SOLAR FLARES

DECEMBER 1959

OBSERVATORY	DATE DEC 1959	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
MITAKA	01	0121	0200		N08	E04	5476	39	1	1	0123	.98	.99	4.10	107	
WENDEL	01	1208 E	1251 D		N09	W02	5476	43 D	1&				8.00			
SAC PEAK	01	1456 E	1622	1533 U	N08	W05	5476	86 D	2	3		8.14			28	Slow S-SWF
MCMATH	01	1527 E	1530 D		N09	W07	5476	3 D	1	3	1528		3.00			
SAC PEAK	01	1638	1946	1708	N08	W05	5476	188	2&	3		8.72			38	
LOCKHEED	01	1639 E	2000	1709	N08	W06	5476	201 D	2	2	1709	8.20			40	
MCMATH	01	1648 E	1725 D		N11	W03	5476	37 D	2&	3	1719		9.00			S-SWF
HAWAII	01	2306 E	2418	2336	N12	W10	5476	72 D	1	2	2336	1.00	1.05			
ONDREJOV	02	0721 E	0823		N08	W16	5476	62 D	1&	2	0739			3.10		
ONDREJOV	02	1051	1103 D		N07	W14	5476	12 D	1&	2	1055			3.10		
WENDEL	02	1219 E	1412 D	1249	N07	W16	5476	113 D	2&				14.00			S-SWF
WENDEL	02	1219 E	1412 D		N09	W07	5476	113 D	2&				13.00			
MCMATH	02	1459 E	1515 D		N11	W14	5476	16 D	1	2	1501		2.00			
HAWAII	02	1756 E	1824	1808	N12	W17	5476	28 D	1	3	1808	1.15	1.20			
HAWAII	02	1840 E	2000	1902	N13	W14	5476	80 D	1	2	1902	1.10	1.15			
ARCETRI	03	0807 E	0826		N09	W30	5476	19 D	1	2						
WENDEL	03	1010	1107		N09	W31	5476	57	2				10.00			
WENDEL	03	1115	1152		N12	E27	5478	37	1&				7.00			
WENDEL	03	1126	1154		N09	W32	5476	28	1				3.00			
WENDEL	03	1408 E	1428 D		N10	W33	5476	20 D	1&				5.00			
LOCKHEED	03	1756	2000	1804	N07	W35	5476	124	2	1	1804	5.70			40	S-SWF
HAWAII	03	1802 E	1946	1815	N12	W31	5476	104 D	1&	3	1815	2.10	2.50			
MITAKA	04	0032	0117	0032	N07	W37	5476	45	2	1	0050	4.42	5.52	2.16	183	S-SWF
HAWAII	04	0038 E	0103 D	0044	N08	W42	5476	25 D	1	2	0044	1.65	2.05			
MITAKA	04	0120	0128	0125	N08	W41	5476	8	1	1	0125	3.93	5.10	2.04	125	
MITAKA	04	0208	0250	0215	N08	E15	5478	42	1&	1	0215	4.92	5.25	2.50	134	G-SWF
MITAKA	04	0353 E	0412	0353	N07	W39	5476	19 D	1&	1	0356	5.90	7.38	2.74	143	
MITAKA	04	0439	0442		N08	W41	5476	3	1	1	0440	.69	.88	3.38	100	
MITAKA	04	0526 E	0532 D		S16	E54	5482	6 D	1	1	0526	2.95	5.75	1.69	107	
LOCKHEED	04	1814	2100	1823	N06	W45	5476	166	2	1	1823	6.80			30	S-SWF
SAC PEAK	04	1824 E	2100 U	1832 U	N07	W44	5476	156 D	2&	3		12.88			32	
MITAKA	05	0035	0048	0043	N10	W01	5478	13	1	2	0035	3.93	4.01	2.50	120	
MITAKA	05	0222 E	0232 D		N16	W31	5477	10 D	1&	1	0223	4.41	5.25	1.68	120	
MITAKA	05	0226 E	0234	0228	N10	W02	5478	8 D	1&	1	0230	5.90	6.02	2.78	149	
CAPRI S	05	1004 E	1016		N11	W02	5478	12 D	1	2	1006	2.20	2.20			
LOCARNO	05	1230 E	1235 D		N12	W06	5478	5 D	2-	3						S-SWF
LOCARNO	05	1408	1430		N10	E02	5478	22	1&	3						
LOCARNO	05	1422	1430		N09	W10	5478	8	1	3						
LOCKHEED	05	1938	2012	1952	N11	W03	5478	34	1	1	1952	2.00			20	
LOCKHEED	05	1938	2012	1958	N11	W03	5478	34	1	1	1952	2.00			20	
SAC PEAK	05	2158	2218 D	2204	N05	W10	5478	20 D	1	2		2.99			22	
LOCKHEED	05	2159	2221	2202	N08	W12	5478	22	1	1	2202	3.40			20	
LOCKHEED	05	2220	2238	2226	N03	W65	5476	18	1	1	2226	2.30			10	
LOCKHEED	05	2341	2350 D	2346	N10	W15	5478	9 D	1	1	2346	2.00			30	
HAWAII	06	0008	0112 D	0014	N13	W04	5478	64 D	1	2	0014	1.40	1.45			
LOCARNO	06	0936	0955	0939	N11	W19	5478	19	1&	2	0939	3.00				
LOCARNO	06	0936	0955	0939	N07	W61	5476	19	1	2	0939	2.00				
LOCARNO	06	1235	1245	1236	N09	W08	5478	10	1	2	1236	1.00				

