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Solar - Geophysical Data

NO. 417 MAY 1979

Part II (Comprehensive Reports)

DATA FOR
NOVEMBER 1978
OCTOBER 1978

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR-GEOPHYSICAL DATA

No. 417

Issued in two parts

Helen E. Coffey, Editor

J. Virginia Lincoln, Chief
Solar-Terrestrial Physics Division

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----- = no data available.
blank = data not yet received.

SGD 417 Part II (Comprehensive)

NOVEMBER 1978 DATA

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ACTIVE REGIONS

CARRINGTON ROTATION 1674

(October 17 to November 13, 1978)

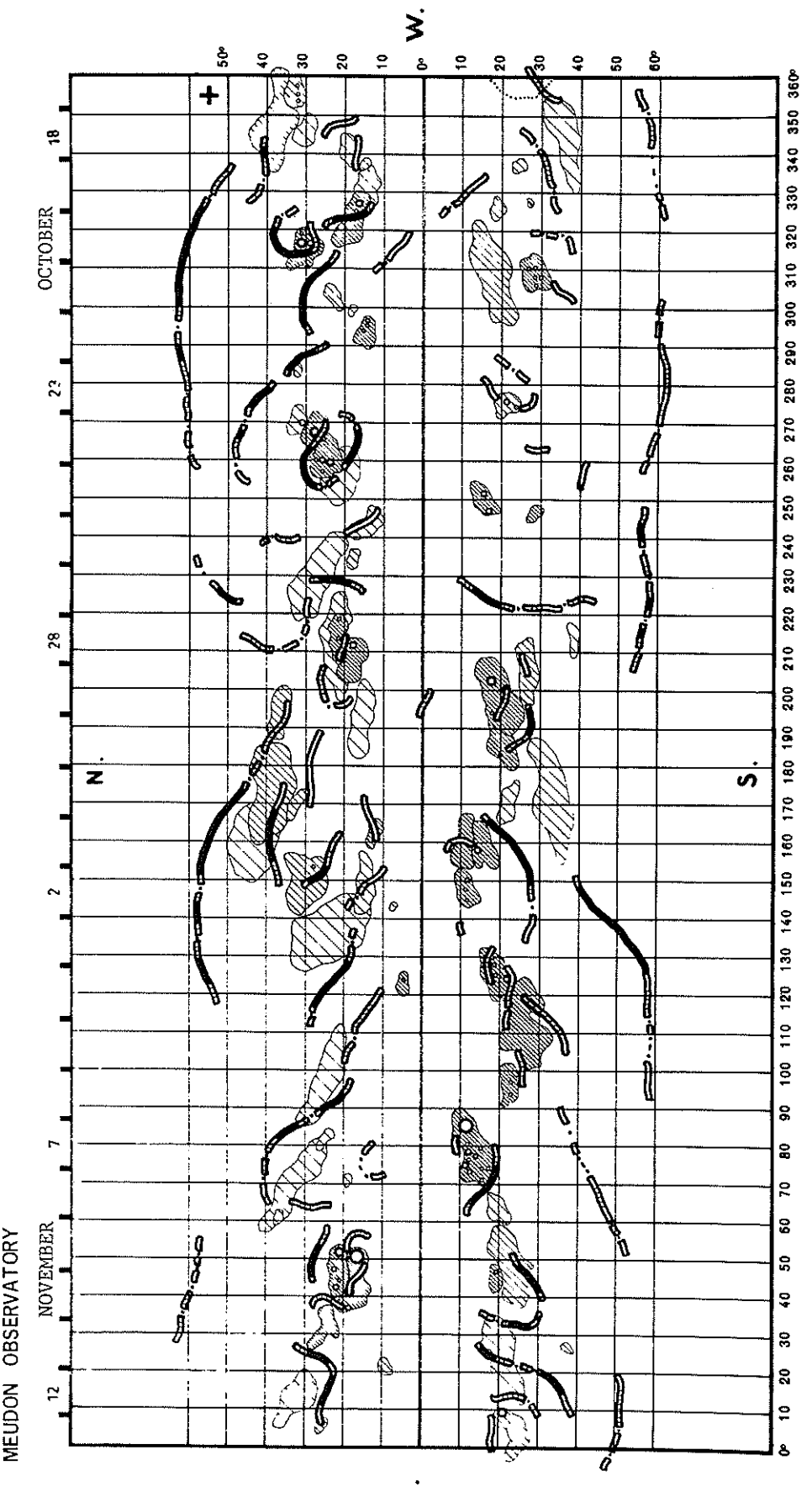
Region No.	Coordinates Lat.	Coordinates Long.	Age at CMP	IMP.	Spot-less Region	Region No. in Rotation 1674	Activity at West Limb
1	33°N	356°	>6	2			decreasing
2	37 N	349	>6	1	x		decreasing
3	15 N	338	-2	1	x		stable
4	25 S	337	+5	1	x		decreasing
5	14 N	332	>6	1	x	(5)	disappeared
6	19 S	326	+3	1	x		stable
7	18 N	324	>6	3			decreasing
8	30 N	316	>6	5			decreasing
9	18 S	309	>6	1	x	(11+12)	decreasing
10	28 S	309	>6	3			decreasing
11	23 N	303	>6	1	x	(10)	decreasing
12	19 N	300	+5	1	x		disappeared
13	15 N	294	+3	2			decreasing
14	33 N	284	+5	1	x		disappeared
15	22 S	275	>6	3			decreasing
16	32 N	270	>6	2			decreasing
17	26 N	264	>6	5			decreasing
18	15 S	250	+4	4			stable
19	28 S	246	-4	1	x		stable
20	14 N	243	>6	1	x		dispersed
21	18 N	234	+2	1	x		decreasing
22	22 N	214	+1	2			decreasing
23	38 S	212	+3	1	x		dispersed
24	22 N	211	>6	1	x		decreasing
25	18 N	208	>6	3			decreasing
26	26 S	205	>6	1	x		decreasing
27	19 S	198	>6	4			decreasing
28	37 N	194	>6	1	x	(25)	decreasing
29	20 S	185	>6	2		(30)	decreasing
30	39 N	173	>6	1	x	(28)	decreasing
31	33 S	172	>6	1	x	(32+35)	dispersed
32	21 S	170	>6	1	x	(33)	dispersed
33	34 N	169	-3	1	x		stable
34	13 N	162	+1	1	x		stable
35	11 S	160	>6	1	x	(36)	decreasing
36	15 S	159	>6	2		(37)	decreasing
37	30 N	150	>6	2			decreasing
38	15 N	148	>6	1	x		decreasing
39	11 S	147	+5	2			decreasing
40	18 S	125	>6	2			decreasing
41	5 N	122	+6	2			disappeared
42	25 S	113	>6	2		(42+43)	decreasing
43	22 S	96	+1	2			decreasing
44	25 N	81	-3	1	x		decreasing
45	13 S	79	>6	7			decreasing
46	19 S	62	>6	1	x	(53)	decreasing
47	37 N	60	+3	1	x		dispersed
48	23 S	48	>6	1	x	(54+56)	decreasing
49	22 N	46	+1	6			stable
50	19 S	44	+1	2			decreasing
51	17 N	43	>6	5			decreasing
52	25 N	30	>6	1	x	(58)	decreasing
53	37 S	25	-4	1	x		decreasing
54	21 S	23	>6	1	x	(59+60)	decreasing
55	10 N	20	+6	1	x		disappeared
56	26 N	4	+1	1	x		dispersed
57	24 S	3	>6	4			stable

SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1674

OCTOBER 17 TO NOVEMBER 13, 1978

MEUDON OBSERVATORY



Hα SOLAR FLARES

NOVEMBER 1978

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
866 MITK	01	0245	0258	0324	S13	E00	.299	15631	1.1	39	-F		C	0258			E	Y5
GRP69867	01	0338+0	0339 0348+8	0413	S28	E50	.848	15635	4.9	35	1N						EHJK	
MITK	01	0338	0356	0409	S28	E50	.848	15635	4.9	31	1F		C	0356	230	4.5	E	
VORO	01	0338	0339	0413	S30	E55	.890	15635	5.3	35	2F		C	0346	287	6.0	EHJK	
TEHR	01	0345	0348	0421	S24	E49	.824	15635	4.8	36	-B	2	C		127			
868 KANZ	01	0738		0809	S26	E48	.824	15635	4.9	31	-N		C				L	Y5
869 KANZ	01	0817	0817	0819	S14	E02	.317	15631	1.5	2	-B		C					Y5
GRP69870	01	0821	0824	0832	N15	W38	.627	15619	29.5	11	-N						DG	
KANZ	01	0821	0824	0830	N15	W38	.627	15619	29.5	9	-B		C				G	
KHAR	01	0824E		0834D	N16	W39	.643	15619	29.4	10D	-F		P	0825	120	1.6	D	
871 KHAR	01	0824E		0834D	S29	E48	.838	15635	5.0	10D	?F		P	0825	130	2.5	E	Y5
	IMP.1 NO : KANZ																	
872 KHAR	01	0945E		1027D	S16	W37	.668	15620	29.6	42D	-F		P	0954			D	Y5
873 KHAR	01	1040E	1042	1053D	S16	W37	.668	15620	29.7	13D	-F		P	1042			D	Y5
GRP69874	01	1149+1	1152+2 1203	1212	S19	E35	.665	15635	4.1	23	-B						DH	
KHAR	01	1149	1152	1212	S19	E35	.665	15635	4.1	23	-B		P	1152	110	1.6	DH	
KANZ	01	1150	1154	1213	S19	E34	.654	15635	4.0	23	1B		C				H	
RAMY	01	1202	1203	1206	S21	E41	.738	15635	4.6	4	-N	3	C		16		H	
GRP69875	01	1226+2	1229+0	1234	S17	W37	.674	15620	29.7	8	-N							
KANZ	01	1226	1229	1236	S17	W38	.685	15620	29.7	10	-N		C					
RAMY	01	1228	1229	1232	S18	W36	.669	15620	29.8	4	-B	3	C		27			
876 RAMY	01	1242	1245	1257	S21	E40	.728	15635	4.5	15	-N	3	C		20		F	Y5
877 RAMY	01	1310	1311	1315	S21	E40	.728	15635	4.5	5	-N	3	C		16			Y5
878 KANZ	01	1326	1332	1337	S18	E32	.625	15635	4.0	11	-F		C					Y5
GRP69879	01	1327+3	1337+7	1441	N22	W55	.829	15619	28.4	74	1B				120	2.2	E	
WEND	01	1327		1408	N22	W53	.811	15619	28.6	41	2N		V		300	5.5	C	
RAMY	01	1329	1339	1441	N21	W55	.828	15619	28.4	72	1B	3	C		163		DE	
KANZ	01	1330	1344	1441	N23	W56	.840	15619	28.4	71	1B		C					
MCMA	01	1333E	1337	1450	N23	W56	.840	15619	28.4	77D	-B		C	1337	75	1.5	E	
880 RAMY	01	1348	1352	1421	S18	W37	.680	15620	29.8	33	-B	3	C		62			Y5
GRP69881	01	1403+1	1404+0	1411	S21	E35	.678	15635	4.2	8	-B						E	
MCMA	01	1403	1404	1410	S22	E36	.695	15635	4.3	7	-B		C	1404	50	.7	E	
KANZ	01	1404	1404	1411	S20	E34	.661	15635	4.1	7	-B		C					
GRP69882	01	1440+1	1443+0	1449	S20	E34	.661	15635	4.2	9	-N				35	.5	E	
MCMA	01	1440	1443	1448	S20	E34	.661	15635	4.2	8	-F		C	1443	30	.4	E	
RAMY	01	1441	1443	1450	S21	E39	.718	15635	4.5	9	-N	3	C		39			
KANZ	01	1441		1441D	S18	E31	.614	15635	3.9		-N		C					
883 MCMA	01	1546	1549	1559	S20	E34	.661	15635	4.2	13	-F		C	1549	25	.3	D	Y5
884 MCMA	01	1627	1631	1635	S20	E33	.650	15635	4.2	8	-F		C	1631	25	.3	D	Y5
885 MCMA	01	1639	1644	1700	S20	E33	.650	15635	4.2	21	-F		C	1644	25	.3	D	Y5
886 MCMA	01	1743	1748	1755	N23	W58	.856	15619	28.4	12	-F		C	1748	50	1.0	E	Y5
887 MCMA	01	1845	1847	1853	S20	E31	.630	15635	4.1	8	-F		C	1847	40	.5	E	Y5
888 MCMA	01	1939	1941	1945D	S20	E31	.630	15635	4.1	6D	-F		C	1941	25	.3	D	Y5
	01	1945	2239	NO FLARE PATROL														
889 VORO	01	2258	2303	2310	S19	E29	.601	15635	4.1	12	-N		C	2303	72	.9	DHJ	Y5
	01	3349	0000	NO FLARE PATROL														
	01	0424	0450	NO FLARE PATROL														
	01	0451	0543	NO FLARE PATROL														
	01	0545	0630	NO FLARE PATROL														

Hα SOLAR FLARES

NOVEMBER 1978

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
890 VORO	02	0150	0151	0158	N21	W64	.900	15619	28.3	8	-F		C	0151	36		D	Y5
GRP69891	02	0218+3	0222+1	0236	S22	W45	.780	15620	29.7	18	-F						E	
VORO	02	0218	0222	0239	S22	W44	.771	15620	29.8	21	1F		C	0222	179	2.7	E	
MITK	02	0221	0223	0233	S22	W46	.789	15620	29.6	12	-F		C	0223			E	
892 VORO	02	0232	0237	0248	S22	E40	.733	15635	5.1	16	?N		C	0237	143	2.1	EJ	Y5
	IMP.1 NO : MITK																	
	02	0520	0557	NO FLARE PATROL														
893 ABST	02	0728E	072?	0738D	S20	E25	.567	15635	4.2	10D	-F		P	072?	87	1.1	D	Y5
894 HTPR	02	1057	1125	1135	S13	E75	.972	15641	8.1	38	-F		C	1125	50			Y5
895 HTPR	02	1205	1210	1216	N21	W71	.944	15619	28.2	11	-F		C	1210	10			Y5
896 HTPR	02	1220	1224	1233	S13	E73	.964	15641	8.0	13	-F		C	1224	60			Y5
GRP69897	02	1255+1	1307	1319	S13	E73	.964	15641	8.0	24	-F						D	
MCMA	02	1255		1320D	S13	E73	.964	15641	8.0	25D	-N		C	1258	40	1.5	D	
HTPR	02	1256	1307	1317	S13	E73	.964	15641	8.0	21	-F		C	1307	60			
898 MCMA	02	1337	1343	1406	S13	E73	.964	15641	8.0	29	-N		C	1343	25	.9	D	Y5
899 ZURI	02	1358	1406	1412	S21	E21	.539	15635	4.2	14	-F		C	1406	110	1.4		Y5
GRP69900	02	1401+1	1404+1	1420	S23	E32	.662	15635	5.0	19	-N				120	1.6	E	
HTPR	02	1401	1404	1420	S22	E32	.655	15635	5.0	19	-N		C	1404	130	1.5	E	
MCMA	02	1401	1405	1420	S23	E33	.672	15635	5.1	19	-B		C	1405	100	1.4	E	
ZURI	02	1402	1404	1412	S23	E32	.662	15635	5.0	10	-N		C	1404	140	2.0		
901 RAMY	02	1457	1458	1501	S12	E67	.931	15641	7.6	4	-F	3	C		25			Y5
GRP69902	02	1510+2	1512 1532	1551	S12	E69	.943	15641	7.8	41	-F						E	
HTPR	02	1510		1536D	S13	E71	.954	15641	8.0	26D	-N		C	1528	80		E	
RAMY	02	1512	1512	1518	S12	E67	.931	15641	7.7	6	-F	3	C		12			
RAMY	02	1530	1532	1551	S12	E67	.931	15641	7.7	21	-F	3	C		18			
GRP69903	02	1522+0	1523+1	1532	N13	W16	.310	15630	1.4	10	-F				20	.2		
RAMY	02	1522	1523	1533	N13	W17	.324	15630	1.4	11	-N	3	C		20			
HTPR	02	1522	1524	1530	N14	W16	.318	15630	1.4	8	-F		C	1524	20	.2		
904 MCMA	02	1707	1708	1719	S31	E32	.727	15635	5.1	12	-F		C	1708	20	.3	D	Y5
GRP69905	02	1917+7	1920	1935	S11	E65	.917	15641	7.7	18	-F						D	
RAMY	02	1917	1920	1935	S12	E64	.911	15641	7.6	18	-F	2	C		49			
HUAN	02	1924		1935	S11	E67	.930	15641	7.8	11	-N	1	C	1930	20		D	
906 HUAN	02	2047		2054D	S11	E70	.947	15641	8.1	7D	-N	1	P	2051	45		E	Y5
907 VORO	02	2259	2313	2357	N31	W14	.497	15629	1.9	58	1F		C	2313	376	4.3	E	Y5
908 VORO	02	2356	2357	0002	N14	W20	.374	15630	1.5	6	-N		C	2357	81	.8	E	Y5
GRP69909	03	0003+0	0011+2	0029	S22	E27	.605	15635	5.0	26	-N						E	
VORO	03	0003	0011	0027	S22	E28	.614	15635	5.1	24	1F		C	0011	188	2.4	E	
MITK	03	0003	0013	0031	S23	E27	.614	15635	5.0	28	-B		C	0013			E	
910 VORO	03	0056	0101	0116	S24	E26	.614	15635	5.0	20	-N		C	0101	63	.8	OJ	Y5
911 VORO	03	0235	0238	0246	N19	W83	.990	15619	27.9	11	-N		C	0238	45		OH	Y5
912 MITK	03	0349	0352	0402	N19	W84	.992	15619	27.9	13	?B		C	0352	100		H	Y5
	IMP.1 NO : VORO																	
913 MONT	03	0936	0940	0945D	S18	W61	.899	15620	29.8	9D	-F		C	0940	60		E	Y5
914 RAMY	03	1116	1124	1132	S12	E53	.820	15641	7.4	16	-N	3	C		17			Y5
915 HTPR	03	1126	1130	1150	S20	E05	.418	15635	3.9	24	-F		C	1130	60	.6	E	Y5
GRP69916	03	1134+2	1136+1	1141	S12	E55	.839	15641	7.6	7	-N							
RAMY	03	1134	1137	1142	S12	E53	.820	15641	7.5	8	-N	3	C		44			
KANZ	03	1136	1136	1140	S13	E58	.867	15641	7.8	4	-N		C					

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP69917	03	1408+4	1413+1	1424	S13	E54	.832	15641	7.6	16	-N				100	1.8	E	
RAMY	03	1343	1413	1459	S12	E51	.801	15641	7.4	76	-B	3	C		104			
KANZ	03	1408	1414	1425	S13	E54	.832	15641	7.6	17	-N		C					
HTPR	03	1410	1413	1422	S15	E55	.846	15641	7.7	12	1N		C	1413	140	2.4	E	
MCMA	03	1412	1414	1421	S14	E56	.852	15641	7.8	9	-N		C	1414	40	.8	E	
918 RAMY	03	1432	1435	1443	S24	E15	.526	15635	4.7	11	-B	3	C		41			Y5
GRP69919	03	1454+3	1457+0	1507	S18	W67	.938	15620	29.6	13	-N				30		EL	
MCMA	03	1454	1457	1507	S17	W66	.930	15620	29.7	13	-N		C	1457	40	1.2	EL	
RAMY	03	1457	1457	1507	S20	W69	.950	15620	29.4	10	-B	3	C		24			
GRP69920	03	1528>9	1554+4 1632	1730D	S13	E52	.813	15641	7.5	122	-N				25	.4		
RAMY	03	1528E	1554	1730	S12	E50	.791	15641	7.4	122D	-N	3	C		31		F	
RAMY	03	1528E	1632	1730	S12	E50	.791	15641	7.4	122D	-B	3	C		95		F	
MCMA	03	1540	1558	1800D	S14	E55	.843	15641	7.8	140D	-N		C	1558	15	.3	D	
921 RAMY	03	1554	1555	1611	S26	E15	.552	15635	4.8	17	-N	3	C		19			Y5
GRP69922	03	1605	1607 1633	1712	S17	E66	.930	15642	8.6	67	-F						EK	
MCMA	03	1605	1607	1712	S17	E66	.930	15642	8.6	67	-F		C	1607	30	.9	EK	
MCMA	03	1605	1633	1712	S17	E66	.930	15642	8.6	67	-F		C	1633	40	1.2		
GRP69923	03	1844>9	1855+2	1915	S24	E15	.526	15635	4.9	31	-N				35	.4		
RAMY	03	1844	1857	1910	S26	E14	.546	15635	4.8	26	-N	3	C		28		F	
MCMA	03	1854	1855	1919	S23	E16	.521	15635	5.0	25	-N		C	1855	40	.5	E	
924 RAMY	03	1854	1856	1918	S12	E50	.791	15641	7.5	24	-B	3	C		49		F	Y5
	03	2005	2012	NO FLARE PATROL														
925 HOLL	03	2012E	2013	2019	S22	E18	.524	15635	5.2	7D	-N	3	C		37		F	Y5
926 VORO	03	2251	2257	2327	S30	E15	.603	15635	5.1	36	?N		C	2257	296	3.7	EJ	Y5
	IMP.1 NO ? HOLL																	
927 VORO	04	0004	0005	0007D	S23	E17	.527	15635	5.3	3D	-B		C	0005	36	.4	D	Y5
GRP69928	04	0145	0147	0203	S19	E05	.400	15635	4.4	18	1N						E	
VORO	04	0145	0147	0203	S19	E02	.394	15635	4.2	18	1N		C	0147	269	2.9	E	
VORO	04	0148	0148	0151	S19	E08	.413	15635	4.7	3	-F		C	0148	125	1.4	E	
929 KANZ	04	0913E	0917	0921D	S11	E44	.723	15641	7.7	8D	-N		C				T	Y5
	04	1025	1037	NO FLARE PATROL														
930 KANZ	04	1114	1122	1157	S20	W05	.416	15635	4.1	43	-N		C					Y5
GRP69931	04	1232+8	1240+1	1258	S11	E40	.676	15641	7.5	26	-B							
KANZ	04	1232	1240	1248	S11	E39	.664	15641	7.4	16	-B		C				D	
RAMY	04	1240	1241	1307	S11	E42	.700	15641	7.7	27	-B	3	C		44		F	
932 RAMY	04	1452	1453	1501	S11	E43	.712	15641	7.8	9	-B	3	C		28		F	Y5
933 MCMA	04	1926	1927	1931	S14	E46	.756	15641	8.3	5	-F		C	1927	25	.4	D	Y5
	04	1938	2122	NO FLARE PATROL														
	04	0231	0240	NO FLARE PATROL														
	04	0242	0255	NO FLARE PATROL														
	04	0258	0300	NO FLARE PATROL														
	04	0418	0426	NO FLARE PATROL														
934 VORO	05	0048	0053	0057	S10	E35	.610	15641	7.7	9	-N		C	0053	116	1.5	EJ	Y5
935 MITK	05	0608E		0624D	S22	E15	.498	15645	6.4	16D	-F		C	0608			EG	Y5
936 ABST	05	0818	0824	0830	N14	W54	.810	15630	1.3	12	-F		C	0824	87	1.5	D	Y5
GRP69937	05	0822	0826	0836	N30	W68	.934	15626	31.2	14	-F							
KANZ	05	0822	0826	0836	N31	W67	.929	15626	31.3	14	-F		C					
HTPR	05	0824E		0836D	N30	W70	.944	15626	31.1	12D	-F		C	0827	60			
GRP69938	05	1014+3	1022 1033	1049	S21	W12	.464	15635	4.5	35	-F						F	
HTPR	05	1014	1033	1055	S22	W10	.466	15635	4.7	41	-F		C	1033	40	.4		
KANZ	05	1017	1022	1042	S21	W14	.477	15635	4.4	25	-F		C				F	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP69939	05	1419+1	1420+1	1427	S23	E11	.486	15645	6.4	8	-F				25	.3	D	
MCMA	05	1419	1420	1425	S23	E10	.480	15645	6.3	6	-N		C	1420	25	.3	D	
HTPR	05	1420	1421	1428	S23	E12	.491	15645	6.5	8	-F		C	1421	20	.2		
GRP69940	05	1512+0	1515	1530	S22	W08	.456	15635	5.0	18	-N				70	.8	E	
MCMA	05	1512	1515	1530	S22	W07	.452	15635	5.1	18	-N		C	1515	50	.6	E	
HTPR	05	1512		1520D	S22	W09	.461	15635	5.0	8D	-N		C	1516	100	1.0	E	
GRP69941	05	1515+4	1519	1608	N17	E62	.884	15643	10.3	53	-F				40	.9	EL	
HTPR	05	1515		1520D	N17	E62	.884	15643	10.3	5D	-F		C	1519	40	.8	E	
MCMA	05	1515	1519	1600	N17	E62	.884	15643	10.3	45	-N		C	1519	35	.8	EL	
HUAN	05	1519		1521D	N17	E68	.926	15643	10.7	2D	-F	1	P				E	
RAMY	05	1529E	1529U	1615	N18	E61	.876	15643	10.2	46D	-N	3	C		29		F	
942 RAMY	05	1611	1612	1619	S26	W11	.527	15635	4.8	8	-N	4	C		26		F	Y5
943 RAMY	05	1618	1622	1732	S12	E26	.506	15641	7.6	74	-N	4	C		35			Y5
944 MCMA	05	1854	1900	1932	S18	W24	.534	15635	4.0	38	-N		C	1900	20	.3	D	Y5
945 MCMA	05	1913	1918	1921	N23	E70	.940	15643	11.1	8	-N		C	1918			DL	Y5
946 MCMA	05	1915	1916	1920	S11	E25	.486	15641	7.7	5	-N		C	1916	30	.3	D	Y5
947 MCMA	05	1917	1919	1921D	S23	E07	.467	15645	6.3	4D	-N		C	1919	25	.3	D	Y5
948 CULG	05	2155	2200	2237	S11	W64	.909	15631	1.1	42	-F		C	2200	40	.9		Y5
949 CULG	05	2233	2237	2255	N29	W73	.957	15626	31.5	22	-F		C	2237	40			Y5
GRP69950	05	2349+0	2355+4	0006	N19	E58	.853	15643	10.3	17	-N						E	
PALE	05	2349	2355	0006	N20	E58	.854	15643	10.3	17	-N	3	C		28		DE	
VORO	05	2349	2359	0005	N18	E58	.852	15643	10.3	16	-N		C	2402	90	1.7	E	
GRP69951	06	0046+0	0047+0	0052	S19	W22	.523	15635	4.4	6	-F						E	
PALE	06	0046	0047	0050	S21	W23	.553	15635	4.3	4	-N	3	C		32		DE	
VORO	06	0046	0047	0053	S18	W22	.512	15635	4.4	7	-F		C	0047	81	.9	E	
952 CULG	06	0128	0132	0144	S18	W19	.482	15635	4.6	16	-F		C	0132	20	.2		Y5
GRP69953	06	0343	0351	0410	S18	W24	.533	15635	4.4	27	-N						EU	
MITK	06	0343	0351	0410	S18	W25	.544	15635	4.3	27	-N		C	0351			E	
CULG	06	0350E	0350U	0350D	S18	W24	.533	15635	4.4		-B		P	0350	90	1.1	U	
GRP69954	06	0440+1	0443+0	0450	S13	E23	.476	15641	7.9	10	-N						D	
TEHR	06	0440	0443	0453	S12	E24	.480	15641	8.0	13	-B	2	C		95			
MITK	06	0441	0443	0447	S15	E23	.494	15641	7.9	6	-N		C	0443			D	
955 KANZ	06	0810	0814	0818	N16	E43	.694	15643	9.6	8	-F		C				L	Y5
956 KANZ	06	0938	0942	0946	S09	E09	.271	15641	7.1	8	-N		C					Y5
957 KANZ	06	1017	1017	1025	S09	E09	.271	15641	7.1	8	-N		C					Y5
958 KANZ	06	1146	1146	1158	N18	E43	.699	15643	9.7	12	-N		C					Y5
GRP69959	06	1220+3	1226+1	1247	S22	W19	.528	15635	5.1	27	-B						EH	
RAMY	06	1220	1226	1249	S24	W22	.576	15635	4.9	29	18	3	C		267			
HTPR	06	1220	1226	1248	S22	W19	.528	15635	5.1	28	-B		C	1226	130	1.3	E	
KANZ	06	1223	1227	1246	S22	W19	.528	15635	5.1	23	-N		C				H	
WEND	06	1225E		1240	S22	W17	.511	15635	5.2	15D	-N		V				H	
960 HTPR	06	1230	1234	1248	S10	E17	.373	15641	7.8	18	-F		C	1234	20	.2		Y5
961 HTPR	06	1420	1427	1432	S10	E07	.268	15641	7.1	12	-F		C	1427	20	.2		Y5
GRP69962	06	1538+2	1542+2	1549	N18	E48	.755	15643	10.3	11	-N				40	.6		
HTPR	06	1538	1542	1547	N18	E49	.766	15643	10.3	9	-F		C	1542	40	.6		
RAMY	06	1540	1544	1550	N18	E48	.755	15643	10.3	10	-B	4	C		38			
963 RAMY	06	1600	1606	1633	S11	E13	.337	15641	7.6	33	-N	4	C		37			Y5
964 RAMY	06	1701	1718	1720	S11	E13	.337	15641	7.7	19	-N	3	C		25			Y5
	06	1732	1739	NO FLARE PATROL														

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP69965	06	2019+3	2024+0	2029	S10	E03	.245	15641	7.1	10	-N				100	1.0		
HUAN	06	2019		2023D	S10	E03	.245	15641	7.1	40	-N	2	P	2020	60	.6		
RAMY	06	2019	2024	2030	S11	E11	.317	15641	7.7	11	-N	3	C		133			
CULG	06	2021E	2024	2026D	S10	E02	.242	15641	7.0	50	-N		P	2024	100	1.1		
PALE	06	2022	2024	2027	S10	E03	.245	15641	7.1	5	-N	2	C		112		DE	
	06	2219	2228	NO FLARE PATROL														
966 CULG	06	2240E	2240U	2241D	S19	W39	.703	15635	4.0	10	-F		P	2241	50	.7		Y5
GRP69967	06	2328+2	2332+2	2345	S10	E09	.284	15641	7.7	17	-N				130	1.4	H	
VORO	06	2328	2333	2353	S08	E09	.257	15641	7.7	25	1F		C	2333	278	2.9	EH	
HOLL	06	2330	2332	2341	S08	E03	.212	15641	7.2	11	-N	2	C		110		F	
PALE	06	2332E	2332U	2336	S11	E09	.299	15641	7.7	4D	-N	3	C		55		DE	
MANI	06	2333E	2334	2340	S12	E10	.321	15641	7.7	7D	-F	3	V		100	1.0	F	
CULG	06	2337E	2337U	0025	S10	E10	.294	15641	7.7	48D	-N		P	2337	170	1.8	F	
GRP69968	07	0326+2	0334+1	0348	S08	W63	.898	15631	2.4	22	-N				50	1.1	E	
CULG	07	0326	0335	0351	S08	W64	.906	15631	2.3	25	-N		C	0335	50	1.3		
VORO	07	0328	0334	0345	S09	W62	.892	15631	2.5	17	-N		C	0334	54		E	
969 CULG	07	0404	0408	0421	S20	E75	.975	15647	12.8	17	-F		C	0408	20			Y5
970 CULG	07	0405	0408	0420	S10	W01	.239	15641	7.1	15	-F		C	0408	20	.2		Y5
971 CULG	07	0426	0432	0506	N18	W47	.745	0	3.7	40	-F		C	0432	120	1.8		Y5
972 MANI	07	0709E	0709U	0720D	S22	W26	.591	15635	5.3	110	-F	3	V		40	.5		Y5
GRP69973	07	0743+1	0744+3	0751	S12	W02	.274	15641	7.2	8	-F						L	
CULG	07	0743E	0745	0747	S12	W04	.280	15641	7.0	4D	-N		P	0745	20	.2	C	
KANZ	07	0744	0744	0751	S12	W03	.276	15641	7.1	7	-F		C				DL	
KANZ	07	0744	0747	0755	S12	E04	.280	15641	7.6	11	-F		C					
GRP69974	07	0811+0	0812+6	0823	S12	E04	.280	15641	7.6	12	-N						E	
KANZ	07	0811	0818	0821	S12	E04	.280	15641	7.6	10	-B		C					
HTPR	07	0811	0812	0825	S13	E04	.296	15641	7.6	14	-N		C	0812	110	1.1	E	
975 HTPR	07	0956	0959	1010	S30	W20	.627	15635	5.9	14	-F		C	0959	10	.1		Y5
GRP69976	07	1028+3	1035+6	1051	S17	W46	.765	15635	4.0	23	-F				35	.5	E	
HTPR	07	1028	1037	1050	S16	W48	.782	15635	3.8	22	-F		C	1037	20	.3	E	
MONT	07	1029	1041	1051	S17	W45	.755	15635	4.1	22	-F		C	1041	50			
KANZ	07	1031	1035	1052	S17	W46	.765	15635	4.0	21	-N		C					
977 HTPR	07	1132	1134	1138	S13	E02	.290	15641	7.6	6	-F		C	1134	20	.2	E	Y5
978 RAMY	07	1133	1134	1150	S20	W44	.758	15635	4.2	17	-B	2	C		61			Y5
GRP69979	07	1230+1	1234+0	1251	S18	W46	.769	15635	4.1	21	-N							
RAMY	07	1230	1234	1252	S20	W44	.758	15635	4.2	22	-B	3	C		69			
KANZ	07	1231	1234	1250	S17	W48	.785	15635	3.9	19	-F		C					
GRP69980	07	1618+2	1621 1637	1728D	N22	E40	.680	15643	10.7	70	1N						ELS	
RAMY	07	1618	1621	1653D	N18	E35	.603	15643	10.3	35D	1B	3	C		345		F S	
MCMA	07	1618E	1637	1728D	N22	E43	.713	15643	10.9	70D	1N		C	1637	250	3.7	EL	
HUAN	07	1620		1629D	N25	E40	.693	15643	10.7	9D	-N	1	P				E	
981 RAMY	07	1639	1639	1642	S20	W46	.778	15635	4.2	3	-N	3	C		18			Y5
	07	1658	1713	NO FLARE PATROL														
GRP69982	07	1836	1840	1855	N19	E25	.481	15643	9.6	19	-N				60	.7	EH	
HOLL	07	1836	1840	1854	N20	E26	.501	15643	9.7	18	-N	2	C		60		H	
MCMA	07	1845E		1856D	N18	E24	.461	15643	9.6	11D	-N		C	1845	60	.7	E	
GRP69983	07	1908>9	1910 1922	1930	S11	W02	.257	15641	7.6	22	-N							
HOLL	07	1908	1910	1923	S09	W03	.227	15641	7.6	15	-N	2	C		59		F	
PALE	07	1921	1922	1930	S11	W02	.257	15641	7.7	9	-N	3	C		26		DE	
MCMA	07	1931E		1940D	S12	W02	.274	15641	7.7	9D	-F		P	1938	80	.9	E	
984 RAMY	07	2056	2057	2103	S20	W49	.805	15635	4.2	7	-N	3	C		34			Y5

