

PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
AUGUST 1958

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

SOLAR - GEOPHYSICAL DATA

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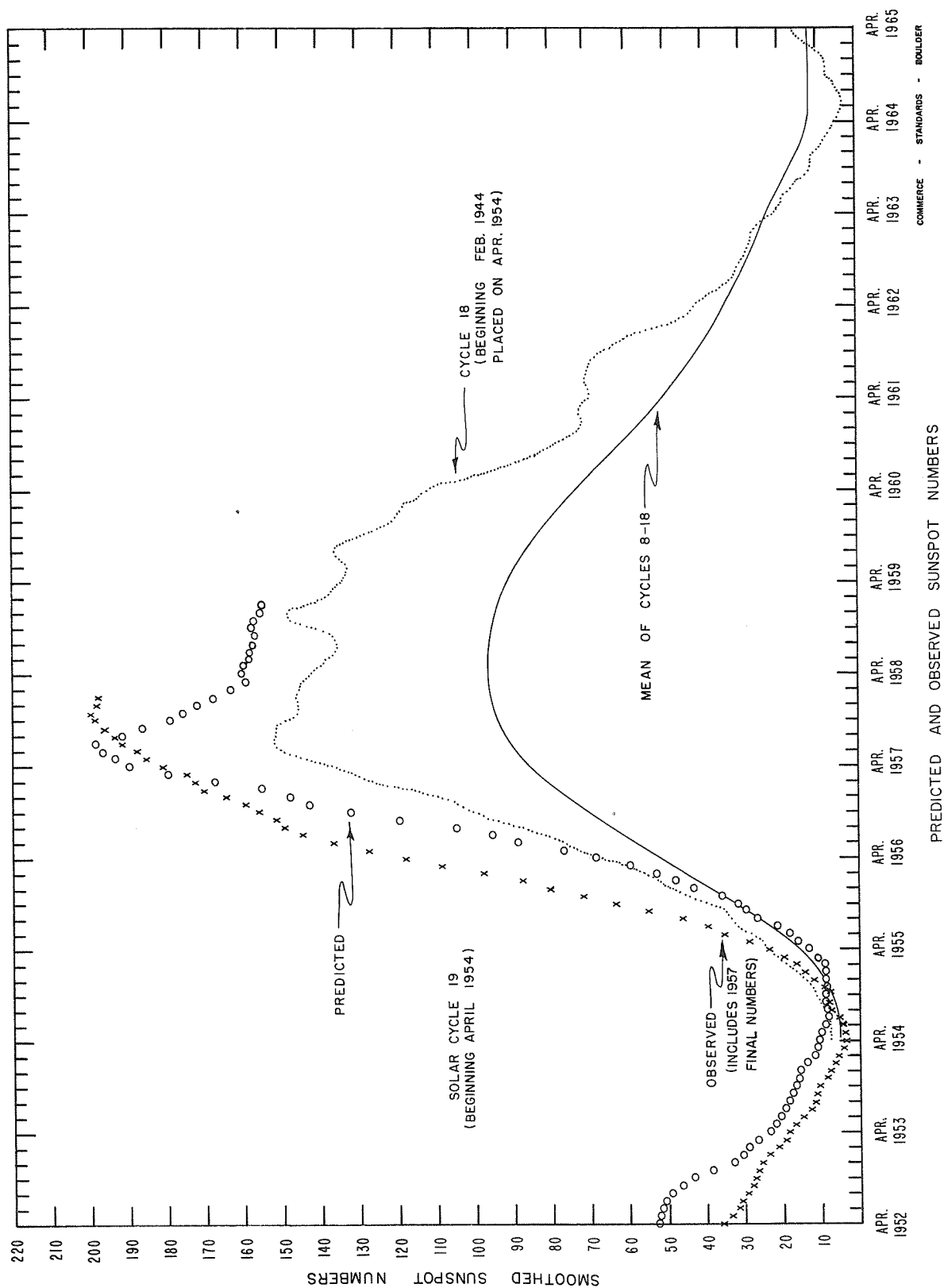
INTRODUCTION

The descriptive text is published quarterly or whenever context of the report is changed. The last issue in which the text appeared was CRPL-F167 Part B issued July 1958

DAILY SOLAR INDICES

June 1958	American Relative Sunspot Numbers R_A'
1	139
2	115
3	148
4	202
5	216
6	185
7	165
8	182
9	161
10	189
11	172
12	162
13	180
14	115
15	86
16	65
17	86
18	96
19	127
20	126
21	135
22	175
23	195
24	164
25	162
26	205
27	175
28	181
29	133
30	121
Mean:	152.1

July 1958	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	180	215
2	164	215
3	190	224
4	213	232
5	222	238
6	240	232
7	231	237
8	218	232
9	207	218
10	219	208
11	165	203
12	137	188
13	149	191
14	143	182
15	142	181
16	144	192
17	160	188
18	181	190
19	196	205
20	192	200
21	208	209
22	184	214
23	178	213
24	170	228
25	179	240
26	213	260
27	238	261
28	250	290
29	274	285
30	280	287
31	263	288
Mean:	197.7	224.1



CALCIUM PLAGE AND SUNSPOT REGIONS

JULY 1958

CMP July 1958	Lat	McMath Plage Number	Return of Region	Calcium Plage Data				Sunspot Data		
				CMP Values Area Int.		History, Age		CMP Values Area Count		History
30.7*	N26	4626	4587	1500	2	$\ell - \ell$	5			
02.1	N12	4627	4586	3100	2.5	$\ell \sim \ell$	3	260	3	$b \sim \ell$
02.3	N25	4628	4591	2000	2.5	$\ell \sim \ell$	3	50	1	$\ell \setminus d$
04.4	N05	4631	New	2500	3.5	$b \sim \ell$	1	560	11	$b \sim \ell$
05.1	S14	4629	4592	1800	2.5	$\ell - \ell$	2	(100)	(1)	$b - d$
05.3	N24	4630	New	9500	3.5	$\ell \vee \ell$	1	1160	35	$\ell \wedge \ell$
05.9	S21	4632	4592	600	2	$\ell \sim \ell$	2	190	4	$b \wedge \ell$
06.2	S07	4633	4592	1200	3	$\ell \sim \ell$	2	40	2	$\ell \wedge d$
07.2	N28	4634	4596	4500	3.5	$\ell \wedge \ell$	2	860	11	$b \wedge \ell$
08.1	S22	4636	4598	4000	3	$\ell \vee \ell$	3	920	7	$\ell \wedge \ell$
08.1	N18	4637	4599	600	2	$\ell \vee \ell$	2	(20)	(1)	$b - d$
09.3	N37	4635	New	7500	3	$\ell \sim \ell$	1			
09.7	S10	4638	4600	300	1	$\ell - \ell$	3			
10.9	N32	4639	New	4500	3.5	$\ell - \ell$	1	550	12	$\ell \setminus d$
11.4	N20	4641	4603	300	2.5	$\ell - \ell$	5			
12.7	S10	4640	4605,6	900	2.5	$\ell \vee \ell$	5	90	2	$b - d$
13.3	S21	4642	4604	2000	3	$\ell \vee \ell$	3	470	2	$\ell \sim \ell$
15.5	N17	4643	4607	2000	3	$\ell \sim \ell$	4	220	1	$\ell - \ell$
16.1	S26	4650	4608	1400	2.5	$\ell \sim \ell$	2	220	2	b / ℓ
16.4	N10	4661	New	(700)	(1)	$b - \ell$	1			
16.8	S13	4653	New	500	3	b / ℓ	1	100	3	$b - d$
17.1	N23	4645	4610,12	800	2	$\ell \sim \ell$	4			
17.4	S17	4660	New	(700)	(3)	$b - \ell$	1			
17.7	N40	4644	4609	1600	2	$\ell \sim \ell$	2	50	1	$\ell \wedge d$
18.3	N09	4646	New	6000	3	$\ell \vee \ell$	1	1410	15	$\ell \sim \ell$
18.9	S20	4648	New	2400	2.5	$\ell \sim \ell$	1	60	3	$\ell \setminus d$
19.0	S05	4647	New	1800	3.5	$\ell \wedge \ell$	1	190	4	$\ell \sim \ell$
20.0	N11	4656	New	400	2	$b - d$	1	20	2	$b - d$
20.7	N22	4651	New	1600	2.5	$\ell \vee \ell$	1	80	20	$\ell \vee \ell$
21.2	N06	4654	4616	500	1.5	$\ell \setminus d$	4	10	1	$b - d$
22.9	S14	4655	4618	5000	3	$\ell \vee \ell$	4	380	15	$\ell \vee \ell$
23.0	N26	4652	4617	1800	2	$\ell \setminus d$	4	20	2	$b - d$
24.3	S06	4671	New	(1200)	(3)	$b - \ell$	1			
25.9	S03	4658	New	1400	2.5	$\ell - \ell$	1	70	2	$\ell \sim d$
26.3	S20	4659	4622	14,000	3.5	$\ell \sim \ell$	2	1790	67	$\ell \sim \ell$
26.9	N20	4657	4623	6600	3	$\ell \wedge \ell$	4	180	8	$\ell \sim \ell$
26.9	N04	4663	4623	900	3	$\ell - \ell$	4	50	1	$b - d$
28.4	N20	4668	New	1500	4	b / ℓ	1	290	7	$\ell \wedge \ell$
29.7	N16	4664	4627	7500	4	$\ell \wedge \ell$	4	530	12	$\ell \wedge \ell$
31.1	N07	4665	4631	6300	3.5	$\ell \wedge \ell$	2	910	13	$\ell \sim \ell$

*June 30.7

COMMERCE - STANDARDS - BOULDER

CORONAL LINE EMISSION INDICES

JULY 1958

CMP July 1958	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	72a	80a	x	x	69	100	26	36	144	187	70	153
2	190	204	41	48	80	100	x	x	84	136	27	69	169	236	77	188
3	251	316	x	x	91	116	x	x	87	104	26	48	208	286	64	96
4	x	x	x	x	133a	215a	x	x	108	127	x	x	180	284	x	x
5	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6	x	x	x	x	x	x	x	x	81	93	x	x	150	300	x	x
7	x	x	x	x	x	x	x	x	109	154	29	61	158	215	86	166
8	x	x	x	x	x	x	x	x	99	144	x	x	181	264	x	x
9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	77a	100a	x	x	99a	210a	x	x	x	x	x	x	x	x	x	x
12	x	x	x	x	x	x	x	x	77	88	x	x	126	150	x	x
13	49	73	12	18	77	100	21	33	x	x	37	59	x	x	30	36
14	95	147	33	51	128	208	35	54	x	x	x	x	99	144	x	x
15	97	140	43	72	66	109	21	36	117	158	x	x	x	x	x	x
16	140	177	52	96	66	98	18	27	72	98	x	x	97	120	x	x
17	138	218	52	84	91	135	18	36	60	100	x	x	81	131	x	x
18	137a	167a	x	x	x	x	x	x	36	81	x	x	73	113	x	x
19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
20	131a	192a	x	x	106a	192a	x	x	87	109	x	x	159	244	x	x
21	144	267	44	72	95	188	62	145	60	122	x	x	148	200	40	72
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
23	112	137	x	x	104	199	x	x	x	x	x	x	x	x	x	x
24	x	x	x	x	x	x	x	x	150	197	51	91	109a	152a	x	x
25	x	x	x	x	x	x	x	x	130	161	44	86	160	196	47	90
26	119	153	x	x	146	236	x	x	113	160	36	61	209	289	39	72
27	x	x	x	x	x	x	x	x	193	284	66	200	214	308	53	72
28	x	x	36a	56a	x	x	43	62	x	x	x	x	x	x	x	x
29	177	221	x	x	120	170	x	x	x	x	x	x	x	x	x	x
30	124	162	x	x	93	167	x	x	69a	91a	x	x	184a	230a	x	x
31	132	192	x	x	76	135	x	x	123a	163a	x	x	179a	220a	x	x

COMMERCE - STANDARDS - BOULDER

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

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE	OBSERVED TIME		LOCATION		DURA- TION — MINUTES	IN- POR- TANCE	OBS. COND.	TIME — UT	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT. — LONG.	APPROX. LAT. — LONG.					MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	
{ SAC PEAK MT WILSON USNRL SAC PEAK HUANCAYO MT WILSON HUANCAYO	03	0007	2042 D	007 W55	4623	35 D	2	2		5.90			Slow S-SWF
	03	0008	2033	027 E25	4630	25	1	3	2015	6.10	7.29	1.00	
	03	0010	2056	030 E24	4630	48	26	2		7.40			
	03	0014	2027	029 E25	4630	32 D	2	3	2015	8.50	11.00	2.90	
{ HAWAII JCCLE GOOD HOPE ZURICH SAC PEAK MT WILSON	03	0009	2318 D	010 W55	4623	189 D	1	2	2024	6.70	10.70	2.40	Slow S-SWF
	04	0142	0200	005 E06	4631	18	1	1	0142	3.30	3.30		
	04	0911	0921	023 E35	4636	10	1	3	0913	2.20	2.10		
	04	1456	1521	020 E03	4630	26	1	2	1456	2.50	3.00		
{ MT WILSON TASHKENT UCCLE UCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	05	0006	0015	044 F08	4656	30	1	1					Slow S-SWF
	05	0341	0432	027 E36	4634	9	1	2					
	05	0935	1135	026 F07	4630	51 D	2	2					
	05	0935	1135	032 E74	4639	120	1	1					
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	05	0935	1135	032 E74	4639	120	1	1					Slow S-SWF
	05	1006	1028	022 E23	4636	22	1	1	1015	2.50	2.20	2.20	
	05	1011	1025	023 E23	4636	14	1	2	1013	2.00			
	05	1337	1400	024 W43	4628	27	16	2	1346	4.40	3.28		
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	05	1340	1407	024 W43	4628	27	1	2	1346	2.26	3.09		Slow S-SWF
	05	1341	1351	024 W44	4628	10	16	2	1346	3.10			
	05	1522	1622	003 W17	4631	60	1	1	1544	2.44	2.56		
	05	1528	1538	030 E50	4634	10	1	1					
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	06	0547	0557	027 E15	4650	5 D	1	3					Slow S-SWF
	06	1255	1332	012 W59	4627	10 D	1	2	1302	1.20	2.20		
	06	1256	1319 D	023 E17	4634	37 D	1	3	1308	1.08			
	06	1711	1726	023 W16	4630	15	1	2	1716	2.03	1.08		
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	06	2106	2140	024 W18	4630	34	1	3	2114	3.80	4.40		Slow S-SWF
	06	2110	2130	024 W25	4630	20	1	3					
	06	2121	2140	020 E05	4630	19	1	3	2130	2.20			
	06	2121	2143	026 F12	4634	22	1	3	2127	3.30	3.60		
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	06	2122	2154	025 F12	4634	32	1	3					Slow S-SWF
	07	0022	0227	028 F07	4634	125	2	3	0029	4.70	5.20		
	07	0026	0104	025 F07	4634	38	16	3	0038	7.98	8.62		
	07	0032	0117 D	025 F07	4634	45	D	3	0109	38.50	38.50		
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	07	0039	0324 D	024 W09	4634	165 D	36	1	0134	3.30	3.60		Slow S-SWF
	07	0040	0214 D	025 W07	4634	18 D	1	3	0156	3.20	2.80		
	07	0156	0214 D	026 W23	4650	18 D	1	1	0156	5.67	7.00		
	07	0417	0425 D	030 E09	4634	8 D	2	1	0417	3.00	3.30		
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	07	0556	0734	029 E08	4634	98 D	16	4	0857	1.70	2.90		Slow S-SWF
	07	0654	0745	029 F06	4634	50	16	2	0915	4.00	4.00		
	07	0657	0718	029 F07	4634	21	1	2	0925	8.00	8.00		
	07	0857	0918	027 W23	4630	21	1	3					
{ HAWAII JCCLE DUNSTON UCCLE { SAC PEAK USNRL MCNATH { SAC PEAK MCNATH MT WILSON	07	0915	0931 D	031 F46	4639	16 D	2	2					Slow S-SWF
	07	0922	0943 D	028 F47	4639	21 D	1	3					
	07	0922	0943 D	028 F47	4639	21 D	1	3					
	07	0922	0943 D	028 F47	4639	21 D	1	3					

STANDARD - SOLAR

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION			IM- POR- TANCE	OBS. COORD.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	MONTH LAT. MER. DIST.	TIME — UT			MEAS. AREA Sq. Deg.	COOR. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %	
{ CAPRI S ZURICH ZURICH ZURICH MT WILSON WENDEL USNRL SAC PEAK MT WILSON USNRL SAC PEAK	07 1024	1109 D		127 F07	4634	1	3	1034	2.00	2.20			
	07 1050 F	1105 D		130 F05	4634	1	2	1050		1.00			
	07 1050 F	1105 D		125 F03	4634	1	2	1050		1.00			
	07 1050 F	1105 D		131 F13	4634	1	2	1050		1.00			
	07 1503	1513 D		100 F45	4631	1	2			5.00		102	
	07 1517 F	1518 D		527 F01	4636	1	2	1635	2.04	2.29		25	
	07 1628	1722 D		130 F05	4634	1	2		2.60				
	07 1630	1705 D		130 F04	4634	1	2						
	07 1716	1734 D		523 F69	4642	1	1	1739	2.04	5.53	2.00	82	
	07 1735	1807 D		522 F59	4642	1	1		3.30			20	
{ MOSCOW ATHENS CAPRI S MOSCOW ATHENS SWEIZ ATHENS CAPRI S UCCLF MOSCOW UCCLF UCCLF SAC PEAK CLIMAX UCCLF MCMATH USNRL FEDERHOFST CAPRI S WENDEL STOCKHOLM R O HEARST UCCLF WENDEL UCCLF UCCLF UCCLF MT WILSON UCCLF ZURICH MT WILSON HAWAII SAC PEAK SAC PEAK HAWAII MT WILSON	08 0525 F	0611 D		119 F39	4630	2	3	0630	6.10	8.30			
	08 0529 F	0637 D		124 F39	4630	2	3	0630	4.50	6.30			
	08 0650 F	0625 D		125 F35	4630	1	3	0603					
	08 0619	0656 D		120 F01	4634	37	1		2.70	3.00			
	08 0619	0715 D		129 F04	4634	54	1						
	08 0619	0934 D		129 F02	4634	167	3		4.70	5.20			
	08 0821 F	0826 D		127 F03	4634	124	4		2.70	3.00			
	08 0822 F	0747 D		126 F03	4634	85	2	0638	3.40	5.00			
	08 0825 F	0758 D		128 F03	4634	93	2	0734					
	08 0841 F	0800 D		125 F04	4634	79	1	0823	3.40				
{ SAC PEAK CLIMAX UCCLF MCMATH USNRL FEDERHOFST CAPRI S WENDEL STOCKHOLM R O HEARST UCCLF WENDEL UCCLF UCCLF UCCLF MT WILSON UCCLF ZURICH MT WILSON HAWAII SAC PEAK SAC PEAK HAWAII MT WILSON	08 0810	0837 D		128 F03	4634	27	1	1143	3.40				
	08 1139	1200 D		125 F03	4634	21	1	1318	2.20				
	08 1315	1330 D		129 F34	4639	15	1		2.50			26	
	08 1332	1412 D		520 F57	4642	40	1	1345	2.20				
	08 1333	1410 D		522 F58	4642	37	1	1338	5.60	6.70			
	08 1333	1411 D		521 F54	4642	36	2	1341	1.32	2.64			
	08 1334	1411 D		521 F56	4642	37	1	1338	1.76	3.45		76	
	08 1336 F	1411 D		522 F50	4642	22	2						
	08 1336 F	1355 D		523 F53	4642	20	2	1344	2.20	4.60			
	08 1336 F	1402 D		523 F53	4642	26	0	1344	7.00				
{ WENDEL STOCKHOLM R O HEARST UCCLF WENDEL UCCLF UCCLF UCCLF UCCLF MT WILSON UCCLF ZURICH MT WILSON HAWAII SAC PEAK SAC PEAK HAWAII MT WILSON	08 1337 F	1353 D		521 F52	4642	16	0	1341	1.80	4.00	2.37	100	
	08 1337 F	1410 D		521 F54	4642	33	0	1344	1.20	2.50			
	08 1340 F	1356 D		521 F54	4642	16	0	1344	2.20				
	08 1416	1425 D		129 F34	4639	9	1	1420	2.20	3.00			
	08 1423 F	1425 D		130 F32	4639	2	1	1420	2.20	3.30			
	08 1419	1423 D		526 F75	4642	4	1	1420	2.20				
	08 1500	1527 D		521 F11	4636	27	1	1520	2.20				
	08 1510	1522 D		525 F12	4634	12	1	1512	2.20				
	08 1545	1630 D		128 F19	4634	45	1	1512	2.20				
	08 1545	1630 D		128 F19	4634	45	1	1512	2.20				
{ UCCLF ZURICH UCCLF MT WILSON UCCLF ZURICH MT WILSON HAWAII SAC PEAK SAC PEAK HAWAII MT WILSON	08 1625	1742 D		521 F14	4636	17	1	1637	4.80	4.00			
	08 1829 F	1840 D		522 F12	4636	11	0	1629	2.20				
	08 1844	1837 D		534 F31	4639	3	0	1805					
	08 2035	2043 D		528 F10	4634	18	1						
	08 2200	2234 D		522 F16	4636	8	1	2222	2.60	3.00		15	
	08 2247	2342 U		526 F09	4634	55	1	2257	2.60			20	
	08 2252	2337 U		534 F25	4639	45	1	2257	1.90				
	08 2254	2326 D		532 F26	4639	32	1	2258	2.90	3.60			
	08 2255	2316 D		533 F30	4639	21	1	2258					
	{ WENDEL UCCLF	09 0624	0651 D		503 F69	4631	27	1	0640	2.20	3.00		
09 0639		0650 D		533 F75	4639	11	1						

COMMENCE - STANDARDS - BOULDER

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG.				MEAS. AREA Sq. Deg.	CONV. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %	
↑ WENDEL	09 0641	0712		N32 E25	4639	31	1			4.00			
UCCLF	09 0705	0729		N33 F23	4639	24	1			4.00			
WENDEL	09 0706	0736 D		N32 E24	4639	30 D	1						
UCCLF	09 0735	0750		S21 E48	4642	15	1			2.20			
UCCLF	09 0821	0847		N30 W19	4634	26	1			2.20			
R O HEARST	09 0845	0925		S22 W20	4636	40	1			3.70		90	
UCCLF	09 0847	0927		S22 W20	4636	40 D	1			8.00			
UCCLF	09 0848	0928		S22 W23	4636	40	2			5.60			
MEUDON	09 0848	0900		S22 W23	4636	40	2			7.00			
CAPRI S	09 0901	0936 D		S23 W19	4636	35 D	1			2.20			
UCCLF	09 1017	1020		S21 W23	4636	8	1			1.80			
UCCLF	09 1137	1144		N32 E19	4639	7	1			2.20			
UCCLF	09 1139	1205		S22 W25	4636	26	1			3.40			
UCCLF	09 1144	1159 D		S22 W21	4636	15 D	1			7.00			
UCCLF	09 1201	1210		N20 F48	4642	9	1			2.20			
UCCLF	09 1204	1216		N28 E11	4639	12	1			2.20			
UCCLF	09 1206	1240 D		S22 W22	4636	34 D	1			7.00			
UCCLF	09 1207	1222		S22 W25	4636	15	1			3.40			
CAPRI S	09 1210	1243 D		S23 W19	4636	33 D	1			1.80			
ZURICH	09 1223	1307		S22 W24	4636	42 D	2			2.20			
UCCLF	09 1300	1337		N33 E16	4639	37	1			8.00			
UCCLF	09 1300	1337		N33 E16	4639	37	1			2.20			
ZURICH	09 1303	1326 D		N33 F19	4639	23 D	1			3.40			
UCCLF	09 1325	1459 D		S22 W25	4636	90	1			7.00			
WENDEL	09 1334	1459 D		S22 W22	4636	85 D	1			4.80			
R O HEARST	09 1336	1415		S22 W23	4636	39	1			8.00			
CAPRI S	09 1337	1415		S23 W20	4636	38	1			2.20		82	
SAC PEAK	09 1339	1500 U		S21 W25	4636	21 D	1			2.20	2.10		
MCNATH	09 1340	1355 U		S22 W27	4636	15 D	1			2.50		18	
STOCKHOLM	09 1340	1405		S22 W23	4636	25	2			3.65		77	
WENDEL	09 1342	1410 D		S21 W25	4636	28 D	1			2.92			
UCCLF	09 1549	1613 D		S22 W24	4636	43	1			2.70			
UCCLF	09 1557	1640		S22 W27	4636	24 D	1			3.20			
UCCLF	09 1610	1626		S22 W27	4636	43	1			7.00			
SAC PEAK	09 1640	1850		S22 W25	4636	16	1			3.65			
UCCLF	09 1658	1709		S22 W27	4636	130	1			2.92			
UCCLF	09 1842	1850		S22 W26	4636	11	1			2.50		17	
MCNATH	09 1842	1850		N04 W60	4631	8	1			2.20		59	
SAC PEAK	09 1940	2017		S20 F43	4642	37	2			2.16		25	
MCNATH	09 1940	2020		S22 E42	4642	34 D	1			5.20		117	
HUANCAYO	09 1945	2019		S18 F40	4642	34 D	1			4.30			
HAWAII	09 1946	2010		S19 E43	4642	24 D	1			6.50			
CLIMAX	09 1958	2014		S21 E44	4642	16 D	1			2.40			
WENDEL	10 0618	0630 D		S23 W40	4636	12 D	1			3.00			
WENDEL	10 0618	0630 D		S21 F37	4642	12 D	1			3.00			
MEUDON	10 0648	0655 D		N30 F06	4639	7 D	1			3.00			
UCCLF	10 0906	1000		S18 W40	4636	54	1			6.00			
CAPRI S	10 0907	1004		S22 W30	4636	57	1			4.80			
UCCLF	10 0908	0944		S23 W33	4636	36	1			2.00			
UCCLF	10 1025	1035		N20 W65	4630	10	1			3.40			
UCCLF	10 1207	1214		N27 W38	4634	7	1			2.60			
MEUDON	10 1334	1349		N20 W40	4634	15	1			5.00			
WENDEL	10 1338	1354 D		S22 W38	4636	6 D	1			5.00			

COMMERCE - STANDARDS - BOLDER

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		MAX. PHASE	LOCATION			DURA- TION MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT	
		START	END		APPROX. LAT.	MER. DIST.	MONTH FLAGE REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH H _z
{ ZURICH WENDEL MT WILSON WENDEL USNRL WENDEL MT WILSON HAWAII SAC PEAK CLIMAX	10 1338	1402			S20 W37		4636	24	1	2	1338		3.00		
	10 1449	1505			S22 W36		4636	16	1				3.00		
	10 1540	1720			N16 E55		4643	100	2						
	10 1609	1631 D			S21 F33		4642	22 D	1				3.00		
	10 1638	1646 D		1642	N25 E87		4644	8 D	1	2	1642	4.45	3.00		
	10 1655	1702 D			S23 W38		4636	7 D	1				3.00		
	10 1918	1957			N29 W40		4634	39	1						
	10 2028	2040		2028	N17 F58		4643	12 D	1	2	2028	2.70	5.10		18
	10 2132	2300 U		2202	N14 E55		4643	88	2	2	2211	6.20			
	10 2158	2233		2211	N12 E57		4643	35 D	1			3.10			
{ MEUDON MEUDON CAPRI S R O HEARST ZURICH ZURICH ATHENS WENDEL UCCLF UCCLF STOCKHOLM ARCTURI WENDEL WENDEL UCCLF WENDEL SAC PEAK USNRL	11 0725	0734 D			S21 W48		4636	9 D	1				3.00		
	11 0730	0830			S15 E30		4642	60	1				7.00		
	11 0741	1200		0837	S26 W36		4642	259	26				18.00		
	11 0744	1020			S25 E27		4642	156	26	3	0840	8.00	10.00		
	11 0750	0930 D		0812 U	S23 F30		4642	100 D	26			5.90		3.27	175
	11 0752	1015			S25 F24		4642	143	3	3	0836		7.80		
	11 0755	0813			S25 F29		4642	18	1	3	0905		11.00		
	11 0755	0835			S24 E24		4642	40 D	26	3	0755	7.50	2.00		
	11 0757	1055 D		0815	S25 E28		4642	177 D	2	3			12.00		
	11 0825	1052		0830	S25 F28		4642	147 D	26	2	0830	9.00			
{ UCCLF UCCLF UCCLF STOCKHOLM ARCTURI WENDEL WENDEL UCCLF WENDEL SAC PEAK USNRL	11 0825	1052		0840	S25 F28		4642	147 D	26		0840	10.20			
	11 0825	1052		0910	S25 F28		4642	147 D	3		0910	12.00			
	11 0832	1023 D			S28 F30		4642	111 D	26		0915	6.80	9.50		
	11 0854	1052 D			S26 F27		4642	118 D	2	4	1003	6.60	8.60		
	11 0855	0915 D			N13 W60		4630	20 D	1				3.00		
	11 1034	1047 D		1740	S21 W49		4636	14 D	1	3	1040	2.20			
	11 1034	1058		1740	S21 W48		4636	24 D	1				3.00		
	11 1415	1439 D			S21 W50		4636	24 D	1	2		2.40			24
	11 1637	1707		1642	N25 W80		4630	30	1	2	1642	4.68	3.42		72
	11 1640	1655		1642	N25 W81		4630	15	1						
{ MEUDON CAPRI S ONDREJOV ATHENS UCCLF UCCLF VEDERHORST CAPRI S WENDEL ONDREJOV UCCLF WENDEL UCCLF MCMAH WENDEL UCCLF HUANCAYO SAC PEAK	12 0753	0825		0758	S22 W75		4636	32	2	3	0803	1.00	24.00		
	12 0755	0811			S24 W70		4636	16	16				3.20		
	12 0757	0811			S21 W70		4636	14 D	2						
	12 0758	0825			S23 W70		4636	27 D	2	3		2.50	7.80		
	12 0800	0806		0900	S22 W72		4636	6 D	16		0800	3.40	4.80		
	12 0811	0823		0917	S26 W68		4636	12 D	2	3	0817	4.80	6.70		
	12 0814	0825			S24 W70		4636	11 D	1						
	12 0815	0825 D			S25 W70		4636	25 D	1	3	0818	1.50	4.80		
	12 0816	0824			S26 W66		4636	8 D	16				7.00		
	12 0817	0824			S24 W66		4636	7 D	2						
{ UCCLF WENDEL UCCLF WENDEL UCCLF MCMAH WENDEL UCCLF HUANCAYO SAC PEAK	12 1001	1008		1104	N30 W59		4634	7	1	3	1004	2.20	2.60		
	12 1020	1056 D			S22 W65		4636	36 D	1				3.00		
	12 1128	1137		1130	S27 W75		4636	9	1	3	1130	2.20	3.30		
	12 1129	1145		1140	S25 W80		4636	16	1	1	1140	4.65	2.51		
	12 1130	1132 D			S26 W68		4636	2 D	1				4.00		
	12 1137	1145		1139	S27 W75		4636	8	16	3	1139	3.40	5.10		
	12 1456	1502		1458	S25 W71		4636	6	16	1	2157	1.70	5.90		
	12 2317	2330 D		2330	N26 W78		4634	13 D	1	1		2.70		3.00	12
	13 0551	0602 D			N09 F68		4646	11 D	1				3.00		
	13 0637	0710 D			S13 F00		4640	33 D	1				3.00		

