

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	MC MATH PLAGE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
KODAIKNI	01	0614 E	0625 D		S19	W18	4897	11 D	1	1	0614			1.20		
LOCARNO	01	0825 E	0850		N18	W24	4895	25 D	1	3	0825		2.00			
UCCLE	01	0844	0851		N06	W20	4895	7	1	1						
LOCARNO	01	0850	0915	0900	N07	W18	4895	25	1	3			2.00			
STOCKHOLM	01	0858 E	0906 D		N07	W21	4895	8 D	1	2	0905	2.00	2.20			
UCCLE	01	0926	0931	0929	N17	W34	4892	5	1	2	0929	2.20				
UCCLE	01	0942	1017	0944	S10	E37	4904	35	16	3	0944	3.40				
LOCARNO	01	1000	1045	1006	S10	E37	4904	45	1	3			3.00			
MEUDON	01	0955 E	1015	1002	S18	E58	4906	20 D	1				4.00			
UCCLE	01	1111	1122	1113	N16	W32	4892	11	16	3	1113	3.40				
LOCARNO	01	1250 E	1310		S15	W06	4897	20 D	1	3	1250		1.00			
CAPRI-S	01	1306 E	1325 D		S08	E34	4904	19 D	1	2	1315	2.00	2.50			
UCCLE	01	1331	1341	1332	S10	E38	4904	20	1	2	1332	2.20				
UCCLE	01	1331	1345	1332	N08	E38	4903	14	16	2	1332	3.40				
UCCLE	01	1417	1429	1421	N08	E39	4903	12	16	2	1421	3.40				
UCCLE	01	1357	1401		S12	W55	4889	4	1	2		2.20				
UCCLE	01	1423	1439		N16	W85	4884	16	1	3		2.20	4.40			
SAC PEAK	01	1615	1725	1645	S12	W55	4889	10	1	2		2.00			25	
CLIMAX	01	1639	1658	1645	S11	W55	4889	19	1		1645	2.20				Slow S-SWF
HUANCAYO	01	1641	1706	1648	S11	W48	4901	25	2	2	1648	4.20	6.30	3.80		
HUANCAYO	01	2006 E	2016	2006	N09	W23	4895	10 D	1	2	2006	2.40	2.60	2.60		
USNRL	01	2043	2100 D	2049	S09	E32	4904	17 D	1	2	2049	1.92	2.31		99	
USNRL	01	2051	2058	2052	N18	W79	4884	7	1	2	2052	.34	2.41		61	
HAWAII	01	2334 E	2342 D		S12	W17	4897	8 D	1	1	2336	2.30	2.40			
MITAKA	01	2354 E	2406		N16	W34	4892	12 D	1		2354	1.84	2.30	2.75	110	
MITAKA	02	0028 E	0041	0032	N11	E14	4899	13 D	1	1	0030	.71	.75	3.70	169	
MITAKA	02	0054 E	0059		N13	W55	4892	5 D	1	1	0055	.53	.94	1.68	107	G-SWF
MITAKA	02	0227 E	0235		N15	W35	4895	8 D	1	1	0227	1.78	2.20	1.63	110	
MITAKA	02	0348 E	0407 D		S16	W21	4897	19 D	1	1	0355	.89	.97	2.15	96	
CAPRI-S	02	0837 E	0947 D		S13	W20	4897	70 D	1	2	0858	2.30	2.50			
ARCETRI	02	0839 E	0930 D		S15	W25	4897	51 D	1	2						
ONDREJOV	02	0936 E	0943 D		N12	E09	4899	7 D	16	1	0637			6.70		Slow S-SWF
UCCLE	02	1354 E	1358 D		S10	E23	4904	4 D	1	2		2.20				
USNRL	02	1446	1631	1457	S16	W23	4897	105	1	2	1457	1.58	1.81	2.00	109	S-SWF
SAC PEAK	02	1455	1545	1520	S15	W24	4897	50	1	2		2.50			18	
USNRL	02	1506	1528	1512	S13	W67	4889	22 D	1	2	1512	1.30	3.32	1.00	93	
HUANCAYO	02	1528 E	1609	1528	S13	W22	4897	41 D	16	2	1531	7.80	8.60	2.00		
CLIMAX	02	1918	1950	1926	S15	W27	4887	32	1		1926	4.40				
USNRL	02	1918	1954	1930	S16	W23	4897	46	16	1	1929	1.81	2.06	1.00	122	
SAC PEAK	02	1920	1955	1924	S14	W26	4897	35	1	2		2.70			18	
HAWAII	02	1922 E	1956	1926	S12	W28	4897	34 D	16	2	1926	4.20	4.90			
MT WILSON	02	1922	2000		S14	W25	4897	38	1							
HUANCAYO	02	1927 E	1947 D	1930	S13	W24	4897	20 D	1	2	1930	3.30	3.70	2.80		
SAC PEAK	02	2110	2202	2125	S08	E17	4904	52	1	2		2.40			20	
MT WILSON	02	2112	2211		S09	E17	4904	59	1							
HAWAII	02	2112	2212	2122	S10	E16	4904	60	16	2	2122	3.60	3.90			
CLIMAX	02	2114	2142	2122	S08	E18	4904	28	1		2122	3.60				
HAWAII	02	2326	2352 D	2330	N07	E20	4903	26 D	1	1	2330	2.20	2.30			
TASHKENT	03	0701	0730	0703	N16	E85	4911	29	2							S-SWF
ONDREJOV	03	0720 E	0741		N16	E85	4911	21 D	16	1	0720			4.20		
ONDREJOV	03	0720 E	0747		N15	W56	4892	27 D	16	3	0726			3.00		

SOLAR FLARES

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		START	END	MAX. PHASE	APPROX.		McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %		
					LAT.	MER. DIST.											
ONDREJOV	03	0818 E	0828		N14	W60	4892	10 D	1		3	0821			2.40		
WENDEL	03	0823 E	1022		N15	E85	4911	119 D	16				7.00				
WENDEL	03	0842	0931		N04	E29	4910	49	1				3.00				
WENDEL	03	0906	0914 D		N09	E15	4903	8 D	1				3.00				
{ ARCTRI	03	1000 E	1107 D		N13	E86	4911	67 D	2	2							
ONDREJOV	03	1001 E	1008		N16	E85	4911	7 D	16	3	1004				3.10		
{ WENDEL	03	1054	1130		N14	E83	4911	36	1				3.00				
{ UCCLE	03	1112	1132		N15	E88	4911	20	16	2		2.20	4.40				
UCCLE	03	1114	1119		N08	E09	4903	5	1	1							
{ WENDEL	03	1128 E	1141 D		S16	W36	4897	13 D	1				3.00				
{ UCCLE	03	1133	1141	1135	S17	W38	4897	8	16	2	1135	3.40					
ONDREJOV	03	1135 E	1140		S15	W36	4897	5 D	1	3	1136				2.10		
{ WENDEL	03	1133 E	1150 D		N16	W52	4892	17 D	1				3.00				
ONDREJOV	03	1225 E	1251		N13	W61	4892	26 D	1	3	1227				2.40		
{ ONDREJOV	03	1343	1349	1344	N16	E85	4911	6	1	3	1344				3.20		
WENDEL	03	1343	1407 D		N14	E79	4911		1				4.00				
WENDEL	03	1407 E	1419 D		N03	E27	4910		1				3.00				
SAC PEAK	03	1725	1825	1755	N47	W31	4891	60	1	2		2.90				14	S-SWF
{ SAC PEAK	03	2005	2025	2010	N15	E90	4911	20	1	2		2.10				20	S-SWF
MT WILSON	03	2009	2021		N15	E72	4911	12	1								
{ HAWAII	03	2246	2308	2250	N15	E80	4911	22	1	3	2250	1.90	9.50				
MT WILSON	03	2248	2253		N15	E71	4911	5	1								
MITAKA	04	0237 E	0247		N12	W18	4899	10 D	1	1	0237	1.78	1.90	2.29	115		
NIZAMIAH	04	0257	0315	0303	N15	E74	4911	18	1	2	0303	.61	2.25	2.11			
MITAKA	04	0408	0417		S17	W42	4897		1	1	0411	.85	1.15	1.54	87		
WENDEL	04	0910	0936 D		N15	E70	4911	26 D	1				4.00				
{ STOCKHOLM	04	1040 E	1116		N16	E70	4911	36 D	2	2	1101	1.70	5.10				
{ WENDEL	04	1051	1113		N15	E74	4911	22	16				6.00				S-SWF
{ CAPRI-S	04	1053 E	1111 D		N16	E70	4911	18 D	16	3	1053	2.00	5.40				
ONDREJOV	04	1055 E	1103		N16	E72	4911	8 D	16	3	1057				3.00		
ONDREJOV	04	1137 E	1146		N13	W23	4899	9 D	1	3	1140				2.10		
WENDEL	04	1341	1349		N17	W77	4892	8	1				3.00				
MITAKA	05	0319	0327		N16	E59	4911	8	1	1	0319	.71	1.42	2.33	128		
{ LOCARNO	05	0855	0920	0905	N15	E57	4911	25	1	2			3.00				
{ STOCKHOLM	05	0902 E	0918 D		N15	E59	4911	16 D	16	2	0908	1.70	3.40				
WENDEL	05	1300 E	1324 D		N15	E53	4911	24 D	1				3.00				
{ USNRL	05	1904	1943 D	1914	N13	E52	4911	39 D	16	3	1914	1.30	2.99		115		
{ SAC PEAK	05	1905	1930	1912	N13	E52	4911	25	1	3		2.10			16		
USNRL	05	2056	2102	2059	S02	E90	4913	6	1	1	2059	.68	4.82		58		
UCCLE	06	1019	1026	1021	N17	E47	4911	7	16	3	1021	3.40					
{ WENDEL	06	1021 E	1028 D		N16	E47	4911	27 D	16				6.00				
CAPRI-S	06	1157	1214 D		N15	E45	4911	17 D	1	3	1201	2.00	3.00				
USNRL	06	1614	1700	1622	S18	W80	4897	46	2	2	1622	1.59	5.55		87		
{ SAC PEAK	06	1935	2035 U	1955	N15	E38	4911	60 D	1	2		3.90			24	Slow S-SWF	
HAWAII	06	1942	2024		N12	E39	4911	42	1	1	1948	2.40	3.10				
MITAKA	07	0217 E	0228 D		N16	E33	4911	11 D	1	2	0219	5.67	7.15	1.69	96		
{ WENDEL	07	0825 E	0928 D		S19	E77	4916	63 D	16				5.00				
ONDREJOV	07	0900 E	0920		S17	E85	4916	20 D	1	3	0906				2.30		
WENDEL	07	0930	1008		S05	E51	4913	38	1				3.00				

