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Jan 69

## SOLAR FLARES

### Confirmed

JANUARY 1969

OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %
					LAT.	MER. DIST.												
GRP20078	01	1441	1450	1444	N19	W75	.974	9842	27.0	9	-N						2 2 2 4	
MCMA	01	1440	1450	1445	N19	W74	.970	9842	27.1	10	-N	C	1445	.31	1.00			E
CANR	01	1441	1449	1443	N19	W76	.977	9842	26.9	8	1N	C		.80	2.10			H
079 SACP	01	1643	1652	1647	N21	W74	.971	9842	27.1	9	--N	C		.38	.88			2
081 HALE	01	2200	2227	2206	N22	W61	.903	9842	28.3	27	--F	2 C	2206	.52				3
GRP20083	02	0034	0048	0038	N23	W62	.912	9842	28.4	14	-N			.82				3 3 3 4
MANI	02	0031	0050	0038	N22	W60	.897	9842	28.5	19	-N	2	0038	1.03	1.90			E
MITK	02	0034	0049	0037	N22	W63	.917	9842	28.3	15	-F	C	0037	.72				E
CRON	02	0036	0046	0039	N24	W64	.926	9842	28.2	10	-N	C		.70	1.50			
GRP20085	02	0210	0224	0215	S23	W79	.980	9841	27.2	14	--F			.54				3 3 3 6
MANI	02	0203	0223	0213	S23	W77	.974	9841	27.3	20D	-N	1	0213	.57	1.30			
HALE	02	0213	0228	0218	S22	W79	.980	9841	27.2	15	1F	3 C	0218	.52				DG
MITK	02	0213	0221	0215	S23	W80	.984	9841	27.1	8	-F	C	0215	.52				
GRP20086	02	0221	0229	0224	S16	E13	.312	9849	3.1	8	-N			1.01				3 3 3 5
HALE	02	0221	0231	0223	S16	E13	.312	9849	3.1	10	-B	3 C	0223	.88	.90			
MANI	02	0221	0228	0226	S16	E13	.312	9849	3.1	7D	-N	2	0226	1.03	1.10			E
MITK	02	0222	0228	0223	S16	E14	.323	9849	3.1	6	-N	C	0223	1.13	1.20			E
GRP20094	02	1141	1159	1144	S22	W83	.991	9841	27.3	18	1N			.80				4 4 4 5
CAPS	02	1140E	1207D		S21	W78	.977	9841	27.6	27D	1N	2	1143	1.00				E
CATA	02	1140	1155D	1140	S20	W85	.995	9841	27.1	15D	1R		1140	.63				763
CANR	02	1141	1149	1143	S22	W80	.983	9841	27.5	8	1N	C		1.00	3.30			
MONT	02	1142	1203	1145	S23	W88	.999	9841	26.9	21	-N	C	1145	.57				
GRP20096	02	1533	1540	1535	N25	E77	.984	9855	8.4	7	-N			.50				2 2 2 2
SACP	02	1532	1542	1535	N25	E76	.981	9855	8.3	10	-N	C		.39	.98			
CANR	02	1533	1538	1534	N24	E78	.986	9855	8.5	5	-N	C		.60	1.80			H
GRP20097	02	1705	1713	1706	N25	E76	.981	9855	8.4	8	--N			.25				2 2 2 3
SACP	02	1704	1713	1706	N25	E74	.974	9855	8.3	9	-N	C		.29	.69			
MCMA	02	1705	1706D		N25	E78	.986	9855	8.6	1D	-N	P	1706	.21	.80			D
GRP20098	02	1725	1740	1732	N21	E77	.982	9855	8.5	15	-N			.50				3 3 3 3
SACP	02	1720	1743	1736	N22	E75	.976	9855	8.3	23	-N	C		.48	1.17			
MCMA	02	1725	1740	1730	N21	E77	.982	9855	8.5	15	-N	C	1730	.31	1.50			E
CANR	02	1729	1737	1731	N19	E79	.987	9855	8.7	8	1N	C		.70	2.10			
099 SACP	02	2051	2104	2059	N23	E73	.969	9855	8.3	13	--N	C		.29	.66			1
GRP20100	02	2115	2143	2128	N20	W75	.975	9842	28.3	28	1N			.91				3 3 3 3
SACP	02	2114	2143	2128	N19	W75	.974	9842	28.3	29	1N	C		1.07	2.55			
CULG	02	2116	2140D	2128	N21	W75	.975	9842	28.3	24D	1N	P	2128	1.03				
HUAN	02	2132E	2139D		N20	W75	.975	9842	28.3	7D	-F	1 P	2132	.62				
GRP20101	02	2248	2257	2250	N23	E72	.965	9855	8.4	9	-N			.64				2 2 2 2
SACP	02	2247	2300	2250	N23	E72	.965	9855	8.3	13	-N	C		.58	1.29			
CRON	02	2248	2254	2250U	N22	E71	.960	9855	8.3	6	-N	C		.70	1.80			E
GRP20102	03	0320	0332	0322	N24	E68	.948	9855	8.2	12	-N			.77				2 2 2 2
CRON	03	0320	0330	0321	N23	E65	.930	9855	8.0	10	-N	C		.60	1.40			
MITK	03	0320	0333	0322	N24	E70	.957	9855	8.4	13	-N	C	0322	.93				E
103 MITK	03	0400	0412	0408	N26	E70	.959	9855	8.4	12	-N	C	0408	.83				3
GRP20104	03	0439	0538	0453	N26	E72	.968	9855	8.6	59	2N			1.96				3 1 1 4
CULG	03	0439E	0538	0503	N26	E72	.968	9855	8.6	59D	2N	P	0503	1.96				HK
CRON	03	0439	0517	0443	N30	E78	.988	9855	9.0	38	1N	C		1.40	4.20			EH
MANI	03	0447E	0535		N22	E70	.955	9855	8.4	48D	1R	2	0447	1.86	4.32			
GRP20105	03	0554	0630	0601	N21	E69	.949	9855	8.4	36	1N			1.26				3 3 3 3
CULG	03	0554	0650	0602	N21	E68	.944	9855	8.3	56	1N	C	0602	1.13				KRZ
MANI	03	0555E	0600D		N22	E70	.955	9855	8.5	5D	1N	2	0559	1.55	3.60			
CRON	03	0559E	0609	0559U	N21	E70	.954	9855	8.5	10D	1R	C		1.10	2.60			H
GRP20106	03	0918	0940	0922	N17	W05	.356	9847	3.0	22	--N			.47				2 2 2 3
CATA	03	0915	0940	0920	N17	W04	.352	9847	3.1	25	-R			.63	.68			243
HTPR	03	0920	0940	0924	N16	W06	.344	9847	2.9	20	-F	C	0924	.31	.30			D
GRP20107	03	0942	0953	0946	N19	E69	.947	9855	8.6	11	-N			1.18				3 3 3 4
CATA	03	0935E	0950	0945	N16	E68	.939	9855	8.5	15D	-R			.87				339
MONT	03	0945	0959	0946	N20	E69	.948	9855	8.6	14	-B	C	0946	2.27				H
HTPR	03	0946	0950	0947	N20	E70	.953	9855	8.7	4	-F	C	0947	.41				