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LOCARNO	06	1340	1348		N11	W14	5478	8	1	2						
LOCARNO	06	1430	1443	1437	N08	W18	5478	13	1	2	1437	2.00				
SAC PEAK	06	1714	1726	1716	N09	W19	5478	12	1	2		2.18			15	
SAC PEAK	06	1902	1930	1908	N12	W15	5478	28	1	2		3.05			16	
MITAKA	07	0434	0452	0439	N11	W20	5478	18	1	1	0439	2.95	3.25	5.79	107	S-SWF
MITAKA	07	0437	0513 D		N08	W27	5478	36 D	1	1	0454	1.97	2.09	2.94	93	
WENDEL	07	0936	1028 D		N11	W23	5478	52 D	2				9.00			
WENDEL	07	1228 E	1300		N12	W32	5478	32 D	1&				6.00			
WENDEL	07	1318	1350		N13	W31	5478	32	1				3.00			
SAC PEAK	07	1630	1702	1644	N12	W36	5478	32	1	2		3.32			20	
SAC PEAK	07	1852	1940 U	1906	N13	W37	5478	48 U	1	2		3.41			18	
SAC PEAK	07	2134	2216 D	2140	N07	W38	5478	42 D	1	2		3.84			20	
HAWAII	07	2136	2240 D	2145	N13	W33	5478	64 D	2	2	2145	2.90	3.60			
MITAKA	08	0120 E	0145		N12	W38	5478	25 D	1	1	0120	3.93	5.11	3.89	149	S-SWF
WENDEL	08	1204	1211 D		N16	W03	5483	7 D	1				4.00			
WENDEL	08	1251	1258 D		S17	E10	5482	7 D	1				3.00			
WENDEL	08	1317	1334		N29	E35	5487	17	1				3.00			
WENDEL	08	1405 E	1426		N29	E35	5487	21 D	1				4.00			
LOCARNO	09	1310	1330		N12	W54	5478	20	1	3						
ZURICH	09	1358	1403		N09	W06	5484	5	1	3	1358		1.00			
LOCKHEED	10	2030	2056	2038	N17	E54	5491	26	1	1	2038	2.40			10	
HAWAII	11	0028 E	0036	0028	N18	W90	5477	8 D	1	2	0028	.25				
WENDEL	11	1256 E	1330 D		N07	W77	5478	34 D	1				3.00			
SAC PEAK	11	2118	2134	2124	S02	E67	5494	16	1	2		2.10			17	
WENDEL	12	0812	0831		N17	E35	5491	19	1				3.00			S-SWF
ARCETRI	12	0815 E	0823 D		N16	E33	5491	8 D	1	2						
WENDEL	12	1140 E	1158 D		N10	E61	5493	18 D	1				3.00			
WENDEL	12	1305 E	1358 D		S19	W60	5482	53 D	1&				8.00			
MCMATH	13	1529	1615	1540	S22	W67	5482	46	1	1	1540		2.00			
SAC PEAK	13	1932	2056	1948	S18	W72	5482	84	1	2		2.91			17	
HUANCAYO	14	1532 E	1555	1540	S18	E90	5500	23 D	1	2	1540			2.80		
WENDEL	15	0841	0901		N10	E59	5497	20	1				4.00			
WENDEL	15	0919 E	1046 D		N08	W82	5484	87 D	1				4.00			
LOCARNO	15	1030 E	1100		N10	E23	5493	30 D	1	2						
WENDEL	15	1031	1100 D		S11	E24	5494	29 D	1				4.00			
WENDEL	15	1120	1146 D		N16	W01	5491	26 D	1				3.00			
LOCARNO	15	1130	1145		N18	W01	5491	15	1	2						
LOCARNO	15	1238	1250		N27	E01	5491	12	1	2	1245	1.00				
WENDEL	15	1244 E	1303 D		N22	W01	5491	19 D	1				3.00			
HUANCAYO	15	1540 E	1555	1545	S14	W01	5492	15 D	1	2	1545	4.10	4.20	1.80		
LOCARNO	16	0845 E	0920		N07	W64	5495	35 D	1	2						
WENDEL	16	0913	0937		N05	W63	5495	24	1				3.00			
WENDEL	16	1017	1042 D		N11	E41	5497	25 D	1				3.00			

