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Part II (Comprehensive Reports)

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MAY 1983

Michael A. Chinnery, Director
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BOULDER, COLORADO

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NUMBER 471

(Issued in Two Parts)

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*Solar radio noise bursts observed at Athens, Learmonth, Manila, Palehua and Sagamore Hill during Aug 1979 through Oct 1980 appear in SOLAR-GEOPHYSICAL DATA, No. 461, Part II, pages 103-235.

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May 83

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean (2 Hz)	Int	Remarks
01	260	ONDR	44 NS	0542.0E		438.0D	67.0			
	127	TORN	43 NS	0746.0	1118.3	446.0	30.0	1.0		V=1
	204	IZMI	43 NS	0900.0		180.0	2.0			
	245	PALF	43 NS	1637.0	2254.6	704.0D	219.0			QL=6 ST=2 TYP=1
	208	VORO	44 NS	2100.0E		240.0D		7.0		
	200	HIRA	43 NS	2253.1	2255.3	630.0D	20.0	5.0		0
	245	LEAR	43 NS	2300.0	2304.0	642.0D	46.0			QL=5 ST=2 TYP=1
	3750	TYKW	45 C	0156.5	0157.1	3.5	3.0	1.5		
	3750	TYKW	29 PBI	0200.0		30.0	1.5	0.7		
	3750	TYKW	45 C	0254.0	0256.8	5.0	22.0	8.0		
	9395	PEKG	20 GRF	0255.0	0256.6	18.0D	11.9	8.3		
	9400	TYKW	45 C	0255.0	0256.6	15.0	13.0	8.0		
	2000	TYKW	45 C	0255.0	0257.3	4.0	6.0	2.5		
	2840	PEKG	3 S	0255.0	0257.3	3.0	15.5	9.3		
	9400	TYKW		0255.0	0302.0		10.0			
	4995	LEAR	4 S/F	0255.6	0256.6	3.2	30.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0256.3	0256.6	2.3	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0256.5	0257.1	2.3	13.0			QL=6 ST=2 TYP=3
	2840	PEKG	29 PBI	0258.0		25.0	6.5	4.5		
	3750	TYKW	29 PBI	0259.0		45.0	6.0	3.0		
	2000	TYKW	29 PBI	0259.0		45.0	2.5	1.5		
	9400	TYKW	29 PBI	0310.0		35.0	8.0	4.0		
	3750	TYKW	21 GRF	0350.0	0404.0	105.0	3.0	1.5		
	3750	TYKW	20 GRF	0424.0	0450.0	65.0	2.0	1.0		
	6100	KISV	1 S	0456.3	0457.1	4.0	4.0			
	3750	TYKW	20 GRF	0550.0	0610.0	70.0	2.0	1.0		
	650	GORK	22 GRF	0554.0	0933.0	234.0D	4.0	2.0		
	2000	TYKW	20 GRF	0555.0	0602.0	60.0	1.5	0.7		
	200	HIRA	8 S	0556.4	0556.7	.5	170.0			0
	2840	PEKG	45 C	0709.0	0719.2	13.0	131.0	42.6		
	3750	TYKW	45 C	0710.0	0718.8	12.0	62.0	14.0		
	2650	DWIN	4 S/F	0710.0	0719.0	15.0	120.0	5.0		
	2000	TYKW	45 C	0710.0	0719.1	15.0	100.0	16.0		
	2902	YUNN	45 C	0710.8	0719.1	49.2	113.0			
	2695	LEAR	47 GB	0711.1	0716.8	12.7	20.0			QL=6 ST=2 TYP=5
	1415	LEAR	47 GB	0711.3	0714.8	11.7	60.0			QL=5 ST=2 TYP=5
	1470	POTS	29 PBI	0712.0	0715.0	63.0	44.0			
	3000	POTS	29 PBI	0712.0	0719.0	61.0	76.0			
	9400	TYKW	20 GRF	0712.0U	0723.0U	80.0U	12.0	6.0		RAIN
	2950	GORK	21 GRF	0712.5	0721.2	84.7	15.0			
	3000	IZMI	7 C	0713.0	0719.2	12.0	93.0	40.0		
	950	GORK	20 GRF	0713.3	0718.8	55.7	5.5			
	1415	ATHN	4 S/F	0713.5	0714.0	8.8	41.0			QL=6 ST=3 TYP=3
	4995	LEAR	4 S/F	0713.6	0718.8	10.2	21.0			QL=6 ST=2 TYP=3
	1000	TYKW	45 C	0714.0	0718.7	10.0	8.0	3.0		
	1415	ATHN	4 S/F	0714.5	0715.0	8.8	41.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0714.8	0719.8	8.0	10.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	0715.5	0718.0	13.1	17.0			QL=6 ST=3 TYP=3
	8800	ATHN	4 S/F	0715.5	0718.8	13.1	11.0			QL=6 ST=3 TYP=3
	4995	ATHN	4 S/F	0716.5	0719.0	12.1	17.0			QL=6 ST=2 TYP=3
8800	ATHN	4 S/F	0716.5	0719.8	12.1	11.0			QL=6 ST=2 TYP=3	
3100	BERN	4 S/F	0716.6	0719.1	7.5	126.0				
2950	GORK	46 C	0716.8	0717.3	4.4	52.0				
5200	BERN	3 S	0716.8	0718.8	7.5	24.0				
2950	GORK	46 C	0716.8	0719.0		64.0				
6100	KISV	2 S/F	0716.9	0719.1	5.0	12.0				
9500	POTS	20 GRF	0717.0	0725.0	58.0	8.0				
9100	GORK	20 GRF	0717.1	0725.9	32.0	9.0	4.0			
15400	LEAR	4 S/F	0718.5	0719.8	3.3	20.0			QL=6 ST=2 TYP=3	
3750	TYKW	29 PBI	0722.0		90.0	11.0	6.0			
2840	PEKG	29 PBI	0722.0		33.0D	14.8	10.4			
2000	TYKW	30 PBI	0725.0		80.0	8.0	4.0			
2000	TYKW	5 S	0733.0	0737.4	10.0	1.5	0.5			
245	LEAR	8 S	0736.1	0736.1	.2	15.0			QL=1 ST=2 TYP=3	
410	LEAR	8 S	0736.1	0736.1	.2	21.0			QL=1 ST=2 TYP=3	
8800	LEAR	8 S	0803.6	0804.6	1.5	9.0			QL=5 ST=2 TYP=3	
4995	LEAR	8 S	0804.3	0804.6	.5	6.0			QL=5 ST=2 TYP=3	
2695	LEAR	8 S	0804.3	0804.6	.7	4.0			QL=5 ST=2 TYP=3	
15400	LEAR	8 S	0804.6	0804.8	.5	26.0			QL=5 ST=2 TYP=3	
6100	KISV	23 GRF	0907.7	0912.5	13.0	5.0				
234	POTS	4 S/F	0914.9	0915.2	.4	165.0	8.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
01	2840	PEKG	45 C	0929.0	0930.8	11.0	17.0	6.6		
	536	ONDR	8 S	0948.5	0948.5	.1	10.0			
	113	POTS	4 S/F	1117.9	1118.1	.4	110.0	15.0		III
	245	SGMR	47 GB	1124.0	1124.1	.5	63.0			QL=6 ST=2 TYP=5
	245	SGMR	49 GB	1136.0	1136.8	1.3	5700.0			QL=6 ST=2 TYP=6
	2800	OTTA	20 GRF	1149.0	1150.0	30.0	3.6	1.8		
	33	UPIC	42 SER	1155.1	1158.0	15.0				
	29	UPIC	42 SER	1155.2	1158.1	14.9				
	1415	ATHN	4 S/F	1303.1	1310.8	11.9	11.0			QL=6 ST=3 TYP=3
	8800	ATHN	4 S/F	1303.1	1313.8	17.4	11.0			QL=6 ST=3 TYP=3
	1415	ATHN	4 S/F	1304.1	1311.8	11.9	11.0			QL=6 ST=3 TYP=3
	8800	ATHN	4 S/F	1304.1	1314.8	18.4	11.0			QL=6 ST=3 TYP=3
	4995	ATHN	4 S/F	1308.1	1313.8	6.9	20.0			QL=6 ST=3 TYP=3
	4995	ATHN	4 S/F	1309.1	1314.8	6.9	20.0			QL=6 ST=3 TYP=3
	2800	OTTA	20 GRF	1310.0	1325.0	45.0	4.0	2.0		
	9500	POTS	20 GRF	1312.0	1318.5	53.0	12.0			
	3000	POTS	20 GRF	1312.0	1321.0	48.0	5.0			
	9400	HUAN	20 GRF	1312.8	1326.1	24.8	14.4	6.7		0
	2800	OTTA	20 GRF	1545.0	1547.0	11.0	3.8	1.3		
	2800	OTTA	260 FAL	1556.0	1603.0	7.0	-3.0	-1.5		0
	9400	HUAN	20 GRF	1708.4	1728.3	39.1	5.8	2.7		0
	2800	OTTA	1 S	1714.8	1715.0	1.0	2.6	1.4		
	4995	SGMR	8 S	1714.8	1715.0	.5	24.0			QL=6 ST=2 TYP=3
	410	SGMR	4 S/F	1745.0	1746.3	3.0	19.0			QL=6 ST=2 TYP=3
	610	SGMR	4 S/F	1745.3	1746.6	3.0	15.0			QL=6 ST=2 TYP=3
	1415	SGMR	4 S/F	1745.6	1746.1	2.7	26.0			QL=6 ST=2 TYP=3
	245	SGMR	8 S	1745.8	1746.6	1.2	44.0			QL=6 ST=2 TYP=3
	245	SGMR	8 S	1756.8	1757.1	.5	40.0			QL=6 ST=2 TYP=3
	410	SGMR	8 S	1757.6	1757.8	1.5	17.0			QL=6 ST=2 TYP=3
	1415	SGMR	47 GB	1757.6	1758.0	.7	61.0			QL=6 ST=2 TYP=5
	610	SGMR	8 S	1758.1	1758.1	.4	22.0			QL=6 ST=2 TYP=3
	2800	OTTA	23 GRF	1835.0	2335.0	420.00	30.0			
	2800	OTTA	4 S/F	1836.0	1839.8	5.0	10.2	4.0		
	2800	OTTA	23 GRF	1836.0	1847.0	105.0	8.2	4.1		
	9400	HUAN	22 GRF	1836.6	1846.50	24.4	12.9	7.8		R
	2695	SGMR	4 S/F	1837.3	1839.8	3.2	16.0			QL=6 ST=2 TYP=3
	4995	SGMR	8 S	1838.8	1839.8	1.5	27.0			QL=6 ST=2 TYP=3
	2800	OTTA	21 GRF	2041.0	2100.0	75.0	13.8	8.0		
	2800	OTTA	4 S/F	2044.5	2049.7	10.0	13.6	6.8		
	1415	SGMR	20 GRF	2045.6	2049.8	12.5	23.0			QL=6 ST=2 TYP=2
	2695	SGMR	20 GRF	2047.0	2049.6	3.0	22.0			QL=6 ST=2 TYP=2
	610	SGMR	20 GRF	2049.3	2049.6	.5	16.0			QL=6 ST=2 TYP=2
	8800	SGMR	20 GRF	2051.6	2051.8	.4	22.0			QL=6 ST=2 TYP=2
	2000	TYKW	28 PRE	2210.0	2253.0	43.0	6.0	3.0		
	1000	TYKW	28 PRE	2210.0	2253.0	43.0	4.0	2.0		
3750	TYKW	28 PRE	2213.0	2253.0	40.0	7.0	3.0			
9400	TYKW	28 PRE	2218.0	2253.0	35.0	5.0	2.5			
500	HIRA	22 GRF	2238.4	2331.7	77.0	8.0	3.0		ML	
2695	PENT	4 S/F	2252.0	2258.0	13.0	27.0	14.6			
500	HIRA	45 C	2252.6	2257.9	14.0	60.0	9.0		WL	
3750	TYKW	45 C	2253.0	2257.2	65.0	32.0	19.0			
2000	TYKW	45 C	2253.0	2257.8	15.0	31.0	17.0			
1000	TYKW	45 C	2253.0	2300.6	40.0	28.0	8.0			
9400	TYKW	45 C	2253.0	2312.0	65.0	35.0	22.0			
410	PALE	47 GB	2254.1	2254.6	8.9	63.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	2254.5	2254.6	.5	169.0			QL=6 ST=2 TYP=5	
8800	PALE	8 S	2254.5	2255.0	.6	15.0			QL=6 ST=2 TYP=3	
410	SGMR	4 S/F	2254.5	2255.3	5.1	34.0			QL=6 ST=2 TYP=3	
610	PALE	4 S/F	2254.5	2256.6	4.6	32.0			QL=6 ST=2 TYP=3	
1415	PALE	4 S/F	2254.5	2256.6	5.1	22.0			QL=6 ST=2 TYP=3	
610	SGMR	4 S/F	2254.5	2256.6	4.6	27.0			QL=6 ST=2 TYP=3	
245	PALE	47 GB	2254.5	2255.1	.7	160.0			QL=6 ST=2 TYP=5	
4995	PALE	8 S	2257.0	2257.1	.3	13.0			QL=6 ST=2 TYP=3	
245	LEAR	8 S	2303.8	2304.0	.3	46.0			QL=6 ST=2 TYP=3	
15400	LEAR	47 GB	2304.1E	2311.1	8.50	50.0			QL=4 ST=2 TYP=5	
4995	LEAR	4 S/F	2304.3E	2310.1	10.00	38.0			QL=4 ST=2 TYP=3	
15400	PALE	20 GRF	2304.6	2311.1	12.7	53.0			QL=6 ST=2 TYP=2	
8800	LEAR	4 S/F	2304.6E	2311.1	9.90	40.0			QL=4 ST=2 TYP=3	
2695	PENT	29 PRE	2305.0	2305.0	25.0	8.0	4.1			
8800	PALE	20 GRF	2305.1	2309.6	12.0	24.0			QL=6 ST=2 TYP=2	
2000	TYKW	29 PRE	2308.0		145.0	10.0	5.0			

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May 83

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983										
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean (2 Hz)	Int	Remarks
01	4995	PALE	8 S	2309.3	2311.3	2.00	13.0			QL=6 ST=2 TYP=3
	1000	TYKW	29 PBI	2333.0		110.0	4.0	2.0		
	3750	TYKW	29 PBI	2358.0		100.0	11.0	5.0		
	9400	TYKW	29 PBI	2358.0		90.0	11.0	4.0		
02	100	GORK	44 NS	0300.0E		420.0D		5.0		
	260	ONDR	44 NS	0555.0E		495.5D	120.0D			
	204	IZMI	43 NS	0600.0		360.0	10.0			
	127	TORN	43 NS	0736.0		144.0		3.0		V=0
	200	HIRA	44 NS	1943.0E	2100.0	820.0D	3.0	1.5		ML
	100	HIRA	44 NS	1943.0E	2122.0	820.0D	100.0	25.0		
	208	VORO	44 NS	2100.0E		240.0D		9.0		
	245	LEAR	43 NS	2300.0	0215.1	641.0D	46.0			QL=6 ST=2 TYP=1
	1415	LEAR	8 S	0137.3	0137.6	.8	5.0			QL=6 ST=2 TYP=3
	4995	LEAR	8 S	0137.5	0137.6	.6	7.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0137.5	0137.6	.6	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0137.5	0137.6	.3	6.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	0137.5	0137.8	.6	23.0			QL=6 ST=2 TYP=3
	1000	TYKW	32 ABS	0320.0	0420.0	170.0	-2.0	-1.0		
	2000	TYKW	5 S	0327.0	0330.0	4.0	1.5	0.5		
	2000	TYKW	31 ABS	0331.0	0350.0	100.0	-4.0	-2.0		
	3750	TYKW	5 S	0332.0	0332.7	2.0	1.5	0.5		
	3750	TYKW	31 ABS	0334.0	0350.0	60.0	-5.0	-2.0		
	9400	TYKW	32 ABS	0335.0	0350.0	145.0	-3.0	-1.5		
	3750	TYKW	32 ABS	0518.0	0542.0	50.0	-2.0	-1.0		
	2000	TYKW	32 ABS	0521.0	0545.0	50.0	-2.0	-1.0		
	410	LEAR	8 S	0813.1	0813.1	.2	15.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0813.1	0813.1	.2	2.0			QL=6 ST=2 TYP=3
	245	LEAR	4 S/F	0813.1	0813.1	18.2	5.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0836.6	0836.8	.2	30.0			QL=6 ST=2 TYP=3
	204	IZMI	4 S/F	0907.0	0907.7	1.0	117.0	50.0		
	29	UPIC	4 S/F	1016.0	1016.9	.9U				
	33	UPIC	4 S/F	1016.4	1016.5	.8				
	113	POTS	41 F	1030.8	1030.9	.7	110.0	1.0		III
	3000	POTS	20 GRF	1209.0	1211.5	6.0	3.0			
	1470	POTS	23 GRF	1209.5	1211.5	3.0	6.0			
	9500	POTS	20 GRF	1210.0	1213.6	13.0	11.0			
	234	POTS	4 S/F	1345.1	1345.8	1.9	3600.0	400.0		III/V
	113	POTS	4 S/F	1345.7	1346.0	1.1	700.0	60.0		III/V
410	SGMR	47 GB	1359.6	1400.1	1.7	83.0			QL=6 ST=2 TYP=5	
930	BORD	46 C	1400.0	1400.1	.4	93.0	7.0			
9400	HUAN	20 GRF	1533.1	1558.8	63.1	9.0	3.1		0	
2800	OTTA	8 S	1555.6	1555.6	.1	3.8				
930	BORD	42 SER	1555.6	1558.2	8.3	333.0	2.0			
2800	OTTA	8 S	1558.0	1558.0	.5	3.8				
1415	SGMR	8 S	1558.0	1558.1	.6	13.0			QL=6 ST=2 TYP=3	
610	SGMR	49 GB	1558.0	1558.1	.6	1800.0			QL=6 ST=2 TYP=6	
410	SGMR	47 GB	1558.0	1558.1	.5	410.0			QL=6 ST=2 TYP=5	
2800	OTTA	27A RF	1705.0		395.0	6.0	4.5			
2800	OTTA	24 R	1705.0	1840.0	95.0	6.0	2.0			
2800	OTTA	3 S	1829.5	1831.5	5.0	15.2	5.1			
9400	HUAN	2 S/F	1829.6	1831.2	3.1	16.4	9.4		L	
1415	SGMR	8 S	1830.5	1831.1	1.5	40.0			QL=6 ST=2 TYP=3	
1415	PALE	8 S	1830.6	1831.1	1.0	31.0			QL=6 ST=2 TYP=3	
610	SGMR	47 GB	1830.8	1831.1	.7	93.0			QL=6 ST=2 TYP=5	
4995	SGMR	8 S	1830.8	1831.3	1.0	19.0			QL=6 ST=2 TYP=3	
610	PALE	47 GB	1831.1	1831.1	.4	130.0			QL=6 ST=2 TYP=5	
4995	PALE	8 S	1831.1	1831.3	.4	13.0			QL=6 ST=2 TYP=3	
8800	SGMR	8 S	1831.1	1831.3	.5	27.0			QL=6 ST=2 TYP=3	
2695	SGMR	8 S	1831.3	1831.8	.7	16.0			QL=6 ST=2 TYP=3	
9400	HUAN	29 PBI	1832.7	1832.7	25.9	6.0	5.7		0	
2800	OTTA	24P R	1840.0		230.0	6.0				
2000	TYKW	20 GRF	2130.0	2210.0	90.0	2.0	1.0			
3750	TYKW	20 GRF	2150.0	2215.0	90.0	3.0	1.5			
2695	PENT	26 FAL	2230.0	2340.0	70.0	-6.0	-3.0			
2930	VORO	45 C	2250.0	2257.0	15.0	65.0				
03	410	LEAR	43 NS	0132.8	0139.3	18.2	10.0			QL=6 ST=2 TYP=1
	100	GORK	44 NS	0254.0E		486.0D		10.0		
	260	ONDR	44 NS	0545.0E		505.0D	20.0			
	204	IZMI	43 NS	0600.0		360.0	15.0			

