CRPL-F 222 PART B

FOR OFFICIAL USE

PART B

SOLAR - GEOPHYSICAL DATA

ISSUED

FEBRUARY 1963

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

CRPL-F 222
PART B

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
28 Feb. 1963

SOLAR - GEOPHYSICAL DATA

CONTENTS

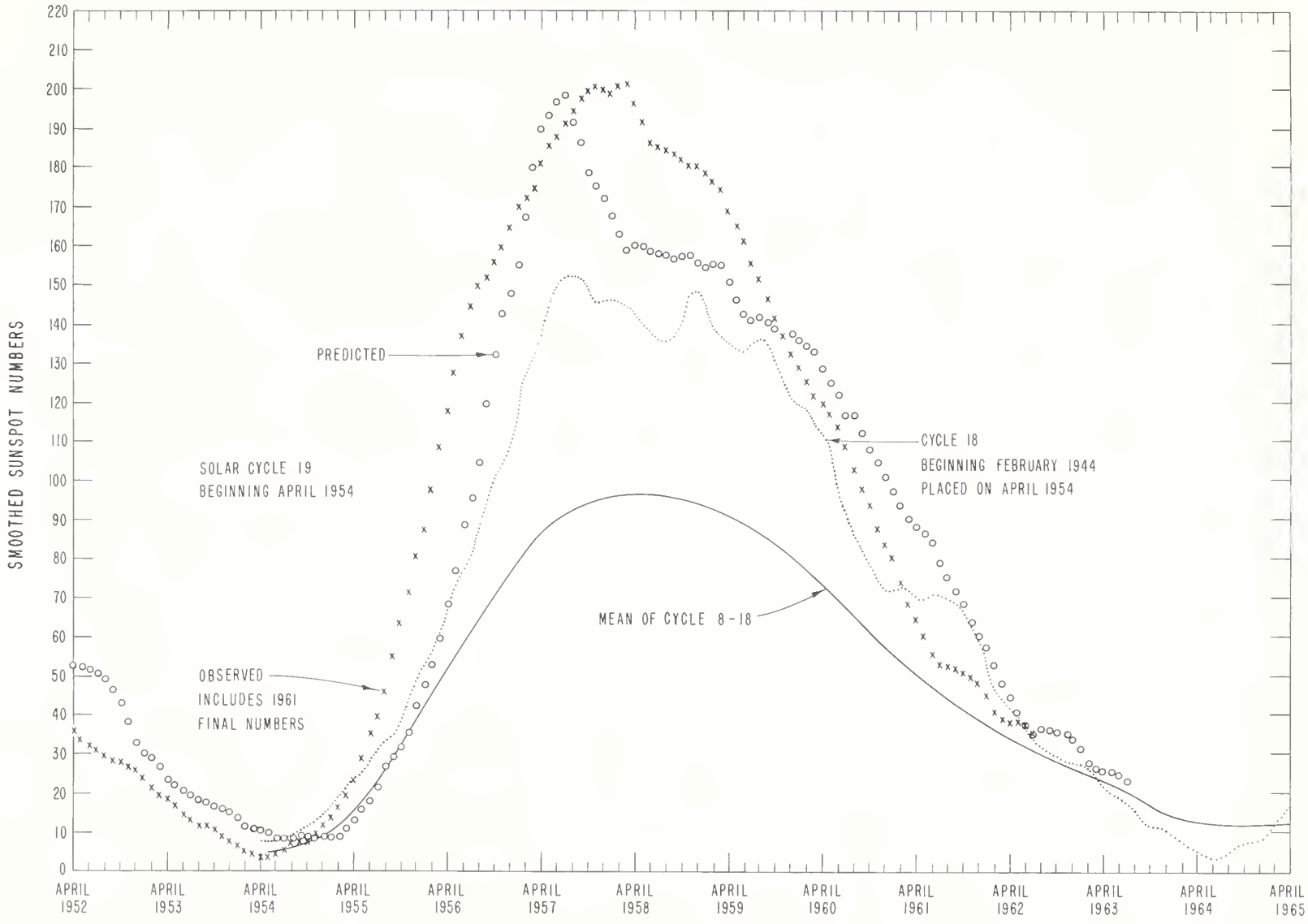
The text describing the contents of Part B was republished in November 1962. A revision was made December 1962, and an addenda January 1963.

DAILY SOLAR INDICES

Dec. 1962	American Relative Sunspot Numbers $R_{A'}$
1	25
2	28
3	38
4	49
5	60
6	40
7	18
8	13
9	15
10	13
11	9
12	3
13	3
14	11
15	1
16	5
17	17
18	34
19	37
20	29
21	25
22	20
23	20
24	21
25	4
26	0
27	0
28	0
29	0
30	0
31	7
Mean:	17.6

Jan. 1963	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	23	--
2	28	--
3	34	77
4	37	79
5	22	77
6	7	77
7	0	77
8	8	76
9	7	78
10	8	80
11	8	81
12	8	78
13	9	79
14	33	86
15	44	85
16	40	82
17	40	82
18	21	80
19	20	78
20	16	78
21	16	76
22	0	75
23	17	74
24	15	73
25	17	74
26	7	73
27	14	81
28	34	80
29	25	79
30	23	78
31	18	82
Mean:	19.3	78.4

COMMERCE - STANDARDS - BOULDER



PREDICTED AND OBSERVED SUNSPOT NUMBERS

CALCIUM PLAGE AND SUNSPOT REGIONS

JANUARY 1963

CMP Jan. 1963	Lat	McMath Plage Number	Return of Region	Calcium Plage Data				Sunspot Data		
				CMP Values Area	Int.	History, Age		CMP Values Area	Count	History
02.8	N17	6658a	6637	1200	3	ℓ ⌐*	2	80	10	b — d
*	*	6658b	New	*	*	*	1			
03.8	S14	6659	New	(600)	(1)	ℓ — *	1			
04.8	N16	6667	New	(400)	(2)	b — *	1			
05.8	S14	6661	6639	(1000)	(2.5)	ℓ ∧ ℓ	3			
05.8	N02	6663	**	(1100)	(3)	ℓ ⌝ ℓ	1			
06.4	N18	6664	6638	(500)	(1.5)	ℓ — ℓ	3			
08.4	S12	6666	6641	200	1	ℓ ⌝ d	2			
09.7	N10	6665	New	700	2	ℓ ⌝ ℓ	1			
10.2	S17	6668	6643	1200	2.5	ℓ ⌝ ℓ	4			
10.6	N13	6669	6642	400	1	ℓ — d	3			
12.9	S04	6677	New	(400)	(2)	b — ℓ	1			
13.9	N09	6672	***	1500	2.5	ℓ — ℓ	1			
15.0	N12	6674	6649	500	2	ℓ ⌝ ℓ	2			
16.2	N10	6673	+	3400	3.5	ℓ ⌐ ℓ	2	710	7	ℓ ∧ ℓ
17.2	S09	6676	6650	400	1.5	b — d	2			
17.5	N11	6675	6648	800	2	ℓ ∧ d	3			
24.3	N04	6679	6654	600	2	b — d	4			
25.2	N12	6678	New	900	3.5	ℓ ∧ ℓ	1			
26.9	N14	6680	++	1000	3	ℓ ⌐ ℓ	1	440	6	b — ℓ
27.5	S11	6681	6662	200	2	ℓ — ℓ	2			
27.5	N00	6682	New	600	2	b — ℓ	1			

* No Data
** New in position of 6644
*** New in position of 6646
\+ Return of a new part of old 6647
++ New in position of 6657.

COMMERCE - STANDARDS - BOULDER

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

JANUARY 1963

Jan. 1963	Time Meas.	Lat.	Mer. Dist.	Type
1	No Obs.			
2	No Obs.			
3	1830	W38	S06	β
		W10	N19	βp
		E16	N18	βf
		E21	N03	βp
		E24	S00	αp
4	1740	W52	S06	β
		W24	N19	βp
		E05	N19	αp
		E08	N03	β*
5	No Spots			
6	No Spots			
7	1735	W39	N17	β
8	No Spots			
9	No Obs.			
10	No Obs.			
11	1805	E58	N10	βp
12	1645	E46	N11	βp
13	2240	W47	N12	αp
		E38	N07	β
		E38	N12	βp

Jan. 1963	Time Meas.	Lat.	Mer. Dist.	Type
14	1645	E17	N10	βp
		E18	N06	β
15	1755	E05	N06	βf
		E05	N10	βp
16	No Obs.			
17	2400	W50	N08	αp
		W26	N06	βp
18	1750	W37	N07	βp
19	No Obs.			
20	No Obs.			
21	No Obs.			
22	No Obs.			
23	1915	E42	N12	βp
24	No Obs.			
25	No Obs.			
26	No Obs.			
27	No Obs.			
28	No Obs.			
29	No Obs.			
30	No Obs.			
31	No Obs.			

COMMERCE - STANDARDS - BOULDER

*Polarities reversed for northern hemisphere for this cycle.

PROVISIONAL CORONAL LINE EMISSION INDICES

JANUARY 1963

CMP Jan 1963	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	12	22	x	x	15	34	x	x
2	x	x	x	x	x	x	x	x	5	8	8	10	5	10	11	20
3	12	17	25	33	14	45	29	82	x	x	x	x	x	x	x	x
4	8	11	x	x	16	39	x	x	x	x	x	x	x	x	x	x
5	11	16	16	25	16	28	13	17	x	x	x	x	x	x	x	x
6	14	22	15	18	18	45	17	21	x	x	x	x	x	x	x	x
7	16	28	12	16	14	20	12	24	10	22	x	x	7	10	x	x
8	21	48	24	45	21	34	17	22	8	16	10	10	9	22	10	15
9	25	53	x	x	22	42	x	x	7	20	11	15	6	7	9	14
10	x	x	x	x	x	x	x	x	9	20	11	20	5	6	7	10
11	7	12	14	20	6	16	17	20	x	x	x	x	x	x	x	x
12	12	22	x	x	8	17	x	x	x	x	x	x	x	x	x	x
13	26	64	18	28	5	8	19	26	x	x	x	x	x	x	x	x
14	31	53	21	52	6	8	19	24	5	13	7	9	17	36	13	21
15	47	95	x	x	6	11	x	x	x	x	x	x	x	x	x	x
16	28	57	18	40	3	8	9	15	6	6	11	14	36	70	10	16
17	x	x	x	x	x	x	x	x	9	21	15	17	9	18	11	15
18	x	x	x	x	x	x	x	x	4	7	7	8	8	9	6	7
19	x	x	x	x	x	x	x	x	4	5	10	13	8	12	8	11
20	x	x	x	x	x	x	x	x	3	4	10	12	6	8	7	10
21	8	8	x	x	4	4	x	x	x	x	x	x	x	x	x	x
22	7	8	7	10	3	3	13	17	2	4	12	20	8	9	7	9
23	10	13	8	15	4	5	12	17	3	6	9	13	7	10	7	10
24	11	19	6	7	4	9	9	10	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	11	24	12	16	16	26	12	18
26	11	14	x	x	7	17	x	x	x	x	x	x	x	x	x	x
27	x	x	x	x	x	x	x	x	6	10	8	12	10	15	7	7
28	5	8	6	8	2	4	11	15	3	6	14	17	5	6	11	15
29	x	x	x	x	x	x	x	x	3	3	12	15	4	5	11	16
30	10	14	17	25	7	11	14	20	6	11	x	x	10	20	x	x
31	9	14	12	20	9	16	19	30	4	8	9	11	5	16	9	12

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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. °	PROVISIONAL IONOSPHERIC EFFECT
	01	0400	0405	NO FLARE	PATROL											
	01	0440	0455	NO FLARE	PATROL											
	01	0530	0610	NO FLARE	PATROL											
	01	0620	0645	NO FLARE	PATROL											
ATHENES	01	0721 E	0821 D		N19	E23			1-	4		1.20	1.60			
ATHENES	01	0738 E	0741 D		S00	E54			1-	4		.50	.80			
	01	0835	0840	NO FLARE	PATROL											
	01	1020	1330	NO FLARE	PATROL											
	01	1405	1420	NO FLARE	PATROL											
MCMATH	01	1620 E	1630 D		N19	E18	6658		1-	1	1622	.50	.60			
	01	1935	1940	NO FLARE	PATROL											
	01	2000	2005	NO FLARE	PATROL											
	01	2015	2400	NO FLARE	PATROL											
	02	0000	0105	NO FLARE	PATROL											
	02	0155	0200	NO FLARE	PATROL											
	02	1125	1335	NO FLARE	PATROL											
	02	1415	1435	NO FLARE	PATROL											
	02	2320	2400	NO FLARE	PATROL											
	03	0000	0025	NO FLARE	PATROL											
	03	0205	0350	NO FLARE	PATROL											
	03	0410	1350	NO FLARE	PATROL											
	03	1400	1410	NO FLARE	PATROL											
	03	1425	1430	NO FLARE	PATROL											
	03	1445	1450	NO FLARE	PATROL											
	03	1510	1755	NO FLARE	PATROL											
	03	2330	2400	NO FLARE	PATROL											
	04	0000	0030	NO FLARE	PATROL											
	04	0100	0130	NO FLARE	PATROL											
	04	0145	0315	NO FLARE	PATROL											
	04	0325	0335	NO FLARE	PATROL											
	04	0340	0425	NO FLARE	PATROL											
	04	0430	0435	NO FLARE	PATROL											
	04	0440	0805	NO FLARE	PATROL											
	04	0925	1000	NO FLARE	PATROL											
	04	1125	1215	NO FLARE	PATROL											
	04	1515	1540	NO FLARE	PATROL											
	04	1935	1940	NO FLARE	PATROL											
	04	2315	2400	NO FLARE	PATROL											
	05	0000	0825	NO FLARE	PATROL											
	05	0910	1300	NO FLARE	PATROL											
	05	1315	1410	NO FLARE	PATROL											
	05	1415	1520	NO FLARE	PATROL											
	06	0200	0835	NO FLARE	PATROL											
	06	0840	0900	NO FLARE	PATROL											
	06	0905	0935	NO FLARE	PATROL											
	06	1015	1545	NO FLARE	PATROL											

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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. %	PROVISIONAL IONOSPHERIC EFFECT
	07	0200	0915	NO FLARE	PATROL											
	07	0930	1045	NO FLARE	PATROL											
	07	1225	1530	NO FLARE	PATROL											
	07	2210	2400	NO FLARE	PATROL											
	08	0000	1040	NO FLARE	PATROL											
	08	1135	1325	NO FLARE	PATROL											
	08	1355	1440	NO FLARE	PATROL											
	08	1450	1520	NO FLARE	PATROL											
	08	2110	2140	NO FLARE	PATROL											
	08	2200	2400	NO FLARE	PATROL											
	09	0000	0020	NO FLARE	PATROL											
	09	0155	0640	NO FLARE	PATROL											
	09	0730	0750	NO FLARE	PATROL											
	09	1050	1105	NO FLARE	PATROL											
	09	1120	1225	NO FLARE	PATROL											
	09	1400	1405	NO FLARE	PATROL											
	09	1410	1415	NO FLARE	PATROL											
	09	1440	1445	NO FLARE	PATROL											
MCMATH	09	1715 E	1726 D		N12	E90	6673		1-	1	1716					
	09	2215	2220	NO FLARE	PATROL											
	09	2230	2235	NO FLARE	PATROL											
	09	2345	2400	NO FLARE	PATROL											
	10	0000	0620	NO FLARE	PATROL											
	10	0800	0805	NO FLARE	PATROL											
	10	0905	1015	NO FLARE	PATROL											
	10	1135	1515	NO FLARE	PATROL											
	10	1530	1800	NO FLARE	PATROL											
HONOLULU	10	1830 E	1904 D	1856	N09	E75	6673	34 D	1	1	1856	1.85	4.00			
	10	2000	2130	NO FLARE	PATROL											
	10	2155	2200	NO FLARE	PATROL											
	10	2235	2315	NO FLARE	PATROL											
	10	2325	2335	NO FLARE	PATROL											
	10	2350	2400	NO FLARE	PATROL											
	11	0000	0005	NO FLARE	PATROL											
	11	0045	0510	NO FLARE	PATROL											
	11	0550	0600	NO FLARE	PATROL											
	11	0605	0805	NO FLARE	PATROL											
ATHENES	11	0832 E	0840		S12	W89			1-	3		.30	1.50			
	11	0925	1750	NO FLARE	PATROL											
	11	2300	2330	NO FLARE	PATROL											
	12	0005	0105	NO FLARE	PATROL											
	12	0150	1205	NO FLARE	PATROL											
	12	1230	1810	NO FLARE	PATROL											
	12	2015	2045	NO FLARE	PATROL											
	12	2105	2110	NO FLARE	PATROL											
	12	2130	2140	NO FLARE	PATROL											

