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Nov 77

H α SOLAR FLARES

NOVEMBER 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIL	IMPORTANCE	OBS COND TYPE	MEASUREMENTS			REMARKS
	DATE	START	MAX PHASE	END	APPROX		CENTRAL DISTANCE	McMATH FLARE REGION	CMP. DAY				TIME UT	MEAS. AREA MIL of Disk	CORR AREA Sq. Deg.	
	NOV				LAT.	NER. DIST.										
	01	1515	1619	NO FLARE PATROL												
	01	1651	1659	NO FLARE PATROL												
	01	1714	1800	NO FLARE PATROL												
	01	1803	1823	NO FLARE PATROL												
	01	1824	1839	NO FLARE PATROL												
	01	1847	1944	NO FLARE PATROL												
	01	1947	2023	NO FLARE PATROL												
	01	2109	2114	NO FLARE PATROL												
975 CULG	01	2207	2212	2228	S24	E20	.566	15016	3.4	21	-F	C	2212	20	.2	Y5
GRP64976	02	0031+1	0032+1	0050	S24	E19	.557	15016	3.4	19	-N			30	.4	DJ
CULG	02	0031	0033	0100	S24	E20	.564	15016	3.5	29	-F	C	0033	30	.3	
VORO	02	0032	0032	0039	S24	E18	.549	15016	3.4	7	-B	C	0032	27	.3	DJ
977 VORO	02	0204	0209	0222	S24	E18	.549	15016	3.4	18	-N	C	0209	54	.6	DH Y5
978 CULG	02	0336	0340	0356	S25	E18	.561	15016	3.5	20	-F	C	0340	15	.2	Y5
979 MONT	02	0828	0832	0838	S25	E14	.534	15016	3.4	10	-F	C	0832	40		E Y5
980 MONT	02	0849	0851	0855	N31	H40	.721	15008	30.4	6	-F	C	0851	40		D Y5
	02	1145	1155	NO FLARE PATROL												
	02	1257	1300	NO FLARE PATROL												
	02	1320	1322	NO FLARE PATROL												
	02	1408	1452	NO FLARE PATROL												
	02	1458	1508	NO FLARE PATROL												
	02	1510	1525	NO FLARE PATROL												
	02	1540	1548	NO FLARE PATROL												
	02	2134	2147	NO FLARE PATROL												
	02	2213	2223	NO FLARE PATROL												
	02	2230	2233	NO FLARE PATROL												
	03	0536	0552	NO FLARE PATROL												
GRP64981	03	1219+1	1227+2	1240	N20	E20	.424	15017	5.0	21	-F					E
MONT	03	1219	1229	1240	N20	E20	.424	15017	5.0	21	-F	C	1229	60		E
KANZ	03	1220	1227	1239	N20	E20	.424	15017	5.0	19	-F					E
	03	1525	2019	NO FLARE PATROL												
	03	2020	2034	NO FLARE PATROL												
982 CULG	03	2255	2302	2310	N30	W63	.903	15008	30.2	15	-F	C	2302	50		Y5
	04	0141	0142	NO FLARE PATROL												
	04	0243	0248	NO FLARE PATROL												
	04	0329	0340	NO FLARE PATROL												
983 KANZ	04	0949	0956	1003	N22	E05	.318	15017	4.8	14	-F					D Y5
984 KANZ	04	1014	1022	1028	N22	E05	.318	15017	4.8	14	-F					Y5
	04	1304	1310	NO FLARE PATROL												
	04	1350	1405	NO FLARE PATROL												
	04	1410	1412	NO FLARE PATROL												
	04	1418	1420	NO FLARE PATROL												
	04	1440	1455	NO FLARE PATROL												
	04	1510	1718	NO FLARE PATROL												
	04	1837	2030	NO FLARE PATROL												
	05	0114	0122	NO FLARE PATROL												
	05	0552	0605	NO FLARE PATROL												
985 HTPR	05	0736	0741	0750	S24	W18	.545	15016	4.0	14	-F	C	0741	10	.1	Y5
986 HTPR	05	1229	1235	1241	S24	W21	.569	15016	3.9	12	-F	C	1235	10	.1	Y5
987 HTPR	05	1425	1428	1434	N20	W07	.299	15017	5.1	9	-F	C	1428	20	.2	Y5
	05	1529	1540	NO FLARE PATROL												
	05	1541	1829	NO FLARE PATROL												
	05	1854	2003	NO FLARE PATROL												
	05	2130	2144	NO FLARE PATROL												
	05	2159	2226	NO FLARE PATROL												
	06	1508	1732	NO FLARE PATROL												
	06	1740	1824	NO FLARE PATROL												