COMMENTS - STANDARDS - BELLEST

S-SWF

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JUL Y 1953	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	LAT.	LONG.	REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	MAX. INT. %.
{ WENDEL MCWATH SAC PEAK USNR WENDEL WENDEL WENDEL SAC PEAK MT WILSON SAC PEAK	13	0935	0947 D	525 W86	4636	4636	12 D	1	1	1409	1.92	3.00		76
	13	1430		522 W86	4642		23	1	1	1448	1.14	2.15		64
	13	1412	1515	N07 E63	4646		55	1	1		2.10	2.45		15
	13	1457	1515	N08 E63	4646		68	1	2	1508	1.36	3.00		85
	13	1500	1524	N08 E64	4646		24	1	2			4.00		
	13	1533	1549 D	N07 E62	4646		16 D	1				4.00		
	13	1613	1628 D	S20 W08	4642		15 D	1				5.00		
	13	1614	1634 D	N07 E61	4646		20 D	1	2		3.50			17
	13	1750	1807	N07 E61	4646		17	1						
	13	1949	2314	N09 E60	4646		275	1	2		2.70			17
{ ZURICH UCCLE UCCLE MEUDON MCWATH STOCKHOLM MCWATH MT WILSON WENDEL SAC PEAK MCWATH MCWATH SAC PEAK SAC PEAK HAWAII	14	0810	0820 D	N08 E53	4646		10 D	1	1	0810		5.00		
	14	1046	1054	N10 E51	4646		8	1	3		2.20			
	14	1125	1137	S20 W18	4642		30 D	1	3	1137	4.80			
	14	1125	1226	S21 W17	4642		61	1	1			7.00		
	14	1129	1147 D	S19 W18	4642		18 D	1	2	1134	1.87			75
	14	1131	1200	S21 W19	4642		29 D	1	1		1.133			
	14	1346	1425 D	N06 E52	4646		39 D	1	2	1350	1.39	2.17		69
	14	1405	1454	N09 E50	4646		49	1				3.00		
	14	1503	1523 D	N08 E51	4646		20 D	1	2		3.75			14
	14	1647	1700	N09 E47	4646		13	1	1	2008	1.70	2.54		68
{ MEUDON MOSCOW CAPRI S ZURICH WENDEL UCCLE WENDEL MEUDON ZURICH MCWATH USNR SAC PEAK MCWATH SAC PEAK HAWAII	14	2008	2014 D	N06 E49	4646		16 D	1	1	2050	1.46	2.18		
	14	2051	2103	N06 E49	4646		12	1	1		3.10			17
	14	2232	2325	S18 W26	4642		53	1	2		2.10			26
	14	2235	2242	S04 E54	4647		47	1	2	2240	3.70	6.20		
	14	2236	2254	S03 E53	4647		18	1	2					
	15	0108	0122	S25 E59	4650		14	1	2	0112	2.90			
	15	0137	0231	S04 E55	4647		54	2						
	15	0807	0815	N07 E37	4646		8 D	1				20.00		
	15	0914	1120 D	N10 E40	4646		126	2						
	15	0918	1000	N09 E40	4646		42	1	3	0920	1.80			
{ MEUDON CAPRI S ZURICH WENDEL UCCLE WENDEL MEUDON ZURICH MCWATH USNR SAC PEAK MCWATH SAC PEAK HAWAII	15	0919	0933 D	N09 E39	4646		70 D	1	3	0919		2.50		
	15	0920	1046 D	N08 E40	4646		14 D	2	3			6.00		
	15	0927	0940	N08 E41	4646		86 D	2	1			11.00		
	15	1235	1314 D	N08 E38	4646		13 D	1	1	0928	2.20			
	15	1244	1315	N10 E37	4646		39 D	1				6.00		
	15	1344	1310	N10 E37	4646		49	1	3			4.00		
	15	1431	1440 D	N08 E37	4646		26 D	1	3	1244		6.00		
	15	1431	1709 D	N08 E37	4646		9 D	1	1	1434	1.95			72
	15	1706	1709 D	N07 E37	4646		3 D	1	1	1706	1.76			
	15	1731	2000 D	N08 E35	4646		29 D	1	3	1734	1.24	1.53		132
{ MEUDON CAPRI S ZURICH WENDEL UCCLE WENDEL MEUDON ZURICH MCWATH USNR SAC PEAK MCWATH SAC PEAK HAWAII	15	1732	1820	N08 E35	4646		48	1	2		2.30			18
	15	1859	1921 D	N07 E37	4646		22 D	1	1	1906	1.96	2.39		
	15	2025	2130	N07 E35	4646		65 D	1	1	2050	2.60	3.07		92
	15	2330	2345	S27 W38	4642		15	1						
	16	0123	0135 D	N08 E32	4646		10 D	1	1	0123	5.67	6.63	1.39	120
	16	0913	0931 D	S24 W08	4650		18 D	1	2			4.00		
	16	1124	1151	N08 E24	4646		27 D	1	2	1124	1.96	2.16		68
	16	1211	1330	N08 E25	4646		79	1	2	1215	1.94	2.17		66
	16	1926	2030	N08 E22	4646		64 D	1	2	1927	1.63	1.76		76
	16			N08 E22	4646									

COMMERCE - STENOGRAPH - BOULEZ

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS		MAX. WIDTH H _g	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. MER. DUR.				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		
MCNATH	16	1924 F	2135 D	S23 W17	4650	129 D	1	2	1927	1.47	1.70	65	SLOW S-SWF
MCNATH	16	2048	2135 D	S22 F23	4648	47 D	1	2	2056	1.71	2.09	79	
MT WILSON	16	2140	2147	N10 E14	4646	7	1						
MT WILSON	16	2241	2256	N10 E14	4646	15	1						
ZURICH	17	1356	1413 D	N23 E41	4651	17 D	1	1	1356	1.71	5.00	65	
MCNATH	17	1358	1440	N24 E41	4651	42	1	3	1404		2.34		
MCNATH	17	1407 F	1438	N20 E45	4651	31 D	1				4.00		
MCNATH	17	1407 F	1438	N28 E42	4651	31 D	1				3.00		
MCNATH	17	1615	1635 D	S07 F16	4647	20 D	1	2	1625	2.30	2.40	59	
UCCLE	17	1633	1647	N21 F43	4651	14	1	3	1637	2.00	2.82	61	
MCNATH	17	1634	1705	N16 F42	4651	31	1	1	1640	2.00	2.62	135	SLOW S-SWF
MCNATH	17	1634	1705	N16 F42	4651	31	1	1	1640	2.00	2.62	135	
USNRL	17	1959	2035 D	N09 F08	4646	36 D	16	2	2004	1.98	2.00	77	
MCNATH	17	2001 F	2029 D	N08 F07	4646	28 D	1	1	2010		2.26	120	
MITAKA	18	0105	0108 D	N15 W38	4643	3 D	1	1	0103	.89	2.06	131	
MITAKA	18	0520 F	0538 D	S21 F06	4648	18 D	1	1	0525	1.84	3.00	131	
MITAKA	18	0536 F	0557 D	N06 W02	4646	21 D	1				6.00		
OTITAWA	18	1236	1243	S14 F67	4655	7	1				4.53	146	
WENDEL	18	1722	1756	S22 F01	4648	34	1	1	2405	.89	3.31	183	
MITAKA	18	2353 F	0036 D	S17 F58	4655	43 D	1	1	2405	2.78	3.16		
MITAKA	18	2355 F	0011 D	N21 E22	4651	16 D	16	1					S-SWF
MT WILSON	19	0106	0118	N23 E21	4651	12	1	3		1.70	2.10		
ATHENS	19	0545	0620	S22 W51	4650	35	1	3		1.30	2.30		
ATHENS	19	0649	0702	S15 F54	4655	13	1	3	1005	2.80	4.00		
UCCLF	19	1032	1014	S21 W52	4650	12	16						
WENDEL	19	1034 F	1020 D	S18 W53	4650	17 D	1						
UCCLF	19	1045	1055	N07 W15	4646	10	1	3	1048	2.80	5.00	76	
WENDEL	19	1045	1102	N06 W14	4646	16	1	1					
MCNATH	19	1232	1245	S16 F51	4655	15	1	1	1235	1.22	5.00	69	
WENDEL	19	1232	1253 D	S16 F50	4655	21 D	1	1					
MCNATH	19	1247 F	1437 D	S23 W58	4650	110 D	2	1	1335	3.41	6.48	100	S-SWF
MCNATH	19	1315	1445	S21 W55	4650	90	2	2	1335	.68	1.34		
USNRL	19	1317	1327	S23 W55	4650	10	1	2	1318	.68	1.34		
WEDDERBOST	19	1330	1347 D	S23 W51	4650	17 D	2						
CAPRI S	19	1332 F	1424 D	S23 W52	4650	52 D	1	3	1338	2.40	4.80	105	
USNRL	19	1332 F	1510	S23 W52	4650	98 D	16	2	1336	2.15	4.45		
HUANGAYO	19	1340 F	1521 D	S23 W53	4650	47 D	2	3	1342	6.50	12.00	62	
MCNATH	19	1515	1621 D	S20 W53	4650	67 D	1	1	1516	6.65	7.23	92	
MCNATH	19	1905 F	1942 D	N25 F13	4651	37 D	26	3	1914	9.04	9.89	167	
USNRL	19	1905 F	2030 D	N23 F14	4651	85 D	26	3	1908	9.30	10.00	72	SLOW S-SWF
MCNATH	19	1923 F	2015 D	N17 E12	4651	52 D	26	1	1923	2.44	2.68		
HAWAII	19	1955 F	2027 D	N18 E12	4651	32 D	1	1	1958		8.20		
MCNATH	20	0540 F	0633 D	S22 W66	4650	53 D	2	4		2.80	7.00		
ATHENS	20	0550 F	0558	S22 W62	4650	8 D	1						
ONDRE JOV	20	0602 F	0732 D	S23 W64	4650	90 D	16						
WENDEL	20	0636 F	0712	S22 W61	4650	36	2						
ONDRE JOV	20	0636 F	0747 D	S23 W62	4650	71 D	3	4	0645	5.70	15.20		
ATHENS	20	0642 F	0715 D	S22 W62	4650	33 D	1	3		1.80	4.70		
CAPRI S	20	0738	0818 D	S23 W65	4650	40 D	1						
WENDEL	20	0741 F	0803 D	S02 W10	4647	22 D	1				3.00		

CONTINUED - SEPTEMBER

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME			LOCATION			DUR- ATION — MINUTES	IM- POR- TANCE	CNR COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT			
		START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	MAGNITUDE FLARE REGION				TIME UT	MEAS. AREA Sq. Deg.	CNR. AREA Sq. Deg.	MAX. WIDTH in		MAX. INT. %		
ZURICH ZURICH {MCNATH ONDREJOV CAPRI S ZURICH ZURICH {ONDREJOV ZURICH USNRL {SAC PEAK MCNATH MT WILSON CLIMAX MT WILSON	20	1020	F	1036	N12	N26	4646	16	D	2	1020	1.00			S-SWF			
	20	1036	F	1049	S22	N66	4650	13	D	2	1036	8.00				115		
	20	1205	F	1245	S22	N70	4650	42	D	3	1215	4.71	14.75				S-SWF	
	20	1205	F	1257	S22	N66	4650	52	D	26								81
20	1210	F	1224	S22	N65	4650	14	D	1	1217	1.50	4.20		25				
20	1211	F	1223	D	S22	N69	4650	12	D	26	1211	10.00				81		
20	1217	F	1224	N24	N12	4646	7	D	1						1528			
20	1221	F	1223	D	N12	N27	4646	2	D	1	1221	1.00						6.40
20	1325	F	1325	S23	N65	4650	50	D	1	1745	2.46			2.60				
20	1527	F	1547	S13	F23	4655	25	D	3	1530	3.41	3.85				2.60		
20	1527	F	1600	S10	F25	4655	38	D	2	1530	3.41	3.85			3.85			
20	1527	F	1542	S13	F23	4655	15	D	2	1530	3.41	3.85					3.85	
20	1522	F	1555	N23	F24	4652	33	D	2	1528	6.40			3.85				
20	2151	D	2215	D	N09	N35	4646	24	D	1								3.85
{MEUDON ATHENS ZURICH STOCKHOLM MCNATH MCNATH HAWAII MCNATH {MT WILSON	21	0559	F	0640	S14	F14	4655	41	D	16						S-SWF		
	21	0600	F	0622	S16	N13	4651	22	D	1							3.00	
	21	0941	F	0946	N20	N08	4651	5	D	1	0941	3.00	10.00		3.00			
	21	1216	F	1223	S21	N75	4650	7	D	1	1217	7.70	3.00					2.00
21	1413	F	1430	N23	N10	4651	17	D	2	1416	2.00	2.10		2.00				
21	1720	F	1740	N12	F60	4657	20	D	1	1723	2.00	3.60				2.00		
21	1910	F	1938	N21	N14	4651	28	D	3	1914	3.40	3.60			3.40			
21	1910	F	2000	N25	N10	4651	50	D	2	1913	3.00	3.18					3.00	
21	1912	F	1940	N18	N14	4651	28	D	1					3.18				
SAC PEAK HUANCAYO USNRL MT WILSON	22	1440	F	1527	S11	N03	4655	47	D	1								S-SWF
	22	1609	F	1702	S15	N67	4660	53	D	3	1611	3.80	2.30		2.20	15		
	22	1917	D	1921	S16	F85	4659	4	D	1	1919	6.68	2.42			2.42		
	22	2001	F	2013	S12	N02	4655	12	D	1					2.42			
TASHKENT {TASHKENT ATHENS UCCLE UCCLE {UCCLE UCCLE UCCLE {MEUDON MEUDON UCCLE {CAPRI S USNRL {CLIMAX USNRL MEUDON NEDERHORST MCNATH STOCKHOLM {WENDEL HUANCAYO HUANCAYO MCNATH	23	0505	F	0600	S17	F58	4659	55	D	16							S-SWF	
	23	0519	F	0605	S10	F40	4658	46	D	26								4.00
	23	0545	F	0618	D	S06	F37	4658	33	D	16			5.10		5.10		
	23	0823	D	0835	D	S15	F40	4659	12	D	1	0825	2.20					
23	1018	F	1045	D	N23	N35	4651	27	D	16	1026	3.40			2.20			
23	1045	F	1120	D	S02	N62	4647	35	D	3	1047	2.20					2.20	
23	1045	F	1120	D	S02	N62	4647	35	D	1						2.20		
23	1053	F	1117	D	S11	N19	4655	24	D	3	1056	2.20						2.20
23	1055	F	1122	D	S15	N17	4655	27	D	1					2.00			
23	1127	F	1315	D	N20	F40	4657	108	D	26			25.00				25.00	
23	1131	F	1200	D	N20	F42	4657	29	D	3	1144	14.70				14.70		
23	1132	F	1450	D	N19	E41	4657	198	D	2	1153	8.00	11.20	1.00				85
23	1206	F	1327	D	N20	F41	4657	81	D	2	1209	7.68	10.77		7.68			
23	1208	F	1441	D	N20	F49	4657	123	D	2	1402	6.40					6.40	
23	1259	F	1630	D	N15	F35	4657	211	D	2	1335	6.21	7.66	2.00		98		7.66
23	1300	F	1950	D	N20	F35	4657	50	D	26			30.00			30.00		
23	1327	F	1357	D	N20	F35	4657	30	D	2					9.70			
23	1338	F	1500	D	N10	F35	4657	22	D	26	1339	8.00	9.70				8.00	
23	1352	F	1437	D	N17	F36	4657	45	D	2	1354	10.00	12.00					10.00
23	1431	F	1511	D	N16	F31	4657	40	D	16			7.00			7.00		
23	1555	F	1600	D	S16	N90	4650	5	D	3	1557	1.50		2.80	2.80			
23	1944	F	2001	D	S14	N22	4655	17	D	3	1946	1.60	5.20				5.20	
23	1944	F	2010	D	S13	N24	4655	26	D	2	1947	3.42	4.00					4.00
23	1944	F	2010	D	S13	N24	4655	26	D	2	1947	3.42	4.00			4.00		

CONTINUOUS - OBSERVATIONS

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURATION MINUTES	IM- FOR- TANCE	OBS. COND.	TIME		MEASUREMENTS		PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG. REGION				— U T		MEAS. AREA Sq. Deg.	COORD. AREA Sq. Deg.	
HAWAII	23	1945		S15 W22	4655	10	1	2	1948		2.90	3.40	
MT WILSON	23	1947	1957	S12 W20	4655	13	1						
MT WILSON	23	2330	2343	N15 W42	4651								
UCCLE	24	0910	0933	S15 F25	4659	23	1	2	0913		2.20		
UCCLE	24	1054	1101	M28 W45	4651	7	1	2	1057		2.20		
UCCLE	24	1106	1110	S15 E22	4659	4	1	2	1107		2.20		
UCCLE	24	1147	1204	S15 E22	4659	17	1	2	1150		3.40		
MCMATH	24	1155 E	1215 D	S13 E25	4659	20	1	2	1210		2.75		
MCMATH	24	1313	1350	S13 E25	4659	37	1	2	1318		1.78		76
OTTAWA	24	1315	1327 D	S08 E25	4658	12	1	2			2.20		18
SAC PEAK	24	1315	1337	S15 E23	4659	22	1	2					
ONDREJOV	24	1318 E	1335	S16 E26	4659	17	1	2					
MCMATH	24	1418	1430	S13 E25	4659	12	1	2	1421		1.78	2.05	77
OTTAWA	24	1420	1426	S07 E25	4658	5	1						
OTTAWA	24	1423	1450	S07 E27	4658	27	1						
MCMATH	24	1540	1640	S13 F22	4659	60	1	2	1550		2.28		
HUANCAYO	24	1542 E	1635 D	S14 E12	4659	53	1	2	1558		1.90	2.10	97
SAC PEAK	24	1544 F	1642 U	S15 E22	4659	58	1	2			2.10		22
ONDREJOV	24	1548 E	1603	S16 E25	4659	15	1	2					
MCMATH	24	1725	1745	N04 E90	4665	20	1	2	1732				
MCMATH	24	1756	1830	S01 E90	4665	34	1	2	1803		3.50		16
SAC PEAK	24	1807 E	1832 E	S01 E90	4665	25	1	2	1800		2.02	2.30	69
MCMATH	24	1757	1815	S13 E20	4659	18	1	2	1841		1.13	1.32	100
USNRL	24	1838	1904 D	S15 E22	4659	26	1	2	1938		1.95	2.20	69
MCMATH	24	1934 E	1945 D	S13 E20	4659	11	1	2					
SYDNEY	25	0040	0130	N06 W80	4646	50	2	4			1.20	6.60	G-SWF
ATHENS	25	0548 E	0745 D	N08 F80	4665	117	2	4			1.50	6.10	
ATHENS	25	0628 E	0654 D	N01 F76	4665	26	1	4			3.00	7.00	
WENDEL	25	0949 E	1157 D	N22 W62	4651	68	1						
WENDEL	25	1016 F	1033 D	S13 F10	4659	19	1						
WENDEL	25	1117 E	1146 D	S18 F06	4659	23	1						
UCCLE	25	1122	1140	S13 E05	4659	18	1	3	1127		2.20		
OTTAWA	25	1122	1148	S16 F06	4659	28	1						
SAC PEAK	25	1332	1400	S16 F02	4659	28	1	1			4.20		20
USNRL	25	1336	1408	S16 F03	4659	32	1	2	1348		1.36		127
NEDEHORST	25	1338	1350	S04 F07	4659	12	2						
WENDEL	25	1338	1404	S16 F05	4659	26	1						
STOCKHOLM	25	1339	1358	S17 F03	4659	19	1						
CAPRI S	25	1340	1356	S16 E03	4659	16	1	3	1340		3.00		
UCCLE	25	1544	1703 D	S15 F06	4659	79	1	2	1343		2.00		
USNRL	25	1547	1554	S13 F08	4659	7	1	2	1554		3.80	3.91	100
UCCLE	25	1856	1954	S17 F01	4659	58	1	2	1551		1.28		
USNRL	25	1904 E	1904 D	S16 E02	4659	41	1	2	1502		1.33		106
SAC PEAK	25	1919	2000 D	S16 W01	4659	50	1	2	1923		1.24	1.34	18
USNRL	25	1925 F	2015 D	S15 F00	4659	37	1	2	1933		3.09	3.31	105
MCMATH	25	2053	2130	S14 W02	4659	16	1	1	2058		4.39	4.74	76
HAWAII	25	2054	2110	S17 W00	4659	16	1	3	2056		2.40	2.60	
NIZAMIAH	26	0301 F	0303 D	S17 W05	4659	2	1	2	0301		2.43	2.63	S-SWF
CAPRI S	26	0627	0654	S15 W05	4659	27	1	3	0636		4.50	4.70	S-SWF
MOSCOW	26	0628	0700	S16 W07	4659	32	2						

COURTESY - STANDARDS - BOULDER

JULY 1958

ВЕРИТЕЛИ

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.				MCARTH PLACE REGION	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g		MAX. INT. %
{CAPRI S SCHAUINS ONDREJOV SCHAUINS ZURICH ZURICH ZURICH ZURICH STOCKHOLM ONDREJOV	28	0810	0825	S17 W36		4659	15	1	3	0813	2.00	3.00		Slow S-SWF	
	28	0810	1016 D	S14 W36		4659	126 D	2						Slow S-SWF	
	28	0904	0912	S15 W34		4659	7 D	2							
	28	0905	0912 D	S15 W19		4659	7 D	1							
	28	0945	0952	S16 W35		4659	7 D	1	2	0945		2.00			
	28	0945	1006	S17 W68		4655	21 D	1		0945		2.00			
	28	1000	1010	S14 W39		4659	10	1	2	1000		8.00		S-SWF	
	28	1014	1051 D	S14 W37		4659	37 D	26	2	1040		2.10			
	28	1017	1029	S15 W35		4659	12 D	1		1017	1.50				
	28	1018		S18 W35		4659		2							
{CAPRI S ZURICH ZURICH ZURICH ZURICH ZURICH USNRL USNRL UCCLE UCCLE USNRL MCMATH ONDREJOV ZURICH WENDEL ZURICH WENDEL USNRL WENDEL CLIMAX	28	1214	1306	S25 W72		4655	52	1	3	1222	1.20	3.20		S-SWF	
	28	1227	1335	S15 W72		4655	68 D	1	2	1227		5.00			
	28	1227	1300	N13 F15		4664	33 D	1	2	1227		5.00			
	28	1227	1400 D	S14 W35		4659	93 D	2	2	1251		9.00			
	28	1304	1316	N22 W00		4668	10 D	1	2	1306		3.00			
	28	1313	1341 D	S18 W70		4655	28 D	1	1	1315	1.07	3.44		68	
	28	1313	1354	S15 W38		4659	41 D	1	1	1313	3.04	4.16		93	
	28	1322	1341	S14 W30		4659	19	1	2	1327	2.20				
	28	1412	1500	S13 W42		4659	48	1	2	1415	2.20				
	28	1414	1458	S15 W40		4659	44	16	1	1419	1.70	2.38	1.00	107	S-SWF
{MCMATH ONDREJOV ZURICH WENDEL ZURICH ZURICH WENDEL USNRL WENDEL CLIMAX	28	1446		S13 W35		4659		1							
	28	1457		S18 W01		4668		1							
	28	1510	1522	N20 W01		4668	12 D	1	2	1510		2.00			
	28	1525	1606 D	N18 W03		4668	41 D	16							
	28	1510	1525 D	S13 W38		4659	15 D	1	2	1515		5.00			
	28	1525	1612 D	S15 W39		4659	47 D	1							
	28	1621	1704	S15 W40		4659	43	1	2	1621	1.04	1.62	1.00	126	
	28	1745	1755	S15 W09		4659	10 D	1				3.00			
	28	1814	1824	S13 W41		4659	10	1		1818	2.20				
	{MITAKA ONDREJOV WENDEL WENDEL WENDEL CAPRI S R O HEARST MCMATH USNRL CAPRI S R O HEARST OTTAWA R O EDIN ONDREJOV MCMATH USNRL USNRL USNRL CLIMAX MCMATH USNRL ONDREJOV USNRL	29	0303	0359 D	S14 W43		4659	56 D	3	1	0303	9.08	12.50	14.40	222
29		0748	0757 D	S14 W40		4659	9 D	2							
29		0925	0950	S13 W49		4659	25 D	1				4.00			
29		0925	1000	S14 W29		4659	33 D	1				4.00			
29		1000	1023 D	S07 F79		4670	25 D	16				5.00			
29		1130	1236	N15 E00		4664	66	2	3	1144	7.50	7.80			
29		1130	1245	N16 E04		4664	75	2	3	1137	5.21	5.26	2.08	77	
29		1204		N15 F05		4664		26							
29		1414	1529	S17 W47		4659	15	16	2	1421	2.26	3.62	2.00	141	
29		1418	1505 D	S14 W43		4659	47 D	1	3	1421	3.20	4.50			
{R O HEARST OTTAWA R O EDIN ONDREJOV MCMATH USNRL USNRL USNRL USNRL CLIMAX MCMATH USNRL ONDREJOV USNRL	29	1418	1512	S13 W46		4659	54	16	3	1427	1.60	2.60	3.46	115	Slow S-SWF
	29	1418	1522 D	S17 W45		4659	64	2	1	1424	4.50	6.90	2.29		
	29	1420	1455 D	S15 W44		4659	35 D	16							
	29	1428	1453 D	S15 W40		4659	15	2							
	29	1428	1455 D	S14 W45		4659	27 D	1							
	29	1547	1608	S18 W40		4659	21 D	1	1	1551	1.02	1.43		118	
	29	1548	1713	S07 E69		4670	85	1	2	1551	1.16	3.17		70	
	29	1647	1750	N03 F18		4665	63	16	2	1651	2.22	2.24	2.00	142	
	29	1649	1726 D	N01 F16		4665	37 D	2		1713	9.80				G-SWF
	29	1652						16							
{USNRL ONDREJOV USNRL	29	1657	1846	N05 E16		4665	109	16	2	1718	4.42	4.60	2.00	116	
	29	1701	1756 D	N02 F13		4665	55	2							
29	1752	1841	N24 W40		4657	49	1	2	1756	1.52	2.06		110	Slow S-SWF	

