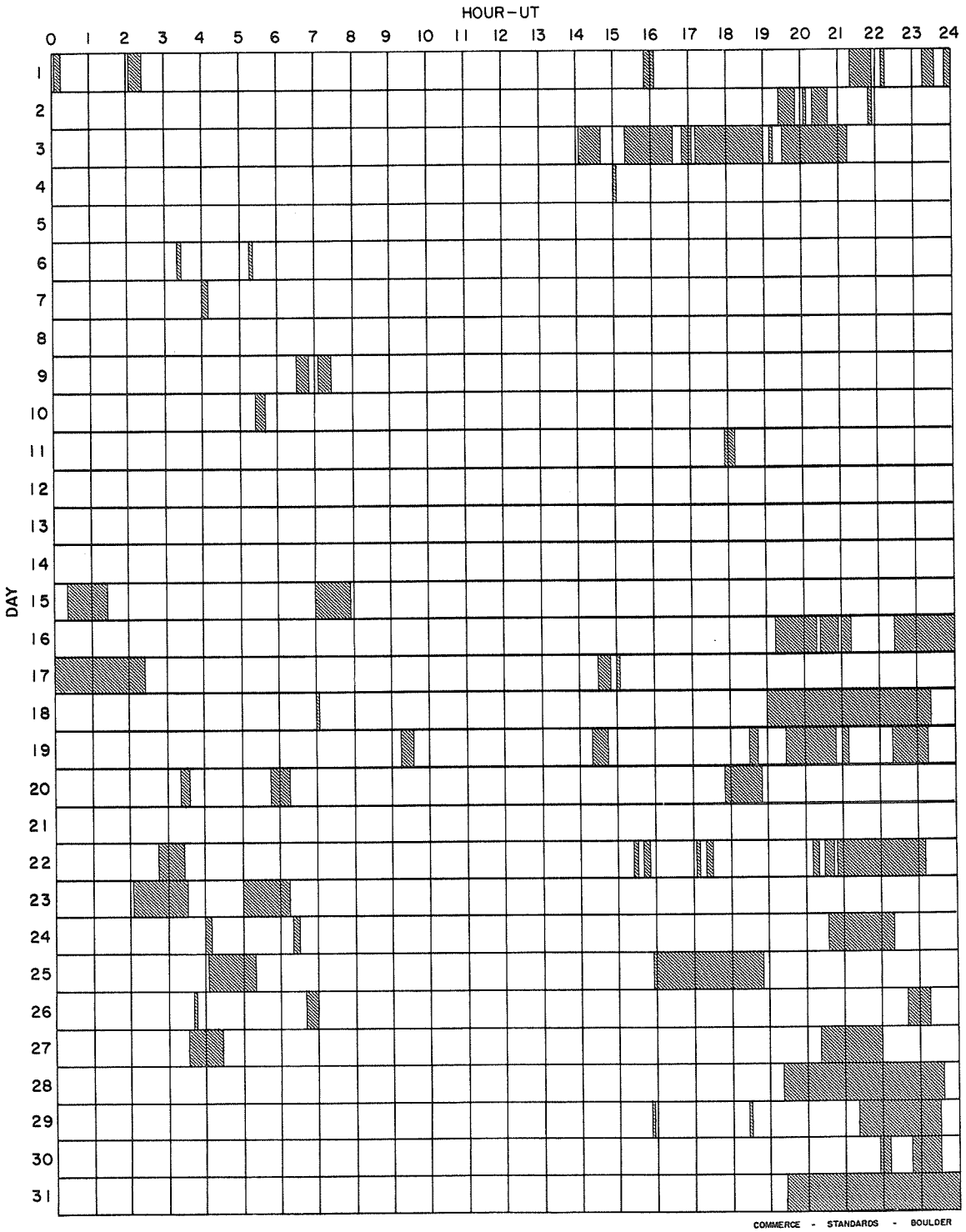
OBSERVATORY	DATE DEC 1964	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CATA	31	0900 E	1020 D		N21	W03	7626	80 D	1		0910					
LVOV	31	0953 E	1212 D		N21	W02	7626	139 D	2							
HUAN	31	1520	1528		N22	W03	7626		1-	C	1526	.20	.20			CDH
SACP	31	1723	1740	1729	N23	W08	7626		1-	C		.54	.56		21	
LOCK	31	1723	1740	1727	N23	W08	7626		1-	C	1727	.60	.60		20	
MCMA	31	1723	1740	1728	N23	W07	7626		1-	2 C	1728	1.00	1.10			E
HUAN	31	1723 E	1741	1727	N23	W07	7626		1-	P	1727	.70	.80			EH
	31	1925	2400	NO FLARE	PATROL											

COMMERCE - STANDARDS - BOULDER

These flares are addenda to the December 1964 flares published in CRPL-F 245 for January 1965.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

DECEMBER 1964



Observatories included:

Abastumani	Capetown	Herstmonceux	Kodaikanal	Mitaka	Siberie
Arcetri	Capri-F (German)	Huancayo	Locarno	Nizamiah	Sydney
Arosa	Capri-S (Swedish)	Ikomasan	Lockheed	Ondrejov	Tachkent
Athenes	Climax	Istanboul	Lvov	Ottawa	Tortosa
Bakou	Crimee	Izmiran	Manila	Sacramento Peak	Uccle
Bucharest	Haute-Provence	Kanzelhöhe	McMath-Hulbert	Salonique	Voroshilov
					Zürich

IONOSPHERIC EFFECTS OF SOLAR FLARES

SHORT WAVE RADIO FADEOUTS
SUDDEN COSMIC NOISE ABSORPTION
SUDDEN ENHANCEMENTS OF ATMOSPHERICS
SUDDEN PHASE ANOMALIES
SUDDEN ENHANCEMENTS OF SIGNAL
SUDDEN FREQUENCY DEVIATIONS
SOLAR NOISE BURSTS AT 18 Mc/s

FEBRUARY 1965

FEB. 1965	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
02	2032	2034									1	5	MC BO	
02	2051	2053									1	5	BO MC	2043
05	1757	1820	1812					36				1	BO(NS588KC-36,NPG-18)	1750
05	1759	1801									1	5	MC BO	
05	1802	1804									1	5	MC BO	
05	1808	1813									2	5	MC BO	
05	1814	1816									1	5	MC BO	
05	1820	1825									1	1	BO	
07	1821	1827	1822							6		1	BO(WWV10-0.6,WWV15-0.2, KKE4-0.2,KKE5-0.2)	
14	1920	2000	1950					30				1	BO(NPG-30)	
18	0510	0541	0517		25	2						1	DE	
18	0510	0620							2			1	DE	

COMMERCE - STANDARDS - BOULDER

Note: No SCNA, SEA, Burst report received from Hawaii.

Errata

In CRPL-F247, table IIIh, on Jan 3 at 1011 UT the event was an importance 1, SCNA with 4% absorption, not an SWF importance 4, and on Jan 4. 28 at 0215 UT the G-SWF was importance 1.

RIOMETER EVENTS

FEBRUARY 1965

FROBISHER BAY

30 Mc/s

FEB. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS	FEB. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS
1	*					16	0412	0548	0425	30	2
2	0353	0458	0359	3	1	17	*				
3	*					18	*				
4	**					19	**				
5	**					20	**				
6	0040	2310	0123	29	6	21	**				
7	0318	1438	0412	10	7	22	**				
8	**					23	**				
9	**					24	0240	0302	0247	6	1
10	0130	0316	0152	15	6	25	*				
11	**					26	0250	0502	0316	35	4
12	*					27	**				
13	*					28	0210	0346	0222	16	4
14	*										
15	0110	0424	0139	25	3						
15	1610	1720	1650	6	1						

COMMERCE - STANDARDS - BOULDER

* No Event
** No Data

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1965

ARO-OTTAWA — 2800 Mc/s
DRAO-PENTICTON — 2700 Mc/s

MAR. 1965	URANE	DESCRIPTIVE TYPE	START UT	DURATION HRS.	DURATION MIN.	MEAN FLUX	MAXIMUM TIME	MAXIMUM FLUX	REMARKS
6	3	Simple 3	1812	2	06	1.0	1911	2.0	
7	1	Simple 1	1603		01.5	0.6	1603.8	1.2	
	4	Post Increase A			12.5	0.3		0.6	
	1	Simple 1	1607.5		01	0.7	1608	1.4	
13	1	Simple 1	2050.5		01	0.6	2051	1.2	
25	3	Simple 3A	2354	1	01	3.0	2412	4.0	
	1	Simple 1	2359		02	3.4	2400	6.4	
	1	Simple 1	2401.5		01	0.4	2402	0.8	

COMMERCE - STANDARDS - BOULDER

HOURS OF OBSERVATION, JANUARY, FEBRUARY, MARCH, 1965

OBSERVING PERIOD:

January	13:25 - 23:20 UT
February	13:00 - 24:30 UT
March	12:20 - 01:25 UT

With the following exceptions:

(1) Observations commenced:
Jan. 24 at 13:45 UT
Feb. 13 at 13:45 UT
25 at 13:30 UT
Mar. 3 at 13:05 UT
4 at 13:20 UT
5 at 13:10 UT
8 at 13:10 UT
26 at 12:35 UT

(2) Daily interruption of observations, approximately 20 minutes in duration, for calibration purposes:

