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Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 435 NOVEMBER 1980

DATA FOR
MAY 1980

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SOLAR-GEOPHYSICAL DATA

No. 435

Issued in two parts

Helen E. Coffey, Editor

J. Virginia Lincoln, Chief
Solar-Terrestrial Physics Division

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"424A 50" listed under 1979 Oct means that the sunspot drawings for Oct 1979 were contained in *Solar-Geophysical Data* Number 424 - Part I, beginning on page 50.

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

SGD 435 Part II (Comprehensive)

MAY 1980 DATA

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NOTE ON DELAY OF GROUPED SOLAR FLARE DATA:

Beginning with the July 1980 issue of *Solar-Geophysical Data*, we planned to publish the final listing of solar flares 13 months, rather than 6 months, from the date of observation. Although this schedule has not been met since the July 1980 issue was published, we and our colleagues at the Meudon Observatory plan to return to the 13-month delay as soon as possible. This new schedule will cause the Daily Flare Index and the Regional Flare Index to appear 13 and 14 months from the date of observation. At the same time we are suspending indefinitely publication of the Abbreviated Calendar Record. We deeply regret this situation, but the volume of data recorded during sunspot maximum and computer conversion problems at the Meudon Observatory and at NGSDC have forced these greater delays on us.

For researchers who need the comprehensive solar flare data more promptly, NGSDC has available "preliminary" listings from August through October 1979. These complete tabulations lack the final Meudon corrections, and will only be published after they have been made. Nevertheless, printouts for the August-October 1979 period are available on request, if they be recognized as "preliminary" when used in research projects. A fee may be charged for reproducing these data. Please contact the editor, Helen E. Coffey, at (303) 497-6223 or telex SOLTERWARN BLDR 45897.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
01	200	GORK	44	NS	0300.0E		300.0D		5		
	260	ONDR	44	NS	0610.0E		491.0D	148	4		
	127	TORN	43	NS	0650.0		490.0		1.2		V1,INCOMPLETE
	200	HIRA	44	NS	2345.0E	0305	560.0D	20	10		WR
	700	SYDN	40	F	0047.0	0047.8	1.4				
	9400	TYKW	5	S	0047.0	0048	3.0	4	1.5		
	3750	TYKW	5	S	0047.0	0048.2	3.0	1.5	.5		
	1000	TYKW	45	C	0047.3	0048.3	2.0	3	.5		
	2000	TYKW	5	S	0047.5	0048.2	2.5	1.5	.5		
	3750	TYKW	45	C	0052.0	0057.0	8.0	4	.5		
	9400	TYKW	5	S	0052.5	0053.7	2.5	4.5	1.5		
	700	SYDN	40	F	0056.5	0057.1	1.5				
	1000	TYKW	45	C	0056.9	0057.0	1.0	1	.3U		
	2000	TYKW	45	C	0056.9	0057.8	1.4	6	2		
	1000	TYKW	5	S	0117.7	0118.0	.5	4	1		
	3750	TYKW	45	C	0118.0	0118.8	1.0	1.5	.3U		
	2000	TYKW	8	S	0119.0	0119.0	.1	3	1 U		
	2000	TYKW	5	S	0212.0	0213	2.0	1	.5		
	1000	TYKW	45	C	0212.0	0212.5	3.0	2.5	.5		
	2000	TYKW	5	S	0320.8	0320.9	.5	1.5	.5		
	9400	TYKW	5	S	0323.0	0323.7	2.0	4	1		
	1000	TYKW	42	SER	0323.6	0323.7	.6	7	1		
	700	SYDN	4	S/F	0327.0	0327.5	1.2				
	2000	TYKW	45	C	0327.4	0327.7	1.5	31	3		
	3750	TYKW	5	S	0327.5	0327.7	.5	2.5	.5		
	1000	TYKW	5	S	0327.5	0327.7	.5	2.5	.5		
	650	GORK	4	S/F	0327.5	0327.9	1.4	60			
	2950	GORK			0327.8	0331.7		40			
	2950	GORK	41	F	0327.8	0327.9	5.8D	13			
	2000	TYKW	5	S	0330.8	0331.4	3.0	100	15		
	700	SYDN	45	C	0330.8	0331.2	1.6				
	1400	SYDN	4	S/F	0330.8	0331.2	1.7				
	3750	TYKW	45	C	0330.9	0331.3	2.1	52	12		
	9400	TYKW	5	S	0331.0	0331.3	1.0	35	12		
	1000	TYKW	45	C	0331.0	0331.4	4.0	32	6		
	17000	NOBE	1	S	0331.0	0331.2	.8	14			L
	950	GORK	5	S	0331.2	0331.7	2.3	20	10		
	9100	GORK	3		0331.4	0331.6	1.8	34	16		
	9400	TYKW	29	PBI	0332.0		6.0	3	1.5		
	3750	TYKW	29	PBI	0333.0		5.0	1.5	.5		
	9400	TYKW	5	S	0405.0	0405.7	2.0	3	1		
	200	GORK	2	S/F	0551.0	0551.2	.9	60 D			
	100	GORK	8	S	0551.1	0551.3	.9	450 D			
	2000	TYKW	5	S	0614.0	0616.1	4.0	5	1.5		
	9400	TYKW	20	GRF	0614.0	0616	45.0	5	2		
	3750	TYKW	5	S	0614.0	0615.8	4.0	9	3.5		
	9100	GORK	20	GRF	0614.3	0616.0	41.9	5	3		
	2950	GORK	20	GRF	0614.3	0614.3	37.0	10	3		
	3750	TYKW	29	PBI	0618.0		40.0	3	1.5		
	2000	TYKW	29	PBI	0618.0		40.0	1.5	.7		
	204	IZMI	41	F	0658.0	0700.0	3.7	90			
	113	POTS	42	SER	0658.7	0658.8	2.1	150	2		
	3750	TYKW	20	GRF	0710.0	0725	40.0	3	1.5		
	9400	TYKW	20	GRF	0710.0	0725	40.0	3	1.5		
	2000	TYKW	20	GRF	0710.0	0720	40.0	1	.5		
	113	POTS	42	SER	0805.0	0810.0	13.0	120	1 E		
	204	IZMI	5	S	0832.0	0832.0	.7	285	200		
	1470	POTS	3	S	0923.5	0923.9	1.0	8			
	3000	POTS	1	S	0923.5	0923.8	1.0	9.7			
	9100	GORK	20	GRF	0930.1	0948.1	18.0E	7.6	4		
	2950	GORK	20	GRF	0930.3	0936.5	20.0E	6.4	3		
	9500	POTS	20	GRF	0935.0	1002	50.0	9.9			
	810	KRAK	41	F	1055.3		5.3	25			
	9500	POTS	1	S	1127.9	1128.0	.6	4.9			
	9500	POTS	1	S	1141.0	1141.5	1.5	6.6			
	810	KRAK	1	S	1157.0	1157.3	.5	14	7		
	33	UPIC	42	SER	1202.8	1202.9	76.8				
	29	UPIC	42	SER	1203.0	1203	76.6				
	113	POTS	4	S/F	1203.0	1203.0	.1E	100	30		III
	9500	POTS	1	S	1252.5	1253.7	2.5	8.2			
	7000	SAOP	20	GRF	1253.2	1254.7		10.0			17L
	3000	POTS	1	S	1253.5	1253.7	1.5	3.7			
	113	POTS	41	F	1318.2	1318.8	.7	350	20		III
	9400	HUAN		S	1359.2	1412.8	41.0	5.7	1.7		0
	113	POTS	42	SER	1407.7	1407.8	12.0	100	1 E		III
	2800	OTTA	24	OAR	1515.0	1605	50.0	8.2	4.1		
	2800	OTTA	1A	S	1553.0	1557	10.0	4.0	2.1		
	7000	SAOP	45	C	1555.0	1558.2	6.0	13			6R
	7000	SAOP	41	F	1555.0						2 BURSTS
	9400	HUAN		S	1557.5	1558.2	1.7	19.1	10.5		0
	2800	OTTA	3	S	1557.7	1558.1	2.5	12.4	6.0		
	33	UPIC	45	C	1558.0	1558.7	2.0				
	29	UPIC	45	C	1558.1	1559	1.9				
	9400	HUAN		PBI	1559.2	1559.2	11.2	3.8	2.1		0

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01	7000	SAOP	45	C	1619.0	1624.0	10.6	660.0			8L
	10715	DWIN	45	C	1620.0	1624	13.0	260	100		
	2650	DWIN	45	C	1620.0	1624	15.0	240	100		
	9400	HUAN		C	1620.3	1623.8	5.7	818.5	240.5		L
	5000	BERN	46		1621.0	1623.8	28.0	275.0			ONLY PAPER REC
	2800	OTTA	45	C	1621.0	1624	7.0	258.0	83.0		
	9400	HUAN		PBI	1626.0	1626.0	38.8	64.9	27.0		0
	9400	HUAN			1627.6	1629.0		141.2			
	9400	HUAN		C	1627.6	1628.5	4.9	143.1	81.1		0
	2800	OTTA	30	PBI	1628.0	1628	32.0	18.8	6.2		
	2800	OTTA	4	S/F	1628.2	1628.7	5.0	43.0	14.2		
	2800	OTTA	1	S	1634.2	1634.5	1.5	5.8	2.5		
	2800	OTTA	40	F	1650.3	1650.5	1.0	6.2			
	2800	OTTA	1	S	1755.0	1757	4.0	4.2	2.0		
	7000	SAOP	45	C	1909.0	1914.6		1417.0			8L,SUNSET
	2800	OTTA	21	GRF	1910.0		290.0	10.4			
	2800	OTTA	47	GB	1913.5	1916	12.0	750.0	170.0		
	9400	HUAN		C	1915.2E	1916.1U	8.8D	261.4	74.8		L
	9400	HUAN		PBI	1924.0	1924.0	7.8	17.2	5.4		0
	2800	OTTA	4	S/F	1934.8	1935.1	1.5	16.6	5.6		
	2800	OTTA	47	GB	1939.0	2007	130.0	800.0	175.0		
	9400	HUAN		S	1945.5	2007.1	95.3	181.3	56.3		L
	9400	TYKW	45	C	2059.0E	2101.4	31.0D	70 U	25 D		
	2000	TYKW	45	C	2059.0E	2101.5	31.0D	85 U	25 D		
	1000	TYKW	45	C	2059.0E	2059.1U	31.0D	32 U	10 D		
	3750	TYKW	45	C	2059.0E	2059.7U	31.0D	55 U	25 D		
	9400	HUAN		S	2100.6	2101.3	1.2	17.2	8.1		0
	2000	TYKW	29	PBI	2130.0		160.0	12	5		
	9400	TYKW	29	PBI	2130.0		160.0	18	9		
	1000	TYKW	29	PBI	2130.0		120.0	3	1.5		
	3750	TYKW	30	PBI	2130.0		160.0	14	7		
	3750	TYKW	20	GRF	2318.5	2319.7	40.0	2.5	1		
02	200	GORK	44	NS	0300.0E		14.0D		10		
	204	IZMI	44	NS	0600.0E		360.0D	40			
	260	ONDR	44	NS	0710.0E		413.0D	81	5		
	127	TORN	44	NS	0720.0E	0937.7	520.0D	230	2.2		V1
	9400	TYKW	45	C	0020.0	0033.7	20.0	15	6		
	2000	TYKW	45	C	0023.0	0034.0	17.0	18	6		
	3750	TYKW	45	C	0023.0	0033.7	17.0	26	9		
	1000	TYKW	45	C	0023.5	0023.8	.7	15	4		
	1000	TYKW	45	C	0028.0	0033.7	12.0	36	3		
	2695	PENT	21	GRF	0028.0	0031	32.0	6.8	3.4		
	1400	SYDN	45	C	0030.0	0034.2	8.1				
	2695	PENT	4	S/F	0032.0	0034	7.0	14.2	5.6		
	3750	TYKW	30	PBI	0040.0		110.0	8	3		
	9400	TYKW	30	PBI	0040.0		100.0	9	4		
	2000	TYKW	30	PBI	0040.0		115.0	4	1.5		
	2000	TYKW	20	GRF	0103.0	0135	90.0	1.5	.7		
	3750	TYKW	21	GRF	0103.0	0142	75.0	6	2.5		
	9400	TYKW	20	GRF	0105.0	0130	70.0	4	2		
	9400	TYKW	20	GRF	0240.0	0322	70.0	5	1.5		
	3750	TYKW	21	GRF	0248.0	0330	65.0	4	2		
	2000	TYKW	21	GRF	0248.0	0330	65.0	1.5	.7		
	3750	TYKW	5	S	0249.0	0249.7	8.0	1.5	.7		
	2000	TYKW	5	S	0249.0	0249.7	2.0	1.5	.5		
	17000	NOBE	1	S	0321.6	0321.9	.8	18			0
	1000	TYKW	42	SER	0326.2	0326.4	1.2	12	1		
	3750	TYKW	21	GRF	0359.0	0409	110.0	4.5	2.5		
	9400	TYKW	21	GRF	0359.0	0415	60.0	5	2.5		
	3750	TYKW	45	C	0400.0	0400.4	3.0	2.5	1		
	2000	TYKW	21	GRF	0405.0	0515	100.0	2	1		
	2000	TYKW	5	S	0405.0	0407	3.0	1	.5		
	700	SYDN	45	C	0434.5	0436.5	2.7				
	1400	SYDN	45	C	0434.8	0436.3	3.2				
	3750	TYKW	5	S	0436.3	0436.6	1.0	3	1		
	2000	TYKW	5	S	0436.3	0436.6	3.0	7	1		
	9400	TYKW	5	S	0436.3	0436.6	.7	7	2		
	1000	TYKW	5	S	0436.3	0436.6	1.0	82	20		
	650	GORK	3	S	0436.4	0436.5	.6	19	8		
	950	GORK	3	S	0436.4	0436.6	.7	28	14		
	9100	GORK	1	S	0436.5	0436.7	.6	6.4	3		
	1000	TYKW	5	S	0437.8	0438.0	.5	5	.5		
	3750	TYKW	21	GRF	0507.0	0517	35.0	3	1.5		
	100	GORK	4	S/F	0526.2	0528.6	5.0	320			
	1000	TYKW	8	S	0530.1	0530.2	.3	12	3		
	1000	TYKW	5	S	0531.9	0532.2	.5	17	4		
	3750	TYKW	5	S	0532.0	0532.1	.5	2	.5		
	2000	TYKW	5	S	0532.0	0532.2	1.0	2	.7		
	1000	TYKW	42	SER	0537.7	0537.9	1.0	5	1		
	2000	TYKW	8	S	0538.5	0538.6	.3	29	5		
	1000	TYKW	42	SER	0549.5	0550.6	1.5	7	1		
	9400	TYKW	20	GRF	0550.0	0556	60.0	4	2		
	2000	TYKW	45	C	0550.0	0555.5	10.0	15	5		
	3750	TYKW	45	C	0550.0	0555.5	10.0	15	6		

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02	2950	GORK			0552.9	0559.1		5.1			
	2950	GORK	45	C	0552.9	0555.7	7.5	13			
	1000	TYKW	45	C	0553.0	0553.7	3.0	6	1.5		
	9100	GORK	1	S	0553.9	0555.5	6.5	4.6	2		
	1000	TYKW	5	S	0559.0	0559.3	1.0	1.5	.5		
	3750	TYKW	30	PBI	0600.0		65.0	8	3.5		
	2000	TYKW	30	PBI	0600.0		65.0	4.5	1.5		
	1000	TYKW	8	S	0618.2	0618.3	.3	4.5	1.5		
	2000	TYKW	5	S	0623.0	0623.5	1.5	1.5	.5		
	1000	TYKW	5	S	0623.2	0623.5	.6	4	1		
	3750	TYKW	5	S	0623.3	0623.4	.7	2	.5		
	1000	TYKW	45	C	0628.7	0628.8	.4	8	2.5		
	6100	KISV	21	GRF	0650.0	0656	13.0	7			
	9500	KISV	3	S	0655.3	0656.3	2.0	4			
	9400	TYKW	5	S	0656.0	0656.4	1.5	4.5	1.5		
	9400	TYKW	20	GRF	0710.0	0733	60.0	4.5	2		
	3750	TYKW	20	GRF	0720.0	0733	50.0	4.5	2.5		
	2000	TYKW	20	GRF	0729.0	0740	45.0	2	1		
	6100	KISV	8	S	0818.0	0819.4	3.0	7			
	9400	TYKW	5	S	0819.0	0819.5	2.5	9	1		
	3750	TYKW	5	S	0819.0	0819.5	2.5	4	1		
	9500	KISV	8	S	0819.3	0819.8	1.0	9			
	9100	GORK	1	S	0819.5	0819.1	1.0	7.7	3		
	2950	GORK	1	S	0819.5	0819.7	.6	2.5			
	204	IZMI	41	F	0820.0	0820.0	1.0	570			
	2950	GORK	20	GRF	0831.0	0834.7	75.0	4.2	2		
	9100	GORK	20	GRF	0934.9	0944.6	16.0E	11.5	6		
	2650	DWIN	45	C	0947.0	0950	4.0	230	50		
	2800	OTTA	24O	R	1125.0	1133	8.0	4.2	2.1		
	9500	KISV	4	S/F	1139.0	1141.3	4.0	10			
	7000	SAOP	3	S	1139.8	1141.2	3.0	14.0			O
	6100	KISV	4	S/F	1140.0	1141.3	3.0	6			
	234	POTS	4	S/F	1206.9	1206.9	.4	1250	50		
	430	KRAK	42	SER	1225.3	1235.5	10.5	220			
	2800	OTTA	40	F	1233.0	1252.2	45.0	8.4			
	234	POTS	4	S/F	1248.3	1248.6	1.2	480	10		
	930	BORD	8	S	1312.3	1312.4	.4	15	1		
	2800	OTTA	23	GRF	1330.0	1500	200.0	12.6	6.0		
	2800	OTTA	3	S	1450.0	1454.5	10.0	11.2	4.0		
	7000	SAOP	45	C	1516.0	1517.0	1.0	25.0			13L
	2800	OTTA	20	GRF	1720.0	1722	23.0	6.2	3.1		
	2800	OTTA	20	GRF	1748.0	1753	22.0	2.6	1.3		
	2800	OTTA	26O	FAL	1845.0	1935	50.0	-5.0	-2.5		
	2800	OTTA	1	S	2047.0	2047.6	3.0	4.2	2.1		
	2800	OTTA	26O	FAL	2105.0	2135	30.0	-3.0	-1.8		
	2800	OTTA	20	GRF	2145.0	2215	55.0	3.0	1.8		
	2000	TYKW	20	GRF	2155.0U	2215 U	45.0U	2 U	1 U		
	3750	TYKW	20	GRF	2155.0	2215	45.0	4	2		
	9400	TYKW	20	GRF	2210.0	2220	30.0	2	1		
	2695	PENT	20	GRF	2245.0	2300	30.0	2.6	1.8		
	9400	TYKW	21	GRF	2330.0	2420	100.0	5	2		
	2000	TYKW	21	GRF	2330.0	2450	120.0	3	1.5		
	3750	TYKW	21	GRF	2330.0	2420	120.0	5	2		
	3750	TYKW	45	C	2343.0	2357.3	25.0	18	3.5		
	2695	PENT	1	S	2348.0	2351	5.0	4.6	2.3		
	2695	PENT	3	S	2356.0	2357.5	5.0	16.8	7.0		
	9400	TYKW	5	S	2356.0	2357.3	3.0	7	3		
	2000	TYKW	5	S	2356.0	2357.5	5.0	10	3		
03	200	HIRA	44	NS	0024.0E	0500	520.0D	10	5		WR
	200	GORK	43	NS	0254.0		412.0D		5		
	260	ONDR	44	NS	0602.0E		487.0D	172	8		
	127	TORN	43	NS	0730.0	1053.3	510.0	130	36		V1
	200	HIRA	44	NS	1941.0E	0019	800.0D	60	20		MR
	1000	TYKW	8	S	0043.5	0043.5	.1	6	3 U		
	1000	TYKW	5	S	0050.8	0050.9	.5	17	6		
	2000	TYKW	5	S	0140.0	0141.2	5.0	4	1		
	1000	TYKW	5	S	0140.0	0141.6	3.0	8	1.5		
	3750	TYKW	5	S	0140.5	0142	15.0	4	1		
	2000	TYKW	45	C	0204.0	0205.7	6.0	130	35		
	9400	TYKW	45	C	0204.0	0205.0	6.0	120	25		
	3750	TYKW	45	C	0204.0	0205.3	6.0	115	25		
	1000	TYKW	45	C	0204.0	0205.5	6.0	55	13		
	35000	NAGO	22	GRF	0204.0	0206	9.0	17			
	5730	IRKU	45	C	0204.3	0205.0	11.0	88 D			R
	5730	IRKU			0204.3	0205.6		53			L
	17000	NOBE	7	C	0204.5	0205.1	10.0	36			O
	500	HIRA	46	C	0204.6	0205.0	1.5	37	17		O
	5730	IRKU	29	PBI	0207.3		8.0	12			L
	3750	TYKW	29	PBI	0210.0		40.0	5	2.5		
	2000	TYKW	29	PBI	0210.0		40.0	6	2		
	1000	TYKW	29	PBI	0210.0		40.0	5	1.5		
	9400	TYKW	29	PBI	0210.0		30.0	6	2		
	3750	TYKW	21	GRF	0320.0	0400	160.0	6	2		
	2000	TYKW	21	GRF	0320.0	0400	160.0	3	2		

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03	9400	TYKW	21	GRF	0340.0	0400	120.0	4	2		
	9400	TYKW	5	S	0355.0	0355.6	1.5	5	2		
	2000	TYKW	45	C	0355.0	0355.7	4.0	9	2		
	3750	TYKW	5	S	0355.0	0355.7	2.0	5	1.5		
	9100	GORK	1	S	0355.1	0356.0	1.5	6.5	3		
	1000	TYKW			0355.3	0355.5		26			
	1000	TYKW	45	C	0355.3	0356.1	3.5	87	4		
	650	GORK			0355.5	0356.3		58			
	650	GORK	46	C	0355.5	0355.8	1.1	58			
	950	GORK	4	S/F	0355.6	0356.4	1.4	45			
	2950	GORK	1	S	0355.7	0356.0	1.3	6.2	3		
	3750	TYKW	20	GRF	0450.0	0500	60.0	3	1.5		
	6100	KISV	45	C	0539.5	0539.4	1.0	4			
	2000	TYKW	20	GRF	0610.0	0620	50.0	3	1.5		
	3750	TYKW	20	GRF	0610.0	0620	50.0	4	2		
	9400	TYKW	20	GRF	0610.0	0630	50.0	3	1.5		
	3750	TYKW	21	GRF	0750.0	0815	30.0	6	3		
	6100	KISV	26	FAL	0756.0	0758	4.0	-3			
	9100	GORK	21	GRF	0758.7	0805.6	12.0	7.8	4		
	5000	BERN	8		0759.1	0800.5	10.3	173.0			ONLY PAPER REC
	8400	BERN	8		0759.1	0800.5	18.2	108.0			ONLY PAPER REC
	2950	GORK	21	GRF	0759.3	0759.8	11.0	6.2	3		
	3000	POTS	29	PBI	0759.5	0800.5	11.0	115			
	930	BORD	46	C	0759.6	0800.4	3.4	50	11		
	6100	KISV	8	S	0800.0	0800.2	1.0	6			
	536	ONDR	23	GRF	0800.0	0922.3	140.0	18	8		
	10715	DWIN	1	S	0800.0	0800	1.0	40	35		
	2650	DWIN	1	S	0800.0	0800	4.0	115	50		
	100	GORK	8	S	0800.0U	0801 U	1.0U	60 D			
	1000	TYKW	5	S	0800.0	0800.6	3.0	27	9		
	9100	GORK	3	S	0800.2	0800.5	1.0	160	80		
	2950	GORK	3	S	0800.2	0800.4	1.5	103			
	536	ONDR	8	S	0800.2	0800.2	.2	49			
	9500	KISV	1	S	0800.2	0800.3	1.0	4			
	808	ONDR	4	S/F	0800.3	0800.5	4.5	33	6		
	204	IZMI	47	GB	0800.3	0800.3	1.0	2000	1000		
	430	KRAK	8	S	0800.3	0800.3	.5	210			
	19600	BERN	8		0800.3U	0800.5	.2U	5.0U			ONLY PAPER REC
	11800	BERN	8		0800.3	0800.5	1.9	83.0			ONLY PAPER REC
	9400	TYKW	5	S	0800.3	0800.5	1.0	160	30		
	2000	TYKW	5	S	0800.4	0800.7U	2.5	70 D	15 D		
	3750	TYKW	5	S	0800.4	0800.6	1.0	165	45		
	9500	POTS	29	PBI	0800.4	0800.5	13.0	107			
	1470	POTS	29	PBI	0800.4	0800.9	22.0	41			
	234	POTS	4	S/F	0800.4	0800.4	.9	5000	1700		III/V
	113	POTS	4	S/F	0800.4	0800.4	1.0	7000 D	2500 D		III/V
	33	UPIC	4	S/F	0800.4	0800.8	1.4				
	810	KRAK	3	S	0800.5	0800.5	1.5D	60	8		
	29	UPIC	4	S/F	0800.5	0800.6	1.1				
	6100	KISV	8	S	0800.8	0801	1.0	160			
	9500	KISV	8	S	0801.0	0801.3	1.0	42 D			
	15000	KISV	8	S	0801.0	0801.2	1.0	47			
	6100	KISV	29	PBI	0801.5	0801.5	3.0	70			
	6100	KISV	1	S	0815.5	0816	2.0	3			
	6100	KISV	1	S	1105.0	1105.5	1.0	4			
	6100	KISV	45	C	1120.0	1311	111.0D	70			
	234	POTS	42	SER	1158.1	1221.4	24.0	400	1 E		III
	9500	KISV	20	GRF	1230.0	1311	41.0D	65			
	2800	OTTA	27A	RF	1230.0		570.0	7.4	7.0		
	2800	OTTA	24	R	1230.0	1244	14.0	7.4	3.7		
	5000	BERN	21		1233.0	1309.2	50.9	71.0			ONLY PAPER REC
	2650	DWIN	47	GB	1235.0	1309	80.0	250	100		
	2800	OTTA	24P	R	1244.0		501.0	7.4			
	2800	OTTA	23	GRF	1246.0	1326	250.0	22.4	7.6		
	9500	POTS	20	GRF	1246.0	1310	114.0	48			
	3000	POTS	45	C	1246.0	1309.5	114.0	218			
	1470	POTS	45	C	1246.0	1309.4	114.0	179			
	15000	KISV	20	GRF	1250.0	1312	22.0D	18			
	536	ONDR	48	C	1250.0	1325	79.0D	60	12		
	430	KRAK	48	C	1251.5	1309.5	77.5D	130	30		
	113	POTS	27	RF	1253.5	1340.5	150.0	700			
	29	UPIC	41	F	1253.8	1404.5	106.7				
	260	ONDR	48	C	1256.0	1344	72.0	178	60		
	234	POTS	27	RF	1256.5	1319.0	147.0	250			
	33	UPIC	41	F	1259.3	1402	101.7				
	810	KRAK			1300.0	1321.5		350			
	810	KRAK			1300.0	1325.3		310			
	810	KRAK	48	C	1300.0	1317.3	25.0	280	40		
	810	KRAK			1300.0	1330.0		170			
	930	BORD	46	C	1300.0	1325.2	44.0	690	75		
	2800	OTTA	46F	C	1301.0	1309.2	23.0	230.0	60.0		
	808	ONDR	48	C	1301.0	1329.6	67.0D	323	63		
	8400	BERN	21		1302.7U	1309.2U	15.9U	26.0U			ONLY PAPER REC
	11800	BERN	21		1303.7U	1309.2U	17.2U	32.0U			ONLY PAPER REC
	127	TORN	27	RF	1314.0	1355.2	59.0	460	210		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
03	234	POTS	4	S/F	1343.8	1345.0	1.8	480	5		
	2800	OTTA	40	F	1348.0	1348.7	1.0	16.4			
	930	BORD	45	C	1349.0	1349.3	.8	18	2		
	810	KRAK	8	S	1349.5	1349.5	.2	23			
	930	BORD	45	C	1405.4	1405.8	1.0	98	12		
	810	KRAK	4	S/F	1405.5	1405.5	.7	40	12		
	930	BORD	45	C	1408.3	1408.8	2.0	22	7		
	810	KRAK	2	S/F	1408.5	1408.7	1.0	27	9		
	930	BORD	42	SER	1434.0	1446.3	24.0	105	2		
	113	POTS	4	S/F	1439.9	1440.1	.4	200	50		
	2650	DWIN	45	C	1619.0	1620	1.0	260	100		
	7000	SAOP	45	C	1619.0	1619.8	6.0	15.0			31L
	2800	OTTA	4	S/F	1619.3	1620.3	1.0	250.0	71.0		
	930	BORD	46	C	1619.4	1619.8	1.0	75	8		
	2800	OTTA	4	S/F	1622.0	1622.7	1.2	268.0	30.0		
	2650	DWIN	45	C	1622.0	1622	1.0	310	150		
	930	BORD	46	C	1622.5	1622.7	.8	285	8		
	33	UPIC	8	S	1624.9	1625	.6				
	29	UPIC	8	S	1624.9	1625	.3				
	930	BORD	40	F	1634.0	1635.4	20.0	30	4		
	2800	OTTA	4	S/F	1748.0	1752.2	7.0	17.2	12.2		
	7000	SAOP	20	GRF	1748.3	1752.0	44.0	23.0			24R,2PARTS
	2800	OTTA	30	PBI	1755.0	1755	115.0	9.4	4.5		
	2800	OTTA	3	S	1759.0	1800.5	5.0	11.0	4.0		
	2800	OTTA	2	S/F	2032.0	2034	7.0	5.4	2.0		
	2800	OTTA	26A	FAL	2105.0	2200	55.0	-7.4	-3.7		
	2800	OTTA	1	S	2127.3	2127.9	2.0	4.2	2.1		
	2000	TYKW	5	S	2127.3	2127.7	1.0	4	1.5		
	1000	TYKW	5	S	2127.3	2127.7	1.0	6	2		
	3750	TYKW	5	S	2127.3	2127.7	1.0	3	1.5		
	3750	TYKW	5	S	2132.9	2133.1	.7	4.5	1.5		
	2000	TYKW	45	C	2132.9	2133.6	1.0	2	1		
	2800	OTTA	1	S	2133.0	2133.3	2.0	2.2	1.1		
	1000	TYKW	45	C	2133.1	2133.4	.5	7	3		
	2000	TYKW	21	GRF	2213.0	2221	55.0	4	1.5		
	3750	TYKW	21	GRF	2213.0	2221	55.0	6	3		
	2800	OTTA	21	GRF	2214.0	2221	46.0	4.4	2.2		
	9400	TYKW	21	GRF	2215.0	2220	45.0	5	2		
	2800	OTTA	3	S	2215.5	2216.8	3.5	17.2	5.8		
	9400	TYKW	5	S	2216.0	2216.3	2.5	44	10		
	3750	TYKW	5	S	2216.0	2216.6	3.0	14	4		
	2000	TYKW	5	S	2216.0	2216.6	3.0	15	4.5		
	17000	NOBE	2	S/F	2216.2	2216.5	1.0	35			R
	1000	TYKW	8	S	2216.5	2216.6	.2	18	5		
	2695	PENT	4	S/F	2316.9	2317.6	1.1	46.2	23.0		
	9400	TYKW	5	S	2317.0	2317.3	1.0	13 U	5		
	1000	TYKW	45	C	2317.0	2317.2	.3	8	3		
	2000	TYKW	45	C	2317.0	2317.2	2.0	34	10		
	3750	TYKW	45	C	2317.0	2317.5	1.0	45	18		
	9400	TYKW	29	PBI	2318.0		10.0	3	1.5		
	3750	TYKW	29	PBI	2318.0		10.0	5	2		
	2695	PENT	29	PBI	2318.0	2318	15.0	9.2	3.0		
	2000	TYKW	29	PBI	2319.0		10.0	2	1		
04	100	HIRA	44	NS	0008.0E	0415	550.0D	330	60		SR
	200	GORK	44	NS	0255.0E		410.0D		10		
	100	GORK	44	NS	0255.0E		410.0D		30		
	234	POTS	44	NS	0530.0E	1439	603.0D	250			
	113	POTS	44	NS	0600.0E	1519	575.0D	900			
	204	IZMI	44	NS	0600.0E		360.0D	160			
	127	TORN	44	NS	0600.0E		270.0D		46		V1,INCOMPLETE
	260	ONDR	44	NS	0600.0E		490.0D	199	18		
	100	HIRA	44	NS	1938.0E	0020	800.0D	1800	750		SR
	200	HIRA	44	NS	1939.0E	0630	800.0D	590	210		SR
	2000	TYKW	8	S	0030.5	0030.6	.2	48	15		
	3750	TYKW	5	S	0045.0	0048	10.0	3	1		
	3750	TYKW	20	GRF	0110.0	0200	110.0	4	2		
	2000	TYKW	20	GRF	0110.0	0200	110.0	1.5	.7		
	3750	TYKW	21	GRF	0405.0	0412	45.0	2	1		
	2000	TYKW	21	GRF	0410.0	0420	40.0	1	.5		
	3750	TYKW	45	C	0427.0	0428.2	4.0	12	1.5		
	1000	TYKW	45	C	0428.0	0428.6	2.5	4.5	1		
	2000	TYKW	5	S	0428.0	0428.6	2.5	4.5	1		
	950	GORK	1	S	0428.1	0428.8	1.9	3			
	2950	GORK	1	S	0428.2	0428.4	3.0	6.8	2		
	2000	TYKW	32	ABS	0455.0	0530	105.0	-5	-2.5		
	3750	TYKW	32	ABS	0455.0	0520	90.0	-5	-3		
	9400	TYKW	32	ABS	0510.0	0520	90.0	-4	-2		
	650	GORK	22	GRF	0557.0	0635.2	228.0E	14			
	2000	TYKW	45	C	0612.0	0612.8	5.0	12	1.5		
	3750	TYKW	45	C	0612.0	0612.8	3.0	16	2		
	9400	TYKW	5	S	0612.6	0612.7	.8	3	1		
	9100	GORK	1	S	0612.6	0612.8	.5	5.3	3		
	2950	GORK	1	S	0612.7	0612.8	2.2	13.6	5		
	3750	TYKW	45	C	0647.0	0652	10.0	3	1		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
04	2000	TYKW	5	S	0651.0	0653	6.0	1.5	.7		
	430	KRAK	40	F	0702.5E		360.0D		6		
	2000	TYKW	45	C	0730.0	0737.1	30.0	6	1		
	3000	POTS	20	GRF	0733.0	0741.5	22.0	6.4			
	9500	POTS	20	GRF	0733.0	0740.0	17.0	5.0			
	9400	TYKW	5	S	0734.0	0739	25.0	3	1.5		
	3750	TYKW	5	S	0734.0	0739	25.0	3	1.5		
	1470	POTS	29	PBI	0735.0	0736.6	7.0	12			
	204	IZMI	7	C	0736.6	0736.6	.5	540	325		
	234	POTS	8	S	0813.2	0813.6	.3	2300	700		III
	113	POTS	4	S/F	0813.3	0813.6	.5	245	50		III
	204	IZMI	8	S	0813.3	0813.3	.7	1770	900		
	100	GORK	45	C	0813.4	0813.6	.8	120 D			
	100	GORK			0813.4	0813.8		120 D			
	234	POTS	42	SER	0841.3	0916.2	35.0	500	1 E		
	1470	POTS	3	S	0959.2	1001.8	3.8	15			
	3000	POTS	1	S	0959.4	1001.6	4.6	6.4			
	9500	POTS	20	GRF	1202.2	1205.0	14.0	4.9			
	930	BORD	8	S	1307.6	1307.6	.1	42	1		
	9500	POTS	40	F	1507.7	1509.5	2.3	6.4			
	2800	OTTA	40	F	1508.0	1508.7	3.2	12.6			
	3000	POTS	40	F	1508.2	1508.6	1.8	13			
	1470	POTS	40	F	1508.5	1509.6	5.5	8.9			
	2800	OTTA	20	GRF	1600.0	1630	90.0	4.2	2.1		
	2800	OTTA	46F	C	1823.8	1825	7.2	29.2	10.8		
	2800	OTTA	29	PBI	1831.0	1831	25.0	5.8	2.7		
	2800	OTTA	21	GRF	1950.0	2017	50.0	3.6	1.8		
	2695	PENT	3	S	2013.9	2014.1	1.0	13.4	4.5		
	2800	OTTA	2	S/F	2019.5	2020	3.0	4.2	2.1		
	2800	OTTA	1	S	2100.5	2101	1.0	2.4	1.2		
	2800	OTTA	1	S	2104.8	2105.5	1.4	2.0	1.6		
	2000	TYKW	21	GRF	2150.0	2300	190.0	5	2.5		
	3750	TYKW	21	GRF	2150.0	2255	190.0	4	2		
	1000	TYKW	21	GRF	2200.0	2300	170.0	2	1		
	2800	OTTA	21	GRF	2200.0	2255	180.0	6.0	4.0		
	1400	SYDN	45	C	2202.8	2203.7	2.0				
	1000	TYKW	45	C	2202.9	2203.9U	2.0	160 D	20 D		
	3750	TYKW	45	C	2203.0	2203.9	3.0	17	4		
	9400	TYKW	45	C	2203.0	2203.9	3.0	39	8		
	2000	TYKW	45	C	2203.0	2203.9	2.0	12	2.5		
	700	SYDN	40	F	2203.0	2203.9	1.5				
	200	HIRA	45	C	2203.0	2203.6	.8	3100	820		
	2800	OTTA	4	S/F	2203.0	2203.9	3.0	15.8	4.0		
	500	HIRA	46	C	2203.2	2203.8	3.0	180	60		
	100	HIRA	45	C	2203.4	2203.7	.9	6000 U			
	700	SYDN	8	S	2209.8	2209.9	.2				
	9400	TYKW	5	S	2210.0	2211.0	2.5	5	1.5		
	1000	TYKW	45	C	2210.0	2210.3	2.5	35	2		
	700	SYDN	8	S	2210.3	2210.6	.5				
	1400	SYDN	2	S/F	2210.3	2210.9	1.8				
	1000	TYKW	45	C	2309.5	2309.9	.7	103	15		
	1400	SYDN	8	S	2336.8	2337.1	1.0				
	1000	TYKW	45	C	2336.9	2337.3	.9	112	20		
05	200	GORK	44	NS	0344.0E		555.0D		190		
	100	GORK	44	NS	0350.0E		550.0E		200		
	234	POTS	44	NS	0540.0E	0719	625.0D	500			
	260	ONDR	44	NS	0600.0E		497.0D	118	39		
	204	IZMI	44	NS	0600.0E		360.0D	265			
	536	ONDR	44	NS	0600.0E		360.0D	42	5		
	113	POTS	44	NS	0604.0E	0829	603.0D	1400			
	430	KRAK	44	NS	0647.0E	0931.0	290.5D	290	14		
	100	HIRA	44	NS	1940.0E	2030	800.0D	500	80		SR
	200	HIRA	44	NS	2356.0E	0406	550.0D	120	30		SR
	1000	TYKW	5	S	0017.7	0018.2	1.0	2.5	.8		
	3750	TYKW	5	S	0108.0	0109	2.0	1.5	.5		
	1000	TYKW	45	C	0108.0	0111.4	5.0	17	1.5		
	2000	TYKW	45	C	0108.0	0109.0	2.0	2.5	.5		
	1000	TYKW			0108.0	0109.0		4			
	1400	SYDN	41	F	0108.3	0111.2	4.0				
	9400	TYKW	5	S	0108.5	0109.0	1.5	6	2		
	1000	TYKW	45	C	0146.2	0146.5	1.0	7	2		
	1000	TYKW	45	C	0233.0	0755.5	360.0D	20 U	4 D		
	2000	TYKW	21	GRF	0240.0	0320	220.0	3.5	1.5		
	3750	TYKW	21	GRF	0330.0	0420	150.0	6	2		
	9400	TYKW	21	GRF	0330.0	0420	150.0	5	2		
	650	GORK	23	GRF	0345.0E	0405.0	555.0D	40			
	2950	GORK	21	GRF	0345.0E		550.0D	12			
	3750	TYKW	45	C	0400.0	0400.9	3.0	3	1		
	700	SYDN	45	C	0405.8	0408.1	6.2				
	1400	SYDN	40	F	0406.6	0408.2	2.1				
	3750	TYKW	5	S	0407.0	0408.1	3.0	8	1.5		
	2000	TYKW	45	C	0407.0	0407.8	3.0	16	2		
	9400	TYKW	5	S	0407.0	0408.2	5.0	6	2		
	1000	TYKW	45	C	0407.3	0408.2	1.5	17	6		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
05	3750	TYKW	5	S	0412.0	0413	4.0	2.5	.7		
	3750	TYKW	5	S	0428.0	0430.2	12.0	9	2.5		
	3750	TYKW	5	S	0452.0	0454	5.0	1.5	.7		
	2000	TYKW			0452.0	0509		2			
	2000	TYKW	45	C	0452.0	0454	25.0	2	1		
	1400	SYDN	45	C	0524.0	0525.4	3.8				
	700	SYDN	42	SER	0524.1	0527.1	3.2				
	3750	TYKW	45	C	0525.0	0525.5	3.0	6	2		
	2000	TYKW	5	S	0525.0	0525.6	3.0	3	.5		
	9400	TYKW	5	S	0525.0	0525.5	1.5	22	8		
	1000	TYKW	5	S	0525.0	0525.5	1.0	12	2		
	2950	GORK	1	S	0525.1	0525.5	2.3	3.6	2		
	11800	BERN	3		0525.1	0525.6	2.5	27.0			ONLY PAPER REC
	19600	BERN	3		0525.1	0525.6	2.5	30.0U			ONLY PAPER REC
	8400	BERN	3		0525.1	0525.6	2.5	13.0			ONLY PAPER REC
	9100	GORK	1	S	0525.2	0525.4	2.1	18	8		
	9400	TYKW	29	PBI	0526.5		4.0	2	1		
	1000	TYKW	5	S	0526.5	0526.8	.8	12	4		
	3750	TYKW	5	S	0532.0	0535	25.0	4	1.5		
	2000	TYKW	5	S	0536.2	0536.4	.4	5.5	1.5		
	100	GORK	41	F	0541.3	0542 U	2.0	370 D			
	100	GORK			0541.3	0542.8		370 D			
	2000	TYKW	21	GRF	0625.0	0705	75.0	4	2		
	8400	BERN	20		0625.3	0630.5	16.0	11.0			ONLY PAPER REC
	11800	BERN	20		0625.3	0630.5	16.0	14.0			ONLY PAPER REC
	9400	TYKW	45	C	0626.0	0630.3	7.0	10	3		
	3750	TYKW	5	S	0627.0	0630.3	6.0	9	2		
	9100	GORK	2	S/F	0627.0	0630.4	5.4	10	5		
	2000	TYKW	45	C	0628.0	0629.4	5.0	24	1.5		
	2950	GORK	1	S	0629.0	0630.4	4.0	6.8	3		
	1000	TYKW	45	C	0629.3	0629.6	2.0	14	2.5		
	3750	TYKW	20	GRF	0640.0	0730	70.0	5	2		
	1000	TYKW	5	S	0704.4	0704.7	1.0	11	3		
	1000	TYKW	45	C	0817.5	0818.0	1.0	48	10		
	930	BORD	41	F	0817.5	0817.7	.5	93	2		
	3750	TYKW	5	S	0820.0	0821.2	4.0	5	1		
	6100	KISV	4	S/F	0821.0	0823	6.0	6			
	9100	GORK	1	S	1051.0	1051.4	1.4	5	2		
	2950	GORK	1	S	1051.0	1051.4	3.9	3.1	2		
	950	GORK	1	S	1059.0	1105.4	8.7	10			
	650	GORK	1	S	1101.0	1105.0	6.5	12	6		
	2800	OTTA	20	GRF	1155.0	1235	100.0	4.0	2.0		
	113	POTS	4	S/F	1308.4	1308.4	1.3	5000	1200		III
	7000	SAOP	40	F	1329.0		47.0				
	930	BORD	8	S	1400.0	1401	.6	55	3		
	1470	POTS	8	S	1400.0	1400.2	.5	23			
	2695	PENT	2	S/F	1411.5	1413.8	9.0	3.6	1.8		
	2800	OTTA	8	S	1429.0	1429.2	.8	1.6	.8		
	2800	OTTA	1	S	1437.8	1438	1.2	2.4	1.0		
	7000	SAOP	45	C	1438.5	1444.4	10.0	31.0			8R
	5000	BERN	4		1442.5	1444.3	16.0	43.0			ONLY PAPER REC
	3000	POTS	4	S/F	1443.2	1444.5	3.3	24			
	9500	POTS	4	S/F	1443.3	1443.4	2.2	15			
	2800	OTTA	4	S/F	1443.4	1444.3	2.0	26.2	13.0		
	1470	POTS	4	S/F	1443.5	1444.5	3.0	19			
	2800	OTTA	29	PBI	1445.4	1445.4	11.0	6.2	2.0		
	930	BORD	41	F	1453.4	1453.5	1.6	16	3		
	7000	SAOP	45	C	1534.4	1537.1	3.2	35.0			14L
	2800	OTTA	3	S	1536.0	1537	4.0	10.8	4.0		
	9500	POTS	3	S	1536.0	1537.0	2.0	13			
	3000	POTS	3	S	1536.2	1537.1	3.3	14			
	11800	BERN	3		1536.3	1537.1	3.0	13.0			ONLY PAPER REC
	8400	BERN	3		1536.3	1537.1	3.0	11.0			ONLY PAPER REC
	5000	BERN	4		1536.3	1537.1	3.0	17.0			ONLY PAPER REC
	1470	POTS	3	S	1536.5	1537.4	3.0	7.8			
	930	BORD	3	S	1649.0	1651.2	7.0	62	7		
	930	BORD	41	F	1658.0	1658.4	1.0	65	4		
	2800	OTTA	1	S	1659.0	1659.5	1.0	2.6	1.3		
	2800	OTTA	21	GRF	1920.0	1940	80.0	8.2	5.6		
	2800	OTTA	8	S	1936.1	1936.1	.1	7.4			
	2800	OTTA	8	S	1944.3	1944.7	.7	13.4			
	2695	PENT	4	S/F	2010.5	2012.5	4.0	16.4	4.0		
	2800	OTTA	1	S	2225.5	2226	1.0	2.6			
	3750	TYKW	21	GRF	2230.0	2330	180.0	4	2		
	2000	TYKW	21	GRF	2240.0	2400	180.0	3	1.5		
	3750	TYKW	5	S	2307.4	2307.9	1.5	19	2		
	2000	TYKW	5	S	2307.5	2308.0	1.0	3.5	1		
	2695	PENT	1	S	2307.5	2308	1.0	4.4	2.0		
	700	SYDN	2	S/F	2307.5	2308.0	.9				
	1400	SYDN	1	S	2307.7	2308.0	1.1				
	1000	TYKW	5	S	2307.7	2307.9	2.0	10	2.5		
	1000	TYKW	45	C	2310.0	2311.5	2.0	6	1		
	1000	TYKW	20	GRF	2325.0	2355	75.0	2	1		
	3750	TYKW	5	S	2332.0	2333.2	3.0	4	1		
06	100	GORK	44	NS	0251.0E		608.0E		70		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
06	200	GORK	44	NS	0252.0E		608.0D		55		
	260	ONDR	44	NS	0550.0E		503.0D	67	10		
	234	POTS	44	NS	0555.0E	0939	385.0D	50			
	204	IZMI	44	NS	0600.0E		360.0D	50			
	113	POTS	44	NS	0601.0E	1047	479.0D	90			
	127	TORN	44	NS	0750.0E	0817.8	550.0D	730	34		V1
	2000	TYKW	45	C	0226.0	0324.8	84.0	5	1		
	3750	TYKW	45	C	0227.0	0325.7	83.0	9	2.5		
	3750	TYKW	5	S	0406.0	0407.3	4.0	9	2		
	2950	GORK	1	S	0406.0	0407.2	3.0	11	5		
	700	SYDN	8	S	0406.0	0406.5	1.3				
	2000	TYKW	5	S	0406.5	0407.2	4.0	9	2.5		
	9100	GORK	1	S	0406.6	0407.2	2.0	14	7		
	9400	TYKW	5	S	0406.7	0407.2	2.0	14	5		
	950	GORK	1	S	0406.8	0407.8	3.5	2	1		
	1000	TYKW	5	S	0407.0	0407.2	2.0	1.5	.5		
	3750	TYKW	29	PBI	0410.0		20.0	1	.5		
	3750	TYKW	21	GRF	0440.0	0621	190.0	14	5		
	2000	TYKW	21	GRF	0440.0	0620	190.0	7	3		
	9400	TYKW	20	GRF	0500.0	0620	170.0	9	3		
	2950	GORK	20	GRF	0604.3	0621.0	57.0	8.2	3		
	9100	GORK	20	GRF	0607.4	0625.7	66.5	6.5	3		
	2000	TYKW	5	S	0625.5	0626.6	2.5	1.5	.5		
	234	POTS	4	S/F	0636.7	0636.7	.1	340	90		
	430	KRAK	41	F	0700.5E	0704.3	50.0D	50	5		
	3750	TYKW	45	C	0708.0	0709	30.0	3.5	1.5		
	234	POTS	4	S/F	0728.3	0728.4	.3	720	50		
	200	GORK	8	S	0755.8	0757.1	1.0	900			
	650	GORK	40	F	0757.5	0759.7	6.0	8			
	2000	TYKW	45	C	0757.5	0758.9	9.0	20	3		
	930	BORD	46	C	0757.5	0758.1	2.5	55	4		
	2650	DWIN	1	S	0758.0	0759	2.0	25	10		
	536	ONDR	2	S/F	0758.0	0758.4	1.5	25	2		
	9500	KISV	8	S	0758.0	0758.5	1.0	6			
	9400	TYKW	5	S	0758.0	0758.8	2.0	9	2		
	9100	GORK	1	S	0758.2	0758.8	1.9	9	4		
	3000	POTS	3	S	0758.2	0758.8	3.5	24			
	9500	POTS	1	S	0758.2	0758.8	.9	5.0			
	1470	POTS	3	S	0758.3	0759.0	2.7	23			
	2950	GORK	3	S	0758.5	0758.9	3.2	22	5		
	1000	TYKW	45	C	0758.5	0759.0	3.0	30	6		
	3750	TYKW	45	C	0758.5	0758.9	3.5	23	4		
	810	KRAK	2	S/F	0758.5	0759.7	2.0	24	2		
	6100	KISV	8	S	0758.5	0759	3.0	14			
	8400	BERN	3		0758.5	0759.0	2.0	11.0			ONLY PAPER REC
	5000	BERN	3		0758.5	0759.0	2.0	18.0			ONLY PAPER REC
	950	GORK	4	S/F	0758.6	0759.1	3.1	20	10		
	430	KRAK			0858.5	0904.0		400			
	430	KRAK	41	F	0858.5	0902.0	7.5	200			
	3100	CRIM	1	S	0858.5	0859.0	1.0	3	1		
	9500	KISV	21	GRF	0859.0	0903	9.0	4			
	536	ONDR	42	SER	0900.0	0902.7	4.5	27			
	430	KRAK	1	S	1027.3	1027.7	.7	21	10		
	6100	KISV	4	S/F	1037.0	1040.7	7.0	4			
	430	KRAK	1	S	1043.0	1043.3	.5	18	9		
	430	KRAK	42	SER	1133.5	1134.7U	10.5	600 D			
	430	KRAK			1133.5	1139.5		200			
	930	BORD	46	C	1134.5	1134.8	.5	23	2		
	810	KRAK	8	S	1135.7	1135.7	.3	23			
	9100	GORK	20	GRF	1147.1	1154.5	32.0	5	3		
	2800	OTTA	20	GRF	1150.0	1154	36.0	5.4	2.7		
	3100	CRIM	20	GRF	1151.0	1154.0	70.0	8	3		
	2950	GORK	20	GRF	1151.0	1154.0	39.0E	6	3		
	430	KRAK			1221.0	1236.0		42			
	430	KRAK			1221.0	1253.3U		600 D			
	430	KRAK			1221.0	1227.0		450			
	430	KRAK	42	SER	1221.0	1222.0	37.0	63			
	2800	OTTA	20	GRF	1228.0	1229	18.0	3.2	1.6		
	7000	SAOP	40	F	1410.0		18.0				
	7000	SAOP	40	F	1517.0		47.0				
	930	BORD	46	C	1807.7	1808.8	2.4	64	6		
	2800	OTTA	4	S/F	1808.5	1809.8	3.0	23.0	10.0		
	2800	OTTA	29	PBI	1811.5	1811.5	17.0	4.0	2.0		
	2800	OTTA	22	GRF	1952.0	2020	43.0	2.4	1.2		
	2800	OTTA	22	GRF	2105.0	2130	45.0	3.2	1.6		
	2000	TYKW	5	S	2123.7	2124.4	1.0	3	1		
	3750	TYKW	45	C	2127.0	2128.5	6.0	3	1.5		
	2000	TYKW	21	GRF	2140.0	2250	150.0	3	1.5		
	1000	TYKW	45	C	2145.0	2146.0	4.0	115	9		
	2000	TYKW	45	C	2145.0	2146.0	2.0	4	1		
	3750	TYKW	21	GRF	2150.0	2300	150.0	6	3		
	2695	PENT	20	GRF	2205.0	2250	60.0	2.4	1.0		
	2000	TYKW	45	C	2211.8	2212.1	.5	1	.3		
	1000	TYKW	45	C	2211.8	2212.1	.5	7	2		
	1400	SYDN	8	S	2230.5	2230.6	.3				

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
06	700	SYDN	8	S	2230.5	2230.6	.5				
	1000	TYKW	8	S	2230.6	2230.7	.2	16	5		
	9400	TYKW	20	GRF	2240.0	2300	60.0	3	1.5		
	3750	TYKW	5	S	2241.5	2242.4	3.5	4	1.5		
	700	SYDN	8	S	2247.0	2247.6	1.0				
	1000	TYKW	8	S	2247.5	2247.6	.2	8	2		
07	200	GORK	44	NS	0318.0E		580.0D		5		
	260	ONDR	44	NS	0554.0E		493.0D	104	5		
	100	GORK	43	NS	1012.0		58.0		5		
	1000	TYKW	5	S	0006.0	0006.3	.6	15	4		
	700	SYDN	2	S/F	0006.0	0006.3	.5				
	700	SYDN	8	S	0050.4	0050.5	.3				
	700	SYDN	45	C	0051.2	0051.9	1.3				
	700	SYDN	40	F	0100.3	0102.7	3.2				
	1000	TYKW	45	C	0101.0	0101.7	3.0	4.5	.5		
	700	SYDN	40	F	0111.8	0112.9	1.3				
	3750	TYKW	5	S	0119.0	0120.4	4.0	4	1.5		
	2000	TYKW	5	S	0120.0	0120.2	1.0	5	1		
	1000	TYKW	45	C	0126.0	0127.7	2.0	17	1.5		
	700	SYDN	45	C	0126.3	0126.7	1.7				
	2000	TYKW	5	S	0126.5	0127.0	1.5	1.5	.3		
	3750	TYKW	5	S	0145.7	0145.9	.5	1.5	.5		
	9400	TYKW	5	S	0145.7	0145.9	.6	4	1		
	700	SYDN	8	S	0231.0	0231.5	.7				
	700	SYDN	45	C	0234.6	0234.9	1.4				
	1000	TYKW	45	C	0234.7	0235.6	1.3	37	6		
	700	SYDN	45	C	0238.9	0239.0	.8				
	1000	TYKW	8	S	0340.0	0340.1	.2	2	.5		
	2000	TYKW	8	S	0340.0	0340.1	.3	1.5	.5		
	9400	TYKW	45	C	0403.0	0403.7	10.0	180	12		
	2000	TYKW	45	C	0403.0	0403.7	12.0	120	35		
	3750	TYKW	45	C	0403.0	0403.7	12.0	138	25		
	1000	TYKW	45	C	0403.0	0403.7U	12.0	157 D	30 D		
	9100	GORK			0403.0	0406.1		39			
	2950	GORK			0403.0	0406.2		62			
	950	GORK			0403.0	0405.8		69			
	950	GORK	46	C	0403.0	0403.7	25.0	69 D			
	9100	GORK	46	C	0403.0	0403.8	10.7	180			
	2950	GORK	45	C	0403.0	0403.8	11.6	115			
	1400	SYDN	48	C	0403.0	0403.3	10.0				
	17000	NOBE	3	S	0403.1	0403.6	1.3	168			R
	700	SYDN	45	C	0403.2	0403.5	2.3				
	650	GORK	4	S/F	0403.8E	0405.8	6.7D	54			
	17000	NOBE	29	PBI	0404.4	0404.4	4.0	13			O
	700	SYDN	45	C	0405.5	0405.7	.7				
	1000	TYKW	30	PBI	0415.0		75.0	8	2		
	3750	TYKW	30	PBI	0415.0		65.0	4	1.5		
	2000	TYKW	30	PBI	0415.0		75.0	7	2		
	2950	GORK	1	S	0417.3	0417.5	2.7	8.9	4		
	700	SYDN	45	C	0437.0	0439.2	4.0				
	1000	TYKW	45	C	0439.0	0439.8	3.0	54	6		
	3750	TYKW	5	S	0454.2	0454.4	.8	2.5	.8		
	2000	TYKW	5	S	0454.2	0454.4	.8	2.5	1		
	1000	TYKW	8	S	0454.4	0454.5	.2	7	2		
	6100	KISV	1	S	0608.0	0608.3	1.0	5			
	8400	BERN	1		0616.5	0617.1	2.0	5.0			ONLY PAPER REC
	5000	BERN	1		0616.5	0617.1	2.0	9.0			ONLY PAPER REC
	9500	KISV	1	S	0617.0	0618	3.0	7			
	3100	CRIM	1	S	0617.0	0617.5	1.0	11	3		
	3750	TYKW	5	S	0617.0	0617.5	1.0	10	4		
	9400	TYKW	5	S	0617.0	0617.5	1.0	5	1		
	2000	TYKW	5	S	0617.0	0617.9	3.0	12	4		
	1000	TYKW	8	S	0617.2	0617.2	.2	10	1		
	9100	GORK	1	S	0617.2	0617.5	.7	3.8	2		
	3750	TYKW	29	PBI	0618.0		40.0	1	.5		
	2000	TYKW	30	PBI	0620.0		70.0	1.5	.5		
	536	ONDR	8	S	0636.0	0636	.2	20			
	930	BORD	41	F	0709.0	0709.7	2.4	11	3		
	2000	TYKW	5	S	0709.0	0709.6	3.0	1.5	.5		
	1000	TYKW	45	C	0709.0	0710.2	3.0	11	2.5		
	810	KRAK	42	SER	0709.3	0709.5	1.3	130			
	1000	TYKW	5	S	0801.3	0801.5	.5	10	2.5		
	810	KRAK	2	S/F	0829.5	0830.0	.7	27	6		
	930	BORD	46	C	0829.6	0829.9	.8	61	4		
	1000	TYKW	45	C	0829.6	0829.9	.7	29	8		
	930	BORD	8	S	0843.2	0843.2	.1	12	1		
	810	KRAK	8	S	0843.3	0843.3	.2	27			
	810	KRAK	8	S	0845.3	0845.5	.2	43			
	930	BORD	8	S	0845.3	0845.5	.1	235	1		
	1000	TYKW	8	S	0845.4	0845.5	.2	135	50		
	810	KRAK	42	SER	0856.7	0858.7	3.3	43			
	930	BORD	46	C	0858.6	0858.9	2.0	28	3		
	930	BORD	8	S	1000.0	1000	.1	15	1		
	810	KRAK	8	S	1000.0	1000.0	.2	60			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
07	930	BORD	46	C	1001.6	1001.8	.6	112	4		
	1470	POTS	8	S	1001.7	1002.0	.8	26			
	234	POTS	4	S/F	1001.7	1001.8	.4	1500	75		III
	113	POTS	4	S/F	1001.8	1001.8	.3	200	12		III
	9100	GORK	1	S	1001.8	1002.0	1.2	3.8	2		
	430	KRAK	3	S	1009.2	1009.5	.5	40	10		
	127	TORN	41	F	1021.0	1027.5	62.0	9.9	.4		
	9100	GORK	21	GRF	1038.7	1126.8	60.3	6.3	3		
	810	KRAK	1	S	1042.7	1042.8	.3	8	1		
	650	GORK	28	PRE	1109.3	1109.6	.9	12	5		
	950	GORK			1119.4	1124.5		1100			
	950	GORK	46	C	1119.4	1121.5	7.0	93			
	650	GORK	46	C	1119.9	1125.3	10.7	850			
	650	GORK			1119.9	1126.2		980			
	3000	POTS	4	S/F	1120.0	1122.9	7.0	42			
	9500	POTS	4	S/F	1120.0	1122.7	6.5	110			
	1470	POTS	4	S/F	1120.0	1122.9	6.5	78			
	536	ONDR	45	C	1120.0	1122.2	7.0	60	11		
	810	KRAK	47	GB	1120.0	1124.3	6.5	1800			
	7000	SAOP	45	C	1120.0	1122.8	4.0	102.0			15R
	5000	BERN	45		1120.0	1122.6	6.0	31.0			ONLY PAPER REC
	19600	BERN	45		1120.0	1122.6	3.0	136.0			ONLY PAPER REC
	11800	BERN	45		1120.0	1122.6	6.0	119.0			ONLY PAPER REC
	2650	DWIN	45	C	1120.0	1122	5.0	50	20		
	930	BORD	45	C	1120.0	1124.2	6.3	1938	30		
	2800	OTTA	46F	C	1120.0	1121.7	7.0	51.0	10.2		
	8400	BERN	45		1120.0	1122.6	6.0	75.0			ONLY PAPER REC
	2950	GORK			1120.1	1123.0		36			
	2950	GORK	45	C	1120.1	1121.8	7.2	40			
	10715	DWIN	45	C	1121.0	1123	5.0	50	30		
	3100	CRIM	45	C	1121.0	1122.5	7.0	33	11		
	3100	CRIM			1121.0	1124.0		33			
	808	ONDR	45	C	1121.0	1128.3	5.5	292	63		
	9100	GORK	4	S/F	1121.2	1122.9	5.2	115	50		
	9500	KISV	4	S/F	1121.5	1124	12.0	85			
	6100	KISV	45	C	1122.0	1124	6.0	64			
	6100	KISV			1122.0	1123		46			
	15000	KISV	4	S/F	1123.0	1124.3	7.0	151			
	810	KRAK	42	SER	1202.0U	1202.7	1.5U	43			
	810	KRAK	8	S	1224.5	1224.5	.2	26			
	810	KRAK	45	C	1246.0	1301.5	19.0	150	15		
	930	BORD	46	C	1254.0	1254.8	1.0	22	2		
	2800	OTTA	24	R	1305.0	1316	11.0	4.2	2.0		
	2800	OTTA	27A	RF	1305.0		200.0	4.2	3.9		
	930	BORD	45	C	1307.0	1320	32.0	2856	210		
	7000	SAOP	45	C	1307.0	1317.6	4.4	520.0			6R,INVERTED POL
	536	ONDR	46	C	1308.0	1319.5	22.0	292	63		
	808	ONDR	46	C	1308.0		30.0	370 D	99		
	2650	DWIN	2	S/F	1308.0	1309	2.0	25	20		
	2800	OTTA	4	S/F	1308.0	1308.7	3.0	18.4	8.0		
	1470	POTS	45	C	1308.0	1321.1	29.0	2200			
	3000	POTS	45	C	1308.0	1320.5	25.0	625			
	19600	BERN	46		1314.0	1320.0	4.0	739.0			ONLY PAPER REC
	2650	DWIN	48	C	1314.0	1320	16.0	300	150		
	35000	BERN	46		1314.0	1320.0	4.0	713.0			ONLY PAPER REC
	8400	BERN	46		1314.0	1317.5	10.0	283.0D			ONLY PAPER REC
	11800	BERN	46		1314.0	1317.5	10.0	534.0			ONLY PAPER REC
	5000	BERN	46		1314.0	1317.5	11.0	273.0			ONLY PAPER REC
	2800	OTTA	4	S/F	1314.2	1315.3	1.7	12.6	6.3		
	9500	POTS	45	C	1315.0	1317.9	18.0	380			
	2800	OTTA	24P	R	1316.0		169.0	4.2			
	228	HARS	45	C	1316.7	1318.3U	10.0	300 D	55		
	260	ONDR	46	C	1316.8		10.0	209 D	55		
	10715	DWIN	48	C	1317.0	1317	10.0	130	50		
	2800	OTTA	45	C	1317.0	1320.4	16.0	305.0	54.0		
	9400	HUAN		C	1317.1	1317.6	9.7	338.2	104.8		ROL
	29	UPIC	48	C	1317.4	1317.6	8.4				
	127	TORN	47	GB	1317.5	1320 U	10.0	1100 D	210		
	234	POTS	45	C	1317.5	1320.2	13.0	83000	1700		III/V
	113	POTS	45	C	1317.6	1317.8	13.0	7700	100		III/V
	33	UPIC	48	C	1317.6	1317.9	7.8				
	7000	SAOP	45	C	1454.0	1456.8	2.0	109.0			16L
	19600	BERN	45		1454.7	1456.3	2.0	159.0			ONLY PAPER REC
	35000	BERN	45		1454.7	1456.3	.5	143.0			ONLY PAPER REC
	5000	BERN	45		1454.7	1456.5	8.0	7[illegible].0			ONLY PAPER REC
	11800	BERN	45		1454.7	1456.3	2.0	119.0			ONLY PAPER REC
	8400	BERN	45		1454.7	1456.3	3.0	66.0			ONLY PAPER REC
	2800	OTTA	4	S/F	1455.0	1456.5	8.0	205.0	41.0		
	10715	DWIN	45	C	1455.0	1456	3.0	25	20		
	930	BORD	45	C	1455.0	1456	11.0	2703	50		
	2650	DWIN	48	C	1455.0	1457	5.0	320	200		
	9500	POTS	4	S/F	1455.0	1456.7	5.0	75			
	1470	POTS	4	S/F	1455.0	1456.7	9.0	1800			
	3000	POTS	4	S/F	1455.0	1457.0	6.0	155			
	9400	HUAN		C	1455.2	1456.1	2.8	80.4	30.4		L

