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H α SOLAR FLARES

APRIL 1975

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION			CMP DAY	COND.	TYPE	TIME UT	MEAS. AREA MIL of Disk		CORR. AREA Sq. Deg.
					LAT.	MER. DIST.											
MCMA	05	2213	2215	2223	N08	E77	.979	13576	11.7	10	SF		C	2215			0
ABST	06	1033	1037	1048	N09	E70	.948		11.7	15	1F		C	1037	87		0GJ
KHAR	06	1037	1037	1043	N03	E69	.937		11.6	6	1F						0
GATA	06	1050	1050	1055	N08	E68	.936		11.6	5	SF	3		1050	56		
ABST	08	0519	0520	0540	N08	E44	.722		11.5	21	SF		C	0520	50	.7	0
PALE	09	2358E	0003	0014	N 2	W 3	.157		9.8	160	SF	2	C		45		
PALE	09	2358E	0003	0014	N 2	W 3	.157		9.8	160	SF	2	V		45		
MANI	10	0004	0023	0035	N03	W03	.174		9.8	31	SN		C	0023	50	.5	F
MANI	10	0004	0007	0035	N03	W03	.174		9.8	31	SF		C	0007	40	.4	0
ABST	10	0504	0506	0510	N02	W07	.192		9.7	6	SF		C	0506	50	.5	0
HUAN	17	2018	2021	2031	S03	E76	.969		23.5	13	SF	1	C	2021	25		
HTPR	23	0750	0802	0803	N10	E72	.960		28.7	13	SF		C	0802	20	.4	
HTPR	23	1250	1252	1304	N08	W03	.265		23.3	14	SF		C	1252	20	.2	E
HTPR	24	1245	1247	1257	N10	E42	.710		27.7	12	SN		C	1247	30	.4	
HTPR	24	1333	1336	1340	S05	E12	.210		25.5	7	SF		C	1336	30	.3	E
HTPR	26	1159	1203	1208	N01	E87	.999		5.0	9	SF		C	1204	20		
HTPR	26	1400	1400	1403	N01	E86	.998		5.0	3	SF		C	1400	20		
PAMY	27	1107	1112	1118	N 4	E69	.938		4.6	11	SF	3	C		22		0E
MEUD	27	1110	1113	1117	N02	E68	.930		4.6	7	SN		C	1113	50		0
HTPR	29	1653		17070	N10	W70	.950		24.5	140	SF		C	1656	20		E
BOUL	29	1705	1712	1732	N 9	W69	.943		24.5	27	SF	2	P	1712	21	.6	
PALE	29	2051E	2053U	20560	S 1	E35	.580		4.5	50	SF	3	C		70		F
PALE	29	2052E	2053U	2059	N 2	E33	.562		4.3	70	SF	3	V		80		F
VORO	29	2255	2259	2307	N03	E33	.566		4.4	12	S0		C	2259	108	1.3	EGJ
MANI	29	2258E	2303	23090	N01	E33	.558		4.4	110	SN		V	2303	60	.8	
PALE	29	2301E	2306U	2313	S 1	E34	.566		4.5	120	SF	3	C		61		U
PALE	29	2301E	2306U	2313	N 2	E33	.562		4.4	120	SF	3	V		80		U
HTPR	30	0917	0919	0923	N10	W78	.983		24.5	6	SF		C	0919	20		
PALE	30	1956E	19573	2000	S10	E60	.860		7.3	40	SF	3	V		15		

Several changes in the presentation of the Grouped Flare Data have been planned to begin with the January 1975 data. The preparation of the new presentation has been delayed because of problems in computer conversions. Therefore, only the observatory flare reports are included here. The grouped flares will no longer be classified as "confirmed" or "unconfirmed". The flare list for this month will be republished later and will include a summary line for each flare. Measured area is now reported in millionths of the solar disk.

H α SOLAR FLARES

Since January 1968 the flare reports published six months after observation have been divided into two tables labeled "confirmed" and "unconfirmed". This separation was felt desirable in 1968 to present the most homogeneous and reliable flare data for use by the scientific community. However, it has become apparent that for small events, which currently constitute the majority of reports, such discrimination is questionable. Therefore, beginning with the January 1975 data, all reported H α flares are published in one chronological list.

The listing is prepared in cooperation with DASOP (Department d' Astronomie Solaire et Planétaire), Observatoire de Paris, 92190 Meudon, France. For each event there is a group report line more closely resembling the presentation of the flares as they will be published in the "IAU Quarterly Bulletin on Solar Activity" (QBSA). In *Solar-Geophysical Data* the flares as reported by the individual observatories follow the "group report" line. In QBSA only the summary of the observatory contributions is included.

