PART B

SOLAR - GEOPHYSICAL DATA

ISSUED

JUNE 1965

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

CRPL-F 250
PART B

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
30 June 1965

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

Note:

The NRL Solar Radiation Monitoring Satellite data for April 1964 (issued in CRPL-F 249 B) should have been labelled revised. The data presented for that month were more complete than those given in CRPL-F 241 B issued September 1964.

SOLAR RADIO WAVES

21 cm Spectroheliograms

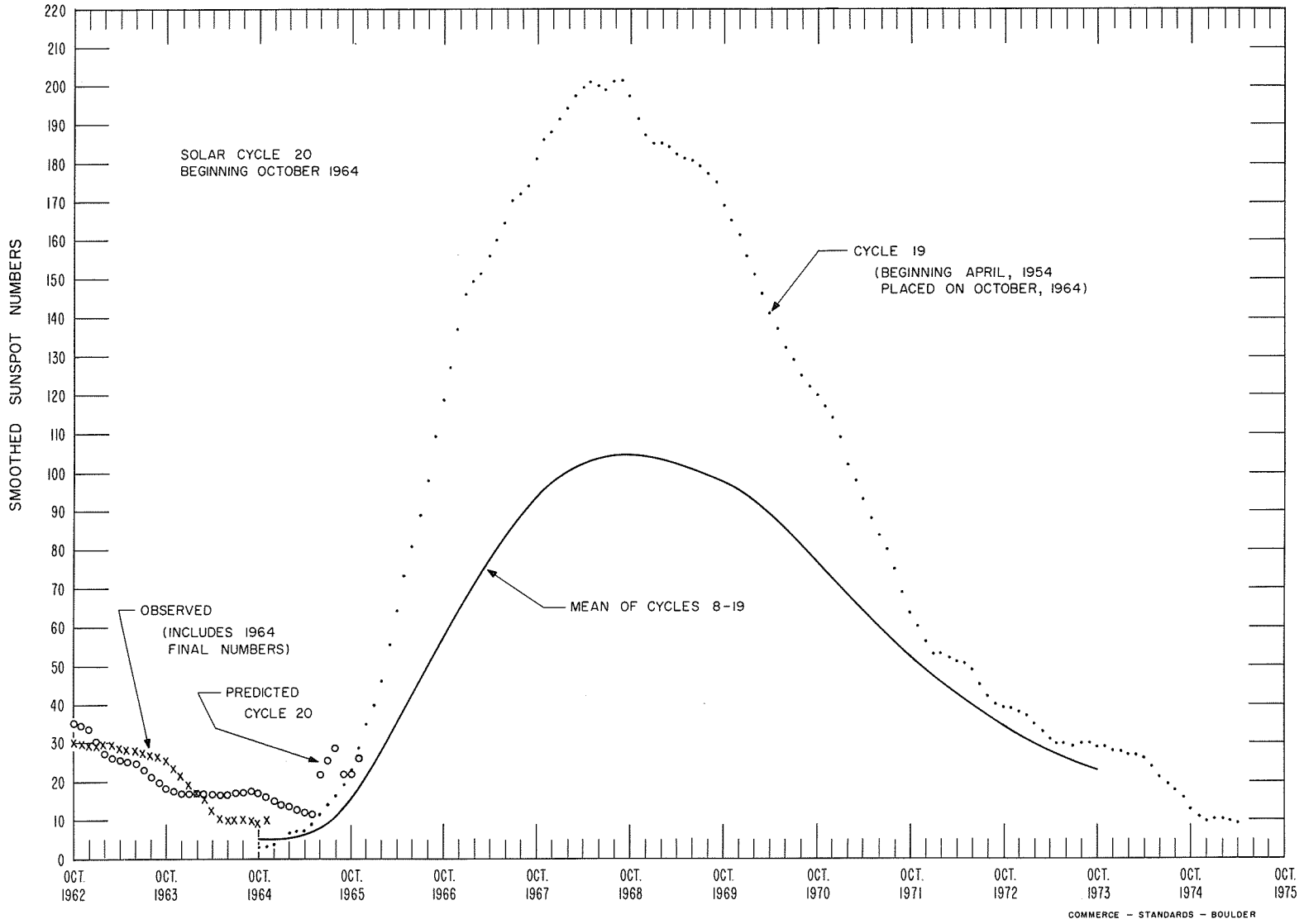
A daily series of radio spectroheliograms are presented from the "Fleurs" Radio Astronomy Field Station of the University of Sydney, Sydney, Australia, under the direction of Professor W. N. Christiansen. East-West and North-South arrays in the form of a cross give pencil beam scans with a resolution of about three minutes of arc. This program is supported by CRPL through National Aeronautics and Space Administration assistance.

The maps show the distribution of radio emission across the solar disk at a wavelength of 21 cm by means of brightness temperature values. The unit of brightness temperature is 1700°K. It gives about the same central temperature for the quiet sun as was found at the last minimum epoch (47,000°K). The noise level is about 5 units. Contours have been sketched at the 50 and 100 unit levels to draw attention to the brighter radio plage regions. Since there is equatorial limb brightening of the quiet sun, weak radio plages in the center of the disk are discriminated against. Below each number is a dot marking the point on the disk to which the number specifically refers.

DAILY SOLAR INDICES

April 1965	American Relative Sunspot Numbers R_A'
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	5
12	10
13	11
14	12
15	17
16	12
17	14
18	8
19	0
20	1
21	13
22	19
23	18
24	10
25	10
26	16
27	12
28	3
29	0
30	0
Mean:	6.4

May 1965	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux S	S_A
1	0	71.1	72.2
2	15	70.8	71.9
3	8	70.7	71.9
4	8	69.7	70.9
5	7	69.0	70.2
6	0	70.4	71.7
7	11	71.4	72.7
8	17	72.0	73.4
9	9	72.4	73.8
10	0	72.1	73.5
11	0	71.1	72.5
12	15	71.8	73.3
13	23	74.4	76.0
14	25	75.4	77.0
15	37	80.5	82.3
16	42	86.3	88.3
17	62	91.1	93.2
18	79	90.4	92.6
19	82	92.4	94.6
20	78	94.7	97.0
21	75	92.8	95.1
22	65	92.2	94.5
23	51	86.2	88.4
24	47	BURST	BURST
25	30	81.0	83.1
26	24	77.9	80.0
27	7	76.0	78.1
28	0	74.5	76.5
29	0	73.7	75.8
30	0	74.0	76.1
31	0	71.6	73.6
Mean:	26.4	77.9	79.7



PREDICTED AND OBSERVED SUNSPOT NUMBERS

CALCIUM PLAGE AND SUNSPOT REGIONS

MAY 1965

May 1965	LAT.	McMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA: CMP VALUES AREA	CMP VALUES INT.	HISTORY	AGE (ROTATIONS)	DATE FIRST SEEN	DURATION (DAYS)	SUNSPOT DATA: CMP VALUES AREA	CMP VALUES COUNT	HISTORY
1.8	N09	7795 (1)	New	100	1	b — d	1	5/2	1			
2.1	S02	7792 (1)	New	(100)	(1.5)	b — d	1	4/29	1			
2.7	N20	7796 (1)	New	400	1	b — d	1	5/2	1			
3.2	N34	7797	New	200	1.5	b — d	1	5/2	4			
3.8	N35	7799 (2)	New	(400)	(3.5)	b / d	1	5/7	3	(40)	(6)	b — ℓ
5.1	S08	7793 (1)	New	(100)	(1)	ℓ — d	1	4/29	1			
5.6	N36	7798	New	(100)	(1)	b — d	1	5/6	2			
7.5	N27	7794	New	1400	3	ℓ _/ ℓ	1	5/1	14	(10)	(2)	b — d
9.5	S12	7805	New	(200)	(1.5)	b — ℓ	1	5/11	5	(10)	(4)	b — d
9.9	N13	7806	New	(300)	(3)	b — ℓ	1	5/13	3			
10.0	S05	7800 (1)	New	(100)	(1.5)	b — d	1	5/7	1			
11.0	S02	7811 (1)	New	(100)	(1.5)	b — d	1	5/15	1			
11.7	N21	7807	New	(200)	(1.5)	b — d	1	5/14	2			
12.1	N03	7804 (1)	New	(100)	(1)	b — d	1	5/10	1			
13.0	N29	7801	New	300	1	b V d	1	5/7	8			
14.9	N05	7802	7771	1300	2	ℓ Λ d	3	5/8	12			
15.4	N21	7803	7779	800	3.5	ℓ Λ ℓ	2	5/9	13	180	4	b Λ d
16.3	S29	7808	New	100	1	b — d	1	5/14	2			
16.3	S23	7815 (1)	New	(100)	(1)	b — d	1	5/19	1			
16.6	N19	7813	New	(600)	(4)	b Λ ℓ	1	5/18	5	(10)	(7)	b — d
16.8	N25	7819 (1)	New	(200)	(2.5)	b — d	1	5/20	1			
19.0	N08	7816	New	300	2.5	b \ d	1	5/19	4	10	5	b — d
19.7	S39	7822 (1)	New	(100)	(1)	b — d	1	5/22	1			
19.8	S36	7817	New	100	1	b — d	1	5/19	3			
20.0	N16	7820 (1)	New	300	1	b — d	1	5/20	1			
20.0	S10	7825 (1)	New	(100)	(1.5)	b — d	1	5/24	1			
20.9	S24	7810	7790	(200)	(1.5)	ℓ \ d	2	5/14	5			
21.2	N23	7809	New	4000	3.5	ℓ ⌐ ℓ	1	5/14	14	290	55	ℓ Λ ℓ
21.3	N33	7814 (1)	New	(200)	(1)	b — d	1	5/18	1			
21.9	S42	7826 (1)	New	(100)	(1)	b — d	1	5/24	1			
23.0	N24	7812	New	3600	3	ℓ ⌐ ℓ	1	5/16	14	70	28	b _ d
23.8	N19	7821 (1)	New	(200)	(1)	b — d	1	5/20	1			
24.0	N41	7829	New	(200)	(1)	b — d	1	5/27	2			
25.1	N20	7834 (1)	New	(100)	(2)	b — d	1	5/29	1			
25.5	S33	7823 (1)	New	(100)	(1)	b — d	1	5/22	1			
25.8	N33	7818 (1)	New	(300)	(1)	ℓ — d	1	5/19	1			
25.9	N32	7830 (1)	New	(100)	(2)	b — d	1	5/28	1			
26.9	N07	7835	New	(200)	(2.5)	b — d	1	5/29	2			
28.3	S26	7841 (3)	New	(1400)	(3.5)	b — ℓ	1	6/3	1			
29.0	N30	7824	New	(300)	(1)	ℓ — d	1	5/22	4			
31.1	N29	7827	New	500	2.5	ℓ Λ ℓ	1	5/24	13			
31.9	S03	7831 (1)	New	(100)	(1.5)	b — d	1	5/28	1			

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(1) These small and ephemeral plages were seen for only one day.
(2) Region 7799 may have formed in the same position as ephemeral plage 7797.
(3) Region 7841 forms on the disk very near the west limb.

No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on May 17 and 22, 1965.

The equipment at Mt. Wilson is being overhauled, therefore no magnetic observations were made during the month of May 1965.

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PROVISIONAL CORONAL LINE EMISSION INDICES

MAY 1965

CMP May 1965	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
1	3	4	10	18	3	3	11	15	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	0	0	x	x	6	28	x	x
5	5	8	15	21	0	1	4	5	x	x	x	x	x	x	x	x
6	16	32	12	23	1	3	13	15	x	x	x	x	x	x	x	x
7	40	87	19	38	2	3	9	12	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	x	x	x	x	x	x	x
10	x	x	12	18	x	x	12	19	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	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
13	9	16	14	13	5	7	14	16	x	x	x	x	x	x	x	x
14	15	44	15	17	5	14	11	12	x	x	x	x	x	x	x	x
15	x	x	x	x	x	x	x	x	0	0	x	x	37	81	x	x
16	8	13	11	16	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	12	14	x	x	8	12	x	x	x	x	x	x	x	x
18	6a	11a	x	x	0a	3a	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	x	x	x	x	x	x
21	x	x	x	x	x	x	x	x	5	6	x	x	82	180	x	x
22	x	x	x	x	x	x	x	x	0a	0a	0a	0a	80a	168a	4a	10a
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
24	x	x	x	x	x	x	x	x	5	8	0	0	11	25	4	10
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	14	20
26	x	x	x	x	x	x	x	x	5	8	7a	10a	10	14	9a	12a
27	x	x	x	x	x	x	x	x	x	x	10	14	x	x	x	x
28	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
29	0a	0a	7	13	0a	0a	14	17	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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

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SOLAR FLARES

MAY 1965

OBSERVATORY	DATE MAY 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
MITK	01	0432	0451		N29	E90	7794		1-	C						G
KANZ	01	0723 E	0927		N27	E90	7794	124 D	2							AG
ARCE	01	0824 E	0835 D		N29	E90	7794		1-	2	0824	.23	1.31			
ARCE	01	0925 E	0943 D		N29	E90	7794		1-	2	0925	.42	2.40			
CATA	01	0930 E	1000 D	0934	N30	E90	7794		1-	1	0934	.30	1.71		129	DG
HUAN	01	1426	1437		N28	E90	7794		1-	P	1428	.25				E
SACP	01	1427	1436 D	1433	N28	E85	7794		1-	C		.86			26	
KANZ	01	1547	1617 D		N28	E85	7794		1-							CD
SACP	01	1854	1907	1858	N29	E80	7794		1-	C		.47			19	
LOCK	01	2001	2013	2005	N30	E90	7794		1-	C	2005	.20	1.00		10	
SACP	02	0008	0015	0010	N27	E76	7794		1-	C		.17	.46		19	
SACP	02	0045	0100	0050	N28	E74	7794		1-	C		.69	1.71		23	
MITK	02	0045	0101	0051	N28	E78	7794		1-	V	0049	2.06		7.51	122	D
MANI	02	0045	0106	0051	N28	E80	7794		1-	2	0051	.45	1.08			
KANZ	02	0740 E	0805		N28	E75	7794	25 D	1							
MANI	02	0757	0812	0805	N28	E76	7794		1-	2	0805	.80	1.84			
MANI	02	0843 E	0850		N28	E76	7794		1-	2	0845	.25	.58			
ONDR	02	1207	1241	1214	N30	E64	7794	34	1+	3	1214			2.60		CEHJKR
HUAN	02	1233 E	1240 D		N27	E69	7794		1-	P	1233	.23				E
HUAN	02	1405	1410	1407	N27	E71	7794		1-	C	1407	.10				D
HUAN	02	1743	1813	1800	N27	E63	7794		1-	C	1800	.10				D
HUAN	02	1928	2058	1945	N28	E65	7794		1-	C	1945	.20				DK
HUAN	02			2010												
LOCK	06	2140	2210	2158	N30	E80	7801		1-	C	2158	.10	.30		20	
LOCK	07	0045	0112	0100	N30	E80	7801		1-	C	0100	.10	.30		20	
ARCE	07	0842 E	0920 D		N34	W48	7799		1-	2	0910	.78	1.41			
KANZ	07	1400 E	1402		N36	E46			1-							D
SACP	07	1432	1510	1459	N36	W49	7799		1-	C		.60	.90		18	
HUAN	07	1436	1454	1442	N37	W48	7799		1-	C	1442	.25	.53			E
KANZ	07	1444	1455 D		N36	E46			1-							D
HUAN	07	1511	1522	1516	N36	W49	7799		1-	C	1516	.25	.53			D
MCMA	07	1557	1658	1602	N35	W52	7799		1-	3 C	1602	.30	.60			DH
MITK	08	0241	0321	0253	N36	W58	7799		1-	C						D
MITK	08	0500	0512	0505	N36	W60	7799		1-	C						D
MITK	08	0717	0738	0721	N36	W59	7799		1-	C						E
MITK	08	0743	0800	0747	N36	W60	7799		1-	C						D
ARCE	08	0817 E	0902 D		N34	W62	7799		1-	2	0838	.56	1.35			
KANZ	08	0818 E	0850 D		N36	W60	7799		1-							D
ARCE	08	1000 E	▭		N34	W62	7799		1-	2	1000	.49	1.18			
HUAN	08	1412 E	1516 D		N37	W62	7799		1-	P	1502	.45				E
MCMA	08	1420 E	1510	1438	N35	W67	7799	50 D	1	2 C	1438	.80	2.40			EH
SACP	08	1423	1507	1437	N35	W63	7799		1-	C		.87	1.66		20	
KANZ	08	1450 E	1512		N36	W63	7799	22 D	1							
MCMA	08	1543	1548	1544	N35	W68	7799		1-	2 C	1544	.50	1.50			EH
MCMA	08	1710 E	1723 D		N35	W69	7799		1-	1 P	1715	.50	1.50			EH
HUAN	08	1720 E	1800 D		N35	W63	7799		1-	P	1735	.20				E
MCMA	08	1805 E	1830 D	1807	N35	W69	7799	25 D	1	2 P	1807	.80	2.40			E

SOLAR FLARES

MAY 1965

OBSERVATORY	DATE MAY 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
HUAN	08	1806	1815 D		N36	W63	7799		1-	P	1811	.25				E
MCMA	08	1906	1919	1911	N37	W70	7799		1-	2 C	1911	.40	1.20			EH
HUAN	08	1910	1934 D		N36	W63	7799		1-	P	1916	.34				E
HUAN	08	2011 E	2013 D		N36	W63	7799		1-	P	2011	.27				E
HUAN	08	2053 E	2055 D		N36	W63	7799		1-	P	2053	.20				E
MCMA	08	2054	2100	2055	N37	W70	7799		1-	2 C	2055	.30	1.00			D
CATA	09	1000 E	1110 D	1002	N34	W78	7799		1-	2	1002	.14	.45		132	D
MCMA	09	1157	1214	1202	N35	W88	7799		1-	2 C	1202	.20				D
MCMA	09	1259	1308	1302	N35	W88	7799		1-	2 C	1302	.20				D
HUAN	09	1435	1455		N37	W80	7799		1-	C	1446	.13				DK
HUAN	09	1511	1531	1520	N37	W80	7799		1-	C	1520	.25				D
SACP	09	1515	1531	1520	N35	W76	7799		1-	C		.17	.48		18	
MCMA	09	1518	1525	1521	N35	W88	7799		1-	2 C	1521	.20				D
MCMA	09	1523	1550	1528	N23	E86	7803		1-	2 C	1528	.30				D
MCMA	09	1612 E	1629 D		N23	E86	7803		1-	1 P	1612	.20				D
HUAN	09	1615	1629		N38	W85	7799		1-	C	1625	.20				DK
HUAN	09	1859	1931	1912	N37	W90	7799		1-	C	1912	.38				D
MCMA	09	1900 E	1914 D		N35	W90	7799		1-	1 P	1911					
HUAN	09	2016	2043	2019	N38	W90	7799		1-	C	2027	.25				DK
HUAN	09			2027												
CATA	10	0620	0930 D	0818	N36	W90	7799	190 D	1	5	0818	.38	2.16		118	FG
ARCE	10	0805 E	0850 D		N34	W90	7799		1-	2	0810	.34	1.93			
ISTA	10	0740 E	0900		N46	W90	7799	80 D	1							
ARCE	10	0930 E	0935 D		N34	W90	7799		1-	2	0930	.20	1.14			
KAND	10	1145 E	1218		N36	W90	7799	33 D	1+	D						
KAND	10	1246	1252	1248	N35	W90	7799		1-	D						
MITK	12	0459	0515	0502	N24	E46	7803		1-	C						GH
MITK	12	0633	0637	0635	N22	E41	7803		1-	C						DGH
ARCE	12	0828 E	▭		N23	E42	7803		1-	2	0828	.75	1.12			
CAPS	12	1301	1316		S15	W33	7805		1-	3	1305	.80	1.00		153	G
KANZ	12	1320 E	1415 D		S15	W40	7805		1-							E
MCMA	12	2044	2105 D	2047	N22	E35	7803		1-	2 C	2047	.50	.70			EH
HUAN	12	2045	2103 D	2047	N21	E35	7803		1-	P	2047	.20	.27			EK
HUAN	12			2058												
HUAN	12	2125 E	2137 D		N20	E34	7803		1-	P	2128	.25	.33			EK
SACP	12	2343 U	2359 U	2355	N23	E32	7803		1-	C		1.31	1.47		18	
KAND	14	0930	1007		N28	E90	7809		1-	D						
OTTA	14	1037 E	1113	1053	S15	W64	7805		1-	2 C	1053	.50	.80			E
KAND	14	1040	1115	1047	S13	W65	7805	35	1+	D						
CAPS	14	1046 E	1103		S10	W60	7805		1-	2	1047	.50	.90		157	DG
KAND	14	1120	1126		N28	E90	7809	6	1	D						
KAND	14	1136	1146		N28	E90	7809		1-	D						
CATA	15	0612 E	0700 D	0612	N21	E02	7803		1-	3	0612	.60	.66		145	EH
KANZ	15	1058 E	1105 D		N20	E76	7809		1-							D
MCMA	15	1200	1207	1203	N25	E90	7809		1-	2 C	1203	.40				T
SACP	15	1355	1402	1356	N21	W02	7803		1-	C		.48	.48		18	