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP69985	07	2057>9	2110+3	2117	S11	W02	.257	15641	7.7	20	-N				80	.8		
CULG	07	2057	2110	2117D	S12	W02	.274	15641	7.7	20D	-N		P	2110	100	1.1	F	
PALE	07	2110	2113	2117	S11	W03	.260	15641	7.7	7	-N	3	C		67		DE	
986 CULG	07	2313	2318U	0000	S13	W03	.293	15641	7.7	47	-F		C	2318	60	.6	F	Y5
987 CULG	08	0127	0132	0142	N17	E11	.295	0	8.9	15	-F		C	0132	20	.2		Y5
988 CULG	08	0133	0150	0225	S10	W08	.273	15641	7.5	52	-F		C	0150	40	.4	F	Y5
989 CULG	08	0246	0257	0320	N18	E20	.411	15643	9.6	34	-N		C	0257	100	1.1		Y5
990 CULG	08	0340	0346	0400	N14	E20	.379	15643	9.7	20	-N		C	0346	100	1.1		Y5
991 CULG	08	0355	0357	0425	S13	W07	.310	15641	7.6	30	-N		C	0357	70	.7		Y5
GRP69992	08	0722+0	0727+2	0746	S25	W31	.663	15645	6.0	24	-N						F	
KANZ	08	0722	0729	0752	S25	W30	.654	15645	6.1	30	-N		C				F	
HTPR	08	0722	0727	0740	S26	W33	.690	15645	5.8	18	-N		C	0727	40	.4		
GRP69993	08	1028+3		1044D	N18	E15	.351	15643	9.6	16	-F							
HTPR	08	1028		1044D	N18	E15	.351	15643	9.6	160	-N		C	1039	30	.3		
KANZ	08	1031	1038	1038D	N19	E15	.362	15643	9.6	7D	-F		C					
GRP69994	08	1150+3	1153+1	1202	S16	W60	.887	15635	4.0	12	-F							
KANZ	08	1150	1154	1202	S16	W60	.887	15635	4.0	12	-F		C					
ZURI	08	1151	1153	1155	S16	W60	.887	15635	4.0	4	-F		C	1153	50	1.1		
RAMY	08	1153	1204	1215	S20	W58	.880	15635	4.1	22	-N	3	C		43			
GRP69995	08	1218+6	1240+7	1305	S14	W10	.346	15641	7.8	47	-N						F	
HTPR	08	1218	1245	1305	S14	W08	.332	15641	7.9	47	-N		C	1245	80	.8	E	
ZURI	08	1223	1247	1305	S14	W09	.339	15641	7.8	42	-N		C	1247	160	1.8		
KANZ	08	1224	1246	1300	S15	W11	.368	15641	7.7	36	-N		C				F	
RAMY	08	1234	1240	1242D	S12	W11	.327	15641	7.7	8D	1B	4	V		292		F	
996 RAMY	08	1239	1242	1257	N18	E24	.462	15643	10.3	18	-B	4	C		40			Y5
GRP69997	08	1324+2	1328+5	1338	N16	E14	.317	15643	9.6	14	-N				60	.6	EL	
HTPR	08	1324	1328	1336	N16	E17	.355	15643	9.8	12	-F		C	1328	60	.6	E	
MCMA	08	1325	1329	1335	N16	E14	.317	15643	9.6	10	-N		C	1329	70	.7	EL	
ZURI	08	1325	1329	1339	N16	E15	.329	15643	9.7	14	-F		C	1329	130	1.4		
KANZ	08	1326	1330	1338	N16	E13	.305	15643	9.5	12	-N		C				LE	
RAMY	08	1332	1333	1342	N16	E14	.317	15643	9.6	10	-N	4	C		47			
GRP69998	08	1355+8	1404+1	1418	N17	E19	.390	15643	10.0	23	-F							
ZURI	08	1355	1405	1407	N16	E15	.329	15643	9.7	12	-F	*	C	1405	90	1.0		
RAMY	08	1403	1404	1428	N18	E23	.449	15643	10.3	25	-N	*	C		29			
GRP69999	08	1357+2	1404+5	1440	S19	W59	.885	15635	4.2	43	1N				170	3.6	ELU	
MCMA	08	1357	1406	1455	S20	W60	.895	15635	4.1	58	1N		C	1406	125	3.0	EL	
KANZ	08	1358	1406	1432D	S18	W59	.883	15635	4.2	34D	1N		C				LF	
ZURI	08	1359	1405	1437	S20	W59	.887	15635	4.2	38	2B		C	1405	290	6.5		
HTPR	08	1359	1404	1435	S19	W58	.878	15635	4.2	36	-F		C	1404	80	1.6	E	
HOLL	08	1405E	1409U	1443	S19	W59	.885	15635	4.2	38D	1B	2	C		210		U	
GRP70000	08	1400+4	1406+4	1421	S19	W44	.753	15635	5.3	21	-N				30	.4	E	
HTPR	08	1400	1407	1422	S20	W44	.758	15635	5.3	22	-F		C	1407	30	.4	E	
ZURI	08	1401	1409	1417	S19	W44	.753	15635	5.3	16	-N		C	1409	110	1.8		
KANZ	08	1402	1410	1420	S18	W44	.749	15635	5.3	18	-N		C					
RAMY	08	1404	1406	1429	S24	W49	.820	15635	4.9	25	-N	4	C		27			
GRP70001	08	1503+5	1510+4 1551+2	1623	N21	E21	.451	15643	10.2	80	-F				60	.7	E	
RAMY	08	1503	1553	1635D	N21	E21	.451	15643	10.2	92D	-N	*	C		56		F	
MCMA	08	1504	1514	1535	N21	E21	.451	15643	10.2	31	-F		C	1514	70	.8	E	
HTPR	08	1508	1510	1533	N20	E22	.453	15643	10.3	25	-F		C	1510	30	.3	E	
MCMA	08	1549	1551	1623	N21	E21	.451	15643	10.2	34	-F	*	C	1551	60	.7	E	
GRP70002	08	1530>9	1542 1551	1559	S13	W12	.350	15641	7.7	29	-N						E	
RAMY	08	1530	1542	1558	S12	W13	.347	15641	7.7	28	-B	4	C		39			
MCMA	08	1542	1551	1600	S14	W11	.354	15641	7.8	18	-F		C	1551	100	1.1	E	
GRP70003	08	1531+0	1536	1550	N18	E14	.339	15643	9.7	19	-F				25	.3	E	
MCMA	08	1531	1536	1548	N16	E14	.317	15643	9.7	17	-F	*	C	1536	30	.3	E	
HTPR	08	1531		1551D	N20	E14	.363	15643	9.7	20D	-F	*	C	1537	20	.2	E	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
4 MCMA	08	1640	1659	1735	N21	E21	.451	15643	10.3	55	-N		C	1659	35	.4	E	Y5
GRP70005	08	1649+0	1652+1	1728	S14	W11	.354	15641	7.9	39	1B				210	2.2		
MCMA	08	1649	1653	1733	S14	W12	.363	15641	7.8	44	1B		C	1653	180	2.0	E	
RAMY	08	1649	1652	1723	S14	W11	.354	15641	7.9	34	1B	4	C		245		F	
6 RAMY	08	1749	1752	1755	S20	W61	.901	15635	4.2	6	-N	4	C		19		F	Y5
GRP70007	08	1751+0	1752+1	1807	N18	E12	.318	15643	9.6	16	1B				280	3.0	H	
RAMY	08	1751	1753	1807	N18	E12	.318	15643	9.6	16	1B	4	C		429		FDE	
MCMA	08	1751	1753	1807	N18	E12	.318	15643	9.6	16	1B		C	1753	200	2.1	EH	
HOLL	08	1751E	1752	1805	N20	E16	.384	15643	9.9	14D	1B	3	C		278		H	
8 MCMA	08	1924	1929	1941D	S12	W17	.391	15641	7.5	17D	-F		C	1929	50	.6	E	Y5
	08	2108	2113	NO FLARE PATROL														
	08	0348	0354	NO FLARE PATROL														
	08	0416	0423	NO FLARE PATROL														
	08	0616	0619	NO FLARE PATROL														
	08	0655	0700	NO FLARE PATROL														
	08	0708	0716	NO FLARE PATROL														
9 CULG	08	2222	2227	2237	N18	E08	.281	15643	9.5	15	-F		C	2227	40	.4		Y5
GRP70010	09	0021+1	0023+1	0034	S14	W12	.362	15641	8.1	13	-N				150	1.6	HJ	
VORO	09	0021	0023	0035	S16	W06	.349	15641	8.6	14	1N		C	0023	197	2.2	EHJ	
PALE	09	0022	0024	0033	S12	W19	.414	15641	7.6	11	-N	3	C		105		F	
11 VORO	09	0044	0044	0046	S10	W23	.448	15641	7.3	2	-N		C	0044	36	.4	D	Y5
GRP70012	09	0203+1	0208+1	0217	N18	E07	.276	15643	9.6	14	-N				80	.8	EJ	
VORO	09	0203	0208	0216	N18	E07	.276	15643	9.6	13	-N		C	0208	90	.9	EJ	
MITK	09	0204	0209	0217	N19	E06	.284	15643	9.5	13	-N		C	0209			E	
CULG	09	0212E	0212U	0225	N18	E08	.283	15643	9.7	13D	-F		P	0212	80	.8		
13 CULG	09	0212E	0212	0225	S18	E22	.509	15642	10.7	13D	-N		P	0212	80	.9		Y5
14 CULG	09	0319	0322	0350	S18	W62	.904	15635	4.5	31	-N		C	0322	30	.7		Y5
15 CULG	09	0431	0438U	0509D	S26	W42	.769	15645	6.0	38D	-N		P	0438	80	1.3		Y5
16 HTPR	09	0713	0717	0723	S13	W20	.436	15641	7.8	10	-F		C	0717	10	.1		Y5
GRP70017	09	0938+3	0940+5	0955	S09	W25	.468	15641	7.5	17	-F							
TEHR	09	0938E	0940	0943D	S09	W25	.468	15641	7.5	5D	-N	1	C		95		FDE	
HTPR	09	0940	0943	1000	S09	W24	.454	15641	7.6	20	-F		C	0943	40	.4		
KANZ	09	0941	0945	0949	S09	W25	.468	15641	7.5	8	-F		C				T	
18 KANZ	09	1043	1047	1051	S08	W29	.517	15641	7.3	8	-F		C					Y5
GRP70019	09	1103+2	1105+5	1116	S10	W23	.448	15641	7.7	13	-N				60	.7	E	
KANZ	09	1103	1107	1111	S11	W23	.456	15641	7.7	8	-F		C					
HTPR	09	1104	1105	1115	S12	W21	.439	15641	7.9	11	-N		C	1105	40	.4	E	
MONT	09	1105	1107	1117	S10	W22	.435	15641	7.8	12	-N		C	1107	60		E	
TEHR	09	1105	1110	1114	S09	W25	.468	15641	7.6	9	-B	1	C		127		FDE	
HTPR	09	1105	1107	1120	S09	W27	.495	15641	7.4	15	-F		C	1107	10	.1		
GRP70020	09	1107+4	1112+3	1148	N18	E10	.300	15643	10.2	41	-N				60	.6		
KANZ	09	1107	1115	1142	N16	E05	.232	15643	9.8	35	-B		C				D	
HTPR	09	1107	1112	1200	N18	E11	.309	15643	10.3	53	-F		C	1112	60	.6	E	
RAMY	09	1109E	1112	1208	N18	E11	.309	15643	10.3	59D	-B	3	C		48			
TEHR	09	1110	1113	1116	N22	E10	.356	15643	10.2	6	-N	1	C		74		FDE	
MONT	09	1111	1114	1143	N08	E09	.174	15643	10.1	32	-F		C	1114	50		E	
21 HTPR	09	1437	1442	1450	N18	E09	.291	15643	10.3	13	-F		C	1442	20	.2		Y5
22 MCMA	09	1627	1629	1635	S15	W35	.634	15641	7.1	8	-N		C	1629	25	.4	DH	Y5
GRP70023	09	1845>9	1908+2	1916	S12	W28	.528	15641	7.7	31	-N				50	.6	FH	
RAMY	09	1845	1910	1916D	S12	W28	.528	15641	7.7	31D	-N	3	C		40		F H	
MCMA	09	1907	1908	1917	S12	W28	.528	15641	7.7	10	-N		C	1908	60	.7	E	
HOLL	09	1908E	1908U	1914	S13	W28	.535	15641	7.7	6D	-N	3	C		39		F	
GRP70024	09	1937+1	1938+3	1951	S12	W28	.528	15641	7.7	14	-N				30	.4	F	
MCMA	09	1937	1940	1945D	S12	W28	.528	15641	7.7	8D	-N		C	1940	30	.4	E	
HOLL	09	1938	1938	1947	S13	W28	.535	15641	7.7	9	-N	3	C		25		F	
RAMY	09	1940E	1941	1955	S12	W28	.528	15641	7.7	15D	-B	2	C		33		F	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg		
	09	2025	2043	NO FLARE PATROL														
	09	2054	2230	NO FLARE PATROL														
25 HOLL	09	2217	2220	2226	S13	W30	.560	15641	7.7	9	-B	3	C		27		F	Y5
	09	2255	0013	NO FLARE PATROL														
	09	0501	0506	NO FLARE PATROL														
	09	0509	0513	NO FLARE PATROL														
26 MANI	10	0048E	0050	0055D	N17	E04	.244	15643	10.3	7D	-B	3	V		120	1.2	FZ	Y5
GRP70027	10	0057E	0122	0232D	N17	E01	.235	15643	10.1	95	2N				740	7.6	FHIJKL	
			0154															
VORO	10	0057E		0227D	N17	E02	.237	15643	10.2	90D	2N		P	0201	771	8.2	FHJKL	
CULG	10	0101E	0122U	0215D	N18	E01	.252	15643	10.1	74D	2N		P	0122	810	8.4	UI	
PALE	10	0113E	0154U	0232D	N17	E02	.237	15643	10.2	79D	2N	3	C		574		Z U	
MITK	10	0119E		0225D	N17	W01	.235	15643	10.0	66D	2B		C	0120	680	7.2		
28 VORO	10	0251E		0330D	N24	E10	.386	15643	10.9	39D	-N		P	0304	99	1.0	B	Y5
29 KANZ	10	0727	0727	0741	S10	W37	.632	15641	7.5	14	-F		C				T	Y5
30 KANZ	10	1024	1032	1036	S11	W43	.709	15641	7.2	12	-F		C					Y5
GRP70031	10	1159+0	1159+5	1208	N18	E04	.260	15643	10.8	9	-F						F	
ZURI	10	1159	1159	1209	N19	E05	.281	15643	10.9	10	-F		C	1159	120	1.3		
RAMY	10	1159	1204	1206	N18	E04	.260	15643	10.8	7	-N	3	C		23		F	
32 RAMY	10	1248	1249	1255	S12	W38	.653	15641	7.7	7	-B	3	C		26		F	Y5
GRP70033	10	1359+0	1401+1	1416	S14	W39	.675	15641	7.7	17	1B						F	
RAMY	10	1359	1402	1415	S14	W38	.663	15641	7.7	16	1B	3	C		208		F	
ZURI	10	1359	1401	1417	S14	W40	.686	15641	7.6	18	2B		C	1401	690	9.8		
34 MCMA	10	1423E		1428D	S17	W34	.633	15641	8.0	5D	-F		P	1426	20	.3	D	Y5
GRP70035	10	1434+0	1435	1439	N19	W09	.307	15643	9.9	5	-N							
RAMY	10	1434	1435	1438	N19	W08	.299	15643	10.0	4	-B	3	C		21			
HUAN	10	1434		1440	N19	W10	.315	15643	9.9	6	-F	1	C					
36 RAMY	10	1712	1712	1725	S14	W40	.686	15641	7.7	13	-B	3	C		27			Y5
GRP70037	10	1727	1747+1	1805	N18	W06	.271	15643	10.3	38	-N							
RAMY	10	1727	1747	1818	N18	W06	.271	15643	10.3	51	1B	3	C		239		DE	
PALE	10	1735E	1748	1804	N18	W08	.285	15643	10.1	29D	-N	3	C		132		FDE	
MCMA	10	1735E		1805D	N18	W05	.265	15643	10.4	30D	-N		C	1736	125	1.4	E	
GRP70038	10	1734	1734	1744	S14	W41	.698	15641	7.7	10	-B				45	.6		
RAMY	10	1734	1734	1745	S14	W40	.686	15641	7.7	11	-B	3	C		60		F	
MCMA	10	1735E		1743	S14	W43	.720	15641	7.5	8D	-F		C	1736	30	.5	E	
GRP70039	10	1939+1	1942	2019	S14	W42	.709	15641	7.7	40	-N				60	.8	E	
RAMY	10	1939	1942	2019	S14	W41	.698	15641	7.7	40	-B	3	C		90			
MCMA	10	1940		1942D	S14	W44	.731	15641	7.5	2D	-N		C	1941	40	.6	E	
40 RAMY	10	2048	2048	2102	N18	W07	.277	15643	10.3	14	-B	3	C		28			Y5
	10	2104	2245	NO FLARE PATROL														
	10	0332	0419	NO FLARE PATROL														
	10	0441	0453	NO FLARE PATROL														
	10	0503	0554	NO FLARE PATROL														
41 VORO	10	2248E		2322	N20	W06	.302	15643	10.5	34D	1F		C	2300	215	2.3	EJ	Y5
42 VORO	10	2336	2339	2341	S29	W90	1.000	15635	4.2	5	-F		C	2339	36		DHJ	Y5
43 VORO	11	0038	0047	0105	S11	W49	.775	15641	7.4	27	-N		C	0047	27	.4	DJ	Y5
44 VORO	11	0209	0212	0215	S15	W55	.843	15641	7.0	6	-N		C	0212	63	1.1		Y5
45 VORO	11	0217	0218	0237	S22	W39	.717	15642	8.2	20	1F		C	0218	152	2.2	EJ	Y5
46 VORO	11	0219	0220	0223	S13	W48	.770	15641	7.5	4	-N		C	0220	63	1.0	DJ	Y5
47 CULG	11	0339E	0340	0426	S20	E65	.926	15654	16.0	47D	1N		P	0340	100	2.5		Y5
48 CULG	11	0350	0400	0432	S11	W48	.764	15641	7.6	42	-N		C	0400	40	.6		Y5

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
49 CULG	11	0449	0450	0455	S10	W44	.717	15641	7.9	6	-N		C	0450	50	.7		Y5
50 CULG	11	0718	0725	0731	S25	W88	1.000	15635	4.7	13	-N		C	0725	30			Y5
51 KANZ	11	0734		0741	N18	W21	.427	15643	9.7	7	-F		C				L	Y5
GRP70052	11	0839+2	0842+0	0846	N19	W23	.460	15643	9.6	7	-F				40	.5	E	
KANZ	11	0839	0842	0846	N19	W23	.460	15643	9.6	7	-F		C					
MONT	11	0840	0842	0846	N19	W23	.460	15643	9.6	6	-F		C	0842	50		E	
HTPR	11	0841	0842	0850	N18	W24	.465	15643	9.6	9	-F		C	0842	30	.3	E	
GRP70053	11	0856+3	0858+4	0906	N19	W23	.460	15643	9.6	10	-B				160	1.8		
ABST	11	0856	0858	0905	N19	W24	.473	15643	9.6	9	1N		C	0858	174	2.0	D	
KANZ	11	0858	0902	0909	N19	W23	.460	15643	9.6	11	-B		C					
MONT	11	0859	0901	0905	N19	W23	.460	15643	9.6	6	-N		C	0901	100			
HTPR	11	0859	0901	0907	N18	W24	.465	15643	9.6	8	1B		C	0901	200	2.2	E	
GRP70054	11	0921+5	0924+3	0931	S14	W54	.832	15641	7.3	10	-F							
KANZ	11	0921	0924	0932	S13	W52	.810	15641	7.5	11	-F		C				F	
MONT	11	0926	0927	0929	S15	W57	.860	15641	7.1	3	-F		C	0927	50		E	
GRP70055	11	1004	1015+2	1025	N24	E40	.692	15651	14.4	21	-F						E	
KANZ	11	1004	1015	1027	N24	E40	.692	15651	14.4	23	-N		C					
MONT	11	1016E	1017	1023	N24	E41	.702	15651	14.5	7D	-F		C	1017	50		E	
GRP70056	11	1029	1030 1037	1042	N18	W25	.478	15643	9.6	13	-N				130	1.5	EH	
MONT	11	1029	1030	1035	N18	W24	.465	15643	9.6	6	-N		C	1030	150			
KANZ	11	1031E	1031	1042	N18	W25	.478	15643	9.6	110	-N		C					
HTPR	11	1036E		1039D	N18	W25	.478	15643	9.6	30	-N		C	1037	170	1.9	E	
MONT	11	1036	1037	1042	N18	W24	.465	15643	9.6	6	-N		C	1037	100		H	
57 HTPR	11	1036E		1039D	N24	E39	.681	15651	14.4	30	-F		C	1036	20	.3	E	Y5
58 RAMY	11	1210	1217	1225	N24	E40	.692	15651	14.5	15	-N	3	C		22			Y5
GRP70059	11	1216+2	1217+1	1225	N18	W23	.452	15643	9.8	9	-F						L	
RAMY	11	1216	1217	1225	N19	W23	.460	15643	9.8	9	-N	3	C		58			
KANZ	11	1218	1218	1224	N17	W24	.458	15643	9.7	6	-F		C				L	
GRP70060	11	1221+3	1222+5	1231	S10	W54	.823	15641	7.5	10	-N						F	
RAMY	11	1221	1222	1230	S12	W53	.818	15641	7.5	9	-B	3	C		17		F	
KANZ	11	1224	1227	1231	S09	W56	.840	15641	7.3	7	-F		C					
GRP70061	11	1242+0	1242+1	1246	S12	W58	.863	15641	7.2	4	-N						F	
KANZ	11	1242	1242	1246	S13	W61	.889	15641	7.0	4	-N		C					
RAMY	11	1242	1243	1246	S12	W55	.836	15641	7.4	4	-N	3	C		25		F	
	11	1254	1300	NO FLARE PATROL														
GRP70062	11	1414+0	1416+1	1422	N17	W25	.471	15643	9.7	8	-N							
RAMY	11	1414	1416	1423	N19	W24	.473	15643	9.8	9	-B	3	C		141		F	
HUAN	11	1414	1417	1421	N16	W27	.491	15643	9.6	7	-N	1	C	1417	50	.5	E	
63 RAMY	11	1503	1504	1524	N17	W25	.471	15643	9.8	21	-N	3	C		20			Y5
GRP70064	11	1556+1	1558+0	1606	N16	W26	.478	15643	9.7	10	-N				40	.5	E	
MCMA	11	1556	1558	1608	N15	W26	.472	15643	9.7	12	-N		C	1558	35	.4	E	
RAMY	11	1557	1558	1604	N17	W26	.484	15643	9.7	7	-B	3	C		42			
65 RAMY	11	1621	1622	1627	N18	W26	.491	15643	9.7	6	-N	3	C		25		F	Y5
66 RAMY	11	1648	1649	1657	N19	W20	.423	15643	10.2	9	-N	3	C		36			Y5
67 RAMY	11	1703	1704	1707	N19	W20	.423	15643	10.2	4	-B	3	C		29			Y5
68 MCMA	11	1737	1740	1753	S16	W63	.908	15641	7.0	16	-N		C	1740	30	.9	D	Y5
	11	1948	1955	NO FLARE PATROL														
	11	1959	2004	NO FLARE PATROL														
	11	2017	2038	NO FLARE PATROL														
69 CULG	11	2037E	2037E	2103	N20	W16	.388	15643	10.7	26D	-F		P	2037	40	.4		Y5
	11	2040	2102	NO FLARE PATROL														
	11	2128	2138	NO FLARE PATROL														
	11	2147	2149	NO FLARE PATROL														

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
	11	0333	0337	NO FLARE PATROL														
	11	0453	0503	NO FLARE PATROL														
	11	0548	0551	NO FLARE PATROL														
70 CULG	11	2147E	2147U	2147D	N18	W28	.517	15643	9.8		-F		P	2147	50	.6	T	Y5
71 CULG	11	2221	2223	2228	S09	W53	.812	15641	8.0	7	-N		C	2223	60	1.0		Y5
GRP70072	11	2334+0	2334+1	2342	N16	W27	.491	15643	10.0	8	-F				35	.4	D	
VORO	11	2334	2335	2339	N15	W27	.486	15643	10.0	5	-N		C	2335	27	.3	D	
CULG	11	2334	2334	2345	N17	W28	.510	15643	9.9	11	-F		P	2334	40	.4	T	
GRP70073	11	2345+1	2347	2358D	S15	W67	.932	15641	7.0	13	-F						D	
CULG	11	2345	2407	0035	S15	W68	.938	15641	6.9	50	-F		C	2407	80			
VORO	11	2346	2347	2358	S15	W67	.932	15641	7.0	12	-N		C	2348	72		D	
74 VORO	12	0004	0005	0009	N15	W27	.486	15643	10.0	5	-N		C	0005	45	.5	D	Y5
75 VORO	12	0041	0041	0045	S11	W68	.934	15641	6.9	4	-B		C	0041	36		D	Y5
76 CULG	12	0257	0310	0340	N13	W18	.347	15643	10.8	43	-F		C	0310	30	.3		Y5
	12	0311	0325	NO FLARE PATROL														
	12	0357	0414	NO FLARE PATROL														
	12	0444	0459	NO FLARE PATROL														
	12	0502	0507	NO FLARE PATROL														
	12	0520	0551	NO FLARE PATROL														
77 CULG	12	0619	0624	0630D	N16	W31	.545	15643	9.9	11D	-F		P	0624	60	.7		Y5
	12	0640	0655	NO FLARE PATROL														
	12	0702	0724	NO FLARE PATROL														
78 KANZ	12	0732	0732	0735	N16	W32	.559	15643	9.9	3	-B		C				D	Y5
GRP70079	12	0754+2	0756+1	0803	N16	W34	.585	15643	9.8	9	-F							
KANZ	12	0754	0758	0802	N16	W32	.559	15643	9.9	8	-F		C					
HTPR	12	0756	0759	0803	N16	W36	.611	15643	9.6	7	-F		C	0759	20	.2		
80 KANZ	12	0850	0854	0858	S10	W58	.859	15641	8.0	8	-F		C					Y5
81 HTPR	12	0901	0905	0910	N16	W36	.611	15643	9.7	9	-F		C	0905	20	.2		Y5
82 KHAR	12	0950E	0955	1008D	N20	W30	.555	15643	10.2	18D	-F		P	0955	65	.8	H	Y5
83 KHAR	12	1100E	1102	1120D	N21	W27	.526	15643	10.4	20D	-F		P	1101	70	.8	H	Y5
84 KANZ	12	1337	1337	1349	N20	W29	.543	15643	10.4	12	-N		C				L	Y5
85 ZURI	12	1358E	1401	1405	N21	W27	.526	15643	10.6	7D	-F		P	1401	60	.7		Y5
86 RAMY	12	1629	1629	1632	N19	W33	.586	15643	10.2	3	-N	3	C		35			Y5
87 RAMY	12	1850	1854	1858	N19	W34	.599	15643	10.2	8	-N	4	C		28			Y5
88 CULG	12	2043	2047	2101	S09	W66	.920	15641	7.9	18	-F		C	2047	60		F	Y5
89 CULG	12	2140E	2145	2158	S16	W88	1.000	15641	6.3	18D	?F		P	2145	80			Y5
	IMP.1 NO : PALE																	
90 CULG	13	0405	0420	0440	N22	W44	.727	15643	9.9	35	-N		C	0420	20	.3		Y5
91 CULG	13	0544	0546	0605	S16	W85	.998	15641	6.9	21	1F		P	0546	60		FKT	Y5
92 KANZ	13	0735	0739	0743	N21	W45	.735	15643	9.9	8	-N		C				ET	Y5
GRP70093	13	0819+5	0822+2	0848	N21	W46	.745	15643	9.9	29	-N				70	1.1	E	
HTPR	13	0819	0822	0900	N20	W46	.742	15643	9.9	41	-N		C	0822	100	1.4	E	
KANZ	13	0824	0824	0836	N21	W47	.755	15643	9.8	12	-N		C					
MONT	13	0826E	0826	0833	N22	W46	.748	15643	9.9	7D	-F		C	0826	50		E	
KHAR	13	0850E		0907D	N22	W48	.769	15643	9.8	17D	-F		P				O	
GRP70094	13	0912+6	0918 0924+0	0932	N21	W46	.745	15643	9.9	20	-N				80	1.2	E	
HTPR	13	0912	0918	0926	N20	W46	.742	15643	9.9	14	-F		C	0918	50	.7	E	
KANZ	13	0916	0924	0932	N21	W47	.755	15643	9.9	16	-N		C					
MONT	13	0918	0924	0931	N22	W46	.748	15643	9.9	13	-N		C	0924	110		E	
KHAR	13	0925E	0940	1010D	N22	W47	.759	15643	9.9	45D	-N		P	0945	100	1.6	E	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP70095	13	0948+8	0959+1	1007	N21	W47	.755	15643	9.9	19	-N				80	1.2	E	
WEND	13	0948E		1010	N21	W45	.735	15643	10.0	22D	1F		V		300	4.7	E	
KANZ	13	0955	0959	1007	N21	W47	.755	15643	9.9	12	-N		C					
HTPR	13	0955	1000	1005	N20	W47	.753	15643	9.9	10	-N		C	1000	100	1.4	E	
MONT	13	0956	1000	1006	N22	W47	.759	15643	9.9	10	-N		C	1000	70		E	
96 KHAR	13	1037E		1055D	S14	W88	1.000	15641	6.8	18D	-F		V	1037			H	Y5
GRP70097	13	1104+1	1105+1	1109	N20	W46	.742	15643	10.0	5	-F						E	
HTPR	13	1104	1105	1110	N20	W48	.763	15643	9.9	6	-F		C	1105	20	.3	E	
ZURI	13	1105	1106	1107	N21	W45	.735	15643	10.1	2	-F		C	1106	60	.9		
98 RAMY	13	1116	1116	1125	N19	W43	.706	15643	10.2	9	-N	2	C		33			Y5
GRP70099	13	1130+4	1134+2	1142	N20	W46	.742	15643	10.0	12	-N				60	.9		
KHAR	13	1130E		1142D	N22	W48	.769	15643	9.9	12D	-F		P				D	
HTPR	13	1131	1134	1140	N20	W48	.763	15643	9.9	9	-F		C	1134	30	.4	E	
RAMY	13	1131	1136	1159	N19	W44	.717	15643	10.2	28	-B	3	C		88			
ZURI	13	1134	1136	1142	N21	W45	.735	15643	10.1	8	-N		C	1136	60	.9		
GRP70100	13	1203+7	1212 1226	1240	N20	W45	.731	15643	10.1	37	-N							
RAMY	13	1203	1226	1249	N19	W44	.717	15643	10.2	46	-B	3	C		27			
ZURI	13	1210	1212	1230	N21	W46	.745	15643	10.1	20	-F		C	1212	80	1.2		
101 KANZ	13	1229	1233	1241	N25	W85	.995	15656	7.1	12	-N		C					Y5
GRP70102	13	1300+3	1300+3	1304	S12	W77	.978	15641	7.8	4	-N							
KANZ	13	1241	1300	1304	S11	W80	.987	15641	7.5	23	-F		C					
ZURI	13	1300	1302	1304	S12	W77	.978	15641	7.8	4	-N		C	1302	60			
RAMY	13	1303	1303	1306	S14	W76	.975	15641	7.8	3	-B	3	C		16			
103 RAMY	13	1302	1305	1307	N19	W44	.717	15643	10.2	5	-N	*	C		27			Y5
104 HTPR	13	1314	1317	1320	N20	W49	.773	15643	9.9	6	-F		C	1317	20	.3	E	Y5
105 HTPR	13	1350	1352	1355	N20	W49	.773	15643	9.9	5	-F		C	1352	20	.3	E	Y5
106 RAMY	13	1535	1536	1538	N24	E12	.405	15651	14.5	3	-B	3	C		22			Y5
GRP70107	13	1559+0	1601+1	1606	N24	E11	.398	15651	14.5	7	-N				30	.3		
HOLL	13	1559	1602	1604	N25	E11	.412	15651	14.5	5	-N	2	C		32			
RAMY	13	1559	1601	1607	N24	E12	.405	15651	14.6	8	-N	3	C		27			
108 HOLL	13	1612	1619	1627	N25	E11	.412	15651	14.5	15	-N	2	C		23			Y5
109 RAMY	13	2116	2116	2119D	N19	W49	.771	15643	10.2	3D	-N	3	C		16			Y5
	13	2119	2121	NO FLARE PATROL														
	13	2125	2135	NO FLARE PATROL														
	13	2142	2211	NO FLARE PATROL														
	13	2214	2228	NO FLARE PATROL														
	13	2258	2300	NO FLARE PATROL														
	13	0119	0128	NO FLARE PATROL														
	13	0133	0140	NO FLARE PATROL														
	13	0145	0153	NO FLARE PATROL														
	13	0157	0202	NO FLARE PATROL														
	13	0445	0450	NO FLARE PATROL														
	13	0040	0045	NO FLARE PATROL														
	14	0144	0207	NO FLARE PATROL														
	14	0235	0245	NO FLARE PATROL														
	14	0253	0312	NO FLARE PATROL														
	14	0347	0402	NO FLARE PATROL														
	14	0527	0537	NO FLARE PATROL														
	14	0548	0552	NO FLARE PATROL														
	14	0555	0632	NO FLARE PATROL														
	14	0637	0643	NO FLARE PATROL														
GRP70110	14	0813+2	0817+3	0843	S22	W01	.423	15647	14.3	30	-N				120	1.3	GHU	
KANZ	14	0813	0817	0843	S22	W02	.424	15647	14.2	30	-N		C					
MONT	14	0815	0819	0843	S22	W01	.423	15647	14.3	28	-N		C	0819	110		GH	
HTPR	14	0815	0819	0842	S23	W02	.439	15647	14.2	27	-N		C	0819	120	1.3	E	
TEHR	14	0815	0820	0837	S27	E08	.515	15647	14.9	22	-N	2	C		127		U F	
111 HTPR	14	1004	1008	1011	N21	W52	.805	15643	10.5	7	-F		C	1008	30	.5		Y5

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
GRP70112	14	1104+0	1106+0	1112	N19	W59	.864	15643	10.0	8	-F				35	.7	E
HTPR	14	1104	1106	1112	N19	W58	.856	15643	10.1	8	-F		C	1106	20	.4	E
MONT	14	1104	1106	1111	N19	W61	.880	15643	9.9	7	-F		C	1106	50		E
GRP70113	14	1137+0	1149+1	1209	N19	W60	.872	15643	10.0	32	-F						E
MONT	14	1137	1150	1150D	N19	W61	.880	15643	9.9	13D	-N		C	1150	11		E
KANZ	14	1137	1149	1209	N19	W60	.872	15643	10.0	32	-F		C				T
114 KANZ	14	1229	1237	1300	S09	W90	1.000	15641	7.8	31	-N		C				Y5
	15	0241	0246	NO FLARE PATROL													
115 KANZ	15	1001	1008	1012	N29	E90	1.000	15667	22.2	11	-F		C				G Y5
GRP70116	15	1036+4	1110+3	1140	N20	W70	.941	15643	10.2	64	1N						FKU
HTPR	15	1036	1110	1135	N20	W70	.941	15643	10.2	59	-N		C	1115	160		EK
MONT	15	1039	1113	1145D	N24	W75	.967	15643	9.8	66D	1N		C	1113	250		
KANZ	15	1040	1112	1147	N21	W70	.942	15643	10.2	67	1N		C				F
TEHR	15	1105	1110	1128	N17	W69	.934	15643	10.3	23	-B	1	C		111		U F
RAMY	15	1115E	1117	1141	N19	W70	.941	15643	10.2	26D	-N	3	C		98		F
GRP70117	15	1352+3	1400	1421	N19	W76	.970	15643	9.9	29	-F						
KANZ	15	1352	1400	1416	N20	W76	.970	15643	9.9	24	-F		C				
HUAN	15	1355		1425	N19	W77	.973	15643	9.8	30	-F	1	C	1405	30		
GRP70118	15	1925+1	1935+2	1947	N17	W76	.969	15643	10.1	22	-N				25		
RAMY	15	1925	1935	1949	N19	W76	.970	15643	10.1	24	-B	3	C		25		F
PALE	15	1926	1937	1945	N16	W76	.969	15643	10.1	19	-N	3	C		20		DE F
GRP70119	16	0813+4	0817+2	0825	N18	W88	.999	15643	9.7	12	-N				70		
KANZ	16	0813	0817	0825	N18	W87	.998	15643	9.8	12	-N		C				
MONT	16	0815	0818	0822	N16	W88	.999	15643	9.7	7	-N		C	0818	60		E
ABST	16	0817	0819	0848	N18	W88	.999	15643	9.7	31	1F		C	0819	87		D
120 KANZ	16	1052	1100	1104	N18	W90	1.000	15643	9.7	12	-N		C				Y5
GRP70121	16	1526+3	1529+1	1533	S23	E80	.990	15669	22.6	7	-F				25		
MCMA	16	1526	1529	1533	S23	E80	.990	15669	22.6	7	-F		C	1529			E
HUAN	16	1529	1530	1533	S21	E85	.998	15669	23.0	4	-F	1	C	1530	20		D
RAMY	16	1529	1530	1536	S26	E77	.983	15669	22.4	7	-F	3	C		28		F
122 RAMY	16	1624	1625	1627	S21	W47	.786	15647	13.2	3	-N	3	C		22		Y5
123 MCMA	16	1808	1810	1830D	N24	W32	.609	15651	14.4	22D	-F		C	1810	60	.8	E Y5
GRP70124	16	1812+1	1814+1	1822	N18	W88	.999	15643	10.2	10	-N						
MCMA	16	1812	1815	1825	N18	W88	.999	15643	10.2	13	-N		C	1815			
RAMY	16	1813	1814	1818	N19	W88	.999	15643	10.2	5	-N	3	C		13		
GRP70125	16	1814	1824 1845	1922	S22	E58	.881	15668	21.1	68	-N						K
MCMA	16	1814	1824	1922	S22	E58	.881	15668	21.1	68	-N		C	1824	25	.5	DK
MCMA	16	1814	1845	1922	S22	E58	.881	15668	21.1	68	-N		C	1845			
GRP70126	16	1848+3	1851 1902	1922	S30	E81	.994	15670	22.9	34	-F						D
MCMA	16	1848	1851	1925D	S31	E88	1.000	15670	23.4	37D	-N		C	1851			D
RAMY	16	1851	1902	1920	S29	E75	.979	15670	22.4	29	-F	3	C		16		
127 RAMY	16	1922	1924	1931	S29	E75	.979	15670	22.4	9	-F	3	C		15		Y5
	17	0450	0510	NO FLARE PATROL													
	17	0513	0527	NO FLARE PATROL													
	17	0530	0555	NO FLARE PATROL													
128 KANZ	17	0931	0935	0943	S16	W34	.622	15671	14.8	12	-N		C				Y5
GRP70129	17	1413+1		1428D	N23	W90	1.000	15643	10.8	15	-F						
KANZ	17	1413		1421D	N25	W90	1.000	15643	10.8	8D	-N		C				
HTPR	17	1414		1428D	N22	W90	1.000	15643	10.8	14D	-F		C	1418	50		
130 CULG	18	0225	0227	0243	N28	W47	.783	15651	14.6	18	-F		C	0227	50	.8	Y5
131 CULG	18	0648	0649	0707	S17	W36	.650	15654	15.6	19	-F		C	0649	60	.8	Y5

