

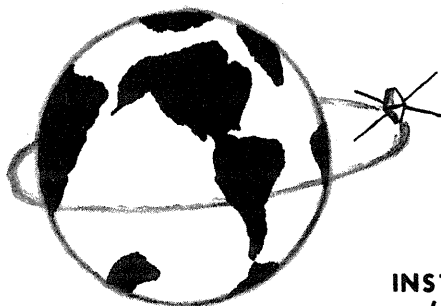
CRPL - FB - 261

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SPACE DISTURBANCES LABORATORY
SOLAR-GEOPHYSICAL DATA

Issued: May 1966



U. S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY
(FORMERLY CENTRAL RADIO PROPAGATION LABORATORY)
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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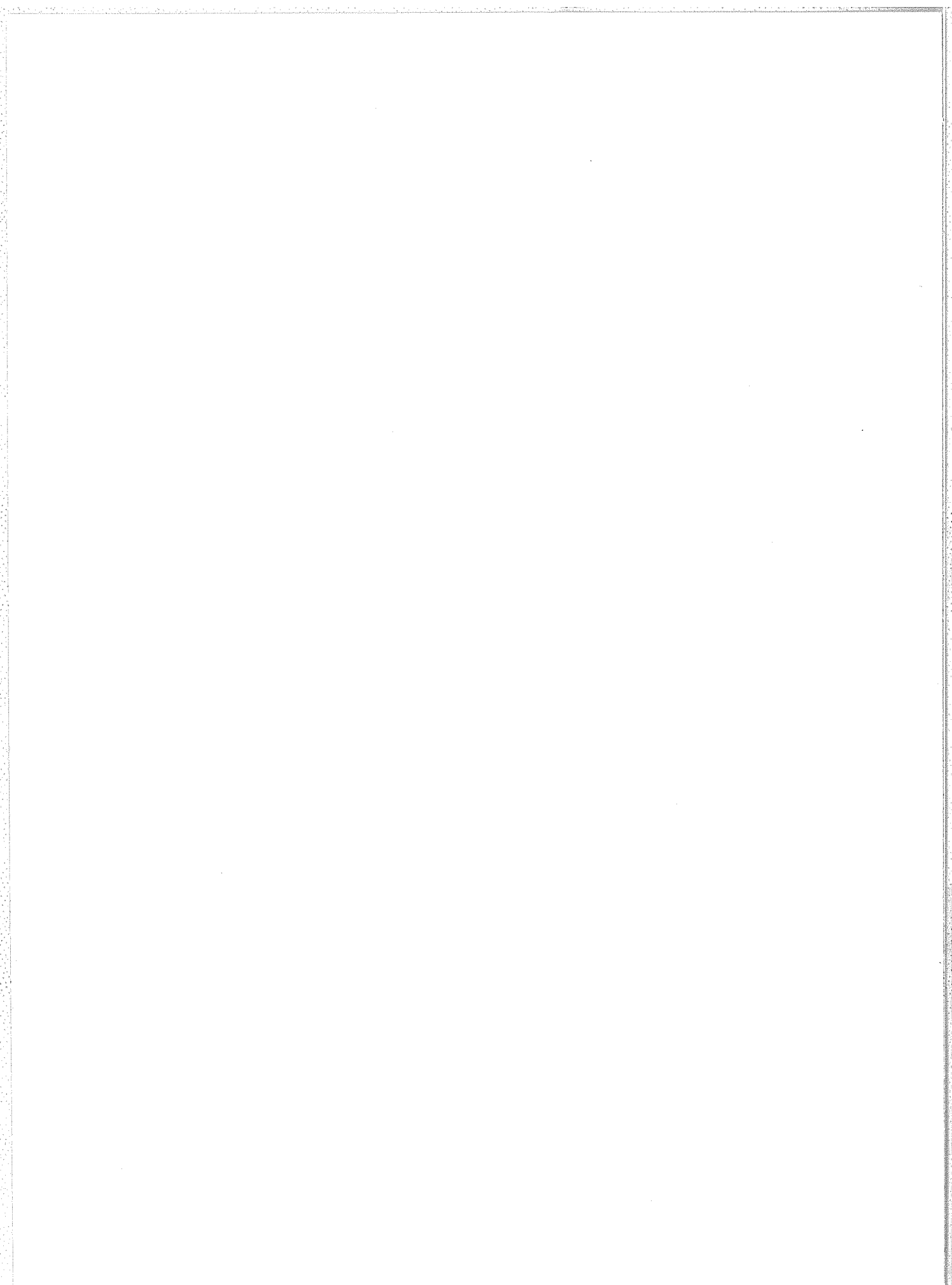
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The descriptive text was republished in January 1966. An addendum was given in the introduction of CRPL-FB-260, April 1966.

Solar Radiation Monitoring Satellite

Outstanding X-ray Events observed by the Solar Radiation Satellite, 1965-16D and the Explorer XXX Satellite, 1965-93A, beginning with January 1966, are reported in Section III. These data have been collected under the direction of Ronald K. Oines at Northern State College, Aberdeen, South Dakota, with advice on data reduction from Robert W. Kreplin of the U. S. Naval Research Laboratory. The presentation is therefore similar to that of earlier data reported from the U. S. Naval Research Laboratory. The flux is given in $\text{ergs cm}^{-2} \text{sec}^{-1}$ assuming that the regions of the solar x-ray spectrum can be approximated, as described in the descriptive text issued January 1966 on pages 14-15 under Solar X-ray Radiation. The 0-3A spectral range is calculated using a 10×10^6 °K "gray" body assumption.

Solar Radio Emission

Beginning with this issue the Outstanding Occurrences observed at discrete frequencies are combined together and are presented in one table in Section IV. The discussions in the descriptive text published in January 1966, with addendum in CRPL-FB-260 published in April, still apply for each individual reporter.

The table which follows on page ii gives the key for identifying type of event and indicates which frequencies have been or may be expected to report each type of event. The second column lists the URANA or URANE synoptic code that is used by the International Ursigram and World Days Service for daily telegraphic interchange of data. The name code used to identify each reporting station is included at the bottom the table.

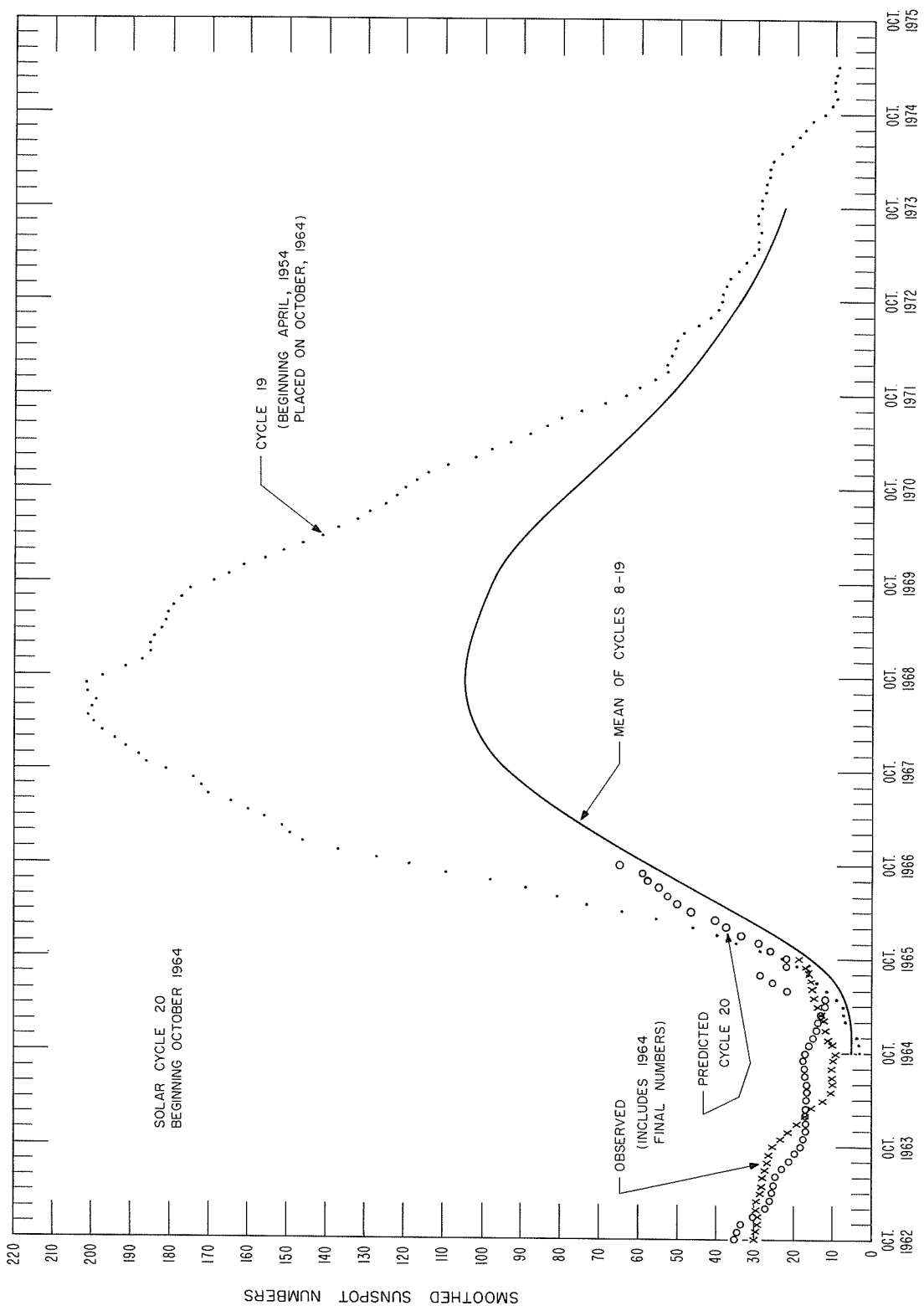
East-West Solar Scans

East-West solar scans from the 43 cm solar radio array at Fleurs, Australia, are presented in Section IV. These records are obtained in a manner similar to that for the 21 cm observations. Changes are being made in the installation at both wave-lengths and will be more fully discussed in a later edition of "Solar-Geophysical Data".

NUMBER CODE FOR TYPE OF SOLAR RADIO EMISSION EVENT

	Code	IUWDS URAN- Form	Mc/s													
			10700	8800	2800	2695	2690	1415	960	606	328	223	108/107	18		
Simple 1	1	E1	x	x	x	x	x	x	x	x	x					
Simple 1F	2	E1			x											
Simple 2	3	E2	x	x	x	x	x	x	x	x	x					
Simple 2F	4	E2			x											
Simple	5								x		x					
Minor	6	A4										x	x		x	
Minor +	7											x	x			
Simple 3	20	E3	x	x	x	x	x	x	x	x	x					
Simple 3A	21	E3			x											
Simple 3F	22	E3			x											
Simple 3AF	23	E3			x											
Rise	24	A1	x		x		x		x		x	x		x		
Rise A	25				x											
Fall	26				x											
Rise and Fall	27		x	x		x	x	x	x	x	x					
Precursor	28	E9		x	x											
Post Burst Increase	29	E4	x	x	x	x	x	x	x	x	x					
Post Burst																
Increase A	30	E4			x											
Post Burst Decrease	31	E5			x											
Fluctuations	40	E7	x	x	x	x	x	x	x	x	x					
Group of Bursts	41	A3,E8	x	x	x	x	x	x	x	x	x	x	x			
Series of Bursts	42	A2											x	x	x	
Onset of Noise																
Storm	43	A7	x	x		x	x	x	x	x	x	x	x	x	x	
Noise Storm in																
Progress	44	A6											x	x	x	
Complex	45	E6	x	x	x	x	x	x	x	x	x					
Complex F	46	E6	x	x	x	x	x	x	x	x	x					
Great Burst	47	E6	x	x	x	x	x	x	x	x	x					
Major	48	A8												x	x	
Major +	49	A9												x	x	

<u>Code</u>	<u>Station</u>	<u>Frequencies Reported, Mc/s</u>
BOES	Boeing - Seattle	223
BOUL	ESSA - Boulder	108
HALE	Haleakala - Hawaii	107
OTTA	ARO-Ottawa, DRAO-Penticton	2800, 2700
PENN	Pennsylvania State University	10700, 2690, 960, 328
SGMR	AFCLR - Sagamore Hill	8800, 2695, 1415, 606



PREDICTED AND OBSERVED SUNSPOT NUMBERS

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

Day	1965									1966			
	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1	0	9	18	0	20	52	29	13	18	7	25	64	
2	14	24	20	0	20	63	28	8	17	9	11	58	
3	8	36	19	15	21	60	20	8	16	20	11	74	
4	8	38	17	14	22	62	13	8	15	17	18	74	
5	7	34	8	0	22	55	13	8	8	17	12	55	
6	0	30	17	16	19	39	29	8	7	17	14	59	
7	11	32	22	7	23	27	40	8	7	16	10	70	
8	15	24	29	31	22	7	46	15	13	13	9	65	
9	9	23	33	12	18	8	38	7	13	10	15	47	
10	0	9	29	14	15	13	41	7	7	11	13	37	
11	0	7	35	16	19	8	40	0	8	14	10	25	
12	15	0	30	13	17	9	26	0	0	8	0	27	
13	21	0	23	8	17	8	17	14	17	16	0	24	
14	15	14	12	7	8	7	16	0	30	12	0	29	
15	30	0	11	0	8	0	10	14	36	16	9	29	
16	36	0	8	0	16	7	9	22	57	13	26	35	
17	55	12	7	0	8	0	7	21	50	19	44	40	
18	72	25	0	7	9	0	0	20	64	24	53	40	
19	75	16	0	7	7	10	0	18	68	32	60	24	
20	72	21	0	7	0	12	0	15	63	39	54	37	
21	70	19	0	7	0	15	0	10	52	41	49	40	
22	62	14	0	0	0	26	7	11	44	50	52	56	
23	50	7	0	0	11	23	0	9	38	55	40	69	
24	43	7	0	8	17	16	7	8	41	42	31	58	
25	30	7	7	0	13	24	0	12	27	37	23	56	
26	22	7	0	8	17	17	7	23	19	36	18	54	
27	7	8	7	14	24	17	0	29	16	35	10	40	
28	0	23	0	12	23	9	8	64	14	31	12	40	
29	0	18	0	16	37	8	8	64	19	31	35	48	
30	0	14	9	15	50	8	15	44	28	42	42	52	
31	0		7	22		14		38	15		52		
Mean:	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	26.7	23.5	24.5	47.5	

All Zürich Sunspot Numbers, R_z , for 1965 are Final. The numbers for 1966 are Provisional.

AMERICAN, R_A

Day	1965									1966			
	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1	0	14	12	0	15	33	29	10	25	0	11	32	
2	3	20	9	0	17	39	27	10	21	12	12	37	
3	4	29	6	7	19	50	20	10	19	14	14	34	
4	1	39	6	2	19	43	11	9	13	16	16	49	
5	1	33	3	0	16	37	1	10	7	17	15	40	
6	0	33	13	0	21	26	29	12	1	15	14	47	
7	9	34	22	7	21	16	43	9	0	14	10	49	
8	10	21	20	6	19	5	34	2	1	13	10	55	
9	4	13	22	9	19	10	38	3	0	12	16	36	
10	0	2	19	10	18	11	43	0	0	14	15	26	
11	1	0	20	10	17	11	38	0	0	15	7	19	
12	7	0	25	14	21	9	24	0	0	11	0	22	
13	10	0	15	1	18	10	15	0	19	12	3	16	
14	4	0	14	1	12	2	16	0	30	14	1	22	
15	29	0	11	0	11	0	14	18	37	13	15	31	
16	37	0	11	0	10	0	12	21	31	16	21	28	
17	57	10	4	0	5	0	0	18	43	13	43	28	
18	55	17	0	3	4	0	0	19	43	25	46	29	
19	65	15	0	1	2	8	0	16	55	24	46	16	
20	55	13	0	2	1	12	0	0	55	33	41	42	
21	48	11	0	0	0	14	0	7	41	36	32	38	
22	43	5	0	0	0	22	0	8	34	43	29	42	
23	39	0	0	0	14	20	3	10	36	55	19	58	
24	30	0	0	0	14	21	4	6	31	47	17	51	
25	23	0	0	0	12	16	0	17	18	47	16	47	
26	14	1	0	3	15	11	0	20	14	47	10	34	
27	1	6	0	16	13	12	0	35	15	32	0	22	
28	0	6	0	12	21	11	6	44	14	28	12	22	
29	0	8	1	3	35	11	9	55	20	36	36	33	
30	0	13	5	12	41	11	10	47	21	41	41	33	
31	0		0	19		12		28	3		32		
Mean:	17.7	11.4	7.7	4.5	15.0	15.6	14.2	14.3	20.9	22.8	19.4	34.6	

DAILY SOLAR FLUX AT 2800 Mc/s

1c

OTTAWA ARO

OBSERVED FLUX,S

Day	1965								1966			
	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	71.1	70.8	76.0	72.0	75.4	92.0	78.8	75.4	82.0	79.9	81.2	106.9
2	70.8	73.7	75.6	73.0	75.9	93.2	79.5	75.0	78.9	79.2	78.0	106.4
3	70.7	75.2	76.2	77.3	76.6	96.0	81.1	74.9	78.5	79.8	77.1	102.1
4	69.7	78.2	75.9	78.4	76.7	97.5	79.8	74.5	80.5	81.3	76.7	102.5
5	69.0	78.3	75.4	76.3	78.7	91.6	78.0	75.4	80.0	82.9	76.0	101.9
6	70.4	78.4	78.5	78.8	77.1	85.2	80.7	76.2	79.7	84.5	76.6	104.0
7	71.4	77.2	81.5	79.6	77.7	83.6	85.2	75.3	80.9	85.1	77.4	102.6
8	72.0	78.4	81.0	77.3	78.6	82.8	80.4	76.7	80.6	84.6	77.5	107.0
9	72.4	79.0	81.4	77.6	76.1	83.3	82.0	75.0	80.1	85.2	79.6	100.0
10	72.1	78.3	80.3	76.1	75.6	80.4	84.1	75.3	79.8	86.0	79.6	94.4
11	71.1	76.5	79.9	76.7	75.7	76.0	84.2	75.6	80.9	85.8	79.0	93.5
12	71.8	76.0	78.2	75.9	75.3	74.8	80.8	75.9	84.0	85.4	79.3	94.4
13	74.4	76.8	76.3	74.8	75.0	75.8	77.3	74.0	87.2	86.1	81.0	92.6
14	75.4	76.1	74.7	73.7	75.2	74.7	76.0	74.7	93.2	86.1	82.3	90.5
15	80.5	76.7	74.5	72.5	74.9	73.8	76.5	76.8	101.9	85.4	88.1	95.7
16	86.3	76.0	72.1	73.8	73.7	72.3	74.0	77.6	106.0	84.7	93.8	92.6
17	91.1	76.3	71.9	72.4	73.8	72.5	74.3	78.4	101.7	84.1	106.2	94.5
18	90.4	78.2	71.9	73.2	73.0	72.2	75.0	78.4	104.8	84.1	110.6	92.1
19	92.4	74.9	72.5	74.3	72.8	71.8	73.4	76.8	108.6	83.0	115.5	88.2
20	94.7	76.0	73.0	73.7	72.8	72.7	72.7	74.5	102.3	84.7	111.9	92.6
21	92.8	75.9	72.6	73.6	72.5	73.3	72.2	74.1	98.9	87.6	121.2	90.8
22	92.2	78.2	71.5	72.9	71.2	76.2	71.8	72.3	94.7	87.9	105.8	92.4
23	86.2	80.2	70.9	73.0	71.8	78.7	71.3	72.7	93.5	84.5	96.8	97.8
24	85.1	78.1	70.1	72.7	76.1	76.3	71.2	71.2	91.8	83.7	93.5	102.5
25	81.0	79.3	70.0	72.2	75.8	77.9	70.6	72.1	88.1	80.9	91.6	102.6
26	77.9	78.7	69.4	72.0	77.0	78.2	71.8	76.9	85.4	84.8	85.0	100.0
27	76.0	77.7	70.0	74.5	78.4	78.0	74.1	83.7	82.4	84.8	83.4	95.6
28	74.5	76.7	70.6	73.2	80.5	77.2	77.0	83.8	80.5	85.7	87.9	93.6
29	73.7	76.4	71.1	74.2	87.3	76.7	73.9	84.7	80.7		96.4	93.1
30	74.0	77.0	71.1	75.0	89.0	76.2	75.1	81.9	78.7		99.2	91.9
31	71.6		70.7	74.9		78.1		80.8	77.7		110.6	
Mean:	78.1	77.0	74.3	74.8	76.3	79.6	76.8	76.5	87.9	84.2	90.3	97.2

FLUX ADJUSTED TO 1 A.U., S_a

Day	1965								1966			
	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	72.2	72.8	78.6	74.2	76.8	92.2	77.6	73.3	79.3	77.6	79.7	106.8
2	71.9	75.8	78.2	75.2	77.3	93.3	78.2	72.9	76.3	76.9	76.7	106.3
3	71.9	77.4	78.8	79.6	77.9	96.1	79.8	72.7	75.9	77.5	75.8	102.1
4	70.9	80.5	78.5	80.7	78.0	97.5	78.4	72.3	77.8	79.0	75.5	102.6
5	70.2	80.6	78.0	78.5	80.0	91.6	76.7	73.2	77.4	80.6	74.8	102.0
6	71.7	80.7	81.2	81.1	78.3	85.1	79.2	74.0	77.1	82.1	75.5	104.2
7	72.7	79.5	84.3	81.8	78.9	83.5	83.7	73.0	78.2	82.8	76.2	102.8
8	73.4	80.7	83.8	79.5	79.8	82.6	78.9	74.4	77.9	82.3	76.4	107.3
9	73.8	81.4	84.1	79.8	77.2	83.0	80.4	72.7	77.4	82.9	78.5	100.3
10	73.5	80.7	83.0	78.2	76.7	80.1	82.4	73.0	77.2	83.8	78.6	94.8
11	72.5	78.9	82.6	78.8	76.7	75.7	82.5	73.2	78.2	83.6	78.0	93.9
12	73.3	78.4	80.8	77.9	76.3	74.5	79.1	73.5	81.2	83.2	78.3	94.8
13	76.0	79.2	78.8	76.7	75.9	75.4	75.7	71.7	84.3	83.9	80.0	93.1
14	77.0	78.5	77.2	75.6	76.1	74.3	74.4	72.4	90.1	83.9	81.4	91.0
15	82.3	79.1	77.0	74.4	75.7	73.3	74.8	74.4	98.5	83.3	87.1	96.3
16	88.3	78.4	74.5	75.6	74.5	71.8	72.4	75.1	102.6	82.7	92.9	93.2
17	93.2	78.7	74.3	74.2	74.5	72.0	72.6	75.9	98.4	82.1	105.1	95.2
18	92.6	80.8	74.3	75.0	73.7	71.6	73.3	75.9	101.4	82.2	109.6	92.9
19	94.6	77.4	74.9	76.1	73.4	71.2	71.6	74.3	105.1	81.1	114.6	89.0
20	97.0	78.5	75.4	75.5	73.4	72.0	70.9	72.1	99.0	82.8	111.0	93.5
21	95.1	78.4	75.0	75.3	73.1	72.6	70.5	71.7	95.7	85.7	120.3	91.7
22	94.5	80.7	73.9	74.6	71.7	75.4	70.0	70.0	91.8	86.0	105.1	93.4
23	88.4	82.8	73.2	74.6	72.3	77.9	69.5	70.3	90.6	82.7	96.2	98.8
24	87.3	80.7	72.4	74.3	76.6	75.5	69.3	68.8	88.9	81.9	92.9	103.7
25	83.1	81.9	72.3	73.8	76.2	77.0	68.8	69.7	85.4	79.3	91.1	103.8
26	80.0	81.4	71.7	73.5	77.4	77.3	69.9	74.4	82.7	83.1	84.7	101.3
27	78.1	80.3	72.3	76.0	78.7	77.0	72.1	80.9	79.9	83.2	83.1	96.0
28	76.5	79.3	72.9	74.7	80.8	76.2	74.9	81.0	78.1	84.1	87.6	94.9
29	75.8	79.0	73.4	75.7	87.6	75.6	71.9	81.9	78.3		96.1	94.5
30	76.1	79.6	73.4	76.4	89.3	75.1	73.0	79.2	76.3		99.0	93.3
31	73.6		73.0	76.3		76.9		78.1	75.4		110.4	
Mean:	79.9	79.4	76.8	76.6	77.2	79.1	75.1	74.1	85.0	82.1	89.4	97.8

CALCIUM PLAGE AND SUNSPOT REGIONS

APRIL 1966

1966	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA						SUNSPOT DATA		
				CMP VALUES		HISTORY	AGE (ROTA- TIONS)	DATE FIRST SEEN	DURA- TION (DAYS)	CMP VALUES		HISTORY
				AREA	INT.					AREA	COUNT	
<u>March</u>												
30.8	S15	8244	New	(100)	(2.0)	b - d	1	≤ 4/4	≥ 1			
31.2	N19	8241	New	(300)	(2.0)	b - d	1	≤ 4/2	≥ 1			
31.3	S24	8245	New	(200)	(2.5)	b - d	1	≤ 4/4	≥ 2			
31.7	N38	8246	New	(300)	(2.5)	b - d	1	≤ 4/4	≥ 2			
<u>April</u>												
1.7	N22	8226 (2)	8184	(400)	(1.0)	ℓ / d	2	< 3/28	> 4			
1.8	S24	8231	New	(100)	(1.0)	b - d	1	3/30	2			
2.6	S26	8232	New	(200)	(2.0)	b - d	1	3/30	2			
2.7	N30	8238	New	200	1.0	b ^ ℓ	1	3/31	9			
3.8	S21	8247	New	(200)	(1.5)	b - d	1	4/4	2			
3.8	N27	8223	8191	(5400)	(3.0)	ℓ - ℓ	2	3/27	15	1010	50	ℓ ^ ℓ
5.2	N30	8248	New	400	2.5	b - d	1	4/4	8	(10)	(2)	b / d
5.4	N40	8234	8188	300	1.0	ℓ - d	3	3/30	9			
6.6	S26	8242	New	300	1.5	b - d	1	≤ 4/2	≥ 8	(10)	(2)	b - d
6.7	N20	8240	New	1500	2.5	ℓ - ℓ	1	3/31	14	30	26	b ^ ℓ
8.1	S03	8256	New	(100)	(1.5)	b - d	1	4/9	2			
10.4	N19	8253	New	(200)	(1.0)	b - d	1	4/7	9			
11.1	N25	8251	8193	900	2.0	ℓ - ℓ	4	4/5	12			
12.1	N30	8254	8204	900	2.5	ℓ - ℓ	2	4/5	13			
13.0	S26	8260	New	100	1.0	b - d	1	4/11	2			
13.0	S33	8267 (1)	New	(100)	(1.5)	b - d	1	4/17	1			
13.1	S20	8266 (1)	New	(100)	(1.0)	b - d	1	4/17	1			
13.1	N10	8258 (1)	New	(100)	(1.5)	b - d	1	4/10	1			
13.5	N29	8264	New	(300)	(1.5)	b - d	1	4/15	3			
14.8	S22	8263 (1)	New	(100)	(1.5)	b - d	1	4/12	1			
15.6	S22	8268 (1)	New	(200)	(1.0)	b - d	1	4/17	1			
18.4	S23	8265 (1)	New	(100)	(2.0)	b - d	1	4/16	1			
18.6	N22	8262	8207	7500	3.0	ℓ - ℓ	2&3	4/11	15	130	27	ℓ ^ ℓ
19.1	N03	8270 (1)	New	200	1.5	b - d	1	4/18	1			
20.7	N29	8275	New	(400)	(3.5)	b / d	1	4/22	5	(20)	(19)	b / ℓ
22.3	N19	8276	New	(300)	(1.5)	b - ℓ	1	4/24	5			
23.2	N14	8269	New	(300)	(2.0)	b - d	1	4/17	2			
24.0	N19	8272 (3)	New	(1400)	(2.5)	b / ℓ	1	4/20	10	90	26	b ^ ℓ
26.8	N25	8273	New	2200	2.5	ℓ √ ℓ	1	4/20	13	(10)	(3)	b - d
										10	6	ℓ ^ d
26.9	N41	8281 (1)	New	(200)	(2.0)	b - d	1	4/28	1			
27.9	N24	8274	New	(800)	(1.5)	ℓ - ℓ	1	4/21	13	(10)	(3)	b - d
28.0	S27	8280 (1)	New	(400)	(2.0)	b - d	1	4/25	1			
30.0	S26	8277 (1)	New	(100)	(1.5)	b - d	1	4/24	1			
30.1	N30	8278 (4)	8238	1500	3.0	ℓ ^ ℓ	2	4/24	12			

(1) These small and ephemeral plages were seen on the disk for only one day.

