

CRPL-F168 PART B

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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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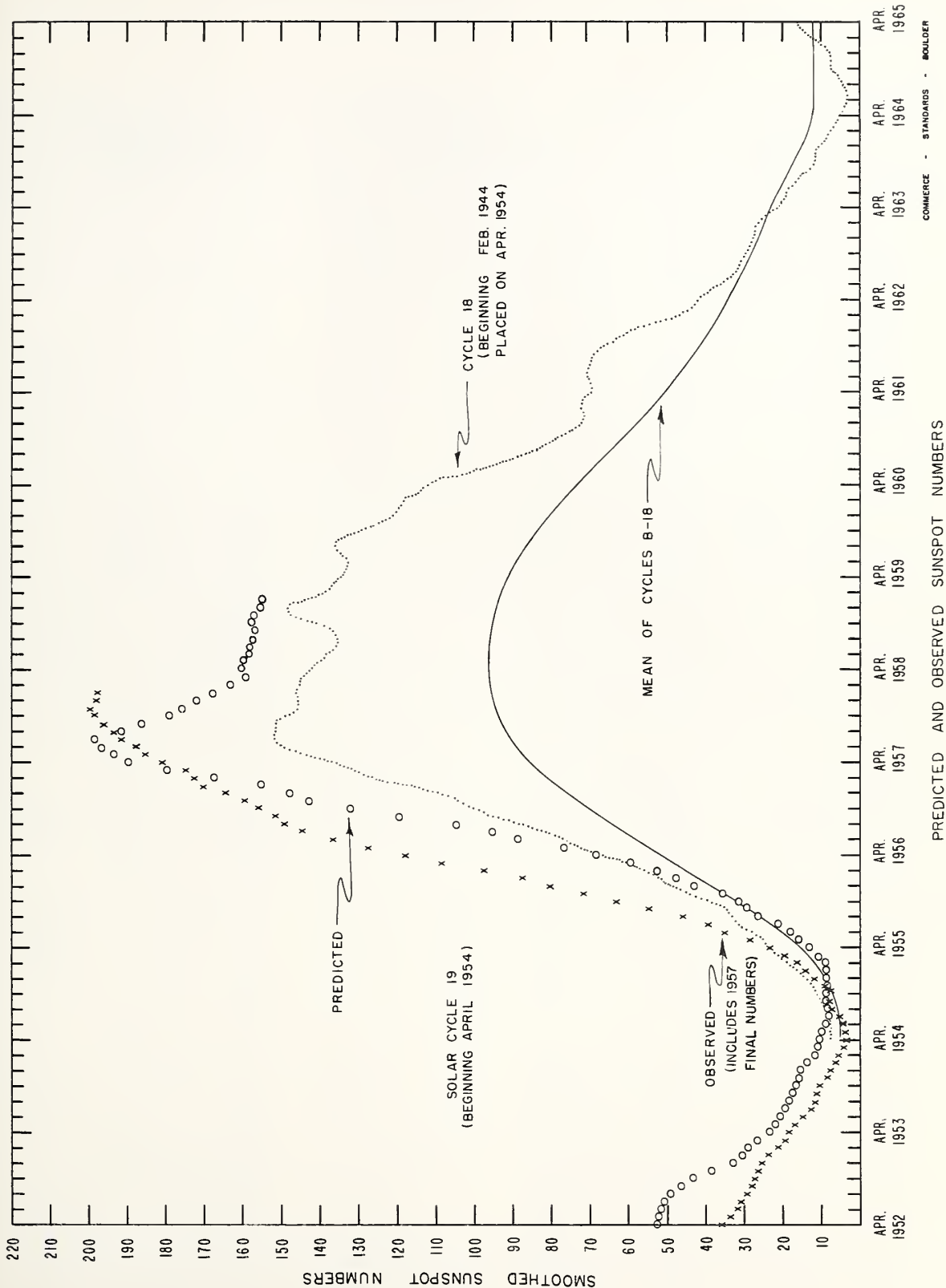
INTRODUCTION

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	$\ell \sim \ell$	2	860	11	$b \wedge \ell$
08.1	S22	4636	4598	4000	3	$\ell \vee \ell$	3	920	7	$\ell \sim \ell$
08.1	N18	4637	4599	600	2	$\ell \sim \ell$	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	$\ell \wedge \ell$	1	80	20	$\ell \vee \ell$
21.2	N06	4654	4616	500	1.5	$\ell \sim d$	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	168
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	x	x	x	x	x	x	x	x
9	x	x	x	x	x	x	x	x	99	144	x	x	181	264	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	x	x	x	x	x	x
14	95	147	33	51	128	208	35	54	x	x	37	59	x	x	30	36
15	97	140	43	72	66	109	21	36	117	158	x	x	99	144	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

* = yellow line observed.

a = index computed from low weight data.

x = no observations.

JULY 1958

[illegible]

COMMERCE - STANDARDS - POLICIES

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. MER. DIST.	MC-MATH PLACE REGION			TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _o	MAX. INT. % %
SAC PFAK	03	2007	2042 D	N07 W55		4623	2	2		5.00			17
MT WILSON	03	2008	2033	N27 F25		4630	1	1					
USNRL	03	2008	2056	N30 F24		4630	48	26	2015	6.10	7.29	1.00	146
SAC PFAK	03	2010	2042 D	N30 F27		4630	32	2		7.40			25
HUANCAYO	03	2014 F	2027	N29 F25		4630	13	2	2015	8.50	11.00	2.90	
MT WILSON	03	2009	2318 D	N10 W55		4623	189	1					
HUANCAYO	03	2023 F	2224 D	N09 W52		4623	121	2	2024	6.70	10.70	2.40	
HAWAII	04	0142	0200	N05 F06		4631	18	1	0142	3.30	3.30		
UCCLE HOPE	04	0911	0921	S23 F35		4636	10	1	0913	2.20			
GOOD HOPE	04	1125	1151	N20 F03		4630	26	1	1128	2.00	2.10		
ZURICH	04	1456	1521	S07 F17		4633	25	1	1456	3.00			
SAC PFAK	04	1830	1855	S23 F30		4636	25	1		2.50			16
MT WILSON	04	2130	0000	N44 F08		4630	30	1					
MT WILSON	05	0006	0015	N27 F36		4634	9	1					
TASHKENT	05	0341 F	0432	N26 F07		4630	51	2					
UCCLE	05	0935	1135	N32 F74		4639	120	1					
UCCLE	05	0935	1135	N32 F74		4639	120	1					
UCCLE	05	0935	1135	N32 F74		4639	120	1					
DUNSTON	05	1006	1028	S22 F23		4636	22	1	1015	2.50		2.20	
UCCLE	05	1011	1025	S23 F23		4636	14	1	1013	2.00	2.20		
SAC PFAK	05	1337	1400	N24 W43		4628	23	1		4.40			19
USNRL	05	1340	1407	N24 W43		4628	27	1	1346	2.26	3.28		79
MC-MATH	05	1341	1351	N24 W44		4628	10	1	1346	2.19	3.09		72
SAC PFAK	05	1522	1622	N03 W17		4631	60	1		3.10			16
MC-MATH	05	1527	1550	N03 W17		4631	23	1	1544	2.44	2.56		69
MT WILSON	05	1528	1538	N30 F30		4634	10	1					
MT WILSON	05	1930 F	1935	N27 E15		4630	5	1					
ATHENS	06	0547 F	0557	N12 F59		4627	10	1		1.20	2.20		
MC-MATH	06	1255 F	1332	N23 F17		4634	37	1	1302	.97	1.08		81
CAPRI S	06	1256 F	1319 D	N24 F14		4634	23	1	1308	2.00	2.20		
MC-MATH	06	1711	1726	N23 W16		4630	15	1	1716	2.03	2.27		76
HAWAII	06	2106	2140	N26 W18		4630	34	1	2114	3.80	4.40		
MT WILSON	06	2110	2130	N24 W25		4630	20	1					
MT WILSON	06	2121	2140	N20 F05		4634	19	1	2130	2.20			
CLIMAX	06	2121	2143	N26 F12		4634	22	1	2127	3.30	3.60		
HAWAII	06	2122	2154	N25 F12		4634	32	1					
MT WILSON	07	0022	0227	N28 F07		4634	125	2					
HAWAII	07	0026	0104	N25 F07		4634	38	16	0029	4.70	5.20		
MITAKA	07	0032 F	0117 D	N25 F07		4634	45	26	0038	7.98	8.62	3.13	278
MITAKA	07	0039 F	0324 D	N24 W09		4634	165	36	0109	35.30	38.50	2.74	227
HAWAII	07	0040	0214 D	N25 W07		4634	94	36	0134	3.30	3.60		
HAWAII	07	0156 F	0214 D	N26 W20		4630	18	1	0156	3.30	3.80		
MITAKA	07	0417	0425 D	N30 F09		4634	8	1	0417	5.67	7.00	2.45	204
WENDEL	07	0556 F	0734	N29 E08		4634	98	16					
STUTZ	07	0655	0745	N31 F06		4634	50	16		3.00	3.30		
ATHENS	07	0657	0718	N29 F07		4634	21	1	0857	4.00	4.00		
ZURICH	07	0857	0918	N27 W23		4630	21	1	0915	8.00	8.00		
ZURICH	07	0915	0931 D	N31 F46		4639	16	2	0925	1.70	2.90		
CAPRI S	07	0922 F	0943 D	N28 F47		4639	21	1					

OBSERVANCE - BY AIRMAIL - BULLSEYE

JULY 1958

[illegible]

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL LONGSPHERIC EFFECT	
		START	END	APPROX. LAT.	APPROX. NEE. DIST.				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hr	MAX. INT. %		
WENDEL UCCLF WENDEL UCCLF UCCLF R O HEARST WENDEL UCCLF UCCLF CAPRI S	09	0641	0712	N32 F25	4639	31	1	2		0710	4.80	4.00		S-SNF
	09	0705	0729	N33 F25	4639	24	16	2						
	09	0736	0736 D	N32 E24	4639	30	D	2						
	09	0735	0750	S21 F48	4642	15	1	2		0736	2.20			
	09	0821	0847	N30 W19	4634	26	1	2		0827	2.20			
	09	0845	0925	S22 W20	4636	40	16	3		0906	3.70	4.40	2.35	
	09	0847	0927	S22 W20	4636	40	D	2			8.00			
	09	0848	0928	S22 W23	4636	40	2	2		0900	5.60			
	09	0848	1000	S22 W19	4636	72	16	2			7.00			
	09	0901	0936	S23 W18	4636	35	D	2		0907	1.80	2.20		
WENDEL UCCLF UCCLF CAPRI S UCCLF UCCLF WENDEL UCCLF UCCLF ZURICH	09	1012	1020	S21 W23	4636	8	1	2		1016	2.20			S-SNF
	09	1137	1144	N32 E19	4639	7	1	2		1138	2.20			
	09	1139	1205	S22 W25	4636	26	16	2		1145	3.40			
	09	1144	1159	S22 W21	4636	15	D	2			7.00			
	09	1201	1210	S20 F48	4642	9	1	2		1206	2.20			
	09	1204	1216	N28 E11	4639	12	1	2		1208	2.20			
	09	1206	1240	S22 W22	4636	34	D	2			7.00			
	09	1207	1222	S22 W25	4636	15	16	2		1212	3.40			
	09	1210	1243	S23 W19	4636	33	D	2		1212	1.80	2.20		
	09	1223	1307	S22 W24	4636	44	D	2		1223	8.00			
WENDEL UCCLF UCCLF ZURICH UCCLF UCCLF ZURICH UCCLF WENDEL R O HEARST CAPRI S SAC PEAK MCMATH NEDERHOFST STOCKHOLM WENDEL	09	1300	1337	N33 E16	4639	37	1	2		1302	2.20			S-SNF
	09	1300	1337	N33 E16	4639	37	16	2		1310	3.40			
	09	1303	1326	N33 F19	4639	23	D	2		1303		7.00		
	09	1325	1455	S22 W25	4636	39	D	3		1343	4.80			
	09	1334	1459	S22 W22	4636	85	D	2			8.00			
	09	1336	1415	S22 W23	4636	39	16	2		1349	1.80	2.20	2.10	
	09	1337	1415	S23 W20	4636	38	1	2		1338	1.80	2.20		
	09	1339	1500	S21 W25	4636	21	D	2			2.50		18	
	09	1340	1345	S22 W27	4636	15	D	2		1343	2.92	3.65	77	
	09	1340	1405	S22 W23	4636	25	D	2			2.92			
WENDEL UCCLF UCCLF SAC PEAK UCCLF MCMATH SAC PEAK UCCLF MCMATH SAC PEAK MCMATH HAWAII CLIMAX	09	1342	1410	S21 W25	4636	28	D	2		1345	2.70	3.20		S-SNF
	09	1549	1613	S22 W24	4636	24	D	2			7.00			
	09	1557	1640	S22 W27	4636	43	1	2		1603	2.92	3.65	72	
	09	1610	1626	S22 W25	4636	16	1	2		1603	2.20			
	09	1640	1850	S22 W27	4636	11	D	2		1612	2.50		17	
	09	1658	1709	S22 W26	4636	11	1	2		1704	2.20			
	09	1842	1850	N04 W80	4631	8	1	2		1844	2.73	2.16	59	
	09	1940	2017	S20 F43	4642	37	2	2		1945	5.20	6.28	25	
	09	1940	2020	S22 E42	4642	40	D	2		1945	4.30		117	
	09	1945	2019	S18 F40	4642	34	D	2		1946	1.90	2.80		
WENDEL UCCLF UCCLF CAPRI S UCCLF UCCLF WENDEL WENDEL	09	1946	2010	S19 F43	4642	24	D	3		1946	4.30	6.50		S-SNF
	09	1958	2014	S21 F44	4642	16	D	2		2000	2.40			
	10	0618	0630	S23 W40	4636	12	D	2			3.00			
	10	0618	0630	S21 F37	4642	12	D	2			3.00			
	10	0648	0655	N10 F06	4639	7	D	2			3.00			
	10	0905	1000	S18 W40	4636	54	16	2			6.00			
	10	0907	1000	S22 W30	4636	57	16	2			4.80	2.60		
	10	0908	0944	S23 W33	4636	36	1	3		0922	2.00	2.60		
	10	1025	1035	N20 W65	4630	10	16	2		0928	3.40			
	10	1207	1214	N27 W38	4634	7	1	3		1027	5.00			

COMMENCE - STANDARDS - BOLLEA

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURATION MINUTES	IN- FOR- TANCE	OBS COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX.					TIME UT	MEXES AREA Sq. Deg.	COORD. AREA Sq. Deg.	MAX. WIDTH No.		MAX. INT. %
				LAT.	LONG. DIST.									
{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 1638	1631 D		S21 F33	4642	22 D	1				3.00			
	10 1655	1646 D	1642	S25 E87	4644	8	1	2	1642	.45	3.00			
	10 1918	1702 D		S23 W38	4636	39	1				3.00			
	10 1957	1702 D		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		N14 F55	4643	88	2	2		6.20				
	10 2158	2233	2211	N12 E57	4643	35	0	1	2211	3.10				
{WENDEL WENDEL WENDEL CAPRI S R O HEARST ZURICH ZURICH ATHENS WENDEL														

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JUL Y 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POP- TANCE	OBS COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT. °	APPROX. LONG. °				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hr.	MAX. INT. %
{ WENDEL MCWATH SAC PEAK USNRL }	13	0935	0947 D	325	386	4636	12 D	1	1409	1.92	3.00		76
	13	1417	1430	322	306	4642	23	1	1448	1.14	2.15		66
	13	1457	1515	307	E65	4646	63	1		2.45			15
	13	1500	1524	308	F63	4646	24	1	1508	1.36	3.00		85
	13	1533	1549 D	307	F62	4646	16 D	1			4.00		
{ WENDEL MCWATH SAC PEAK MT WILSON }	13	1613	1628 D	320	308	4642	15 D	1			5.07		
	13	1616	1636 D	307	F61	4646	20 D	1					
	13	1750	1807	307	F61	4646	17	1		3.50			17
	13	1939	2314	309	F63	4646	275	1					
	13	2207	2315	307	F60	4646	68	1		2.70			17
{ ZURICH UCCLF UCCLE MEUDON }	14	0810	0820 D	308	F53	4646	10 D	1	0810		5.00		
	14	1046	1056	310	F51	4646	8	1	1047	2.20			
	14	1125	1135 D	320	318	4642	30 D	16	1137	4.80			
	14	1125	1226	321	317	4642	61	16			7.00		
	14	1129	1167 D	319	318	4642	18 D	1	1134	1.87	2.15		75
{ STOCKHOLM MCWATH MT WILSON }	14	1331	1700	321	319	4642	29 D	1	1133	1.80	2.19		69
	14	1346	1425 D	306	F52	4646	39 D	1	1350	1.39			
	14	1405	1456	309	F50	4646	49	1					
	14	1503	1623 D	308	F51		20 D	1			3.00		
	14	1647	1700	309	F47	4646	13	1		3.75			14
{ MCWATH SAC PEAK MCWATH SAC PEAK SAC PEAK HAWAII }	14	2028	2014 D	306	F49	4646	6 D	1	2008	1.70	2.54		68
	14	2051	2103	306	F49	4646	12	1	2050	1.46	2.13		17
	14	2232	2325	318	326	4642	53	1		3.10			26
	14	2235	2322	304	F54	4647	47	16		2.10			
	14	2236	2254	303	F53	4647	18	1	2240	3.70	6.20		
{ HAWAII MT WILSON SCHALINS MEUDON }	15	0104	0122	325	F09	4650	14	1	0112	2.90	3.30		
	15	0137	0231	304	F55	4647	54	2					
	15	0807	0815	307	F37	4646	8 D	1			20.00		
	15	0914	1120 D	310	F43	4646	126	2					
	15	0918	1000	309	F40	4646	42	16					
{ MOSCOW CAPRI S ZURICH WENDEL UCCLF }	15	0918	1028	308	F40	4646	70 D	1	0920	1.80	2.50		
	15	0919	0933 D	309	F39	4646	14 D	2	0919		6.00		
	15	0920	1046 D	308	F40	4646	86 D	2			11.00		
	15	0927	0940	308	F41	4646	13 D	1	0928	2.20			
	15	1235	1314 D	308	F38	4646	39 D	16			6.00		
{ WENDEL MEUDON ZURICH MCWATH USNRL }	15	1236	1325	310	F37	4646	49	1			4.00		
	15	1244	1310	309	E37	4646	26 D	16	1244		6.00		72
	15	1431	1440 D	308	F37	4646	9 D	1		1.95	2.38		
	15	1706	1709 D	307	F37	4646	3 D	1	1706	1.76	2.15		132
	15	1731	2000 D	308	F35	4646	23 D	1	1734	1.24	1.53		18
{ SAC PEAK MCWATH MT WILSON MT WILSON }	15	1722	1820 D	308	F35	4646	48	1		2.30			92
	15	1859	1921 D	307	F37	4646	22 D	1	1806	1.96	2.39		
	15	2025	2130	307	F35	4646	65 D	16	2050	2.60	3.07		
	15	2310	2345	322	338	4642	15	1					
	16	0123	0135 D	308	F32	4646	10 D	16	0123	5.67	6.63	1.39	120
{ MT AYIA WENDEL MCWATH MCWATH MCWATH }	16	0913	0931 D	324	308	4650	18 D	1			4.00		68
	16	1124	1151	308	F24	4646	27 D	1	1124	1.96	2.16		66
	16	1211	1330	308	F25	4646	79	1	1215	1.94	2.17		76
	16	1926	2030	308	F22	4646	64 D	1	1927	1.63	1.76		
	16												

COMMENCE - STANDARDS - BOLIDE

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	APPROX. LONG. DIST.				TIME — UT	MEAS. AREA Sq. Deg.	COBE. AREA Sq. Deg.	MAX. WIDTH H _z		MAX. INT. %
MCWATH MCWATH MT WILSON MT WILSON	16	1926 F	2135 D	S23 W17	4650	129 D	1	2	1927	1.47	1.70		65	SLOW S-SWF
	16	2048	2135 D	S22 F23	4648	47 D	1	2	2056	1.71	2.09		79	
	16	2140	2147	N10 E14	4646	7	1							
	16	2241	2256	N10 E14	4646	15	1							
{ ZURICH MCWATH MEUDON MCWATH	17	1356	1413 D	N23 E41	4651	17 D	1	1	1356		5.00			SLOW S-SWF
	17	1358	1440	N24 E41	4651	42	1	3	1404	1.71			65	
	17	1407 F	1438	N20 E45	4651	31 D	1				2.34			
	17	1407 F	1438	N28 E42	4651	31 D	1				4.00			
{ UCCEL MCWATH USNRL MCWATH	17	1615	1635 D	S07 F16	4647	20 D	1	2	1625	2.30	2.40		59	SLOW S-SWF
	17	1633	1647	N21 F40	4651	14	1	3	1637	2.20				
	17	1634	1705	N16 E42	4651	31	1	1	1640	2.00	2.82		61	
	17	1959	2035 D	N09 F08	4646	36 D	16	2	2004	2.60	2.62		135	
{ MCWATH MITAKA MITAKA WENDEL	17	2001 F	2029 D	N08 F07	4646	28 D	1	1	2010	1.98	2.00		77	SLOW S-SWF
	18	0105	0108 D	N15 W38	4643	3 D	1	1	0103	.89	2.26	1.98	120	
	18	0520 F	0538 D	S21 E06	4648	18 D	1	1	0525	1.84	2.06	1.90	131	
	18	0536 F	0557 D	N06 W02	4646	21 D	1	1			3.00			
{ OTTAWA WENDEL MITAKA MITAKA	18	1236	1243	S14 F67	4655	7	1							S-SWF
	18	1722	1756	S22 F01	4648	34	1	1	2405	.89	6.00	3.31	146	
	18	2353 F	0036 D	S17 F58	4655	43 D	1	1	2405	2.78	3.16	2.45	183	
	18	2355 F	0011 D	N21 E22	4651	16 D	16	1						
{ MT WILSON ATHENS ATHENS UCCEL	19	0106	0118	N23 E21	4651	12	1	3						S-SWF
	19	0545	0620	S22 W51	4650	35	1	3						
	19	0649	0702	S15 F54	4655	13	1	3						
	19	1002	1014	S21 W52	4650	12	16	3	1005	2.80	3.40			
{ WENDEL UCCEL WENDEL MCWATH	19	1004 F	1020 D	S18 W53	4650	17 D	1	3	1048	2.80				S-SWF
	19	1045	1055	N07 W15	4646	10	1	3						
	19	1046	1102	N06 W14	4646	16	1	3						
	19	1232	1245	S16 E51	4655	15	1	1	1235	1.22	5.00		76	
{ WENDEL WENDEL MCWATH USNRL	19	1247 E	1253 D	S16 E50	4655	21 D	1	1						S-SWF
	19	1315	1445	S23 W58	4650	110 D	2	1	1355	3.41	9.00		69	
	19	1315	1445	S23 W55	4650	90	2	2	1318	.68	6.48		100	
	19	1317	1327	S23 W51	4650	10	1	2	1318		1.34			
{ NEDERHORST CAPRI S USNRL HJANGAYO	19	1330	1347 D	S23 W51	4650	17 D	2	3	1338	2.40	4.80			S-SWF
	19	1332 F	1424 D	S23 W52	4650	52 D	1	3	1336	2.15	4.45	2.00	105	
	19	1332 F	1510	S23 W55	4650	98 D	16	2	1336	2.15	4.45	2.00	105	
	19	1340 F	1427	S22 W53	4650	47 D	2	3	1342	6.50	12.00	2.30		
{ HJANGAYO MCWATH USNRL HAWAII	19	1515	1521 D	S20 W53	4650	6 D	1	1	1516	1.30	2.40		62	S-SWF
	19	1905 F	1942 D	N25 F13	4651	37 D	26	3	1914	6.65	7.23		92	
	19	1905 F	2030 D	N23 F14	4651	85 D	26	3	1908	9.04	9.89	2.00	167	
	19	1923 F	2015 D	N17 E12	4651	52	26	1	1923	9.30	10.00			
{ MCWATH ATHENS ONDRE JOV WENDEL	19	1955 F	2027 D	N28 E12	4651	32 D	1	1	1958	2.44	2.68		72	SLOW S-SWF
	20	0540 F	0633 D	S22 W66	4650	53 D	2	4			8.20			
	20	0550 F	0558	S23 W62	4650	8 D	1							
	20	0607 F	0732 D	S23 W64	4650	90 D	16				7.00			
{ ONDRF JOV ATHENS CAPRI S WENDEL	20	0636 F	0712	S22 W61	4650	36	2							SLOW S-SWF
	20	0636 F	0747 D	S23 W62	4650	71 D	3	4			15.20			
	20	0642 F	0715 D	S22 W62	4650	33 D	1	3	0645	5.70	4.70			
	20	0738	0818 D	S23 W65	4650	40 D	1			1.80	4.00			
WENDEL	20	0741 F	0803 D	S07 W19	4647	22 D	1				3.00			