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LOCARNO	16	1030 E	1055		N09	E42	5497	25 D	1	2						
LOCARNO	17	0914	0935	0918	N12	E30	5497	21	1	3	0935	1.00				
LOCKHEED	17	2155 E	2221		S09	W49	5490	26 D	1	1	2157	3.40			20	
LOCARNO	19	1055 E	1115	1058	S02	W30	5494	20 D	1&	3						
HAWAII	19	2142	2216	2200	N22	E47	5502	34	1	3	2200	1.95	3.25			
CAPRI S	20	0835	0919 D		N19	E43	5502	44 D	1	3	0909	1.60	2.40			
ARCETRI	20	0931 E	0950 D		S17	E11	5500	19 D	1	2						
CAPRI S	20	1206 E	1234 D		S03	W43	5494	28 D	1	3	1214	1.80	2.30			
ZURICH	20	1422 E	1428		S09	W81	5490	6 D	□	2	1422		1.00			
MITAKA	21	0045 E	0104	0055	S03	W53	5494	19 D	1&	1	0053	7.86	12.50	3.21	137	Slow S-SWF
HAWAII	21	0129 E	0154 D		S03	W55	5494	25 D	1&	2	0145	2.05	3.45			
MITAKA	21	0148 E	0157 D		N28	E32	5502	9 D	1	1	0150	1.28	1.61	3.03	134	
CAPRI S	21	1231	1242 D		N10	W16	5497	11 D	1	1	1238	2.00	2.00			
LOCARNO	22	1410	1420		N08	W08	5501	10	1	3						
HAWAII	23	0002	0024 D	0010	N09	W11	5501	22 D	1	2	0010	1.70	1.80			
WENDEL	23	0918 E	0937		N24	E13	5504	19 D	1				3.00			
HUANCAYO	23	1640	1715	1647	N23	W04	5502	35	1	2	1647	3.00	3.30	2.90		
MITAKA	25	0221 E	0245 D	0223	N23	W23	5502	24 D	1	1	0230	3.93	4.72	3.37	134	
{ WENDEL	25	1304 E	1313 D		S16	W55	5500	9 D	1				3.00			
{ CAPRI S	25	1304 E	1321 D		S19	W51	5500	17 D	1	2	1315	1.40	2.20			
LOCKHEED	26	1833	1906	1837	N26	W47	5502	33	1	2	1837	2.30			20	
LOCARNO	27	1148 E	1159	1148	S18	W76	5500	11 D	2-	2						
CAPRI S	28	1101 E	1116 D		N09	E45	5511	15 D	1	2	1104	1.80	2.40			
LOCARNO	28	1212	1225		N22	E62	5513	13	1	3						
LOCARNO	28	1240	1255		N12	E15	5507	15	1	3						
LOCARNO	29	1312	1322		N21	W55	5504	10	1	3						Slow S-SWF
LOCKHEED	29	1744	1840	1750	N11	W49	5505	56	1	2	1750	2.40			30	
HAWAII	29	2226	2236	2230	S11	E11	5510	10	1	3	2230	1.15	1.15			
LOCARNO	30	0900 E	1020		N04	W87	5505	80 D	1	3						
ARCETRI	30	1016 E	1028 D		N11	W58	5505	12 D	1	3	1016	1.30	2.50			
{ LOCARNO	31	1022	1032	1026	S09	W08	5510	10	1&	2	1026	2.00				
{ AROSA	31	1027	1031		S10	W09	5510	4	1							