COMMENCE - STANDARDS - SOLAR

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		START	END	MAX. PHASE	LAT.	MER. DIST.	McMATH PLACE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Rc	MAX. INT. %	
ONDREJOV	07	0941 E	0957		S07	E58	4913	16 D	1	3	0955			2.20		S-SWF
WENDEL	07	0945	1011		N17	E39	4911	26	1				3.00			
ONDREJOV	07	1106 E	1112		S17	W85	4897	6 D	1	3	1107			3.60		
WENDEL	07	1106 E	1130 D		S16	W87	4897	24 D	□							
WENDEL	07	1324	1421 D		S19	E76	4916	57 D	1				3.00			
UCCLE	07	1412	1421		S18	E85	4916	9	1	3						
CLIMAX	07	1556	1600 D		S20	E78	4916	4 D	1		1600	2.30				
HAWAII	08	0140	0158	0142	S02	E43	4913	18	1	1	0142	2.50	3.50			S-SWF
NIZAMIAH	08	0554 E	0601 D		S04	E46	4913	7 D	1	2	0554	1.52	2.21	1.33		
WENDEL	08	0858	0911		S03	E46	4913	13	26				15.00			
UCCLE	08	0904	0911	0908	S03	E48	4913	7	16	3	0908	4.20				
CAPRI-S	08	0905 E	0937 D		S03	E46	4913	32 D	2	3	0915	3.00	4.50			
SCHAUMS	08	0906 E	0929		S04	E45	4913	23 D	2							
ARCETRI	08	0906 E	0935		S03	E45	4913	29 D	2	2						
KODAIKNL	08	0907 E	0915 D		S04	E48	4913	8 D	1	1	0907			1.60		
UCCLE	08	0909	0935		S04	E49	4913	26	1	3						
NIZAMIAH	08	0912 E	0914 D		S04	E46	4913	2 D	16	2	0912	2.43	3.53	2.00		
UCCLE	08	0913	0930		S03	E50	4913	17	1	3						
UCCLE	08	0932	0939		N13	E20	4911	7	1	3						
WENDEL	08	1232	1315 D		N16	E17	4911	43 D	16				7.00			
WENDEL	08	1231	1255		S04	E53	4913	24	1				4.00			
WENDEL	08	1313 E	1338 D		N11	W39	4910	25 D	1				3.00			
WENDEL	08	1405	1418 D		S08	E50	4913	13 D	1				3.00			
LOCARNO	08	1400 E	1420		S16	E52	4916	20 D	16	2	1405		2.00			
WENDEL	08	1418	1424 D		S16	E64	4916	6 D	16				7.00			
OTTAWA	08	1418	1440		S14	E65	4916	22 D	1	3	1423	2.20	5.51			
USNRL	09	1305 E	1325		N15	W02	4911	20 D	1	2	1305	1.02	1.05		120	S-SWF
USNRL	09	1354	1421	1357	N29	E26	4914	27	1	2	1357	1.02	1.28	2.00	109	S-SWF
MCMATH	09	1629	1640 D		N28	E25	4914	11 D	1	1	1631	.32	.42		57	
SAC PEAK	09	1642	1730	1655	N10	W90	4899	48	16	1		3.80			22	
USNRL	09	1644	1735	1654	N11	W90	4899	51	1	2	1654	2.71		2.00	47	S-SWF
MT WILSON	09	1652 E			S02	E29	4913		1							
MT WILSON	09	1652 E			N14	W01	4911		1							
MT WILSON	09	1757	1810		N14	W01	4911	13	16							
USNRL	09	1757 E	1826	1803	N15	W05	4911	29 D	1	2	1803	1.13	1.17	2.00	137	
MT WILSON	09	1803	1832		S08	W02	4912	29	1							
MT WILSON	09	1824	1930		S02	E28	4913	66	1							S-SWF
MT WILSON	09	2243	2257		S02	E27	4913	14	1							
HAWAII	10	0034	0108 D	0044	S05	E26	4913	34 D	16	2	0044	4.40	5.00			
MITAKA	10	0048 E	0018		S03	E27	4913	30 D	26							
MITAKA	10	0048 E	0124	0049	S01	E26	4913	36 D	26	2	0058	8.49	9.59	2.50	256	
MITAKA	10	0221	0303		S00	E23	4913	42	26							
MITAKA	10	0221	0306	0221	N00	E20	4913	45	26	1	0221	9.02	9.74	7.28	251	
MITAKA	10	0456	0504		S19	E43	4916	8	1	1	0458	2.73	3.97	1.89	91	
UCCLE	10	1134 E	1144 D		S03	E22	4913	10 D	16	3		4.20				
CAPRI-S	10	1140	1220 D		S03	E20	4913		□							
CAPRI-S	10	1224	1257 D		S03	E20	4913	33 D	1	1	1237	4.00	4.20			S-SWF
USNRL	10	1312 E	1514	1318	S02	E19	4913	62 D	1	2	1428	1.81	1.92	2.00	157	
SAC PEAK	10	2027	2055	2032	S21	W55	4906	28	1	2		2.60			14	
USNRL	10	2029	2100 D	2034	S21	W57	4906	31 D	1	2	2034	1.92	3.67	1.00	92	