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LOCK	15	1754	1815	1805	N26	E90	7809		1-	C	1805	.30	1.50		20	HJ
LOCK	15	1900	1955	1917	N26	E90	7809	55	1	C	1917	.60	3.00		20	HJ
LOCK	16	0103	0129	0111	N25	E90	7812	26	1	C	0111	.60	3.00		20	HJ
CAPS	16	0600 E	0735		N26	E90	7812	95 D	2	2	0615	2.00				HIJK
CATA	16	0630 E	1200 D	0900	N25	E90	7812	330 D	2	2	0900	1.62	9.21		178	J
CAPS	16	0738	0942		N26	E90	7812	124	2	3	0805	.90				HIJK
KANZ	16	0755 E	0930 D		N24	E89	7812	95 D	1+							A
ARCE	16	0810 E	0820 D		N26	E90	7812	10 D	2	1	0810	1.17	6.44			
ARCE	16	0830 E	0915 D		N26	E90	7812	45 D	1	1	0900	.69	3.92			
CAPS	16	1042	1245		N26	E88	7812	123	2	3	1130	1.00				HIJK
MCMA	16	1217 E	1515		N26	E90	7812	178 D	1+	2 P	1219	1.00				FH
HUAN	16	1243	1301	1247	N25	E90	7812		1-	C	1258	.20				DK
HUAN	16			1258												
CAPS	16	1255	1402		N26	E86	7812	67	1	3	1338	.80				EI
WEND	16	1314 E	1336 D		N23	E88	7812	22 D	2+				16.00			
KANZ	16	1316 E	1342 D		N24	E88	7812	26 D	1+							CH
HUAN	16	1329	1400	1339	N25	E90	7812		1-	C	1358	.34				DK
HUAN	16			1353												
HUAN	16			1358												
HUAN	16	1427	1506		N24	E90	7812		1-	P	1435	.20				DK
HUAN	16	1513	1529	1518	N24	E90	7812		1-	C	1518	.20				D
CAPS	16	1515 E	1538		N26	E86	7812	23 D	1	2		.90				EHI
MCMA	16	1925 E	1933 D		N26	E88	7812		1-	2 P	1928	.20				D
MCMA	16	1954 E	2000 D		N25	E88	7812		1-	2 P	2000	.10				D
HUAN	16	1957	2006	2001	N24	E90	7812		1-	C	2000	.25				D
MCMA	16	2032 E	2057 D		N25	E88	7812		1-	2 P	2032	.20				D
HUAN	16	2034	2045 D		N24	E90	7812		1-	P	2037	.25				D
LOCK	16	2037	2112	2050	N24	E90	7812	35	1	C	2050	.70	3.50		20	J
HALE	16	2214	2240 D	2217	N23	E90	7812		1-	3 P	2228	.90				K
HALE	16			2228												
LOCK	16	2215	2340	2225	N24	E90	7812	85	1	C	2225	.70	3.50		20	HJ
LOCK	16	2303	2338	2314	N24	E90	7812	35	1	C	2314	.90	4.50		20	HJ
MITK	16	2312 E	2315		N25	E85	7812	4 D	2	P						B
HALE	17	0009	0028 D	0018	N24	E90	7812	19 D	1	2 P	0018	1.00				H
LOCK	17	0030	0119	0039	N24	E90	7812	49	1	C	0102	1.00	5.00		20	
LOCK	17			0102												
HALE	17	0032 E	0058	0035	N24	E90	7812	26 D	1	1 P	0035	1.70				H
MITK	17	0043 E	0053		N26	E88	7812	10 D	1+	C						
HALE	17	0059	0105 D	0104	N24	E90	7812	6 D	1	2 P	0104	1.70				
MITK	17	0103 E	0117	0103	N24	E88	7812	14 D	1	V	0108	1.54		4.74	107	E
MITK	17	0124	0143	0127	N26	E85	7812	19	1	V	0131	1.54		3.16	96	E
MITK	17	0152	0210	0152	N26	E85	7812	18	1	V	0152	1.23		2.23	107	E
MITK	17	0226	0240	0229	N24	E88	7812		1-	V	0229	.26		2.63	96	E
MITK	17	0240	0321	0249	N26	E85	7812	41	1	V	0250	1.23		3.89	120	D
MITK	17	0324	0422	0350	N26	E85	7812	58	1	V	0350	2.01		2.29	107	
KODA	17	0340 E	0402 D	0350	N25	E80	7812	22 D	1	C		1.30		4.36		
MITK	17	0405	0418	0412	N26	E50	7809		1-	C						D
MITK	17	0433	0452	0444	N26	E85	7812	19	1	C						
MITK	17	0518	0545	0521	N26	E82	7812	27	1	C						

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MITK	17	0603	0619	0612	N26	E82	7812	16	1	C						E
CATA	17	0630	0650	0636	S25	E47	7810		1-	1	0636	.38	.60		155	E
ONDR	17	0637 E	0648		S22	E48	7810		1-	3	0638			1.30		CEG
CATA	17	0635	0655	0646	N24	E80	7812		1-	1	0646	.28	.90		182	D
MITK	17	0636	0648	0645	N26	E83	7812		1-	C						D
MITK	17	0653	0713	0705	N26	E76	7812		1-	C						D
KANZ	17	0755 E	0820		N23	E80	7812	25 D	1+							
ARCE	17	0810 E	0828 D		N26	E79	7812	18 D	1	3	0810	1.31	4.19			
KAND	17	0923	1000		N26	E75	7812	37	2	D						
KAND	17	0948	0957		N27	E90	7812		1-	D						
CAPS	17	1001	1008		N25	E80	7812		1-	3	1005	.20			201	D
KAND	17	1002	1039		N26	E75	7812	37	2	D						
KAND	17	1045	1155		N26	E75	7812	70	2	D						
KANZ	17	1049	1052 D		N23	E80	7812		1-							D
KAND	17	1105	1110		N24	E68	7809		1-	D						
KAND	17	1112	1119		N28	E90	7812		1-	D						
KAND	17	1200	1215		N26	E75	7812		2-	D						
KAND	17	1216	1228		N26	E75	7812	12	1	D						
SACP	17	1302	1313	1307	N26	E81	7812		1-	C		.26			20	
HUAN	17	1323	1334	1327	N23	E73	7812		1-	C	1327	.45				E
HUAN	17	1344	1349	1345	N23	E72	7812		1-	C	1345	.25				D
HUAN	17	1354	1359	1356	N23	E72	7812		1-	C	1356	.20				D
HUAN	17	1406 E	1418 D		N23	E72	7812		1-	P	1414	.20				D
CAPS	17	1430 E	1452 D		N26	E50	7809	22 D	1	3	1441	1.40	2.40		189	CE
HUAN	17	1431	1440	1436	N25	E48	7809		1-	C	1436	.30	.50			E
SACP	17	1435	1443	1438	N25	E69	7812		1-	C		.43	.87		18	
HUAN	17	1436	1442	1438	N22	E70	7812		1-	C	1438	.20				D
CAPS	17	1441 E	1458 D		N25	E78	7812	17 D	1	3	1449	1.10	3.20		205	CE
HUAN	17	1445	1451	1448	N23	E69	7812		1-	C	1448	.20				E
SACP	17	1445	1452	1448	N25	E68	7812		1-	C		.34	.68		19	
SACP	17	1858	1903	1901	N21	E43	7809		1-	C		.61	.74		23	
HALE	17	1859	1903	1901	N21	E43	7809		1-	3 C	1901	1.00	1.20			H
LOCK	17	1859	1907	1902	N21	E40	7809		1-	C	1902	.50	.50		20	JL
HUAN	17	1901 E	1903		N22	E45	7809		1-	P	1902	.20	.30			D
HUAN	17	1902	1905 D		N26	E76	7812		1-	P	1902	.20				D
HALE	17	2027	2036	2032	N23	E62	7812		1-	2 C	2032	.20	.40			
SACP	17	2321	2333	2325	N20	W19	7813		1-	C		.17	.17		19	
MITK	17	2348	0006	2355	N27	E65	7812		1-	C						D
MITK	18	0159	0213	0204	N23	E42	7809		1-	C						D
MITK	18	0314	0340	0322	N25	E66	7812		1-	C						D
MANI	18	0322 E	0340	0326	N24	E69	7812		1-	2	0326	.50	.95			
MITK	18	0459	0530	0512	N26	E41	7809	31	1	C						E
MITK	18	0539	0558	0542	N27	E38	7809		1-	C						D
MITK	18	0546	0612	0552	N25	E65	7812	26	1	C						E
MANI	18	0625	0658	0635	N25	E68	7812		1-	2	0635	1.00	1.90			
MITK	18	0627	0700	0640	N26	E65	7812	33	1	C						
WEND	18	0630 E	0652 D		N23	E62	7812	22 D	1+				6.00			
CAPS	18	0637 E	0653		N25	E64	7812	16 D	1	3	0643	.80	2.10		182	CEH
CATA	18	0638	0650	0645	N24	E65	7812		1-	3	0645	.16	.36		155	DH
BUCA	18	0648 E	0700 D	0648	N26	E64	7812		1-				1.60			

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KAND	18	0821	0836		N21	W45	7803		1-	D						
KAND	18	0822	0834		N18	W23	7813		1-	D						
CATA	18	0824	0858 D	0846	N25	E63	7812		1-	3	0854	.50	1.08		166	E
KAND	18	0826	0850	0832	N27	E64	7812	24	1+	D						
BUCA	18	0832 E	0850 D		N26	E64	7812		1-				1.60			
KANZ	18	0836	0926		N28	E67	7812		1-							K
CAPS	18	0837	0907		N20	W23	7813		1-	3	0841	.30	.30		240	DG
CATA	18	0838	0858	0843	N20	W23	7813		1-	3	0843	.46	.55		174	D
KAND	18	0838	0904	0839	N18	W23	7813	26	1+	D						
BUCA	18	0839 E	0848 D	0839	N20	W20	7813		1-				1.80			
HERS	18	0840 E	0850	0841	N20	W20	7813		1-	3	0841	.30	.40			CD
KANZ	18	0840	0905 D		N20	W22	7813	25 D	1							
BUCA	18	0836 E	0850 D		N21	W40	7803		1-				.80			
CATA	18	0840	0849 D	0843	N22	W40	7803		1-	3	0843	.44	.65		178	E
KANZ	18	0842	0951		N21	W41	7803		1-							
KAND	18	0843	0901		N21	W45	7803	18	1	D						
CAPS	18	0843	0907		N23	W41	7803		1-	3	0845	.50	.70			DJ
KANZ	18	0848 E	0902 D		N26	E61	7812		1-							E
CAPS	18	0902	0926		N27	E60	7812		1-	3	0905	.50	1.20			EJ
CAPS	18	0943	1030 D		N20	W23	7813		1-	3	0955	.20	.20			DGJ
CAPS	18	0959	1019 D		N22	W41	7803		1-	3	1004	.90	1.40			EJ
MCMA	18	1222	1245 D	1226	N22	E30	7809		1-	3 C	1226	.30	.40			EH
CAPS	18	1224 E	1236		N22	E32	7809		1-	3	1233	.90	1.20		234	EJ
MCMA	18	1234	1238	1236	N27	E65	7812		1-	3 C	1236	.30	.70			D
KANZ	18	1415 E	1455		N19	E31	7809		1-							
HUAN	18	1445	1457	1450	N23	E58	7812		1-	C	1450	.20				E
KANZ	18	1447	1503		N25	W60	7803		1-							
KANZ	18	1526	1550		N19	E29	7809	24	1							
KANZ	18	1542	1459		N25	W57	7803		1-							
SACP	18	1625	1645	1635	N21	E28	7809		1-	C		.61	.65		19	
HUAN	18	1626 E	1630 D		N20	E28	7809		1-	P	1628	.25	.31			E
MCMA	18	1627	1645	1630	N22	E28	7809		1-	2 C	1630	.30	.40			EH
MCMA	18	1721	1730	1724	N27	E63	7812		1-	2 C	1724	.20	.40			D
SACP	18	1737	1748 D	1740	N19	E11	7809		1-	P		.26	.26		18	
MCMA	18	1748	1755	1750	N27	E63	7812		1-	2 C	1750	.30	.70			E
MCMA	18	1828	1835	1829	N22	E27	7809		1-	2 C	1829	.30	.40			E
MCMA	18	1844	1915	1856	N22	E27	7809		1-	2 C	1856	.60	.70			EK
LOCK	18	1849	1902	1855	N19	E24	7809		1-	C	1855	.60	.60		20	L
SACP	18	1850	1917 U	1858 U	N20	E27	7809		1-	P		1.75	1.86		19	
HALE	18	1852	1901	1857	N18	E26	7809		1-	1 C	1857	.60	.60			
LOCK	18	1854	1911	1902	N18	E28	7809		1-	C	1902	.50	.50		10	
HUAN	18	1915 E	1923		N20	E28	7809		1-	P	1920	.20	.25			D
MCMA	18	2000	2015	2003	N25	E29	7809		1-	1 C	2003	.20	.30			D
MCMA	18	2107	2120	2109	N25	E29	7809		1-	2 C	2109	.20	.30			D
SACP	18	2326	2351 D	2344 U	N19	W32	7813		1-	P		.43	.47		19	
MANI	18	2334 E	2355	2348	N20	W34	7813		1-	2	2348	.17	.19			
MANI	19	0731 E	0740	0733	N24	E53	7812		1-	2	0733	.17	.24			
BUCA	19	0731 E	0742 D		N26	E50	7812		1-				1.00			
CATA	19	0735	0755	0736	N24	E50	7812		1-	2	0736	.82	1.43		182	E
BUCA	19	1036 E	1044 D		N24	E24	7809		1-				.70			

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MCMA	19	1128	1133	1129	N21	E17	7809		1-	2 C	1129	.20	.20			E
MCMA	19	1140	1149	1141	N23	E17	7809		1-	2 C	1141	.20	.20			D
SACP	19	1220	1237	1222	N20	E18	7809		1-	C		.36	.37		18	
MCMA	19	1222	1229	1223	N21	E17	7809		1-	2 C	1222	.20	.20			E
MCMA	19	1319	1335		N19	W42	7813		1-	2 C	1323	.30	.40			S
SACP	19	1423	1455	1429	N26	E22	7809		1-	C		1.09	1.17		20	
HUAN	19	1424 E	1443 D		N25	E22	7809		1-	P	1426	.65	.78			E
CAPS	19	1424 E	1446		N24	E25	7809		1-	3	1430	1.20	1.50		165	CF
MCMA	19	1424	1451	1427	N27	E23	7809		1-	2 C	1427	.50	.60			S
SACP	19	1508	1521	1511	N26	E46	7812		1-	C		.56	.74		20	
HUAN	19	1509	1514	1511	N24	E46	7812		1-	C	1512	.30	.50			E
MCMA	19	1509	1516	1511	N27	E47	7812		1-	2 C	1511	.50	.70			EH
CAPS	19	1530	1552		N20	W41	7813		1-	3	1537	.40	.60		190	D
MCMA	19	1532	1542	1534	N19	W44	7813		1-	1 C	1534	.30	.40			S
MCMA	19	1600	1612	1602	N27	E23	7809		1-	2 C	1602	.40	.50			S
SACP	19	1600	1619 U	1602	N26	E22	7809		1-	C		.61	.65		18	
SACP	19	1723	1733	1725	N20	E15	7809		1-	C		.26	.26		18	
HALE	19	1801 E	1820	1803	N17	W42	7813		1-	3 P	1803	1.60	1.90			
HALE	19	1820	1902	1827	N24	E43	7812	42	1	3 C	1827	2.00	2.60			F
LOCK	19	1821	1845	1826	N25	E41	7812		1-	C	1826	.80	.80		20	H
MCMA	19	1821	1850 D	1824	N27	E45	7812	29 D	1	2 C	1824	1.30	2.10			S
HUAN	19	1821 E	1904		N23	E46	7812	43 D	1	P	1832	1.35	2.24			E
SACP	19	1821	1908	1826	N25	E44	7812		1-	C		1.40	1.76		21	
HALE	19	1848	1856	1852	N27	E42	7812		1-	3 C	1852	.60	.80			
MCMA	19	1902	1957	1923	N18	W42	7813		1-	2 C	1923	.50	.70			SHK
HALE	19	1918	1952	1924	N17	W41	7813		1-	3 C	1924	1.00	1.20			
HALE	19	1948	2010	1953	N20	E12	7809		1-	3 C	1953	.40	.40			
MCMA	19	1951	2002	1953	N20	E20	7809		1-	2 C	1953	.20	.20			D
SACP	19	1951	2009	1956	N20	E13	7809		1-	C		.43	.44		18	
LOCK	19	1952	2007	2002	N21	E13	7809		1-	C	2002	.30	.30		20	
OTTA	19	2002 E	2009		N20	E12	7809		1-	C	2002	.36	.36			E
HALE	19	2007	2020	2009	N22	E12	7809		1-	2 C	2009	.40	.40			H
OTTA	19	2105	2124 D		N20	E13	7809		1-	1 C	2115	.53	.53			HE
SACP	19	2106	2132	2114	N20	E13	7809		1-	C		.61	.62		18	
MCMA	19	2108	2120	2115	N20	E20	7809		1-	2 C	2115	.50	.50			E
HALE	19	2109	2125	2115	N20	E13	7809		1-	3 C	2115	1.20	1.20			
HALE	20	0001	0009	0006	N18	W44	7813	8	1	2 C	0006	2.00	2.40			
MITK	20	0001 E	0012 D		N18	W45	7813		1-	C						E
HALE	20	0009	0030	0014	N18	W45	7813	21	1	3 C	0014	2.50	3.00			
MANI	20	0005 E	0040	0000 L	N21	W34			1-	2	0006	1.30	1.56			
HALE	20	0138	0150 D	0139	N24	E16	7809		1-	3 P	0139	.80	.80			
BUCA	20	0556 E	0639 D		N19	W48	7813	43 D	1				3.60			
MANI	20	0600 E	0626	0603	N21	W46	7813		1-	2	0603	1.00	1.30			
CAPS	20	0615 E	0636 D		N21	W48	7813	21 D	1	2	0622	1.60	2.50		194	F
BUCA	20	0652 E	0701 D		N19	W49	7813		1-				.90			
WROC	20	0832	0840 D		N22	E09	7809		1-	1						J
WROC	20	0838 E	0840 D		N26	E32	7812		1-	1						J
KAND	20	0853	0857		N23	E10	7809		1-	G						
OTTA	20	1051	1107	1055	N17	W50	7813		1-	1 C	1055	.15	.20			
OTTA	20	1206	1425	1215	N26	E35	7812		1-	C	1215	.24	.28			HK

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KAND	20	1210	1227	1212	N24	E24	7812	17	1	G						
KAND	20	1236	1255		N24	E24	7812		1-	G						
HUAN	20	1241	1300	1248	N24	E36	7812		1-	C	1248	.30	.41			D
SACP	20	1314 U	1339	1326	N25	E35	7812		1-	C		.26	.30		19	
HUAN	20	1321	1335	1325	N24	E36	7812		1-	C	1325	.20	.27			D
MCMA	20	1405	1413	1406	N26	E09	7809		1-	2 C	1406	.20	.20			E
SACP	20	1405	1418 D	1406	N25	E09	7809		1-	C		.65	.66		18	
OTTA	20	1405	1421	1406	N25	E09	7809		1-	2 C	1406	.28	.28			E
OTTA	20	1407	1423	1417	N24	W49	7819		1-	2 C	1417	.12	.16			
OTTA	20	1440	1501	1446	N27	E30	7812	21	1	C	1446	1.90	2.17			
SACP	20	1441	1452	1445	N27	E30	7812		1-	C		.99	1.13		22	
MCMA	20	1441	1455	1444	N28	E32	7812		1-	2 C	1444	.80	1.10			S
HUAN	20	1441	1456	1445	N26	E30	7812		1-	C	1445	.50	.67			E
OTTA	20	1502	1516	1508	N27	E33	7812		1-	C	1508	.12	.16			
OTTA	20	1535	1553	1537	N27	E33	7812		1-	C	1537	.12	.13			
OTTA	20	1548	1557	1550	N28	E09	7809		1-	C	1550	.24	.25			
OTTA	20	1602	1643	1604	N27	E32	7812		1-	C	1604	.20	.23			
HUAN	20	1603	1609	1605	N25	E35	7812		1-	C	1605	.20	.27			D
OTTA	20	1647	1733	1649	N22	E02	7809		1-	C	1649	.04	.04			
MCMA	20	1700	1711	1705	N27	E35	7812		1-	1 C	1705	.20	.30			D
OTTA	20	1702	1712	1706	N27	E32	7812		1-	2 C	1706	.18	.20			
HUAN	20	1702	1712	1705	N25	E35	7812		1-	C	1705	.20	.27			D
HUAN	20	1748	1801	1754	N25	E35	7812		1-	C	1754	.20	.27			D
LOCK	20	1909	1918	1912	N22	E00	7809		1-	C	1912	.20	.20		20	
HALE	20	1909	1921	1911	N23	W01	7809		1-	1 P	1911	.40	.40			
MCMA	20	1910	1916	1911	N23	E00	7809		1-	2 C	1911	.10	.10			D
SACP	20	1910 U	1917 U	1911	N22	E00	7809		1-	C		.17	.17		19	
SACP	20	2033	2100 U	2039	N19	W55	7813		1-	C		.30	.43		17	
MCMA	20	2040	2057	2042	N23	E03	7809		1-	2 C	2042	.20	.20			D
MCMA	20	2125	2130	2127	N27	E33	7812		1-	2 C	2127	.20	.30			D
MCMA	20	2215	2228	2218	N23	E03	7809		1-	3 C	2218	.60	.70			S
MCMA	20	2229	2247	2231	N19	W60	7813		1-	3 C	2231	.20	.40			D
SACP	20	2241	2258	2248	N26	E03	7809		1-	C		.41	.42		18	
MCMA	20	2245	2256	2247	N25	E05	7809		1-	2 C	2247	.50	.60			S
SACP	20	2320	2357 D	2323	N19	W59	7813	37 D	1	C		1.62	2.47		21	
MITK	20	2321 E	2326 D		N18	W60	7813	5 D	1	P						E
MANI	20	2338 E	0040		N20	W59	7813		1-	2		1.00	1.40			
SACP	20	2330	2340	2331	N27	E30	7812		1-	C		.52	.59		18	
MANI	20	2333 E	2355	2335	N25	E04	7809		1-	2	2335	.33	.33			
SACP	21	0011 U	0045 U	0032	N18	W59	7813		1-	C		1.05	1.59		19	
SACP	21	0100	0110	0102	N05	E39	7816		1-	C		.52	.58		18	
MANI	21	0105	0120	0112	N20	W58	7813		1-	2	0112	.33	.46			
WROC	21	0736 E	0840 D	0740	N19	W63	7813	64 D	1	2				2.60		J
KAND	21	0807 E	0952 D		N19	W64	7813	105 D	1	D						
WROC	21	0930 E	0935 D		N25	E22	7812		1-	2						H
WROC	21	0930 E	0935 D		N23	W02	7809	5 D	1	2						J
MCMA	21	1106 E	1149	1134	N24	W06	7809		1-	3 C	1137	1.10	1.20			S
OTTA	21	1108	1214	1124	N22	E17	7812		1-	C	1124	.09	.09			H
WROC	21	1113 E	1123 D		N23	W02	7809	10 D	1	2						J
OTTA	21	1124	1147	1137	N23	W05	7809		1-	C	1137	1.43	1.44			E