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SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.				TIME — UT	MEAS. AREA Sq. Deg.	COOR. Sq. Deg.	MAX. WIDTH He	MAX. INT. %
MCMAH HAWAII	29	2019 F	2100 D	S10 E70	4670	41 D	16	2	2021	2.60	6.48		60
	29	2338 F	0000	S07 F63	4670	22 D	1	1	2340	3.80	8.70		
MITAKA	30	0127 F	0140 D	S08 F64	4670	13 D	16	1	0128	3.80	9.11	1.92	134
	30	0235 F	0258 D	N20 W23	4668	23 D	1	1	0249	2.23	2.43	1.57	
{UCCLF CAPRI S	30	0912 F	0935 D	S08 F60	4670	23	1	3	0925	2.20	2.90		
	30	0921 F	0940 D	S09 F62	4670	11	1	3	0926	2.00	4.40		
{STOCKHOLM CAPRI S	30	0929 F	0930 D	S11 F62	4670	11 D	16	1	0929	4.00	8.00		
	30	1313 F	1330 D	S10 W58	4659	17 D	1	1	1318	1.22	2.44		
{UCCLF MCMAH	30	1432 F	1518 D	S08 F58	4670	46 D	16	1	1434	3.40	4.40		
	30	1433 F	1445 D	S10 F60	4670	12 D	16	1	1436	1.46	2.92		75
{WENDEL USNRL	30	1434 F	1446 D	S08 F57	4670	12 D	16	1	1438	1.36	2.51		105
	30	1434 F	1452 D	S10 F59	4670	18	16	2	1438	1.36	2.51		
{CAPRI S MCMAH	30	1440 F	1447 D	S09 F60	4670	7 D	1	3	1444	1.80	3.60		
	30	1436 F	1444 D	S08 W55	4659	8 D	16	2	1531	4.00	5.20	2.00	96
{UCCLF ONDERHOV	30	1523 F	1614 D	S13 W65	4659	51	2	2	1528	1.69	5.45		
	30	1524 F	1630 D	S14 W67	4659	66	2	2	1535	12.00			
{ZURICH USNRL	30	1525 F	1555 D	S15 W64	4655	30 D	2	2	1535	2.20	3.20		18
	30	1525 F	1635 D	S14 W66	4659	70	1	2	1535	1.50	5.80	3.56	90
{SAC PEAK R O HEARST	30	1526 F	1610 D	S15 W62	4659	44	16	2	1535	2.00			
	30	1526 F	1620 D	S14 W68	4659	54 D	2	2	1531				
{CAPRI S WENDEL	30	1529 F	1545 D	S13 W59	4659	13 D	2	3					
	30	1532 F	1545 D	S13 W64	4659	13 D	2						
{ONDERHOV NEDERHOV	30	1534 F	1556 D	S17 W64	4659	22 D	2						
	30	1534 F	1556 D	S12 W62	4659	22 D	2						
{MCMAH SCHAUINS	30	1545 F	1603 D	S07 F09	4665	7 D	1						
	30	1756 F	1803 D	N13 W14	4664	39	1						
{MIT WILSON HAWAII	30	1952 F	2031 D	S05 F65	4670	28	1	1	2040	2.90	4.80		
	30	2036 F	2104 D	S05 F65	4670	28	1	2	2141	2.40	5.50		
{HAWAII SAC PEAK	30	2139 F	2230 D	S17 W63	4659	6	16	1	2148	4.70	11.00		18
	30	2146 F	2204 D	S17 W63	4659	18	2	2					
{MITAKA	31	0315 F	0318 D	N18 W39	4668	3 D	1	1	0315	1.84	2.26	1.51	96
	31	0345 F	0409 D	N19 W38	4668	24 D	1	1	0403	7.57	9.32	1.79	96
{MITAKA	31	0355 F	0401 D	N05 F03	4665	6 D	1	1	0355	3.00	6.20		
	31	0734 F	0752 D	S26 F52	4674	18	16	3	0711	2.20	3.30		
{UCCLF ATHENS	31	0805 F	0816 D	S13 W68	4659	11	16	1	0846	2.00	5.00		
	31	0805 F	0819 D	S12 W71	4659	14 D	16	4					
{WENDEL ARCETRI	31	0845 F	0859 D	N20 W47	4668	13 D	1	2	1135	2.20	2.80		
	31	1102 F	1142 D	S13 W88	4659	40	1	2	1135	2.80	3.20		
{UCCLF CAPRI S	31	1113 F	1144 D	S14 W80	4659	31	1	3	1135	2.80	3.20		
	31	1113 F	1144 D	S13 W80	4659	31	1	3	1135	2.80	3.20		
{CAPRI S STOCKHOLM	31	1120 F	1140 D	S13 W80	4659	18 D	16	2	1133	2.30	2.30	2.67	110
	31	1122 F	1140 D	S15 W80	4659	12 D	2	2	1133	2.30	2.30	2.67	110
{WENDEL NEDERHOV	31	1128 F	1140 D	S15 W80	4659	18 D	16	2	1133	2.30	2.30	2.67	110
	31	1132 F	1156 D	S14 W79	4659	18 D	16	2	1133	2.30	2.30	2.67	110
{R O HEARST USNRL	31	1323 F	1340 D	S12 W80	4659	12	1	3	1330	2.30	2.30	2.67	110
	31	1323 F	1335 D	S14 W80	4659	12	1	3	1330	2.30	2.30	2.67	110
{CAPRI S NEDERHOV	31	1323 F	1335 D	S14 W80	4659	12	1	3	1330	2.30	2.30	2.67	110
	31	1330 F	1339 D	S12 W80	4659	9	26	2	1425	2.30	2.30	2.67	110
{USNRL	31	1921 F	1950 D	N05 W70	4663	29	1	2	1925	2.30	2.30	2.67	110
	31	1921 F	1950 D	N05 W70	4663	29	1	2	1925	2.30	2.30	2.67	110

COMMENTS - STANDARDS - BOLSON

SAC PEAK: ALL VALUES IN MAX. INT. COLUMN ARE ARBITRARY UNITS (0-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
+ - PLUS
- - MINUS
□ - NOT REPORTED

ANACAPRI - GERMAN
ANACAPRI - SWEDISH
ROYAL OBSERVATORY, CAPE OF GOOD HOPE

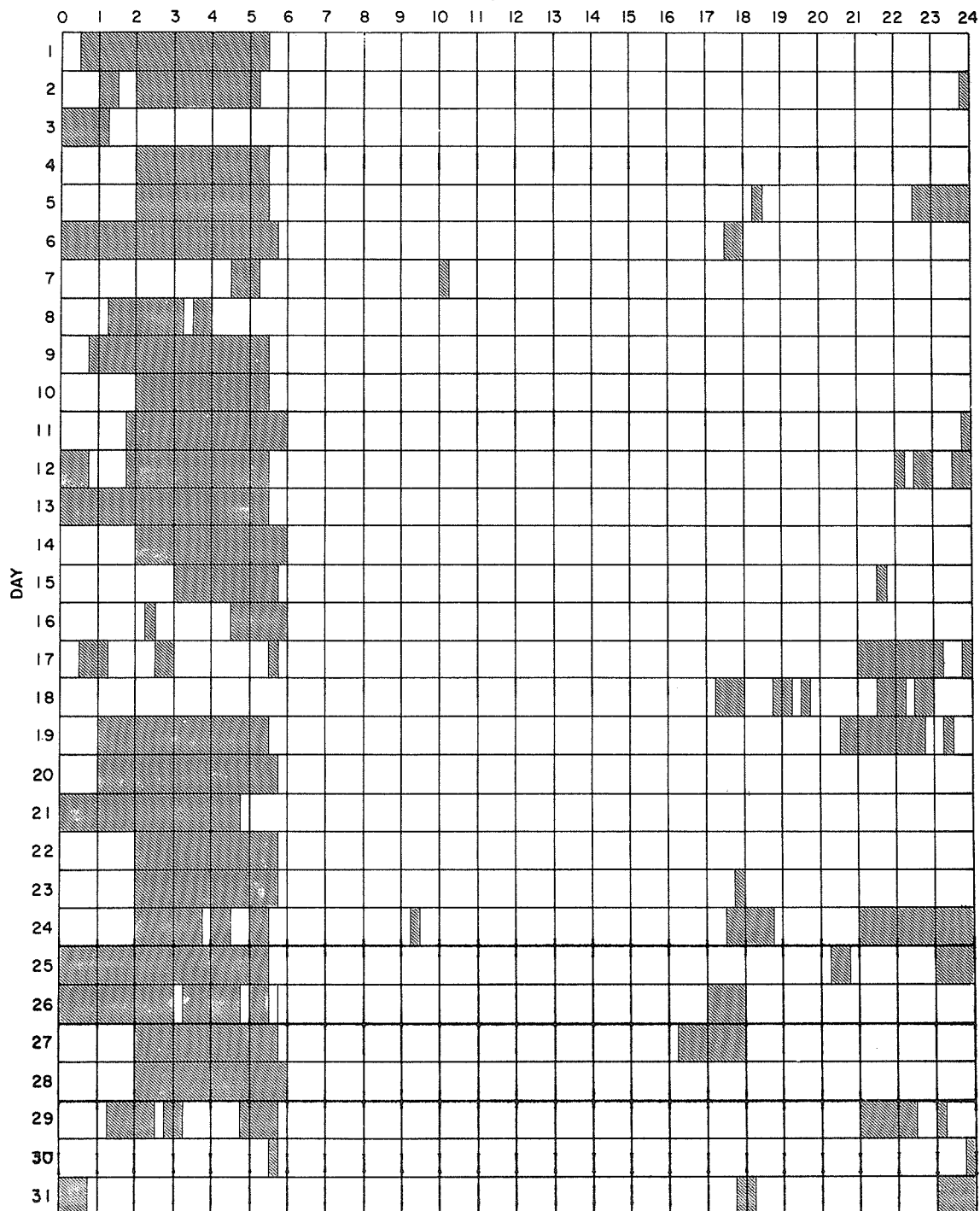
KODAIKANAL
KRASNAYA PAKHRA
ROYAL OBSERVATORY, EDINBURGH
GREENWICH ROYAL OBSERVATORY, WESTMINSTER
SAC PEAK
SCHAUINSLAND
UNITED STATES NAVAL RESEARCH LABORATORY

CAPRI S
CAPRI S
GOOD HOPE
KODAIKANAL
KRASNAYA
R O HEARST
R O HEARST
SAC PEAK
SCHAUINS
USNRL

INTERVALS OF NO FLARE PATROL OBSERVATIONS

1 JULY 1958

HOUR-UT



Times indicated are accurate to the nearest 15 minutes.

COMMERCE - STANDARDS - BOULDER

Stations included:

Anacapri (Swedish)
Arcetri
Arosa
Athens
Climax
Dunsink

Hawaii
Huancayo
Meudon
Mitaka
Nizamia
Royal Greenwich Observatory,
Herstmonceux

Royal Observatory,
Edinburgh
Royal Observatory,
Good Hope
Sacramento Peak
U. S. Naval Research Laboratory
Zurich

SUBFLARES NOTED AS FOLLOWS, DATE - UNIVERSAL TIME - COORDINATES

JUNE 1958

LOCARNO	01	0815	E	N21	W32
CAPRI S	01	1047	E	N12	W11
USNRL	01	1213	E	N12	W38
USNRL	01	1303	E	N22	W39
USNRL	01	1329	E	N19	W41
USNRL	01	1329	E	N19	W41
*GOOD HOPE	01	1332	E	N26	E27
USNRL	01	1449	E	N18	W11
USNRL	01	1423	E	N12	W50
USNRL	01	1454	E	N19	W12
USNRL	01	1457	E	N11	E42
USNRL	01	1516	E	S21	E42
USNRL	01	1523	E	N19	W12
USNRL	01	1523	E	N31	W36
CLIMAX	01	1947	E	N18	W16
*USNRL	02	1237	E	N29	W35
*OTTAWA	02	1312	E	N19	E52
*USNRL	02	1312	E	N19	E52
*OTTAWA	02	1333	E	N20	W29
USNRL	02	1420	E	S21	E50
CLIMAX	02	1439	E	N18	W39
*MCMATH	02	1743	E	N30	W43
MCMATH	02	1800	E	N15	W67
MCMATH	02	1812	E	N23	W42
USNRL	02	1847	E	N28	W44
USNRL	02	1921	E	N29	W46
MCMATH	02	1940	E	N29	W46
WENDEL	03	0856	E	S16	W32
*OTTAWA	03	1203	E	N17	W34
*GOOD HOPE	03	1203	E	N21	W37
MCMATH	03	1213	E	S27	W08
MCMATH	03	1420	E	N17	W08
OTTAWA	03	1423	E	N17	W08
MCMATH	03	1602	E	S20	W15
MCMATH	03	1632	E	S07	W62
MCMATH	03	1744	E	N18	W80
MCMATH	03	1700	E	N18	W80
MCMATH	03	1814	E	S20	E37
MCMATH	03	1847	E	N20	E37
LOCARNO	04	0800	E	N18	W46
GOOD HOPE	04	0915	E	N18	W46
GOOD HOPE	04	0952	E	N18	W46
WENDEL	04	1149	E	N17	W34
WENDEL	04	1149	E	S22	E58
USNRL	04	1203	E	N17	W34
USNRL	04	1224	E	S30	W57
USNRL	04	1224	E	N43	E70
USNRL	04	1243	E	N43	E55
*USNRL	04	1517	E	N29	W68
USNRL	04	1239	E	N17	W27
USNRL	04	1453	E	N15	W46
*LOCARNO	04	1500	E	N45	E65
WENDEL	04	1521	E	N18	W44
WENDEL	04	1549	E	S10	W73
WENDEL	04	1600	E	N17	W27
WENDEL	04	1607	E	N20	W50
WENDEL	04	1608	E	S10	W73
WENDEL	04	1629	E	N16	E84
USNRL	04	1801	E	N16	W25
USNRL	04	1808	E	N16	W36
USNRL	04	1820	E	N44	E63
ATHENS	05	0709	E	N43	E59
CAPRI S	05	0742	E	N17	W32
OTTAWA	05	1240	E	N43	E48
OTTAWA	05	1314	E	N17	W32
OTTAWA	05	1321	E	N44	E47
OTTAWA	05	1403	E	N44	E47
USNRL	05	1406	E	N43	E59
USNRL	05	1406	E	N43	E59
OTTAWA	05	1435	E	N17	W33
USNRL	05	1435	E	N42	E51
USNRL	05	1438	E	N42	E49
OTTAWA	05	1442	E	N42	E49
USNRL	05	1442	E	N45	E51
USNRL	05	1453	E	N43	E49
USNRL	05	1523	E	N43	E49
USNRL	05	1654	E	N45	E47
USNRL	05	1706	E	N27	E61
USNRL	05	1706	E	N15	W10
USNRL	05	1706	E	N45	E52
USNRL	05	1708	E	N18	W37
USNRL	05	1746	E	N45	E50
USNRL	05	1850	E	N45	E49
USNRL	05	1947	E	N44	E46
STOCKHOLM	06	1037	E	S24	E29
*CAPRI S	06	1059	E	N45	E39
OTTAWA	06	1252	E	N45	E39
*MEUDON	06	1327	E	N43	E40
MCMATH	06	1450	E	N08	W24
*MCMATH	06	1510	E	N08	W26
USNRL	06	1526	E	N23	E07
USNRL	06	1526	E	N38	E38
USNRL	06	1526	E	S08	W53
USNRL	06	1558	E	N19	W90
OTTAWA	06	1703	E	N18	W39
WENDEL	06	1703	E	N20	W85
*OTTAWA	06	1706	E	N32	E50
OTTAWA	06	1708	E	N30	E50
WENDEL	06	1709	E	N27	E48
USNRL	06	1709	E	N36	E43
USNRL	06	1709	E	N32	W55
MCMATH	06	1913	E	N18	W80
MCMATH	06	1918	E	N27	E45
MCMATH	06	2004	E	N42	E38
MCMATH	06	2018	E	N42	E38
ARCETRI	07	0817	E	N45	E32
*ONORE JOV	07	0833	E	N28	E34
*MEUDON	07	1022	E	N25	E37
USNRL	07	1170	E	N28	E31
*USNRL	07	1257	E	N28	E31
*MCMATH	07	1302	E	N26	E34
USNRL	07	1304	E	S21	E43
MCMATH	07	1311	E	N42	E25
USNRL	07	1311	E	N44	E25
USNRL	07	1311	E	N29	E33
USNRL	07	1342	E	N29	E33
MCMATH	07	1416	E	N28	E33
OTTAWA	07	1418	E	N28	E33
USNRL	07	1421	E	N44	E24
MCMATH	07	1423	E	N41	E24
*MCMATH	07	1508	E	N41	E30
*OTTAWA	07	1509	E	N45	E28
USNRL	07	1509	E	N45	E28
*CAPRI S	07	1513	E	N44	E27
MCMATH	07	1519	E	S20	E76
ONORE JOV	07	1524	E	N25	E32
*MEUDON	07	1605	E	N25	E32
*MCMATH	07	1608	E	N25	E33
MCMATH	07	1724	E	N25	E33
*MCMATH	07	1803	E	N26	E30
MCMATH	07	1953	E	N26	E30
MCMATH	07	2025	E	N26	E30
GOOD HOPE	08	0745	E	N28	E24
*LOCARNO	08	0920	E	N41	E15
*GOOD HOPE	08	1010	E	N27	E56
USNRL	08	1314	E	N24	E57
*USNRL	08	1312	E	N12	E62
*CLIMAX	08	1326	E	N42	E13
USNRL	08	1327	E	N42	E13
USNRL	08	1339	E	N43	E13
USNRL	08	1342	E	N42	E14
*ONORE JOV	08	1346	E	N42	E14
WENDEL	08	1441	E	N26	W55
*CLIMAX	08	1441	E	S21	E00
*USNRL	08	1443	E	S20	E00
*CAPRI S	08	1444	E	S20	E00
USNRL	08	1577	E	N43	E16
USNRL	08	1538	E	N26	W58
WENDEL	08	1544	E	N43	E16
*CLIMAX	08	1648	E	N30	E28
GOOD HOPE	09	0805	E	N32	E21
ONORE JOV	09	0812	E	N30	E11
*GOOD HOPE	09	0842	E	N44	E04
*ONORE JOV	09	0847	E	N41	E05
LOCARNO	09	0850	E	N25	E29
GOOD HOPE	09	0859	E	N31	E29
*CAPRI S	09	0900	E	N32	E18
*GOOD HOPE	09	0940	E	N28	E19
*LOCARNO	09	0940	E	N27	E19
*CAPRI S	09	0944	E	S26	E34
LOCARNO	09	0945	E	N24	W06
*GOOD HOPE	09	0949	E	N28	E12
WENDEL	09	0951	E	S21	W05
GOOD HOPE	09	1009	E	N43	E08
WENDEL	09	1012	E	N42	E08
OTTAWA	09	1023	E	N44	E04
ONORE JOV	09	1123	E	N27	E15
OTTAWA	09	1131	E	N27	E10
CLIMAX	09	1311	E	N35	E16
OTTAWA	09	1311	E	N35	E16
*USNRL	09	1528	E	N27	W74
USNRL	09	1749	E	N05	W87
ONORE JOV	09	1749	E	N24	W79
USNRL	09	1806	E	N28	W75
USNRL	09	1906	E	N37	E05
USNRL	09	1915	E	N28	W75
*CAPRI S	10	1118	E	S28	E32
GOOD HOPE	10	1250	E	N43	W10
*USNRL	10	1255	E	N45	W07
USNRL	10	1602	E	N45	W10
USNRL	10	1737	E	S18	E17
USNRL	10	1745	E	N27	E01
USNRL	10	1754	E	N45	W07
MCMATH	10	1859	E	N42	W08
USNRL	10	1901	E	N42	W07
MCMATH	10	1930	E	N42	W08
*USNRL	10	1930	E	N45	W07
*HAWAII	10	2380	E	N45	W11
*CLIMAX	10	2353	E	N43	W15
*NIZAMIAH	11	0552	E	N44	W15
USNRL	11	1206	E	S07	E08
*USNRL	11	1207	E	N42	W24
MCMATH	11	1514	E	N42	W20
USNRL	11	1543	E	S07	E07
CLIMAX	11	1601	E	N43	E20
USNRL	11	1634	E	N43	E20
MCMATH	11	1636	E	S18	E07
USNRL	11	1658	E	S07	E07
USNRL	11	1658	E	N15	E90
USNRL	11	1713	E	N43	W26
USNRL	11	1726	E	N45	W25
MCMATH	11	1748	E	N42	W20
USNRL	11	1749	E	N44	W24
MCMATH	11	1752	E	N25	W36
USNRL	11	1754	E	N26	W27
USNRL	11	1824	E	S28	E07
USNRL	11	1824	E	N46	E07
MCMATH	11	1857	E	S17	E06
MCMATH	11	1949	E	N49	W23
MCMATH	11	2148	E	N42	W23
MCMATH	11	2204	E	N23	W25
MCMATH	11	2250	E	S08	W20
HAWAII	12	0114	E	N46	W23
*ATHENS	12	0631	E	N43	W28
*OTTAWA	12	1030	E	N42	W34
MCMATH	12	1238	E	N43	W30
OTTAWA	12	1241	E	N43	W34
USNRL	12	1242	E	N44	W32
OTTAWA	12	1244	E	N27	W60
CLIMAX	12	1440	E	N27	W60
CLIMAX	12	1401	E	S28	E90
CLIMAX	12	1429	E	N46	E20
*USNRL	12	1429	E	N46	E20
*USNRL	12	1443	E	N45	W30
MCMATH	12	1518	E	N28	W26
USNRL	12	1604	E	N16	E70
USNRL	12	1623	E	N28	W29
*MCMATH	12	1634	E	N30	W23
*USNRL	12	1634	E	N29	W24
USNRL	12	1725	E	N27	E68
USNRL	12	1749	E	N28	W30
USNRL	12	1844	E	N28	W30
USNRL	12	1934	E	N15	E70
ONORE JOV	13	0452	E	S23	W65
USNRL	13	1253	E	N14	E60
MCMATH	13	1328	E	N14	E60
USNRL	13	1329	E	N15	E58
*USNRL	13	1511	E	N13	E58
*CLIMAX	13	1511	E	N13	E58
*CLIMAX	13	1654	E	N18	W46
USNRL	13	1809	E	N18	W50
*LOCARNO	14	0825	E	N17	E49
*MEUDON	14	0923	E	N29	E70
*OTTAWA	14	1310	E	N29	E70
USNRL	14	1330	E	N15	E42
USNRL	14	1330	E	N23	W18
USNRL	14	1339	E	N19	E45
*MCMATH	14	1342	E	N25	W16
*USNRL	14	1342	E	N25	W17
*CLIMAX	14	1343	E	N25	W16
*OTTAWA	14	1347	E	N24	W17
USNRL	14	1350	E	N24	W14
*MCMATH	14	1401	E	S27	E63

SUBFLARES NOTED AS FOLLOWS, DATE - UNIVERSAL TIME - COORDINATES

JUNE 1958

USNRL	16	1627	N15	E14	USNRL	25	1706	N16	W13
MCMAH	16	1628	N15	E15	USNRL	25	1814	N11	E56
ONDR JOV	16	1628	N12	E14	USNRL	25	1934	S09	E87
CLIMAX	16	1628	N12	E14					
USNRL	16	1629	N20	E32	MCMAH	26	1319	N10	E50
HUANCAYO	16	1635	N15	E15	USNRL	26	1454	S08	E40
USNRL	16	1635	N15	E15	USNRL	26	1455	N10	W30
ONDR JOV	16	1638	N15	E15	MCMAH	26	1456	N09	E31
USNRL	16	1640	N14	E13	MCMAH	26	1551	S16	W44
ONDR JOV	16	1648	N15	E16	USNRL	26	1602	S20	E33
USNRL	16	1706	N15	E16	USNRL	26	1646	N08	W30
MCMAH	16	1707	N15	E17	MCMAH	26	1647	N10	W31
USNRL	16	1717	N15	E16	USNRL	26	1654	N08	W59
ONDR JOV	16	1721	S31	W05	MCMAH	26	1657	N09	W60
USNRL	16	1722	S29	W06	USNRL	26	1701	N12	E46
USNRL	16	1743	N15	E16	MCMAH	26	1722	N09	W63
USNRL	16	1806	N13	E21	MCMAH	26	1804	N08	E40
MCMAH	16	1808	N13	E22	MCMAH	26	1845	N10	W30
MCMAH	16	1919	N13	E22	USNRL	26	1848	N15	W26
MCMAH	16	1937	S00	W00	MCMAH	26	1949	N08	E40
MCMAH	16	1942	N15	E12					
USNRL	16	1943	S15	W12	*ATHENS	27	0617	S12	W23
USNRL	16	1948	N18	W01	CAPRI S	27	0855	S24	E25
MCMAH	16	2140	N15	E12	*CAPRI S	27	1121	N09	E35
					MCMAH	27	1226	S20	E20
ONDR JOV	17	0612	N28	W90	MCMAH	27	1334	N15	W36
ONDR JOV	17	0653	N36	W90	CAPRI S	27	1345	N09	E34
*ONDR JOV	17	0856	N40	W90	USNRL	27	1408	N18	E00
*WENDEL	17	1405	N06	E33	*MCMAH	27	1532	S23	E20
USNRL	17	1403	N16	E03	*USNRL	27	1532	S23	E20
USNRL	17	1404	N14	W01	MCMAH	27	1735	N10	E30
MCMAH	17	1405	N15	E03	USNRL	27	1836	N12	E33
MCMAH	17	1411	N05	E26	*USNRL	27	1836	N12	E33
USNRL	17	1428	N09	E20	*MCMAH	27	1839	N10	E33
USNRL	17	1439	N39	E20	MCMAH	27	1839	N10	E33
MCMAH	17	1831	N17	E01	HUANCAYO	27	2053	N10	E34
MCMAH	17	1856	N17	E02	MCMAH	27	2054	N10	E34
MCMAH	17	2235	N17	W02	MCMAH	27	2114	S19	E15
MCMAH	18	1305	N19	E57	ATHENS	28	0932	N10	E21
OTTAWA	18	1306	N22	E56	OTTAWA	28	1140	S10	E29
*LOCARNO	18	1350	N15	W08	OTTAWA	28	1220	N10	E29
*USNRL	18	1345	N15	W11	USNRL	28	1226	N14	W03
MCMAH	18	1504	S25	E05	OTTAWA	28	1248	N19	E17
LOCARNO	18	1505	S25	E14	*OTTAWA	28	1248	N19	E16
MCMAH	18	1510	N18	W10	USNRL	28	1248	N19	E16
MEUDON	18	1533	N18	W10	*CLIMAX	28	1249	N17	E18
LOCARNO	18	1540	N15	W03	*OTTAWA	28	1255	N18	E21
					OTTAWA	28	1300	N17	W08
NIZAMIAH	19	0456	N15	W22	LOCARNO	28	1300	N17	W63
ATHENS	19	0547	N19	W19	*CLIMAX	28	1434	S07	W22
ATHENS	19	0655	N19	W19	*MCMAH	28	1434	S07	W22
*ATHENS	19	0740	N15	W19	*OTTAWA	28	1435	S25	W19
WENDEL	19	0753	N19	W16	*USNRL	28	1436	S25	W20
OTTAWA	19	0857	N19	W16	USNRL	28	1529	S17	E02
LOCARNO	19	1140	N19	E44	USNRL	28	1529	S17	E02
OTTAWA	19	1149	N19	E44	USNRL	28	1643	S34	E04
OTTAWA	19	1222	N22	E46					
*MEUDON	19	1328	N18	E47	ATHENS	29	0626	N20	E70
*STOCKHOLM	19	1328	N18	E47	CAPRI S	29	0833	N20	E82
OTTAWA	19	1333	S26	W07	*CAPRI S	29	0850	N10	E09
OTTAWA	19	1334	S26	W07	WENDEL	29	0931	N13	W64
USNRL	19	1549	N11	E25	MCMAH	29	1217	N18	W78
USNRL	19	1550	S13	E87	USNRL	29	1330	S11	E14
USNRL	19	1604	N15	E25	USNRL	29	1400	N29	E89
USNRL	19	1631	N15	E25	USNRL	29	1418	N23	E80
USNRL	19	1723	N14	E28	CLIMAX	29	1419	N23	E80
USNRL	19	1736	N14	E28	MCMAH	29	1419	N22	E78
USNRL	19	1746	N13	E24	CLIMAX	29	1440	N19	E69
USNRL	19	1818	N15	E68	MCMAH	29	1440	N19	E69
USNRL	19	1840	N15	E68	USNRL	29	1440	N22	E72
USNRL	19	1917	S26	W10	CLIMAX	29	1440	N22	E72
USNRL	19	1954	S12	E87	*MCMAH	29	1508	S14	W16
					*USNRL	29	1509	N22	E17
*ATHENS	20	0554	N16	W29	MCMAH	29	1510	N22	E17
ATHENS	20	0634	S26	W15	MCMAH	29	1518	N13	E04
MCMAH	20	0800	S26	W15	USNRL	29	1518	N13	E04
OTTAWA	20	1233	N14	W36	USNRL	29	1519	N13	E02
MCMAH	20	1241	N14	W34	USNRL	29	1520	N11	E05
OTTAWA	20	1315	S08	E71	MCMAH	29	1520	N11	E05
*OTTAWA	20	1310	N18	W37	MCMAH	29	1520	N18	E67
MCMAH	20	1326	N19	E70	MCMAH	29	1627	N18	W38
*OTTAWA	20	1545	N13	W38	HUANCAYO	29	1629	N29	E41
*MCMAH	20	1801	N09	E55	CLIMAX	29	1746	S17	E17
HAWAII	20	2152	S22	E26	CLIMAX	29	2014	N25	E88
*MCMAH	21	1220	N19	W51	*WENDEL S	30	0854	S13	W30
MCMAH	21	1302	N19	W51	CAPRI S	30	1020	S10	E03
MCMAH	21	1312	N07	W32	USNRL	30	1202	S10	E02
MCMAH	21	1312	N07	W32	USNRL	30	1202	S10	E02
ONDR JOV	21	1312	N07	W32	USNRL	30	1202	N25	E68
MCMAH	21	1316	N25	W25	USNRL	30	1238	S13	W33
MCMAH	21	1415	N12	W30	USNRL	30	1307	S11	E02
MCMAH	21	1415	N12	W30	MCMAH	30	1308	S11	E02
MCMAH	21	1919	N19	W55	MCMAH	30	1312	S08	W19
MCMAH	21	1919	S18	W59	USNRL	30	1313	N25	E66
MCMAH	21	2014	N08	W39	MCMAH	30	1343	S08	W19
MCMAH	21	2054	S25	W39	*MCMAH	30	1343	N23	E66
MCMAH	21	2113	N08	W39	USNRL	30	1343	S08	W20
					*CLIMAX	30	1348	N25	E66
ATHENS	22	0609	S11	E47	USNRL	30	1352	N25	E66
MCMAH	22	1152	S09	E90	MCMAH	30	1359	S07	W20
MCMAH	22	1206	N19	E90	USNRL	30	1425	S15	W36
USNRL	22	1208	S06	E90	MCMAH	30	1451	S05	W21
MCMAH	22	1219	S06	E90	USNRL	30	1456	S07	W21
USNRL	22	1327	S05	E90	MCMAH	30	1457	S07	W20
MCMAH	22	1328	S05	E90	USNRL	30	1518	S12	W34
MCMAH	22	1432	S12	E45	MCMAH	30	1544	S17	W18
MCMAH	22	1548	N16	E72	USNRL	30	1544	S18	W18
*CLIMAX	22	1620	N16	E72	USNRL	30	1550	S07	W21
*MCMAH	22	1636	S06	E90	USNRL	30	1553	S12	W21
*MCMAH	22	1709	S20	E90	MCMAH	30	1609	S02	W34
MCMAH	22	1740	S20	E90	USNRL	30	1613	S08	W21
					MCMAH	30	1635	N29	E11
ATHENS	23	0547	S19	E38	USNRL	30	1707	N26	E65
LOCARNO	23	0730	N11	E21	USNRL	30	1713	S23	E90
MCMAH	23	1135	N06	W20	*USNRL	30	1713	N30	W30
MCMAH	23	1238	N07	W05	MCMAH	30	1726	S06	W22
MCMAH	23	1242	S21	E75	MCMAH	30	1806	S13	W37
OTTAWA	23	1244	S19	E72	CLIMAX	30	1808	S15	W66
*OTTAWA	23	1300	S19	E72	USNRL	30	1809	S15	W37
*MCMAH	23	1301	S21	E75	USNRL	30	1809	S08	W28
ONDR JOV	23	1310	S21	E74	MCMAH	30	1810	S07	W21
USNRL	23	1332	N17	E61	MCMAH	30	1847	S14	W38
*CLIMAX	23	1349	S21	E78	USNRL	30	1849	S19	W29
OTTAWA	23	1401	N20	E74	MCMAH	30	1932	S08	W04
*MCMAH	23	1401	N20	E74	MCMAH	30	2005	S13	W39
ONDR JOV	23	1432	S09	E90	MCMAH	30	2022	S19	W29
*MCMAH	23	1445	S22	E76	HUANCAYO	30	2023	S19	W25
*CLIMAX	23	1450	S09	E90	MCMAH	30	2034	S07	W23
USNRL	23	1615	N10	E90	MCMAH	30	2123	S13	W40
*CLIMAX	23	1709	N15	W80	HAWAII	30	2254	S15	W37
ONDR JOV	23	1743	N15	W80					
HAWAII	23	2138	S22	E70					
ONDR JOV	24	0557	N24	E30					
ONDR JOV	24	0650	N09	E70					
OTTAWA	24	1050	N11	E03					
OTTAWA	24	1100	N11	E03					
OTTAWA	24	1120	N11	E03					
*MCMAH	24	1156	S09	E18					
*OTTAWA	24	1214	N14	E04					
*MCMAH	24	1311	N14	E04					
USNRL	24	1532	N09	E68					
USNRL	24	1547	S09	E16					
USNRL	24	1657	S09	E17					
USNRL	25	1240	N15	E62					
MEUDON	25	1242	N15	E60					
USNRL	25	1252	S12	E20					
*USNRL	25	1344	N16	E61					
*CLIMAX	25	1551	N10	E59					
USNRL	25	1606	N10	E59					
USNRL	25	1619	N06	E55					
*CLIMAX	25	1622	N06	E55					
HUANCAYO	25	1625	N07	E56					
USNRL									