The group report line is intended as a summary of all individual reports. The principal criteria for grouping reports together are flare position and times. The following new rules have been adopted to determine times, areas and importances of grouped events:

- The beginning time is the time of first observation of an event by an observatory. If there is uncertainty in the beginning time, it is indicated by a "+" sign followed by the difference in minutes between the time of the first observation and the time of the latest observed beginning. More than 9 minutes difference appears as >9. The same applies for times of maximum. When two or more maxima are identified, their times are reported with the same group line.
- With near agreement among observatories an average of the areas is used in determining importance.
- With widely varying areas among several observatories the average area is not computed. The importance is estimated from the reported importances. An importance 1 or more is assigned only when reported by several observers or when only a single observatory is operating at the time of observing such a flare.
- If only one or two observers report a flare of importance 1 or more with considerable disagreement in importance, no importance is assigned and a "?" is inserted in the importance column.
- Queries are sent to observatories who have reported cinematographic observation at a time when only one or two observatories have reported an event of importance 1 or greater. Any new information thus obtained is included in the flare listing.

The columns in the table are as follows:

- Group Number and Reporting Observatories using IAU abbreviation (see table on page 11 of February 1975 *Explanation of Data Reports*).
- The Universal date.
- Beginning time in UT.
- Time of maximum phase in UT. (more than one maxima may be listed)
- Ending time in UT.
- The heliographic coordinates in degrees for the "center of gravity" of the emission region, corresponding to the time of maximum intensity.
- The distance from the center of disk in units of disk radius.
- McMath serial number of the associated plage region.
- The time of central meridian passage of the position of the flare in tenths of the Universal date.
- Duration in minutes.
- The flare importance on the IAU scale of Sf* to 4b. (In the summary line for the group a "?" will be used when there has been too much discrepancy among individual reports to determine accurately the probable importance of the event).
- Observing conditions where 1 means poor, 2 fair, and 3 good. (Observatories at Ramey, Palehua, Athenes and Tehran use a scale of 1-5).
- Nature and completeness of available observations where -

C = a complete, or quasi complete sequence of photographs was obtained,
P = one or a few photographs of the event were obtained resulting in incomplete time coverage,
V = all (or most of) the development of the flare was visually observed, or
S = flare was seen visually for a small part of its probable duration.

* For easier visual selection of the more important flares a minus sign, "-", is used to indicate subflares instead of "S".

- Time of measurement for tabulated areas.
- Apparent (i.e., projected) area at time of maximum brightness in millionths of solar disk -- this is not necessarily the maximum area. (Prior to January 1975 this measured area in millionths was divided by 97 and was indicated as heliographic square degrees, hence the tabular heading was incorrect and should have been mill/97.)
- Corrected area in square degrees.
- Remarks in the IAU system of notes where

- | | |
|---|---|
| <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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 Hα 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 Hα line. Y = System of loop-type prominences. Z = Major sunspot umbra covered by flare. |
|---|---|

When importance is questionable the list of observatories reporting cinematographic patrol but not reporting flare follows the group report. The abbreviated observatory name is followed by "2" when a second look by the observer still did not identify a flaring event at that time. Observatories not observing the event and not making a second evaluation are followed by "1".

Intervals when no observatory reported times of patrol observation are listed chronologically in the table.

NEW STANDARDIZED FLARE DATA FOR JANUARY - APRIL 1975 ARE ON PAGES 26-40 OF THIS REPORT.