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OTTA	21	1146	1156	1148	N25	E18	7812		1-	C	1148	.18	.19			
OTTA	21	1156	1251	1221	N25	W05	7809		1-	C	1221	.60	.61			E
OTTA	21	1213	1235	1214	N08	W32	7816		1-	C	1214	.23	.24			F
OTTA	21	1358	1403	1359	N19	W65	7813		1-	2 C	1359	.18	.31			
OTTA	21	1441	1541	1450	N26	E20	7812		1-	1 C	1450	.12	.13			
MCMA	21	1442	1454	1444	N25	E22	7812		1-	2 C	1444	.10	.10			D
HUAN	21	1444	1509	1449	N21	W66	7813		1-	C	1449	.40				EK
MCMA	21	1457	1502	1458	N18	W68	7813		1-	2 C	1458	.20	.60			D
OTTA	21	1457	1505	1458	N17	W67	7813		1-	1 C	1458	.27	.50			
SACP	21	1458	1503	1459	N18	W65	7813		1-	C		.61	1.06		20	
OTTA	21	1526	1535	1531	N26	E10	7812		1-	C	1531	.12	.12			
MCMA	21	1531	1536	1533	N25	E12	7812		1-	2 C	1533	.20	.20			D
MCMA	21	1526	1540	1530	N20	W66	7813		1-	2 C	1530	.20	.60			D
HUAN	21	1528	1536	1531	N21	W65	7813		1-	C	1531	.20				D
OTTA	21	1529	1536	1531	N19	W65	7813		1-	2 C	1531	.18	.31			
OTTA	21	1554	1607	1557	N23	W08	7809		1-	2 C	1557	.42	.43			
HUAN	21	1714	1730 D		N18	W68	7813		1-	P	1726	.20				D
OTTA	21	1722 E	1736		N18	W68	7813		1-	2 C	1722	.60	1.06			F
OTTA	21	1814	1835 D	1825	N18	W69	7813		1-	3 C	1825	.36	.67			E
MCMA	21	1849	1905	1855	N25	W08	7809		1-	2 C	1855	.40	.40			S
HALE	21	1849	1906	1856	N24	W10	7809		1-	2 C	1856	.70	.70			
HALE	21	1852	1908	1900	N18	W70	7813		1-	2 C	1900	.70	1.40			
OTTA	21	2026 E	2029 D		N24	W10	7809		1-	2 C	2027	.18	.18			
MCMA	21	2040	2051	2042	N18	W70	7813		1-	3 C	2042	.20	.60			D
HALE	21	2047 E	2059		N17	W72	7813		1-	3 P	2047	.70	1.50			
MCMA	21	2120	2158	2125	N21	W10	7809		1-	3 C	2125	.20	.20			D
HALE	21	2126	2129	2127	N23	W11	7809		1-	2 C	2127	.40	.40			
HALE	21	2128	2155	2136	N17	W71	7813		1-	2 C	2136	.60	1.20			
HALE	21	2244 E	2319	2252	N18	W74	7813		1-	2 P	2252	.60	1.40			
HALE	21	2342	2347	2343	N23	W11	7809		1-	3 C	2343	.10	.10			
HALE	21	2347	0025	0002	N23	W09	7809		1-	3 C	0002	.50	.50			
SACP	22	0000	0017	0005	N24	W10	7809		1-	C		.52	.53		19	
MANI	22	0002 E	0010		N28	W06	7809		1-	1	0004	.25	.25			
MITK	22	0003 E	0016	0003	N23	W10	7809	13 D	1	V	0003	.82	.93	1.85	120	D
HALE	22	0052	0104	0054	N17	W75	7813		1-	3 C	0054	.40	1.00			
SACP	22	0053	0101	0054	N16	W72	7813		1-	C		.35	.72		18	
SACP	22	0115 E	0131 D	1210	N19	W70	7813		1-	P		.30	.60		19	
HALE	22	0117	0147	0123	N18	W74	7813		1-	2 C	0123	.40	1.00			
HALE	22	0151	0204	0153	N18	W75	7813	13	1	3 C	0153	1.00	2.40			
HALE	22	0205	0222	0208	N18	W75	7813		1-	3 C	0208	.30	.70			
HALE	22	0232	0237	0234	N18	W73	7813		1-	3 C	0234	.20	.50			F
HALE	22	0250	0259	0253	N18	W75	7813		1-	3 C	0253	.30	.70			
HALE	22	0354	0400	0356	N18	W80	7813		1-	1 C	0356	.20	.50			
WROC	22	0655 E	0720 D		N18	W70	7813		1-	1				2.80		J
ONDR	22	0727	0748	0733	N24	E10	7812	21	1	3	0730			1.70		CEH
WROC	22	0744 E	▭		N27	E12	7812		1-	1						HFJ
WEND	22	0802 E	0814 D		N20	W73	7813		1-							
CATA	22	0805	0830	0810	N21	W79	7813		1-	3	0810	.58	1.01		174	DH
WROC	22	0928 E	▭		N18	W70	7813		1-	1				2.80		JL
WEND	22	1124 E	1136 D		N20	W75	7813		1-							

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SACP	22	1309	1327	1317	N18	W78	7813		1-	C		.35	.90		20	
HUAN	22	1311	1337		N19	W85	7813		1-	P	1321	.30				D
MCMA	22	1313	1329	1317	N18	W85	7813		1-	3 C	1317	.50				D
CAPS	22	1313 E	1334		N17	W79	7813		1-	3	1321	.25	.80		160	CJ
HUAN	22	1425	1437		N19	W85	7813		1-	P	1434	.30				E
HUAN	22	1633 E	1640		N19	W85	7813		1-	P	1635	.25				D
SACP	22	1633	1704	1642	N23	W01	7812		1-	C		.41	.61		19	
OTTA	22	1634	1702	1644	N23	W00	7812		1-	2 C	1644	.18	.18			H
OTTA	22	1654	1703	1658	N23	W22	7809		1-	C	1658	.12	.13			
OTTA	22	1739	1817	1753	N24	W22	7809		1-	C	1753	.15	.16			H
MCMA	22	1752	1800	1755	N25	W20	7809		1-	2 C	1755	.10	.10			D
HALE	22	1916	1940	1929	N17	W90	7813		1-	1 C	1929	.60				
MCMA	22	1925	1933	1929	N18	W88	7813		1-	2 C	1929	.50				
MCMA	22	1938	2008 D	1944	N26	W20	7809	30 D	1	2 C	1944	1.70	2.10			S
SACP	22	1940	1953 D	1944	N25	W19	7809	13 D	1	C	1950	2.72	2.88		22	
HALE	22	1942	2009		N25	W20	7809	27	1	3 P	1947	2.20	2.20			F
HALE	22	1942	2016		N17	W90	7813		1-	2 P	2003	.70				
HUAN	22	1943	1957	1947	N27	W20	7809		1-	C	1947	1.00	1.22			E
HUAN	22	1959	2009	2002	N19	W90	7813		1-	C	2002	.50				E
MCMA	22	2000	2007	2002	N18	W90	7813		1-	2 C	2002	.30				
HALE	22	2054	2127	2111	N17	W90	7813		1-	1 C	2111	.60				
HALE	22	2147	2200	2154	N17	W90	7813		1-	1 C	2154	.40				
MCMA	22	2244	2249 D	2246	N18	W90	7813		1-	1 P	2246	.20				
HALE	22	2326	2331	2328	N17	W90	7813		1-	2 C	2328	.30				
HALE	22	2337	0002	2344	N17	W90	7813		1-	2 C	2344	.40				
HALE	23	0159	0207	0202	N17	W90	7813		1-	2 C	0202	.30				
HALE	23	0223	0244	0226	N24	W24	7809		1-	2 C	0226	.20	.20			
HALE	23	0223	0328	0233	N24	W22	7809		1-	2 C	0233	.30	.30			
HALE	23	0314	0325	0322	N18	W90	7813		1-	3 C	0322	.10				H
HALE	23	0351	0355	0352	N17	W90	7813		1-	3 C	0352	.10				
CATA	23	0625 E	0645	0636	N21	W90	7813		1-	1	0636	.14	.80		132	D
OTTA	23	1248 E	1353 D		N22	W10	7812		1-	1 C	1307	.18	.18			H
OTTA	23	1550	1617	1552	N22	W12	7812		1-	C	1552	1.64	1.68			E
CAPS	23	1556	1606		N27	E00	7812		1-	3	1600	1.00	1.10			
OTTA	23	1600	1623	1603	N21	W15	7812		1-	C	1603	.21	.21			H
OTTA	23			1618												
SACP	23	1620 E	1625	1620 U	N22	W15	7812		1-	P		.26	.26		18	
HALE	23	1707	1720	1714	N17	W90	7813		1-	3 P	1714	.20				
HALE	23	1744	1804	1749	N21	W41	7809		1-	3 C	1749	.20	.20			
HALE	23	1806	1819	1809	N21	W41	7809		1-	3 C	1809	.70	.80			
HALE	23	1810	1812	1811	N16	W90	7813		1-	3 C	1811	.20				H
LOCK	23	1901	1920	1908	N21	W39	7809		1-	C	1908	.40	.40		10	HJ
HALE	23	1904	1915	1908	N21	W41	7809		1-	3 C	1908	.20	.20			HJ
HALE	23	1927	1935	1930	N22	W42	7809		1-	3 C	1930	.40	.50			H
HALE	23	2033	2037	2034	N15	W90	7813		1-	3 C	2034	.10				H
LOCK	23	2346	0012	2351	N24	W32	7809		1-	C	2351	.50	.50		20	
OTTA	24	1644	1656	1648	N30	E90	7827		1-	1 C	1648	.30				
OTTA	24	1635	1653	1648	N25	W46	7809		1-	2 C	1648	.36	.47			
OTTA	24	1650	1737	1703	N26	W43	7809		1-	2 C	1703	1.08	1.35			E

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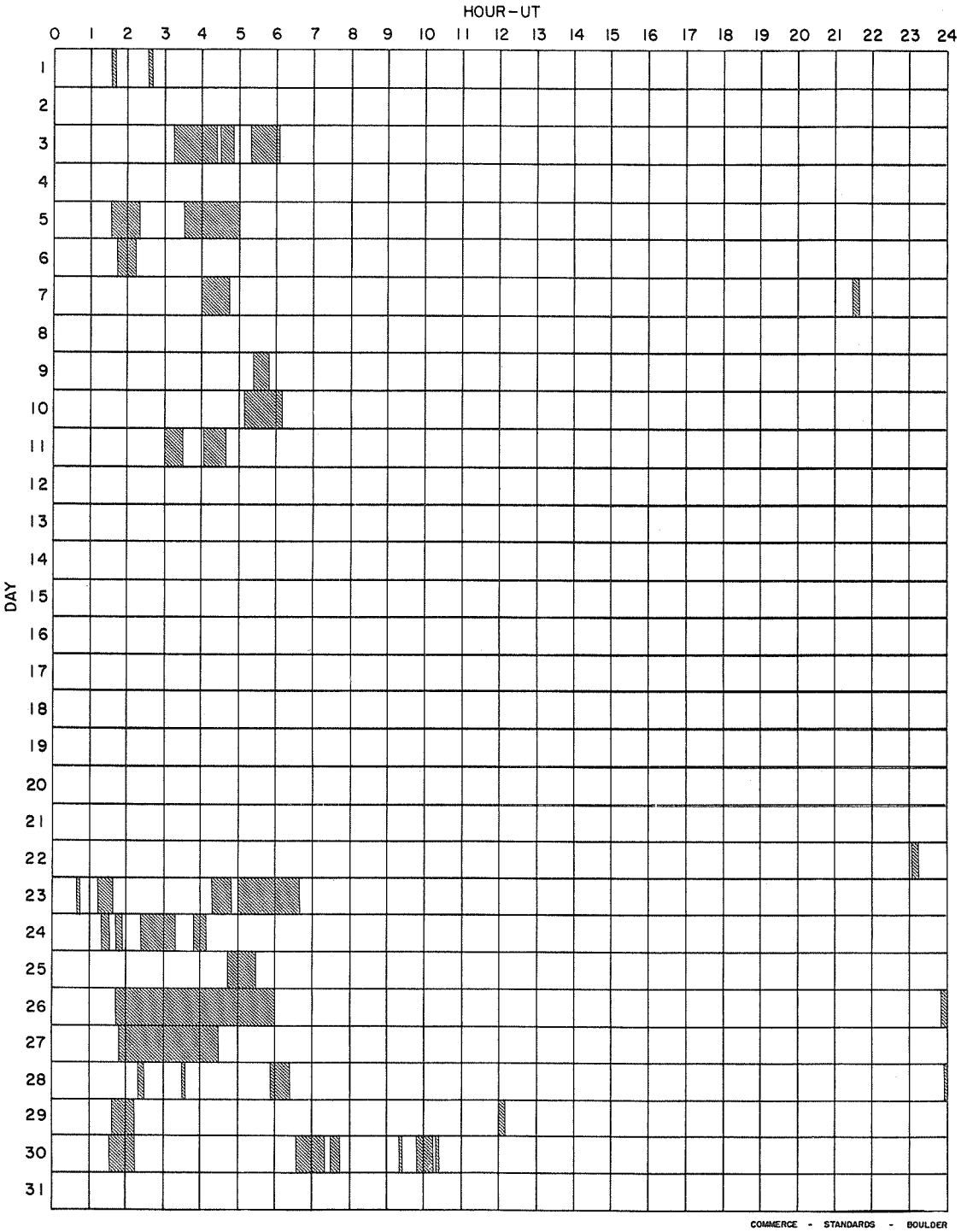
SACP	24	1700	1738 U	1706	N26	W43	7809		1-	C		1.04	1.31		19	
MCMA	24	1702	1733		N27	W45	7809		1-	1 P	1709	.80	1.30			S
HUAN	24	1704 E	1723 D		N27	W43	7809		1-	P						E
HALE	24	1816	1822	1818	N20	W48	7809		1-	3 C	1818	.10	.10			
HALE	24	1853	1905	1856	N20	W48	7809		1-	3 C	1856	.30	.40			
HALE	24	1910	1921	1915	N23	W48	7809		1-	3 C	1915	.30	.40			F
HALE	24	2150	2219	2202	N24	W27	7812		1-	1 C	2202	.80	.90			F
MCMA	24	2220 E	2240 D	2223	N23	W28	7812		1-	2 P	2223	.40	.50			E
HALE	25	0338	0346	0339	N24	W28	7812		1-	3 C	0339	.20	.20			
HALE	25	0419	0446 D	0434	N27	W51	7809		1-	2 P	0434	1.00	1.40			F
SACP	25	1349	1359	1356	N19	W65	7809		1-	C		.80	1.23		17	
OTTA	25	1352	1358	1355	N18	W77	7809		1-	C	1355	.15	.26			
HALE	25	1631	1640	1634	N20	W69	7809		1-	2 C	1634	.10	.20			
HALE	25	1645	1651	1648	N22	W60	7809		1-	3 C	1648	.40	.60			
SACP	25	1647	1655	1651	N19	W67	7809		1-	C		.43	.79		20	
OTTA	25	1647	1718	1651	N19	W78	7809		1-	1 C	1651	.24	.44			H
HALE	25	1744	1755	1752	N18	W70	7809		1-	3	1752	.20	.40			H
HALE	25	1802	1816	1805	N18	W70	7809		1-	3	1805	.20	.40			
LOCK	25	1921	1929	1924	N17	W49	7812		1-	C	1924	.20	.20		10	
HALE	25	2005	2014	2007	N20	W72	7809		1-	3	2007	.20	.40			F
LOCK	25	2005	2015	2008	N19	W69	7809		1-	C	2008	.60	1.20		20	
SACP	25	2006	2010	2008	N20	W69	7809		1-	C		.69	1.34		19	
LOCK	25	2209	2218	2212	N19	W69	7809		1-	C	2212	.60	1.20		20	
MCMA	25	2210	2216	2212	N20	W72	7809		1-	2 C	2212	.40				E
LOCK	25	2240	2251	2245	N19	W69	7809	11	1	C	2245	1.10	2.20		20	H
LOCK	25	2310	2322	2315	N32	E37	7824		1-	C	2315	.20	.20		10	
LOCK	26	0021	0051	0026	N27	E35	7824		1-	C	0026	.60	.60		20	L
SACP	26	0025	0036	0027	N28	W37	7812		1-	C		.87	1.04		19	
ARCE	26	0855 E	▭		N19	W85	7809		1-	2	0855	.23	.94			
OTTA	26	1235	1245	1241	N24	W72	7809		1-	2 C	1241	.30	.60			
HUAN	26	1238 E	1244 D		N26	W70	7809		1-	P	1240	.20				D
SACP	26	1239	1244	1240	N24	W68	7809		1-	C		.26	.50		18	
SACP	26	1343	1349	1346	N21	W79	7809		1-	C		.13	.35		17	
CAPS	28	0916 E	1038 D		N25	W90	7812	82	2	2	0940	1.00			204	EJ
LOCK	28	2034	2120	2046	N29	E28	7827		1-	C	2046	.40	.40		20	L
LOCK	29	1840	1910	1845	N38	E90	7838		1-	C	1845	.30	1.50		20	H
LOCK	29			1857												

INTERVALS OF NO FLARE PATROL OBSERVATIONS
PROVISIONAL

MAY 1965



Observatories included:

Arcetri	Haleakala	Kandilli	Manila	Ondrejov	Wendelstein
Bucharest	Herstmonceux	Kanzelhöhe	McMath-Hulbert	Ottawa	Wroclaw
Capri-S (Swedish)	Huancayo	Kodaikanal	Meudon	Sacramento Peak	
Catania	Istanboul	Lockheed	Mitaka	Tortosa	

SOLAR FLARES

FEBRUARY 1965

OBSERVATORY	DATE FEB 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CULG	01	0308	0314	0310	N06	E41	7661		1-	C	0310	1.00	1.30			
CULG	01	0459	0508	0504	N36	W33	7658		1-	C	0504	.20	.32			GC
	02	0000	0030	NO FLARE	PATROL											
ARCE	02	0920 E	1000 D		N08	E22	7661		1-	1	0950	.49	.55			
SACP	02	1510	1521	1517	N07	E15	7661		1-	C		.33	.32		17	
OTTA	02	1613	1622	1616	N07	E13	7661		1-	C	1616	.67	.67			H
MCMA	02	1614	1622	1616	N08	E12	7661		1-	2 C	1616	.50	.50			DH
CLMX	02	1614	1623	1616	N07	E13	7661		1-	C	1616	1.20	1.20			
SACP	02	1620 E	1629	1620	N07	E13	7661		1-	C		.29	.28		17	
SACP	02	1656	1719	1711	N08	E13	7661		1-	C		.75	.74		18	
OTTA	02	1700 E	1715	1711	N08	E13	7661		1-	C	1711	.22	.22			H
CLMX	02	1707	1715	1710	N08	E13	7661		1-	C	1710	.90	1.00			
SACP	02	1722	1753	1731	N08	E13	7661		1-	C		.29	.28		16	
OTTA	02	1724	1754	1728	N08	E13	7661		1-	C	1728	.33	.33			H
CLMX	02	1725	1738	1729	N08	E13	7661		1-	C	1729	.60	.60			
SACP	02	1733	1800 U	1744	N06	E15	7661		1-	C		.33	.32		19	
CLMX	02	1738	1802	1743	N05	E16	7661		1-	C	1743	.90	1.00			
OTTA	02	1741	1805	1744	N05	E15	7661		1-	C	1744	.28	.28			E
SACP	02	1853	1917	1905	N07	E11	7661		1-	C		1.08	1.06		19	
CLMX	02	1854	1917	1905	N07	E12	7661		1-	C	1905	1.10	1.10			
SACP	02	1916	1939	1931	N08	E12	7661		1-	C		.16	.16		19	
CLMX	02	1919	1939	1929	N08	E12	7661		1-	C	1929	.40	.40			
LOCK	02	1919	1945	1930	N10	E10	7661		1-	C	1930	.20	.20		20	H
MCMA	02	1924	1929 D		N08	E10	7661		1-	1 P	1929	.20	.20			DH
CLMX	02	2043	2101	2053	N07	E11	7661		1-	C	2053	1.00	1.00			
LOCK	02	2043	2109	2054	N09	E09	7661		1-	C	2054	.60	.60		20	H
HALE	02	2048	2050 D		N06	E08	7661		1-	4						
SACP	02	2050	2057	2052	N07	E10	7661		1-	C		1.04	1.02		18	
LOCK	02	2131	2201	2140	N08	E09	7661		1-	C	2140	.50	.50		20	H
CULG	02	2200	2209	2203	N08	E10	7661		1-	C	2203	.40	.42			
CULG	02	2206	2240	2211	N09	E12	7661		1-	C	2211	1.40	1.47			FHK
CULG	02	2247	2251 D	2249	N08	E12	7661		1-	C	2249	.60	.63			H
CULG	02	2305	2318 D	2313	N08	E09	7661	13 D	1	P	2313	2.00	2.10			
LOCK	02	2306	2326	2313	N06	E08	7661		1-	C	2313	.50	.50		20	J
HALE	02	2307	2322	2314	N06	E08	7661		1-	3	2314	.70	.70			
MITK	02	2311 E	2318	2312	N07	E09	7661	7 E	1	C						
CULG	02	2343	2356 D	2345	N09	E11	7661		1-	C	2345	.60	.63			H
CULG	03	0022	0041	0030	N07	E09	7661		1-	C	0030	1.00	1.05			H
LOCK	03	0025	0034	0029	N08	E08	7661		1-	C	0029	.70	.70		20	
MITK	03	0027	0031	0029	N07	E08	7661		1-	C						
LOCK	03	0041	0053	0046	N09	E09	7661		1-	C	0046	.50	.50		10	
CULG	03	0043	0052 D	0046	N09	E10	7661		1-	C	0046	1.20	1.26			H
CULG	03	0058	0119	0105	N10	E10	7661		1-	C	0105	.60	.63			H
CULG	03	0115	0152	0121	N08	E08	7661		1-	C	0121	.80	.84			HK
CULG	03	0159	0209	0204	N10	E10	7661		1-	C	0204	.20	.21			H
CULG	03	0200	0213	0204	N07	E08	7661		1-	C	0204	.80	.84			
CULG	03	0204	0220	0211	N09	E08	7661		1-	C	0211	.60	.63			
CULG	03	0223	0237	0226	N09	E10	7661	14	1	C	0226	2.00	2.10			
CULG	03	0234	0254	0242	N08	E08	7661		1-	C	0242	1.40	1.47			H
CULG	03	0306	0321	0310	N07	E11	7661		1-	C	0310	.40	.42			

SOLAR FLARES

FEBRUARY 1965

OBSERVATORY	DATE FEB 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CULG	03	0314	0324	0317	N08	E08	7661		1-	C	0317	1.00	1.05			H
CULG	03	0338	0352	0341	N08	E08	7661		1-	C	0341	.80	.84			
	03	0355	0415	NO FLARE	PATROL											
MCMA	03	1715	1732	1720	N08	E03	7661		1-	1 C	1720	.30	.30			LS
ARCE	04	0855 E	0925 D		N08	W05	7661		1-	2	0905	1.70	1.76			
SACP	05	1613	1629	1621	N06	W24	7661		1-	C		.99	1.01		17	
SACP	05	1750	2000 U	1808	N07	W25	7661	130 U	2	C		1.51	1.93		30	
MCMA	05	1750	2006 D	1810	N08	W25	7661	136 D	2+	2 C	1810	7.50	8.50			FS
CLMX	05	1750	2024	1810	N08	W26	7661	154	2	C	1810	8.20	8.20			
CULG	06	0127	0135	0131	N07	E49	7668		1-	C	0131	.40	.64			G
ARCE	06	0942 E	1000 D		N10	W33	7661		1-	4	0942	.56	.70			
	06	1720	1930	NO FLARE	PATROL											
	06	1950	2100	NO FLARE	PATROL											
	06	2150	2210	NO FLARE	PATROL											
CULG	07	0320	0330	0324	N12	W46	7661		1-	C	0324	.20	.30			
MITK	07	0330	0347	0336	N11	W42	7661		1-	C						
CULG	07	0332	0350	0339	N11	W42	7661		1-	C	0339	.60	.80			
CULG	07	0422	0433	0426	N05	W48	7661		1-	C	0426	.20	.30			
CAPS	07	1155 E	1200 D		N09	W43	7661	5 D	1	1	1157					C
	07	1220	1245	NO FLARE	PATROL											
LOCK	07	1819	1848	1826	N09	W51	7661	29	1	C	1826	3.60	4.50		20	FL
HUAN	07	1822	1838 D		N09	W53	7661	16 D	1	C	1826	1.64	2.74			EFL
HUAN	07			1827												
HUAN	07			1826												
HUAN	07			1826												
HALE	07	2128	2144	2131	N16	W53	7661		1-	4	2131	.60	.80			
MITK	07	2333	2346	2338	N22	W52	7660		1-	C						
KIEV	08	1151	1210	1159	N13	W49	7665		1-	C	1159	1.00	1.50		50	D
	08	1545	1600	NO FLARE	PATROL											
LOCK	08	1831	1903	1845	N30	E90	7667		1-	C	1845	.30	1.50		20	
MCMA	08	1833	2000 D	1846	N31	E90	7667		1-	1 P	1846					K
LOCK	08	2029	2117	2038	N05	W65	7661		1-	C	2038	.50	.80		10	L
	09	0120	0200	NO FLARE	PATROL											
	09	0640	0800	NO FLARE	PATROL											
	09	1600	1605	NO FLARE	PATROL											
	09	1905	2105	NO FLARE	PATROL											
	09	2115	2235	NO FLARE	PATROL											
CULG	09	2255	2327	2305	N25	E38	7674	32	2	C	2305	3.60	5.40			FL
	10	0300	0320	NO FLARE	PATROL											
ARCE	10	0925 E	1013 D		N20	W90	7660	48 D	1	1	1002	.72	4.09			
CAPE	10	0950	1022		N20	W90	7660	32	1	C	1004	.90				H
CATA	10	1020	1045 D	1022	N18	W90	7660	25 D	1		1022					
CAPE	10	1121	1128		N21	W90	7660		1-	C	1125	.50				
	10	1605	1650	NO FLARE	PATROL											