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	COR. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT. LONG.	McMAGH FLAGE REGION DIST.				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH He		MAX. INT. %.
KYOTO	01 0014 E			N24 W04	4124	1			0014	1.50				S-SWF
	01 0014 E			N11 W07	4124	1			0014	2.30		2.00	208	
	01 0204	0223	0209	N13 W08	4124	19	1	1	0205	3.90	4.00	1.16		
	01 0312	0315		N17 E00	4124	3	1		0314					S-SWF
	01 0521 F	0536 D		N16 E01	4124	15 D	1	3	0526		4.00			
	01 0621	0637	0625	N12 W08	4124	16	1	3	0625		2.00	2.90	56	
	01 0622	0640 D		N11 W08	4124	18 D	1			2.70				S-SWF
	01 0659	0720	0710	S28 W20	4125	21	1	3	0702		2.00	2.60	45	
	01 0802	0827	0804	N14 W13	4124	25	16			9.10				
	01 0826	0816	0810	N16 W11	4124	10	1	2	0809		3.00	7.00		S-SWF
01 0951 F	1012	0952	N09 W10	4124	21 D	2	2	0955		3.00				
01 0953 E	1018	0953	N11 W10	4124	25 E	3	1				.75			
01 1024	1028	1025	N26 W19	4124	4	16	2	1025	3.40	3.60			S-SWF	
01 1025 E	1031		N26 W15	4124	6 D	1	1	1025		3.00				
01 1036	1143		N24 W02	4124	67	1	2	1039	3.40	3.60				
01 1117 F			N10 W12	4124		U	1							S-SWF
01 1258 F	1352	1301	N15 W14	4124	54 D	2	2	1302		12.00				
02 0410 E	0430	0413	N13 W26	4124	20 D	1		2	0412	2.60	2.90	1.80	105	
02 0434 E	0445		N14 W24	4124	11 D	1	2	0434	2.13	2.34	1.00			
02 0804 F	0816	0804	S29 W27	4125	12 D	1	3	0804	1.60	2.40			S-SWF	
02 1016	1039	1019	N15 W26	4124	23	1	1	1020		3.00				
02 1022	1137	1023	N14 W29	4124	75	2	4	1023	5.00	5.50				S-SWF
02 1055	1254 D		S30 W36	4125	119 D	1	4	1135	2.20	3.20				
02 1057 F	1206	1103	S33 W37	4125	69 D	16	1	1105		4.00			G-SWF	
02 1141	1156	1143	N26 W25	4124	15	1	4	1143	2.20	2.40				
02 1300	1321 D		N10 W23	4124	21 D	16	2							S-SWF
02 1330		1330	S34 W44	4125		2	3	1330	5.10	7.20				
02 1424	1435	1426	N13 W29	4124	11	16	3	1426	4.00	4.40			SLOW S-SWF	
02 1553 F	1556 D		N25 W27	4124	3 D	1	2	1555		3.00				
03 0037 F	0116	0149	N24 W24	4124	39 D	1	2	0049		3.00				S-SWF
03 0045 E	0105 D		N24 W31	4124	20 D	1		0050						
03 0246 F	0341	0330	N23 W23	4124	30 D	1	2	0330	1.50	2.00	4.30	73	SLOW S-SWF	
03 0326	0341		S15 W46	4126	15	1	2	0350	9.10					
03 0753 E	0819 D	0800	N15 W38	4124	26 D	2			3.10	4.03				S-SWF
03 0755 E	0822 D		N15 W39	4124	27 D	2	2	0759	3.10					
03 0757 E			N15 W38	4124		16			2.30				S-SWF	
03 0849 E	0852 D	0849	S31 W30	4125	4 D	1			3.00	2.94		56		
03 0853 E	0859 D		S15 W47	4126	6 D	1	2	0853	1.86	2.94		56		
03 0953	0910	0857	S11 F59	4133	17	1	2	0857	1.44			77	S-SWF	
03 0934 F	0936 D		S20 W41	4126	2 D	1								
03 1018	1038	1023	N15 W44	4124	20 D	2	1	1023	7.10	8.50	4.80			S-SWF
03 1038	1050 D	1039	N13 W41	4124	12 D	16	1	1039	4.00					
03 1415 F	1427		N24 W28	4124	12 D	3	2						S-SWF	
03 1417	1535 D	1432	N25 W29	4124	78 D	3	2	1430	18.00	2.00				
03 1427	1447	1431	N13 W35	4124	20	1	3	1430	2.00					S-SWF
03 2344	0004	2346	N26 W50	4124	70	1	3	2346	1.00	2.00				
04 0228 F	0319	0243	S31 W49	4125	51 D	2	2	0243	3.00	7.00			S-SWF	
04 0257	0422	0310	N28 W53	4124	85	1	2	0310	1.00	2.00				

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[illegible]

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- COR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MAGNITUDE FLARE REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _o		MAX. INT. %
CAPRI G UCCLF JCCLE CAPRI G	10	0817	0906	S18 E15	4141	49	16	2	0822	5.80	4.00		Slow S-SWF	
	10	0822 F	1030	S17 E15	4141	128 D	2	2	0827	3.40	6.20			
	10	1056	1119	S18 E11	4141	23	1	1	1325	3.00	3.70			
	10	1322	1346	S18 E11	4141	24	1	1			3.00			
SYDNEY SYDNEY CAPRI G ST-EIZ CAPRI G ST-EIZ CAPRI G	11	0243	0545	N11 W03	4134	182	3	2	0315	21.00	21.00		S-SWF	
	11	0441	0524	S44 E46	4144	43	1	2	0502	1.00	2.00			
	11	0526 F	0645	N11 E50	4134	19 D	16	2		1.80	3.00	3.60		52
	11	0828 F	0848 D	S19 F02	4141	20 D	1	2	0840	4.60	3.00	3.60		63
CAPRI G ST-EIZ CAPRI G CAPRI G	11	0838 F	0847 D	S18 F02	4141	9 D	1	2					S-SWF	
	11	0855 F	0908 D	S26 W61	4136	13 D	1	2	1311	3.00	3.00			
	11	1311 E	1319 D	N11 W04	4134	8 D	1	2						
	12	0023	0047	N08 W12	4134	24	1	1	0036	2.00	3.00			
SYDNEY SYDNEY SYDNEY ST-EIZ CAPRI G UCCLF JCCLE UCCLF JCCLE JCCLE SYDNEY	12	0034	0050	S20 W61	4136	16	1	2	0039	1.00	3.00		S-SWF	
	12	0414	0435	S21 W72	4136	21	1	3	0421	1.00	3.00			
	12	0708 F	0737	N09 W13	4134	29 D	2	3	0714	10.00	8.00			
	12	0708 F	0734 D	N08 W14	4134	25 D	2	3		10.80	10.80			
CAPRI G UCCLF JCCLE UCCLF JCCLE JCCLE JCCLE SYDNEY	12	1016 F	1028	N09 W15	4134	12 D	1	2		3.30	4.10		S-SWF	
	12	1016 F	1028	S19 W12	4141	12 D	1	1	1215	2.50	2.80			
	12	1018 E	1045	S25 E20	4143	27 D	1	3	1515	7.50	7.90			
	12	1210 E	1222 D	S17 W09	4141	12 D	1	1		3.80	4.10			
JCCLE JCCLE JCCLE JCCLE SYDNEY	12	1511	1530 D	N10 W19	4134	19 D	2	1	1657	2.00	2.00		Slow S-SWF	
	12	1515	1703 D	N14 W26	4134	16 D	1	3	2326	1.00				
	12	1647	2340	S16 W16	4141	18	1	3						
	12	2322		S16 W25	4138									
SYDNEY CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G JCCLE JCCLE JCCLE CAPRI G JCCLE														

COMMISSION - SEPTEMBER - 1957

SOLAR FLARES SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS			PROVINCIAL IONOSPHERIC EFFECT			
		START	END	APPROX. LAT.	MER. DIST.				MEAS. AREA Sq. Deg.	TIME — UT	CORR. AREA Sq. Deg.		MAX. WIDTH km	MAX. INT. %	
UCCLE	14	1335 F			N12 E85	1 D	1	1							
	14	1406 E	1407		S13 W43		1	1							
	14	2146 E			N24 E60		1	1				2.80			
	14	2146 E			N08 W50		1	1				4.70			
	14	2146 E			S23 W48	13 D	1	1				2146			
YOTO	14	2146 E			N10 E70	13 D	16	1				1.90		1.48	
	14	2327 E	2340 D	2330											
WADAI/ML	15	0333 F	0400	0334	N07 E70	27 D	2	2				4.30	12.40	5.20	S-SWF
	15	0415 E	0428 D		N09 E70	13 D	1	1				0415			
	15	0815 E	0820		N09 E70	5 D	16	3							
	15	0847 F	0858 D	0858	N20 E52	11 D	1	1				1.30	2.20		
	15	0919 F	0926		N08 E65	27 D	16	2				2.70	5.00		
	15	1053	1118	1100	N21 E54	25	1	2				3.00	3.00		
	15	1232	1241	1237	N09 E65	9	1	2				3.00	3.00		
	15	1448	1504	1455	S17 W52	16	1	2				1.50	4.00		
	15	2245 F	2259	2246	N07 E53	14 D	1	3				2246	3.00		
	15	2301 E			N15 E23	1	1	3				3.40	2.00		
SYDNEY	15	2317	2326	2322	N10 E51	9	1	3				1.00	2.00		SLOW S-SWF
	16	0355	0409	0358	S15 W61	14	1	3				2.00	4.00		S-SWF
SYDNEY	16	0455	0525	0509	N10 W68	30	1	3				2.00	5.00		
	16	0516	0527	0522	S15 W62	11	1	3				2.00	4.00		
CAPRI G	16	0604 E			S16 W61	1	1	3				0604	3.00		
	16	0643	0702	0650	N23 E06	148	19	1	3			0650	3.00		
KRASNAYA	16	0728	0809 D	0759 U	N23 E43	4151	41 D	1	2			0759	7.56		70
	16	0745 F	0803		N21 E44	4151	18 D	1	2			0746	4.00		
SILFIZ	16	0752 E	0752 D		N23 E43	4151	1	1	2			4.50	4.00		
	16	0835 F	0823 D	0838 U	N09 E37	4152	48 D	1	2			2.27	2.84		
KRASNAYA	16	0842 F	0853		N10 E38	4152	11 D	1	2			0842	4.00		
	16	1024	1034	1028	N08 E45	4152	10	1	3			1028	3.90		
CAPRI G	16	1025	1038	1029	N06 E44	4152	15	1	3			1027	3.00		
	16	1136	1134	1113	N10 W72	4134	28	1	2			1110	5.00		
UCCLE	16	1110	1120	1113	N08 W73	4134	10	1	3			1113	3.80		
	16	1313 E	1337		N11 E50	4152	24 D	16	2			1315	5.00		
CAPRI G	16	1410 F	1428		N10 W74	4134	18 D	16	2			1410	4.00		
	16	1513 E	1525 D		N09 E52	4152	12 D	2	1			1513	8.00		
SYDNEY	16	2313 E	2345	2319	N23 E30	4151	32 D	1	3			3.00	4.00		SLOW S-SWF
	17	0121	0139	0127	N23 E32	4151	18	1	3			0127	3.00		
MIZAMAH	17	0416 F	0539 D	0418	N23 E28	4151	93 D	16	3			0418	4.00		
	17	0535 F	0620		N22 E29	4151	45 D	2	2			0540	3.34	2.70	S-SWF
CAPRI G	17	0648	0702	0654	N07 E37	4152	14	1	2			0655	10.00		
	17	0758	0847	0806	N22 E26	4151	49	2	2			0805	4.00		S-SWF
SINEIZ	17	0904 E	0904 D		N23 E28	4151	1	2	2			27.40	10.00	2.40	
	17	0914	0931	0920	N22 E26	4151	17	1	2			0920	3.00		
CAPRI G	17	1038	1106	1042	N21 E29	4151	28	1	2			1042	2.00		
	17	1148 E	1216		N26 W58	4142	28 D	16	2			1150	3.00		S-SWF
SYDNEY	17	2313 F	0047	2346	N22 E19	4151	94 D	2	2			2346	6.00		S-SWF
	18	0112	0220	0122	N10 E27	4152	68	1	2			0122	4.00		
SYDNEY	18	0115 E	0135 D	0120	N10 E27	4152	20 D	1	2			0123	8.10		SLOW S-SWF
	18	0118 E	0140 D	0121	N14 E36	4152	22 D	1	2			0123	2.50		
YOTO	18	0420	0452	0432	N23 E12	4151	31	1	2			0432	4.00		SLOW S-SWF
	18	0420	0452	0432	N23 E12	4151	31	1	2			0432	4.00		SLOW S-SWF

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SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		MAX. PHASE	LOCATION			DURA- TION — MINUTES	IN- COR- TANCE	OBS. COORD.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END		APPROX. LAT.	MAGNITUDE					TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hc		MAX. INT. %
						MONTH	REGION									
{SYDNEY CAPRI G CAPRI G CAPRI G CAPRI G SYDNEY KYOTO	18	0624	0704	0632	N23 E14	4151	4151	44	26	2	0638	21.90	5.00	4.30	S-SWF	
	18	0635	0640	D	N23 E15	4151	4151	5 D	16							
	18	0817	0852		N16 E90	4158	4158	35 D	1	1	104C		9.00		G-SWF	
	18	1026	1155	1050	N23 E13	4151	4151	89	2	1	1325		10.00			
	18	1316	1410	1325	N23 E11	4151	4151	54	2	3	2346	5.00	5.00			
	18	2331	0017	2346	N17 E03	4151	4151	46	1	3	2343			1.00		
	18	2337	2356	D	N17 E04	4151	4151	19 D	16							
	19	0250	0320		N24 F02	4151	4151	30 D	2	2	0250	7.29	7.61	1.60	SLOW S-SWF	
	19	0401	0455	0412	N23 E01	4151	4151	54	36	3	0412	48.00	52.00			
	19	0404	0450	0408	N23 E04	4151	4151	46	3		0414		24.70	1.84	SLOW S-SWF	
{SYDNEY KODAIKUNL SYDNEY CAPRI G SYDNEY CAPRI G UCCLE	19	0435	0432	0410	N22 E06	4151	4151	27	2	3	0407	7.20	7.50	3.00		
	19	0606	0610		N26 W62	4142	4142	8	1	2	0509		3.00		S-SWF	
	19	0744	0855	D	N24 F03	4151	4151	71 D	2	3	0755	16.40	7.00	4.30		
	19	0747	0856	0755	N23 E03	4151	4151	9	2	3	0825	6.60	6.60			
	19	0825	0900		N23 E01	4151	4151	35 D	2	3	0834	2.10	3.00			
	19	0831	0846	0834	S24 F08	4155	4155	15	1	3	0835	2.60	2.30			
	19	0832	0851	0840	S23 E10	4155	4155	19	1	3	0842	1.00	1.00			
	19	0833	0854		N07 E04	4152	4152	21	1	5	0853	3.40	3.40			
	19	0851	0857	0853	S24 W58	4149	4149	6	1	3	0946	4.00	4.00			
	19	0946	1002	D	N22 F03	4151	4151	16 D	1	3	0946	3.40	4.00			
{UCCLE UCCLE UCCLE UCCLE UCCLE UCCLE UCCLE	19	0946	1013	D	N24 W09	4151	4151	27 D	1	2	1000	6.80	6.80		G-SWF	
	19	1000	1012	D	N24 F01	4151	4151	12 D	16	2						
	19	1057	1130	D	S16 W55	4154	4154	33 D	1	2						
	19	1107	1127	D	N24 W01	4151	4151	20 D	2	1	1114	3.40	3.40			
	19	1110	1126	D	N24 W15	4151	4151	16 D	1	3						
	19	1112	1124	D	S41 W77	4144	4144	12 D	1	3						
	20	0344	0425	0350	N25 W05	4151	4151	41	1	2	0350	3.00	4.00	1.60	SLOW S-SWF	
	20	0347	0434	0355	N23 W13	4151	4151	47	16	2	0355	4.25	4.54			
	20	0435	0447	0430	N22 W12	4151	4151	42	1	2	0430	4.00	5.00			
	20	0443	0501	0448	S22 W03	4155	4155	18 D	1	2	0448	2.43	2.79	1.50		
{SYDNEY KODAIKUNL NIZAMIAH CAPRI G WEDERHOFST WEDERHOFST WEDERHOFST CAPRI G	20	0443	0525	0446	S21 W02	4155	4155	42	2	2	0446	6.00	6.00			
	20	0450	0454		S21 E00	4155	4155	4	1	1	0450	2.13	2.27	1.80		
	20	0529	0552	0533	N23 W13	4151	4151	33 D	1	2	0533	2.13	2.27	1.80		
	20	0805	0815	D	N06 W06	4152	4152	10 D	1	1	0815	5.00	5.00	2.66		
	20	0806	0835	0809	N07 W07	4152	4152	29	16	3		7.30				
	20	1240	1245	D	N29 W90	4142	4142	5 D	1	3						
	20	1430	1442		N24 W25	4151	4151	12 D	1	2						
	20	1443	1453		N23 W25	4151	4151	13 D	1	2	144C		4.00			
	21	0410	0455	0423	N25 W18	4151	4151	45	2	2	041C	12.40	4.40	2.00	SLOW S-SWF	
	21	0415	0428		N22 W23	4151	4151	13	16	2	0418	3.90	4.40	1.80		
{KODAIKUNL NIZAMIAH SYDNEY SYDNEY SYDNEY CAPRI G CAPRI G CAPRI G UCCLE	21	0423	0456		N22 W23	4151	4151	53 D	16	2	0423	4.25	4.96	2.86		
	21	0604	0647	0614	N23 W25	4151	4151	43	16	2		9.10	3.60	3.60		
	21	0657	0706	D	N14 F93	4159	4159	9 D	1	1		7.30	6.00	2.52		
	21	0614	0656	D	N09 F01	4152	4152	40 D	16	1			6.00	3.24		
	21	0658	0721		N12 F94	4159	4159	23 D	2	1	0708	4.50	4.00	3.24		
	21	0704	0729	D	N09 F01	4152	4152	25 D	1	1	0708	4.50	4.00	2.20		
	21	0707	0718		N09 E00	4152	4152	11 D	1	1	0732		3.00		S-SWF	
	21	0728	0740	D	N09 F02	4152	4152	12 D	1	1	0847	5.80				
	21	0729	0741	D	N10 F04	4152	4152	12 D	1	1						
	21	0844	0851	D	N10 W05	4152	4152	7 D	2	1						

COME - STRENGTH - DENSITY

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	POS- ITION — TANGENT	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX PHASE	APPROX. LAT.	APPROX. LONG.	APPROX. REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORE AREA Sq. Deg.	MAX. WIDTH H _g	MAX. INT. %
CAPRI G	21	0955 E	1425 D		N09 W01	4152		41	D	1	1345		10.00		Slow S-SWF
CAPRI G	21	1344 E			N09 W02	4152				1					
CAPRI G	22	0650 E	0718 D	0654 U	N08 W35	4152		28	D	2	0650	7.30	5.00	1.96	74
SIMEIZ	22	0654 E	0725 D		N08 W36	4152		31	D			9.10		1.64	70
SIMEIZ	22	0710 E	0710 D		N10 W14	4152		16				9.10		9.80	91
SIMEIZ	22	0745 E	0840 D	0748 U	N23 W39	4151		55	D	2	0755	5.00			S-SWF
SIMEIZ	22	0746 E	0819 D	0802 U	N23 W34	4151		33	D	2	1223	1.60	2.00		
UCCLE	22	1221 E	1223 D	1223	N07 W42	4152		2	D	2	1321	8.00			S-SWF
CAPRI G	22	1321 E			N08 W38	4152		30		3	2331	4.00	7.00		
SYDNEY	22	2322	2352	2331	N17 W57	4151									
SYDNEY	23	0006	0113	0216	N19 E42	4159		67	1	3	0016	2.00	4.00	2.04	60
SIMEIZ	23	0902	0928	0903	N12 E55	4159		26	1			5.50			
UCCLE	23	1115	1127	1117	N10 W30	4152		12	1	3	1117	3.40	3.70		
UCCLE	23	1149	1151 D	1149	N09 W57	4152		2	1	3	1149	1.10	1.90		
UCCLE	23	1454	1505	1500	N24 W57	4151		11	2	3	1500	4.50	7.60		
UCCLE	23	1454	1533	1500	N13 E51	4159		39	16	3	1529	4.40	6.60		
UCCLE	23	1529 E			N12 W38	4152		16		3		.50			
SYDNEY	23	2313 E	0001	2324	N15 E92	4162		47	D	3	2324				
SYDNEY	24	0044	0102	0748	S27 W86	4149		18		2	0048	.75			
SYDNEY	24	0057	0128	0122	N15 E92	4162		31		3	0122	.50			
SYDNEY	24	0224 F	0307	0327	N15 E91	4162		43	D	3	0227	.50			
SYDNEY	24	0256	0330	0315	N12 W44	4151		34		1	0304	2.00	3.00	2.70	150
SYDNEY	24	0257	0310	0300	N10 W45	4151		13	1	3	0258	3.90	5.10		
SYDNEY	24	0317	0345	0333	S27 W88	4149		28		2	0333	2.00			
SYDNEY	24	0318	0357	0320	N15 E91	4162		39		3	0320	.50			
SYDNEY	24	0427	0439	0434	N15 E91	4162		12		3	0434	.50			
SYDNEY	24	0507	0522	0513	N15 E90	4162		15		3	0513	.50			
SYDNEY	24	0648 E	0729 D	0724 U	N19 E87	4162		41	D	2	0724	1.20	11.50	4.30	70
SIMEIZ	24	0721	0726	0722	N15 E90	4162		5	16			4.00		3.10	54
SIMEIZ	24	0755	0816	0759 U	N15 E90	4162		21	1	2	0809	1.04	8.76		
KRASNAYA	24	0803 E	0820 D	0809	N19 E86	4162		17	D	2					
CAPRI G	24	0805 E			N15 E90	4162		15	D	2					
CAPRI G	24	0931 E	0950		S33 E93	4161		19	D	3	1036	5.00			
CAPRI G	24	1035 E			N16 E36	4159				2					
SIMEIZ	25	0845 E	0909 D	0845 U	S27 E47	4161		24	D	1		4.50		2.24	70
SIMEIZ	25	0921 E	0953 D		S25 W70	4155		32	D	1		1.80		2.52	60
CAPRI G	25	1342 E	1349		N11 W82	4152		5	D	2	1342		4.00		
UCCLE	26	0856 E	1105	0934	N18 E02	4159		129	D	1	0934	4.80			
UCCLE	26	1102	1107	1104	N14 E55	4162		5	1	3	1104	3.40			
CAPRI G	26	1225 E	1245 D		S28 E30	4161		20	D	2	1230		4.00		
MIZAMIAH	27	0523	0544 D	0528	S24 E22	4161		21	D	1	0528	2.43	3.07	2.20	
UCCLE	27	0958	1004	0959	N16 E47	4162		6	1	3	0959	3.40	4.70		
UCCLE	27	1125	1134	1126	N10 E13	4159		9	1	3	1126	2.50			
UCCLE	27	1149	1153	1151	N32 E75	4165		4	1	3	1151	1.50	3.00		
UCCLE	27	1200	1202 D	1202	N19 E03	4159		2	D	1	1202	2.50			
CAPRI G	27	1200 E	1208		N17 E04	4159		8	D	2	1205		4.00		
SIMEIZ	28	0912	0940	0914	N17 W11	4159		28	16	2		7.30		2.70	80

CONTINUED - OBSERVATIONS

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.	MONTH PLACE REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH in		MAX. INT. %
{ VIZMAIAH CAPRI G UCCLE CAPRI G ST-HEIZ CAPRI G CAPRI G ST-HEIZ CAPRI G SYDNEY SYDNEY SYDNEY SYDNEY CAPRI G ST-HEIZ CAPRI G CAPRI G UCCLE UCCLE UCCLE CAPRI G UCCLE SYDNEY	28	0913 F	0933	N20 W17	4159	20 D	16	2	0916	4.25	4.56	2.60	Slow S-SWF		
	28	0925 F	0940 D	N16 W10	4159	15 D	16	3	0925	5.20	5.00				
	28	0925 F	1004	N14 W12	4159	39	2	2		2.70					
	28	1004	1018	N18 E34	4162	14	1	2							
	29	0708 F	0735	N26 W20	4159	27	1	3	0713		4.00				
	29	0710 F	0730 D	N21 W27	4159	20 D	1			3.60		3.40			
	29	0744 F	0840 D	N18 W25	4159	56 D	2			18.20		3.80			
	29	0753 F	0836	N17 W24	4159	13	1	1	0758		4.00				
	29	0822 F	0920 D	N17 W25	4159	8 D	1			3.60		2.60			
	29	0925 F	1022 D	N24 F70	4167	27 D	1		2	2.70		2.80			
	29	1125	1111	N17 W21	4159	6	16	2	1108		6.00				
	29	1149 E	1202	N26 E48	4165	13 D	1	2	1149		2.00				
{ SYDNEY SYDNEY SYDNEY SYDNEY CAPRI G ST-HEIZ CAPRI G CAPRI G UCCLE UCCLE UCCLE CAPRI G UCCLE SYDNEY	30	0212 F	0246	N21 W33	4159	34 D	2	2	0224	6.00	7.00		Slow S-SWF		
	30	0256	0311	S25 E57	4167	15	1	1	0258	2.00	5.00				
	30	0353	0407	S28 F59	4167	14	1	1	0359	1.00	3.00				
	30	0507	0513	S17 E86	4167	6	1	1	0509	.50					
	30	0745 F	0752 D	S18 F75	4167	7 D	16	2		2.70		60			
	30	0748 F	0814 D	S18 F85	4167	26 D	16								
	30	1028 F	1042 D	N15 W52	4159	14 D	1	2			4.00				
	30	1058 F	1140 D	N18 W40	4159	18 D	2	2			6.00				
	30	1227 F	1245 D	N16 W45	4159	42 D	2	2			9.00				
	30	1229 F	1236	N19 W54	4159	7 D	2	3	1229	4.00	6.40				
	30	1253	1306	N19 W55	4159	13	1	3	1255	1.50	2.30				
	30	1313	1317	S18 E80	4167	4	1	3	1255	1.50	2.30				
30	1321	1329	S18 F80	4167	8	16	1	1315	2.00	4.00					
30	1456 F	1535 D	N19 W35	4159	29 D	1	2	1324	3.00	6.00					
30	1559 F	1516 D	N18 W40	4159	9	16	1	1513	4.00	5.60					
30	2313	2331	S26 W28	4161	16	1	2	2319	1.50	2.00					

