CRPL-F 248 PART B

FOR OFFICIAL DISTRIBUTION

PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
APRIL 1965

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

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

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 (ROTA- TIONS)	DATE FIRST SEEN	DURA- TION (DAYS) (1)	CMP VALUES		HISTORY
				AREA	INT.					AREA	COUNT	
2.0	S04	7704 (2)	New	1500	2	$\ell - d$	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	$\ell - ?$	2	< 2/26	>5			
2.9	N22	7707	7660	2300	3	$\ell - ?$	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)	$\ell - ?$	1	2/27	≥ 4			
5.7	N28	7712	7664	(400)	(2)	$\ell - \ell$	3	2/28	12	(218)	(2)	$b - d$
7.8	N19	7716	New	(400)	(2.5)	$b - \ell$	1	$\leq 3/10$	>4	(72)	(3)	$b - \ell$
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	$? \setminus d$	3	< 3/10	>4			
14.4	N16	7726	New	(100)	(1)	$b - \ell$	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	$b - \ell$
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)	$\ell - d$	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	$b \wedge d$	1	3/18	4			
23.0	N05	7736	New	(300)	(3)	$b - \ell$	1	$\leq 3/27$	≥ 2			
24.4	N04	7734 (3)	New	100	1.5	$b - d$	1	3/24	1			
26.0	N22	7732	New	(400)	(3)	$\ell - d$	1	3/20	3			
27.3	N21	7737	New	300	2.5	$b - d$	1	$\leq 3/27$	≥ 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	$\leq 3/27$	≥ 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	$\ell - \ell$	3	3/24	13	(121)	(1)	$\ell - d$
30.1	N23	7739	7707	500	1.5	$b - d$	3	$\leq 3/27$	>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.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

11b

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 S12	W29 E24	βf^* β^{***}	15903 15904
4	1800	N28	E14	αp^*	15900	19	1830	N30	W33	βf^*	15903
5	1805	N13 N29	W06 E03	βf αp^{**}	15901 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 N10	E08 E43	αp^* βp	15906 15905
10	1855	N20 N18	W38 W37	αp^* $\beta +$	15902 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

IIc

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	30	30	15	28	x	x	17	18	x	x
28	9	12	17	20	7	9	14	16	13	29	0	0	21	24	12	24
29	28	73	24	40	4	11	19	20	23	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

COMPARISON - STANDARDS - BOULDER

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	14	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

COMBINE - STANDARDS - BOLDER

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

COMMENTS -

STANDARD -

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	32	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	x	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	18	2	3	2	3	9	17	3	4
8	11	20	10	17	8	9	10	x	x	x	11	14	x	x	1	8
9	x	x	x	x	x	x	x	x	x	x	1	2	x	x	x	x
10	x	x	x	x	x	x	x	x	2	3	1	x	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	38	x	x	x	x	x	x	x	x
15	x	x	11	13	x	x	16	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	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	6	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	20	x	x
29	x	x	x	x	x	x	x	x	3	4	x	x	13	x	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