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

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May 83

M A Y 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
03	200	HIRA	44 NS	1941.0E	2351.0	820.0D	35.0	10.0		ML
	208	VORO	44 NS	2300.0E		120.0D		8.0		
	2695	PENT	240 R	0007.0	0010.0	3.0	2.8	1.4		
	3750	TYKW	5 S	0007.0	0013.2	10.0	7.0	3.0		
	9400	TYKW	21 GRF	0011.0	0019.0	100.0	6.0	3.0		
	3750	TYKW	30 PBI	0017.0		70.0	4.0	2.0		
	3750	TYKW	45 C	0054.0	0103.0	15.0	3.0	1.5		
	3750	TYKW	5 S	0113.0	0113.7	2.0	7.0	3.0		
	2695	PENT	1 S	0113.5	0113.9	1.0	1.6	0.8		
	3750	TYKW	29 PBI	0115.0		10.0	1.5	0.7		
	500	HIRA	42 SER	0131.7	0134.3	9.0	25.0			0
	2000	TYKW	21 GRF	0142.0	0149.0	100.0	3.0	1.5		
	3750	TYKW	20 GRF	0142.0	0153.0	100.0	3.0	1.5		
	1000	TYKW	20 GRF	0142.0	0210.0	120.0	1.0	0.5		
	9400	TYKW	20 GRF	0144.0	0150.0	40.0	3.0	1.5		
	2000	TYKW	5 S	0205.0	0207.0	10.0	1.5	0.5		
	9400	TYKW	5 S	0432.0	0432.2	1.0	4.0	1.5		
	200	HIRA	8 S	0520.0	0520.3	.6	95.0			ML
	3750	TYKW	20 GRF	0700.0	0725.0	70.0	3.0	1.5		
	430	KRAK	8 S	0711.0	0711.7	1.0	180.0			
	810	KRAK	8 S	0711.5	0711.5	.3	5.0			
	2950	GORK	20 GRF	0716.0	0721.0	286.0	3.0	2.0		
	410	LEAR	8 S	0808.5	0808.6	.3	30.0			QL=6 ST=2 TYP=3
	2950	GORK	1 S	0812.5	0813.5	2.8	2.3			
	2950	GORK	20 GRF	0942.0	1001.0	42.0	4.6	2.0		
	2800	OTTA	20 GRF	1000.0	1200.0	120.0D	4.2	2.0		
	2950	GORK	20 GRF	1108.5	1116.0	22.5	3.8	2.0		
	810	KRAK	8 S	1114.7	1114.7	.2	12.0			
	930	BORD	8 S	1115.3	1115.3	.1	32.0	1.0		
	2800	OTTA	260 FAL	1140.0	1205.0	25.0	-3.0	-1.5		
	2800	OTTA	20 GRF	1220.0	1235.0	130.0	3.0	1.5		
	930	BORD	8 S	1233.7	1233.7	.1	15.0	1.0		
	2800	OTTA	26A FAL	1520.0	1650.0	90.0	-3.0	-1.5		
	2800	OTTA	20 GRF	1600.0	1615.0	40.0	2.2	1.1		
	2800	OTTA	21 GRF	2040.0	2145.0	220.0	7.2	2.4		
	9400	HUAN	2 S/F	2043.4	2045.3	6.2	11.0	6.3		R
	2000	TYKW	28 PRE	2130.0	2133.0	7.0	2.0	1.0		
	1000	TYKW	28 PRE	2130.0	2138.0	8.0	1.5	0.7		
	3750	TYKW	28 PRE	2130.0	2138.0	8.0	4.0	1.5		
	2000	TYKW	45 C	2137.0	2139.6	9.0	27.0	10.0		
9400	TYKW	45 C	2138.0	2139.0	3.0	8.0	4.0			
2800	OTTA	3 S	2138.0	2139.5	8.0	22.4	7.4			
3750	TYKW	45 C	2138.0	2139.6	5.0	19.0	12.0			
1000	TYKW	45 C	2138.0	2140.5	4.0	5.0	3.0			
2695	SGMR	4 S/F	2138.5	2139.1	2.5	28.0			QL=6 ST=2 TYP=3	
1415	SGMR	4 S/F	2138.6	2140.1	2.5	26.0			QL=6 ST=2 TYP=3	
4995	SGMR	8 S	2138.8	2139.5	.8	13.0			QL=6 ST=2 TYP=3	
9400	TYKW	29 PBI	2141.0		55.0	4.0	2.0			
1000	TYKW	29 PBI	2142.0		80.0	1.5	0.7			
3750	TYKW	29 PBI	2143.0		50.0	6.0	3.0			
2000	TYKW	29 PBI	2146.0		80.0	4.0	1.5			
15400	LEAR	8 S	2347.0	2347.1	.3	16.0			QL=6 ST=2 TYP=3	
04	100	GORK	44 NS	0300.0E		540.0D		10.0		
	260	ONDR	44 NS	0557.0E		491.0D	22.0			
	100	HIRA	44 NS	1940.0E	2021.0	420.0D	130.0	30.0		
	200	HIRA	44 NS	1940.0E	2047.0	500.0D	15.0	5.0		ML
	208	VORO	44 NS	2100.0E		240.0D		4.0		
	610	LEAR	8 S	0046.6	0046.8	.2	45.0			QL=6 ST=2 TYP=3
	2000	TYKW	20 GRF	0313.0	0320.0	30.0	1.5	0.7		
	3750	TYKW	20 GRF	0315.0	0326.0	30.0	2.0	1.0		
	3750	TYKW	20 GRF	0352.0	0401.0	30.0	2.0	1.0		
	2000	TYKW	20 GRF	0352.0	0401.0	30.0	1.5	0.7		
	410	LEAR	8 S	0408.8	0409.8	1.5	20.0			QL=6 ST=2 TYP=3
	9100	GORK	1 S	0441.1	0444.3	3.2U	9.0	4.0		
	9400	TYKW	5 S	0443.5	0444.3	1.5	11.0	2.5		
	8800	LEAR	8 S	0444.1	0444.1	.2	13.0			QL=6 ST=2 TYP=3
	6100	K1SV	1 S	0444.1	0444.2	.5	3.0			
	9400	TYKW	29 PBI	0445.0		20.0	2.0	1.0		
2950	GORK	20 GRF	0514.6	0545.0	78.0	5.2				
2000	TYKW	20 GRF	0516.0	0600.0	130.0	3.0	1.5			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
04	9400	TYKW	21 GRF	0520.0	0550.0	110.0	6.0	3.0		
	3750	TYKW	20 GRF	0520.0	0550.0	120.0	4.0	2.0		
	1000	TYKW	20 GRF	0520.0	0555.0	120.0	1.5	0.7		
	6100	KISV	1 S	0543.7	0544.3	2.0	4.0			
	9400	TYKW	5 S	0544.0	0544.2	1.0	11.0	2.5		
	9100	GORK	1 S	0544.1	0544.3	.5	13.0	6.0		
	410	LEAR	8 S	0557.6	0558.3	1.2	20.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0558.1	0558.3	.5	8.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0738.6	0738.8	.5	34.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0845.8	0846.0	.3	13.0			QL=6 ST=2 TYP=3
	100	GORK	8 S	1039.8	1040.2	.7	180.00			
	3000	POTS	20 GRF	1112.0	1121.7	23.0	9.0			
	2800	OTTA	1 S	1119.0	1120.0	10.0	3.0	1.2		
	1470	POTS	20 GRF	1119.0	1122.0	56.0	4.0			
	536	ONDR	1 S	1140.5	1140.8	.5	12.0			
	930	BORD	8 S	1223.5	1223.5	.1	17.0	1.0		
	430	KRAK	42 SER	1258.5	1259.5	2.00	270.0			
	2800	OTTA	22 GRF	1824.0	1840.0	40.0	3.0	1.3		
05	100	GORK	44 NS	0406.0E		414.00		10.0		
	127	TORN	44 NS	0740.0E		350.00		4.0		V=1
	245	SGMR	43 NS	1920.0	1938.8	22.3	43.0			QL=6 ST=3 TYP=1
	200	HIRA	44 NS	1939.0E	2016.0	130.00	80.0	15.0		0
	208	VORO	44 NS	2100.0E		50.00				
	3750	TYKW	28 PRE	0003.0E	0003.7	14.00	6.0	4.00		
	9400	TYKW	21 GRF	0003.0	0035.0	120.0	8.0	4.00		
	9400	TYKW	5 S	0003.3	0003.7	.70	5.0	2.00		
	4995	LEAR	8 S	0003.6	0003.6	.2	10.0			QL=6 ST=2 TYP=3
	2695	PENT	20 GRF	0005.0	0020.0	75.0	7.2	3.2		
	2000	TYKW	28 PRE	0009.0E	0019.0	10.00	2.0	1.00		
	3750	TYKW	5 S	0017.0	0019.7	5.0	12.0	7.0		
	2695	LEAR	4 S/F	0017.1	0019.1	3.9	23.0			QL=6 ST=2 TYP=3
	9400	TYKW	45 C	0018.0	0019.4	3.0	6.0	3.0		
	2000	TYKW	45 C	0019.0	0023.6	13.0	7.0	3.5		
	4995	LEAR	8 S	0019.6	0019.8	.4	13.0			QL=6 ST=2 TYP=3
	1000	TYKW	5 S	0020.0	0020.1	1.0	2.0	0.7		
	9400	TYKW	29 PBI	0021.0		8.0	3.0	1.5		
	3750	TYKW	29 PBI	0022.0		45.0	7.0	4.0		
	500	HIRA	7 C	0023.1	0023.1	2.0	60.0	15.0		0
	245	LEAR	49 GB	0023.3	0023.3	2.0	570.0			QL=6 ST=2 TYP=6
	610	LEAR	8 S	0023.3	0023.3	2.0	42.0			QL=6 ST=2 TYP=3
	410	LEAR	49 GB	0023.3	0023.3	2.0	570.0			QL=6 ST=3 TYP=6
	410	PALE	49 GB	0023.3	0023.5	.8	560.0			QL=6 ST=2 TYP=6
	610	PALE	8 S	0023.3	0023.5	.5	47.0			QL=6 ST=2 TYP=3
	1000	TYKW	5 S	0023.3	0023.7	4.7	3.0	1.5		
	1000	TYKW	30 PBI	0028.0		75.0	1.0	0.5		
	2000	TYKW	29 PBI	0032.0		70.0	3.0	1.5		
	610	LEAR	47 GB	0033.1	0033.3	1.0	210.0			QL=6 ST=2 TYP=5
	410	LEAR	8 S	0049.8	0050.1	.8	22.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0049.8	0050.1	.7	19.0			QL=6 ST=2 TYP=3
	1000	TYKW	5 S	0050.0	0050.3	1.0	3.0	1.0		
	3750	TYKW	20 GRF	0325.0	0333.0	30.0	5.0	2.0		
	410	LEAR	4 S/F	0330.8	0332.8	2.3	17.0			QL=6 ST=2 TYP=3
	500	HIRA	8 S	0417.0	0417.1	.4	35.0			0
	17000	NOBE	20 GRF	0423.0	0425.2	16.0	14.0			0
	3750	TYKW	20 GRF	0445.0	0505.0	60.0	2.0	1.0		
	500	HIRA	8 S	0448.9	0449.0	.4	40.0			0
	410	LEAR	8 S	0449.1	0449.3	.7	23.0			QL=6 ST=2 TYP=3
	410	LEAR	4 S/F	0514.0	0515.1	10.5	20.0			QL=6 ST=2 TYP=3
	950	GORK	21 GRF	0514.5	0517.0	7.0	2.0			
	500	HIRA	7 C	0515.1	0515.5	3.0	250.0	50.0		0
610	LEAR	4 S/F	0515.5	0515.8	6.1	37.0			QL=6 ST=2 TYP=3	
2000	TYKW	45 C	0515.6	0516.1	2.0	7.0	2.0			
1000	TYKW	45 C	0515.6	0516.1	2.0	20.0	4.0			
950	GORK	4 S/F	0515.8	0516.0	.7	20.0				
1415	ATHN	4 S/F	0542.5	0552.6	21.1	16.0			QL=5 ST=2 TYP=3	
2695	ATHN	4 S/F	0546.6	0551.8	17.0	13.0			QL=5 ST=2 TYP=3	
8800	ATHN	4 S/F	0546.8	0552.6	14.2	22.0			QL=5 ST=2 TYP=3	
4995	ATHN	4 S/F	0548.3	0552.6	10.3	9.0			QL=5 ST=2 TYP=3	
410	LEAR	4 S/F	0706.5	0709.3	7.5	10.0			QL=6 ST=2 TYP=3	
430	KRAK	42 SER	0709.0	0709.5	4.5	12.0				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean (W/m ² Hz)	Int	Remarks
05	410	LEAR	8 S	0804.6	0805.0	.9	19.0			QL=6 ST=2 TYP=3
	430	KRAK	42 SER	0805.0	0805.0	8.0	32.0			
	410	LEAR	4 S/F	0809.0	0810.5	4.1	11.0			QL=6 ST=2 TYP=3
	430	KRAK	45 C	0815.5	0818.0	3.5	47.0	12.0		
	410	LEAR	8 S	0817.8	0818.0	1.0	37.0			QL=6 ST=2 TYP=3
	430	KRAK	42 SER	0851.5	0915.5	249.0	115.0			
	430	KRAK		0851.5	1035.5		320.0			
	430	KRAK		0851.5	1051.5		33.0			
	2695	LEAR	4 S/F	0914.0	0915.1	4.8	29.0			QL=6 ST=2 TYP=3
	4995	LEAR	4 S/F	0914.1	0915.8	3.7	25.0			QL=6 ST=2 TYP=3
	1415	LEAR	4 S/F	0914.1	0915.8	4.2	22.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	0914.3	0915.3	2.2	38.0			QL=5 ST=2 TYP=3
	1415	ATHN	4 S/F	0914.3	0915.8	2.2	33.0			QL=5 ST=2 TYP=3
	4995	ATHN	4 S/F	0914.3	0915.8	2.2	30.0			QL=5 ST=2 TYP=3
	5200	BERN	45 C	0914.5	0915.8	8.0	55.0			
	3100	BERN	45 C	0914.5	0915.8	10.0	41.0			
	8400	BERN	45 C	0914.5	0915.8	6.0	29.0			
	8800	ATHN	8 S	0914.6	0915.8	1.9	13.0			QL=5 ST=2 TYP=3
	6100	KISV	45 C	0914.7	0915.8	2.0	17.0			
	2650	DWIN	2 S/F	0915.0	0915.0	1.0	40.0	20.0		
	930	BORD	45 C	0915.0	0915.8	1.2	21.0	3.0		
	1470	POTS	29 PBI	0915.0	0915.2	8.5	9.0			
	2950	GORK	45 C	0915.0	0915.3	1.2	24.0			
	3000	POTS	29 PBI	0915.0	0915.4	8.0	25.0			
	808	ONDR	2 S/F	0915.0	0915.5	2.0	20.0	9.0		
	610	LEAR	4 S/F	0915.0	0915.6	2.5	38.0			QL=6 ST=2 TYP=3
	1470	POTS		0915.0	0915.7		16.0			
	810	KRAK	2 S/F	0915.0	0915.7	1.2	22.0	5.0		
	650	GORK	4 S/F	0915.0	0915.8	1.2	16.0			
	950	GORK	3 S	0915.0	0915.8	1.2	11.0			
	3000	POTS		0915.0	0915.9		25.0			
	536	ONDR	46 C	0915.0	0916.0	2.0	49.0			
	2950	GORK		0915.0	0918.8		21.0			
	410	LEAR	8 S	0915.1	0915.3	1.0	45.0			QL=6 ST=2 TYP=3
	9100	GORK	1 S	0915.2	0915.7	1.0	16.0	8.0		
	9500	POTS	3 S	0915.2	0915.9	1.3	14.0			
	2950	GORK	29 PBI	0916.2	0916.2	9.5	6.1			
	950	GORK	29 PBI	0916.2	0916.2	9.2	2.0			
	3100	CRIM	45 C	1015.0	1015.2	2.0	21.0	7.0		
	3100	CRIM		1015.0	1015.8		21.0			
	3100	CRIM	29 PBI	1017.0	1017.0	8.0	4.0	1.0		
	810	KRAK	2 S/F	1035.7	1036.0	.7	9.0	1.0		
	1470	POTS	3 S	1035.9	1036.0	2.1	6.0			
	536	ONDR	46 C	1036.0	1036.0	2.0	52.0			
	2800	OTTA	20 GRF	1135.0	1205.0	100.0	3.0	2.1		
810	KRAK	8 S	1153.3	1153.3	.1	8.0				
810	KRAK	41 F	1201.0	1201.5	2.0	6.0	1.0			
430	KRAK	46 C	1201.0	1202.0	9.0	115.0	7.0			
430	KRAK		1201.0	1205.2		250.0				
410	SGMR	47 GB	1201.3	1201.8	1.2	66.0			QL=6 ST=2 TYP=5	
610	SGMR	8 S	1201.5	1201.6	.3	24.0			QL=6 ST=2 TYP=3	
245	SGMR	47 GB	1202.1	1202.1	.5	100.0			QL=6 ST=2 TYP=5	
536	ONDR	46 C	1203.5	1204.0	2.0	36.0				
410	SGMR	47 GB	1204.9	1205.1	2.2	100.0			QL=6 ST=2 TYP=5	
930	BORD	46 C	1204.8	1205.1	2.2	34.0	4.0			
610	SGMR	47 GB	1205.0	1205.1	.8	64.0			QL=6 ST=2 TYP=5	
245	SGMR	8 S	1205.0	1205.1	.8	39.0			QL=6 ST=3 TYP=3	
810	KRAK	2 S/F	1205.0	1205.5	1.3	25.0	9.0			
1470	POTS	4 S/F	1205.0	1206.0	2.0	9.0				
1415	SGMR	8 S	1205.1	1205.5	.9	20.0			QL=6 ST=2 TYP=3	
1415	ATHN	4 S/F	1205.1	1205.8	2.5	10.0			QL=6 ST=2 TYP=3	
536	ONDR	46 C	1224.0	1224.0	1.0	55.0				
430	KRAK	42 SER	1224.3	1224.5	2.0	115.0				
430	KRAK	8 S	1245.0	1245.0	.1	29.0				
2800	OTTA	1 S	1328.0	1359.5	31.5D	8.6	4.2			
6100	KISV	2 S/F	1357.5	1359.6	4.0	7.0				
4995	ATHN	4 S/F	1357.8	1359.5	3.3	20.0			QL=5 ST=2 TYP=3	
4995	SGMR	20 GRF	1358.1	1359.5	2.5	30.0			QL=6 ST=2 TYP=2	
2695	SGMR	20 GRF	1358.8	1359.3	1.3	20.0			QL=6 ST=2 TYP=2	
2695	ATHN	8 S	1359.0	1359.3	1.3	8.0			QL=5 ST=2 TYP=3	
2800	OTTA	29 PBI	1400.2	1400.2	12.0	4.4				

SOLAR RADIO EMISSION
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MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)			
05	410	SGMR	8 S	1401.1	1401.1	.4	23.0			QL=6 ST=2 TYP=3	
	245	SGMR	8 S	1416.8	1417.1	.5	49.0			QL=6 ST=2 TYP=3	
	410	SGMR	8 S	1417.3	1417.6	.5	29.0			QL=6 ST=2 TYP=3	
	2800	OTTA	20 GRF	1420.0	1430.0	30.0	3.0	1.8			
	610	SGMR	47 GB	1426.6	1426.6	.4	57.0			QL=6 ST=2 TYP=5	
	410	SGMR	47 GB	1427.1	1427.3	.4	54.0			QL=6 ST=2 TYP=5	
	245	SGMR	47 GB	1427.5	1427.6	.1D	28.0			QL=6 ST=2 TYP=5	
	2800	OTTA	240 R	1740.0	1800.0	20.0	2.0	1.0			
	2800	OTTA	240AR	1850.0	1925.0	35.0	3.0				
	2800	OTTA	21 GRF	1900.0	1912.0	25.0	5.0	3.0			
	2800	OTTA	1 S	1900.5	1901.0	1.0	3.0	1.3			
	245	SGMR	8 S	1925.8	1926.1	.7	30.0				QL=6 ST=2 TYP=3
	4995	SGMR	4 S/F	1932.0	1934.0	2.1	13.0				QL=6 ST=2 TYP=3
	2695	SGMR	8 S	2010.3	2010.8	1.5	18.0				QL=6 ST=2 TYP=3
	245	PALE	8 S	2039.3	2040.1	1.3	44.0				QL=5 ST=2 TYP=3
	2800	OTTA	240 R	2110.0	2140.0	30.0	2.2	1.0			
	3750	TYKW	21 GRF	2325.0	0051.0	230.0	4.0	2.0			
	2695	PENT	20 GRF	2330.0	2355.0	50.0	2.2	1.1			
	2000	TYKW	20 GRF	2335.0	2358.0	50.0	2.0	1.0			
	06	2000	TYKW	20 GRF	0032.0	0100.0	160.0	3.0	1.5		
2695		PENT	20 GRF	0040.0	0100.0	60.0	2.2	1.4			
610		LEAR	47 GB	0129.1	0129.5	1.0	68.0				QL=6 ST=2 TYP=5
410		LEAR	8 S	0129.1	0129.5	1.4	22.0				QL=6 ST=2 TYP=3
610		PALE	47 GB	0129.5	0129.6	.3	72.0				QL=6 ST=2 TYP=5
410		PALE	8 S	0129.5	0129.6	.3	25.0				QL=6 ST=2 TYP=3
410		LEAR	8 S	0142.1	0142.5	1.5	20.0				QL=6 ST=2 TYP=3
3750		TYKW	20 GRF	0155.0	0159.0	60.0	2.0	1.0			
245		LEAR	8 S	0254.6	0254.8	.4	17.0				QL=6 ST=2 TYP=3
410		LEAR	47 GB	0309.1	0309.1	.5	52.0				QL=6 ST=2 TYP=5
245		LEAR	8 S	0319.8	0320.0	.3	11.0				QL=6 ST=2 TYP=3
410		LEAR	4 S/F	0401.3	0403.8	3.0	32.0				QL=6 ST=3 TYP=3
500		HIRA	7 C	0402.7	0403.3	1.4	40.0	25.0			ML
1000		TYKW	45 C	0403.0	0404.2	2.0	4.0	1.0			
2000		TYKW	45 C	0403.0	0404.2	2.0	4.0	1.0			
2000		TYKW	5 S	0414.9	0415.0	1.0	3.0	0.7			
410		LEAR	8 S	0452.6	0453.0	1.2	20.0				QL=6 ST=2 TYP=3
1000		TYKW	45 C	0457.0	0502.9	13.0	8.0	3.0			
245		LEAR	8 S	0514.6	0514.8	.2	21.0				QL=6 ST=2 TYP=3
650		GORK	1 S	0523.6	0524.5	1.3	5.0	2.0			
950		GORK	1 S	0524.2	0524.6	.7	2.5				
410		LEAR	8 S	0543.3	0543.3	.3	11.0				QL=6 ST=2 TYP=3
410		LEAR	8 S	0544.1	0544.6	1.5	32.0				QL=6 ST=2 TYP=3
500		HIRA	3 S	0544.3	0544.4	1.3	18.0	9.0			0
1000		TYKW	5 S	0607.0	0607.3	1.0	4.0	1.0			
15400		LEAR	4 S/F	0650.8	0651.1	2.3	10.0				QL=5 ST=2 TYP=3
930		BORD	41 F	0707.6	0708.0	.4	12.0	2.0			
430		KRAK	8 S	0725.2	0725.2	.2	41.0				
410		LEAR	8 S	0725.3	0725.3	.2	16.0				QL=6 ST=2 TYP=3
610		LEAR	4 S/F	0731.8	0733.0	3.7	19.0				QL=6 ST=2 TYP=3
1415		LEAR	4 S/F	0732.3	0733.3	3.8	11.0				QL=6 ST=2 TYP=3
410		LEAR	8 S	0732.3	0733.3	1.3	13.0				QL=6 ST=2 TYP=3
810		KRAK	41 F	0732.5	0733.2	2.2	11.0	2.0			
810	KRAK		0732.5	0734.3		17.0					
500	HIRA	7 C	0732.6	0732.6	1.0	13.0	8.0			0	
8800	LEAR	8 S	0732.6	0733.3	1.2	10.0				QL=6 ST=2 TYP=3	
15400	LEAR	8 S	0732.6	0733.3	1.4	23.0				QL=6 ST=2 TYP=3	
950	GORK	4 S/F	0732.7	0733.0	2.2	14.5					
430	KRAK	2 S/F	0732.7	0733.2	.7	30.0	4.0				
1000	TYKW	45 C	0732.7	0733.4	3.5	9.0	3.0				
6100	K1SV	1 S	0732.8	0733.5	2.0	3.0					
950	GORK	3 S	0732.8	0733.5	4.0	15.0	7.0				
9100	GORK	1 S	0732.9	0733.3	1.0	15.0	7.0				
3750	TYKW	5 S	0733.0	0733.3	2.0	2.0	0.5				
9400	TYKW	5 S	0733.0	0733.3	0.7	12.0	3.0				
2000	TYKW	5 S	0733.0	0733.4	2.0	4.0	1.0				
2950	GORK	1 S	0733.0	0733.5	1.4	3.8	2.0				
9500	POTS	3 S	0733.0	0733.5	1.0	12.0					
1470	POTS	3 S	0733.0	0733.5	2.0	7.0					
2695	LEAR	8 S	0733.1	0733.3	1.5	2.0				QL=6 ST=2 TYP=3	
930	BORD	4 S/F	0733.2	0734.7	2.0	15.0	3.0				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
06	430	KRAK	8 S	0852.0	0852.0	.1	9.0			
	430	KRAK	8 S	0901.8	0901.8	.1	16.0			
	430	KRAK	8 S	0954.0	0954.5	.5	18.0			
	430	KRAK	42 SER	1025.0	1031.3	12.0	93.0			
	810	KRAK	8 S	1030.8	1030.8	.2	13.0			
	536	ONDR	8 S	1031.0	1031.0	1.0	42.0			
	260	ONDR	8 S	1031.0	1031.0	.1	26.0			
	3100	CRIM	26 FAL	1058.0	1110.0		4.0			
	260	ONDR	41 F	1125.0	1154.5	32.0	209.0U			
	2800	OTTA	22 GRF	1240.0	1530.0	390.0	8.0	4.0		
	9400	HUAN	22 GRF	1525.8	1543.1	33.2	6.9	2.8		0
	100	HIRA	46 C	2039.6	2040.0	.7	145.0	8.4		
	410	PALE	8 S	2113.3	2113.5	.3	29.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	2234.0	2234.7	1.5	1.5			
	2000	TYKW	5 S	2257.0	2259.0	25.0	2.0	1.0		
	3750	TYKW	20 GRF	2300.0	2309.0	35.0	2.0	1.0		
	610	LEAR	4 S/F	2336.5	2338.1	4.6	35.0			QL=6 ST=2 TYP=3
	3750	TYKW	20 GRF	2340.0	2345.0	50.0	2.0	1.0		
245	LEAR	8 S	2349.5	2349.6	.3	49.0			QL=6 ST=2 TYP=3	
07	245	LEAR	43 NS	0526.1	0734.6	252.9D	20.0			QL=6 ST=2 TYP=1
	208	VORO	43 NS	2205.0		175.0D		4.0		
	245	PALE	43 NS	2237.1	0007.1	358.9D	310.0			QL=6 ST=2 TYP=1
	245	LEAR	43 NS	2302.0	2354.8	636.0D	219.0			QL=6 ST=2 TYP=1
	200	HIRA	43 NS	2324.0	0030.0	200.0	30.0	10.0		0
	3750	TYKW	28 PRE	0055.0	0130.0	35.0	3.0	1.5		
	3750	TYKW	5 S	0102.2	0102.4	1.5	2.0	0.7		
	9400	TYKW	5 S	0122.0	0122.6	3.0	4.0	1.0		
	9395	PEKG	1 S	0122.0	0122.6	4.0	6.7	3.0		
	3750	TYKW	45 C	0130.0	0133.7	15.0	31.0	10.0		
	2695	PENT	21 GRF	0130.0	0137.0	14.0	7.2	4.0		
	410	LEAR	4 S/F	0130.8	0132.1	5.0	24.0			QL=6 ST=2 TYP=3
	245	LEAR	4 S/F	0130.8	0132.1	5.0	24.0			QL=6 ST=3 TYP=3
	610	LEAR	4 S/F	0132.1	0133.3	4.9	8.0			QL=6 ST=2 TYP=3
	410	PALE	47 GB	0132.3	0133.1	2.5	330.0			QL=6 ST=2 TYP=5
	410	LEAR	47 GB	0132.3	0133.8	2.5	280.0			QL=6 ST=3 TYP=5
	1000	TYKW	5 S	0132.5	0133.0	1.0	3.0	0.7		
	9400	TYKW	45 C	0132.5	0134.5	3.5	10.0	3.0		
	4995	PALE	4 S/F	0132.6	0133.1	2.2	21.0			QL=6 ST=2 TYP=3
	4995	LEAR	4 S/F	0132.6	0133.3	2.2	19.0			QL=6 ST=2 TYP=3
	9395	PEKG	45 C	0133.0	0134.5	3.0	9.6	3.2		
	1000	TYKW	5 S	0134.0	0134.4	1.2	1.5	0.5		
	2695	PENT	40 F	0134.0	0134.5	2.0	42.0			
	2000	TYKW	45 C	0134.0	0134.7	3.0	31.0	3.0		
	2695	LEAR	8 S	0134.6	0134.6	.2	32.0			QL=6 ST=2 TYP=3
	9400	TYKW	29 PBI	0136.0		35.0	3.0	1.5		
	9395	PEKG	29 PBI	0136.0	0137.6	8.0	4.8	2.0		
	2000	TYKW	29 PBI	0137.0		10.0	1.5	0.7		
	3750	TYKW	30 PBI	0145.0		65.0	6.0	3.0		
	3750	TYKW	5 S	0151.0	0153.5	10.0	4.0	1.5		
	2000	TYKW	20 GRF	0153.0	0159.0	35.0	2.0	1.0		
	245	LEAR	8 S	0256.6	0256.8	.2	19.0			QL=6 ST=2 TYP=3
	2000	TYKW	20 GRF	0317.0	0400.0	110.0	2.0	1.0		
	3750	TYKW	21 GRF	0330.0	0400.0	110.0	2.0	1.0		
	610	LEAR	4 S/F	0331.8	0333.0	3.0	15.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	0422.0	0422.4	3.0	1.0	0.3		
6100	KISV	2 S/F	0438.2	0440.0	4.5	3.0				
3750	TYKW	5 S	0439.0	0439.7	2.0	5.0	2.0			
2950	GORK	1 S	0439.3	0439.9	1.1	3.0	1.0			
3750	TYKW	29 PBI	0441.0		15.0	1.5	0.7			
3750	TYKW	5 S	0533.0	0534.3	4.0	1.5	0.5			
3750	TYKW	21 GRF	0545.0	0635.0	130.0	3.0	1.5			
2000	TYKW	20 GRF	0615.0	0639.0	50.0	2.0	1.0			
6100	KISV	1 S	0619.8	0619.6	1.5	5.0				
3750	TYKW	5 S	0619.0	0619.6	4.0	5.0	1.5			
6100	KISV	28 PRE	0720.5	0721.5	23.0	3.0				
2000	TYKW	20 GRF	0724.0	0740.0	70.0	2.0	1.0			
3750	TYKW	21 GRF	0730.0	0735.0	60.0	2.0	1.0			
9400	TYKW	45 C	0741.0	0743.7	8.0	34.0	10.0			
9500	POTS	40 F	0741.0	0743.8	12.0	25.0				
9395	PEKG	45 C	0741.7	0743.7	10.3	31.2	8.5			