COMMENCE - STANDARD - END

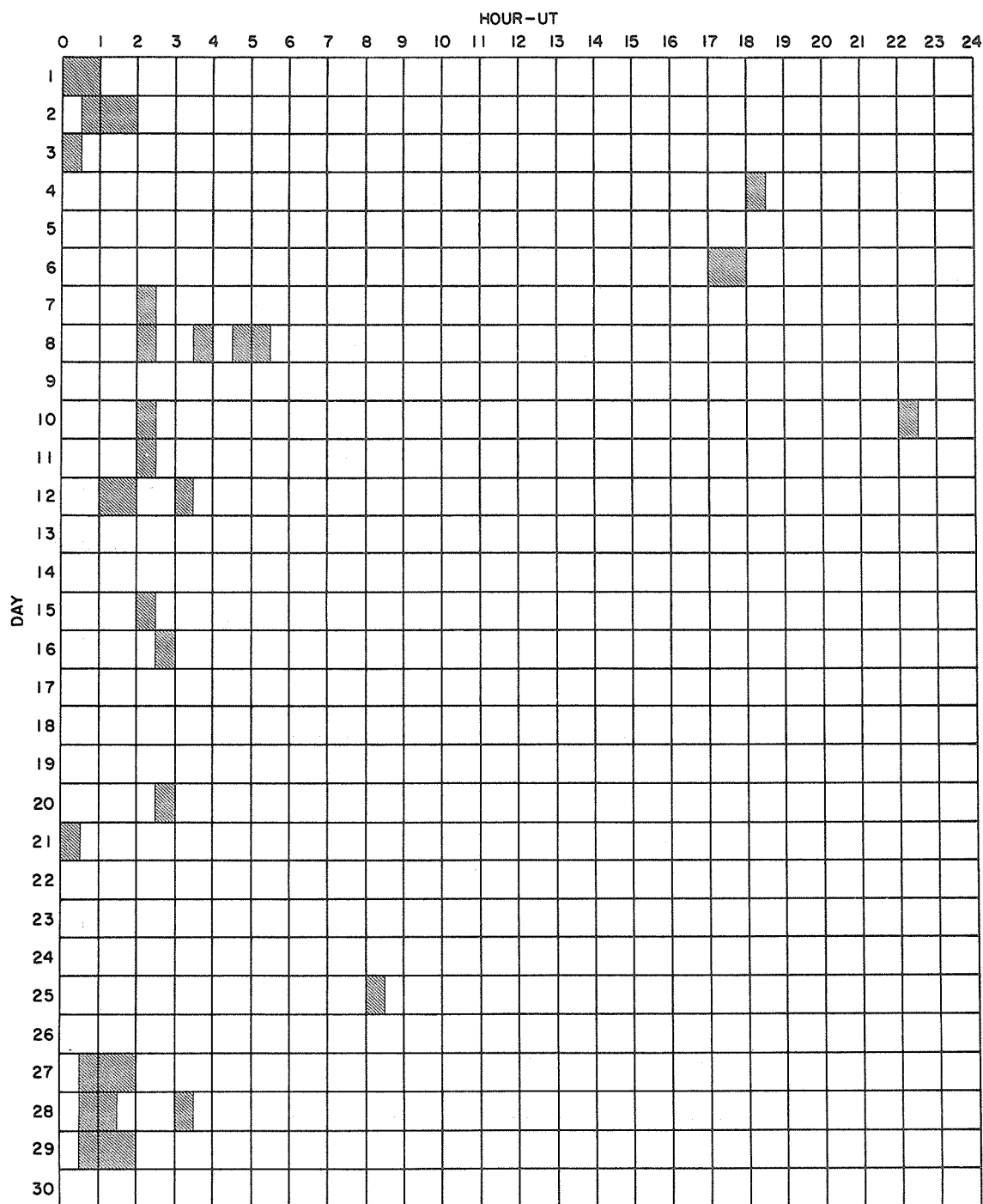
These flare reports are addenda to the September 1957 flares published in CRPL-F 158 Parts October 1957.

E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
+ - PLUS
- - MINUS

ANACAPRI - GERMAN
ANACAPRI - SWEDISH
ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KODAIKANAL
KRASHYA
ROYAL OBSERVATORY, EDINBURGH
R O EDIN
GREENWICH ROYAL OBSERVATORY, HERSTONCEUX
SAC PEAK
SCHAUMSLAN
UNITED STATES NAVAL RESEARCH LABORATORY
USRL

INTERVALS OF NO FLARE PATROL OBSERVATIONS SEPTEMBER 1957

IIIw



Times indicated are accurate to the nearest half hour.

COMMERCE - STANDARDS - BOULDER

Stations included:

Anacapri (Swedish)
Arcetri
Athens
Climax
Dunsink
Hawaii
Huancayo
Ikomasan

Kodaikanal
Krasnaya Pakhra
Meudon
Mitaka
Nera
Nizamiyah
Ondrejov
Ottawa

Royal Greenwich Obs.,
Herstmonceux
Royal Observatory, Edinburgh
Simeiz
Sydney
Uccle
U.S. Naval Research Laboratory
Zurich

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE	OBSERVED TIME		MAX. PHASE	LOCATION			DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT		
		START	END		APPROX. LAT.	APPROX. LONG.	APPROX. DIST.				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %	
APASTUMANI	01	0712	0723	0713	N13 361	4159		11	1			4.80		2.70	66	
	01	0734	0745	0736	N11 347	4159		11	1			4.80		2.30	72	
	01	0935	0955		N28 F19	4165		20	16	1		5.00	2.00			
	01	2348	2358	2350	S15 F52	4167		20	1	1	2350	1.00	2.00			
SYDNEY	02	0246	0253	0248	S15 F49	4167		7	1	2	0248	1.50	3.00		G-SWF	
	02	0342	0426	0348	N10 347	4159		42	1	1	0348	2.00	3.00			
	02	0343	0417	0350	N12 347	4159		34	15	1		7.30		2.40	90	
	02	0417	0427	0418	S15 F53	4175		12	1			3.30		2.70	100	
TASHKENT	02	0418	0426	0419	S15 F50	4167		6	1	1	0419	1.00	2.00			
	02	0418	0425	0418	S15 F53	4167		7	1			2.20		1.00	1	
	02	0429	0439	0430	S17 F58	4167		30	1			1.00		2.60	80	
	02	0435	0439	0435	S17 F50	4167		6	1	1	0436	2.00	2.00			
SYDNEY	02	0615	0621	0616	S16 F50	4177		6	1			0.617			1	
	02	0623	0631	0624	S15 F54	4167		8	1	1	0624	7.20		2.40	68	
	02	0640	0643	0640	S13 F44	4167		102	16	1			3.00			
	02	0748	0813	0754	N12 F67	4172		25	1	1		4.00		2.90	70	
CAPRI G	02	0833	0843	0834	N12 F67	4172		10	1			8.20		2.50	75	
	02	0833	0843	0834	N12 F67	4172		10	1			7.20		2.50	75	
	02	0850	0909	0854	N28 F05	4165		19	16				6.00		1.60	70
	02	0855	0910	0858	N28 F04	4165		15	16							
ARASTUMANI	02	0853	0905	0856	N27 F10	4167		12	2	1		4.10				
	02	0933	0956	0936	N28 F18	4165		23	1	1		4.00				
	02	1350	1400	1350	S14 F30	4167		10	1	1		5.00				
	02	1443	1459	1443	S22 F28	4167		16	1	2	2316	1.00	3.00		Slow S-SWF	
SYDNEY	02	2258	2332	2316	N23 F79	4159		34	1	2	2327	3.00	4.00		Slow S-SWF	
	02	2317	2336	2317	S22 F21	4167		19	1	3						
	03	0102	0131	0111	N23 F72	4159		29	2	2	0111	1.50	6.00		Slow S-SWF	
	03	0523	0534	0527	N23 F72	4159		11	1	2	0527	1.00	5.00			
TASHKENT	03	0527	0540	0529	N16 F74	4159		13	16			2.20		4.60	80	
	03	0527	0538	0529	N13 F69	4159		11	1		0529	1.40		1.32	1	
	03	0541	0553	0541	S14 F38	4175		12	1			2.60		4.00	80	
	03	0625	0637	0632	S23 F20	4167		12	1		0632					
SYDNEY	03	0625	0638	0625	S21 F19	4167		13	1			5.00			G-SWF	
	03	0629	0638	0629	S23 F13	4167		9	1			2.20		3.50	60	
	03	0722	0737	0727	S17 F37	4175		17	1			2.40			58	
	03	0739	0748	0741	S08 F33	4175		9	1			2.50			52	
ARASTUMANI	03	0739	0852	0741	S12 E41	4175		13	1			2.80			78	
	03	0739	0852	0741	S12 E41	4175		13	1			1.90		1.00		
	03	0740	0755	0742	S15 F43	4175		15	1		0741	1.90		4.30	80	
	03	0740	0755	0742	S15 F43	4175		15	1			1.50		2.35	120	
TASHKENT	03	0740	0754	0745	S14 F37	4175		12	1			7.50				
	03	0742	0756	0745	S20 F38	4175		17	16			9.50				
	03	0923	1244	0904	S19 F39	4175		9	1	2	2301	1.50	3.00			
	03	1235	1244	1238	S41 F50	4173		18	1	3	2349	1.50	1.50			
SYDNEY	03	2256	2314	2301	S41 F50	4173		18	1			1.50				
	03	2346	2350	2346	N20 F04	4179		4	1			1.50				
	04	0017	0035	0027	N20 F04	4179		18	1	2	0027	1.50				
	04	0050	0107	0102	N20 F04	4179		8	1	2	0103	1.50				
SYDNEY	04	0113	0121	0115	N20 F04	4179		8	1	2	0115	1.50				
	04	0149	0200	0152	N20 F04	4179		11	1	3	0152	1.50				
	04	0703	0720	0703	N28 F21	4165		9	1			7.00		2.20	57	
	04	0825	0910	0849	S14 F16	4175		45	16			9.50		2.60	67	

CONVERSION - DOLLAR

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MONTHLY FLAGE REGION				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Sq.		MAX. INT. %
CAPRI G	04	1100 F	1120 D	N20 E95	4179	20 D	1	1			5.00			
UTRECHT	04	1345	1347 D	□	□	2 D	1						120	
KIEV	05	1142	1225	S43 E40	4173	43	1			1.80				
KIEV*	06	1022 F	1025 F	S24 W24	4167	3 D	1			4.90				
KIEV*	06	1050 F	1125 D	N38 W90	4159	35 D	□			6.30				
KIEV	06	1220 F	1244 D	S28 W24	4167	24 D	16						100	
HEUDON	06	1229	1252	S28 W21	4167	23	1							
CAPRI G	06	1245 F	1300 D	S24 W22	4167	15 D	2	1		7.00				
CAPRI G	06	1515 F	1523	N41 E00	4171	8 D	1	1		3.00				
TASHKENT	07	0518	0615	N17 E11	4172	57	1			3.60		2.50	70	
HEUDON	07	1337	1358	N10 E80	4180	21	1							
SYDNEY	08	0231	0258	N20 W08	4172	27	2	2	0239	10.00	11.00		Slow S-SWF	
SYDNEY	08	0522	0541	N13 E32	4172	19	1	2	0526	4.00	5.00			
KIEV	08	1003 F	1115	N43 W25	4171	72 D	2			5.43			220	
HEUDON	08	1036 F	1043	S37 W05	4173	7	1							
CAPRI G	08	1048 F	1053	N12 E06	4172	5 D	16	1		5.00				
HEUDON	08	1053	1125	N40 E25	4171	32	16							
CAPRI G	08	1053	1118	N42 W24	4171	23	2	1		7.00				
CAPRI G	08	1055 F	1125 D	N41 W26	4171	30 D	16	3						
HEDERHORST	08	1055 F	1121 D	N40 W23	4171	24 D	16			8.65				
KIEV*	08	1057 F	1110	□	□	4	16							
UTRECHT	08	1106	1110	N50 W10	4171	29 D	1		1127	2.00	2.00	3.00		
DUNSTON	08	1110 F	1130	N18 W17	4172	11 D	1					2.20		
DUNSTON	08	1437 F	1448	N10 E90	4192	25	□	2	0220	.75				
SYDNEY	09	0212	0237	N10 E90	4192	10	□	2	0327	.75				
SYDNEY	09	0320	0330	N10 E90	4192	17 D	□	2	0341	1.00				
SYDNEY	09	0336	0353 D	S42 W08	4173	102 D	1	2	0400	2.70			1	
KYOTO	09	0355 F	0537 D	N07 E46	4180	12	1	2			2.00			
CAPRI G	09	0654	0706	N14 W04	4172	15 D	1	2			5.00			
CAPRI G	09	0700	0715 D	N18 W26	4172	5 D	1	2			5.00			
CAPRI G	09	0740 F	0745 D	N15 W19	4172	5 D	1	2			5.00			
CAPRI G	09	0940 F	0945 D	N14 W20	4172	5 D	1	2			3.00			
CAPRI G	09	0943 F	0948 D	N24 E37	4182	10 D	1	2						
HEUDON	09	1020 F	1030 D	N12 W25	4172	13 D	1	2						
CAPRI G	09	1140 F	1153 D	N14 W21	4172	6	1	2		1.40			110	
HEUDON	09	1141	1147	N24 E37	4182	11 D	1	2		.75				
KIEV	09	1404 F	1415	N15 E82	4192	9	□	2	2224					
CAPRI G	09	2221	2230	N25 W77	4172	18 D	1	1	0246	.75				
SYDNEY	10	0237	0255 D	S19 E62	4185	25 D	1	2			3.00			
SYDNEY	10	0900 F	0925	N24 E26	4182	5 D	1	2			5.00			
CAPRI G	10	1105 F	1110 D	S40 W36	4173	26	1	1	0256	1.00	2.00			
SYDNEY	11	0250	0316	N18 E01	4179	30	1	1	0419	4.00	5.00		70	
SYDNEY	11	0415	0445	S29 E90	4189	18 D	1	3		2.70		3.20		
CRINEA	11	0807 F	0825 D	S29 E89	4189	10	1			2.40		2.30		
ABASTUMANI	11	0809	0819	S29 E89	4189	10	1			1.40		2.40		
CRINEA	11	0814 F	0846 D	N14 W47	4172	32 D	1							
HEUDON	11	1422	1503	N42 W50	4171	41	1							

CONTINUED - SEPTEMBER - OCTOBER

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DUR. MIN.	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	APPROX. MER. DIST.				TIME - UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH R _h		MAX. INT. %
{CAPRI G CAPRI G CAPRI G NEUDON CAPRI G	11	1432 E	1440 D	N42 W59	4171	8 D	1	2			4.00			G-SHF
	11	1432 F	1517 D	S38 W36	4173	45 D	1	2			3.00			
	11	1450 F	1517 D	S13 E50	4185	27 D	1	2			2.00			S-SHF
	11	1505 F	1525 D	S28 E75	4189	20 D	1	2			3.00			
	11	1510 F	1517 D	S23 E71	4189	7 D	1	2						
{ARASTUMANI CAPRI G CAPRI G ABASTUMANI CAPRI G CAPRI G KHARKOV CAPRI G CAPRI G CAPRI G CAPRI G	12	0558 F	0613 C	N14 W60	4172	195 D	1	2						
	12	0710 F	0714	S15 W46	4177	4 D	1	2		6.00	2.00	2.40	64	
	12	0735 F	0850 D	S16 E44	4185	75 D	1	2		7.20		2.20	51	
	12	0821 E	0913 D	N07 E45	4186	52 D	16			8.40			52	
	12	0900 F	0910 D	S25 E67	4189	10 D	2	2			8.00			S-SHF
	12	0900 F	0915 D	N16 W57	4172	15 D	1	2		1.00				
	12	0955 E	1010 D	N22 E55	4188	15 D	1	2			3.00			
	12	0955 E	1024	N10 E56	4186	29 D	1	2			5.00			
	12	1000 F		N05 E46	4186		1	2		3.00				S-SHF
	12	1010 F	1030 D	S24 E66	4189	20 D	15	2			6.00			
{KYOTO KYOTO TASHKENT CAPRI G CAPRI G CAPRI G ARASTUMANI CAPRI G CAPRI G MOSCOW CAPRI G MOSCOW CAPRI G CAPRI G CAPRI G MOSCOW MOSCOW CAPRI G CAP														

CONTINUED - SEPTEMBER - DECEMBER

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED TIME		LOCATION		IN- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. MER. DIST.			MEAS. AREA Sq. Deg.	COOR. AREA Sq. Deg.	MAX. WIDTH H _z	
KIEV	14	1107	1126 D	S16 E05	4185	19 D	2	2.00	3.00		70
CAPRI G	14	1150 F	1200 D	S26 E50	4189	10 D			4.00		
JIRECHT	14	1305 D	1307 D	S21 E47	4189	7 D	2				
CAPRI G	14	1318	1325 D	N15 W50	4172	15 D	3				
NEDERHORST	14	1320	1335 D	S21 E47	4189	7 D					
JIRECHT	14	1327	1328 D	S14 E07	4185	10 D	2		3.00		
CAPRI G	14	1435 F	1445 D	S20 E16	4185	6 D	2		2.00		
CAPRI G	14	1534 F	1540 D	S24 E32	4189	8 D	2		3.00		
CAPRI G	14	1534 F	1542 D	S16 E74	4191	24	1	2318	3.00		
SYDNEY	14	2303	2327	S24 W02	4183	14	3	0122	2.00		
SYDNEY	15	0239 F	0324	S26 E30	4189	45 D	2	0247	4.00		
TASHKENT	15	0509 F	0550 D	N06 E08	4186	41 D	1		2.00	70	
KYOTO	15	0650	0655	S23 E27	4189	5	1	0650	1.24	1	
CAPRI G	15	0759	0834	S28 E29	4189	35	3		7.00		
CAPRI G	15	1015	1036	N11 E57	4186	21	3		6.00		
KIEV	15	1217 F	1220	N10 E53	4186	3	3	1.40	4.00		93
CAPRI G	15	1250 F	1335	N26 W10	4183	45 D	1				
NEDERHORST	15	1325 F	1345 D	N19 E90	4195	20 D	1				
CAPRI G	15	1329 F	1335 D	S21 E30	4189	6 D	3		5.00		
NEDERHORST	15	1332 F	1357	S18 E29	4189	25 D	1				
CAPRI G	15	1334 F	1345 D	S23 E32	4189	11 D	1	1.80		130	
KIEV	15	1335	1345 D	N06 E14	4186	10 D	16	5.40		120	
KIEV	15	1335	1430	N11 F17	4186	55	2				
CAPRI G	15	1352 F	1400	N08 E34	4185	8 D	3		4.00		
SYDNEY	16	0413	0442	S27 F17	4189	29	3	0427	4.00		
TASHKENT	16	0528	0535	S27 F19	4189	11	2		4.40	70	
ABASTUMANI	16	0624 F	0638 D	S25 F18	4189	164 D	1		4.20		
CAPRI G	16	0700 F	0717	S24 E15	4189	17 D	3		5.00		
CZIMEA	16	0705 F	0705 D	S28 F19	4189	3 D	1		3.00	80	
CAPRI G	16	0708 F	0711	N21 W59	4182	3 D	3				
CZIMEA	16	0749 F	0745 D	S28 E18	4189	23	2		6.40	90	
MOSCOW	16	0750 F	0813 D	S30 E73	4189	10 D	2		5.63	220	
CAPRI G	16	0804	0814 D	S24 F18	4189	10 D	1		4.00		
CAPRI G	16	0804	0814 D	N07 F22	4186	10 D	2		3.00		
CAPRI G	16	0850 F	0906 D	S24 E59	4189	6 D	3		2.00		
CHARKOV	16	0918 F	1025 D	S14 W22	4185	47 D	1		3.00		
CHARKOV	16	0950 F	0959 D	S21 E16	4189	9 D	1		2.00		
CHARKOV	16	1032 F	1036 D	N30 E17	4190	4 D	1		2.38	160	
MOSCOW	16	1159 E	1116 D	N19 W62	4179	17	1		3.00		
CHARKOV	16	1144 E	1206 D	S14 W23	4185	22 D	1				
CAPRI G	16	1154 E	1210 D	S13 W19	4185	16 D	1		3.00		
CAPRI G	16	1230 F	1237	S23 E12	4189	7 D	2		2.00		
CAPRI G	16	1330 F	1340 D	S13 W19	4185	10 D	2		5.00		
CAPRI G	16	1351	1402	S24 E15	4189	11	1		2.00		
CAPRI G	16	1408 F	1415	N09 E52	4186	7 D	2		4.00		
CAPRI G	16	1513 F	1520 D	S12 W19	4185	7 D	1		3.00		
SYDNEY	17	0420	0500	S23 E06	4189	40	2	0432	3.00	50	
ALMA-ATA	17	0635 F	0740 D	N07 W28	4192	95 D	1		8.00		
ALMA-ATA	17	0658 F	0750 D	N12 W23	4192	102 D	1				

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SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE	OBSERVED TIME		LOCATION		DURA- TION — MINUTES	IN- COR- PORATION — TANCE	OBS. COND.	MEASUREMENTS		MAX. WIDTH He	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. MER. DIST.	MCARTH. FLAGE REGION			TIME — UT	MEAS. AREA Sq. Deg.	CORR. Sq. Deg.		
ALMA-ATA	17	0619 E	0653 D	S31 W05		4189	34 D	1		2.00	7.00	50	Slow S-SWF
CAPRI G	17	1140 F	1210 D	S23 E04		4189	30 D	2			3.00		
CAPRI G	17	1150 F	1205	N11 F15		4186	15 D	2			10.00		
CAPRI G	17	1410 F	1540 D	S24 E08		4189	90 D	2		4.00	5.00		
SYDNEY	17	2359 F	0133 D	S29 E06		4189	94 D	2	0023				
CRIMEA	18	0652 E	0718	S18 W41		4299	26 D	1		4.60		70	S-SWF
ARASTUMANI	18	0821 E	0911 D	S22 W02		4189	50 D	1		4.80			
CAPRI G	18	0823 F	0905	S22 W04		4189	42 D	2			8.00		
CAPRI G	18	1007 F	1015 D	S25 W02		4189	8 D	16			6.00		
DUNSTON	18	1010 E	1202	S22 W22		4189	118 D	1				100	
CAPRI G	18	1243 E	1301 D	N24 E50		4196	18 D	1			3.00		
CAPRI G	18	1645 E		N28 E90		4197	18 D	3					
CAPRI G	18	1515 F	1541 D	S24 W08		4189	26 D	16			7.00		
CAPRI G	18	1522 E	1539	N22 W64		4183	17 D	1			3.00		
ARASTUMANI	19	0603	0800	S26 W24		4189	177	2		13.00		204	Slow S-SWF
CRIMEA	19	0622	0635	N13 W42		4186	33	16		9.60		110	
CAPRI G	19	0654 E	0755	S24 W25		4189	65 D	2		20.10			
CAPRI G	19	0708 E	0815	S23 W24		4189	67 D	26			11.00		
TASHKENT	19	0740 E	0754	S23 W26		4189	14 D	2		15.70		90	S-SWF
ARASTUMANI	19	0747 E	0857	S28 W17		4189	70 D	1		8.60		144	
CAPRI G	19	0830 E	0900	S26 W17		4189	30 D	2			7.00		
KIEV*	19	1018	1028	S27 W28		4189	10	1		4.20			
CAPRI G	19	1040 E	1155	S22 W17		4189	75 D	2			9.00		
KHARKOV	19	1131 E	1153 D	N10 W30		4180	22 D	1					
CAPRI G	19	1255 F	1306	S24 W24		4189	11 D	16			5.00		
CAPRI G	19	1317 F	1400	S24 W20		4189	43 D	2			8.00		
CAPRI G	19	1304 E	1316	S20 E00		4201	8 D	1					
CAPRI G	19	1512 E	1528	N24 W72		4183	16 D	1			3.00		
CAPRI G	19	1512 F	1535 D	N13 W51		4180	23 D	1			3.00		
ARASTUMANI	20	0555 E	0902 D	N17 W31		4188	167 D	16		9.60			
NEUDON	20	0801	0830	N12 W12		4197	29	16					
KHARKOV	20	0913 E	1010 D	S26 W30		4189	57 D	16		9.00			
KHARKOV	20	0921 E	0931 D	S21 W28		4189	10 D	1		3.00			
MOSCOW	20	0922 E	0932 D	S21 W31		4189	10	1		1.36			
CAPRI G	20	0925 E	0929	S21 W35		4189	4 D	16			6.00	120	
KIEV	20	0925 E	1200 D	S26 W32		4183	155 D	26	1	11.80		270	S-SWF
NEUDON	20	0938 F	1017	S28 W33		4189	39	2					
MIZMIT	20	0942 F	1036 D	S25 W33		4189	54 D	16		4.95		100	
CAPRI G	20	0943 E	1050	S26 W30		4189	67 D	2			6.82		
KIEV*	20	0945	1001	S30 W28		4189	16	2			8.00		
MOSCOW	20	0948 F	1053 D	S26 W30		4189	65	16		8.55		180	
SYDNEY	20	1034 E	1116 D	N23 F70		4197	42	1		2.84		110	
CAPRI G	20	1150 E	1155 D	S27 W35		4189	5 D	16			6.00		
SYDNEY	20	2219 E	2247	S21 W41		4189	28 D	1	2224	2.00			
SYDNEY	20	2221	2248	S25 W41		4189	27	1	2232	3.00			
SYDNEY	20	2221	2247	N25 E58		4197	26	1	2229	1.50			
SYDNEY	20	2259	2320	S27 W45		4189	21	1	2304	1.50			
SYDNEY	20	2340	0006	N23 W54		4188	26	1	2345	3.00			
SYDNEY	21	0150	0205	N26 E60		4197	15	1	0156	2.00			

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SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	RM. FOR TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL LONGPERMIC EFFECT	
		START	END	APPROX. LAT.	APPROX. LONG. REGION				TIME U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX WIDTH In		MAX. INT. %
{SYDNEY KYOTO SYDNEY ARASTUMANI TASHKENT ARASTUMANI	21	0150	0239	N24 W54	4188	49	2	3	0156	5.00	8.00	1.82	1	
	21	0153	0212	N25 W48	4188	19	1		0158					
	21	0245	0255	N23 W55	4197	10	1	3	0247	1.50	3.00			
	21	0607	0714	N20 W61	4197	47	16			8.40		2.50	70	
	21	0653	0707	N22 W64	4197	14	1			5.30				
SYDNEY	21	0627	0910	N26 W47	4189	165	1			4.30				
	22	0128	0137	N26 W55	4188	9	1	2	0134	1.50	3.00			
	22	0502	0540	N25 W60	4189	38	1			2.90		2.70	50	Slow S-SWF
	22	0709	0806	N31 W59	4188	308	1			10.90		1.86	150	
	22	0755	0806	N28 W65	4188	11	1							
	22	0803	1215	N16 W00	4193	252	16			10.69		1.94	150	
	22	0755	0806	N25 W07	4194	11	1							
	22	0803	1215	N28 W03	4194	252	2			17.05		1.92	150	
	22	0923	1013	N28 W65	4188	50	16			6.22				
	22	0928	0946	N25 W07	4194	16	16			2.42				
{MIZUR MIZUR														

