

H α SOLAR FLARES

JANUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1977 JAN	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CNR DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
GRP63694	01	0203+4	0213 0220	0250	S21	W16	.403	14579	30.9	47	1F				240	2.6	
MITK	01	0203	0220	0237D	S21	W16	.403	14579	30.9	340	1N	C	0220	310	3.5		
CULG	01	0207	0213	0250	S21	W16	.403	14579	30.9	43	-F	C	0223	170	1.9		
	01	1915	2304	NO FLARE PATROL													
GRP63695	01	2350+1	2350+4	0603	S19	W29	.538	14579	30.8	13	-F				60	.7	FH
MANI	01	2350E	2350U	2355D	S21	W27	.528	14579	31.0	50	-F	V	2350	50	.6	FH	
MITK	01	2351	2354	0003	S18	W31	.557	14579	30.7	12	-F	C	2354	80	1.0	H	
696 MITK	02	0122	0125	0131	N31	W38	.763	14591	30.2	9	-F	C	0125	70	1.1	E	Y5
697 MITK	02	0303E		0305D	S20	W40	.675	14579	30.1	20	-N	P	0305	80	1.1	D	Y5
	02	0753	0807	NO FLARE PATROL													
	02	0816	0826	NO FLARE PATROL													
	02	0940	0942	NO FLARE PATROL													
	02	0944	1002	NO FLARE PATROL													
	02	1015	1045	NO FLARE PATROL													
698 CULG	02	2028	2033	2058	S25	W36	.656	14579	31.2	30	-F	C	2039	30	.4		Y5
699 MITK	02	2346E		2350	N32	W50	.857	14591	30.2	40	-F	C	2346	100	2.0	E	Y5
700 MITK	03	0026	0034	0047	N31	W52	.867	14591	30.1	21	-F	C	0034	80	1.6	D	Y5
GRP63701	03	0211	0218+3	0329	N32	W52	.871	14591	30.2	78	-B						HJ
VORO	03	0211	0218	0230D	N33	W51	.868	14591	30.3	190	-B	C	0218	18	.4	DJ	
KODA	03	0218E	0221	0329	N31	W53	.874	14591	30.1	710	1N	V	0218	250	2.6	EH	
702 MITK	03	0335	0337	0345	N32	W55	.890	14591	30.0	10	-F	C	0337	50	1.1	EH	Y5
	03	0822	0832	NO FLARE PATROL													
	03	0838	0845	NO FLARE PATROL													
	03	0847	0913	NO FLARE PATROL													
	03	0922	1005	NO FLARE PATROL													
	03	1015	1030	NO FLARE PATROL													
	03	1035	1045	NO FLARE PATROL													
	03	1250	1826	NO FLARE PATROL													
	03	1849	1910	NO FLARE PATROL													
703 CULG	03	2045E		2045	S23	W61	.884	14579	30.3		-F	C				B	Y5
	03	2217	2223	NO FLARE PATROL													
	03	2220	2235	NO FLARE PATROL													
	03	2236	2248	NO FLARE PATROL													
GRP63704	04	0105+1	0109+2	0118	N31	W66	.948	14591	30.1	13	-N				70		J
VORO	04	0105	0111	0119	N31	W65	.943	14591	30.2	14	1N	C	0111	90	2.8	DJ	
MITK	04	0106	0109	0117	N31	W67	.953	14591	30.0	11	-F	C	0109	50		E	
705 VORO	04	0220	0222	0230	N31	W52	.868		31.2	10	-B	C	0220	81	1.6	DJ	Y5
706 VORO	04	0231	0237	0249	N30	W67	.951	14591	30.1	18	?N	C	0237	72	2.5	DJ	Y5
	IMP	1 NO	MITK1	PALE1													
707 VORO	04	0342	0348	0357	N30	W67	.951	14591	30.1	15	1N	C	0348	61	3.5	DJ	Y5
	04	0630	0637	NO FLARE PATROL													
	04	0643	0648	NO FLARE PATROL													
	04	0747	0755	NO FLARE PATROL													
	04	0945	1000	NO FLARE PATROL													
GRP63708	04	1719+3	1723+7	1756	S22	W71	.946	14579	30.4	37	-B				80		H
MCHA	04	1719	1723	1734D	S23	W74	.961	14579	30.2	150	1N	C	1723	60	2.4	EH	
RAHY	04	1722	1726U	1728D	S22	W71	.946	14579	30.4	60	-B	C		97		FDE	
RAHY	04	1728E	1730	1756	S21	W69	.935	14579	30.6	280	-B	V		90			
	04	2204	2310	NO FLARE PATROL													
	04	2315	2333	NO FLARE PATROL													
709 BUCA	05	0805		0830	N34	W80	.994	14591	30.3	25	-N	P	0805	53	.5	CE	Y5
	05	0900	0903	NO FLARE PATROL													
	05	0908	0915	NO FLARE PATROL													
	05	0919	1000	NO FLARE PATROL													