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May 83

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
07	9100	GORK		0741.9						
	9100	GORK	46 C	0741.9	0743.6	12.2	30.0			
	9100	GORK		0741.9	0744.4		25.0			
	8800	LEAR	4 S/F	0743.3	0744.3	4.8	18.0			QL=6 ST=3 TYP=3
	8400	BERN	45 C	0743.4	0744.4	7.0	40.0			
	11800	BERN	45 C	0743.4	0745.6	7.0	61.0			
	19600	BERN	45 C	0743.4	0745.6	7.0	63.0			
	15400	LEAR	47 GB	0743.5	0743.6	4.3	51.0			QL=6 ST=3 TYP=5
	8800	ATHN	4 S/F	0743.6	0744.3	3.7	18.0			QL=6 ST=2 TYP=3
	6100	KISV	46 C	0743.6	0744.5	6.5U	11.0			
	6100	KISV		0743.6	0745.8		9.0			
	3750	TYKW	5 S	0744.0	0746.5	8.0	2.0	1.0		
	9400	TYKW	29 PBI	0749.0		15.0	5.0	2.0		
	6100	KISV	29 PBI	0750.0	0750.0	17.0	4.0			
	6100	KISV	2 S/F	0755.3	0756.3	2.0	3.0			
	3750	TYKW	45 C	0756.0	0800.3	10.0	4.0	1.0		
	9100	GORK	1 S	0901.5	0902.4	1.4	8.0	4.0		
	260	ONDR	41 F	0940.0	1028.5	50.0	21.0			
	430	KRAK	8 S	1019.0	1019.2	.5	12.0			
	430	KRAK	4 S/F	1026.3	1028.0	2.0	77.0	5.0		
	6100	KISV	1 S	1033.2	1033.4	.5	3.0			
	2695	SGMR	8 S	1036.6	1038.1	1.7	20.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	1037.0	1037.6	2.5	13.0			QL=6 ST=2 TYP=3
	1415	ATHN	4 S/F	1037.0	1037.6	2.5	19.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	1037.0	1037.6	2.5	13.0			QL=6 ST=2 TYP=3
	6100	KISV	1 S	1037.4	1038.0	3.0	6.0			
	1415	SGMR	8 S	1037.8	1038.1	.8	23.0			QL=6 ST=2 TYP=3
	2650	DWIN	1 S	1038.0	1038.0	1.0	20.0	10.0		
	2695	ATHN	4 S/F	1043.1	1044.3	3.9	15.0			QL=6 ST=3 TYP=3
	4995	ATHN	4 S/F	1043.1	1044.3	3.9	8.0			QL=6 ST=3 TYP=3
	1415	ATHN	4 S/F	1043.1	1044.3	3.9	23.0			QL=6 ST=3 TYP=3
	6100	KISV	1 S	1043.7	1044.5	4.0	4.0			
	2650	DWIN	1 S	1044.0	1044.0	1.0	20.0	10.0		
	1415	SGMR	4 S/F	1044.0	1044.3	8.6	34.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1044.0	1044.5	.8	19.0			QL=6 ST=2 TYP=3
	15400	SGMR	4 S/F	1045.0	1045.1	12.3	27.0			QL=6 ST=2 TYP=3
	9500	POTS	40 F	1133.0	1134.8	5.0	16.0			
	6100	KISV	1 S	1134.3	1134.9	3.0	3.0			
	2800	OTTA	21 GRF	1155.0	1207.0	30.0	3.0	1.6		
	2800	OTTA	1 S	1200.3	1201.0	1.5	3.4	1.5		
	6100	KISV	1 S	1200.4	1201.0	2.0	4.0			
	4995	SGMR	8 S	1200.8	1201.0	.3	13.0			QL=6 ST=2 TYP=3
	260	ONDR	41 F	1217.0	1230.0	33.0	7.0			
	2800	OTTA	20 GRF	1305.0	1315.0	50.0	2.4	1.2		
	2695	SGMR	20 GRF	1311.1	1315.8	19.0	20.0			QL=6 ST=2 TYP=2
	8800	ATHN	8 S	1401.6	1402.8	2.0	15.0			QL=5 ST=2 TYP=3
	4995	ATHN	8 S	1401.8	1402.3	1.8	11.0			QL=5 ST=2 TYP=3
	9400	HUAN	1 S	1401.8	1402.9	2.6	8.2	3.6		0
	9400	HUAN	29 PBI	1404.4	1404.4	14.4	2.7	1.2		0
	2800	OTTA	260 FAL	1420.0	1445.0	25.0	-3.0	-1.5		
9400	HUAN	2 S/F	1502.8	1503.3	2.1	3.4	1.8		0	
9400	HUAN	20 GRF	1522.0	1538.2	30.7	9.5	4.2		0	
2800	OTTA	1 S	1537.0	1538.0	2.0	3.8	1.8			
2695	ATHN	4 S/F	1537.0	1537.3	2.8	5.0			QL=6 ST=2 TYP=3	
4995	ATHN	4 S/F	1537.0	1538.3	5.3	8.0			QL=6 ST=2 TYP=3	
4995	SGMR	8 S	1537.6	1538.1	.9	17.0			QL=6 ST=2 TYP=3	
9400	HUAN	23 GRF	1708.0	1721.2	22.0	10.2	5.3		L	
9400	HUAN	4 S/F	1713.7	1714.4	2.2	136.0	53.8		L	
15400	PALF	47 GB	1714.0	1714.5	.8	320.0			QL=6 ST=2 TYP=5	
15400	SGMR	47 GB	1714.0	1714.6	.8	239.0			QL=6 ST=2 TYP=5	
8400	BERN	8 S	1714.3	1714.5	.5	155.0				
11800	BERN	8 S	1714.3	1714.5	.5	296.0				
19600	BERN	8 S	1714.3	1714.5	.5	78.0				
8800	PALF	47 GB	1714.5	1714.6	.3	65.0			QL=6 ST=2 TYP=5	
8800	SGMR	47 GB	1714.5	1714.6	.3	92.0			QL=6 ST=2 TYP=5	
29	UPIC	45 C	1738.0	1739.4	1.7					
33	UPIC	46 C	1738.4	1739.1	2.1					
9400	HUAN	21 GRF	1917.5E	1931.7	68.70	12.2	4.7		L	
9400	HUAN	8 S	1918.7	1919.3	1.1	83.0	37.8		L	
8800	SGMR	47 GB	1919.1	1919.3	.7	82.0			QL=6 ST=2 TYP=5	
15400	SGMR	47 GB	1919.3	1919.3	.3	100.0			QL=6 ST=2 TYP=5	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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May 83

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (JT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
07	9400	HUAN	3 S	1925.9	1927.0	3.5	66.6	25.6		L
	2800	OTTA	240AR	1926.0	1929.0	3.0	2.8	1.4		
	2800	OTTA	3 S	1926.2	1927.0	2.0	11.0	4.0		
	4995	SGMR	47 GB	1926.6	1927.1	1.5	59.0			QL=6 ST=2 TYP=5
	2695	SGMR	4 S/F	1926.6	1927.1	2.5	13.0			QL=6 ST=2 TYP=3
	8800	SGMR	47 GB	1926.6	1927.1	1.4	78.0			QL=6 ST=2 TYP=5
	8800	PALE	8 S	1926.8	1927.0	.5	29.0			QL=6 ST=2 TYP=3
	15400	PALE	8 S	1926.8	1927.1	.3	30.0			QL=6 ST=2 TYP=3
	15400	SGMR	8 S	1926.8	1927.1	.8	28.0			QL=6 ST=2 TYP=3
	4995	PALE	8 S	1926.8	1927.1	.8	30.0			QL=6 ST=2 TYP=3
	9400	HUAN	2 S/F	1938.4	1939.0	1.7	8.2	4.6		0
	9400	TYKW	47 GB	2215.0	2218.5	15.0	4100.0	450.0		
	9400	HUAN	47 GB	2215.7	2218.2	8.0	1020.0	742.2		L
	500	HIRA	45 C	2215.7	2218.9	20.0	110.0	40.0		WR
	1000	TYKW	45 C	2216.0	2218.7	14.0	290.0	50.0		
	3750	TYKW	47 GB	2216.0	2219.2	14.0	1000.0	150.0		
	2000	TYKW	45 C	2216.0	2219.3	15.0	470.0	65.0		
	208	VORO	48 C	2216.0	2220.00	10.0	300.00			
	17000	NOBE	47 GB	2216.0	2218.6	6.8	8500.0			L
	8800	PALE	49 GB	2216.1	2218.5	13.5	5100.0			QL=6 ST=2 TYP=7
	410	PALE	49 GB	2216.3	2216.5	7.7	180.0			QL=6 ST=2 TYP=7
	410	SGMR	49 GB	2216.3	2217.3	10.3	160.0			QL=6 ST=2 TYP=7
	4995	PALE	49 GB	2216.3	2218.5	9.3	1300.0			QL=6 ST=2 TYP=7
	4995	SGMR	49 GB	2216.3	2218.6	7.5	1600.0			QL=6 ST=2 TYP=7
	8800	SGMR	49 GB	2216.5	2218.5	5.6	3000.0			QL=6 ST=2 TYP=7
	2800	OTTA	47 GB	2216.5	2219.5	8.5	640.0	157.0		
	200	HIRA	48 C	2216.5	2221.0	65.0	2100.0	90.0		0
	200	HIRA		2216.5	2233.1		120.0			0
	245	SGMR	49 GB	2216.6	2217.3	10.2	320.0			QL=6 ST=2 TYP=7
	15400	PALE	49 GB	2216.6	2218.5	12.2	8200.0			QL=6 ST=2 TYP=7
	15400	SGMR	49 GB	2216.6	2218.5	10.0	8000.0			QL=6 ST=2 TYP=7
	2695	SGMR	49 GB	2216.6	2219.3	26.0	610.0			QL=6 ST=2 TYP=7
	245	PALE	49 GB	2216.8	2217.3	7.8	350.0			QL=6 ST=2 TYP=7
	1415	SGMR	49 GB	2216.8	2218.6	12.0	500.0			QL=6 ST=2 TYP=7
	1415	PALE	49 GB	2217.0	2218.5	7.0	320.0			QL=6 ST=2 TYP=7
	610	PALE	49 GB	2217.0	2218.5	9.8	110.0			QL=6 ST=2 TYP=7
	610	SGMR	49 GB	2217.0	2219.3	13.8	260.0			QL=6 ST=2 TYP=7
	35000	NAGO	47 GB	2218.0	2218.0	2.0	5500.0			
	100	HIRA	48 C	2219.0	2225.4	17.0	10000.00	2300.00		
	17000	NOBE	29 PBI	2222.8	2222.8	11.0	78.0			0
	2800	OTTA	30 PBI	2225.0	2225.0	20.0	21.0	10.5		
	2800	OTTA	8 S	2227.7	2227.8	.3	6.4	3.2		
	1000	TYKW	30 PBI	2230.0	2230.0	40.0	7.0	2.0		
	9400	TYKW	29 PBI	2230.0	2230.0	30.0	23.0	8.0		
	3750	TYKW	29 PBI	2230.0	2230.0	25.0	13.0	5.0		
	2000	TYKW	30 PBI	2231.0	2231.0	30.0	13.0	4.0		
	2000	TYKW	45 C	2233.0	2234.6	3.5	18.0	4.0		
	2800	OTTA	1 S	2233.0	2235.0	3.0	4.2	2.8		
	1000	TYKW	45 C	2234.0	2235.5	9.0	8.0	3.0		
	245	PALE	8 S	2237.0	2237.1	.5	41.0			QL=6 ST=2 TYP=3
1000	TYKW	45 C	2248.0	2249.0	2.0	9.0	3.0			
610	PALE	8 S	2248.8	2249.0	.7	27.0			QL=6 ST=2 TYP=3	
610	SGMR	8 S	2248.8	2249.0	1.0	38.0			QL=6 ST=2 TYP=3	
2000	TYKW	45 C	2316.0	2318.3	3.0	4.0	1.0			
2695	PENT	8 S	2333.9	2333.9	.1	6.6				
245	PALE	8 S	2337.1	2337.3	.4	21.0			QL=6 ST=2 TYP=3	
245	PALE	8 S	2341.5	2341.8	.5	23.0			QL=6 ST=2 TYP=3	
9400	TYKW	20 GRF	2350.0	0010.0	80.0	4.0	2.0			
3750	TYKW	20 GRF	2350.0	0015.0	70.0	3.0	1.5			
2000	TYKW	20 GRF	2355.0	0004.0	70.0	3.0	1.0			
08	1000	TYKW	45 C	0043.0	0043.8	1.5	2.0	0.7		
	1000	TYKW	45 C	0045.0	0046.4	2.0	3.0	1.0		
	3750	TYKW	45 C	0108.0	0113.4	15.0	2.0	1.0		
	2000	TYKW	28 PRE	0224.0	0232.6	21.0	4.0	2.0		
	1000	TYKW	28 PRE	0225.0	0232.7	20.0	4.0	2.0		
	3750	TYKW	28 PRE	0225.0	0245.0	20.0	2.0	1.0		
	1415	LEAR	20 GRF	0225.8	0232.6	19.3	8.0			QL=6 ST=2 TYP=2
	3653	YUNN	47 GB	0243.6	0317.0	313.6	3705.0			
500	HIRA	45 C	0244.7	0316.2	85.0	300.0	50.0		WR	
9400	TYKW	28 PRE	0245.0	0256.0	11.0	14.0	5.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
08	2000	TYKW		0245.0	0304.3		840.0			
	3750	TYKW	47 GB	0245.0	0306.4	70.0	8500.0	750.0		
	1000	TYKW		0245.0	0307.6		295.0			
	3750	TYKW		0245.0	0317.2		2660.0			
	2000	TYKW	47 GB	0245.0	0317.9	80.0	1970.0	400.0		
	1000	TYKW	47 GB	0245.0	0318.4	85.0	585.0	145.0		
	1415	PALE	47 GB	0245.3	0254.3	13.3	119.0			QL=6 ST=2 TYP=5
	1415	LEAR	49 GB	0245.3	0304.1	33.3	540.0			QL=6 ST=2 TYP=6
	2695	LEAR	49 GB	0246.1	0304.1	32.5	990.0			QL=6 ST=2 TYP=6
	200	HIRA	46 C	0248.7	0305.4	50.0	210.0	34.0		WR
	200	HIRA		0248.7	0321.0		140.0			MR
	9395	PEKG	47 GB	0249.0	0307.7	48.0	349.0	282.00		
	9395	PEKG		0249.0	0317.0		1056.00			
	4995	LEAR	49 GB	0249.1	0305.1	29.5	630.0			QL=6 ST=2 TYP=6
	610	LEAR	47 GB	0249.6	0304.8	29.0	189.0			QL=6 ST=2 TYP=5
	610	PALE	20 GRF	0250.1	0255.8	8.5	32.0			QL=6 ST=2 TYP=2
	4995	PALE	20 GRF	0250.6	0256.3	8.0	46.0			QL=6 ST=2 TYP=2
	100	GORK	46 C	0251.0E	0257.7	96.00	160.0			
	8800	LEAR	47 GB	0251.8	0305.6	26.8	360.0			QL=6 ST=2 TYP=5
	8800	PALE	8 S	0254.0	0254.3	.5	15.0			QL=6 ST=2 TYP=3
	2950	GORK	47 GB	0254.0	0307.0	45.0	950.0			
	2950	GORK		0254.0	0317.2		2500.0			
	410	LEAR	47 GB	0254.5	0303.6	24.1	90.0			QL=6 ST=2 TYP=5
	9400	TYKW		0256.0	0307.8		470.0			
	9400	TYKW	47 GB	0256.0	0317.0	44.0	1580.0	450.0		
	2840	PEKG	47 GB	0256.0E	0318.0U	37.00	1353.00			
	410	PALE	8 S	0256.6	0257.1	2.0	22.0			QL=6 ST=2 TYP=3
	35000	NAGO	20 GRF	0257.0	0317.0	180.0	198.0			
	950	GORK	47 GB	0257.0E	0318.4	69.00	3050.0			
	15400	LEAR	47 GB	0257.3	0305.6	21.3	139.0			QL=6 ST=2 TYP=5
	410	PALE	49 GB	0258.6	0303.6	20.2	85.0			QL=6 ST=2 TYP=7
	1415	PALE	49 GB	0258.6	0304.1	20.2	620.0			QL=6 ST=2 TYP=7
	610	PALE	49 GB	0258.6	0304.8	20.2	180.0			QL=6 ST=2 TYP=7
	4995	PALE	49 GB	0258.6	0305.6	20.2	630.0			QL=6 ST=2 TYP=7
	8800	PALE	49 GB	0258.6	0305.6	20.2	350.0			QL=6 ST=2 TYP=7
	17000	NOBE	45 C	0258.8	0316.8	32.5	715.0			L
	15400	PALE	49 GB	0259.1	0305.6	19.7	130.0			QL=6 ST=2 TYP=7
	245	PALE	49 GB	0300.1	0304.6	18.7	130.0			QL=6 ST=2 TYP=7
	245	LEAR	47 GB	0304.6	0304.6	14.0	139.0			QL=6 ST=2 TYP=5
	9100	GORK	47 GB	0314.0E	0318.8	22.00	1490.0			
	650	GORK	47 GB	0316.3E	0317.2	49.70	510.0			
	100	GORK		0317.0	0317.0U		200.00			
	2950	GORK	30 PBI	0317.2	0339.0	400.00	108.0			
	410	LEAR	47 GB	0318.6	0318.8	18.7	160.0			QL=6 ST=2 TYP=5
	8800	LEAR	49 GB	0318.6	0318.8	49.2	1600.0			QL=6 ST=2 TYP=6
	15400	LEAR	49 GB	0318.6	0318.8	49.2	860.0			QL=6 ST=2 TYP=6
	4995	LEAR	49 GB	0318.6	0318.8	44.4	2600.0			QL=6 ST=2 TYP=6
	2695	LEAR	49 GB	0318.6	0318.8	44.4	2699.0			QL=6 ST=3 TYP=6
	1415	LEAR	49 GB	0318.6	0318.8	47.4	1199.0			QL=6 ST=2 TYP=6
	610	LEAR	47 GB	0318.6	0318.8	46.5	470.0			QL=6 ST=2 TYP=5
245	LEAR	47 GB	0318.6	0320.6	3.9	139.0			QL=6 ST=2 TYP=5	
4995	PALE	49 GB	0318.8	0318.8	26.3	2100.0			QL=6 ST=2 TYP=7	
8800	PALE	49 GB	0318.8	0318.8	26.3	1300.0			QL=6 ST=2 TYP=7	
1415	PALE	49 GB	0318.8	0318.8	26.3	1399.0			QL=6 ST=2 TYP=7	
610	PALE	49 GB	0318.8	0318.8	26.3	480.0			QL=6 ST=2 TYP=7	
410	PALE	49 GB	0318.8	0318.8	7.2	169.0			QL=6 ST=2 TYP=7	
15400	PALE	49 GB	0318.8	0319.0	26.3	710.0			QL=6 ST=2 TYP=7	
17000	NOBE	29 PBI	0331.3	0331.3	180.0	143.0			L	
9100	GORK	29 PBI	0336.0	0336.0	284.0	140.0				
9395	PEKG	29 PBI	0337.0		98.00	100.0	35.6			
9400	TYKW	29 PBI	0340.0		300.00	155.0	60.00			
3750	TYKW	29 PBI	0355.0		320.00	96.0	45.00			
2000	TYKW	30 PBI	0405.0		300.00	53.0	30.00			
650	GORK	29 PBI	0406.0	0406.0	159.6	7.0				
950	GORK	29 PBI	0406.0	0406.0	378.0	9.0				
1000	TYKW	30 PBI	0410.0		265.00	18.0	13.00			
1000	TYKW	45 C	0415.0	0431.8	25.0	4.0	1.5			
2000	TYKW	5 S	0431.0	0432.0	6.0	1.5	0.7			
1000	TYKW	45 C	0552.0	0553.9	16.0	3.0	1.0			
650	GORK	1 S	0737.7	0739.0	5.0	2.0				
650	GORK	20 GRF	0806.2	0812.0	11.8	4.0	2.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
08	930	BORD	41 F	0833.2	0833.2	.2	14.0	2.0		
	6100	KISV	23 GRF	0929.5	0940.7	30.0	5.0			
	33	UPIC	4 S/F	0942.5	0942.7	.6				
	29	UPIC	4 S/F	0942.6	0942.8	.6				
	430	KRAK	8 S	1026.3	1026.5	.3	29.0			
	33	UPIC	2 S/F	1033.1	1033.2	.4				
	29	UPIC	2 S/F	1033.3	1033.4	.4				
	430	KRAK	8 S	1108.5	1109.0	1.0	32.0			
	430	KRAK	8 S	1116.8	1116.9	.2	16.0			
	8800	ATHN	8 S	1143.3	1144.3	1.8	23.0			QL=5 ST=2 TYP=3
	9400	HUAN	2 S/F	1143.5	1144.3	3.0	11.1	7.2		L
	9500	POTS	40 F	1143.5	1144.5	22.0	16.0			
	610	SGMR	49 GB	1143.6	1143.8	2.5	1199.0			QL=6 ST=2 TYP=6
	33	UPIC	45 C	1143.7	1143.8	1.1				
	29	UPIC	45 C	1143.8	1144.1	1.2				
	930	BORD	46 C	1144.0	1145.8	3.0	42.0	2.0		
	6100	KISV	2 S/F	1144.5	1145.1	3.5	5.0			
	9400	HUAN	29 PBI	1146.5	1146.5	9.9	4.8	4.0		L
	6100	KISV	1 S	1149.9	1151.3	4.0	3.0			
	2800	OTTA	20 GRF	1730.0	1835.0	195.0	3.0	1.5		
	9400	TYKW	5 S	2114.0	2114.7	2.0	4.0	1.0		
	2930	VORO	47 GB	2215.0	2220.0	45.0	7427.0			
	2695	PENT	240 R	2220.0	2315.0	55.0	3.6			
	9400	TYKW	5 S	2240.0	2240.3	1.0	3.0	1.0		
	9400	TYKW	5 S	2250.0	2252.1	8.0	6.0	2.0		
	2695	PENT	21 GRF	2345.0	2355.0	65.0	3.6	1.4		
	3750	TYKW	5 S	2350.0	2351.1	2.5	9.0	5.0		
2695	LEAR	4 S/F	2350.0	2351.1	2.3	8.0			QL=6 ST=2 TYP=3	
4995	LEAR	4 S/F	2350.0	2351.3	2.3	11.0			QL=6 ST=2 TYP=3	
9400	TYKW	5 S	2350.5	2351.0	1.5	3.0	1.0			
2695	PENT	1 S	2351.0	2351.3	1.5	1.8	0.9			
3750	TYKW	29 PBI	2352.5		60.0	3.0	1.5			
09	33	UPIC	43 NS	1149.1	1225.3	370.9D				
	29	UPIC	43 NS	1149.3	1225.4	370.7D				
	208	VORO	44 NS	2100.0E		240.0D				
	3750	TYKW	20 GRF	0125.0	0202.0	100.0	2.0	1.0		
	2000	TYKW	20 GRF	0131.0	0135.0	60.0	1.5	0.7		
	9400	TYKW	20 GRF	0153.0	0200.0	30.0	4.0	2.0		
	9400	TYKW	5 S	0227.5	0229.0	10.0	2.0	1.0		
	245	LEAR	8 S	0232.0	0232.1	.6	9.0			QL=6 ST=2 TYP=3
	9400	TYKW	45 C	0301.5	0302.5	7.0	9.0	3.0D		
	2950	GORK	1 S	0308.0	0308.9	.9U	9.1			
	9400	TYKW	5 S	0323.0	0323.2	1.0	3.0	1.0		
	9400	TYKW	5 S	0344.0	0344.2	3.0	3.0	1.0		
	3750	TYKW	20 GRF	0350.0	0405.0	30.0	2.0	1.0		
	500	HIRA	8 S	0351.0	0351.0	.4	60.0			0
	6100	KISV	46 C	0401.8	0403.1	11.0	6.0			
	6100	KISV		0401.8	0408.1		5.0			
	9400	TYKW	5 S	0402.0	0406.0	12.0	5.0	2.0		
	8800	LEAR	4 S/F	0402.0	0403.0	5.1	5.0			QL=6 ST=2 TYP=3
	4995	LEAR	4 S/F	0402.0	0404.0	10.1	5.0			QL=6 ST=2 TYP=3
	9400	TYKW	21 GRF	0425.0	0438.0	110.0	10.0	4.0		
	3750	TYKW	21 GRF	0425.0	0451.0	160.0	4.0	2.0		
	8800	LEAR	20 GRF	0431.8	0440.0	32.2	8.0			QL=6 ST=2 TYP=2
	4995	LEAR	20 GRF	0431.8	0440.3	32.2	4.0			QL=6 ST=2 TYP=2
	2950	GORK	20 GRF	0432.2	0748.0	283.0	6.1			
	15400	LEAR	20 GRF	0432.6	0443.0	31.4	8.0			QL=6 ST=2 TYP=2
	9100	GORK	20 GRF	0433.0	0527.7	54.7U	13.0			
	2000	TYKW	20 GRF	0440.0	0500.0	50.0	2.0	1.0		
	6100	KISV	3 S	0524.2	0525.7	5.5	21.0			
	4995	LEAR	4 S/F	0524.8	0525.6	4.2	18.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	0525.0	0525.7	2.5	3.0	1.0		
	9400	TYKW	5 S	0525.0	0525.7	2.0	8.0	3.0		
	8800	LEAR	8 S	0525.1	0525.6	1.2	10.0			QL=6 ST=2 TYP=3
9400	TYKW	21 GRF	0530.0	0535.0	30.0	6.0	3.0			
9400	TYKW	5 S	0541.5	0542.6	3.0	4.0	1.5			
3750	TYKW	5 S	0545.0	0548.2	6.0	5.0	3.0			
2000	TYKW	5 S	0545.0	0549.0	15.0	1.0	0.3			
3750	TYKW	29 PBI	0551.0		20.0	3.0	1.5			
9400	TYKW	45 C	0634.0	0635.1	1.5	11.0	3.0			

