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Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 449 JANUARY 1982

DATA FOR
JULY 1981
MARCH 1980

**NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO**

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA/EDIS/NGSDC, 0631, 325 Broadway, Boulder, Colorado 80303.

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Solar-Geophysical Data, 450 Part I (or Part II), pages, February 1982, U.S. Department of Commerce (Boulder, Colorado, U.S.A. 80303).

SOLAR-GEOPHYSICAL DATA

No. 449

Issued in two parts

Helen E. Coffey, Editor

Joe H. Allen, Chief
Solar-Terrestrial Physics Division

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Notes:

"438A 44" listed under 1980 Dec means that the sunspot drawings for Dec 1980 were contained in Solar-Geophysical Data Number 438 - Part I, beginning on page 44.

A = Part I, B = Part II.

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

SGD 449 Part II (Comprehensive)

JULY 1981 DATA

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ PEAK	MEAN		
01	200 HIRA	43 NS	0024.0	0527	560.00	40.0	5.0	ML	
	245 LEAR	43 NS	0350.0	0558.3	343.00	200			
	260 ONDR	44 NS	0543.0E	1206.2	506.00	192.0	9.0		
	245 SGMR	44 NS	1029.0E	1332.8	45.1U	55			
	245 PALE	43 NS	1715.0	1717.1	556.00	110			
	208 VORO	44 NS	2100.0E		240.00		7.0		
	3750 TYKW	20 GRF	0210.0	0230	4.0	2.0	1.0		
	245 PALE	8 S	0217.6	0217.8	.2	63			
	3750 TYKW	5 S	0330.0	0332	1.5	2.0	1.0		
	204 IZMI	4 S/F	0649.2	0650.2	1.0	60.0			
	204 IZMI	4 S/F	0657.8	0658.0	1.0	270.0			
	3100 CRIM	26 FAL	0712.0	0724.0		3.0			
	234 POTS	42 SER	0950.0	0950.3	9.7	300.0	20.0		
	2800 OTTA	20 GRF	1150.0	1200	40.0	2.4	1.2		
	606 SGMR	8 S	1226.1	1227.0	1.4D	27			
	410 SGMR	4 S/F	1226.8	1227.1	2.2D	13			
	245 SGMR	8 S	1226.8	1227.3	1.2	79			
	1415 SGMR	4 S/F	1226.8	1227.1	2.2D	29			
	29 UPIC	3 S	1257.5	1257.5	.5				
	33 UPIC	8 S	1257.5	1257.5	.4				
	1470 POTS	40 F	1309.0	1309.6	10.0	6.7			
	2800 OTTA	1 S	1309.0	1309.5	2.0	4.2	2.0		
	3000 POTS	1 S	1309.5	1309.9	.9	2.9			
	2800 OTTA	20 GRF	1440.0	1500	70.0	2.4	1.2		
	7000 SAOP	27 RF	1446.0		19.0	7.0	3.0		
	245 PALE	4 S/F	1751.8	1752.3	2.7	80			
	410 PALE	4 S/F	1751.8	1753.3	3.0	40			
	8800 PALE	8 S	1844.0	1844.1	.3	40			
	3750 TYKW	45 C	2113.5	2113.7	1.5	5.0	1.0		
	9400 TYKW	45 C	2113.5	2113.7	1.5	12.0	4.0		
	1000 TYKW	5 S	2153.0	2153.1	.5	7.0	2.0		
	9400 TYKW	5 S	2251.5	2251.9	1.0	78.0	14.0		
	3750 TYKW	5 S	2251.6	2251.9	.8	9.0	1.5		
	17000 NOBE	1 S	2251.7	2251.9	1.0	85.0			
	9400 TYKW	29 PBI	2252.5		3.0	3.0	1.5		
9400 TYKW	5 S	2323.0	2325	25.0	3.0	1.5			
9400 TYKW	5 S	2351.0	2351.2	1.0	4.0	1.5			
02	260 ONDR	44 NS	0542.0E		507.00	57.0	3.0	RAIN	
	245 LEAR	43 NS	0712.0	0826.8	141.00	110			
	245 SGMR	43 NS	1355.1	1639.0	244.90	150			
	410 SGMR	43 NS	1355.1	1726.1	244.90	25			
	245 LEAR	4 S/F	0111.1	0112.6	5.2	61			
	3750 TYKW	20 GRF	0250.0	0255	60.0	4.0	1.5		
	2000 TYKW	20 GRF	0251.0	0254	70.0	2.0	1.0		
	9400 TYKW	5 S	0340.0	0340.4	1.0	3.0	1.0		
	8800 LEAR	8 S	0340.1	0340.5	.5	05			
	410 LEAR	8 S	0340.1	0340.3	.4	09			
	15400 LEAR	4 S/F	0340.3	0340.3	200.6	21			
	1000 TYKW	20 GRF	0455.0	0505	150.0	1.5	.7		
	2000 TYKW	20 GRF	0500.0	0610	150.0	2.0	1.0		
	9400 TYKW	20 GRF	0530.00	0610	100.00	6.0	3.00		
	3750 TYKW	20 GRF	0530.0	0610	120.0	3.0	1.5		
	3100 CRIM	26 FAL	0615.0	0748.0		6.0			
	29 UPIC	2 S/F	0823.5	0823.7	.5				
	33 UPIC	4 S/F	0823.5	0823.5	.3				
	430 KRAK		1015.8	1049.6		24.0			
	430 KRAK	41 F	1015.8	1032.0	46.0	19.0			
	15000 KISV	45 C	1244.0	1245	3.0	25.0			
	5200 BERN	22 GRF	1244.0	1301.3	105.0	92.0			
	3200 BERN	22 GRF	1244.0	1301.3	105.0	54.0	ONLY PAPER REC		
	8400 BERN	22 GRF	1244.0	1301.3	105.0	61.0	ONLY PAPER REC		
	19600 BERN	22 GRF	1244.0	1301.3	90.0	64.0	ONLY PAPER REC		
	6100 KISV	45 C	1244.6	1245.5	5.4	35.0			
	15400 SGMR	4 S/F	1244.6	1245.1	4.4	29			
	9400 HUAN	8 S	1244.7	1245.0	.8	59.4	30.5		
	7000 SAOP	3 S	1244.7	1245.0	.5	86.0	43.0		
	4995 SGMR	4 S/F	1244.8	1245.0	5.00	33			
	8800 SGMR	4 S/F	1244.8	1245.0	5.80	78			
	9500 POTS	4 S/F	1245.0	1245.0	3.0	57.0			
	7000 SAOP	29 PBI	1245.2	1246.1	8.5	31.0	15.0		
	9400 HUAN	S	1245.8	1246.3	1.0	11.9	5.9		
	9400 HUAN	S	1245.8	1246.3	1.0	59.4	30.5		
7000 SAOP	28 PRE	1252.3	1255.8	6.6	14.0	7.0			
2800 OTTA	21 GRF	1255.0	1310	85.0	14.2	8.0			
9400 HUAN	S	1255.5	1303.7	20.1	27.1	9.7			
9500 POTS	29 PBI	1256.0	1301.4	97.0	44.0				
3000 POTS	29 PBI	1256.0	1301.9	105.0	37.0				
7000 SAOP	4 S/F	1258.8	1301.4	4.0	72.0	35.0			
1470 POTS	29 PBI	1259.0	1304.5	86.0	9.0				
6100 KISV	4 S/F	1259.0	1301.7	5.0	35.0				
4995 ATHN	4 S/F	1259.0	1301.6	72.5	44				
2800 OTTA	3 S	1259.0	1301.5	8.0	24.0	10.0			
2695 ATHN	4 S/F	1259.1	1301.6	69.90	26				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
02	15000 KISV	3 S	1300.0	1302	6.0	25.0			
	9400 HUAN	S	1300.1	1301.7	3.1	30.5	13.3		0
	1415 ATHN	4 S/F	1301.0	1304.3	26.80	11			
	7000 SAOP	29 PBI	1302.8	1302.8	57.0	34.0	17.0		
	228 HARS	7 C	1312.5	1315.0	5.0	70.0	10.0		
	245 SGMR	4 S/F	1313.5	1315.6	5.6	52			
	6100 KISV	3 S	1314.8	1315.3	2.0	10.0			
	228 HARS	45 C	1349.0	1349.4	100.0	200.0	75.0		III
	113 POTS	4 S/F	1353.6	1354.8	1.9	450.0	35.0		III
	29 UPIC	45 C	1353.7	1354.6	1.9				
	245 SGMR	4 S/F	1353.8	1354.8	4.3	130			
	33 UPIC	45 C	1353.9	1354.4	1.5				
	1415 SGMR	4 S/F	1354.6	1356.0	2.40	08			
	234 POTS	4 S/F	1354.7	1354.8	.5	300.0	50.0		III
	606 SGMR	4 S/F	1355.0	1355.1	2.80	32			
	2800 OTTA	31 ABS	1420.0	1505	140.0	-10.6	-6.0		
	33 UPIC	4 S/F	1603.1	1604.2	2.5				
	33 UPIC	4 S/F	1603.1	1604.2	2.5				
	29 UPIC	2 S/F	1603.8	1604.5	2.0				
	2800 OTTA	20 GRF	1700.0	1715	80.0	2.4	1.6		
	8800 PALE	8 S	1802.5	1803.3	.8	100			
	2800 OTTA	20 GRF	1825.0	1845	140.0	2.4			
	2800 OTTA	21 GRF	2135.0	2210	95.0	2.4	1.2		
	3750 TYKW	20 GRF	2150.0	2200	40.0	2.0	1.0		
	2000 TYKW	20 GRF	2150.0	2200	40.0	1.5	.7		
	2800 OTTA	1 S	2239.5	2240	1.0	5.4	2.7		
	3750 TYKW	28 PRE	2239.6	2239.8	6.4	6.0	2.0		
	2000 TYKW	5 S	2239.7	2239.8	1.0	2.0	.7		
	17000 NORE	1 S	2245.8	2246.4	1.3	59.0			R
	15400 PALE	8 S	2246.0	2246.3	.8	90			
	2000 TYKW	5 S	2246.0	2246.4	3.0	5.0	1.5		
	3750 TYKW	5 S	2246.0	2246.4	3.0	31.0	13.0		
8800 PALE	8 S	2246.0	2246.3	1.8	73				
2800 OTTA	3 S	2246.2	2246.4	5.0	12.8	3.7			
2695 PALE	8 S	2246.3	2246.3	.3	20				
4995 PALE	8 S	2246.3	2246.3	.5	30				
3750 TYKW	29 PRI	2249.0		12.00	5.0	2.00		RAIN	
2000 TYKW	29 PRI	2249.0		11.00	1.5	.70			
3750 TYKW	5 S	2346.0	2349	7.0	3.0	1.5			
3750 TYKM	31 ABS	2353.0	0022	65.0	-4.0	-1.5			
2000 TYKM	5 S	2359.0	0002	11.0	2.0	1.0			
03	245 LEAR	43 NS	0604.0	0605.8	210.00	30			
	260 ONDR	44 NS	0610.0E		495.00	37.0	2.0		
	2000 TYKM	45 C	0004.2	0045.5	.80	20.0	7.00		
	2695 PENT	32 ABS	0005.0	0025	35.0	-3.0	-1.5		
	9400 TYKW	32 ABS	0007.0E	0050	64.00	-7.0	-4.00		
	2000 TYKM	31 ABS	0010.0	0025	50.0	-1.5	-.7		
	2695 PENT	23 GRF	0050.0	0127	60.00	16.8			
	9400 TYKW	28 PRE	0111.0	0112.2	9.0	33.0	5.0		
	3750 TYKM	28 PRE	0111.0	0112.4	9.0	5.0	3.0		
	2000 TYKM	28 PRE	0111.0	0112.2	10.0	1.5	1.0		
	8800 LEAR	4 S/F	0118.6	0125.0	23.9	190			
	15400 LEAR	4 S/F	0118.8	0125.1	21.7	240			
	3750 TYKM	45 C	0120.0	0125.1	20.0	72.0	20.0		
	9400 TYKW	45 C	0120.0	0125.0	20.0	182.0	30.0		
	4995 LEAR	4 S/F	0120.8	0125.0	21.5	79			
	2000 TYKM	45 C	0121.0	0125.1	19.0	12.0	4.0		
	2695 LEAR	4 S/F	0122.1	0125.1	18.2	45			
	4995 PALE	47 GB	0123.0	0125.0	5.3	70			
	15400 PALE	47 GB	0123.3	0125.0	13.8	270			
	8800 PALE	47 GB	0123.3	0125.0	12.0	180			
	2695 PENT	3 S	0124.0	0125.1	2.5	26.0	9.0		
	2695 PALE	47 GB	0124.5	0125.0	10.8	38			
	17000 NORE	4 S/F	0124.5	0125.1	12.0	176.0			R
	35000 NAGO	5 S	0125.0	0125	1.0	25.0			
	9400 TYKW	29 PBI	0140.0		25.0	16.0	7.0		
	2000 TYKM	30 PBI	0140.0		90.0	3.0	1.5		
	3750 TYKM	30 PBI	0140.0		110.0	10.0	5.0		
	2000 TYKM	20 GRF	0210.0	0225	60.0	2.0	1.0		
	9400 TYKW	21 GRF	0210.0	0240	80.0	4.0	2.00		RAIN
	3750 TYKM	20 GRF	0212.0	0220	55.0	6.0	3.0		
	2000 TYKM	31 ABS	0310.0	0415	110.0	-4.0	-2.0		
	3750 TYKM	31 ABS	0330.0	0407	72.0	-6.0	-3.5		
9400 TYKW	31 ABS	0330.0	0407	70.0	-8.0	-4.00		RAIN	
2950 GORK	20 GRF	0434.2	0444.0	198.0	14.0				
15000 KISV	46 C	0439.0	0444	11.0	20.0				
9100 GORK	22 GRF	0439.5	0443.8	37.0	25.0				
6100 KISV	4 S/F	0440.0	0444	20.0	15.0				
9400 TYKW	45 C	0440.0	0443.7	10.0	32.0	11.0			
3750 TYKM	21 GRF	0440.0	0620	190.0	10.0	4.0			
3750 TYKM	5 S	0441.0	0443.9	8.0	17.0	7.0			
8800 LEAR	4 S/F	0441.0	0443.6	5.1	39				
15400 LEAR	4 S/F	0441.0	0443.1	4.8	25				
5730 IRKU	20 GRF	0442.7	0443.9	7.0	32.0			L	

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
03	2000 TYKM	5 S	0443.0	0443.8	10.0	2.5	.7			
	4995 LEAR	8 S	0443.5	0443.8	.5	15				
	2695 LEAR	4 S/F	0443.6	0443.8	327.2	15				
	3750 TYKM	29 PBI	0449.0		16.0	6.0	3.0			
	9400 TYKW	30 PBI	0450.0		25.0	8.0	3.0			
	9400 TYKW	5 S	0505.0	0506.4	6.0	5.0	2.0			
	3750 TYKM	5 S	0505.0	0507	8.0	2.0	1.0			
	245 LEAR	8 S	0507.8	0508.1	1.0	58				
	9400 TYKW	21 GRF	0520.0	0616	150.0	12.0	6.00		INTERFERENCE	
	2000 TYKM	20 GRF	0520.0	0528	30.0	1.5	.7			
	3750 TYKM	5 S	0520.0	0528	20.0	3.0	1.5			
	2000 TYKM	20 GRF	0603.0	0617	75.0	2.0	1.0			
	6100 KISV	20 GRF	0604.0	0615	30.0	4.0				
	9100 GORK	22 GRF	0604.5	0615.4	51.0	8.0				
	3100 CRIM	26 FAL	0620.0	0724.0		7.0				
	430 KRAK	42 SER	0701.5	0712.4	78.0	39.0				
	9100 GORK	22 GRF	0701.5	0811.6		17.0				
	6100 KISV	3 S	0727.8	0735.3	14.5	12.0				
	3750 TYKM	5 S	0728.0	0735	22.0	6.0				
	9400 TYKW	5 S	0732.0	0735	10.0	7.0	3.0			
	9400 TYKW	5 S	0733.0	0735	10.0	8.0	3.0			
	2950 GORK	20 GRF	0939.0	0954.3	52.0	8.0				
	9100 GORK	2 S/F	0951.9	0954.1	7.1	10.0				
	9500 POTS	20 GRF	0953.5	0954.2	30.0	6.0				
	3000 POTS	20 GRF	0953.8	0955.5	21.0	7.0				
	2950 GORK	20 GRF	1054.8		62.0E					
	2800 OTTA	21 GRF	1120.0	1215	135.0	5.4				
	2800 OTTA	1 S	1136.0	1136.4	2.0	2.8	1.4			
	9100 GORK	1 S	1136.0	1136.1	1.1	6.8	3.0			
	3000 POTS	1 S	1136.0	1136.4	1.5	5.0				
	9500 POTS	1 S	1136.0	1136.2	1.5	6.0				
	2800 OTTA	22 GRF	1250.0	1258	25.0	5.6	3.0			
	2800 OTTA	21 GRF	1530.0	1635	190.0	5.0	2.6			
	7000 SAOP	20 GRF	1559.4	1614.3	63.0	14.0	7.0		0	
	2800 OTTA	45 C	1608.0	1614	10.0	6.6	3.3			
	15400 PALE	8 S	1659.8	1700.1	.3	21				
	2800 OTTA	45 C	1759.0	1801	5.0	9.8	3.3			
	2800 OTTA	1 S	1818.7	1819.5	3.0	7.8	2.8			
	2800 OTTA	21 GRF	1905.0	1955	110.0	4.8	2.6			
	7000 SAOP	4 S/F	1907.5	1908.9	1.8	12.0	9.0			
	2800 OTTA	4 S/F	1908.0	1908.5	2.5	11.0	4.0			
	7000 SAOP	29 PBI	1909.3	1910.8	2.7	6.0	3.0			
	2800 OTTA	21 GRF	2110.0	2150	130.0	5.0	2.5			
	2800 OTTA	1 S	2143.5	2146	5.0	3.8	1.8			
	2000 TYKM	20 GRF	2144.0	2146	40.0	1.5	.7			
	3750 TYKM	20 GRF	2144.0	2146	40.0	3.0	1.5			
	04	245 PALF	43 NS	0228.1	0228.1	130.90	94			
		410 PALE	43 NS	0228.1	0235.5	130.90	40			
		245 SGMR	43 NS	0916.0	1423.0	524.00	290			
		410 SGMR	43 NS	0916.0	1408.0	524.00	230			
260 ONDR		043 NS	0952.0	1123.4	20.80	71.0	3.0			
430 KRAK		43 NS	1052.8	1235.3	128.00	80.0				
208 VORD		44 NS	2100.0E		180.00		8.0			
245 LEAR		43 NS	2322.0	0038.0	612.00	110				
15400 PALE		4 S/F	0018.3	0019.5	8.5	42				
9400 TYKM		20 GRF	0255.0	0310	45.0	3.0	1.5			
3750 TYKM		20 GRF	0255.0	0304.5	35.0	6.0	2.0			
2000 TYKM		5 S	0257.0	0304	25.0	1.5	.7			
15400 PALE		4 S/F	0431.1	0432.3	3.2	51				
2000 TYKM		20 GRF	0435.0	0450	55.0	1.0	.5			
3750 TYKM		5 S	0447.0	0451	25.0	2.0	1.0			
9400 TYKM		20 GRF	0530.0	0600	80.0	4.0	2.0			
2000 TYKM		20 GRF	0545.0	0600	50.0	1.5	.7			
3750 TYKM		45 C	0549.0	0554.7	8.0	7.0	2.5			
3750 TYKM		29 PBI	0557.0		50.0	3.0	1.5			
410 LEAR		8 S	0709.1	0709.6	.7	48				
245 LEAR		8 S	0709.5	0709.6	.3	21				
606 LEAR		8 S	0709.6	0709.6	.2	19				
410 LEAR		8 S	0743.6	0743.8	.2	43				
245 LEAR		8 S	0743.6	0743.8	.2	18				
9500 POTS			0816.2	0818.0		8.5				
9500 POTS		40 F	0816.2	0817.0	2.8	8.5				
430 KRAK		4 S/F	0817.5	0819.7	4.5	36.0	7.0			
245 LEAR		8 S	0824.1	0824.3	.4	19				
410 LEAR		8 S	0824.1	0824.3	.4	34				
33 UPIC		42 SER	1040.3	1217.9	183.5					
29 UPIC		42 SER	1040.4	1208.3	183.4					
6100 KISV		1 S	1129.5	1130	1.5	4.0				
536 ONDR		041 F	1207.0	1216.4	7.20	31.0	8.0			
810 KRAK		27 RF	1211.0	1232.7	54.00	15.0	7.0			
1470 POTS		27 RF	1255.0	1315	27.0	1.3				
2800 OTTA		20 GRF	1255.0	1300	60.0	3.6	2.6			
3000 POTS		27 RF	1257.3	1300.3	56.0	5.0				
1470 POTS		40 F	1343.0	1344.6	4.0	3.1				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
04	1000 TYKM	5 S	2213.5	2213.7	.5	3.0	1.0		
	1000 TYKM	20 GRF	2225.0	2243	50.0	5.0	1.5		
	9400 TYKM	20 GRF	2240.0	2255	50.0	4.0	2.0		
	3750 TYKM	20 GRF	2240.0	2252	40.0	4.0	1.5		
	2000 TYKM	20 GRF	2245.0	2252	35.0	2.0	.7		
	2800 OTTA	20 GRF	2245.0	2252	25.0	5.0	2.5		
05	260 ONDR	44 NS	0623.0E		460.00	78.0	5.0		
	410 PALE	43 NS	2157.3	0243.5	406.70	110			
	245 PALF	43 NS	2157.3	0423.1	406.70	61			
	410 LEAR	43 NS	2322.0	2335.1	406.70	160			
	245 LEAR	43 NS	2322.0	0741.6	406.70	67			
	2000 TYKM	21 GRF	0515.0	0535	160.0	7.0	2.5		
	9100 GORK	20 GRF	0518.5	0534.2	117.0	14.0			
	3750 TYKM	21 GRF	0520.0	0535	160.0	8.0	3.0		
	9400 TYKM	20 GRF	0520.0	0535	130.0	7.0	3.0		
	2000 TYKM	5 S	0530.0	0530.5	1.5	1.5	.5		
	410 LEAR	8 S	0536.3	0537.3	1.8	20			
	3750 TYKM	5 S	0544.0	0544.7	4.0	1.5	.5		
	2000 TYKM	20 GRF	0555.0	0610	45.0	2.0	1.0		
	29 UPIC	3 S	0735.0	0735.2	.9				
	33 UPIC	8 S	0735.2	0735.2	.8				
	9500 POTS	1 S	1128.5	1130.0	9.0	7.2			
	2800 OTTA	20 GRF	1310.0	1335	70.0	7.2	3.2		
	3000 POTS	27 RF	1331.8	1338	26.0	4.3			
	1470 POTS	27 RF	1335.0	1340	14.0	1.0			
	33 UPIC	4 S/F	1526.5	1526.8	.8				
	29 UPIC	4 S/F	1527.0	1527.4	.8				
	245 SGMR	4 S/F	1529.3	1532.5	5.00	119			
	228 HARS	45 C	1530.0	1532.3	4.0	170.0	30.0		
	2800 OTTA	2 S/F	1530.0	1532.5	6.0	3.6	1.8		
	410 SGMR	4 S/F	1530.1	1531.6	2.70	13			
	1415 SGMR	4 S/F	1530.1	1531.8	5.0	08			
	606 SGMR	8 S	1530.1	1531.1	1.90	17			
	33 UPIC	46 C	1530.2	1530.8	3.4				
	29 UPIC	46 C	1530.5	1531.2	3.2				
	410 PALF	8 S	1718.0	1718.3	.8	110			
	410 PALE	8 S	1731.1	1731.3	.5	50			
410 PALE	8 S	2123.6	2124.1	.5	62				
06	3750 TYKM	21 GRF	0110.0	0145	90.0	3.0	1.5		
	2000 TYKM	21 GRF	0110.0	0145	90.0	2.0	1.0		
	1000 TYKM	45 C	0116.0	0116.7	15.0	2.5	.5		
	9400 TYKM	20 GRF	0120.0	0150	70.0	4.0	2.0		
	3750 TYKM	5 S	0121.0	0123	5.0	1.5	.7		
	2000 TYKM	5 S	0121.0	0123.3	6.0	2.0	.7		
	3750 TYKM	20 GRF	0720.0	0750	120.0	6.0	2.5		
	2000 TYKM	20 GRF	0720.0	0750	120.0	4.0	1.5		
	9400 TYKM	20 GRF	0720.0	0755	100.0	7.0	3.0		
	260 ONDR	4 S/F	0740.8	0742	3.0	54.0	5.0		
	260 ONDR	42 SER	0927.0	0949.5	67.0	32.0			
	410 PALE	8 S	2113.1	2113.5	.5	36			
	208 VORO	4 S/F	2332.0	2333	1.5	150.00			
07	245 LEAR	43 NS	0037.5	0153.3	537.50	150			
	410 LEAR	43 NS	0037.5	0245.1	537.50	30			
	208 VORO	41 F	0003.0	0010	8.5	15.00			
	245 LEAR	4 S/F	0006.5	0011.0	4.8	68			
	245 PALE	8 S	0010.8	0011.1	.3	50			
	2000 TYKM	28 PRE	0217.0	0220.6	22.0	4.0	2.5		
	3750 TYKM	28 PRE	0218.0	0221	20.0	3.0	2.0		
	9400 TYKM	21 GRF	0230.0	0256	150.0	15.0	5.0		
	3750 TYKM	45 C	0238.0	0245.1	12.0	18.0	9.0		
	2000 TYKM	45 C	0239.0	0244.9	11.0	28.0	6.0		
	9400 TYKM	45 C	0244.0	0244.9	6.0	6.0	2.00		
	1000 TYKM	5 S	0244.7	0245.0	1.0	3.5	1.0		
	2000 TYKM	29 PBI	0250.0		170.0	6.0	3.0		
	3750 TYKM	29 PBI	0250.0		130.0	10.0	4.0		
	260 ONDR	42 SER	0728.0	0755.2	42.0	209.0			
	245 LEAR	4 S/F	0753.1	0755.1	3.4	450			
	204 IZMI	8 S	0755.0	0755.2	.5	100.0	50.0		
	234 POTS	4 S/F	0755.1	0755.1	.2	360.0	90.0		
	3100 CRIM	26 FAL	0805.0	0924.0		3.0			
	430 KRAK	42 SER	1128.4	1135.5	92.00	35.0			
	430 KRAK		1128.4	1152.2		35.0			
	430 KRAK		1128.4	1150.7		36.0			
	430 KRAK		1128.4	1147.4		29.0			
260 ONDR	42 SER	1153.0	1329.6	141.00	64.0				
3000 POTS	27 RF	1250.0	1349	80.0	17.0				
1470 POTS	27 RF	1258.0	1329	37.0	1.6				
2800 OTTA	22 GRF	1300.0	1430	140.0	3.8				
29 HPIC	3 S	1328.5	1328.7	.6					
33 UPIC	8 S	1328.5	1328.5	.7					
245 SGMR	47 GR	1329.3	1330.6	1.5	2000				
606 SGMR	8 S	1330.1	1330.6	.70	44				

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
07	245 SGMR	4 S/F	1510.8	1511.6	2.8	78				
	2800 OTTA	240 R	1535.0	1550	15.0	3.0	1.5			
	410 PALE	4 S/F	1959.6	2003.8	7.5	57				
	245 PALE	47 GB	2000.1	2004.1	10.4	430				
	245 PALE	47 GB	2020.1	2023.5	14.0	240				
	410 PALE	47 GB	2026.6	2026.8	2.00	17				
08	260 ONDR	44 NS	0540.0E		512.00	13.0				
	3750 TYKW	21 GRF	0420.0	0500	90.0	2.0	1.0			
	2000 TYKW	5 S	0424.5	0426	5.0	1.5	.7			
	9400 TYKW	20 GRF	0425.0	0445	70.0	4.0	2.0			
	2000 TYKW	5 S	0435.0	0437.8	5.0	6.0	2.0			
	3750 TYKW	5 S	0436.0	0437.0	4.0	8.0	5.0			
	3750 TYKW	29 PBI	0440.0		10.0	3.0	1.5			
	2000 TYKW	29 PBI	0440.0		60.0	2.0	1.0			
	2950 GORK	1 S	0836.3	0837.6	2.0	6.0				
	2950 GORK	29 PBI	0838.3	0838.3	.6	3.6				
	430 KRAK	8 S	0908.4	0908.4	.2	7.0				
	3000 POTS	20 GRF	1115.0	1217.5	123.0	7.0				
	1470 POTS	20 GRF	1120.0	1206.5	85.0	1.3				
	9500 POTS	20 GRF	1123.5	1145	92.0	7.3				
	430 KRAK	8 S	1136.8	1136.8	.2	20.0				
	430 KRAK	8 S	1145.4	1145.5	.3	13.0				
	810 KRAK	8 S	1159.5	1159.5	.1	13.0				
	2800 OTTA	21 GRF	1215.0		45.00	5.2				
	2800 OTTA	2 S/F	1217.0	1219	4.0	4.2	2.2			
	2800 OTTA	20 GRF	1320.0	1500	170.0	2.6	1.3			
	1470 POTS	20 GRF	1320.0	1330.8	60.0	3.0				
	245 SGMR	8 S	1324.0	1324.1	.60	11				
	410 SGMR	8 S	1324.0	1324.1	.50	11				
	606 SGMR	8 S	1324.0	1324.1	.30	11				
	1415 SGMR	8 S	1324.1	1324.1	.7	110				
	2800 OTTA	1 S	2048.5	2049.5	3.5	4.0	1.6			
	09	260 ONDR	44 NS	0538.0E		509.00	23.0			
		208 VOR0	44 NS	2100.0E		24.00		7.0		
3750 TYKW		5 S	0022.0	0029.7	15.0	3.0	1.0			
2000 TYKW		5 S	0022.0	0029.8	20.0	4.0	1.0			
1000 TYKW		45 C	0029.0	0030.4	12.0	5.0	1.0			
245 LEAR		8 S	0156.8	0157.0	.3	20				
3750 TYKW		20 GRF	0700.0	0742	110.0	8.0	3.5			
9400 TYKW		20 GRF	0720.0	0750	80.0	6.0	3.0			
1000 TYKW		20 GRF	0720.0	0741	80.0	2.0	1.0			
2000 TYKW		20 GRF	0720.0	0741	80.0	4.0	1.5			
1470 POTS		40 F	0739.5	0740.5	4.5	3.2				
1470 POTS		1 S	1056.5	1056.6	1.5	2.7				
8400 BERN		42 SER	1234.0	1317.0	46.0	30.0				
3200 BERN		42 SER	1234.0	1317.0	46.0	19.0				
11800 BERN		42 SER	1234.0	1317.0	46.0	27.0				
5200 BERN		42 SER	1234.0	1317.0	46.0	29.0				
8800 SGMR		4 S/F	1237.3	1238.8	3.50	15				
9500 POTS		1 S	1237.5	1239.0	3.0	8.7				
3000 POTS		1 S	1237.5	1239.0	1.9	2.0				
4995 SGMR		4 S/F	1237.5	1238.8	3.30	10				
606 SGMR		8 S	1237.5	1238.1	1.3	24				
9400 HUAN		S	1237.6	1238.7	2.3	10.2	5.0			
2800 OTTA		1 S	1238.0	1239	2.0	2.2	1.1			
8800 SGMR		4 S/F	1304.3	1305.3	3.00	28				
4995 SGMR		4 S/F	1304.3	1305.8	2.70	11				
9500 POTS		4 S/F	1304.5	1306.1	4.5	30.0				
9400 HUAN		S	1304.8	1305.8	1.9	29.2	17.8			
7000 SAOP		45 C	1304.8	1305.9	1.6	26.0	13.0		L	
3000 POTS		2 S/F	1305.0	1305.6	5.00	5.0			6L	
1470 POTS		1 S	1305.0	1306	2.0	2.7				
2695 SGMR		4 S/F	1305.0	1305.8	2.80	07				
2800 OTTA		2 S/F	1305.0	1305.7	2.0	8.4	3.8			
808 ONDR		8 S	1305.3	1305.3	.3	85.0				
536 ONDR		42 SER	1305.5	1308.2	13.0	36.0				
7000 SAOP		29 PBI	1306.4	1306.4	4.9	13.0	6.0			
606 SGMR		8 S	1307.1	1308.1	2.00	34				
410 SGMR		47 GB	1307.5	1308.1	4.00	340				
245 SGMR		8 S	1308.0	1308.1	.5	42				
2800 OTTA		21 GRF	1315.0	1355	310.0	5.0	2.0			
7000 SAOP		4 S/F	1315.5	1317.1	3.4	23.0	10.0			
9500 POTS		3 S	1315.5	1317.0	7.0	14.0			19L	
3000 POTS		3 S	1316.0	1317	3.0	12.0				
2800 OTTA	4 S/F	1316.0	1317	4.0	11.2	3.0				
808 ONDR	4 S/F	1316.4	1317	1.5	125.0	3.0				
1470 POTS	4 S/F	1316.5	1316.8	1.5	51.0					
3200 BERN	3 S	1609.3	1611.1	3.5	18.0					
5200 BERN	3 S	1610.0	1611.1	3.0	20.0					
2800 OTTA	3 S	1610.0	1611	4.0	10.4					
7000 SAOP	3 S	1610.0	1611.1	2.9	13.0	5.0		11L		
10	200 GORK	44 NS	0252.0E		467.00	5.0				

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME		TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS	
			UT	UT	UT		10 ⁻²² W m ⁻² Hz ⁻¹	PEAK			MEAN
10	245 LEAR	43 NS	0459.8	0504.3		276.20	37				
	260 ONDR	44 NS	0540.0E			508.00	71.0	3.0			
	245 SGMR	43 NS	0920.0	1255.6		520.00	150				
	200 HIRA	44 NS	1926.0E	2020		630.00	10.0	3.0		WR	
	208 VORO	44 NS	2100.0E			24.00		9.0			
	245 LEAR	43 NS	2335.0	0152.8		602.00	90				
	245 LEAR	8 S	0059.1	0059.1		.5	33				
	4995 LEAR	8 S	0655.0	0655.1		.3	18				
	8800 LEAR	8 S	0655.0	0655.1		.3	11				
	2695 LEAR	8 S	0655.0	0655.1		.3	13				
	228 HARS	45 C	0958.0	0958.5		1.0	115.0	18.0			
	2800 OTTA	20 GRF	1310.0	1315		25.0	4.4	2.2			
	2800 OTTA	21 GRF	1340.0	1550		220.0	9.0	4.0			
	7000 SAOP	3 S	1515.0	1517.0		2.4	137.0	65.0		17L	
	4995 ATHN	4 S/F	1515.1	1516.8		13.90	139				
	8800 ATHN	4 S/F	1515.3	1516.8		13.0	110				
	8400 BERN	3 S	1515.5U	1517.0U		10.00	120.00				
	11800 BERN	3 S	1515.5U	1517.0U		10.00	80.00				
	3200 BERN	3 S	1515.5	1517.0		10.0	176.0				
	5200 BERN	3 S	1515.5	1517.0		10.0	210.0				
	8800 SGMR	4 S/F	1515.5	1516.8		3.60	100				
	4995 SGMR	4 S/F	1515.6	1516.8		4.40	230				
	15400 SGMR	4 S/F	1515.8	1517.0		3.20	41				
	2695 SGMR	4 S/F	1515.8	1516.8		5.20	110				
	2695 ATHN	4 S/F	1516.0	1516.8		12.30	91				
	2800 OTTA	3 S	1516.0	1517		9.0	130.0	23.0			
	2650 DNIN	3 S	1516.0	1517		10.0	100.0	30.0			
	1415 SGMR	4 S/F	1516.5	1517.1		2.3	19				
	1415 ATHN	4 S/F	1516.5	1516.8		13.10	19				
	7000 SAOP	29 PBI	1517.5	1517.5		73.5	47.0	23.0			
	9400 HUAN	S	1940.6	1941.4		1.9	11.4	6.5		L	
	2800 OTTA	1 S	1949.0	1949.7		2.0	6.4	2.2			
	3750 TYKW	20 GRF	2300.0	2335		100.0	3.0	1.5			
	11	200 GORK	44 NS	0306.0E			393.00		5.0		
		260 ONDR	44 NS	0641.0E			449.00	64.0	2.0		
100 GORK		43 NS	0833.0			69.00		10.0			
127 TORN		43 NS	0840.0			120.00		2.0		V1, DISTURBED	
208 VORO		44 NS	2100.0E			240.00		8.0			
245 LEAR		43 NS	2345.1	0153.8		591.90	230				
245 PALE		8 S	0023.8	0024.0		.5	64				
606 LEAR		8 S	0048.1	0048.1		.2	18				
606 LEAR		8 S	0049.5	0050.5		1.3	22				
410 LEAR		8 S	0049.8	0050.1		.3	20				
245 LEAR		8 S	0101.1	0102.0		1.2	33				
3750 TYKW		5 S	0211.0	0212 U		4.00	15.00	8.00		INTERFERENCE	
2000 TYKW		20 GRF	0503.0	0514		50.0	2.0	1.0			
3750 TYKW		45 C	0503.0	0517.2		5.0	9.00	3.00		INTERFERENCE	
3750 TYKW		21 GRF	0503.0	0514		45.0	5.0	2.0			
9400 TYKW		20 GRF	0503.0	0514		50.0	11.0	4.0			
2950 GORK		20 GRF	0503.2	0507.1		25.2	8.4	4.0			
9100 GORK		20 GRF	0503.3	0507.1		8.5	10.0				
410 LEAR		8 S	0713.0	0713.1		.3	33				
430 KRAK		8 S	0754.7	0754.7		.1	29.0				
9500 POTS		1 S	1102.6	1103.5		1.4	10.0				
2800 OTTA		22 GRF	1200.0	1207		30.0	5.0	2.5			
3000 POTS		23 GRF	1201.0	1204.4		24.0	9.0				
1470 POTS		23 GRF	1202.0	1204.2		13.0	3.8				
430 KRAK		8 S	1207.5	1207.5		.1	60.0				
430 KRAK		8 S	1230.8	1230.8		.1	10.0				
7000 SAOP		1 S	1331.0	1331.3		.5	8.0	4.0		0	
7000 SAOP		1 S	1352.4	1352.8		1.0	8.0	4.0		0	
2800 OTTA		21 GRF	1500.0	1535		90.0	5.8	3.9			
2800 OTTA		40 F	1501.5	1502		2.0	50.0				
2650 DNIN		45 C	1511.0	1512		3.0	40.0	20.0			
7000 SAOP		3 S	1637.6	1638.9		4.6	11.0	5.0		0	
2800 OTTA		20 GRF	1750.0	1757		60.0	4.4	2.0			
245 PALE		8 S	1821.1	1821.3		.4	110				
9400 HUAN		S	2044.5	2045.3		1.8	12.3	3.8		L	
3750 TYKW	21 GRF	2240.0	2315		105.0	4.0	2.0		RAIN		
2000 TYKW	20 GRF	2245.0	2315		100.0	2.0	1.0				
2695 PENT	20 GRF	2306.0	2316		20.0	2.4	1.2				
9400 TYKW	45 C	2342.0	2346.1		9.0	15.0	2.5				
3750 TYKW	5 S	2342.0	2346.1		9.0	4.0	.5				
8800 LEAR	8 S	2346.0	2346.1		.8	16					
12	200 GORK	44 NS	0245.0E			423.00		5.0			
	260 ONDR	44 NS	0549.0E			507.00	24.0				
	208 VORO	44 NS	2100.0E			240.00		10.0			
	8800 LEAR	8 S	0034.8	0035.1		.5	40				
	3750 TYKW	5 S	0035.0	0035.2		3.0	10.0	2.0			
	9400 TYKW	5 S	0035.0	0035.2		1.0	32.0	9.0		RAIN	
	4995 LEAR	8 S	0035.0	0035.1		.3	26				
	15400 LEAR	8 S	0035.0	0035.1		1.1	18				
	1415 LEAR	8 S	0036.1	0036.3		.4	23				

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
12	208 VORO	4 S/F	0041.0	0041.5	1.0	200.00			
	3750 TYKW	5 S	0231.0	0231.8	9.0	3.0	1.0		
	2000 TYKW	20 GRF	0300.0	0315	50.0	1.5	.7		
	9400 TYKW	45 C	0303.0	0315.3	17.0	24.0	8.0		
	3750 TYKW	20 GRF	0305.0	0314	45.0	6.0	2.0		
	8800 LEAR	4 S/F	0312.0	0315.1	11.6	19			
	15400 LEAR	4 S/F	0312.0	0315.1	11.6	20			
	4995 LEAR	4 S/F	0312.0	0315.1	11.6	11			
	9400 TYKW	29 PRI	0320.0		30.0	12.0	6.0		
	410 LEAR	8 S	0324.1	0324.5	.7	10			
	245 LEAR	8 S	0324.3	0324.5	.5	230			
	245 PALE	8 S	0324.3	0324.5	.3	290			
	1415 LEAR	8 S	0350.0	0350.1	.3	30			
	9400 TYKW	21 GRF	0410.0	0416	55.0	6.0	2.5		
	9100 GORK	1 S	0440.1	0444.3	7.9	6.0			
	8800 LEAR	8 S	0443.5	0444.3	1.6	10			
	9400 TYKW	5 S	0444.0	0444.3	2.0	8.0	3.0		
	15400 LEAR	8 S	0444.1	0444.3	1.0	21			
	15400 LEAR	8 S	0446.6	0446.8	1.5	26			
	9400 TYKW	5 S	0507.2	0507.4	.8	6.0	2.0		
	9100 GORK	23 GRF	0518.2	0543.5	4.8	10.0			
	9400 TYKW	5 S	0524.0	0524.6	2.0	5.0	2.0		
	9400 TYKW	5 S	0541.0	0543	10.0	5.0	2.0		
	35000 BERN	46 C	0601.7	0602.6	2.0	440.0			
	19600 BERN	46 C	0602.0	0602.6	2.5	302.0			
	11800 BERN	46 C	0602.3	0602.6	2.5	79.0			
	8400 BERN	46 C	0602.5	0602.7	2.5	13.0			
	9400 TYKW	5 S	0602.5	0602.8	6.5	14.0	4.00		
	17000 NOBE	4 S/F	0602.5	0602.8	1.5	149.0			L
	9100 GORK	1 S	0602.5	0602.7	1.6	11.0	5.0		
	15400 LEAR	8 S	0602.5	0602.6	1.3	139			
	204 IZMI	8 S	0649.1	0649.1	.3	140.0	125.0		
	1000 TYKW	5 S	0657.0	0657.3	1.0	5.0	1.5		
	9100 GORK	21 GRF	0701.2	0704.0	67.7	6.8			
	9100 GORK		0701.5	0701.7	.5	16.0	8.0		
	9500 POTS	3 S	0701.5	0701.8	4.5	11.0			
	9400 TYKW	5 S	0701.5	0701.7	3.0	15.0	4.0		
	8800 LEAR	8 S	0701.6	0701.8	.5	17			
	1000 TYKW	C	0714.9	0715.0					
	808 ONDR	8 S	0715.0	0715	.3	95.0			
	234 POTS	4 S/F	0809.3	0809.3	.3	100.0	10.0		
	9100 GORK	20 GRF	0836.0	0914.4	69.0E	15.0			
	430 KRAK	8 S	0849.1	0849.1	.2	20.0			
	9500 POTS	20 GRF	0902.0	0923	43.0	10.0			
	9500 POTS	20 GRF	0951.0	1043	13.1	18.0			
	3000 POTS	45 C	0953.0	1043.3	182.0	51.0			
	1470 POTS	45 C	1002.0	1044.2	170.0	41.0			
	113 POTS	41 F	1002.8	1003.1	1.9	150.0	20.0		III ONLY PAPER REC
	3200 BERN	22 GRF	1005.0	1043.2	105.0	41.0			
	5200 BERN	22 GRF	1005.0	1043.2	105.0	38.0			
	260 ONDR	28 PRE	1012.0	1053	55.0	64.0	43.0		
	234 POTS	46 C	1012.0	1104	163.0	26.0	35.0		IV
	228 HARS	47 GB	1012.0	1112.5	148.0	150.0	50.0		
	245 SGMR	47 GB	1012.6	1030.0	122.40	40			
	410 SGMR	47 GB	1013.0	1023.6	100.50	26			
	1415 ATHN	4 S/F	1018.3	1043.1	87.30	50			
	810 KRAK		1018.5	1051.6		63.0			
	810 KRAK		1018.5	1044.3		180.0			
	810 KRAK	49 GB	1018.5	1022.3	89.8	79.0	21.0		
	810 KRAK		1018.5	1104.6		35.0			
	2695 SGMR	47 GB	1018.5	1022.1	33.6	41			
	4995 ATHN	4 S/F	1018.6	1043.3	98.00	21			
	606 SGMR	47 GB	1018.6	1022.8		86			
	2695 ATHN	4 S/F	1018.8	1022.6	91.30	46			
	1415 SGMR	47 GB	1019.3	1024.6	46.00	33			
	808 ONDR	28 PRE	1019.5	1037.6	20.0	30.0	18.0		
	113 POTS	46 C	1020.0	1053	250.0	200.0			IV
	536 ONDR	28 PRE	1020.0	1023.2	19.0	42.0	21.0		
	430 KRAK		1020.7	1047		270.0			
	430 KRAK	49 GB	1020.7	1021.4	89.5	110.0	53.0		
	430 KRAK		1020.7	1044.6		240.0			
	430 KRAK		1020.7	1052.0		260.0			
	204 IZMI	25 R	1021.5	1132.2	98.0	250.0	100.0		
	8800 ATHN	4 S/F	1021.5	1043.3	97.5	17			
	33 UPIC	46 C	1032.5		6.3				
	29 UPIC	46 C	1034.5	1035.5	5.2				
	536 ONDR	46 C	1039.0	1046.8	23.0	208.0	115.0		
	808 ONDR	45 C	1039.3	1043.8	11.0	102.0	69.0		
	808 ONDR	28 PRI	1050.3	1106.2	50.0	38.0	13.0		
	2800 OTTA	26A FAL	1100.0	1235	95.0	-11.2	-5.6		
	536 ONDR	29 PRI	1102.0	1126.7	45.0	24.0	21.0		
	260 ONDR	48 C	1107.0	1113.8	50.0	135.0	103.0		
	2800 OTTA	1 S	1109.0	1113	7.0	8.4	4.0		
	2800 OTTA	20 GRF	1124.0	1126	11.0	4.2	2.1		
	8800 ATHN	4 S/F	1205.1	1207.8	9.5	48			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} W_m^{-2} Hz^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
12	11800 BERN	46 C	1207.0	1208.6	7.0	38.0			
	5200 BERN	3 S	1207.0	1208.6	4.0	38.0			
	3200 BERN	1 S	1207.0	1208.6	1.5	9.0			ONLY PAPER REC
	4995 ATHN	4 S/F	1207.1	1208.1	4.00	26			ONLY PAPER REC
	8400 BERN	46 C	1207.6	1208.3	7.0	64.0			
	8800 SGMR	8 S	1207.8	1208.3	1.80	63			
	9400 HUAN	S	1207.8	1208.7	3.2	31.3	12.8		L
	3000 POTS	3 S	1208.0	1208.5	1.5	11.0			
	9500 POTS	3 S	1208.0	1208.5	7.0	38.0			
	4995 SGMR	4 S/F	1208.0	1208.8	2.80	30			
	15400 SGMR	8 S	1208.1	1208.6	1.4	15			
	7000 SAOP	4 S/F	1208.6	1209.4	1.2	65.0	32.0		6L
	7000 SAOP	29 PBI	1209.9	1209.9	12.1	32.0	16.0		
	430 KRAK	8 S	1215.3	1215.3	.2	25.0			
	1415 SGMR	4 S/F	1401.3	1404.0	5.3	31			
	245 SGMR	4 S/F	1401.3	1402.3	5.00	56			
	245 SGMR	4 S/F	1401.8	1412.3	10.8	31			
	9500 POTS	1 S	1402.0	1402.3	2.0	5.9			
	2800 OTTA	20 GRF	1645.0	1725	95.0	3.6	1.8		
	2000 TYKW	5 S	2059.0	2059.5	1.0	7.0	3.0		
208 VORO	4 S/F	2115.5	2116	1.0	200.00				
9100 GORK	20 GRF	F311.2	0318.2	36.0	20.0				
13	200 GORK	44 NS	0301.0E		536.00		5.0		
	260 ONDR	44 NS	0958.0E	1250	245.00	13.0			
	410 LEAR	8 S	0001.6	0001.8	1.2	240			
	245 LEAR	8 S	0001.8	0002.0	.8	11			
	606 LEAR	8 S	0001.8	0002.3	.8	49			
	100 GORK	46 C	0411.7	0412.2	1.9	1300.0			
	100 GORK		0411.7	0412.5		3700.0			
	245 LEAR	8 S	0411.8	0412.6	1.0	56			
	410 LEAR	8 S	0412.0	0412.3	1.8	04			
	606 LEAR	8 S	0412.1	0412.8	2.0	19			
	9100 GORK	21 GRF	0446.6	0453.1	15.7	5.0			
	9100 GORK	1 S	0447.4	0447.9	1.2	24.0	12.0		
	3750 TYKW	28 PRE	0530.0	0537	16.0	2.5	1.5		
	15000 KISV	4 S/F	0545.0	0548	4.0	24.0			
	3750 TYKW	45 C	0546.0	0548.0	3.0	15.0	6.0		
	9400 TYKW	21 GRF	0546.0	0553	30.0	4.0	2.0		
	2000 TYKW	45 C	0546.0	0548.1	3.0	9.0	2.5		
	5200 BERN	3 S	0546.6	0547.8	3.0	34.0			ONLY PAPER REC
	8400 BERN	3 S	0546.6	0547.8	3.0	16.0			ONLY PAPER REC
	3200 BERN	3 S	0546.6	0547.8	3.0	18.0			ONLY PAPER REC
	2695 ATHN	4 S/F	0546.6	0547.6	3.00	11			
	11800 BERN	3 S	0546.6	0547.8	3.0	21.0			ONLY PAPER REC
	2950 GORK	20 GRF	0546.8	0548.0	17.9	12.0	6.0		
	4995 ATHN	8 S	0547.0	0547.6	2.00	13			
	8800 ATHN	8 S	0547.0	0547.6	1.6	20			
	9400 TYKW	5 S	0547.0	0547.9	2.0	23.0	8.0		
	8800 LEAR	8 S	0547.5	0547.8	.6	33			
	4995 LEAR	8 S	0547.5	0548.0	.6	22			
	15400 LEAR	8 S	0547.6	0547.8	.5	23			
	2695 LEAR	8 S	0547.6	0548.0	.5	16			
	3750 TYKW	29 PBI	0549.0		110.0	4.0	2.0		
	2000 TYKW	29 PBI	0549.0		110.0	2.0	1.0		
	9400 TYKW	5 S	0638.5	0638.8	1.5	5.0	2.0		
	245 LEAR	8 S	0700.6	0700.6	.2	49			
	234 POTS	4 S/F	0700.6	0700.8	.5	200.0	20.0		III
	113 POTS	4 S/F	0700.8	0701	.3	100.0	15.0		III
	204 IZMI	5 S	0706.00	0706.0	.7	250.0	140.0		
	113 POTS	42 SER	0728.4	0731.8	3.8	100.0	2.0		
	245 LEAR	8 S	0812.0	0812.6	1.5	72			
	113 POTS	4 S/F	0920.9	0921	.2	175.0	35.0		III
2800 OTTA	20 GRF	1240.0	1305	50.0	2.6	1.6			
2800 OTTA	21 GRF	1525.0	1605	200.0	8.2	4.0			
7000 SAOP	27 RF	1558.2		29.5	7.0	3.0		0	
3200 BERN	3 S	1647.6	1648.6	2.0	14.0			ONLY PAPER REC	
2695 ATHN	4 S/F	1648.0	1648.6	5.10	15				
8400 BERN	3 S	1648.0	1648.6	2.0	50.0				
2800 OTTA	3 S	1648.0	1648.6	3.0	14.0	4.7			
8800 ATHN	4 S/F	1648.0	1648.6	5.1	41				
11800 BERN	3 S	1648.0	1648.6	2.0	30.0				
5200 BERN	3 S	1648.0	1648.6	2.0	29.0			ONLY PAPER REC	
4995 ATHN	4 S/F	1648.0	1648.6	5.10	30				
9400 HUAN	S	1648.1	1648.7	2.0	40.4	15.0		L	
7000 SAOP	3 S	1648.1	1648.7	.8	46.0	23.0		14L	
1415 ATHN	4 S/F	1648.3	1649.1	3.30	09				
7000 SAOP	29 PBI	1648.9	1648.9	3.2	23.0	11.0			
7000 SAOP	2 S/F	1843.0	1843.3	1.0	8.0	4.0		29R	
2800 OTTA	20 GRF	1950.0	2030	115.0	3.2	1.6			
14	200 GORK	43 NS	0452.0		452.0E		5.0		
	100 GORK	44 NS	0503.0E		441.00		10.0		
	127 TORN	44 NS	0600.0E	1238.4	600.00	200.0	17.0		V1
	245 LEAR	43 NS	0615.0	0840.1	203.00	42			

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
			UT	UT		MINUTES	$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ PEAK		
14	260 ONDR	44 NS	0626.0E		453.0D	40.0	11.0		
	200 HIRA	44 NS	1928.0E	2112	520.0D	6.0	3.0		WR
	208 VORO	44 NS	2100.0E		240.0D		8.0		
	606 LEAR	4 S/F	0025.5	0026.8	4.0	19			
	410 LEAR	8 S	0026.0	0027.0	1.8	08			
	2000 TYKW	20 GRF	0110.0	0128	60.0	2.0	1.0		
	3750 TYKW	20 GRF	0110.0	0127	60.0	3.0	1.0		
	500 HIRA	7 C	0424.1	0424.6	.6	600.0	200.0		0
	245 LEAR	4 S/F	0516.0	0551.6	55.1	54			
	606 LEAR	8 S	0516.8	0517.1	.7	30			
	410 LEAR	8 S	0516.8	0517.1	.8	27			
	606 LEAR	4 S/F	0519.1	0521.6	3.0	31			
	410 LEAR	4 S/F	0520.0	0521.1	2.1	35			
	410 LEAR	8 S	0529.5	0529.6	1.5	26			
	606 LEAR	8 S	0529.6	0530.5	1.4	20			
	3750 TYKW	20 GRF	0655.0	0701	55.0	2.0	1.0		
	2000 TYKW	20 GRF	0659.0	0701	50.0	2.0	1.0		
	430 KRAK	8 S	0941.5	0941.7	.6	53.0			
	430 KRAK	4 S/F	1005.5	1006.3	1.0	76.0	8.0		
430 KRAK	8 S	1011.2	1011.2	.2	18.0				
9500 POTS	1 S	1125.5	1126.5	2.0	7.0				
3750 TYKW	20 GRF	2230.0	2310	100.0	4.0	2.0			
15	100 GORK	44 NS	0300.0E		90.0D		5.0		
	200 GORK	44 NS	0300.0E		323.0D		5.0		
	260 ONDR	44 NS	0600.0E		491.0D	37.0			
	245 LEAR	43 NS	0600.0	0601.0	218.0D	35			
	208 VORO	44 NS	2100.0E		240.0D		7.0		
	9400 TYKW	5 S	0027.5	0028.2	3.5	23.0	5.0		
	8800 LEAR	8 S	0027.6	0028.1	1.2	24			
	9400 TYKW	31 ABS	0113.0	0145	167.0	-8.0	-4.0		
	9400 TYKW	5 S	0121.0	0121.9	6.0	6.0	2.0		
	9400 TYKW	21 GRF	0140.0	0200	40.0	4.0	2.0		
	3750 TYKW	21 GRF	0143.0	0200	40.0	2.0	1.0		
	2000 TYKW	45 C	0145.6	0150.1	6.0	4.0	1.0		
	3750 TYKW	5 S	0148.0	0150.1	4.0	5.0	2.0		
	9400 TYKW	5 S	0149.5	0150.1	2.0	7.0	1.5		
	8800 LEAR	8 S	0149.8	0149.8	.5	11			
	4995 LEAR	8 S	0149.8	0149.8	.7	11			
	2000 TYKW	5 S	0247.0	0248.6	3.0	8.0	3.5		
	9400 TYKW	5 S	0247.5	0248.6	1.5	14.0	6.0		
	3750 TYKW	5 S	0247.5	0248.6	2.5	13.0	7.0		
	4995 MANT	3 S	0247.6	0248.6	2.4	16.4	5.5		
	1415 MANT	1 S	0248.0	0248.5	1.3	5.6	1.9		
	1000 TYKW	5 S	0248.0	0248.4	1.5	2.5	.7		
	2695 MANT	1 S	0248.1	0248.5	1.5	10.4	3.5		
	9400 TYKW	29 PBI	0249.0		30.0	6.0	2.5		
	2000 TYKW	29 PBI	0250.0		40.0	3.0	1.5		
	3750 TYKW	29 PBI	0250.0		45.0	7.0	3.0		
	410 LEAR	8 S	0305.0	0305.1	.6	51			
	245 LEAR	8 S	0305.0	0305.1	.6	38			
	3750 TYKW	28 PRE	0345.0	0354	9.0	2.0	1.0		
	9400 TYKW	28 PRE	0346.0	0347.3	8.0	4.0	1.0		
	1000 TYKW	20 GRF	0350.0	0430	150.0	1.5	.7		
	9100 GORK	23 GRF	0353.7	0401.2	66.0	1.90			
	2950 GORK	20 GRF	0354.0	0357.5	137.0	1.10	6.0		
	3750 TYKW	45 C	0354.0	0357.6	6.0	17.0	6.0		
	2000 TYKW	20 GRF	0354.0	0357.6	145.0	6.0	2.5		
	9400 TYKW	45 C	0354.0	0357.2	6.0	56.0	25.0		
	8800 MANT	3 S	0354.2	0357.3	7.8	74.0	24.7		
	4995 MANT	3 S	0354.2	0357.6	7.8	32.8	10.9		
	8800 ATHN	4 S/F	0354.5	0357.3	7.1	44			
	8800 LEAR	4 S/F	0355.6	0357.1	10.7	68			
	9100 GORK	4 S/F	0355.6	0357.1	4.3	4.30			
	15400 LEAR	47 GB	0355.6	0356.3	15.7	67			
	4995 ATHN	4 S/F	0355.6	0357.1	4.0D	26			
	2695 ATHN	4 S/F	0356.0	0357.1	2.1D	08			
	4995 LEAR	4 S/F	0356.1	0357.1	3.7	26			
	9400 TYKW	29 PBI	0400.0		140.0	21.0	7.0		
	3750 TYKW	30 PBI	0400.0		140.0	12.0	4.0		
	3750 TYKW	5 S	0503.0	0504.2	2.0	3.0	2.0		
	3750 TYKW	29 PBI	0505.0		15.0	2.0	1.0		
	245 LEAR	8 S	0541.6	0541.8	.9	21			
	500 HIRA	46 C	0541.6	0542.6	1.2	13.0	6.0		SR
	410 LEAR	4 S/F	0541.8	0542.0	3.2	63			
	410 LEAR	4 S/F	0704.1	0706.1	3.0	38			
1470 POTS	2 S/F	0718.0	0718.5	1.0	2.5				
3750 TYKW	5 S	0730.0	0732.7	5.0	13.0	4.0			
650 GORK	4 S/F	0730.4	0734.3	4.5	2.14				
11800 BERN	4 S/F	0730.5	0732.0	4.0	19.0				
8400 BERN	4 S/F	0730.5	0732.0	4.0	23.0				
606 MANT	4 S/F	0730.6	0730.8	3.4	13.8	4.6			
9100 GORK	2 S/F	0731.0	0732.0	6.0	1.90				
3100 CRIM	1 S	0731.0	0732.5	3.0	8.0	3.0			
4995 MANT	3 S	0731.1	0731.8	2.9	27.3	9.1			

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
15	8800 ATHN	4 S/F	0731.3	0731.8	2.3	18			
	2695 ATHN	4 S/F	0731.3	0732.1	2.2D	05			
	3200 BERN	4 S/F	0731.3	0732.6	3.0	13.0			ONLY PAPER REC
	5200 BERN	4 S/F	0731.3	0732.6	3.0	23.0			ONLY PAPER REC
	4995 ATHN	4 S/F	0731.3	0732.0	2.3D	15			
	810 KRAK	4 S/F	0731.4	0732.0	3.6	110.0	5.0		
	430 KRAK	4 S/F	0731.4	0731.6	4.0	22.0	5.0		
	1415 MANI	4 S/F	0731.4	0731.8	2.6	15.8	5.3		
	2695 MANI	1 S	0731.5	0732.2	1.5	10.4	3.5		
	9400 TYKW	5 S	0731.5	0732.2	2.5	14.0	8.0		
	2000 TYKW	45 C	0731.5	0731.9	2.5	6.0	2.0		
	1000 TYKW	45 C	0731.5	0732.2	3.5	16.0	5.0		
	3000 POTS	3 S	0731.5	0732.7	3.5	8.0			
	1470 POTS	4 S/F	0731.5	0732.5	2.5	11.0			
	9500 POTS	4 S/F	0731.5	0732.0	3.5	15.0			
	1415 ATHN	8 S	0731.5	0732.3	2.0D	16			
	204 IZMI	5 S	0731.6	0731.8	1.0	68.0	50.0		
	234 POTS	4 S/F	0731.6	0731.9	.5	100.0	4.0		III
	950 GORK	2 S/F	0731.7	0732.7	3.5	.70			
	113 POTS	4 S/F	0731.9	0732	.5	700.0	25.0		III
	9400 TYKW	29 PBI	0734.0		20.0	3.0	1.5		
	29 UPIC	2 S/F	0749.5	0750	.9				
	33 UPIC	45 C	0749.5	0750	2.1				
	2000 TYKW	28 PRE	0800.0	0812	12.0	2.0	1.0		
	3750 TYKW	28 PRE	0800.0	0812	12.0	4.0	2.0		
	2695 MANI	3 S	0810.0	0814.8	8.0	48.6	16.2		
	3100 CRIM	2 S	0811.7	0814.3	6.0	39.0	13.0		
	9500 POTS	4 S/F	0812.0	0816.0	9.5	163.0			
	3000 POTS	4 S/F	0812.0	0814.9	6.0	36.0			
	9100 GORK	4 S/F	0812.0	0816.3	5.6	18.0D			
	2950 GORK	4 S/F	0812.0	0814.8	5.9	3.10			
	8800 MANI	4 S/F	0812.0	0816.5	7.0	222.0	74.0		
	3750 TYKW	45 C	0812.0	0816.7	7.0	39.0	18.0		
	2000 TYKW	45 C	0812.0	0814.8	6.0	27.0	10.0		
	9400 TYKW	45 C	0812.0	0816.6	8.0	175.0	50.0		
	8400 BERN	46 C	0812.2	0816.0	30.0	216.0			
	19600 BERN	46 C	0812.2	0816.0	30.0	117.0			
	11800 BERN	46 C	0812.2	0816.0	30.0	199.0			
	2950 GORK	29 PBI	0812.4	0818.0	8.5	.40			
	1470 POTS	4 S/F	0812.5	0814.5	5.5	15.0			
	5200 BERN	46 C	0813.0	0817.5	36.0	15.0			ONLY PAPER REC
	1415 ATHN	4 S/F	0813.0	0814.6	4.3D	16			
	3200 BERN	46 C	0813.0	0814.0	36.0	36.0			ONLY PAPER REC
	4995 MANI	4 S/F	0813.0	0816.5	6.0	114.7	38.2		
	1000 TYKW	45 C	0813.0	0816.6	10.0	7.0	2.5		
	8800 ATHN	4 S/F	0813.1	0816.3	6.4	139			
	2695 ATHN	4 S/F	0813.1	0814.6	5.9D	28			
	2695 LEAR	4 S/F	0813.1	0814.8	4.5	43			
	4995 ATHN	4 S/F	0813.3	0816.6	5.3D	74			
	4995 LEAR	4 S/F	0813.6	0816.6	4.5	87			
	8800 LEAR	4 S/F	0814.0	0816.5	6.5	200			
	15400 LEAR	4 S/F	0814.1	0816.5	14.4	139			
	1415 LEAR	8 S	0814.5	0814.6	.1	15			
	9100 GORK	29 PBI	0817.7	0817.7	102.0E	4.40			
	2000 TYKW	29 PBI	0819.0		60.0	5.0	3.0		
	3750 TYKW	29 PBI	0819.0		60.0	11.0	6.0		
	9400 TYKW	29 PBI	0820.0		50.0D	27.0	12.0D		
	2800 OTTA	240AR	1325.0	1355	30.0	6.6			
	3000 POTS	29 PBI	1325.0	1330.5	80.0	14.0			
	9500 POTS	20 GRF	1325.0	1340	85.0D	13.0			
	1470 POTS	29 PBI	1326.0	1330.5	84.0D	7.0			
	2800 OTTA	22 GRF	1327.0	1330	27.0	12.4			
	8400 BERN	22 GRF	1330.0	1504.5	120.0	28.0			ONLY PAPER REC
	11800 BERN	22 GRF	1330.0	1504.5	120.0	28.0			ONLY PAPER REC
	113 POTS	42 SER	1330.9	1331	3.9	150.0	1.0		III
	2650 DWIN	2 S/F	1448.0	1501	5.0	70.0	30.0		
	2800 OTTA	20 GRF	1503.0	1507	30.0	3.4	1.7		
	7000 SAOP	45 C	1503.6	1504.3	8.4	17.0	8.0		0
	8800 ATHN	4 S/F	1642.3	1645.6	14.3	72			
	8800 SGMR	4 S/F	1642.5	1645.8	11.1D	100			
	2695 ATHN	4 S/F	1642.5	1645.6	10.6D	100			
	4995 ATHN	4 S/F	1642.5	1645.6	14.0D	130			
	11800 BERN	4 S/F	1642.6	1645.8	33.0	70.0			
	8400 BERN	4 S/F	1642.6	1645.8	33.0	94.0			
	2800 OTTA	3 S	1642.7	1645.7	7.3	111.0	35.6		
	2695 SGMR	4 S/F	1643.0	1645.8	8.6D	119			
	3200 BERN	3 S	1643.0	1645.8	10.0	120.0			ONLY PAPER REC
	4995 SGMR	4 S/F	1643.0	1645.8	9.3D	110			
	5200 BERN	3 S	1643.0	1646.0	32.0	127.0			ONLY PAPER REC
	9400 HUAN	S	1643.1	1645.8	4.4	59.1	26.8		L
	19600 BERN	4 S/F	1643.2	1646.3	32.0	27.0			
	7000 SAOP	4 S/F	1643.4	1645.9	3.6	79.0	39.0		10L
	1415 SGMR	4 S/F	1643.6	1645.0	6.9	78			
	1415 ATHN	4 S/F	1643.6	1645.5	5.0D	60			
	15400 SGMR	4 S/F	1643.8	1645.8	5.0D	36			

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
15	15400 PALE	4 S/F	1644.3	1646.0	4.8	45				
	1415 PALE	4 S/F	1644.5	1645.8	3.6	24				
	4995 PALE	4 S/F	1644.6	1645.8	3.9	72				
	8800 PALE	4 S/F	1644.6	1645.8	4.0	69				
	2695 PALE	4 S/F	1644.6	1645.8	3.5	85				
	7000 SAOP	29 PRI	1647.1	1647.1	7.9	27.0	13.0			
	9400 HUAN	29 PRI	1647.5	1647.5	9.3	27.7	12.9		L	
	2800 OTTA	29 PBI	1650.0	1650	150.0	10.8	5.4			
	2800 OTTA	20 GRF	1940.0	2005	55.0	3.6				
	8800 PALE	8 S	2005.6	2006.0	.7	47				
	15400 PALE	8 S	2005.6	2006.0	.5	36				
	9400 TYKW	5 S	2133.0	2136	20.0	4.0	2.0			
	3750 TYKW	45 C	2134.0	2135.4	3.0	8.0	3.0			
	2800 OTTA	45 C	2134.0	2135.4	2.5	9.0	3.0			
	2800 OTTA	29 PBI	2136.5	2136.5	12.0	4.4				
	3750 TYKW	29 PBI	2137.0		15.0	3.0	1.5			
	9400 TYKW	20 GRF	2157.0	2159	40.0	12.0	5.0			
	2000 TYKW	45 C	2157.0	2158.6	8.0	21.0	7.0			
	1000 TYKW	5 S	2157.0	2159.0	4.0	9.0	2.5			
	3750 TYKW	45 C	2157.0	2159.0	7.0	18.0	8.0			
	2800 OTTA	4 S/F	2157.5	2158.5	6.0	24.0	10.0			
	2695 PALE	8 S	2158.1	2159.0	1.0	20				
	1415 PALE	8 S	2158.8	2159.0	.2	16				
	2800 OTTA	29 PBI	2203.5	2203.5	30.0	3.0	1.2			
	3750 TYKW	29 PBI	2204.0		35.0	4.0	2.0			
	2000 TYKW	29 PBI	2205.0		30.0	2.0	1.0			
	2695 PENT	20 GRF	2335.0	0040	115.0	6.0	3.0			
	16	200 GORK	44 NS	0344.0E		498.00		5.0		
		260 ONDR	44 NS	0555.0E		487.00	27.0			
		208 VORO	44 NS	2100.0E		240.00		9.0		
245 LEAR		43 NS	2320.0	0315.1	619.00	190				
2000 TYKW		21 GRF	0033.0	0037	37.0	2.5	1.0			
3750 TYKW		5 S	0033.0	0042	15.0	2.0	1.0			
3750 TYKW		32 ABS	0106.0	0150	190.0	-4.0	-2.5			
9400 TYKW		5 S	0106.0	0109	7.0	4.0	2.0			
2000 TYKW		31 ABS	0110.0	0230	180.0	-3.0	-1.5			
1000 TYKW		32 ABS	0120.0	0250	330.0	-3.0	-1.5			
9400 TYKW		5 S	0159.0	0200.3	5.0	5.0	2.0			
3750 TYKW		20 GRF	0200.0	0207	40.0	3.0	1.5			
9400 TYKW		5 S	0213.0	0214.3	6.0	47.0	13.0			
17000 NOBE		1 S	0213.6	0214.3	1.5	40.0			L	
9400 TYKW		29 PBI	0219.0		8.0	6.0	3.0			
33 UPIC		42 SER	0351.6	0417.1	43.8					
29 UPIC		42 SER	0351.7		42.7					
9400 TYKW		5 S	0400.0	0401	9.0	3.0	1.5			
3750 TYKW		5 S	0406.0	0408	4.0	1.5	.7			
3750 TYKW		5 S	0418.0	0419.2	3.0	20.0	5.0			
9400 TYKW		45 C	0418.0	0419.2	12.0	12.0	5.0			
9100 GORK		22 GRF	0418.0	0419.1	22.0	1.40				
2000 TYKW		5 S	0418.5	0419.3	1.5	4.0	1.5			
2950 GORK		1 S	0418.7	0419.1	1.8	1.40	7.0			
5730 IRKU		1 S	0418.7	0419.3	1.0	20.0			L	
3750 TYKW		30 PBI	0421.0		24.0	2.0	1.0			
9400 TYKW		30 PBI	0430.0		15.0	4.0	2.0			
9400 TYKW		31 ABS	0445.0	0540	115.0	-6.0	-3.5			
3750 TYKW		31 ABS	0445.0	0545	114.0	-6.0	-3.5			
2000 TYKW		32 ABS	0515.0	0620	84.0	-2.0	-1.0			
5730 IRKU		21 GRF	0638.5	0642.3	11.0	96.0			L	
9100 GORK		3 S	0639.0	0642.2	3.2	5.80				
2950 GORK		20 GRF	0639.0	0642.2	34.2	1.50	7.0			
11800 BERN		4 S/F	0639.0	0642.2	30.0	54.0				
5200 BERN		4 S/F	0639.0	0642.0	26.0	70.0			ONLY PAPER REC	
19600 BERN		20 GRF	0639.0	0651.0	30.0	22.0				
3750 TYKW		45 C	0639.0	0642.3	6.0	26.0	10.0			
2000 TYKW		5 S	0639.0	0642.1	6.0	7.0	2.5			
3200 BERN		4 S/F	0639.0	0642.0	26.0	23.0			ONLY PAPER REC	
8400 BERN		4 S/F	0639.0	0642.2	30.0	70.0				
3100 CRIM		1 S	0639.6	0642.0	4.0	19.0	6.0			
3100 CRIM		29 PBI	0639.6	0646.0	40.0	15.0	5.0			
3000 POTS		29 PBI	0640.0	0642.4	20.0	12.0				
9500 POTS		29 PBI	0640.0	0642.3	70.0	50.0				
9400 TYKW		45 C	0640.0	0642.3	5.0	56.0	18.0			
9100 GORK		29 PBI	0642.0	0643.0	152.0	2.00				
9400 TYKW		29 PBI	0645.0		45.0	14.0	6.0			
3750 TYKW		29 PBI	0645.0		45.0	7.0	3.0			
2000 TYKW		29 PBI	0645.0		45.0	2.0	1.0			
430 KRAK		8 S	0812.5	0812.6	.4	24.0				
5200 BERN	22 GRF	1012.00	1018.3	11.00	23.0			ONLY PAPER REC		
19600 BERN	20 GRF	1012.0	1022.0	90.0	39.0					
35000 BERN	20 GRF	1012.0	1022.0	60.00	40.00					
11800 BERN	22 GRF	1012.0	1018.4	120.0	38.0					
3200 BERN	22 GRF	1012.00	1018.3	11.00	11.0			ONLY PAPER REC		
8400 BERN	22 GRF	1012.0	1018.2	75.0	41.0					
3000 POTS	22 GRF	1013.0	1045	107.0	19.0					