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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 Ha	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
	12	2220	2255	NO FLARE	PATROL											
	13	0140	0500	NO FLARE	PATROL											
	13	0505	0510	NO FLARE	PATROL											
	13	0640	0655	NO FLARE	PATROL											
	13	0835	0845	NO FLARE	PATROL											
	13	0900	1000	NO FLARE	PATROL											
	13	1035	1130	NO FLARE	PATROL											
	13	1150	1320	NO FLARE	PATROL											
	14	0200	0710	NO FLARE	PATROL											
	14	0735	0810	NO FLARE	PATROL											
	14	1015	1225	NO FLARE	PATROL											
	14	1240	1320	NO FLARE	PATROL											
	14	1435	1445	NO FLARE	PATROL											
OTTAWA	14	1450	1550	1512	N12	E15			1-	3	1512	.70	.70			
	14	2240	2245	NO FLARE	PATROL											
	14	2330	2400	NO FLARE	PATROL											
	15	0000	0005	NO FLARE	PATROL											
	15	0115	0200	NO FLARE	PATROL											
ATHENES	15	0834 E	0852	0837	N06	E10			1-	3		1.80	1.90			
KODAIKNL	15	0835 E	0846 D	0836	N05	E13			1-	3	0836			1.60	114	
	15	1005	1020	NO FLARE	PATROL											
	15	1035	1315	NO FLARE	PATROL											
OTTAWA	15	1352	1400 D		N11	E03			1-	1	1359	1.05	1.05			
MCMATH	15	1357 E	1404		N11	E03	6673		1-	2	1358	.30	.30			
SAC PEAK	15	1537	1545	1541	N06	E06			1-	3		.68	.58		16	
MCMATH	15	1537 E	1549 D		N07	E05	6673		1-	1	1541	.40	.40			
SAC PEAK	15	1617	1635	1621	N12	E02			1-	3		1.34	1.34		18	
MCMATH	15	1619	1631	1621	N11	E01	6673		1-	1	1621	1.00	1.00			
SAC PEAK	15	1649	1720	1712	N12	E11			1-	3		.95	.95		18	
MCMATH	15	1650	1720	1654	N13	E09	6673		1-	1	1708	1.00	1.10			
MCMATH	15	1650 F	1720	1708	N13	E09			1-							
SAC PEAK	15	1739	1759	1743	N12	E02			1-	3		1.49	1.46		19	
MCMATH	15	1740	1752	1742	N12	E01	6673		1-	1	1742	.70	.70			
SAC PEAK	15	1933	2000	1940	N12	E09			1-	3		.95	.95		17	
MCMATH	15	1937	2000	1940	N13	E08	6673		1-	1	1940	.80	.80			
	15	2300	2400	NO FLARE	PATROL											
	16	0000	0200	NO FLARE	PATROL											
	16	0435	0450	NO FLARE	PATROL											
	16	0705	0725	NO FLARE	PATROL											
	16	0925	0955	NO FLARE	PATROL											
	16	1005	1020	NO FLARE	PATROL											
	16	1030	1235	NO FLARE	PATROL											
OTTAWA	16	1434	1451	1446	N11	W13			1-	2	1446	1.11	1.11			
SAC PEAK	16	1851	1904	1854	N12	W09			1-	3		.64	.62		17	
MCMATH	16	1857	1907	1901	N11	W09	6673		1-	2	1901	.20	.20			
	16	2230	2400	NO FLARE	PATROL											
	17	0000	0112	NO FLARE	PATROL											

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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 °o	PROVISIONAL IONOSPHERIC EFFECT
	17	0125	0130	NO FLARE	PATROL											
	17	0140	0200	NO FLARE	PATROL											
	17	0225	0230	NO FLARE	PATROL											
	17	0910	0950	NO FLARE	PATROL											
	17	1000	1315	NO FLARE	PATROL											
	17	1335	1400	NO FLARE	PATROL											
	17	1440	1445	NO FLARE	PATROL											
	17	2230	2350	NO FLARE	PATROL											
	18	0015	0200	NO FLARE	PATROL											
	18	1035	1325	NO FLARE	PATROL											
	18	1455	1500	NO FLARE	PATROL											
	18	1600	1650	NO FLARE	PATROL											
SAC PEAK	18	1704	1710	1706	N12	W36			1-	2		•54	•60		16	
SAC PEAK	18	1817	1840	1822	N17	W39			1-	2		•21	•23		15	
SAC PEAK	18	2058 E	2058 D	2058 U	N18	W41			1-	1		•29	•33		16	
	18	2325	2335	NO FLARE	PATROL											
	18	2345	2350	NO FLARE	PATROL											
	19	0105	0200	NO FLARE	PATROL											
	19	0635	0700	NO FLARE	PATROL											
	19	0710	1255	NO FLARE	PATROL											
	19	1310	1325	NO FLARE	PATROL											
	19	1345	1350	NO FLARE	PATROL											
	19	1415	1500	NO FLARE	PATROL											
	19	1510	1545	NO FLARE	PATROL											
	19	1610	1630	NO FLARE	PATROL											
	19	1650	1930	NO FLARE	PATROL											
	19	1955	2125	NO FLARE	PATROL											
	19	2135	2140	NO FLARE	PATROL											
	19	2145	2225	NO FLARE	PATROL											
	19	2240	2315	NO FLARE	PATROL											
	19	2340	2345	NO FLARE	PATROL											
	19	2355	2400	NO FLARE	PATROL											
	20	0000	0105	NO FLARE	PATROL											
	20	0115	0200	NO FLARE	PATROL											
	20	0620	0855	NO FLARE	PATROL											
	20	1015	1545	NO FLARE	PATROL											
	21	0200	0315	NO FLARE	PATROL											
	21	0800	0805	NO FLARE	PATROL											
	21	1035	1310	NO FLARE	PATROL											
	21	1325	1335	NO FLARE	PATROL											
	21	2315	2325	NO FLARE	PATROL											
	22	0000	0010	NO FLARE	PATROL											
	22	0020	0200	NO FLARE	PATROL											
	22	1205	1210	NO FLARE	PATROL											
	22	1215	1225	NO FLARE	PATROL											
	22	2235	2400	NO FLARE	PATROL											

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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 Ha	MAX INT. %	PROVISIONAL IONOSPHERIC EFFECT
	23	0000	0105	NO FLARE	PATROL											
	23	0120	0155	NO FLARE	PATROL											
	23	1210	1315	NO FLARE	PATROL											
	23	1550	1600	NO FLARE	PATROL											
	23	2235	2400	NO FLARE	PATROL											
	24	0000	0200	NO FLARE	PATROL											
	24	1110	1115	NO FLARE	PATROL											
	24	1125	1145	NO FLARE	PATROL											
	24	1200	1225	NO FLARE	PATROL											
	24	2235	2400	NO FLARE	PATROL											
	25	0000	0215	NO FLARE	PATROL											
	25	0325	0340	NO FLARE	PATROL											
	25	0350	0400	NO FLARE	PATROL											
	25	0450	0810	NO FLARE	PATROL											
	25	1215	1255	NO FLARE	PATROL											
	25	1315	1325	NO FLARE	PATROL											
	25	1505	1510	NO FLARE	PATROL											
	25	2250	2355	NO FLARE	PATROL											
	26	0015	0020	NO FLARE	PATROL											
	26	0115	0120	NO FLARE	PATROL											
	26	0130	0810	NO FLARE	PATROL											
	26	1200	1205	NO FLARE	PATROL											
	26	1305	1340	NO FLARE	PATROL											
	26	1350	1405	NO FLARE	PATROL											
	26	2245	2400	NO FLARE	PATROL											
	27	0000	0215	NO FLARE	PATROL											
	27	0225	0235	NO FLARE	PATROL											
	27	0240	0245	NO FLARE	PATROL											
	27	0250	0300	NO FLARE	PATROL											
	27	0935	0950	NO FLARE	PATROL											
	27	1000	1010	NO FLARE	PATROL											
	27	1015	1045	NO FLARE	PATROL											
	27	1055	1215	NO FLARE	PATROL											
	27	1340	1345	NO FLARE	PATROL											
	27	1355	1400	NO FLARE	PATROL											
	27	1440	1445	NO FLARE	PATROL											
	28	0145	0205	NO FLARE	PATROL											
CAPRI S	28	0806 E	0903 D		N12	W25	6680	57 D	1	3	0812	.10	5.00			
SAC PEAK	28	1711	1720	1713	N10	W28			1-	1		.12	.14		16	
OTTAWA	28	1711	1724	1713	N09	W28			1-	2	1713	.93	.95			
	28	2025	2050	NO FLARE	PATROL											
	28	2245	2250	NO FLARE	PATROL											
	28	2315	2340	NO FLARE	PATROL											
	29	0015	0135	NO FLARE	PATROL											
	29	0145	0220	NO FLARE	PATROL											

SOLAR FLARES
JANUARY 1963

OBSERVATORY	DATE JAN 1963	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 °.	PROVISIONAL IONOSPHERIC EFFECT
	29	0710	0800	NO FLARE	PATROL											
	29	1045	1125	NO FLARE	PATROL											
	29	1135	1200	NO FLARE	PATROL											
	29	2240	2245	NO FLARE	PATROL											
	29	2300	2400	NO FLARE	PATROL											
	30	0000	0205	NO FLARE	PATROL											
	30	0545	0555	NO FLARE	PATROL											
ONDREJOV	30	1309 E	1354 D		N10	W53	6680	45 D	1	3	1332			2.20		
	30	1355	1400	NO FLARE	PATROL											
	30	1450	1500	NO FLARE	PATROL											
SAC PEAK	30	1602	1608	1604	N10	W59			1-	3		.54	.83		16	
OTTAWA	30	1604 E	1615		N09	W59			1-	2	1605	.52	.77			
	30	2245	2325	NO FLARE	PATROL											
	30	2340	2350	NO FLARE	PATROL											
	31	0000	0020	NO FLARE	PATROL											
	31	0045	0355	NO FLARE	PATROL											
	31	0400	0800	NO FLARE	PATROL											
ATHENES	31	0852 E	0901 D		S13	E81			1-	3		.20	1.10			
	31	0900	0915	NO FLARE	PATROL											
	31	1005	1045	NO FLARE	PATROL											
	31	1105	1235	NO FLARE	PATROL											
	31	1245	1305	NO FLARE	PATROL											
	31	1355	1400	NO FLARE	PATROL											
	31	1405	1410	NO FLARE	PATROL											
	31	1415	1425	NO FLARE	PATROL											
MCMATH	31	1732	1757	1742	N12	W71	6680		1-	2	1742	.40	1.50			
MCMATH	31	1816	1835	1820	N12	W71	6680		1-	2	1820	.30	1.20			
SAC PEAK	31	1849	1856	1852	N13	W76			1-	2		.39	.91		15	
MCMATH	31	1850	1855	1851	N12	W71	6680		1-	2	1851	.20	.80			
MCMATH	31	1903	1935	1905	N12	W71	6680		1-	1	1905	.40	1.60			
SAC PEAK	31	1904	1925	1907	N10	W72			1-	2		.39	.80		15	
	31	2235	2400	NO FLARE	PATROL											

COMMERCE - STANDARDS - BOULDER

ATHENES	ATHENS, GREECE
BAKOU	PIRCULI, USSR
CAPETOWN	ROYAL OBSERVATORY, CAPE OF GOOD HOPE
CAPRI F	CAPRI, ITALY (GERMAN)
CAPRI S	CAPRI, ITALY (SWEDISH)
CRIMÉE	SIMEIZ, USSR
HERSTMONCEU	ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX, ENGLAND
HTE-PROVEN	HAUTE-PROVENCE
HONOLULU	HAWAII, USA
IKOMASAN	KYOTO, JAPAN
KIEV KO	KIEV GAO, USSR
KIEV KY	KIEV UNIVERSITY, USSR
LOCKHEED	LOS ANGELES, CALIF., USA
MCMATH	MCMATH-HULBERT PONTIAC, MICH., USA
MOSCOU	MOSCOW-GAISH, USSR
NEW SCHAUIN	FREIBURG, GFR
NERA	NEDERHORST den BERGH, NETHERLANDS
NIZMIR	KRASNAYA PAKHRA, USSR
SAC PEAK	SACRAMENTO PEAK, N.MEX. USA
SALTSJÖBADEN	STOCKHOLM, SWEDEN
SCHAUINS	SCHAUINSLAND, GFR
TACHKENT	TASHKENT, USSR
WENDEL	WENDELSTEIN, GFR

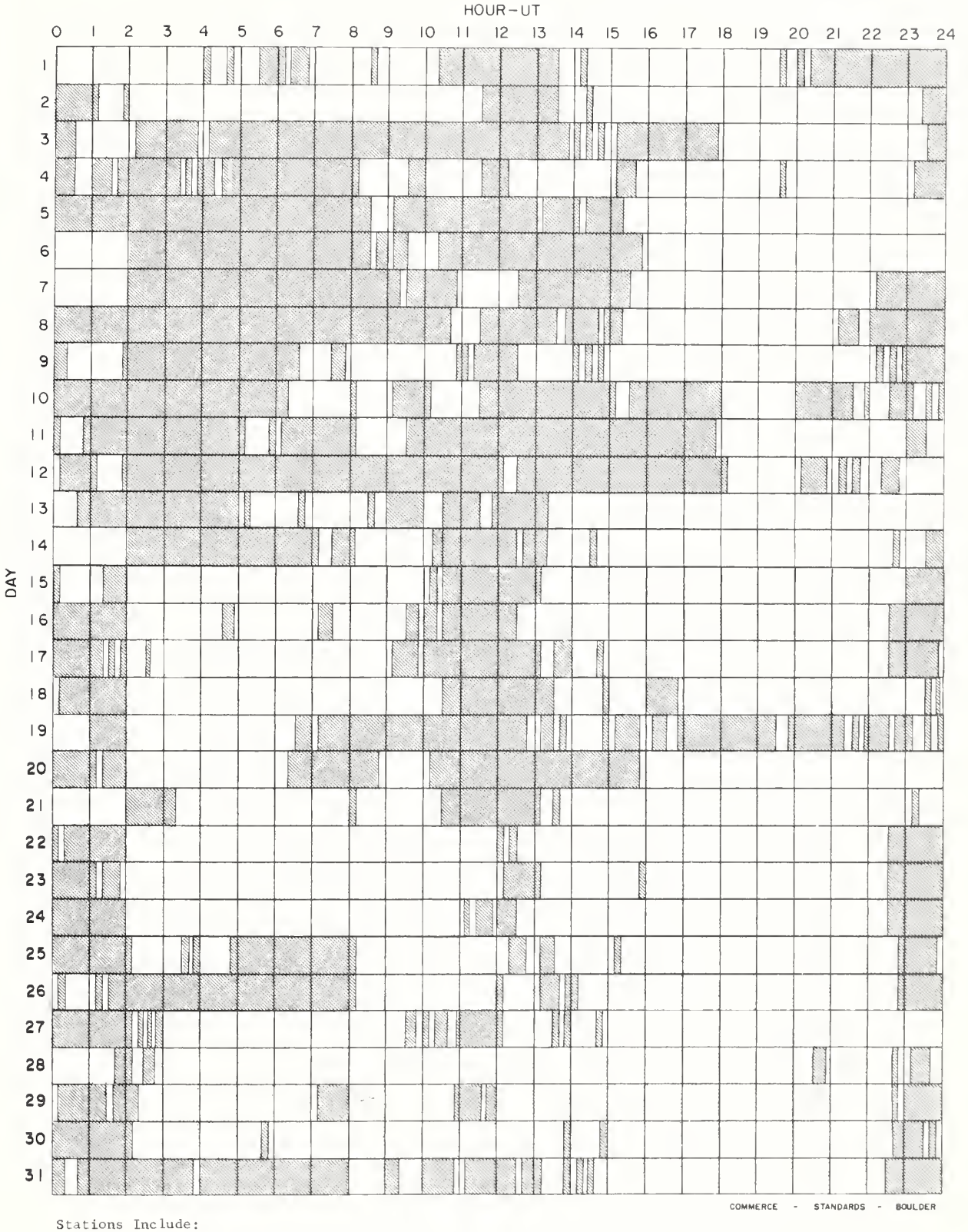
ALL VALUES IN THE MAXIMUM INTENSITY COLUMN FOR SAC PEAK ARE ARBITRARY UNITS (0-40) AND FOR LOCKHEED ARE ARBITRARY UNITS (10-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

SEE DESCRIPTIVE TEXT PUBLISHED NOVEMBER 1961 FOR DEFINITION OF CORRECTED AREA VALUES LISTED FOR CLIMAX, HAWAII, LOCKHEED AND SACRAMENTO PEAK.