CONFIDENTIAL - STATIONARY - POLAR

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE	OBSERVED TIME		LOCATION		DURA- TION -- MINUTES	IM- POR- TANCE	OBS COND.	TIME -- U T	MEASUREMENTS			REMARKS
		START	END	APPROX. LAT.	MER DIST.	MATH PLAGE REGION				MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH Ha	
LOCK	MAR 01 1965	1800	1823	N02	W32	7713	1-	C	1807	.20	.20	10	
LOCK		1821	1834	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	N21	W00	7707	1-	C	1556	.91	.92		
OTTA	02	1553	1622	S06	E13	7704	1-	C	1559	.31	.31		E
SACP	04	1539	1600	N25	W13	7707	1-	C		.41	.44	17	
HALE	04	1920	1950	N28	E14	7712	1-	3	1933	.20	.20		
HALE	05	0023	0040	N12	E76		1-	C		.34	.84	17	
HALE	05	0024	0049	N12	E80		1-	4	0032	.20			
LOCK	05	0024	0040 D	N29	E11	7712	1-	C	0031	.30	.30	20	
SACP	05	0025	0044	N30	E11	7712	1-	C		.59	.66	18	
HALE	05	0026	0057	N28	E10	7712	1-	2	0032	.80	.90		H
IKOM	05	0028 E	0040	N30	E12	7712	12 D	2	0030	1.80	2.20	110	D
HALE	05	0111	0145	N30	E12	7712	1-	2	0114	.80	.90		FK
HALE	05	0111	0145	N30	E12	7712	1-	2	0121	1.00	1.10		
IKOM	05	0120 E	0128 D	N28	E10	7712	8 D	2	0120	2.80	3.50	100	E
MANI	05	0128	0138	N31	E13	7712	1-	2	0130	.15	.15		
HALE	05	0212	0228	N13	E02		1-	4	0218	.20	.20		H
HALE	05	0229	0310	N13	E02		1-	3	0241	.40	.40		
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	1.00	GS	
BUCA	06	0745	0915 D	N22	W50	7707	1-	3	0800	.58	.98	159	GS
BUCA	06	0829 E	0910 D	N24	W50	7707	1-	3		1.50	1.50		
SACP	06	1814	1920	N32	W11	7712	1-	2		1.51	1.70	18	
HALE	06	1817 E	1848	N30	W13	7712	1-	2	1839	.30	.30		
HALE	06	1817 E	1933	N32	W12	7712	1-	2		.30	.40		
HALE	06	1858	1950	N35	W10	7712	1-	3	1907	.30	.30		
HALE	06	1830	1900	N18	W57	7707	1-	3	1841	.40	.60		
HALE	06	1859	1922	N21	W56	7707	1-	3	1910	.50	.80		
HALE	06	1919	1948	N17	W58	7707	1-	3	1924	.20	.30		
HALE	06	1945	1953	N18	W57	7707	1-	4	1946	.50	.80		
HALE	06	1955	2042	N18	W57	7707	1-	3	2003	1.20	1.90		H
HALE	06	2100	2142	N18	W57	7707	1-	3	2115	1.00	1.60		
HALE	06	2200	2216	N17	W58	7707	1-	3	2205	.40	.60		
HALE	07	0141	0153	N30	W15	7712	1-	3	0144	.80	.90		
SACP	07	1602	1620 U	N21	W67	7707	1-	C		.96	1.88	18	E
HUAN	07	1604	1627	N22	W68	7707	1-	P	1611	.20			D
IKOM	07	2305	2321 D	N15	W37		16 D	C					
HUAN	08	1300	1304	N15	W45		1-	C	1302	.10	.15		DG
LOCK	08	1740	1810	N19	W90	7707	1-	C	1800	.30	1.50	20	
HALE	08	2240	2254 D	N13	W50		1-	3		.20	.30		
LOCK	08	2351	2359	N26	W45	7712	1-	C	2355	.20	.40	20	
HALE	08	2353	2358	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	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — U T	MEASUREMENTS			MAX WIDTH He	MAX INT %	REMARKS
		START	END	APPROX LAT	MER DIST	PLACHT REGION					MEAS AREA Sq Deg	CORR. AREA Sq Deg				
IKOM	MAR 09 1965	0516 E	0528 D	N10 W90		7708	12 D	1	V	2312	.80	1.00		80	A	
IKOM	09	2306	2340 D	N20 W26		7716		1-	V							
ARCE	10	0850 E	0910 D	N19 W33		7716		1-	3	0910	.39	.48		129		
CATA	10	0905 E	0925 D	N19 W33		7716		1-	S	0906	.72	.94				
MCMA	11	1343	1354	N29 W84		7712		1-	1 C	1346	.20				DH	
MANI	12	0825	0838	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	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	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	N28 E47		7718		1-	C		.42	.60		18		
OTTA	12	1414	1421	N29 E48		7718		1-	C	1416	.72	1.02				
MCMA	12	1415	1421	N29 E48		7718		1-	1 C	1416	.30	.60			D	
OTTA	12	1450	1512	N31 E50		7718		1-	C	1458	.28	.43			D	
MCMA	12	1453	1507	N31 E52		7718		1-	1 C	1456	.20	.40			D	
HUAN	12	1505 E	1511	N30 E52		7718		1-	P	1508	.16	.32		17		
SACP	12	1526	1544	N28 E46		7718		1-	C		.46	.65				
OTTA	12	1527	1550	N29 E47		7718		1-	C	1536	.28	.40			H	
MCMA	12	1528	1539	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	N29 E46		7718		1-	1 C	1624	.20	.40			DH	
HUAN	12	1621	1634	N28 E49		7718		1-	C	1625	.25	.46			D	
SACP	12	1621	1636 U	N28 E46		7718		1-	C		.37	.52		17		
MCMA	12	1651	1704	N31 E49		7718		1-	1 C	1652	.20	.40			DH	
OTTA	12	1651	1707	N31 E47		7718		1-	C	1652						
HALE	12	1939	1956	N27 E44		7718		1-	3	1947	.20	.30			H	
HALE	12	2010	2020	N30 E45		7718		1-	3	2011	.50	.75			H	
HALE	12	2012	2035	N28 E43		7718		1-	3	2016	.40	.60			H	
HALE	12	2046	2054 D	N27 E43		7718		1-	3	2050	.20	.30			H	
HALE	12	2102	2112 D	N27 E43		7718		1-	2	2107	.20	.30			H	
HALE	12	2213 E	2224	N28 E42		7718		1-	4	2215	.40	.60				
SACP	13	2050	2106	N31 E34		7718		1-	C		.92	1.17		20		
LOCK	14	1845	1905	N50 W75				1-	C	1855	.10	.50		10		
OTTA	15	1420	1445	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	S	0938	4.00	3.11		141		
CATA	18	0830	1200 D	N27 W27		7718	210 D	1			2.24	2.24				
ARCE	18	0858 E	1000 D	N28 W26		7718		1-	2	0925	1.05	1.41				