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	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %				
					LAT.	MER. DIST.															
134 MCMA	04	1733	1752	1737	N24	E48	.810	9855	8.3	19	--N	C	1737	.41	.70			E	2		
GRP20135	04	2004	2019	2009	N24	E47	.801	9855	8.4	15	--R			.45				2	2	2	2
MCMA	04	2002	2021D	2008	N24	E47	.801	9855	8.4	19D	-B	C	2008	.41	.70			EL			
SACP	04	2005	2017	2009U	N24	E47	.801	9855	8.4	12	-N	C		.48	.64						
GRP20136	04	2010	2022	2016	N17	W37	.667	9847	2.1	12	--F			.65				2	2	2	2
MCMA	04	2010	2021D	2015	N17	W37	.667	9847	2.1	11D	-N	P	2015	.62	.80			E			
SACP	04	2010	2022U	2016	N16	W36	.650	9847	2.1	12D	-F	C		.68	.77						
GRP20137	04	2035	2224	2109	N27	E53	.861	9855	8.8	109	2R			4.71				3	3	3	3
CULG	04	2035E	2224	2110	N28	E53	.864	9855	8.8	109D	2B	P	2110	5.36	10.40			UE			
SACP	04	2058	2150U	2109U	N28	E53	.864	9855	8.8	52D	2B	C		4.27	6.32						
HOUT	04	2100D	2141D	2109U	N25	E52	.847	9855	8.8	41D	2B	C		4.50	8.60			E			
GRP20138	04	2338	2350	2341	N23	E46	.788	9855	8.4	12	--F			.36				2	2	2	4
MANI	04	2337	2352	2340	N22	E47	.793	9855	8.5	15	-F	2	2340	.52	.82						
SACP	04	2339	2347	2341	N22	E45	.779	9855	8.4	8	-N	C		.20	.25						
GRP20140	05	0308	0329	0314	N22	E42	.747	9855	8.3	21	1N			2.11				5	5	5	6
CULG	05	0306	0337	0314	N22	E41	.737	9855	8.2	31	1N	C	0314	2.06	3.00			H			
CRON	05	0309	0325	0313	N20	E40	.716	9855	8.1	16	1N	C		1.90	2.90						
MITK	05	0310	0328	0314	N23	E42	.752	9855	8.3	18	1R	C	0314	2.17	3.30			EH			
KODA	05	0313E	0326	0313	N22	E44	.766	9855	8.4	13D	1N	P	0314	1.93	2.90	2.68					
MANI	05	0313E	0330	0315	N22	E43	.756	9855	8.4	17D	1R	2	0315	2.48	3.81						
GRP20148	05	1128	1146	1130	N25	E41	.754	9855	8.6	18	--N			.40				2	2	2	6
HTPR	05	1128	1137	1137	N23	E40	.733	9855	8.5	9	-F	C	1132	.21	.30						
CATA	05	1130E	1155D	1130	N26	E41	.759	9855	8.6	25D	-B		1130	.58	.85			229			
GRP20149	05	1145	1158	1148	N22	E40	.727	9855	8.5	13	--F			.64				2	2	2	6
HTPR	05	1144	1200	1148	N23	E40	.733	9855	8.5	16	-F	C	1148	.41	.60			E			
CAPE	05	1145	1155	1148	N21	E39	.712	9855	8.4	10	-F	C	1148	.86	1.30						
GRP20151	05	1250	1318	1258	N05	E50	.773	9856	9.3	28	--R			.62				3	2	2	6
HTPR	05	1246	1308	1250	N04	E48	.749	9856	9.1	22	-F	C	1250	.41	.60			E			
CATA	05	1250E	1325	1305	N05	E47	.740	9856	9.1	35D	-R		1305	.93	1.39			331			
CAPS	05	1250E	1310	1310	N05	E53	.805	9856	9.5	20D	-R	3	1304	.30	.50			204	C		
GRP20152	05	1259	1320	1310	S33	E66	.928	9857	10.5	21	--R			.46				2	2	2	6
CATA	05	1250E	1325	1310	S34	E66	.929	9857	10.5	35D	-R		1310	.40				257			
HTPR	05	1307	1315	1310	S32	E65	.921	9857	10.4	8	-N	C	1310	.52	1.00						
GRP20154	05	1403	1504	1445	N22	E38	.708	9855	8.4	61	--N			.47				6	5	5	9
HTPR	05	1400	1505	1505	N20	E38	.696	9855	8.4	65	-N	C	1440	.62	.90			H			
SANM	05	1401E	1527	1438	N22	E37	.698	9855	8.4	86D	-F	P	1438	.48	.67			EHU			
MCMA	05	1409E	1500	1500	N24	E37	.711	9855	8.4	51D	-N	C	1439	.36	.50			EHK			
CAPS	05	1433E	1450	1450	N21	E42	.742	9855	8.8	17D	-F	3	1438	.20	.30	142		CH			
SACP	05	1435E	1457	1443U	N23	E38	.714	9855	8.5	22D	-N	C		.68	.81						
CAPE	05	1452	1505	1455	N20	E35	.664	9855	8.2	13	-N	C	1455	.78	1.10			H			
MCMA	05	1510	1526	1518	N24	E37	.711	9855	8.4	16	-N	C	1518	.31	.40			ES			
GRP20158	05	1614	1624	1618	N23	E37	.704	9855	8.5	10	--F			.50				2	2	2	5
MCMA	05	1614	1622	1615	N23	E37	.704	9855	8.5	8	-N	C	1615	.62	.90			E			
SACP	05	1614	1625	1621	N23	E36	.694	9855	8.4	11	-F	C		.38	.45						
GRP20159	05	1823	1834	1827	N07	E45	.721	9856	9.1	11	-N			.84				2	2	2	2
SACP	05	1822	1834	1826	N08	E45	.723	9856	9.1	12	-N	C		.87	1.04						
HOUT	05	1824	1833	1827U	N05	E44	.704	9856	9.1	9	-N	C		.80	1.10			H			
160 SACP	05	1858	1921	1909	N22	E72	.965	9858	11.2	23	--F	C		.48	1.07						
GRP20161	05	1912	1941	1929	N23	E34	.675	9855	8.4	29	--N			.64				2	2	2	3
HUAN	05	1909E	1944	1944	N22	E34	.668	9855	8.3	35D	-N	1	1929	.50	.64			ET			
SACP	05	1915	1938	1929	N23	E33	.665	9855	8.3	23	-N	C		.77	.89						
162 HUAN	05	2100	2116		N22	E34	.668	9855	8.4	16	--F	1	C	2102	.45	.59			E	3	
163 SACP	05	2242	2250	2245	S30	E60	.887	9857	10.4	8	--F	C		.29	.46						
164 MANI	05	2303	2312	2307	N03	E47	.736	9856	9.5	9	--F	2	2307	.57	.80						
GRP20166	05	2346	2356	2348	N19	E37	.679	9855	8.8	10	--F			.54				2	2	2	3
MANI	05	2345	2356	2349	N18	E37	.673	9855	8.8	11	-F	2	2349	.36	.49			E			
MITK	05	2346	2355	2347	N20	E36	.675	9855	8.7	9	-F	C	2347	.72	1.00						
GRP20168	06	0026	0038	0029	N22	E33	.658	9855	8.5	12	--F			.73				2	2	2	4
MANI	06	0025	0035	0028	N21	E33	.651	9855	8.5	10	-F	2	0028	.52	.68						
MITK	06	0027	0040	0030	N23	E32	.656	9855	8.4	13	-F	C	0030	.93	1.30			E			



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	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H <sub>z</sub>		MAX. INT. %	
					LAT.	MER. DIST.													
GRP20201	1969 JAN	07 0648	0726	0654	N04	E27	.470	9856	9.3	38	-B							3 2 2 5	
MITK		07 0643	0657D	0651	N05	E27	.475	9856	9.3	14D	-N		0651	.93	1.10			E	
CRON		07 0652	0715	0657	N03	E26	.451	9856	9.2	23	1R			2.80	3.10			E	
CAPE		07 0708	0726	0715	N02	E19	.339	9856	8.7	18	-F		0715	.91	1.00			H	
GRP20203		07 1047	1129	1101	S08	E34	.560	9859	10.0	42	--F			.74				2 2 2 4	
CAPS		07 1047	1124D		S08	E33	.546	9859	9.9	37D	-N	3	1051	.70	.80		170		
MONT		07 1048E	1129	1101	S07	E35	.574	9859	10.1	41D	-F		1101	.77					
GRP20208		07 1259	1338	1318	N04	E22	.395	9856	9.2	39	-N			1.16				2 2 2 5	
MONT		07 1259	1338	1318	N03	E23	.406	9856	9.3	39	-N		1318	1.50					
HUAN		07 1310E	1334D		N04	E21	.380	9856	9.1	24D	-N	1	1317	.81	.89			E	
209 SACP		07 1703	1729	1705	N28	E17	.583	9855	9.0	26	1R			2.03	2.19			2	
210 SACP		07 1840E	1850	1843	S11	E36	.594	9859	10.5	10D	--N			.29	.32			2	
GRP20211		07 1843	1907	1849	N04	E19	.350	9856	9.2	24	-N			1.78				2 2 2 2	
SACP		07 1840	1918	1849	N04	E19	.350	9856	9.2	38	-N	8		1.85	1.84				
HOUT		07 1845	1855	1849U	N03	E19	.344	9856	9.2	10	-N	8		1.70	1.90				
GRP20212		07 2006	2048	2019	S13	E62	.882	9861	12.5	42	-B			1.46				2 2 2 2	
SACP		07 2006	2036	2020	S12	E60	.865	9861	12.3	30	-R			1.36	2.02				
CULG		07 2018E	2100	2018	S14	E63	.890	9861	12.6	42D	1R		2018	1.55	3.00			UJKB	
GRP20213		07 2107	2150	2121	S15	E61	.875	9861	12.5	43	-N			1.00				3 3 3 4	
SACP		07 2106	2157	2126	S15	E60	.867	9861	12.4	51	-R			.97	1.43				
CULG		07 2107	2157	2120	S15	E62	.883	9861	12.5	50	1N		2120	1.24	2.40				
HOUT		07 2115E	2135	2117	S16	E62	.884	9861	12.5	20D	-N			.80	1.60				
214 SACP		07 2140	2211	2157	N04	E16	.305	9856	9.1	31	--N			.58	.57			3	
GRP20215		07 2145	2216	2151	S07	E37	.601	9859	10.7	31	-N			1.48				4 4 4 4	
SACP		07 2143	2216	2150	S07	E37	.601	9859	10.7	33	-N			1.56	1.70				
CULG		07 2143	2228	2157	S08	E38	.616	9859	10.8	45	1N		2152	2.27	2.75			S	
HOUT		07 2149	2205	2150U	S06	E36	.587	9859	10.6	16	-N			1.50	1.80				
HUAN		07 2201E	2201D		S08	E37	.602	9859	10.7		-N	1	2201	.57	.68			E	
216 SACP		07 2207	2217	2211	N20	E06	.413	9855	8.4	10	--N			.97	.98			3	
217 CRON		07 2304	2315	2310	S13	E60	.866	9861	12.5	11	-N			.90	1.80			E 2	
GRP20218		08 0026	0039	0028	N04	E14	.276	9856	9.1	13	--N			.81				2 2 2 5	
MANI		08 0025	0038	0028	N04	E13	.261	9856	9.0	13	-F	2	0028	.62	.65				
VORO		08 0026	0039	0028	N04	E14	.276	9856	9.1	13	-B		0028	1.00	1.06		90	EJ	
5 STATIONS REPORTING GROUP 20219. 0 STATIONS OBSERVING AND NOT REPORTING.																			
GRP20219		08 0100	0147	0106	N04	E15	.291	9856	9.2	47	1N			2.15				5 4 4 5	
VORO		08 0051	0058	0052	N04	E14	.276	9856	9.1	7	-B		0052	.70	.72		70	E	
CULG		08 0058	0157	0105	N04	E14	.276	9856	9.1	59	1N		0105	2.27	2.10				
MITK		08 0101	0138	0105	N03	E15	.283	9856	9.2	37	1N		0105	1.96	2.10			E	
CRON		08 0101	0145	0104	N04	E16	.306	9856	9.2	44	1N			2.10	2.20			EK	
MANI		08 0109E	0115D	0109	N03	E15	.283	9856	9.2	6D	1N	2	0109	2.27	2.40				
20219		08 0101	0152	0126	N04	E17	.320	9856	9.3	51	*1R			3.55				2 2 1 4	
CRON		08 0101	0145	0123	N04	E16	.306	9856	9.2	44	1N								
VORO		08 0101	0159	0129	N04	E17	.320	9856	9.3	58	1R		0129	3.55	3.76		96	EJ	
GRP20221		08 0235	0302	0244	S08	E26	.441	9859	10.1	27	-N			1.37				4 4 4 6	
MITK		08 0234	0309	0243	S08	E25	.426	9859	10.0	35	-N		0243	.72	.80			D	
VORO		08 0234	0317	0244	S07	E27	.455	9859	10.1	43	1R		0244	2.73	3.03		90	FJ	
CRON		08 0238	0255	0244	S09	E26	.444	9859	10.1	17	-N			1.60	1.80			E	
MANI		08 0243E	0304D		S08	E25	.426	9859	10.0	21D	-N	1	0244	.41	.50				
VORO		08 0256	0301	0259	S07	E27	.455	9859	10.1	5	1R		0259	1.91	2.11		87	EJ	
GRP20222		08 0430	0438	0433	N27	E12	.543	9855	9.1	8	--N			.81				2 2 2 3	
CRON		08 0429	0437	0432	N26	E12	.530	9855	9.1	8	-N			1.10	1.30			E	
MITK		08 0430	0438	0433	N28	E12	.557	9855	9.1	8	-N		0433	.52	.60			D	
223 CRON		08 0632	0700	0639	N32	E08	.596	9855	8.9	28	1F			2.00	2.50			EL 3	
		08 1130	1245	NO FLARE PATROL															
224 HUAN		08 1248	1254		S14	E52	.791	9861	12.4	6	-N	1	P 1254	.75	1.20			E 2	
GRP20226		08 1401	1416	1404	S13	E51	.779	9861	12.4	15	-N			.70				3 3 3 4	
HTRP		08 1400	1410	1403	S13	E52	.790	9861	12.5	10	-N		1403	.83	1.20				
SANM		08 1401	1422	1404	S13	E50	.769	9861	12.3	21	-B		1404	.97	1.50			E	
HUAN		08 1403E	1405D		S13	E52	.790	9861	12.5	2D	-N	1	P 1403	.31	.49			D	