E = LESS THAN D = GREATER THAN U = APPROXIMATE ☐ = NOT REPORTED.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

JANUARY 1963



Stations Include:

Arcetri	Kodaikanal
Athenes	McMath-Hulbert
Capri-S (Swedish)	Ottawa
Honolulu	Sacramento Peak

SOLAR FLARES

OCTOBER 1962

OBSERVATORY	DATE OCT 1962	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 Ha	MAX INT %	PROVISIONAL IONOSPHERIC EFFECT
	01	0200	0505	NO FLARE	PATROL											
ABASTUMANI	01	0701	0728	0708	S09	E18	6564	27	1	3		.90	1.01		58	
UCCLE	01	0931	0940		N10	E46			1-	3						
	02	0230	0410	NO FLARE	PATROL											
SCHAUINS	02	1313 E	1342 D		N07	E34	6566	29 D	1	2			3.00			
UCCLE	02	1349 E	1404		N08	E38			1-	3						
UCCLE	02	1409	1425 D		N08	E38			1-	3						
	03	0210	0220	NO FLARE	PATROL											
	03	0305	0500	NO FLARE	PATROL											
	04	0225	0335	NO FLARE	PATROL											
	04	0340	0345	NO FLARE	PATROL											
	04	0415	0525	NO FLARE	PATROL											
CAPRI F	04	0915 E	0929		N11	E12	6566	14 D	1	2			3.00			
ONDREJOV	04	0918 E	0932 D		N09	E10	6566	14 D	1	2						
CAPRI F	04	0944 E	0955		N11	E11	6566	11 D	1	2			3.00			
UCCLE	04	1333	1337 D		N09	E04			1-	3						
CAPRI F	04	1345 E	1415		N11	E01			1-	2			.50			
UCCLE	04	1356 E	1423		N09	E04			1-	3						
CAPRI F	04	1425 E	1427 D		N11	E01			1-	2			.50			
	04	1840	1900	NO FLARE	PATROL											
	04	1915	1925	NO FLARE	PATROL											
	04	1950	1955	NO FLARE	PATROL											
	04	2115	2140	NO FLARE	PATROL											
	04	2235	2250	NO FLARE	PATROL											
	05	0130	0425	NO FLARE	PATROL											
	05	0435	0455	NO FLARE	PATROL											
	05	1640	1710	NO FLARE	PATROL											
	05	2245	2310	NO FLARE	PATROL											
	06	0205	0430	NO FLARE	PATROL											
	06	1620	1625	NO FLARE	PATROL											
	07	0340	0350	NO FLARE	PATROL											
	07	0400	0420	NO FLARE	PATROL											
	07	0435	0500	NO FLARE	PATROL											
	08	0215	0325	NO FLARE	PATROL											
	08	0400	0440	NO FLARE	PATROL											
CAPRI F	08	1407 E	1412 D		N02	E41			1-	1			1.00			
UCCLE	08	1408	1444		N01	E41			1-	3						
UCCLE	08	1452	1519		N01	E41			1-	3						
ONDREJOV	08	1455 E	1507		N01	E40			1-	3	1458			1.10		
	09	0200	0220	NO FLARE	PATROL											
	09	0240	0350	NO FLARE	PATROL											
	09	0430	0500	NO FLARE	PATROL											
ONDREJOV	09	0815	0827		N05	E40	6571	12	1	3	0819			1.80		

SOLAR FLARES
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OBSERVATORY	DATE OCT 1962	OBSERVED UNIVERSAL TIME START	OBSERVED UNIVERSAL TIME END	OBSERVED UNIVERSAL TIME MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT. °o	PROVISIONAL IONOSPHERIC EFFECT
CLIMAX	09	2128	2155	2132	S05	E70			1-			1.00	1.80			
	10	0205	0230	NO FLARE	PATROL											
UCCLE	10	0851	0903		N05	E25			1-	3						
UCCLE	10	0905	0927		N03	E24			1-	3						
UCCLE	10	1031	1047		N03	E24			1-	3						
UCCLE	10	1148	1155		N03	E20			1-	3						
UCCLE	10	1427	1514		N01	E13			1-	3						
	11	0205	0315	NO FLARE	PATROL											
	11	0320	0340	NO FLARE	PATROL											
	11	0450	0500	NO FLARE	PATROL											
CAPRI F	11	1139 E	1144 D		N06	E10			1-	1			1.00			
	12	0600	0610	NO FLARE	PATROL											
	12	1015	1020	NO FLARE	PATROL											
	12	1025	1040	NO FLARE	PATROL											
	12	1045	1055	NO FLARE	PATROL											
	12	1105	1115	NO FLARE	PATROL											
	12	1135	1140	NO FLARE	PATROL											
	12	1150	1155	NO FLARE	PATROL											
	12	1215	1220	NO FLARE	PATROL											
ONDREJOV	12	1348 E	1353		N03	E75			1-	3	1349			2.10		
CLIMAX	12	2256 E	2310 D	2304	S12	E23			1-			.70	.70			
IKOMASAN	12	2302	2307 D		S15	E22	6579	5 D	1		2303	2.48			120	
	13	0230	0300	NO FLARE	PATROL											
NIZMIR	13	0803	0942	0926	S10	E20	6579	99	1			2.27			70	
KHARKOV	13	0846	1225 D	0927	S13	E17	6579	219 D	1	3	0927	3.09	3.40	2.20		
SCHAUINS	13	1150 E	1208		S11	E14	6579	18 D	1	2			4.00			
ONDREJOV	13	1150	1223	1154	N12	E15	6578	33	1	3	1154			2.60		
ONDREJOV	13	1300	1304	1301	N12	E14			1-	3	1301			1.60		
CLIMAX	13	1607	1621	1613	S13	E13			1-			1.00	1.00			
CLIMAX	13	1654	1701	1656	S13	E13			1-			.30	.30			
CLIMAX	13	1749	1803	1753	S13	E13			1-			.90	.90			
CLIMAX	13	1805	1823	1809	S13	E13			1-			.90	.90			
CLIMAX	13	1837	1909	1847	S15	E13			1-			1.30	1.30			
CLIMAX	13	2033	2038	2035	S15	E08			1-			.40	.40			
CLIMAX	13	2245	2317	2304	N04	E02			1-			.40	.40			
	14	0045	0330	NO FLARE	PATROL											
	14	0345	0355	NO FLARE	PATROL											
	14	0400	0410	NO FLARE	PATROL											
	14	0425	0430	NO FLARE	PATROL											
	14	0440	0500	NO FLARE	PATROL											
CAPRI F	14	0636 E	0654		N01	E58			1-	2			1.50			
SCHAUINS	14	0855 E	0915 D		N05	E55	6581	20 D	1	2			3.00			
SCHAUINS	14	0918	0937		N01	E58			1-	2			3.00			
CAPRI F	14	0924 E	0944		N03	E56	6581	20 D	1	3			2.00			
SCHAUINS	14	1105 E	1125		N04	E53	6581	20 D	1	2			3.00			
KHARKOV	14	1121 E	1235 D		N05	E54	6581	74 D	1	3	1132	1.03	1.90	2.00		

SOLAR FLARES
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KHARKOV	14	1121 E	1235 D		S13	E05	6579	74 D	1	3	1127	2.06	2.40	1.70		
	14	1240	1250	NO FLARE	PATROL											
	14	1300	1305	NO FLARE	PATROL											
	14	1315	1320	NO FLARE	PATROL											
	14	1325	1330	NO FLARE	PATROL											
	14	1335	1340	NO FLARE	PATROL											
	14	1350	1405	NO FLARE	PATROL											
CLIMAX	14	1408 E	1417		N02	E55			1-		1412	.80	1.04			
CLIMAX	14	1445	1517	1507	S18	E06			1-			.30	.30			
CLIMAX	14	1606	1638	1610	S17	E03			1-			.40	.40			
CLIMAX	14	1612	1634	1618	S10	W05			1-			.20	.20			
CLIMAX	14	1807	1828	1814	S11	W02			1-			.60	.60			
CLIMAX	14	1852	1927	1901	S18	E00			1-			.30	.30			
	14	2355	2400	NO FLARE	PATROL											
	15	0000	0045	NO FLARE	PATROL											
	15	0140	0250	NO FLARE	PATROL											
	15	0320	0345	NO FLARE	PATROL											
	15	0400	0405	NO FLARE	PATROL											
	15	0410	0600	NO FLARE	PATROL											
	15	0750	0805	NO FLARE	PATROL											
SCHAUINS	15	0950 E	0955 D		S09	W12	6579	5 D	1	3			3.00			
	15	1315	1320	NO FLARE	PATROL											
	15	1330	1335	NO FLARE	PATROL											
UCCLE	15	1500	1510		S15	W10			1-	3						
UCCLE	15	1513	1551	1522	S12	W12	6579	38	1+	3	1527	3.90	4.40			
UCCLE	15	1513	1551	1527	S12	W12			1+							
ALMA-ATA	16	0527	0552	0530	S10	W24	6579	25	1		0530	2.17			57	
ALMA-ATA	16	0657	0705 D	0658	S12	W20			1-		0658	1.08			53	
SCHAUINS	16	0831 E	0837		S11	W27			1-	3			2.00			
KHARKOV	16	1005 E	1028		N05	E27	6581	23 D	1	1	1010	1.14	1.40	1.50		
	16	1605	1630	NO FLARE	PATROL											
IKOMASAN	17	0041	0104 D		S13	W32	6579	23 D	1		0048	4.33		1.18	100	
VOROSHILOV	17	0042	0102 D	0049	S11	W32	6579	20 D	1+	2		1.79			80	
	17	0210	0500	NO FLARE	PATROL											
ONDREJOV	17	0914 E	0927		S12	W35			1-	3	0920			2.10		
SCHAUINS	17	0921 E	0946		S10	W36	6579	25 D	1+	2			5.00			
ONDREJOV	17	1049 E	1057 D		S12	W40			1-	3	1050			2.00		
NIZMIR	17	1050 E	1056	1050	S09	W40			1-		1043	.93			60	
SCHAUINS	17	1058 E	1102 D		S11	W43			1-	2			1.00			
	17	1205	1210	NO FLARE	PATROL											
	17	1220	1225	NO FLARE	PATROL											
	17	1235	1245	NO FLARE	PATROL											
UCCLE	17	1255	1319 D	1304	S11	W42			1-	3						
OTTAWA	17	1256	1330	1303	S07	W40			1-			.50	.60			
SCHAUINS	17	1306 E	1320		S09	W39	6579	14 D	1	2			3.00			
	18	0230	0235	NO FLARE	PATROL											
	18	0245	0315	NO FLARE	PATROL											

SOLAR FLARES
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	18	0320	0325	NO FLARE	PATROL											
	18	0330	0600	NO FLARE	PATROL											
	18	2100	2105	NO FLARE	PATROL											
	18	2230	2310	NO FLARE	PATROL											
MITAKA	18	2344 E	2353 D		S13	W82	6585	9 D	1	1	2344	2.01		1.77	125	
	19	0230	0600	NO FLARE	PATROL											
ABASTUMANI	19	0714 E	0754 D	0744	S13	W69	6579	40 D	1	3		.90	2.67			
CAPRI F	19	0723 E	0757 D		N11	E76	6586	34 D	1	3	0724	.75	2.05			
SCHAUINS	19	0954 E	1010		S12	W69	6579	16 D	1	1			3.50			
	19	1235	1245	NO FLARE	PATROL											
OTTAWA	19	1249	1257	1251	N05	W16			1-			.60	.60			
OTTAWA	19	1618	1640 D	1625	S01	E52			1-			.40	1.00			
	19	2200	2225	NO FLARE	PATROL											
	19	2235	2250	NO FLARE	PATROL											
	20	0155	0700	NO FLARE	PATROL											
CAPETOWN	20	0931	0959	0934	N09	E81	6591	28	1		0934	.70				
CAPETOWN	20	1133	1202	1138	N09	E81	6591	29	1		1138	.70				
CAPETOWN	20	1307	1325	1312	N09	E81			1-		1312	.60				
CAPETOWN	20	1347	1420	1352	N09	E81	6591	33	1		1352	.80				
CAPRI F	20	1358 E	1442 D	1409	N08	E75	6591	44 D	1	3	1409	1.50	4.11			
CLIMAX	20	1626	1656	1630	N09	E89			1-			.60	1.40			
	21	0200	0500	NO FLARE	PATROL											
CAPRI F	21	1415 E	1422 D		S02	W43			1-	1	1415	1.50	2.11			
CLIMAX	21	1524	1649	1554	N02	W40			1-			1.30	1.60			
	22	0150	0335	NO FLARE	PATROL											
	22	0420	0430	NO FLARE	PATROL											
ONDREJOV	22	0634 E	0649		S21	W52			1-	3	0642			1.60		
ONDREJOV	22	0959 E	1006		N04	W52	6581	7 D	1	3	1000			2.20		
ONDREJOV	22	1053 F	1106 D		N06	W59			1-	3	1055			1.70		
ONDREJOV	22	1224	1244		S12	W32			1-	3	1229			1.60		
ONDREJOV	22	1356 E	1410 D		N17	E65			1-	3	1401			2.10		
	23	0200	0410	NO FLARE	PATROL											
CLIMAX	23	1645	1730	1659	N04	W70	6581	45	2			3.80	6.80			
	24	0550	0600	NO FLARE	PATROL											
	25	0055	0110	NO FLARE	PATROL											
	25	0200	0300	NO FLARE	PATROL											
	25	0310	0315	NO FLARE	PATROL											
	25	0440	0525	NO FLARE	PATROL											
	25	0530	0545	NO FLARE	PATROL											
	25	0550	0615	NO FLARE	PATROL											
	25	1110	1200	NO FLARE	PATROL											
CLIMAX	25	1428	1439	1433	N10	E12			1-			.60	.60			
CAPRI F	25	1445 E	1522 D		S13	W62	6593	37 D	1	2	1447	1.00	1.80			
CAPRI F	25	1447 E	1502 D		N11	E03	6591	15 D	1	2	1447	2.00	2.00			