In the period 14:00 - 15:00 UT

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1965

NBS BOULDER 108 Mc/s

March 1965	TYPE	START UT	TIME OF MAXIMUM UT	DURATION MINUTES	INTENSITY
19	7	1900	2353	356D	1
25	7	2353	0027	70D	1
25	3	2358	2359.8	2.9	2

NOMINAL TIMES OF OBSERVATION

MARCH 1965

NBS BOULDER 108 Mc/s

March 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.	March 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.
1	1339-0037	1339-1900	17	1314-0054	
2	1337-0038	1701-1915	18	1312-0055	
3	1336-0039	2001-2004	19	1311-0056	
4	1334-0040		20	1309-0057	
5	1333-0041				
			21	1307-0058	
6	1331-0042		22	1306-1653;	
7	1330-0043			1711-0059	
8	1328-0044		23	1304-0100	
9	1327-0045		24	1303-0101	
10	1325-0046		25	1301-0102	
11	1324-0047		26	1259-0103	
12	1322-0049		27	1258-0104	
13	1320-0050		28	1256-0105	
14	1319-0051	1420-1426	29	1254-0106	
15	1317-0052	1523-1529	30	1253-0107	
16	1316-0053		31	1251-0108	

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MARCH 1965

High Altitude Observatory
Boulder

7.6 - 41 Mc/s

Date Mar 1965	Bursts			Frequency Range (Mc/s)	Date Mar 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity			Type	Time (U.T.)	Intensity	
1	no observ.	1500-1700			12	III	2209:15-2209:30	1-	23-41
6	continuum	1813:15-1837	2	18-41		III	2336:45-2337:45	1+	18-41
	(f)	1843-1854	2	26-37	13	III	1549-1551	1+	19-41
7	III	1610-1610:30	1	31-41	19	continuum	2035-2210	1-	20-41
8	no observ.	1640-1859				III	2254:45-2255	1-	21-41
	III	1914:30-1915	2	19-41		III	2257:30-2257:45	1-	25-38
	III	1915:30-1915:45	1-	19-41	20	III	1909-1909:15	1-	20-41
	no observ.	2110-2255				III	1909:30-1909:45	1-	25-33
9	no observ.	2200-2330				III	2108-2108:15	1-	21-41
12	III	1714:30-1715	2	20-41		III	2108:30-2108:45	1-	21-34
	III	1721-1721:30	2	18-41	22	no observ.	1500-1800		
	III	1830-1830:30	1	21-41	23	no observ.	1700-2000		
	III	2049:15-2050:30	1	18-41	29	no observ.	1700-2000		
	III	2050:45-2051:45	2	13-41	30	no observ.	1819-2400		
	III	2114-2115	3	12-41	31	no observ.	1625-1916, 2106-2315		

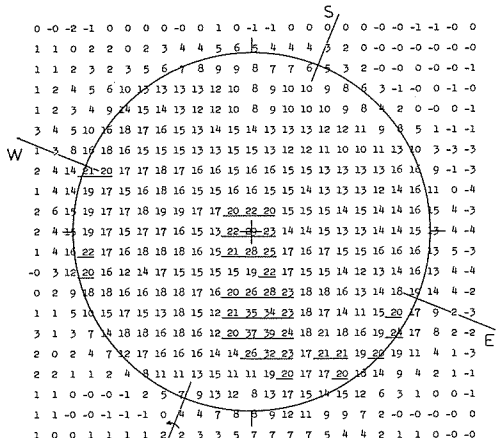
f = amorphous structure

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

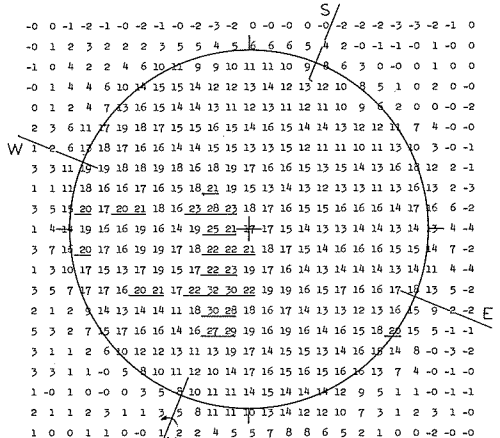
MARCH 1965

STANFORD **9.1 cm**



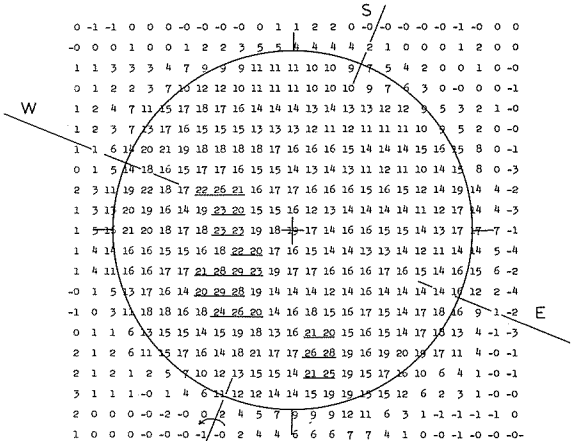
9.1 cm SPECTROHELIOGRAM S = 76 Total = 5040

Stanford, 1965 Mar 01, 20-21 hrs UT; Brightness Unit = 1.8 x 10³ °K.



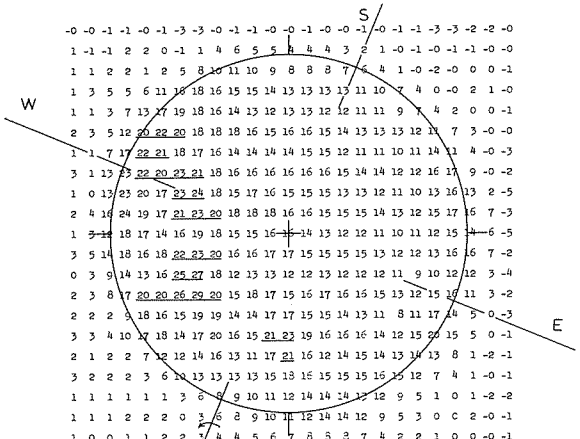
9.1 cm SPECTROHELIOGRAM S = 74 Total = 5043

Stanford, 1965 Mar 02, 20-21 hrs UT; Brightness Unit = 1.7 x 10³ °K.



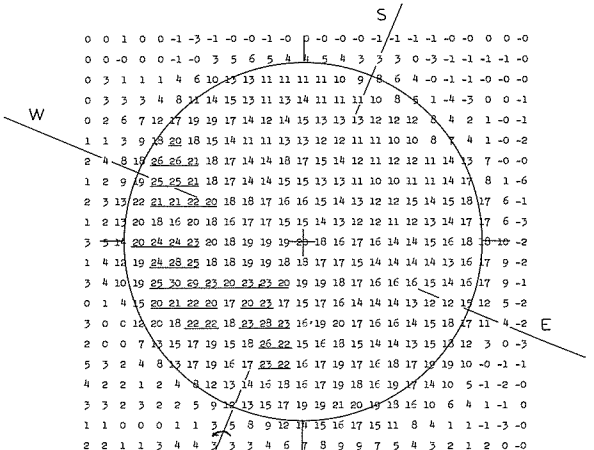
9.1 cm SPECTROHELIOGRAM S = 75 Total = 5028

Stanford, 1965 Mar 3, 20-21 hrs UT; Brightness Unit = 1.8 x 10³ °K.



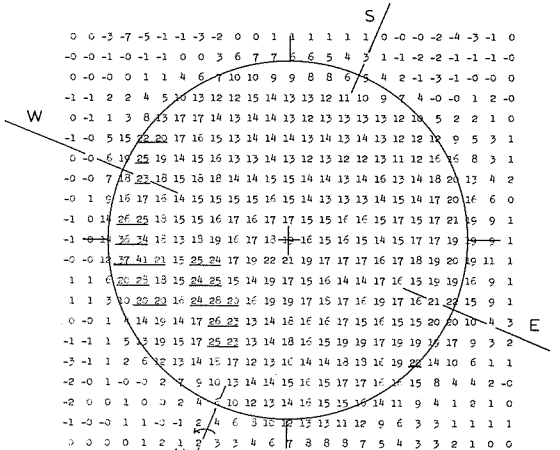
9.1 cm SPECTROHELIOGRAM S = 75 Total = 4923

Stanford, 1965 Mar 04, 20-21 hrs UT; Brightness Unit = 1.8 x 10³ °K.



9.1 cm SPECTROHELIOGRAM S = 76 Total = 5350

Stanford, 1965 Mar 05, 20-21 hrs UT; Brightness Unit = 1.7 x 10³ °K.



9.1 cm SPECTROHELIOGRAM S = 77 Total = 5193

Stanford, 1965 Mar 06, 20-21 hrs UT; Brightness Unit = 1.8 x 10³ °K.