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
16	1470 POTS	4 S/F	1013.0	1016.4	11.0	67.0				
	9500 POTS	29 PRI	1013.5	1018.5	87.0	29.0				
	9100 GORK	23 GRF	1014.0	1022.3	90.0	2.10				
	3100 CRIM	3 S	1014.2	1016.0	8.0	14.0	5.0			
	9100 GORK	1 S	1016.0	1018.2	5.5	2.30	10.0			
	29 UPIC	45 C	1016.6	1017	1.9					
	33 UPIC	45 C	1016.8	1016.9	1.5					
	29 UPIC	8 S	1120.3	1120.4	.6					
	33 UPIC	8 S	1120.5	1120.5	.7					
	2800 OTTA	240AR		1355.0	1535	100.0	6.2	3.1		
	7000 SAOP	28 PRE		1437.3		4.0	7.0	3.0		
	9500 POTS	3 S		1440.5	1444.0	5.0	16.0			
	7000 SAOP	4 S/F		1441.3	1443.8	4.0	17.0	8.0		0
	7000 SAOP	29 PRI		1445.3	1445.3	6.2	10.0	5.0		
	33 UPIC	42 SER		1507.0		149.7				
	2800 OTTA	21 GRF		1508.0	1514	22.0	4.6	2.8		
	29 UPIC	42 SER		1508.6	1559.1	148.1				
	7000 SAOP	20 GRF		1509.0	1517.5	23.3	10.0	5.0		0
	2800 OTTA	2 S/F		1510.0	1511	2.3	6.8	3.4		
	7000 SAOP	1 S		1537.4	1538.5	2.2	7.0	3.0		0
	7000 SAOP	29 PRI		1539.7	1539.7	6.2	4.0	2.0		
	11800 BERN	46 C		1604.0	1641.1	70.0	393.0			
	2800 OTTA	23 GRF		1605.0	1645	185.0	8.4			
	8400 BERN	46 C		1605.2	1641.1	51.0	235.0			
	19600 BERN	46 C		1606.0	1641.1	40.0	311.0			
	7000 SAOP	28 PRE		1606.0	1608.6	3.8	14.0	7.0		
	5200 BERN	1 S		1606.5	1610.7	9.0	52.0			ONLY PAPER REC
	3200 BERN	1 S		1609.6	1610.7	4.0	15.0			ONLY PAPER REC
	2800 OTTA	3 S		1609.7	1610.7	3.0	16.6	5.6		
	7000 SAOP	3 S		1609.9	1610.6	1.3	87.0	43.0		6L
	7000 SAOP	29 PRI		1611.2	1612.0	16.3	21.0	15.0		
	7000 SAOP	28 PRE		1628.0	1629.0	8.1	17.0	8.0		
	5200 BERN	1 S		1636.0	1641.0	7.0	108.0			ONLY PAPER REC
	7000 SAOP	46 C		1636.1	1641.2	5.5	175.0	85.0		0
	2650 DWIN	1 S		1640.0	1641	2.0	45.0	15.0		
	3200 BERN	1 S		1640.3	1641.0	2.0	54.0			ONLY PAPER REC
	2800 OTTA	3 S		1640.5	1641	2.0	52.0	17.2		
	35000 BERN	3 S		1640.6	1641.1	2.0	130.0			
	7000 SAOP	29 PRI		1642.8	1642.8	19.3	52.0	26.0		
	7000 SAOP	27 RF		1710.5		14.7	7.0	3.0		
	2800 OTTA	21 GRF		1925.0	1945	85.0	7.4	3.7		
	2800 OTTA	4 S/F		1936.0	1939.3	7.0	31.0	7.8		
	2695 PALE	4 S/F		1937.6	1939.3	2.5	40			
	8800 PALE	4 S/F		1938.0	1939.1	3.6	32			
	410 PALE	8 S		1938.1	1939.1	1.2	58			
	1415 PALE	8 S		1938.5	1939.3	1.6	23			
	4995 PALE	8 S		1938.8	1939.1	1.0	30			
	15400 PALE	4 S/F		1939.0	1939.6	5.3	19			
	245 PALE	47 GR		1939.0	1939.1	.3	510			
	606 PALE	8 S		1939.3	1939.6	.8	19			
8800 PALE	4 S/F		1943.6	1945.1	12.5	20				
8800 PALE	4 S/F		1944.8	1945.1	11.3	20				
15400 PALE	47 GR		1944.8	1945.1	12.8	19				
100 HIRA	46 C		2023.2	2024.2	2.6	840.0	230.0			
2800 OTTA	3 S		2023.5	2025	4.0	18.8	7.0			
200 HIRA	46 C		2023.6	2024.3	2.0	66.0	23.0		WL	
2800 OTTA	1 S		2039.0	2039.3	2.0	9.4	2.4			
2800 OTTA	20 GRF		2100.0	2107	60.0	6.4	3.0			
245 PALE	8 S		2100.1	2100.3	.5	139				
9400 TYKW	45 C		2101.0	2107.2U	9.0	18.0U	10.0U			
3750 TYKW	5 S		2103.0E	2106.7	7.0U	10.0	6.0U			
245 PALE	8 S		2109.6	2109.8	.2	30				
3750 TYKW	29 PRI		2110.0		50.0	4.0	2.0			
9400 TYKW	29 PRI		2110.0		50.0	10.0	4.0			
2800 OTTA	22 GRF		2205.0	2310	115.0	4.6	2.3			
3750 TYKW	21 GRF		2210.0	2258	140.0	7.0	3.5			
9400 TYKW	21 GRF		2210.0	2320	140.0	9.0	4.0			
2000 TYKW	20 GRF		2210.0	2310	140.0	5.0	2.0			
1000 TYKW	5 S		2211.0	2212.0	2.0	4.0	1.0			
9400 TYKW	20 GRF		2215.0	2235	45.0	4.0	2.0			
3750 TYKW	5 S		2254.0	2254.7	2.0	3.5	1.5			
3750 TYKW	20 GRF		2307.0	2311	40.0	4.0	2.0			
9400 TYKW	45 C		2345.0	2346.5	3.0	11.0	3.0			
17	100 GORK	44 NS	0252.0	E	68.00		5.0			
	260 ONDR	44 NS	0627.0E		476.00	74.0				
	100 GORK	43 NS	0942.0		135.0		50			
	9400 TYKW	5 S	0001.0	0007 U	18.0	4.0U	2.0U			
	9400 TYKW	28 PRE	0124.0	0124.4	25.0	7.0	2.0			
	8800 LEAR	4 S/F	0124.3	0124.3	71.4	16				
	9400 TYKW	5 S	0132.5	0132.9	1.5	6.0	2.0			
	17000 NOBE	1 S	0132.6	0132.9	1.0	17.0			L	
	15400 LEAR	8 S	0132.6	0132.8	.4	20				
	3750 TYKW	28 PRE	0142.0	0149	7.0	7.0	2.0			
2695 PENT	3A S	0143.0	0152	10.00	13.6					

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT		MINUTES	PEAK		
17	9400 TYKW	5 S	0146.0	0146.9	1.5	18.0	3.0		
	17000 NOBE	28 PRE	0146.5	0147.0	4.2	34.0			L
	15400 LEAR	8 S	0146.8	0146.8	.2	31			
	8800 LEAR	4 S/F	0146.8	0146.8	26.4	21			
	2000 TYKW	45 C	0148.0	0151.2	6.0	61.0	12.0		
	9400 TYKW	45 C	0149.0	0151.1	6.0	240.0	55.0		
	1000 TYKW	45 C	0149.0	0150.7	5.0	11.0	3.0		
	3750 TYKW	45 C	0149.0	0151.1	6.0	110.0	27.0		
	8800 LEAR	4 S/F	0149.5	0151.0	11.1	260			
	4995 LEAR	4 S/F	0149.5	0151.0	5.1	119			
	4995 PALE	4 S/F	0149.5	0151.0	5.1	110			
	606 LEAR	8 S	0149.8	0150.3	1.2	360			
	2695 LEAR	4 S/F	0149.8	0151.1	2.5	98			
	8800 MANI	4 S/F	0150.0	0154.0	5.6	288.8	96.3		
	4995 MANI	4 S/F	0150.0	0154.0	5.0	169.2	56.4		
	2695 PENT	3 S	0150.0	0151.2	2.0	86.0	32.0		
	35000 NAGO	5 S	0150.0	0151	2.0	42.0			
	606 PALE	8 S	0150.1	0150.3	.9	320			
	15400 LEAR	4 S/F	0150.1	0151.0	10.5	320			
	410 LEAR	8 S	0150.1	0150.8	1.0	21			
	8800 PALE	4 S/F	0150.1	0151.0	7.9	280			
	500 HIRA	46 C	0150.3	0150.5	1.0	75.0	20.0		0
	15400 PALE	4 S/F	0150.5	0151.0	7.6	340			
	2695 PALE	8 S	0150.6	0151.0	1.2	81			
	17000 NOBE	45 C	0150.7	0151.1	1.5	295.0			L
	1415 LEAR	8 S	0150.8	0151.1	1.0	28			
	1415 PALE	8 S	0150.8	0151.1	1.0	29			
	606 MANI	4 S/F	0151.5	0153.1	3.5	201.8	67.3		
	17000 NOBE	29 PBI	0152.2	0152.2	33.0	28.0			0
	1415 MANI	3 S	0152.5	0154.1	4.5	18.5	6.2		
	2695 MANI	3 S	0152.5	0154.0	2.5	96.5	32.2		
	1000 TYKW	30 PBI	0154.0		75.0	1.5	.7		
	2000 TYKW	30 PBI	0154.0		206.0	6.0	2.5		
	3750 TYKW	30 PBI	0155.0		105.0	12.0	5.0		
	9400 TYKW	30 PBI	0155.0		95.0	23.0	9.0		
	1000 TYKW	5 S	0212.0	0212.1	.5	7.0	2.5		
	3750 TYKW	5 S	0215.0	0218.5	10.0	4.0	2.0		
	2000 TYKW	5 S	0216.0	0218.5	6.0	3.0	1.0		
	410 LEAR	8 S	0217.8	0219.0	1.3	82			
	1000 TYKW	5 S	0218.0	0218.6	3.0	2.0	.7		
	9400 TYKW	45 C	0246.0	0252.4U	25.0	14.0	4.0D		
	3750 TYKW	5 S	0251.0	0252.3	6.0	2.5	1.0		
	8800 LEAR	8 S	0251.8	0252.1	1.5	18			
	1000 TYKW	5 S	0312.5	0313.4	2.0	3.5	.7		
	9100 GORK	1 S	0344.5	0345.4	2.1	1.70			
	9400 TYKW	5 S	0345.0	0345.4	2.0	17.0	4.0		
	3750 TYKW	20 GRF	0350.0	0419	70.0	5.0	2.5		
	606 LEAR	8 S	0354.8	0355.0	.5	45			
	410 LEAR	8 S	0354.8	0355.0	.3	17			
	9400 TYKW	28 PRE	0433.0	0442	11.0	4.0	2.0		
	9100 GORK	3 S	0443.0	0444.4	5.0	9.50			
	9400 TYKW	5 S	0444.0	0444.5	2.0	109.0	25.0		
	17000 NOBE	3 S	0444.1	0444.5	1.0	155.0			L
	4995 ATHN	8 S	0444.1	0444.6	1.2	09			
	8800 ATHN	8 S	0444.3	0444.5	1.7	76			
	9400 TYKW	29 PBI	0446.0		8.0	7.0	3.0		
	8400 BERN	3 S	0501.1	0504.3	4.0	100.0			
	11800 BERN	3 S	0501.1	0504.3	4.0	106.0			
	9400 TYKW	5 S	0502.7	0503.2	2.3	90.0	23.0		
	9100 GORK	3 S	0502.9	0503.1	1.0	8.40			
	17000 NOBE	1 S	0502.9	0503.3	1.0	33.0			L
	9100 GORK	29 PBI	0503.0	0503.9	17.5	1.60			
	15400 LEAR	8 S	0503.0	0503.1	.8	47			
	4995 ATHN	8 S	0503.0	0503.1	2.0D	09			
	8800 LEAR	8 S	0503.0	0503.1	.8	98			
	8800 ATHN	8 S	0503.0	0503.1	2.0	62			
	9400 TYKW	30 PBI	0505.0		27.0	6.0			
	2000 TYKW	31 ABS	0520.0	0620	110.0	-3.0	-1.5		
	3750 TYKW	32 ABS	0520.0	0557	110.0	-6.0	-3.0		
	9400 TYKW	5 S	0526.0	0526.7	4.0	4.0	2.0		
	9400 TYKW	31 ABS	0532.0	0555	95.0	-4.0	-2.0		
	113 POTS	41 F	0710.5	0713.4	4.0	700.0	30.0		III
	228 HARS	45 C	0711.9	0714.4	4.1	160.0	150.0		
	204 IZMI	41 F	0712.0	0713.5	2.5	220.0			
	234 POTS	4 S/F	0712.2	0714.3	2.4	150.0	3.0		III
	2000 TYKW	20 GRF	0720.0	0730	40.0	1.5	.7		
	9400 TYKW	20 GRF	0720.0	0730	40.0	3.0	1.5		
	3750 TYKW	20 GRF	0720.0	0730	40.0	2.0	1.0		
	9100 GORK	47 GB	0750.5	0839.9	87.0	920.00			
	9500 POTS	47 GB	0803.0	0839	157.0	4800.0			
	9400 TYKW	45 C	0803.0	0813.4	29.0	480.0	120.0		
	8800 ATHN	47 GB	0803.3	0813.3	33.8	550			
	11800 BERN	47 GB	0803.5	0839.3	120.0	9700.0			
	8400 BERN	47 GB	0804.0	0838.3U	120.0	2400.0D			
	15400 LEAR	47 GB	0804.1	0839.3	75.2	10000			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ PEAK	$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ MEAN		
17	19600 BERN	47 GB	0806.0	0839.3	90.0	13500.0			
	3000 POTS	47 GB	0806.0	0840.0	162.0	1600.0			
	8800 LEAR	47 GB	0806.3	0839.3	72.0	8000			
	2695 ATHN	4 S/F	0806.8	0813.8	30.50	160			
	3100 CRIM	28 PRE	0806.8	0837.0	30.0	24.0	8.0		
	9100 GORK		0807.0	0839.5		254.80			
	5200 BERN	47 GB	0807.0	0839.2	143.0	290.00			ONLY PAPER REC
	3200 BERN	47 GB	0807.0	0839.2	143.0	220.00			ONLY PAPER REC
	3750 TYKW	45 C	0807.0	0813.6	25.0	197.0	63.0		
	2000 TYKW	45 C	0807.0	0813.7	25.0	101.0	35.0		
	9100 GORK	47 GB	0807.2	0814.0	230.0E	16.50			
	9100 GORK		0807.2	0908.4		20.50			
	4995 LEAR	47 GB	0807.3	0839.5	80.0	5000			
	4995 ATHN	47 GB	0807.3	0813.6	30.0	210			
	8800 MANI	47 GB	0807.3	0839.5	51.70	4444.5	1481.5		
	2695 MANI	47 GB	0807.3	0839.5	51.70	1769.6	589.9		
	4995 MANI	47 GB	0807.3	0839.5	51.70	3090.1	1030.0		
	2695 LEAR	47 GB	0807.8	0839.5	91.2	2400			
	1470 POTS	47 GB	0809.0	0839.7	126.0	600.0			
	1415 ATHN	4 S/F	0809.6	0813.6	28.00	93			
	536 ONDR	28 PRE	0810.0	0829.6	22.5	34.0	15.0		
	3100 CRIM		0810.0	0821.0		135.0			
	3100 CRIM	45 C	0810.0	0813.3	20.0	161.0	54.0		
	950 GORK	23 GRF	0810.0	0912.0	106.0	6.70			
	2650 DWIN	49 GB	0810.0		95.0	500.00			
	1415 MANI	47 GB	0810.0	0840.0	49.00	653.4	217.8		
	1415 LEAR	47 GB	0810.8	0840.0	88.2	1100			
	650 GORK	23 GRF	0811.0	0911.8	129.5	3.00			
	1000 TYKW	45 C	0811.0	0815.9	21.0	212.0	20.0		
	808 ONDR	28 PRE	0811.4		27.00	85.00	19.0		
	810 KRAK	28 PRE	0811.5	0822.6	23.5	30.0	12.0		
	606 MANI	4 S/F	0812.0	0840.2	47.00	165.7	55.2		
	606 LEAR	47 GB	0812.6	0840.0	74.2	330			
	410 LEAR	47 GB	0814.8	0821.3	43.2	310			
	200 HIRA	46 C	0817.4	0839.6	62.0	2000.0	25.0		0
	810 KRAK	8 S	0817.5	0817.5	.1	1000.0			
	245 LEAR	47 GB	0817.5	0840.0	63.6	540			
	430 KRAK	28 PRE	0818.0	0819.7	19.5	270.0	8.0		
	228 HARS	28 PRE	0818.0	0829.5	20.0	13.0	7.0		
	100 GORK	46 C	0819.0	0838.8	22.0	3150.00			
	100 GORK		0819.0	0840.0		3690.00			
	113 POTS	27 RF	0821.0	0842	100.0	30.0	7.0		RISE+I
	100 HIRA	46 C	0824.0	0840	40.0	1500.00	130.00		0
	1000 TYKW	30 PBI	0832.0		5.5	6.0	6.0		
	2000 TYKW	30 PBI	0832.0		5.5	18.0	16.0		
	3750 TYKW	30 PBI	0832.0		5.0	27.0	25.0		
	9400 TYKW	30 PBI	0832.0		5.5	58.0	58.0		
	3100 CRIM	47 GB	0837.0	0839.0	24.0	1921.0	640.0		
	9100 GORK	29 PBI	0837.0	0918.0	160.0E	9.70			
	8800 ATHN	47 GB	0837.1E	0839.1	58.40	7000			
	2695 ATHN	47 GB	0837.3	0839.3	60.00	2500			
	4995 ATHN	47 GB	0837.3E	0839.3	58.30	2900			
	810 KRAK	49 GB	0837.5	0839.7	62.5	360.0	54.0		
	430 KRAK	49 GB	0837.5	0839.5	55.0	190.0	47.0		
	810 KRAK		0837.5	0911.5		51.0			
	9400 TYKW	47 GB	0837.5	0839.4	21.5	10100.0	1200.0		
	3750 TYKW	47 GB	0837.5	0839.5	21.5	3600.0	700.0		
	2000 TYKW	47 GB	0837.5	0839.6	21.5	1850.0	450.0		
	1000 TYKW	47 GB	0837.5	0840.0	21.5	600.0	175.0		
	35000 BERN	47 GB	0837.6	0839.3	20.0	15600.00			
	1415 ATHN	47 GB	0837.6	0839.3	59.90	940			
	500 HIRA	5 S	0837.7	0840.0	20.0	144.0	65.0		0
	536 ONDR	48 C	0837.7	0840.3	24.0	124.0	70.0		
	950 GORK	3 S	0837.7	0839.9	6.2	45.40			
	650 GORK	4 S/F	0837.8	0840.0	19.2	22.00			
	228 HARS	47 GB	0838.0	0839.00	24.0	450.00	40.0		
	260 ONDR	46 C	0838.0	0840.5	18.0	212.00	52.0		
	204 IZMI	48 C	0838.0	0840.0	6.1	1000.0	530.0		
	113 POTS	4 S/F	0838.2	0839.9	4.4	700.0	230.0		
	234 POTS	4 S/F	0838.2	0839.9	3.4	600.0	200.0		III
	808 ONDR	48 C	0838.3		62.0	85.00	68.0		III
	29 UPIC	49 GB	0838.5	0842.2	20.6				
	33 UPIC	49 GB	0838.7	0839.1	20.3				
	1000 TYKW	30 PBI	0859.0		15.00	32.0	32.00		
	2000 TYKW	30 PBI	0859.0		25.00	63.0	58.00		
	3750 TYKW	30 PBI	0859.0		25.00	67.0	62.00		
	9400 TYKW	30 PBI	0859.0		20.00	84.0	84.00		
	29 UPIC	29 PBI	0859.3	0918.2	58.1				
	33 UPIC	29 PBI	0859.3	0956.5	61.5				
	3100 CRIM	3 S	0901.0	0911.0	14.0	103.0	34.0		
	536 ONDR	29 PBI	0901.7	0916.3	68.0	62.0	14.0		
	228 HARS	29 PBI	0902.0	0902.0	63.0	6.0	3.0		
	2000 TYKW	45 C	0904.0	0911.3	20.00	142.0	55.00		
	3750 TYKW	45 C	0904.0	0912.3	20.00	138.0	50.0		
	1000 TYKW	45 C	0904.0	0912.7	10.00	58.0	27.00		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
17	9400 TYKW	45 C	0907.0E	0912.3	10.0D		95.0	35.0D	
	3100 CRIM	29 PRI	0915.0	0915.0			18.0		
	228 HARS	40 F	0954.4	0958.9	5.6		215.0	6.0	
	430 KRAK	8 S	0957.0	0957.7	.9		32.0		
	204 IZMI	41 F	0958.2	1000.0	2.0		100.0		
	234 POTS	4 S/F	0958.3	0959	1.1		300.0	5.0	III
	113 POTS	4 S/F	0958.6	0959.2	.8		700.0	45.0	III
	2800 OTTA	23 GRF	1140.0	1230	130.0		15.6	7.0	
	3200 BERN	1 S	1145.6	1146.6	5.0		22.0		ONLY PAPER REC
	5200 BERN	1 S	1145.6	1146.6	4.0		16.0		ONLY PAPER REC
	3000 POTS	3 S	1146.0	1147.1	2.5		17.0		
	2800 OTTA	3 S	1146.0	1147	3.0		14.8	5.0	
	7000 SAOP	3 S	1146.1	1146.3	1.8		12.0	6.0	12L
	9500 POTS	1 S	1146.5	1147.0	1.5		7.3		
	2695 ATHN	4 S/F	1214.6	1225.1	30.7D		21		
	4995 ATHN	4 S/F	1217.6	1225.0	38.7D		44		
	11800 BERN	22 GRF	1221.0	1225.0	44.0		83.0		
	8400 BERN	22 GRF	1221.0	1225.0	40.0		83.0		
	9500 POTS	29 PRI	1223.0	1225.0	77.0		73.0		
	7000 SAOP	46 C	1223.0	1225.0	5.4		77.0	38.0	2L
	5200 BERN	22 GRF	1223.1	1224.8	30.0		40.0		ONLY PAPER REC
	3200 BERN	22 GRF	1223.1	1224.8	21.0		18.0		ONLY PAPER REC
	8800 ATHN	4 S/F	1223.1	1225.0	33.7		67		
	2800 OTTA	3 S	1223.5	1225	3.0		14.4	7.0	
	9400 HUAN	S	1223.5	1225.0	6.0		64.7	26.6	0
	15400 SGMR	4 S/F	1223.8	1225.0	7.2		59		
	19600 BERN	22 GRF	1224.0	1225.1	32.0		36.0		
	3000 POTS	29 PRI	1224.0	1225.3	51.0		19.0		
	1415 ATHN	4 S/F	1224.1	1225.6	10.4D		11		
	7000 SAOP	29 PRI	1228.4	1228.8	26.5		32.0	16.0	
	9400 HUAN	29 PRI	1229.5	1229.5	20.2		17.0	8.5	0
	430 KRAK	8 S	1234.4	1234.4	.2		20.0		
	7000 SAOP	20 GRF	1308.0		11.1		11.0	5.0	15L
	2800 OTTA	260 FAL	1410.0	1510	60.0		-10.0	-5.0	
	2800 OTTA	21 GRF	1600.0	1715	200.0		8.2	4.1	
	7000 SAOP	1 S	1649.0	1649.4	1.3		7.0	3.0	0
	7000 SAOP	4 S/F	1658.5	1703.2	8.4		75.0	37.0	2L
	4995 SGMR	4 S/F	1659.0	1703.1	15.8D		63		
	4995 SGMR	8 S	1659.0	1703.1U	122.1D		63		
	11800 BERN	22 GRF	1659.5	1703.2	36.0		57.0		
	8400 BERN	22 GRF	1659.5	1703.3	20.0		70.0		
	2695 SGMR	8 S	1659.6	1703.3U	122.9D		36		
	2695 SGMR	4 S/F	1659.6	1703.3	15.0D		36		
	3200 BERN	22 GRF	1659.7	1703.0	20.0		40.0		ONLY PAPER REC
	5200 BERN	22 GRF	1659.7	1703.0	28.0		65.0		ONLY PAPER REC
	8800 SGMR	8 S	1659.8	1703.1U	122.9D		78		
	8800 SGMR	4 S/F	1659.8	1703.1	15.7D		78		
	2800 OTTA	45 C	1700.0	1703.2	12.0		32.0	10.6	
	1415 SGMR	4 S/F	1700.0	1659.8	7.0D		20		
	15400 SGMR	8 S	1700.1	1703.3	3.2D		29		
15400 SGMR	4 S/F	1700.1	1703.3	14.7		29			
4995 ATHN	8 S	1700.1	1703.3U	3.2D		85			
8800 ATHN	8 S	1700.1	1703.3	3.2D		73			
2695 ATHN	8 S	1700.3	1703.3U	3.0D		39			
4995 PALE	4 S/F	1700.3	1703.1	5.3		49			
9400 HUAN	S	1700.3	1703.2	5.7		41.9	20.4	0	
8800 PALE	4 S/F	1700.8	1703.3	10.2		68			
19600 BERN	22 GRF	1701.0	1703.6	12.0		30.0			
2695 PALE	4 S/F	1701.3	1703.3	3.8		32			
15400 PALE	4 S/F	1701.6	1704.3	10.0		46			
9400 HUAN	29 PRI	1706.0	1706.0	64.0		17.4	5.9	0	
7000 SAOP	29 PRI	1707.0	1709.8	55.2		31.0	15.0		
1415 ATHN	8 S	1712.8	1726.1U	13.3D		28			
7000 SAOP	20 GRF	1859.6		14.3		11.0	5.0	0	
3750 TYKW	21 GRF	2140.0	2310	270.0		6.0	3.0		
9400 TYKW	5 S	2155.0	2155.5	2.0		6.0	2.0		
9400 TYKW	5 S	2213.0	2213.3	1.5		6.0	2.0		
9400 TYKW	5 S	2251.8	2252.1	2.5		9.0	3.0		
3750 TYKW	5 S	2254.5	2255.1	1.5		4.0	1.0		
9400 TYKW	5 S	2255.0	2255.2	1.0		5.0	2.0		
2695 PENT	20 GRF	2315.0	0050	160.0D		10.2			
3750 TYKW	5 S	2316.0	2320	10.0		3.0	1.5		
9400 TYKW	5 S	2320.0	2320.2	1.5		12.0	3.0		
17000 NOBE	1 S	2329.1	2329.2	1.0D		34.0		L	
3750 TYKW	20 GRF	2350.0	2354	30.0		3.0	1.5		
2000 TYKW	5 S	2352.0	2354	5.0		1.5	.5		
2000 TYKW	5 S	2358.0	0002.3	25.0		2.0	1.0		
18	100 GORK	44 NS	0254.0E		381.0D		50		
	29 UPIC	43 NS	0622.7	1022.2D	371.8				
	33 UPIC	43 NS	0623.0		371.2				
	127 TORN	43 NS	0750.0		430.0U				VI, DISTURBED
	245 SGMR	43 NS	1300.0	1536.1	300.0D	130			
	200 HIRA	44 NS	1933.0E	0810	860.0D	650.0	15.0		WL
	208 VORD	44 NS	2100.0E		240.0D		11.0		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
						$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$			
			UT	UT	MINUTES	PEAK	MEAN		
18	245 LEAR	43 NS	2320.0	0631.8	620.00	220			
	410 LEAR	43 NS	2343.5	0500.6	596.50	190			
	9400 TYKW	28 PRE	0021.0	0021.5	9.0	12.0	6.0		
	3750 TYKW	28 PRE	0022.0	0026	8.0	3.0	2.0		
	3750 TYKW	45 C	0030.0	0031.8	5.0	16.0	9.0		
	9400 TYKW	45 C	0030.0	0031.8	5.0	31.0	12.0		
	2000 TYKW	21 GRF	0030.0	0050	100.0	4.0	2.0		
	17000 NOBE	20 GRF	0030.7	0031.8	22.0	11.0		0	
	4995 LEAR	4 S/F	0030.8	0031.8	4.2	22			
	8800 LEAR	4 S/F	0030.8	0031.8	4.2	29			
	8800 PALE	4 S/F	0030.8	0031.8	2.5	30			
	15400 LEAR	4 S/F	0031.3	0031.8	3.7	19			
	4995 PALE	8 S	0031.6	0031.8	.2	18			
	9400 TYKW	30 PBI	0035.0		95.0	12.0	6.0		
	3750 TYKW	30 PBI	0035.0		95.0	9.0	4.0		
	3750 TYKW	5 S	0148.0	0149.6	9.0	5.0	1.5		
	2000 TYKW	5 S	0149.0	0149.7	10.0	2.5	1.0		
	8800 PALE	8 S	0156.8	0157.3	.8	43			
	9400 TYKW	5 S	0157.0	0157.3	3.0	15.0	4.0		
	8800 LEAR	8 S	0157.1	0157.3	.9	20			
	9400 TYKW	31 ARS	0210.0	0310	172.5	-9.0	-5.0		
	2000 TYKW	31 ARS	0210.0	0245	190.0	-4.0	-2.0		
	3750 TYKW	31 ARS	0218.0	0243	190.0	-7.0	-3.5		
	410 LEAR	8 S	0317.1	0317.6	.5	19			
	3750 TYKW	20 GRF	0350.0	0420	60.0	3.0	1.5		
	17000 NOBE	20 GRF	0500.4	0503.2	60.00	14.0		0	
	9100 GORK	22 GRF	0501.0	0706.3	280.0E	3.80			
	9400 TYKW	5 S	0502.0	0503.5	13.0	6.0	3.0		
	204 IZMI	41 F	0622.5	0623.0	1.0	38.0			
	100 GORK	8 S	0622.7	0623.0U	1.2	110.00			
	113 POTS	4 S/F	0622.9	0623	.4	200.0	10.0	III	
	3000 POTS	27 RF	0702.5	0706.5	13.0	9.0			
	8800 ATHN	4 S/F	0705.6	0706.5	20.7	26			
	9400 TYKW	45 C	0706.0	0709.0	5.0	30.0	18.0		
	3750 TYKW	5 S	0706.0	0706.3	5.0	7.0	2.0		
	9500 POTS	27 RF	0706.0	0709.2	51.0	27.0			
	3000 POTS	1 S	0706.0	0706.5	1.0	5.0			
	17000 NOBE	45 C	0706.0	0706.4	8.0U	45.0		L	
	9500 POTS	8 S	0706.1	0706.4	.9	27.0			
	15400 LEAR	47 GB	0706.1	0706.3	10.4	56			
	8800 LEAR	4 S/F	0706.1	0706.3	5.5	26			
	4995 LEAR	8 S	0706.3	0706.3	.8	11			
	9400 TYKW	29 PBI	0711.0		30.0	14.0	7.0		
	9500 POTS	1 S	0926.5	0930.0	14.0	5.8			
	9500 POTS	3 S	1105.0	1108.2	15.0	31.0			
	4995 SGMR	4 S/F	1106.5	1108.3	5.00	21			
	2695 SGMR	4 S/F	1106.5	1107.8	4.10	05			
	8800 SGMR	4 S/F	1106.6	1108.1	5.00	44			
	15400 SGMR	8 S	1107.8	1108.1	1.5	20			
	7000 SAOP	3 S	1108.0E	1108.3		54.0	27.0	14L	
	7000 SAOP	29 PBI	1108.5	1108.5	8.3	24.0	12.0		
	7000 SAOP	3 S	1108.5	1223.0		51.0	25.0	6L	
	9500 POTS	27 RF	1140.0	1149	150.0	21.0			
	9500 POTS	3 S	1222.3	1223.0	7.7	80.0			
	35000 BERN	3 S	1222.5	1222.6	.3U	335.0			
	19600 BERN	4 S/F	1222.5	1223.0	3.0U	87.0			
	11800 BERN	4 S/F	1222.5	1223.0	4.0U	139.0			
	8400 BERN	4 S/F	1222.5	1223.0	8.0	83.0			
	8800 SGMR	8 S	1222.6	1223.0	1.50	78			
	8800 ATHN	8 S	1222.6	1223.1	1.5	88			
	15400 SGMR	8 S	1222.6	1223.0	1.70	92			
	9400 HUAN	8 S	1222.7	1223.0	1.1	87.0	27.1	0	
	7000 SAOP	29 PBI	1223.2	1223.2	15.5	24.0	12.0		
	9400 HUAN	S	1254.1	1312.8	57.4	16.2	9.2	0	
	7000 SAOP	21 GRF	1307.8		37.3	14.0	7.0	0	
	2800 OTTA	20 GRF	1320.0	1327	25.0	3.2	1.4		
	9500 POTS	3 S	1321.8	1322.5	2.5	21.0			
	8800 ATHN	4 S/F	1332.1	1332.6	2.5	21			
	9400 HUAN	S	1332.3	1332.8	1.4	19.2	7.7	L	
	7000 SAOP	1 S	1332.4	1332.8	.5	10.0	5.0	22R	
	2800 OTTA	22 GRF	1410.0	1600	200.0	8.2	4.1		
	7000 SAOP	24 R	1447.8			15.0	7.0		
	9400 HUAN	S	1535.6	1600.8	56.8	24.8	9.6	L	
	8800 SGMR	4 S/F	1548.6	1556.1	15.50	50			
	8800 ATHN	4 S/F	1550.0	1556.1	13.3	64			
	15400 SGMR	4 S/F	1551.5	1556.0	8.8	46			
	4995 ATHN	4 S/F	1551.8	1556.1	10.30	15			
	9400 HUAN	S	1552.5	1556.3	7.3	49.5	21.2	L	
	7000 SAOP	20 GRF	1553.0	1556.3	19.7	20.0	10.0	8L	
	7000 SAOP	3 S	1631.5	1632.1	1.1	13.0	6.0	11L	
	7000 SAOP	29 PBI	1632.7	1632.7	10.9	7.0	3.0		
	7000 SAOP	3 S	1736.5	1736.5	1.5	109.0	54.0	11L	
	11800 BERN	3 S	1736.5U	1737.3	1.5U	83.0U			
	5200 BERN	3 S	1736.8	1737.1	2.0	37.0			
	9400 HUAN	S	1737.0	1737.5	1.2	89.1	38.2	ONLY PAPER REC	0

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME		TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS		
			UT	UT	UT	MINUTES	PEAK	MEAN				
18	8400 BERN	3 S	1737.0	1737.3	1737.3	3.00	124.0			ONLY PAPER REC		
	8800 SGMR	4 S/F	1737.1	1735.6	1735.6	3.00	79					
	8800 PALE	8 S	1737.1	1737.3	1737.3	.9	139					
	4995 SGMR	4 S/F	1737.1	1735.6	1735.6	2.70	33					
	15400 SGMR	8 S	1737.1	1737.5	1737.5	1.7	540					
	15400 SGMR	8 S	1737.1	1737.5	1737.5	1.7	54					
	4995 PALE	8 S	1737.3	1737.3	1737.3	.2	24					
	7000 SAOP	29 PBI	1738.0	1738.0	1738.0	13.9	23.0	11.0				
	7000 SAOP	28 PRE	1758.6	1758.6	1758.6	1.8	3.0	1.0				
	2800 OTTA	1 S	1800.0	1801.3	1801.3	4.5	8.4	4.0				
	7000 SAOP	3 S	1800.4	1800.4	1800.4	1.9	21.0	10.0	14L			
	7000 SAOP	29 PBI	1802.3	1802.3	1802.3	17.9	13.0	6.0				
	2800 OTTA	29 PBI	1804.5	1804.5	1804.5	55.0	3.2	1.6				
	2800 OTTA	21 GRF	2019.0	2022	2022	18.0	5.2	2.6				
	2800 OTTA	1 S	2024.0	2025	2025	3.0	5.4	2.4				
	15400 PALE	4 S/F	2053.8	2054.6	2054.6	5.2	210					
	8800 PALE	8 S	2054.3	2054.6	2054.6	1.3	87					
	9400 TYKW	29 PBI	2100.0E	2100.0E	2100.0E	60.00	31.00	12.00				
	3750 TYKW	28 PRE	2220.0	2225	2225	28.0	3.0	1.5				
	9400 TYKW	21 GRF	2245.0	2300.1	2300.1	35.0	11.0	3.5				
	3750 TYKW	5 S	2248.0	2249.7	2249.7	4.0	12.0	7.0				
	9400 TYKW	5 S	2249.0	2249.3	2249.3	1.0	4.0	1.5				
	2800 OTTA	1 S	2249.0	2249.8	2249.8	6.0	3.2	1.6				
	3750 TYKW	29 PBI	2252.0	2252.0	2252.0	30.0	5.0	2.5				
	410 LEAR	8 S	2333.3	2333.3	2333.3	.2	22					
	9400 TYKW	21 GRF	2335.0	2400	2400	65.0	5.0	2.5				
	9400 TYKW	5 S	2335.0	2339	2339	10.0	5.0	2.0				
	2000 TYKW	21 GRF	2340.0	2400	2400	70.0	3.0	1.5				
	245 PALE	8 S	2342.8	2343.0	2343.0	.3	230					
	245 LEAR	8 S	2342.8	2343.0	2343.0	.3	220					
	410 LEAR	8 S	2342.8	2342.8	2342.8	.3	23					
	410 PALE	8 S	2342.8	2343.0	2343.0	.3	24					
	3750 TYKW	21 GRF	2345.0	0020	0020	65.0	5.0	2.5				
	2695 PENT	21 GRF	2350.0	0020	0020	55.0	4.2	2.1				
	19	245 PALE	43 NS	0149.8	0231.3	0231.3	162.20	88				WL
		100 GORK	44 NS	0254.0E			384.00		100			
		200 GORK	44 NS	0257.0E			298.00		50			
		29 UPIC	43 NS	0558.1	1017.1	1017.1	602.4					
		33 UPIC	43 NS	0558.2			602.3					
		204 IZMI	43 NS	0600.0			360.0	90.0				
		260 ONDR	44 NS	0644.0E			418.00	138.0	21.0			
		536 ONDR	43 NS	0724.0			378.00	25.0				
		430 KRAK	43 NS	0850.7	0852.2	0852.2	224.00	130.0	23.0			
		200 HIRA	44 NS	1933.0E	0129	0129	860.00	15.0	8.0			
		208 VORO	44 NS	2100.0E			240.00		13.0			
245 LEAR		43 NS	2320.0	0308.0	0308.0	620.00	130					
3750 TYKW		5 S	0014.0	0015.7	0015.7	5.0	3.0	1.0				
3750 TYKW		5 S	0021.0	0022.5	0022.5	8.0	6.0	1.0				
410 LEAR		8 S	0021.8	0022.1	0022.1	.8	270					
410 PALE		8 S	0022.0	0022.1	0022.1	.1	330					
2000 TYKW		5 S	0022.0	0022.4	0022.4	3.0	6.0	2.0				
1000 TYKW		5 S	0022.0	0023	0023	5.0	2.0	.5				
2695 PENT		1 S	0022.0	0022.5	0022.5	1.5	4.4	2.2				
9400 TYKW		5 S	0024.3	0024.5	0024.5	1.0	16.0	3.0				
3750 TYKW		28 PRE	0103.0	0119.4	0119.4	32.0	8.0	4.0				
9400 TYKW		28 PRE	0103.0	0136	0136	33.0	14.0	7.0				
2000 TYKW		20 GRF	0105.0	0140	0140	140.0	4.0	2.0				
245 PALE		8 S	0123.3	0123.3	0123.3	.2	100					
410 PALE		8 S	0127.1	0128.3	0128.3	1.9	29					
245 PALE		8 S	0127.6	0128.0	0128.0	.4	130					
17000 NOBE		28 PRE	0131.0	0138.3	0138.3	25.8	26.0		L			
3750 TYKW		45 C	0135.0	0138.6	0138.6	12.0	22.0	12.0				
9400 TYKW		45 C	0136.0	0138.2	0138.2	8.0	45.0	23.0				
8800 LEAR		4 S/F	0137.1	0138.1	0138.1	8.0	39					
15400 LEAR		47 GB	0137.5	0138.1	0138.1	6.8	27					
4995 LEAR		4 S/F	0137.6	0138.5	0138.5	5.7	18					
9400 TYKW		30 PBI	0144.0	0144.0	0144.0	13.0	19.0	17.0				
3750 TYKW		30 PBI	0147.0	0147.0	0147.0	95.0	10.0	5.0				
410 LEAR		8 S	0148.3	0148.5	0148.5	.5	23					
245 LEAR		8 S	0148.5	0148.6	0148.6	.1	67					
3750 TYKW		5 S	0150.0	0153	0153	15.0	3.0	1.5				
8800 PALE		4 S/F	0156.1	0157.1	0157.1	3.5	49					
15400 PALE		8 S	0156.3	0157.1	0157.1	1.5	83					
17000 NOBE		3 S	0156.8	0159.8	0159.8	5.9	92.0		L			
9400 TYKW		45 C	0157.0	0200.2	0200.2	30.0	56.0	27.0				
15400 LEAR		47 GB	0157.5	0200.1	0200.1	18.1	119					
606 LEAR		8 S	0158.5	0158.8	0158.8	.5	29					
8800 LEAR		47 GB	0158.6	0200.1	0200.1	17.0	35					
17000 NOBE		29 PBI	0202.7	0202.7	0202.7	50.0	23.0		L			
9400 TYKW	29 PBI	0227.0	0227.0	0227.0	55.0	24.0	13.0					
2000 TYKW	5 S	0402.0	0405	0405	10.0	2.0	.7					
9400 TYKW	28 PRE	0413.0	0421.3	0421.3	12.0	44.0	20.0					
9100 GORK		0414.0	0559.5	0559.5		4960.0						
9100 GORK	46 C	0414.0	0429.2	0429.2	127.0	1425.0						

SOLAR RADIO EMISSION
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JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} W_m^{-2} Hz^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
19	9100 GORK		0414.0	0535.3			2480.0		
	8800 MANI	47 GB	0416.0	0429.1	21.0		1800.4	600.1	
	4995 MANI	47 GB	0416.5	0429.3	22.5		1815.9	605.3	
	17000 NOBE	28 PRE	0417.9	0421.9	6.6		31.0		L
	15400 LEAR	47 GB	0418.6	0559.3	217.2		4300		
	8800 LEAR	47 GB	0418.6	0559.3	217.2		4600		
	3750 TYKW	28 PRE	0419.0	0422	6.0		4.0	3.0	
	4995 LEAR	47 GB	0420.1	0559.5	218.7		3400		
	650 GORK	23 GRF	0422.0	0732.7	320.0		36.0		
	17000 NOBE	47 GB	0424.5	0429.1	8.0		1236.0		L
	2695 MANI	4 S/F	0424.5	0430.0	15.5		361.0	120.3	
	1415 MANI	4 S/F	0425.0	0429.0	10.0		190.4	63.5	
	3750 TYKW	47 GB	0425.0	0429.5	15.0		640.0	140.0	
	9400 TYKW	47 GB	0425.0	0429.2	15.0		1430.0	235.0	
	2950 GORK		0425.0	0535.6			780.0		
	2950 GORK	47 GB	0425.0	0430.0	317.0E		391.0		
	2950 GORK		0425.0	0732.5			109.0		
	2950 GORK		0425.5	0523.9			130.0		
	2950 GORK		0425.5	0559.4			2013.0		
	2000 TYKW	47 GB	0425.5	0428.5	14.5		785.0	57.0	
	1415 LEAR	47 GB	0426.8	0734.1	209.5		4800		
	2695 LEAR	47 GR	0427.3	0559.0	208.5		1800		
	35000 NAGO	5 S	0428.0	0428	.3		40.5		
	950 GORK	2 S/F	0428.1	0428.6	2.0		8.0		
	1000 TYKW	45 C	0428.3	0429.7	2.2		13.0	5.0	
	17000 NOBE	29 PRI	0432.0	0432.5	27.0		100.0		L
	2000 TYKW	30 PRI	0440.0		22.0		8.0	7.0	
	9400 TYKW	30 PRI	0440.0		20.0		50.0	40.0	
	3750 TYKW	30 PRI	0440.0		20.0		23.0	19.0	
	9400 TYKW	5 S	0442.0	0445	7.0		12.0	4.0	
	1000 TYKW	28 PRE	0450.0	0510	20.0		3.0	1.0	
	9400 TYKW	5 S	0452.0	0455	6.0		6.0	3.0	
	2000 TYKW	45 C	0454.0	0454.4	1.3		10.0	3.0	
	2000 TYKW	5 S	0456.0	0456.7	1.2		5.0	1.5	
	17000 NOBE	47 GB	0459.9	0533.6	57.4		1248.0		L
	9400 TYKW	47 GB	0500.0	0535.4	53.0		2400.0	420.0	
	3750 TYKW	47 GB	0500.0	0535.6	53.0		1110.0	180.0	
	2000 TYKW	45 C	0502.0	0535.6	50.0		390.0	80.0	
	4995 ATHN	47 GB	0503.0	0535.3	84.1D		3000		
	1415 ATHN	47 GB	0506.0	0600.0	90.3D		740		
	1415 ATHN	8 S	0506.0	0535.8U	29.8D		270		
	8800 ATHN	47 GB	0506.0	0535.3	79.5		1800		
	8800 ATHN	47 GB	0506.0	0535.3	29.3D		1800		
	2695 ATHN	47 GB	0506.0	0535.3U	29.3D		730		
	2695 ATHN	47 GB	0506.0	0535.8	90.3D		730		
	8800 MANI	47 GB	0507.0	0559.3	73.0		6751.5	2250.5	
	4995 MANI	47 GB	0507.0	0559.3	73.0		5055.2	1685.1	
	1415 MANI	47 GB	0508.0	0559.2	79.0		625.7	208.6	
	8400 BERN	47 GB	0510.0	0535.2	48.0D		1827.0		
	2695 MANI	47 GB	0510.0	0559.1	71.0		2654.4	884.8	
1000 TYKW	45 C	0510.0	0535.6	42.0		141.0	30.0		
19600 BERN	47 GB	0510.0	0533.5	48.0D		1914.0			
11800 BERN	47 GB	0510.0	0535.1	48.0D		2213.0			
35000 NAGO		0510.0	0533			986.0			
35000 NAGO		0510.0	0559			965.0			
35000 NAGO	47 GB	0510.0	0527	160.0		227.0			
606 LEAR	47 GB	0512.8	0559.1	158.7		280			
410 LEAR	47 GB	0513.0	0559.3	74.1		200			
606 MANI	4 S/F	0513.2	0559.1	70.8		218.9	73.0		
650 GORK		0514.0	0536.0			49.0			
650 GORK	46 C	0514.0	0527.0	28.0		49.0			
100 GORK		0514.0	0536.2			560.0			
100 GORK		0514.0	0519.8			130.0D			
100 GORK	41 F	0514.0	0514.0	27.0		130.0D			
950 GORK	46 C	0516.0	0535.9	83.0		106.0			
950 GORK		0516.0	0559.2			297.0			
950 GORK		0516.0	0614.9			124.0			
200 GORK	27 RF	0522.0	0602.0	63.7		60.0			
35000 BERN	47 GB	0531.0U	0533.5	17.0U		3680.0U			
9100 GORK	29 PRI	0541.0	0621.0	200.0E		230.0			
1000 TYKW	30 PRI	0552.0		2.0		10.0	10.0		
2000 TYKW	30 PRI	0552.0		2.0		36.0	35.0		
9400 TYKW	30 PRI	0553.0		5.0		160.0	154.0		
3750 TYKW	30 PRI	0553.0		5.0		75.0	75.0		
2000 TYKW	5 S	0554.0	0555.3	4.0		63.0	50.0		
9400 TYKW	5 S	0554.0	0555	3.0		15.0	6.0		
3750 TYKW	5 S	0554.0	0555.0	4.0		32.0	14.0		
1000 TYKW	5 S	0554.0	0555.4	4.0		21.0	16.0		
17000 NOBE	47 GB	0557.3	0559.4	10.4		3630.0		L	
2650 DWIN	49 GR	0558.0	0559	15.0		500.0D			
650 GORK	4 S/F	0558.0	0559.2	9.6		220.0			
35000 BERN	47 GB	0558.0U	0559.2U	5.0U		1680.0U			
19600 BERN	47 GB	0558.0	0559.4	21.0		4331.0			
11800 BERN	47 GB	0558.0	0559.0U	33.0		4520.0D			
2000 TYKW	47 GB	0558.0	0559.1	42.0		1180.0	200.0		

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME		TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	UT	MINUTES	PEAK	MEAN		
19	3750 TYKW	47 GR	0558.0	0559.4	42.0	2650.0	390.0			
	1000 TYKW	45 C	0558.0	0559.3	42.0	420.0	70.0			
	9400 TYKW	47 GR	0558.0	0559.5	42.0	4880.0	510.0			
	8400 RERN	47 GR	0558.0	0559.00	34.5	1830.00				
	245 LEAR	47 GR	0558.8	0601.3	11.5	180				
	17000 NOBE	29 PBI	0607.7	0607.7	60.0	468.0			0	
	234 POTS	4 S/F	0631.5	0631.6	14.5	260.0	4.0			
	9400 TYKW	30 PBI	0640.0		155.00	70.0	45.00			
	1000 TYKW	30 PBI	0640.0		150.00	10.0	8.00			
	3750 TYKW	30 PBI	0640.0		155.00	35.0	25.00			
	2000 TYKW	30 PBI	0640.0		155.00	22.0	19.00			
	1000 TYKW	45 C	0646.0	0646.1	1.5	5.0	1.0			
	1000 TYKW	45 C	0657.0	0701.0	10.0	6.0	2.5			
	2000 TYKW	5 S	0658.0	0703	15.0	3.0	1.0			
	1000 TYKW	45 C	0709.5	0715.7	8.0	6.0	2.0			
	3750 TYKW	28 PRE	0718.0	0719.7	7.0	9.0	4.0			
	9400 TYKW	5 S	0719.0	0719.5	2.0	14.0	5.0			
	950 GORK		0719.0	0733.5		660.0				
	950 GORK	46 C	0719.5	0730.60	68.5	586.0				
	950 GORK		0719.5	0742.8		69.0				
	3000 POTS	21 GRF	0720.0E	0732.5	90.00	71.0				
	1000 TYKW	28 PRE	0720.0	0722.8	5.0	6.0	2.5			
	2000 TYKW	28 PRE	0720.0	0726.9	7.0	30.0	7.0			
	1470 POTS	45 C	0723.0	0735	67.0	3040.0				
	2695 ATHN	4 S/F	0723.8	0732.5	25.20	150				
	2695 MANI	4 S/F	0724.0	0733.1	24.0	162.5	54.2			
	808 ONDR	46 C	0724.0		36.0	108.00	73.0			
	430 KRAK		0724.7	0736.3		130.0				
	810 KRAK		0724.7	0746.0		76.0				
	810 KRAK	45 C	0724.7	0733.3	46.5	220.0	28.0			
	430 KRAK	27 RF	0724.7	0730.50	16.00	64.0	6.0			
	9500 POTS	21 GRF	0725.0E	0732.5	135.00	50.0				
	1415 MANI	47 GB	0725.0	0734.5	25.0	3099.9	1033.3			
	1000 TYKW	47 GB	0725.0	0733.4	40.0	1010.0	160.0			
	3750 TYKW	45 C	0725.0	0729.2	35.0	51.0	25.0			
	9400 TYKW	45 C	0725.0	0735.9	35.0	39.0	13.0			
	606 MANI	4 S/F	0725.4	0733.1	27.6	39.0	13.0			
	4995 MANI	3 S	0725.5	0733.3	17.0	64.0	21.3			
	4995 ATHN	4 S/F	0725.5	0732.6	22.00	24				
	2000 TYKW	47 GB	0727.0	0733.5	10.0	8450.0	1550.0			
	8800 ATHN	4 S/F	0728.1	0732.6	19.0	35				
	2650 DWIN	41 F	0730.0	0733	10.0	70.00	30.00			
	2000 TYKW	30 PBI	0737.0		95.0	40.0	9.0			
	2000 TYKW	45 C	0743.5	0745.3	3.5	10.0	3.0			
	2000 TYKW	45 C	0759.0	0801.1	10.0	17.0	1.5			
	1415 LEAR	4 S/F	0759.3	0802.0	6.3	119				
	3750 TYKW	29 PBI	0800.0		50.0	12.0	6.0			
	1000 TYKW	29 PBI	0805.0		20.0	6.0	3.0			
	2000 TYKW	20 GRF	0818.0	0820	40.0	6.0	3.0			
	950 GORK	22 GRF	0848.0	0927.3	54.0E	32.0				
410 LEAR	47 GB	0850.3	0851.0	4.0	100					
430 KRAK		0850.7	1236.3		500.00					
430 KRAK		0850.7	1150.9		270.0					
430 KRAK		0850.7	1126.2		150.0					
204 IZMI	41 F	0910.6	0911.2	5.8	510.0					
234 POTS	4 S/F	0911.8	0912.2	1.2	150.0	15.0				
1470 POTS	40 F	0917.5	0927.9	31.0	14.0					
808 ONDR	42 SER	0922.5	1027.8	77.0	48.0	5.0				
810 KRAK	4 S/F	0922.7	0927.1	8.2	90.0	9.0				
606 LEAR	8 S	0927.1	0927.3	.2	54					
9500 POTS	20 GRF	1000.0	1108	90.0	180.0					
113 POTS	4 S/F	1016.3	1016.8	1.6	385.0	15.0				
3000 POTS	8 S	1016.6	1016.6	.4	10.0			III		
1470 POTS	4 S/F	1022.0	1028	9.0	82.0					
810 KRAK		1025.6	1029.7		18.0					
810 KRAK	7 C	1025.6	1027.7	5.1	80.0	11.0				
3000 POTS	42 SER	1027.0	1027.5	10.0	28.0					
2695 ATHN	4 S/F	1027.1	1027.6	3.4	53					
8800 ATHN	4 S/F	1027.1	1027.6	3.4	53					
810 KRAK	8 S	1102.8	1103.0	.8	31.0					
1470 POTS	8 S	1403.1	1403.4	.9	18.0					
2800 OTTA	26A FAL	1510.0	1740	150.0	20.6					
2695 ATHN	8 S	1555.8	1556.1	.7	28					
228 HARS	45 C	1556.2	1558.8	4.6	330.00	30.0				
245 SGMR	47 GB	1556.8	1559.1	4.2	1000					
606 SGMR	8 S	1558.3	1558.8	1.50	33					
410 SGMR	8 S	1558.8	1559.0	1.20	13					
2800 OTTA	1 S	1630.0	1632	3.5	6.2	4.2				
2800 OTTA	8 S	1730.4	1730.5	.5	4.0					
2800 OTTA	240AR	1825.0	2010	105.0	8.2	4.1				
2800 OTTA	8 S	1901.0	1901.1	.5	3.6	1.8				
2800 OTTA	20 GRF	2100.0	2106	60.0	8.2	4.0				
9400 TYKW	20 GRF	2110.0	2130	45.0	8.0	4.0				
3750 TYKW	20 GRF	2110.0	2120	40.0	4.0	2.0				
2000 TYKW	20 GRF	2110.0	2115	40.0	3.0	1.5				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME		TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
			UT	UT	UT	MINUTES	10 ⁻²² W m ⁻² Hz ⁻¹ PEAK	MEAN		
19	1000 TYKW	45 C	2134.0	2134.8		1.5	11.0	2.0		
	2000 TYKW	20 GRF	2202.0	2210		70.0	2.0	1.0		
	3750 TYKW	20 GRF	2202.0	2210		75.0	4.0	2.0		
	9400 TYKW	20 GRF	2202.0	2210		30.0	6.0	2.0		
	9400 TYKW	28 PRE	2237.0	2237.3		3.0	6.0	4.0		
	17000 NOBE	1 S	2239.9	2240.2		1.5	33.0			L
	9400 TYKW	5 S	2240.0	2240.2		2.0	33.0	12.0		
	9400 TYKW	29 PBI	2242.0			10.0	6.0	2.0		
	3750 TYKW	5 S	2333.0	2337.00		25.0	7.0	2.50		
20	100 GORK	44 NS	0503.0E			79.0D		10.0		
	260 ONDR	44 NS	0540.0E			512.0D	104.0	6.0		
	33 UPIC	43 NS	0646.1			567.9				
	29 UPIC	43 NS	0647.5	1223.8D		564.3				
	245 SGMR	43 NS	0928.0	1202.8		154.8D	110			
	100 GORK	43 NS	1312.0			47.0E		5.0		
	245 PALE	43 NS	1847.0	2026.1		603.0D	30000			
	200 HIRA	44 NS	1933.0E	2253		860.0D	15.0	8.0		0
	208 VORO	44 NS	2100.0E			240.0D		12.0		
	245 LEAR	43 NS	2319.0	0700.8		622.0D	66			
	410 LEAR	43 NS	2319.0	2325.8		622.0D	20			
	3750 TYKW	20 GRE	0020.0	0053		60.0	4.0	2.0		
	9400 TYKW	21 GRF	0022.0	0027		60.0	6.0	3.0		RAIN
	2000 TYKW	21 GRF	0030.0	0100		150.0	3.0	1.5		
	606 LEAR	8 S	0055.8	0056.0		.5	31			
	410 LEAR	8 S	0055.8	0056.0		.3	09			
	9400 TYKW	5 S	0107.7	0108.0		1.0	8.0	2.0		
	2750 TYKW	21 GRF	0130.0	0208		80.0	4.0	2.0		
	9400 TYKW	5 S	0139.0	0140		6.0	6.0	2.0		
	2000 TYKW	20 GRF	0140.0	0220		80.0	2.0	1.0		
	9400 TYKW	45 C	0149.0	0151.2		6.0	7.0	3.0		
	9400 TYKW	5 S	0157.0	0200		7.0	4.0	2.0		
	9400 TYKW	45 C	0217.0	0217.2		1.5	12.0	2.0		
	3750 TYKW	5 S	0217.0	0217.8		3.0	4.0	1.5		
	9400 TYKW	28 PRE	0220.0	0221.7		7.0	11.0	4.0		
	9400 TYKW	5 S	0227.0	0230.7		6.0	20.0	8.0		
	3750 TYKW	5 S	0227.0	0230.8		22.0	7.0	2.5		
	8800 LEAR	8 S	0230.3	0230.6		.5	24			
	4995 LEAR	8 S	0230.3	0230.8		.8	16			
	15400 LEAR	8 S	0230.5	0230.6		.1	20			
	9400 TYKW	30 PBI	0233.0			12.0	7.0	3.0		
	9400 TYKW	31 ABS	0245.0	0320		85.0D	6.0	3.0D		RAIN
	3750 TYKW	31 ABS	0250.0	0350		90.0D	-7.0	-3.5D		
	2000 TYKW	31 ABS	0300.0	0350		70.0D	-3.0	-1.5		
	9100 GORK	23 GRF	0327.0E	0509.7		513.0D	34.0			
	9100 GORK	21 GRF	0330.0E	0423.4		510.0D	16.0	8.0		
	410 LEAR	8 S	0339.1	0340.3		1.7	17			
	15400 LEAR	8 S	0342.8	0343.1		1.7	35			
	17000 NOBE	1 S	0342.8	0343.3		3.0	34.0			L
	245 LEAR	8 S	0349.8	0349.8		.2	280			
	410 LEAR	8 S	0349.8	0349.8		.8	19			
	2000 TYKW	20 GRF	0410.0D	0430		100.0D	4.0	2.0D		
	15400 SGMR	4 S/F	0415.1	1731.1		797.5D	51			
	245 PALE	8 S	0424.1	0424.1		.2	130			
	100 GORK	8 S	0427.0	0427.4		1.0	140.0D			
	245 LEAR	8 S	0427.1	0427.3		.2	98			
	3750 TYKW	20 GRF	0500.0	0520		50.0	4.0	2.0		
	606 LEAR	8 S	0502.6	0503.3		.9	200			
	113 POTS	42 SER	0646.3	0655.2		12.0	1000.0	25.0		III
	228 HARS	7 C	0654.2	0655.0		3.7	140.0	30.0		
	204 IZMI	41 F	0655.0	0656.0		3.8	160.0			
	11800 BERN	3 S	0717.6	0719.8		6.0	35.0			
	8400 BERN	3 S	0717.6	0719.8		6.0	29.0			
	9400 TYKW	5 S	0718.0	0719.9		5.0	37.0	11.0		
	9500 POTS	29 PBI	0718.0	0720		27.0	32.0			
	9100 GORK	2 S/F	0719.0	0719.9		3.3	24.0			
	8800 LEAR	4 S/F	0719.3	0719.8		2.3	35			
15400 LEAR	8 S	0719.8	0719.8		.2	21				
9400 TYKW	29 PBI	0723.0			10.0	8.0	4.0			
430 KRAK	42 SER	0726.0	0748.8		31.0	40.0				
3100 CRIM	26 FAL	0924.0	1020.0			8.0				
5200 BERN	3 S	0936.1	0941.7		9.0	18.0				
11800 BERN	3 S	0941.0	0942.3		10.0	24.0			ONLY PAPER REC	
8400 BERN	3 S	0941.0	0942.5		7.0	28.0				
9100 GORK	1 S	0941.6	0942.4		3.2	24.0	12.0			
9500 POTS	3 S	0942.0	0942.5		3.0	18.0				
8800 ATHN	4 S/F	0942.1	0943.0		3.4	22				
4995 ATHN	4 S/F	0942.3	0943.0		3.5D	08				
8400 BERN	3 S	0955.5	0957.5		10.0	27.0				
11800 BERN	3 S	0956.0	0957.3		18.0	59.0				
8800 ATHN	8 S	0956.8	0957.3		2.0	26				
9500 POTS	29 PBI	0957.0	0957.5		28.0	37.0				
8400 BERN	41 F	1043.5	1045.8		47.0D	15.0D				
11800 BERN	41 F	1044.0H	1115.4		44.0D	18.0D				
430 KRAK	42 SER	1046.0	1058.5		16.0	71.0				

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SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$ PEAK	MEAN		
20	100 GORK	41 F	1047.3	1048.0	10.0		110.00		
	100 GORK		1047.3	1056.6		106200.0			
	100 GORK		1047.3	1050.2			110.00		
	9500 POTS	21 GRF	1114.0	1201	81.0		20.0		
	5200 BERN	47 GB	1117.0	1318.1	250.0		780.0		ONLY PAPER REC
	9100 GORK	1 S	1145.0	1146.5	2.5		25.0	12.0	
	3200 BERN	47 GB	1145.0	1318.1	280.0		610.0		ONLY PAPER REC
	7000 SAOP	4 S/F	1145.3	1146.6	2.7		27.0	13.0	
	8800 ATHN	4 S/F	1145.5	1146.8	4.6		44		
	2695 ATHN	4 S/F	1145.5	1146.8	3.10		08		
	4995 ATHN	4 S/F	1145.6	1146.8	4.70		16		
	9100 GORK	1 S	1145.8	1146.5	1.7		5.0	2.5	
	234 POTS	42 SER	1148.5	1151.8	15.0		250.0	1.0	
	11800 BERN	2 S/F	1201.0E	1201.5	1.00		32.00		
	8400 BERN	2 S/F	1201.0E	1201.5	1.00		12.00		
	2800 OTTA	240 R	1208.0	1215	7.0		6.2	3.0	
	11800 BERN	3 S	1221.5	1223.0	4.00		31.00		
	11800 BERN	22 GRF	1244.0	1301.3	105.0		47.0		
	234 POTS	42 SER	1245.3	1255.2	16.0		250.0	1.0	
	2800 OTTA	240AR	1300.0	1615	195.0		8.2		
	7000 SAOP	28 PRE	1300.5	1309.8	9.2		26.0	13.0	
	1470 POTS	45 C	1302.0	1321.7	58.00		130.0		
	9500 POTS	45 C	1305.0	1317.7	55.00		500.0		
	3000 POTS	45 C	1306.00	1321.5	54.00		1750.0		
	4995 SGMR	47 GB	1306.0	1311.6	31.10		420		
	1415 SGMR	47 GB	1306.5	1311.8	24.50		81		
	2695 SGMR	47 GB	1306.6	1311.8	30.40		270		
	2800 OTTA	47 GB	1307.0	1319.5	58.0		645.0	155.0	
	4995 ATHN	47 GB	1307.6	1319.1	68.50		1500		
	8800 SGMR	47 GB	1307.8	1311.6	30.00		350		
	2695 ATHN	47 GB	1308.0	1319.6	57.60		650		
	8400 BERN	47 GB	1308.00	1317.50	72.00		560.00		
	11800 BERN	46 C	1308.00	1317.50	34.00		350.00		
	19600 BERN	46 C	1308.00	1318.70	34.00		170.00		
	8800 ATHN	47 GB	1308.8	1318.8	67.7		730		
	1415 ATHN	47 GB	1309.5	1321.6	59.60		130		
	7000 SAOP	47 GR	1309.8	1317.6	20.2		952.0	476.0	21L
	536 ONDR	41 F	1310.0	1319.3	25.0		22.0	13.0	
	536 ONDR	8 S	1310.5	1310.5	.2		42.0		
	606 SGMR	4 S/F	1310.5	1319.1	20.5		49		
	808 ONDR	41 F	1310.8	1318.8	19.0		35.0	27.0	
	15400 SGMR	47 GB	1311.0	1313.1	25.60		130		
	113 POTS	4 S/F	1323.0	1324	1.9		200.0	50.0	III
	7000 SAOP	29 PBI	1330.0	1350.8	118.2		103.0	51.0	
	1415 SGMR	4 S/F	1337.0	1351.6	26.0		51		
	2695 SGMR	4 S/F	1337.3	1351.1	25.70		76		
	8800 SGMR	4 S/F	1338.0	1350.3	25.00		49		
	4995 SGMR	4 S/F	1338.0	1351.3	25.00		66		
	2800 OTTA	29 PBI	1405.0	1405	125.0		37.0	18.6	
	228 HARS	7 C	1508.5	1511.5	4.0		215.0	45.0	
7000 SAOP	28 PRE	1620.5	1755	70.0		13.0	6.0		
2800 OTTA	21 GRF	1635.0	1755	175.0		17.4	8.7		
2695 ATHN	4 S/F	1720.1	1721.0	2.50		110			
1415 ATHN	4 S/F	1720.1	1721.1	2.90		37			
4995 ATHN	4 S/F	1720.3	1721.0	2.50		139			
8800 ATHN	4 S/F	1720.3	1721.0	2.3		119			
3200 BERN	21 GRF	1729.0	1733.0	31.0		45.0			
5200 BERN	21 GRF	1729.0	1733.0	31.0		80.0		ONLY PAPER REC	
11800 BERN	4 S/F	1730.00	1733.8	9.00		44		ONLY PAPER REC	
8400 BERN	4 S/F	1730.00	1733.1	13.00		61.0			
8800 SGMR	4 S/F	1730.5	1733.1	9.50		79			
2800 OTTA	4 S/F	1730.5	1732.5	7.0		50.0	16.8		
7000 SAOP	4 S/F	1730.5	1733.2	3.3		80.0	40.0	4R	
4995 SGMR	4 S/F	1730.6	1733.0	10.40		74			
2695 SGMR	4 S/F	1730.6	1732.6	9.4		48			
8800 PALE	4 S/F	1730.8	1733.1	10.3		98			
2695 PALE	4 S/F	1731.0	1732.5	5.6		63			
19600 BERN	4 S/F	1731.00	1732.6	5.00		40.00			
15400 PALE	8 S	1731.8	1732.6	1.8		59			
7000 SAOP	29 PBI	1733.8	1733.8	36.6		32.0	16.0		
245 PALE	4 S/F	1841.1	1843.1	2.4		170			
410 PALE	8 S	2039.3	2039.5	.3		68			
100 HIRA	46 C	2109.0	2111.2	3.2		14000.0	1400.0		
200 HIRA	46 C	2110.5	2110.8	1.4		120.0	43.0	WL	
1000 TYKW	45 C	2110.5	2111.2	1.0		13.0	4.0		
9400 TYKW	5 S	2134.7	2134.9	1.0		12.0	4.0		
1000 TYKW	45 C	2141.00	2144.1	6.00		3.00	1.00		
2800 OTTA	20 GRF	2150.0	2205	55.0		3.0	1.5		
9400 TYKW	5 S	2159.0	2200.1	2.0		12.0	4.0		
9400 TYKW	21 GRF	2159.0	2223	60.0		10.0	4.0		
3750 TYKW	20 GRF	2200.0	2220	60.0		5.0	2.0		
2000 TYKW	20 GRF	2200.0	2220	60.0		2.0	1.0		
2800 OTTA	22 GRF	2200.0	2220	120.0		4.6			
9400 TYKW	29 PBI	2201.0		10.0		4.0	2.0		
1000 TYKW	45 C	2306.3	2306.8	.7		45.0	10.0		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
20	3750 TYKW	5 S	2308.0	2314	22.0	2.0	1.0		
	9400 TYKW	28 PRE	2331.0	2333.4	7.0	23.0	8.0		
	9400 TYKW	45 C	2338.0	2339.4	5.0	35.0	16.0		
	3750 TYKW	5 S	2339.0	2340	26.0	3.0	1.5		
	9400 TYKW	30 PBI	2343.0		92.0	14.0	8.0		
	3750 TYKW	5 S	2347.0	2350	8.0	2.0	1.0		
	9400 TYKW	5 S	2347.0	2350	25.0	4.0	2.0		
21	100 GORK	44 NS	0251.0E		275.0D		5.0		
	260 ONDR	44 NS	0547.0E		503.0D	64.0	9.0		
	536 ONDR	43 NS	0610.0		470.0D	14.0			
	29 UPIC	43 NS	0654.9		419.4				
	33 UPIC	43 NS	0655.0		416.9				
	430 KRAK	44 NS	0700.0E	1045.5	36.0D	80.0			
	204 IZMI	43 NS	0930.0		150.0	51.0			
	127 TORN	44 NS	1050.0E	1102.8	310.0D	140.0	5.0		V1
	245 PALE	43 NS	1650.0	0401.0	713.0D	210			
	245 PALE	43 NS	1847.0	2026.1	603.0D	230			
	100 HIRA	44 NS	1935.0E	0648	860.0D	470.0	180.0		ML
	200 HIRA	44 NS	1935.0E	0730	860.0D	210.0	50.0		ML
	208 VORO	44 NS	2100.0E		240.0D		21.0		
	3750 TYKW	5 S	0012.5	0013.3	10.0	2.0	1.0		
	9400 TYKW	5 S	0030.0	0033.7	20.0	40.0	10.0		
	9400 TYKW	5 S	0110.0	0110.4	3.0	9.0	2.0		
	9400 TYKW	31 ABS	0115.0	0310	345.0	-18.0	-10.0		
	1000 TYKW	45 C	0153.0	0153.3	6.0	180.0	50.0		
	3750 TYKW	28 PRE	0200.0	0211	11.0	4.0	2.0		
	2000 TYKW	28 PRE	0200.0	0211	11.0	2.0	1.0		
	2000 TYKW	5 S	0211.0	0212.2	3.0	8.0	5.0		
	2000 TYKW	29 PBI	0214.0		35.0	3.0	1.5		
	3750 TYKW	29 PBI	0215.0U		35.0U	6.0U	3.0U		
	2000 TYKW	28 PRE	0320.0	0322.6	38.0	4.0	1.5		
	3750 TYKW	5 S	0321.0	0321.6	2.0	8.0	2.5		
	3750 TYKW	29 PBI	0323.0		15.0	3.0	1.5		
	9100 GORK	23 GRF	0328.6	0409.0	382.0	50.0			
	3750 TYKW	28 PRE	0350.0	0353.3	9.0	13.0	7.0		
	9400 TYKW	28 PRE	0350.0	0353.3	8.0	32.0	17.0		
	9100 GORK	1 S	0352.2	0353.3	2.0	17.0	8.0		
	2950 GORK	21 GRF	0354.6	0406.6	199.8	16.0	8.0		
	606 MANI	4 S/F	0358.0	0402.5	9.0	71.8	23.9		
	1415 MANI	4 S/F	0358.0	0402.5	10.5	163.7	54.6		
	2000 TYKW	45 C	0358.0	0403.1	9.0	190.0	30.0		
	9400 TYKW	45 C	0358.0	0402.7	25.0	133.0	40.0		
	950 GORK	46 C	0358.2	0400.7	8.5	169.0			
	950 GORK		0358.2	0402.5		198.0			
	4995 MANI	4 S/F	0358.5	0402.9	8.5	215.5	71.8		
	650 GORK	4 S/F	0358.7	0402.3	9.8	70.0			
	1000 TYKW	45 C	0359.0	0402.5	8.0	210.0	40.0		
	3750 TYKW	45 C	0359.0	0402.8	26.0	90.0	22.0		
	8800 MANI	4 S/F	0359.0	0402.9	8.5	198.7	66.2		
	2695 MANI	4 S/F	0359.2	0403.0	6.8	76.8	25.6		
	9100 GORK		0359.7	0404.1		85.0			
	9100 GORK	46 C	0359.7	0402.7	9.2	108.0			
	2950 GORK	45 C	0359.8	0403.0	6.8	62.0			
	1415 ATHN	4 S/F	0400.0	0402.8	8.3D	13			
	100 GORK	46 C	0403.9	0404.3	1.1	110.0D			
	100 GORK		0403.9	0404.8		3400.0			
	2000 TYKW	30 PBI	0407.0		90.0	8.0	4.0		
	1000 TYKW	30 PBI	0407.0		145.0	4.5	2.0		
	228 HARS	45 C	0413.0	0415.0	4.2	85.0	45.0		
245 LEAR	4 S/F	0413.1	0414.6	2.7	98				
100 GORK	24 R	0414.0	0430.0	8.3	110.0				
1000 TYKW	45 C	0415.0	0421.1	45.0	7.0	1.5			
2000 TYKW	5 S	0416.0	0416.9	2.0	7.0	2.0			
9400 TYKW	29 PBI	0423.0		30.0	14.0	6.0			
3750 TYKW	29 PBI	0425.0		80.0	12.0	6.0			
9400 TYKW	5 S	0455.5	0456.3	4.5	67.0	20.0			
8800 ATHN	4 S/F	0455.5	0455.8	2.3	59				
9100 GORK	3 S	0455.5	0456.3	4.7	70.0	35.0			
17000 NDR	1 S	0455.6	0456.3	2.5	29.0			R	
15400 LEAR	4 S/F	0455.8	0456.1	2.8	40				
9400 TYKW	29 PBI	0500.0		10.0	4.0	1.5			
650 GORK	20 GRF	0518.0	0602.4	71.4	85.0	4.0			
1000 TYKW	45 C	0537.0	0604 U	31.0	2.0	1.0D			
3750 TYKW	20 GRF	0550.0	0700	150.0	8.0	4.0U			
1000 TYKW	45 C	0610.0	0615	20.0	3.0	1.0			
100 GORK		0617.2	0618.3		150.0D				
100 GORK	46 C	0617.2	0617.5	2.2	150.0D				
100 GORK		0617.2	0619.1		150.0D				
8800 ATHN	4 S/F	0620.3	0622.0	15.8	46				
4995 ATHN	4 S/F	0620.5	0622.5	22.8D	11				
9400 TYKW	45 C	0621.0	0623.2	8.0	45.0	16.0			
9100 GORK	3 S	0622.3	0623.2	4.9	38.0				
9400 TYKW	30 PBI	0629.0		25.0	9.0	5.0			
9400 TYKW	45 C	0633.5	0636.2	9.0	24.0	9.0			