COMMENCE - STANDARDS - BOLDER

SOLAR FLARES

DECEMBER 1958

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		START	END	MAX. PHASE	APPROX.		McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
					LAT.	MER. DIST.										
HAWAII	11	0106 E	0110 D		S01	E09	4913	4 D	1	1	0106	2.20	2.20			
NIZAMIAH	11	0510 E	0527	0515	S01	E03	4913	17 D	16	3	0515	3.04	3.05	2.31		
CAPRI-S	11	0820 E	0903 D		S00	E07	4913	43 D	1	1	0841	2.00	2.00			
ARCETRI	11	0943 E	1002 D		S21	W64	4906	19 D	16	2	0948	2.00	4.90			
KIEV*	11	1124	1146	1127	S01	E03	4913	22	2							
ARCETRI	11	1125 E	1140 D		S01	E02	4913	15 D	2	2						S-SWF
CAPRI-S	11	1130 E	1200 D		S00	E05	4913	30 D	16	2	1135	1.80	1.80			
MT WILSON	11	1800	1809		S01	E05	4913	9	16							
SAC PEAK	11	1802	1842	1812	S02	E00	4913	40	2	2		6.20			40	S-SWF
MT WILSON	11	1808	1835		S03	E05	4913	27	2							
HAWAII	11	1814 E	1826 D		S02	E00	4913	12 D	2	1	1814	5.10	5.10			
MT WILSON	11	1854	1918		S03	E05	4913	24	1							
SAC PEAK	11	1930	2012	1939	S02	W04	4913	42	2	2		9.60			40	S-SWF
MT WILSON	11	1931	2000		S03	E05	4913	29	16							
HAWAII	11	1950 E	2008		S02	W02	4913	18 D	1	1	1950	3.10	3.10			
SAC PEAK	11	2120	2215 U	2150	S09	E26	4916	55	26	2		22.50			25	
SAC PEAK	11	2150	2217 D	2212	S00	W04	4913	27	1	2		3.10			23	
MT WILSON	11	2204 E	2219		S02	E07	4913	15 D	1							
MITAKA	11	2355 E	2422	2406	S03	W05	4913	27 D	1	1	2406	1.84	1.84	2.33	149	
MITAKA	12	0042	0049		S11	W34	4912	7	1	1	0042	.89	1.09	2.23	107	
MITAKA	12	0049 E	0055		S18	E18	4916	6 D	1	1	0049	.82	.90	1.91	102	
MITAKA	12	0057 E	0120	0107	S00	W05	4913	23 D	26	1	0107	4.62	4.62	8.34	278	
HAWAII	12	0106 E	0116		N02	W06	4913	10 D	26	1	0106	7.90	8.00			S-SWF
MITAKA	12	0209	0235 D	0211	S18	E17	4916	26 D	1	1	0210	4.35	4.78	1.72	134	
MITAKA	12	0214 E	0247	0230	S02	W06	4913	33 D	26	1	0230	7.38	7.38	4.31	251	S-SWF
NIZAMIAH	12	0320	0347	0329	S02	W06	4913	27	16	2	0329	2.13	2.14	3.33		S-SWF
MITAKA	12	0328	0345	0332	S01	W08	4913	17	2	1	0333	2.78	2.78	4.11	278	
NIZAMIAH	12	0532	0554	0545	S02	W06	4913	22	16	3	0545	2.43	2.45	2.81		
LOCARNO	12	1045 E	1110		S03	W08	4913	25 D	16	3	1050		4.00			
CAPRI-S	12	1215	1435 D		S01	W08	4913	140 D	26	3	1306	10.00	10.00			
SALTSGOBAD	12	1257 E	1304 D		S05	W07	4913	7 D	26							S-SWF
STOCKHOLM	12	*1257 E	1304 D		S05	W07	4913	7 D	26	1	1302	7.00	7.00			
McMATH	12	1345 E	1443 D		S02	W07	4913	58 D	1	1	1353	2.43	2.48			
USNRL	12	1416	1547		S03	W08	4913	91	1	1	1447	1.36	1.38	1.00	100	
USNRL	12	1500	1535	1506	S02	W14	4913	35	1	2	1506	1.24	1.28	2.00	138	S-SWF
USNRL	12	1603	1618	1604	S03	W09	4913	15	1	1	1612	1.47	1.51		150	
USNRL	12	1927	2007	1927	S18	E08	4916	40	1	1	1927	.90	.94	1.00	123	
SAC PEAK	12	2155	2205 D	2200	S01	W16	4913	10	1	2		2.70			17	
MT WILSON	12	2159	2242		S05	W20	4913	43	1							
MITAKA	13	0003 E	0030 D	0004	N21	E53	4920	27 D	1	2	0004	1.84	3.46	2.40	134	
HAWAII	13	0020 E	0100 D		S01	W15	4913	40 D	1	1	0020	3.40	3.50			S-SWF
MITAKA	13	0025 E	0103	0031	S02	W13	4913	38 D	2	2	0033	3.80	3.88	3.51	278	
SYDNEY	13	0025 E	0130		S09	W15	4913	65 D	2							
MITAKA	13	0200	0207		S05	W13	4913	7	1	2	0201	1.34	1.37	1.57	91	
MITAKA	13	0213 E	0216		S01	W20	4913	3 D	1	1	0213	1.86	1.95		149	
MITAKA	13	0402	0411 D	0403	N00	W20	4913	9 D	1	1	0404	.89	.91	2.68	192	
MITAKA	13	0425 E	0446	0433	S05	W15	4913	21 D	1	1	0433	.89	.91	2.32	152	

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OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	MC MATH PLACE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %	
SYDNEY	13	0445	0530 D	0450	N12	E17	4919	45 D	2							S-SWF
MITAKA	13	0449	0459	0456	S17	E01	4916	10	16	1	0449	3.14	3.23	1.98	110	
USNRL	13	1605	1631	1607	S09	W21	4913	26	1	2	1607	1.02	1.11		104	
{ SAC PEAK	13	1830	1920	1835	S03	W27	4913	50	2	2		5.00			22	
{ HAWAII	13	1832	1922	1834	S01	W27	4913	50	16	3	1834	5.00	5.60			
{ MT WILSON	13	1833	1904		S03	W27	4913	31	2							
MT WILSON	13	2206	2259		S02	W32	4913	53	16							
MITAKA	14	0231 E	0239		S00	W30	4913	8 D	1	1	0233	.41	.46	2.62	96	Slow S-SWF
SYDNEY	14	0445	0530 D	0450	N12	E17	4919	45 D	2							
ATHENS	14	0745 E	0840 D		S02	W33	4913	55 D	2							
MEUDON	14	1008 E	1100		N17	E50	4924	52 D	1				2.00			
MEUDON	14	1130	1200	1140	N00	W30	4913	30	16			7.00				
LOCARNO	14	1245	1300		S09	E90	4923	15	1	3	1250					
CLIMAX	14	1527 E	1527		N22	E34	4920		1		1706	3.00				
{ SAC PEAK	14	1615	1630	1620	N01	W36	4913	15	1	2		2.10			17	
{ SAC PEAK	14	1825	1910	1857	S03	W36	4913	45	1	2		3.30			16	
{ HAWAII	14	1830 E	1910 D	1834	S02	W37	4913	40 D	16	2	1834	4.20	5.30			
{ HAWAII	15	0052	0110	0056	N22	E23	4920	18	1	2	0056	3.10	3.70			
MITAKA	15	0053	0101		N22	E18	4920	8	1	1	0058	1.78	2.12	1.43	118	
MITAKA	15	0133 E	0136		S08	W39	4913	3 D	1	1	0135	.89	1.17	1.81	91	
MITAKA	15	0244 E	0252		N21	E20	4920	8 D	16	1	0244	7.57	9.01	2.27	118	
{ NIZAMIAH	15	0550 E	0557 D		N23	E19	4920	7 D	16	2	0550	2.13	2.44	1.92		
MITAKA	15	0554 E	0608	0558	N25	E21	4920	14 D	16	1	0554	3.14	3.74	2.08	196	
TASHKENT	15	0624	0700	0626	N23	E18	4920	36	2							
WENDEL	15	1022 E	1040 D		N22	E16	4920	18 D	16				6.00			
{ ONDREJOV	15	1036 E	1105 D		S20	W19	4916	29 D	1	3	1050			2.00		
{ CAPRI-S	15	1105 E	1114 D		S16	W17	4916	9 D	1	1	1112	4.00	6.00			
WENDEL	15	1120 E	1230 D		S13	W18	4916	70 D	3				20.00			
WENDEL	15	1134 E	1137 D		N22	E15	4920	3 D	1				4.00			
{ ONDREJOV	15	1310	1320 D		N17	E45	4924	10 D	1	3	1315			2.40		
WENDEL	15	1326 E	1346 D		N19	E45	4924	20 D	1				3.00			
USNRL	15	1507 E	1532		N24	E14	4920	25 D	1	1	1512	1.02	1.17		103	
USNRL	15	1507 E	1533		S08	W50	4913	26 D	1	1	1512	1.13	1.82		107	
USNRL	15	1548	1619	1552	S08	W50	4913	31	1	1	1552	1.02	1.63	1.00	102	
{ SAC PEAK	15	2012	2100 U	2020	N24	E11	4920	48	1	2		3.10			22	
USNRL	15	2014	2026	2026	N24	E10	4920	37	1	2	2026	2.49	2.80		88	
{ CLIMAX	15	2018	2030 D	2023	N23	E12	4920	12 D	1	2	2023	2.90				
{ SAC PEAK	15	2132	2150	2135	N23	E10	4920	18	1	2		2.50			18	
{ SAC PEAK	15	2200	2222 D	2205 U	N24	E11	4920	22	1	2		2.40			25	Slow S-SWF
CLIMAX	15	2203	2218	2206	N23	E11	4920	15	1		2206	2.10				
{ HAWAII	15	2226	2232 D	2230	S02	W60	4913	6 D	1	2	2230	2.40	4.50			
{ CLIMAX	15	2226	2235	2230	S07	W61	4913	9	1		2230	2.10				
MITAKA	15	2354	2414 D	2354	N22	E09	4920	20 D	1	1	2354	.41	.45	2.03	115	
MITAKA	16	0005	0018 D	0018	N22	E08	4920	13 D	1	1	0018			1.76	107	
KODAIKUN	16	0230 E	0236 D		N24	E08	4920	6 D	1	2	0232	1.60	1.80	2.80	106	
{ NIZAMIAH	16	0415 E	0431		S15	W36	4916	16 D	2	3	0415	5.47	6.99	2.05		
{ NIZAMIAH	16	0434 E	0441		S08	W48	4913	7 D	1	3	0434	1.82	2.75	1.59		
WENDEL	16	0826	0832 D		S06	W61	4913	6 D	1				3.00			
WENDEL	16	0835 E	0912 D		N23	E02	4920	37 D	1				3.00			
WENDEL	16	0836	0845 D		S22	E43	4926	9 D	1				4.00			