CAPRI G ANACAPRI - GERMAN
CAPRI S ANACAPRI - SWEDISH
GOOD HOPE ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KIEV* KIEV UNIVERSITY
KODAIKNAL KODAIKANAL
KRASNYA KRASNAYA PAKHRA
LOCKHEED LOS ANGELES
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

The flare areas reported by Hawaii from July 1957 to December 1959 were derived from original measurements based on millionths of the solar disk instead of the hemisphere. In applying the conversion factor to square degrees this discrepancy was not recognized and hence for these months the areas reported in square degrees, both measured and corrected, are too large by a factor of two. The data for December 1959 for Hawaii in this issue have been converted properly to square degrees. Hawaii bases its flare "importances" on the measured areas as do the High Altitude Observatory, Sacramento Peak Observatory and Lockheed.

LOCKHEED OBSERVATIONS: ALL VALUES IN THE MAXIMUM INTENSITY COLUMN ARE ARBITRARY UNITS ON A SCALE OF 10 TO 40 - NOT PERCENT OF THE CONTINUOUS SPECTRUM.

COMMERCE - STANDARDS - BOULDER

SOLAR FLARES

DECEMBER 1959

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PIRCULI	01	1056 E	1112 D	1107 U	N08	W04	5476	16 D	2	3	1107	7.28	7.43		75	
GOOD HOPE	01	1147	1227	1157	N12	E01	5476	40	1		1157	2.80	2.80			
CLIMAX	01	1522 E	1616		N09	W07	5476	54 D	1		1531	3.40				Slow S-SWF
CLIMAX	01	1641	2035	1709	N09	W04	5476	234	1		1709	3.10				S-SWF
NIZAMIAH	02	0510 E	0517 D		N08	W11	5476	7 D	1+	1	0510	3.65	3.75	2.00		Slow S-SWF
GOOD HOPE	02	0647	0713	0652	N18	W32	5471	26	1		0652	2.40	3.00			
GOOD HOPE	02	0712	0805	0717	N08	W15	5476	53	1		0717	2.60	2.70			
PIRCULI	02	0750 E	0851	0819	N06	W05	5476	61 D	2	3	0819	8.64	8.82		72	
PIRCULI	02	0750 E	1006	0755	N08	W06	5476	136 D	2	3	0755	6.37	6.83		97	
PIRCULI	02	0808	0835	0820 U	S01	W07	5476	27	1+	3	0820	2.36	2.41		73	
GOOD HOPE	02	1052	1113	1057	N08	W17	5476	21	1		1057	2.10	2.20			
PIRCULI	03	0715	0743	0725	S13	E67	5482	28	2	3	0725	2.94	7.48		84	
PIRCULI	03	0755	0825	0805 U	N12	E30	5478	30	1	3	0805	3.72	4.49		62	
PIRCULI	03	0800	0840	0815	N09	W29	5476	40	1	3	0815	3.68	4.26		63	
PIRCULI	03	0814 E	0852 D	0842 U	N13	W24	5476	38 D	1	3	0842	2.85	3.19		54	
CLIMAX	03	1757	1803 D		N08	W35	5476				1802					S-SWF