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
21	9100 GORK	1 S	0633.7	0636.3	5.0	22.0	1.0		
	11800 BERN	21 GRF	0636.1	0638.5	48.00	46.0			ONLY PAPER REC
	8400 BERN	21 GRF	0636.1	0638.5	48.00	53.0			ONLY PAPER REC
	430 KRAK		0700.0E	1046.2		81.0			
	4995 ATHN	8 S	0714.0	0715.5	1.80	21			
	8800 ATHN	4 S/F	0714.5	0715.3	2.1	18			
	9400 TYKW	5 S	0715.0	0715.7	2.0	16.0	5.0		
	9100 GORK	1 S	0715.0	0715.4	1.6	14.0	7.0		
	9500 POTS	3 S	0715.2	0715.8	2.3	11.0			
	9500 POTS		0832.0	0855.0					
	9500 POTS	21 GRF	0832.0	0849.5	128.0	31.0			
	5200 BERN	20 GRF	0844.0	0845.0	19.0	65.0			ONLY PAPER REC
	3200 BERN	20 GRF	0844.0	0845.0	19.0	40.0			ONLY PAPER REC
	9400 TYKW	5 S	0845.0	0849	25.0	30.0	12.00		
	3750 TYKW	45 C	0845.0	0848.4	25.0	42.0	9.00		
	4995 MANI	3 S	0845.5	0847.8	6.5	41.4	13.8		
	3100 CRIM	3 S	0845.5	0848.5	6.0	50.0	17.0		
	3000 POTS	29 PBI	0846.0	0848.5	54.00	42.0			
	2000 TYKW	45 C	0846.0	0848.6	15.0	58.0	8.00		
	2950 GORK	3 S	0846.7	0848.5	4.9	28.0	14.0		
	2695 MANI	3 S	0846.8	0848.3	5.2	38.5	12.8		
	1000 TYKW	5 S	0847.0	0849.0	5.0	12.0	5.00		
	1470 POTS	29 PBI	0847.0	0849.9	105.0	37.0			
	1415 MANI	3 S	0847.0	0848.3	5.0	19.9	6.6		
	9100 GORK	2 S/F	0847.1	0849.3	4.2	29.0			
	650 GORK	1 S	0847.3	0848.6	4.0	4.0	2.0		
	4995 LEAR	8 S	0847.6	0848.1	1.9	38			
	2695 LEAR	4 S/F	0847.6	0848.3	2.7	43			
	8800 LEAR	8 S	0847.8	0849.3	1.7	28			
	1415 LEAR	8 S	0848.0	0848.6	1.6	44			
	3100 CRIM	29 PBI	0851.5	0854.5	12.0	17.0	5.0		
	2950 GORK	21 GRF	0854.2	0856.2	120.7	19.0	9.0		
	234 POTS	4 S/F	1225.9	1226.1	.5	35.0	15.0		
	7000 SAOP	20 GRF	1236.0	1237.5	12.0	8.0	4.0		0
	7000 SAOP	20 GRF	1246.3		16.6	9.0	4.0		15R
	7000 SAOP	3 S		1313.7	2.0	63.0	31.0		9R
	9400 HUAN	S		1313.7	5.1	75.7	27.8		0
	9500 POTS	3 S		1314.0	5.0	77.0			
	11800 BERN	3 S		1314.0	6.0	80.0			
	5200 BERN	3 S		1314.0	5.0	18.0			ONLY PAPER REC
	8800 ATHN	4 S/F		1314.0	4.8	98			
	8400 BERN	3 S		1314.0	7.0	85.0			
	19600 BERN	3 S		1314.2	4.0	35.0			
	4995 ATHN	4 S/F		1314.3	5.70	26			
	35000 BERN	3 S		1314.5H	4.00	20.00			
	7000 SAOP	29 PBI		1315.8	18.2	27.0	13.0		
	9500 POTS	1 S		1355.0	3.5	7.3			
	2800 OTTA	21 GRF		1530.0	420.0	26.4	13.2		
	7000 SAOP	27 RF		1545.6	128.5	24.0	12.0		
	2800 OTTA	2 S/F		1650.2	1.0	2.6			
8800 PALE	47 GB		1736.3	3.5	2100				
8800 PALE	8 S		1741.8	.8	46				
7000 SAOP	1 S		1812.1	3.5	9.0	4.0		0	
7000 SAOP	3 S		1909.0	6.4	12.0	6.0		0	
15400 PALE	8 S		1909.1	1.2	43				
8800 PALE	4 S/F		1909.3	3.8	50				
7000 SAOP	20 GRF		1939.4	12.5	9.0	4.0		0	
2000 TYKW	29 PBI		2100.0E	90.00	3.00	1.50			
9400 TYKW	30 PBI		2100.0E	150.00	23.00	12.00			
3750 TYKW	30 PBI		2100.0E	150.00	4.00	2.00			
245 PALE	47 GB		2100.3	1.0	1000				
15400 PALE	8 S		2139.8	.8	70				
8800 PALE	8 S		2139.8	1.0	41				
9400 TYKW	5 S		2140.0	2.0	35.0	9.0			
3750 TYKW	5 S		2153.0	10.0	7.0	3.0			
9400 TYKW	5 S		2154.0	10.0	8.0	4.0			
9400 TYKW	28 PRE		2313.0	1.5	4.0	2.0			
3750 TYKW	5 S		2314.0	2.0	15.0	4.0			
2000 TYKW	45 C		2314.3	1.5	8.0	2.5			
9400 TYKW	5 S		2314.5	1.5	33.0	12.0			
8800 PALE	8 S		2314.6	1.0	50				
1000 TYKW	45 C		2314.7	1.0	35.0	5.0			
4995 PALE	8 S		2314.8	.3	20				
2695 PENT	8 S		2315.0	.8	8.6	4.3			
3750 TYKW	29 PBI		2316.0	10.0	2.0	1.0			
9400 TYKW	29 PBI		2316.0	10.0	4.0	2.0			
1000 TYKW	8 S		2335.1	.1	115.0	25.0			
3750 TYKW	21 GRF		2340.0	170.0	6.0	2.5			
9400 TYKW	20 GRF		2350.0	0015	40.0	5.0			
22	606 LEAR	43 NS	0209.5	0523.0	451.50	21			
	410 LEAR	43 NS	0216.0	0216.3	445.00	110			
	100 GORK	44 NS	0250.0E		490.0E		50.0		
	200 GORK	44 NS	0251.0E		489.00		15.0		
	29 UPIC	44 NS	0345.0E		753.20				

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
22	33 UPIC	44 NS	0345.0E		753.9D				
	260 ONDR	44 NS	0557.0E		494.0D	135.0	24.0		
	536 ONDR	44 NS	0557.0E		494.0D	31.0			
	204 IZMI	44 NS	0600.0E		360.0D	61.0			
	430 KRAK	44 NS	0700.0E	0826.7	360.0D	69.0			
	245 SGMR	43 NS	0930.0	1446.8	510.0D	470			
	100 HIRA	44 NS	1935.0E	2129	860.0D	200.0			
	200 HIRA	44 NS	1935.0E	2318	860.0D	200.0	110.0		SR
	208 VORO	44 NS	2100.0E		240.0D		88.0		WL
	245 LEAR	43 NS	2319.0	0855.0	622.0D	250			
	410 PALE	47 GB	0000.8	0001.1	6.5	60			
	9400 TYKW	5 S	0041.0	0048	15.0	7.0	3.0		
	2695 PENT	20 GRF	0045.0	0120	70.0	4.2	2.1		
	2000 TYKW	21 GRF	0050.0	0113	110.0	5.0	2.0		
	9400 TYKW	21 GRF	0105.0	0125	85.0	8.0	4.0		
	1000 TYKW	45 C	0108.0	0108.9	8.0	4.0	1.0		
	9400 TYKW	45 C	0130.0	0133.0	10.0	38.0	14.0		
	8800 LEAR	47 GB	0130.3	0141.8	16.5	130			
	8800 PALE	4 S/F	0132.0	0133.1	6.6	51			
	3750 TYKW	5 S	0132.0	0133.1	3.0	5.0	1.0		
	15400 LEAR	47 GB	0132.1	0133.0	13.0	75			
	4995 PALE	8 S	0132.3	0133.1	1.0	23			
	4995 LEAR	8 S	0132.3	0133.1	.8	19			
	9400 TYKW	30 PBI	0140.0		30.0	11.0	4.0		
	9400 TYKW	5 S	0141.5	0142.0	3.5	105.0	17.0		
	8800 PALE	8 S	0141.5	0141.8	1.3	130			
	15400 PALE	8 S	0141.6	0141.8	.7	76			
	17000 NOBE	1 S	0141.6	0142.0	1.2	48.0			L
	3750 TYKW	5 S	0150.0	0150.6	3.0	3.0	1.0		
	9400 TYKW	5 S	0150.0	0153.0	5.0	10.0	3.5		
	9400 TYKW	5 S	0203.0	0203.8	5.0	16.0	5.0		
	2000 TYKW	45 C	0209.6	0209.7	.8	5.0	2.0		
	1000 TYKW	45 C	0219.4	0220.2	1.0	7.0	2.0		
	3750 TYKW	31 ABS	0230.0	0440	329.0	-13.0	-7.0		
	9400 TYKW	45 C	0239.0	0256.5U	21.0	19.0D	5.0D		
	2000 TYKW	31 ABS	0240.0	0440	310.0	-6.0	-3.0		
	1000 TYKW	32 ABS	0240.0	0430	300.0	-2.0	-1.0		
	8800 LEAR	8 S	0256.1	0256.5	1.0	20			
	9400 TYKW	31 ABS	0300.0	0440	297.0	-21.0	-12.0		
	9100 GORK	23 GRF	0314.0E	0420.2	457.0D	34.0			
	15400 LEAR	8 S	0327.6	0329.3	.2	13			
	2000 TYKW	5 S	0336.0	0340.9	20.0	7.0	2.0		
	3750 TYKW	5 S	0339.0	0340.8	6.0U	5.0	2.0U		
	15400 PALE	8 S	0341.1	0341.6	.5	29			
	4995 PALE	8 S	0341.3	0341.5	.2	19			
	2695 PALE	8 S	0341.3	0341.5	.2	16			
	9400 TYKW	5 S	0351.0U	0355.2	9.0U	8.0	3.0U		INTERFERENCE
	245 PALE	8 S	0401.3	0401.5	.3	200			
	410 PALE	8 S	0401.3	0402.6	.2	17			
	245 PALE	8 S	0403.8	0404.5	.8	119			
410 PALE	8 S	0403.8	0404.1	.3	16				
9400 TYKW	5 S	0404.0	0404.6	7.0	8.0	2.5			
8800 LEAR	8 S	0404.3	0404.5	.2	17				
9400 TYKW	5 S	0418.0	0420	7.0	13.0	5.0			
650 GORK	22 GRF	0438.6	1130.0	44.1E	16.0				
2000 TYKW	5 S	0446.0	0448.5	9.0	2.0	.7			
1000 TYKW	45 C	0520.0	0547.6	50.0	4.0	2.0			
410 LEAR	8 S	0530.8	0531.0	.3	74				
245 LEAR	8 S	0530.8	0531.0	.3	139				
9400 TYKW	5 S	0554.5	0554.9	1.5	8.0	3.0			
15000 KISV	4 S/F	0555.0	0555.8	2.0	24.0				
9500 POTS	21 GRF	0642.0	0643.4	11.0	11.0				
4995 MANI	4 S/F	0656.0	0702.0	8.0	36.8	12.3			
8800 MANI	4 S/F	0656.0	0702.0	9.0	164.0	54.7			
245 LEAR	8 S	0703.8	0704.6	1.0	220				
410 LEAR	8 S	0704.3	0704.6	.5	32				
9500 POTS	1 S	0755.0	0801.1	20.0	7.0				
11800 BERN	21 GRF	0757.0	0837.8	78.0	50.0				
19600 BERN	21 GRF	0757.0	0837.8	20.0U	33.0				
8400 BERN	21 GRF	0757.0	0837.8	78.0	45.0				
3000 POTS	1 S	0757.7	0800.5	13.0	4.7				
2950 GORK	20 GRF	0806.6	0825.4	67.7	13.0	6.0			
3000 POTS	22 GRF	0810.0	0923.5	100.0	15.0				
9500 POTS	22 GRF	0810.0	0900	75.0	19.0				
3000 POTS	22 GRF	0810.0	0923.5	100.0	15.0				
3750 TYKW	45 C	0821.0	0823.4	4.0	14.0	4.0			
9400 TYKW	45 C	0821.0	0825.5	5.0	21.0	8.0			
5200 BERN	21 GRF	0821.5	0837.2	43.0	40.0			ONLY PAPER REC	
3750 TYKW	29 PBI	0825.0		30.0	3.0	1.5U			
9400 TYKW	30 PBI	0826.0		70.0U	8.0	4.0U			
15000 KISV	20 GRF	0837.0	0839	15.0	14.0				
8800 ATHN	4 S/F	0837.1	0837.6	4.7	55				
9100 GORK	3 S	0837.3	0837.7	2.9	49.0	25.0			
4995 ATHN	4 S/F	0837.3	0837.6	4.0D	43				
9400 TYKW	5 S	0837.4	0837.7	1.6	55.0	20.0			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
22	8800 LEAR	8 S	0837.5	0837.6	1.0	46			
	15400 LEAR	8 S	0837.5	0837.6	1.3	36			
	6100 KISV	8 S	0837.5	0837.9	1.0	34.0			
	15000 KISV	8 S	0837.5	0837.9	.7	50.0			
	4995 LEAR	8 S	0837.6	0837.6	.5	15			
	9400 TYKW	29 PBI	0839.0		30.00	14.00	7.00		
	15000 KISV	1 S	0848.0	0848.4	.8	13.0			
	234 POTS	42 SER	0854.5	0855.2	3.9	500.0	5.0		III
	234 POTS	42 SER	0855.0	0855.2	3.9	500.0	5.0		III
	9500 POTS	22 GRF	1002.0	1015.3	79.0	26.0			
	9500 POTS	22 GRF	1002.0	1015.3	79.0	26.0			
	8800 ATHN	8 S	1004.3	1004.8	2.0	21			
	8800 ATHN	4 S/F	1013.5	1015.3	3.5	34			
	5200 BERN	20 GRF	1026.1	1029.5	26.0	20.0			ONLY PAPER REC
	7000 SAOP	20 GRF	1128.7		22.6	6.0	3.0		22L
	9500 POTS	3 S	1132.0	1132.4	2.0	11.0			
	2800 OTTA	23 GRF	1140.0	1350	320.0	6.8	3.4		
	7000 SAOP	20 GRF	1211.6		40.0	9.0	4.0		30L
	9500 POTS	27 RF	1211.7	1245	64.0	11.0			
	3000 POTS	27 RF	1215.0	1236	50.0	9.4			
	2800 OTTA	1 S	1217.0	1221	6.0	4.2	2.1		
	245 SGMR	47 GB	1219.0	1219.1	.6	3100			
	9400 HUAN	S	1318.7	1339.7	45.1	14.4	5.3		0
	7000 SAOP	20 GRF	1320.0		47.0	13.0	6.0		22L
	228 HARS	45 C	1430.0	1435.6	10.0	540.0	109.0		
	7000 SAOP	28 PRE	1524.8	1527.5	10.3	13.0	6.0		
	9400 HUAN	S	1525.7	1541.7	36.1	11.2	5.6		0
	5200 BERN	21 GRF	1533.5	1539.3	25.0	15.0			ONLY PAPER REC
	3200 BERN	21 GRF	1533.5	1537.0	25.0	13.0			ONLY PAPER REC
	8400 BERN	41 F	1534.0	1538.2	25.0	21.0			
	2800 OTTA	45 C	1534.0	1539.5	14.0	14.4	4.8		
	2695 ATHN	4 S/F	1534.0	1539.6	10.30	13			
	2695 SGMR	4 S/F	1534.5	1539.6	9.00	16			
	1415 ATHN	4 S/F	1534.5	1540.0	9.30	26			
	4995 SGMR	4 S/F	1534.5	1539.6	9.00	22			
	4995 ATHN	4 S/F	1534.5	1539.3	12.80	31			
	8800 ATHN	4 S/F	1534.6	1535.5	12.7	29			
	11800 BERN	41 F	1535.0	1538.2	25.0	32.0			
	7000 SAOP	46 C	1535.0	1535.5	5.8	25.0	12.0		6L
	8800 SGMR	4 S/F	1535.1	1535.5	9.20	35			
	9400 HUAN	S	1535.3	1537.5	4.7	16.0	8.3		0
	245 SGMR	4 S/F	1535.3	1539.1	5.70	260			
	606 SGMR	4 S/F	1535.6	1539.6	4.70	35			
	1415 SGMR	4 S/F	1535.8	1540.0	4.50	29			
	15400 SGMR	8 S	1537.0	1537.3	1.3	25			
	7000 SAOP	29 PBI	1540.9	1541.1	4.0	16.0	8.0		
	7000 SAOP	8 S	1616.0	1616.4	.8	13.0	6.0		24L
	2800 OTTA	21 GRF	1705.0	1730	50.0	4.0	2.0		
	2800 OTTA	1 S	1724.8	1725.2	2.0	4.2	2.1		
	7000 SAOP	4 S	1724.8	1725.2	1.3	19.0	9.0		0
2800 OTTA	240 R	1810.0	1823	13.0	4.0				
2800 OTTA	21 GRF	1825.0	1840	37.0	13.2	6.6			
2800 OTTA	3 S	1830.0	1830.7	2.0	13.2	6.0			
2800 OTTA	3 S	1833.0	1836	7.0	28.0	14.0			
7000 SAOP	28 PRE	1833.1	1835.0	2.5	10.0	5.0			
7000 SAOP	4 S/F	1835.6	1835.9	2.8	29.0	14.0		16L	
7000 SAOP	29 PBI	1838.4		4.6	13.0	6.0			
606 PALE	8 S	1844.1	1844.3	.5	52				
2800 OTTA	8 S	1845.0	1845.2	.5	6.6	2.2			
7000 SAOP	4 S/F	1905.1	1905.8	2.5	26.0	13.0		6R	
9400 HUAN	S	1905.3	1905.8	2.0	21.0	9.4		0	
2800 OTTA	3 S	1905.5	1905.8	2.0	15.4	4.0			
100 HIRA	42 SER	1954.0	2017	98.0	1800.0			SR	
2800 OTTA	21 GRF	2015.0	2239	345.0	35.0	14.8			
2800 OTTA	8 S	2024.6	2024.6	.1	6.6				
9400 HUAN	S	2028.3	2029.2	2.1	11.3	4.6		L	
2800 OTTA	3 S	2028.7	2029.3	2.0	13.2	6.0			
2800 OTTA	1 S	2040.3	2040.4	1.5	2.8	1.4			
2800 OTTA	2 S/F	2048.5	2048.7	1.0	9.6				
8800 PALE	8 S	2048.5	2048.6	.3	26				
2000 TYKW	28 PRE	2109.0	2241.5	111.0	33.0	11.0			
3750 TYKW	45 C	2109.0	2113.8	21.0	26.0	9.0			
2800 OTTA	22 GRF	2110.0	2118	20.0	12.4	8.0			
9400 TYKW	45 C	2113.0	2113.5	7.0	15.0	7.0			
4995 PALE	8 S	2113.1	2113.8	1.0	24				
9400 TYKW	29 PBI	2120.0		20.0	8.0	4.0			
3750 TYKW	30 PBI	2130.0		13.0	7.0	7.0			
3750 TYKW	45 C	2143.0	2154.2	30.0	37.0	17.0			
9400 TYKW	45 C	2144.0	2154.0	12.0	21.0	8.0			
1000 TYKW	28 PRE	2150.0	2241.4	69.0	27.0	7.0			
4995 PALE	47 GB	2152.5	2154.1	13.1	30				
2800 OTTA	1 S	2153.0	2154	2.0	5.0	2.5			
8800 PALE	47 GB	2153.1	2154.1	20.0	29				
9400 TYKW	30 PBI	2156.0		235.0	14.0	7.0			
410 PALE	47 GB	2156.8	2158.6	.3	13				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
22	606 PALE	47 GB	2158.3	2158.6	2.8	24				
	15400 PALE	47 GB	2203.5	2203.6	.6	23				
	245 PALE	8 S	2212.8	2213.0	.3	300				
	3750 TYKW	30 PBI	2213.0		270.0	16.0	8.0			
	9400 TYKW	5 S	2221.0	2221.6	2.0	6.0	2.0			
	3750 TYKW	28 PRE	2227.0	2343	33.0	17.0	10.0			
	500 HIRA	45 C	2229.0	2236.0	17.0	90.0	40.0		SL	
	9400 TYKW	28 PRE	2230.0	2252	32.0	10.0	5.0			
	1000 TYKW	45 C	2259.0	2317.7	97.0	245.0	65.0			
	500 HIRA	48 C	2259.3	2317.8	136.0	400.0	60.0		MR	
	3750 TYKW	45 C	2300.0	2315.5	70.0	210.0	90.0			
	2000 TYKW	45 C	2300.0	2322	90.0	260.0	90.0			
	1415 MANI	4 S/F	2301.0	2319.8	58.0	214.2	71.4			
	606 MANI	40 F	2301.0	0003.0	123.0	77.0	25.7			
	2695 MANI	3 S	2301.5	2323.0	62.5	202.7	67.6			
	2695 PENT	3 S	2301.5	2318	49.5	270.0	135.0			
	9400 TYKW	45 C	2302.0	2321.5	58.0	87.0	47.0			
	8800 MANI	3 S	2306.0	2322.0	28.0	114.0	38.0			
	4995 MANI	3 S	2306.0	2321.0	41.0	254.8	84.9			
	17000 NOBE	20 GRF	2308.6	2319.9	38.0	23.0			0	
	606 LEAR	47 GB	2319.0E	2320.1	51.30	570				
	4995 LEAR	47 GB	2319.0E	2321.3	47.50	170				
	15400 LEAR	47 GB	2319.0E	2321.3	41.10	80				
	245 LEAR	47 GB	2319.0E	2343.3	24.30	160				
	410 LEAR	47 GB	2319.0E	2339.0	35.60	139				
	1415 LEAR	47 GB	2319.0E	2321.3	50.50	280				
	2695 LEAR	47 GB	2319.0E	2321.3	50.50	330				
	8800 LEAR	47 GB	2319.0E	2321.3	41.50	100				
	2695 PENT	30 PBI	2351.0	2351	75.0	60.0	16.0			
	606 PALE	47 GB	2354.1	2352.8	20.50	119				
	1415 PALE	47 GB	2356.6	2356.8	.5	100				
	2695 PENT	8 S	2357.0	2357.1	.5	15.6	7.0			
	23	200 GORK	44 NS	0248.0E		405.00	80.0			
		100 GORK	44 NS	0250.0E		400.0E	45.0			
		33 UPIC	43 NS	0523.9		577.5				
		29 UPIC	43 NS	0524.0		576.5				
		260 ONDR	44 NS	0545.0E		506.00	67.0	5.0		
		536 ONDR	44 NS	0545.0E		506.00	29.0			
		204 IZMI	44 NS	0600.0E		360.00	150.0			
		430 KRAK	44 NS	0700.0E	0901.2	360.00	320.0			
127 TORN		44 NS	1100.0E		300.00		40.0		V1	
200 HIRA		44 NS	1937.0E	2156	850.00	250.0	70.0		WL	
100 HIRA		44 NS	1937.0E	2015	860.00	380.0	62.0		0	
208 VORD		44 NS	2100.0E		240.00		90.0			
9400 TYKW		30 PBI	0000.0		100.0	27.0	13.0			
3750 TYKW		30 PBI	0010.0		80.0	21.0	10.0			
2000 TYKW		29 PBI	0030.0		120.0	10.0	4.0			
1000 TYKW		30 PBI	0036.0		115.0	4.0	2.0			
9400 TYKW		45 C	0054.0	0056.6	12.0	23.0	7.0			
3750 TYKW		5 S	0056.0	0100	15.0	3.0	1.5			
9400 TYKW		29 PBI	0106.0		25.0	7.0	3.0			
1000 TYKW		45 C	0142.5	0142.7	.3	11.0	3.0			
9400 TYKW		5 S	0211.0	0211.8	2.0	123.0	40.0			
8800 MANI		3 S	0211.0	0212.0	2.2	80.2	26.7			
4995 MANI		3 S	0211.0	0211.9	1.5	30.5	10.2			
17000 NOBE		3 S	0211.1	0211.9	1.5	85.0			L	
9400 TYKW		29 PBI	0213.0		25.0	14.0	6.0			
3750 TYKW		5 S	0248.0	0249.3	7.00	15.00	4.00			
9400 TYKW		5 S	0248.0	0249.3	3.00	33.00	7.00		INTERFERENCE	
4995 MANI		3 S	0248.4	0249.3	1.9	50.8	16.9			
8800 MANI		3 S	0248.4	0249.3	1.9	56.1	18.7			
1415 MANI		3 S	0307.1	0308.0	1.5	41.3	13.8			
4995 MANI		3 S	0307.1	0307.8	1.2	22.9	7.6			
2695 MANI		3 S	0307.3	0307.8	1.2	32.1	10.7			
8800 MANI		3 S	0307.4	0307.8	1.1	32.1	10.7			
1000 TYKW		5 S	0307.5	0308.0	1.5	19.0	5.0			
9400 TYKW		5 S	0307.5	0307.9	1.00	33.00	10.00		INTERFERENCE	
3750 TYKW		5 S	0307.5	0308.0	1.00	13.00	5.00			
17000 NOBE		1 S	0307.7	0308.0	.7	32.0			0	
2000 TYKW		45 C	0308.0E	0308.3	1.00	105.00	20.00			
3750 TYKW		28 PRE	0434.0	0445	11.0	6.0	3.0			
9400 TYKW		28 PRE	0434.00	0444	11.00	18.0	9.00		INTERFERENCE	
2950 GORK	20 GRF	0434.9	0447.6	50.6	19.0	9.0				
9100 GORK	21 GRF	0435.0	0449.3	59.0	30.0					
5200 BERN	20 GRF	0437.0	0447.5	111.0	40.0			ONLY PAPER REC		
17000 NOBE	7 C	0444.9	0446.8	9.0	64.0			L		
9100 GORK		0445.0	0447.7		68.0					
9100 GORK	46 C	0445.0	0446.7	3.5	60.0					
8800 MANI	4 S/F	0445.0	0447.7	6.0	80.2	26.7				
4995 MANI	4 S/F	0445.0	0447.7	5.5	43.2	14.4				
9400 TYKW	45 C	0445.0	0447.7	6.0	93.0	30.0				
3750 TYKW	45 C	0445.0	0447.7	8.0	25.0	10.0				
2000 TYKW	45 C	0446.0	0447.7	3.0	8.0	2.0				
2695 MANI	3 S	0446.0	0447.7	3.5	12.8	4.3				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
23	1000 TYKW	45 C	0447.6	0448.4	1.0	8.0	2.0		
	2000 TYKW	30 PBI	0449.0		20.0	2.0	1.0		
	9400 TYKW	30 PBI	0451.0		40.0	20.0	8.0		
	3750 TYKW	29 PBI	0453.0		20.0	8.0	3.0		
	2000 TYKW	5 S	0456.0	0456.3	1.0	2.0	.7		
	1000 TYKW	5 S	0456.2	0456.6	1.0	3.0	.7		
	9400 TYKW	5 S	0456.3	0456.6	1.0	3.0	1.0		
	3750 TYKW	5 S	0530.0	0533	12.0	2.0	1.0		
	3750 TYKW	21 GRF	0530.0	0620	150.0	5.0	2.5		
	9400 TYKW	5 S	0544.0	0544.4	5.0	5.0	1.5		
	2000 TYKW	45 C	0544.2	0545.6	2.0	6.0	2.0		
	1000 TYKW	42 SER	0544.2	0544.3	2.0	185.0	10.00		
	9400 TYKW	20 GRF	0552.0	0620	45.0	4.0	2.0		
	3750 TYKW	5 S	0554.0	0544.4	5.0	2.0	.7		
	2950 GORK	20 GRF	0647.5	0711.1	56.8	6.0	3.0		
	3750 TYKW	45 C	0656.00	0658.8	6.00	9.0	3.00		INTERFERENCE
	430 KRAK		0700.0E	1001.0		470.00			
	430 KRAK		0700.0E	0953.5		470.00			
	3750 TYKW	30 PBI	0702.0		40.0	2.0	1.0		
	6100 KISV	4 S/F	0704.0	0705.3	5.0	39.0			
	9400 TYKW	5 S	0709.0	0711.0	5.0	93.0	27.0		
	4995 MANI	3 S	0709.5	0710.8	2.8	48.3	16.1		
	8800 MANI	3 S	0709.7	0711.0	5.3	148.4	49.5		
	9100 GORK	3 S	0709.7	0711.0	2.8	103.0			
	9500 POTS	29 PBI	0710.0	0711	40.0	78.0			
	11800 BERN	3 S	0710.0	0711.0	9.00	60.00			
	5200 BERN	3 S	0710.0	0711.1	2.0	17.0			ONLY PAPER REC
	3750 TYKW	5 S	0710.0	0711.0	3.0	10.0	3.0		
	8400 BERN	3 S	0710.0	0711.0	18.00	104.0			
	17000 NOBE	1 S	0710.2	0711.1	4.0	38.0			L
	9100 GORK	29 PBI	0712.5	0712.5	50.5	30.0			
	3750 TYKW	30 PBI	0713.0		20.0	2.0	1.0		
	9400 TYKW	30 PBI	0714.0		50.0	8.0	3.0		
	9400 TYKW	5 S	0719.0	0721	10.0	8.0	4.0		
	3750 TYKW	5 S	0720.00	0721.0	3.00	6.0	2.00		
	234 POTS	4 S/F	0723.6	0724	1.3	300.0	30.0		
	9100 GORK	23 GRF	0832.1	1113.5	234.0	33.0			
	9100 GORK		0832.1	0903.0		140.0			
	808 ONDR	45 C	0857.6		9.0	100.00	80.0		
	8800 MANI	4 S/F	0859.2	0901.0	5.8	248.6	82.9		
	4995 MANI	4 S/F	0859.5	0901.0	6.5	157.5	52.5		
	606 MANI	4 S/F	0859.8	0901.1	7.2	80.0	26.7		
	5200 BERN	41 F	0900.00	0900.7	40.00	115.0			ONLY PAPER REC
	19600 BERN	41 F	0900.0	0901.0	6.0	70.0			
	11800 BERN	41 F	0900.0	0900.7	9.0	243.0			
	2695 MANI	4 S/F	0900.0	0903.7	9.0	112.4	37.5		
	9500 POTS	4 S/F	0900.0	0901.5	8.0	205.0			
	3000 POTS	4 S/F	0900.0	0903.0	25.0	128.0			
	3100 CRIM		0900.0	0903.2		149.0	49.0		
	3100 CRIM	45 C	0900.0	0901.0	7.0	140.0			
2650 DWIN	45 C	0900.0	0903	15.0	160.0	50.0			
2000 TYKW	45 C	0900.0	0903.6	13.0	250.0	45.0			
9400 TYKW	45 C	0900.0	0901.0	4.00	270.00	45.00			
8400 BERN	41 F	0900.0	0901.0	9.0	230.0				
2950 GORK	46 C	0900.1	0901.0	6.2	119.0				
2950 GORK		0900.1	0903.3		141.0				
6100 KISV		0900.4	0903.2		65.0				
6100 KISV	45 C	0900.4	0901.2	7.0	110.0				
1415 MANI	4 S/F	0900.4	0903.8	11.6	119.5	39.8			
810 KRAK		0900.5	0904.8		700.0				
810 KRAK	45 C	0900.5	0904.1	30.2	980.0	46.0			
3750 TYKW	45 C	0903.0E	0903.6	10.00	100.00	20.00			
1000 TYKW	45 C	0903.0E	0904.7	11.00	175.0	40.00			
2950 GORK	30 PBI	0906.3	0906.3	175.0E	31.0				
808 ONDR	29 PBI	0906.6	1001	85.0	72.00	21.0			
3100 CRIM	29 PBI	0907.0	0907.0	20.0	18.0	5.0			
810 KRAK	42 SER	0952.4	0958.4	18.1	76.0	9.0			
810 KRAK		0952.4	1001.0		490.0				
536 ONDR	46 C	0953.2	1000.8	10.0	384.0	27.0			
3000 POTS	4 S/F	0958.0	1001	7.0	44.0				
9500 POTS	4 S/F	0958.0	0958.5	5.0	13.0				
2650 DWIN	45 C	0958.0	1002	10.0	50.0	20.0			
9100 GORK	4 S/F	0958.0	1000.9	4.9	80.0				
2950 GORK	3 S	0958.2	0958.6	1.8	35.0	17.0			
3100 CRIM	1 S	0959.0	0959.8	1.5	35.0	12.0			
5200 BERN	3 S	1000.5	1000.7	1.00	34.0			ONLY PAPER REC	
2950 GORK	4 S/F	1000.8	1001.1	3.7	43.0				
234 POTS	41 F	1001.0	1002.4	1.5	3700.0	80.0			
3100 CRIM		1001.8	1003.5		31.0				
3100 CRIM	45 C	1001.8	1001.9	5.0	46.0	15.0			
3100 CRIM	20 GRF	1015.0	1035.0	81.0	15.0	5.0			
9500 POTS	21 GRF	1015.0	1051	80.0	22.0				
3000 POTS	20 GRF	1020.0	1037.5	125.0	25.0				
2800 OTTA	20 GRF	1050.0	1115	95.0	8.0	3.8			
9100 GORK	4 S/F	1101.6	1103.4	4.3	48.0				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
23	9500 POTS	4 S/F	1102.0	1103.4	4.0	60.0				
	9100 GORK	1 S	1155.7	1156.0	1.5	12.0	6.0			
	7000 SAOP	3 S	1340.5	1341.1	1.2	29.0	14.0		15R	
	9500 POTS	3 S	1340.5	1341.1	3.0	18.0				
	3000 POTS	3 S	1340.5	1341.3	2.0	12.0				
	2800 OTTA	1 S	1341.0	1341.3	1.2	5.0	2.5			
	7000 SAOP	29 PBI	1341.7	1341.7	6.9	16.0	8.0			
	7000 SAOP	20 GRF	1405.1		26.3	10.0	5.0		15R	
	2800 OTTA	240 R	1430.0	1445	15.0	4.0	2.0			
	9500 POTS	1 S	1452.5	1453.2	1.0	6.0				
	3000 POTS	1 S	1452.7	1453.2	.8	3.6				
	1470 POTS	1 S	1452.8	1453.3	1.2	5.0				
	7000 SAOP	20 GRF	1548.0		10.1	10.0	5.0		30L	
	2800 OTTA	21 GRF	1650.0	1759	65.0	4.0	2.0			
	7000 SAOP	28 PRE	1700.0		7.9	14.0	7.0			
	5200 BERN	3 S	1707.5	1707.7	1.0	23.0U				
	7000 SAOP	3 S	1707.8	1708.1	1.3	54.0	37.0		ONLY PAPER REC	
	2695 PENT	1 S	1707.9	1708	1.0	8.6	4.6		29R	
	7000 SAOP	29 PBI	1709.0	1709.0	11.5	14.0	7.0			
	7000 SAOP	27 RF	1758.3		15.5	10.0	5.0			
	2800 OTTA	23 GRF	1805.0	2130	435.0	34.4	22.0			
	7000 SAOP	20 GRF	1819.4	1826.5	16.5	10.0	5.0		16R	
	2800 OTTA	40 F	1900.0	1922	26.0	10.0				
	9400 HUAN	S	1911.7	2104.5	156.5	37.1	11.3		L	
	2695 PENT	3 S	2010.6	2010.9	1.0	17.0	4.4			
	9400 HUAN	S	2038.7	2039.7	2.5	43.6	20.7		R	
	9400 HUAN	C	2046.2	2048.1	5.5	80.7	32.4		L	
	2800 OTTA	1 S	2048.0	2049.5	3.5	3.4	1.7			
	2000 TYKW	21 GRF	2100.0E	2127	260.00	20.0	9.00			
	9400 TYKW	21 GRF	2100.0E	2119	250.00	55.0	20.00			
	3750 TYKW	21 GRF	2100.0E	2135	260.00	35.0	20.00			
	1000 TYKW	21 GRF	2100.0E	2135 U	250.00	10.0U	5.00			
	2000 TYKW	45 C	2119.0	2119.2	1.0	8.0	2.0			
	2695 PENT	29 PBI	2124.0	2124	10.0	6.4	3.2			
	9400 TYKW	5 S	2131.0	2131.4	1.5	55.0	8.0			
	17000 NOBE	1 S	2151.6	2151.9	1.0	21.0			R	
	2930 VORO	21 GRF	2255.0	2317	80.0	314.0				
	1000 TYKW	8 S	2300.0	2300.1	.3	14.0	3.0			
	9400 TYKW	28 PRE	2313.0	2314.8	7.0	30.0	8.0			
	17000 NOBE	1 S	2314.4	2314.8	1.2	21.0			O	
	17000 NOBE	1 S	2319.2	2321.9	7.5	48.0			O	
	9400 TYKW	5 S	2320.0	2322.0	10.0	167.0	40.0			
	1000 TYKW	42 SER	2320.5	2324.1	4.0	180.0	10.0			
	2000 TYKW	45 C	2321.0	2324.1	9.0	4.0	.7			
	3750 TYKW	45 C	2321.0	2322.0	4.0	84.0	22.0			
	2695 PENT	4 S/F	2321.0	2322	3.0	21.0	10.5			
	8800 MANI	3 S	2321.0	2322.6	4.8	74.8	24.9			
	4995 MANI	3 S	2321.7	2322.4	2.7	117.6	39.2			
	2695 MANI	3 S	2321.8	2322.8	2.5	23.4	7.8			
	1415 MANI	3 S	2323.9	2324.8	1.9	85.2	28.4			
	3750 TYKW	29 PBI	2325.0		15.0	8.0	4.0			
	1000 TYKW	45 C	2328.3	2328.7	1.0	15.0	4.0			
	9400 TYKW	29 PBI	2330.0		20.0	10.0	3.0			
	1000 TYKW	45 C	2350.0	2351.3	8.0	34.0	4.0			
	2000 TYKW	42 SER	2350.0	2351.4	8.0	4.0	.7			
	24	200 GORK	44 NS	0250.0E		399.00		5.0		
		100 GORK	44 NS	0259.0E		396.00		30.0		
		260 ONDR	44 NS	0536.0E		513.00	202.00	12.0		
		33 UPIC	43 NS	0546.0		527.3				
		29 UPIC	43 NS	0546.4		52.7				
204 IZMI		44 NS	0600.0E		360.00	50.0				
127 TORN		44 NS	1200.0E		300.00			17.0	V1, DISTURBED	
200 HIRA		44 NS	1939.0E	0143	860.00	60.0	30.0		MR	
100 HIRA		44 NS	1939.0E	2014	860.00	140.0	40.0		MR	
208 VORO		44 NS	2100.0E		240.00		20.0			
5730 IRKU		2 S	0049.5	0050.8	7.0	135.0	40.0		R	
17000 NOBE		7 C	0050.0	0050.8	3.0	53.0			L	
9400 TYKW		5 S	0050.0	0051.8	4.0	58.0	17.0			
3750 TYKW		20 GRF	0145.0	0215	140.0	6.0	3.0			
2000 TYKW		20 GRF	0145.0	0215	120.0	3.0	1.5			
9400 TYKW		20 GRF	0300.0	0307 U	40.0	12.00	4.00			
5730 IRKH		2 S	0304.7	0306.0	5.0	130.0	30.0		L	
9100 GORK		20 GRF	0322.0E		400.00					
9100 GORK		20 GRF	0412.0	0412.3	8.3	55.0	25.0			
9400 TYKW		45 C	0412.0	0417.0	9.0	13.0	4.0			
9400 TYKW		28 PRE	0435.0	0448	32.0	5.0	2.5			
3750 TYKW		28 PRE	0440.0	0505	28.0	4.0	2.5			
9100 GORK		20 GRF	0442.0	0444.5	14.2	55.0	25.0			
9100 GORK		23 GRF	0503.3		407.7					
9400 TYKW		5 S	0507.0	0509.3	5.0	19.0	11.0			
2000 TYKW		21 GRF	0507.0	0514	110.0	7.0	2.0			
2950 GORK		20 GRF	0507.3	0509.35	51.0	8.0	4.0			
3750 TYKW	5 S	0508.0	0510	12.0	14.0	10.0				
9400 TYKW	30 PBI	0512.0		130.0	16.0	8.0				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} W_m^{-2} Hz^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
24	9400 TYKW	20 GRF	0512.0	0525	30.0	4.0	2.0		
	3750 TYKW	30 PBI	0520.0		120.0	6.0	3.0		
	2950 GORK	20 GRF	0602.7	0603.5	12.6	7.0	3.0		
	3750 TYKW	5 S	0603.0E	0603.7	6.00	4.0	1.00		
	1000 TYKW	45 C	0603.0E	0603.7	2.00	194.0	30.00		
	2000 TYKW	5 S	0603.0	0603.7	2.00	9.0	5.00		
	2000 TYKW	29 PRI	0608.0E		12.00	1.0	.50		
	17000 NOBE	1 S	0634.7	0634.9	.4	27.0			R
	204 IZMI	41 F	0658.0	0701.5	13.0	1670.0			
	228 HARS	45 C	0658.0	0701.2	9.0	790.0	80.0		
	234 POTS	4 S/F	0658.6	0701.7	3.5	22000.0	500.0		III
	113 POTS	4 S/F	0658.6	0701.7	3.6	3500.0	120.0		III
	200 HIRA	46 C	0700.5	0701.6	1.4	4600.0	590.0		WL
	536 ONDR	42 SER	0701.0	0852.4	122.0	36.0			
	100 HIRA	46 C	0701.2	0701.7	2.1	10000.0	840.0		WL
	9500 POTS	4 S/F	0745.3	0748.5	14.0	150.0			III
	6100 KISV	4 S/F	0746.0	0748.9	8.0	140.0			
	3000 POTS	4 S/F	0747.0	0748.8	11.0	62.0			III
	1470 POTS	1 S	0747.0	0748.6	8.0	3.0			III
	2000 TYKW	5 S	0747.0	0748.8	5.0	11.0	6.0		
	9100 GORK	4 S/F	0747.4	0748.2	3.5	180.0			
	19600 BERN	3 S	0747.5	0748.5	9.0	66.0			
	5200 BERN	3 S	0747.5	0748.6	9.0	195.0			ONLY PAPER REC
	11800 BERN	3 S	0747.5	0748.3	9.0	128.0			ONLY PAPER REC
	3750 TYKW	5 S	0747.5	0748.6	5.5	140.0	50.0		
	9400 TYKW	5 S	0747.5	0748.4	4.5	160.0	55.0		
	3200 BERN	3 S	0747.5	0748.5	9.0	78.0			ONLY PAPER REC
	8400 BERN	3 S	0747.5	0748.3	9.0	190.0			
	17000 NOBE	3 S	0747.6	0748.6	1.3	88.0			0
	2650 DWIN	1 S	0748.0	0749	5.0	40.0	25.0		
	3100 CRIM	3 S	0748.0	0748.5	5.0	70.0	23.0		
	2695 MANI	3 S	0748.0	0748.7	4.5	50.1	16.7		
	8800 MANI	3 S	0748.0	0748.7	4.0	210.9	70.3		
	4995 MANI	3 S	0748.0	0748.7	5.0	236.2	78.7		
	17000 NOBE	29 PBI	0748.9	0748.9	18.0	55.0			0
	9400 TYKW	29 PBI	0752.0		80.00	20.0	15.00		
	2000 TYKW	29 PBI	0752.0		80.00	5.0	5.00		
	3750 TYKW	29 PBI	0753.0		80.00	11.0	10.00		
	3100 CRIM	30 PBI	0753.0	1006.0	247.0	20.0	7.0		
	430 KRAK	27 RF	0810.7	0820.5	60.5	63.0	3.0		
	430 KRAK		0810.7	0851.5		290.0			
	1470 POTS	27 RF	0837.0	0904	43.0	5.4			III
	1000 TYKW	45 C	0838.0	0839.0	2.0	8.0	2.5		
	810 KRAK	42 SER	0843.8	0845.1	12.5	90.0	10.0		
	810 KRAK		0843.8	0855.3		35.0			
	1000 TYKW	45 C	0844.5	0845.7	6.5	29.0	7.0		
	950 GORK	41 F	0844.6	0846.1	13.8	24.0			
	950 GORK		0844.6	0855.5		32.0			
	950 GORK		0844.6	0848.0		8.0			
	808 ONDR	45 C	0844.7	0855.6	15.0	32.0	15.0		
2950 GORK	4 S/F	0847.1	0848.5	4.3	57.0				
100 GORK	8 S	0852.0	0852.2	1.3	1840.00				
200 GORK	8 S	0852.0	0852.2	.8	60.00				
228 HARS	8 S	0852.0	0852.2	.5	800.0	290.0			
204 IZMI	5 S	0852.0	0852.3	.8	970.0	550.0			
1000 TYKW	45 C	0853.0	0855.5	5.0	15.0	4.0			
1000 TYKW	5 S	0906.0	0906.7	3.0	6.0	3.00			
9500 POTS	42 SER	1014.0	1015.8	4.5	42.0			III	
9100 GORK	1 S	1014.1	1014.5	.9	96.0	45.0			
1470 POTS	27 RF	1015.0	1021.4	55.0	11.0			III	
3000 POTS	27 RF	1015.0	1022	30.0	7.0			III	
2950 GORK	3 S	1015.4	1015.6	.8	25.0	12.0			
1470 POTS	3 S	1016.0	1016.2	.6	18.0			III	
3000 POTS	3 S	1016.0	1016.8	1.1	28.0			III	
9100 GORK	4 S/F	1016.3	1016.6	1.3	51.0				
5200 BERN	3 S	1016.3	1016.5	1.0	17.0			ONLY PAPER REC	
3200 BERN	3 S	1016.3	1016.5	1.0	18.0			ONLY PAPER REC	
3100 CRIM	1	1016.5	1017.1	1.0	23.0	8.0			
810 KRAK	8 S	1016.6	1016.6	.4	1200.00				
430 KRAK	8 S	1016.6	1016.6	.2	17.0				
808 ONDR	8 S	1016.8	1016.8	.2	85.0				
2950 GORK	30 PBI	1022.7	1022.7	180.0E	25.0				
810 KRAK	42 SER	1043.3	1043.5	31.0	95.0				
810 KRAK		1043.3	1113.3		550.0				
808 ONDR	42 SER	1043.5	1113.4	33.0	92.0				
536 ONDR	42 SER	1046.6	1046.6	62.0	41.0				
1470 POTS	1 S	1100.0	1101.4	2.3	4.0			III	
9500 POTS	42 SER	1109.8	1114.4	5.5	9.1			III	
1470 POTS	42 SER	1109.8	1113.4	5.5	28.0				
430 KRAK		1142.9	1205.3		150.0				
430 KRAK	42 SER	1142.9	1143.9	30.0	440.00				
430 KRAK		1142.9	1144.5		440.00				
228 HARS	45 C	1144.0	1144.1	3.8	635.0	105.0			
113 POTS	42 SER	1144.2	1146.8	3.7	1100.0	20.0		III	
234 POTS	42 SER	1144.2	1144.8	3.6	850.0	12.0		III	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	$10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$				
						PEAK	MEAN			
24	204 IZMI	41 F	1145.0	1145.2	4.0	470.0				
	2800 OTTA	21 GRF	1225.0	1325	120.0	9.6	4.8			
	9500 POTS	42 SER	1233.6	1241.1	13.0	24.0				
	9500 POTS	47 GR	1240.0	1247.1	60.0	594.0				
	7000 SAOP	1 S	1339.4	1840.4	1.7	7.0	3.0		0	
	9500 POTS	1 S	1339.8	1340.5	4.7	7.3				
	7000 SAOP	28 PRE	1400.0		2.3	7.0	3.0			
	9500 POTS	42 SER	1402.0	1403.6	47.0	17.0				
	7000 SAOP	3 S	1402.4	1403.5	2.6	23.0	11.0		7L	
	7000 SAOP	29 PBI	1405.0	1409.8	6.5	13.0	6.0			
	3000 POTS	42 SER	1409.5	1409.9	20.0	11.0				
	2695 PENT	1 S	1409.6	1410	1.0	7.6	2.8			
	1470 POTS	42 SER	1428.4	1429.4	12.0	55.0				
	7000 SAOP	1 S	1428.7	1429.2	1.8	7.0	3.0		0	
	2800 OTTA	1 S	1428.8	1429.2	1.5	9.2	3.4			
	2800 OTTA	2 S/F	1447.5	1447.6	1.5	6.4				
	7000 SAOP	3 S	1447.8	1448.4	1.2	12.0	6.0		0	
	2800 OTTA	240 R	1535.0	1600	25.0	5.0	2.5			
	2800 OTTA	23 GRF	1635.0	1735	175.0	14.8	5.6			
	2800 OTTA	8 S	1636.0	1636	.1	5.4				
	2800 OTTA	4 S/F	1638.1	1638.9	2.0	42.0	7.6			
	7000 SAOP	3 S	1654.9	1655.6	2.0	30.0	15.0		10R	
	2800 OTTA	1 S	1716.0	1717	2.0	2.6	2.0			
	7000 SAOP	28 PRE	1729.8		1.4	7.0	3.0			
	7000 SAOP	3 S	1731.2	1731.6	1.4	13.0	6.0		0	
	7000 SAOP	29 PBI	1732.6	1736.7	5.2	13.0	6.0			
	2800 OTTA	1 S	1807.0	1808	2.0	2.6	2.0			
	7000 SAOP	3 S	1826.8	1828.0	2.1	30.0	15.0		5L	
	7000 SAOP	29 PBI	1828.9	1829.3	3.1	16.0	8.0			
	2800 OTTA	8 S	1836.8	1837	.5	10.0				
	2800 OTTA	8 S	2102.5	2102.7	.8	5.2	2.6			
	2000 TYKW	5 S	2117.2	2117.3	.5	32.0	8.0			
	9400 TYKW	5 S	2202.7	2203.0	.8	7.0	2.0			
	9400 TYKW	28 PRE	2237.0	2237.8	4.5	8.0	2.5			
	3750 TYKW	28 PRE	2239.0	2240.1	21.0	7.0	3.0			
	9400 TYKW	5 S	2241.5	2242.1	6.5	23.0	9.0			
	9400 TYKW	30 PBI	2248.0		110.0	5.0	2.0			
	1000 TYKW	21 GRF	2300.0	0130	270.0	2.0	1.0			
	3750 TYKW	45 C	2300.0	2315.9	20.0	19.0	12.0			
	2000 TYKW	21 GRF	2300.0	2311	270.0	6.0	2.0			
	2695 PENT	20 GRF	2300.0	2310	35.0	10.0	5.0			
	9400 TYKW	45 C	2305.0	2312.0	10.0	12.0	5.0			
	9400 TYKW	29 PBI	2315.0		15.0	3.0	1.5			
	3750 TYKW	30 PBI	2320.0		240.0	10.0	5.0			
	3750 TYKW	5 S	2340.0	2346.4	15.0	12.0	7.0			
	9400 TYKW	45 C	2343.0	2346.3	7.0	25.0	10.0			
	9400 TYKW	29 PBI	2350.0		40.0	9.0	5.0			
	3750 TYKW	29 PBI	2355.0		45.0	7.0	3.5			
	25	127 TORN	44 NS	0600.0E		420.00		50.0		V1, DISTURBED
		260 QNDR	44 NS	0615.0E		465.00	138.0	6.0		
245 PALE		43 NS	1720.0	1740.1	674.00	490				
200 HIRA		44 NS	1939.0E	0850	860.00	100.0	20.0		WR	
100 HIRA		44 NS	1939.0E	2018	230.00	90.0	15.0		NR	
208 VORO		44 NS	2100.0E		240.00		18.0			
2000 TYKW		45 C	0011.0	0012.0	3.0	3.0	1.0			
2000 TYKW		21 GRF	0040.0	0155	150.0	5.0	2.0			
9400 TYKW		45 C	0040.6	0041.0	.6	18.0	8.0			
2000 TYKW		5 S	0125.0	0125.2	.6	5.0	1.0			
3750 TYKW		21 GRF	0145.0	0153	45.0	2.0	1.0			
2000 TYKW		5 S	0158.0	0158.8	4.0	5.0	1.5			
3750 TYKW		5 S	0158.4	0158.9	1.6	5.0	2.0			
3750 TYKW		29 PBI	0200.0		10.0	1.5	.7			
1000 TYKW		42 SER	0306.0	0323.2	23.0	3.0	.7			
9400 TYKW		5 S	0311.0	0311.2	1.0	10.0	4.0			
9100 GORK		23 GRF	0327.6		393.00					
3750 TYKW		5 S	0331.0	0331.3	1.0	3.0	1.0			
2000 TYKW		5 S	0339.5	0340.1	2.5	8.0	2.0			
9400 TYKW		8 S	0339.7	0340.0	.4	8.0	3.0			
1000 TYKW		45 C	0339.9	0341.2	2.0	15.0	1.5			
3750 TYKW		5 S	0339.9	0340.0	.7	7.0	2.0			
1000 TYKW		45 C	0402.3	0403.0	1.0	4.5	1.0			
228 HARS		45 C	0445.0	0445.3	1.0	700.0	150.0			
200 HIRA		41 F	0459.3	0502.9	4.0	300.0				
9100 GORK		1 S	0507.3	0507.7	1.3	10.0	5.0			
2000 TYKW		20 GRF	0540.0	0637	180.0	3.0	1.0			
9400 TYKW		21 GRF	0540.0	0700	180.0	7.0	3.0		INTERFERENCE	
3750 TYKW		21 GRF	0540.0	0700	180.0	6.0	2.5			
2950 GORK		20 GRF	0612.0	0636.7	150.0	12.0	6.0			
9400 TYKW		5 S	0635.0	0636.6	20.0	16.0	5.0			
3750 TYKW		5 S	0635.0	0637	20.0	8.0	3.0			
9100 GORK		1 S	0635.3	0636.6	2.0	17.0	8.5			
204 IZMI		8 S	0705.0	0705.0	.5	81.0	60.0			
9500 POTS		27 RF	0725.0	0814	58.0	7.5				
3000 POTS	27 RF	0731.6	0736.5	41.0	2.3					

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
25	234 POTS	4 S/F	0801.8	0801.9	.1	200.0	50.0		
	9100 GORK	1 S	0813.4	0813.9	1.3	8.5	4.0		
	113 POTS	4 S/F	0814.6	0814.6	.2	280.0	45.0		
	9500 POTS	4 S/F	0918.4	0921.3	9.8	68.0			
	9100 GORK	4 S/F	0919.1	0921.2	4.0	66.0			
	11800 BERN	3 S	0919.2	0921.1	13.0	70.0			ONLY PAPER REC
	8400 BERN	3 S	0919.2	0921.1	13.0	65.0			ONLY PAPER REC
	6100 KISV	4 S/F	0921.0	0924.5	5.0	21.0			
	15000 KISV	3 S	0924.0	0924.5	2.0	50.0			
	2950 GORK	20 GRF	0924.3		27.0E				
	536 ONDR	8 S	0936.8	0936.8	.2	31.0			
	234 POTS	4 S/F	0936.8	0936.9	.3	100.0	20.0		III
	204 IZMI	5 S	1050.0	1053.2	5.0	80.0	50.0		
	536 ONDR	42 SER	1051.0	1106.8	17.0	49.0			
	808 ONDR	42 SER	1108.0	1112.7	5.5	50.0			
	9500 POTS	4 S/F	1110.0	1110.6	4.5	28.0			
	113 POTS	4 S/F	1124.6	1124.7	.5	200.0	35.0		III
	33 UPIC	45 C	1124.6	1124.6	1.3				
	29 UPIC	45 C	1124.7	1124.9	1.5				
	7000 SAOP	28 PRE	1210.3		25.7	16.0	8.0		
	113 POTS	4 S/F	1233.0	1234	1.4	2500.0	100.0		III
	127 TORN	4 S/F	1233.5	1234.0	1.5	470.0	230.0		
	113 POTS	4 S/F	1233.6	1234	.7	260.0	7.0		III
	2800 OTTA	21 GRF	1235.0	1325	115.0	14.8	7.4		
	7000 SAOP	47 GB	1236.0	1242.2	10.0	544.0	272.0		6L
	11800 BERN	47 GB	1239.0U	1246.6U	12.0U	600.0U			ONLY PAPER REC
	8400 BERN	47 GB	1239.0U	1246.6	12.0U	540.0U			ONLY PAPER REC
	3000 POTS	47 GB	1240.0	1247.5	56.0	75.0			
	5200 BERN	4 S/F	1241.3	1248.0	90.0	178.0			ONLY PAPER REC
	3200 BERN	4 S/F	1241.3	1247.2	90.0	67.0			ONLY PAPER REC
	9400 HUAN	47 GB	1244.3	1246.9	5.5	833.1	346.4		L
	2650 HWIN	2 S/F	1245.0	1248	15.0	60.0	30.0		
	1470 POTS	3 S	1245.0	1247.6	21.0	11.0			
	2800 OTTA	4 S/F	1245.0	1247.5	15.0	70.0	40.0		
	7000 SAOP	29 PBI	1246.0	1246.0	66.9	114.0	57.0		
	9400 HUAN	29 PBI	1249.8	1249.8	45.8	129.1	38.2		L
	2800 OTTA	29 PBI	1300.0	1300	20.0	18.6	9.3		
	234 POTS	8 S	1311.4	1311.4	.8	600.0	200.0		III
	7000 SAOP	3 S	1359.0	1400.4	1.6	16.0	8.0		0
	9500 POTS	4 S/F	1400.0	1405.6	13.0	15.0			
	19600 BERN	21 GRF	1400.0	1403.2	20.0	49.0			ONLY PAPER REC
	11800 BERN	21 GRF	1400.0	1403.2	20.0	30.0			ONLY PAPER REC
	7000 SAOP	29 PBI	1401.2	1401.2	3.9	7.0	3.0		
	234 POTS	4 S/F	1427.5	1427.5	.9	240.0	25.0		
	9500 POTS	1 S	1444.5	1444.7	6.3	9.3			
	2800 OTTA	20 GRF	1505.0	1540	60.0	3.2	1.6		
	29 UPIC	2 S/F	1615.0	1615.3	.6				
	33 UPIC	2 S/F	1615.3	1615.4	.2				
	2800 OTTA	21 GRF	1750.0	1910	170.0	8.0	3.6		
	7000 SAOP	28 PRE	1755.5	1756.9	1.4	13.0	6.0		
	7000 SAOP	3 S	1756.9	1757.6	1.2	33.0	16.0		4L
	7000 SAOP	29 PBI	1758.1	1758.1	3.3	10.0	5.0		
	2800 OTTA	1 S	1839.0	1840.2	4.0	4.2	2.6		
	2000 TYKW	45 C	2100.0	2104.7	5.0D	7.0	3.0D		
	3750 TYKW	21 GRF	2105.0	2125	190.0	8.0	4.0		
	3750 TYKW	5 S	2106.0	2107.6	3.0	11.0	3.0		
	9400 TYKW	5 S	2107.0E	2107.3	2.0D	12.0	5.0D		
	2000 TYKW	30 PBI	2108.0E		190.0D	6.0D	3.0D		
	9400 TYKW	21 GRF	2120.0	2125	50.0	12.0	5.0		
	1000 TYKW	21 GRF	2130.0U	2200	170.0U	3.0	1.5		
	2800 OTTA	8 S	2156.0	2156.1	.5	3.8	1.9		
	9400 TYKW	5 S	2157.0	2157.7	4.0	12.0	4.0		
	9400 TYKW	28 PRE	2220.0	2232.2	15.0	16.0	4.0		
	9400 TYKW	45 C	2235.0	2237.5	5.0	23.0	14.0		
	3750 TYKW	45 C	2236.0	2246	22.0	6.0	2.5		
	2800 OTTA	1 S	2236.0	2238	3.0	2.6	1.3		
	200 HIRA	46 C	2237.6	2238.3	.7	410.0	77.0		
	100 HIRA	8 S	2238.3	2238.5	.3	1800.0			0
	9400 TYKW	30 PBI	2240.0		90.0	9.0	4.0		
	2800 OTTA	1 S	2243.0	2245	9.0	5.2	2.6		
	9400 TYKW	5 S	2244.0	2247.0	15.0	14.0	3.5		
	1000 TYKW	5 S	2246.5	2247.0	2.5	3.0	1.0		
	9400 TYKW	5 S	2300.0	2300.7	3.0	8.0	2.0		
	3750 TYKW	21 GRF	2300.0	2346	70.0	3.5	1.5		
	9400 TYKW	5 S	2307.0	2310.1	5.0	20.0	4.0		
	9400 TYKW	30 PBI	2312.0		10.0	4.0	2.0		
	245 LEAR	47 GB	2317.0	0500.3	814.0D	960			
	9400 TYKW	5 S	2318.0	2318.3	1.0	7.0	3.0		
	9400 TYKW	28 PRE	2327.0	2328	10.0	3.0	1.5		
	2000 TYKW	5 S	2337.0	2337.7	4.0	10.0	2.5		
	1000 TYKW	5 S	2337.0	2337.8	3.0	11.0	3.0		
	3750 TYKW	5 S	2337.0	2337.7	3.0	26.0	5.0		
	9400 TYKW	45 C	2337.0	2337.7	3.0	50.0	12.0		
	2695 PENT	3 S	2337.0	2337.8	2.0	22.0	10.0		
	17000 NOBE	1 S	2337.5	2337.6	.7	33.0			R

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
25	9400 TYKW	30 PBI	2340.0		30.0	4.0	2.0		
	1000 TYKW	45 C	2342.0	2342.9	2.0	3.5	.5		
	2000 TYKW	42 SER	2342.0	2345.7	15.0	63.0	1.0		
	9400 TYKW	45 C	2342.0	2347.8	7.0	32.0	10.0		
	1000 TYKW	45 C	2345.0	2347.8	6.0	17.0	1.5		
	3750 TYKW	5 S	2347.0	2347.7	2.0	24.0	4.0		
	2695 PENT	1 S	2347.9	2348.1	1.0	6.4	3.2		
	9400 TYKW	30 PBI	2349.0		19.0	6.0	3.0		
	9400 TYKW	45 C	2354.0	2358.4	6.0	21.0	3.5		
	1000 TYKW	5 S	2358.0	2358.3	1.0	2.0	.5		
	2000 TYKW	5 S	2358.0	2358.3	2.0	3.5	1.0		
	3750 TYKW	5 S	2358.0	2358.3	1.0	2.5	1.0		
26	127 TORN	44 NS	0530.0E		630.00	430.0	42.0		V1
	33 HPIC	43 NS	0550.4	1024.2	654.5				
	29 HPIC	43 NS	0550.5		654.4				
	204 IZMI	44 NS	0600.0E		360.00				
	260 ONDR	44 NS	0607.0E		473.00	70.0	19.0		
	536 ONDR	44 NS	0607.0E	1154.5	473.00	209.00	15.0		
	430 KRK	43 NS	0731.0	0847.7	330.00	73.0	11.0		
	410 PALE	43 NS	1641.0	1649.0	730.00	230			
	245 PALE	43 NS	1641.0	1718.5	730.00	400			
	200 HIRA	44 NS	1939.0E	0130	860.00	40.0	28.0		MR
	208 VORO	44 NS	2100.0E		120.00		29.0		
	606 LEAR	44 NS	2317.0E	2330.8	13.80	290			
	245 LEAR	43 NS	2317.0	0813.1	626.00	1800			
	410 LEAR	44 NS	2317.0E	2333.8	16.80	10			
	606 LEAR	43 NS	2317.0	2330.8	626.00	290			
	410 LEAR	43 NS	2317.0	0121.5	626.00	44			
	9400 TYKW	5 S	0044.0	0048.5	20.0	8.0	4.0		
	3750 TYKW	5 S	0044.0	0049	20.0	3.0	1.5		
	9400 TYKW	5 S	0044.5	0045.2	1.5	13.0	3.0		
	200 HIRA	46 C	0053.2	0053.3	3.0	500.0	58.0		WL
	3750 TYKW	5 S	0107.0	0111	12.0	3.0	1.0		
	9400 TYKW	28 PRE	0109.0	0115	12.0	4.0	2.0		
	3750 TYKW	21 GRF	0120.0	0126	80.0	3.0	1.5		
	9400 TYKW	45 C	0121.0	0123.2	7.0	65.0	20.0		
	17000 NOBE	1 S	0122.2	0123.3	2.0	23.0			0
	9400 TYKW	30 PBI	0128.0		65.0	8.0	3.5		
	2000 TYKW	28 PRE	0129.0	0206.8	40.0	6.0	3.0		
	3750 TYKW	5 S	0136.0	0136.6	1.5	3.0	1.0		
	9400 TYKW	5 S	0204.5	0206.3	3.0	37.0	18.0		
	3750 TYKW	5 S	0205.0	0206.3	2.5	17.0	6.0		
	17000 NOBE	28 PRE	0205.2	0210.8	11.1	27.0			
	9400 TYKW	30 PBI	0207.5		2.0	12.0	11.0		R
	3750 TYKW	30 PRI	0207.5		2.5	5.0	5.0		
	2000 TYKW	45 C	0209.0	0217.2	20.0	31.0	12.0		
	9400 TYKW	45 C	0209.5	0210.7	2.5	52.0	27.0		
	1000 TYKW	28 PRE	0209.8	0209.9	5.2	7.0	1.0		
	3750 TYKW	45 C	0210.0	0217.3	13.0	43.0	13.0		
	9400 TYKW	30 PBI	0212.0		3.0	18.0	18.0		
	9400 TYKW	45 C	0215.0	0217.1	8.0	172.0	45.0		
	1000 TYKW	45 C	0215.0	0217.1	5.0	16.0	4.0		
	5730 IRKU	2 S	0216.0	0217.2	5.0	88.0	32.0		L
	35000 NAGO	5 S	0216.0	0217	3.0	27.0			
	1415 MANI	3 S	0216.2	0217.3	3.1	5.8	1.9		
	4995 MANI	3 S	0216.2	0217.3	3.1	50.8	16.9		
	2695 MANI	3 S	0216.2	0217.3	2.8	22.9	7.6		
	8800 MANI	3 S	0216.3	0217.4	3.7	142.8	47.6		
	17000 NOBE	7 C	0216.3	0217.1	10.0	92.0			R
	1000 TYKW	30 PBI	0220.0		50.0	2.0	1.0		
	9400 TYKW	30 PBI	0223.0		10.0	8.0	3.0		
	3750 TYKW	29 PBI	0223.0		15.0	7.0	3.0		
	9400 TYKW	45 C	0225.0	0227.5	5.0	8.0	2.5		
	2000 TYKW	30 PBI	0229.0		92.0	6.0	6.0		
1000 TYKW	8 S	0250.9	0250.9	.1	6.0	2.0			
3750 TYKW	45 C	0251.0	0303 U	27.0	7.00	4.00			
9400 TYKW	28 PRE	0251.0	0253.8	9.0	8.0	3.0			
9400 TYKW	5 S	0300.0	0302.6	8.0	15.0	8.00			
2000 TYKW	47 GB	0301.5	0302.5	3.5	5300.0	650.0			
9400 TYKW	29 PBI	0308.0		10.0	5.0	2.5			
9400 TYKW	28 PRE	0321.0	0332	13.0	12.0	8.0			
3750 TYKW	28 PRE	0322.0	0325	12.0	4.0	2.0			
9100 GORK	23 GRF	0325.0E		389.00					
2950 GORK	23 GRF	0332.6	0421.0	93.8	14.0				
9400 TYKW	45 C	0334.0	0335.3	5.0	22.0	15.0			
3750 TYKW	45 C	0334.0	0335.2	7.0	21.0	8.0			
2950 GORK	1 S	0334.1	0335.1	3.0	7.0	3.5			
9100 GORK	2 S/F	0334.5	0335.4	1.5	12.7				
9400 TYKW	30 PBI	0339.0		22.0	11.0	8.0			
3750 TYKW	30 PBI	0341.0		110.0	4.0	2.0			
3750 TYKW	5 S	0346.0	0349	10.0	4.0	1.5			
9400 TYKW	5 S	0346.0	0349.5	10.0	8.0	4.0			
3750 TYKW	28 PRE	0401.0	0401.9	9.0	15.0	8.0			
9400 TYKW	28 PRE	0401.0	0402.4	9.0	34.0	26.0			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
26	2000 TYKW	28 PRE	0401.0	0410	9.0	10.0	6.0		
	5730 IRKU	20 GRF	0401.5	0402.0	9.0	15.0			L
	6100 KISV	24 R	0404.0		9.0	11.0			
	950 GORK	4 S/F	0409.0	0411.5	10.3	120.0			
	650 GORK	4 S/F	0409.0	0411.2	6.0	60.0			
	4995 MANI	3 S	0409.8	0411.8	6.2	259.1	86.4		
	35000 NAGO	5 S	0410.0	0411	9.0	32.0			
	9100 GORK	4 S/F	0410.0	0411.4	8.0	473.0			
	5730 IRKU	2 S	0410.0	0411.7	5.0	160.0	40.0		L
	2000 TYKW	45 C	0410.0	0411.6	5.0	185.0	50.0		
	1000 TYKW	45 C	0410.0	0411.7	7.0	116.0	20.0		
	9400 TYKW	47 GB	0410.0	0411.6	8.0	525.0	110.0		
	3750 TYKW	45 C	0410.0	0411.4	4.0	270.0	70.0		
	2950 GORK	4 S/F	0410.1	0411.5	3.7	258.0			
	17000 NOBE	45 C	0410.3	0411.3	3.5	674.0			R
	1415 MANI	3 S	0410.3	0412.0	5.4	80.5	26.8		
	606 MANI	4 S/F	0410.3	0411.0	4.7	193.1	64.4		
	2695 MANI	3 S	0410.4	0411.8	4.1	235.4	78.5		
	8800 MANI	3 S	0410.6	0411.8	6.4	285.6	95.2		
	15000 KISV	45 C	0412.3	0414.7	10.0	260.0			
	15000 KISV			0412.3	0418		15.0		
	6100 KISV	4 S/F	0413.0	0414.7	4.0	38.0			
	3750 TYKW	30 PBI	0414.0		55.0	15.0	5.0		
	2000 TYKW	30 PBI	0415.0		310.00	17.0	9.00		
	1000 TYKW	30 PBI	0417.0		297.00	3.0	3.00		
	6100 KISV	29 PBI	0417.5		17.0	6.0			
	9400 TYKW	29 PBI	0418.0		25.0	20.0	10.0		
	650 GORK	23 GRF	0430.0	0851.0	314.0E	24.0			
	1000 TYKW	21 GRF	0435.0	0550	160.0	5.0	2.5		
	1000 TYKW	45 C	0444.0	0444.1	1.0	28.0	3.0		
	9400 TYKW	20 GRF	0450.0	0504	40.0	7.0	3.0		
	3750 TYKW	5 S	0451.0	0453	10.0	6.0	2.0		
	6100 KISV		0501.0	5105		30.0			
	6100 KISV	45 C	0501.0	0503.7	13.0	70.0			
	1000 TYKW	45 C	0513.4	0513.6	.6	126.0	20.0		
	1000 TYKW	5 S	0514.4	0514.7	.6	12.0	3.0		
	6100 KISV	27 RF	0522.0	0523	4.0	14.0			
	228 HARS	45 C	0528.2	0529.6	4.0	725.0	125.0		
	3750 TYKW	28 PRE	0542.0	0544	17.0	5.0	2.0		
	2950 GORK	21 GRF	0542.7	0604.1	27.7	9.0	4.5		
	19600 BERN	3 S	0548.0	0601.5U	38.0	160.00			ONLY PAPER REC
	11800 BERN	4 S/F	0548.0	0601.5	38.0	192.0			ONLY PAPER REC
	8400 BERN	4 S/F	0548.0	0601.2U	38.0	260.00			ONLY PAPER REC
	9400 TYKW	28 PRE	0550.0	0554	9.0	12.0	7.0		
	113 POTS	42 SER	0553.7	0553.7	3.8	600.0	5.0		III
	1000 TYKW	45 C	0557.0	0559.1	9.0	15.0	2.00		
	950 GORK	21 GRF	0557.7	0603.0	18.0	4.5			
	4995 MANI	4 S/F	0557.8	0602.1	12.2	99.1	33.0		
	2650 DWIN	2 S/F	0558.0	0602	10.0	50.0	25.0		
	1415 MANI	4 S/F	0558.3	0600.9	10.7	33.2	11.1		
950 GORK	4 S/F	0558.6	0602.1	5.4	38.0				
2695 MANI	4 S/F	0558.8	0602.1	11.3	62.1	20.7			
8800 MANI	4 S/F	0558.8	0602.1	11.2	204.7	68.2			
606 MANI	47 GB	0559.0	0600.9	8.6	834.6	278.2			
35000 NAGO	5 S	0559.0	0601	1.1	20.0				
9400 TYKW	45 C	0559.0	0602.0	11.0	165.0	70.00			
3750 TYKW	45 C	0559.0	0600 U	10.0	29.00	14.00			
2000 TYKW	45 C	0559.0	0602.1	13.0	48.0	10.00			
17000 NOBE	7 C	0559.1	0602.1	15.0	168.0			R	
9100 GORK	4 S/F	0559.3	0601.9	10.5	160.0				
2950 GORK	4 S/F	0559.3	0601.8	4.1	40.0				
650 GORK	4 S/F	0559.7	0601.4	8.3	104.0				
15000 KISV		0602.0	0608		32.0				
15000 KISV		0602.0	0610		35.0				
15000 KISV	46 C	0602.0	0604.9	16.0	150.0				
15000 KISV		0602.0	0603.2		100.0				
2950 GORK	1 S	0605.0	0606.6	3.6	8.0	4.0			
3750 TYKW	29 PBI	0610.0		7.0	3.0	1.0			
9400 TYKW	29 PBI	0610.0		7.0	7.0	3.0			
15000 KISV	45 C	0618.0	0623	8.0	42.0				
15000 KISV		0618.0	0621		6.0				
9400 TYKW	5 S	0618.5	0619.8	6.0	70.0	10.0			
9100 GORK	3 S	0619.0	0619.7	4.5	58.0				
17000 NOBE	1 S	0619.2	0619.7	2.0	49.0			L	
9400 TYKW	28 PRE	0634.0	0734.6	90.0	50.0	17.0			
204 IZMI	41 F	0645.0	0646.8	4.0	550.0				
3000 POTS	27 RF	0659.0	0938	428.0	26.0				
3750 TYKW	28 PRE	0700.0U	0803.3	64.0U	30.0	5.0			
430 KRAK	8 S	0702.5	0702.9	.5	69.0				
127 TORN	8 S	0702.5	0703.2	1.0	1200.0	580.0		V1	
9500 POTS	27 RF	0703.5	0922	42.0	63.0				
11800 BERN	47 GB	0705.0	0806.5U	215.0	690.0			ONLY PAPER REC	
19600 BERN	46 C	0705.0	0806.5U	215.0	440.0U			ONLY PAPER REC	
8400 BERN	46 C	0705.0	0806.5U	215.0	266.00			ONLY PAPER REC	
3200 BERN	46 C	0711.0	0806.5U	221.0	163.00			ONLY PAPER REC	