988 PALE	06	1921	1922	1946	N22	E64	.902	15024	11.6	25	-N	3 V		35		U F Y5

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN	IMPORTANCE	OBS		MEASUREMENTS			REMARKS
	DATE NOV	START	MAX PHASE	END	APPROX		CENTRAL DISTANCE	MC MATH PLAGE REGION	CMR DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
GRP64989 CULG CATA	07 07	0301 0322	0309 0327	NO FLARE PATROL													
	07 07	0531 0531	0607 0607	08300	S23	W45	.782	15016	3.9	179	1N						
	07 07	0705E	0705	0718D	S24	W45	.786	15016	3.9	1070	1N						
	07 07			08300	S23	W45	.782	15016	3.9	850	1N	2	C	0607 0705	200 252	3.2 4.1	U U
990 CULG	07 07	1515 2058 2105	1709 2059 2111	NO FLARE PATROL													
	07 07	2355	2401	0008	N25	W36	.651	15017	5.3	13	-F		C	2401	60	.8	L Y5
	08 08	0139 0157 0300	0144 0245 0309	NO FLARE PATROL													
991 CULG	08 08	0451	0456	0523	S23	E64	.926	15026	13.0	32	-N		C	0456	.70		Y5
	08 08	0649 0725	0701 0732	NO FLARE PATROL													
GRP64992 LVOV MONT KANZ	08 08	1057+4	1105+1	1118	N22	W50	.786	15017	4.7	21	1N				180	3.0	H
	08 08	1057	1105	1121	N21	W49	.773	15017	4.8	24	1F		C	1105	150	2.6	
	08 08	1058	1106	1118	N23	W51	.798	15017	4.6	20	1N		C	1106	220		H
	08 08	1101	1105	1112	N21	W51	.793	15017	4.6	11	1N						
993 CULG 994 CULG 995 CULG 996 CULG 997 CULG 998 CULG 999 CULG 0 CULG 1 MONT 2 MONT GRP65003 HTPR CATA 4 PALE GRP65005 PALE CULG 6 KANZ 7 KANZ	08 08	1544	1957	NO FLARE PATROL													
	08 08	2039	2042	2045	N22	W57	.849	15017	4.6	6	-F		C	2042	40	.8	Y5
	08 08	2050	2053	2100	N21	W55	.830	15017	4.7	10	-F		C	2053	30	.6	Y5
	08 08	2256	2300	2310	N21	W59	.864	15017	4.5	14	-N		C	2300	30	.6	Y5
	08 08	2335	2340	2343	N22	W59	.866	15017	4.6	8	-N		C	2340	60	1.2	Y5
	09 09	0046	0110	0140	N22	W53	.815	15017	5.1	54	-N		C	0110	60	1.0	L Y5
	09 09	0301	0305	0312	N22	W59	.866	15017	4.7	11	-F		C	0305	20	.4	Y5
	09 09	0339	0402	0440	N24	E60	.877	15017	13.7	61	-N		C	0402	40	1.2	F Y5
	09 09	0347	0424U	0445	N18	W63	.893	15017	4.4	58	-F		C	0424	15	.3	Y5
	09 09	0700 0725	0705 0747	NO FLARE PATROL													
	09 09	0847	0852	0903	S23	E48	.807	15026	13.0	16	-F		C	0852	40		E Y5
	09 09	0941	0950	NO FLARE PATROL													
	09 09	1124	1129	1149	S25	E48	.815	15026	13.1	25	-F		C	1129	20		D Y5
	09 09	1420	1845	NO FLARE PATROL													
	09 09	2109	2220	NO FLARE PATROL													
	10 10	0215	0227	NO FLARE PATROL													
10 10	0316	0350	NO FLARE PATROL														
10 10	0834	0847+3	0918	N25	E18	.464	15024	11.7	44	-F				45	.5	E	
10 10	0834	0847	0918	N25	E17	.455	15024	11.6	44	-F		C	0847	30	.3	E	
10 10	0845E	0850	0900D	N25	E19	.474	15024	11.8	150	-N	2	C	0850	56	.6		
10 10	1557	1954	NO FLARE PATROL														
10 10	1754	1754	1759	S22	E30	.627	15026	13.0	5	-F	3	C		26		DE Y5	
10 10	2057	2124+1	2135	S22	E26	.587	15026	12.8	38	-F				40	.5		
10 10	2057	2124	2125	S22	E27	.597	15026	12.9	28	-N	3	C		45			
10 10	2123E	2125	2145	S22	E26	.587	15026	12.8	220	-F		P	2125	30	.4		
10 10	2116	2123	NO FLARE PATROL														
11 11	1004	1020	1024	N37	E86	.996	15028	17.9	20	-F						Y5	
11 11	1159	1206	1210	N37	E86	.996	15028	17.9	11	-F						Y5	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE NOV	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.												