SOLAR FLARES

FEBRUARY 1965

OBSERVATORY	DATE FEB 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
CULG	11	0524	0529 D	0526	N29	E51	7677		1-	P	0526	.40	.80			
LOCK	11	1913	1937	1924	N29	E41	7677		1-	C	1924	.20	.30		10	
LOCK	11	2110	2127	2116	N29	E41	7677		1-	C	2116	.20	.30		10	
CULG	12	0555	0611	0602	N22	E39	7677		1-	C	0602	.60	.84			C
CULG	12	0557	0613	0601	N26	E43	7677		1-	C	0601	.80	1.36			
	14	0630	0730	NO FLARE	PATROL											
OTTA	14	1606	1637	1610	S41	W19	7687		1-	C	1610	.15	.16			
CULG	14	2200	2217	2205	N32	E06	7677		1-	C	2205	.20	.26			H
	15	0735	0745	NO FLARE	PATROL											
KAND	15	1333	1338		S22	W85			1-							
CULG	16	0453	0502	0455	N25	E56			1-	C	0455	.40	.90			G
CULG	16	0540	0548	0544	N28	W13	7677		1-	C	0544	.60	.75			GH
LOCK	16	1700	1716	1707	N32	E01	7677		1-	C	1707	.10	.10		10	H
LOCK	16	2006	2019	2010	S04	E45			1-	C	2010	.20	.20		10	
LOCK	16	2244	2257	2249	S01	E27	7693		1-	C	2249	.10	.10		10	H
	17	1200	1205	NO FLARE	PATROL											
	17	1255	1300	NO FLARE	PATROL											
OTTA	17	1844	1855		N24	W63	7674		1-	C	1845	.11	.20			
LOCK	17	2316	2336	2323	N23	W60	7674		1-	C	2323	.40	.70		10	
CULG	17	2317	2334	2323	N26	W68	7674		1-	C	2323	.40	1.20			G
SACP	17	2319	2332	2328	N25	W64	7674		1-	C		.46	.88		16	
CULG	17	2340	2400	2358	N13	E22			1-	P	2358	.40	.46			G
CULG	18	0137	0200	0148	N28	E22			1-	C	0148	.20	.26			G
KAND	18	1016	1025	1022	N31	E90	7696		1-							
KAND	18	1026	1032	1028	N26	E90	7696		1-							
KAND	18	1116 E	1121		N02	W50			1-							
CLMX	18	1535	1547	1540	N04	E67	7694		1-	C	1540	.60	1.00			
SACP	18	1535	1547	1540	N05	E66	7694		1-	C		.29	.50		17	
LOCK	18	1759	1837	1815	S31	W13	7695		1-	C	1815	.20	.20		10	H
LOCK	18	2044	2102	2054	N43	W30			1-	C	2054	.30	.40		10	H
CULG	18	2142	2201	2150	N21	W34	7677		1-	C	2150	.40	.56			CGL
LOCK	18	2147	2205	2152	N20	W32			1-	C	2152	.40	.40		20	H
CULG	18	2220	2229	2223	N00	E58	7694		1-	C	2223	1.00	1.80			CG
SACP	18	2220	2232	2224	N02	E58	7694		1-	C		.38	.55		17	
MCMA	19	1635	1650	1638	S23	W13	7695		1-	1 C	1638	.20	.20			DH
	20	0210	0215	NO FLARE	PATROL											
CULG	20	2218	2236	2226	N32	E15			1-	C	0226	.40	.52			CGH
LOCK	20	2218	2238	2225	N30	E13			1-	C	2225	.20	.20		10	
SACP	20	2256	2307	2259	N27	E64	7697		1-	C		.27	.53		18	
CULG	20	2256	2309	2301	N26	E64	7697		1-	C	2301	.60	1.80			G
LOCK	20	2256	2310	2302	N26	E59	7697		1-	C	2302	.40	.70		10	
KAND	23	0653 E	0808	0713	S05	E90	7704	75 D	2							

SOLAR FLARES

FEBRUARY 1965

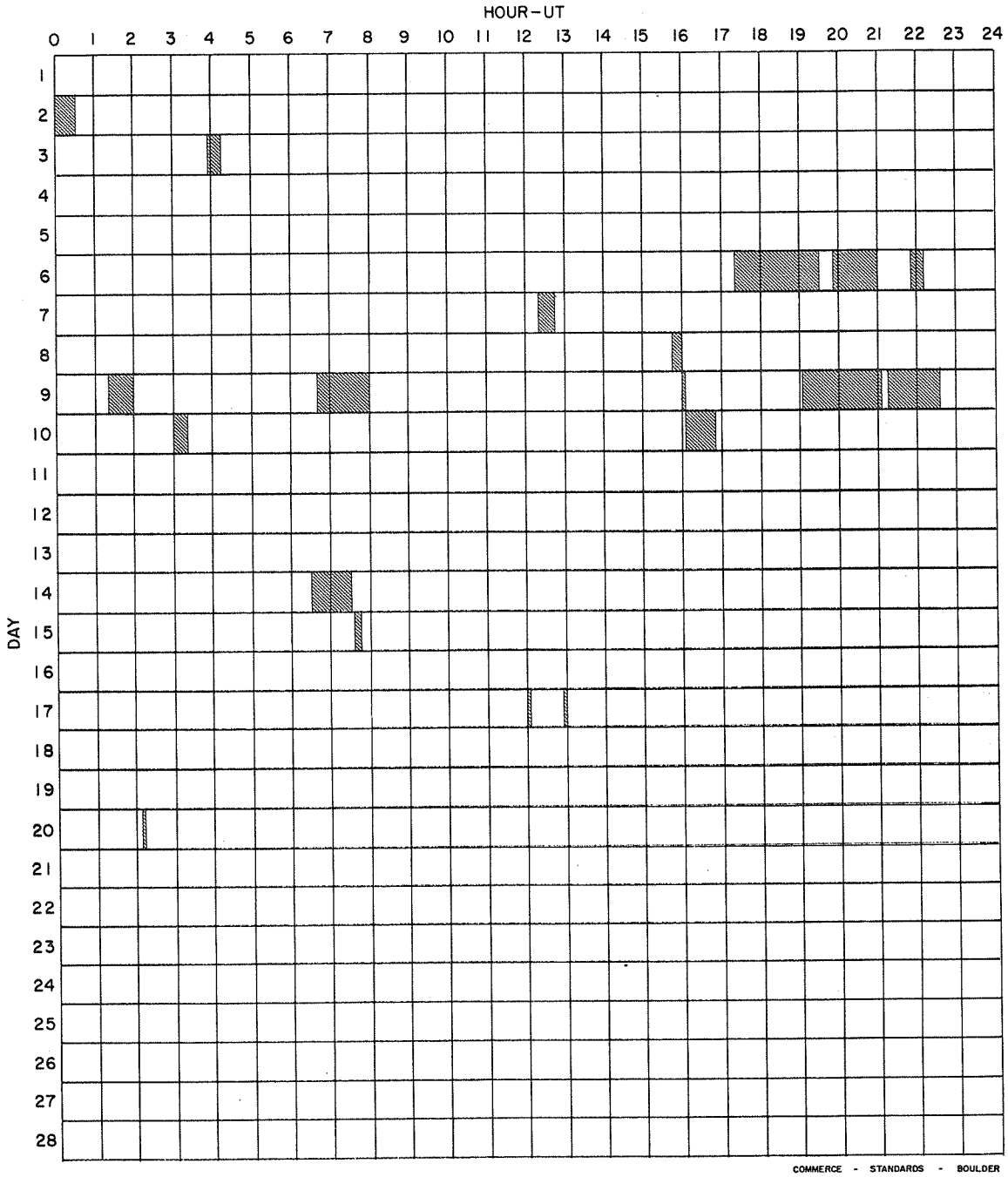
OBSERVATORY	DATE FEB 1965	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	REMARKS
LOCK	23	2010	2030	2017	N32	W90			1-	C	2017	.30	1.50		20	
SIBE	24	0420 E	0429	0423	S04	E79	7704	9 E	1	C	0423	.66	3.40		180	EL
LOCK	24	2026	2041	2033	S03	E61	7704		1-	C	2033	.30	.50		10	
SACP	26	2123	2142	2130	N16	E54	7707		1-	C		.12	.18		17	
HALE	26	2336	2355	2346	N05	E35			1-	3	2346	.20	.20			H
CULG	27	0419	0436	0429	S05	E32	7704		1-	C	0429	.60	.69			L
CULG	27	0502	0518	0511	S06	E32	7704		1-	C	0511	.20	.23			L
CULG	27	0551	0607	0557	S16	E35	7709		1-	C	0557	.80	1.00			EG
MITK	27	0553	0604	0556	S15	E35	7709		1-	C						
CATA	27	0845	0915 D	0846	N28	E74	7710		1-	C	0846	.16	.42		155	G
ISTA	27	0855 E	0904 D		N35	E21		9 D								
NIZH	27	0925 E	0935 D	0930	S15	E44	7709	10 E	1	1	0930	1.82	2.79	1.30		CDH
HTPR	27	0932	0952	0936	N23	E45	7707	20	1		0936	1.60	2.50			
KANZ	27	0942 E	0946 D		N16	E49	7707	4 D	1							E
CAPS	27	0942 E	1020 D		N22	E42	7707	38 D	1	1	0942	2.40	3.50		150	E
ARCE	27	1015 E	1020 D		N24	E47	7707		1-	2	1015	.65	1.06			
ARCE	27	1015 E	1020 D		N36	E72	7710		1-	2	1015	.26	.80			
ARCE	27	1015 E	1020 D		S01	E30	7704		1-	2	1015	.20	.23			
MCMA	27	1319 E	1417 D		N32	E62	7710		1-	2 P	1350	.40				S
CULG	27	2234	2300	2239	S04	E21	7704		1-	C	2239	.20	.21			
HUAN	27	2238 E	2238 D		S03	E22	7704		1-	P	2238	.10	.10			D
CULG	28	0425	0549	0432	N23	E37	7707		1-	C	0432	3.00	4.50			FG
LOCK	28	2010	2025	2015	N30	E44	7710		1-	C	2015	.40	.50		10	
LOCK	28	2042	2104	2047	N21	E22	7707		1-	C	2047	.50	.50		20	
MCMA	28	2044	2057	2048	N23	E29	7707		1-	3 C	2048	.40	.50			ES

COMMERCE - STANDARDS - BOULDER

These flare reports are addenda to the February 1965 flares published in CRPL-F 247 Part B for March 1965.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

FEBRUARY 1965



Observatories Included:

Abastumani	Catania	Ikomasan	Locarno	Ondrejov	Voroshilov
Arcetri	Climax	Istanboul	Lockheed	Ottawa	Wrocław
Athenes	Culgoora	Izmiran	Lvov	Sacramento Peak	Zürich
Bucharest	Haleakala	Kandilli	Manila	Siberie	
Capetown	Haute-Provence	Kanzelhöhe	McMath-Hulbert	Tachkent	
Capri-F (German)	Herstmonceux	Kiev-Ko	Mitaka	Tortosa	
Capri-S (Swedish)	Huancayo	Kodaikanal	Nizamiah	Uccle	

IONOSPHERIC EFFECTS OF SOLAR FLARES

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

APRIL 1965

APR. 1965	UNIVERSAL TIME			TYPE SWF	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX	IMP	ABS	SCNA	SEA	SPA	SES	SFD				
02	1958	2001									1	5	HA BO	
02	2103	2106									1-	5	BO HA RO	
02	2203	2209									1	5	BO HA	
02	2250	2253									1-	5	BO HA	
02	2305	2307									1-	5	HA BO	
05	2035	2038									1	5	HA BO	
06	1930	1933									1	5	BO HA	
09	0150	0152									1-	5	MA HA	
11	1450	1540	1508	S 2								5	PU DA HU JU MC	1453
11	1455	1535	1507						1			5	A-1	
11	1456	1522	1509		7	1						5	PU	
11	1458	1608	1552				1					5	PU A-2 A-5	
15	2353	0010	2358	G 1-								3	MA	2351
15	2353	0018	2358					18				3	MA	
17	2136	2143									1	5	RO HA	2132
21	1418	1421									1-	5	BO RO	
21	1430	1433									1-	5	RO BO	
21	1451	1454									1-	5	BO RO	
21	1457	1459									1-	5	BO RO	
21	1623	1627									1	5	RO BO	
21	2129	2134									1	5	BO HA	

COMMERCE - STANDARDS - BOULDER

RIOMETER EVENTS

APRIL 1965

FROBISHER BAY **30 Mc/s**

APR. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS	APR. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS
9	0320	0400	0329	3	1	20	0910	1608	1107	7	2
13	0142	0326	0153	22	4	25	1132	1325	1139	16	4
14	2358	0008	2400	4	1	26	0950	1510	1035	16	2
17	1300	1920	1618	14	2	27	0920	1924	1425	12	1
18	0332	1100	0704	9	5	28	0925	1312	1019	19	5
19	0216	0428	0224	6	2	30	0940	*	1000	22	1
19	1004	0119	2326	32	2						

COMMERCE - STANDARDS - BOULDER

* Uncertain due to equipment failure

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1965

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

MAY 1965	URANE	DESCRIPTIVE TYPE	START UT	DURATION HRS.	DURATION MIN.	MEAN FLUX	MAXIMUM TIME	MAXIMUM FLUX	REMARKS
2	3	Simple 3A	0045		45	1.0	Indet.	2.0	
	1	Simple 1F	0048		01	4.5	0048.5	7.0	
2	3	Simple 3A	1205	1	37	1.3	1230	2.5	
	1	Simple 1	1210		04	0.5	1212	1.0	
8	3	Simple 3	1634	2	31	0.5	1810	1.0	
13	3	Simple 3	2312		18	0.5	2330	1.0	
15	1	Simple 1	1354		03.5	0.5	1355	1.0	
15	3	Simple 3	1440	1	25	0.7	1515	1.5	
15	1	Simple 1	1921		05	1.5	1924	3.0	
	4	Post B.I.	1926		30	0.7		1.5	
16	3	Simple 3	1440	1	55	0.8	Indet.	1.5	
16	3	Simple 3F	1905	2	07	1.0	1945	2.0	
17	3	Simple 3	1425		35	1.0	1440	1.8	
17	3	Simple 3	1505		12	0.6	1508	1.2	
17	1	Simple 1	1836		02	0.3	1837	0.6	
17	1	Simple 1	2039		03	1.5	2040	3.0	
17	3	Simple 3	2214		26	0.6	2222	1.2	
17	3	Simple 3	2350	>1	50	-	0050	2.6	
18	3	Simple 3	1551	2	14	0.5	1630	1.0	
18	3	Simple 3A	1842		55	0.8	1906	1.6	
	1	Simple 1	1851		01.5	0.5	1851.5	1.0	
	1	Simple 1	1858		03	0.5	1858.5	1.0	
	1	Simple 1	1903		03	2.0	1904	4.0	
18	3	Simple 3F	1957	2	33	0.7	2119	1.4	
18	3	Simple 3	2325	2	15	0.7	0030	1.4	
19	3	Simple 3A	1405	1	35	1.5	1428	3.0	
	1	Simple 1	1424		02	2.0	1425	4.0	
19	1	Simple 1	1600	2	00	0.7	1600.5	1.3	
19	3	Simple 3F	1815	1	30	2.5	1824	5.0	
19	3	Simple 3	2046	1	28	1.2	2114	2.0	
19	3	Simple 3A	2356	1	22	1.3	0008	2.2	
20	1	Simple 1	0002		02	1.1	0003	2.2	
20	1	Simple 1	0137		04.5	1.0	0138.3	2.0	
20	3	Simple 3	b1425	>1	17	1.2	1450	2.4	
20	3	Simple 3	1608	2	10	1.3	1710	2.0	
20	3	Simple 3A	2026	2	36	1.0	2045	2.0	
	1	Simple 1	2140		01	0.5	2140.5	1.0	
20	3	Simple 3A	2320.8	>2	20	-	2343	7.5	
	6	Complex	2320.8		03	7.0	2321	18.0	
	1	Simple 1	2339.5		02.5	1.4	2341	2.0	
	6	Complex	2344		02.5	2.5	2345	4.0	
21	3	Simple 3	1131		11	1.1	1134	2.2	
21	3	Simple 3	1840		40	0.3	1855	0.6	
21	3	Simple 3	2002		28	0.5	2015	1.0	
21	3	Simple 3	2330	2	05	1.2	0002	2.4	
22	3	Simple 3	1823		33	0.3	1829	0.6	
22	3	Simple 3A	1940	1	35	2.7	1950	5.4	
	1	Simple 1	1942		04	1.5	1943	3.0	
	1	Simple 1	2026		03	3.2	1927.5	6.4	
23	3	Simple 3	1550		35	0.7	1552	1.4	
23	3	Simple 3F	2340	1	26	1.3	2353	2.6	
24	3	Simple 3F	1649	1	11	1.6	1705	3.2	
24	3	Simple 3	1818	1	10	0.3	Indet.	0.6	
24	3	Simple 3	2230	1	00	0.4	2300	0.8	
25	2	Simple 2F	2242		02	4.0	2202.8	10.0	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1965

NBS BOULDER 108 Mc/s

May 1965	TYPE	START UT	TIME OF MAXIMUM UT	DURATION MINUTES	INTENSITY
12	3	1311.7	1312.1	1.6	3
25	8	2241	2241.1	4	3

COMMERCE - STANDARDS - BOULDER

NOMINAL TIMES OF OBSERVATION

MAY 1965

NBS BOULDER 108 Mc/s

May 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.	May 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.
1	1205-0135		18	1147-0150	2152-2159; 2300-0151
2	1204-0136	1439-2200; 2307-0002	19	1147-2057; 2138-0151	1858-2057; 2138-2257; 2305-0151
3	1203-1358; 1417-0137	1443-1937; 2304-0137			
4	1202-0138	1202-1825; 2255-0138	20	1146-1619; 1726-0152	2205-0152
5	1201-0139	1201-1929; 2302-0139	21	1145-0153	2300-0153
6	1159-0140	1330-1552; 2300-0140	22	1144-0154	2007-0154
			23	1143-0154	1500-0154
7	1158-0141	2315-0141	24	1143-0155	1428-2205; 2245-0155
8	1157-0142	2228-0142	25	1142-1753; 1900-0156	1630-1753; 1900-0007
9	1156-0143	1745-0143			
10	1155-0144	1228-1823; 2300-0144	26	1141-0157	2019-2250; 2340-0157
11	1154-0145	1200-1500; 2137-0145	27	1141-0158	
12	1153-0146	2300-0146	28	1140-0158	
13	1152-0146	1844-0147	29	1140-0158	
14	1151-0147	2300-0147	30	1139-1636; 1800-0159	
15	1150-0148	2300-0148			
16	1149-0149		31	1139-1552; 1722-0159	1722-0159
17	1148-0149	2253-0149			

COMMERCE - STANDARDS - BOULDER

NOTE: Equipment operated erratically May 30 and 31. Most of the interference due to atmospherics.