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
26	5200 BERN	46 C	0711.0	0806.50	221.0	195.00			ONLY PAPER REC
	1470 POTS	27 RF	0715.0	0824	188.0	7.0			
	2950 GORK	20 GRF	0720.5	0725.4	28.0	6.0	3.0		
	15400 LEAR	4 S/F	0720.5	0726.1	11.5	39			
	8800 LEAR	4 S/F	0720.5	0725.8	11.5	51			
	9500 POTS	3 S	0722.2	0725.5	4.4	32.0			
	3000 POTS	4 S/F	0723.2	0725.9	4.9	7.9			
	2695 LEAR	4 S/F	0723.8	0725.8	6.8	15			
	1470 POTS	3 S	0724.0	0727.5	4.0	5.7			
	4995 LEAR	4 S/F	0724.1	0725.8	7.9	25			
	950 GORK	1 S	0724.4	0725.7	2.5	3.0			
	9100 GORK	1 S	0724.6	0725.4	1.8	19.8	10.0		
	6100 KISV	20 GRF	0726.0	0728.8	18.0	17.0			
	430 KRAK		0731.0	1112.3		450.00			
	430 KRAK		0731.0	1154.5		450.00			
	430 KRAK		0731.0	1023.9		205.0			
	1000 TYKW	28 PRE	0735.00	0803.4	29.00	14.0	1.50		
	2000 TYKW	28 PRE	0735.0	0800.1	29.0	35.0	3.0		
	204 IZMI	41 F	0740.0	0744.8	6.0	400.0			
	1470 POTS	3 S	0745.5	0745.8	.6	7.2			
	3000 POTS	4 S/F	0754.5	0806.6	23.0	377.0			
	204 IZMI	41 F	0755.0	0757.2	5.0	250.0			
	1470 POTS	4 S/F	0756.0	0807.4	20.0	220.0			
	2950 GORK	23 GRF	0757.2	0838.7	106.0E	27.0			
	9500 POTS	4 S/F	0757.5	0805.5	19.0	354.0			
	6100 KISV	45 C	0800.0	0809.8	18.0	140.0			
	6100 KISV		0800.0	0811.6		90.0			
	6100 KISV		0800.0	0809		120.0			
	536 ONDR	45 C	0800.5	0806.7	8.0	247.0	13.0		
	234 POTS	42 SER	0801.2	0811.5	11.0	625.0	7.0	III	
	950 GORK	21 GRF	0802.2	0842.0	76.0	9.0			
	17000 NOBE	45 C	0802.2	0805.8	5.00	522.0		R	
	650 GORK	47 GR	0802.5	0805.5	22.4	210.0			
	650 GORK		0802.5	0820.9		206.0			
	808 ONDR	4 S/F	0802.5	0812.8	17.0	78.0	35.0		
	650 GORK		0802.5	0823.5		2400.0			
	1415 MANI	4 S/F	0802.5	0806.9	11.0	182.6	60.9		
	2950 GORK	1 S	0802.8	0803.3	1.1	22.0	11.0		
	15000 KISV		0803.0	8115		120.0			
	15000 KISV	45 C	0803.0	0809.7	12.0	340.0			
	2650 DWIN	45 C	0803.0	0807	10.0	530.0	150.0		
	2695 MANI	4 S/F	0803.0	0807.0	10.0	454.5	151.5		
	606 MANI	47 GR	0803.0	0823.6	24.0	2596.9	865.6		
	9100 GORK	46 C	0803.7	0805.7	7.0	371.0			
	9100 GORK		0803.7	0808.3		198.0			
	8800 MANI	4 S/F	0803.8	0806.0	7.2	323.7	107.9		
	4995 MANI	4 S/F	0804.0	0806.9	8.0	274.3	91.4		
	5730 IRKU		0804.0	0808.3		140.0		L	
	5730 IRKU		0804.0	0806.8		256.0		L	
	5730 IRKU	45 C	0804.0	0805.9	10.0	175.0	81.0	L	
2000 TYKW	45 C	0804.0	0806.9	9.0	410.0	85.0			
1000 TYKW	45 C	0804.0	0806.9	18.0	150.0	25.0			
3750 TYKW	45 C	0804.0	0806.7	8.0	400.0	90.0			
9400 TYKW	45 C	0804.0	0805.9	7.0	370.0	140.0			
2950 GORK	4 S/F	0804.5	0806.7	7.0	429.0				
950 GORK	3 S	0804.6	0806.8	7.5	123.0				
810 KRAK	5 S	0805.0	0807.1	9.2	100.0	19.0			
430 KRAK	8 S	0806.0	0806.2	.4	650.00				
9400 TYKW	30 PBI	0811.0		12.0	36.0	36.0			
3750 TYKW	30 PBI	0812.0		11.0	14.0	9.0			
2000 TYKW	30 PBI	0813.0		72.00	7.00	7.00			
536 ONDR	45 C	0813.3	0823.4	14.0	312.0	107.0			
9500 POTS	21 GRF	0822.0	0835.3	33.0	100.0				
1000 TYKW	45 C	0822.0	0836.2	26.0	140.0	18.0			
1470 POTS	21 GRF	0822.5	0836.6	53.0	1340.0				
808 ONDR	41 F	0822.7	0836	48.0	52.0	25.0			
9400 TYKW		0823.0	0835.6		175.00				
3750 TYKW	45 C	0823.0	0835.6	67.00	73.00	15.00			
9400 TYKW	45 C	0823.0	0911.7	56.00	210.00	50.00			
3000 POTS	21 GRF	0823.2	0836.0	32.0	48.0		INTERFERENCE		
2000 TYKW	47 GR	0823.3	0824.2	1.5	790.0	120.0			
2000 TYKW	47 GR	0829.0	0837.8	16.0	7500.0	600.0			
6100 KISV	20 GRF	0830.0	0840	24.0	44.0				
6100 KISV		0830.0	0843.5		40.0				
810 KRAK	4 S/F	0831.0	0834.8	14.2	63.0	12.0			
950 GORK	4 S/F	0833.0	0836.0	7.4	71.0				
650 GORK		0833.0	0840.9		17.0				
650 GORK	41 F	0833.0	0839.0	11.2	15.0				
2650 DWIN	45 C	0833.0	0842	10.0	140.0	60.0			
9100 GORK	46 C	0833.3	0835.3	11.2	45.0				
9100 GORK		0833.3	0840.1		35.0				
2950 GORK	1 S	0833.4	0836.0	5.0	22.0	11.0			
650 GORK	2 S/F	0835.3	0857.1	4.1	11.0	5.0			
2950 GORK	1 S	0838.9	0840.8	5.6	9.0	4.5			
1000 TYKW	45 C	0848.0	0853.7	23.00	25.0	10.00			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
26	2000 TYKW	47 GB	0853.0	0856.8	18.0	550.0	50.0			
	950 GORK	4 S/F	0853.3	0853.6	47.0	22.0				
	113 POTS	4 S/F	0903.6	0904.2	9.7	200.0	10.0		III	
	234 POTS	4 S/F	0903.7	0904	5.8	250.0	40.0		III	
	9500 POTS	4 S/F	0904.0	0911.6	14.0	145.0				
	15000 KISV			0910.0		0910.5		80.0		
	15000 KISV	45 C		0910.0		0911.5		110.0		
	9100 GORK	4 S/F		0910.0		0910.9		75.0		
	3000 POTS	23 GRF		0915.0		0938.1		24.0		
	1470 POTS	42 SER		0924.5		0929.4		9.5		
	810 KRAK	8 S		0945.4		0945.4		840.0		
	3000 POTS	4 S/F		0956.7		1005.6		27.0		
	1470 POTS	4 S/F		0957.6		0959.2		14.0		
	6100 KISV			0958.0		1001		30.0		
	15000 KISV			0958.0		1001		30.0		
	6100 KISV			0958.0		0959		90.0		
	15000 KISV	21 GRF		0958.0		1004.5	30.0	75.0		
	6100 KISV	21 GRF		0958.0		1003.5	14.0	40.0		
	2650 DWIN	2 S/F		0958.0		1011	10.0	20.0	16.0	
	15000 KISV			0958.0		0959		28.0		
	9500 POTS	4 S/F		0958.5		1003.5	13.0	107.0		
	113 POTS	41 F		1021.8		1024.4	29.7	700.0	20.0	III
	1470 POTS	3 S		1024.4		1024.6	.6	6.2		
	113 POTS	4 S/F		1102.0		1102.0	3.3	175.0	30.0	III
	234 POTS	42 SER		1102.2		1112.9	12.0	800.0	7.0	III
	810 KRAK	8 S		1107.5		1107.5	.2	44.0		
	5200 BERN	3 S		1110.5		1112.6	68.0	166.0		ONLY PAPER REC
	3200 BERN	4 S/F		1110.5		1112.6	44.0	155.0		ONLY PAPER REC
	808 ONDR	45 C		1111.0			19.0	80.00	30.0	
	2650 DWIN	45 C		1111.0		1113	15.0	23.0	80.0	
	7000 SAOP	46 C		1111.5		1113.3	9.9	357.0	178.0	3A
	810 KRAK			1111.6		1117.8		70.0		
	810 KRAK	45 C		1111.6		1111.8	12.1	300.0	22.0	
	536 ONDR	45 C		1112.0		1113.6	3.5	351.0	72.0	
	11800 BERN	45 C		1112.2		1113.6	68.0	403.0		
	19600 BERN	45 C		1112.2		1113.6	68.0	270.0		
	35000 BERN	45 C		1112.2		1113.6	68.0	215.0		
	8400 BERN	45 C		1112.2		1113.0	68.0	338.0		
	15000 KISV			1112.5		1118.5		120.0		
	15000 KISV			1112.5		1112.9		320.0		
	204 IZMI	5 S		1112.5		1113.0	.8	1200.0	400.0	
	15000 KISV	46 C		1112.5		1113.5	13.0	360.0		
	1470 POTS	4 S/F		1114.5		1114.8	33.0	281.0		
	9500 POTS	4 S/F		1115.0		1115.0	13.0	380.0		
	3000 POTS	4 S/F		1115.5		1112.5	17.0	197.0		
	6100 KISV			1117.0		1123		110.0		
	6100 KISV	45 C		1117.0		1118.8	15.0	170.0		
	7000 SAOP	29 PBI		1141.4		1141.4	59.6	51.0	25.0	
	9500 POTS	4 S/F		1146.0		1154.3	18.0	83.0		
	3000 POTS	4 S/F		1148.6		1154.3	9.9	11.0		
7000 SAOP	28 PRE		1151.4			2.4	10.0	5.0		
6100 KISV	42 SER		1153.0		1154.2	6.0	30.0			
15000 KISV	45 C		1153.0		1154.3	10.0	70.0			
6100 KISV			1153.0		1157.3		15.0			
15000 KISV			1153.0		1157.2		30.0			
9400 HUAN	C		1153.1		1154.2	4.9	82.6	21.0	0	
1470 POTS	4 S/F		1153.8		1154.4	4.2	12.0			
7000 SAOP	4 S/F		1153.9		1154.3	1.4	67.0	33.0	7R	
7000 SAOP	29 PBI		1155.2		1157.7	7.8	37.0	18.0		
9400 HUAN	S		1215.6		1216.2	2.0	29.7	13.2	0	
9500 POTS	4 S/F		1215.8		1216.4	2.2	28.0			
15000 KISV	1 S		1249.5		1250	2.5	24.0			
7000 SAOP	28 PRE		1251.6			58.0	17.0	8.0		
15000 KISV			1348.0		1358		370.0			
15000 KISV	45 C		1348.0		1353.5	10.0	930.0			
1470 POTS	4 S/F		1348.5		1354.1	19.0	202.0			
3000 POTS	4 S/F		1348.5		1354.7	16.0	243.0			
5200 BERN	4 S/F		1348.7		1350.00	15.0	195.00		ONLY PAPER REC	
3200 BERN	4 S/F		1348.7		1350.00	15.0	163.00		ONLY PAPER REC	
8400 BERN	46 C		1349.0		1353.5	10.0	305.0			
19600 BERN	47 GB		1349.0		1353.5	10.0	1020.0			
11800 BERN	47 GB		1349.0		1353.5	10.0	640.0			
35000 BERN	47 GB		1349.0		1353.5	10.0	890.0			
9500 POTS	4 S/F		1349.0		1353.6	11.0	465.0			
6100 KISV	45 C		1349.0		1350.7	11.0	200.0			
536 ONDR	46 C		1349.0		1353.5	6.0	332.0	145.0		
6100 KISV			1349.0		1353.7		160.0			
228 HARS	45 C		1349.5		1351.5	2.0	780.0	230.0		
7000 SAOP	46 C		1349.7		1350.7	9.8	357.0	178.0	9R	
2800 OTTA	46F C		1349.7		1353.5	8.3	330.0	125.0		
808 ONDR	45 C		1349.8			11.0	80.00	59.0		
2650 DWIN	45 C		1350.0			8.0	325.0	150.0		
234 POTS	4 S/F		1350.1		1350.2	.7	650.0	150.0	III	
113 POTS	8 S		1350.3		1350.5	.3	100.0	30.0	III	
2800 OTTA	29 PBI		1358.0		1358	12.0	13.2			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
			26	127 TORN	8 S	1418.5	1419.0		
	2800 OTTA	21 GRF	1430.0	1547	240.0	25.4	10.0		
	7000 SAOP	46 C	1529.2	1538.8	15.6	27.0	13.0	11R	
	2800 OTTA	40 F	1530.7	1536	14.0	13.2			
	7000 SAOP	20 GRF	1612.6	1615.0	11.0	19.0	9.0	0	
	9400 HUAN	S	1614.2	1615.2	2.6	14.6	6.6	0	
	2800 OTTA	3 S	1643.9	1644.3	5.0	16.0	6.0		
	7000 SAOP	3 S	1644.0	1644.4	1.1	24.0	12.0	13L	
	7000 SAOP	29 PBI	1645.1	1645.1	1.1	10.0	5.0		
	7000 SAOP	27 RF	1805.4		3.8	8.0	4.0	0	
	7000 SAOP	4 S/F	1810.0	1811.2	2.2	50.0	25.0	0	
	2650 DWIN	2 S/F	1810.0	1811	3.0	60.0	20.0		
	2800 OTTA	3 S	1810.0	1811	3.5	75.0	18.6		
	9400 HUAN	S	1810.4	1811.2	1.5	38.4	16.5	R	
	9400 HUAN	S	1817.5	1818.7	2.8	27.4	12.1	0	
	2800 OTTA	3 S	1817.5	1819	5.0	14.8	5.0		
	7000 SAOP	45 C	1817.6	1819.1	2.5	34.0	17.0	22R	
	7000 SAOP	29 PBI	1820.1	1820.5	3.0	10.0	5.0		
	2800 OTTA	21 GRF	1845.0	1920	145.0	10.6			
	7000 SAOP	27 RF	1845.3		14.3	10.0	5.0	0	
	7000 SAOP	3 S	1911.0	1911.6	1.1	20.0	10.0	0	
	2800 OTTA	4 S/F	1911.0	1911.8	2.0	10.6	5.0		
	7000 SAOP	29 PBI	1912.1	1912.5	.9	10.0	5.0		
	7000 SAOP	4 S/F	1915.5	1919.4	5.7	44.0	22.0	7R	
	9400 HUAN	S	1916.2	1919.8	5.4	47.5	20.0	R	
	2800 OTTA	3 S	1918.9	1919	1.0	45.0	11.0		
	7000 SAOP	29 PBI	1921.2	1921.9	4.4	10.0	5.0		
	9400 HUAN	S	1932.3	1932.8	1.9	43.8	15.4	0	
	2800 OTTA	1 S	1932.3	1932.8	1.0	8.0	4.0		
	7000 SAOP	4 S/F	1932.4	1932.8	.6	27.0	13.0	0	
	7000 SAOP	29 PBI	1933.0	1933.0	.5	7.0	3.0		
	2800 OTTA	21 GRF	2120.0	2243	155.0	10.6	5.3		
	3750 TYKW	28 PRE	2120.0	2129	9.0	10.0	5.0		
	9400 TYKN	28 PRE	2123.0	2128.0	5.5	27.0	4.0	INTERFERENCE	
	2600 TYKW	47 GB	2124.0	2125	2.5	570.0	45.0	INTERFERENCE	
	1000 TYKW	45 C	2124.5	2125.8	2.5	94.0	6.0	INTERFERENCE	
	208 VORO	4 S/F	2128.0	2130	4.0	200.0D			
	9400 TYKW	45 C	2128.5	2131.2	8.5	345.0	110.0		
	200 HIRA	46 C	2128.6	2130.8	4.0	415.0	125.0	MR	
	17000 NOBE	45 C	2129.0	2129.6	4.5	380.0		R	
	2000 TYKW	45 C	2129.0	2131.9	6.0	85.0	35.0		
	1000 TYKW	45 C	2129.0	2129.6	5.0	110.0	10.0		
	3750 TYKW	45 C	2129.0	2130.1	8.0	160.0	65.0		
	2800 OTTA	4 S/F	2129.0	2131.9	8.0	133.0	53.2		
	500 HIRA	8 S	2129.1	2129.1	.4	140.0		WL	
	17000 NOBE	29 PBI	2133.5	2133.6	16.0	43.0		0	
	1000 TYKW	30 PBI	2134.0		206.0	4.0	2.0		
	2000 TYKW	30 PBI	2135.0		205.0	9.0	4.0		
	3750 TYKW	30 PBI	2137.0		228.0	19.0	10.0		
	9400 TYKW	30 PBI	2137.0		95.0	23.0	7.0		
	2800 OTTA	29 PBI	2137.0	2137	10.0	8.0	4.0		
	3750 TYKW	5 S	2156.0	2157.7U	10.0U	9.0U	3.0U		
	2800 OTTA	1 S	2157.0	2158	4.0	7.0	3.0		
	2800 OTTA	1 S	2203.4	2203.8	1.0	8.0			
	1000 TYKW	45 C	2203.4	2204.4	1.5	30.0	7.0		
	2000 TYKW	45 C	2203.4	2205.3	4.5	8.0	3.0		
	9400 TYKN	5 S	2218.0	2219.2	2.0	12.0	6.0		
	3750 TYKW	5 S	2218.0	2219.2	4.0	9.0	3.0		
	1000 TYKW	45 C	2243.2	2244.8	2.0	45.0	4.0		
	208 VORO	4 S/F	2244.0	2245	4.5	200.0D			
	9400 TYKW	45 C	2245.0	2246.1	5.0	32.0	6.0		
	3750 TYKW	5 S	2245.5U	2246.0	1.5U	10.0U	3.0U		
	2800 OTTA	3 S	2245.7	2246	1.0	40.0	10.0		
	17000 NOBE	3 S	2245.8	2246.2	3.5	113.0		R	
	3750 TYKW	45 C	2320.0	2328.1	15.0	22.0	6.0		
	9400 TYKW	45 C	2320.0	2328.0	20.0	12.0	3.0		
	1000 TYKW	42 SER	2320.5	2321.6	2.5	97.0	8.0		
	2000 TYKW	5 S	2320.5	2321.4	2.5	4.0	1.0		
	1000 TYKW	45 C	2323.0	2323.9	4.0	118.0	10.0		
	2000 TYKW	45 C	2323.0	2323.9	3.0	42.0	7.0		
	2695 PENT	45 C	2323.2	2323.9	2.5	21.0	7.0		
	606 LEAR	8 S	2323.5	2324.8	1.6	380			
	1415 LEAR	8 S	2323.6	2323.8	.2	37			
	2000 TYKW	30 PBI	2326.0		10.0	2.0	1.0		
	1000 TYKW	45 C	2327.7	2327.8	1.0	20.0	4.0		
	2000 TYKW	45 C	2327.7	2328.3	1.5	22.0	5.0		
	2695 PENT	3 S	2327.8	2328.2	2.0	14.8	7.0		
	1415 LEAR	8 S	2327.8	2327.8	1.0	20			
	606 LEAR	47 GB	2327.8	2328.0	1.0	560			
	1000 TYKW	5 S	2330.7	2330.8	.5	45.0	5.0		
	2000 TYKW	8 S	2330.8	2330.9	.2	5.0	2.0		
	2000 TYKW	8 S	2331.9	2331.9	.1	14.0	3.0		
	3750 TYKW	29 PBI	2335.0		10.0	3.0	1.5		
	9400 TYKW	31 ABS	2340.0	0340	350.0	-25.0	-13.0		
	2000 TYKW	45 C	2348.0	2348.6	1.5	2.5	.7		

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} W m^{-2} Hz^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
26	9400 TYKW	5 S	2348.0	2348.6	7.0	13.0	4.0		
	3750 TYKW	5 S	2348.0	2348.4	2.0	11.0	5.0		
	1000 TYKW	5 S	2348.1	2348.3	.5	7.0	2.0		
	8800 LEAR	47 GB	2348.1	2348.3	.7	22			
	4995 LEAR	8 S	2348.1	2348.3	.9	20			
	606 LEAR	8 S	2348.1	2349.1	1.0	150			
	15400 LEAR	47 GB	2348.3	2349.1	.8	21			
	1000 TYKW	8 S	2349.0	2349.1	.2	79.0	15.0		
	3750 TYKW	29 PBI	2350.0		8.0	3.0	1.5		
9400 TYKW	5 S	2356.5	2357.1	1.5	9.0	3.0			
27	33 UPIC	43 NS	0405.6		716.3				
	29 UPIC	43 NS	0406.5		715.7				
	204 IZMI	44 NS	0600.0E		360.00	65.0			
	260 ONDR	44 NS	0622.0E		461.00	209.00	9.0		
	127 TORN	43 NS	0716.0	1305.4	524.0	330.0	3.0		V2
	245 SGMR	43 NS	0935.0	1112.5	505.00	180			
	200 HIRA	44 NS	1938.0E		0249	700.00	10.0	5.0	WR
	410 LEAR	43 NS	2316.0	0708.8	624.00	50			
	245 LEAR	43 NS	2316.0	0118.8	624.00	440			
	9400 TYKW	5 S	0014.4	0014.8	1.0	27.0	8.0		
	8800 PALE	8 S	0014.5	0014.6	.3	49			
	2695 LEAR	8 S	0019.0	0019.8	1.3	11			
	15400 LEAR	8 S	0019.8	0020.1	1.2	16			
	15400 LEAR	8 S	0026.3	0026.8	1.2	19			
	8800 LEAR	8 S	0026.3	0026.8	1.3	11			
	1000 TYKW	31 ABS	0100.0	0355	270.0	-5.0	-3.0		
	2000 TYKW	31 ABS	0100.0	0340	270.0	-7.0	-4.0		
	2000 TYKW	45 C	0103.0U	0108.0	12.0U	32.0U	5.0U		
	245 LEAR	8 S	0103.1	0103.3	.5	180			
	606 LEAR	8 S	0103.1	0103.5	1.4	23			
	410 LEAR	47 GB	0103.1	0103.3	.4	570			
	410 PALE	47 GB	0103.1	0103.3	.4	1199			
	1000 TYKW	45 C	0103.2	0104.2	1.3	200.0	25.0		
	1415 PALE	8 S	0103.3	0103.3	1.2	99			
	1415 LEAR	8 S	0103.3	0103.5	1.2	87			
	100 HIRA	41 F	0103.3	0103.6	6.1	32000.0			WL
	4995 LEAR	4 S/F	0106.3	0108.3	2.7	07			
	410 PALE	47 GB	0106.6	0108.0	2.9	1100			
	410 LEAR	4 S/F	0106.6	0106.8	2.9	320			
	500 HIRA	46 C	0106.6	0107.7	6.6	130.0	18.0		WL,WR
	1000 TYKW	28 PRE	0106.6	0107.0	1.0	36.0	8.0		
	1415 PALE	4 S/F	0106.8	0108.0	2.8	200			
	1415 LEAR	4 S/F	0106.8	0108.0	2.8	170			
	3750 TYKW	5 S	0107.0	0108.4	3.0	9.0	4.0		
	2695 LEAR	4 S/F	0107.5	0108.1	2.3	17			
	1000 TYKW	47 GB	0107.6	0108.0	2.4	1020.0	170.0		
	606 PALE	4 S/F	0107.6	0108.6	2.2	190			
	606 LEAR	8 S	0107.6	0108.6	2.0	230			
	2695 PENT	3 S	0107.7	0108.1	2.0	12.6	5.0		
	1000 TYKW	30 PBI	0110.0		5.0	8.0	3.0		
	1000 TYKW	5 S	0111.6	0111.9	.7	42.0	10.0		
	1000 TYKW	45 C	0113.7	0113.8	1.0	20.0	4.0		
	3750 TYKW	31 ABS	0125.0	0340	240.0	-12.0	-5.0		
	3750 TYKW	21 GRF	0215.0	0240 U	70.0	6.0U	3.0U		
	2000 TYKW	21 GRF	0220.0H	0245	70.0U	4.0	2.0U		
	4995 PALE	8 S	0220.6	0221.1	.2	18			
	3750 TYKW	5 S	0227.0U	0228.3	4.0U	11.0U	4.0U		
	4995 PALE	8 S	0227.8	0229.6	1.8	22			
	9400 TYKW	5 S	0242.0	0243.2	10.0	12.0	3.0		
	100 HIRA	46 C	0311.8	0313.7	6.0	13000.0	1300.0		0
	4995 MANI	3 S	0312.0	0313.0	2.8	29.5	9.8		
	606 MANI	47 GB	0312.3	0313.8	2.7	783.1	261.0		
	245 LEAR	47 GB	0312.5	0313.5	2.1	500			
	200 HIRA	46 C	0312.5	0313.5	3.0	1170.0	190.0		MR
	500 HIRA	6 S	0312.6	0313.7	2.3	2300.0	500.0		SR
	1415 MANI	1 S	0312.6	0313.3	2.4	7.9	2.6		
	410 PALE	47 GB	0312.8	0313.6	1.8	1300			
	606 LEAR	47 GB	0312.8	0314.1	2.2	940			
	410 LEAR	47 GB	0312.8	0313.6	1.8	1100			
	2695 MANI	1 S	0313.0	0313.3	2.0	9.6	3.2		
	1000 TYKW	5 S	0313.0	0314.1	2.0	15.0	4.0		
	2000 TYKW	5 S	0313.0	0313.6	2.0	21.0	4.0		
	3750 TYKW	5 S	0313.0	0313.6	3.0	9.0	3.0		
	606 PALE	47 GB	0313.1	0314.1	1.7	900			
	245 PALE	47 GB	0313.3	0313.5	.3	780			
	2950 GORK	23 GRF	0321.0	0632.8	374.00	52.0			
	3750 TYKW	5 S	0343.0	0351.7		15.0	5.0		
	9400 TYKW	5 S	0345.0	0351	13.0	12.0	4.0		
	3750 TYKW	30 PBI	0358.0		25.0	5.0	2.5		
	17000 NOBE	28 PRE	0358.1	0412.4	14.3	22.0			R
	650 GORK	23 GRF	0358.3		482.00	8.0			
	9400 TYKW	28 PRE	0400.0	0407 U	14.0	12.0U	4.0U		
	2000 TYKW	45 C	0401.0U	0407.3U	11.0U	6.0U	1.0U		
	228 HARS	45 C	0403.0	0405.5	5.0	955.0	165.0		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
27	606 LEAR	4 S/F	0404.8	0405.3	2.8	24			
	1415 LEAR	4 S/F	0405.0	0405.8	3.1	11			
	1000 TYKW	45 C	0405.0	0407.3	4.0	22.0	2.0		
	410 LEAR	4 S/F	0405.1	0407.1	2.7	73			
	245 LEAR	47 GB	0405.1	0405.6	1.4	840			
	410 PALE	8 S	0405.5	0406.3	1.0	110			
	245 PALE	47 GB	0405.5	0405.6	1.8	960			
	15400 LEAR	4 S/F	0407.1	0408.6	254.2	15			
	8800 LEAR	8 S	0407.1	0407.1	.2	17			
	15000 KISV	45 C	0412.0	0414.3	12.0	120.0			
	15000 KISV			0412.0	0413		15.0		
	15400 LEAR	4 S/F	0412.1	0414.3	4.7	110			
	17000 NOBE	7 C	0412.4	0414.3	2.2	217.0			R
	6100 KISV	42 SER	0413.0	0414.3	7.0	13.0			
	6100 KISV			0413.0	0418		7.0		
	8800 MANI	3 S	0413.8	0414.3	2.5	98.6	32.7		
	8800 LEAR	4 S/F	0413.8	0414.3	2.2	230			
	8800 ATHN	8 S	0414.0	0414.5	1.1	98			
	9400 TYKW	5 S	0414.0	0414.2	2.0	110.0	25.0		
	15400 PALE	4 S/F	0414.0	0414.1	2.3	220			
	35000 WAGO	5 S	0414.0	0414	2.0	45.0			
	17000 NOBE	29 PBI	0414.6	0414.6	12.0	76.0			R
	9400 TYKW	29 PBI	0416.0	0416.0	8.0	12.0	4.0		
	4995 MANI	3 S	0416.5	0417.6	2.5	14.8	4.9		
	1415 MANI	3 S	0416.7	0417.7	2.3	11.4	3.8		
	950 GORK	3 S	0416.7	0417.8	2.8	18.0			
	2950 GORK	1 S	0416.8	0417.7	2.0	9.6	4.0		
	2695 MANI	3 S	0416.9	0417.6	1.6	12.8	4.3		
	600 MANI	3 S	0417.0	0417.7	1.3	42.8	14.3		
	228 HARS	45 C	0417.0	0417.5	3.5	1500.0	235.0		
	1000 TYKW	5 S	0417.0	0418.0	3.0	19.0	6.0		
	2000 TYKW	45 C	0417.0	0417.9	2.5	9.0	2.0		
	3750 TYKW	5 S	0417.0	0417.9	3.0	11.0	3.0		
	650 GORK	4 S/F	0417.2	0417.8	1.4	39.0	12.0		
	606 PALE	8 S	0417.6	0417.8	.5	86			
	245 PALE	47 GB	0417.6	0417.8	1.5	1399			
	9100 GORK	21 GRF	0418.0E		462.00	64.0			
	2000 TYKW	5 S	0421.5	0421.7	1.50	4.0	1.50		
	410 LEAR	4 S/F	0428.6	0430.1	2.2	180			
	245 LEAR	47 GB	0428.8	0430.1	2.5	950			
	15000 KISV	20 GRF	0435.0	0436.5	4.0	12.0			
	2000 TYKW	21 GRF	0435.0	0442	30.0	6.0	2.0		
	3750 TYKW	28 PRE	0435.0	0440	5.0	4.0	2.0		
	6100 KISV	46 C	0436.0	0441.3	12.0	20.0			
	6100 KISV			0436.0	0438.5		9.0		
	6100 KISV			0436.0	0443.5		20.0		
	2950 GORK	2 S/F	0439.0	0443.4	6.0	9.0			
	9400 TYKW	45 C	0439.0	0443.4	10.0	32.0	9.0		
	3750 TYKW	45 C	0440.0	0443.6	.6	20.0	8.0		
	9100 GORK			0440.5	0446.4		13.7		
9100 GORK	45 C	0440.5	0441.2	3.8	23.0				
2695 LEAR	47 GB	0440.8	0441.1	.2	15				
4995 LEAR	47 GB	0440.8	0441.3	.5	17				
8800 LEAR	47 GB	0441.0	0441.3	8.0	41				
15400 LEAR	47 GB	0441.6	0443.6	4.7	23				
950 GORK	1 S	0442.0	0443.5	2.8	4.0	2.0			
410 LEAR	8 S	0445.6	0446.1	1.0	36				
606 LEAR	8 S	0445.6	0446.1	.2	15				
3750 TYKW	30 PBI	0446.0		20.0	6.0	3.0			
9400 TYKW	30 PBI	0449.0		20.0	8.0	4.0			
8800 ATHN	4 S/F	0455.0	0457.1	5.1	330				
1000 TYKW	45 C	0456.0	0457.1	3.0	23.0	3.0			
1415 MANI	3 S	0456.0	0456.5	1.7	17.6	5.9			
6100 KISV	4 S/F	0456.0	0457	3.0	76.0				
8800 MANI	8 S	0456.3	0456.7	.7	266.2	88.7			
4995 MANI	3 S	0456.3	0456.6	1.2	100.3	33.4			
2695 MANI	3 S	0456.3	0456.6	.8	22.5	7.5			
606 MANI	3 S	0456.3	0457.3	2.7	18.2	6.1			
2950 GORK	1 S	0456.4	0456.9	2.9	20.0	10.0			
950 GORK	2 S/F	0456.5	0457.1	1.3	18.0				
228 HARS	45 C	0456.5	0458.0	3.5	610.0	165.0			
245 LEAR	47 GB	0456.5	0458.1	3.6	720				
4995 LEAR	4 S/F	0456.5	0457.0	2.1	74				
3750 TYKW	5 S	0456.5	0457.0	2.0	31.0	7.0			
8800 LEAR	4 S/F	0456.5	0457.0	2.6	300				
2695 LEAR	8 S	0456.5	0457.0	1.1	24				
15400 LEAR	8 S	0456.6	0457.0	1.7	250				
8400 BERN	8 S	0456.7	0457.0	.3	250.0				
9400 TYKW	5 S	0456.7	0457.1	3.5	270.0	25.0			
2000 TYKW	5 S	0456.7	0457.0	1.0	23.0	4.0			
9100 GORK	3 S	0456.8	0456.9	1.0	321.00				
410 LEAR	4 S/F	0456.8	0458.3	2.3	390				
1415 LEAR	8 S	0456.8	0457.0	1.2	25				
606 LEAR	8 S	0456.8	0457.8	1.5	37				
19600 BERN	8 S	0456.8	0457.0	.2	140.0				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
27	11800 BERN	8 S	0456.8	0457.0	.2	310.0			
	17000 NOBE	7 C	0456.8	0457.0	2.0	190.0			R
	15000 KISV	8 S	0456.8	0457	2.0	90.0			
	650 GORK		0456.8	0457.7		19.0			
	650 GORK	45 C	0456.8	0456.9	1.7	16.0			
	228 HARS	45 C	0514.5	0515.0	2.0	1500.0	235.0		
	3750 TYKW	5 S	0515.0	0515.7	1.0	20.0	4.0		
	2000 TYKW	8 S	0515.5	0515.6	.3	15.0	5.0		
	1000 TYKW	5 S	0515.5	0515.6	1.5	55.0	5.0		
	9400 TYKW	5 S	0515.5	0515.7	1.5	21.0	4.0		
	2695 LEAR	4 S/F	0515.5	0515.6	3.1	24			
	8800 LEAR	8 S	0515.5	0515.6	.1	29			
	6100 KISV	8 S	0515.5	0515.7	.5	21.0			
	4995 LEAR	8 S	0515.5	0515.6	.1	21			
	606 LEAR	4 S/F	0515.5	0518.5	3.1	170			
	1415 LEAR	4 S/F	0515.5	0520.3	5.0	98			
	245 LEAR	47 GB	0515.5	0515.6	4.8	2700			
	410 LEAR	4 S/F	0515.5	0515.6	3.1	119			
	1000 TYKW	45 C	0517.7	0517.9	1.0	31.0	7.0		
	1000 TYKW	5 S	0520.0	0520.3	1.0	12.0	3.0		
	1000 TYKW	45 C	0526.3	0526.9	1.0	10.0	3.0		
	1415 LEAR	8 S	0529.8	0530.3	2.0	110			
	9400 TYKW	5 S	0532.5	0532.8	.7	13.0	3.0		
	1415 LEAR	4 S/F	0537.1	0538.5	2.2	29			
	1000 TYKW	45 C	0542.0	0550.8	9.0	7.0	1.5		
	245 LEAR	8 S	0551.3	0551.6	.7	77			
	410 LEAR	8 S	0551.3	0551.6	.5	62			
	1000 TYKW	45 C	0552.2	0553.1	1.5	25.0	6.0		
	1000 TYKW	45 C	0607.3	0607.8	1.5	2.0	.5		
	3750 TYKW	28 PRE	0610.0	0618.0	18.0	18.0	4.0		
	2000 TYKW	28 PRE	0610.0	0618.0	18.0	10.0	1.5		
	100 HIRA	46 C	0614.6	0618	6.0	60000.00	3600.00		
	9400 TYKW	28 PRE	0615.0	0617.9	14.0	55.0	7.0		
	1000 TYKW	45 C	0616.0	0616.4	1.0	11.0	2.5		
	410 LEAR	4 S/F	0616.1	0618.0	3.2	390			
	245 LEAR	47 GB	0616.3	0617.8	2.8	3200			
	113 POTS	4 S/F	0617.0	0618.1	1.8	10000.0	300.0		III
	1000 TYKW	45 C	0617.0	0618.0	1.5	38.0	4.0		
	606 LEAR	4 S/F	0617.1	0617.8	5.5	80			
	127 TORN	46 C	0617.4	0618.3	4.2	26500.0	370.0		
	234 POTS	4 S/F	0617.5	0617.6	.9	3400.0	350.0		III
	4995 LEAR	8 S	0617.6	0618.0	.5	24			
	11800 BERN	8 S	0617.7	0617.8	.2	50.0			
	8400 BERN	8 S	0617.7	0617.8	.2	47.0			
	2695 LEAR	8 S	0617.8	0618.0	.3	10			
	8800 LEAR	8 S	0617.8	0618.0	2.0	63			
	15400 LEAR	8 S	0617.8	0618.0	.3	23			
	6100 KISV	8 S	0617.8	0618	.4	24.0			
	15000 KISV	8 S	0617.8	0618	.4	22.0			
	1415 ATHN	4 S/F	0618.0	0618.1	4.80	31			
8800 ATHN	4 S/F	0618.0	0618.1	8.6	62				
1000 TYKW	8 S	0622.3	0622.4	.2	33.0	5.0			
3750 TYKW	47 GB	0628.0	0631.3	22.0	570.0	65.0			
2000 TYKW	45 C	0628.0	0631.3	20.0	240.0	40.0			
4995 MANI	47 GB	0628.0	0630.7	22.0	899.8	300.0			
6100 KISV		0628.0	0644.3		50.0				
6100 KISV		0628.0	0647		40.0				
6100 KISV		0628.0	0635		155.0				
6100 KISV	46 C	0628.0	0631.2	26.0	470.0				
2650 DWIN	45 C	0628.0	0631	18.0	330.0				
8800 MANI	47 GB	0628.2	0630.8	24.3	705.0	235.0			
1415 MANI	4 S/F	0628.2	0630.8	19.8	121.4	40.5			
2695 MANI	4 S/F	0628.2	0630.8	19.8	321.0	107.0			
606 MANI	4 S/F	0628.2	0630.0	23.8	391.5	130.5			
2950 GORK	40 S/F	0628.3	0631.2	4.5	573.0				
9100 GORK	46 C	0628.7	0631.1	10.0	970.0				
9100 GORK		0628.7	0634.8		282.0				
650 GORK	46 C	0628.8	0633.6	25.5	178.0				
650 GORK		0628.8	0644.1		138.0				
650 GORK		0628.8	0635.0		186.0				
2695 ATHN	4 S/F	0628.8	0631.3	22.50	320				
2695 LEAR	47 GB	0628.8	0631.3	17.2	370				
8800 ATHN	47 GB	0628.8	0631.0		700				
8800 ATHN	47 GB	0628.8	0631.0	24.5	700				
2695 ATHN	8 S	0628.8	0631.30		320				
4995 LEAR	47 GB	0628.8	0631.1	17.2	920				
11800 BERN	47 GB	0629.0	0631.1	20.0	1000.0				
3100 CRIM	45 GB	0629.0	0632.0	19.0	341.0	113.0			
3000 IZMI		0629.0	0644.0		70.0				
15000 KISV		0629.0	0637.3		190.0				
15000 KISV		0629.0	0635		200.0				
3100 CRIM		0629.0	0636.0		123.0				
3000 IZMI	45 C	0629.0	0631.2	19.0	400.0	100.0			
3000 IZMI		0629.0	0635.0		128.0				
15000 KISV	46 C	0629.0	0631.3	21.0	890.0				

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
27	3100 CRIM		0629.0	0645.0			33.0		
	8400 BERN	47 GB	0629.0	0631.1			887.0		
	9400 TYKW	47 GB	0629.0	0631.2	20.0		960.0	110.0	
	8800 LEAR	47 GB	0629.1	0631.1	16.9		1100		
	950 GORK	46 C	0629.5	0636.1	21.0		77.0		
	950 GORK		0629.5	0644.4			70.0		
	17000 NOBE	45 C	0629.6	0631.2	25.0		771.0		R
	536 ONDR	46 C	0630.0	0630.6	25.0		162.0	30.0	
	808 ONDR	46 C	0630.0	0631.3	17.0		48.0	23.0	
	19600 BERN	47 GB	0630.0	0631.1	20.0		854.0		
	35000 BERN	47 GB	0630.0U	0631.1	20.0U		600.0U		
	1000 TYKW	45 C	0630.0	0631.3	16.0		100.0	25.0	
	15400 LEAR	47 GB	0630.3	0631.1	15.7		890		
	606 LEAR	47 GR	0630.5	0636.1	15.5		380		
	1415 LEAR	47 GR	0630.5	0631.3	15.5		200		
	500 HIRA	46 C	0630.5	0641.6	33.0		300.0	40.0	
	500 HIRA		0630.5	0631.0			210.0		ML
	500 HIRA		0630.5	0633.7			140.0		ML
	500 HIRA		0630.5	0636.4			140.0		ML
	1415 ATHN	8 S	0630.6	0631.3U	7.00		160		
	1415 ATHN	4 S/F	0630.6	0631.3	17.00		160		
	410 LEAR	47 GB	0630.6	0631.1	15.4		650		
	2950 GORK	4 S/F	0633.0	0634.8	6.8		113.0		
	234 POTS	8 S	0635.7	0635.7	.1		1000.0	300.0	
	2950 GORK	3 S	0643.4	0644.0	2.1		40.0	20.0	
	1000 TYKW	30 PBI	0646.0		100.0U		3.0U	1.5U	
	2000 TYKW	29 PBI	0648.0		100.0U		5.0U	3.0U	
	9400 TYKW	29 PBI	0650.0		100.0U		10.0U	3.0U	
	3750 TYKW	29 PBI	0650.0		100.0U		8.0U	4.0U	INTERFERENCE
	113 POTS	42 SER	0656.4		13.0		320.0	4.0	
	1415 LEAR	4 S/F	0671.8		570.6		38		III
	9100 GORK	1 S	0709.7	0710.3	2.7		19.0		
	9500 POTS	3 S	0710.0	0710.5	3.5		19.0		
	15000 KISV	1 S	0710.0	0710.5	2.0		11.0		
	9500 POTS	3 S	0719.0	0719.1	.4		19.0		
	15000 KISV	3 S	0722.0	0722.6	2.0		26.0		
	17000 NOBE	1 S	0722.1	0722.4	1.0		49.0		R
	15400 LEAR	8 S	0722.3	0722.5	.8		49		
	8800 LEAR	8 S	0722.5	0722.6	.5		15		
	536 ONDR	8 S	0731.3	0731.3	.2		46.0		
	3100 CRIM	26 FAL	0750.0	0900.0			10.0		
	1470 POTS	4 S/F	0750.5	0751.4	16.0		106.0		
	113 POTS	41 F	0754.2	0804.1	11.0		1100.0	20.0	III
	1000 TYKW	45 C	0754.7	0755.2	1.5U		10.0U	2.5U	
	234 POTS	41 F	0802.0	0804	5.2		850.0	6.0	III
	1000 TYKW	5 S	0826.3	0826.5	1.0		6.0	1.5	
	430 KRAK	8 S	0833.1	0833.3	.4		90.0		
	113 POTS	4 S/F	0842.6	0843.7	11.8		1250.0	25.0	III
	430 KRAK	8 S	0846.9	0846.9	.2		40.0		
	430 KRAK	8 S	0910.5	0910.5	.2		55.0		
430 KRAK	8 S	1022.5	1022.5	.2		27.0			
2950 GORK	20 GRF	1033.2	1039.3	13.0		6.0	3.0		
808 ONDR	45 C	1035.0	1040	6.5		5.5	19.0		
113 POTS	42 SER	1054.7	1100.7	6.4		200.0	3.0	III	
808 ONDR	42 SER	1057.3	1101.3	4.0		25.0			
2800 OTTA	21 GRF	1100.0		47.0		20.0			
536 ONDR	42 SER	1103.0	1349	166.0		117.0			
810 KRAK	8 S	1103.2	1103.2	.2		24.0			
606 SGMR	8 S	1109.1	1109.6	.9		119			
810 KRAK	8 S	1109.5	1109.5	.2		35.0			
2950 GORK	21 GRF	1126.6		34.00					
3000 IZMI	7 C	1129.0	1136.0	16.0		215.0	113.0		
3000 IZMI		1129.0	1139.7			125.0	57.0		
11800 BERN	46 C	1132.0	1136.0	14.0		286.0			
8800 ATHN	47 GB	1133.3	1136.8	15.0		480			
1415 SGMR	47 GR	1133.8	1136.1	18.50		55			
5200 BERN	46 C	1134.0U	1136.0U	98.0U		230.0U		ONLY PAPER REC	
6100 KISV	45 C	1134.0	1136.3	11.0		210.0			
6100 KISV		1134.0	1139.7			90.0			
1470 POTS	4 S/F	1134.0	1140.3	21.0		122.0			
3000 POTS	4 S/F	1134.0	1136.4	21.0		138.0			
3200 BERN	46 C	1134.0U	1136.0	98.0U		144.0		ONLY PAPER REC	
2695 SGMR	47 GB	1134.0	1136.3	18.30		130			
8400 BERN	46 C	1134.0	1136.1	14.0		335.0			
2950 GORK	46 C	1134.2	1136.2	8.8		129.0			
2950 GORK		1134.2	1139.5			93.0			
4995 SGMR	47 GB	1134.3	1136.3	15.30		360			
410 SGMR	47 GB	1134.3	1135.8	9.20		89			
9100 GORK	46 C	1134.5	1136.1	7.0		356.0			
9100 GORK		1134.5	1139.8			242.0			
2800 OTTA	45 C	1134.5	1136.5	8.5		128.0	42.4		
650 GORK	46 C	1134.7	1139.4U	8.7		80.0U			
650 GORK		1134.7	1140.2U			83.0			
8800 SGMR	47 GB	1134.8	1136.1	14.00		400			
2695 ATHN	47 GB	1134.8	1137.1	12.80		130			

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} W_m^{-2} Hz^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
27	1415 ATHN	47 GB	1134.8	1140.6	12.80	150			
	9500 POTS	4 S/F	1134.8	1136.1	18.0	291.0			
	430 KRAK	47 GB	1134.9	1136.9	9.2	490.00	28.0		
	810 KRAK	45 C	1134.9	1139.9	8.8	180.0	11.0		
	430 KRAK		1134.9	1139.5U		490.00			
	15000 KISV	45 C	1135.0	1136.3	13.0	290.0			
	15000 KISV		1135.0	1140		250.0			
	2650 DWIN	2 S/F	1135.0	1141	10.0	120.0	40.0		
	35000 BERN	45 C	1135.0	1136.6U	7.0U	123.0U			
	19600 BERN	46 C	1135.0	1136.1	8.0U	137.0			
	245 SGMR	47 GB	1135.0	1135.8	7.8	220			
	4995 ATHN	47 GB	1135.1	1136.8	12.50	390			
	15400 SGMR	47 GB	1135.1	1136.1	11.90	200			
	234 POTS	42 SER	1135.3	1135.9	3.2	675.0	5.0		
	536 ONDR	45 C	1135.5	1138.5	8.5	176.0	32.0		
	950 GORK	46 C	1135.5	1136.6	6.1	17.0			
	950 GORK		1135.5	1138.8		48.0			
	606 SGMR	47 GB	1135.6	1136.8	12.50	44			
	2800 OTTA	31A ABS	1147.0	1213	43.0	-16.0	-10.0		
	810 KRAK		1154.8	1201.7		210.0			
	810 KRAK	42 SER	1154.8	1155.2	8.6	190.0			
	1470 POTS	42 SER	1156.8	1201.4	5.0	13.0			
	1470 POTS	27 RF	1217.0	1305	100.0	3.2			
	9500 POTS	27 RF	1220.0	1246	85.0	22.0			
	2695 SGMR	4 S/F	1220.0	1224.8	10.00	18			
	4995 SGMR	4 S/F	1220.3	1225.0	16.70	24			
	1415 SGMR	4 S/F	1221.0	1225.8	14.00	13			
	8800 SGMR	4 S/F	1221.6	1227.5	15.40	19			
	2800 OTTA	1 S	1222.2	1222.6	1.0	4.8	2.4		
	7000 SAOP	24 R	1222.4			25.0	12.0		
	2800 OTTA	1 S	1224.0	1225	3.0	7.0	3.2		
	606 SGMR	8 S	1225.0	1225.6	1.3	25			
	113 POTS	42 SER	1230.7	1311.8	42.0	270.0	1.0	III	
	2800 OTTA	21 GRF	1235.0	1256	160.0	14.6	7.3		
	8800 ATHN	4 S/F	1308.8	1311.6	5.5	46			
	7000 SAOP	28 PRE	1309.5		1.8	6.0	3.0		
	410 SGMR	47 GB	1309.8	1311.6	6.20	1100			
	4995 ATHN	4 S/F	1310.0	1311.6	3.00	17			
	245 SGMR	47 GB	1311.0	1311.8	3.8	990			
	6100 KISV	1 S	1311.0	1311.7		14.0			
	4995 SGMR	8 S	1311.1	1311.6	2.00	21			
	1415 SGMR	8 S	1311.1	1311.8	1.90	13			
	8800 SGMR	8 S	1311.1	1311.6	2.00	44			
	1470 POTS	3 S	1311.2	1311.9	1.9	9.0			
	7000 SAOP	3 S	1311.3	1311.6	.6	3.7	1.8		8R
	606 SGMR	8 S	1311.3	1311.6	1.00	18			
	2695 SGMR	8 S	1311.3	1311.6	1.20	06			
	2695 ATHN	8 S	1311.3	1311.6	2.00	06			
	127 TORN	8 S	1311.4	1311.9	1.0	1400.0	700.0		
	234 POTS	4 S/F	1311.4	1311.8	.8	850.0	65.0		III
1415 ATHN	8 S	1311.5	1312.0	1.80	11				
2800 OTTA	1 S	1311.5	1311.9	1.0	3.2	1.6			
7000 SAOP	12 PBI	1311.8	1311.8	2.9	2.9	.6			
1470 POTS	45 C	1348.5	1350.3	3.7	27.0				
606 SGMR	47 GB	1348.6	1350.1	4.50	520				
1415 SGMR	4 S/F	1348.6	1350.3	5.20	72				
2695 SGMR	4 S/F	1348.6	1349.1	3.90	07				
2800 OTTA	2 S/F	1349.0	1349.2	1.5	5.4				
410 SGMR	8 S	1349.1	1349.8	.9	260				
9500 POTS	1 S	1349.4	1349.8	3.1	5.7				
808 ONDR	42 SER	1350.7	1351.8	3.5	98.00				
9500 POTS	1 S	1352.3	1355.5	4.2	9.5				
1470 POTS	1 S	1353.0	1353.0	1.5	3.3				
113 POTS	41 F	1451.3	1456.2	5.0	130.0	1.0		III	
228 HARS	45 C	1453.0	1453.5	4.5	1030.0	290.0			
234 POTS	4 S/F	1454.0	1454.2	2.3	3000.0	20.0		III	
7000 SAOP	20 GRF	1454.6	1455.4	2.7	.9	.4		0	
2800 OTTA	1 S	1544.0	1646	10.0	5.8	2.0			
11800 BERN	3 S	1626.1	1627.3	2.00	30.0				
19600 BERN	3 S	1626.1	1627.3	2.00	40.0				
5200 BERN	3 S	1646.2	1647.7	4.00	17.0			ONLY PAPER REC	
8400 BERN	3 S	1646.2	1647.7	4.00	18.0			ONLY PAPER REC	
2800 OTTA	3 S	1646.7	1648	3.7	13.4	5.0			
7000 SAOP	3 S	1646.7	1648.0	1.8	27.0	13.0		49R	
7000 SAOP	29 PBI	1648.5	1653.4	8.7	13.0	6.0			
2800 OTTA	29 PBI	1650.0	1650	20.0	5.4	2.6			
7000 SAOP	46 C	1722.6		8.7					
410 SGMR	49 GB	1722.8	1724.5	15.80	3000				
1415 SGMR	49 GB	1722.8	1725.0	19.30	300				
4995 SGMR	49 GB	1723.0	1725.1	15.10	1100				
11800 BERN	47 GB	1723.0	1724.2	8.0	1380.0				
5200 BERN	47 GB	1723.0	1725.0	11.00	630.0U			ONLY PAPER REC	
19600 BERN	47 GB	1723.0	1724.2	8.0	625.0				
228 HARS	45 C	1723.0	1724.0	3.5	1500.0	350.0			
2650 DWIN	45 C	1723.0	1725	10.0	360.0	140.0			

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
27	2800 OTTA	46F C	1723.0	1725	9.0	395.0	125.0			
	3200 BERN	47 GB	1723.0	1725.0	11.00	660.00			ONLY PAPER REC	
	8400 BERN	47 GB	1723.0	1724.7	9.0	1284.0				
	606 SGMR	49 GB	1723.1	1724.8	17.90	760				
	2695 SGMR	49 GB	1723.3	1725.0	17.50	420				
	8800 SGMR	49 GB	1723.3	1724.5	12.70	1800				
	15400 SGMR	49 GB	1723.5	1724.3	12.10	1000				
	245 SGMR	49 GB	1723.8	1725.0	10.5	3100				
	9400 HUAN	C	1725.8	1726.3E	3.90	440.5	211.1			R
	1415 PALE	47 GB	1727.8	1725.0	2.8	290				
	245 PALE	47 GB	1727.8	1724.6	2.8	4000				
	15400 PALE	47 GB	1727.8	1724.3	1.5	920				
	2695 PALE	47 GB	1727.8	1725.0	2.8	400				
	606 PALE	47 GB	1727.8	1724.8	1.2	1100				
	8800 PALE	47 GB	1727.8	1724.3	5.5	1900				
	4995 PALE	47 GB	1727.8	1724.8	3.7	970				
	410 PALE	47 GB	1727.8	1724.3	2.8	3000				
	9400 HUAN	29 PRI	1729.7	1729.7	25.0	36.7	9.4		R	
	7000 SAOP	29 PBI	1731.2	1731.2	8.4	23.0	11.0			
	2800 OTTA	29 PRI	1732.0	1732	10.0	16.0	5.4			
	7000 SAOP	4 S	1814.6	1815.6	2.3	16.0	8.0		10L	
	2800 OTTA	20 GRF	1815.0	1950	150.0	8.2	4.1			
	9400 TYKW	5 S	2108.0	2108.5	2.0	25.0	10.0			
	8800 PALE	8 S	2138.0	2139.1	1.3	20				
	3750 TYKW	21 GRF	2200.0	2250	190.0	8.0	4.0			
	2000 TYKW	21 GRF	2200.0	2250	190.0	4.0	2.0			
	9400 TYKW	21 GRF	2200.0	2250	190.0	12.0	6.0			
	1000 TYKW	21 GRF	2200.0	2250	190.0	2.0	1.0			
	245 PALE	47 GB	2209.8	2210.0	4.0	300				
	2800 OTTA	1 S	2210.0	2224	10.0	4.8	3.2			
	410 PALE	47 GB	2210.5	2211.1	5.1	260				
	606 PALE	47 GB	2211.0	2211.6	3.3	48				
	3750 TYKW		2211.0	2215.3		10.0				
	2000 TYKW	45 C	2211.0	2215.3	7.0	4.0	2.0			
	3750 TYKW	45 C	2211.0	2211.5	7.0	10.0	3.5			
	8800 PALE	47 GB	2211.1	2211.8	.9	20				
	9400 TYKW	5 S	2211.3	2211.7	1.0	12.0	4.0			
	3750 TYKW	45 C	2222.0	2228.3	13.0	18.0	3.0			
	2800 OTTA	4 S/F	2222.0	2228	12.0	12.2	4.4			
	2000 TYKW	45 C	2224.0	2228.4	6.0	8.0	3.5			
	1000 TYKW	45 C	2224.0	2226.4	6.0	4.0	.7			
	3750 TYKW	20 GRF	2333.0	2343	35.0	3.5	1.5			
	28	200 GORK	44 NS	0415.0E		483.00	5.0			
		100 GORK	44 NS	0417.0E		481.00	15.0			
		260 QNDR	44 NS	0554.0E	0649.5	488.00	135.0	3.0		
127 TORN		44 NS	0600.0E		540.00		2.0			
33 UPIC		43 NS	0642.5	1332	426.0				V1, DISTURBED	
29 UPIC		43 NS	0643.1		425.4					
245 LEAR		43 NS	2316.0	0630.3	624.00	180				
3750 TYKW		21 GRF	0013.0	0031	45.0	5.0	3.0			
3750 TYKW		5 S	0019.0	0019.9	2.0	2.0	.7			
9400 TYKW		5 S	0019.5	0019.9	1.0	5.0	1.5			
9400 TYKW		21 GRF	0025.0	0026.6	35.0	7.0	2.5			
3750 TYKW		5 S	0026.0	0027	4.0	3.0	1.0			
9400 TYKW		5 S	0030.3	0030.6	.7	4.0	1.5			
9400 TYKW		5 S	0040.0	0040.3	1.0	6.0	2.0			
3750 TYKW		5 S	0040.0	0040.3	1.0	2.0	.7			
9400 TYKW		5 S	0052.0	0053	5.0	7.0	3.0			
9400 TYKW		5 S	0126.0	0126.8	3.0	48.0	17.0			
9400 TYKW		30 PBI	0129.0		31.0	7.0	4.0			
3750 TYKW		45 C	0137.0	0138.4	3.0	97.0	14.0			
9400 TYKW		45 C	0138.0	0138.4	.3	27.0	7.0			
2000 TYKW		5 S	0138.0	0138.5	2.0	465.0	40.0			
9400 TYKW		45 C	0138.0	0138.4	3.0	27.0	7.0			
2695 PENT		47 GB	0138.0	0138.5	1.0	670.0				
100 HIRA		46 C	0138.0	0138.4	1.3	250.0	96.0		0	
500 HIRA		8 S	0138.0	0138.4	.6	18.0	12.0		0	
4995 MANI		3 S	0138.2	0138.5	1.3	47.5	15.8			
2695 MANI		8 S	0138.4	0138.5	.8	399.9	133.3			
606 MANI		8 S	0138.4	0138.6	.9	77.2	25.7			
1415 MANI		8 S	0138.4	0138.8	.9	90.6	30.2			
3750 TYKW		29 PBI	0140.0		6.0	3.0	1.5			
9400 TYKW		5 S	0141.9	0142.1	1.0	12.0	4.0			
9400 TYKW		5 S	0158.0	0158.1	1.0	11.0	3.0			
3750 TYKW		5 S	0158.0	0158.4	1.5	3.0	1.0			
3750 TYKW		45 C	0200.0	0224.30	50.0	12.00	4.00		INTERFERENCE	
9400 TYKW		45 C	0215.0	0217.5	10.00	37.0	7.0			
8800 LEAR		8 S	0216.8	0217.6	1.0	40				
4995 LEAR		8 S	0217.1	0217.5	.7	22				
8800 PALE		8 S	0217.3	0217.6	.5	41				
4995 PALE		8 S	0217.3	0217.6	.5	26				
4995 LEAR		8 S	0220.5	0221.5	1.3	17				
8800 LEAR		8 S	0221.1	0221.5	.7	20				
8800 LEAR		4 S/F	0223.0	0224.3	3.0	11				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
28	4995 LEAR	4 S/F	0223.0	0224.3	3.0	15			
	606 LEAR	8 S	0224.0	0224.6	1.1	91			
	606 PALE	8 S	0224.0	0224.1	1.1	44			
	4995 PALE	8 S	0224.5	0224.8	.1	13			
	9400 TYKW	29 PBI	0225.0U		30.0U	8.0	4.0		
	606 MANI	4 S/F	0256.0	0300.2	9.0	91.2	30.4		
	200 HIRA	41 F	0256.3	0300	5.6	860.0			MR
	500 HIRA	46 C	0256.8	0300.0	7.6	230.0	60.0		SR
	100 HIRA	46 C	0257.0	0258.7	4.7	1100.0	280.0U		0
	2695 MANI	3 S	0257.0	0300.2	4.5	13.3	4.4		
	8800 MANI	3 S	0257.0	0300.2	5.0	54.0	18.0		
	4995 MANI	3 S	0257.0	0300.2	6.5	80.3	26.8		
	3750 TYKW	5 S	0257.0	0300.0	3.0U	36.0U	13.0U		
	2000 TYKW	5 S	0257.0	0300.3	6.0	11.0	5.0		
	606 LEAR	4 S/F	0257.3	0300.6	4.8	190			
	1415 MANI	2 S/F	0257.5	0259.0	4.0	7.2	2.4		
	410 LEAR	4 S/F	0257.8	0300.5	4.3	210			
	410 PALE	4 S/F	0257.8	0300.3	4.3	290			
	245 LEAR	4 S/F	0258.0	0259.0	4.1	82			
	1000 TYKW	45 C	0258.0	0258.3U	2.0U	3.0U	2.0U		
	2695 LEAR	4 S/F	0258.3	0300.3	2.5	23			
	245 PALE	8 S	0258.8	0258.8	1.5	100			
	1415 LEAR	8 S	0258.8	0259.0	.3	20			
	4995 LEAR	4 S/F	0258.8	0300.3	2.5	50			
	9400 TYKW	5 S	0259.0E	0300.4	4.0U	56.0	20.0U		
	17000 NOBE	20 GRF	0259.1	0300.8	5.0	21.0			0
	8800 LEAR	4 S/F	0259.3	0300.3	2.5	58			
	15400 LEAR	8 S	0259.8	0300.8	2.0	28			
	2000 TYKW	29 PBI	0303.0		30.0	2.0	1.0		
	3750 TYKW	29 PBI	0303.0E		30.0U	4.0U	2.0U		
	9400 TYKW	29 PBI	0303.0		30.0	8.0	4.0		
	2000 TYKW	21 GRF	0340.0	0351	120.0	6.0	2.0		
	3750 TYKW	21 GRF	0340.0	0351	125.0	7.0	3.0		
	9400 TYKW	20 GRF	0340.0	0350	50.0	4.0	2.0		
	9400 TYKW	45 C	0445.0	0453.9	15.0	18.0	6.0		
	6100 KISV	4 S/F	0449.0	0453.5	11.0	23.0			
	9100 GORK	20 GRF	0449.7	0453.8	16.0	14.0			
	4995 ATHN	4 S/F	0449.8	0453.5	8.3U	47			
	2950 GORK	20 GRF	0449.9	0453.8	22.7	10.0	5.0		
	2000 TYKW	45 C	0450.0	0453.8	10.0	10.0	2.0		
	1000 TYKW	42 SER	0450.0	0450.5	5.0	17.0	2.0		
	3750 TYKW	45 C	0450.0	0454.0	18.0	26.0	8.0		
	8800 ATHN	4 S/F	0450.0	0453.5	8.1	17			
	2695 ATHN	4 S/F	0452.1	0454.1	5.9U	07			
	245 LEAR	8 S	0456.1	0457.0	1.7	160			
	410 LEAR	8 S	0456.6	0457.0	1.9	40			
	9400 TYKW	29 PBI	0500.0		40.0	6.0	3.0		
	2000 TYKW	30 PBI	0500.0		40.0	2.0	1.0		
	3750 TYKW	29 PBI	0508.0		35.0	4.0	2.0		
	2000 TYKW	5 S	0521.0	0521.7	2.0	1.5	.5		
3750 TYKW	20 GRF	0549.0	0555	40.0	4.0	2.0			
2000 TYKW	20 GRF	0549.0	0555	40.0	2.0	1.0			
9400 TYKW	20 GRF	0550.0	0555	40.0	4.0	2.0			
9100 GORK	20 GRF	0627.5	0627.5	23.0U	12.5				
9400 TYKW	21 GRF	0634.0	0710	120.0	10.0	5.0			
9400 TYKW	5 S	0635.0	0635.7	2.0	6.0	2.0			
3750 TYKW	21 GRF	0638.0	0710	110.0	6.0	3.0			
2000 TYKW	21 GRF	0640.0	0710	110.0	2.0	1.0			
204 IZMI	41 F	0645.5	0650.0	5.0	110.0				
234 POTS	4 S/F	0649.8	0649.9	.4	260.0	65.0			
3750 TYKW	45 C	0650.0	0651.7	12.0	10.0	2.5			
3750 TYKW		0650.0	0700.5		10.0				
650 GORK	40 F	0651.0	0651.3	9.7	7.0				
650 GORK		0651.0	0658.9		47.0				
3200 BERN	20 GRF	0651.0	0714.5	70.0	18.0			ONLY PAPER REC	
536 ONDR	45 C	0651.0	0659.5	10.0	72.0	15.0			
5200 BERN	20 GRF	0651.0	0714.2	70.0	37.0			ONLY PAPER REC	
430 KRAX	45 C	0655.5E	0659.0	5.2U	56.0	12.0U			
2000 TYKW	5 S	0657.0	0700.3	5.0	4.0	1.5			
9100 GORK	21 GRF	0658.6	0706.0	4.2	12.7				
9500 POTS	1 S	0701.8	0702.3	.8	7.6				
11800 BERN	20 GRF	0702.0	0714.1	20.0U	26.0				
9400 TYKW	5 S	0702.0	0702.3	2.0	9.0	3.0			
8400 BERN	20 GRF	0702.0	0714.1	40.0	30.0				
3750 TYKW	45 C	0711.0	0714.0	10.0	20.0	5.0			
2000 TYKW	45 C	0712.0	0714.1	7.0	10.0	3.0			
1415 MANI	1 S	0712.0	0713.8	4.2	9.0	3.0			
19600 BERN	20 GRF	0712.0U	0715.0U	6.0U	20.0U				
15000 KISV	4 S/F	0712.0	0715	8.0	26.0				
6100 KISV		0712.0	0727		20.0				
6100 KISV	45 C	0712.0	0715	24.0	21.0				
17000 NOBE	20 GRF	0712.3	0714.9	6.0	27.0			0	
9500 POTS	4 S/F	0712.5	0714.9	5.5	25.0				
3000 POTS	4 S/F	0712.5	0714.9	4.9	18.0				
606 MANI	1 S	0712.5	0714.0	3.5	9.7	3.2			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
29	260 ONDR	44 NS	0550.0E		493.0D	78.0			
	127 TORN	43 NS	0600.0		200.0		1.0		V1, DISTURBED
	245 PALE	43 NS	1752.3	0131.3	637.7D	210			
	245 LEAR	43 NS	2316.0	0128.1	629.0D	150			
	245 LEAR	8 S	0041.5	0041.6	.8	98			
	245 PALE	8 S	0041.5	0041.6	1.6	110			
	410 LEAR	8 S	0041.6	0041.8	.7	08			
	9400 TYKW	5 S	0104.0	0104.6	2.0	9.0		2.0	
	8800 LEAR	8 S	0104.3	0104.6	.5	19			
	410 LEAR	8 S	0131.1	0131.3	.9	18			
	245 LEAR	8 S	0131.3	0131.3	.5	180			
	245 LEAR	8 S	0136.8	0137.1	.8	40			
	410 LEAR	8 S	0137.0	0137.3	.6	08			
	9400 TYKW	5 S	0147.0	0150	10.0	6.0		2.0	
	8800 LEAR	8 S	0150.8	0149.6	.2	15			
	9400 TYKW	5 S	0235.0	0235.9	4.0	30.0		8.0	
	8800 LEAR	8 S	0235.3	0235.8	1.5	42			
	15400 LEAR	8 S	0235.5	0235.8	1.3	13			
	9400 TYKW	20 GRF	0239.0	0245	30.0	11.0		4.0	
	3750 TYKW	20 GRF	0239.0	0242	40.0	3.0		1.5	
	8800 LEAR	4 S/F	0240.0	0244.5	15.1	17			
	9100 GORK	21 GRF	0300.0E		43.8D			5.0	
	2950 GORK	21 GRF	0309.0E		507.0D				
	9400 TYKW	5 S	0357.0	0357.6	2.0	15.0		6.0	
	9100 GORK	2 S/F	0357.0	0357.4	2.0	46.0			
	15400 LEAR	8 S	0357.3	0357.5	.7	25			
	9400 TYKW	29 PBI	0359.0		10.0	4.0		2.0	
	3750 TYKW	5 S	0419.5	0420.1	5.0	3.0		1.0	
	9100 GORK	2 S/F	0449.3	0449.7	2.0	16.5			
	9400 TYKW	5 S	0449.5	0450.2	6.0	9.0		2.5	
	4995 ATHN	8 S	0450.1	0450.6	1.0D	13			
	2695 ATHN	8 S	0450.1	0450.6	1.0D	11			
	8800 ATHN	8 S	0450.1	0450.6	1.0	13			
	2695 ATHN	8 S	0456.6	0457.6	1.5D	13			
	4995 ATHN	8 S	0456.6	0457.6	1.7D	08			
	8800 ATHN	8 S	0456.6	0457.1	1.5	13			
	9100 GORK	2 S/F	0512.3	0512.9	1.9	36.0			
	2000 TYKW	20 GRF	0520.0	0700	200.0	3.0		1.5	
	3100 CRIM	26 FAL	0524.0	0538.0		9.0			
	3750 TYKW	21 GRF	0527.0	0710	190.0	5.0		2.0	
	9400 TYKW	21 GRF	0530.0	0720	190.0	8.0		4.0	
	245 LEAR	8 S	0612.3	0612.6	1.5	230			
	410 LEAR	8 S	0612.3	0612.6	1.2	13			
	234 POTS	4 S/F	0629.9	0630.2	.5	170.0		20.0	
	9400 TYKW	5 S	0639.0	0640.7	5.0	18.0		4.0	
	9100 GORK	2 S/F	0639.7	0640.5	4.4	42.0			
	15400 LEAR	4 S/F	0640.3	0640.6	4.3	23			
	8800 LEAR	4 S/F	0640.3	0640.6	3.0	19			
	650 GORK		0737.1	0739.3		8.0			
	650 GORK	46 C	0737.1	0738.2	3.6	66.0			
950 GORK	4 S/F	0739.0	0740.0	1.4	12.0				
650 GORK		0740.0	0740.0		8.0				
113 POTS	8 S	0747.2	0747.3	.2	100.0		30.0	III	
6100 KISV	8 S	0806.0	0807	1.6	150.0				
9400 TYKW	5 S	0806.0	0807.0	4.0	395.0		60.0		
8400 BERN	3 S	0806.2	0806.8	7.5	367.0				
9100 GORK	4 S/F	0806.3	0807.5U	5.2	70.0D				
9500 POTS	3S	0806.4	0807.1	11.0	330.0				
3000 POTS	3 S	0806.5	0807.0	2.0	13.0				
15000 KISV	8 S	0806.5	0807	4.0	340.0				
11800 BERN	3 S	0806.5	0806.8	7.5	436.0				
5200 BERN	3 S	0806.5	0807.0	8.0	196.0				
3750 TYKW	5 S	0806.5	0807.0	1.5	90.0		15.0	ONLY PAPER REC	
2950 GORK	2 S	0806.5	0806.8	.7	13.0				
3200 BERN	1 S	0806.5	0806.5	1.0	38.0				
15400 LEAR	8 S	0806.6	0807.0	1.9	460				
19600 BERN	3 S	0806.6	0806.8	5.0	231.0				
4995 LEAR	4 S/F	0806.6	0807.0	4.2	150				
8800 ATHN	47 GR	0806.6	0807.3	6.7	850				
35000 BERN	3 S	0806.6U	0807.0	3.0U	100.0U				
8800 LEAR	4 S/F	0806.6	0807.0	4.2	440				
17000 NOBE		0806.8		.3D	34.3D			L	
4995 ATHN	4 S/F	0807.0	0807.3	4.1D	160				
4995 ATHN	4 S/F	0807.0	0807.3	4.1D	160				
8800 MANI	3 S	0807.3	0808.0	2.0	294.6		98.2		
4995 MANI	3 S	0807.3	0808.0	1.3	160.2		53.4		
6100 KISV	29 PBI	0807.6		11.0	27.0				
3750 TYKW	29 PBI	0808.0		10.0	2.0		1.0U		
9400 TYKW	29 PBI	0810.0		20.0	8.0		4.0		
113 POTS	4 S/F	0828.8	0829.0	.7	100.0		5.0	III	
127 TORN	7 C	0917.4	0918.0	2.0	460.0				
204 IZMI	5 S	0917.5	0919.0	1.5	36.0		9.0		
204 IZMI	41 F	1045.0	1045.0	9.0	176.0				
808 ONDR	2 S/F	1103.5	1103.8	2.0	6.0		2.0		
2695 ATHN	4 S/F	1112.1	1113.6	3.0D	18				