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
GRP70132	18	1139+8	1151	1210	N23	W45	.745	15651	15.1	31	-F							
HTPR	18	1139		1220D	N24	W44	.738	15651	15.2	41D	-F		C	1143	30	.4		
KANZ	18	1147	1151	1159	N23	W47	.765	15651	15.0	12	-F		C					
	18	1358	1401	NO FLARE PATROL														
	18	1507	1510	NO FLARE PATROL														
	18	1525	1529	NO FLARE PATROL														
	18	1540	1544	NO FLARE PATROL														
133 HUAN	18	1616	1618	1619	S16	E38	.667	15669	21.5	3	-F	1	C	1618	20	.2	D	Y5
	18	2329	2332	NO FLARE PATROL														
	18	2355	0020	NO FLARE PATROL														
	18	0322	0331	NO FLARE PATROL														
	18	0625	0632	NO FLARE PATROL														
	19	0158	0159	NO FLARE PATROL														
	19	0318	0321	NO FLARE PATROL														
	19	0049	0130	NO FLARE PATROL														
134 HTPR	19	0908	0913	0925	S15	E34	.614	15669	21.9	17	-F		C	0913	20	.2		Y5
GRP70135	19	0925+0	0925+2	0931	S19	E34	.639	15669	21.9	6	-F						L	
KANZ	19	0925	0925	0933	S19	E34	.639	15669	21.9	8	-N		C				LT	
HTPR	19	0925	0927	0929	S19	E34	.639	15669	21.9	4	-F		C	0927	20	.2		
136 HTPR	19	0936	0940	0946	S23	E22	.548	15668	21.1	10	-F		C	0940	30	.3	E	Y5
GRP70137	19	1255+2	1303+3	1309	S19	E32	.616	15669	21.9	14	-N							
KANZ	19	1255	1303	1307	S19	E32	.616	15669	21.9	12	-N		C					
HTPR	19	1257	1306	1310	S19	E32	.616	15669	21.9	13	-N		C	1306	20	.2		
138 HTPR	19	1343	1345	1405	N40	W38	.777	15653	16.7	22	-N		C	1345	50	.7	E	Y5
139 HUAN	19	1558	1601	1605	S17	E28	.556	15669	21.8	7	-F	1	C	1601	20	.2	D	Y5
140 CULG	19	2129	2129	2137	S18	E26	.541	15669	21.8	8	-F		C	2129	30	.3		Y5
141 CULG	19	2232	2237	2250	S17	E27	.544	15669	22.0	18	-F		C	2237	40	.5	F	Y5
GRP70142	19	2246+2	2251+2	2304	N16	E63	.894	15673	24.7	18	-N				40	.9	F	
CULG	19	2246	2253	2311	N13	E63	.892	15673	24.7	25	-N		C	2253	50	1.3		
PALE	19	2248	2251	2304	N16	E63	.894	15673	24.7	16	-N	3	C		48		F	
HOLL	19	2248	2252	2302	N16	E62	.887	15673	24.6	14	-N	3	C		27			
143 CULG	19	2307	2310	2323	N41	W43	.815	15653	16.7	16	-N		C	2310	50	.9		Y5
GRP70144	19	2353+1	2355+2	0005	S19	E24	.528	15669	21.8	12	-F				30	.4	D	
VORO	19	2353	2355	0000	S19	E25	.539	15669	21.9	7	-N		C	2355	27	.3	D	
CULG	19	2354	2357	0010	S19	E24	.528	15669	21.8	16	-F		C	2357	30	.3		
145 VORO	20	0119	0125	0133	S22	E11	.447	15668	20.9	14	-N		C	0125	72	.8	D	Y5
146 CULG	20	0356	0418	0428	N27	W70	.947	15651	14.9	32	-F		C	0418	20			Y5
GRP70147	20	0604>9	0631 0642+5	0712	N16	E57	.845	15673	24.5	68	-N				100	1.9	KU	
CULG	20	0604	0642	0743	N15	E58	.853	15673	24.6	99	-N		C	0642	80	1.6	K	
TEHR	20	0625	0631	0710	N17	E57	.847	15673	24.5	45	-B	1	C		127		U F	
ABST	20	0641	0647	0705	N14	E60	.869	15673	24.8	24	1N		C	0647	131	2.6	E	
KANZ	20	0658E		0713	N17	E57	.847	15673	24.6	15D	-B		C				U	
GRP70148	20	0826+2	0828+2	0841	N22	W79	.981	15651	14.4	15	-F						EJ	
ABST	20	0826	0828	0840	N23	W80	.985	15651	14.4	14	1F		C	0828	131		EJ	
HTPR	20	0828	0830	0841	N22	W78	.978	15651	14.5	13	-F		C	0830	20			
149 HTPR	20	0900	0901	0908	N22	W78	.978	15651	14.5	8	-F		C	0901	20			Y5
GRP70150	20	0928+1	0932+0	0940	S24	E06	.453	15668	20.8	12	-F						E	
KANZ	20	0928	0932	0936	S24	E09	.465	15668	21.1	8	-F		C					
HTPR	20	0929	0932	0943	S24	E04	.447	15668	20.7	14	-F		C	0932	20	.2	E	
GRP70151	20	0944+1	0945+0 1003	1007	N39	W53	.870	15653	16.4	23	-N							
KANZ	20	0944	0945	1007	N41	W53	.877	15653	16.4	23	-F		C					
HTPR	20	0945	0945	1010	N38	W55	.879	15653	16.3	25	-N		C	0948	20	.3		
TEHR	20	0957	1003	1007	N39	W50	.852	15653	16.7	10	-B	1	C		64		FDE	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Dist.	CORR AREA Sq. Deg.		
152 HTPR	20	1201	1203	1205	N38	W56	.885	15653	16.3	4	-F		C	1203	20	.3		Y5
153 RAMY	20	1437	1500	1541	S22	E05	.419	15668	21.0	64	-B	3	C		122			Y5
	20	1813	1819	NO FLARE PATROL														
154 CULG	20	1955E	1955E	0345	N40	W65	.937	15653	16.0	470D	?F		P	1955	780		US	Y5
	IMP.3 NO : PALE			HOLL														
GRP70155	20	2149	2152+3	2215	N15	E50	.776	15673	24.7	26	-N				50	.8	FU	
CULG	20	2149	2155	2215	N15	E51	.786	15673	24.7	26	-N		C	2155	40	.6		
PALE	20	2151E	2152U	2208D	N16	E50	.778	15673	24.7	17D	-B	3	C		55		U F	
	20	2232	2235	NO FLARE PATROL														
156 CULG	21	0440	0503	0730D	N24	E34	.636	15672	23.7	170D	1N		C	0503	180	2.3	G	Y5
157 HTPR	21	0835	0837	0840	S19	E07	.379	15669	21.9	5	-F		C	0837	20	.2	E	Y5
158 KANZ	21	0841	0845	0852	N40	W67	.946	15653	16.3	11	-F		C					Y5
GRP70159	21	0946+7	0949+7	1000	N39	W67	.945	15653	16.4	14	-N							
TEHR	21	0946	0949	0959	N39	W60	.911	15653	16.9	13	-B	1	C		64		FDE	
KANZ	21	0949	0953	1001	N39	W68	.949	15653	16.3	12	-N		C					
HTPR	21	0953	0956	1000	N39	W67	.945	15653	16.4	7	-F		C	0956	30	.7		
GRP70160	21	1051+1	1055 1104	1115	N39	W67	.945	15653	16.4	24	-F							
HTPR	21	1051	1055	1114	N39	W67	.945	15653	16.4	23	-F		C	1055	50	1.2		
KANZ	21	1052	1104	1116	N39	W68	.949	15653	16.4	24	-F		C					
161 KANZ	21	1119		1205	N24	E11	.412	0	22.3	46	-F		C				GL	Y5
GRP70162	21	1208+7	1218+0	1226	N39	W67	.945	15653	16.5	18	-F				30		E	
RAMY	21	1208	1218	1230	N39	W66	.941	15653	16.6	22	-N	3	C		35			
HTPR	21	1215	1218	1221	N39	W68	.949	15653	16.4	6	-F		C	1218	20	.5	E	
GRP70163	21	1333+3	1336+5	1352	S28	E19	.577	15670	23.0	19	-N				20	.2		
HTPR	21	1323	1336	1350	S28	E20	.584	15670	23.1	27	-F		C	1336	20	.2	E	
KANZ	21	1333	1338	1356	S27	E19	.565	15670	23.0	23	-N		C					
RAMY	21	1336	1341	1352	S28	E16	.557	15670	22.8	16	-N	4	C		22		F	
GRP70164	21	1348+0	1348 1411+4	1420	N39	W69	.953	15653	16.4	32	-N							
HTPR	21	1348	1411	1420	N39	W69	.953	15653	16.4	32	-F		C	1411	50	1.2		
RAMY	21	1348	1348	1352	N38	W69	.952	15653	16.4	4	-N	4	C		12			
KANZ	21	1404	1412	1416	N39	W68	.949	15653	16.5	12	-N		C					
RAMY	21	1413	1415	1428	N38	W69	.952	15653	16.4	15	-N	4	C		11			
165 RAMY	21	1517	1525	1539	N38	W69	.952	15653	16.5	22	-B	4	C		31		FDE	Y5
166 RAMY	21	1535	1537	1608	S16	E04	.319	15669	21.9	33	-B	4	C		60		F	Y5
167 RAMY	21	1543	1544	1551	N38	W69	.952	15653	16.5	8	-B	4	C		17			Y5
168 RAMY	21	1554	1558	1609	N38	W69	.952	15653	16.5	15	-N	4	C		22			Y5
169 RAMY	21	1645	1647	1658	N38	W70	.956	15653	16.4	13	-B	4	C		19			Y5
170 RAMY	21	1911	1913	1922	N38	W70	.956	15653	16.5	11	-N	3	C		16			Y5
171 RAMY	21	1951	1952	1959	N38	W71	.960	15653	16.5	8	-B	3	C		21		F	Y5
GRP70172	21	2009+9	2012 2020+1	2023	N39	W71	.961	15653	16.5	14	-N				45			
RAMY	21	2009	2012	2023	N38	W71	.960	15653	16.5	14	-B	3	C		16			
CULG	21	2011	2021	2033	N42	W75	.976	15653	16.2	22	-F		P	2021	50			
PALE	21	2018	2020	2023	N39	W68	.949	15653	16.7	5	-N	3	C		37		FDE	
173 HUAN	21	2135	2145	2149	N36	W76	.976	15653	16.2	14	-F	1	C	2145	30			Y5
174 CULG	21	2237	2249	2309	N41	W74	.973	15653	16.4	32	-F		C	2249	30			Y5
	21	2332	0029	NO FLARE PATROL														
175 CULG	22	0602	0603	0620	N22	W85	.996	0	15.9	18	-F		C	0603	30			Y5

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	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
176 KANZ	22	0755	0755	0803	S16	W05	.321	15669	22.0	8	-B		C				D	Y5
GRP70177	22	0850+1	0855+1	0902	N39	W80	.988	15653	16.4	12	-N				50		E	
MONT	22	0850	0855	0902	N38	W82	.991	15653	16.2	12	-N		C	0855	70			
HTPR	22	0851	0856	0858	N39	W80	.988	15653	16.4	7	-N		C	0856	30		E	
KANZ	22	0851	0855	0903	N40	W79	.986	15653	16.4	12	-N		C					
GRP70178	22	1003+1	1006+1	1012	N39	W81	.990	15653	16.3	9	-N				35			
KANZ	22	1003	1007	1014	N40	W77	.981	15653	16.6	11	-N		C					
HTPR	22	1004	1007	1010	N39	W81	.990	15653	16.3	6	-F		C	1007	20			
MONT	22	1004	1006	1012	N38	W82	.991	15653	16.3	8	-N		C	1006	50			
GRP70179	22	1120+2	1124+0	1129	N39	W80	.988	15653	16.5	9	-F							
KANZ	22	1120	1124	1132	N40	W79	.986	15653	16.5	12	-N		C					
HTPR	22	1122	1124	1126	N39	W81	.990	15653	16.4	4	-F		C	1124	10			
180 KANZ	22	1251	1255	1259	N40	W80	.988	15653	16.5	8	-N		C					Y5
181 KANZ	22	1339	1347	1355	N15	E80	.984	15679	28.6	16	-F		C					Y5
	22	1540	1552	NO FLARE PATROL														
	22	1628	1651	NO FLARE PATROL														
	22	0033	0044	NO FLARE PATROL														
182 CULG	22	2002	2005	2018	N40	W88	.999	15653	16.2	16	-F		C	2005	40			Y5
183 CULG	22	2045	2055	2108	S19	E38	.680	15677	25.7	23	-F		C	2055	30	.4		Y5
184 CULG	22	2306	2318	2338	N40	W90	1.000	15653	16.2	32	-N		C	2318	40			Y5
185 KANZ	23	0809	0809	0817	N13	E75	.966	15679	29.0	8	-N		C				D	Y5
186 KANZ	23	0845	0848	0900	S11	W20	.402	15669	21.9	15	-F		C				G	Y5
	23	1536	1731	NO FLARE PATROL														
	23	1901	2003	NO FLARE PATROL														
GRP70187	23	2329>9	2337 2349	0004	N11	E66	.914	15679	28.9	35	-F						OJ	
CULG	23	2329	2337	0016	N10	E65	.907	15679	28.9	47	-F		C	2337	60	1.3		
VORO	23	2349	2349	2352	N13	E68	.928	15679	29.1	3	-N		C	2349	54		DJ	
188 CULG	24	0000	0005	0017	N12	E90	1.000	15690	30.8	17	-F		C	0005	40			Y5
189 VORO	24	0022	0023	0025	S21	W62	.904	0	19.4	3	-N		C	0023	45		DGJ	Y5
190 VORO	24	0129	0131	0137	S19	W25	.533	15669	22.2	8	-N		C	0131	90	1.0	E	Y5
191 VORO	24	0243	0245	0251	S20	W63	.909	0	19.4	8	-B		C	0245	63		DGJ	Y5
GRP70192	24	0244+1	0245+3	0255	S19	W26	.544	15669	22.2	11	-N						E	
CULG	24	0244	0248	0257	S19	W27	.555	15669	22.1	13	-N		C	0248	20	.2		
VORO	24	0245	0245	0253	S20	W26	.553	15669	22.2	8	-N		C	0245	108	1.3	E	
GRP70193	24	0652	0657 0713	0720	N14	E59	.862	15679	28.7	28	-N						F	
TEHR	24	0652	0657	0719	N16	E58	.856	15679	28.6	27	-B	2	C		130		F	
KANZ	24	0656E		0720	N14	E59	.862	15679	28.7	240	-N		C					
MANI	24	0708E	0713U	0725	N13	E61	.878	15679	28.9	170	-F	3	V		80	1.5		
GRP70194	24	1054+0	1057+1	1102	S12	W33	.582	15669	22.0	8	-F							
MONT	24	1054	1057	1101	S13	W33	.587	15669	22.0	7	-F		C	1057	50			
KANZ	24	1054	1058	1102	S12	W34	.595	15669	21.9	8	-F		C					
195 KANZ	24	1222	1222	1230	N13	E80	.984	15690	30.5	8	-N		C					Y5
196 KANZ	24	1226	1242	1256	N13	W85	.996	15662	18.1	30	-N		C					Y5
197 RAMY	24	1439	1440	1443	S12	W34	.595	15669	22.1	4	-N	3	C		26			Y5
GRP70198	24	1757+2	1800+2	1812	S13	W37	.637	15669	22.0	15	-N				40	.5		
RAMY	24	1757	1802	1813	S13	W37	.637	15669	22.0	16	-B	4	C		54			
PALE	24	1759	1800	1810	S13	W37	.637	15669	22.0	11	-N	3	C		33		DE F	
199 RAMY	24	1826	1826	1836	N15	E47	.745	15679	28.3	10	-N	4	C		20			Y5
200 CULG	24	2045E	2052	2104	N23	W32	.610	0	22.5	190	-F		C	2052	60	.8	F	Y5

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	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
	24	2133	2140	NO FLARE PATROL														
GRP70201	25	0216+1	0236+1	0252	S30	W26	.646	15670	23.1	36	-N				70	.9	JK	
CULG	25	0216	0237	0300	S30	W26	.646	15670	23.1	44	-N		C	0237	60	.8		
VORO	25	0217	0236	0252	S30	W25	.638	15670	23.2	35	-N		C	0236	90	1.1	EJK	
PALE	25	0236		0247	S29	W27	.644	15670	23.1	11	-N	1	C				DE	
GRP70202	25	0423+3	0427+5 0446	0448	N13	E43	.695	15679	28.4	25	-N							
TEHR	25	0423	0427	0448	N13	E42	.683	15679	28.3	25	-B	2	C		95		F	
CULG	25	0424	0446	0540	N13	E44	.707	15679	28.5	76	1F		C	0446	240	3.3		
MITK	25	0426	0432	0448	N15	E43	.701	15679	28.4	22	-N		C	0432			E	
GRP70203	25	1720+2	1728	1740	N08	E58	.849	15681	30.1	20	-N				60	1.1	E	
MCMA	25	1720E		1732D	N09	E59	.858	15681	30.1	12D	-N		C	1725	50	1.0	E	
RAMY	25	1722	1728	1740	N08	E57	.840	15681	30.0	18	-B	3	C		82			
204 CULG	25	2113	2121	2135	S31	W36	.735	15670	23.2	22	-F		P	2121	40	.6		Y5
205 CULG	25	2305	2318	2345	N07	E56	.830	15681	30.2	40	-F		C	2318	30	.5		Y5
GRP70206	26	0609	0615	0632	N14	E36	.612	15679	29.0	23	-N				50	.6	F	
CULG	26	0609	0615	0632	N14	E40	.662	15679	29.3	23	-N		C	0615	50	.6		
MANI	26	0617E	0617U	0626D	N14	E33	.572	15679	28.7	9D	-F	3	V		60	.7	F	
207 RAMY	26	1139	1140	1209	N08	E47	.734	15681	30.0	30	-N	3	C		20			Y5
208 HOLL	26	1759	1800	1809	N10	E22	.398	15679	28.4	10	-B	3	C		33		FDE	Y5
209 PALE	26	2353	2355	0001	N12	W29	.509	15673	24.8	8	-N	3	C		21		DE	Y5
210 CULG	27	0332	0338	0356	N17	E48	.763	15690	30.7	24	-F		C	0338	120	1.9		Y5
211 TEHR	27	0520E	0525	0540	N12	W31	.537	15673	24.9	20D	-B	1	C		127		UDE	Y5
212 ABST	27	0626E	0627	0648	N12	W33	.565	15673	24.8	22D	-F		P	0627	87	1.1	DJ	Y5
213 ABST	27	0640	0641	0648	N24	W66	.924	0	22.3	8	?F		C	0641	87		DJ	Y5
	IMP.1 NO ‡ CULG																	
GRP70214	27	0855	0900	0915	N12	W34	.578	15673	24.8	20	-N						DJ	
ABST	27	0855	0900	0912D	N12	W33	.565	15673	24.9	17D	-N		P	0900	87	1.1	DJ	
HTPR	27	0904E		0915	N12	W35	.592	15673	24.8	11D	-N		C	0909	80	1.0		
215 HTPR	27	0942	0947	0957	N12	W35	.592	15673	24.8	15	-F		C	0947	60	.7		Y5
216 LVOV	27	1047	1054	1127	N12	W37	.618	15673	24.7	40	-N		C	1054	150	2.0	DJ	Y5
	27	1243	1255	NO FLARE PATROL														
	27	1300	1421	NO FLARE PATROL														
217 RAMY	27	1441E	1454	1516D	N11	W38	.628	15673	24.8	35D	-B	3	C		36			Y5
218 RAMY	27	1457	1502	1516D	N12	E41	.669	15690	30.7	19D	-F	3	C		47			Y5
	27	1516	1533	NO FLARE PATROL														
	27	1605	1616	NO FLARE PATROL														
219 RAMY	27	1758	1802	1818	N12	W39	.644	15673	24.8	20	-B	3	C		23		F	Y5
220 PALE	27	1858	1858	1909	N12	W40	.657	15673	24.8	11	-N	3	C		21		DE F	Y5
GRP70221	27	1915+5	1921+1	1943	N11	W40	.654	15673	24.8	28	-B				45	.6		
PALE	27	1915	1922	1945	N12	W40	.657	15673	24.8	30	-B	3	C		46		DE F	
RAMY	27	1920	1921	1941	N11	W40	.654	15673	24.8	21	-B	3	C		35			
222 RAMY	27	2008	2010	2017	N21	W71	.950	0	22.5	9	-N	3	C		12			Y5
223 PALE	27	2013	2013	2017	N12	W40	.657	15673	24.8	4	-N	3	C		19		DE F	Y5
224 PALE	27	2026	2028	2032	N12	W40	.657	15673	24.9	6	-N	3	C		26		DE F	Y5
225 RAMY	27	2026	2034U	2034D	N21	W71	.950	0	22.5	8D	-N	3	C		16			Y5
226 PALE	27	2050	2052	2055	N12	W41	.669	15673	24.8	5	-N	3	C		29		DE F	Y5
227 CULG	27	2145	2150	2209	S18	W86	.998	15669	21.5	24	?F		C	2150	60			Y5
	IMP.1 NO ‡ PALE																	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMR DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
228 PALE	27	2207	2207	2220	N12	W42	.682	15673	24.8	13	-N	3	C		21		DE F	Y5
229 CULG	27	2328	2331	2347	S33	E68	.954	15684	3.1	19	?F		C	2331	140		L	Y5
	IMP.1 NO : PALE MANI																	
230 CULG	27	2356	2401	0017	N17	E01	.269	15679	28.1	21	-N		C	2401	30	.3		Y5
GRP70231	28	0239	0257+3	0325	N12	W44	.706	15673	24.8	46	-N				70	1.0		
CULG	28	0239	0300	0332	N13	W43	.697	15673	24.9	53	-F		C	0300	80	1.1	T	
MITK	28	0243E		0318D	N13	W45	.720	15673	24.7	35D	-F		C	0316			D	
MANI	28	0256E	0258	0318	N12	W44	.706	15673	24.8	22D	-N	3	P		80	1.1	F	
PALE	28	0257E	0257U	0315D	N11	W46	.728	15673	24.7	18D	-B	3	C		50		FDE	
GRP70232	28	0511+2	0532+5	0646	N14	E47	.745	15682	.7	95	2N				440	6.6	U	
CULG	28	0511	0537	0754	N13	E47	.743	15682	1.7	163	2B		C	0537	440	6.6	U	
MITK	28	0513	0535	0637	N13	E45	.720	15682	1.6	84	2N		C	0535	440	6.4	F	
MANI	28	0530	0532	0609	N15	E52	.800	15682	2.1	39	-N	3	P		120	1.9		
TACH	28	0536E		0700	N14	E47	.745	15682	1.8	84D	2N		C	0542	460	7.1	BU	
ABST	28	0547E	0547	0640	N14	E46	.734	15682	1.7	53D	1N		P	0547	217	3.5	E	
233 CULG	28	0547	0550	0604	N18	W04	.295	15679	27.9	17	-F		C	0550	10	.1		Y5
234 ABST	28	0626	0629	0644	N24	W80	.986		0 22.3	18	?F		C	0629	87		D	Y5
	IMP.1 NO : CULG MITK TACH																	
	28	1005	1020	NO FLARE PATROL														
	28	1041	1111	NO FLARE PATROL														
GRP70235	28	1134	1136	1252	N11	W48	.750	15673	24.9	78	-B						F	
			1200															
RAMY	28	1134	1136	1252	N11	W48	.750	15673	24.9	78	-F	3	C		19		F	
RAMY	28	1134	1200	1252	N11	W48	.750	15673	24.9	78	-B	3	C		36		F	
236 RAMY	28	1259	1300	1307	N11	W48	.750	15673	24.9	8	-N	3	C		16		F	Y5
GRP70237	28	1313>9	1314	1445D	N12	W49	.763	15673	24.9	92	-N				40	.6		
			1437+1															
RAMY	28	1313	1438	1533	N12	W48	.752	15673	25.0	140	-B	3	C		40		F	
RAMY	28	1313	1314	1533	N12	W48	.752	15673	25.0	140	-N	3	C		16		F	
HTPR	28	1416	1437	1445	N12	W50	.774	15673	24.8	29	-F		C	1437	40	.6	E	
238 RAMY	28	1334	1335	1351	S13	W01	.247	15678	28.5	17	-N	3	C		20			Y5
	28	1600	1612	NO FLARE PATROL														
239 RAMY	28	1607	1612	1636	N11	W50	.772	15673	24.9	29	-B	3	C		63		DE	Y5
240 RAMY	28	1721	1721	1728	N11	W51	.783	15673	24.9	7	-B	3	C		16		F	Y5
GRP70241	28	1815>9	1827+5	1843	N12	W53	.805	15673	24.8	28	-N						E	
MCMA	28	1815	1827	1849D	N13	W54	.816	15673	24.7	34D	-N		C	1827	80	1.4	E	
RAMY	28	1832	1832	1837	N11	W52	.794	15673	24.9	5	-B	3	C		16			
242 RAMY	28	1905	1910	1918	N09	E15	.289	15681	29.9	13	-N	3	C		42			Y5
243 RAMY	28	1910	1911	1916	N11	W52	.794	15673	24.9	6	-B	3	C		20			Y5
244 RAMY	28	1923	1923	1934	N11	W52	.794	15673	24.9	11	-B	3	C		15			Y5
	28	1950	2002	NO FLARE PATROL														
GRP70245	28	2006	2008+4	2035	N09	E15	.289	15681	30.0	29	-N				80	.8		
RAMY	28	2006	2008	2023	N09	E15	.289	15681	30.0	17	-N	3	C		63			
CULG	28	2011E	2012	2047	N10	E15	.297	15681	30.0	36D	-N		P	2012	100	1.1		
	28	2102	2110	NO FLARE PATROL														
	28	2117	2205	NO FLARE PATROL														
	28	2253	2258	NO FLARE PATROL														
	28	0956	1000	NO FLARE PATROL														
GRP70246	28	2335	0020	0052	N12	W57	.843	15673	24.7	77	?F						FHJK	
MANI	29	0016E	0020U	0028D	N12	W56	.834	15673	24.8	12D	F	3	V		50	.8	F	
	IMP.2 IMP.S																	
VORO	28	2335		0052	N12	W58	.852	15673	24.6	77	2F		C	2421	358	6.6	FHJK	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
247 VORO	29	0115	0119	0126	N14	W55	.828	15673	24.9	11	-N		C	0119	108	1.9	DJ	Y5
248 VORO	29	0204	0210	0220	N12	W57	.844	15673	24.8	16	?F		C	0210	116	2.2	EJ	Y5
	IMP.1 NO : MITK CULG																	
GRP70249	29	0505+0	0519+7	0613	N15	E38	.643	15682	1.1	68	2N				450	5.8	FISU	
CULG	29	0505	0526	0613	N15	E38	.643	15682	2.1	68	2N		C	0526	420	5.5	SU	
MITK	29	0505	0519	0617	N17	E38	.651	15682	2.1	72	2N		C	0519	480	6.5	FIU	
TEHR	29	0517	0521	0550	N16	E40	.671	15682	2.2	33	2B	1	C		732		U F	
MANI	29	0518E	0523	0528D	N15	E34	.592	15682	1.8	10D	1N	3	V		220	2.8	FU	
	29	1050	1102	NO FLARE PATROL														
	29	1103	1157	NO FLARE PATROL														
	29	1159	1212	NO FLARE PATROL														
250 RAMY	29	1202	1208	1214	N12	W61	.878	15673	24.9	12	-B	2	C		34			Y5
251 HTPR	29	1228		1240E	N13	E26	.475	15682	1.5	12D	-F		C	1231	20	.2		Y5
	29	1319	1324	NO FLARE PATROL														
GRP70252	29	1354>9	1404	1409	S17	E56	.849	15687	2.8	15	-F				20	.4	D	
HTPR	29	1354	1404	1410	S17	E55	.840	15687	3.7	16	-F		C	1404	20	.3		
HUAN	29	1404		1408	S17	E57	.857	15687	3.9	4	-F	1	C	1404	20	.3	D	
GRP70253	29	1426+5	1433+0	1438	S17	E57	.857	15687	2.9	12	-N				50	1.0	E	
HTPR	29	1426	1433	1438	S17	E55	.840	15687	3.7	12	-N		C	1433	60	1.0	E	
RAMY	29	1431	1433	1437	S16	E58	.864	15687	4.0	6	-B	3	C		45		F	
HUAN	29	1434E		1439	S17	E57	.857	15687	3.9	5D	-N	2	P	1434	40	.7	CE	
254 HUAN	29	1454	1456	1510	S18	E76	.975	15687	5.3	16	-F	1	C	1456	20		D	Y5
GRP70255	29	1517+6	1523+2	1530	S17	E56	.849	15687	2.8	13	-N				60	1.1		
HTPR	29	1517	1523	1527	S17	E54	.831	15687	3.7	10	-N		C	1523	70	1.2	E	
MCMA	29	1518	1523	1529	S20	E56	.855	15687	3.8	11	-B		C	1523	50	1.0	D	
RAMY	29	1519	1524	1530	S16	E57	.855	15687	3.9	11	-B	3	C		67			
HUAN	29	1523	1525	1530	S17	E56	.849	15687	3.8	7	-N	2	C	1525	60	1.1		
256 MCMA	29	1524	1526	1540	S20	E76	.975	15687	5.3	16	-N		C	1526			D	Y5
257 RAMY	29	1655	1657	1707	N14	E28	.508	15682	1.8	12	-N	3	C		31			Y5
258 RAMY	29	1708	1709	1712	N11	W64	.901	15673	24.9	4	-B	3	C		29			Y5
259 RAMY	29	1719	1720	1728	S16	E56	.847	15687	3.9	9	-N	3	C		16			Y5
	29	1742	1947	NO FLARE PATROL														
260 RAMY	29	1748	1748	1754	S16	E56	.847	15687	3.9	6	-N	3	C		14			Y5
261 RAMY	29	1759	1839	1850	S16	E56	.847	15687	3.9	51	-B	3	C		38			Y5
262 PALE	29	1947E	1948U	2003D	S18	E58	.867	15687	4.2	16D	-B	3	C		40		FDE	Y5
	29	2003	2101	NO FLARE PATROL														
	29	2132	2152	NO FLARE PATROL														
263 HOLL	29	2153	2155	2210	S16	E56	.847	15687	4.1	17	-B	3	C		89		DE	Y5
	29	2212	2252	NO FLARE PATROL														
264 HOLL	29	2255	2257	2300D	S16	E55	.838	15687	4.1	5D	-B	2	C		61		DE	Y5
	29	2300	2319	NO FLARE PATROL														
265 VORO	29	2336	2340	2350	S17	E51	.803	15687	3.8	14	?N		C	2340	152	2.5	EHJ	Y5
	IMP.1 NO : MITK																	
266 VORO	30	0115	0118	0126	S18	E50	.796	15687	3.8	11	-B		C	0118	54	.8	DHJ	Y5
267 VORO	30	0136	0142	0152	S17	E49	.783	15687	3.7	16	?F		C	0142	134	2.2	HJ	Y5
	IMP.1 NO : MITK																	
GRP70268	30	0145+2	0201+3	0254	N14	E26	.482	15682	1.0	69	1N						JK	
VORO	30	0145	0201	0251	N13	E26	.476	15682	2.0	66	1N		C	0201	188	2.1	EJ	
MITK	30	0147	0204	0256	N16	E26	.495	15682	2.0	69	1B		C	0204	180	2.1	FK	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg		
269 VORO	30	0159	0204	0223	N10	W73	.957	15673	24.6	24	?N		C	0204	72		EH	Y5
	IMP.1 NO : MITK																	
GRP70270	30	0637	0638+3	0648	S15	E45	.735	15687	2.7	11	-N				110	1.6	D	
ABST	30	0637	0638	0645	S16	E47	.760	15687	3.8	8	-N		C	0638	87	1.4	D	
TEHR	30	0640E	0641U	0651	S14	E43	.709	15687	3.5	11D	-B	2	C		127			
271 HTPR	30	0933	0937	0944	S18	E44	.735	15687	3.7	11	-F		C	0937	20	.3	E	Y5
272 KANZ	30	1028	1028	1032	N14	W79	.982	15673	24.5	4	-N		C					Y5
GRP70273	30	1032+2	1032+6	1042	N15	E18	.384	15682	.8	10	-N							
KANZ	30	1032	1032	1042	N15	E18	.384	15682	1.8	10	-N	*	C					
HTPR	30	1032	1035	1038	N15	E18	.384	15682	1.8	6	-F	*	C	1035	40	.4	E	
TEHR	30	1034	1038	1053	N17	E19	.416	15682	1.9	19	-B	*	C		95		F	
274 KANZ	30	1032	1035	1039	S19	E43	.728	15687	3.7	7	-F		C					Y5
GRP70275	30	1042+4	1048+3	1107	S16	E48	.770	15687	3.0	25	-N							
KANZ	30	1042	1051	1110	S16	E48	.770	15687	4.0	28	-N		C					
TEHR	30	1044	1048	1107	S15	E48	.767	15687	4.0	23	-B	2	C		135			
HTPR	30	1046	1051	1100	S18	E49	.786	15687	4.1	14	-F		C	1051	10	.2		
GRP70276	30	1137+0	1137+1	1141	S18	E42	.713	15687	2.6	4	-F							
HTPR	30	1137	1138	1140	S19	E42	.717	15687	3.6	3	-F		C	1138	20	.3		
KANZ	30	1137	1137	1141	S18	E42	.713	15687	3.6	4	-N		C					
277 HTPR	30	1137	1138	1143	S28	E22	.586	15684	2.1	6	-F		C	1138	10	.1		Y5
278 KANZ	30	1203	1210	1215	N15	E17	.372	15682	1.8	12	-F		C					Y5
279 RAMY	30	1504	1509	1540	S17	E43	.720	15687	3.9	36	-N	3	C		21			Y5
GRP70280	30	1543+1	1545+1	1605	S17	E44	.731	15687	3.0	22	-N				40	.6	E	
MCMA	30	1543	1546	1605	S18	E45	.745	15687	4.0	22	-N		C	1546	40	.6	E	
RAMY	30	1544	1545	1603D	S17	E43	.720	15687	3.9	19D	-B	3	C		39			
	30	1715	1736	NO FLARE PATROL														
281 RAMY	30	1723	1730	1749	S17	E42	.709	15687	3.9	26	-N	3	C		84			Y5
GRP70282	30	1801+1	1802	1808D	S17	E43	.720	15687	3.0	7	-N				50	.7	E	
MCMA	30	1801		1808D	S18	E45	.745	15687	4.1	7D	-N		C	1802	40	.6	E	
RAMY	30	1802	1802	1808D	S17	E41	.698	15687	3.8	6D	-B	3	C		70			
283 HOLL	30	1856	1856	1911	S16	E44	.727	15687	4.1	15	-B	3	C		20			Y5
	30	2059	2134	NO FLARE PATROL														
	30	2212	2325	NO FLARE PATROL														
	30	2339	2356	NO FLARE PATROL														

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 D_3 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.

DAILY FLARE INDICES

Includes all Flares

NOVEMBER 1978

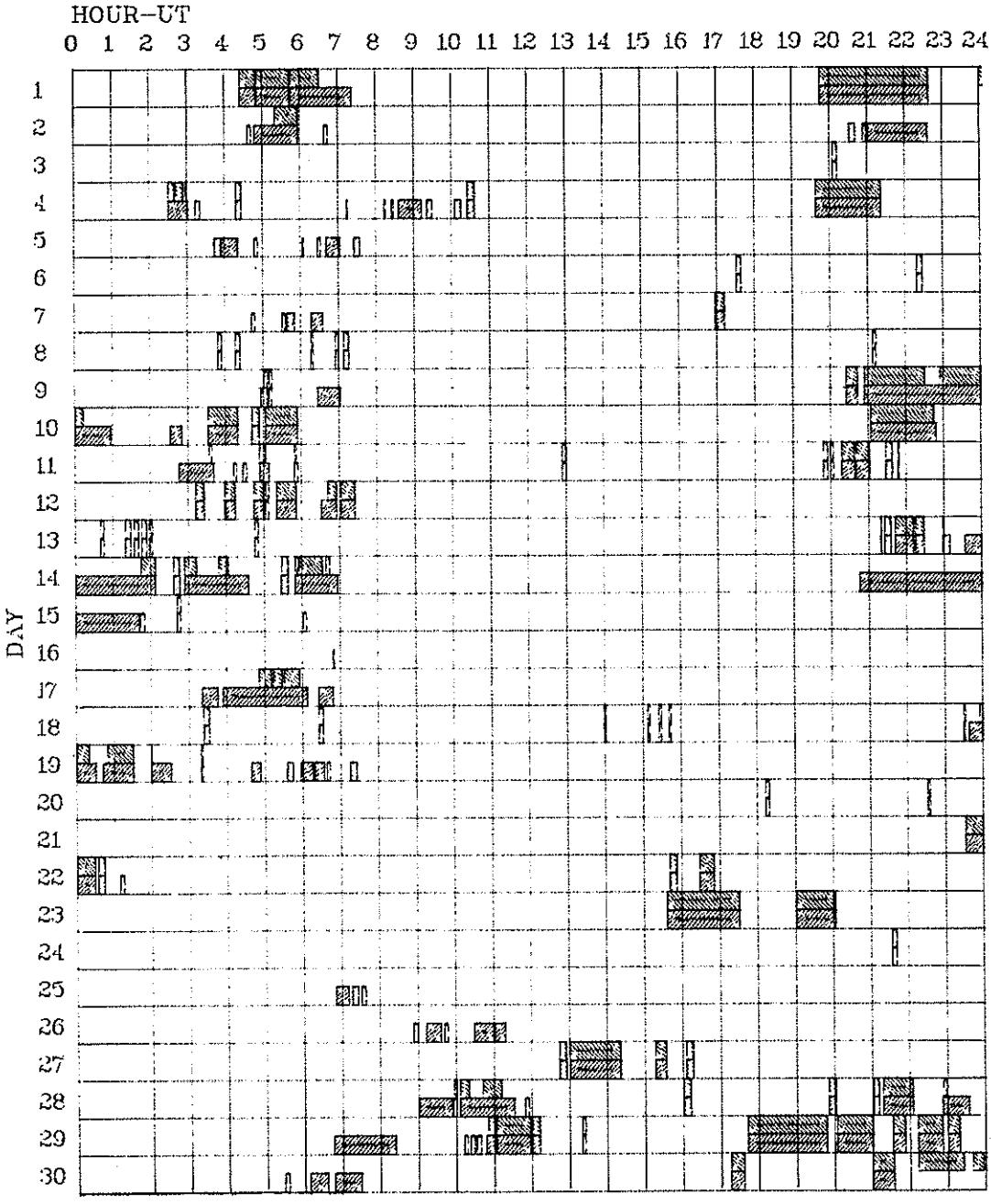
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
781101	78.76	18.9	781111	102.40	22.5	781124	24.70	23.9
781102	49.19	23.4	781112	44.97	22.0	781125	10.19	24.0
781103	37.13	23.9	781113	47.42	22.4	781126	11.88	24.0
781104	44.45	21.5	781114	11.89	21.9	781127	46.94	22.0
781105	36.90	24.0	781115	5.40	23.9	781128	138.12	21.8
781106	69.30	23.7	781116	12.42	24.0	781129	136.15	18.2
781107	66.35	23.8	781117	4.29	23.0	781130	55.78	21.6
781108	152.91	23.4	781118	7.64	23.0	781121	44.82	23.1
781109	63.01	20.7	781119	29.25	23.3	781122	14.43	23.2
781110	381.18	20.5	781120	24.75	23.9	781123	7.76	21.1

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

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

NOVEMBER 1978



Observatories included in total patrol:

Abastumani	Herstmonceux	Kharkov	Monte Mario	Voroshilov
Athenes	Holloman	Locarno	Palehua	Wendelstein
Bucharest	Huancayo	Lvov	Ramey	Zürich
Catania	Istanboul	Manila	Tashkent	
Culgoora	Kandilli	McMath-Hulbert	Tehran	
Haute Provence	Kanzelhohe	Mitaka	Upice	