(2) Region 8226 contains weak remnants of old plage 8184.

(3) Region 8272 has developed in the same position as the short-lived regions 8218 and 8227, of the previous rotation.

(4) Part of region 8278 is new plage which develops in the region after May 1.

No calcium plage observations were secured at the McMath-Hulbert Observatory on April 1, 3, 19, 23, 27, 30, 1966.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

IIB

APRIL 1966

April 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	April 1966	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	2355	N26	E19	$\beta\gamma$	16004	8	1655	N25	W68	βp	16004
		S27	E56	βp	16006			N30	W45	βp	16010
2	1750	N26	E08	γ	16004	9	No Obs.	N20	W27	$\beta\gamma$	16008
		S27	E46	βp	16006						
3	2320	N26	W09	$\beta\gamma$	16004	10	1625	N21	W52	$\beta\gamma$	16008
		N28	W25	βp	16007	11-12	No Obs.				
		N20	E32	βp	16008						
4	1700	N26	W17	$\beta\gamma$	16004	13	1910	N21	E62	βp	16011
		N28	W35	β	16007	14	1615	N21	E52	$\beta\gamma$	16011
		N37	W61	β	16009			N19	E38	αp	16012
		N20	E24	βp	16008						
6	0010	N26	W33	$\beta\gamma$	16004	16	0015	N21	E34	$\beta\gamma$	16011
		N28	W49	αf	16007			N18	E20	β	16012
		N29	W09	βp	16010	16	1745	N21	E25	$\beta\gamma$	16011
		N19	E08	βp	16008			N21	E15	αf	16013
6	1650	N26	W43	$\beta\gamma$	16004	17-28	No Obs.				
		N29	W62	βp	16007						
		N29	W19	βp	16010						
		N20	W00	βf	16008						
7	2345	N25	W59	βp	16004	29	1715	N28	E08	β	16019
		N28	W78	βf	16007			N21	E52	αp	16020
		N29	W37	β	16010						
		N20	W17	βp	16008						

FINAL CORONAL LINE EMISSION INDICES

JANUARY 1966

CMP Jan 1966	North East Quadrant (observed 7 days earlier)			South East Quadrant (observed 7 days earlier)			South West Quadrant (observed 7 days later)			North West Quadrant (observed 7 days later)		
	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁
1	x	x	x	x	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	x	x	x	x
5	32	40	x	10	12	x	x	x	x	x	x	x
6	9	20	8	4	5	9	0	0	11	10	19	15
7	27	46	x	13	15	x	0	0	x	x	23	x
8	x	x	x	x	x	x	x	0	14	17	26	15
9	x	x	x	x	x	x	x	x	x	x	x	x
10	35	103	44	0	0	15	8	9	13	15	83	22
11	37	86	47	5	9	17	11	16	29	40	104	31
12	24	43	29	1	4	13	14	19	19	30	91	30
13	11	17	21	0	0	14	17	x	x	x	x	x
14	14	26	x	0	0	x	x	x	x	x	x	x
15	x	x	x	x	x	x	x	7	20	25	12	25
16	10	17	24	1	5	15	17	x	x	x	x	x
17	9	12	19	3	5	17	20	0	15	23	41	52
18	x	x	x	x	x	x	x	7	12	15	57	55
19	52	81	x	17	24	x	x	4	12	15	119	65
20	39	75	29	2	12	11	14	5	x	x	122	23
21	61	91	x	9	36	x	x	6	8	12	69	20
22	30	44	16	1	5	13	20	9	10	12	39	18
23	52	63	x	x	x	x	x	0	14	22	7	20
24	27	30	20	10	11	14	20	20	18	35	41	26
25	12	14	33	17	20	22	36	x	x	x	x	x
26	15	20	40	18	39	17	28	67	21	42	18	15
27	x	x	x	x	x	x	x	0	15	24	24	24
28	x	x	x	x	x	x	x	x	x	x	x	x
29	10	18	19	6	14	21	25	17	4	8	10	15
30	x	x	x	x	x	x	x	12	16	13	19	19
31	15	31	14	4	6	23	25	x	x	x	x	x

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

FINAL CORONAL LINE EMISSION INDICES

FEBRUARY 1966

CMP Feb 1966	North East Quadrant (observed 7 days earlier)			South East Quadrant (observed 7 days earlier)			South West Quadrant (observed 7 days later)			North West Quadrant (observed 7 days later)		
	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁	G ₆	G ₁	R ₁
1	14	25	x	3	6	23	x	x	x	x	x	x
2	17	31	x	5	7	x	7	9	25	36	15	18
3	22	44	27	3	4	15	x	x	x	x	x	x
4	30	67	14	2	5	12	x	x	x	x	x	x
5	35	63	10	1	5	16	x	0	39	53	65	38
6	18	30	20	0	0	25	0	0	6	8	42	14
7	68	92	32	13	16	11	0	0	16	22	65	18
8	x	x	x	x	x	x	1	8	17	23	45	25
9	46	68	21	16	18	19	0	0	x	x	34	33
10	8	10	14	5	15	23	0	3	11	16	15	44
11	6	9	19	4	9	23	x	x	47	60	x	16
12	18	20	17	6	6	14	9	12	0	0	17	30
13	21	25	20	10	14	18	0	0	43	49	22	46
14	x	x	x	x	x	x	7	13	7	10	42	9
15	x	x	x	x	x	x	0	0	22	28	91	47
16	55	90	27	10	19	18	9	10	15	18	91	27
17	x	x	x	x	x	x	21	64	6	13	141	17
18	x	x	x	x	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	x	x	x	x
20	36	56	11	3	6	9	x	x	x	x	x	x
21	24	38	23	18	85	18	7	15	18	24	84	87
22	14	18	32	21	69	34	7	17	12	18	85	17
23	6	12	14	25	64	25	x	x	x	x	x	96
24	4	11	22	30	100	44	x	x	x	x	x	x
25	x	x	22	x	x	x	6	18	12	20	22	43
26	12	15	6	13	25	8	8	15	9	10	8	18
27	3	10	x	0	0	52	13	15	8	10	17	12
28	13	21	14	11	15	12	5	8	13	17	7	16

x = no observations

* = yellow line emission

a = index computed from low weight data

FINAL CORONAL LINE EMISSION INDICES

He

MARCH 1966

GMP Mar 1966	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G 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	11	24	17	23	2	6	25	38	2	5	10	12	10	14	9	18
2	16	28	13	16	0	0	18	19	6	7	14	15	15	19	10	15
3	11	20	x	x	6	11	8	12	7	8	19	25	20	23	14	21
4	x	x	x	x	x	x	x	x	7	8	15	19	29	47	16	29
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	x	x	x	x	x	x	x	x
7	67	114	x	x	3	9	53	63	11	13	16	24	51	67	20	27
8	56	127	25	38	1	9	36	44	x	x	16	18	38	50	11	13
9	x	x	x	x	x	x	x	x	11	12	25	29	33	44	24	28
10	x	x	x	x	x	x	x	x	2	10	11	14	21	31	9	18
11	10	23	13	25	0	0	22	26	7	10	18	21	43	56	15	19
12	16	20	x	x	5	11	12	16	x	x	x	x	x	x	x	x
13	28	33	15	26	22	24	14	18	15	18	14	16	44	58	10	13
14	25	32	11	30	4	10	15	17	9	15	12	15	56	96	12	13
15	57	92	18	42	7	23	12	19	7	14	16	25	51	62	20	33
16	52	73	11	13	12	25	12	14	6	8	x	x	47	64	x	x
17	48	70	19	36	12	19	11	14	x	x	x	x	x	x	x	x
18	37	45	11	13	10	14	13	15	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	3	10	25	63	39	69	x	x
20	x	x	x	x	x	x	x	x	14	17	x	x	44	66	x	x
21	78	105	23	51	16	23	9	16	x	x	x	x	x	x	x	x
22	66	112	29	56	22	31	13	14	17	26	2	15	79	129	21	55
23	65	88	22	42	13	16	11	12	14	20	0	0	39	50	4	19
24	48	66	14	28	8	12	10	14	2	12	16	20	23	31	21	29
25	29	34	15	21	10	11	20	28	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	25	26	17	22	13	14	19	25	x	x	x	x	x	x	x	x
28	23	30	17	22	8	9	18	20	x	x	x	x	x	x	x	x
29	8	15	6	35	7	14	21	27	4	9	17	27	2	10	14	16
30	16	18	x	x	7	8	x	x	0	0	34	48	17	40	x	x
31	x	x	x	x	x	x	x	x	5	9	13	21	10	15	22	25

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

PROVISIONAL CORONAL LINE EMISSION INDICES

APRIL 1966

CMP April 1966	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G 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	27	44	37	125	x	13	21	24	x	8a	13a	19a	x	94a	23a	43a
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	10	x	x	x	128	x	x
5	x	x	21	23	x	x	23	30	x	x	x	x	x	x	x	x
6	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
7	21	34	21	30	x	0	21	29	x	x	x	x	x	x	x	x
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	0	x	x	x	56	x	x
10	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12	60	108	37	84	x	34	22	29	x	x	x	x	x	x	x	x
13	32	57	41	87	1	8	38	43	x	3	19	32	x	72	14	26
14	15	22	27	76	2	7	15	17	x	x	x	x	x	x	x	x
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	32a	69a	14a	23a	0a	0a	18a	24a	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	72	92	x	x	4	15	x	x	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
20	x	x	x	x	x	x	x	x	x	x	18a	24a	x	x	34a	50a
21	x	x	x	x	x	x	x	x	x	4	14	25	x	96	31	47
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
23	13	25	x	x	0	0	x	x	x	x	x	x	x	x	x	x
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
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	77	138	35	49	9	18	26	34	x	0a	56a	70a	x	121a	59a	117a
28	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	3a	32a	43a	x	78a	54a	95a

x = no observations

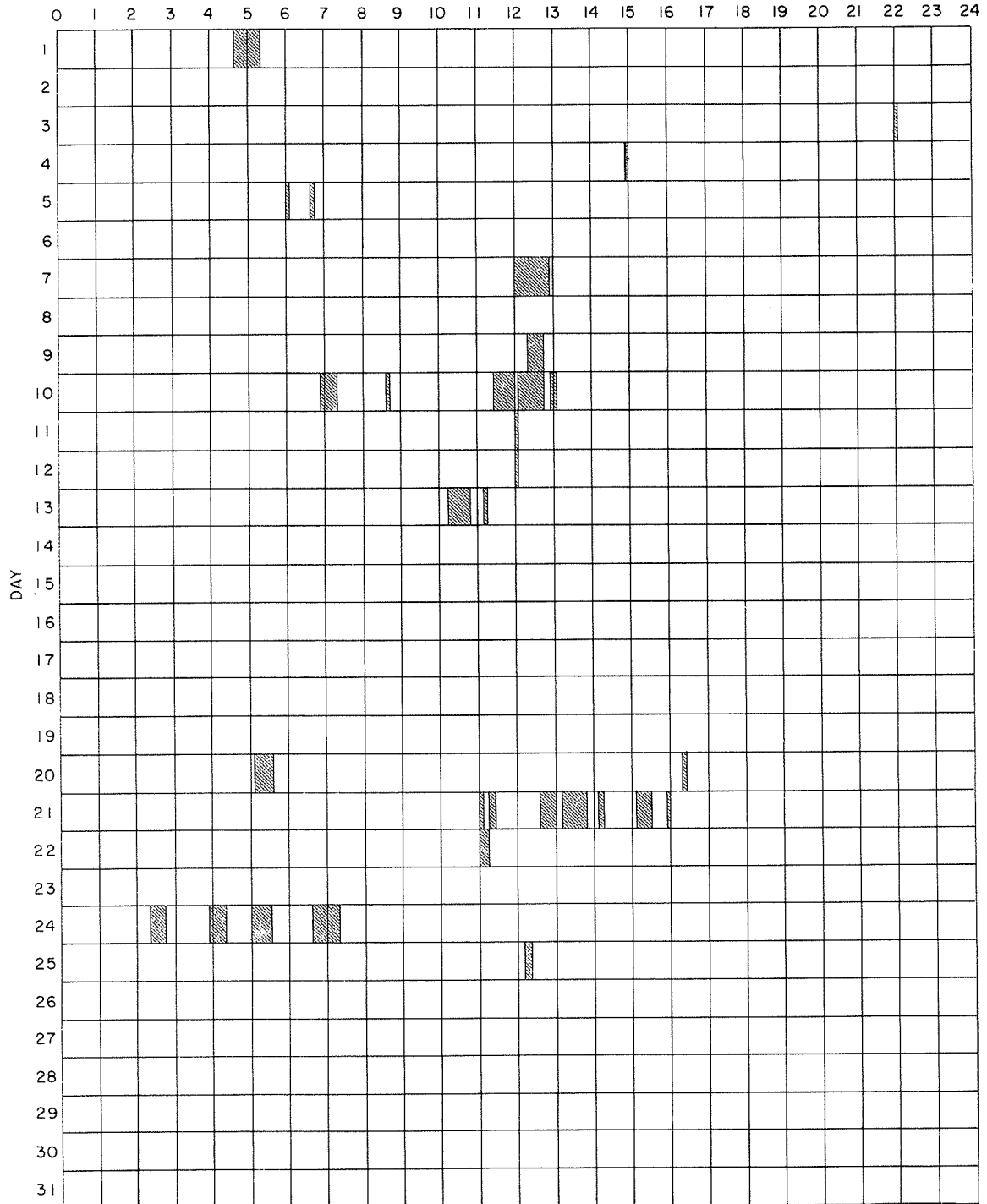
* = yellow line emission

a = index computed from low weight data

INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

APRIL 1966

HOUR-UT



Observatories included:

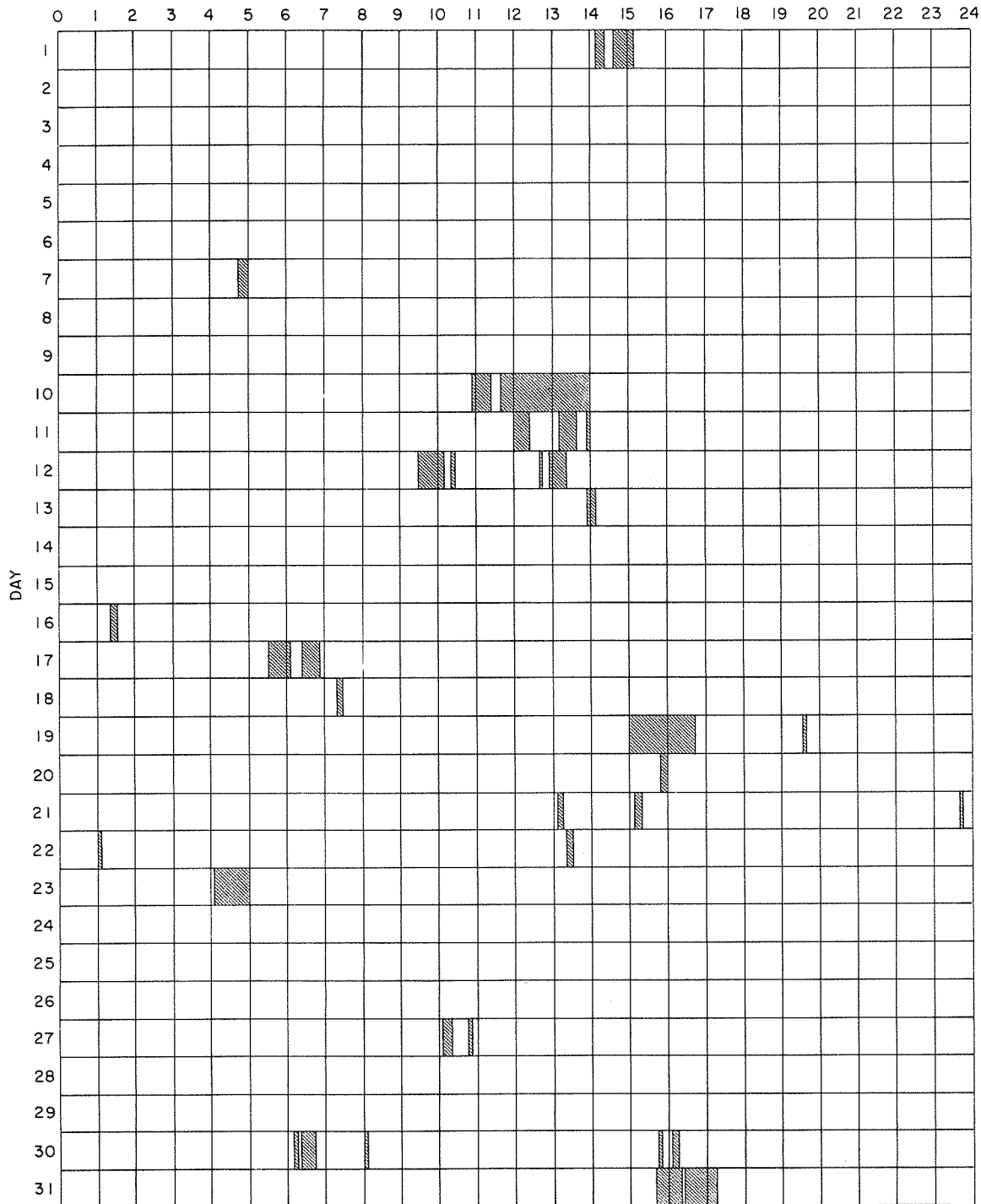
- | | | | | |
|------------------|--------------|----------------|-----------------|-------------|
| Arcetri | Haleakala | Kodaikanal | Meudon | Salonique |
| Arosa | Herstmonceux | Locarno | Mitaka | Tortosa |
| Capri-F (German) | Istanbul | Lockheed | Monte Mario | Wendelstein |
| Catania | Kandilli | Manila | Ottawa | Zürich |
| Climax | Kanzelhöhe | McMath-Hulbert | Sacramento Peak | |

INTERVALS OF NO FLARE PATROL OBSERVATIONS

IIIa

JANUARY 1966

HOUR-UT



Observatories included:

- | | | | | | |
|-------------------|--------------|------------|----------------|-----------------|-------------|
| Abastumani | Catania | Ikomasan | Locarno | Mitaka | Tachkent |
| Arcetri | Climax | Istanbul | Lockheed | Monte Mario | Tortosa |
| Athens | Crimee | Kandilli | Lvov | Ondrejov | Uccle |
| Bakou | Culgoora | Kanzelhöhe | Manila | Ottawa | Voroshilov |
| Bucharest | Haleakala | Kiev | McMath-Hulbert | Sacramento Peak | Wendelstein |
| Capri-F (German) | Herstmonceux | Kodaikanal | Meudon | Siberie | Zürich |
| Capri-S (Swedish) | Huancayo | | | | |

**SOLAR RADIATION MONITORING SATELLITE
X-RAY OBSERVATIONS**

ABERDEEN, SOUTH DAKOTA

JANUARY-APRIL 1966

OUTSTANDING EVENTS					
Date	Times of Observation	44-60A	8-12 A	0-8A	0-3A
Jan. 17	1313 1325	$>3.4 \times 10^{-1}$	$>1.3 \times 10^{-2}$	8.5×10^{-4}	2.5×10^{-5}
	1456 1506	2.4×10^{-1}	$>1.3 \times 10^{-2}$	7.7×10^{-4}	6.9×10^{-6}
18	1245 1255	1.6×10^{-1}	7.6×10^{-3}	3.5×10^{-4}	6.9×10^{-6}
	1428 1438	2.7×10^{-1}	1.3×10^{-2}	8.2×10^{-1}	8.5×10^{-6}
Feb. 12	0023 0035	---	1.4×10^{-3}	3.1×10^{-4}	6.9×10^{-6}
20	1956 2011	1.4×10^{-1}	1.3×10^{-3}	3.5×10^{-4}	$<7.5 \times 10^{-6}$
27	0001 0014	1.9×10^{-1}	2.2×10^{-3}	7.6×10^{-4}	$<8.3 \times 10^{-6}$
	2332 2344	3.5×10^{-1}	1.0×10^{-2}	1.0×10^{-2}	1.7×10^{-4}
28	1744 1758	---	2.5×10^{-3}	7.4×10^{-4}	$<7.6 \times 10^{-6}$
	2302 2313	3.3×10^{-1}	1.4×10^{-2}	$>1.2 \times 10^{-2}$	1.7×10^{-4}
March 1	1533 1543	---	3.5×10^{-3}	8.0×10^{-4}	5.3×10^{-7}
2	1859 1912	3.5×10^{-1}	3.5×10^{-3}	1.1×10^{-3}	3.6×10^{-7}
	0016 0029	---	5.1×10^{-3}	2.3×10^{-3}	1.2×10^{-6}
15	1534 1546	2.8×10^{-1}	2.8×10^{-3}	1.3×10^{-3}	---
17	1346 1359	---	1.2×10^{-2}	5.5×10^{-3}	3.1×10^{-6}
	1807 1817	---	1.2×10^{-2}	5.5×10^{-3}	8.2×10^{-6}
18	1920 1933	---	4.0×10^{-3}	9.8×10^{-4}	4.8×10^{-7}
	1302 1316	---	6.8×10^{-3}	1.4×10^{-3}	5.3×10^{-7}
20	1825 1834	---	6.8×10^{-3}	1.8×10^{-3}	7.9×10^{-7}
	2005 2018	---	1.3×10^{-2}	8.4×10^{-3}	4.8×10^{-6}
21	1232 1247	---	8.9×10^{-3}	2.6×10^{-3}	7.9×10^{-7}
	1751 1805	---	5.7×10^{-3}	1.0×10^{-3}	4.0×10^{-7}
26	1852 1903	3.5×10^{-1}	3.2×10^{-3}	1.3×10^{-3}	5.0×10^{-6}
28	1423 1433	3.1×10^{-1}	3.7×10^{-3}	1.3×10^{-3}	7.2×10^{-7}
29	1538 1551	---	4.9×10^{-3}	1.9×10^{-3}	7.4×10^{-7}
30	1508 1522	---	8.1×10^{-3}	1.7×10^{-3}	6.0×10^{-7}
	1255 1306	---	6.7×10^{-3}	1.4×10^{-3}	5.3×10^{-7}
31	1439 1452	---	4.6×10^{-3}	1.2×10^{-3}	8.4×10^{-7}
	1311 1321	3.5×10^{-1}	5.7×10^{-3}	1.5×10^{-3}	3.6×10^{-5}
April 3	1240 1251	2.6×10^{-1}	$>3.3 \times 10^{-3}$	1.2×10^{-3}	2.3×10^{-5}
6	1324 1332	2.2×10^{-1}	2.3×10^{-3}	8.0×10^{-4}	2.4×10^{-5}
7	1255 1308	2.9×10^{-1}	---	$>1.7 \times 10^{-3}$	2.5×10^{-5}
11	1242-1255	---	---	$>1.3 \times 10^{-2}$	$>1.7 \times 10^{-4}$
11	1435 1438	---	5.1×10^{-3}	1.0×10^{-3}	3.8×10^{-5}
12	1212 1226	3.0×10^{-1}	4.8×10^{-3}	1.2×10^{-3}	5.5×10^{-5}
14	1257 1310	2.2×10^{-1}	3.0×10^{-3}	7.3×10^{-4}	1.2×10^{-5}