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OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	LAT.	MER. DIST.	McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
{ WENDEL	16	1016	1032 D		N20	E04	4920	16 D	16			6.00				
{ ZURICH	16	1021	1028		N20	E01	4920	7	1	2	1021	2.00				
{ ONDREJOV	16	1128 E	1142		S06	W64	4913	14 D	1	3	1129			2.40		
{ WENDEL	16	1129 E	1148 D		S08	W59	4913	19 D	16			5.00				
{ USNRL	16	1348	1408	1351	S07	W63	4913	20	1	2	1351	1.36			89	
{ WENDEL	16	1350 E	1405 D		S06	W63	4913	15 D	16			2.96				
{ USNRL	16	1449	1503	1450	N24	E04	4920	14	1	2	1450	1.36			100	
{ USNRL	16	1511	1556	1517	S07	W63	4913	45	1	2	1517	.90			106	
{ USNRL	16	1630	1647 D	1634	S15	E67	4926	17 D	16	2	1634	1.47			105	
{ HUANCAYO	16	1633	1643	1634	S14	E66	4926	10	1	2	1634	1.00		2.00		
{ SAC PEAK	16	1727	1817	1730	S01	W65	4913	50	1	2		2.40		3.30		
{ CLIMAX	16	1728	1748	1734	S03	W66	4913	20	1		1734	2.90			16	
{ USNRL	16	1729	1819	1733	S02	W63	4913	50	1	2	1733	1.70	3.89	2.00	94	
MITAKA	17	0145 E	0241		S08	W70	4913	56 D	16	1	0204	2.27	6.13	3.45	165	
MITAKA	17	0207 E	0240		N04	W26	4919	33 D	1	1	0207	1.78	1.99	2.93	183	
{ WENDEL	17	0830 E	1038 D		S08	W70	4913	128 D	16			8.00				
{ ONDREJOV	17	1123 E	1139 D		N06	W32	4919	16 D	1	2	1131			2.50		
{ ONDREJOV	17	1137 E	1211		S06	W77	4913	34 D	1	3	1138			3.30		
{ CAPRI-S	17	1138 E	1235 D		S06	W68	4913	57 D	1	2	1156	1.00	3.50			
{ ONDREJOV	17	1254 E	1301		S06	W78	4913	7 D	1	3	1255			3.10		
{ USNRL	17	1537	1547	1542	S07	W79	4913	70	1	2	1542	.45	2.29		81	
{ HUANCAYO	17	1539	1631	1541	S07	W77	4913	22	1	2	1541	1.20	4.80	4.10		
{ SAC PEAK	17	1855	1927	1900	N07	W35	4919	32	16	2		3.90			25	S-SWF
{ MT WILSON	17	1859	1944		N04	W33	4919	45	2							
HAWAII	18	0126 E	0200 D	0132	S12	E35	4926	34 D	1	3	0132	2.10	2.60			
HAWAII	18	0347 E	0354 D		N11	W36	4919	7 D	16	2	0347	2.43	3.07	2.05		
{ WENDEL	18	1136	1157		N24	W23	4920	21	1			4.00				
{ SAC PEAK	18	1607	1635	1612	N07	W47	4919	28	1	2		2.30			20	
{ USNRL	18	1611	1634	1612	N08	W48	4919	23	1	2	1612	1.69	2.54		94	
{ HUANCAYO	18	1611 E	1639 D	1612	N07	W45	4919	28 D	16	2	1612	4.40	5.80	2.30		
{ SAC PEAK	18	1635	1720 U	1642	N06	W48	4919	45 D	1	2		2.50			23	
{ CLIMAX	18	1636	1701	1643	N08	W47	4919	25	1		1643	3.00				
{ USNRL	18	1638	1658	1643	N08	W48	4919	20	16	3	1643	2.26	3.36		125	Slow S-SWF
{ MT WILSON	18	1640 E	1654 D		N05	W46	4919	14 D	1							
{ HUANCAYO	18	2003	2010	2008	S05	W90	4913	7	1	2	2008			6.10		
{ SAC PEAK	18	2125	2155	2147	N22	W23	4920	30	1	2		2.90			17	
{ MT WILSON	18	2235	2258		N05	W49	4919	23	1							
STOCKHOLM	19	1055 E	1107 D		S25	E74	4929	12 D	1	1	1055	.70	2.40			
{ CAPRI-S	19	1135 E	1158 D		S22	E70	4929	23 D	2	3	1137	2.00	6.80			
{ USNRL	19	1744	1829		S16	E90	4929	45	1	1	1808	2.83			57	
{ HAWAII	19	2322	2356 D	2328	S12	E11	4926	34 D	16	3	2328	5.00	5.10			
SAC PEAK	20	1749	1811	1759	S16	E12	4926	22	1	2		2.40			24	
MITAKA	21	0027 E	0034 D		S16	E85	4934	7 D	1	1	0027	1.84		3.20		
{ HAWAII	21	0046	0110	0048	S18	E90	4934	24	1	2	0048	1.70				
{ MITAKA	21	0047 E	0114 D		S16	E85	4934	27 D	1	1	0048	1.12		5.06		Slow S-SWF
{ WENDEL	21	0920	1059		S10	E80	4934	79	2				11.00			
{ USNRL	21	1422 E	1438 D		S14	E78	4934	16 D	1	1	1437	.91	3.66			Slow S-SWF
HAWAII	22	0116	0132	0120	S17	E75	4934	16	1	3	0120	2.60	11.00			