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1965

High Altitude Observatory
Boulder

7.6 - 41 Mc/s

Date May 1965	Bursts			Frequency Range (Mc/s)	Date May 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity			Type	Time (U.T.)	Intensity	
1 May	III	1427-1431:30	2	8-41	18 May	III	1554:45-1555	1-	29-34
	IV	1427-1448	1-	21-41		III	1601:15-1601:45	1-	20-41
	III	1622-1623:15	1+	20-41		III	1612:45-1613	1	10-41
	III	1643-1643:30	1-	8-41		III	1613:15-1613:45	1	10-41
3	III	1623:15-1623:45	2	28-41		III	1630:45-1631	1	26-38
	no observ.	2112-2254				III	1635-1635:30	1	19-38
6	no observ.	1300-1544				continuum	1704-1750	1-	21-41
7	III	1353-1353:15	1-	27-41		III	1756:15-1756:45	1	22-31
	III	1403:45-1404:45	2	14-41		III	1806:30-1807	1-	22-41
	III	1553:30-1553:45	1-	18-41		III	1830-1830:15	1	21-30
	III	1719:30-1720	1-	22-41		III	1840-1840:30	1-	26-41
	III	1802:30-1802:45	1	21-41		III	1846-1846:15	1-	23-41
	III	1818:15-1818:30	1	11-41		III	1921-1921:15	1-	23-34
	III	1824:45-1825:15	1	24-41		III	1934-1934:15	1-	24-32
10	no observ.	2010-2258				III	1949-1949:15	1-	22-41
12	no observ.	1300-1349				III	2005:30-2005:45	1-	19-37
	III	2025-2025:15	1-	22-41		III	2006:15-2006:45	1-	17-40
15	III	0103-0103:30	1	22-38		III	2019-2019:15	1-	26-33
17	III	1154:45-1155	1-	17-41		III	2053:15-2053:30	1-	24-32
	III	1600-1600:15	1	20-41		III	2108:15-2108:30	1-	24-41
	III	1618:45-1619	1	23-37		III	2119:15-2119:45	2	19-41
	III	1638-1638:15	1	24-30		III	2131:45-2132:15	1+	21-41
	III	1800:45-1801	1-	28-35		III	2134-2134:15	1	21-41
	III	1809:45-1810	1	23-41		III	2210:30-2211	1+	18-41
	III	1815:30-1816:45	2	9-41		III	2258:15-2258:30	1	22-37
	III	1924:15-1924:30	1-	18-27		III	2336:15-2336:45	3	12-41
	III	2002-2002:15	1-	22-35		III	2336:45-2337:30	3	12-41
	III	2003-2003:15	1	24-41		III	2337:30-2337:45	1	12-41
	III	2145:30-2145:45	1	18-38		III	2338-2338:15	1	20-41
	III	2237-2237:15	1-	21-35		III	2355:45-2356	1-	26-35
	III	2335-2335:15	1	21-35		III	2356:45-2357	1-	26-35
	III	2354-2354:15	1-	23-38	19	III	0013:30-0013:45	1+	24-41
18	III	0008:45-0009:45	3	12-41		III	1129-1129:15	1	16-21
	III	0010:15-0010:45	1+	20-41		III	1130-1130:30	1	16-22
	III	0051-0052:45	2	16-41		III	1131:15-1131:45	1	16-22
	III	0056:45-0057	1-	22-41		III	1140:15-1143:15	2	12-41
	III	1157:15-1157:45	1+	13-35		III	1143:30-1143:45	1+	15-41
	III	1224:15-1224:30	1	17-41		III	1227:30-1227:45	1-	24-33
	III	1224:30-1224:45	1	17-41		III	1320:15-1320:45	1+	20-41
	III	1225-1225:15	1	25-41		III	1323-1323:15	1-	22-38
	III	1225:15-1225:30	1	25-41		III	1402-1402:15	1	25-41
	III	1226:30-1227	1-	25-41		III	1404:45-1405	1-	23-30
	III	1316:15-1316:30	1-	22-41		III	1406-1406:45	2	16-41
	III	1344-1344:15	1	22-41		III	1407:15-1410:15	2	16-41
	III	1402:15-1402:30	1	20-41		III	1411:15-1411:30	2	17-41
	III	1414:45-1415:15	1+	19-41		III	1457-1457:15	1-	25-32
	III	1421-1421:15	1	20-39		III	1502:15-1502:30	1-	21-34
	III	1441-1441:15	1	23-38		III	1515:45-1516:15	2	16-41
	III	1516-1516:15	1	21-41		III	1532-1532:30	2	16-41
	III	1519:15-1519:30	1	27-31		III	1537:30-1539:15	3	8-41

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1965

High Altitude Observatory
Boulder

7.6-41 Mc/s

Date May 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity	
19 May	III	1542:30-1543	1+	16-41
	III	1544:45-1545	1+	20-31
	III	1550-1550:15	1	21-41
	III	1603:30-1603:45	1	29-39
	III	1604:45-1605	1	25-41
	III	1612-1614:30	1+	16-41
	III	1635:30-1636:30	1-	22-35
	III	1728:45-1729	1	24-41
	III	1831:45-1832	1-	22-38
	III	1915:30-1915:45	1-	29-41
	III	1918:15-1918:45	1	16-41
	III	1920:30-1921	1-	17-41
	III	1926-1926:45	2	14-41
	III	2008:45-2010:30	2	8-41
	III	2015:30-2015:45	1	24-35
	III	2056:15-2056:45	1	21-41
	III	2101:15-2101:30	1-	23-34
	III	2218-2218:30	1-	16-41
	III	2219-2219:30	1+	16-41
	III	2239:45-2240	1-	23-30
	III	2304:15-2305:30	3	13-41
	III	2335-2335:15	1	27-41
	III	2335:45-2336:15	2	13-41
	III	2341:45-2342	1-	35-41
20	III	0002:30-0005	3	11-41
	III	0005:15-0005:30	1	27-41
	III	0007:45-0012:15	1	23-41
	III	0014-0014:15	1-	34-41
	III	0045-0045:30	1+	19-41
	III	0046-0047:15	2	17-41
	III	0103-0103:15	1	29-41
	III	0116:15-0116:30	1-	27-38
	III	1236:15-1236:30	1-	24-41
	III	1305:45-1306	1	21-32
	III	1317:15-1317:30	1-	31-38
	III	1321:30-1321:45	1	29-38
	III	1329:30-1329:45	1-	26-41
	III	1412:30-1413	1-	28-41
	III	1421:15-1421:30	1	24-41
	III	1631:15-1632	2	8-41
	III	1632:45-1633:15	1+	20-39
	III	1639:45-1640	1	27-37
	III	1640:30-1641	1	19-41
	III	1744-1744:15	1-	25-32
	III	1832:15-1832:30	1	20-41
	III	1857:30-1857:45	1	20-41
	III	2054:45-2055	1-	29-41
21	III	0014:15-0014:30	1	23-41
	III	0015-0016:30	2	12-41
	III	0019:30-0019:45	1-	25-41

Date May 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity	
21 May	III	0027:30-0027:45	1-	29-41
	III	0041-0041:15	1-	29-39
	III	1648:45-1649	1-	29-40
	III	1703:45-1704:15	1-	22-38
	III	1851-1851:15	1-	22-41
	III	1853:45-1854	1-	22-41
	III	1954:45-1955	1-	22-37
	III	2030-2030:15	1-	22-41
	III	2045:30-2049:45	1	12-36
	III	2053:45-2054	1-	23-39
	continuum	2107-2527	1-	23-41
22	continuum	1213-1835	1-	20-41
	III	1549:45-1550	2	16-34
	III	1602:45-1603:15	1	16-36
	III	1847-1848:15	2	21-41
	continuum	1849-a2000	1-	20-41
	III	2210:45-2211:15	1	23-41
23	III	1248:30-1249	1-	34-41
	III	1250:15-1250:45	1-	30-41
	III	1252:15-1252:30	1-	26-41
	III	1308:30-1309	1	27-41
	III	1309:15-1309:30	1-	31-41
	III	1617:30-1619	2	28-41
	III	1619-1619:30	1	26-41
	III	1654:15-1654:45	1-	22-41
	III	1717-1717:30	1	24-41
	III	1718:30-1719:45	2	25-41
	III	1726:15-1727:30	1+	23-41
	III	1728:15-1728:30	1-	26-41
	III	1729-1729:30	1	28-41
	III	1732-1732:15	1	28-41
	III	1733:15-1733:30	1-	32-41
	III	1743:30-1743:45	1-	32-41
	III	1747-1747:15	1-	30-41
	III	1747:30-1749	2	23-41
	III	1749:15-1749:30	2	25-41
	III	1752:30-1753	1	28-41
	III	1806:45-1809:45	3	16-41
	continuum	1806:45-1813:30	1-	31-41
	III	1927-1927:45	1	16-41
	III	1928-1928:45	1	16-41
	III	1929-1929:15	1-	24-41
	III	1955:45-1956:30	1+	23-41
	III	2021:30-2022	1-	27-32
	III	2026:30-2027	1-	26-33
	III	2034:30-2035	2	15-41
	III	2044:45-2045:15	1	26-34
	III	2047:45-2048:15	1	25-37
24	III	1623:15-1623:30	1-	24-38
	III	1751:45-1752	1-	23-37

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1965

High Altitude Observatory
Boulder

7.6 - 41 Mc/s

Date May 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity	
24 May	III	1953:45-1954:15	1-	20-39
	III	1954:30-1955	1-	22-39
	III	2057:15-2057:45	1-	23-41
	III	2058:30-2059	1	16-41
	III	2059-2059:30	1	16-41
25	III	1130:15-1131	1+	16-41
	III	1131-1132:15	1+	16-41
	III	1132:15-1133:45	2	16-41
	III	1133:45-1134	1-	17-38
	III	1136:15-1136:45	1+	18-41
	III	1140:15-1140:45	1	21-41
	III	1233:15-1233:45	1	23-41
	III	1234:15-1235	2	20-41
	III	1238:30-1239:15	2	16-41
	III	1244-1244:30	1-	27-38
	III	1248-1248:15	1-	28-39
	III	1339:15-1339:45	1+	20-41
	III	1346:45-1347:15	1+	20-41
	III	1347:45-1348	1-	29-36
	III	1353-1353:30	1	20-37
	III	1354:45-1355:15	1-	23-28
	III	1355:15-1355:45	1-	23-41
	III	1355:45-1356:15	1	21-41
	III	1409:15-1409:45	1	16-41
	III	1419:45-1420:15	1	20-41
	III	1427:15-1427:45	1	20-41
	III	1444-1444:30	1-	23-32
	III	1451-1451:30	1+	12-37
	III	1503:45-1504:15	1-	23-41
	III	1512:30-1513	1-	27-39
	III	1513:30-1515:15	3	11-41
	III	1517-1517:30	1	16-41
	III	1639-1641	3	8-41
	III	1648:15-1648:30	1-	27-37
	III	1649-1649:15	1	25-39
	III	1652:15-1652:30	1	22-41
	III	1724:45-1725	1	22-41
	III	1736-1736:30	1	10-41
	III	1751:30-1753	1+	14-41
	III	1820:15-1821:30	2	8-41

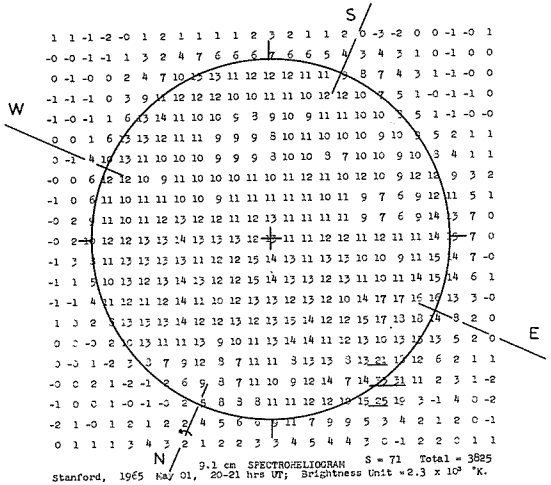
Date May 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Intensity	
25 May	III	1827:15-1828	1+	19-41
	III	1956:45-1957:45	1+	16-41
	III	1957:45-1958:15	1	19-41
	III	2005:15-2005:30	1+	19-41
	III	2006-2006:30	1+	8-41
	III	2006:30-2011:15	3	8-41
	III	2116:30-2117:45	1	13-41
	III	2120:30-2124	2	8-41
	III	2200:30-2204	2	8-41
	III	2208:30-2209	1+	20-41
	III	2209:30-2213:15	2	8-41
	III	2227:30-2228	1	20-41
	IV	2241-2252	1+	8-41
	III	2241:45-2244:30	3	8-41
	II	2246:30-2250	1	28-41
	II	2303-2310	2	27-41
26	III	1246:30-1247	1-	24-39
	III	1348-1348:45	2	12-41
	III	1430:45-1431:15	1	12-34
	III	1437:45-1438	1-	20-36
	III	1444:15-1444:30	1-	30-37
	III	1444:45-1445	1-	29-38
	III	1445:15-1448:15	2	16-38
	III	1452:15-1454:15	3	13-41
	no observ.	1900-2147		
27	III	1403:15-1404	1-	22-36
	continuum	1406:30-1412:30	3	11-41
28	III	0006:15-0007	1	20-41
	III	0007:15-0008:15	1	20-41
	III	0008:45-0009	1-	22-41
	III	0009:15-0009:30	1-	22-31
	III	1849:30-1854:15	3	8-41
30	III	1259:45-1301:15	2	15-41

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

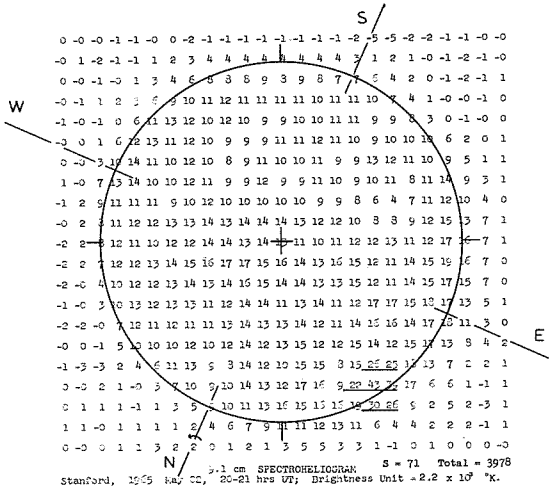
MAY 1965

9.1 cm

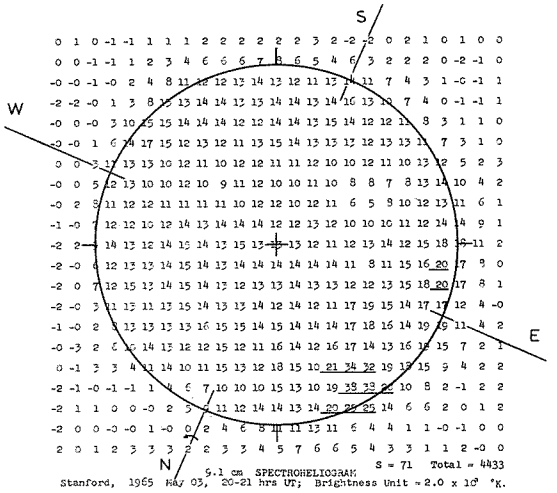
STANFORD



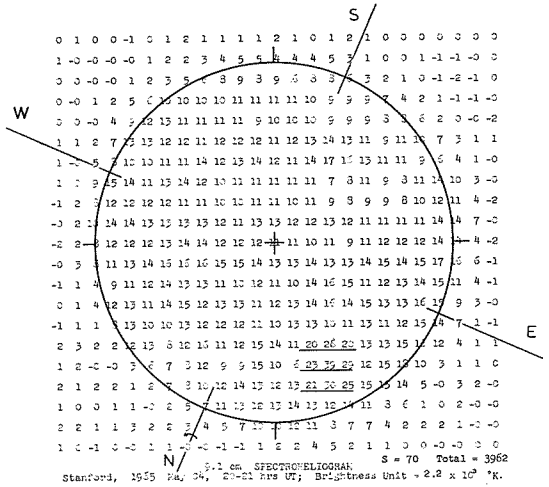
9.1 cm SPECTROHELIOGRAM S = 71 Total = 3825
Stanford, 1965 May 01, 20-21 hrs UT; Brightness Unit = 2.3 x 10^3 °K.



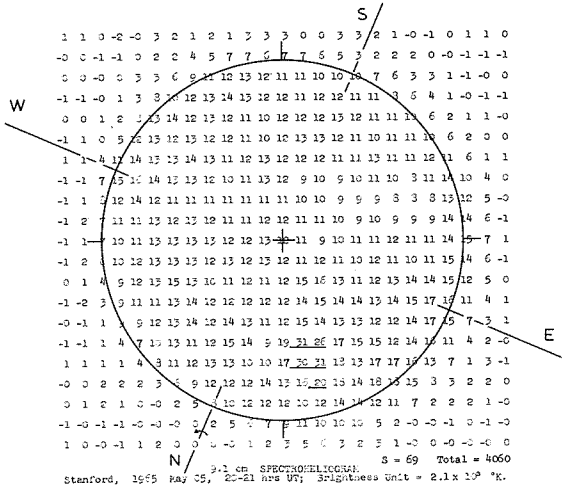
9.1 cm SPECTROHELIOGRAM S = 71 Total = 3978
Stanford, 1965 May 02, 20-21 hrs UT; Brightness Unit = 2.2 x 10^3 °K.



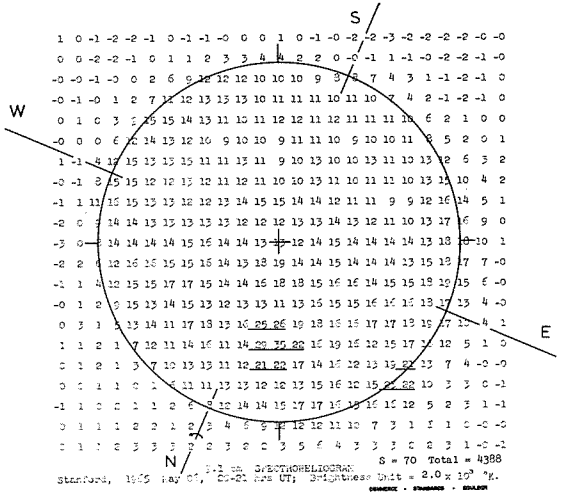
9.1 cm SPECTROHELIOGRAM S = 71 Total = 4433
Stanford, 1965 May 03, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 70 Total = 3962
Stanford, 1965 May 04, 20-21 hrs UT; Brightness Unit = 2.2 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 69 Total = 4060
Stanford, 1965 May 05, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.

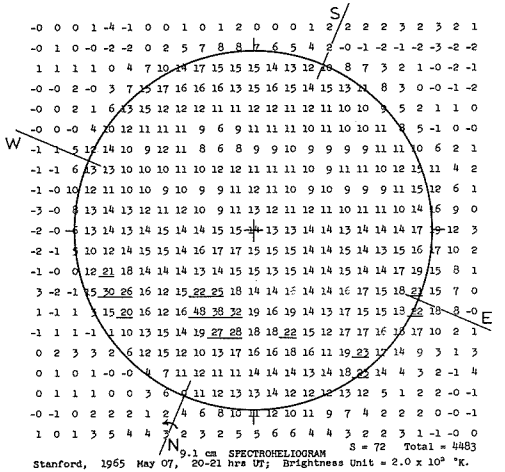


9.1 cm SPECTROHELIOGRAM S = 70 Total = 4388
Stanford, 1965 May 06, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

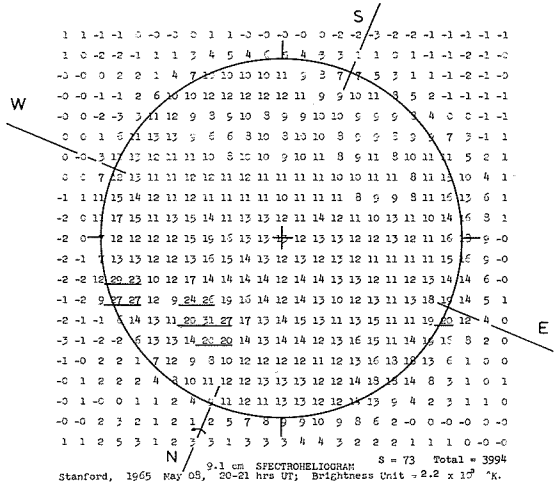
MAY 1965

STANFORD **9.1 cm**



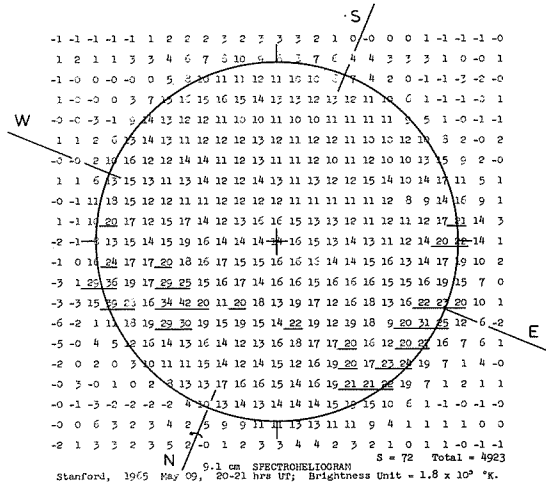
9.1 cm SPECTROHELIOGRAM S = 72 Total = 4483

Stanford, 1965 May 07, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



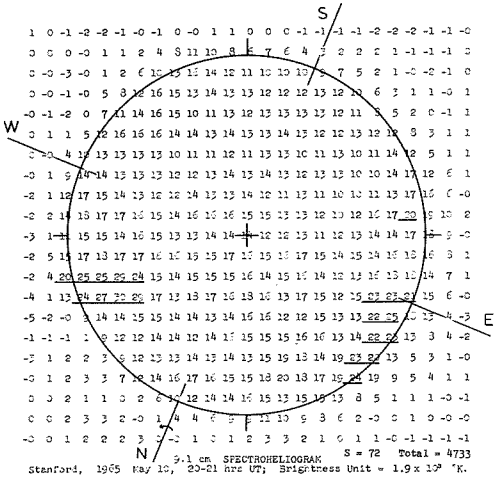
9.1 cm SPECTROHELIOGRAM S = 73 Total = 3994

Stanford, 1965 May 08, 20-21 hrs UT; Brightness Unit = 2.2 x 10^3 °K.



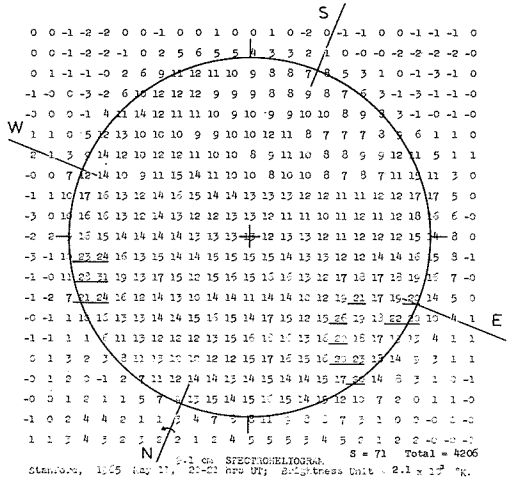
9.1 cm SPECTROHELIOGRAM S = 72 Total = 4923

Stanford, 1965 May 09, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



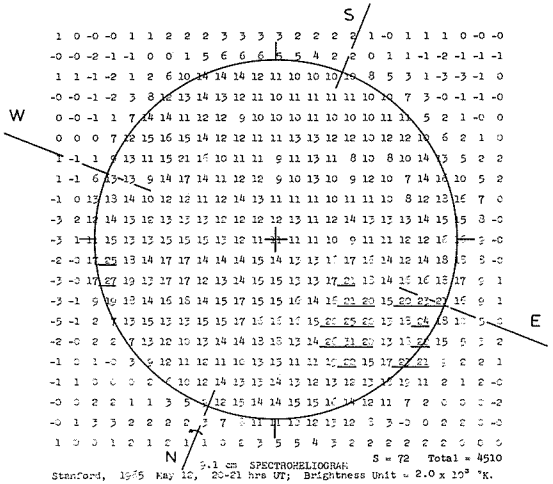
9.1 cm SPECTROHELIOGRAM S = 72 Total = 4733

Stanford, 1965 May 10, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 71 Total = 4206

Stanford, 1965 May 11, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 72 Total = 4510

Stanford, 1965 May 12, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.