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
07	9400	HUAN			1455.2	1456.6		76.8			
	234	POTS	4	S/F	1455.8	1455.9	.8	2700			
	930	BORD	46	C	1603.4	1604	.6	51	2		
	2800	OTTA	26	FAL	1605.0	1625	20.0	-4.2	-2.1		
	2800	OTTA	3	S	2046.0	2046.8	5.0	96.0	16.2		
	9400	HUAN		S	2046.2	2046.8	3.3	51.2	17.2		0
	200	HIRA	45	C	2046.3	2046.8	.9	420	80		0
	100	HIRA	45	C	2046.5	2046.7	.7	1000	220		WL
	3750	TYKW	21	GRF	2202.0	2309	125.0	6	2		
	2000	TYKW	21	GRF	2202.0	2310	125.0	3.5	1.5		
	2000	TYKW	5	S	2203.0	2205	4.0	3	1		
	3750	TYKW	5	S	2204.0	2205	4.0	2.5	.8		
	2695	PENT	21	GRF	2204.0	2309	130.0	7.4	3.7		
	2000	TYKW	5	S	2320.0	2323.2	7.0	27	11		
	3750	TYKW	5	S	2321.0	2323.3	8.0	45	15		
	2695	PENT	3	S	2321.0	2323	7.0	35.0	14.4		
	9400	TYKW	5	S	2322.0	2323.5	40.0	7	3		
	2000	TYKW	29	PBI	2327.0		35.0	5	2		
	2695	PENT	29	PBI	2328.0	2328	23.0	7.0	3.5		
	3750	TYKW	29	PBI	2329.0		25.0	8	4		
08	200	GORK	44	NS	0305.0E		400.0D		5		
	260	ONDR	44	NS	0556.0E		498.0D	61	2		
	204	IZMI	44	NS	0600.0E		215.0D	40			
	3750	TYKW	28	PRE	0016.0	0019.5	40.4	8	1		
	9400	TYKW	45	C	0016.0	0016.5	3.0	8	3		
	2000	TYKW	45	C	0018.0	0018.7	4.0	1.5	.7		
	1000	TYKW	45	C	0019.0	0019.6	3.5	3	1		
	9400	TYKW	29	PBI	0019.0		15.0	2	1		
	2000	TYKW	28	PRE	0034.0	0056.4	22.4	3	1.5		
	1400	SYDN	45	C	0056.3	0057.7	9.7				
	2000	TYKW	45	C	0056.4	0057.8	8.6	205	40		
	9400	TYKW	45	C	0056.4	0057.3	6.0	230	45		
	3750	TYKW	45	C	0056.4	0057.3	10.6	206	25		
	1000	TYKW	45	C	0056.5	0058.2	8.5	143	25		
	17000	NOBE	46	C	0056.5	0057.6	6.6	124			RL
	700	SYDN	48	C	0056.5	0057.2	10.2				
	2695	PENT	4	S/F	0056.5	0057.5	9.5	178.0	39.0		
	700	SYDN			0056.5	0104.0					
	700	SYDN			0056.5	0101.0					
	700	SYDN			0056.5	0102.7					
	100	HIRA	42	SER	0057.1	0057.7	12.0	1500			0
	200	HIRA	42	SER	0057.1	0059.2	6.3	3400			
	500	HIRA	8	S	0058.7	0058.8	.4	20000	9000		
	1000	TYKW	30	PBI	0105.0		215.0	4	1		
	2000	TYKW	30	PBI	0105.0		215.0	7	3		
	2695	PENT	29	PBI	0106.0	0106	15.0	5.2	2.6		
	3750	TYKW	30	PBI	0107.0		215.0	4	2.5		
	9400	TYKW	21	GRF	0230.0	0300	130.0	3	1.5		
	700	SYDN	40	F	0248.0	0248.8	1.0				
	700	SYDN	45	C	0419.4	0419.7	.9				
	9400	TYKW	45	C	0419.5	0419.9	8.0	30	4		
	3750	TYKW	45	C	0419.5	0419.9	8.0	15	2		
	2000	TYKW	5	S	0419.5	0420.0	7.0	18	3		
	1000	TYKW	45	C	0419.6	0419.7	5.5	8	2		
	17000	NOBE	2	S/F	0419.7	0419.9	1.4	20			0
	1400	SYDN	2	S/F	0419.7	0420.0	2.3				
	2950	GORK	20	GRF	0420.0	0420.3	10.5	12			
	950	GORK	1	S	0420.0	0420.4	3.6	4.5			
	650	GORK	3	S	0420.0	0422.3	.7	60 D			
	9100	GORK	3	S	0420.1	0420.3	.9	33	16		
	9100	GORK	29	PBI	0421.0	0421.0	20.5	5			
	2000	TYKW	21	GRF	0500.0	0620	170.0	4	1.3		
	650	GORK	2	S/F	0500.6	0500.8	.3	12	6		
	3750	TYKW	21	GRF	0522.0	0620	145.0	5	2		
	9400	TYKW	45	C	0523.0	0525.3	5.0	10	4		
	3750	TYKW	45	C	0523.0	0523.5	4.0	8	2.5		
	2000	TYKW	5	S	0523.0	0523.5	3.5	6	1.5		
	6100	KISV			0523.0	0530		13			
	6100	KISV	45	C	0523.0	0524.5	10.0	49			
	6100	KISV			0523.0	0525.7		26			
	650	GORK	41	F	0523.3	0526.3	10.2	20			
	2950	GORK	1	S	0523.3	0524.0	4.4	12.5	5		
	650	GORK			0523.3	0531.5		6			
	1000	TYKW	5	S	0523.4	0523.5	1.0	3	1		
	9100	GORK	1	S	0523.8	0525.7	3.4	10	5		
	9500	KISV	45	C	0524.0	0525.7	10.0	10			
	9500	KISV			0524.0	0530.7		3			
	15000	KISV	27	RF	0524.0	0525	4.0	7			
	9500	KISV			0524.0	0524.7		8			
	950	GORK	1	S	0527.7	0531.0	2.5	4			
	1000	TYKW	45	C	0529.0	0529.4	4.0	8	1.5		
	2000	TYKW	45	C	0529.0	0530.7	4.0	2.5	.5		
	204	IZMI	41	F	0601.2	0601.3	1.3	1100			
	1000	TYKW	8	S	0639.9	0639.9	.1	10	5 U		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
08	536	ONDR	42	SER	0732.0	0818.8	48.0	124			
	430	KRAK	42	SER	0733.5	0819.3	62.0	90			
	950	GORK	1	S	0819.1	0819.3	.5	2.5			
	650	GORK	46	C	0819.1	0819.2	1.9	60 D			
	650	GORK			0819.1	0820.0		60 D			
	2950	GORK	1	S	0820.6	0820.7	.8	2	1		
	6100	KISV	1	S	0822.0	0823	3.0	5			
	9100	GORK	2	S/F	0843.0	0843.3	7.4	16	6		
	2950	GORK	1	S	0843.0	0843.1	.8	2	1		
	2000	TYKW	45	C	0843.0	0843.2	1.0	3	1		
	3750	TYKW	5	S	0843.0	0843.4	1.0	6	2		
	6100	KISV	8	S	0845.0	0845.5	2.0	14			
	9500	KISV	4	S/F	0845.0	0845.3	1.0	14			
	15000	KISV	4	S/F	0845.0	0845.5	2.0	17			
	9500	KISV	45	C	0851.0	0851.8	2.0	11			
	9500	KISV			0851.0	0851.3		7			
	9100	GORK	21	GRF	0901.1	0912.8	22.3	6.3	3		
	1470	POTS	40	F	0905.7	0910.5	10.0	6.9			
	2950	GORK	4	S/F	0909.0	0910.6	4.4	8.8	4		
	3100	CRIM	1	S	0909.0	0910.0	3.0	15	5		
	3000	POTS	4	S/F	0909.3	0910.5	2.9	11			
	9500	POTS	4	S/F	0909.5	0910.5	3.5	37			
	6100	KISV	45	C	0910.0	0912.5	6.0	66			
	6100	KISV			0910.0	0913.5		28			
	950	GORK	1	S	0910.2	0910.8	1.5	3			
	9100	GORK	46	C	0910.3	0910.6	2.3	28			
	9100	GORK			0910.3	0911.5		24			
	9500	KISV			0911.0	0913.7		25			
	9500	KISV	45	C	0911.0	0912.5	5.0	39			
	15000	KISV	45	C	0912.0	0912.5	3.0	26			
	15000	KISV			0912.0	0913.5		17			
	234	POTS	8	S	0918.1	0918.2	.1	200	70		
	3100	CRIM	1	S	1008.0	1009.0	2.0	8	2		
	6100	KISV	4	S/F	1010.0	1011	4.0	9			
	9500	KISV	1	S	1010.0	1011	3.0	6			
	808	ONDR	45	C	1026.3	1027.2	6.5	50	18		
	29	UPIC	42	SER	1034.6	1127.1	65.5				
	33	UPIC	42	SER	1034.9	1122	60.3				
	3100	CRIM	1	S	1046.0	1048.0	4.0	11	3		
	1470	POTS	3	S	1047.5	1048.0	1.0	6.1			
	3000	POTS	1	S	1047.5	1048.0	2.0	6.2			
	810	KRAK	46	C	1050.3	1057.0	17.0U	180			
	430	KRAK			1110.0U	1129.5		600 D			
	430	KRAK	46	C	1110.0U	1126.7	32.0U	600 D			
	2800	OTTA	21	GRF	1110.0	1355	440.0	14.4	8.0		
	3100	CRIM	3	S	1124.0	1128.0	5.0	22 D			
	228	HARS	6	S	1125.8	1126.0U	1.7	200 D	35		
	5000	BERN	45		1126.0	1127.2	10.0	68.0			ONLY PAPER REC
	11800	BERN	45		1126.0	1127.2	3.0	46.0			ONLY PAPER REC
	8400	BERN	45		1126.0	1127.2	3.0	48.0			ONLY PAPER REC
	19600	BERN	45		1126.0	1128.0	2.0U	75.0			ONLY PAPER REC
	2650	DWIN	45	C	1126.0	1126	5.0	80	30		
	10715	DWIN	45	C	1126.0	1128	5.0	20	10		
	7000	SAOP	45	C	1126.0	1127.1	4.2	108.0			10R
	2800	OTTA	4	S/F	1126.4	1127	5.0	79.0	23.8		
	204	IZMI	46	C	1126.5	1126.7	1.5	2000	900		
	810	KRAK	45	C	1126.5	1026.7	5.0	70	10		
	260	ONDR	8	S	1126.5	1126.5	1.0	216 D			
	536	ONDR	45	C	1126.5	1128.6	7.0	98	12		
	113	POTS	4	S/F	1126.5	1126.9	.9	2100	200		III
	9500	POTS	4	S/F	1126.5	1127.0	4.5	42			
	3000	POTS	4	S/F	1126.5	1127.1	4.5	69			
	1470	POTS	4	S/F	1126.7	1127.4	3.3	54			
	234	POTS	4	S/F	1126.8	1126.9	.6	800	250		III/V
	6100	KISV	45	C	1127.0	1129.5	10.0	96			
	6100	KISV			1127.0	1130.3		23			
	6100	KISV			1127.0	1130.7		33			
	6100	KISV			1127.0	1131.5		16			
	9500	KISV			1128.0	1132		20			
	9500	KISV			1128.0	1131		40 D			
	9500	KISV	45	C	1128.0	1129.5	5.0	40 D			
	15000	KISV	45	C	1129.0	1130.7	5.0	55			
	15000	KISV			1129.0	1129.5		29			
	15000	KISV			1129.0	1132		17			
	430	KRAK	45	C	1229.0	1238.5	22.0	220			
	2800	OTTA	1	S	1314.0	1316	5.0	2.8	1.4		
	35000	BERN	45		1328.0	1344.1	5.0	156.0			ONLY PAPER REC
	92000	BERN	45		1328.0	1344.1	2.0	80.0U			ONLY PAPER REC
	11800	BERN	45		1328.0	1344.1	12.0	108.0			ONLY PAPER REC
	19600	BERN	45		1328.0	1344.1	.7	114.0			ONLY PAPER REC
	8400	BERN	45		1328.0	1344.1	16.0	95.0			ONLY PAPER REC
	5000	BERN	45		1328.0	1344.1	32.0	59.0			ONLY PAPER REC
	7000	SAOP	45	C	1337.0	1344.4	6.0	148.0			14R
	7000	SAOP	41	F	1337.0						2 BURSTS
	2650	DWIN	45	C	1338.0	1344	10.0	55	40		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
08	2800	OTTA	46F	C	1338.0	1344.1	13.0	51.0	21.0		
	3000	POTS	4	S/F	1338.0	1344.4	9.0	48			
	9500	POTS	4	S/F	1338.0	1344.4	12.0	113			
	1470	POTS	4	S/F	1340.0	1344.5	9.0	30			
	10715	DWIN	45	C	1340.0	1344	7.0	40	30		
	536	ONDR	45	C	1340.0	1341.6	4.5	25			
	9400	HUAN		C	1340.0	1344.0	6.7	122.9	53.7		
	808	ONDR	41	F	1340.0	1341.5	10.0	38	5		
	2800	OTTA	21	GRF	1402.0	1404	35.0	11.0	5.5		
	1470	POTS	20	GRF	1402.0	1405	35.0	2.6			
	3000	POTS	29	PBI	1402.5	1405.2	24.0	20			
	9500	POTS	20	GRF	1403.0	1410.5	36.0	7.8			
	7000	SAOP	20	GRF	1403.0			16.0			11R,CALIBRATION
	2800	OTTA	1	S	1404.5	1405	1.0	5.2	2.6		
	9400	HUAN		S	1845.4	1850.3	18.7	6.5	3.6		0
	9400	HUAN		S	1924.4	1941.0	22.3	8.1	4.7		L
	9400	HUAN		S	1935.8	1937.3	3.1	56.7	20.6		L
	7000	SAOP	45	C	1935.8	1937.2	2.4	86.0			40L
	2800	OTTA	4	S/F	1935.8	1937.3	4.2	56.0	14.0		
	2800	OTTA	29	PBI	1940.0	1940	6.0	3.8	1.9		
	3750	TYKW	5	S	2351.6	2351.8	.5	2	.5		
09	200	GORK	44	NS	0258.0E		404.0D		5		
	260	ONDR	44	NS	0610.0E		481.0D	28			
	2695	PENT	1	S	0004.0	0004.5	1.0	7.0	3.4		
	3750	TYKW	5	S	0004.0	0004.3	1.0	7	2		
	2000	TYKW	5	S	0004.0	0004.4	.7D	9	3 D		
	1000	TYKW	5	S	0004.0	0004.3	1.0	35	6		
	2000	TYKW	21	GRF	0120.0	0230	130.0	2	1		
	3750	TYKW	21	GRF	0145.0	0230	80.0	4	2		
	3750	TYKW	45	C	0220.0	0222.8	7.0	7	2		
	9400	TYKW	5	S	0221.0	0222.8	5.0	6	1.5		
	2000	TYKW	45	C	0221.0	0222.8	5.0	4	1		
	3750	TYKW	5	S	0253.0	0255	7.0	2	1		
	1000	TYKW	42	SER	0338.0	0339.0	1.3	3	.5		
	2000	TYKW	42	SER	0338.0	0339.0	1.3	9	1.5		
	2950	GORK	1	S	0338.1	0339.1	1.2	8.2			
	9400	TYKW	5	S	0338.8	0339.0	1.5	9	2		
	3750	TYKW	5	S	0338.8	0339.0	.5	4	1.5		
	9100	GORK	1	S	0339.0	0339.2	.7	8.8	4		
	3750	TYKW	21	GRF	0420.0	0458	130.0	4	2		
	2000	TYKW	21	GRF	0420.0	0455	130.0	2	1		
	9400	TYKW	21	GRF	0430.0	0500	130.0	3	1.5		
	3750	TYKW	5	S	0450.0	0451.4	3.0	1.5	.5		
	9400	TYKW	5	S	0451.0	0451.6	2.0	3	1		
	2000	TYKW	5	S	0457.0	0457.5	1.0	4	1		
	9400	TYKW	5	S	0457.0	0457.5	2.0	2	1		
	3750	TYKW	5	S	0511.0	0511.4	1.0	2	.5		
	650	GORK	20	GRF	0528.5	0545.8	49.5	7	3		
	15000	KISV	3	S	0530.5	0532	4.0	9			
	6100	KISV	45	C	0531.0	0532	3.0	22			
	3750	TYKW	45	C	0531.0	0532.4	20.0	10	1.5		
	9400	TYKW	45	C	0531.0	0532.4	25.0	21	4		
	9100	GORK	2	S/F	0531.4	0532.4	2.0	23.0	11		
	2950	GORK	1	S	0531.5	0532.5	2.3	7.0	3		
	2000	TYKW	5	S	0531.5	0532.4	2.5	3	1		
	9500	KISV	45	C	0531.5	0533.5	4.0	21			
	8400	BERN	3		0531.5	0532.5	4.0	20.0			ONLY PAPER REC
	11800	BERN	3		0531.5	0532.5	3.0	28.0			ONLY PAPER REC
	5000	BERN	3		0531.5	0532.5	2.0	10.0			ONLY PAPER REC
	19400	BERN	3		0531.5	0532.5	1.0U	40.0U			ONLY PAPER REC
	1000	TYKW	8	S	0532.2	0532.3	.2	3	1		
	9100	GORK	29	PBI	0533.4	0533.4	14.8	11	5		
	15000	KISV	1	S	0622.0	0623.3	2.0	10			
	6100	KISV			0710.0	0715.3		50			
	6100	KISV			0710.0	0720.2		20			
	6100	KISV	45	C	0710.0	0713.2	12.0	263			
	9500	KISV			0711.0	0715		74			
	9500	KISV	45	C	0711.0	0713.2	5.0	290			
	15000	KISV			0711.0	0715		43			
	15000	KISV	45	C	0711.0	0712.7	5.0	270			
	35000	BERN	46		0711.0	0712.2	2.0U	311.0			ONLY PAPER REC
	2650	DWIN	48	C	0711.0	0712	10.0	225	50		
	10715	DWIN	48	C	0711.0	0712	5.0	100	50		
	17000	NOBE	46	C	0711.0	0712.3	2.6	275			0
	5000	BERN	46		0711.0	0712.2	10.0	220.0			ONLY PAPER REC
	8400	BERN	46		0711.0	0712.2	11.0	200.0D			ONLY PAPER REC
	11800	BERN	46		0711.0	0712.2	12.0	256.0			ONLY PAPER REC
	19600	BERN	46		0711.0	0712.2	6.0	341.0			ONLY PAPER REC
	3000	POTS	42	SER	0711.0	0712.5	24.0	196			
	9500	POTS	42	SER	0711.0	0712.3	22.0	305			
	9400	TYKW	45	C	0711.0	0712.5	10.0	310	35		
	2000	TYKW	45	C	0711.0	0712.5	10.0	180	25		
	3750	TYKW	45	C	0711.0	0712.6	10.0	227	30		
	536	ONDR	41	F	0711.5	0714.2	5.0	75	3		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22}Wm^{-2}Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
09	2950	GORK			0711.6	0714.6		25			
	2950	GORK	45	C	0711.6	0712.7	4.9	180			
	9100	GORK			0712.0E	0714.6		50			
	1470	POTS	42	SER	0712.0	0713.7	23.0	108			
	9100	GORK	46	C	0712.0E	0712.5	3.0D	235			
	1000	TYKW	45	C	0712.0	0713.1	9.0	400	25		
	808	ONDR	41	F	0712.0	0713.2	8.0	100	10		
	35000	NAGO	5	S	0712.0	0712	2.0	183			
	500	HIRA	42	SER	0712.2	0714.1	4.0	120			O
	650	GORK	46	C	0712.2	0712.6	2.6	60			
	650	GORK			0712.2	0714.0		150			
	810	KRAK	42	SER	0712.3	0712.5	12.5	250			
	810	KRAK			0712.3	0714.3		280			
	430	KRAK			0712.7	0714.5		600 D			
	430	KRAK	42	SER	0712.7	0713.2	12.3	600 D			
	950	GORK			0713.0E	0713.8		69			
	950	GORK	46	C	0713.0E	0713.0	11.5D	57			
	950	GORK			0713.0E	0719.5		34			
	17000	NOBE	30	PBI	0713.5	0713.5	9.0	37			O
	35000	NAGO	29	PBI	0714.0	0714	5.0	25			
	17000	NOBE	1	S	0714.4	0714.5	.4	28			L
	650	GORK	29	PBI	0714.8	0715.9	14.0	5			
	9100	GORK	30	PBI	0715.0	0715.0	21.0	22			
	9100	GORK	1	S	0719.4	0719.5	.7	13	6		
	15000	KISV	4	S/F	0719.5	0720	2.0	8			
	9500	KISV	8	S	0719.7	0719.8	1.0	14			
	3750	TYKW	29	PBI	0721.0		60.0	7	2		
	9400	TYKW	29	PBI	0721.0		30.0	8	3		
	2000	TYKW	29	PBI	0721.0		70.0	5	1.5		
	2950	GORK	30	PBI	0916.5	0916.5	19.5	13			
	2950	GORK	1	S	0919.4	0919.5	1.2	12	6		
	6100	KISV			1030.0	1035.5		12			
	6100	KISV	45	C	1030.0	1033.5	9.0	14			
	9500	POTS	1	S	1035.0	1035.0	.5	5.2			
	9400	HUAN		S	1518.5	1528.5	19.2	7.0	4.2		O
	11800	BERN	3		1519.0	1524.0	4.0	32.0			ONLY PAPER REC
	5000	BERN	3		1519.0	1524.0	34.0	10.0			ONLY PAPER REC
	8400	BERN	3		1519.0	1524.0	4.0	12.0			ONLY PAPER REC
	7000	SAOP	3	S	1521.4	1523.6	3.4	20.0			12L
	9400	HUAN		S	1521.4	1523.3	3.7	12.2	6.6		L
	2800	OTTA	1	S	1522.0	1523.2	3.0	3.4	1.6		
	2800	OTTA	23	GRF	1940.0	2200	320.0	17.2	10.8		
	2800	OTTA	1	S	1943.5	1945	7.0	5.4	2.5		
	500	HIRA	46	C	2110.1	2110.9	5.5	15	10		
	3750	TYKW	20	GRF	2120.0	2200	100.0	4	2		
	2000	TYKW	20	GRF	2120.0	2200	100.0	3	1.5		
	3750	TYKW	21	GRF	2320.0	2350	80.0	2	1		
	2000	TYKW	20	GRF	2320.0	2338	40.0	4	1.5		
	3750	TYKW	5	S	2336.0	2338	6.0	7	2.5		
	2695	PENT	1	S	2337.0	2338	3.0	4.2	2.4		
	100	HIRA	46	C	2353.8	2354.0	1.0	1000	300		WL
10	200	GORK	44	NS	0257.0E		420.0D		10		
	260	ONDR	44	NS	0626.0E		471.0D	115	8		
	127	TORN	43	NS	0823.0	1231.2	457.0	290	10		V2
	3750	TYKW	5	S	0145.0U	0146.1	2.5U	2.5	.7U		
	2000	TYKW	5	S	0145.5	0146.2	1.5	1.5	.5		
	2000	TYKW	20	GRF	0200.0	0210	80.0	4	2		
	9400	TYKW	20	GRF	0200.0	0210	60.0	5	2.5		
	3750	TYKW	20	GRF	0200.0	0210	70.0	5	2.5		
	2000	TYKW	5	S	0331.0	0332.2	8.0	24	4		
	3750	TYKW	5	S	0331.0	0332.2	8.0	32	4		
	1000	TYKW	45	C	0331.5	0332.3	5.0	5.5	1.5		
	2950	GORK	3	S	0331.6	0332.4	4.3	29	7		
	950	GORK	1	S	0331.7	0332.7	3.0	5	2		
	9400	TYKW	5	S	0331.7	0332.1	4.0	18	4		
	9100	GORK	1	S	0332.0	0332.4	2.0	23	10		
	650	GORK	4	S/F	0332.1	0332.2	12.0	56	5		
	33	UPIC	3	S	0448.6	0448.6	.4				
	29	UPIC	3	S	0448.8	0449	.5				
	1000	TYKW	45	C	0518.0	0518.4	2.0	1	.3		
	3750	TYKW	45	C	0518.0	0519.0	2.0	3.5	1		
	2000	TYKW	45	C	0518.0	0519.0	2.0	3.5	1		
	2950	GORK	1	S	0518.3	0519.0	1.0	3	1		
	2950	GORK	1	S	0523.8	0527.0	1.8	5	2		
	3750	TYKW	45	C	0526.0	0527.3	4.0	8	2		
	2000	TYKW	45	C	0526.5	0527.3	4.0	5	1.5		
	9400	TYKW	45	C	0526.5	0527.3	4.0	5	1.5		
	5000	BERN	3		0526.5	0527.0	6.0	10.0			ONLY PAPER REC
	8400	BERN	3		0526.5	0527.0	6.0	6.0			ONLY PAPER REC
	9100	GORK	1	S	0526.7	0527.5	1.5	5	3		
	1000	TYKW	8	S	0526.8	0526.9	.3	2	1		
	113	POTS	4	S/F	0651.6	0651.7	.4	360	90		III
	113	POTS	4	S/F	0723.1	0723.1	.1	360	20		III
	1470	POTS	1	S	0810.0	0811.0	2.0	2			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
10	3000	POTS	1	S	0810.0	0810.5	2.0	4			
	3750	TYKW	45	C	0810.0	0810.7	2.0	3	1.5		
	2000	TYKW	45	C	0810.0	0811.3	4.0U	3	1 U		
	2950	GORK	1	S	0810.3	0810.7	1.5	3	1		
	33	UPIC	42	SER	0822.7	0831.7	10.4				
	29	UPIC	42	SER	0823.4	0831.9	10.0				
	113	POTS	42	SER	0823.6	0832.6	12.0	3000	125		III
	234	POTS	4	S/F	0830.2	0830.4	.3	400	40		III
	810	KRAK	2	S/F	0831.3	0832.0	1.0	30			
	536	ONDR	2	S/F	0831.7	0831.7	1.5	25			
	430	KRAK	42	SER	0831.7	0831.7	1.3	60			
	33	UPIC	41	F	0907.5	1241.4	257.0				
	29	UPIC	41	F	0907.8	1043.8	256.0				
	808	ONDR	20	GRF	0910.0	1049.5	170.0	62	11		
	113	POTS	8	S	0910.3	0910.4	.1	1950	600		III
	1470	POTS	42	SER	0925.0	1104.3	165.0	72			
	430	KRAK	42	SER	0925.5	0929.0	3.5	30			
	113	POTS	8	S	0927.1	0927.1	.1	200	70		III
	950	GORK	40	F	0939.4	0945.4	20.0E	11			
	810	KRAK	8	S	0944.7	0944.7	.1	8			
	430	KRAK	4	S/F	0957.0	0958.3U	1.3U	60	12		
	650	GORK	2	S/F	0957.2	0957.6	1.1	17	4		
	234	POTS	4	S/F	0957.2	0957.2	.6	675	20		III
	536	ONDR	8	S	0957.3	0957.3	.2	15			
	113	POTS	4	S/F	0957.4	0957.8	.7	1000	250		III
	430	KRAK	8	S	1046.7	1046.8	.3	8			
	810	KRAK	8	S	1049.5	1049.5	.1	50			
	810	KRAK	8	S	1059.0	1059.0	.3	10			
	430	KRAK	8	S	1100.7	1100.7	.1	19			
	3100	CRIM			1129.0	1133.0		32			
	3100	CRIM	45	C	1129.0	1130.5	6.0	30	10		
	2800	OTTA	46F	C	1129.5	1133.3	6.5	35.4	15.4		
	3000	POTS	41	F	1129.5	1133.3	7.0	32			
	1470	POTS	41	F	1129.5	1133.4	6.5	42			
	430	KRAK	46	C	1129.7	1131.0	5.5	70	9		
	536	ONDR	46	C	1130.0	1132.4	5.5	55	9		
	8400	BERN	45		1130.0	1133.1	10.0	40.0			ONLY PAPER REC
	5000	BERN	45		1130.0	1133.1	8.0	30.0			ONLY PAPER REC
	19600	BERN	45		1130.0	1133.1	1.0	24.0U			ONLY PAPER REC
	11800	BERN	45		1130.0	1133.1	10.0	35.0			ONLY PAPER REC
	2650	DWIN	45	C	1130.0	1133	5.0	40	20		
	10715	DWIN	45	C	1130.0	1133	5.0	10	5		
	9500	POTS	41	F	1130.0	1132.7	10.0	41			
	810	KRAK	4	S/F	1130.3	1132.5	5.0	220	7		
	9400	HUAN		S	1131.3	1132.9	2.7	49.6	23.0		L
	430	KRAK	1	S	1152.0	1152.3	.5	12	5		
	810	KRAK	1	S	1159.7	1159.5	.5	14	6		
	113	POTS	41	F	1241.1	1241.2	1.2	1400	40		III
	113	POTS	42	SER	1305.5	1323.0	25.0	1400	1 E		III
	234	POTS	8	S	1323.0	1323.0	.1	750	250		III
	536	ONDR	8	S	1352.6	1352.6	.2	18			
	113	POTS	8	S	1357.4	1357.4	.1	300	100		III
	33	UPIC	4	S/F	1505.5	1505.7	.9				
	29	UPIC	4	S/F	1505.8	1506	.9				
	33	UPIC	45	C	1624.5	1625.9	2.4				
	29	UPIC	45	C	1625.7	1626.1	2.0				
	2800	OTTA	21	GRF	1730.0	1742	55.0	3.8	1.8		
	9400	HUAN		S	1739.6	1745.7	15.3	4.8	3.0		0
	5000	BERN	8		1740.0	1745.5	10.0	70.0			ONLY PAPER REC
	11800	BERN	8		1740.0	1745.5	10.0U	27.0			ONLY PAPER REC
	8400	BERN	8		1740.0	1745.5	10.0U	40.0			ONLY PAPER REC
	7000	SAOP	3	S	1740.5	1745.3	.6	113.0			17L
	2800	OTTA	3	S	1744.7	1745.2	1.7	45.0	11.2		
	9400	HUAN	8	S	1744.8	1745.3	.8	73.6	36.5		L
	29	UPIC	45	C	1757.0	1757.1	1.1				
	33	UPIC	45	C	1757.5	1757.6	1.0				
	7000	SAOP	45	C	1943.6	1952.2	29.0	242.0			10L
	2800	OTTA	21	GRF	1945.0	2015	145.0	7.6	3.0		
	9400	HUAN		C	1951.2	1951.9	3.4	244.8	89.1		L
	2800	OTTA	45	C	1951.3	1952.2	5.0	59.0	21.8		
	9400	HUAN		PBI	1954.6	1954.6	19.6	9.6	3.2		L
	100	HIRA	46	C	2020.9	2022.7	4.3	38000 U	1400 U		
	2800	OTTA	40	F	2021.2	2022.8	3.5	3.8			
11	200	HIRA	44	NS	0055.0E	0740	490.0D	15	5		MR
	200	GORK	44	NS	0259.0E		420.0D		10		
	260	ONDR	44	NS	0635.0E		451.0D	168	5		
	127	TORN	43	NS	0644.0	1302	556.0	200	.4		V1
	33	UPIC	43	NS	0644.2	0925.5	614.6				
	29	UPIC	43	NS	0644.9	0925.5	613.1				
	536	ONDR	43	NS	0925.0		266.0	162			
	200	HIRA	44	NS	2350.0E	0438	570.0D	20	10		MR
	3750	TYKW	21	GRF	0030.0	0130	120.0	2	1		
	2000	TYKW	21	GRF	0040.0	0130	120.0	1.5	.7		
	2000	TYKW	45	C	0100.0	0102.6	6.0	19	2.5		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
11	3750	TYKW	45	C	0100.0	0102.6	6.0	33	4		
	5730	IRKU	1	S	0101.0	0101.6	2.0	30	13		L
	9400	TYKW	5	S	0102.0	0102.5	1.5	16	5		
	2695	PENT	3	S	0102.2	0102.6	1.5	25.6	9.0		
	1000	TYKW	5	S	0102.4	0102.6	2.0	14	2		
	3750	TYKW	45	C	0114.0	0115.6	14.0	13	2		
	9400	TYKW	45	C	0115.0	0115.5	10.0	5	1		
	1000	TYKW	45	C	0115.0	0116.0	2.5	18	3		
	2000	TYKW	45	C	0115.0	0115.6	10.0	5	1		
	2695	PENT	1	S	0115.3	0115.6	1.0	5.6	2.4		
	2000	TYKW	5	S	0131.0	0131.8	2.0	1	.3		
	3750	TYKW	5	S	0131.4	0131.7	.6	1.5	.8		
	3750	TYKW	5	S	0137.0	0138.1	3.0	5	1		
	1000	TYKW	5	S	0137.3	0137.8	1.5	11	1.5		
	2000	TYKW	5	S	0137.5	0137.8	1.5	1.5	.3		
	9400	TYKW	45	C	0410.0	0411.5	10.0	108	25		
	3750	TYKW	45	C	0410.0	0411.9	10.0	52	13		
	1000	TYKW	45	C	0410.5	0412.1	6.5	76	14		
	2000	TYKW	45	C	0410.5	0411.8	9.5	100	20		
	650	GORK	40	F	0410.5	0410.6	4.5	14			
	950	GORK			0410.5	0414.4		14			
	2950	GORK	45	C	0410.5E	0412.1	5.3D	51			
	650	GORK			0410.5	0413.7		16			
	2950	GORK			0410.5E	0414.3		20			
	950	GORK	46	C	0410.5	0411.7	6.0	58			
	9100	GORK	46	C	0410.6	0411.8	5.5	103			
	9100	GORK			0410.6	0414.4		45			
	5730	IRKU			0411.0	0414.9		15			R
	5730	IRKU	45	C	0411.0	0412.3	7.0	32	12		R
	2950	GORK	29	PBI	0415.8	0416.0	143.0	10			
	9100	GORK	29	PBI	0416.1	0416.3	214.9	21			
	1000	TYKW	29	PBI	0417.0		20.0	1	.5		
	9400	TYKW	29	PBI	0420.0		220.0	10	3		
	2000	TYKW	29	PBI	0420.0		220.0	2.5	1		
	3750	TYKW	30	PBI	0420.0		220.0	3.5	1.5		
	1000	TYKW	45	C	0445.4	0445.7	.6	16	6		
	3750	TYKW	20	GRF	0500.0	0516	35.0	3.5	1.5		
	1000	TYKW	8	S	0529.5	0529.6	.3	123	20		
	113	POTS	4	S/F	0643.7	0644.6	2.1	350	70		III
	200	GORK	27	RF	0710.6	0741.2	104.8	28			
	3750	TYKW	5	S	0735.0	0737.3	10.0	7	1.5		
	5000	BERN	20		0736.0	0737.3	21.0	8.0			ONLY PAPER REC
	113	POTS	42	SER	0740.0	0754.2	14.0	1750	2		III
	2000	TYKW	45	C	0817.0	0818.9	5.0	19	3.5		
	9500	KISV	4	S/F	0817.0	0818	3.0	19			
	1470	POTS	40	F	0817.3	0819.0	3.1	12			
	9400	TYKW	5	S	0818.0	0818.8	4.0	20	6		
	3750	TYKW	5	S	0818.0	0818.8	5.0	6	2		
	2950	GORK	1	S	0818.0	0819.0	3.3	7.1	3		
	3100	CRIM	1	S	0818.0	0819.0	3.0	12	4		
	3000	POTS	40	F	0818.1	0819.0	3.9	8			
	9500	POTS	4	S/F	0818.2	0818.8	3.5	17			
	9100	GORK	2	S/F	0818.2	0818.9	1.7	23	11		
	8400	BERN	3		0818.3	0819.5	2.0	11.0			ONLY PAPER REC
	5000	BERN	3		0818.3	0819.5	3.0	10.0			ONLY PAPER REC
	11800	BERN	3		0818.3	0819.5	2.0	10.0			ONLY PAPER REC
	9100	GORK	29	PBI	0819.9	0819.9	14.3	10	3		
	204	IZMI	21	GRF	0924.2	0925.0	10.0	440			
	200	GORK	46	C	0924.3	0926.1	4.0	400 D			
	200	GORK			0924.3	0927.8		1300			
	113	POTS	4	S/F	0924.3	0927.7	3.5	1700	100		III
	2950	GORK	1	S	0924.4	0925.7	4.3	2.0	1		
	650	GORK	46	C	0924.5	0925.8	5.5	60			
	650	GORK			0924.5	0927.0		115			
	810	KRAK	42	SER	0924.5	0925.5	4.3	30			
	430	KRAK	4	S/F	0924.5	0925.5	3.5	400	10		
	234	POTS	4	S/F	0925.0	0925.2	2.6	360	5		III
	9500	POTS	4	S/F	0925.0	0925.6	5.0	7			
	950	GORK	2	S/F	0925.5	0925.8	1.8	10			
	9100	GORK	2	S/F	0925.5	0926.1	1.7	10	5		
	430	KRAK	4	S/F	1009.0	1010.3	1.7	170	2		
	113	POTS	42	SER	1010.4	1016.7	6.4	250	1		III
	430	KRAK	42	SER	1040.5	1049.7	25.0	100			
	430	KRAK			1040.5	1053.0		80			
	430	KRAK			1040.5	1056.7		240			
	127	TORN	42	SER	1047.0	1050	13.5	350			
	6100	KISV	1	S	1049.3	1049.8	1.0	2			
	113	POTS	42	SER	1049.4	1049.8	11.0	1200	10		III
	810	KRAK			1049.5	1056.7		150			
	810	KRAK			1049.5	1053.3		16			
	204	IZMI	5	S	1049.5	1049.5	.5	800	500		
	810	KRAK	42	SER	1049.5	1049.7	7.7	17			
	234	POTS	4	S/F	1049.6	1049.8	.4	170	20		III
	6100	KISV	2	S/F	1052.3	1052.8	1.0	2			
	430	KRAK	8	S	1126.0	1126.3	.5	60			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
11	430	KRAK	42	SER	1138.5	1141.0	7.5	180			
	127	TORN	42	SER	1142.0	1145	3.5	200			
	113	POTS	42	SER	1142.2	1144.8	2.9	700	10		III
	810	KRAK	8	S	1144.5	1144.5	.3	10			
	9500	POTS	20	GRF	1151.5	1152	14.0	3.3			
	430	KRAK	42	SER	1206.0	1210.5	17.5	90			
	810	KRAK	42	SER	1210.0	1210.3	8.5	14			
	234	POTS	41	F	1210.2	1210.6	4.6	450	3		III
	113	POTS	41	F	1210.2	1214.8	4.7	1200	50		III
	1470	POTS	4	S/F	1211.2	1211.5	.6	16			
	2800	OTTA	21	GRF	1250.0	1302	90.0	5.8	4.0		
	9400	HUAN		S	1251.7	1253.2	2.5	64.6	31.4		R
	9500	KISV	4	S/F	1251.8	1252.7	2.0	32			
	19600	BERN	4		1252.0	1252.6	2.0	55.0			ONLY PAPER REC
	11800	BERN	4		1252.0	1252.6	8.0	42.0			ONLY PAPER REC
	5000	BERN	4		1252.0	1252.6	20.0	55.0			ONLY PAPER REC
	8400	BERN	4		1252.0	1252.6	8.0	37.0			ONLY PAPER REC
	6100	KISV	45	C	1252.0	1253.3	7.0	37			
	6100	KISV			1252.0	1257.3		11			
	1470	POTS	3	S	1252.0	1254.0	6.5	136			
	9500	POTS	30	PBI	1252.2	1253.3	13.0	52			
	3000	POTS	3	S	1252.2	1253.2	7.8	64			
	2800	OTTA	3	S	1252.2	1253.3	7.0	69.0	15.0		
	810	KRAK	2	S/F	1252.7	1252.7	1.0	7	2		
	9400	HUAN		PBI	1254.2	1254.2	22.9	8.5	5.3		R
	430	KRAK	42	SER	1255.7	1257.0	5.0D	170			
	113	POTS	42	SER	1258.0	1314.5	19.0	5000	40		III
	234	POTS	8	S	1315.7	1315.7	.1	350	120		III
	1470	POTS	40	F	1335.0	1345.4	17.0	3			
	9500	POTS	40	F	1341.3	1346.0	8.7U	7			
	8400	BERN	1		1344.6	1345.5	2.5	11.0			ONLY PAPER REC
	5000	BERN	1		1344.6	1345.5	2.5	13.0			ONLY PAPER REC
	2800	OTTA	1	S	1345.0	1345.3	1.2	4.0	2.0		
	7000	SAOP	4	S/F	1345.0	1345.3	2.0	18.0			42L
	3000	POTS	4	S/F	1345.0	1345.3	1.2	7			
	234	POTS	42	SER	1345.2	1347.1	1.9	170	1 E		III
	113	POTS	4	S/F	1345.2	1345.6	.8	300	25		III
	2800	OTTA	21	GRF	1450.0	1520	90.0	3.8	1.9		
	8400	BERN	45		1512.0	1515.0	6.0	158.0			ONLY PAPER REC
	19600	BERN	45		1512.0	1515.0	6.0	35.0			ONLY PAPER REC
	5000	BERN	45		1512.0	1515.0	12.0	85.0			ONLY PAPER REC
	11800	BERN	45		1512.0	1515.0	6.0	209.0			ONLY PAPER REC
	7000	SAOP	45	C	1512.0	1515.0	3.7	222.0			14L,2 PARTS
	127	TORN	47	GB	1512.1	1512.6	6.8	4000 D			
	2800	OTTA	46F	C	1512.1	1515	6.0	37.6	16.0		
	9400	HUAN		C	1514.0E	1515.0	3.1D	214.2	97.2		L
	9400	HUAN		PBI	1517.1	1517.1	9.6	3.4	2.0		0
	7000	SAOP	45	C	1650.0	1656.0	1.2	211.0			8L,2 PARTS
	2800	OTTA	21	GRF	1650.0	1720	65.0	2.4	1.0		
	9400	HUAN		C	1654.6	1656.0	2.4	153.0	42.0		L
	2800	OTTA	4	S/F	1654.8	1655.7	3.0	46.4	11.6		
	19600	BERN	4		1655.0	1656.0	.1U	27.0			ONLY PAPER REC
	11800	BERN	4		1655.0	1656.0	.1U	63.0			ONLY PAPER REC
	8400	BERN	4		1655.0	1656.0	4.0	17.0			ONLY PAPER REC
	5000	BERN	4		1655.0	1656.0	5.0	130.0			ONLY PAPER REC
	9400	HUAN		PBI	1657.0	1657.0	25.3	6.8	2.2		0
	2800	OTTA	1	S	1758.0	1800.4	7.0	4.0	1.4		
	2800	OTTA	2	S/F	1810.0	1810.5	3.0	2.0	1.6		
	7000	SAOP	45	C	1852.3	1853.8	2.2	26.0			27L
	2800	OTTA	3	S	1853.0	1853.7	2.5	20.0	5.0		
	3750	TYKW	21	GRF	2140.0	2310	160.0	4	2		
	2000	TYKW	21	GRF	2140.0	2300	160.0	2	1		
	9400	TYKW	45	C	2142.0	2147.4	25.0	18	4		
	2000	TYKW	45	C	2142.0	2144.4	20.0	14	1		
	3750	TYKW	45	C	2142.0	2147.4	20.0	13	2		
	2800	OTTA	40	F	2142.0	2144.9	11.0	9.2			
	1000	TYKW	42	SER	2143.3	2144.4	2.0	4.5	.7		
	1000	TYKW	8	S	2147.3	2147.4	.2	3	1		
	2000	TYKW	5	S	2217.0	2217.1	.5	4	1		
	2695	PENT	21	GRF	2230.0	2330	110.0	3.8	1.9		
	2695	PENT	3	S	2341.7	2343	6.0	105.0	20.0		
	2000	TYKW	5	S	2342.0	2343.0	8.0	78	10		
	3750	TYKW	5	S	2342.0	2343.0	8.0	124	17		
	9400	TYKW	45	C	2342.0	2342.7	8.0	175	17		
	1000	TYKW	47	GB	2342.0	2342.9	5.0	750	35		
	17000	NOBE	3	S	2342.3	2342.7	1.2	114			R
	35000	NAGO	5	S	2343.0	2343	3.0	13			
	17000	NOBE	29	PBI	2343.5	2343.6	6.0	16			0
12	100	HIRA	43	NS	0224.0	0314	400.0D	150	30		0
	200	GORK	44	NS	0258.0E		600.0D		20		
	260	ONDR	44	NS	0544.0E		488.0D	148	6		
	33	UPIC	43	NS	0555.6	0955.6	538.0				
	29	UPIC	43	NS	0555.8	0956	539.1				
	127	TORN	44	NS	0600.0E	0848.8	600.0D	260	2.5		V1