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1978

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
1	1400	SYDN	2 S	0338.8	0340.3	4.6				
	245	SGMR	44 NS	1121 E	1644.1	611 D	93.1			
	410	SGMR	44 NS	1121 E	1746.6	611 D	23.7			
	1470	BERL	43 NS	1331	1338.8	22	8.9			
	260	ONDR	41 F	1152	1153.5	2.5	44			
	260	CNDR	3 S	1221.8	1221.8	.2	8			
	9400	HUAN	21 GRF	1313.7	1439.7	86	13.2	4.6		O
	2800	OTTA	40 F	1325	1339	30	15.8			
	7000	SAOP	3 S	1332	1339	1.2	38			
	7000	SAOP	21 GRF	1332						
	7000	SAOP	3 SF	1332						
	7000	SAOP	21 GRF	1332						
	9400	HUAN	1 S	1338.3	1340.7	2.4	5	4.1		O
	9500	BERL	1 S	1338.5	1339.3	2	6.8			
	3000	BERL	4 S/F	1338	1338.8	7	15			
	260	CNDR	42 SER	1338	1345.8	20	19	2		
	113	POTS	2 S/F	1339.4	1340.1	.6	280	20		
	245	SGMR	7 S	1346.5	1346.6	3.1	259	77.7		
	410	SGMR	6 S	1346.6	1346.7	2.4	116	34.8		
	9400	HUAN	1 S	1411.2	1413	1.8	3.3	2		O
	245	SGMR	6 S	1441.8	1442.1	1.1	9.1	2.7		
	410	SGMR	6 S	1441.8	1442.1	2.8	70.9	21.3		
	606	SGMR	1 S	1450.5	1450.6	4.5	7.4	2.2		
	8800	SGMR	45 C	1506.9	1507.5		171.6			
	8800	SGMR	45 C	1506.9	1507	.8	198	59.4		
	245	SGMR	6 S	1538.1	1538.2	3.7	33.8	10.1		
	410	SGMR	48 GB	1538.1	1538.2	4.7	938	281		
	606	SGMR	3 S	1538.1	1538.2	.2	19.1	5.7		
	9400	HUAN	3 S	1600.1	1601.6	1.5	11.6	3		L
	2800	OTTA	20 GRF	1800	1920	120	3.2	2		
	9400	HUAN	3 S	1934.7	1937.1	2.4	13.2	4.3		L
	2695	PENT	20 GRF	2100	2159	120 D	8.8			
2	260	ONDR	43 NS	0823		348	16			
	410	SGMR	44 NS	1122 E	1404.3	609 D	12.2			
	245	SGMR	44 NS	1122 E	1913.9	609 D	128			
	9400	HUAN	20 GRF	1356.8	1417.5	20.7	8.1	3.2		O
	7000	SAOP	4 S/F	1357.4	1403.9		13			
	10400	BERN	1 S	1359.7	1404.7	16	3	9		
	8900	BERN	1 S	1359.7	1404.4	16	5	15		O
	8400	BERN	1 S	1359.7	1404.7	16	6	16		O
	10400	BERN	1	1359.7	1404.7	16	9			OPR
	8900	BERN	1	1359.7	1404.4	16	15			OPR
	8400	BERN	1	1359.7	1404.7	16	16			OPR
	3000	BERL	4 S/F	1401	1404	4	16			
	1470	BERL	4 S/F	1401	1404	5	8.1			
	2650	CHIN	45 C	1401	1403	4	20	10		
	9500	BERL	2 S/F	1402.5	1404	3	9.5			
	9100	ARCE	4 S/F	1538	1538.9	2.6				AT SUNSET
	2695	PENT	4 S/F	1706	1708.7	3.5	11.8	4		
	2800	OTTA	29 PBI	1709.5	1709.5	50	3.6			
	2695	BOUL	45 C	1817 E	1818.5	2.50	117	39		
	2695	BOUL	45 C	1845 E	1845.5	3.50	31	10		
	2695	BOUL		1845 E	1848		26	9		
	2695	BOUL		1845 E	1847		31	10		
3	700	SYDN	40 F	0032.3	0032.7	1.3				
	260	ONDR	44 NS	0800		370 D	101			
	234	POTS	48 C	0801.1	0814.4	14	875	1 E		
	113	POTS	48 C	0801.1	0814.4	25	14000	1 E		
	237	TRST	41 F	0807.5	0808.1	1.3	480			O
	237	TRST	41 F	0814.6	0814.7	.4	1950			3L
	237	TRST	41 F	0817.2	0818	.8	125			27R
	113	POTS	48 C	0850.5	0909	19	13000	1 E		
	237	TRST	41 F	0908.1	0908.7	1.5	410			20R
	9400	HUAN	3 S	1245.8	1247	1.2	16.9	5.7		O
	2800	OTTA	20 GRF	1553.5	1554.5	17	3.2	1.6		
	410	SGMR	43 NS	1635	1729.6	295 D	9.7			
	245	SGMR	43 NS	1635	1638	295 D	54.9			
	2800	OTTA	20 GRF	1850	1920	70	3	1.5		
	2695	PENT	20 GRF	2047	2120	110	3.8	1.9		
4	260	ONDR	44 NS	0805 E		369 D	27			
	245	SGMR	44 NS	1125 E	1918	603 D	172			
	410	SGMR	43 NS	1557	1607	331 D	11			
	200	HIRA	44 NS	2105 E	2245	640 D	30	10		HR
	2800	OTTA	20 GRF	1553	1605	30	3.6	1.8		
	2800	OTTA	27AFRF	1940		100	3	2.8		
	2800	OTTA	24 R	1940	1945	5	3	1.5		
	2800	OTTA	24P R	1945		85	3			
	2800	OTTA	1 S	2047	2052	10	3	1.5		
	2800	OTTA	1 S	2100	2101.5	9	3	1.5		
	2695	PENT	26 FAL	2110	2120	10	-3	-1.5		
5	200	GORK	43 NS	0530 E		500 D		5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1978

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	127	TORN	44 NS	0650 E	1159.8	430 D	15	1		V=0
	260	CNDR	44 NS	0800 E		388 D	22			
	410	SGMR	44 NS	1126 E	1821.6	601 D	29.9			
	245	SGMR	44 NS	1126 E	1907.1	601 D	93.6			
	200	HIRA	44 NS	2105 E	2350	340 D	30	20		MR
	100	HIRA	43 NS	2240	2330	245 D	25	15		SR
	9100	GORK	20 GRF	1011	1033	76	11	6		
	113	POTS	1 S	1038.3	1038.3	.1	200	70		
	9400	HUAN	20 GRF	1258.3	1345	46.7	4.9	2.4		0
	113	POTS	45 C	1417.2	1417.3	.1	175	25		
	113	POTS	45 C	1441.2	1441.3	.1	200	50		
	2800	OTTA	22 GRF	1500	1505	30	3.6	2.7		
	2800	OTTA	20 GRF	1615	1621	20	3	2		
	2800	OTTA	20 GRF	1754	1802	30	2.8	1.4		
	2800	OTTA	21 GRF	1830		150	4.8	2.4		
	2800	OTTA	45 C	1912	1913.2	12	17	5.8		
6	100	GORK	44 NS	0527 E		333 D		-5		
	200	GORK	44 NS	0530 E		330 D		5		
	127	TORN	44 NS	0650 E	0743.5	430 D	210	6.4		V=1
	260	CNDR	44 NS	0805 E		368 D	158	8		
	410	SGMR	44 NS	1127 E	2002.1	599 D	87.4			
	245	SGMR	44 NS	1127 E	1952.3	599 D	411			
	234	POTS	45 C	0725.5	0726.1	.7	300	50		
	234	POTS	45 C	0744.3	0744.4	.3	230	30		
	234	POTS	45 C	0920.3	0920.3	.1	420	100		
	237	TRST	42 SER	1018.1	1018.3	2.3	455			0
	237	TRST		1018.1	1020.1		710			32L
	113	POTS	45 C	1019.5	1020	.2	600	150		
	234	POTS	45 C	1019.5	1020	.4	420	80		
	234	POTS	45 C	1058.4	1059.2	1.2	200	15		
	9400	HUAN	3 S	1151.4	1153.7	2.3	13.9	5.7		0
	234	POTS	45 C	1324.3	1325.5	1.6	550	50		
	113	POTS	45 C	1324.5	1325.5	1.1	420	45		
	606	SGMR	1 S	1324.8	1325.7	2.9	8.1	2.4		
	245	SGMR	48 GB	1324.8	1325.4	1.9	559	168		3
	410	SGMR	6 S	1324.8	1325.2	1.9	7	2.1		
	237	TRST	47 GB	1324.8	1324.9	1.6	495			20L
	237	TRST		1324.8	1325.7		2550			53L
	234	POTS	1 S	1348.5	1348.5	.1	250	80		
	237	TRST	42 SER	1348.7	1348.9	.6	530			15L
	237	TRST	41 F	1427.2	1427.4	.7	225			2R
	237	TRST	41 F	1507.8	1507.9	.4	265			0
	2800	CTTA	20 GRF	1530	1710	150	3.6	2		
	2800	OTTA	26 FAL	1800	1830	30	-3	-1.5		
	2800	OTTA	20 GRF	1910	2000	100	3.2	1.6		
7	700	SYDN	45 C	0034.3	0034.5	.5				
	100	GORK	44 NS	0524 E		386 D		20		
	200	GORK	44 NS	0530 E		384 D		40		
	127	TORN	44 NS	0650 E	1246.8	430 D	200	75		V=2
	260	CNDR	44 NS	0750 E		378 D	101	17		
	245	SGMR	44 NS	1129 E	1614.9	596 D	1570			3G
	410	SGMR	44 NS	1129 E	1424.5	596 D	162			3G
	606	SGMR	44 NS	1129 E	1841.4	596 D	75.3			3G
	234	POTS	2 S/F	1016.4	1020.3	4.2	1200	12		
	234	POTS	2 S/F	1157.5	1159	1.7	400	20		
	2800	OTTA	27A RF	1605		405	14.2			
	2800	CTTA	24 R	1605	1640	35	14.2	7.1		
	2800	OTTA	1A S	1618	1619	8	3.2	1.6		
	2800	CTTA	8 S	1620	1620	.1E	60			
	2800	CTTA	24P R	1640		285	14.2			
	2800	CTTA	20 GRF	1837	1840	11	2.6	1.3		
	2800	OTTA	20 GRF	1900	1910	53	3	1.5		
	2695	PENT	26 FAL	2125	2250	85	-8.2	-4.1		
8	700	SYDN	40 F	0246.2	0251.8	6.6				
	1400	SYDN	40 F	0246.5	0250.8	6.4				
	500	HIRA	46 C	0246	0252	7	50	20		WL
	500	HIRA	46 C	0301	0302.3	2	20	10		SL
	100	GORK	44 NS	0527 E		388 D		10		
	200	GORK	44 NS	0530 E		390 D		30		
	127	TORN	44 NS	0650 E	1131.3	480 D	320	44		V=2
	260	CNDR	44 NS	0828 E		338 D	98	6		
	606	SGMR	44 NS	1130 E	1608.5	594 D	20			CONT
	245	SGMR	44 NS	1130 E	1256.7	594 D	596			CONT
	410	SGMR	44 NS	1130 E	1914.9	594 D	169			CONT
	100	GORK		0733.2	0735.4		2900			
	100	GORK	46 C	0733.2	0734.2	2.5	4450			
	100	GORK	2 SF	0745.1	0745.6	2	3880			
	200	GORK	8 S	0747.2	0748.6	2.3	480 D			
	234	POTS	45 C	0808.4	0808.5	.5	420	80		
	113	POTS	45 C	0822.1	0822.4	.5	700	70		
	237	TRST	41 F	0848.2	0848.3	.3	500			34R
	234	POTS	2 S/F	0853.4	0855.3	4.7	350	5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1978

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	237	TRST	41	F	0949.6	0949.7	.3	320			59L
	237	TRST	41	F	1108.7	1109.2	2.1	850			26R
	237	TRST	41	F	1115.8	1116	1.4	695			27R
	237	TRST	41	F	1119.8	1119.8	.2	1050			26R
	234	POTS	45	C	1205.1	1205.1	.1	630	150		
	2800	OTTA	240	R	1356	1400	4	3.6	1.8		
	7000	SAOP	20	GRF	1359.5			0			
	237	TRST	41	F	1512.9	1512.9	.1	245			42R
	237	TRST	41	F	1531.4	1531.6	.8	330			3L
	2800	OTTA	1	S	1648.5	1649.5	2	9.6	6		
	2800	OTTA	29	PBI	1649.5	1649.5	45	5	3		
	9400	HUAN	3	S	1749.8	1802.7	12.9	42	15.2		R
	245	SGMR	48	GB	1750.4	1751.8	8.1	93.7	37.5		3G,SHF
	606	SGMR	3	S	1750.5	1753.2	4.3	85.5	34.2		3G,SHF
	2695	SGMR	3	S	1750.5	1751.8	4.5	12.5	50		3G,SHF
	2800	OTTA	4	S/F	1750.5	1752	4.5	88	46		
	1415	SGMR	3	S	1750.7	1752.3	3.4	81.2	32.5		3G,SHF
	410	SGMR	7	S	1750.7	1754	6.8	34.8	13.9		3G,SHF
	7000	SAOP	46	C	1750.8	1751.8	.2	44			
	8800	SGMR	3	S	1751	1751.8	2	62	24.8		3G,SHF
	4995	SGMR	3	S	1751.1	1751.9	3.9	10.1	40.4		3G,SHF
	15400	SGMR	3	S	1751.5	1751.8	6.7	24.4	9.8		3G,SHF
	2695	BOUL			1752 E	1753.5		94	31		
	2695	BOUL	45	C	1752 E	1753	5 D	94	31		
	2800	OTTA	29	PBI	1755	1755	8	6.2	3		
	2800	OTTA	26	FAL	1835	1935	60	-3	-1.5		
	9400	HUAN	3	S	1936.5	1937.8	1.3	16.2	8.6		0
9	200	GORK	44	NS	0530 E		310 D		10		
	100	GORK	44	NS	0545 E		40 D		40		
	127	TORN	44	NS	0650 E	1151.6	480 D	150	20		V=2
	260	ONDR	44	NS	0820 E		345 D	128	9		
	245	SGMR	44	NS	1131 E	1504.8	592 D	109			
	410	SGMR	44	NS	1131 E	1432.6	592 D	27			
	606	SGMR	44	NS	1131 E	1155.6	592 D	33.9			
	100	GORK	3	S	0718.2	0718.3	.4	3690 D			
	113	POTS	2	S/F	0954	0954.1	1.7	2400	70		
	234	POTS	2	S/F	0954	0954.2	1.6	420	20		
	237	TRST	41	F	0954	0954.3	.9	835			8L
	237	TRST	41	F	0955.3	0955.4	.5	310			8L
	237	TRST	41	F	1003.5	1003.6	.4	285			7L
	408	TRST	46	C	1047.7	1047.8	.4	100			
	1470	BERL	20	GRF	1103	1140	72	4			
	3000	BERL	20	GRF	1103	1103	72	8.5			
	9500	BERL	20	GRF	1103	1134	72	13			
	237	TRST	45	C	1145.4	1145.4	.1	360	125		54R
	113	POTS	45	C	1245.4	1245.5	.2	550	80		
	237	TRST	41	F	1343.7	1344.1	.8	125			3R
	2800	OTTA	20	GRF	1500	1549	180	6	3		
	2800	OTTA	3	S	1906.5	1908	3.5	13	4		
	2695	BOUL	3	S	1907 E	1908.5	3.5D	21	7		
	2800	OTTA	1	S	1937	1938.2	4	7.2	3.2		
10	1400	SYDN	48	GB	0040.9	0139.6					
	1400	SYDN	48	GB	0040.9	0111.2	20				
	700	SYDN	48	GB	0044.5	0140.2	137.1				
	500	HIRA	48	C	0056	0151.5	70	800	200		SLMR
	1415	MANI	4	S/F	0133.2	0139.9	31.8	89.3	59.2		
	606	MANI	47	GB	0133.5	0142.2	29.5	621	414		
	2695	MANI	4	S/F	0134.2	0139.9	14.1	94.5	63		
	700	SYDN	42	SER	0224.3	0237.2	34.5				
	606	MANI	4	S/F	0236.7	0237.3	1.6	93.1	62.1		
	1415	MANI	4	S/F	0236.7U	0237.3U	1.6U	11.8U	3 U		DRIFT
	2695	MANI	4	S/F	0236.7U	0237.9U	1.6U	10.5U	3 U		DRIFT
	700	SYDN	40	F	0333.2	0337.9	34.8				
	700	SYDN	40	F	0333.2	0401.4					
	1400	SYDN	40	F	0334.2	0404	39.1				
	200	GORK	44	NS	0545		375 D		5		
	260	ONDR	44	NS	0815 E		365 D	28			
	127	TORN	44	NS	0900 E	0911.9	340 D	27	4.3		V=0
	410	SGMR	44	NS	1132 E	1534.9	589 D	42.5			SHF
	245	SGMR	44	NS	1132 E	1730.5	589 D	116			SHF
	237	TRST	41	F	0818.6	0819.1	1	115			0
	113	POTS	48	C	0916.4	0920	3.7	2500	1		
	234	POTS	1	S	0916.8	0916.9	.1	350	120		
	237	TRST	41	F	0917.1	0917.2	.4	760			4L
	237	TRST	41	F	0920	0920	.4	135			0
	127	TORN	45	C	1157	1159.1	3.5	72	4.2		
	29	UPIC	45	C	1158.2	1159.2	1.8				
	606	SGMR	3	S	1355.3	1356.7	4.4	209	62.7		SHF
	9400	HUAN	20	GRF	1355.8	1423.2	27.4	18.9	8.8		R
	10400	BERN	20	GRF	1357.4	1404.4	30	7	20		
	8900	BERN	20	GRF	1357.4	1404.4	30	8	21		0
	8400	BERN	20	GRF	1357.4	1404.4	30	8	19		0
	8400	BERN	20		1357.4	1404.4	30	19			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
	10400	BERN	20		1357.4	1404.4	30	20			
	8900	BERN	20		1357.4	1404.4	30	21			
	1470	BERL	20	S/F	1358.5	1413.3	20	10			
	3000	BERL	20	S/F	1358	1407.1	27	13			
	9500	BERL	20	S/F	1358	1411.5	27	17			
	2800	CTTA	3	S	1358	1400	3	10	5		
	9100	ARCE	20	GRF	1359	1405.4	19.6				
	2800	OTTA	30	PBI	1401	1401	179	7.2	3.6		
	2800	OTTA	8	S	1533.7	1534	.9	10.8			
	2800	CTTA	22	GRF	1715	1749	115	7.2	3.6		
	7000	SAOP	4	S/F	1758.9	1800.2	.2	20			
	2800	OTTA	20	GRF	1930	1950	55	2.8	2.1		
	500	HIRA	27	RF	2258	2308	45	25	10		SL
11	100	GORK	44	NS	0525 E		389 D		10		
	200	GORK	44	NS	0530 E		380 D		10		
	127	TORN	44	NS	0650 E	1354.7	470 D	100	25		V=2
	260	ONDR	44	NS	0800 E		380 D	216	11		
	245	SGMR	44	NS	1134 E	1312.8	586 D	571			CONT
	410	SGMR	44	NS	1134 E	1320.6	586 D	64.1			CONT
	127	TORN	45	C	0731.3	0732.3	3.3	250	25		
	237	TRST	41	F	0732.3	0732.7	.6	105			4L
	237	TRST	41	F	0737.2	0737.3	.5	210			5L
	113	POTS	48	C	0840	0859.2	28	8400			
	234	POTS	48	C	0840	0858.8	35	7700			
	237	TRST			0840.2	0841.6		895			18L
	237	TRST	42	SER	0840.2	0840.9	4.4	495			8L
	237	TRST			0840.2	0844.1		1125			16L
	29	UPIC	45	C	0840.4	0842.3	3.6				
	228	HARS	45	C	0841	0844	5	440	130		
	228	HARS	45	C	0855	0901.5	8	500 U	140		
	200	GORK			0856.7	0902		1200			
	200	GORK			0856.7	0901.1		600			
	200	GORK	46	C	0856.7	0859 U	7.7	110			
	408	TRST	49	GB	0857.1	0859.2	3.9D	250			
	127	TORN	47	GB	0857.8	0859	6.5	1400	310		
	9500	BERL	3	S	0858	0858.9	2	96			
	3000	BERL	4	S/F	0858	0859	11	28			
	237	TRST			0858.2	0859.1		6200			4L
	237	TRST	42	SER	0858.2	0858.9	3.7	7000			6L
	237	TRST			0858.2	0900.1		2900			2L
	10400	BERN	8	S	0858.2	0859.1	4	44	127		
	10400	BERN	8		0858.2	0859.1	4	127			
	9100	ARCE	3	S	0858.4	0859.2	1.4				
	29	UPIC	45	C	0858.4	0859.6	3				
	536	ONDR	46	C	0858.5	0859	6	52	6.5		
	100	GORK	45	C	0858.5	0901.2	6.1	5000			
	100	GORK			0858.5	0903.5		4000			
	100	GORK			0858.5	0902.1		4990			
	1470	BERL	4	S/F	0858.5	0859.3	10	26			
	650	GORK	45	C	0858.6	0859.5	5.8	60			
	2950	GORK	4	SF	0858.6	0859.4	7	35	6		
	650	GORK			0858.6	0903		11			
	808	ONDR	8	S	0858.8	0858.8	.4	68			
	9100	GORK	3	S	0858.9	0859.4	4.1	170	85		
	2650	DWIN	1	S	0858	0859	2	20	5		
	10715	DWIN	8	S	0858	0859	2	105	20		
	9100	ARCE	30	PBI	0859.8		13.5				
	9100	ARCE	1	S	0900.1	0900.3	.5				
	7000	SAOP	46	C	1024	1029.5		49			8 COMPONENTS
	127	TORN	47	GB	1026.9	1028.9	3.8	800	250		
	100	GORK			1027.6	1036.6		5000			
	100	GORK	41	F	1027.6	1031.7	12.8	5000			
	100	GORK			1027.6	1039.4		5000 D			
	3000	BERL	24	R	1028	1028.5	15	22			
	9500	BERL	4	S/F	1028	1029.9	3	22			
	1470	BERL	24	R	1028	1029.6	12 D	40			
	234	POTS	48	C	1028.1	1030.1	12	2200	1		
	113	POTS	48	C	1028.1	1039.3	12	4600			
	10400	BERN	4	S/F	1028.1	1029.4	3	8	24		
	237	TRST	42	SER	1028.1	1028.8	4.1	1750			12L
	237	TRST			1028.1	1030.7		3500			5L
	237	TRST			1028.1	1029.5		3100			10L
	10400	BERN	4		1028.1	1029.4	3	24			
	2950	GORK	41	F	1028.3	1028.9	11.5	15			
	2950	GORK			1028.3	1039.4		5			
	2950	GORK			1028.3	1036.7		7			
	29	UPIC	45	C	1028.3	1029.5	2.6				
	9100	ARCE	45	C	1028.4	1029.6	4				
	408	TRST	46	C	1028.6	1030.8	3.7	93 D			
	536	ONDR	42	SER	1028.6	1037.7	12	124	7		
	9100	GORK			1028.7	1036.7		11			
	9100	GORK	41	F	1028.7	1029.8	8.5	33			
	650	GORK	40	F	1028.9	1031	3.7	26			
	2650	DWIN	1	S	1028	1029	2	25	10		

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	10715	CHIN	1	S	1028	1029	2	10	5		
	200	GORK	46	C	1029	1029.8U	20.6	100			
	200	GORK			1029	1039.4		1900			
	200	GORK			1029	1031.5		550			
	228	HARS	45	C	1030	1031.5	3	520 D	160		
	808	ONDR	45	C	1035.5	1039.2	4.5	130	5		
	408	TRST	46	C	1035.7	1036.3	1.3	93 D			
	237	TRST	41	F	1036	1036.2	.7	1305			8L
	9100	ARCE	1	S	1036.2	1036.5	2				
	408	TRST	46	C	1038.6	1038.9	1.4	93 D			
	237	TRST	41	F	1038.7	1038.9	1.1	3000			0
	9100	ARCE	1	S	1200	1200.2	.5				
	9400	HUAN	3	S	1215.4	1217.7	2.3	26.3	7.5		R
	7000	SAOP	4	S/F	1216	1216.7	.3	39			
	245	SGMR	48	GB	1216	1216.9	1.5	2000	790		5
	10400	BERN	8	S	1216.1	1216.8	2	5	15		
	10400	BERN	8		1216.1	1216.8	2	15			
	234	POTS	48	C	1216.3	1216.4	8.1	4200	1		
	113	POTS	48	C	1216.3	1224.2	12	4200			
	29	UPIC	4	S/F	1216.4	1216.8	2.5				
	127	TORN	42	SER	1216.4	1216.8	11.5	810			
	127	TORN			1216.4	1224.3		250			
	9100	ARCE	3	S	1216.6	1216.9	1.6				
	237	TRST	41	F	1217.4	1217.7	.7	3750			5L
	245	SGMR	6	S	1223.8	1224.4	1	146	43.8		5,CONT
	237	TRST	41	F	1224.2	1224.2	.2	610			4L
	606	SGMR	3	S	1224.7	1225.5	1.6	148	44.4		5,CONT
	410	SGMR	6	S	1225.5	1225.7	1	188	56.4		5,CONT
	536	ONDR	4	S/F	1225	1225.3	2	58	9.8		
	237	TRST	42	SER	1311.2E	1311.2	3	1125			18L
	237	TRST			1311.2E	1312.5		1600			8L
	29	UPIC	45	C	1311.4	1313.2	2.7				
	228	HARS	45	C	1312	1312.5	2.5	520 D	70		
	33	UPIC	45	C	1312.5E	1313.1	2.1D				NOT CALIBRATED
	7000	SAOP	3	S	1412	1412.5	.3	83			
	7000	SAOP	41	F	1412						2
	234	POTS	2	S/F	1412	1414.3	4.6	2000			
	29	UPIC	45	C	1412.1	1412.5	1.7				
	237	TRST	42	SER	1412.1	1412.3	3	450			0
	237	TRST			1412.1	1414.5		2700			0
	237	TRST			1412.1	1414		585			6L
	33	UPIC	45	C	1412.3	1412.4	1.6				
	228	HARS	45	C	1413	1415	4	520 D	140		
	606	SGMR	3	S	1414	1415.7	3	50	20		3G,CONT
	7000	SAOP	4	S/F	1414.2	1414.9	.2	35			
	113	POTS	2	S/F	1414.2	1414.4	3	4500			
	410	SGMR	7	S	1414.6	1417.9	4.4	486	146		3G,CONT
	245	SGMR	48	GB	1414.6	1414.8	3.2	1860	558		3G,CONT
	29	UPIC	45	C	1414.8	1415	2.9				
	33	UPIC	45	C	1415.1	1415.1	2.4				
	237	TRST	41	F	1450.4	1450.4	.6	255			2L
	7000	SAOP	3	S	1454	1455	.4	50			
	237	TRST	41	F	1535.7	1535.9	.3	135			0
	2800	CTTA	20	GRF	1820	1833	20	2.2	1.1		
12	100	GORK	44	NS	0536 E		375		400		
	200	GORK	44	NS	0539 E		370		15		
	127	TORN	44	NS	0640 E	0832.4	450 D	560	79		V=2
	260	ONDR	44	NS	0800 E		380 D	94	12		
	410	SGMR	44	NS	1135 E	1935.1	584 D	37.7			
	245	SGMR	44	NS	1135 E	1540.5	584 D	19.2			
	234	POTS	45	C	1116.2	1116.5	.6	175	20		
	237	TRST	41	F	1117.3	1117.8	.7	435			12R
	237	TRST	41	F	1252.9	1252.9	.6	148			0
	2800	CTTA	20	GRF	1336.5	1337	13	3.6	2		
	2800	CTTA	20	GRF	1430	1433	25	1.8	.9		
	2800	CTTA	26	FAL	1520	1555	35	-2.8	-1.4		
	1420	BOUL	2	SF	1709	1710.5	2.5	8	3		
13	700	SYDN	40	F	0047	0047.3	1.6				
	1400	SYDN	8	S	0047.2	0048.2	.5				
	127	TORN	44	NS	0650 E	0906.6	440 D	170	1.5		V=0
	260	ONDR	44	NS	0815 E		365 D	37			
	410	SGMR	44	NS	1136 E	1447.1	582 D	25.5			
	245	SGMR	44	NS	1136 E	1446.4	582 D	45.6			
	2950	GORK	1	S	0817.7	0823.1	9.7	10	2		
	10400	BERN	3	S	0820.4	0823	20	10	28		
	10400	BERN	3		0820.4	0823	20	28			OPR
	9100	GORK	21	GRF	0821.5	0824.6	19.6	14	4.5		
	3000	BERL	4	S/F	0821.5	0823	8.5	10			
	9500	BERL	4	S/F	0821.7	0823	37	29			
	9100	ARCE	3	S	0821.8	0823.2	3.1				
	9100	GORK	1	S	0822.4	0823	1.1	28	14		
	9100	ARCE	29	PBI	0824.9		16				
	9500	BERL	20	GRF	0917	0924	28	5.5			

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	113	FOTS	45	C	0917.1	0917.1	.4	200	15		
	237	TRST	41	F	0917.1	0917.4	.8	180			0
	1470	BERL	4	S/F	0926.5	0926.9	2.5	11			
	3000	BERL	4	S/F	0926.5	0926.5	1	21			
	408	TRST	7	C	0926.9	0927	.6	69			
	260	CNDR	45	C	1222	1222	1	222 D	24		
	2800	CTTA	20	GRF	1849.5	1851	20	1.8	.9		
14	260	CNDR	44	NS	0814 E		331 D	148	10		
	410	SGMR	44	NS	1138 E	1644.4	579 D	3.2			
	245	SGMR	44	NS	1138 E	1443.4	579 D	110			
	113	FOTS	1	S	1024.1	1024.1	.1	700	250		
	237	TRST	41	F	1248	1248.8	1	105			0
15	1415	MANI	1	S	0753	0753.4	1	7.3	2.4		
	2695	MANI	1	S	0753	0753.5	1	4.3	1.4		
	8800	MANI	4	S/F	0753	0753.3	1	49.5	16.5		
	260	CNDR	44	NS	0815 E		343 D	26			
	410	SGMR	44	NS	1139 E	1300.2	577 D	11.3			
	245	SGMR	44	NS	1139 E	1643	577 D	45.1			
	237	TRST	41	F	1211.8	1211.9	.2	150			0
	2800	CTTA	20	GRF	1320	1400	100	3	1.5		
	2800	CTTA	26	FAL	1530	1600	30	3	1.5		
	2800	CTTA	20	GRF	1756	1800	30	2.6	1.2		
	2800	CTTA	24	OAR	1900	1950	50	3.4	1.7		
	2800	CTTA	22	GRF	1924	1930	25	7	3.5		
	2695	PENT	20	GRF	2040	2115	90	2	1.2		
	2695	BCUL	4	SF	2116.5	E 2118.5	2 D	30	10		
16	2950	GORK	20	GRF	0807.2	0815.3	15.7	14	7		
	3000	BERL	20	GRF	0811	0815	8	10			
	1470	BERL	20	GRF	0812	0816	10	4.1			
	260	CNDR	44	NS	0905		238	8			
	245	SGMR	44	NS	1140 E	1759	575 D	33.6			
	410	SGMR	43	NS	1702	1728.6	253 D	14.5			
	2800	CTTA	8	S	1654.6	1654.6	.2	5			
	2800	CTTA	20	GRF	1745	1810	60	4.8	2.4		
	4995	BCUL	4	SF	1929.5	1931	3	13	4		
	1420	BCUL	2	SF	2131.5	2133	4	6	2		
17	9400	HUAN	3	S	1550.2	1554.5	4.3	14.1	6		RLOR
18	245	SGMR	44	NS	1143 E	1623.2	571 D	15.8			
	410	SGMR	43	NS	1508.8	1551	365.2D	15			
	237	TRST	41	F	1226.5	1226.8	.4	105			0
	260	CNDR	8	S	1227.6	1227.6	.4	28			
	8800	SGMR	3	S	1816.3	1816.5	.4	67.5	20.3		
	8800	SGMR	3	S	1844	1844.2	2	297	89.1		
	2800	CTTA	1	S	1904.7	1905.5	1.8	1.4	.9		
19	260	CNDR	2	S/F	0923	0924.3	3	10	.9		
	260	CNDR	3	S	1129	1129	.3	10			
	245	SGMR	44	NS	1144 E	1506.7	569 D	38.3			3G
	260	CNDR	42	SER	1251	1257.2	8	15			
	2800	CTTA	20	GRF	1340	1402	60	2.6			
	260	CNDR	8	S	1343.3	1343.3	.3	18			
	2800	CTTA	20	GRF	1555	1610	30	1.4	.7		
	1420	BCUL	4	SF	1757	1758.5	2	12	4		
	2800	CTTA	1	S	1932	1932.4	1	2.8	1.2		
20	260	CNDR	45	C	1028	1028.2	1.5	82	32		
	9400	HUAN	20	GRF	1251.3	1308.2	16.9	4.9	1.6		0
	2800	CTTA	24	R	1435	1610	105	10.4	4		
	2800	CTTA	27	RF	1435		375	10.4			
	2800	CTTA	24	P R	1610		160	10.4			
	2800	CTTA	26	FAL	1900	2050	110	3.8	1.9		
	9400	HUAN	20	GRF	2017.2	2039.8	22.6	5.2	2.1		0
	4995	BCUL	4	SF	2137.5	2139	3	24	8		
	2695	PENT	1	S	2150.2	2151	2	1.6	.8		
	9400	HUAN	3	S	2201.5	2202.7	1.2	26.1	9.6		L
	2695	PENT	3	S	2201	2201.9	2	52	6.6		
	4995	BCUL	8	S	2201	2201.5	1	16	5		
	2695	BCUL	3	S	2202	2204	7	44	15		
21	260	CNDR	42	SER	0938	1004.8	64	25			
	260	CNDR	4	S/F	1139.4	1140.3	2	88	18		
	234	FOTS	45	C	1140.2	1140.5	1.3	125	25		
	237	TRST	47	GB	1140.3	1140.9	1.7	240			90L
	228	HARS	45	C	1140.5	1141	1.3	120	40		
	9400	HUAN	21	GRF	1328.7	1439.2	70.5	6.5	4.3		0
	9400	HUAN	1	S	1402	1402.8	.8	8.2	3.3		0
	9400	HUAN	20	GRF	1532.2	1553.5	21.3	5.7	4.1		0
	2800	CTTA	20	GRF	1535	1545	35	1.8	.9		
22	245	SGMR	6	S	1407.8	1408	.4	10	3		3G

SOLAR RADIO EMISSION
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NOVEMBER 1978

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
	2800	CTTA	8 S	1824.9	1825	.5	1.2			
23	9400	HUAN	20 GRF	1337.7	1416.7	39	11.8	4.7		O
24	2800	CTTA	20 GRF	1750	1910	210	3.6	2		
	9400	HUAN	20 GRF	1831	1903.4	32.4	6.8	3		L
25	2800	CTTA	20 GRF	1435	1655	235	2.6	1.3		
	9400	HUAN	20 GRF	1617	1645	28	5.3	1.8		O
	245	SGMR	43 NS	1645.7	1646.9	263.3D	42.5			
26	113	POTS	45 C	0829	0829	.1	200	40		
	2800	CTTA	240 R	1730	1800	30	2	1		
27	200	GORK	43 NS	0700		120		5		
	127	TORN	44 NS	0730 E	0815.4	100 U	34			V=1
	245	SGMR	43 NS	1429	1718.9	399 D	33.8			3G
	410	SGMR	43 NS	1429	1632	399 D	53.5			3G
	2800	CTTA	240 R	1440	1450	10	1.2	.6		
	2800	CTTA	20 GRF	1550	1615	80	2.6	1.3		
	9400	HUAN	21 GRF	1600.2	1717.2	77	3.4	2.6		O
	9400	HUAN	1 S	1629.8	1631.2	1.4	5.1	4.4		O
	2800	CTTA	20 GRF	1840	1915	100	1.8	1		
28	700	SYDN	40 F	0526.8	0533.7	13.1				
	1400	SYDN	40 F	0526.9	0536.1	13.1				
	500	HIRA	46 C	0527	0535	30	20	8		HR
	500	HIRA		0527	0546		15			WR
	1415	MANI	4 S/F	0528.8	0535.9	24.8	42.2	14.1		
	2695	MANI	4 S/F	0529.2	0547	24.4	93.5	31.2		
	606	MANI	3 S	0530.9	0533.1	18.3	7.3	2.4		
	35000	NAGO	20 GRF	0530	0546	50 D	8			SUNSET
	500	HIRA	3 S	0532	0532.6	1.5	35	20		WL
	100	GORK	44 NS	0555 E		50 D		10		
	260	CNOR	43 NS	0930		280 D	220 D			
	245	SGMR	44 NS	1155 E	2047.9	552 D	3420			3G
	410	SGMR	44 NS	1155 E	2048.4	552 D	267			3G
	200	GORK		0603.6	0626.6		135			
	200	GORK	45 C	0603.6	0609.8	38.5	40 D			
	2950	GORK		0605.7U	0607.7U		11			
	2950	GORK	45 C	0605.7U	0606 U	2.6	15			
	650	GORK		0606	0613.1		188			
	650	GORK	46 C	0606	0610.5	24	178			
	650	GORK		0606	0616.8		200			
	500	HIRA	48 C	0606.1	0616.6	23	220	90		ML
	950	GORK	45 C	0607	0609.2	22.8	65			
	950	GORK		0607	0616.6		54			
	950	GORK	45 C	0607	0610.4		62			
	606	MANI	4 S/F	0607.6	0617.1	22.5	243.9	81.3		
	1415	MANI	3 S	0608	0610.8	11.1	9.5	3.2		
	2950	GORK	21 GRF	0803 U	0810	14.2	13.5	9.2		
	1470	BERL	24 R	0804	0813	12	75			
	3000	BERL	24 R	0804	0812	11	21			
	200	GORK		0809	0812		50 D			
	200	GORK	41 F	0809	0809.9	5.8	27			
	200	GORK		0809	0813.5		50 D			
	237	TRST	41 F	0809.2	0809.4	.3	420			O
	950	GORK	45 C	0809.3	0810.3	5.6	~69			
	950	GORK		0809.3	0812.3		97			
	650	GORK	4 SF	0812	0812.8	1.4	117	37		
	2950	GORK	3 S	0812	0812.4	2.1	17			
	237	TRST	41 F	0812	0812.3	.6	735			O
	9500	BERL	4 S/F	0812	0812.1	2				
	10400	BERN	3 S	0812	0812.3	1.5	6	17		
	10400	BERN	3	0812	0812.3	1.5	17			
	9100	GORK	1 S	0812.1	0812.4	1.6	26	13		
	2695	MANI	3 S	0812.5	0813	2.1	33.4	11.1		
	1415	MANI	3 S	0812.6	0813.1	2.1	72.1	24		
	606	MANI	4 S/F	0812.6	0812.8	2.1	145.6	48.5		
	2650	ONIN	1 S	0812	0813	2	35	10		
	950	GORK	3 S	0918.8	0919.3	1.3	17.5	8		
	536	CNOR	42 SER	0919	1132.6	231	280	6		
	408	TRST	48 C	1024	1028.7	6	120 D			
	2950	GORK		1024.8	1028.7		32			
	2950	GORK	45 C	1024.8	1027	6.3	25	11		
	10400	BERN	41 F	1025	1028.7	5	3	10		
	10400	BERN	41	1025	1028.7	5	10			OPR
	650	GORK	4 SF	1025.5	1029.4	4.5	135			
	808	CNOR	42 SER	1025.5	1029.2	37	434	23		
	237	TRST	42 SER	1025.6	1026.7	3.1	2350			2R
	200	GORK	45 C	1025.6	1025.7	3.9	50			
	200	GORK		1025.6	1028.7		450			
	200	GORK		1025.6	1027		50 D			
	950	GORK		1025.6	1028.9		175			
	950	GORK	46 C	1025.6	1027	5.7	120 D			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	2650	DHIN	45 C	1025	1029	7	62	20		
	234	POTS	2 S/F	1026.3	1026.4	3	1575	40		
	9100	GORK	2 S	1026.5	1028.7	3.1	12	4.5		
	228	HARS	45 C	1026.6	1028	3.5	700	100 U		
	1470	BERL	4 S/F	1028	1029.8	16	50			
	3000	BERL	4 S/F	1028	1029.5	12	5.2			
	200	GORK	8 S	1038.3	1038.6	.6	28			
	950	GORK	3 S	1038.5	1038.8	.3	102	50		
	650	GORK	1 S	1048.7	1049.8	1.7	35 D	7		
	408	TRST	41 F	1049.3	1049.9	1	51			
	237	TRST	41 F	1049.5	1049.8	.5	235			0
	200	GORK	8 S	1049.5	1049.6	.9	44			
	234	POTS	48 C	1122	1133.2	30	30000	1 E		
	113	POTS	48 C	1122.1	1133.2	29	7000	1 E		
	237	TRST		1122.1	1124.2		5350			0
	237	TRST		1122.1	1123.6		730			0
	237	TRST		1122.1	1122.9		6600			0
	237	TRST	42 SER	1122.1	1122.4	2.5	5300			0
	408	TRST		1122.1	1126.2		57			
	408	TRST		1122.1	1124.2		170 D			
	408	TRST	42 SER	1122.1	1122.4	4.2	160 D			
	228	HARS	45 C	1122.5	1123 U	2.5	1400 D	100 U		
	228	HARS	45 C	1132.3	1133 U	1.5	1400 D	200 U		
	237	TRST	41 F	1132.6	1132.9	.9	14900			1R
	237	TRST		1132.6	1133.3		62000			0
	408	TRST	42 SER	1132.7	1133.3	1.3	210 D			
	237	TRST	41 F	1150.5	1150.9	1.2	905			0
	237	TRST	41 F	1203.5	1203.5	.3	690			0
	228	HARS	45 C	1235.8	1237.7	2.5	850	100 U		
	234	POTS	45 C	1237.4	1237.5	.3	1400	280		
	237	TRST	41 F	1237.8	1237.9	.2	1350			0
	237	TRST	5 S	1440.3	1440.3	.1	135	55		0
	2800	CTTA	240 R	1750	1800	10	1.4	.7		
	2800	CTTA	8 S	1848.9	1849	.5	1.8			
	606	SGMR	3 S	1908.7	1909.3	2.9	27.8	8.3		SHF
	410	SGMR	6 S	1909	1911.4	5.2	130	39		SHF
	245	SGMR	48 GB	1909	1911.1	7	2970	891		SHF
	1420	BOUL	45 C	1909 E	1910	4 D	8	3		
	2800	CTTA	45 C	1909	1910.1	3	5.6	1.8		
	2695	BOUL	45 C	1913.5E	1914.5	1.5D	16	5		
	2800	CTTA	240 R	1920	1950	30	2.8	1.4		
	4995	BOUL	40 F	2013.5	2016	7	12	4		
	606	MANI	8 S	2358.3	2358.5	.4	36.4	12.1		
	2695	MANI	1 S	2358.3	2358.5	.7	2.9	1		
	1415	MANI	1 S	2358.4	2358.6	.6	8.2	2.7		
29	500	MIRA	46 C	0508.5	0516.5	40	50	20		ML
	2695	MANI	4 S/F	0508.7	0513.3	9.1	72.2	24.1		
	606	MANI	3 S	0509.3	0513	13.5	27.3	9.1		
	1400	SYDN	40 F	0510.7	0512.6	19.7				
	1415	MANI	3 S	0510.8	0517.2	12	12.4	4.2		
	35000	NAGO	20 GRF	0510	0530	53	9			
	700	SYDN	40 F	0511	0515.4	19.8				
	100	GORK	44 NS	0556 E		225 D		5		
	200	GORK	44 NS	0600 E		330		5		
	127	TORN	44 NS	0650 E	0842	300 U		.7		V=1
	260	CNDR	44 NS	0810 E		360 D	64	10		
	410	SGMR	44 NS	1156 E	1337.1	551 D	144			3G,5
	245	SGMR	44 NS	1156 E	2002.6	551 D	500			3G,5
	237	TRST	41 F	0758.5	0758.5	.1	100			0
	33	UPIC	45 C	0817.7	0818.4	1.6				UNCERTN
	113	POTS	1 S	1014.4	1014.4	.1	175	60		
	113	POTS	48 C	1041.1	1041.1	3.9	200	1		
	237	TRST	41 F	1112.1	1112.2	.8	210			0
	234	POTS	45 C	1152	1152.2	1.4	250	12		
	113	POTS	45 C	1213	1213.1	.9	700	70		
	113	POTS	1 S	1343.2	1343.3	.1	150	50		
	234	POTS	45 C	1402.1	1402.5	1.9	330	10		
	113	POTS	45 C	1402.1	1403.5	3.9	2500	35		
	606	SGMR	3 S	1402.9	1403.3	2.4	25.7	7.7		3G
	410	SGMR	6 S	1402.9	1403.7	12.1	134	40.2		3G
	245	SGMR	49 GB	1403	1411.3	12.5	503	151		3G
	245	SGMR	7 S	1431.2	1433	3.5	292	87.6		3G
	410	SGMR	6 S	1431.8	1432.2	4.4	85.7	25.7		3G
	606	SGMR	3 S	1431.8	1432.9	5.6	50.3	15.1		3G
	2800	CTTA	24 R	1555	1605	10	2.4	1.2		
	2800	CTTA	27 RF	1555		80	2.4	2		
	2800	CTTA	24P R	1605		50	2.4			
	2800	CTTA	26 FAL	1655	1715	20	-2.4	-1.2		
	4995	BOUL	40 F	1934.5	1943	12.5	17	6		
	4995	BOUL		1934.5	1937.5		14	5		
	2800	CTTA	2 S/F	1936	1938	3	5	2.5		
	2800	CTTA	30 PBI	1939	1939	16	2.4	1.2		
	2800	CTTA	1 S	1943.5	1944	2.5	2.4	1.2		
	606	SGMR	3 S	1943.5	1944.5	5.2	5.8	17		2