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM. POR- TANCE	OBS. COND.	TIME — U.T.	MEASUREMENTS		MAX. WIDTH H _α	MAX. INT. I _h	REMARKS
		START	END	APPROX. LAT.	MER. DIST.	MM:MM PLACE REGION				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.			
ONDR	18 MAR 1965	0941 E	0959	N28 W24		7718	1-	3	0943	.84	.94	1.70	112	CEHJKR
CATA	18	1140 E	1200 D	S11 E27		7727	1-	S	1143	4.00				
WEND	18	1206 E	1254 D	N29 W26		7718	1-	C		1.61	1.88		18	
SACP	18	1324 E	1350 U	N28 W28		7718	1-	P	1429	1.00				E
MCMA	18	1414 E	1517 D	N28 W28		7718	1-	P	1813	.18	.26			D
HUAN	18	1811 E	1816	N29 W31		7718	1-	C		.92	1.10		17	
SACP	18	1915	1956	N27 W32		7718	1-	C						
IKOM	19	0006	0012	N28 W36		7718	1-	C		.80	1.10		100	E
IKOM	19	0110 E	0128 D	N28 W32		7718	1-	V	0124	1.40	2.25	1.18	80	D
CATA	19	0940	1000 D	N29 W36		7718	1	S	0941				132	
HALE	20	0210	0233	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		.26	.83			
HALE	20	1818	1820	N31 W55		7718	1-	4	1819	.10	.20			
SACP	20	1818	1820	N32 W54		7718	1-	C		.29	.48		17	
LOCK	20	1856	1920	S11 W01		7727	1-	C	1903	.30	.30		10	
HALE	20	1858	1917	S13 W02		7727	1-	3	1907	.40	.40			H
SACP	20	1860	1924 U	S12 W02		7727	1-	C		.72	.71		18	
HALE	20	2053	2113	N27 W60		7718	1-	4	2100	.30	.50			
LOCK	21	2204	2224	N28 W75		7718	1-	C	2211	.30	.90		10	
CATA	22	1013 E	1200 D	N28 W90		7718	1	S	1026	.64	3.64		112	
LOCK	23	2310 E	2320 D	N12 W90			1-	C	2314	.30	1.50		20	
SACP	24	1620	1650 D	N11 E73		7735	1-	C		.38	.84		17	
HUAN	24	1623	1646	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	N11 E67		7735	1-	C		2.07	3.23			E
OTTA	25	1246	1347	N10 E62		7735	1	C	1327				17	
SACP	25	1318	1341	N09 E63		7735	1-	C		.86	1.42			
HUAN	25	1323	1343	N08 E62		7735	1-	C	1328	.25	.55			D
OTTA	25	1350	1403	N10 E62		7735	1-	C	1354	.69	1.08			
HUAN	25	1352	1401	N08 E62		7735	1-	C	1356	.10	.22			D
SACP	25	1606	1631	N10 E58		7735	1-	C		.34	.51		18	
OTTA	25	1608	1627	N10 E58		7735	1-	C	1613	.17	.25			HJ
HUAN	25	1612 E	1613 D	N08 E59		7735	1-	P		.18	.36			D
HUAN	25	1621 E	1634	N08 E59		7735	1-	P	1625	.30	.60			H
HUAN	25	1638	1649 D	N09 E59		7735	1-	P	1642	.42	.84			
HALE	25	1811 E	1833	N09 E56		7735	1-	3	1813	.40	.60			
LOCK	25	2223	2250	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	N09 E55		7735	1-	P		1.44	2.02		28	
MANI	26	0508 E	0549	N11 E55		7735	1	2	0513	1.60	2.24			
ARCE	26	0810 E	0842 D	N13 E50		7735	1	3	0817	1.93	2.97			