SOMERSET - STANDARD - SCALOID

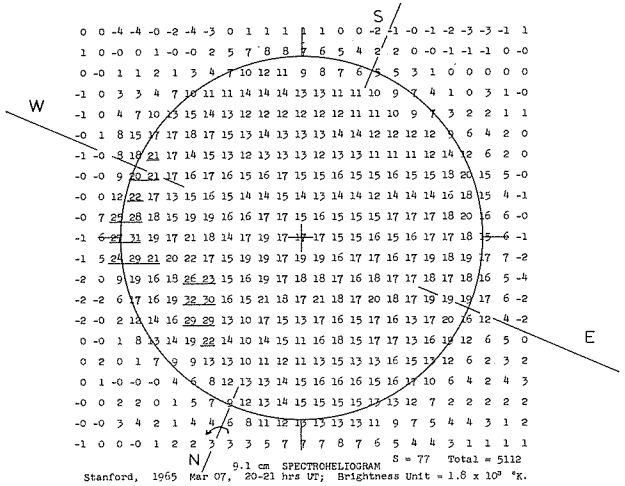
PAI

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

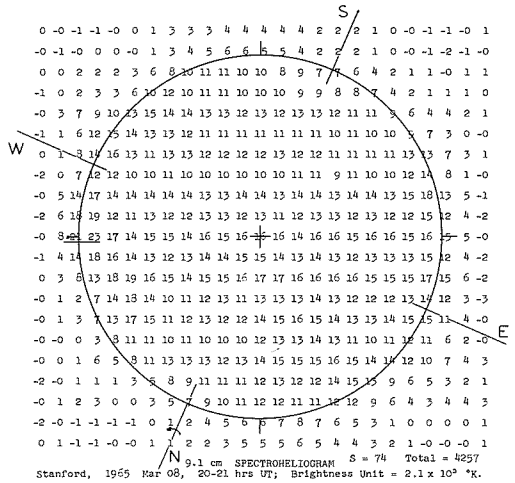
STANFORD

MARCH 1965

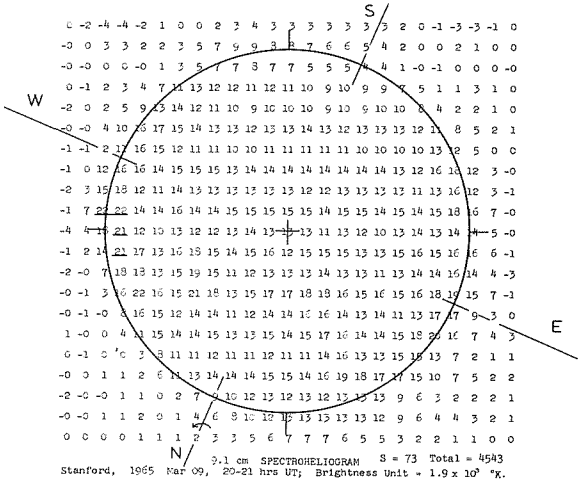
9.1 cm



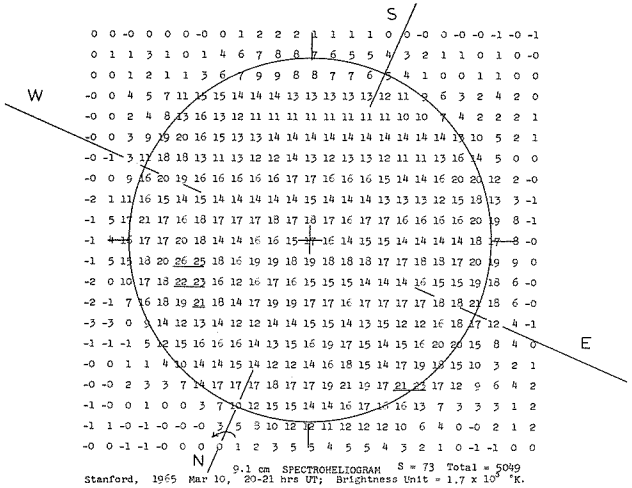
9.1 cm SPECTROHELIOGRAM S = 77 Total = 5112
Stanford, 1965 Mar 07, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



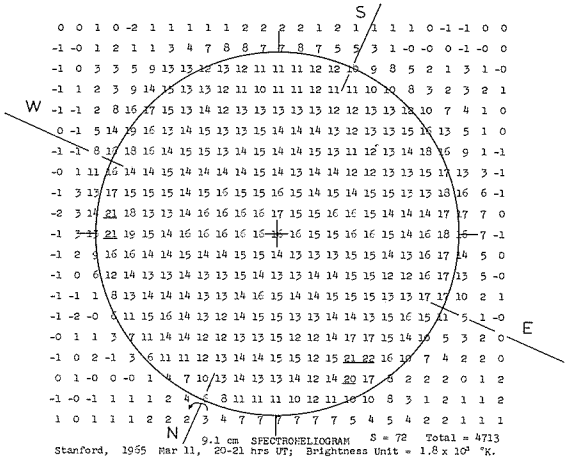
9.1 cm SPECTROHELIOGRAM S = 74 Total = 4257
Stanford, 1965 Mar 08, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.



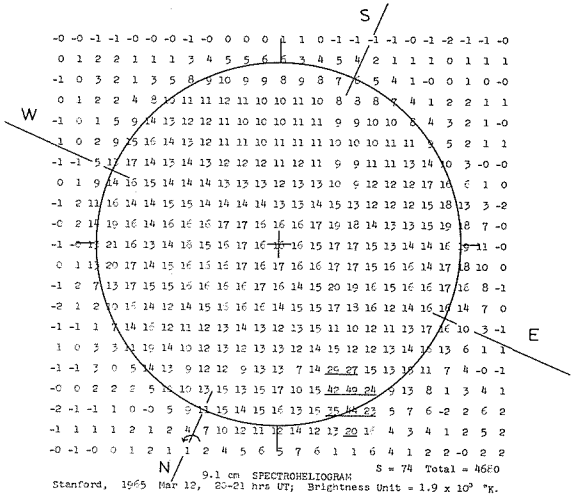
9.1 cm SPECTROHELIOGRAM S = 73 Total = 4543
Stanford, 1965 Mar 09, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 73 Total = 5049
Stanford, 1965 Mar 10, 20-21 hrs UT; Brightness Unit = 1.7 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 72 Total = 4713
Stanford, 1965 Mar 11, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 74 Total = 4680
Stanford, 1965 Mar 12, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.

COMMERCE • STANDARDS • BOULDER

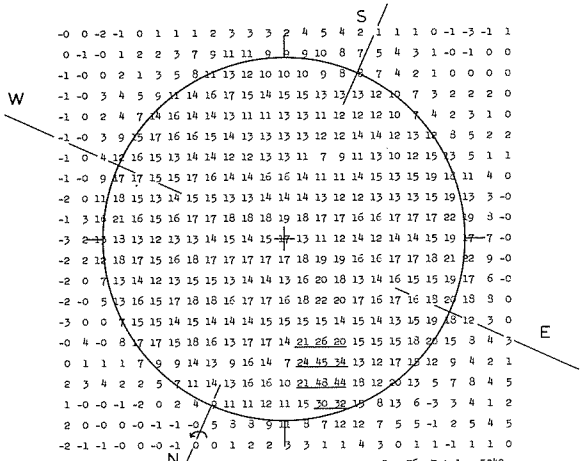
IVc

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

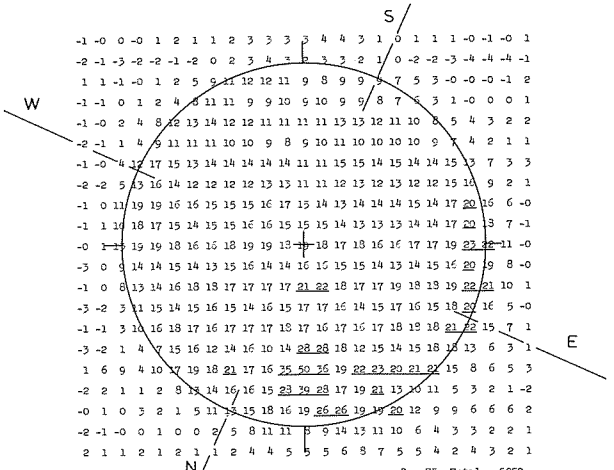
STANFORD

9.1 cm



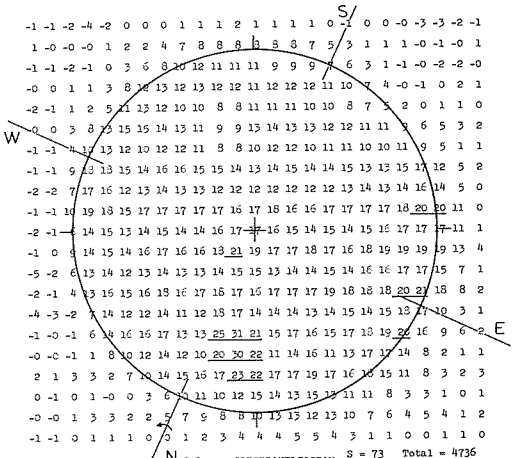
9.1 cm SPECTROHELIOGRAM S = 76 Total = 5043

Stanford, 1965 Mar 13, 20-21 hrs UT; Brightness Unit = 1.8×10^3 °K.



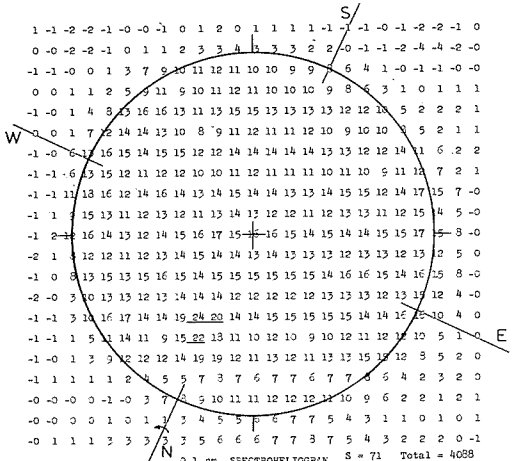
9.1 cm SPECTROHELIOGRAM S = 75 Total = 5052

Stanford, 1965 Mar 14, 20-21 hrs UT; Brightness Unit = 1.8×10^3 °K.