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OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX.		McMATH PLAGE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _o	MAX. INT. %	
					LAT.	MER. DIST.										
ZURICH	22	1007	1016		S13	E86	4934	9	1	2	1010		5.00			
UCCLE	22	1303	1310		S15	E75	4934	7	1	2						
WENDEL	22	1311 E	1350 D		S13	E70	4934	39 D	16				7.00			
UCCLE	22	1314	1342	1320	S15	E72	4934	28	16	2	1320	3.40	5.10			
ZURICH	22	1315	1336		S15	E62	4934	11	1	2	1320		5.00			
USNRL	22	1316	1320 D		S11	E66	4934	4 D	1	1	1320	.91	2.31		93	
AROSA	22	1320 E	1335		S14	E65	4934	15 D	16							
USNRL	22	1456	1729	1502	S14	E62	4934	33	26	2	1502	5.10	11.20	2.00	120	G-SWF
USNRL	22	1708	1719	1710	S12	E81	4934	11	16	2	1710	1.13	5.69		67	
USNRL	22	1714	1730	1719	S23	E70	4934	16	1	2	1719	1.36	4.33		65	
MT WILSON	22	2030			S23	E54	4934		1							
HAWAII	23	0044	0200	0102	S21	W09	4929	76	1	3	0102	2.90	3.10			
NIZAMIAH	23	0545 E	0552 D		S14	E66	4934	7 D	1	2	0545	.91	2.21	1.43		G-SWF
MT WILSON	23	2207	2213		S19	E65	4934	6	1							
MITAKA	24	0057 E	0110	0103	S15	E63	4934	13 D	1	1	0057	1.34	2.85	4.16	110	
MITAKA	24	0423 E	0432		S26	E58	4934	9 D	1	1	0425	.21	.44	2.16	87	
MITAKA	24	0555	0603	0559	S13	E60	4934	8	1	1	0555	1.34	2.85	3.63	120	
NIZAMIAH	24	0947 E	1005	0954	S14	E50	4934	18 D	16	3	0954	1.82	2.91	3.14		
HUANCAYO	24	1534 E	1547 D		N17	E66	4936	13 D	16	1	1539	2.90	7.30	2.90		Slow S-SWF
USNRL	24	1604 E	1615		N18	E65	4936	11 D	1	1	1604	1.02	2.60			
MITAKA	24	2345 E	2347		S18	E31	4934	2 D	1	1	2345	1.78	2.17	1.19	96	
LOCARNO	25	0830 E	0910		S15	E31	4934	40 D	16	4	0830		3.00			
LOCARNO	25	1316	1330	1320	N19	E48	4936	14	1	2			2.00			
USNRL	25	1629	1659 D	1634	S15	E30	4934	30 D	16	2	1634	2.32	2.76		114	
SAC PEAK	25	1935	2005	1937	N20	E53	4936	30	1	1		2.20			18	S-SWF
LOCARNO	26	1105 E	1115 D		N20	E41	4936	10 D	1	2	1110		2.00			
CAPRI-S	26	1217	1255 D		N10	W53	4927	38 D	2	2	1235	4.00	7.40			
CAPRI-S	26	1235 E	1250 D		N07	W53	4927	15 D	1	2	1237	2.00	3.50			
USNRL	26	1300	1403	1311	S14	E11	4934	63	1	2	1311	1.02	1.07	1.00	122	
HUANCAYO	26	1602	1615	1603	N16	E48	4938	13	1	2	1606	.50	.80	2.00		
SAC PEAK	26	1640	1700	1647	N05	E55	4938	20	1	2		2.10			22	
USNRL	26	*1640	1700 D		N06	E54	4938	20 D	1	1	1646	1.07	1.88	1.00	102	
MCMATH	26	1643	1707	1648	N07	E57	4938	24	16	1	1648	3.74	6.50		79	
HUANCAYO	26	1644	1701	1647	N07	E53	4938	17	16	2	1647	2.90	4.80	6.20		
SAC PEAK	26	1840	1940	1917	N05	E54	4938	60	1	2		2.10			20	
HAWAII	26	1912	1936	1918	N03	E55	4938	24	1	3	1918	2.10	3.90			
MCMATH	26	1912	1937 D	1917	N06	E56	4938	25 D	1	1	1917	2.03	3.53		73	
WENDEL	27	0838 E	0857		N16	E02	4936	19 D	1				3.00			
AROSA	27	0855	0900		S15	E00	4934	5	1							
USNRL	27	1454	1515	1457	N24	E23	4936	21	1	3	1457	1.13	1.30		106	
LOCARNO	28	0955	1015	1002	S11	E00	4934	20	16	4			2.00			
LOCARNO	28	1305	1355	1320	N07	W40	4932	50	2	4			6.00			S-SWF
MCMATH	28	1710	1730	1714	S14	W20	4934	20	1	1	1714	2.76	2.98			
SAC PEAK	28	1830	1902	1847	S19	W01	4934	32	1	2		2.10			15	
HAWAII	28	1854	1910	1858	N13	W05	4936	16	1	2	1858	2.10	2.20			
SAC PEAK	28	2150	2220 U	2152	N11	W07	4936	30	1	2		2.20			14	
MITAKA	29	0050 E	0054		N11	W11	4936	4 D	1	2	0050	.41	.43	1.69	100	

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OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
MITAKA	29	0105 E	0115 D		N11	W11	4936	10 D	1	2	0105	.89	.93	1.79	134	
MITAKA	29	0109 E	0115 D		S17	W29	4934	6 D	1	2	0109				96	
MITAKA	29	0113 E	0127	0116	N07	W47	4932	14 D	2	2	0117	3.80	5.62	2.63	196	
MITAKA	29	0146	0157	0149	N15	W09	4936	11	16	2	0146	8.04	8.52	3.23	120	
MITAKA	29	0326	0335		N08	W11	4936	9	1	2	0327	1.23	1.27	1.60	100	
LOCARNO	29	0835 E	0850		N20	E12	4938	15 D	1	3	0840		1.00			
UCCLE	29	0922 E	0926		N08	W54	4932	4 D	1	2						
UCCLE	29	0924	0931	0925	N19	E08	4936	7	1	2	0925	2.20				
LOCARNO	29	1032	1047	1036	N05	E16	4938	15	1	3			1.00			
LOCARNO	29	1045	1106	1052	N08	W51	4932	23	1	3			3.00			
CAPRI-S	29	1048 E	1108 D		N11	W52	4932	20 D	1	3	1050	1.60	2.60			
McMATH	29	1721	1745	1733	N09	W60	4932	24	1	1	1733	1.22	2.44		78	
MITAKA	30	0437 E	0455	0442	N09	W24	4936	18 D	1	1	0442	2.64	2.84	1.97	122	
MITAKA	30	0453 E	0511	0455	S23	W23	4934	18 D	1	1	0455	1.34	1.51	2.04	115	
AROSA	30	1034	1057		S17	W38	4934	23	1							
AROSA	30	1111	1123		S11	W25	4934	12	1							
HUANCAYO	30	1545	1556	1546	N11	W57	4932	11	1	1	1546	1.20	2.60	2.70		
USNRL	30	1545	1616		N10	W66	4932	31	1	1	1546	.97	2.62		93	
McMATH	30	1909	1933 D	1922	N16	W30	4936	24 D	1	1	1922	1.54	1.88		70	
USNRL	30	1915	1952	1923	N16	W30	4936	37	1	3	1923	1.13	1.39	2.00	111	
MITAKA	31	0211 E	0227 D		S15	W48	4934	16 D	1	1	0213	.89	1.32	2.16	107	
WENDEL	31	0930 E	1000 D		S13	W49	4934	30 D	1				3.00			
WENDEL	31	0957 E	1016		N17	W36	4936	19 D	16				5.00			
WENDEL	31	1129 E	1135 D		S17	E47	4944	6 D	16				5.00			
WENDEL	31	1257 E	1315 D		S14	E48	4944	18 D	1				3.00			
USNRL	31	1312	1400		S20	W54	4934	48	1	1	1322	1.24	2.13			
AROSA	31	1315	1346		S18	W55	4934	31	1							
WENDEL	31	1316 E	1400		S19	W52	4934	44 D	16				5.00			
AROSA	31	1312	1430		N03	W10	4938	78	16							
OTTAWA	31	1358 E	1440		N05	W09	4938	42 D	2	2	1408	7.71	7.93			
USNRL	31	1316	1449		N13	W09	4938	93	1	1	1322	2.37	2.43			
WENDEL	31	1320 E	1406 D		N05	W08	4938	46 D	16				7.00			
CAPRI-S	31	1322	1438 D		S06	W06	4940	76 D	1	3	1348	3.00	3.00			
USNRL	31	1335	1340	1336	N16	W40	4936	5	1	1	1336	.45	.64			
USNRL	31	1656	1741	1702	S19	W56	4934	45	3	2	1702	9.02	14.65	2.00	144	S-SWF
HUANCAYO	31	1659	1803 D	1704	S18	W52	4934	64 E	3	1	1704	12.10	22.50	6.10		
SAC PEAK	31	1827	1852	1832	S18	W46	4934	25	1	2		3.90			14	
USNRL	31	1830	1903	1834	S20	W47	4934	33	16	2	1834	3.39	5.05		108	

CAPRI G ANACAPRI - GERMAN
CAPRI S ANACAPRI - SWEDISH
GOOD HOPE ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KIEV* KIEV UNIVERSITY
KODAIKNL KODAIKANAL
KRASNAYA KRASNAYA PAKHRA
MOSCOW NIZMIR