SOLAR FLARES

OCTOBER 1962

OBSERVATORY	DATE OCT 1962	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 Ha	MAX INT	PROVISIONAL IONOSPHERIC EFFECT
CLIMAX	25	1503	1513	1506	S13	W60			1-			1.20	1.80			
CLIMAX	25	1639	1709	1548	S12	W62			1-			.40	.70			
	26	0300	0340	NO FLARE	PATROL											
	26	0550	0615	NO FLARE	PATROL											
	26	1325	1335	NO FLARE	PATROL											
CLIMAX	26	2308	2325	2314	N12	W13			1-			.60	.60			
VOROSHILOV	26	2316	2326	2318	N12	W12			1-	1		1.62			58	
	27	0400	0600	NO FLARE	PATROL											
	27	1535	1540	NO FLARE	PATROL											
CLIMAX	27	1839	1852	1842	N10	W26			1-			.60	.60			
VOROSHILOV	28	0020	0040	0023	N10	W30			1-	2		.63			82	
	28	0200	0245	NO FLARE	PATROL											
	28	0300	0305	NO FLARE	PATROL											
	28	0345	0350	NO FLARE	PATROL											
	28	0400	0500	NO FLARE	PATROL											
CLIMAX	28	1745	1802	1755	N11	W38			1-			.20	.20			
	29	0440	0445	NO FLARE	PATROL											
CLIMAX	29	2020	2029	2023	N08	W48			1-			.30	.40			
	30	0300	0315	NO FLARE	PATROL											
	30	0355	0400	NO FLARE	PATROL											
	30	0510	0605	NO FLARE	PATROL											
CLIMAX	30	1758	1813	1804	N09	W64			1-			.40	.60			
	31	0445	0455	NO FLARE	PATROL											
	31	0515	0555	NO FLARE	PATROL											
UCCLE	31	1200	1205 D		N08	W88			1-	3						
CAPETOWN	31	1203	1213	1205	N10	W70			1-		1205	.50	1.50			
CAPETOWN	31	1222	1300	1227	N08	W81	6591	38	1		1227	1.50				
UCCLE	31	1223	1237	1289	N07	W86			1-	3						
	31	1410	1440	NO FLARE	PATROL											

COMMERCE - STANDARDS - BOULDER

These flare reports are addenda to the October 1962 flares published in CRPL-F 219B November 1962.

ATHENES	ATHENS, GREECE
BAKOU	PIRCULI, USSR
CAPETOWN	ROYAL OBSERVATORY, CAPE OF GOOD HOPE
CAPRI F	CAPRI, ITALY (GERMAN)
CAPRI S	CAPRI, ITALY (SWEDISH)
CRIMÉE	SIMEIZ, USSR
HERSTMONCEU	ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX, ENGLAND
HTE-PROVEN	HAUTE-PROVENCE
HONOLULU	HAWAII, USA
IKOMASAN	KYOTO, JAPAN
KIEV KO	KIEV GAO, USSR
KIEV KY	KIEV UNIVERSITY, USSR
LOCKHEED	LOS ANGELES, CALIF., USA
MCMATH	MCMATH-HULBERT PONTIAC, MICH., USA
MOSCOU	MOSCOW-GAISH, USSR
NEW SCHAUIN	FREIBURG, GFR
NERA	NEDERHORST den BERGH, NETHERLANDS
NIZMIR	KRASNAYA PAKHRA, USSR
SAC PEAK	SACRAMENTO PEAK, N.MEX. USA
SALTSJÖBADEN	STOCKHOLM, SWEDEN
SCHAUINS	SCHAUINSLAND, GFR
TACHKENT	TASHKENT, USSR
WENDEL	WENDELSTEIN, GFR

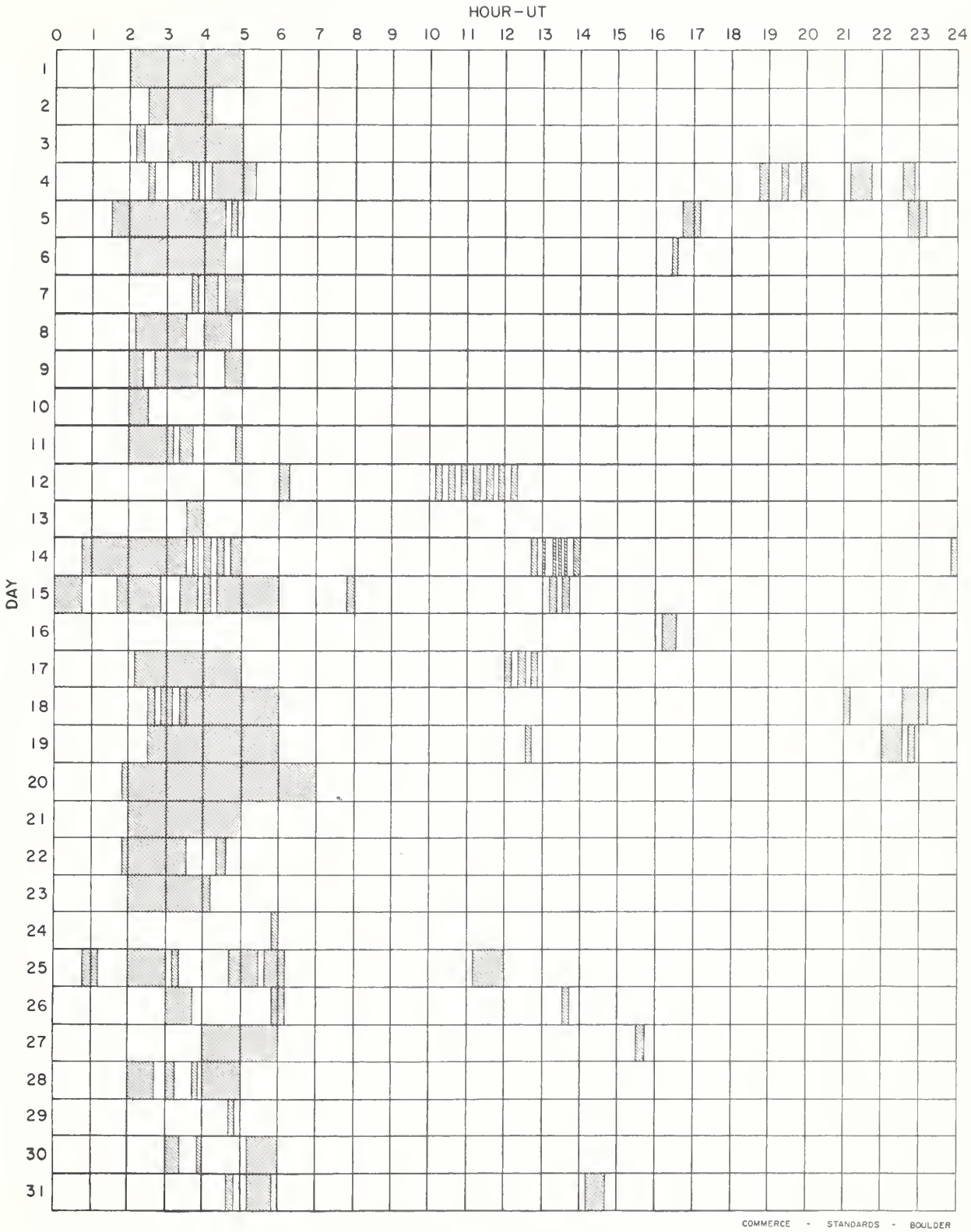
ALL VALUES IN THE MAXIMUM INTENSITY COLUMN FOR SAC PEAK ARE ARBITRARY UNITS (0-40) AND FOR LOCKHEED ARE ARBITRARY UNITS (10-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

SEE DESCRIPTIVE TEXT PUBLISHED NOVEMBER 1961 FOR DEFINITION OF CORRECTED AREA VALUES LISTED FOR CLIMAX, HAWAII, LOCKHEED AND SACRAMENTO PEAK.

E = LESS THAN D = GREATER THAN U = APPROXIMATE □ = NOT REPORTED.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

OCTOBER 1962



Stations Include:

Abastumani	Bucharest	Crimee	Kharkov	Mitaka	Sacramento Peak
Alma-Ata	Capetown	Herstmonceux	Kiev KO	Nizamiah	Schauinsland
Arcetri	Capri-F (German)	Honolulu	Kodaikanal	Nizmir	Tashkent
Athens	Capri-S (Swedish)	Huancayo	Lockheed	Ondrejov	Uccle
Bakou	Climax	Ikomasan	McMath-Hulbert	Ottawa	Voroshilov

IONOSPHERIC EFFECTS OF SOLAR FLARES

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

NOVEMBER 1962

NOVEMBER 1962	UNIVERSAL TIME			SWF TYPE IMP	IMPORTANCE					WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	BUR			
17	2254	2307	2300		10	1				5	HA MC	

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

JANUARY 1963

ARO - OTTAWA

2800 Mc.

Jan. 1963	Type	Start UT	Duration Hrs.Mins	Maximum			Remarks
				Time UT	Peak Flux	Mean Flux	
16	1 Simple 1 f	1850	2	1851	6	3	
	4 Post Increase		13		1	0.5	
30	3 Simple 3 f	1330	7 30	1355	11	3	

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATIONS
JANUARY 1962

BOEING - SEATTLE 221 Mc.

Jan. 1962	Type	Starting time	Time of max.	Duration	Flux density 10^{-22} wm^{-2}(c/s)$^{-1}$	
		UT	UT	minutes	peak	mean
2	e	1917.3	1917.4	0.5	35	9.5

COMMERCE - STANDARDS - BOULDER

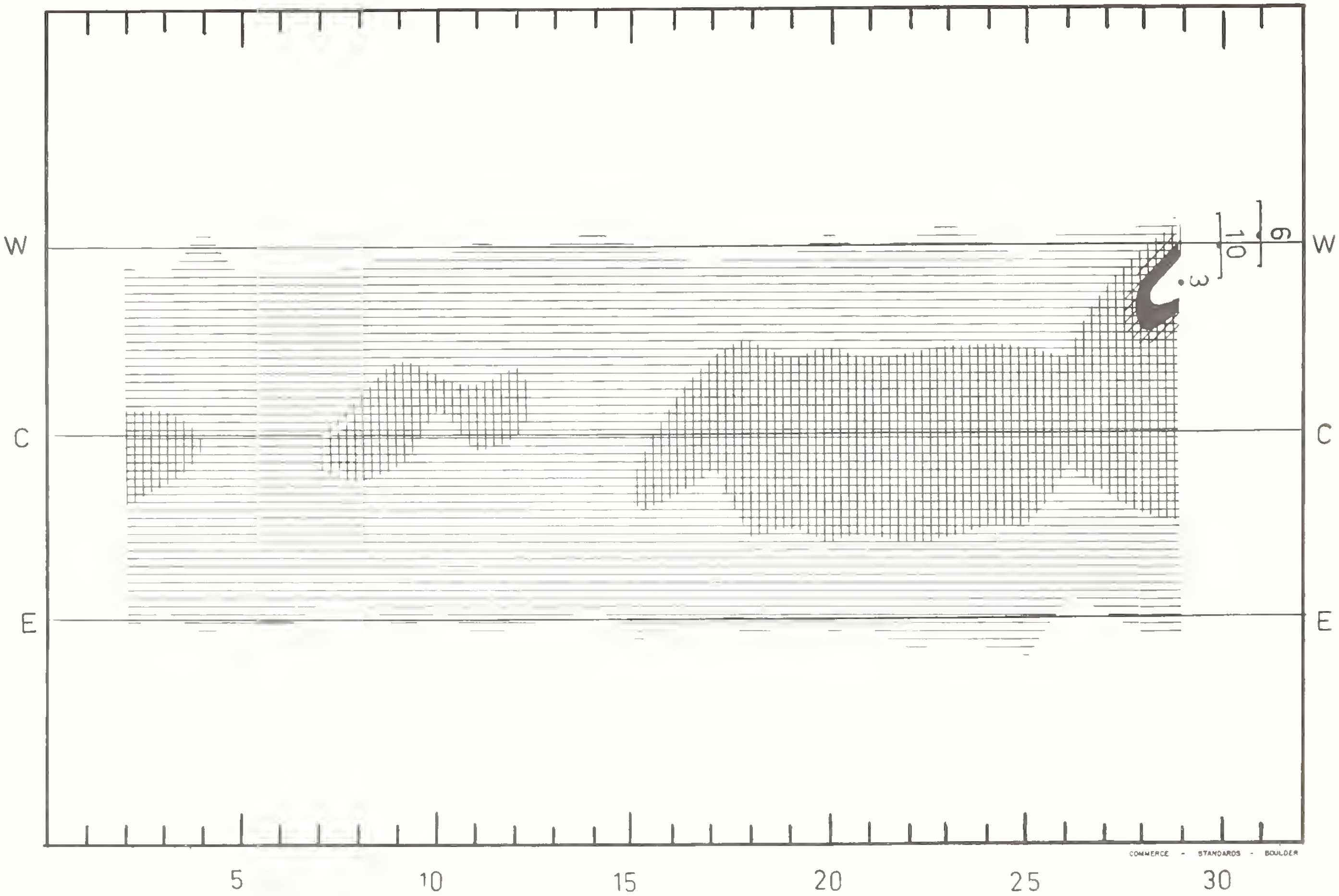
Normal observing period: 1700-2300 UT

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATIONS

JANUARY 1963

NANÇAY

169 Mc.



JANUARY 1963

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JANUARY 1963

BOULDER 108 Mc.

Jan. 1963	Type	Start UT	Time of Maximum UT	Duration Minutes	Intensity
28	6	1556	-	483 D	2
28	3	1801.1	1802.2	1.1	
30	6	1416 E	-	339 D	2
30	3	2331.5	2333.0	2.0	2

COMMERCE - STANDARDS - BOULDER

NOMINAL TIMES OF OBSERVATION
OUTSTANDING OCCURRENCES
JANUARY 1963

BOULDER 108 Mc.

Jan. 1963	U.T.			Jan. 1963	U.T.		
1	1427-2330			16	1425-2345		
2	1427-2331			17	1424-2346		
3	1427-2332			18	1424-2347	I	2000-2347
4	1427-2333			19	1423-2349	I	1605-1640
5	1427-2334			20	1423-2350		
6	1815-2335			21	1422-2351		
7	1427-2336	I	1520-1529	22	1422-2352		
8	1427-2337			23	2245-2353		
9	1427-2338			24	1420-1908;		
10	1628-2339				2030-2354		
				25	1420-2356	I	1754-1759;
11	1427-2340	I	1902-1917;				2225-2245
			1957-1958;				
			2006-2011;	26	1419-2357	I	2320-2332;
			2031-2035				2343-2350
12	1426-2341	I	1426-2341	27	1418-2358	I	2336-2340
13	1426-1635	I	1426-1635	28	1417-2359		
14	1513-1703;			29	1417-2400		
	1711-2343			30	1416-0002		
15	1425-2344						
				31	1415-0003		

COMMERCE - STANDARDS - BOULDER

Fort Davis

25-580 Mc.