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SOLAR FLARES

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OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS			MAX INT. %	PROBABLE IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG.				MEAN AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX WIDTH No.		
ZURICH	20 1020	F 1036		N12 W26	4646	16 D	1	2	1020	1.00			
ZURICH	20 1036	F 1049		S22 W66	4650	13 D	2	2	1036	8.00			
{MCMATH	20 1203	F 1245	1208	S22 W70	4650	42 D	3	3	1215	14.75		115	S-SMF
{ONDREJOV	20 1205	F 1257		S22 W66	4650	52 D	26						
{CAPRI S	20 1210	F 1224		S22 W65	4650	14 D	1		1217	4.20			
{ZURICH	20 1211	F 1223	D	S22 W69	4650	12 D	26	2	1211	10.00			
{ONDREJOV	20 1217	F 1224		N24 W12	4646	7 D	1						
{ZURICH	20 1221	F 1223	D	N12 W27	4646	2 D	1	2	1221	1.00			
{USNRL	20 1235	F 1325		S23 W65	4650	50 D	1	2	1245	2.46		81	
{SAC PEAK	20 1522	F 1547	1627	S13 F23	4655	25 D	16	3	1530	2.60		25	S-SMF
{MCMATH	20 1522	F 1600	1630	S10 F25	4655	38 D	16	2	1530	3.41		81	
{MT WILSON	20 1527	F 1542		S13 F23	4655	15 D	16						
{CLIMAX	20 1522	F 1555	D	N23 F24	4652	33 D	2		1528	6.40			
{MT WILSON	20 2151	F 2215	D	N09 W35	4646	24 D	1						
{MEUDON	21 0559	F 0640	0604	S14 F14	4655	41 D	16			10.00			S-SMF
{ATHENS	21 0600	F 0822		S16 W13	4651	22 D	1	3	0941	3.00			
{ZURICH	21 0941	F 0946		N20 W08	4651	5 D	1	1	1217	2.00			
{STOCKHOLM	21 1216	F 1230		S21 W75	4650	7 D	1	2	1416	2.00		87	
{MCMATH	21 1413	F 1430	1416	N23 W10	4651	17 D	1	2	1723	2.00		61	G-SMF
{MCMATH	21 1720	F 1740	1723	N12 F60	4657	20 D	1	2	1723	3.60			
{HAWAII	21 1910	F 1938	1914	N21 W14	4651	28 D	1	3	1914	3.40		85	
{MCMATH	21 1910	F 2000	1913	N25 W10	4651	50 D	16	2	1913	3.00			
{MT WILSON	21 1912	F 1940		N18 W14	4651	28 D	1						
{SAC PEAK	22 1440	F 1527	1502	S11 W03	4655	47 D	1	2	1611	3.80	2.20	15	
{HUANCAYO	22 1609	F 1702	1639	S15 W67	4660	53 D	1	3	1919	2.30		95	
{USNRL	22 1917	F 1921	D	S16 F85	4659	4 D	1	1		2.42			
{MT WILSON	22 2001	F 2013		S12 W02	4655	12 D	1						
{TASHKENT	23 0505	F 0600		S17 F58	4659	55 D	16						
{ATHENS	23 0519	F 0605	0534	S10 F40	4658	46 D	26						
{UCCLF	23 0545	F 0618	D	S06 F37	4658	33 D	16	5		5.10			S-SMF
{UCCLF	23 0823	F 0835	D	S15 F40	4659	12 D	1	2	0825	2.20			
{UCCLF	23 1018	F 1045	D	N23 W35	4651	27 D	16	2	1026	3.40			
{UCCLF	23 1045	F 1120	1047	S02 W62	4647	35 D	1	3	1047	2.20			
{UCCLF	23 1045	F 1120	1113	S02 W62	4647	35 D	1						
{UCCLF	23 1053	F 1117	1056	S11 W19	4655	24 D	1	3	1056	2.20			
{MEUDON	23 1055	F 1122		S15 W17	4655	27 D	1			2.00			
{MEUDON	23 1127	F 1315	1144	N20 F40	4657	108 D	26			25.00			
{UCCLF	23 1131	F 1200	D	N20 F42	4657	29 D	3	2	1144	14.70			
{CAPRI S	23 1132	F 1450	1144	N19 E41	4657	198 D	2	2	1153	8.00		85	
{USNRL	23 1206	F 1327		N20 F41	4657	81 D	2	2	1402	7.68	1.00		
{CLIMAX	23 1238	F 1441	1402	N20 F49	4657	123 D	2	2	1335	6.40		98	
{USNRL	23 1259	F 1430	1335	N15 F35	4657	211 D	2			30.00			Slow S-SMF
{MEUDON	23 1300	F 1350	D	N20 F35	4657	50 D	26						
{MEUDORHST	23 1327	F 1357	D	N20 F35	4657	30 D	2	1	1339	8.00		83	
{MCMATH	23 1338	F 1500		N10 F35	4657	22 D	26		1354	10.00			
{STOCKHOLM	23 1352	F 1437	D	N17 F36	4657	45 D	2			7.00			
{WINDFL	23 1431	F 1511	D	N16 F31	4657	40 D	16						
{HUANCAYO	23 1555	F 1600	1557	S16 W90	4650	5 D	1	3	1557	1.50	2.80		
{HUANCAYO	23 1946	F 2001	1946	S14 W22	4655	17 D	1		1946	1.60	5.20		
{MCMATH	23 1944	F 2010	1947	S13 W24	4655	26 D	16	2	1947	3.42	4.00	98	

SOLAR FLARES

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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. MER. DIST.	MONTH PLAC REGION				TIME UT	MEAS. AREA Sq. Deg.	COOR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
HAWAII MT WILSON	23	1945		S15 W22		4655		1	2	1948	2.90	3.40			
	23	1947	1957	S12 W20		4655	10	16							
	23	2330	2343	N15 W42		4651	13	1							
UCCLE	24	0910	0933	S15 F25		4659	23	1	2	0913	2.20				
	24	1054	1101	N28 W45		4651	7	1	2	1057	2.20				
	24	1106	1110	S15 F22		4659	4	1	2	1107	2.20				
UCCLE	24	1147	1204	S15 F22		4659	17	1	2	1150	3.40				
	24	1155 E	1215 D	S13 E25		4659	20	0	1	1110	2.75	3.17		76	
	24	1313	1350	S13 E25		4659	37	1	2	1318	1.78	2.05			
OTTAWA	24	1315	1327 D	S08 E25		4658	12	1	2	1318					
	24	1315	1337	S15 E23		4659	22	1	2		2.20			18	Slow S-SMF
	24	1318 E	1335	S16 E26		4659	17	16		1421	1.78	2.05		77	
MCMAH	24	1418	1430	S13 E25		4659	12	1	2						
	24	1420	1426	S07 F25		4658	6	16							
	24	1423	1450	S07 F27		4658	27	1	2						
OTTAWA	24	1540	1640	S13 F22		4659	60	1	2	1550	2.28	2.62		87	Slow S-SMF
	24	1542 E	1635 D	S14 F12		4659	53	1	2	1558	1.90	2.10	2.00	22	
	24	1544 F	1642 U	S15 E22		4659	58	1	2		2.10				
HUANCAYO	24	1546 E	1603	S16 E25		4659	15	1	2						
	24	1548 E	1603	S16 E25		4659	15	1	2						
	24	1548 E	1603	S16 E25		4659	15	1	2						
LONDREJOV	24	1732	1745	N04 E90		4665	20	1	2	1732					
	24	1756	1830	S01 F90		4665	34	16	2	1803	3.50			16	S-SMF
	24	1807 E	1832 E	S01 F90		4665	25	16	1		2.02	2.30		69	
SAC PEAK	24	1757	1815	S13 E20		4659	18	1	2	1800	1.13	1.32		100	
	24	1757	1815	S13 E20		4659	18	1	2	1841	1.95	2.20		69	
	24	1838	1904 D	S15 E22		4659	26	1	2						
USNRL	24	1934 E	1945 D	S13 F20		4659	11	1	2	1938					
	24	1934 E	1945 D	S13 F20		4659	11	1	2						
	24	1934 E	1945 D	S13 F20		4659	11	1	2						
SYDNEY	25	0040	0130	N06 W80		4646	50	2	4						
	25	0548 E	0745 D	N08 F80		4665	117	2	4		1.20	6.60		20	G-SMF
	25	0548 E	0745 D	N08 F80		4665	117	2	4		1.50	3.00		127	
ATHENS	25	0628 F	0654 D	N01 F76		4665	26	2	4						
	25	0628 F	0654 D	N01 F76		4665	26	2	4						
	25	0949 F	1157 D	N22 W62		4651	68	1	4		7.00				
WENDEL	25	1016 F	1035 D	S13 F10		4659	19	1	4						
	25	1016 F	1035 D	S13 F10		4659	19	1	4						
	25	1117 E	1146 D	S16 E06		4659	29	1	4		5.00				
UCCLE	25	1122	1140	S15 E05		4659	18	1	3	1127	2.20				
	25	1122	1148	S16 E06		4659	26	1	3		4.20			20	
	25	1332	1400	S16 E02		4659	28	16	1	1348	1.36	1.48		127	
SAC PEAK	25	1336	1408	S16 F03		4659	32	1	2						
	25	1336	1408	S16 F03		4659	32	1	2						
	25	1338	1350	S04 E07		4659	12	2	2						
NEDERHORST	25	1338	1404	S16 F05		4659	26	16	3						
	25	1339	1358	S17 F03		4659	19	1	2	1340	3.00	5.00		100	S-SMF
	25	1340	1356	S16 E03		4659	16	1	3	1343	2.00	3.00		100	
STOCKHOLM	25	1340	1356	S16 E03		4659	16	1	3	1343	2.00	3.00		100	
	25	1340	1356	S16 E03		4659	16	1	3	1343	2.00	3.00		100	
	25	1340	1356	S16 E03		4659	16	1	3	1343	2.00	3.00		100	
LCAPRI S	25	1544	1703 D	S15 F06		4659	79	1	2	1551	3.80	3.91		100	
	25	1547	1554	S13 F08		4659	7	1	2	1551	2.20				
	25	1547	1554	S13 F08		4659	7	1	2	1551	2.20				
UCCLE	25	1902	1902	S17 F01		4659	58	1	2	1902	1.28	1.34		106	Slow S-SMF
	25	1856	1954	S17 F01		4659	58	1	2	1902	1.28	1.34		106	
	25	1904 E	1904 D	S16 E02		4659	41	1	2					18	
SAC PEAK	25	1904 E	2000 D	S16 W01		4659	41	1	2	1923	1.24	1.34		105	
	25	1919	2000 D	S16 W01		4659	41	1	2	1923	1.24	1.34		105	
	25	1925 E	2015 D	S15 F00		4659	50	16	1	1933	3.09	3.31		76	
MCMAH	25	2053	2130	S14 W02		4659	37	16	1	2058	4.39	4.74		76	
	25	2053	2130	S14 W02		4659	37	16	1	2058	4.39	4.74		76	
	25	2054	2110	S17 W00		4659	16	1	3	2056	2.40	2.60			
HAWAII	25	2054	2110	S17 W00		4659	16	1	3	2056	2.40	2.60			
	25	2054	2110	S17 W00		4659	16	1	3	2056	2.40	2.60			
	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	1.41		S-SMF
	26	0627	0654	S15 W05		4659	27	16	3	0636	4.50	4.70			S-SMF
	26	0628	0700	S16 W07		4659	32	2							

COMMENCE - STANDARDS - BOLIDE

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	INC. FOR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. MER. DIST.				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	
ONDREJOV ATHENS ZURICH ZURICH WENDEL STOCKHOLM ZURICH ONDREJOV CHRISTICH CAPRI S MOSCOW WENDEL ZURICH WENDEL MCNATH MCNATH WENDEL USNRL SAC PEAK CAPRI S WENDEL WENDEL WENDEL MCNATH HAWAII HAWAII MCNATH	26	0631 F	0649	S06 W05	4659	18 D	2	3		2.80	5.20	S-SWF
	26	0635 F	0705	S16 W05	4658	30 D	16	2				
	26	0820 F	0826	S14 F19	4659	6 D	1	2	0820		2.00	
	26	0833	0838	M03 F63	4665	5 D	1	2	0833		2.00	
	26	0856		S15 W09	4659	31	2	2			13.00	
	26	0857	0917	S17 W10	4659	20	1	4	0907	4.00	4.00	
	26	0857 F	0934	S17 W07	4659	37 D	26	2	0902		10.00	
	26	0858 F		S16 W02	4659	26 D	2	1				
	26	0858 F	0924	S15 W11	4659	22	1	3	0900	3.50	3.80	
	26	0910 F	0925	S16 W07	4659	13 D	2					
HAWAII ATHENS CAPRI S WENDEL CAPRI S WENDEL USNRL SAC PEAK CAPRI S WENDEL WENDEL WENDEL MCNATH HAWAII HAWAII MCNATH HAWAII MT WILSON MT WILSON HAWAII MT WILSON MT WILSON CAPRI S	26	1030 F	1034 D	M04 F60	4665	34 D	1	2	1020	3.24	10.00	S-SWF
	26	1035 F		S12 W10	4659	15 D	2	2	1130		5.00	
	26	1128	1145	S14 W04	4659	17	1	3		3.44	3.44	
	26	1210	1222	S12 W10	4659	13 D	1	3	1213	1.94	2.06	
	26	1249	1325	S12 W10	4659	36	1	3	1253	2.11	2.24	
	26	1250 F	1314	S16 W01	4659	24 D	16	2	1257	1.54	5.00	
	26	1327	1411	S17 W02	4659	39	1	2		5.20	1.65	
	26	1334	1414	M16 W74	4651	44	2	1	1348	1.20	3.80	
	26	1337 F		M18 W79	4667	55 D	2	3		14.00	8.00	
	26	1353	1430	S17 W13	4659	37	2	1		5.30		
HAWAII ATHENS CAPRI S WENDEL CAPRI S WENDEL USNRL MCNATH WENDEL MCNATH HAWAII HAWAII MCNATH HAWAII MT WILSON MT WILSON HAWAII MT WILSON MT WILSON CAPRI S	26	1357 F	1446	S12 W12	4659	53	1					S-SWF
	26	1840 F	1905 D	S12 W10	4659	25 D	16	3	1852	4.70	5.10	
	26	1842	1924	S17 W12	4659	42	1	3	1954	4.70	5.10	
	26	1952	2014	S12 W10	4659	22	16	3				
	26	2000 F		S17 W13	4659	20	1	2	0014	3.30	3.60	
	27	0008	0028	S18 W19	4659	11	1	3		3.70	4.10	
	27	0650	0701	S16 W21	4659	24 D	3	3	0903	3.00	20.00	
	27	0856 F	0920 D	M08 F51	4665	14	1	3				
	27	0956 F	1024	S15 W25	4659	28 D	2	3	1001	1.70	9.00	
	27	0958	1017	S15 W25	4659	19	1	1	1202	1.83	2.20	
HAWAII ATHENS CAPRI S WENDEL CAPRI S WENDEL USNRL MCNATH WENDEL MCNATH HAWAII HAWAII MCNATH HAWAII MT WILSON MT WILSON HAWAII MT WILSON MT WILSON CAPRI S	27	1202 F	1233 D	S15 W25	4659	31 D	1	1				S-SWF
	27	1316 F	1325 D	S15 W25	4659	7 D	16	2	1353	3.40		
	27	1337 F	1345 D	S12 W26	4659	8 D	16	2				
	27	1350 F	1437 D	S15 W25	4659	47 D	16	3	1806	2.40	2.90	
	27	1358 F		S15 W16	4659	22	1	3	1850	2.90	3.50	
	27	1804	1826	S19 W24	4659	24	16	3	1944	3.40	4.20	
	27	1805	1829	S17 W30	4659	14	1	3	1958	6.20	8.70	
	27	1848	1902	S19 W24	4659	20	1	3				
	27	1915	1935	S12 W31	4659	10	1	3				
	27	1940	1950	S17 W28	4659	36	2	3				
HAWAII ATHENS CAPRI S WENDEL CAPRI S WENDEL USNRL MCNATH WENDEL MCNATH HAWAII HAWAII MCNATH HAWAII MT WILSON MT WILSON HAWAII MT WILSON MT WILSON CAPRI S	27	1950	2026	M07 F45	4665	8	16	3				S-SWF
	27	2018	2026	S12 W31	4659	6	16	3				
	27	2211	2217	S12 W31	4659	6	16	3				
	27	2329	2355	S15 W20	4659	6	1	3	0720	2.00	3.00	
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				
	28	0713 F	0739 D	S15 W38	4659	26 D	1	3				

COMMENT - 811410000 - 0001.000

SOLAR FLARES

JULY 1958

OBSERVATORY	DATE JULY 1958	OBSERVED TIME		LOCATION		DUR. — MINUTES	IM. POR- TANCE	OBS. COND.	TIME — UT	MEASUREMENTS		PROVISIONAL LONG/SHORT EFFECT
		START	END	APPROX. LAT.	APPROX. LONG.					MEAS. Sq. Deg.	CORR. Sq. Deg.	
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	
MITAKA	30	0235 F	0258 D	N20 W23	4668	23 D	1	1	0249	2.23	2.43	
UCCLF	30	0912 F	0935	S08 F60	4670	23	1	3	0925	2.20	2.90	134
CAPRI S	30	0921	0932	S09 F62	4670	11	1	3	0926	2.00	4.40	
STOCKHOLM	30	0929 F	0940 D	S11 F62	4670	11 D	16	1	0929	4.00	8.00	
UCCLF	30	1313 F	1330	S10 W58	4659	17 D	1	1	1318	1.22	2.44	
UCCLF	30	1432	1518 D	S08 F58	4670	46 D	16	1	1434	3.40	4.40	
MCMAH	30	1433	1445 D	S10 F60	4670	12 D	16	1	1436	1.46	2.92	75
WENDEL	30	1436	1446 D	S08 F57	4670	12 D	16	1	1436	1.46	2.92	
USNRL	30	1436	1452	S08 F57	4670	18	16	2	1438	1.36	2.31	105
MEUDON	30	1439 F	1447	S10 F59	4670	7 D	1	3	1444	1.80	3.60	
CAPRI S	30	1440 F	1447	S08 F59	4670	8 D	16	2	1531	4.00	5.20	
ONDREJOV	30	1436 F	1444	S08 W55	4659	56	2	2	1528	1.69	5.45	96
UCCLF	30	1523	1614	S13 W65	4659	61	2	2	1535	12.00		
USNRL	30	1524	1630	S14 W67	4659	30 D	2	2	1535	2.20	3.20	18
ZURICH	30	1525 F	1555 D	S15 W64	4655	70	1	2	1535	1.50	5.80	90
SAC PEAK	30	1525	1635	S14 W66	4659	54 D	2	3	1531	2.00	15.00	
R O HEARST	30	1526	1610	S15 W62	4659	54 D	2	3	1531	2.00	15.00	
CAPRI S	30	1526 F	1620	S14 W68	4659	16 D	2	2	1531	2.00	15.00	
WENDEL	30	1529 F	1545 D	S13 W59	4659	13 D	2	2	1531	2.00	15.00	
NEDERHORST	30	1532	1545	S13 W64	4659	13 D	2	2	1531	2.00	15.00	
ONDREJOV	30	1534 F	1556 D	S17 W64	4659	22 D	2	2	1531	2.00	15.00	
MEUDON	30	1545 F	1556 D	S12 W62	4659	22 D	2	2	1531	2.00	15.00	
SCHAUTINS	30	1545 F	1556 D	S12 W62	4659	22 D	2	2	1531	2.00	15.00	
MIT WILSON	30	1756	1803 D	S07 F09	4665	7 D	1	1	1531	2.00	15.00	
HAWAII	30	1952	2031	S13 W14	4664	39	1	1	1531	2.00	15.00	
HAWAII	30	2036	2104	S05 F55	4670	28	1	1	1531	2.00	15.00	
HAWAII	30	2138	2144	S17 W63	4659	6	16	1	1531	2.00	15.00	
SAC PEAK	30	2139 F	2230	S16 W66	4659	51 D	16	1	1531	2.00	15.00	
HAWAII	30	2146	2204	S17 W63	4659	18	2	2	1531	2.00	15.00	
MITAKA	31	0315 F	0318	S18 W39	4668	3 D	1	1	0315	1.84	2.26	96
MITAKA	31	0345 F	0409	S19 W38	4668	24 D	1	1	0403	7.57	9.32	107
MITAKA	31	0355 F	0401 D	S05 F03	4665	6 D	1	1	0403	7.57	9.32	76
ATHENS	31	0734	0752	S26 F52	4674	18	16	3	0411	3.00	6.20	
UCCLF	31	0805	0816	S13 W88	4659	11	16	1	0411	3.00	6.20	
WENDEL	31	0805 F	0819 D	S12 W71	4659	14 D	16	1	0411	3.00	6.20	
ARCETRI	31	0846 F	0859 D	S12 W40	4668	13 D	1	4	0846	2.00	2.70	
UCCLF	31	1102	1142	S13 W88	4659	40 D	1	3	1135	2.80	3.20	
UCCLF	31	1113	1164	S14 W80	4659	31	1	3	1135	2.80	3.20	
CAPRI S	31	1120	1170	S14 W80	4659	31	1	3	1135	2.80	3.20	
STOCKHOLM	31	1122 F	1140 D	S12 W72	4659	18 D	16	2	1135	2.80	3.20	
WENDEL	31	1128 F	1140	S15 W80	4659	12 D	2	2	1135	2.80	3.20	
NEDERHORST	31	1132 F	1156 D	S14 W79	4659	18 D	16	2	1135	2.80	3.20	
R O HEARST	31	1132 F	1156 D	S14 W79	4659	18 D	16	2	1135	2.80	3.20	
USNRL	31	1329	1343	S12 W85	4659	4	26	3	1135	2.80	3.20	
CAPRI S	31	1329	1343	S12 W85	4659	4	26	3	1135	2.80	3.20	
NEDERHORST	31	1330	1339	S12 W85	4659	9	26	3	1135	2.80	3.20	
USNRL	31	1330	1339	S12 W85	4659	9	26	3	1135	2.80	3.20	
	31	1921	1950	S05 W70	4663	29	1	2	1925	4.68	2.16	67