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
09	9400	TYKW	20 GRF	0713.0	0728.0	70.0	6.0	3.0		
	9100	GORK	20 GRF	0714.2	0736.1	94.0	10.0			
	3750	TYKW	20 GRF	0715.0	0728.0	105.0	6.0	3.0		
	2000	TYKW	20 GRF	0720.0	0755.0	90.0	3.0	1.5		INTERFERENCE
	6100	KISV	45 C	1202.3	1204.3	3.0	6.0			
	6100	KISV	29 PBI	1202.3	1205.5	13.0	3.0			
	2800	OTTA	2 S/F	1202.5	1202.8	3.0	6.0	2.6		
	3000	POTS	3 S	1202.5	1203.8	2.5	8.5			
	2695	ATHN	4 S/F	1202.6	1203.6	3.7	8.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	1203.0	1204.5	3.5	8.0			QL=6 ST=2 TYP=3
	9400	HUAN	20 GRF	1203.0	1206.3	12.5	7.9	3.8		0
	930	BORD	41 F	1203.2	1203.6	.5	29.0	2.0		
	810	KRAK	8 S	1203.3	1203.5	.3	42.0			
	1470	POTS	2 S/F	1203.3	1203.9	1.2	4.0			
	113	POTS	42 SER	1221.2	1225.1	6.9	400.0	2.0		111
	260	ONDR	8 S	1225.2	1225.2	.5	24.0			
	2800	OTTA	20 GRF	1300.0	1308.0	30.0	3.6	1.6		
	8800	ATHN	4 S/F	1325.3	1327.6	4.5	15.0			QL=5 ST=2 TYP=3
	2695	PENT	240 R	1403.0	1407.0	4.0	1.6	0.8		
	9400	HUAN	3 S	1410.5	1412.0	3.9	77.5	28.6		L
	8800	ATHN	47 GB	1410.6	1412.1	3.9	92.0			QL=6 ST=2 TYP=5
	4995	ATHN	47 GB	1410.8	1412.3	3.7	64.0			QL=6 ST=2 TYP=5
	2650	DWIN	1 S	1411.0	1411.0	4.0	45.0	20.0		
	19600	BERN	4 S/F	1411.0	1411.7	18.0	67.0			
	11800	BERN	4 S/F	1411.0	1411.8	18.0	106.0			
	9500	POTS	29 PBI	1411.0	1412.0	29.0	76.0			
	5200	BERN	3 S	1411.0	1412.1	18.0	85.0			
	8400	BERN	3 S	1411.0	1412.1	18.0	100.0			
	3100	BERN	3 S	1411.0	1412.1	18.0	76.0			
	3000	POTS	29 PBI	1411.0E	1412.3	37.00	51.0			
	15400	SGMR	47 GB	1411.3	1411.8	1.8	87.0			QL=3 ST=2 TYP=5
	2695	ATHN	4 S/F	1411.3	1412.3	3.2	46.0			QL=6 ST=2 TYP=3
	2695	PENT	3 S	1411.5	1412.2	3.5	42.0	14.0		
	1415	ATHN	4 S/F	1411.6	1412.3	5.7	19.0			QL=6 ST=2 TYP=3
	1470	POTS	29 PBI	1412.0E	1412.6	36.00	9.0			
	930	BORD	45 C	1412.4	1412.9	.8	25.0	5.0		
	9400	HUAN	29 PBI	1414.1	1414.1	23.4	9.5	6.3		0
	2800	OTTA	29 PBI	1415.0	1415.0	75.0	5.2	2.6		
	2800	OTTA	21 GRF	1545.0	1700.0	195.0	4.6	3.0		
	930	BORD	46 C	1545.4	1545.7	.7	27.0	3.0		
	2800	OTTA	40 F	1732.5	1737.5	10.0	2.2			
	9400	HUAN	21 GRF	1733.7	1742.0	24.7	4.7	2.5		0
	9400	HUAN	1 S	1736.2	1737.5	3.4	11.1	8.1		0
	245	SGMR	47 GB	1741.8	1742.0	.5	54.0			QL=6 ST=2 TYP=5
	9400	HUAN	2 S/F	1748.5	1750.8	3.5	7.9	5.2		0
	2800	OTTA	1 S	1749.0	1751.2	8.0	5.2	1.8		
	410	SGMR	8 S	1826.6	1827.0	.7	24.0			QL=6 ST=2 TYP=3
	410	SGMR	8 S	1834.8	1835.0	.5	20.0			QL=6 ST=2 TYP=3
	410	PALE	8 S	1834.8	1835.3	.7	26.0			QL=6 ST=2 TYP=3
	2800	OTTA	1 S	2020.8	2021.4	2.0	4.0	2.0		
500	HIRA	8 S	2022.0	2022.0	.4	60.0			0	
2800	OTTA	20 GRF	2105.0	2110.0	40.0	4.0	1.8			
3750	TYKW	5 S	2129.0	2129.5	2.0	3.5	2.0			
3750	TYKW	29 PBI	2131.0	2131.0	15.0	2.0	1.0			
2000	TYKW	28 PRE	2230.0	2304.0	34.0	4.0	1.0			
9400	TYKW	28 PRE	2300.0	2301.0	3.5	6.0	3.5			
3750	TYKW	28 PRE	2300.0	2301.1	3.0	4.0	2.0			
100	HIRA	48 C	2302.1	2305.5U	85.0	10000.00	510.00			
3750	TYKW	47 GB	2303.0	2307.2	15.0	520.0	140.0			
1415	LEAR	47 GB	2303.0	2305.3	13.3	189.0			QL=6 ST=2 TYP=5	
410	LEAR	49 GB	2303.0	2305.5	13.6	1199.0			QL=6 ST=2 TYP=6	
245	LEAR	49 GB	2303.0	2305.6	25.8	8300.0			QL=6 ST=2 TYP=6	
15400	LEAR	49 GB	2303.0	2305.8	19.0	920.0			QL=6 ST=2 TYP=6	
8800	LEAR	49 GB	2303.0	2306.1	26.6	1199.0			QL=6 ST=2 TYP=6	
610	LEAR	47 GB	2303.0	2306.8	14.0	200.0			QL=6 ST=2 TYP=5	
4995	LEAR	49 GB	2303.0	2306.8	26.6	590.0			QL=6 ST=2 TYP=6	
2695	LEAR	47 GB	2303.0	2307.5	25.8	310.0			QL=6 ST=2 TYP=5	
15400	SGMR	49 GB	2303.1	2305.6	6.2	1000.0			QL=4 ST=3 TYP=7	
9400	TYKW	47 GB	2303.5	2306.4	16.5	1670.0	340.0			
8800	PALE	49 GB	2303.6	2305.6	23.2	2000.0			QL=6 ST=2 TYP=7	
500	HIRA	45 C	2303.6	2308.3	34.0	400.0	150.0		MR	

SOLAR RADIO EMISSION
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MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 -22 W/m ² Hz)	Mean			
09	200	HIRA	48 C	2303.6	2309.3	31.0	17000.0	920.0	0		
	245	SGMR	49 GB	2303.8	2305.6	18.2	9800.0			QL=4 ST=3 TYP=7	
	4995	SGMR	49 GB	2303.8	2306.3	7.0	800.0			QL=4 ST=3 TYP=7	
	2000	TYKW	45 C	2304.0	2305.5	14.0	220.0	60.0			
	208	VORO	48 C	2304.0	2306.0	8.0	500.0D				
	2000	TYKW		2304.0	2307.2		220.0				
	2695	PENT	46F C	2304.0	2307.2	14.0	320.0				
	1000	TYKW	45 C	2304.0	2307.3	16.0	157.0	98.0			
	410	PALE	49 GB	2304.0	2305.5	13.1	2300.0			QL=6 ST=2 TYP=7	
	17000	NOBE	46 C	2304.0	2305.6	7.3	1210.0			R	
	4995	PALE	49 GB	2304.0	2306.3	17.8	820.0			QL=6 ST=2 TYP=7	
	8800	SGMR	49 GB	2304.0	2306.3	7.3	1399.0			QL=4 ST=3 TYP=7	
	208	VORO		2304.0	2310.0		300.0D				
	245	PALE	49 GB	2304.1	2305.6	15.7	13999.0			QL=6 ST=2 TYP=7	
	15400	PALE	49 GB	2304.1	2305.6	18.7	1800.0			QL=6 ST=2 TYP=7	
	610	PALE	49 GB	2304.1	2305.8	13.9	290.0			QL=6 ST=2 TYP=7	
	1415	PALE	49 GB	2304.3	2305.5	12.0	230.0			QL=6 ST=2 TYP=7	
	1415	SGMR	49 GB	2304.3	2305.5	5.8	169.0			QL=4 ST=3 TYP=7	
	410	SGMR	49 GB	2304.3	2305.6	10.5	1600.0			QL=4 ST=3 TYP=7	
	610	SGMR	49 GB	2304.3	2305.8	10.5	260.0			QL=4 ST=3 TYP=7	
	2695	SGMR	49 GB	2304.3	2307.3	6.0	270.0			QL=4 ST=3 TYP=7	
	35000	NAGO	5 S	2305.0	2306.0	6.0	356.0				
	35000	NAGO	29 PBI	2311.0	2311.0	10.0	93.0				
	17000	NOBE	29 PBI	2311.3	2311.3	45.0	79.0			0	
	2000	TYKW	30 PBI	2318.0		35.0	6.0	2.0			
	3750	TYKW	30 PBI	2318.0		35.0	16.0	8.0			
	2695	PENT	29 PBI	2318.0	2318.0	22.0	9.8	3.2			
	1000	TYKW	29 PBI	2320.0		30.0	4.0	2.0			
	9400	TYKW	29 PBI	2320.0		35.0	45.0	16.0			
	2000	TYKW	45 C	2326.0	2329.6	6.0	1.5	0.5			
	3750	TYKW	5 S	2329.0	2329.5	2.0	4.0	1.5			
	2695	PENT	31 ABS	2340.0	2355.0	40.0	-2.6	-1.5			
	10	245	LEAR	43 NS	0056.1	0056.3	520.9D	18.0			QL=6 ST=2 TYP=1
		245	SGMR	43 NS	1830.0	1859.1		38.0			QL=6 ST=2 TYP=1
		200	HIRA	44 NS	1936.0E	2009.0	90.0D	10.0	5.0		MR
100		HIRA	44 NS	1936.0E	2013.0	90.0D	140.0	25.0			
208		VORO	44 NS	2100.0E			240.0D				
245		PALE	43 NS	2220.0	2314.1		364.0D	56.0		QL=6 ST=2 TYP=1	
245		LEAR	43 NS	2303.0	0843.8		633.0D	77.0		QL=6 ST=3 TYP=1	
410		LEAR	20 GRF	0001.6	0005.3	11.2	13.0			QL=6 ST=3 TYP=2	
2695		PENT	240AR	0003.0	0041.0	38.0	5.8	2.8			
2695		PENT	4 S/F	0004.0	0005.5	6.0	13.6	4.6			
410		PALE	8 S	0004.3	0005.6	1.8	22.0			QL=6 ST=2 TYP=3	
1415		LEAR	47 GB	0004.5	0005.1	.6	50.0			QL=6 ST=2 TYP=5	
1415		PALE	47 GB	0004.6	0005.1	.7	51.0			QL=5 ST=2 TYP=5	
410		LEAR	20 GRF	0004.6	0005.6	1.0	13.0			QL=6 ST=2 TYP=2	
3750		TYKW	20 GRF	0011.0	0019.0	35.0	3.0	1.5			
245		LEAR	8 S	0011.0	0011.1	.3	30.0			QL=6 ST=2 TYP=3	
245		LEAR	8 S	0042.1	0042.1	.2	18.0			QL=6 ST=2 TYP=3	
410		LEAR	8 S	0042.5	0042.6	.1	30.0			QL=6 ST=2 TYP=3	
2000		TYKW	20 GRF	0100.0	0130.0	60.0	2.0	1.0			
3750		TYKW	20 GRF	0104.0	0130.0	60.0	2.0	1.0			
200		HIRA	27 RF	0120.0	0312.0	176.0	7.0	3.0		0	
9400		TYKW	20 GRF	0145.0	0150.0	45.0	4.0	2.0			
2000		TYKW	21 GRF	0210.0	0400.0	270.0	2.0	1.0			
3750		TYKW	21 GRF	0235.0	0430.0	240.0	4.0	2.0			
245		LEAR	8 S	0251.3	0251.3	.7	6.0			QL=6 ST=2 TYP=3	
410		LEAR	8 S	0251.3	0251.3	.3	33.0			QL=6 ST=2 TYP=3	
9400		TYKW	20 GRF	0253.0	0310.0	45.0	4.0	2.0			
3750		TYKW	5 S	0256.0	0257.7	3.0	7.0	3.5			
2000		TYKW	5 S	0257.0E	0257.6	3.0D	3.0	1.0D			
3750		TYKW	29 PBI	0259.0		25.0	3.0	1.5			
2902		YUNN	5 S	0321.0	0322.5	3.0	6.0				
3750		TYKW	20 GRF	0330.0	0340.0	35.0	3.0	1.0			
2000		TYKW	5 S	0339.0	0340.7	7.0	2.0	0.7			
6100		KISV		0348.3	0352.8		30.0				
6100		KISV	46 C	0348.3	0400.0	11.7U	130.0				
6100	KISV		0348.3	0401.0		95.0					
6100	KISV		0348.3	0403.3		50.0					
6100	KISV	29 PBI	0405.5	0405.5	36.0	25.0					

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
10	245	LEAR	47 GB	0438.3	0438.6	.5	50.0			QL=6 ST=3 TYP=5
	8800	ATHN	4 S/F	0438.6	0441.0	4.4	13.0			QL=5 ST=2 TYP=3
	3750	TYKW	21 GRF	0500.0	0530.0	70.0	4.0	2.0		
	3750	TYKW	5 S	0522.0	0524.0	5.0	5.0	1.5		
	6100	KISV	45 C	0523.2	0523.9	7.0	4.0			
	6100	KISV		0523.2	0526.4		3.0			
	6100	KISV	1 S	0614.4	0615.3	1.5	4.0			
	6100	KISV	1 S	0724.3	0725.1	1.0	4.0			
	430	KRAK	8 S	0741.8	0741.8	.1	26.0			
	6100	KISV	21 GRF	0756.5	0824.1	54.0	12.0			
	6100	KISV	1 S	0809.6	0810.5	1.0	3.0			
	430	KRAK	8 S	0830.5	0830.5	.1	16.0			
	430	KRAK	8 S	0916.5	0916.5	.1	15.0			
	9100	GORK	20 GRF	1122.1	1155.4	40.00	5.0			
	9400	HUAN	2 S/F	1133.7	1135.4	2.3	11.3	4.5		0
	6100	KISV		1206.8	1210.3		75.0			
	930	BORD	45 C	1206.8	1210.4	146.0	161.0	16.0		
	6100	KISV	46 C	1206.8	1212.5	8.5	140.0			
	2800	OTTA	4 S/F	1207.0	1212.7	11.0	145.0	66.6		
	2650	DWIN	45 C	1207.0	1213.0	10.0	130.0	60.0		
	1470	POTS	45 C	1207.0	1212.4	23.0	118.0			
	3000	POTS	45 C	1207.0	1212.5	23.0	141.0			
	5200	BERN	3 S	1207.3	1212.0	13.0	268.0			
	2695	ATHN	47 GB	1207.3	1212.3	11.0	130.0			QL=6 ST=2 TYP=5
	4995	ATHN	47 GB	1207.3	1212.3	14.5	300.0			QL=6 ST=2 TYP=5
	8400	BERN	3 S	1207.3	1212.4	13.0	216.0			
	3100	BERN	3 S	1207.3	1212.6	13.0	216.0			
	11800	BERN	3 S	1207.3	1212.6	13.0	142.0			
	19600	BERN	3 S	1207.3	1212.6	13.0	92.0			
	3100	CRIM	3 S	1207.5	1213.0	11.0	179.0	60.0		
	2695	SGMR	47 GB	1207.6	1212.3		169.0			QL=6 ST=1 TYP=5
	9400	HUAN	4 S/F	1207.6	1212.3	8.9	137.4	51.2		R
	8800	ATHN	47 GB	1207.6	1212.3	14.0	160.0			QL=6 ST=2 TYP=5
	4995	SGMR	47 GB	1207.8	1212.3		200.0			QL=6 ST=1 TYP=5
	808	ONDR	46 C	1208.0	1212.0	15.0	202.0	50.0		
	9500	POTS	45 C	1208.2	1212.5	22.0	130.0			
	8800	SGMR	47 GB	1208.3	1212.3		139.0			QL=6 ST=1 TYP=5
	810	KRAK	4 S/F	1208.5	1212.2	9.0	140.0	32.0		
	15400	SGMR	47 GB	1208.6	1212.3		100.0			QL=6 ST=1 TYP=5
	1415	ATHN	47 GB	1208.6	1212.3	9.2	110.0			QL=6 ST=2 TYP=5
	430	KRAK	47 GB	1209.0	1210.5	8.5	540.00	170.0		
	536	ONDR	46 C	1209.0	1211.5	10.0	260.0	97.0		
	1415	SGMR	47 GB	1209.0	1212.1		130.0			QL=6 ST=1 TYP=5
	430	KRAK		1209.0	1212.30		540.00			
	234	POTS	4 S/F	1210.1	1210.4	11.0	300.0	2.0		III/V
	113	POTS	4 S/F	1210.1	1214.3	5.7	900.0	15.0		III
	6100	KISV	29 PBI	1214.3	1215.5	40.0	25.0			
	9400	HUAN	29 PBI	1216.5	1216.5	15.0	12.7	6.4		R
	2800	OTTA	30 PBI	1218.0	1218.0	335.0	8.6	4.0		
	3100	CRIM	29 PBI	1218.0	1218.5	28.0	6.0	2.0		
810	KRAK	7 C	1218.0	1220.7	4.0	10.0	4.0			
430	KRAK	4 S/F	1218.0	1220.7	4.5	100.0	34.0			
610	SGMR	47 GB	1218.1	1220.6	6.5	83.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	1218.6	1219.6	3.9	56.0			QL=6 ST=2 TYP=5	
410	SGMR	47 GB	1218.8	1220.6	5.0	90.0			QL=6 ST=2 TYP=5	
260	ONDR	45 C	1219.0	1219.5	4.0	71.0	42.0			
536	ONDR	46 C	1219.0	1221.0	5.0	42.0	32.0			
6100	KISV	2 S/F	1307.6	1310.1	3.5	4.0				
245	SGMR	47 GB	1315.1	1318.6	4.5	139.0			QL=6 ST=2 TYP=5	
610	SGMR	47 GB	1358.1	1358.3	.2	110.0			QL=6 ST=2 TYP=5	
2800	OTTA	20 GRF	1450.0	1525.0	80.0	4.6	2.8			
2800	OTTA	20 GRF	1620.0	1650.0	80.0	5.2	2.8			
2800	OTTA	20 GRF	1815.0	1845.0	165.0	10.4	3.6			
245	PALE	8 S	1828.6	1830.1	1.5	19.0			QL=5 ST=2 TYP=3	
9400	HUAN	20 GRF	1839.0	1844.3	11.9	14.2	7.1		L	
245	PALE	8 S	1858.6	1859.0	.5	46.0			QL=5 ST=2 TYP=3	
9400	HUAN	2 S/F	1920.4	1922.0	3.4	14.9	9.8		R	
9400	HUAN	29 PBI	1923.8	1923.8	15.4	5.7	3.3		R	
245	PALE	47 GB	2026.3	2026.3	.3	69.0			QL=5 ST=2 TYP=5	
2800	OTTA	20 GRF	2110.0	2135.0	40.0	1.8	1.0			
2800	OTTA	20 GRF	2200.0	2215.0	30.0	2.4	1.2			