IONOSPHERIC EFFECTS OF SOLAR FLARES

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

MARCH 1966

N.A.R. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
01	2102	2108	2103							003		1	BO(WWV10-0.3)	
02	0313	0441	0322									5	MA(NPG19-140),	
02	0313	0443	0314	S 2				140				5	MA CA OK TO	0335
02	1317	1400	1326					12				1	UM(NSS21-12)	
05	1602	1611	1604	S 1-								5	FM BO MC WS	
15	0143	0152	0145	S 1-								5	MA CA	0145
15	1335		1643					48				1	UM(NBA24-48,GBZ20-28)	1338
15	1450	1522	1512	S 1-								5	FM BE RO	1446
15	1503	1510	1504D							003		1	BO(WWV10-0.3)	
15	1537	1545D	1540							011		1	BO(WWV10-1.1)	
15	1630	1631									1	1	MC	
15	1636	1644	1637D					36		034	1	1	BO(WWV10-3.4)	
15	1636	1730	1642									5	BO(NBA24-36,NPM26-22, NSS21-17),HA(WWV120-22)	1636
15	1637	1642	1652		03	1						1	BO	
15	1638	1655	1642	S 1								5	HU FM MC WS	
15	1640	1727						1-				1	BO	
15	1849	1856	1850							006		1	BO(WWV10-0.6)	
15	1901	1903	1902							003		1	BO(WWV10-0.3)	
15	1904		1904D							004		1	BO(WWV10-0.4)	
15	1907E	1912	1907D							003		1	BO(WWV10-0.3)	
15	2008	2011	2009							002		1	BO(WWV10-0.2)	
15	2120	2123									1+	4	MC BO	2122
15	2242	2245	2242D							002		1	BO(WWV10-0.2)	
15	2258	2300	2259							002		1	BO(WWV10-0.2)	
16	0105	0200	0108					76				1	MA(NPG19-76)	0109
16	0107	0119	0112	S 1								5	MA CA OK TO	
16	0200	0234	0210					29				1	MA(NPG19-29)	0219
16	0316	0323									1+	1	MA	0315
16	0345	0350									1+	1	MA	
16	0426	0429									1	1	MA	
16	0426	0457	0435					36				1	MA(NPG19-36)	
16	1511	1512									1	1	MC	
16	1514	1516									1	1	MC	1501
16	1527	1533	1528D									1	BO(WWV10-0.5)	
16	1534	1537								005		1	MC	
16	1534	1540	1537							004		1	BO(WWV10-0.4)	
16	1548	1549										1	MC	
16	1610	1620	1612							003		1	BO(WWV10-0.3)	
16	1617	1619									1	4	MC BO	1603
16	1625	1630									1+	4	MC BO	
16	1625	1652	1637	SL 1								5	BE BO FM HU MC TR WS	
16	1625	1745	1629					58				5	UM(GBZ20-58,NSS21-42), BO(NPM26-14,NSS21-8)	
16	1626	1635D	1627							017		1	BO(WWV10-1.7)	
16	1701	1708	1703D							002		1	BO(WWV10-0.2)	
16	1805	1813	1806D							006		1	BO(WWV10-0.6)	
16	1920	1929									1+	4	BO MC	
16	1921	2018	1927					44				5	BO(NPM26-44,NBA24-22, NSS21-4),HA(WWV620-22)	1913
16	1922E	1929	1923							017		1	BO(WWV10-1.7)	
16	1925	1959	1929									1	A3	
16	1925	2002								1-		1	BO	
16	1929	2012	1932									1	BO	
16	1935D	1939D	1936D									1	BO	
16	1940	1952	1942	SL 1	06	1	1			006		5	MC FM WS	
16	2150E	2209	2150D									1	BO(WWV10-0.6)	
16	2150	2229D	2155							008		1	BO(NPM26-25,NBA24-8)	2145
16	2159	2200						25			1	4	MC BO	
16	2226	2240	2230D							006		1	BO(WWV10-0.6)	
16	2229	2400	2235					32				5	MA(NPG19-32), BO(NPM26-29), HA(WWV120-18)	2225
16	2255	2258									1	4	MC BO	2252
16	2255E	2301	2256							002		1	BO(WWV10-0.2)	
17	0040E	0615									1	1	MA (NOISE STORM)	0023
17	0131	0139									1+	1	MA	0134
17	0134	0149	0139									1	MA(NPG19-20)	
17	0134	0151	0140	SL 1-				20				5	MA OK WS	
17	0241	0246									1+	1	MA	0206E
17	0246	0248									1	1	MA	
17	0248	0251									1	1	MA	
17	0307	0313									1+	1	MA	0307
17	0316	0320									1	1	MA	
17	0339	0344									1	1	MA	
17	0354	0400									1+	1	MA (DOUBLE BURST)	0356E
17	0423	0428									1	1	MA (DOUBLE BURST)	0428
17	0427	0459	0437					48				1	MA(NPG19-48)	
17	0517	0522									1+	1	MA	0517
17	0545	0548									1	1	MA	
17	0559	0605									1+	1	MA	0559
17	1146	2306									1	1	MA	
17	1154	1307U	1233					106			4	1	MC BO (NOISE STORM)	
17	1205	1320	1216									1	UM(GBZ20-106,NBA24-30)	1213
17	1210	1300	1227			2						1	AR	
17	1609	1610								1+		1	UM	
17											1	1	MC	

IONOSPHERIC EFFECTS OF SOLAR FLARES

MARCH 1966

MAR. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
17	1645	1652									1+	4	BO MC	1641
17	1653	1720	1702	SL 1							5	HU MC WS		
17	1700	1703									1	4	MC BO	1742
17	1737	1742									1	4	MC BO (DOUBLE BURST)	
17	1744	1749									1	4	MC BO	
17	1747	1835	1807			1					3	A5 A8		
17	1750	1855	1800						1+		1	A1		
17	1751	1755									1	4	BO MC	1910
17	1752	1825	1805	SL 1+							5	MC BE BO FM HU TR WS		
17	1756	1910	1810				32				5	BO(NPM26-32,NBA24-22), HA(WWVL20-40)		
17	1759	1819	1801							008	1	BO(WWV10-0.8)		
17	1827	1831	1828							004	1	BO(WWV10-0.4)		
17	1917	1920									1	4	MC BO	1910
17	1919	2148D	1929								5	HA(WWVL20-14)		
17	1925	1931	1926	S 1-			29				5	BO(NPM26-29,NBA24-8), MC WS		
17	1934	1938									1+	4	MC BO	
17	2003	2005									1	4	MC BO	
17	2005	2008									1	4	MC BO	2143
17	2008	2009									1	4	MC BO	
17	2011	2023D	2012							003	1	BO(WWV10-0.3)		
17	2148	2300	2155				40				5	BO(NPM26-40,NBA24-12), HA(WWVL20-22)		
17	2149	2159									1	4	MC BO	
17	2236	2238									1	4	BO (AN)	
18	0030E	0645									1	1	MA (NOISE STORM)	0420
18	0132	0135									1	1	MA	
18	0423	0515		S 1							5	CA MA OK TO		
18	0424	0428									1+	1	MA	
18	0433	0438									1	1	MA	
18	0439	0444									1+	1	MA	1257
18	1400	2351									1	5	BO MC (HU)(NOISE STORM)	
18	1420	1421									1	5	MC RO	
18	1552	1556									1+	4	MC BO	
18	1724	1732									1	4	BO MC	
18	1752	1800D	1755								006	1	BO(WWV10-0.6)	1856
18	1851	1852									1	4	MC BO	
18	1852	1853									1	4	MC BO	
18	1855	1857									1	5	MC BO (AN)	
18	1859	1903									1+	4	MC BO	
18	1906	1908									1	4	MC BO	1914
18	1910	1912									1	4	MC BO	
18	1913	1918	1914								005	1	BO(WWV10-0.5)	
18	1928	1934									1+	4	MC BO	
18	1940D	1944	1941								004	1	BO(WWV10-0.4)	
18	2008	2009									1	4	MC BO	2040
18	2053	2055									1	4	MC BO	
18	2056	2100									1+	4	MC BO	
18	2158	2201									1	4	MC BO	
18	2343	2348									1	5	BO (AN)	
18	2348	2351									1	5	BO (AN)	2337
19	0134	0138									1	1	MA	
19	0340	0415	0350	S 3							5	OK MA NZ TO CW+		
19	0340	0510	0347						158		5	MA(NPG19-158), BO(NPM26-108)		
19	0343	0359	0348			44	2				1	MA		
19	0343	0454	0401				1				5	MA TA	2040	
19	0628E	1055									1	RO (NOISE STORM)		
19	0939	0943									1	RO		
19	0948	0959									1	RO		
19	1005	1010									1	RO		
19	1044	1051									1	RO	1539	
19	1148	1155									1	RO		
19	1228	2255									1+	5		MC BO (HU)(NOISE STORM)
19	1356	1420D	1401								003	1		BO(WWV10-0.3)
19	1400	1420	1402	S 1-							5	BE DA FM MC WS		
19	1414	1420									1	5	MC RO	1910
19	1425	1428									1+	5	MC BO	
19	1605	1612									4	MC BO		
19	1710	1730	1715	S 1							5	MC TR WS		
19	1819	1821									1	4	MC BO	
19	2132	2133									1	4	MC BO	2130
19	2142	2310	2204						52		5	BO(NPM26-52), HA(WWVL20-32)		
19	2143	2145									1	4	MC BO	
19	2144	2210D	2157							004	1	BO(WWV10-0.4)		
19	2156	2158									4	MC BO		
19	2207	2210									1	4	MC BO	
20	0212	0258									1	1	AN	0226E
20	0223	0315	0225	S 1+			1				5	MA AN OK TO		
20	0224	0325	0228								1	MA(NPG19-68)		
20	0945	1115	1000						68		3	AR KU		
20	0955	1007	0958								5	RO DE		
20	0955	1013	1002			90	3				1	DE	0928	
20	0955	1020	1002	S 3							1+	5		TO DA EN KU CW** CW***

IONOSPHERIC EFFECTS OF SOLAR FLARES

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MARCH 1966

MAR. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
-20	1013	1017									1	1	RO	
-20	1028	1031									1	1	RO	
-20	1031	1038									1+	1	RO	
20	1300	2205									1	5	MC BO (HU) (NOISE STORM)	
-20	1537	1542	1539							005	1	1	BO(WWV10-0.5)	
-20	1537	1542	1539							005	1	1	BO(WWV10-0.5)	
-20	1540	1543									1	1	MC	1534
20	1548	1551									1	1	MC	
-20	1604	1607	1605							003	1	1	BO(WWV10-0.3)	
-20	1604	1607	1605							003	1	1	BO(WWV10-0.3)	
20	1730	1734	1730D							006	1	1	BO(WWV10-0.6)	
-20	1759	1820	1801D							036	1	1	BO(WWV10-3.6)	
-20	1759	1852	1807				2				1	1	A3	1756
-20	1800	1842D	1810					54			5	5	BO(NPM26-54,NBA24-47, NSS21-22),HA(WWV20-36)	
-20	1800	1854	1803								1	1	A3	
-20	1802	1830	1808	S 1+							5	5	MC BE BO FM WS	
-20	1803	1823					1				4	4	BO MC	
-20	1803	1825	1809								5	5	BO MC AN	
-20	1842	2000D	1900			10	1				5	5	BO(NBA24-36,NPM26-25, NSS21-18),HA(WWVB60-43, WWV20-36)	1847
-20	1850D		1852								020	1	BO(WWV10-2.0)	
-20	1857D	1906	1858D								032	1	BO(WWV10-3.2)	
-20	1858	1900									1	5	MC BO (AN)	
-20	1948	1950									1	5	MC BO (AN)	
-20	1950	1951									1	4	MC BO	
-20	2000	2015	2002								040	1	BO(WWV10-4.0)	
-20	2000	2030	2011	SL 1+							5	5	BE BO FM HU MC WS	1959
-20	2000	2100	2010					36			5	5	BO(NPM26-36,NBA24-28, NSS21-11),HA(WWVB60-65, WWV20-36)	
20	2102	2103									1	5	MC BO (AN)	
20	2147	2148									1	4	MC BO	
-21	0110	0138	0120	S 2							5	5	AN MA OK	0110
-21	0114	0134	0121								1	1	MA(NPG19-36)	
21	0447	0451									1+	1	MA	
21	0458	0500									1	1	MA	
21	0504	0507									1	1	MA	
-21	0932	1025	0945								1+	1	DE	0924
-21	0933	1030	0943								5	5	DE MA	
-21	0934	1000		SL 1+			1+				5	5	TO EN	
21	1200	2305D									1+	5	MC BO (HU) (NOISE STORM)	
-21	1505	1512D	1507								008	1	BO(WWV10-0.8)	
-21	1507	1512D	1512								53	1	UM(NBA24-53,GBZ20-26)	1503
-21	1510	1520	1515	SL 1-							5	5	MC BO FM TR	
21	1543	1637	1604	SL 2							5	5	BE BO FM MC TR	1541
21	1616	1619	1617								014	1	BO(WWV10-1.4)	
-21	1814	1822D	1822								1-	3	A1 A3	1819
-21	1822	1935	1832								41	5	BO(NPM26-41,NSS24-7) HA(WWVB60-43,WWV20-29)	
-21	1824	1920	1836				2				3	3	A5 A3	
-21	1825	1842	1830	S 1							5	5	MC BE RO FM WS	
21	1956	1957									1	4	MC BO	
21	2022D	2031	2027								036	1	BO(WWV10-3.6)	
-21	2150	2217D	2200								43	5	MA(NPG19-43), BO(NPM26-36,NBA24-11), HA(WWVB60-54,WWV20-18)	2138
-21	2151	2154									1	5	MC BO (AN) (B1)	
-21	2154	2157									1	5	MC BO (AN) (B1)	
-21	2158	2160									1	5	MC BO (AN) (B1)	
-21	2158E	2201	2159								007	1	BO(WWV10-0.7)	
-21	2200	2215	2203			5	1				5	5	MC BO MA	
-21	2217	2357	2236								177	5	MA(NPG19-177), BO(NPM26-70,NBA24-25, NSS21-4),HA(WWVB60-151, WWV20-65),AN(NPM26-58)	2219
-21	2219	2245D	2228								011	1	BO(WWV10-1.1)	
-21	2224	2400D									1	1	BO	
-21	2227	2246	2234								1	1	RO	
-21	2227	2300	2235	SL 1+		8	1				5	5	TO AN RO CA MA TR WS	
21	2345	0015	2355	SL 1							5	5	CA MA WS	2306
22	0334	0337									1	1	MA	
22	0441	0446									1	1	MA	
-22	0940	1030	0953				1				1	1	DE	0946
-22	0940	1030	0946								1	1	DE	
22	1112	2304									1+	4	MC BO (NOISE STORM)	
22	1117	1123									1	1	RO	
22	1406	1412	1409								012	1	BO(WWV15-1.2)	1110
22	1613	1614									1	4	MC BO	
22	1620	1621									1	4	MC BO	
22	1625	1627									1	4	MC BO	
22	1632	1633									1	4	MC BO	
22	1757	1758									1	4	MC BO	
22	1803	1804									1	4	MC BO	
-22	1808	1811									1	4	MC BO	1809
-22	1811	1814									1	4	MC BO	

IONOSPHERIC EFFECTS OF SOLAR FLARES

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MAR. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE	
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD					
22	1819	1823									1+	5	MC BO (AN)		
22	1930	2010	1938				1					3	A8 A1 A3 A5		
22	1932	2010	1942									1	A1		
22	1932	2030	1940					28	1-			5	BO(CYZ80-28,NBA24-18, NSS21-11),HA(WWVL20-22)		
22	1936	1957	1943	G 1-								1	MC		
22	1938	2016					1					1	BO		
22	1958	2251	2002			2	1					1	BO		
22	2255	2345	2300					14				1	HA(WWVL20-14)		
23	1200	2325									1	5	BO MC (HU)(NOISE STORM)		
23	1925	2120	2020					43				1	BO(NPM26-43,NBA24-25)	1907	
23	2255	2350	2300					43				1	HA(WWVB60-43,WWVL20-14)	2246	
24	0218	0224									1+	1	MA		
24	0218	0239	0229			75	3					5	MA DE	0225	
24	0225	0255	0235	S 2+								5	OK AN CA MA NZ TO		
24	0225	0411	0240					216				5	HA(WWVR60-216, WWVL20-36), MA(NPG19-198), AN(NPM26-90)		
24	0228	0305	0243									5	DE A3		
24	0228	0312	0249									1	DE		
24	0233	0239										1	MA		
24	0303	0305										1	MA		
24	0307	0312										1	MA		
24	0315	0319										1	MA		
24	0444	0447										1	MA		
24	1021	1024										1	RO		
24	1113	2204										1+	4	MC BO (NOISE STORM)	
24	1125	1145	1130					14				1	UM(GBZ20-14)		
24	1204	1206										1	MC		
24	1257	1258										1	MC	1236	
24	1533	1536										1	MC	1534	
24	1540	1550										1+	1	BO	
24	1649	1655	1651							010		1	BO(WWV10-1.0)		
24	1749	1755	1751							005		1	BO(WWV10-0.5)		
24	1756	1759										1	4	MC BO	1733
24	1810	1823	1812									008	1	BO(WWV10-0.8)	
24	1844	1846										1	1	BO	1840E
24	1846	1848										1	1	BO	
24	1910	1914										1+	4	BO MC	1858
24	1914	1917										1+	4	BO MC	
24	1915	1940	1919									1	1	HA(WWVR60-32,WWVL20-14)	
24	1955	2000D	1956D									034	1	BO(WWV10-3.4)	
24	2033	2054	2041	G 1								1	5	BO AN MC TR	2032
24	2035	2037										1	4	BO MC	
24	2037	2042										1+	4	BO MC	
24	2038	2108	2043					70				5	AN(NPM26-70), BO(NPM26-65,NBA24-27, NSS21-11), HA(WWVB60-140, WWVL20-43),UM(NBA24-26)		
24	2040	2115	2045									1	5	UM A3	
24	2042	2044										1+	4	BO MC	
24	2045	2048										1	4	BO MC	
24	2136	2145D	2142D									026	1	BO(WWV10-2.6)	
25	0025	0045		S 2								5	CA TO	0034E	
25	0025	0110	0030					22				1	HA(WWVL20-22)		
25	0146	0329	0154	S 3								5	MA AN CA NZ OK TO	0143	
25	0153	0300	0208					100				5	AN(NPM26-100), MA(NPG19-90D), BO(NPM26-54), HA(WWVL20-43)		
25	0153	0318	0211									1	MA		
25	0511	0541	0512	S 1+			3					5	MA OK TO	0513	
25	0513	0515										1	1	MA	
25	0513	0607	0519									1	1	MA(NPG19-83)	
25	0515	0518										1	1	MA	
25	0515	0544	0524									1	1	DE	
25	0516	0540	0521				1+					1	1	A17	
25	0518	0602	0524									1	1	MA	
25	0529	0532										1	1	MA	
25	1002	1007	1115				1+					5	AR A17	0935	
25	1311	1315	1312									005	1	BO(WWV10-0.5)	
25	1327	2300										1+	5	MC BO (HU)(NOISE STORM)	
25	1530	1545D	1536									018	1	BO(WWV10-1.8)	
25	1531	1630	1545					42				5	UM(GBZ20-42,NBA24-17), BO(NBA24-16)	1514	
25	1644	1648										1+	4	MC BO	1616
25	1654	1656										1	4	MC BO	1654E
25	1712	1714										1	4	MC BO	
25	1909	1911	1909D									004	1	BO(WWV10-0.4)	
25	1929	1931										1	4	MC BO	1931E
25	1929	1935D	1930									018	1	BO(WWV10-1.8)	
25	1930	2115	1935					43				5	HA(WWVB60-43, WWVL20-14),BO(NBA24-24, NPM26-22)		

IONOSPHERIC EFFECTS OF SOLAR FLARES

IIIc

MARCH 1966

MAR. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
25	1931	1933									1	4	MC BO	
25	1936D	1940D	1937							006	1	1	BO(WWV10-0.6)	
25	2039	2042									1	5	MC BO (HU)	
25	2050	2054									1	1	BO	
25	2113	2119	2114							005	1	1	BO(WWV10-0.5)	
26	0038	0115	0058			1					1	1	MA	0038
26	0038	0145	0100	S 2							5	5	CA MA OK TO	
26	0038	0210	0055								5	5	HA(WWVB60-108, WWVL20-36), MA(NPG19-85), BO(NPM26-75)	
26	0505	0510									1	1	MA	
26	0510	0515									1+	1	MA	
26	1210	1251	1239		24	1					5	5	MC AN RI	1221
26	1251	1405	1315		24	1					1	1	MC	
26	1544	1547									1	4	BO MC	
26	1743	1747									1	1	BO	
26	1755	1759									1	1	BO	
26	1830	1834									1	4	BO MC	1843E
26	1848	1920	1859	SL 1							5	5	HU BO MC WS	
26	1849E	1910	1851							012	1	1	BO(WWV10-1.2)	
26	1850	1856									1+	4	MC BO	
26	1850	1930	1854					86			5	5	HA(WWVB60-86, WWVL20-22),BO(NBA24-11, NSS21-10)	
26	1852	1950	1908				1				3	3	A5 A3 A8	
26	1853	1950	1858								1	1	A3	
27	1123	1125									1	1	RO	1120E
27	1155	1245	1215								1	1	UM	
27	1158	1257	1218					71		2+	1	1	UM(GBZ20-71,NBA24-26)	
27	1200	1238		S 2							1	1	PU	
27	1206	1245	1215				1-				1	1	A17	
27	1513	1528	1515	SL 1+							5	5	BE BO WS	
27	1525	1526									1	5	MC (HU)	
27	1526	1527									1	1	MC	
28	0400	0528	0442	S 1+							5	5	CA MA OK	0419E
28	0426	0521	0448			1					1	1	MA	
28	0432	0514	0352				1				1	1	MA	
28	1505	1507									1	1	MC	1441
28	1805	1815D	1806								1	1	BO(WWV10-0.6)	
28	1907	2020	1920	S 2+						006	5	5	BO BE FM MC TR WS	1910
28	1910	2100	1920					100			5	5	BO(NPM26-100,NBA24-65, NSS21-33), HA(WWVB60-227, WWVL20-94),AN(NPM26-75, GBZ20-58,NSS21-36, WWVL20-36),UM(NBA24-60, GBZ20-35)	
28	1912	1935D	1914							012	1	1	BO(WWV10-1.2)	
28	1912	1957	1919		27	1					4	4	BO MC	
28	1912	2045	1924				2+				3	3	A8 A3 A5 BO MC	
28	1915	1935	1920							2	5	5	UM A1 A3 A18	
28	2357	0157	0007								5	5	HA(WWVB60-346, WWVL20-108), MA(NPG19-233), AN(NPM26-108,WWVL20-25)	2355
28	2359	0030	0005		5	1					1	1	BO	
28	2359	0209	0003	S 2							5	5	MA BO NZ OK TO WS	
29	0003	0038	0010				2				1	1	MA	
29	0253	0312	0302								1	1	MA(NPG19-32)	0258
29	0319	0432	0327						32		5	5	MA(NPG19-184), AN(NPM26-90), HA(WWVB60-86,WWVL20-40)	0324
29	0323	0344	0328	S 2							5	5	AN CA NZ OK TO CW+	
29	0324	0350	0330		44	1+					5	5	DE AN BI	
29	0327	0358	0335							1+	1	1	DE	
29	0946	0949									1	1	RO	0940E
29	0946	1029	0958		11	1					1	1	RO	
29	0950	1020	1002							1	1	1	DE	
29	0950	1028	1002				1+				1	1	DE	
29	1020	1025									1	1	RO	
29	1048	1120	1102							1	1	1	DE	1045E
29	1052	1138	1058		45	2					1	1	RO	
29	1054	1130	1058				2				1	1	DE AR LO	
29	1056	1143					1				1	1	RO	
29	1100	1135	1103								1	1	RO	
29	1100	1145	1105	S 2				108			1	1	AN(GBZ20-108)	
29	1117	1121									1	1	EN TR CW**	
29	1506	1530	1520								1	1	RO	
29	1508	1555	1517							1	1	1	UM	1504
29	1512	1530	1518	SL 1-					32		1	1	UM(GBZ20-32,NBA24-26)	
29	1519	1520									1	5	MC BE TR	
29	1524	1535	1525							012	1	5	MC (HU)	
29	1525	1527									1	5	BO(WWV10-1.2)	
29	1528	1531									1	5	MC BO (HU)	
29	1528	1531									1	5	MC (HU)	

IONOSPHERIC EFFECTS OF SOLAR FLARES

MARCH 1966

MAR. 1966	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
29	1617	1700	1627					42				5	UM(GBZ20-42,NBA24-26), BO(NPM26-41,NBA24-32, NSS21-14),HA(WWVL20-22)	1549
29	1622	1623									1	5	MC BO (HU)	
29	1622	1650	1632	SL 1+							1	5	MC BO FM TR	
29	1633	1634									1	5	MC BO (HU)	
29	1700	1703									1	5	MC BO (HU)	
29	1707	1708									1	4	MC BO	
29	1718	1719									1	5	MC BO (HU)	1717
29	1722	1725									1	5	MC BO (HU)	
29	1728	1729									1	5	MC BO (HU)	
29	1731	1733									1	5	MC BO (HU)	
29	1740	1950	1810					86				5	AN(GBZ20-86,WWVL20-43, NSS21-29),UM(GBZ20-85, NBA24-69), HA(WWVB60-281, WWVL20-83),BO(NBA24-25, NSS21-32)	1746
29	1745	1840	1806			43	2					5	BO MC HA	
29	1745	1845	1810								3-	5	UM A18	
29	1745	1900	1805	S 2+								5	BE AN BO FM MC TR WS	
29	1752	1830	1807				1+					3	A5 A8 BO MC	
29	1800	1826D	1801D									1	BO(WWV10-0.7)	
29	1813	1815									007	1	MC BO (HU) (AN)	
29	1821	1826										1	MC BO (HU) (AN)	
29	1826	1830										1	MC BO (HU)	
29	1826	1840	1829								008	1	BO(WWV10-0.8)	
29	1905	1907										1	MC BO (HU)	
29	2220	2300	2230					43				5	HA(WWVB60-43, WWVL20-22),MA(NPG19-25)	2151
30	0030	0045	0043				1-					1	MA	
30	0030	0100	0042	S 1+								5	CA MA OK TO WS	0049E
30	0036	0123	0042									5	MA(NPG19-43), HA(WWVB60-43,WWVL20-18)	
30	0932	0937										1	MA	0945E
30	1242	1346	1251			70	3					5	RO MC	1241
30	1245	1255D	1255									5	UM A3	
30	1245	1335	1253	S 3								5	TR BE BO EN FM MC WS CW+ CW** CW***	
30	1245	1400	1255					247				5	UM(GBZ20-247), BO(NSS21-18)	
30	1245	1415	1250				2					5	AR LO RO A3 A5 A8 A17	
30	1249E	1300D	1250								048	1	BO(WWV15-4.8)	
30	1325	1517										4	MC BO (NOISE STORM)	
30	1330E	1337	1331								004	1	BO(WWV10-0.4)	
30	1610	1640	1621	G 2								5	BO FM TR	
30	1716	1830	1729					15				5	HA(WWVB60-151, WWVL20-43),BO(NPM26-78, NSS21-21),UM(GBZ20-42)	1718
30	1717	1740	1723	S 1+								5	BE HU MC TR WS	
30	1720	1800	1730								1	5	UM A3	
30	1949	2200	2020					194				5	HA(WWVB60-194, WWVL20-65),BO(NPM26-95, NSS21-25),UM(NBA24-60)	1930
30	1952	2100	2017	G 2								5	MC BE HU WS	
30	1952	2211					1+					4	BO A3	
30	1955	2040	2015								1+	5	UM A3	
30	1955	2105	2017			20	1					5	BO HA MC	
31	0109	0139	0113									1	MA(NPG19-36)	0053
31	0143	0210	0151									1	MA(NPG19-32)	0145
31	0818	0837		S 1								1	PU	0810E
31	1323	1325										4	MC RO	1245
31	1323	1755										5	MC BO RO (HU) (NOISE STORM)	
31	1645	1652										1	MC (SERIES OF BURSTS)	
31	1856	1915D	1901D								044	1	BO(WWV10-4.4)	
31	1858	2125					1+					1	BO	1807
31	1900	2030	1910	S 3								5	MC BE BO FM HU TR WS	
31	1900	2040	1930			52	2					5	BO BI HA MC	
31	1900	2200	1930					194				5	HA(WWVB60-194, WWVL20-72), MA(NPG19-120), UM(NBA24-78,GBZ20-28), BO(INSS21-39)	
31	1903	2000	1915				1+					3	A5 A3	
31	1905	1950	1915									5	UM A3	

1. Stations associated with bursts where given in () signify observations on 30 Mc/s riometers.
 2. Stations AN and BI under SCNA events are from 30 Mc/s riometer observations at Anchorage and Barter Island, Alaska.