COMMENCE - END

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

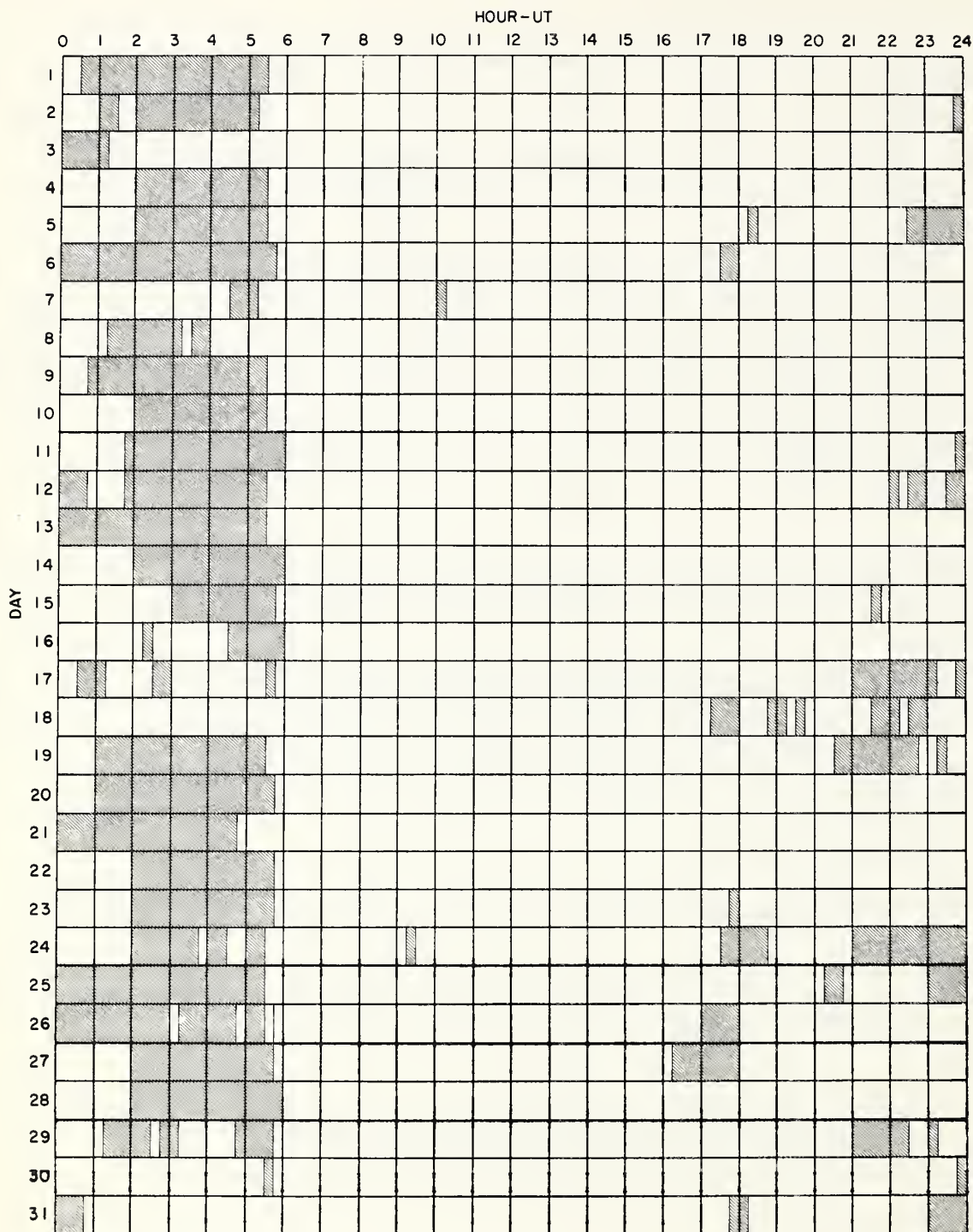
E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
+ - PLUS
- - MINUS
= NOT REPORTED

ANACAPRI - GERMANY
ANACAPRI - SWEDISH
ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KODAIKANAL
KRASNAYA PAKHRA
ROYAL OBSERVATORY, ENGLAND
R O EDIN
GRENWICH ROYAL OBSERVATORY, ENGLAND
SAC PEAK
SCHAUTINS
UNITED STATES NAVAL RESEARCH LABORATORY
USNRL

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

INTERVALS OF NO FLARE PATROL OBSERVATIONS

1 JULY 1958



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

JUNE 1958

CARNO	01	081	W32	G000 HOPE	09	01
CAPRI S	01	1067	W11	*ONORE JOV	09	01
USNRL	01	1213	S13	*GOOD HOPE	09	01
USNRL	01	1303	W22	*ONORE JOV	09	01
USNRL	01	1397	N26	LOCARNO	09	01
USNRL	01	1397	N26	G000 HOPE	09	01
*G000 HOPE	01	1332	E27	CAPRI S	09	01
*USNRL	01	1349	W11	*G000 HOPE	09	01
USNRL	01	1373	N19	*LOCARNO	09	01
USNRL	01	1454	W19	*CAPRI S	09	01
USNRL	01	1457	S21	*LOCARNO	09	01
USNRL	01	1476	E42	*G000 HOPE	09	01
USNRL	01	1531	N19	WENDEL	09	01
CLIMAX	01	1543	N18	G000 HOPE	09	01
			W18	WENDEL	09	01
*USNRL	02	1237	N29	OTTAWA	09	11
*OTTAWA	02	1312	N19	ONORE JOV	09	11
*USNRL	02	1312	N19	OTTAWA	09	11
OTTAWA	02	1312	N19	CLIMAX	09	11
CLIMAX	02	1420	S21	OTTAWA	09	11
*MCMAH	02	1439	S22	*USNRL	09	11
MCMAH	02	1800	N15	ONORE JOV	09	11
MCMAH	02	1812	N28	USNRL	09	11
USNRL	02	1847	N32	USNRL	09	11
USNRL	02	1921	N32	*CAPRI S	10	01
	02	1940	N29	G000 HOPE	10	01
*WENDEL	03	0836	S16	*USNRL	10	01
*OTTAWA	03	1203	N21	USNRL	10	01
*G000 HOPE	03	1315	S21	USNRL	10	01
*MCMAH	03	1420	N17	USNRL	10	01
OTTAWA	03	1423	N17	USNRL	10	01
USNRL	03	1504	S15	MCMAH	10	01
MCMAH	03	1602	S20	USNRL	10	01
MCMAH	03	1632	S07	MCMAH	10	01
MCMAH	03	1646	S10	USNRL	10	01
MCMAH	03	1870	N18	*HAWAII	10	01
MCMAH	03	1814	S20	*CLIMAX	10	02
MCMAH	03	1841	N20			
LOCARNO	04	0800	N18	*NIZAMIAH	11	01
G000 HOPE	04	0952	N18	USNRL	11	01
WENDEL	04	1115	N12	*ATHENS	12	01
WENDEL	04	1149	S12	*OTTAWA	12	01
WENDEL	04	1149	S12	MCMAH	12	01
USNRL	04	1203	S30	CLIMAX	12	01
USNRL	04	1224	N43	USNRL	12	01
*USNRL	04	1317	N29	USNRL	12	01
USNRL	04	1335	N17	MCMAH	12	01
USNRL	04	1335	N22	USNRL	12	01
*LOCARNO	04	1500	N15	USNRL	12	01
WENDEL	04	1571	N45	USNRL	12	01
WENDEL	04	1549	N16	MCMAH	12	01
WENDEL	04	1600	S10	USNRL	12	01
WENDEL	04	1617	N20	MCMAH	12	01
WENDEL	04	1608	N10	USNRL	12	01
USNRL	04	1627	N16	MCMAH	12	01
USNRL	04	1871	N16	HAWAII	12	01
USNRL	04	1808	N16	ATHENS	12	01
USNRL	04	1820	N44	*MCMAH	12	01
			E56	*OTTAWA	12	01
ATHENS	05	0709	N43	MCMAH	12	01
CAPRI S	05	1240	N18	OTTAWA	12	01
OTTAWA	05	1314	N17	USNRL	12	01
OTTAWA	05	1403	N13	OTTAWA	12	01
OTTAWA	05	1403	N44	CLIMAX	12	01
USNRL	05	1406	S12	CLIMAX	12	01
USNRL	05	1478	S12	*CLIMAX	12	01
USNRL	05	1478	N17	*USNRL	12	01
USNRL	05	1438	N42	MCMAH	12	01
USNRL	05	1438	N42	USNRL	12	01
OTTAWA	05	1442				

COMMERCE - STANDARDS - BOLDER

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	S11	E66
ONOREJOV	16	1628	N12	E14	USNRL	25	1934	S09	E87
CLIMAX	16	1628	N20	E15					
USNRL	16	1629	N15	E15	MCMAH	26	1319	N10	E50
HUANCAYO	16	1635	N15	E15	USNRL	26	1454	S07	E30
USNRL	16	1636	N15	E14	USNRL	26	1455	N10	W30
ONOREJOV	16	1638	N15	E15	MCMAH	26	1456	N09	W31
USNRL	16	1640	N15	E15	MCMAH	26	1551	N12	E46
ONOREJOV	16	1648	N12	E14	USNRL	26	1602	S20	E33
USNRL	16	1706	N15	E16	USNRL	26	1646	N09	W30
MCMAH	16	1707	N15	E16	MCMAH	26	1647	N10	W31
USNRL	16	1717	N15	E11	USNRL	26	1654	N08	W59
ONOREJOV	16	1721	S31	W05	MCMAH	26	1657	N09	W60
USNRL	16	1722	N15	E15	USNRL	26	1701	N10	W30
USNRL	16	1743	N15	E16	MCMAH	26	1724	N09	W63
USNRL	16	1806	N13	E25	MCMAH	26	1804	N10	E46
MCMAH	16	1808	N13	E25	MCMAH	26	1845	N10	W30
MCMAH	16	1919	N15	E16	USNRL	26	1846	N15	E26
MCMAH	16	1937	S00	W03	MCMAH	26	1949	N08	E40
MCMAH	16	1942	N15	E12					
USNRL	16	1943	N15	E12	*ATHENS	27	0617	S12	E23
USNRL	16	1947	S15	E12	*CAPRI S	27	0855	S24	E25
USNRL	16	1948	N18	W90	*CAPRI S	27	1121	N09	E35
MCMAH	16	2140	N15	E12	*MCMAH	27	1226	S20	E30
					MCMAH	27	1336	N15	W36
ONOREJOV	17	0612	N28	W90	*CAPRI S	27	1345	N09	E34
ONOREJOV	17	0653	H36	W90	USNRL	27	1345	N11	E37
ONOREJOV	17	0956	S25	W85	USNRL	27	1408	N10	E30
*WENDEL	17	1056	N06	E33	*MCMAH	27	1535	S23	E20
USNRL	17	1439	N16	E33	*MCMAH	27	1536	N10	E30
USNRL	17	1404	N14	W01	MCMAH	27	1735	E	N10
MCMAH	17	1405	N15	W01	USNRL	27	1735	N12	E33
MCMAH	17	1411	N05	E25	*USNRL	27	1836	E	N10
USNRL	17	1428	N05	E25	*MCMAH	27	1836	N10	E33
USNRL	17	1439	N39	W90	MCMAH	27	1857	N10	E33
MCMAH	17	1451	N17	W01	HUANCAYO	27	2053	N10	E33
MCMAH	17	1856	N15	W01	MCMAH	27	2054	E	S19
MCMAH	17	2235	N17	W02	MCMAH	27	2114	E	S19
MCMAH	18	1305	N19	E57	ATHENS	28	0933	E	N10
*OTTAWA	18	1306	N22	E56	OTTAWA	28	1140	N10	E21
*LOCARNO	18	1307	N18	W01	OTTAWA	28	1220	N10	E29
USNRL	18	1345	N18	W11	USNRL	28	1226	S14	W03
MCMAH	18	1346	N16	E14	MCMAH	28	1248	N16	E17
LOCARNO	18	1505	S25	E14	*OTTAWA	28	1248	N18	E16
MCMAH	18	1510	N16	W10	*USNRL	28	1249	N18	E16
MEUDON	18	1523	N15	W03	*CLIMAX	28	1255	S14	W08
LOCARNO	18	1540	N15	W03	*OTTAWA	28	1255	N18	E21
					OTTAWA	28	1300	S14	W08
NIZAMIAH	19	0456	N15	W22	LOCARNO	28	1300	E	N10
ATHENS	19	0547	N15	W18	*CLIMAX	28	1434	S27	W22
ATHENS	19	0655	N15	W19	*MCMAH	28	1434	N10	E21
*ATHENS	19	0740	N18	E29	*OTTAWA	28	1435	S25	W20
WENDEL	19	0753	N18	E29	*USNRL	28	1436	S25	W20
OTTAWA	19	0857	N19	E26	USNRL	28	1514	E	N10
LOCARNO	19	1410	N19	E26	USNRL	28	1529	S34	E04
OTTAWA	19	1449	N21	E43					
OTTAWA	19	1422	N18	E46					
*MEUDON	19	1328	N18	E47	ATHENS	29	0626	N20	E70
*STOCKHOLM	19	1332	N20	E46	*CAPRI S	29	0832	N25	E62
OTTAWA	19	1332	S24	E47	*CAPRI S	29	0850	E	N10
USNRL	19	1334	S26	W07	WENDEL	29	0931	N13	W64
USNRL	19	1349	N11	W25	MCMAH	29	1213	N22	E18
USNRL	19	1540	N13	W25	USNRL	29	1301	N22	E18
USNRL	19	1614	N10	E69	USNRL	29	1400	N29	E69
USNRL	19	1631	N12	W28	USNRL	29	1418	N29	E69
USNRL	19	1723	N12	W28	USNRL	29	1418	N29	E69
USNRL	19	1736	S12	E83	MCMAH	29	1419	N22	E18
USNRL	19	1744	N12	E84	*CLIMAX	29	1440	N14	W06
USNRL	19	1818	N15	E68	MCMAH	29	1440	N19	E69
USNRL	19	1840	S21	E82	USNRL	29	1440	N22	E72
USNRL	19	1917	S26	W10	CLIMAX	29	1508	S14	W16
USNRL	19	1954	S12	E87	*MCMAH	29	1508	S16	W17
					*USNRL	29	1509	S16	W17
ATHENS	20	0554	E	N16	MCMAH	29	1510	N10	E78
*ATHENS	20	0634	N15	W36	MCMAH	29	1518	N13	E04
MCMAH	20	1215	S26	W15	USNRL	29	1519	N16	E02
OTTAWA	20	1215	N14	W35	USNRL	29	1520	N16	E02
MCMAH	20	1241	N17	W34	MCMAH	29	1550	N18	E67
OTTAWA	20	1241	S08	E37	MCMAH	29	1627	N18	E67
*OTTAWA	20	1510	N18	W37	HUANCAYO	29	1629	S07	E41
MCMAH	20	1526	S23	W20	*MCMAH	29	1746	S15	W17
*OTTAWA	20	1545	N09	E55	CLIMAX	29	2014	N25	E88
*MCMAH	20	1801	N09	E55					
*HAWAII	20	2152	S25	W26					
*MCMAH	21	1220	N19	W51	*WENDEL S	30	0854	S13	W30
MCMAH	21	1302	S26	W31	*CAPRI S	30	1020	N10	E03
MCMAH	21	1312	N07	E28	USNRL	30	1207	S10	E02
MCMAH	21	1315	S26	W36	USNRL	30	1207	S08	E18
ONOREJOV	21	1315	N12	W36	USNRL	30	1207	S10	E02
MCMAH	21	1405	N12	W36	USNRL	30	1238	S13	W33
MCMAH	21	1445	N07	W30	USNRL	30	1307	S10	E02
MCMAH	21	1515	N15	W33	MCMAH	30	1308	S10	E02
MCMAH	21	1519	N15	W33	MCMAH	30	1312	S08	W39
MCMAH	21	1919	S18	E59	USNRL	30	1315	S08	E19
MCMAH	21	2014	N09	E37	USNRL	30	1340	S08	W19
MCMAH	21	2044	S25	W39	*MCMAH	30	1343	N23	E66
MCMAH	21	2113	N08	W35	USNRL	30	1343	S08	W20
					*CLIMAX	30	1348	N25	E66
ATHENS	22	0609	S11	E47	USNRL	30	1352	N25	E70
MCMAH	22	1152	S09	E90	MCMAH	30	1359	S07	W20
MCMAH	22	1206	N16	W67	USNRL	30	1422	S15	W36
USNRL	22	1208	S06	E90	MCMAH	30	1451	S07	E21
MCMAH	22	1219	S06	E90	USNRL	30	1454	S07	W21
USNRL	22	1257	N05	E90	MCMAH	30	1457	S12	W20
MCMAH	22	1357	N05	E90	USNRL	30	1518	S12	W20
MCMAH	22	1328	N11	E28	MCMAH	30	1544	S17	W18
MCMAH	22	1428	N16	E28	USNRL	30	1544	S18	W18
MCMAH	22	1428	N16	E28	USNRL	30	1550	S07	W21
*CLIMAX	22	1620	S06	E90	USNRL	30	1553	S12	W34
*MCMAH	22	1656	S06	E90	MCMAH	30	1609	S08	W21
*MCMAH	22	1706	S20	E90	USNRL	30	1613	S08	W21
MCMAH	22	1740	S20	E90	MCMAH	30	1635	E	N29
					USNRL	30	1707	S26	E03
ATHENS	23	0547	S19	E38	USNRL	30	1713	S23	E00
LOCARNO	23	0730	N	W36	*USNRL	30	1724	N06	W22
MCMAH	23	1135	N06	W26	MCMAH	30	1806	S13	W37
MCMAH	23	1238	N20	W05	CLIMAX	30	1808	S15	W49
MCMAH	23	1322	N21	E35	USNRL	30	1809	S15	W49
OTTAWA	23	1244	S09	E72	USNRL	30	1809	S08	W27
OTTAWA	23	1300	S09	E72	USNRL	30	1811	S10	E71
*MCMAH	23	1311	N09	E72	MCMAH	30	1847	S14	W38
*USNRL	23	1310	N	E74	USNRL	30	1849	S15	W38
*ONOREJOV	23	1332	N17	E60	MCMAH	30	1932	S13	W39
*CLIMAX	23	1449	S21	E74	MCMAH	30	2005	S13	W39
OTTAWA	23	1421	N	E74	MCMAH	30	2022	S09	W29
*MCMAH	23	1401	S06	E74	HUANCAYO	30	2022	S09	W29
ONOREJOV	23	1432	S06	E74	MCMAH	30	2034	S07	W23
*MCMAH	23	1445	S21	E72	MCMAH	30	2154	S15	W37
*CLIMAX	23	1450	N10	E90					
USNRL	23	1615	N10	E90					
*CLIMAX	23	1709	S23	E76					
ONOREJOV	23	1743	S22	E76					
HAWAII	23	2138	S22	E70					
ONOREJOV	24	0557	N24	E30					
ONOREJOV	24	0650	N09	E70					
OTTAWA	24	1030	N07	E68					
OTTAWA	24	1100	N11	E68					
OTTAWA	24	1120	N11	E68					
*MCMAH	24	1126	N05	E68					
OTTAWA	24	1214	S08	E65					
*MCMAH	24	1332	N05	E68					
USNRL	24	1422	N05	E68					
USNRL	24	1427	S26	W20					
USNRL	24	1657	S09	E17					
USNRL	25	1240	N15	E62					
MEUDON	25	1242	N16	E60					
USNRL	25	1253	S017	W06					
USNRL	25	1344	N15	E60					
*CLIMAX	25	1511	N10	E59					
USNRL	25	1606	N10	E59					
USNRL	25	1619	N05	E59					
*CLIMAX	25	1625	N07	E56					
HUANCAYO	25	1645	N13	E59					