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

MARCH 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — U T	MEASUREMENTS			REMARKS	
		START	END	APPROX		MATH FLAGE REGION					MEAS. AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H ₀		MAX INT H ₀
				LAT	MER DIST										
CAPS	MAR 1965														
	26	0816	0829	N08 E47	7735	13	1-	3	0819	1.50	2.40	200	EHJ		
	26	0816	0831	N11 E54	7735		1-	2	0819	.33	.46				
	26	0850	0913	N11 E53	7735		1-	2	0858	.33	.44				
	26	0855	E 1000 D	N13 E50	7735		1-	2	0951	1.01	1.55				
	26	0945	E 1010 D	N10 E48	7735		1-	3	1000	1.00	1.50				
	26	0949	E 1005 D	N08 E46	7735		1-	3	1007	.60	1.00	150	CJ		
	26	1000	E 1130 D	N10 E50	7735		1-	3	1007	1.02	1.64	151	EFJ		
	26	1314	E 1336	N08 E45	7735	22	1-	3	1324	1.67	2.03	216	EFJ		
	26	1314	E 1336	N09 E45	7735		1-	C		.68	.84	21			
CAPS	26	1429	1455	N10 E46	7735		1-	C	1435	.70	1.10	190	EJ		
	26	1430	1444	N08 E46	7735		1-	C	1541	.16	.25	190	D		
	26	1537	1547	N09 E45	7735		1-	C	1541	.16	.25	190	D		
	26	2036	2058	N11 E42	7735		1-	C		.76	.90	19			
OTTA	27	1220	1421	N12 E34	7735	121	1	C	1229	1.10	2.13	190	EF		
	27	1227	E 1310	N09 E38	7735	43 D	1	3	1231	1.90	2.50	190	CE		
	27	1302	E 1345 D	N12 E38	7735		1-	2	1308	.40	.50	E			
OTTA	28	1526	1552	N24 E90			1-	C	1539	.29			D		
	28	1844	1853	N12 E20	7735		1-	2	1845	.20	.20	10			
	28	2232	2245	N18 W32			1-	C	2236	.40	.40				
	29	0040	0058	N01 W66	7736		1-	C		.60	1.02	18			
OTTA	30	1541	1549	N09 E67			1-	C	1545	.11	.21		H		
	30	1703	1710	N15 E23			1-	C	1707	.15	.15				
	30	2247	2304 D	N12 W17	7735		1-	C		.34	.34	17			

COMMERCE - STANDARDS - BOULDER

INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

IIIc

MARCH 1965

HOURLY-UT

COMMERCE - STANDARDS - BOULDER

Observatories included:

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

SOLAR FLARES

NOVEMBER 1964

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

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION MINUTES	IM- POR- TANCE	OBS. COND.	TIME UT	MEASUREMENTS			REMARKS
		START	END	APPROX.	LAT.	M- MATH PLAGE REGION					MEAS. AREA Sq Deg	COVR. AREA Sq Deg	MAX WIDTH H ₀	
	NOV 1964													
	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									
	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									
	12	0940	1008 D	0955	N29 E02	7568	125 D	1-	2 S	0958	1.50	1.60		DFGHJ
	12	0945 E	1150 D		N30 E03	7568		1-	3	1420	.77	.88		
	12	1420			N29 W01	7568								
	13	0050	0055	NO FLARE	PATROL									
	13	0135	0225	NO FLARE	PATROL									
	13	0245	0350	NO FLARE	PATROL									
	13	0400	0410	NO FLARE	PATROL									
	13	2100	2122	2104	N32 W18	7568		1-	C	2104	.30	.30		J
	13	2204	2214	2210	N32 W18	7568		1-	C	2210	.20	.20		J
	14	0039	0058	0046	N34 W21	7568		1-	C	0046	.40	.48		DG
	14	0042 E	0055	0047	N32 W20	7568		1-	C					D
	14	0820 E			N30 W25	7568		1-	S					
	14	0920			N30 W27	7568		1-	2	0920	.56	.70		
	15	0404	0417	0410	N32 W39	7568		1-	C	0410	.30	.42		GH
	15	0853 E	0857 D	0853	N30 W38	7568	4 D	1-	3	0853			2.20	D
	15	1104	1107 D		N32 W44	7568		1-	C	1641	.20	.20		10
	15	1638	1647	1641	N32 W38	7568		1-						
	16	0250	0258	0254	N31 W53	7568		1-	C	0254	.40	.72		DGH
	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									
	16	1729 E	1733 D	1730	N20 W12	7581		1-	P		.27	.27		18
	16	2100 E	2101 U	2100 E	N19 W13	7581		1-	P		1.92	1.81		18
	16	2122	2127 D	2125	N19 W16	7581		1-	P		.27	.27		19
	16	2255	2308 D	2308	N20 W17	7581		1-	P		.35	.35		19
	16	2305	2315 D	2315 D	N18 W15	7581		1-		2310	3.60	3.90		E
	16	2338 E	2351 D		N18 W16	7581		1-		2338	1.80	1.90		D
	16	2349 E	0034	0006	N18 W14	7581	45 D	1-	V	0006	2.46	2.68	.78	100
	16	2353	0035	0014	N22 W17	7581		1-	C	0014	.60	.66	2.49	134
	17	0015 E	0040 D		N18 W15	7581	25 D	1		0018	3.20	3.50		E