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JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
29	204 JZMI	5 S	1113.0	1113.5	1.5	77.0	22.0		
	5200 BERN	2 S/F	1113.1	1113.5	2.0	24.0			ONLY PAPER REC
	2950 GORK	2 S	1113.1	1113.5	5.4	16.0			
	3200 BERN	2 S/F	1113.1	1113.5	2.0	17.0			ONLY PAPER REC
	950 GORK	21 GRF	1113.2	1118.6	11.0	4.0			
	4995 ATHN	8 S	1113.3	1114.1	1.80	20			
	410 SGMR	8 S	1113.3	1114.3	1.80	29			
	2695 SGMR	8 S	1113.3	1113.8	1.50	16			
	536 ONDR	20 S/F	1113.3	1114.4	3.0	35.0	6.0		
	113 POTS	41 F	1113.3	1114.0	5.6	1400.0	20.0		III
	3000 POTS	3 S	1113.4	1113.8	1.6	14.0			
	950 GORK	1 S	1113.4	1114.0	1.5	6.6			
	650 GORK	4 S/F	1113.4	1114.20	1.4	10.00			
	8400 BERN	2 S/F	1113.5	1114.1	3.5	27.0			
	2800 OTTA	4 S/F	1113.5	1113.8	2.0	17.4	8.0		
	430 KRAK	2 S/F	1113.5	1113.7	1.1	78.0	28.0		
	606 SGMR	8 S	1113.5	1114.1	1.80	60			
	4995 SGMR	8 S	1113.5	1114.1	1.30	21			
	1415 SGMR	8 S	1113.5	1113.6	1.10	04			
	810 KRAK	1 S	1113.6	1114.1	2.6	6.0	3.0		
	8800 ATHN	8 S	1113.8	1114.1	1.8	18			
	8800 SGMR	8 S	1113.8	1114.1	.7	20			
	1415 ATHN	8 S	1113.8	1114.3	1.30	11			
	9100 GORK	4 S/F	1113.8	1114.1	2.1	70.0			
	11800 BERN	1 S	1114.0	1114.1	6.0	22.0			
	6100 KISV	4 S/F	1114.0	1114.4	2.0	14.0			
	7000 SAOP	3 S	1114.0	1114.2	1.4	23.0	11.0		0
	9500 POTS	1 S	1114.0	1114.2	.5	5.5			
	650 GORK	29 PBI	1114.7	1114.7	129.0	2.0			
	8400 BERN	3 S	1226.0	1226.8	4.0	45.0			
	260 ONDR	4 S/F	1226.0	1226.5	4.0	148.0	15.0		
	11800 BERN	3 S	1226.0	1226.8	4.0	24.0			
	5200 BERN	1 S	1226.1	1226.7	2.0	73.0			ONLY PAPER REC
	113 POTS	4 S/F	1226.1	1226.9	2.2	7000.0	600.0		III
	3200 BERN	1 S	1226.1	1226.7	3.0	38.0			ONLY PAPER REC
	9400 HUAN	S	1226.2	1226.8	2.1	35.1	13.2		0
	536 ONDR	2 S/F	1226.3	1227.4	6.0	22.0	8.0		
	808 ONDR	2 S/F	1226.3	1227.1	3.5	10.0	4.0		
	4995 SGMR	8 S	1226.3	1226.6	1.00	59			
	2695 SGMR	8 S	1226.3	1226.6	1.00	35			
	3000 POTS	3 S	1226.4	1226.9	3.8	35.0			
	9500 POTS	3 S	1226.5	1226.9	2.7	26.0			
	8800 ATHN	4 S/F	1226.5	1226.8	4.5	46			
	2695 ATHN	4 S/F	1226.5	1226.8	3.50	29			
	245 SGMR	47 GB	1226.5	1226.8	.80	500			
	8800 SGMR	8 S	1226.5	1226.8	.8	46			
	4995 ATHN	4 S/F	1226.5	1226.8	4.00	71			
	1415 ATHN	4 S/F	1226.5	1226.8	3.30	18			
	606 SGMR	4 S/F	1226.5	1227.1	2.50	130			
	1415 SGMR	8 S	1226.6	1226.8	1.20	17			
234 POTS	4 S/F	1226.6	1226.8	.7	1450.0	50.0		III	
430 KRAK	3 S	1226.6	1226.8	6.1	20.0	5.0			
7000 SAOP		1226.6		2.3					
810 KRAK	1 S	1226.6	1226.8	2.5	8.0	4.0			
2800 OTTA	3 S	1226.7	1227	3.0	30.0	8.0			
410 SGMR	4 S/F	1226.8	1227.8	2.20	13				
2650 DWIN	1 S	1227.0	1227	3.0	30.0	5.0			
19600 BERN	1 S	1227.30	1227.4	.20	17.00				
2800 OTTA	20 GRF	1350.0	1430	80.0	4.4	2.6			
2800 OTTA	260 FAL	1750.0	1825	35.0	-4.4	-2.2			
2000 TYKW	45 C	2056.0	2056.4	1.5	24.0	5.0			
2800 OTTA	8 S	2056.5	2056.5	.1	4.0				
2000 TYKW	21 GRF	2140.0	2300	180.0	6.0	3.0			
3750 TYKW	21 GRF	2140.0	2300	180.0	7.0	3.0			
3750 TYKW	5 S	2205.0	2206.3	3.0	5.0	1.5			
9400 TYKW	21 GRF	2210.0	2300	150.0	8.0	4.0			
9400 TYKW	45 C	2211.0	2211.9	2.0	6.0	1.5			
1000 TYKW	45 C	2225.3	2226.1	1.0	3.0	.5			
1000 TYKW	5 S	2228.2	2228.4	.5	4.0	1.5			
17000 NOBE	1 S	2257.9	2258.1	.4	27.0			0	
2000 TYKW	45 C	2306.0	2306.7	3.0	5.0	1.0			
3750 TYKW	45 C	2306.0	2306.8	3.0	32.0	7.0			
9400 TYKW	45 C	2306.0	2306.8	5.0	24.0	4.0			
2695 PENT	4 S/F	2306.2	2306.9	2.5	12.2	3.0			
3750 TYKW	29 PBI	2309.0		10.0	3.0	1.0			
9400 TYKW	5 S	2316.0	2317	3.0	3.0	1.0			
9400 TYKW	21 GRF	2330.0	2340	40.0	4.0	2.0			
3750 TYKW	21 GRF	2332.0	2342	45.0	6.0	3.0			
9400 TYKW	5 S	2349.0	2352	12.0	8.0	4.0			
3750 TYKW	5 S	2350.0	2352	2.0	5.0	2.5			
30	260 ONDR	44 NS	0550.0E		492.00	54.0			
	127 TORN	44 NS	1420.0E		40.00		3.00		V2
	200 HIRA	44 NS	1941.0E	0035	490.00	15.0	5.0		0
	245 PALE	43 NS	2015.0	0102.0	287.00	480			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
30	208 VORO	44 NS	2200.0E		180.0D		8.0		
	3750 TYKW	5 S	0046.0	0054.0	15.0	4.0	1.0		
	3750 TYKW	45 C	0114.0	0115.3	17.0	3.0	1.0		
	9400 TYKW	45 C	0114.0	0121.5	17.0	7.0	2.0		
	9400 TYKW	5 S	0133.0	0137.5	15.0	3.0	1.5		
	3750 TYKW	20 GRF	0158.0	0213	40.0	5.0	2.5		
	9400 TYKW	20 GRF	0200.0	0213	30.0	4.0	2.0		
	2000 TYKW	21 GRF	0258.0	0304 U	120.0	4.0U	1.5		
	9400 TYKW	21 GRF	0300.0	0310	110.0	6.0	3.0		
	3750 TYKW	21 GRF	0303.0E	0307	70.0D	9.0	4.0D		
	950 GORK	23 GRF	0309.0E		229.0D				
	3750 TYKW	45 C	0312.0	0316	8.0	2.0	1.0		
	9400 TYKW	5 S	0315.0	0316	3.0	3.0	1.0		
	410 LEAR	8 S	0318.5	0318.6	.8	29			
	9400 TYKW	5 S	0353.0	0354.2	4.0	5.0	1.5		
	2000 TYKW	45 C	0353.0	0354.4	4.0	11.0	2.0		
	3750 TYKW	45 C	0353.0	0354.6	15.0	8.0	2.0		
	9400 TYKW	45 C	0359.0	0400.7	7.0	8.0	2.0		
	8800 LEAR	4 S/F	0400.6	0400.8	2.2	11			
	4995 LEAR	8 S	0401.3	0401.6	1.5	05			
	3750 TYKW	5 S	0420.0	0425	10.0	2.0	1.0		
	950 GORK	1 S	0508.7	0508.9	3.3	7.0	4.0		
	2000 TYKW	5 S	0508.8	0509.1	3.0	2.0	.7		
	3750 TYKW	5 S	0508.8	0509.1	3.0	3.5	1.0		
	650 GORK	2 S/F	0508.8	0510.3	3.1	5.0	2.0		
	950 GORK	1 S	0510.7	0511.3	2.3	7.0	3.0		
	2000 TYKW	5 S	0513.0	0513.4	2.5	5.0	1.5		
	3750 TYKW	5 S	0513.0	0513.4	2.5	6.0	2.0		
	9400 TYKW	21 GRF	0530.0	0730	190.0	8.0	4.0		
	2000 TYKW	21 GRF	0530.0	0700	190.0	3.5	2.0		
	3750 TYKW	21 GRF	0530.0	0730	190.0	8.0	4.0		
	1000 TYKW	20 GRF	0530.0	0700	180.0	2.0	1.0		
	9400 TYKW	5 S	0541.0	0541.8	3.0	5.0	1.5		
	2000 TYKW	5 S	0541.0	0541.9	3.0	3.0	1.0		
	3750 TYKW	5 S	0541.0	0541.9	2.0	4.0	1.0		
	2000 TYKW	5 S	0623.5	0624.0	3.5	21.0	5.0		
	3200 BERN	3 S	0623.5	0623.6	4.0	38.0			ONLY PAPER REC
	3750 TYKW	5 S	0623.7	0624.0	2.3	29.0	8.0		
	950 GORK	3 S	0623.8	0624.0	3.0	36.0	18.0		
	4995 LEAR	8 S	0623.8	0623.8	.2	19			
	2695 LEAR	8 S	0623.8	0623.8	.5	43			
	5200 BERN	3 S	0623.8	0624.0	2.0	20.0			ONLY PAPER REC
	2650 DWIN	2 S/F	0624.0	0624	3.0	40.0	15.0		
	2695 ATHN	4 S/F	0624.6	0624.6	2.7D	40			
	4995 ATHN	8 S	0624.6	0624.8	1.4	16			
	3750 TYKW	30 PRI	0625.0		10.0	4.0	2.0		
	2000 TYKW	29 PRI	0627.0		15.0	2.0	1.0		
	8400 BERN	3 S	0629.2	0631.3	6.0	50.0			
	19600 BERN	3 S	0629.2	0631.3	5.0	55.0			
	11800 BERN	3 S	0629.2	0631.3	6.0	81.0			
	6100 KISV	4 S/F	0630.0	0631.5	5.0	8.0			
	15000 KISV	4 S/F	0630.0	0631.5	4.0	480.0			
	9400 TYKW	5 S	0630.5	0631.5	7.0	70.0	12.0		
	15400 LEAR	8 S	0630.8	0631.5	1.7	97			
	8800 LEAR	8 S	0630.8	0631.3	1.8	67			
	17000 NOBE	3 S	0631.0	0631.5	1.5	61.0			
	3750 TYKW	5 S	0631.0	0632.2	3.0	2.5	1.0		L
	8800 ATHN	4 S/F	0631.6	0632.5	3.5	51			
	8800 ATHN	4 S/F	0647.6	0654.0	10.9	07			
	3750 TYKW	45 C	0649.0	0651.1	12.0	7.0	2.0		
	4995 LEAR	8 S	0650.8	0651.0	.2	13			
	3100 CRIM	1 S	0724.0	0724.1	2.0	41.0	13.0		
	9100 GORK	21 GRF	0725.0E	0743.5	233.0D	24.0			
	2695 ATHN	4 S/F	0733.0	0734.6	4.1	17			
	950 GORK	2 S	0733.8	0734.7	2.0	11.0			
	2000 TYKW	45 C	0734.0	0734.8	6.0	9.0	1.5		
	3750 TYKW	45 C	0734.0	0734.8	3.0	5.0	1.0		
	950 GORK	4 S/F	0856.6	0901.7	5.9	39.0			
	6100 KISV	45 C	0858.0	0901.6	28.0	20.0			
	6100 KISV		0858.0	0911.4		10.0			
	3200 BERN	2 S/F	0859.0	0901.5	14.0	50.0			ONLY PAPER REC
	3000 POTS	3 S	0900.8	0901.4	3.2	43.0			
	2650 DWIN	1 S	0901.0	0902	1.0	35.0	15.0		
	3100 CRIM	1 S	0901.5	0901.6	4.0	45.0	15.0		
	5200 BERN	2 S/F	0901.5	0901.5	13.0	69.0			ONLY PAPER REC
	9100 GORK	1 S	0901.5	0901.6	.4	18.0	9.0		
	2695 ATHN	8 S	0901.6	0901.6	1.0D	30			
	8800 ATHN	47 GR	0901.6	0901.6	1.9	770			
	8800 LEAR	4 S/F	0901.6	0901.6	843.2	24			
	4995 ATHN	8 S	0901.6	0901.6	.9D	64			
	4995 LEAR	4 S/F	0901.6	0901.6	2.5	52			
	2695 LEAR	8 S	0901.6	0901.6	.5	35			
	950 GORK	3 S	0902.9	0903.2	1.4	24.0	12.0		
	8800 ATHN	4 S/F	0910.6	0911.3	2.9	23			
	15000 KISV	4 S/F	0911.0	0911.3	3.0	12.0			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
30	9100 GORK	1 S	0911.0	0911.4	1.1	17.0	8.0		
	8800 LEAR	8 S	0911.1	0911.3	.5	23			
	9500 POTS	3 S	0911.2	0911.6	2.4	14.0			
	3000 POTS	20 GRF	0935.0	0939.8	12.0	31.0			
	6100 KISV	4 S/F	0937.5	0939.7	4.0	190.0			
	4995 ATHN	4 S/F	0937.6	0939.8	5.50	160			
	9500 POTS	20 GRF	0937.7	0940.4	20.0	670.0			
	11800 BERN	47 GB	0937.8	0939.8	16.0	1052.0			
	19600 BERN	47 GB	0937.8	0939.8	16.0	510.0			
	8400 BERN	47 GB	0937.8	0939.7	16.0	767.0			
	8800 ATHN	47 GB	0938.0	0939.6	10.0	1199			
	5200 BERN	3 S	0938.0	0939.8	14.0	176.0			ONLY PAPER REC
	9100 GORK	4 S/F	0938.5	0940.0	3.5	750.0			
	3200 BERN	3 S	0938.7	0940.5	8.0	46.0			ONLY PAPER REC
	2695 ATHN	8 S	0938.8	0939.8	1.30	19			
	15000 KISV	8 S	0939.0	0940	2.0	320.0			
	2950 GORK	3 S	0939.0	0939.8	3.1	24.0	12.0		
	8800 LEAR	47 GB	0939.1	0939.8	1.7	830			
	35000 BERN	3 S	0939.2U	0939.8	2.0U	140.0U			
	4995 LEAR	8 S	0939.3	0939.8	.8	93			
	4995 MANI	3 S	0939.3	0941.0	3.7	151.7	50.6		
	8800 MANI	47 GB	0939.5	0941.0	3.0	1003.8	334.6		
	15400 LEAR	47 GB	0939.6	0939.8	.7	830			
	3100 CRIM	1 S	0940.0	0940.5	3.0	33.0	11.0		
	15000 KISV	29 PBI	0941.0	0941	13.0	30.0			
	6100 KISV	29 PBI	0941.0	0941	14.0	30.0			
	3000 POTS	4 S/F	1005.0	1010.7	12.0	31.0			
	9500 POTS	1 S	1007.0	1010.7	13.0	5.4			
	3100 CRIM	1 S	1010.0	1010.1	2.0	37.0	12.0		
	3200 BERN	8 S	1010.2	1010.3	4.0	50.0			ONLY PAPER REC
	5200 BERN	8 S	1010.3	1010.5	4.0	44.0			ONLY PAPER REC
	6100 KISV	1 S	1010.5	1010.6	.5	13.0			
	1470 POTS	1 S	1010.5	1010.6	.5	1.7			
	2950 GORK	3 S	1010.5	1010.6	1.9	30.0	15.0		
	2650 DMIN	1 S	1011.0	1011	1.0	40.0	5.0		
	3000 POTS	3 S	1030.0	1030.9	3.0	10.0			
	1470 POTS	1 S	1030.0	1030.9	3.0	3.3			
	9500 POTS	1 S	1030.0	1031.0	3.0	5.4			
	2950 GORK	1 S	1030.0	1030.8	4.3	6.0	3.0		
	810 KRAK	8 S	1030.7	1030.8	.4	27.0			
	6100 KISV	4 S/F	1045.5	1046.6	2.0	52.0			
	11800 BERN	3 S	1045.6	1046.5	15.0	103.0			
	8400 BERN	4 S/F	1045.6	1046.3	15.0	147.0			
	9100 GORK		1046.0	1048.8		36.0			
	9100 GORK	45 C	1046.0	1046.6	5.0	150.0			
	5200 BERN	2 S/F	1046.0	1046.1	8.0	64.0			ONLY PAPER REC
	19600 BERN	3 S	1046.1	1046.5	1.0U	20.0U			
	4995 SGMR	4 S/F	1046.1	1046.3	7.0D	45			
	8800 ATHN	4 S/F	1046.1	1046.6	8.7	160			
	8800 SGMR	4 S/F	1046.1	1046.5	7.9D	150			
3200 BERN	1 S	1046.1	1046.5	.8	13.0			ONLY PAPER REC	
4995 ATHN	4 S/F	1046.3	1046.5	6.0D	54				
15400 SGMR	8 S	1046.3	1046.6	2.0	27				
15000 KISV	8 S	1047.0	1047.3	.7	50.0				
6100 KISV	29 PBI	1047.5	1047.5	13.0	16.0				
9500 POTS	3 S	1156.5	1157.2	1.7	11.0				
8400 BERN	1 S	1156.5	1157.1	2.0	13.0				
11800 BERN	1 S	1156.6	1157.1	1.0	9.0				
7000 SAOP	1 S	1156.8	1157.4	1.6	9.0	4.0		0	
3000 POTS	3 S	1206.5	1216.9	19.0	10.0				
1470 POTS	1 S	1206.6	1207.4	1.4	3.3				
810 KRAK	8 S	1207.1	1207.1	.2	57.0				
3000 POTS	3 S	1230.3	1231.0	1.5	9.6				
2695 SGMR	8 S	1230.3	1230.8	1.3D	13				
1470 POTS	4 S/F	1230.4	1231.1	2.6	9.8				
9500 POTS	1S	1230.5	1231.2	1.0	5.6				
1415 SGMR	8 S	1230.5	1231.0	1.8D	13				
2800 OTTA	1 S	1230.5	1231	3.0	8.8	3.0			
606 SGMR	8 S	1230.6	1230.8	.5D	68				
810 KRAK	8 S	1230.7	1230.8	.2	280.0				
4995 SGMR	8 S	1230.8	1230.8	.3	05				
7000 SAOP	4 S	1240.9	1242.5	3.1	90.0	45.0		3L	
6100 KISV	8 S	1241.0	1242.5	3.0	44.0				
15000 KISV	4 S/F	1241.5	1242.5	2.5	30.0				
11800 BERN	3 S	1241.5	1242.4	15.0	65.0				
8400 BERN	3 S	1241.5	1242.4	15.0	128.0				
8800 SGMR	4 S/F	1241.6	1242.3	9.0D	130				
4995 SGMR	4 S/F	1241.6	1242.3	8.7D	23				
9500 POTS	28 PRE	1241.6	1242.6	21.0	108.0				
9400 HUAN	29 S	1241.8	1242.5	2.0	94.4	44.1		0	
15400 SGMR	4 S/F	1241.8	1242.3	6.0	25				
2695 SGMR	8 S	1241.8	1242.1	1.2D	05				
3000 POTS	1 S	1241.9	1242.4	1.1	2.4				
5200 BERN	1 S	1242.0	1242.8	12.0	29.0			ONLY PAPER REC	
2800 OTTA	1 S	1242.0	1242.3	1.0	4.4	2.0			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
30	9400 HUAN	29 PBI	1243.8	1243.8	14.4	16.0	6.2		0
	7000 SAOP	29 PBI	1244.0	1244.0	10.4	31.0	15.0		
	6100 KISV	29 PBI	1244.0	1244	16.0	18.0			
	8800 ATHN	4 S/F	1246.8	1247.5	6.0	139			
	4995 ATHN	4 S/F	1247.0	1247.6	2.60	25			
	2800 OTTA	20 GRF	1410.0	1425	95.0	9.0	4.6		
	7000 SAOP	3 S	1412.2	1413.8	7.7	16.0	8.0		0
	234 POTS	41 F	1420.3	1420.5	.9	300.0	12.0		
	7000 SAOP	3 S	1515.0	1516.2	5.2	16.0	8.0		19R
	2800 OTTA	21 GRF	1600.0	1635	130.0	15.6	6.0		
	7000 SAOP	3 S	1612.8	1617.5	6.2	140.0	70.0		23R
	2695 ATHN	4 S/F	1613.5	1616.3	12.00	410			
	8800 ATHN	4 S/F	1613.6	1616.3	12.0	119			
	1415 ATHN	4 S/F	1613.6	1616.3	11.90	85			
	4995 ATHN	4 S/F	1613.6	1616.5	11.70	119			
	8800 SGMR	4 S/F	1614.0	1617.3	16.00	119			
	4995 SGMR	4 S/F	1614.0	1617.5	18.10	160			
	2695 SGMR	4 S/F	1614.0	1617.6	16.00	350			
	15400 SGMR	4 S/F	1614.0E	1618.1	7.80	87			
	1415 SGMR	4 S/F	1614.0	1617.6	16.00	130			
	2650 DWIN	45 C	1614.0	1618	15.0	400.0	100.0		
	2800 OTTA	4 S/F	1614.5	1617	20.0	295.0	37.0		
	7000 SAOP	29 PBI	1619.0	1620.5	53.7	68.0	34.0		
	7000 SAOP	3 S	1843.4	1845.1	3.1	133.0	66.0		1R
	9400 HUAN	S	1843.8	1845.2	3.4	110.7	54.6		0
	8800 PALE	4 S/F	1844.1	1845.1	7.4	190			
	2800 OTTA	4 S/F	1844.5	1845	2.0	196.0	33.0		
	15400 PALE	8 S	1844.6	1845.1	1.7	70			
	2695 PALE	8 S	1844.6	1845.0	.7	119			
	4995 PALE	4 S/F	1844.8	1845.1	2.3	60			
	7000 SAOP	29 PBI	1846.6	1846.6	12.2	30.0	15.0		
	9400 HUAN	PBI	1847.2	1847.2	32.4	15.8	9.5		0
	2800 OTTA	260 FAL	1855.0	1925	30.0	-6.8	-3.4		0
	7000 SAOP	3 S	1907.2	1908.4	3.1	13.0	6.0		0
	2800 OTTA	46F C	1947.5	1952.8	7.5	33.0	12.0		
	7000 SAOP	46 C	1949.2	1952.7	4.7	66.0	33.0		5R
	9400 HUAN	C	1950.0	1952.6	6.1	66.4	21.3		L
	100 HIRA	46 C	1950.4	1951.0	2.6	1500.0	290.0		0
	15400 PALE	4 S/F	1950.5	1952.6	3.6	84			
	4995 PALE	4 S/F	1950.5	1952.6	3.3	47			
	8800 PALE	4 S/F	1950.5	1952.5	4.1	110			
	1415 PALE	4 S/F	1950.6	1951.3	4.4	40			
	2695 PALE	4 S/F	1951.1	1952.6	3.0	46			
	7000 SAOP	29 PBI	1953.9	1955.7	3.4	13.0	6.0		
	2800 OTTA	29 PBI	1955.0	1955	15.0	5.2	2.4		
	2800 OTTA	23 GRF	2050.0		75.0	5.6	3.0		
	2800 OTTA	40 F	2051.0	2051.6	6.0	39.0			
	9400 HUAN	S	2053.4	2054.5	2.3	82.2	34.0		0
	9400 HUAN	29 PBI	2055.7	2055.7	19.1	9.5	5.9		0
	2800 OTTA	1 S	2112.5	2113.7	4.0	4.4	2.2		
	500 HIRA	28 PRE	2131.7	2131.8	1.6	4.0	2.0		WR
	100 HIRA	7 C	2131.9	2132.6	8.0	95.0	18.0		0
	2800 OTTA	4 S/F	2131.9	2133.9	8.0	124.0	25.0		
	9400 TYKW	5 S	2132.0	2133.8	6.00	135.0	25.0		RAIN
	2000 TYKW	45 C	2132.0	2133.9	6.0	190.0	25.0		
	3750 TYKW	5 S	2132.0	2133.8	6.00	88.0	16.0		
	1000 TYKN	45 C	2132.0	2133.8	6.0	205.0	30.0		
	9400 HUAN	S	2132.5	2133.8	3.7	118.6	50.3		R
	500 HIRA	3 S	2133.3	2133.4	4.0	2800.0	150.0		ML
	17000 NORE	7 C	2133.4	2133.7	1.2	122.0			0
	1000 TYKW	29 PBI	2138.0		20.0	10.0	3.0		
	2000 TYKN	29 PBI	2138.0		20.0	5.0	2.0		
	1000 TYKW	45 C	2220.0	2223.4	13.0	19.0	4.0		
	1000 TYKW	190	2220.0	2221.1					
	9400 TYKW	45 C	2220.0	2221	15.0	14.0	4.0H		RAIN
	3750 TYKW	45 C	2220.0	2220.9	13.0	33.0	6.0		
	2000 TYKW	45 C	2220.0	2221.2	9.0	25.0	5.0		
	2800 OTTA	3 S	2220.0	2221	2.0	28.0	14.0		
	208 VORO	4 S/F	2220.0	2221	1.5	50.00			
	2800 OTTA	30 PBI	2222.0	2222	10.0	3.6	1.6		
	2800 OTTA	1 S	2223.0	2223.5	1.0	3.6	1.8		
	2800 OTTA	1 S	2225.0	2226	3.5	2.6	1.8		
	2800 OTTA	23 GRF	2240.0	2249	30.0	5.8	2.0		
	3750 TYKW	45 C	2248.0	2257.9	12.0	18.0	5.0		
	9400 TYKW	45 C	2248.0	2249.5	7.0	16.0	5.0		RAIN
	2000 TYKW	45 C	2248.0	2257.9	13.0	8.0	2.0		
	1000 TYKW	45 C	2248.0	2252.2	7.0	27.0	3.0		
	2695 PENT	2 S/F	2256.0	2258	4.0	5.8	2.9		
	3750 TYKW	30 PBI	2300.0		23.0	5.0	5.0		
	1000 TYKW	8 S	2318.7	2318.8	.3	4.0	1.0		
	2695 PENT	23 GRF	2320.0	2338	36.0	10.2	5.0		
	3750 TYKW	28 PRE	2323.0	2326	3.0	8.0	6.0		
	9400 TYKW	28 PRE	2325.0	2327.3	17.0	18.0	10.0		
	2000 TYKW	45 C	2325.5	2326.4	4.5	42.0	9.0		
	3750 TYKW	45 C	2326.0	2327.1	6.0	80.0	25.0		

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
30	2695 PENT	3 S	2326.0	2327	4.0	53.0	15.0		
	8800 PALE	4 S/F	2326.6	2327.3	8.2	31			
	2695 PALE	8 S	2326.6	2327.0	1.7	60			
	4995 PALE	4 S/F	2326.6	2327.1	3.5	66			
	1000 TYKW	45 C	2326.7	2327.3	2.0	18.0	3.5		
	1415 PALE	8 S	2326.8	2327.3	.7	26			
	2695 LEAR	8 S	2327.0	2327.3	1.3	40			
	4995 LEAR	8 S	2327.0	2327.1	1.3	51			
	2000 TYKW	30 PBI	2330.0		11.5	3.0	3.0		
	3750 TYKW	30 PBI	2332.0		10.0	14.0	14.0		
	4995 MANI	3 S	2335.0	2336.3	3.3	53.9	18.0		
	2695 MANI	3 S	2335.1	2336.4	3.2	56.5	18.8		
	1415 MANI	3 S	2335.8	2336.6	2.5	22.3	7.4		
	9400 TYKW	5 S	2337.0	2338	3.0	6.0	3.0		
	3750 TYKW	5 S	2337.0	2337.7	4.0	6.0	2.5		
	2000 TYKW	45 C	2337.0	2337.7	3.0	4.0	1.0		
	1000 TYKW	28 PRE	2337.0	2338	5.0	2.0	1.0		
	606 MANI	4 S/F	2341.0	2343.7	9.0	218.4	72.8		
	2000 TYKW	45 C	2341.5	2343.8	10.5	100.0	23.0		
	8800 MANI	4 S/F	2341.8	2343.2	5.2	67.5	22.5		
	1415 MANI	4 S/F	2341.8	2343.1	8.2	52.4	17.5		
	4995 MANI	4 S/F	2341.8	2343.1	5.2	112.3	37.4		
	2695 MANI	4 S/F	2341.8	2343.1	7.2	105.9	35.3		
	1000 TYKW	45 C	2342.0	2344.7	10.0	90.0	18.0		
	9400 TYKW	45 C	2342.0	2343.8	10.0	70.0	18.0		
	3750 TYKW	45 C	2342.0	2343.8	15.0	138.0	25.0		
	2695 PENT	46F C	2342.0	2344	9.0	115.0	27.0		
	2695 LEAR	47 GB	2342.1	2343.8	5.7	130			
	4995 LEAR	47 GB	2342.1	2343.8	5.7	130			
	8800 LEAR	47 GB	2342.8	2343.8	2.2	110			
	606 LEAR	47 GB	2343.3	2344.3	4.8	360			
	200 HIRA		2343.3	2346.0		150.0			O
	200 HIRA	7 C	2343.3	2343.5	4.6	4400.0	460.0		O
	500 HIRA	46 C	2343.4	2344.4	9.0	580.0	30.0		SL
	500 HIRA		2343.4	2347.0		90.0			WL
	208 VORO	46 C	2343.5	2344	4.5	50.00			
	245 LEAR	47 GB	2343.5	2343.8	4.1	8700			
	410 LEAR	47 GB	2343.6	2343.8	4.2	430			
	100 HIRA	42 SER	2343.6	2358.6	43.0	30000.0			O
	15400 LEAR	47 GB	2343.8	2344.0	1.2	55			
	8800 PALE	8 S	2347.6	2347.6	1.0	30			
	2695 PALE	8 S	2347.6	2347.6	.5	23			
	606 PALE	8 S	2347.6	2347.6	.5	21			
	1415 PALE	8 S	2347.6	2347.6	1.0	30			
	15400 PALE	8 S	2347.6	2347.8	.4	29			
	4995 PALE	8 S	2347.6	2347.6	.5	19			
	1000 TYKW	30 PBI	2352.0		25.0	4.0	1.0		
	2000 TYKW	29 PBI	2352.0		5.0	2.0	1.0		
	9400 TYKW	31 ABS	2352.0	0001	59.0	-10.0	-5.0		RAIN
	410 LEAR	8 S	2357.8	2358.8	1.2	65			
8800 LEAR	8 S	2358.0	2358.8	1.1	47				
4995 LEAR	8 S	2358.1	2358.8	1.0	36				
15400 LEAR	8 S	2358.1	2358.8	1.0	20				
4995 PALE	8 S	2358.3	2358.5	.3	28				
245 LEAR	8 S	2358.3	2358.8	.7	35				
8800 PALE	8 S	2358.3	2358.5	.3	46				
410 PALE	8 S	2358.3	2358.6	.3	300				
2695 LEAR	8 S	2358.3	2358.8	1.0	24				
3750 TYKW	5 S	2358.3	2358.6	1.70	21.0	7.00			
9400 TYKW	5 S	2358.3	2358.6	1.5	35.0	13.0		RAIN	
2695 PENT	3 S	2358.3	2358.8	1.7	17.6	4.6			
1000 TYKW	5 S	2358.4	2358.7	1.60	17.0	6.00			
2000 TYKW	5 S	2358.4	2358.7	1.6	72.0	9.0			
606 LEAR	8 S	2358.5	2358.8	.5	10				
1415 PALE	8 S	2358.5	2358.6	.3	53				
31	245 LEAR	43 NS	0020.8	0021.3	564.20	200			
	200 GORK	44 NS	0133.0E		414.00		5.0		
	100 GORK	NS	0400.0E		259.00		10.0		
	33 UPIC	43 NS	0455.8		730.5				
	29 UPIC	43 NS	0455.8		730.1				
	260 ONDR	44 NS	0544.0E		502.00	61.0	3.0		
	127 TORN	43 NS	0740.0		350.00		5.0		V1, DISTURBED
	410 LEAR	43 NS	0815.8	0816.6	89.20	34			
	245 SGMR	43 NS	0939.0	1341.6	501.00	320			
	200 HIRA	44 NS	1941.0E	0544	840.00	15.0	10.0		MR
	208 VORO	44 NS	2200.0E		240.00		10.0		
	2000 TYKW	30 PBI	0000.0		15.0	1.0	.5		
	2000 TYKW	5 S	0001.0	0002.0	4.0	2.0	.7		
	9400 TYKW	5 S	0001.5	0001.7	1.0	7.0	2.5		
	1000 TYKW	29 PBI	0003.0E		5.00	1.50	.50		
	3750 TYKW	30 PBI	0003.0E		18.00	2.00	2.00		
3750 TYKW	5 S	0007.0	0009.2	12.0	7.0	2.5			
200 HIRA	46 C	0013.6	0014.3	1.3	400.0	62.0		WR	
2695 PENT	21 GRF	0020.0	0120	90.00	8.8				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
31	3750 TYKW	28 PRE	0021.0	0036	30.0	9.0	7.0		
	1000 TYKW	28 PRE	0025.0	0051	26.0	2.0	1.0		
	2000 TYKW	28 PRE	0025.0	0032	26.0	4.0	2.5		
	3750 TYKW	5 S	0028.0	0029.1	3.0	8.0	3.0		
	3750 TYKW	5 S	0032.0	0039	25.0	3.0	1.5		
	2695 PENT	8 S	0038.2	0038.2	.2	20.0			
	4995 LEAR	8 S	0038.3	0038.3	.3	15			
	2695 LEAR	8 S	0038.3	0038.3	.3	21			
	2930 VORD		0050.0	0054		202.0			
	4995 MANI	4 S/F	0050.2	0053.0	6.7	314.3	104.8		
	1415 MANI	4 S/F	0050.2	0053.1	9.8	279.0	93.0		
	606 MANI	47 GR	0050.3	0052.5	11.7	595.5	198.5		
	2695 MANI	4 S/F	0050.3	0052.9	9.2	218.9	72.9		
	100 HIRA	46 C	0050.3	0051.3	9.4	2900.0	180.0		WL
	200 HIRA	46 C	0050.4	0051.3	7.0	1000.0	45.0		0
	8800 MANI	4 S/F	0050.4	0051.5	5.6	311.4	103.8		
	500 HIRA	46 C	0050.8	0050.8	10.0	700.0	155.0		WL
	5730 IRKH	47 GR	0050.9	0053.0	10.0	285.00			L
	4995 PALE	47 GB	0051.0	0053.3	2.30	180			
	8800 LEAR	4 S/F	0051.0	0052.1	9.1	340			
	8800 PALE	47 GB	0051.0	0052.1	1.10	340			
	4995 LEAR	4 S/F	0051.0	0053.5	9.1	180			
	2695 PENT	45 C	0051.0	0053.5	9.0	275.0	70.0		
	2000 TYKW	45 C	0051.0	0053.4	9.0	290.0	70.0		
	1000 TYKW	45 C	0051.0	0052.2	19.0	440.0	40.0		
	3750 TYKW	45 C	0051.0	0053.4	9.0	180.0	50.0		
	9400 TYKW	45 C	0051.0	0052.1	8.0	305.0	55.0		
	245 PALE	47 GB	0051.1	0051.3	.50	170			RAIN
	15400 PALE	47 GB	0051.1	0053.3	2.20	270			
	245 LEAR	4 S/F	0051.1	0051.3	3.7	150			
	2695 LEAR	4 S/F	0051.1	0053.3	9.0	260			
	2695 PALE	47 GB	0051.1	0053.3	2.20	240			
	410 PALE	47 GB	0051.1	0053.1	7.00	700			
	15400 LEAR	4 S/F	0051.1	0053.3	9.0	250			
	1415 PALE	47 GB	0051.1	0053.3	2.20	280			
	17000 NOBE	7 C	0051.1	0053.3	3.2	210.0			0
	606 PALE	47 GB	0051.3	0053.1	1.80	600			
	606 LEAR	47 GR	0051.5	0053.1	8.6	770			
	410 LEAR	47 GB	0051.8	0053.1	6.7	730			
	17000 NOBE	29 PBI	0054.3	0054.3	15.0	33.0			0
	9400 TYKW	29 PBI	0059.0		25.0	8.0	3.0		RAIN
	2000 TYKW	30 PBI	0100.0		105.00	18.0	7.00		ECLIPSE
	3750 TYKW	30 PBI	0100.0		105.00	19.0	11.00		ECLIPSE
	2695 PENT	29 PBI	0100.0	0100	14.0	16.4	5.4		
	1000 TYKW	30 PBI	0110.0		95.00	8.0	4.50		ECLIPSE
	1000 TYKW	5 S	0128.0	0129.3	3.0	3.0	1.0		
	2000 TYKW	5 S	0128.0	0129.2	3.0	4.0	1.5		
	5730 IRKH	20 GRF	0128.3	0129.1	3.0	52.0			L
	9400 TYKW	5 S	0128.6	0129.1	1.5	6.0	3.0		
	1000 TYKW	45 C	0133.0	0134.0	37.0	5.0	1.00		
	2000 TYKW	5 S	0133.0	0134	4.0	2.5	1.0		
	1000 TYKW		0133.0	0154.9		5.0			
	9400 TYKW	5 S	0133.0	0134.8	5.0	8.0	3.0		
	9400 TYKW	29 PBI	0138.0		15.0	3.0	1.5		
	3750 TYKW	20 GRF	0209.0	0216	30.0	6.0	2.0		
	2000 TYKW	45 C	0210.0	0214	9.0	74.0	8.0		
	9400 TYKW	20 GRF	0210.0	0216	30.0	8.0	3.0		
	1000 TYKW	45 C	0213.0	0214.1	7.0	3.0	.7		
	1415 PALE	4 S/F	0213.5	0214.1	3.0	44			
	8800 PALE	8 S	0215.8	0216.1	.3	19			
	2000 TYKW	29 PBI	0219.0		15.0	2.0	1.0		
	606 LEAR	8 S	0313.0	0313.3	.5	160			
	606 MANI	4 S/F	0326.0	0344.6	21.8	198.0	66.0		
	8800 MANI	4 S/F	0326.0	0327.3	21.2	67.5	22.5		
	4995 MANI	4 S/F	0326.0	0341.5	21.2	59.0	20.0		
	1415 MANI	4 S/F	0326.0	0327.6	20.8	48.0	16.0		
	100 HIRA	46 C	0326.1	0327.5	2.6	5000.0	1200.0		WL
	200 HIRA	46 C	0326.3	0327.3	4.0	125.0	8.0		0
	9100 GORK	21 GRF	0326.5	0343.0	380.0	20.0			
	3750 TYKW	45 C	0326.5	0327.7	7.0	26.0	5.0		
	9400 TYKW	45 C	0326.5	0327.7	10.0	45.0	8.0		ECLIPSE
	650 GORK	23 GRF	0326.6	0326.6	25.6	4.0			
	8800 PALE	4 S/F	0326.8	0327.6	6.3	73			
	410 LEAR	8 S	0326.8	0327.6	.8	260			
	2695 MANI	4 S/F	0327.0	0327.3	17.0	34.6	11.5		
	2000 TYKW	45 C	0327.0	0327.8	6.0	31.0	5.0		
	1000 TYKW	45 C	0327.0	0327.3	7.0	210.0	10.0		
	9100 GORK		0327.0	0329.3		34.0			
	950 GORK	4 S/F	0327.0	0327.80	5.5	58.00			
	950 GORK	30 PBI	0327.0	0333.0	22.0	5.0			
	9100 GORK	46 C	0327.0	0327.7	3.3	44.0			
	650 GORK		0327.1	0329.5		7.0			
	650 GORK	46 C	0327.1	0328.2	39.0	6.0			
	4995 PALE	8 S	0327.1	0327.6	.9	34			
	245 LEAR	4 S/F	0327.3	0327.8	3.3	13			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
31	8800 LEAR	4 S/F	0327.3	0327.6	2.5	54			
	410 PALE	47 GB	0327.3	0327.6	.3	540			
	500 HIRA	45 C	0327.3	0327.7	5.0	6.0	3.0		MR
	5730 IRKU	45 C	0327.5	0327.8	7.0	390.00			R
	5730 IRKU			0327.5	0329.6		45.0		R
	4995 LEAR	8 S	0327.5	0327.6	.5	29			
	2695 PALE	8 S	0327.5	0327.6	.6	34			
	1415 PALE	8 S	0327.5	0327.6	.6	43			
	2695 LEAR	8 S	0327.6	0327.6	.4	29			
	606 LEAR	4 S/F	0327.6	0328.0	4.5	15			
	606 PALE	8 S	0327.6	0328.1	.7	17			
	15400 LEAR	8 S	0327.6	0327.6	2.0	18			
	2000 TYKW	45 C	0341.5	0343.1	5.5	16.0	4.0		
	1000 TYKW	45 C	0341.5	0345.6	7.5	23.0	5.0		
	3750 TYKW	45 C	0341.5	0342.8	5.5	20.0	5.0		
	9400 TYKW	5 S	0342.0	0343	6.0	5.0	2.0		ECLIPSE
	950 GORK	46 C	0342.2	0342.8	4.8	30.0			
	950 GORK	800		0342.2	0345.6				
	650 GORK	4 S/F	0342.3	0345.9	5.4	200.0			
	410 LEAR	4 S/F	0342.3	0345.5	4.3	29			
	2695 LEAR	4 S/F	0342.3	0343.1	4.3	17			
	4995 LEAR	4 S/F	0342.3	0342.8	4.3	11			
	606 LEAR	4 S/F	0342.3	0345.5	4.3	360			
	410 LEAR	8 S	0347.5	0348.0	1.1	100			
	245 LEAR	8 S	0347.6	0348.3	1.0	119			
	410 PALE	8 S	0348.3	0348.5	.3	98			
	3750 TYKW	5 S	0405.0	0405.6	3.0	9.0	2.5		
	2000 TYKW	45 C	0405.0	0405.7	4.0	4.0	1.5		
	1000 TYKW	5 S	0405.3	0405.5	1.5	6.0	.5		
	9400 TYKW	5 S	0405.5	0405.8	1.5	4.0	1.5		ECLIPSE
	245 LEAR	8 S	0439.8	0439.8	.3	130			
	410 LEAR	8 S	0439.8	0439.8	.2	280			
	3750 TYKW	45 C	0449.0	0450.5	7.0	4.0	1.5		ECLIPSE
	9400 TYKW	5 S	0449.0	0450.7	6.0	4.0	1.5		ECLIPSE
	6100 KISV	4 S/F	0449.5	0450.3	4.0	5.0			
	2950 GORK	21 GRF	0449.6	0505.5	25.4	6.0	3.0		
	2950 GORK	1 S	0449.9	0450.3	.8	6.0	3.0		
	2695 LEAR	8 S	0450.0	0450.5	.6	21			
	8800 LEAR	8 S	0450.3	0450.5	.2	11			
	4995 LEAR	8 S	0450.3	0450.5	.2	13			
	2000 TYKW	45 C	0504.0	0519.1	20.0	6.0	2.5		
	3750 TYKW	45 C	0504.0	0505.6	12.0	8.0	4.0		
	1000 TYKW		0505.0	0519.1		4.0			
	9400 TYKW	5 S	0505.0	0506	8.00	6.0	2.00		ECLIPSE
	1000 TYKW	45 C	0505.0	0505.4	19.0	4.0	1.5		
	3750 TYKW	45 C	0518.0	0519.0	6.0	12.0	5.0		
	6100 KISV		0518.0	0521		13.0			
	6100 KISV	42 SER	0518.0	0518.7	6.0	27.0			
	6100 KISV		0518.0	0523		12.0			
	200 GORK	41 F	0518.3	0518.8	9.5	60.00			
2950 GORK	23 GRF	0518.3	0900.3	273.0	13.0				
100 GORK	8 S	0518.4	0518.80	1.7	53500.00				
9400 TYKW	45 C	0518.5E	0518.90	4.50	27.00	6.00		RAIN	
9100 GORK	4 S/F	0518.5	0519.0	2.0	34.0				
2950 GORK	1 S	0518.5	0518.8	1.6	6.0	3.0			
5200 BERN	2 S/F	0518.5	0519.0	3.0	35.0			ONLY PAPER REC	
8800 ATHN	8 S	0518.5	0519.0	5.00	63				
4995 ATHN	8 S	0518.5	0519.0	1.10	28				
8800 ATHN	4 S/F	0518.5	0519.0	3.3	63				
4995 ATHN	8 S	0518.5	0519.00	5.00	28				
3200 BERN	1 S	0518.5	0519.0	2.0	8.0			ONLY PAPER REC	
8800 LEAR	8 S	0518.6	0518.8	.5	41				
4995 LEAR	8 S	0518.6	0518.8	.5	26				
4995 LEAR	8 S	0520.8	0521.1	1.0	11				
8800 LEAR	8 S	0520.8	0521.1	1.2	28				
9100 GORK	1 S	0521.0	0521.2	1.3	19.0				
245 LEAR	47 GB	0524.0	0524.1	.3	870				
200 GORK		0524.1	0524.1		60.00				
2000 TYKW	28 PRE	0540.0E	0553.9	15.00	15.0	3.50		ECLIPSE	
9400 TYKW	28 PRE	0540.0E	0554	15.50	7.0	3.00		ECLIPSE	
3750 TYKW	28 PRE	0540.0E	0553.3	15.00	11.0	5.00			
3100 CRIM	3 S	0545.0	0546.0	12.0	192.0	64.0			
2950 GORK	45 C	0551.0	0556.1	11.2	178.0				
15400 LEAR	4 S/F	0551.1	0556.0	9.7	72				
5200 BERN	4 S/F	0551.1	0556.1	14.0	338.00			ONLY PAPER REC	
3200 BERN	4 S/F	0551.1	0556.0	19.0	200.0			ONLY PAPER REC	
8800 LEAR	4 S/F	0551.1	0556.0	13.7	220				
4995 LEAR	4 S/F	0551.1	0556.0	14.9	310				
2695 LEAR	4 S/F	0551.3	0556.0	14.8	190				
1415 LEAR	4 S/F	0552.3	0556.1	10.0	119				
260 ONDR	46 C	0553.0		13.0	219.00	14.0			
17000 NORE	3 S	0553.9	0556.1	4.0	65.0			0	
2695 MANI	3 S	0554.0	0554.8	6.0	179.9	60.0			
8800 MANI	3 S	0554.0	0554.8	5.3	223.2	74.4			
606 MANI	4 S/F	0554.0	0554.8	6.0	49.5	16.5			

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
31	1415 MANI	3 S	0554.0	0554.8	7.5	80.4	26.8		
	4995 MANI	3 S	0554.0	0554.8	7.5	398.3	132.8		
	200 GORK	1 S/F	0554.3	0557.6	4.5	600.0D			
	3750 TYKW	5 S	0555.0	0556.1	9.0	253.0	25.0		
	2000 TYKW	5 S	0555.0	0556.1	8.0	120.0	20.0		
	1000 TYKW	5 S	0555.0	0556.2	5.0D	65.0	20.0D		
	6100 KISV	8 S	0555.0	0556	15.0	16.0			
	3000 IZMI	5 S	0555.0	0556.0	2.0	138.0	80.0		
	536 ONDR	2 S/F	0555.3	0556.1	8.0	24.0	9.0		
	8800 ATHN	4 S/F	0555.3	0556.0	15.3	190			
	2695 ATHN	4 S/F	0555.3	0556.1	15.0D	200			
	4995 ATHN	4 S/F	0555.3	0556.1	12.2D	260			
	650 GORK	4 S/F	0555.3	0556.1	8.0	70.0			
	9100 GORK	3 S	0555.4	0556.0	2.6	160.0			
	100 GORK		0555.4	0557.8		2600.0			
	100 GORK	46 C	0555.4	0556.3	3.4	1680.0			
	500 HIRA	46 C	0555.4	0555.9	5.0	30.0	8.0		WR
	19600 BERN	4 S/F	0555.5U	0556.0U	3.0U	43.0U			
	11800 BERN	3 S	0555.5	0556.0	4.0	110.0			
	245 LEAR	47 GB	0555.5	0559.6	4.6	1000			
	1415 ATHN	4 S/F	0555.5	0556.1	13.5D	63			
	8400 BERN	3 S	0555.5	0556.0	4.0	206.0			
	9400 TYKW	5 S	0555.5	0556.1	4.5	157.0	30.0		
	950 GORK	4 S/F	0555.5	0556.1	5.1	43.0			
	410 LEAR	4 S/F	0555.6	0556.0	5.5	95			
	606 LEAR	4 S/F	0555.6	0556.0	6.9	230			
	100 HIRA	7 C	0555.6	0555.7	3.6	2800.0	130.0		WL
	808 ONDR	2 S/F	0555.6	0556.4	4.5	28.0	14.0		
	127 TORN	47 GB	0555.7	0556.0	4.5	20000.0			
	3100 CRIM	26 FAL	0557.0	0800.0		13.0			
	9400 TYKW	30 PBI	0600.0		8.0	8.0	3.0D		
	2000 TYKW	31 ABS	0603.0	0623	55.0	-11.0	-6.0		
	3750 TYKW	31 ABS	0604.0	0621	40.0	-13.0	-7.0		
	9400 TYKW	31 ABS	0608.0	0618	22.0	-11.0	-5.0D		
	1000 TYKW	31 ABS	0610.0U	0627 U	40.0U	-4.0U	-1.5U		INTERFERENCE
	9400 TYKW	20 GRF	0630.0	0643	40.0	4.0	2.0		
	3750 TYKW	20 GRF	0644.0	0655	35.0	3.0	1.5		
	245 LEAR	8 S	0701.8	0702.0	.3	25			
	410 LEAR	8 S	0701.8	0702.0	.3	34			
	606 LEAR	8 S	0701.8	0702.0	.3	16			
	410 LEAR	8 S	0730.3	0730.8	1.3	470			
	430 KRAK	8 S	0730.8	0731.3	1.0	520.0D			
	3000 POTS	1 S	0733.5	0734.3	6.5	4.6			
	9500 POTS	1 S	0733.5	0733.7	3.9	4.1			
	430 KRAK	42 SER	0745.1	0811.3	32.5	63.0			
	430 KRAK		0745.1	0816.6		100.0			
	410 LEAR	8 S	0811.3	0811.3	.2	78			
	2950 GORK	1 S	0840.3	0841.9	4.7	6.0	3.0		
	3200 BERN	20 GRF	0840.5	0900.0	30.0	11.0			ONLY PAPER REC
	5200 BERN	20 GRF	0840.5	0900.0	30.0	15.0			ONLY PAPER REC
3100 CRIM	1 S	0939.0	0941.0	7.0	7.0	2.0			
3100 CRIM	20 GRF	0955.0	1000.0	14.0	11.0	4.0			
2950 GORK	23 GRF	1038.9		82.0E					
3200 BERN	1 S	1120.7	1121.3	1.5	8.0			ONLY PAPER REC	
5200 BERN	1 S	1120.7	1121.3	1.5	15.0			ONLY PAPER REC	
3000 POTS	3 S	1120.8	1121.5	2.7	11.0				
2950 GORK	1 S	1120.9	1121.4	1.4	11.0	5.0			
7000 SAOP	1 S	1120.9	1121.5	1.3	6.0	3.0		24L	
2800 OTTA	3 S	1121.0	1121.2	2.0	10.8	4.0			
6100 KISV	8 S	1121.0	1121.5	1.0	6.0				
430 KRAK	8 S	1135.0	1135.0	.5	50.0				
2800 OTTA	24 R	1140.0	1150	10.0	3.2	2.0			
2800 OTTA	27 RF	1140.0		140.0	3.2				
2800 OTTA	24P R	1150.0		115.0	3.2	2.9			
6100 KISV	8 S	1314.0	1315	2.0	7.0				
7000 SAOP	3 S	1343.5	1344.1	.9	19.0	9.0		0	
8800 SGMR	8 S	1343.8	1344.1	2.0D	11				
4995 SGMR	8 S	1343.8	1344.0	.8	13				
7000 SAOP	29 PBI	1344.4	1344.5	4.4	12.0	6.0			
2800 OTTA	26 FAL	1345.0	1400	15.0	-3.2	-1.6			
234 POTS	8 S	1349.0	1349	.1	250.0	80.0			
7000 SAOP	31 S	1426.7	1427.8	3.2	17.0	8.0		0	
4995 SGMR	4 S/F	1427.0	1427.8	3.0	13				
8800 SGMR	8 S	1427.5	1427.8	2.0D	15				
2800 OTTA	2 S/F	1538.0	1542	10.0	6.6	2.8			
606 SGMR	8 S	1541.3	1541.6	.8D	200				
410 SGMR	8 S	1541.6	1542.0	.7D	31				
245 SGMR	47 GB	1542.1	1542.3	.2	520				
8800 ATHN	4 S/F	1702.6	1704.0	11.7	66				
2800 OTTA	21 GRF	1703.0	1720	85.0	9.8	4.8			
2695 PENT	4 S/F	1703.0	1705	5.0	10.0	5.0			
7000 SAOP	46 C	1703.0	1704.8	6.5	80.0	40.0			
11800 BERN	4 S/F	1703.1	1705.0	5.0	40.0			2R	
8400 BERN	4 S/F	1703.1	1704.8	6.0	88.0				
8800 PALE	4 S/F	1703.1	1704.8	4.4	96				

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

JULY 1981

DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$		INT	POLARIZATION OR REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
31	4995 PALE	4 S/F	1703.1	1704.6	4.4		55		
	5200 BERN	4 S/F	1703.1	1704.8	5.0		49.0		ONLY PAPER REC
	3200 BERN	4 S/F	1703.1	1704.8	4.0		12.0		ONLY PAPER REC
	15400 PALE	4 S/F	1703.1	1704.8	4.4		32		
	9400 HUAN	S	1704.9E	1705.6U	2.20		46.0	20.9	0
	2800 OTTA	8 S	1711.0	1711	.5		2.6		
	2695 PENT	1 S	1940.5	1941	1.0		3.4	1.8	
	2800 OTTA	26A FAL	2005.0	2025	20.0		-7.0	-3.5	
	2695 PENT	1 S	2009.0	2010	5.0		7.6	3.8	
	245 PALE	8 S	2009.3	2009.5	.5		170		
	2800 OTTA	20 GRF	2030.0	2150	120.0		7.8	3.8	
	2930 VORO	45 C	2050.0	0052	20.0		141.0		
	2930 VORO	3 S	2129.0	2134	13.0		135.0		
	2000 TYKW	20 GRF	2140.0	2158	50.0		2.0	1.0	
	3750 TYKW	20 GRF	2140.0	2154	50.0		8.0	3.0	
	9400 TYKW	20 GRF	2140.0	2158	50.0		6.0	2.0	
	2930 VORO	3 S	2220.0	2221	10.0		70.0		
	3750 TYKW	21 GRF	2250.0	2259	30.0		3.0	1.5	
	9400 TYKW	45 C	2251.5	2254.2	3.0		10.0	3.0	
	3750 TYKW		2253.0	2254.3			5.0		
	3750 TYKW	45 C	2253.0	2253.3	3.0		5.0	1.5	
	2000 TYKW	80 S	2254.2	2254.3	.3		26.0	6.0	
	9400 TYKW	29 PRI	2254.5		25.0		4.0	2.0	
	3750 TYKW	5 S	2324.0	2326	8.0		1.5	.7	
	2930 VORO	3 S	2325.0	2328	13.0		55.0		
	2930 VORO		2340.0	2347			55.0		
	2930 VORO	45 C	2340.0	2344	30.0		155.0		

Reports are received routinely from the following observatories:

ATHN = Athens	HIRA = Hiraiso	LEAR = Learmonth	PALE = Palehua	SYDN = Sydney
BERN = Berne	HUAN = Huancayo	MANI = Manila	PEKG = Peking	TORN = Torun
BORD = Bordeaux	IRKU = Irkutsk	NAGO = Nagoya	PENT = Penticton	TYKW = Toyokawa
CRIM = Crimea	IZMI = Izmiran	NOBE = Nobeyama	POTS = Potsdam	YUNN = Yunnan
DWIN = Dwingeloo	KISV = Kislovodsk	ONDR = Ondrejov	SAOP = Sao Paulo	TRST = Trieste
GORK = Gorky	KRAK = Krakow	OTTA = Ottawa	SGMR = Sagamore Hill	UPIC = Upice
HARS = Harestua				VORD = Voroshilov

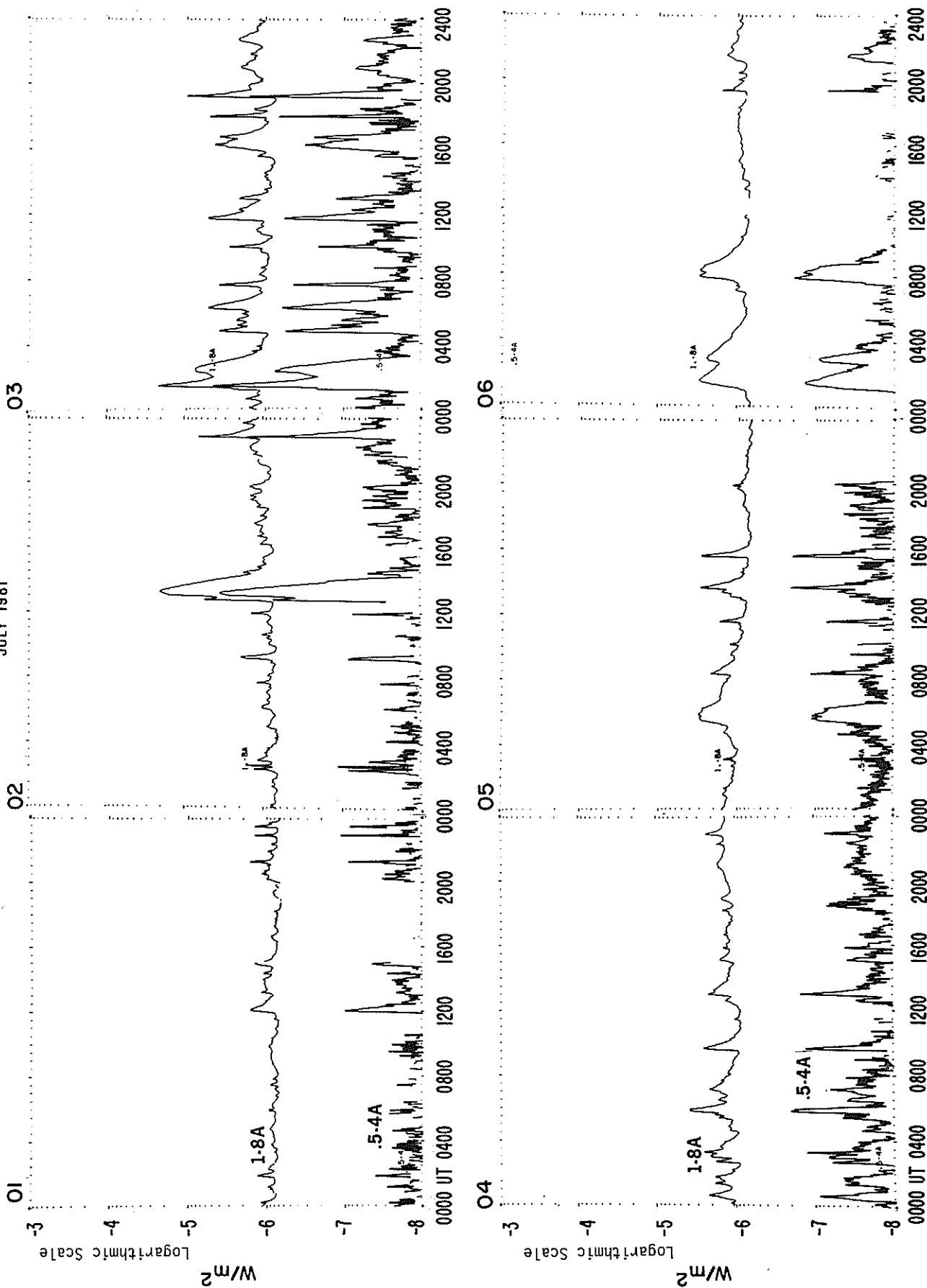
Explanation of Type Code:

1 Simple 1	6 Minor	22 Simple 3F	27 Rise and Fall	32 Absorption	44 Noise Storm in Progress
2 Simple 1F	7 Minor +	23 Simple 3AF	28 Precursor	40 Fluctuation	45 Complex
3 Simple 2	8 Spike	24 Rise	29 Post Burst Increase	41 Group of Bursts	46 Complex F
4 Simple 2F	20 Simple 3	25 Rise A	30 Post Burst Increase A	42 Series of Bursts	47 Great Burst
5 Simple	21 Simple 3A	26 Fall	31 Post Burst Decrease	43 Onset of Noise Storm	48 Major
					49 Major +
1A Simple 1A	2A Simple 1AF	240 Rise only	26A Fall A	27F Rise and Fall F	31A P.B. Decrease A
3A Simple 2A	4A Simple 2AF	240F Rise only F	260 Fall Only	27AF Rise and Fall AF	32A Absorption A
21A Simple 3A GRF		24P Post Rise	26F Fall F		46F Complex F
		24PF Post Rise F			

Under the "Remarks" column heading, RIF stands for Relative Increase in Flux. The expression "RIF 469.2", for example, denotes a flux increase of 469.2% above background.