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	ONS COND.	MEASUREMENTS			PROVINCIAL IONOSPHERIC EFFECT		
		START	END	APPROX. LAT.	APPROX. MER DIST.				FLARE REGION	TIME — UT	MEAS. AREA Sq. Deg.		CORR. AREA Sq. Deg.	MAX. WIDTH Sq. Deg.
KYOTO KYOTO KODAIKUN KYOTO CAPRI G CAPRI G SINEIZ CAPRI G CAPRI G CAPRI G UCCLE UCCLE UCCLE CAPRI G	01	0014 E		N24 W04	4124		1		0014	1.50				S-SWF
	01	0014 E		N11 W07	4124		1		0014	2.30				
	01	0204	0223	N13 W08	4124		19	1	0014	3.90	4.00	2.00	208	
	01	0312	0315	N17 E00	4124		3		0314			1.16		S-SWF
	01	0521 F	0536 D	N16 E01	4124		15	D	0326		4.00			
	01	0621	0637	N12 W08	4124		16	1	0326		2.00			
	01	0622	0640 D	N11 W08	4124		18	D		2.70		2.90	56	S-SWF
	01	0659	0720	S28 W20	4125		21	1	0702		2.00			
	01	0802	0827	N14 W13	4124		25	1	0702	9.10		2.60	45	
	01	0826	0816	N16 W11	4124		10	1	0809		3.00			S-SWF
	01	0951 F	1012	N09 W10	4124		21	D	0955		7.00			
	01	0953 E	1018	N11 W10	4124		25	E				.75		
	01	1024	1028	N26 W19	4124		4	16	1025	3.40	3.60			S-SWF
	01	1025 F	1031	N26 W15	4124		6	D	1025	3.00	3.60			
	01	1036	1143	N24 W02	4124		67	1	1039	3.40				
01	1117 F		N10 W12	4124		6	U						S-SWF	
01	1258 E	1352	N15 W14	4124		54	D	2	1302		12.00			
02	0410 F	0430	N13 W26	4124		20	D	2	0412	2.60	2.90	1.80		105
02	0434 E	0445	N14 W24	4124		11	D	2	0434	2.13	2.34	1.00	Slow S-SWF	
02	0804 F	0816	S29 W27	4125		12	D	2	0804	1.60	2.40			
02	1016	1039	N15 W26	4124		23	1	2	1020	3.00				S-SWF
02	1022	1127	N14 W29	4124		75	2	1	1023	5.00	5.50			
02	1055	1254 D	S30 W36	4125		119	D	4	1105	2.20	3.20			
02	1103	1206	S33 W37	4125		69	D	1	1105	4.00			G-SWF	
02	1141	1156	N26 W25	4124		15	1	4	1143	2.20	2.40			
02	1300	1321 D	N10 W23	4124		21	D	2		5.10	7.20			
02	1332 F	1330	S34 W44	4125		2	3	3	1330	4.00	4.40			S-SWF
02	1424	1435	N13 W29	4124		11	16	3	1426					
02	1453 F	1556 D	N25 W27	4124		3	D	2	1555		3.00			
03	0037 F	0116	N24 W24	4124		39	D	2	0049	2.00	3.00			S-SWF
03	0045 F	0105 D	N24 W31	4124		20	D	2	0050					
03	0045 F	0115 D	M23 W23	4124		30	D	1	0050					
03	0326	0341	S15 W46	4126		15	1	2	0330	1.50	2.00			Slow-S-SWF
03	0753 E	0819 D	N15 W38	4124		26	D	2		9.10		4.30	73	
03	0755 E	0822 D	N15 W39	4124		27	D	2	0759	3.10	4.03			
03	0757 E		N15 W38	4124		16				3.10				S-SWF
03	0849 E	0852 D	S31 W39	4125		4	D	1		2.30		3.00	56	
03	0853 E	0859 D	S15 W47	4126		6	D	2	0853	1.86	2.94			
03	0853 F	0910	S11 F59	4133		17	1	2	0857	1.44				S-SWF
03	0934 F	0936 D	S20 W41	4126		2	D	1		7.10	8.50			
03	1018	1038	N15 W44	4124		20	D	1	1023	4.00				
03	1038	1050 D	N13 W44	4124		12	D	1	1059		4.80			S-SWF
03	1415 F	1427 D	N23 W28	4124		12	D	3			18.00			
03	1417	1535 D	N23 W29	4124		78	D	3	1430		2.00			
03	1427	1447	N18 W35	4124		20	1	3	1430		2.00			S-SWF
03	2344	0004	N26 W50	4124		20	1	3	2346	1.00	2.00			
04	0228 F	0319	S31 W49	4125		51	D	2	0243	3.00	7.00			
04	0257	0422	N28 W53	4124		85	1	2	0310	1.00	2.00			

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION			DURATION — MINUTES	ING. POP. FACIES	OBS. COND.	MEASUREMENTS			MAX WIDTH Ha	MAX INT. %	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG. DIST.	MAGNETIC REGION				TIME UT	MEAN AREA Sq. Deg.	CORR. AREA Sq. Deg.			
KYOTO YIZAMIAH CAPRI G UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF	04	0421 F	0443 D	N13 W51	4124	4124	22 D	1	2	0439	2.30	2.30	1.80		Slow S-SHF
	04	0541 F	0555 D	N13 W49	4124	4124	14	1	2	0545	2.13	3.24			
	04	1155 F	1215 D	N18 W52	4124	4124	20 D	2	1	1213	7.00	7.00			
	04	1157 F	1237 D	N18 W55	4124	4124	40	2	3	1203	4.40	5.50			
	04	1200 F	1253 D	N18 W54	4124	4124	53	2	3	1203	1.20	1.50			
	04	1206 F	1250 D	N23 W51	4124	4124	44	2,6	3	1203					
	04	2341 E	2345 D	N15 W67	4124	4124	4 D	1	3	2341	2.00	3.00			
	05	0002	0036	N15 W67	4124	4124	34	1	3	0012	1.50	3.00			
	05	0313	0340	N11 W70	4124	4124	27	2	3	0319	5.00	11.00			
	05	0440	0452	S30 W82	4125	4125	12	2	2	0446	.75				
UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF UCCLF	05	1154	1158	N11 E64	4134	4134	4	1	1						S-SHF Slow S-SHF C-SHF
	05	1210	1250 D	N14 W65	4124	4124	40 D	2	2	1537	4.00	4.00			
	05	1533 F	1543 D	S30 W69	4125	4125	10 D	1	2	1537	2.00	3.00			
	05	2155	0005	S24 F10	4136	4136	10	1	3	0006					
	06	0301	0330	N17 W49	4124	4124	29	2	2	0009	2.00	8.00			
	06	0043	0100 D	N11 W69	4124	4124	17 D	1	1	0054	3.00	3.00			
	06	0126 F	0143 D	N24 W85	4124	4124	17 D	1	1	0137	1.50	3.00			
	06	0603 F	0603 D	N16 W85	4124	4124	25 D	1	2	0600					
	06	0751	0850	N25 W65	4124	4124	59	2,6	2		20.00	10.00	4.30	52	
	06	0755	0847	N27 W64	4124	4124	52	2	2	0805				87	
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	06	0812	0853	N10 E61	4134	4134	41	1,6	2	0820	8.20	5.00	3.00	61	S-SHF C-SHF
	06	0815	0900 D	N12 F65	4134	4134	45 D	16	2						
	06	0820	0845 D	N20 W73	4124	4124	25 D	2	2						
	06	0820	0920 D	N14 F63	4134	4134	60 D	2	2						
	06	0830 F	0900 D	N25 W70	4124	4124	30 D	2,6	1	0837	7.70	14.00			
	06	0835 F	1020 D	N10 F65	4134	4134	105 D	2	1	0836	6.50	10.50			
	06	1045 F	1106	N16 W90	4124	4124	21 D	1	3	1145	3.40	3.90			
	06	1140	1156	S24 E92	4136	4136	16	1	2						
	06	1334	1410 D	S28 W78	4125	4125	36 D	2	2						
	06	1347 E	1354	S28 W90	4125	4125	7 D	1	1						
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	07	0751	0806	N28 W90	4124	4124	15	1	2						S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF
	07	0815	0835 D	N20 W90	4124	4124	20 D	2	3						
	07	0817	0828 D	N13 W90	4124	4124	11 D	1,6	2						
	07	0817	0837 D	N14 W88	4124	4124	20 D	1,6	2	0823	2.30	8.90	4.30	56	
	07	0825 E	0837	N20 W90	4124	4124	12 D	1	2					60	
	07	1102	1108	S15 E42	4138	4138	6	1	2	1106	2.40	3.40			
	07	1423 F	1437	N10 E44	4134	4134	14 D	1	2	1426	3.00	3.00			
	09	0126	0222	S13 F23	4138	4138	58	2	3	0139	5.00	6.00			
	09	0215	0233	S23 E70	4144	4144	18	1	3	0219	1.00	3.00			
	09	0759	0841	N12 E25	4134	4134	42	2	1	0810	7.00	7.00			
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	09	0801	0838 D	N14 E24	4134	4134	37 D	2	2				2.80	87	S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF S-SHF
	09	0951	0954	S30 F75	4144	4144	3	1	2	0952	16.40	3.10			
	09	1026	1030	S20 W42	4136	4136	4	1	2	1027	1.30	3.10			
	09	1150	1205 D	S17 E30	4141	4141	15 D	1	3	1027	2.20	3.30			
	10	0223	0300 D	N14 F16	4134	4134	37 D	3	2	0250	11.00	12.00		116	
	10	0809 F	0915 D	S15 F17	4141	4141	66 D	2	2	0902	6.71	7.53		59	
	10	0814 F	0915 D	S18 F15	4141	4141	61 D	1,6	2				2.60		
	10	0814 F	0915 D	S18 F15	4141	4141	61 D	1,6	2				2.60		
	10	0814 F	0915 D	S18 F15	4141	4141	61 D	1,6	2				2.60		
	10	0814 F	0915 D	S18 F15	4141	4141	61 D	1,6	2				2.60		

CONTINUED - SEE PAGE 1120

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEP T 1957	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IN- TER- FERENCE	OBS COND.	TIME — UT	MEASUREMENTS			PROVISIONAL LONGSPHERIC EFFECT
		START	END	MAX PHASE	APPROX LAT	MAGNITU- DE MIR.	PLACE REGION					MEAS AREA Sq. Deg.	COIL AREA Sq. Deg.	MAX WIDTH Ha	
{ CAPRI G UCCLE JCCLE CAPRI G	10	0817	0906	0824	S18 E15	4141	49	16	2	0822	4.00	4.00		Slow S-SMF	
	10	0822	1030	0827	S17 E15	4141	128 D	2	2	0827	5.80	6.20			
	10	1056	1119		S17 E15	4141	23	1	1		3.40	3.70			
	10	1322	1346	1429	S18 E11	4141	24	1	1	1325	3.00	3.00			
{ SYRNEY SYRNEY CAPRI G	11	0243	0545	0315	N11 W03	4134	182	3	2	0315	21.00	21.00		Slow S-SMF	
	11	0441	0524	0502	S44 E46	4144	43	16	2	0502	1.00	2.00			
	11	0526	0645		N11 E00	4134	19 D	1	2		1.80	3.00			
	11	0828	0844	0835 U	S19 E02	4141	20 D	1	2	0840	3.00	3.00			
{ ST-ELZ CAPRI G ST-ELZ CAPRI G	11	0838	0847		S18 E02	4141	9 D	1	2		4.60	3.00		Slow S-SMF	
	11	0855	0908	0900 U	S26 W61	4136	13 D	1	2	1311	3.00	3.00			
	11	1311	1319		N11 W04	4134	8 D	1	2		2.00	3.00			
	11	0047	0036		N08 W12	4134	24	1	1	0036	1.00	3.00			
{ SYRNEY SYRNEY SYRNEY	12	0034	0050	0039	S20 W61	4136	16	1	1	0039	1.00	3.00		S-SMF	
	12	0414	0435	0421	S21 W72	4136	21	16	3	0421	10.00	3.00			
	12	0708	0737	0711	N09 W13	4134	29 D	2	3	0714	10.80	10.80			
	12	0709	0734		N09 W15	4134	25 D	2	3		3.30	4.10			
{ JCCLE JCCLE JCCLE JCCLE	12	1016	1028	1017	S19 W12	4141	12 D	1	2		2.80	4.10		S-SMF	
	12	1018	1045		S25 E20	4143	27 D	1	1	1215	7.50	7.90			
	12	1210	1222	1215	S17 W09	4141	12 D	1	3	1215	3.80	4.10			
	12	1511	1530	1515	N10 W19	4134	19 D	2	1	1515	2.00	2.00			
{ JCCLE JCCLE SYRNEY	12	1515	1703	1657	N14 W26	4134	16 D	1	1	1657	3.80	4.10		S-SMF	
	12	1647	2340	2326	S16 W16	4141	18	1	3	2326	2.00	2.00			
	12	2322			S16 W25	4138		1	3		1.00				Slow S-SMF
	13	0221	0235	0229	N21 E90	4151	14	1	3	0229	3.00	3.00			
{ SYRNEY CAPRI G CAPRI G CAPRI G	13	0602	0642	0609	S15 W23	4141	40	1	2	0607	3.00	3.00		Slow S-SMF	
	13	0718	0732	0724	N22 E17	4142	14	1	2	0723	3.00	3.00			
	13	0743	0755	0750	S45 E13	4144	12	1	2	0745	4.00	4.00			
	13	0820	0831		N22 E17	4142	11	1	2	0823	4.00	4.00			
{ CAPRI G CAPRI G CAPRI G CAPRI G	13	0935	0956	0940	N20 E71	4151	21	1	2	0939	3.00	3.00		Slow S-SMF	
	13	0936	1000	0940	N08 W29	4134	24	1	2	0939	3.00	3.00			
	13	0951	1159	0954	N21 E92	4151	8	1	3	1153	2.10	3.30			
	13	1151	1335	1153	S07 W57	4147	21 D	26	3	1316	11.00	13.20			
{ CAPRI G UCCLE UCCLE CAPRI G	13	1318	1446	1316	S17 W25	4141	90 D	2	1	1322	7.00	10.00		Slow S-SMF	
	13	1349	1416		S16 W26	4141	29 D	1	1	1425	2.00	2.50			
	13	1410	1505	1425	S15 W32	4141	55	2	1	1425	7.00	7.00			
	13	1508	1515	1514	N08 W31	4134	29 D	1	1	1514	2.00	2.50			
{ UCCLE UCCLE UCCLE JCCLE	13	1552	1607	1553	S27 E67	4150	15 D	1	2	1514	1.00	5.00		S-SMF	
	13	1554	1607	1554	S14 W31	4141	13	1	1		4.60	1.80			
	14	0223	0321	0231	N08 E73	4152	58	2	3	0231	5.00	7.00			
	14	0226	0303	0230	N12 W60	4134	37	2	3	0239	3.20	4.00			
{ KODAI-KNL SYRNEY SYRNEY SYRNEY	14	0230	0249	0235	N10 W38	4134	19	1	2	0236	2.00	2.00		S-SMF	
	14	0249	0316	0258	S17 W32	4141	27	1	3	0258	1.00	5.00			
	14	0338	0407	0356	N08 E73	4152	29 D	2	3	0356	4.60	1.80			
	14	0645	0715	0643	S17 W32	4141	30 D	2	2		11.90	4.30			
{ ST-ELZ CAPRI G CAPRI G CAPRI G	14	0725	0816	0726	N08 E81	4152	21 D	2	2	0744	5.00	5.00		S-SMF	
	14	0743	0803	0743	N07 E78	4152	22 D	16	2	0744	5.00	7.00			
	14	1240	1305	1305	S21 E02	4143	25 D	2	1	1240	5.00	7.00			
	14	1240	1305	1305	S21 E02	4143	25 D	2	1	1240	5.00	7.00			

SOLAR FLARES SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	ONS. COND.	TIME — U T	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	MAGNIT. FLARE REGION					MEAS. AREA Sq. Deg.	COIB. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %
UCLE	14	1345 F		N12 E85	4152	1 D	1	1					
UCLE	14	1406 F	1407	S13 W43	4141	1	1	1					
YOTO	14	2145 F		N24 E60	4151		1		2146	2.80			
YOTO	14	2146 F		N08 W50	4134		1		2146	4.70			
YOTO	14	2146 F		S23 W48	4152	13 D	1		2332	1.90		1.48	
YOTO	14	2327 F	2340 D	N10 E70	4152	13 D	16						
YODATVNL	15	0333 F		N07 F70	4152	27 D	2	2	0334	4.30	12.40	5.20	150
YOTO	15	0415	0428 D	N09 E70	4152	13 D	1		0415				
UCLE	15	0815 F	0820	N09 F66	4152	5 D	16	3					
UCLE	15	0847	0858 D	N20 E52	4151	11 D	1	1	0858	1.30	2.20		
UCLE	15	0919 F	0926	N08 E65	4152	27 D	16	2	0921	2.70	3.00		
CAPRI G	15	1053	1118	N21 E54	4151	25	1	2	1100	3.00	3.00		
CAPRI G	15	1232	1241	N09 F65	4152	9	1	2	1235	3.00	3.00		
CAPRI G	15	1448	1504	S17 W52	4141	16	1	2	1455	4.00	4.00		
SYDNEY	15	2245 F	2259	N07 F53	4152	14 D	1	3	2246	1.50	3.00		
YOTO	15	2301 F		N15 F23	4148		1		2301	3.40			
SYDNEY	15	2317	2326	N10 E51	4152	9	1	3	2322	1.00	2.00		
SYDNEY	16	0355	0409	S15 W61	4141	14	1	3	0358	2.00	4.00		
SYDNEY	16	0455	0525	N10 W68	4134	30	1	3	0509	2.00	5.00		
SYDNEY	16	0516	0527	S15 W62	4141	11	1	3	0522	2.00	4.00		
CAPRI G	16	0604 F		S16 W61	4141		1	1	0604	3.00	3.00		
CAPRI G	16	0643	0702	N23 F06	4148	19	1	3	0650	3.00	3.00		
KRASNOYA	16	0728	0805 U	N23 F43	4151	41 D	1	3	0759	4.05	7.56		70
CAPRI G	16	0745 F	0803	N21 E44	4151	18 D	1	2	0746	4.00	4.00		
SH-ELZ	16	0752 F	0752 D	N23 F43	4151		1						
KRASNOYA	16	0835	0923 D	N09 F37	4152	48 D	1	2	0838	4.50	2.27	2.40	52
CAPRI G	16	0842 F	0853	N10 F38	4152	11 D	1	2	0842	2.84	4.00		63
UCLE	16	1024	1036	N08 E45	4152	10	1	3	1028	4.00	4.00		
CAPRI G	16	1025	1036	N06 F44	4152	15	1	3	1027	3.90	3.00		
CAPRI G	16	1106	1134	N10 W72	4134	28	1	1	1107	3.00	3.00		
UCLE	16	1110	1120	N08 W73	4134	10	1	2	1110	5.00	5.00		
CAPRI G	16	1313 F	1337	N11 E50	4152	24 D	16	3	1315	3.80	3.80		
CAPRI G	16	1410 F	1428	N10 W74	4134	18 D	16	2	1410	5.00	4.00		
CAPRI G	16	1513 F	1525 D	N09 E52	4152	12 D	2	2	1513	8.00	8.00		
SYDNEY	16	2313 F	2345	N23 F30	4151	52 D	1	3	2319	3.00	4.00		
SYDNEY	17	0121	0139	N23 F32	4151	18	1	3	0127	3.00	4.00		
MIZANTAH	17	0416 F	0539 D	N23 F28	4151	83 D	16	3	0418	3.34	3.89	2.70	
CAPRI G	17	0515 F	0620	N22 E20	4151	45 D	2	2	0540	10.00	10.00		
CAPRI G	17	0648	0702	N07 F37	4152	14	1	2	0655	4.00	4.00		
CAPRI G	17	0758	0847	N22 F26	4151	49	2	2	0805	10.00	10.00		
SH-ELZ	17	0904 E	0904 D	N23 E28	4151		2			27.40		2.40	
CAPRI G	17	0914	0931	N22 F26	4151	17	1	2	0920	3.00	3.00		
CAPRI G	17	1038	1106	N21 E29	4151	28	1	2	1042	2.00	2.00		
CAPRI G	17	1148 F	1216	N26 W38	4142	28 D	16	2	1150	3.00	3.00		
SYDNEY	17	2313 F	0047	N22 F19	4151	94 D	2	2	2346	5.00	6.00		
SYDNEY	18	0115	0220	N10 F27	4152	68	1	2	0122	4.00	4.00		
YOTO	18	0117	0135 D	N10 E27	4152	20 D	1	2	0123	8.10	8.10		
YOTO	18	0118 F	0140 D	N14 F36	4152	22 D	1		0123	2.50	2.50		
SYDNEY	18	0420	0452	N23 F12	4151	31	1	2	0432	4.00	4.00		