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				REMARKS		
		START	END	MAX PHASE	APPROX					MOMENT PLACE REGION	TIME U T	MEAS AREA Sq Deg	CORR AREA Sq Deg		MAX WIDTH H ₀	MAX INT °
					LAT	MER DIST										
VORO IKOM MITK SYDN CATA SACP SACP SACP SYDN	NOV 1964															
	17	0105 E	0224 D	N18 W18		7581	25 D	1-	C	0113	1.35	1.43		30	EH	
	17	0110 E	0135 D	N18 W15		7581		1						100	D	
	17	0343	0350 D	N18 W16		7581		1-						80	E	
	17	0345 E	0354	N20 W18		7581	9 D	1	V	0345	.98	1.08	1.64	96	E	
	17	0527	0604	N17 E64		7582	37	2	S	0542	4.00	9.00			GJ	
	17	0851 E		N18 W24		7581		1-						17		
	17	1724	1746	S10 W58		7579		1-	C		.21	.31				
	17	1750	1800	N18 W26		7581		1-	C		.41	.43		17		
	17	2208	2229	N20 W31		7581		1-	C		.41	.43		16		
TACH SACP MITK MITK LOCK LOCK LOCK LOCK	17	2224	2235	N19 W28		7581		1-	C		.55	.58		19		
	17	2224	2235	N20 W28		7581		1-	C	2226	1.40	1.61			H	
	18	0727	0753	N17 E49		7582	26	1	C	0739	2.10	3.20		55	E	
	18	1507	1516	N19 W36		7581		1-	C		.25	.27		17		
	20	0223	0317	N37 W45		7587		1-	C						DG	
	21	0334	0347	N21 W75		7581	13	1	C							
	21	2128	2134	N17 W85		7581		1-	C	2130	.20	.60		10	H	
	21	2339	2357	N26 E62		7592		1-	C	2344	.20	.30		10	J	
	22	0700	0745	NO FLARE												
	22	1830	1930	N37 W80		7587		1-	C	1845	.40	1.00		10	J	
MITK SYDN SYDN MITK LOCK LOCK LOCK LOCK MITK SYDN SACP	22	2235	2250	N37 W80		7587		1-	C	2239	.20	.50		10	J	
	22	2302	2327	N37 W80		7587		1-	C	2310	.20	.60		10		
	22	2333	0030	N37 W85		7587	57	1	C	2400	1.60	4.80		20	L	
	23	0003	0028	N37 W84		7587	25	1	C				4.95		G	
	23	0012	0019	N38 W90		7587			C						G	
	23	0408	0427	N36 W90		7587	15	1	C				3.65		G	
	23	0411	0426	N37 W86		7587			C						G	
	24	0620	0640	NO FLARE												
	24	1728	1745	N28 E28		7592		1-	C	1733	.30	.30		10	L	
	24	2341	0030	N29 E26		7592	49	1	C	2350	2.00	2.00		20	L	
SACP SACP SACP SACP SACP SACP SACP SACP SACP SACP	24	2343	0004	N27 E25		7592	21	2	C	2351	7.00	8.40			GHJ	
	24	2343	2355 D	N28 E26		7592		1-	C		1.40	1.50		19		
	25	1655	1709	N29 E15		7592		1-	C	1658	.20	.20		10		
	25	2150	2201	S11 W28		7585		1-	C	2155	.30	.30		10		
	25	2217	2232	N25 E09		7592		1-	C	2221	.30	.30		10		
	26	1210	1220	PATROL												
	26	1235	1255	NO FLARE												
	26	1305	1325	NO FLARE												
	26	1335	1350	NO FLARE												
	26	1616	1704	N27 E03		7592		1-	C		.82	.84		19		
HUAN SACP	26	1935	1950	NO FLARE												
	27	1313 E	1328	N28 W10		7592		1-	P	1314	.31	.35		16	E	
	27	2140	2200	N26 W13		7592		1-	C		.31	.31				

SOLAR FLARES

NOVEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS		MAX WIDTH H ₀	MAX INT °	REMARKS
		START	END	APPROX LAT	MER DIST	MC-MATH FLAGE REGION				MEAS. AREA Sq Deg	CORR AREA Sq Deg			
SACP	NOV 27	2248	2300	N27	W16	7592		1-	C	.43	.45		18	
SACP	27	2303	2316 D	N30	W17	7592		1-	P	.54	.56		17	
UCCL	28	1121	1125	N18	W50	7596		1-	3					DH
CAPE	28	1315	1338	N28	W26	7592		1-		.80	1.00			H
SACP	28	1357	1424	N28	W25	7592		1-	C	.21	.23		18	
LOCK	28	1634	1655	N28	W28	7592		1-	C	.30	.30		10	H
LOCK	28	1820	1830	N28	W28	7592		1-	C	.20	.20		10	H
LOCK	28	2120	2155	S11	W90	7585		1-	C	.20	1.00		10	
LOCK	29	1602 E	1618	N07	E70	7602		1-	C	.50	1.00		10	
LOCK	29	1637	1645	N30	W13	7600		1-	C	.30	.30		10	L
LOCK	29	1827	1850	N33	E05	7601		1-	C	.30	.30		10	L
HUAN	30	1716 E	1743	N18	W82	7596		1-	P	.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	Istanbul	Lockheed	Ondrejov	Tortosa
Bucharest	Crimee	Izmiran	Lvov	Sacramento Peak	Uccle
Capetown	Haute-Provence	Kanzelhöhe	Manila	Salonique	Voroshilov
					Zürich