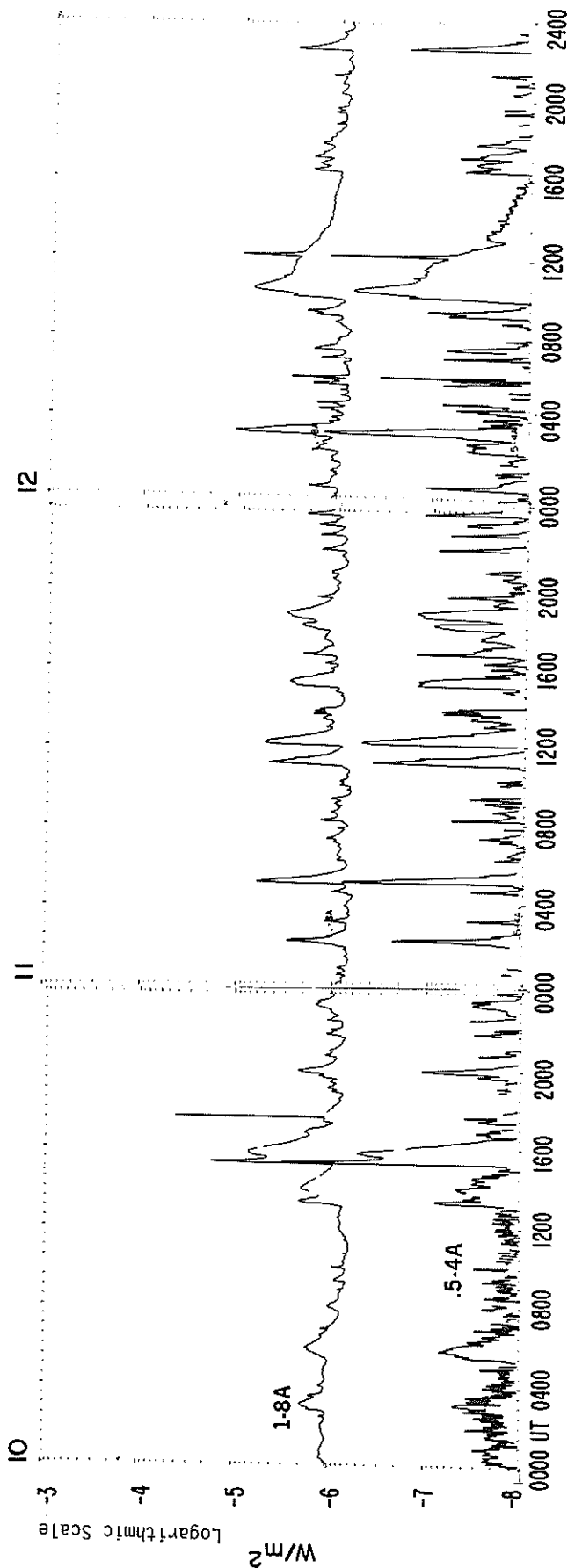
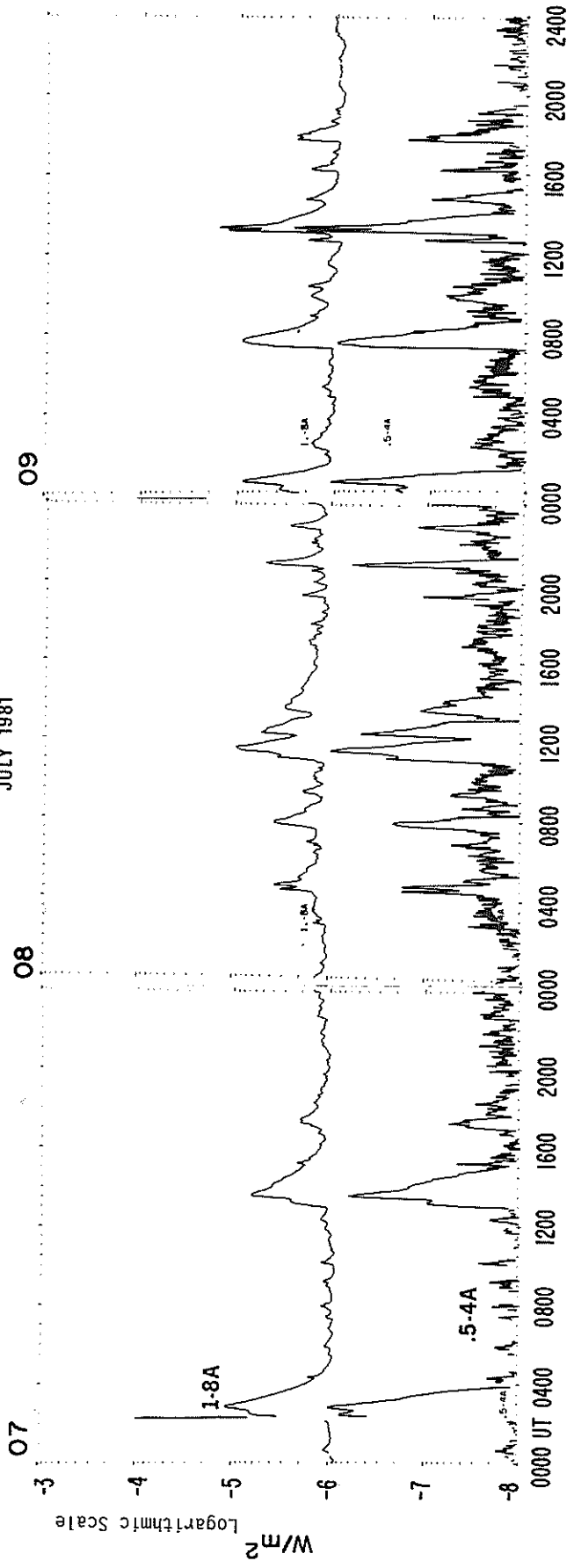
SMS-GOES X-RAYS

JULY 1981



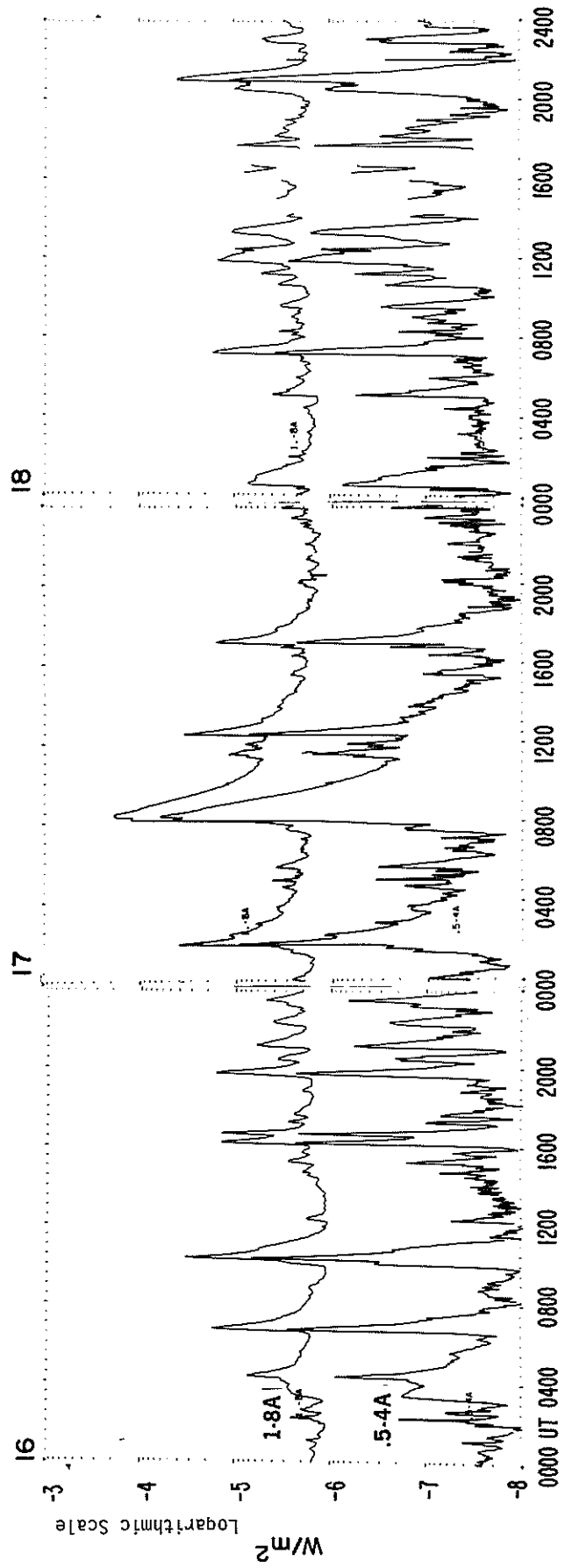
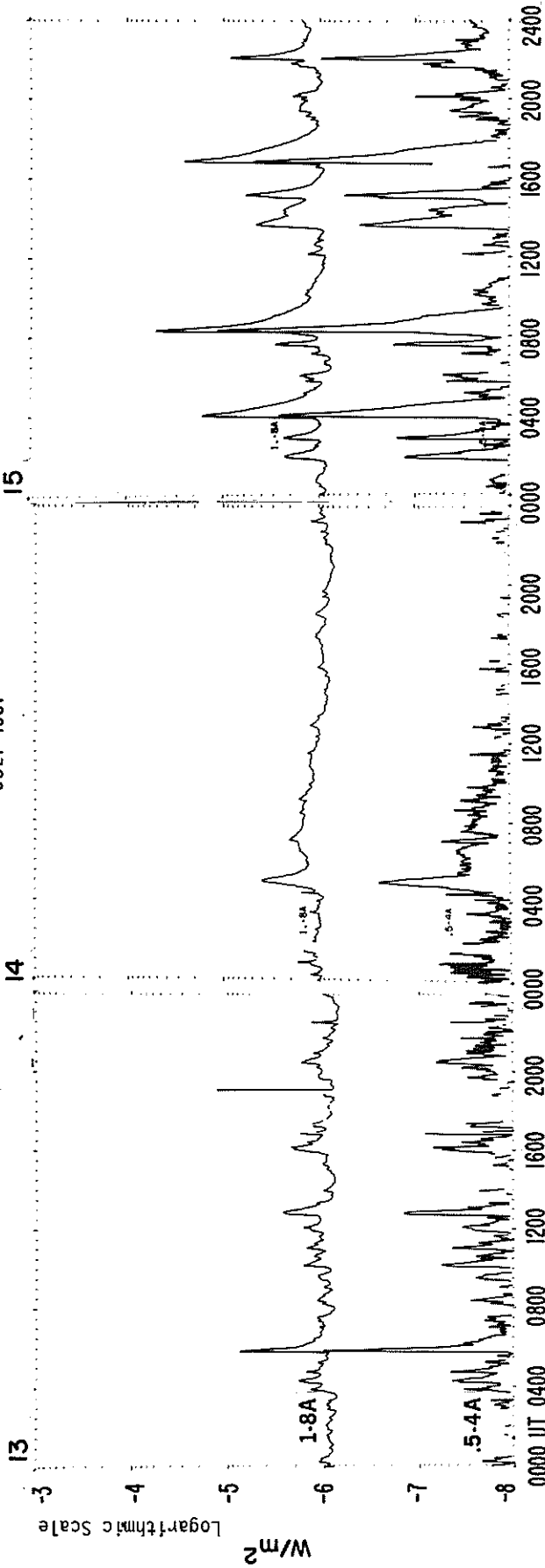
SMS-GOES X-RAYS

JULY 1981



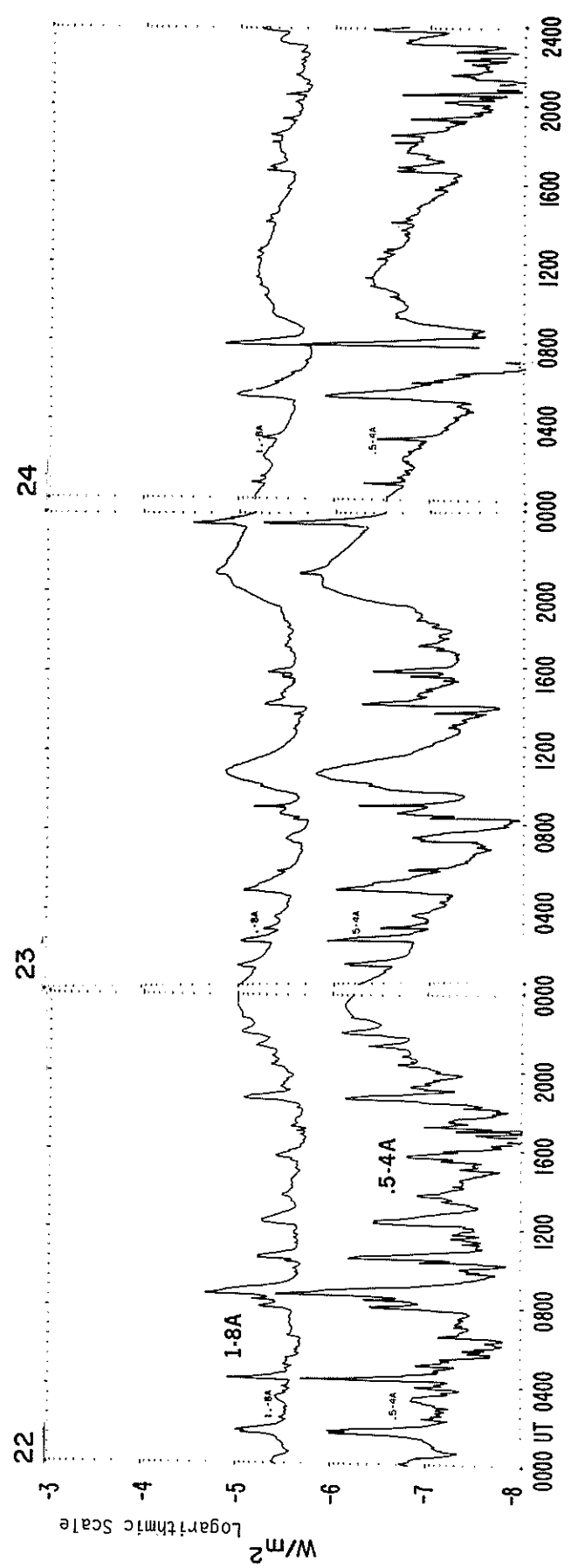
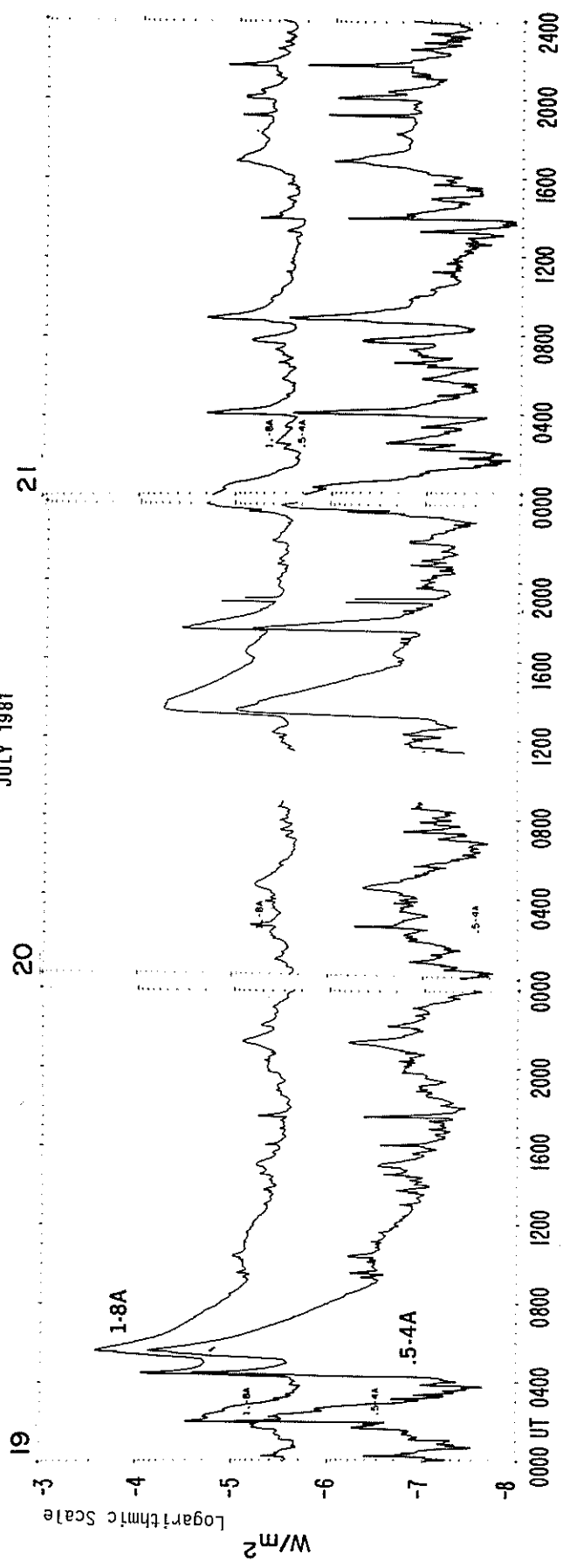
SMS-GOES X-RAYS

JULY 1981



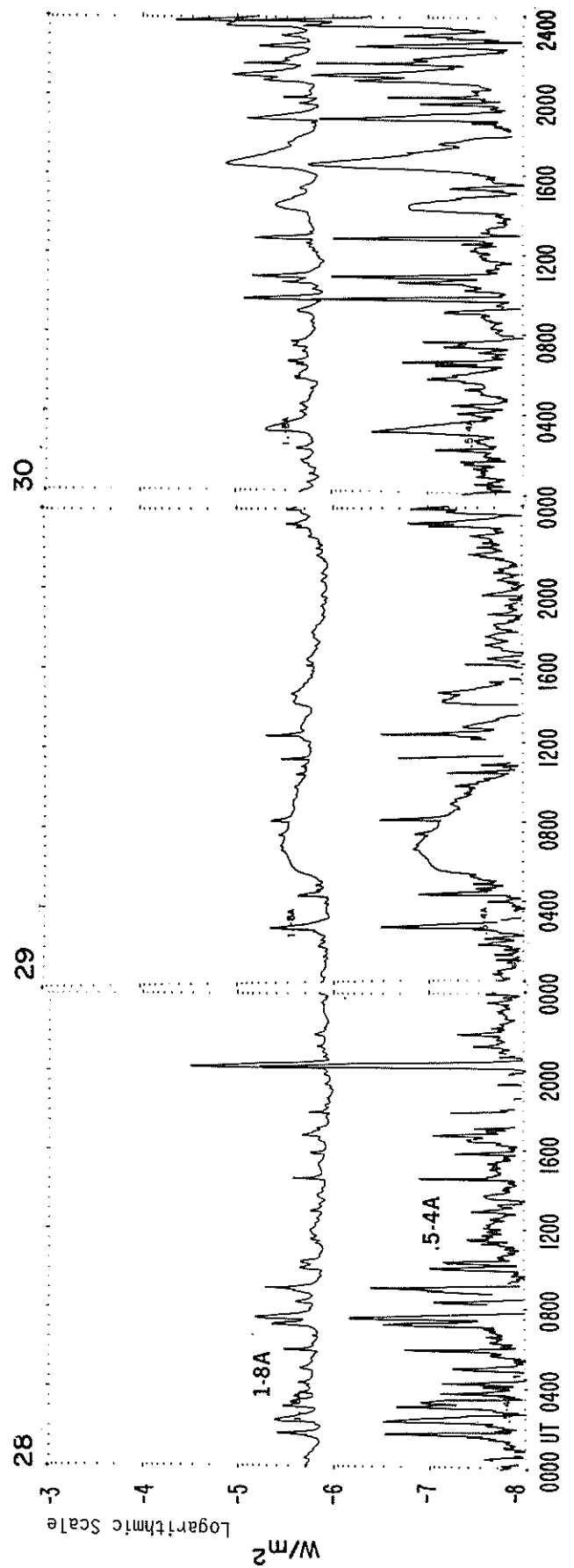
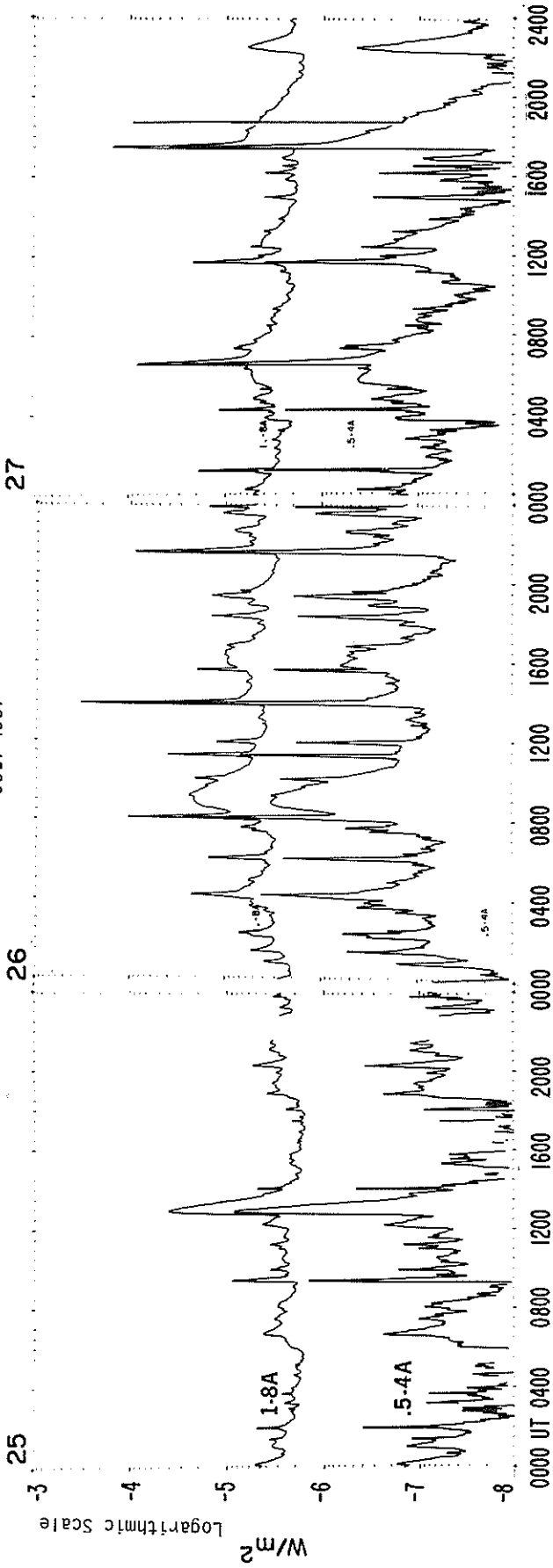
SMS-GOES X-RAYS

JULY 1981



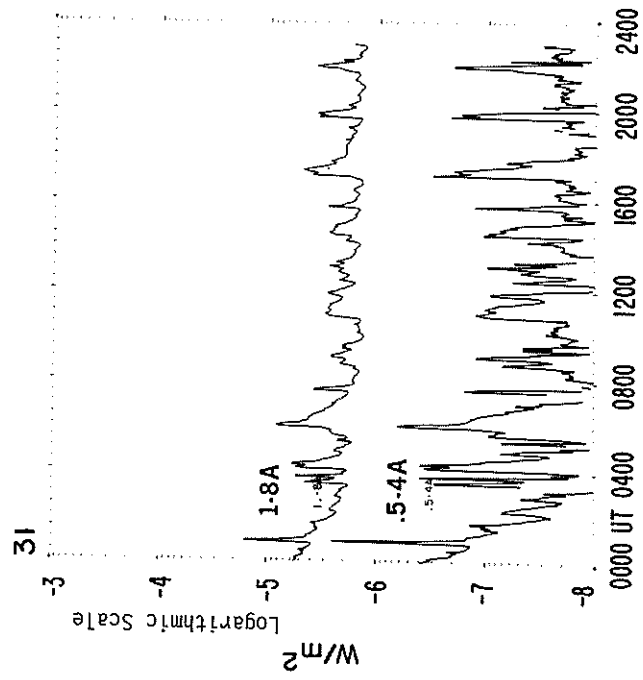
SMS-GOES X-RAYS

JULY 1981



SMS-GOES X-RAYS

JULY 1981



MASS EJECTIONS FROM THE SUN

July 1981

Station	Day	Observed UT			Location		Wavelength	Type of Event
		Start	Max	End	RA°	R/R ₀		
KHAR	Jul 01	1010		1042	180	0.17	H-alpha	S
KHAR	Jul 01	1120		1130	280	1.00	H-alpha	S
KHAR	Jul 03	0805		0835	259	1.00	H-alpha	S
ABST	Jul 04	0534	0537	0538	260	1.00	H-alpha	SP
ABST	Jul 04	0606	0620	0630	283	1.00	H-alpha	SP
KHAR	Jul 04	0816		0830	258	1.00	H-alpha	S
KHAR	Jul 04	0830		0900	279	1.00	H-alpha	S
KHAR	Jul 04	0838		0857	258	1.00	H-alpha	S
DWIN	Jul 06	0827.1		0827.2			Decimeter	IV
WEND	Jul 08	0637E		0742D	072	1.0 -1.14	H-alpha	Q
WEND	Jul 08	0704	0713	0723	101	1.0	H-alpha	S
WEND	Jul 08	0958	1010	1038D	101	1.0	H-alpha	S
WEND	Jul 08	1131	1138	1224	073	0.98-1.10	H-alpha	SP
WEND	Jul 08	1228	1240	1246	101	1.0 -1.06	H-alpha	S
WEND	Jul 08	1601	1605	1610	254	1.0	H-alpha	S
WEND	Jul 08	1701	1707	1722	265	0.98	H-alpha	S
WEND	Jul 08	1753	1801	1809	265	0.98	H-alpha	S
WEND	Jul 09	0509E	0528	0605	266	1.0	H-alpha	S
WEND	Jul 09	0716E	0727	0750	254	1.0 -1.05	H-alpha	SP?
WEND	Jul 09	1524	1528	1554	099	0.97-1.02	H-alpha	S
WEIS	Jul 12	1032.6		1041.2			30- 86	II Harmonic
CULG	Jul 13	0424		0426			Meter	II
DWIN	Jul 17	0816		0855			Decimeter	IV
WEIS	Jul 17	0838.8		0920.3			30-260	IV Moving
WEIS	Jul 17	0839.0		0846.5			160-1000	IV Decimeter
DWIN	Jul 19	0516.5		0517.1			Decimeter	IV
DWIN	Jul 19	0522.3		0527.6			Decimeter	IV
CULG	Jul 19	0526					Meter	IV
CULG	Jul 19	0534.5		0550			Meter	II
WEIS	Jul 19	0534.9		0549.2			30- 86	II Harmonic
LEAR	Jul 19	0535.5		0541.4			Meter	II
LEAR	Jul 19	0541.4		0640.4			Meter	IV
DWIN	Jul 19	0558.1		0619.0			Decimeter	IV
WEIS	Jul 19	0558.4		0600.4			30- 86	II Harmonic
CULG	Jul 19	0558.5		0715			Decimeter; meter	IV
DWIN	Jul 19	0850.2		0930			Decimeter	IV
KHAR	Jul 20	0758		0801	103	0.87	H-alpha	S
KHAR	Jul 20	0838	0845	0927	063	0.38	H-alpha	S
KHAR	Jul 20	0928	0943	1015	090-097	0.74-0.79	H-alpha	S
HARV	Jul 20	1322		1332			Meter	II
WEIS	Jul 20	1322.2		1354.6			30- 140	II Harmonic
SGMR	Jul 20	1323.0		1330.0			Meter	II
DWIN	Jul 20	1554		1603			Decimeter	IV
WEIS	Jul 20	1606.3		1627.5			30- 86	II Harmonic
HARV	Jul 20	1608		1614			Meter	II
SGMR	Jul 20	1608.0		1618.0			Meter	II
HARV	Jul 20	1619		1622			Meter	II
CULG	Jul 20	2158		2159			Meter	Possible II
CULG	Jul 21	0400.5		0715			Decimeter	IV
CULG	Jul 21	0403.5		0418.5			Meter	II Herringbone
LEAR	Jul 21	0405.3		0702.1			Meter	IV
CULG	Jul 21	0420		0520			Meter	IV
KHAR	Jul 21	0808	0809	0822	109	1.03	H-alpha	S
KHAR	Jul 21	0824		0827	099	0.61	H-alpha	S
KHAR	Jul 21	0912	0912	0940	109	1.03	H-alpha	S
KHAR	Jul 21	0940		1000	104	1.02	H-alpha	S
KHAR	Jul 21	1024	1030	1058	109	1.03	H-alpha	S

MASS EJECTIONS FROM THE SUN

July 1981

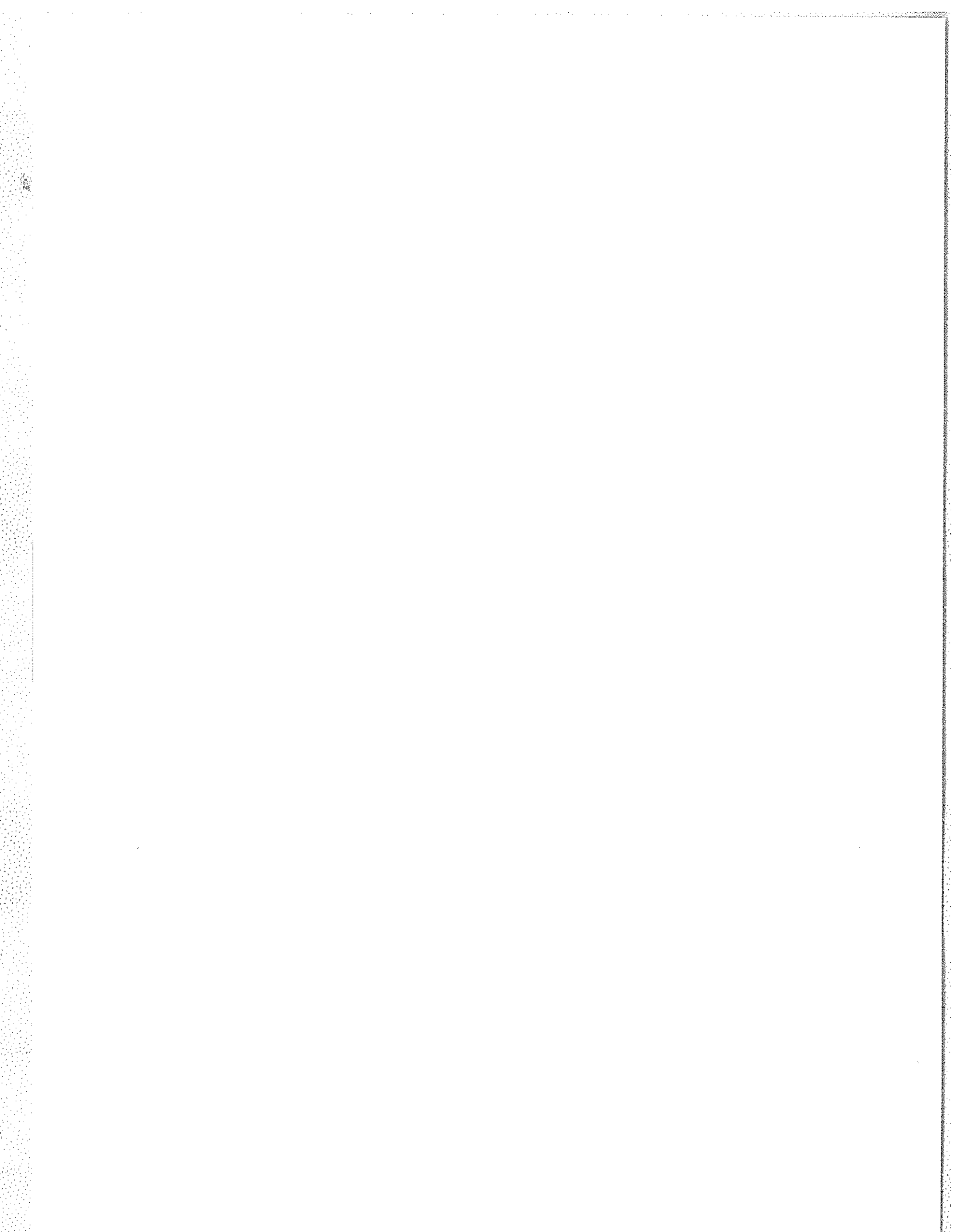
Station	Day	Observed UT			Location		Wavelength	Type of Event
		Start	Max	End	RA°	R/R ₀		
KHAR	Jul 21	1025	1025	1040	104	1.03	H-alpha	S
KHAR	Jul 21	1043	1045	1058	107	1.02	H-alpha	S
DWIN	Jul 21	1621		1625			Decimeter	IV
DWIN	Jul 22	1819		1839			Decimeter	IV
DWIN	Jul 23	0900		0913			Decimeter	IV
KHAR	Jul 24	0831	0837	0906	094	1.02	H-alpha	S
KHAR	Jul 24	0935	0945	1011	095	1.02	H-alpha	S
DWIN	Jul 24	1448.3		1448.7			Decimeter	IV
KHAR	Jul 25	0805		0806	118	0.77	H-alpha	S
KHAR	Jul 25	0905		1020	118	0.77	H-alpha	S
KHAR	Jul 26	0752	0752	0815	102-104	0.52-0.67	H-alpha	S
DWIN	Jul 26	0812		0830			Decimeter	IV
DWIN	Jul 26	1211.4		1300			Decimeter	IV
DWIN	Jul 26	1349		1354			Decimeter	IV
DWIN	Jul 26	1644.0		1647.0			Decimeter	IV
DWIN	Jul 27	0633		0644			Decimeter	IV
KHAR	Jul 27	0802		0828	139-142	0.46	H-alpha	S
KHAR	Jul 27	0805	0810	0842	179-182	0.19-0.20	H-alpha	S
KHAR	Jul 27	0826	0826	0907	139-140	0.87-0.92	H-alpha	S
HARV	Jul 27	1731		1736			Meter	II
KHAR	Jul 28	0850	0850	0900	282	1.04	H-alpha	S
PALE	Jul 28	2007.3		2026.3			Meter	IV
HARV	Jul 28	2009		2017			Meter	IV Pulsations
CULG	Jul 29	0526		0532			Meter	II
LEAR	Jul 31	0050.8		0112.3			Meter	II
CULG	Jul 31	0052		0057			Decimeter	IV Pulsations
CULG	Jul 31	0100		0112			Meter	II
KHAR	Jul 31	0600	0600	0620	242	0.71	H-alpha	S
KHAR	Jul 31	1053		1100	249	0.69	H-alpha	S

QUALIFIERS ON START, MAX AND END TIMES
 D = event ended after tabulated time
 E = event began before the tabulated time
 U = uncertain time

REPORTING STATIONS
 ABST = Abastumani
 BIGB = Big Bear
 BLEN = Bleien
 CULG = Culgoora
 DWIN = Dwingeloo
 GEOR = Georgiana
 HALE = Haleakala
 HAOC = High Altitude Observatory's SMM
 Coronagraph/Polarimeter
 HAOK = High Altitude Observatory's MARK-III
 Coronameter at Mauna Loa
 HARV = Harvard (Fort Davis)
 KHAR = Kharkov
 LEAR = Learmonth
 MANI = Manila
 MITK = Mitaka
 NRLC = Naval Research Laboratory's White-Light
 Coronagraph Experiment on P78-1
 PALE = Palehua
 SGMR = Sagamore Hill
 TELV = Tel Aviv
 WEIS = Weissenau
 WEND = Wendelstein
 UDAI = Udaipur

TYPE OF EVENT
 A = eruptive active region prominence
 CB = coronal cloud bubble
 D = coronal depletions
 E = coronal enhancement
 EL = coronal expanding loop
 II = Type II radio burst
 IVm = moving Type IV radio burst
 Q = eruptive quiescent prominence
 R = coronal ray or streamer
 S = flare-surge if there is a known flare
 association
 SP = flare-spray if there is a known flare
 association
 * = movement may be caused by ionospheric
 refraction

NOTE: Because only a small fraction of the data taken by satellite-borne coronagraph had been analyzed at the time this table was assembled, many events are defined solely by ground-based observatory reports.



SGD 449 Part II (Comprehensive)

MARCH 1980 DATA

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H α SOLAR FLARES

MARCH 1980

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
332 CULG	01	0004	0013	0029	S10	W01	.051	16685	1.1	25	-F	C	0013	100	1.0		
333 CULG	01	0120	0122	0129	S13	E15	.273	16676	2.2	9	-N	C	0122	150	1.5	F	
334 PALE	01	0136	0141	0150	S28	W56	.836	16686	5.3	14	-F	3 C		50			
335 CULG	01	0148	0212	0227	S09	W41	.651	16677	4.1	39	-N	C	0212	100	1.3		
GRP82336	01	0207+8	0216+4	0234	N02	E32	.548	16681	3.5	27	-N			120	1.4	U	
CULG	01	0207	0216	0234	N02	E33	.562	16681	3.6	27	-N	C	0216	160	1.9	U	
YUNN	01	0215	0220	0227	N02	E32	.548	16681	3.5	12	-F	C		80	1.0		
PURP	01	0219E	0219	0234	N03	E32	.552	16681	3.5	15D	1N	P					
337 CULG	01	0359	0410	0415	S26	W54	.815	16686	5.2	16	-F	C	0410	70	1.2	T	
338 CULG	01	0528	0537	0545	N13	W90	1.000		8.0	17	-F	C	0537	40			
339 ABST	01	0620	0626	0645	N01	E32	.544	16681	3.7	25	-F	C	0626	131	1.5	E	
340 ABST	01	0620E	0628	0653	S24	E04	.296	16673	1.6	33D	-F	P	0628	87	.9	D	
341 ABST	01	0620E	0628	0645	S13	E14	.258	16676	2.3	25D	-F	P	0628	87	.9	D	
342 ABST	01	0625	0628	0653	S24	W58	.847	16686	5.6	28	-F	C	0628	87	1.7	D	
343 HTPR	01	0726E		0745	S26	W60	.865	16686	5.8	19D	-F	C	0735	20	.4	E	
GRP82344	01	0749+3	0752+3	0803	N12	W33	.616	16667	27.9	14	-N					E	
CULG	01	0749	0753	0806D	N12	W33	.616	16667	3.8	17D	-N	P	0753	110	1.4		
CATA	01	0750E	0755	0755D	N11	W33	.610	16667	3.8	5D	-B	2	0755	56	.7		
HTPR	01	0751	0752	0803	N12	W36	.651	16667	4.0	12	-F	C	0752	30	.4	E	
KANZ	01	0752	0752	0802	N12	W33	.616	16667	3.8	10	-N	1					
GRP82345	01	0817+0	0820+3	0838	S07	W43	.678	16677	27.1	21	-N					E	
WEND	01	0817	0823	0840	S07	W42	.665	16677	4.5	23	-N	C	0823	100	1.4		
KANZ	01	0817	0820	0838	S07	W43	.678	16677	4.6	21	-N	1					
HTPR	01	0817	0821	0838	S08	W46	.714	16677	4.8	21	-F	C	0821	40	.6	E	
GRP82346	01	0840+5	0901+0	0913	S25	W60	.864	16686	25.9	33	-F			50	1.1		
WEND	01	0840E	0901	0920D	S25	W60	.864	16686	5.9	40D	-F	C	0901	56	1.3		
HTPR	01	0845	0901	0912	S26	W61	.873	16686	5.9	27	-F	C	0901	30	.6	E	
KANZ	01	0858	0901	0913	S26	W59	.858	16686	5.8	15	-N	1					
MONT	01	0858	0901	0905	S25	W69	.927	16686	6.5	7	-F	C	0901	50		D	
GRP82347	01	0930+3	0941+2	1000	S28	W03	.358	16673	1.2	30	-F					EH	
HTPR	01	0930	0942	0952	S30	W06	.398	16673	1.8	22	-F	C	0942	20	.2	E	
WEND	01	0932	0941	1000	S28	W03	.358	16673	1.6	28	-F	C	0941	70	.8	H	
KANZ	01	0933	0943	1003	S28	W03	.358	16673	1.6	30	-F	1				H	
GRP82348	01	1247+0	1254+1	1324	N15	E26	.560	16680	3.5	37	-N					E	
			1307														
HTPR	01	1247	1254	1325	N17	E26	.578	16680	3.5	38	-N	C	1254	120	1.3	E	
KANZ	01	1247	1255	1315	N15	E27	.571	16683	3.6	28	-N	2					
ATHN	01	1302E	1307	1324	N14	E21	.521	16687	3.1	22D	-N	3 V	1307	98	1.1		
349 HTPR	01	1435	1459	1510	S26	W63	.888	16686	6.3	35	-F	C	1459	20	.4		
350 HTPR	01	1540	1606	1625	S09	W10	.175	16685	2.4	45	-N	C	1606	80	.8	E	
	01	1656	2059		NO FLARE PATROL												
	01	1656	2059		NO FLARE PATROL												
351 PALE	01	2018	2019	2039	S26	W03	.326	16673	2.1	21	-F	3 C		27			
352 PALE	01	2027	2028	2030	S13	E04	.122	16676	2.2	3	-F	3 C		26		D	
	01	2109	2124		NO FLARE PATROL												
GRP82353	01	2306+2	2308+5	2323	S29	W12	.415	16673	1.1	17	-N			50	.6	DH	
VORO	01	2306	2308	2319	S29	W12	.415	16673	2.9	13	-B	C	2308	63	.7	DH	
CULG	01	2308	2313	2326	S29	W13	.422	16673	2.9	18	-N	C	2313	50	.5		
GRP82354	01	2311+3	2312+4	2322	S27	W66	.909	16686	26.0	11	-N			35		D	
VORO	01	2311	2312	2319	S26	W66	.909	16686	6.9	8	-F	C	2312	45		D	
CULG	01	2311	2315	2322	S26	W67	.915	16686	7.0	11	-N	C	2315	40			
PALE	01	2313	2315	2324	S29	W66	.910	16686	6.9	11	-N	3 C		21			
HOLL	01	2314	2316	2322	S28	W66	.910	16686	6.9	8	-N	3 C		25			

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H α SOLAR FLARES

MARCH 1980

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS AREA Mill of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
374	VORO	03 0152	0152	0201	S29	W22	.501	16673	4.7	9	-F	C	0152	45	.5	DHL	
375	CULG	03 0404	0409	0416	S13	E75	.960	16699	8.8	12	?F	C	0409	120			
		IMP.1 NO : YUNN															
376	CULG	03 0439	0442	0447	S07	W68	.923	16677	8.3	8	-F	C	0442	50			
377	YUNN	03 0615E		0635	S26	W82	.984	16686	9.4	200	-N	P	0617	32			
378	CULG	03 0718	0726	0735	S25	W85	.991	16686	9.7	17	1F	C	0726	130			
GRP82379	03 0745E	0746+0	0908	S26	W82	.984	16686	26.2	83	-N			60				
	MANI	03 0745E	0746	0754D	S26	W85	.991	16686	9.7	9D	-F	3	V	50	1.5		
	ATHN	03 0745E	0746	0908	S26	W80	.978	16686	9.3	83D	1B	3	V	0746	82	4.1	
380	KANZ	03 1040	1040	1044D	S26	W83	.986	16686	9.7	4D	-N	1					
		03 1400	1736	NO FLARE PATROL													
		03 1756	1806	NO FLARE PATROL													
		03 1825	1903	NO FLARE PATROL													
		03 1931	1948	NO FLARE PATROL													
381	PALE	03 1942	1943	1956D	S00	W03	.136	16681	4.0	14D	-F	3	C	48			
		03 1952	2037	NO FLARE PATROL													
		03 2042	2053	NO FLARE PATROL													
382	CULG	03 2053E	2053E	2100	S26	W89	.997	16686	10.5	7D	-N	P	2053	80			
383	CULG	03 2150	2153	2158	S08	W80	.982	16677	9.9	8	-F	C	2153	60			
384	CULG	03 2206	2210	2226	S26	W89	.997	16686	10.6	20	1N	C	2210	80			
385	CULG	03 2211	2212	2222	S13	E75	.960	16699	9.5	11	1F	C	2212	120			
386	CULG	03 2212	2222	2232D	S12	W24	.409	16676	5.7	20D	1N	P	2222	400	4.4	F	
		03 2232	2238	NO FLARE PATROL													
387	CULG	03 2249	2250	2306	S08	W82	.988	16677	10.1	17	?F	C	2250	80		K	
		IMP.1 NO : VORO															
388	CULG	03 2320	2344	2355	S08	W82	.988	16677	10.1	35	-N	C	2344	60		K	
389	CULG	04 0022	0033U	0044	S07	W10	.172	16681	4.8	22	-N	C	0033	120	1.2		
390	VORO	04 0138	0138	0147	N11	E69	.946	16696	9.2	9	-F	C	0138	99		D	
GRP82391	04 0335+0	0345+6	0438	S23	W36	.616	16673	1.4	63	1F			220	2.8	EIU		
	YUNN	04 0335	0345	0430	S22	W37	.624	16673	6.9	55	1N	C	225	3.0	E		
	CULG	04 0335	0351	0446	S22	W37	.624	16673	6.9	71	2N	C	0351	560	7.3	UI	
	PALE	04 0337E	0346	0348D	S25	W34	.602	16673	6.7	11D	1F	3	C	205			
	MANI	04 0344E	0348	0415D	S25	W35	.613	16673	6.8	31D	1F	3	V	180	2.4	EU	
392	CULG	04 0352	0358	0407	S28	W90	.998		10.9	15	-N	C	0358	30			
393	CULG	04 0407U	0421U	0450	N08	E67	.930	16696	9.2	43D	-N	P	0421	70	1.8		
394	ABST	04 0622	0623	0630	N12	E90	1.000	16698	11.0	8	?N	C	0623	87		AD,IV	
		IMP.1 NO : YUNN															
395	ABST	04 0638	0642	0645	S15	E57	.832	16699	8.6	7	-N	C	0642	87	1.7	DJ	
396	ABST	04 0638	0643	0645D	N19	E05	.449	16683	4.7	7D	-N	*	C	0643	87	1.0	DJ
397	ABST	04 0640	0641	0645	S01	W08	.176	16681	4.9	5	-N	C	0641	131	1.3	EIV	
398	HPR	04 0745		0750D	S29	W90	.998		11.1	5D	-N	C	0747	30			
399	KHAR	04 0908E		1008D	N44	W90	1.004		11.1	60D	-F	P	0946				
400	KHAR	04 0916E		0931	N27	W85	1.000	16667	10.8	15D	-F	V	0916				
401	KHAR	04 0916E		0930	S08	E53	.793	16699	8.4	14D	?F	*	V	0916		B	
		IMP.1 NO : YUNN KANZ															
402	KANZ	04 1008	1008	1027	N14	W11	.405	16680	5.2	19	-F	1				H	

H α SOLAR FLARES

MARCH 1980

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLACE REGION			CHP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
403 KHAR	04	1010		1012D	S28	W36	.641	16673	7.1	2D	-F	V	1012			E	
	04	1145	1159	NO FLARE PATROL													
GRP82404	04	1333	1355+4	1445	S14	W31	.518	16676	2.2	72	-N						
KANZ	04	1333	1359	1431D	S13	W31	.516	16676	6.9	58D	-N	*				EHK	
HTPR	04	1336E		1445	S19	W27	.481	16684	6.6	69D	-N					H	
HTPR	04	1348	1355	1415	S11	W35	.570	16676	7.2	27	-N	*	C	1337	120	1.3	EIK
	04												C	1355	100	1.2	
405 HTPR	04	1438	1442	1455	N11	E25	.513	16694	6.5	17	-F		C	1442	20	.2	
406 HTPR	04	1454	1508	1515	S29	W90	.998		11.4	21	-F		C	1508	40		
407 HTPR	04	1520	1523	1530	S08	W90	1.000	16667	11.4	10	-F		C	1523	40		
408 HTPR	04	1520	1544	1552	S29	W90	.998		11.4	32	-F	*	C	1544	20		
409 BIGB	04	1644E	1647U	1655D	S27	W90	.998		11.4	11D	1B	3	P	1647	70		
410 BIGB	04	2238	2243	2252	S27	W90	.998		11.7	14	?B	2	C	2243	70		
		IMP.1 NO : PALE VORO															
411 VORO	05	0049	0052	0055D	N29	E01	.591	16688	5.1	6D	-F		C	0052	90	1.1	DGJ
GRP82412	05	0157+4	0202	0235	S24	W48	.753	16673	1.5	38	1N				140	2.2	EH
			0205+9														
CULG	05	0157	0213	0253U	S23	W50	.771	16673	8.8	56D	1N		C	0213	180	2.7	
PALE	05	0201	0202	0241	S26	W47	.748	16673	8.6	40	-N	3	C		123		
VORO	05	0201	0205	0229	S24	W47	.743	16673	8.6	28	-N		C	0205	99	1.5	EH
MANI	05	0206E	0208	0211D	S24	W49	.763	16673	8.8	5D	-F	3	V		50	.8	
YUNN	05	0212E	0214	0221	S21	W48	.747	16673	8.7	9D	1N		C		193	3.0	
GRP82413	05	0209+4	0215+0	0224	S18	W17	.338	16682	3.8	15	-F				130	1.4	E
PALE	05	0209	0215U	0228	S19	W22	.413	16682	6.7	19	-F	3	C		113		
VORO	05	0213	0215	0219	S17	W13	.276	16682	6.1	6	-N		C	0215	152	1.6	E
414 CULG	05	0234	0243	0252	N11	E24	.501	16694	6.9	18	-N		C	0243	30	.3	
415 ABST	05	0823	0825	0835	S13	E42	.665	16699	8.5	12	-N		C	0825	131	1.7	EJ
GRP82416	05	1005+2	1007+0	1015	S11	W47	.726	16676	1.9	10	-F						E
MONT	05	1005	1007	1014	S11	W47	.726	16676	8.9	9	-F		C	1007	50		E
KANZ	05	1007	1007	1015	S12	W47	.726	16676	8.9	8	-F	1					
GRP82417	05	1058E	1102	1118	S17	W16	.316	16682	4.3	20	-F						E
KANZ	05	1058E	1102	1117	S17	W18	.344	16682	6.8	19D	-F	*					
HTPR	05	1101E		1119D	S17	W15	.302	16682	6.6	18D	-F	*	C	1104	40	.4	E
418 KANZ	05	1058E	1106	1157	N27	W05	.568	16688	5.8	59D	-F	*					G
419 KANZ	05	1058E		1157	S23	W53	.801	16673	9.4	59D	-N	1					
420 KANZ	05	1058E		1121	N14	W25	.540	16680	7.3	23D	-F	*					
421 KANZ	05	1348	1351	1359	S26	W54	.815	16673	9.6	11	-F	1					
422 KANZ	05	1419	1433	1441D	N29	W07	.600	16688	6.1	22D	-F	1					G
GRP82423	05	1437+1		1452	S23	W59	.854	16673	1.2	15	-F						E
KANZ	05	1437	1441	1441D	S23	W54	.810	16673	9.7	4D	-F	1					
WEND	05	1438		1452	S23	W64	.893	16673	10.4	14	-F		C	1440	31		E
424 WEND	05	1520		1540	S25	W62	.880	16673	10.3	20	-F		C	1530	50	1.2	E
	05	1610	1616	NO FLARE PATROL													
	05	1717	1726	NO FLARE PATROL													
425 VORO	06	0006	0010	0021	S05	E31	.514	16699	8.3	15	-F		C	0010	63	.8	DH
426 HOLL	06	0013	0014	0019	S25	W59	.856	16676	10.4	6	-F	3	C		19		
	06	0423	0437	NO FLARE PATROL													
427 CULG	06	0437E	0437E	0449D	N15	W25	.549	16683	8.1	12D	2N		P	0437	480	5.8	
	06	0448	0454	NO FLARE PATROL													
	06	0552	0558	NO FLARE PATROL													

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
428 ABST	06	0644E	0646	0648D	N05	W46	.737	16681	9.7	4D	-N	P	0646	87	1.3	EJ	
429 ABST	06	0849	0851	0900	S13	E26	.442	16699	8.3	11	-N	C	0851	174	2.0	FJ	
430 ABST	06	0851	0854	0900	N05	W46	.737	16681	9.8	9	-N	C	0854	87	1.3	DJ	
	06	0935	0952	NO FLARE PATROL													
	06	1041	1048	NO FLARE PATROL													
GRP82431	06	1051>9	1101+0	1146	S17	W30	.513	16682	4.2	55	-N					E	
KANZ	06	1051	1101	1121D	S17	W31	.527	16682	8.8	30D	-N	1					
LVOV	06	1101	1101	1146	S17	W30	.513	16682	8.7	45	1F	C	1101	250	3.0	E	
432 WEND	06	1358	1405	1437	S14	E26	.445	16699	8.5	39	-N	C	1405	125	1.5		
433 HOLL	06	1604	1605	1627	N02	W45	.717	16681	10.0	23	-F	3 C		30			
	06	1804	1838	NO FLARE PATROL													
	06	1848	1918	NO FLARE PATROL													
	06	1940	2046	NO FLARE PATROL													
GRP82434	06	2050+4	2056+2	2114	N02	W44	.705	16681	3.6	24	-N					F	
PALE	06	2050E	2056U	2059	N01	W44	.703	16681	10.2	9D	-F	2 C		52			
CULG	06	2054	2058	2128	N03	W45	.720	16681	10.2	34	1B	C	2058	200	2.8	F	
435 CULG	06	2056	2059	2110	N13	W25	.531	16683	8.7	14	-N	C	2059	40	.5		
436 CULG	06	2253	2301	2335	N14	E08	.386	16694	7.6	42	-N	C	2301	160	1.8	H	
437 CULG	07	0010	0018	0030	S33	E90	.999	16706	13.8	20	-F	C	0018	30			
438 CULG	07	0031	0045U	0130	N05	W45	.726	16681	10.4	59	1F	C	0045	280	3.9	FI	
439 CULG	07	0335	0358	0426	S15	W63	.884	16684	11.9	51	1F	C	0358	120	2.4	F	
440 ABST	07	0618E	0619	0630D	N15	W41	.723	16683	10.3	12D	-N	P	0619	87	1.3	D	
441 ABST	07	0619E	0621	0625	S13	E15	.273	16699	8.4	6D	-N	P	0621	87	.9	D	
442 CULG	07	0655	0715	0729	N05	W51	.792	16681	11.1	34	-F	C	0715	50	.8		
443 CULG	07	0742	0746	0752	S13	W72	.945	16676	12.7	10	?N	C	0746	140			
		IMP.1 NO : ABST															
GRP82444	07	0750+0	0753+0	0800	N14	W33	.630	16683	4.9	10	-N					J	
ABST	07	0750	0753	0800	N14	W31	.607	16683	9.7	10	-N	C	0753	87	1.1	DJ	
CULG	07	0750	0753	0758D	N13	W31	.600	16683	9.7	8D	-N	P	0753	60	.8		
ABST	07	0750	0753	0800	N15	W41	.723	16683	10.4	10	-N	C	0753	87	1.3	DJ	
	07	0935	0946	NO FLARE PATROL													
	07	0949	0956	NO FLARE PATROL													
	07	1045	1151	NO FLARE PATROL													
	07	1214	1230	NO FLARE PATROL													
	07	1250	1321	NO FLARE PATROL													
	07	1325	1355	NO FLARE PATROL													
	07	1402	1406	NO FLARE PATROL													
445 RAMY	07	1437	1438	1447	S13	W77	.969	16676	13.4	10	-F	3 C					
	07	1530	1600	NO FLARE PATROL													
	07	1603	1615	NO FLARE PATROL													
446 PALE	07	1806E	1806U	1920D	N14	W45	.760	16683	11.1	74D	-F	2 C		50			
447 HOLL	07	1930	1933	1937	S15	W77	.969	16676	13.6	7	-F	3 C					
448 CULG	07	2146U	2158	2214	N18	W47	.797	16683	11.4	28D	-F	C	2158	120	1.9	T	
449 CULG	07	2206	2211	2222	S11	W56	.823	16689	12.1	16	-N	C	2211	60	1.1		
450 VORO	08	0038E		0041	S15	E85	.993	16705	14.4	3D	-N	C	0038	27		CD	
451 PALE	08	0052	0053	0057	N14	W48	.790	16683	11.6	5	-F	3 C		21			
	08	1055	1120	NO FLARE PATROL													
452 KHAR	08	1120E	1123	1157D	S17	W60	.859	16682	13.0	37D	1F	P	1120	130	2.6		

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS		
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mil. of Disk		CORR AREA Sq. Deg.	
					LAT.	MER. DIST.												
GRP82453	08	1229	1235 1243	1316	N14	W55	.853	16683	4.4	47	-F					E		
RAMY	08	1229	1235	1314	N12	W57	.865	16683	12.8	45	-F	3	C	59				
KHAR	08	1240E	1243	1317	N17	W53	.845	16683	12.5	37D	1F		P	1250	180	3.4	E	
GRP82454	08	1313+1	1316+1	1330	S13	00	.100	16699	8.6	17	-F			45		.5	D	
KHAR	08	1313	1317	1323D	S13	W01	.102	16699	8.6	10D	-N		P	1317	60	.6	D	
RAMY	08	1314	1316	1330	S14	E00	.118	16699	8.6	16	-F	3	C	30				
455	RAMY	08	1427	1428	1441	N12	W54	.839	16683	12.7	14	-F	3	C	15			
456	YUNN	09	0437E	0438	0446	N14	E51	.818	16702	13.0	9D	-N		C	96	1.7		
		09	1100	1130	NO FLARE PATROL													
		09	1135	1211	NO FLARE PATROL													
		09	1325	1346	NO FLARE PATROL													
457	KANZ	09	1403	1407	1413	S08	W18	.307	16699	10.9	10	-F	1					
		09	1413	1432	NO FLARE PATROL													
GRP82458	09	1559+3	1604+5	1629	N16	E44	.759	16702	13.0	30	-F							
RAMY	09	1559	1609	1633	N16	E44	.759	16702	13.0	34	-N	3	C	103				
HOLL	09	1602	1604	1624	N16	E44	.759	16702	13.0	22	-F	3	C	27				
459	BIGB	09	1729	1738	1803	N18	E90	1.001	16711	16.5	34	?N	3	C	1738	60		
			IMP.1 NO : HOLL															
GRP82460	09	1743+1	1745+2	1807	N16	W70	.957	16683	4.5	24	-F							
HOLL	09	1743	1745	1807	N16	W70	.957	16683	15.0	24	-F	3	C					
RAMY	09	1743	1745	1800	N17	W67	.943	16683	14.8	17	-F	3	C	50				
BIGB	09	1744	1747	1807D	N16	W72	.966	16703	15.1	23D	1F	3	P	1747	210			
461	HOLL	09	1822	1825	1831	N16	W72	.966	16683	15.2	9	-F	3	C				
462	BIGB	09	2231	2238	2259	S14	W21	.370	16699	11.5	28	-N	3	C	2238	50	.6	
463	PALE	09	2352	2357	0002	N15	E39	.702	16702	12.9	10	-F	3	C	41			
464	CULG	10	0622	0626	0650	S08	W26	.435	16699	12.2	28	-N		C	0626	120	1.4	H
GRP82465	10	0637	0701+1	0711	S15	E49	.750	16705	14.0	34	-N			130	2.0		EHJ	
CULG	10	0637	0701	0711	S15	E48	.739	16705	13.9	34	1N		C	0701	140	2.1		
ABST	10	0658E	0702	0720	S16	E50	.762	16705	14.0	22D	-N		P	0702	131	2.0		
YUNN	10	0700E		0704	S15	E49	.750	16705	14.0	4D	-F		P	0700	129	2.0		
466	ABST	10	0658E	0658	0720	S14	E70	.933	16707	15.5	22D	?N		P	0720	131		EJ
			IMP.1 NO : CULG															
		10	1253	1315	NO FLARE PATROL													
		10	1711	1728	NO FLARE PATROL													
		10	1752	1843	NO FLARE PATROL													
		10	1859	1933	NO FLARE PATROL													
		10	1956	2000	NO FLARE PATROL													
GRP82467	10	2026+2	2033+4	2119	S12	E64	.892	16707	15.7	53	-N			80	1.8		D	
PALE	10	2026	2033	2119	S12	E63	.884	16707	15.6	53	-N	3	C	85				
RAMY	10	2028	2037	2042D	S13	E66	.907	16707	15.8	14D	-N	3	C	84				
468	VORO	10	2228E		2250D	S12	E61	.868	16707	15.5	22D	?F		P	2232	197		E
			IMP.1 NO : PALE															
469	CULG	11	0053	0054	0101	S08	W36	.583	16699	13.7	8	-B		C	0054	80	1.0	
470	CULG	11	0200	0202	0210	S14	E36	.588	16705	13.8	10	-F		C	0202	80	1.0	
471	CULG	11	0316	0323	0331	S14	E34	.560	16705	13.7	15	?F		C	0323	160	2.0	
			IMP.1 NO : PALE VORO YUNN															
472	CULG	11	0419	0437	0456	S12	E12	.221	16704	12.1	37	-N		C	0437	60	.6	
473	CULG	11	0421	0428	0431	S14	E36	.588	16705	13.9	10	-F		C	0428	140	1.8	

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
GRP82474	11	0746+4	0750+1 0810	0850	S16	E36	.592	16705	14.0	64	1N			230	2.9	FJ	
CULG	11	0746	0751	0754D	S16	E36	.592	16705	14.0	80	1B	P	0751	200	2.5		
ABST	11	0747	0750	0850	S15	E36	.589	16705	14.0	63	1N	C	0800	261	3.4	FJ.	
CATA	11	0750	0810	0850	S16	E35	.578	16705	14.0	60	1N	2	0810	253	3.2		
YUNN	11	0758E		0825	S16	E36	.592	16705	14.0	27D	1N	P	0758	209	2.7		
	11	0955	1025	NO FLARE PATROL													
	11	1035	1109	NO FLARE PATROL													
	11	1142	1143	NO FLARE PATROL													
	11	1215	1235	NO FLARE PATROL													
475 VORO	11	2222	2223	2224	S21	E68	.920	16714	17.0	2	-F	C	2223	72		DGL	
GRP82476	12	0212	0214	0228	S13	W48	.738	16699	8.5	16	1F						E
VORO	12	0212	0214	0230	S13	W48	.738	16699	15.7	18	1F	C	0214	251	3.7	E	
YUNN	12	0220E		0225	S13	W48	.738	16699	15.7	5D	-N	P	0220	113	1.8		
GRP82477	12	0723	0728	0800	S15	W52	.783	16699	8.4	37	-F						
HTRP	12	0723	0728	0800	S17	W54	.804	16699	16.4	37	-F	C	0728	40	.7		
YUNN	12	0740E		0743D	S14	W51	.772	16699	16.1	3D	-N	P	0740	80	1.3		
478 HTRP	12	0812	0835	0843	S11	E36	.584	16707	15.0	31	-F	C	0835	40	.5	E	
GRP82479	12	1430+4	1438+2	1449	S15	E15	.286	16705	13.7	19	-F			30	.3	E	
HTRP	12	1430	1438	1455	S13	E15	.273	16705	13.7	25	-F	C	1438	30	.3	E	
RAMY	12	1434	1440	1443	S17	E16	.316	16705	13.8	9	-F	3	C	27			
	12	1848	1907	NO FLARE PATROL													
480 CULG	12	2120	2130	2150	S10	E35	.569	16707	15.5	30	-N	C	2130	100	1.2		
481 CULG	13	0104	0108	0120U	S12	W60	.859	16699	17.5	16D	?F	C	0108	140	2.8		
		IMP.1 NO : VORO YUNN															
482 VORO	13	0105	0106	0115	S15	E11	.230	16705	13.9	10	-F	C	0106	125	1.3	E	
483 CULG	13	0441	0448	0449D	N20	E45	.787	16711	16.6	8D	-F	P	0448	120	1.8	F	
GRP82484	13	0630>9	0645+5	0655	S12	W61	.868	16699	8.7	25	-N			50	1.0		
ATHN	13	0630E	0645	0655D	S13	W58	.841	16699	17.6	25D	-N	* V	0645	49	.9		
CULG	13	0649	0650	0655	S11	W64	.893	16699	18.1	6	-N	* C	0650	50	1.1		
485 CULG	13	0634	0635	0639	N09	E54	.831	16711	17.3	5	-F	C	0635	60	1.1		
GRP82486	13	0659+1	0700+5	0724	S10	E44	.689	16713	16.6	25	-N						E
CULG	13	0659	0705	0732	S10	E44	.689	16713	16.6	33	1N	C	0705	200	2.8		
YUNN	13	0700E	0700	0705D	S11	E45	.702	16713	16.7	50	-N	P		64	.9	E	
CATA	13	0700	0705	0715	S09	E44	.728	16711	16.6	15	-B	2	0705	112	1.6		
MANI	13	0702E	0702U	0710D	S10	E46	.714	16713	16.7	8D	-F	3	V	30	.4		
487 KHAR	13	0853E		0935D	S13	W66	.907	16699	18.3	42D	?F	P	0910			E	
		IMP.1 NO : CATA YUNN															
GRP82488	13	0938>9	0959	1019	S11	E42	.664	16713	16.6	41	-N						EH
KHAR	13	0938E		1035D	S09	E43	.677	16713	16.6	57D	-F	P	0946	100	1.4	EH	
MONT	13	0953	0959	1019	S11	E42	.664	16713	16.6	26	-N	C	0959	180			
CATA	13	1000E	1000	1010D	S11	E41	.651	16713	16.5	10D	1N	2	1000	197	2.7		
YUNN	13	1009E	1009	1018	S11	E43	.677	16713	16.6	9D	-N	C		48	.7	H	
489 KHAR	13	1111E	1114	1124D	S08	E44	.690	16713	16.8	13D	-F	P	1114	50	.7	D	
GRP82490	13	1238	1238	1254	S17	E04	.183	16705	13.8	16	-F						E
RAMY	13	1238	1238	1247	S17	E04	.183	16705	13.8	9	-F	3	C	29			
KHAR	13	1239E		1300D	S17	E04	.183	16705	13.8	21D	-F	P	1239	80	.8	E	
491 RAMY	13	1354	1354	1432	S18	E04	.199	16705	13.9	38	-F	3	C	38			
492 RAMY	13	1432	1432	1438	S14	W68	.920	16699	18.7	6	-F	3	C	12			
GRP82493	13	1912+3	1914+3	1927	S12	E23	.393	16707	15.5	15	-F			70	.8		
BIGB	13	1912	1914	1928	S13	E24	.412	16707	15.6	16	-N	3	C	1914	70	.8	
RAMY	13	1914	1917	1927	S12	E23	.393	16707	15.5	13	-F	3	C	106			
HOLL	13	1915	1915	1918	S11	E23	.391	16707	15.5	3	-F	3	C	23			
494 BIGB	13	2038	2041	2114	S16	E02	.157	16705	14.0	36	-N	3	C	2041	90	.9	

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS		MEASUREMENTS			REMARKS			
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION			CMP. DAY	COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.		
					LAT.	NER. DIST.													
GRP82495	13	2230+0	2232+6	2252	S14	W02	.123	16705	13.8	22	1F								
VORO	13	2230	2232	2247	S14	W02	.123	16705	14.1	17	1F	C	2232	210	2.1		J		
CULG	13	2230	2238	2256U	S15	W03	.145	16705	14.2	26D	1F	C	2238	206	2.1		EJ		
														220	2.2		F		
GRP82496	13	2332+2	2336+2	2352	S16	W01	.154	16705	13.9	20	-F			120	1.2		EJK		
CULG	13	2332	2337	2354	S16	W02	.157	16705	14.1	22	-N	C	2337	180	1.8				
HOLL	13	2334	2338	2348	S17	W01	.171	16705	14.1	14	-F	3 C		36					
VORO	13	2334	2336	2349	S17	W01	.171	16705	14.1	15	-N	C	2336	134	1.4		EJK		
BIGB	13	2334	2338	0015D	S16	E00	.153	16705	14.0	41D	-F	3 P	2338	110	1.1				
497	CULG	14	0013	0016	0024	S15	W04	.152	16705	14.3	11	-F	C	0016	70	.7			
GRP82498	14	0014+2	0018+3	0029	S15	W73	.950	16699	8.5	15	-N			60					
YUNN	14	0014	0021	0030	S13	W71	.939	16699	19.3	16	-N	C		64					
CULG	14	0016	0020	0030	S14	W75	.960	16699	19.6	14	1N	C	0020	100					
PALE	14	0016	0020	0033	S16	W74	.955	16699	19.6	17	-N	3 C		82					
HOLL	14	0016	0018	0027	S16	W72	.944	16699	19.4	11	-N	3 C		40					
MANI	14	0021E	0021U	0028	S14	W72	.945	16699	19.4	7D	-F	2 V		40	.9				
GRP82499	14	0104+2	0107+2	0116	S13	W74	.956	16699	8.5	12	-F			50			D		
CULG	14	0104	0109	0117	S13	W76	.965	16699	19.7	13	-F	C	0109	60					
YUNN	14	0105	0107	0114	S13	W73	.950	16699	19.5	9	-N	C		32					
VORO	14	0106	0108	0112D	S15	W74	.955	16699	19.6	6D	-F	P	0108	63			D		
500	CULG	14	0134	0140	0150	S12	W77	.970	16699	19.8	16	?F	C	0140	100				
			IMP.1	NO :	PALE	VORO	YUNN												
GRP82501	14	0225+6	0234+0	0242	S14	W74	.955	16699	8.6	17	-F			50					
CULG	14	0225	0234	0257	S14	W74	.955	16699	19.7	32	1F	C	0234	80					
YUNN	14	0227	0234	0242	S13	W74	.956	16699	19.7	15	-N	C		48					
PALE	14	0231	0234	0241	S16	W75	.960	16699	19.7	10	-F	3 C		31					
502	YUNN	14	0348	0350	0355	S14	W74	.955	16699	19.7	7	-N	C		16				
			14	0645	0705	NO FLARE PATROL													
503	ABST	14	1129E	1131	1135	N14	E35	.652	16711	17.1	6D	-F	P	1131	87	1.2	D		
504	RAMY	14	1359	1359	1403	S16	W79	.976	16699	20.5	4	-N	3 C						
505	HOLL	14	1901	1901	1908	S17	W10	.239	16705	15.5	7	-F	3 C		42				
506	CULG	14	2145	2152	2215	S11	E09	.168	16707	15.6	30	?F	C	2152	200	2.0			
			IMP.1	NO :	HOLL	BIGB													
GRP82507	14	2256+4	2302+3	2332	S17	W12	.264	16705	14.1	36	-N			180	1.9		H		
CULG	14	2256	2305	2334	S16	W15	.294	16705	16.1	38	1B	C	2305	220	2.3		F		
BIGB	14	2259	2305	2340	S17	W13	.276	16705	15.9	41	-B	3 C	2305	140	1.5				
HOLL	14	2259	2302	2312	S17	W12	.264	16705	15.9	13	-F	3 C		87					
VORO	14	2300	2305	2330	S17	W12	.264	16705	15.9	30	1N	C	2305	215	2.3		EH		
508	VORO	14	2306	2310	2316	S02	E87	.998	16719	21.5	10	-F	C	2310	108			DG	
509	CULG	15	0055	0058	0116	S15	W18	.331	16705	16.4	21	-N	C	0058	70	.7			
GRP82510	15	0150+0	0151+2	0200	S11	W84	.992	16699	8.8	10	-N			25					
YUNN	15	0150	0153	0158	S11	W81	.984	16699	21.2	8	-N	C		16					
CULG	15	0150	0151	0201	S11	W87	.997	16699	21.6	11	-N	C	0151	30					
511	CULG	15	0335	0349	0418	S35	W15	.516	16706	16.3	43	-N	C	0349	120	1.3	L		
512	ABST	15	0618E	0622	0622D	S12	E05	.120	16707	15.6	4D	-F	P	0622	174	1.7	E		
513	CULG	15	0630	0743U	0747D	N36	E04	.686	16710	15.6	77D	?F	P	0743	280	3.8	G		
			IMP.1	NO :	YUNN	CATA													
514	KHAR	15	0845E		0920D	S03	E78	.977	16719	21.2	35D	-F	P	0909				EO	
GRP82515	15	0900+9	0920	0930	S16	W19	.352	16705	14.0	30	-N							EH	
KHAR	15	0900E		1000D	S16	W20	.366	16705	16.9	60D	1F	P	0933	200	2.1		EH		
MONT	15	0911	0920	0930	S17	W19	.358	16705	16.8	19	-N	C	0920	110					
516	KHAR	15	0933E		0933D	N17	W52	.837	16702	19.3		-F	P					E	
517	KHAR	15	1047E	1050	1103	N15	W39	.702	16702	18.4	16D	-F	V	1050				E	

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA		CORR AREA
					LAT.	MER. DIST.											
GRP82543	18	2253+0	2254+1	2307	S25	E56	.832	16725	23.2	14	-F		60	1.1			
HOLL	18	2253	2255	2304	S25	E57	.840	16725	23.2	11	-F	3	C	35			
CULG	18	2253	2254	2309	S26	E56	.833	16725	23.2	16	-F		C	2254	80	1.5	
544 CULG	18	2330	2338	2346	S15	W62	.876	16705	23.6	16	-F		C	2338	90	1.8	
GRP82545	19	0015+3	0019	0026	S17	W41	.659	16707	15.9	11	-F						
			0026														
YUNN	19	0015	0026	0058	S18	W41	.661	16707	22.1	43	-N		C	48	.7		
HOLL	19	0018	0019	0026	S17	W41	.659	16707	22.1	8	-F	3	C	18			
546 CULG	19	0040	0049	0104	S27	E12	.390	16721	19.9	24	-F		C	0049	60	.7	H
547 YUNN	19	0215	0224	0228	S27	E08	.364	16721	19.7	13	-N		C	64	.7		
GRP82548	19	0228+6	0233+1	0237	S27	E14	.406	16721	20.2	9	-N			80	.9		
YUNN	19	0228D	0233	0237	S27	E14	.406	16721	20.2	9D	-N		C	113	1.3		
CULG	19	0230	0233	0247	S26	E14	.393	16721	20.2	17	-B		C	0233	60	.7	
PURP	19	0234	0234	0235	S27	E16	.423	16721	20.3	1	1N		C				
GRP82549	19	0243+6	0247+2	0304	S27	E08	.364	16721	19.7	21	-N						
YUNN	19	0243	0247	0300	S27	E08	.364	16721	19.7	17	-N		C	94	1.1	D	
PURP	19	0249	0249	0307	S27	E08	.364	16721	19.7	18	-N		C			D	
GRP82550	19	0305+9	0312	0352	S17	W43	.683	16707	15.9	47	-N						
			0327														
CULG	19	0305	0312	0350	S17	W43	.683	16707	22.4	45	-N		C	0312	120	1.7	T
YUNN	19	0314	0327	0354	S18	W43	.685	16707	22.4	40	-N		C	64	.9		
GRP82551	19	0323+5	0327+1	0344	S27	E10	.376	16721	19.9	21	-F						
YUNN	19	0323E	0327	0345	S27	E10	.376	16721	19.9	22D	-F		C	161	1.8		
PURP	19	0328	0328	0334	S27	E16	.423	16721	20.3	6	-F		C				
PURP	19	0328	0344	0344D	S27	E08	.364	16721	19.7	16D	-F		P				
GRP82552	19	0419+3	0427	0436	S27	E07	.358	16721	19.7	17	-F						
PURP	19	0419	0446	0512	S27	E07	.358	16721	19.7	53	-F		C				
YUNN	19	0422	0427	0436	S27	E07	.358	16721	19.7	14	-N		C	48	.5		
GRP82553	19	0453+8	0504+1	0511	N15	E62	.908	16727	23.9	18	-F						
CULG	19	0453	0504	0509	N15	E60	.894	16727	23.7	16	-F		C	0504	70	1.6	
PURP	19	0501	0505	0512	N16	E64	.923	16727	24.0	11	1F		C				
GRP82554	19	0522+8	0526+1	0540	S27	E10	.376	16721	20.0	18	-N			170	1.8		
YUNN	19	0522E	0526	0540	S28	E10	.390	16721	20.0	18D	1N		C	193	2.2		
CULG	19	0523	0527	0603	S26	E10	.361	16721	20.0	40	-N		C	0527	160	1.8	
PURP	19	0526	0526	0530	S28	E10	.390	16721	20.0	4	1B		C				
PURP	19	0530	0539	0539D	S27	E09	.369	16721	19.9	9D	-F		P				
555 YUNN	19	0544	0552	0627	S20	W44	.701	16707	22.5	43	-N		C	32	.5		
556 YUNN	19	0613	0645	0738	S29	E74	.954	16729	24.8	85	-N		C	32			
557 YUNN	19	0701	0710	0754	S27	E52	.800	16725	23.2	53	-F		C	16	.3		
558 CULG	19	0718	0721	0735	N27	E64	.943	16726	24.1	17	-F		C	0721	50		
559 CULG	19	0742	0746	0752	N03	E75	.968	16730	24.9	10	-F		C	0746	40		
GRP82560	19	0806+4	0806+3	0815	S27	E08	.364	16721	19.9	9	-N			160	1.7	D	
MONT	19	0806	0808	0817	S27	E09	.369	16721	20.0	11	-N		C	0808	220		
YUNN	19	0806E	0806	0813	S28	E09	.384	16721	20.0	7D	1N		C	209	2.3		
PURP	19	0808	0809	0811	S28	E08	.379	16721	19.9	3	1B		C				
BUCA	19	0810		0820	S27	E08	.364	16721	19.9	10	-N		C	0811	107	1.1	D
MANI	19	0810E	0810U	0815D	S25	E06	.323	16721	19.8	5D	-N	2	V	80	.9		
561 YUNN	19	0900	0910	0933	S27	E51	.791	16725	23.2	33	-F		C	32	.6		
562 KHAR	19	0917	0917	0917D	N26	E63	.936	16726	24.1		-F		P			D	
563 WEND	19	1002		1016	S18	W65	.899	16705	24.3	14	-F		C	1010	19		

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP DAY			COND	TYPE	TIME UT	MEAS. AREA	CORR AREA		
					LAT.	WER. DIST.												Mill. of Disk
GRP82564	19	1009+7	1013+5	1025	S28	E07	.374	16721	19.9	16	-F						D	
YUNN	19	1009	1013	1025	S28	E07	.374	16721	19.9	16	-F				16	.2		
KHAR	19	1010E	1013	1023D	S28	E07	.374	16721	19.9	13D	-F						D	
KANZ	19	1015	1018	1025	S28	E07	.374	16721	20.0	10	-N	2						
WEND	19	1016		1027D	S27	E11	.252	16721	20.3	11D	-F		C	1023	31	.3		
565 KHAR	19	1200E	1200	1204D	S28	E06	.369	16721	19.9	4D	-F		P				D	
GRP82566	19	1207E	1217	1227	S29	E09	.399	16721	20.2	20	-F						E	
KHAR	19	1207E	1217	1224D	S29	E09	.399	16721	20.2	17D	-F		P				E	
KHAR	19	1211E		1227D	S31	E13	.451	16721	20.5	16D	-F		P				D	
KHAR	19	1227E		1227D	S28	E06	.369	16721	20.0		-F		P				D	
567 KHAR	19	1217E		1221D	S25	W03	.311	16721	19.7	4D	-F		P				D	
	19	1236	1257	NO FLARE PATROL														
GRP82568	19	1436+2	1441+0	1509	S26	W03	.328	16721	19.4	33	-B				130	1.4	D	
RAMY	19	1436	1441	1509	S26	W02	.326	16721	19.8	33	-B	3	C		141		D	
HOLL	19	1438	1441	1510	S25	W03	.311	16721	19.8	32	-N	3	C		121			
KANZ	19	1447E		1507	S26	W04	.331	16721	19.9	20D	-B	2						
GRP82569	19	1513+2	1515+1	1519	S27	E05	.350	16721	20.0	6	-F							
HOLL	19	1513	1516	1520	S27	E06	.354	16721	20.1	7	-F	3	C		31			
KANZ	19	1515	1515	1518	S27	E04	.347	16721	19.9	3	-F	1						
570 RAMY	19	1609	1612	1620	S18	W69	.926	16705	24.8	11	-F	3	C		23			
GRP82571	19	1730+5	1737+2	1757	S27	E05	.350	16721	20.1	27	-B				60	.6	D	
HOLL	19	1730	1739	1800	S27	E05	.350	16721	20.1	30	-N	3	C		65			
BIGB	19	1735	1737	1754	S27	E05	.350	16721	20.1	19	-B	2	C	1737	50	.5		
RAMY	19	1735	1737	1739D	S28	E04	.363	16721	20.0	4D	-B	3	C		48		D	
GRP82572	19	1947+3	1949+3	2008	S26	W06	.338	16721	19.4	21	-B				110	1.2		
BIGB	19	1947	1949	2026	S16	W07	.195	16721	20.3	39	-B	2	C	1949	120	1.2		
RAMY	19	1950	1952	2008	S27	W06	.354	16721	20.3	18	-B	3	C		108			
PALE	19	1957E	1957U	2001	S26	W06	.338	16721	20.3	4D	-F	2	C		23			
GRP82573	19	1955+0	1957+6	2054	S21	W50	.769	16707	16.1	59	1N				180	2.9		
			2014															
BIGB	19	1955	2003	2119	S20	W50	.767	16707	23.6	84	1B	3	C	2003	240	3.8		
RAMY	19	1955	1957	2054	S22	W48	.750	16707	23.4	59	-N	3	C		131			
HOLL	19	2013	2014	2029	S21	W52	.789	16707	23.7	16	-F	2	C		80			
574 CULG	19	2133	2138	2155	S25	E43	.704	16725	23.1	22	-N		C	2138	100	1.4		
575 CULG	19	2232	2234	2241	S28	E02	.358	16721	20.1	9	-N		C	2234	40	.4		
GRP82576	19	2240>9	2303+3	2328	S26	W08	.349	16721	19.3	48	-N				100	1.1	E	
VORO	19	2240	2303	2322	S26	W08	.349	16721	20.5	42	-N		C	2304	143	1.6	E	
CULG	19	2253	2306	2328	S25	W08	.334	16721	20.6	35	-N		C	2306	100	1.1		
BIGB	19	2258	2304	2351	S26	W07	.195	16721	20.5	53	-F	3	C	2304	70	.7		
GRP82577	19	2336>9	2349+6	2358	S28	E04	.363	16721	20.3	22	-N				90	1.0	D	
CULG	19	2336	2349	0000	S29	E05	.381	16721	20.4	24	-N	*	C	2349	60	.7		
VORO	19	2352	2355	2356	S28	E03	.360	16721	20.2	4	-N	*	C	2355	116	1.3	D	
578 CULG	19	2341	2346	2355	N24	E55	.883	16726	24.1	14	-F		C	2346	40	.7		
579 CULG	19	2346	2352	0013	N18	W46	.787		23.4	27	-N		C	2352	70	1.1		
580 VORO	20	0014	0016	0020	N02	E74	.963	16730	25.6	6	-N		C	0016	63		DJ	
GRP82581	20	0023+3	0028+0	0035	S28	E68	.923	16729	25.1	12	-N				50		D	
CULG	20	0023	0028	0036	S29	E69	.929	16729	25.2	13	-N		C	0028	40	1.0		
VORO	20	0026	0028	0033	S27	E67	.916	16729	25.0	7	-N		C	0028	63		CD	
GRP82582	20	0126+4	0129+7	0143	S26	W09	.355	16721	19.4	17	-N				150	1.6	E	
VORO	20	0126	0130	0147	S26	W08	.349	16721	20.7	21	-B		C	0130	179	2.0	E	
MITK	20	0127	0129	0142	S26	W10	.362	16721	20.8	15	-N		C	0129			E	
CULG	20	0128	0131	0209	S25	W10	.348	16721	20.8	41	-N		C	0131	120	1.3	T	
PALE	20	0130	0136	0137	S26	W01	.325	16721	20.1	7	-F	3	C		151			
MANI	20	0131E	0134	0140D	S25	W10	.348	16721	20.8	9D	-F	3	V		150	1.6		
583 CULG	20	0250	0254	0310	S27	W06	.354	16721	20.6	20	-N		C	0254	100	1.1	T	
584 CULG	20	0251	0254	0300	N01	E70	.941	16730	25.4	9	-N		C	0254	40			