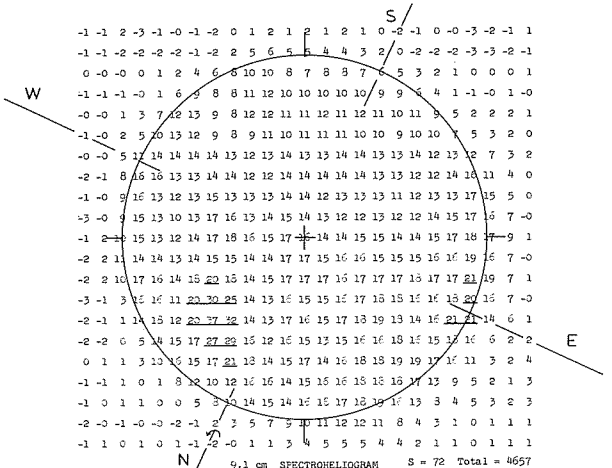
9.1 cm SPECTROHELIOGRAM S = 73 Total = 4736

Stanford, 1965 Mar 15, 20-21 hrs UT; Brightness Unit = 1.8×10^3 °K.



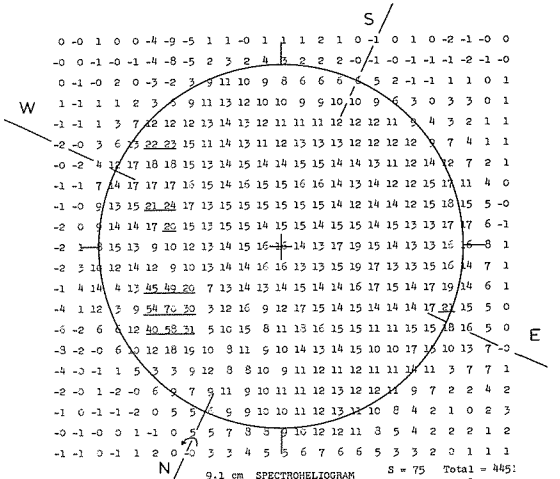
9.1 cm SPECTROHELIOGRAM S = 71 Total = 4088

Stanford, 1965 Mar 16, 20-21 hrs UT; Brightness Unit = 2.1×10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 72 Total = 4657

Stanford, 1965 Mar 17, 20-21 hrs UT; Brightness Unit = 1.8×10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 75 Total = 445[illegible]

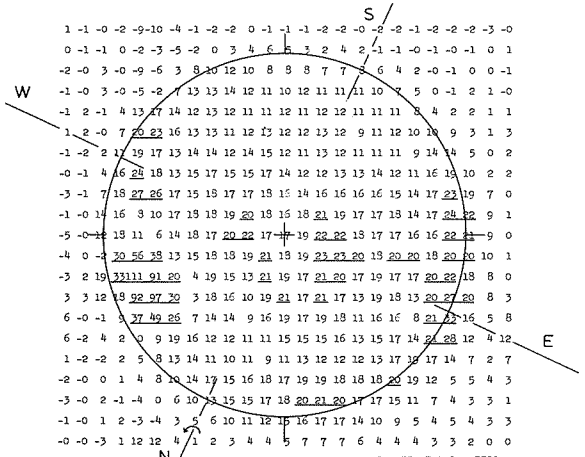
Stanford, 1965 Mar 18, 20-21 hrs UT; Brightness Unit = 2.0×10^3 °K.

COMMERCE - STANDARDS - BOULDER

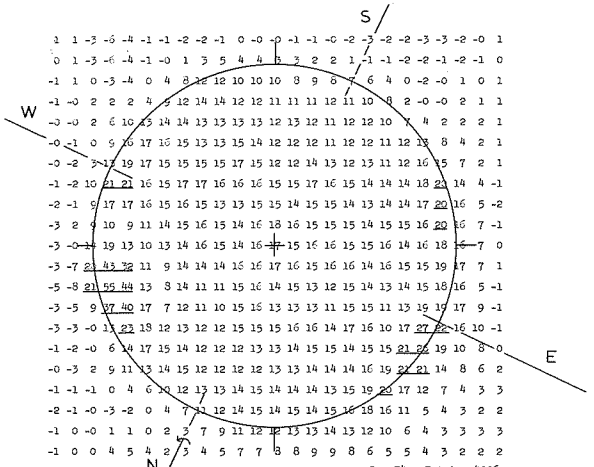
SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

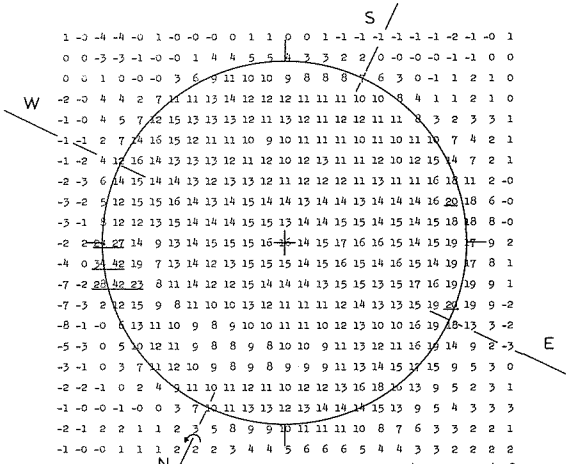
STANFORD **9.1 cm**



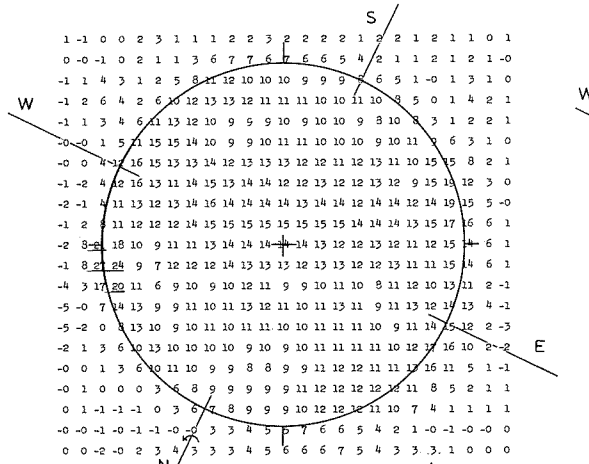
9.1 cm SPECTROHELIOGRAM S = 77 Total = 5539
Stanford, 1965 Mar 19, 20-21 hrs UT; Brightness Unit = 1.7 x 10^3 °K.



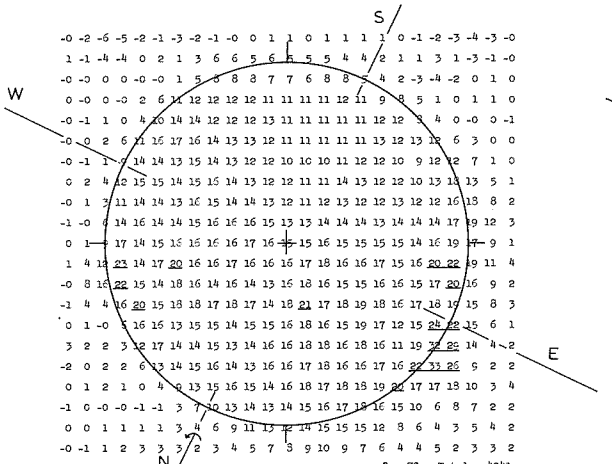
9.1 cm SPECTROHELIOGRAM S = 74 Total = 4906
Stanford, 1965 Mar 20, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



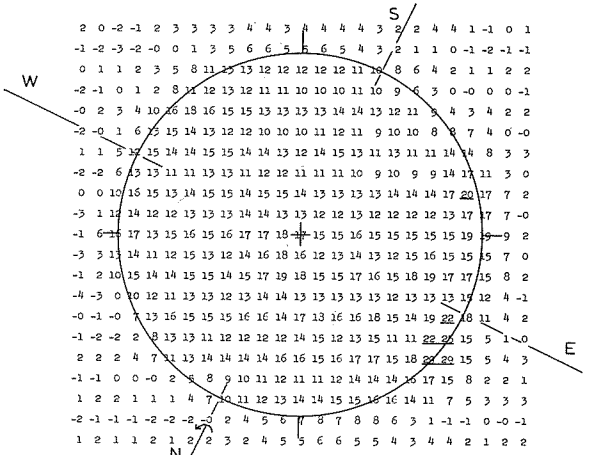
9.1 cm SPECTROHELIOGRAM S = 74 Total = 4318
Stanford, 1965 Mar 21, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 73 Total = 3965
Stanford, 1965 Mar 22, 20-21 hrs UT; Brightness Unit = 2.2 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 73 Total = 4941
Stanford, 1965 Mar 23, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 73 Total = 4594
Stanford, 1965 Mar 24, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.