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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS	
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %		
					LAT.	MER. DIST.														
261 SACP	1969 JAN 09	1740	1804	1750	N04	W05	.163	9856	9.4	24	--N	C		.39	.38				3	
GRP20262	09	1854	1950	1855	S14	E36	.600	9861	12.5	56	1F			1.82					3 2 2 3	
BOUL	09	1831	1900	1835	S17	E35	.598	9861	12.4	29	1N	8	C	1.80	2.30				E	
SACP	09	1854E	1856D	1855U	S13	E35	.584	9861	12.4	2D	1N	8	P	1.94	2.09					
HUAN	09	1859E	1950D		S14	E37	.614	9861	12.6	51D	1F	1	P	1859 1.70	2.05				E	
263 HUAN	09	1854E	1924		N25	W11	.512	9855	9.0	30D	--N	1	P	1910	.31	.35			D	2
264 HUAN	09	1933	1944		S08	E12	.218	9859	10.7	11	--F	1	C	1936	.25	.25			E	2
265 HUAN	09	1939	1950D		N24	W12	.504	9855	8.9	11D	--N	1	P	1948	.57	.65			E	2
267 BOUL	09	2214	2217	2215	S13	E32	.543	9861	12.3	3	-N		C		.90	1.10				2
GRP20268	09	2301	2347	2311	N30	W13	.589	9855	9.0	46	-F			1.94					2 2 2 3	
CULG	09	2254	0015	2312	N29	W14	.581	9855	8.9	81	1F		C	2312	2.58	3.24			U	
CRON	09	2308	2318	2310	N31	W12	.598	9855	9.1	10	-F		C		1.30	1.70				
GRP20269	10	0030	0043	0033	S17	E32	.559	9861	12.4	13	-N			1.16					2 2 2 4	
CRON	10	0030	0044	0032	S17	E31	.545	9861	12.3	14	-N		C	1.60	1.90					
MANI	10	0030E	0041	0033	S17	E33	.572	9861	12.5	11D	-N	2		0033 .72	.90					
GRP20271	10	0221	0330	0246	N05	W11	.246	9856	9.3	69	-N			1.01					2 2 2 7	
MITK	10	0221	0330	0246	N05	W12	.259	9856	9.2	69	-F		C	0246	.83	.90			E	
VORO	10	0251E	0255D		N05	W10	.233	9856	9.4	4D	-B		C	0253	1.18	1.22			98	EJ
GRP20272	10	0404	0423	0408	S14	E29	.504	9861	12.3	19	-N			1.81					4 4 3 5	
VORO	10	0402	0437D	0408	S12	E30	.511	9861	12.4	35D	1B		C	0408	2.28	2.62			136	DJ
MANI	10	0403	0431	0408	S15	E29	.509	9861	12.3	28	-N	2		0408	1.65	1.94				
CRON	10	0406	0414	0408	S15	E28	.495	9861	12.3	8	-N		C	1.50	1.80					
SIBE	10	0406	0411		S15	E30	.523	9861	12.4	5	-F		V						E	
GRP20277	10	0920	0925	0921	N21	W18	.509	9855	9.0	5	-N			1.00					3 3 3 9	
HTPR	10	0919	0925	0920	N22	W19	.530	9855	9.0	6	-N	8	C	0920	.77	.80				
CRON	10	0919	0925	0921	N21	W18	.509	9855	9.0	6	-N	8	C	.90	1.10					
MONT	10	0921	0926	0922	N21	W17	.501	9855	9.1	5	-B	8	C	0922	1.34					
GRP20279	10	1242	1249	1244	S15	E25	.453	9861	12.4	7	--F			.83					2 2 2 5	
MONT	10	1241	1248	1244	S15	E25	.453	9861	12.4	7	-N		C	1244	1.13					
HTPR	10	1242	1250		S15	E25	.453	9861	12.4	8	-F		C	1246	.52	.60				
	10	1655	1710	NO FLARE PATROL																
GRP20281	10	1711	1807	1720	N26	W34	.702	9855	8.2	56	--N			.42					2 2 2 2	
MCMA	10	1711E	1735D		N23	W35	.689	9855	8.1	24D	-N		P	1712	.31	.40			DH	
HALE	10	1713E	1807	1720	N28	W32	.700	9855	8.3	54D	-N	1	P	1720	.52	.70			H	
282 HALE	10	1739	1802	1745	N08	W35	.601	9864	8.1	23	-B	1	C	1745	.77	1.00				2
283 HALE	10	1752	1812	1758	S13	E21	.384	9861	12.3	20	--N	1	C	1758	.31	.30				2
284 HALE	10	1807	1813D	1810	S11	E21	.374	9861	12.3	6D	--N	1	C	1810	.41	.40			F	3
286 HALE	10	1908	1941	1911	N28	W33	.708	9855	8.3	33	--N	2	C	1911	.21	.30			H	2
287 HALE	10	1913	1953	1921	N12	W78	.982	9851	5.0	40	1F	1	C	1921	.57					3
GRP20290	11	0056	0111	0059	S16	E14	.312	9861	12.1	15	--B			.60					3 3 3 5	
MANI	11	0055	0125	0059	S17	E14	.323	9861	12.1	30	-N	2		0059	.83	.86				
VORO	11	0056	0103	0059	S16	E14	.312	9861	12.1	7	-B		C	0059	.46	.49			85	DHJL
HALE	11	0057	0106	0100	S16	E13	.300	9861	12.0	9	-B	2	C	0100	.52	.50			UH	
GRP20291	11	0148	0201	0150	S18	E16	.357	9861	12.3	13	-B			1.20					4 4 4 7	
HALE	11	0147	0207	0149	S18	E16	.357	9861	12.3	20	-B	2	C	0149	1.65	1.80				
MANI	11	0148E	0205	0151	S18	E17	.369	9861	12.4	17D	-N	2		0151	1.13	1.22				
VORO	11	0148	0156	0149	S18	E16	.357	9861	12.3	8	-B		C	0149	.82	.89			89	EL
CRON	11	0148	0154	0149	S19	E15	.356	9861	12.2	6	-N		C		1.20	1.30				
GRP20294	11	0310	0328	0317	S13	E90	1.000	9868	17.9	18	1B			.73					2 2 2 7	
HALE	11	0310	0329	0315	S14	E89	.999	9868	17.8	19	1B	2	C	0315	.62					
MANI	11	0312E	0327	0319	S11	E90	1.000	9868	17.9	15D	1N	2		0319	.83	2.60				
GRP20296	11	0422	0430	0424	S11	W08	.182	9859	10.6	8	--N			.73					3 3 3 6	
MANI	11	0421	0435	0426	S11	W08	.182	9859	10.6	14	-F	2		0426	.36	.37				
CRON	11	0422	0427	0423	S11	W09	.195	9859	10.5	5	-N		C		1.00	1.00			E	
VORO	11	0422	0427D	0423	S11	W08	.182	9859	10.6	5D	-B		C	0423	.82	.84			83	E





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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MC MATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H <sub>g</sub>	MAX. INT. %			
331 MCMA	12	1848	1916		S14	W07	.207	9861	12.3	28	--N	C	1903	.41	.40			EHK	3	
GRP20332	12	1916	1956	1924	S07	W34	.558	9859	10.3	40	-B			1.31				3 3 3 3		
HALE	12	1916	1953	1921	S07	W34	.558	9859	10.3	37	-B	3	C	1921	1.44	1.70		H		
SACP	12	1916	2000	1925	S08	W34	.559	9859	10.3	44	-R		C		1.46	1.55				
MCMA	12	1917	1955	1925	S06	W33	.543	9859	10.3	38	-R		C	1925	1.03	1.20		E		
333 HALE	12	2212	2222	2213	S07	W36	.587	9859	10.2	10	--N	3	C	2213	.41	.50			2	
GRP20334	12	2224	2331	2236	S14	W04	.183	9861	12.6	67	--N			.73				3 2 2 3		
SACP	12	2223	2314	2235	S14	W04	.183	9861	12.6	51	-N		C		.88	.86				
HALE	12	2225	2348	2236	S14	W04	.183	9861	12.6	83	-N	3	C	2236	.57	.60				
MITK	12	2252E	2325		S14	W04	.183	9861	12.7	33D	-N		C	2252	1.03	1.10				
GRP20335	13	0032	0049	0033	S14	W12	.263	9861	12.1	17	--R			.54				2 2 2 4		
VORO	13	0032	0039	0032	S14	W10	.239	9861	12.3	7	-R		C	0032	.82	.84		78	EL	
HALE	13	0032	0058	0033	S13	W11	.240	9861	12.2	26	-R	2	C	0033	.26	.30				
HALE	13	0042	0133	0054	S13	W16	.309	9861	11.8	51	-N	2	C	0054	.31	.30				
GRP20338	13	0309	0329	0312	S08	W38	.615	9859	10.3	20	1B			1.76				4 4 4 4		
HALE	13	0307	0323D	0310	S07	W38	.614	9859	10.3	16D	1B	2	P	0310	1.86	2.30			F	
VORO	13	0308	0328	0310	S08	W37	.601	9859	10.4	20	1B		C	0310	1.73	2.20		125	E	
MITK	13	0308	0331	0311	S08	W38	.615	9859	10.3	23	-N		C	0311	1.55	2.00			E	
CRON	13	0313	0329	0317	S07	W39	.628	9859	10.2	16	1N		C		1.90	2.50			E	
340 VORO	13	0439	0446	0440	S13	W14	.281	9861	12.1	7	--R		C	0440	.64	.67		91	EL	
341 CRON	13	0814	0830	0818	N21	W80	.991	9869	7.3	16	-N		C		.40	1.30			2	
343 SANM	13	1441	1456	1443	S07	W45	.705	9859	10.2	15	--N		C	1443	.65	.92			E	
GRP20344	13	1540	1559	1548	S13	W15	.295	9861	12.5	19	--F			.48				2 2 2 3		
SANM	13	1540	1556	1544	S12	W15	.287	9861	12.5	16	-F		C	1544	.48	.50			E	
SACP	13	1548E	1602	1552	S13	W14	.281	9861	12.6	14D	-N		C		.48	.48				
345 SACP	13	1657	1707	1702	S08	W46	.718	9859	10.3	10	--F		C		.58	.69			2	
GRP20349	13	1938	1952	1944	N20	W89	1.000	9869	7.1	14	-N			.41				2 2 1 5		
HALE	13	1935	1951	1942	N19	W88	1.000	9869	7.2	16	1N	1	C	1942	.41				D	
MCMA	13	1940	1952	1945	N20	W90	1.000	9869	7.1	12	-N		C	1945						
GRP20352	13	2132	2144	2135	S07	W49	.753	9859	10.2	12	--F			.26				2 2 2 5		
HUAN	13	2130	2140	2133	S07	W49	.753	9859	10.2	10	-F	2	C	2133	.21	.31			D	
HALE	13	2134	2147	2137	S06	W48	.741	9859	10.3	13	-F	2	C	2137	.31	.50				
353 HUAN	13	2139	2152D		S12	W17	.317	9861	12.6	13D	--F	1	C	2150	.41	.43			E	
	13	2202	2218	NO FLARE PATROL																
GRP20356	14	0155	0201	0156	S14	W27	.474	9861	12.1	6	--B			.86				2 2 2 4		
CRON	14	0154	0202	0156	S12	W26	.451	9861	12.1	8	-N		C		.90	1.00				
VORO	14	0155	0159	0156	S16	W27	.484	9861	12.1	4	-B		C	0156	.82	.93		85	EJL	
357 CRON	14	0456	0507	0501	S11	W23	.402	9861	12.5	11	--F		C		1.30	1.40			4	
358 CRON	14	0511	0525	0514	N03	W85	.997	9864	7.8	14	1N		C		.90	3.10			H	
359 CRON	14	0540	0546	0541	S10	W50	.765	9859	10.5	6	1N		C		1.50	2.40			3	
GRP20362	14	0855	0923	0900	S15	W29	.506	9861	12.2	28	-N			1.27				3 3 3 7		
CRON	14	0855	0910	0900	S17	W29	.516	9861	12.2	15	-N		C		1.00	1.10			E	
MANT	14	0855E	0915D	0900	S16	W27	.484	9861	12.3	20D	-N	2		0900	.72	.83				
CAPS	14	0906E	0945D		S12	W31	.524	9861	12.1	39D	1N	1		0909	2.10	2.40				
	14	1045	1102	NO FLARE PATROL																
	14	1108	1130	NO FLARE PATROL																
GRP20363	14	1247	1321	1307	N27	W79	.991	9855	8.6	34	--F			.31				2 2 2 3		
HUAN	14	1247	1321		N28	W80	.993	9855	8.5	34	-F		C	1306	.25				DT	
SANM	14	1259E	1443	1307	N25	W77	.985	9855	8.8	104D	-F	1	P	1307	.36	2.07			D	
GRP20364	14	1343	1443	(1348)	N26	W79	.991	9855	8.6	60	--F			.40				2 2 2 3		
SANM	14	1259E	1443		N25	W77	.985	9855	8.8	104D	-F		C	1349	.48	2.80			D	
HUAN	14	1343	1400D		N27	W80	.993	9855	8.6	17D	-N	1	C	1347	.31					
GRP20365	14	1416	1422	1417	S11	W58	.846	9859	10.2	6	--F			.43				2 2 2 3		
HUAN	14	1413	1419	1415	S10	W58	.846	9859	10.2	6	-N	1	C	1415	.37	.67				
SANM	14	1418	1425	1419	S11	W58	.846	9859	10.2	7	-F		C	1419	.48	.87			E	