CLIMAX	03	2144	2213		N08	W35	5476				2148					
VOROSHILOV	04	0120	0129	0126	N07	W41	5476	9	1+	1	0126	5.11	6.69		69	
VOROSHILOV	04	0325	0343	0329	N09	E18	5478	18	1	1	0329	2.51	2.67		67	
VOROSHILOV	04	0340	0359	0350	N07	W42	5476	19	2	1	0350	3.94	5.27		80	
ALMA-ATA	04	0732	0807	0753	N10	W34	5476	35	1	1	0753	1.28	1.80		54	
ALMA-ATA	04	0732	0831 D	0823	N10	W40	5476	59 D	1	1	0823	1.65	2.30		66	
TASHKENT	04	0735 E	1005 D	0756	N05	W38	5476	150 D	2	3	0759	12.75	17.00	2.60	80	S-SWF?
ALMA-ATA	04	0749	0831 D	0801	N09	W43	5476	42 D	1	1	0801	2.63	3.30		59	
KRASNYA	04	0808 E	0930 D	0814	N05	W33	5476	82 D	2	2	0814	16.20	18.00		100	
KODAIKNL	04	0845 E	0920 D	0855	N07	W36	5476	35 D	2	2	0845	11.00	13.80	1.50	122	
VOROSHILOV	05	0033	0050	0036	N10	W02	5478	17	1+	2	0036	2.32	2.39		80	
VOROSHILOV	05	0109 E	0137 D	0121	N09	W02	5478	28 D	1+	2	0121	2.41	2.46		80	
VOROSHILOV	05	0220 E	0300 D	0235	N21	W26	5477	40 D	1	2	0235	2.69	3.22		72	
VOROSHILOV	05	0226	0238	0229	N09	W02	5478	12	1+	2	0229	2.69	2.82		81	
VOROSHILOV	05	0243	0254	0244	N13	W48	5476	11	1+	2	0244	1.52	2.31		102	
NIZAMIAH	05	0345 E	0356 D		N09	W52	5476	11 D	1	2	0345	1.82	3.02	1.50		
NIZAMIAH	05	0407 E	0416 D	0411	N03	W11	5478	9 D	1+	2	0411	2.43	2.47	1.80		
TASHKENT	05	0616 E	0630 D	0622	N08	E04	5478	14 D	1	3	0625	5.01	5.00	2.60	130	S-SWF
GOOD HOPE	05	0948	1023	1003	N10	W06	5478	35	1		1003	2.80	2.80			
KRASNYA	05	0959	1019	1004	N10	W06	5478	20	1+	2	1004	5.84	6.00		90	S-SWF
MOSCOW G	05	1005 E	1024 D		N10	W06	5478	18 D	1+	1	1009	5.25	5.36	2.19	100	
GOOD HOPE	05	1024	1032	1025	N12	W49	5476	8	1		1025	1.40	2.20			
GOOD HOPE	05	1215	1250	1221	N11	W08	5478	35	2		1221	5.40	5.60			S-SWF
SYDNEY	05	2320	2334	2323	N11	W13	5478	14	1	1	2323	2.00	2.00			
SYDNEY	05	2342	2349	2345	N08	W08	5478	7	1	2	2345	3.00	3.50			
VOROSHILOV	06	0008	0032	0010	N11	W06	5478	24	1+	3	0010	3.10	3.24		85	
SYDNEY	06	0008	0037	0012	N10	W04	5478	29	2	2	0012	7.00	8.00			
GOOD HOPE	06	0626 E	0632		N08	W72	5476	6 D	1		0626	.90				
ALMA-ATA	06	0628 E	0654	0631	N12	W08	5478	26 D	1	3	0631	5.56			66	
ALMA-ATA	06	0629 E	0719	0632	N11	W11	5478	50 D	1	3	0632	1.23	1.30		68	
GOOD HOPE	06	0630	0703	0632	N12	W09	5478	33	1		0632	2.90	3.00			
PIRCULI	06	0640	0655	0643 U	N11	W09	5478	15	1+	2	0643	5.14	5.35		77	