Note: Although these flare listings give all reported events, not all possible brightenings are reported. Thresholds of reporting vary from observatory to observatory.

H α SOLAR FLARES

JANUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE 1977 JAN	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	McMATH FLARE REGION	CNR DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill of Disk	CORR. AREA Sq. Deg.		
					LAT.	MER. DIST.												
710 MITK	05	1728	1740	NO FLARE PATROL														
	05	2010	2027	NO FLARE PATROL														
	05	2103	2105	NO FLARE PATROL														
	05	2110	2154	NO FLARE PATROL														
	05	2157	2333	NO FLARE PATROL														
	06	0004	0009	0016	N30	W90	1.0J0	14591	30.3	12	?N	C	0009	50		DH	Y5	
	IMP.	1	NO	VOROI														
	06	0515	0546	NO FLARE PATROL														
	06	0554	0735	NO FLARE PATROL														
	06	1507	1623	NO FLARE PATROL														
07	1836	2017	NO FLARE PATROL															
09	0155	0156	NO FLARE PATROL															
09	2237	2242	NO FLARE PATROL															
09	2252	2301	NO FLARE PATROL															
09	2303	0001	NO FLARE PATROL															
10	1300	1315	NO FLARE PATROL															
10	1934	1954	NO FLARE PATROL															
10	2227	2306	NO FLARE PATROL															
GRP63711 RAMY RAMY	11	1328	1336+4	1350	S28	E12	.446	14607	12.5	22	-F			35	.4	FH		
	11	1328	1340	1350	S28	E12	.446	14607	12.5	22	-F	3	C	40		F	H	
	11	1332E	1336U	1348D	S28	E13	.452	14607	12.5	16D	-F	4	V	31		H		
	11	1535	1550	NO FLARE PATROL														
	11	1605	1612	NO FLARE PATROL														
	11	1801	1806	NO FLARE PATROL														
	11	1839	1848	NO FLARE PATROL														
	11	1930	1941	NO FLARE PATROL														
	11	2133	2245	NO FLARE PATROL														
	712 MITK	12	0039	0041	0048	S28	E06	.414	14607	12.5	9	-N	C	0041	70	.8	E	Y5
713 HTPR	12	1302	1302	1305	S29	W04	.424	14607	12.2	3	-F	C	1302	20		E	Y5	
GRP63714 RAMY RAMY HTPR	12	1316+5	1323	1355	S28	W05	.411	14607	12.2	39	-N					F		
			1330+5															
	12	1316	1323	1345D	S27	W05	.395	14607	12.2	29D	-N	4	C	105		F		
	12	1318E	1335	1350	S27	W05	.395	14607	12.2	32D	-N	4	V	190		F		
12	1321	1330	1400	S29	W06	.429	14607	12.1	39	-N		C	1330	40		E		
715 MCMA	12	1753	1807	1850D	S28	W06	.414	14607	12.3	57D	-B	C	1807	125	1.4	E	Y5	
	12	1916	1951	NO FLARE PATROL														
716 MCMA	12	1951E		2006D	S28	W06	.414	10607	12.4	15D	-N	C	1951	60	.7	E	Y5	
	12	2006	2013	NO FLARE PATROL														
	12	2017	2026	NO FLARE PATROL														
	12	2030	2055	NO FLARE PATROL														
	12	2105	2119	NO FLARE PATROL														
	12	2150	2201	NO FLARE PATROL														
	12	2201	2206	2218D	S29	W06	.429	14607	12.5	17	-N						JU	
GRP63717 CULG PALE	12	2201	2206	2215D	S29	W05	.426	14607	12.5	14D	-N		P	2215	130	1.3	J	
	12	2214E	2216U	2218D	S29	W08	.437	14607	12.3	4D	-F	3	C	16			U	
	12	2222	2344	NO FLARE PATROL														
GRP63718 MITK VORO PALE	13	0050>9	0106	0200D	S28	W08	.420	14607	12.4	70	-N						EJU	
			0113															
	13	0050	0106	0112D	S27	W08	.405	14607	12.4	22D	-N		C	0106	100	1.1		
	13	0106	0122	0200D	S28	W09	.425	14607	12.4	54D	1B		C	0122	215	2.4	EJ	
GRP63719 VORO CULG MITK	13	0111E	0113U	0131D	S30	W08	.450	14607	12.4	20D	-F	3	C	69			U	
	13	0339>9	0349+6	0429	S28	W11	.436	14607	12.3	50	-N			120	1.3		J	
			0421															
	13	0339	0349	0400D	S28	W11	.436	14607	12.3	21D	-B		C	0349	125	1.4	EJ	
	13	0352	0355	0425	S29	W10	.445	14607	12.4	33	-F		C	0358	100	1.2		
13	0416	0421	0432	S27	W12	.429	14607	12.3	16	-N		C	0421	170	1.9	F		
720 HTPR	13	0901	0912	0920	S28	W17	.480	14607	12.1	19	-F	C	0912	20		E	Y5	
721 HTPR	13	1019	1022	1030	S28	W18	.488	14607	12.1	11	-F	C	1022	10			Y5	

