

10
Feb 77

H α SOLAR FLARES

FEBRUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE 1977 FEB	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	MCNATH PLAGE REGION	CMPR DAY			MIN	COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg
					LAT.	MER. DIST.												
GRP63788	09	1458	1504+1	1519	N12	E42	.716	14638	12.8	21	-N			110	1.6	FSU U S F		
RAMY	09	1458	1505	1521	N12	E42	.716	14638	12.8	23	-N	3	C	97				
RAMY	09	1502E	1504	1516	N12	E43	.727	14638	12.9	140	-N	4	V	127				
789	RAMY	09	1700	1704	1710	S40	E30	.681	14637	12.0	10	-F	3	C	60		F Z Y5	
		10	1415	1420	NO FLARE PATROL													
		10	1425	1432	NO FLARE PATROL													
790	CATA	10	1525E	1525	1530D	N10	E41	.696		13.7	5D	1F	1	P	1525	168	2.4	Y5
		10	1545	1553	NO FLARE PATROL													
791	MCMA	10	1833	1834	1838	S41	E20	.626	14637	12.3	5	-N		C	1834	20	.3	D Y5
792	MCMA	10	1936	1939	1943	S42	E18	.627	14637	12.2	7	-F		C	1939	20	.3	DL Y5
		10	2016	2022	NO FLARE PATROL													
		10	2034	2043	NO FLARE PATROL													
793	HTRP	11	0741	0742	0753	S40	E12	.574	14637	12.2	12	-N		C	0742	80	1.0	E Y5
794	HTRP	11	0910	0915	0924	S41	E11	.584	14637	12.2	14	-F		C	0915	30	.3	E Y5
GRP63795		11	1100+1	1104+1	1119	S41	E13	.592	14637	12.4	19	-N			80	1.0	E E E	
MONT	11	1100	1104	1119	S40	E15	.588	14637	12.6	19	-N		C	1104	110			
HTRP	11	1101	1105	1119	S41	E11	.584	14637	12.3	18	-N		C	1105	70	.8		
ZURI	11	1101	1104	1117	S41	E12	.588	14637	12.4	16	-B		C	1104	70	.8		
	11	1523	1800	NO FLARE PATROL														
GRP63796		11	2125+2	2132+2	2152D	S40	W01	.550	14637	11.8	27	1N			250	3.0	J	
				2140														
CULG	11	2125	2132	2240	S42	E05	.583	14637	12.3	75	-N		C	2133	130	1.3	J	
PALE	11	2127	2140	2152	S40	W01	.550	14637	11.8	25	1B	3	C		279			
PALE	11	2127	2132	2152	S40	W01	.550	14637	11.8	25	-B	3	C		280			
RAMY	11	2132E	2134U	2139D	S39	W01	.536	14637	11.8	7D	1N	2	V		254		FDE	
RAMY	11	2132E	2134U	2139D	S40	W04	.553	14637	11.6	7D	1N	2	C		254		FDE	
GRP63797		11	2154+0	2155+0	2212	S40	W01	.550	14637	11.8	18	-F			30	.4		
PALE	11	2154	2155	2212	S40	W01	.550	14637	11.8	18	-F	3	V		32			
PALE	11	2154	2155	2212	S40	W01	.550	14637	11.8	18	-F	3	C		32			
798	MITK	12	0236	0239	0248	N03	E26	.465	14643	14.1	12	-N		C	0239	80	.9	D Y5
799	ATHN	12	1154	1156	1201	N01	E19	.350	14643	13.9	7	-F		V	1156	21	43.0	Y5
800	ATHN	12	1154	1157	1205	S40	W10	.567	14637	11.7	11	-F		V	1157	33	70.0	Y5
801	CATA	12	1535E	1545	1545D	S41	W06	.570	14637	12.2	100	-N	1	P	1545	56	.7	Y5
		12	2220	2223	NO FLARE PATROL													
		12	2230	2245	NO FLARE PATROL													
		12	2254	2309	NO FLARE PATROL													
802	BUCA	13	0850		0900	N16	W49	.804	14647	9.7	10	-N		P	0850	64	1.1	E Y5
803	HTRP	13	1204	1207	1212	N23	E08	.511	14649	14.1	8	-F		C	1207	20	.2	Y5
804	HTRP	13	1321	1325	1336	S40	W20	.613	14637	12.1	15	-F		C	1325	10	.1	Y5
		13	1458	1604	NO FLARE PATROL													
		13	1620	1621	NO FLARE PATROL													
GRP63805		13	1708	1714+2	1727	S41	W13	.590	14637	12.7	19	-N			70	.9	F F F	
RAMY	13	1708	1716	1727	S41	W13	.590	14637	12.7	19	-N	4	C	52				
RAMY	13	1710E	1714	1722D	S41	W13	.590	14637	12.7	120	-N	4	V	95				
		13	1840	2054	NO FLARE PATROL													
806	CULG	13	2150	2154	2209	S42	W15	.611	14637	12.8	19	-F		C	2157	60	.6	Y5
		13	2208	2214	NO FLARE PATROL													
807	MONT	14	0853	0855	0902	S41	W22	.635	14637	12.7	9	-F		C	0855	60		E Y5
808	MONT	14	1046	1050	1054	S42	W22	.646	14637	12.8	8	-F		C	1050	40		E Y5