RIOMETER EVENTS

IIIv

MARCH 1966

GREAT WHALE RIVER

30 Mc/s

MARCH 1966	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS	MARCH 1966	START UT	END UT	MAX UT	MAX. ABS. .1DB	NO. OF PKS
03	0936	2012	1010	17	3	17	2204				
04	0000	0134	0040	10	2	18		0600	0153	22	3
04	0640	2200	0952	10	4	19	0050	0259	0158	5	1
05	0115	0701	0352	8	3	19	0731		1919		
05	1003	1351	1035	9	2	20		0922		21	6
06	0847	1800	1315	17	4	20	1320	2210	1645	19	7
07	1418	2150	1500	3	1	21	0050	0850	0249	28	6
09	1948					22	2128		2142		
10		0511	0041	47	11	23		0000		6	4
10	0801	1000	0905	3	1	23	0218	1740	1000	89	9
10	1354	2210	1515	15	1	25	1038	2010	1412	11	4
11	0042	0500	0212	28	4	26	0429	0541	0508	11	2
11	1944	2344	2145	3	1	26	1213	2250	1318	31	5
12	0838		0937			27	0110	2130	0428	42	8
13		0310		10	5	28	0505	2130	1131	77	8
13	1410					29	0136	1000	0318	28	3
14		2306	0606	64	7	29	1212	1950	1256	21	3
15	0132	2044	0241	10	11	30	0300	1010	0459	14	4
16	0206	0531	0333	10	2	30	1242		1754		
16	1005	2010	1156	14	2	31		1330		11	6
17	1112	1930	1256	8	3						

THIS TABULATION SHOWS ALL EVENTS STARTING ON ANY DAY OF THIS MONTH.
 SEE PREVIOUS MONTH TABLE FOR EVENTS WHICH MAY NOT HAVE ENDED BY
 THE FIRST DAY OF THIS MONTH.
 MAX IS THE TIME OF EVENT MAXIMUM.
 ABS IS ABSORPTION.
 PKS IS PEAKS.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1966

DATE	FREQUENCY STATION	TYPE	STARTING TIME		DURATION	FLUX DENSITY		INT.	REMARKS
			UT	UT		$10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$			
					MINUTES	PEAK	MEAN		
1	108 BOUL	44	1250	E	1330	235	D		
	2800 OTTA	20	1340		1340	70		2.6	1.3
					1340	40		2.0	
					1420	30		2.6	
	2800 OTTA	20	1620		1640	60		5.0	2.5
	2800 OTTA	21	1630		1755	90		7.8	4.0
	8800 SGMR	20	1733		1751.5	65		29.4	5.1
	2695 SGMR	20	1732		1734.2	62		1.0	0.5
	8800 SGMR	3	1737		1737.5	2		16.0	3.0
	2800 OTTA	1	1736.8		1737	2		4.4	2.2
	2800 OTTA	1	1741.8		1742.5	1.2		1.6	0.8
2800 OTTA	2	1921.5		1922	1.5		1.4	0.9	
2	2800 OTTA	24	0020			8		12.0	
	108 BOUL	6	0030.4		0031.5	2.3			
	2800 OTTA	4	0058.5		0102.3	7.5		72.0	36.0
	2800 OTTA	29	0106			35		12.0	6.0
	10700 PENN	45	1135.3		1135.9	33.4		224.0	5.0
	8800 SGMR	45	1135		1136.3	7		264.0	60.0
	2695 SGMR	45	1135.2		1136	9		92.0	25.0
	2690 PENN	45	1135		1135.9	4.2		119.0	37.0
	606 SGMR	40	1134		2045	686		12.5	
	10700 PENN	29	1139.9		1139.9	28.6		28.0	14.0
	8800 SGMR	29	1142		1142	56		23.0	12.0
	2695 SGMR	29	1144.2		1144.2	50		15.0	7.0
	2690 PENN	29	1139.2		1139.2	56.9		20.0	10.0
	108 BOUL	44	1248	E	2225	742	D		
	2800 OTTA	1	1442		1444	5		1.4	0.7
	8800 SGMR	3	1458.2		1459	2		36.1	12.0
	2800 OTTA	3	1458		1458.8	1.5		12.2	6.1
	2695 SGMR	3	1458.2		1459	2		16.1	5.0
	8800 SGMR	29	1500.2		1500.2	20		18.0	8.0
	2800 OTTA	29	1459.5			20		3.4	1.7
	2695 SGMR	29	1500.2		1500.2	26		6.0	2.0
	606 SGMR	22	1738		1742	8		12.5	6.0
	8800 SGMR	20	1742		1746.5	26		2.2	1.0
	2800 OTTA	21	1740		1758	50		5.0	2.5
	2800 OTTA	1	1744		1744.8	1.5		1.6	0.8
	2800 OTTA	1	1751.3		1751.7	1		3.4	1.7
	2695 SGMR	20	1753		1758	30		5.7	2.0
	2800 OTTA	1	1815.5		1816	2		1.0	0.5
	2800 OTTA	21	1902			230		2.6	2.0
	2800 OTTA	1	2102		2102.5	2		1.8	0.9
	10700 PENN	3	2113.3		2114.2	13.6		102.0	51.0
	2800 OTTA	3	2113.5		2214.2	6		54.0	15.0
	2690 PENN	3	2113.5		2114.3	10.8		50.0	25.0
1415 SGMR	1	2113.5		2114.3	5		4.5	2.2	
2800 OTTA	20	2140		2153	20		3.4	1.7	
2800 OTTA	3	2214		2214.3	1.5		32.0	14.0	
2800 OTTA	30	2215.5			13		3.4	1.5	
2800 OTTA	1	2217		2217.5	1		1.6	0.8	
3	8800 SGMR	20	1058.3		1101.7	11		23.2	7.0
	2695 SGMR	45	1057		1104.5	15		45.2	15.0
	1415 SGMR	20	1100		1103.5	12		8.8	2.0
	606 SGMR	20	1100		1103.9	30		101.0	30.0
	606 SGMR	40	1130		1505.7	448		22.7	
	8800 SGMR	1	1201		1201.5	2		7.0	1.0
	108 BOUL	44	1246	E	1658	745	D		
	8800 SGMR	20	1300.5		1306	18		11.5	3.0
	2695 SGMR	20	1300.7		1305.7	19		8.2	2.0
	606 SGMR	22	1601		1708	125		34.8	5.0
	2800 OTTA	1	1705		1708	10		1.6	0.8
	2800 OTTA	1	1754		1755	2		1.2	0.6
	2800 OTTA	1	1853		1854.2	6		1.8	0.9
	1415 SGMR	20	1928		1956	168		3.2	1.0
	606 SGMR	22	1922.4		1954	178		45.8	10.0
	10700 PENN	3	2156.5		2157	2.2		91.0	46.0
	2800 OTTA	1	2156.8		2157	1		1.4	0.7
	2690 PENN	1	2156.7		2157.2	3.3		2.0	1.0
2800 OTTA	21	2234		2256	36		3.4	1.7	
2800 OTTA	1	2251		2251.5	1.5		1.0	0.5	
4	2800 OTTA	24	1500			50		4.6	
	2800 OTTA	20	1827			16		1.8	0.9
	8800 SGMR	1	1833.5		1834.8	6		7.0	1.5
	2800 OTTA	1	1833		1834.7	3		4.0	2.0
	2695 SGMR	1	1834.1		1834.8	5		4.8	1.0
	2690 PENN	1	1833.6		1834.8	2.1		4.0	2.0
	108 BOUL	43	1940		2025	332	D		
	2800 OTTA	21	2035			135		3.0	2.5
	2800 OTTA	45	2109		2117.5	11		21.0	10.0
					2109	7		10.0	
				2116	4		21.0		
2800 OTTA	30	2120			50		12.0	6.0	
2800 OTTA	1	2121.8		2122.5	2		1.6	0.8	
5	2800 OTTA	45	0110.3		0111.3	8		25.0	9.0
			0110.3		0111.3	2		25.0	
			0112.3		0112.5	6		22.0	
	108 BOUL	43	2040		2306	255	D		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
APRIL 1966

IVb

DATE	FREQUENCY STATION	TYPE	STARTING TIME		TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$		INT.	REMARKS
			UT	UT			PEAK	MEAN		
6	2800 OTTA	1	1214		1215.3	2	1.6	0.8	1	
	108 BOUL	44	1242	E	1328	751 D				
	2800 OTTA	31	1515		1550	55	3.0	1.5		
	2695 SGMR	41	1554		1605.9	20	23.7			
	4995 SGMR	3	1600.2		1600.3	3.5	16.0	3.0		
	2800 OTTA	1	1559		1600.5	3	5.0	2.5		
	2800 OTTA	20	1645		1740	100	1.6	0.8		
	10700 PENN	3	2109.8		2112.6	3.6	17.0	9.0		
	2800 OTTA	4	2109		2112.5	5	10.0	6.6		
	2690 PENN	1	2109.4		2112.7	5.2	7.0	3.0		
	2800 OTTA	29	2114			55	3.4	2.5		
	2800 OTTA	21	2250		2325	125	7.4	3.7		
	2800 OTTA	3	2320		2321	4	14.0	7.0		
	2800 OTTA	1	2414.8		2415	.8	1.4	0.7		
7	2800 OTTA	21	1220		1400	150	3.4	1.7	1	
	8800 SGMR	20	1237		1245	25	3.6	0.8		
	4995 SGMR	20	1237		1243	45	8.5	1.5		
	2800 OTTA	20	1238		1243	20	2.6	1.3		
	2695 SGMR	20	1237		1243	25	7.0	2.0		
	1415 SGMR	20	1237		1243	23	1.0	0.4		
	108 BOUL	44	1240	E	1330	754 D				
	2800 OTTA	20	1540			170	2.8	1.4		
	2800 OTTA	20	2020			130	2.6	1.3		
2800 OTTA	20	2310		2415	130	2.8	1.4			
8	606 SGMR	1	1215		1215.1	.5	6.3	1.0		
	2800 OTTA	1	1609		1609.5	1	1.4	0.7		
	2800 OTTA	21	1615		1635	145	4.8	2.4		
	2800 OTTA	2	1629		1629.5	5	7.0	3.5		
	606 SGMR	41	1749.6		1749.7	.3	10.3			
	2800 OTTA	20	1812		1814	25	1.6	0.8		
	2695 SGMR	41	1923.6		1923.8	3	119.0	25.0		
	2695 SGMR	41	1933.4		1943.8	12	49.5			
	2800 OTTA	1	2028		2028.5	1	1.4	0.7		
	2800 OTTA	20	2150		2215	120	3.8	2.0		
9	2800 OTTA	20	0023		0033	65	2.6	1.3		
	2800 OTTA	1	0024		0024.2	1	2.0	1.0		
10	8800 SGMR	3	1222		1222.6	.8	18.0	6.0		
	4995 SGMR	3	1222		1222.6	1	11.7	3.8		
	8800 SGMR	20	1222		1228	23	9.9	4.5		
	4995 SGMR	20	1222		1228	23	5.7	2.5		
	2800 OTTA	20	1222		1225	15	2.2	1.1		
	2695 SGMR	20	1224.8		1226.8	20	11.9	5.1		
	2800 OTTA	1	1245		1245.7	1.5	1.0	0.5		
	1415 SGMR	1	1245.1		1245.5	1	2.2	0.9		
	606 SGMR	1	1245.1		1245.5	1	2.0	0.8		
	2800 OTTA	21	1340		1345	60	2.8	1.4		
	606 SGMR	41	1344		1345.3	4	8.6	2.1		
	2800 OTTA	1	1351.5		1351.7	.5	3.0	1.5		
	1415 SGMR	1	1351.5		1351.8	.6	6.0	1.2		
	606 SGMR	1	1351.5		1351.8	.6	3.7	0.7		
	2800 OTTA	1	1515		1515.5	1	3.2	1.6		
	1415 SGMR	1	1515.3		1515.6	.6	5.6	2.2		
	606 SGMR	1	1515.4		1515.6	.2	4.2	1.8		
	2800 OTTA	20	1530		1550	70	2.4	1.2		
	2695 SGMR	20	1538		1544.2	9	3.4	1.3		
	8800 SGMR	1	1544.2		1544.8	3	7.9	2.0		
4995 SGMR	1	1543.1		1543.9	4	6.2	2.0			
11	8800 SGMR	3	1252.2		1252.8	1.6	13.9	2.9		
	4995 SGMR	1	1252.5		1252.8	1.3	7.0	3.0		
	606 SGMR	41	1421.5		1421.7	1.2	1.5	1.0		
12	108 BOUL	6	1537		1539	3.2			1	
	10700 PENN	3	1629.9		1630.1	1.2	32.0	7.0		
	2690 PENN	3	1629.9		1630.7	7.1	19.0	10.0		
	8800 SGMR	3	1630		1630.7	3	24.1	6.0		
	4995 SGMR	45	1630.5		1631.7	5.5	24.8	4.7		
	2800 OTTA	3	1630		1630.8	6	20.0	7.0		
	2695 SGMR	3	1630		1630.7	6	19.6	5.0		
	10700 PENN	45	1717.6		1718.5	2.8	137.0	44.0		
	8800 SGMR	41	1718		1718.5	2	127.0	25.0		
	4995 SGMR	41	1718.1		1718.6	6.8	35.4	7.0		
	8800 SGMR	29	1720		1720	32	12.4	3.0		
2800 OTTA	1	2128		2129	2	1.0	0.5			
13	2800 OTTA	20	1330		1340	25	1.4	0.7		
	2800 OTTA	1	2031		2032.5	3	.8	0.4		
	2800 OTTA	1	2137		2138.3	2	2.0	1.0		
	2800 OTTA	29	2139			13	1.6	0.8		
14	2800 OTTA	1	0024.8		0025.2	1.5	1.2	0.6		
	2800 OTTA	20	1240		1249	60	2.4	1.2		
	2695 SGMR	20	1240		1248	25	4.5	1.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
 APRIL 1966

DATE	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{Wm}^{-2} (\text{c/s})^{-1}$		INT.	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
16	8800 SGMR	1	1831	1831.9	3	3.0	0.6		
	4995 SGMR	1	1830.5	1831.8	2	5.2	1.3		
	2800 OTTA	21	1829		20	1.6	0.8		
	2800 OTTA	1	1831	1831.5	2	1.4	0.7		
	2695 SGMR	1	1829	1830.5	7	5.0	1.0		
17	2800 OTTA	20	1300	1307	20	1.6	0.8		
	2800 OTTA	22	1430	1439	120	3.2	1.6		
	4995 SGMR	20	1732	1752.7	158	12.5	3.0		
	2800 OTTA	21	1740		45	2.4	1.2		
	2695 SGMR	20	1749	1752.7	22	4.1	1.0		
	8800 SGMR	20	1750	1752.5	18	6.0	1.5		
	2800 OTTA	21	1750	1752	8	3.4	1.7		
	2690 PENN	20	1750	1752.6	9.1	8.0	4.0		
	4995 SGMR	3	1751	1752.7	4	11.0	2.6		
	2800 OTTA	1	1752	1752.7	1	3.2	1.6		
	2695 SGMR	1	1752.5	1752.7	.7	3.1	0.6		
	2800 OTTA	31	1825	1850	65	1.2	0.6		
	2800 OTTA	40	2057	2058	1.5	2.8			
18	2800 OTTA	22	1135	1242	195	5.0	2.5		
	2800 OTTA	20	1755	1756	35	1.0	0.5		
	2800 OTTA	20	1955	1956	17	1.4	0.9		
	2800 OTTA	21	2133	2215	105	2.8	1.4		
	2800 OTTA	3	2133	2135	5	8.4	4.2		
	2690 PENN	20	2133.2	2134.7	9.5	9.0	5.0		
20	2800 OTTA	21	1820	1855	75	1.6	1.0		
	2800 OTTA	1	1854	1856	2.3	3.2	2.0		
	2690 PENN	1	1854.4	1855.7	3.5	4.0	2.0		
	2800 OTTA	29	1856.3		14	1.8	0.9		
	2800 OTTA	20	1955		45	1.0	0.5		
21	108 BOUL	6	1352.2	1353	2.7			3	
	2800 OTTA	1	1535	1536.5	3	1.2	0.6		
	2800 OTTA	1	1825	1826.5	2.5	1.0	0.5		
	2800 OTTA	1	1843	1843.6	2.5	1.4	0.7		
	960 PENN	45	1944.2	1945.8	4.5	10.0	5.0		
	2690 PENN	5	1945.8	1946.1	.4	2.0	1.0		
	328 PENN	45	1945.2	1948.7	4.6	39.0	15.0		
	2690 PENN	5	2019.3	2019.5	.3	8.0	4.0		
	328 PENN	45	2018.7	2019.3	1.8	66.0	26.0		
	22	2800 OTTA	1	2221.8	2222.2	1.5	.8	0.4	
23	328 PENN	5	2218.5	2220.8	3.7	15.0	8.0		
	328 PENN	5	2222.6	2225.3	14.4	37.0	2.0		
	328 PENN	5	2237	2238.5	2.5	15.0	8.0		
	328 PENN	45	2240	2241.1	3.3	310.0	172.0		
	328 PENN	5	2243.7	2245	3.3	45.0	22.0		
	328 PENN	45	2247.1	2249	3.9	208.0	120.0		
24	8800 SGMR	1	1357	1357.5	1	6.3	1.5		
	4995 SGMR	1	1357	1357.6	2	6.6	1.6		
	2800 OTTA	1	1357	1358	2	2.2	1.1		
	2695 SGMR	1	1357	1358	2	4.4	1.0		
	8800 SGMR	3	1410.6	1411.2	.9	12.4	3.0		
	4995 SGMR	3	1410.5	1411.2	1.3	17.8	3.9		
	2695 SGMR	3	1410.7	1411.2	1.5	22.0	5.0		
	8800 SGMR	40	1411.5	1414.2	6.5	6.3			
	4995 SGMR	40	1411.8	1414.2	6.2	8.2			
	8800 SGMR	29	1411.5	1411.5	10.5	6.3	1.5		
	4995 SGMR	29	1411.8	1411.8	8.5	5.5	1.3		
	2800 OTTA		1412	1414.5	58	9.8			
	2695 SGMR	29	1412.2	1412.2	16.8	5.4	1.2		
	2695 SGMR	40	1412.5	1416.8	6.5	4.4			
	2690 PENN	45	1410.5	1411.3	10.2	16.0	4.0		
	1415 SGMR	40	1411	1411.4	8	4.8			
	2800 OTTA	31	1510	1600	65	1.8	0.9		
	2800 OTTA	20	2100	2102	15	1.0	0.5		
	2800 OTTA	21	2127	2145	60	2.4	1.2		
2800 OTTA	1	2228	2229	2	1.6	0.8			
25	2800 OTTA	20	1135	1140	60	1.6	1.0		
	2800 OTTA	20	1435	1540	210	4.6	2.3		
	2800 OTTA	1	1954	1956	5	1.0	0.5		
	2800 OTTA	20	2245	2315	105	3.0	1.5		
26	2800 OTTA	21	1415	1540	165	2.8	1.4		
	2800 OTTA	20	1530	1540	30	1.6	0.8		
	2800 OTTA	20	1950	2030	90	1.6	0.8		
28	328 PENN	45	1834.2	1838.5	13.3	100.0	33.0		
	2800 OTTA	24	2215		15	1.6			
29	2800 OTTA	20	1500	1520	35	1.8	0.9		

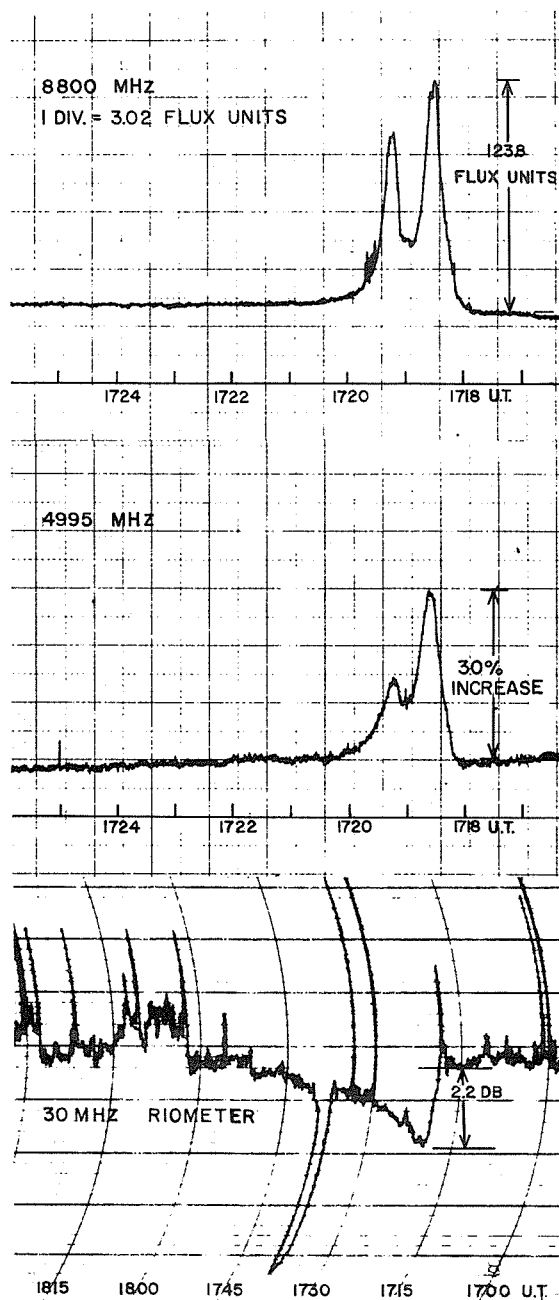
RECORD INCOMPLETE

Errata: In the April issue of Solar Geophysical Data four pages of Solar Radio Emission data appeared in wrong locations. IVc and IVf were interchanged and IVk and IVo were interchanged.

SELECTED SOLAR NOISE BURSTS AFCRL SAGAMORE HILL

IVd

APRIL 1966



COMPLEX BURST OBSERVED AT APPROXIMATELY 1718 U.T.,
APRIL 12, 1966 AT AFCRL HAMILTON, MASS.
NO SIGNIFICANT FLUX INCREASE OBSERVED AT 2695, 1415, OR 606 MHz

IVc

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

HALEAKALA

MARCH 1966

107 Mc s

DATE	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} (\text{c/s})^{-1}$		INT.	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
15	107 HALE	48	2124	2125	3			3	
16	107 HALE	48	1520	1520	5			2	
	107 HALE	48	1925	1925.2	4.3			3	
	107 HALE	6	2202	2205	3			2	
	107 HALE	48	2259	2300	4.9			3	
17	107 HALE	6	0055	0056	3.7			3	
	107 HALE	6	0137	0138.5	3			3	
	107 HALE	41	0230	0252	32			2	
	107 HALE	6	0311	0312	2			3	
	107 HALE	6	0321	0322	2.1			2	
	107 HALE	6	0428	0429	1.1			3	
	107 HALE	41	1646	1704	19			2	
	107 HALE	41	1750	1758	27			3	
	107 HALE	48	2043	2045	6			2	
	107 HALE	41	2149	2155	6			3	
	18	107 HALE	48	0137	0141	5.2			3
107 HALE		48	0208	0209	3.1			3	
107 HALE		48	0427	0428	2.9			3	
107 HALE		41	1715	1734	25			2	
107 HALE		41	1854	1910	46			3	
107 HALE		41	2057	2102	14			3	
107 HALE		49	2347	2354	15			3	
19	107 HALE	49	0000 U	0030	105			2	
	107 HALE	43	1823	2003	150			2	
	107 HALE	41	2130	2211	46			2	
20	107 HALE	44	1623 E	0210	749 D			3	
21	107 HALE	44	1623 E	2253	749 D			3	
	107 HALE	41	2147	2208	36			3	
22	107 HALE	41	1813	1824	61			3	
	107 HALE	43	2315	0200	335 D			3	
23	107 HALE	44	1621 E	1905	261 D			3	

No observations were made in March before 1600 UT March 12.

Malfunction of equipment or excessive interference prevented measurement of occurrences after 2100 UT March 23.