H α SOLAR FLARES

JANUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPORTANCE	OBS COND TYPE	MEASUREMENTS			REMARKS		
	DATE 1977 JAN	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	McMATH FLARE REGION				CMP DAY	TIME UT	MEAS. AREA MIN. of Disk		CORR AREA Sq. Deg	
					LAT.	HEG. DIST.											
735 MITK	18	2238	2303	NO FLARE PATROL									H	Y5			
	18	2317	2325	NO FLARE PATROL													
736 MONT	19	0230	0232	0237	S33	W90	.999	14607	12.4	7	?F	C	0232	60			
		IMP. 1	NO	VORO1	CULG1												
736 MONT	19	1127	1140	1147	S32	W90	.999	14607	12.7	20	-F	C	1140	20		Y5	
	19	1519	1532	NO FLARE PATROL													
	19	1545	1621	NO FLARE PATROL													
	19	1644	1705	NO FLARE PATROL													
	19	1800	1811	NO FLARE PATROL													
	19	1915	1924	NO FLARE PATROL													
	19	1942	2004	NO FLARE PATROL													
	20	1114	1120	NO FLARE PATROL													
	20	1145	1158	NO FLARE PATROL													
	20	1203	1708	NO FLARE PATROL													
	20	1730	1835	NO FLARE PATROL													
	20	1854	2615	NO FLARE PATROL													
	20	2021	2031	NO FLARE PATROL													
	21	1000	1010	NO FLARE PATROL													
	21	1525	1736	NO FLARE PATROL													
	21	2021	2035	NO FLARE PATROL													
	737 MITK	22	0253	0254	0324	N25	W07	.515	14614	21.6	31	-F	C	0254	60	.7	DG Y5
	738 MITK	22	0450	0457	0506	N25	W08	.518	14614	21.6	160	-F	C	0457	50	.6	DG Y5
		22	1305	1508	NO FLARE PATROL												
		22	1939	2216	NO FLARE PATROL												
739 VORO	23	0028	0120	NO FLARE PATROL													
	23	0331	0332	0343	N32	E52	.882	14615	27.0	12	-B	C	0332	36	.7	DJ Y5	
	23	0401	0940	NO FLARE PATROL													
	23	1030	1045	NO FLARE PATROL													
	23	1115	1144	NO FLARE PATROL													
	23	1156	1308	NO FLARE PATROL													
	23	1333	1859	NO FLARE PATROL													
	23	1924	1958	NO FLARE PATROL													
	23	2010	2304	NO FLARE PATROL													
	23	2312	2326	NO FLARE PATROL													
	23	2341	2347	NO FLARE PATROL													
	740 MITK	24	0417	0428	0432	N27	W36	.738	14614	21.5	15	-N	C	0428	110	1.7	Y5
	GRP63741 CULG CATA	24	0754+1	0755+1	0819	N27	W37	.746	14614	21.6	25	-N			60	.9	
24		0754	0756	0832	N28	W37	.753	14614	21.6	38	-N	C	0758	60	.9		
24		0755	0755	0805	N27	W37	.746	14614	21.6	10	-N	2	0755	67	1.0		
24		1510	1523	NO FLARE PATROL													
742 CULG	24	1534	1556	NO FLARE PATROL													
	24	1802	1845	NO FLARE PATROL													
	24	2207	2213	NO FLARE PATROL													
	25	0426	0428	0500	N27	W48	.835	14614	21.6	34	-F	C	0431	20	.4	Y5	
743 MONT	25	0922	0925	0946	N26	W50	.846	14614	21.6	24	-F	C	0925	40		E Y5	
	25	1911	1921	NO FLARE PATROL													
	25	1926	2001	NO FLARE PATROL													
	25	2136	2154	NO FLARE PATROL													
	25	2158	2207	NO FLARE PATROL													
	26	1350	1415	NO FLARE PATROL													
	26	1425	1439	NO FLARE PATROL													
	26	1537	1539	NO FLARE PATROL													
	26	1604	1656	NO FLARE PATROL													
	26	1908	2009	NO FLARE PATROL													
	26	2152	2158	NO FLARE PATROL													
	27	1046	1050	NO FLARE PATROL													
	27	1500	1514	NO FLARE PATROL													
	27	1925	1946	NO FLARE PATROL													
	27	1710	1728	NO FLARE PATROL													
	27	1903	2032	NO FLARE PATROL													
	27	2138	2145	NO FLARE PATROL													
	27	2211	2218	NO FLARE PATROL													