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS		
	DATE 1977 FEB	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	MCNATH PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR. AREA Sq. Deg.	
					LAT.	MER. DIST.												
GRP63809 RAMY RAMY	14	1407	1412+1	1429	S41	W27	.667	14637	12.6	22	-N		100	1.4	FOE FOE			
	14	1407	1413	1427	S42	W28	.683	14637	12.5	20	-N	4	79					
	14	1409E	1412	1430D	S41	W27	.667	14637	12.6	21D	-N	4	120					
		14	1724	1736	NO FLARE PATROL													
		14	1746	1804	NO FLARE PATROL													
		14	1820	1904	NO FLARE PATROL													
		14	1924	1927	NO FLARE PATROL													
		14	1948	1956	NO FLARE PATROL													
		14	2000	2017	NO FLARE PATROL													
		14	2021	2039	NO FLARE PATROL													
		14	2150	2155	NO FLARE PATROL													
		14	2321	2346	NO FLARE PATROL													
	810	MONT	15	0843	0845	0850	S43	W37	.750	14637	12.6	7	-F	C	0845	20	D	Y5
	811	HTPR	15	1603	1605	1610	N22	W25	.613	14649	13.8	7	-F	C	1605	10	.1	Y5
15			1626	1655	NO FLARE PATROL													
15			1705	1759	NO FLARE PATROL													
15			1802	1850	NO FLARE PATROL													
15			1859	2022	NO FLARE PATROL													
15			2110	2111	NO FLARE PATROL													
812	CULG	15	2254	2307	2355	N26	W90	1.001		9.2	61	1F	C	2309	50		Y5	
813	HITK	16	0225	0229	0234	S43	W40	.770	14637	13.1	9	-N	C	0229	50	.8	D	Y5
814	HITK	16	0423	0428	0431D	S43	W40	.770	14637	13.2	80	-B	C	0428	60	1.0	D	Y5
815	MONT	16	0803	0808	0814	S42	W50	.832	14637	12.6	11	-F	C	0808	60		E	Y5
		16	1317	1345	NO FLARE PATROL													
816	CULG	17	0145	0210	0240	S45	W60	.900	14637	12.6	55	-F	C	0210	30	.6		Y5
817	PALE	17	0308	0309	0311	S41	W57	.873	14637	12.9	3	-F	3	C	20			Y5
818	PALE	17	0335	0338	0351D	S41	W58	.879	14637	12.8	160	-F	3	C	41			Y5
		17	0605	0700	NO FLARE PATROL													
GRP63819 RAMY MCMA	17	1339+1	1349+1	1432	N19	W54	.859	14649	13.5	53	-F		60	1.1	E			
	17	1339	1350	1418D	N19	W54	.859	14649	13.5	39D	-F	4	53		DE			
	17	1340	1349	1432	N20	W54	.862	14649	13.5	52	-N	C	1349	80	1.7	E		
GRP63820	MCMA RAMY MCMA RAMY	17	1528+3	1530	1605	S42	W65	.920	14637	12.8	37	1N		130		EHL		
		17	1528	1530	1539	S42	W67	.930	14637	12.6	11	-F	C	1530	70	1.8	EH	
		17	1531	1554	1605D	S42	W65	.920	14637	12.8	34D	1N	3	132		DE		
		17	1540	1548	1605	S42	W67	.930	14637	12.6	25	-N	C	1548	60	1.6	EHL	
		17	1547E	1552	1600D	S42	W62	.904	14637	13.0	13D	-N	4	144		DE		
		17	2221	2227	NO FLARE PATROL													
821	VORO	18	0345E	0346	0348D	S00	W70	.941		12.9	3D	-N	C	0346	36	.4	D	Y5
		18	1001	1004	NO FLARE PATROL													
GRP63822	CULG CULG MANI HITK	18	2340+4	2350+0	0020	N20	W70	.961	14649	13.7	40	1N				E		
		19	0020E		0020	N19	W70	.960	14649	13.8		1F	C		70	2.1		
		18	2340	2350	2354D	N19	W70	.960	14649	13.7	14D	1F	C	2354	70	2.1		
		18	2344	2350	2358	N23	W77	.987	14649	13.2	14	-N	2	2350	50	1.3		
		18	2357E	2359	0056	N20	W67	.946	14649	14.0	59D	1N	C	2359	130		E	
		19	0507	0513	NO FLARE PATROL													
		19	1000	1025	NO FLARE PATROL													
823	VORO	19	1135	1150	NO FLARE PATROL													
		19	1310	1320	NO FLARE PATROL													
		20	0147E	0149	0205D	S15	E08	.194	14651	20.7	18D	?N	C	0153	296	3.0		Y5
	IMP. 1 NO	PALE1																
	20	0228	0302	NO FLARE PATROL														
824	VORO	20	0242E	0258	0355D	S14	E07	.170	14651	20.6	73D	1N	C	0304	233	2.4		Y5