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
12	9400	TYKW	20	GRF	0040.0	0100	50.0	2	1		
	3750	TYKW	20	GRF	0040.0	0100	50.0	3	1.5		
	2000	TYKW	5	S	0057.0	0057.7	15.0	1.5	.5		
	1000	TYKW	21	GRF	0140.0	0350	300.0	3	1.5		
	2000	TYKW	21	GRF	0145.0	0240	300.0	5	2.5		
	1400	SYDN	40	F	0148.0	0148.5	1.2				
	3750	TYKW	21	GRF	0150.0	0240	220.0	4	2		
	9400	TYKW	21	GRF	0150.0	0240	120.0	3	1.5		
	2930	VORO	3	S	0250.0	0255	10.0	207			
	200	HIRA	45	C	0254.0	0254.8	3.0	35000	1900		ML
	100	HIRA	48	C	0254.0		10.0	100000 D	8000 D		
	5730	IRKU	2	S/F	0254.0	0254.6	2.0	70 D			L
	1400	SYDN	45	C	0254.0	0255.5	11.0				
	700	SYDN	4	S/F	0254.0	0254.8	7.5				
	1000	TYKW	5	S	0254.0	0255.2	5.0	130	30		
	9400	TYKW	47	GB	0254.0	0254.8U	2.0	830 D	130 D		
	3750	TYKW	45	C	0254.0	0254.9	3.0	200	40		
	2000	TYKW	45	C	0254.0	0310.4U	35.0	36 D	4 D		
	500	HIRA	46	C	0254.1	0254.4	11.0	135	20		
	17000	NOBE	8	S	0254.6	0254.8	1.0	860			L
	3750	TYKW	30	PBI	0257.0		10.0	3	1		
	1000	TYKW	30	PBI	0259.0		1.0D	10	10 D		
	3750	TYKW	5	S	0259.0	0259.3	1.0D	3	1 D		
	1000	TYKW	47	GB	0303.0E	0310.2	25.0D	11000	100 D		
	3750	TYKW	5	S	0555.0	0556.1	4.0	6	2		
	2000	TYKW	5	S	0555.5	0556.2	1.5	4	1		
	3100	CRIM	1	S	0555.5	0556.5	1.0	8	3		
	100	HIRA	46	C	0555.5	0556.2	4.4	5800	820		O
	200	HIRA	46	C	0555.8	0557.0	3.5	1000	85		WL
	2950	GORK	1	S	0555.8	0556.2	1.0	4.0	2		
	200	GORK	4	S/F	0555.8	0557.9	4.4	70 D			
	650	GORK	1	S	0557.2	0557.7	1.1	2			
	113	POTS	42	SER	0842.8	0845.6	5.9	700	8		III
	234	POTS	4	S/F	0847.0	0847.1	.2	200	40		
	5000	BERN	41		0953.1	0956.2	9.8	9.0			ONLY PAPER REC
	113	POTS	42	SER	0953.8	0955.6	16.0	2800	4		III
	1470	POTS	42	SER	0955.0	0956.0	6.0	5			
	3000	POTS	42	SER	0955.0	0955.8	6.0	14			
	3100	CRIM			0955.0	0959.5		11			
	3100	CRIM	45	C	0955.0	0956.0	6.0	18	6		
	228	HARS	45	C	0955.3	0956.0	1.5	125 U	60		
	100	GORK	8	S	0955.3	0956 U	3.0	300 D			
	2950	GORK	41	F	0955.4	0959.5		8.2			
	2950	GORK	41	F	0955.4	0955.9	6.0	11	5		
	9100	GORK	1	S	0955.5	0955.9	5.7	4	2		
	950	GORK	1	S	0955.5	0956.6	1.1	5	2		
	200	GORK	4	S/F	0955.5	0956.2	1.7	340 D			
	234	POTS	4	S/F	0955.5	0956.2	1.0	300	70		III/V
	127	TORN	47	GB	0955.5	0956.3	2.8	670	330		
	204	IZMI	6	S	0955.5	0956.0	1.5	580	380		
	6100	KISV	8	S	0955.5	0955.8	1.0	7			
	650	GORK	1	S	0955.6	0956.3	1.4	4	2		
	930	BORD	8	S	1004.6	1004.6	.1	25	1		
	5000	BERN	4		1009.0	1014.1	17.2	12.0			ONLY PAPER REC
	430	KRAK	47	GB	1011.5	1012.5	3.7	700	200		
	1470	POTS	4	S/F	1011.5	1015.4	6.5	234			
	950	GORK	4	S/F	1012.0	1014.7	4.5	70			
	930	BORD	45	C	1012.0	1014.8	5.0	170	12		
	3000	POTS	4	S/F	1012.5	1014.8	4.5	38			
	2650	DWIN	45	C	1013.0	1114	2.0	80	40		
	6100	KISV			1013.5	1014.7		10			
	3100	CRIM	3	S	1013.5	1014.5	2.5	49	10		
	6100	KISV	45	C	1013.5	1014.2	3.0	12			
	810	KRAK	4	S/F	1013.7	1015.0	2.0	50	4		
	2950	GORK	4	S/F	1013.7	1014.2	3.0	35	15		
	650	GORK	1	S	1014.0	1015.5	2.5	3	1		
	9100	GORK	1	S	1014.1	1014.3	3.8	5	2		
	2800	OTTA	8	S	1237.5	1237.7	.8	2.4	1.2		
	2800	OTTA	8	S	1326.5	1326.7	.5	2.0	1.0		
	7000	SAOP	4	S/F	1339.7	1340.1	1.0	16.0			16R
	9400	HUAN		S	1339.8	1340.2	1.4	10.2	3.8		R
	2800	OTTA	1	S	1339.8	1340.1	2.0	3.4	1.6		
	930	BORD	41	F	1340.0	1340.3	.6	33	4		
	1470	POTS	4	S/F	1340.0	1340.3	5.0	7			
	9500	POTS	2	S/F	1340.0	1340.1	1.0	8			
	113	POTS	41	F	1352.5	1352.5	1.1	230	4		III
	9500	POTS	20	GRF	1423.0	1423.2	11.0	3.3			
	9400	HUAN		S	1447.1	1447.6	1.1	11.8	5.9		R
	113	POTS	4	S/F	1451.9	1452.8	1.3	800	20		III
	228	HARS	45	C	1502.0	1503.0	2.0	125	30		
	9400	HUAN		S	1548.7	1559.1	45.1	5.1	2.2		O
	2800	OTTA	8	S	1735.8	1736	8.0	3.8	1.9		
	2930	VORO	3	S	2340.0	2350	10.0	175			
13	200	GORK	44	NS	0333.0E				15		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
13	100	GORK	43	NS	0407.0		65.0		10		
	3750	TYKW	21	GRF	0040.0	0103.4	60.0	3.5	1		
	2000	TYKW	20	GRF	0045.0	0103	45.0	2	1		
	3750	TYKW	5	S	0111.0	0114	10.0	2	1		
	1000	TYKW	42	SER	0208.0	0210.3	3.5	8	1.5		
	100	GORK	8	S	0408.6	0409.4	1.0	130 D			
	2950	GORK	20	GRF	0433.7	0436.0	10.6	7.9			
	9400	TYKW	20	GRF	0540.0	0555	60.0	3	1.5		
	3750	TYKW	20	GRF	0540.0	0555	60.0	3	1.5		
	2000	TYKW	20	GRF	0540.0	0555	110.0	1.5	.8		
	33	UPIC	45	C	0833.2	0833.6	1.5				
	29	UPIC	45	C	0833.2	0833.5	1.3				
	2950	GORK	1	S	0853.0	0853.3	1.7	8.9			
	430	KRAK	41	F	0935.5		50.0	25	5		
	9100	GORK	22	GRF	1009.0		81.0				
	2950	GORK	1	S	1009.3	1009.8	4.8	13	6		
	810	KRAK	1	S	1012.3	1012.5	.3	5	2		
	430	KRAK			1120.0	1208.3		40			
	430	KRAK	41	F	1120.0	1146.0	64.5	70	7		
	430	KRAK	41	F	1301.3	1303.7	3.3	18	5		
	2800	OTTA	21	GRF	1306.0	1340	80.0	3.6			
	1470	POTS	20	GRF	1310.0	1312.0	12.0	4			
	33	UPIC	46	C	1310.4	1312.5	8.9				
	29	UPIC	46	C	1311.0	1312.3	6.8				
	2800	OTTA	1	S	1311.0	1312	6.0	3.0	1.5		
	113	POTS	42	SER	1452.1	1500.8	11.0	1700	10		III
	33	UPIC	4	S/F	1530.7	1531	.7				
	29	UPIC	4	S/F	1530.7	1530.9	.7				
	9400	HUAN		S	2059.8	2100.5	1.6	16.4	9.0		R
14	200	GORK	44	NS	0300.0E		515.0D		15		
	260	ONDR	44	NS	0544.0E		516.0D	34			
	200	HIRA	44	NS	1930.0E	2000	630.0D	10	5		
	2000	TYKW	21	GRF	0120.0	0204	370.0	7	2.5		
	1000	TYKW	21	GRF	0120.0	0210	220.0	3	1.5		
	3750	TYKW	21	GRF	0120.0	0220	380.0	6	3		
	1000	TYKW	45	C	0137.0	0149.5	28.0	6	1		
	9400	TYKW	20	GRF	0150.0	0210	80.0	3	1.5		
	3750	TYKW	5	S	0425.0	0436.1	20.0	12	4		
	2000	TYKW	5	S	0430.0	0436.2	30.0	8	1.5		
	9400	TYKW	20	GRF	0430.0	0436	90.0	6	2		
	9100	GORK	20	GRF	0433.1	0436.1	14.0	6.4	3		
	650	GORK	1	S	0433.6	0436.5	3.9	7			
	950	GORK	2	S/F	0434.0	0436.0	3.5	4.5			
	1000	TYKW	45	C	0434.0	0436.0	10.0	8	1.5		
	3750	TYKW	29	PBI	0445.0		70.0	3	1		
	1000	TYKW	42	SER	0501.8	0512.0	3.0	4	.5		
	5000	BERN	1		0852.7	0853.3	2.6	7.0			ONLY PAPER REC
	3100	CRIM	1	S	0853.0	0853.5	1.0	17	5		
	9100	GORK	4	S/F	0853.0	0853.3	5.0	54			
	5000	BERN	41		1004.5	1009.8	18.5	11.0			ONLY PAPER REC
	9500	POTS	20	GRF	1005.7	1010.5	14.0	7.6			
	1470	POTS	4	S/F	1008.8	1010.9	6.9	7.4			
	3000	POTS	4	S/F	1008.8	1009.9	6.2	19			
	9500	KISV	1	S	1009.0	1009.7	5.0	6			
	3100	CRIM	1	S	1009.0	1010.0	4.0	17	5		
	6100	KISV	4	S/F	1009.0	1009.7	7.0	9			
	9100	GORK	1	S	1009.5	1010.0	5.0	6.4	3		
	3100	CRIM	25	R	1218.0	1246.0	60.0D	8			
	3000	POTS	3	S	1255.0	1257.0	10.0	187			
	1470	POTS	3	S	1255.0	1257.6	9.8	167			
	7000	SAOP	4	S/F	1255.4	1257.4	2.6	272.0			11L
	8400	BERN	3		1255.6	1257.5	12.8	125.0			ONLY PAPER REC
	5000	BERN	3		1255.6	1257.5	12.8	227.0			ONLY PAPER REC
	9500	POTS	3	S	1255.8	1257.5	5.2	119			
	10715	DWIN	3	S	1256.0	1257	4.0	40	35		
	2800	OTTA	3	S	1256.0	1257.6	5.5	170.0	49.4		
	2650	DWIN	3	S	1256.0	1257	5.0	140	80		
	3100	CRIM	47	GB	1256.0	1257.5	10.0D	208			
	9400	HUAN		S	1256.0	1257.4	4.4	160.9	56.6		L
	11800	BERN	3		1256.2	1257.7	10.0	94.0			ONLY PAPER REC
	19600	BERN	3		1256.2	1257.7	4.0	74.0			ONLY PAPER REC
	35000	BERN	20		1256.2	1257.7	4.0	60.0			ONLY PAPER REC
	228	HARS	45	C	1256.3	1257.0	2.5	75	35		
	127	TORN	4	S/F	1256.5	1257.4	3.0	270	130		
	950	GORK	1	S	1257.0	1257.9	3.0	3	1		
	650	GORK	1	S	1257.0	1259.0	6.0	2.5			
	234	POTS	42	SER	1257.2	1257.4	10.0	200	4		III
	9400	HUAN		PBI	1300.4	1300.4	21.3	6.5	3.4		0
	2800	OTTA	29	PBI	1301.5	1301.5	11.0	4.8	2.0		
	2800	OTTA	1	S	1317.0	1318.7	7.0	2.2	1.1		
	536	ONDR	8	S	1332.2	1332.2	.3	60			
	113	POTS	42	SER	1333.0	1333.0	21.0	100	1 E		III
	2800	OTTA	8	S	1333.5	1333.7	.5	38.0			
	2800	OTTA	20	GRF	1405.0	1413	30.0	2.2	1.1		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
14	2800	OTTA	24O R	1500.0	1504	4.0	2.2	1.1		
	2800	OTTA	1 S	1506.0	1509.4	7.0	8.2	2.8		
	2800	OTTA	2 S/F	1517.0	1521	8.0	9.0	3.0		
	2800	OTTA	27A RF	1550.0		465.0	3.6	3.4		
	2800	OTTA	24 R	1550.0	1605	15.0	3.6	1.8		
	2800	OTTA	24P R	1605.0		412.0	3.6			
	228	HARS	45 C	1720.0	1720.2	4.0	95	8		
	2800	OTTA	21 GRF	1720.0	1722.5	14.0	3.6	1.8		
	2800	OTTA	8 S	1721.6	1722	.7	3.8	2.0		
	2800	OTTA	21 GRF	1900.0	1924	140.0	21.8	10.0		
	7000	SAOP	45 C	1913.0	1919.9	5.2	201.0			7L
	2800	OTTA	8 S	1915.8	1915.9	.2	21.8			
	2800	OTTA	46F C	1918.5	1920	4.5	61.0	24.4		
	9400	HUAN	C	1918.8	1920.0	3.0	121.9	54.3		L
	2800	OTTA	3 S	1928.0	1930.7	5.0	13.2	7.0		
	2800	OTTA	45 C	1956.0	1958	7.0	11.2	4.6		
	2800	OTTA	8 S	2139.2	2139.7	.8	16.2	8.1		
	3750	TYKW	5 S	2139.2	2139.9	1.0	17	5		
	2000	TYKW	5 S	2139.4	2139.9	.8	3	1		
	9400	TYKW	5 S	2251.0U	2251.5	2.0U	8 U	3 U		RAIN
	2695	PENT	26 FAL	2257.0	2335	38.0	-3.6			
	1000	TYKW	45 C	2317.0	2317.8	2.0	8	1		
	2695	PENT	8 S	2352.0	2352.3	.8	7.4	2.4		
15	200	GORK	44 NS	0318.0E		102.0D		5		
	260	ONDR	44 NS	0548.0E		500.0D	71			
	200	HIRA	46 C	0101.8	0102.9	8.4	7300	200		
	200	HIRA		0101.8	0108.4		75			
	500	HIRA	46 C	0102.0	0102.5	5.0	140	60		
	5730	IRKU	45 C	0102.0	0103.0	4.0	29 D			L
	5730	IRKU		0102.0	0103.2		42			O
	1400	SYDN	45 C	0102.0	0102.6	3.4				
	700	SYDN	48 C	0102.0	0102.5	5.0				
	2695	PENT	4 S/F	0102.0	0103	4.0	60.0	15.0		
	3750	TYKW	45 C	0102.0	0103.0	10.0	88	7		
	9400	TYKW	45 C	0102.0U	0103.0	2.0U	88 U	15 U		RAIN
	2000	TYKW	45 C	0102.0	0102.9	10.0	54	7		
	1000	TYKW	47 GB	0102.0	0102.8	4.0	650	70		
	100	HIRA	45 C	0102.1	0103.0	4.0	65000	3700		WL
	1000	TYKW	5 S	0128.0	0128.7	3.0	8	1.5		
	2000	TYKW	5 S	0128.0	0129.3	5.0	3.5	1.2		
	3750	TYKW	5 S	0128.0	0129.3	5.0	4	1.5		
	2000	TYKW	20 GRF	0218.0	0223	35.0	2	.5		
	3750	TYKW	20 GRF	0218.0	0223	35.0	1.5	.7		
	1000	TYKW	8 S	0254.0	0254.1	.3	14	4		
	3750	TYKW	5 S	0326.0	0326.5	3.0	3	1		
	100	GORK	8 S	0335.4	0335.7	.6	100 D			
	3750	TYKW	5 S	0401.0	0402.1	4.0	1.5	.5		
	2000	TYKW	5 S	0401.0	0402.1	5.0	1.5	.5		
	1000	TYKW	8 S	0403.2	0403.3	.2	7	2		
	3750	TYKW	21 GRF	0430.0	0435.5	50.0	4	1		
	1000	TYKW	42 SER	0430.0	0432.0	7.0	28	1		
	2000	TYKW	21 GRF	0430.0	0448	50.0	2.5	1		
	950	GORK	40 F	0430.0	0431.2	6.5	14			
	650	GORK	40 F	0430.2	0431.2	6.9	8			
	650	GORK		0430.2	0436.3		13			
	234	POTS	42 SER	0708.8	0708.9	8.0	100	1 E		III
	113	POTS	42 SER	0714.4	0714.5	26.0	375	4		III
	2650	DWIN	8 S	0731.0			100			
	113	POTS	42 SER	1111.7	1111.7	1.6	600	15		III
	33	UPIC	8 S	1113.1	1113.1	.9				
	29	UPIC	8 S	1113.1	1113.2	.6				
	2800	OTTA	27A RF	1120.0		240.0	3.0	2.9		
	2800	OTTA	24 R	1120.0	1130	10.0	3.0	1.5		
	5000	BERN	22	1124.2	1239.6	156.0	8.0			ONLY PAPER REC
	2800	OTTA	24P R	1130.0		220.0	3.0			
	2800	OTTA	1 S	1153.0	1153.3	1.0	3.8	1.9		
	3100	CRIM	1 S	1153.0	1153.5	1.0	9	3		
	33	UPIC	45 C	1153.2	1153.9	1.1				
	2950	GORK	1 S	1153.5	1153.8	3.9	4	2		
	29	UPIC	8 S	1153.6	1154	.9				
	2800	OTTA	1 S	1204.0	1205	2.5	2.6	1.3		
	536	ONDR	8 S	1211.8	1211.8	.2	27			
	9500	POTS	27 RF	1219.5	1241.0	87.0	9.1			
	430	KRAK	41 F	1230.0	1230.7	13.5	300			
	2800	OTTA	21 GRF	1233.0	1246	107.0	3.8	1.9		
	536	ONDR	45 C	1235.0	1235.8	6.0	41	5		
	3000	POTS	4 S/F	1235.0	1240.3	10.0	16			
	1470	POTS	4 S/F	1235.6	1239.5	8.4	15			
	2800	OTTA	2 S/F	1235.8	1236	1.0	5.2			
	3100	CRIM	1 S	1236.0	1240.0	8.0	16	5		
	2800	OTTA	1 S	1238.0	1239.7	7.0	9.8	4.5		
	810	KRAK	41 F	1238.5	1239.0	2.7	24	4		
	7000	SAOP	45 C	1448.0	1449.4	2.2	16.0			11L
	2800	OTTA	26 FAL	1510.0	1520	10.0	-3.0	-1.5		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
15	2800 OTTA	1 S	1540.0	1542.5	6.0	3.0	1.5		
	2800 OTTA	20 GRF	1620.0	1700	140.0	3.8	1.9		
	2800 OTTA	1 S	1936.0	1936.6	1.2	1.8			
	2800 OTTA	20 GRF	1957.0	1958	15.0	3.8	1.9		
	2800 OTTA	21 GRF	2030.0	2050	60.0	6.4			
	2800 OTTA	4 S/F	2037.0	2041	10.0	45.0	11.0		
	2695 PENT	4 S/F	2355.0	2357.4	4.0	11.4	4.0		
	3750 TYKW	5 S	2356.0	2357.2	4.0D	12	3 D		
	2000 TYKW	5 S	2356.0	2357.2	5.0	6	2.5		
16	200 HIRA	44 NS	1929.0E	0832	800.0D	30	5		
	3750 TYKW	5 S	0006.0	0013.6	14.0	4	1.5		
	9400 TYKW	5 S	0012.0	0013.5	7.0	8	1.5		
	9400 TYKW	31 ABS	0019.0	0100	185.0	-6	-3		
	2000 TYKW	32 ABS	0020.0	0200	160.0	-3	-1.5		
	3750 TYKW	31 ABS	0020.0	0100	55.0	-4.5	-2.5		
	1000 TYKW	32 ABS	0040.0	0130	162.0	-1	-.5		
	3750 TYKW	32 ABS	0125.0	0200	105.0	-5.5	-3		
	700 SYDN	27 RF	0133.0	0135.3	6.2				
	500 HIRA	46 C	0133.3	0134.6	5.0	1800	150		
	1000 TYKW	45 C	0134.0	0134.9	10.0	33	5		
	3750 TYKW	45 C	0134.0	0134.8	7.0	45	6		
	2000 TYKW	45 C	0134.0	0135.5	8.0	61	8		
	1400 SYDN	45 C	0134.3	0134.8	5.6				
	2695 PENT	45 C	0134.3	0134.7	4.5	80.0	14.4		
	9400 TYKW	45 C	0134.5	0134.8	7.0	15	3		
	5730 IRKU		0134.7	0135.5		15			L
	5730 IRKU	45 C	0134.7	0134.9	1.5	28			L
	3750 TYKW	5 S	0305.0	0306.8	4.0	6	2		
	6100 KISV	46 C	0658.0	0702	9.0	7			
	9100 GORK	1 S	0658.5	0700.2	2.8	6	3		
	9500 KISV	4 S/F	0700.0	0710.5	5.0	6			
	6100 KISV	4 S/F	0832.0	0832.2	2.0	6			
	260 ONDR	8 S	0918.8	0919.2	1.0	195			
	228 HARS	45 C	0919.0	0919.1	.5	250	125		
	9100 GORK	32 ABS	1129.8	1136.6	11.2	9	5		
	2800 OTTA	24O R	1155.0	1220	25.0	3.0	1.5		
	260 ONDR	41 F	1239.0	1240.8	39.0	10	1		
	2800 OTTA	27 RF	1440.0		170.0	3.8	3.4		
	2800 OTTA	24 R	1440.0	1500	20.0	3.8	1.9		
	2800 OTTA	24P R	1500.0		130.0	3.8			
	2800 OTTA	26 FAL	1710.0	1730	20.0	-3.8	-1.9		
	2800 OTTA	21 GRF	2005.0	2105	95.0	5.6	2.8		
	2800 OTTA	8 S	2040.0	2040.3	.5	3.4			
	2800 OTTA	1 S	2058.0	2059.4	3.0	8.0	2.6		
	2800 OTTA	27A RF	2202.0		35.0	5.0	4.7		
	2800 OTTA	24 R	2202.0	2204	2.0	5.0	2.0		
	3750 TYKW	45 C	2203.0	2210.2	13.0	56	24		
	2800 OTTA	24P R	2204.0		31.0	5.0			
	2800 OTTA	45 C	2204.1	2210.2	10.0	32.0	14.0		
	3750 TYKW	30 PBI	2216.0		14.0	7	7		
	2800 OTTA	1 S	2218.5	2219	1.0	2.6	1.3		
	2800 OTTA	3 S	2230.0	2232	4.0	55.0	24.0		
	3750 TYKW	5 S	2230.0	2231.9	7.0	53	15		
	2800 OTTA	26 FAL	2235.0	2237	2.0	-5.0	-2.5		
	3750 TYKW	31 ABS	2237.0	2250	55.0	-15	-8		
	2800 OTTA	32 ABS	2237.5	2255	45.0	-14.4	-9.6A		
17	100 HIRA	43 NS	0231.0	0602	260.0	40	5		ML
	100 GORK	44 NS	0257.0E		221.0D		5		
	204 IZMI	44 NS	0600.0E		240.0D	86			
	260 ONDR	44 NS	0643.0E		452.0D	125	8		
	100 HIRA	43 NS	0746.0	0830	110.0D	170	60		SL
	100 GORK	43 NS	0746.0		122.0		10		
	127 TORN	44 NS	0750.0E	0806.8	430.0D	60	3.6		VO
	2000 TYKW	21 GRF	0130.0	0210	70.0	2.5	1		
	1000 TYKW	20 GRF	0130.0	0220	80.0	1.5	.4		
	9400 TYKW	45 C	0144.0	0144.9	3.0	12	2		
	3750 TYKW	21 GRF	0202.0	0203.5	38.0	5	2.5		
	9400 TYKW	5 S	0202.0	0202.8	5.0	26	12		
	9400 TYKW	30 PBI	0207.0		23.0	6	4		
	9400 TYKW	31 ABS	0230.0	0330	150.0	-9	-5		
	2000 TYKW	31 ABS	0240.0	0320	133.0	-3.5	-2		
	3750 TYKW	31 ABS	0240.0	0310	140.0	-5	-2.5		
	9100 GORK	21 GRF	0421.0	0427.7	7.7	5	3		
	9100 GORK	1 S	0421.9	0422.4	1.2	7.6	4		
	9100 GORK	1 S	0426.1	0426.6	1.2	7.4	4		
	9400 TYKW	5 S	0454.7	0455.1	1.0	4.5	1.5		
	9100 GORK	1 S	0456.1	0456.5	4.9	9	4		
	3750 TYKW	21 GRF	0510.0	0605	80.0	6	3		
	2000 TYKW	21 GRF	0520.0	0605	70.0	1.5	.7		
	5000 BERN	41	0533.5	0553.8	63.0	20.0			ONLY PAPER REC
	6100 KISV	3 S	0540.0	0541	2.0	6			
	3100 CRIM	1 S	0540.0	0541.3	3.0	16	5		
	9400 TYKW	20 GRF	0540.0	0554	50.0	6	2.5		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
17	3750	TYKW	5	S	0540.0	0540.9	5.0	16	4		
	2000	TYKW	5	S	0540.0	0541.0	5.0	3	.7		
	2950	GORK	40	F	0540.0	0541.0	22.9	14			
	9100	GORK	20	GRF	0540.3	0554.6	38.4	9	4		
	6100	KISV	29	PBI	0542.0	0542	10.0	3			
	3750	TYKW	45	C	0550.0	0553.8	9.0	11	3		
	2000	TYKW	45	C	0550.0	0553.9	9.0	7	1.5		
	9500	KISV	20	GRF	0552.0	0554	40.0	5			
	6100	KISV	3	S	0552.0	0554	3.0	8			
	3100	CRIM	1	S	0553.0	0554.0	2.0	9	3		
	6100	KISV	29	PBI	0555.0	0555	15.0	4			
	9500	KISV	4	S/F	0636.0	0637	2.0	3			
	6100	KISV	4	S/F	0636.0	0637	9.0	4			
	5000	BERN	45		0728.5	0736.8	98.0	78.0			ONLY PAPER REC
	19600	BERN	45		0728.5	0735.7	30.0	126.0			ONLY PAPER REC
	6100	KISV	47	GB	0730.0	0735	10.0	160			
	9500	KISV	47	GB	0730.0		10.0	60 D			
	9500	POTS	4	S/F	0730.0	0734.6	24.0	193			
	3100	CRIM	3	S	0731.0	0743.0	7.0	29	10		
	3000	POTS	4	S/F	0731.8	0735.8	20.0	47			
	9400	TYKW	45	C	0732.0	0734.9	7.0	213	60		
	3750	TYKW	45	C	0732.0	0736.0	7.0	60	24		
	2000	TYKW	45	C	0732.0	0736.4	7.0	26	10		
	1470	POTS	4	S/F	0732.0	0734.9	6.9	37			
	2950	GORK			0732.0	0736.0		34			
	2950	GORK	45	C	0732.0	0734.1	5.8	21			
	2950	GORK			0732.0	0734.7		24			
	2650	DWIN	1	S	0732.0	0736	6.0	30	15		
	10715	DWIN	45	C	0732.0	0735	6.0	110	70		
	15000	KISV	46	C	0732.0		8.0	40 D			
	17000	NOBE	21	GRF	0732.5	0737.2	25.0D	23			O
	11800	BERN	45		0732.6	0736.0	60.0	164.0			ONLY PAPER REC
	8400	BERN	45		0732.6	0735.6	45.0	146.0			ONLY PAPER REC
	5730	IRKU	45	C	0733.0	0734.0	13.0	77			L
	5730	IRKU			0733.0	0735.5		80 D			R
	808	ONDR	45	C	0733.0	0734.7	6.0	20	12		
	536	ONDR	45	C	0733.0	0734.8	11.0	35	13		
	950	GORK	46	C	0733.0	0734.5	9.3	22			
	950	GORK			0733.0	0736.4		21			
	1000	TYKW	45	C	0733.0	0734.6	6.0	43	9		
	650	GORK	4	S/F	0733.3	0736.5	5.0	43	9		
	500	HIRA	45	C	0733.3	0737.6	8.0	38	12		
	17000	NOBE	4	S/F	0733.5	0734.2	3.7	112			R
	810	KRAK	45	C	0733.7	0734.5	4.5	40	9		
	100	GORK			0733.9	0735.7		230			
	100	GORK	46	C	0733.9	0734.4	3.0	160 D			
	113	POTS	4	S/F	0734.0	0735.8	2.1	200	4		III
	35000	NAGO	5	S	0734.0	0735	26.0D	27			SUNSET
	33	UPIC	42	SER	0734.0	1113.2	220.1				
	430	KRAK	45	C	0734.0	0735.5	11.0	500	18		
	35000	BERN	4		0734.0	0735.1	32.0	96.0			ONLY PAPER REC
	100	HIRA			0734.4	0734.6		880			ML
	100	HIRA	7	C	0734.4	0736.0	3.3	890	225		WL
	9100	GORK	46	C	0734.6	0734.3	4.4	185			
	9100	GORK			0734.6	0734.9		180			
	29	UPIC	42	SER	0735.4	1113.4	218.6				
	2950	GORK	29	PBI	0737.8	0737.9	57.0	8			
	3100	CRIM	29	PBI	0738.0	0748.0	240.0D	9			
	650	GORK	29	PBI	0738.3	0738.3	3.7	5			
	9100	GORK	29	PBI	0739.0	0739.0	42.5	97			
	3750	TYKW	29	PBI	0739.0		50.0	7	2.5		
	1000	TYKW	29	PBI	0739.0		40.0	1.5	.5U		
	2000	TYKW	29	PBI	0739.0		60.0D	4	3 D		
	9400	TYKW	29	PBI	0739.0		50.0	17	6		
	113	POTS	27	RF	0744.0	0817	162.0	56			RISE+I
	234	POTS	27	RF	0754.5	1029.5	181.0	240			RISE+I
	3000	POTS	27	RF	0959.0	1051.3	102.0	17			
	6100	KISV	27	RF	1000.0	1020	40.0	12			
	15000	KISV	27	RF	1000.0	1020	30.0	15			
	9500	KISV	27	RF	1000.0	1023	60.0	15			
	1470	POTS	27	RF	1001.0	1011.4	104.0	17			
	9500	POTS	27	RF	1005.0	1020	104.0	12			
	3100	CRIM	1	S	1010.0	1011.5	10.0	8	3		
	5000	BERN	3		1047.5	1051.0	8.0	20.0			ONLY PAPER REC
	6100	KISV	46	C	1048.0	1051.2	12.0	10			
	3100	CRIM	1	S	1050.5	1051.5	5.0	8	3		
	2800	OTTA			1100.0	1310	130.0D	10.4			
	204	IZMI	4	S/F	1112.5	1113.0	.8	243	156		
	234	POTS	4	S/F	1112.7	1112.8	.4	170	35		III
	113	POTS	8	S	1113.0	1113.1	.2	100	30		III
	113	POTS	8	S	1118.3	1118.3	.1	120	40		
	228	HARS	45	C	1258.5	1259.2	1.0	215	15		
	113	POTS	8	S	1259.2	1259.2	.1	100	30		III
	2800	OTTA	20	GRF	1410.0	1413	40.0	3.6	1.8		
	2800	OTTA	21	GRF	1500.0	1557	160.0	4.8	2.4		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
17	2800	OTTA	1	S	1644.0	1645	2.2	1.8	1.0		
	2800	OTTA	20	GRF	1838.0	1839.7	12.0	3.8	1.6		
	7000	SAOP	3	S	1901.2	1902.4	4.2	20.0			25L
	2800	OTTA	1	S	1902.0	1902.5	2.0	5.6	1.9		
	2800	OTTA	20	GRF	2010.0	2027	70.0	6.0	2.8		
	2800	OTTA	20	GRF	2154.0	2235	75.0	3.6	1.8		
	9400	TYKW	5	S	2309.0	2309.3	2.0	16	5		
	2695	PENT	240	R	2325.0	2335	10.0	4.8	2.4		
	1000	TYKW	21	GRF	2330.0	0100	300.0	4	2		
	3750	TYKW	21	GRF	2330.0	0155	280.0	10	4		
	2000	TYKW	21	GRF	2330.0	0155	300.0	7	2.5		
18	200	GORK	43	NS	0356.0		120.0D		5		
	260	ONDR	44	NS	0702.0E		430.0D	27			
	9400	TYKW	21	GRF	0000.0	0120	250.0	8	2.5		
	3750	TYKW	5	S	0007.0	0008.2	3.0	3	.7		
	9400	TYKW	5	S	0018.0	0018.2	1.0	4	1		
	9400	TYKW	5	S	0036.0	0036.4	3.0	7	2		
	2000	TYKW	45	C	0100.0	0107.2	14.0	58	7		
	2695	PENT	21	GRF	0101.0	0108	15.0	9.4	3.1		
	3750	TYKW	5	S	0103.0	0107.0	10.0	37	6		
	1000	TYKW	45	C	0104.0	0107.4	10.0	120	15		
	9400	TYKW	5	S	0106.0	0107.0	2.5	8	2		
	5730	IRKU	1	S	0106.2	0107.0	1.5	20			R
	2695	PENT	3	S	0106.5	0107	1.5	21.0	10.0		
	500	HIRA	46	C	0106.5	0109.4	7.0	40	15		
	1000	TYKW	45	C	0216.0	0220.7	11.0	16	4		
	9400	TYKW	5	S	0222.5	0222.9	5.0	7	2		
	9400	TYKW	5	S	0349.9	0350.4	7.0	20	4		
	9100	GORK	1	S	0349.9	0350.7	2.9	16	7		
	2000	TYKW	21	GRF	0545.0	0615	110.0	2.5	1		
	3750	TYKW	21	GRF	0545.0	0634	110.0	7	2		
	2000	TYKW	45	C	0548.0	0551.5	5.0	7.5	1		
	200	HIRA	45	C	0549.6	0550.0	.8	470	100		
	100	HIRA	45	C	0550.0	0550.3	1.0	530	145		WL
	3750	TYKW	5	S	0551.2	0551.4	.5	3	1		
	1000	TYKW	5	S	0551.3	0551.5	.4	25	5		
	9400	TYKW	20	GRF	0610.0	0635 U	85.0	4 U	2 U		
	5000	BERN	3		0724.6	0819.7	97.0	10.0			ONLY PAPER REC
	204	IZMI	42	SER	0800.0	0848.0	120.0	445			
	3100	CRIM	1	S	0816.0	0819.5	7.0	18	6		
	9100	GORK	21	GRF	0816.1	0822.0	92.0E	16	6		
	2950	GORK	21	GRF	0816.9	0821.4	94.0	7			
	9400	TYKW	5	S	0817.0	0819.8	6.0	25	10		
	1470	POTS	42	SER	0817.0	0839.5	31.0U	6			
	2000	TYKW	5	S	0817.0	0820	6.0U	7	3 U		
	3750	TYKW	5	S	0817.0	0819.8	6.0	18	7		
	3000	POTS	42	SER	0817.5	0819.9	12.0U	19			
	9500	POTS	23	GRF	0817.8	0827.0	32.0U	13			
	9500	POTS	4	S/F	0817.8	0819.8	5.4	25			
	950	GORK	1	S	0818.8	0825.5	6.7D	5.5	3		
	9100	GORK	2	S/F	0818.8	0819.8	2.3	22	11		
	2950	GORK	1	S	0819.3	0819.9	2.9	9	4		
	3750	TYKW	29	PBI	0823.0		35.0D	4	2 D		
	9400	TYKW	29	PBI	0823.0		35.0D	10	4 D		
	2950	GORK	1	S	0826.8	0827.0	.7	3	1		
	3000	POTS	1	S	0936.5	0937.0	1.2	6.4			
	2950	GORK	1	S	0936.8	0937.0	.7	5	2		
	3100	CRIM	1	S	0937.0	0937.5	2.0	8	3		
	2800	OTTA	21	GRF	1115.0	1450	390.0	9.2	6.4		
	2800	OTTA	1	S	1254.1	1255	1.5	3.6	1.8		
	536	ONDR	8	S	1311.4	1311.4	.2	34			
	7000	SAOP	3	S	1343.4	1344.9		14.0			18L
	2800	OTTA	1	S	1344.8	1345	2.0	1.8	.9		
	808	ONDR	8	S	1345.7	1345.7	.2	35			
	7000	SAOP	40	F	1704.0		56.0				
	2800	OTTA	240	R	1900.0	2040	100.0	3.6	1.8		
	2695	PENT	20	GRF	2305.0	2330	90.0	3.0			
	9400	TYKW	5	S	2316.0	2317.5	4.0	6	1		
19	9400	TYKW			0212.0	0231.4		9			
	9400	TYKW	45	C	0212.0	0213.3	27.0	9	3		
	9400	TYKW	45	C	0411.3	0411.7	2.0	7	2		
	3750	TYKW	5	S	0411.6	0411.8	.4	5	2		
	1000	TYKW	45	C	0538.6	0540.2	2.5	145	10		
	2000	TYKW	45	C	0538.6	0539.9	3.0	18	3.5		
	6100	KISV	46	C	0538.7	0540.3	2.0	15			
	500	HIRA	41	F	0538.9	0540.1	1.6	500	150		0
	9500	KISV	46	C	0539.0	0539.3	6.0	13			
	15000	KISV	8	S	0539.0	0539.2	1.0	9			
	3750	TYKW	45	C	0539.0	0539.9	2.0	18	4		
	9400	TYKW	45	C	0539.0	0539.2	2.0	13	4		
	650	GORK	4	S/F	0539.0	0540.4U	2.1	140 D			
	950	GORK	4	S/F	0539.0	0540.4	1.8	46			
	2950	GORK	4	S/F	0539.1	0539.4	2.8	22			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
19	9100	GORK	2	S/F	0539.3	0540.6	2.1	11	6		
	9400	TYKW	29	PBI	0541.0		5.0	2	1		
	3750	TYKW	29	PBI	0541.0		25.0	2	1		
	430	KRAK	41	F	1044.5	1048.5	10.3	270	4		
	260	ONDR	42	SER	1207.0	1235.5	125.0D	138			
	7000	SAOP	20	GRF	1214.0			8.0			0
	2800	OTTA	240	R	1235.0	1245	10.0	3.6			
	127	TORN	7	C	1235.3	1236.4	1.8	150	64		
	234	POTS	4	S/F	1236.2	1236.4	.5	250	30		III
	536	ONDR	8	S	1246.2	1246.2	.2	24			
	9500	POTS	1	S	1255.0	1255.3	4.5	7			
	9500	KISV	46	C	1256.0	1256.5	4.0	10			
	15000	KISV	4	S/F	1256.0	1256.3	2.0	6			
	10715	DWIN	1	S	1417.0	1418	4.0	30	15		
	9500	KISV	4	S/F	1417.0	1419	7.0	35 D			
	9500	POTS	3	S	1417.0	1418.0	4.0	46			
	8400	BERN	3		1418.0	1418.3	2.0	30.0			ONLY PAPER REC
	11800	BERN	3		1418.0	1418.3	2.0	37.0			ONLY PAPER REC
	5000	BERN	3		1418.0	1418.3	2.0	9.0			ONLY PAPER REC
	19600	BERN	3		1418.0	1418.3	1.0	21.0			ONLY PAPER REC
	15000	KISV	8	S	1418.0	1419	3.0	40			
	6100	KISV	3	S	1418.5	1419	5.0	20			
	2800	OTTA	1	S	1440.0	1443	5.0	2.6	1.3		
	7000	SAOP	20	GRF	1506.0			8.0			0
	10715	DWIN	1	S	1544.0	1544	1.0	10	5		
	2800	OTTA	1	S	1556.0	1556.4	1.5	2.0	1.0		
	2800	OTTA	1	S	1608.0	1610.7	5.0	2.6	1.2		
	3750	TYKW	5	S	2344.0	2348	20.0	3	1.5		
20	3750	TYKW	45	C	0207.0	0208.5	20.0	2	1		
	2000	TYKW	5	S	0217.0	0218.3	6.0	2	.5		
	9400	TYKW	5	S	0254.0	0254.9	2.0	4	1		
	9400	TYKW	5	S	0456.0	0457.2	4.0U	11	2 U		
	260	ONDR	42	SER	0553.0	0647	88.0	37			
	810	KRAK	1	S	0828.0	0828.3	.5	5	2		
	1470	POTS	27	RF	0903.0	1022	167.0	4			
	930	BORD	41	F	1135.7	1135.8	.3	20	2		
	1470	POTS	40	F	1240.0	1247.2	56.0	5			
	3000	POTS	40	F	1242.0	1247.1	43.0	9.8			
	9500	POTS	40	F	1243.0	1319.8	70.0	11			
	127	TORN	40	F	1259.0		66.0		2.4		
	11800	BERN	27		1334.0	1411.5	200.0U	10.0			ONLY PAPER REC
	8400	BERN	27		1334.0	1411.5	200.0U	21.0			ONLY PAPER REC
	5000	BERN	27		1334.0	1411.5	200.0U	20.0			ONLY PAPER REC
	2800	OTTA	240	R	1340.0	1355	15.0	9.4	3.2		
	1470	POTS	20	GRF	1340.0	1451.8	80.0D	15			
	3000	POTS	20	GRF	1343.4	1452.5	77.0D	27			
	10715	DWIN	24	R	1350.0		20.0	10			
	7000	SAOP	20	GRF	1350.7	1411.5	112.0	40.0			17L
	9400	HUAN		S	1354.7	1411.4	202.4	28.0	18.0		L
	9500	POTS	20	GRF	1355.0	1452 U	65.0D	24			
	536	ONDR	46	C	1356.0	1411.3	20.0D	42	6		
	2800	OTTA	21	GRF	1356.0	1452	215.0	18.4	11.2		
	930	BORD	46	C	1404.6	1410.6	44.3	300	22		
	808	ONDR	45	C	1405.0	1410.3	11.0	108	19		
	1470	POTS	4	S/F	1407.0	1410.9	11.0	57			
	2695	PENT	46F	C	1407.5	1411.5	11.0	20.0	6.7		
	3000	POTS	4	S/F	1409.0	1411.6	4.9	15			
	9500	POTS	1	S	1409.0	1411.5	6.0	10			
	1470	POTS	4	S/F	1422.3	1427.5	10.0	28			
	9400	HUAN		S	1955.8	2003.8	15.6	8.2	4.9		0
	9400	HUAN		S	2000.0	2000.8	2.3	13.2	5.6		0
	9400	TYKW	5	S	2304.0	2304.9	4.0	14	4		
	9400	TYKW	5	S	2351.0	2351.3	1.0	5	1.5		
21	9400	TYKW	5	S	0032.3	0032.5	1.0	3	1		
	9400	TYKW	5	S	0035.7	0036.4	3.0	7	2.5		
	3750	TYKW	20	GRF	0115.0	0200	100.0	4	2		
	2000	TYKW	20	GRF	0120.0	0200	90.0	3	1.5		
	9400	TYKW	5	S	0324.0	0325.6	5.0	5	1		
	3750	TYKW	5	S	0324.0	0326	10.0	3	1		
	9400	TYKW	5	S	0427.3	0427.7	2.0	9	3		
	9100	GORK	1	S	0427.6	0428.0	2.4	10	4		
	2000	TYKW	21	GRF	0430.0	0455	90.0	2	1		
	3750	TYKW	20	GRF	0440.0	0500	80.0	2	1		
	9400	TYKW	5	S	0453.0	0454	3.0	2	1		
	9400	TYKW	5	S	0520.0	0521	5.0	5	2		
	9500	KISV	1	S	0520.0	0520.7	2.0	6			
	9100	GORK	1	S	0520.2	0521.0	2.1	5	2		
	2950	GORK	4	S/F	0539.1	0539.4	2.8	22			
	260	ONDR	42	SER	0606.0	0814.2	164.0	27			
	2000	TYKW	5	S	0616.5	0617.4	1.5	2.5	.7		
	3750	TYKW	45	C	0616.5	0617.4	1.5	9	2		
	2950	GORK	1	S	0616.7	0617.2	.9	4.9	2		
	1000	TYKW	45	C	0617.0	0617.4	1.0	18	4		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
21	9400	TYKW	5	S	0712.0	0714.7	13.0	12	4		
	9500	POTS	4	S/F	0712.5	0714.7	20.0	12			
	6100	KISV	4	S/F	0713.0	0715.3	8.0	12			
	9500	KISV	4	S/F	0713.7	0714.8	3.0	14			
	9100	GORK	20	GRF	0713.7	0714.6	13.7	15	6		
	3000	POTS	1	S	0725.0	0725.8	1.5	4.9			
	113	POTS	4	S/F	0728.7	0728.8	.2	350	100		III
	9400	TYKW	5	S	0752.0	0753.0	2.0	6	2		
	9100	GORK	1	S	0752.6	0752.9	3.9	5	3		
	113	POTS	8	S	0818.4	0818.4	.1	100	30		
	3100	CRIM	24	R	0911.0	1000.0		14			
	9500	POTS	20	GRF	0956.0	1000.0	19.0	9			
	930	BORD	6	C	0956.2	0956.3	.4	46	3		
	9100	GORK	2	GRF	0957.2	0959.5	16.4	10	5		
	930	BORD	8	S	1001.3	1001.3	.1	14	1		
	1470	POTS	2	S/F	1008.2	1009.2	3.1	3			
	3000	POTS	1	S	1009.0	1010.0	2.5	4.9			
	930	BORD	41	F	1009.0	1010.4	2.0	58	2		
	9100	GORK	1	S	1031.6	1032.7	5.5	7.6	3		
	7000	SAOP	1	S	1155.4	1156.0		8.0			33L
	7000	SAOP	41	F	1155.4						3 BURSTS
	7000	SAOP	20	GRF	1206.5	1254.0	62.0	19.0			9L,2 PARTS
	9100	GORK	40	F	1206.5		20.5				
	9500	POTS	4	S/F	1206.5	1207.8	5.0	9			
	9500	POTS	27	RF	1220.0	1239.0	24.0U	11			
	9100	GORK	2	S/F	1236.4	1239.0	5.9	10	5		
	9500	POTS	23	GRF	1250.0	1254.7	36.0	13			
	9100	GORK	1	S	1252.7	1254.7	6.9	13	6		
	3000	POTS	20	GRF	1352.0	1406.7	33.0	12			
	2800	OTTA	240	R	1400.0	1410	10.0	3.4	1.7		
	9400	HUAN		S	1404.0	1453.5	79.1	18.2	6.7		L
	9500	POTS	24	R	1404.0	1406.5	56.0	6			
	7000	SAOP	45	C	1404.2	1448.8	55.0	40.0			4L
	9500	POTS	4	S/F	1446.0	1448.7	9.0U	29			
	9400	HUAN		S	1448.1	1448.7	4.2	36.4	19.8		L
	10715	DWIN	1	S	1449.0	1449	3.0	15	5		
	2800	OTTA	240	R	1705.0	1740	35.0	3.4	1.7		
	7000	SAOP	40	F	1723.0		5.0				
	7000	SAOP	40	F	1744.0		3.0				
	2800	OTTA	20	GRF	1800.0	1803.5	40.0	5.0	2.4		
	7000	SAOP	40	F	1813.0		4.0				
	2800	OTTA	240	R	1920.0	2000	40.0	3.0	1.5		
	2800	OTTA	47	GB	2052.0	2056	21.0	800.0	317.0		
	9400	HUAN		C	2053.2	2055.8	12.5	1247.8	388.2		L
	2000	TYKW	47	GB	2055.0E	2056.4	35.0D	780 U	90 U		
	1000	TYKW			2055.0E	2056.4		1070 U			
	1000	TYKW	47	GB	2055.0E	2120.3U	32.0D	1700 D	100 D		
	9400	TYKW	47	GB	2055.0E	2055.9	55.0D	1250 U	100 U		
	3750	TYKW	47	GB	2055.0E	2055.9	55.0D	1000 U	90 U		
	9400	HUAN		PBI	2105.7	2105.7	49.4	132.2	72.4		L
	2800	OTTA	30	PBI	2113.0	2113	250.0	25.0			
	2800	OTTA	40	F	2113.5	2117	9.0	17.0			
	2000	TYKW	30	PBI	2130.0		290.0	8	4		
	2000	TYKW	45	C	2140.0	2142.0	9.0	5	1		
	1000	TYKW	45	C	2140.0	2140.9	3.0	10	3		
	3750	TYKW	30	PBI	2150.0		280.0	10	5		
	9400	TYKW	30	PBI	2150.0		280.0	20	10		
	2000	TYKW	45	C	2150.5	2153.1	3.5	7	2		
	2800	OTTA	40	F	2151.0	2153	4.0	6.4			
	2800	OTTA	21	GRF	2157.0	2210.3	65.0	10.6	5.0		
	3750	TYKW	20	GRF	2200.0	2210	60.0	7	3		
	2000	TYKW	45	C	2200.0	2210.7	14.0	17	3		
	9400	TYKW	5	S	2202.0	2210	25.0	4	2		
	1000	TYKW	45	C	2204.0	2204.7	10.0	17	3		
	2800	OTTA	2	S/F	2208.0	2208.6	2.0	7.6	3.8		
	2000	TYKW	29	PBI	2214.0		46.0	4	2		
	1000	TYKW	29	PBI	2214.0		46.0	3	1.5		
22	260	ONDR	43	NS	0916.0		297.0D	28			
	100	HIRA	44	NS	2330.0E	0827	600.0D	40	10		WR
	200	HIRA	44	NS	2330.0E	0431	610.0D	10	5		
	1000	TYKW	45	C	0008.0	0008.4	2.5	43	3		
	2000	TYKW	20	GRF	0340.0	0510	240.0	6	3		
	9400	TYKW	21	GRF	0340.0	0510	240.0	9	4.5		
	3750	TYKW	21	GRF	0340.0	0510	240.0	13	7		
	2950	GORK	22	GRF	0357.0	1049.2	273.0E	11			
	9100	GORK	21	GRF	0427.4	0604.3	480.0E	22			
	9400	TYKW	45	C	0433.0	0435.3	10.0	6	2		
	9100	GORK	1	S	0435.1	0435.6	1.3	5	3		
	9100	GORK	1	S	0438.8	0439.4	1.8	5	3		
	9400	TYKW	45	C	0559.0	0602.4	5.0D	31	8		
	5000	BERN	3		0559.0	0602.1	22.0	13.0			ONLY PAPER REC
	9100	GORK	2	S/F	0601.8	0602.3	2.0D	30			
	3750	TYKW	5	S	0603.0E	0603 U	14.0D	3 D	1.5D		
	9400	TYKW	29	PBI	0607.0E		10.0D	4	2		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
22	3750	TYKW	5	S	0636.5	0637.1	1.5	4.5	1.5		
	9400	TYKW	5	S	0637.0	0637.6	2.0	9	3		
	9100	GORK	1	S	0637.0	0637.6	1.5	12	6		
	3100	CRIM	24	R	1018.0	1151.0		11			
	930	BORD	41	F	1046.0	1046.1	1.2	49	3		
	810	KRAK	8	S	1138.7	1139.0	.3	26			
	430	KRAK	8	S	1139.5	1140.0	.7	130			
	7000	SAOP	20	GRF	1205.4			7.0			0,2 PARTS
	2800	OTTA	240	R	1300.0	1355	55.0	7.6	3.8		
	7000	SAOP	20	GRF	1315.0	1315.8		7.0			21L,2 PARTS
	7000	SAOP	45	C	1356.6	1358.8	3.0	13.0			12L
	7000	SAOP	41	F	1356.6						3 BURSTS
	7000	SAOP	1	S	1407.7	1408.2	4.6	9.0			0
	7000	SAOP	4	S/F	1416.7	1417.2	6.6	19.0			17L
	2800	OTTA	20	GRF	1416.8	1417	11.0	5.0			
	2800	OTTA	20	GRF	1510.0	1520	65.0	6.2	3.1		
	7000	SAOP	20	GRF	1527.0	1529.9		11.0			21L
	2800	OTTA	20	GRF	1711.0	1712	15.0	2.4	1.0		
	2800	OTTA	21	GRF	1820.0	2120	400.0	24.6	9.0		
	2800	OTTA	1	S	1853.8	1854.3	1.0	4.0	2.0		
	2800	OTTA	20	GRF	2015.0	2018	30.0	6.2	3.1		
	2800	OTTA	4	S/F	2051.0	2100	23.0	30.0	11.6		
	9400	HUAN		S	2054.7	2120.4	49.1	32.7	24.7		L
	2800	OTTA	21	GRF	2147.0		28.0	4.0			
	3750	TYKW	5	S	2148.0	2156	20.0	9	3		
	2000	TYKW	45	C	2149.0	2156.3	20.0	42	4		
	1000	TYKW	45	C	2149.0	2156.4	20.0	26	3		
	2800	OTTA	1	S	2154.0	2156.3	6.0	7.6	3.8		
	2695	PENT	2	S/F	2256.0	2257.2	2.0	7.6	3.8		
	2000	TYKW	45	C	2256.0	2257.3	16.0	8	1.5		
	9400	TYKW	5	S	2256.0	2257.5	10.0	7	2		
	3750	TYKW	45	C	2256.0	2257.4	16.0	7	1.5		
	2695	PENT	29	PBI	2258.0	2258	16.0	3.4	1.7		
	3750	TYKW	5	S	2318.0	2319	5.0	2	1		
23	260	ONDR	44	NS	0549.0E		499.0D	51	3		
	536	ONDR	43	NS	0630.0	0644.8	280.0	130	7		
	127	TORN	43	NS	0630.0		430.0		2.8		VO,INCOMPLETE
	33	UPIC	43	NS	0653.8	0722.1	406.8				
	29	UPIC	43	NS	0659.4	1212.4	401.6				
	200	HIRA	44	NS	1928.0E	0800	850.0D	110	30		MR
	9400	TYKW	45	C	0120.0U	0122.2	10.0U	10	2.5U		
	9100	GORK	23	GRF	0354.0E	1049.5	516.0E	53			
	2950	GORK	20	GRF	0357.0E	0645.7	480.0E	29			
	3750	TYKW	5	S	0430.0	0432	10.0	4	1		
	9400	TYKW	5	S	0431.0	0431.5	3.0	8	3		
	9100	GORK	1	S	0431.5	0432.4	2.2	10	5		
	650	GORK	22	GRF	0529.0	0813.7	378.5	25			
	2000	TYKW	21	GRF	0625.0	0640	145.0D	9	5 D		
	1000	TYKW	45	C	0625.0	0645.2	145.0D	40	12 D		
	3750	TYKW	21	GRF	0625.0	0652	145.0D	13	6 D		
	950	GORK	22	GRF	0627.0	0645.5	360.0E	32			
	9400	TYKW	20	GRF	0630.0	0700	140.0D	8	4 D		
	113	POTS	27	RF	0630.0	0651	57.0	25	5		RISE+I
	6100	KISV	3	S	0640.0	0643	5.0	5			
	2000	TYKW	45	C	0644.5	0645.7	2.5	6	2		
	6100	KISV	4	S/F	0728.0	0730	5.0	6			
	9500	KISV	4	S/F	0729.5	0730	5.0	8			
	9100	GORK	1	S	0729.7	0730.2	1.9	7.5	4		
	9500	KISV	8	S	0740.0	0741.5	3.0	12			
	9500	POTS	1	S	0741.0	0741.3	3.0	8			
	9100	GORK	1	S	0741.1	0741.4	1.3	11	5		
	2000	TYKW	45	C	0745.0	0750.0	15.0	30	2.5		
	1470	POTS	41	F	0746.5	0749.9	5.0	94			
	810	KRAK	8	S	0748.5	0748.5	.1	27			
	3000	POTS	1	S	0751.5		2.0	2.8			
	9500	KISV	3	S	0754.0	0756	4.0	4			
	6100	KISV	40	F	0755.0	0756	20.0	4			
	234	POTS	4	S/F	0809.0	0809.0	.3	150	15		
	9500	KISV	3	S	0830.0	0833	5.0	7			
	6100	KISV	4	S/F	0831.0	0832.5	4.0	13			
	9100	GORK	1	S	0859.9	0900.2	1.1	10	5		
	9500	KISV	4	S/F	0900.0	0900.5	4.0	10 D			
	9500	KISV	4	S/F	0910.0	0911	4.0	10			
	9500	KISV	4	S/F	1023.0	1024	7.0	7			
	9500	KISV	3	S	1034.0	1038	9.0	7			
	9500	KISV	4	S/F	1049.0	1049.7	7.0	10			
	15000	KISV	4	S/F	1049.3	1049.5	2.0	11			
	2800	OTTA	1A	S	1055.0	1100	10.0	4.8	2.4		
	2800	OTTA	1	S	1057.5	1057.8	1.0	5.2	2.6		
	9100	GORK	1	S	1057.7	1058.5	2.3	10	5		
	15000	KISV	4	S/F	1058.0	1058.5	5.0	7			
	9500	KISV	4	S/F	1058.0	1058.7	7.0	9			
	2800	OTTA	24	R	1110.0	1135	25.0	5.2	2.6		
	2800	OTTA	27A	RF	1110.0		225.0	5.2	4.6		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
23	2800	OTTA	24P	R	1135.0		175.0	5.2			
	6100	KISV	8	S	1157.0	1157.2	.5	4			
	9500	KISV	8	S	1157.2	1157.5	.5	6			
	9500	KISV	45	C	1229.0	1229.7	2.0	30 D			
	6100	KISV	3	S	1232.0	1235	10.0	5			
	113	POTS	4	S/F	1318.4	1318.4	.6	200	10		III
	7000	SAOP	45	C	1327.0	1441.8	81.4	95.0			3L, INVERTED POL
	5000	BERN	27		1350.0	1401.0	50.0	17.0			ONLY PAPER REC
	9500	POTS	21	GRF	1354.0	1404.2	28.0	15			
	9500	POTS	3	S	1355.0	1356.0	4.0	75			
	10715	DWIN	1	S	1355.0	1356	2.0	20	10		
	6100	KISV	21	GRF	1355.0	1356	25.0	36			
	9500	KISV	8	S	1355.0		2.0	30 D			
	9500	KISV	28	PBI	1355.0	1357	30.0	20			
	15000	KISV	8	S	1355.5	1356	2.0	50			
	8400	BERN	20		1355.5	1356.1	15.0	42.0			ONLY PAPER REC
	19600	BERN	20		1355.5	1356.1	15.0	50.0			ONLY PAPER REC
	11800	BERN	20		1355.5	1356.1	15.0	47.0			ONLY PAPER REC
	3000	POTS	20	GRF	1356.0	1404.5	28.0	17			
	2800	OTTA	21	GRF	1357	1401	28.0	5.2	3.0		
	15000	KISV	29	PBI	1357.5	1356.8	33.0	6			
	2800	OTTA	1	S	1402.5	1405	8.0	9.8	4.9		
	2800	OTTA	26	FAL	1430.0	1455	25.0	-5.2	-2.6		
	9500	KISV	45	C	1434.5	1435	3.0	8			
	234	POTS	4	S/F	1436.3	1436.5	.6	340	35		
	9500	POTS	3	S	1440.0	1441.3	9.0	68			
	9500	KISV	8	S	1440.0		3.0	30 D			
	9500	KISV	29	PBI	1440.0	1443	17.0	20			
	19600	BERN	20		1440.0U	1440.0U	8.0U	40.0			ONLY PAPER REC
	8400	BERN	20		1440.0U	1440.0U	8.0U	42.0			ONLY PAPER REC
	6100	KISV	4	S/F	1440.0	1441.5	10.0	40			
	11800	BERN	20		1440.0U	1440.0U	8.0U	50.0			ONLY PAPER REC
	10715	DWIN	1	S	1440.0	1441	5.0	20	10		
	15000	KISV	8	S	1440.5	1441.3	2.0	70			
	15000	KISV	29	PBI	1442.5	1442	8.0	30			
	7000	SAOP	40	F	1512.0						SUNSET
	2800	OTTA	20	GRF	1800.0	1825	60.0	4.8	2.4		
	2800	OTTA	20	GRF	1915.0	1930	30.0	2.6	1.3		
	2800	OTTA	20	GRF	1955.0	2005	30.0	2.4	1.2		
	2800	OTTA	45	C	2030.0	2032.3	4.0	3.6			
	2800	OTTA	21	GRF	2100.0	2150	110.0	8.4	2.8		
	9400	TYKW	45	C	2130.0	2131.1	40.0	25	3		
	2000	TYKW	20	GRF	2140.0U	2150	60.0U	2	1 U		
	3750	TYKW	20	GRF	2143.0	2146	70.0	8	2		
	1000	TYKW	45	C	2145.5	2146.4	1.5	23	3		
	2800	OTTA	1	S	2145.5	2146.3	2.0	3.6	1.7		
	1000	TYKW	20	GRF	2210.0U	2230 U	40.0U	4 U	2 U		
	9400	TYKW	45	C	2257.0	2259.3	13.0	35	4		
	3750	TYKW	45	C	2258.0U	2259.0	7.0U	5	1 U		
	17000	NOBE	1	S	2258.4	2259.2	3.0	26			L
24	100	HIRA	43	NS	0240.0	0823	450.0D	230	25		SR
	100	GORK	44	NS	0304.0E		360.0E		10		
	113	POTS	43	NS	0600.0	0819	510.0D	55			
	127	TORN	44	NS	0600.0E	0845.4	600.0D	290	8.4		V1
	204	IZMI	44	NS	0600.0E		240.0D	83			
	260	ONDR	44	NS	0626.0E		457.0D	185	12		
	536	ONDR	44	NS	0626.0E		457.0D	84	9		
	33	UPIC	43	NS	0713.2	0822.5	213.5				
	29	UPIC	43	NS	0749.5	0834.6	177.3				
	100	HIRA	44	NS	1928.0E	0800	850.0D	500	140		SR
	9400	TYKW	20	GRF	0015.0	0020	30.0	8	4		
	3750	TYKW	45	C	0015.0	0018.4	25.0	16	3		
	2695	PENT	1	S	0016.0	0016.5	1.0	4.8	2.6		
	2695	PENT	1	S	0026.2	0026.4	1.0	2.8	1.4		
	3750	TYKW	45	C	0046.0	0050.7	9.0	25	7		
	9400	TYKW	45	C	0046.0U	0050.6U	9.0U	18 U	4 U		
	2695	PENT	4	S/F	0047.0	0050.5	6.0	27.4	12.0		
	2000	TYKW	45	C	0048.0	0050.6	7.0	30	8		
	1000	TYKW	45	C	0049.0	0049.9U	3.0	134 D	10 D		
	1000	TYKW	30	PBI	0052.0		11.0	2	1		
	2695	PENT	29	PBI	0053.0	0053	15.0	7.2	2.4		
	3750	TYKW	29	PBI	0055.0		25.0	3	1.5		
	9400	TYKW	29	PBI	0055.0		25.0	4	2		
	2000	TYKW	29	PBI	0055.0		25.0	3	1.5		
	1000	TYKW	8	S	0105.1	0105.1	.1	33	8		
	9400	TYKW	20	GRF	0140.0	0200	60.0	4	2		
	3750	TYKW	45	C	0147.0	0205	40.0	11	4		
	2000	TYKW	45	C	0147.0	0147.5	2.0	4	2.5		
	2000	TYKW	29	PBI	0149.0		35.0	2	1		
	1000	TYKW	20	GRF	0255.0	0330	100.0	1.5	.7		
	2000	TYKW	20	GRF	0255.0	0330	100.0	3	1.5		
	3750	TYKW	20	GRF	0305.0	0320	125.0	4	2		
	2950	GORK	21	GRF	0336.0E	0345.8	360.0E	18			
	9100	GORK	20	GRF	0504.3	0512.7	12.9	15	6		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
24	6100	KISV	24	R	0510.0	0525	15.0	-5			
	35000	NAGO	22	GRF	0520.0	0551	36.0	5			
	9100	GORK	20	GRF	0520.1	0524.2	15.6	11	5		
	15000	KISV	46	C	0544.0	0544.5	1.0	6			
	9500	KISV	46	C	0545.5	0545.8	1.0	6			
	6100	KISV	45	C	0545.5	0545.8	1.0	7			
	2000	TYKW	21	GRF	0550.0	0710	180.0D	12	7 D		
	1000	TYKW	45	C	0550.0	0833.3	180.0D	63	10 D		
	3750	TYKW	21	GRF	0620.0	0720	150.0D	11	6 D		
	9400	TYKW	21	GRF	0620.0	0720	150.0D	10	6 D		
	3100	CRIM	1	S	0622.0	0625.0	6.0	16	5		
	2000	TYKW	5	S	0623.0	0624.2	5.0	5	2		
	1000	TYKW	45	C	0623.0	0624.7	3.0	33	3		
	2950	GORK	1	S	0623.1	0624.7	3.4	8	4		
	9100	GORK	22	GRF	0623.2	0630.3	198.0E	21	11		
	650	GORK	28	PRE	0624.0	0624.5	1.4	11	4		
	3750	TYKW	5	S	0624.0	0624.9	3.0	9	4		
	9400	TYKW	5	S	0624.0	0624.3	2.0	4.5	1.5		
	950	GORK	28	GRF	0624.2	0625.1	1.2	24			
	950	GORK	22	GRF	0627.0	0834.5	198.0E	26			
	650	GORK	22	GRF	0634.0	0806.3	192.0E	37	10		
	5000	BERN	25		0652.0	0654.0	.1U	5.0			ONLY PAPER REC
	3000	POTS	3	S	0652.2	0653.8	3.8	18			
	1470	POTS	3	S	0652.4	0654.4	5.1	14			
	2950	GORK	1	S	0652.8	0653.8	3.0	16	8		
	2000	TYKW	45	C	0653.0	0653.8	5.0	14	4		
	3750	TYKW	5	S	0653.0	0653.7	4.0	15	5		
	3100	CRIM	1	S	0653.0	0654.0	3.0	22	7		
	2650	DWIN	1	S	0653.0	0654	3.0	15	10		
	6100	KISV	8	S	0703.0	0704	2.0	9			
	808	ONDR	20	GRF	0750.0	0832.8	170.0	40	8		
	810	KRAK	27	RF	0753.0	0833.3	77.0	45	10		
	9500	KISV	4	S/F	0804.0	0804.5	1.0	6			
	930	BORD	40	F	0806.0	0832.9	55.0	41	15		
	11800	BERN	21		0828.0	0830.3	20.0U	10.0			ONLY PAPER REC
	8400	BERN	21		0828.0	0830.3	.1U	8.0			ONLY PAPER REC
	5000	BERN	21		0828.0	0830.3	38.0	7.0			ONLY PAPER REC
	9500	POTS	3	S	0828.2	0830.3	4.3	14			
	6100	KISV	4	S/F	0829.0	0830.5	3.0	20			
	9500	KISV	8	S	0830.0	0830.5	1.0	13			
	1470	POTS	3	S	0831.5	0833.4	4.3	6.8			
	3000	POTS	3	S	0832.5	0833.8	4.0	9.3			
	3100	CRIM	1	S	0833.0	0834.0	3.0	15	5		
	234	POTS	41	F	0840.6	0840.8	2.3	1200	10		III
	810	KRAK	27	RF	0922.5	0929.0	15.0	15	7		
	810	KRAK	27	RF	0944.8	1009.0	49.0	45	13		
	930	BORD	40	F	0946.0	0956.8	28.0	19	8		
	6100	KISV	24	R	1020.0	1027	7.0	7			
	810	KRAK	27	RF	1041.0		14.5	20	6		
	2800	OTTA	21	GRF	1103.0	1115	47.0	7.8	3.9		
	9500	KISV	4	S/F	1106.0	1108.5	9.0	12			
	15000	KISV	3	S	1106.0	1108	5.0	7			
	6100	KISV	46	C	1107.0	1109	53.0	11			
	2650	DWIN	2	S/F	1136.0	1136	1.0	20	10		
	2800	OTTA	40	F	1136.2	1136.7	.7	14.0			
	7000	SAOP	40	F	1154.0		22.0				
	234	POTS	42	SER	1155.2	1158.7	3.8	190	10		
	9500	KISV	4	S/F	1211.5	1212	4.0	8			
	6100	KISV	8	S	1212.0	1212.2	1.0	7			
	15000	KISV	46	C	1212.0	1212.2	1.0	4			
	2800	OTTA	20	GRF	1220.0	1235	50.0	3.2	1.6		
	2800	OTTA	1	S	1316.5	1317	1.5	4.6	2.3		
	930	BORD	40	F	1438.0	1527.8	144.0	48	20		
	2800	OTTA	20	GRF	1440.0	1527.5	115.0	6.2	2.1		
	7000	SAOP	40	F	1608.0	1837.8	182.0				
	2800	OTTA	21	GRF	2000.0	2030	60.0	3.4	2.0		
	2800	OTTA	1	S	2050.8	2051	1.0	3.4	1.7		
	2800	OTTA	20	GRF	2115.0	2118	20.0	3.4	2.2		
	1000	TYKW			2140.0	2221		13			
	1000	TYKW	45	C	2140.0	2646.6	670.0D	75	15 D		
	1000	TYKW			2140.0	2255.6		14			
	1000	TYKW			2140.0	2342		13			
	9400	TYKW	5	S	2158.0	2159.3	4.0	6	2		
	9400	TYKW	5	S	2204.0	2210	20.0	5	2		
	3750	TYKW	5	S	2207.0	2208.3	20.0	4	1.5		
	3750	TYKW	5	S	2231.0	2232	20.0	3	1.5		
	2000	TYKW	5	S	2254.0	2255.7	4.0	3	1		
	9400	TYKW	21	GRF	2334.0	2340	40.0	5	3		
	3750	TYKW	20	GRF	2334.0	2340	35.0	6	2.5		
	2000	TYKW	5	S	2336.0	2340	25.0	2	1		
	2695	PENT	20	GRF	2340.0	2342	15.0	3.4	1.7		
	9400	TYKW	5	S	2341.5	2342.1	6.0	11	3		
25	200	HIRA	44	NS	0010.0E	0800	580.0D	490	150		SR
	100	GORK	44	NS	0254.0E		414.0E		40		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
25	234	POTS	44	NS	0545.0E	0846.5	525.0D	770			
	33	UPIC	43	NS	0553.0	0743.3	520.7				
	29	UPIC	43	NS	0553.0	1009.9	520.8				
	204	IZMI	44	NS	0600.0E		360.0D	600			
	127	TORN	44	NS	0600.0E	1440.4	600.0D	2100	390		V1,SATURATED
	113	POTS	44	NS	0609.0E	0833.5	501.0D	850			
	808	ONDR	44	NS	0635.0E		467.0D	45	3		
	536	ONDR	44	NS	0635.0E		467.0D	136	10		
	260	ONDR	44	NS	0635.0E		467.0D	142 D	49		
	430	KRAK	44	NS	0700.0E		360.0D	40	20		
	100	HIRA	44	NS	1928.0E	0300	850.0D	140	25		SR
	200	HIRA	44	NS	2356.0E	0534	580.0D	65	45		MR
	2695	PENT			0025.0	0133	85.0D	43.8			
	3750	TYKW	45	C	0028.0	0132	130.0	36	20		
	9400	TYKW	21	GRF	0028.0	0140	270.0	35	14		
	2000	TYKW	45	C	0028.0	0139.1	130.0	50	14		
	2000	TYKW	30	PBI	0238.0		140.0	9	4.5		
	3750	TYKW	30	PBI	0238.0		140.0	12	6		
	2000	TYKW	5	S	0245.0	0246	6.0	2	1		
	9400	TYKW	5	S	0300.0	0304 U	24.0	8 D	4 D		
	650	GORK	22	GRF	0300.0E	0715.0	408.0E	50			
	3750	TYKW	20	GRF	0305.0	0316	40.0	6	2		
	2950	GORK	20	GRF	0315.6	0324.0	380.0E	30			
	9100	GORK	21	GRF	0321.0E	0607.2	380.0E	28			
	9400	TYKW	45	C	0327.0	0327.8	3.0	39	12		
	9100	GORK	4	S/F	0327.4	0328.1	5.5	41			
	9400	TYKW	29	PBI	0330.0		14.0	6	3		
	950	GORK	22	GRF	0342.0E	0436.5	480.0E	22			
	3750	TYKW	45	C	0410.0	0412	16.0	10	3		
	9400	TYKW	45	C	0410.0	0412	14.0U	10	3 U		RAIN
	9100	GORK	1	S	0411.0	0412.1	3.4	11	6		
	2000	TYKW	5	S	0419.5	0420.3	1.5	4	1		
	3750	TYKW	5	S	0431.0	0435	20.0	3	1		
	2000	TYKW	20	GRF	0545.0	0600	60.0	3	1.5		
	3750	TYKW	20	GRF	0545.0	0554	60.0U	8	3.5U		RAIN
	6100	KISV	24	R	0551.0	0556		-12			
	15000	KISV	20	GRF	0551.0	0600	54.0	8			
	9500	KISV	20	GRF	0551.0	0553	12.0	7			
	6100	KISV	4	S/F	0605.0	0629	30.0	12			
	9500	POTS	8	S	0853.9	0854.0	.3	41			
	9100	GORK	1	S	0903.6	0904.5	2.4	7.6	3.0		
	930	BORD	8	S	0928.0	0928	.1	33	1		
	930	BORD	8	S	1009.8	1009.8	.1	14	1		
	8400	BERN	3		1014.0	1016.0	2.0	8.0			ONLY PAPER REC
	5000	BERN	3		1014.0	1016.0	5.0	6.0			ONLY PAPER REC
	15000	KISV	21	GRF	1015.0	1016.5	10.0	7			
	9500	KISV	20	GRF	1016.0	1016.5	2.0	6			
	930	BORD	40	F	1148.0	1238	76.0	32	16		
	930	BORD	8	S	1148.0	1238.8		100			
	2800	OTTA	20	GRF	1238.0	1239	19.0	4.4	2.2		
	2800	OTTA	21	GRF	1325.0	1345	30.0	6.0	3.0		
	8400	BERN	21		1330.0	1411.7	60.0	8.0			ONLY PAPER REC
	5000	BERN	21		1330.0	1411.7	60.0	9.0			ONLY PAPER REC
	1470	POTS	1	S	1331.0	1333.9	3.5	6.6			
	9500	KISV	20	GRF	1332.0	1334	13.0	7			
	2800	OTTA	8	S	1332.4	1332.4	.1	8.8			
	6100	KISV	21	GRF	1333.0	1336.5	12.0	10			
	7000	SAOP	45	C	1407.4	1411.0	14.0	28.0			12L
	3000	POTS	1	S	1410.0	1411.5	11.0	5.4			
	9500	POTS	1	S	1410.0	1411.6	11.0	10			
	6100	KISV	21	GRF	1411.0	1413	9.0	24			
	2800	OTTA	260	FAL	1420.0	1500	40.0	-6.0	-3.0		
	7000	SAOP	4	S/F	1548.0	1550.6	9.4	52.0			19L
	5000	BERN	20		1549.0	1550.5	20.0	8.0			ONLY PAPER REC
	8400	BERN	20		1549.0	1550.5	20.0	26.0			ONLY PAPER REC
	11800	BERN	20		1549.0	1550.5	2.0	28.0			ONLY PAPER REC
	19600	BERN	20		1549.0	1550.5	1.0U	27.0U			ONLY PAPER REC
	10715	DWIN	1	S	1550.0	1550	1.0	10	5		
	2800	OTTA	1	S	1726.0	1728	10.0	3.8			
	2800	OTTA	260	FAL	1750.0	1830	40.0	-6.0	-3.0		
	1000	TYKW			2140.0	0146.8		60			
	1000	TYKW			2140.0	0609		28			
	1000	TYKW			2140.0	0246.6		75			
	1000	TYKW			2140.0	0037.2		39			
	1000	TYKW			2140.0	0436.1		35			
	3750	TYKW	45	C	2353.0	2355.4	7.0D	41	20 D		
	1000	TYKW	45	C	2353.0	2355.2	5.0	77	13		
	2000	TYKW	45	C	2353.0	2355.4	10.0	41	10		
	1400	SYDN	45	C	2353.0	2355.5	5.0				
	2695	PENT	45	C	2354.0	2356	8.0	43.6	17.4		
	700	SYDN	40	F	2354.2	2355.7	3.3				
	1000	TYKW	29	PBI	2358.0		30.0	3.5	2		
	2695	PENT	29	PBI	2402.0	2402	55.0	12.0	5.0		
26	100	GORK	44	NS	0330.0E		570.0E		10		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
26	234	POTS	44	NS	0537.0E	1049	575.0D	110			
	204	IZMI	44	NS	0600.0E		360.0D	87			
	127	TORN	44	NS	0600.0E	1225.1	600.0D	1300	29		V2
	29	UPIC	43	NS	0606.0	1224.7	566.9				
	113	POTS	44	NS	0606.0E	1056	548.0D	70			
	430	KRAK	44	NS	0645.0E	0719.5	360.0D	200	5		
	260	ONDR	44	NS	0645.0E		444.0D	175	20		
	536	ONDR	44	NS	0645.0E		444.0D	39	2		
	33	UPIC	44	NS	0706.0E	1224.6	506.5D				
	100	HIRA	44	NS	1923.0E	0615	850.0D	330	50		MR
	200	HIRA	44	NS	1923.0E	0834	850.0D	190	70		SR
	3750	TYKW	29	PBI	0003.0E		60.0D	12	6 D		
	2000	TYKW	29	PBI	0003.0		60.0	6	3		
	9100	GORK	22	GRF	0453.7	0456.9	20.6	14	6		
	6100	KISV	20	GRF	0454.0	0457	16.0	12			
	9100	GORK	22	GRF	0537.3	0603.9	52.4	21			
	9400	TYKW	45	C	0539.0	0603.0	50.0U	20	4 U		RAIN
	6100	KISV	45	C	0540.0	0603	80.0	14			
	9500	KISV			0540.0	0549.5		14			
	9500	KISV	41	F	0540.0	0603.5	25.0	20			
	6100	KISV			0540.0	0548		8			
	15000	KISV			0540.0	0548		8			
	15000	KISV	41	F	0540.0	0603	80.0	14			
	9500	KISV			0540.0	0548		13			
	650	GORK	22	GRF	0606.8	0840.8	410.0E	13			
	430	KRAK			0645.0E	0735.0		130			
	430	KRAK			0645.0E	0832.5		250			
	6100	KISV	21	GRF	0730.0	0736	17.0	20			
	10715	DWIN	1	S	0735.0	0735	1.0	5	3		
	9400	TYKW	5	S	0735.0U	0735.5	1.0U	21 U	5 U		RAIN
	9500	POTS	3	S	0735.1	0735.6	2.4	22			
	9100	GORK	1	S	0735.4	0735.9	.7	23	11		
	15000	KISV	8	S	0735.5	0735.7	.5	6			
	9500	KISV	8	S	0735.5	0736	1.0	30			
	9100	GORK	29	PBI	0736.1	0736.1	9.2	7.6	3		
	9500	KISV	29	PBI	0736.5	0736.5	4.0	7			
	113	POTS	42	SER	0830.6	0831.2	4.1	2000			III
	100	GORK			0831.0	0834.4		150 D			
	100	GORK	46	C	0831.0	0831.4	4.0	150 D			
	234	POTS	41	F	0831.1	0839.0	13.0	350			III
	1470	POTS	1	S	0833.0	0833.9	1.3	3.9			
	204	IZMI	41	F	0842.0	0842.5	10.0	330			
	113	POTS	4	S/F	1017.6	1018.0	.8	700	70		III
	1470	POTS	1	S	1017.8	1018.3	.7	3.8			
	204	IZMI	41	F	1027.0	1030.0	11.0	450			
	7000	SAOP	40	F	1102.0		28.0				
	204	IZMI	42	SER	1103.0	1103.0	52.0	430			
	100	GORK	8	S	1103.2	1103.5	1.0	130			
	9500	POTS	8	S	1137.2	1137.5	.4	11			
	7000	SAOP	45	C	1149.5	1150.5		12.0			42L
	2800	OTTA	22	GRF	1205.0	1240	80.0	6.2	3.1		
	234	POTS	4	S/F	1224.5	1224.9	.6	380	40		III
	113	POTS	8	S	1224.8	1224.9	.2	1700	600		III
	650	GORK	2	S/F	1224.9	1225.3	4.0	13			
	100	GORK			1225.0	1229.2		140			
	100	GORK	41	F	1225.0	1225.4	5.0	140 D			
	930	BORD	41	F	1248.5	1248.5	.4	19	1		
	2800	OTTA	1A	S	1340.0	1350	10.0	4.3			
	1470	POTS	1	S	1341.0	1346.3	8.0	4.8			
	3000	POTS	1	S	1342.5	1346.3	11.0	5.8			
	2800	OTTA	8	S	1346.0	1346.2	.5	3.8	1.9		
	9500	POTS	4	S/F	1401.0	1404.1	6.3	18			
	7000	SAOP	2	S/F	1403.2	1404.2		10.0			O
	2800	OTTA	1	S	1424.0	1427.5	9.0	4.4	1.8		
	3000	POTS	3	S	1425.0	1427.6	7.0	18			
	9500	POTS	3	S	1458.4	1458.5	.6	22			
	2800	OTTA	20	GRF	1518.0	1521	35.0	6.2	3.1		
	7000	SAOP	40	F	1523.0		5.0				
	127	TORN	7	C	1526.4	1527.7	2.7	510 D	290 D		
	7000	SAOP	40	F	1631.0		55.0				
	11800	BERN	21		1727.0	1728.3	10.0U	18.0			ONLY PAPER REC
	8400	BERN	21		1727.0	1728.3	10.0	18.0			ONLY PAPER REC
	5000	BERN	21		1727.0	1728.3	10.0	17.0			ONLY PAPER REC
	7000	SAOP	45	C	1727.4	1728.2	10.8	48.0			22L
	2800	OTTA	3	S	1727.5	1728.4	1.0	11.2	5.6		
	2800	OTTA	29	PBI	1728.5	1728.5	7.0	5.6	2.8		
	2800	OTTA	1	S	1810.5	1810.6	1.0	3.6	1.8		
	2800	OTTA	2	S/F	1824.0	1826	4.0	8.0	4.2		
	2800	OTTA	27	RF	1900.0		110.0	6.8	5.6		
	2800	OTTA	24	R	1900.0	1910	10.0	6.8	3.2		
	2800	OTTA	24P	R	1910.0		70.0	6.8			
	2800	OTTA	26	FAL	2020.0	2050	30.0	-6.8	-3.2		
	3750	TYKW	5	S	2225.0	2227	6.0	2	.5		
	1000	TYKW	45	C	2248.7	2249.1	1.5	5	1		
	2695	PENT	20	GRF	2300.0	2305	40.0	5.0	3.0		