GRP65008	11	1235+0	1239+2	1309	N25	E02	.371	15024	11.7	34	1N						GU	
ZU RI	11	1235	1239	1311	N25	E02	.371	15024	11.7	36	-F	C	1239	60	.7		G	
KANZ	11	1235	1241	1307	N26	E02	.387	15024	11.7	32	1N						U	
CATA	11	1255E	1255	1305D	N24	E02	.354	15024	11.7	100	1N	2	1255	196	2.1			
9 KANZ	11	1417	1431	1434D	N23	E28	.552	15025	13.7	170	-N						Y5	
GRP65010	11	1442E		1508	N23	E30	.574	15025	13.9	26	-N						E	
HTRP	11	1442E		1505	N23	E30	.574	15025	13.9	230	-F	C	1443	20	.2			
CATA	11	1445E	1445	1510	N22	E27	.532	15025	13.6	250	1N	2	1445	168	2.0			
11 HTRP	11	1510	1511	1519	N20	E17	.399	15025	12.9	9	-F	C	1511	10	.1		Y5	
	11	1542	1843	NO FLARE PATROL														
	11	1906	1949	NO FLARE PATROL														
GRP65012	12	0800+0	0805	0845	N25	W10	.404	15024	11.6	45	-F						E	
BUCA	12	0800		0850	N26	W10	.418	15024	11.6	50	-F	C	0815	43	.5		E	
CATA	12	0800E	0805	0840	N25	W10	.404	15024	11.6	40D	-N	1	0805	56	.6			
13 BUCA	12	0819	0824	0840	S24	E08	.474	15026	12.9	21	-N	C	0824	107	1.2		Y5	
14 CATA	12	1335	1335	1345	N39	E68	.945	15028	17.7	10	-N	1	1335	28			Y5	
	12	1625	1706	NO FLARE PATROL														
	12	1710	1724	NO FLARE PATROL														
	12	1740	1843	NO FLARE PATROL														
	12	1906	1916	NO FLARE PATROL														
	12	1919	1952	NO FLARE PATROL														
	13	0256	0301	NO FLARE PATROL														
15 CULG	13	0302E	0313U	0343D	N25	E08	.394	15025	13.7	410	-F	P	0313	50	.6		F Y5	
	13	0325	0330	NO FLARE PATROL														
	13	0335	0341	NO FLARE PATROL														
	13	0347	0501	NO FLARE PATROL														
	13	0523	0545	NO FLARE PATROL														
	13	0548	0557	NO FLARE PATROL														
16 CATA	13	1030	1035	1055	N23	E05	.350	15025	13.8	25	-N	2	1035	168	1.8		Y5	
17 MCMA	13	1456	1458	1501	N36	E68	.942	15028	18.7	5	-F	C	1458	15	.5		D Y5	
	13	1600	1620	NO FLARE PATROL														
18 MCMA	13	1620E		1637	N36	E67	.938	15028	18.7	170	-N	P	1622	50	1.3		E Y5	
	13	1724	1734	NO FLARE PATROL														
	13	1954	2000	NO FLARE PATROL														
19 CULG	13	2106	2112	2117D	N23	W03	.344	15025	13.7	110	-F	P	2112	70	.8		Y5	
	14	0308	0615	NO FLARE PATROL														
	14	0631	0639	NO FLARE PATROL														
	14	0755	0757	NO FLARE PATROL														
GRP65020	14	0806+7	0814+1	0817	S20	E88	1.000	15035	20.9	11	-F						D	
KANZ	14	0806	0815	0818	S20	E87	1.000	15035	20.9	12	-F						D	
MONT	14	0813	0814	0816	S20	E90	1.000	15035	21.1	3	-F	C	0814	20			D	
21 MONT	14	1012	1016	1024	S20	E88	1.000	15035	21.0	12	-F	C	1016	20			Y5	
22 MONT	14	1204	1207	1211	S20	E87	1.000	15035	21.0	7	-F	C	1207	20			D Y5	
	14	1440	1705	NO FLARE PATROL														
GRP65023	14	2005+0	2006+0	2011	S25	W68	.948	15032	9.7	6	-F			20				