SOLAR RADIO EMISSION
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Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
10	1000 TYKW	45 C	2213.0	2213.6	4.0	3.0	1.0		
	1000 TYKW	45 C	2218.0	2219.5	3.0	16.0	2.0		
	2930 VORO	47 GB	2300.0	2308.0	60.0	7601.0			
	2695 PENT	240 R	2325.0	2340.0	15.0	3.4	1.7		
	3750 TYKW	20 GRF	2330.0	2345.0	30.0	2.0	1.0		
	9400 TYKW	5 S	2345.0	2347.0	15.0	3.0	1.5		
11	410 LEAR	43 NS	0113.5	0828.6	502.5D	36.0			QL=6 ST=2 TYP=1
	200 HIRA	43 NS	0246.0	0850.0	420.0	50.0	5.0		WL
	9100 GORK	44 NS	0300.0E		90.0D		5.0		
	260 ONDR	44 NS	0544.0E		503.0D	94.0			
	204 IZMI	43 NS	0600.0		360.0	40.0			
	127 TORN	43 NS	0812.0		448.0		73.0		V=1
	100 GORK	43 NS	0814.1		226.0D		30.0		
	33 UPIC	43 NS	0841.9	1104.2	558.1D				
	29 UPIC	43 NS	0842.0	1103.9	558.0D				
	245 SGMR	43 NS	1101.3	1539.6	749.7D	219.0			QL=6 ST=2 TYP=1
	245 PALE	44 NS	1634.0E	2011.1		520.0			QL=6 ST=3 TYP=1
	200 HIRA	44 NS	1934.0E	0607.0	835.0D	290.0	60.0		MR
	208 VORO	44 NS	2300.0E		290.0D		28.0		
	245 LEAR	43 NS	2304.0	0244.3	632.0D	330.0			QL=6 ST=2 TYP=1
	410 LEAR	43 NS	2304.0	0856.1	632.0D	76.0			QL=6 ST=2 TYP=1
	9400 TYKW	21 GRF	0003.0	0043.0	85.0	4.0	2.0		
	3750 TYKW	45 C	0004.0	0005.4	5.0	15.0	5.0		
	8800 LEAR	4 S/F	0004.6	0005.5	2.9	22.0			QL=5 ST=2 TYP=3
	15400 LEAR	47 GB	0004.8	0005.6	3.7	72.0			QL=5 ST=2 TYP=5
	245 LEAR	47 GB	0004.8	0006.8	5.3	139.0			QL=5 ST=2 TYP=5
	17000 NOBE	3 S	0004.9	0005.6	3.5	115.0			0
	1000 TYKW	45 C	0005.0	0005.8	4.0	8.0	2.5		
	8800 PALE	47 GB	0005.0	0005.6	1.5	80.0			QL=6 ST=2 TYP=5
	4995 LEAR	4 S/F	0005.1	0005.6	2.7	11.0			QL=5 ST=2 TYP=3
	15400 PALE	47 GB	0005.1	0005.6	2.4	139.0			QL=6 ST=2 TYP=5
	2695 LEAR	4 S/F	0005.1	0005.8	2.7	11.0			QL=5 ST=2 TYP=3
	4995 PALE	8 S	0005.3	0005.6	.5	18.0			QL=6 ST=2 TYP=3
	410 LEAR	4 S/F	0005.3	0007.8	4.2	4.0			QL=5 ST=2 TYP=3
	35000 NAGO	5 S	0006.0	0006.0	2.0	68.0			
	208 VORO	41 F	0006.0	0007.0	3.0	200.0D			
	610 PALE	8 S	0006.3	0006.8	.5	13.0			QL=6 ST=2 TYP=3
	200 HIRA	42 SER	0006.3	0006.8	9.0	1200.0			0
	245 PALE	47 GB	0006.5	0006.6	.6	169.0			QL=6 ST=2 TYP=5
	100 HIRA	42 SER	0006.5	0006.7	6.0	1900.0			
	9400 TYKW	5 S	0007.0E	0007.0U	3.0D	20.0		5.0D	
	2000 TYKW	21 GRF	0015.0	0100.0	140.0	2.0	1.0		
	200 HIRA	46 C	0015.6	0018.0	10.0	14.0	3.0		0
	3750 TYKW	21 GRF	0018.0	0043.0	135.0	5.0	2.0		
	2695 PENT	1 S	0021.5	0021.8	1.0	3.2	1.6		
	200 HIRA	27 RF	0043.0	0100.0	32.0	6.0	4.0		0
	500 HIRA	22 GRF	0110.0	0143.5	125.0	10.0	4.0		SR
	3750 TYKW	21 GRF	0122.0	0132.0	65.0	2.0	1.0		
	2000 TYKW	20 GRF	0125.0	0140.0	60.0	2.0	1.0		
	3750 TYKW	21 GRF	0134.0	0137.0	35.0	5.0	2.0		
	9400 TYKW	20 GRF	0134.0	0150.0	50.0	3.0	1.5		
	3750 TYKW	5 S	0139.5	0140.3	2.5	2.0	0.7		
	3750 TYKW	21 GRF	0240.0	0250.0	55.0	2.0	1.0		
	9400 TYKW	45 C	0243.0	0245.4	15.0	12.0	6.0		
	3750 TYKW	5 S	0245.0	0245.3	2.5	2.0	0.7		
	9400 TYKW	29 PBI	0258.0		35.0	4.0	2.0		
100 GORK	46 C	0305.1	0318.9	49.0	12.0				
100 GORK		0305.1	0343.6		15.0				
3750 TYKW	5 S	0315.0	0320.0	15.0	3.0	1.0			
3750 TYKW	45 C	0340.0	0400.0	50.0	119.0	17.0			
650 GORK	21 GRF	0341.4	0434.3	392.0	13.0				
2000 TYKW	28 PRE	0342.0	0350.0	8.0	3.0	1.5			
9400 TYKW	45 C	0342.0	0400.0	48.0	150.0	30.0			
9100 GORK	21 GRF	0342.0	1146.3	498.0D	45.0				
2950 GORK	21 GRF	0342.4	1124.0	500.0D	27.0				
9395 PEKG	46 C	0344.0	0400.0	22.5	137.0	39.3			
1000 TYKW	45 C	0348.0	0359.9	20.0	85.0	16.0			
2902 YUNN	45 C	0348.0	0400.0	38.0	101.0				
3653 YUNN	45 C	0348.0	0400.0	37.0	115.0				
950 GORK	46 C	0348.0	0352.5	25.0	55.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
11	950	GORK		0348.0	0400.0		71.0			
	6100	KISV		0348.3	0352.8		30.0			
	6100	KISV	46 C	0348.3	0400.0	17.0	130.0			
	6100	KISV		0348.3	0401.0		95.0			
	6100	KISV		0348.3	0403.3		50.0			
	4995	ATHN	47 GB	0349.6E	0359.8	20.5D	130.0			QL=2 ST=2 TYP=5
	2000	TYKW	45 C	0350.0	0400.0	16.0	64.0	17.0		
	500	HIRA	45 C	0350.0	0359.5	12.0	120.0	30.0		WL
	1415	ATHN	4 S/F	0350.0E	0400.1	14.3D	43.0			QL=2 ST=2 TYP=3
	650	GORK	46 C	0350.1	0350.8	3.7	26.0			
	650	GORK	46 C	0350.1	0352.6		39.0			
	8800	ATHN	47 GB	0350.1E	0400.1	20.0D	119.0			QL=2 ST=2 TYP=5
	610	PALE	4 S/F	0350.5	0352.5	2.3	44.0			QL=6 ST=2 TYP=3
	2840	PEKG	46 C	0351.0	0400.0	16.0	86.5	12.6		
	9100	GORK	1 S	0351.0	0352.5	3.6	15.0			
	2695	ATHN	47 GB	0351.1E	0400.0	13.2D	62.0			QL=2 ST=2 TYP=5
	4995	PALE	4 S/F	0351.3	0352.6	2.8	34.0			QL=6 ST=2 TYP=3
	2950	GORK	3 S	0351.6	0352.6	3.7	19.0			
	1415	PALE	8 S	0351.8	0352.5	1.0	23.0			QL=6 ST=2 TYP=3
	650	GORK	4 S/F	0354.8	0400.0	9.3	50.0			
	1415	PALE	47 GB	0355.8	0359.8	7.2	70.0			QL=6 ST=2 TYP=5
	410	LEAR	49 GB	0356.3	0401.1	6.5	790.0			QL=6 ST=2 TYP=6
	610	LEAR	47 GB	0356.6	0401.1	7.4	230.0			QL=6 ST=2 TYP=5
	410	PALE	49 GB	0356.8	0401.1	5.8	800.0			QL=6 ST=2 TYP=6
	35000	NAGO	20 GRF	0357.0	0413.0	50.0	81.0			
	15400	PALE	47 GB	0357.0	0359.8	9.1	119.0			QL=6 ST=2 TYP=5
	1415	LEAR	47 GB	0357.1	0400.1	7.2	76.0			QL=6 ST=2 TYP=5
	610	PALE	47 GB	0357.3	0401.1	4.7	230.0			QL=6 ST=2 TYP=5
	9100	GORK	4 S/F	0358.0	0400.0	7.2	110.0			
	4995	LEAR	47 GB	0358.0	0400.1	7.5	130.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0358.0	0400.1	7.6	139.0			QL=6 ST=2 TYP=5
	2695	LEAR	47 GB	0358.0	0400.1	7.0	72.0			QL=6 ST=2 TYP=5
	15400	LEAR	47 GB	0358.0	0401.0	7.3	100.0			QL=6 ST=2 TYP=5
	2950	GORK	4 S/F	0358.1	0400.0	5.6	62.0			
	245	LEAR	49 GB	0358.6	0401.0	2.7	1300.0			QL=6 ST=2 TYP=6
	8800	PALE	47 GB	0359.1	0359.8	3.9	119.0			QL=6 ST=2 TYP=5
	4995	PALE	47 GB	0359.1	0400.0	3.7	119.0			QL=6 ST=2 TYP=5
	245	PALE	49 GB	0400.8	0401.0	.5	1199.0			QL=6 ST=2 TYP=6
	500	HIRA	29 PBI	0402.0	0402.0	80.0	10.0	6.0		SR
	6100	KISV	29 PBI	0405.5	0405.5	36.0	25.0			
	2000	TYKW	30 PBI	0406.0		210.0	7.0	3.0		
	9395	PEKG	29 PBI	0406.5		21.5	36.0	18.0		
	1000	TYKW	30 PBI	0408.0		210.0	3.0	1.5		
	410	PALE	8 S	0408.1	0408.5	.5	13.0			QL=6 ST=2 TYP=3
	245	PALE	8 S	0408.6	0409.5	1.0	47.0			QL=6 ST=2 TYP=3
	1000	TYKW	21 GRF	0415.0	0612.0	130.0	2.0	1.0		
	9400	TYKW	30 PBI	0430.0		75.0	15.0	6.0		
	3750	TYKW	21 GRF	0430.0		80.0	7.0	4.0		
	3750	TYKW	20 GRF	0512.0	0527.0	35.0	2.0	1.0		
	9400	TYKW	5 S	0525.0	0530.0	15.0	4.0	2.0		
8800	ATHN	4 S/F	0553.6	0554.6	3.7	28.0			QL=6 ST=2 TYP=3	
1000	TYKW	5 S	0554.0	0554.6	2.0	3.0	1.0			
2000	TYKW	5 S	0554.0	0554.6	2.0	5.0	2.0			
9400	TYKW	5 S	0554.0	0554.6	3.0	31.0	11.0			
3750	TYKW	5 S	0554.0	0554.7	3.0	8.0	3.0			
2000	TYKW	21 GRF	0554.0	0640.0	95.0	3.0	1.5			
5200	BERN	4 S/F	0554.0	0554.8	5.5	23.0				
8400	BERN	4 S/F	0554.0	0554.9	5.5	40.0				
3100	BERN	3 S	0554.0	0555.3	5.5	9.0				
4995	ATHN	4 S/F	0554.1	0554.6	3.2	11.0			QL=6 ST=2 TYP=3	
2695	ATHN	4 S/F	0554.1	0554.6	3.2	7.0			QL=6 ST=2 TYP=3	
650	GORK	1 S	0554.2	0554.3	.4	5.2	3.0			
2950	GORK	1 S	0554.3	0554.7	2.2	4.7				
9400	TYKW	5 S	0557.0	0559.0	6.0	4.0	2.0			
3750	TYKW	5 S	0557.0	0600.0U	8.0	2.0	1.0D			
9395	PEKG	3 S	0558.0	0558.7	4.0	28.6	8.6			
9400	TYKW	21 GRF	0612.0	0621.0	75.0	8.0	4.0			
3750	TYKW	21 GRF	0614.0	0630.0	75.0	4.0	2.0			
6100	KISV	1 S	0614.1	0615.3	1.5	4.0				
3750	TYKW	5 S	0654.0	0655.0	3.0	4.0	1.5			
2950	GORK	1 S	0654.2	0654.7	2.0	4.7				

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
11	9100	GORK	1 S	0654.4	0654.8	1.0	6.0	3.0		
	9400	TYKW	5 S	0654.5	0655.0	1.5	7.0	2.0		
	430	KRAK	42 SER	0712.5	0828.8	348.00	67.0			
	430	KRAK		0712.5	0921.3		129.0			
	430	KRAK		0712.5	0934.5		85.0			
	430	KRAK		0712.5	1000.5		129.0			
	430	KRAK		0712.5	1243.0		112.0			
	9400	TYKW	5 S	0722.0	0725.0	10.0	6.0	3.0		
	6100	KISV	1 S	0724.3	0725.1	1.0	4.0			
	3750	TYKW	20 GRF	0734.0	0800.0	80.0	6.0			
	2000	TYKW	20 GRF	0750.0	0800.0	65.0	2.0	1.0		
	9100	GORK	3 S	0754.2	0754.6	2.3	28.0			
	6100	KISV	21 GRF	0756.5	0824.1	54.0	12.0			
	9100	GORK	1 S	0823.2	0824.0	1.5	8.0	4.0		
	245	LEAR	47 GB	0834.8	0835.8	1.0	119.0			QL=6 ST=2 TYP=5
	100	GORK	41 F	0843.2	0843.7	2.1	190.0			
	100	GORK		0843.2	0844.7		200.00			
	610	LEAR	47 GB	0852.8	0853.1	2.3	73.0			QL=6 ST=2 TYP=5
	650	GORK	46 C	0853.2	0853.2	2.3	42.0			
	650	GORK		0853.2	0854.3		26.0			
	100	GORK	41 F	0942.4	0943.1	178.0	200.0			
	100	GORK		0942.4	0949.9		200.0			
	100	GORK		0942.4	0955.2		200.0			
	100	GORK		0942.4	0958.1		200.00			
	100	GORK		0942.4	0959.6		200.00			
	204	IZMI	41 F	0953.0	0953.2	19.0	480.0			
	536	ONDR	41 F	0958.0	0958.0	3.0	20.0			
	6100	KISV	25 R	0959.0	1130.00		20.00			
	9400	HUAN	2 S/F	1003.5	1005.0	2.6	18.3	9.9		0
	100	GORK	8 S	1007.8	1008.2	.8	200.00			
	6100	KISV	22 GRF	1027.0	1030.5	17.0	5.0			
	2800	OTTA	23 GRF	1050.0	1500.0	660.0	18.8			
	2695	ATHN	20 GRF	1052.5	1108.0	26.5	7.0			QL=6 ST=2 TYP=2
	8800	ATHN	20 GRF	1052.5	1140.0	62.5	28.0			QL=6 ST=2 TYP=2
	1415	SGMR	4 S/F	1053.6	1055.5	3.7	20.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1054.5	1054.8	.5	13.0			QL=6 ST=2 TYP=3
	4995	ATHN	20 GRF	1057.3	1108.0	21.7	13.0			QL=6 ST=2 TYP=2
	1415	ATHN	20 GRF	1101.3	1108.0	17.7	18.0			QL=6 ST=2 TYP=2
	204	IZMI	41 F	1103.0	1104.0	6.0	210.0			
	113	POTS	4 S/F	1103.8	1104.8	1.8	200.0	45.0		111
	3100	CRIM	20 GRF	1107.0	1209.0	98.00	13.0			
	3000	POTS	20 GRF	1112.0E	1123.5	18.00	13.0			
	1470	POTS	20 GRF	1113.5	1124.0	17.0	5.0			
	2800	OTTA	1 S	1157.0	1157.3	5.0	3.8	1.8		
	2695	ATHN	4 S/F	1157.3	1157.5	2.2	7.0			QL=6 ST=2 TYP=3
4995	ATHN	4 S/F	1157.3	1157.5	2.2	7.0			QL=6 ST=2 TYP=3	
8800	ATHN	4 S/F	1157.3	1157.5	2.2	7.0			QL=6 ST=2 TYP=3	
3000	POTS	1 S	1203.0	1204.0	2.0	3.0				
2800	OTTA	1 S	1203.5	1204.0	1.0	3.2	1.5			
1470	POTS	1 S	1203.5	1204.1	1.5	4.0				
1415	ATHN	8 S	1203.6	1204.1	1.0	11.0			QL=6 ST=2 TYP=3	
2695	ATHN	8 S	1203.6	1204.1	1.0	9.0			QL=6 ST=2 TYP=3	
810	KRAK	2 S/F	1204.0	1204.0	.5	16.0	2.0			
234	POTS	8 S	1207.6	1207.6	.7	150.0	50.0			
6100	KISV	21 GRF	1221.0	1222.6	18.0	4.0				
2695	SGMR	8 S	1226.1	1226.8	.7	15.0			QL=6 ST=2 TYP=3	
245	SGMR	4 S/F	1226.1	1226.8	2.4	47.0			QL=6 ST=2 TYP=3	
810	KRAK	1 S	1253.5	1254.0	.7	3.0	1.0			
234	POTS	4 S/F	1303.9	1304.0	.6	30.0	27.5			
1415	ATHN	20 GRF	1305.1	1316.0	64.4	11.0			QL=6 ST=2 TYP=2	
4995	ATHN	20 GRF	1306.5	1330.8	63.0	17.0			QL=6 ST=2 TYP=2	
8800	ATHN	20 GRF	1311.5	1330.8	58.0	39.0			QL=6 ST=2 TYP=2	
9500	POTS	20 GRF	1312.0	1326.0	28.0	24.0				
2695	ATHN	20 GRF	1313.5	1344.3	56.0	7.0			QL=6 ST=2 TYP=2	
6100	KISV		1314.0	1318.0		4.0				
6100	KISV		1314.0	1328.1		12.0				
6100	KISV	46 C	1314.0	1330.9	21.0	13.0				
9400	HUAN	21 GRF	1323.2	1326.2	12.4	12.2	6.2		0	
8800	SGMR	4 S/F	1323.6	1326.3	7.5	25.0			QL=6 ST=2 TYP=3	
15400	SGMR	20 GRF	1323.8	1325.8	8.5	51.0			QL=6 ST=2 TYP=2	
9400	HUAN	2 S/F	1330.2	1330.8	1.4	6.1	2.4		0	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean			
11	4995	SGMR	8 S	1330.6	1330.8	.5	13.0			QL=6 ST=2 TYP=3	
	9400	HUAN	22 GRF	1342.1	1445.0	63.1U	4.6	1.6		0	
	410	SGMR	4 S/F	1403.6	1417.0	15.7	41.0			QL=6 ST=3 TYP=3	
	3000	POTS	23 GRF	1418.0U	1444.8	58.0U	31.0				
	8400	BERN	23 GRF	1418.0	1449.1	45.0U	208.0				
	5200	BERN	23 GRF	1418.0	1449.1	45.0U	241.0				
	3100	BERN	23 GRF	1418.0	1449.1	45.0U	181.0				
	9400	HUAN	23 GRF	1418.3	1440.9	61.4	18.3	5.0		R	
	2800	OTTA	2 S/F	1418.5	1421.0	8.0	9.2	4.4			
	1470	POTS	23 GRF	1418.5E	1444.5	62.0D	10.0				
	9500	POTS	23 GRF	1419.0	1432.5	61.0	24.0				
	610	SGMR	8 S	1419.3	1420.6		24.0				QL=6 ST=1 TYP=3
	127	TORN	4 S/F	1424.8	1425.3	2.0	420.0D	210.0D			
	2800	OTTA	28 PRE	1430.0	1444.8	17.2	20.0				
	113	POTS	42 SER	1431.0	1432.5	19.0	200.0	10.0			III
	1470	POTS	4 S/F	1432.0	1433.7	3.0	8.0				
	3000	POTS	4 S/F	1432.2	1433.5	2.3	23.0				
	127	TORN	42 SER	1439.8	1444.8	11.0	120.0D				
	234	POTS	4 S/F	1442.7	1449.8	10.0	1100.0	250.0			III
	2650	DWIN	45 C	1445.0	1454.0	10.0	125.0	60.0			
	3000	POTS	4 S/F	1446.5	1449.2	8.5	157.0				
	1470	POTS	4 S/F	1447.0	1449.2	7.5	44.0				
	2800	OTTA	45 C	1447.2	1449.0	8.5	144.0	38.6			
	9400	HUAN	4 S/F	1447.3	1448.9	6.0	103.6	29.6			R
	9500	POTS	4 S/F	1447.5	1449.0	6.5	107.0				
	2800	OTTA	1 S	1512.5	1514.0	3.0	2.8	1.3			
	3100	BERN	3 S	1612.6	1613.6	6.0	35.0				
	8400	BERN	4 S/F	1612.6	1613.8	6.0	27.0				
	9400	HUAN	1 S	1612.6	1613.8	3.0	12.2	7.4			R
	5200	BERN	4 S/F	1612.6	1613.9	6.0	33.0				
	2800	OTTA	4 S/F	1612.8	1613.7	5.0	27.0	6.8			
	2650	DWIN	1 S	1613.0	1614.0	2.0	30.0	10.0			
	9400	HUAN	20 GRF	1850.4	1906.2U	30.3	9.1	5.0			0
	2800	OTTA	1 S	1930.2	1930.8	1.5	6.6	3.3			
	610	PALE	8 S	1930.5	1930.6	.3	21.0				QL=5 ST=2 TYP=3
	2800	OTTA	1 S	1932.3	1932.5	1.0	7.8	2.6			
	4995	SGMR	4 S/F	1940.1	1941.3	3.0	43.0				QL=6 ST=2 TYP=3
	2695	SGMR	4 S/F	1940.1	1941.5	3.0	21.0				QL=6 ST=2 TYP=3
	2800	OTTA	3 S	1940.2	1941.5	8.0	13.8	3.6			
	9400	HUAN	1 S	1940.3	1946.5	6.2U	19.8	10.0			L
	4995	PALE	8 S	1940.8	1941.3	1.7	34.0				QL=6 ST=2 TYP=3
	8800	SGMR	8 S	1941.0	1941.6	2.0	18.0				QL=6 ST=2 TYP=3
	8800	PALE	8 S	1941.1	1941.5	1.2	29.0				QL=6 ST=2 TYP=3
	8800	PALE	8 S	2004.3	2004.6	1.0	29.0				QL=6 ST=2 TYP=3
	15400	PALE	8 S	2004.5	2004.6	.3	39.0				QL=6 ST=2 TYP=3
2695	PENT	1 S	2006.0	2006.7	2.0	2.4	1.2				
15400	PALE	8 S	2059.0	2059.1	.3	28.0				QL=6 ST=2 TYP=3	
8800	PALE	8 S	2059.1	2059.1	.2	16.0				QL=6 ST=2 TYP=3	
245	PALE	47 GB	2108.0	2108.1	.3	180.0				QL=6 ST=2 TYP=5	
245	PALE	47 GB	2111.0	2111.1	.3	230.0				QL=6 ST=2 TYP=5	
245	PALE	47 GB	2122.5	2122.6	1.0	420.0				QL=6 ST=2 TYP=5	
9400	TYKW	21 GRF	2155.0	2236.0	95.0	8.0	4.0				
9400	TYKW	5 S	2158.0	2200.0	7.0U	9.0	3.0				
2695	PENT	24OAR	2205.0	2220.0	15.0	3.8	1.9			INTERFERENCE	
3750	TYKW	21 GRF	2206.0	2233.0	70.0	6.0	3.0				
3750	TYKW	5 S	2207.0	2208.1	3.0	11.0	3.0				
2800	OTTA	1 S	2207.8	2208.0	1.2	2.4	1.2				
9400	TYKW	5 S	2213.0	2214.1	2.5	6.0	2.0				
2000	TYKW	20 GRF	2213.0	2236.0	80.0	3.0	1.5				
1000	TYKW	45 C	2213.5	2214.9	2.5	4.0	1.5				
1000	TYKW	45 C	2217.5	2219.3	2.5	19.0	1.5				
9400	TYKW	5 S	2228.5	2228.8	1.5	3.0	1.0				
245	PALE	47 GB	2228.5	2231.1	3.1	460.0				QL=6 ST=2 TYP=5	
410	PALE	47 GB	2229.3	2230.8	2.0	75.0				QL=6 ST=2 TYP=5	
610	PALE	47 GB	2230.1	2230.6	.7	100.0				QL=6 ST=2 TYP=5	
245	PALE	49 GB	2238.3	2239.1	1.5	590.0				QL=6 ST=2 TYP=6	
410	PALE	47 GB	2238.6	2238.6	.4	57.0				QL=6 ST=2 TYP=5	
610	PALE	8 S	2239.3	2239.3	.3	37.0				QL=6 ST=2 TYP=3	
3750	TYKW	45 C	2258.0	2300.2	6.0	1.5	0.5				
1415	PALE	47 GB	2309.6	2309.8	1.0	130.0				QL=6 ST=2 TYP=5	
245	PALE	47 GB	2309.6	2310.3	2.5	310.0				QL=6 ST=2 TYP=5	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
11	410	PALE	47 GB	2310.3	2310.3	.3	53.0			QL=6 ST=2 TYP=5
	1415	PALE	47 GB	2318.3	2318.6	3.0	130.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2318.3	2318.6	.5	320.0			QL=6 ST=2 TYP=5
	9400	TYKW	45 C	2336.0	2338.1	4.0	35.0	12.0		
	3750	TYKW	45 C	2336.0	2338.2	7.0	25.0	6.0		
	610	LEAR	4 S/F	2336.3	2336.8	3.8	33.0			QL=6 ST=2 TYP=3
	1000	TYKW	45 C	2336.3	2337.0	1.0	5.0	1.0		
	2695	PENT	3 S	2337.2	2338.5	3.0	12.0	6.0		
	2000	TYKW	45 C	2337.3	2338.5	6.0	14.0	3.0		
	8800	LEAR	8 S	2337.6	2338.0	1.2	30.0			QL=6 ST=2 TYP=3
	4995	LEAR	8 S	2337.6	2338.0	1.7	33.0			QL=6 ST=2 TYP=3
	8800	PALE	8 S	2337.6	2338.0	1.7	38.0			QL=6 ST=2 TYP=3
	4995	PALE	8 S	2337.6	2338.1	1.7	32.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	2337.6	2338.5	1.2	20.0			QL=6 ST=2 TYP=3
	1000	TYKW	45 C	2337.7	2338.3	2.0	12.0	3.0		
	1415	LEAR	8 S	2338.0	2339.1	1.3	20.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	2338.6	2338.8	1.9	13.0			QL=6 ST=2 TYP=3
	9400	TYKW	30 PBI	2340.0		7.0	10.0	4.0		
	9400	TYKW	5 S	2343.4	2343.8	1.0	9.0	3.0		
	2000	TYKW	21 GRF	2345.0	0016.0	85.0	2.0	1.0		
	2695	PENT	21 GRF	2348.0		80.0	4.6			
	3750	TYKW	45 C	2349.0	2351.7	6.0	11.0	4.0		
	1000	TYKW	5 S	2349.0	2351.7	5.0	2.0	0.7		
	1415	LEAR	4 S/F	2349.1	2351.8	8.9	8.0			QL=6 ST=2 TYP=3
	9400	TYKW	21 GRF	2350.0	0008.0	105.0	4.0	2.0		
	2000	TYKW	45 C	2350.0	2351.8	7.0	15.0	6.0		
	2695	LEAR	4 S/F	2350.1	2351.8	8.0	17.0			QL=6 ST=2 TYP=3
	4995	LEAR	4 S/F	2350.1	2351.8	8.9	9.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	2351.0	2351.7	3.0	3.0	1.0		
	2695	PENT	4 S/F	2351.0	2351.8	4.0	12.6	6.3		
3750	TYKW	30 PBI	2355.0		75.0	4.0	2.0			
2000	TYKW	29 PBI	2357.0		7.0	2.0	1.0			
12	100	GORK	44 NS	0300.0E		540.0D		10.0		
	33	UPIC	44 NS	0400.0E		840.0D				
	29	UPIC	44 NS	0400.0E		840.0D				
	260	ONDR	44 NS	0550.0E		497.0D	40.0			
	204	I2MI	44 NS	0600.0E		360.0D	150.0			
	430	KRAK	44 NS	0653.0E	0856.5	367.0D	320.0	14.0		
	245	SGMR	43 NS	0947.0	1841.1	825.0D	270.0			QL=6 ST=2 TYP=1 V=1
	127	TORN	44 NS	1120.0E		210.0D		12.0		
	100	HIRA	44 NS	1934.0E	2014.0	150.0D	250.0	85.0		
	200	HIRA	44 NS	1934.0E	2032.0	835.0D	110.0	35.0		SR
	208	VORO	44 NS	2100.0E		360.0D		41.0		
	3750	TYKW	5 S	0008.0	0011.0	11.0	1.5	0.7		
	9400	TYKW	5 S	0009.0	0011.0	10.0	4.0	2.0		
	1000	TYKW	5 S	0014.0	0014.3	1.0	1.0	0.3		
	1000	TYKW	5 S	0018.0	0018.3	1.0	2.5	1.0		
	3750	TYKW	5 S	0021.0	0022.0	3.0	7.0	2.0		
	2000	TYKW	5 S	0021.5	0021.9	2.5	4.0	1.0		
	9400	TYKW	45 C	0021.5	0022.2	11.0	6.0	2.0		
	3750	TYKW	30 PBI	0024.0		10.0	1.5	0.7		
	245	LEAR	47 GB	0024.0	0024.5	1.1	110.0			QL=1 ST=2 TYP=5
	3750	TYKW	45 C	0027.0	0029.0	6.0	12.0	2.0		
	9400	TYKW	5 S	0035.0	0037.5	8.0	12.0	6.0		
	15400	LEAR	4 S/F	0035.0	0039.1	4.3	13.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0036.1	0037.3	1.4	11.0			QL=6 ST=2 TYP=3
	9400	TYKW	29 PBI	0043.0		25.0	4.0	2.0		
	9395	PEKG	28 PRE	0120.0		92.0	17.1	11.6		
	3750	TYKW	45 C	0141.0	0156.0	32.0	8.0	3.5		
	9400	TYKW	45 C	0142.0	0155.3	25.0	28.0	12.0		
	8800	LEAR	20 GRF	0145.0	0155.1	20.5	25.0			QL=6 ST=2 TYP=2
	15400	LEAR	20 GRF	0145.0	0155.1	24.8	26.0			QL=6 ST=2 TYP=2
2940	PEKG	45 C	0147.0	0155.2	21.0	5.0	2.6			
2000	TYKW	5 S	0147.5	0148.2	1.5	2.0	0.5			
9395	PEKG	45 C	0152.0	0155.3	13.0	21.0	13.7			
2000	TYKW	5 S	0154.0	0155.0	6.0	1.5	0.5			
410	PALE	8 S	0158.3	0158.5	.3	27.0			QL=6 ST=2 TYP=3	
245	PALE	47 GB	0159.0	0159.8	2.1	360.0			QL=6 ST=2 TYP=5	
9400	TYKW	30 PBI	0207.0		155.0	9.0	3.0			
3750	TYKW	45 C	0217.0	0224.1	15.0	3.0	1.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
12	2000	TYKW	45 C	0223.0	0224.0	8.0	2.0	0.5		
	9400	TYKW	5 S	0223.0	0228.0	15.0	5.0	2.5		
	9400	TYKW	5 S	0240.0	0241.0	4.0	6.0	2.0		
	3750	TYKW	28 PRE	0240.0	0252.0	12.0	8.0	3.0		
	2840	PEKG	28 PRE	0242.0		7.0	6.2	3.1		
	1000	TYKW	28 PRE	0243.0	0252.0	9.0	2.0	1.0D		
	2000	TYKW	28 PRE	0243.0	0252.0	9.0	4.0	1.5		
	9400	TYKW	28 PRE	0245.0	0247.0	6.0	4.0	2.0		
	2840	PEKG	47 GB	0249.0	0253.8	24.0	972.0	201.0		
	2902	YUNN	45 C	0250.0	0254.0	25.0	891.0			
	3653	YUNN	45 C	0250.0	0254.0	32.0	926.0			
	2930	VORO	47 GB	0250.0	0254.0	25.0	7532.0			
	9400	TYKW	47 GB	0251.0	0255.1	25.0	1220.0	115.0D		
	2695	LEAR	49 GB	0251.8	0253.8	13.5	770.0			QL=6 ST=2 TYP=7
	8800	LEAR	49 GB	0251.8	0255.0	23.7	1199.0			QL=6 ST=2 TYP=7
	3750	TYKW	47 GB	0252.0	0253.8	25.0	867.0	85.0		
	9395	PEKG	47 GB	0252.0	0253.8	19.0	911.0	189.0U		
	2000	TYKW	47 GB	0252.0	0253.8	18.0	515.0	85.0		
	9395	PEKG		0252.0	0255.1		1065.0			
	1000	TYKW		0252.0	0255.2		312.0			
	1000	TYKW	45 C	0252.0	0256.5	23.0	331.0	65.0		
	4995	LEAR	49 GB	0252.5	0253.8	16.6	770.0			QL=6 ST=2 TYP=7
	4995	PALE	49 GB	0252.6	0253.8	12.7	760.0			QL=6 ST=2 TYP=7
	1415	LEAR	49 GB	0252.6	0255.0	12.7	470.0			QL=6 ST=2 TYP=7
	1415	PALE	49 GB	0252.6	0255.0	12.0	430.0			QL=6 ST=2 TYP=7
	100	HIRA	48 C	0252.7	0253.0	13.0	10000.0D	3800.0D		
	15400	LEAR	49 GB	0252.8	0253.6	21.3	900.0			QL=6 ST=2 TYP=7
	8800	PALE	49 GB	0252.8	0253.8	15.5	1100.0			QL=6 ST=2 TYP=7
	15400	PALE	49 GB	0252.8	0253.8	15.0	1000.0			QL=6 ST=2 TYP=7
	17000	NOBE	46 C	0252.8	0253.8	5.1	782.0			R
	500	HIRA	48 C	0252.8	0254.5	20.0	13000.0	300.0		WL
	410	LEAR	49 GB	0252.8	0254.6	10.0	10000.0			QL=6 ST=2 TYP=7
	610	LEAR	49 GB	0252.8	0254.8	14.3	370.0			QL=6 ST=2 TYP=7
	200	HIRA	48 C	0252.8	0255.5	7.7	23000.0	3580.0		0
	208	VORO	48 C	0253.0	0255.0	8.0	400.0D			
	35000	NAGO	5 S	0253.0	0255.0	5.0	213.0			
	410	PALE	49 GB	0253.0	0254.6	7.3	18999.0			QL=6 ST=2 TYP=7
	610	PALE	49 GB	0253.0	0254.8	11.6	370.0			QL=6 ST=2 TYP=7
	245	LEAR	49 GB	0253.0	0255.1	6.0				QL=6 ST=2 TYP=7
	245	PALE	49 GB	0253.3	0255.1	5.7				QL=6 ST=2 TYP=7
	17000	NOBE	29 PBI	0257.9	0257.9	20.0	53.0			R
	35000	NAGO	29 PBI	0258.0	0258.0	14.0	59.0			
	9100	GORK	23 GRF	0300.0E	0306.5	435.0D	58.0			
	100	GORK	46 C	0300.5	0302.0	5.6	1000.0			
	100	GORK		0300.5	0305.3		700.0			
	9100	GORK	1 S	0302.9	0303.8	2.8	16.0	8.0		
	2950	GORK	21 GRF	0304.4E	0312.0	308.0D	11.0			
	2950	GORK	1 S	0306.7	0306.9	.9	6.2	3.0		
	650	GORK	21 GRF	0308.0E	0602.0	370.0D	14.0			
	2000	TYKW	29 PBI	0310.0		35.0	4.0	1.5		
9395	PEKG	29 PBI	0311.0		8.0	12.0	6.2			
2840	PEKG	29 PBI	0313.0		10.0	12.3	11.9			
1000	TYKW	29 PBI	0315.0		90.0	4.0	2.0			
9400	TYKW	29 PBI	0316.0		30.0	9.0	3.0			
3750	TYKW	29 PBI	0317.0		15.0	2.0	1.0			
2000	TYKW	20 GRF	0337.0	0401.0	70.0	3.0	1.0			
9400	TYKW	21 GRF	0355.0	0415.0	45.0	4.0	2.0			
9100	GORK	2 S/F	0408.6	0409.8	3.4	13.0				
6100	KISV	1 S	0408.7	0409.8	3.0	6.0				
9400	TYKW	45 C	0408.8	0409.2	3.0	9.0	3.0			
9395	PEKG	45 C	0408.8	0409.3	3.2	16.3	6.5			
3750	TYKW	32 ABS	0428.0	0440.0	24.0	-2.0	-1.0			
3750	TYKW	45 C	0455.0	0456.1	6.0	70.0	7.0			
9400	TYKW	45 C	0455.0	0456.6	6.0	24.0	7.0			
9395	PEKG	45 C	0455.0E	0456.7	3.4D	23.2	13.7U			
9100	GORK	2 S/F	0455.2	0456.5	3.0	23.0				
6100	KISV	4 S/F	0455.2	0456.8	2.0	26.0				
6100	KISV	29 PBI	0455.2	0457.3	19.0	8.0				
245	LEAR	47 GB	0455.3	0455.5	2.0	270.0			QL=6 ST=3 TYP=5	
4995	LEAR	4 S/F	0455.3	0456.5	4.7	28.0			QL=6 ST=2 TYP=3	
8800	LEAR	4 S/F	0455.3	0456.6	4.7	32.0			QL=6 ST=2 TYP=3	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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May 83