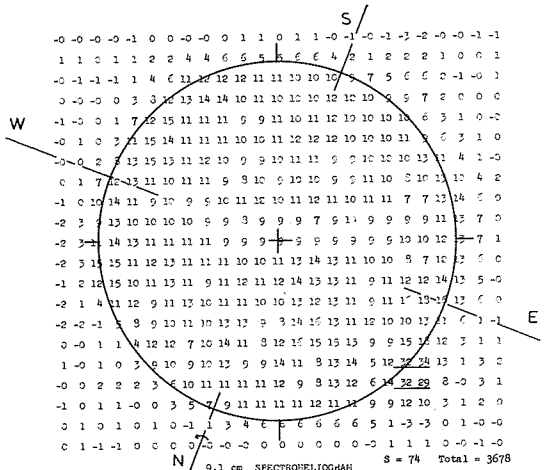
COMMERCE - STANDARDS - DOUBLER

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MAY 1965

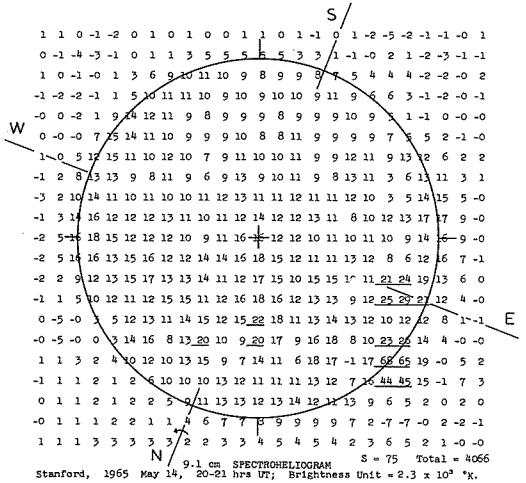
STANFORD

9.1 cm



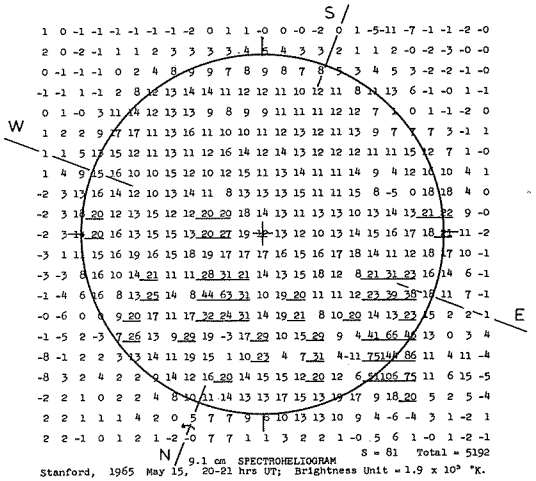
9.1 cm SPECTROHELIOGRAM S = 74 Total = 3678

Stanford, 1965 May 13, 20-21 hrs UT; Brightness Unit = 2.5 x 10^3 °K.



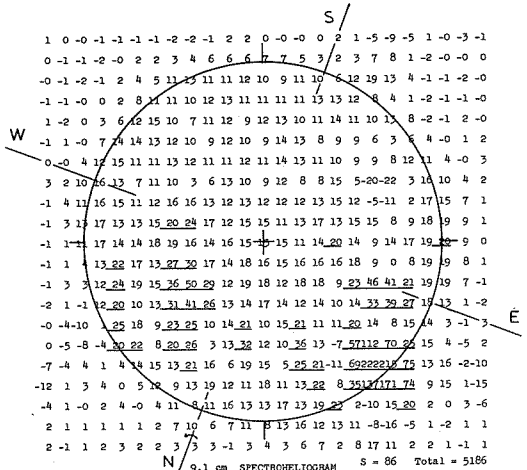
9.1 cm SPECTROHELIOGRAM S = 75 Total = 4066

Stanford, 1965 May 14, 20-21 hrs UT; Brightness Unit = 2.3 x 10^3 °K.



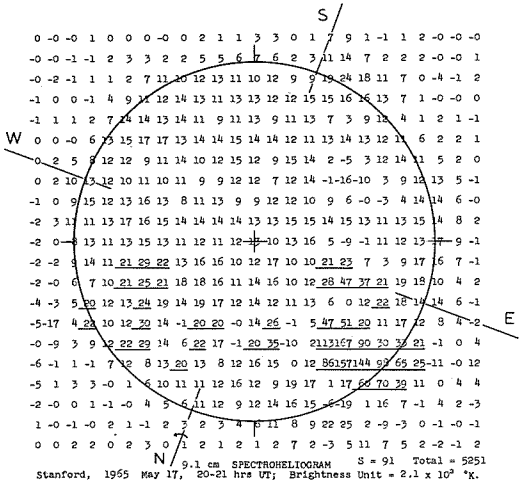
9.1 cm SPECTROHELIOGRAM S = 81 Total = 5192

Stanford, 1965 May 15, 20-21 hrs UT; Brightness Unit = 1.9 x 10^3 °K.



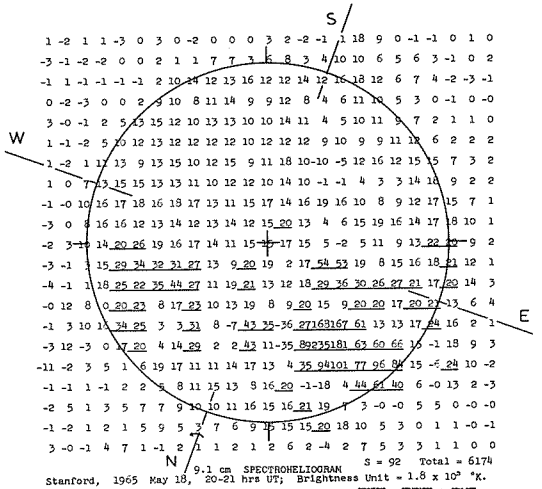
9.1 cm SPECTROHELIOGRAM S = 86 Total = 5186

Stanford, 1965 May 16, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 91 Total = 5251

Stanford, 1965 May 17, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 92 Total = 6174

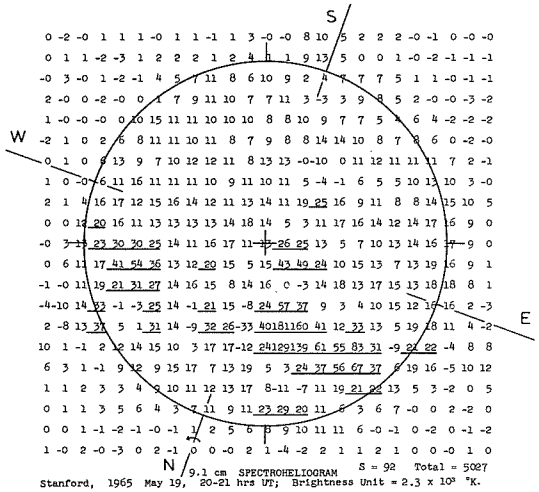
Stanford, 1965 May 18, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

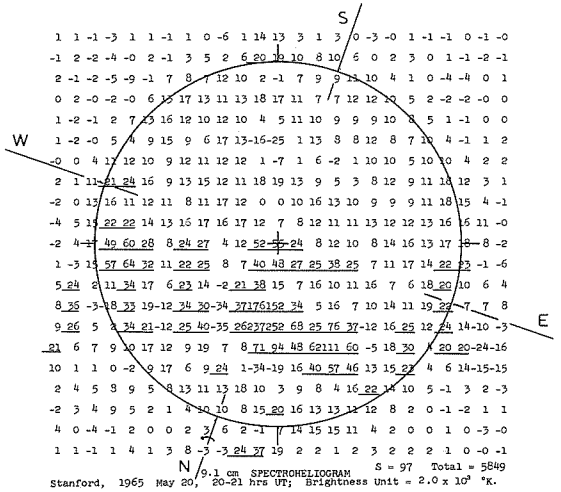
MAY 1965

STANFORD

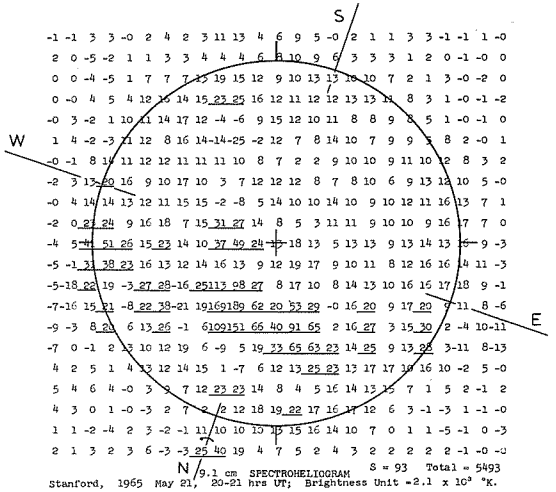
9.1 cm



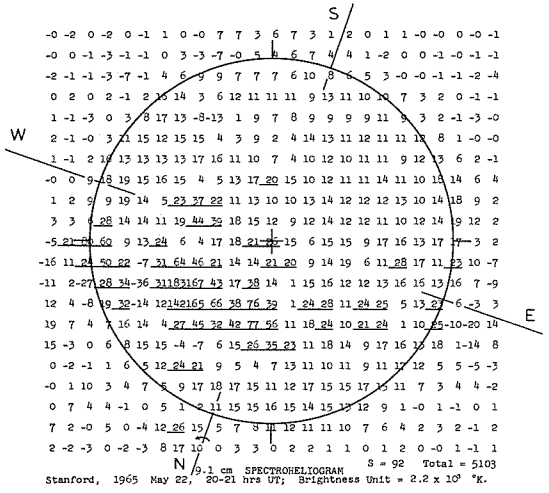
9.1 cm SPECTROHELIOGRAM S = 92 Total = 5027
Stanford, 1965 May 19, 20-21 hrs UT; Brightness Unit = 2.3 x 10^3 °K.



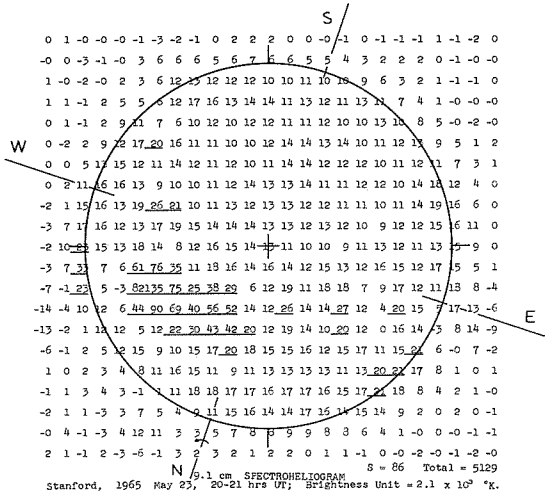
9.1 cm SPECTROHELIOGRAM S = 97 Total = 5849
Stanford, 1965 May 20, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



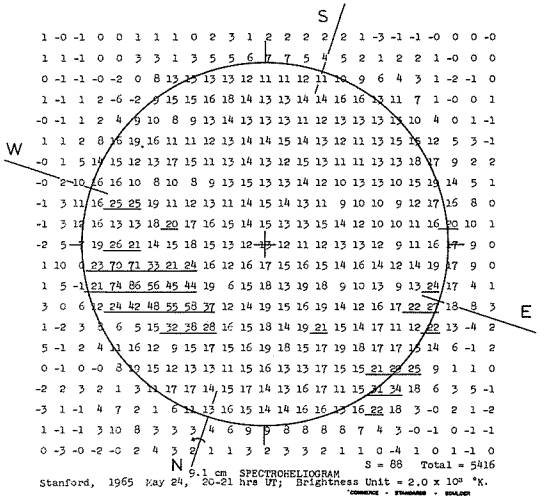
9.1 cm SPECTROHELIOGRAM S = 93 Total = 5493
Stanford, 1965 May 21, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 92 Total = 5103
Stanford, 1965 May 22, 20-21 hrs UT; Brightness Unit = 2.2 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM S = 86 Total = 5129
Stanford, 1965 May 23, 20-21 hrs UT; Brightness Unit = 2.1 x 10^3 °K.



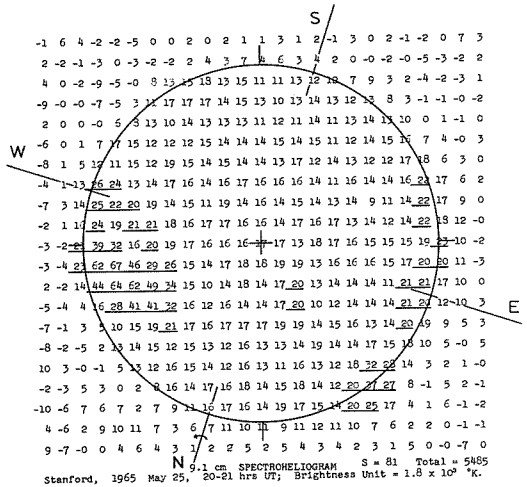
9.1 cm SPECTROHELIOGRAM S = 88 Total = 5416
Stanford, 1965 May 24, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

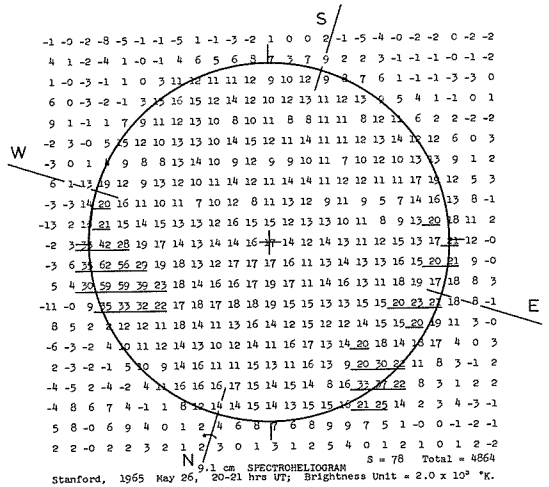
MAY 1965

9.1 cm

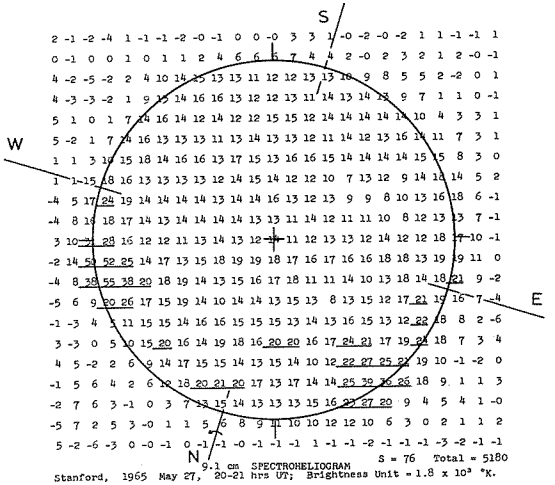
STANFORD



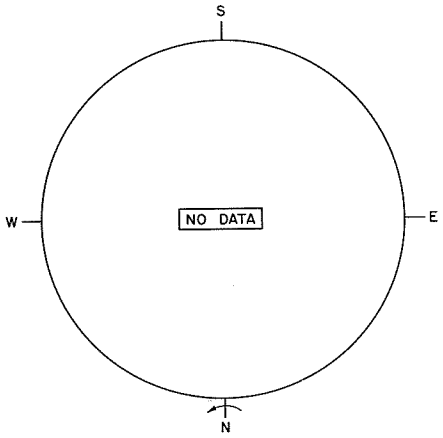
9.1 cm SPECTROHELIOGRAM S = 81 Total = 5485
Stanford, 1965 May 25, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



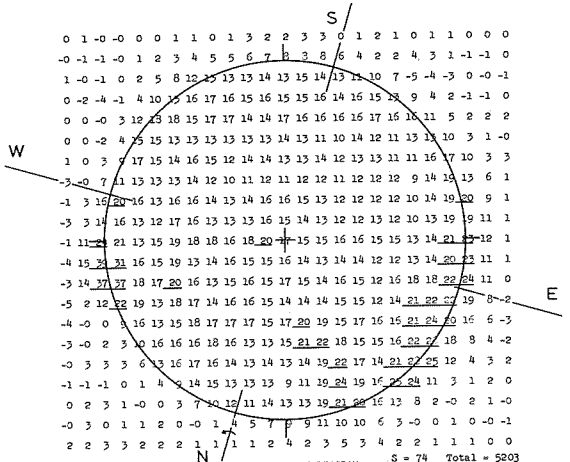
9.1 cm SPECTROHELIOGRAM S = 78 Total = 4864
Stanford, 1965 May 26, 20-21 hrs UT; Brightness Unit = 2.0 x 10^3 °K.



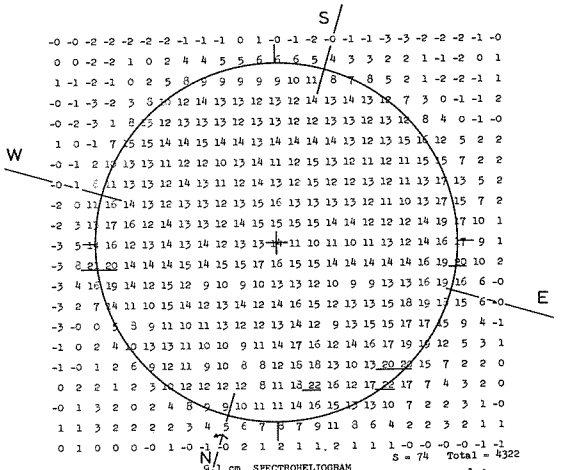
9.1 cm SPECTROHELIOGRAM S = 76 Total = 5180
Stanford, 1965 May 27, 20-21 hrs UT; Brightness Unit = 1.8 x 10^3 °K.



1965 MAY 28



9.1 cm SPECTROHELIOGRAM S = 74 Total = 5203
Stanford, 1965 May 29, 20-21 hrs UT; Brightness Unit = 1.7 x 10^3 °K.

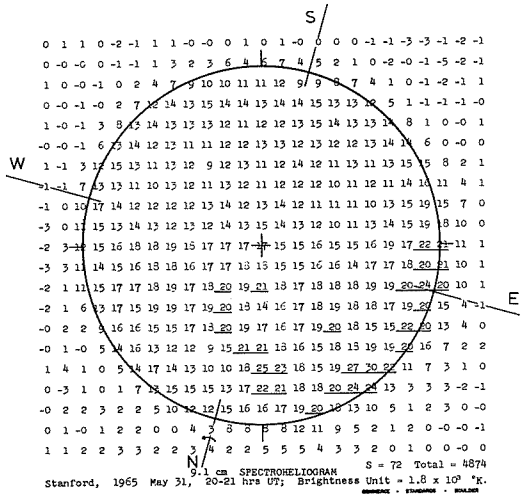


9.1 cm SPECTROHELIOGRAM S = 74 Total = 4322
Stanford, 1965 May 30, 20-21 hrs UT; Brightness Unit = 2.1x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MAY 1965

STANFORD **9.1 cm**

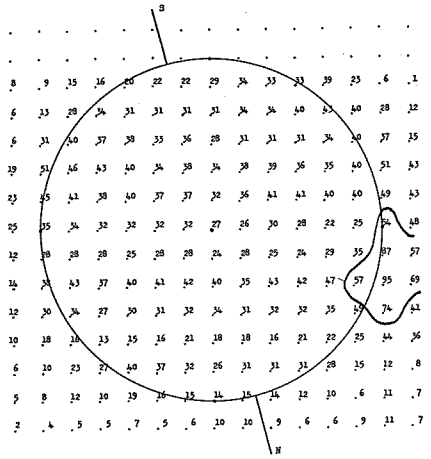


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

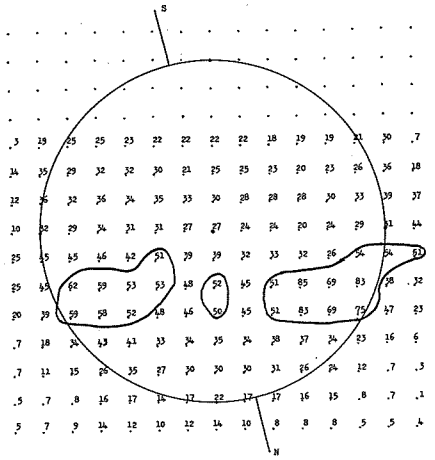
DECEMBER 1964

FLEURS, AUSTRALIA

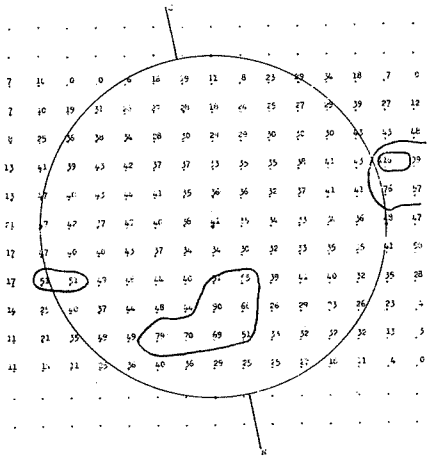
21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness Temperature: 1700° K



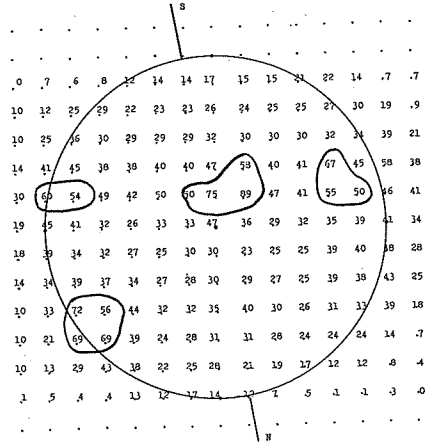
1964 DECEMBER 4 0230 UT



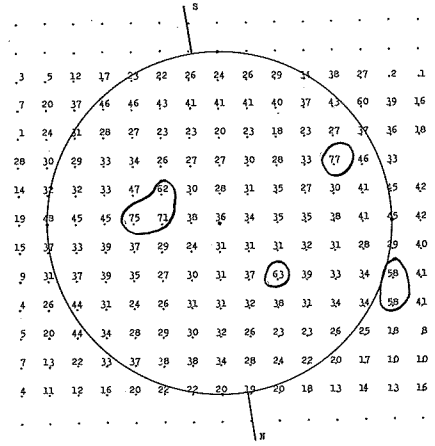
1964 DECEMBER 7 0230 UT



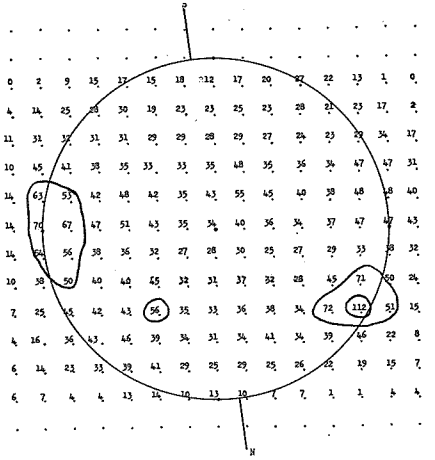
1964 DECEMBER 11 0230 UT



1964 DECEMBER 16 0230 UT



1964 DECEMBER 18 0230 UT



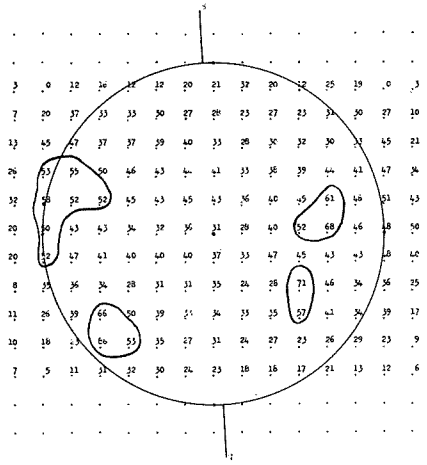
1964 DECEMBER 21 0230 UT

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

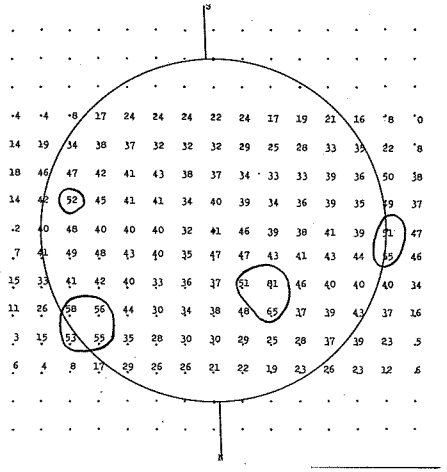
FLEURS, AUSTRALIA

DECEMBER 1964 — JANUARY 1965

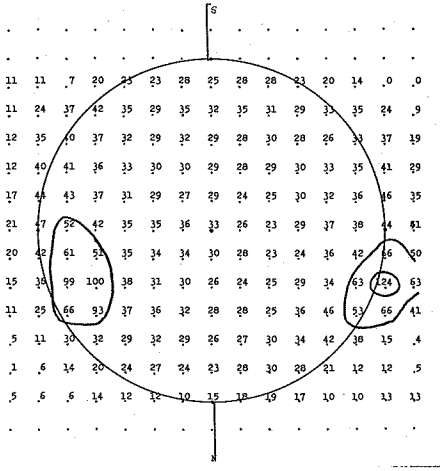
21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness Temperature: 1700°K