SOLAR RADIO EMISSION
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MAY 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
26	3750	TYKW	45	C	2301.0	2305.4	13.0	6	1		
27	200	GORK	44	NS	0336.0E		564.0D		100		
	100	GORK	44	NS	0336.0E		564.0D		25		
	29	UPIC	43	NS	0400.0	1205.7	586.5				
	33	UPIC	43	NS	0400.0	1054.7	588.5				
	234	POTS	44	NS	0530.0E	1041.5	567.0D	170			
	260	ONDR	44	NS	0546.0E		503.0D	155	18		
	536	ONDR	44	NS	0546.0E		503.0D	39	2		
	113	POTS	44	NS	0553.0E	1121	547.0D	150			
	204	IZMI	44	NS	0600.0E		360.0D	100			
	127	TORN	44	NS	0600.0E	0850.6	350.0D	600	85		V1,DISTURBED
	100	HIRA	44	NS	1923.0E	0426	850.0D	700	100		SR
	200	HIRA	44	NS	2346.0E	0337	600.0D	440	120		SR
	2000	TYKW	21	GRF	0010.0	0100	110.0	4	2		
	3750	TYKW	21	GRF	0010.0	0101.5	110.0	6	2		
	9400	TYKW	20	GRF	0010.0	0100	120.0	4	2		
	3750	TYKW	5	S	0125.0	0132.5	20.0	4	1.5		
	2000	TYKW	5	S	0128.0	0132	15.0	2	.7		
	650	GORK	22	GRF	0330.0E	0642.0	252.0D	8			
	1400	SYDN	27	RF	0500.5	0502.5	6.0				
	700	SYDN	27	RF	0501.0	0502.2	4.0				
	5000	BERN	1		0501.0	0503.3	7.0	7.0			ONLY PAPER REC
	1000	TYKW	5	S	0501.0	0503	6.0	4	1		
	2000	TYKW	5	S	0501.0	0503	6.0	7	3		
	3750	TYKW	5	S	0501.5	0503.0	3.5	17	7		
	950	GORK	1	S	0501.7	0503.0	2.4	3.3	2		
	2950	GORK	3	S	0501.7	0503.0	3.3	14	7		
	9100	GORK	1	S	0502.0	0503.2	3.9	13	6		
	9400	TYKW	5	S	0502.0	0503.1	3.0	12	6		
	9400	TYKW	29	PBI	0505.0		35.0	4	2		
	3750	TYKW	29	PBI	0505.0		40.0	2	1		
	9400	TYKW	5	S	0600.5	0601.0	2.5	15	4		
	9100	GORK	1	S	0600.5	0601.0	3.4	15	7		
	11800	BERN	1		0600.7	0601.7	1.0	10.0			ONLY PAPER REC
	8400	BERN	1		0600.7	0601.7	1.0	9.0			ONLY PAPER REC
	430	KRAK	41	F	0745.0E		360.0D	55	7		
	650	GORK	22	GRF	0749.4	1132.2	310.0E	14	7		
	3000	POTS	20	GRF	0756.0	0821.8	34.0	19			
	1470	POTS	20	GRF	0756.0	0811.2	22.0	7.3			
	9500	POTS	20	GRF	0756.0	0821.5	34.0	16			
	2950	GORK	20	GRF	0758.3	0821.9	20.0	15			
	9100	GORK	22	GRF	0758.6	0821.8	46.4	20	10		
	2000	TYKW	45	C	0800.0	0810.3	50.0	8	3		
	1000	TYKW	45	C	0800.0	0810.4	50.0	8	2		
	3750	TYKW	45	C	0800.0	0821.9	50.0	28	5		
	9400	TYKW	45	C	0800.0	0821.8	50.0	20	4		
	3100	CRIM			0809.0	0815.0		11			
	3100	CRIM			0809.0	0822.0		19			
	3100	CRIM	45	C	0809.0	0811.0	10.0	7	6		
	810	KRAK	8	S	0814.3	0814.3	.1	55			
	11800	BERN	1		0820.0	0821.8	10.0U	10.0			ONLY PAPER REC
	8400	BERN	1		0820.0	0821.8	10.0U	9.0			ONLY PAPER REC
	5000	BERN	1		0820.0	0821.8	10.0U	13.0			ONLY PAPER REC
	113	POTS	4	S/F	0920.0	0920.3	1.5	250	35		III
	930	BORD	8	S	1029.4	1029.8	.6	33	3		
	930	BORD	8	S	1031.4	1031.7	.4	14	2		
	204	IZMI	41	F	1032.2	1038.0	7.8	1430			
	100	GORK	27	RF	1045.0	1120.1	135.0E	400			
	2800	OTTA	20	GRF	1150.0	1230	120.0	8.8	4.4		
	1470	POTS	1	S	1158.8	1159.5	1.2	2.7			
	234	POTS	4	S/F	1205.5	1205.9	.9	575	100		
	930	BORD	8	S	1211.0	1211.1	.2	26	2		
	113	POTS	42	SER	1357.5	1358.0	17.0	700			III
	930	BORD	41	F	1413.1	1413.1	.5	146	2		
	7000	SAOP	40	F	1434.0		31.0				
	9400	HUAN		S	1516.9	1605.0	69.2	10.0	2.4		L
	2800	OTTA	4	S/F	1600.0	1601	5.0	14.4	5.8		
	930	BORD	46	C	1600.0	1600.6	2.0	21	1		
	19600	BERN	4		1600.0	1601.0	10.0U	48.0			ONLY PAPER REC
	7000	SAOP	45	C	1600.0	1601.2	6.6	64.0			13L
	8400	BERN	4		1600.0	1601.0	10.0	28.0			ONLY PAPER REC
	5000	BERN	4		1600.0	1601.0	10.0	22.0			ONLY PAPER REC
	11800	BERN	4		1600.0	1601.0	10.0U	28.0			ONLY PAPER REC
	9400	HUAN		S	1600.1	1601.2	3.3	43.2	23.1		L
	930	BORD	41	F	1832.3	1832.4	.3	21	1		
	2800	OTTA	20	GRF	1840.0	1850	30.0	2.8	1.2		
	2800	OTTA	8	S	1919.7	1920	.4	12.6			
	2800	OTTA	8	S	1930.5	1930.5	.1	10.4			
	2800	OTTA	4	S/F	2103.5	2104.5	2.5	46.0	20.0		
	2000	TYKW	45	C	2103.5	2104.6	1.3D	27	14 D		
	3750	TYKW	45	C	2103.5	2104.6	3.5	43	14		
	9400	TYKW	5	S	2103.5	2104.0U	.5D	83 D	20 D		
	1000	TYKW	45	C	2103.5	2103.9	2.5	7	3 U		
	9400	HUAN		C	2103.6	2104.0	3.6	83.2	25.4		L

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
27	9400	HUAN			2103.6	2104.7		69.8			
	2800	OTTA	29	PBI	2106.0	2106	14.0	5.8	2.0		
	9400	TYKW	29	PBI	2107.0E		10.0D	6	3 D		
	3750	TYKW	29	PBI	2107.0		10.0	4	2		
	2000	TYKW	29	PBI	2108.0E		8.0D	3	1 D		
	2000	TYKW	21	GRF	2125.0	2219	315.0	8	4		
	3750	TYKW	21	GRF	2130.0	2245	315.0	14	7		
	2800	OTTA	240	R	2136.0	2140	4.0	5.8	2.0		
	3750	TYKW	5	S	2137.0	2140	6.0	4	2		
	2000	TYKW	5	S	2139.0	2140	4.0	2	1		
	9400	TYKW	20	GRF	2240.0	2246	30.0	5	2		
	1000	TYKW	21	GRF	2340.0	0009	160.0	4	2		
	2000	TYKW	20	GRF	2340.0	2357.6	140.0	11	4		
	9400	TYKW	21	GRF	2345.0	0001	110.0	9	3		
	2695	PENT	20	GRF	2345.0	2358	100.0	9.8	7.2		
	3750	TYKW	21	GRF	2350.0	0008	100.0	9	4		
28	200	GORK	44	NS	0321.0E		580.0D		100		
	100	GORK	44	NS	0321.0E		580.0D		55		
	33	UPIC	43	NS	0507.9		787.1D				
	29	UPIC	43	NS	0508.0	1419.9	787.0D				
	234	POTS	44	NS	0535.0E	0607.5	565.0D	300			
	204	IZMI	44	NS	0600.0E		360.0D	84			
	536	ONDR	44	NS	0610.0E		481.0D	22	1		
	260	ONDR	44	NS	0610.0E		481.0D	168	20		
	113	POTS	44	NS	0615.0E	1119	525.0D	245			
	127	TORN	44	NS	0750.0E	0847.4	490.0D	1500	75		V2
	100	HIRA	44	NS	1920.0E	0510	850.0D	500	50		WR
	200	HIRA	44	NS	1920.0E	0600	850.0D	130	35		SR
	3750	TYKW	5	S	0024.5	0026	6.0	3	1		
	3750	TYKW	20	GRF	0045.0	0049	45.0	6	3		
	3750	TYKW	5	S	0135.0	0137	7.0	3	1.5		
	3750	TYKW	45	C	0144.0	0148	17.0	9	3.5		
	9400	TYKW	5	S	0145.0	0149	16.0	3	1.5		
	3750	TYKW	45	C	0208.0	0209.8	37.0	64	12		
	9400	TYKW	45	C	0208.0	0209.8	32.0	72	14		
	17000	NOBE	21	GRF	0208.0	0210.9	25.0	22			
	35000	NAGO	20	GRF	0209.0	0210	6.0	13			
	700	SYDN	45	C	0209.0	0209.5	1.0				
	1400	SYDN	4	S/F	0209.0	0210.3	1.7				
	200	HIRA	46	C	0209.0	0209.6	1.2	13000	3000		ML
	1000	TYKW	45	C	0209.0	0210.4	5.0	19	3		
	2000	TYKW	45	C	0209.0	0210.3	15.0	34	3.5		
	17000	NOBE	4	S/F	0209.1	0210.4	1.8	78			
	100	HIRA	48	C	0209.2	0209.7	4.0	13000	1800		O
	35000	NAGO	20	GRF	0216.0	0220	14.0	10			
	1000	TYKW	31	ABS	0240.0	0315	180.0	-3	-1.5		
	2000	TYKW	31	ABS	0240.0	0355	180.0	-6	-3		
	9400	TYKW	31	ABS	0240.0	0310	200.0	-8	-4		
	3750	TYKW	31	ABS	0245.0	0310	200.0	-8	-4		
	650	GORK	22	GRF	0322.0E	0543.4	212.0D	12			
	9100	GORK	20	GRF	0442.9	0507.6	44.1	9	4		
	700	SYDN	8	S	0507.1	0507.3	.8				
	9400	TYKW	5	S	0542.0	0542.2	2.0	7	2		
	234	POTS	8	S	0552.2	0552.4	.6	720	230		
	6100	KISV	27	RF	0621.0	0638	89.0	25			
	9400	TYKW	45	C	0632.0	0645.8	21.0	6	2		
	6100	KISV	1	S	0657.0	0658	2.0	6			
	430	KRAK	41	F	0700.0E		360.0D	30 U	7 U		
	2950	GORK	20	GRF	0735.0	0740.0	22.0	5	2		
	650	GORK	22	GRF	0806.0	1007.6	294.0E	9			
	204	IZMI	41	F	0815.0	0816.5	3.0	300			
	113	POTS	4	S/F	0816.0	0816.8	1.1	850	85		III
	100	GORK	3	S	0904.4	0905.0	1.5	120 D			
	204	IZMI	8	S	0904.5	0904.5	.3	770	400		
	2950	GORK	20	GRF	0914.9	0920.7	14.7	6	2		
	9500	POTS	3	S	0938.0	0938.7	2.0	13			
	9100	GORK	21	GRF	0938.5	1059.2	159.2	21			
	9100	GORK	1	S	0938.6	0938.8	.9	13	6		
	6100	KISV	4	S/F	0940.0	0941	2.0	10			
	930	BORD	41	F	0942.0	0942.4	.4	67	2		
	9500	POTS	3	S	1005.0	1005.3	4.3	13			
	9100	GORK	1	S	1005.2	1005.5	1.0	10	5		
	5000	BERN	20		1043.0	1109.0	70.0	8.0			ONLY PAPER REC
	204	IZMI	41	F	1047.0	1054.0	9.0	1000			
	2800	OTTA	21	GRF	1050.0	1110	120.0	10.4	5.2		
	6100	KISV	27	RF	1052.0	1146	43.0	8			
	930	BORD	41	F	1052.4	1052.7	.3	52	2		
	1470	POTS	3	S	1056.8	1100.5	6.2	4.6			
	9500	POTS	3	S	1057.5	1059.2	6.0	15			
	200	GORK	4	S/F	1057.7	1059.0	2.0	550 D			
	100	GORK	3	S	1058.0	1059.0	2.0	1000 D			
	2950	GORK	22	GRF	1059.0	1107.5	31.0	5	2		
	2800	OTTA	1	S	1059.0	1100.5	3.5	4.2	2.2		
	3000	POTS	3	S	1100.0	1101.1	3.0	7.5			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
28	6100	KISV			1101.0	1102.5		7			
	6100	KISV	4	S/F	1101.0	1101.5	3.0	6			
	204	IZMI	45	C	1115.2	1115.7	.5	1500	800		
	930	BORD	41	F	1247.0	1247	.3	52	2		
	1470	POTS	2	S/F	1314.5	1317.2	16.0	3.7			
	2800	OTTA	24O	R	1315.0	1317	2.0	4.6	2.3		
	234	POTS	41	F	1355.7	1356.8	4.8	850			
	7000	SAOP	45	C	1415.2	1419.4	7.4	24.0			O
	9400	HUAN		S	1415.6	1422.1	15.4	6.0	4.5		O
	3000	POTS	4	S/F	1418.2	1419.6	3.6	11			
	9500	POTS	4	S/F	1418.2	1419.5	2.7	22			
	1470	POTS	4	S/F	1418.4	1419.2	2.9	16			
	9400	HUAN		S	1418.6	1419.2	1.9	15.1	12.5		L
	11800	BERN	3		1419.0	1419.5	4.0	45.0			ONLY PAPER REC
	5000	BERN	1		1419.0	1419.5	1.0	4.0			ONLY PAPER REC
	10715	DWIN	1	S	1419.0	1419	1.0	10	5		
	8400	BERN	3		1419.0	1419.5	4.0	10.0			ONLY PAPER REC
	2650	DWIN	45	C	1419.0	1420	2.0	60	20		
	19600	BERN	3		1419.0	1419.5	4.0	72.0			ONLY PAPER REC
	2800	OTTA	4	S/F	1419.0	1419.5	1.8	14.8	5.0		
	113	POTS	4	S/F	1419.0	1419.3	1.3	2800	450		III
	930	BORD	8	S	1419.5	1419.5	.1	66	1		
	7000	SAOP	45	C	1505.2	1515.2	14.0	20.0			8L
	2800	OTTA	1	S	1528.0	1528.4	1.0	6.0	2.0		
	2800	OTTA	21	GRF	1545.0	1551	30.0	8.6			
	5000	BERN	41		1545.0	1552.5	35.0	60.0			ONLY PAPER REC
	8400	BERN	41		1545.0	1552.5	35.0	79.0			ONLY PAPER REC
	7000	SAOP	45	C	1549.0	1552.1	25.0	140.0			13L
	9400	HUAN			1550.2	1603.8		76.0			
	9400	HUAN		C	1550.2	1559.2	18.8	105.6	46.4		L
	2800	OTTA	3	S	1552.0	1552.5	7.0	77.0	34.0		
	2800	OTTA	3	S	1601.0	1605	9.0	13.2	6.6		
	9400	HUAN		PBI	1609.0	1609.0	15.4	16.6	11.3		L
	7000	SAOP	45	C	1633.0	1717.6		1540.0			1L,3 PARTS
	9400	HUAN	28	PRE	1635.7	1710.7	35.0	13.6	5.0		L
	35000	BERN	46		1637.0	1717.3	6.0	2644.0			ONLY PAPER REC
	11800	BERN	46		1637.0	1717.3	34.0	419.0U			ONLY PAPER REC
	2800	OTTA	3	S	1637.0	1638.5	7.0	12.6	4.2		
	5000	BERN	46		1637.0	1717.3	75.0	475.0			ONLY PAPER REC
	8400	BERN	46		1637.0	1717.3	34.0	176.0U			ONLY PAPER REC
	19600	BERN	46		1637.0	1717.3	20.0	1154.0U			ONLY PAPER REC
	930	BORD	8	S	1653.0	1653	.1	81	1		
	2800	OTTA	3	S	1653.0	1656	7.0	25.8	13.0		
	2800	OTTA	30	PBI	1700.0	1700	50.0	11.4			
	930	BORD	45	C	1702.0	1717.4	30.0	165	20		
	2695	PENT	28	PRE	1705.0	1706.3	5.0	8.0			
	2800	OTTA	46F	C	1710.0	1717.6	27.0	316.0	54.0		
	9400	HUAN			1710.7	1718.0		2467.1			
	9400	HUAN		C	1710.7	1717.7	10.7	2504.8	729.4		L
	9400	HUAN		PBI	1721.4	1721.4	31.9	355.9	161.4		L
	9400	HUAN		S	1808.0	1810.3	3.7	49.8	19.2		L
	2800	OTTA	4	S/F	1808.6	1810.1	3.0	20.0	10.0		
	930	BORD	46	C	1809.0	1811.4	3.0	139	6		
	9400	HUAN		PBI	1811.7	1811.7	20.3	7.5	4.2		L
	2800	OTTA	21	GRF	1827.0	1920	110.0	9.0			
	9400	HUAN		S	1859.2	1956.5	90.8	31.7	13.0		L
	2800	OTTA	28	PRE	1940.0		5.0	24.6			
	7000	SAOP	45	C	1941.0	1947.6		2598.0			SUNSET
	9400	HUAN		C	1943.5	1947.6	7.0	770.6	254.6		L
	2800	OTTA	47	GB	1945.0	1947.4	7.0	1132.0	256.0		
	500	HIRA	48	C	1945.7	1957.7	21.0	8000	1000		
	100	HIRA	42	SER	1946.7	1947.8	21.0	10000			ML
	200	HIRA	46	C	1946.8U	1947.8	2.7U	840 U	220 U		SUNRISE
	2800	OTTA	30	PBI	1952.0	1952	28.0	37.4	18.7		
	2800	OTTA	4	S/F	1954.5	1956.3	6.5	32.8	16.4		
	2800	OTTA	26A	FAL	2100.0	2250	110.0	-16.8	-8.4		
	2800	OTTA	23	GRF	2145.0	2200	55.0	5.6	3.0		
	3750	TYKW	45	C	2145.0	2219.9	65.0	27	5		
	9400	TYKW	45	C	2150.0	2205.4	60.0	65	13		
	2000	TYKW	45	C	2154.0	2219.9	50.0	13	2		
	2800	OTTA	3	S	2218.5	2219.9	4.0	16.0	4.0		
	3750	TYKW	5	S	2308.6	2308.9	.8	3	1		
	9400	TYKW	5	S	2308.7	2308.9	.6	7	2		
	2695	PENT	21	GRF	2310.0	2400	80.0	11.8	5.9		
	2000	TYKW	28	PRE	2324.0	2338	14.0	3	1.5		
	3750	TYKW	28	PRE	2324.0	2330.5	14.0	14	4		
	9400	TYKW	5	S	2330.3	2330.6	1.0	4	1.5		
	5730	IRKU	1	S	2330.3	2330.5	1.0	18			L
	5730	IRKU			2338.0	2346 U		155 D			L
	17000	NOBE	28	PRE	2338.0	2339.9	2.9	21			O
	5730	IRKU			2338.0	2344 U		155 D			L
	5730	IRKU			2338.0	2347.4		160			L
	5730	IRKU	45	C	2338.0	2339.0	20.0	100			L
	2695	PENT	46F	C	2338.0	2339	18.0	69.0	18.9		
	2000	TYKW	45	C	2338.0	2339.0	20.0	52	10		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
28	3750	TYKW	45	C	2338.0	2343.6	20.0	96	44		
	9400	TYKW	45	C	2338.0	2343.6	20.0	385	100		
	1000	TYKW	45	C	2338.0	2339.0	16.0	72	12		
	500	HIRA	46	C	2338.4	2341.7	18.0	500	200		
	200	HIRA	46	C	2338.5	2338.7	8.0	640	100		
	200	HIRA			2338.5	2342.6		340			
	100	HIRA	46	C	2338.6	2339.0	7.2	30000	980		O
	100	HIRA			2338.6	2345.0		7900			WL
	700	SYDN	45	C	2338.7	2341.2	6.0				
	17000	NOBE	45	C	2340.9	2343.5	11.5	183			L
	35000	NAGO	5	S	2341.0	2344	15.0	80			
	17000	NOBE	29	PBI	2352.4	2352.4	33.0	27			O
	3750	TYKW	30	PBI	2358.0		160.0	17	4		
	2000	TYKW	29	PBI	2358.0		60.0	5	2.5		
	9400	TYKW	29	PBI	2358.0		60.0	19	7		
29	100	GORK	44	NS	0254.0E		606.0E		10		
	200	GORK	44	NS	0255.0E		605.0D		25		
	234	POTS	44	NS	0538.0E	1011	562.0D	140			
	260	ONDR	44	NS	0557.0E		487.0D	168	13		
	536	ONDR	44	NS	0557.0E		487.0D	20	2		
	204	IZMI	44	NS	0600.0E		360.0D	90			
	127	TORN	44	NS	0600.0E	1339.0	600.0D	790	65		V1
	113	POTS	44	NS	0605.0E	1038	535.0D	300			
	430	KRAK	44	NS	0700.0E	0911.8	360.0D	200	5		
	33	UPIC	43	NS	0722.2		387.2				
	29	UPIC	43	NS	0722.4	1344.6	386.8				
	200	HIRA	44	NS	1920.0E	2229	860.0D	110	20		
	100	HIRA	44	NS	1920.0E	2210	860.0D	20	10		SR
	3750	TYKW	20	GRF	0110.0	0115	75.0	11	4		
	9400	TYKW	20	GRF	0110.0	0120	80.0	10	3		
	2000	TYKW	20	GRF	0110.0	0115	80.0	3	1.5		
	17000	NOBE	20	GRF	0110.5	0118.3	48.0	14			L
	2695	PENT	20	GRF	0112.0	0115	20.0	7.4	3.7		
	3750	TYKW	45	C	0324.0	0334.6	14.0	16	4		
	2950	GORK	22	GRF	0324.0E	0334.8	30.0D	17			
	2950	GORK			0324.0E	0345.0		13			
	2000	TYKW	45	C	0325.0	0334.7	12.0	8	1.5		
	9400	TYKW	45	C	0327.0	0334.8	10.0	4	2		
	9100	GORK	20	GRF	0328.4	0331.9	10.4	10	5		
	950	GORK	1	S	0333.9	0334.7	1.6	4	2		
	1000	TYKW	5	S	0334.0	0334.7	3.0	7	2		
	3750	TYKW	45	C	0339.0	0345	11.0	21	8		
	5730	IRKU	20	GRF	0339.0	0344.9	11.0	70	20		L
	9100	GORK	21	GRF	0340.0	0348.8	17.3	16			
	9400	TYKW	5	S	0340.0	0344.8	16.0	33	9		
	2000	TYKW	5	S	0340.0	0345	7.0	2	.7		
	17000	NOBE	27	RF	0340.5	0345.1	12.0	19			O
	9100	GORK	1	S	0342.8	0344.9	5.9	28	14		
	35000	NAGO	20	GRF	0344.0	0346	6.0	14			
	2000	TYKW	31	ABS	0347.0	0402	30.0	-3	-1.5		
	3750	TYKW	31	ABS	0350.0	0405	29.0	-4	-2		
	9400	TYKW	31	ABS	0356.0	0406	25.0	-5	-2.5		
	1000	TYKW	28	PRE	0402.0	0510	68.0	3.5	1.5		
	2000	TYKW	45	C	0409.0	0412.6	7.0	6	.5		
	1000	TYKW	45	C	0410.0	0414.0	6.0	19	2.5		
	2000	TYKW	28	PRE	0417.0	0509	52.0	5	1.5		
	3750	TYKW	28	PRE	0422.0	0509	47.0	13	3		
	100	GORK	8	S	0434.9	0435.2	.6	55	9		
	9400	TYKW	28	PRE	0445.0	0509	24.0	11	4		
	15000	KISV	4	S/F	0500.0	0511	18.0	116			
	6100	KISV	45	C	0501.0	0511	24.0	295			
	6100	KISV			0501.0	0519.8		160			
	6100	KISV			0501.0	0523		100			
	2950	GORK	21	GRF	0503.0		84.0				
	9100	GORK	21	GRF	0503.9	0547.2	165.6	20			
	5000	BERN	45		0505.0	0511.0	250.0	160.0			ONLY PAPER REC
	11800	BERN	45		0505.0	0511.0	250.0	112.0			ONLY PAPER REC
	19600	BERN	45		0505.0	0511.0	150.0	147.0			ONLY PAPER REC
	8400	BERN	45		0505.0	0511.0	250.0	123.0			ONLY PAPER REC
	3750	TYKW	45	C	0509.0	0511.1	30.0	210	35		
	2000	TYKW	45	C	0509.0	0511.1	26.0	64	10		
	9400	TYKW	45	C	0509.0	0511.0	25.0	197	50		
	9100	GORK			0509.2	0519.8		106			
	9100	GORK	46	C	0509.2	0510.8	13.0E	170			
	1400	SYDN	3	S	0509.5	0511.0	4.5				
	2950	GORK			0509.6	0511.0		96			
	2950	GORK	45	C	0509.6	0510.2	2.4	57			
	950	GORK	5	S	0509.7	0511.0	3.9	22			
	17000	NOBE	4	S/F	0509.9	0511.1	9.0	91			L
	35000	NAGO	45	C	0510.0	0520	14.0	32			
	5730	IRKU			0510.0	0519.9		132			L
	700	SYDN	45	C	0510.0	0510.2	4.0				
	5730	IRKU	45	C	0510.0	0511 U	22.0	300			L
	1000	TYKW	45	C	0510.0	0511.1	15.0	37	6		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
29	29	UPIC	3	S	0511.0	0511.2	.4				
	33	UPIC	2	S/F	0511.0	0511.1	.4				
	950	GORK	29	PBI	0513.6	0513.6	12.0E	3			
	15000	KISV	4	S/F	0518.0	0530	12.0	93			
	17000	NOBE	4	S/F	0519.1	0520.0	15.0	82			L
	9500	KISV	45	C	0519.5E	0519.5		121			
	6100	KISV	29	PBI	0525.0	0525	67.0	77			
	1000	TYKW	29	PBI	0525.0		95.0	4	2		
	9400	TYKW	30	PBI	0534.0		120.0	18	7		
	2000	TYKW	30	PBI	0535.0		85.0	6	3		
	3750	TYKW	30	PBI	0539.0		90.0	13	4		
	2000	TYKW	5	S	0542.0	0550	40.0U	3	1	U	
	3750	TYKW	5	S	0542.0	0544	15.0	8	3		
	9400	TYKW	5	S	0542.0	0549	40.0U	4	2	U	
	3750	TYKW	5	S	0609.0	0611.5U	7.0	8 U	3	U	
	6100	KISV	4	S/F	0718.0	0719.5	6.0	21			
	6100	KISV	4	S/F	0724.0	0727	7.0	10			
	6100	KISV	27	RF	0755.0	0758	12.0	6			
	9100	GORK	20	GRF	0755.8	0758.6	16.2	9	5		
	950	GORK	4	S/F	0755.8	0756.0	.7	56			
	204	IZMI	8	S	0849.3	0849.3	.7	675	450		
	6100	KISV	1	S	0904.0	0912	9.0	6			
	9500	POTS	1	S	0927.3	0927.8	1.0	6.2			
	3000	POTS	3	S	0946.0	0948.2	6.0	15			
	6100	KISV			0946.0	0949		10			
	6100	KISV			0946.0	0954.5		12			
	6100	KISV	45	C	0946.0	1013.5	36.0	17			
	9500	POTS	1	S	0946.3	0954.0	8.7	8.2			
	2950	GORK	22	GRF	0946.8	0948.4	58.6	12	5		
	1470	POTS	1	S	0947.6	0948.6	3.3	3.0			
	9100	GORK	20	GRF	0947.8	1012.6	31.9	15	7		
	15000	KISV	27	RF	0952.0	1014	28.0	11			
	9500	POTS	3	S	1008.7	1012.5	8.5	13			
	9500	KISV	27	RF	1009.0	1013	10.0	13			
	15000	KISV	1	S	1028.5	1029	3.0	9			
	3000	POTS	1	S	1110.6	1112.4	6.2	7.6			
	1470	POTS	1	S	1111.0	1112.5	9.0	3.0			
	2800	OTTA	1	S	1111.0	1113	7.0	4.6	2.3		
	2950	GORK	1	S	1111.2	1112.5	4.5	5			
	7000	SAOP	4	S/F	1313.6	1314.8	4.4	18.0			0
	9500	POTS	1	S	1314.3	1314.9	1.2	6.5			
	7000	SAOP	45	C	1343.0			10.0			25L
	113	POTS	4	S/F	1343.3	1344.0	1.7	1750	150		III
	9400	HUAN		S	1345.0	1347.4	12.6	8.6	3.9		L
	9500	POTS	1	S	1345.5	1346.2	3.7	6.5			
	1470	POTS	1	S	1345.8	1348.5	4.2	3			
	2650	DWIN	45	C	1550.0	1552	20.0	70	30		
	10715	DWIN	45	C	1551.0	1554	18.0	25	15		
	7000	SAOP	40	F	1638.0		22.0				
	7000	SAOP	40	F	1720.0		139.0				
	2800	OTTA	8	S	1844.0	1844.1	.5	11.8			
	3750	TYKW	5	S	2322.0	2323.6	3.0	9	3		
	2000	TYKW	5	S	2322.0	2323.6	25.0	3	1.5		
	2695	PENT	1	S	2323.0	2323.8	1.8	5.2	2.6		
	3750	TYKW	29	PBI	2325.0		20.0	4	2		
30	200	GORK	44	NS	0255.0E		605.0D		5		
	100	GORK	43	NS	0405.0		500.0		5		
	260	ONDR	44	NS	0545.0E		510.0D	20			
	204	IZMI	44	NS	0600.0E		360.0D	45			
	127	TORN	43	NS	0755.0	0901.3	390.0	860	12		V2,DISTURBED
	2695	PENT	21	GRF	0015.0	0025	45.0	4.2	2.4		
	2000	TYKW	21	GRF	0016.0	0030	45.0	4	1.5		
	3750	TYKW			0016.0	0020.2		4			
	3750	TYKW	45	C	0016.0	0030.0	45.0	10	2		
	1000	TYKW	5	S	0018.0	0020.5	30.0	2	1		
	2000	TYKW	5	S	0019.0	0020	3.0	4.5	2		
	9400	TYKW	5	S	0026.0	0030	25.0	5	2		
	2695	PENT	1	S	0029.0	0030	4.5	5.2	2.6		
	1000	TYKW	5	S	0119.0	0119.2	.5	4	1		
	3750	TYKW	5	S	0201.0	0201.4	2.0	8	3		
	9400	TYKW	5	S	0201.0	0201.4	1.0	7	1		
	2950	GORK	20	GRF	0356.0	0405.0	21.0	4	2		
	228	HARS	45	C	0454.2	0455.8	2.2	145	45		
	113	POTS	4	S/F	0659.5	0659.8	.7	150	15		
	100	GORK	46	C	0659.8	0700.1	1.0	250 D			
	100	GORK			0659.8	0700.4		220			
	6100	KISV	1	S	1004.0	1005	6.0	4			
	430	KRAK	41	F	1033.7		40.5	40			
	6100	KISV	27	RF	1048.0	1058	36.0	6			
	2800	OTTA	20	GRF	1055.0	1056.5	40.0	8.6	4.3		
	1470	POTS	1	S	1055.8	1056.2	2.7	2.5			
	930	BORD	46	C	1056.0	1056.2	.4	18	2		
	113	POTS	27	RF	1110.0	1146	85.0	30	6		RISE+I
	2800	OTTA	40	F	2050.9	2051.7	3.0	38.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
30	3750	TYKW	5	S	2317.0	2318	8.0	2	.7		
31	100	HIRA	43	NS	0200.0	0306	520.0D	30	5		SL
	200	GORK	44	NS	0255.0E		424.0D		5		
	127	TORN	44	NS	0600.0E	0959.0	550.0D	40	8.3		VO
	260	ONDR	44	NS	0700.0E		514.0D	24			
	3750	TYKW	5	S	0310.0	0311	10.0	3	1		
	9500	POTS	1	S	0700.3	0700.4	.2	8			
	9500	POTS	1	S	0713.9	0714.1	.4	9.7			
	5730	IRKU	2	S/F	0738.2	0739.4	6.0	32			L
	6100	KISV	4	S/F	0743.0	0745	6.0	53			
	8400	BERN	3		0743.0	0744.3	8.0	42.0			ONLY PAPER REC
	11800	BERN	3		0743.0	0744.5	3.0	21.0			ONLY PAPER REC
	5000	BERN	3		0743.0	0744.3	8.0	22.0			ONLY PAPER REC
	3000	POTS	1	S	0743.0	0744.3	3.5	6.6			
	3750	TYKW	5	S	0743.0	0744.4	3.0	13	4		
	9100	GORK	21	GRF	0743.4	0746.1	29.8	10			
	9400	TYKW	5	S	0743.5	0744.3	3.5U	34	8 U		
	9100	GORK	4	S/F	0744.0	0744.4	1.9	47	23		
	10715	DWIN	1	S	0744.0	0744	2.0	10	5		
	9500	KISV	4	S/F	0744.0	0745	4.0	16			
	2950	GORK	1	S	0744.1	0744.6	1.5	3	1		
	9500	POTS	3	S	0744.1	0744.3	3.4	37			
	15000	KISV	4	S/F	0745.0	0745	2.0	12			
	3750	TYKW	29	PBI	0746.0		16.0	4	2		
	9500	POTS	8	S	0919.3	0919.5	.4	16			
	9500	POTS	8	S	1404.0	1404.1	.2	23			
	7000	SAOP	2	S/F	1611.6	1612.2		10.0			26L
	2800	OTTA	21	GRF	1805.0	1915	280.0	8.6	4.6		
	2800	OTTA	1	S	2048.0	2048.5	1.0	3.2	1.6		
	9400	TYKW	5	S	2352.0	2354.3	10.0	4	2		
	3750	TYKW	5	S	2354.0	2354.5	5.0	2	1		

Reports are received routinely from the following observatories:

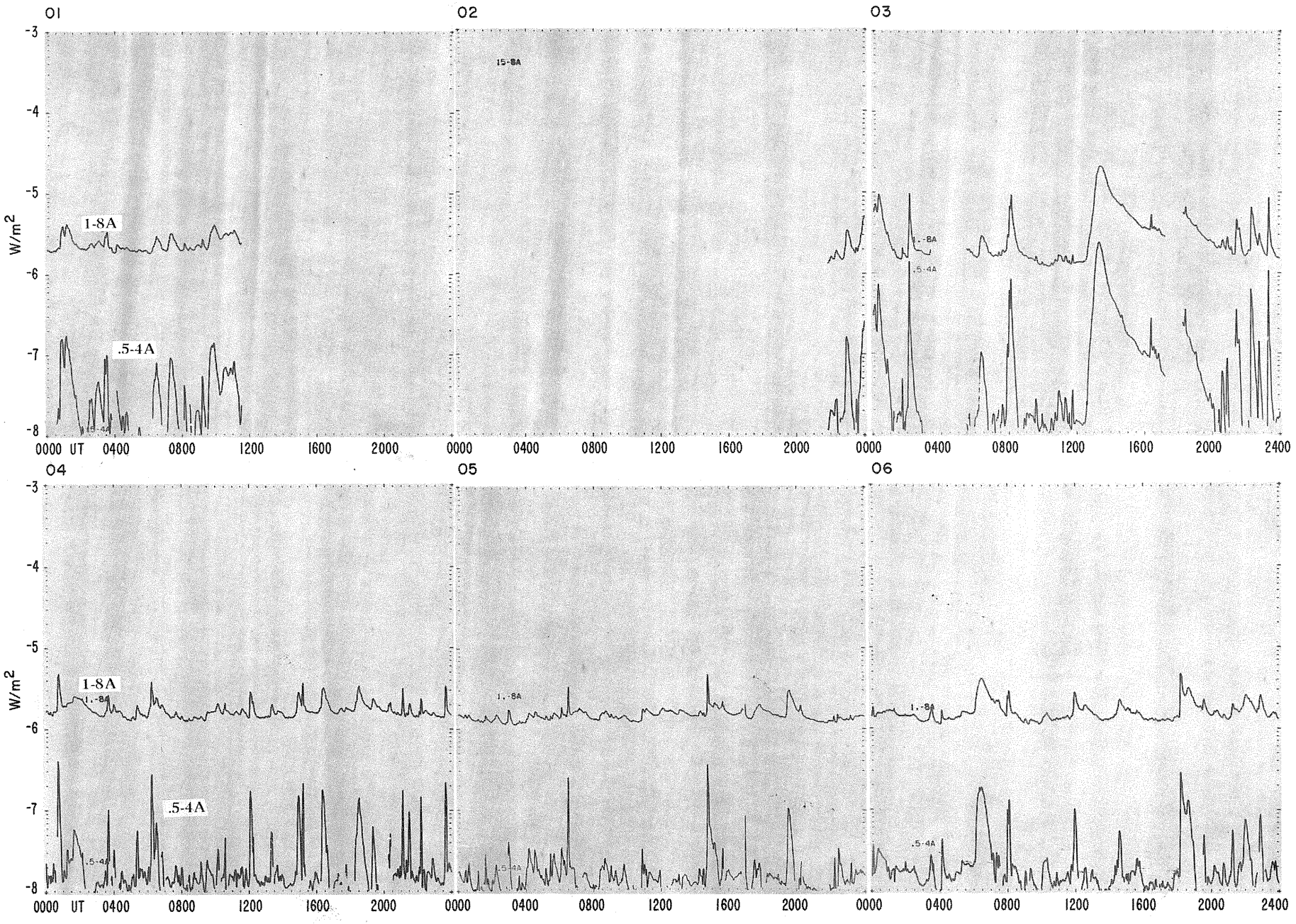
ARCE = Arcetri
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
DWIN = Dwingeloo
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
MANI = Manila
NAGO = Nagoya
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SOAP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov

Explanation of Type Code:

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

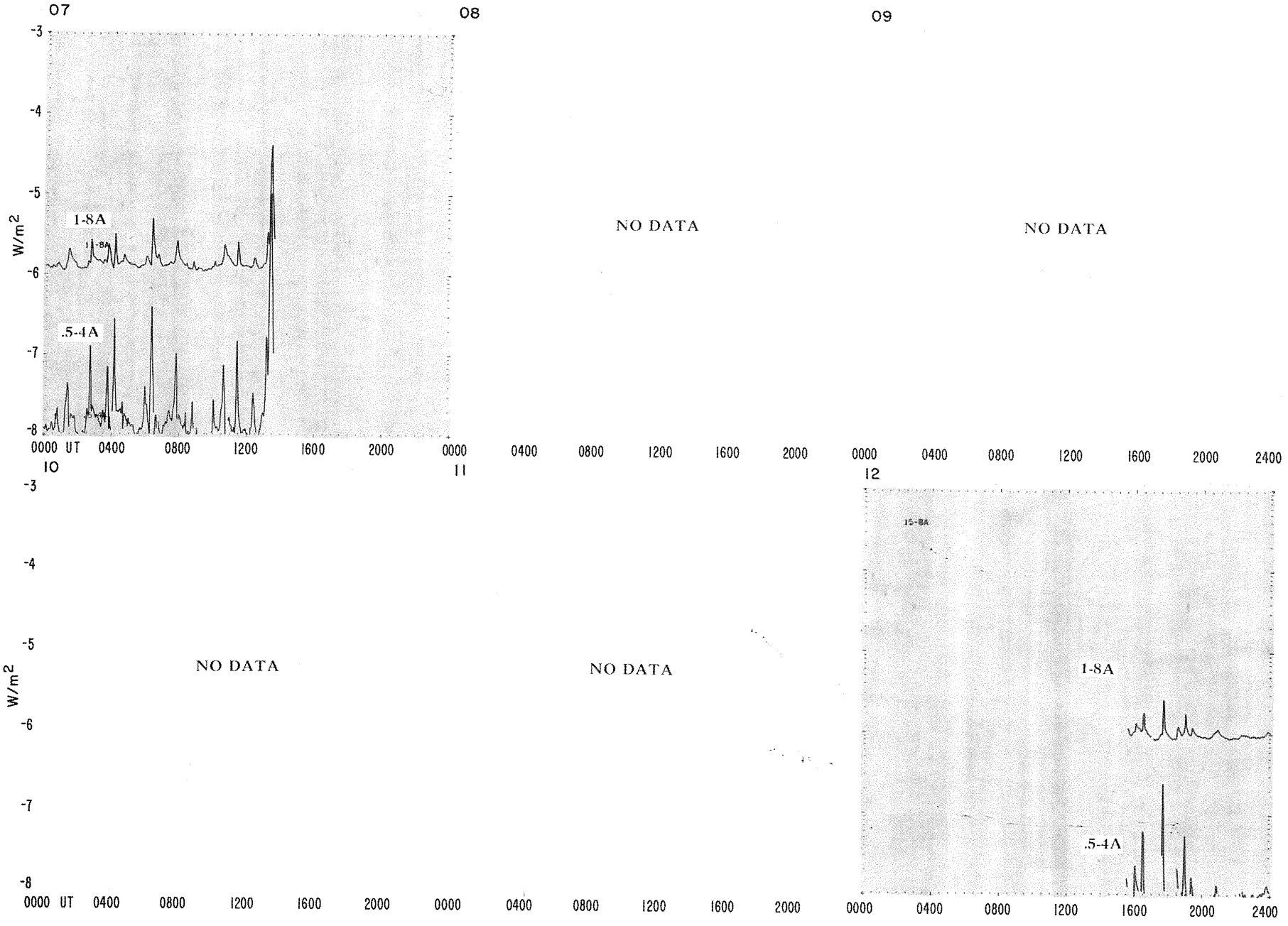
SMS-GOES X-RAYS

MAY 1980



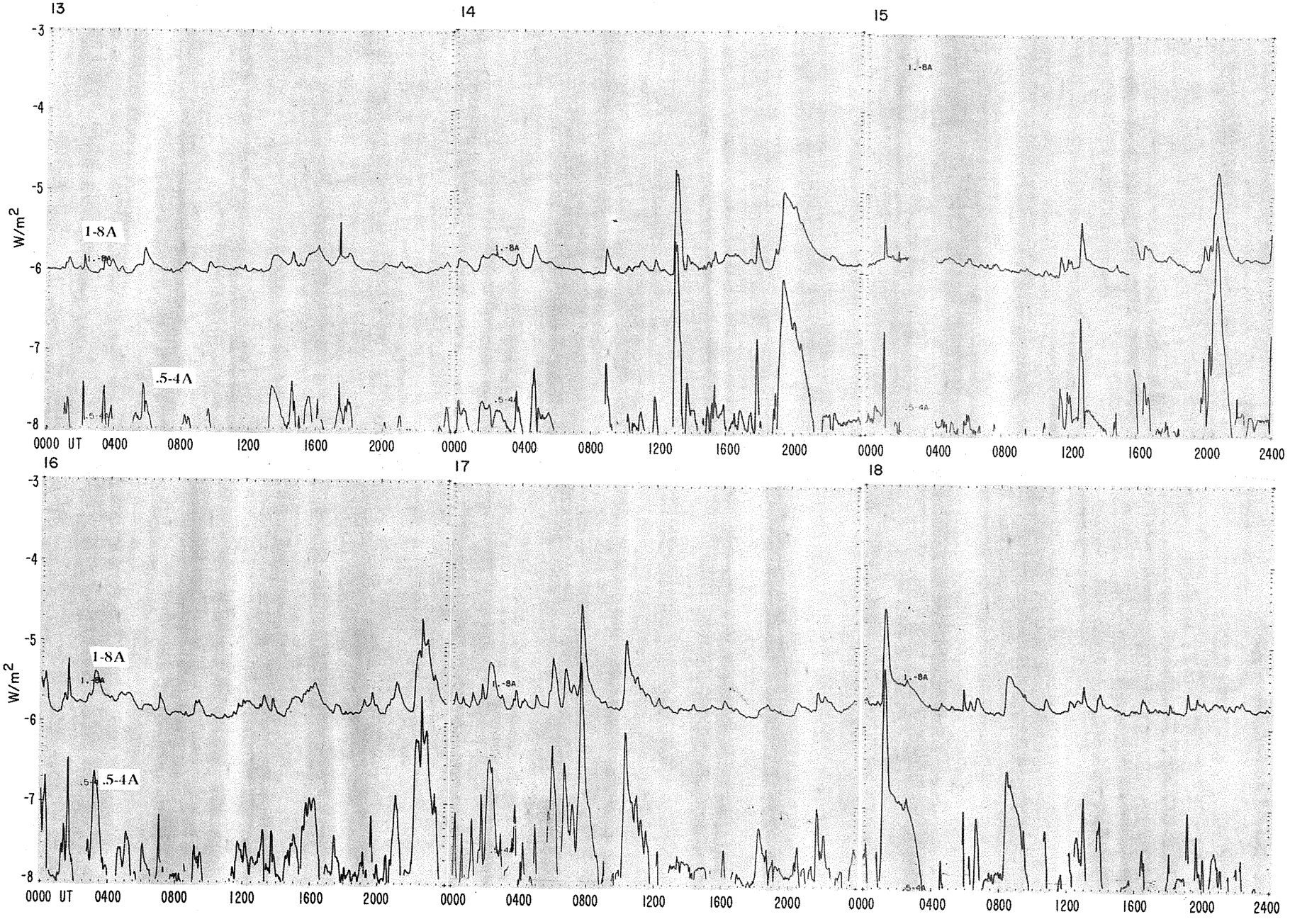
SMS-GOES X-RAYS

MAY 1980



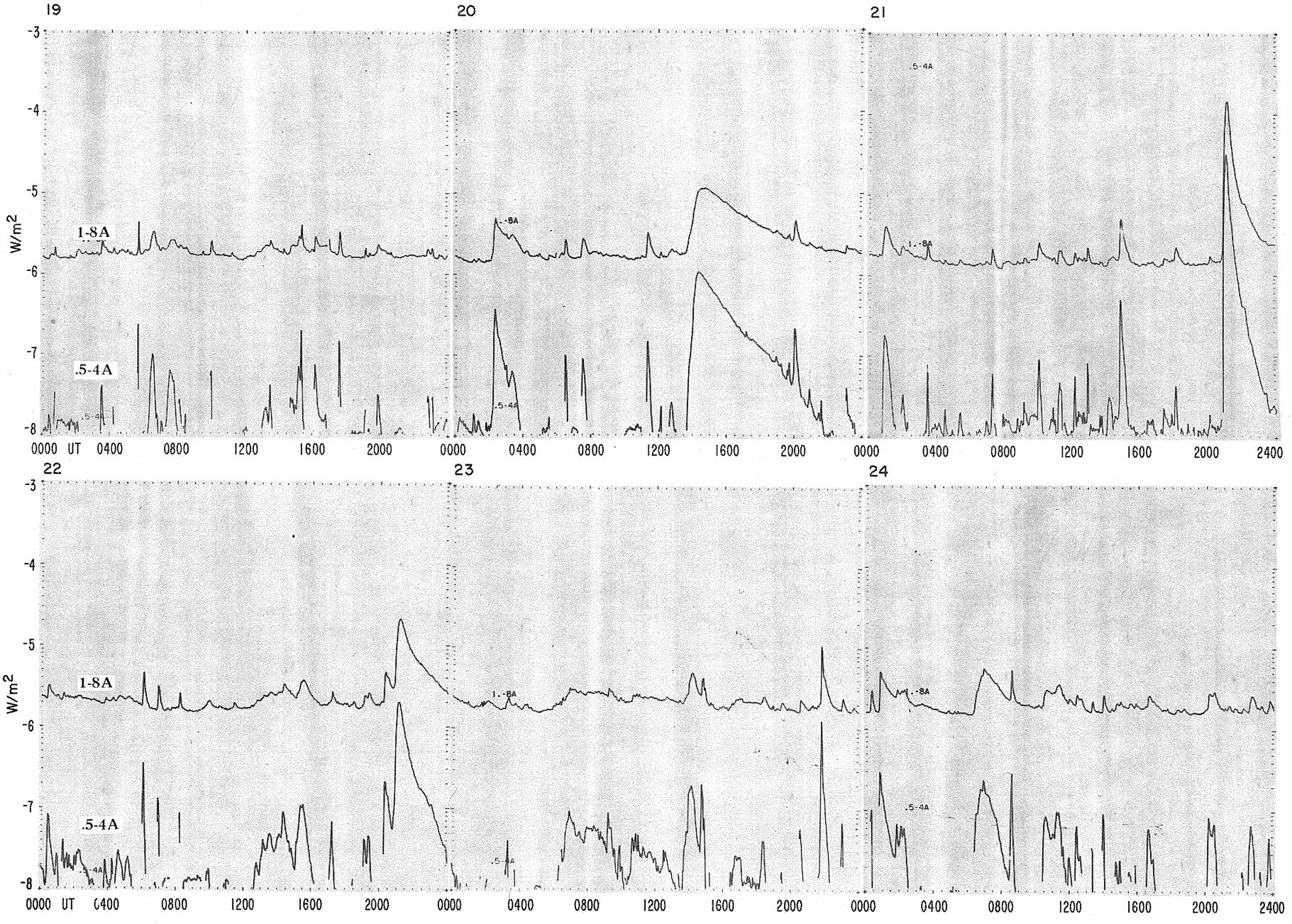
SMS-GOES X-RAYS

MAY 1980



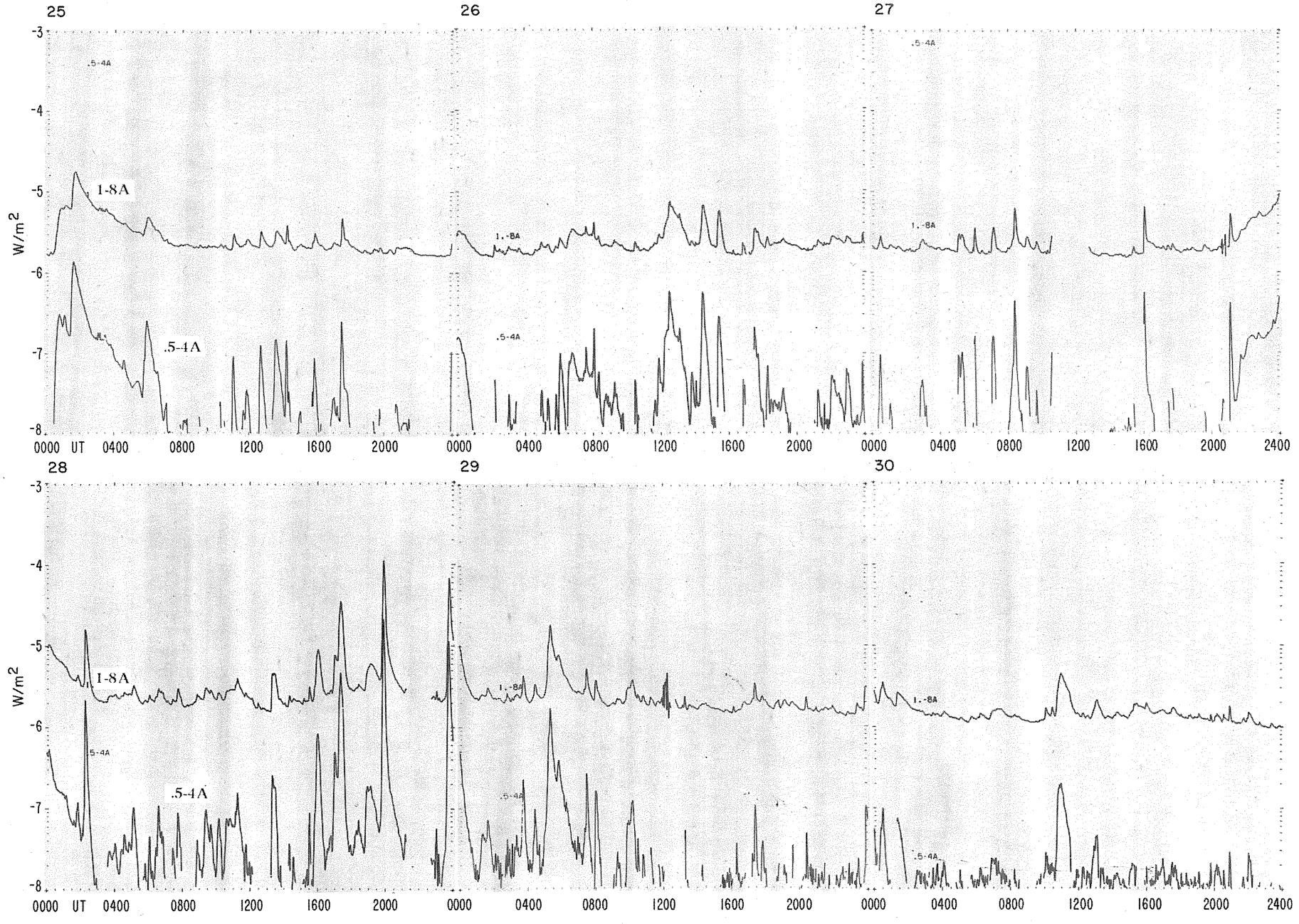
SMS-GOES X-RAYS

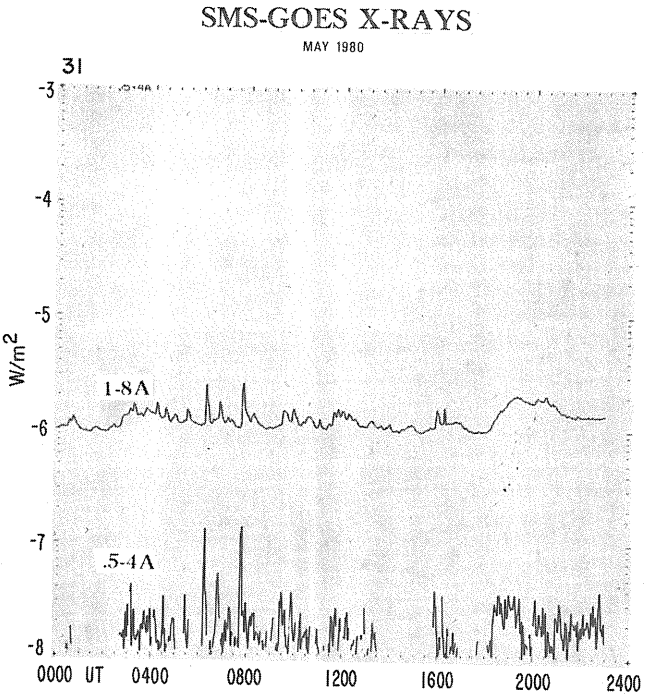
MAY 1980



SMS-GOES X-RAYS

MAY 1980




SMS-GOES X-RAYS
MAY 1980
31
-3
-4
-5
-6
-7
-8
W/m2
1-8A
.5-4A
0000 UT
0400
0800
1200
1600
2000
2400

MASS EJECTIONS FROM THE SUN

MAY 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/Ro	Wavelength	Type of Event
SGMR	May 01	1519.4		1931.5			Meter	II
SGMR	May 01	1557.8		1600.0			Meter	II
HARV	May 01	1627		1638			Meter	II
DWIN	May 01	1628.5		1632.0			Decimeter	IV
HALE	May 01	1759	2050	2233D	117	1.0	H-alpha	Q?
HARV	May 01	1916		1940			Meter; dekameter	II
PALE	May 01	1919.3		1930.8			Meter	II
SGMR	May 01	1920.5		1929.0			Meter	IV
HAOC	May 01	1951E			091	1.6		A; spike
HAOC	May 01	2025E		2028	096	2.4		EL; spread 25°
DWIN	May 03	1250.0		1409.0			Decimeter	IV Fast drift
BLEN	May 03	1253		1410			Decimeter; meter	IV Pulsations
WEIS	May 03	1258.7		1314.0			30-60 MHz	II Harmonic
HARV	May 03	1307		1405			Meter	IV
DWIN	May 03	1551.2		1551.6			Decimeter	IV Fast drift
DWIN	May 03	1607.0		1609.0			Decimeter	IV Fast drift
DWIN	May 03	1619.0		1715.0			Decimeter	IV Fiber bursts
DWIN	May 04	1824.0		1828.0			Decimeter	IV Sunset
HAOK	May 04	1948U			125		White light	
HAOC	May 05	1041E		1205	289	4.7		EL; spread 48°
HAOC	May 06	1034E		1221	275	3.4		EL; spread 55°
DWIN	May 07	0627.5		0631.6			Decimeter	IV Fast drift
DWIN	May 07	0709.5		0711.5			Decimeter	IV Zebra patterns
DWIN	May 07	0729.2		0730.4			Decimeter	IV
DWIN	May 07	0736.9		0738.5			Decimeter	IV
DWIN	May 07	0856.5		0859.6			Decimeter	IV Zebra patterns
DWIN	May 07	1120.0		1130.0			Decimeter	IV Pulsations
BLEN	May 07	1253.5		1327.0			Decimeter; meter	IV
DWIN	May 07	1308.0		1309.2			Decimeter	IV
DWIN	May 07	1314.5		1323.0			Decimeter	IV Fast drift; fiber
DWIN	May 07	1455.0		1458.0			Decimeter	IV Fast drift
DWIN	May 07	1549.1		1549.2			Decimeter	IV Pulsations
HAOC	May 07	2121E			108			Spread 25°
HAOC	May 07	2152E			WSW			
CULG	May 08	0057		0110			Decimeter; meter	II
DWIN	May 08	1026.6		1027.5			Decimeter	IV Fast drift
HAOC	May 08	2250E			109			Spread 28°
DWIN	May 09	0713.8		0714.5			Decimeter	II
CULG	May 09	2110		2116			Meter	IV Weak
DWIN	May 10	1130.0		1135.5			Decimeter	IV Fast drift
DWIN	May 11	0925.0		0928.0			Decimeter	IV
DWIN	May 11	1009.0		1010.3			Meter	IV
DWIN	May 11	1049.4		1050.8			Decimeter	IV
DWIN	May 11	1052.0		1053.5			Decimeter	IV
DWIN	May 11	1056.0		1057.5			Decimeter	IV
DWIN	May 11	1210.1		1211.8			Decimeter	IV
DWIN	May 11	1256.8		1302.6			Decimeter	IV
DWIN	May 11	1345.0		1346.0			Decimeter	IV
WEIS	May 11	1516.6		1522.8			35-140 MHz	II Harmonic
PALE	May 11	1655.3		1700.4			Meter	II
HARV	May 11	1658		1706			Meter	II
WEIS	May 11	1658.4		1702.7			40-140 MHz	II Harmonic
MITK	May 12	0103		0136	249	0.95		S
CULG	May 12	0255		0500			Decimeter; meter	IV Weak
WEIS	May 12	1001.3		1002.2			50-150 MHz	II Harmonic
MITK	May 14	0705		0745D	083	1.0		A
HARV	May 14	1305		1320			Meter	II
WEIS	May 14	1305.3		1323.8			30-130 MHz	II Harmonic
DWIN	May 14	1520.0		1522.0			Decimeter	IV
DWIN	May 14	1719.8		1723.5			Decimeter	IV
HARV	May 14	1923		1937			Meter	II

MASS EJECTIONS FROM THE SUN

MAY 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/Ro	Wavelength	Type of Event
CULG	May 15	0102		0105.5			Decimeter	IV Pulsations
CULG	May 15	0107.5		0122			Meter	II
LEAR	May 15	0107.6		0128.9			Meter	II
PALE	May 15	0108.9		0127.0			Meter	II
HALE	May 15	1934E	1953	2028	061	1.0-1.37	H-alpha	A
DWIN	May 16	1636.1		1637.2			Decimeter	IV
HARV	May 16	2237		2246			Meter	II
CULG	May 16	2238		2251.5			Decimeter; meter	II Herringbone
PALE	May 16	2240.7		2248.8			Meter	II
WEND	May 17	0537E		1128D	116	1.02-1.07	H-alpha	A
DWIN	May 17	0735.5		0740.0			Decimeter	IV Fiber bursts
NRLC	May 17	1347			005-025	7.5	White light	Spokes or narrow loop
CULG	May 18	0106.5		0113.5			Decimeter	IV
UDAI	May 20	0224	0230	0240	NE limb		H-alpha	A
DWIN	May 20	1409.4		1414.7			Decimeter	IV
HARV	May 20	1410		1412			Decimeter	IV
WEIS	May 20	1415.4	1418.5				30-80 MHz	II Harmonic
HARV	May 20	1416		1418			Meter	II
CULG	May 21	2054		2123			Decimeter	IV
CULG	May 21	2057		2110			Meter	IV
CULG	May 21	2057		2127			Decimeter; meter	II
PALE	May 21	2058.9		2120			Meter	II
NRLC	May 21	2319			000-012	7.0	White light	Flame
CULG	May 22	2050		2300			Decimeter; meter	IV
HARV	May 22	2104		2108			Meter	IV
CULG	May 23	0633		0706			Meter	II Continuum
DWIN	May 26	0902.0		0902.5			Decimeter	IV Fiber bursts
DWIN	May 26	1303.1		1304.5			Decimeter	IV
WEIS	May 26	1525.8		1540.8			30-140 MHz	II Harmonic
HALE	May 26	1949E	2230	2230D	259	1.0-1.17	H-alpha	S
HAOC	May 26	2010E			W			Large loop
BLEN	May 27	1601.8		1605.3			Decimeter; meter	II
WEIS	May 27	1601.9		1605.5			50-500 MHz	II Harmonic
DWIN	May 28	1552.5		1555.5			Decimeter	IV
BLEN	May 28	1653.4		1732.8			Decimeter; meter	IV
DWIN	May 28	1701.5		1731.5			Decimeter	IV Pulsations
WEIS	May 28	1718		1735			30-140 MHz	II Herringbone
CULG	May 28	2336		2357			Decimeter	IV Pulsations
NRLC	May 29	1228		1355	312-350	4.5-6.8	White light	Big loop; 310-350 km/s
CULG	May 30	2101		2104			Meter	II Weak
CULG	May 31	0606.5		0608			Meter	II Weak

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

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

REPORTING STATIONS
BIGB = Big Bear
BLEN = Bleien
CULG = Culgoora
DWIN = Dwingeloo
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)
LEAR = Learmonth
MANI = Manila
MITK = Mitaka
NRLC = Naval Research Laboratory's White-Light Coronagraph Experiment on P78-1
PALE = Palehua
SGMR = Sagamore Hill
WEIS = Weissenau
WEND = Wendelstein
UDAI = Udaipur

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

*Movement may be caused by ionospheric refraction.