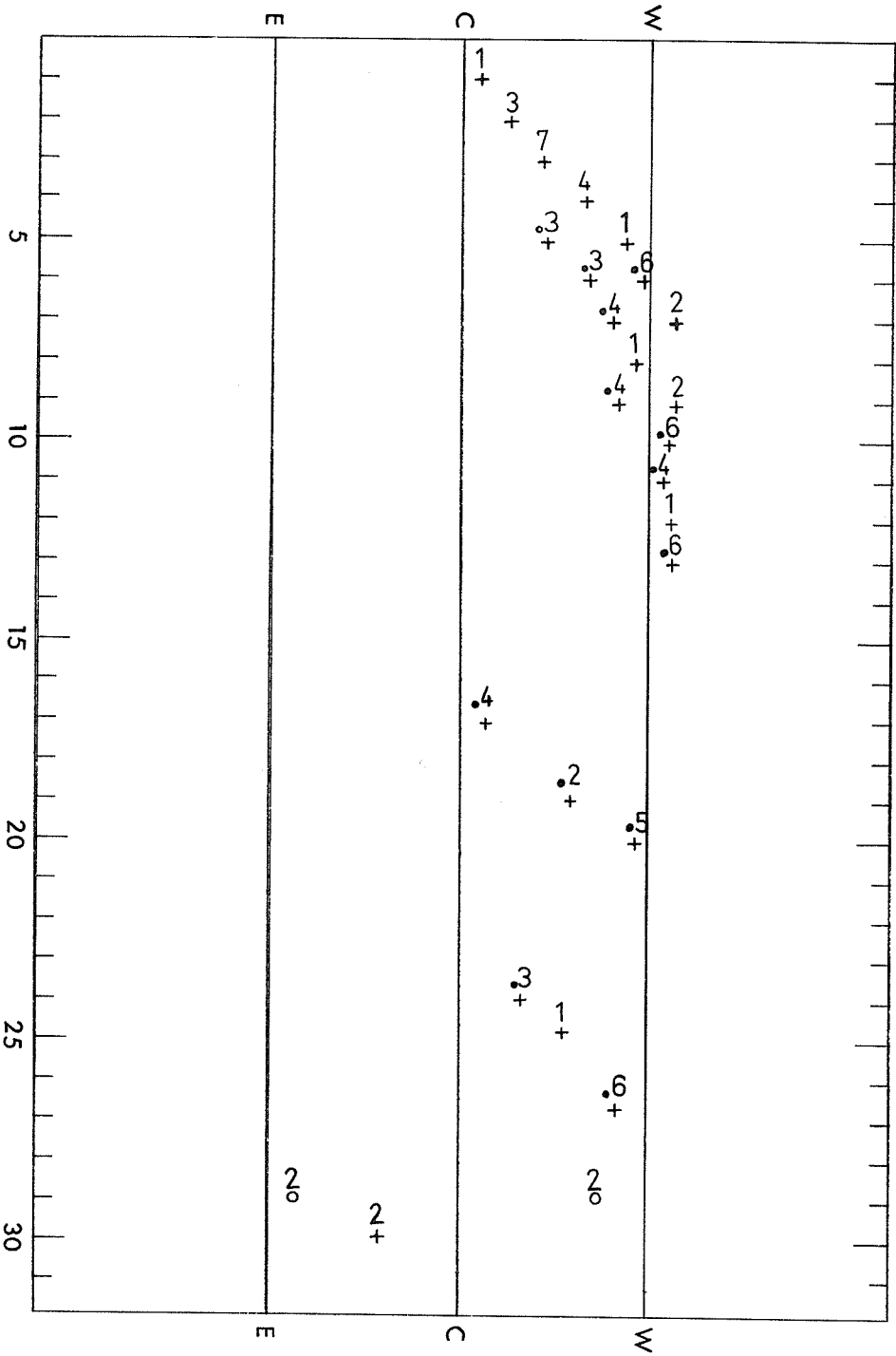
Sunrise-sunset times for March are approximately 1625 UT - 0435 UT.

SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATIONS

NANÇAY

APRIL 1966

408 Mc/s

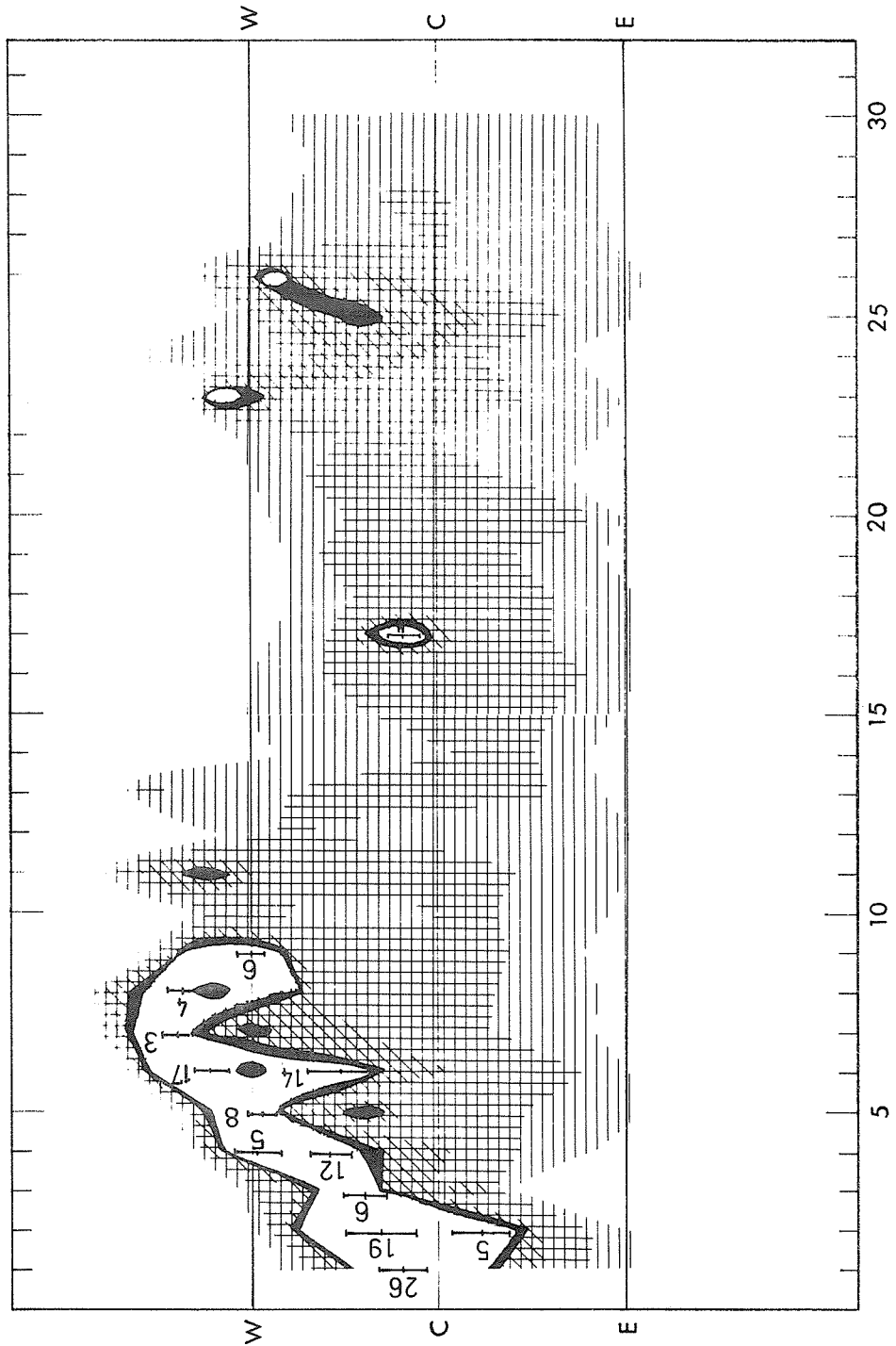


SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATIONS

169 Mc/s

APRIL 1966

NANÇAY



SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVh

JANUARY, FEBRUARY, MARCH 1966

Fort Davis

25-320 Mc/s

1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS
		TYPE	TIMES U. T.	INT.		
<u>January</u>						
1	1350-2345					
2	1350-2345	IIIb	1423-1424	2	190-100	Occasional Weak I during day
		IIIg	1545-1546	2	320- 50	
		IIIg	1553-1554	2	280- 50	
		IIIg	1846-1847	2	280- 50	
3-11	1351-2345					
12	1350-2345	IIIg	1456-1457	2	240- 50	2156: U-burst 2200: U-burst
		IIIg	2155-2156	2	320-<25	
		IIIg	2200-2202	2	300- 50	
		IIIg	2209-2213	2	>320-<25	
		IIIg	2258-2259	1	280-125	
13	1350-2345	IIIg	1814-1815	2	280-<25	
14	1350-2345	IIIg	1928-1929	2	240- 50	Occasional Weak I during day
		IIIg	2214-2215	2	260-180	
		IIIg	2226-2229	2	320- 60	
		IIIg	2230-2232	2	320-100	
15	1351-2345	IIIg	1540-1541	1	300-115	Occasional Weak I during day
16	1350-2345	IIIg	1615-1617	2	320-125	
		I	1820-2220	3	280-<25	Weak I throughout day
		IIIg	1852-1855	2	>320-115	1852: Possibly associated Type IV 1845-2200: Forward and reverse drift pairs, 80-60 Mc/s.
		V				
17	1351-2345	IIIg	1838-1839	2	50- 25	Occasional Weak I during day
18	1350-2345	IIIg	1844-1845	2	80-<25	
		I	1420-1700	1	290- 60	Weak I throughout day
19	1350-2345	IIIg	1638-1639	2	75-<25	Weak I throughout day
20-22	1351-2345					
23	1351-2345					Occasional Weak I during day
24	1350-2345	IIIg	1719-1720	2	250- 50	Occasional Weak I during day
		IIIg	1729-1732	2	300- 50	
		IIIg	1801-1802	2	280- 50	
		IIIg	1908-1909	1	180-<25	
		I	2158-2345	1	240- 50	
25	1351-2345	IIIg	1601-1602	2	150-<25	Occasional Weak I during day
		IIIg	1624-1625	2	320-100	
		IIIg	1749-1750	2	250-<25	
		IIIg	1755-1756	1	180-<25	
		IIIg	1816-1817	2	240-<25	
		IIIg	1827-1828	2	250-<25	
		IIIg	1910-1912	2	240-<25	
		IIIg	2115-2117	3	300-<25	
26-27	1350-2345					
28	1351-2345	IIIb	2139-2140	1	180-115	Occasional Weak I during day
		IIIg	2141-2142	1	180- 50	
29	1351-2345	IIIg	1807-1808	2	310-150	Occasional Weak I during day
30-31	1351-2345					
<u>February</u>						
1	1351-2345					
2	1400-2345	IIIg	1514-1515	2	180- 90	
3	1350-2345	Uncl.	1517-1523	2	80-<25	
4-18	1351-2345					Occasional Weak I during day
19	1350-2345	IIIg	1554-1555	2	180- 50	
20	1350-2345	IIIb	1853-1854	1	175-100	Weak I throughout day
		IIIg	2044-2045	2	200-100	
		IIIg	2046-2047	1	320-180	
		IIIg	2049-2050	2	>320-200	
		IIIg	2055-2056	1	210-130	
21	1350-2345	I	1730-1940	1	320-150	Weak I throughout day
22	1351-2345					Weak I throughout day
23	1350-2345	IIIg	2153-2154	2	280-190	Occasional Weak I during day
		IIIg	2306-2307	2	230-140	
24	1351-2345	I	1352-1401	1	310-125	Weak I throughout day
25	1350-2345	IIIg	2114-2115	2	240-115	Occasional Weak I during day
		IIIg	2215-2216	3	250- 50	
		IIIg	2230-2231	1	180- 75	
		IIIg	2232-2233	2	320-100	2233: U-burst
26	1351-2345					
27	1351-2345	IIIg	2302-2303	2	140-100	
28	1350-2345	IIIg	2339-2340	2	250-100	
<u>March</u>						
1-7	1318-2330					
8	1318-2330					
9-12	1318-2330	IIIb	2053-2054	1	50-<25	
13	1318-2330	IIIb	1432-1433	1	130- 50	
14	1318-2330	IIIg	1421-1422	2	150- 55	Occasional Weak I during day
		IIIg	1828-1829	2	180- 25	
		IIIg	1831-1832	3	300-<25	
		IIIg	1936-1938	2	50-<25	
		IIIg	2019-2020	3	220-<25	2019: Type V
		IIIg	2229-2230	1	150-<50	
		IIIg	2255-2257	2	180-<25	2256: U-burst
		IIIg	2311-2312	1	200-<100	
		IIIg	2322-2323	3	220-<50	

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MARCH 1966

FORT DAVIS

25 - 320 Mc/s

1966	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC	REMARKS			
		TYPE	TIMES U.T	INT.					
15	1318-2330	IIIg	1352-1353	1	180- 90	Weak I throughout day			
		IIIg	1520-1521	2	>320-200				
		IIIg	1613-1614	2	120-<25				
		IIIg	1629-1630	2	300-<25				
		Unc1.	1637-1638	2	320-240				
		II	1640.8-1644	3	310-110				
		IIIg	1657-1700	1	125-<50				
		IIIb	1727-1728	2	50-<25				
		IIIg	1742-1743	2	75-<25				
		IIIb	1804-1805	2	50-<25				
		IIIb	1843-1844	2	50-<25				
		IIIb	1858-1859	1	35-<25				
		IIIg	1915-1916	2	75-<25				
		IIIb	1959-2000	2	35-<25				
		IIIb	2007-2008	2	50-<25				
		IIIg	2011-2012	1	180- 60				
		IIIb	2049-2050	1	40-<25				
		IIIb	2100-2101	2	50-<25				
		IIIg	2103-2104	2	200-<25				
		IIIg	2108-2109	2	190-<25				
		IIIg	2110-2111	2	150- 50				
		IIIg	2115-2119	2	180-<25				
		IIIg	2120-2121	3	250-<25				
		IIIg	2147-2148	1	180- 65				
		IIIg	2152-2154	1	200- 75				
		IIIb	2158-2159	1	130- 60				
		IIIb	2301-2302	2	60-<25				
		IIIg	2316-2317	2	210-<25				
		16	1318-2330	IIIg	1324-1325		2	300-200	Weak I throughout day
				IIIg	1413-1417		2	>320- 50	
				IIIb	1457-1458		2	>320-245	
				IIIg	1515-1519		2	>320-<25	
				IIIg	1521-1524		2	>320- 50	
				IIIg	1528-1529		3	>320- 50	
				IIIg	1535-1536		2	310-<25	
				IIIg	1540-1543		2	320-100	
				IIIg	1545-1546		2	180- 60	
				IIIg	1548-1549		2	>320-<25	
				IIIg	1615-1619		2	240-<25	
				IIIg	1621-1624		2	80-<25	
				IIIg	1625-1630		3	>320-<25	
IIIb	1651-1652			2	100-<25				
IIIg	1702-1705			3	>320-<25				
IIIb	1722-1723			2	125-<25				
IIIb	1734			2	>320-200				
IIIg	1739-1740			3	>320- 90				
IIIg	1800-1802			3	>320-<25				
IIIg	1805-1807			2	280-<25				
IIIg	1822-1824			2	>320-<25				
IIIg	1825-1826			2	>320-190				
IIIb	1830-1831			2	280-190				
IIIb	1834-1835			2	180-<25				
IIIb	1904			2	50-<25				
IIIb	1918-1919			2	50-<25				
IIIg	1921-1928			3	290-<25				
IIIg	1936-1937			2	>320-240				
IIIg	1941-1942			2	>320- 50				
IIIg	2034-2035			2	200-<25				
IIIb	2041-2042			2	35-<25				
IIIg	2051-2053			2	125-<25				
IIIg	2129-2131			2	>320-<25				
IIIg	2150-2151			3	>320-100				
IIIg	2158-2202			3	280-<25				
IIIg	2228-2229			2	280-125				
IIIg	2251-2252			2	260- 50				
IIIg	2255-2300			3	300-<25				
IIIg	2302-2309			2	>320-<25				
17	1318-2330			IIIg	1427-1430	1	180- 50	Weak I throughout day	
				IIIg	1443-1444	2	75- 30		
		I	1444-1549	1	320- 50				
		IIIb	1506	1	120- 50				
		IIIg	1554-1556	1	100-<25				
		IIIg	1606-1607	2	75-<25				
		IIIg	1609-1610	3	290-<25				
		IIIg	1637-1639	2	180-<25				
		IIIg	1641-1708	3	300-<25				
		IIIg	1737-1742	3	100-<25				
		I	1740-1820	1	150- 50				
		IIIg	1745-1751	3	300-<25				
		IIIg	1753-1756	3	280-<25				
		IIIg	1757-1805	2	>320-<25				
		IIIg	1807-1812	2	>320-<25				
		IIIg	1817-1819	2	280-<25				
		IIIg	1839-1842	2	320-<25				
		IIIg	1908-1915	2	75-<25				
		IIIg	1917-1924	2	300-<25				
		IIIg	1926-1931	2	180-<25				
		IIIg	1932-1939	3	300-<25				
		IIIg	2002-2007	2	280-<25				
		IIIg	2018-2022	2	100-<25				
		I	2040-2044	2	140- 50				
		IIIg	2147-2151	3	230-<25				
		IIIg	2208-2209	2	240-<25				
		IIIg	2233-2235	2	280-<25				
		IIIg	2236-2238	2	240-<25				
		IIIg	2242-2243	2	280-<25				
		IIIg	2257-2258	2	180-<25				
		IIIg	2309-2310	2	180- 50				
		IIIg	2312-2313	2	180-<25				
							2120: Type V		
							1523: U-burst 1529: Type V		
							1627: Type V		
							1826: U-burst		
							1922: Type V 1936: U-burst		
							1708-2330: Sporadic Type III bursts 100-<25 Mc/s.		

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVj

MARCH 1966

FORT DAVIS

25 - 320 Mc/s

1966 <small>FORM NO. 4</small>	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC	REMARKS			
		TYPE	TIMES U.T.	INT					
18	1317-2330	IIIG	1317-1318	2	180-100	Weak I throughout day Sporadic Type III throughout day 100-<25 Mc/s.			
		I	1320-1530	1	320-125				
		IIIG	1343-1348	2	180-50				
		IIIG	1352-1358	2	180-50				
		IIIG	1401-1402	2	180-100				
		IIIG	1403-1404	1	180-100				
		IIIG	1405-1415	2	180-<25				
		IIIB	1416-1417	2	150-50				
		IIIG	1420-1425	2	180-<25				
		IIIG	1426-1432	2	320-<25				
		IIIG	1435-1436	1	180-100				
		IIIG	1439-1440	1	240-135				
		IIIG	1442-1443	2	180-50				
		IIIG	1446-1448	2	180-50				
		IIIG	1449-1450	2	180-50				
		IIIG	1455-1456	2	175-100				
		IIIG	1458-1459	2	180-50				
		IIIG	1500-1501	2	180-50				
		IIIG	1504-1508	2	280-<25				
		IIIB	1513-1514	2	135-<25				
		IIIB	1525-1526	2	150-50				
		IIIB	1529-1530	1	135-50				
		IIIG	1545-1549	2	280-<25				
		IIIG	1550-1551	2	280-<25				
		IIIG	1553-1601	3	300-<25				
		IIIG	1643-1644	2	180-50				
		IIIG	1713-1714	3	140-<25				
		IIIG	1718-1719	3	180-<25				
		IIIG	1721-1725	2	150-<25				
		IIIG	1726-1735	3	180-<25				
		IIIG	1736-1738	2	200-<25				
		IIIG	1750-1752	2	180-<25				
		IIIG	1800-1801	2	150-<25				
		IIIG	1808-1809	2	180-<25				
		IIIG	1812-1814	2	150-<25				
		IIIG	1816-1822	2	280-<25				
		IIIG	1824-1827	3	280-<25				
		IIIG	1829-1831	2	165-<25				
		IIIG	1850-1854	3	280-<25				
		IIIG	1855-1859	3	>320-<25				
		IIIG	1900-1903	3	320-<25				
		IIIG	1905-1916	3	>320-<25				
		IIIG	1917-1920	2	280-<25				
		IIIG	1921-1927	2	280-<25				
		IIIG	1928-1935	3	>320-<25				
		I	1953-2226	1	280-100				
		IIIG	2008-2011	3	280-<25				
		IIIG	2049-2050	2	165-<25				
IIIG	2051-2055	2	320-<25						
IIIG	2056-2103	3	>320-<25						
IIIG	2104-2107	2	>320-<25						
IIIB	2116-2117	2	150-<25						
IIIG	2157-2204	3	150-<25						
IIIG	2205-2207	3	180-<25						
IIIG	2211-2212	2	150-<25						
IIIG	2216-2217	2	180-<25						
IIIG	2251-2252	3	240-<25						
IIIG	2309-2313	2	150-<25						
IIIG	2315-2316	2	150-50						
19	1318-2330	IIIG	1329-1332	2	280-<100	Weak I throughout day Sporadic Type III throughout day 100-<25 Mc/s.			
		IIIG	1336-1338	2	230-<50				
		IIIG	1344-1346	2	150-<50				
		IIIG	1349-1351	2	290-<25				
		IIIG	1402-1404	2	150-50				
		IIIG	1419-1432	2	>320-<25				
		IIIG	1525-1526	3	180-<25				
		IIIG	1553-1555	1	240-<25				
		IIIG	1605-1621	3	>320-<25				
		IIIG	1627-1631	2	250-<25				
		IIIG	1819-1821	3	310-<25				
		I	1920-2040	1-2	260-<25				
		IIIG	1920-1921	2	180-<25				
		IIIG	1931-1932	2	150-<25				
		IIIG	2036-2037	2	180-<25				
		IIIB	2115	1	140-<25				
		IIIG	2127-2131	1	240-<25				
		IIIG	2132-2134	3	290-<25				
		IIIG	2137-2138	2	250-<25				
		IIIG	2139-2142	2	300-<25				
		IIIG	2143-2148	3	310-<25				
		IIIG	2150-2200	3	320-<25				
		IIIG	2201-2203	3	290-<25				
		IIIG	2204-2206	3	290-<25				
		IIIG	2207-2211	3	290-<25				
		IIIG	2306-2307	2	200-50				
		20	1318-2330	I	1325-2330		1-2	240-50	Noise storm has continuum background Sporadic Type III throughout day 100-<50 Mc/s.
				IIIG	1357-1358		2	200-<50	
IIIG	1409-1410			3	150-<50				
IIIG	1450-1454			2	180-<50				
IIIG	1525-1528			2	130-<50				
IIIG	1536-1537			2	100-<50				
IIIG	1540-1544			2	320-<50				
IIIG	1547-1551			2	100-<50				
IIIG	1555-1558			2	300-<50				
IIIB	1603-1604			2	100-<50				
IIIB	1612-1613			2	100-<50				
IIIG	1614-1615			1	100-<50				
IIIG	1653-1654	2	75-<50						
IIIG	1656-1657	2	85-<50						
IIIG	1704-1706	1	180-<50						
IIIG	1744-1747	2	280-<50						
IIIG	1852-1853	2	250-75						

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

MARCH 1966

Fort Davis

25-320 Mc/s

1966 <small>UTIME-MET-20</small>	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC	REMARKS			
		TYPE	TIMES U. T.	INT.					
21	1318-2330	IIIG	1858-1859	3	320-<50	Weak I throughout day Sporadic Type III throughout day 100-<50 Mc/s.			
		IIIG	1948-1951	3	300-<50				
		IIIG	2054-2055	3	150-<50				
		IIIG	2102-2103	3	300-<50				
		IIIG	2107-2109	2	240-<50				
		IIIG	2140-2141	2	240-<50				
		IIIG	2145-2148	2	200-<50				
		IIIB	2215-2216	2	180-<50				
		IIIG	2302-2303	2	200-<50				
		IIIG	2308-2311	3	320-<50				
		IIIG	1358-1359	2	200-<50				
		IIIG	1400-1403	1	200-<50				
		IIIG	1406-1407	1	210-<50				
		IIIG	1412-1413	2	150-<50				
		IIIG	1415-1417	3	320-<50				
		IIIG	1605-1606	1	160-<50				
		IIIG	1607-1608	2	200-<50				
		IIIG	1609-1610	1	180-<50				
		IIIB	1856-1857	3	220-<50				
IIIG	2127-2129	2	300-<50						
IIIG	2130-2131	2	250-<50						
IIIB	2141-2142	2	250-60						
IIIG	2144-2146	2	280-<50						
IIIB	2147-2148	2	170-<50						
IIIG	2151-2200	3	>320-<50						
IIIG	2203-2206	3	310-<50						
I	2210-2330	1	>250-<50						
22	1318-2330	I	1318-2330	1	320-<50	1940-2151: Sporadic Type III 100-<50 Mc/s. 2151-2330: Sporadic Type III 100-<25 Mc/s.			
		IIIG	1612-1613	3	180-<50				
		IIIB	1615-1616	2	125-<50				
		IIIG	1632-1633	2	195-<50				
		IIIG	1702-1703	1	180-<50				
		IIIG	1757-1758	2	250-<50				
		IIIG	1803-1804	1	180-<50				
		IIIG	1807-1813	1	>320-<50				
		IIIG	1814-1824	3	>320-<50				
		IIIB	1921-1922	1	80-<50				
		IIIG	2250-2251	2	75-<25				
		IIIG	2319-2320	2	190-50				
		23	1318-2330	I	1318-2330		2-3	280-<25	Sporadic Type III throughout day 100-<25 Mc/s.
IIIG	1339-1340			3	290-<25				
IIIG	1649-1650			3	100-<25				
IIIG	1716-1718			3	150-<25				
IIIG	1957-1958			2	180-<25				
IIIG	2041-2042			1	300-<25				
IIIG	2120-2121			1	>320-150				
IIIG	2123-2124			2	180-<25				
IIIG	2141-2142			1	>320-135				
IIIG	2243-2245			2	150-<25				
IIIG	2249-2250			2	>320-75				
IIIG	2256-2257			1	180-100				
II	2326.5-2330			2	>320-100				
24	1318-2330			I	1318-1400	1	280-50	Weak I throughout day. Sporadic Type III throughout day 100-<25 Mc/s. 1916: Type V	
		IIIB	1536-1537	1	310-170				
		IIIG	1736-1737	2	250-<25				
		IIIG	1751-1752	1	240-<25				
		IIIG	1756-1757	2	180-<25				
		IIIG	1758-1759	2	240-50				
		IIIG	1909-1918	3	320-<25				
		IIIG	2039-2045	2	320-<25				
		I	2020-2330	1	280-50				
		IIIG	2255-2256	2	180-50				
		25	1318-2330	I	1318-2330	1-2	320-50		Sporadic Type III throughout day 100-<25 Mc/s. 1653: Type V
IIIG	1458-1459			1	125-<25				
IIIG	1537-1538			3	320-<25				
IIIG	1642-1643			2	>320-180				
IIIG	1645-1647			2	250-<25				
IIIG	1929-1932			3	250-<25				
IIIG	2039-2042			2	240-<25				
IIIG	2048-2049			1	180-<25				
IIIG	2052-2055			2	240-<25				
IIIG	2057-2059			2	200-<25				
IIIG	2231-2233			2	180-<25				
IIIG	2235-2236			1	190-<25				
26	1318-2330			I	1318-1820	1	320-50	Weak I throughout day. 1830: Type V 1852: Type V 1910: Type V	
				IIIG	1830-1833	2	150-<25		
		IIIG	1850-1853	3	320-<25				
27	1318-2330	IIIG	1319-1322	2	>320-100	Weak I throughout day.			
		IIIG	1413-1414	2	190-50				
		IIIB	1415-1416	1	240-150				
		IIIG	1418-1419	1	150-115				
		IIIG	1524-1526	2	240-<25				
		IIIG	1530-1534	3	320-<50				
		IIIG	1539-1541	1	180-110				
		IIIG	1733-1735	2	>320-160				
		IIIG	1736-1737	2	>320-200				
		IIIG	2015-2016	1	240-180				
		IIIG	2017-2018	2	>320-190				
IIIB	2054-2055	1	180-60						
IIIG	2118-2124	2	320-<25						