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SOLAR FLARES
SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IN- FOR- TRACE	OBS. COND.	MEASUREMENTS				PROVINCIAL IONOSPHERIC EFFECT
		START	END	LAT.	APPROX. MAX. DIST.	MAGNETIC FLARE REGION				TIME UT	AREA Sq. Deg.	COLOR INDEX Sq. Deg.	MAX WIDTH in	MAX INT. %
{SYDNEY CAPRI G CAPRI G CAPRI G SYDNEY KYOTO	18	0624	0708	N23 E14	4151	4151	44	26	2	0638	21.90	5.00	4.30	S-SWF
	18	0635	0640	N23 E15	4151	4151	5	16	1					
	18	0817	0852	N16 E90	4158	4158	35	1	1	1040		9.00		C-SWF
	18	1026	1155	N23 E13	4151	4151	89	2	1	1325	5.00	10.00		
	18	1316	1410	N23 E11	4151	4151	54	2	1	2346		5.00	1.00	
{NIZANIAH SYDNEY KYOTO KODAIKIL SYDNEY CAPRI G	18	2331	0017	N17 E63	4151	4151	46	1	3	2343				
	18	2337	2356	N17 E64	4151	4151	19	16						
	19	0250	0320	N24 E62	4151	4151	30	2	2	0250	7.29	7.61	1.60	Slow S-SWF
	19	0401	0455	N23 E01	4151	4151	54	36	3	0412	48.00	52.00		
	19	0404	0450	N23 E04	4151	4151	46	3	3	0414	1.84	24.70	1.84	Slow S-SWF
{SYDNEY KODAIKIL CAPRI G SYDNEY CAPRI G	19	0405	0432	N22 E06	4151	4151	27	2	3	0407	7.20	3.00	278	
	19	0606	0614	N26 E42	4142	4142	8	1	2	0609		3.00		
	19	0744	0855	N24 E03	4151	4151	71	2	3	0755	16.40	7.00	4.30	S-SWF
	19	0747	0856	N23 E03	4151	4151	9	2	3	0825	6.60			
	19	0925	0900	N23 E01	4151	4151	35	2	3	0834	2.10	3.00		
{CAPRI G UCCLE UCCLE UCCLE UCCLE	19	0831	0846	S24 E08	4155	4155	15	1	3	0835	2.60	2.30		
	19	0832	0851	S23 E10	4155	4155	19	1	3	0853	1.00			
	19	0833	0854	N07 E04	4152	4152	21	1	3	0842	3.40			
	19	0851	0857	S24 E58	4149	4149	6	1	5	0853	3.40			
	19	0946	1002	N22 E03	4151	4151	16	1	3	0946	4.00			
{CAPRI G UCCLE UCCLE UCCLE UCCLE	19	0946	1013	N24 E01	4151	4151	27	1	3	1000				
	19	1000	1012	S16 E55	4154	4154	35	1	2	1000				
	19	1057	1130	N24 E01	4151	4151	12	16	4					
	19	1107	1127	N24 E01	4151	4151	20	2	3	1114	6.80			C-SWF
	19	1110	1126	N24 E15	4151	4151	16	1	3					
{SYDNEY NIZANIAH SYDNEY NIZANIAH SYDNEY KODAIKIL	19	1112	1124	S41 E77	4144	4144	12	1	3	1114	3.40			
	20	0344	0425	N25 E05	4151	4151	41	1	2	0350	3.00	4.00	1.60	Slow S-SWF
	20	0347	0434	N23 E13	4151	4151	47	16	2	0355	4.25	4.54		
	20	0435	0447	N22 E12	4151	4151	42	1	2	0430	4.00	5.00		
	20	0443	0501	S22 E03	4155	4155	18	1	2	0448	2.43	2.79	1.50	
{SYDNEY KODAIKIL NIZANIAH CAPRI G SYDNEY KODAIKIL	20	0443	0525	S21 E02	4155	4155	42	2	2	0446	6.00	6.00		
	20	0450	0454	S21 E00	4155	4155	4	1	1	0450			1.80	
	20	0529	0552	N23 E13	4151	4151	33	1	2	0533	2.13	2.27	1.30	
	20	0805	0815	N06 E06	4152	4152	10	1	1	0815	7.30	5.00	2.66	
	20	0806	0835	N07 E07	4152	4152	29	16	3					
{SYDNEY KODAIKIL NIZANIAH SYDNEY KODAIKIL	20	1240	1245	N29 E02	4142	4142	5	1	3	1440		4.00		
	20	1430	1442	N24 E25	4151	4151	12	1	3					
	20	1440	1453	N23 E25	4151	4151	13	1	2					
	21	0410	0455	N25 E14	4151	4151	45	2	2	0410	12.40	4.40	2.00	Slow S-SWF
	21	0415	0428	N22 E23	4151	4151	13	1	2	0418	3.90	4.40	1.80	
{SYDNEY KODAIKIL NIZANIAH SYDNEY KODAIKIL	21	0423	0456	N22 E23	4151	4151	33	16	2	0423	4.25	4.96	1.80	
	21	0604	0647	N23 E25	4151	4151	43	16			9.10	2.86	2.86	
	21	0657	0706	N14 E00	4159	4159	9	1	1		6.80	3.60	2.52	
	21	0614	0654	N09 E01	4152	4152	40	16			7.30	6.00	2.52	
	21	0658	0721	N12 E84	4159	4159	23	2	1	0708	4.50	4.00	3.24	
{SYDNEY KODAIKIL NIZANIAH SYDNEY KODAIKIL	21	0704	0729	N09 E01	4152	4152	25	1	1	0708	4.50	4.00	2.20	S-SWF
	21	0707	0718	N09 E30	4152	4152	11	1	1					
	21	0728	0740	N09 E02	4152	4152	12	1	1					
	21	0729	0741	N10 E04	4152	4152	12	1	1	0732	4.50	3.00	2.20	
	21	0844	0851	N10 E05	4152	4152	7	2	1	0847	5.80			

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SOL 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL HORIZONTAL EFFECT
		START	END	LAT.	APPROX. MAGN. DATE				TIME — UT	MEAS. AREA Sq. Deg.	CORR. Sq. Deg.	MAX. WIDTH In	
CAPRI G	21	0955 F	1425 G	N09 W01	4152	41 D	1	1	10.00				Slow S-SWF
CAPRI G	21	1344 F		N06 W03	4152		2	1					
CAPRI G	22	0650 F	0718	N08 W35	4152	28 D	16	2	5.00				
ST-HEIZ	22	0654 F	0725 G	N08 W36	4152	31 D	16		7.30			1.96	74
ST-HEIZ	22	0710 F	0710 G	N10 W14	4152		16		9.10			1.64	70
ST-HEIZ	22	0745 F	0640 G	N23 W39	4151	55 D	16		9.10			9.80	91
CAPRI G	22	0746	0819	N23 W34	4151	33	16	2	0755				
UCCLE	22	1221	1223 D	N07 W42	4152	2 D	1	2	1.60				
CAPRI G	22	1321 E		N08 W38	4152		2	2	1321				
CAPRI G	22	1321 E		N08 W38	4152		2	2	1321				
SYDNEY	22	2322	2352	N17 W57	4151	30	2	3	2331				
SYDNEY	23	0006	0113	N19 E42	4159	67	1	3	0016				
SYDNEY	23	0902	0928	N12 E55	4159	26	1		2.00				
UCCLE	23	1115	1127	N10 W30	4152	12	1	3	3.40			2.04	60
UCCLE	23	1149	1151 G	N09 W57	4152		1		3.70				
UCCLE	23	1454	1505	N24 W57	4151	11	1	2	1.169				
UCCLE	23	1454	1533	N13 E51	4159	39	16	3	1.500				
UCCLE	23	1529 E		N12 W38	4152		16	3	1.589				
SYDNEY	23	2313 F	0001	N15 E92	4162	47 D	□	3	.50				
SYDNEY	24	0044	0102	S27 W36	4149	18	□	2	.0048				
SYDNEY	24	0057	0128	N15 F92	4162	31	□	3	.122				
SYDNEY	24	0224 F	0307	N15 E91	4162	43 D	□	3	.0227				
SYDNEY	24	0256	0330	N12 W44	4151	34	1	1	.0304				
JOHANNESBURG	24	0257	0310	N10 W45	4151	13	1	3	.0258			2.70	150
SYDNEY	24	0317	0345	S27 W38	4149	28	□	2	.0333				
SYDNEY	24	0318	0357	N15 E91	4162	39	□	3	.0320				
SYDNEY	24	0427	0439	N15 E91	4162	12	□	3	.0434				
SYDNEY	24	0507 F	0522	N15 F90	4162	15	□	3	.0513				
KRASNOYARSK	24	0648 F	0729 G	N19 F87	4162	41 D	16	2	.0724				
ST-HEIZ	24	0721	0722	N15 F90	4162	5	16		1.20			11.50	70
ST-HEIZ	24	0755	0816	N15 F90	4162	21	1		4.00			4.30	
KRASNOYARSK	24	0833 F	0820	N19 E86	4162	17 D	16	2	4.00			3.10	54
CAPRI G	24	0805 E	0820 D	N15 E90	4162	15 D	1	2	0809				
CAPRI G	24	0941 F	0950	S33 E93	4161	19 D	16	2					
CAPRI G	24	1035 E		N16 E36	4159		16	2					
ST-HEIZ	25	0845 F	0909 G	S27 E47	4161	24 D	1						
ST-HEIZ	25	0921 F	0953 G	S25 W70	4155	32 D	1		4.50			2.24	70
CAPRI G	25	1347 F	1349	N11 W82	4152	5 D	1	2	1.80			2.52	60
UCCLE	26	0856 F	1105	N18 E02	4159	129 D	1	3	0934				
UCCLE	26	11-12	1104	N16 E55	4162	5	1	4	1104				
CAPRI G	26	1225 F	1245 G	S28 F30	4161	20 D	1	2	1230				
YIZAMIAH	27	0523	0544	S24 E22	4161	21 D	1	2	0528				
UCCLE	27	0958	1004	N16 E47	4162	6	1	3	2.43			2.20	
UCCLE	27	1125	1134	N10 E13	4159	9	1	3	3.40			4.70	
UCCLE	27	1149	1153	N32 E75	4165	4	1	3	2.50				
UCCLE	27	1200	1202 D	N19 E03	4159	2 D	1	3	1.50			3.00	
UCCLE	27	1200 F	1208	N17 E04	4159	8 D	1	2	2.50				
CAPRI G	27	1200 F		N17 E04	4159		16	2	4.00				
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16		7.30			3.70	80
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
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ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
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ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
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ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
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ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
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ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28	16						
ST-HEIZ	28	0912	0940	N17 W11	4159	28</							

COMMITTEE - **STUDY GROUP** - **RESEARCH**

SOLAR FLARES

SEPTEMBER 1957

OBSERVATORY	DATE SEPT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION MINUTES	IN- POR- TANCE	OBS COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG.				TIME UT	MEAS AREA Sq. Deg.	CORE AREA Sq. Deg.	MAX. WIDTH R _s	
HIZAKIAH CAPRI G UCCL S UCCL S	28	0913 E	0933	N20 W17	4159	20 D	16	2	0916	4.25	4.56	2.60	Slow S-SWF
	28	0925 E	0940 D	N16 W10	4159	15 D	16	3	0925	5.20	5.00		
	28	0925	1004	N14 W12	4159	39	2	2	0925	5.20			
CAPRI G STWELZ CAPRI G STWELZ	28	1004	1018	N18 E34	4162	14	1	2					Slow S-SWF
	29	0708	0735	N26 W20	4159	27	1	3	0713		4.00		
	29	0710 E	0712 U	N21 W27	4159	20 D	1						
CAPRI G STWELZ CAPRI G STWELZ	29	0744 E	0840 D	N18 W25	4159	56 D	2			3.60		3.40	Slow S-SWF
	29	0753	0806	N17 W24	4159	13	1	1	0758	18.20	4.00	3.80	
	29	0922 F	0930 D	N17 W25	4159	8 D	1			3.60		2.60	
CAPRI G STWELZ CAPRI G STWELZ	29	0945 F	1002 D	S24 F70	4167	27 D	1	2	1108	2.70	6.00	2.80	Slow S-SWF
	29	1113	1111	N17 W21	4159	6	16	2	1108		2.00		
	29	1149 E	1202	N26 E48	4165	15 D	1	2	1149				
SYDNEY SYDNEY SYDNEY SYDNEY	30	0212 E	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		
CAPRI G STWELZ CAPRI G STWELZ	30	0507	0513	S17 E86	4167	6	1	1	0509	.50			Slow S-SWF
	30	0745 E	0752 D	S18 F75	4167	7 D	16	2			5.00	4.60	
	30	0748 E	0814 D	S18 F85	4167	26 D	16	2		2.70			
CAPRI G STWELZ CAPRI G STWELZ	30	1028 F	1042 D	N15 W52	4159	14 D	1	2			4.00		Slow S-SWF
	30	1058	1140 D	N18 W40	4159	42 D	2	2			9.00		
	30	1227 F	1245 D	N16 W45	4159	18 D	2	2			6.00		
UCCL S UCCL S UCCL S UCCL S	30	1229 F	1236	N19 W54	4159	7 D	2	2	1229	4.00	6.40		Slow S-SWF
	30	1253	1346	N19 W55	4159	13	1	3	1255	1.50	2.30		
	30	1313	1317	S18 E82	4167	4	1	3	1315	2.00	4.00		
CAPRI G STWELZ CAPRI G STWELZ	30	1321	1329	S18 F90	4167	8	16	1	1324	3.00	6.00		Slow S-SWF
	30	1456 F	1555 D	N19 W43	4159	39 D	1	2	1513	4.00	5.00		
	30	1509 F	1518 D	N18 W43	4159	9	16	2	1513	1.50	2.00		
SYDNEY	30	2313	2331	S26 W28	4161	18	1	2	2319				

CONTINUED - SEPTEMBER - 1957

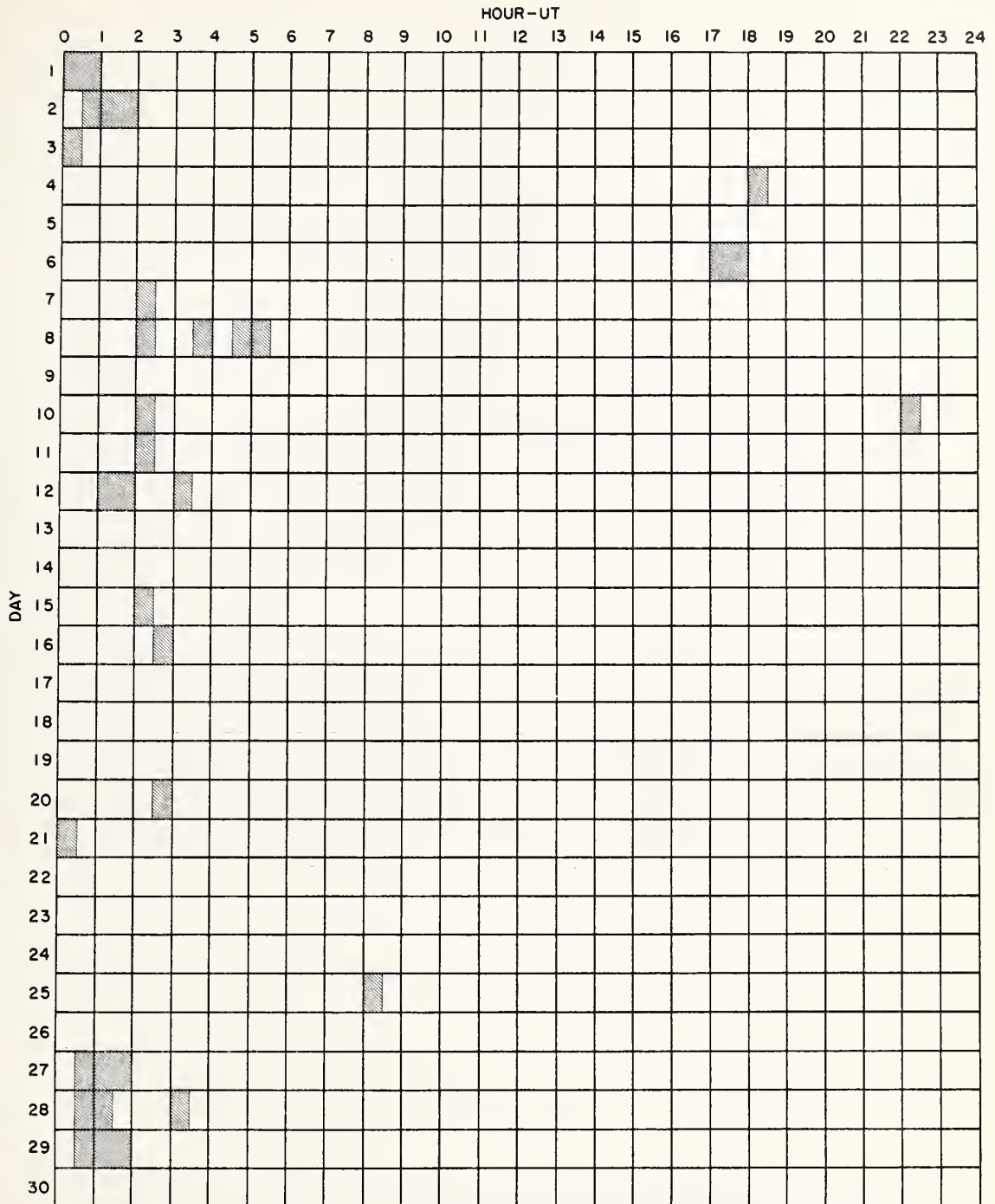
ANACAPRI - GERMAN
ANACAPRI - SWEDISH
ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KODAIKANAL
KODAIKANAL
KRASHYA PAKHRA
ROYAL OBSERVATORY, EDINBURGH
GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK
SACRA-LETO PEAK
SCHAUNSLAN
UNITED STATES NAVAL RESEARCH LABORATORY
USRL

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

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
Nizamiah
Ondrejov
Ottawa

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

SOLAR FLARES
OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- PO- TANCE	OBS COND.	MEASUREMENTS				PROVINCIAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	APPROX. LONG. DIST.	APPROX. REGION				TIME UT	MEAS. AREA Sq. Deg.	COBI. AREA Sq. Deg.	MAX. WIDTH H _z	
APASTUMANI ARASTUMANI CAPRI G SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY	01 0712	0723	0713	N13 W61	4159	11	1			4.80		2.70	66	C-SWF
	01 0734	0745	0736	N11 W47	4159	11	1			4.80		2.30	72	
	01 0935	0955		N28 F19	4165	20 D	16			5.00				
	01 2338	2358		S15 E52	4167	20	1	1	2350	1.00	2.00			
	02 0246	0253	0248	S15 E49	4167	7	1	2	0248	1.50	3.00			
	02 0342	0424	0348	N10 W47	4159	42	1	1	0348	3.00	3.00	2.40	90	
	02 0343	0417	0350	N12 W47	4159	34	15			7.30				
	02 0417	0420	0418	S16 E53	4175	12	1			3.30		2.70	100	
	02 0418	0424	0419	S15 E50	4167	6	1	1	0419	1.00	2.00			
	02 0418	0425	0419	S15 E53	4167	7 D	1			2.20		1.00	1	
APASTUMANI CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	02 0429	0459	0430	S17 E48	4167	30	1	1	0436	2.00	2.00	2.60	80	Slow S-SWF
	02 0435	0439	0436	S07 E50	4167	4	1			1.00				
	02 0615	0621		S16 E50	4177	6 D	1		0417					
	02 0623	0631	0624	S15 E54	4167	8 D	1		0624	7.20	3.00	2.40	68	
	02 0640	0622	0655	S14 E54	4167	102 D	16	1		4.00				
	02 0748	0813		N12 E67	4172	25 D	1	1		8.20		2.90	70	
	02 0823	0843		S16 E58	4166	10 D	1		7.20		2.50	75		
	02 0850	0909	0854	N28 E05	4162	19 D	16	1		4.10		1.60	70	
	02 0855	0910	0858	N28 E04	4165	15	16							
	02 0855	0910	0858	N28 E04	4165	15	16							
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	02 0934	0905	0936	S27 F10	4167	12 D	2	1		5.00				Slow S-SWF
	02 1350	1400		N28 E18	4165	23 D	1	1		3.00				
	02 1443			S14 E30	4167	10 D	16	1	2316	1.00	3.00			
	02 2258	2332	2316	S22 E28	4167	10	1	2	2327	3.00	4.00			
	02 2317	2336	2327	N23 W70	4159	34	1	3						
	03 0102	0131	0111	S22 E21	4167	19	1							
	03 0523	0534	0527	N23 W72	4159	29	2	2	0111	1.50	6.00			
	03 0527	0540	0529	N16 W74	4159	11	1	2	0527	1.00	5.00			
	03 0527	0538	0529	N13 W69	4159	11 D	1		0529	2.20		4.60	90	
	03 0541	0553		S14 E38	4175	12 D	1			1.40		1.32	1	
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	03 0637	0632	0632	S23 E20	4167	12 D	1	1	0632	2.60		4.00	80	C-SWF
	03 0625	0632	0623	S21 E19	4167	13	1			5.00				
	03 0625	0632	0623	S21 E19	4167	13	1			2.20		3.50	60	
	03 0629	0638	0629	S23 E13	4167	9 D	1			2.40				
	03 0722	0739	0727	S17 E37	4175	17	1	1		2.50				
	03 0739	0748	0741	S08 E33	4175	9	1	1		2.80		78		
	03 0739	0852	0741	S12 E41	4175	13	1			1.90		1.00	1	
	03 0740	0755	0742	S15 E43	4175	15 D	1		0741	1.50		4.30	80	
	03 0742	0754	0745	S14 E37	4175	12 D	1			7.50		2.35	120	
	03 0903	1200	0904	S20 E38	4175	17	16			9.50	3.00			
KIEV* SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY SYDNEY	03 1235	1244	1238	S13 E38	4175	9 D	1	2	2301	7.50				S-SWF
	03 2314	2301		S41 E50	4173	18	1	3	2349	.50				
	03 2346	2350	2350	N20 E04	4179	4 D		2		.50				
	04 0017	0035	0027	N20 E04	4179	18		2	0027	.50				
	04 0050	0107	0103	N20 E04	4179	9		2	0103	.50				
	04 0113	0121	0116	N20 E04	4179	9		2	0115	.50				
	04 0149	0200	0152	N20 E04	4179	11 D	1	3	0152	.50				
	04 0703	0638	0723	N28 W71	4165	25 D	16			7.00		2.20	57	
	04 0825	0910	0849	S14 E16	4175	45 D	16			9.50		2.60	67	

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		MAX. PHASE	LOCATION		IM- POR- TANCE	OBS. COND.	TIME — U T	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END		APPROX. LAT. MER. DIST.	MC-MATH PLACE REGION				MEAS. AREA Sq. Deg.	COORD. AREA Sq. Deg.	MAX. WIDTH No.	
CAPRI G	04	1100 F	1120 D		N20 F95	4179	1	1	20 01		5.00		
UTRECHT	04	1345	1347 D		□		1		2 01				
KIEV	05	1142	1225	1214	S43 F40	4173	1		43	1.80			120
KIEV*	06	1022 F	1025		S24 W26	4167	1		3 D	4.90			
KIEV*	06	1050 F	1125		N38 W90	4159	□		35 01				
KIEV	06	1220 F	1244 D	1236	S28 W24	4167	16		24 D	6.30			100
HEUDON	06	1229	1252		S28 W21	4167	23		1				
CAPRI G	06	1245 F	1300 D		S24 W22	4167	15	1	0 2	7.00			G-SWF
CAPRI G	06	1515 F	1523		N41 E03	4171	8	1	0 1	3.00			
TASHKENT	07	0518	0615		N17 F11	4172	57		1	3.60		2.50	70
HEUDON	07	1337	1358		N10 E80	4180	21	1					
SYDNEY	08	0211	0258	0239	N20 W08	4172	27	2	0 239	10.00	11.00		Slow S-SWF
SYDNEY	08	0522	0541	0526	N13 F32	4172	19	1	0 526	4.00	5.00		
KIEV	08	1003 F	1115	1105	N43 W25	4171	72	2		5.43			220
HEUDON	08	1036	1063		S37 W05	4173	7	1					
CAPRI G	08	1048 F	1053		N12 F08	4172	5	1	0 16	5.00			
HEUDON	08	1053	1125		N40 W25	4171	32	16					
CAPRI G	08	1055	1115		N42 W24	4171	23	2					
HEUDORST	08	1055 F	1125 D		N41 W26	4171	50	0	16	8.65			S-SWF
KIEV*	08	1057 F	1121 D	1103	N40 W23	4171	24	0	16				
UTRECHT	08	1110 F	1110		□		4	16					
DUNSTINK	08	1110 F	1130	1107	N50 W10	4171	29	0	1	2.00	2.00	3.00	
	08	1437 F	1448	1437	N18 W17	4172	11	0	1			2.20	
SYDNEY	09	0212	0237	0220	N10 E90	4192	25	□	0 220	.75			Slow S-SWF
SYDNEY	09	0320	0330	0327	N10 E90	4192	10	□	0 327	.75			
SYDNEY	09	0336	0353	0341	N10 E90	4192	17	0	0 341	1.00			
KYOTO	09	0355 F	0537 D	0400	S42 W08	4173	102	1		2.70			1
CAPRI G	09	0654	0706		N07 F46	4180	12	1					
CAPRI G	09	0700	0715		N14 W04	4172	15	1		2.00			
CAPRI G	09	0740 F	0745 D		N18 W26	4172	5	1		5.00			
CAPRI G	09	0940 F	0945 D		N14 W19	4172	5	0	1	5.00			
HEUDON	09	0943 F	0948 D		N12 W20	4172	5	0	1				
CAPRI G	09	1020 F	1030 D		N24 F37	4182	10	0	1	3.00			
HEUDON	09	1140 F	1153 D		N12 W25	4172	13	0	1				
KIEV	09	1141	1147	1143	N14 W21	4172	6	1		1.40			110
CAPRI G	09	1404 F	1415		N24 E37	4182	11	0	1				
SYDNEY	09	2221	2230	2224	N15 E82	4192	9	□	2 224	.75			
SYDNEY	10	0237	0255	0246	N25 W77	4172	18	0	1				
CAPRI G	10	0900 F	0925		S19 E62	4185	25	0	1	3.00			S-SWF
CAPRI G	10	1105 F	1110 D		N24 E25	4182	5	0	1	4.00			
SYDNEY	11	0250	0316	0256	S40 W36	4173	26	1	0 256	1.00	2.00		
SYDNEY	11	0415	0445	0419	N18 E01	4179	50	1	0 419	4.00	5.00		
CRIMEA	11	0807 F	0825 D	0813 U	S29 F90	4189	18	0	1	2.70		3.20	
ABASTUMANI	11	0809	0819	0816 U	S29 F89	4189	10	1		2.40		2.40	
CRIMEA	11	0814 F	0846 D		N14 W47	4172	32	0	1	1.40			G-SWF
HEUDON	11	1422	1503		N42 W50	4171	41	1					