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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS	
	DATE	START	END	MAX. PHASE	APPROX. MER.		CENTRAL DISTANCE	MCMMATH PLAGE REGION	CMP DAY				TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %
					LAT.	MER. DIST.												
GRP20493	20	1235	1241	1236	N16	E13	.417	9873	21.5	6	--N							3 3 3 6
HTPR	20	1235	1240	1236	N16	E14	.425	9873	21.6	5	--F	C	1236	.86	.60			H
MONT	20	1235	1242	1236	N16	E12	.409	9873	21.4	7	--N	C	1236	1.55				H
HUAN	20	1235	1242		N16	E12	.409	9873	21.4	7	--N	1 C	1236	.50	.54			H
GRP20495	20	1726	1820	1736	S22	E05	.303	9875	21.1	54	--N			.44				3 3 3 4
HALE	20	1721	1836	1734	S22	E04	.299	9875	21.0	75	--N	2 C	1734	.83	.90			F
SACP	20	1727	1819	1734	S22	E05	.303	9875	21.1	52	--N	C		.29	.29			
MCHA	20	1730	1805	1740	S23	E05	.319	9875	21.1	35	--F	C	1740	.21	.20			DL
GRP20496	20	1803	1827	1806	N16	E07	.377	9873	21.3	24	--N			.38				2 2 2 5
HALE	20	1802	1835	1806	N16	E07	.377	9873	21.3	33	--N	2 C	1806	.36	.40			
SACP	20	1803	1819	1806	N16	E07	.377	9873	21.3	16	--N	C		.39	.39			
GRP20499	20	1932	1945	1934	N16	E07	.377	9873	21.3	13	--F			.34				4 4 4 4
HUAN	20	1927	1932	1928	N17	E08	.397	9873	21.4	5	--F	1 C	1928	.31	.34			D
HALE	20	1932	1948	1935	N16	F06	.372	9873	21.3	16	--N	2 C	1935	.31	.30			D
SACP	20	1933	1946	1935	N16	E06	.372	9873	21.3	13	--N	C		.39	.39			
MCHA	20	1934	1941	1936	N17	E07	.392	9873	21.3	7	--F	C	1936	.36	.40			EH
HUAN	20	1935	1943	1938	N16	E07	.377	9873	21.3	8	--F	2 C	1938	.25	.27			D
500 HALE	20	2050	2105	2056	N17	E06	.388	9873	21.3	15	--N	2 C	2056	.26	.30			3
GRP20501	20	2140	2157	2142	S16	E09	.243	9875	21.6	17	--N			.28				2 2 2 2
HALE	20	2140	2157	2142	S15	E09	.231	9875	21.6	17	--N	2 C	2142	.21	.20			E
HUAN	20	2140	2153D		S16	E08	.233	9875	21.5	13D	--N	1 C	2143	.35	.35			E
502 HALE	20	2153	2157	2153	N14	E05	.336	9873	21.3	4	--F	2 C	2153	.26	.30			HV
503 HALE	20	2312	2335	2315	N24	E13	.525	9876	21.9	23	--N	2 C	2315	.21	.20			3
504 MANI	21	0657E	0710	0659	N17	E33	.635	9879	23.8	13D	--F	2	0659	.83	1.07			2
504 MANI	21	0657	0725	0708	N26	E38	.746	9879	24.1	28	*--N	2	0708	1.24	1.88			2
GRP20505	21	0726	0823	0738	N24	E38	.733	9879	24.2	57	1N			3.09				2 1 1 4
CULG	21	0726E	0823D	0738	N24	E38	.733	9879	24.2	57D	1N	P	0738	3.09	4.20			U
HTPR	21	0918E	0910		N25	E38	.739	9879	24.2	52D	--N	C	0918	1.03	1.50			
GRP20506	21	0859	0912	0901	S38	E08	.555	9875	22.0	13	--F			.39				2 2 2 6
MONT	21	0857	0912	0901	S38	E08	.555	9875	22.0	15	--F	C	0901	.46				
HTPR	21	0900	0912		S37	E08	.540	9875	22.0	12	--F	C	0902	.31	.40			H
509 HUAN	21	1610	1615		N16	W04	.366	9873	21.4	5	--F	1 C	1612	.21	.22			D
511 SACP	21	2201	2220	2205	N22	E27	.614	9879	23.9	19	--N	C		.20	.21			2
512 MANI	22	0018	0047	0025	N08	W19	.392	9873	20.6	29	--N	2	0025	1.13	1.24			2
GRP20517	22	1435	1455	1443	N12	E38	.663	9882	25.5	20	--N			.91				3 3 3 4
SANM	22	1434	1453	1442	N12	F36	.639	9882	25.3	19	--N	C	1442	.80	1.00			E
MONT	22	1435	1448	1443	N12	E39	.675	9882	25.5	13	--N	C	1443	1.13				
CAPS	22	1435E	1504D		N12	E38	.663	9882	25.5	29D	--N	2	1444	.80	1.10			176 E
518 SANM	22	1555	1601D		N12	E35	.627	9882	25.3	6D	--F	P	1558	.17	.20			2
519 HUAN	22	1635	1642D		N12	W25	.504	9873	20.8	7D	--F	1 P						D
521 HALE	22	1919	1930	1921	N13	E34	.621	9882	25.4	11	--N	3 C	1921	.15	.20			1
522 HALE	22	1940	1949	1943	N17	E09	.406	9879	23.5	9	--R	2 C	1943	.31	.30			1
GRP20523	22	2323	2337	2325	N24	W15	.540	9876	21.8	14	--N			.90				2 2 2 3
MANI	22	2322	2337	2324	N24	W15	.540	9876	21.8	15	--F	2	2324	1.03	1.23			
HALE	22	2323	2337	2325	N24	W15	.540	9876	21.8	14	--R	3 C	2325	.77	.90			
524 HALE	22	2339	2347	2341	N12	E30	.566	9882	25.2	8	--N	3 C	2341	.46	.60			3
528 SACP	23	1655	1724	1716	N13	W27	.537	9873	21.7	29	--N	C		.18	.19			3
529 SACP	23	1657	1734	1708	S22	E16	.387	9888	24.9	37	--N	C		.62	.62			3
531 SACP	23	2004	2015	2010	N12	W39	.675	9873	20.9	11	--N	C		.62	.71			3
534 HALE	23	2322	2353	2327	N15	E00	.347	9879	24.0	31	--F	2 C	2327	.62	.70			3
GRP20536	24	0120	0129	0123	N12	E20	.445	9882	25.6	9	--F			.47				2 2 2 5
MANI	24	0119	0130	0122	N11	F21	.447	9882	25.6	11	--F	2	0122	.52	.56			
HALE	24	0121	0127	0123	N12	E19	.433	9882	25.5	6	--N	1 C	0123	.41	.50			