SGD 435 Part II (Comprehensive)

MISCELLANEOUS DATA

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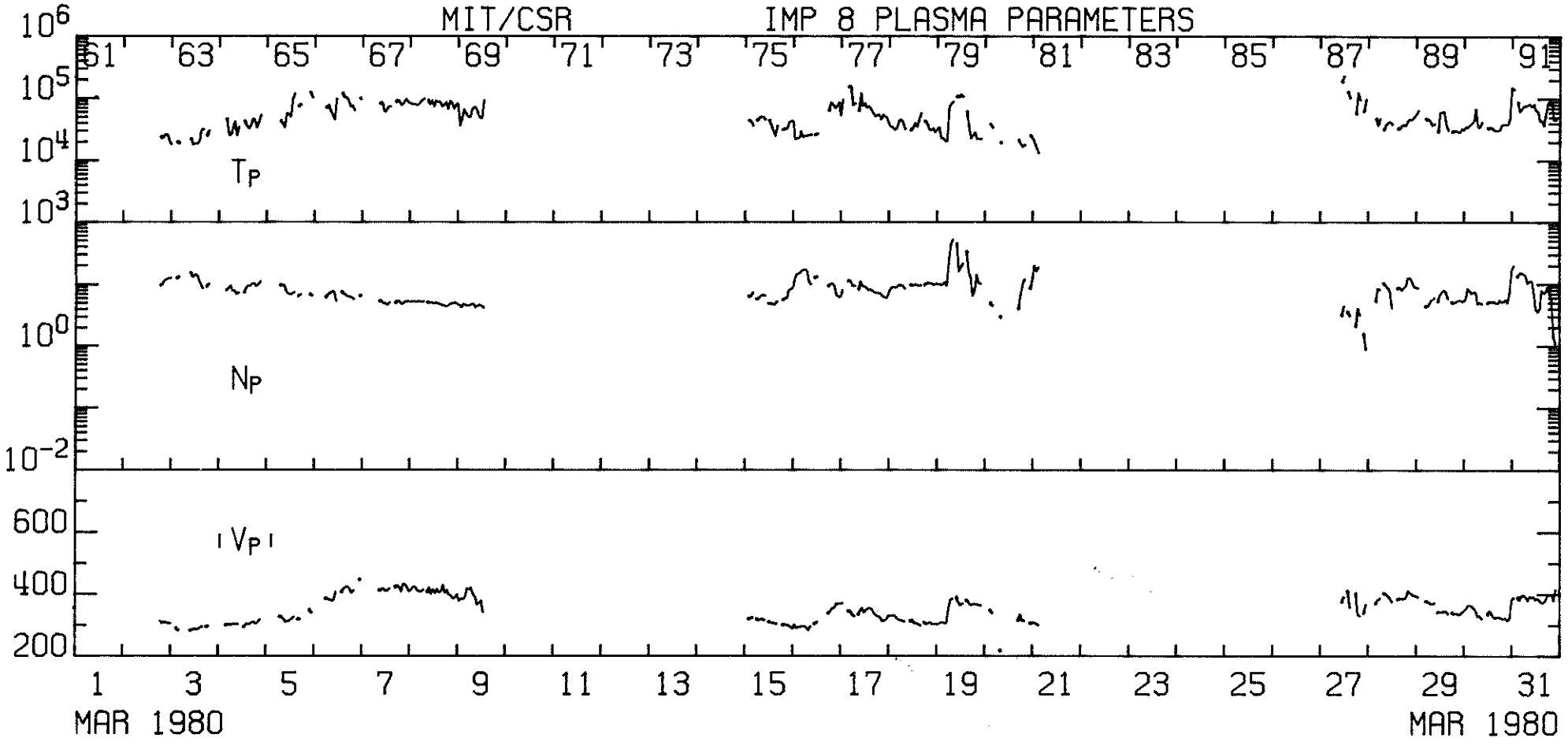
IMP 8 SOLAR WIND PLASMA

MARCH 1980



SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
01	200	GORK	44	NS	0359.0E		541.0D		10		
	260	ONDR	44	NS	0840.0E		386.0D	24			
	200	HIRA	44	NS	2348.0E	0754	550.0D	8	2		WL
	3750	TYKW	5	S	0200.0	0200.8	2.0	2	.7		
	3750	TYKW	5	S	0359.0	0401	10.0	2	.7		
	650	GORK	2	S/F	0538.0	0539.0	2.4	4	2		
	200	GORK	2	S/F	0538.3	0539.1	3.0	30			
	100	GORK	8	S	0707.3	0707.5U	.7	200 D			
	6100	KISV	27	RF	0803.0	0834	75.0	5			
	6100	KISV	1	S	0807.0	0808	2.0	4			
	100	GORK			0826.1	0827.2		220			
	100	GORK	46	C	0826.1	0826.3U	1.6	220 D			
	113	POTS	41	F	0826.3	0826.5	.3	600	60		III
	234	POTS	8	S	0837.6	0837.6	.2	150	50		
	6100	KISV	1	S	0846.5	0847.5	4.0	2			
	127	TORN	7	C	0853.3	0854.2	1.5	110	60		
	228	HARS	45	C	0902.0	0902.0	2.5	270	20		
	6100	KISV	4	S/F	0941.0	0944	7.0	19			
	5730	IRKU	2	S/F	0942.5	0943.6	3.0	32			
	9500	POTS	3	S	0943.0	0943.5	2.5	9.1			
	2950	GORK	1	S	0943.0	0943.7	2.3	1.8	.9		
	9100	GORK	1	S	0943.3	0943.7	1.5	12	6		
	7000	SAOP	4	S/F	1259.5	1319.6	38.0	32.0			19R
	2800	OTTA	21	GRF	1317.0	1322	11.0	2.4	1.2		
	9400	HUAN		S	1318.2	1319.6	5.6	10.4	4.4		R
	9500	POTS	3	S	1318.8	1319.5	2.4	11			
	3000	POTS	1	S	1319.0	1319.5	1.5	4.5			
	2800	OTTA	1	S	1319.0	1319.4	1.0	2.8	1.4		
	7000	SAOP	45	C	1326.4E	1326.4	5.3D	42.0			36R,CALIBRATION
	600	UCCL	8	S	1408.5	1408.6	.2	10	5		
	408	TRST	41	F	1524.3	1526.7	3.5	780			7R
	327	TRST	41	F	1524.3	1525.7	3.9	94			8R
	237	TRST	41	F	1524.3	1526.3	3.9	130			4L
	8400	BERN	22		1524.5	1526.3	5.0	22.0			ONLY PAPER REC
	11800	BERN	22		1524.5	1526.3	5.0	10.0			ONLY PAPER REC
	10400	BERN	22		1524.5	1526.3	5.0	17.0			ONLY PAPER REC
	2800	OTTA	20	GRF	1525.0	1543	55.0	4.4	2.2		
	9400	HUAN		S	1525.4E	1526.2	3.4D	17.4	7.1		R
	600	UCCL	8	S	1525.5	1525.6	.2	22	10		
	9400	HUAN		S	1531.7	1545.8	78.0	8.7	1.6		0
	237	TRST	41	F	1536.1	1541.8	7.0	36			2L
	7000	SAOP	3	S	1800.0	1801.2	1.8	26.0			9R
	9400	HUAN		S	1800.2	1801.2	2.0	19.1	13.3		0
	2800	OTTA	1	S	1801.0	1801.2	1.0	2.6	1.3		
	9400	HUAN		PBI	1802.2	1802.2	14.4	3.5	2.3		0
	9400	HUAN		S	1812.0	1812.2	1.1	6.9	4.9		0
	100	HIRA	46	C	2337.3	2337.8	2.8	500	38		
02	200	GORK	44	NS	0359.0E		561.0D		5		
	260	ONDR	44	NS	0710.0E		477.0D	21			
	127	TORN	43	NS	0850.0	1214.5	430.0	140	2		V1
	100	HIRA	44	NS	2020.0E	0417	750.0D	90	35		SL
	200	HIRA	44	NS	2020.0E	0353	750.0D	38	15		ML
	3750	TYKW	5	S	0030.0	0031.4	3.0	1.5	.5		
	100	HIRA	46	C	0031.0	0032.0	2.1	1700	365		0
	1000	TYKW	5	S	0031.6	0031.9	.8	17	4		
	2000	TYKW	5	S	0031.7	0031.9	.5	1.5	.3		
	3750	TYKW	21	GRF	0150.0	0305	110.0	3	1.5		
	2000	TYKW	20	GRF	0210.0	0300	90.0	2	1		
	9400	TYKW	20	GRF	0210.0	0310	90.0	5	2		
	3750	TYKW	5	S	0249.6	0250.2	3.0	2.5	.5		
	3750	TYKW	5	S	0254.0	0254.8U	.8D	3 U	1.5D		
	3750	TYKW	45	C	0414.0	0421.2	35.0	7	2		
	9400	TYKW	45	C	0415.0	0416.8	20.0	4	1.5		
	200	GORK	2	S/F	0449.3	0449.9	1.2	30 D			
	100	GORK	8	S	0449.3	0449.5U	.5	60 D			
	3750	TYKW	45	C	0505.0	0507.6	30.0	5	1		
	100	GORK	41	F	0527.4	0527.5	1.9	65			
	100	GORK			0527.4	0528.5U		65 D			
	600	UCCL	1	S	0658.5	0658.7	.4	8	4		
	2950	GORK	1	S	0714.8	0715.6	1.0	3.6	1.8		
	600	UCCL	1	S	0739.0	0739.2	.5	7	3		
	260	ONDR	45	C	0901.8	0902.6	3.0	202	15		
	6100	KISV	45	C	0902.0	0903.3	6.0	73			
	3100	CRIM	3	S	0902.0	0903.5	3.0	32	10		
	6100	KISV			0902.0	0902.5		53			
	9500	POTS	4	S/F	0902.2	0903.5	2.1	16			
	237	TRST	41	F	0902.2	0902.5	2.0	420			1L
	2950	GORK	3	S	0902.3	0903.6	2.8	14	6.0		
	327	TRST	41	F	0902.4	0902.5	1.7	110			0
	234	POTS	4	S/F	0902.4	0902.5	.5	750	200		
	10400	BERN	22		0902.5	0903.6	4.0	11.0			ONLY PAPER REC
	9100	GORK	4	S/F	0902.8	0903.4	3.5	116			
	2650	DWIN	1	S	0903.0	0904	1.0	35	20		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
02	3000	POTS	3	S	0903.0	0903.5	1.5	17			
	350	GORK	1	S	0903.3	0903.9	1.2	1.5			
	1470	POTS	1	S	0903.5	0904.0	1.0	2.3			
	650	GORK	3	S	1016.7	1017.0U	.8	540			
	950	GORK	3	S	1016.8	1017.0U	.8	100 D			
	100	GORK			1016.8	1018.0		1400			
	100	GORK	45	C	1016.8	1017.4	1.6	340			
	600	UCCL	1	S	1101.8	1101.9	.2	9	4		
	6100	KISV	8	S	1120.0	1120.5	5.0	102			
	7000	SAOP	3	S	1120.5	1121.5	1.6	150.0			18R
	10400	BERN	3		1121.0	1121.6	2.5	77.0			ONLY PAPER REC
	9500	POTS	29	PBI	1121.0	1121.5	24.0	90			
	3000	POTS	3	S	1121.0	1121.7	2.5	40			
	9400	HUAN		S	1121.0E	1121.5U	1.9D	133.3	38.8		R
	2650	DWIN	1	S	1121.0	1122	2.0	40	20		
	10715	DWIN	1	S	1121.0	1122	2.0	35	20		
	2950	GORK	3	S	1121.2	1121.6	2.7	36	18		
	9100	GORK	3	S	1121.2	1121.7	.9	120			
	1470	POTS	3	S	1121.2	1121.6	2.8	12			
	650	GORK	3	S	1121.5	1121.5	.4	27			
	600	UCCL	3	S	1121.5	1121.7	.3	27	8		
	810	KRAK	8	S	1121.5	1121.5	.1	15			
	430	KRAK	8	S	1121.5	1121.5	.1	230			
	950	GORK	3	S	1121.5	1121.8	.6	8	4		
	9100	GORK	29	PBI	1122.2	1122.2	23.0	22			
	113	POTS	4	S/F	1136.6	1136.7	.2	110	20		
	100	GORK	41	F	1213.0	1213.7U	2.8	150 D			
	100	GORK			1213.0	1217.7U		150 D			
	113	POTS	41	F	1213.2	1214.7	1.8	280	10		III
	9400	HUAN		S	1336.4	1337.8	5.4	10.5	3.3		O
	600	UCCL	4	S/F	1547.5	1549	3.5	35	12		
	9400	HUAN		S	1646.6	1702.0	44.8	8.8	5.5		R
	2800	OTTA	22	GRF	1700.0	1703	30.0	4.0			
	2800	OTTA	21	GRF	1915.0	1955	165.0	11.0	5.0		
	2800	OTTA	2	S/F	1945.0	1946	1.5	4.8	2.4		
	2800	OTTA	40	F	1949.0	1950.5	4.0	9.6			
	9400	HUAN		S	2006.6E	2017.8U	44.1D	12.3	5.3		R
	2800	OTTA	20	GRF	2110.0	2116	35.0	4.0	1.7		
	3750	TYKW	5	S	2321.0	2324	20.0	4	1.5		
03	200	GORK	44	NS	0357.0E		543.0D		10		
	100	GORK	44	NS	0400.0E		540.0E		30		
	234	POTS	44	NS	0533.0E	0719	587.0D	800			
	113	POTS	44	NS	0602.0E	0719	558.0D	350			
	127	TORN	43	NS	0643.0	0643.5	497.0	220	40		V1
	260	ONDR	44	NS	0658.0E		498.0D	27			
	200	HIRA	44	NS	2019.0E	2253	760.0D	15	5		ML
	100	HIRA	44	NS	2019.0E	0025	760.0D	80	45		SL
	2000	TYKW	20	GRF	0025.0	0045	45.0	1	.5		
	3750	TYKW	20	GRF	0025.0	0045	45.0	2	1		
	9400	TYKW	5	S	0051.5	0051.8	2.0	6	1.5		
	3750	TYKW	21	GRF	0111.0	0202	125.0	10	6		
	9400	TYKW	21	GRF	0114.0	0126	130.0	15	6		
	2000	TYKW	21	GRF	0114.0	0200	130.0	6	3		
	3750	TYKW	45	C	0114.0	0117.7	8.0	31	7		
	2930	VORO	3	S	0115.0	0118	9.0	30			
	1400	SYDN	4	S/F	0116.9	0117.6	1.3				
	2695	PENT	4	S/F	0117.0	0117.7	4.0	22.0	7.4		
	1000	TYKW	45	C	0117.0	0117.6	4.0	21	4		
	2000	TYKW	45	C	0117.0	0118.0U	3.0	110 D	10 D		
	9400	TYKW	5	S	0117.0	0117.6	4.0	26	6		
	700	SYDN	2	S/F	0117.2	0118.0	1.3				
	17000	NOBE	20	GRF	0117.4	0128.6	86.0	20			0
	5730	IRKU	2	S/F	0118.0	0118.8	1.8	25			R
	5730	IRKU	29	PBI	0119.8		3.0	13			R
	35000	NAGO	21	GRF	0121.0	0131	23.0	14			
	650	GORK	23	GRF	0611.5		101.0				
	650	GORK	4	S/F	0622.6	0624.7	4.3	10			
	950	GORK	2	S/F	0623.2	0624.3	3.5	5.5			
	1000	TYKW	45	C	0623.8	0623.9	3.5	3.5	1		
	17000	NOBE	28	PRE	0632.4	0705.3	34.7	14			0
	3750	TYKW	47	GB	0633.0	0720.7	77.0	1220	210		
	1000	TYKW	45	C	0634.0	0634.3	2.0	6	1		
	2950	GORK			0634.0	0713.2		350			
	2950	GORK			0634.0	0710.0		190			
	9100	GORK	47	GB	0634.0	0639.2	65.0	32			
	2950	GORK			0634.0	0721.2		950			
	2950	GORK			0634.0	0702.7		50			
	2950	GORK	47	GB	0634.0	0639.2	65.0	32			
	3100	CRIM	47	GB	0634.0	0637.0		9			
	6100	KISV			0634.0	0713		450			
	3100	CRIM			0634.0	0639.0		78			
	3100	CRIM			0634.0	0701.5		80			
	6100	KISV	47	GB	0634.0	0720	66.0	850			
	3100	CRIM			0634.0	0720.5	326.0	1650	550		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
03	3100	CRIM			0634.0	0712.5		600			
	6100	KISV			0634.0	0709.7		250			
	950	GORK	28	PRE	0634.3	0638.2	6.5	20			
	2000	TYKW	47	GB	0636.0	0721.1	74.0	700	110		
	1000	TYKW	45	C	0636.5	0638.3	9.0	21	4.5		
	10400	BERN	47		0636.5	0719.8	83.0	790.0			ONLY PAPER REC
	650	GORK	4	S/F	0637.0	0638.5	3.5	85			
	9400	TYKW	47	GB	0637.0	0720.0	73.0	915	190		
	9100	GORK			0637.2	0720.4		800			
	9100	GORK	29	PBI	0637.2	0739.0	129.0	95	15		
	9100	GORK			0637.2	0713.1		390			
	9100	GORK	47	GB	0637.2	0710.0	62.0	180			
	228	HARS	47	GB	0647.0	0719.0	65.0U	350	50		
	204	IZMI	25	R	0647.0	0720.0	73.0	550	200		
	1000	TYKW			0647.0	0720.0		145			
	1000	TYKW	45	C	0647.0	0703.7	70.0	145	30		
	200	GORK	46	C	0647.5	0708.6	74.3	150			
	200	GORK			0647.5	0713.0		300			
	200	GORK			0647.5	0719.8		1000			
	200	HIRA			0647.5	0649		42			WL
	200	HIRA			0647.5	0702.0		35			WL
	200	HIRA			0647.5	0656.4		22			ML
	200	HIRA			0647.5	0658.0		38			WL
	200	HIRA	48	C	0647.5	0719.4	75.0	670	90		WR
	950	GORK	21	GRF	0647.8		68.7				
	500	HIRA	46	C	0653.8	0655.6	6.0	18	6		O
	1470	POTS	45	C	0659.0	0721	51.0	240			
	3000	POTS	45	C	0700.0U	0721	60.0U	1400 D			
	9500	POTS	45	C	0700.0	0720	85.0	720			
	100	HIRA	48	C	0700.0U	0718.7	77.0U	2100	350		WL
	2650	DWIN	49	GB	0700.0		60.0	470 D			
	808	ONDR	46	C	0700.7	0703.5	39.0	131	60		
	536	ONDR	46	C	0700.8	0705.1	33.0	91	32		
	500	HIRA	48	C	0701.0	0706.0	29.0	200	50		MR
	100	GORK			0701.3	0718.5		3700			
	100	GORK	46	C	0701.3	0714.0	23.0	1000			
	950	GORK	46	C	0701.7	0703.8	22.3	140			
	650	GORK	46	C	0701.7	0704.3	23.3	77			
	950	GORK			0701.7	0721.0		97			
	950	GORK			0701.7	0708.0		88			
	650	GORK			0701.7	0706.5		90			
	650	GORK			0701.7	0710.2		58			
	650	GORK			0701.7	0720.6		40			
	10715	DWIN	49	GB	0705.0		45.0	220	100		
	260	ONDR	46	C	0705.0	0718.2	35.0	179	69		
	17000	NOBE	47	GB	0707.2	0720.3	55.0	330			L
	35000	NAGO	20	GRF	0710.0	0721	560.0	75			SUNSET
	2950	GORK	29	PBI	0739.0	0739.0	200.0	60			
	6100	KISV	29	PBI	0740.0	0740	230.0	80			
	3750	TYKW	29	PBI	0750.0		50.0D	25	15 D		
	2000	TYKW	29	PBI	0750.0		50.0D	15	10 D		
	9400	TYKW	29	PBI	0750.0		50.0D	38	30 D		
	6100	KISV	8	S	0815.0	0816	2.0	10			
	650	GORK	4	S/F	1032.4	1034.8	3.0	17			
	237	TRST	42	SER	1131.1	1131.5	1.1	120			6R
	9400	HUAN		S	1825.5	1840.0	21.7	5.5	1.8		R
	2800	OTTA	21	GRF	2000.0	2100	150.0	6.8	3.0		
	2800	OTTA	1	S	2043.5	2045	3.5	2.6	1.3		
	1000	TYKW	45	C	2249.5	2250.8	2.5	14	3		
	3750	TYKW	45	C	2250.0	2251.7	3.0	5	1		
	9400	TYKW	45	C	2250.0	2251.7	4.0	12	3		
	2000	TYKW	5	S	2250.5	2250.9	1.0	2.5	.5U		
	700	SYDN	40	F	2355.2	2357.2	3.2				
04	200	GORK	44	NS	0349.0E		531.0D		5		
	100	GORK	44	NS	0351.0E		549.0E		10		
	127	TORN	44	NS	0600.0E	1150.7	480.0D	170	5		V2
	260	ONDR	44	NS	0717.0E		441.0D	78			
	100	HIRA	44	NS	2017.0E	0703.0	760.0D	120	35		ML
	200	HIRA	44	NS	2017.0E	0700	760.0D	110	30		ML
	2000	TYKW	45	C	0029.0	0029.6	1.0	7	1		
	3750	TYKW	5	S	0029.0	0029.5	2.0	2	.5		
	1000	TYKW	45	C	0029.0	0029.4	1.0	1	.3		
	9400	TYKW	5	S	0029.0	0029.4	2.0	4	1		
	9400	TYKW	21	GRF	0110.0	0129.5	60.0	8	2		
	2000	TYKW	20	GRF	0110.0	0130	80.0	3	1.5		
	3750	TYKW	21	GRF	0110.0	0129.6	70.0	4.5	1.5		
	1000	TYKW	45	C	0124.8	0125.4	1.5	3.5	1		
	700	SYDN	1	S	0126.6	0127.1	1.0				
	3750	TYKW	21	GRF	0330.0	0435	130.0	3	1.5		
	3750	TYKW	5	S	0335.0	0335.8	5.0	2.5	.7		
	9400	TYKW	5	S	0335.0	0335.8	5.0	6	1.5		
	29	UPIC	3	S	0647.8	0648.2	.8				
	33	UPIC	3	S	0647.8	0648	.6				
	204	IZMI	41	F	0706.0	0707.0	4.5	650			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
04	200	HIRA	46	C	0706.0	0707.1	1.3	1300	240		WL
	100	HIRA	46	C	0706.0	0707.2	2.0	3800	750		ML
	2000	TYKW	45	C	0706.0	0707.7	5.0	8	1		
	1000	TYKW	45	C	0706.0	0707.7	5.0	23	2		
	3750	TYKW	45	C	0706.0	0710.2	10.0	6	1		
	650	GORK	41	F	0706.2	0707.8	4.8	2			
	650	GORK			0706.2	0710.3		50			
	200	GORK			0706.3E	0710.3		50 D			
	200	GORK	46	C	0706.3E	0707.2	4.3D	160			
	950	GORK	2	S/F	0706.5	0710.3	4.9	19			
	100	GORK			0706.8	0707.2		180 D			
	100	GORK	45	C	0706.8	0706.7	1.1	180			
	2950	GORK	41	F	0707.1	0707.1	4.0	4.9			
	2950	GORK			0707.1	0710.3		6.8			
	6100	KISV	42	SER	0709.0	0710.2	2.0	5			
	113	POTS	4	S/F	0709.8	0710.3	.7	170	15		III
	234	POTS	4	S/F	0709.9	0710.2	.7	450	100		III
	9100	GORK	1	S	0709.9	0710.3	5.1	6.5	3		
	3000	POTS	8	S	0710.0	0710.3	.7	9.0			
	1470	POTS	8	S	0710.0	0710.4	.7	3.4			
	9400	TYKW	5	S	0710.0	0710.3	5.0	5	1.5		
	9400	TYKW	5	S	0721.7	0722.1	1.0	17	5		
	11800	BERN	1		0721.7	0722.1	1.0	11.0			ONLY PAPER REC
	10400	BERN	1		0721.7	0722.1	1.0	18.0			ONLY PAPER REC
	8400	BERN	1		0721.7	0722.1	1.0	11.0			ONLY PAPER REC
	6100	KISV	8	S	0721.8	0722	3.0	8			
	9100	GORK	1	S	0721.8	0722.1	1.4	20	10		
	9100	GORK	1	S	0733.0	0733.9	3.0	6	3		
	113	POTS	8	S	0802.3	0802.3	.1	120	40		
	113	POTS	4	S/F	0816.0	0816.1	.1	320	80		
	113	POTS	42	SER	1008.6	1008.6	9.6	220	1 E		
	650	GORK	2	S/F	1009.7	1010.3	4.1	2.4			
	9100	GORK	1	S	1017.9	1018.9	3.1	5.8	2		
	6100	KISV	4	S/F	1101.0	1102.5	2.0	5			
	10400	BERN	1		1101.1	1102.5	2.5	9.0			ONLY PAPER REC
	8400	BERN	1		1101.1	1102.5	2.5	6.0			ONLY PAPER REC
	9100	GORK	1	S	1101.5	1102.4	4.4	9	4		
	6100	KISV	29	PBI	1103.0	1103	17.0	2			
	9500	POTS	42	SER	1125.0	1140	44.0	46			
	9100	GORK	21	GRF	1125.1	1202.6	65.0E	13			
	650	GORK	41	F	1125.9	1126.2	36.0	5			
	650	GORK			1125.9	1140.0		47			
	650	GORK			1125.9	1151.0		30			
	6100	KISV	8	S	1126.0	1126.7	2.0	16			
	8400	BERN	3		1126.0	1126.5	2.5	17.0			ONLY PAPER REC
	10400	BERN	3		1126.0	1126.5	2.5	13.0			ONLY PAPER REC
	2950	GORK	1	S	1126.2	1126.4	.6	1.4	.7		
	9100	GORK	1	S	1126.2	1126.6	1.2	17	6		
	430	KRAK	8	S	1137.0	1137.0	.2	33			
	810	KRAK	8	S	1137.0	1137.0	.1	6			
	6100	KISV	8	S	1139.0	1140	4.0	33			
	9400	HUAN		S	1139.2	1140.0	1.4	54.5	20.3		R
	11800	BERN	3		1139.3	1139.9	2.5	45.0			ONLY PAPER REC
	8400	BERN	3		1139.3	1139.9	2.5	34.0			ONLY PAPER REC
	19600	BERN	3		1139.3	1139.9	2.5	21.0			ONLY PAPER REC
	10400	BERN	3		1139.3	1139.9	2.5	39.0			ONLY PAPER REC
	3100	CRIM	1	S	1139.5	1140.0	1.0	6	2		
	536	ONDR	8	S	1139.5	1139.5	.2	169			
	9100	GORK	3	S	1139.5	1140.0	1.5	50	13		
	810	KRAK	8	S	1139.7	1139.7	.1	24			
	430	KRAK	8	S	1139.7	1139.8	.3	50			
	2950	GORK	1	S	1139.9	1140.0	.9	2.9	1.4		
	950	GORK	2	S/F	1140.0	1140.3	.3	8.5			
	810	KRAK	8	S	1140.5	1140.5	.1	9			
	9400	HUAN		S	1145.7	1146.4	1.6	5.9	2.9		0
	10400	BERN	3		1149.9	1151.1	3.5	23.0			ONLY PAPER REC
	8400	BERN	3		1149.9	1151.1	3.5	23.0			ONLY PAPER REC
	11800	BERN	3		1149.9	1151.1	3.5	20.0			ONLY PAPER REC
	3100	CRIM	1	S	1150.0	1151.0	2.0	7	2		
	6100	KISV	8	S	1150.0	1151.2	3.0	33			
	9400	HUAN		S	1150.0	1151.2	2.1	32.4	14.1		R
	9100	GORK	1	S	1150.3	1151.2	1.8	30	12		
	2950	GORK			1150.3	1200.7		1.9			
	2950	GORK	41	F	1150.3	1151.2	17.4	3.8	1.9		
	950	GORK	2	S/F	1150.5	1151.4	1.5	3			
	9400	HUAN		PBI	1152.1	1152.1	26.9	8.8	6.0		R
	6100	KISV	29	PBI	1153.0	1153	7.0	3			
	8400	BERN	22		1154.0	1200.8	16.5	11.0			ONLY PAPER REC
	11800	BERN	22		1154.0	1200.8	16.5	11.0			ONLY PAPER REC
	10400	BERN	22		1154.0	1200.8	16.5	14.0			ONLY PAPER REC
	9400	HUAN		S	1200.2	1200.8	2.2	7.4	3.5		0
	6100	KISV	3	S	1200.3	1200.7	1.0	8			
	6100	KISV	29	PBI	1201.0	1201	9.0	3			
	9100	GORK	1	S	1205.0	1208.0	1.0	13	5		
	234	POTS	4	S/F	1242.2	1242.2	.1	150	30		III

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
04	9400	HUAN		S	1253.4	1323.1	72.2	8.8	4.7		O
	33	UPIC	2	S/F	1313.0	1313.1	.8				
	29	UPIC	2	S/F	1313.4	1313.5	.6				
	9400	HUAN		S	1317.1	1317.9	1.4	14.7	7.6		O
	113	POTS	41	F	1343.2	1343.2	.4	420	40		III
	2800	OTTA	47	GB	1454.0	1507.5	60.0	550.0	108.0		
	2650	DWIN	49	GB	1455.0		60.0	500 D			
	10715	DWIN	45	C	1456.0	1508	30.0	45	35		
	930	BORD	47	GB	1456.0	1540.8	71.0	2200	180		
	930	BORD			1456.0	1531		430			
	930	BORD			1456.0	1508.8		850			
	930	BORD			1456.0	1519.8		1250			
	930	BORD			1456.0	1542.8		2180			
	7000	SAOP	45	C	1456.5	1507.4	121.6	250.0			2R
	9400	HUAN		S	1456.8	1507.8	22.2	148.9	75.5		ROR
	228	HARS	47	GB	1500.0	1511.0	64.0U	300	70		
	600	UCCL	45	C	1501.0	1508.5	64.5	120	30		
	10400	BERN	20		1502.0	1507.4	86.0	95.0			ONLY PAPER REC
	8400	BERN	20		1502.0	1507.4	86.0	115.0			ONLY PAPER REC
	11800	BERN	20		1502.0	1507.4	86.0	87.0			ONLY PAPER REC
	19600	BERN	20		1502.0	1507.4	86.0	100.0U			ONLY PAPER REC
	33	UPIC	46	C	1504.9	1505.5	12.9				
	29	UPIC	46	C	1505.4	1506.2	11.4				
	9400	HUAN		PBI	1519.0	1519.0	201.4	70.8	38.5		R
	2800	OTTA	30	PBI	1554.0	1554	220.0	20.6	8.6		
	9400	HUAN		S	1654.6	1655.4	3.9	13.3	6.4		R
	2800	OTTA	20	GRF	1730.0	1740	40.0	6.0	3.0		
	9400	HUAN		S	1752.0	1753.1	3.3	7.4	5.9		O
	9400	TYKW	5	S	2309.5	2309.8	1.5	4.5	1.5		
05	200	GORK	44	NS	0348.0E		429.0D		50		
	100	GORK	44	NS	0348.0E		429.0D		15		
	234	POTS	44	NS	0540.0E	0631	532.0D	220			
	113	POTS	44	NS	0543.0E	0659	530.0D	70			
	204	IZMI	44	NS	0600.0E		360.0D	60			
	127	TORN	44	NS	0610.0E	0850.5	550.0D	640	45		V2
	600	UCCL	43	NS	1046.0		434.0D	5			
	100	HIRA	44	NS	2017.0E	0126	430.0D	500	170		SL
	200	HIRA	44	NS	2017.0E	0814	760.0D	390	60		ML
	100	HIRA	44	NS	2017.0E	0400	460.0D	500	150		SL
	200	HIRA	44	NS	2017.0E	2252	760.0D	150	30		SL
	9400	TYKW	45	C	0008.5	0009.6	2.5	17	3		
	3750	TYKW	5	S	0008.5	0009.6	2.5	1.5	.5		
	17000	NOBE	4	S/F	0008.9	0009.5	2.0	43			O
	2000	TYKW	5	S	0009.0	0009.6	1.5	1.5	.5		
	3750	TYKW	21	GRF	0105.0	0140	70.0	3	1.5		
	2000	TYKW	20	GRF	0105.0	0122	70.0	2	1		
	9400	TYKW	5	S	0145.0	0147.0	5.0	9	1.5		
	3750	TYKW	20	GRF	0240.0	0320	60.0	3.5	2		
	9400	TYKW	20	GRF	0255.0	0320	45.0	4	2		
	3750	TYKW	21	GRF	0344.0	0545	200.0	6	3		
	2000	TYKW	21	GRF	0344.0	0545	220.0	4	2		
	1000	TYKW	5	S	0346.0	0348	7.0	1.5	.8		
	2000	TYKW	5	S	0346.0	0348	6.0	1	.5		
	9400	TYKW	20	GRF	0352.0	0409.3	70.0	12	5		
	17000	NOBE	20	GRF	0353.7	0415.6	58.0	11			O
	35000	NAGO	21	GRF	0356.0	0406	18.0	7			
	500	HIRA	48	C	0403.5	0410.4	43.0	250	60		
	3750	TYKW	5	S	0408.0	0409	3.0	2.5	1		
	2000	TYKW	5	S	0425.0	0425.5	1.5	1.5	.5		
	3750	TYKW	5	S	0425.0	0425.4	2.0	1.5	.5		
	2950	GORK	23	GRF	0515.0	1024.0	350.0E	17			
	9100	GORK	21	GRF	0529.2	1026.4	330.0E	19			
	9400	TYKW	21	GRF	0530.0	0545	80.0	4	2		
	9400	TYKW	45	C	0550.0	0610	60.0	12	4		
	3100	CRIM			0552.0	0601.5		8			
	3100	CRIM			0552.0	0610.0		8	8		
	3100	CRIM	45	C	0552.0	0556.6	39.0	27	9		
	17000	NOBE	20	GRF	0552.8	0605.4	48.0	18			O
	3750	TYKW	45	C	0553.0	0556.6	40.0	18	4		
	1000	TYKW	45	C	0553.0	0555.1	20.0	12	2.5		
	2000	TYKW	45	C	0553.0	0556.7	40.0	18	3		
	650	GORK	23	GRF	0553.5	0643.5	80.0	7.5			
	2950	GORK	3	S	0553.8	0556.7	4.3	16			
	950	GORK	22	GRF	0554.0	0556.7	22.6	13			
	600	UCCL	40	F	0554.0	0556	56.0	15	2		
	650	GORK	46	C	0554.0	0556.0	11.0	28			
	650	GORK			0554.0	0604.6		9			
	35000	NAGO	20	GRF	0558.0	0610	22.0	25			
	29	UPIC	42	SER	0724.5	1042.3	273.9				
	3100	CRIM	25	R	0730.0	1022.0		27			
	33	UPIC	42	SER	0730.5	0944.5	267.5				
	100	GORK			0840.5	0851.0		280			
	100	GORK			0840.5	0847.7		280 D			
	100	GORK	41	F	0840.5	0840.7	110.0	220			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
05	200	GORK	27	RF	0932.0	1013.2	85.0E	180			
	237	TRST	42	SER	0944.4	0944.5	.4	390			3L
	100	GORK	8	S	0944.4	0944.6U	.9	280 D			
	327	TRST	5	S	0944.4	0944.5	.2	110	28		4R
	127	TORN	8	S	0944.5	0944.8	.6	640	490		
	234	POTS	4	S/F	0944.5	0944.5	.4	500	30		III
	113	POTS	8	S	0944.5	0944.5	.5	10000	3000		III
	810	KRAK	3	S	1001.5	1002.0	1.3	38	8		
	650	GORK	1	S	1001.6U	1002.5	4.4U	2			
	2950	GORK	1	S	1002.5	1002.9	2.0	2	1.0		
	100	GORK			1009.0	1010.2		480			
	100	GORK	41	F	1009.0	1009.2	16.0	480			
	100	GORK			1009.0	1024.2		480 D			
	100	GORK			1009.0	1024.9		480 D			
	113	POTS	41	F	1009.0	1009.1	1.2	1800	90		III
	113	POTS	41	F	1024.1	1024.2	1.1	1100	100		III
	8400	BERN	3		1040.9	1041.5	2.5	31.0			ONLY PAPER REC
	10400	BERN	3		1040.9	1041.5	2.5	45.0			ONLY PAPER REC
	11800	BERN	3		1040.9	1041.5	2.5	34.0			ONLY PAPER REC
	19600	BERN	3		1040.9	1041.5	2.5	21.0			ONLY PAPER REC
	9100	GORK	4	S/F	1040.9	1041.5	5.2	56	7		
	127	TORN	5	S	1041.0	1041.6	1.5	510	260		
	10715	DWIN	1	S	1041.0	1042	2.0	15	10		
	3100	CRIM	1	S	1041.0	1041.5	3.0	8	3		
	113	POTS	42	SER	1041.1	1041.6	1.4	8500	2000		III
	2950	GORK	1	S	1041.2	1041.5	2.3	5	2.5		
	100	GORK	8	S	1041.4	1041.7U	1.0	480 D			
	234	POTS	4	S/F	1041.4	1043.6	9.4	300	1 E		III
	650	GORK	1	S	1043.4	1043.7	.5	4.5			
	234	POTS	42	SER	1146.7	1146.8	4.7	300	1		III
	430	KRAK	46	C	1208.5	1211.0	3.7	390	180		
	234	POTS	8	S	1227.5	1227.6	.1	300	100		
	430	KRAK	8	S	1332.0	1332.5	.7	640 D			
	2800	OTTA	21	GRF	1405.0	1607	330.0	20.6	11.0		
	9400	HUAN	8	S	1420.1	1420.3	.6	56.8	23.8		0
	237	TRST	5	S	1423.9	1424.0	.2	160	39		13L,NOISE STORM
	8400	BERN	22		1448.4	1452.8	8.5	25.0			ONLY PAPER REC
	10400	BERN	22		1448.4	1452.8	8.5	31.0			ONLY PAPER REC
	11800	BERN	22		1448.4	1452.8	8.5	15.0			ONLY PAPER REC
	8400	BERN	46		1514.5	1552.6	36.0	170.0D			ONLY PAPER REC
	2650	DWIN	49	GB	1540.0	1551	25.0	380	200		
	19600	BERN	46		1541.5	1552.6	36.0	227.0			ONLY PAPER REC
	35000	BERN	46		1541.5	1552.6	36.0	117.0			ONLY PAPER REC
	10400	BERN	46		1541.5	1552.6	36.0	385.0			ONLY PAPER REC
	11800	BERN	46		1541.5	1552.6	36.0	870.0D			ONLY PAPER REC
	2800	OTTA	45	C	1542.0	1551.5	25.0	375.0	107.0		
	237	TRST	47	GB	1542.0	1553.3	50.0D	560			2L,OSCILLATION
	600	UCCL	4	S/F	1542.0	1542.5	3.0	48	15		
	408	TRST	47	GB	1542.0	1551.7	50.0D	1200			29R,OSCILLATION
	10715	DWIN	49	GB	1542.0	1553	25.0	140	100		
	327	TRST	47	GB	1542.0	1552.7	50.0D	1000			2R,OSCILLATION
	228	HARS			1542.5	1656.0		420			
	228	HARS	47	GB	1542.5	1559.5	120.0	390	150		
	600	UCCL	45	C	1546.0	1553	21.0	270	60		
	9400	HUAN		C	1546.1	1550.1	14.6	352.4	244.1		1
	9400	HUAN			1546.1	1551.2		480.2			1
	9400	HUAN			1546.1	1552.7		511.2			1
	9400	HUAN			1546.1	1555.2		422.1			1
	9400	HUAN		PBI	1600.7	1600.7	53.9	42.6	24.0		1
	9400	HUAN		S	1608.1	1609.8	2.6	178.1	95.4		1
	2800	OTTA	1	S	1612.8	1613	1.2	6.4	3.0		
	9400	HUAN		S	1722.0	1723.0	1.6	176.6	99.6		0
	9400	HUAN		PBI	1723.6	1723.6	56.2	36.5	21.6		0
	2800	OTTA	8	S	1746.7	1747	.5	18.6			
	2800	OTTA	21	GRF	1840.0	1850	45.0	5.2	3.0		
	2800	OTTA	1	S	1852.3	1854.3	5.0	5.6	2.5		
	2800	OTTA	21	GRF	1940.0	2000	110.0	4.2	2.1		
	2800	OTTA	1	S	1956.0	1956.3	1.0	3.8	1.9		
	9400	TYKW	21	GRF	2130.0U	2205 U	160.0U	16 U	7 U		RAIN
	2000	TYKW	21	GRF	2130.0	2205	150.0	6	3		
	1000	TYKW	21	GRF	2140.0	2210	150.0	3	1.5		
	3750	TYKW	21	GRF	2140.0	2205	150.0	9	4		
	2800	OTTA	21	GRF	2144.0	2222	165.0	7.8	3.9		
	3750	TYKW	45	C	2253.0	2256.0	4.0	27	5		
	9400	TYKW	45	C	2255.0U	2256.0	3.0U	13 U	3 U		RAIN
	1000	TYKW	45	C	2255.0	2256.0	4.0	45	8		
	2000	TYKW	45	C	2255.0	2256.0	6.0	30	5		
	2800	OTTA	3	S	2255.8	2256	2.0	22.4	7.4		
	3750	TYKW	29	PBI	2257.0		20.0	4	2		
	1000	TYKW	29	PBI	2259.0		10.0	3	1.5		
06	200	GORK	44	NS	0353.0E		418.0D		10		
	100	GORK	44	NS	0357.0E		423.0D		50		
	234	POTS	44	NS	0522.0E	0549	673.0D	250			
	113	POTS	44	NS	0538.0E	0557	672.0D	250			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
06	204	IZMI	44	NS	0600.0E		360.0D	35			
	127	TORN	44	NS	0600.0E	1309.3	600.0D	440	32		V1
	260	ONDR	44	NS	0652.0E		438.0D	61	4		
	536	ONDR	43	NS	0728.0		392.0	35			
	29	UPIC	43	NS	0732.7	1309.3	429.1				
	33	UPIC	44	NS	0933.0E	0959.4U	304.5D				
	3750	TYKW	21	GRF	0038.0	0137	140.0	9	4		
	2000	TYKW	20	GRF	0040.0	0140	150.0	4	2		
	9400	TYKW	20	GRF	0045.0	0155	100.0	6	3		
	1000	TYKW	21	GRF	0045.0	0120	100.0	2	1		
	1000	TYKW	45	C	0050.0	0050.3	.6	12	2		
	1000	TYKW	42	SER	0216.1	0217.2	1.5	54	4		
	1000	TYKW	8	S	0308.0	0308.1	.2	35	4		
	9400	TYKW	45	C	0402.0	0413.9	48.0	488	65		
	3750	TYKW	45	C	0403.0	0414.2	37.0	310	45		
	17000	NOBE	21	GRF	0403.5	0423.6	46.0	66			O
	1000	TYKW	45	C	0403.6	0413.8	37.0	230	33		
	2000	TYKW	45	C	0403.6	0414.3	36.4	170	27		
	650	GORK			0404.0	0423.8		34			
	650	GORK	46	C	0404.0	0414.0	23.0	76			
	950	GORK			0404.2	0415.0		190			
	950	GORK	46	C	0404.2	0406.2	17.5	80			
	200	GORK	46	C	0406.8	0422.5	193.0	1500			
	200	GORK			0406.8	0454.0		5800			
	200	GORK			0406.8	0437.1		1700			
	100	GORK	27	RF	0408.8	0420.9	128.0	1200			
	100	GORK			0408.8	0433.5		2100			
	2950	GORK			0411.0E	0415.6		240			
	2950	GORK	46	C	0411.0E	0412.0	6.0D	65			
	17000	NOBE	4	S/F	0412.9	0414.1	5.0	208			R-O
	9100	GORK	46	C	0416.0E	0416.5U	44.0D	330			
	2950	GORK	29	PBI	0417.6	0417.6	130.0	75			
	950	GORK	30	PBI	0420.9	0420.9	25.0	50			
	650	GORK	29	PBI	0427.0	0427.0	33.0	18			
	2000	TYKW	30	PBI	0440.0		90.0	4	2		
	3750	TYKW	30	PBI	0440.0		120.0	11	4		
	950	GORK	46	C	0440.7	0441.7	2.8	22			
	950	GORK			0440.7	0442.8		24			
	9400	TYKW	30	PBI	0450.0		110.0U	20	8 U		RAIN
	228	HARS	47	GB	0514.0	0545.0	100.0U	210	85		
	650	GORK	22	GRF	0514.5	0913.0	276.0	12			
	950	GORK	21	GRF	0517.4	0522.7	21.4	3.7			
	1000	TYKW			0520.0	0530.6		35			
	2000	TYKW	45	C	0520.0	0522.0	4.0	16	4		
	1000	TYKW	42	SER	0520.0	0521.8	26.0	35	3		
	9100	GORK	21	GRF	0521.0	0746.9	309.0E	18			
	950	GORK	4	S/F	0521.2	0521.9	1.5	19			
	2000	TYKW	45	C	0527.0	0528.4	6.0	9	2.5		
	950	GORK	4	S/F	0527.9	0530.9	4.1	26			
	9400	TYKW	5	S	0611.0	0612.4	3.0	12	5		
	3750	TYKW	5	S	0611.0	0612.6	3.0	20	7		
	10400	BERN	1		0611.7	0612.6	2.5	10.0			ONLY PAPER REC
	8400	BERN	1		0611.7	0612.6	2.5	9.0			ONLY PAPER REC
	9100	GORK	1	S	0611.8	0612.6	3.3	14	5		
	9400	TYKW	29	PBI	0614.0		15.0U	5	3 U		
	3750	TYKW	29	PBI	0614.0		15.0	6	3		
	5730	IRKU	21	GRF	0637.5	0638.8	9.0	19			O
	5730	IRKU			0700.3	0712.6		660			L
	5730	IRKU			0700.3	0710.0		30			L
	5730	IRKU	48	GB	0700.3	0702.6	48.0	18			L
	5730	IRKU			0700.3	0720.3		1915			L
	100	GORK	8	S	0711.3	0711.6	.5	2100 D			
	1000	TYKW	45	C	0717.0	0717.1	.6	20	5		
	2000	TYKW	45	C	0718.0	0733.5	55.0	31	2		
	3750	TYKW	45	C	0718.0	0742	55.0	20	7		
	3100	CRIM	1	S	0720.0	0722.0	5.0	18	9		
	2950	GORK	1	S	0721.9	0722.3	1.5	6	3		
	3100	CRIM	22	GRF	0729.0	0802.0	33.0	16	5		
	1470	POTS	4	S/F	0732.5	0733.8	1.8	22			
	113	POTS	8	S	0736.9	0737.1	.7	1500	500		
	100	GORK	8	S	0737.2	0737.3	.5	2100 D			
	234	POTS	8	S	0743.2	0743.2	.1	300	100		
	2950	GORK	21	GRF	0744.6	0744.6	91.0	12			
	2950	GORK	20	GRF	0926.8	1004.0	60.0E	9			
	113	POTS	8	S	0959.0	0959.2	.4	1500	500		
	9400	HUAN		C	1143.6	1147.0	11.0	233.6	134.4		10R1
	9400	HUAN		PBI	1154.6	1154.6	17.2	19.6	10.8		1
	600	UCCL	40	F	1155.0	1309		7			
	9500	POTS	20	GRF	1224.0	1227.5	8.0	6.7			
	9500	POTS	45	C	1405.0	1421.3	105.0	770			
	3000	POTS	46	C	1406.0	1436.5	101.0	1900 D			
	10715	DWIN	49	GB	1410.0	1427	70.0	250	80		
	35000	BERN	46		1412.3	1426.5	98.0	110.0			ONLY PAPER REC
	8400	BERN	46		1412.3	1426.5	98.0	150.0D			ONLY PAPER REC
	19600	BERN	46		1412.3	1426.5	98.0	412.0			ONLY PAPER REC

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
06	10400	BERN	47		1412.3	1426.5	98.0	638.0			ONLY PAPER REC
	11800	BERN	47		1412.3	1426.5	98.0	240.0D			ONLY PAPER REC
	1470	POTS	46	C	1417.0	1455.6	108.0	2400			
	2800	OTTA	21	GRF	1419.0E	1630	290.0D	25.2			
	9400	HUAN		C	1419.8	1426.7	53.8	728.8	155.6		1
	2650	DWIN	49	GB	1420.0		85.0	460 D			
	2800	OTTA	47	GB	1420.0	1436.5	78.0	680.0	162.0		
	600	UCCL	47	GB	1420.5	1426 U		1037 D	105		
	113	POTS	45	C	1421.0	1430	149.0D	4600			II+III+IV
	234	POTS	45	C	1422.0	1426	133.0D	35000			II+III+IV
	228	HARS	47	GB	1422.5		125.0		650 U		
	127	TORN	27	RF	1423.0		97.0				
	127	TORN	49	GB	1423.0	1426 U	13.6	2000 D			SATURATED
	9400	HUAN		PBI	1513.6	1513.6	30.9	34.3	13.4		0
	2800	OTTA	3	S	1540.3	1542.5	7.0	19.6	6.6		
	9400	HUAN		S	1621.6	1624.5	5.7	35.9	18.5		0
	11800	BERN	20		1622.6	1624.3	42.5	16.0			ONLY PAPER REC
	10400	BERN	20		1622.6	1624.3	42.5	35.0			ONLY PAPER REC
	8400	BERN	20		1622.6	1624.3	42.5	32.0			ONLY PAPER REC
	2800	OTTA	3	S	1623.3	1624.8	4.0	20.0	6.8		
	9400	HUAN		PBI	1627.3	1627.3	148.1	21.2	7.2		0
	9400	HUAN		S	1658.6	1658.8	2.0	24.5	10.4		0
	9400	HUAN		S	2014.3	2019.8	13.0	49	3.5		0
	9400	HUAN		S	2052.6	2126.8	59.5	21.2	13.7		0
	2695	PENT	20	GRF	2110.0	2145	80.0	4.0	2.4		
	3750	TYKW	21	GRF	2304.0	2311	85.0	9	2		
	9400	TYKW	21	GRF	2305.0	2313	90.0	9	3		
	2695	PENT	21	GRF	2307.0	2310	35.0	6.0	3.0		
	2695	PENT	8	S	2324.0	2324.3	.4	10.6			
	2000	TYKW	45	C	2324.0	2324.3	.7	10	.4		
	9400	TYKW	5	S	2324.0	2324.7	1.5	2	.1		
07	113	POTS	44	NS	0510.0E	0708	599.0D	1200			
	33	UPIC	43	NS	0539.1	0847.5	574.5				
	29	UPIC	43	NS	0539.2	1039.4	574.1				
	234	POTS	44	NS	0549.0E	0643	559.0D	800			
	204	IZMI	44	NS	0600.0E		360.0D	50			
	127	TORN	44	NS	0600.0E	1410.6	600.0D	520	240		V1
	200	GORK	44	NS	0646.0E		374.0D		110		
	100	GORK	44	NS	0648.0E		372.0E		250		
	260	ONDR	44	NS	0650.0E		497.0D	165	37		
	536	ONDR	44	NS	0650.0E		497.0D	27	2		
	430	KRAK	44	NS	0651.0E		369.0D	100	30		
	600	UCCL	44	NS	0700.0E		385.0D	2			
	600	UCCL	43	NS	1400.0		240.0U	6			
	200	HIRA	44	NS	2012.0E	0654	760.0D	650	260		SL
	100	HIRA	44	NS	2012.0E	0750	760.0D	2700	610		SL
	2000	TYKW	21	GRF	0043.0	0101	75.0	12	3		
	3750	TYKW	21	GRF	0043.0	0108	75.0	19	9		
	9400	TYKW	21	GRF	0044.0	0110	75.0	45	20		
	35000	NAGO	20	GRF	0044.0	0111	53.0	27			
	2695	PENT	21	GRF	0047.0	0100	45.0	11.8	5.9		
	500	HIRA	48	C	0050.0	0105.8	130.0	250	60		SL
	1000	TYKW			0050.0	0053.7		58			
	1000	TYKW	45	C	0050.0	0103.0	35.0	80	15		
	17000	NOBE	21	GRF	0050.3	0110.6	71.0	34			0
	2695	PENT	45	C	0051.5	0054	3.0	27.8	10.0		
	3750	TYKW	45	C	0051.5	0053.7	3.5	15	6		
	2000	TYKW	45	C	0051.5	0053.7	3.5	112	30		
	9400	TYKW	45	C	0052.0	0052.9	4.0	12	3		
	200	HIRA	27	RF	0052.0	0104	162.0	340	106		SL
	3750	TYKW	45	C	0057.0	0102.9	10.0	6	3		
	2000	TYKW	45	C	0102.0	0103.1	4.0	48	15		
	9400	TYKW	45	C	0102.5	0103	4.5	6	3		
	1000	TYKW	30	PBI	0125.0		75.0	6	3		
	2000	TYKW	5	S	0131.0	0131.8	3.0	3	1		
	1000	TYKW	45	C	0139.0	0139.5	10.0	9	2.5		
	2000	TYKW	5	S	0139.0	0139.6	2.0	46	9		
	3750	TYKW	5	S	0139.0	0139.5	2.0	23	5		
	2695	PENT	4	S/F	0139.0	0139.5	1.3	37.6	12.6		
	17000	NOBE	1	S	0139.1	0139.4	.6	42			L
	9400	TYKW	5	S	0139.3	0139.5	.5	29	10		
	3750	TYKW	45	C	0202.0	0223	55.0	10	3		
	2000	TYKW	45	C	0204.0	0224.8	40.0	11	2.5		
	9400	TYKW	5	S	0205.0	0207.0	5.0	15	4		
	100	HIRA	42	SER	0205.0	0223	125.0	700			SL
	1000	TYKW	45	C	0206.3	0206.7	1.5	8	1		
	17000	NOBE	1	S	0206.8	0206.9	.6	18			0
	9400	TYKW	30	PBI	0210.0		40.0	4	2		
	9400	TYKW	5	S	0221.0	0223	6.0	4	2		
	3750	TYKW	45	C	0310.0	0401.0	70.0	57	20		
	2000	TYKW	45	C	0310.0	0401.0	80.0	83	25		
	1000	TYKW	45	C	0315.0	0401.0	75.0	60	15		
	9400	TYKW	45	C	0316.0	0401	59.0	24	6		
	17000	NOBE	21	GRF	0355.3	0408.1	240.0D	9			0