MOSCOW-G MOSCOW - GAISH
R O EDIN ROYAL OBSERVATORY, EDINBURGH
R O HERST GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK SACRAMENTO PEAK
SCHAUNSLAND SCHAUNSLAND
USNRL UNITED STATES NAVAL RESEARCH LABORATORY

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

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

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	LAT.	MER. DIST.	McMATH PLAGE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %	
SCHAUINS	01	0830 E	0904 D		N07	W18	4895	34 D	16	1			4.00	2.00		Slow S-SWF
CAPRI-G	01	1225 E	1240 D		S14	W07	4897	15 U	1	2			4.00			
CAPRI-G	01	1245 E	1248 D					3 D	1	2						
CAPRI-G	01	1254 E	1315 D		S14	W07	4897	21 D	1	2			4.00			
CAPRI-G	01	1308 E	1315 D		N07	E38	4903	7 D	1	2			4.00			
MT WILSON	01	1639	1643 D	1643	S14	W55	4889	4 D	1							
ABASTUMANI	02	0646	0705	0650	S08	W61	4889	19	1	3	0650		2.75		88	Slow S-SWF
GOOD HOPE	02	0829 E	0940		S14	W20	4897	71 D	1		0850	2.30	2.50			
ABASTUMANI	02	0832	0926 D	0856	S14	W21	4897	24	16	3	0855		2.44	2.27	70	
KRASNYA	02	0837	0933	0846	S14	W18	4897	56	16	1	0846		2.20		83	
CAPRI-G	02	0852 E	0927 D		S13	W19	4897	35 D	16	3			5.00			
SCHAUINS	02	0900 E	0953 D		S15	W20	4897	53 D	2	1			9.00	2.00		
ABASTUMANI	02	0841	0846	0843	S12	W62	4889	5	1	3	0843		2.62		73	
KRASNYA	02	0858 E	0913	0906 U	N12	E79	4911	15 D	1				2.22		67	
CAPRI-G	02	0902 E	0912 D		N12	E74	4911	10 D	1	3			2.00			
CAPRI-G	02	0920 E	0927 D		N06	W37	4895	27 D	1	3			3.00			
GOOD HOPE	02	0935	0955	0938	N12	E11	4899	20	1		0938	2.30	2.40			
KRASNYA	02	0936	0944	0937	N12	E11	4899	8	1		0937		.47		96	
SCHAUINS	02	0940 E	0954 D		N11	E07	4899	14 D	16	1			3.00	2.20		
CAPRI-G	02	1040 E			N15	E90	4911		1	3						
CAPRI-G	02	1050 E			S19	E90	4909		1	3						
CAPRI-G	02	1100 E	1110 D		N19	W38	4892	10 D	1	3			2.00			
CAPRI-G	02	1129 E	1137 D		N13	W61	4884	8 D	1	3			2.00			
CAPRI-G	02	1152 E	1227 D		S11	W59	4889	35 D	1	3			3.00			
CAPRI-G	02	1152 E	1227 D		N07	E27	4903	35 D	1	3			3.00			
SCHAUINS	02	1230 E	1240 D		N15	W40	4892	10 D	16	1			3.00	2.20		S-SWF
CAPRI-G	02	1235 E	1240 D		N19	W40	4892	5 D	1	3			3.00			
CAPRI-G	02	1323 E	1340 D		N08	W33	4895	17 D	1	3			2.00			
CAPRI-G	02	1347 E	1415 D		S08	E23	4904	28 D	1	2			3.00			
MT WILSON	02	1922	2000	1926	S13	W24	4897	38	1							
MT WILSON	02	2112	2211	2124	S08	E17	4904	59	1							
MT WILSON	03		0730 D		N15	E89	4911		3	1	0705		28.00	4.30		
TASHKENT	03	0702	0733	0706	N19	E85	4911	31	2	3	0705			5.00	160	
GOOD HOPE	03	0703	0726	0706	N16	E88	4911	23	1		0706	1.10				
GOOD HOPE	03	0716	0730	0719	N18	W58	4892	14	1		0719	1.50	2.80			
MT WILSON	03	0950	1005	0955 U	N15	E90	4911	15	26	2	0959		20.00	4.00	124	
GOOD HOPE	03	0957	1015	1001	N15	E88	4911	18	1		1001	1.20				
NEDERHORST	03	0958 E	1002		N18	E78	4911	4 D	26	1						
GOOD HOPE	03	1219	1252	1227	N13	W59	4892	33	1		1227	1.00	2.00			
SCHAUINS	03	1232 E	1243		N07	E15	4903	11 D	1	2			3.00	1.50		
GOOD HOPE	03	1240	1312	1300	N05	W53	4895	32	1		1300	1.40	2.50			
MT WILSON	03	2009	2021	2011	N15	E71	4911	12	1							S-SWF
GOOD HOPE	04	1049	1110	1056	N15	E73	4899	21	1		1056	1.20	4.40			
CAPRI-G	04	1050 E	1114 D		N15	E68	4911	24 D	2	3			6.00			
SCHAUINS	04	1050	1125 D		N15	E67	4911	35 D	16	2			5.00	3.30		
CAPRI-G	04	1137 E	1149		N11	W22	4899	12 D	1	3			3.00			
CAPRI-G	04	1207 E	1213 D		N15	E68	4911	6 D	1	3			4.00			
CAPRI-G	04	1346 E	1348 D		N13	W75	4892	2 D	1	3			2.00			
CAPRI-G	04	1350 E	1438		S07	W05	4904	48 D	1	3			3.00			
CAPRI-G	04	1358 E	1412		N09	W01	4903	14 D	1	3			4.00			

COMMERCIAL - STANDARDS - SOLAR

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX.		McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
					LAT.	MER. DIST.										
SYDNEY	05	0148	0213	0151	S15	W50	4897	25	1	3	0151	2.00	3.00			
SYDNEY	05	0257	0313	0300	N15	E67	4911	16	2	2	0300	3.00	7.00			
VOROSHILOV	05	0317	0333	0321	N18	E60	4911	16	16	2	0321		2.17		127	
SYDNEY	05	0434	0445	0439	S15	W51	4897	11	1	3	0439	1.50	3.00			
SCHAUINS	05	0909 E	1404 D		S16	E54	4912	295 D	16	2			3.00	3.40		
VOROSHILOV	06	0319	0326	0320	N16	E47	4911	7	16	1	0320		2.21		93	
CAPRI-G	06	1202 E	1230 D		N16	E40	4911	28 D	16	3			5.00			
CAPRI-G	06	1215 E	1230 D		S11	W13	4905	15 D	1	3			3.00			
CAPRI-G	06	1322 E	1341 D		S02	E73	4913	19 D	1	3			2.00			
CAPRI-G	06	1426 E	1432 D		S13	W71	4897	6 D	1	3			2.00			
CAPRI-G	06	1436 E	1505 D		S07	W12	4905	29 D	1	3			4.00			
CAPRI-G	06	1506 E	1522 D		S08	E78	4913	12 D	1	2			3.00			
GOOD HOPE	07	0650	0740	0712	N18	E34	4911	50	1		0712	3.60	4.60			
CAPRI-G	07	0838 E	1025 D		S07	W24	4905	107 D	1	3			2.00			
CAPRI-G	07	0846 E	0927 D		S18	E79	4916	41 D	1	3			3.00			
CAPRI-G	07	0905 E	0920 D		S01	E53	4913	15 D	1	3			3.00			
CAPRI-G	07	0932 E	1005 D		S07	E65	4913	33 D	1	3			3.00			
CAPRI-G	07	0951 E	1025 D		N14	E32	4911	34 D	16	3			5.00			
CAPRI-G	07	1040 E	1051		N18	E11	4907	11 D	1	3			4.00			
CAPRI-G	07	1040 E	1136		N15	W68	4898	56 D	1	3			4.00			S-SWF
CAPRI-G	07	1050 E	1105 D		N14	E32	4911	15 D	1	3			4.00			
CAPRI-G	07	1053 E	1120 D		S18	E80	4916	27 D	1	3			3.00			
CAPRI-G	07	1052	1127		S17	W85	4897	35	1	3			5.00			
CAPRI-G	07	1210 E	1216		N14	E36	4911	6 D	1	3			4.00			
CAPRI-G	07	1243 E	1305 D		S18	E80	4916	22 D	1	3			2.00			
CAPRI-G	07	1313 E	1318		S07	W26	4905	5 D	16	2			6.00			
CAPRI-G	07	1325 E	1402 D		S18	E80	4916	37 D	1	2			2.00			
CAPRI-G	07	1356 E	1430 D		N09	W43	4899	34 D	1	2			4.00			
CAPRI-G	08	0753 E	0800 D		S16	W90	4897	7 D	1	3						
CAPRI-G	08	0804 E	0808		N08	W55	4899	4 D	1	3			3.00			
CAPRI-G	08	0817 E	0910 D		N15	E21	4911	53 D	1	3			3.00			
SCHAUINS	08	0906 E	0929		S03	E45	4913	23 D	2	2			7.00	2.90		
CAPRI-G	08	0908 E	0955 D		S03	E46	4913	37 D	2	3			8.00			
MT WILSON	08	0935 E	0935 D		S03	E46	4913		16	1	0918		5.70	2.30	80	
CAPRI-G	08	1036 E	1054		N24	E43	4914	18 D	1	3			3.00			
CAPRI-G	08	1053 E	1118		N07	E90	4919	25 D	1	3			3.00			
CAPRI-G	08	1240 E	1302 D		N15	E17	4911	22 D	1	3			3.00			
CAPRI-G	08	1409 E	1424 D		S08	E51	4913	15 D	1	2			3.00			
CAPRI-G	08	1413	1435 D		N13	E17	4911	22 D	1	2			2.00			
SCHAUINS	08	1420 E	1428		S17	E67	4916	8 D	1	2			4.00	1.20		
CAPRI-G	08	1423 E	1433		S17	E66	4916	10 D	1	2			4.00			
CAPRI-G	08	1429 E	1456 D		S03	E47	4913	27 D	1	2			3.00			
CAPRI-G	08	1456 E	1515 D		S07	E50	4913	19 D	1	2			3.00			
SYDNEY	08	2328	2329 D		N14	W77	4899	1 D	2	2	2328	1.00	5.00			
KIEV	09	1007	1026	1013	S15	E55	4916	19	1	1	1012		2.01		70	
KRASNYA	09	1008	1016	1011	S16	E55	4916	8	16	1	1011		1.55		82	
GOOD HOPE	09	1008	1030	1012	S17	E53	4916	22	1		1012	2.20	4.00			
MOSCOW-G	09	1013 E	1027		S19	E58	4916	14 D	1	1	1016		3.10	3.30	90	
GOOD HOPE	09	1355	1411 D	1356	N29	E28	4914	16 D	1		1356	1.60	2.10			