SOLAR FLARES

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OBSERVATORY	DATE DEC 1959	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
GOOD HOPE	06	0748	0810	0751	N07	W76	5476	22	2		0751	2.80				
PIRCULI	06	0825	0841	0832	N06	W70	5476	16	1	2	0832	1.37	3.95		63	
PIRCULI	06	0936	0954	0941	N11	W20	5478	18	1	2	0941	1.29	1.40		66	
SYDNEY	06	2225	2234	2228	N15	W60	5476	9	1	1	2228	1.00	2.00			
VOROSHILOV	07	0302 E	0314 D		N15	W19	5478	12 D	1+	2	0312	3.32	3.60		80	
GOOD HOPE	07	0633 E	0709 D		N07	W78	5476	36 D	1		0633	.70				
GOOD HOPE	07	0940	1040	1001 U	N15	W26	5478	60	1		1001	2.50	2.80			
KRASNYA	07	1032 E	1100 D	1039	N08	W31	5478	28 D	1	2	1039	8.10	9.00		75	S-SWF
KHARKOV	07	1035	1120		N05	W33	5478	45	2	2	1038	11.30	14.00	2.00		
GOOD HOPE	07	1036	1116	1044	N08	W32	5478	40	1		1044	3.90	4.70			
CLIMAX	07	1636			N12	W37	5478				1645					
CLIMAX	07	1902	2002	1912	N09	W37	5478	60	1		1912	2.20				
CLIMAX	07	2135	2240 D		N06	W39	5478				2143					
VOROSHILOV	08	0116	0204	0120	N14	W40	5478	48 D	2	2	0120	4.21	5.63		90	S-SWF
ATHENS	08	0747	0829		N12	W42	5478	42	2	4		6.00	8.20			S-SWF
GOOD HOPE	08	0752	0839	0756	N13	W45	5478	47	2		0756	3.90	5.80			
SYDNEY	09	0429	0444	0432	N15	W57	5478	24	1	3	0432	1.50	2.00			
SYDNEY	09	0453	0502	0458	N15	E78	5491	9	1	2	0458	.50	2.00			
SYDNEY	09	0554	0658		N05	W50	5478	64	2	2	0644	6.00	10.00			
ATHENS	09	0737 E	0807		N06	W54	5478	30 D	1	3		1.70	2.90			
GOOD HOPE	09	1313	1323 D	1319	N12	W55	5478	10 D	1		1319	1.40	2.60			
SYDNEY	10	0102	0150	0132	N15	W68	5478	48	2	3	0132	2.50	6.00			
SYDNEY	10	0332	0351	0340	N20	W54	5478	19	1	3	0340	1.50	3.00			
SYDNEY	10	0512	0537 D	0518	N15	W70	5478	25 D	2+	2	0518	5.00	12.00			S-SWF
ATHENS	10	0743	0748		N08	W63	5478	5	1+	3		1.70	3.60			
GOOD HOPE	10	1221	1253	1234	N09	W19	5484	32	1		1234	2.60	2.80			
GOOD HOPE	10	1512	1533 D	1519	N15	W79	5478	21 D	1		1519	1.50				
KHARKOV	11	0910 E	0955 D	0932	S17	W44	5482	45 D	2	2	0932	11.30	17.80	2.00		
GOOD HOPE	11	0923 E	0957	0929 U	S16	W44	5482	34 D	2		0929	3.70	5.30			
KRASNYA	11	0928 E	0942 D	0930	S03	E73	5494	14 D	1+	2	0930	4.49	20.00		65	
SYDNEY	11	2234	2258	2243	N14	W40	5483	24	1	2	2243	2.00	2.00			
VOROSHILOV	13	0227	0243	0228	N15	E24	5491	16	1	1	0228	1.86	2.15		71	
SYDNEY	13	0227	0245	0229	N15	E22	5491	18	1	2	0229	2.00	2.00			
SYDNEY	14	0022	0057	0033	N19	W72	5483	35	2	3	0033	2.00	7.00			
VOROSHILOV	14	0338	0349	0340	N18	W76	5483	11	1+	1	0340	1.96	6.97		65	
VOROSHILOV	15	0209 E	0239	0230	S17	W80	5482	30 D	1	1	0230	.52	2.18		66	
VOROSHILOV	15	0343	0348 D	0345	S18	E90	5500	5 D	1+	1	0345	.43	3.09		80	
GOOD HOPE	15	0918	0937	0920	N10	W86	5484	19	1		0920	.30				
NIZAMIAH	16	0600	0611	0605	N07	W57	5495	11	1+	2	0605	1.82	3.44	2.00		
SYDNEY	17	0358	0436	0412	S08	W37	5490	38	2	3	0412	4.00	5.00			Slow S-SWF
NIZAMIAH	17	0401	0415	0406	S06	W34	5490	14	1+	2	0406	1.82	2.19	2.10		
PIRCULI	17	0810	0826	0816	S12	E06	5494	16	1	1	0816	3.21	3.38		55	
TASHKENT	18	0602 E	0614 D		N24	E65	5502	12 D	1	2	0607	1.45	5.00	2.40	65	