12
Jan 77

H α SOLAR FLARES

JANUARY 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE 1977 JAN	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY			MIN.	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR. AREA Sq. Deg.
					LAT.	MER. DIST.												
744 CULG	28	0536	0539	0600	N30	W02	.584	14621	28.1	24	-F	C	0540	40	.5	Y5		
745 ATHN	28	0726	0727	0732	S20	H50	.772	14625	24.6	6	-N	S	0727	98	255.0	Y5		
746 ATHN	28	0851	0855	0904	S20	H50	.772	14625	24.6	13	-F	S	0855	33	84.0	Y5		
	28	1629	1921	NO FLARE PATROL														
	28	2007	2019	NO FLARE PATROL														
	28	2051	2058	NO FLARE PATROL														
	28	2138	2145	NO FLARE PATROL														
	28	2201	2207	NO FLARE PATROL														
	28	2216	2233	NO FLARE PATROL														
	28	2318	2320	NO FLARE PATROL														
	29	0832	0835	NO FLARE PATROL														
	29	0850	0857	NO FLARE PATROL														
	29	2048	2052	NO FLARE PATROL														
747 CULG	30	0228	0235	0400	N31	E90	1.001	14630	5.9	92	1F	C	0250	70		Y5		
	30	1919	2026	NO FLARE PATROL														
	31	1243	1250	NO FLARE PATROL														
	31	1448	1459	NO FLARE PATROL														
	31	1610	2035	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.

JANUARY 1977			DAILY FLARE INDICES			Includes all Flares		
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
770101	36.97	20.2	770111	.67	22.0	770121	0.00	21.4
770102	6.71	22.8	770112	34.60	21.0	770122	7.96	19.3
770103	4.43	15.8	770113	38.66	18.0	770123	2.47	6.3
770104	10.59	22.0	770114	0.00	23.2	770124	3.89	22.6
770105	.91	20.3	770115	0.00	19.9	770125	3.60	22.8
770106	0.00	20.5	770116	.91	21.0	770126	0.00	21.3
770107	0.00	22.3	770117	4.62	21.2	770127	0.00	21.3
770108	0.00	24.0	770118	0.00	23.1	770128	8.00	20.3
770109	0.00	22.8	770119	.86	22.1	770129	0.00	23.8
770110	0.00	22.8	770120	0.00	16.0	770130	3.38	22.9
						770131	0.00	19.3

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