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM- POR- TANCE	OBS COND.	TIME U T	MEASUREMENTS			MAX WIDTH Ha	MAX INT %	REMARKS
		START	END	APPROX LAT.	MER DIST	MEMPHIS PLACE REGION					MEAS AREA Sq Deg	CORR AREA Sq Deg				
CAPS SACP	DEC 1964															
	01	0005	0015	NO FLARE	PATROL											
	01	0205	0225	NO FLARE	PATROL											
	01	1055	E	1111	D											
	01	1426	1447	1440												
	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											
	04	0032	0049	0037												
	04	0753	0810	0757												
	04	0827	0856													
	04	0829	E	0855	D											
	04	0840	E	1000	D											
	04	0935	E	0955	D											
	04	0958	E	1003	D											
	04	0958	E	1015	D											
	04	1000	E													
	04	1500	1505	NO FLARE	PATROL											
	04	1536	1548	1541												
	04	2312	2334	2315												
	05	0112	0124	0119												
	05	0456	0502	0457												
	05	1740	1800	N29 E33												
	05	2003	2024	N24 W26												
	05	2054	2107	2059												
	05	2130	2149	2140												
	06	0320	0325	NO FLARE	PATROL											
	06	0515	0520	NO FLARE	PATROL											
	07	0400	0410	NO FLARE	PATROL											
	07	1008	E	1025	D											
	07	1017	E	1038												
	07	1018	E	1042	D											
	07	1019	E	1022												
	07	2344	0011	2357												
	07	2344	0011	2357												
CAPS SACP	01	0005	0015	NO FLARE	PATROL											
	01	0205	0225	NO FLARE	PATROL											
	01	1055	E	1111	D											
	01	1426	1447	1440												
	01	1550	1605	NO FLARE	PATROL											
CAPS SACP	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											
CAPS SACP	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											
CAPS SACP	03	1650	1705	NO FLARE	PATROL											
	03	1710	1900	NO FLARE	PATROL											
	03	1910	1915	NO FLARE	PATROL											
	03	1930	2115	NO FLARE	PATROL											
	04	0032	0049	0037												
CAPS SACP	04	0753	0810	0757												
	04	0827	0856													
	04	0829	E	0855	D											
	04	0840	E	1000	D											
	04	0935	E	0955	D											
CAPS SACP	04	0958	E	1003	D											
	04	0958	E	1015	D											
	04	1000	E													
	04	1500	1505	NO FLARE	PATROL											
	04	1536	1548	1541												
CAPS SACP	04	2312	2334	2315												
	05	0112	0124	0119												
	05	0456	0502	0457												
	05	1740	1800	N29 E33												
	05	2003	2024	N24 W26												
CAPS SACP	05	2054	2107	2059												
	05	2130	2149	2140												
	06	0320	0325	NO FLARE	PATROL											
	06	0515	0520	NO FLARE	PATROL											
	07	0400	0410	NO FLARE	PATROL											
CAPS SACP	07	1008	E	1025	D											
	07	1017	E	1038												
	07	1018	E	1042	D											
	07	1019	E	1022												
	07	2344	0011	2357												
CAPS SACP	07	2344	0011	2357												
	07	2344	0011	2357												
	07	2344	0011	2357												
	07	2344	0011	2357												
	07	2344	0011	2357												

SOLAR FLARES

DECEMBER 1964

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

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS				REMARKS
		START	END	APPROX LAT	APPROX MER DIST	M:PLATH PLAGE REGION				TIME — U T	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H _g	
MITK MITK MITK	DEC 1964													
	18	0700	0705	NO FLARE	PATROL									
	18	1900	2320	NO FLARE	PATROL									
	19	0146	0214	0149	S10 W35	7613								G
	19	0241	0248	0243	N06 W38	7624								DG
	19	0527	0617	D 0534	N06 W38	7624								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									
KODA	19	2100	2110	NO FLARE	PATROL									
	19	2220	2315	NO FLARE	PATROL									
	20	0320	0335	NO FLARE	PATROL									
	20	0338 E	0345	0338	S10 E18	7619								
	20	0545	0615	NO FLARE	PATROL									
MITK CATA OTTA	20	1750	1850	NO FLARE	PATROL									
	21	0005	0045	0023	S12 E06	7619	40							
	21	0945 E	1140 D	1728	S09 E03	7619	115	D						
	21	1724	1739	1728	N35 E36	7622								
MITK MITK	22	0245	0325	NO FLARE	PATROL									
	22	0500	0550	0513	S12 W07	7619	50							
	22	0610	0610	D 0548	N06 W90	7624								
	22	1525	1530	NO FLARE	PATROL									
	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									
UCCL HUAN CAPE HUAN HUAN HUAN	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									
	24	1200	1203	1203	S12 W43	7619								
	24	1248	1303	1251	N37 E05	7622								
	24	1250	1300	1251	N38 E05	7622								
	24	1406	1436	1436	N37 E05	7622								
	24	1645	1707	D 1652	N37 E05	7622								
LOCK	24	1719 E	1721 D	NO FLARE	PATROL									
	24	2035	2220	NO FLARE	PATROL									
	25	0405	0520	NO FLARE	PATROL									
	25	1555	1850	NO FLARE	PATROL									
	25	2200	2230	2215	N30 E08	7622								
SYDN	26	0026	0032	0029	N33 W23	7622								