SOLAR FLARES

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OBSERVATORY	DATE DEC 1959	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
TASHKENT	18	0636 E	0700 D	0638	S07	W53	5490	24 D	1+	2	0639	2.55	4.00	4.30	80	S-SWF
SYDNEY	19	0013	0019 D		S10	W62	5490	6 D	1	2	0018	1.00	2.00			
NIZAMIAH	19	0337	0400	0345	S08	W63	5490	23	1+	2	0345	1.82	4.02	2.20		S-SWF
SYDNEY	19	0343	0405	0345	S08	W62	5490	22	1	2	0345	1.50	4.00			
SYDNEY	19	0415	0423		N24	E56	5502	8	1	1	0419	1.50	3.00			
GOOD HOPE	19	1039	1112	1042	S04	W32	5494	33	1		1042	1.70	2.00			
SYDNEY	20	0009	0013 D		N23	E42	5502	4 D	1	3	0013	1.50	2.00			
VOROSHILOV	20	0012	0029	0015	N22	E42	5502	17	1	2	0015	3.22	4.78		66	
VOROSHILOV	20	0048	0110	0058	S10	W80	5490	22	2	2	0058	1.35	5.44		87	
SYDNEY	20	0111	0125	0115	N23	E41	5502	14	1	3	0115	2.50	4.00			
VOROSHILOV	20	0112	0121	0114	N22	E41	5502	9	1	2	0114	2.33	3.47		76	
SYDNEY	20	0131	0152	0144	N10	W06	5497	21	1	2	0144	2.00	2.00			
VOROSHILOV	20	0132	0152	0134	N10	W06	5497	20	1	2	0134	3.41	3.52		68	
VOROSHILOV	20	0144	0228	0201	S17	E21	5500	44	1	2	0201	1.97	2.20		68	
SYDNEY	20	0333	0349	0336	N22	E40	5502	16	1	3	0336	1.50	2.00			
ALMA-ATA	20	0608	0628	0616	S18	E20	5500	20	1	2	0616	2.63	2.90		48	
ALMA-ATA	20	0732	0802 D	0754	N11	E24	5501	30 D	1+	2	0754	5.61	6.40		50	
GOOD HOPE	20	0749	0806	0754	N10	E23	5501	17	1		0754	2.30	2.50			
CLIMAX	20	1605			N04	W46	5493				1615					
VOROSHILOV	21	0043	0350 D	0049	S05	W55	5494	7 D	2	2	0049	3.58	5.98		80	
SYDNEY	21	0053 E	0122		S04	W51	5494	29 E	2	1	0053	6.00	10.00			
VOROSHILOV	21	0139	0147	0140	N15	W85	5491	8	1+	2	0140	.90	4.44		81	
SYDNEY	21	0143	0159		N24	E26	5502	16	1	1	0147	4.00	5.00			
VOROSHILOV	21	0144	0213	0146	N24	E30	5502	29	1+	2	0146	3.10	3.92		93	
SYDNEY	21	0219	0250 D	0226	N20	E33	5502	31 D	1	1	0226	2.00	3.00			
VOROSHILOV	21	0316	0344	0318	N10	E12	5501	28	1	1	0318	2.86	2.94		78	