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
07	2950	GORK	23	GRF	0415.0E	0547.3	268.0D	29			
	9400	TYKW	30	PBI	0415.0		74.0	15	15		
	9100	GORK	23	GRF	0416.0E	0600.2	227.0D	57			
	650	GORK	22	GRF	0418.0E	0501.8	64.0D	21			
	3750	TYKW	30	PBI	0420.0		68.0	21	16		
	9400	TYKW	20	GRF	0423.0	0432	30.0	7	3		
	2000	TYKW	30	PBI	0430.0		60.0	11	10		
	6100	KISV	32	ABS	0520.0	0528	10.0	-5			
	3750	TYKW	45	C	0528.0	0533.8	60.0	70	30		
	9400	TYKW	45	C	0529.0	0540.8	60.0	125	50		
	2000	TYKW	45	C	0530.0	0554.8	27.0	110	20		
	6100	KISV			0530.0	0533.5		100			
	6100	KISV	46	C	0530.0	0540.8	30.0	110			
	6100	KISV			0530.0	0534		100			
	6100	KISV			0530.0	0555		60			
	6100	KISV			0530.0	0542.3		100			
	200	HIRA	27	RF	0530.0	0643	140.0	1500	520		SL
	9100	GORK			0530.0	0542.4		92			
	9100	GORK	46	C	0530.0	0533.4	30.0	70			
	17000	NOBE	20	GRF	0530.0	0545.0	70.0	73			O
	9100	GORK			0530.0	0540.9		100			
	2950	GORK	46	C	0530.3	0533.8	13.4	32			
	2950	GORK			0530.3	0535.7		19			
	2950	GORK			0530.3	0540.8		20			
	8400	BERN	20		0531.0U	0542.4U	54.0U	41.0			ONLY PAPER REC
	10400	BERN	20		0531.0U	0542.4U	54.0U	45.0			ONLY PAPER REC
	11800	BERN	20		0531.0U	0542.4U	54.0U	35.0			ONLY PAPER REC
	35000	NAGO	20	GRF	0532.0	0548	50.0	75			
	1000	TYKW			0535.0	0555.6		73			
	1000	TYKW	45	C	0535.0	0539.5	25.0	115	10		
	100	HIRA	27	RF	0536.0	0646	140.0	3000	1400		SL
	650	GORK	23	GRF	0536.2	0626.0	282.0	24			
	500	HIRA	48	C	0537.0	0539.2	125.0	800	100		SL
	200	HIRA	46	C	0538.2	0539.7	3.3	1800	600		SL
	100	HIRA	46	C	0539.0	0540.2	6.0	55000	5300		SL
	650	GORK			0539.0	0554.8		60			
	650	GORK	46	C	0539.0	0539.5	18.0	290			
	2950	GORK			0554.1	0556.4		22			
	2950	GORK	46	C	0554.1	0554.8	3.0	32			
	2000	TYKW	29	PBI	0557.0		120.0	18	6		
	6100	KISV	29	PBI	0600.0	0600	30.0	40			
	204	IZMI	25	R	0600.0	0642.0	100.0	1100	450		
	3100	CRIM	26	FAL	0600.0	0854.0		26			
	3750	TYKW	29	PBI	0628.0		80.0	16	7		
	9400	TYKW	29	PBI	0629.0		90.0	18	9		
	1000	TYKW	45	C	0655.0	0655.5	1.0	12	3		
	6100	KISV	32	ABS	0800.0	0900	120.0	-6			
	2950	GORK	20	GRF	0921.0	1002.0	189.0E	6			
	3100	CRIM	20	GRF	0949.0	1010.0	76.0	13	4		
	6100	KISV	27	RF	1000.0	1015	30.0	4			
	6100	KISV	46	C	1030.0	1035	10.0	20			
	6100	KISV			1030.0	1036		12			
	9100	GORK	1	S	1033.0	1035.0	6.0	23	5		
	11800	BERN	3		1034.7	1035.0	4.5	9.0			ONLY PAPER REC
	8400	BERN	3		1034.7	1035.0	4.5	14.0			ONLY PAPER REC
	10400	BERN	3		1034.7	1035.0	4.5	15.0			ONLY PAPER REC
	6100	KISV	4	S/F	1201.0	1201.5	1.0	4			
	600	UCCL	27	RF	1229.0	1245	21.0	6	2		
	650	GORK	22	GRF	1229.4	1245.4	30.0	10			
	113	POTS	4	S/F	1254.1	1254.5	.6	6000	1500		III
	234	POTS	8	S	1254.1	1254.4	.4	600	200		III
	2800	OTTA	240	R	1317.0	1320	3.0	3.0	1.5		
	600	UCCL	27	RF	1410.0	1414.5	27.0	6			
	536	ONDR	48	C	1411.0	1501.5	56.0D	124	44		
	600	UCCL	4	S/F	1457.0	1459	7.0	95	24		
	2800	OTTA	1	S	1514.0	1515	2.2	1.8	.9		
	2800	OTTA	21	GRF	1540.0	1610	140.0	10.0	6.0		
	9400	HUAN		S	1602.0	1619.4	37.1	12.6	6.2		O
	2800	OTTA	1	S	1602.5	1603	3.0	3.2	1.6		
	7000	SAOP	45	C	1642.4	1648.4	6.0	37.0			O
	7000	SAOP	41	F	1642.4						
	9400	HUAN		S	1650.4	1652.7	9.7	7.2	3.9		O
	7000	SAOP	45	C	1651.6	1652.5	9.0	19.0			O
	2800	OTTA	21	GRF	1835.0	1855	45.0	4.8	2.4		
	7000	SAOP	45	C	1840.4	1843.9	32.0	56.0			5L
	9400	HUAN		S	1840.7	1843.6	5.4	32.4	19.5		R
	2800	OTTA	1	S	1842.3	1844	4.0	7.0	3.2		
	9400	HUAN		PBI	1846.1	1846.1	80.5	14.4	11.9		O
	2800	OTTA	240	AR	2107.0	2140	33.0	4.0	2.0		
	2800	OTTA	1	S	2112.5	2114.2	3.0	2.4	1.2		
	2800	OTTA	20	GRF	2150.0	2227	120.0	8.0	4.0		
	2000	TYKW	20	GRF	2200.0	2230	110.0	5	2.5		
	3750	TYKW	20	GRF	2210.0	2300	100.0	8	4		
	9400	TYKW	20	GRF	2220.0	2300	90.0	5	2.5		
	2695	PENT	21	GRF	2351.0	2405	38.0	4.0	2.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
07	3750	TYKW	21	GRF	2353.0	2404	40.0	7	3		
	9400	TYKW	21	GRF	2354.0	2403	40.0	7	3		
	9400	TYKW	5	S	2355.0	2356.7	5.0	7	3		
	3750	TYKW	5	S	2355.0	2356.7	5.0	16	5		
	2000	TYKW	5	S	2355.0	2357.0	4.0	9	3		
	1000	TYKW	42	SER	2355.5	2357.1	2.0	3	.3		
	2695	PENT	4	S/F	2355.5	2357	4.0	13.0	5.0		
	2000	TYKW	29	PBI	2359.0		30.0	1.5	.7		
08	200	GORK	44	NS	0358.0E		148.0D		130		
	100	GORK	44	NS	0437.0E		480.0E		5		
	234	POTS	44	NS	0514.0E	1221	586.0D	750			
	113	POTS	44	NS	0514.0E	1223	586.0D	1400			
	33	UPIC	43	NS	0528.9	1159.4	510.6				
	29	UPIC	43	NS	0529.0	1159.5	510.1				
	204	IZMI	44	NS	0600.0E		360.0D	120			
	536	ONDR	44	NS	0600.0E		494.0D	46	5		
	260	ONDR	44	NS	0600.0E		494.0D	84	23		
	600	UCCL	44	NS	0600.0E	1000	720.0D	6			
	127	TORN	44	NS	0600.0E		600.0D		420		V1,SATURATED
	430	KRAK	44	NS	0650.0E	0950.0	376.0D	190	30		
	100	HIRA	44	NS	2012.0E	0513	760.0D	500	90		SL
	200	HIRA	44	NS	2332.0E	0005	570.0D	190	50		SL
	1000	TYKW	45	C	0029.0	0036.1	20.0	6	1.5		
	3750	TYKW	28	PRE	0035.0	0036.3	38.0	3	2		
	2000	TYKW	45	C	0035.0	0038.3D	4.0	50 D	10 D		
	2000	TYKW	30	PBI	0039.0		36.0	5	3.5		
	9400	TYKW	21	GRF	0100.0	0127	75.0	9	3		
	3750	TYKW	45	C	0113.0	0117.6	6.0	16	9		
	2000	TYKW	45	C	0115.0	0117.7	7.0	3	2		
	9400	TYKW	5	S	0115.3	0116.2	1.5	5	2		
	3750	TYKW	30	PBI	0119.0		100.0	10	8		
	2000	TYKW	29	PBI	0122.0		70.0	2	1		
	9400	TYKW	5	S	0140.0	0140.4	6.0	16	4		
	9400	TYKW	5	S	0147.0	0147.4	1.0	3	1		
	9400	TYKW	5	S	0149.0	0150	4.0	3	1		
	3750	TYKW	5	S	0150.0	0151	3.0	2.5	1		
	9400	TYKW	5	S	0238.0	0240	10.0	4	2		
	2000	TYKW	45	C	0259.0	0307.9U	21.0	26 D	12 D		
	3750	TYKW	45	C	0259.0	0307.1	21.0	115	40		
	9400	TYKW	45	C	0300.0	0307.1U	20.0	105 D	40 D		
	1000	TYKW	45	C	0303.0E	0306	10.0D	4.5	1 D		
	5730	IRKU			0303.5	0305.2		44			L
	5730	IRKU			0303.5	0306.3		50 D			L
	5730	IRKU			0303.5	0311.4		56			L
	5730	IRKU			0303.5	0307.0		50 D			L
	5730	IRKU	45	C	0303.5	0304.9	25.0	35			L
	17000	NOBE	21	GRF	0303.9	0306.8	56.0	45			O
	35000	NAGO	20	GRF	0305.0	0311	55.0	35			
	500	HIRA	24	R	0308.0	0651.4	360.0D	40	20		SL
	17000	NOBE	20	GRF	0308.9	0311.1	5.0	18			O
	1000	TYKW	45	C	0320.0	0401.0	70.0	6	1.5		
	2000	TYKW	30	PBI	0320.0		300.0	10	4		
	9400	TYKW	5	S	0320.0	0320.7	3.0	8	2		
	3750	TYKW	30	PBI	0320.0		270.0	30	10		
	9400	TYKW	30	PBI	0320.0		70.0	35	15		
	2000	TYKW	5	S	0357.5	0358.3	2.5	2	.5		
	3750	TYKW	5	S	0358.0	0358.3	3.0	6	2		
	650	GORK	22	GRF	0400.0E	0529.5	141.0D	21			
	2000	TYKW	5	S	0409.0	0409.5	4.0	3	1		
	3750	TYKW	5	S	0409.0	0409.3	2.5	2.5	.7		
	2950	GORK	23	GRF	0422.0E	0502.2	488.0E	16			
	9100	GORK	23	GRF	0422.0E	0539.2	488.0D	28			
	3750	TYKW	28	PRE	0500.0	0504	25.0	4	2		
	9400	TYKW	28	PRE	0500.0	0503.8	25.0	8	5		
	6100	KISV	3	S	0524.0	0527	4.0	7			
	3750	TYKW	45	C	0525.0	0529.8	8.0	50	10		
	9400	TYKW	45	C	0525.0	0529.5	7.0	30	12		
	1000	TYKW	45	C	0525.0	0529.8	8.0	14	3		
	2000	TYKW	45	C	0525.0	0529.5	8.0	32	6		
	2950	GORK	46	C	0525.4	0529.4	6.8	33			
	2950	GORK			0525.4	0529.7		34			
	9100	GORK	1	S	0528.6	0529.4	2.4	25	8		
	100	GORK	8	S	0528.7	0529 U	.5	2500 D			
	6100	KISV	45	C	0528.7	0529.5	1.0	30			
	5730	IRKU	21	GRF	0528.9	0529.7	5.0	34			R
	950	GORK	2	S/F	0528.9	0529.2	1.4	9.3			
	3100	CRIM	3	S	0529.0	0530.5	3.0	51	17		
	9400	TYKW	30	PBI	0532.0		140.0	8	4		
	3750	TYKW	30	PBI	0533.0		60.0	9	5		
	2000	TYKW	30	PBI	0533.0		85.0	2	1		
	2000	TYKW	45	C	0538.0	0539.1	5.0	3	1		
	3750	TYKW	5	S	0538.0	0539.2	6.0	7	2		
	3100	CRIM	26	FAL	0603.0	1308.0		23			
	9400	TYKW	5	S	0609.0	0610.0	2.5	10	3		

SOLAR RADIO EMISSION
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APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
08	6100	KISV	4	S/F	0609.5	0610.5	3.0	10			
	9100	GORK	1	S	0609.8	0610.1	1.7	10	4		
	9100	GORK	1	S	0625.9	0626.1	.8	6	3		
	6100	KISV	8	S	0626.0	0626.5	3.0	6			
	1470	POTS	2	S/F	0731.0	0731.5	1.0	5.2			
	2950	GORK	1	S	0924.2	0924.5	.8	6.0	3.0		
	3100	CRIM			0949.5	1006.0		7			
	3100	CRIM	42	SER	0949.5	0954.0	18.0	7	2		
	6100	KISV	4	S/F	1003.0	1006	10.0	9			
	6100	KISV	4	S/F	1035.0	1035.8	2.0	3			
	6100	KISV	45	C	1040.0	1052	20.0	14			
	3100	CRIM	1	S	1049.0	1052.0	3.0	11	3		
	3000	POTS	3	S	1050.0U	1051.8	3.0U	8.2			
	1470	POTS	1	S	1050.7	1051.8	1.8	3.7			
	9500	POTS	1	S	1051.0	1051.8	1.5	5.0			
	9100	GORK	1	S	1051.0	1051.9	2.1	8	3		
	3100	CRIM	3	S	1121.0	1122.0	4.0	24	8		
	2650	DWIN	1	S	1125.0	1126	10.0	25	10		
	2950	GORK	4	SF	1125.8	1126.5	2.1	18	8.0		
	6100	KISV	4	S/F	1126.0	1127	5.0	30			
	1470	POTS	1	S	1212.0	1212.5	1.5	3.8			
	6100	KISV			1215.0	1231		13			
	6100	KISV	45	C	1215.0	1219.8	30.0	21			
	8400	BERN	41		1215.3	1231.0	23.0	12.0			ONLY PAPER REC
	10400	BERN	41		1215.3	1231.0	23.0	17.0			ONLY PAPER REC
	7000	SAOP	3	S	1217.7	1219.8	21.6	31.0			28R
	930	BORD	41	F	1218.0	1218.5	2.0	19	2		
	1470	POTS	3	S	1218.5	1219.8	3.5	11			
	2950	GORK	3	S	1218.8	1220.0	2.4	26	13		
	2650	DWIN	1	S	1219.0	1220	2.0	25	20		
	3000	POTS	3	S	1219.0	1219.9	1.5	31			
	9500	POTS	1	S	1219.0	1219.7	1.0	6.7			
	9100	GORK	1	S	1219.4	1219.8	1.8	13	5		
	930	BORD	46	C	1307.0	1315.7	13.0	36	13		
	3100	CRIM	3	S	1319.0	1319.5	1.0	38	12		
	9500	POTS	1	S	1332.0	1332.7	2.0	6.8			
	1470	POTS	8	S	1332.4	1332.7	.6	4.5			
	930	BORD	41	F	1345.0	1345.3	.3	68	2		
	930	BORD	41	F	1438.2	1438.4	.6	113	2		
	2800	OTTA	20	GRF	1440.0	1510	75.0	4.6	2.3		
	9400	HUAN		S	1550.5	1552.8	16.8	10.3	3.7		O
	8400	BERN	3		1625.0	1625.3	4.5	11.0			ONLY PAPER REC
	11800	BERN	3		1625.0	1625.3	4.5	24.0			ONLY PAPER REC
	10400	BERN	3		1625.0	1625.3	4.5	17.0			ONLY PAPER REC
	2800	OTTA	8	S	1625.2	1625.2	.2	20.0			
	2800	OTTA	21	GRF	1705.0	1850	190.0	10.2	5.1		
	9400	HUAN		S	1725.6	1815.1	61.4	12.0	6.2		O
	2800	OTTA	1	S	1810.0	1810.4	1.0	2.8	1.0		
	9400	HUAN		S	1810.6	1811.5	1.6	10.3	2.7		O
	2800	OTTA	8	S	1854.0	1854.2	.4	2.4	1.2		
	9400	HUAN		S	1955.6	1957.2	6.6	12.0	5.0		O
	2800	OTTA	23	GRF	2050.0	2220	170.0	9.0	5.0		
	9400	TYKW	21	GRF	2150.0	2220	70.0	4	2		
	2000	TYKW	21	GRF	2150.0	2200	110.0	5	2.5		
	3750	TYKW	20	GRF	2150.0	2220	110.0	9	4		
	9400	TYKW	45	C	2231.0	2235.4	10.0	8	2		
	2695	PENT	8	S	2243.1	2243.7	.5	12.6			
	2000	TYKW	45	C	2243.2	2243.5	.5	20	3		
	3750	TYKW	21	GRF	2352.0	2431	185.0	6	3		
09	204	IZMI	44	NS	0600.0E		360.0D	25			
	127	TORN	44	NS	0600.0E	1332.8	600.0D	270	7		V2
	113	POTS	44	NS	0602.0E	0812	538.0D	80			
	260	ONDR	44	NS	0610.0E		478.0D	98	4		
	234	POTS	44	NS	0630.0E	0817.5	502.0D	90			
	200	HIRA	44	NS	2011.0E	2217	770.0D	110	45		MR
	100	HIRA	44	NS	2011.0E	2156	760.0D	40	10		ML
	2695	PENT	21	GRF	0000.0	0035	75.0	4.4	2.6		
	9400	TYKW	21	GRF	0000.0	0031	65.0	6	3		
	2000	TYKW	21	GRF	0000.0	0040	160.0	5	1.5		
	2000	TYKW	5	S	0020.0	0020.9	2.0	4	1		
	9400	TYKW	5	S	0020.0	0020.9	2.0	4	1		
	3750	TYKW	5	S	0020.0	0020.9	2.0	4.5	1		
	2695	PENT	8	S	0020.7	0020.8	.5	4.2	2.1		
	700	SYDN	41	F	0038.3	0039.0	1.2				
	5730	IRKU	21	GRF	0040.0	0042.2	13.0	17	4		L
	9400	TYKW	5	S	0041.0	0042.4	2.0	7	3		
	3750	TYKW	5	S	0041.0	0042.4	8.0	3.5	1		
	9400	TYKW	29	PBI	0043.0		20.0	3	1.5		
	700	SYDN	45	C	0045.3	0045.7	.9				
	700	SYDN	8	S	0205.9	0206.0	.2				
	3750	TYKW	21	GRF	0320.0	0340	95.0	3	2		
	9400	TYKW	21	GRF	0328.0	0405	70.0	3	1		
	9400	TYKW	5	S	0351.4	0351.7	1.5	2.5	1		
	1000	TYKW	45	C	0351.5	0352.1	.8	4.5	1.5		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
09	17000	NOBE	21	GRF	0351.5	0401.6	20.0	9			O
	9400	TYKW	45	C	0354.5	0355.4	2.5	8	2		
	2000	TYKW	5	S	0354.5	0355.3	2.5	2	.7		
	17000	NOBE	1	S	0354.8	0355.3	1.0	18			O
	1000	TYKW	45	C	0355.0	0355.3	1.0	8	1.5		
	3750	TYKW	5	S	0355.0	0355.4	2.0	8	2		
	3750	TYKW	5	S	0359.0	0400	5.0	2	1		
	9400	TYKW	5	S	0359.5	0400	4.0	2.5	1		
	2000	TYKW	5	S	0402.0	0402.6	1.0	3	.5		
	9400	TYKW	45	C	0408.0	0409.9	4.0	10	4		
	3750	TYKW	45	C	0408.0	0408.7	7.0	3.5	1		
	9400	TYKW	29	PBI	0412.0		10.0	4	2		
	9100	GORK	23	GRF	0436.0E	0507.5	327.0D	19			
	2950	GORK	23	GRF	0436.2E	0523.5	420.0D	19			
	650	GORK	22	GRF	0439.0E	0641.7	381.0D	15			
	9400	TYKW	28	PRE	0500.0	0507	16.0	7	2		
	3750	TYKW	28	PRE	0500.0	0500.6	16.0	3	2		
	9400	TYKW	5	S	0516.0	0516.8	4.0	195	25		
	3750	TYKW	5	S	0516.0	0516.8	2.0	51	10		
	5730	IRKU	2	S/F	0516.0	0516.8	2.5	106	47		L
	10400	BERN	4		0516.0U	0516.9	2.5U	114.0U			ONLY PAPER REC
	9100	GORK	3	S	0516.3	0517.2	4.0	170			
	17000	NOBE	2	S/F	0516.4	0516.8	2.0	37			L
	2950	GORK	1	S	0516.5	0517.0	1.0	13	6.5		
	3750	TYKW	30	PBI	0518.0		42.0	4	2.5		
	5730	IRKU	29	PBI	0518.5		6.0	7			L
	9400	TYKW	29	PBI	0520.0		40.0	8	3		
	3750	TYKW	5	S	0521.0	0523.2	26.0	7	1.5		
	2000	TYKW	5	S	0522.0	0523.3	3.0	3	1		
	2000	TYKW	29	PBI	0525.0		35.0	1	.5		
	3750	TYKW	21	GRF	0620.0	0635	60.0	4	2		
	5730	IRKU	2	S/F	0639.4	0639.5	2.5	24			L
	3750	TYKW	5	S	0639.5	0639.9	1.5	4	1		
	8400	BERN	1		0639.6	0639.9	2.5	10.0			ONLY PAPER REC
	10400	BERN	1		0639.6	0639.9	2.5	13.0			ONLY PAPER REC
	9400	TYKW	5	S	0639.8	0639.9	.5	15	4		
	536	ONDR	23	GRF	0640.0	0836.8	264.0	25	14		
	9100	GORK	1	S	0640.0	0640.2	.7	24	10		
	234	POTS	4	S/F	0726.1	0726.2	.2	150	40		
	430	KRAK	23	GRF	0821.3	0901.5	93.0	32	11		
	234	POTS	42	SER	0837.2	0837.8	2.2	180	1 E		
	2650	DWIN	8	S	0956.0			50			
	10400	BERN	3		0956.4	0959.1	12.5	14.0			ONLY PAPER REC
	11800	BERN	3		0956.4	0959.1	12.5	13.0			ONLY PAPER REC
	8400	BERN	3		0956.4	0959.1	12.5	9.0			ONLY PAPER REC
	19600	BERN	3		0956.4	0959.1	12.5	35.0			ONLY PAPER REC
	3000	POTS	8	S	0956.5	0957.1	1.0	35			
	9500	POTS	1	S	0956.5	0957.0	1.0	6.8			
	9100	GORK	1	S	0957.1	0957.5	.7	9	3.5		
	2950	GORK	3	S	0957.2	0957.6	.7	33	16		
	3100	CRIM	3	S	0957.5	0958.0	1.0	34	11		
	3100	CRIM	3	S	1002.0	1002.5	1.0	36	12		
	2650	DWIN	8	S	1002.0			15			
	3000	POTS	8	S	1002.3	1002.5	.7	22			
	2950	GORK	3	S	1002.8	1002.9	.5	23	11		
	3100	CRIM	1	S	1046.0	1046.5	1.0	9	3		
	2950	GORK	1	S	1046.2	1046.8	5.8	7.6	2.0		
	9100	GORK	1	S	1046.2	1046.8	1.3	6	2		
	29	UPIC	42	SER	1118.2	1118.4	160.9				
	33	UPIC	42	SER	1118.5	1118.6	160.9				
	9100	GORK	1	S	1141.2	1141.7	3.8	9	3.5		
	234	POTS	8	S	1330.9	1331.0	.1	400	130		
	113	POTS	4	S/F	1429.6	1430.0	.6	700	35		III
	2800	OTTA	240	R	1500.0	1517	17.0	2.6	1.3		
	2800	OTTA	21	GRF	1535.0	1640	130.0	5.0			
	2800	OTTA	1	S	1633.0	1633.2	1.0	3.2			
	7000	SAOP	20	GRF	1751.6	1753.8	16.2	18.0			10L
	9400	HUAN		S	1751.7	1755.0	42.3	11.0	3.4		O
	2800	OTTA	8	S	1837.5	1838	.8	4.2	2.1		
	7000	SAOP	20	GRF	1921.4	1923.6	7.0	14.0			40L
	2000	TYKW	45	C	2224.0	2231.2	11.0	25	5		
	3750	TYKW	45	C	2227.0	2231.3	8.0	12	3.5		
	1000	TYKW	45	C	2227.0	2231.7	8.0	18	5		
	2800	OTTA	45	C	2227.0	2231.2	8.0	18.6	6.2		
	1400	SYDN	27	RF	2227.7	2231.6	7.3				
	700	SYDN	45	C	2227.8	2230.5	7.5				
	3750	TYKW	21	GRF	2255.0	2320	60.0	3	1.5		
	3750	TYKW	5	S	2333.0	2335	10.0	6	2		
10	127	TORN	44	NS	0600.0E	1408.2	600.0D	910	18		V2
	234	POTS	44	NS	0600.0E	1453	537.0D	100			
	204	IZMI	44	NS	0600.0E		360.0D	21			
	113	POTS	44	NS	0600.0E	1208	537.0D	15			
	260	ONDR	44	NS	0600.0E		488.0D	148	12		
	33	UPIC	43	NS	0652.7	0801	376.3				

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
10	29	UPIC	43	NS	0653.2	0933.5	436.0				
	536	ONDR	43	NS	0830.0	1026.8	273.0	28	3		
	430	KRAK	43	NS	0847.0	1158.5	253.0D	90	16		
	200	HIRA	44	NS	2010.0E	0736	770.0D	120	60		MR
	100	HIRA	44	NS	2010.0E	0020	770.0D	25	10		MR
	3750	TYKW	21	GRF	0020.0	0135	180.0	8	4		
	3750	TYKW	5	S	0024.5	0025.4	3.5	3	1		
	2000	TYKW	5	S	0117.0	0117.2	.5	12	3		
	3750	TYKW	45	C	0123.0	0125.5	7.0	5	1.5		
	9400	TYKW	45	C	0125.0	0125.4	1.5	30	4		
	9400	TYKW	45	C	0217.0	0217.6	5.0	21	5		
	17000	NOBE	1	S	0219.8	0220.0	1.5	36			L
	17000	NOBE	21	GRF	0228.3	0254.7	58.0	14			O
	5730	IRKU	1	S	0237.0	0238.3	5.0	23			L
	2000	TYKW	28	PRE	0237.0	0241	11.0	1.5	1		
	9400	TYKW	5	S	0237.5	0238.3	2.5	33	9		
	3750	TYKW	5	S	0237.5	0238.3	2.5	15	6		
	9400	TYKW	30	PBI	0240.0		45.0	5	2.5		
	3750	TYKW	30	PBI	0240.0		30.0	5	2.5		
	9400	TYKW	45	C	0245.0	0248.6U	24.0	22 D	6 D		
	3750	TYKW	45	C	0245.0	0248.6	15.0	14	3.5		
	2000	TYKW	45	C	0248.0	0251.5	7.0	13	4		
	1000	TYKW	45	C	0251.0	0252.8	25.0	10	3		
	1400	SYDN	4	S/F	0251.1	0252.5	4.8				
	700	SYDN	27	RF	0251.2	0252.8	5.8				
	17000	NOBE	2	S/F	0251.2	0251.4	1.0	14			0
	2000	TYKW	29	PBI	0255.0		20.0	5	1.5		
	9400	TYKW	21	GRF	0435.0	0440	95.0	3	1.5		
	3750	TYKW	21	GRF	0436.0	0440	95.0	6	2		
	2000	TYKW	20	GRF	0437.0	0440	60.0	3	1		
	2950	GORK	23	GRF	0438.0	0930.0	430.0E	20	10		
	17000	NOBE	20	GRF	0515.2	0540.0	165.0D	9			0
	3750	TYKW	5	S	0520.0	0524	15.0	3	1		
	9400	TYKW	5	S	0522.0	0524	6.0	4.5	1.5		
	9100	GORK	20	GRF	0522.3	0523.8	10.6	8.8	3		
	3750	TYKW	21	GRF	0620.0	0645	60.0	4	2		
	3100	CRIM	20	GRF	0629.0	0719.0	75.0	18	6		
	2000	TYKW	20	GRF	0630.0	0645	50.0	2	1		
	113	POTS	4	S/F	0654.8	0654.9	.3	1800	600		III
	9400	TYKW	5	S	0655.0	0700	25.0	4	2		
	3750	TYKW	5	S	0658.0	0700	5.0	3	1		
	127	TORN	5	S	0659.6	0700.4	1.5	590 U	290 U		
	6100	KISV	26	FAL	0755.0	0800	5.0	9			
	9400	TYKW	20	GRF	0755.0	0804	45.0D	6	4 D		
	3750	TYKW	21	GRF	0755.0	0757	35.0D	4	2 D		
	2000	TYKW	20	GRF	0756.0	0757.5	35.0D	4	2 D		
	3100	CRIM	1	S	0756.0	0757.0	4.0	8	2		
	2950	GORK	1	S	0756.4	0756.7	2.4	4.2	2		
	9100	GORK	21	GRF	0757.7	0924.4	265.0	3			
	113	POTS	4	S/F	0800.2	0800.4	1.0	1900	200		III
	930	BORD	46	C	0827.0	0827.1	.4	73	3		
	930	BORD	46	C	0836.3	0836.7	.6	31	3		
	3100	CRIM	1	S	0902.5	0904.0	4.0	22	7		
	11800	BERN	46		0915.0	0921.0	45.0	94.0			ONLY PAPER REC
	35000	BERN	46		0915.0	0921.0	45.0	57.0			ONLY PAPER REC
	10400	BERN	46		0915.0	0921.0	45.0	107.0			ONLY PAPER REC
	19600	BERN	46		0915.0	0921.0	45.0	85.0			ONLY PAPER REC
	8400	BERN	46		0915.0	0921.0	45.0	97.0			ONLY PAPER REC
	9500	POTS	29	PBI	0916.0	0920.7	39.0	130			
	6100	KISV	45	C	0916.0	0920.7	9.0	93			
	6100	KISV			0916.0	0918.5		80			
	10715	DWIN	45	C	0916.0	0921	20.0	40	20		
	2650	DWIN	3	S	0916.0		15.0	45	20		
	6100	KISV			0916.0	0924		22			
	5730	IRKU	45	C	0916.7	0919.0	12.0	135			L
	5730	IRKU			0916.7	0921.2		150			L
	9100	GORK	46	C	0916.8	0918.7	7.9	100			
	9100	GORK			0916.8	0920.8		150			
	1470	POTS	1	S	0917.0	0918.1	2.5	3.4			
	3000	POTS	29	PBI	0917.0	0918.8	33.0	67			
	3100	CRIM	3	S	0917.0	0919.0	5.0	43	14		
	2950	GORK	46	C	0917.1	0918.0	4.9	24			
	2950	GORK			0917.1	0918.7		60			
	6100	KISV	32	ABS	0925.0	1020	25.0	-8			
	234	POTS	8	S	0927.6	0927.6	.1	175	60		
	1470	POTS	4	S/F	1025.5	1027.2	2.5	16			
	930	BORD	46	C	1026.0	1027.2	2.0	14	3		
	2950	GORK	1	S	1026.1	1027.3	1.6	10			
	3000	POTS	4	S/F	1026.5	1027.4	1.5	11			
	810	KRAK	8	S	1027.0	1027.0	.1	62			
	930	BORD	8	S	1049.2	1049.2	.1	33	1		
	113	POTS	4	S/F	1125.4	1125.7	.5	700	70		III
	234	POTS	42	SER	1223.3	1227.4	4.5	350	1		
	7000	SAOP	20	GRF	1251.0	1252.2	7.6	14.0			13L
	3000	POTS	3	S	1251.5	1252.8	3.0	14			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
10	234	POTS	42	SER	1259.2	1259.4	4.0	1000	8		
	234	POTS	42	SER	1316.2	1316.3	7.5	300	1 E		
	113	POTS	4	S/F	1407.9	1408.1	.8	1800	100		III
	1470	POTS	1	S	1422.5	1423.5	1.8	3.5			
	2800	OTTA	1	S	1422.8	1423.5	1.0	3.0	1.5		
	600	UCCL	4	S/F	1422.8	1423.7	2.2	55	20		
	9400	HUAN		S	1542.5	1612.2	59.0	8.2	4.2		0
	9400	HUAN		S	1550.3	1551.3	1.9	13.1	6.1		0
	7000	SAOP	41	F	1608.0						
	7000	SAOP	3	S	1608.0	1609.0	.8	24.0			15L
	2800	OTTA	4	S/F	1608.3	1608.8	1.5	39.0	9.6		
	9400	HUAN		S	1608.5	1609.0	1.3	11.5	6.2		0
	11800	BERN	1		1608.6	1609.1	1.0	10.0			ONLY PAPER REC
	8400	BERN	1		1608.6	1609.1	1.0	10.0			ONLY PAPER REC
	10400	BERN	3		1608.6	1609.1	1.0	15.0			ONLY PAPER REC
	2650	DWIN	8	S	1609.0			55			
	7000	SAOP	3	S	1614.8	1615.5	2.2	14.0			32L
	2800	OTTA	20	GRF	1627.0	1629.9	11.0	5.2	1.8		
	7000	SAOP	45	C	1642.0	1724.5	20.0	174.0			2R
	9400	HUAN		PRE	1645.8	1721.8	36.0	4.9	3.1		0
	9400	HUAN		C	1721.8	1724.6	4.9	225.0	90.5		1
	35000	BERN	46		1721.9	1724.5	5.0	170.0			ONLY PAPER REC
	8400	BERN	46		1721.9	1724.5	5.0	87.0			ONLY PAPER REC
	11800	BERN	46		1721.9	1724.5	5.0	198.0			ONLY PAPER REC
	10400	BERN	46		1721.9	1724.5	5.0	166.0			ONLY PAPER REC
	19600	BERN	46		1721.9	1724.5	5.0	385.0			ONLY PAPER REC
	2800	OTTA	4	S/F	1722.5	1724.8	6.5	28.4	14.2		
	9400	HUAN		PBI	1726.7	1726.7	150.7	44.3	12.2		0
	2800	OTTA	30	PBI	1729.0	1729	150.0	10.4	5.2		
	9400	HUAN		S	1729.6	1730.1	1.6	16.4	12.3		0
	2800	OTTA	1	S	1940.0	1941.2	2.0	2.6	1.2		
	9400	HUAN		S	1951.8	1952.6	2.2	13.1	7.2		0
	2800	OTTA	27A	RF	2005.0		205.0	4.4	3.6		
	2800	OTTA	24	P	2005.0	2030	25.0	4.4	2.2		
	2800	OTTA	24P	R	2030.0		135.0	4.4			
	1000	TYKW	20	GRF	2130.0	2200	120.0	4.5	1.5		
	2000	TYKW	20	GRF	2130.0	2158	120.0	10	4		
	2800	OTTA	20	GRF	2148.0	2159	50.0	13.2	5.6		
	9400	TYKW	20	GRF	2150.0	2203	120.0	12	6		
	3750	TYKW	21	GRF	2150.0	2203	120.0	10	4		
	2800	OTTA	26	FAL	2245.0	2330	45.0	-4.4	-2.2		
	3750	TYKW	5	S	2336.3	2336.8	2.0	4	1		
11	100	GORK	44	NS	0437.0E		480.0E		5		
	200	GORK	44	NS	0439.0E		486.0D		35		
	234	POTS	44	NS	0540.0E	1037	543.0D	100			
	204	IZMI	44	NS	0600.0E		360.0D	80			
	260	ONDR	44	NS	0600.0E		489.0D	168	8		
	127	TORN	44	NS	0600.0E	1105.5	600.0D	1010	16		V2
	114	POTS	44	NS	0605.0E	0758	520.0D	15			
	100	HIRA	44	NS	2005.0E	2045	770.0D	110	60		WL
	200	HIRA	44	NS	2007.0E	2209	770.0D	180	50		WR
	200	HIRA	44	NS	2010.0E	0225	770.0D	110	40		WR
	100	HIRA	44	NS	2010.0E	2309	770.0D	110	25		WL
	3750	TYKW	21	GRF	0015.0	0129	160.0	8	3		
	3750	TYKW	5	S	0031.0	0031.3	1.0	2	.7		
	2000	TYKW	21	GRF	0120.0	0138	90.0	4	1.5		
	700	SYDN	2	S/F	0123.6	0123.8	.3				
	9400	TYKW	5	S	0126.0	0126.4	1.0	11	3		
	9400	TYKW	29	PBI	0127.0		35.0	4	2		
	9400	TYKW	21	GRF	0320.0	0400	160.0	6	3		
	3750	TYKW	21	GRF	0320.0	0339	185.0	9	4		
	2000	TYKW	21	GRF	0320.0	0400	180.0	3	1.8		
	1000	TYKW	45	C	0326.0	0326.2	.4	11	3		
	9400	TYKW	45	C	0410.0	0416.6	40.0	14	4		
	3750	TYKW	45	C	0410.0	0416.1	40.0	28	5		
	1000	TYKW	45	C	0412.0	0415.5	6.0	26	4		
	2000	TYKW	45	C	0412.0	0413.6	11.0	8	3		
	1400	SYDN	40	F	0412.1	0413.4	5.0				
	700	SYDN	4	S/F	0414.7	0416.1	2.4				
	700	SYDN	8	S	0417.7	0417.8	.2				
	700	SYDN	45	C	0422.2	0422.8	1.8				
	2000	TYKW	29	PBI	0423.0		30.0	2.5	1		
	2950	GORK	21	GRF	0424.0	0721.0	480.0E	21	10		
	700	SYDN	8	S	0429.1	0429.2	.2				
	9100	GORK	22	GRF	0512.0	0514.7	8.8	11	4.5		
	9400	TYKW	45	C	0512.0	0514.4	5.0	10	2		
	9400	TYKW	30	PBI	0517.0		35.0	2	1		
	9400	TYKW	5	S	0533.3	0533.6	2.5	3	1		
	3750	TYKW	5	S	0617.5	0618.6	4.0	5	1.5		
	9400	TYKW	45	C	0617.5	0619.7	4.0	6	2		
	9400	TYKW	21	GRF	0628.0	0720	110.0D	12	9 D		
	3750	TYKW	21	GRF	0628.0	0720	110.0D	15	10 D		
	2000	TYKW	21	GRF	0628.0	0720	110.0D	12	9 D		
	9100	GORK	21	GRF	0629.3	0909.5	189.0	19			

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
11	2000	TYKW	45	C	0637.0	0638.6	4.5	8	3		
	650	GORK	20	GRF	0642.8	1150.0	377.0E	9	4		
	536	ONDR	2	S/F	0717.3	0718.2	1.5	18	2		
	234	POTS	4	S/F	0737.8	0737.8	.1	150	50		
	9100	GORK	1	S	0816.2	0816.8	1.5	9	3.5		
	536	ONDR	2	S/F	0902.3	0902.6	1.0	11			
	5730	IRKU			0902.5	0907.4		27			L
	9500	POTS	29	PBI	0902.5	0903.5	38.0	31			
	5730	IRKU	45	C	0902.5	0903.4	9.5	45			L
	9100	GORK			0902.6	0907.4		25			
	9100	GORK	46	C	0902.6	0903.5	6.8	45			
	11800	BERN	11		0902.7	0907.4	39.0	21.0			ONLY PAPER REC
	10400	BERN	22		0902.7	0907.4	39.0	30.0			ONLY PAPER REC
	3000	POTS	29	PBI	0902.7	0903.5	39.0	12			
	8400	BERN	22		0902.7	0907.4	39.0	31.0			ONLY PAPER REC
	19600	BERN	22		0902.7	0907.4	39.0	19.0			ONLY PAPER REC
	930	BORD	41	F	0903.0	0903.4	.6	106	2		
	2950	GORK	1	S	0903.0	0903.7	2.2	9.5			
	5730	IRKU	29	PBI	0912.0		16.0	12			L
	33	UPIC	42	SER	0916.5	0916.6U	237.8				
	113	POTS	8	S	0916.6	0916.6	.1	800	250		III
	29	UPIC	42	SER	0916.6	1105.8	237.2				
	113	POTS	4	S/F	1105.3	1105.4	.3	550	50		III/V
	234	POTS	4	S/F	1202.3	1206.9	5.1	600	6		
	9100	GORK	22	GRF	1217.0						
	930	BORD	8	S	1220.0	1220	.1	14	1		
	234	POTS	42	SER	1234.0	1246.0	18.0	1700			
	7000	SAOP	41	F	1258.0						
	7000	SAOP	27	RF	1258.0			9.0			0
	7000	SAOP	3	S	1307.5	1311.3	6.0	30.0			9R
	2650	DWIN	1	S	1310.0	1311	2.0	20	10		
	9400	HUAN		S	1310.1	1312.8	9.2	8.6	5.4		R
	536	ONDR	42	SER	1310.5	1311.2	45.0	35			
	9500	POTS	1	S	1310.5	1311.0	1.5	6.9			
	2800	OTTA	3	S	1310.8	1311	2.0	18.6	6.2		
	1470	POTS	1	S	1311.0	1311.5	1.5	2.9			
	3000	POTS	3	S	1311.0	1311.5	2.0	17			
	113	POTS	4	S/F	1311.0	1311.4	.8	150	50		III
	600	UCCL	1	S	1311.0	1311.2	.8	20	8		
	2650	DWIN	2	S/F	1345.0	1350	7.0	20	10		
	2800	OTTA	4	S/F	1347.4	1349.8	4.6	15.4	7.0		
	9400	HUAN		S	1348.7	1350.1	2.3	17.3	8.1		0
	600	UCCL	2	S/F	1349.0	1349.5	3.0	20	7		
	9500	POTS	1	S	1349.0	1350.0	3.5	6.2			
	7000	SAOP	45	C	1349.0	1350.2	2.4	22.0			0
	3000	POTS	4	S/F	1349.0	1349.7	3.0	16			
	1470	POTS	4	S/F	1349.0	1350.5	3.0	9.6			
	2800	OTTA	29	PBI	1352.0	1352	11.0	5.0	2.5		
	2800	OTTA	1	S	1510.5	1511.5	2.0	5.6	2.8		
	9400	HUAN		S	1510.5	1511.9	4.1	15.6	5.9		0
	7000	SAOP	45	C	1510.8	1511.8	2.0	20.0			0
	930	BORD	8	S	1526.8	1526.8	.1	39	1		
	930	BORD	41	F	1618.8	1618.8	1.0	212	2		
	930	BORD	41	F	1635.2	1635.3	.3	31	2		
	7000	SAOP	45	C	1725.0	1726.0	2.4	89.0			4R
	2800	OTTA	21	GRF	1725.0	1755	145.0	14.2	7.1		
	2800	OTTA	4	S/F	1725.5	1726	1.8	21.6	10.8		
	11800	BERN	4		1725.6	1726.1	1.5D	22.0U			ONLY PAPER REC
	19600	BERN	4		1725.6	1726.1	1.5D	24.0U			ONLY PAPER REC
	8400	BERN	4		1725.6	1726.1	1.5D	27.0U			ONLY PAPER REC
	10400	BERN	4		1725.6	1726.1	1.5D	53.0U			ONLY PAPER REC
	7000	SAOP	3	S	1821.0	1821.6	1.6	18.0			0
	2800	OTTA	4	S/F	1821.0	1821.4	2.0	33.6	9.0		
	2800	OTTA	260	FAL	1955.0	2010	15.0	-4.2	-2.1		
	500	HIRA	41	F	2038.7	2040.2	2.5	28			0
	100	HIRA	48	C	2040.0	2042.8	3.5	14000	2400		WL
	100	HIRA			2040.0	2041.1		7800			WL
	9400	HUAN		S	2051.5	2052.2	3.3	8.9	5.4		0
	2800	OTTA	21	GRF	2115.0	2315	245.0	16.0	7.4		
	2800	OTTA	3	S	2139.0	2140	2.0	13.0	6.5		
	3750	TYKW	45	C	2139.0	2142.8	8.0	24	4		
	9400	TYKW	45	C	2139.0	2142.8	8.0	175	5 U		
	2000	TYKW	45	C	2139.0	2142.8	5.0	120	5 U		
	2800	OTTA	30	PBI	2141.0	2141	10.0	3.4	1.7		
	1000	TYKW	45	C	2142.0	2142.8	1.0	65 D	10 D		
	2800	OTTA	3	S	2142.6	2142.8	1.0	100.0	10.0		
	2800	OTTA	1	S	2144.0	2144	1.0	4.2	2.0		
	3750	TYKW	21	GRF	2200.0	2335	220.0	12	6		
	2000	TYKW	20	GRF	2200.0	2320	180.0	7	3		
	500	HIRA	40	F	2226.0	2227.0	5.5	500	20		ML
	3750	TYKW	5	S	2245.5	2246.7	3.5	7	1.5		
	9400	TYKW	28	PRE	2246.0	2246.4	9.0	7	3		
	2695	PENT	1	S	2253.7	2300.5	3.0	6.2	3.1		
	9400	TYKW	45	C	2255.0	2310.7	35.0	57	15		
	3750	TYKW	45	C	2257.0	2300.5	33.0	20	5		

SOLAR RADIO EMISSION
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APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
11	100	HIRA	45	C	2259.0	2259.3	.9	570	240		WL
	17000	NOBE	20	GRF	2309.7	2310.9	23.0	27			O
	9400	TYKW	30	PBI	2330.0		140.0	15	6		
	35000	NAGO	20	GRF	2357.0	2401	23.0	11			
12	200	GORK	44	NS	0344.0E		434.0D		30		
	100	GORK	44	NS	0347.0E		430.0D		5		
	234	POTS	44	NS	0543.0E	1146	521.0D	250			
	260	ONDR	44	NS	0556.0E		500.0D	155	6		
	127	TORN	44	NS	0600.0E	1116.9	600.0D	70	10		V1
	204	IZMI	44	NS	0600.0E		360.0D	40			
	3750	TYKW	21	GRF	0200.0	0220.5	170.0	13	6		
	2000	TYKW	21	GRF	0200.0	0220.5	150.0	10	3		
	9400	TYKW	21	GRF	0200.0	0220	140.0	9	3		
	2000	TYKW	5	S	0202.0	0202.8	2.0	6	1.5		
	3750	TYKW	5	S	0202.0	0202.7	2.0	4	1		
	2000	TYKW	5	S	0204.0	0205	2.0	1.5	.5		
	2000	TYKW	5	S	0209.7	0210.1	1.5	1.5	.5		
	2000	TYKW	45	C	0213.7	0215.1	1.8	33	7		
	1000	TYKW	5	S	0214.6	0214.8	.5	1	.3		
	9400	TYKW	5	S	0214.7	0215.0	.8	3	1		
	3750	TYKW	5	S	0214.7	0215.0	1.0	2	.7		
	650	GORK	21	GRF	0348.0E	0556.5	430.0E	17			
	2950	GORK	21	GRF	0406.4	0645.0	400.0E	14			
	9100	GORK	23	GRF	0407.0E	0637.9	400.0E	28			
	100	GORK	46	C	0457.0	0457.5	1.8	150			
	100	GORK			0457.0	0458 U		150 D			
	3750	TYKW	20	GRF	0500.0	0510	40.0	2	1		
	9400	TYKW	5	S	0535.6	0535.8	1.0	6	2		
	3750	TYKW	5	S	0541.7	0542.0	1.0	4	1.5		
	1000	TYKW	5	S	0546.5	0547.2U	1.5	3	1		
	650	GORK	1	S	0546.5	0547.3	1.3	5	2		
	950	GORK	3	S	0546.5	0547.4	1.5	2.6	1.3		
	9400	TYKW	45	C	0548.0	0558.3	13.0	51	10		
	3750	TYKW	45	C	0550.0	0555.9	10.0	30	8		
	100	GORK			0551.0	0558.3		160			
	100	GORK	46	C	0551.0	0551.9	7.8	160			
	100	GORK			0551.0	0556.0		160			
	3100	CRIM	45	C	0551.0	0555.5	8.0	20	7		
	3100	CRIM			0551.0	0558.0		17	6		
	2000	TYKW	45	C	0552.0	0556	9.0	6	2		
	10400	BERN	4		0553.4	0558.2	7.6	32.0			ONLY PAPER REC
	8400	BERN	4		0553.4	0558.2	7.6	22.0			ONLY PAPER REC
	11800	BERN	4		0553.4	0558.2	7.6	28.0			ONLY PAPER REC
	5730	IRKU	45	C	0553.5	0555.1	6.0	42			L
	5730	IRKU			0553.5	0557.5		60			L
	2950	GORK	1	S	0554.0	0555.5	5.8	7.6			
	1000	TYKW	45	C	0554.0U	0556.5U	6.0U	5 U	2 U		
	950	GORK	3	S	0554.2	0556.3	5.8	4.7	2.3		
	9100	GORK			0554.8	0558.3		44			
	9100	GORK	45	C	0554.8	0556.0	5.7	19			
	536	ONDR	41	F	0558.0	0602	42.0	15	2		
	3750	TYKW	30	PBI	0600.0		36.0	5	5		
	9400	TYKW	30	PBI	0601.0		29.0	9	7		
	2000	TYKW	21	GRF	0610.0	0720	140.0	5	2.5		
	6100	KISV	4	S/F	0612.0	0613	8.0	6			
	9400	TYKW	5	S	0630.0	0637.5U	20.0	22 U	12		
	2000	TYKW	8	S	0635.8	0635.9	.2	13	4		
	3750	TYKW	5	S	0636.0	0638	14.0	12	9		
	2000	TYKW	45	C	0637.0	0637.4	1.5	17	2		
	1000	TYKW	8	S	0637.3	0637.4	.4	5	1.5		
	9400	TYKW	29	PBI	0650.0		60.0	8	4		
	3750	TYKW	29	PBI	0650.0		60.0	6	3		
	113	POTS	4	S/F	0655.4	0655.4	.1E	100	20		
	17000	NOBE	3	S	0655.7	0658.3	7.0	36			O
	113	POTS	41	F	0810.7	0810.8	1.7	1800	60		III
	2650	DWIN	45	C	0846.0	0846	1.0	130	50		
	3100	CRIM	3	S	0846.5	0847.0	1.0	43	14		
	950	GORK	1	S	0846.5	0846.7	.3	3	1.5		
	1000	TYKW	45	C	0846.5	0846.7	1.5	4	1		
	2000	TYKW	45	C	0846.5	0846.9	1.5	67	15		
	2950	GORK	3	S	0846.6	0847.0	1.0	40	10		
	3000	POTS	20	GRF	0902.0	0937.5	83.0	7.9			
	1470	POTS	20	GRF	0902.0	0921	83.0	6.9			
	9500	POTS	20	GRF	0903.0	0927	77.0	15			
	113	POTS	42	SER	0928.4	0936.3	8.2	200	1 E		III
	8400	BERN	3		0930.8	0940.1	2.6	7.0			ONLY PAPER REC
	33	UPIC	2	S/F	0936.0	0936.2	.7				
	29	UPIC	2	S/F	0936.1	0936.4	1.1				
	100	GORK	45	C	0936.3	0936.5U	.6	180 D			
	100	GORK			0936.3	0936.6		180 D			
	11800	BERN	3		0939.8	0940.1	2.6	6.0			ONLY PAPER REC
	10400	BERN	3		0939.8	0940.1	2.6	11.0			ONLY PAPER REC
	234	POTS	8	S	1135.4	1135.4	.1	550	280		
	408	TRST	42	SER	1141.0	1141.1	.2	640			6R

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
12	327	TRST	42	SER	1141.0	1141.0	.2	590			1L
	234	POTS	4	S/F	1158.3	1200.0	2.3	750	40		
	113	POTS	8	S	1207.3	1207.3	.1E	180	60		
	536	ONDR	42	SER	1233.0	1338	67.0	32			
	408	TRST	5	S	1235.2	1235.2	.1	160	47		3R
	327	TRST	5	S	1235.2	1235.2	.1	200	60		2L
	9500	POTS	8	S	1247.5	1247.5	.3	23			
	33	UPIC	42	SER	1313.1	1313.9	50.4				
	29	UPIC	42	SER	1313.5	1314.3	51.8				
	234	POTS	4	S/F	1321.2	1321.2	.2	700	100		
	1470	POTS	1	S	1337.5	1338.8	4.0	5.1			
	3000	POTS	3	S	1337.5U	1338.5U	2.5U	10			
	2800	OTTA	1	S	1337.5	1338.2	2.0	6.2	3.1		
	7000	SAOP	45	C	1345.0	1402.2	113.4	32.0			0
	10400	BERN	3		1401.0	1402.4	26.6	30.0			ONLY PAPER REC
	10715	DWIN	1	S	1401.0	1403	4.0	10	5		
	11800	BERN	3		1401.0	1402.4	26.6	20.0			ONLY PAPER REC
	9500	POTS	4	S/F	1401.0	1402.3	4.0	21			
	19600	BERN	3		1401.0	1402.4	26.6	38.0			ONLY PAPER REC
	8400	BERN	3		1401.0	1402.4	26.6	18.0			ONLY PAPER REC
	9400	HUAN		S	1401.3	1402.2	3.5	23.6	11.0		0
	9400	HUAN		S	1427.7	1428.1	1.1	25.6	14.5		0
	10715	DWIN	1	S	1428.0	1428	1.0	10	5		
	10400	BERN	3		1428.2	1428.4	2.7	27.0			ONLY PAPER REC
	8400	BERN	3		1428.2	1428.4	2.7	13.0			ONLY PAPER REC
	19600	BERN	3		1428.2	1428.4	2.7	24.0			ONLY PAPER REC
	11800	BERN	3		1428.2	1428.4	2.7	20.0			ONLY PAPER REC
	2800	OTTA	3	S	1430.0	1431	2.0	10.4	4.0		
	9400	HUAN		S	1447.1	1453.1	8.9	11.8	9.3		0
	9400	HUAN		S	1511.5	1553.0	59.7	13.8	6.9		0
	930	BORD	41	F	1526.8	1526.9	.4	80	3		
	930	BORD	8	S	1645.4	1645.5	.2	22	2		
	9400	HUAN		S	1748.7	1749.4	2.1	15.7	8.2		0
	2800	OTTA	21	GRF	1910.0	2000	160.0	12.2	6.0		
	2800	OTTA	22	GRF	1941.0	1945	14.0	12.0	5.0		
	9400	HUAN		PRE	1941.3	2040.8	59.5	11.8	8.6		0
	2800	OTTA	46F	C	2038.0	2047	19.0	83.6	29.6		
	9400	HUAN		C	2040.8	2047.0	13.5	230.0	88.8		1
	9400	HUAN		PBI	2054.3	2054.3	41.0	21.6	10.2		0
	3750	TYKW	21	GRF	2200.0	2255	150.0	12	5		
	2695	PENT	21	GRF	2210.0	2255	140.0	10.4	5.0		
	2000	TYKW	21	GRF	2220.0U	2255 U	100.0U	3 U	1.5U		
	9400	TYKW	45	C	2224.0	2228.2	10.0	45	8		
	1000	TYKW	45	C	2225.5	2228.5	7.0	140	30		
	3750	TYKW	45	C	2226.0	2227.2	7.0	75	15		
	2000	TYKW	45	C	2226.0	2227.3	6.0	85	18		
	2800	OTTA	46F	C	2226.0	2227.2	5.0	88.0	30.0		
	2695	PENT	1	S	2239.0	2240	2.0	5.4	2.7		
	3750	TYKW	5	S	2239.0	2240.0	2.0	8	2		
	9400	TYKW	5	S	2239.0	2239.8	2.0	7	2.5		
	3750	TYKW	45	C	2300.0	2302.8	4.0	32	5		
	2695	PENT	1	S	2300.3	2300.7	1.0	5.0	2.5		
	2000	TYKW			2300.5	2302.7		18			
	2000	TYKW	45	C	2300.5	2301.0	4.0	25	3		
	9400	TYKW	45	C	2300.5U	2302.7	3.0U	95 U	15 U		RAIN
	1000	TYKW	8	S	2300.9	2301.0	.2	40	8		
	1000	TYKW	45	C	2302.0	2302.7	2.0	30	5		
	2695	PENT	3	S	2302.0	2302.8	1.5	24.0	8.0		
	17000	NOBE	2	S/F	2302.0	2302.7	1.0	41			L
	2000	TYKW	8	S	2307.6	2307.6	.2	33	5		
13	200	GORK	44	NS	0351.0E		426.0D		30		
	100	GORK	44	NS	0351.0E		429.0E		10		
	234	POTS	44	NS	0535.0E	0550	495.0D	200			
	127	TORN	44	NS	0600.0E	0913.7	490.0D	230	4		V1
	204	IZMI	44	NS	0600.0E		360.0D	50			
	113	POTS	44	NS	0602.0E	0609	438.0D	30			
	260	ONDR	44	NS	0645.0E		481.0D	192	12		
	536	ONDR	44	NS	0645.0E		481.0D	169	9		
	430	KRAK	44	NS	0700.0E		360.0D		5		
	200	HIRA	44	NS	2007.0E	2351	770.0D	25	10		WR
	9400	TYKW	21	GRF	0100.0U	0120	80.0U	5	2 U		RAIN
	3750	TYKW	21	GRF	0100.0	0120	310.0	6	3		
	2000	TYKW	21	GRF	0100.0	0120	90.0	2	1		
	2000	TYKW	45	C	0104.0	0109.9	12.0	3	1		
	1000	TYKW	45	C	0104.0	0107.0	4.0	3	.5		
	3750	TYKW	5	S	0109.6	0109.9	1.0	3	1		
	9400	TYKW	5	S	0143.6	0143.8	1.5	5	2		
	3750	TYKW	5	S	0149.0	0150.3	15.0	1.5	.5		
	100	HIRA	8	S	0229.2	0229.4	.4	6000			WL
	3750	TYKW	21	GRF	0230.0	0236	25.0	4	2		
	9400	TYKW	45	C	0230.5	0231.2	3.0	62	10		
	3750	TYKW	45	C	0230.5	0231.2	2.5	35	8		
	2000	TYKW	5	S	0230.7	0231.2	2.5	16	5		
	1000	TYKW	45	C	0230.8	0231.2	3.0	12	4		

SOLAR RADIO EMISSION
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APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
13	100	HIRA	46	C	0241.3	0242.0	.9	710	120		WL
	3750	TYKW	5	S	0259.0	0305	20.0	2	1		
	9400	TYKW	20	GRF	0300.0	0310	45.0	4	2		
	3750	TYKW	5	S	0324.0	0326.2	10.0	3	.5		
	2000	TYKW	5	S	0326.0	0326.3	1.0	3	1		
	2000	TYKW	29	PBI	0327.0		15.0	1	.5		
	950	GORK	21	GRF	0351.6E	0454.0	200.0D	9			
	650	GORK	23	GRF	0354.0E	0547.6	423.0E	26			
	2000	TYKW	45	C	0403.3	0405.4	3.7	25	6		
	3750	TYKW	5	S	0403.5	0405.5	5.5	62	14		
	2950	GORK	23	GRF	0403.7E	0415.0	420.0E	14			
	9400	TYKW	5	S	0404.0	0405.5	3.0	43	15		
	9100	GORK	23	GRF	0404.4	0455.7	73.0	15			
	2950	GORK	3	S	0404.6	0405.4	1.9	44			
	9100	GORK	1	S	0405.0	0405.5	1.9	39	15		
	17000	NOBE	1	S	0405.1	0405.5	1.4	19			L
	9400	TYKW	30	PBI	0407.0		115.0	9	4		
	2000	TYKW	30	PBI	0407.0		35.0	3	1.5		
	3750	TYKW	30	PBI	0409.0		80.0	5	2		
	3750	TYKW	5	S	0413.0	0414	5.0	1.5	.7		
	1000	TYKW	21	GRF	0420.0U	0450 U	100.0U	6 U	2.5U		
	9400	TYKW	5	S	0420.0	0420.7	2.0	8	4		
	3750	TYKW	5	S	0420.0	0420.7	1.0	8	3		
	2000	TYKW	5	S	0420.6	0420.8	.5	5	1		
	3750	TYKW	29	PBI	0421.0		9.0	3	1.5		
	9400	TYKW	29	PBI	0422.0		15.0	4	2		
	3750	TYKW	45	C	0449.0	0453.5	7.0	12	3		
	9400	TYKW	45	C	0449.0	0453.5	8.0	16	5		
	2000	TYKW	45	C	0449.0	0454.0	7.0	14	3.5		
	1000	TYKW	45	C	0453.0	0454.1	3.0	17	3		
	2950	GORK	1	S	0453.1	0454.0	1.8	6.4	3		
	950	GORK	2	S/F	0453.2	0454.0	1.8	8.4			
	3750	TYKW	29	PBI	0456.0		20.0	3	1		
	2000	TYKW	30	PBI	0456.0		60.0	3	1		
	9400	TYKW	29	PBI	0457.0		20.0U	8	4		
	9400	TYKW	45	C	0520.0	0520.1	3.0	8	2		
	3750	TYKW	45	C	0542.0	0545.9	15.0	5	.8		
	2000	TYKW	5	S	0545.7	0546.0	1.0	1.5	.5		
	9400	TYKW	5	S	0546.0	0547	8.0	2	1		
	3100	CRIM	26	FAL	0552.0	1048.0		18			
	9100	GORK	1	S	0553.0	0553.5	2.0	12	5		
	113	POTS	4	S/F	0640.1	0640.1	.2	350	35		III
	2000	TYKW	5	S	0651.0	0651.1	.5	9	2.5		
	1000	TYKW	45	C	0651.0	0651.1	.5	5	1		
	127	TORN	8	S	0709.1	0709.3	.5	2000 U	350 U		
	113	POTS	4	S/F	0709.5	0709.5	.3	2000	500		III
	100	GORK	8	S	0809.0	0809.1	.3	190 D			
	600	UCCL	41	F	0828.0	0831	4.0	25	6		
	650	GORK	4	S/F	0828.3	0828.5	3.7	135			
	808	ONDR	45	C	0829.0	0831.7	4.0	41	2		
	810	KRAK	41	F	0829.2	0831.7	2.5	69			
	930	BORD	41	F	0829.3	0831.7	2.7	72	3		
	1000	TYKW	45	C	0829.3	0831.7	3.0	60	6		
	950	GORK	4	S/F	0829.4	0831.7	3.4	4.0			
	1470	POTS	4	S/F	0829.5	0831.6	3.0	15			
	3000	POTS	42	SER	0830.0	0835.2	10.0	17			
	2000	TYKW	45	C	0830.0	0831.7	2.0	13	4		
	8400	BERN	22		0833.4	0838.1	18.0	18.0			ONLY PAPER REC
	11800	BERN	22		0833.4	0838.1	18.0	20.0			ONLY PAPER REC
	19600	BERN	22		0833.4	0838.1	18.0	18.0			ONLY PAPER REC
	10400	BERN	22		0833.4	0838.1	18.0	23.0			ONLY PAPER REC
	9100	GORK	22	GRF	0833.8	0835.8	10.0	12	5		
	9500	POTS	40	F	0834.0	0835.3	21.0	15			
	9500	POTS			0834.0	0838.0		18			
	3100	CRIM	1	S	0834.0	0835.0	2.0	13	4		
	2000	TYKW	45	C	0834.0	0835.3	2.0	15	2		
	2950	GORK	1	S	0834.2	0835.2	1.5	12			
	3750	TYKW	5	S	0834.7U	0835.3	1.5U	6 U	1.5U		
	29	UPIC	42	SER	0900.4	0913.6	183.2				
	808	ONDR	2	S/F	0902.0	0902.8	2.0	35			
	10715	DWIN	3	S	0903.0	0904	3.0	40	20		
	2650	DWIN	45	C	0903.0	0904	3.0	70	30		
	810	KRAK	41	F	0903.2	0904.0	1.2	45			
	9100	GORK	3	S	0903.3	0904.2	3.0	100	40		
	930	BORD	46	C	0903.3	0904.3	2.3	48	3		
	8400	BERN	3		0903.3	0904.2	6.0	56.0			ONLY PAPER REC
	10400	BERN	3		0903.3	0904.2	6.0	76.0			ONLY PAPER REC
	35000	BERN	3		0903.3	0904.2	6.0	30.0			ONLY PAPER REC
	19600	BERN	3		0903.3	0904.2	6.0	65.0			ONLY PAPER REC
	11800	BERN	3		0903.3	0904.2	6.0	79.0			ONLY PAPER REC
	3000	POTS	4	S/F	0903.4	0904.5	1.6	39			
	600	UCCL	41	F	0903.5	0904	1.5	35	8		
	1470	POTS	4	S/F	0903.5	0904.2	1.5	24			
	9500	POTS	3	S	0903.5	0904.1	4.5	90			
	113	POTS	42	SER	0903.5	0913.5	11.0	200	2		III