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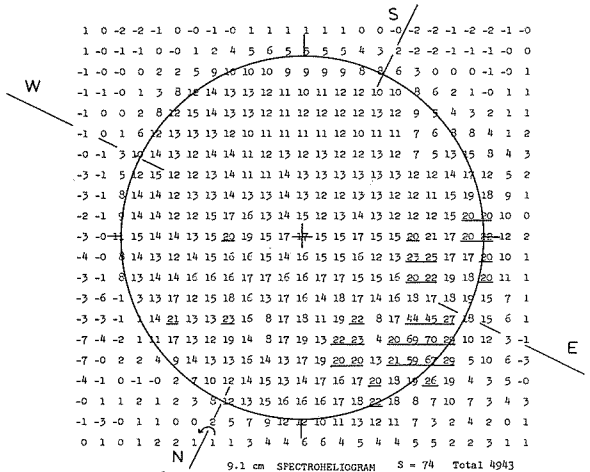
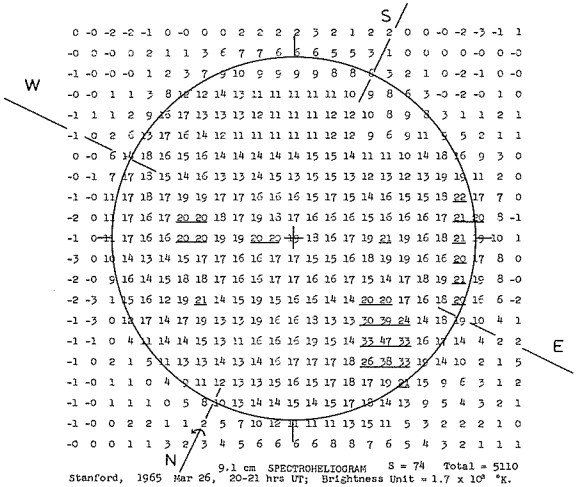
SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

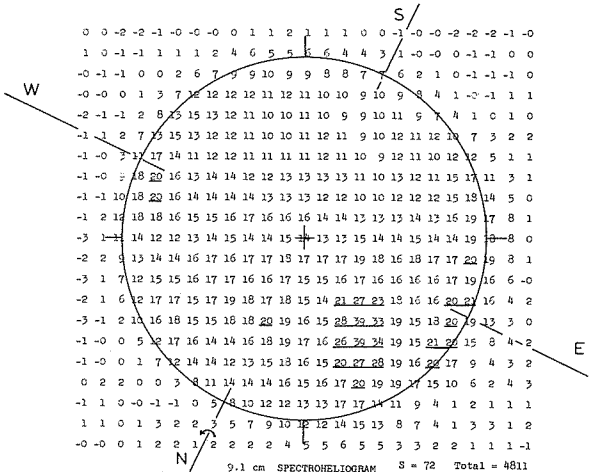
STANFORD **9.1 cm**



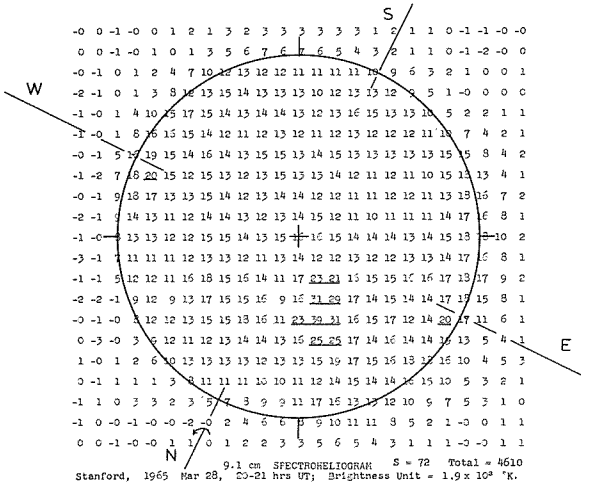
9.1 cm SPECTROHELIOGRAM S = 74 Total 4943
Stanford, 1965 Mar 25, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



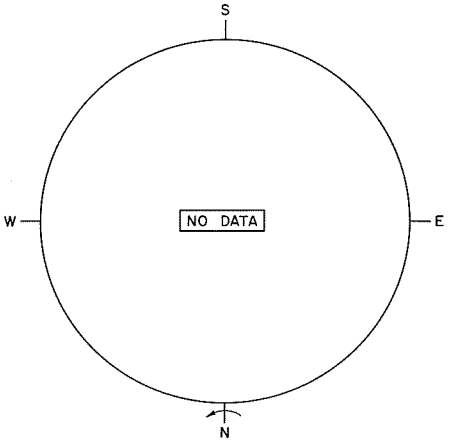
9.1 cm SPECTROHELIOGRAM S = 74 Total = 5110
Stanford, 1965 Mar 26, 20-21 hrs UT; Brightness Unit = 1.7 x 10^3 °K.



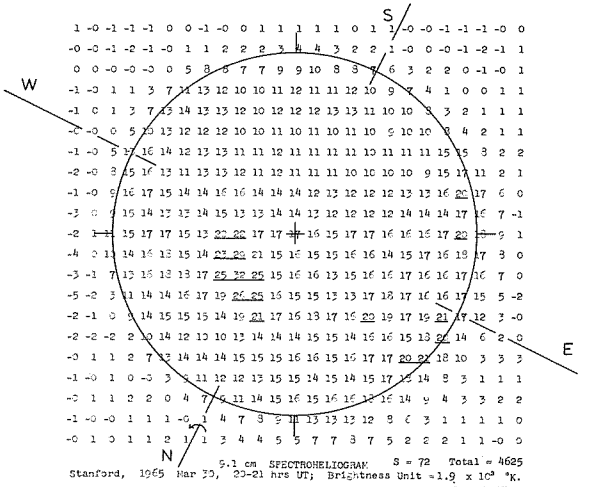
9.1 cm SPECTROHELIOGRAM S = 72 Total = 4811
Stanford, 1965 Mar 27, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 72 Total = 4610
Stanford, 1965 Mar 28, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.



1965 MARCH 29



9.1 cm SPECTROHELIOGRAM S = 72 Total = 4625
Stanford, 1965 Mar 30, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.

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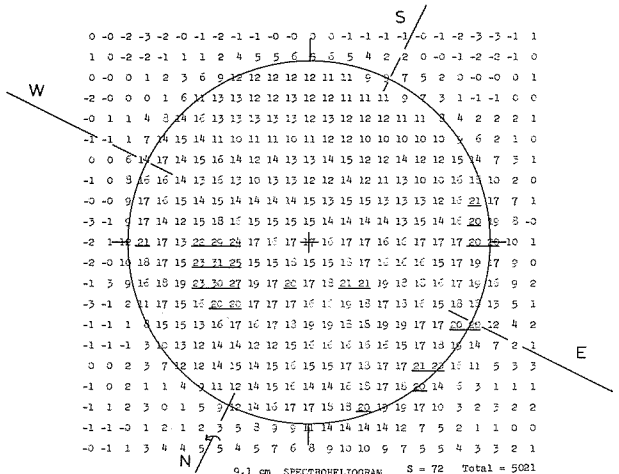
SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD **9.1 cm**



9.1 cm SPECTROHELIOGRAM S = 72 Total = 5021
Stanford, 1965 Mar 31, 20-21 hrs UT; Brightness Unit = 1.7 x 10^4 °K.

COMMERCE - STANDARDS - BOULDER

COSMIC RAY INDICES
(Neutron Monitors)

FEBRUARY 1965

FEB. 1965	CHURCHILL DAILY AVERAGE COUNTS PER HOUR	CLIMAX DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR
1	6597.6	3367.2	6618.8
2	6625.8	3360.1	6630.3
3	6617.0	3355.8	6629.7
4	6595.4	3348.7	6616.9
5	6574.7	3353.4	6614.5
6	6588.8	3376.5	6629.8 (12)
7	6552.9	3386.0	6630.0
8	6513.5	3349.9 (28)	6569.1 (18)
9	6419.8	3297.8	6480.2
10	6465.7	3327.0	6532.1
11	6510.3	3340.0	6552.3
12	6530.5	3349.3	6580.9
13	6552.3	3337.8	6583.5
14	6551.3	3347.8	6594.0
15	6542.0	3348.7	6589.7
16	6563.4	3346.9	6580.1
17	6573.3	3340.2	6591.5
18	6579.0	3345.7	6615.1
19	6588.4	3352.2	6636.5
20	6589.2	3362.3	6646.1
21	6552.1	3352.0	6611.5
22	6562.2	3368.9	6622.6
23	6565.8	3374.8	6633.8
24	6552.1	3355.0	6595.5
25	6552.3	3343.3	6597.6
26	6556.8	3342.5	6597.4
27	6559.4	3352.0	6601.5
28	6555.7	3372.3	6616.6