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT		TIME OF MAXIMUM UT	DURATION MINUTES		FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK		MEAN	INT	POLARIZATION OR REMARKS
	245	SGMR	6	S	1944		1946.6	4.4		172		52		2
	410	SGMR	48	GB	1944.1		1944.8	4.6		1560		468		2
	2800	CTTA	2	S/F	2024		2024.5	2		3				
	4995	ECUL	2	SF	2046		2048.5	3.5		9		3		
	2695	PENT	20	GRF	2125		2137	20		2.2		1.1		
30	2695	MANI	3	S	0117.2		0117.7	1.2		18.5		6.2		IIIG
	700	SYDN	40	F	0117.3		0117.7	1.3						
	1400	SYDN	3	S	0117.3		0117.9	1.5						
	1415	MANI	3	S	0117.5		0117.9	1.3		12.4		4.1		
	2695	MANI	4	S/F	0149.6		0158.8	20.3		68.2		22.7		
	1415	MANI	4	S/F	0151.1		0159	16.9		65.9		21.9		
	1400	SYDN	48	GB	0151.2		0158.8	17.8						
	700	SYDN	48	GB	0151.2		0158.9	18.8						
	606	MANI	4	S/F	0152.5		0159.1	16.8		110.4		36.8		
	500	HIRA	46	C	0152		0159.6	24		200		70		MLMR
	100	HIRA	44	NS	0230	E	0430	295	D	60		30		SR
	200	HIRA	44	NS	0230	E	0410	295	D	30		20		ML
	100	GORK	44	NS	0554	E		118	D			5		
	200	GORK	44	NS	0600	E		330				5		
	260	CNDR	44	NS	0820	E		250	D	162		12		
	245	SGMR	44	NS	1157	F	1750.1	550	D	332				
	410	SGMR	44	NS	1157	E	1715.9	550	D	59.8				
	234	POTS	45	C	0728.6		0729.5	1.9		350		30		
	237	TRST	41	F	0736.4		0736.9	.6		445				2L
	113	POTS	2	S/F	0754.4		0755	11		200		5		
	200	GORK	8	S	0754.9		0755.5	1.8		35				
	100	GORK			0755.1		0753.7			140				
	100	GORK	46	C	0755.1		0752.5	2.5		140				
	33	UPIC	2	S/F	0905.6		0905.9	.7						
	29	UPIC	2	S/F	0905.6		0906	1.5						
	100	GORK			0906		0907.1			170				
	100	GORK	45	C	0906		0906.2	1.5		170	D			
	200	GORK			0912		0913.4			117				
	200	GORK	46	C	0912		0912.9	2.8		37				
	113	POTS	45	C	0933.1		0933.2	.5		100		2		
	113	POTS	45	C	1203.5		1205.4	6.4		150		5		
	2650	DWIN	2	S/F	1206		1207	3		10		5		
	33	UPIC	4	S/F	1222.9		1224.2	1.9						UNCERTN
	2800	OTTA	21	GRF	1440		1535	130		4.2		2.4		
	2800	CTTA	1	S	1519		1520.8	3		2.6		1.3		
	410	SGMR	6	S	1801.4		1802	1.4		176		52.8		5
	245	SGMR	48	GB	1801.4		1802	1.2		678		203		5
	606	SGMR	3	S	1801.5		1801.9	2		231		69.3		5
	2800	CTTA	1	S	1801.8		1802.2	2		5.6		1.8		
	2800	CTTA	26	FAL	1805		1825	20		3		1.5		

Reports received from the following observatories:

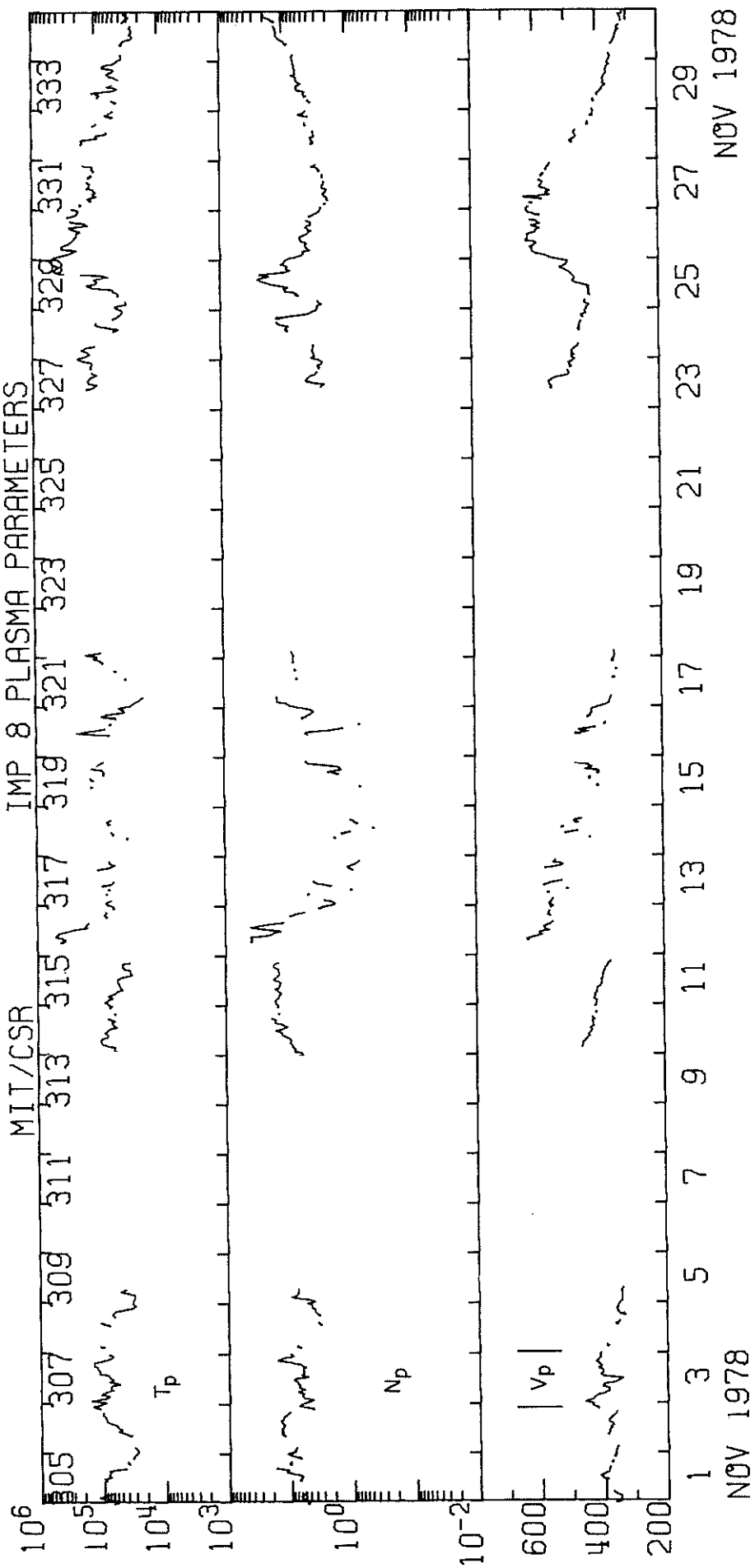
ARCE = Arcetri
BERL = Berlin-Adlershof
BERN = Berne
BORD = Bordeaux
BOUL = Boulder
CRIM = Simferopol
DWIN = Dwingeloo
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
KIEV = Kiev
MANI = Manila
MCMA = McMath-Hulbert
NAGO = Nagoya
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
VORO = Voroshilov (Ussurisk)