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
13	950	GORK	4	S/F	0903.5	0904.3	2.3	19			
	3100	CRIM	3	S	0903.5	0904.5	2.0	41	13		
	650	GORK			0903.7U	0904.7		30			
	2950	GORK	4	S/F	0903.7	0904.7	1.2	45			
	650	GORK	45	C	0903.7U	0904.3U	4.2U	36 D			
	100	GORK	41	F	0910.9	0911.6	3.0	200 D			
	100	GORK			0910.9	0913.5		200 D			
	930	BORD	8	S	0946.0	0946	.1	34	1		
	100	GORK	8	S	0952.2	0952.6	.8	200 D			
	113	POTS	41	F	0952.6	0952.7	.1	100	10		III
	930	BORD	8	S	0955.0	0955	.1	116	1		
	8400	BERN	1		1002.2	1004.4	7.0	10.0			ONLY PAPER REC
	10400	BERN	1		1002.2	1004.4	7.0	15.0			ONLY PAPER REC
	11800	BERN	1		1002.2	1004.4	7.0	8.0			ONLY PAPER REC
	1470	POTS	3	S	1003.5	1004.8	3.0	13			
	3000	POTS	3	S	1004.0	1004.5	2.5	14			
	9500	POTS	3	S	1004.0	1004.5	3.0	12			
	930	BORD	46	C	1004.0	1005.6	2.0	22	1		
	3100	CRIM	1	S	1004.0	1004.5	1.0	17	5		
	950	GORK	2	S/F	1004.2	1004.7	2.2	4.5			
	2950	GORK	1	S	1004.2	1004.6	.8	8.6	4.0		
	9100	GORK	3	SF	1016.6	1017.3	5.3	19	7		
	9100	GORK	22	GRF	1020.8	1024.1	12.2	10			
	808	ONDR	45	C	1023.3	1024.1	2.5	42	7		
	930	BORD	46	C	1023.4	1024.7	2.0	138	6		
	950	GORK	4	S/F	1023.4	1024.8	2.4	32			
	1470	POTS	4	S/F	1023.5	1024.0	2.0	22			
	650	GORK	4	S/F	1023.8	1024.7	1.2	38			
	3000	POTS	3	S	1023.9	1024.4	1.6	9.0			
	9500	POTS	1	S	1023.9	1024.4	2.1	6.7			
	234	POTS	4	S/F	1024.0	1024.4	.9	2600	100		III
	600	UCCL	4	F	1024.0	1024.2	1.0	48	12		
	100	GORK			1024.0	1024.6		200			
	810	KRAK	2	S/F	1024.0	1024.8	2.0	85	8		
	100	GORK	46	C	1024.0	1024.3	.9	200			
	3100	CRIM	1	S	1024.0	1024.5	1.0	12	4		
	113	POTS	4	S/F	1024.1	1024.6	.8	280	30		III
	430	KRAK	4	S/F	1024.2	1024.5	2.0	160	22		
	810	KRAK	8	S	1034.5	1034.5	.1	9			
	600	UCCL	42	SER	1040.0	1141	64.0	20			
	2650	DWIN	2	S/F	1111.0	1112	2.0	50	20		
	9400	HUAN		S	1210.1	1231.8	33.2	6.8	4.9		0
	9500	POTS	1	S	1227.0	1230.0	4.5	10			
	600	UCCL	4	S/F	1227.5	1228	1.0	96	12		
	810	KRAK	8	S	1227.7	1227.7	.1	17			
	1470	POTS	3	S	1228.0	1230.0	5.0	35			
	810	KRAK	8	S	1228.3	1228.3	.1	54			
	930	BORD	45	C	1229.0	1230	4.0	120	9		
	3000	POTS	3	S	1229.0	1230.0	2.0	20			
	9400	HUAN		S	1229.1	1229.7	1.6	8.4	3.0		0
	808	ONDR	4	S/F	1229.2	1230	2.5	52	7		
	430	KRAK	4	S/F	1229.3	1230.0	1.8	140	28		
	810	KRAK	4	S/F	1229.5	1230.0	1.8	250	12		
	2800	OTTA	3	S	1229.5	1230	2.0	15.4	5.2		
	600	UCCL	4	S/F	1229.5	1229.7	1.5	65	10		
	234	POTS	4	S/F	1229.6	1229.9	.6	750	250		III
	127	TORN	8	S	1229.7	1230.1	1.0	570	290		
	113	POTS	4	S/F	1229.8	1230.0	.4	500	50		III
	2800	OTTA	1	S	1237.0	1237.8	1.2	4.2	2.1		
	930	BORD	45	C	1239.5	1240.2	1.3	58	4		
	430	KRAK	3	S	1239.7	1240.3	.7	170	50		
	1470	POTS	3	S	1239.7	1240.2	1.3	12			
	808	ONDR	8	S	1240.0	1240	.2	25			
	810	KRAK	3	S	1240.0	1240.5	1.0	50	12		
	3000	POTS	1	S	1247.0	1247.5	1.0	6.0			
	1470	POTS	1	S	1247.3	1247.5	.7	4.6			
	2800	OTTA	22	GRF	1330.0	1450	190.0	5.2	3.0		
	7000	SAOP	45	C	1627.7	1629.6	5.0	16.0			10L
	9400	HUAN		S	1709.4	1711.1	2.9	11.8	5.1		1
	600	UCCL	2	S/F	1711.5	1713.7	2.5	15	7		
	2800	OTTA	20	GRF	1725.0	1800	65.0	5.2	3.8		
	7000	SAOP	45	C	1809.0	1812.5	9.0	24.0			7L
	2800	OTTA	21	GRF	1845.0	1950	135.0	4.6	2.3		
	9400	HUAN		S	1850.1	2015.2	120.7	13.5	6.9		1
	2800	OTTA	40	F	1851.0	1851.1	4.0	5.2			
	2800	OTTA	1	S	1955.0	1955.5	2.0	6.2	3.1		
	2800	OTTA	21	GRF	2120.0	2135	45.0	6.8	3.4		
	2800	OTTA	1	S	2133.5	2134	1.0	4.2	2.1		
	1000	TYKW	45	C	2150.0	2150.9	2.0	20	3		
	3750	TYKW	5	S	2220.5	2221.2	2.5	3	1		
	700	SYDN	40	F	2246.5	2248.6	3.0				
	2695	PENT	3	S	2247.0	2248	2.0	16.8	6.0		
	3750	TYKW	5	S	2248.0	2249.0	5.0	21	3		
	1000	TYKW	45	C	2248.0	2248.6	3.0	30	4		
	2000	TYKW	5	S	2248.0	2248.9	2.0	12	3		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
13	1000	TYKW	45	C	2257.0	2300.0	6.0	65	15		
	700	SYDN	45	C	2258.3	2300.0	4.9				
	500	HIRA	4	S/F	2258.4	2300.8	5.0	17	8		ML
	2695	PENT	20	GRF	2305.0	2320	95.0	4.2	2.1		
	1000	TYKW	8	S	2307.2	2307.4	.5	14	4		
	1000	TYKW	45	C	2315.5	2319.6	11.5	16	2		
	2000	TYKW	45	C	2315.5	2316.2	1.5	2	.5		
	2000	TYKW	5	S	2319.2	2319.6	1.0	2	.5		
14	200	GORK	44	NS	0353.0E		497.0D		5		
	100	GORK	44	NS	0530.0E		390.0D		5		
	260	ONDR	44	NS	0600.0E		496.0D	104	5		
	100	HIRA	43	NS	0623.0	0742	160.0D	50	35		WL
	127	TORN	43	NS	0700.0	1329.7	480.0	90	7		V1
	3750	TYKW	5	S	0215.5	0216.4	2.5	11	2		
	9400	TYKW	5	S	0215.8	0216.4	1.5D	12	3 D		RAIN
	2000	TYKW	5	S	0216.0	0216.5	1.5	1.5	.5		
	700	SYDN	4	S/F	0238.0	0238.4	.8				
	3750	TYKW	21	GRF	0345.0	0430	240.0	6	3		
	2000	TYKW	21	GRF	0350.0	0500	230.0	6	3		
	9400	TYKW	21	GRF	0405.0U	0500 U	80.0U	6 U	2 U		RAIN
	700	SYDN	45	C	0408.8	0409.0	2.0				
	3750	TYKW	5	S	0409.0	0409.3	1.0	1.5	.5		
	1000	TYKW	5	S	0409.0	0409.4	1.5	1.5	.5		
	2000	TYKW	5	S	0409.0	0409.4	1.5	4	1.5		
	1000	TYKW	5	S	0411.5	0412.1	1.0	7	1		
	2000	TYKW	45	C	0412.0	0412.1	2.2	4	1		
	950	GORK	41	F	0412.0	0413.9	4.9	13			
	950	GORK			0412.0	0415.8		13.5			
	650	GORK	41	F	0412.2	0414 U	4.5	7			
	650	GORK			0412.2	0415.7		36			
	700	SYDN	41	F	0412.7	0415.5	4.5				
	1000	TYKW	45	C	0413.3	0413.6	1.0	10	2		
	3750	TYKW	45	C	0414.8	0415.6	1.5	13	2		
	2000	TYKW	45	C	0414.8	0415.6	1.2	18	6		
	1000	TYKW	45	C	0414.8	0415.6	2.0	15	3.5		
	1400	SYDN	2	S/F	0414.8	0415.6	1.1				
	9400	TYKW	5	S	0415.0	0415.5	1.0	4	1		
	3750	TYKW	5	S	0419.0	0419.7	3.0	5	1.5		
	2000	TYKW	5	S	0419.0	0419.8	3.0	3	1		
	9400	TYKW	5	S	0419.3	0419.8	2.0	9	3		
	700	SYDN	27	RF	0435.8	0437.1	3.2				
	3750	TYKW	21	GRF	0437.0	0447	45.0	6	3		
	9400	TYKW	5	S	0442.8	0443.0	1.0	6	1.5		
	2000	TYKW	20	GRF	0540.0	0640	100.0	3	1.5		
	3750	TYKW	21	GRF	0550.0	0645	100.0	5	2		
	204	IZMI	41	F	0559.5	0559.5	.8	280			
	650	GORK	3	S	0608.4	0608.5U	.5	37 D			
	536	ONDR	8	S	0608.5	0608.5	.2	39			
	234	POTS	4	S/F	0709.0	0709.0	.1	250	60		
	9500	POTS	22	GRF	0910.0	0934	46.0	13			
	430	KRAK	42	SER	0911.0	1147.0	169.0D	290			
	408	TRST	42	SER	0940.4	0941.3	1.0	110			4L
	327	TRST	42	SER	0941.0	0941.2	.7	130			15L
	930	BORD	8	S	1000.7	1000.8	.2	26	2		
	327	TRST	45	C	1031.7	1031.8	.3	220	66		4L,VARIABLE POL
	408	TRST	45	C	1031.7	1031.8	.2	200	59		2L,VARIABLE POL
	930	BORD	8	S	1031.8	1031.8	.1	29	1		
	2950	GORK	21	GRF	1048.1	1051.2	20.0	4.6			
	3000	POTS	3	S	1048.5	1049.5	2.0	12			
	1470	POTS	1	S	1049.0	1049.7	3.0	4.6			
	9100	GORK	2	S/F	1049.0	1049.5	4.3	8	3		
	3100	CRIM	3	S	1049.0	1049.5	1.0	23	7		
	6100	KISV	4	S/F	1049.0	1049.8	6.0	14			
	2950	GORK	1	S	1049.3	1049.7	1.4	3.3	4.0		
	536	ONDR	42	SER	1106.7	1107	48.0	72			
	1470	POTS	42	SER	1106.7	1112.0	6.3	10			
	6100	KISV	45	C	1111.0	1112.5	3.0	11			
	3100	CRIM	3	S	1111.0	1112.0	2.0	57	15		
	3000	POTS	4	S/F	1111.5	1112.1	1.3	32			
	327	TRST	41	F	1144.2	1147.3	5.4	210			6L
	408	TRST	41	F	1147.2	1147.2	1.2	130			7L
	810	KRAK	41	F	1151.7	1153.0	1.5	230			
	2950	GORK	22	GRF	1152.5	1154.0	16.5	7.4			
	2800	OTTA	8	S	1152.5	1152.7	.5	3.2	1.6		
	1470	POTS	2	S/F	1152.5	1153.7	1.9	4.6			
	9100	GORK	2	S/F	1152.8	1154.0	6.0	7.6	3		
	2800	OTTA	8	S	1153.3	1153.4	.5	10.8	5.4		
	3000	POTS	3	S	1153.4	1153.6	.6	9.4			
	9500	POTS	1	S	1153.5	1153.7	.9	6.7			
	6100	KISV	8	S	1153.5	1154	1.0	4			
	650	GORK	4	S/F	1153.6	1154.1	.7	20	10		
	950	GORK	1	S	1153.8	1154.1	.6	2.7	1.3		
	2800	OTTA	20	GRF	1158.0	1210	27.0	3.2	1.6		
	930	BORD	41	F	1158.8	1158.8	.4	18	2		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
14	327	TRST	41	F	1215.6	1217.8	2.6	360			4L
	408	TRST	41	F	1215.8	1218.6	2.9	160			1L
	237	TRST	41	F	1216.9	1217.9	1.6	140			4L
	1470	POTS	2	S/F	1217.7	1218.0	1.3	4.6			
	810	KRAK	8	S	1218.0	1218.2	.5	800			
	930	BORD	41	F	1218.3	1218.6	.8	74	2		
	808	ONDR	8	S	1218.7	1218.7	.2	58			
	2800	OTTA	20	GRF	1227.0	1330	205.0	5.2	2.6		
	536	ONDR	8	S	1326.4	1326.4	.3	20			
	9400	HUAN		S	1355.8	1426.7	123.2	5.6	3.3		R
	930	BORD	45	C	1404.6	1404.6	.5	67	3		
	808	ONDR	8	S	1405.0	1405	.2	59			
	9400	HUAN		S	1720.5	1724.0	11.6	3.7	3.2		0
	9400	HUAN		S	1725.9	1726.2	1.4	22.3	8.2		1
	2800	OTTA	260	FAL	1755.0	1855	60.0	-4.2	-2.1		
	2800	OTTA	21	GRF	2003.0	2036	85.0	13.0	4.4		
	2800	OTTA	3	S	2004.0	2005.3	6.0	92.0	23.0		
	9400	HUAN		S	2004.3	2005.3	5.0	74.3	34.8		1
	9400	HUAN		PBI	2009.3	2009.3	13.4	18.6	9.6		0
	9400	HUAN		S	2030.0	2042.0	23.5	13.0	7.8		0
	2800	OTTA	2	S/F	2031.0	2032	4.0	8.6	5.0		
	9400	HUAN		S	2115.8	2141.8	32.5	16.7	4.9		R
	2800	OTTA	40	F	2135.0	2141.8	9.0	30.0			
	2000	TYKW	45	C	2135.0	2136.9	5.0	31	3		
	3750	TYKW	45	C	2135.0	2137.5	12.0	26	3		
	1000	TYKW	45	C	2136.0	2136.9	4.0	12	3		
	9400	HUAN		S	2136.9	2137.4	1.7	20.4	12.4		R
	9400	TYKW	45	C	2137.0	2137.5	9.0	19	4		
	2695	PENT	260	FAL	2220.0	2350	90.0	-8.4	-4.2		
15	200	GORK	44	NS	0402.0E		538.0D		5		
	260	ONDR	44	NS	0557.0E		490.0D	81	9		
	3750	TYKW	45	C	0204.5	0206.0	15.0	23	3.5		
	2000	TYKW	5	S	0204.5	0205.8	7.0	15	3		
	500	HIRA	46	C	0204.6	0206.1	2.5	400	60		WL
	100	HIRA	46	C	0204.7	0205.4	5.0	6100	670		WL
	1400	SYDN	2	S/F	0204.9	0205.7	2.8				
	700	SYDN	4	S/F	0204.9	0205.8	4.3				
	9400	TYKW	45	C	0205.0	0206.0	17.0	19	4.5		
	1000	TYKW	5	S	0205.0	0205.9	7.0	24	6		
	9400	TYKW	5	S	0318.5	0319.2	5.0	3	1		
	3750	TYKW	5	S	0337.5	0337.8	.7	3	1		
	3750	TYKW	45	C	0439.0	0443.2	8.0	20	7		
	2000	TYKW	5	S	0440.0	0445.7	20.0	3	1		
	9400	TYKW	5	S	0441.0	0443.2	3.0	9	4		
	9100	GORK	20	GRF	0441.5	0443.2	16.5	10	3		
	2950	GORK	1	S	0442.0	0443.2	4.4	6.6	3.3		
	9400	TYKW	29	PBI	0444.0		45.0	4	2		
	3750	TYKW	29	PBI	0447.0		25.0	6	2		
	3750	TYKW	45	C	0547.0	0548.9	10.0	70	10		
	5730	IRKU	2	S/F	0547.0	0549.0	4.0	30			L
	2000	TYKW	45	C	0547.0	0549.0	10.0	60	8		
	100	HIRA			0547.0	0553.4		4400			WL
	100	HIRA	46	C	0547.0	0548.9	14.0	5000	480		0
	100	HIRA			0547.0	0551.9		3200			WL
	950	GORK			0547.4	0553.9		37			
	950	GORK	46	C	0547.4	0549.5	6.5	100			
	228	HARS	45	C	0547.5	0550.0	5.5	180	40		
	29	UPIC	42	SER	0547.7	0548.7	81.4				
	2950	GORK	21	GRF	0547.7	0550.8	12.2	11.0	4.0		
	9100	GORK	21	GRF	0548.0	0551.8	17.0	14			
	2950	GORK	3	S	0548.0	0549.0	1.9	60	30		
	1000	TYKW	45	C	0548.0	0549.2	6.0	100	17		
	9400	TYKW	45	C	0548.0	0549.1	10.0	20	8		
	3100	CRIM	3	S	0548.0	0549.5	3.0	105	35		
	700	SYDN	45	C	0548.1	0549.7	3.1				
	1400	SYDN	4	S/F	0548.2	0549.1	1.6				
	33	UPIC	42	SER	0548.2	0548.7	80.9				
	500	HIRA	45	C	0548.2	0549.1	2.0	45	20		SL
	11800	BERN	3		0548.3	0549.0	2.0	22.0			ONLY PAPER REC
	10400	BERN	3		0548.3	0549.0	2.0	20.0			ONLY PAPER REC
	8400	BERN	3		0548.3	0549.0	2.0	22.0			ONLY PAPER REC
	650	GORK			0548.4	0553.4		8			
	650	GORK	41	F	0548.4U	0549.0U	5.6U	40 D			
	9100	GORK	1	S	0548.5	0548.9	1.3	19	7		
	3750	TYKW	29	PBI	0557.0		30.0	3.5	1.5		
	2000	TYKW	29	PBI	0557.0		25.0	1.5	.7		
	9400	TYKW	29	PBI	0558.0		20.0	4	2		
	3100	CRIM	26	FAL	0748.0	0810.0		6			
	29	UPIC	41	F	1028.4	1028.6	24.6				
	33	UPIC	41	F	1028.5	1050	24.0				
	3100	CRIM	20	GRF	1053.0	1142.0	127.0D	12	4		
	33	UPIC	48	C	1101.9	1105.8	21.2				
	29	UPIC	48	C	1102.9	1104.8	21.1				
	9100	GORK	20	GRF	1103.0	1135.5	75.0	6.3	2.5		

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
15	204	IZMI	4	S/F	1105.7	1106.0	3.3	50	30		
	430	KRAK	45	C	1251.0	1253.5	6.2	48 D	13		
	10715	DWIN	45	C	1504.0	1506	4.0	35	20		
	2650	DWIN	45	C	1504.0	1507	6.0	220	70		
	2800	OTTA	21	GRF	1508.0	1600	135.0	8.4	4.8		
	2800	OTTA	4	S/F	1508.5	1510.5	8.0	126.0	37.0		
	9400	HUAN			1508.7	1511.1		89.0			
	9400	HUAN		C	1508.7	1510.6	5.3	78.7	28.4		R
	11800	BERN	46		1508.8	1511.2	7.0	108.0			ONLY PAPER REC
	7000	SAOP	45	C	1508.8	1510.4	3.6	106.0			7R
	10400	BERN	46		1508.8	1511.2	7.0	84.0			ONLY PAPER REC
	8400	BERN	46		1508.8	1511.2	7.0	53.0			ONLY PAPER REC
	19600	BERN	46		1508.8	1511.2	7.0	170.0			ONLY PAPER REC
	35000	BERN	46		1508.8	1511.2	7.0	131.0			ONLY PAPER REC
	930	BORD	45	C	1509.6	1511.3	5.0	174	10		
	9400	HUAN		S	1530.1	1600.0	59.5	10.3	4.6		R
	7000	SAOP	27	RF	1537.0		33.0	9.0			O
	2800	OTTA	26O	FAL	1820.0	1840	20.0	-4.6	-2.3		
	2800	OTTA	20	GRF	1920.0	1933	55.0	5.6	2.0		
16	200	GORK	44	NS	0515.0E		465.0D		5		
	260	ONDR	44	NS	0544.0E		505.0D	14			
	200	HIRA	46	C	0038.6	0039.5	1.9	1000	190		WL
	100	HIRA	46	C	0038.9	0039.6	1.4	9000	2000		ML
	3750	TYKW	21	GRF	0055.0	0135	105.0	7	4		
	9400	TYKW	21	GRF	0055.0	0135	100.0	11	5		
	3750	TYKW	45	C	0058.0	0103.6	10.0	13	2.5		
	9400	TYKW	45	C	0058.0	0103.7	9.0	38	7		
	2000	TYKW	45	C	0058.0	0103.6	9.0	20	4		
	2930	VORO	3	S	0100.0	0103	8.0	22			
	35000	NAGO	21	GRF	0101.0	0103	43.0	17			
	1400	SYDN	2	S/F	0101.2	0103.7	4.3				
	17000	NOBE	1	S	0101.6	0103.8	60.0	27			O
	1000	TYKW	45	C	0102.0	0103.8	5.0	23	2.5		
	2000	TYKW	29	PBI	0107.0		90.0	2	1		
	3750	TYKW	45	C	0402.0	0407.1	8.0	25	6		
	2000	TYKW	45	C	0402.0	0407.3	8.0	13	3		
	9400	TYKW	45	C	0402.0	0407.3	10.0	17	4		
	700	SYDN	45	C	0406.4	0406.8	3.6				
	1000	TYKW	45	C	0406.5	0407.0	3.0	59	6		
	3750	TYKW	29	PBI	0410.0		35.0	4	2		
	2000	TYKW	29	PBI	0410.0		30.0	2	1		
	9400	TYKW	29	PBI	0412.0		30.0	4	2		
	3750	TYKW	20	GRF	0450.0	0500	40.0	2	1		
	9400	TYKW	20	GRF	0455.0	0500	35.0	2	1		
	200	HIRA	46	C	0524.3	0524.8	.8	115	42		
	100	HIRA	46	C	0524.3	0524.6	.8	76	28		WL
	9400	TYKW	20	GRF	0538.0	0545	40.0	5	2.5		
	2000	TYKW	45	C	0538.0	0541	6.0	6	2		
	3750	TYKW	45	C	0538.0	0540.6	7.0	9	2		
	2950	GORK	22	GRF	0538.2	0540.9	25.6	6.5			
	9100	GORK	20	GRF	0539.3	0544.2	12.3	4.4			
	2000	TYKW	29	PBI	0544.0		20.0	1.5	.7		
	3750	TYKW	29	PBI	0545.0		40.0	3	1.5		
	9400	TYKW	5	S	0637.5	0638	2.0	6	2		
	9100	GORK	1	S	0637.5	0638.2	5.7	7.4	3		
	3750	TYKW	5	S	0637.8	0638.2	4.0	2	1		
	2000	TYKW	20	GRF	0650.0	0710	50.0	1	.5		
	3750	TYKW	20	GRF	0650.0	0707	40.0	4	1.5		
	127	TORN	41	F	0937.0	1002.5	38.0	20			
	930	BORD	41	F	1338.0	1338.1	.6	26	2		
	2800	OTTA	20	GRF	1700.0	1717	60.0	3.2	1.6		
	700	SYDN	40	F	2248.4	2249.2	1.5				
17	260	ONDR	44	NS	0556.0E		490.0D	15			
	200	GORK	44	NS	0617.0E		403.0D		5		
	700	SYDN	45	C	0124.8	0125.0	.4				
	700	SYDN	2	S/F	0208.3	0208.5	.5				
	2000	TYKW	21	GRF	0417.0	0445	170.0	7	2.5		
	3750	TYKW	21	GRF	0430.0	0450	150.0	7	2.5		
	2000	TYKW	5	S	0437.0	0438.0	3.0	5	1.5		
	3750	TYKW	5	S	0437.0	0438	3.0	1.5	.5		
	9400	TYKW	20	GRF	0437.0	0450	50.0	4	2		
	9100	GORK	20	GRF	0440.8	0455.3	28.3	5			
	2950	GORK	20	GRF	0457.8	0504.7	10.6	8.3	4.0		
	2000	TYKW	45	C	0458.0	0504.8	13.0	15	4.5		
	3750	TYKW	45	C	0501.0	0504.8	8.0	3.5	1.5		
	1000	TYKW	5	S	0501.0U	0505 U	10.0U	7 U	3 U		
	3100	CRIM	20	GRF	0614.0	0623.0	37.0	12	4		
	2950	GORK	1	S	0621.0	0622.8	4.6	3.7	1.8		
	3750	TYKW	5	S	0622.0	0622.9	3.0	3	1		
	2000	TYKW	5	S	0622.0	0622.9	3.0	3	1		
	1470	POTS	8	S	0651.0	0651.2	.5	12			
	113	POTS	4	S/F	0747.0	0749.4	8.7	200	20		III
	33	UPIC	46	C	0747.5	0751.5	9.6				

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
17	29	UPIC	46	C	0747.8	0751.5	5.6				
	127	TORN	48	C	0748.5	0751.5	6.0	6			
	1000	TYKW	45	C	0749.0	0752.8	5.0	55	4		
	200	GORK	2	S/F	0749.2	0751.7	5.1	15			
	950	GORK	3	S	0749.4	0753.0	6.4	50	40		
	2000	TYKW			0750.0	0752.8		10			
	2000	TYKW	45	C	0750.0	0751.3	7.0	14	2		
	650	GORK	45	C	0751.0	0751.3	3.1	5			
	2950	GORK	1	S	0751.0	0753.0	5.6	3.7	1.5		
	650	GORK			0751.0	0752.9		25			
	1470	POTS	4	S/F	0751.0	0752.8	3.5	18			
	3000	POTS	3	S	0751.0	0753.0	2.5	4.4			
	930	BORD	3	S	0752.3	0752.8	1.0	60	20		
	3750	TYKW	5	S	0752.6	0753	1.0	1 U	.3U		
	810	KRAK	3	S	0752.7	0752.8	.5	46	23		
	9500	POTS	8	S	1400.4	1400.5	.6	13			
	9400	HUAN		S	1542.9	1555.2	21.3	8.4	2.4		R
	2800	OTTA	20	GRF	2000.0	2110	150.0	4.2	2.4		
	2000	TYKW	5	S	2314.0	2314.5	2.0	8	2		
	3750	TYKW	5	S	2314.0	2314.5	2.0	6	2		
	2695	PENT	8	S	2314.2	2314.5	.8	6.8	3.4		
	1000	TYKW	5	S	2314.3	2314.4	.3	160 D	50 D		
18	200	GORK	44	NS	0411.0E		169.0D		5		
	260	ONDR	44	NS	0600.0E		502.0D	28			
	2000	TYKW	5	S	0115.0	0117	6.0	3	.8		
	9400	TYKW	20	GRF	0430.0	0450	60.0	3	1.5		
	3750	TYKW	20	GRF	0430.0	0450	100.0	5	3		
	2000	TYKW	20	GRF	0430.0	0450	100.0	3	1.5		
	6100	KISV	1	S	0535.5	0537	3.0	2			
	2000	TYKW	21	GRF	0623.0	0645	140.0	5	2.5		
	3750	TYKW	21	GRF	0623.0	0645	140.0	9	5		
	3100	CRIM	21	GRF	0624.0	0658.0	101.0	7	2		
	9400	TYKW	21	GRF	0624.0	0644	110.0D	11	7 D		
	2000	TYKW	45	C	0624.0	0639.3	20.0	13	2		
	2950	GORK	21	GRF	0625.5	0657.0	360.0E	7.3			
	9100	GORK	20	GRF	0626.0	0653.7	89.0	11	4.4		
	1000	TYKW	5	S	0638.5	0639.3	2.5	5	1.5		
	3100	CRIM	1	S	0638.5	0639.0	1.0	10	3		
	3000	POTS	1	S	0638.7	0639.3	1.3	6.2			
	1470	POTS	1	S	0638.8	0639.4	1.7	5.5			
	3750	TYKW	45	C	0639.0	0639.3	1.5	5	1.5		
	2950	GORK	1	S	0639.3	0639.7	.9	6.4	3.2		
	35000	NAGO	20	GRF	0643.0	0651	16.0	9			
	2000	TYKW	45	C	0653.0	0654.5	4.0	4	1		
	3750	TYKW	45	C	0653.5	0654.7	4.0	3.5	1		
	3100	CRIM			0654.0	0655.5		6	2		
	3100	CRIM	45	C	0654.0	0654.5	3.0	8	3		
	3000	POTS	2	S/F	0654.0	0654.8	2.5	6.1			
	2950	GORK	1	S	0654.5	0655.2	2.5	10			
	3100	CRIM	3	S	0749.0	0750.0	3.0	92	30		
	6100	KISV	8	S	0809.0	0809.5	2.0	20			
	9100	GORK	1	S	0809.0	0810.0	2.2	16	6		
	2650	DWIN	3	S	0809.0	0810	5.0	70	40		
	810	KRAK	41	F	0809.3	0809.5	1.5	220			
	930	BORD	46	C	0809.3	0809.4	1.0	199	4		
	3750	TYKW	5	S	0809.3	0809.6	5.0	58	12		
	2000	TYKW	45	C	0809.3	0809.7	7.0	45	12		
	1000	TYKW	45	C	0809.3	0809.6	3.0	150	10		
	9400	TYKW	5	S	0809.3	0809.6	2.0	10	3		
	3000	POTS	4	S/F	0809.5	0809.6	5.5	70			
	1470	POTS	4	S/F	0809.5	0809.8	5.5	27			
	9500	POTS	1	S	0809.5	0809.7	1.5	8.3			
	808	ONDR	8	S	0809.8	0809.8	.2	130			
	2950	GORK	3	S	0809.8	0810.1	2.5	63	30		
	600	UCCL	41	F	0810.0	0810.5	1.0	14	4		
	600	UCCL	40	F	0842.0	0848.5	7.0	6	2		
	600	UCCL	40	F	1158.0	1159	8.0	4	1		
	237	TRST	42	SER	1216.0	1216.3	.5	95			1L
	237	TRST	41	F	1414.7	1415.7	2.0	120			1L
	2800	OTTA	21	GRF	2000.0	2046	105.0	4.0	2.0		
	2800	OTTA	1	S	2001.5	2002.5	2.5	5.0	3.4		
	2800	OTTA	1	S	2043.5	2044	2.0	2.4	1.2		
19	260	ONDR	44	NS	0600.0E		492.0D	24			
	200	GORK	43	NS	0725.0		217.0E		5		
	1000	TYKW	5	S	0055.5	0056.8	3.5	4	1		
	3750	TYKW	5	S	0056.0	0056.8	5.0	1.5	.5		
	2000	TYKW	5	S	0056.0	0057.0	5.0	3	1		
	3750	TYKW	5	S	0117.0	0120	15.0	4	1		
	2000	TYKW	5	S	0239.0	0240.7	3.0	4	2		
	3750	TYKW	5	S	0239.0	0240.7	3.0	5	2		
	2000	TYKW	29	PBI	0242.0		20.0	1.5	.5		
	3750	TYKW	29	PBI	0242.0		50.0	2	1		
	3750	TYKW	5	S	0346.0	0346.3U	1.0	1 U	.5U		

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19	2000	TYKW	5	S	0346.0	0346.3	1.0	2	.7		
	600	UCCL	3	S	0647.5	0647.8	.5	24	10		
	1000	TYKW	5	S	0656.0	0656.2	.5	13	2		
	600	UCCL	1	S	0705.0	0707	2.5	4	2		
	113	POTS	8	S	0800.2	0800.3	.1	600	200		III
	600	UCCL	3	S	0838.7	0838.8	.3	15	6		
	600	UCCL	8	S	0855.5	0856.6	.3	52	25		
	810	KRAK	8	S	0947.2	0947.2	.1	28			
	600	UCCL	41	F	1022.0	1025	4.0	6			
	600	UCCL	40	F	1037.8	1038	3.0	8	3		
	2800	OTTA	22	GRF	1500.0	1550	170.0	3.4	1.7		
	327	TRST	41	F	1553.6	1554.2	1.9	73			1R
	237	TRST	41	F	1553.7	1555.9	2.4	77			2L
	7000	SAOP	40	F	1735.0		34.0				O
	9400	HUAN		S	1850.4	1850.8	1.0	21.9	7.7		R
20	200	GORK	44	NS	0421.0E		399.0D		5		
	260	ONDR	44	NS	0650.0E		474.0D	27			
	3750	TYKW	28	PRE	0226.0	0227.3	22.0	2.5	1		
	2000	TYKW	5	S	0248.0	0249.5	4.0	2.5	1.8		
	3750	TYKW	45	C	0248.0	0249.7	4.0	7	4		
	2000	TYKW	29	PBI	0252.0		25.0	1.8	1		
	3750	TYKW	29	PBI	0252.0		25.0	3	1.5		
	3750	TYKW	21	GRF	0330.0	0630	300.0	5	2.5		
	2000	TYKW	21	GRF	0330.0	0630	300.0	3	1.5		
	9400	TYKW	21	GRF	0630.0U	0720 U	100.0U	10 U	5 U		
	1000	TYKW	21	GRF	0630.0U	0650 U	60.0U	4	2		
	3750	TYKW	21	GRF	0638.0	0720	100.0	8	4		
	2000	TYKW	21	GRF	0638.0	0720	100.0	4.5	2.5		
	3750	TYKW	45	C	0638.0	0643.5	20.0	17	3		
	2000	TYKW	45	C	0638.0	0643.6	30.0	14	4		
	3100	CRIM			0639.0	0643.8		22	7		
	3100	CRIM	45	C	0639.0	0641.0	10.0	17			
	3000	POTS	3	S	0639.5	0640.7	2.5	16			
	1470	POTS	3	S	0640.0	0640.9	3.0	13			
	2950	GORK			0640.0	0643.7		16			
	2950	GORK	46	C	0640.0	0641.1	6.8	12	6		
	6100	KISV			0640.0	0642		7			
	6100	KISV	45	C	0640.0	0645	15.0	8			
	6100	KISV	29	PBI	0640.0	0655	95.0	7			
	9100	GORK	20	GRF	0640.4	0729.7	94.0	12	5		
	200	GORK	2	S/F	0643.2	0644.3	1.9	4			
	650	GORK	40	F	0645.5	0645.8	2.4	2.5			
	650	GORK			0645.5	0647.5		2.5			
	2950	GORK	29	PBI	0646.8	0646.8	70.0	6.0			
	1470	POTS	42	SER	0718.0	0727.2	11.0	8.3			
	2000	TYKW	42	SER	0718.0	0719.1	7.0	7	1		
	950	GORK	22	GRF	0740.1	0745.4	8.9	3			
	536	ONDR	42	SER	1235.0	1344	95.0	42			
	237	TRST	45	C	1252.1	1252.1	.1	120	29		4L
	9400	HUAN		S	1706.7	1714.5	51.9	5.4	1.0		O
	2800	OTTA	8	S	1956.0	1956.1	.7	2.8			
	2800	OTTA	20	GRF	2130.0	2210	95.0	4.6	2.3		
21	200	HIRA	43	NS	2354.0	0125	630.0D	5	2		WL
	2000	TYKW	21	GRF	0210.0	0245	90.0	5	2		
	3750	TYKW	21	GRF	0220.0	0245	80.0	6	2.5		
	9400	TYKW	21	GRF	0220.0	0237.5	80.0	7	2.5		
	9400	TYKW	5	S	0225.4	0225.9	1.0	6	2		
	3750	TYKW	21	GRF	0355.0	0410	95.0	6	2.5		
	9400	TYKW	20	GRF	0355.0U	0410	95.0U	9	4		RAIN
	2000	TYKW	20	GRF	0355.0	0407	50.0	2.5	1		
	6100	KISV	32	ABS	0510.0	0538	70.0	-8			
	3100	CRIM	1	S	0538.8	0540.2	1.0	9	3		
	6100	KISV	8	S	0539.0	0539.8	2.0	11			
	1000	TYKW	45	C	0539.4	0539.7	.8	11	3		
	3750	TYKW	5	S	0539.4	0539.8	1.0	8	4		
	9100	GORK	1	S	0539.4	0539.7	1.0	9	3.5		
	2000	TYKW	5	S	0539.5	0539.8	1.0	2.5	.8		
	9400	TYKW	5	S	0539.5	0539.8	1.0	12	3		
	1000	TYKW	45	C	0541.7	0542.1	.7	95	10		
	2000	TYKW	5	S	0541.8	0542.1	.8	6	1		
	1000	TYKW	45	C	0542.7	0543.1	1.7	125	25		
	2950	GORK	1	S	0542.9	0543.1	1.8	7.8	3.0		
	2000	TYKW	5	S	0543.0	0543.2	3.0	9	3		
	3750	TYKW	45	C	0543.0	0544.1	3.0	7	3		
	3100	CRIM	1	S	0543.0	0543.5	2.0	14	5		
	2000	TYKW	20	GRF	0550.0	0655	140.0	2.5	1.5		
	3750	TYKW	20	GRF	0550.0	0620	140.0	5	3		
	9400	TYKW	20	GRF	0555.0	0620	105.0	6	3		
	9100	GORK	20	GRF	0555.3	0617.5	52.0	9	4		
	3100	CRIM	26	FAL	0700.0	0836.0	96.0	10			
	930	BORD	41	F	1029.8	1030.3	1.2	454	4		
	810	KRAK	41	F	1030.0	1030.3	.8	130			
	7000	SAOP	40	F	1040.0		72.0				O

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
21	6100	KISV	3	S	1127.0	1131	8.0	3			
	6100	KISV	45	C	1210.0	1238	40.0	8			
	9400	HUAN		S	1233.8	1236.5	16.5	7.0	3.7		0
	7000	SAOP	20	GRF	1234.0			14.0			0
	2800	OTTA	20	GRF	1320.0	1405	80.0	5.4			
	2800	OTTA	20	GRF	1510.0	1555	80.0	2.8	1.4		
	7000	SAOP	40	F	1526.0		94.0				0
	9400	HUAN		S	1542.0	1559.4	49.4	5.2	3.5		0
	7000	SAOP	40	F	1750.0		7.0				0
	7000	SAOP	4	S/F	1827.0	1828.0	6.0	31.0			6L
	9400	HUAN		S	1827.3	1828.2	1.5	31.4	9.8		0
	9400	HUAN		S	1901.8	1913.5	26.0	5.2	2.1		0
	9400	HUAN		S	1908.1	1909.2	3.2	21.0	10.5		0
	9400	HUAN		S	1916.3	1917.4	2.1	10.5	7.0		0
	3750	TYKW	5	S	2305.0	2307.5	7.0	4	1.5		
22	200	GORK	44	NS	0350.0E		550.0D		10		
	260	ONDR	44	NS	0715.0E		413.0D	64	10		
	127	TORN	44	NS	0740.0E	1102.6	260.0D	160	2.5		V1
	100	GORK	43	NS	1003.0U		177.0E		5		
	430	KRAK	43	NS	1115.5	1116.5	104.5D	130	17		
	600	UCCL	43	NS	1225.0	1258	126.0U	6			
	200	HIRA	44	NS	2354.0E	0650	550.0D	40	10		WL
	9400	TYKW	5	S	0100.7	0101.0	1.5	6	2		
	9400	TYKW	45	C	0115.0	0118.7	8.0	19	8		
	3750	TYKW	21	GRF	0116.0	0119	65.0	5	1.5		
	17000	NOBE	20	GRF	0116.8	0118.7	22.0	12			0
	9400	TYKW	29	PBI	0123.0		45.0	9	3		
	2000	TYKW	20	GRF	0140.0	0151	40.0	1.5	.7		
	3750	TYKW	20	GRF	0235.0	0255	35.0	2	1		
	9400	TYKW	20	GRF	0240.0	0250	35.0	3	1.5		
	2000	TYKW	21	GRF	0315.0	0325	70.0	2.5	1.5		
	3750	TYKW	20	GRF	0320.0	0335	70.0	4	2		
	9400	TYKW	20	GRF	0325.0	0332	40.0	4	1.5		
	950	GORK	22	GRF	0508.0U	1257.0	480.0E	20			
	3750	TYKW	21	GRF	0515.0	0540	90.0	10	5		
	9400	TYKW	21	GRF	0515.0	0525	90.0	18	7		
	3100	CRIM	21	GRF	0515.0	0540.0	69.0	17	5		
	2950	GORK	20	GRF	0518.0	0540.0	420.0E	6.0			
	9100	GORK	20	GRF	0518.2	0522.9	60.0	16	7.3		
	17000	NOBE	20	GRF	0519.4	0522.6	63.0	9			0
	2000	TYKW	20	GRF	0520.0	0545	100.0	6	3		
	35000	NAGO	21	GRF	0521.0	0522	7.0	12			
	3750	TYKW	45	C	0531.0	0532	4.5	6	2.5		
	3100	CRIM	1	S	0532.0	0532.5	3.0	8	3		
	9100	GORK	22	GRF	0750.8	1150.8	288.0E	18			
	237	TRST	41	F	0800.8	0802.6	2.4	81			0
	327	TRST	41	F	0800.9	0801.7	1.0	440			10L
	237	TRST	41	F	1022.2	1023.7	3.0	120			28L,VAR POL
	327	TRST	41	F	1022.7	1025.5	2.8	130			0
	1470	POTS	23	GRF	1055.0	1229.9	200.0	21			
	1470	POTS			1055.0	1231.4		21			
	3000	POTS	23	GRF	1100.0U	1357.5	195.0U	13			
	7000	SAOP	20	GRF	1113.0		115.5	28.0			8L
	430	KRAK			1115.5	1230.2		130			
	810	KRAK	41	F	1115.5	1116.5	1.0	80			
	430	KRAK			1115.5	1149.5		130			
	9500	POTS	20	GRF	1116.0	1145	164.0	13			
	2800	OTTA	27A	RF	1120.0		250.0	10.0	7.7		
	2800	OTTA	24	R	1120.0	1155	35.0	10.0	5.2		
	650	GORK	22	GRF	1127.0	1227.0	93.0E	15			
	2800	OTTA	24P	R	1155.0		135.0	10.0			
	536	ONDR	41	F	1220.0	1220	100.0	27	3		
	930	BORD	41	F	1241.2	1241.4	.2	26	2		
	810	KRAK	8	S	1241.3	1241.3	.2	23			
	930	BORD	8	S	1302.3	1302.3	.1	18	1		
	2800	OTTA	1	S	1354.0	1357.5	8.0	5.4	1.8		
	7000	SAOP	20	GRF	1356.0	1357.5	7.0	14.0			11L
	2800	OTTA	26	FAL	1410.0	1530	80.0	-10.0	-5.0		
	2800	OTTA	8	S	1505.2	1505.2	.1	6.4			
	327	TRST	42	SER	1554.9	1554.9	.3	85			5L
	408	TRST	42	SER	1554.9	1554.9	.7	120			3L
	237	TRST	42	SER	1554.9	1555.2	.3	170			6L
	7000	SAOP	40	F	1654.0		111.0				
	2800	OTTA	26O	FAL	2040.0	2100	20.0	-3.6	-1.8		
	2800	OTTA	26O	FAL	2155.0	2240	45.0	-2.8	-1.4		
23	200	GORK	44	NS	0400.0E		360.0D	15			
	260	ONDR	44	NS	0600.0E		495.0D	80	6		
	204	IZMI	44	NS	0600.0E		360.0D	30			
	100	GORK	43	NS	0630.0U		135.0U		5		
	127	TORN	43	NS	0650.0	1145.5	265.0	20	.5		V1
	1000	TYKW	47	GB	0232.0	0252.6U	28.0D	2800	400 D		
	1000	TYKW	45	C	0355.0	0444.6	115.0	5.5	2		
	950	GORK	22	GRF	0400.0E	0500.0	360.0E	14			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
23	650	GORK	22	GRF	0400.0E		360.0E	13			
	2000	TYKW	20	GRF	0430.0	0450	80.0	2	1		
	9400	TYKW	20	GRF	0430.0	0450	80.0	3	1.5		
	3750	TYKW	20	GRF	0430.0	0450	80.0	3	1.5		
	35000	NAGO	20	GRF	0643.0	0651	17.0	10			
	3100	CRIM	26	FAL	0712.0	1202.0		13			
	2800	OTTA	20	GRF	1727.0	1730	15.0	4.4	1.5		
	2800	OTTA	20	GRF	1755.0	1800	20.0	4.4	2.2		
24	3750	TYKW	20	GRF	0045.0	0055	40.0	3	1.5		
	9400	TYKW	5	S	0100.0	0100.9	3.0	8	2		
	3750	TYKW	20	GRF	0147.0	0150	55.0	1.5	.7		
	3750	TYKW	21	GRF	0330.0	0403	60.0	2	1		
	2000	TYKW	5	S	0550.0	0551	2.0	1.5	.5		
	3100	CRIM	1	S	0550.0	0551.0	6.0	10	3		
	9400	TYKW	5	S	0550.0	0553	14.0	3	1.5		
	3750	TYKW	5	S	0550.0	0551.1	6.0	12	5		
	2950	GORK	21	GRF	0550.3	0551.1	12.2	7.1			
	9100	GORK	21	GRF	0550.5	0558.9	36.5	6.3	2.5		
	2000	TYKW	30	PBI	0552.0		40.0	.1	.5		
	5730	IRKU	2	S/F	0555.2	0556.0	2.0	25			L
	3750	TYKW	30	PBI	0556.0		35.0	3	1		
	3100	CRIM	3	S	0557.0	0557.5	2.0	38	13		
	1000	TYKW	5	S	0557.0	0557.8	3.0	13	3		
	9400	TYKW	5	S	0557.0	0557.7	4.0	16	4		
	2000	TYKW	5	S	0557.0	0557.8	4.0	17	3		
	3750	TYKW	5	S	0557.0	0557.7	3.0	26	6		
	6100	KISV	8	S	0557.0	0558	3.0	33			
	650	GORK	3	S	0557.0	0557.8	2.2	10	4		
	2950	GORK	3	S	0557.2	0557.7	1.2	18	9		
	950	GORK	1	S	0557.3	0557.8	1.7	9			
	9100	GORK	1	S	0557.3	0557.8	1.0	19	.7		
	10400	BERN	3		0557.4	0557.8	4.0	17.0			ONLY PAPER REC
	11800	BERN	3		0557.4	0557.8	4.0	11.0			ONLY PAPER REC
	8400	BERN	3		0557.4	0557.8	4.0	23.0			ONLY PAPER REC
	237	TRST	41	F	0652.9	0654.1	1.3	140			1L
	2650	DWIN	2	S/F	0930.0	0933	4.0	20	10		
	228	HARS	45	C	0930.0	0930.0	1.0	720	120		
	3100	CRIM	3	S	0930.0	0931.0	2.0	22	7		
	9100	GORK	3	S	0930.3	0931.1	5.1	10			
	408	TRST	41	F	0930.4	0930.7	2.9	920			6L,VARIABLE POL
	430	KRAK			0930.5	0933.2		630			
	237	TRST	41	F	0930.5	0930.8	2.8	680			7L,VARIABLE POL
	327	TRST	41	F	0930.5	0932.9	2.6	770			16L,VARIABLE PO
	430	KRAK	46	C	0930.5	0931.0	4.0	200	13		
	650	GORK	1	S	0930.5	0931.0	5.0	8			
	3000	POTS	4	S/F	0930.5	0931.0	3.5	18			
	204	IZMI	5	S	0930.5	0931.0	1.0	680	400		
	234	POTS	4	S/F	0930.5	0930.8	.8	2000	300		III/V
	1470	POTS	4	S/F	0930.5	0931.2	4.5	19			
	2950	GORK	41	F	0930.7	0931.0	3.1	14	7		
	2950	GORK			0930.7	0933.0		10	5		
	950	GORK	45	C	0930.8	0931.0	3.5	8			
	950	GORK			0930.8	0933.2		4			
	810	KRAK	1	S	0931.0	0931.0	.8	19	4		
	6100	KISV	45	C	0931.0	0931.3	3.0	16			
	6100	KISV			0931.0	0933.5		9			
	3100	CRIM	1	S	0932.5	0933.0	1.0	16	5		
	113	POTS	4	S/F	1045.2	1045.2	.1E	200	70		
	430	KRAK	41	F	1047.0		85.0	45	5		
	237	TRST	42	SER	1124.4	1125.5	1.9	140			3R
	2800	OTTA	22	GRF	1140.0	1320	300.0	9.6	4.5		
	327	TRST	45	C	1203.3	1203.4	.3	210	56		6L
	237	TRST	45	C	1203.3	1203.4	.5	520	77		8L
	234	POTS	4	S/F	1203.3	1203.4	.3	700	120		III/V
	113	POTS	4	S/F	1203.5	1203.6	.1	100	30		III
	237	TRST	41	F	1400.7	1401.2	2.3	300			12L
	327	TRST	41	F	1400.9	1401.2	1.3	98			0
	234	POTS	4	S/F	1400.9	1401.2	.6	400	80		III
	113	POTS	4	S/F	1433.5	1433.5	.2	200	70		III
	2800	OTTA	20	GRF	1750.0	1810	110.0	11.8	5.4		
	2800	OTTA	240	R	2010.0	2120	70.0	4.0	2.0		
	1000	TYKW	45	C	2240.0	2411.3	280.0	18	5		
25	430	KRAK	43	NS	0842.5	1016.0	268.0D	120	12 U		
	650	GORK	2	S/F	0748.4	0751.0	4.5	8			
	237	TRST	45	C	0754.5	0754.7	.3	47	14		0
	3100	CRIM	24	R	0832.0	1128.0		6			
	810	KRAK	8	S	0936.7	0937.0	.7U	30			
	810	KRAK	8	S	0938.7	0938.7	.2	12			
	950	GORK	1	S	1025.0	1029.0	7.5	6.5			
	930	BORD	8	S	1116.2	1116.2	.1	18	1		
	430	KRAK	47	GB	1121.0	1122.5	2.5	670 D	440		
	29	UPIC	2	S/F	1251.7	1252	.8				
	237	TRST	42	SER	1251.8	1252.0	1.0	46			2L