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVI

MARCH 1966

Fort Davis

25-320 Mc/s

1966 <small>LOCAL TIME</small>	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC.	REMARKS
		TYPE	TIMES U. T.	INT.		
<u>March</u> 28	1318-2330	IIIg	1446-1447	1	>320-280	
		IIIG	1503-1509	2	310- 50	
		IIIg	1914-1915	2	196- 60	
		IIIg	1919-1920	1	240-170	
		IIIG	1922-1924	1	>320-200	
29	1318-2330	IIIg	1319-1320	1	125-100	Weak I throughout day. 1525: Type V
		IIIG	1321-1322	1	125-100	
		IIIG	1400-1402	1	230-100	
		IIIg	1403-1404	1	240-100	
		IIIg	1518-1519	3	150-<25	
		IIIG	1525-1526	3	135-<25	
		IIIG	1529-1532	2	>320-<25	
		IIIB	1637-1638	2	125-<25	
		IIIg	1659-1700	3	125-<25	
		IIIg	1702-1703	1	180- 70	
		IIIg	1707-1708	2	240- 50	
		IIIg	1718-1719	2	100-<25	
		IIIg	1723-1724	2	135-<25	
		IIIg	1728-1729	3	>320-<25	
		IIIg	1731-1732	3	>320-<25	
		IIIg	1801-1803	2	190-<25	
		Unc1.	1807-1808	2	100-<25	
		IIIg	1812-1814	2	100-<25	
		IIIg	1826-1830	3	>320-<25	
		IIIg	1832-1833	2	>320-<25	
		IIIg	2011-2012	2	>320- 50	
IIIg	2100-2101	2	125-<25			
30	1318-2330	IIIg	1452-1453	1	290- 50	Weak I throughout day.
		IIIg	1506-1508	1	180-100	
		IIIg	1623-1624	2	300- 75	
		IIIG	1644-1646	2	320-<25	
31	1318-2330	I	1318-1720	1	310-100	Weak I throughout day. Sporadic Type III: 1627-2224, 100-<25 Mc/s.
		IIIB	1900-1901	2	180-<25	
		IIIg	2032-2033	1	180-<25	

**SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS**

APRIL 1966

UNIVERSITY OF COLORADO

7.6-41 Mc/s

Date April 1966	Bursts				Date April 1966	Bursts			
	Type	Time (U.T.)	Inten- sity	Frequency Range (Mc/s)		Type	Time (U.T.)	Inten- sity	Frequency Range (Mc/s)
1 Apr	continuum	b1240-a0045	1	19-41	15 Apr	III	2352-2353	1-	26-37
2	continuum	b1240-a0038	1	19-41	16	III	0000:30-0001:30	1-	22-41
3	continuum	b1243-a0043	1	16-41		III	2125:45-2126	1-	24-39
4	continuum	b1235-a0049	1	16-41		III	2131-2131:15	1+	21-41
5	continuum	b1235-a0050	1	19-41	17	III	0032-0033	1	31-41
	III	1526:15-1530	3	12-41		III	1222-1223:15	1+	23-41
6	continuum	b1231-a0050	1	19-41	18	III	0033:45-0034	1	24-41
7	continuum	b1235-a0045	1	17-41		continuum	1605-1733	1-	24-41
	III	1644-1645:30	3	12-41	20	III	1709:45-1710	1	28-38
8	continuum	b1230-a0050	1	18-41		III	1754:15-1755	1	24-38
	III	1452:30-1455:30	2	13-41		continuum	1930-2125	1-	24-41
9	continuum	b1300-a0045	1-	20-41		III	2116:45-2117	1	26-38
	III	2023-2024	2	15-41		III	2159:45-2200:30	2	29-34
10	III	1244:45-1245:45	2	18-41		III	2209-2209:15	1-	32-41
	III	1246-1246:15	2	22-41		III	2238:30-2238:45	1-	26-41
	III	1250:15-1250:30	1-	26-37	21	III	2339:30-2339:45	1-	31-39
	III	1351:15-1352	2	17-41		III	0006:30-0007	1	23-41
	III	1355-1355:30	2	23-41		III	1305-1306	1+	22-41
	III	1413:45-1415:15	2	17-41		III	1659:45-1700	1-	23-33
	III	1451-1452	1+	12-41		III	1703:30-1704	1	21-41
	III	1514:45-1516	2	16-41		III	1711-1711:15	1-	28-36
	III	1519:30-1520:30	1+	16-41		III	1713:15-1713:30	1-	26-36
	III	1609-1609:15	1-	23-38		III	1727:30-1728	1	24-40
	III	1801:15-1801:45	1	24-35		III	1729:45-1730	1-	28-41
	III	1925:30-1926:30	1	16-41		III	1752:30-1752:45	1-	27-36
	III	2035:30-2036	1-	15-41		continuum	1813-2220	1	21-41
	III	2047:15-2050	1-	12-36		III	2240:45-2241	1-	21-41
	III	2126:15-2126:30	1-	32-41		continuum	2305-a0100	1-	24-41
	III	2131:15-2131:30	1-	31-41	22	III	1516:30-1516:45	1	21-33
	III	2132:30-2133	1	26-41		continuum	1655-2004	1-	20-41
	III	2134-2135	2	17-41		no observ.	2015-2318		
	III	2138-2139:15	1	20-41		continuum	b2318-a0105	1-	20-41
11	III	1636:45-1637:15	1	26-41	23	continuum	b1210-a0117	1-	20-41
	III	2031:30-2032	1	25-39		III	1329:15-1329:45	3	18-41
	III	2034-2034:15	1-	32-36		III	1953-1954	3	12-41
	III	2036-2036:15	1-	32-36	24	continuum	b1210-a0124	1	20-41
12	III	1312-1313:15	1	22-41		III	1647:30-1650	3	11-41
	III	1316:45-1317:30	1	27-41		III	1650:15-1650:45	3	11-41
	III	1531:30-1535	3	11-41		III	1651-1652	3	11-41
	II	1537-1552	3	22-41		III	1739-1740:45	3	11-41
	IV	1552-1900	1-	24-41		III	1742-1743	3	11-41
13	III	0050:45-0051:30	1	21-41	25	continuum	b1423-a0115	1	22-41
14	III	0059:30-0100:30	1+	13-41	26	III	0001-0002:15	2+	17-41
	III	1231-1231:15	1-	15-41		III	1230:30-1231	1	20-41
	III	1232:30-1232:45	1-	21-29		III	1242:30-1243:15	2	26-41
	III	1233:15-1233:45	1-	15-41		III	1243:15-1244:15	3	20-41
	III	1258:30-1259:15	2	14-41		III	1358:15-1358:30	1-	30-41
	III	1305:15-1305:30	1-	27-41		III	1524:30-1525:15	1-	28-36
	III	1317:45-1318	1-	31-41		III	1526:15-1527:30	1+	21-37
	continuum	1325-a0045	1-	20-41		III	1528:45-1529	1	23-39

**SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS**

IVn

APRIL 1966

UNIVERSITY OF COLORADO

7.6-41 Mc/s

Date April 1966	Bursts				Date April 1966	Bursts			
	Type	Time (U.T.)	Inten- sity	Frequency Range (Mc/s)		Type	Time (U.T.)	Inten- sity	Frequency Range (Mc/s)
26 Apr	III	1531:45-1532:30	1	24-37	27 Apr	III	1959:45-2000:15	1	26-36
	III	1638:45-1639:15	1	29-36		III	2103-2103:15	1	27-41
	III	1641-1641:15	1-	33-39		III	2111:45-2112:15	1+	21-41
	III	1646:30-1647	1+	24-41		III	2135-2136	3	12-41
	III	1708-1708:15	1	28-36		III	2223-2223:15	1	32-41
	III	1742:30-1742:45	1	28-39	28	III	2240:15-2240:30	1	25-41
	III	1834:15-1834:45	1+	18-41		III	2325:15-2325:30	1-	25-41
	III	1838:30-1839:15	1+	16-41		III	0050:45-0051	1	25-37
	III	2213:45-2215	2	16-41		III	0102:30-0102:45	1	26-41
	III	2311:30-2312:45	2	16-41		III	1320:30-1320:45	1-	25-37
	III	2312:45-2313:30	2	16-41		III	1332:30-1332:45	1-	24-36
	III	2318-2319:15	2	21-41		III	1348-1348:15	1	24-41
	III	2320:45-2322:15	2	16-41		III	1403:30-1403:45	1	21-28
	III	2340:30-2341:15	2	16-41		III	1704:30-1704:45	1-	27-38
III	2342-2342:15	1+	24-41	III		2147:30-2147:45	1	23-32	
27	III	2345:15-2345:30	1+	27-41	III	2202:15-2202:45	1	25-41	
	III	2350:15-2351:15	3	16-41	III	2219:15-2220	1	21-41	
	III	0042-0042:15	1-	25-36	III	2220:15-2221	2	17-41	
	III	0053:30-0053:45	1-	28-41	III	2227:45-2228	1	25-34	
	III	1351:45-1352:45	2	19-41	III	2319:30-2319:45	1-	23-37	
	III	1441-1441:15	1	26-35	29	III	2321:30-2321:45	1	24-40
	III	1448-1448:15	1+	18-37		continuum	0012-0035	1-	30-41
	III	1507:30-1508:15	1	17-35		no observ	1930-0220		
	III	1512-1512:45	1+	16-35	30	III	1431-1431:45	1	22-41
	III	1647:45-1648:15	1+	14-41		III	1532:45-1533:15	2	22-41
	III	1704:45-1705	1	27-34					
	III	1721:45-1722:15	1+	21-39					
	III	1738:30-1738:45	1	27-38					
	III	1851:15-1852:15	2	21-41					
	III	1923:15-1924	1+	25-39					

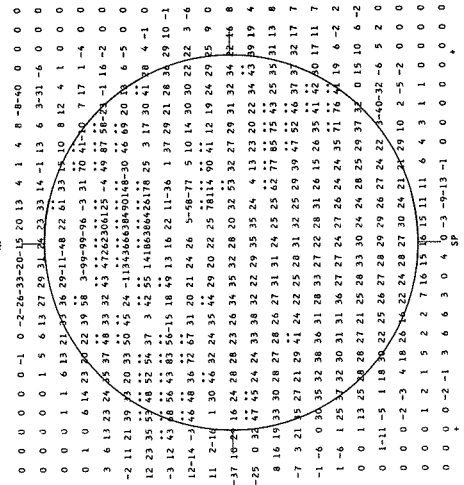
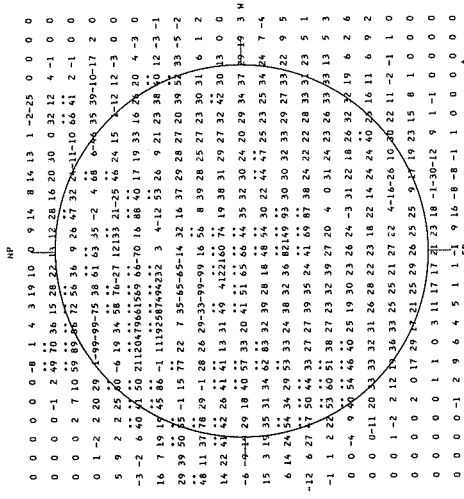
d = harmonic structure

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

APRIL 1966

STANFORD

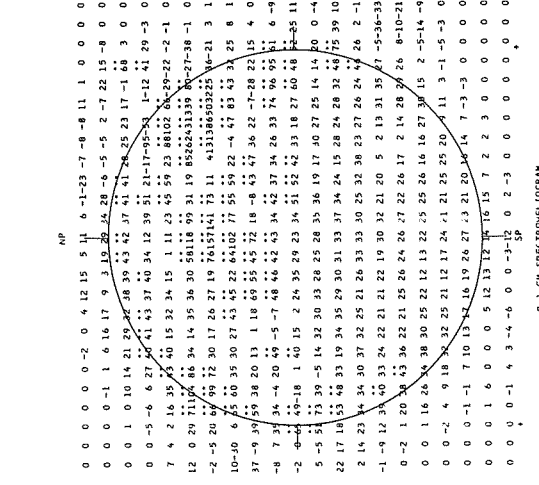
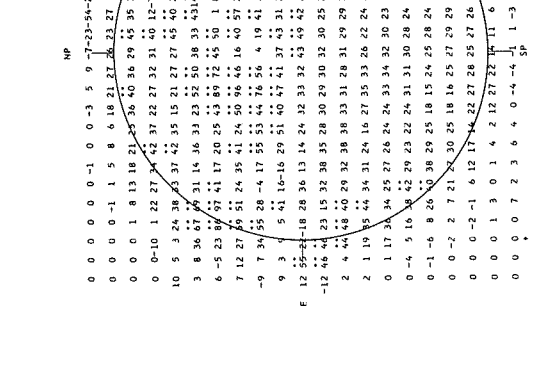
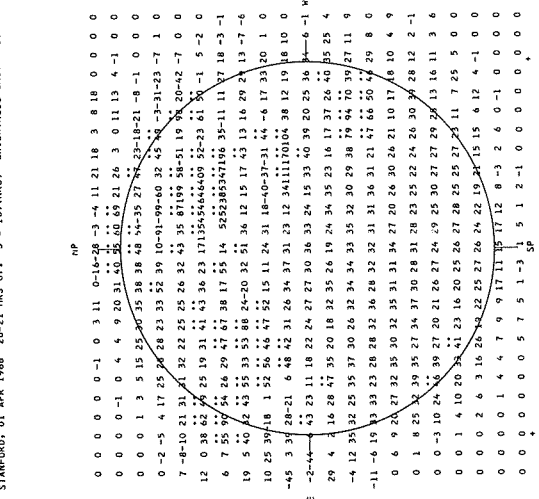
9.1 cm



9.1 CM SPECTROHELIOGRAM
STANFORD, 01 APR 1966 20-21 HRS UT. S = 107HNCI. BRIGHTNESS UNIT = 1000 K

02 APR. 1966

9.1 CM SPECTROHELIOGRAM
STANFORD, 03 APR 1966 20-21 HOURS UT. S = 102. BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 04 APR 1966 20-21 HRS UT. S = 103. BRIGHTNESS UNIT = 1000 K

05 APR. 1966

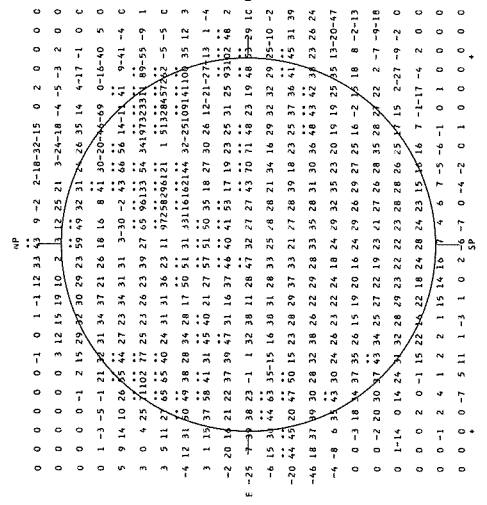
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SOLAR RADIO EMISSION SPECTROHELIOGRAMS

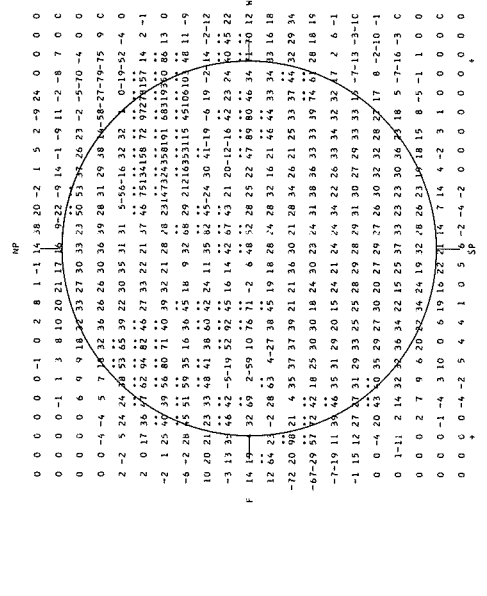
APRIL 1966

STANFORD

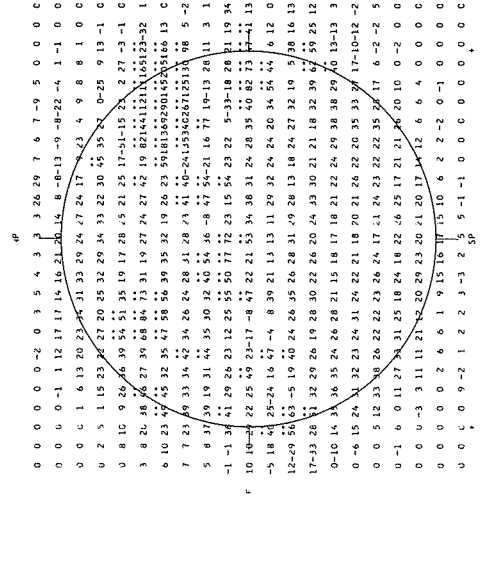
9.1 cm



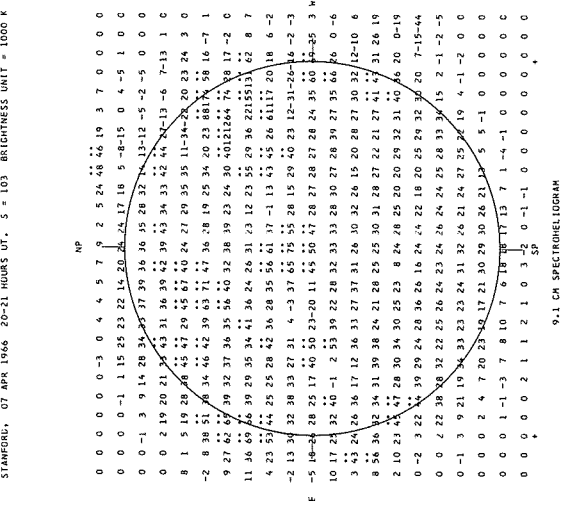
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STANFORD, 07 APR 1966 20-21 HOURS UT. S = 103 BRIGHTNESS UNIT = 1000 K



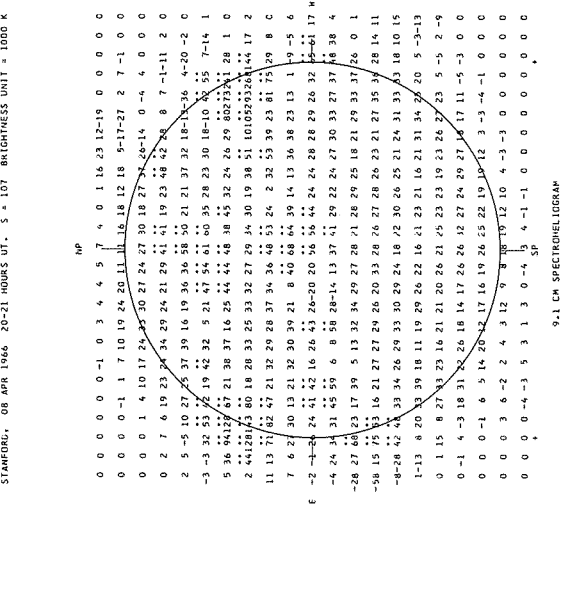
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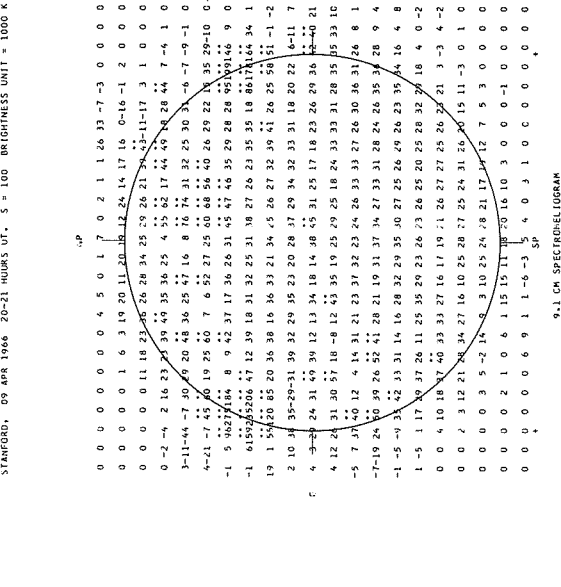
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STANFORD, 09 APR 1966 20-21 HOURS UT. S = 100 BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 10 APR 1966 20-21 HOURS UT. S = 94 BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 11 APR 1966 20-21 HOURS UT. S = 94 BRIGHTNESS UNIT = 1000 K



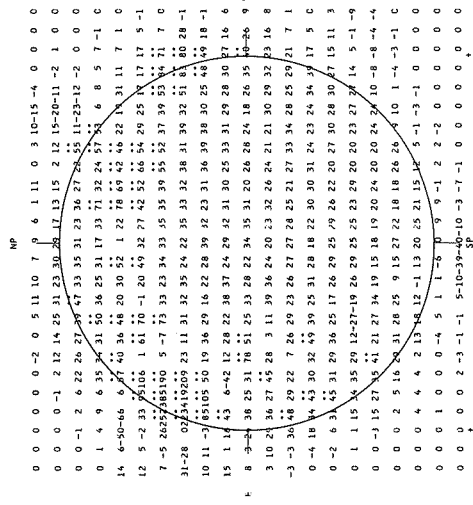
9.1 CM SPECTROHELIOGRAM
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SOLAR RADIO EMISSION SPECTROHELIOGRAMS

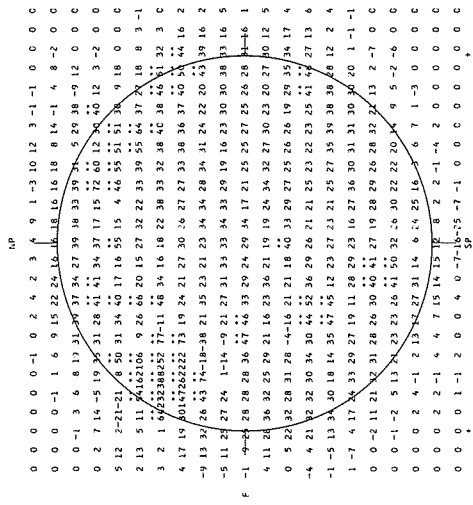
STANFORD

APRIL 1966

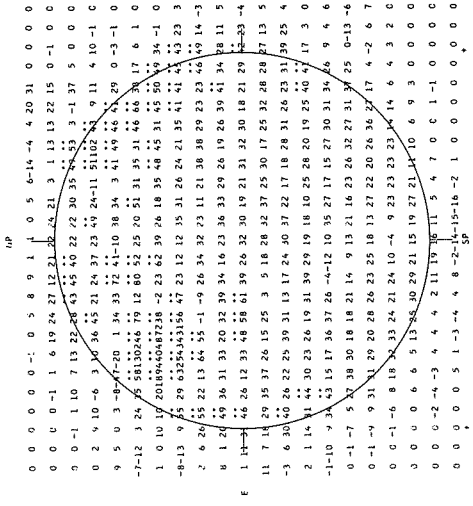
9.1 cm



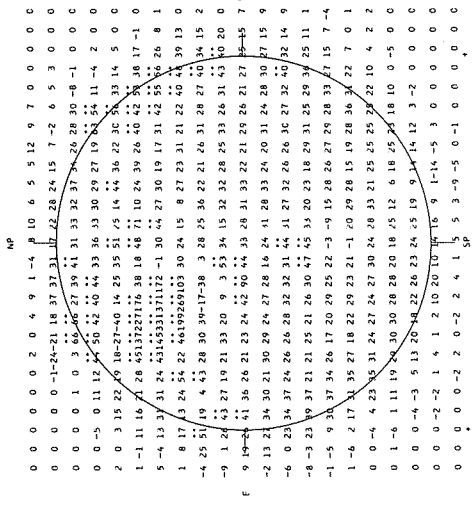
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STANFORD, 13 APR 1966 20-21 HOURS UT. S = 93. BRIGHTNESS UNIT = 1000 K



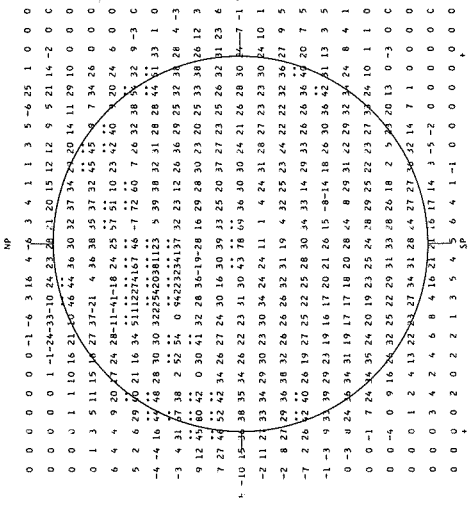
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STANFORD, 14 APR 1966 20-21 HOURS UT. S = 91. BRIGHTNESS UNIT = 1000 K



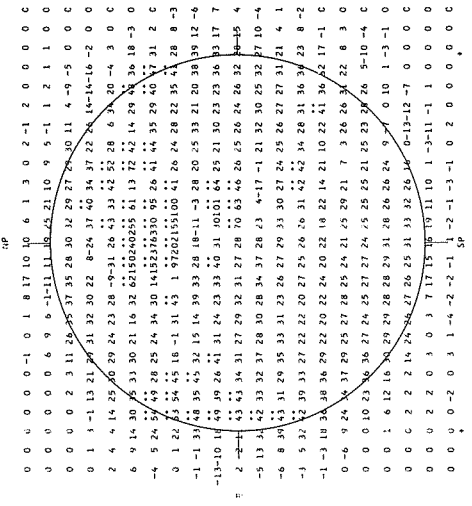
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STANFORD, 15 APR 1966 20-21 HOURS UT. S = 96. BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 16 APR 1966 20-21 HOURS UT. S = 93. BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 17 APR 1966 20-21 HOURS UT. S = 95. BRIGHTNESS UNIT = 1000 K