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
12	610	LEAR	47 GB	0455.3	0456.8	3.8	189.0			QL=6 ST=2 TYP=5
	410	LEAR	47 GB	0455.3	0459.1	5.3	280.0			QL=6 ST=2 TYP=5
	650	GORK	4 S/F	0455.4	0456.6	1.9	160.0			
	2000	TYKW	45 C	0455.5	0456.7	2.5	36.0	9.0		
	2695	LEAR	47 GB	0455.6	0456.5	2.5	65.0			QL=6 ST=2 TYP=5
	3100	BERN	45 C	0455.7	0456.5	3.0	118.0			
	2950	GORK	4 S/F	0455.7	0456.6	2.6	70.0			
	5200	BERN	4 S/F	0455.7	0456.6	3.0	45.0			
	8400	BERN	4 S/F	0455.7	0456.6	3.0	75.0			
	1000	TYKW	45 C	0455.7	0456.7	3.5	39.0	4.0		
	950	GORK	4 S/F	0455.7	0456.7	2.6	47.0			
	4995	ATHN	4 S/F	0455.8	0456.6	5.0	31.0			QL=6 ST=2 TYP=3
	2695	ATHN	47 GB	0455.8	0456.8	2.5	57.0			QL=6 ST=2 TYP=5
	1415	LEAR	8 S	0455.8	0456.8	1.5	40.0			QL=6 ST=2 TYP=3
	1415	ATHN	4 S/F	0455.8	0456.8	2.5	33.0			QL=6 ST=2 TYP=3
	2902	YUNN	5 S	0456.0	0456.5	2.3	74.0			
	2840	PEKG	3 S	0456.0E	0456.7	3.0D	33.0	18.3		
	8800	ATHN	4 S/F	0456.0	0456.6	4.1	22.0			QL=6 ST=2 TYP=3
	650	GORK	8 S	0457.9	0458.1	.5	34.0			
	2000	TYKW	29 PBI	0458.0		15.0	1.5	0.7		
	650	GORK	8 S	0459.0	0459.2	.3	18.0			
	9400	TYKW	30 PBI	0501.0		35.0	4.0	2.0		
	650	GORK	1 S	0502.5	0502.7	.3	5.0	2.0		
	9400	TYKW	5 S	0508.0	0511.0	7.0	3.0	1.5		
	9400	TYKW	5 S	0525.5	0525.8	1.5	3.0	1.0		
	6100	KISV	2 S/F	0536.0	0537.0	2.0	10.0			
	6100	KISV	29 PBI	0538.0	0538.4	5.0	5.0			
	9400	TYKW	21 GRF	0548.0	0602.0	150.0	6.0	3.0		
	2000	TYKW	20 GRF	0549.0	0550.5	40.0	3.0	1.0		
	3750	TYKW	21 GRF	0549.0	0611.0	140.0	4.0	2.0		
	9400	TYKW	5 S	0610.5	0610.8	1.5	10.0	2.0		
	536	ONDR	41 F	0623.0	0625.0	4.0	38.0			
	9400	TYKW	45 C	0627.0	0637.0	20.0	30.0	9.0		
	1415	ATHN	20 GRF	0630.6	0638.6	17.2	7.0			QL=6 ST=2 TYP=2
	2840	PEKG	45 C	0631.0	0637.0	15.0	10.7	3.3		
	9395	PEKG	45 C	0631.0	0637.0	13.0	28.5	8.1		
	8800	ATHN	20 GRF	0631.0	0636.8	19.5	30.0			QL=6 ST=2 TYP=2
	4995	ATHN	20 GRF	0631.3	0637.0	20.0	7.0			QL=6 ST=2 TYP=2
	2695	ATHN	20 GRF	0631.8	0637.6	17.8	5.0			QL=6 ST=2 TYP=2
	3750	TYKW	5 S	0636.0	0637.4	6.0	4.0	1.0		
	9100	GORK	1 S	0636.0	0637.0	1.9	20.0			
	9395	PEKG	29 PBI	0644.0		10.0	8.9	3.4		
9400	TYKW	29 PBI	0647.0		30.0	4.0	2.0			
430	KRAK		0653.0	1102.5		120.0				
430	KRAK		0653.0	1232.0		100.0				
9400	TYKW	5 S	0722.0	0723.1	2.0	11.0	5.0			
9100	GORK	1 S	0722.7	0723.1	.8	12.0				
9400	TYKW	29 PBI	0724.0		10.0	3.0	1.5			
9500	POTS	20 GRF	0835.0	0840.0	15.0	9.0				
2950	GORK	20 GRF	0835.5	0845.0	45.0	3.2	2.0			
2950	GORK	20 GRF	1047.0	1051.0	8.2	3.3	2.0			
2800	OTTA	20 GRF	1105.0	1110.0	35.0	5.8	2.7			
650	GORK	20 GRF	1144.4	1201.7U	28.2D	4.0				
100	GORK	8 S	1145.6	1146.3	1.6	240.0D				
2800	OTTA	23 GRF	1150.0	1405.0	230.0	15.6	6.0			
9100	GORK	20 GRF	1151.9	1200.0	14.0D	10.0				
2950	GORK	20 GRF	1152.2	1200.0	13.9D	7.0				
410	SGMR	8 S	1206.1	1207.1	1.0	30.0			QL=6 ST=2 TYP=3	
610	SGMR	8 S	1206.6	1206.8	.4	18.0			QL=6 ST=2 TYP=3	
536	ONDR	41 F	1217.0	1232.5	17.5	25.0				
810	KRAK	8 S	1225.6	1225.7	.2	6.0				
808	ONDR	40 F	1231.0	1242.3	12.0	45.0				
1470	POTS	23 GRF	1231.5	1234.1	17.0	8.0				
3000	POTS	23 GRF	1231.5	1242.5	34.0	11.0				
9500	POTS	20 GRF	1231.5	1246.5	40.0	12.0				
2800	OTTA	8 S	1231.6	1231.8	.4	4.6	2.3			
810	KRAK	2 S/F	1233.7	1234.0	.7	12.0	3.0			
2800	OTTA	45 C	1237.0	1242.0	7.0	8.0	.0			
6100	KISV	2 S/F	1237.2	1239.0	9.5	7.0				
4995	SGMR	4 S/F	1237.8	1238.8	5.3	20.0			QL=6 ST=2 TYP=3	
930	BORD	46 C	1238.0	1242.0	5.0	40.0	8.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
12	8800	SGMR	8 S	1238.3	1238.8	.8	23.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1238.5	1240.3	2.0	13.0			QL=6 ST=2 TYP=3
	810	KRAK	7 C	1239.0	1242.0	4.0	18.0	4.0		
	1415	SGMR	8 S	1241.8	1242.0	.3	13.0			QL=6 ST=2 TYP=3
	15400	SGMR	8 S	1244.3	1244.5	.3	20.0			QL=6 ST=2 TYP=3
	234	POTS	42 SER	1312.0	1339.5	43.0	420.0			
	536	ONDR	8 S	1324.5	1324.5	.1	25.0			
	8800	ATHN	20 GRF	1329.6	1340.6	57.4	65.0			QL=6 ST=2 TYP=2
	9500	POTS	20 GRF	1330.0E	1343.0	90.0D	49.0			
	6100	KISV		1332.0	1333.4		9.0			
	6100	KISV	46 C	1332.0	1341.5	24.0D	26.0			
	4995	ATHN	20 GRF	1332.3	1340.6	54.7	32.0			QL=6 ST=2 TYP=2
	2695	ATHN	20 GRF	1332.3	1340.6	54.7	11.0			QL=6 ST=2 TYP=2
	3100	BERN	20 GRF	1332.3	1343.0U	80.0	15.0			ONLY PAPER RE
	8400	BERN	20 GRF	1332.3	1343.0U	80.0	35.0			ONLY PAPER RE
	1415	ATHN	20 GRF	1333.6	1341.6	11.7	10.0			QL=6 ST=2 TYP=2
	3000	POTS	21 GRF	1335.0	1402.0U	86.0	17.0U			
	6100	KISV		1336.2			16.0			
	8800	SGMR	20 GRF	1338.3	1342.0	17.5	40.0			QL=6 ST=2 TYP=2
	4995	SGMR	4 S/F	1339.1	1342.3	38.9	25.0			QL=6 ST=2 TYP=3
	15400	SGMR	4 S/F	1339.3	1341.5	5.7	34.0			QL=6 ST=2 TYP=3
	2695	SGMR	4 S/F	1349.5	1351.5	2.1	16.0			QL=6 ST=2 TYP=3
	1415	ATHN	20 GRF	1402.6	1408.5	24.4	13.0			QL=6 ST=2 TYP=2
	2695	PENT	1 S	1416.0	1416.5	1.5	2.4	1.2		
	2800	OTTA	1 S	1418.5	1418.6	2.5	5.0	2.7		
	3000	POTS	3 S	1418.5	1419.0	1.5	17.0			
	1470	POTS	28 PRE	1418.5	1419.1	3.5	6.0			
	610	SGMR	47 GB	1418.6	1418.6	.2	70.0			QL=6 ST=2 TYP=5
	410	SGMR	47 GB	1418.6	1418.8	.7	219.0			QL=6 ST=2 TYP=5
	410	SGMR	49 GB	1508.3	1508.5	.7	1500.0			QL=6 ST=2 TYP=6
	610	SGMR	47 GB	1508.3	1508.5	.5	90.0			QL=6 ST=2 TYP=5
	610	SGMR	47 GB	1520.0	1520.1	.5	160.0			QL=6 ST=2 TYP=5
	410	SGMR	8 S	1520.1	1520.3	.4	30.0			QL=6 ST=2 TYP=3
	2800	OTTA	21 GRF	1605.0	1625.0	85.0	3.4	1.9		
	8800	ATHN	8 S	1619.6	1620.1	1.5	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	2 S/F	1619.9	1620.0	1.0	3.2	1.6		
	2800	OTTA	3 S	1637.0	1638.0	7.0	27.0	5.4		
	3100	BERN	45 C	1637.0	1638.0	7.0	32.0			ONLY PAPER RE
	4995	ATHN	4 S/F	1637.3	1638.1	4.0	23.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	1637.3	1638.1	3.5	22.0			QL=6 ST=2 TYP=3
2695	ATHN	4 S/F	1637.5	1638.1	4.3	21.0			QL=6 ST=2 TYP=3	
4995	PALE	8 S	1637.8	1638.0	.5	32.0			QL=6 ST=2 TYP=3	
8800	PALE	8 S	1637.8	1638.0	1.3	30.0			QL=6 ST=2 TYP=3	
1415	PALE	8 S	1638.1	1638.3	.2	13.0			QL=6 ST=2 TYP=3	
15400	PALE	8 S	1638.6	1638.8	.2	36.0			QL=6 ST=2 TYP=3	
610	SGMR	47 GB	1640.0	1640.3	.8	59.0			QL=6 ST=2 TYP=5	
610	PALE	47 GB	1640.1	1640.1	.5	53.0			QL=6 ST=2 TYP=5	
410	PALE	49 GB	1640.3	1640.3	.5	2100.0			QL=6 ST=2 TYP=6	
410	SGMR	49 GB	1640.3	1640.3	.5	2100.0			QL=6 ST=2 TYP=6	
1415	ATHN	8 S	1640.3	1640.6	1.2	10.0			QL=6 ST=2 TYP=3	
8800	SGMR	8 S	1720.5	1721.1	1.5	34.0			QL=6 ST=2 TYP=3	
4995	SGMR	4 S/F	1720.5	1721.1		17.0			QL=6 ST=2 TYP=3	
15400	SGMR	8 S	1720.6	1721.1	1.2	26.0			QL=6 ST=2 TYP=3	
8800	PALE	8 S	1721.0	1721.1	.3	26.0			QL=6 ST=2 TYP=3	
610	PALE	47 GB	1736.1	1736.8	2.5	169.0			QL=6 ST=2 TYP=5	
610	SGMR	47 GB	1736.6	1736.8	2.9	180.0			QL=6 ST=2 TYP=5	
2800	OTTA	32 ABS	1800.0	1820.0	50.0	-3.2	-2.2			
410	SGMR	8 S	1941.3	1941.3	.8	40.0			QL=6 ST=2 TYP=3	
410	PALE	47 GB	1941.6	1941.8	.5	67.0			QL=6 ST=2 TYP=5	
2800	OTTA	20 GRF	2032.0	2035.0	25.0	3.2	1.6			
2800	OTTA	260 FAL	2100.0	2130.0	30.0	-6.2	-3.1			
2800	OTTA	22 GRF	2135.0	2225.0	85.0	6.2	2.0			
9400	TYKW	21 GRF	2155.0	2215.0	70.0	4.0	2.0			
2000	TYKW	20 GRF	2200.0	2225.0	60.0	2.0	1.0			
9400	TYKW	5 S	2218.0	2221.5	14.0	6.0	2.0			
15400	LEAR	8 S	2329.1	2329.1	.2	16.0			QL=6 ST=2 TYP=3	
2930	VORO	42 SER	2335.0	2338.0	55.0	36.0				
2000	TYKW	20 GRF	2345.0	0020.0	110.0	2.0	1.0			
13	100	GORK	44 NS	0300.0E		540.0D		20.0		
	260	ONDR	44 NS	0544.0E		506.0D				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
13	29	UPIC	43 NS	0548.5		731.5D				
	33	UPIC	43 NS	0548.5		731.5D				
	204	IZMI	44 NS	0600.0E		360.0D	100.0			
	430	KRAK	44 NS	0700.0E	0806.0	104.0D	84.0	7.0		
	127	TORN	43 NS	0707.0		403.0		11.0		V=1
	430	KRAK	44 NS	0920.0E	0955.4	220.0D	77.0	9.0		
	245	SGMR	43 NS	0946.0	1752.1	830.0D	440.0			QL=6 ST=2 TYP=1
	410	SGMR	43 NS	1204.8	1831.6	691.2D	62.0			QL=6 ST=2 TYP=1
	245	PALE	43 NS	1639.0	1911.1	707.0D	290.0			QL=6 ST=2 TYP=1
	200	HIRA	44 NS	1933.0E	0807.0	835.0D	170.0	2.0		ML
	208	VORO	44 NS	2100.0E		360.0D		16.0		
	410	LEAR	43 NS	2305.0	0353.8	630.0D	26.0			QL=6 ST=2 TYP=1
	245	LEAR	43 NS	2305.0	0802.1	630.0D	320.0			QL=5 ST=3 TYP=1
	3750	TYKW	20 GRF	0005.0E	0018.0	80.0D	5.0	3.0D		
	2695	PENT	8 S	0036.2	0036.5	.8	1.8	0.9		
	9400	TYKW	20 GRF	0040.0	0054.0	35.0	4.0	2.0		
	9400	TYKW	20 GRF	0135.0	0200.0	50.0	3.0	1.5		
	3750	TYKW	5 S	0140.0	0140.6	1.5	2.0	0.7		
	9400	TYKW	20 GRF	0230.0	0255.0	100.0	4.0	2.0		
	100	GORK	8 S	0357.0	0357.5U	1.5	20.0D			
	3750	TYKW	21 GRF	0413.0	0453.0	115.0	6.0	2.0		
	9400	TYKW	21 GRF	0430.0	0505.0	90.0	6.0	3.0		
	2000	TYKW	20 GRF	0440.0	0453.0	90.0	2.0	1.0		
	3750	TYKW	5 S	0445.0	0445.6	2.0	2.0	0.7		
	9400	TYKW	5 S	0542.0	0543.2	9.0	6.0	1.5		
	650	GORK	21 GRF	0606.0E	0930.7	355.0D	10.0			
	9400	TYKW	28 PRE	0614.0	0616.5	17.0	6.0	3.0		
	3750	TYKW	45 C	0614.0	0636.0	35.0	16.0	4.0		
	2840	PEKG	5 S	0618.0	0636.0	30.0	19.0	3.3		
	2000	TYKW	21 GRF	0620.0	0640.0	50.0	3.0	1.5		
	2000	TYKW	5 S	0625.0	0627.0	8.0	2.0	1.0		
	9395	PEKG	3 S	0625.0	0636.1	22.0	32.8	5.6		
	1000	TYKW	45 C	0631.0	0635.8	6.0	30.0	1.5		INTERFERENCE
	9400	TYKW	45 C	0631.0	0636.0	19.0	37.0	8.0		
	6100	KISV	2 S/F	0631.0	0636.2	6.0	8.0			
	2695	ATHN	4 S/F	0633.8	0635.8	3.2	17.0			QL=6 ST=2 TYP=3
	1415	ATHN	4 S/F	0633.8	0635.8	3.2	13.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	0633.8	0635.8	3.2	19.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	0633.8	0635.8	3.2	27.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0634.1	0636.0	6.0	35.0			QL=6 ST=2 TYP=3
	4995	LEAR	4 S/F	0634.8	0636.0	3.0	18.0			QL=6 ST=2 TYP=3
	2000	TYKW	5 S	0635.0	0636.0	2.0	13.0	1.5		
	1415	LEAR	8 S	0635.1	0636.0	1.0	20.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0635.3	0636.0	.8	13.0			QL=6 ST=2 TYP=3
	6100	KISV	29 PBI	0637.0	0637.5	10.0	6.0			
3750	TYKW	29 PBI	0649.0		20.0	3.0	1.5			
9400	TYKW	30 PBI	0650.0		50.0	4.0	2.0			
9400	TYKW	5 S	0652.0	0652.4	1.0	4.0	1.5			
100	GORK	4 S/F	0707.0	0707.7	4.4	20.0D				
6100	KISV	22 GRF	0712.0	0718.4	20.0	6.0				
234	POTS	42 SER	0717.4	0717.6	8.1	275.0	1.0			
234	POTS	4 S/F	0809.2	0809.4	.1	200.0	40.0			
4995	ATHN	4 S/F	0814.1	0816.3	4.2	10.0			QL=6 ST=2 TYP=3	
8800	ATHN	4 S/F	0814.1	0816.3	4.2	15.0			QL=6 ST=2 TYP=3	
6100	KISV	1 S	0815.3	0816.2	2.0	4.0				
430	KRAK		0920.0	1106.5		90.0				
430	KRAK		0920.0	1143.7		127.0				
430	KRAK		0920.0	1222.8		96.0				
810	KRAK	8 S	0955.0	0955.3	.7	31.0				
808	ONDR	46 C	1021.0	1022.5	3.0	70.0				
950	GORK	4 S/F	1021.4	1022.6	2.5	26.0				
6100	KISV		1021.5	1022.2		16.0				
1470	POTS	4 S/F	1021.5	1022.5	3.5	14.0				
810	KRAK	2 S/F	1021.5	1022.5	1.5	13.0	3.0			
6100	KISV		1021.5	1022.6		23.0				
9500	POTS	4 S/F	1021.5	1023.0	3.0	32.0				
6100	KISV	46 C	1021.5	1023.2	5.0	33.0				
11800	BERN	45 C	1021.7	1023.1	5.5	36.0				
8400	BERN	45 C	1021.7	1023.1	5.5	57.0				
5200	BERN	4 S/F	1021.7	1023.1	5.5	41.0				
3100	BERN	4 S/F	1021.7	1023.1	5.5	30.0				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
13	8800	SGMR	47 GB	1021.8	1023.1	2.2	53.0			QL=6 ST=2 TYP=5
	2650	DWIN	1 S	1022.0	1022.0	2.0	30.0	10.0		
	3000	POTS	4 S/F	1022.0	1023.2	3.0	20.0			
	3100	CRIM	1 S	1022.0	1023.0	3.0	20.0	7.0		
	2950	GORK	4 S/F	1022.0	1023.1	3.7	20.0			
	15400	SGMR	8 S	1022.0	1023.1	1.1	28.0			QL=6 ST=2 TYP=3
	4995	SGMR	8 S	1022.0	1023.1	1.3	34.0			QL=6 ST=2 TYP=3
	1415	SGMR	8 S	1022.1	1022.3	1.0	20.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1022.1	1022.5	1.2	19.0			QL=6 ST=2 TYP=3
	6100	KISV	29 PBI	1026.5	1026.5	8.0	3.0			
	536	ONDR	41 F	1102.5	1109.5	11.0	11.0			
	2800	OTTA	21 GRF	1105.0	1110.0	17.0	2.2	1.1		
	808	ONDR	40 F	1105.0	1109.5	14.0	17.0			
	6100	KISV	21 GRF	1105.1	1109.9	23.5	8.0			
	650	GORK	40 F	1106.0	1109.4	7.2	47.0			
	810	KRAK	42 SER	1106.5	1109.8	7.0	13.0			
	234	POTS	4 S/F	1110.6	1110.7	.6	240.0	40.0		
	2800	OTTA	8 S	1110.7	1110.8	.7	2.2	1.1		
	2800	OTTA	1 S	1134.0	1135.0	2.5	2.6	1.3		
	6100	KISV	1 S	1134.1	1135.3	4.0	3.0			
	410	SGMR	8 S	1154.5	1154.6	.3	20.0			QL=6 ST=2 TYP=3
	2800	OTTA	27A RF	1210.0		350.0	3.2	3.0		
	2800	OTTA	24 R	1210.0	1225.0	15.0	3.2	1.6		
	2800	OTTA	24P R	1225.0		305.0	3.2			
	2800	OTTA	20 GRF	1230.0	1232.0	25.0	3.2	1.7		
	810	KRAK	8 S	1239.5	1239.5	.5	35.0			
	234	POTS	41 F	1248.5	1248.5	.9	275.0	15.0		
	3000	POTS	20 GRF	1410.0E	1428.0	40.00	18.0			
	2800	OTTA	20 GRF	1415.0	1440.0	60.0	5.0	2.5		
	9500	POTS	20 GRF	1417.5E	1422.0	33.00	21.0			
	8800	ATHN	20 GRF	1417.6	1427.6	20.4	30.0			QL=6 ST=2 TYP=2
	4995	ATHN	20 GRF	1417.6	1428.5	20.4	22.0			QL=6 ST=2 TYP=2
	2695	ATHN	20 GRF	1421.8	1427.6	16.2	13.0			QL=6 ST=2 TYP=2
	234	POTS	4 S/F	1422.9	1423.0	.3	330.0	75.0		
	2800	OTTA	26 FAL	1730.0	1800.0	30.0	-3.2	-1.6		
	245	PALE	47 GB	1831.5	1831.6	.5	280.0			QL=6 ST=2 TYP=5
	2800	OTTA	240 R	1905.0	1920.0	15.0	2.2	1.1		
	2800	OTTA	21 GRF	1925.0	1950.0	195.0	5.8	2.5		
	2800	OTTA	1 S	1946.0	1946.5	2.0	2.2	1.1		
	9400	TYKW	5 S	2254.5	2255.8	3.5	5.0	2.0		
3750	TYKW	20 GRF	2330.0	0010.0	115.0	4.0	2.0			
1000	TYKW	45 C	2339.4	2339.9	1.5	8.0	1.5			
410	LEAR	8 S	2339.6	2339.8	.4	45.0			QL=6 ST=2 TYP=3	
9400	TYKW	21 GRF	2345.0	0015.0	110.0	4.0	2.0			
2695	PENT	20 GRF	2350.0	0010.0	55.0	3.0	1.5			
2000	TYKW	20 GRF	2350.0	0013.0	50.0	2.0	1.0			
14	410	LEAR	43 NS	0115.3	0523.3	499.70	61.0			QL=6 ST=2 TYP=1
	100	GORK	44 NS	0300.0E		120.00		5.0		
	260	ONDR	44 NS	0550.0E		504.00	175.0			
	204	IZMI	44 NS	0600.0E		360.00	50.0			
	100	HIRA	43 NS	0617.0	0855.0U	158.00	500.0U	140.0U		
	100	GORK	43 NS	0700.0		171.00		100.0		
	33	UPIC	43 NS	0723.5		636.50				
	29	UPIC	43 NS	0723.7		636.30				
	245	SGMR	43 NS	0945.0	1225.6	735.0	910.0			QL=6 ST=3 TYP=1
	245	PALE	44 NS	1634.0E	1712.6		110.0			QL=6 ST=3 TYP=1
	200	HIRA	44 NS	1932.0E	2055.0	570.00	30.0	10.0		WR
	208	VORO	44 NS	2100.0E		360.00		7.0		
	245	LEAR	43 NS	2306.0	2311.8	628.00	88.0			QL=6 ST=2 TYP=1
	410	LEAR	43 NS	2334.0	2339.1	101.0	11.0			QL=6 ST=2 TYP=1
	9400	TYKW	20 GRF	0050.0	0055.0	30.0	3.0	1.5		
	2000	TYKW	20 GRF	0058.0	0100.0	35.0	2.0	1.0		
	3750	TYKW	20 GRF	0152.0	0201.0	35.0	2.0	1.0		
	2000	TYKW	20 GRF	0155.0	0205.0	30.0	1.5	0.7		
	9100	GORK	21 GRF	0256.0E	0837.8	410.00	21.0			
	9400	TYKW	5 S	0312.0	0313.0	3.0	3.0	1.0		
	3750	TYKW	21 GRF	0320.0	0405.0	130.0	5.0	2.0		
	2000	TYKW	21 GRF	0320.0	0410.0	170.0	4.0	2.0		
	9400	TYKW	28 PRE	0330.0	0357.0	27.0	6.0	3.0		
1000	TYKW	21 GRF	0340.0	0425.0	150.0	2.0	1.0			