COMMERCE - STANDARDS - BOULDER

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

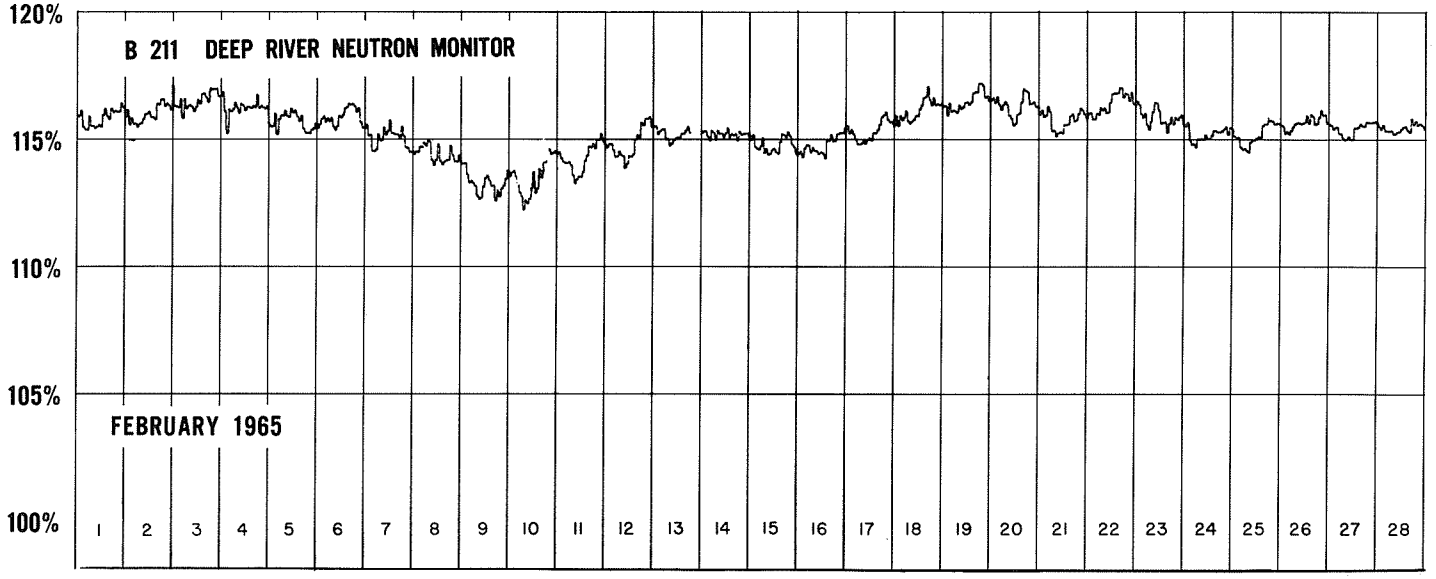
Churchill Super Neutron Monitor, Scaling Factor 120.

Climax IGC Station B305, Scaling Factor 128.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

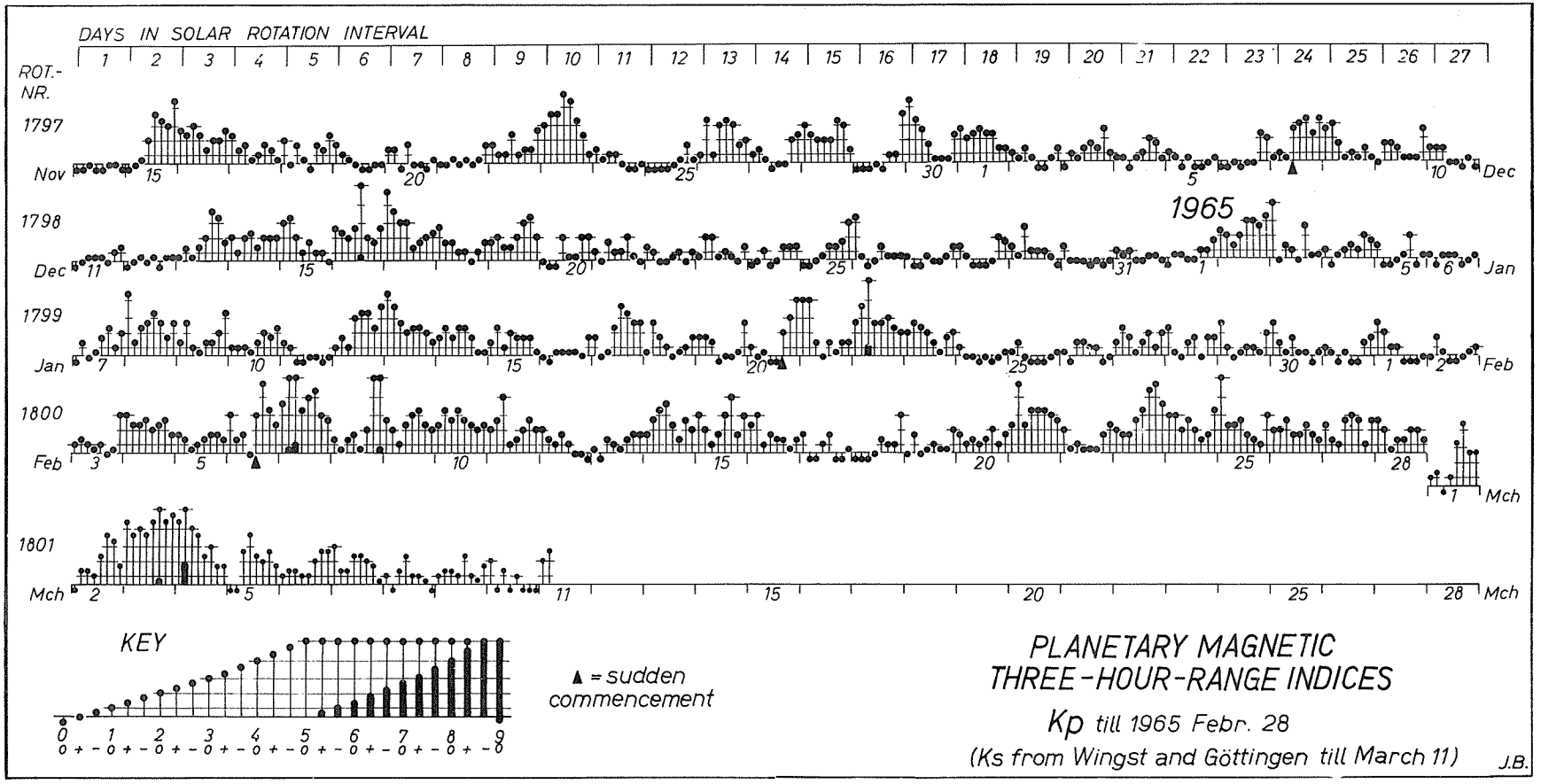


COMMERCE - STANDARDS - BOULDER

GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1965

Feb. 1965	C	Values Kp Three hour Gr. interval 1	2	3	4	5	6	7	8	Sum	Ap	Final Selected Days
1	0.1	3-	2o	1o	1o	0o	0o	0o	0+	7o	4	Five
2	0.0	0+	2-	1-	0o	0o	0+	1-	1o	5-	2	Quiet
3	0.3	1o	1+	1o	1-	1o	0+	1-	3o	9o	5	
4	0.6	3o	2+	2+	3-	2o	2+	3-	2-	19o	10	2
5	0.4	2-	1+	1-	1o	1+	2-	2-	1+	11-	5	12
												13
6	1.1	3o	1+	2-	0+	3o	5-	3+	2+	20-	14	17
7	1.4	4-	5+	6-	3+	4o	4+	3o	3-	32o	31	19
8	1.0	1+	1-	1+	2-	1-	2o	5o	5+	18o	17	
9	0.8	3-	2o	1o	2+	3o	3+	2+	2o	19-	10	
10	0.7	2+	3+	3-	3+	3-	2+	2o	2+	21o	12	
11	0.6	2o	3-	4o	1o	1+	2o	3-	2o	18-	10	Five
12	0.1	2o	1+	1o	2-	1o	0+	0+	0o	8-	4	Disturbed
13	0.4	1-	0o	1+	1o	1-	1+	2-	2-	8+	4	
14	0.8	2-	3-	3+	4-	2+	1+	3-	2o	20-	11	7
15	0.9	3o	2o	1o	2-	3o	4o	2-	3o	19+	12	8
												21
16	0.2	2+	3o	1o	2-	1+	1+	1-	1+	13-	6	23
17	0.0	2-	0o	0o	1o	2-	0o	0o	1-	5o	2	25
18	0.4	0o	0o	0o	0+	1+	1o	1o	3o	7-	4	
19	0.2	0+	2-	0+	1-	1o	1-	1-	2o	7+	4	
20	0.3	2-	1o	1+	1o	1+	2o	1o	2-	11o	5	
21	0.9	2+	5-	2+	3+	3+	3+	3o	3-	25o	17	Ten
22	0.1	2o	1-	1o	1-	1-	1-	2-	2+	10-	5	Quiet
23	1.1	2o	2-	2-	3-	3+	4+	5-	4-	24o	18	
24	0.7	3o	3o	2o	3-	2o	1+	2-	3+	19o	11	1
25	0.8	5o	2+	2+	3-	2-	1+	1o	3o	19+	14	2
												3
26	0.5	2o	2o	3-	2-	2-	2+	2-	1+	15+	7	5
27	0.6	2+	1+	1o	3-	3o	3-	1o	3-	17-	9	12
28	0.3	3-	2o	1-	1+	1+	2o	2o	1+	13+	6	13
												17
												18
												19
												22
Mean:	0.55									Mean:	9	