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS			
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMAH PLAGE REGION				CMP DAY	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %		
					LAT.	MER. DIST.														
539 MANI	24	0540E	0547	0541	N14	W44	.740	9873	20.9	7D	--F	2	0541	.36	.55			3		
541 HTPR	24	0720E	0800		N10	E15	.366	9882	25.4	40D	1F		C	0735	2.06	2.10			3	
GRP20542	24	0803	0926	0811	N20	W09	.452	9879	23.7	83	2R			9.23					5 3 3 6	
MANI	24	0706E	0804D	0721	N20	W05	.436	9879	23.9	58D	2N	2	0721	9.28	16.20					
HTPR	24	0719E	0930	0735	N20	W08	.447	9879	23.7	131D	3N	8	C	0735	16.19	17.30			H	
ARCE	24	0803E	0902		N20	W08	.447	9879	23.7	59D	2R	8	P	0803	10.73	12.00			B	
MONT	24	0806E	0931	0811	N21	W08	.462	9879	23.7	85D	1B	8	C	0811	4.95				F	
CAPS	24	0807E	0945D		N20	W10	.457	9879	23.6	98D	3N	1		0815	12.00	13.00		190	H	
GRP20545	24	1400	1430	(1413)	N12	E10	.342	9882	25.3	30	--F			.59					2 2 2 6	
HTPR	24	1400	1420		N12	E11	.351	9882	25.4	20	--F		C	1410	.93	.90			H	
HUAN	24	1415E	1440		N12	E08	.327	9882	25.2	25D	--F	1	C	1416	.25	.27			D	
6 STATIONS REPORTING GROUP 20546. 2 STATIONS OBSERVING AND NOT REPORTING.																				
GRP20546	24	1441	1518	1456	N12	E10	.342	9882	25.4	37	--F			.67					5 4 4 8	
SANM	24	1420E	1513	1455	N12	E08	.327	9882	25.2	53D	--F		C	1455	.48	.55				
HTPR	24	1435	1520		N13	E11	.365	9882	25.4	45	--F		C	1455	.62	.60			H	
SACP	24	1443E	1524	1457U	N11	E09	.320	9882	25.3	41D	--N		C		.89	.87				
HUAN	24	1444	1514		N12	E11	.351	9882	25.4	30	--N	1	C	1456	.67	.73			E	
CAPS	24	1516E	1542		N12	E11	.351	9882	25.5	26D	--F	2		1519	.40	.40		176	EJ	
20546	24	1404	1457	1436	N12	E08	.327	9882	25.2	53	*--N			1.03					3 1 1 7	
CAPS	24	1329E	1438D		N12	E11	.351	9882	25.4	69D	1N	1		1337	3.20	3.40		169	FJ	
MONT	24	1404	1457	1436	N12	E08	.327	9882	25.2	53	--N		C	1436	1.03					
SANM	24	1420E	1513		N12	E07	.321	9882	25.1	53D	--F		P	1425	.32	.40			K	
548 HALE	24	1744	1754	1747	N11	E06	.300	9882	25.2	10	--N	2	C	1747	.41	.40				2
549 HALE	24	1844	1856	1846	N11	E07	.306	9882	25.3	12	--N	1	C	1846	.41	.40				2
550 HALE	24	1930	1947	1932	N11	E04	.290	9882	25.1	17	--N	1	C	1932	.52	.50				2
551 HALE	24	2037	2044	2042	S08	E32	.528	9895	27.3	7	--N	2	C	2042	.10	.10			DHG	3
552 HALE	24	2157	2208	2158	N16	W61	.899	9873	20.3	11	--N	1	C	2158	.21					3
553 HALE	25	0018	0037	0020	N20	W13	.477	9879	24.0	19	--N	2	C	0020	.67	.80				3
554 HALE	25	0131	0249	0132	N12	E03	.304	9882	25.3	78	--N	2	C	0132	.41	.40			KW	3
555 HALE	25	0143	0148	0144	N20	W13	.477	9879	24.1	5	--R	2	C	0144	.67	.80			V	3
556 HALE	25	0157	0214	0159	N16	W63	.913	9873	20.4	17	--R	2	C	0159	.62				V	2
557 HALE	25	0240	0255	0245	N13	W57	.862	9873	20.8	15	--F	2	C	0245	.21	.40				3
558 HALE	25	0250	0300	0252	N12	E03	.304	9882	25.3	10	--N	2	C	0252	.77	.80				3
559 MANI	25	0547E	0618	0550	N12	E02	.302	9882	25.4	31D	--N	2		0550	1.55	1.62				3
GRP20560	25	0753	0819	0757	N12	E02	.302	9882	25.5	26	--N			1.26					2 2 2 4	
CAPE	25	0753	0810	0756	N11	E02	.286	9882	25.5	17	--N		C	0756	.86	.90				
MANI	25	0755E	0827	0757	N12	E02	.302	9882	25.5	32D	--N	2		0757	1.65	1.73				
GRP20561	25	0901	0917	0906	N12	E02	.302	9882	25.5	16	--F			.95					3 2 2 8	
MANI	25	0858	0920	0906	N12	E02	.302	9882	25.5	22	--F	2		0906	1.13	1.20				
MONT	25	0904	0913	0906	N12	E02	.302	9882	25.5	9	--N		C	0906	.77					
CAPS	25	0918	1020D		N10	E00	.267	9882	25.4	62D	--N	3		0922	.50	.50		176		
GRP20563	25	1216	1246	1224	N11	W03	.288	9882	25.3	30	--N			1.51					3 3 3 4	
HTPR	25	1215	1255	1225	N12	W03	.304	9882	25.3	40	--N		C	1225	1.24	1.20			H	
CAPS	25	1216E	1242D		N10	W02	.269	9882	25.4	26D	--N	3		1225	1.30	1.30		170		
CANR	25	1217	1240	1222	N11	W04	.291	9882	25.2	23	1N		C		2.00	2.10			E	
GRP20564	25	1407	1443	1417	N11	W04	.291	9882	25.3	36	1N			2.44					6 5 5 7	
HUAN	25	1406	1440	1414	N11	W03	.288	9882	25.4	34	1N	1	C	1414	2.11	2.11				
HTPR	25	1406	1445	1410	N12	W04	.308	9882	25.3	39	1N		C	1410	2.48	2.50			H	
SANM	25	1408	1437D		N12	W05	.312	9882	25.2	29D	1B		C	1410	2.91	3.00			E	
CANR	25	1409	1425	1411	N11	W04	.291	9882	25.3	16	1N		C		2.70	2.80			E	
CAPS	25	1417E	1510D		N10	W03	.272	9882	25.4	53D	1N	2		1420	2.00	2.10		182		
MCMA	25	1432E	1456	1433	N12	W04	.308	9882	25.3	24D	--N		C	1433	1.24	1.40			BE	





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OBSERVATORY	OBSERVED UT			LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS	
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION			CMP DAY	COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hc		MAX. INT. %
					LAT.	MER. DIST.													
	1969 JAN																		
GRP20597	27	1525	1539	1532	N36	E75	.989	9893	2.3	14	-F						5 4 3 5		
MCMA	27	1509	1540	1512	N36	E90	1.002	9893	3.4	31	-R						E		
CAPS	27	1518E	1541D		N38	E68	.972	9893	1.7	23D	-F	1	C	1512	.55				
HUAN	27	1526	1535		N35	E80	.996	9893	2.6	9	-F	1	C	1539	.70			160	
SACP	27	1527	1541	1532U	N36	E72	.982	9893	2.0	14	-N				.44				
CANR	27	1527	1537	1531	N36	E78	.994	9893	2.5	10	-N				.50	1.50			
	27	2355	0002	NO FLARE PATROL															
600 HALE	28	0147	0154	0150	N10	W34	.606	9882	25.5	7	--R	1	C	0150	.31	.40		H 3	
GRP20601	28	0215	0235	0221	N22	W58	.892	9879	23.7	20	--N				.47			2 2 2 3	
HALE	28	0215	0232	0221	N22	W58	.892	9879	23.7	17	-R	1	C	0221	.31	.70		F	
MANI	28	0217E	0237		N22	W58	.892	9879	23.7	20D	-F	2		0217	.62	1.20			
GRP20604	28	0445	0600	0510	N25	W60	.913	9879	23.7	75	1N				1.55			2 1 1 3	
CULG	28	0445	0600	0510	N25	W60	.913	9879	23.7	75	1N				1.55			S	
MANI	28	0432E	0502	0455	N20	W63	.921	9879	23.5	10D	-F	2		0455	.62	1.30			
GRP20608	28	1105	1140	1115	N21	W60	.903	9879	24.0	35	-N				.55			2 2 2 5	
CATA	28	1105E	1140D	1115	N20	W62	.914	9879	23.8	35D	-R			1115	.29			202	
CAPS	28	1109E	1125D		N21	W58	.890	9879	24.1	16D	-F	3		1116	.80	1.60		145	
GRP20611	28	1501	1507	1503	N10	W41	.692	9882	25.6	6	--F				.22			2 2 2 3	
SANM	28	1500	1507	1503	N10	W40	.680	9882	25.6	7	-F				.17	.25		D	
SACP	28	1502	1507	1503	N09	W41	.688	9882	25.6	5	-N				.27	.31			
GRP20612	28	1616	1622	1616	N09	W46	.745	9882	25.2	6	--F				.35			2 2 1 3	
SACP	28	1612	1617	1613	N09	W42	.699	9882	25.5	5	-N				.27	.31			
SACP	28	1615	1622	1616	N08	W46	.742	9882	25.2	7	-N				.35	.43			
HUAN	28	1616	1621		N09	W47	.756	9882	25.2	5	-F	1							
613 SACP	28	1632	1643D	1635	N08	W55	.834	9879	24.6	11D	--N				.27	.37		3	
	28	1645	1657	NO FLARE PATROL															
614 SACP	28	1740	1746	1741	N15	W65	.925	9879	23.9	6	--N				.18	.31		2	
GRP20615	28	1746	1813	1748	N07	W58	.859	9879	24.4	27	--N				.40			2 2 2 2	
HALE	28	1745	1813D	1748	N07	W57	.851	9879	24.5	28D	-N	1	P	1748	.52	1.00		K	
SACP	28	1746	1749D	1748	N06	W58	.858	9879	24.4	3D	-N				.27	.38			
GRP20616	28	1806	1818	1810	N19	W66	.937	9879	23.8	12	-N				.62			2 1 1 2	
SACP	28	1806E	1818D	1810	N19	W66	.937	9879	23.8	12D	-N				.62	1.15			
HALE	28	1806	1851D		N21	W67	.945	9879	23.7	45D	1N	1	P	1823	1.24			F	
	28	1817	1822	NO FLARE PATROL															
	28	1851	1859	NO FLARE PATROL															
	28	1914	2012	NO FLARE PATROL															
	28	2035	2056	NO FLARE PATROL															
617 HALE	28	2138E	2158		N36	E56	.920	9893	2.1	20D	--F	1	P	2139	.21			2	
618 HALE	28	2236	2243	2238	N35	E48	.873	9893	1.5	7	--F	2	C	2238	.21	.40		3	
GRP20619	28	2355	0010	2359	N10	W47	.759	9882	25.5	15	--F				.44			2 2 2 4	
MANI	28	2355	0009	2359	N10	W47	.759	9882	25.5	14	-F	2		2359	.52	.70			
HALE	29	0002E	0010		N09	W46	.745	9882	25.6	8D	-N	2	P	0002	.36	.50			
GRP20623	29	0535	0557	0537	N09	W52	.808	9882	25.3	22	-N				.60			2 1 1 3	
CRON	29	0535	0557	0537	N09	W52	.808	9882	25.3	22	-N				.60	1.00			
MANI	29	0548	0549D		N10	W50	.791	9882	25.5	1D	-F	2		0549	.62	1.00			
GRP20624	29	0712	0740	0714	N10	W51	.801	9882	25.5	28	-R				.60			3 2 1 4	
CRON	29	0711	0740	0714	N09	W52	.808	9882	25.4	29	-N				.60	1.00		K	
CRON	29	0711	0740	0721	N09	W52	.808	9882	25.4	29	-N								
ISTA	29	0712	0716D		N10	W50	.791	9882	25.5	4D	-R								
MANI	29	0728E	0729D		N10	W51	.801	9882	25.5	1D	-F	1		0729	.26	.42			
	29	1130	1201	NO FLARE PATROL															
	29	1206	1210	NO FLARE PATROL															
626 CAPE	29	1234	1242	1236	N18	W81	.993	9879	23.4	8	-N				.60			2	