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX.		McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
					LAT.	MER. DIST.										
MT WILSON	09	1757	1810	1802	N14	W02	4911	13	1							S-SWF
{VOROSHILOV	10	0032	0122	0048	S02	E25	4913	50	16	2	0048		2.52		100	Slow S-SWF
{SYDNEY	10	0039	0124	0047	S03	E27	4913	45	1	2	0047	3.00	3.00			
VOROSHILOV	10	0218	0254	0220	N02	E20	4913	36	2	2	0220		5.22		117	S-SWF
SYDNEY	10	0423 E	0436		N03	W67	4910	13 D	1	1	0418	1.00	2.00			
ABASTUMANI	10	0746	0811	0801	S03	E22	4913	25	1	3	0801		2.99		70	
GOOD HOPE	10	1158	1220	1204	S04	E17	4913	22	1		1204	3.00	3.10			
SYDNEY	11	0012	0040	0024	N14	E61	4919	28	1	2	0024	2.00	4.00			
{SYDNEY	11	0036	0101	0044	S01	E15	4913	25	2	1	0044	6.00	6.00			Slow S-SWF
{SYDNEY	11	0036	0101	0054	N00	E09	4913	25	1	1	0054	1.00	1.00			
SYDNEY	11	0355	0435	0411	S19	W62	4906	40	2	2	0411	3.50	8.00			Slow S-SWF
SYDNEY	11	0456	0542	0519	S10	W72	4905	46	1	2	0519	.75	2.00			
SYDNEY	11	0458	0522 D	0503	N00	E06	4913	24 D	1	1	0503	4.00	4.00			Slow S-SWF
{ABASTUMANI	11	0718	0736	0727	S13	W26	4912	18	1	3	0727		2.74		62	
{CAPRI-G	11	0820 E	0832 D		S11	W28	4912	12 D	1	2			4.00			
{ABASTUMANI	11	0801	0855	0845	S02	E05	4913	54	1	3	0846		2.62	2.70	84	
{CAPRI-G	11	0820 E	0842 D	0840	S02	E08	4913	22 D	16	2			6.00			
KIEV	11	0908	0923	0914	N03	W90	4910	15	1	2	0913				72	
KIEV	11	0943	1011	0951	S20	W66	4906	28	1	2	0951		2.25		46	
KIEV*	11	1003	1007	1004	S01	E04	4913	4	1	2	1004		1.70			
{GOOD HOPE	11	1116	1153	1127	S01	E03	4913	37	1		1127	3.30	3.30			
{KIEV	11	1117	1147	1127	S02	E02	4913	30	16	2	1127		4.40		110	S-SWF
{KIEV*	11	1124	1146	1127	S01	E03	4913	22	2	2	1127		4.20			
{CAPRI-G	11	1138 E	1215 D		S02	E02	4913	37 D	16	2			5.00			
{CAPRI-G	11	1215 E	1215 D						1	1						
{CAPRI-G	11	1418 E	1430 D		S11	W28	4912	12 D	1	2			3.00			
{CAPRI-G	11	1430	1445 D		S02	E03	4913	15 D	1	2			3.00			
{MT WILSON	11	1800	1809	1801	S01	W05	4913	9	1							
MT WILSON	11	1808	1835	1817	S03	W05	4913	27	2-							S-SWF
MT WILSON	11	1854	1918	1857	S03	W05	4913	24	1							
MT WILSON	11	1931	2000	1937	S03	W05	4913	29	16							S-SWF
SYDNEY	12	0049	0130	0054	S14	W48	4912	41	1	1	0054	3.00	4.00			
{SYDNEY	12	0054	0123	0107	S02	W08	4913	29	2	1	0107	5.00	5.00			S-SWF
{VOROSHILOV	12	0055 E	0115	0106	S02	W06	4913	20 D	16	3	0106		2.88		102	
SYDNEY	12	0106	0148	0108	N08	W05	4913	42	2	2	0108	5.00	5.00			
{VOROSHILOV	12	0210	0243	0225	S03	W02	4913	33	16	3	0225		4.81		84	Slow S-SWF
{SYDNEY	12	0211	0240	0219	S05	W04	4913	29	2	1	0219	5.00	5.00			
{GOOD HOPE	12	0637 E	0800	0657	S02	W07	4913	83 D	2		0707	5.80	5.80			Slow S-SWF
{MT WILSON	12	0703 E		0703 U	S02	W06	4913		16	1	0700		9.00	3.40	120	
{GOOD HOPE	12	1229	1320 D	1305	S02	W09	4913	51 D	2		1305	9.90	10.00			S-SWF
{CAPRI-G	12	1232	1422 D	1302	S03	W09	4913	110 D	26	3			10.00			
MT WILSON	12	2159	2242	2159	S05	W20	4913	43	1							
{VOROSHILOV	13	0021 E	0111		S05	W15	4913	50 D	16	3	0036		2.12		110	S-SWF
{SYDNEY	13	0027 E	0054	0030	S06	W15	4913	27 D	2	2	0030	5.00	5.00			
MT WILSON	13	1833	1904	1837	S03	W27	4913	31	2-							S-SWF
MT WILSON	13	2206	2259	2230	S02	W32	4913	53	1							
{SYDNEY	14	0434	0552	0450	N13	E07	4919	78	2	2	0450	10.50	11.00			Slow SWF
{GOOD HOPE	14	0738	0910	0750	S00	W33	4913	92	1		0750	3.30	3.90			