1962	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC	REMARKS
		TYPE	TIMES U.T	INT		
Oct. 1	1317-2400					
Oct. 2	1316-2400					
Oct. 3	1317-2400					
Oct. 4	1316-2157 2210-2400					
Oct. 5	1316-2400					
Oct. 6	1316-2400					
Oct. 7	1316-2400					
Oct. 8	1316-2400					
Oct. 9	1316-2400					
Oct.10	1331-2400					
Oct.11	1330-2400	IIIG	1822-1824	3	580-25	
Oct.12	1330-2400	IIIG	2301-2305	3+	580-25	
Oct.13	1330-2400	IIIG	1741-1743	1-2	150-25	
		IIIG	1808-1810	1-3	175-25	
		IIIG	1946-1949	1-2	200-25	
		IIIG	2032-2034	2-3	200-25	
		IIIG	2035-2036	3	450-25	
Oct.14	1330-2400					
Oct.15	1330-2400					Many weak type III 75-25 Mc during day
Oct.16	1330-2400	IIIG	1716-1719	1	250-40	
		IIIG	2029-2032	2	280-25	
Oct.17	1330-2400					Weak I throughout day
Oct.18	1331-2400					
Oct.19	1332-2400					
Oct.20	1331-2400	IIIG	1839-1841	1-2	150-≤50	
		IIIG	2218-2220	3	200-25	
Oct.21	1331-2350					
Oct.22	1331-2350					Weak I throughout day
Oct.23	1331-2350	II	1648.7-1650	2	125-60	
		IIG	1734-1737	2	90-25	
Oct.24	1330-2350					
Oct.25	1330-2350					
Oct.26	1331-2350					
Oct.27	1330-2350	IIIG	1838-1842	2	580-25	
Oct.28	1348-2350	IIIG	1744-1748	2-3	450-25	Weak I throughout day
		IIIG	1750-1753	1-3	280-25	
Oct.29	1348-2345	IIIG	1707-1709	1-2	300-25	
		IIIG	2019-2023	2	580-25	
Oct.30	1348-2345	IIIG	1802-1805	1-2	250-25	
		IIIG	1918-1921	1-2	250-25	
Oct.31	1348-2345	IIIG	2217-2219	1-3	420-25	
Nov. 1	1347-2345					
Nov. 2	1349-2345					
Nov. 3	1347-2345					
Nov. 4	1347-2345					
Nov. 5	1347-2345					
Nov. 6	1347-2340					
Nov. 7	1347-2340	I	≤1800-≤2140	1	250-100	Weak I throughout day
Nov. 8	1346-2340	IIIG	1509-1511	2	580-250	
Nov. 9	1348-2340					Weak I during day
Nov.10	1347-2340	IIIG	1936-1937	2	450-140	Weak I during day
		IIIG	2103-2107	1-2	250-25	
Nov.11	1347-2340					Weak I during day
Nov.12	1347-2340					
Nov.13	1346-2335					Weak I during day

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

NOVEMBER — DECEMBER 1962

Fort Davis

25-580 Mc.

1962	OBSERVING HOURS	IMPORTANT BURSTS			FREQUENCY RANGE MC	REMARKS
		TYPE	TIMES U.T	INT		
Nov.14	1347-2335					1417-1540 Many III 80-50 Mc
Nov.15	1347-2335					
Nov.16	1347-2330					
Nov.17	1347-2330					
Nov.18	1348-2330					
Nov.19	1347-2330					
Nov.20	1347-2330					
Nov.21	1347-2330					
Nov.22	1346-2330					
Nov.23	1346-2330					
Nov.24	1346-2330					
Nov.25	1401-2330					
Nov.26	1402-2330					
Nov.27	1402-2330					
Nov.28	1401-2330					
Nov.29	1402-2330					
Nov.30	1401-2330					
Dec. 1	1401-2335					
Dec. 2	1401-2335					Weak I during day
Dec. 3	1402-2335					
Dec. 4	1402-2335					
Dec. 5	1402-2335					
Dec. 6	1402-2335	IIIG	1432-1435	1	200-100	
Dec. 7	1402-2335					
Dec. 8	1401-2335					Weak I throughout day
Dec. 9	1402-2335					Weak I during day
Dec.10	1402-2335					Weak I throughout day
Dec.11	1402-2335					
Dec.12	1402-2335					
Dec.13	1401-2335	IIIG	2228-2232	2	220-100	
Dec.14	1402-2335					
Dec.15	1414-2335					
Dec.16	1414-2335					
Dec.17	1415-2335					
Dec.18	1415-2335	IIIG IIIG	1940-1947 1949-1956	1-2 1-2	580-320 450-320	Weak I during day
Dec.19	1415-2335					
Dec.20	1414-2340	IIIG	1740-1741	2	280-25	Weak I during day
Dec.21	1416-2340					Weak I throughout day
Dec.22	1415-2340					
Dec.23	1415-2340	IIIG	1433-1435	1-2	200-25	
Dec.24	1415-2340	IIIG	1833-1835	2	300-25	
Dec.25	1415-2340					
Dec.26	1415-2340					
Dec.27	1415-2340					
Dec.28	1414-2340					
Dec.29	1415-2340					
Dec.30	1415-2345					
Dec.31	1415-2345					

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS

JANUARY 1963

HAO BOULDER

7.6 - 41 Mc.

Date 1963	Bursts				Date 1963	Bursts			
	Type	Time (U.T.)	Intensity	Frequency Range (mc)		Type	Time (U.T.)	Intensity	Frequency Range (mc)
1 Jan	No Observ.				22 Jan	III	1921.30-1922.30	1	12-41
2	No Observ.	1507-2341				No Observ.	2041-2356		
3	No Observ.	1538-2255			23	No Observ.	1550-2337		
9	No Observ.	2049-2304			24	No Observ.	1548-1828		
		2344-2349			25	No Observ.	1617-2316		
10	No Observ.	1618-1641			26	No Observ.			
		1750-1844			27	No Observ.			
		2217-2339			28	No Observ.	b1830		
11	No Observ.	a1605				continuum	b1830-a2300	1	22-41
12	No Observ.					III	1944-1944.30	1	21-41
13	No Observ.					III	2058-2058.15	1	21-41
14	No Observ.					III	2220.30-2221	1	19-41
15	No Observ.	b2027			29	III	1834.45-1835.15	1-	23-36
22	III	1917-1917.45	1	16-41	30	continuum	b1408-1750	2	22-41
	III	1918.45-1919.30	1-	16-41	31	III	2107.15-2107.45	1	16-41
						III	2214.30-2215.15	1	32-41

COMMERCE - STANDARDS - BOULDER

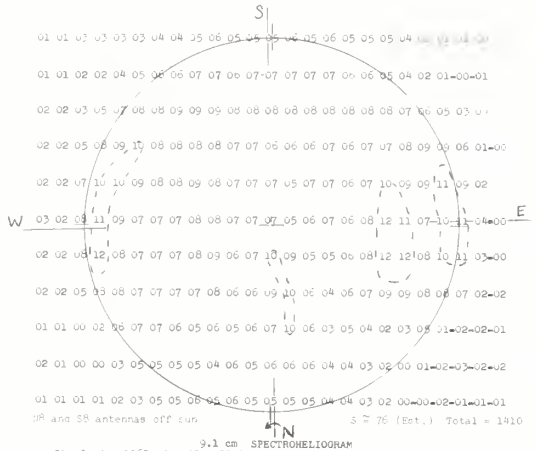
SOLAR RADIO EMISSION SPECTROHELIOGRAMS

JANUARY 1963

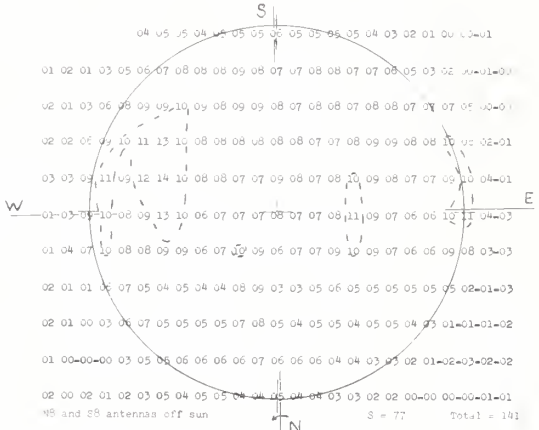
STANFORD

9.1 cm

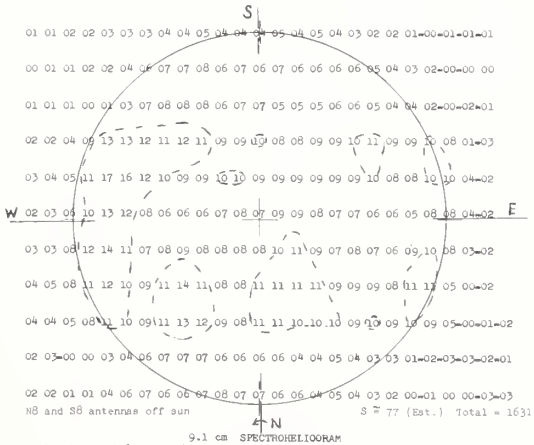
1963 JAN 01



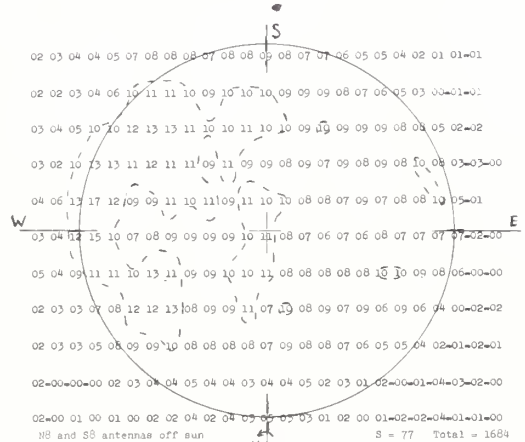
9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 02, 20-21 hrs UT; Brightness Unit = [illegible] x 10^3 °K.



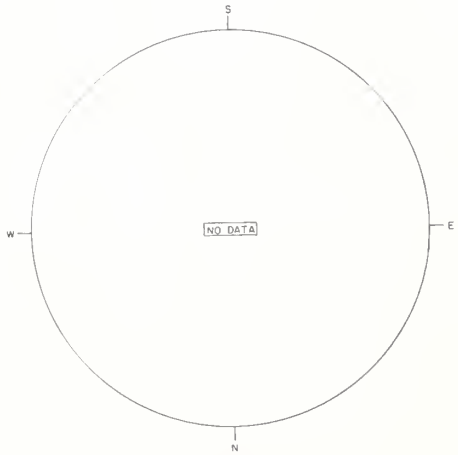
9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 03, 20-21 hrs UT; Brightness Unit = [illegible] x 10^3 °K.



9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 04, 20-21 hrs UT; Brightness Unit = 3.1 x 10^3 °K.



9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 05, 20-21 hrs UT; Brightness Unit = 3.0 x 10^3 °K.



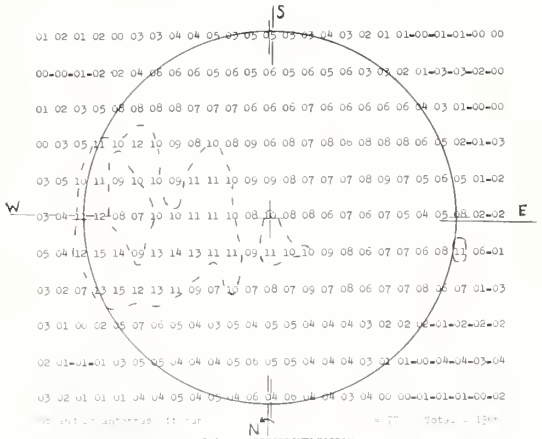
1963 JAN 06

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

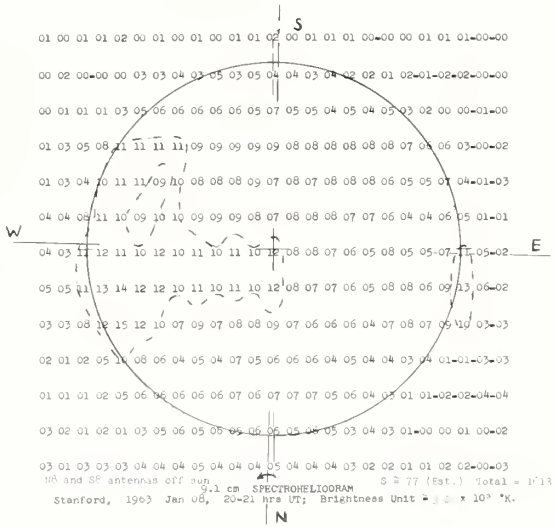
JANUARY 1963

STANFORD

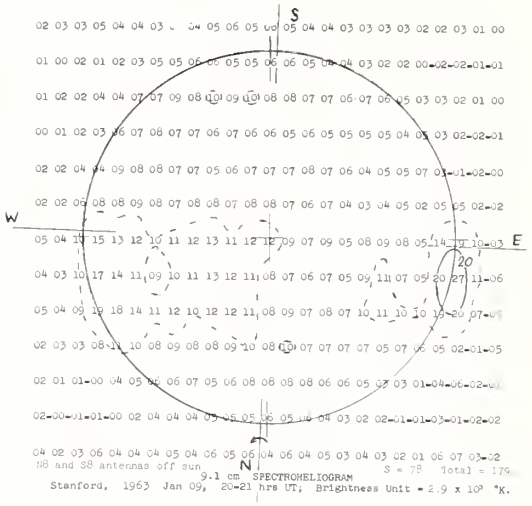
9.1 cm



9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 07, 20-21 hrs UT; Brightness Unit = [illegible] x 10^3 °K.

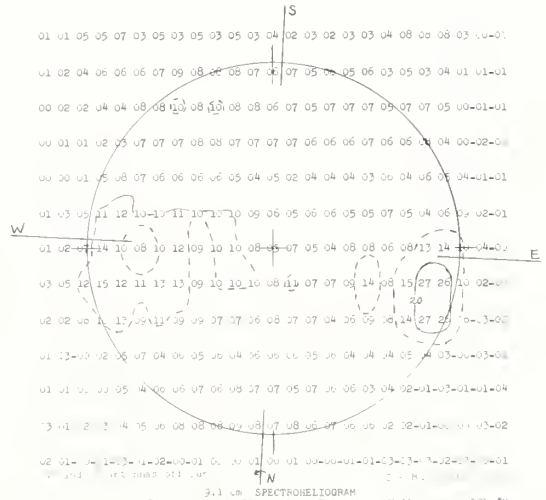


N8 and S8 antennas off sun. S = 77 (Est.) Total = 1[illegible]13
9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 08, 20-21 hrs UT; Brightness Unit = [illegible] x 10^3 °K.



N8 and S8 antennas off sun. S = 78 Total = 179
9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 09, 20-21 hrs UT; Brightness Unit = 2.9 x 10^3 °K.

1963 JAN [illegible]



9.1 cm SPECTROHELIOGRAM
Stanford, 1963 Jan 11, 20-21 hrs UT; Brightness Unit = [illegible] x 10^3 °K.