PALE	14	2005	2006	2011	S25	W68	.948	15032	9.7	6	-F	3	V	23			FOE	
PALE	14	2005	2006	2011	S25	W68	.948	15032	9.7	6	-F	3	C	23			FDE	
GRP65024	14	2116+0	2117+0	2120	S25	W69	.953	15032	9.7	4	-F			20				
PALE	14	2116	2117	2120	S25	W69	.953	15032	9.7	4	-F	3	V	22			FOE	
PALE	14	2116	2117	2120	S25	W69	.953	15032	9.7	4	-F	3	C	22			FDE	
25 CULG	14	2220	2230U	2350	S25	W73	.970	15032	9.5	90	-F	C	2230	40			FJ Y5	
26 CULG	14	2318	2321	2330	S22	E74	.972	15035	20.5	12	-N	C	2321	15			Y5	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE NOV	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.											
27 CULG	15	0419	0425	0440	S24	W80	.990	15032	9.2	21	1F	C	0425	60		Y5	
28 CULG	15	0645	0718U	0747	S25	W85	.998	15032	8.9	62	-F	C	0718	15		Y5	
GRP65029	15	0801	0804 0809	0818	S20	E68	.942	15035	20.4	17	-N						
HTPR	15	0801	0804	0818	S20	E68	.942	15035	20.4	17	-N	C	0804	10	.1		
HTPR	15	0801	0809	0818	S20	E68	.942	15035	20.4	17	-N	C	0804				
30 HTPR	15	0842	0847	0857	S20	E68	.942	15035	20.5	15	-F	C	0847	10	.1	Y5	
GRP65031	15	0920E	0920	0930	N15	E90	1.000	15034	22.1	10	-F			50			
ZURI	15	0920E	0920	0930	N14	E90	1.000	15034	22.1	100	-F	P	0920	40			
CATA	15	0925E	0925	0930	N16	E90	1.000	15034	22.1	50	1F	1	0925	56			
	15	1056	1100	NO FLARE PATROL													
32 KANZ	15	1247	1250	1254	N37	E48	.767	15028	18.5	7	-F					D Y5	
33 CATA	15	1255	1255	1300D	N24	E49	.785	15031	19.2	50	-N	2	1255	56	.9	Y5	
	15	1533	1744	NO FLARE PATROL													
	15	1754	1800	NO FLARE PATROL													
	15	1935	2008	NO FLARE PATROL													
34 CULG	15	2013	2026	2037	N40	E30	.719	15028	18.1	24	-N	C	2026	120	1.8	Y5	
35 CULG	15	2056	2102	2112	N40	E30	.719	15028	18.1	16	-F	C	2102	30	.4	Y5	
	15	2112	2116	NO FLARE PATROL													
36 VORO	15	2312	2317	2344	S22	W42	.743	15026	12.8	32	-B	C	2317	54	.8	DJ Y5	
37 CULG	16	0013	0029U	0109	N30	E33	.662	15028	18.5	56	-F	C	0029	50	.7	Y5	
38 CULG	16	0705	0706	0714	N19	W48	.762	15025	12.7	9	-N	C	0706	30	.5	Y5	
GRP65039	16	0739	0753	0802	S24	W45	.780	15025	12.9	23	-N			50	.8	FK	
CULG	16	0739	0753U	0803D	S23	W45	.775	15025	12.9	24D	-N	P	0753	70	1.0	FK	
HTPR	16	0748E		0800	S25	W46	.793	15025	12.9	12D	-N	C	0758	30	.3		
40 CATA	16	1115E	1120	1120D	S24	W90	1.000	15032	9.7	50	1N	2	1120	56		Y5	
	16	1232	1245	NO FLARE PATROL													
	16	1250	1402	NO FLARE PATROL													
	16	1439	1455	NO FLARE PATROL													
	16	1502	1741	NO FLARE PATROL													
	16	1749	1830	NO FLARE PATROL													
GRP65041	16	1856	1858	1920D	S23	W49	.811	15026	13.1	24	-F						
PALE	16	1856	1858	1920	S24	W51	.832	15026	13.0	24	-F	3				FOE	
MCHA	16	1907E		1951D	S23	W48	.803	15026	13.2	44D	-N	P	1908	60	1.1	E	
	16	2035	2138	NO FLARE PATROL													
	16	2140	0107	NO FLARE PATROL													