CONTINUED - PREVIOUS PAGES

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- TER- VAL	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT. LONG.	MEAS. PLACE REGION				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H ₃₀₀₀	MAX. INT. %		
ABASTUMANI	25	0712 F	0747	N27 W43	4194	28 D	1		4.80			178	S-SWF	
	25	0826	0910	N15 W08	4197	44	1		7.20			186		
	25	0837 F	0923	S26 F09	4201	46	2		26.40		1.80	214		
CAPRI G	25	0838 F	0940	S25 F07	4201	62 D	2			10.00			S-SWF	
CAPRI G	25	0844 F	0920	N13 W06	4197	36 D	1			4.00				
CAPRI G	25	0927 F	0932 D	N19 E03	4197	5 D	1			4.00				
CAPRI G	25	0946 E	1025	N25 W44	4194	39 D	1			4.00			S-SWF	
CAPRI G	25	1042 E	1105 D	N25 W44	4194	23 D	1	3		5.00				
KIEV*	25	1044 E	1058 D	N27 W46	4194	14 D	16		10.50			90		
CAPRI G	25	1054 F	1129 D	N26 W46	4194	35 D	1		2.70				SLOW-R-SWF	
CAPRI G	25	1050	1105 D	N18 W46	4195	15 D	1	3		3.00				
CAPRI G	25	1059 F	1125 D	N13 E59	4206	26 D	1	1		3.00				
CAPRI G	25	1120 F	1125 D	S13 E26	4203	5 D	1	1		4.00			S-SWF	
CAPRI G	25	1317 F	1339	S12 F31	4203	22 D	1	2		3.00				
CAPRI G	25	1505 F	1515 D	N10 E05	4197	10 D	2	1		8.00				
TASHKENT	26	0755	0827	N13 W11	4197	32	2		8.80		3.80	170	S-SWF	
KHARKOV	26	0943 F	1010 D	S21 W14	4201	27 D	16		3.00					
YEUJON	26	1207	1222	N25 E52	4205	15	1							
YEUJON	26	1407	1440	S25 F80	4207	33	1						S-SWF	
TASHKENT	27	0650 F	0705	N21 E06	4202	15 D	1		3.00		3.00	70		
CAPRI G	27	0703 F	0717 D	N14 E06	4202	14 D	1	2		4.00				
CAPRI G	27	0748 F	0803 D	N23 W18	4197	15 D	1	2		4.00			S-SWF	
CRIMEA	27	0800 F	0811 D	S25 F65	4207	11 D	1		3.60		2.60	80		
CAPRI G	27	0800	0814 D	S28 E57	4207	14 D	1	2		3.00				
TASHKENT	27	0801	0806	S24 E59	4207	5	16		4.20		4.20	150	S-SWF	
CAPRI G	27	0851	0925	N14 W22	4197	34	1	2		4.00				
KIEV	27	0856 F	0931	N21 E04	4202	35 D	16		4.50			90		
KIEV*	27	0900 F	0917	N21 E02	4202	17 D	1		4.00				S-SWF	
KIEV	27	0907	1000	N13 W22	4197	53	1		2.00		100			
CAPRI G	27	0916	0958	N22 W24	4197	42	1	2	0930		3.00			
KIEV*	27	0917 F	0956 D	N10 W24	4197	39 D	1		2.50			90	S-SWF	
KIEV	27	1114	1206 D	N12 W31	4197	52 D	1		2.00			110		
KIEV	27	1120	1206 D	N19 W46	4196	46 D	1		1.80					
KIEV*	27	1201 E	1219 D	S24 W29	4201	18 D	16		3.75				S-SWF	
CAPRI G	27	1205 E	1223	S22 W24	4201	18 D	16	2		5.00				
CAPRI G	27	1426 E	1433 D	N18 W74	4195	7 D	1	1		3.00				
CAPRI G	27	1532 E	1535 D	S20 F55	4207	3 D	1	1		3.00			S-SWF	
SYDNEY	28	0103 F	0107 D	S23 F51	4207	4 D	1	2	0103	1.50	3.00	1.48		1
KYOTO	28	0213 F	0225 D	N21 W10	4202	12 D	1	2	0215					
SYDNEY	28	0442	0454 D	S23 F49	4207	12 D	1	1	0448	2.00	4.00			
CRIMEA	28	0749 E	0823 D	S27 F53	4207	29 D	1	1		5.00		1.40	70	
CAPRI G	28	0801 E	0820 D	S26 F47	4207	19 D	1	2		2.00				
ABASTUMANI	28	0816 F	0836	N23 F26	4205	80 D	1		2.40			159	S-SWF	
ABASTUMANI	28	0816 F	0911 D	N21 W11	4202	55 D	1		7.20			187		
ABASTUMANI	28	0816 F	0911 D	S28 E52	4207	55 D	1		5.00			170		
KIEV	28	0900 F	0900 D	S23 W35	4201	55 D	1		1.80			70	S-SWF	
KIEV	28	0900 F	0900 D	S20 W36	4201	1	1		1.20			90		
CRIMEA	28	0905	0912	S24 F54	4207	7	1		2.00		1.70	80		
ABASTUMANI	28	0907		S24 F53	4207		1		3.50			182	S-SWF	
CAPRI G	28	0932 F	0944	S24 E47	4207	12 D	1	2		1.00				
CAPRI G	28	0937 F												

OBSERVING - STATION - SOLAR

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED TIME		UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — UT	MEASUREMENTS		PROVISIONAL IONOSPHERIC EFFECT
		START	END	START	END	APPROX. LAT. MER. DIST.	APPROX. LONG. REGION					MEAS. AREA Sq. Deg.	COOR. AREA Sq. Deg.	
CAPRI G	28	0959	1015	1003	U	S22 W34	4201	16 D	16	2		2.00	2.00	
CAPRI G	28	1001	1020			S22 W33	4201	19 D	1				3.00	
CAPRI G	28	1120	1133			N21 W08	4202	13	1	3		2.00		
CAPRI G	28	1120	1136			N23 W11	4202	16 D	1			5.00		
CAPRI G	28	1144	1203			S20 W36	4201	19 D	1					
CAPRI G	28	1147	1159			S22 W30	4201	12 D	1	3				
CAPRI G	28	1146	1156			S25 E55	4207	10 D	1					
CAPRI G	28	1352	1358			S23 W40	4201	6	1	2				
ARASTUWANI	29	0631	0710	0650		S19 E80	4218	39	16			4.80		
ARASTUWANI	29	0703	0801	0834		N22 W25	4202	118	16			7.20		
ARASTUWANI	29	0811	0850	0830		N21 W23	4202	39 D	16	1				S-SWF
ARASTUWANI	29	0828	0856	0835	U	N21 W24	4202	39 D	16			9.12		
ARASTUWANI	29	0816	0827			S19 E33	4207	11	1	1				
CAPRI G	29	1120	1150			N21 W23	4202	30 D	16	2				
CAPRI G	29	1120	1150			N24 W78	4196	30 D	1	2				
CAPRI G	29	1130	1140			S20 E31	4207	10	1	2				
CAPRI G	29	1130	1144			N25 E13	4205	14	1	2				
CAPRI G	29	1338	1346			S23 E37	4207	8 D	1	2				
CAPRI G	29	1338	1346			N20 W25	4202	8 D	1	2				
CAPRI G	29	1518	1525			N17 W67	4196	7 D	16	2				Slow S-SWF
CAPRI G	29	1540	1545			N19 W22	4202	5 D	16	1				
CAPRI G	29	1540	1545			S17 E30	4207	5 D	2	1				Slow S-SWF
CAPRI G	30	0855	0920	0857		S13 W37	4203	35	1			7.00		
CAPRI G	30	0900	0912			S12 W37	4203	12 D	16			2.60		
CAPRI G	30	0904	0906			N23 W35	4202	2	1					
CAPRI G	30	0926	0930			N23 E02	4208	4 D	16					
CAPRI G	30	0950	1014	1000	U	S12 W38	4203	24 D	1					
CAPRI G	30	0956	1013	0958		S14 W38	4203	3 D	2			3.05		
CAPRI G	30	1013	1019	1016	U	S10 W35	4203	15 D	1	1		8.35		
CAPRI G	30	1014	1018			S21 W59	4201	6 D	1					
CAPRI G	30	1043	1055	1044		S25 W66	4201	4	2			4.00		
CAPRI G	30	1131	1203			N13 F30	4213	10 D	1		1044	7.50		
CAPRI G	30	1150	1200			N22 W35	4202	32 D	16	2				
CAPRI G	30	1316	1328			N37 E56	4212	12 D	1	2		5.00		
CAPRI G	30	1427	1451			S21 E16	4207	24 D	16	2				Slow S-SWF
CAPRI G	31	0022	0050	0025		N38 E47	4212	28	1					
CAPRI G	31	0053	0056			S11 W49	4203	3	1	2		2.00		
CAPRI G	31	0146	0226	0202		S12 W47	4203	40	1	3		1.50		
CAPRI G	31	0155	0218			S15 W46	4203	23 D	16			3.00		
CAPRI G	31	0201	0222	0205		S21 W05	4207	21	1	3		0155		
CAPRI G	31	0320	0336	0327		S21 W71	4201	16	1	2		2.00		
CAPRI G	31	0700	0707			S22 E11	4207	7 D	1	3		.75		

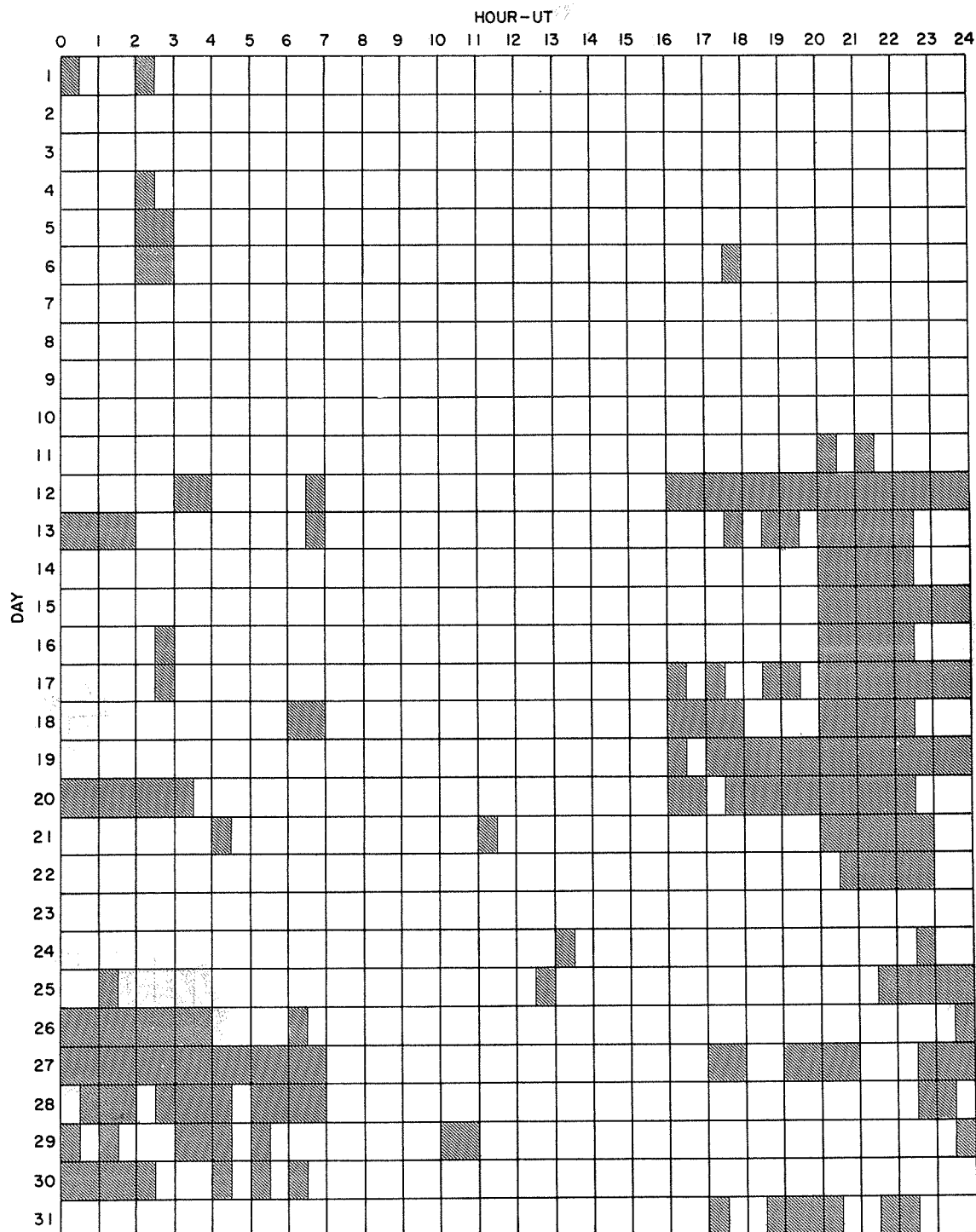
COMMENCE - END

These flare reports are addenda to the October 1957 flares published in CRPL-F 159 Part B, November 1957).

E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
+ - PLUS
- - MINUS

CAPRI G
CAPRI S
GOOD HOPE
KODAIKANAL
KODAIKANAL
KRASNYA PAKHRA
ROYAL OBSERVATORY, EDINBURGH
R O EDIN
GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK
SCHAUMSLAND
UNITED STATES NAVAL RESEARCH LABORATORY

INTERVALS OF NO FLARE PATROL OBSERVATIONS OCTOBER 1957



Times indicated are accurate to the nearest half hour.

COMMERCE - STANDARDS - BOULDER

Stations included:

Abastumani
Alma-Ata
Anacapri (Swedish)
Arcetri
Arosa
Athens
Climax
Dunsink
Hawaii

Huancayo
Ikomasan
Kharkov
Kiev I, GAO
Kiev University
Kodaikanal
Krasnaya Pakhra
Mitaka
Meudon

Moscow University
Nera
Nizamia
Ondrejov
Ottawa
Royal Greenwich Obs.,
Herstmonceux
Royal Observatory,
Edinburgh

Sacramento Peak
Simeiz
Sydney
Tashkent
Uccle
Utrecht
U.S. Naval Research
Laboratory
Zurich

IONOSPHERIC EFFECTS OF SOLAR FLARES

(SHORT-WAVE RADIO FADEOUTS)

JUNE 1958

June 1958	Start UT	End UT	Type	Wide Spread Index	Importance	Observation Stations	Known Flare, UT CRPL-F 167B
2	0700	0720	S-SWF	5	2-	NE, OK, PU, TO	
2	1950	2015	S-SWF	5	1+	BE, CR, HU, MC, PR, WS	
3	1332	1415	G-SWF	4	1+	BE, HU, MC, PR	1320E
3	1510	1535	S-SWF	5	2+	BE, HU, MC, NE, PR, TO, WS, CW***	1507
3	1927	2000	G-SWF	4	1	AN, HU, MC, WS	
4	1820	1840	G-SWF	3	1	HU, MC	
4	2142	2240	Slow S-SWF	5	2+	AD, BE, CR, HU, MC, PR, TO, WS, RCA+	2147E
5	0842	0937	S-SWF	5	2+	KO, NE, OK, CW***	0841E
5	1620	1800	S-SWF	5	3	BE, CR, HU, MC, NE, PR, PU, TO, WS	1615
5	1809	1830	Slow S-SWF	4	1-	AN, BE, HU, MC	1811
6	0436	0526	Slow S-SWF	5	2	OK, TO, WI, CW**	0436
6	1335	1355	G-SWF	2	1-	HU, MC	1332
7	0004	0034	S-SWF	3	1+	OK, TO	
7	0819	0828	Slow S-SWF	1	1	NE	0819E
8	0850	0915	S-SWF	5	2+	JU, KO, NE, OK, PU	0845
8	1750	1820	S-SWF	5	2+	AD, BE, HU, MC, PR, PU, WS	1742
8	1837	1855	S-SWF	4	1	BE, HU, MC, PR	1815
9	0905	0938	S-SWF	3	2	DA, JU	0904
9	1009	1050	S-SWF	3	2	DA, JU	
10	0309	0358	S-SWF	1	2	OK	0307E
10	0546	0634	Slow S-SWF	5	2	KO, NE, OK	0557E
10	2355	0025	S-SWF	5	1	AD, CA, OK	2354
11	0228	0338	S-SWF	5	2+	AD, CA, KO, OK, TO, CW+	0231E
11	1134	1205	S-SWF	1	1	DA	
11	1236	1255	S-SWF	5	2	BE, DA, HU, JU, MC, NE, PR, SW	1234E
11	1306	1400	S-SWF	5	2+	BE, DA, HU, JU, MC, NE, PR	1306
11	1510	1521	S-SWF	3	1-	HU, MC, PR	1514E
11	1607	1625	S-SWF	5	1+	BE, CR, DA, HU, JU, MC, PR, PU, WS	1553
11	1636	1700	G-SWF	5	1-	AN, HU, JU, MC, WS	
11	2038	2118	S-SWF	5	2	AD, BE, CR, HU, MC, PR, TO, WS	2037
12	0700	0752	S-SWF	4	2	OK, PU	0655E
12	1430	1500	Slow S-SWF	5	2-	BE, HU, MC, PR, PU, WS	1419
13	0704	0729	S-SWF	5	2	KO, NE, PU	0659
13	1715	1740	S-SWF	5	2-	BE, CR, HU, JU, MC, PR, WS	1712E
13	2326	2358	Slow S-SWF	4	1+	AD, MC, OK, TO, WS	2322
14	1121	1200	Slow S-SWF	5	2	JU, MC, NE, PR, PU	1119
14	1708	1747	Slow S-SWF	4	2-	BE, HU, MC, PR	1652
14	1943	2000	Slow S-SWF	3	1-	HU, MC, PR	
14	2115	2128	S-SWF	5	1+	AD, AN, BE, HU, MC, PR, TO, WS	2112
15	0010	0020	S-SWF	4	1	AD, OK	0015E
15	1352	1423	Slow S-SWF	5	1+	BE, HU, JU, MC, NE, PR, PU	1349
15	1827	1855	G-SWF	5	1-	BE, HU, MC, PR, WS	
15	2307	2318	Slow S-SWF	4	1	AD, MC, OK	2300
18	1825	1840	S-SWF	3	1	HU, PR	1824
18	2350	0010	S-SWF	5	1	AD, OK, TO	2348
19	0219	0255	S-SWF	5	2+	AD, AN, OK, TO, CW+	0212E
19	0329	0416	S-SWF	1	2+	OK	
19	0732	0746	S-SWF	3	2	NE, PU	0730
19	1005	1030	S-SWF	3	2	NE, SW	0940
19	1257	1310	Slow S-SWF	5	1	BE, CR, HU, MC, NE, PR	1256

IONOSPHERIC EFFECTS OF SOLAR FLARES

(SHORT-WAVE RADIO FADEOUTS)

JUNE 1958

June 1958	Start UT	End UT	Type	Wide Spread Index	Importance	Observation Stations	Known Flare, UT CRPL-F 167B
19	1437	1502	S-SWF	5	3-	AN, BE, CR, DA, HU, MC, NE, PR, <u>TO</u> , CW***	1434
19	1843	1855	S-SWF	3	1-	<u>HU</u> , PR	
21	1240	1337	S-SWF	1	2	<u>PU</u>	1239E
22	1800	1835	G-SWF	5	2	BE, CR, HU, <u>MC</u> , PR	1755
23	0330	0410	G-SWF	3	1	<u>AD</u> , AN	*
23	0711	0819	S-SWF	5	2-	DA, <u>JU</u> , DO, OK, PU	0700
23	0800	0816	S-SWF	1	2	<u>PU</u>	0755
23	1302	1320	S-SWF	4	1-	DA, <u>MC</u> , PR	1300
23	1350	1422	S-SWF	4	1	BE, DA, HU, <u>MC</u>	1337
23	1451	1507	S-SWF	4	1-	BE, HU, <u>MC</u>	1445
23	1707	1722	S-SWF	3	1-	<u>HU</u> , MC	1711
24	1150	1216	S-SWF	1	2	<u>DA</u>	1153
25	2322	2357	S-SWF	5	2	AD, OK, <u>TO</u>	2315
26	0005	0054	Slow S-SWF	5	2+	AD, OK, <u>TO</u>	0029E
26	0247	0412	Slow S-SWF	5	2+	AD, AN, OK, <u>TO</u> , CW+	0245E
26	2240	2317	S-SWF	5	1+	<u>AD</u> , AN, <u>TO</u>	2240
27	0308	0333	S-SWF	5	2	AD, OK, <u>TO</u> , CW+	0304
28	0906	0921	S-SWF	1	2	<u>PU</u>	0853E
28	1840	1855	S-SWF	1	1-	<u>HU</u>	1837
29	2023	2052	S-SWF	5	2	AD, BE, CR, HU, MA, MC, <u>PR</u>	2024
30	0615	0628	S-SWF	5	2	<u>NE</u> , OK	0609E

COMMERCE - STANDARDS - BOULDER

CA = Canberra, Australia

DA = Darmstadt, G.F.R.

JU = Juhlesruh, G.D.R.

KO = Kodaikanal

MA = Madrid, Spain

NE = Nederhorst den Berg, Netherlands

PU = Prague, Czech.

SW = Enköping, Sweden

TO = Hiraiso Radio Wave Observatory, Japan

WI = Witteveen, Netherlands

CW* = Cable and Wireless, Barbadoes

CW** = Cable and Wireless, Somerton, England

CW*** = Cable and Wireless, Brentwood, England

CW+ = Cable and Wireless, Hong Kong

CW++ = Cable and Wireless, Singapore

RCA+ = RCA Communications Inc., Pt. Reyes, Calif.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JULY 1958

OTTAWA

2800 MC

July 1958	Type*	Start UT Hrs:Mins	Duration Hrs:Mins	Maximum		Remarks
				Time UT Hrs:Mins	Peak Flux	
1	1 Simple 1	13 39.5	2.5	13 40.5	7	Interference present
1	3 Simple 3	16 50	5 20	indet.	20	
3	3 Simple 3 A	20 06	>4 10	indet.	20	
	6 Complex	20 12	5	20 13.7	75	
4	1 Simple 1	17 15.2	2	17 15.8	7	In sunset oscillation
6	1 Simple 1	17 12.5	1.5	17 13	6	
6	1 Simple 1	20 01	3	20 02.2	5	
6	3 Simple 3 f	21 07	1 30	21 26	22	
6	2 Simple 2	24 26.5	>8.5	24 27.5	875	
7	3 Simple 3 A	16 31.5	25	16 36	11	
	8 Group (2)	16 31.5	6.5			
	2 Simple 2 f	16 31.5	3.5	16 33	15	
	2 Simple 2	16 36.5	1.5	16 37	25	
7	3 Simple 3 A	17 34.5	15	indet.	5	
	8 Group (2)	17 36	9.2			
	6 Complex f	17 36	6	17 40	95	
	1 Simple 1	17 44.2	1	17 44.5	6	
8	2 Simple 2	13 34.5	8	13 38.4	55	
9	2 Simple 2	16 36.7	2	16 37.5	9	
9	2 Simple 2 f	19 42.9	4	19 44	84	
10	6 Complex	10 28	1	10 28.5	23	
11	1 Simple 1	14 02.3	0.5	14 02.5	7	
11	1 Simple 1	16 41	2	16 42	7	
11	2 Simple 2 f	23 25	1	23 25.5	8	
12	2 Simple 2	20 51.5	1	20 51.9	13	
13	6 Complex	14 06.3	1.7	14 07.5	19	
	4 Post Increase		7		4	
13	1 Simple 1	17 23.8	1	17 24	7	
14	2 Simple 2	22 38	5	22 39	23	
15	3 Simple 3	20 40	1	21 00	8	
16	1 Simple 1	19 07	4	19 09	3	
16	2 Simple 2	20 54	6	20 55.9	23	
16	2 Simple 2	21 41.8	1	21 42	15	
16	1 Simple 1	22 40.7	1	22 41	5	
17	6 Complex	14 02	4	14 04.5	15	
17	2 Simple 2	20 01.5	4	20 03	9	
19	6 Complex f	19 05	20	19 07.5	390	
	4 Post Increase		40		12	
19	2 Simple 2	22 14.3	3	22 15.5	35	
20	6 Complex	12 08.5	7	12 10	84	
	4 Post Increase A		2		15	
20	2 Simple 2	12 55.5	1.5	12 56.2	12	
20	3 Simple 3	21 48	13	21 53	8	
21	6 Complex f	19 11	7	19 13	30	
23	3 Simple 3 A	11 29	5 30	13 45	30	
	2 Simple 2	13 22.5	22	13 28	35	
23	6 Complex	19 45	6	19 46.7	35	
24	3 Simple 3	10 35	1 50	11 00	27	
24	1 Simple 1	17 24.5	2	17 25.5	7	
25	8 Group (2)	11 27.5	10.5			
	2 Simple 2	11 27.5	1.5	11 28	22	
	2 Simple 2	11 34.5	3.5	11 35.5	10	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JULY 1958

OTTAWA

2800 MC

July 1958	Type*	Start UT Hrs:Mins	Duration Hrs:Mins	Maximum		Remarks
				Time UT Hrs:Mins	Peak Flux	
25	8 Group (3)	13 25	27.5			
	1 Simple 1 f	13 25	8	13 29	7	
	1 Simple 1	13 36.5	3	13 37.3	7	
	6 Complex	13 44	8.5	13 45.1	46	
25	2 Simple 2	17 14	1.5	17 14.2	14	
25	3 Simple 3	19 18	10	19 22	10	
26	3 Simple 3 f	13 50	40	indet.	5	
27	1 Simple 1	16 22.5	6	16 25	6	
27	8 Group (2)	17 34.3	2			
	1 Simple 1	17 34.3	1	17 34.8	5	
	2 Simple 2	17 35.3	1	17 35.8	18	
27	3 Simple 3	22 10	10	22 13	7	
28	2 Simple 2	15 52.3	2	15 53	16	
28	1 Simple 1	17 45.7	1.5	17 46.4	6	
28	2 Simple 2	23 11	1.5	23 11.5	45	
29	2 Simple 2 f	14 17.5	10	14 21.5	98	
	4 Post Increase A		1 40		15	
	1 Simple 1	16 01	1.5	16 01.5	5	
29	1 Simple 1	16 23.5	1.5	16 24	6	
30	2 Simple 2 f	15 25.5	12	15 29.5	400	
	4 Post Increase		1 10		25	
30	3 Simple 3 f A	21 25	>2 30	21 46	30	
	2 Simple 2 f	21 30	12	21 33.5	120	
31	1 Simple 1	17 53	4	17 54.5	7	

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION

DAILY DATA

JULY 1958

CORNELI

200 MC

July 1958	Flux Density $10^{-22} \text{w m}^{-2}(\text{c/s})^{-1}$			Variability 0 to 3			Observing Periods
	Hours UT			Hours UT			Hours UT
	12 15	15 18	18 21	12 15	15 18	18 21	
1	11	11	12]	0	1	1]	1235-1940
2	24	28		2	2		1240-1815
3	[24	21		[2	2		1245-1350, 1420-1525, 1540-1545, 1550-1800
4	[[27	20	16]	[[2	2	2]	1400-2015
5	17	17	19]	2	3	3]	1230-1925
6	26	22]		3	3]		1240-1630
7	[12]	[12	11]]	[1]	[1	0]]	1245-1415, 1605-1845
8	[12	12	12]	[1	0	0]	1240-2000
9	[12	12	12]	[0	0	1]	1240-2010
10	12	12	12]	[0	1	1]	1240-2005
11	15	15	14]	1	2	2]	1235-2010
12	[40	29		[2	1		1250-1820
13	[34	39]]		[2	2]]		1255-1615
14	21	[18	18]	2	[1	2]	1230-1450, 1540-1545, 1550-1820, 1835-1925
15	15	19	14]	1	2	1]	1240-2005
16	[14	13	12]	[2	1	1]	1250-2010
17	[19	[15	13]]	[2	[2	1]]	1245-1455, 1555-1840
18	16	11	11]	[1	1	1]	1240-1445, 1530-2005
19	11	12]]		1	1]]		1240-1605
20	[21	18]]		[2	2]]		1245-1605
21	[14	16	20]	[2	2	3]	1250-2010
22	18	13	13]	1	1	1]	1240-2005
23	[14	16	16]	[2	2	2]	1245-2000
24	[50	34	31]	[2	2	2]	1245-2020
25	17	15	15]]	2	2	1]]	1235-1855
26	[11	11]]		[0	0]]		1245-1600
27	[20	19]]		[2	1]]		1250-1600
28	25	23	20]	2	2	2]	1235-2005
29	19	14	14]]	2	1	1]]	1235-1830
30	13	13	12]]	1	1	2]]	1235-1535, 1555-1840
31	[15	13	15]	[2	2	2]	1305-2000

COMMERCE - STANDARDS - BOULDER

[= 1st hour missing.
 [[= 1st two hours missing.
] = last hour missing.
]] = last two hours missing.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JULY 1958

CORNELL

200 MC

July 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ w m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
2	3	1536		1.5	CA	140	55	
	3	1601		.5	CA	120	55	
	3	1655		< .25	SA	180	120	
3	3	1448.5		1	CA	91	41	
4	2	1403.5	1405.5	3	CA	100	67	
	3	1840		1.5	CA	91	55	
5	6	b1230		>414	F			
6	6	b1238		>231	F			
7	3	1736.5		1	CD	~ 65		
8	3	1316.5		.5	SD	260	180	
	2	1335.5	1342	6.5	CD	260	120	
9	8	1942	1944	5	CD	~ 65		
10	3	1316		1.5	CD	140	91	
11	8	1252	1254	3	CA	1700	1200	
	8	1604.5	1610	6.5	CA	1000	740	
	3	1710.5	1711	1	CA	880	630	
	8	1801.5	1803	3.5	CA	530	440	
	8	1850.5	1852	2	CA	140	91	
12	3	1324	1325	2.5	CA	120	55	
	2	1348.5	1354	35	F	380	180	
	3	1609	1610	2	CA	120	72	
	3	1615		1	CA	72	41	
	2	1805	1813.5	13	F	630	380	
14	3	1356.5	1357	1	CA	91	41	
	8	1406	1407	3	CA	120	72	
15	3	1457		1	CA	~ 65		
	3	1628.5		1	CA	~ 65		
	1	1503	1559.5	89	F			
16	2	1404	1407	9.5	F	91	72	
	2	1916	1931.5	30	F	120	91	
18	2	1405	1406	3	CA	180	120	
	8	1605	1606.5	2	CA	880	630	
	8	1720	1720.5	6	CD	440	380	
21	7	1603.5		>247	F			
22	2	1550	1558	36	F	210	140	
23	3	1949		3	CA	47	28	
	9	1322	1325	15	ECD	120	91	
	9	1342.5		37	F			
	3	1813		1	CA	72	55	
	2	1943.5	1948	15	F	72	55	
24	8	1545	1546.5	3	CD	320	140	
27	3	1249		.5	CD	380	260	
	8	1308.5	1309	1.5	ECD	1000	740	
	3	1444		1	CD	~ 65		
	2	1519.5	1520.5	2	CD	210	180	
28	8	1745.5	1745.5	1.5	CA	440	380	
	3	1827		.5	CA	120	72	
29	1	1328		57	F			
30	3	1647.5		1.5	CA	45	30	
	3	1755		2	CA	45	31	
31	3	1612	1612.5	2	CA	260	210	
	2	1718	1719	2	CA	72	55	
	0	1949.5	1952	>12	F			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
APRIL 1958