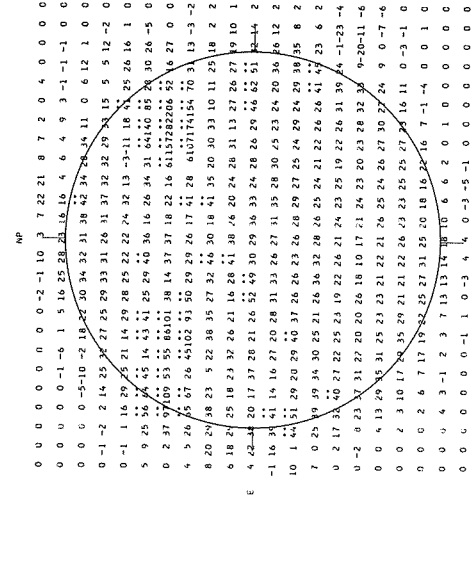
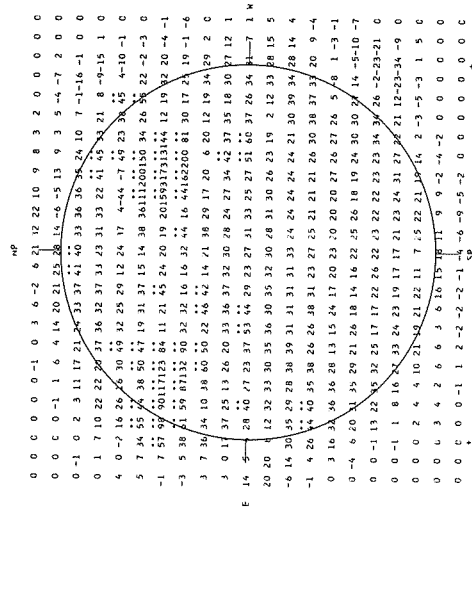
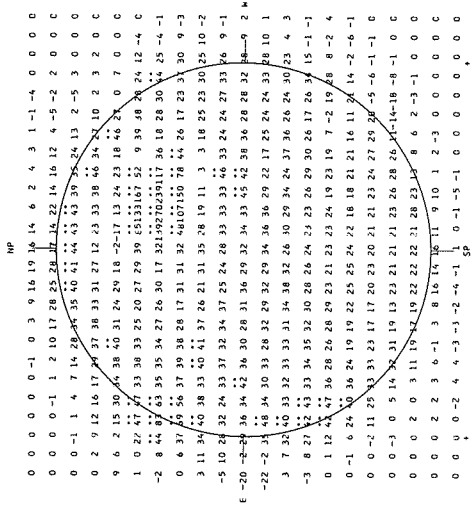
9.1 CM SPECTROHELIOGRAM
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SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

APRIL 1966

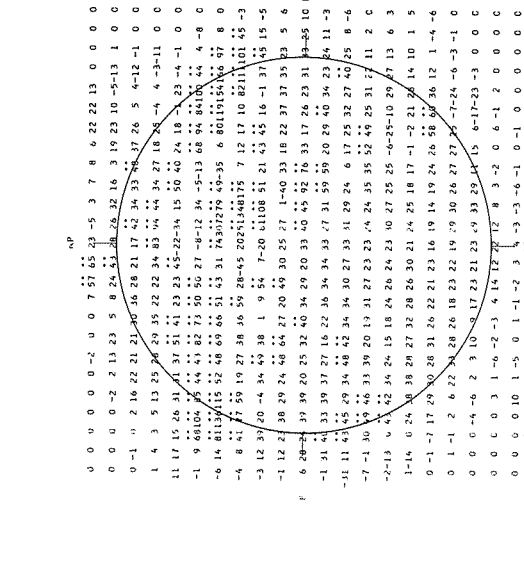
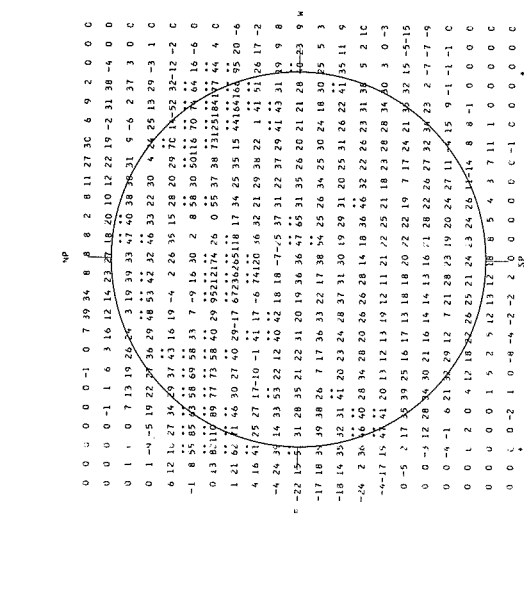
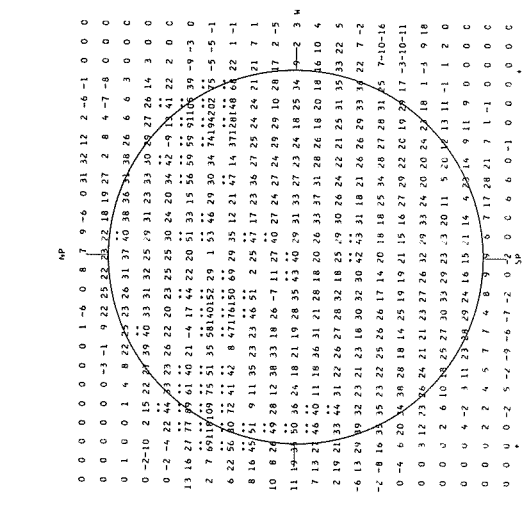
9.1 cm



9.1 CM SPECTROHELIOGRAM
STANFORD, 19 APR 1966 20-21 HOURS UT. S = 88 BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
STANFORD, 20 APR 1966 20-21 HOURS UT. S = 93 BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
STANFORD, 21 APR 1966 20-21 HOURS UT. S = 91 BRIGHTNESS UNIT = 1000 K



9.1 CM SPECTROHELIOGRAM
STANFORD, 22 APR 1966 20-21 HOURS UT. S = 92 BRIGHTNESS UNIT = 1000 K

9.1 CM SPECTROHELIOGRAM
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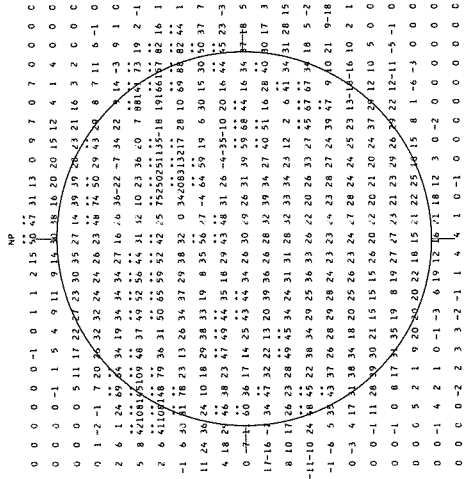
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SOLAR RADIO EMISSION SPECTROHELIOGRAMS

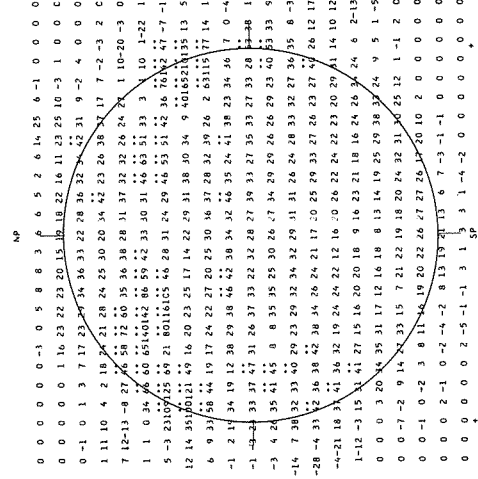
APRIL 1966

STANFORD

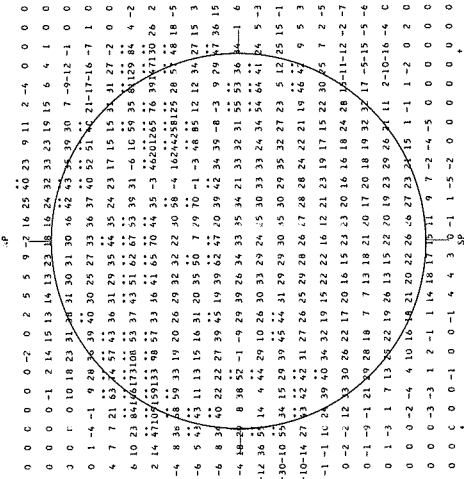
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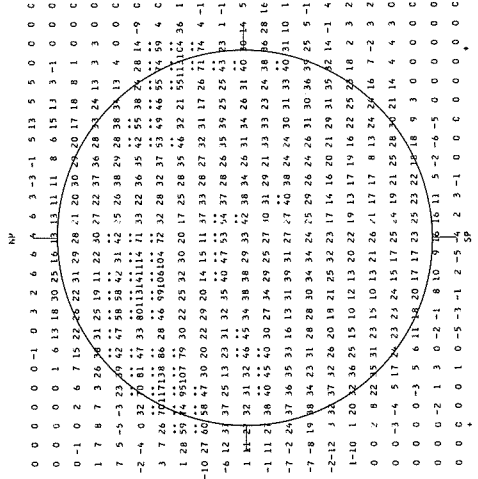
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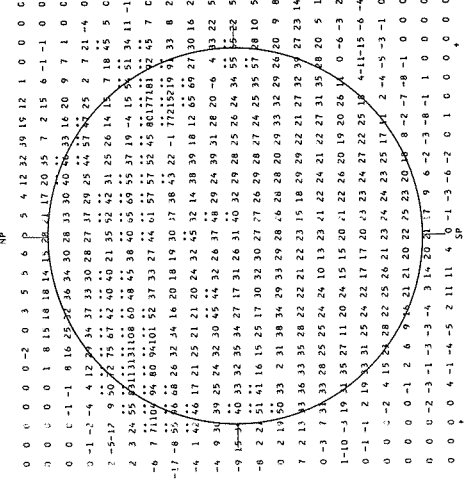
STANFORD, 29 APR 1966. 20-21 HOURS UT. S = 94. BRIGHTNESS UNIT = 1000 K



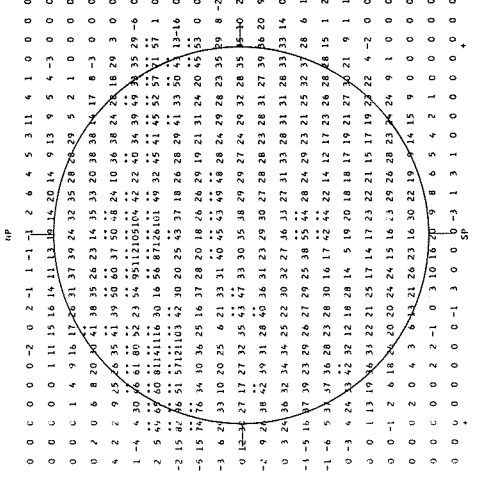
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STANFORD, 30 APR 1966. 20-21 HOURS UT. S = 92. BRIGHTNESS UNIT = 1000 K



STANFORD, 27 APR 1966. 20-21 HOURS UT. S = 96. BRIGHTNESS UNIT = 1000 K



STANFORD, 28 APR 1966. 20-21 HOURS UT. S = 94. BRIGHTNESS UNIT = 1000 K

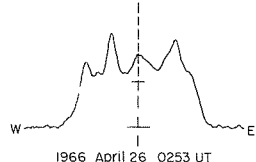
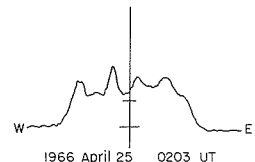
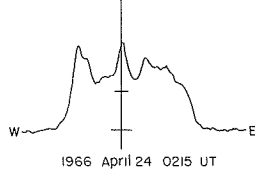
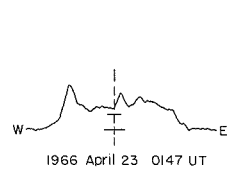
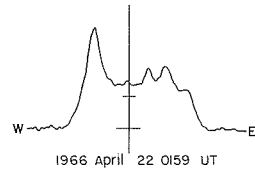
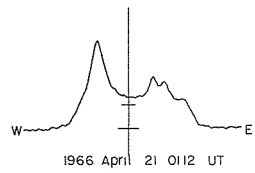
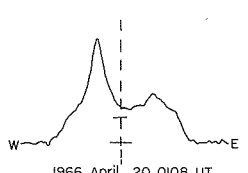
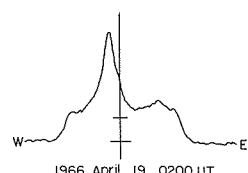
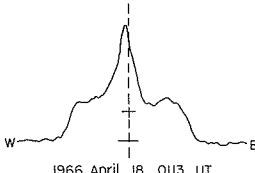
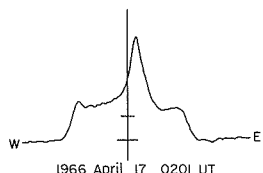
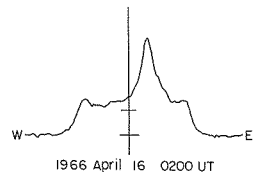
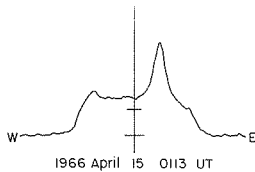
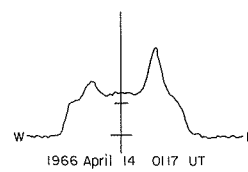
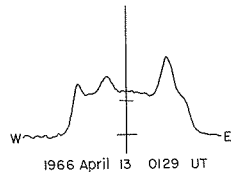
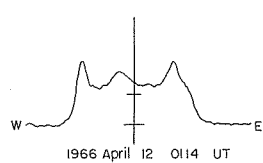
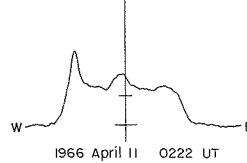
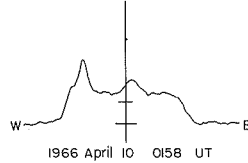
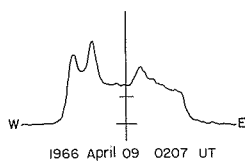
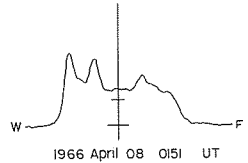
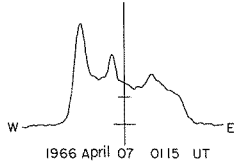
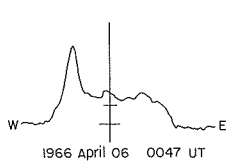
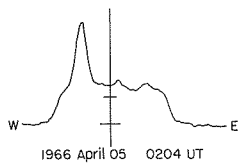
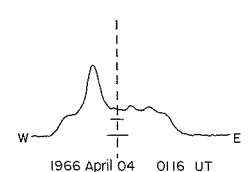
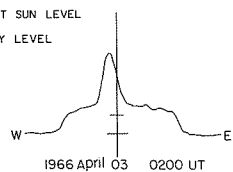
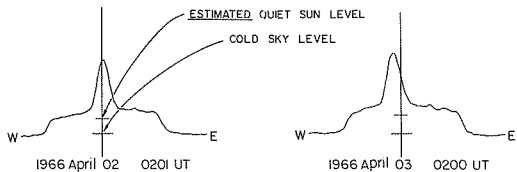
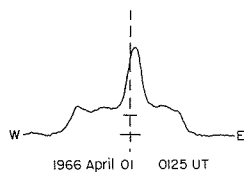
EAST - WEST SOLAR SCANS

IV

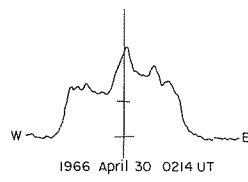
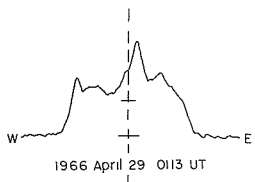
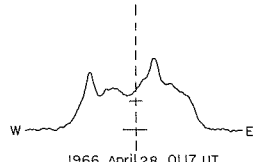
FLEURS, AUSTRALIA

APRIL 1966

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



NO DATA
1966 April 27

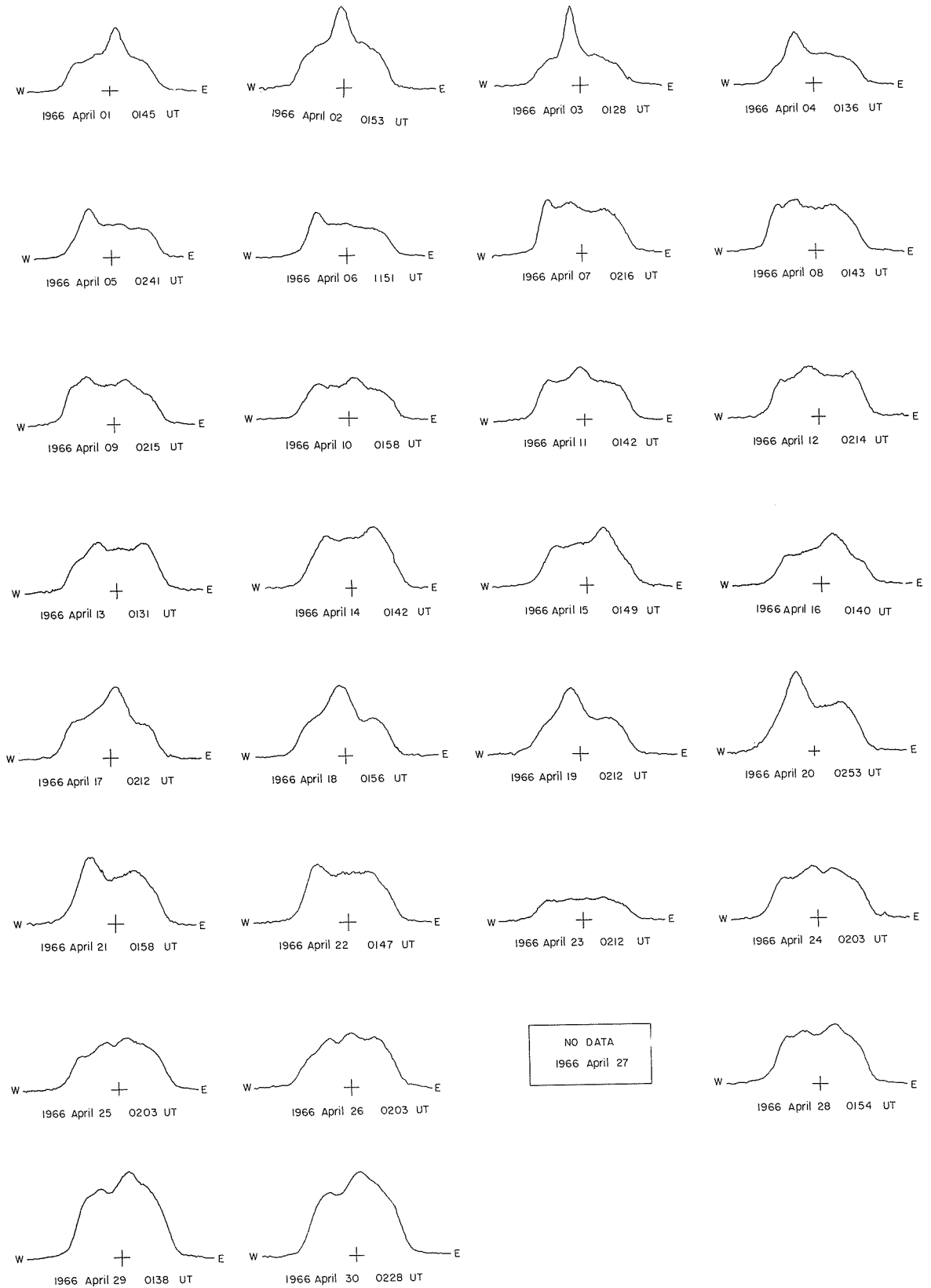


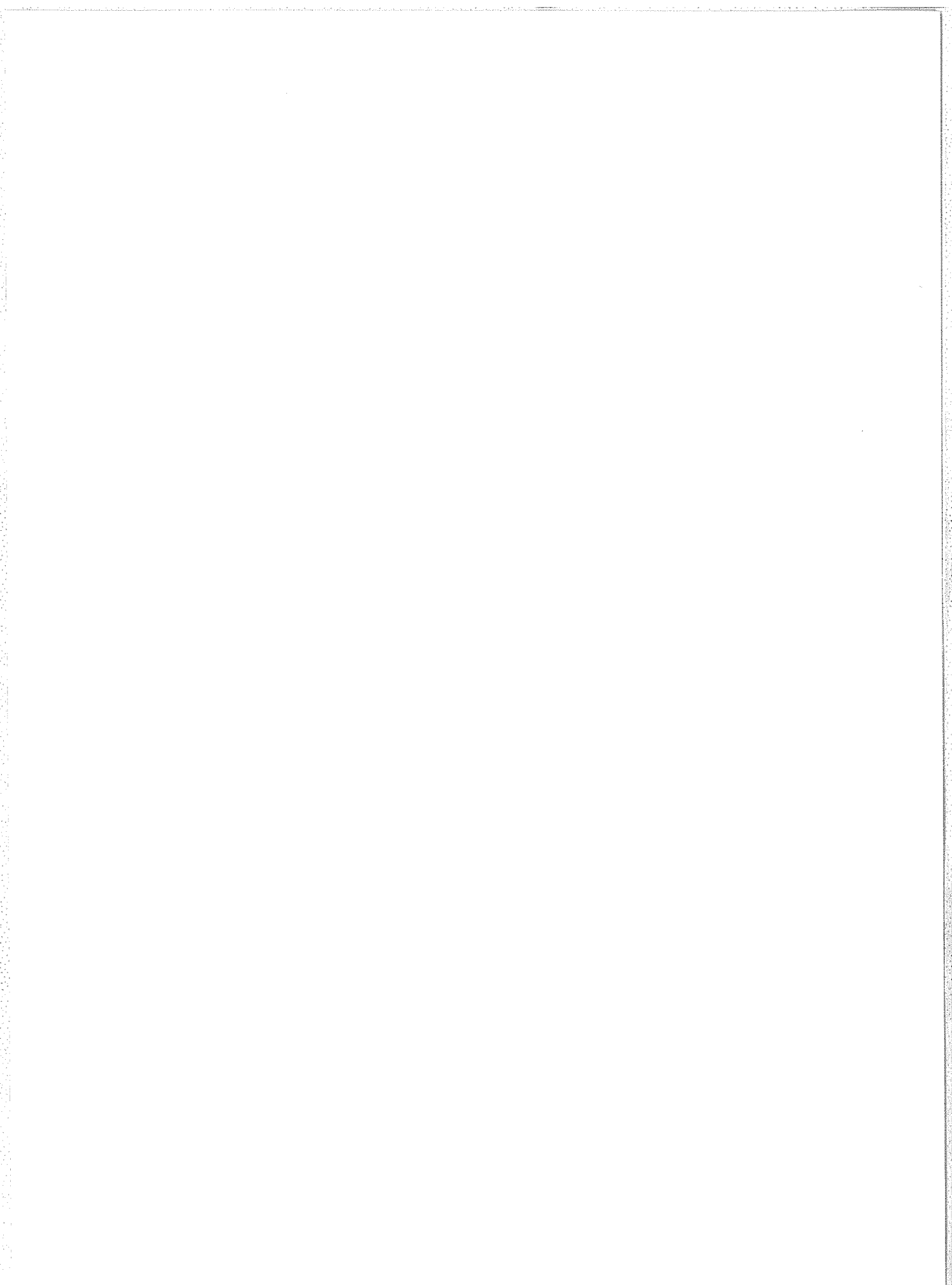
EAST - WEST SOLAR SCANS

FLEURS, AUSTRALIA

APRIL 1966

43 cm





COSMIC RAY INDICES
(Neutron Monitors)

MARCH 1966

MARCH 1966	CHURCHILL	DEEP RIVER	CLIMAX	DALLAS
	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR
1	6573.3	7110.7	4279.5	6471.2
2	6560.3	7107.7	4314.9	6466.7
3	6542.8	7070.7	4298.2	6453.8
4	6544.3	7070.1	4278.1	6485.0
5	6536.9	7078.0	4265.1	6481.8
6	6540.5	7109.4	4264.3	6482.8
7	6560.4	7116.0	4272.3	6484.3
8	6558.3	7105.7	4267.6	6469.4
9	6543.3	7079.3	4262.7	6472.9
10	6527.5	7072.5	4269.0	6470.8
11	6527.4	7080.8	4274.8	6466.3
12	6571.8	7098.2	4284.0	6480.7
13	6504.6	7007.4	4211.6	6405.5
14	6474.0	7040.0	4301.7	6491.8
15	6495.1	7064.5	4287.4	6471.0
16	6527.0	7087.0	4294.3	6473.2
17	6538.8	7090.6	4305.2	6474.8
18	6529.3	7079.4	4290.5	6487.5
19	6514.6	7074.7	4271.5	6476.7
20	6514.9	7075.3	4262.6	6443.9
21	6519.9	7039.1	4272.6	6424.2 (19)
22	6477.0	7006.3	4243.2	6407.8
23	6358.2	6907.5	4173.7	6374.3
24	6215.1	6728.0	4069.5	6252.1
25	6222.7	6773.7	4076.7	6250.2
26	6186.6	6722.2	4018.5	6168.0
27	6171.1	6711.4	3996.3	6150.9
28	6140.9	6678.5	3986.8	6122.5
29	6205.6	6745.4	4023.9	6179.3
30	6239.6	6794.2	4060.5	6229.5
31	6276.6	6812.2	4058.2	6256.7 (21)

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

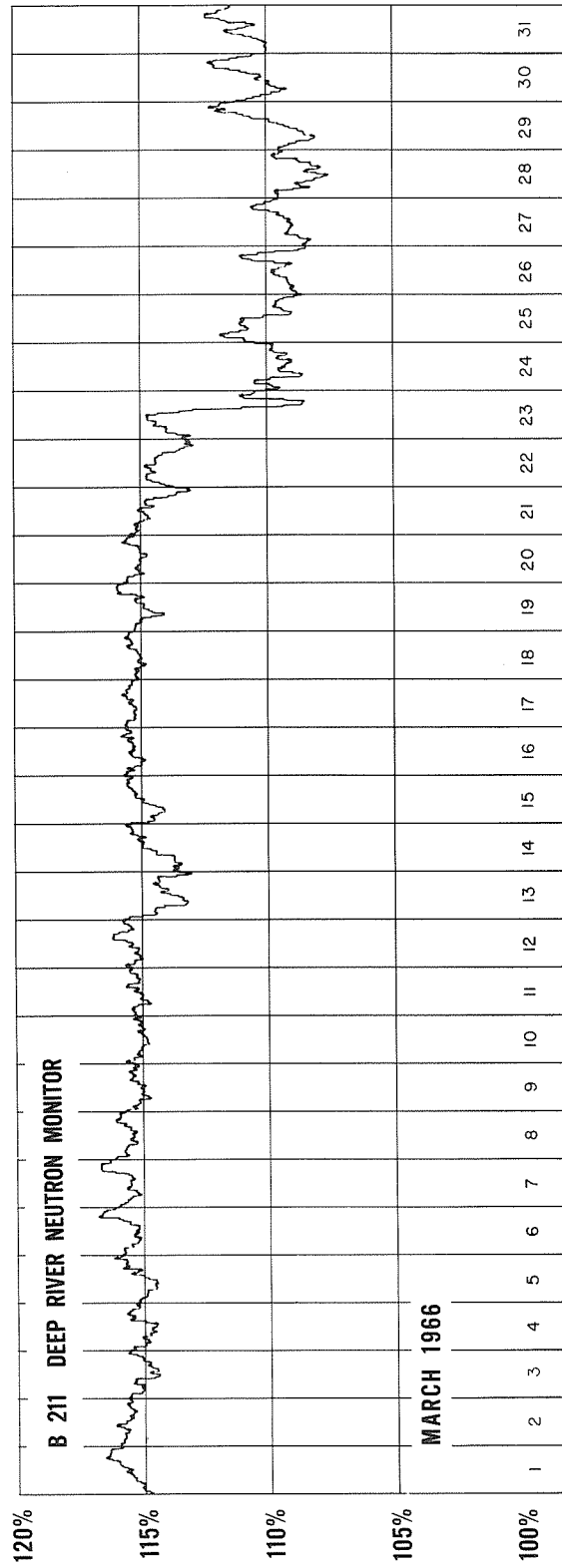
Churchill Super Neutron Monitor, Scaling Factor 120.