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OBSERVATORY	OBSERVED UT				LOCATION				DURATION — MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha		MAX. INT. %	
076 CATA	01	0810	0825D	0820	N22	W70	.955	9842	27.1	15D	-B		0820	.40			224	6	
077 CAPE	01	1228	1320	1234	N19	E90	1.000	9855	8.3	52	-N	C	1234	.99				AHV	3
080 SACP	01	1908	1918D	1910	S24	W74	.962	9841	27.2	10D	-N	P		.20	.42				3
082 SACP	01	2258E	2303D	2259	S24	W76	.970	9841	27.3	5D	-N	P		.48	1.13				4
084 MANI	02	0122	0132	0124	S16	E15	.335	9849	3.2	10	-F	2	0124	.41	.44				5
087 HALE	02	0228	0234	0229	N22	W63	.917	9842	28.4	6	-N	3 C	0229	.31					6
088 CRON	02	0753	0809	0756	S22	W80	.983	9841	27.3	16	-F	C		.30	1.00				5
089 CANR	02	0839	0845	0840	N04	E85	.997	9856	8.7	6	-N	C		.30	1.00			H	6
090 CANR	02	0841	0900	0842	S23	W80	.984	9841	27.4	19	-N	C		.60	1.80				6
091 CATA	02	0940	0950D	0940	N23	E83	.996	9855	8.6	10D	-N		0940	.14			170		5
092 CANR	02	1107	1117	1111U	N17	E90	1.000	9855	9.2	10	-N	C		.30	1.20				4
093 CATA	02	1135E	1200D	1150	N14	E20	.442	9850	4.0	25D	-N		1150	.11	.13		178		5
095 CATA	02	1305E	1310D	1305	N16	E90	1.000	9855	9.3	5D	-N		1305	.29			178		5
108 HTPR	03	1328	1340		N25	E65	.934	9855	8.4	12	-F	C							5
110 HUAN	03	1740	1746		N23	E60	.899	9855	8.2	6	-F	1 C						D	4
111 SACP	03	1802	1815	1805	N07	W28	.496	9847	1.7	13	-N	C		.39	.40				4
118 MANI	04	0319	0328D	0322	N22	E58	.883	9855	8.5	9D	-F	2	0322	.52	.97				6
119 MANI	04	0321	0328D	0322	N23	W90	1.000	9842	28.4	7D	-F	2	0322	.26	.72				6
120 CRON	04	0358	0414U	0401	N21	E59	.888	9855	8.6	16D	-N	C		1.00	2.00			E	5
121 MITK	04	0448	0458	0450	N24	E55	.866	9855	8.3	10	-F	C	0450	.72	1.40			E	4
123 MANI	04	0700E	0712	0705	S31	E79	.981	9857	10.2	12D	-F	2	0705	.26	.65				6
GRP20124	04	0834	0853	0840	N24	E55	.866	9855	8.5	19	-F			.72					
MANI	04	0834	0844	0836	N23	E56	.871	9855	8.6	10	-F	2	0836	.31	.57			2 2 2	8
MONT	04	0834	0902	0844	N24	E54	.859	9855	8.4	28	-N	C	0844	1.13					
125 CATA	04	0910	0915	0910	N03	E65	.908	9856	9.3	5	-B		0910	.11			204		6
128 HUAN	04	1208	1214		N22	E51	.828	9855	8.3	6	-F	2 C	1211	.21	.37			D	7
131 SANM	04	1327	1341	1329	S33	E78	.979	9857	10.4	14	-F	C	1329	.17	.95			D	8
GRP20139	05	0203	0226	0211	N24	E44	.776	9855	8.4	23	-N			.41					
MANI	05	0201	0226	0211	N22	E43	.756	9855	8.3	25	-F	2	0211	.36	.55			2 2 2	6
VORO	05	0204	0221	0211	N25	E43	.772	9855	8.3	17	-B	C	0211	.46	.72		68	E	
VORO	05	0222	0226	0223	N25	E45	.789	9855	8.5	4	-B	C	0223	.36	.57		66	D	
141 MANI	05	0424E	0430D	0427	N22	E43	.756	9855	8.4	6D	-F	1	0427	.26	.40				5
142 MANI	05	0612	0619D	0613	S10	E74	.960	9859	10.8	7D	-F	2	0613	.36	.82				4
143 CATA	05	0900E	0910D	0905	N23	E39	.723	9855	8.3	10D	-F		0905	.23	.33		146		8
144 CATA	05	0925E	0930	0925	N26	E40	.751	9855	8.4	5D	-F		0925	.23	.34		148		8
145 HTPR	05	1011	1020	1013	N23	E40	.733	9855	8.4	9	-F	C	1013	.41	.60				8
146 CATA	05	1025	1030D	1025	N25	E43	.772	9855	8.7	5D	-N		1025	.29	.44		186		8
147 CATA	05	1105	1115D	1105	S32	E68	.937	9857	10.6	10D	-N		1105	.14			176		7
150 CATA	05	1230	1240	1230	S35	E65	.925	9857	10.4	10	-B		1230	.23			214	Z	6
153 HTPR	05	1304	1310	1306	N24	E38	.720	9855	8.4	6	-F	C	1306	.52	.70				6
155 MCMA	05	1430	1435	1432	N07	E48	.755	9856	9.2	5	-F	C	1432	.41	.60			E	9