COMMERCE - STANDARDS - BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC, NORTH PACIFIC — FEBRUARY 1965

FEB. 1965	WHOLE DAY INDICES			ADVANCE FORECASTS (Jc-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES				NORTH ATLANTIC SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF:				NORTH PACIFIC 8-HOURLY QUALITY FIGURES			GEOMAGNETIC INDICES K_{FR}		A_{FR}		K_{SI}		A_{SI}
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		00 TO 06	06 TO 12	12 TO 18	18 TO 24	00	06	12	18	03 TO 11	11 TO 19	19 TO 03	HALF (1)	DAY (2)	OB-SERVED	PRE-DICTED	HALF (1)	DAY (2)	
1	6+	6	6	6	6-	6-	7-	7-	6	6	7	7	6	6	7	2	0	4	3	1	0	2
2	6+	6	6	6	6-	6-	7-	7-	6	6	7	7	5	6	7	1	1	2	3	0	0	0
3	6+	6	6	6	6o	6-	7-	7-	6	6	7	7	6	5	7	1	1	4	3	0	0	1
4	6+	6	6	6	6+	5+	7-	7o	6	6	7	7	6	5	7	3	2	9	5	2	1	5
5	6+	6	6	6	6o	5o	7o	7-	6	5	7	7	6	5	7	1	1	3	3	0	0	1
6	6+	6	6	6	6+	5+	7-	7-	6	5	7	5	7	5	7	2	3	12	3	1	2	8
7	5o	(4)	5	6	6o	4-	6o	5o	5	4	6	6	5	5	4	(4)	3	23	4	(5)	3	55
8	5+	(4)	5	6	5-	4+	6+	6o	5	3	6	6	5	4	5	1	3	10	7	1	2	4
9	6o	5	6	6	6o	5+	7-	6+	5	4	7	7	5	4	6	2	3	8	11	1	2	7
10	6+	5	6	6	6+	6-	7-	6+	6	5	7	6	5	6	6	3	2	9	5	3	1	10
11	6o	5	6	6	6o	5o	7-	6o	6	6	7	7	4	4	6	2	2	8	7	2	2	9
12	6o	5	6	6	6o	5+	7-	7-	6	6	7	6	6	5	6	2	0	3	5	1	0	3
13	6o	6	6	6	6o	5+	7-	7-	6	6	7	7	5	6	6	1	1	2	5	1	1	3
14	6+	6	6	6	6+	6-	6+	7-	6	6	7	6	6	6	6	2	2	8	5	3	2	13
15	6+	5	6	6	6+	6-	7-	7-	6	5	7	6	6	5	5	2	3	9	3	1	3	10
16	6+	6	6	6	6o	6-	7-	7-	6	6	7	7	6	6	6	2	1	5	4	2	1	5
17	6+	6	6	6	6+	5+	7-	6+	6	6	7	7	6	6	6	1	1	3	6	0	1	2
18	6+	6	6	6	6o	6-	7-	7-	6	6	7	7	7	6	7	0	1	2	7	0	1	1
19	6+	6	6	6	6o	6-	7-	7-	6	5	7	7	6	5	6	1	1	2	5	0	1	2
20	6+	6	6	6	6-	6-	7-	7-	6	6	7	7	7	6	6	1	1	4	3	1	1	5
21	6-	6	6	6	5+	5+	7-	6+	6	5	7	7	7	6	6	3	2	13	3	2	2	13
22	6+	5	6	6	6-	6-	7-	7-	6	5	7	7	5	5	5	1	1	3	3	1	1	3
23	6o	5	6	6	6-	6-	7-	7-	6	6	7	6	7	5	5	2	3	13	4	1	3	12
24	6o	5	6	6	6-	6-	7-	7-	5	5	7	7	7	4	5	3	2	10	4	2	2	7
25	6o	5	6	6	6o	5o	7-	7-	6	5	7	7	5	5	5	2	1	8	5	2	1	8
26	6o	6	6	6	6o	5-	7-	7-	6	5	7	7	7	5	5	2	2	7	5	2	1	9
27	6o	6	6	6	6-	5+	7-	7-	6	5	7	7	7	6	6	2	2	8	3	2	2	9
28	6o	6	6	7	6-	6-	7-	6+	6	5	7	7	7	6	7	1	1	5	3	1	1	4
SCORES QUIET PERIODS:			P	25					24	14	27	17										
			S	3					4	12	1	10										
			U	0					0	0	0	1										
			F	0					0	0	0	0										
DISTRUBED PERIODS:			P	0					0	1	0	0										
			S	0					0	1	0	0										
			U	0					0	0	0	0										
			F	0					0	0	0	0										

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NOTES:

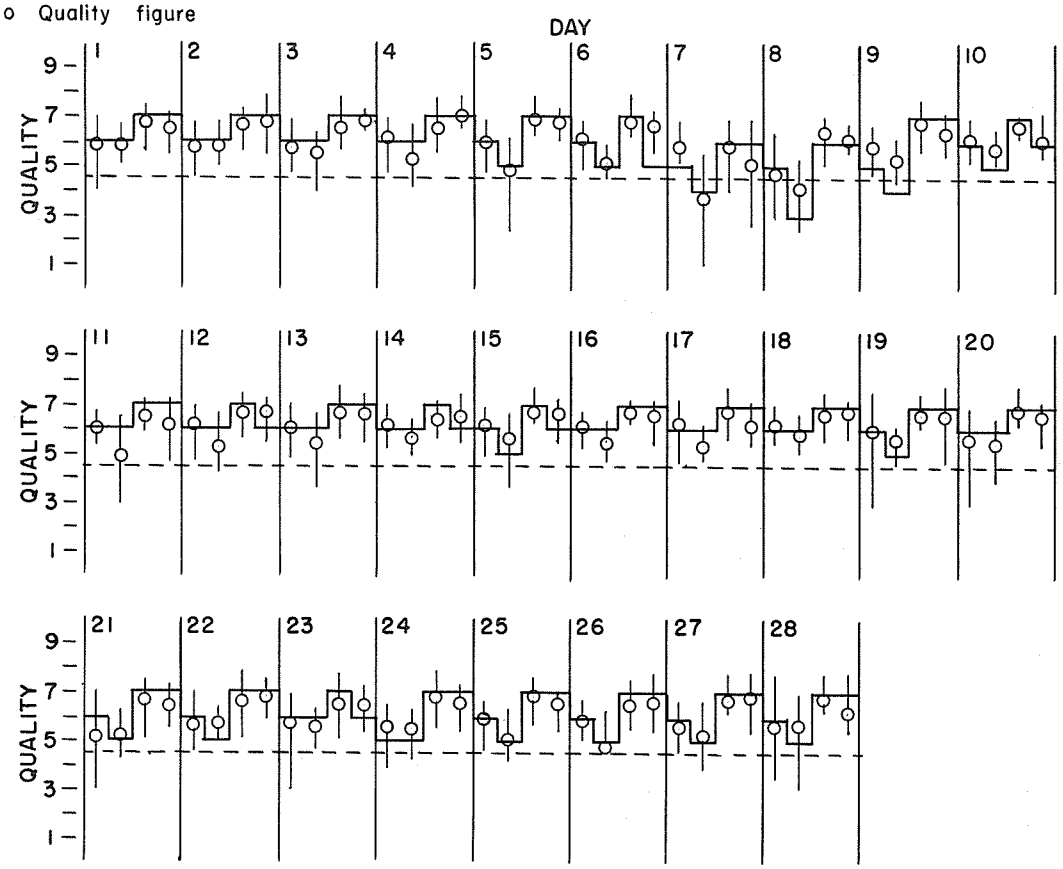
1. The advance Jc-forecasts are scored against the average high latitude whole day indices.
2. The observed indices for the North Pacific are low weight because of insufficient data available for their preparation.
3. The predicted A_{Fr} indices are issued each Wednesday for the coming seven days. The value for the first day of each prediction period is underscored.