ALMA-ATA	21	0500 E	0610 D	0508	S13	E12	5500	70 D	1	2	0508	3.61	3.90		49	
ALMA-ATA	21	0500 E	0610 D	0508	N10	E09	5501	70 D	1	2	0508	1.33	1.40		47	
VOROSHILOV	24	0341	0434	0356	N25	W10	5502	53	1+	2	0356	2.86	3.32		84	Slow S-SWF
SIMEIZ	25	0858 E	0858		N25	W28	5502		1	1	0849	4.62	5.90	2.40		
GOOD HOPE	25	1303	1308 D	1305 U	S17	W57	5500	5 D	1		1305	1.20	2.30			
GOOD HOPE	25	1338 E	1405		N28	E62	5509	27 D	1		1339	1.30	3.60			
VOROSHILOV	27	0023	0039	0025	S19	W76	5500	16	1	2	0025	.72	2.28		74	
GOOD HOPE	27	0729	0736	0731	N03	W48	5501	7	1		0731	1.70	2.50			
GOOD HOPE	27	0834	0913	0837	S19	W85	5500	39	1		0837	.60				
GOOD HOPE	27	1021	1035	1025	N11	E58	5511	14	1		1025	1.70	3.30			
GOOD HOPE	27	1135	1202	1140	S18	W87	5500	27	1+		1140	2.20				
ALMA-ATA	28	0500 E	0800 D	0708	N09	W32	5505	180 D	1+	2	0708	6.59	8.10		48	
SYDNEY	29	0011	0027	0013	N20	E54	5513	16	1	2	0013	2.00	3.50			
NIZAMIAH	29	0320 E	0330 D		N07	W41	5505	10 D	1	1	0320	1.82	2.44	1.50		
ALMA-ATA	30	0516 E	0800 D	0735	N10	W60	5505	164 D	2	2	0735	6.28	13.70		49	
SYDNEY	31	0354	0401 D	0357	N20	W66	5506	67 D	1	2	0357	1.50	4.00			
PIRCULI	31	0725	0810	0745 U	S10	E62	5514	45	1	3	0745	1.84	3.71		52	

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		START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	McMATH PLAGE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GOOD HOPE	31	0854	0920	0858	S26	E82	5515	26	1		0858	.90				

COMMERCE - STANDARDS - BOULDER

These flare reports are addenda to the December 1959 flares published in CRPL-F 185 Part B, January 1960.

CAPRI G ANACAPRI - GERMAN
CAPRI S ANACAPRI - SWEDISH
GOOD HOPE ROYAL OBSERVATORY, CAPE OF GOOD HOPE
KIEV* KIEV UNIVERSITY
KODAIKNAL KODAIKANAL
KRASNYA KRASNAYA PAKHRA
LOCKHEED LOS ANGELES
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

LOCKHEED OBSERVATIONS: ALL VALUES IN THE MAXIMUM INTENSITY COLUMN ARE ARBITRARY UNITS ON A SCALE OF 10 TO 40 - NOT PERCENT OF THE CONTINUOUS SPECTRUM.