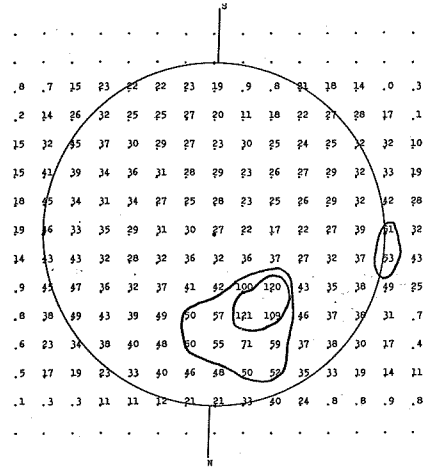
1964 DECEMBER 29 0230 UT



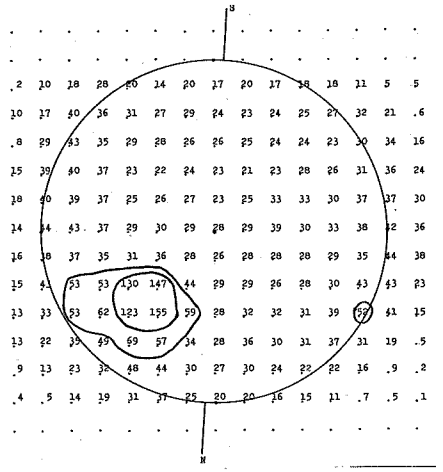
1964 DECEMBER 30 0230 UT



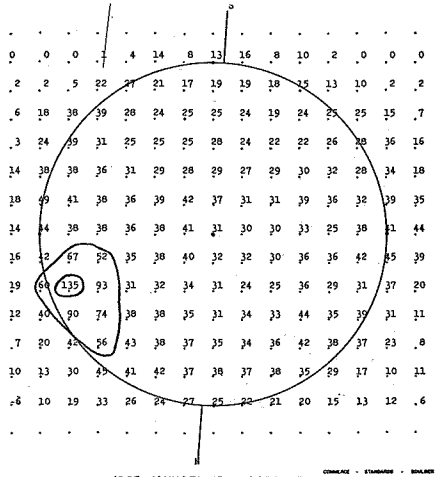
1965 JANUARY 4 0230UT



1965 JANUARY 8 0230 UT



1965 JANUARY 11 0230 UT



1965 JANUARY 13 .0230 UT

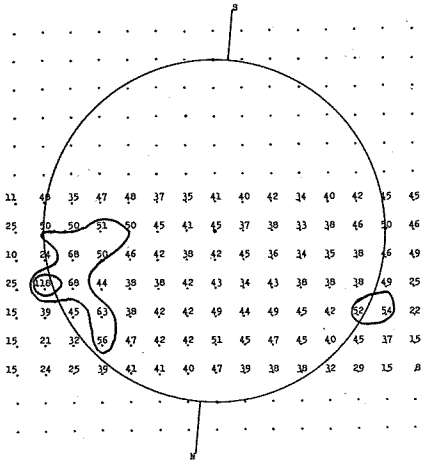
IVm

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

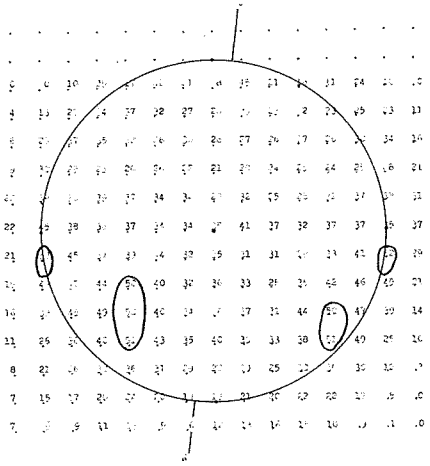
JANUARY 1965

FLEURS, AUSTRALIA

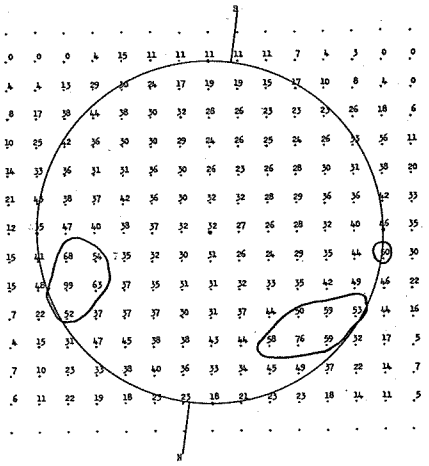
21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness Temperature: 1700° K



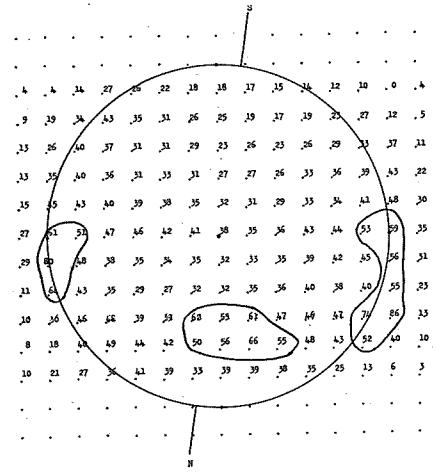
1965 JANUARY 15 0230 UT



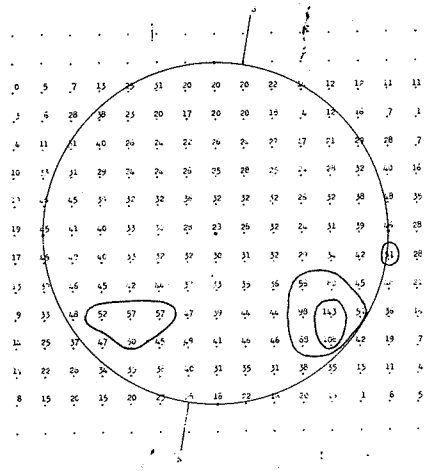
1965 JANUARY 18 0230 UT



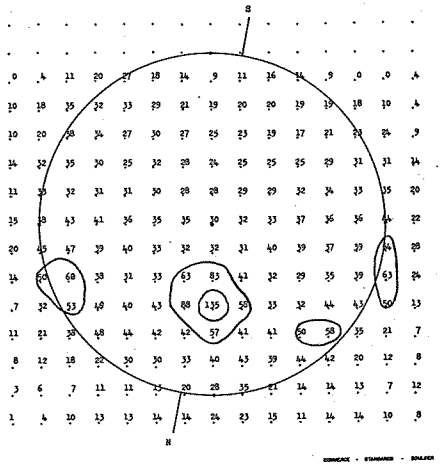
1965 JANUARY 20 0230 UT



1965 JANUARY 22 0230 UT



1965 JANUARY 25 0230 UT



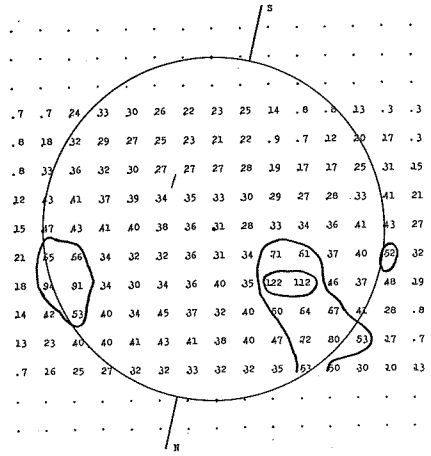
1965 JANUARY 28 0230 UT

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

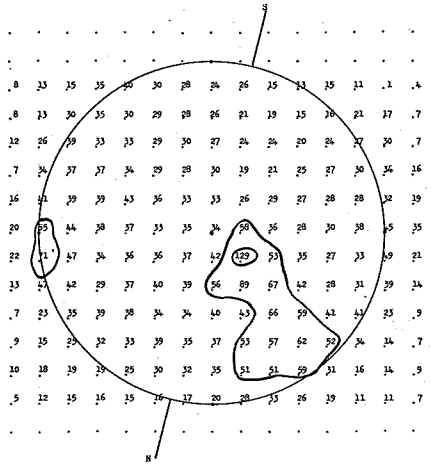
FEBRUARY 1965

FLEURS, AUSTRALIA

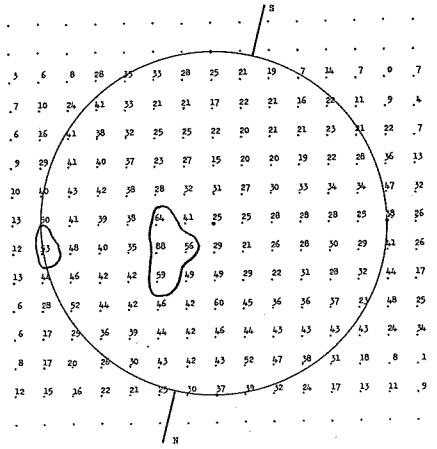
21 cm
Resolution about 3 minutes of arc.
Unit of Brightness Temperature 1700° K



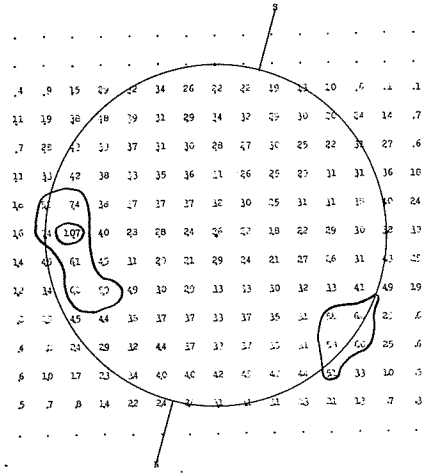
1965 FEBRUARY 2 0230 UT



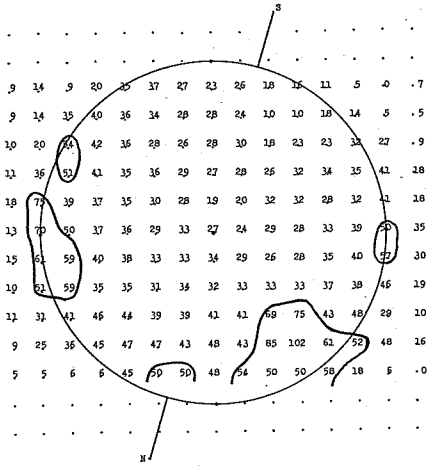
1965 FEBRUARY 3 0230 UT



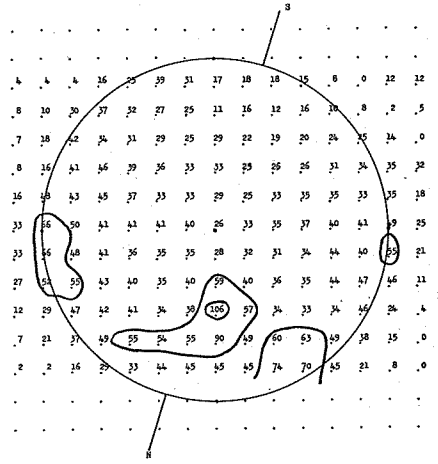
1965 FEBRUARY 5 0230 UT



1965 FEBRUARY 8 0230 UT



1965 FEBRUARY 10 0230 UT



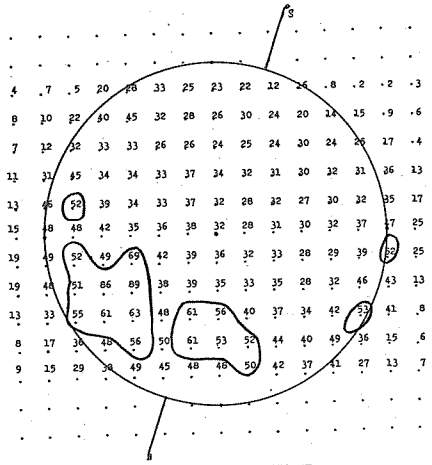
1965 FEBRUARY 12 0230 UT

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

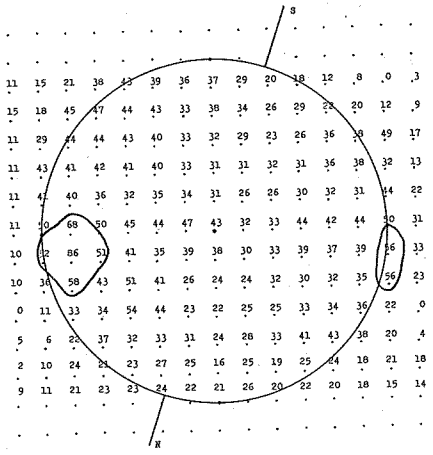
FEBRUARY 1965

FLEURS, AUSTRALIA

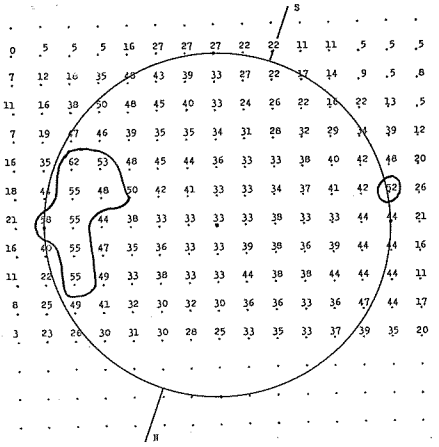
21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness Temperature: 1700° K



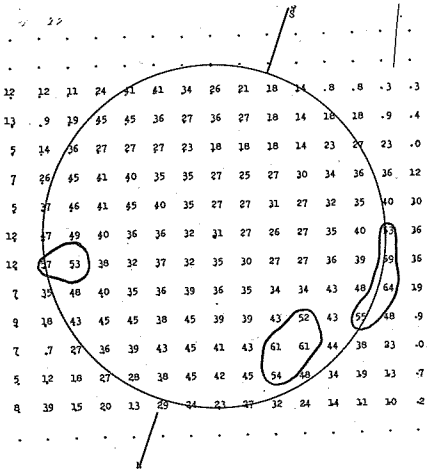
1965 FEBRUARY 15 0230 UT



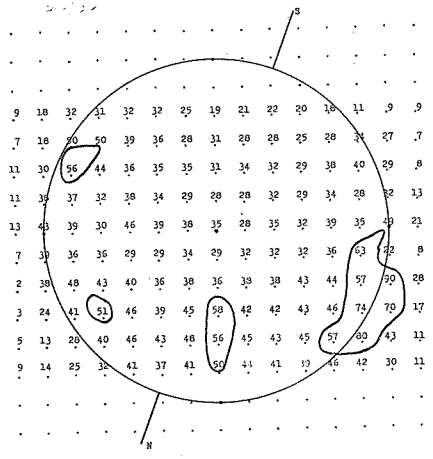
1965 FEBRUARY 17 0230 UT



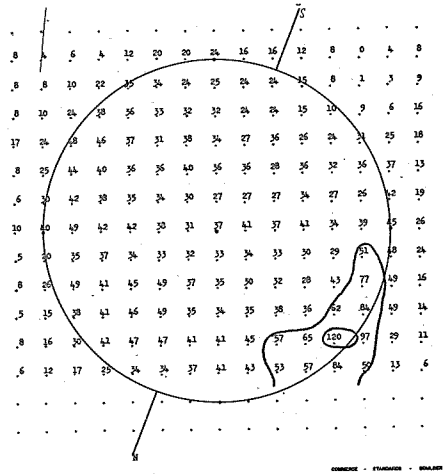
1965 FEBRUARY 19 0230 UT



1965 FEBRUARY 22 0230 UT



1965 FEBRUARY 24 0230 UT



1965 FEBRUARY 26 0230 UT

COSMIC RAY INDICES

(Neutron Monitors)

APRIL 1965

April 1965	CHURCHILL DAILY AVERAGE COUNTS PER HOUR	CLIMAX DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR
1	6599.5	3381.5	6646.5
2	6583.2	3379.6	6625.6(22)
3	6593.5	3384.0	6638.9
4	6592.9	3388.3	6646.0
5	6580.1	3301.1	6652.4(19)
6	6597.9	3375.9	6640.3
7	6595.8	3384.3	6646.4
8	6605.8	3378.8	6631.5
9	6601.5	3401.1	6658.8
10	6612.2	3408.9	6658.6
11	6620.4	3406.0	6673.8
12	6616.1	3398.9	6698.0
13	6622.4	3387.6	6681.7
14	6625.5	3384.4	6664.3
15	6642.3	3394.6	6679.6
16	6675.7	3398.5	6701.7
17	6666.8	3392.9(28)	6697.2
18	6573.2	3352.0 (2)	6726.1
19	6553.3	3392.5 (4)	6656.3
20	6566.1	3367.7	6662.3
21	6568.8	3364.9	6655.8
22	6568.9	3373.5	6672.2
23	6554.8	3380.3	6662.6
24	6575.0	3383.7	6657.8
25	6591.4	3391.0	6664.6
26	6607.3	3398.4	6683.2
27	6605.2	3394.6	6671.5
28	6632.5	3391.3	6681.2
29	6644.5	3381.4	6682.4
30	6621.3	3376.8	6679.6

COMMERCE - STANDARDS - BOULDER

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

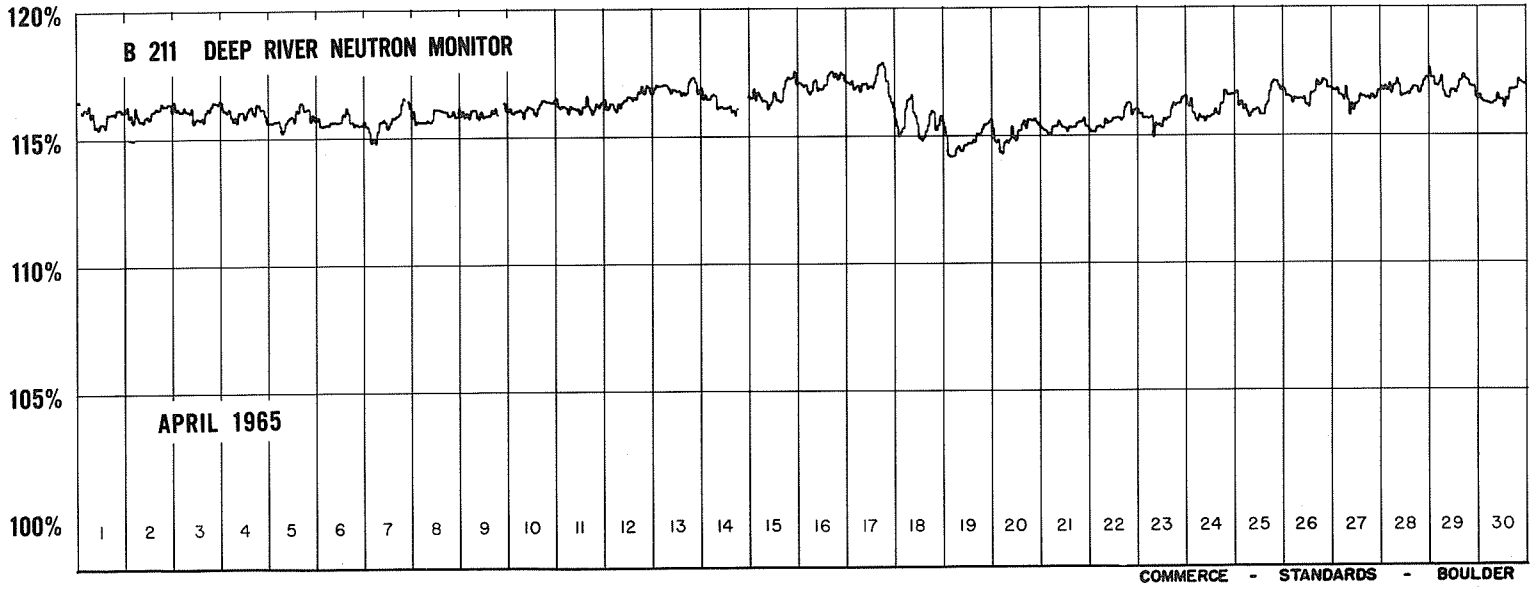
Churchill Super Neutron Monitor, Scaling Factor 120.