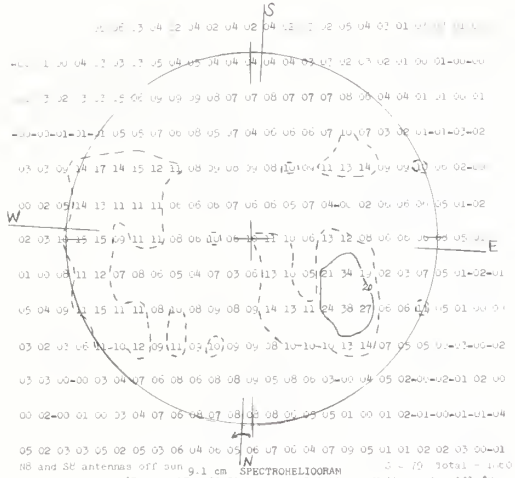
1963 JAN [illegible]

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

JANUARY 1963

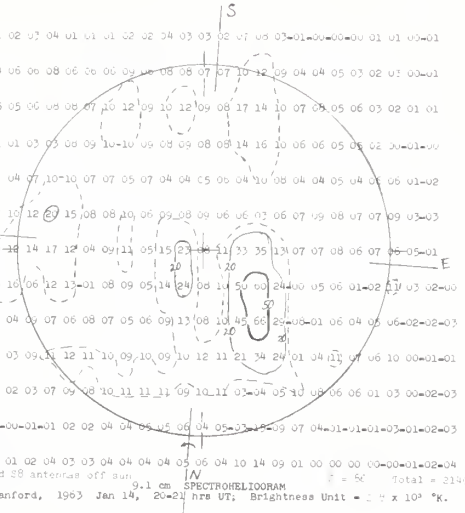
STANFORD

9.1 cm



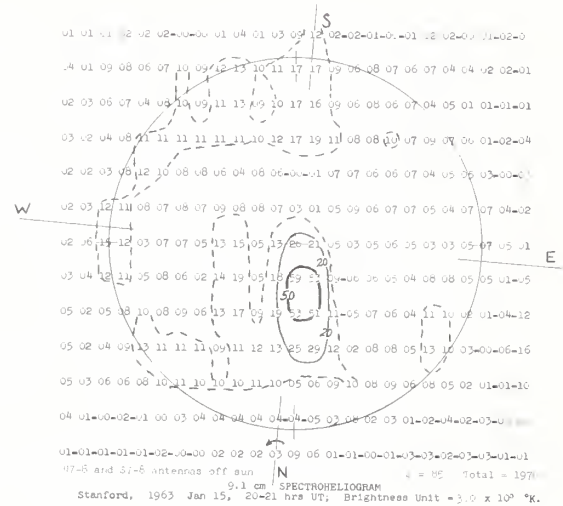
N6 and S6 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 79 Total = 1760

Stanford, 1963 Jan 13, 20-21 hrs UT; Brightness Unit = 2.9 x 10^3 °K.



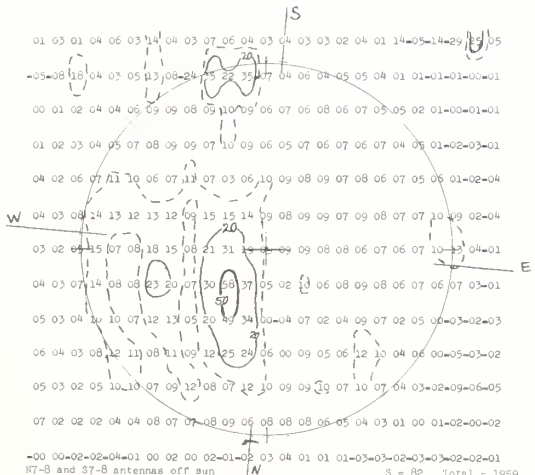
N7 and S8 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 56 Total = 2140

Stanford, 1963 Jan 14, 20-21 hrs UT; Brightness Unit = 2.4 x 10^3 °K.



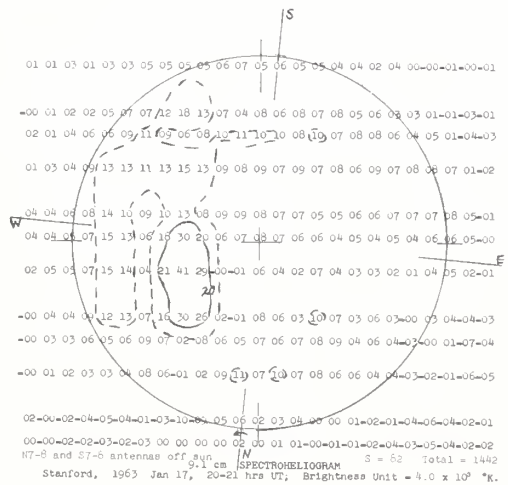
N7-8 and S7-8 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 85 Total = 1970

Stanford, 1963 Jan 15, 20-21 hrs UT; Brightness Unit = 3.0 x 10^3 °K.



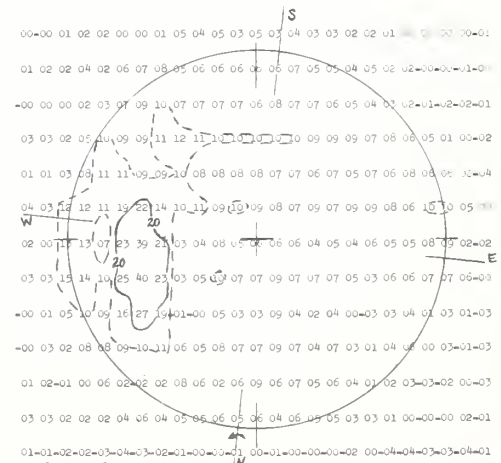
N7-8 and S7-8 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 82 Total = 1959

Stanford, 1963 Jan 16, 20-21 hrs UT; Brightness Unit = 2.9 x 10^3 °K.



N7-8 and S7-8 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 62 Total = 1442

Stanford, 1963 Jan 17, 20-21 hrs UT; Brightness Unit = 4.0 x 10^3 °K.



N7-8 and S7-8 antennas off sun 9.1 cm SPECTROHELIOGRAM S = 80 Total = 1c

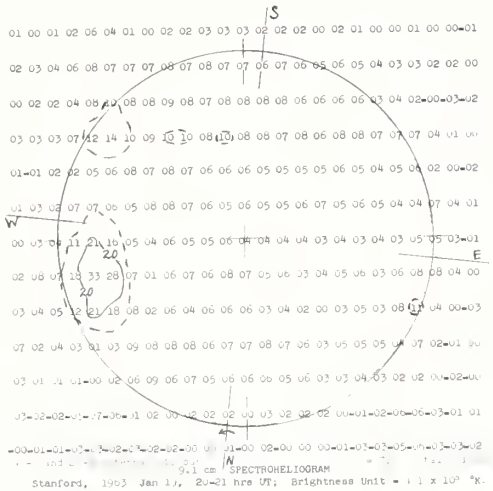
Stanford, 1963 Jan 18, 20-21 hrs UT; Brightness Unit = 3.5 x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

JANUARY 1963

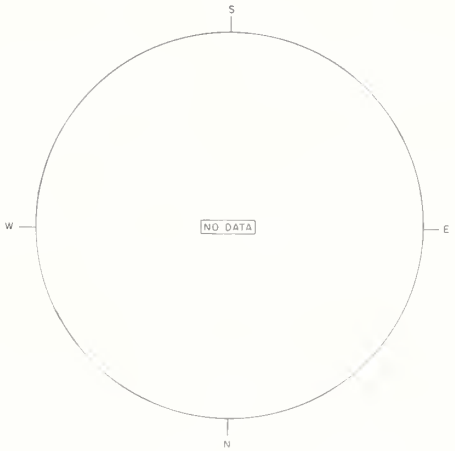
STANFORD

9.1 cm

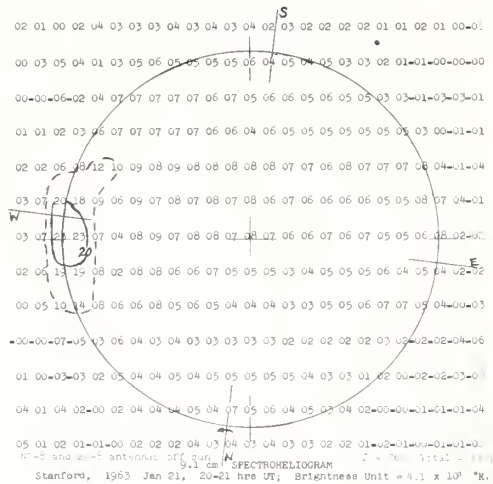


9.1 cm SPECTROHELIOGRAM

Stanford, 1963 Jan 19, 20-21 hrs UT; Brightness Unit = 1.1 x 10^3 °K.

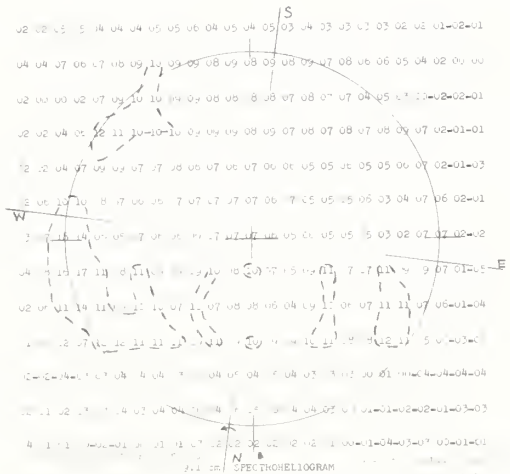


1963 JAN 20



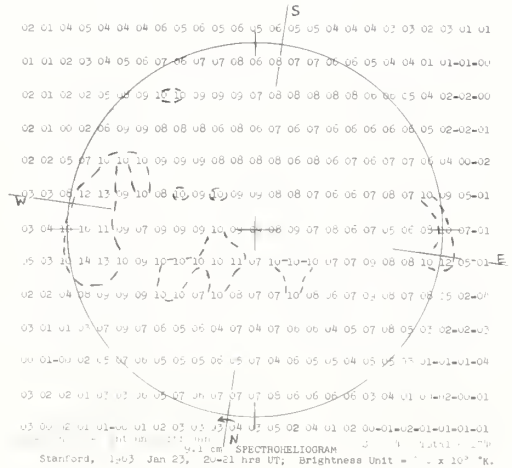
9.1 cm SPECTROHELIOGRAM

Stanford, 1963 Jan 21, 20-21 hrs UT; Brightness Unit = 4.1 x 10^3 °K.



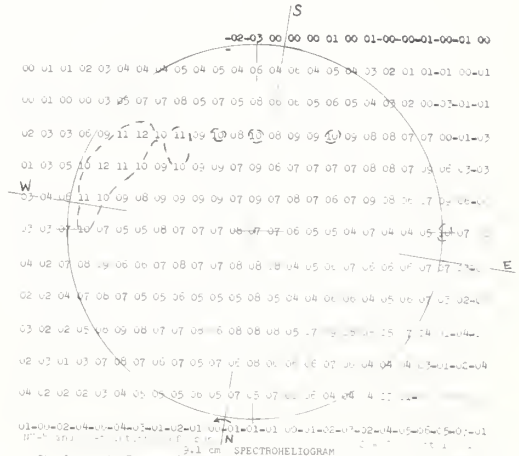
9.1 cm SPECTROHELIOGRAM

Stanford, 1963 Jan 22, 20-21 hrs UT; Brightness Unit = x 10^3 °K.



9.1 cm SPECTROHELIOGRAM

Stanford, 1963 Jan 23, 20-21 hrs UT; Brightness Unit = x 10^3 °K.



9.1 cm SPECTROHELIOGRAM

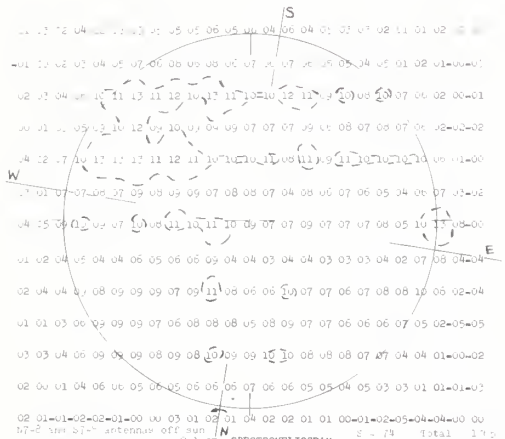
Stanford, 1963 Jan 24, 20-21 hrs UT; Brightness Unit = x 10^3 °K.

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

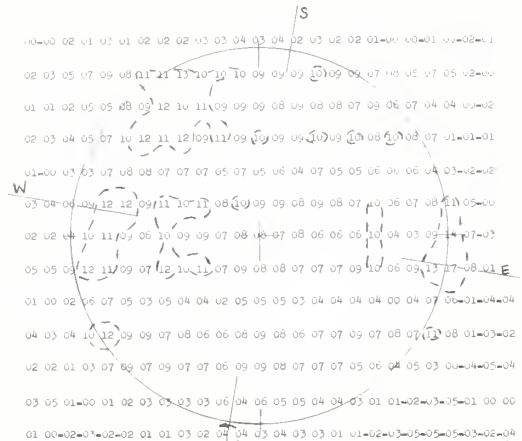
JANUARY 1963

STANFORD

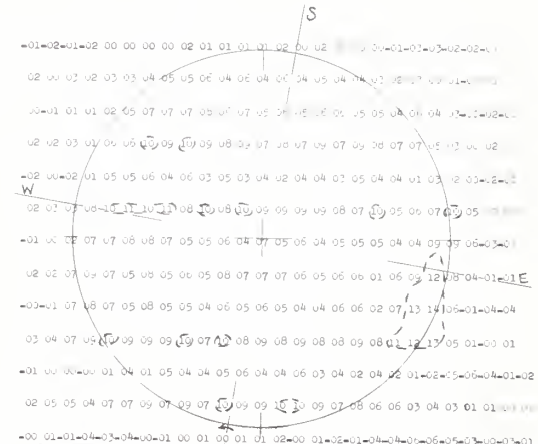
9.1 cm



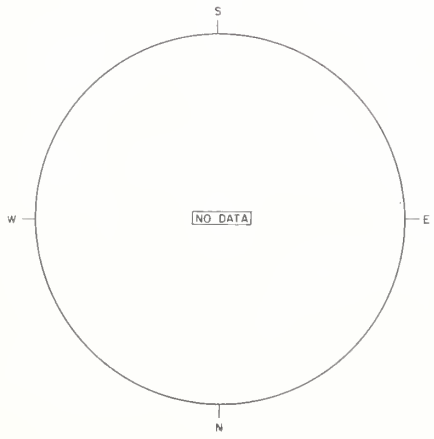
Stanford, 1963 Jan 25, 20-21 hrs UT; Brightness Unit = 3.1 x 10^3 °K.



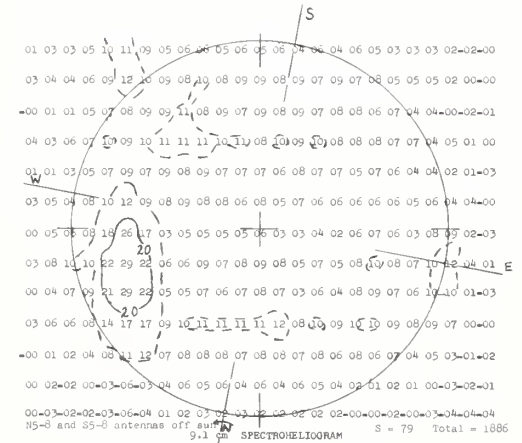
Stanford, 1963 Jan 26, 20-21 hrs UT; Brightness Unit = 3.2 x 10^3 °K.



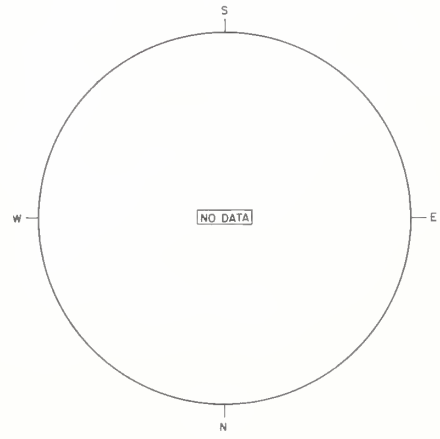
Stanford, 1963 Jan 27, 20-21 hrs UT; Brightness Unit = 4.6 x 10^3 °K.



1963 JAN 28



Stanford, 1963 Jan 29, 20-21 hrs UT; Brightness Unit = 3.2 x 10^3 °K.