	17	0200	0235	NO FLARE PATROL													
	17	0930	0940	NO FLARE PATROL													
GRP65042	17	1100+3	1106 1115	1145D	N22	E24	.505	15031	19.3	45	-N						
CATA	17	1100	1115	1145D	N22	E24	.505	15031	19.3	45D	-B	1	1115	112	1.3	T	
KANZ	17	1103	1106	1110	N22	E25	.516	15031	19.3	7	-F						
GRP65043	17	1215+0	1215+0	1230	N22	E23	.493	15031	19.2	15	-N			100	1.1		
CATA	17	1215	1215	1235	N22	E23	.493	15031	19.2	20	-B	2	1215	112	1.3	T	
RAMY	17	1215E	1215U	1225	N23	E23	.503	15031	19.2	10D	-N	3		95			
	17	1545	1609	NO FLARE PATROL													
44 MCHA	17	1640	1644	1658	S23	W62	.910	15026	13.0	18	-F	C	1644	30	.8	D Y5	
	17	1714	1730	NO FLARE PATROL													
	17	1733	1753	NO FLARE PATROL													
	17	1758	1826	NO FLARE PATROL													
	17	1856	1916	NO FLARE PATROL													
	17	1922	1937	NO FLARE PATROL													
	17	1952	2026	NO FLARE PATROL													

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	DATE NOV	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.											
61 CULG	21	0014	0020	0036	N25	W21	.508	15031	19.4	22	-F	C	0020	30	.3	Y5	
GRP65062	21	0141	0210 0218	0254	N22	W23	.498	15031	19.3	73	-F						
CULG	21	0141	0210U	0300	N21	W23	.489	15031	19.3	79	-F	C	0210	60	.7	DE	
PALE	21	0217E	0218	0247	N24	W23	.518	15031	19.4	300	-F	C		48			
63 KANZ	21	1048		1057	N28	W28	.604	15031	19.4	9	-F					Y5	
	21	1222	1459		NO FLARE PATROL												
	21	1642	1655		NO FLARE PATROL												
	21	1701	1720		NO FLARE PATROL												
	21	2101	2106		NO FLARE PATROL												
64 CULG	21	2312	2326	2337	N21	W38	.663	15031	19.1	25	-F	C	2326	15	.2	Y5	
65 CULG	22	0040	0044	0115	N26	W25	.558	15033	20.2	35	-N	C	0044	30	.3	Y5	
GRP65066	22	0217	0227	0304	N25	W36	.664	15031	19.4	47	-N					JL FL EJL	
CULG	22	0217	0227U	0302	N27	W36	.676	15031	19.4	45	-N	C	0227	30	.3		
VORO	22	0232E		0306	N24	W36	.658	15031	19.4	340	1N	C	0232	179	2.4		
GRP65067	22	0330+1	0334+2	0400	N25	W37	.674	15031	19.4	30	1F			190	2.6	JL	
CULG	22	0330	0336	0406	N25	W36	.664	15031	19.4	36	1F	C	0336	160	2.1	JL	
VORO	22	0331	0334	0353	N26	W39	.701	15031	19.2	22	1N	C	0334	215	2.9	JL	
68 CULG	22	0424	0428	0505	N25	W36	.664	15031	19.5	41	-N	C	0428	60	.8	F Y5	
GRP65069	22	0945+0	1005+5	1108	N24	W40	.700	15031	19.4	83	2B			450	6.3	EI	
HTPR	22	0945	1007	1105	N23	W40	.695	15031	19.4	80	2B	C	1007	400	5.6	EI	
KANZ	22	0945	1010	1110	N24	W40	.700	15031	19.4	85	2B						
CATA	22	0950E	1005	10360	N23	W41	.706	15031	19.3	460	2B	2	1005	505	7.3		
LOCA	22	1015E	1015	1100D	N25	W40	.705	15031	19.4	450	2N	P	1015	652	9.5		
70 HTPR	22	1222	1223	1232	S25	W22	.565	15035	20.9	10	-F	C	1223	20	.2	Y5	
	22	1530	1950		NO FLARE PATROL												
	22	2102	2108		NO FLARE PATROL												