COMPARISON - PROBABLY - 1957

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED TIME UNIVERSAL TIME			LOCATION			DURATION -- MINUTES	IM- PORT- ANCE	COS COND.	MEASUREMENTS				PROVINCIAL IONOSPHERIC EFFECT	
		START	END	MAX. PHASE	APPROX. LAT.	APPROX. LONG.	NAME PLACE REGION				TIME -- W Y	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Km.		MAX. INT. %
CAPRI G	11	1432 E	1440 D		N42 W59	4171		8 D	1	2			4.00			G-SWF
	11	1437 F	1517 D		S38 W36	4173		45 D	1	2						
	11	1450 F	1517 D		S13 E50	4185		27 D	1	2			2.00			S-SWF
	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						
APASTUMANI	12	0558 F	0913 D	0609 U	N14 W60	4172		195 D	1	2		6.00		2.40	64	
	12	0710 F	0714 D		S15 W46	4177		4 D	1	2						
	12	0735 F	0850 D	0742 U	S16 W44	4185		75 D	1	2		7.20		2.20	51	
	12	0821 E	0913 D	0913 U	N07 E45	4186		52 D	16	2		8.40			52	
	12	0900 F	0910 D		S25 E67	4189		10 D	2	2						
KHARKOV	12	0900 F	0915 D		N16 W57	4172		15 D	1	2		1.00				S-SWF
	12	0955 F	1010 D		N22 E55	4188		15 D	1	2						
	12	0955 F	1024 D		N10 E56	4186		29 D	1	2						
	12	1000 F			N05 E46	4186			1	2		3.00				
	12	1010 F	1030 D		S24 E66	4189		20 D	16	2						
CAPRI G	12	1201 F	1210 D		N15 W44	4172		9 D	1	2						
	12	1304 F	1330 D		S12 W71	4176		26 D	1	2						
	12	1352 F	1430 D		S26 E65	4189		38 D	1	2						
	12	1352 F	1534 D		N22 E37	4188		9 D	1	2						
	12	1525 F														
KYOTO	13	0640 F	0522 D	0457	S23 E60	4189		42 D	16		0457	13.10		2.68	1	
	13	0530 E	0624 D		N11 E43	4186		34 D	26		0544	6.90		2.34	1	
	13	0550 F	0620 D		N10 F38	4186		30 D	16					3.50	70	
	13	0718 E	0745 D		S24 E54	4189		27 D	1	1						
	13	0723 F	0745 D		N15 W68	4172		22 D	1	1						
APASTUMANI	13	0757 F	0855 D	0812	N06 F34	4186		58 D	1	1		7.20			49	
	13	0810 F	0835 D		N07 F34	4186		25 D	1	2						
	13	1020 F	1026 D		S22 E59	4189		6 D	1	2						
	13	1056 F	1332 D	1156 U	S22 E57	4189		156 D	16	2						
	13	1115 E	1123 D		S23 E52	4189		8 D	1	2						
YOSCOV	13	1133 E	1146 D		S24 E65	4189		13 D	1	2						
	13	1135 E	1147 D		S28 E64	4189		12 D	1	2		4.20		3.20	200	
	13	1135 F	1147 D		S14 E26	4185		12 D	1	2						
	13	1136 F	1145 D	1136 U	S13 E25	4185		9 D	1	2						
	13	1248 F	1359 D	1253 U	N23 E31	4188		71 D	26	2		20.70		2.19	150	
CAPRI G	13	1250 F	1322 D		N19 E35	4188		32 D	2	2				2.45	220	
	13	1307 E			N20 F30	4188			1	2						
	13	1338 F	1350 D		N24 E54	4188		12 D	2	2						
	13	1450 F	1500 D		N40 F39	4190		10 D	1	2						
	13	1528 F	1540 D		N26 E53	4188		12 D	2	2						
CAPRI G	13	1538 E	1540 D		N44 W85	4171		2 D	1	2						
	13	2236 F	2317 D		N22 E42	4188		41 D	1	2	2236	11.20		1.34	1	
	13	2245 F	2325 D	2254	N24 E44	4188		40 D	2	3	2254	5.00				
	13	2236 F														
	13	2245 F														
KYOTO	14	0120 F	0256 D		N27 W90	4172		96 D	1	2						
	14	0556 E	0625 D		N24 E16	4188		29 D	16	2						
	14	0653 E	0705 D		S17 E12	4185		12 D	1	2						
	14	0823 F	0835 D		S22 E48	4189		12 D	1	2						
	14	0830 F	0855 D		N12 W85	4172		25 D	1	2						
CAPRI G	14	0842 F	0852 D		S22 E53	4189		10 D	1	2						
	14	0842 F	0852 D		N40 W47	4171		27 D	1	2						
	14	0955 F	1022 D		S45 W00	4173		35 D	1	3		2.00				
	14	1045 F	1110 D													
	14	1045 F	1110 D													

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		MAX. PHASE	LOCATION		DURATION — MINUTES	IN- POR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT	
		START	END		APPROX. LAT.	MATH. MER. DIST.				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH H _o
KIEV CAPRI G UTRECHT CAPRI G NEDEHORST UTRECHT CAPRI G CAPRI G CAPRI G CAPRI G SYDNEY	14	1107	1126 D	1107	S16 E05	4185	19 D	1			2.00	3.00		70
	14	1150 F	1200 D		S26 F50	4189	10 D	1	2					
	14	1305	1307 D		S21 E47	4189	2 D	1						
	14	1318	1325 D		S15 W90	4172	15 D	1	3			4.00		
	14	1320	1335 D		S14 E07	4185	6 D	2						
	14	1322	1326 D		S14 E07	4185	10 D	1	2			3.00		
	14	1435 F	1445 D		S20 F16	4185	6 D	1	2			2.00		
	14	1534 F	1540 D		S26 F32	4189	8 D	1	2			3.00		
	14	1534 F	1542 D		S16 F74	4191	24	1	1	2:18	1.00	3.00		
	14	2303	2327	2:18	S24 F02	4183	14	1	3	0:122	2.00	4.00		
SYDNEY SYDNEY TASHKENT KYOTO CAPRI G CAPRI G CAPRI G KIEV CAPRI G NEDEHORST NEDEHORST CAPRI G KIEV KIEV CAPRI G CAPRI G	15	0117	0131	0122	S24 F39	4189	45 D	1	3	0:122	2.00	4.00		
	15	0239 F	0324	0247	S06 F08	4186	41 D	1	2	0:247	3.00	5.80	2.00	70
	15	0509 F	0550 D		S23 E27	4189	5	1			5.80		1.24	1
	15	0759	0834		S28 F29	4189	35	2	3	0:650		7.00		
	15	1015	1036		S11 E17	4186	21	16	3		6.00			
	15	1217 F	1220	1217	S10 E43	4186	3	1	3		1.40			93
	15	1250 F	1335		S26 W10	4183	45 D	1	3			4.00		
	15	1325 F	1345 D		S19 F90	4195	20 D	1	3					
	15	1329 F	1336 D		S21 F30	4189	6 D	1	3					
	15	1332 F	1357		S18 F29	4189	25 D	1	3			5.00		
CAPRI G KIEV KIEV CAPRI G CAPRI G SYDNEY SYDNEY ABASTUMANI CAPRI G CRIMEA CAPRI G CRIMEA MOSCOW CAPRI G CAPRI G CAPRI G CAPRI G PHARKOV PHARKOV PHARKOV MOSCOW PHARKOV KIEV CAPRI G CAPRI G CAPRI G CAPRI G SYDNEY ALMA-ATA ALMA-ATA	15	1334 F	1345 D	1:34	S23 F32	4189	11 D	1			1.80			130
	15	1335	1345 D	1:41	S06 F14	4186	10 D	16			5.40			120
	15	1335	1430		S11 F17	4186	55	2	3			9.00		
	15	1352 F	1400		S08 F34	4186	8 D	1	3			4.00		
	16	0413	0442	0427	S27 F17	4189	29	2	3	0:427	4.00	5.00		
	16	0528	0539	0531	S27 F19	4189	11	1			4.40		4.20	70
	16	0624 F	0930 D	0659	S25 F18	4189	164 D	1			6.00			
	16	0700 F	0717		S24 F15	4189	17 D	16	3			5.00		
	16	0705 F	0705 D		S28 F19	4189					6.40			80
	16	0708 F	0711		S21 W69	4182	3 D	1	3			3.00		
CAPRI G CRIMEA MOSCOW CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G PHARKOV PHARKOV PHARKOV MOSCOW PHARKOV KIEV CAPRI G CAPRI G CAPRI G CAPRI G SYDNEY ALMA-ATA ALMA-ATA	16	0749 F	0745 D		S28 F18	4189					6.40			90
	16	0750 F	0813 D		S30 F20	4189	23	2			5.53		4.62	220
	16	0804	0814 D		S24 F18	4189	10 D	1				4.00		
	16	0804	0814		S07 F22	4186	10 D	1	2			3.00		
	16	0950 F	0906 D		S24 F09	4189	6 D	1	3			2.00		
	16	0938 F	1025 D		S14 F22	4185	47 D	1			3.00			
	16	0950 F	0959 D		S21 F16	4189	9 D	1			2.00			
	16	1032 F	1036 D		S30 F17	4190	4 D	1						
	16	1059 E	1116 D		S19 W62	4179	17	1			2.38		2.37	160
	16	1144 E	1206 D		S14 W23	4185	22 D	1			3.00			
CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G SYDNEY ALMA-ATA ALMA-ATA	16	1154 E	1210 D		S13 W19	4185	16 D	1	2					
	16	1230 F	1237		S23 F12	4189	7 D	1	2			2.00		
	16	1330 F	1340 D		S13 W19	4185	10 D	1	2			5.00		
	16	1351	1402		S24 F15	4189	11	1	2			4.00		
	16	1408 F	1415		S09 F02	4186	7 D	1	2			2.00		
	16	1513 F	1520 D		S12 W19	4185	7 D	1	2			4.00		
	17	0420	0500	0432	S23 F06	4189	40	1	2	0:432	3.00	3.00		50
	17	0655 F	0740 D	0625	S07 W28	4192	95 D	1			5.00			50
	17	0608 F	0750 D	0625	S12 W23	4192	102 D	1			8.00			

CONTINUED - SEPTEMBER - 1957

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION MINUTES	IM- POR- TANCE	CSE COND.	TIME — 0 T	MEASUREMENTS			PROVISIONAL LONGPERIODIC EFFECT
				APOX LAT.	MEAT DIST.					MEAS AREA Sq. Deg.	CORR. Sq. Deg.	MAX. WIDTH H _g	
ALMA-ATA	17	0619 F	0653 D	S31 W05	4189	34 D	1			2.00			Slow S-SWP
CAPRI G	17	1140 F	1210 D	S23 F04	4189	50 D	2				7.00		
CAPRI G	17	1150 F	1205 D	N11 F15	4186	15 D	1				3.00		
CAPRI G	17	1410 F	1540 D	S24 F04	4189	90 D	26				10.00		
SYDNEY	17	2350 F	0133 D	S29 F06	4189	94 D	1		0023	4.00	5.00		S-SWP
PRIMEA	18	0652 F	0718 D	S18 W41	4299	26 D	1			4.60			
ARASTUMANI	18	0821 F	0811 D	S23 W02	4189	50 D	1			4.80			
CAPRI G	18	0823 F	0905 D	S22 W04	4189	42 D	2			8.00			
CAPRI G	18	1007 F	1015 D	S25 W02	4189	8 D	16			6.00			100
DUNSTON	18	1010 E	1202 D	S22 W22	4189	118 D	1						
CAPRI G	18	1243 F	1301 D	N24 F50	4196	18 D	1			3.00			
CAPRI G	18	1445 E	1541 D	N28 E90	4197	18 D	1						
CAPRI G	18	1515 F	1541 D	S24 W08	4183	26 D	16			7.00			Slow S-SWP
CAPRI G	18	1522 F	1539 D	N22 W64	4183	17 D	1			3.00			
ARASTUMANI	19	0603	0900 D	S26 W26	4189	177	2			13.00		2.70	
ARASTUMANI	19	0622	0655 D	N13 W23	4186	23	16			9.60		263	
PRIMEA	19	0654 F	0759 D	S24 W25	4189	65 D	2			20.10		1.80	S-SWP
CAPRI G	19	0708 F	0815 D	S23 W24	4189	67 D	26				11.00		
TASHEFT	19	0740 F	0857 D	S23 W26	4189	14 D	2			15.70		2.30	
ARASTUMANI	19	0747 F	0857 D	S26 W17	4189	30 D	1			8.40		2.50	
CAPRI G	19	0830 F	0900 D	S27 W28	4189	10	1			4.20			Slow S-SWP
XIEV*	19	1018	1028 D	S22 W17	4189	75 D	2				9.00		
CAPRI G	19	1040 E	1155 D	N10 W20	4180	22 D	1						
KHARKOV	19	1131 E	1153 D	S24 W24	4189	11 D	16			5.00			
CAPRI G	19	1255 F	1306 D	S24 W20	4189	43 D	2			8.00			S-SWP
CAPRI G	19	1317 F	1400 D	S20 F00	4201	8 D	1						
CAPRI G	19	1308 F	1316 D	S20 F00	4201	8 D	1						
CAPRI G	19	1512 E	1528 D	N24 W72	4183	16 D	1			3.00			
CAPRI G	19	1512 F	1535 D	N13 W81	4180	23 D	1			3.00			S-SWP
ARASTUMANI	20	0555 E	0902 D	N17 W31	4188	167 D	16			9.60			
HEUDON	20	0801	0830 D	N12 W12	4197	29	16						
KHARKOV	20	0913 F	1010 D	S26 W30	4189	57 D	16			9.00			
MOSEOW	20	0921 E	0931 D	S21 W28	4189	10 D	1			3.00			120
CAPRI G	20	0922 E	0932 D	S21 W31	4189	10 D	1			1.36		3.86	
XIEV*	20	0925 E	0929 D	S21 W35	4189	4 D	16				6.00		
HEUDON	20	0925	1000 D	S26 W32	4183	155 D	26			11.80			
WIZ-1*	20	0938	1017 D	S28 W33	4189	59	2			4.95			S-SWP
CAPRI G	20	0942 F	1036 D	S26 W30	4189	67 D	2				6.82		
MOSEOW	20	0945 F	1001 D	S30 W28	4189	16	2				8.00		
MOSEOW	20	0948 F	1053 D	S26 W30	4189	65	16			8.55		2.53	
CAPRI G	20	1034 E	1116 D	N23 F70	4197	42	1			2.84		3.39	180
SYDNEY	20	1150 E	1155 D	S27 W35	4189	5 D	16				6.00		
SYDNEY	20	2219 E	2247 D	S21 W41	4189	28 D	1			2.00			
SYDNEY	20	2221	2248 D	S25 W41	4189	27	1			2.00			
SYDNEY	20	2221	2247 D	N25 E58	4197	26	1			1.50			110
SYDNEY	20	2259	2320 D	S27 W45	4189	21	1			3.00			
SYDNEY	20	2340	0006 D	N23 W54	4188	26	1			3.00			
SYDNEY	21	0150	0205 D	N26 F60	4197	15	1			2.00		4.00	

SOLAR FLARES

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OBSERVATORY	DATE OCT 1957	OBSERVED UNIVERSAL TIME		MAX. RANGE	LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END		APPROX. LAT.	NEAR DIST.				MAGNITU- DE REGION	MAGN. ALPHA Eq. Dep.	TIME — UT	CONJ. ALPHA Eq. Dep.	
{SYDNEY KYOTO SYDNEY	21 0150	0239	0156	N26 W54	4188	49	2	3	0156	5.00	8.00	1.82	1	SLOW S-SWF
	21 0153 E	0212 U	0158	N25 W48	4188	19	1	3	0158	1.50	3.00	2.50	70	
	21 0245	0245	0247	N23 W56	4197	67	16		0247	8.40	3.30			
{ABASTUMANI TASHKENT TASHKENT	21 0635 F	0714 U	0635 U	N20 F61	4197	14	1		0635 U	4.30				
	21 0653 F	0707		N22 W64	4197	14	1							
	21 0627 F	0910 D	0642 U	N26 W47	4189	163	1							
{SYDNEY TASHKENT MOSCOW	22 0128	0137 U	N26 W55	4188	9	9	2	2	0134	1.50	3.00	2.70	50	
	22 0502 F	0540	N25 W60	4199	38	8	1		2.90	10.90	1.86	150		
	22 0739 E	1217 D	0940 U	N31 W59	4188	308	1							
{MIZMIR MOSCOW MOSCOW	22 0755 E	0804 U	N28 W45	4188	11	11						1.94	150	
	22 0803 F	1215 U	N16 W50	4193	252	16			10.69					
	22 0755 F	0806 D	N25 W07	4194	11	0			17.05			1.92	150	
{MIZMIR MIZMIR MIZ-IP	22 0823 F	1013	N28 W03	4194	252	20	2		2.42	6.22	6.22	100		
	22 0903 F	1215	N28 W65	4188	50	16			2.47	2.65	2.65	120		
	22 0928 F	0946 D	N25 W07	4194	16	16			2.07	2.09	2.09	110		
{MIZMIR MIZMIR MIZ-IP	22 0940	0943	N25 E19	4196	3	3	1					-80		
	22 0958	1013	N31 W02	4193	15	5	16		2.07	2.09	2.09	110		
	22 1143	1148 D	N27 W05	4194	7	7	2		6.82	7.38	7.38	70		
{MIZMIR MIZ-IP MIZ-IP	22 1253 F	1300 D	N13 E58	4203										
	23 0027	0019	N18 W66	4189	12	1	2		0019	3.00	3.00			
	23 0274	0237	N20 W44	4189	13	16			0233	1.00	5.00	100		
{ALMA-ATA CAPRI G CAPRI G	23 0621 F	0908	N28 W40	4189	8	0	2							
	23 0900 F	0925	N07 W58	4186	2	2								
	23 0923 F	0925	N27 W74	4188	21	21	2							
{CAPRI G CAPRI G CAPRI G	23 0925	0946	N27 W75	4189	21	21	2							
	23 0937	1016	N27 W74	4188	39	39	2							
	23 0950 F	1006	N20 F40	4197	16	16	2							
{CAPRI G CAPRI G CAPRI G	23 0953	1023 D	N07 W59	4186	30	30	2							
	23 1115 F	1122 D	N23 E33	4201	7	0	2							
	23 1258 F	1302 D	N25 W65	4189	4	4	2							
{CAPRI G CAPRI G CAPRI G	23 1327 D	1327 D	N14 F21	4197	5	5	2							
	23 1374 F	1374 D	N16 W12	4195	6	6	2							
	23 1414 F	1421	N26 W75	4189	7	0	1							
{CAPRI G CAPRI G SYDNEY	23 1420 F	1628 D	N27 W74	4188	8	1	1							
	23 2222 E	2236	N18 W79	4189	14	14	2		2222	3.00	3.00			
	23 2348	0001	N26 W82	4188	13	1	3		2351	2.00	2.00			
{SYDNEY TASHKENT TASHKENT	24 0411	0448	N16 W25	4195	37		3		0417	3.00	3.00	2.20	70	S-SWF
	24 0504 F	0533	N23 E22	4201	29	29	1		2.60					
	24 0630 F	0906	N23 W40	4189	156	6	1		4.80					
{TASHKENT CRIMEA CAPRI G	24 0650	0801 D	N22 W74	4189	71	2			2.90					
	24 0653 F	0928 D	N22 W85	4189	95	6	16		4.60					
	24 0730 F	0733 D	N20 W74	4189	3	3	1							
{CAPRI G CAPRI G CAPRI G	24 0730 F	0733 D	N11 E20	4202	3	2	1							
	24 0730 F	0733 D	N11 E20	4202	3	2	1							
	24 1335 E	1350 D	N14 F07	4197	15	1	1		4.97	3.00	3.00	3.70	100	
{CAPRI G CAPRI G CAPRI G	24 1335 F	1417 D	N15 W25	4195	42	0	1					4.30	90	
	24 1335 F	1417 D	N15 W25	4195	42	0	1							
	24 1335 F	1417 D	N15 W25	4195	42	0	1							
{SYDNEY SYDNEY SYDNEY	25 0131	0159	N13 W07	4197	28		2		0145	2.00	2.00			S-SWF
	25 0327	0349	N25 F10	4201	22	1	3		0330	2.00	3.00			
	25 0540	0549	N12 F06	4197	16	1	3		0536	2.00	2.00			
SYDNEY	25 0540	0604	N25 F45	4205	15	1	3		0600	1.00	3.00			