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

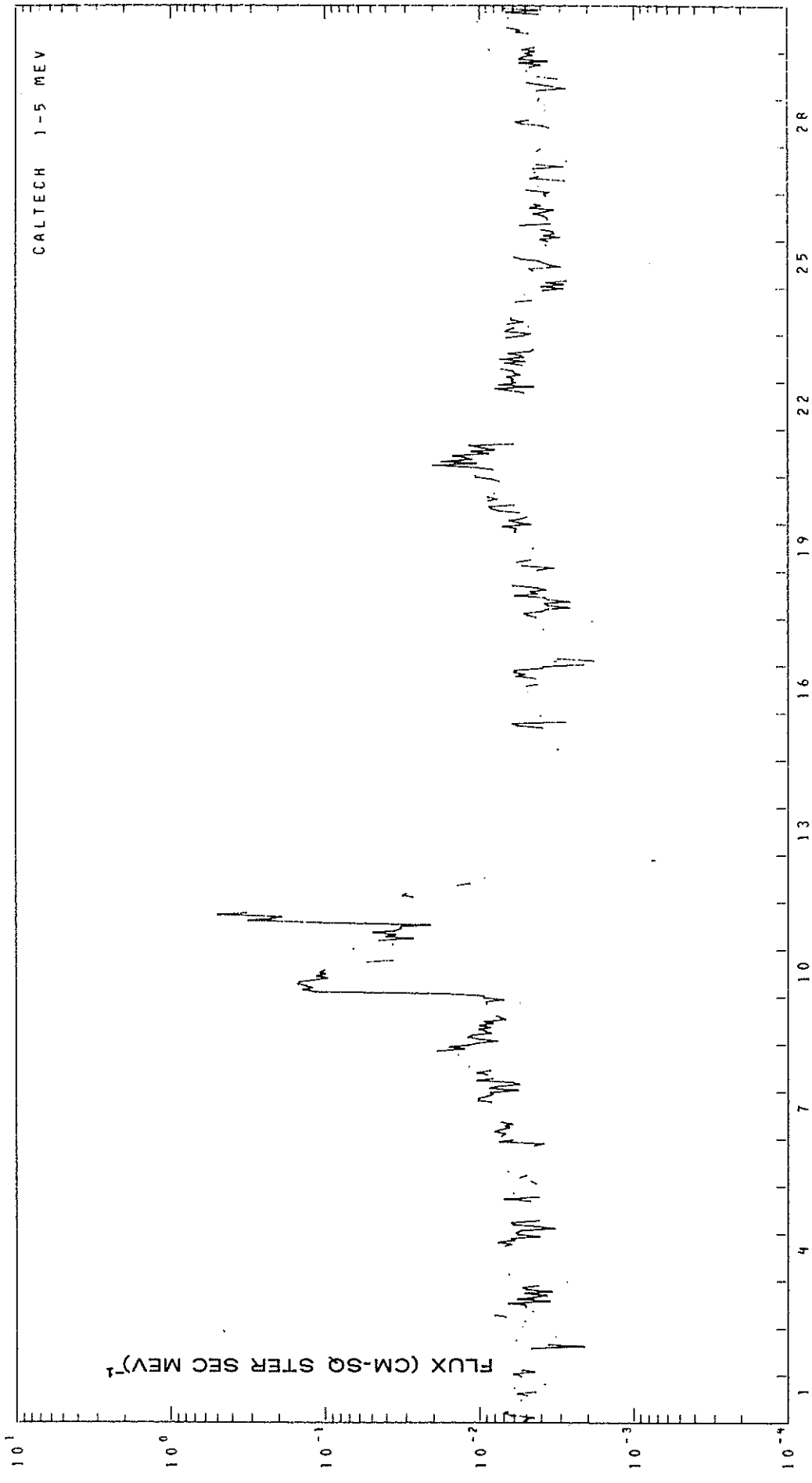
IMP 8 SOLAR WIND PLASMA

NOVEMBER 1978



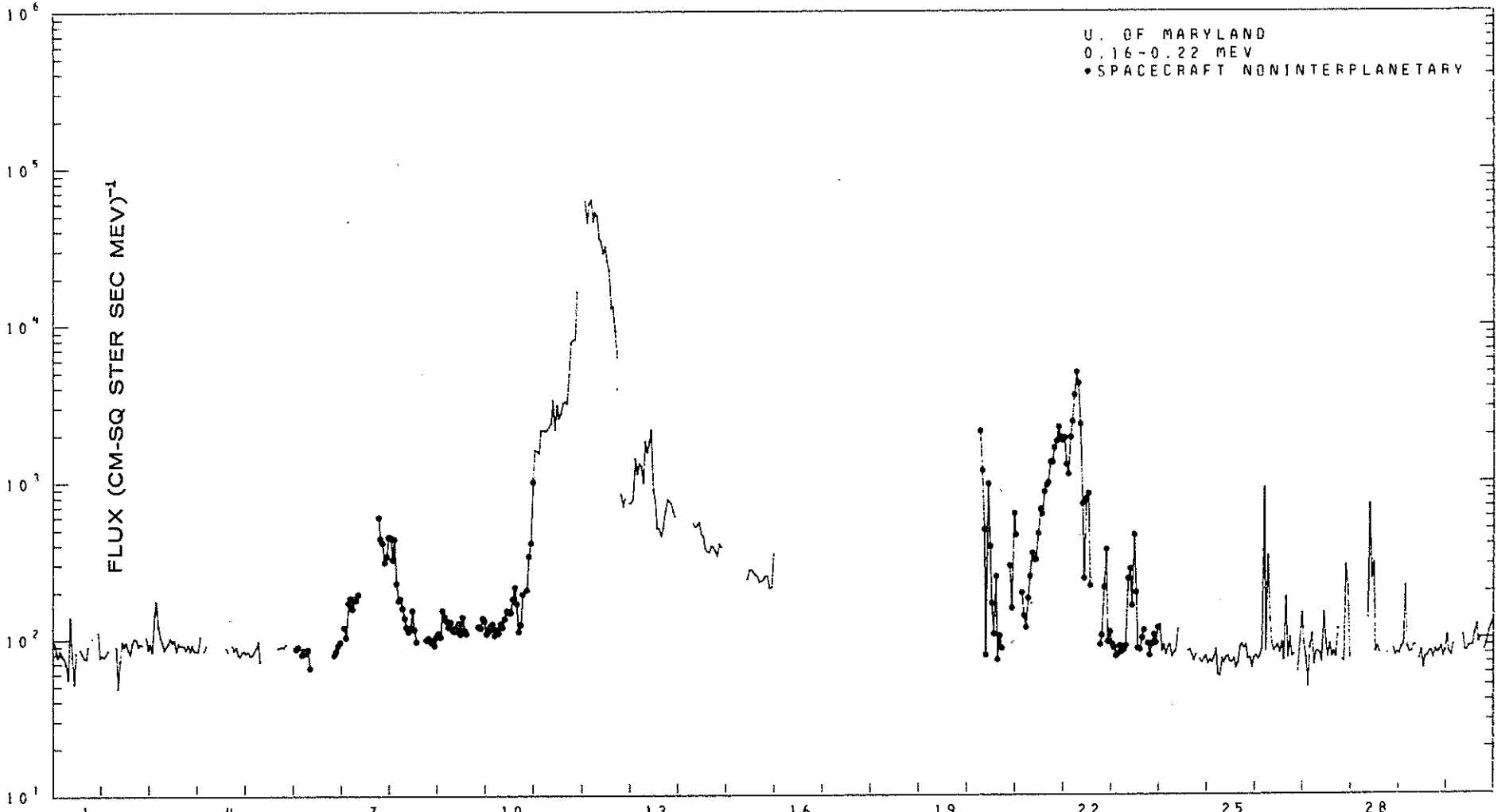
IMP 8 ELECTRONS

NOVEMBER 1978



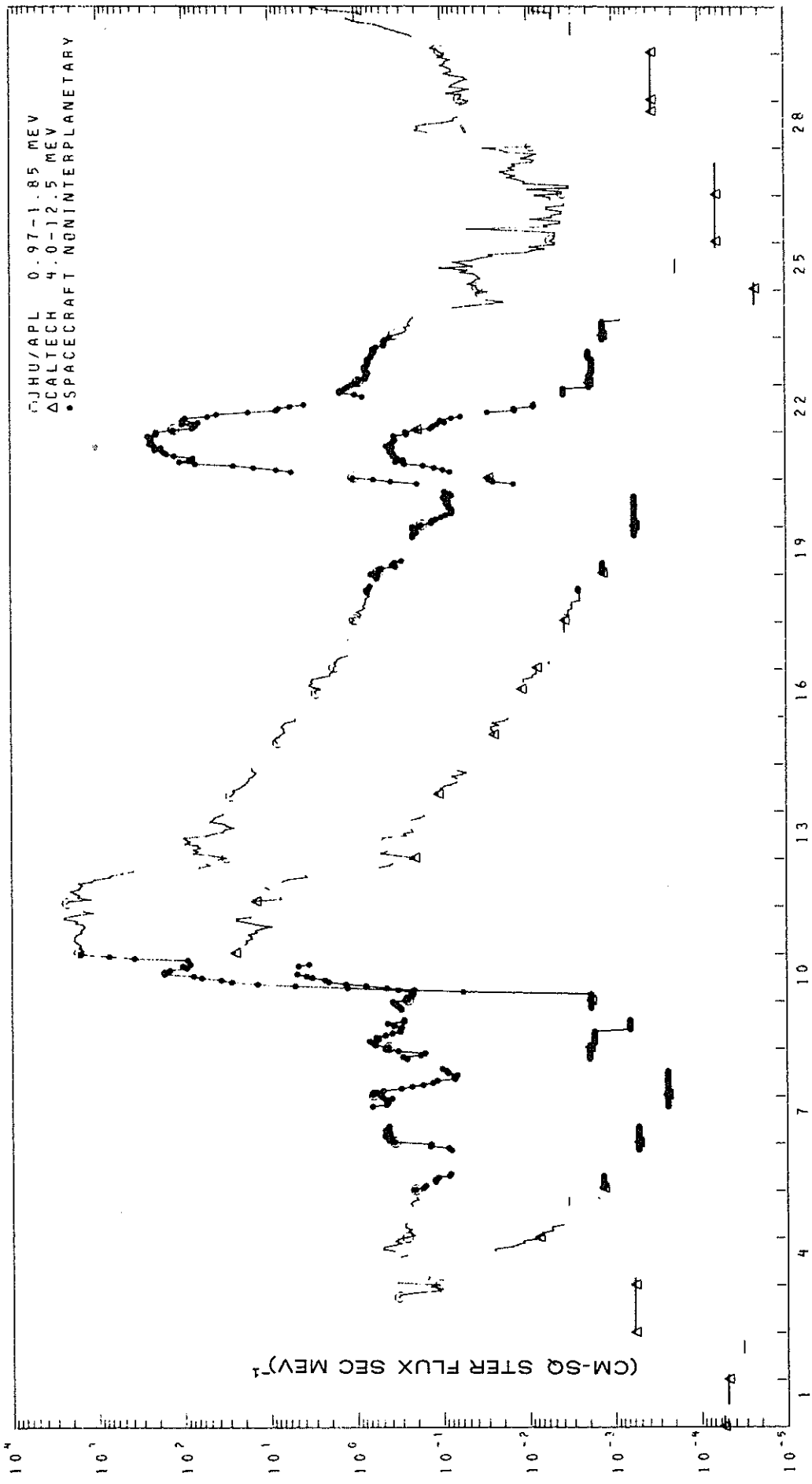
IMP 8 LOW ENERGY PROTONS

NOVEMBER 1978



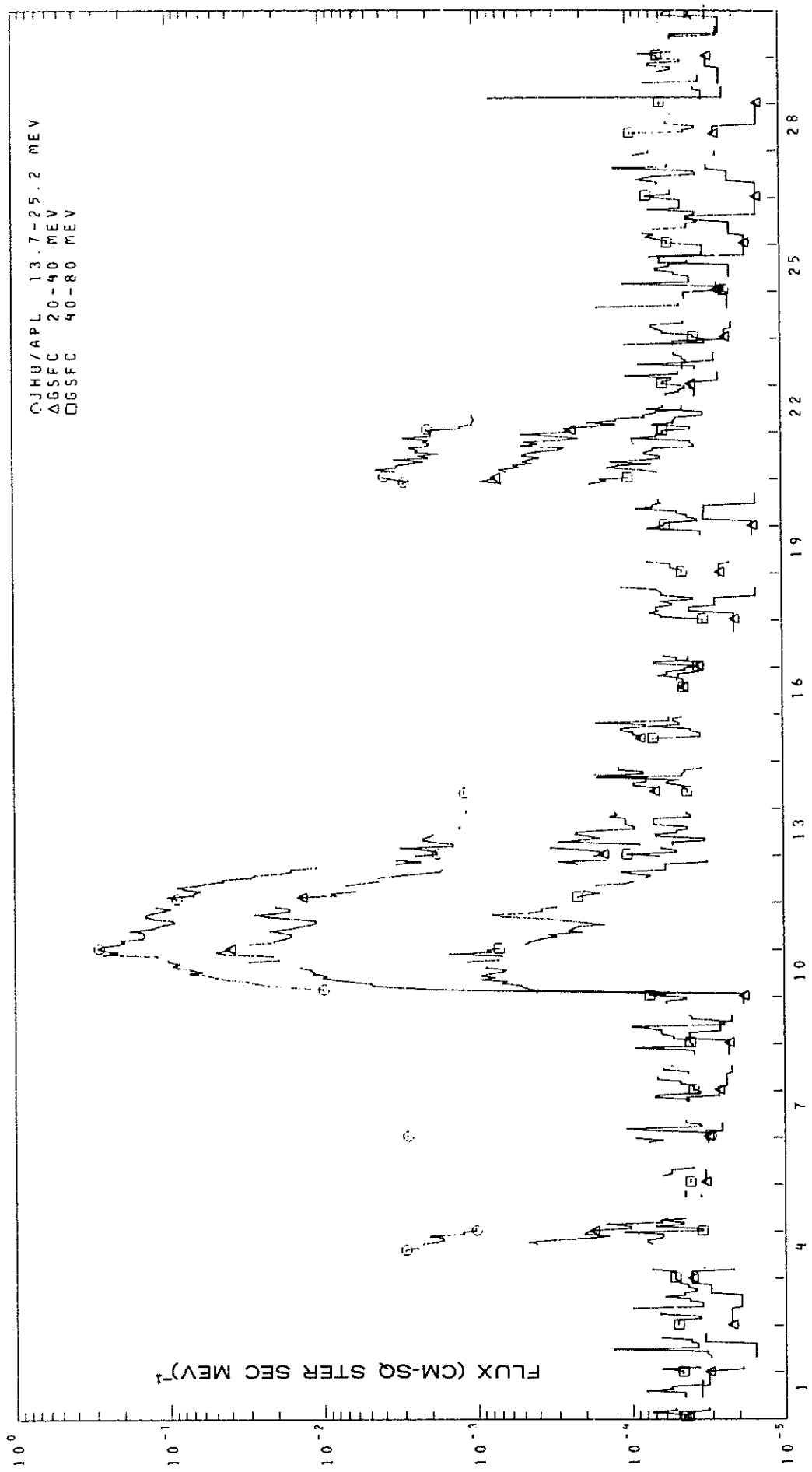
IMP 8 INTERMEDIATE ENERGY PROTONS

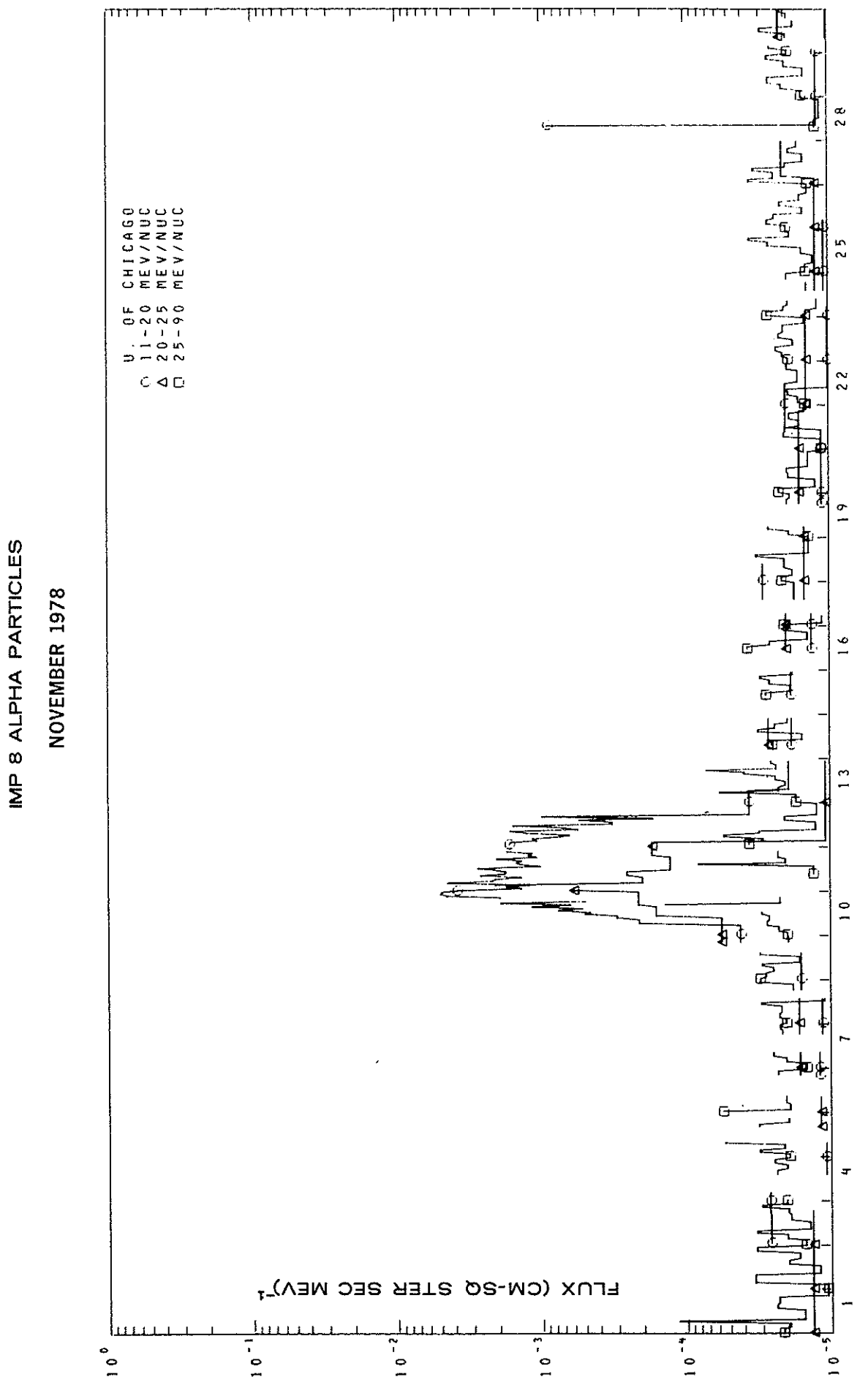
NOVEMBER 1978

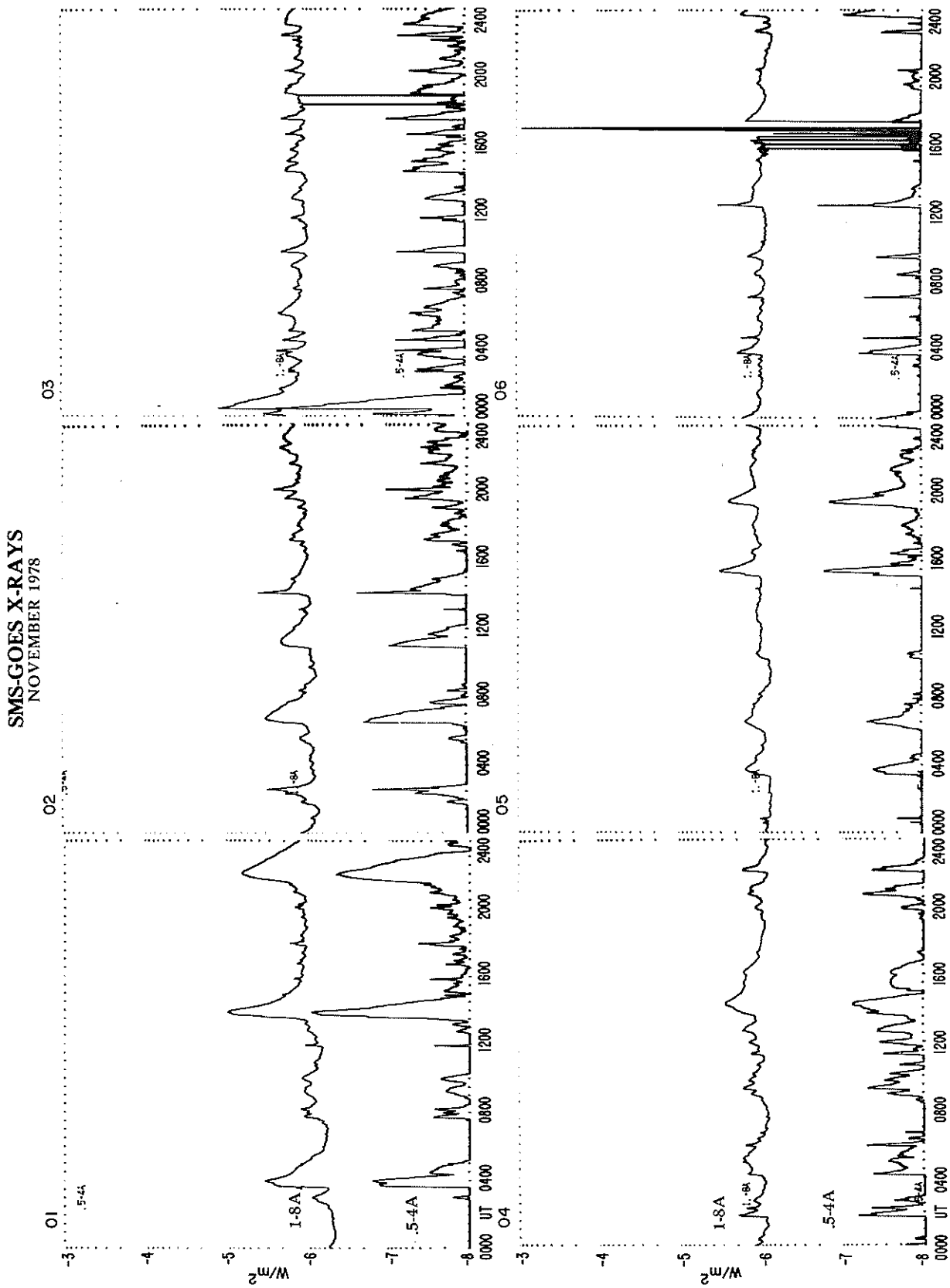


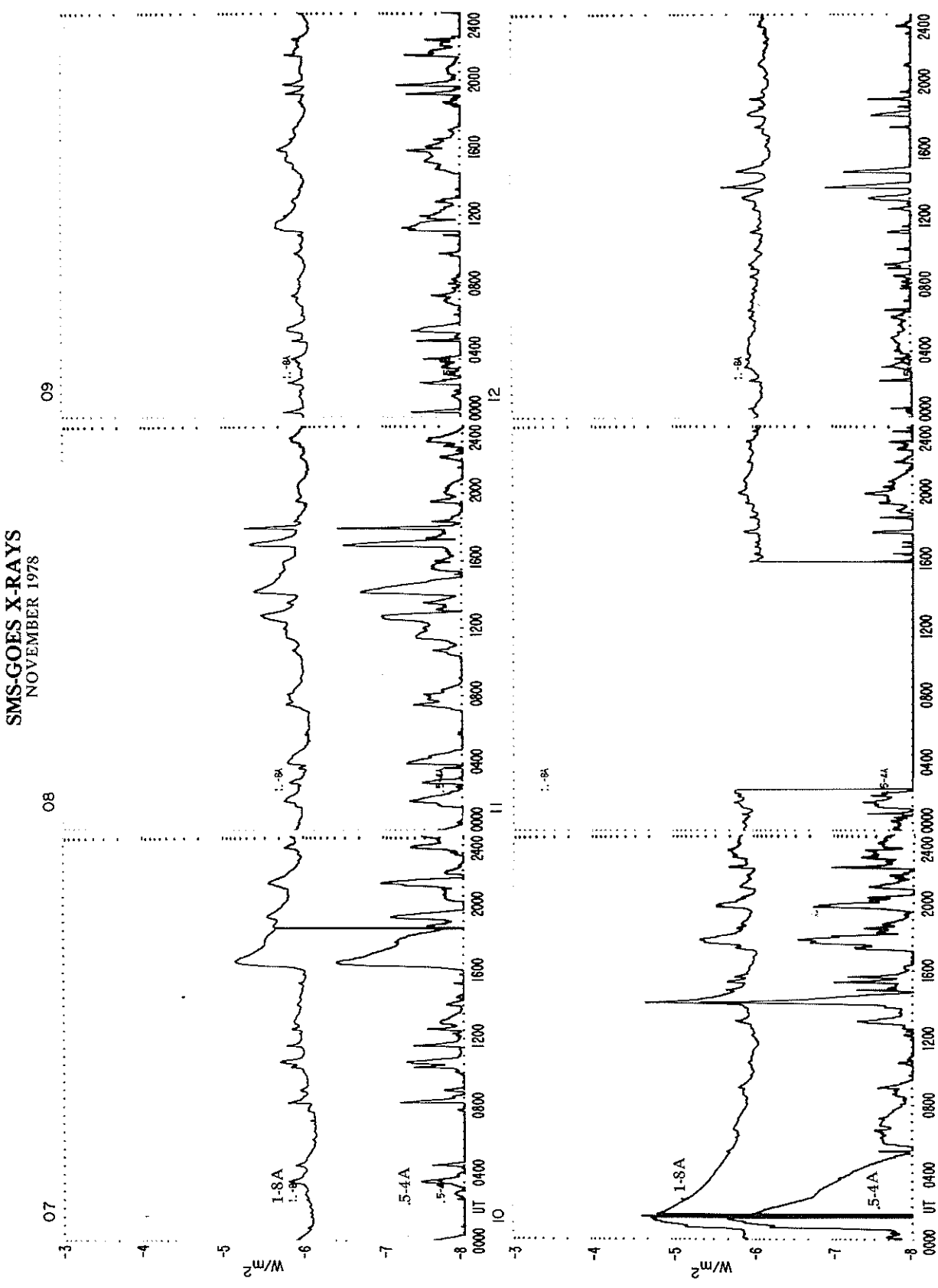
IMP 8 HIGH ENERGY PROTONS

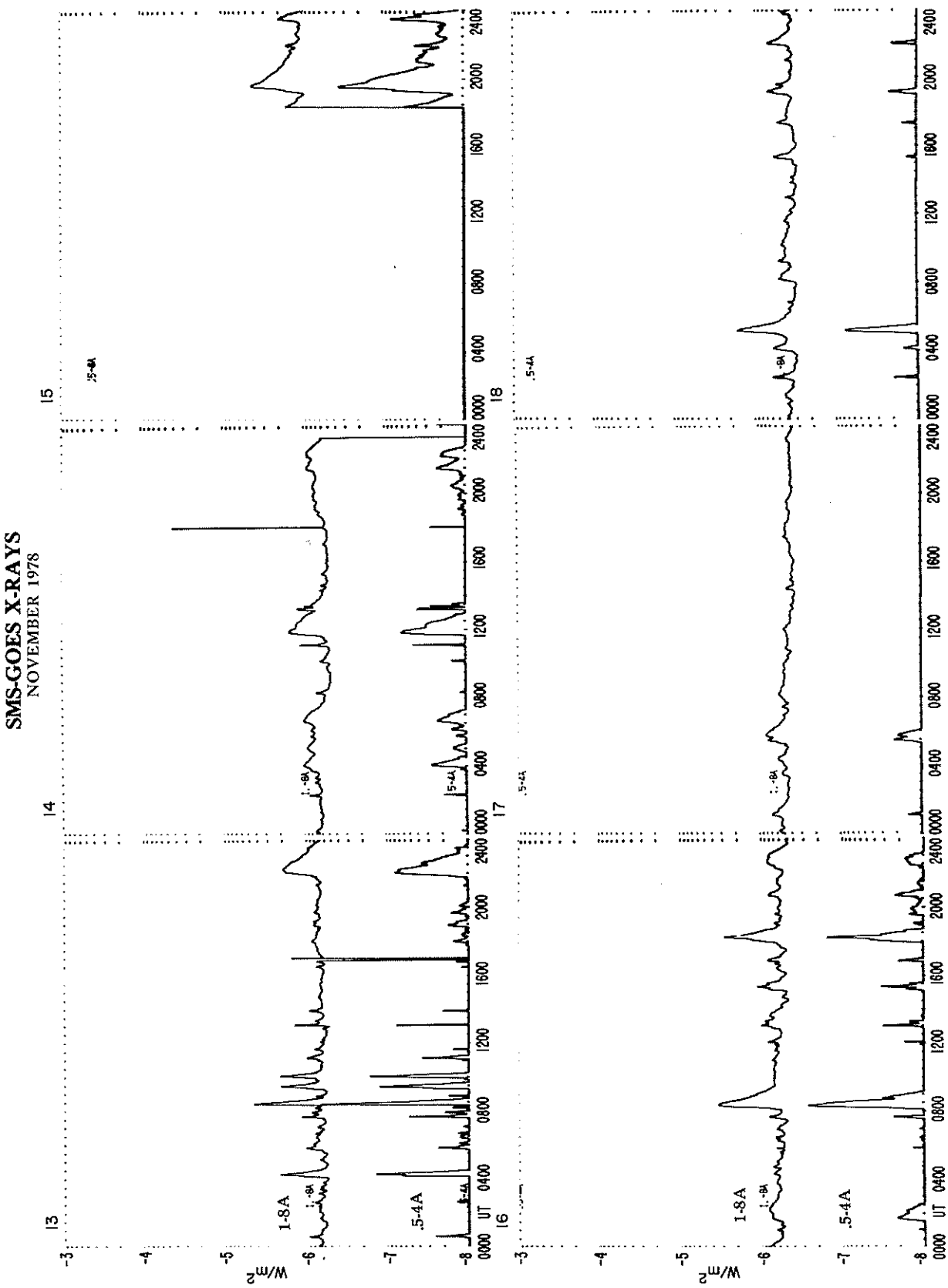
NOVEMBER 1978

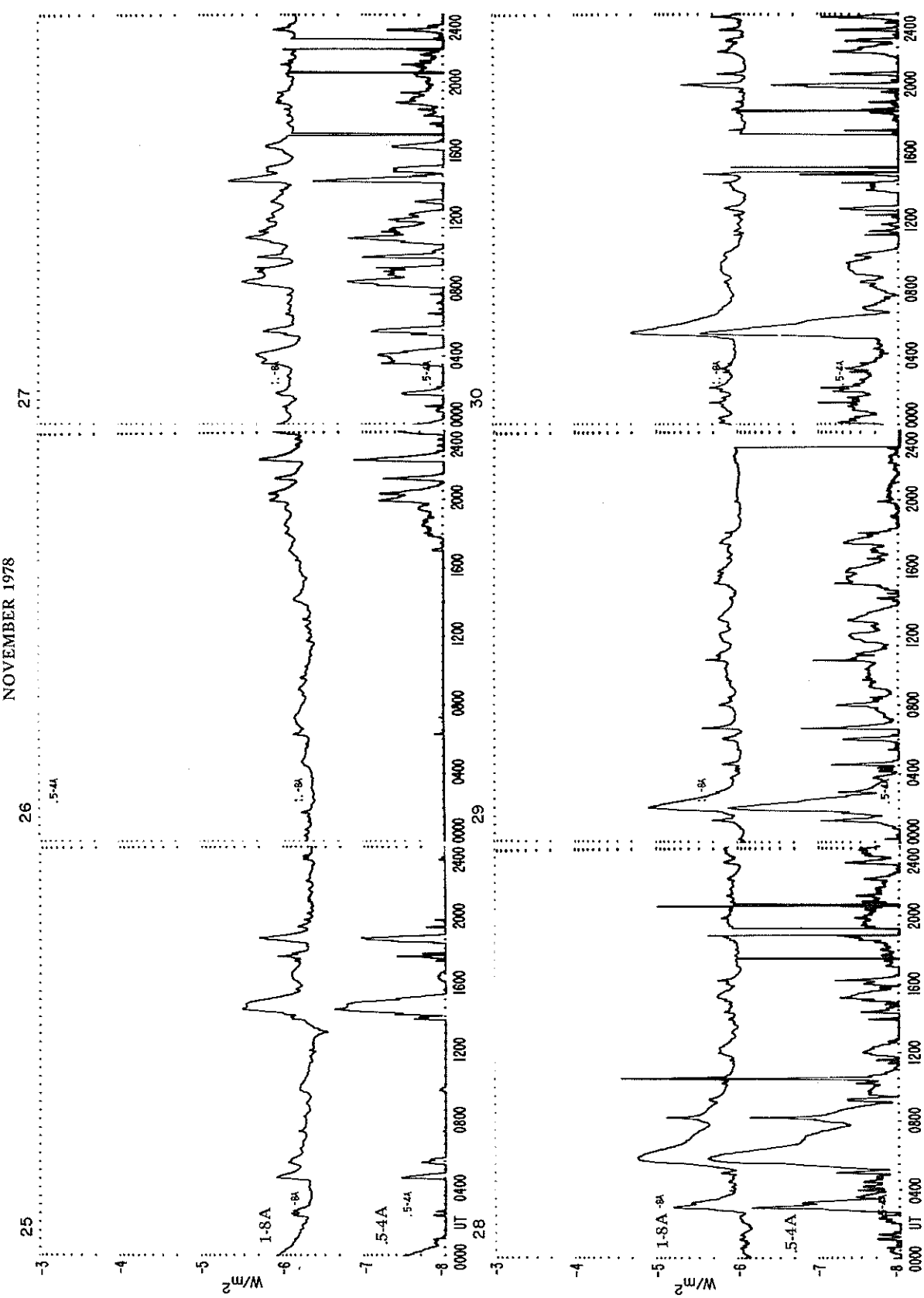


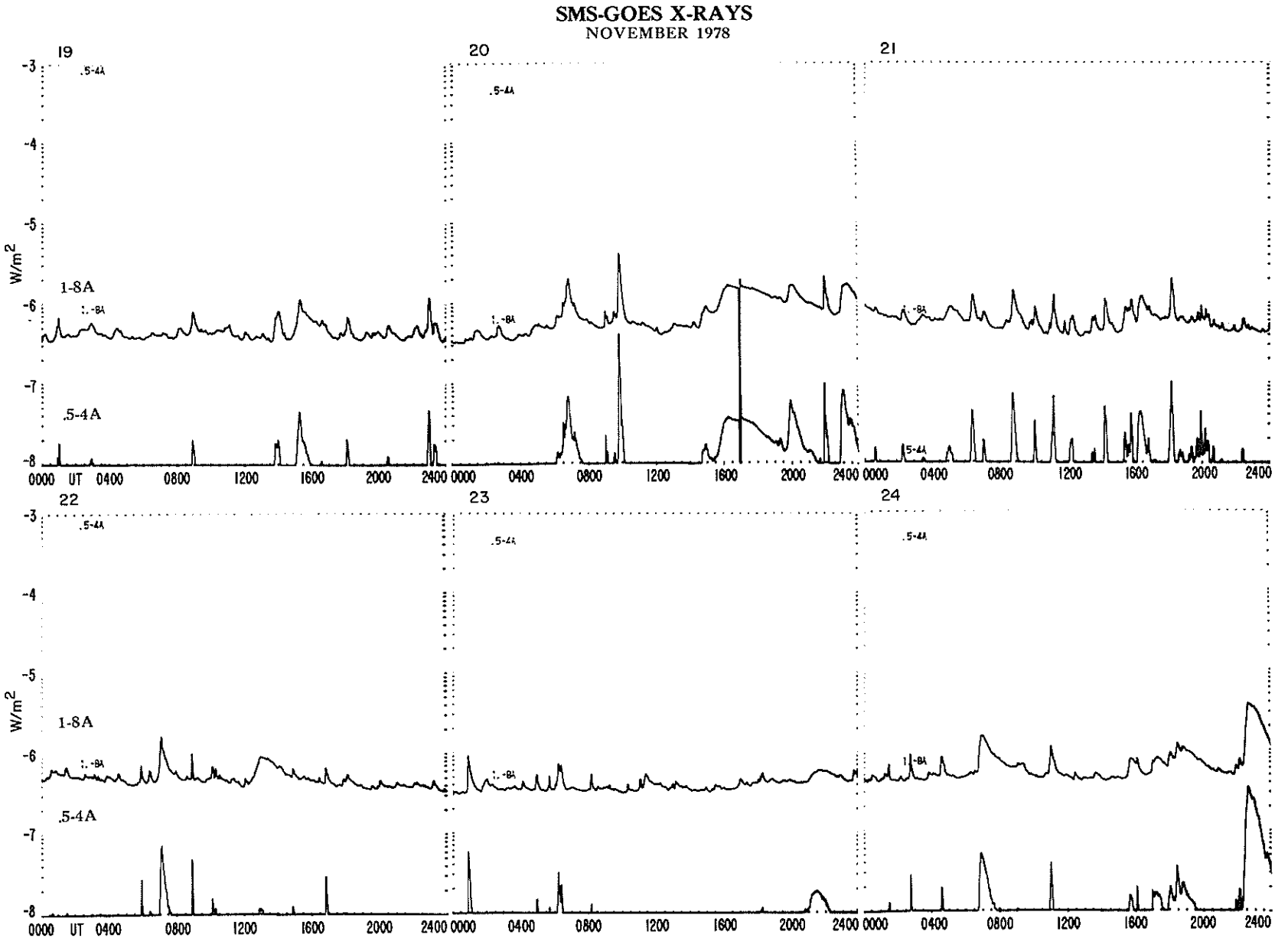

IMP 8 ALPHA PARTICLES
NOVEMBER 1978
U. OF CHICAGO
○ 11-20 MEV/NUC
△ 20-25 MEV/NUC
□ 25-90 MEV/NUC
FLUX (CM-SQ STER SEC MEV)⁻¹
10⁰
10⁻¹
10⁻²
10⁻³
10⁻⁴
10⁻⁵
1
4
7
10
13
16
19
22
25
28


SMS-GOES X-RAYS
NOVEMBER 1978
01
02
03
04
05
06
1-8A
.5-4A
W/m²
-3
-4
-5
-6
-7
-8
0000 UT 0400 0800 1200 1600 2000 2400 0000


SMS-GOES X-RAYS
NOVEMBER 1978
07
08
09
10
11
12
1-8A
.5-4A
W/m²
UT
0000
0400
0800
1200
1600
2000
2400


SMS-GOES X-RAYS
NOVEMBER 1978
13
14
15
16
17
18
1-8A
.5-4A
W/m²
-3
-4
-5
-6
-7
-8
0000 UT 0400 0800 1200 1600 2000 2400 0000 0400 0800 1200 1600 2000 2400 0000 0400 0800 1200 1600 2000 2400


SMS-GOES X-RAYS
NOVEMBER 1978
25
26
27
28
29
30
1-8A
.5-4A
W/m²
UT
0000
0400
0800
1200
1600
2000
2400


SMS-GOES X-RAYS
NOVEMBER 1978
19
20
21
22
23
24
W/m2
-3
-4
-5
-6
-7
-8
1-8A
.5-4A
0000 UT 0400 0800 1200 1600 2000 2400

SGD 417 Part II (Comprehensive)

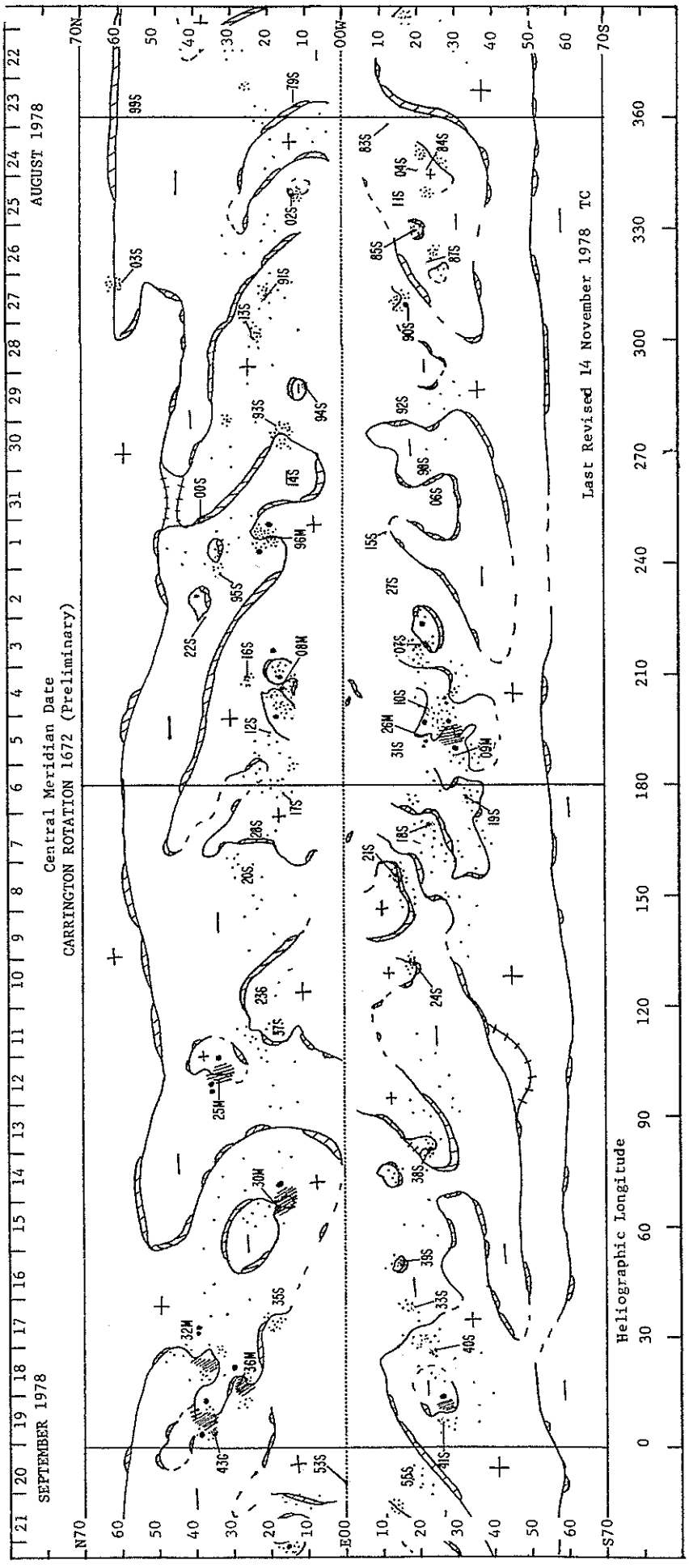
OCTOBER 1978 DATA

Contents

ABBREVIATED CALENDAR RECORD

Hα SYNOPTIC CHART

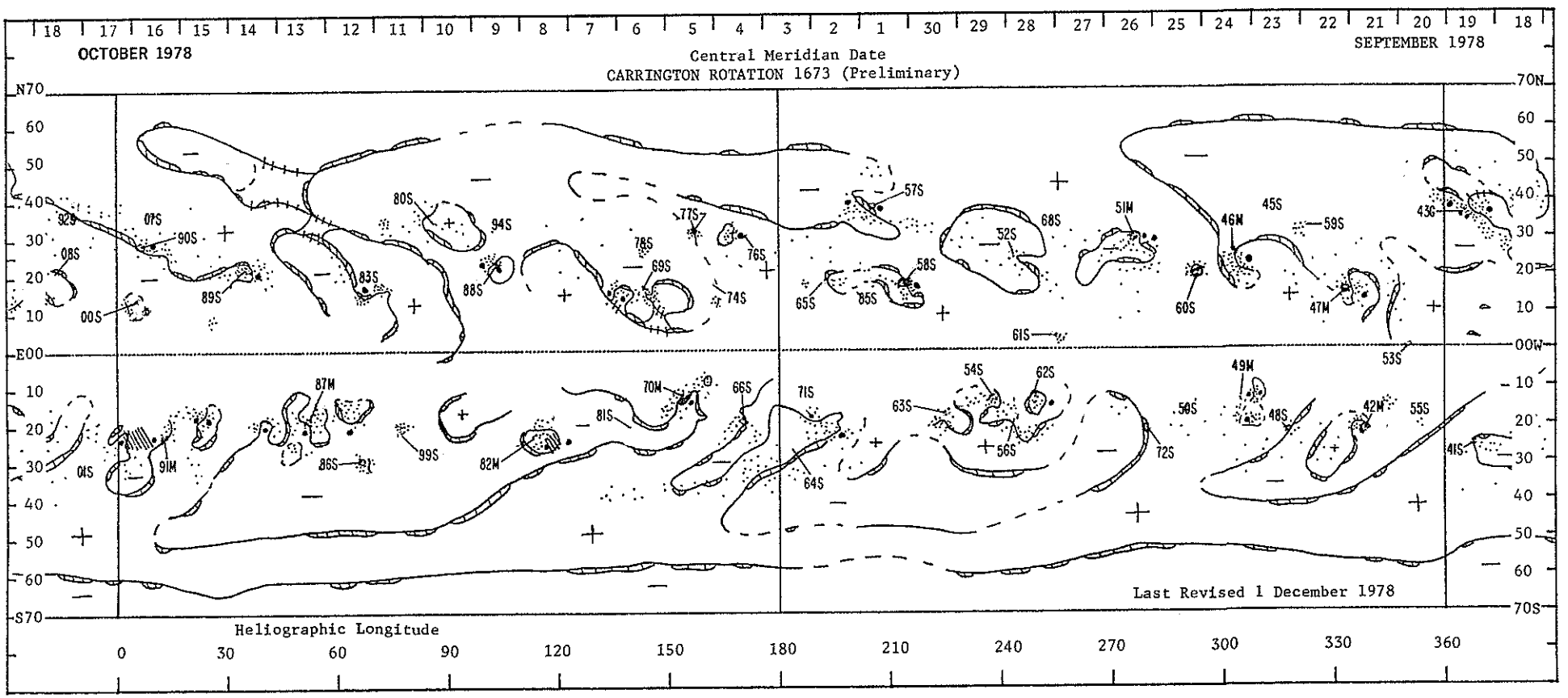
AUGUST - SEPTEMBER 1978



ABBREVIATED CALENDAR RECORD

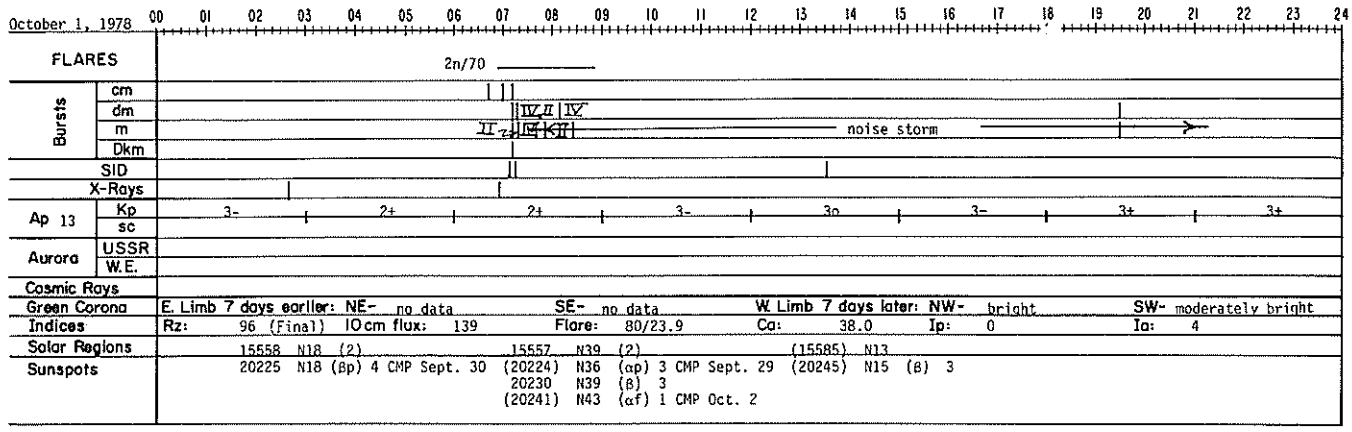
Hα SYNOPTIC CHART

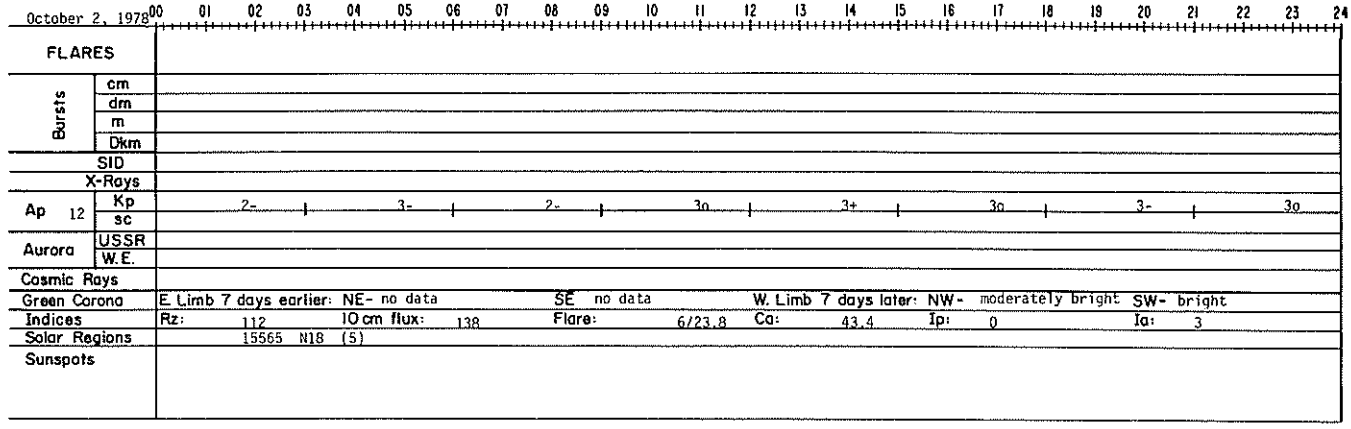
SEPTEMBER - OCTOBER 1978

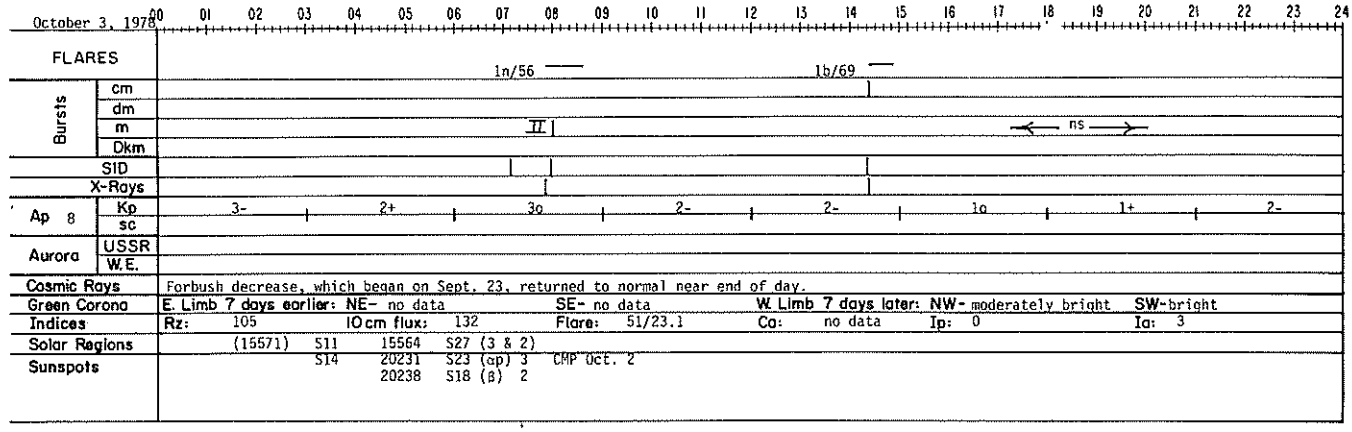


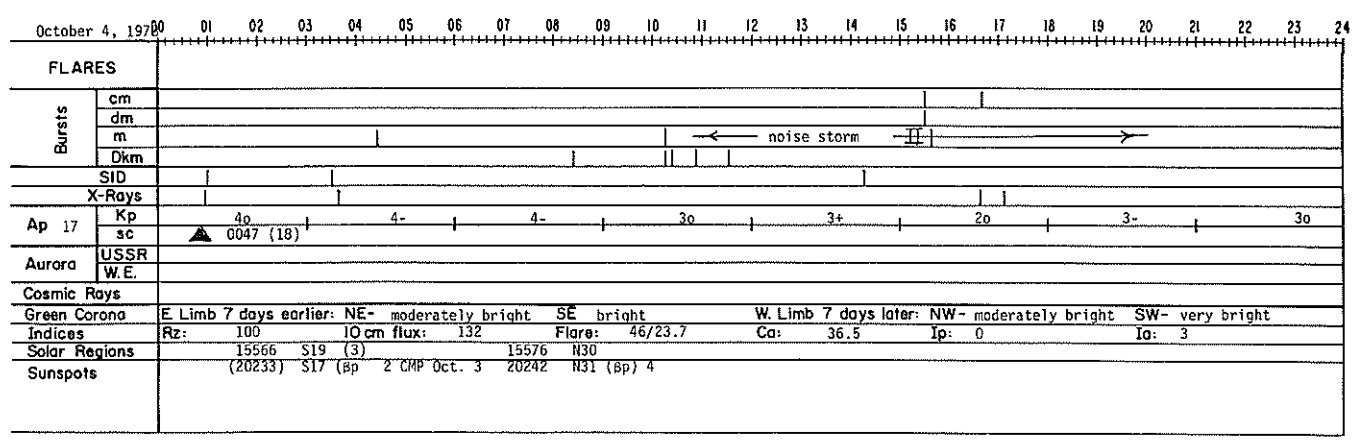
ABBREVIATED CALENDAR RECORD

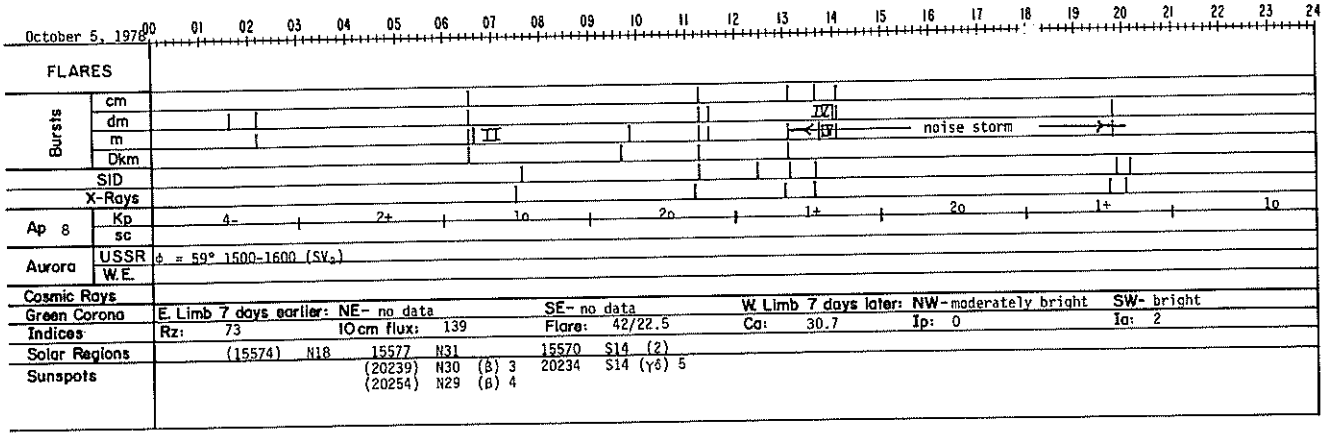
OCTOBER 1978

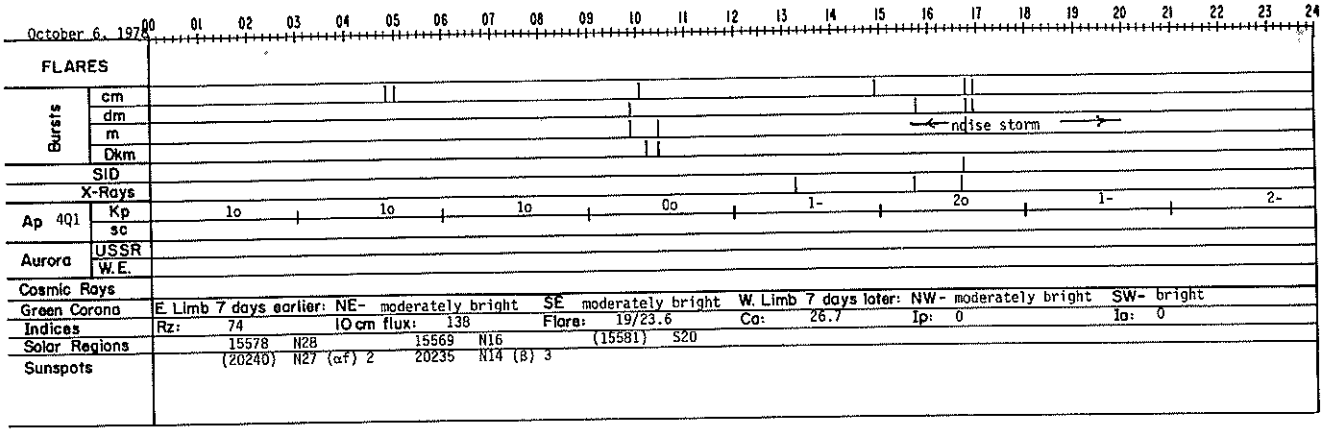


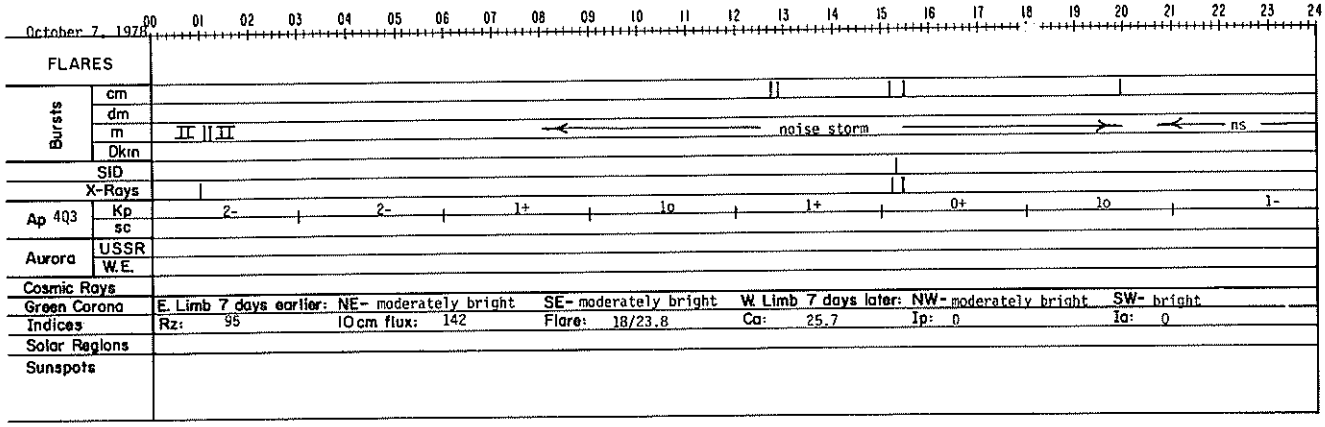


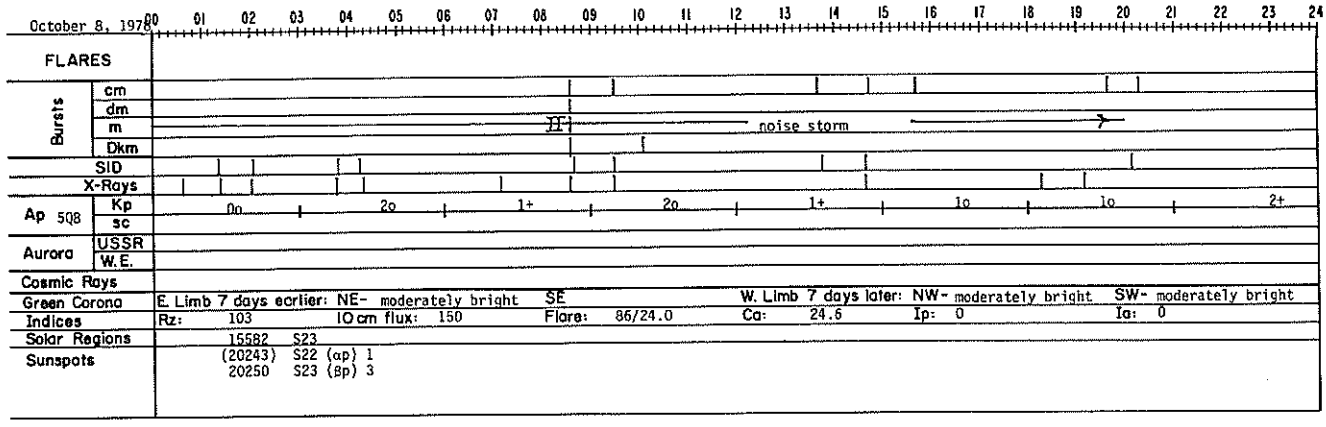


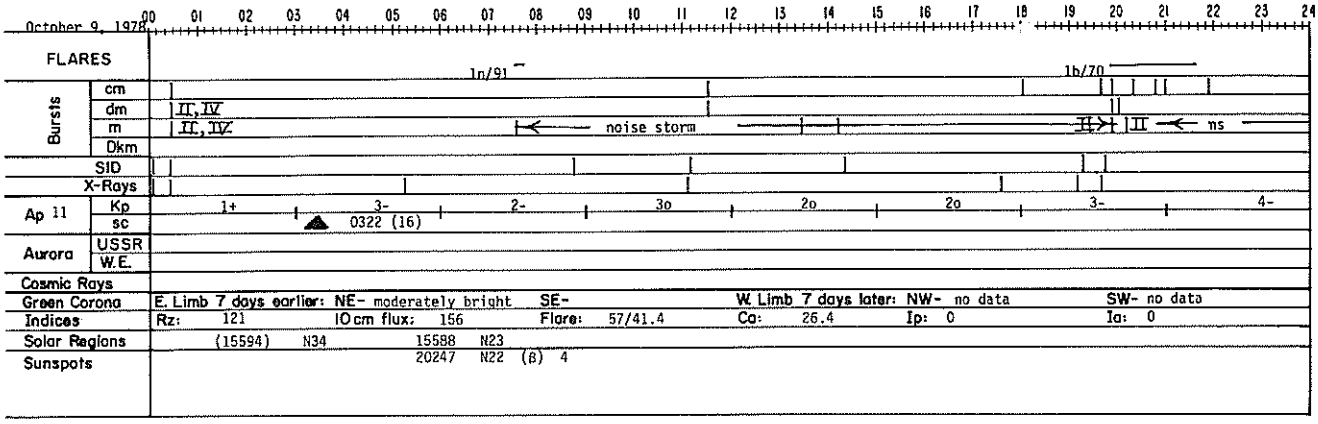


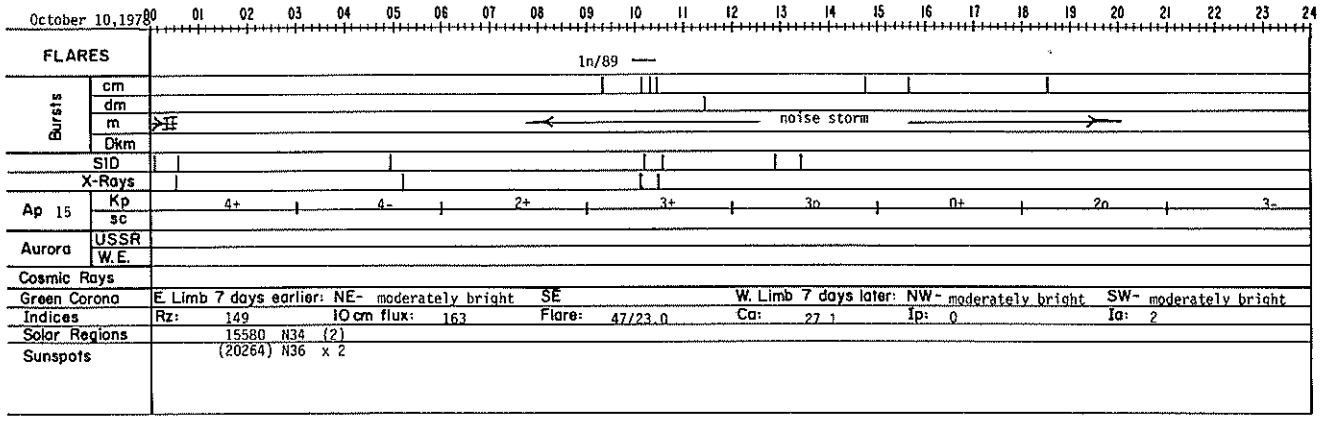

October 5, 1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 8
Kp
4- 2+ 1o 2o 1+ 2o 1+ 1o
sc
Aurora
USSR
φ = 59° 1500-1600 (SV2)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- moderately bright SW- bright
Indices
Rz: 73 10cm flux: 139 Flare: 42/22.5 Ca: 30.7 Ip: 0 Ia: 2
Solar Regions
(15574) N18 15577 N31 15570 S14 (2)
Sunspots
(20239) N30 (β) 3 20234 S14 (γδ) 5
(20254) N29 (β) 4