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
585 CULG	20	0256	0303	0315	S09	W62	.878	16707	24.8	19	-F	C	0303	40	.8		
586 CULG	20	0317	0324	0329	N01	E70	.941	16730	25.4	12	?N	C	0324	80			
		IMP.1 NO : MITK															
587 CULG	20	0445	0450	0500	N07	E68	.935	16730	25.3	15	-F	C	0450	30			
588 CULG	20	0522	0525	0535	S31	W88	.996	16705	26.8	13	-F	C	0525	40			
GRP82589	20	0529+9	0549+8	0631	S27	W06	.354	16721	19.8	62	1N			310	3.3	E	
CULG	20	0529	0552	0631	S28	W06	.370	16721	20.7	62	1B	C	0552	450	4.9	T	
YUNN	20	0538	0549	0617	S27	W07	.359	16721	20.8	39	-N	C		96	1.1	E	
ABST	20	0556E	0557	0633D	S23	W06	.292	16721	20.7	37D	1N	P	0557	306	3.4	BE	
GRP82590	20	0700+0	0704+1	0715	S25	W12	.363	16721	19.4	15	-F			45	.5		
CULG	20	0700	0704	0720	S25	W13	.372	16721	21.3	20	-N	C	0704	60	.6		
YUNN	20	0700D	0705	0710	S26	W12	.377	16721	21.2	10D	-F	C		32	.4		
GRP82591	20	0758E	0801	0820	N05	E65	.913	16730	25.2	22	1N			80		E	
ABST	20	0758E	0801	0820	N05	E66	.920	16730	25.3	22D	1N	P	0801	114	2.7	E	
CATA	20	0805E	0805	0810D	N05	E64	.906	16730	25.1	5D	-N	2	0805	45	1.1		
592 MANI	20	0905E	0905U	0915D	S30	E65	.905	16729	25.3	10D	-F	2	V	30	.6		
GRP82593	20	1004E		1019	S27	W04	.347	16721	20.1	15	-F						
KHAR	20	1004E		1015D	S28	W04	.363	16721	20.7	11D	-F	P				D	
KHAR	20	1005E		1019D	S27	W05	.350	16721	20.8	14D	-F	P				D	
594 KHAR	20	1008E		1019D	S27	W14	.406	16721	21.5	11D	-F	P				D	
595 WEND	20	1031		1042	S28	W05	.366	16721	20.8	11	-F	C	1036	46	.5		
596 KHAR	20	1117E		1124D	S27	W09	.370	16721	21.1	7D	-F	P				D	
597 KHAR	20	1140E		1143D	S27	W15	.415	16721	21.6	3D	-F	P				D	
598 KHAR	20	1153E		1153D	S27	W09	.370	16721	21.2		-F	P				D	
599 KHAR	20	1231E		1240D	S27	W09	.370	16721	21.2	9D	-F	P				D	
600 KHAR	20	1250E	1254	1257D	S28	W09	.385	16721	21.2	7D	-N	P				D	
	20	1317	1337	NO FLARE PATROL													
	20	1341	1424	NO FLARE PATROL													
GRP82601	20	1440+3	1441+3	1453	S02	E02	.095	16719	20.8	13	-F			60	.6		
RAMY	20	1440	1441	1453	S02	E04	.112	16719	20.9	13	-F	3	C	39			
HOLL	20	1443	1444	1448D	S03	E01	.073	16719	20.7	5D	-N	3	C	80			
602 RAMY	20	1450	1451	1506	S28	W10	.391	16721	21.4	16	-F	3	C	26			
603 PALE	20	1904	1906	1921	S28	W12	.404	16721	21.7	17	-F	3	C	28			
604 PALE	20	1910	1912	1916	N16	E38	.696	16727	23.6	6	-F	3	C	18			
605 PALE	20	1952	1953	2008D	S28	E56	.837	16729	25.0	16D	-F	3	C	16			
GRP82606	20	2041+1	2043+1	2104	S27	W11	.383	16721	20.0	23	-F			50	.5		
HOLL	20	2041	2044	2057	S26	W11	.369	16721	21.7	16	-F	3	C	30			
PALE	20	2042	2043	2104	S27	W11	.383	16721	21.7	22	-F	3	C	65			
CULG	20	2104E	2104E	2145	S27	W13	.398	16721	21.9	41D	1N	P	2104	340	3.7		
GRP82607	20	2325+5	2329+3	2342	N06	E55	.833	16730	25.1	17	-N			90	1.6	EH	
CULG	20	2325	2329	2342	N05	E55	.831	16730	25.1	17	1N	C	2329	120	2.2		
VORO	20	2327	2330	2342	N06	E57	.851	16730	25.3	15	-N	C	2330	90	1.7	EH	
HOLL	20	2330	2332	2339	N07	E54	.826	16730	25.0	9	-F	3	C	36			
GRP82608	21	0015+1	0016+6	0030	S26	W16	.412	16721	19.8	15	-N			90	1.0	DH	
VORO	21	0015	0016	0023	S27	W15	.415	16721	22.1	8	-B	C	0016	90	1.0	DH	
CULG	21	0016	0022	0040	S26	W16	.412	16721	22.2	24	-N	C	0022	150	1.7		
YUNN	21	0020E	0021	0030	S26	W18	.432	16721	22.4	10D	-N	C		64	.7		
GRP82609	21	0046+4	0049+3	0102	S29	E43	.720	16728	24.3	16	-N			50	.7	E	
VORO	21	0046	0049	0102	S27	E43	.712	16728	24.3	16	-N	C	0049	90	1.3	E	
YUNN	21	0047D	0050	0058	S29	E43	.720	16728	24.3	11D	-N	C		32	.5		
CULG	21	0050	0052	0103	S29	E43	.720	16728	24.3	13	-F	C	0052	50	.8		

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPOR- TANCE	OBS. COND. TYPE	MEASUREMENTS			REMARKS		
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION				CMP. DAY	TIME UT	MEAS. AREA Mm of Disk		CORR AREA Sq Deg.	
					LAT.	MER. DIST.											
GRP82610	21	0126+3	0131+3	0142	S31	E55	.835	16729	25.2	16	-F			80	1.5	D	
CULG	21	0126	0131	0142	S31	E55	.835	16729	25.2	16	-F	C	0131	80	1.4		
VORO	21	0129	0134	0135D	S31	E56	.843	16729	25.3	6D	-N	P	0134	81	1.5	D	
GRP82611	21	0132+3	0138+1	0153	S26	W22	.474	16721	19.4	21	1N			210	2.4	EL	
CULG	21	0132	0138	0155	S26	W22	.474	16721	22.7	23	1N	C	0138	240	2.8	L	
VORO	21	0133	0138	0206	S27	W22	.483	16721	22.7	33	1B	C	0138	188	2.2	E	
YUNN	21	0135	0139	0150	S25	W23	.476	16721	22.8	15	1B	C		193	2.3		
PALE	21	0135		0142	S27	W22	.483	16721	22.7	7	-F	3 C		72			
612	CULG	21	0519	0524	0535	S25	W25	.499	16721	23.1	16	-F	C	0524	30	.3	
613	ABST	21	0558	0601	0620	S27	W13	.399	16721	22.2	22	-F	C	0601	37	1.0	D
614	CULG	21	0634	0637	0655	S32	E51	.804	16729	25.1	21	-F	C	0637	100	1.8	
GRP82615	21	0728+9	0739+4	0805	S25	E33	.592	16728	23.8	37	-F					F	
CULG	21	0728	0743U	0743D	S25	E34	.603	16728	23.9	15D	-N	P	0743	60	.8		
ABST	21	0731	0739	0806D	S26	E33	.598	16728	23.8	35D	1F	P	0739	297	3.8	F	
HTRP	21	0733	0741	0805	S25	E33	.592	16725	23.8	32	-F	C	0741	20	.2		
YUNN	21	0737	0742	0800	S26	E35	.620	16728	23.9	23	-N	C		32	.4		
616	HTRP	21	0954	0956	1000	S26	W33	.598	16721	23.9	6	-F	C	0956	10	.1	
		21	1135	1215	NO FLARE PATROL												
		21	1355	1403	NO FLARE PATROL												
617	HUAN	21	1403E		1410D	S30	E36	.654	16728	24.3	7D	-F	1 P				
		21	1410	1425	NO FLARE PATROL												
		21	1428	1441	NO FLARE PATROL												
GRP82618	21	2030+2	2033+1	2041	S28	E53	.811	16729	25.8	11	-F			40	.7		
PALE	21	2030	2033	2044	S27	E54	.818	16729	25.9	14	-F	3 C		38			
RAMY	21	2032	2034	2038	S29	E53	.813	16729	25.8	6	-F	3 C		38			
619	PALE	21	2050	2100	2110	S27	E53	.809	16729	25.8	20	-F	3 C		16		
620	VORO	21	2238E		2248	S26	E90	.999	16736	28.7	10D	-F	* C	2242	72		L
621	VORO	21	2238E		2306	S27	E52	.800	16729	25.8	28D	?F	C	2243	152	2.5	DK
			IMP.1 NO :	HOLL	CULG	PALE											
622	VORO	21	2311E	2314	2335	S27	E52	.800	16729	25.9	24D	?F	C	2314	161	2.7	EH
			IMP.1 NO :	HOLL	CULG	PALE											
623	CULG	21	2330	2334	2342	N09	E55	.840	16730	26.1	12	-F	C	2334	40	.7	
624	CULG	21	2345	2350	2355	S32	E43	.733	16729	25.2	10	-F	C	2350	70	1.1	
GRP82625	21	2357>9	0002	0024	S27	W33	.604	16721	19.5	27	-N						
			2414														
YUNN	22	0012	0014	0027	S27	W33	.604	16721	24.5	15	-N	C		32	.4		
CULG	21	2357	2402	0021	S27	W34	.615	16721	24.5	24	-N	C	2402	80	1.0		
626	CULG	22	0013	0014	0017	N29	W39	.788		24.9	4	-N	C	0014	20	.3	G
GRP82627	22	0024	0028+1	0036	S24	W35	.610	16721	19.4	12	-N			45	.6		
CULG	22	0024	0028	0038	S23	W37	.629	16721	24.8	14	-N	C	0028	60	.8		
YUNN	22	0027D	0029	0034	S25	W34	.604	16721	24.6	7D	-N	C		32	.4		
GRP82628	22	0100+5	0110+2	0131	S24	W25	.491	16721	20.2	31	-N						
CULG	22	0100	0112U	0114D	S23	W25	.483	16721	23.9	14D	1N	P	0112	280	3.2		
YUNN	22	0102	0110	0130	S24	W28	.527	16721	24.1	28	-F	C		64	.8		
PALE	22	0105		0131	S25	W24	.487	16721	23.8	26	-N	3 C		23			
629	CULG	22	0320	0333	0344	S18	W54	.806	16721	26.2	24	-F	C	0333	30	.5	G
630	ABST	22	0755E	0811	0821	S24	E54	.813	16729	26.4	26D	?N	P	0811	349	5.8	F
			IMP.2 NO :	YUNN													
631	WEND	22	1013	1016	1032	S22	W19	.402	16721	23.9	19	-F	C	1016	75	.9	
		22	1325	1343	NO FLARE PATROL												

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	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill of Disk	CORR AREA Sq Deg.	
					LAT.	MER. DIST.											
GRP82632	22	1459+6	1503+5	1518	N03	E41	.671	16730	25.7	19	-F			90	1.2	E	
WEND	22	1459	1503	1521	N04	E41	.674	16730	25.7	22	-N	C	1503	94	1.3	E	
RAMY	22	1505	1508	1514	N03	E41	.671	16730	25.7	9	-F	3 C		93			
633 WEND	22	1605		1634D	S25	W35	.615	16721	25.3	29D	-N	C	1613	69	1.0	E	
634 RAMY	22	1741	1744	1753	N14	E12	.409	16727	23.6	12	-F	3 C		89			
635 HOLL	22	1828	1830	1843	S28	W37	.653	16721	25.5	15	-N	2 C		42			
636 CULG	22	2136	2140	2148	S29	W35	.638	16721	25.5	12	-N	P	2140	50	.7		
637 VORO	22	2221	2226	2245	S26	E90	.999	16736	29.7	24	-N	C	2226	90			
GRP82638	22	2317+3	2321+2	2331	S26	E04	.332	16725	23.3	14	-N					EL	
VORO	22	2317	2321	2330	S26	E05	.335	16725	23.3	13	-B	C	2323	90	1.0	EL	
PALE	22	2320	2323	2332	S27	E04	.348	16725	23.3	12	-F	3 C		24			
639 VORO	23	0009	0011	0029	S26	E90	.999	16736	29.8	20	-N	C	0011	54		H	
640 CULG	23	0131	0135	0158	S31	E42	.719	16729	26.2	27	-F	C	0135	40	.5	GH	
641 CULG	23	0209	0217	0234	S29	W75	.959		28.7	25	-F	C	0217	40		G	
642 CULG	23	0430	0440	0446	S26	W49	.770	16721	26.9	16	-N	C	0440	80	1.6		
643 YUNN	23	0712E		0725	S28	E36	.643	16729	26.0	13D	-N	P	0716	16	.2		
644 KHAR	23	0841E	0843	0856D	S27	W49	.772	16721	27.0	15D	-F	* P				D	
645 KHAR	23	0841E		0920D	S28	E36	.643	16729	26.1	39D	-F	* P	0850			DT	
GRP82646	23	0841+2	0844+1	0917	S28	E13	.413	16728	24.3	36	-N					DHO	
KHAR	23	0841E	0844	0917D	S28	E14	.421	16728	24.4	36D	1N	P	0855			DHO	
YUNN	23	0843	0845	0845D	S28	E12	.405	16728	24.3	2D	-N	C		32	.4		
647 KHAR	23	0859	0901	0910D	S27	E83	.987	16736	29.6	11D	-F	P	0902			D	
648 KHAR	23	0912E		0912D	S26	W49	.770	16721	27.1		-F	C				D	
649 KHAR	23	0943E		0947D	S27	W49	.772	16721	27.1	4D	-F	C				D	
650 KHAR	23	0947	0950	1007D	S26	E82	.984	16736	29.6	20D	-F	C	0950				
651 KHAR	23	1006		1010	S27	E00	.343	16725	23.4	4	-F	C				D	
652 KHAR	23	1016E		1016D	S27	E03	.346	16725	23.7		-F	C				E	
653 KHAR	23	1024E		1024D	S28	E32	.600	16729	25.8		-F	C				D	
654 KHAR	23	1026E		1026D	S27	W47	.753	16721	27.0		-F	C				D	
GRP82655	23	1053	1057	1115	N05	E30	.533	16730	25.7	22	-N			45	.5	D	
KHAR	23	1053	1057	1110D	N06	E30	.539	16730	25.7	17D	-N	C	1100	60	.7		
WEND	23	1100E		1115	N04	E30	.528	16730	25.7	15D	-F	C	1102	30	.4	D	
656 KHAR	23	1104E		1110D	S27	E12	.392	16728	24.4	6D	-F	C				E	
657 KHAR	23	1110E		1110D	S24	W42	.691	16721	26.6		-F	C				D	
658 KHAR	23	1114E		1114D	S26	W43	.709	16721	26.7		-F	C				D	
659 KHAR	23	1117E		1117D	S24	W43	.702	16721	26.7		-F	C				D	
660 KHAR	23	1121E		1124D	N13	E02	.343	16727	23.6	3D	-F	C				D	
661 KHAR	23	1130	1136	1143D	S29	E12	.419	16728	24.4	13D	-N	C	1130			EH	
GRP82662	23	1140E		1147	S26	W49	.770	16721	19.8	7	-F						
KHAR	23	1140E		1147D	S26	W50	.779	16721	27.2	7D	-F	C	1142			D	
KHAR	23	1140E		1144D	S27	W48	.763	16721	27.1	4D	-F	C	1142			D	
663 KHAR	23	1146E	1150	1203D	S29	E12	.419	16728	24.4	17D	-N	C				E	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS			
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA	CORR AREA				
					LAT.	MER. DIST.												TIME UT	MEAS. AREA	CORR AREA
																		Mill. of Disk	5 σ Deg.	
GRP82664	23	1205	1210	1227	S28	W50	.784	16721	19.8	22	1N			230	3.8	EH				
			1217																	
CATA	23	1205	1210	1225	S28	W50	.784	16721	27.3	20	1N	2	1210	169	2.8					
WEND	23	1208E		1220D	S27	W48	.763	16721	27.1	120	1N		P 1209	295	5.1					
KHAR	23	1208E		1228D	S26	W52	.798	16721	27.4	200	1N		V 1208			EH				
KHAR	23	1216E	1217	1224D	S32	W52	.813	16721	27.4	80	-F		V 1217			DH				
	23	1240	1246	NO FLARE PATROL																
665 KHAR	23	1245E		1312D	S28	E35	.632	16729	26.2	27D	-F		C				DT			
666 KHAR	23	1249E		1309D	S26	W52	.798	16721	27.4	200	-F		C				D			
GRP82667	23	1312+7	1322+1	1329	S26	W50	.779	16721	19.8	17	-N						E			
KHAR	23	1312		1416D	S26	W49	.770	16721	27.2	64D	-F	*	C							
KHAR	23	1315	1322	1348	S26	W52	.798	16721	27.5	33	-N	*	C				E			
RAMY	23	1319	1323	1329	S26	W50	.779	16721	27.3	10	-N	*	C		25					
KHAR	23	1339E		1356D	S26	W49	.770	16721	27.2	17D	-F	*	C				D			
668 KHAR	23	1315E	1328	1340D	N25	E54	.879	16731	27.6	25D	-N		C				E			
GRP82669	23	1656+1	1658+4	1715	S27	W50	.782	16721	20.0	19	2B			380	6.3	D				
BIGB	23	1656	1658	1715	S30	W50	.790	16721	27.5	19	1B	2	C	1658	270	4.3				
HOLL	23	1657	1702	1715	S27	W46	.743	16721	27.2	18	1B	3	C		395		D			
RAMY	23	1657	1702	1718	S27	W50	.782	16721	27.5	21	2B	3	C		459					
670 RAMY	23	2059	2101	2121	S24	W53	.804	16721	27.8	22	-F	3	C		25					
671 CULG	23	2359	2408	0033	S25	W55	.824	16721	28.1	34	-N		C	2408	40	.7				
GRP82672	24	0027+2	0030+2	0044	S27	E03	.347	16728	24.2	17	-F			100	1.1	E				
CULG	24	0027	0030	0050	S28	E03	.363	16728	24.2	23	-N		C	0030	70	.7				
VORO	24	0029	0032	0037	S27	E03	.347	16728	24.2	8	-F		C	0032	134	1.5	E			
673 PURP	24	0035	0035	0056	S28	E26	.536	16729	26.0	21	-F		C							
GRP82674	24	0157+1	0200+2	0210	S28	E03	.363	16728	24.3	13	-F						E			
CULG	24	0157	0201	0216	S28	E03	.363	16728	24.3	19	-F		C	0201	70	.7				
YUNN	24	0158	0202	0210	S28	E02	.361	16728	24.2	12	-N		C		16	.2				
VORO	24	0158	0200	0208	S26	E04	.333	16728	24.4	10	-F		C	0200	179	1.9	E			
GRP82675	24	0215+9	0220+6	0236	S27	W57	.844	16721	19.8	21	1N						EHJL			
CULG	24	0215	0222	0328	S27	W56	.836	16721	28.3	73	2B		C	0222	450	8.6	HTFL			
VORO	24	0218	0226	0234	S26	W57	.842	16721	28.4	16	1F		C	0226	143	2.7	EHL			
PURP	24	0220	0220	0237	S27	W58	.852	16721	28.4	17	1F		C				E			
YUNN	24	0224	0226	0229	S28	W58	.854	16721	28.4	5	-N		C		32	.6	EJ			
676 CULG	24	0413	0417	0458	S25	W64	.895	16721	29.0	45	?B		C	0417	140	3.2	VHTF			
		IMP.1	NO :	PURP	YUNN	MITK														
GRP82677	24	0508	0512	0522	N13	W07	.360	16727	23.7	14	-N			80	.9	DJ				
CULG	24	0508	0512	0522	N13	W08	.366	16727	24.8	14	-N		C	0512	60	.6	T			
ABST	24	0513E	0513	0521	N14	W06	.371	16727	24.7	8D	-F		P	0513	96	1.1	DJ			
678. CULG	24	0551	0557	0605	S25	W65	.902	16721	29.1	14	?F		C	0557	90	2.2	T			
		IMP.1	NO :	YUNN	ABST															
GRP82679	24	0604+1	0610+6	0632	S28	W01	.360	16728	24.2	28	-N						E			
CULG	24	0604	0610	0634	S28	E01	.360	16728	24.3	30	-N		C	0610	80	.8				
YUNN	24	0605E	0605	0605D	S28	W02	.361	16728	24.4		-N		P		16	.2				
ABST	24	0605	0616	0630	S28	W01	.360	16728	24.3	25	1F		C	0616	244	2.7	E			
GRP82680	24	0608+1	0610+2	0619	S25	W60	.866	16721	19.8	11	1F			110	2.3	DJV				
CULG	24	0608	0612	0623	S25	W59	.858	16721	28.7	15	-N		C	0612	90	1.8	T			
ABST	24	0609	0610	0615	S26	W61	.874	16721	28.8	6	1F		C	0610	131		DJV			
GRP82681	24	0622>9	0647	0721	N22	E42	.769	16731	27.4	59	1N						EJU			
			0654																	
CULG	24	0622	0647	0750D	N22	E45	.796	16731	27.6	88D	1B		C	0647	260	4.2	U			
YUNN	24	0646		0712	N22	E42	.769	16731	27.4	26	-N		P	0653	96	1.6				
ABST	24	0650E	0654	0717	N24	E42	.781	16731	27.4	27D	1F		P	0654	262	4.2	EJU			
CATA	24	0700E	0700	0725	N22	E42	.769	16731	27.4	25D	1N	2		0700	140	2.3				
682 CULG	24	0628	0631	0636	S26	W50	.780	16721	28.0	8	-F		C	0631	30	.5	T			

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	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk		CORR AREA Sq. Deg.	
					LAT.	MER. DIST.												
GRP82683	24	0650+3	0656+3	0707	S27	E70	.934	16736	29.5	17	-N							
CULG	24	0650	0659	0711	S28	E69	.929	16736	29.5	21	1N	C	0659	80			D	
ABST	24	0653	0656	0703	S27	E71	.939	16736	29.6	10	-N	C	0656	87			D	
684 KHAR	24	0800E	0804	0825D	S27	W61	.875	16721	28.9	25D	-N	P	0804	40			D	
685 KHAR	24	0835E		0839D	S26	W62	.882	16721	29.0	4D	-F	P					D	
686 KHAR	24	0847E		0900D	N14	W12	.408	16727	25.3	13D	-F	P	0847				E	
687 KHAR	24	0858E		0905D	S28	E01	.360	16728	24.4	7D	-F	P					D	
688 KHAR	24	0858E		0905D	S25	W61	.873	16721	28.9	7D	-F	* P					D	
689 KHAR	24	0912E		0929D	S26	W63	.889	16721	29.1	17D	-F	* P					D	
GRP82690	24	0912+3	0925	1000	S29	W13	.427	16725	23.4	48	-N							
KHAR	24	0912E		1005D	S29	W14	.434	16725	25.4	53D	-N	P	0935	110	1.2		EH	
CATA	24	0915	0925	0955	S29	W13	.427	16725	25.4	40	-N	2	0925	140	1.6		EH	
691 KHAR	24	0916E		0938D	S25	E65	.902	16736	29.3	22D	-F	P	0916				D	
692 KHAR	24	0928E		0928D	N13	W11	.386	16727	25.2		-F	P					D	
693 KHAR	24	0958E	0958	1002D	S31	E57	.851	16736	28.7	4D	-F	P					D	
GRP82694	24	1002+3	1005+0	1015	S26	W62	.882	16721	19.8	13	-N							
KHAR	24	1002E	1005	1015D	S26	W63	.889	16721	29.1	13D	-N	P	1006				E	
YUNN	24	1005E		1012	S26	W62	.882	16721	29.1	7D	-N	P	1005	32	.4		E	
CATA	24	1005	1005	1020	S26	W61	.874	16721	29.0	15	-N	1	1005	84	1.8			
695 KHAR	24	1002E		1013D	S29	W90	.998	16721	31.2	11D	-F	V					H	
696 KHAR	24	1022		1029D	S26	E64	.896	16736	29.2	7D	-F	P	1024				D	
697 KHAR	24	1033E		1038D	S26	W63	.889	16721	29.2	5D	-F	V	1033				D	
698 KHAR	24	1036E	1100	1250D	N13	E15	.421	16730	25.6	134D	-N	P	1059				EK	
699 KHAR	24	1039	1040	1123D	N12	E78	.984	16737	30.3	44D	-N	P	1042				EH	
700 ATHN	24	1057E	1101	1108	N11	W17	.417	16727	25.7	11D	-N	2	V	1101	82	.9		
701 KHAR	24	1103E		1120D	S27	W60	.868	16721	29.0	17D	-F	P	1103	110	2.4		D	
702 CATA	24	1110E	1110	1135D	N12	W12	.381	16727	25.4	25D	-B	2	1110	84	.9			
703 KHAR	24	1140E	1143	1150D	S28	E21	.484	16729	26.1	10D	-F	P					D	
704 CATA	24	1250E	1250	1250D	N12	W13	.389	16727	25.5		-N	2	1250	84	.9			
	24	1255	1405	NO FLARE PATROL														
	24	1426	1443	NO FLARE PATROL														
705 BIGB	24	1536	1544	1605	N23	E70	.964	16732	29.9	29	1N	2	C	1544	110			
706 HUAN	24	1806		1811D	S27	E65	.904	16736	29.6	5D	-F	1	P					
707 HUAN	24	1858E		1902D	N26	E62	.931	16732	29.4	4D	-F	1	P					
708 CULG	24	2148	2153	2204	S25	W64	.895	16721	29.7	16	-F	C	2153	30				
709 CULG	24	2148	2159	2218	S03	W54	.808	16719	29.0	30	-F	C	2159	60	1.1		G	
710 CULG	24	2256	2318	2339	N12	W22	.484	16727	26.6	43	?B	C	2318	240	2.8			
		IMP.1	NO :	BIGB														
711 CULG	24	2329	2332	2342	N16	E68	.946	16737	30.1	13	-F	C	2332	30				
712 CULG	24	2338	2349	0011	S27	E60	.868	16736	29.5	33	?N	C	2349	100	2.1		F	
		IMP.1	NO :	BIGB														
713 CULG	24	2348	2355	0025	S30	W08	.411	16728	25.6	37	?N	C	2355	280	3.1		LH	
		IMP.1	NO :	BIGB MITK														
714 CULG	25	0053E	0053E	0112	S28	W08	.382	16728	25.6	19D	-N	P	0053	70	.8			

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	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION			CMP. DAY	COND.	TYPE	TIME UT	MEAS. AREA Mill of Disk		CORR AREA Sq. Deg.
					LAT.	MER. DIST.											
GRP82715	25	0148+9	0151+6	0214	N12	W20	.461	16727	23.6	26	1N		250	2.8	H		
CULG	25	0148	0151	0240	N14	W20	.482	16727	26.6	52	1B	C	0151	300	3.5	F	
YUNN	25	0150	0153	0204	N12	W20	.461	16727	26.6	14	1N	C		209	2.4	EH	
PURP	25	0157	0157	0214	N11	W20	.450	16727	26.6	17	1F	C					
GRP82716	25	0247+3	0249+1	0255	N13	W22	.493	16727	23.5	8	-F			40	.5		
CULG	25	0247	0249	0257	N14	W22	.503	16727	26.8	10	-F	C	0249	50	.6		
YUNN	25	0250	0250	0253	N12	W22	.483	16727	26.8	3	-F	C		32	.4		
717	CULG	25	0249	0255	0301	N16	E67	.940	16737	30.1	12	-N	C	0255	40		
718	CULG	25	0316	0318	0324	S27	W61	.875	16721	29.7	8	-N	C	0318	40	.8	
GRP82719	25	0400>9	0424+9	0509	S26	W25	.508	16725	23.3	69	2F			480	5.6	EIU	
CULG	25	0400	0424	0630U	S26	W25	.508	16725	27.0	150D	2N	C	0424	690	7.9	UIF	
TACH	25	0406	0428	0530	S28	W25	.526	16725	27.0	84	2F	C	0428	447	5.4	EU	
YUNN	25	0410		0445	S26	W24	.497	16725	27.0	35	1N	P	0421	401	4.8	E	
PURP	25	0413	0433	0511	S25	W23	.477	16725	26.9	58	2F	C	0433	604	6.9	U	
MITK	25	0435D		0445	S22	W25	.477	16725	27.1	10D	1F	P	0437	260	3.1	EFU	
720	CULG	25	0420	0424	0429	N16	E65	.929	16737	30.1	9	-F	C	0424	50	1.1	
GRP82721	25	0423+9	0426+6	0446	S24	W75	.959	16721	19.6	23	1N					AH	
CULG	25	0423	0430	0500	S25	W75	.959	16721	30.8	37	2N	C	0430	360		F	
TACH	25	0424	0426	0450	S25	W80	.978	16721	31.2	26	1N	C	0426	53		D	
YUNN	25	0425	0427	0435	S24	W76	.963	16721	30.9	10	1N	C		96		A	
PURP	25	0432	0432	0441	S23	W70	.933	16721	30.4	9	1N	C				H	
722	CULG	25	0434	0453	0522	S26	W15	.405	16728	26.3	48	?N	C	0453	240	2.6	
			IMP.1	NO : PURP	YUNN	TACH	MITK										
GRP82723	25	0540+8	0546+3	0556	N12	W22	.483	16727	23.6	16	1N			240	2.7		
CULG	25	0540	0546	0602	N14	W23	.514	16727	27.0	22	1N	C	0546	260	3.0		
PURP	25	0548	0549	0552	N11	W22	.474	16727	26.9	4	1N	C					
YUNN	25	0551E	0551	0556	N12	W22	.483	16727	26.9	5D	1N	C		225	2.7		
724	CULG	25	0558	0601	0609	N16	E65	.929	16737	30.1	11	-F	C	0601	60	1.4	
725	YUNN	25	0817	0817	0820D	S30	W17	.471	16728	26.6	3D	-N	C		32	.4	
		25	0908	0918	NO FLARE PATROL												
		25	0935	0940	NO FLARE PATROL												
		25	1032	1115	NO FLARE PATROL												
726	RAMY	25	1220	1221	1225	N12	W28	.554	16727	27.6	5	-F	3 C		24		
727	RAMY	25	1337	1406	1415	N18	E58	.886	16737	29.9	38	-F	3 C		44		
GRP82728	25	1351+9	1356+4	1417	N25	E57	.898	16732	29.9	26	-N			80	1.7		
RAMY	25	1351	1356	1417	N27	E57	.904	16732	29.9	26	-F	3 C		58			
CATA	25	1400	1400	1410D	N24	E58	.902	16732	29.9	10D	1N	2	1400	112	2.7		
729	RAMY	25	1405	1405	1416	N23	W23	.607	16726	27.3	11	-F	3 C		28		
730	RAMY	25	1406	1406	1420	S27	W22	.485	16728	27.2	14	-F	3 C		46		
731	RAMY	25	1421	1423	1430	N17	E57	.876	16737	29.9	9	-F	3 C		18		
732	RAMY	25	1425	1425	1441	S27	W21	.475	16728	27.2	16	-F	3 C		33		
GRP82733	25	1450+1	1454+0	1506	S27	W16	.426	16728	24.4	16	-F			90	1.0		
RAMY	25	1450	1454	1503	S28	W19	.465	16728	27.0	13	-F	3 C		67			
HOLL	25	1451	1454	1509D	S27	W13	.400	16728	26.6	18D	-N	3 C		122			
734	HOLL	25	1559	1601	1608	N11	W31	.583	16727	28.0	9	-F	3 C		31		
735	HOLL	25	1631	1637	1700	N10	W01	.291	16730	25.8	29	-F	3 C		165		
736	HOLL	25	1635	1640	1646	N17	E42	.742	16733	28.8	11	-F	3 C		21		
GRP82737	25	1717	1719	1726	N15	E57	.871	16737	30.0	9	-N			50	1.0		
RAMY	25	1717	1719	1725	N14	E57	.869	16737	30.0	8	-N	3 C		67			
HUAN	25	1723E		1726	N16	E58	.881	16737	30.1	3D	-N	1 P	1723	30	.6		

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
GRP82738	25	1737+1	1740+4	1747	S28	W74	.955	16721	20.2	10	-N			50			
RAMY	25	1737	1740	1748	S28	W75	.959	16721	31.4	11	-N	3	C	64			
HUAN	25	1738	1744	1747	S28	W74	.955	16721	31.3	9	-N	1	C	1744	30		
HOLL	25	1739E	1740	1747	S31	W67	.919	16721	30.8	8D	-N	2	C	67			
	25	1913	2104	NO FLARE PATROL													
GRP82739	25	2053	2053	2118	S27	W24	.506	16728	24.1	25	-N						
HOLL	25	2053	2053	2111	S27	W26	.528	16728	27.8	18	-N	3	C	149			
CULG	25	2108E	2108E	2125	S27	W23	.495	16728	27.6	17D	-F		P	2108	80	.9 B	
740 HOLL	25	2103	2103	2130	N13	E40	.700	16733	28.9	27	-F	3	C	30			
	25	2122	2132	NO FLARE PATROL													
741 CULG	25	2143	2145	2200	S27	W71	.940	16721	31.2	17	-N		C	2145	40		
742 CULG	25	2145U	2206U	2213U	S29	W03	.379	16729	26.1	28D	-F		C	2206	100	1.1	
	25	2150	2219	NO FLARE PATROL													
743 CULG	25	2219E	2219U	2226	N17	E55	.860	16737	30.1	7D	-N		P	2219	30	.6	
GRP82744	25	2226	2231	2241	N05	W04	.217	16730	25.6	15	1N					EH	
CULG	25	2226	2231	2314U	N05	W04	.217	16730	26.2	48D	1N		C	2231	320	3.2	
VORO	25	2235E		2241	N05	W05	.223	16730	26.3	6D	-F		C	2235	90	.9 EH	
745 CULG	25	2330	2335	2341	N16	E53	.841	16737	30.0	11	-N		C	2335	80	1.5	
GRP82746	26	0002+1	0007+0	0037	N13	E53	.832	16737	30.0	35	1B			280	5.0	JK	
HOLL	26	0002	0007	0031	N14	E52	.826	16737	29.9	29	1B	3	C	273		D	
VORO	26	0003	0007	0038	N12	E54	.838	16737	30.1	35	1B		C	0007	206	3.6 E	
PURP	26	0023	0026	0036	N09	E52	.811	16737	29.9	13	-N		C				
CULG	26	0043	0053	0110	N17	E52	.835	16737	29.9	27	-N		C	0053	80	1.4 KT	
CULG	25	2351	2353	0004	N18	E57	.879	16737	30.3	13	-N		C	2353	60	1.2	
CULG	25	2358	2407	0046	N10	E51	.804	16737	29.8	48	2N		C	2407	360	6.1 FJ	
GRP82747	26	0002+2	0006+1	0018	S28	W73	.950	16721	20.5	16	-N			45			
CULG	26	0002	0006	0022	S27	W76	.963	16721	31.7	20	-B		C	0006	60		
HOLL	26	0004	0007	0014	S30	W70	.935	16721	31.3	10	-N	3	C	25			
748 CULG	26	0103	0111	0115	N26	E58	.907	16732	30.4	12	-F		C	0111	70		
749 CULG	26	0123	0132	0144	N17	E52	.835	16737	30.0	21	-F		C	0132	40	.7 T	
750 CULG	26	0226	0231	0237	N17	E51	.827	16737	29.9	11	-N		C	0231	40	.7 T	
751 CULG	26	0307	0312	0323	N17	E51	.827	16737	30.0	16	-N		C	0312	60	1.0 TH	
752 CULG	26	0310	0322	0335	S27	W78	.971	16721	1.0	25	-F		C	0322	30		
753 CULG	26	0459	0505	0540	N23	E43	.783	16732	29.4	41	-F		C	0505	50	.8 KL	
GRP82754	26	0501>9	0519	0559	N21	E19	.552	16731	27.6	58	1N					FHLU	
CULG	26	0501	0519	0605	N22	E20	.572	16731	27.7	64	2B	*	C	0519	780	9.4 ULFH	
PURP	26	0519	0528	0553	N21	E18	.544	16731	27.6	34	1F	*	C				
755 CULG	26	0502	0508	0516	N25	E90	1.001	16740	2.0	14	?F		C	0508	60		
		IMP.1	NO :	PURP													
756 CULG	26	0607	0614	0628	N17	E50	.818	16737	30.0	21	-N		C	0614	80	1.4 TH	
757 CULG	26	0611	0624	0659	N20	E20	.549	16731	27.8	48	?N		C	0624	300	3.6 UF	
		IMP.1	NO :	PURP													
GRP82758	26	0821+1	0822+2	0830	N17	E48	.800	16737	29.9	9	1N			130	2.1		
HTPR	26	0821	0824	0828	N18	E50	.822	16737	30.1	7	1N		C	0824	150	2.3	
KANZ	26	0822	0822	0830	N17	E48	.800	16737	29.9	8	-N	2					
CATA	26	0825E	0825	0830	N17	E47	.790	16737	29.9	5D	-B	2		0825	112	1.9	
759 KANZ	26	0936	0943	0955	N15	E32	.623	16733	28.8	19	-F	1					
760 KANZ	26	0947	0951	0955D	S29	W08	.397	16729	27.0	8D	-F	1					
	26	1010	1018	NO FLARE PATROL													

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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPORTANCE	OBS. COND. TYPE	MEASUREMENTS			REMARKS		
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION				CMP. DAY	TIME UT	MEAS. AREA Mill of Disk		CORR. AREA Sq. Deg.	
					LAT.	MER. DIST.											
	26	1055	1100	NO FLARE PATROL													
	26	1105	1125	NO FLARE PATROL													
	26	1130	1138	NO FLARE PATROL													
761 RAMY	26	1139	1159	1253	N14	E31	.604	16733	28.8	74	-F	3	C	20			
GRP82762	26	1329+0	1334+0	1354	S28	W81	.981	16721	20.5	25	-B						
LVOV	26	1329	1334	1354	S28	W83	.987	16721	1.8	25	IN		C	1334	150	D	
RAMY	26	1329	1334	1353	S29	W80	.978	16721	1.6	24	-B	3	C				
763 RAMY	26	1333	1334	1339	N15	E56	.863	16737	30.8	6	-F	3	C	23			
GRP82764	26	1420+0	1421+0	1429	S29	W82	.984	16721	20.4	9	-B						
RAMY	26	1420	1421	1430	S29	W83	.987	16721	1.8	10	-B	3	C				
HOLL	26	1420	1421	1427	S30	W81	.981	16721	1.7	7	-B	3	C				
765 RAMY	26	1456	1517	1518	S12	E71	.940	16742	31.9	22	-F	3	C	11			
766 HOLL	26	1743	1745	1807D	N18	E62	.914	16738	31.4	24D	-N	3	C	90			
767 HOLL	26	1800E	1804	1807	S29	W90	.998	16721	2.5	7D	-N	3	C				
768 CULG	26	2109E	2109U	2118	N16	E41	.726	16737	30.0	9D	-N		P	2109	40	.6	
769 CULG	26	2113	2114	2123	N26	W38	.759	16726	29.7	10	-B		C	2114	60	.9	H
770 HOLL	26	2147	2147	2204	S09	E67	.916	16742	31.9	17	-F	3	C	14			
771 CULG	26	2203	2205	2214D	N26	E72	.975	16740	1.3	11D	-F		C	2205	40		
772 CULG	26	2221	2233	2314U	N28	E71	.973	16740	1.3	53D	-F		C	2233	60		
773 CULG	26	2225	2235	2251	S26	W47	.751	16728	30.5	26	?N		C	2235	280	3.7	F
		IMP.1	NO :	BIGB	HOLL	PALE	VORO										
GRP82774	26	2254+2	2259+5	2329	S27	W36	.638	16728	24.3	35	-B			110	1.4	D	
CULG	26	2254	2259	2328	S26	W39	.666	16728	29.9	34	1B		C	2259	260	3.3	
HOLL	26	2255	2304	2333	S27	W35	.627	16728	29.6	38	-B	3	C	134			
VORO	26	2255	2259	2316	S27	W36	.638	16728	29.7	21	-N		C	2259	81	.9	E
BIGB	26	2256	2259	2330	S28	W37	.655	16728	29.7	34	-B	2	C	2259	110	1.4	
PALE	26	2256E	2303U	2330	S28	W36	.644	16728	29.7	34D	-N	3	C	94		D	
775 CULG	26	2255	2313	2330	S26	E37	.644	16736	29.7	35	-F		C	2313	130	1.7	L
GRP82776	26	2314+1	2317+4	2335	S30	W13	.441	16729	26.0	21	-N						
CULG	26	2314	2317	2339	S30	W14	.448	16729	28.0	25	1B		C	2317	340	3.9	H
BIGB	26	2315	2318	2339	S31	W14	.462	16729	28.0	24	-B	2	C	2318	110	1.2	FH
VORO	26	2315	2317	2332	S31	W12	.448	16729	27.9	17	1N		C	2317	251	2.8	EH
HOLL	26	2315	2321	2334	S29	W12	.421	16729	27.9	19	-F	3	C	122			
PALE	26	2316E	2318	2333	S30	W12	.435	16729	27.9	17D	-F	3	C	110		D	
777 CULG	26	2333	2335	2342	S12	E70	.934	16742	1.2	9	-N		C	2335	70		
778 CULG	26	2337	2341	2353	N23	E32	.685	16732	29.4	16	-F	*	C	2341	60	.8	H
GRP82779	26	2337+1	2340+2	2358	S26	W37	.644	16728	24.2	21	-N			150	2.0	E	
CULG	26	2337	2340	0002	S26	W38	.655	16728	29.8	25	-B		C	2340	140	1.8	
VORO	26	2338	2340	2351	S26	W36	.633	16728	29.7	13	1F		C	2340	206	2.7	E
PALE	26	2339E	2342U	2358	S29	W37	.660	16728	29.8	19D	-B	3	C	106			
780 CULG	27	0101	0108	0134	S08	E72	.947	16742	1.4	33	-N		C	0108	30		
781 CULG	27	0108	0115	0126	N28	E70	.970	16740	1.3	18	-F		C	0115	30		T
782 CULG	27	0146	0150	0236	N15	E52	.829	16737	31.0	50	-N		C	0150	100	1.7	L
783 CULG	27	0209	0212	0230	N18	E40	.727	16737	30.1	21	-N		C	0212	120	1.7	
784 CULG	27	0327	0332	0401	S25	W40	.673	16728	30.1	34	?N		C	0332	200	2.8	LT
		IMP.1	NO :	MITK	PURP	PALE											
785 CULG	27	0342	0346	0358	N22	E35	.704	16732	29.8	16	-F		C	0346	40	.5	
786 MANI	27	0419E	0419U	0428D	N29	E69	.967	16740	1.4	9D.	-N	3	V	25	.5		
787 CULG	27	0512	0515	0519	N16	E46	.776	16737	30.7	7	-F		C	0514	70	1.0	

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	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
788 CULG	27	0527	0529	0540	N16	E46	.776	16737	30.7	13	-N	C	0529	80	1.1		
789 CULG	27	0714	0718	0728	N16	E44	.757	16737	30.6	14	-F	C	0718	40	.6		
790 CULG	27	0728	0730	0731D	N22	E33	.686	16732	29.8	3D	-N	P	0730	60	.8		
791 CULG	27	0740E	0743	0746D	N16	E44	.757	16737	30.6	6D	-N	P	0743	70	1.0		
GRP82792	27	0837+1	0837+6	0848	N14	E21	.492	16733	28.9	11	-N						
MANI	27	0837E	0837U	0843D	N15	E21	.502	16733	28.9	6D	-N	3	Y	60	.7		
PURP	27	0838	0843	0848	N14	E21	.492	16733	28.9	10	-N	C					
	27	1000	1025	NO FLARE PATROL													
	27	1035	1120	NO FLARE PATROL													
	27	1125	1145	NO FLARE PATROL													
793 HTPR	27	1156E		1240	S26	W52	.799	16728	31.4	44D	-F	C	1200	60	.9	E	
794 HTPR	27	1156E		1230	S28	W22	.496	16729	29.1	34D	?B	*	C	1200	220	2.5	E
		IMP.1 NO : CATA															
GRP82795	27	1156E	1300	1316	N29	E70	.971	16740	2.7	80	?B						
HTPR	27	1156E		1316D	N30	E70	.972	16740	1.7	80D	?B	*	C	1205	70		
		IMP.S IMP.2															
CATA	27	1250E	1300	1315D	N29	E70	.971	16740	1.8	25D	2B	*		1300	197		
796 CATA	27	1250E	1300	1315D	S29	W23	.516	16729	29.3	25D	-N	2		1300	112	1.4	
797 CATA	27	1250E	1300	1315D	S27	W54	.819	16728	31.6	25D	-N	2		1300	84	1.5	
798 HTPR	27	1311		1316D	N09	E13	.349	16733	28.5	5D	-N	C	1316	30	.3		
	27	1316	1334	NO FLARE PATROL													
799 HTPR	27	1334E		1342	N09	E13	.349	16733	28.5	8D	-N	C	1334	30	.3	E	
	27	1346	1447	NO FLARE PATROL													
800 HUAN	27	1535		1540	N22	E28	.640	16732	29.7	5	-F	1	C	1537	20	.3	D
801 BIGB	27	1838	1840	1920	N24	W59	.908	16727	1.2	42	2B	2	P	1840	310	6.2	
802 BIGB	27	2009	2018	2034	S32	W90	.998	16721	3.6	25	-N	3	C	2018	40		
GRP82803	27	2030	2032	2047	N08	E10	.306	16733	28.6	17	-N			60	.6		
BIGB	27	2030	2032	2047	N09	E10	.320	16733	28.6	17	-B	3	C	2032	80	.8	
HUAN	27	2032E		2039D	N08	E10	.306	16733	28.6	7D	-N	1	P	2034	45	.5	
804 HUAN	27	2045E		2052D	N12	E42	.717	16737	31.0	7D	-F	1	P				
GRP82805	27	2102+4	2110+0	2136	S26	W48	.761	16728	24.3	34	-B						
BIGB	27	2102	2110	2144	S27	W48	.764	16728	31.5	42	-B	3	C	2110	80	1.2	J
CULG	27	2106	2110	2127	S26	W48	.761	16728	31.5	21	1B	C	2110	180	2.7	J	
GRP82806	27	2106E	2108	2142	N08	E10	.306	16733	28.6	36	-N						
CULG	27	2106E	2108U	2145U	N09	E11	.329	16733	28.7	39D	-N	P	2108	160	1.7	K	
HUAN	27	2132E		2138	N08	E10	.306	16733	28.6	6D	-F	1	P	2133	30	.3	K
807 CULG	27	2120	2123	2131	N28	E63	.940	16740	1.6	11	?N	C	2123	100	2.5		
		IMP.1 NO : BIGB															
808 CULG	27	2144	2146	2154	N28	E63	.940	16740	1.6	10	?N	C	2146	100	2.5		
		IMP.1 NO : BIGB HUAN															
809 CULG	27	2330	2339	2350	N14	E37	.672	16737	30.8	20	-F	C	2339	110	1.4		
GRP82810	28	0011	0015	0025	N22	E62	.922	16740	2.7	14	-N						
CULG	28	0011	0015	0027	N22	E62	.922	16740	1.7	16	-N	C	0015	70	1.7	E	
VORO	28	0014E		0023	N23	E63	.929	16740	1.7	9D	1F	C	0015	161		E	
811 VORO	28	0031	0034	0036	N10	E08	.318	16733	28.6	5	-N	C	0034	72	.8	D	
GRP82812	28	0037+7	0046+1	0053	N10	E09	.326	16733	28.7	16	-N						
CULG	28	0037	0047	0115	N09	E09	.311	16733	28.7	38	-N	C	0047	140	1.5	DH	
VORO	28	0042	0046	0053	N11	E08	.333	16733	28.6	11	-N	C	0046	63	.7	HT	
YUNN	28	0044		0051	N10	E09	.326	16733	28.7	7	-N	P	0046	32	.4	DH	

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	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
813	VORO	28 0100	0103	0109	N08	E07	.281	16733	28.6	9	-N	C	0103	90	1.0	DHJ	
814	CULG	28 0109	0113	0125	N26	E67	.955	16740	2.1	16	?F	C	0113	120		T	
		IMP.1 NO : BIGB MITK				VORO YUNN											
GRP82815		28 0154	0158+3	0230	N09	E08	.303	16733	28.7	36	-N						H
	CULG	28 0154	0201	0233	N09	E08	.303	16733	28.7	39	1N	C	0201	200	2.1	H	
	MANI	28 0158E	0158U	0210D	N10	E08	.318	16733	28.7	12D	-F	2	V	60	.6		
	VORO	28 0214	0218	0227	N09	E06	.290	16733	28.5	13	-N	C	0218	36	.4		
GRP82816		28 0200	0203+1	0230	S27	W51	.792	16728	24.3	30	-N			60	1.0		
	CULG	28 0200	0204	0234	S27	W50	.783	16728	31.8	34	-B	C	0204	80	1.4		
	YUNN	28 0203E	0203	0225	S28	W52	.804	16728	1.0	22D	-N	C		48	.8		
817	VORO	28 0213	0214	0221	S29	W30	.588	16729	30.3	8	-F	C	0214	99	1.2	D	
818	VORO	28 0217	0221	0232	N11	E24	.496	16737	29.9	15	?F	C	0221	251	2.9	EJ	
		IMP.1 NO : MITK CULG				YUNN PALE											
819	VORO	28 0220	0220	0229	N28	E60	.924	16740	1.6	9	-F	C	0220	27	.7	D	
GRP82820		28 0232+0	0233+1	0239	N28	E25	.673	16732	30.0	7	-F			110	1.5	E	
	CULG	28 0232	0234	0241	N28	E25	.673	16732	30.0	9	-N	C	0234	100	1.3		
	VORO	28 0232	0233	0236	N28	E25	.673	16732	30.0	4	-F	C	0233	125	1.8	E	
GRP82821		28 0258+4	0305+2	0400	S28	W32	.602	16729	25.7	62	-N						
	CULG	28 0258	0305	0400	S28	W32	.602	16729	30.5	62	-N	C	0305	140	1.8	E	
	YUNN	28 0302	0307	0307D	S28	W32	.602	16729	30.5	5D	-N	P		64	.8	E	
GRP82822		28 0318+4	0322+1	0343	N08	E06	.274	16733	28.6	25	-N						
	CULG	28 0318	0323	0343	N09	E07	.296	16733	28.7	25	-N	C	0323	80	.8	T	
	YUNN	28 0322	0322	0325D	N08	E06	.274	16733	28.6	3D	-N	C		32	.4		
823	CULG	28 0338	0341	0404	S26	W53	.808	16728	1.1	26	?B	C	0341	140	2.4		
		IMP.1 NO : YUNN MITK															
824	CULG	28 0457	0514	0627U	N26	W10	.561	16731	29.0	90D	?F	C	0514	180	2.2		
		IMP.1 NO : YUNN															
825	CULG	28 0500	0501	0516	N22	E60	.909	16740	1.7	16	-F	C	0501	50	1.1	T	
GRP82826		28 0630+4	0640+5	0710	N15	E35	.655	16737	30.9	40	1N			240	3.2	GIL	
	CULG	28 0630	0643	0743D	N14	E37	.671	16737	31.0	73D	2N	C	0643	760	10.0	IFL	
	YUNN	28 0634	0640	0654	N16	E35	.662	16737	30.9	20	1N	C		241	3.4	EG	
	ATHN	28 0643E	0645	0710	N15	E34	.560	16732	30.8	27D	1B	3	V	0645	212	2.4	
GRP82827		28 0727+8	0730+9	0744	N09	E03	.276	16733	28.5	17	-N			70	.7		
	ABST	28 0727E	0730	0741	N09	E04	.280	16733	28.6	14D	-N	P	0730	105	1.1	D	
	ATHN	28 0733E	0734	0752	N13	E02	.340	16733	28.5	19D	-B	3	V	0734	49	.5	
	YUNN	28 0735	0739	0744	N09	E03	.276	16733	28.5	9	-N	C		64	.7	E	
GRP82828		28 0800E	0802	0811	N10	E20	.439	16737	29.8	11	1N						
	ABST	28 0800E	0802	0810D	N10	E21	.451	16737	29.9	10D	1N	P	0802	183	2.1	F	
	YUNN	28 0805E	0805	0811	N10	E20	.439	16737	29.8	6D	-N	C		32	.4	E	
829	HTPR	28 0814E		0823	N10	E20	.439	16737	29.8	9D	-N	C	0814	40	.4	BE	
GRP82830		28 0842+2	0846+1	0930	S14	E50	.762	16742	2.1	48	-N			50	.8	E	
	HTPR	28 0842	0847	1000	S14	E50	.762	16742	1.1	78	-B	C	0857	50	.8	E	
	YUNN	28 0844	0846	0930D	S14	E51	.773	16742	1.2	46D	-N	C		64	1.0	E	
	MANI	28 0853E	0853U	0855D	S13	E52	.783	16742	1.3	2D	-F	2	V	50	.7		
	KANZ	28 0855E		0918	S14	E49	.751	16742	1.0	23D	-F	2					
GRP82831		28 0934+1	0934+2	0958	N17	E22	.533	16737	30.0	24	-F						
	KANZ	28 0934	0934	0957	N17	E22	.533	16737	30.0	23	-F	2					
	HTPR	28 0935	0936	0958	N18	E22	.544	16737	30.0	23	-F	C	0936	10	.1		
832	HTPR	28 0949	0953	0958	N24	E05	.517	16733	28.8	9	-B	C	0953	60	.7	E	
833	KANZ	28 0950	0950	0957	N24	E49	.837	16740	1.1	7	-B	3					
GRP82834		28 0955+2	0955+3	1005	N26	E60	.919	16740	2.9	10	1B			150	3.6	E	
	YUNN	28 0955E	0955	1002	N26	E60	.919	16740	1.9	7D	1B	C		161			
	HTPR	28 0956	0958	1006	N27	E60	.921	16740	1.9	10	1B	C	0958	150	3.0	E	
	KANZ	28 0957	0957	1005	N26	E62	.930	16740	2.1	8	-B	3					

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mill of Disk	CORR AREA Sq. Deg.	
					LAT.	MER. DIST.											
GRP82835	28	1017+3	1017 1028	1037	N09	E18	.405	16737	29.8	20	-F						
KANZ	28	1017	1017	1030	N09	E18	.405	16737	29.8	13	-F	2					
HTPR	28	1020	1028	1043	N10	E19	.427	16737	29.9	23	-N		C	1028	30	.3	
836 HTPR	28	1030	1031	1033	N17	E22	.533	16737	30.1	3	-F		C	1031	50	.5	E
837 HTPR	28	1057		1111D	N27	E23	.649	16732	30.2	14D	-F		C	1058	20	.2	
	28	1111	1142	NO FLARE PATROL													
838 HTPR	28	1215		1301D	N15	E06	.383	16733	29.0	46D	-F		C	1252	20	.2	
	28	1301	1311	NO FLARE PATROL													
	28	1341	1346	NO FLARE PATROL													
GRP82839	28	1510+3	1514+1	1528	N27	E57	.904	16740	2.9	18	-B				60	1.3	
KANZ	28	1510	1515	1528	N25	E57	.898	16740	1.9	18	-B	2					
BIGB	28	1511	1514	1530	N27	E59	.915	16740	2.1	19	-B	2	C	1514	80	1.6	
HTPR	28	1513	1515	1528	N27	E57	.904	16740	1.9	15	-B		C	1515	40	.7	
840 BIGB	28	1629	1632	1640	N07	W05	.253	16733	29.1	11	-F	2	C	1632	80	.8	
841 BIGB	28	1743	1751	1810	S28	W60	.870	16728	2.2	27	-N	3	C	1751	70	1.4	
842 PALE	28	1852	1854	1857	N21	W19	.551	16731	30.2	5	-F	3	C		21		D
GRP82843	28	1942>9	1945 2004+0	2051	N14	00	.354	16733	28.8	69	1B,				230	2.5	
PALE	28	1942	1945	2009	N09	W03	.276	16733	29.0	27	-N	3	C		20		D
PALE	28	1959	2004	2042	N13	W01	.338	16733	28.9	43	1B	3	C		315		
BIGB	28	2000	2004	2100	N14	E01	.355	16733	28.9	60	-B	3	C	2004	160	1.6	
HUAN	28	2007E		2007D	N14	E00	.354	16733	28.8		1N	1	P	2007	220	2.4	E
GRP82844	28	2046+5	2055 2110	2120	N08	W05	.268	16733	28.5	34	-N						D
BIGB	28	2046	2055	2124	N08	W04	.264	16733	29.2	38	-B	2	C	2055	110	1.1	
PALE	28	2051	2110	2115	N08	W06	.274	16733	29.3	24	-N	3	C		53		D
GRP82845	28	2156+2	2200+1	2227	N09	W04	.280	16733	28.6	31	1B				280	2.9	
CULG	28	2156	2200	2224	N09	W03	.276	16733	29.1	28	1B		C	2200	340	3.6	
VORO	28	2157	2200	2245	N11	W05	.316	16733	29.3	48	1B		C	2200	367	4.0	E
BIGB	28	2158	2200	2230	N08	W04	.264	16733	29.2	32	-B	2	C	2200	180	1.9	
PALE	28	2158	2201	2204D	N09	W04	.280	16733	29.2	6D	1B	3	C		238		D
PALE	28	2158	2201	2220	N09	W04	.280	16733	29.2	22	1B	3	C		238		D
GRP82846	28	2156+2	2200+2	2225	N17	E20	.514	16737	30.4	29	-N						
CULG	28	2156	2202	2238	N18	E21	.534	16737	30.5	42	1N	*	C	2202	200	2.3	
PALE	28	2158	2200	2211	N16	E19	.493	16737	30.3	13	-F	*	C		64		
847 CULG	28	2241	2249	2256	N28	E50	.861	16740	1.7	15	-N		C	2249	40	.8	
GRP82848	28	2250+2	2255+3	2301	S25	W03	.317	16736	28.7	11	-F						EJL
VORO	28	2250	2255	2335	S25	W03	.317	16736	29.2	45	1F		C	2255	197	2.1	EJL
CULG	28	2252	2258	2301	S25	W03	.317	16736	29.2	9	-F		C	2258	80	.9	
849 CULG	28	2253	2258	2308	S10	E31	.512	16742	31.3	15	-F		C	2258	90	1.1	
GRP82850	28	2344+2	2348+1	2351	N08	W10	.306	16733	28.2	7	-F						D
CULG	28	2344	2349	2351	N08	W10	.306	16733	29.7	7	-F		C	2349	70	.7	
VORO	28	2346	2348	2351	N08	W10	.306	16733	29.7	5	-F		C	2348	18	.2	D
GRP82851	28	2345+3	2350+4	0008	N28	E46	.833	16740	2.4	23	-F						
CULG	28	2345	2350	0011	N28	E48	.847	16740	1.6	26	-F		C	2350	80	1.7	
PALE	28	2348	2354	0005	N29	E45	.830	16740	1.4	17	-F	3	C		21		
GRP82852	28	2349>9	0002+0	0011	S20	W10	.283		28.2	22	-F				100	1.0	DGH
CULG	28	2349	2402	0015	S20	W10	.283	16735	29.7	26	-F		C	2402	80	.8	G
VORO	28	2359	2402	0007	S20	W10	.283	16735	29.7	8	-F		C	2402	116	1.2	DGH
853 VORO	29	0020	0021	0048	N10	E10	.333	16737	29.8	28	-F		C	0035	179	1.9	EFJ

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mil. of Disk	CORR AREA Sq. Deg.		
					LAT.	MER. DIST.												
GRP82854	29	0042+1	0045+1	0053	N27	E51	.864	16740	2.9	11	-N			100	1.9	DH		
VORO	29	0042	0046	0052	N28	E54	.888	16740	2.1	10	1N		0046	108	2.7	DH		
PALE	29	0043	0046	0053	N28	E45	.825	16740	1.4	10	-B	3	C	107				
BIGB	29	0043	0045	0054	N26	E52	.867	16740	1.9	11	-B	3	C	0045	80	1.3		
CULG	29	0045E	0045U	0055	N28	E52	.874	16740	1.9	10D	1N		C	0045	180	3.6	HC	
YUNN	29	0045E	0046	0050	N25	E50	.848	16740	1.8	5D	-N		C	32	.6			
GRP82855	29	0102+6	0115+6	0146	N26	E43	.799	16740	2.3	44	1N			190	3.1	E		
PALE	29	0102	0120	0204	N27	E42	.796	16740	1.2	62	1B	*	C	199				
VORO	29	0103	0121	0146	N27	E44	.812	16740	1.3	43	2F	*	C	0121	314	6.0	E	
CULG	29	0104	0117	0145D	N25	E45	.809	16740	1.4	41D	1N	*	C	0117	260	4.4	E	
YUNN	29	0108	0116	0145	N24	E40	.762	16740	1.0	37	-N	*	C	64	1.1	E		
BIGB	29	0108	0115	0140D	N25	E43	.793	16740	1.3	32D	1B	*	P	0115	150	2.1	E	
MANI	29	0124E	0124U	0126D	N27	E44	.812	16740	1.4	2D	1N	*	P	150	2.5	F		
856	CULG	29	0104U	0106	0112	N08	W10	.305	16733	29.8	8D	-F		C	0106	100	1.0	
GRP82857	29	0110+3	0115+1	0128	N10	E09	.325	16737	29.7	18	-N			80	.8	E		
YUNN	29	0110	0116	0122	N10	E08	.317	16737	29.6	12	-N		C	80	.9	E		
PALE	29	0112	0115	0133D	N09	E09	.310	16737	29.7	21D	-N	3	C	66				
VORO	29	0113	0116	0128	N10	E09	.550	16738	29.7	15	1F		C	0116	197	2.1	E	
858	CULG	29	0230	0236	0248	S11	E30	.499	16742	31.4	18	-F		C	0236	60	.7	G
859	CULG	29	0244	0246	0253	N28	E52	.874	16740	2.0	9	-F		C	0246	30	.6	
860	CULG	29	0314	0321	0330	S20	W12	.304	16735	30.0	16	-F		C	0321	30	.3	G
GRP82861	29	0329+1	0330+2	0340	N10	W08	.317	16733	28.5	11	-N			70	.7	UV		
PALE	29	0329	0332U	0340	N08	W08	.288	16733	29.7	11	-N	2	C	70				
CULG	29	0329	0332	0354	N10	W06	.305	16733	29.6	25	1N		C	0332	250	2.6	VU	
YUNN	29	0330	0330	0340	N10	W08	.317	16733	29.7	10	-N		C	64	.7			
862	CULG	29	0337	0338	0341	S10	E21	.359	16741	30.7	4	-F		C	0338	30	.3	G
863	CULG	29	0422	0424	0434	N28	E51	.868	16740	2.0	12	-F		C	0424	40	.8	
864	CULG	29	0425	0429	0437	N10	W07	.311	16733	29.7	12	-F		C	0429	50	.5	
865	CULG	29	0441	0445	0456	S03	E19	.330	16739	30.6	15	-F		C	0445	50	.5	G
866	CULG	29	0442	0446	0503	N10	W07	.311	16733	29.7	21	-F		C	0446	120	1.3	
GRP82867	29	0511+1	0512+6	0526	N10	W08	.317	16733	28.6	15	-N			150	1.6	DV		
CULG	29	0511	0512	0534	N10	W08	.317	16733	29.8	23	1N		C	0512	200	2.1	V	
TACH	29	0512	0516	0526	N10	W09	.325	16733	29.9	14	-N		C	0516	150	1.6	D	
YUNN	29	0515E	0518	0522	N10	W08	.317	16733	29.8	7D	-N		C	48	.5			
PURP	29	0518E	0518	0526	N10	W08	.317	16733	29.8	8D	1F		P					
868	ABST	29	0549	0551	0603	N09	E06	.289	16737	29.7	14	-F		C	0551	87	.9	DJ
GRP82869	29	0552+3	0556+1	0610	N10	W09	.325	16733	28.6	18	1N			290	3.1	EJU		
CULG	29	0552	0557	0610	N10	W08	.317	16733	29.8	18	1N		C	0557	280	2.9	U	
ABST	29	0554	0557	0610D	N09	W09	.310	16733	29.9	16D	1N		P	0557	262	2.8	EJ	
TACH	29	0555	0556	0603	N10	W09	.325	16733	29.9	8	1B		C	0556	327	3.6	E	
870	CULG	29	0611	0613	0617	S26	W68	.923	16728	3.4	6	-F		C	0613	40	1.0	
871	ABST	29	0737E	0737	0739	N22	E45	.795	16738	1.7	2D	-N		P	0737	87	1.4	DJ
GRP82872	29	0750	0756+5	0827	N10	E07	.311	16737	29.9	37	-N			100	1.1	J		
HTPR	29	0750	0756	0833	N10	E07	.311	16737	29.9	43	-N		C	0756	120	1.2	E	
ABST	29	0757E	0801	0802D	N09	E09	.311	16733	30.0	5D	-N		P	0801	87	.9	DJ	
YUNN	29	0805E	0808	0808D	N10	E08	.317	16737	29.9	3D	-F		P	96	1.1			
PURP	29	0807	0808	0820	N10	E07	.311	16737	29.9	13	1F		C					
GRP82873	29	0813+6	0815+5	0821	N10	W10	.333	16733	28.6	8	-N			40	.4	E		
ATHN	29	0813	0815	0821	N07	W10	.291	16733	30.1	8	-N	*	V	0815	33	.3	E	
HTPR	29	0817	0818	0851	N11	W11	.355	16733	30.2	34	-N	*	C	0818	50	.5	E	
PURP	29	0819	0820	0820D	N10	W08	.317	16733	29.9	1D	-F	*	C					
874	HTPR	29	0815	0817	0822	N27	E38	.765	16740	1.2	7	-N		C	0817	70	.9	
GRP82875	29	0826	0832	0854	N23	W26	.631	16731	27.4	28	-N						E	
HTPR	29	0826	0832	0854	N23	W27	.639	16731	31.4	28	-N		C	0832	100	1.1	E	
CATA	29	0845E	0850	0850D	N23	W26	.631	16731	31.3	5D	-N	2		0850	140	1.9	E	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR-TANCE	OBS. COND. TYPE	MEASUREMENTS			REMARKS		
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY				TIME UT	MEAS. AREA Mill of Disk	CORR. AREA .Sq. Deg.			
					LAT.	MER. DIST.												
GRP82876	29	0845>9	0858	0913	N10	W09	.325	16733	28.7	28	-F					E		
ISTA	29	0845		0915D	N09	W08	.303	16733	30.0	30D	-N	*				E		
HTPR	29	0856	0858	0910	N11	W11	.355	16733	30.2	14	-F	*	C	0858	20	.2		
GRP82877	29	0918+1	0922	0930	N27	E38	.765	16740	2.2	12	-N				50	.8	E	
YUNN	29	0918	0922	0927	N28	E40	.787	16740	1.4	9	-N		C		64	1.1		
HTPR	29	0919		0932D	N27	E37	.757	16740	1.2	13D	-B		C	0919	40	.5	E	
GRP82878	29	0925	0928	1007	N10	W10	.333	16733	28.6	42	-N						E	
			0958															
HTPR	29	0925	0928	1008	N11	W12	.364	16733	30.3	43	-N		C	0928	40	.4	E	
YUNN	29	0926E	0927	0927D	N10	W10	.333	16733	30.1	1D	-N		P		164	1.8		
ATHN	29	0942E	0958	1006	N07	W10	.291	16733	30.2	24D	-B	2	V	0958	82	.8		
	29	0932	0938	NO FLARE PATROL														
GRP82879	29	1413+3	1425	1518	N09	E04	.279	16737	29.9	65	1N				270	2.8	E	
HUAN	29	1413		1459D	N08	E04	.263	16737	29.9	46D	1N	1	P	1421	260	2.8	E	
RAMY	29	1416	1425	1518	N10	E04	.295	16737	29.9	62	1N	3	C		275			
GRP82880	29	1438+5	1442+5	1451	N08	W13	.335	16733	28.6	13	-N				80	.9	D	
HUAN	29	1438	1442	1447	N08	W14	.346	16733	30.7	9	-N	1	C	1442	70	.8		
RAMY	29	1443	1447	1455	N08	W13	.335	16733	30.6	12	-B	3	C		99		D	
881	RAMY	29	1530	1530	1542	S28	W51	.795	16729	2.5	12	-F	3	C		126		
882	HUAN	29	1538		1542D	N09	E04	.279	16737	30.0	4D	-N	1	P	1539	60	.6	
883	HOLL	29	1754	1757	1808	N13	E02	.339	16737	29.9	14	-N	3	C		53		
884	RAMY	29	1816	1817	1819	N26	E37	.750	16740	1.5	3	-F	3	C		26		
885	HOLL	29	1846	1847	1859	N10	W16	.392	16733	31.0	13	-F	3	C		44		
GRP82886	29	2015+0	2016+1	2023	N28	E35	.748	16740	2.5	8	-N				20	.3	D	
HOLL	29	2015	2016	2023	N28	E36	.756	16740	1.5	8	-N	3	C		23			
PALE	29	2015	2017	2023	N28	E34	.740	16740	1.4	8	-N	3	C		19		D	
887	PALE	29	2027	2027	2038	N09	W01	.271	16737	29.9	11	-F	3	C		25		D
GRP82888	29	2040+1	2042	2107	N28	E35	.748	16740	2.5	27	-N				50	.7	D	
			2051+0															
RAMY	29	2040	2042U	2055D	N25	E36	.734	16740	1.6	15D	-N	2	C		60			
HOLL	29	2041	2051	2107	N29	E35	.756	16740	1.5	25	-N	3	C		50			
PALE	29	2045E	2051U	2051D	N28	E34	.740	16740	1.4	6D	-N	3	C		46		D	
889	CULG	29	2102	2103	2120	N11	W21	.460	16733	31.5	18	-F		C	2103	50	.6	
GRP82890	29	2115+5	2122+1	2153	N10	00	.287	16737	29.9	38	-N				90	.9		
			2134															
CULG	29	2115	2122	2141	N10	E01	.288	16737	30.0	26	1B		C	2122	300	3.2		
HOLL	29	2119	2123	2205	N11	E00	.304	16737	29.9	46	-F	3	C		94			
BIGB	29	2120	2122	2141	N10	E00	.287	16737	29.9	21	-N	2	C	2122	90	.9		
PALE	29	2133E	2134U	2236	N10	E00	.287	16737	29.9	63D	-F	2	C		48			
GRP82891	29	2130+3	2133+0	2149	N27	E35	.741	16740	2.5	19	-N				70	1.0	D	
			2139															
CULG	29	2130	2139	2148	N28	E35	.748	16740	1.5	18	-N		C	2139	80	1.2		
BIGB	29	2130	2133	2150	N26	E35	.733	16740	1.5	20	-B	2	C	2133	60	.8		
HOLL	29	2133	2133	2146	N29	E35	.756	16740	1.5	13	-N	3	C		70			
PALE	29	2133E	2133U	2155	N27	E32	.717	16740	1.3	22D	-N	3	C		75		D	
GRP82892	29	2135+2	2137+3	2206	N13	W11	.383	16733	29.1	31	-N				80	.9		
CULG	29	2135	2140	2216	N14	W10	.390	16733	30.6	41	-N		C	2140	120	1.3		
BIGB	29	2136	2138	2213	N12	W11	.369	16733	30.7	37	-N	2	C	2138	60	.6		
HOLL	29	2137	2137	2155	N15	W11	.411	16733	30.7	18	-N	3	C		71			
PALE	29	2139E	2139U	2159D	N12	W17	.426	16733	31.2	20D	-N	2	C		69			
893	CULG	29	2243	2319	2330	N25	E36	.734	16740	1.6	47	-F		C	2319	60	.8	JT
894	MANI	29	2248E	2308	2336	N10	W02	.289	16737	30.1	48D	-N	2	P		130	1.4	F
GRP82895	29	2251	2252	2306	S25	00	.314	16736	30.0	15	-N				80	.8	V	
CULG	29	2251	2252	2306	S26	W01	.331	16736	30.0	15	-N		C	2252	110	1.2	V	
PALE	29	2253E	2253U	2305	S25	E01	.314	16736	30.0	12D	-F	2	C		48			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPOR- TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
					LAT.	NER. DIST.											
GRP82896	29	2258	2304+6	2313	N11	W15	.393	16733	28.8	15	-N						
BIGB	29	2258	2304	2357	N10	W11	.342	16733	30.8	59	-N	2	C	2304	90	.9	
CULG	29	2308	2310	2313	N13	W19	.458	16733	31.4	5	-N		C	2310	30	.3	
897 CULG	29	2307	2314	2330	N21	W43	.771	16730	2.2	23	-F		C	2314	60	1.0	G
898 CULG	29	2317	2320	2327	S22	W90	.999	16728	5.7	10	-F		C	2320	30		
GRP82899	29	2348	2353+3	0005	N26	E31	.700	16740	2.3	17	-F			25	.3		D
MANI	29	2348	2353	0004	N26	E32	.708	16740	1.4	16	-F	2	P	30	.4		
PALE	29	2350E	2356	0005	N26	E31	.700	16740	1.3	15D	-F	3	C	20			D
GRP82900	30	0005+1	0007+0	0022	S26	W81	.982	16728	23.9	17	-F						K
CULG	30	0005	0007	0032	S26	W78	.972	16728	4.9	27	-N		C	0007	40		K
PALE	30	0006	0007	0012	S26	W85	.992	16728	5.4	6	-F	2	C				
901 CULG	30	0008	0012	0022	N09	W02	.272	16737	30.2	14	-N		C	0012	40	.4	
902 CULG	30	0026	0032	0040	N09	W19	.416	16733	31.4	14	-N		C	0032	80	.8	T
903 CULG	30	0039	0046	0058	S26	W56	.835	16729	3.2	19	?F		C	0046	120	2.2	
		IMP.1	NO :	HOLL PALE	YUNN												
GRP82904	30	0053+2	0055+1	0104	N27	E33	.724	16740	2.5	11	-N						
CULG	30	0053	0056	0104	N27	E38	.764	16740	1.9	11	-N		C	0056	80	1.2	
YUNN	30	0055	0055	0056D	N28	E28	.694	16740	1.1	1D	-N		C	32	.5		
GRP82905	30	0156+1	0157+3	0210	N27	E31	.708	16740	2.4	14	-F						
CULG	30	0144	0200	0216	N28	E35	.748	16740	1.7	32	-F		C	0200	100	1.5	FT
VORO	30	0156	0157	0209	N28	E32	.724	16740	1.5	13	-N		C	0157	108	1.6	E
YUNN	30	0157E		0200	N28	E30	.709	16740	1.3	3D	-N		P	0157	48	.7	
PALE	30	0157	0200	0211	N26	E30	.692	16740	1.3	14	-F	2	C	44			
MANI	30	0159E	0200	0211	N26	E31	.700	16740	1.4	12D	-F	2	P	30	.4		
906 CULG	30	0203	0212	0300	N15	E11	.411	16737	30.9	57	-F	*	C	0212	60	.7	L
GRP82907	30	0203+5	0206+4	0224	N13	W17	.437	16733	28.8	21	-F			45	.5		
CULG	30	0203	0208	0230	N14	W15	.430	16733	31.2	27	1N		C	0208	250	2.7	F
PALE	30	0204	0209U	0224	N12	W17	.425	16733	31.4	20	-F	2	C	30			
MANI	30	0204E	0206	0217D	N13	W18	.447	16733	31.4	13D	-F	2	P	25	.3		
YUNN	30	0208	0210	0220	N14	W18	.459	16733	31.4	12	-F		C	64	.8		E
908 CULG	30	0210	0221	0237	S26	W79	.975	16728	5.0	27	-N		C	0221	50		
GRP82909	30	0228+7	0236+4	0255	N12	W17	.425	16733	28.8	27	-F			50	.6		D
PALE	30	0228	0240	0255	N12	W17	.425	16733	31.4	27	-F	*	C	25			
CULG	30	0231	0237	0252	N09	W20	.428	16733	31.6	21	-F	*	C	0237	120	1.3	T
VORO	30	0235	0236	0256	N15	W15	.443	16733	31.2	21	-N	*	C	0236	45	.5	D
GRP82910	30	0233>9	0244+5	0256	S28	W07	.380	16736	29.6	23	-F						D
CULG	30	0233	0244	0330	S28	W08	.385	16736	30.7	57	-N		C	0244	100	1.1	
PALE	30	0243	0249	0256	S28	W06	.376	16736	30.6	13	-F	3	C	25			D
GRP82911	30	0300+3	0303+3	0311	N27	E31	.708	16740	2.4	11	-F			50	.7		
CULG	30	0300	0306	0313	N28	E34	.740	16740	1.7	13	-F		C	0306	60	.9	T
PALE	30	0303	0303	0308	N26	E29	.683	16740	1.3	5	-N	3	C	41			
912 CULG	30	0328	0345	0407	N25	W01	.525	16732	30.2	39	-F		C	0345	60	.7	G
GRP82913	30	0335+4	0339	0351	N27	E31	.708	16740	2.5	16	-F						
			0350														
CULG	30	0335	0350	0400	N28	E34	.740	16740	1.7	25	-F		C	0350	80	1.2	T
PALE	30	0339	0339	0342	N26	E29	.683	16740	1.3	3	-F	2	C	44			
914 CULG	30	0414	0423	0434	N09	W21	.441	16733	31.8	20	-F		C	0423	120	1.3	T
915 CULG	30	0527	0545	0600	N10	W20	.438	16733	31.7	33	-F		C	0545	50	.6	
GRP82916	30	0536+3	0542+2	0549	N26	E32	.708	16740	2.6	13	-F			130	1.8		F
CULG	30	0536	0542	0550	N28	E33	.732	16740	1.7	14	-F		C	0542	90	1.3	T
ABST	30	0539	0544	0548	N24	E31	.683	16740	1.6	9	1F		C	0544	175	2.5	F
917 CULG	30	0539	0540	0555	S23	E33	.584	16742	1.7	16	-N		C	0540	60	.8	GH
918 ABST	30	0608E	0609	0614D	N25	E34	.717	16740	1.8	6D	-F		P	0609	87	1.3	D