H α SOLAR FLARES

FEBRUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION			DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS		
	DATE FEB	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE			MCMATH PLAGE REGION	CMR DAY	COND.	TYPE	TIME UT		MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg
					LAT.	MER. DIST.											
	20	0307	0316	NO FLARE	PATROL												
	20	0348	0349	NO FLARE	PATROL												
	20	0413	0421	NO FLARE	PATROL												
	20	1531	1535	NO FLARE	PATROL												
	20	1605	1723	NO FLARE	PATROL												
	20	1802	1808	NO FLARE	PATROL												
	20	2017	2120	NO FLARE	PATROL												
	20	2201	2310	NO FLARE	PATROL												
	21	0053	0104	NO FLARE	PATROL												
	21	0150	0230	NO FLARE	PATROL												
	21	1306	1323	NO FLARE	PATROL												
	21	1607	1621	NO FLARE	PATROL												
	21	1626	1706	NO FLARE	PATROL												
	21	2306	2308	NO FLARE	PATROL												
	22	1650	1804	NO FLARE	PATROL												
	22	2011	2236	NO FLARE	PATROL												
	22	2252	2332	NO FLARE	PATROL												
	22	2334	2346	NO FLARE	PATROL												
	23	1613	1623	NO FLARE	PATROL												
	23	1633	1759	NO FLARE	PATROL												
	23	1814	1845	NO FLARE	PATROL												
	23	1934	2035	NO FLARE	PATROL												
	23	2105	2128	NO FLARE	PATROL												
	23	2220	2235	NO FLARE	PATROL												
	24	0530	0532	NO FLARE	PATROL												
	24	0535	0536	NO FLARE	PATROL												
	24	1210	1530	NO FLARE	PATROL												
	24	1617	1826	NO FLARE	PATROL												
	24	1831	2041	NO FLARE	PATROL												
	24	2046	2111	NO FLARE	PATROL												
	24	2141	2202	NO FLARE	PATROL												
	25	1940	1945	NO FLARE	PATROL												
	26	2056	2106	NO FLARE	PATROL												
	26	2115	2132	NO FLARE	PATROL												
	26	2310	2325	NO FLARE	PATROL												
	27	1300	1350	NO FLARE	PATROL												
	27	1400	1430	NO FLARE	PATROL												
	27	1435	1500	NO FLARE	PATROL												
	27	1505	1751	NO FLARE	PATROL												
	28	2004	2027	NO FLARE	PATROL												
	28	2225	2226	NO FLARE	PATROL												

"Remarks":

- A = Eruptive prominence whose base is less than 90° from central meridian.
- 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 visible spots in the neighborhood.
- H = Flare accompanied by a high speed dark filament.
- I = Active region very extended.
- J = Distinct variations of plage intensity before or after the flare.
- K = Several intensity maxima.
- L = Existing filaments show signs of sudden activity.
- M = White-light flare.

- N = Continuous spectrum shows effects of polarization.
- O = Observations have been made in the calcium II lines H and K.
- P = Flare shows helium D₃ in emission.
- Q = Flare shows the Balmer continuum in emission.
- R = Marked asymmetry in H α line suggests ejection of high velocity material.
- S = Brightness follows disappearance of filament (same position).
- T = Region active all day.
- U = Two bright branches, parallel (||) or converging (Y).
- V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
- W = Great increase in area after time of maximum intensity.
- X = Unusually wide H α line.
- Y = System of loop-type prominences.
- Z = Major sunspot umbra covered by flare.

FEBRUARY 1977			DAILY FLARE INDICES			Includes all Flares		
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
770201	20.32	24.0	770210	17.22	23.4	770219	0.00	23.1
770202	22.04	18.4	770211	47.92	21.4	770220	25.63	19.5
770203	12.15	22.4	770212	15.58	23.5	770221	0.00	22.0
770204	3.61	19.7	770213	16.76	20.6	770222	0.00	19.5
770205	0.00	22.2	770214	12.25	21.5	770223	0.00	20.2
770206	1.96	22.8	770215	9.94	20.4	770224	0.00	15.5
770207	2.76	23.7	770216	5.78	23.5	770225	0.00	23.9
770208	19.26	24.0	770217	13.52	23.0	770226	0.00	23.3
770209	10.19	23.4	770218	4.22	24.0	770227	0.00	19.5
						770228	0.00	23.6

When no Flare Index is given, it is 0 for that day.