BOULDER

167 MC

April 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
1	6	1330 B	2006.7	695 D	CD	1100	45	
1	3	1538	1538.4	1.1	ECD	1500	-	
1	8	1631	1632.1	5	ECD	800	380	Large burst 2159.4
1	3	2353.2	2353.2	1.2	ECD	600	-	Large burst 2501.1
2	6	1430 B	2226.1	640 D	CD	1100	120	I 1800-1820
2	2	1516.2	1517.1	3	ECD	540	260	
2	3	1539.5	1540.2	1.4	ECD	2700D	-	
2	8	1607.7	1610.0	6.4	ECD	2300D	510	Large burst 1742
2	3	1743.4	1743.8	1.0	ECD	1100	-	
2	3	1824.8	1825.1	0.9	ESD	1000	-	Large burst 1844.1
2	3	1852.2	1853.1	1.5	ECD	2400D	-	
2	3	1945.0	1946.4	2.7	ECD	1300	470	
2	9a	1951	1953	3.5	ECD	2400D	1200	
2	9b	1955	1959	16	ECD	2400D	1100	N2
3	1	1245 B	1506.8	165 X	MF	620	-	
3	6	1530 X	1755.8	330 X	GD	710	10	Large bursts 1802.6, 1958.1
3	1	2100 X	2217.3	250 X	M	98	-	
4	6	1245 B	1641.8	641 D	CD	1600	14	S
4	2	1330	1331.0	6	CD	400	79	Burst 1959.9
4	2	2011.0	2011.9	2.8	ECD	1300	470	Burst 2118.8
5	6	1240 B	1547.9	750 D	CA	110X	80	
5	8	1404	1404.8	5.4	ECD	120	42	
5	8	1936	1945.3	24	CD	820	30	
6	1	1240 B	1718.0	415	MF	1300	-	
6	3	1901.3	1901.8	0.6	ECD	500	-	
6	9	1935	1947.9	15	ECD	150	53	
6	6	1950	2241.9	320 D	CD	240	20	
7	1	1240 B	1711.4	750 D	MF	400	-	Burst 1412.4
7	2	1815.4	1816.0	2.2	CD	620	15	
7	8	2209.6	2210.8	4.1	ECD	220	60	
8	1	1235 B	1419.9	505	M	98	-	S
8	2	1911	1912.2	3.6	ECD	380	71	
8	6	2100	2221.2	255 D	CD	420	7	Burst 2319.2
9	6	1340 B	1437.4	80 X	CD	560	5	
9	1	1500 X	1817.9	270 X	MF	960	-	

COMMERCE - STANDARDS - BOULDER

- Notes: 1. Interference may obscure or be mistaken for solar events. Relatively small events are not reported.
2. April 2, Large bursts 1940.9, 1943.6, 2506.5. Bursts 2221.0, 2234.3, 2343.1, 2417.8, 2455.0.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
APRIL 1958

BOULDER

167 MC

April 1958	Type Ap. J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ w m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
9	4	1947	1947.3	173	ECD	540	9	
9	3	2147	2147.8	1.6	ECD	2300D	-	
9	3	2331.4	2331.9	1.1	ECD	180	-	Bursts 2420.1, 2423.4
10	1	1350 B	1644.4	685 D	MF	620	-	S N3
10	2	2101.9	2103.8	2.0	ECD	720	230	
11	1	1545 B	1716.2	570 D	MF	90X	-	S
11	3	2346.2	2348.1	2.9	ECD	640	150	
11	2	2400.2	2400.8	4.3	ECD	180	49	
12	3	2329 X	2329.1X	1.4X	ESD	400	-	I
13	3	1304.1	1304.3	1.4	ESD	300	-	Burst 1354.8
13	2	1429.2X	1430.8X	2.3X	ECD	200	100	I
13	2	1531.1	1531.2	1.8	ESD	1400D	-	Burst 1635.1
13	2	1803.3	1804.0	1.3	ECD	470	-	
13	2	1938.3	1939.2	1.6	ECD	720	-	Burst 2437.4
14	3	1407.9	1408.5	1.2	ESD	440	-	
14	3	1925.0	1925.3X	0.8X	ESD	490	-	I, Large burst 2201.2
15	3	2404.2	2404.4	0.5	ESD	620	-	
16	1	1225 B	1318.9	775 D	MF	1400D	-	S
16	3	1305.7	1305.8	0.2	ESD	930	-	N4
16	3	2116.7	2116.9	1.1	ESD	1300D	-	
16	2	2400.4	2401.5	1.5	ECD	1700D	400	
17	6	1225 B	1543.9	275 X	CD	150	8	
17	1	1700 X	1716.2	500 X	MF	100	-	S
18	1	1800 X	2239.9	445 X	MF	1400D	-	S, Large burst 2434.1
19	1	1220 B	1502.2	785 D	MF	130	-	S
20	1	1220 B	1741.2	785 D	M	140	-	I, 1545-1630
20	3	2145.7	2146.1	1.4	ECD	190	-	N5
22	6	1215 B	1406.8	225	CD	180	11	
22	1	1600 X	1840.1	240 X	M	89	-	
25	6	1500 X	1912.7	330 X	CA	100	5	S
27	1	1210 B	2107.9	805 D	MF	1100	-	
28	1	1210 B	1229.2	260 X	M	120X	-	
28	6	1630 X	2034.4	545 X	CD	320	7	
28	8	2036	2038.5	7	CD	560	98	
28	3	2109.6	2109.7	0.8	ESD	540	-	Bursts 2416.1, 2446.2
29	6	1205 B	1632.4	810 D	CD	760	32	S
29	8	1301	1304.7	9	CD	1700D	170	N6
30	6	1345 B	1744.2	710 D	CD	260	22	

COMMERCE - STANDARDS - BOULDER

- Notes: 3. April 10, Group of bursts 1336-1342, not measurable. Burst 1651.4. Large bursts 1743.4.
 4. April 16, Large bursts 2000.8, 2426.9. Burst 2057.3.
 5. April 21, Burst 2213.8.
 6. April 29, Probable large bursts at 1654.5, 1655.8, 2035.5. Large burst 2120.3.

SOLAR RADIO EMISSION
DAILY DATA
MAY 1958

BOULDER

167 MC

May 1958	Flux Density $10^{-22} \text{ w m}^{-2} (\text{c/s})^{-1}$						Variability 0 to 3						Observing Periods	
	Hours UT					Day	Hours UT					Day	Hours UT	
	0 3	12 15	15 18	18 21	21 24		0 3	12 15	15 18	18 21	21 24			
1	-	-	20	26	26	23	-	-	2	2S	2S	2S	14.0-25.6	
2	-	-	51	25	22	37	-	2	2	2	2S	2	12.0-25.6	
3	-	-	26	23	25	25	-	2	2S	2S	2	2	12.0-25.6	
4	-	-	18	17	23	19	-	2	2	1	2	2	12.0-25.6	
5	-	-	70	143	55	82	-	1	2	2	2S	2	12.0-25.6	
6	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	-	-	-	20	19	20	-	-	-	1S	0S	1S	19.2-25.7	
8	-	-	-	-	12	-	-	-	-	0S	0S	0S	17.5-25.7	
9	-	-	19	18	19	19	-	-	1S	0S	0S	0S	16.3-19.8; 20.5-22.2; N1	
10	-	-	-	16	16	16	-	1S	1S	2	2S	2S	12.0-13.6; 16.8-25.7	
11	-	-	16	16	15	16	-	0	0	2	0S	0S	11.9-25.7	
12	-	-	17	16	16	16	-	2S	2S	1	0S	2S	11.8-25.8	
13	-	-	17	16	16	17	-	1	2S	2S	1S	2S	11.8-25.8	
14	-	-	16	16	-	16	-	0S	0S	0S	0S	0S	11.8-25.8	
15	-	-	18	17	16	17	-	1	1	0S	0S	0S	11.8-25.8	
16	-	-	16	21	18	18	-	0S	0S	2S	2S	2S	13.3-25.8	
17	-	-	44	34	24	35	-	3	2	2	2	2	11.8-25.8	
18	-	-	18	18	14	17	-	2	1S	2S	0S	2S	11.8-23.5	
19	-	-	17	20	19	19	-	1S	1S	2	2S	2S	11.8-20.5; 20.9-25.8	
20	-	-	17	-	-	17	-	1	0	0S	-	0S	11.8-21.0	
21	-	-	17	17	15	16	-	-	1	2S	0S	1S	13.8-25.7	
22	-	16	17	18	16	17	-	0	0S	1S	0S	0S	11.8-25.8	
23	-	-	17	16	16	16	-	-	1S	1S	2S	1S	14.0-25.8	
24	-	-	17	17	16	17	-	-	0	0S	0S	0S	13.8-25.9	
25	-	-	17	17	16	17	-	-	0	0S	0S	0S	14.0-25.8	
26	-	16	17	16	17	17	-	1	0	0S	2S	1S	11.7-25.9	
27	-	-	17	16	16	16	-	2S	2S	2S	2S	2S	11.7-25.8	
28	-	-	16	15	16	16	-	-	2	2S	1S	2S	13.8-25.9	
29	-	15	16	16	15	15	-	0S	0S	2S	2S	2S	11.7-25.8	
30	-	15	16	15	13	15	-	2S	2S	1S	2S	2S	11.7-25.8	
31	-	15	15	15	14	15	-	1	1S	2	0S	1S	11.7-25.9	

Note: 1. May 9, Observed periods continued 22.8-25.7

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS

JULY 1958

FORT DAVIS

100-580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)			TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED				TYPE III (FAST DRIFT BURSTS)			REMARKS
	Bursts* or Continuum	Time	Int	II or Unclass	Act	Time	Int	Act	Time	Int	
July 1 0000-0149 1214-2400		1730-43	1	Uncl.	b	1537	1	b	1223	1	2327 Inverted U Burst.
		2017-2100	1	Uncl.	b	1600	3	b	1347	1-	
		2100-2150	2	Uncl.	b	1949	1	b	1439	3	
		2150 →	1					g	1617-18	3	
								g	1821-22	2	
July 2 0000-0121 1214-2400								g	1947-48	3	
								b	2315	3	
		← 0120	1					g	0047	2	
		1216-1311	1					g	0039	1-	
		1311-32	2					g	1357	2	
		1332-1403	1					b	1443	1-	
		1403-1503	2					g	1738-39	3	
		1503-57	3					g	1834	2	
		1557-1836	1					b	1835	1	
		1836-1913	2					b	1837	3	
		1913-2058	1					g	1901	3	
		2058-2231	2					G	1905-07	3	
		2231-2309	3					g	1909-10	3	
		2309 →	2					g	1943	3	
								g	1949-50	1	
								g	2012-13	2	
								g	2015	2	
								g	2016	3	
								g	2146	3	
								b	2346	1	
July 3 0000-0150 1216-2108 2126-2400		← 0013	2					g	0048	3	
		0013-0148	3					g	1324	3	
		1216-1344	1					g	1354	1-	
		1344-1400	3					g	1356	2	
		1400-1455	2					g	1427	3	
		1455-1628	1					g	1452-53	2	
		1628-1913	2					b	1642	2	
		1913-2108	3					b	1643	1	
		2127-2203	1					g	1701	3	
		2203-2304	2					g	1849	2	
		2304 →	3					b	1856	3	
								g	1912	1	
								g	2014	3	
								g	2140	3	
July 4 0000-0150 1221-2214 2215-2231 2314-2400		← 0147	3					b	1326	3	
		1221-2042	1					g	1710	2	
		2105-2201	1					b	1715	1	
		2218-2231	1					g	1717	3	
								b	1828	1-	
								g	1836	1-	
								g	1841	1	
								g	1844	3	
								b	1848	1	
								b	1902	3	
								g	2016	3	
				Uncl.	b	2351	3	g	2040-41	3	
				Uncl.	b	2352	3	G	2138-39	2	
July 5 0000-0146 1215-2400		0016-0038	1-	Uncl.	b	2354	3	g	2141	3	
		0142	1	Uncl.	g	2357	2	g	2341-42	1-	
		1221-1734	1					g	2353	3	
		1734-1833	2					b	0020	3	
		1833-1910	1					g	2050	2	
		1910-2214	2					b	2205	3	
								b	2313	3	

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS

JULY 1958

FORT DAVIS

100-580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)	TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED	TYPE III (FAST DRIFT BURSTS)	REMARKS
	Bursts* or Continuum Time Int	II or Unclass Act Time Int	Act Time Int	
July 5 Continued	2214 → 1			
July 6 0000-0149 1216-2400	← 0145 1 1216-1629 3 1629-2011 2 2011-2228 1		b 1541 3 g 1742-43 3 g 2010 2 g 2151 2 g 2212 3 g 2217 2 G 2314-16 1	1541 Inverted U burst.
July 7 0000-0150 1218-2400	Cont. 0005-54 1 0028-29 3 0054-0144 2 Cont. IV 0052-0147 3 1226-1500 1- 1623-44 1- 1739-56 2 1904-10 1- 2035 1- 2113-14 1-		g 0027-28 3 g 0033-34 1 b 0055 3 g 0059-0100 3 g 1410-11 2 g 1525 2 b 1620 2 g 1737 3 b 1739 3 g 1902 2	
July 8 0000-0150 1216-2400	Cont. 1339 3		g 1317 3 g 1337-39 3 g 1340 3 b 1343 1 b 1534 1- b 1548 1-	1338 Two Inverted U Bursts.
July 9 0000-0149 1746-1752 1836-2400	Cont. 1943 2 2304 1-	Uncl. g 2353 1-	b 0011 1 b 0015 1 G 1943-45 1 b 1947 1 b 2353 1- b 2358 1- b 2400 3	2400 Inverted U burst.
July 10 0000-0150 1215-2150 2153-2400	1302-18 1- 1801-1845 1- 1942-2017 1- 2136 1- 2259-2359 1		b 0133 1- b 1308 1- b 1317 1 b 1610 3 g 1626 1 b 1635 1- g 1711 1 g 1753 2 G 1941 3 b 1948 3 b 1950 1- b 1952 1- G 2018-20 2 g 2145 2 b 2154 1 b 2156 3 g 2157-58 2 b 2214 1- g 2250 3 b 2252 1- b 2253 1- b 2358 3	
July 11 0000-0150 1217-2400	0119-0141 1- 1358-1919 1 2011-2052 1 2126-45 3	Uncl. g 0004 2	g 0031 2 b 0034 1- g 0047 2 b 1222 2 b 1234 2 g 1253-54 2	

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS
JULY 1958

FORT DAVIS

100 - 580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)			TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED				TYPE III (FAST DRIFT BURSTS)			REMARKS
	Bursts* or Continuum	Time	Int	II or Unclass	Act	Time	Int	Act	Time	Int	
July 11 Continued								g	1428-29	2	
								g	1503-04	1	
								b	1608	3	
								g	1609	2	
								g	1610	3	
								b	1709	3	
								g	1711-12	3	
								g	1804-05	3	
								g	1810-11	3	
								g	2048	2	
								g	2129-30	3	
								b	2134	1	
								g	2137	2	
								g	2139	2	
								b	2327	2	
								b	2328	3	
								b	2358	2	
July 12 0000-0150 1217-2400	0004-12	1		II		2329-33	3	b	0025	2	
	1222-1318	1						g	0035-36	1	
	1318-1541	3						g	1902	3	
	1541-1651	2						b	2210	1-	
	1651-1727	1									
	1801-1817	2									
	1817-40	3									
	1840 →	2									
July 13 0000-0150 1215-2400	← 0145	2						g	1724	2	
	1411-1525	1-									
	1604-1728	1-									
	1801-2009	1-									
	2125-30	1-									
	2256-2306	1-									
	2338 →	1-									
July 14 0000-0141 1217-2400	← 0021	1-						g	1357	2	1357 Inverted
	0112-13	1-						b	1406	1-	U Burst.
	1254-1711	1-		Unc1.	g	2300	1	g	1407-08	1-	
	1839-2007	1						b	1638	1-	
	2102-2111	1						g	1651-52	1-	
	2139-43	1						g	1827	2	
								b	1828	1-	
								g	1829	1-	
								g	1844	2	
								g	2052	3	
								G	2055-56	3	
								b	2113	1-	
								g	2114	3	
								g	2128-29	3	
								b	2155	2	
								g	2156	1	
								b	2259	3	
								g	2305	1-	
								b	2348	3	
								b	2349	2	
July 15 0000-0150 1230-1636	0051	1-						g	1318-19	1-	
	0127-37	1-						b	1631	1	
	1355-1441	1									
	1441-49	2									
	1449-1554	1									
	1554-1611	2									
	1611-1636	1									
July 16 1354-1600 1608-1800 1804-2400	1405-33	2						b	1507	2	
	1433-1520	1						b	1518	3	
	1555	2									

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS

JULY 1958

FORT DAVIS

100-580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)			TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED				TYPE III (FAST DRIFT BURSTS)			REMARKS
	Bursts* or Continuum	Time	Int	Unclass	Act	Time	Int	Act	Time	Int	
July 16 Continued		1645-1709	1-					g	1528	1-	
		1941-46	1					g	1627	1-	
		2033	1					b	2050	1-	
								g	2053	1-	
								G	2054-56	2	
								g	2142	1-	
July 17 0000-0149 1230-2400		1238-1507	2					b	0011	1-	
		1507-35	1					b	0042	2	
		1535-53	3								
		1553-2008	1								
		2038-2141	1					b	2107	2	
		2240-2313	1					b	2108	3	
		2339 →	1								
July 18 0000-0149 1245-2400		← 0105	1					b	0017	1-	
		1246-1426	1	Uncl.	g	1350	1	g	1555	1	
		1517-28	1					b	1606	1	
		1555-1602	1					G	1607	2	
		1721-24	1					b	1721	3	
		1906-16	1					g	2135	1	
		2119-47	1					b	2338	1	
		2319	1								
July 19 0000-0150 1231-2400	Cont.	0012-0143	1					g	0105-06	3	
		0106	3					g	1612	1	
		1244	1	II		1907.0-15	3+	g	1725	2	
		1333-53	1-					G	1905-08	3	
		1620	1-								
		1642-1714	1-								
		1714-1730	2								
		1730-2221	3								
	Cont.	1906-08	3								
	Cont.	1913-14	3								
	Cont.	2108-2125	1								
	Cont.	2125-2151	2								
	Cont.	2151-2215	3								
	Cont.	2215-24	2								
	Cont.	2224-2304	1								
		2221-2346	2								
		2346 →	1								
July 20 0000-0150 1232-2400		← 0004	1					g	0026-27	1	0026 Inverted U Burst.
		0004-18	2					b	1406	3	
		0018-0142	1					b	1411	1-	
		1238-1804	1					g	1412	2	
				Uncl.	b	1716	3	b	1530	3	
		1901-2056	1					b	1715	3	
				Uncl.	b	2245-46	2	g	1755	2	
								g	1906	2	
								b	1916	1	
		2156 →	1-					g	1944	2	
								g	1950	1	
								b	2348	1	
								g	2349	2	
								g	2353	2	
July 21 0000-0150 1231-2400		← 0015	1					g	1255	1-	
		0044-52	1					g	1514-15	1-	
		0139	1					b	1620	1-	
		1241-52	1					g	1858	2	
		1328-1917	1					g	1913-14	2	
		1917 →	2					g	2358	1-	

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS
JULY 1958

FORT DAVIS

100 - 580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)	TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED	TYPE III (FAST DRIFT BURSTS)	REMARKS
	Bursts* or Continuum Time Int	II or Unclass Act Time Int	Act Time Int	
July 22 0000-0150 1231-2400	← -0143 2 1235-1522 1 1549-53 1- 1553-1607 3 1607-1615 2 1615-1628 1 1659-1830 1- 1904-2020 1- 2114-2222 1- 2351 → 1-		g 0001 1 g 0005 1- b 1340 2 b 1451 3 b 2100 1- b 2200 2	
July 23 0000-0150 1305-2400	← 0139 1 Cont. 1324-28 3 1323-1405 1 Cont. 1344-45 2 Cont. 1345-46 1- Cont. 1348 2 Cont. 1349 1 1431-1844 1 1844-2012 2 2012-2329 1 2329 → 2		b 1325 2 g 1345 2 g 1408-09 2 g 1410 1 g 1531 3 b 1834 1- g 1835 1- g 1946 1- b 1948 3 g 1955 1 g 2018-19 1- g 2025 3 g 2026 2 g 2120 1 g 2122 1	
July 24 0000-0150 1300-2400	← 0034 2 0034-0144 3 Cont. 1300-2252 2 1300-1605 3 1605 → 2 Cont. 2252 → 1		b 0145 1-	
July 25 0000-0001 0010-0150 1306-1630 1637-2400	← 0001 1 0010-0143 2 Cont. ← 0001 1 Cont. 0010-0143 2 1306-1408 2 1408-1630 1 1637 → 1			
July 26 0000-0150 1241-2400	← 0142 1- 1247-1452 1 Cont. 1634 1 Cont. 1659 1- 2124 1- Cont. 2227-28 3 2237 → 1-	Uncl. b 2025 1-	g 1615 1- g 1629 1- g 1634 1- g 1658-59 2 b 1837 1- b 1913 1- b 1940 2 b 1941 1 b 1942 1- g 2005 2 b 2024 1- G 2223-25 1- g 2226 3 G 2227-29 3	
July 27 0000-0150 1241-2400	← 0010 1- 0010-14 3 0014-0142 1 1242-1358 2 1358-1459 1 1459 → 2 Cont. 2017-18 3 Cont. 2212-13 3	Uncl. 0013-17 3 Uncl. 0020-22 3	g 0115 1- g 1248-49 3 g 1309-10 3 b 1313 1- g 1444-45 1- b 1515 1 b 1517 3 G 1520-21 2 g 1626 2	0010-14 Drift toward lower fre- quencies in noise storm.

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS
JULY 1958

FORT DAVIS

100 - 580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)	TYPE II (SLOW DRIFT BURSTS) & UNCLASSIFIED	TYPE III (FAST DRIFT BURSTS)	REMARKS
	Bursts* or Continuum Time Int	II or Unclass Act Time Int	Act Time Int	
July 27 Continued			b 1653 3 b 1657 1- b 1700 3 g 1735 2 b 1736 3 g 1736-37 1- g 1812 3 g 1819-20 1- b 1821 3 b 1843 1 g 1851 3 g 1906 2 G 1915-17 3 g 1918-19 3 g 1920 1- b 1922 3 G 1923-24 2 g 1927 3 G 1928 3 b 2003 3 g 2009-10 3 b 2014 1- G 2017-19 3 g 2030 1 g 2107 2 g 2122 2 g 2146 1- g 2150 1 g 2203 3 b 2207 3 g 2208 3 G 2210-13 3 g 2311 3 b 2355 3	
July 28 0000-0150 1242-2400	← 0142 2 1246-1409 2 1409-1818 3 Cont. 1746-47 2 1818 → 2 Cont. 2323-24 1		g 0007-08 2 g 0039-40 1 g 0054 1- g 0113 1 g 0134 2 b 0135 1 b 1248 3 g 1321 3 b 1457 3 b 1652 2 b 1733 3 g 1746-47 2 b 1937 2	
July 29 0000-0150 1247-1317 1446-2400	← 0141 2 1247-1317 1 1446-2258 2 2258 → 1	Uncl. 2305 1-	g 0039 3 g 0050-51 2 g 0053-54 2 b 1252 2 b 1603 1- b 1741 1 b 1746 1 g 1823-24 3 b 1828 1- b 2123 3 b 2201 2	
July 30 0000-0146 1246-2400	← 0137 1 1249-1317 1 1317-34 2 1334-1411 1 1411-1517 3 1517-1617 2 1617 → 1	Uncl. g 1526 3	g 1333-34 3 g 1353-54 2 g 1354-55 1- b 1419 3 b 1448 3 G 1527-29 2 G 1551-53 3 g 1556 1-	

SOLAR RADIO EMISSION
SPECTRUM OBSERVATIONS

JULY 1958

FORT DAVIS

100 - 580 Mc

DATE and OBSERVING TIMES (U.T.) 1958	TYPE I (NOISE STORMS and CONTINUUM)			TYPE II (SLOW DRIFT BURSTS) & UNCLASSIED				TYPE III (FAST DRIFT BURSTS)			REMARKS
	Bursts* or Continuum	Time	Int	II or Unclass	Act	Time	Int	Act	Time	Int	
July 30 Continued								b	1646	1-	
								b	1647	1-	
								G	1648-49	1	
								G	1723-25	1	
								g	1753	1	
								G	1755-57	2	
								g	1800-1801	1-	
								b	1855	2	
								b	2023	3	
								b	2029	1-	
								g	2033-34	2	
								G	2036-38	2	
								g	2135	1-	
								b	2145	3	
								g	2155	2	
								G	2206-07	2	
								b	2249	1-	
								b	2251	1-	
								g	2255-56	1-	
								b	2343	1-	
								b	2351	1-	
								b	2352	2	
July 31 0000-0150 1246-2400		← 0134	1					G	0024-25	2	
								g	0044	1	
								G	0045-46	3	
								b	0052	1-	
								b	0057	1-	
								g	0104-05	1	
								b	0133	1	
								g	1251	3	
								g	1304	1	
								G	1327-30	2	
								g	1345-46	1	
								g	1420-21	1	
								g	1504-05	1	
								g	1531	3	
								b	1603	1-	
								G	1613-15	2	
								b	1630	1	
								g	1632-34	3	
								b	1639	3	
								g	1720-21	2	
								g	1749-51	3	
								G	1752-55	2	
								g	1838	1	
								g	1840	3	
								G	1844-47	1	
								b	1902	3	
								g	1921	2	
								b	2027	1-	
								g	2035	2	
								g	2044	1-	
								G	2051-52	3	
								b	2141	3	
								G	2157-58	2	
								b	2210	1-	
								b	2214	1-	
								g	2316-17	1	
								g	2347	3	
	Cont.	1248-1844	1								
		1251-52	3								
		1844-1914	2								
		1914-2024	1								
		2024-31	3								
		2031-2118	2								
		2118-27	3								
		2127-2156	2								
		2156-2203	3								
		2203 →	2								
											1329 Inverted U burst.

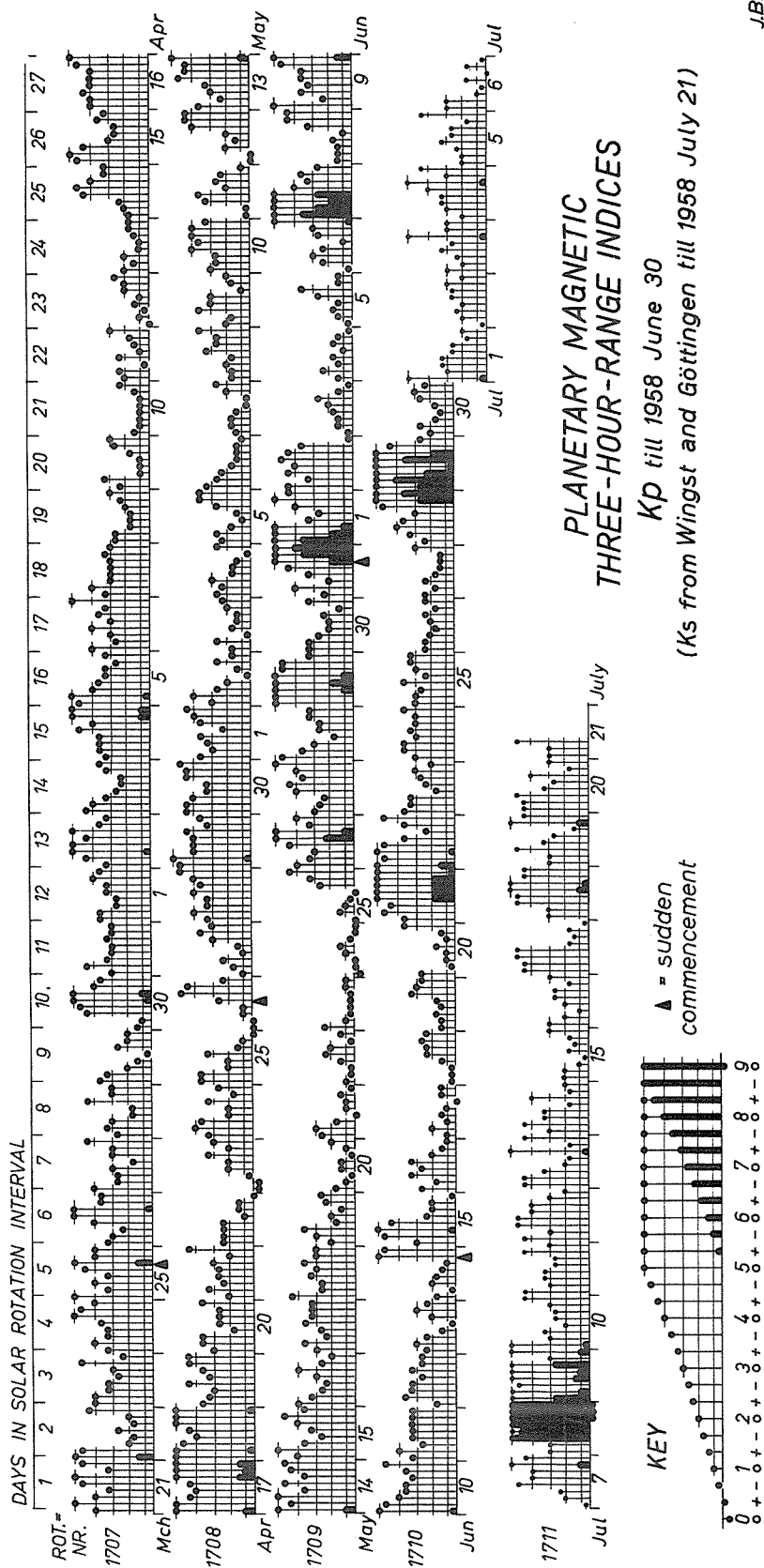
*Burst unless
specified otherwise.