Deep River Neutron Monitor, Scaling Factor 300.

Climax IGC Station B305, Scaling Factor 100.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES
 (Pressure Corrected Hourly Totals)



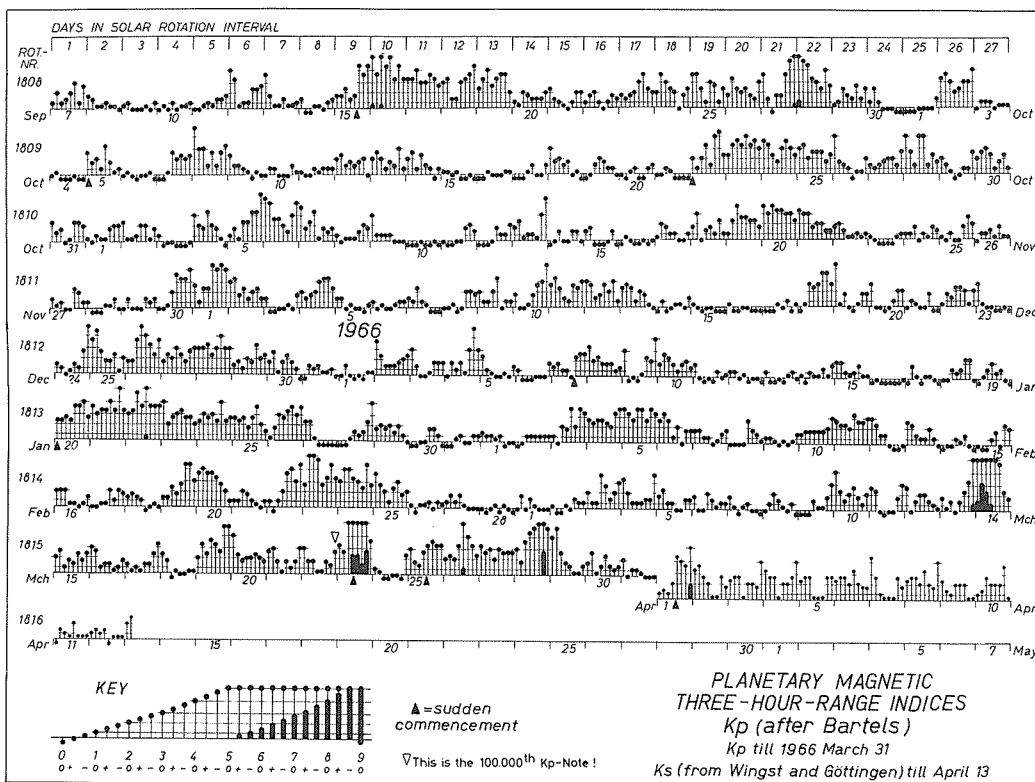
GEOMAGNETIC ACTIVITY INDICES

MARCH 1966

Day		Three-hour range indices Kp								Sum	Prel. Ci	Cp	Ap
		1	2	3	4	5	6	7	8				
1	Q	0+	2-	0+	1+	1-	0+	0+	0+	5+	0.0	0.1	3
2	Q	1-	0o	0o	1-	0+	1+	1o	1o	5o	0.1	0.0	3
3		2o	1o	1o	4-	3-	1+	2o	3o	17-	0.7	0.5	10
4		3+	2o	1o	1o	1o	1+	1+	4-	15-	0.6	0.5	9
5	q	2-	2+	1o	1o	0+	0+	1+	1+	9+	0.2	0.2	5
6	q	2-	0+	0+	2o	1+	1-	1o	1o	8+	0.1	0.1	4
7	Q	2-	1-	0o	1-	1o	0+	0+	0o	5-	0.0	0.0	2
8	q	0+	1o	2o	1+	1-	0+	1o	0o	7-	0.0	0.1	3
9	q	0o	0o	0o	1+	1-	1-	2-	3o	7+	0.3	0.1	4
10		4o	2+	1+	2o	3-	2-	1o	2o	17o	0.7	0.5	10
11		3-	2+	0+	0o	0+	0+	2-	3o	11-	0.4	0.3	6
12		3-	0+	1+	2o	2o	1+	1o	1-	11+	0.3	0.3	6
13		2-	1-	1+	0+	1+	2+	3+	6-	17-	1.1	0.8	14
14	D	6o	7+	7-	6-	5o	5-	2+	2-	39+	1.6	1.7	64
15		2o	3-	1o	2-	1+	2+	2-	2+	15o	0.5	0.4	7
16		3o	3-	1o	1+	1+	1-	1o	2-	13-	0.3	0.3	7
17		1+	1-	1o	1-	1+	1+	2+	3+	12o	0.4	0.3	6
18	q	2+	2-	0o	1-	0+	0+	1-	1-	7-	0.1	0.1	4
19	D	2o	3+	2+	4-	3+	3-	5-	5-	27-	1.1	1.0	20
20		4o	2+	2-	2o	2o	2+	2o	2-	18o	0.6	0.5	10
21		3-	3o	2-	1-	2-	1o	2-	3o	15+	0.4	0.5	8
22		3o	2-	2-	1-	1-	2-	1+	3-	13+	0.4	0.4	7
23	D	3+	3-	5o	7-	7-	6o	7o	4-	41o	1.7	1.7	67
24	Q	1o	1-	0o	0o	0+	0+	0o	2+	5-	0.1	0.0	2
25		3o	2-	1+	3-	3+	4-	3+	3+	22+	0.9	0.8	14
26	D	2o	2+	2o	3+	6-	4o	3+	2+	25o	1.0	1.0	20
27		3+	3-	3o	2o	3o	3-	3-	3-	22o	0.8	0.7	13
28	D	3o	2-	4-	4+	5-	5o	7o	5-	34o	1.5	1.5	42
29		4o	5-	3-	2-	1+	1-	1-	1+	17o	0.6	0.7	12
30		2-	3-	1-	1+	2+	1+	1o	1+	12+	0.4	0.3	6
31	Q	2o	0+	1o	1o	1-	0+	0+	0+	6o	0.0	0.1	3
Means:											0.55	0.50	13
No. of days :											31	31	31

GEOMAGNETIC ACTIVITY INDICES

VIb



DAILY AVERAGE INDICES A_p

Day	1965					1966						
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	4	4	5	13	5	6	2	4	19	2	3	3
2	2	2	6	5	11	5	16	5	9	8	3	3
3	3	3	9	5	6	4	3	1	2	6	11	10
4	6	4	11	3	7	16	1	8	11	11	13	9
5	4	26	6	3	4	9	8	13	3	4	18	5
6	7	6	5	19	3	9	2	17	3	2	8	4
7	8	5	3	8	6	7	6	9	3	7	4	2
8	4	11	9	21	6	4	15	4	4	8	4	3
9	11	12	12	12	7	3	4	5	6	8	3	4
10	6	7	2	14	4	3	3	0	10	7	7	10
11	8	2	5	2	6	4	3	3	10	2	12	6
12	7	4	3	5	6	11	6	3	10	2	5	6
13	5	3	2	5	3	6	8	10	6	2	6	14
14	5	3	6	4	8	3	6	3	2	3	2	64
15	4	4	19	10	6	15	2	2	1	5	4	7
16	4	18	73	4	7	35	2	1	1	0	5	7
17	11	5	34	2	11	18	2	4	2	2	4	6
18	68	4	11	6	21	16	6	6	12	5	3	4
19	14	2	2	13	27	17	4	10	7	3	14	20
20	10	4	2	5	17	5	2	17	4	15	17	10
21	3	5	2	3	12	5	1	10	2	23	4	8
22	5	6	4	4	5	5	14	4	6	27	14	7
23	5	5	3	13	9	10	19	2	3	14	28	67
24	5	6	3	7	14	10	14	4	9	14	19	2
25	4	3	11	6	13	12	11	5	12	11	10	14
26	6	4	10	4	7	9	7	4	19	14	3	20
27	5	6	6	8	6	20	6	4	10	3	4	13
28	3	5	3	15	3	27	15	2	16	7	2	42
29	5	3	11	12	6	7	5	3	8	6	6	12
30	5	3	14	4	8	3	8	12	6	2	6	6
31		4		3	11		6		3	2		3
Mean:	8	6	10	8	9	10	7	6	7	7	8	13

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC, NORTH PACIFIC

MARCH 1966

JAN 1966	WHOLE DAY INDICES			ADVANCE FORECASTS (Jc-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC				NORTH PACIFIC				GEOMAGNETIC INDICES										
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF:				K _{FR}		A _{FR}		K _{SI}		A _{SI}				
					00 TO 06	06 TO 12	12 TO 18	18 TO 24	00	06	12	18	00 TO 06	06 TO 12	12 TO 18	18 TO 24	HALF DAY (1)	PRE-SERVED (2)	HALF DAY (1)	PRE-DICTED (2)	A _{SI}		
					06	12	18	24	00	06	12	18	06	12	18	24	(1)	(2)	(1)	(2)			
01	6+	6	6	6	6+	6-	7-	7o	6	5	7	7	6	6	6	6	1	0	2	5	0	0	1
02	6+	6	6	6	6+	6o	7-	7-	6	6	7	7	6	6	6	6	0	1	2	9	0	1	1
03	6+	6	6	6	7-	6-	7o	7-	6	6	7	7	6	6	6	6	2	2	8	12	1	1	5
04	7-	6	6	6	7-	6-	7o	7-	6	6	7	7	6	6	6	6	2	2	7	12	1	2	5
05	6+	6	6	6	6+	6-	7-	7o	6	6	7	7	6	6	6	6	2	1	3	7	2	0	4
06	7-	6	6	6	6o	6o	7o	7o	6	5	7	7	6	6	6	6	1	1	3	4	1	0	3
07	6+	6	6	6	7-	6o	7-	7-	6	6	7	7	6	6	6	6	1	0	2	2	0	0	1
08	6+	6	6	6	6+	6-	7-	7-	7	6	7	7	6	6	6	6	1	0	2	4	1	0	2
09	7-	6	6	6	6+	6o	7o	7o	7	6	7	7	6	6	6	6	0	2	4	7	0	1	1
10	6+	6	6	6	6o	6-	7o	7-	6	6	7	7	6	6	6	6	2	2	8	8	2	2	7
11	6+	6	6	6	7-	6-	7-	7-	6	6	7	7	6	6	6	6	1	1	6	6	0	0	2
12	7-	6	6	6	7-	6-	7-	7o	7	6	7	7	6	6	6	6	2	2	6	4	1	1	6
13	7-	6	6	7	7-	6o	7o	7o	6	6	7	7	6	6	6	4	1	3	8	2	0	2	6
14	(4o)	5	(4)	7	5+	2+	3+	5o	6	4	4	5	5	5	5	5	(5)	3	36	2	(7)	(4)	113
15	3-	5	5	7	3-	3+	7-	6o	4	2	6	6	5	5	5	5	2	2	7	5	2	1	5
16	6o	6	6	7	6o	5-	7-	7-	5	5	7	6	6	6	6	5	2	1	6	5	1	1	3
17	6+	5	6	6	6+	5+	7-	7o	6	5	6	7	5	6	6	5	1	2	5	8	0	1	3
18	6+	6	6	6	6+	6-	7-	7-	6	5	7	7	5	6	6	6	1	1	3	10	1	0	2
19	6+	6	6	6	7-	5+	7-	7-	7	5	7	6	6	6	6	6	3	(4)	18	10	2	3	15
20	6o	6	6	7	6+	5-	6-	6+	5	4	7	6	5	6	6	6	2	2	9	6	2	2	6
21	6+	6	6	7	6o	6o	7-	7-	4	4	6	6	6	6	6	6	2	2	7	6	2	2	6
22	6+	6	6	7	6+	6o	7-	7-	6	6	6	6	6	6	6	6	2	2	7	6	1	2	4
23	5+	(4)	5	6	7-	5+	6-	4+	6	6	5	4	6	4	4	4	(4)	(4)	28	6	(5)	(6)	104
24	5o	(4)	(4)	3	3+	4+	7-	6+	3	2	5	6	4	4	4	4	0	1	2	25	0	0	1
25	6+	5	6	4	6-	5o	7o	7-	6	5	6	6	5	6	5	5	2	3	13	10	2	3	11
26	6o	5	6	5	6+	5o	7-	6+	6	4	6	6	5	6	6	5	3	3	15	6	2	3	18
27	6+	5	6	6	6+	6-	7-	7-	6	4	7	6	5	5	6	6	3	2	13	3	3	2	11
28	6-	5	5	6	6+	4+	6-	6+	6	6	7	6	5	6	5	4	3	(4)	20	3	3	(5)	41
29	5+	5	5	7	4o	4+	7-	6+	5	3	6	6	5	5	5	5	3	1	12	3	2	1	7
30	6-	5	5	7	6o	4+	6-	7-	6	5	6	6	5	5	5	6	2	1	5	6	2	1	5
31	6o	5	6	5	6o	5o	6+	7-	6	5	7	6	5	5	5	5	2	1	4	15	2	0	4
QUIET				P	16					16	17	18	22										
				S	9					11	5	11	8										
				U	3					0	0	1	0										
				F	1					1	3	0	0										
DISTURBED				P	0					1	0	0	1										
				S	1					2	3	1	0										
				U	0					0	2	0	0										
				F	1					0	1	0	0										

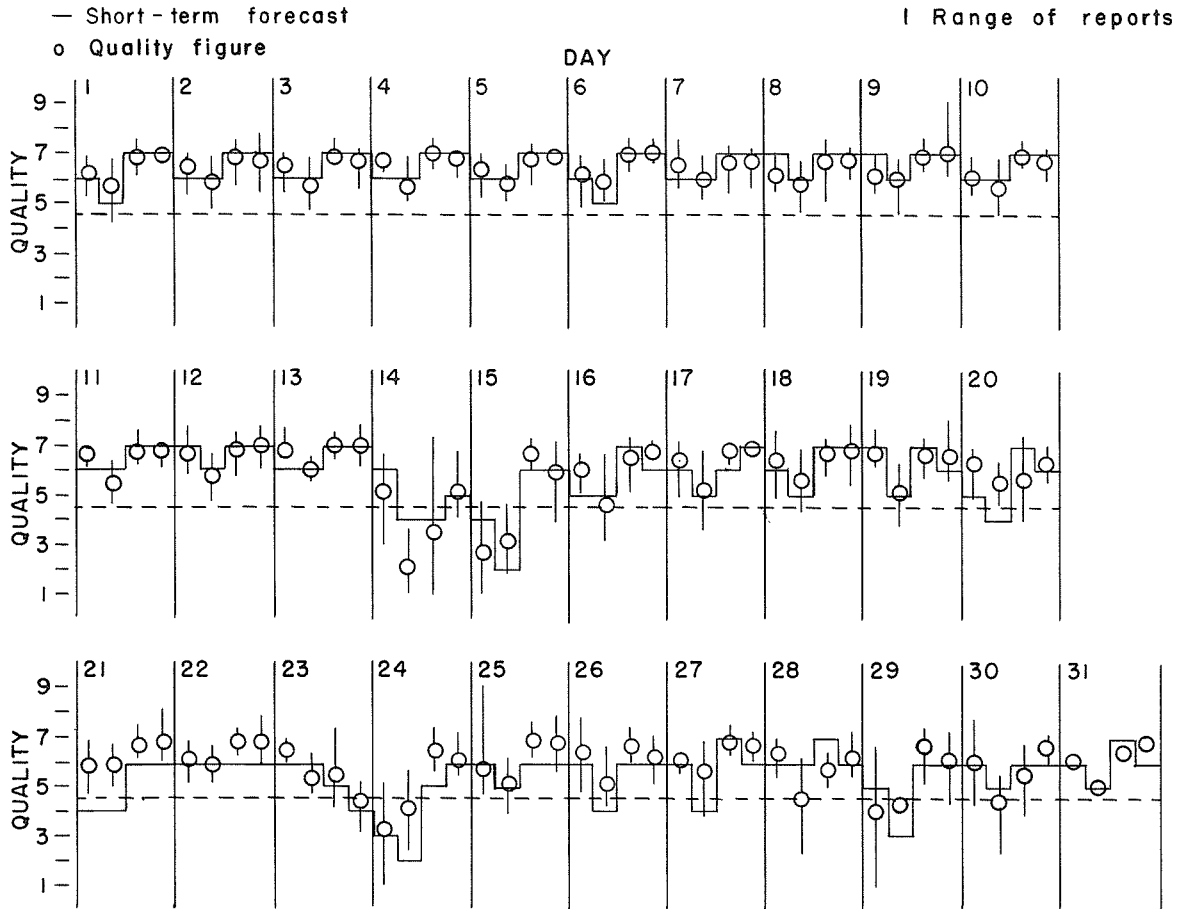
1) THE ADVANCE Jc-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES.

2) 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.

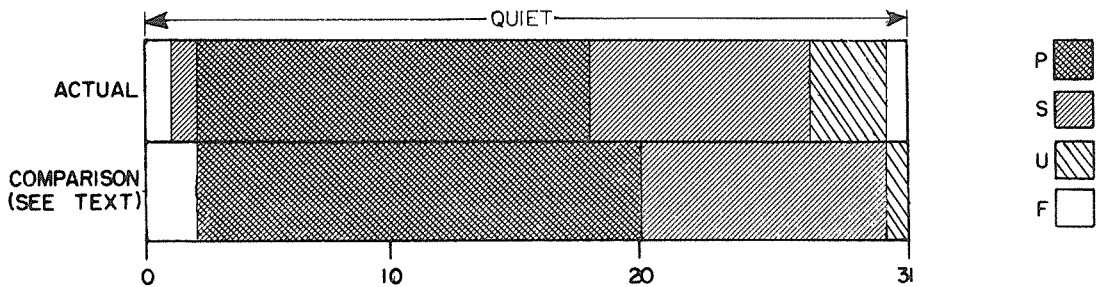
CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS VIIb

MARCH 1966

NORTH ATLANTIC



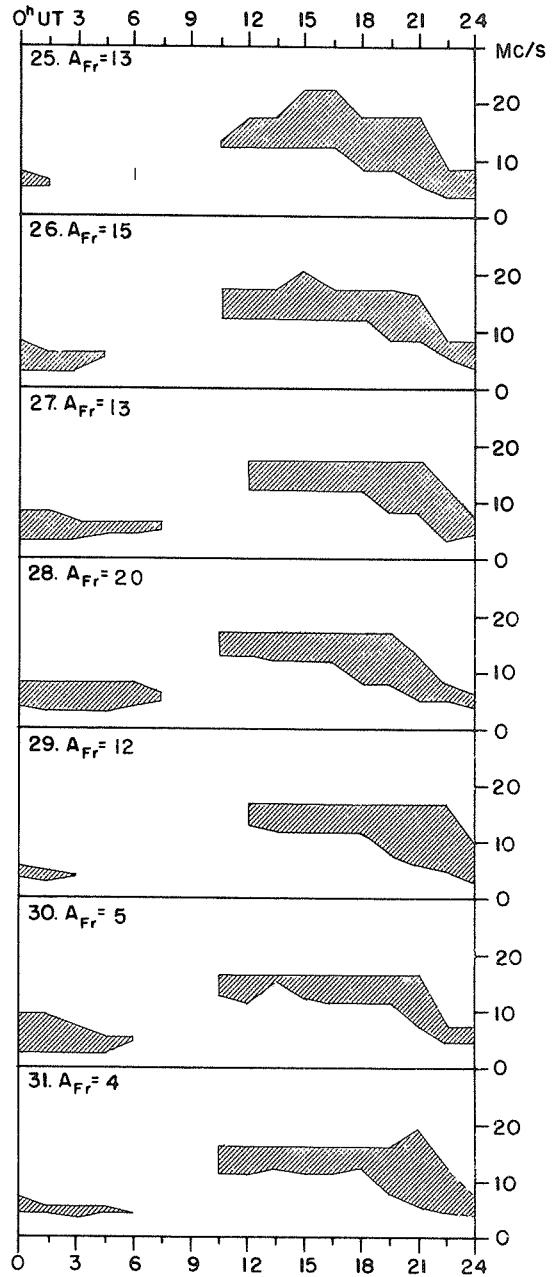
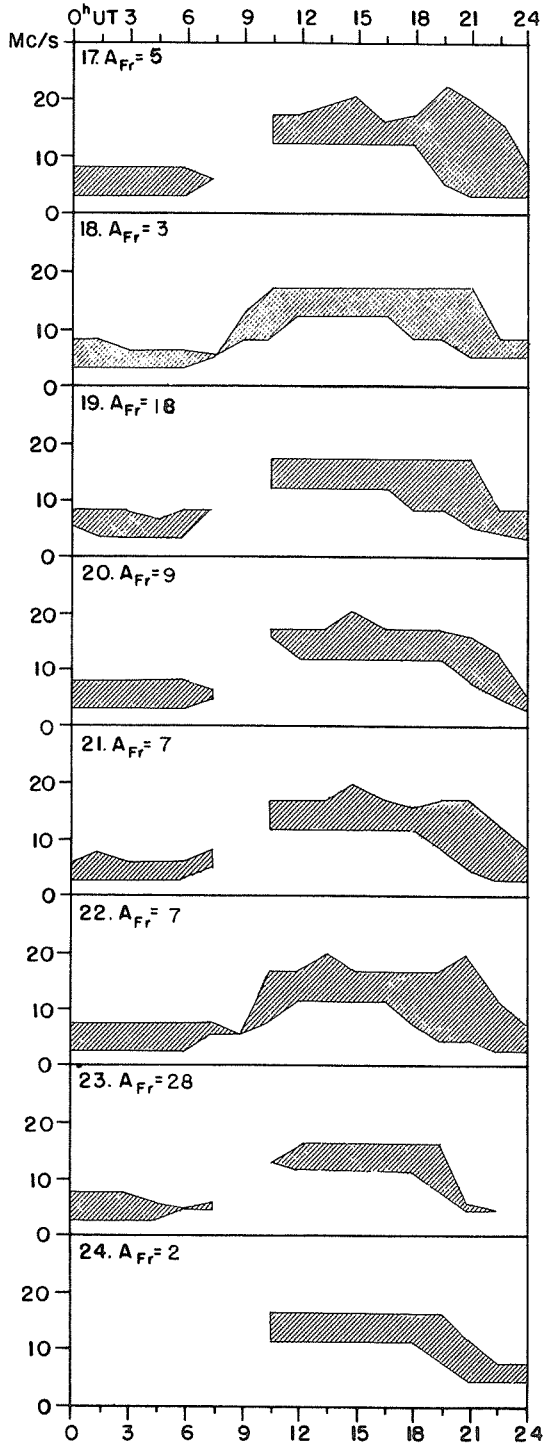
HIGH LATITUDE



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

VII d

MARCH 1966



Adapted from Observations by Deutsches Bundespost

ALERT PERIODS
INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

APRIL 1966

Apr. 1966	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
1	0400		332	Solar Activity	Exists	
			333	Magnetic Storm	Expected	
2	0228*	ADALERTPRESTO TENFLARE Toyokawa 020059Z				
	0400		334	Solar Activity	Exists	
			335	Magnetic Storm	01/1238Z	
3	0400		336	Solar Activity	Exists	
4	0250*	ADALERTPRESTO TENFLARE Toyokawa 040156Z				
	0400		337	Solar Activity	Exists	
5	0243*	ADALERTPRESTO TENFLARE Toyokawa 050109Z				
	0400		338	Solar Activity	Exists	
	0405*	ADALERTPRESTO TENFLARE Toyokawa 050207Z				
6	0400		339	Solar Activity	Exists	
7	0400		340	Solar Activity	Exists	
8	0400		341	Solar Activity	Exists	
9	0400		342	Solar Activity	Exists	
16	0400		343	Solar Activity	Exists	Beta Gamma Spot, Flares
17	0400		344	Solar Activity	Exists	
18	0400		345	Solar Activity	Exists	
19	0400		346	Solar Activity	Exists	

* Time when Alert was relayed by AGIWARN