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

29
May 83

M A Y 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
14	3750	TYKW	5 S	0347.0	0348.3	4.0	4.0	1.5		
	9400	TYKW	5 S	0347.0	0348.6	7.0	13.0	4.0		
	4995	LEAR	4 S/F	0347.6	0348.5	3.4	10.0			QL=6 ST=2 TYP=3
	9100	GORK	1 S	0348.1	0348.8	1.5	13.0	6.0		
	9400	TYKW	45 C	0357.0	0414.3	25.0	22.0	12.0		
	650	GORK	21 GRF	0403.0	0726.8	264.0	16.0			
	4995	LEAR	20 GRF	0404.0	0414.0	26.0	10.0			QL=6 ST=2 TYP=2
	8800	LEAR	20 GRF	0404.0	0416.0	26.0	15.0			QL=6 ST=3 TYP=2
	8800	LEAR	20 GRF	0411.1	0411.3	.4	16.0			QL=6 ST=2 TYP=2
	4995	ATHN	20 GRF	0412.6	0414.8	17.4	5.0			QL=6 ST=2 TYP=2
	2695	ATHN	20 GRF	0412.6	0418.3	17.4	8.0			QL=6 ST=2 TYP=2
	8800	ATHN	20 GRF	0412.6	0418.5	17.4	25.0			QL=6 ST=2 TYP=2
	3750	TYKW	5 S	0413.0	0414.0	4.0	3.0	1.0		
	6100	KISV	1 S	0413.0	0414.1	6.0	7.0			
	9100	GORK	1 S	0413.4	0414.2	1.7	11.0	5.0		
	9400	TYKW	29 PBI	0422.0		60.0	12.0	5.0		
	950	GORK	23 GRF	0439.0	0712.0	312.00	16.5			
	8800	ATHN	4 S/F	0440.1	0440.6	3.2	29.0			QL=6 ST=2 TYP=3
	3750	TYKW	20 GRF	0445.0	0455.0	40.0	2.0	1.0		
	2000	TYKW	5 S	0448.0	0449.8	3.0	4.0	2.0		
	650	GORK	4 S/F	0448.4	0449.7	1.9	46.0			
	500	HIRA	42 SER	0448.4	0514.4	27.0	90.0			ML
	650	GORK	1 S	0448.5	0448.9	1.5	3.0			
	610	LEAR	47 GB	0448.5	0449.6	1.3	69.0			QL=6 ST=2 TYP=5
	2950	GORK	20 GRF	0448.5	0449.8	13.2	3.1			
	2000	TYKW	30 PBI	0451.0		20.0	2.0	1.0		
	1415	ATHN	4 S/F	0459.6	0501.5	5.7	13.0			QL=6 ST=2 TYP=3
	2000	TYKW	5 S	0501.0	0501.5	1.0	4.0	1.5		
	1000	TYKW	5 S	0501.0	0501.5	1.0	12.0	4.0		
	950	GORK	2 S/F	0501.0	0501.5	.8	11.0			
	610	LEAR	47 GB	0501.0	0501.6	1.5	66.0			QL=6 ST=2 TYP=5
	650	GORK	4 S/F	0501.1U	0501.6	.8U	37.0			
	1415	LEAR	8 S	0501.1	0501.6	.7	8.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	0550.0	0556.0	12.0	3.0	1.5		
	9400	TYKW	5 S	0619.0	0628.0	22.0	6.0	2.0		
	1000	TYKW		0640.0	0720.7		18.0			
	2000	TYKW	21 GRF	0640.0	0721.0	140.0U	10.0	5.0		
	1000	TYKW	45 C	0640.0	0738.3	70.0	23.0	6.0		
	9400	TYKW	5 S	0646.0	0647.1	5.0	4.0	1.0		
	3750	TYKW	21 GRF	0652.0	0755.0	135.00	14.0	8.00		
	500	HIRA	22 GRF	0654.3	0728.0	90.0	15.0	6.0		SL
	6100	KISV	28 PRE	0655.0	0731.0	36.0	10.0			
	2695	ATHN	4 S/F	0656.3	0701.5	6.7	11.0			QL=6 ST=2 TYP=3
	1415	LEAR	20 GRF	0657.5	0757.6	74.5	56.0			QL=5 ST=2 TYP=2
	808	ONDR	42 SER	0700.0	0738.0	40.0	30.0			
	536	ONDR	40 F	0700.0	0815.0	90.0	7.0			
	2695	LEAR	20 GRF	0700.5	0728.1	71.5	11.0			QL=5 ST=2 TYP=2
	245	LEAR	20 GRF	0700.5E	0805.0	84.5D	75.0			QL=5 ST=2 TYP=2
	410	LEAR	20 GRF	0701.3	0726.8	70.7	29.0			QL=5 ST=2 TYP=2
	610	LEAR	20 GRF	0702.0	0711.6	38.0	15.0			QL=6 ST=2 TYP=2
	4995	LEAR	20 GRF	0702.0	0744.1	70.0	11.0			QL=5 ST=2 TYP=2
	9400	TYKW	5 S	0705.7	0706.2	2.0	2.0	1.0		
	810	KRAK	27 RF	0708.0U	0711.5	20.0U	12.0	2.0		
	3000	POTS	20 GRF	0715.0U	0720.5	150.0U	11.0			
	430	KRAK	27 RF	0721.5	0728.0	25.0	32.0	12.0		
	1470	POTS	45 C	0725.0	0757.5	130.0	40.0			
	100	HIRA	45 C	0726.4	0727.0	1.2	94.0	230.0		
	1415	ATHN	4 S/F	0726.5	0726.6	2.8	13.0			QL=6 ST=2 TYP=3
	2000	TYKW	5 S	0726.5	0726.7	0.5	8.0	1.5		
	113	POTS	4 S/F	0726.7	0727.0	.9	700.0	150.0		!!!
	9400	TYKW	5 S	0729.0	0731.6	4.0	98.0	18.0		
	204	IZMI	42 SER	0730.0		60.0	600.0			
	19600	BERN	3 S	0730.3	0731.5	15.0	42.0			
	5200	BERN	3 S	0730.3	0731.5	15.0	46.0			
	8400	BERN	3 S	0730.3	0731.5	15.0	105.0			
	11800	BERN	3 S	0730.3	0731.5	15.0	91.0			
	8800	ATHN	47 GB	0730.6	0731.5	3.5	72.0			QL=6 ST=2 TYP=5
	3750	TYKW	5 S	0731.0	0731.6	2.0	9.0	2.5		
	4995	LEAR	8 S	0731.0	0731.5	1.1	42.0			QL=6 ST=2 TYP=3
	9100	GORK	4 S/F	0731.0	0731.5	2.0	92.0			
	8800	LEAR	47 GB	0731.0	0731.5	1.8	100.0			QL=6 ST=2 TYP=5

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
14	6100	KISV	8 S	0731.0	0731.5	1.0	60.0			
	9500	POTS	4 S/F	0731.0	0731.6	3.0	88.0			
	4995	ATHN	8 S	0731.1	0731.5	1.7	28.0			QL=6 ST=2 TYP=3
	15400	LEAR	47 GB	0731.1	0731.5	.9	68.0			QL=6 ST=2 TYP=5
	17000	NOBE	1 S	0731.1	0731.6	1.7	56.0			R
	9400	TYKW	30 PBI	0733.0		67.0D	11.0	7.0D		
	2000	TYKW	45 C	0736.0	0743.6	10.0	3.0	1.5		
	1415	ATHN	20 GRF	0737.6	0742.1	10.7	36.0			QL=6 ST=2 TYP=2
	810	KRAK	2 S/F	0738.0	0738.0	1.0	22.0	3.0		
	810	KRAK	8 S	0744.5	0744.5	.5	6.0			
	2000	TYKW	30 PBI	0746.0		50.0	2.0	1.0		
	1000	TYKW	30 PBI	0750.0		60.0	5.0	2.5		
	430	KRAK	42 SER	0753.0E	0835.2	307.0D	46.0			
	430	KRAK		0753.0E	0857.5		49.0			
	430	KRAK		0753.0E	0956.5		330.0			
	430	KRAK		0753.0E	1243.3		250.0			
	2000	TYKW	45 C	0754.0	0757.7	6.0	6.0	2.0		
	2000	TYKW	45 C	0800.0	0805.7	12.0	18.0	6.0		
	1000	TYKW	5 S	0800.0	0805.7	12.0	4.0	1.0		
	234	POTS	41 F	0801.3	0802.1	7.7	770.0	25.0		III
	2000	TYKW	5 S	0813.0	0813.6	2.0	3.0	1.0		
	2000	TYKW	5 S	0818.5	0818.7	0.7	3.0	1.0		
	9400	TYKW	5 S	0834.0	0836.7	4.0	29.0	10.0		
	6100	KISV	3 S	0834.9	0836.9	4.0	16.0			
	3750	TYKW	45 C	0835.5	0836.8	4.0	9.0	3.0		
	9500	POTS	25 R	0835.5	0836.8	25.0	27.0			
	4995	LEAR	8 S	0835.6	0836.8	1.9	17.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	0835.6	0836.8	1.9	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0835.6	0836.8	1.9	24.0			QL=6 ST=2 TYP=3
	9100	GORK	3 S	0835.7	0836.9	2.1	23.0	11.0		
	9400	TYKW	29 PBI	0838.0		2.0D	8.0	7.0D		
	8800	LEAR	8 S	0848.8	0849.8	1.7	17.0			QL=6 ST=2 TYP=3
	4995	LEAR	8 S	0848.8	0849.8	1.7	13.0			QL=6 ST=2 TYP=3
	6100	KISV	1 S	0849.1	0849.8	5.0	8.0			
	9100	GORK	1 S	0849.3	0849.7	1.3	9.4	5.0		
	810	KRAK	41 F	0850.3	0852.5	53.5	12.0	3.0		
	204	IZMI	5 S	0951.2	0951.3	.2	1230.0	1000.0		
	810	KRAK	4 S/F	0955.7	0955.8	4.3	200.0	4.0		
	234	POTS	4 S/F	0955.7	0955.8	.8	42000.0	1000.0		III
	3000	POTS	4 S/F	0955.7	0956.0	3.3	75.0			
	1470	POTS	4 S/F	0955.7	0956.2	9.3	73.0			
	11800	BERN	4 S/F	0955.8	0956.1	6.0	67.0			
	19600	BERN	3 S	0955.8	0956.1	6.0	36.0			
	5200	BERN	4 S/F	0955.8	0956.1	6.0	93.0			
	3100	BERN	4 S/F	0955.8	0956.1	6.0	104.0			
8400	BERN	4 S/F	0955.8	0956.1	6.0	91.0				
6100	KISV	4 S/F	0955.8	0956.8	2.0	23.0				
2650	DWIN	3 S	0956.0	0956.0	2.0	70.0	30.0			
536	ONDR	4 S/F	0956.0	0956.0	2.0	37.0				
3000	IZMI	5 S	0956.0	0956.1	2.6	46.0	20.0			
9500	POTS	4 S/F	0956.0	0956.3	2.0	64.0				
113	POTS	4 S/F	0956.1	0956.1	.5	2800.0	300.0		III	
808	ONDR	46 C	0957.0	0957.0	1.0U	82.0				
204	IZMI	42 SER	1011.0		15.0	300.0				
810	KRAK	1 S	1043.2	1043.5	1.3	8.0	3.0			
234	POTS	4 S/F	1117.7	1117.8	.1	180.0	20.0			
2800	OTTA	1 S	1143.0	1143.3	1.0	3.2	1.8			
3000	POTS	1 S	1143.0	1143.5	1.0	4.0				
536	ONDR	4 S/F	1143.0	1143.5	2.0	95.0				
1470	POTS	4 S/F	1143.0	1144.0	1.5	38.0				
410	SGMR	47 GB	1143.1	1143.1	.7	87.0			QL=6 ST=2 TYP=5	
610	SGMR	8 S	1143.3	1143.3	.5	31.0			QL=6 ST=2 TYP=3	
1415	SGMR	8 S	1143.3	1143.8	.8	38.0			QL=6 ST=2 TYP=3	
2800	OTTA	32 ABS	1155.0	1230.0	70.0	-2.6	-1.3			
9500	POTS	20 GRF	1404.0	1412.0	21.0	9.0				
9400	HUAN	20 GRF	1404.7	1413.5	13.8	5.2	1.9		R	
2800	OTTA	21 GRF	1525.0	1615.0	155.0	6.2	3.1			
9400	HUAN	1 S	1542.2	1543.7	6.0	11.7	5.6		R	
2695	SGMR	8 S	1559.8	1601.3	1.7	13.0			QL=6 ST=2 TYP=3	
2800	OTTA	2 S/F	1605.0	1609.0	6.0	4.0	2.2			
2695	ATHN	4 S/F	1605.1	1608.8	6.9	7.0			QL=6 ST=2 TYP=3	