	23	1535	2005		NO FLARE PATROL												
71 CULG	23	2007	2013	2025	N14	W21	.407	15034	22.3	18	-F	C	2013	25	.3	Y5	
	23	2111	2116		NO FLARE PATROL												
	24	0318	0329		NO FLARE PATROL												
	24	0537	0542		NO FLARE PATROL												
	24	0544	0604		NO FLARE PATROL												
	24	0619	0626		NO FLARE PATROL												
GRP65072	24	0907+2	0909	09200	N24	W64	.911	15031	19.6	13	-F					D D	
MONT	24	0907	0909	0920	N24	W53	.904	15031	19.7	13	-F	C	0909	20			
KANZ	24	0909		0951	N24	W65	.917	15031	19.5	42	-F						
	24	1406	1414		NO FLARE PATROL												
	24	1419	1433		NO FLARE PATROL												
	24	1524	1727		NO FLARE PATROL												
	24	1801	2233		NO FLARE PATROL												
	25	0313	0325		NO FLARE PATROL												
	25	1914	1935		NO FLARE PATROL												
	25	1957	2005		NO FLARE PATROL												
	25	2254	2257		NO FLARE PATROL												
	26	1938	2010		NO FLARE PATROL												
73 HTPR	27	1333	1338	1346	N15	W88	.999	15034	21.0	13	-F	C	1338	20	.4	Y5	
74 HTPR	27	1442	1447	1450	N26	W74	.966	15042	22.1	8	-F	C	1447	30	.7	Y5	
	27	1535	1835		NO FLARE PATROL												
	27	1915	1945		NO FLARE PATROL												
	27	2204	2212		NO FLARE PATROL												
GRP65075	28	0305+0	0310+1	0331	N19	E60	.877	15044	1.6	26	-N			70	1.5	D D	
VORO	28	0305	0310	0321	N19	E60	.877	15044	2.6	16	-E	C	0310	90	1.9		
CULG	28	0305	0311	0340	N19	E60	.877	15044	2.6	35	-F	C	0311	50	1.0		
76 CULG	28	0428	0431	0441	N26	W81	.989	15042	22.1	13	-F	C	0431	35		Y5	
77 MONT	28	0925E	0930	0930D	N15	W90	1.000	15034	21.6	50	-F	C	0930	20		D Y5	

H α SOLAR FLARES

NOVEMBER 1977

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE NOV	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	MCNATH PLAGE REGION	CHR. DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
					LAT.	MER. DIST.											
	28	0930	0940	NO FLARE	PATROL												
	28	2155	2208	NO FLARE	PATROL												
	28	2307	0005	NO FLARE	PATROL												
	29	0230	0310	NO FLARE	PATROL												
	29	0758	0813	NO FLARE	PATROL												
	29	1450	1532	NO FLARE	PATROL												
	29	1540	1651	NO FLARE	PATROL												
	29	2021	2220	NO FLARE	PATROL												
	29	2225	2240	NO FLARE	PATROL												
78 MITK	30	0009	0010	0026	N19 E36	.637	15044	2.7	17	-N	C	0010	60	.8	E	Y5	
79 CULG	30	0337	0407	0409D	S25 E90	1.000	15049	6.9	320	?N	P	0407	45			Y5	
		IMP.1 NO	MITK1														
80 KHAR	30	0905E		0908D	S28 E85	.998	15049	6.8	30	?N	V					Y5	
		IMP.1 NO	HTPR2														
	30	1530	1555	NO FLARE	PATROL												
	30	2136	2141	NO FLARE	PATROL												
81 CULG	30	2310	2312	0011	S21 E65	.922	15049	5.8	61	-N	C	2312	30			Y5	

"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.