Climax IGC Station B305, Scaling Factor 128.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES

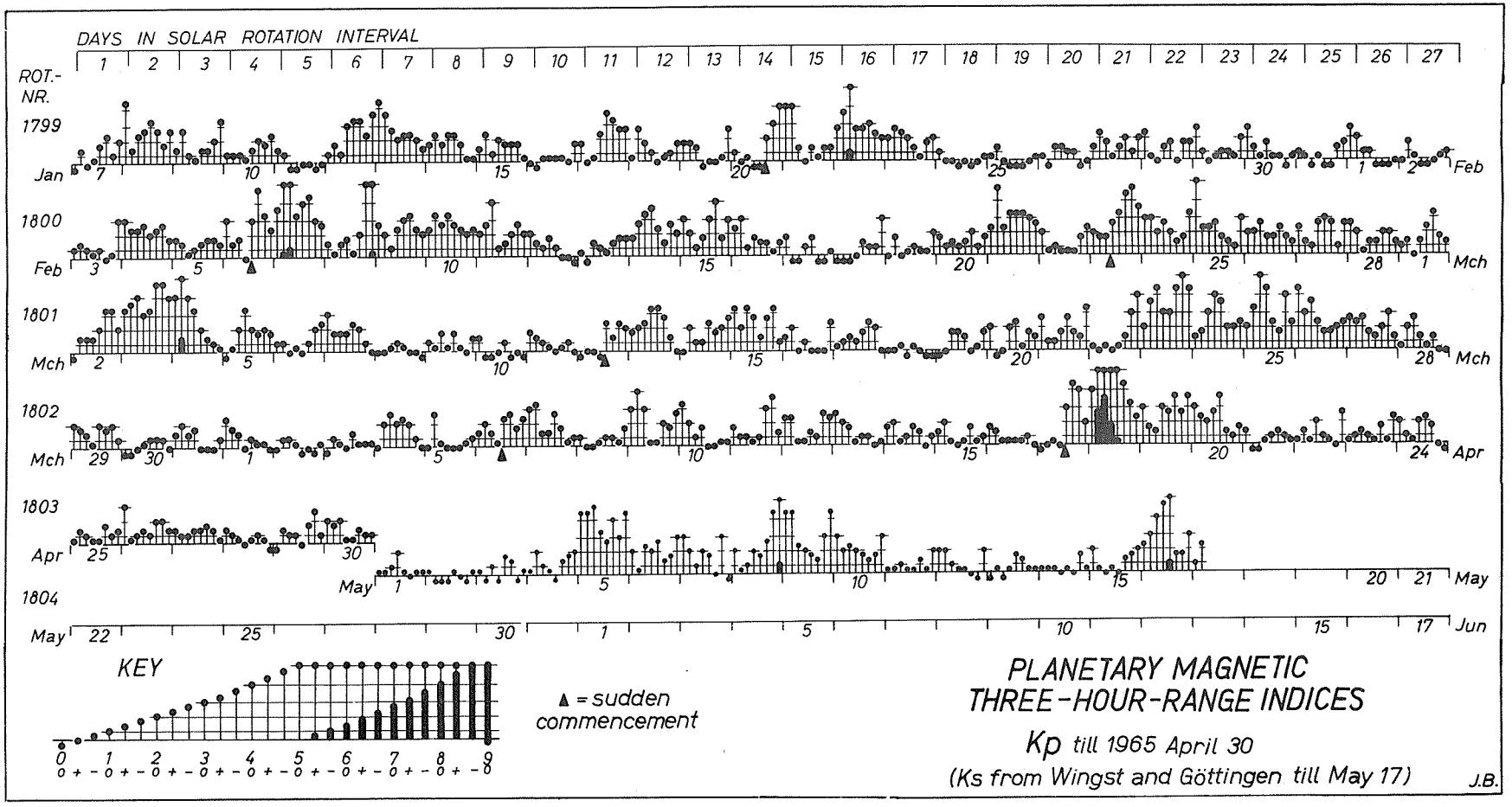
(Pressure Corrected Hourly Totals)



GEOMAGNETIC ACTIVITY INDICES

APRIL 1965

April 1965	C	Values Kp Three hour Gr. interval 1	2	3	4	5	6	7	8	Sum	Ap	Final Selected Days
1	0.0	2+	2-	1+	0+	1o	1-	1-	0+	8+	4	Five
2	0.0	0+	1o	1o	1-	0o	0+	0o	1-	4o	2	Quiet
3	0.0	0o	1o	1-	0+	1+	1-	1-	1-	5+	3	
4	0.5	0+	2o	3-	2o	2+	2o	1o	0+	13-	6	2
5	0.1	0+	3-	1-	0+	0+	0+	1-	1o	6+	4	3
												8
6	0.4	1+	2o	1+	1-	2+	3-	2-	2+	14+	7	21
7	0.4	3o	3+	1+	1+	3-	2-	1-	1o	15o	8	28
8	0.2	1o	0+	0+	1-	1o	1o	1-	2-	7-	4	
9	0.6	3o	4o	3o	1-	1-	2o	2-	3-	18-	11	
10	0.3	3+	2o	1o	2-	0+	0+	1-	1-	10o	6	
11	0.7	2-	1o	1o	1-	1o	3o	4-	1+	13+	8	Five
12	0.5	2+	2+	1-	1-	1+	1o	3-	2+	13+	7	Disturbed
13	0.3	3-	2o	2-	1-	1o	1o	0+	1-	10o	5	
14	0.2	2-	2o	1-	1o	2-	1+	0+	1o	10-	5	9
15	0.2	1+	2o	1-	0+	1-	2-	1-	2o	8+	4	17
												18
16	0.2	2-	1+	1-	1-	1-	1-	1o	0+	7o	4	19
17	0.9	0o	0+	1-	0+	3o	4+	4o	2o	15-	11	20
18	1.8	4o	7o	8-	6+	5+	4+	3+	2+	40+	68	
19	1.0	3o	2-	1+	3o	3-	4-	3-	4-	22-	14	
20	0.8	3o	2+	2o	3-	4-	1+	1o	2-	18-	10	
21	0.2	1+	0o	0o	1-	1o	1+	1o	1-	6o	3	Ten
22	0.4	1-	1+	1-	2o	1o	1-	0+	3-	9+	5	Quiet
23	0.2	1-	1o	1+	1o	1-	2-	1-	2+	9+	5	
24	0.3	2o	1o	1-	2o	2+	2-	0+	0o	10o	5	1
25	0.2	1-	1+	1o	1-	1-	2-	1o	1+	8+	4	2
												3
26	0.4	3o	1-	1o	1+	1o	2o	2o	1+	12+	6	5
27	0.2	1+	1o	1o	1+	1+	2-	1+	1-	10-	5	8
28	0.1	1+	1o	1-	0+	1-	1o	1-	0o	6-	3	15
29	0.4	0o	1+	1o	1o	0+	2-	3-	1o	9o	5	16
30	0.2	2o	2-	2o	1-	1-	1+	1o	1o	10+	5	21
												25
												28
Mean:	0.39									Mean:	8	


DAYS IN SOLAR ROTATION INTERVAL
ROT.-NR.
1799
1800
1801
1802
1803
1804
Jan
Feb
Mch
Apr
May
Jun
KEY
▲ = sudden commencement
PLANETARY MAGNETIC THREE-HOUR-RANGE INDICES
Kp till 1965 April 30
(Ks from Wingst and Göttingen till May 17)
J.B.

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC, NORTH PACIFIC — **APRIL 1965**

APR. 1965	WHOLE DAY INDICES			ADVANCE FORECASTS (Jc-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES				NORTH ATLANTIC SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF:				NORTH PACIFIC 6-HOURLY QUALITY FIGURES				GEOMAGNETIC INDICES K_{FR}		A_{FR}		K_{SI}		A_{SI}
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		00 TO 06	06 TO 12	12 TO 18	18 TO 24	00	06	12	18	00 TO 06	06 TO 12	12 TO 18	18 TO 24	HALF (1)	DAY (2)	OB-SERVED	PRE-DICTED	HALF (1)	DAY (2)	
1	7-	6	6	6	6+	6+	7-	7-	7	6	7	7	6	6	6	6	1	1	3	7	1	1	3
2	7-	6	6	6	7-	6-	7-	7o	7	6	7	7	6	6	6	6	1	0	1	7	0	0	1
3	7-	6	6	6	7-	6+	7-	7-	7	6	7	7	6	6	6	6	1	1	2	5	0	0	0
4	7-	6	6	6	6+	6+	7-	7o	7	6	7	7	6	6	6	6	2	2	7	3	2	1	5
5	7-	6	6	7	7-	6o	7-	7o	7	6	7	7	6	6	6	6	1	1	3	3	0	0	0
6	6+	6	6	7	6o	6o	7-	7-	7	6	7	7	6	6	6	6	2	2	6	3	1	2	4
7	6+	7	7	7	6+	6-	7-	7-	6	6	7	7	7	6	7	6	2	1	6	3	2	1	6
8	6+	7	7	7	6o	5+	7-	7o	6	6	7	7	7	6	7	6	1	1	3	5	0	1	2
9	6+	6	6	7	6o	5+	7-	7o	6	5	7	7	6	6	7	7	3	2	11	7	2	1	6
10	6+	7	7	6	6+	6-	7-	7-	6	6	7	7	6	6	7	6	2	1	5	7	2	0	4
11	6+	6	6	6	6+	6-	7-	7-	6	6	7	7	6	6	6	6	1	2	6	7	1	2	5
12	6+	7	7	6	6o	5+	7-	7-	6	5	7	7	6	7	7	6	2	2	7	5	1	2	4
13	6o	7	7	6	6o	5+	7-	7-	6	6	7	7	6	7	7	6	2	1	5	3	1	0	3
14	6+	7	7	7	6o	6-	7-	7o	6	6	7	7	6	7	7	6	2	1	5	3	1	0	2
15	6+	7	7	7	6+	6-	7-	7-	6	6	7	7	6	7	7	7	1	1	2	5	1	1	3
16	6+	7	7	7	7-	5+	7-	7o	6	6	7	7	7	6	7	6	1	1	3	5	2	0	3
17	6+	7	7	7	6o	6o	7-	7-	7	6	7	6	6	7	6	6	1	3	9	7	0	2	7
18	(4+)	5	5	6	5o	3o	4+	6-	5	4	5	4	6	4	4	5	(6)	3	48	11	(7)	(4)	34
19	5+	(4)	5	6	4o	4o	6+	7-	4	4	6	6	4	5	5	4	2	3	11	15	2	3	13
20	6-	5	5	6	6o	5-	6o	7-	5	5	6	6	6	5	5	5	2	2	9	11	2	2	9
21	6+	6	6	6	6-	6-	7-	7-	6	5	7	7	6	6	6	6	1	1	3	11	0	1	3
22	6+	6	6	6	6+	5o	7-	7o	6	6	7	7	6	6	6	6	1	1	4	7	2	1	4
23	6o	7	7	6	6-	5o	7-	7-	6	5	7	7	6	7	6	6	1	1	5	7	1	1	5
24	6+	6	6	6	6-	6o	6+	7-	6	5	7	7	6	6	6	6	1	1	4	5	2	1	4
25	6o	7	7	6	6-	5+	6+	7-	6	5	7	7	6	6	7	6	1	1	3	5	1	1	2
26	6+	7	7	7	6o	6-	7-	7-	6	5	7	7	6	7	7	6	1	2	5	5	2	1	6
27	6o	7	7	7	6o	6-	6+	6+	6	6	7	7	6	7	7	6	1	2	5	5	1	1	4
28	6o	7	7	7	6-	5+	7-	7-	6	6	7	7	6	6	7	6	1	1	3	5	0	1	2
29	6+	7	7	6	7-	6-	7-	7-	6	6	7	7	6	7	7	6	1	1	5	3	1	1	4
30	6o	7	7	6	6o	5+	6o	7-	6	6	7	7	6	7	7	5	2	1	6	3	2	1	4
SCORES																							
QUIET PERIODS:			P	17					22	19	25	25											
			S	13					7	9	4	4											
			U	0					0	0	0	0											
			F	0					0	0	0	1											
DISTURBED PERIODS:			P	0					1	1	0	0											
			S	0					0	1	1	0											
			U	0					0	0	0	0											
			F	0					0	0	0	0											

COMMERCE - STANDARDS - BOULDER

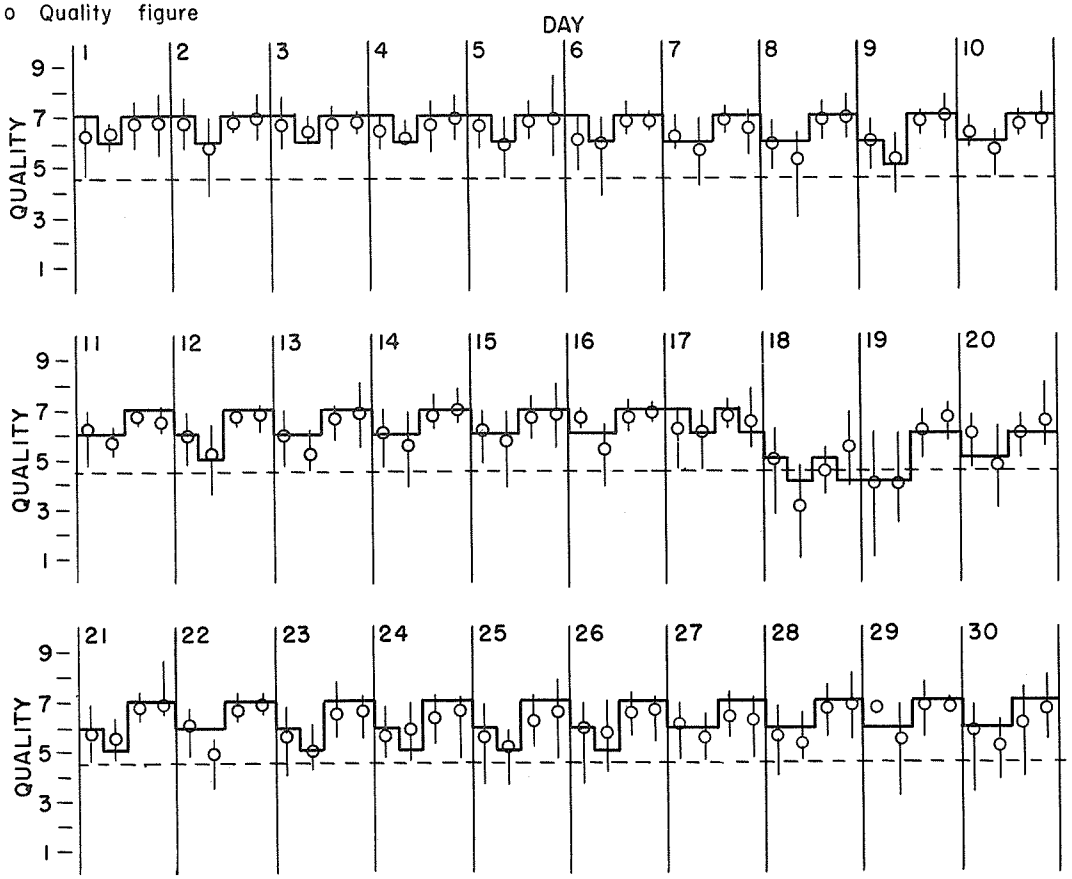
NOTES:

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

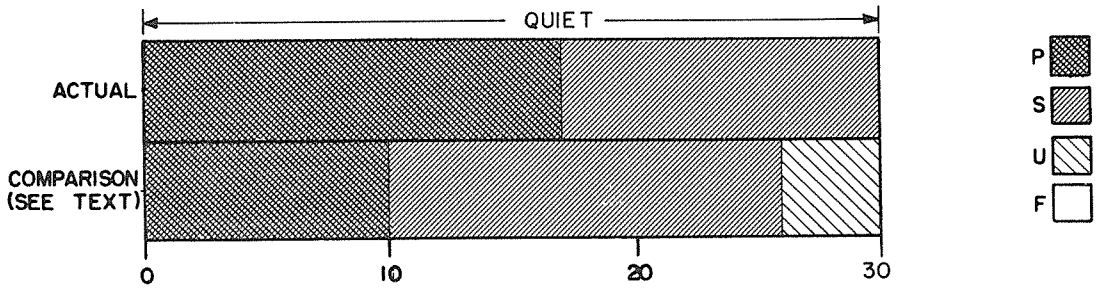
NORTH ATLANTIC

APRIL 1965

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

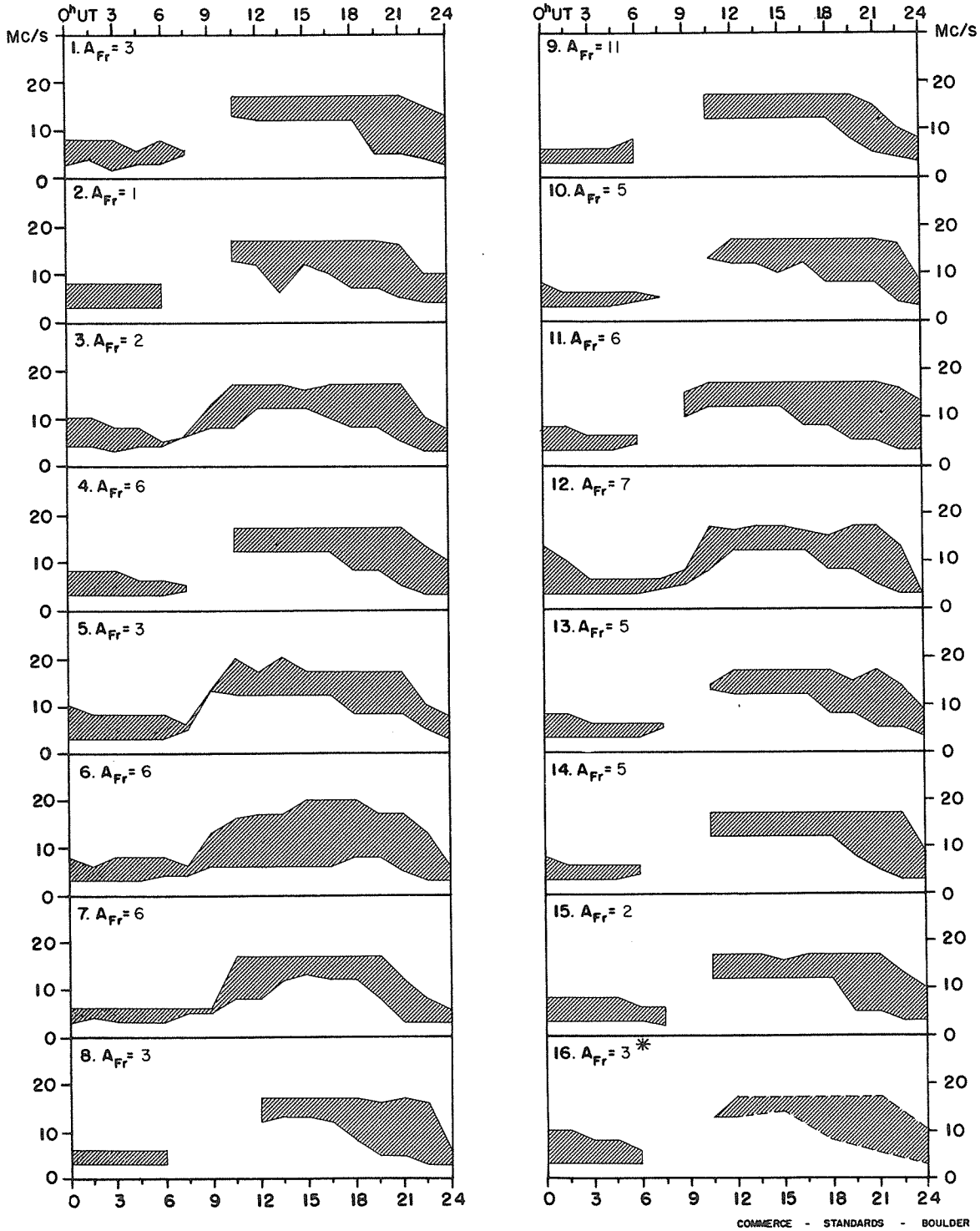


HIGH LATITUDE



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

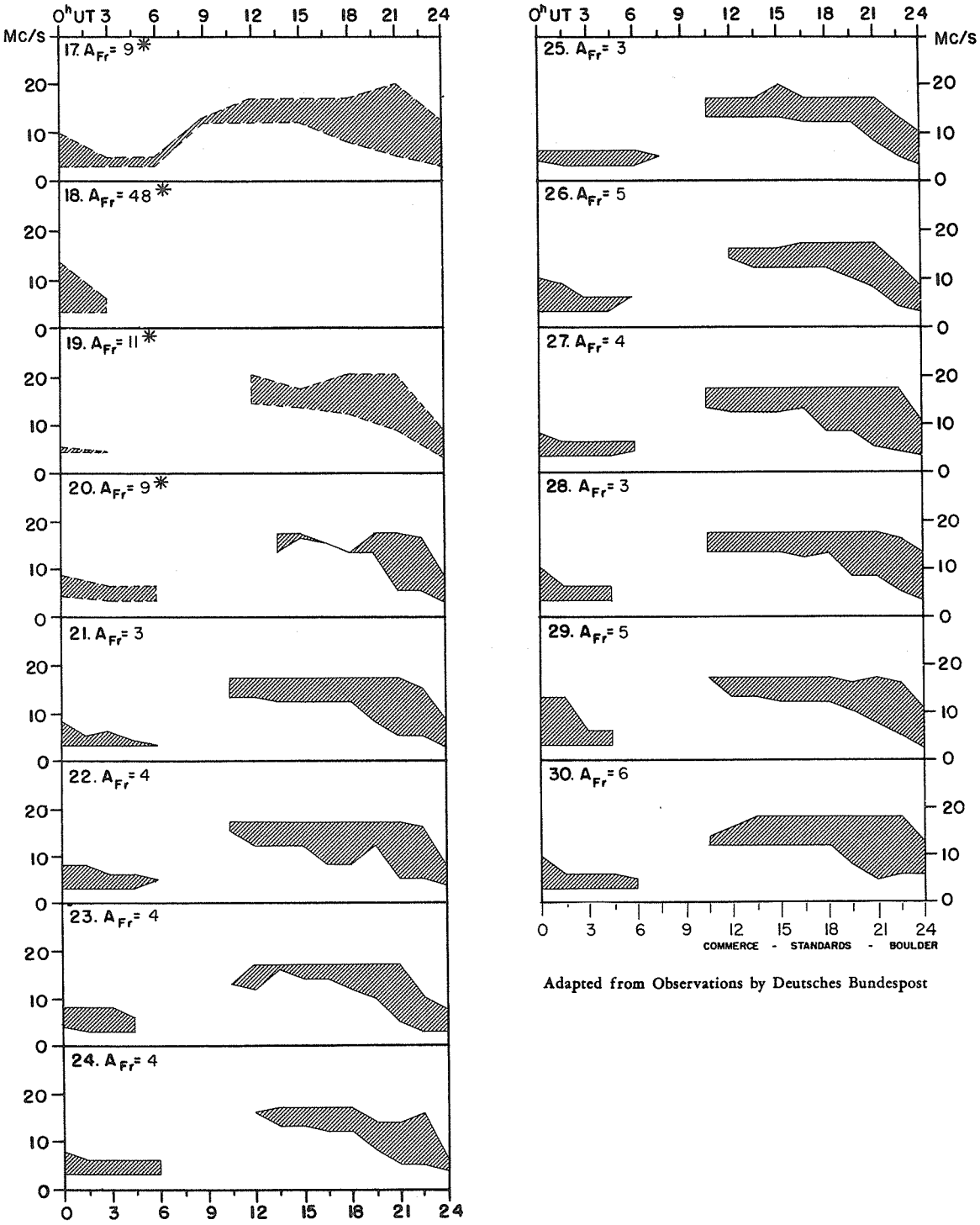
APRIL 1965



COMMERCE - STANDARDS - BOULDER

USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

APRIL 1965



Adapted from Observations by Deutsches Bundespost

Note: Observations were reported for every third hour instead of each one and one-half hours from April 16, 1200 UT to April 20, 0600 UT, 1965.

IQSY ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

MAY 1965

May 1965	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
2	0400		196	Solar Activity	Exists	East Limb
3	0400		197	Solar Activity	Exists	
4	0400		198	Solar Activity	Exists	
15	0400		199	Solar Activity	Exists	East Limb
16	0400		200	Solar Activity	Exists	
17	0400		201	Solar Activity	Exists	Flares
18	0400		202	Solar Activity	Exists	
19	0400		203	Solar Activity	Exists	
20	0400		204	Solar Activity	Exists	
21	0400		205	Solar Activity	Exists	
22	0400		206	Solar Activity	Exists	
23	0400		207	Solar Activity	Exists	

COMMERCE - STANDARDS - BOULDER

Note: 1964 July 23-28 and September 19-20 have been designated QUIETSUN Retrospective World Interval, and 1964 September 21-24 has been designated IONOMAGSTORM Retrospective World Interval. This information was sent with the May 17 Geophysical Alert.