COMMERCE - STANDARDS - BELL

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT	
		START	END	MAX. PHASE	APPROX.		McMATH FLARE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _z	MAX. INT. %		
					LAT.	MER. DIST.											
{ MT WILSON GOOD HOPE	14	0745	0905 D	0748	N02	W33	4913	80 D	16	2	0844	2.60	6.00	2.50	104	Slow S-SWF	
	14	1133	1215	1138	S00	W35	4913	42	1		1138		3.20				
{ SYDNEY VOROSHILOV TASHKENT ALMA-ATO ALMA-ATO TASHKENT ALMA-ATO GOOD HOPE GOOD HOPE GOOD HOPE	15	0240	0253	0246	N22	E20	4920	13	1	2	0246	3.00	3.00				
	15	0243	0250	0246	N22	E19	4920	7	16		3	0246		2.91			81
	15	0549	0611	0553	N26	E19	4920	22	1		2	0553		5.00	2.80		80
	15	0550	0606	0555	N23	E21	4920	16	1		3	0555		3.30			63
	15	0551	0601	0559	N25	E18	4920	10	1		3	0559		1.20			80
	15	0624	0700	0626	N26	E19	4920	36	2		2	0630		6.00	2.60		165
	15	0625	0640	0627	N24	E20	4920	15	2		3	0627		7.60			92
	15	0638 E	0702		N25	E21	4920	24 D	1			0638	1.90	2.20			
	15	1030	1130	1041	S14	W19	4916	60	1			1041	2.20	2.60			
	15	1307	1329	1311	N18	E47	4924	22	1			1311	1.50	2.20			
{ VOROSHILOV VOROSHILOV ALMA-ATO ALMA-ATO ALMA-ATO ALMA-ATO TASHKENT	16	0105	0127	0113	N24	E08	4920	22	16	3	0113		2.30		101		
	16	0405	0515 D	0416	S18	W36	4916	70 D	2		3	0416		6.10			90
	16	0427 E	0512	0439	S15	W42	4916	45 D	16		1	0439		8.00			57
	16	0621	0629	0625	N20	E06	4920	8	1		2	0625		1.30			54
	16	0651	0706	0659	N23	E07	4920	15	1		2	0659		1.60			63
	16	0652	0717	0701	N25	E03	4920	25	1		2	0701		2.00			73
	16	0653	0722	0705	N23	E04	4920	29	1		2	0709		3.00	2.20		80
	17	0255 E	0310 D		N06	W27	4919	15 D	1		1	0255	2.00	2.00			
	17	0655 E	0727		N12	W28	4919	32 D	1			2			2.00		85
	17	0702 E	0722		N11	W28	4919	20 D	1				0702	2.80	3.20		
17	0702 E	0730		S06	W79	4913	28 D	1		0702		.80	4.60				
17	0739	0755 D	0743	S18	W52	4916	16 D	1	2	0743			3.00		85		
17	0739	0755	0744	S17	W52	4916	16	1				0744	1.30	2.20			
17	1047	1115	1053	S16	W57	4916	28	1				1053	1.20	2.30			
17	1052	1115	1059	S05	W79	4913	23	1				1059	.40	2.10			
17	1156 E	1233	1200	S05	W79	4913	37 D	1				1200	.90	5.20			
17	1245	1308	1253	S05	W80	4913	23	1				1253	.80	4.60			
17	1859	1944	1901	N04	W33	4919	45	2-									
{ VOROSHILOV VOROSHILOV GOOD HOPE MT WILSON MT WILSON	18	0056 E	0104 D	0056	S12	W86	4913	8 D		16	1	0056		2.10		144	
	18	0128	0210 D	0135	S09	E37	4926	42 D		1		1	0135		2.63		68
	18	0724 E	0734		S05	W80	4913	10 D		1			0726	.50	2.90		
	18	1640 E	1654 D	1650	N05	W46	4919	14 D	1								
	18	2235	2258	2242	N05	W49	4919	23	1								
{ VOROSHILOV TASHKENT MT WILSON ABASTUMANI MT WILSON GOOD HOPE	21	0046	0105	0049	S11	E89	4934	19	2	3	0049		10.60		139	Slow S-SWF	
	21	0655	0704	0659	S16	E88	4934	9	1		1	0657		6.00	5.00		
	21	0702 E	0702		S15	E90	4934		1		2	0659		6.70			64
	21	0920	0949 D	0938	S14	E89	4934	29 D	2		2	0938		7.50			71
	21	0922 E	0955	0929	S16	E87	4934	33 D	16		2	0930		10.00	1.10		72
	21	1355	1400 D		S15	E85	4934	5 D	1			1400	1.50				
{ VOROSHILOV GOOD HOPE SCHAUVINS SCHAUVINS GOOD HOPE SCHAUVINS	22	0116	0132	0119	S09	E75	4934	16	2	3	0119		6.51		81		
	22	0923	0940	0927	S16	E66	4934	17	1			0927	.90	2.20			
	22	0930 E	0944		S17	E59	4934	14 D	1		2			3.00	1.90		
	22	0932	0946		N12	E90	4936	14	1								
	22	1315	1335	1321	S15	E68	4934	20	1			2	1321	1.40	3.70		
	22	1316 E	1331		S16	E65	4934	15 D	1						4.00	1.80	

SOLAR FLARES

DECEMBER 1958

OBSERVATORY	DATE DEC 1958	OBSERVED UNIVERSAL TIME			LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS					PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	MCMATH PLACE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
{ ABASTUMANI GOOD HOPE	23	0609 E	0803 D	0624	S16	E65	4934	114 D	3	3	0620		26.80	1.60	66	G-SWF
	23	0642 E	0730		S15	E66	4934	48 D	2		0644	4.00	10.20			
ABASTUMANI	24	0558 E	0609 D	0601 U	S16	E62	4934	11 D	16	3	0601		5.10		70	S-SWF
ABASTUMANI	24	0839 E	0913 D	0859	S16	E45	4934	34 D	2	3	0858		12.40	2.20	105	
GOOD HOPE	24	0946	1010	0947	S15	E59	4934	24	1		0947	2.50	5.00			
GOOD HOPE	24	1011	1025	1017	N12	E69	4938	14	1		1017	.80	2.30			
TASHKENT	25	0750	0810	0756	S17	E32	4934	20	1	1	0753		2.00	2.50	80	
GOOD HOPE	25	1317	1332	1321	N18	E47	4936	15	1		1321	2.20	3.40			
GOOD HOPE	26	1059	1119	1107	N20	E44	4936	20	1		1107	1.50	2.20			
GOOD HOPE	26	1118	1132	1121	N06	E58	4938	14	1		1121	2.00	3.90			
GOOD HOPE	26	1210	1250	1223	S13	E08	4934	40	1		1223	2.60	2.70			
GOOD HOPE	26	1216	1300	1227	N11	W58	4927	44	1		1227	2.30	4.60			
GOOD HOPE	26	1224	1250	1230	N06	E57	4938	26	16		1230	2.70	5.00			
GOOD HOPE	26	1302	1330	1308	S14	E14	4934	28	1		1308	2.30	2.40			
GOOD HOPE	28	0957	1020	1000	S11	E00	4934	23	1		1000	2.20	2.20			
KRASNYA	28	1019 E	1025 D		N18	W40	4932	6 D	1	1	1022		1.24		80	
GOOD HOPE	28	1212 E	1233		N22	E15	4938	21 D	1		1213	1.90	2.10			
VOROSHILOV	29	0106	0126	0110	N05	W51	4932	20	16	3	0110		2.26		126	
GOOD HOPE	29	0732	0810	0741	N14	W09	4936	38	1		0741	3.70	3.90			
GOOD HOPE	29	0831	0849	0833	N21	W11	4936	18	1		0833	2.10	2.30			
NEDERHORST	29	1042	1048 D		N06	E18	4938	6 D	1	2						
MT WILSON	29	2022	2041	2030	N05	E12	4938	19	1							
{ VOROSHILOV	31	0124	0135	0126	N08	W72	4932	11	16	2	0126		2.50		90	S-SWF
{ SYDNEY	31	0124	0142	0125	N11	W74	4932	18	1	2	0125	.75	2.00			
MT WILSON	31	0957	1015	1004 U	N16	W36	4936	18	1	2	1003		1.20	2.30	76	
MT WILSON	31	1710 E	1732	1710	S19	W63	4934	22 D	2							

CONTINUED - CONTINUED - CONTINUED

These flare reports are addenda to the December 1958
Flares published in CRPL-F 173 Part B, January 1959.

CAPRI G ANACAPRI - GERMAN
CAPRI S ANACAPRI - SWEDISH
GOOD HOPE ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KIEV* KIEV UNIVERSITY
KODAIKANAL KODAIKANAL
KRASNAYA KRASNAYA PAKHRA
MOSCOW NIZMIR

MOSCOW-G MOSCOW - GAISH
R O EDIN ROYAL OBSERVATORY, EDINBURGH
R O HERST GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK SACRAMENTO PEAK
SCHAUINS SCHAUINSLAND
USNRL UNITED STATES NAVAL RESEARCH LABORATORY

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

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