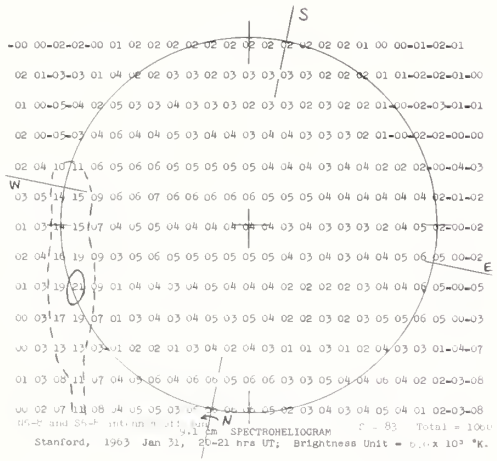
1963 JAN. 30

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

JANUARY 1963

STANFORD

9.1 cm



9.1 cm SPECTROHELIOGRAM

Stanford, 1963 Jan 31, 20-21 hrs UT; Brightness Unit = 6.00 x 10^3 °K.

COSMIC RAY INDICES

(Climax Neutron Monitor)

IGC Station B 305

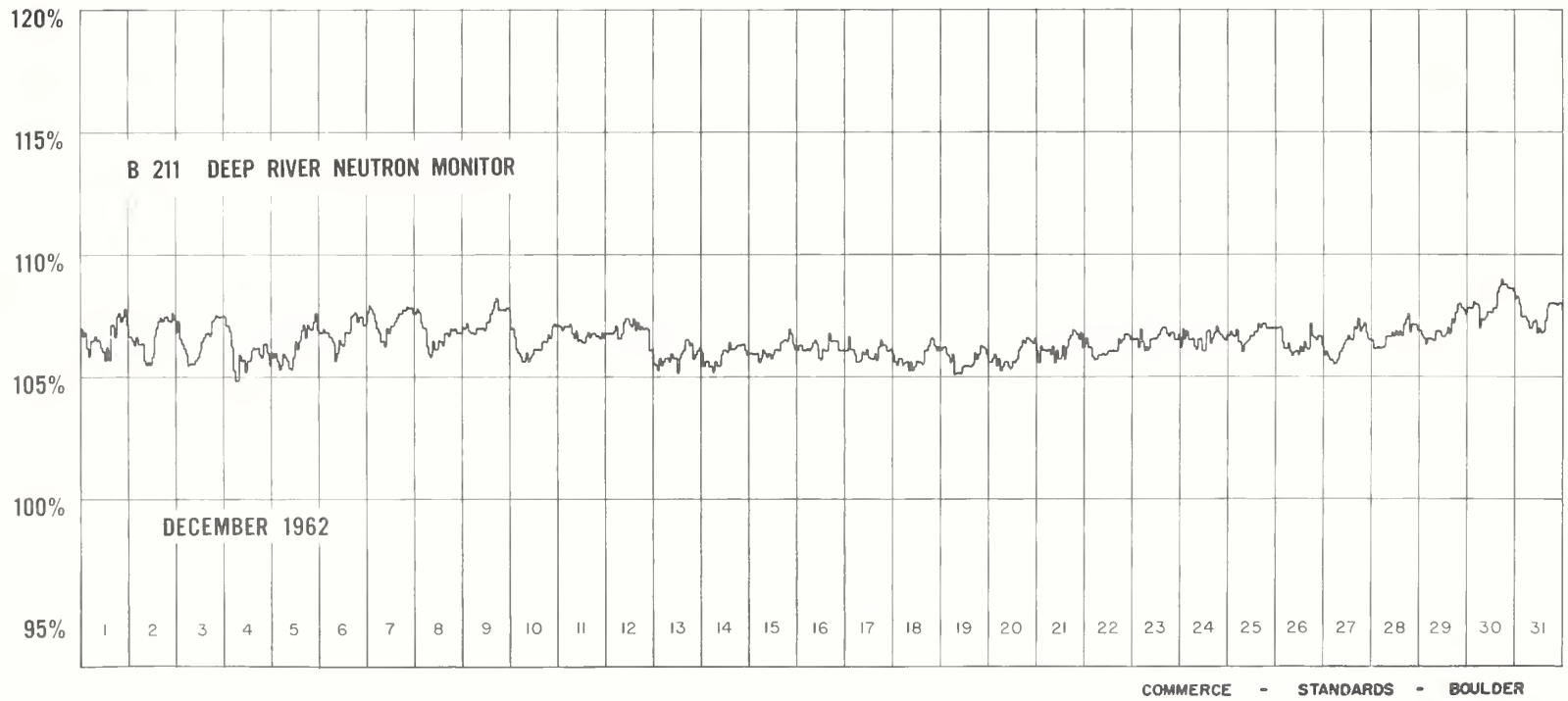
DECEMBER 1962

Dec. 1962	Daily average counts/hr*	Dec. 1962	Daily average counts/hr*
1	3115.0	17	3103.6
2	3107.9	18	3112.2
3	3096.9	19	3105.8
4	3084.0	20	3101.1
5	3084.0	21	3112.7
6	3092.6	22	3107.3
7	3086.9	23	3115.9
8	3091.8	24	3134.0
9	3093.3	25	3132.1
10	3064.5	26	3122.0
11	3090.9	27	3109.4
12	3097.2	28	3121.7
13	3069.0	29	3124.1
14	3069.9	30	3135.1
15	3088.3	31	3141.2
16	3093.6		

COMMERCE - STANDARDS - BOULDER

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

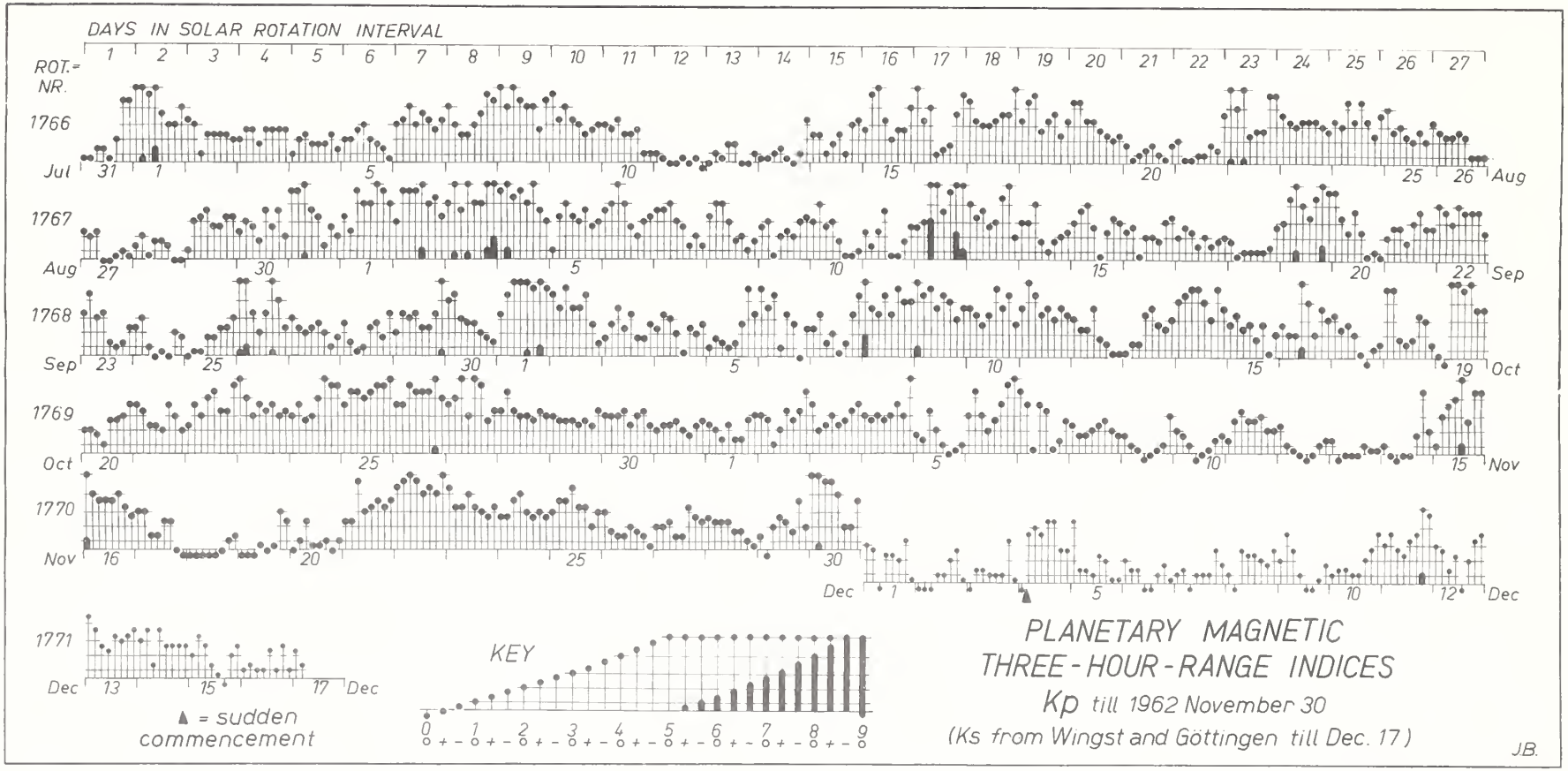


GEOMAGNETIC ACTIVITY INDICES

DECEMBER 1962

Dec. 1962	C	Values Kp Three hour Gr. interval 1 2 3 4	5 6 7 8	Sum	Ap	Final Selected Days
1	0.4	3o 2o 1- 2o	1o 2o 3- 0+	14-	7	Five
2	0.0	0o 1- 1- 1o	1- 1+ 1+ 1o	7-	3	Quiet
3	0.2	0o 2- 0+ 0+	1- 1o 3- 0o	7-	4	2
4	1.2	0o 3+ 3+ 4o	4o 4o 3o 2o	24-	17	6
5	0.3	4- 1+ 1+ 2-	2+ 2- 1- 1-	13+	7	7
						23
6	0.1	2- 1o 1+ 0+	0+ 0+ 1o 0+	6+	3	25
7	0.1	1- 1o 1- 1-	1- 1- 1+ 1+	7o	4	
8	0.3	1+ 0+ 2+ 3-	2o 2- 1o 2+	14-	7	
9	0.3	2+ 4- 2o 1+	0+ 0+ 0+ 1+	12-	7	
10	0.4	1+ 2- 1+ 0+	1- 1+ 2- 4-	12o	7	
11	1.4	3o 4o 3o 3-	4- 3+ 5+ 4+	29+	25	Five
12	0.8	3o 3o 1- 1+	0+ 2o 3+ 4-	17+	11	Disturbed
13	1.1	4o 3+ 2+ 2+	3+ 2+ 3- 4-	24o	16	11
14	0.8	3- 3+ 2o 3o	3o 3- 3- 3-	22o	13	17
15	0.4	3o 4- 4- 2-	1- 1- 2- 2+	17+	11	18
						19
16	0.1	1o 1- 1+ 1+	2- 1+ 1+ 1o	10-	5	20
17	1.5	3- 2- 3- 3-	2+ 6o 5o 7-	30-	36	
18	1.5	6+ 5o 3o 3+	5- 5- 5o 5o	37o	44	
19	1.5	5+ 5- 5+ 5-	4o 5- 5o 4+	38o	42	
20	1.5	4- 5o 4o 4o	4o 5- 5- 5o	35o	35	
21	1.3	4o 4- 4- 3o	4- 4- 4+ 3+	29+	22	Ten
22	0.6	3- 3- 2+ 3-	2o 3- 2+ 3-	20o	11	Quiet
23	0.0	2o 2o 1o 1o	0+ 0+ 0o 0+	7o	4	2
24	0.2	1- 0o 2- 1o	2o 1+ 2- 1+	10-	4	3
25	0.1	2o 1o 0o 1+	1- 1- 1- 1+	8-	4	6
						7
26	1.2	2- 1+ 2+ 3+	5- 4- 3- 4-	23+	17	16
27	0.5	2o 1o 1+ 1o	2- 1+ 2- 3-	13-	6	23
28	0.4	1- 0+ 0o 1-	2o 2o 2o 2o	10-	4	24
29	0.2	1o 2o 1o 1o	2- 2o 1- 1o	10+	5	25
30	0.2	1o 0o 0+ 1o	1- 0+ 1o 3-	7o	4	28
31	0.9	2+ 1- 1+ 4o	4- 3+ 2o 1o	18+	12	30
Mean:	0.63			Mean:	13	

COMMERCE - STANDARDS - BOULDER



COMMERCE - STANDARDS - BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

DECEMBER 1962

NORTH ATLANTIC

DECEMBER 1962	North Atlantic 6-hourly quality figures 00 to 06	06 to 12	12 to 18	18 to 24	Short-term forecasts issued about one hour in advance of 00	06	12	18	Whole day index	Advance forecasts (J-reports) for whole day, issued in advance by 1-7 days (Final J_s)	1-3 / 1-7 days (SDW J)	Geomagnetic K_{FR} half day (1)	(2)
01	3-	3o	6-	4+	3	2	5	4	(4-)	4	4	2	1
02	4-	4-	6-	5o	4	3	6	5	(4+)	4	4	1	1
03	4+	4o	6+	6-	5	4	6	5	5-	4	4	1	1
04	5-	4o	6-	5o	5	4	6	5	5-	5	5	3	3
05	4+	3+	6-	6-	4	4	6	5	(4+)	5	5	2	1
06	4+	5-	6+	6-	4	4	6	6	5o	5	5	1	0
07	5o	4+	6+	5+	5	5	6	6	5o	5	5	1	1
08	5-	4o	6+	6-	5	4	7	6	5o	5	5	2	1
09	5-	4o	6-	6-	5	4	6	6	5-	5	5	2	2
10	5-	4o	6+	5+	5	4	6	6	5o	5	5	2	1
11	5-	4o	6-	4o	5	4	6	5	(4+)	5	5	3	3
12	3+	4+	6o	4+	4	4	6	5	(4+)	5	5	2	2
13	4-	3-	6-	4+	4	4	5	4	(4-)	4	4	3	3
14	4+	4-	6+	4o	4	4	6	5	(4+)	5	5	3	2
15	4-	3-	6-	4+	4	3	6	4	(4o)	5	5	3	1
16	4+	4-	6o	5+	4	3	6	5	5-	5	5	1	1
17	4+	4o	6-	4-	5	4	6	5	(4+)	5	5	2	(4)
18	3-	3o	4+	3o	3	2	6	4	(3+)	4	4	(4)	(4)
19	2o	2+	4+	3-	3	2	5	3	(3-)	4	4	(5)	(4)
20	2o	2+	4+	3o	2	3	5	3	(3o)	3	3	(4)	(4)
21	2-	2o	5+	3+	3	2	5	3	(3-)	3	3	3	3
22	3o	3-	5+	3+	2	2	5	4	(3+)	3	3	2	2
23	3+	3+	6-	4-	3	3	5	4	(4-)	4	4	2	0
24	4+	4o	5+	5-	3	4	6	4	(4+)	4	4	1	1
25	4o	4o	5+	5o	4	4	6	5	(4+)	4	4	1	1
26	4-	4-	5+	5-	4	4	6	4	(4o)	4	4	2	(4)
27	4+	4-	6o	5o	3	3	6	5	(4+)	3	3	1	2
28	4o	4-	6-	5+	4	4	6	5	(4+)	3	3	0	1
29	4+	4-	6-	5-	4	4	6	5	(4+)	4	4	1	1
30	4+	3+	5+	5o	4	4	6	5	(4+)	4	4	1	1
31	4o	4o	6-	5-	5	4	6	5	(4+)	4	4	2	2