H α SOLAR FLARES

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 APR	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	MCNATH PLAGE REGION	CNR DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	NER DIST.											
	01	1938	1943		NO FLARE	PATROL											
	02	2032	2110		NO FLARE	PATROL											
	02	2115	2123		NO FLARE	PATROL											
	03	1828	1918		NO FLARE	PATROL											
	03	1926	1932		NO FLARE	PATROL											
	03	1940	1941		NO FLARE	PATROL											
	03	1954	2018		NO FLARE	PATROL											
	03	2024	2039		NO FLARE	PATROL											
	03	2103	2120		NO FLARE	PATROL											
	03	2139	2155		NO FLARE	PATROL											
133 MCHA	05	2213	2215	2223	N08	E77	.979	13576	11.7	10	-F	C	2215				
GRP62134	06	1033+4	1037+0	1046	N06	E69	.939	13576	11.6	13	1F						
ABST	06	1033	1037	1048	N09	E70	.948	13576	11.7	15	1F	C	1037	87		DGJ	
KHAR	06	1037	1037	1043	N03	E69	.937	13576	11.6	6	1F					DGJ	
135 CATA	06	1050	1050	1055	N08	E68	.935	13576	11.6	5	-F	3	1050	56			
	08	0135	0142		NO FLARE	PATROL											
	08	0216	0222		NO FLARE	PATROL											
136 ABST	08	0519	0520	0540	N08	E44	.721	13576	11.5	21	-F	C	0520	50			
	09	2025	2045		NO FLARE	PATROL											
	09	2053	2113		NO FLARE	PATROL											
GRP62137	09	2358+6	0003+4	0014	N02	W03	.150	13584	9.8	16	-F			50	.5	F	
MANI	10	0004	0007	0035	N03	W03	.165	13584	9.8	31	-F	C	0007	40	.4		
MANI	10	0004	0023	0035	N03	W03	.165	13584	9.8	31	-N		0023	50	.5		
PALE	09	2358E	2403	0014	N02	W03	.150	13584	9.8	160	-F	2	W	45			
PALE	09	2358E	2403	0014	N02	W03	.150	13584	9.8	160	-F	2	C	45			
138 ABST	10	0504	0506	0510	N02	W07	.184	13584	9.7	6	-F	C	0506	50			
	11	2045	2055		NO FLARE	PATROL											
	11	2115	2120		NO FLARE	PATROL											
	11	2127	2132		NO FLARE	PATROL											
	11	2217	2222		NO FLARE	PATROL											
	12	1230	1248		NO FLARE	PATROL											
	13	0736	0741		NO FLARE	PATROL											
	13	0748	0753		NO FLARE	PATROL											
	14	2028	2039		NO FLARE	PATROL											
	14	2155	2200		NO FLARE	PATROL											
	15	0953	1018		NO FLARE	PATROL											
	15	1109	1118		NO FLARE	PATROL											
	15	1136	1220		NO FLARE	PATROL											
139 HUAN	17	2018	2021	2031	S03	E76	.969	13624	23.5	13	-F	1	C	2021	25		
	17	2053	2121		NO FLARE	PATROL											
	19	0500	0510		NO FLARE	PATROL											
	19	0513	0525		NO FLARE	PATROL											
	20	0243	0246		NO FLARE	PATROL											
	20	1323	1325		NO FLARE	PATROL											
	20	1645	1653		NO FLARE	PATROL											
	20	1655	1700		NO FLARE	PATROL											
	21	0200	0208		NO FLARE	PATROL											
140 HTPR	23	0750	0802	0803	N10	E72	.958	13622	28.7	13	-F	C	0802	20			
141 HTPR	23	1250	1252	1304	N08	W03	.230	13624	23.3	14	-F	C	1252	20			
	23	2049	2104		NO FLARE	PATROL											
	23	2111	2118		NO FLARE	PATROL											
	25	0653	0701		NO FLARE	PATROL											
	25	0722	0800		NO FLARE	PATROL											
142 HTPR	25	1245	1247	1257	N10	E42	.700	13622	27.7	12	-N	C	1247	30			
143 HTPR	25	1333	1336	1340	S05	E12	.207	13630	25.5	7	-F	C	1336	30			
	25	1923	1928		NO FLARE	PATROL											
	25	2121	2124		NO FLARE	PATROL											
144 HTPR	26	1159	1203	1208	N01	E87	.999	13628	3.0	9	-F	C	1204	20			

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H α SOLAR FLARES

APRIL 1975

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 APR	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg	
					LAT.	MER. DIST.											
145 HTPR	26	1400	1400	1403	N01	E86	.998	13628	3.0	3	-F	C	1400	20			
	26	2333	2341	NO FLARE PATROL													
	27	0640	0642	NO FLARE PATROL													
GRP62146 RAMY HEUD	27	1107+3	1112+1	1118	N03	E68	.930	13628	1.6	11	-F	3	C		35		D O E D
	27	1107	1112	1118	N04	E69	.936	13628	2.6	11	-F			22			
	27	1110	1113	1117	N02	E68	.929	13628	2.6	7	-N		C	1113	50		
	27	2206	2209	NO FLARE PATROL													
	27	2219	2237	NO FLARE PATROL													
GRP62147 HTPR BOUL	29	1653+9	1712	1732	N09	H69	.940	13630	24.5	39	-F						E E
	29	1653		1707D	N10	H70	.947	13630	24.5	140	-F		C	1656	20		
	29	1705	1712	1732	N09	H69	.940	13630	24.5	27	-F	2	P	1712	21	.6	
GRP62148 PALE PALE	29	2051E	2053+0	2059	00	E34	.563	13628	1.4	8	-F				70	.8	F F F
	29	2051E	2053U	2056D	S01	E35	.575	13628	2.5	50	-F	3	C		70		
	29	2052E	2053U	2059	N02	E33	.553	13628	2.3	70	-F	3	V		80		
	29	2112	2123	NO FLARE PATROL													
GRP62149 VORO MANI PALE PALE	29	2255	2259+7	2311	N01	E33	.551	13628	1.4	16	-N				80	1.0	EGJU EGJ U U
	29	2255	2259	2307	N03	E33	.556	13628	2.4	12	-B		C	2259	108	1.3	
	29	2258E	2303	2309D	N01	E33	.551	13628	2.4	110	-N		V	2303	60	.8	
	29	2301E	2306U	2313	N02	E33	.553	13628	2.4	120	-F	3	V		80		
	29	2301E	2306U	2313	S01	E34	.561	13628	2.5	120	-F	3	C		61		
150 HTPR	30	0917	0919	0923	N10	H70	.982	13630	24.5	6	-F		C	0919	20		
151 PALE	30	1956E	19573	2000	S10	E60	.864	13634	5.3	40	-F	3	V		15		
	30	2100	2105	NO FLARE PATROL													