SOLAR FLARES

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OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		MAX PHASE	LOCATION			DURA- TION — MINUTES	PA- RALL- ANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END		LAT	APPROX. NUT DIST.	MONTHLY BLAZE REGION				TIME U T	NEAR AREA Sq. Deg.	CORE AREA Sq. Deg.	MAX WIDTH No.		MAX INT. %
ARASTUMANI	25	0712 F	0747 F	0715 U	N27 W43		4194	28 D	1			4.80			178	S-SWF
	25	0826 F	0910 F	0858 F	N15 W08		4197	44 D	1			7.20			186	
	{ ARASTUMANI	25	0837 F	0923 F	0900 F	S26 F09		4201	46 D	2			26.40		1.80	
{ CAPRI G	25	0838 F	0940 F		S25 F07		4201	62 D	2				10.00			S-SWF
CAPRI G	25	0844 F	0920 F		N13 W06		4197	36 D	1				4.00			
CAPRI G	25	0927 F	0932 D		N19 F03		4197	5 D	1				4.00			
CAPRI G	25	0946 F	1025 F		N25 W44		4194	39 D	1				4.00			S-SWF
{ CAPRI G	25	1042 F	1105 D		N25 W44		4194	23 D	1			10.50			90	
{ KIEV	25	1044 F	1058 D		N27 W46		4194	14 D	16			2.70	3.00			
CAPRI G	25	1054 F	1129 D	1100 F	N26 W44		4194	35 D	1				3.00			S-SWF
CAPRI G	25	1050 F	1105 D		N18 W46		4195	15 D	1				3.00			
CAPRI G	25	1059 F	1125 D		N13 F69		4206	26 D	1				4.00			
CAPRI G	25	1120 F	1125 D		S13 E26		4203	5 D	1				3.00			SLOW-SWF
CAPRI G	25	1317 F	1339 F		S12 F31		4203	22 D	1				3.00			
CAPRI G	25	1505 F	1515 D		N10 F05		4197	10 D	2				8.00			
TASHKENT	26	0755 F	0827 F	0801 F	N13 W11		4197	32 D	2			8.80		3.80	170	S-SWF
KHARKOV	26	0943 F	1010 D	0947 J	S21 W14		4201	27 D	16			3.00				
MEUDON	26	1207 F	1222 F		N25 E52		4205	15 D	1							
MEUDON	26	1407 F	1440 F		S25 F80		4207	33 D	1							S-SWF
TASHKENT	27	0650 F	0705 F		N21 F06		4202	15 D	1			3.00		3.00	70	
CAPRI G	27	0703 F	0717 D		N14 F06		4202	14 D	1				4.00			
CAPRI G	27	0748 F	0803 D		N23 W18		4197	15 D	1				4.00			S-SWF
CRIMEA	27	0800 F	0811 D	0802 U	S25 F65		4207	11 D	1			3.60		2.60	80	
CAPRI G	27	0800 F	0814 D		S28 E57		4207	14 D	1				3.00			
TASHKENT	27	0801 F	0806 F	0803 F	S24 F59		4207	5 D	16			4.20		4.20	150	S-SWF
CAPRI G	27	0851 F	0925 F		N14 W22		4197	34 D	1				4.00			
CAPRI G	27	0956 F	0931 F	0902 F	N21 F04		4202	35 D	16			4.50			90	
{ KIEV	27	0906 F	0917 F		N21 F02		4202	17 D	1			4.00			100	S-SWF
{ KIEV	27	0907 F	1000 F	0942 F	N13 W22		4197	53 D	1			2.00				
CAPRI G	27	0916 F	0958 D		N22 W24		4197	42 D	1		0930		3.00			
CAPRI G	27	0917 F	0956 D		N10 W24		4197	39 D	1			2.50			90	S-SWF
CAPRI G	27	1114 F	1206 D	1118 F	N12 W31		4197	52 D	1			2.00			110	
CAPRI G	27	1120 F	1206 D	1132 F	N19 W46		4196	46 D	1			1.80				
{ KIEV	27	1201 F	1219 F	1206 F	S24 W29		4201	18 D	16			3.75				S-SWF
CAPRI G	27	1205 F	1223 F		S22 W24		4201	18 D	16				5.00			
CAPRI G	27	1426 F	1433 D		N18 W74		4195	7 D	1				3.00			
CAPRI G	27	1532 F	1535 D		S20 F55		4207	3 D	1				3.00			S-SWF
SYDNEY	28	0103 F	0107 D		S23 F51		4207	4 D	1			1.50		1.48	1	
SYDNEY	28	0213 F	0225 D	0215 F	N21 W10		4202	12 D	1				3.00			
SYDNEY	28	0442 F	0454 D	0448 F	S23 F49		4207	12 D	1			2.00		1.40	70	S-SWF
CRIMEA	28	0759 F	0823 D	0805 U	S27 F53		4207	29 D	1			5.00				
CAPRI G	28	0801 F	0820 D		S26 F47		4207	19 D	1				2.00			
ARASTUMANI	28	0816 F	0836 F	0823 F	N23 F26		4205	50 D	1			2.40			159	S-SWF
ARASTUMANI	28	0816 F	0911 D	0821 U	N21 W11		4202	55 D	1			7.20			187	
ARASTUMANI	28	0816 F	0911 D	0821 U	S28 F52		4207	55 D	1			5.00			170	
ARASTUMANI	28	0816 F	0911 D	0821 U	S28 F52		4207	55 D	1			1.80			70	S-SWF
{ KIEV	28	0900 F	0900 D	0900 F	S23 W35		4201	1 D	1			1.20			90	
{ KIEV	28	0910 F	0910 D	0913 F	S20 W36		4201	1 D	1			2.00			90	
CRIMEA	28	0905 F	0917 F	0907 U	S24 F54		4207	7 D	1				2.00			S-SWF
ARASTUMANI	28	0907 F	0911 U	0911 U	S24 F53		4207	1 D	1			3.50		1.70	80	
ARASTUMANI	28	0932 F	0944 F		S24 E47		4207	12 D	1				1.00		182	

SOLAR FLARES

OCTOBER 1957

OBSERVATORY	DATE OCT 1957	OBSERVED TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	TIME — U T	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT	APPROX. MEN DIST.					MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	MAX. INT. %
CZIMEA {CAPRI G HARKOV HARKOV CAPRI G KIEV CAPRI G	28	0959 F	1015 U	522 W34	4201	16 D	16	2	2.00	2.00	2.00	4.60	60
	28	1001	1020 D	522 W34	4201	19 D	1	2			2.00		
	28	1120 E	1136 D	N21 W08	4202	13	1	3		2.00	3.00		
	28	1144 F	1203 D	S20 W36	4201	19 D	1			5.00			
	28	1147 F	1159 D	522 W30	4201	12 D	1	3			2.00		
ARASTUANI {CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	28	1146 F	1156 D	525 F55	4207	10 D	1			.90			100
	28	1352	1358	523 W40	4201	6	1	2			3.00		
	29	0631	0710	519 F50	4218	39	16			4.80		2.00	219
	29	0713	0801	N22 W25	4202	118	16			7.20	6.00	2.00	257
	29	0811 F	0850 U	N21 W23	4202	39 D	16	1					
CZIMEA {CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	29	0828	0856 D	N21 W25	4202	38 D	16			9.12		4.60	80
	29	0816	0827	S19 F33	4207	11	1	1			4.00		
	29	1120 F	1150 D	N21 W23	4202	30 D	16	2			5.00		
	29	1120 F	1140	N24 W78	4196	30 D	1	2			4.00		
	29	1130	1140	S20 F31	4207	10	1	2			4.00		
CZIMEA {CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	29	1130	1144	N25 E13	4205	14	1	2			3.00		
	29	1338 F	1346 D	S23 F37	4207	8 D	1	2			2.00		
	29	1338 F	1346 D	N20 W25	4202	8 D	1	2			2.00		
	29	1518 F	1525	N17 W67	4196	7 D	16	2			6.00		
	29	1540 F	1545 D	N19 W22	4202	5 D	16	2			5.00		
CZIMEA {CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	29	1540 F	1545 D	S17 F50	4207	5 D	2	1			7.00		
	30	0855	0920	513 W37	4203	25	1			7.00		2.60	80
	30	0900 F	0912 D	512 W37	4203	12 D	16			2.60			90
	30	0904	0906	N23 W35	4202	2	1			1.27			90
	30	0926 F	1014 D	N23 F02	4208	4 D	16			3.05	3.21	2.60	90
CZIMEA {CAPRI G CAPRI G CAPRI G CAPRI G CAPRI G	30	0956 F	1013 D	512 W38	4203	26 D	1			5.00			
	30	0958 F	1013 D	S14 W38	4203	3 D	2	1		8.35			
	30	1013 F	1019 D	S10 W35	4203	15 D	1				3.00		
	30	1014	1018	S21 W59	4201	6 D	1			4.00		4.50	
	30	1016	1018	S25 W66	4201	4	2		1044	4.15		1.45	
SYONYF {SYONYF SYONYF SYONYF SYONYF CAPRI G	30	1043 F	1055	N13 F30	4213	10 D	1	2		7.50	2.00		
	30	1131 F	1203	N12 W35	4202	32 D	16						
	30	1150 F	1500 D	N20 W37	4202	10 D	1	2		5.00	2.00		
	30	1316 F	1328	N37 F56	4212	12 D	1	2			5.00		
	30	1427 F	1451	S21 E16	4207	24 D	16						
SYONYF {SYONYF SYONYF SYONYF SYONYF CAPRI G	31	0022	0050	N18 F47	4212	28	1	2		2.00	4.00		
	31	0053	0056	S11 W49	4203	3	1	3		1.50			
	31	0146	0226	S12 W47	4203	40	1	3		3.00	5.00	3.36	1
	31	0155 E	0218	S15 W46	4203	23 D	16						
	31	0201	0222	S21 F05	4207	21	1	3		2.00	3.00		
SYONYF {SYONYF SYONYF SYONYF CAPRI G	31	0320	0336	S21 W71	4201	16	1	2		.75	3.00		
	31	0700 F	0707	S22 F11	4207	7 D	1	3			3.00		

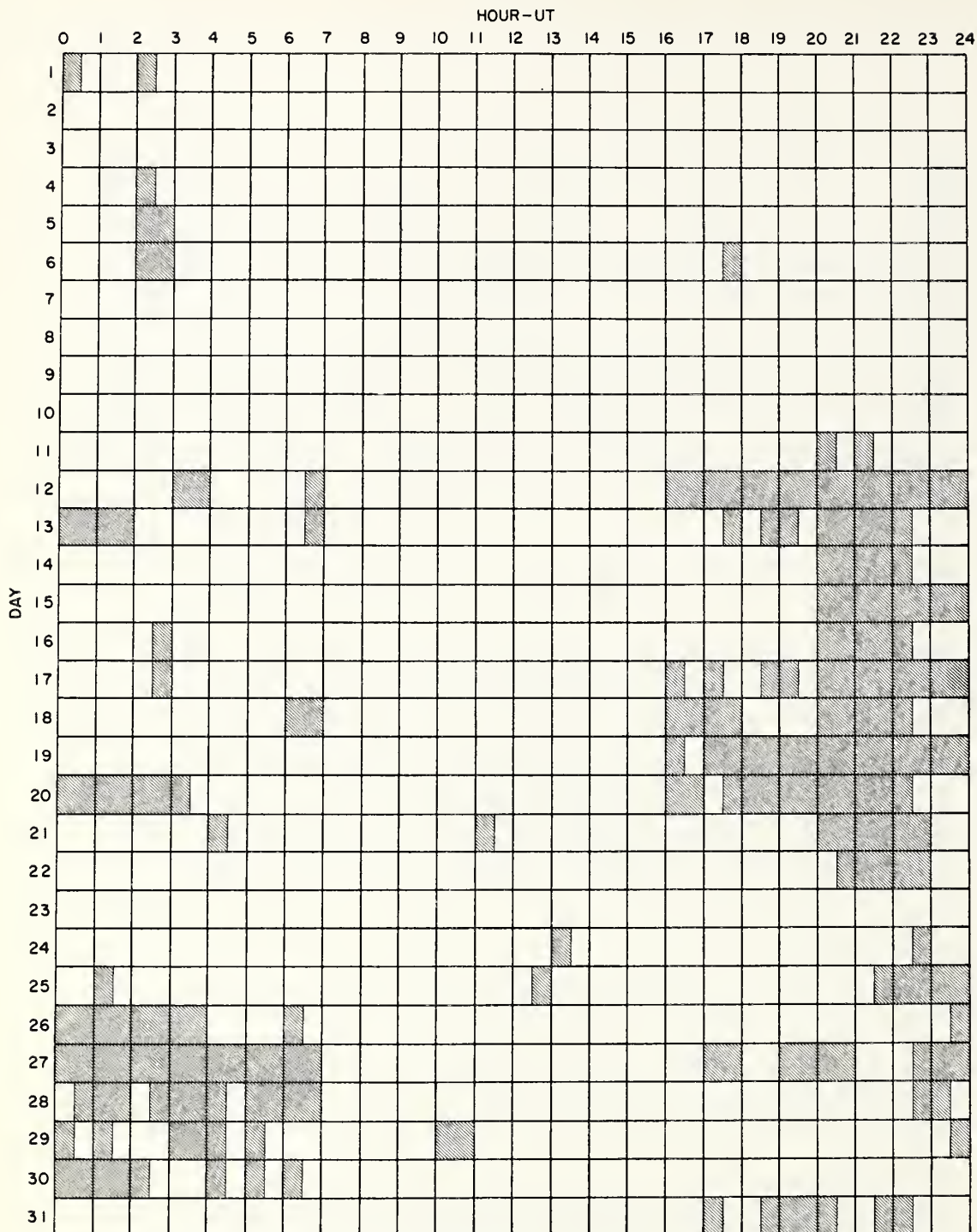
COMMENTS - 81464008 - 81464009

ANACAPRI - GERMAN
CAPRI S
GOOD HOPE
KODAIKANAL
KODAIKANAL
KRASNYA PAKHRA
R O EDIN
GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK
SCHAUTINSLAND
UNITED STATES NAVAL RESEARCH LABORATORY

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

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
Nizamiah
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-	<u>NE</u> , OK, PU, TO	
2	1950	2015	S-SWF	5	1+	<u>BE</u> , CR, HU, <u>MC</u> , PR, WS	
3	1332	1415	G-SWF	4	1+	BE, HU, <u>MC</u> , PR	1320E
3	1510	1535	S-SWF	5	2+	BE, <u>HU</u> , <u>MC</u> , NE, PR, TO, WS, CW***	1507
3	1927	2000	G-SWF	4	1	AN, HU, <u>MC</u> , WS	
4	1820	1840	G-SWF	3	1	HU, <u>MC</u>	
4	2142	2240	Slow S-SWF	5	2+	AD, <u>BE</u> , CR, HU, <u>MC</u> , PR, TO, WS, RCA+	2147E
5	0842	0937	S-SWF	5	2+	KO, <u>NE</u> , OK, CW***	0841E
5	1620	1800	S-SWF	5	3	BE, CR, HU, <u>MC</u> , NE, PR, PU, TO, WS	1615
5	1809	1830	Slow S-SWF	4	1-	AN, BE, HU, <u>MC</u>	1811
6	0436	0526	Slow S-SWF	5	2	OK, <u>TO</u> , WI, CW***	0436
6	1335	1355	G-SWF	2	1-	HU, <u>MC</u>	1332
7	0004	0034	S-SWF	3	1+	OK, <u>TO</u>	
7	0819	0828	Slow S-SWF	1	1	<u>NE</u>	0819E
8	0850	0915	S-SWF	5	2+	JU, KO, NE, <u>OK</u> , PU	0845
8	1750	1820	S-SWF	5	2+	AD, <u>BE</u> , HU, MC, PR, PU, WS	1742
8	1837	1855	S-SWF	4	1	BE, HU, <u>MC</u> , PR	1815
9	0905	0938	S-SWF	3	2	<u>DA</u> , JU	0904
9	1009	1050	S-SWF	3	2	<u>DA</u> , JU	
10	0309	0358	S-SWF	1	2	<u>OK</u>	0307E
10	0546	0634	Slow S-SWF	5	2	KO, NE, OK	0557E
10	2355	0025	S-SWF	5	1	AD, <u>CA</u> , OK	2354
11	0228	0338	S-SWF	5	2+	AD, <u>CA</u> , KO, <u>OK</u> , TO, CW+	0231E
11	1134	1205	S-SWF	1	1	<u>DA</u>	
11	1236	1255	S-SWF	5	2	BE, DA, HU, JU, <u>MC</u> , NE, PR, SW	1234E
11	1306	1400	S-SWF	5	2+	BE, DA, HU, JU, <u>MC</u> , NE, PR	1306
11	1510	1521	S-SWF	3	1-	<u>HU</u> , MC, PR	1514E
11	1607	1625	S-SWF	5	1+	BE, CR, DA, HU, JU, <u>MC</u> , PR, PU, WS	1553
11	1636	1700	G-SWF	5	1-	AN, HU, JU, <u>MC</u> , WS	
11	2038	2118	S-SWF	5	2	AD, BE, CR, HU, MC, <u>PR</u> , TO, WS	2037
12	0700	0752	S-SWF	4	2	OK, <u>PU</u>	0655E
12	1430	1500	Slow S-SWF	5	2-	<u>BE</u> , HU, MC, PR, PU, WS	1419
13	0704	0729	S-SWF	5	2	KO, NE, <u>PU</u>	0659
13	1715	1740	S-SWF	5	2-	BE, CR, HU, JU, <u>MC</u> , PR, WS	1712E
13	2326	2358	Slow S-SWF	4	1+	AD, MC, OK, <u>TO</u> , WS	2322
14	1121	1200	Slow S-SWF	5	2	JU, <u>MC</u> , NE, PR, PU	1119
14	1708	1747	Slow S-SWF	4	2-	BE, <u>HU</u> , MC, PR	1652
14	1943	2000	Slow S-SWF	3	1-	<u>HU</u> , MC, PR	
14	2115	2128	S-SWF	5	1+	AD, AN, <u>BE</u> , HU, MC, PR, TO, WS	2112
15	0010	0020	S-SWF	4	1	<u>AD</u> , OK	0015E
15	1352	1423	Slow S-SWF	5	1+	BE, HU, JU, <u>MC</u> , NE, PR, PU	1349
15	1827	1855	G-SWF	5	1-	BE, <u>HU</u> , MC, PR, WS	
15	2307	2318	Slow S-SWF	4	1	AD, <u>MC</u> , OK	2300
18	1825	1840	S-SWF	3	1	<u>HU</u> , PR	1824
18	2350	0010	S-SWF	5	1	AD, OK, <u>TO</u>	2348
19	0219	0255	S-SWF	5	2+	<u>AD</u> , AN, OK, TO, CW+	0212E
19	0329	0416	S-SWF	1	2+	<u>OK</u>	
19	0732	0746	S-SWF	3	2	NE, <u>PU</u>	0730
19	1005	1030	S-SWF	3	2	NE, <u>SW</u>	0940
19	1257	1310	Slow S-SWF	5	1	BE, CR, HU, MC, NE, <u>PR</u>	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-	HU, 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-	HU, 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 = Enkoping, 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 $10^{-22} \text{ w m}^{-2} (\text{c/s})^{-1}$ Hours UT			Variability 0 to 3 Hours UT			Observing Periods 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	
14	2	1805	1813.5	13	F	630	380	
	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	Large burst 2159.4 Large burst 2501.1 I 1800-1820
1	3	1538	1538.4	1.1	ECD	1500	-	
1	8	1631	1632.1	5	ECD	800	380	
1	3	2353.2	2353.2	1.2	ECD	600	-	
2	6	1430 B	2226.1	640 D	CD	1100	120	
2	2	1516.2	1517.1	3	ECD	540	260	Large burst 1742
2	3	1539.5	1540.2	1.4	ECD	2700D	-	
2	8	1607.7	1610.0	6.4	ECD	2300D	510	
2	3	1743.4	1743.8	1.0	ECD	1100	-	
2	3	1824.8	1825.1	0.9	ESD	1000	-	
2	3	1852.2	1853.1	1.5	ECD	2400D	-	N2
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	
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	
4	2	1330	1331.0	6	CD	400	79	
4	2	2011.0	2011.9	2.8	ECD	1300	470	
5	6	1240 B	1547.9	750 D	CA	110X	80	Burst 1412.4
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	Burst 2319.2
6	6	1950	2241.9	320 D	CD	240	20	
7	1	1240 B	1711.4	750 D	MF	400	-	
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	
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; NI	
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 Unclase	Act	Time	Int	Act	Time	Int	
July 1 0000-0149 1214-2400		1730-43	1	Uncl.	b	1537	1	b	1223	1	
		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	
								g	1947-48	3	
								b	2315	3	
July 2 0000-0121 1214-2400		← 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	
								g	2327	3	
								g	2328	2	
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	
								g	2040-41	3	
				Uncl.	b	2351	3	G	2138-39	2	
				Uncl.	b	2352	3	g	2141	3	
				Uncl.	b	2354	3	g	2341-42	1-	
				Uncl.	g	2357	2	g	2353	3	
July 5 0000-0146 1215-2400		0016-0038	1-					b	0020	3	
		0142	1					g	2050	2	
		1221-1734	1					b	2205	3	
		1734-1833	2					b	2313	3	
		1833-1910	1								
		1910-2214	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 5 Continued		2214 →	1								
July 6 0000-0149 1216-2400		← 0145	1					b	1541	3	1541 Inverted U burst.
		1216-1629	3					g	1742-43	3	
		1629-2011	2					g	2010	2	
		2011-2228	1					g	2151	2	
								g	2212	3	
								g	2217	2	
								G	2314-16	1	
July 7 0000-0150 1218-2400	Cont.	0005-54	1					g	0027-28	3	
		0028-29	3					g	0033-34	1	
		0054-0144	2					b	0055	3	
	Cont. IV	0052-0147	3					g	0059-0100	3	
		1226-1500	1-					g	1410-11	2	
		1623-44	1-					g	1525	2	
		1739-56	2					b	1620	2	
		1904-10	1-					g	1737	3	
		2035	1-					b	1739	3	
		2113-14	1-					g	1902	2	
July 8 0000-0150 1216-2400	Cont.	1339	3					g	1317	3	1338 Two Inverted U Bursts.
								g	1337-39	3	
								g	1340	3	
								b	1343	1	
								b	1534	1-	
								b	1548	1-	
July 9 0000-0149 1746-1752 1836-2400	Cont.	1943	2	Uncl.	g	2353	1-	b	0011	1	2400 Inverted U burst.
		2304	1-					b	0015	1	
								G	1943-45	1	
								b	1947	1	
								b	2353	1-	
								b	2358	1-	
								b	2400	3	
								b	0133	1-	
								b	1308	1-	
July 10 0000-0150 1215-2150 2153-2400		1302-18	1-					b	1317	1	
		1801-1845	1-					b	1610	3	
		1942-2017	1-					g	1626	1	
		2136	1-					b	1635	1-	
		2259-2359	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-	Uncl.	g	0004	2	g	0031	2	
								b	0034	1-	
								g	0047	2	
								b	1222	2	
								b	1234	2	
								g	1253-54	2	
		1358-1919	1								
		2011-2052	1								
		2126-45	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 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		2329.8-33	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-	Uncl.	g	2300	1	g	1357	2	1357 Inverted U Burst.
		0112-13	1-					b	1406	1-	
		1254-1711	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-								
		0127-37	1-								
		1355-1441	1					g	1318-19	1-	
		1441-49	2					b	1631	1	
		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	II or 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	
		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	
								g	1755	2	
				Uncl.	b	2245-46	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