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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS	
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MC MATH PLAGE REGION			CMP DAY	COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$		MAX. INT. %
					LAT.	MER. DIST.													
GRP20248 MANI HTPR	09	0803	0816	0810	S14	E40	.652	9861	12.3	13	-F		.98				2 2 2 6		
	09	0802	0820	0809	S14	E40	.652	9861	12.3	18	-F	2	0809	1.34	1.81				
	09	0804	0812	0810	S14	E40	.652	9861	12.3	8	-F		0810	.62	.70				
GRP20249 MANI HTPR	09	0841	0850	0844	S15	E41	.667	9861	12.4	9	-F		.52				2 2 2 8		
	09	0840	0850	0844	S15	E42	.679	9861	12.5	10	-F	2	0844	.41	.56				
	09	0841	0850	0844	S14	E40	.652	9861	12.4	9	-F		0844	.62	.70				
250	MANI	09	0847	0859	0852	N04	E01	.139	9856	9.4	12	-F	2	0852	.52	.52		7	
253	MONT	09	1021	1042	1029	S21	E90	1.000	9865	16.2	21	-F		1029	.77			6	
254	UCCL	09	1037	1107	1052	S11	E45	.709	9861	12.8	30	1N		1055	1.55	3.10		FIJ 6	
256	UCCL	09	1115	1124	1117	S11	E45	.709	9861	12.8	9	1N		1117	1.55	3.10		IJ 5	
266	HUAN	09	2053	2117D		N24	W12	.504	9855	9.0	24D	-N	1	P	2055	.55	.63		E 3
270	CRON	10	0150	0158	0155	S21	E27	.519	9861	12.1	8	-N			1.10	1.30		5	
273	MANI	10	0419	0448	0428	N03	W14	.270	9856	9.1	29	-F	2	0428	.98	1.03		6	
274	MANI	10	0536	0547	0541	S17	E28	.506	9861	12.3	11	-N	2	0541	1.13	1.31		7	
275	HTPR	10	0915	0921		S15	E25	.453	9861	12.3	6	-F		0918	.41	.50		9	
276	ARCE	10	0919	0925D	0920	N22	E17	.513	9858	11.7	6D	-N		0920	1.07	1.20		9	
278	HTPR	10	1145	1155		S15	E25	.453	9861	12.4	10	-F		1146	.41	.50		5	
280	SANM	10	1534	1602D	1559	N26	W33	.693	9855	8.2	28D	-F		1559	.17	.23		D 4	
285	HALE	10	1824E	1851	1825	N27	W33	.701	9855	8.3	27D	-N	2	P	1825	.36	.50		H 4
GRP20288 HALE HALE	10	1933	2011	1940	S15	E17	.342	9861	12.1	38	-R		.15				1 1 1 4		
	10	1933	2002	1936	S15	E16	.329	9861	12.0	29	-F	2	C	1936	.41	.40		HK	
	10	1934	2011	1940	S15	E19	.370	9861	12.2	37	-R	2	C	1940	.15	.20		D	
289	HALE	10	2249	2325	2255	S15	E14	.303	9861	12.0	36	-N	2	C	2255	.26	.30		H 4
292	HALE	11	0231	0243	0234	S16	E12	.288	9861	12.0	12	-F	2	C	0234	.31	.30		7
293	HALE	11	0244	0259	0246	S16	E12	.288	9861	12.0	15	-F	2	C	0246	.36	.40		7
295	MANI	11	0405	0428	0418	S15	E14	.302	9861	12.2	23	-N	2	0418	.77	.82		7	
297	CRON	11	0607	0623	0615	N22	W90	1.000	9850	4.5	16	-F			.80	1.00		L 5	
300	MONT	11	1231	1239	1235	S16	E07	.237	9861	12.0	8	-F		1235	.46			5	
GRP20302 HTPR CAPS CANR MONT	11	1411	1427	1414	S17	E08	.260	9861	12.2	16	-N		1.07				4 4 4 4		
	11	1407	1430D		S17	E10	.279	9861	12.3	23D	-F		1421	.62	.60				
	11	1412	1430		S16	E09	.255	9861	12.3	18	-R	3	C	1418	.40	.50		230	
	11	1412	1420	1414	S17	E05	.238	9861	12.0	8	-R		C	1414	1.20	1.20		H	
	11	1413	1427	1414	S16	E06	.229	9861	12.0	14	-N		C	1414	2.06				
305	HUAN	11	1712	1723		N24	W07	.484	9858	11.2	11	-F	1	C					D 5
306	SACP	11	1737	1742	1739	S14	E07	.209	9861	12.3	5	-N			.39	.38		4	
317	MANI	12	0111E	0113D	0112	S11	E80	.983	9868	18.0	2D	1N	2	0112	1.03	2.65		5	
321	CATA	12	0830E	0835	0830	S15	E00	.187	9861	12.4	5D	-R		0830	.46	.47		276 3	
322	CATA	12	0840	0900D	0840	S34	W22	.589	9857	10.7	20D	-R		0840	.69	.86		214 4	
323	CATA	12	0840	0900D	0840	S34	W16	.549	9857	11.2	20D	-N		0840	.40	.48		191 4	
328	HUAN	12	1550	1617		S08	W32	.530	9859	10.3	27	-F	1	C	1603	.31	.37		E 4
329	SACP	12	1733	1756	1740	S07	W32	.529	9859	10.3	23	-N			.48	.51		5	
336	HALE	13	0059	0127	0105	S07	W38	.614	9859	10.2	28	-N	2	C	0105	1.29	1.60		4
337	MANI	13	0101	0109D	0107	S09	E38	.616	9865	15.9	8D	-F	2	0107	.62	.78		4	
339	CRON	13	0438	0447	0441	N21	W80	.991	9869	7.2	9	-N			.40	1.30		4	
342	SANM	13	1410	1420	1415	S07	W45	.705	9859	10.2	10	-F		1415	.17	.23		E 5	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS			
	DATE	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %				
					LAT.	MER. DIST.																
346 SACP	1969 JAN 13	1756	1810	1800	S08	W47	.730	9859	10.2	14	-N		C		.29	.35			5			
347 MCMA	13	1909	1919	1912	N20	W90	1.000	9869	7.0	10	-F		C	1912					D	5		
348 HALE	13	1925	1940	1926	S13	W24	.426	9861	12.0	15	-F	2	C	1926	.52	.60				5		
350 HUAN	13	2040	2047		S14	W31	.531	9859	11.5	7	-F	2	C	2041	.21	.25			D	4		
351 HUAN	13	2121	2142		S13	W35	.582	9859	11.3	21	-F	2	C	2132	.25	.30			D	5		
354 VORO	13	2349	2354	2351	S12	W19	.347	9861	12.6	5	-R		C	2351	.73	.78		85	EJL	5		
355 MANI	14	0054	0118	0102	S20	E90	1.000	9875	20.8	24	1N	2		0102	.72	2.35				5		
360 CRON	14	0837	0845	0841	S06	W56	.827	9859	10.2	8	-F		C		1.10	1.90				7		
361 CATA	14	0845E	0850D	0845	S14	W31	.530	9861	12.0	5D	-N			0845	.23	.29		178		7		
374 HALE	14	2343E	2356		S13	W36	.596	9861	12.3	13D	-F	1	C	2343	.62	.80				5		
375 HALE	14	2357	0030	2359	N20	W81	.993	9855	8.9	33	-F	1	C	2359	.26					5		
376 HALE	15	0012	0041	0014	N27	W88	1.000	9855	8.4	29	-N	1	C	0014	.26					5		
377 HALE	15	0039	0055	0041	S13	W37	.609	9861	12.3	16	-N	2	C	0041	.93	1.20				5		
378 MANI	15	0212	0225	0215	N11	W40	.679	9871	12.1	13	-F	2		0215	.57	.78				6		
380 VORO	15	0422	0429	0422	S16	W37	.617	9861	12.4	7	-R		C	0422	.64	.80		100	D	5		
GRP20381	15	0440	0455	0444	N12	W43	.717	9871	12.0	15	-F				.73				2	2	2	6
MITK	15	0440	0455	0444	N12	W43	.717	9871	12.0	15	-N		C	0444	.83	1.20						
MANI	15	0444E	0445D		N11	W42	.702	9871	12.0	1D	-F	1		0444	.62	.86						
383 MANI	15	0617	0630	0620	S14	W37	.611	9861	12.5	13	-F	2		0620	.26	.34				3		
384 HTPR	15	0750E	0830		N12	W45	.740	9871	12.0	40D	-F		C	0755	.62	.90				4		
385 MONT	15	0803E	0831D	0810	N26	E90	1.001	9876	22.1	28D	-N		C	0810	.46					5		
386 HTPR	15	0948	1015		N22	E90	1.000	9876	22.2	27	-F		C							6		
387 CATA	15	1045	1100	1050	N13	E78	.983	9873	21.3	15	1B			1050	.69			243		6		
395 HALE	15	1903	1927	1907	N26	E88	1.000	9876	22.4	24	-R	2	C	1907	.31					3		
403 HALE	15	2344	0002	2346	N21	W66	.937	9858	11.0	18	-F	1	P	2346	.72					5		
GRP20404	16	0038	0057	0043	N10	W53	.817	9871	12.1	19	-N				.49				2	2	2	6
MANI	16	0036	0052	0045	N10	W53	.817	9871	12.0	16	-N	2		0045	.62	.98						
HALE	16	0039	0101	0041	N10	W53	.817	9871	12.1	22	-N	1	C	0041	.36	.60						
405 HALE	16	0049	0111	0056	S15	W47	.735	9861	12.5	22	-F	2	C	0056	.41	.60				6		
406 HALE	16	0141	0203	0143	S15	W50	.769	9861	12.3	22	-F	2	C	0143	.21	.30				7		
GRP20407	16	0149	0216	0155	N11	W54	.829	9871	12.0	27	-F				.73				2	2	2	7
MANI	16	0145	0219	0156	N11	W55	.838	9871	11.9	34	-F	2		0156	.93	1.49						
HALE	16	0152	0212	0154	N10	W53	.817	9871	12.1	20	-N	1	C	0154	.52	.90						
408 HALE	16	0217	0223	0218	S08	W79	.980	9859	10.2	6	-N	2	C	0218	.26					8		
409 MANI	16	0520	0542	0526	N13	E64	.913	9873	21.0	22	-F	2		0526	.52	1.03				7		
410 MANI	16	0527E	0546	0530	N11	W58	.864	9871	11.9	19D	-F	2		0530	.72	1.24				7		
411 MANI	16	0548	0600	0552	N08	W53	.813	9871	12.3	12	-F	2		0552	.31	.51				5		
413 MANI	16	0855	0908	0858	N12	W56	.849	9871	12.2	13	-F	2		0858	.26	.45				4		
418 CANR	16	1741	1801	1744	N23	E65	.934	9873	21.6	20	-N		C		.60	1.40				4		
420 BOUL	16	1915	1930	1918	N22	E69	.954	9876	22.0	15	-N		C		.60	1.60				3		
428 MANI	17	0000	0016	0003	N15	W70	.951	9871	11.8	16	-F	2		0003	.31	.78				5		
431 VORO	17	0455	0501	0457	N10	W70	.947	9871	12.0	6	1B		C	0457	.73	2.12		86	E	5		
432 CRIM	17	0731E	0745D		N15	W70	.951	9871	12.1	14D	1F		P	0732	1.53				D	4		

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS			
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %				
434	MONT	17	0837	0856	0849	N32	W90	1.001	9858	10.6	19	-F	C	0849	.10					9		
447	MANI	17	2320	2329	2326	S25	E13	.403	9868	18.9	9	-N	2	2326	.26	.28				3		
448	MANI	17	2337	2344	2339	S16	W83	.990	9861	11.8	7	-N	2	2339	.52	1.44				6		
450	MANI	18	0018	0031	0025	N19	E81	.993	9879	24.1	13	-F	2	0025	.26	.67				6		
451	HALE	18	0107	0112	0108	S13	W81	.985	9861	12.0	5	-F	1	C	0108	.21				4		
453	MANI	18	0150	0159D	0153	S12	E30	.508	9874	20.3	9D	-F	2	0153	.21	.24				4		
456	MANI	18	0527E	0545	0530	N15	E43	.731	9873	21.5	18D	-F	2	0530	.36	.54				3		
459	CANR	18	0835	0845	0836	N11	W80	.988	9871	12.4	10	-N		C		.40	1.20				8	
462	MONT	18	1244	1250	1246	N12	W90	1.000	9871	11.8	6	-N		C	1246	.10					6	
468	HALE	19	0042	0105	0044	N14	E31	.589	9873	21.4	23	-F	2	C	0044	.72	.90			FH	6	
469	HALE	19	0054	0107	0056	S17	W89	.999	9861	12.4	13	1B	2	C	0056	.62					6	
471	MANI	19	0529E	0536	0531	N11	E22	.455	9873	20.9	7D	-F	2	0531	.26	.29				5		
483	HALE	20	0053	0059	0055	N27	E28	.668	9876	22.1	6	-F	2	C	0055	.36	.50			CH	5	
484	HALE	20	0155	0207	0156	N20	W50	.820	9877	16.3	12	-F	2	C	0156	.21	.40			HV	4	
486	HALE	20	0208	0257	0217	S08	W25	.423	9868	18.2	49	-F	2	C	0217	.52	.60				4	
487	HALE	20	0311	0325	0321	N15	E12	.395	9873	21.0	14	-N	2	C	0321	.31	.30				5	
490	CAPS	20	0820E	0840D		N12	W90	1.000	9863	13.6	20D	-N	2							A	6	
GRP20491		20	1008	1019	1011	N16	E17	.453	9873	21.7	11	-F				.71						
HTPR		20	1008	1017	1011	N16	E15	.434	9873	21.5	9	-F		C	1011	.83	.90			2 2 2	7	
CATA		20	1010E	1020	1010	N15	E19	.461	9873	21.8	10D	-N			1010	.58	.64			H		
																				170	H	
492	CATA	20	1200	1210D	1205	N22	E45	.784	9879	23.9	10D	-N			1205	.17	.29			166	6	
494	SACP	20	1622	1641	1624	N16	E08	.382	9873	21.3	19	-N		C		.39	.39				4	
497	HALE	20	1900	1907	1901	N16	E05	.368	9873	21.2	7	-N	2	C	1901	.15	.20				4	
498	HALE	20	1907	1928	1910	N24	E14	.531	9876	21.8	21	-F	2	C	1910	.93	1.10				4	
507	CANR	21	1111	1128	1116	N11	W08	.309	9873	20.9	17	1F		C		2.20	2.30			E	6	
508	HUAN	21	1220	1241		N13	W12	.370	9873	20.6	21	-F	1	C	1226	.25	.27			D	6	
510	HUAN	21	1810E	1835D		N17	E27	.569	9879	23.8	25D	-F	1	P							5	
513	CAPS	22	0947	1011D		N27	E21	.617	9879	24.0	24D	-F	3		0956	1.30	1.70			158	L	4
514	CAPS	22	0956	1009		N12	E39	.675	9882	25.3	13	-N	3		0956	.30	.40			190	D	4
515	CAPS	22	1104	1124D		N12	E39	.675	9882	25.4	20D	-N	3		1109	.70	.90			170	D	3
516	MONT	22	1416	1433	1426	N26	E21	.606	9879	24.2	17	-F		C	1426	.77					5	
520	HUAN	22	1741	1750		N12	E36	.639	9882	25.4	9	-N	1	C							3	
525	HALE	23	0001E	0020		N17	E09	.407	9879	23.7	19D	-F	1	P	0001	.21	.20				4	
526	MANI	23	0101	0112	0104	N11	E32	.585	9882	25.4	11	-F	2		0104	.21	.26				4	
527	SANM	23	1436	1458	1447	N12	E21	.456	9882	25.2	22	-F		C	1447	.32	.40			D	5	
530	HUAN	23	1839	1934		N12	E23	.480	9882	25.5	55	-N	1	C	1840	.35	.38			D	5	
532	HUAN	23	2044	2101		N14	W28	.557	9873	21.8	17	-F	1	C	2051	.25	.30			DH	4	
533	HALE	23	2249	2304	2252	N12	E18	.421	9882	25.3	15	-N	2	C	2252	.15	.20				5	
535	HALE	23	2332	2355	2335	S29	E06	.413	9887	24.4	23	-F	2	C	2335	.36	.40				6	
537	HALE	24	0203	0211		N14	W46	.761	9873	20.6	8	-N	1	P	0205	.31	.50				4	
538	MANI	24	0213E	0228		N11	E20	.435	9882	25.6	15D	-F	2		0216	.83	.92				5	