Score		ST 00	ST 06	ST 12	ST 18	Advance 1-7	Advance 1-3/1-7
Quiet Periods	P	6	0	20	12	7	7
	S	0	1	8	5	0	0
	U	0	0	0	0	0	0
	F	0	0	0	0	0	0
Disturbed Periods	P	16	19	0	7	13	13
	S	9	11	2	7	11	11
	U	0	0	0	0	0	0
	F	0	0	1	0	0	0

NORTH PACIFIC

DECEMBER 1962	North Pacific 12 hourly quality figures 0700 to 1900	1900 to 0700	Short-term forecasts issued at 0600	1800	Whole day index	Advance forecasts (J_p reports) for whole day, issued in advance by 1-7 days (Final J_{ps})	1-3 / 1-7 days (SDW J_p)	Geomagnetic K_{SI} half day (1)	(2)
01	4	7	4	6	5	4	4	1	1
02	6	6	4	6	6	5	5	1	1
03	5	6	5	6	5	5	5	0	1
04	5	6	5	5	5	5	5	3	(4)
05	5	6	4	6	6	5	5	1	1
06	5	6	5	6	5	5	5	1	0
07	5	6	6	6	5	6	6	0	1
08	6	7	5	6	6	6	6	2	2
09	6	7	5	6	6	6	6	2	0
10	5	7	5	6	6	6	6	2	1
11	5	5	5	5	5	5	5	(4)	3
12	5	5	4	5	5	4	4	1	2
13	6	7	4	6	6	4	4	3	3
14	5	7	5	6	5	4	4	2	2
15	5	6	5	6	6	5	5	3	1
16	5	6	5	6	5	5	5	1	1
17	4	4	5	4	(4)	5	5	2	(4)
18	4	5	4	4	(4)	4	4	(4)	(4)
19	4	5	4	5	(4)	4	4	(5)	(4)
20	5	5	4	5	(4)	4	4	(4)	(4)
21	5	5	3	5	5	4	4	3	3
22	5	5	4	5	5	4	4	2	2
23	4	6	4	5	5	5	5	1	0
24	2	5	4	5	(4)	5	5	1	1
25	4	6	3	5	5	5	5	0	0
26	5	5	5	5	5	5	5	2	3
27	5	5	4	6	5	4	4	0	1
28	5	5	5	5	5	4	4	0	2
29	5	5	5	5	5	5	5	1	1
30	5	5	5	5	5	5	5	0	0
31	4	5	4	5	(4)	5	5	2	3

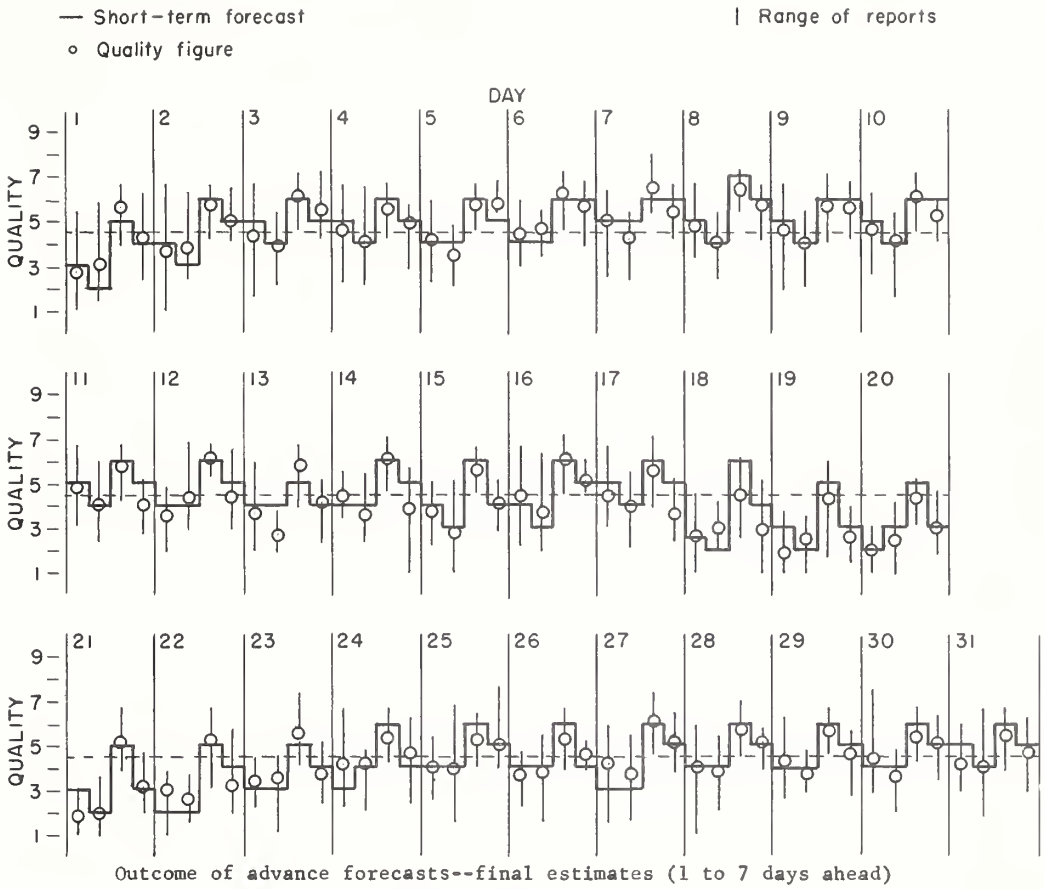
Score		ST 0600	ST 1800	Advance
Quiet Periods	P	12	19	13
	S	7	11	11
	U	1	0	0
	F	2	0	1
Disturbed Periods	P	5	1	3
	S	3	0	3
	U	1	0	0
	F	0	0	0

( ) Represent disturbed values
All times are Universal Time (U.T.)

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

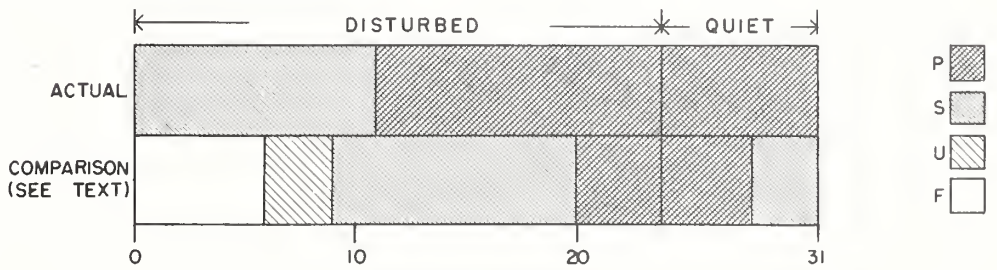
NORTH ATLANTIC

DECEMBER 1962

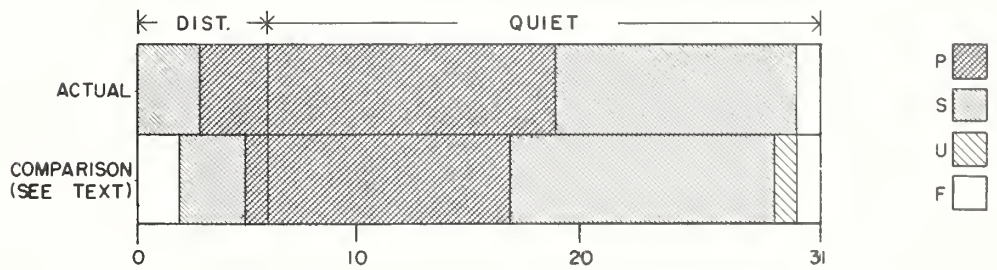


Outcome of advance forecasts--final estimates (1 to 7 days ahead)

NORTH ATLANTIC

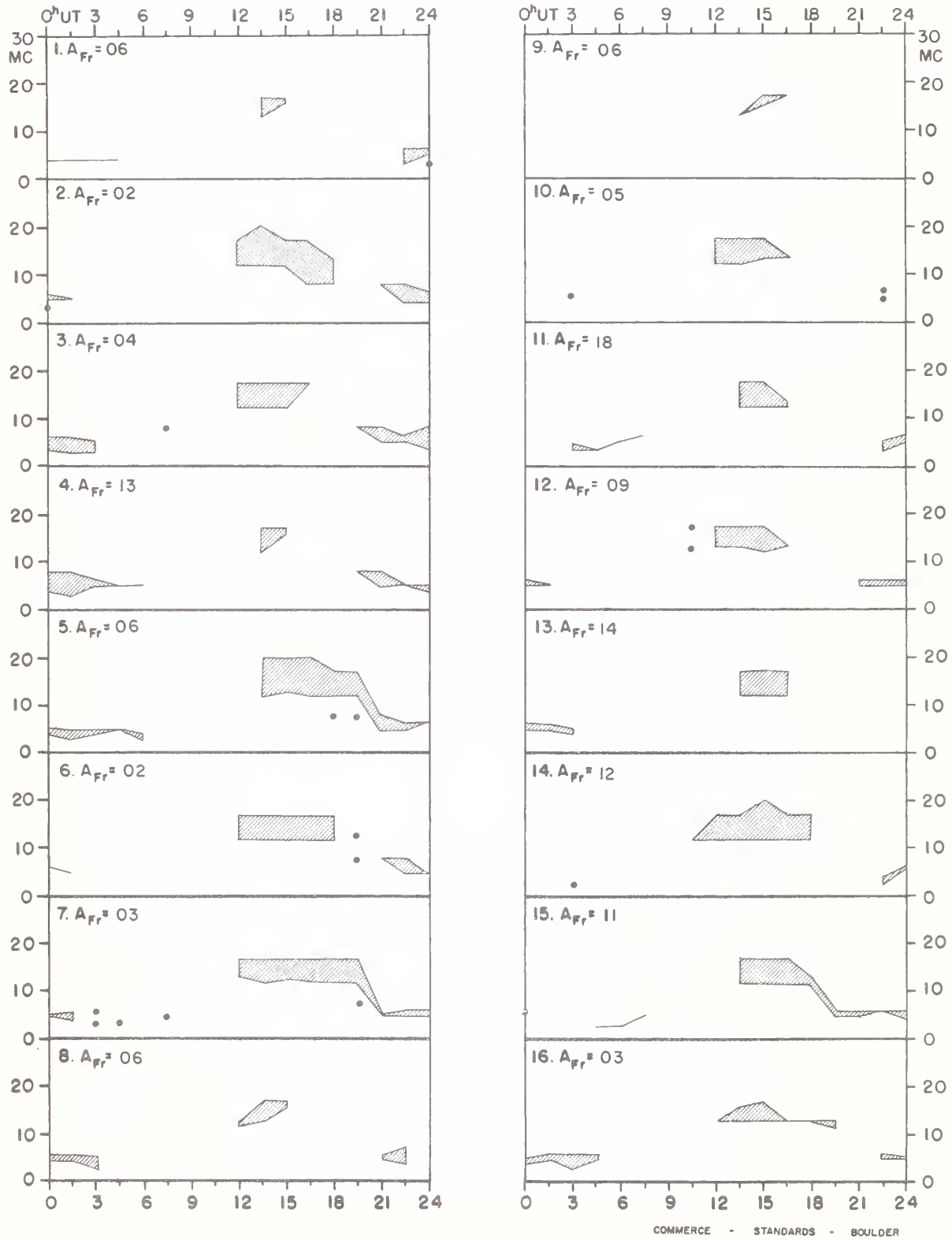


NORTH PACIFIC



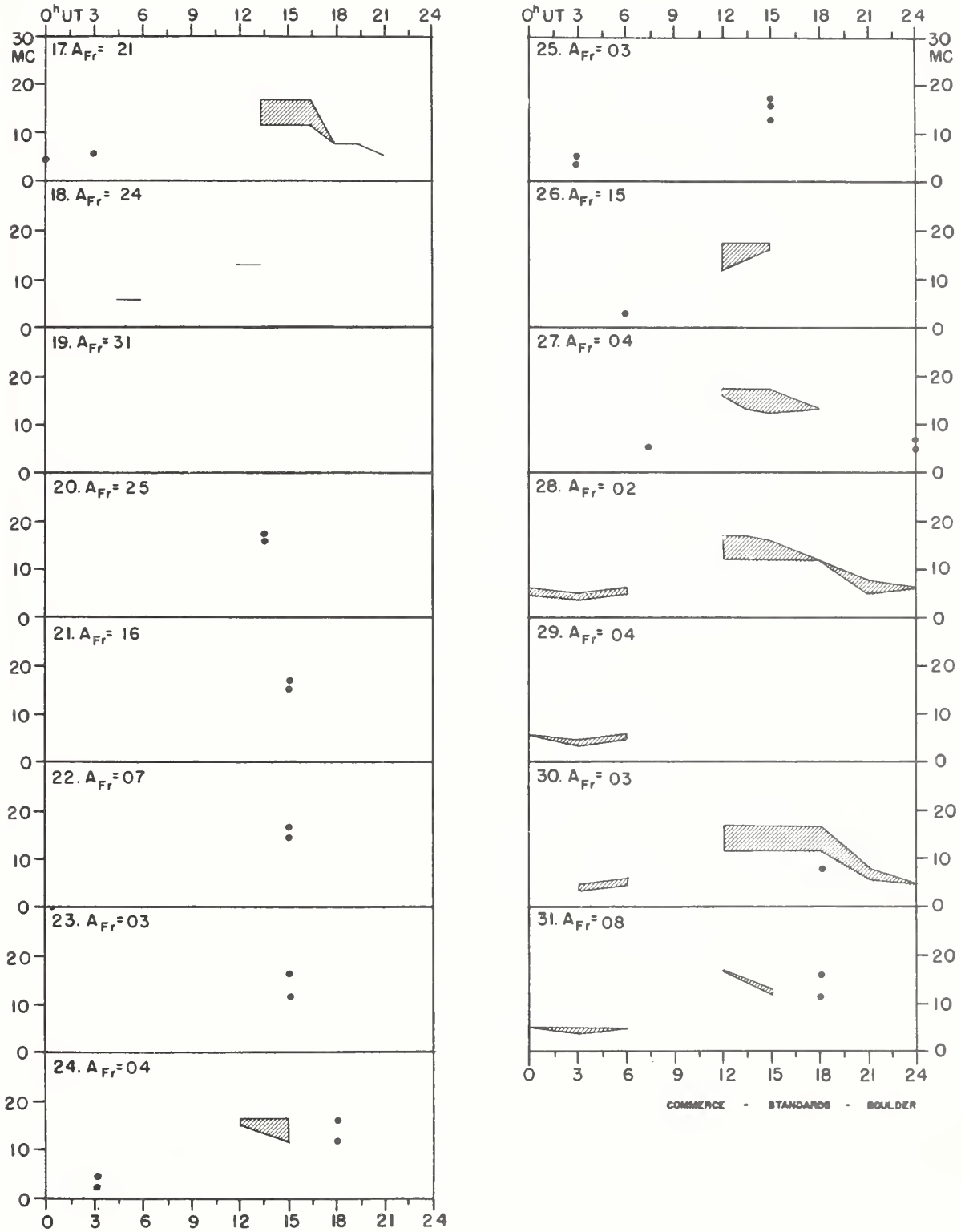
USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

DECEMBER 1962



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

DECEMBER 1962



Adapted from Observations by Deutsches Bundespost

ALERT PERIODS AND SPECIAL WORLD INTERVALS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

JANUARY 1963

Issued January 1963 Day/Time U.T.	Advance Geophysical Alert	No.	World-Wide Geophysical Alert	Special World Intervals
13/1600		191	Magnetic Storm 12/23XX	Start
14/1600		192		Continue
15/1600		193		Finish
31/1600		194	Magnetic Storm 30/0200*	Start

COMMERCE - STANDARDS - BOULDER

*Time of event should have read 30/02XX.