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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					g	0001	1	
		1235-1522	1					g	0005	1-	
		1549-53	1-					b	1340	2	
		1553-1607	3					b	1451	3	
		1607-1615	2					b	2100	1-	
		1615-1628	1					b	2200	2	
		1659-1830	1-								
		1904-2020	1-								
		2114-2222	1-								
		2351 →	1-								
July 23 0000-0150 1305-2400		← 0139	1					b	1325	2	
	Cont.	1324-28	3					g	1345	2	
		1323-1405	1					g	1408-09	2	
	Cont.	1344-45	2					g	1410	1	
	Cont.	1345-46	1-					g	1531	3	
	Cont.	1348	2					b	1834	1-	
	Cont.	1349	1					g	1835	1-	
		1431-1844	1					g	1946	1-	
		1844-2012	2					b	1948	3	
		2012-2329	1					g	1955	1	
		2329 →	2					g	2018-19	1-	
								g	2025	3	
								g	2026	2	
								g	2120	1	
								g	2122	1	
July 24 0000-0150 1300-2400		← 0034	2					b	0145	1-	
		0034-0144	3								
	Cont.	1300-2252	2								
		1300-1605	3								
		1605 →	2								
	Cont.	2252 →	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-					g	1615	1-	
		1247-1452	1					g	1629	1-	
	Cont.	1634	1	Uncl.	b	2025	1-	g	1634	1-	
	Cont.	1659	1-					g	1658-59	2	
		2124	1-					b	1837	1-	
	Cont.	2227-28	3					b	1913	1-	
		2237 →	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-	Uncl.		0013-17	3	g	0115	1-	
		0010-14	3					g	1248-49	3	
		0014-0142	1	Uncl.		0020-22	3	g	1309-10	3	0010-14
		1242-1358	2					b	1313	1-	Drift toward
		1358-1459	1					g	1444-45	1-	lower fre-
		1459 →	2					b	1515	1	quencies in
	Cont.	2017-18	3					b	1517	3	noise storm.
	Cont.	2212-13	3					G	1520-21	2	
								g	1626	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 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					g	0007-08	2	
		1246-1409	2					g	0039-40	1	
		1409-1818	3					g	0054	1-	
Cont.		1746-47	2					g	0113	1	
		1818 →	2					g	0134	2	
Cont.		2323-24	1					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					g	0039	3	
		1247-1317	1					g	0050-51	2	
		1446-2258	2					g	0053-54	2	
		2258 →	1	Uncl.		2305	1-	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					g	1333-34	3	
		1249-1317	1	Uncl.	g	1526	3	g	1353-54	2	
		1317-34	2					g	1354-55	1-	
		1334-1411	1					b	1419	3	
		1411-1517	3					b	1448	3	
		1517-1617	2					G	1527-29	2	
		1617 →	1					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	
								C	1723-25	1	
								g	1753	1	
								C	1755-57	2	
								g	1800-1801	1-	
								b	1855	2	
								b	2023	3	
								b	2029	1-	
								g	2033-34	2	
								C	2036-38	2	
								g	2135	1-	
								b	2145	3	
								g	2155	2	
								C	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					C	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	
								C	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	
								C	1752-55	2	
								g	1838	1	
								g	1840	3	
								C	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		

DAYS IN SOLAR ROTATION INTERVAL

ROT. =

NR.

1707

Mch

1708

Apr

1709

May

1710

Jun

1711

Jul

KEY

▲ = sudden commencement

0 + - 0 + - 2 - 3 - 3 - 4 - 4 - 5 - 5 - 6 - 6 - 7 - 8 - 8 - 9

PLANETARY MAGNETIC THREE-HOUR-RANGE INDICES

Kp till 1958 June 30
(Ks from Wingst and Göttingen till 1958 July 21)

J.B.

COMMERCE - STANDARDS - BOULDER

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:			Geomagnetic 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)	Day (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

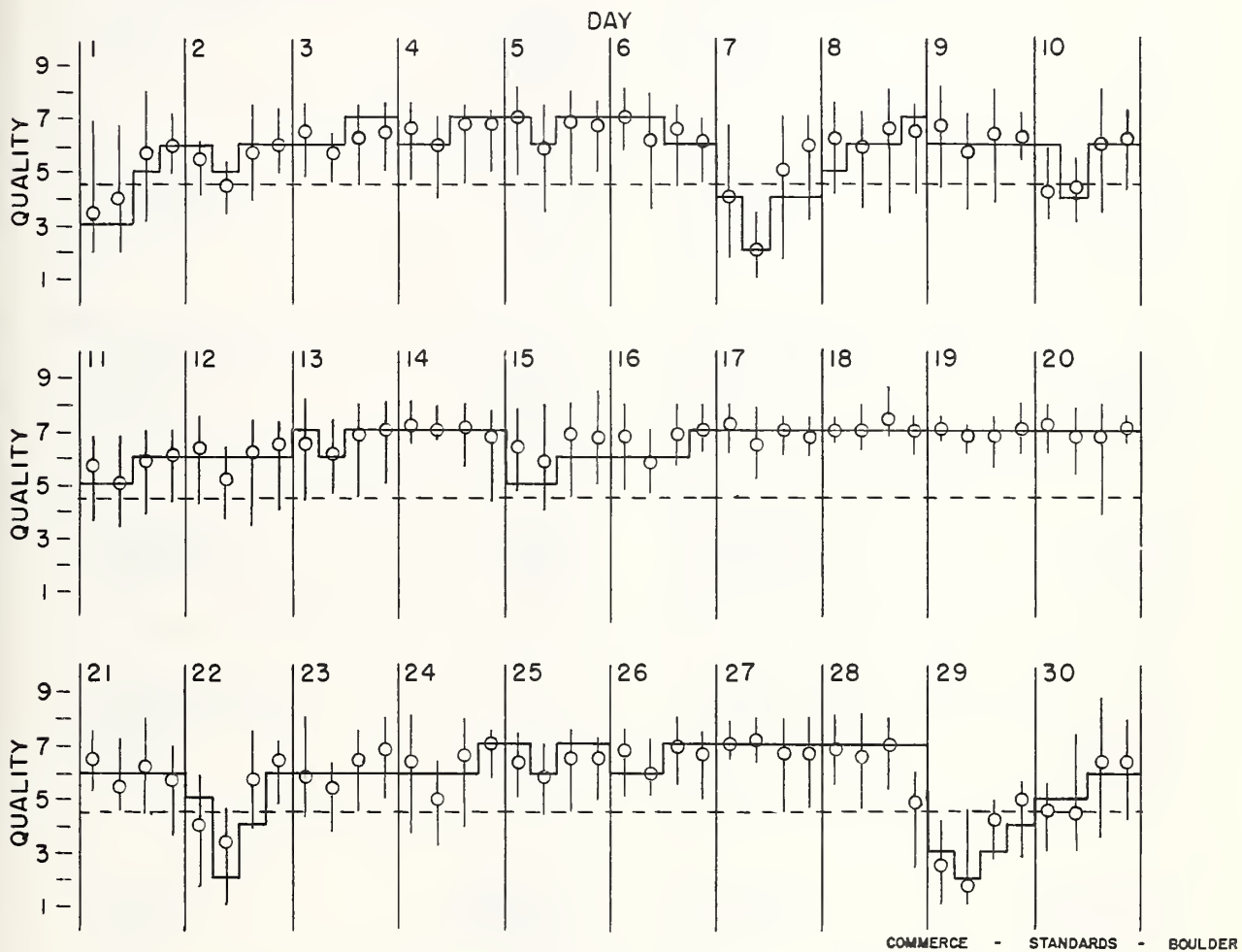
NORTH ATLANTIC

JUNE 1958

— Short-term forecast

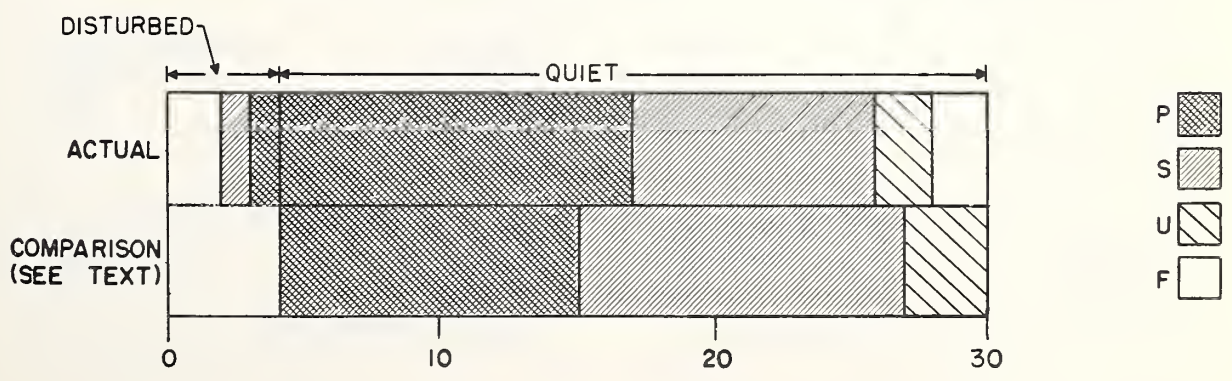
| Range of reports

o Quality figure



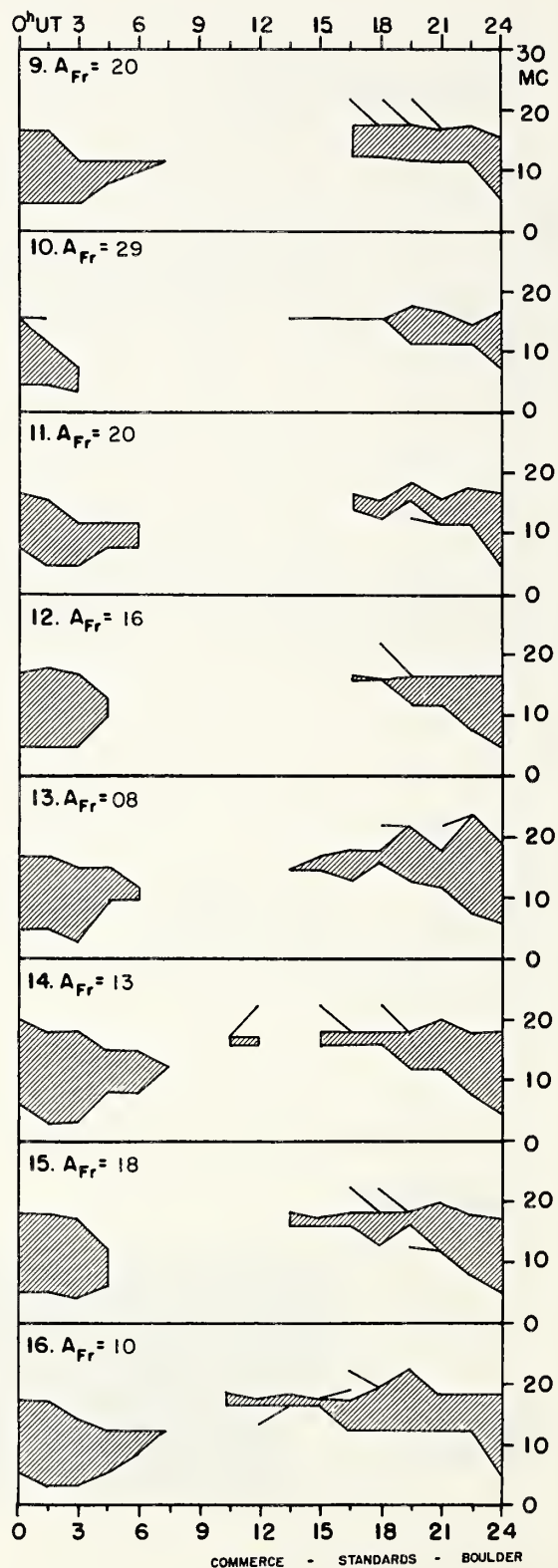
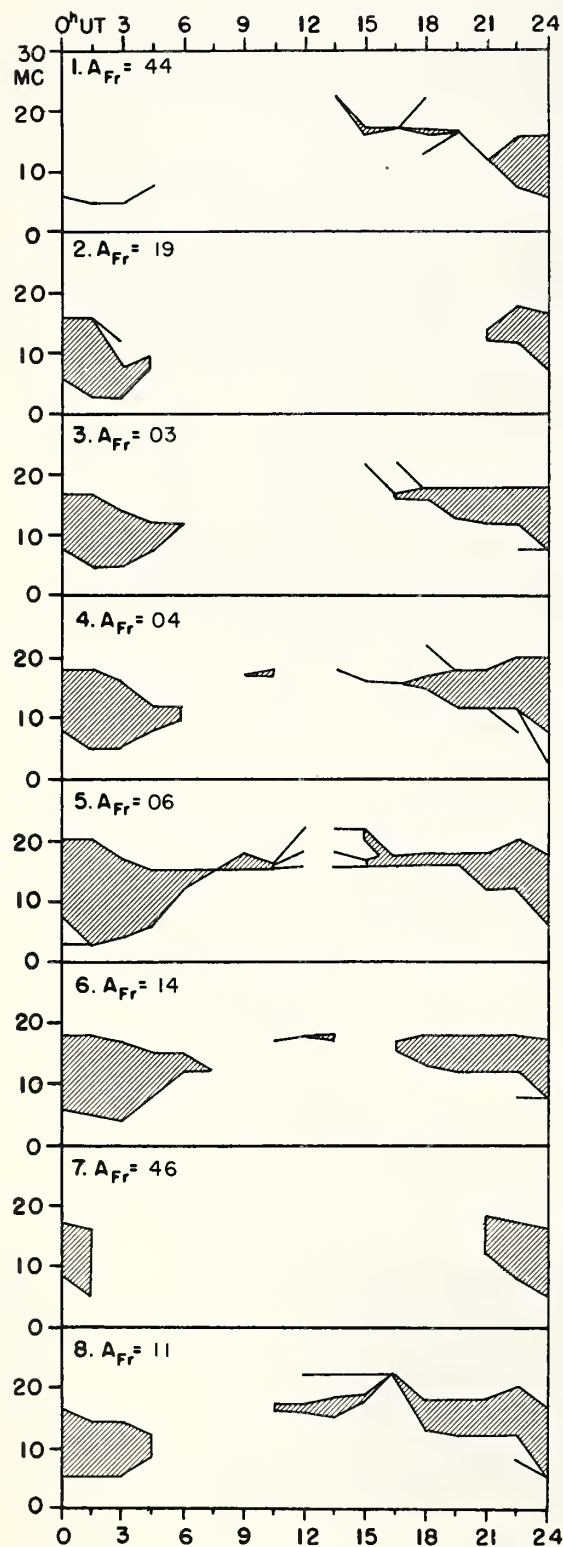
OUTCOME OF ADVANCED FORECASTS

1 TO 4 DAYS AHEAD

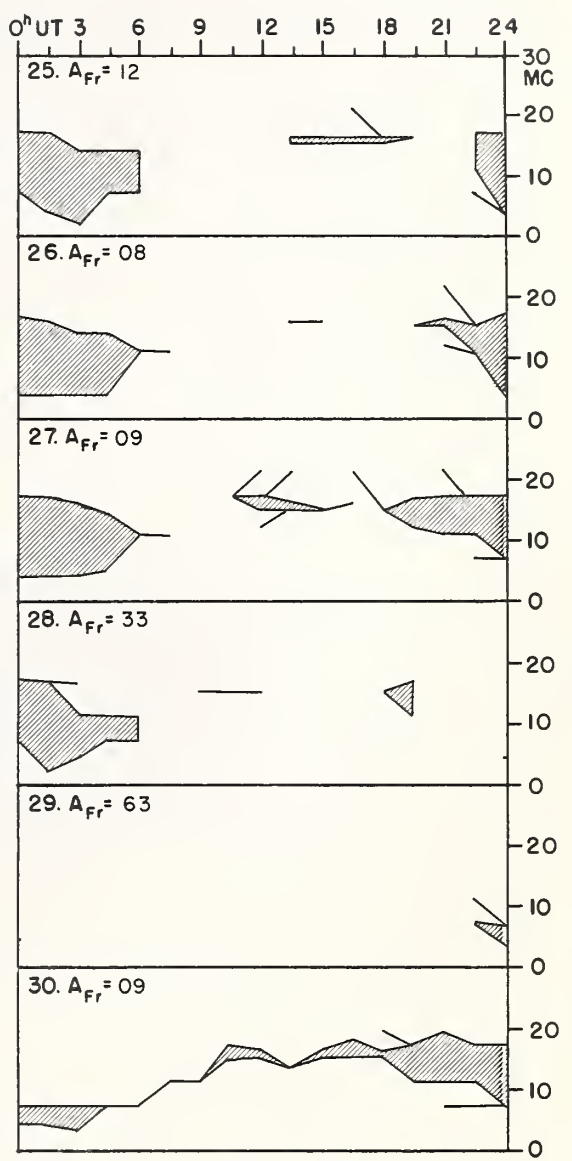
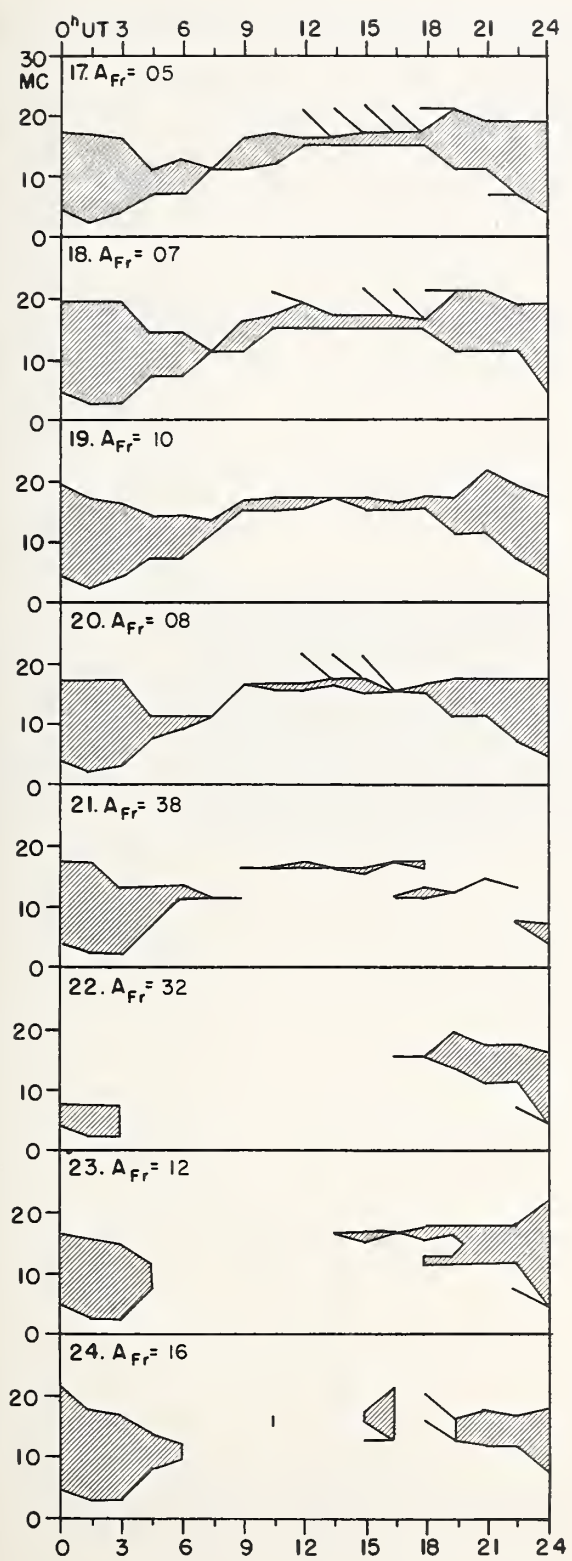


USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

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)	(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.

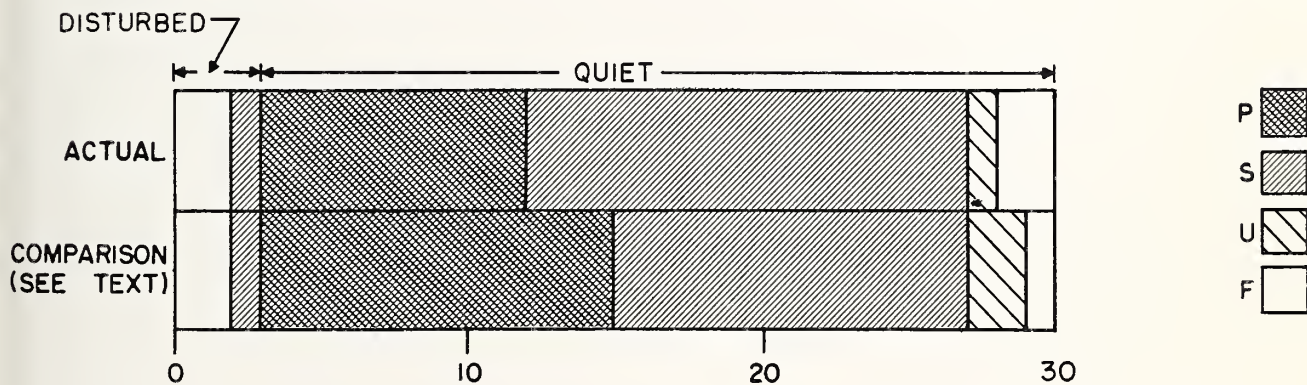
CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

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 ≥ 2 Reported Promptly on Days of Alert Period
1958			
July 05 July 14	July 08 July 09	12-04-15- <u>125</u> - <u>39</u> -13-12-15- 14-10	2-0-2- <u>3</u> - <u>2</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