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC

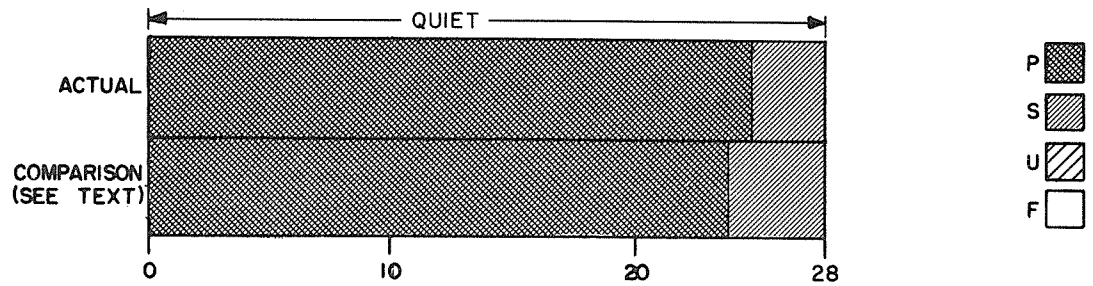
FEBRUARY 1965

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



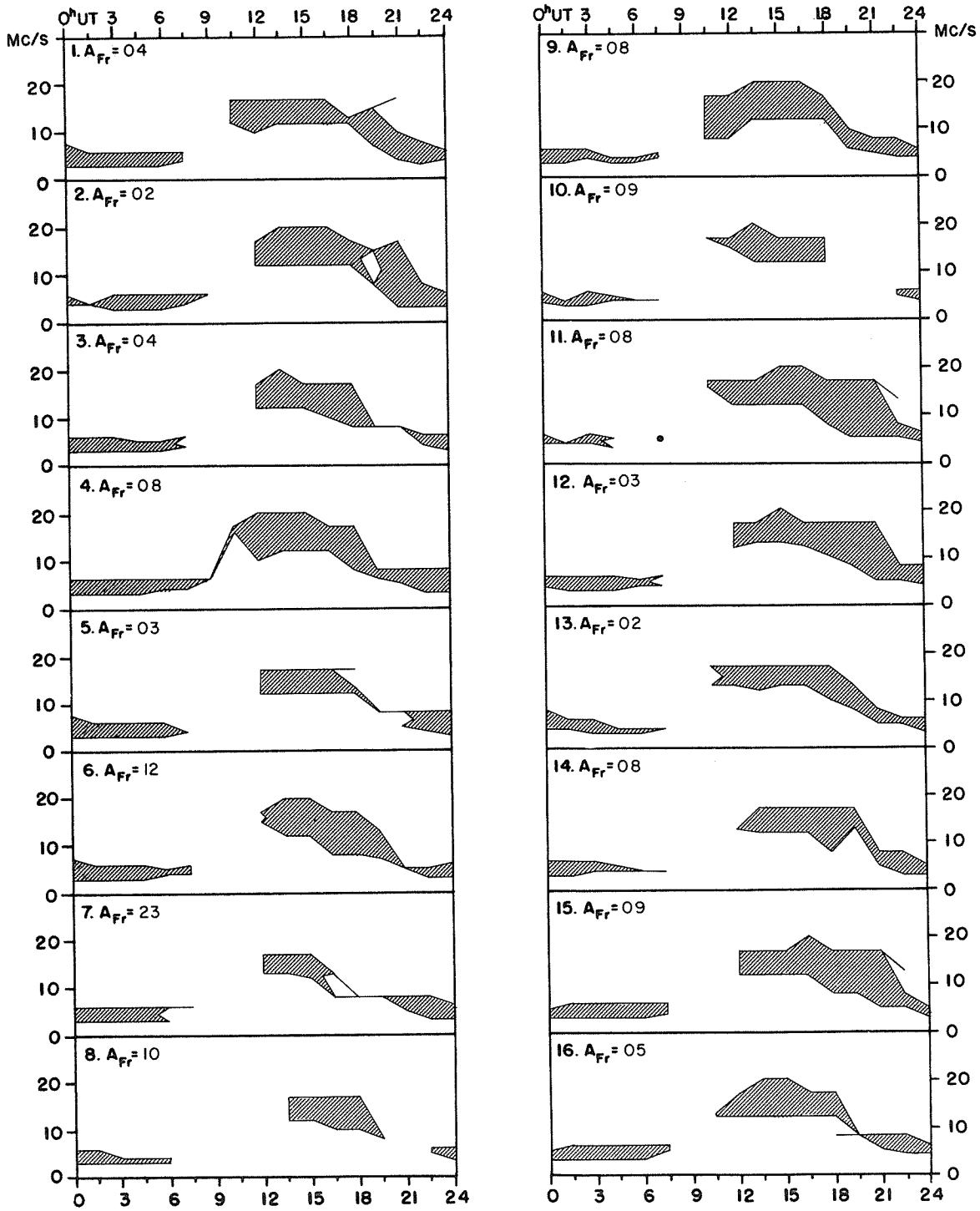
OUTCOME OF ADVANCE FORECASTS -- FINAL ESTIMATES (1 TO 7 DAYS AHEAD)

HIGH LATITUDE



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

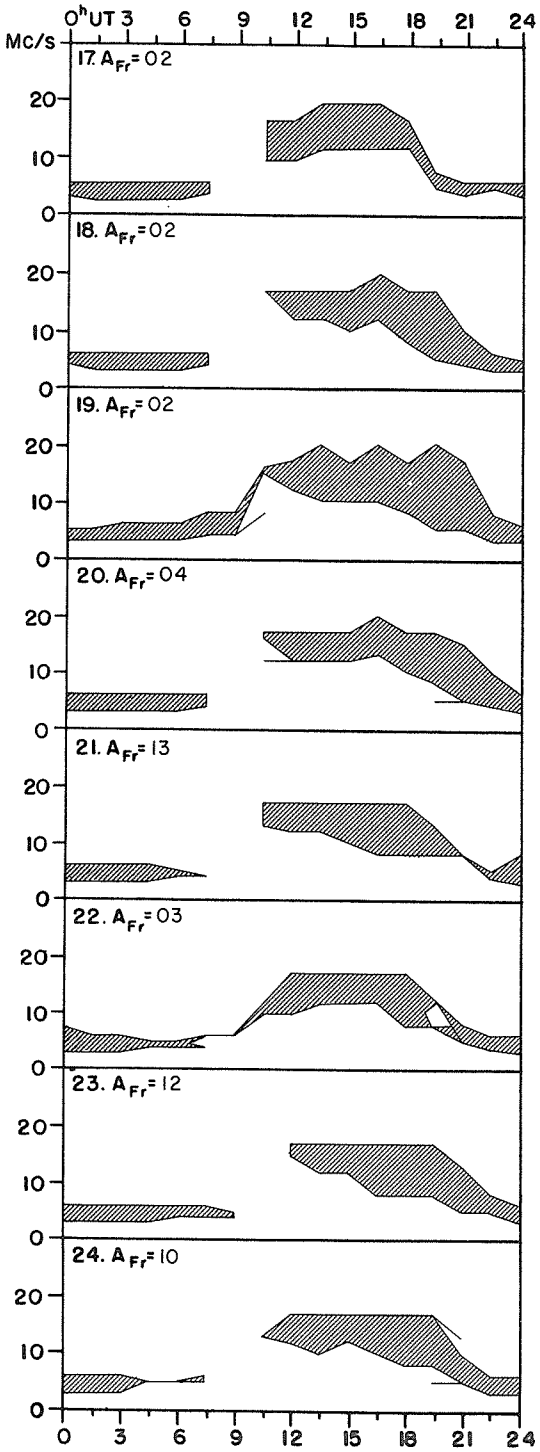
FEBRUARY 1965

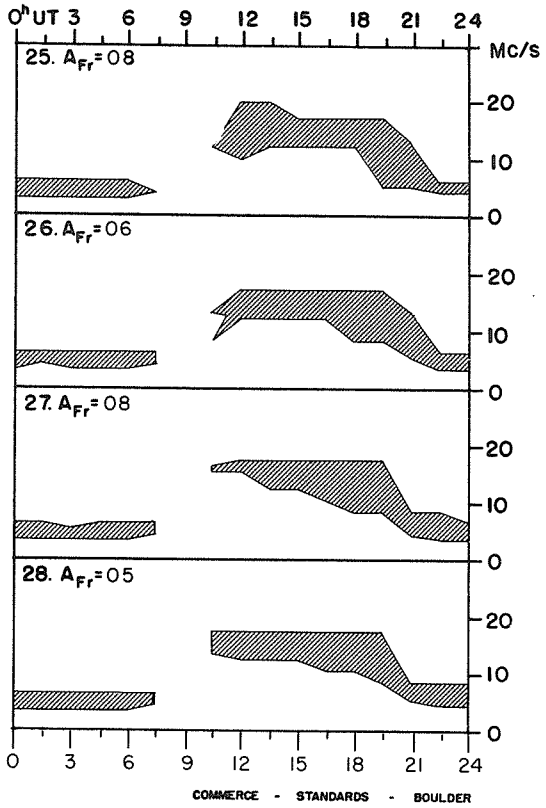


COMMERCE - STANDARDS - BOULDER

USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1965





Adapted from Observations by Deutsches Bundespost

IQSY ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

MARCH 1965

MAR. 1965	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
11*	0400		165	Magnetic Calm	Exists	
12	0400		166	+Strat Warming	Begins	Ukraine moving southern Ural Mountains moderate
13	0400		167	Strat Warming Solar Activity	Exists Exists	Sverlovsk region moving northeast moderate New region born
14	0400		168	Solar Activity Strat Warming	Exists Exists	Siberia moving northeastward moderate intensity increasing
15	0400		169	Solar Activity Strat Warming	Exists Exists	North Central Siberia moving northeastward strong intensity increasing
16	0400		170	Solar Activity Strat Warming	Exists Exists	Cosmic event Polcap Absorption North Central Siberia moving Poleward intense
17	040		171	Strat Warming	Exists	North Central Siberia 73° north latitude 140° east longitude moving northeastward intense
18	0400		172	Strat Warming	Exists	North of Wrangel Island 76° north latitude 179° west longitude moving eastward intense
19	0400		173	Strat Warming	Exists	North of Bering Strait 78° north latitude 170° west longitude moving Northern Canada intense
20	0400		174	Strat Warming	Exists	North of Alaska 76° north latitude 160° west longitude slowly moving Northern Canada
21	0400		175	Strat Warming	Exists	North of Eastern Siberia slowly moving north-northeastward strong decreasing
22	0400		176	Strat Warming	Exists	North of Eastern Siberia slowly moving northward moderate decreasing
23	0400		177	Strat Warming	Exists	Polar region moderate
24	0400		178	Strat Warming	Exists	Polar region moderate
25	0400		179	Strat Warming Strat Warming	Ends Begins	Polar region Prince Albert Canada moderate increasing moving north
25	1410	Ottawa, Solar Flare 25/1325Z				
26**	0400		180	Strat Warming	Exists	Calgary Canada moving Vancouver Island intense
27	0400		181	Solar Activity Strat Warming	Exists Exists	Flares Vancouver Island moving westward moderate weakening
28	0400		182	Solar Activity	Exists	Due west of State of Oregon moving westward moderate decreasing intensity
29	0400		183	Solar Activity Strat Warming	Exists Ends	
31	0400		184	Strat Warming	Begins	In Greenland moving north-northeast moderate

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* February 5 - 9, 1965 has been designated as a Interplanet Riometer Retrospective World Interval. This information was sent with March 11, 1965 Geophysical Alert.

** The following dates were designated as Riometer 1964 Retrospective World Intervals: 3-4 January, 4-5 March, and 6-9 September. This information was sent on March 26, 1965.

\+ Strat=Stratospheric