SOLAR FLARES

DECEMBER 1964

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS				REMARKS	
		START	END	MAX. PHASE	APPROX.	LOCATION				TIME	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H ₀		
						LAT									MER DIST
	DEC 1964														
	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	28	1708	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		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		1	C						
CAPS	30	0846 E	1050 D		N34 W80	7622	20	1	1	0902	3.00			157	
ATHN	30	0920	0929		N22 E09	7626	124 D	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-	1	0928	.30	.40			D
CAPS	30	1027 E	1050 D		N22 E10	7626	23 D	1		1040	2.00	2.20		150	
HTPR	30	1032	1040	1034	N22 E12	7626		1-	C	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-	C	1146	.60	.70			E
HUAN	30	1146	1207	1157	N31 W80	7622		1-	C	1157	.40	.40			D
HUAN	30	1308 E	1323 D	1317	N31 W80	7622		1-	P	1317	.20	.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	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM- FOR- TANCE	OBS COND.	TIME	MEASUREMENTS			REMARKS		
		START	END	LAT.	APPROX.	MER. DIST.					MC-MATH PLACE REGION	MEAS AREA Sq Deg	CORR. AREA Sq Deg		MAX WIDTH Ha	MAX INT %
DEC 1964																
CATA	31	0900 E	1020 D	N21 W03			7626	1		0910						
LVOV	31	0953 E	1212 D	N21 W02			7626	2								
HUAN	31	1520	1528	N22 W03			7626	1-	C	1526	.20	.20		CDH		
SACP	31	1723	1740	N23 W08			7626	1-	C		.54	.56				
LOCK	31	1723	1740	N23 W08			7626	1-	C	1727	.60	.60				
MCMA	31	1723	1740	N23 W07			7626	1-	2 C	1728	1.00	1.10		E		
HUAN	31	1723 E	1741	N23 W07			7626	1-	P	1727	.70	.80		EH		
	31	1925	2400	NO FLARE												

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	Istanbul	Lvov	Ottawa	Tortosa
Bakou	Crimee	Izmiran	Manila	Sacramento Peak	Uccle
Bucharest	Haute-Provence	Kanzelhoehe	McMath-Hulbert	Salonique	Voroshilov
					Zurich

IONOSPHERIC EFFECTS OF SOLAR FLARES

IIIq

SHORT WAVE RADIO FADEOUTS
SUDDEN COSMIC NOISE ABSORPTION
SUDDEN ENHANCEMENTS OF ATMOSPHERICS
SOLAR NOISE BURSTS AT 18 Mc/s

SUDDEN PHASE ANOMALIES
SUDDEN ENHANCEMENTS OF SIGNAL
SUDDEN FREQUENCY DEVIATIONS

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 (N5588KC-36, NPG-18)	1750
05	1759	1801									1	5	MC BO	
05	1802	1804									1	5	MC BO	
05	1808	1812									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, KFE4-0.2, KFE5-0.2)	
14	1920	2000	1950					30				1	BO (NPG-30)	
18	0510	0541	0517		25	2						1	DE	
18	0510	0620							2			1	DE	

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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

IVa

MARCH 1965

ARO-OTTAWA
DRAO-PENTICTON

2800 Mc/s
2700 Mc/s

MAR 1965	U R A N E	DESCRIPTIVE TYPE	START UT	DURATION HRS MIN	MEAN FLUX	MAXIMUM		REMARKS
						TIME	FLUX	
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 1701-1915 2001-2004	17	1314-0054	
2	1337-0038		18	1312-0055	
3	1336-0039		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	1420-1426 1523-1529	26	1259-0103	
12	1322-0049		27	1258-0104	
13	1320-0050		28	1256-0105	
14	1319-0051		29	1254-0106	
15	1317-0052		30	1253-0107	
16	1316-0053		31	1251-0108	

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVc

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.)	Inten- sity			Type	Time (U.T.)	Inten- sity	
1	no observ.	1500-1700			12	III	2209:15-2209:30	1-	23-41
6	continuum (f)	1813:15-1837	2	18-41		III	2336:45-2337:45	1+	18-41
		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

9.1 cm

STANFORD

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm

COSMIC RAY INDICES

(Neutron Monitors)