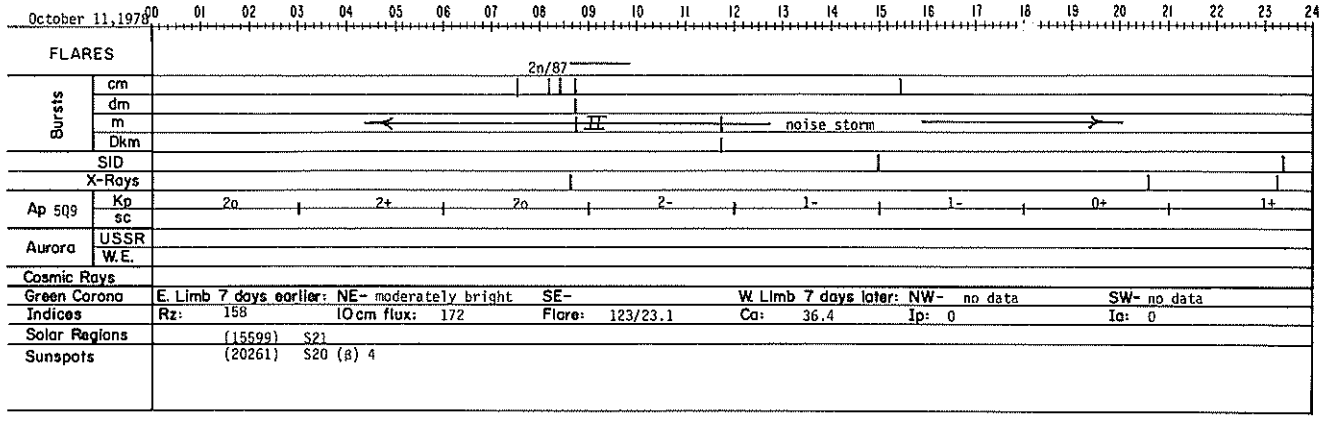

October 6, 1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 401
Kp
1o 1o 1o 0o 1- 2o 1- 2-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- moderately bright SE moderately bright W. Limb 7 days later: NW- moderately bright SW- bright
Indices
Rz: 74 10cm flux: 138 Flare: 19/23.6 Ca: 26.7 Ip: 0 Ia: 0
Solar Regions
15578 N28 15569 N16 (15581) S20
Sunspots
(20240) N27 (αf) 2 20235 N14 (β) 3

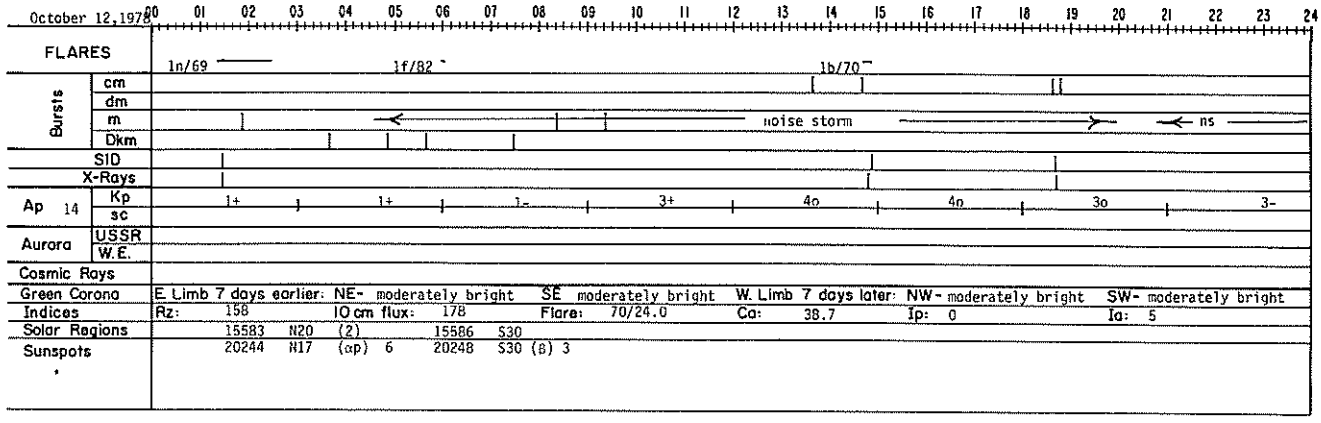

October 7, 1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 403
Kp
2- 2- 1+ 1o 1+ 0+ 1o 1-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE- moderately bright W. Limb 7 days later: NW- moderately bright SW- bright
Indices
Rz: 95 10cm flux: 142 Flare: 18/23.8 Ca: 25.7 Ip: 0 Ia: 0
Solar Regions
Sunspots

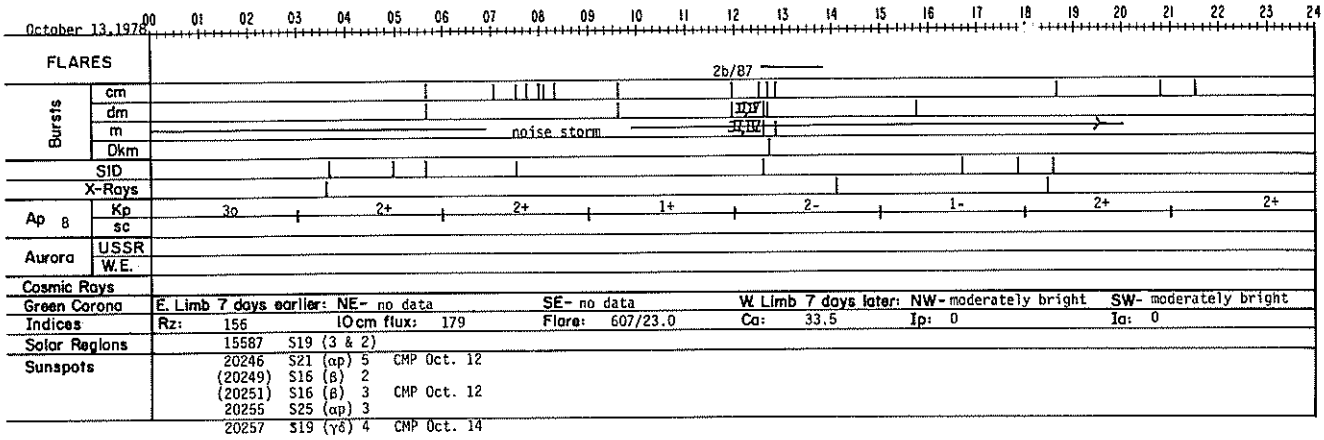

October 8, 1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 508
Kp
0o 2o 1+ 2o 1+ 1o 1o 2+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 103 10cm flux: 150 Flare: 86/24.0 Ca: 24.6 Ip: 0 Ia: 0
Solar Regions
15582 S23
Sunspots
(20243) S22 (αp) 1
20250 S23 (βp) 3

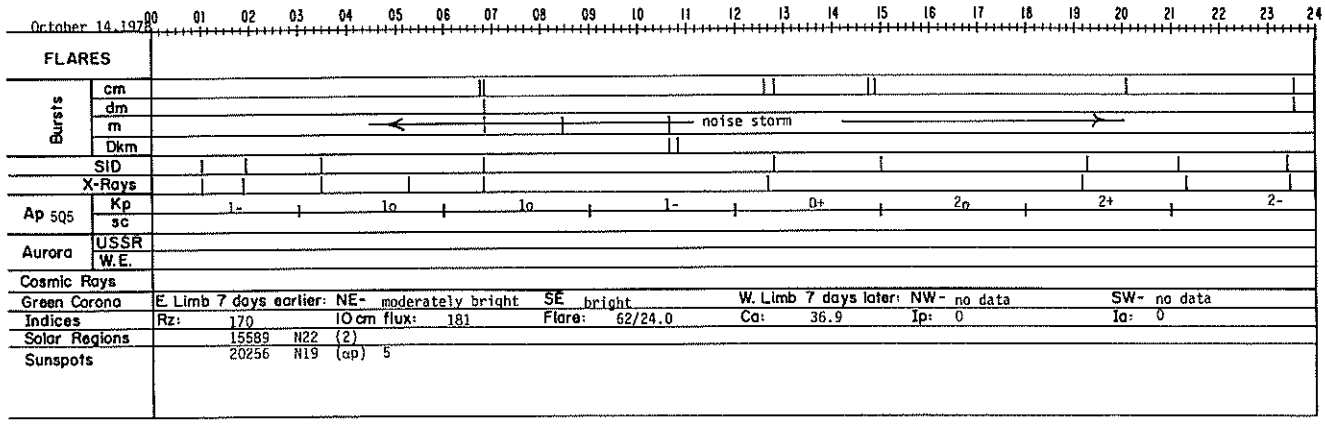

October 9, 1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/91
1b/70
Bursts
cm
dm
m
Dkm
II, IV
II, IV
noise storm
II
II
ns
SID
X-Rays
Ap 11
Kp
sc
1+ 3- 2- 3o 2o 2o 3- 4-
0322 (16)
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE-
W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 121 10 cm flux: 156 Flare: 57/41.4 Ca: 26.4 Ip: 0 Ia: 0
Solar Regions
(15594) N34 15588 N23
Sunspots
20247 N22 (B) 4

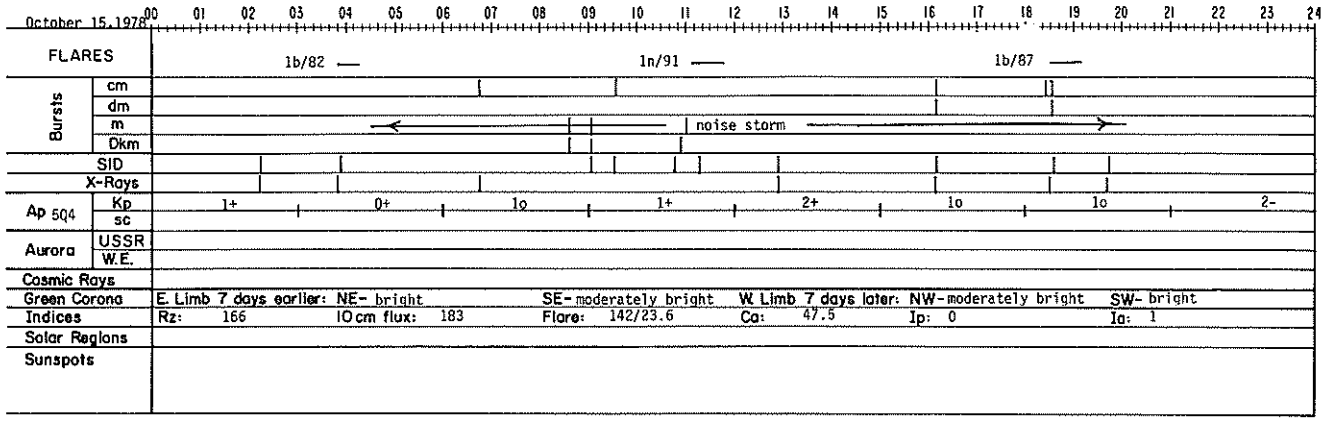

October 10,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/89
Bursts
cm
dm
m
Dkm
II
noise storm
SID
X-Rays
Ap 15
Kp
sc
4+ 4- 2+ 3+ 3o 0+ 2o 3-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE
W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 149 10 cm flux: 163 Flare: 47/23.0 Ca: 27.1 Ip: 0 Ia: 2
Solar Regions
15580 N34 (2)
Sunspots
(20264) N36 x 2

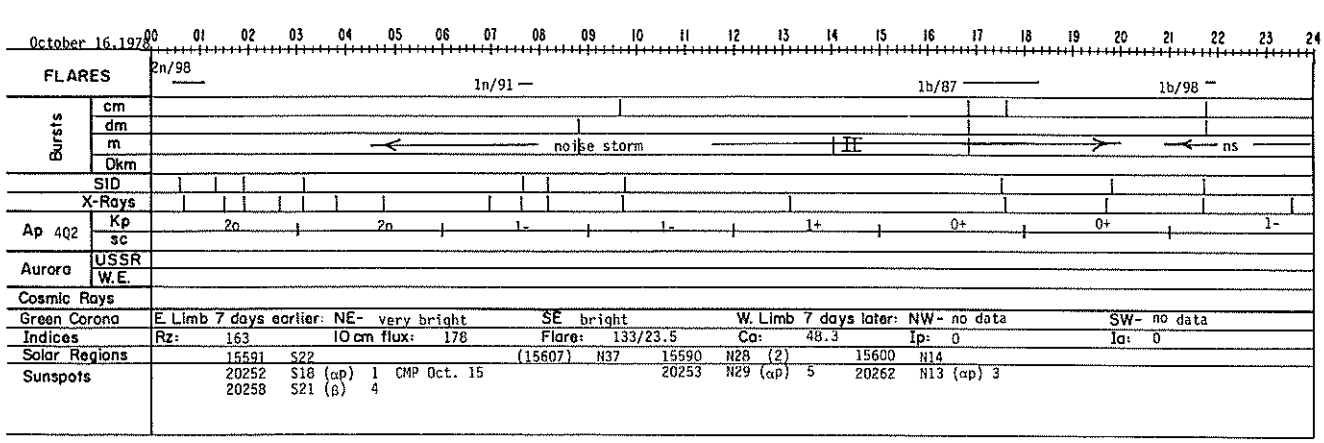

October 11,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
2n/87
Bursts
cm
dm
m
Dkm
II
noise storm
SID
X-Rays
Ap 509
Kp
sc
2o 2+ 2o 2- 1- 1- 0+ 1+
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE-
W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 158 10 cm flux: 172 Flare: 123/23.1 Ca: 36.4 Ip: 0 Ia: 0
Solar Regions
(15599) S21
Sunspots
(20261) S20 (B) 4

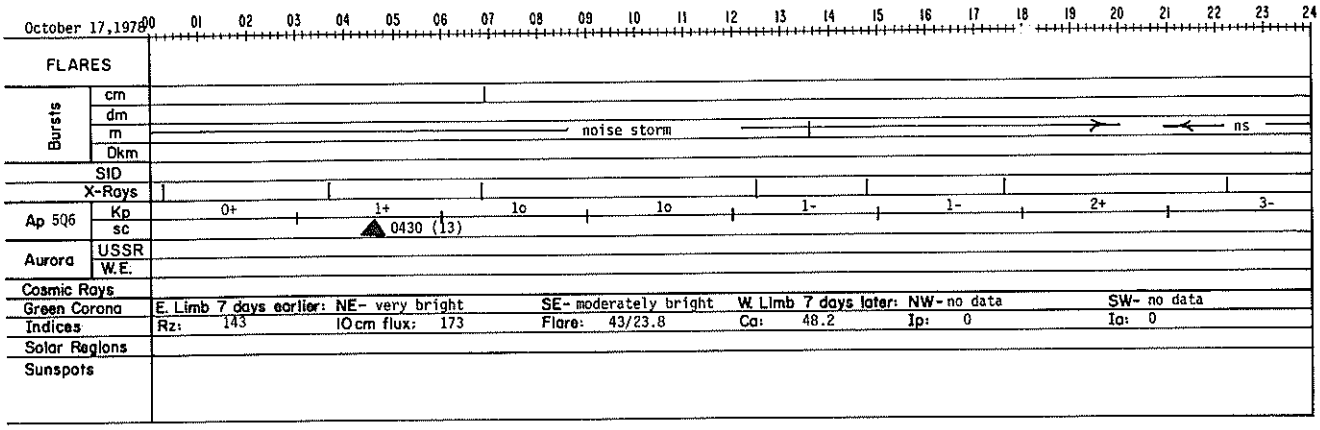

October 12,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/69
1f/82
1b/70
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 14
Kp
sc
1+ 1+ 1- 3+ 4o 4o 3o 3-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE moderately bright
W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 158 10 cm flux: 178 Flare: 70/24.0 Ca: 38.7 Ip: 0 Ia: 5
Solar Regions
15583 N20 (2) 15586 S30
Sunspots
20244 N17 (ap) 6 20248 S30 (B) 3

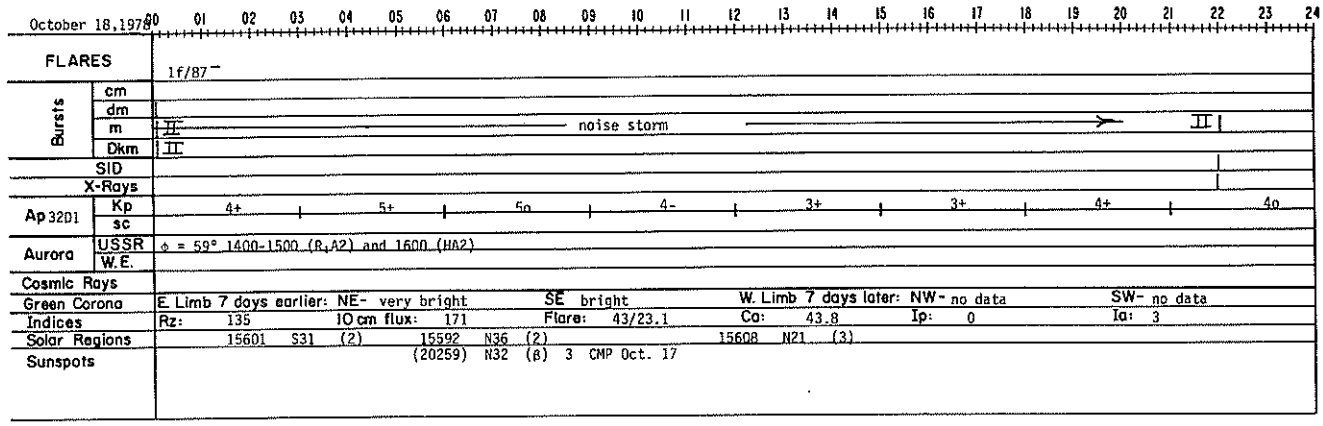

October 13,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
2b/87
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 8
Kp
sc
3o 2+ 2+ 1+ 2- 1- 2+ 2+
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 156 10cm flux: 179 Flare: 607/23.0 Ca: 33.5 Ip: 0 Ia: 0
Solar Regions
15587 S19 (3 & 2)
Sunspots
20246 S21 (αp) 5 CMP Oct. 12
(20249) S16 (β) 2
(20251) S16 (β) 3 CMP Oct. 12
20255 S25 (αp) 3
20257 S19 (γδ) 4 CMP Oct. 14

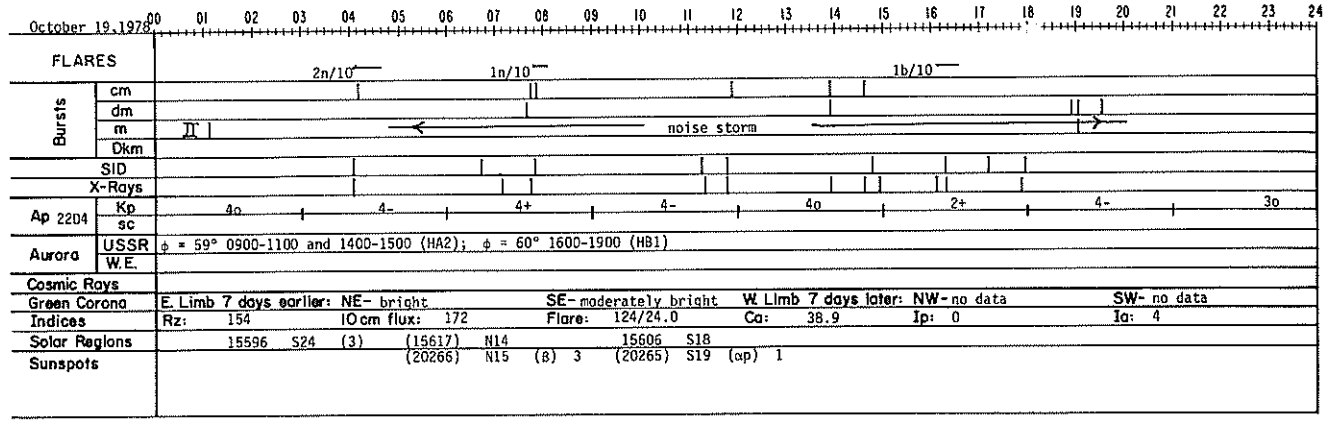

October 14,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 505
Kp
sc
1- 1o 1o 1- 0+ 2o 2+ 2-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 170 10cm flux: 181 Flare: 62/24.0 Ca: 36.9 Ip: 0 Ia: 0
Solar Regions
15589 N22 (2)
Sunspots
20256 N19 (αp) 5

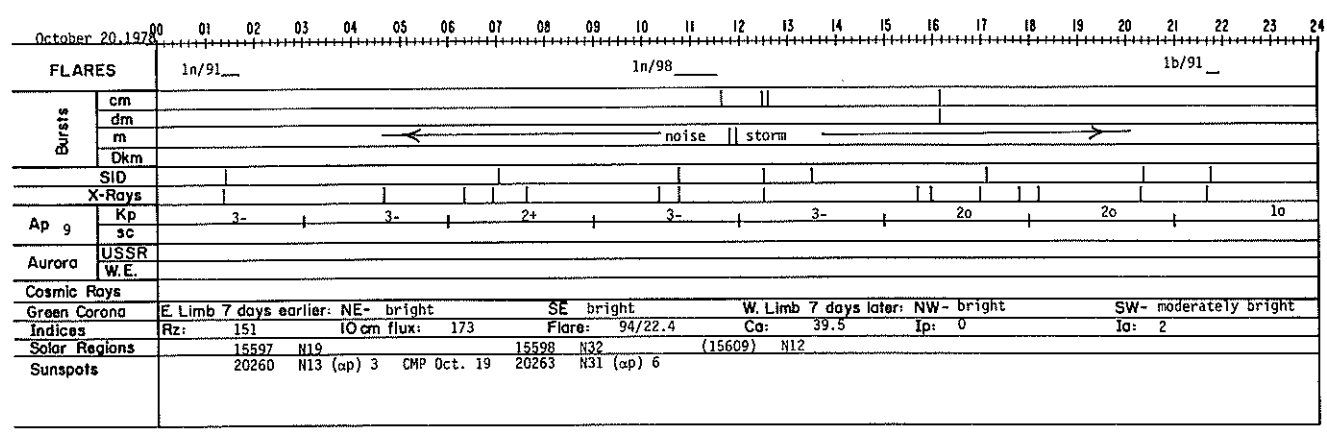

October 15,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/82
1n/91
1b/87
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 504
Kp
sc
1+ 0+ 1o 1+ 2+ 1o 1o 2-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- bright SE- moderately bright W. Limb 7 days later: NW- moderately bright SW- bright
Indices
Rz: 166 10cm flux: 183 Flare: 142/23.6 Ca: 47.5 Ip: 0 Ia: 1
Solar Regions
Sunspots

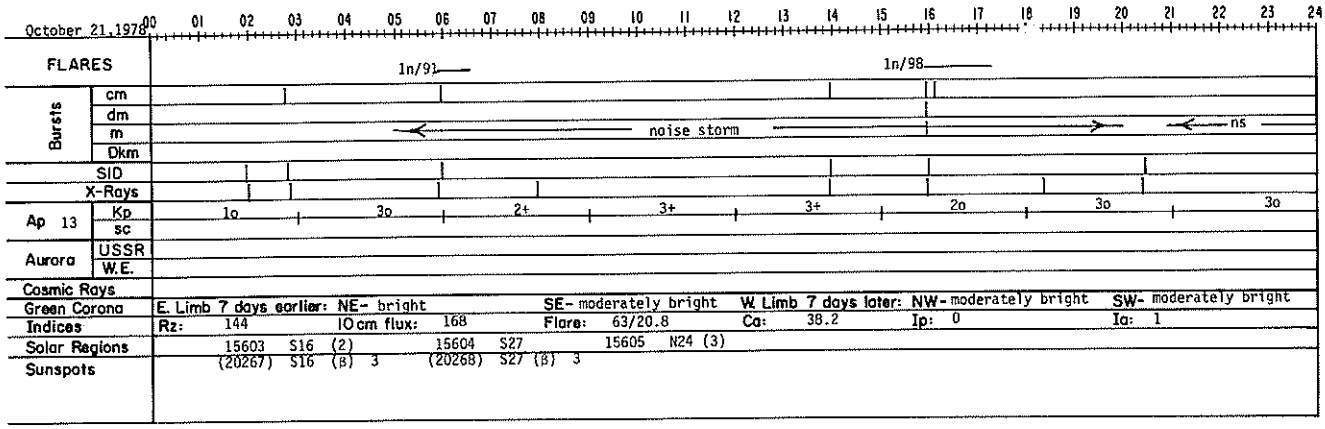

October 16,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
2n/98
1n/91
1b/87
1b/98
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 402
Kp
sc
2o 2o 1- 1- 1+ 0+ 0+ 1-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- very bright SE bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 163 10cm flux: 178 Flare: 133/23.5 Ca: 48.3 Ip: 0 Ia: 0
Solar Regions
15591 S22 (15607) N37 15590 N28 (2) 15600 N14
Sunspots
20252 S18 (αp) 1 CMP Oct. 15 20253 N29 (αp) 5 20262 N13 (αp) 3
20258 S21 (β) 4

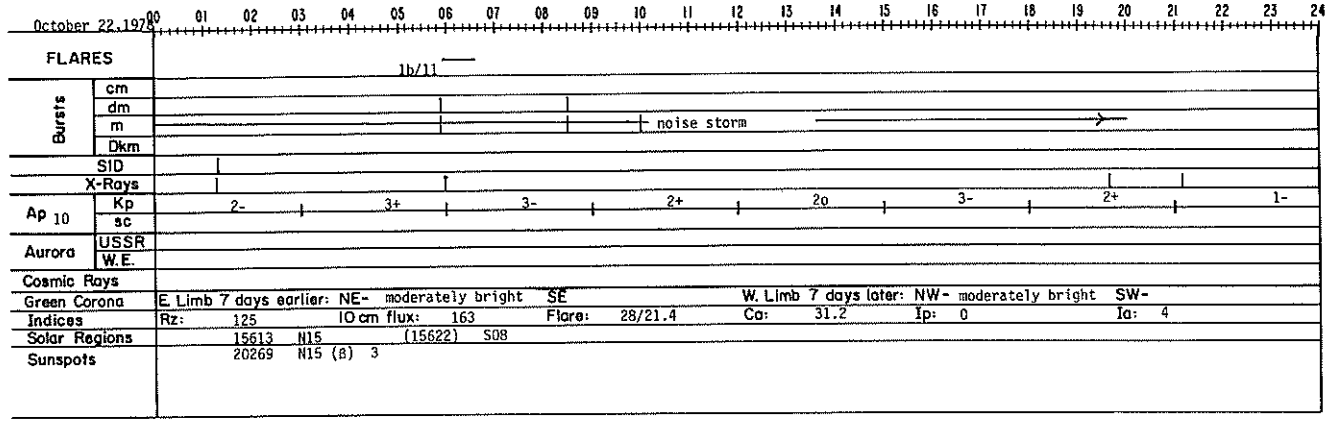

October 17,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 506
Kp
sc
0+ 1+ 1o 1o 1- 1- 2+ 3-
0430 (13)
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- very bright SE- moderately bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 143 10 cm flux: 173 Flare: 43/23.8 Ca: 48.2 Ip: 0 Ia: 0
Solar Regions
Sunspots

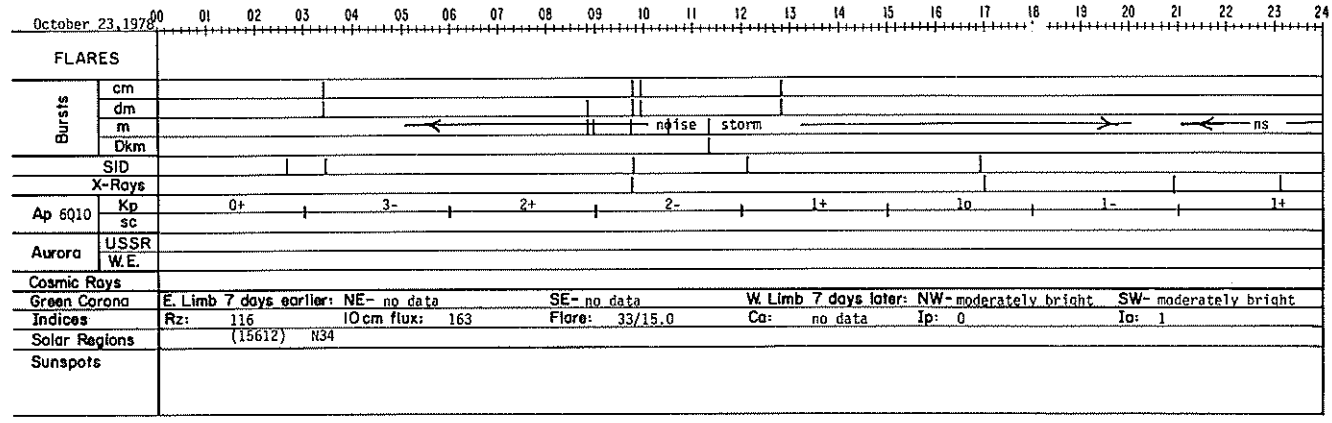

October 18,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1f/87
Bursts
cm
dm
m
Dkm
II
noise storm
II
II
SID
X-Rays
Ap 3201
Kp
sc
4+ 5+ 5o 4- 3+ 3+ 4+ 4o
Aurora
USSR
W.E.
ϕ = 59° 1400-1500 (R,A2) and 1600 (HA2)
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- very bright SE bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 135 10 cm flux: 171 Flare: 43/23.1 Ca: 43.8 Ip: 0 Ia: 3
Solar Regions
15601 S31 (2) 15592 N36 (2) 15608 N21 (3)
Sunspots
(20259) N32 (β) 3 CMP Oct. 17

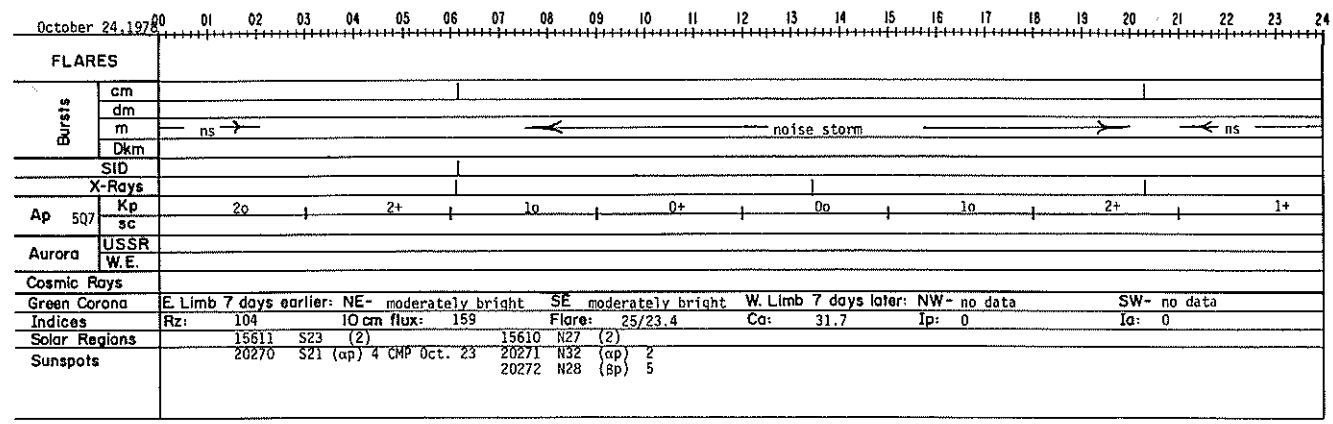

October 19,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
2n/10
1n/10
1b/10
Bursts
cm
dm
m
Dkm
II
noise storm
SID
X-Rays
Ap 2204
Kp
sc
4o 4- 4+ 4- 4o 2+ 4- 3o
Aurora
USSR
W.E.
ϕ = 59° 0900-1100 and 1400-1500 (HA2); ϕ = 60° 1600-1900 (HB1)
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- bright SE- moderately bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 154 10 cm flux: 172 Flare: 124/24.0 Ca: 38.9 Ip: 0 Ia: 4
Solar Regions
15596 S24 (3) (15617) N14 15606 S18
Sunspots
(20266) N15 (β) 3 (20265) S19 (αp) 1

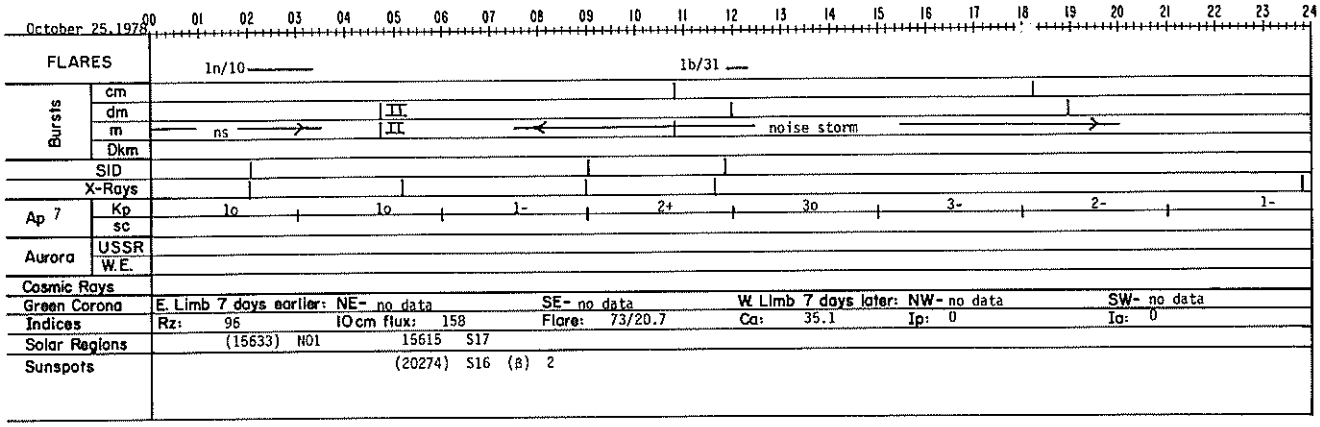

October 20,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/91
1n/98
1b/91
Bursts
cm
dm
m
Dkm
noise || storm
SID
X-Rays
Ap 9
Kp
sc
3- 3- 2+ 3- 3- 2o 2o 1o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- bright SE bright W. Limb 7 days later: NW- bright SW- moderately bright
Indices
Rz: 151 10 cm flux: 173 Flare: 94/22.4 Ca: 39.5 Ip: 0 Ia: 2
Solar Regions
15597 N19 15598 N32 (15609) N12
Sunspots
20260 N13 (αp) 3 CMP Oct. 19 20263 N31 (αp) 6

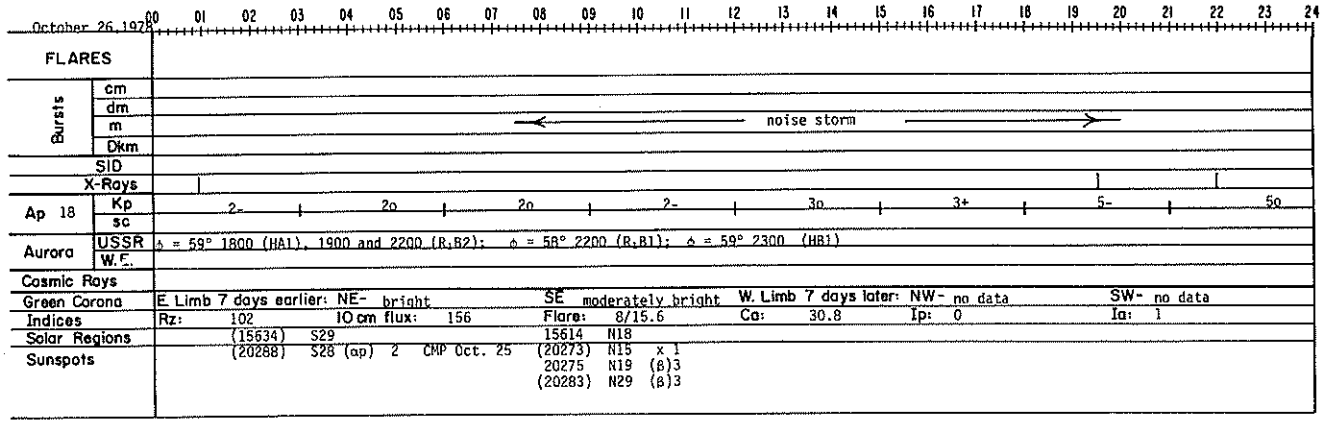

October 21,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/91
1n/98
Bursts
cm
dm
m
noise storm
ns
Dkm
SID
X-Rays
Ap 13
Kp
1o 3o 2+ 3+ 3+ 2o 3o 3o
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- bright SE- moderately bright W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 144 IO cm flux: 168 Flare: 63/20.8 Ca: 38.2 Ip: 0 Ia: 1
Solar Regions
15603 S16 (2) 15604 S27 15605 N24 (3)
Sunspots
(20267) S16 (β) 3 (20268) S27 (β) 3

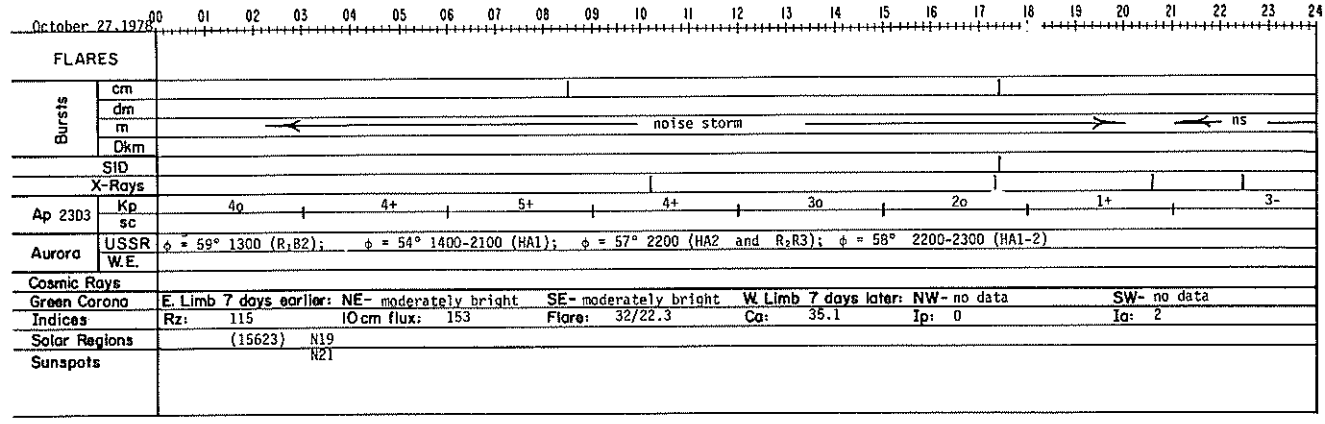

October 22,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/11
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 10
Kp
2- 3+ 3- 2+ 2o 3- 2+ 1-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE W. Limb 7 days later: NW- moderately bright SW-
Indices
Rz: 125 IO cm flux: 163 Flare: 28/21.4 Ca: 31.2 Ip: 0 Ia: 4
Solar Regions
15613 N15 (15622) S08
Sunspots
20269 N15 (β) 3