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY			COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.		
					LAT.	MER. DIST.												
GRP82919	30	0649+4	0659	0710	N28	E32	.724	16740	2.7	21	-F						E	
CULG	30	0649	0659	0713	N28	E33	.732	16740	1.8	24	-N	C	0659	80	1.2		T	
ISTA	30	0653		0706	N28	E32	.724	16740	1.7	13	-F						E	
920 YUNN	30	0925		0930	S09	E28	.467	16745	1.5	5	-N	P	0925	48	.6		E	
921 RAMY	30	1409	1409	1414	N26	E23	.637	16740	1.3	5	-N	3 C		25				
922 HUAN	30	1522E		1526	N27	E24	.655	16740	1.4	4D	-F	1 P					E	
923 HUAN	30	1526		1531	N08	W14	.346	16737	31.7	5	-F	1 C	1526	40	.4			
GRP82924	30	1617+1	1618+3 1637	1645	N10	W13	.360	16737	29.7	28	-N			60	.6			
HUAN	30	1617	1619	1619D	N08	W14	.346	16737	31.7	2D	-F	1 P	1619	45	.5			
BIGB	30	1617	1619	1648	N09	W13	.347	16737	31.7	31	-N	2 C	1619	60	.6			
RAMY	30	1617	1621	1630	N10	W14	.370	16737	31.7	13	-N	3 C		67				
HOLL	30	1618	1620	1630	N13	W10	.375	16737	31.4	12	-N	3 C		69				
KANZ	30	1618	1618	1645	N10	W14	.370	16737	31.7	27	-N	3 C						
RAMY	30	1635	1637	1645	N10	W13	.360	16737	31.7	10	-N	3 C		86				
925 KANZ	30	1633	1637	1648	S10	E23	.391	16745	1.4	15	-F	3						
GRP82926	30	1648+0	1653+1	1710	N23	E27	.639	16740	2.7	22	-N							
KANZ	30	1648	1654	1700D	N24	E26	.640	16740	1.6	12D	-N	2						
RAMY	30	1648	1653	1710	N23	E28	.648	16740	1.8	22	-N	3 C		87				
GRP82927	30	1838+4	1846+2	1852	N10	W13	.360	16737	29.8	14	-N			50	.5			
PALE	30	1838	1846	1854	N10	W13	.360	16737	31.8	16	-B	3 C		81				
RAMY	30	1842	1848	1852	N10	W15	.381	16737	31.9	10	-N	3 C		23				
HOLL	30	1842	1846	1852	N13	W11	.383	16737	31.6	10	-N	3 C		53				
GRP82928	30	2049+0	2050+0	2054	N09	W16	.380	16737	29.7	5	-N			60	.6			
BIGB	30	2049	2050	2103	N09	W13	.347	16737	31.8	14	-N	2 C	2050	60	.6			
HOLL	30	2049	2050	2054	N11	W16	.403	16737	1.1	5	-N	3 C		55				
PALE	30	2049	2050	2053	N08	W17	.381	16737	1.1	4	-N	3 C		66				
929 CULG	30	2211	2221	2228	N14	W14	.421	16737	1.0	17	-N	C	2221	140	1.5			
GRP82930	30	2236+2	2242+4	2316	N10	W15	.381	16737	29.8	40	1N						U	
CULG	30	2236	2242	2338U	N11	W14	.383	16737	1.0	62D	2N	C	2242	460	5.1		U	
PALE	30	2237E		2305	N08	W18	.394	16737	1.3	28D	1N	3 C		342				
PALE	30	2237E		2253D	N08	W18	.394	16737	1.3	16D	1N	3 C		342				
BIGB	30	2238	2246	2325	N10	W15	.381	16737	1.1	47	-B	2 C	2246	120	1.3			
HOLL	30	2238	2245	2306	N13	W15	.417	16737	1.1	28	1N	3 C		270				
931 CULG	30	2331U	2351	0100U	N13	W25	.525	16733	1.9	89D	?N	C	2351	350	4.4		FI	
		IMP.1 NO : HOLL PALE																
GRP82932	31	0041>9	0049+2	0100	N10	W19	.425	16737	29.6	19	-B			100	1.1		DH	
CULG	31	0041	0050	0102	N10	W19	.425	16737	1.5	21	-B	C	0050	140	1.5		H	
MANI	31	0048	0049	0051D	N10	W19	.425	16737	1.5	3D	-N	2 P		100	1.1			
YUNN	31	0050	0050	0057	N10	W20	.437	16737	1.5	7	-B	C		129	1.5			
HOLL	31	0050	0051	0057	N13	W15	.417	16737	1.2	7	-B	3 C		54			D	
PALE	31	0051	0051	0057	N08	W21	.431	16737	1.6	6	-B	3 C		82			D	
PALE	31	0051	0051	0108	N08	W21	.431	16737	1.6	17	-B	3 C		82			D	
GRP82933	31	0113+6	0117+3	0130	N26	E16	.589	16740	2.3	17	-F						V	
CULG	31	0113	0119	0144	N27	E17	.608	16740	1.3	31	1N	C	0119	200	2.5		V	
MANI	31	0116	0118	0126D	N26	E16	.589	16740	1.3	10D	-F	2 P		50	.6			
PALE	31	0117	0117	0127	N27	E14	.591	16740	1.1	10	-F	3 C		32				
YUNN	31	0119	0120	0130	N26	E18	.602	16740	1.4	11	-N	C		161	2.0			
GRP82934	31	0200	0208	0217	N10	W19	.425	16737	29.7	17	-B			130	1.4		K	
CULG	31	0200	0208	0217	N10	W20	.437	16737	1.6	17	-B	C	0208	140	1.5		K	
YUNN	31	0209E	0209	0211D	N11	W19	.436	16737	1.5	2D	-N	C		129	1.5			
935 CULG	31	0528	0534	0548	S15	W05	.169	16741	31.6	20	-F	C	0534	50	.5		G	
936 ABST	31	0539E	0543	0549	N27	E24	.654	16740	2.0	10D	-F	P	0543	87	1.2		DJ	
GRP82937	31	0539	0547 0614	0621	S08	E18	.307	16745	2.6	42	-F						DJ	
ABST	31	0539	0547	0614D	S08	E19	.324	16745	1.7	35D	-F	P	0547	87	.9		DJ	
MANI	31	0613E	0614	0621	S08	E18	.307	16745	1.6	8D	-F	2 P		20	.2			

H α SOLAR FLARES

MARCH 1980

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IMPORTANCE	OBS COND TYPE	MEASUREMENTS			REMARKS		
	DATE	START	MAX. PHASE	END	APPROX		CENTRAL DISTANCE	HALE FLARE REGION				CNP DAY	TIME UT	MEAS. AREA MIN. of Disk		CORR AREA Sq. Deg	
					LAT.	MER. DIST.											
938 ATHN	31	0600E	0603	0626	S18	E03	.204	16741	31.5	260	-B	3	V	0603	98	1.0	
939 CULG	31	0628	0633	0648	N10	W23	.474	16737	2.0	20	-F		C	0633	60	.7	H
940 CULG	31	0702	0705	0715	N25	E20	.604	16740	1.8	13	-F		C	0705	40	.5	
GRP82941	31	0810+0	0815	0834	N09	W36	.631	16733	28.6	24	-F						DJ
ISTA	31	0810		0834	N05	W37	.625	16733	3.1	24	-F						D
KANZ	31	0810E		0834	N09	W36	.631	16733	3.0	240	-F	1					
ABST	31	0811E	0815	0816D	N09	W36	.631	16733	3.0	5D	-F		P	0815	87	1.2	DJ
GRP82942	31	1014	1028+7	1052	N26	E14	.578	16740	2.5	38	1N				190	2.3	EU
KANZ	31	1014	1028	1049	N27	E14	.591	16740	1.5	35	-B	2					U
KHAR	31	1028E	1028	1128D	N28	E15	.609	16740	1.6	60D	1N		C	1031	160	2.1	E
WEND	31	1029E	1031	1041	N26	E14	.578	16740	1.5	12D	-N		C	1031	162	1.9	
ATHN	31	1033E	1035	1054	N24	E14	.522	16740	1.5	21D	1B	3	V	1035	261	3.3	
GRP82943	31	1033+5	1043+2	1150	N09	W38	.656	16733	28.6	77	-N				100	1.3	
KHAR	31	1033E		1051D	N09	W39	.668	16733	3.4	18D	-N		C	1043	100	1.4	
KANZ	31	1037	1045	1148	N09	W38	.656	16733	3.3	71	-N	2					
WEND	31	1038		1057D	N10	W38	.660	16733	3.3	19D	-F		C	1047	75	1.0	
ATHN	31	1041E	1043	1152	N12	W41	.753	16732	3.5	71D	1B	3	V	1043	229	3.2	
KHAR	31	1056E		1128D	N09	W39	.668	16733	3.4	32D	-N		C	1126	100	1.4	
WEND	31	1129E		1137D	N10	W38	.660	16733	3.3	8D	-N		C	1132	80	1.1	
GRP82944	31	1103+0	1104+1	1109	S07	E16	.274	16745	2.7	6	-F						E
KHAR	31	1103E	1104	1110D	S07	E17	.290	16745	1.7	7D	-F		C	1104	60	.7	E
KANZ	31	1103	1105	1108	S07	E16	.274	16745	1.7	5	-N	2					
GRP82945	31	1126E		1138	N25	E13	.560	16740	2.5	12	-F						D
KHAR	31	1126E		1128D	N27	E14	.591	16740	1.5	2D	-F		C	1126	20	.3	D
WEND	31	1129E		1136	N26	E14	.578	16740	1.5	7D	-N		C	1132	82	1.0	
WEND	31	1131E		1138D	N19	E11	.467	16740	1.3	7D	-N		C	1132	38	.4	D
946 KANZ	31	1348	1348	1410	S10	E09	.166	16742	1.2	22	-F	1					
GRP82947	31	1706+1	1707+1	1712	N26	E09	.556	16740	2.4	6	-B				100	1.2	D
HOLL	31	1706	1707	1709D	N26	E08	.552	16740	1.3	3D	-B	2	C		139		D
BIGB	31	1706	1708	1712	N26	E09	.556	16740	1.4	6	-N	2	C	1708	60	.6	
RAMY	31	1707	1708	1712	N26	E10	.560	16740	1.5	5	-B	3	C		101		
	31	1858	1926	NO FLARE PATROL													
948 CULG	31	2249	2253	2306	S08	E10	.174	16745	1.7	17	-F		C	2253	90	.9	
949 CULG	31	2324	2325	2337	N13	W34	.630	16733	3.5	13	-F		C	2325	60	.8	
950 CULG	31	2334	2345	0013	N23	W60	.911	16733	5.5	39	?F		C	2345	120	3.0	G
		IMP.1 NO : BIGB HOLL															
951 CULG	31	2341	2347	2359	N09	W46	.748	16733	4.4	18	-F		C	2347	30	.5	
952 PALE	31	2346	2347	0011	N11	W29	.556	16737	3.2	25	-F	3	C		53		

"REMARKS":

- A = Eruptive prominence whose base is less than 90° from central meridian.
- B = Probably the end of a more important flare.
- C = Invisible 10 minutes before.
- D = Brilliant point.
- E = Two or more brilliant points.
- F = Several eruptive centers.
- G = No visible spots in the neighborhood.
- H = Flare accompanied by 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 H and K lines of CaII.
- P = Flare shows helium D3 in emission.
- Q = Flare shows Balmer continuum in emission.
- R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
- S = Brightness follows disappearance of filament in same position.
- T = Region active all day.
- U = Two bright branches, parallel or converging.
- V = Occurrence of an explosive phase: important, expansion within roughly 1 minute that often includes a significant intensity increase.
- W = Great increase in area after time of maximum intensity.
- X = Unusually wide H-alpha line.
- Y = System of loop-type prominences.
- Z = Major sunspot umbra covered by flare.

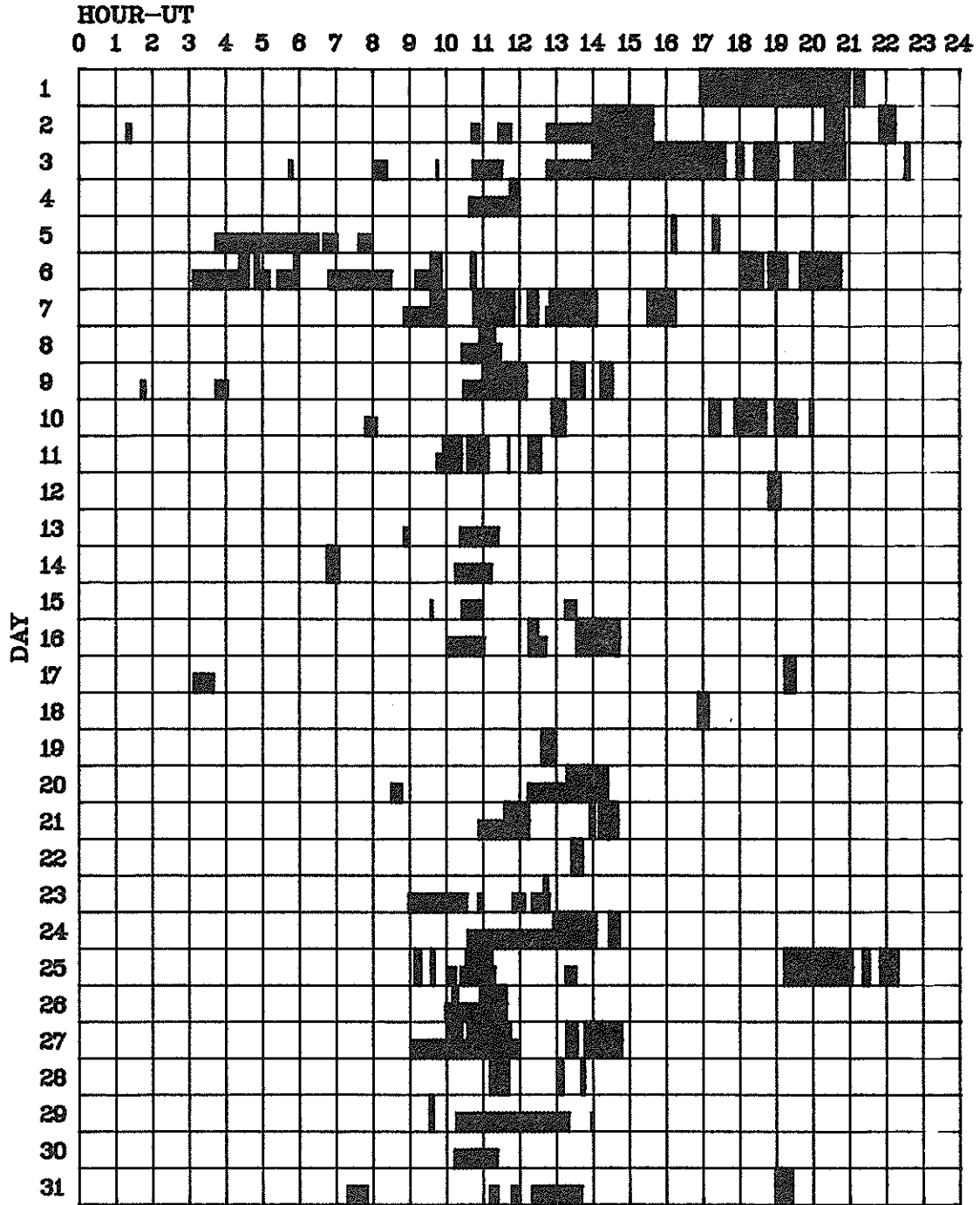
DAILY FLARE INDICES

Includes all Flares

MARCH 1980								
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
800301.	107.53	15.6	800312.	19.52	23.7	800323.	186.48	23.9
800302.	112.16	21.5	800313.	66.24	24.0	800324.	123.53	22.5
800303.	61.51	18.3	800314.	36.63	23.7	800325.	285.30	20.5
800304.	73.89	23.8	800315.	99.97	24.0	800326.	132.75	23.3
800305.	50.72	23.7	800316.	4.81	22.6	800327.	180.30	21.2
800306.	339.47	21.0	800317.	3.38	23.7	800328.	258.24	23.2
800307.	34.58	20.5	800318.	43.96	23.8	800329.	260.68	23.9
800308.	9.94	23.6	800319.	154.11	23.6	800330.	120.77	24.0
800309.	18.81	22.2	800320.	142.78	22.9	800331.	102.92	23.5
800310.	17.78	21.9	800321.	63.06	22.7			
800311.	44.17	22.6	800322.	37.85	23.7			

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

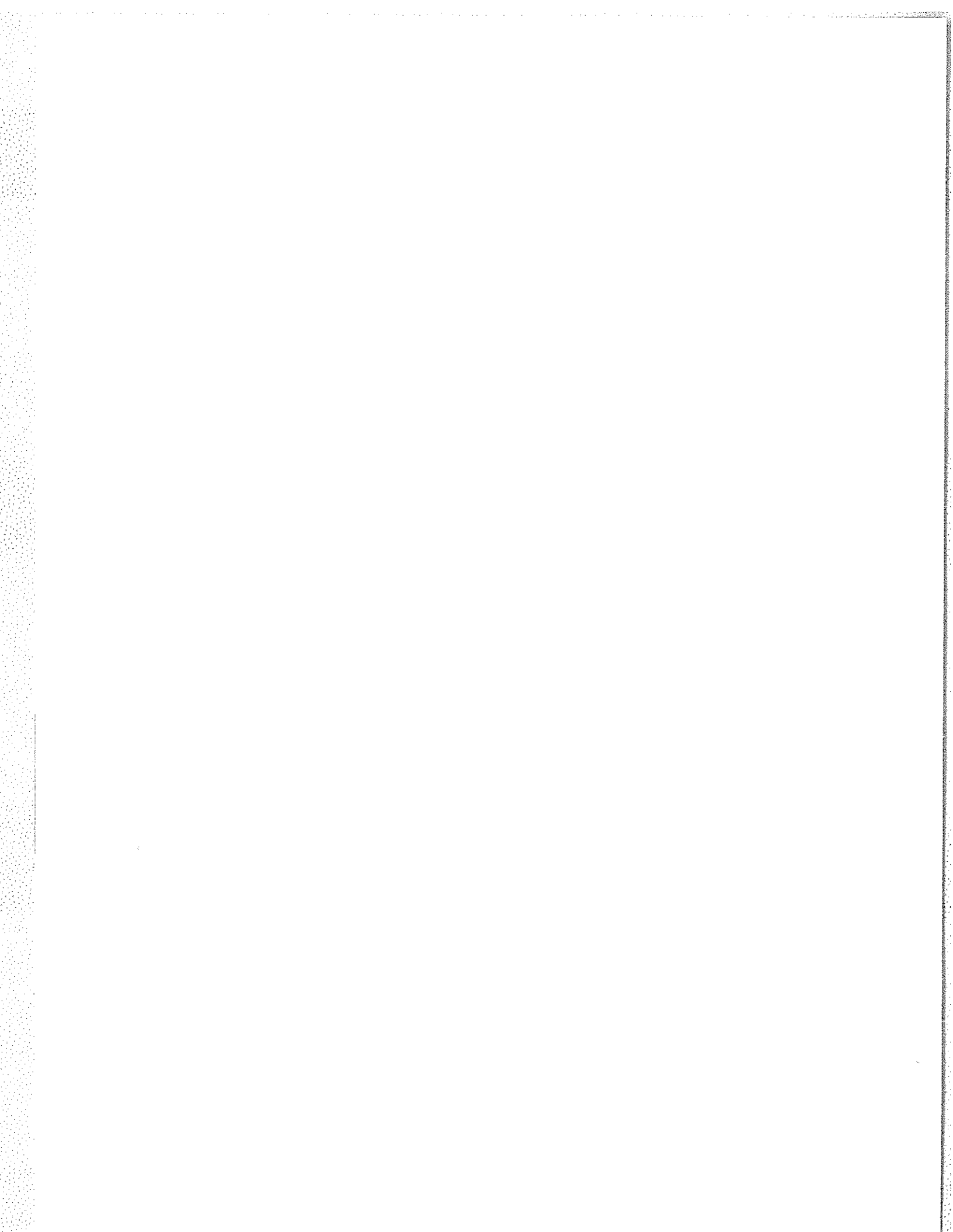
INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE MARCH 1980



Observatories included in total patrol:

Abastumani	Catania	Istanbul	Manila	Ramey
Athens	Culgoora	Kanzelhoehe	Monte Mario	Tashkent
Big Bear	Haute Provence	Kharkov	Mitaka	Voroshilov
Bucharest	Holloman	Kodaikanal	Palehua	Wendelstein
	Huancayo	Lvov	Purple Mt.	Yunnan

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).



MISCELLANEOUS DATA

Contents

Page

Energetic Solar Particles and Plasma

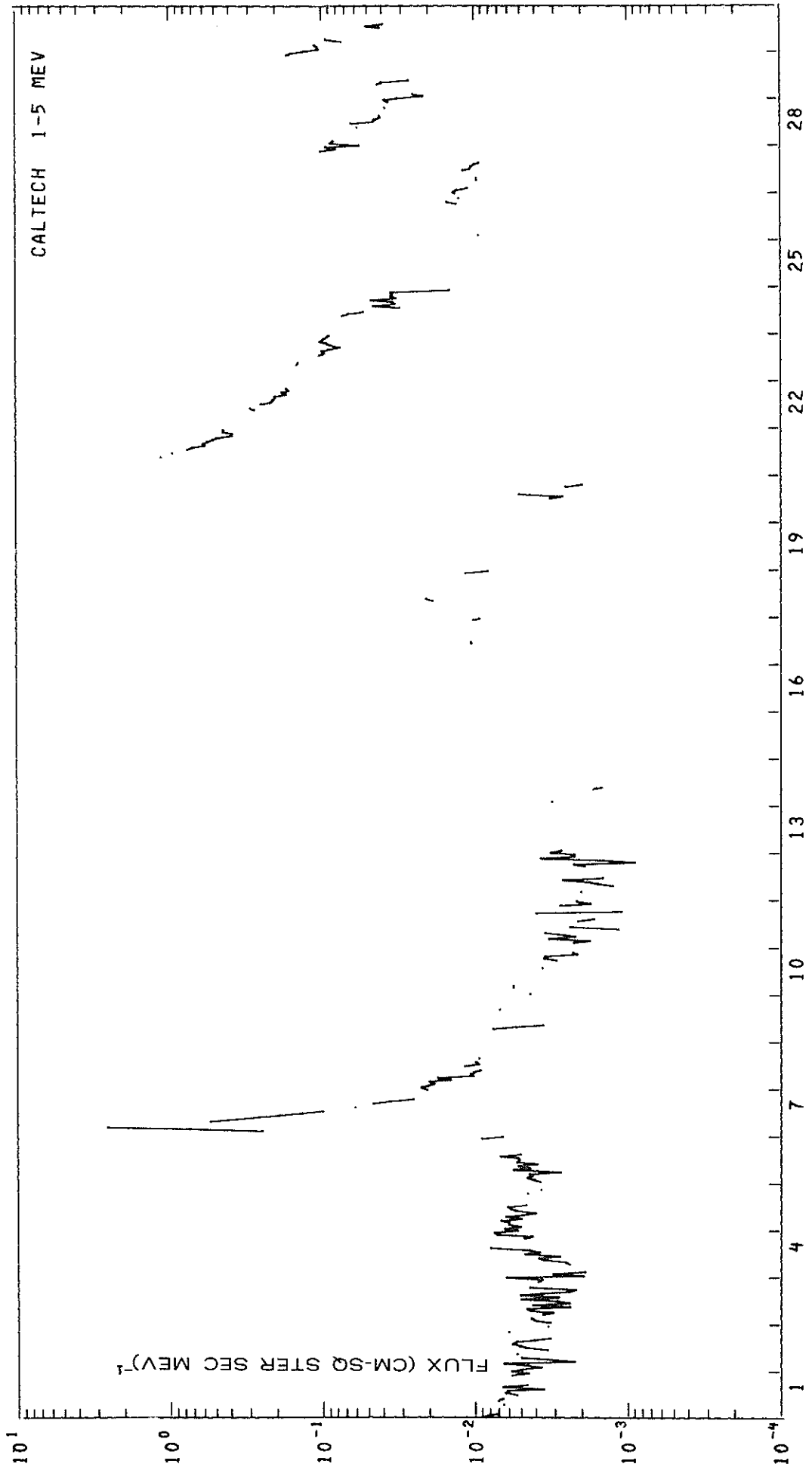
IMP 8 Electrons, Protons and Alpha Particles June 1980

98-102

IMP 8 Solar Wind Plasma December 1980 - May 1981

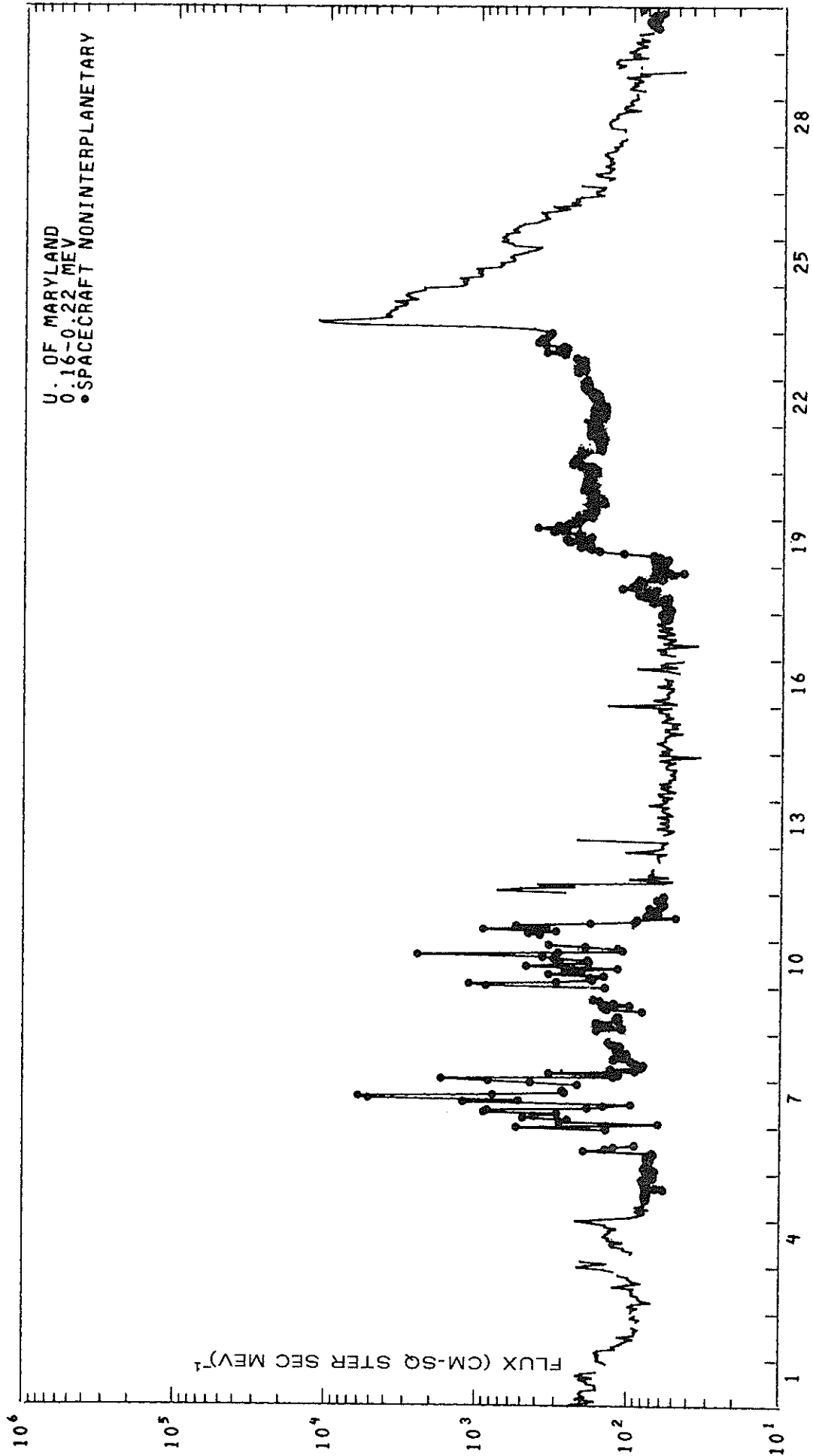
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IMP 8 ELECTRONS
JUNE, 1980

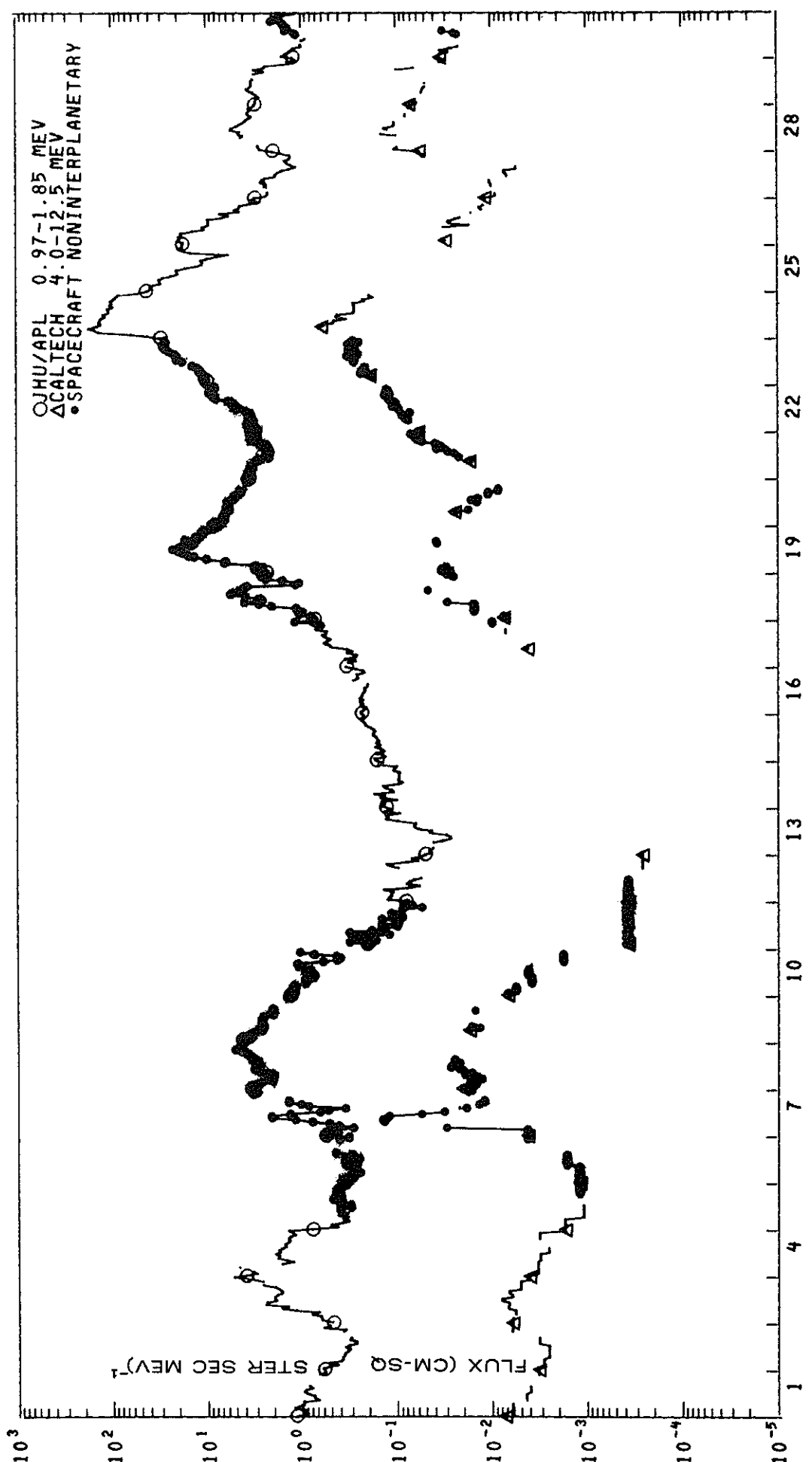


IMP 8 LOW ENERGY PROTONS

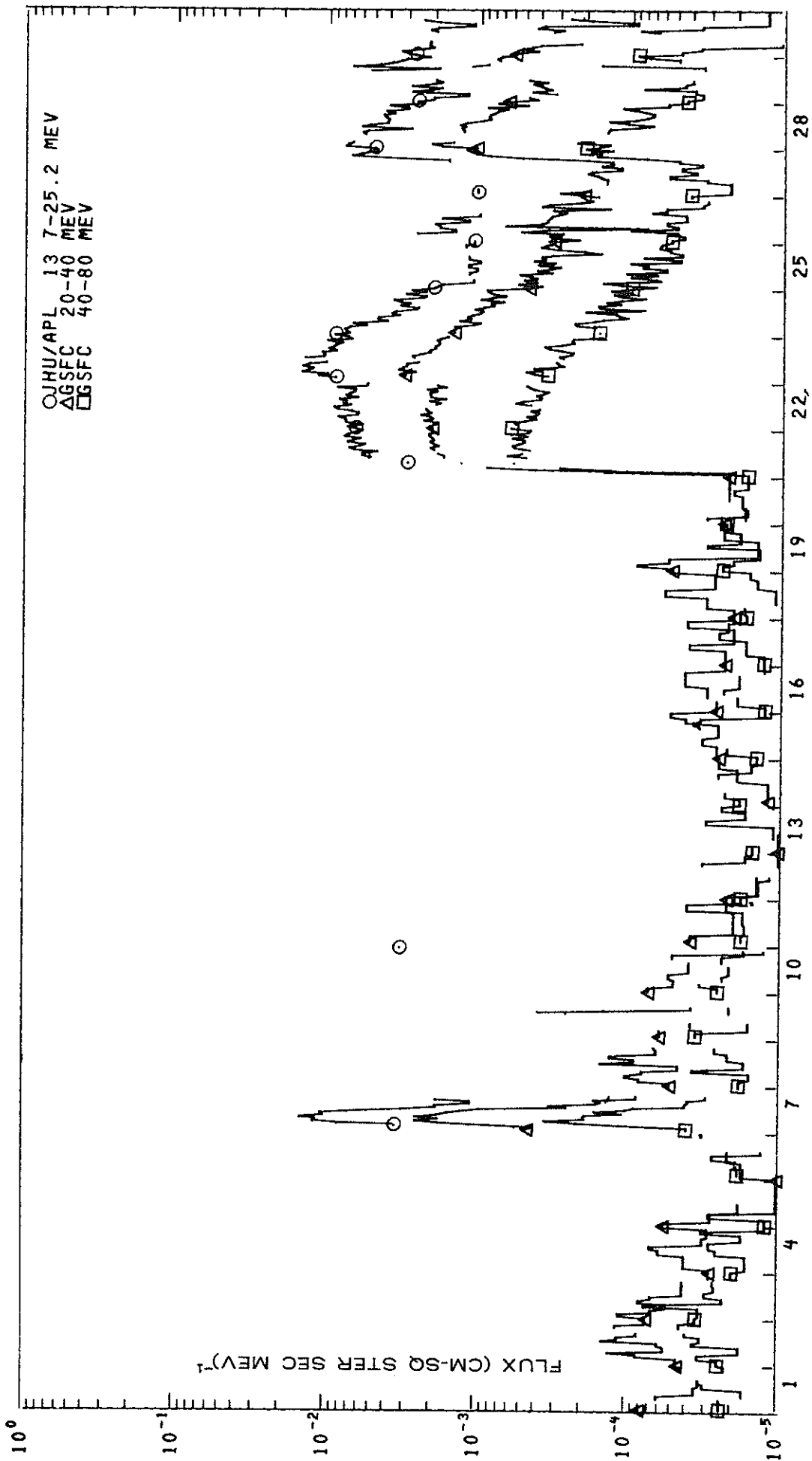
JUNE, 1980



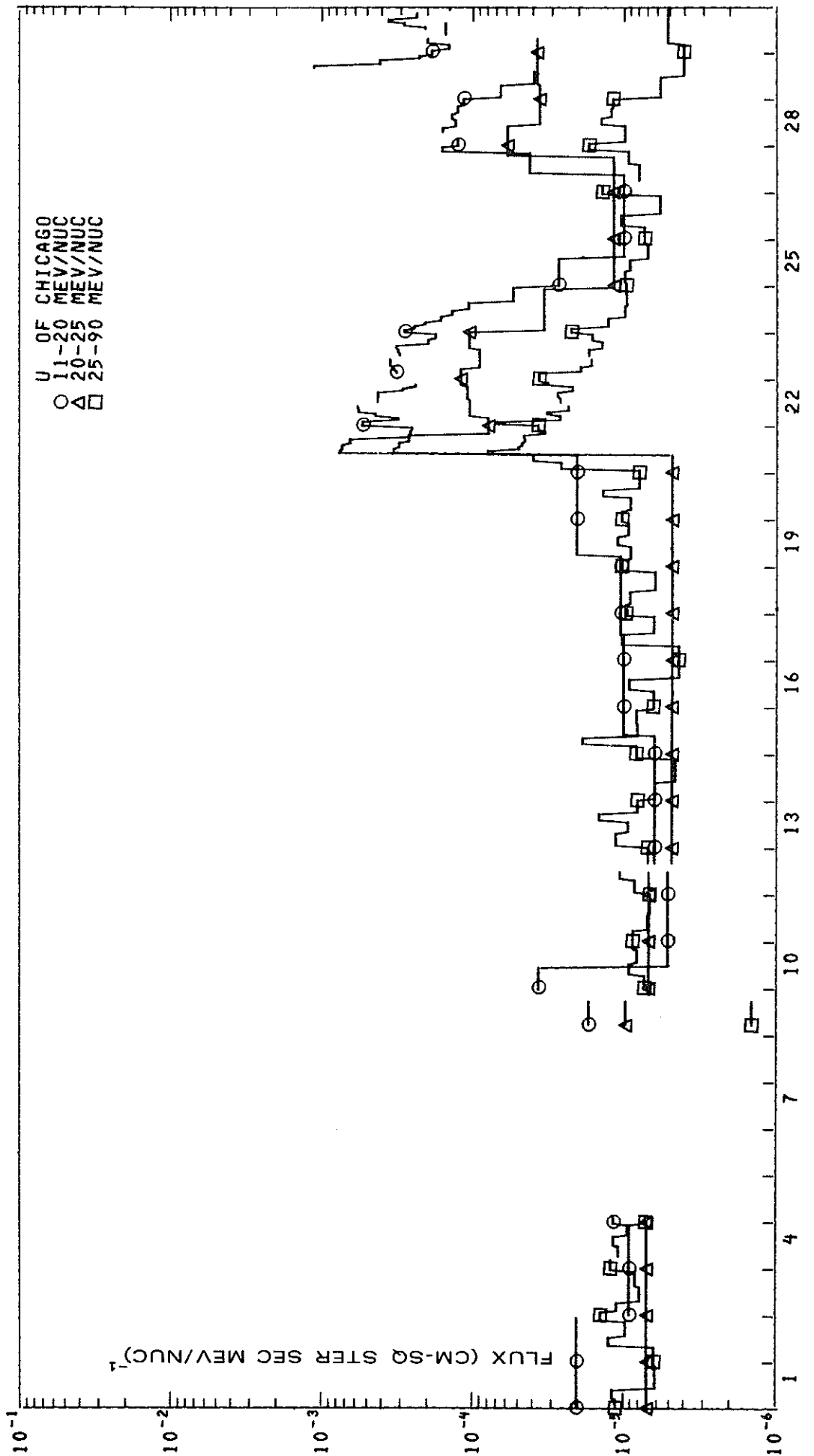
IMP 8 INTERMEDIATE ENERGY PROTONS JUNE, 1980



IMP 8 HIGH ENERGY PROTONS
JUNE, 1980

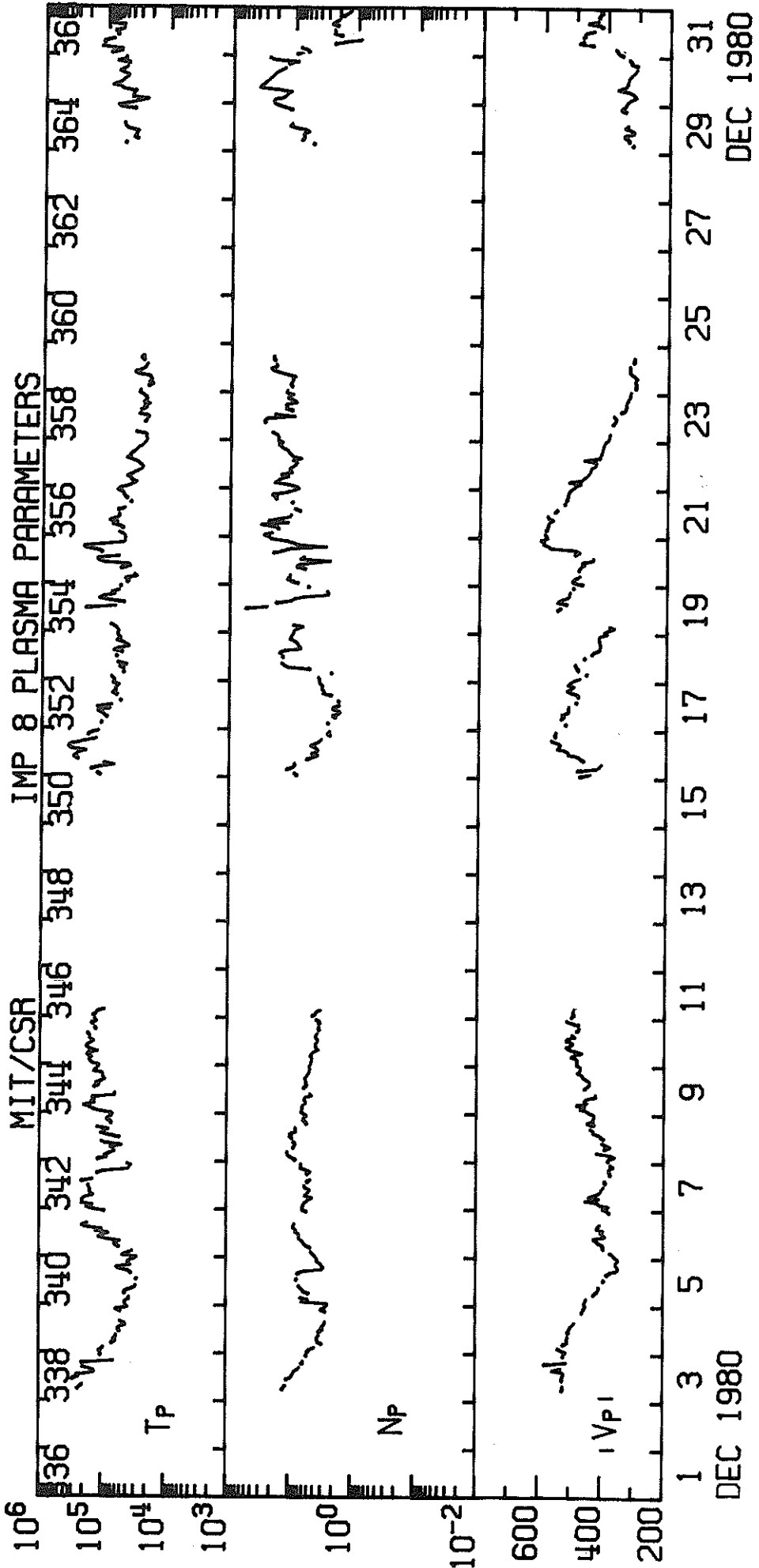


IMP 8 ALPHA PARTICLES
JUNE, 1980



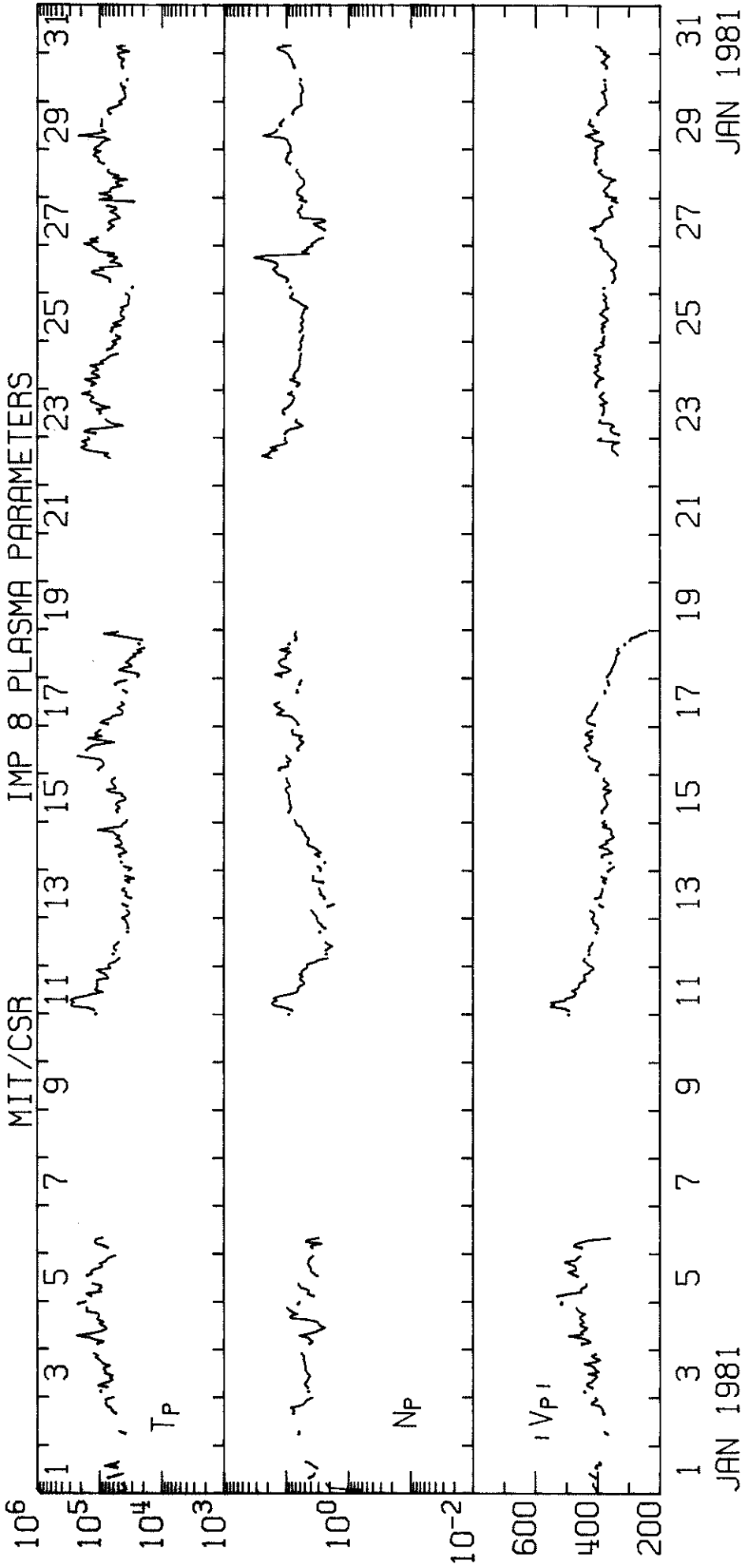
IMP 8 SOLAR WIND PLASMA

DECEMBER 1980



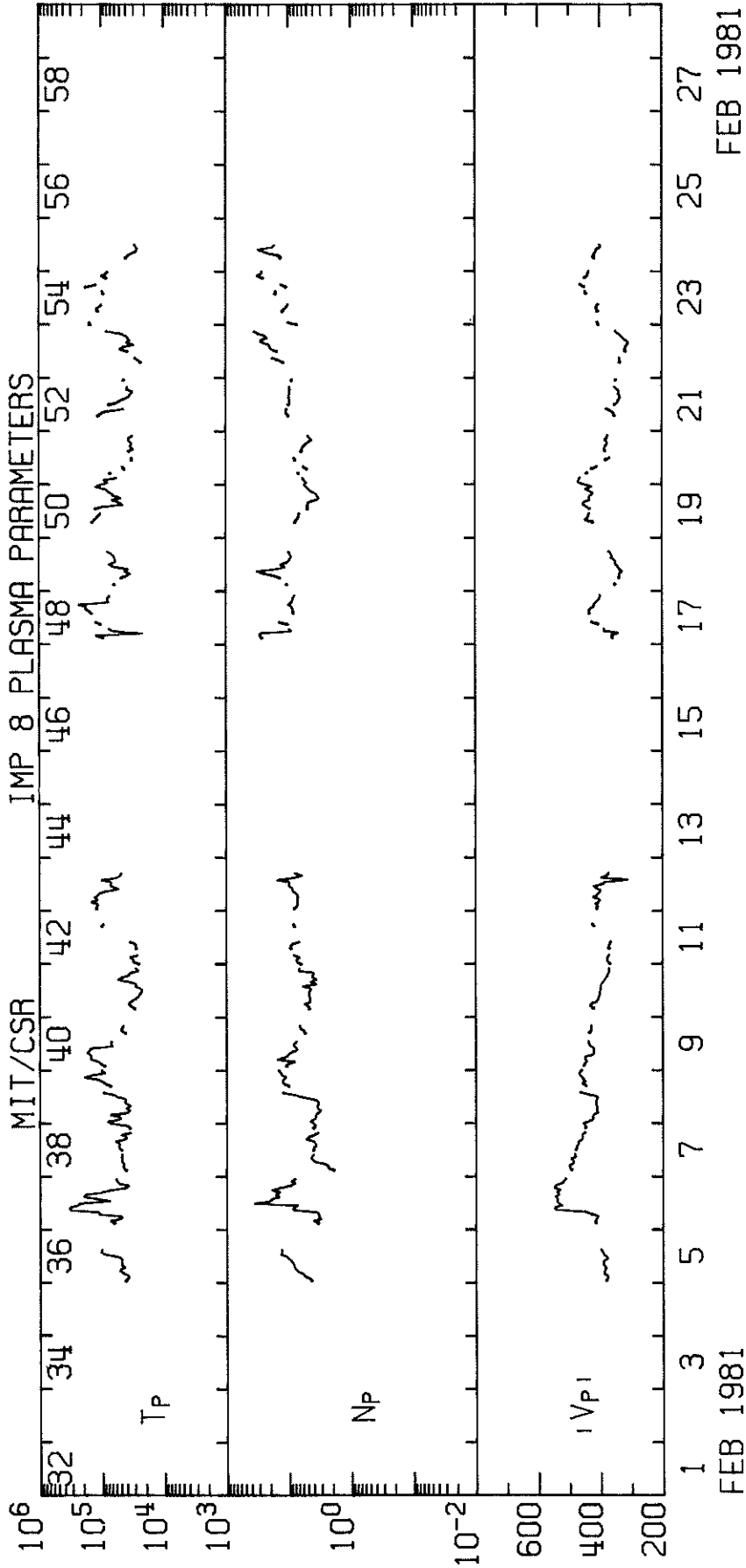
IMP 8 SOLAR WIND PLASMA

JANUARY 1981



IMP 8 SOLAR WIND PLASMA

FEBRUARY 1981

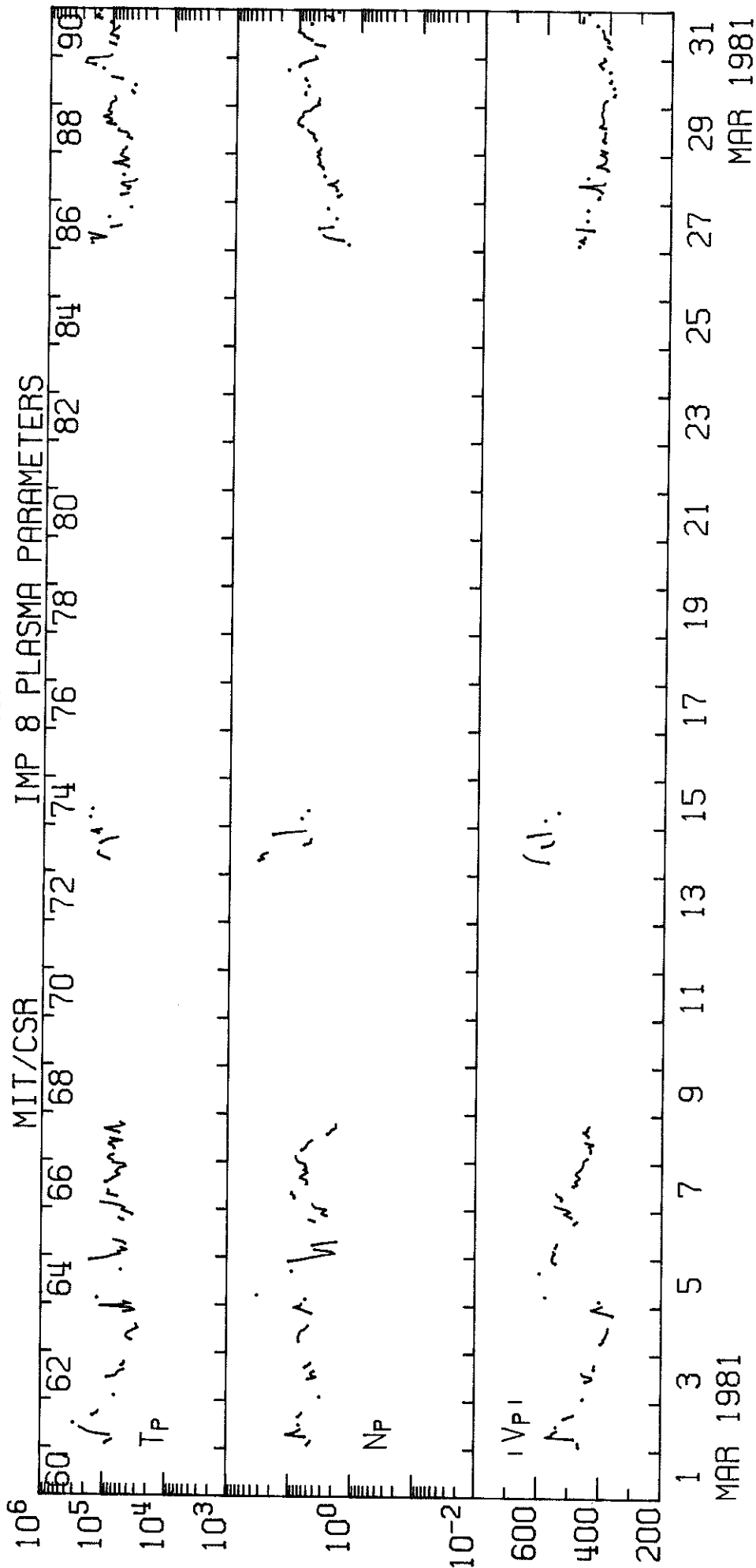


FEB 1981

FEB 1981

IMP 8 SOLAR WIND PLASMA

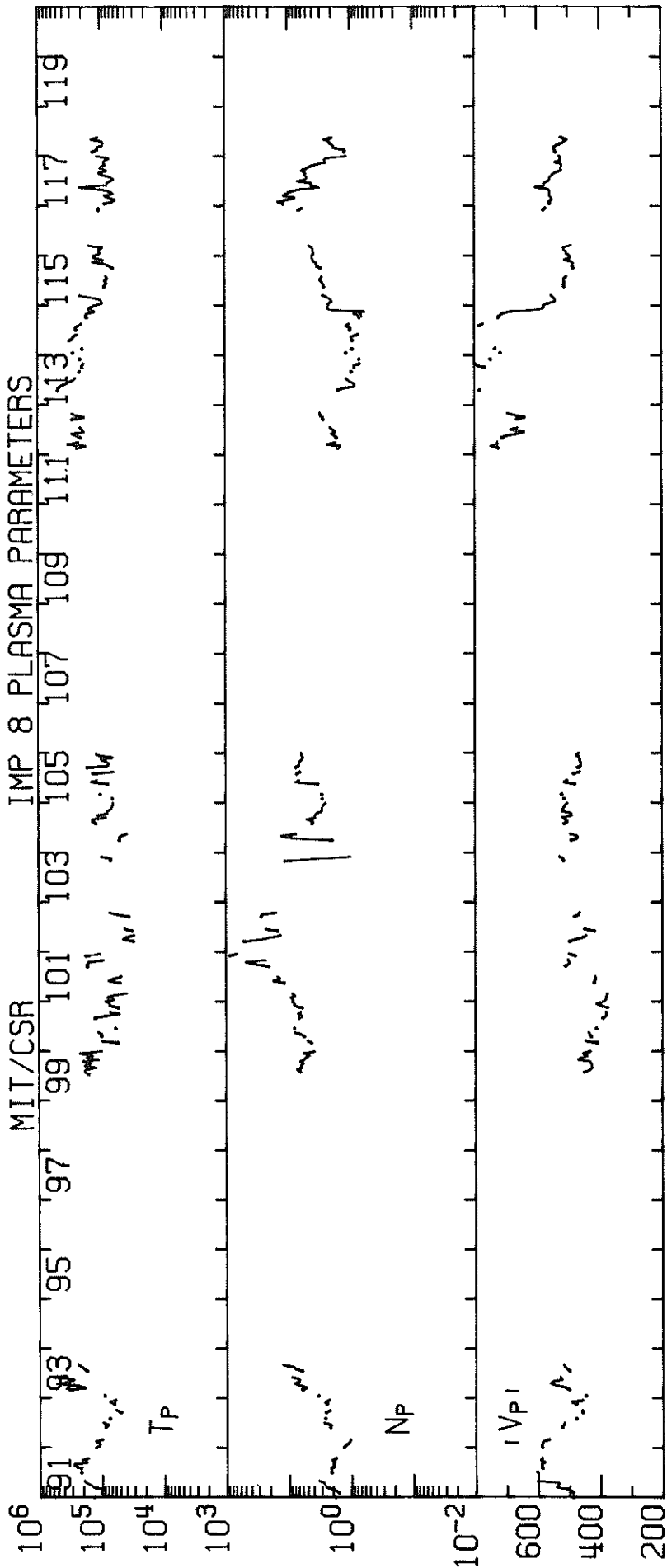
MARCH 1981



IMP 8 SOLAR WIND PLASMA

APRIL 1981

MIT/CSR IMP 8 PLASMA PARAMETERS

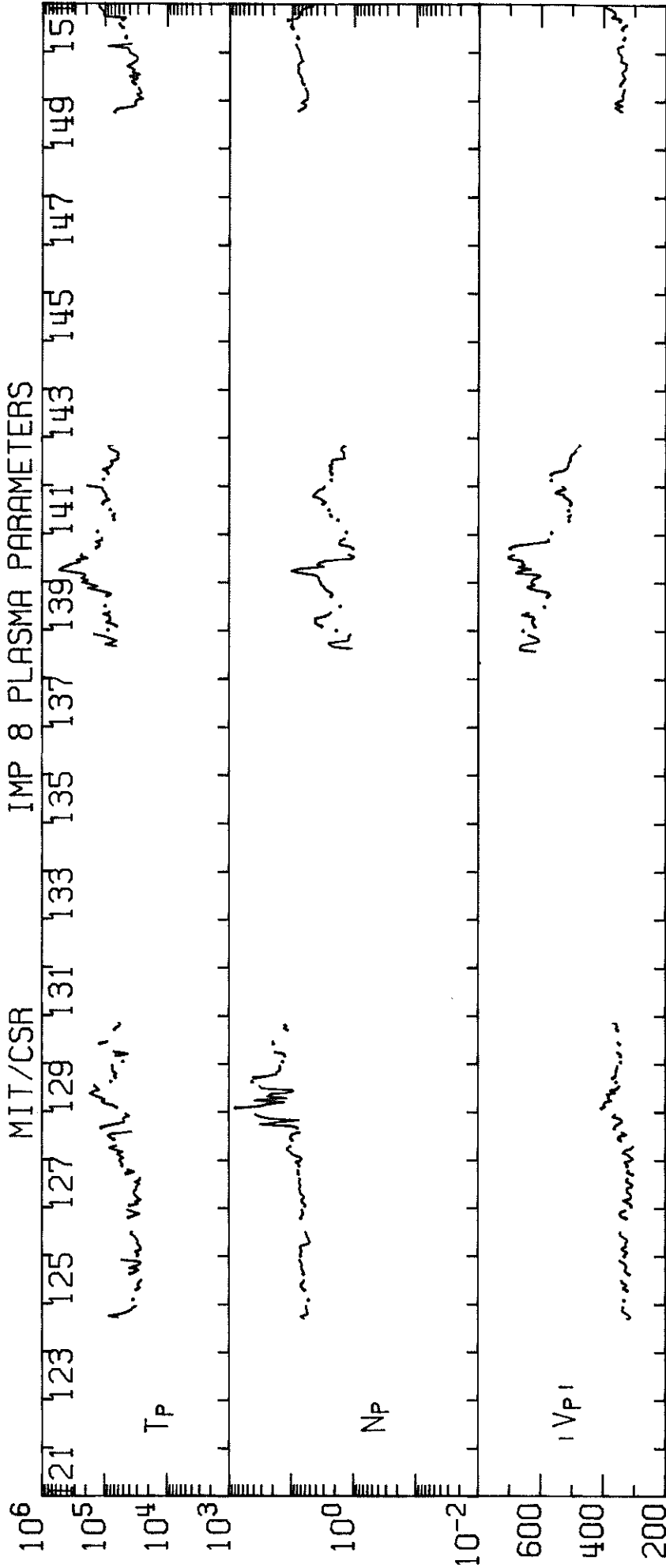


1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
 APR 1981 APR 1981

IMP 8 SOLAR WIND PLASMA

MAY 1981

MIT/CSR IMP 8 PLASMA PARAMETERS



1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
MAY 1981

SOME OTHER SOURCES OF DATA

Data Available: Some data available in publication form are cited here. A list is given, along with addresses of the responsible institutions. The WDC-A for Solar-Terrestrial Physics publishes the Toyokawa, Ottawa and Penticton radio data in its monthly publication, *Solar-Geophysical Data*. The WDC-A for Solar-Terrestrial Physics also receives most of the periodicals when they become available.

- | | | | |
|----------|--|--------------|---|
| Belgium: | <i>Bulletin d'Observations: Activite Solaire - Observations Radio-electriques Solaires - 600 MHz (Humain, Belgium) Observatoire Royal de Belgique, Ave. Circulaire 3, Brussels, Belgium (monthly since 1962)</i> | Japan: | <i>Monthly Report of Solar Radio Emission</i> Radio Astronomy Section, Research Institute of Atmospheric, Nagoya University, Toyokawa, Japan (since 1956); <i>Solar Activity Chart WDC-C2</i> , Toyokawa Observatory, Nagoya University, Toyokawa, Japan (annually since 1968); <i>IAU Quarterly Bulletin on Solar Activity</i> Tokyo Astronomical Observatory, Mitaka, Tokyo, Japan (since 1978) |
| Canada: | <i>Solar Noise Observations at 2800 Mc/s (Ottawa - ARO) and 2700 Mc/s (Penticton - DRAO) Series C Monthly Report, National Research Council, Radio Astronomy Section Ottawa 7, Ontario, Canada (since 1947)</i> | Netherlands: | <i>Geomagnetic Data</i> IAGA Bulletin No. 12 (1932-69), No. 32 (since 1970) IUGG Publications Office, 39 ter, Rue Gay-Lussac, Paris V, France (annually) |
| France: | <i>Carte Synoptiques de La Chromosphere Solaire</i> Observatoire de Paris, 92 Meudon, France (monthly since 1931) | Philippines: | <i>Manila Observatory "Solar Maps and Activity"</i> , Manila Observatory, P.O. Box 1231, Manila, Philippines (monthly) |
| Germany: | <i>Daily Mean Value of Solar Flux Density</i> Heinrich-Hertz Institut, 1199 Berlin-Adlershof, Rudower Chaussee 5, G.D.R. (monthly since Jul 1957) | Switzerland: | <i>Bulletin of "Berne Solar Observations"</i> , Institute of Applied Physics, Div. of Solar Observations, Sidlerstrasse 5, 3012 Berne, Switzerland (since 1968) |
| Italy: | <i>Solar Phenomena - Monthly Bulletin and Photographic Supplement</i> Osservatorio Astronomica di Roma, Monte Mario, Rome, Italy (monthly since 1958); <i>Osservazioni Solari, Solar Flux and Distinctive Events</i> Osservatorio Astronomico Di Trieste (quarterly since 1965); <i>Solar Observations made at Catania Astrophysical Observatory</i> (annually since 1967) | Taiwan: | <i>Report on Sunspot Observations</i> Taiwan Provincial Weather Bureau Observatory, Taipei, Taiwan (quarterly since 1957) |
| | | USSR: | <i>СОЛНЕЧНЫЕ ДАННЫЕ (Solar Data)</i> USSR Academy of Science (monthly since 1958); <i>КОСМИЧЕСКИЕ ДАННЫЕ (Cosmic Data)</i> (monthly since 1962); <i>Magnetic Fields of Sunspots</i> (bimonthly since 1964) |
| | | USA: | <i>Preliminary Report and Forecast of Solar-Geophysical Activity</i> Space Environment Services Center, NOAA, Boulder, Colorado 80303 USA (weekly); <i>Solar-Geophysical Data</i> NOAA, Boulder, Colorado 80303 USA (monthly since November 1955) |

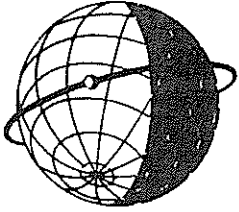
UAG SERIES OF REPORTS

Between 4 and 12 UAG Reports are published at irregular intervals each year. Subscriptions may be ordered through the National Geophysical and Solar-Terrestrial Data Center, Environmental Data and Information Service, NOAA, Boulder, CO 80303, USA. The subscription price for the calendar year only is \$40.00 (\$23.00 additional for foreign mailing). Each year the single copy prices total less than \$40.00, the expiration date for all subscriptions will be extended. Back issues may be purchased at the prices shown below plus a \$4.00 handling charge per order; some reports, though, are available only on microfiche. Orders must include check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGSDC.

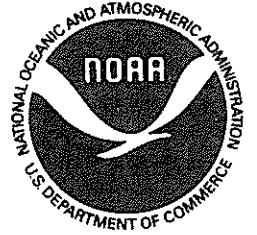
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