SOLAR FLARES  
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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS				REMARKS			
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMY DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$		MAX. INT. %		
540 ISTA	24	0710E	0845D		N15	W50	.805	9873	20.5	95D	1N							3		
543 CAPS	24	0807E	0910D		N12	E11	.351	9882	25.2	63D	1F	1					155	5		
GRP20544	24	1305	1345	(1309)	N12	E09	.335	9882	25.2	40	-F			.85				2 2 2 6		
HTPR	24	1305	1355		N12	E10	.342	9882	25.3	50	-F	C	1308	.72	.70					
SANM	24	1309E	1334		N12	E07	.321	9882	25.1	25D	-F	P	1309	.97	1.10			BE		
GRP20547	24	1530	1556	1536	N20	W07	.443	9879	24.1	26	-F			.53				2 2 2 7		
SACP	24	1530	1558	1536	N20	W08	.447	9879	24.0	28	-F	C		.35	.36					
CAPS	24	1535E	1553		N20	W05	.436	9879	24.3	18D	-F	2	1541	.70	.70			142		
562 HTPR	25	1125	1145		N12	E00	.300	9882	25.5	20	-F	C	1130	.62	.60			H	4	
566 CANR	25	1602	1612	1606	N06	W21	.405	9879	24.1	10	1N	C		2.00	2.20			E	4	
567 HALE	25	1932	2039	1936	N23	W27	.627	9879	23.8	67	-N	2	C	1936	1.03	1.30			KL	3
568 HALE	25	2304	2316	2307	N12	W66	.927	9873	21.0	12	-F	2	C	2307	.36					4
569 HALE	25	2310	2314	2312	N15	W74	.971	9873	20.4	4	-B	2	C	2312	.31				V	4
570 HALE	25	2311	2345	2320	S15	W46	.721	9881	22.5	34	-N	2	C	2320	.26	.40			KHG	4
575 CATA	26	0940	0945	0940	N19	W90	1.000	9873	19.7	5	1R		0940	.58					229	8
576 CATA	26	1000	1015	1005	N19	W90	1.000	9873	19.7	15	-N		1005	.17					191	6
577 MONT	26	1034	1042	1037	N09	W17	.380	9882	25.2	8	-N	C	1037	1.03						6
578 HUAN	26	1231	1238		N10	W16	.379	9882	25.3	7	-F	1	C	1233	.21	.23			DT	6
579 CATA	26	1310	1335D	1325	N12	W16	.402	9882	25.3	25D	-N		1325	.23	.26				155	7
583 HALE	26	1733	1750	1734	N35	E86	1.000	9893	2.2	17	-F	2	C	1734	.21					5
584 HALE	26	1800	1840	1804	N11	W17	.401	9882	25.5	40	-N	2	C	1804	.26	.30				4
585 HALE	26	1814	1851	1817	N21	W38	.717	9879	23.9	37	-N	2	C	1817	.46	.70				5
586 HALE	26	1928	1945	1930	N35	E77	.992	9893	1.6	17	-F	2	C	1930	.21					4
588 HALE	26	1936	1948	1939	N15	E26	.544	9890	28.8	12	-F	2	C	1939	.15	.20				4
589 HALE	26	2046	2138	2049	N18	E26	.571	9903	28.8	52	-N	2	C	2049	.62	.80				4
590 SACP	26	2046	2141	2100	N17	E24	.541	9890	28.7	55	-F	8	C		.79	.83				4
592 HALE	27	0210	0218	0212	N35	E74	.986	9893	1.6	8	-N	2	C	0212	.15					4
595 MCMA	27	1421	1435	1425	N22	W68	.951	9876	22.5	14	-F	C	1425	.26	.90			D	6	
598 MANI	27	2304E	2316	2308	N08	W40	.671	9882	25.0	12D	-F	2	2308	.72	.98				3	
599 MANI	28	0142E	0155	0144	N22	W58	.892	9879	23.7	13D	-F	2	0144	.83	1.60				3	
602 MANI	28	0300	0310	0303	N38	E68	.973	9893	2.2	10	-F	2	0303	.52	1.28				4	
603 HALE	28	0330	0351	0331	N08	W41	.684	9882	25.1	21	-N	1	C	0331	.52	.70				4
605 MANI	28	0600	0613	0604	N07	W46	.739	9882	24.8	13	-F	2	0604	.26	.38				3	
606 CATA	28	0955	1015	1005	N32	E65	.953	9893	2.3	20	-N		1005	.23					174	4
607 UCCL	28	1019E	1025D		N10	W41	.692	9882	25.4	6D	1N	P	1019	1.03	2.40			BE	4	
609 CATA	28	1335E	1355	1335	N12	W39	.677	9882	25.6	20D	-N		1335	.11	.16			Z	182	5
610 SANM	28	1339	1351	1342	N16	W80	.990	9878	22.6	12	-N	C	1342	.32				D	5	
620 HALE	29	0226	0234	0228	N10	W54	.830	9882	25.1	8	-B	2	C	0228	.52	.90			V	4
621 HALE	29	0254	0306	0301	N17	W72	.964	9879	23.7	12	-B	1	C	0301	.36					4
622 HALE	29	0311	0318	0312	N09	W47	.756	9882	25.6	7	-B	2	C	0312	.41	.60			F	5
625 CATA	29	0810	0820	0810	N37	E51	.898	9893	2.2	10	-B		0810	.23	.53				226	7
628 CANR	29	1531	1536	1533	N15	W85	.998	9879	23.3	5	-N	C		.30	1.10				3	



SOLAR FLARES  
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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1969 JAN	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMMATH FLARE REGION	CMP DAY			COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hq	MAX. INT. %	
					LAT.	MER. DIST.													
634 MANI	29	2359E	0013		N14	W39	.688	9902	27.1	14D	-F	2	0004	1.34	1.90			5	
637 MANI	30	0125	0139	0127	N17	W89	1.000	9879	23.4	14	1N	2	0127	.93	2.90			4	
GRP20639	30	0823	0843	0827	N13	W45	.749	9902	27.0	20	-F			.47				2 2 2 6	
MANI	30	0823	0835	0827	N13	W44	.739	9902	27.0	12	-F	2	0827	.62	.93				
HTPR	30	0831E	0850		N13	W45	.749	9902	27.0	19D	-F		C	0835	.31	.50			
640 HTPR	30	1010	1030		N14	W47	.774	9902	26.9	20	-F		C	1012	.41	.60			6
645 HUAN	30	2222	2227D		N11	W76	.976	9882	25.2	5D	-N	1	P	2227	.45				3
646 MANI	31	0417E	0424		N33	E22	.697	9893	1.8	7D	-F	2	0421	1.24	1.80			5	
647 MANI	31	0611	0619		N30	E20	.653	9893	1.8	8	-N	2	0613	1.03	1.40			5	
648 ARCE	31	0932	0940D	0935	S01	E80	.985	9909	6.4	8D	-F		C	0935	.18	.60			9
650 HTPR	31	1056	1103		N27	E72	.974	9907	5.9	7	-F		C	1058	.41				8
651 CAPS	31	1110E	1118D		N22	W45	.790	9903	28.1	8D	-N	1	1117	.50	.90		189		7
656 CULG	31	2110	2335D	2221	N35	E14	.682	9893	1.9	145D	1F		P	2221	1.96	2.47			3

"Remarks":

- A = Eruptive prominence, base at >90°.
- B = Probably the end of a more important flare.
- C = Invisible 10 minutes before.
- D = Brilliant point.
- E = Two or more brilliant points.
- F = Several eruptive centers.
- G = No spots visible in the neighborhood.
- H = Flare with high velocity dark surge.
- I = Very extensive active region.
- J = Plage with flare shows marked intensity variations.
- K = Several intensity maxima.
- L = Filaments show effects of sudden activation.
- M = White-light flare.

- N = Continuous spectrum shows effects of polarization.
- O = Observations have been made in the calcium II lines H or K.
- P = Flare shows helium D<sub>3</sub> in emission.
- Q = Flare shows the Balmer continuum in emission.
- R = Marked asymmetry in H $\alpha$  line.
- S = Brightening follows disappearance of filament (same position).
- T = Region active all day.
- U = Close and somewhat parallel bright filaments (H or Y shape).
- V = Occurrence of an explosive phase.
- W = Great increase in area after time of maximum intensity.
- X = Unusually wide H $\alpha$  emission.
- Y = Onset of a system of loop-type prominences.
- Z = Major sunspot umbra covered by flare.

Note:

A line of explanation has been added before each flare event having more than one maxima. The total number of stations reporting some part of the event is given. The number of stations observing at the time of the principal maximum but not reporting the event is given in the second statement. Care should be exercised in utilizing the numbers in the remarks column. The first number is the number of stations reporting the individual maximum, and not the total number of stations reporting some part of the flare event. The last number is the number of stations reporting at the time of the individual maximum and not necessarily the total number of stations observing during the flare event. GRP numbers may appear several times in order to indicate secondary maxima. An asterisk beside an importance indicates a secondary maximum. The word "GRP" has also been omitted to aid in pointing to this condition.

When it is impossible to determine the time of Maximum Phase from the individual reports the time of Area Measurements is used. This time appears in parentheses. For Flares reported by only one station, the last 3 digits of the group number appear to the left of the station code.

In the importance column "--" signifies the subflare has been confirmed by the ESSA grouping program but is not included in the I.A.U. Quarterly Bulletin on Solar Activity.