FEBRUARY 1965

FEB. 1965	CHURCHILL	CLIMAX	DALLAS
	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	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								Sum	Ap	Final Selected Days
		Three hour Gr. interval										
		1	2	3	4	5	6	7	8			
1	0.1	3-	2o	1o	1o	0o	0o	0o	0+	7o	4	Five Quiet
2	0.0	0+	2-	1-	0o	0o	0+	1-	1o	5-	2	
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	
5	0.4	2-	1+	1-	1o	1+	2-	2-	1+	11-	5	
6	1.1	3o	1+	2-	0+	3o	5-	3+	2+	20-	14	12
7	1.4	4-	5+	6-	3+	4o	4+	3o	3-	32o	31	13
8	1.0	1+	1-	1+	2-	1-	2o	5o	5+	18o	17	17
9	0.8	3-	2o	1o	2+	3o	3+	2+	2o	19-	10	19
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 Disturbed
12	0.1	2o	1+	1o	2-	1o	0+	0+	0o	8-	4	
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	
15	0.9	3o	2o	1o	2-	3o	4o	2-	3o	19+	12	
16	0.2	2+	3o	1o	2-	1+	1+	1-	1+	13-	6	21
17	0.0	2-	0o	0o	1o	2-	0o	0o	1-	5o	2	23
18	0.4	0o	0o	0o	0+	1+	1o	1o	3o	7-	4	25
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 Quiet
22	0.1	2o	1-	1o	1-	1-	1-	2-	2+	10-	5	
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	
25	0.8	5o	2+	2+	3-	2-	1+	1o	3o	19+	14	
26	0.5	2o	2o	3-	2-	2-	2+	2-	1+	15+	7	1
27	0.6	2+	1+	1o	3-	3o	3-	1o	3-	17-	9	2
28	0.3	3-	2o	1-	1+	1+	2o	2o	1+	13+	6	3
												5
												12
												13
												17
												18
												19
												22
Mean:	0.55									Mean:	9

COMMERCE - STANDARDS - BOULDER

NORTH ATLANTIC, NORTH PACIFIC

FEBRUARY 1965

FEB. 1965	WHOLE DAY INDICES			ADVANCE FORECASTS (Jc- REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								NORTH PACIFIC			GEOMAGNETIC INDICES							
					6 - HOURLY QUALITY FIGURES				SHORT - TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF.				8 - HOURLY QUALITY FIGURES			K _{PR}		A _{PR}		K _{SI}		A _{SI}	
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		00 TO 06	06 TO 12	12 TO 18	18 TO 24	00 TO 06	06 TO 12	12 TO 18	18 TO 24	03 TO 11	11 TO 19	19 TO 03	HALF (1)	DAY (2)	08- 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																			
S				3																			
U				0																			
F				0																			
DISTURBED PERIODS: P				0																			
S				0																			
U				0																			
F				0																			

COMMERCE - STANDARDS - BOULDER

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_{PR} indices are issued each Wednesday for the coming seven days. The value for the first day of each prediction period is underscored.

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

FEBRUARY 1965

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	Ottawa, Solar Flare 25/1325Z	165	Magnetic Calm	Exists	
12	0400		166	+Strat Warming	Begins	Ukraine moving southern Ural Mountains moderate
13	0400		167	Strat Warming	Exists	Sverlovsk region moving northeast moderate
14	0400			Solar Activity	Exists	New region born
15	0400		168	Solar Activity Strat Warming	Exists Exists	Siberia moving northeastward moderate intensity increasing
16	0400		169	Solar Activity Strat Warming	Exists Exists	North Central Siberia moving northeastward strong intensity increasing
17	0400		170	Solar Activity Strat Warming	Exists Exists	Cosmic event Polcap Absorption North Central Siberia moving Poleward intense
18	0400		171	Strat Warming	Exists	North Central Siberia 73° north latitude 140° east longitude moving northeastward intense
19	0400		172	Strat Warming	Exists	North of Wrangel Island 76° north latitude 179° west longitude moving eastward intense
20	0400		173	Strat Warming	Exists	North of Bering Strait 78° north latitude 170° west longitude moving Northern Canada intense
21	0400		174	Strat Warming	Exists	North of Alaska 76° north latitude 160° west longitude slowly moving Northern Canada
22	0400		175	Strat Warming	Exists	North of Eastern Siberia slowly moving north-northeastward strong decreasing
23	0400		176	Strat Warming	Exists	North of Eastern Siberia slowly moving northward moderate decreasing
24	0400		177	Strat Warming	Exists	Polar region moderate
25	0400		178	Strat Warming	Exists	Polar region moderate
26**	0400		179	Strat Warming Strat Warming	Ends Begins	Polar region Prince Albert Canada moderate increasing moving north
27	0400		180	Strat Warming	Exists	Calgary Canada moving Vancouver Island intense
28	0400		181	Solar Activity Strat Warming	Exists Exists	Flares Vancouver Island moving westward moderate weakening
29	0400		182	Solar Activity	Exists	Due west of State of Oregon moving westward moderate decreasing intensity
30	0400		183	Solar Activity Strat Warming	Exists Ends	
31	0400		184	Strat Warming	Begins	In Greenland moving north-northeast moderate

COMMENCE - STANDARDS - BOUNDARY

* 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