COMMERCE - STANDARDS - BOULDER

GEOMAGNETIC ACTIVITY INDICES

JUNE 1958

June 1958	C	Values Kp								Sum	Ap	Final Selected Days	
		Three hour Gr. interval											
		1	2	3	4	5	6	7	8				
1	1.5	8-	6+	6-	3+	3-	4o	5o	4+	39o	60	Five Quiet	
2	1.1	4+	3+	4+	4o	5-	4+	4-	1-	29+	26		
3	0.2	1-	1+	1+	2-	2o	3-	1+	1-	12-	6		
4	0.1	1+	2+	1+	2-	1o	2-	1+	1-	11+	5		3
5	0.4	1-	1+	2-	1+	3-	4-	1+	1+	14o	8		4
6	0.7	1-	2+	3o	2+	1o	3-	3o	5+	20+	15	17	
7	1.5	8-	7o	6+	7o	4o	3+	4-	3-	42-	77	18	
8	0.7	1+	1+	1+	2-	1o	3+	4+	4+	19-	13	20	
9	1.2	5o	2+	4-	3+	4-	4-	5-	6o	32+	32		
10	1.2	5+	5-	4o	4-	4-	3+	4-	5-	33o	31		
11	1.0	3+	4o	3-	3+	3+	3+	3+	3+	27-	18	Five Disturbed	
12	0.7	2-	4-	3+	3+	3-	3+	3-	3-	23+	15		
13	0.4	2+	3o	2+	1+	1-	2o	3o	2+	17o	9		
14	0.7	2-	1-	2o	2-	1+	1o	5o	5-	18o	15		1
15	1.0	3o	5-	5+	4+	2+	2o	2o	1-	24+	21		7
16	0.5	3-	2-	3+	3-	3+	2o	1+	1o	18o	10	21	
17	0.1	1o	2o	1o	1+	1o	0+	1+	1+	9+	4	28	
18	0.4	1-	1-	1-	1+	2+	2+	3-	2+	13o	7	29	
19	0.6	1+	1+	2-	1+	2-	3+	3o	3-	16+	9		
20	0.3	3-	1-	1o	1o	2-	1o	1+	4-	13o	8		
21	1.6	4-	5-	4+	6+	6+	6+	6+	5+	43+	66	Ten Quiet	
22	1.3	6o	5-	5+	5-	4-	2+	4-	5-	35o	38		
23	0.7	4-	3+	3+	2-	2+	3-	3o	2o	22o	13		
24	0.9	3o	4-	4-	3o	3+	3o	3o	4-	26+	18		3
25	0.7	3o	3o	3-	4-	2+	3o	3+	3+	24+	16		4
26	0.3	2+	2+	2o	2-	2o	2+	2-	2+	17-	8	5	
27	0.3	2+	2-	2+	2-	1+	1+	1+	3o	15o	8	13	
28	1.6	2+	3+	4o	4-	3o	5-	7o	8-	36-	55	17	
29	1.7	7o	8o	7-	5+	8-	6+	4+	3-	48o	103	18	
30	0.6	2o	3-	2-	1+	2-	3-	3o	2+	17+	9	19	
												20	
												26	
												27	
Mean:	0.80									Mean:	24		



CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS
NORTH ATLANTIC
JUNE 1958

June 1958	North Atlantic 6-hourly quality figures				Short-term forecasts issued about one hour in advance of:				Whole day index	Advance forecasts (J-reports) for whole day; issued in advance by:			Geomag- netic K _{Fr}	
	00 to 06	06 to 12	12 to 18	18 to 24	00	06	12	18		1-4 days	4-7 days	8-25 days	Half Day (1) (2)	
1	3+	4o	6-	6o	3	3	5	6	(4+)	6	7		(5)	(4)
2	6-	5-	6-	6o	6	5	6	6	5+	6	7		(4)	3
3	7-	6-	6+	6+	6	6	7	7	6+	6	7		1	1
4	7-	6o	7-	7-	6	6	7	7	7-	6	7		2	2
5	7o	6o	7o	7-	7	6	7	7	7-	7	7		2	2
6	7o	6+	7-	6+	7	7	6	6	7-	5	7		2	3
7	4o	2o	5o	6o	4	2	4	4	(4-)	3	7		(6)	3
8	6+	6o	7-	7-	5	6	6	7	6+	4	7		1	3
9	7-	6-	6+	6+	6	6	6	6	6+	6	7		(4)	3
10	4+	4+	6o	6+	6	4	6	6	5o	6	6		(4)	3
11	6-	5o	6-	6o	5	5	6	6	6-	6	6		3	3
12	6+	5+	6+	7-	6	6	6	6	6o	7	6		3	3
13	7-	6+	7-	7o	7	6	7	7	7-	6	7		2	2
14	7o	7o	7o	7-	7	7	7	7	7o	6	7		2	3
15	6+	6-	7o	7-	5	5	6	6	6+	6	7		(4)	2
16	7-	6-	7o	7o	6	6	6	7	7-	7	7		2	2
17	7+	7-	7o	7-	7	7	7	7	7o	7	7		1	1
18	7o	7o	7+	7o	7	7	7	7	7o	7	7		1	3
19	7o	7o	7-	7o	7	7	7	7	7o	7	7		2	3
20	7+	7o	7o	7o	7	7	7	7	7o	5	7		2	2
21	7-	6-	6+	6-	6	6	6	6	6o	4	7		(5)	(5)
22	4o	3+	6-	6+	5	2	4	6	(4+)	4	7		(5)	3
23	6o	5+	6+	7-	6	6	6	6	6o	6	7		3	2
24	6+	5o	7-	7o	6	6	6	7	6+	6	7		3	3
25	6+	6-	7-	7-	7	6	7	7	6+	7	7		3	2
26	7-	6o	7o	7-	6	6	7	7	7-	7	7		2	2
27	7o	7o	7-	7-	7	7	7	7	7o	7	7		2	2
28	7o	7-	7o	5o	7	7	7	7	6+	7	7		3	(5)
29	2+	2-	4+	5o	3	2	3	4	(3o)	7	7		(6)	(4)
30	5-	4+	6+	6+	5	5	6	6	5+	6	7		2	2
31														
Score: Quiet Periods					P	15	19	20	23		13	14		
					S	10	5	8	5		9	10		
					U	0	0	0	1		2	2		
					F	0	0	1	1		2	0		
Disturbed Periods					P	2	3	0	0		1	0		
					S	2	3	1	0		1	0		
					U	0	0	0	0		0	0		
					F	1	0	0	0		2	4		

() represent disturbed values.

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

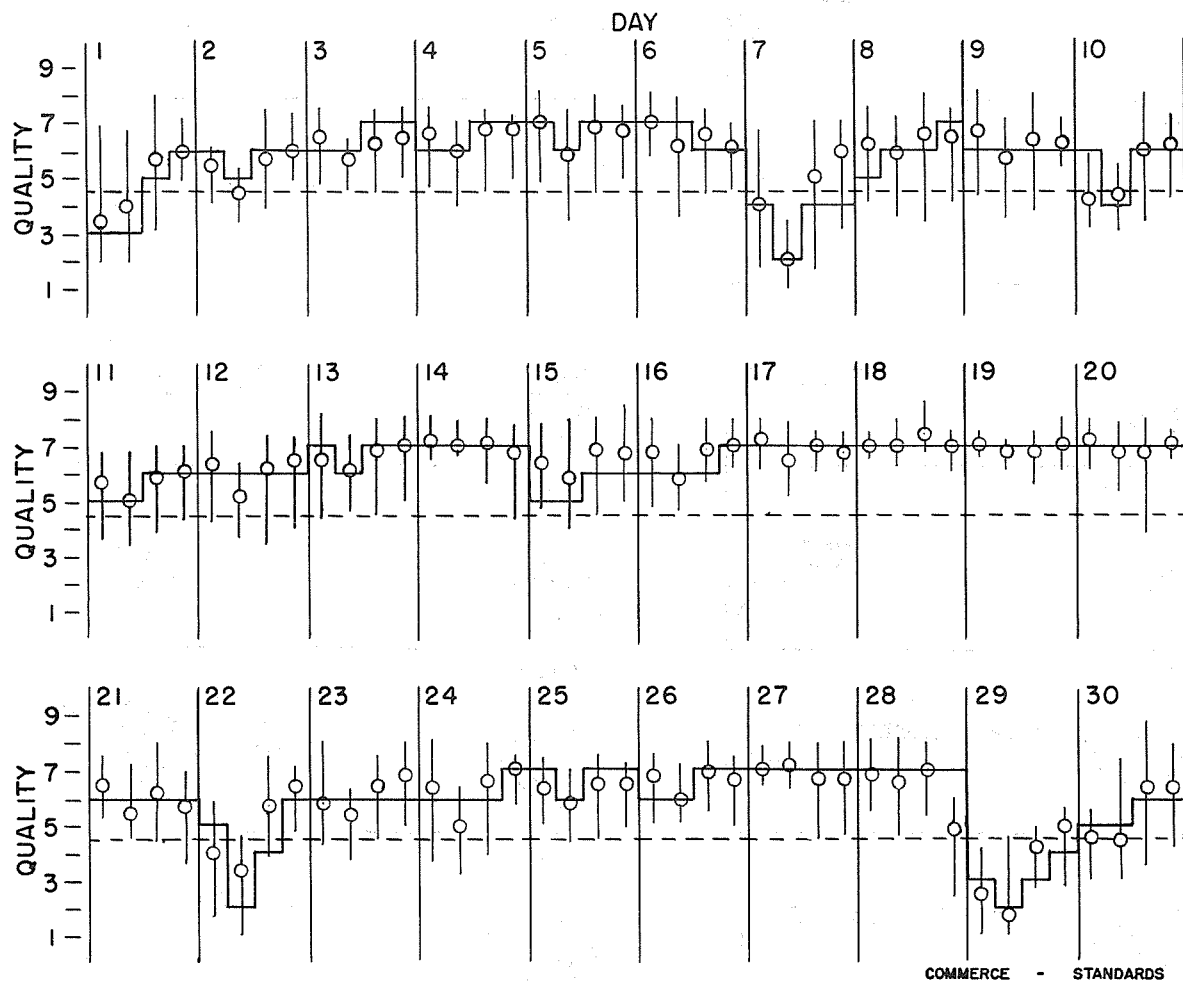
NORTH ATLANTIC

JUNE 1958

— Short-term forecast

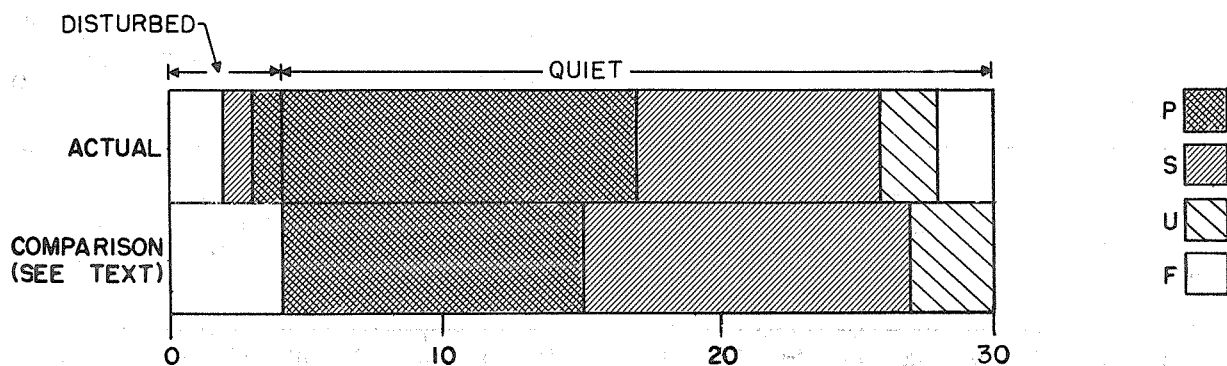
○ Quality figure

| Range of reports



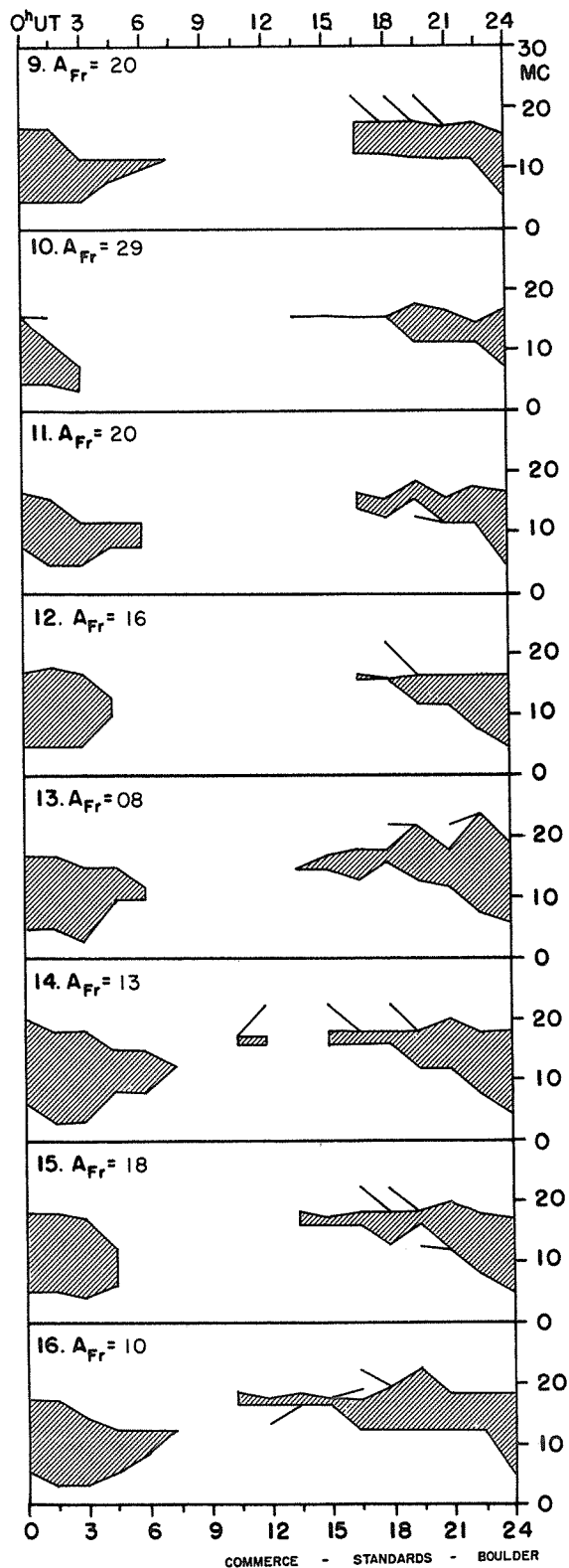
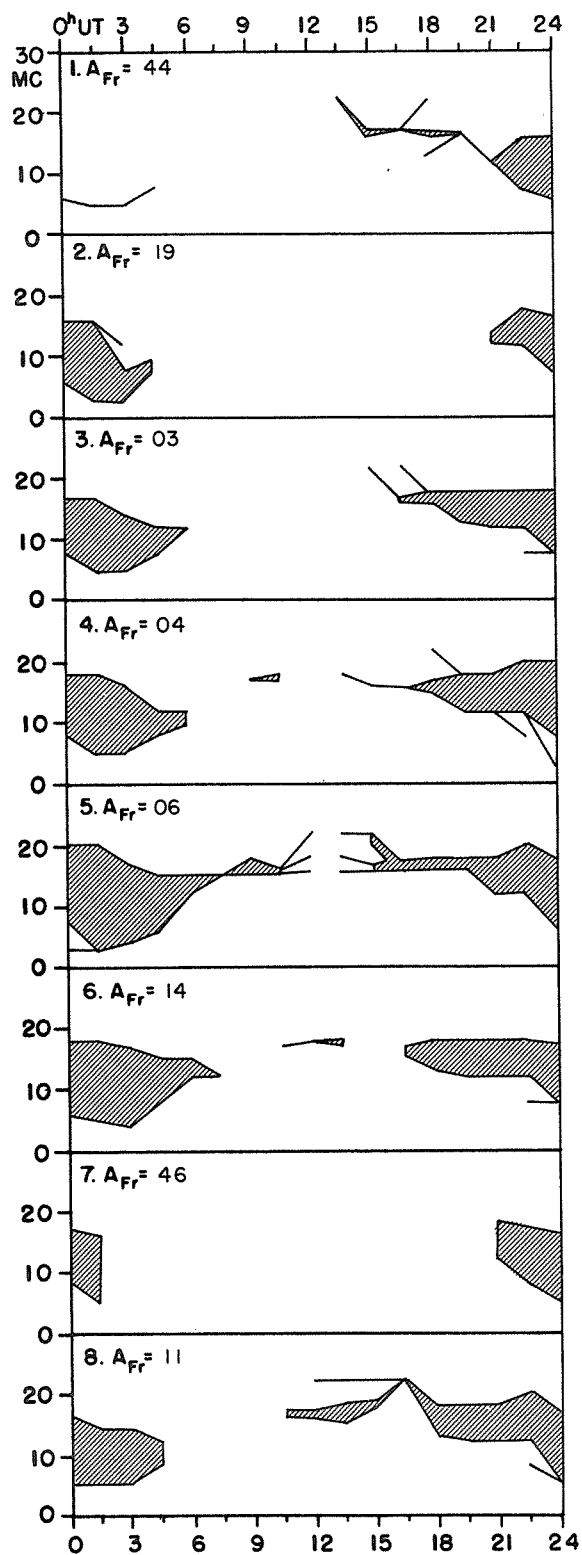
OUTCOME OF ADVANCED FORECASTS

1 TO 4 DAYS AHEAD

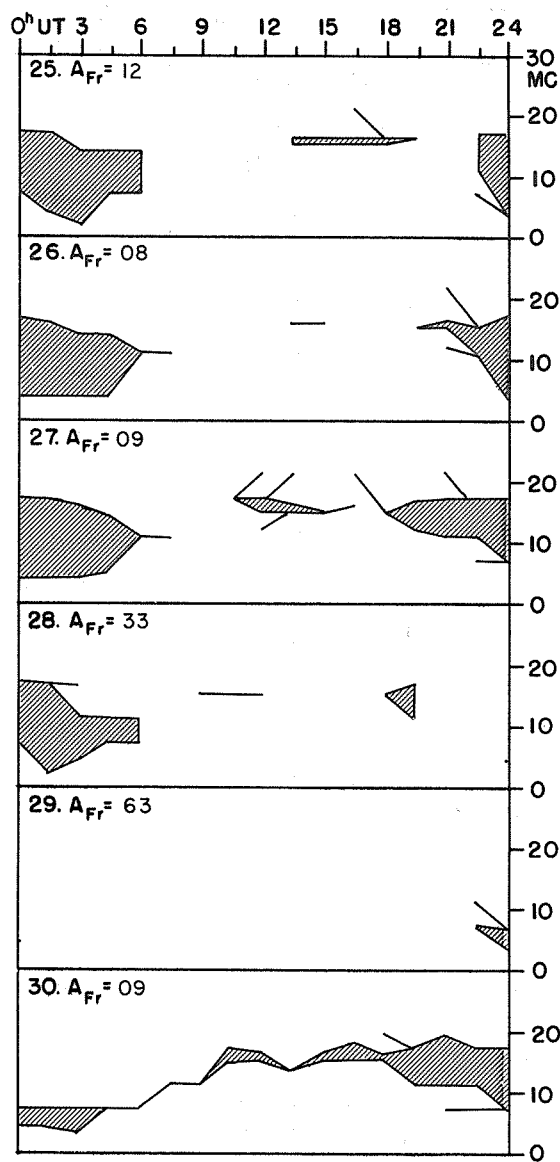
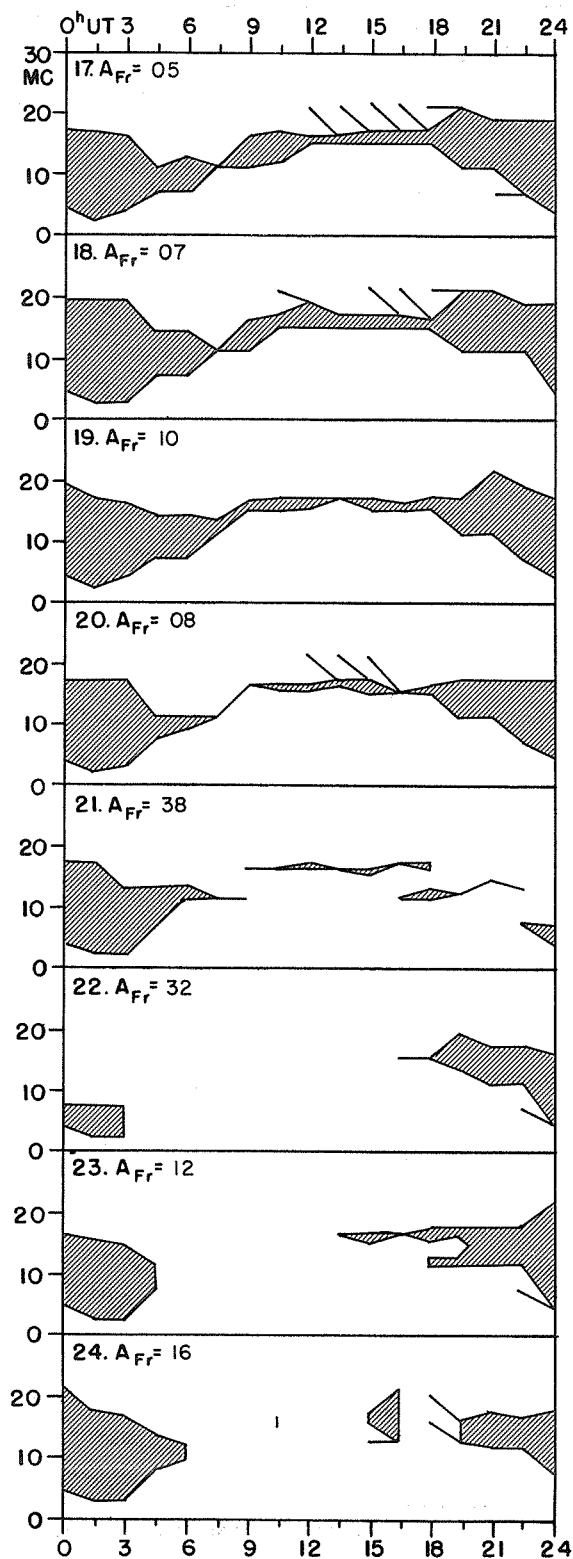


USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

JUNE 1958



JUNE 1958



COMMERCE - STANDARDS - BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS
NORTH PACIFIC
 JUNE 1958

June 1958	North Pacific 8-hourly quality figures			Short-term forecasts issued at			Whole day index	Advance forecasts (Jp reports) for whole day; issued in advance by:			Geomagnetic K _{SI}	
	03 to 11	11 to 19	19 to 03	02	10	18		1-4 days	4-7 days	8-25 days	Half Day (1)	Day (2)
1	4	5	5	4	4	5	5	6	7		(6)	3
2	5	6	6	5	5	5	5	6	7		(5)	(4)
3	6	6	5	6	6	6	5	6	7		1	2
4	6	6	6	6	6	6	6	5	6		2	1
5	7	6	6	6	7	6	6	5	7		2	2
6	6	6	5	6	6	6	6	6	7		2	2
7	4	4	6	4	3	5	(4)	3	6		(8)	(4)
8	6	6	6	5	5	6	6	4	6		2	2
9	6	5	5	6	6	6	6	5	7		(4)	(4)
10	5	6	5	4	6	6	5	5	7		(5)	(4)
11	6	6	6	5	6	5	6	5	5		(4)	3
12	6	6	6	6	6	6	6	6	6		(4)	3
13	5	6	6	6	6	6	6	6	6		2	2
14	6	6	6	5	6	5	6	6	6		2	2
15	5	5	5	5	5	6	5	6	6		(6)	2
16	5	6	7	5	6	6	6	6	6		3	2
17	5	5	7	6	6	6	6	7	6		1	0
18	7	6	6	6	7	7	7	6	7		1	2
19	6	6	7	6	6	6	6	7	7		1	2
20	6	6	6	6	6	6	6	7	7		2	2
21	6	5	4	6	5	5	5	6	7		(5)	(5)
22	4	5	4	4	4	5	(4)	6	7		(6)	(4)
23	5	6	6	5	5	6	5	6	7		3	2
24	6	5	6	5	5	6	6	6	7		(4)	(4)
25	5	6	6	5	5	6	6	4	7		3	2
26	5	6	6	5	5	6	6	5	7		2	2
27	6	6	7	5	6	6	7	5	7		2	2
28	6	6	4	6	6	6	6	6	6		(4)	(4)
29	2	2	4	4	3	2	(2)	6	5		(8)	(6)
30	5	6	6	6	6	6	6	6	6		2	2
Score: Quiet Periods P 15 17 12 9 11 S 11 11 14 15 10 U 0 0 0 1 6 F 0 0 0 2 0 Disturbed Periods P 3 0 0 0 0 S 0 2 2 1 0 U 1 0 1 0 0 F 0 0 1 2 3												

() represent disturbed values.

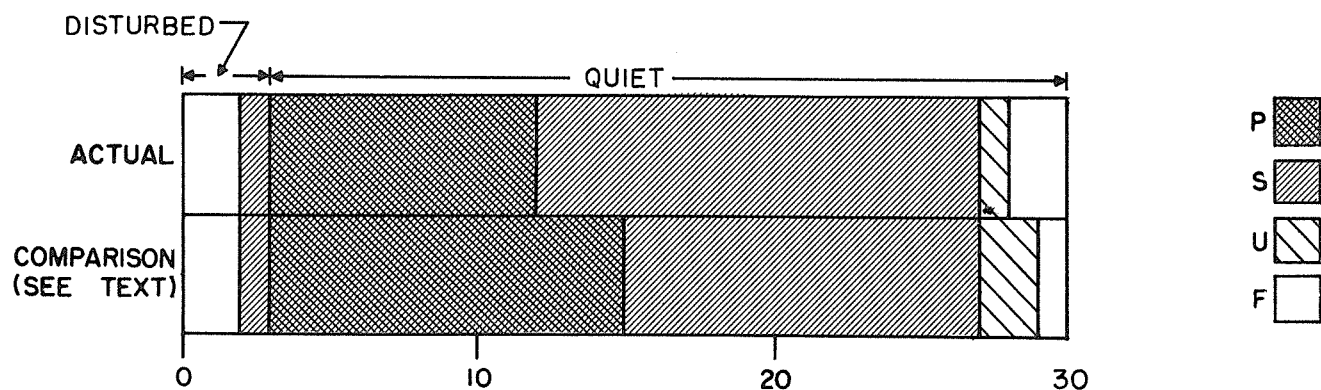
CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH PACIFIC

JUNE 1958

OUTCOME OF ADVANCED FORECASTS

1 TO 4 DAYS AHEAD



ALERT PERIODS AND SPECIAL WORLD INTERVALS

Alert Issued Ends 1600 UT 1600 UT	SWI Starts Ends 0001 UT 2400 UT	A _{Be} On Days of Alert Period (SWI Underlined)	Number of Flares of IMP $\geq$ 2 Reported Promptly on Days of Alert Period
1958			
July 05 July 14	July 08 July 09	12-04-15- <u>125-39</u> -13-12-15- 14-10	2-0-2- <u>3</u> -2-1-1-0-0
July 20 July 22		16-45-20	3-0-0
July 24 Aug 04	July 30 July 31	15-22-09-36-14-11- <u>11</u> - <u>14</u> - 12-11-15-05	0-4-4-3-2-6- <u>2</u> - <u>2</u> -1-1-2-1

COMMERCE - STANDARDS - BOULDER