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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
25	33	UPIC	2	S/F	1251.8	1252	.8				
	930	BORD	8	S	1351.1	1351.2	.1	13	1		
	237	TRST	41	F	1510.0	1510.7	1.2	210			7L
	327	TRST	42	SER	1510.6	1510.7	.3	99			3L
	7000	SAOP	41	F	1830.4						
	7000	SAOP	3	S	1830.4	1831.0		11.0			0
	7000	SAOP	27	RF	1838.2		31.0				
	7000	SAOP	3	S	1857.2E	1857.2		14.0			25L
26	200	GORK	44	NS	0421.0E		357.0D		5		
	3750	TYKW	21	GRF	0010.0	0030	190.0	5	2.5		
	3750	TYKW			0010.0	0130		5			
	2000	TYKW	21	GRF	0010.0	0130	190.0	4	2		
	3750	TYKW	5	S	0011.0	0012	3.0	2.5	.8		
	9400	TYKW	20	GRF	0020.0	0030	40.0	4	2		
	3750	TYKW	5	S	0024.0	0025.7	5.0	3	1		
	1000	TYKW	45	C	0058.4	0058.6	.8	25	3.5		
	9400	TYKW	20	GRF	0100.0	0130	70.0	3	1.5		
	1000	TYKW	21	GRF	0115.0	0216	125.0	4.5	1.5		
	9400	TYKW	21	GRF	0329.0	0350	81.0	6	3		
	3750	TYKW	21	GRF	0329.0	0400	81.0	3	1.5		
	2000	TYKW	21	GRF	0330.0	0700	270.0D	6	4 D		
	17000	NOBE	20	GRF	0330.9	0334.4	41.0	9			0
	35000	NAGO	20	GRF	0331.0	0334	38.0	9			
	2000	TYKW	5	S	0332.5	0332.8	1.0	6	1.5		
	9400	TYKW	5	S	0332.5	0332.7	1.5	12	2.5		
	3750	TYKW	5	S	0332.5	0332.7	1.5	13	3		
	1000	TYKW	5	S	0332.5	0332.7U	.5	150 D	10 D		
	3750	TYKW	29	PBI	0334.0		10.0	2	1		
	9400	TYKW	20	GRF	0450.0	0700	190.0D	11	5 D		
	3750	TYKW	21	GRF	0450.0	0700	190.0D	8	4 D		
	9100	GORK	20	GRF	0532.5	0657.0	235.0	11	4.5		
	1000	TYKW	45	C	0651.5	0651.6	.5	21	7		
	810	KRAK	8	S	0745.7	0745.7	.2	17			
	2800	OTTA	24	R	1130.0	1150	20.0	3.6	1.8		
	2800	OTTA	27A	RF	1130.0		330.0	3.6	3.4		
	127	TORN	48	C	1134.2	1135.2	5.5	520	160		
	9500	POTS	24	R	1140.0	1350	160.0D	15			
	3000	POTS	24	R	1140.0	1338	160.0D	14			
	7000	SAOP	45	C	1141.0	1144.8		18.0			9L
	7000	SAOP	41	F	1141.0						
	2800	OTTA	2	S/F	1144.0	1144.8	4.0	5.6	2.4		
	1470	POTS	25	R	1144.0	1145	156.0D	6.2			
	2800	OTTA	24P	R	1150.0		295.0	3.6			
	600	UCCL	3	S	1219.0	1219.3	.7	18	6		
	7000	SAOP	3	S	1221.0	1229.2	12.0	13.0			12L
	930	BORD	41	F	1245.2	1245.7	.8	22	2		
	2800	OTTA	1	S	1245.6	1245.9	1.0	4.4	2.2		
	600	UCCL	1	S	1245.7	1246	.5	12	4		
	810	KRAK	8	S	1246.2	1246.2	.1	30			
	930	BORD	41	F	1308.9	1309	.4	60	2		
	2800	OTTA	21	GRF	1323.0	1355	77.0	5.6			
	113	POTS	46	C	1334.5	1335.0	14.0	1400	200		III
	1470	POTS	3	S	1336.5	1338.3	3.5	7.8			
	2800	OTTA	1	S	1337.0	1338	5.0	2.6	1.3		
	29	UPIC	46	C	1340.0	1342.8	11.8				
	33	UPIC	46	C	1340.5	1346.6	11.4				
	2800	OTTA	26	FAL	1645.0	1700	15.0	-3.6	-1.8		
	7000	SAOP	3	S	1737.0	1737.8	1.6	34.0			47L
	2800	OTTA	3	S	1737.5	1738	1.5	26.6	11.2		
	2800	OTTA	21	GRF	1930.0	1934	14.0	5.6	2.0		
	2800	OTTA	4	S/F	1931.5	1931.6	1.2	12.0			
	2800	OTTA	4	S/F	2031.2	2032.3	4.8	128.0	49.0		
	2800	OTTA	30	PBI	2036.0	2036	20.0	9.2	4.5		
	2800	OTTA	8	S	2039.0	2039.2	.5	2.4	1.2		
	2000	TYKW	5	S	2136.0	2136.9	2.0	5	1.5		
	9400	TYKW	45	C	2136.0	2137.4	13.0	31	6		
	3750	TYKW	45	C	2136.0	2137.6	13.0	6	1.5		
	2800	OTTA	2	S/F	2136.5	2137	1.5	3.6	1.8		
	3750	TYKW	20	GRF	2155.0	2210	45.0	2	1		
	9400	TYKW	5	S	2155.0	2201	15.0	3	1		
	9400	TYKW	45	C	2222.0	2228.8	11.0	6	2		
	3750	TYKW	21	GRF	2254.0	2307	66.0	4	2		
	9400	TYKW	21	GRF	2254.0	2307	66.0	6	3		
	2000	TYKW	45	C	2254.5	2255.1	1.5	11	3		
	9400	TYKW	5	S	2254.5	2255	1.5	2	1		
	3750	TYKW	45	C	2254.5	2254.9	1.5	6	1.5		
	1000	TYKW	45	C	2254.7	2255.2	1.0	100	20		
	2695	PENT	2	S/F	2254.8	2255	1.0	9.8	5.0		
	2000	TYKW	30	PBI	2256.0		64.0	1.5	.7		
	9400	TYKW	5	S	2320.5	2320.8	1.5	4.5	1.5		
	2000	TYKW	5	S	2333.9	2334.0	.5	4	1		
	1000	TYKW	5	S	2333.9	2334.1	1.0	3.5	1		
	9400	TYKW	5	S	2350.0	2350.3	1.0	4	1		
27	100	GORK	43	NS	0453.0		127.0		5		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
27	200	GORK	43	NS	0535.0		316.0E		5		
	204	IZMI	43	NS	0700.0		180.0	40			
	127	TORN	43	NS	0701.0	0855.5	312.0	60	7		V1
	430	KRAK	44	NS	0715.0E		83.0D	60	20		
	100	GORK	43	NS	0828.0		137.0E		10		
	430	KRAK	43	NS	1115.0		105.0D	60	10		
	600	UCCL	43	NS	1523.0	1509	87.0	8	2		
	1000	TYKW	5	S	0025.0	0026.3	3.0	10	1.5		
	3750	TYKW	5	S	0025.5U	0026.2	1.5U	8	2.5U		
	9400	TYKW	45	C	0025.5U	0026.2	2.5U	9 U	2 U		
	2000	TYKW	5	S	0025.5U	0026.3	2.0U	3.5	1 U		
	2695	PENT	1	S	0025.8	0026.3	2.0	6.4	3.2		
	9400	TYKW	5	S	0037.0	0037.9	3.0	4	1		
	9400	TYKW	20	GRF	0150.0	0210	40.0	2	1		
	3750	TYKW	20	GRF	0155.0	0200	30.0	3	1.5		
	3750	TYKW	45	C	0228.0	0229	5.0	2.5	1		
	1000	TYKW	45	C	0228.0	0229.2	6.0	49	5		
	2000	TYKW	45	C	0228.0	0229.2	6.0	8	1.5		
	2000	TYKW	28	PRE	0238.0	0248	13.0	2	1		
	3750	TYKW	28	PRE	0238.0	0245	13.0	3	1		
	9400	TYKW	28	PRE	0239.0	0248	12.0	3	2		
	2000	TYKW	45	C	0251.0	0256.9	10.0	19	4		
	1000	TYKW	45	C	0251.0	0252.0	3.0	22	2		
	9400	TYKW	45	C	0251.0	0256.9	12.0	69	11		
	3750	TYKW	45	C	0251.0	0257.0	12.0D	13	5 D		
	1000	TYKW	45	C	0254.0	0256.9	5.0	11	1		
	17000	NOBE	1	S	0254.7	0256.9	10.0	30			L
	1000	TYKW	5	S	0259.0	0259.7	1.0D	2	1 D		
	2000	TYKW	29	PBI	0301.0		80.0	3	1.5		
	9400	TYKW	29	PBI	0303.0		50.0	9	3		
	3750	TYKW	29	PBI	0303.0E		50.0D	4	1.5D		
	5730	IRKU			0351.0	0359.2		7			R
	5730	IRKU	45	C	0351.0	0352.1	10.0	12			R
	5730	IRKU			0351.0	0357.0		16			R
	100	GORK	46	C	0516.7	0517.7	3.0	100			
	100	GORK			0516.7	0518.2		100			
	200	GORK	2	S/F	0517.3	0517.4	.6	45			
	650	GORK	1	S	0518.2	0519.3	2.0	6			
	650	GORK	2	S/F	0626.7	0627.6	2.0	34			
	600	UCCL	2	S/F	0627.5	0627.8	.6	11	4		
	650	GORK	20	GRF	0706.0	0733.0	70.5	10	5		
	810	KRAK	8	S	0747.8	0747.8	.1	30			
	600	UCCL	8	S	0803.0	0803.2	.4	40	15		
	810	KRAK	8	S	0841.5	0841.5	.1	21			
	113	POTS	27	RF	0852.0	0940	178.0	35	8		RISE+I
	650	GORK	20	GRF	0915.0	0921.0	14.0	5	2.5		
	430	KRAK	42	SER	0955.0E		80.0D	60			
	1470	POTS	1	S	1126.0	1126.1	1.0	3			
	237	TRST	45	C	1152.9	1153.0	.2	110	21		4R
	327	TRST	45	C	1152.9	1153.0	.2	150	32		7R
	2800	OTTA	21	GRF	1440.0	1615	180.0	8.0	5.0		
	7000	SAOP	45	C	1440.4	1450.2	22.0	37.0			10L
	2800	OTTA	45	C	1441.5	1452	18.5	9.4	5.0		
	2800	OTTA	1	S	1511.0	1512	2.0	4.6	2.3		
	2800	OTTA	1	S	1537.7	1539.2	2.0	4.6	2.0		
	7000	SAOP	4	S/F	1538.0	1539.4	6.0	20.0			9L
	2800	OTTA	1	S	1629.9	1630.1	1.0	4.6	2.3		
	2800	OTTA	240	R	1840.0	1855	15.0	4.4	2.2		
	2800	OTTA	40	F	1928.5	1931	3.5	3.2			
	2800	OTTA	1	S	2047.9	2048.1	1.5	3.8	1.8		
	1000	TYKW	8	S	2055.8	2055.8	.1	23	7 U		
	1000	TYKW	45	C	2256.5	2256.8	1.5	55	11		
28	200	GORK	44	NS	0455.0E		488.0D		5		
	260	ONDR	44	NS	0620.0E		449.0D	216	8		
	127	TORN	43	NS	1220.0	1232.0	148.0	110	6		V2
	3750	TYKW	20	GRF	0030.0	0155	160.0	7	3		
	2000	TYKW	20	GRF	0030.0	0155	160.0	4	2		
	1000	TYKW	20	GRF	0040.0	0200	150.0	2	1		
	9400	TYKW	20	GRF	0130.0	0200	90.0	4	2		
	700	SYDN	45	C	0237.8	0238.0	.6				
	2000	TYKW	5	S	0344.8	0345.0	1.0	1.5	.4		
	3750	TYKW	5	S	0344.8	0345.0	1.0	5	1		
	650	GORK	23	GRF	0628.5	0651.0	387.0	9			
	113	POTS	4	S/F	0643.8	0644.0	1.1	180	30		
	100	GORK	41	F	0643.9	0644.3U	23.0	230 D			
	100	GORK			0643.9	0653.2		230			
	100	GORK			0643.9	0705.9		230 D			
	430	KRAK	42	SER	0646.0E	0653.5	156.0D	270	8		
	237	TRST	42	SER	0705.3	0705.7	.9	160			18R
	327	TRST	42	SER	0706.1	0706.8	.8	52			7L
	2950	GORK	1	S	0815.6	0816.3	2.8	3.0	1.5		
	9100	GORK	23	GRF	0828.8	0903.5	54.7	12			
	6100	KISV	32	ABS	0851.0	0853	4.0	-3			
	6100	KISV	32	ABS	0855.0	0859	6.0	-3			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
28	950	GORK	41	F	0856.2	0856.4	9.1	5			
	950	GORK			0856.2	0901.5		4			
	950	GORK			0856.2	0902.8		11			
	2650	DWIN	2	S/F	0900.0	0902	4.0	20	10		
	10715	DWIN	2	S/F	0900.0	0902	4.0	10	5		
	8400	BERN	3		0900.2	0902.2	4.0	20.0			ONLY PAPER REC
	11800	BERN	3		0900.2	0902.2	4.4	28.0			ONLY PAPER REC
	430	KRAK	46	C	0900.3	0901.2	2.5	600	18		
	430	KRAK			0900.3	0902.3		400			
	9500	POTS	4	S/F	0900.5	0902.5	9.0	30			
	3000	POTS	4	S/F	0900.7	0902.5	3.3	20			
	9100	GORK	45	C	0900.7	0901.3	2.6	25			
	9100	GORK			0900.7	0902.5		26			
	6100	KISV	45	C	0901.0	0901.7	14.0	22			
	1470	POTS	4	S/F	0901.0	0902.5	6.0	25			
	6100	KISV			0901.0	0903		21			
	650	GORK	3	S	0901.2	0902.2U	1.5	50 D			
	600	UCCL	8	S	0902.0	0902.3	.4	110	50		
	810	KRAK	4	S/F	0902.0	0902.2	1.5	1000	6		
	19600	BERN	3		0902.0U	0902.2	.5U	22.0U			ONLY PAPER REC
	2950	GORK	1	S	0902.2	0902.6	1.0	13	6.0		
	100	GORK	8	S	0902.5	0902.7	.3	60			
	29	UPIC	42	SER	0906.0	1038.9	265.9				
	33	UPIC	42	SER	0906.5	1038.5	265.4				
	430	KRAK	41	F	0928.5	1137.5	125.0D	60	6		
	327	TRST	41	F	0939.2	0942.8	4.3	550			0
	237	TRST	41	F	0939.2	0942.5	4.6	800			1L
	408	TRST	41	F	0940.9	0942.8	2.0	54			12R
	234	POTS	4	S/F	0942.5	0942.6	.5	2000	100		III
	113	POTS	4	S/F	0942.6	0942.6	.5	500	50		III
	650	GORK	3	S	0952.6	0952.8	.5	50			
	600	UCCL	8	S	0953.0	0953.1	.2	84	40		
	237	TRST	42	SER	1006.0	1006.4	.8	430			5L
	200	GORK			1006.0	1011.4		60 D			
	200	GORK	41	F	1006.0	1006.5	5.8	60 D			
	100	GORK	41	F	1006.1	1006.2	1.3	150			
	100	GORK			1006.1	1006.5U		200 D			
	234	POTS	42	SER	1006.2	1011.2	5.5	14000	40		III
	113	POTS	42	SER	1006.4	1006.4	5.3	1500	25		III
	6100	KISV	8	S	1006.5	1006.8	2.0	4			
	204	IZMI	41	F	1007.0	1012.0	8.0	1480			
	327	TRST	42	SER	1010.9	1011.2	.8	270			3L
	237	TRST	42	SER	1011.1	1011.2	.6	2100 D			
	9100	GORK	23	GRF	1029.8	1102.1	47.0	8			
	237	TRST	41	F	1035.9	1038.6	3.1	1300			5L
	204	IZMI	41	F	1036.3	1039.5	9.7	885			
	100	GORK			1036.8	1039 U		200 D			
	100	GORK	41	F	1036.8	1036.9	9.0	200			
	100	GORK			1036.8	1044.9		115			
	100	GORK			1036.8	1041.5		150			
	200	GORK	41	F	1036.9	1038.7	8.7	60 D			
	200	GORK			1036.9	1041.4		60 D			
	113	POTS	42	SER	1036.9	1038.7	4.6	2100	70		III
	11800	BERN	1		1038.1	1038.3	1.4	9.0			ONLY PAPER REC
	8400	BERN	1		1038.1	1038.3	1.0	10.0			ONLY PAPER REC
	2950	GORK	1	S	1038.4	1038.5	.8	5.0	2.5		
	9100	GORK	1	S	1038.4	1038.6	.5	18	7		
	234	POTS	42	SER	1038.4	1038.7	3.5	3500	20		III
	950	GORK	1	S	1038.6	1038.8	1.0	5			
	6100	KISV	8	S	1038.8	1039	1.0	7			
	237	TRST	41	F	1040.3	1041.3	1.9	560			2L
	810	KRAK	8	S	1056.3	1056.5	.3	110	2		
	237	TRST	41	F	1114.9	1115.9	2.6	110			0
	113	POTS	4	S/F	1115.9	1115.9	.1	700	200		III
	200	GORK			1135.1	1138.3		60 D			
	200	GORK	41	F	1135.1	1136.1	13.7	60 D			
	100	GORK			1135.7	1141.9		200			
	100	GORK			1135.7	1151.7		200			
	100	GORK			1135.7	1138.4		200 D			
	100	GORK	41	F	1135.7	1136.5U	16.0	200 D			
	204	IZMI	41	F	1135.7	1136.8	4.8	700			
	113	POTS	42	SER	1135.9	1136.2	3.4	800	30		III
	234	POTS	42	SER	1135.9	1136.0	3.4	250	1		III
	2800	OTTA	1	S	1136.0	1136.2	1.0	3.0	1.5		
	950	GORK	1	S	1136.1	1136.4	1.3	2.7			
	7000	SAOP	45	C	1145.0	1204.2	2.4	186.0			3L
	127	TORN	45	C	1201.5	1204.5	6.7	330 D			
	9100	GORK	3	S	1201.8	1204.2	10.5	180	17		
	228	HARS	45	C	1202.0	1203.0	3.5	570	220		
	9500	POTS	3	S	1202.0	1204.0	18.0	160			
	6100	KISV	8	S	1202.0	1204.8	11.0	105			
	8400	BERN	4		1202.1	1203.9	11.8	100.0			ONLY PAPER REC
	10715	DWIN	3	S	1203.0	1204	6.0	70	40		
	2650	DWIN	3	S	1203.0	1204	7.0	150	70		
	2800	OTTA	3	S	1203.0	1204.5	4.0	154.0	39.4		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
28	11800	BERN	4		1203.0	1204.1	4.0	178.0			
	19600	BERN	4		1203.0	1204.1	4.0	260.0			ONLY PAPER REC
	1470	POTS	4	S/F	1203.0	1205.2	12.0	157			ONLY PAPER REC
	3000	POTS	3	S	1203.0	1204.0	11.0	127			
	810	KRAK	4	S/F	1203.3	1204.0	9.0U	80	16		
	234	POTS	4	S/F	1203.4	1204.3	1.8	3800	200		III
	113	POTS	4	S/F	1203.5	1204.6	2.1	2000	500 D		III
	3100	CRIM	3	S	1203.5	1204.0	4.0	91	30		
	600	UCCL	3	S	1203.5	1204.3	5.0	30	7		
	2950	GORK	3	S	1203.5	1204.4	3.8	110	50		
	35000	BERN	4		1204.0U	1204.1U	.2U	23.0U			ONLY PAPER REC
	650	GORK	3	S	1204.5E	1204.5	6.3D	45			
	200	GORK	4	S/F	1205.7E	1206.7	1.8D	100			
	100	GORK			1205.7E	1206.3		240			
	100	GORK	46	C	1205.7E	1206.0	3.1E	300			
	950	GORK	3	S	1205.8E	1206.0	6.3D	35			
	2800	OTTA	29	PBI	1207.0	1207	5.0	7.0	2.4		
	113	POTS	27	RF	1213.0	1343	147.0D	60			RISE+I+III
	100	GORK	40	F	1216.0	1219.8	16.0	150			
	100	GORK			1216.0	1224.6		170			
	2800	OTTA	1	S	1227.0	1228	2.5	2.6	1.6		
	2800	OTTA	21	GRF	1234.0	1325	155.0	8.2	5.2		
	19600	BERN	45		1235.0U	1238.0U	20.0U	43.0U			ONLY PAPER REC
	2650	DWIN	2	S/F	1235.0	1238	5.0	50	30		
	8400	BERN	45		1235.4	1238.5	20.2	30.0			ONLY PAPER REC
	3100	CRIM	3	S	1235.5	1239.0	5.0	32	10		
	11800	BERN	45		1235.8	1238.5	32.7	28.0			ONLY PAPER REC
	10715	DWIN	2	S/F	1236.0	1239	4.0	10	8		
	810	KRAK	4	S/F	1236.0	1236.5	3.5	54	15		
	600	UCCL	4	S/F	1236.0	1237.5	5.0	24	10		
	6100	KISV			1236.0	1239.5		36			
	6100	KISV	45	S	1236.0	1238	5.0	37			
	3000	POTS	42	SER	1236.0	1239.0	13.0	50			
	1470	POTS	42	SER	1236.0	1239.0	14.0	90			
	9500	POTS	42	SER	1236.0	1240	34.0	28			
	950	GORK	41	F	1236.2	1239.0	14.0	44			
	650	GORK			1236.2	1245.0U		42 D			
	950	GORK			1236.2	1245.0U		70			
	650	GORK	46	C	1236.2	1237.5	10.4	42			
	2800	OTTA	4	S/F	1236.5	1239	4.0	50.0	20.0		
	100	GORK			1243.2	1250.4		550			
	100	GORK	41	F	1243.2	1244.5	8.0	2300 D			
	228	HARS	45	C	1243.5	1244.0	2.0	380	130		
	810	KRAK	5	S	1243.7	1244.3	5.5	450	60		
	234	POTS	4	S/F	1243.9	1244.0	1.3	1800	250		III/V
	113	POTS	4	S/F	1244.0	1244.6	1.1	2000 D	300 D		III
	3100	CRIM	3	S	1244.0	1244.5	3.0	46	15		
	2650	DWIN	1	S	1244.0	1245	5.0	40	20		
	600	UCCL	3	S	1244.0	1245	3.0	160	70		
	2800	OTTA	3	S	1244.0	1244.7	4.0	37.4	13.1		
	200	GORK	4	S/F	1244.0	1244.5	2.6	240 D			
	6100	KISV	45	S	1244.5	1245	2.0	19			
	7000	SAOP	45	C	1244.6E	1244.6		43.0			8R, CALIBRATION
	228	HARS	27	RF	1315.0	1330.0	35.0	40	15		
	9400	HUAN		S	1526.8	1538.3	25.3	7.4	3.1		0
	8400	BERN	3		1533.2	1534.0	1.4	10.0			ONLY PAPER REC
	11800	BERN	1		1533.2	1534.0	1.4	9.0			ONLY PAPER REC
	2800	OTTA	1	S	1533.5	1534.5	2.0	3.0	1.5		
	7000	SAOP	45	C	1533.6	1534.2		14.0			0
	9400	HUAN		S	1533.7	1534.1	2.1	14.8	9.6		0
	600	UCCL	41	F	1534.0	1535	1.5	18	5		
	600	UCCL	3	S	1543.5	1543.7	.3	60	25		
	600	UCCL	1	S	1546.5	1547	1.0	12	5		
	9400	HUAN		S	1632.6	1729.0	152.7	32.6	10.9		0
	228	HARS	45	C	1700.0	1700.5	1.5	250	105		
	2800	OTTA	21	GRF	1703.0	1740	120.0	10.4	6.0		
	9400	HUAN		S	1703.5	1704.3	1.3	13.3	5.9		0
	8400	BERN	45		1703.8	1707.0	15.7	40.0			ONLY PAPER REC
	3200	BERN	45		1703.8	1707.0	15.7	14.0U			ONLY PAPER REC
	600	UCCL	4	S/F	1704.0	1704.3	.6	70	30		
	11800	BERN	45		1704.0	1707.0	10.9	56.0			ONLY PAPER REC
	19600	BERN	45		1705.8	1707.0	2.2	87.0			ONLY PAPER REC
	7000	SAOP	45	C	1706.0	1707.2	3.8	62.0			0
	9400	HUAN		C	1706.1	1707.2	4.7	69.6	32.9		0
	2695	PENT	3	S	1706.2	1707.3	3.0	19.6	6.6		
	600	UCCL	4	S/F	1706.5	1706.7	.4	40	15		
	228	HARS	45	C	1706.5	1707.0	1.5	265	110		
	2800	OTTA	1	S	1718.2	1718.5	1.5	4.0	1.6		
	9400	HUAN		S	1723.3	1724.3	2.2	22.2	14.3		0
	7000	SAOP	45	C	1723.5	1727.5	23.4	26.0			0
	8400	BERN	22		1726.3	1730.6	10.2	25.0			ONLY PAPER REC
	11800	BERN	22		1726.7	1730.6	14.3	28.0			ONLY PAPER REC
	2800	OTTA	1	S	1758.0	1758.5	1.5	3.4	1.7		
	2800	OTTA	24	R	1940.0	2000	20.0	4.2	2.1		
	2800	OTTA	27AFRF		1940.0		195.0	4.2	3.4		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
28	9400	HUAN		S	1951.4	1952.4	3.6	13.3	9.3		0
	2800	OTTA	8	S	1952.9	1952.9	.1	4.2			
	2800	OTTA	24P	R	2000.0		125.0	4.2			
	9400	HUAN		S	2025.3	2042.2	28.4	8.9	5.8		1
	9400	HUAN		S	2031.8	2032.5	3.1	11.8	6.7		0
	9400	HUAN		S	2039.0	2040.1	1.8	230.9	52.0		1
	2800	OTTA	3	S	2039.0	2040	5.0	119.0	13.7		
	9400	HUAN		S	2103.6	2105.6	2.9	10.4	4.2		0
	9400	TYKW	5	S	2115.0	2116.4	3.0	230	25		
	3750	TYKW	5	S	2115.0	2116.5	5.0	79	19		
	9400	HUAN		S	2115.4	2116.3	2.0	238.3	88.6		1
	2000	TYKW	5	S	2115.5	2116.5	4.5	72	15		
	1000	TYKW	45	C	2115.5	2116.7	20.0	62	10		
	17000	NOBE	4	S/F	2115.8	2116.3	1.5	273			L
	2800	OTTA	3	S	2115.8	2116.6	6.5	77.0	13.0		
	9400	HUAN		PBI	2117.4	2117.4	13.9	14.8	8.4		0
	9400	TYKW	30	PBI	2118.0		15.0	15	5		
	2000	TYKW	29	PBI	2120.0		100.0	6	2		
	3750	TYKW	30	PBI	2120.0		100.0	5	2		
	9400	TYKW	5	S	2124.0	2125.1	3.0	7	2		
	1000	TYKW	45	C	2138.5	2138.8	.5	100	10 U		
	9400	TYKW	45	C	2143.0	2143.7	12.0	10	3		
	9400	HUAN		S	2143.0	2143.7	2.3	8.9	6.2		0
	9400	TYKW	5	S	2159.0	2159.5	1.0	3	1		
	9400	TYKW	45	C	2202.0	2218.5	20.0	4.5	1.5		
	2800	OTTA	26	FAL	2205.0	2255	50.0	-4.2	-2.1		
	2695	PENT	21	GRF	2300.0	2330	70.0	2.6	1.3		
	3750	TYKW	21	GRF	2301.0	2322	70.0	3	1.5		
	9400	TYKW	21	GRF	2301.0	2308	50.0	6	3		
	9400	TYKW	45	C	2302.0	2302.5	2.0	10	2		
	3750	TYKW	5	S	2308.0	2308.3	1.0	8	1		
	2000	TYKW	5	S	2308.0	2308.3	.6	12	2.5		
	2695	PENT	1	S	2308.0	2308.2	1.0	3.4	1.2		
	2000	TYKW	21	GRF	2310.0	2325	60.0	1	.5		
	9400	TYKW	45	C	2313.0	2314.1	5.0	18	4		
	3750	TYKW	5	S	2313.0	2315.3	4.0	4	1.5		
	17000	NOBE	7	C	2313.7	2314.0	3.5	26			0
	1000	TYKW	45	C	2314.0	2316.8	4.0	9	1		
	2000	TYKW	5	S	2315.0	2315.4	1.0	2	.7		
	2695	PENT	1	S	2315.0	2315.4	1.0	2.0	1.0		
	9400	TYKW	5	S	2353.5	2354.1	6.0	18	4		
29	260	ONDR	44	NS	0805.0E		362.0D	81			
	200	HIRA	44	NS	2353.0E	0436	550.0D	15	5		ML
	9400	TYKW	5	S	0010.0	0011	5.0	3	1.5		
	9400	TYKW	5	S	0023.0	0025	15.0	4	1.5		
	17000	NOBE	1	S	0023.7	0023.9	.4	13			0
	3750	TYKW	21	GRF	0024.0	0140	220.0	5	2.5		
	9400	TYKW	5	S	0048.0	0048.4	10.0	3	1		
	700	SYDN	8	S	0048.9	0049.1	.4				
	2000	TYKW	21	GRF	0100.0	0200	180.0	2	1		
	9400	TYKW	5	S	0130.0	0131.3	3.0	4.5	1		
	9400	TYKW	5	S	0133.0	0133.7	6.0	6	2		
	17000	NOBE	1	S	0133.6	0133.8	.7	27			0
	700	SYDN	8	S	0136.8	0136.9	.2				
	17000	NOBE	7	C	0201.0	0203.7	5.0	23			0
	2000	TYKW	5	S	0201.0	0202.9	4.0	4.5	1.5		
	3750	TYKW	45	C	0201.0	0203.9	10.0	18	4		
	9400	TYKW	45	C	0201.0	0203.9	9.0	31	7		
	1000	TYKW	45	C	0201.8	0202.2	2.5	10	1		
	700	SYDN	45	C	0208.5	0209.0	2.6				
	1000	TYKW	5	S	0209.0	0209.7	2.0	3	1		
	9400	TYKW	29	PBI	0210.0		35.0	4	2		
	17000	NOBE	3	S	0302.9	0303.3	.8	162			L
	700	SYDN	8	S	0303.0	0303.3	.7				
	1000	TYKW	5	S	0303.0	0303.3	3.0	21	1.5		
	9400	TYKW	5	S	0303.0	0303.4	1.0D	72	30 D		
	2000	TYKW	5	S	0303.0	0303.5	2.0	10	3		
	3750	TYKW	5	S	0303.0	0303.4	3.0	15	2.5		
	17000	NOBE	29	PBI	0303.7	0303.8	4.0	18			0
	9400	TYKW	5	S	0310.0	0314.5	15.0	6	2		
	3750	TYKW	5	S	0311.0	0312	9.0	1.5	.5		
	9400	TYKW	45	C	0331.0	0336	10.0	7	4		
	9400	TYKW	30	PBI	0341.0		30.0	4	2		
	700	SYDN	2	S/F	0341.8	0342.0	.4				
	17000	NOBE	20	GRF	0354.9	0356.7	5.0	13			0
	9400	TYKW	5	S	0355.0	0356.3	4.0	5	2		
	9400	TYKW	5	S	0407.5	0407.8	2.0	9	2		
	17000	NOBE	1	S	0407.7	0407.9	.5	36			L
	2000	TYKW	20	GRF	0410.0	0550	220.0	4	2		
	3750	TYKW	20	GRF	0410.0	0545	230.0	8	4		
	9100	GORK	20	GRF	0430.0E	0605.7	169.0D	15			
	700	SYDN	2	S/F	0456.8	0457.0	.4				
	2950	GORK	20	GRF	0511.0	0613.0	180.0	9	4.0		
	9400	TYKW	20	GRF	0520.0	0610	140.0	8	4		

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
29	6100	KISV	4	S/F	0540.0	0542	5.0	3			
	6100	KISV	8	S	0605.0	0605.5	2.0	5			
	6100	KISV	27	RF	0830.0	0850	40.0	8			
	3100	CRIM	20	GRF	0840.0	1016.0	200.0	14	5		
	2950	GORK	20	GRF	0840.7	1015.0	240.0E	17			
	9100	GORK	23	GRF	0841.0	1014.8	230.0E	28			
	1470	POTS	40	F	0845.0	0847.3	8.0	7.5			
	237	TRST	42	SER	0854.5	0855.0	.8	45			7L
	327	TRST	42	SER	0854.6	0854.8	.6	44			0
	408	TRST	42	SER	0854.7	0854.9	.2	120			3L
	3000	POTS	20	GRF	0936.0	1015	104.0	11			
	9500	POTS	20	GRF	1007.0	1014.6	16.0	13			
	33	UPIC	45	C	1038.5	1039.8	2.3				
	237	TRST	42	SER	1038.6	1039.6	1.6	58			2L
	29	UPIC	45	C	1038.7	1040.1	2.2				
	204	IZMI	4	S/F	1039.0	1039.5	1.0	110	50		
	113	POTS	4	S/F	1039.2	1040.1	1.0	500	20		III
	9500	POTS	29	PBI	1105.0	1105.4	3.0	10			
	9100	GORK	1	S	1105.3	1105.5	1.2	10	4		
	237	TRST	41	F	1108.8	1108.9	3.9	90			0
	327	TRST	41	F	1108.8	1111.9	3.3	130			3L
	113	POTS	42	SER	1109.4	1112.2	2.9	600	3		III
	9500	POTS	29	PBI	1124.0	1124.7	6.0	16			
	7000	SAOP	3	S	1124.0	1124.6	3.0	14.0			0
	9100	GORK	1	S	1124.3	1125.0	3.5	18	7		
	7000	SAOP	27	RF	1133.0			9.0			0
	2800	OTTA	27A	RF	1135.0		345.0	4.0			
	2800	OTTA	24	R	1135.0	1145	10.0	4.0	2.0		
	2800	OTTA	24P	R	1145.0		305.0	4.0			
	33	UPIC	45	C	1155.2	1156.9	2.4				
	29	UPIC	45	C	1156.4	1157.2	1.0				
	2800	OTTA	28	PRE	1215.0	1240	36.0	30.0	9.7		
	113	POTS	8	S	1220.3	1220.4	.1	100	30		III
	200	GORK	27	RF	1224.1	1238.1	23.6	5			
	7000	SAOP	45	C	1224.6	1307.0	110.0	184.0			14L
	100	GORK	27	RF	1237.2	1251.8	38.0	35			
	2650	DWIN	49	GB	1238.0	1305	155.0	240	100		
	3100	CRIM	47	GB	1238.5	1241.5	32.0	24			
	3100	CRIM			1238.5	1305.0		216	70		
	3000	POTS	45	C	1239.0	1305	151.0	208			
	650	GORK	29	PRE	1239.0	1240.0	3.0	3	1.5		
	950	GORK	1	S	1239.0	1239.9	2.0	6	3		
	8400	BERN	45		1239.6	1307.2	160.0	77.0			ONLY PAPER REC
	11800	BERN	45		1239.6	1307.2	160.0	69.0			ONLY PAPER REC
	3200	BERN	45		1239.6	1307.2	160.0	120.0U			ONLY PAPER REC
	1470	POTS	45	C	1240.0U	1306.5	150.0U	145			
	9500	POTS	45	C	1245.0	1306.7	135.0	90			
	19600	BERN	45		1249.0	1307.2	150.0	48.0			ONLY PAPER REC
	2800	OTTA			1251.0	1254.2	9.0	148.0			
	2800	OTTA	45	C	1251.0	1305	124.0	255.0	99.0		
	650	GORK	22	GRF	1251.0	1305.5	39.0E	17			
	950	GORK	20	GRF	1251.3	1306.0	39.0E	40			
	2800	OTTA			1300.0	1305	37.0	255.0			
	3100	CRIM	29	PBI	1310.0	1310.0	20.0D	171			
	127	TORN	42	SER	1322.8	1326.0	7.7	310			
	29	UPIC	3	S	1322.9	1323	.5				
	113	POTS	42	SER	1323.0	1326.0	3.0	1800	20		III
	237	TRST	41	F	1323.0	1325.8	3.2	71			8L
	100	GORK			1323.0	1326.0		140 D			
	200	GORK	41	F	1323.0	1323.0	7.9	55			
	200	GORK			1323.0	1326.0		55 D			
	100	GORK	41	F	1323.0	1323.1	7.5	140 D			
	100	GORK			1323.0	1330.0		140 D			
	33	UPIC	3	S	1323.2	1323.2	.5				
	29	UPIC	2	S/F	1325.7	1326	.7				
	33	UPIC	2	S/F	1326.0	1326.3	.7				
	2800	OTTA			1337.0	1410	78.0	130.0			
	810	KRAK	8	S	1355.8	1355.8	.1	11			
	113	POTS	42	SER	1419.2	1434.6	23.0	350	1 E		III
	33	UPIC	45	C	1425.6	1428.9	4.7				
	237	TRST	41	F	1426.0	1427.6	3.7	140			11L, VAR POL
	327	TRST	41	F	1426.9	1427.6	2.6	150			6L
	408	TRST	41	F	1427.4	1427.5	.9	200			2L
	29	UPIC	45	C	1427.5	1429	2.5				
	2800	OTTA	30	PBI	1455.0	1455	75.0	18.6	4.6		
	2800	OTTA	40	F	1601.0	1602.3	2.0	12.4			
	2800	OTTA	26	FAL	1650.0	1720	30.0	-4.0	-2.0		
	2800	OTTA	24	R	1800.0	1815	15.0	3.2	1.6		
	2800	OTTA	27A	FRF	1800.0		180.0	3.2	2.4		
	9400	HUAN		S	1814.6	1815.5	2.0	10.0	8.0		0
	2800	OTTA	24P	R	1815.0		150.0	3.2			
	2800	OTTA	40	F	1825.8	1828.6	6.0	296.0			
	9400	HUAN		S	1941.9	2024.6	85.2	13.4	4.8		0
	9400	HUAN			2016.1	2018.1		25.1			
	9400	HUAN			2016.1	2020.9		24.3			

SOLAR RADIO EMISSION
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DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
29	9400	HUAN		C	2016.1	2016.7	7.5	20.1	12.5		O
	2800	OTTA	3	S	2020.0	2021.2	4.0	18.6	5.0		
	2800	OTTA	26	FAL	2045.0	2100	15.0	-3.2	-1.6		
	2000	TYKW	20	GRF	2120.0	2145	150.0	4	2		
	3750	TYKW	21	GRF	2120.0	2145	150.0	5	3		
	2800	OTTA	20	GRF	2125.0	2135	105.0	3.2	2.4		
	3750	TYKW	5	S	2158.0U	2159 U	2.0U	2 U	1 U		
	9400	TYKW	5	S	2158.0	2158.9	2.0	9	3		
	9400	HUAN		S	2158.2	2159.0	2.0	11.7	8.1		R
	3750	TYKW	5	S	2242.0	2243.2	10.0	2.5	.5		
	9400	TYKW	5	S	2244.0	2244.8	1.0	8	4		
	9400	TYKW	29	PBI	2245.0		10.0	2	1		
	9400	TYKW	5	S	2345.0	2346	3.0	2	1		
30	100	HIRA	43	NS	0229.0	0507	309.0	470	35		
	100	GORK	44	NS	0357.0E		183.0D		5		
	200	GORK	44	NS	0357.0E		303.0D		5		
	260	ONDR	44	NS	0611.0E		480.0D	78	3		
	200	HIRA	44	NS	1945.0E	2239	300.0D	10	5		WL
	3750	TYKW	20	GRF	0020.0	0024	60.0	3	1.5		
	9400	TYKW	20	GRF	0020.0	0025	40.0	4	2		
	2000	TYKW	20	GRF	0030.0	0050	50.0	1	.5		
	9400	TYKW	5	S	0124.0	0125.2	5.0	12	3		
	3750	TYKW	5	S	0124.0	0125.3	5.0	3	1		
	17000	NOBE	1	S	0124.4	0125.2	2.0	9			O
	2000	TYKW	5	S	0125.0	0125.5	1.0	1	.3		
	3750	TYKW	45	C	0145.0	0150.2	10.0	45	12		
	2930	VORO	3	S	0145.0	0150	15.0	56			
	9400	TYKW	45	C	0147.0	0150.1	7.0	97	20		
	2000	TYKW	5	S	0148.0	0150.4	6.0	17	6		
	5730	IRKU	45	C	0148.0	0149.3	10.0	48			L
	5730	IRKU			0148.0	0150.2		74			L
	1000	TYKW	5	S	0148.0	0150.5	7.0	5	2		
	700	SYDN	27	RF	0148.5	0149.5	3.1				
	1400	SYDN	27	RF	0148.7	0150.4	3.2				
	2000	TYKW	29	PBI	0154.0		15.0	2	1		
	9400	TYKW	29	PBI	0154.0		40.0U	8	4 U		
	3750	TYKW	29	PBI	0155.0		45.0	4	1.5		
	2000	TYKW	28	PRE	0320.0	0342.3	25.0	13	3		
	3750	TYKW	28	PRE	0320.0	0342	25.0	10	2.5		
	9400	TYKW	28	PRE	0320.0	0347	30.0	6	2		
	1000	TYKW	28	PRE	0337.0	0342	8.0	4	1		
	2930	VORO	45	C	0340.0	0403	75.0	240			
	1000	TYKW	45	C	0345.0	0404.5	55.0	85	30		
	2000	TYKW	45	C	0345.0	0403.3	65.0	150	50		
	3750	TYKW	45	C	0345.0	0403.1	55.0	175	60		
	1400	SYDN	27	RF	0346.5	0404.4	39.6				
	700	SYDN	27	RF	0346.8	0404.5	33.0				
	9400	TYKW	45	C	0350.0	0403.0	50.0	63	25		
	950	GORK	20	GRF	0357.0E		50.0D				
	17000	NOBE	20	GRF	0401.8	0403.1	12.0	14			O
	100	GORK	8	S	0406.4	0406.5U	.3	40 D			
	9100	GORK	20	GRF	0429.0E		42.0D				
	650	GORK	20	GRF	0430.0E	0445.0	33.0D	5			
	2950	GORK	20	GRF	0430.0E		50.0D				
	9400	TYKW	29	PBI	0440.0		20.0	6	3		
	3750	TYKW	30	PBI	0440.0		60.0	15	4		
	1000	TYKW	29	PBI	0440.0		180.0	6	1.5		
	2000	TYKW	30	PBI	0450.0		210.0	6	2		
	3750	TYKW	5	S	0506.0	0507.1	5.0	2.5	.5		
	9400	TYKW	5	S	0506.0	0507	10.0	3	1		
	9400	TYKW	21	GRF	0543.0	0600	110.0	8	4		
	2000	TYKW	21	GRF	0543.0	0548	110.0	2	.5		
	3750	TYKW	21	GRF	0543.0	0546.3	110.0	5.5	1.5		
	200	HIRA	46	C	0543.5	0544.7	2.3	120	38		ML
	100	HIRA	46	C	0543.6	0545.1	3.0	70	25		SL
	6100	KISV	45	C	0545.0	0547	15.0	10			
	2000	TYKW	5	S	0610.3	0610.9	3.0	2	.5		
	3750	TYKW	5	S	0610.3	0610.9	2.0	3	1		
	200	GORK	8	S	0624.9	0625.7	1.5	400			
	100	GORK	45	C	0625.0	0625.1U	.4	100 D			
	100	GORK			0625.0	0625.3		100			
	204	IZMI	4	S/F	0625.0	0625.5	1.5	215	120		
	113	POTS	4	S/F	0625.0	0625.1	1.1	100	30		III
	2000	TYKW	31	ABS	0630.0	0640	20.0	-2.5	-1		
	3750	TYKW	31	ABS	0630.0	0637.5	20.0	-5	-2		
	6100	KISV	32	ABS	0630.0	0638	20.0	-6			
	9400	TYKW	31	ABS	0630.0	0637	20.0	-5	-2		
	100	GORK			0710.6	0712.6		100 D			
	100	GORK			0710.6	0716.5		100			
	200	GORK			0710.6	0712.6		50 D			
	200	GORK	41	F	0710.6	0710.9	6.1	50 D			
	100	GORK	41	F	0710.6	0710.9	6.2	100 D			
	6100	KISV	4	S/F	0717.0	0717.5	3.0	4			
	600	UCCL	1	S	0729.0	0729.3	.6	20	8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

APRIL 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	POLARIZATION OR REMARKS
30	6100	KISV	1	S	0742.0	0743.5	4.0	3			
	204	IZMI	5	S	0758.5	0758.5	1.5	270	200		
	113	POTS	8	S	0907.4	0907.5	.2	850	300		III
	1470	POTS	2	S/F	0923.5	0925.5	3.5	1.8			
	9500	POTS	2	S/F	0924.0	0925.0	2.5	2			
	6100	KISV	1	S	0925.0	0926.5	3.0	3			
	234	POTS	4	S/F	0939.0	0939.2	.4	5200	1700		III
	113	POTS	4	S/F	0939.2	0939.3	.2	100	10		III
	3100	CRIM	21	GRF	0942.0	1103.0		16	5		
	204	IZMI	41	F	0944.0	0944.0	7.0	885			
	1470	POTS	1	S	0945.5	0945.8	1.0	3.6			
	228	HARS	8	S	0948.5	0948.7	10.0	590	200		
	6100	KISV	3	S	1014.0	1018.5	8.0	5			
	8400	BERN	1		1101.7	1103.0	3.5	10.0			ONLY PAPER REC
	5300	BERN	1		1102.0	1102.9	3.0	9.0			ONLY PAPER REC
	3100	CRIM	1	S	1102.0	1103.0	3.0	7	2		
	1470	POTS	23	GRF	1102.0	1132.5	163.0	6.3			
	3000	POTS	29	PBI	1102.0	1102.7	143.0	5.9			
	6100	KISV	4	S/F	1102.0	1104.3	18.0	11			
	9500	POTS	29	PBI	1102.0	1103.0	193.0	15			
	11800	BERN	1		1102.5	1103.0	2.0	9.0			ONLY PAPER REC
	7000	SAOP	3	S	1115.5	1146.2	51.0	17.0			0
	234	POTS	4	S/F	1132.2	1132.4	.3	750	50		III
	113	POTS	4	S/F	1132.5	1132.6	.2	100	25		III
	204	IZMI	5	S	1137.0	1137.3	.8	280	200		
	2800	OTTA	20	GRF	1140.0	1155	55.0	4.6	2.3		
	6100	KISV	45	C	1142.0	1147.5	10.0	11			
	204	IZMI	41	F	1147.5	1150.0	8.5	800			
	2800	OTTA	20	GRF	1250.0	1255	40.0	6.2	2.1		
	228	HARS	8	S	1318.5	1318.7	1.0	410	125		
	234	POTS	4	S/F	1319.1	1319.3	.4	800	160		
	1470	POTS	1	S	1342.0	1344.5	4.0	1.8			
	2800	OTTA	1	S	1343.0	1344.5	2.0	8.2	3.8		
	3000	POTS	3	S	1343.3	1344.2	1.7	7.8			
	7000	SAOP	45	C	1412.8	1443.4	46.0	23.0			16L
	234	POTS	4	S/F	1413.1	1413.3	.6	250	20		
	2800	OTTA	20	GRF	1515.0	1533	28.0	3.2	1.6		
	9400	HUAN		S	1530.8	1542.3	76.2	10.1	6.1		1
	29	UPIC	45	C	1532.4	1532.5	2.0				
	33	UPIC	45	C	1532.5	1532.5	2.0				
	127	TORN	46	C	1533.0	1533.5	4.0	490 U			
	600	UCCL	41	F	1533.5	1534	2.0	36	15		
	7000	SAOP	45	C	1546.0	1549.3	10.0	25.0			18L
	9400	HUAN		S	1547.8	1548.8	2.0	28.2	12.1		1
	8400	BERN	4		1547.8	1549.0	2.6	15.0			ONLY PAPER REC
	5300	BERN	4		1548.0	1548.3	1.4	11.0			ONLY PAPER REC
	11800	BERN	4		1548.0	1549.0	2.9	17.0			ONLY PAPER REC
	2800	OTTA	4	S/F	1548.2	1548.6	2.0	10.4	5.0		
	2800	OTTA	23	GRF	1605.0	1837	220.0	5.8	3.6		
	8400	BERN	1		1621.9	1622.4	1.0	8.0			ONLY PAPER REC
	2800	OTTA	1	S	1622.1	1622.7	1.0	2.4	1.2		
	11800	BERN	1		1622.1	1622.4	.8	4.0			ONLY PAPER REC
	5300	BERN	1		1622.1	1622.4	.6	5.0			ONLY PAPER REC
	2800	OTTA	21	GRF	2020.0	2050	115.0	4.2	3.6		
	2800	OTTA	3	S	2022.2	2023.3	4.0	14.6	5.0		
	9400	TYKW	20	GRF	2110.0U	2145	60.0U	4 U	2 U		
	3750	TYKW	20	GRF	2110.0	2145	60.0U	2	1		
	2000	TYKW	21	GRF	2230.0U	2240 U	60.0U	3 U	1		
	9400	TYKW	20	GRF	2230.0	2240	60.0	2	1		
	3750	TYKW	20	GRF	2230.0	2237	60.0	2.5	1		
	2800	OTTA	21	GRF	2230.0	2240	45.0	3.6	1.8		
	2695	PENT	8	S	2244.6	2244.6	.1	3.2			
	2000	TYKW	8	S	2244.6	2244.6	.1	1.5	.5U		
	1000	TYKW	8	S	2244.6	2244.6	.1	60	20 U		

Reports are received routinely from the following observatories:

ARCE = Arcetri
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
DWIN = Dwingeloo
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
MANI = Manila
NAGO = Nagoya
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SOAP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov

Explanation of Type Code:

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

MASS EJECTIONS FROM THE SUN

APRIL 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/Ro	Wavelength	Type or Event
HAOC	Apr 02	1905E			258			Spread 21°
LEAR	Apr 03	0055.7		0105.8			Meter	II
CULG	Apr 03	0637		0735			Decimeter; meter	IV Pulsations
DWIN	Apr 03	0701		0722			Decimeter	IV Pulsations
CULG	Apr 03	0706		0729			Meter	II
LEAR	Apr 03	0715.9		0729.5			Meter	II
WEIS	Apr 03	0716.0		0722.0			Meter	II
LEAR	Apr 03	0730.0		1004.0			Meter	IV
BIGB	Apr 03	1926	1929	1950	100	1.0	H-alpha	S
BIGB	Apr 03	2046	2051	2107	100	1.0	H-alpha	S
HALE	Apr 03	2104E		2150	098	1.44	H-alpha	SP
HARV	Apr 04	1502		1605			Decimeter; meter	IV
WEIS	Apr 04	1502.2		1627.0			Meter	IV
HARV	Apr 04	1503		1528			Meter; dekameter	II
BIGB	Apr 04	1647	1704	1813	271	1.0	H-alpha	A
HAOC	Apr 04	2015E			E			
UDAI	Apr 05	0803E	0814	0833	W limb		H-alpha	SP
DWIN	Apr 05	1542		1605			Decimeter	IV Fast drift; zebra
HARV	Apr 05	1542		1602			Deci to dekameter	IV
BLEN	Apr 05	1542.3		1720			Decimeter; meter	IV
WEIS	Apr 05	1545		1659			Meter	IV
HARV	Apr 05	1554		1605			Meter	II
WEIS	Apr 05	1554		1606			30-80 MHz	II
BIGB	Apr 05	1706	1714	1728	121.5	1.0	H-alpha	SP
HALE	Apr 05	2150E		2236	250	1.06	H-alpha	S
CULG	Apr 06	0408		0615			Decimeter	IV
CULG	Apr 06	0408.5		0434			Meter	II
CULG	Apr 06	0413		0734			Meter	IV
CULG	Apr 06	0615		0734			Decimeter	IV
HAOC	Apr 06	1059E			216			Spread 39°
BLEN	Apr 06	1420.5		1721D			Decimeter; meter	IV, II
WEIS	Apr 06	1423.5		1440.0			30-400 MHz	II
WEIS	Apr 06	1424		1711			Meter	IV
BIGB	Apr 06	1707	1727	1819	102	1.0	H-alpha	SP
BIGB	Apr 06	1710	1728	1750	061	1.0	H-alpha	SP
HAOC	Apr 07	0405E		0427	292	4.2		EL, R; spread >87°
UDAI	Apr 07	0529	0545	0620	NW limb		H-alpha	S
BLEN	Apr 07	0537		0542			Decimeter; meter	II Fast drift
LEAR	Apr 07	0537.9		0751.0			Meter	IV
BIGB	Apr 08	1800	1807	1814	074	0.991	H-alpha	S
BIGB	Apr 09	0024	0033	0040	102	0.991	H-alpha	S
BIGB	Apr 09	1852	1918	1937	119	1.0	H-alpha	S
BIGB	Apr 09	1946	2040U	2106	119	1.0	H-alpha	S
BIGB	Apr 09	2201	2207	2234	119	1.0	H-alpha	S
BIGB	Apr 09	2226	2227	2235	261	0.991	H-alpha	SP
HARV	Apr 09	2233		2240			Meter	II
HALE	Apr 09	2233E	2240	2307	259	1.16	H-alpha	Flare-spray
CULG	Apr 09	2236.5		2241.5			Meter	II
PALE	Apr 09	2236.8		2244.4			Meter	II
BIGB	Apr 09	2300	2324	0021	261	1.0	H-alpha	SP
HAOC	Apr 09	2310E		2354	290	3.8		EL; spread >60°; 880 km/s
NRLC	Apr 09	2342		0002	230-290	5.0-7.0	White light	500-1000 km/s; loop
BIGB	Apr 10	0029	0038	0048	119	1.0	H-alpha	SP
MITK	Apr 10	0246		0305	071	1.0	H-alpha	A
BIGB	Apr 10	1839	1841	1852	282	1.0	H-alpha	SP
CULG	Apr 10	2255		2307	280→260	2.4→3.9	80 MHz	IVm?*
CULG	Apr 10	2255		2307	300→270	1.5→2.3	80 MHz	IVm?*
CULG	Apr 10	2255		2307	330→290	2.0→2.2	80 MHz	IVm?*
NRLC	Apr 11	0204		0940	240-340	2.7-10.0	White light	? (Not seen)
UDAI	Apr 11	0900	0910	0915	NW limb		H-alpha	A
BIGB	Apr 11	1550	1553	1602	239	0.982	H-alpha	S
BIGB	Apr 11	1812	1816	1844	239	0.982	H-alpha	S
HALE	Apr 11	1920E	1940	2010	074	1.06	H-alpha	S
BIGB	Apr 11	2009	2017	2052	068	1.0	H-alpha	A

MASS EJECTIONS FROM THE SUN

APRIL 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/Ro	Wavelength	Type of Event
UDAI	Apr 12	0622	0648	0716	NW limb		H-alpha	S
BIGB	Apr 12	1858	1901	1910	079	1.0	H-alpha	A
BIGB	Apr 12	2038	2049	2138	267	1.0	H-alpha	SP
HARV	Apr 12	2053		2100			Meter	II
CULG	Apr 12	2053		2104.5			Meter	II
PALE	Apr 12	2053.8		2103.0			Meter	II
BIGB	Apr 12	2056	2115	2217	260	1.0	H-alpha	S
HAOC	Apr 12	2133E		2220	238	4.4		EL; spread >14°; 390 km/s
CULG	Apr 12	2235		2344.5			Meter	II
HARV	Apr 12	2236		2242			Meter	II
BIGB	Apr 12	2337	2346	0001	251	1.0	H-alpha	SP
UDAI	Apr 13	0725	0746	0800	W limb		H-alpha	S
WEND	Apr 13	0727E		0805D	118	1.04	H-alpha	A
UDAI	Apr 13	0835	0845	0900	W limb		H-alpha	A
WEND	Apr 13	0836	0843	0852	282	0.98-1.04	H-alpha	S
UDAI	Apr 13	0900	0902	0906	W limb		H-alpha	S
WEND	Apr 13	0900	0904	0906	291	0.96-1.01	H-alpha	S
BIGB	Apr 13	1729	1810	1927	262	1.0	H-alpha	SP
HARV	Apr 13	1959		2004			Meter	II
BIGB	Apr 13	2117	2129	2142	259	1.0	H-alpha	S
BIGB	Apr 13	2143	2146	2202	252.5	1.0	H-alpha	S
LEAR	Apr 14	0213.7		0224.5			Meter	II
HAOC	Apr 14	0449E		0721	355	4.0		EL; 290 km/s
NRLC	Apr 14	0801			325-355	6.0-7.5	White light	Bulb?
HARV	Apr 14	2140		2151			Meter	II
CULG	Apr 14	2141		2145			Meter	II Weak
CULG	Apr 14	2145		2150.5			Meter	II Herringbone
NRLC	Apr 14	2301			020-030	3.4	White light	Blob became loops
HAOC	Apr 14	2309E			015	3.7		EL?; spread 45°
CULG	Apr 15	0210		0211			Meter	Possible II Weak
LEAR	Apr 15	0213.7		0224.5			Meter	II
BLEN	Apr 15	0550.0		0554.7			Decimeter; meter	II
WEIS	Apr 15	0550.2		0611.5			30-330 MHz	II Harmonic
CULG	Apr 15	0550.5		0609			Meter	II Herringbone
LEAR	Apr 15	0551.7		0612.5			Meter	II
WEIS	Apr 15	1049.3		1052.0			40-80 MHz	II
WEIS	Apr 15	1101.7		1122.0			30-160 MHz	II Herringbone
SGMR	Apr 15	1104.3		1107.5			Meter	II
WEND	Apr 15	1709	1714	1722	106	1.04	H-alpha	A
BIGB	Apr 15	1710	1714	1730	105	1.0	H-alpha	S
HAOC	Apr 15	2220E		2320	068	2.8		Spread 30°; 270 km/s
NRLC	Apr 16	0033		0201	035-055	4.4-6.5	White light	Narrow loop
BIGB	Apr 16	2151	2154	2203	099	1.0	H-alpha	A
WEND	Apr 17	0634	0649	0743	098-105	1.04	H-alpha	A
LEAR	Apr 17	0758.0		0808.2			Meter	II
WEIS	Apr 17	0759.4		0808.5			30-46 MHz	II
LEAR	Apr 17	2256.9		2300.2			Meter	II
CULG	Apr 17	2257		2309	270	2.1→2.9	43 & 80 MHz	II*
CULG	Apr 17	2257		2309	245	5.0→6.0	43 & 80 MHz	II*
HARV	Apr 17	2257		2308			Meter	II
CULG	Apr 17	2257		2306			Meter	II Herringbone
HAOC	Apr 17	2312E		2326	300	3.4		R; 640 km/s
BIGB	Apr 18	2002	2006	2016	075	1.0	H-alpha	SP
BIGB	Apr 18	2017	2018	2034	075	1.0	H-alpha	SP
NRLC	Apr 19	1328			185-195	4.0	White light	Blob
BIGB	Apr 19	1635	1655	1803	239.5	0.991	H-alpha	A
BIGB	Apr 19	1850	1900	1912	247	1.0	H-alpha	SP
BIGB	Apr 19	1949	2053	2217	225	1.0	H-alpha	Q
WEIS	Apr 20	0652.4		0656.8			100-150 MHz	II
BIGB	Apr 20	2133	2142		241.5	0.964	H-alpha	SP
BIGB	Apr 24	2213	2234	2257	291	1.0	H-alpha	SP
HALE	Apr 24	2316E		2335	291	1.28	H-alpha	SP

MASS EJECTIONS FROM THE SUN

APRIL 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/Ro	Wavelength	Type of Event
NRLC	Apr 25	0049			275-285	4.0	White light	Helmet
HARV	Apr 26	1334		1352			Meter; dekameter II	
WEIS	Apr 26	1334.2		1352.5			30-180 MHz	II Harmonic
BLEN	Apr 26	1334.7		1344.0			Meter	II
SGMR	Apr 26	1338.7		1349.3			Meter	II
BIGB	Apr 26	2002	2010	2142	085	1.0	H-alpha	A
BIGB	Apr 26	2020	2026	2049	091	1.0	H-alpha	A
CULG	Apr 27	0231		0232			Meter	Possible II
CULG	Apr 27	0235		0242	095	1.5→1.9	80 & 160 MHz	IVm?*
HAOC	Apr 27	0241E		0301	100	3.1		EL; narrow; 610 km/s
CULG	Apr 27	0245		0250			Meter	II
PALE	Apr 27	0245.0		0253.0			Meter	II
LEAR	Apr 27	0245.5		0253.4			Meter	II
CULG	Apr 27	0249		0255	100	2 2.5	80 & 160 MHz	IVm?*
UDAI	Apr 27	0517E	0524	0541	NE limb		H-alpha	A
HAOC	Apr 27	0538E			092	4.0		R; spread 46°
BIGB	Apr 27	1910	1924	1944	084	1.0	H-alpha	SP
BIGB	Apr 27	2030E	2031D	2040	283	1.0	H-alpha	SP
DWIN	Apr 28	1203		1206			Decimeter	IV Fiber bursts
DWIN	Apr 28	1236		1246			Decimeter	IV Fast drift
WEND	Apr 29	0708	0714	0733	108	1.10	H-alpha	S
HAOC	Apr 29	1038E		1535	W			
WEND	Apr 29	1340		1357D	113	1.03-1.06	H-alpha	CB or Q
UDAI	Apr 30	0540		0553	SW limb		H-alpha	A
UDAI	Apr 30	0739		0805	SW limb		H-alpha	A
WEND	Apr 30	0940	0948	1003	260	1.06	H-alpha	S
WEND	Apr 30	1032		1114	262-270	1.04	H-alpha	A
WEND	Apr 30	1140	1155	1241D	264	1.04	H-alpha	A
WEND	Apr 30	1146	1153	1224	068	1.03	H-alpha	A

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

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

REPORTING STATIONS
BIGB = Big Bear
BLEN = Bleien
CULG = Culgoora
DWIN = Dwingeloo
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)
LEAR = Learmonth
MANI = Manila
MITK = Mitaka
NRLC = Naval Research Laboratory's White-Light Coronagraph Experiment on P78-1
PALE = Palehua
SGMR = Sagamore Hill
WEIS = Weissenau
WEND = Wendelstein
UDAI = Udaipur

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

*Movement may be caused by ionospheric refraction.

ACTIVE REGIONS
CARRINGTON ROTATION 1691
(January 24 to February 20, 1980)

Region No.	Coordinates Lat.	Coordinates Long.	IMP	Age at CMP	Spot-less Region	Region No. in Rotation 1690	Activity at West Limb
1	10°N	349°	1	+1	x		decreasing
2	12 S	337	1	>6	x		dispersed
3	30 N	337	1	0	x		decreasing
4	05 S	336	1	>6	x		decreasing
5	22 S	320	1	>6	x	4-6	dispersed
6	27 N	310	2	>6			disappeared
7	10 S	306	2	>6			decreasing
8	16 S	298	1	>6	x		dispersed
9	16 N	297	1	>6	x		decreasing
10	24 N	295	1	>6	x		dispersed
11	16 S	277	2	>6			decreasing
12	11 S	257	1	>6	x		decreasing
13	17 N	253	2	>6			decreasing
14	05 N	249	4	>6			decreasing
15	11 N	240	1	>6	x		decreasing
16	16 S	236	1	>6	x		dispersed
17	24 S	235	1	-2	x		stable
18	17 N	232	4	>6			stable
19	14 N	224	3	>6			decreasing
20	15 S	216	1	>6	x		decreasing
21	20 N	213	2	>6			decreasing
22	12 S	208	3	>6			decreasing
23	31 N	208	1	>6	x		dispersed
24	17 S	201	5	>6			decreasing
25	18 N	198	2	>6			decreasing
26	04 N	194	4	+2			stable
27	12 S	180	1	>6	x	28	decreasing
28	22 N	178	1	0	x		dispersed
29	21 S	174	1	>6	x	27	decreasing
30	27 N	170	1	>6	x	29	decreasing
31	27 N	150	2	>6			decreasing
32	12 N	149	2	>6			decreasing
33	10 N	144	2	>6			decreasing
34	13 N	141	2	0			decreasing
35	20 N	138	1	>6	x		dispersed
36	09 N	133	1	+3	x		dispersed
37	12 S	127	6	>6			decreasing
38	18 S	114	1	>6	x		decreasing
39	12 S	110	2	+4			decreasing
40	27 N	100	1	>6	x		disappeared
41	19 S	98	1	>6	x		dispersed
42	17 S	85	1	>6	x		dispersed
43	18 N	82	2	+1			decreasing
44	18 S	65	1	>6	x	46	decreasing
45	27 N	58	1	-3	x		stable
46	16 N	55	1	>6	x		decreasing
47	12 N	47	5	>6			decreasing
48	23 N	40	1	>6	x		decreasing
49	16 S	37	2	>6			decreasing
50	18 S	24	3	>6		52	decreasing
51	12 S	21	1	>6	x		dispersed
52	07 S	11	2	+2			decreasing

ACTIVE REGIONS
CARRINGTON ROTATION 1692
(February 20 to March 18, 1980)

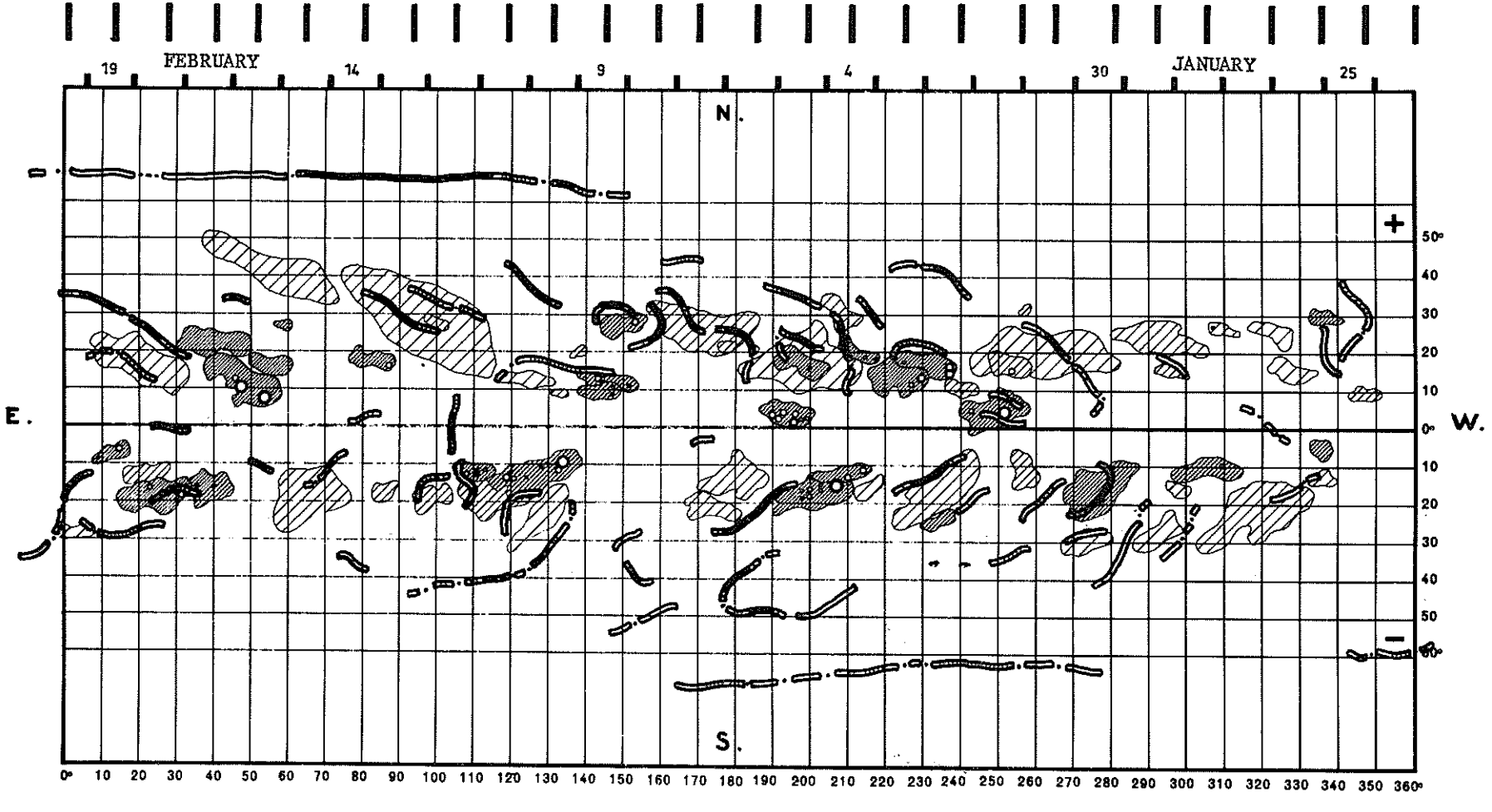
Region No.	Coordinates Lat.	Coordinates Long.	IMP	Age at CMP	Spot-less Region	Region No. in Rotation 1691	Activity at West Limb
1	25°S	348°	2	>6			dispersed
2	21 S	334	1	-1	x		dispersed
3	10 S	323	3	>6			decreasing
4	06 N	321	1	0	x		dispersed
5	08 S	318	1	-4	x		increasing
6	11 N	312	4	+6			decreasing
7	32 S	306	1	-3	x		decreasing
8	17 N	289	1	-1	x		decreasing
9	28 N	287	2	+1			decreasing
10	26 S	284	2	-3			stable
11	12 S	269	3	>6			decreasing
12	15 N	255	2	+1			decreasing
13	16 N	253	1	>6	x		dispersed
14	16 N	243	2	>6			decreasing
15	25 S	236	1	>6	x	17	dispersed
16	16 N	232	2	>6			decreasing
17	25 S	230	3	>6			decreasing
18	11 N	227	1	+5	x		dispersed
19	14 S	219	3	>6			decreasing
20	23 N	213	1	+6	x		decreasing
21	22 S	210	1	>6	x		disappeared
22	14 N	209	1	>6	x		decreasing
23	09 S	201	1	0	x		dispersed
24	03 N	199	3	>6		26	decreasing
25	19 S	198	3	>6		24	decreasing
26	21 N	198	1	>6	x		dispersed
27	15 N	191	2	>6			stable
28	11 N	149	2	>6		32-33-34	decreasing
29	12 S	141	2	>6			decreasing
30	10 S	136	3	>6		37	decreasing
31	27 N	136	1	>6	x		decreasing
32	10 N	128	2	>6			decreasing
33	19 N	114	1	+6	x		disappeared
34	12 N	112	2	>6			decreasing
35	18 N	107	1	+5	x		disappeared
36	17 N	92	1	>6	x		dispersed
37	16 N	81	2	>6			decreasing
38	05 S	74	1	-2	x		dispersed
39	30 S	74	1	>6	x		dispersed
40	17 S	61	3	>6			decreasing
41	16 N	55	1	0	x		stable
42	17 N	48	1	>6	x	46-47-48	dispersed
43	12 S	43	1	>6	x		decreasing
44	19 S	40	2	-3			increasing
45	23 S	30	1	>6	x	49	dispersed
46	10 S	29	1	>6	x		decreasing
47	13 N	27	1	>6	x		dispersed
48	18 N	27	1	>6	x		dispersed
49	21 S	19	1	>6	x	50	decreasing

SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1691

JANUARY 24 - FEBRUARY 20, 1980

MEUDON OBSERVATORY

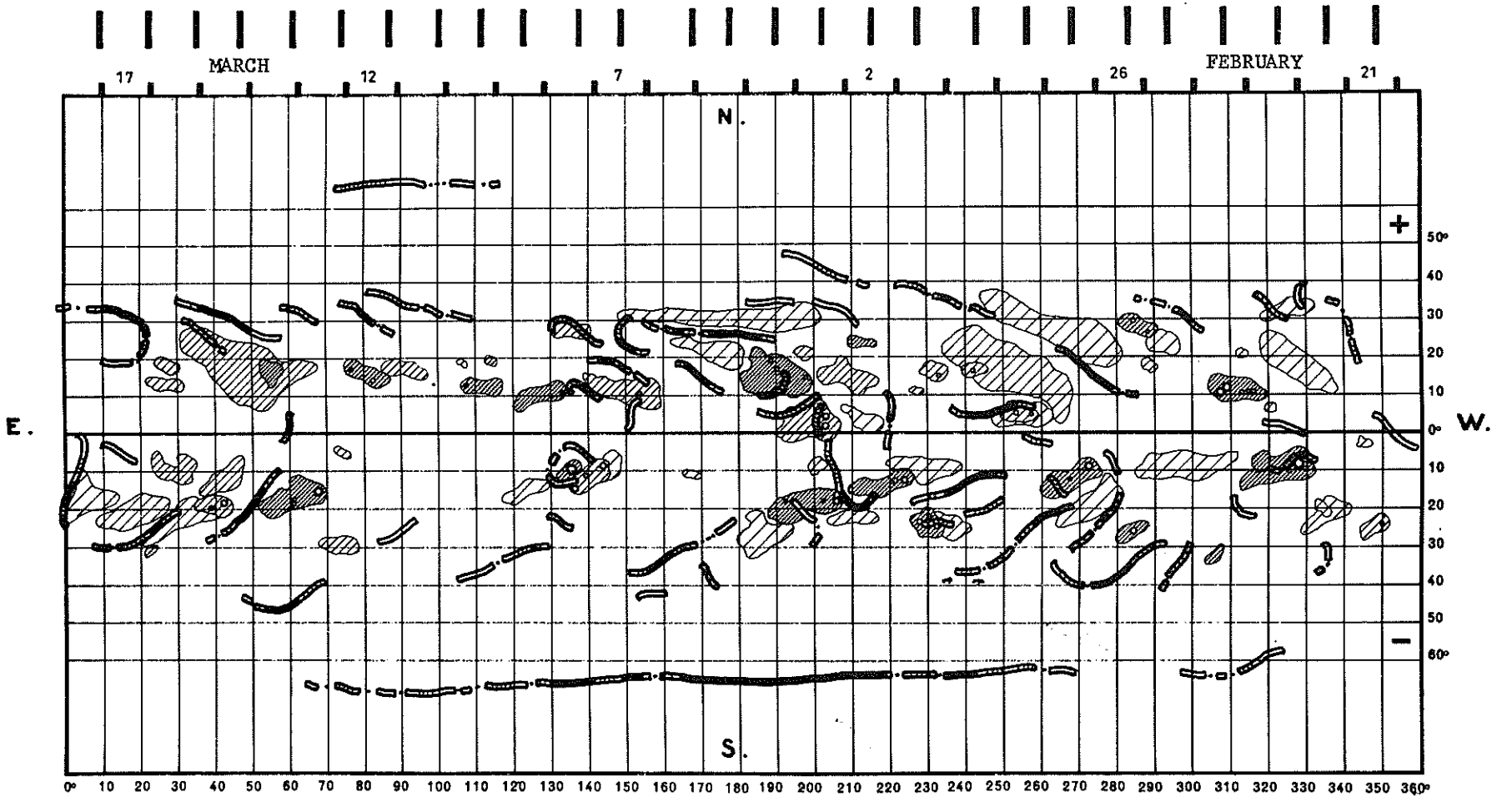


SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1692

FEBRUARY 20 - MARCH 18, 1980

MEUDON OBSERVATORY



91
Misc
Jan-Mar 80

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.

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Canada: *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)

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Germany: *Daily Mean Value of Solar Flux Density* Heinrich-Hertz Institut, 1199 Berlin-Adlershof, Rudower Chaussee 5, G.D.D. (monthly since Jul 1957)

Italy: *Solar Phenomena - Monthly Bulletin and Photographic Supplement* Osservatorio Astronomica di Roma, Monte Mario, Rome, Italy (monthly since 1958) *Osservazion Solari, Solar Flux and Distinctive Events* Osservatorio Astronomico Di Trieste (quarterly since 1965) *Solar Observations made at Catania Astrophysical Observatory* (annually since 1967)

Japan: *Monthly Report of Solar Radio Emission* Radio Astronomy Section, Research Institute of Atmospherics, Nagoya University, Toyokawa, Japan (since 1956) *Solar Activity Chart* WDC-C2, Toyokawa Observatory, Nagoya University, Toyokawa, Japan (annually since 1968) *IAU Quarterly Bulletin on Solar Activity* Tokyo Astronomical Observatory, Mitaka, Tokyo, Japan (since 1978)

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UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events," Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, July 1973, 932 pp, $4.50.

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UAG-30 "Catalogue of Data on Solar-Terrestrial Physics," prepared by NOAA Environmental Data Service, Boulder, CO, October 1973, $1.50. Supersedes UAG-11, 15, and 20 catalogs.

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UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20 October 1964 - August 1965," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO and Jerome T. Nolte, American Science and Engineering, Inc., Cambridge, MA, March 1975, 25 pp, $0.48.

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UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs," compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1975, 159 pp, $3.00.

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UAG-60 "Geomagnetic Data for January 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, July 1977, 57 pp, $1.07.

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UAG-74 "ATS-6 Radio Beacon Electron Content Measurements at Ootacamund, India, October - July 1976," by S.D. Bouwer, K. Davies, R.F. Donnelly, R.N. Grubb, J.E. Jones and J.H. Taylor, NOAA Space Environment Laboratory, Boulder, CO, and R.G. Rastogi, M.R. Deshpande, H. Chandra and G. Sethia, Physical Research Laboratory, Ahmedabad, India, March 1980, 58 pp, $2.50.

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UAG-77 "Synoptic Solar Magnetic Field Maps for the Interval Including Carrington Rotations 1601-1680, May 5, 1973 - April 26, 1979," by J. Harvey, B. Gillespie, P. Miedaner and C. Slaughter, Kitt Peak National Observatory, Tucson, AZ, August 1980, 66 pp, $2.50.

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The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."