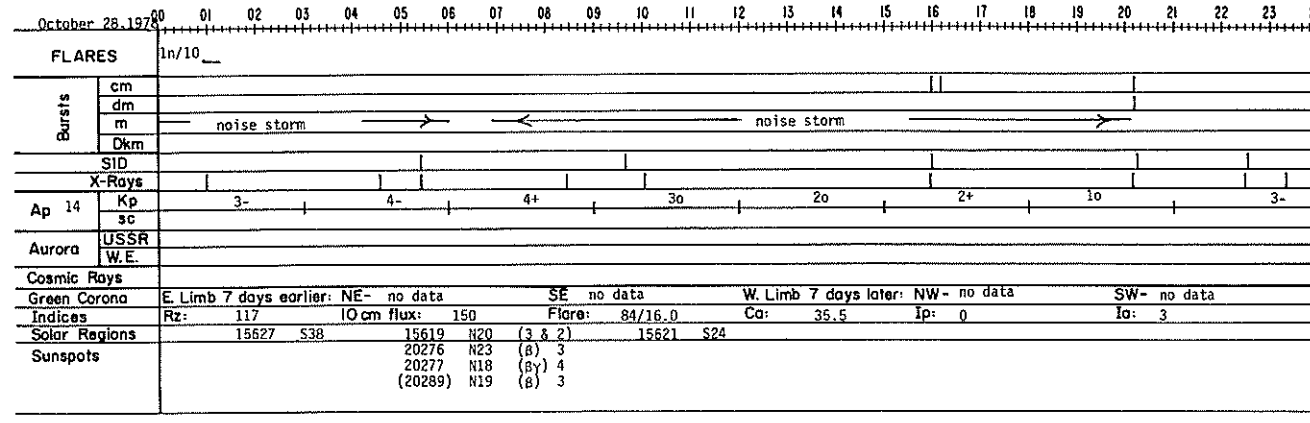

October 23,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
noise storm
ns
Dkm
SID
X-Rays
Ap 6Q10
Kp
0+ 3- 2+ 2- 1+ 1o 1- 1+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- moderately bright SW- moderately bright
Indices
Rz: 116 IO cm flux: 163 Flare: 33/15.0 Ca: no data Ip: 0 Ia: 1
Solar Regions
(15612) N34
Sunspots

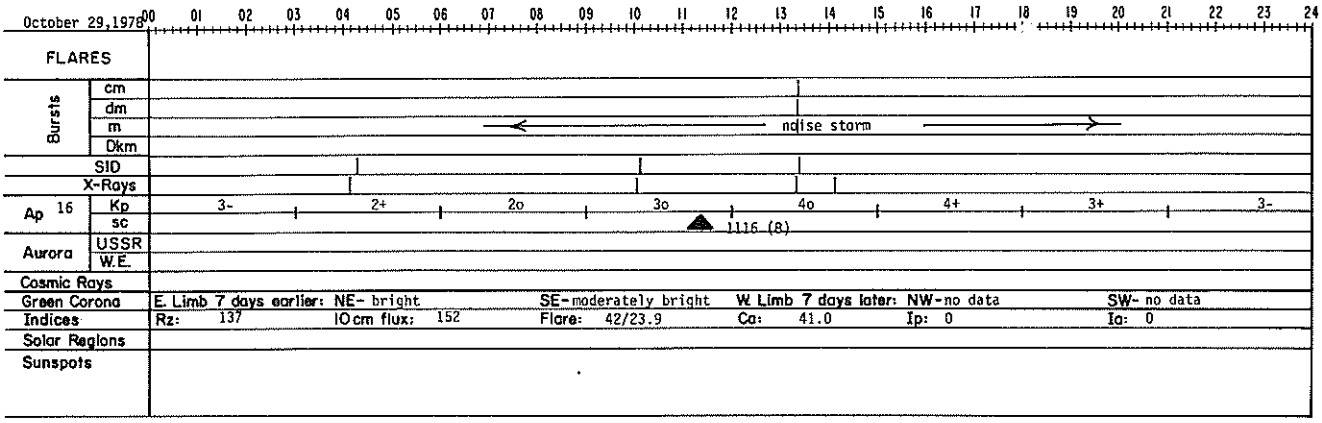

October 24,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
ns
noise storm
ns
Dkm
SID
X-Rays
Ap 5Q7
Kp
2o 2+ 1o 0+ 0o 1o 2+ 1+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- moderately bright SE moderately bright W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 104 IO cm flux: 159 Flare: 25/23.4 Ca: 31.7 Ip: 0 Ia: 0
Solar Regions
15611 S23 (2) 15610 N27 (2)
Sunspots
20270 S21 (αp) 4 CMP Oct. 23 20271 N32 (αp) 2
20272 N28 (βp) 5

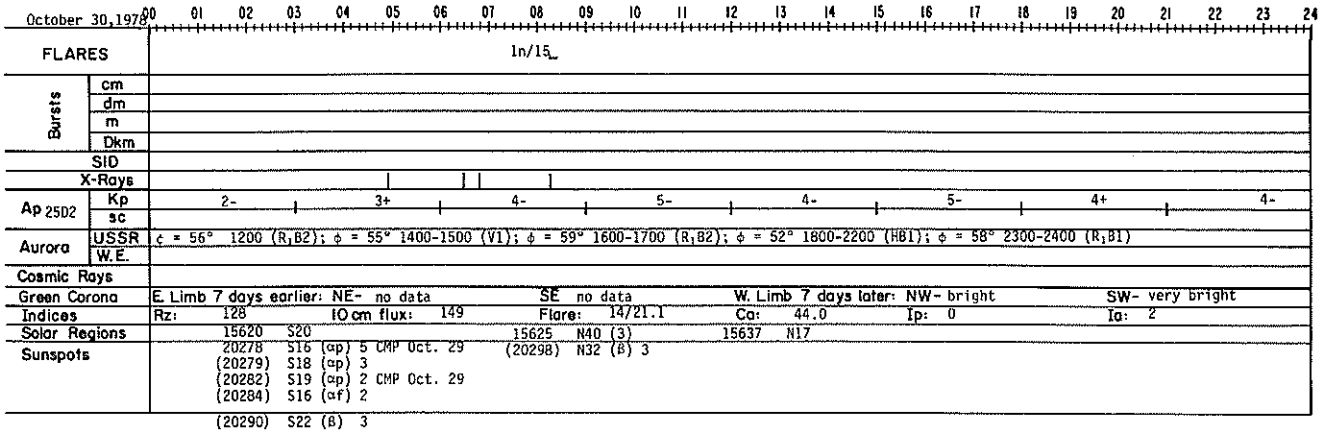

October 25,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/10
1b/31
Bursts
cm
dm
m
Dkm
ns
noise storm
SID
X-Rays
Ap 7
Kp
sc
1o 1o 1- 2+ 3o 3- 2- 1-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- no data SW- no data
Rz: 96 IOcm flux: 158 Flare: 73/20.7 Ca: 35.1 Ip: 0 Ia: 0
(15633) N01 15615 S17
(20274) S16 (β) 2

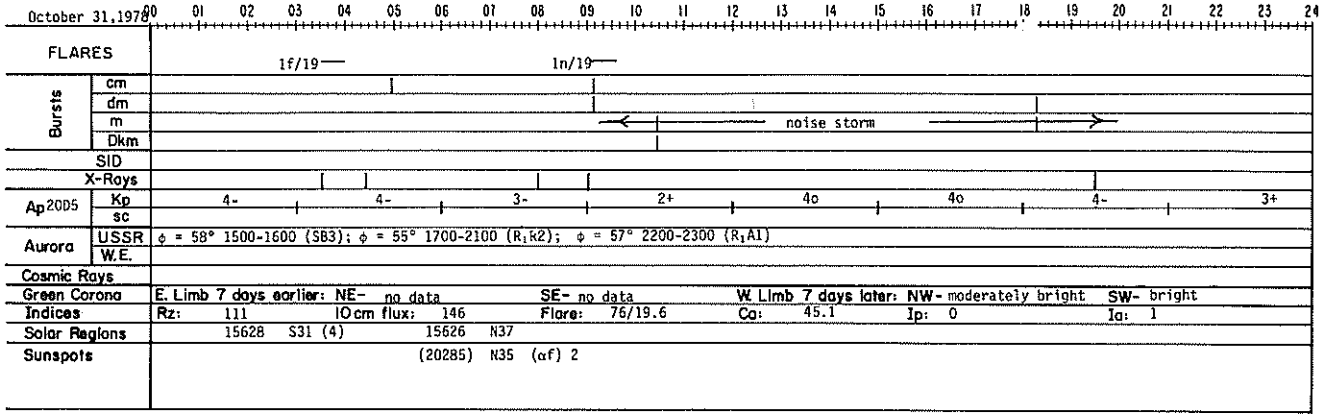

October 26,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 18
Kp
sc
2- 2o 2o 2- 3o 3+ 5- 5o
Aurora
USSR
W.E.
δ = 59° 1800 (HA1), 1900 and 2200 (R1B2); ϕ = 58° 2200 (R1B1); δ = 59° 2300 (HB1)
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
E. Limb 7 days earlier: NE- bright SE moderately bright W. Limb 7 days later: NW- no data SW- no data
Rz: 102 IOcm flux: 156 Flare: 8/15.6 Ca: 30.8 Ip: 0 Ia: 1
(15634) S29 15614 N18
(20288) S28 (αp) 2 CMP Oct. 25 (20273) N15 x 1
20275 N19 (β)3
(20283) N29 (β)3


October 27,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 2303
Kp
sc
4o 4+ 5+ 4+ 3o 2o 1+ 3-
Aurora
USSR
W.E.
ϕ = 59° 1300 (R1B2); ϕ = 54° 1400-2100 (HA1); ϕ = 57° 2200 (HA2 and R2R3); ϕ = 58° 2200-2300 (HA1-2)
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
E. Limb 7 days earlier: NE- moderately bright SE- moderately bright W. Limb 7 days later: NW- no data SW- no data
Rz: 115 IOcm flux: 153 Flare: 32/22.3 Ca: 35.1 Ip: 0 Ia: 2
(15623) N19
N21


October 28,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/10
Bursts
cm
dm
m
Dkm
noise storm
noise storm
SID
X-Rays
Ap 14
Kp
sc
3- 4- 4+ 3o 2o 2+ 1o 3-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
E. Limb 7 days earlier: NE- no data SE no data W. Limb 7 days later: NW- no data SW- no data
Rz: 117 IOcm flux: 150 Flare: 84/16.0 Ca: 35.5 Ip: 0 Ia: 3
15627 S38 15619 N20 (3 & 2) 15621 S24
20276 N23 (β) 3
20277 N18 (βγ) 4
(20289) N19 (β) 3


October 29,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 16
Kp
3- 2+ 2o 3o 4o 4+ 3+ 3-
sc
1116 (B)
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- bright SE-moderately bright W. Limb 7 days later: NW-no data SW- no data
Indices
Rz: 137 10cm flux: 152 Flare: 42/23.9 Ca: 41.0 Ip: 0 Ia: 0
Solar Regions
Sunspots


October 30,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/15
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 25D2
Kp
2- 3+ 4- 5- 4- 5- 4+ 4-
sc
USSR
¢ = 56° 1200 (R;B2); ϕ = 55° 1400-1500 (V1); ϕ = 59° 1600-1700 (R;B2); ϕ = 52° 1800-2200 (HB1); ϕ = 58° 2300-2400 (R;B1)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE no data W. Limb 7 days later: NW- bright SW- very bright
Indices
Rz: 128 10cm flux: 149 Flare: 14/21.1 Ca: 44.0 Ip: 0 Ia: 2
Solar Regions
15620 S20 15625 N40 (3) 15637 N17
Sunspots
20278 S16 (αp) 5 CMP Oct. 29 (20298) N32 (B) 3
(20279) S18 (αp) 3
(20282) S19 (αp) 2 CMP Oct. 29
(20284) S16 (αf) 2
(20290) S22 (B) 3


October 31,1978
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1f/19
1n/19
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 20D5
Kp
4- 4- 3- 2+ 4o 4o 4- 3+
sc
Aurora
USSR
ϕ = 58° 1500-1600 (SB3); ϕ = 55° 1700-2100 (R;R2); ϕ = 57° 2200-2300 (R;A1)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- moderately bright SW- bright
Indices
Rz: 111 10cm flux: 146 Flare: 76/19.6 Ca: 45.1 Ip: 0 Ia: 1
Solar Regions
15628 S31 (4) 15626 N37
Sunspots
(20285) N35 (αf) 2

REGIONAL FLARE INDEX

INCLUDES ALL FLARES

OCTOBER 1978

MC MATH PLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
15564	S28	78/10/03.4	78/09/27	78/10/07	7.09	.64	4
15566	S19	78/10/04.4	78/10/01	78/10/06	9.08	1.51	3
15577	N30	78/10/05.5	78/10/10	78/10/10	1.73	1.73	2
15570	S14	78/10/05.6	78/09/29	78/10/12	286.18	20.44	69
15578	N28	78/10/06.4	78/10/04	78/10/04	6.76	6.76	2
15569	N16	78/10/06.5	78/09/30	78/10/12	51.14	3.93	9
15582	S23	78/10/08.5	78/10/09	78/10/15	63.14	9.02	43
15588	N23	78/10/09.6	78/10/12	78/10/14	11.40	3.80	5
15599	S21	78/10/11.4	78/10/16	78/10/16	1.70	1.70	2
15586	S30	78/10/12.2	78/10/13	78/10/13	1.96	1.96	1
15583	N19	78/10/12.2	78/10/06	78/10/15	51.35	5.14	12
15587	S19	78/10/13.4	78/10/06	78/10/19	881.67	62.98	70
15589	N21	78/10/14.4	78/10/09	78/10/19	75.15	6.83	24
15591	S21	78/10/16.6	78/10/08	78/10/22	184.46	12.30	73
15590	N28	78/10/16.8	78/10/20	78/10/20	1.91	1.91	1
15600	N14	78/10/16.9	78/10/17	78/10/17	5.28	5.28	1
15592	N35	78/10/18.6	78/10/11	78/10/21	4.46	.41	6
15617	N14	78/10/19.0	78/10/22	78/10/22	2.07	2.07	1
15597	N18	78/10/20.1	78/10/14	78/10/22	7.95	.88	3
15598	N31	78/10/20.8	78/10/15	78/10/24	139.95	14.00	26
15604	S27	78/10/21.3	78/10/18	78/10/25	28.23	3.53	9
15613	N15	78/10/22.3	78/10/21	78/10/29	8.56	.95	3
15611	S23	78/10/24.0	78/10/22	78/10/22	20.16	20.16	1
15610	N27	78/10/24.8	78/10/17	78/10/29	212.92	16.38	39
15615	S18	78/10/25.9	78/10/25	78/10/30	23.13	3.86	7
15619	N19	78/10/28.5	78/10/21	78/11/03	194.87	13.92	34
15621	S24	78/10/28.9	78/10/30	78/10/31	5.57	2.78	2
15620	S18	78/10/30.1	78/10/23	78/11/03	55.84	4.65	30
15628	S31	78/10/31.7	78/10/25	78/10/25	.92	.92	1
15626	N37	78/10/31.8	78/10/29	78/11/05	5.07	.63	3

SGD 417 Part II (Comprehensive)

Miscellaneous Data

Contents

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	1415	2340	HARV				1613	1614	1	1613	1614	1	IIIG
			HARV				1954	1955	2				IIIG
			HARV				2039		2	2039		2	IIIB
			HARV				2139		2	2139		2	IIIB
02	1415	2340	HARV				1654	1659	3	1654	1659	3	IIIG
			HARV	1701	1702	2							IIIG
			HARV				1744		3	1744		3	IIIB
			HARV				1750	1752	3	1750	1752	3	IIIG
			HARV				1814		2	1814		2	IIIB
			HARV				1824	1830	3	1824	1830	3	IIIG,UNCL
			HARV				1842		2	1842		2	IIIB
			HARV				1908		2	1908		2	IIIB
			HARV				1934		2	1934		2	IIIG
			HARV				2021	2026	3	2021	2026	3	IIIG
			HARV	2049	2051	3							IIIGG
			HARV	2111		2	2111	2112	3	2111	2112		IIIG,V
			HARV				2115	2119	3	2115	2119	3	IIIG
			HARV	2132		2	2132		2				IIIG
			HARV	2157	2200	3	2158	2203		2158	2203	3	IIIGG
			HARV	2240		3							IIIG
			HARV				2241	2243	2	2241	2243	2	IIIG
			HARV	2246	2247	2	2246	2247	2				IIIG,V
			HARV				2253	2305	2				II
			HARV	2331	2334	3	2331	2333	3				IIIGG
03	1415	2345	HARV	1415	1416	2							IIIG
			HARV				1603	1604	2	1603	1604	2	IIIG
			HARV	1606	1708	3							IVN
			HARV	1625	1629	3	1625	1629	3	1625	1629	3	IIIGG,V
			HARV	1646		2	1646		3	1646		3	IIIG,U
			HARV				1852		1	1852		1	IIIG
			HARV	1900	1902	1	1900	1903	3	1900	1903	3	IIIGG
			HARV				1925		1	1925		1	IIIG
			HARV				1935		1				IIIB
			HARV				1946		2	1946		2	IIIG
			HARV	2019		2							IIIG
			HARV				2141		3	2141		3	IIIB
			HARV	2145	2146	2	2145	2147	3	2145	2147	3	IIIGG,V
			HARV	2224		2							IIIG
04	1415	2345	HARV				1546		2	1546		2	IIIB
			HARV				1619		2	1619		2	IIIB
			HARV				1623	1624	3	1623	1624	3	IIIG
			HARV				1641		1	1641		1	IIIB
			HARV				1713		2	1713		2	IIIG
			HARV				1718		1	1718		1	IIIB
			HARV				1753		1	1753		1	IIIB
			HARV				1833		2	1833		2	IIIG
			HARV				1837		2	1837		2	IIIG
			HARV				1848	2145	1	1848	2145	1	IIINW
			HARV				2137	2138	3	2137	2138	3	IIIG
05	1415	2345	HARV	1646	1647	3							IIIG
			HARV	1846	1847	3							IIIG
06	1415	2340	HARV										
07	1415	2340	HARV				1444		2	1444		2	IIIG
			HARV				2044		2	2044		2	IIIG
08	1415	2350	HARV				1752		1	1752		1	IIIB
			HARV				1856	1858	2	1856	1858	2	IIIG
			HARV				1901		1	1901		1	IIIB
			HARV	2345		1							
09	1415	2340	HARV				1703		3	1703		3	IIIG
			HARV				1806		3	1806		3	IIIB
			HARV				2009		2	2009		2	IIIB
			HARV				2028		2				IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
10	1415	2355	HARV										
11	1415	2345	HARV				1716	1717	3	1716	1717	3	IIIG
12	1415	2345	HARV				1813	1816	1	1813	1816	1	IIIG
			HARV				1829		1	1829			IIIB
			HARV				2011	2012	2				IIIG
			HARV				2135	2137	2				IIIG
			HARV				2239		1				IIIB
13	1415	2345	HARV				1827		3	1827		3	IIIB
			HARV				1838		3	1838		3	IIIB
14	1415	2345	HARV				2234	2235	3				IIIG,V,U
15	1415	2345	HARV				1542		2				IIIG
			HARV				2025	2026	3	2025	2026	3	IIIG,V
			HARV				2124	2126	2	2124	2126	2	IIIG
			HARV				2150		2				IIIG
			HARV				2233	2234	3				IIIG,V
			HARV				2238		2				IIIG
16	1415	2340	HARV				2056		2				IIIB
			HARV				2306		3				IIIG
			HARV				2332		2				IIIG
17	1415	2355	HARV				2034		1	2034		1	IIIB
18	1415	2345	HARV				1929		2				IIIG
19	1427	2345	HARV				1705	1900	1				INW
			HARV				1856	1858	2	1856	1858	2	IIIG
			HARV				1906		1				IIIB
			HARV				1951		2				IIIG
			HARV				2110		2				IIIB
20	1415	2345	HARV				1946		3	1946		3	IIIG,V
21	1415	2345	HARV				1511		3				IIIG
			HARV				1811		2				IIIB
			HARV				1842		3				IIIG
			HARV				1918		2	1918		2	IIIG
22	1415	2245	HARV				1923	1924	2	1923	1924	2	IIIG
			HARV				2036	2114	2				IIIN
			HARV				2059		3	2059		3	IIIB
			HARV				2118		2				IIIG
23	1415	2345	HARV				1443	1444	3				IIIGG
			HARV				1504	1511	1				IIINN
			HARV				1547	1548	2	1547	1548	2	IIIGG
			HARV				1625	1627	2				IIIGG
			HARV				1628	1713	1				I
			HARV				1718	1722	3	1718	1722	3	IIIGG,V
			HARV				1755	1758	3	1755	1758	3	IIIGG
			HARV				1816	1833	3	1816	1833	3	IIIGG,V
			HARV				1855		3	1855		3	IIIB
			HARV				1914	1918	3	1914	1918	3	IIIGG,V
			HARV				1929	1930	3	1929	1930	3	IIIG
			HARV				1935	1936	3	1935	1936	3	IIIGG
			HARV				2032		2				IIIG,V
			HARV				2034	2041	2				IIIN
24	1415	2345	HARV				1525	1526	2				IIIG
			HARV				1646	1647	3	1646	1647	3	IIIG
			HARV				1702		3	1702		3	IIIG
			HARV				1708		3	1708		3	IIIG
			HARV				2011	2012	2	2011	2012	2	IIIG
			HARV				2019	2026	2	2019	2026	2	IIIG
			HARV				2041		2	2041		2	IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
25	1531	2350	HARV				2141	2142	3	2141		3	IIIG
			HARV				2237	2238	3	2237	2238	3	IIIG
			HARV				2317		3				
26	1415	2350	HARV	1734		1							IIIG
			HARV				1757	1759	3	1757	1759	3	IIIG
			HARV				1824	1825	1				IIIG
			HARV				1842	1844	3	1842	1844	3	IIIGG,V
			HARV				1929	1932	2	1929	1932	2	IIIG
			HARV				1942		1	1942		1	IIIB
			HARV				2032		1				IIIBW
			HARV	2105		1	2104	2107	2	2104	2106	2	IIIGG
			HARV				2121	2122	2	2121		2	IIIGG
			HARV				2133	2134	1				IIIG
			HARV				2149		1				IIIBW
			HARV				2206		3	2206		3	IIIG
			HARV				2214		1				IIIBW
			HARV				2230		2				IIIB
			HARV				2317		1				IIIG
			HARV				2342		2				IIIG
27	1415	2345	HARV				1517	2255	1				IIINW
			HARV	1553		2	1553		2	1553			IIIG
			HARV	1558		3	1558	1600	3	1558	1600	3	IIIGG
			HARV				1726	1732	3	1726	1732	3	IIIGG
			HARV	1949	1951	2	1950	1954	3	1950	1954	3	IIIGG
			HARV				2038		3	2038		3	IIIG
28	1400	2345	HARV				1906	1909	2	1906	1909	2	IIIG
			HARV				1957		2	1957		2	IIIB
29	1400	2345	HARV				1537		1				IIIG
			HARV	1550		1	1550	1551	2	1551		2	IIIG,V
			HARV				1652		1				IIIG
			HARV				1815	1902	1	1815	1902	1	IIIG
			HARV				1925		1				IIIG,W
			HARV	1933		1	1931	1933	3	1933		3	IIIG,V
			HARV				1951	1952	3	1951	1952	3	IIIG,V
			HARV				2004	2005	3	2004	2005	3	IIIG,V
			HARV				2029	2032	2				IIIG,U
			HARV	2054	2055	1	2054	2055	2				IIIG
			HARV				2235		2				IIIB
30	1400	2345	HARV	1425	1433	2							IIIN
			HARV	1922	1923	2	1922	1923	2				IIIG
			HARV				2043		1				IIIB
			HARV	2054	2055	3							IIIG
			HARV	2109		2	2109		2				IIIG
			HARV	2120		3							IIIG
			HARV				2207		3	2207		3	IIIG,V
			HARV	2323	2327	3							IIIG
31	1400	2345	HARV	1601		1							IIIG
			HARV				1703		2				IIIG
			HARV				1902		1				IIIB
			HARV				2200		3	2200		3	IIIB
			HARV				2209		2				IIIB
			HARV				2242		2				IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	1400	2345	HARV				1430		2				IIIG
			HARV				1451		1				IIIG
			HARV				1709		1				IIIG
			HARV				1735	1738	2	1735		3	IIIG
			HARV				1820		3	1820		2	IIIB
			HARV				1847		2	1849		2	IIIG
			HARV				1858		2	1858		2	IIIB
			HARV				2039	2040	3	2039	2040	3	IIIGG
			HARV				2147		1	2147		1	IIIB
			HARV				2322		1				IIIGW
02	1400	2345	HARV				1828		2				IIIG
03	1400	2345	HARV										
04	1400	2345	HARV										
05	1400	2345	HARV				1607	1621	3	1607	1621	3	IIIGG
			HARV				1640	1651	3	1640	1651	3	IIIGG
			HARV				1703		2	1703		2	IIIG
			HARV				1721	1725	3	1721	1725	3	IIIG
			HARV				1740	1743	3	1740	1743	3	IIIG
			HARV				1851	1858	2	1851	1858	2	IIIG
			HARV				1906	1918	3	1906	1918	3	IIIGG,V
			HARV				1929	1931	2	1921	1931	2	IIIG
			HARV				2013	2015	2	2013	2014	3	IIIG
			HARV	2120	2122	3							IIIG
			HARV	2122	2125	3	2125	2140	3				II
			HARV	2131	2133	1	2131	2133	3	2132	2133	3	IIIG,V
			HARV	2144	2151	3	2149	2151	3				IIIGG,V
06	1400	2345	HARV				1619	1620	2				IIIG
			HARV				1654		1				IIIB
			HARV	1752	1753	1	1753		3	1753		3	IIIG
			HARV	1853		1							IIIG
			HARV				2113	2116	2	2113	2116	2	IIIG
07	1400	2345	HARV										
08	1400	2345	HARV				1803		2	1803		2	IIIG
			HARV				1937	1939	2	1937	1939	2	IIIG
			HARV				2237	2240	2				IIIG
09	1400	2345	HARV				1629		2	1629		2	IIIG
			HARV				1708		2	1708		2	IIIG
			HARV				1715		2				IIIB
			HARV				1900	1901	3	1900	1901	3	IIIG,V
			HARV				2026		2	2026		2	IIIB
			HARV				2042		1				IIIB
			HARV				2135		1				IIIB
			HARV				2145	2150	2	2145	2150	2	IIIGG
10	1400	2345	HARV				1818	1822	3	1818	1822	3	IIIGG
			HARV				2118	2119	2	2118	2119	2	IIIGG
11	1400	2345	HARV				1540	1812	1				INW,DC
			HARV				1912		2	1912		2	IIIB
			HARV				2010		1	2010		1	IIIB
			HARV				2024		1	2024		1	IIIBW
			HARV	2034	2037	3	2032	2035	3				IIIG,V
12			HARV				1438	2345	1				IIIN
	1400	2345	HARV				1438	2345	1				IN
			HARV				1533		2				IIIB,V
			HARV				1629		3				IIIB
			HARV				1729		2				IIIB
			HARV				1840		3	1840		3	U,V
			HARV				1902	1906	3	1902	1906	3	IIIGG
			HARV				1928		2				IIIB
			HARV				1942		2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
12			HARV	1947	1954	3	1946	1951	3	1947	1951	3	IIIG
			HARV				2003	2008	1				I,DC
			HARV				2038	2041	3	2038	2041	3	IIIGG
			HARV				2052	2055	2	2052	2055	2	IIIG
			HARV				2115		2	2115		2	IIIG
			HARV				2127		2	2127		2	IIIG
			HARV	2129		3							IIIG
			HARV				2136	2137	2	2136	2137	2	IIIG
			HARV	2146	2150	3	2147	2150	3	2147	2150	3	IIIGG
			HARV	2229	2232	1	2229	2232	2	2232		2	IIIG
13	1400	2400	HARV	1708	1710	2	1708	1710	2				IIIG
			HARV				1802	1803	2				IIIG
			HARV				1827		2	1827		2	IIIB
			HARV				1849		2	1849		2	IIIB
14	1400	2345	HARV				1600	1602	1				IIIG
			HARV				1806		1				IIIG
			HARV				1837	1837	2	1837	1838	2	IIIGG
			HARV				1845		2				IIIG
			HARV	1852		3	1852		3	1852		3	IIIG,V
			HARV				1935		1				IIIG
			HARV				2101	2102	2	2101	2102	2	IIIG
			HARV				2143		3	2143		3	IIIG
			HARV				2222		1				IIIB
			HARV				2338		1				IIIG
15	1400	2345	HARV	1652	1733	2							IIIN
			HARV				1700	1701	2				IIIG
			HARV	1714	1717	3							IIIGG
			HARV				2023	2024	2				IIIG
			HARV				2115		2				IIIB
16	1400	2345	HARV				1412	1413	2				IIIG
			HARV	1446		1	1445	1446	2				IIIG
			HARV				1504	1505	2				IIIG
			HARV				1511	1512	2				IIIG
			HARV				1520		3				IIIG,V
			HARV	1526	1530	2	1526	1530	3				IIIGG
			HARV	1532		1							IIIG
			HARV	1535	1537	2	1535	1537	2				IIIG
			HARV	1542		1	1542		1				IIIG
			HARV	1721	1735	3	1721	1738	3	1721	1735	3	IIIGN
			HARV	1741	1742	1	1741	1751	3	1741	1751	3	IIIGN
			HARV	1756	1758	1	1753	1758	3	1753	1758	3	IIIGG
			HARV				1800	1813	3	1800	1813	3	IIIS
			HARV	1900	1901	2	1900	1901	3	1900	1901	3	IIIG,V
			HARV	1952	1953	3	1952	1958	3	1952	1958	3	IIIGG,V
			HARV				2033	2034	2	2033	2034	2	IIIG
			HARV	2144		2	2138	2145	3	2138	2145	3	IIIGG
			HARV				2145	2224	2				IIIN
			HARV				2152	2153	3	2152	2153	3	IIIG
			HARV	2159	2200	3	2159	2200	3	2159	2200	3	IIIG
			HARV	2226	2315	2							IIIN
			HARV				2235	2303	3	2335	2303	3	IIIGN
17	1400	2345	HARV				1439	1950	1				IN
			HARV	1502	1511	1							IN
			HARV				1729		1	1729		1	IIIG
			HARV				1818		2				IIIB
			HARV				1905	1906	3	1905	1906	3	IIIG,V
			HARV				1923	1943	3	1927	1943	3	II
			HARV				1950	2043	2				I
			HARV				2021	2034	3	2021	2034	3	IIIG
			HARV				2056	2345	2				I,DC
18	1400	2345	HARV				1400	1637	1				IN,IIIN
			HARV				1435	1436	2				IIIG,U
			HARV	1557		2	1557		2				IIIG
			HARV				1630	1632	2	1630	1632	2	IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
18			HARV	1636	1651	3	1637	1653	3	1637	1653	3	IIIGG,V
			HARV				1637	2345	2				I
			HARV				1657	2345	2	1657	2202	2	IIIN
			HARV	1702	1706	3	1701	1705	3	1701	1705	3	IIIGG,V
			HARV	1709	1719	3	1709	1720	3	1709	1720	3	IIIGG,V
			HARV				1729		3	1729		3	IIIG
			HARV	1853	1901	3	1854	1900	2	1854	1900	2	IIIGG
			HARV	1910	1911	1							IIIG
			HARV				1950	2003	3	1950	2003	3	IIIGN
			HARV				2136	2159	3	2156	2159	3	IIIGN
			HARV				2204	2212	3	2204	2212	3	IIIGG
			HARV	2223	2233	3	2223	2233	3	2223	2233	3	IIIGG
19	1400	2350	HARV				1510	1522	1				IN
			HARV				1521		2				IIIG
			HARV				1522	1826	2				I
			HARV	1524	1536	2	1525	1536	3	1525	1536	3	IIIGG
			HARV				1546		3	1546		3	IIIB
			HARV				1826	2220	1				IN
			HARV	2210	2350	1	1826	2350	1				IIIN
			HARV	2221	2228	3	2221	2229	3				IIIGG
			HARV				2306	2307	1				IIIG
			HARV				2344	2346	2				IIIG
20	1345	2345	HARV				1402	1740	1				IN
			HARV	1647		2	1647	1648	3	1647	1648	3	IIIG,V
			HARV				1733	1740	2	1733	1740	2	IIIN
			HARV				1740	1835	2				I
			HARV				1743	1746	2	1743	1746	2	IIIG
			HARV				1751	1757	2				II
			HARV				1800	1812	2				IIIN
			HARV				1835	2020	2				IC
			HARV				1849	1852	3	1849	1852	3	IIIGG,V
			HARV				1953	2020	2	1953	2003	2	IIIN
			HARV				2006	2008	3	2006	2008	3	IIIG,V
			HARV				2020	2215	1				I
			HARV				2104	2105	2	2104	2105	2	IIIG
			HARV	2129	2132	2	2130	2132	3	2130	2132	3	IIIGG,V
			HARV				2136	2137	2	2136		2	IIIG
			HARV				2200	2203	3				IIIGG
			HARV				2215	2320	2				IC
			HARV				2217	2218	3	2217	2218	3	IIIG
			HARV	2342		2	2341	2342	3				IIIG,V
21	1345	2345	HARV				1358	2345	1				IN
			HARV				1419		3				IIIG
			HARV				1459		2				IIIB
			HARV				1526		3	1526		3	IIIG
			HARV	1557	1558	3	1557		2	1557		2	IIIG
			HARV				1604	2106	1				IIIN
			HARV	1645		2							IIIG
			HARV				1815		2	1815		2	IIIB
			HARV	1832		1	1832		3				IIIG,V
			HARV	1851	1852	3	1851	1852	2				IIIG
			HARV	1905	1906	2	1905	1907	1	1907		1	IIIG
			HARV				1957	1958	2	1957	1958	2	IIIG
			HARV				2021	2022	2				IIIG
			HARV				2038		3	2038		3	IIIG,V
			HARV	2044	2047	3	2044	2047	3	2046	2047	3	IIIGG
			HARV	2254		1	2254		2				IIIG
			HARV	2333		1	2333	2336	2				IIIG
22	1345	2345	HARV				1542	1823	1				IIIN,W
			HARV				1655	1659	3	1655	1659	3	IIIG
			HARV				1710	1711	3	1710	1711	3	IIIG
			HARV				1857	1859	3	1857	1859	3	IIIG
			HARV				1939		3	1939		3	IIIG
23	1345	2345	HARV				1423		1				IIIB
			HARV				1426	1427	3	1426	1427	3	IIIGV

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1979

	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
24	1345	2345	HARV				2116		2	2116		2	IIIG
25	1345	2345	HARV	1510		3	1509	1510	3	1509	1510	3	IIIGG
			HARV				1627	1628	2				IIIG
			HARV				1740		2				IIIG
			HARV	1808		3							IIIG
			HARV				2219		1				IIIGW
26	1345	2345	HARV				2129	2130	2	2129		1	IIIG
			HARV				2205		2				IIIG
27	1345	2345	HARV										
28	1345	2345	HARV	1453	1454	2							I

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III

RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity
DCIM = Fast drift

COSMIC RAY INDICES

(Neutron Monitors)

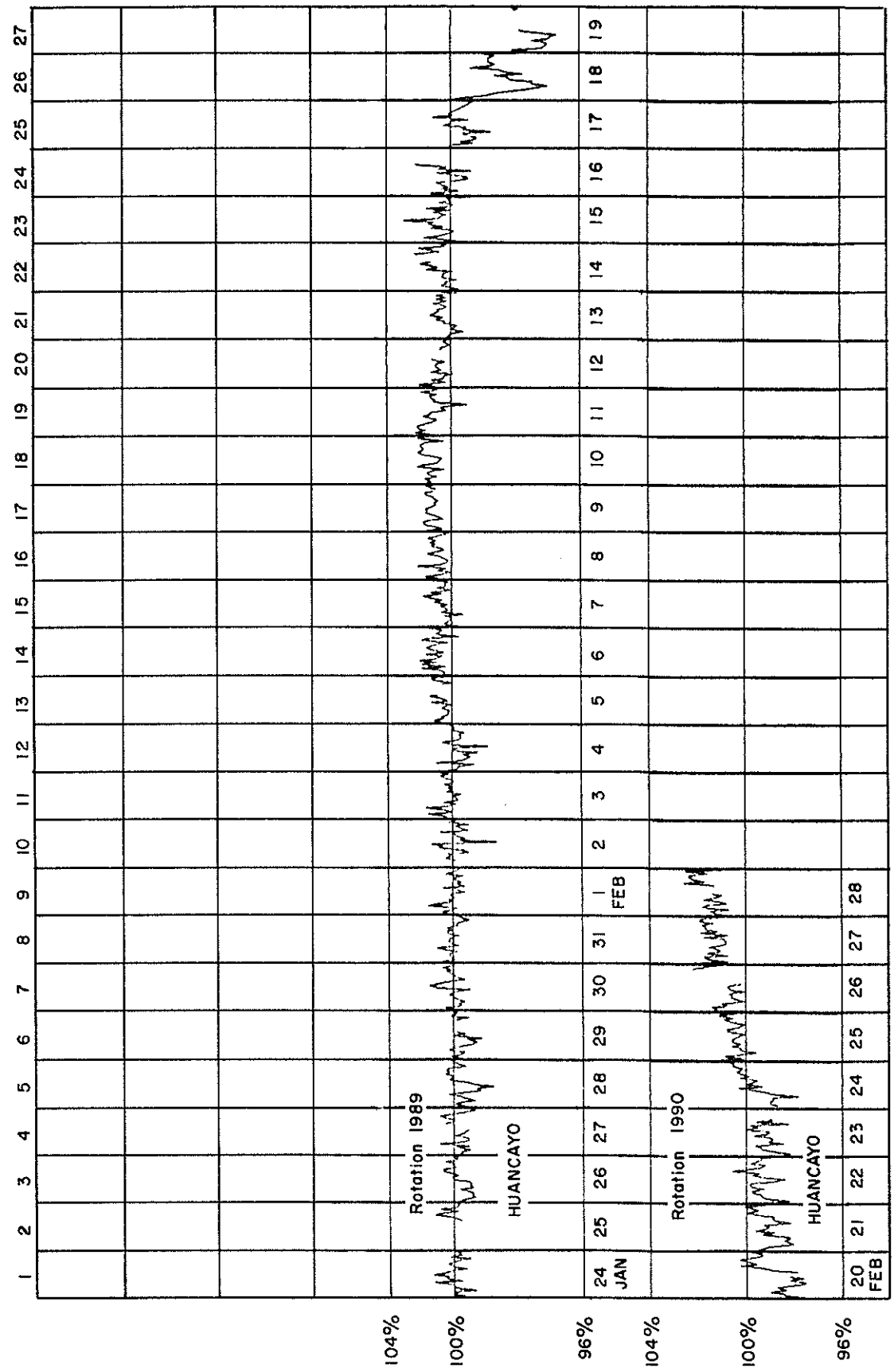
FEBRUARY 1979

Feb. 1979	HUANCAYO Average cts/hr
1	1742.4
2	1739.6
3	1746.1
4	1737.0
5	1750.4
6	1755.5
7	1749.1
8	1753.5
9	1758.5
10	1760.5
11	1757.7
12	1751.4
13	1747.4
14	1748.9 (28)
15	--
16	--
17	--
18	--
19	1691.3 (6)
20	1695.2
21	1697.8
22	1704.7
23	1698.8
24	1708.0
25	1721.7
26	1728.6 (36)
27	1737.5
28	1740.7
MEAN	1736.0

( ) Number of section hours of sum of both sections is less than 40 hours.
Scaling factor at Climax and Huancayo = 100.

COSMIC RAY INDICES
(Neutron Monitors)

Bartels Rotation 1989-1990 (January-February 1979)



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