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

31
May 83

M A Y 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
14	9400	HUAN	4 S/F	1605.3	1607.9	5.9	19.5	9.0		R
	3100	BERN	3 S	1605.5	1607.7	15.0				ONLY PAPER RE
	8400	BERN	3 S	1605.5	1607.7	15.0	34.0			ONLY PAPER RE
	5200	BERN	4 S/F	1605.5	1607.7	15.0	47.0			ONLY PAPER RE
	4995	ATHN	4 S/F	1605.8	1607.6	6.3	29.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	1606.3	1607.6	5.8	22.0			QL=6 ST=2 TYP=3
	4995	SGMR	4 S/F	1606.5	1607.8	3.5	37.0			QL=6 ST=2 TYP=3
	610	SGMR	8 S	1606.6	1607.5	1.0	24.0			QL=6 ST=2 TYP=3
	8800	SGMR	8 S	1606.6	1607.8	1.7	31.0			QL=6 ST=2 TYP=3
	15400	SGMR	8 S	1606.8	1607.8	1.2	23.0			QL=6 ST=2 TYP=3
	410	SGMR	47 GB	1607.3	1607.5	.5	169.0			QL=6 ST=2 TYP=5
	610	SGMR	4 S/F	1612.8	1614.3	3.7	27.0			QL=6 ST=2 TYP=3
	410	SGMR	8 S	1613.5	1613.6	.3	18.0			QL=6 ST=2 TYP=3
	410	PALE	47 GB	1712.3	1712.6	.5	230.0			QL=6 ST=2 TYP=5
	410	SGMR	47 GB	1712.3	1712.6	.5	239.0			QL=6 ST=2 TYP=5
	2800	OTTA	21 GRF	1915.0	1923.0	45.0	2.6	1.3		
	2800	OTTA	1 S	1943.0	1943.5	1.5	3.8	.9		
	410	PALE	8 S	2052.3	2052.3	.3	20.0			QL=6 ST=2 TYP=3
	410	SGMR	8 S	2105.3	2105.8	.8	40.0			QL=6 ST=2 TYP=3
	410	PALE	47 GB	2105.6	2105.8	.4	130.0			QL=6 ST=2 TYP=5
	2800	OTTA	23 GRF	2140.0	2210.0	160.0	4.2	1.9		
	2000	TYKW	20 GRF	2150.0	2210.0	50.0	3.0	1.5		
	2000	TYKW	21 GRF	2252.0	2320.0	80.0	2.0	1.0		
	3750	TYKW	21 GRF	2300.0	2320.0	70.0	4.0	2.0		
	9400	TYKW	20 GRF	2300.0	2325.0	70.0	4.0	2.0		
	3750	TYKW	45 C	2310.0	2314.0	6.0	6.0	2.0		
	2000	TYKW	45 C	2310.0	2314.0	5.0	5.0	1.0		
	500	HIRA	45 C	2312.7	2313.7	1.7	70.0	20.0		ML
	1000	TYKW	45 C	2313.0	2314.2	2.0	27.0	6.0		
	610	LEAR	8 S	2313.1	2314.0	1.9	30.0			QL=6 ST=2 TYP=3
	2695	PENT	1 S	2313.2	2314.0	2.0	3.6	1.5		
	245	LEAR	47 GB	2313.3	2313.6	1.3	97.0			QL=6 ST=2 TYP=5
	1415	LEAR	8 S	2313.3	2314.1	1.7	7.0			QL=6 ST=2 TYP=3
410	PALE	8 S	2313.6	2314.0	.5	29.0			QL=6 ST=2 TYP=3	
245	SGMR	8 S	2313.6	2314.1	1.2	20.0			QL=6 ST=2 TYP=3	
245	PALE	8 S	2313.6	2314.1	.7	30.0			QL=6 ST=2 TYP=3	
410	LEAR	8 S	2313.8	2314.0	.3	27.0			QL=6 ST=2 TYP=3	
610	PALE	8 S	2313.8	2314.1	.5	33.0			QL=6 ST=2 TYP=3	
15	410	LEAR	43 NS	0236.0	0238.5	418.00	22.0			QL=6 ST=2 TYP=1
	100	GORK	44 NS	0254.0E		159.00		10.0		
	100	GORK	43 NS	0940.0		80.00		130.0		
	245	SGMR	43 NS	1215.3	1219.6		26.0			QL=6 ST=3 TYP=1
	9400	TYKW	5 S	0012.5	0013.3	3.5	15.0	7.0		
	8800	LEAR	8 S	0012.8	0013.3	1.7	13.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	0013.1	0013.1	.5	21.0			QL=6 ST=2 TYP=3
	9400	TYKW	30 PBI	0016.0		75.0	4.0	2.0		
	9400	TYKW	5 S	0030.0	0032.4	20.0	8.0	3.0		
	3750	TYKW	5 S	0030.0	0034.0	15.0	1.5	0.5		
	4995	PALE	8 S	0110.3	0110.3	.3	21.0			QL=6 ST=2 TYP=3
	8800	PALE	8 S	0110.3	0110.3	.3	26.0			QL=6 ST=2 TYP=3
	1415	PALE	8 S	0110.3	0110.3	.3	15.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	0152.5	0153.0	3.5	27.0	5.0		
	8800	PALE	8 S	0152.8	0153.0	.5	35.0			QL=6 ST=2 TYP=3
	4995	LEAR	8 S	0152.8	0153.0	.7	9.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	0152.8	0153.0	.3	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0152.8	0153.0	.5	29.0			QL=6 ST=2 TYP=3
	9395	PEKG	3 S	0152.8	0153.1	2.2	26.1	3.6		
	245	PALE	47 GB	0235.6	0235.6	.4	82.0			QL=6 ST=2 TYP=5
	410	PALE	8 S	0237.1	0237.1	.2	30.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0243.1	0243.1	.2	44.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0243.1	0243.3	.2	13.0			QL=6 ST=2 TYP=3
9400	TYKW	5 S	0248.0	0248.4	1.0	5.0	2.0			
4995	LEAR	8 S	0251.8	0252.6	1.5	17.0			QL=6 ST=2 TYP=3	
9395	PEKG	3 S	0252.0	0252.6	3.0	48.8	16.4			
9400	TYKW	5 S	0252.0	0252.6	2.0	48.0	12.0			
8800	LEAR	47 GB	0252.1	0252.6	.9	51.0			QL=6 ST=2 TYP=5	
8800	PALE	47 GB	0252.3	0252.6	.5	53.0			QL=6 ST=2 TYP=5	
15400	LEAR	8 S	0252.3	0252.6	.5	41.0			QL=6 ST=2 TYP=3	
15400	PALE	47 GB	0252.3	0252.6	.5	69.0			QL=6 ST=2 TYP=5	
17000	NOBE	1 S	0252.3	0252.6	1.0	30.0			R	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean (10 ⁻²² W/m ² Hz)			
15	245	LEAR	8 S	0252.3	0252.6	.5	29.0			QL=6 ST=2 TYP=3	
	3750	TYKW	5 S	0252.3	0252.7	1.5	5.0	1.5			
	4995	PALE	8 S	0252.5	0252.6	.3	16.0			QL=6 ST=2 TYP=3	
	410	LEAR	8 S	0252.6	0252.6	.2	11.0			QL=6 ST=2 TYP=3	
	9400	TYKW	29 PB1	0254.0		10.0	4.0	2.0			
	3750	TYKW	20 GRF	0310.0	0322.0	40.0	2.0	1.0			
	9400	TYKW	21 GRF	0330.0U	0355.0U	80.0U	4.0	2.0			RAIN
	100	GORK	46 C	0332.0	0333.3	3.2	140.0				
	100	GORK		0332.0	0333.9		180.0				
	9100	GORK	20 GRF	0341.4	0353.0	17.7	5.5	2.0			
	3750	TYKW	20 GRF	0405.0	0420.0	50.0	2.0	1.0			
	650	GORK	20 GRF	0421.0	0500.0	52.7	7.0	3.0			
	9100	GORK	1 S	0435.5	0435.7	.7	10.0	5.0			
	9100	GORK	1 S	0438.5	0438.7	.6	5.5	3.0			
	245	LEAR	47 GB	0447.1	0447.3	.5	130.0				QL=6 ST=2 TYP=5
	410	LEAR	8 S	0447.1	0447.3	.7	18.0				QL=6 ST=2 TYP=3
	9100	GORK	21 GRF	0505.0	0641.8	147.8	28.0	10.0			
	610	LEAR	8 S	0510.1	0510.6	1.0	28.0				QL=6 ST=2 TYP=3
	410	LEAR	8 S	0510.1	0510.6	.9	19.0				QL=6 ST=2 TYP=3
	9400	TYKW	21 GRF	0530.0U	0640.0U	191.0U	20.0	10.0U			RAIN
	3750	TYKW	20 GRF	0540.0	0621.0U	160.0U	4.0	2.0U			RAIN
	204	IZMI	7 C	0614.5	0615.5	1.0	124.0	60.0			
	650	GORK	41 F	0627.7	0628.3	3.4	17.0				
	650	GORK		0627.7	0630.7		32.0				
	950	GORK	1 S	0628.0	0628.3	4.0	2.0				
	2840	PEKG	20 GRF	0630.0	0634.0	46.0	22.6				
	9395	PEKG	20 GRF	0637.0	0640.6	34.0	20.7	9.6			
	9100	GORK	1 S	0638.3	0638.8	3.4	10.0	5.0			
	15400	LEAR	8 S	0638.5	0638.8		20.0				QL=6 ST=3 TYP=3
	8800	LEAR	8 S	0638.5	0640.8		21.0				QL=6 ST=3 TYP=3
	2000	TYKW	20 GRF	0645.0	0725.0	110.0	4.0	2.0			
	430	KRAK	42 SER	0700.0E	0812.5	90.0D	21.0				
	9400	TYKW	20 GRF	0804.0	0807.0U	30.0	12.0	5.0U			
	9500	POTS	20 GRF	0805.0	0807.2	10.0	16.0				
	9100	GORK	2 S/F	0805.0	0807.0	5.3	12.9				
	9395	PEKG	20 GRF	0810.0	0815.8	20.0	4.9	3.2			
	3653	YUNN	47 GB	0833.0	0919.8	87.0D	3382.0				
	2840	PEKG	47 GB	0837.0	0846.3	33.0D	651.0				
	9395	PEKG	47 GB	0837.0	0846.8	78.0	638.0D				
	9395	PEKG		0837.0	0911.2		740.0				
9100	GORK	47 GB	0837.8	0846.8	138.0D	1070.0					
9100	GORK		0837.8	0911.0		1650.0					
9100	GORK		0837.8	0919.1		2250.0					
9400	TYKW	45 C	0838.0	0839.7U	3.0D	80.0	35.0D				
3750	TYKW	47 GB	0838.0	0846.1	21.0	530.0	140.0				
19600	BERN	47 GB	0839.0	0846.6	200.0U	920.0					
8400	BERN	47 GB	0839.0	0919.0U	200.0U	2800.0D					
3100	BERN	47 GB	0839.0	0919.0U	200.0U	2100.0D					
5200	BERN	47 GB	0839.0	0919.0U	200.0U	2500.0D					
11800	BERN	47 GB	0839.0	0919.4	200.0U	1698.0					
4995	LEAR	49 GB	0839.1	0845.8	14.0	570.0				QL=6 ST=2 TYP=7	
8800	LEAR	49 GB	0839.1	0846.0	14.0	990.0				QL=6 ST=2 TYP=7	
2950	GORK	47 GB	0839.2	0846.2	130.0D	450.0					
2950	GORK		0839.2	0911.2		1740.0					
2950	GORK		0839.2	0919.7		2800.0					
15400	LEAR	49 GB	0839.3	0846.0	13.8	1000.0				QL=6 ST=2 TYP=7	
2000	TYKW	45 C	0840.0	0845.8	19.0	465.0	100.0				
1470	POTS	45 C	0840.0E	0921.5	200.0D	925.0					
2650	DWIN	49 GB	0841.0		120.0	500.0D					
1000	TYKW	47 GB	0841.0	0846.3	13.0D	2840.0	430.0D				
3000	IZMI	46 C	0841.0	0846.0	16.0	466.0	190.0				
2695	LEAR	49 GB	0841.3	0846.0	11.8	470.0				QL=6 ST=2 TYP=7	
930	BORD	47 GB	0842.0	0846.3	18.0	1860.0	300.0				
950	GORK	47 GB	0842.0	0847.8	93.0	2890.0					
930	BORD		0842.0	0847.8		1705.0					
950	GORK		0842.0	0921.5		983.0					
1415	LEAR	49 GB	0842.1	0845.8	11.0	2699.0				QL=6 ST=2 TYP=7	
810	KRAK	49 GB	0843.0	0847.5U	149.0	390.0D	100.0				
810	KRAK		0843.0	0910.0		127.0					
810	KRAK		0843.0	0926.5		300.0					
650	GORK	47 GB	0843.3	0846.8	1007.0	180.0					

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

33
May 83

M A Y 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
15	650	GORK		0843.3	0919.8		189.0			
	610	LEAR	49 GB	0843.6	0844.6	9.5	160.0			QL=6 ST=2 TYP=7
	536	ONDR	28 PRE	0844.0				50.0		
	536	ONDR		0844.0	0848.0		59.0			
	536	ONDR		0844.0	0910.0		38.0			
	500	HIRA	45 C	0844.6	0849.3	10.0	200.0	30.0		0
	3000	POTS	45 C	0845.0E		210.0D	1150.0			
	9500	POTS	45 C	0845.0E	0919.0	210.0D	1850.0			
	430	KRAK	45 C	0846.0	0910.5	140.0	122.0	33.0		
	430	KRAK		0846.0	0919.0		114.0			
	430	KRAK		0846.0	1000.5		88.0			
	260	ONDR	46 C	0847.0		31.0				
	260	ONDR		0847.0	0848.0		206.0D			
	260	ONDR		0847.0	0910.0		195.0			
	260	ONDR		0847.0	0920.0U		206.0D			
	410	LEAR	49 GB	0847.8	0848.0	5.3	39.0			QL=6 ST=2 TYP=7
	234	POTS	48 C	0848.0	0848.5	42.0	1100.0			111/1V
	113	POTS	48 C	0848.0	0849.5	52.0	5500.0			111/1V
	100	HIRA	48 C	0848.0	0850.7	40.0D	5500.0	230.0U		
	100	HIRA		0848.0	0902.5		850.0U			
	33	UPIC	49 GB	0848.2		21.9				
	100	GORK	46 C	0848.2	0849.9	45.5	121000.0			
	100	GORK		0848.2	0850.5		68000.0			
	100	GORK		0848.2	0903.6		12000.0			
	100	GORK		0848.2	0909.0		80000.0			
	29	UPIC	49 GB	0848.4	0849.8	22.1				
	245	LEAR	49 GB	0848.5	0848.6	4.6	2399.0			QL=6 ST=2 TYP=7
	204	IZMI	5 S	0848.5	0848.6	.5	630.0	300.0		
	204	IZMI	45 C	0848.5	0910.4	95.0	220.0	100.0		
	200	HIRA	48 C	0848.6	0848.8	40.0D	860.0	120.0U		0
	200	HIRA		0848.6	0912.1		260.0U			WL
	410	LEAR	4 S/F	0853.1	0853.3	5.0	39.0			QL=6 ST=2 TYP=3
	610	LEAR	47 GB	0853.1	0853.3	3.0	230.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0853.1	0853.3	3.7	500.0			QL=6 ST=2 TYP=5
	2695	LEAR	47 GB	0853.1	0853.3	3.9	139.0			QL=6 ST=2 TYP=5
	4995	LEAR	47 GB	0853.1	0853.3	3.7	330.0			QL=6 ST=2 TYP=5
	15400	LEAR	49 GB	0853.1	0907.3	20.5	119.0			QL=6 ST=2 TYP=6
	1415	LEAR	49 GB	0853.1	0912.3	20.5	620.0			QL=6 ST=2 TYP=6
	245	LEAR	47 GB	0854.0	0855.6	19.6	50.0			QL=6 ST=2 TYP=5
	2000	TYKW	30 PBI	0859.0		1.0	10.0	10.0		
	3750	TYKW	47 GB	0859.0	0918.8	20.0D	4350.0	950.0D		
	2000	TYKW	47 GB	0900.0	0911.8	15.0D	1500.0	480.0D		
	930	BORD	29 PBI	0900.0	0921.5	134.0	589.0	13.0		
	3000	IZMI	47 GB	0905.0	0920.0	55.0	2660.0	1300.0		
	33	UPIC	29 PBI	0910.1	0949.4	85.4				
	29	UPIC	29 PBI	0910.5	0946.8	81.5				
	1415	LEAR	49 GB	0913.6	0913.8	9.7	620.0			QL=6 ST=2 TYP=7
	2695	LEAR	49 GB	0913.6	0914.1	9.7	1800.0			QL=6 ST=2 TYP=7
	4995	LEAR	49 GB	0913.6	0914.3	9.7	2000.0			QL=6 ST=2 TYP=7
	8800	LEAR	49 GB	0913.6	0914.3	9.7	1300.0			QL=6 ST=2 TYP=7
15400	LEAR	49 GB	0913.6	0914.3	9.7	1000.0			QL=6 ST=2 TYP=7	
245	LEAR	49 GB	0913.6	0918.6	9.7	330.0			QL=6 ST=2 TYP=7	
410	LEAR	49 GB	0913.6	0918.8	9.7	60.0			QL=6 ST=2 TYP=7	
610	LEAR	49 GB	0913.6	0918.8	9.7	180.0			QL=6 ST=2 TYP=7	
536	ONDR	46 C	0916.0		64.0					
536	ONDR		0916.0	0920.0		71.0				
536	ONDR		0916.0	1001.5		71.0				
500	HIRA	46 C	0921.0	0924.0	21.0D	100.0	50.0		WR	
15400	LEAR	49 GB	0923.3	0923.3	8.3	2000.0			QL=6 ST=2 TYP=7	
2695	LEAR	49 GB	0923.3	0923.3	8.3	4000.0			QL=6 ST=2 TYP=7	
4995	LEAR	49 GB	0923.3	0923.3	8.3	3600.0			QL=6 ST=2 TYP=7	
245	LEAR	49 GB	0923.3	0923.5	8.3	169.0			QL=6 ST=2 TYP=7	
610	LEAR	49 GB	0923.3	0923.5	8.3	160.0			QL=6 ST=2 TYP=7	
8800	LEAR	49 GB	0923.3	0923.5	8.3	1300.0			QL=6 ST=2 TYP=7	
1415	LEAR	49 GB	0923.3	0923.5	8.3	1399.0			QL=6 ST=2 TYP=7	
410	LEAR	49 GB	0923.3	0923.5	8.3	60.0			QL=6 ST=2 TYP=7	
260	ONDR	29 PBI	0928.0	1002.0	52.0	30.0	26.0			
1415	LEAR	49 GB	0931.6	0931.8	2.4D	1600.0			QL=6 ST=2 TYP=7	
2695	LEAR	49 GB	0931.6	0931.8	2.4D	2000.0			QL=6 ST=2 TYP=7	
4995	LEAR	49 GB	0931.6	0931.8	2.4D	1600.0			QL=6 ST=2 TYP=7	
8800	LEAR	49 GB	0931.6	0931.8	2.4D	930.0			QL=6 ST=2 TYP=7	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean			
15	15400	LEAR	49 GB	0931.6	0932.1	2.4D	600.0			QL=6 ST=2 TYP=7	
	245	LEAR	49 GB	0931.6	0932.3	2.4D	39.0			QL=6 ST=2 TYP=7	
	610	LEAR	49 GB	0931.6	0932.3	2.4D	80.0			QL=6 ST=2 TYP=7	
	410	LEAR	49 GB	0931.6	0932.5	2.4D	21.0			QL=6 ST=2 TYP=7	
	950	GORK	29 PBI	1015.0	1015.0	33.0D	107.0				
	536	ONDR	29 PBI	1020.0		50.0					
	650	GORK	29 PBI	1024.0	1024.0	32.0D	65.0				
	2800	OTTA	260 FAL	1055.0	1447.0	232.0D	-41.0				
	430	KRAK	8 S	1200.5	1200.7	.7	15.0				
	33	UPIC	42 SER	1406.5	1611.0	126.6					
	29	UPIC	42 SER	1407.0	1611.3	126.4					
	930	BORD	41 F	1611.0	1611.3	2.6	20.0	2.0			
	245	SGMR	49 GB	1611.0	1612.0	1.6	520.0				QL=6 ST=2 TYP=6
	410	SGMR	47 GB	1611.8	1612.0	.8	380.0				QL=6 ST=2 TYP=5
	610	SGMR	47 GB	1612.1	1612.1	.5	56.0				QL=6 ST=2 TYP=5
	15400	SGMR	4 S/F	1616.3	1618.8	13.2	37.0				QL=6 ST=2 TYP=3
	2800	OTTA	260 FAL	1635.0	1655.0	20.0	-3.2	-1.6			
	9400	HUAN	20 GRF	1709.3	1730.1	28.0	10.8	7.1			0
	9400	HUAN	2 S/F	1800.4	1802.1	4.3	13.1	5.1			0
	245	PALE	47 GB	1816.8	1817.0	1.0	180.0				QL=6 ST=2 TYP=5
	610	PALE	8 S	1817.3	1817.5	.3	18.0				QL=6 ST=2 TYP=3
	930	BORD	41 F	1818.0	1818.4	1.0	23.0	2.0			
	410	PALE	8 S	1818.6	1818.6	.2	19.0				QL=6 ST=2 TYP=3
	410	SGMR	47 GB	1933.3	1933.3	.3	53.0				QL=6 ST=2 TYP=5
	410	PALE	47 GB	1933.3	1933.5	.3	169.0				QL=6 ST=2 TYP=5
	3750	TYKW	20 GRF	2205.0	2220.0	80.0	2.0	1.0			RAIN
	16	260	ONDR	44 NS	0550.0E		496.0D	175.0			
		245	LEAR	43 NS	0604.3	0707.8	209.7D	35.0			
		33	UPIC	43 NS	0717.0		643.0D				QL=6 ST=2 TYP=1
		29	UPIC	43 NS	0717.2		642.8D				
208		VORO	44 NS	2100.0E		360.0D					
15400		LEAR	4 S/F	0004.1	0007.1	7.9	10.0				QL=6 ST=2 TYP=3
500		HIRA	8 S	0006.7	0006.7	.5	200.0				0
1000		TYKW	45 C	0007.0	0011.2	5.0	34.0	4.0			
410		LEAR	47 GB	0007.1	0007.1	2.0	82.0				QL=6 ST=2 TYP=5
8800		LEAR	4 S/F	0007.1	0007.1	4.9	11.0				QL=6 ST=2 TYP=3
610		LEAR	4 S/F	0007.1	0011.1	4.9	11.0				QL=6 ST=2 TYP=3
2695		LEAR	4 S/F	0041.8	0043.1	5.0	10.0				QL=6 ST=2 TYP=3
3750		TYKW	45 C	0042.0	0043.6	3.0	14.0	4.0			
9400		TYKW	45 C	0042.0	0043.6	3.0	83.0	23.0			
1415		LEAR	4 S/F	0042.0	0043.1	2.8	5.0				QL=6 ST=2 TYP=3
8800		LEAR	47 GB	0042.3	0043.1	1.8	71.0				QL=6 ST=2 TYP=5
1000		TYKW	45 C	0042.3	0043.3	4.0	18.0	5.0			
500		HIRA	8 S	0042.5	0042.7	.8	75.0				0
2000		TYKW	45 C	0042.5	0043.5	2.0	5.0	1.5			
8800		PALE	47 GB	0042.6	0043.1	1.4	81.0				QL=6 ST=2 TYP=5
15400		LEAR	8 S	0042.6	0043.1	1.2	41.0				QL=6 ST=2 TYP=3
4995		PALE	8 S	0042.8	0043.1	1.0	31.0				QL=6 ST=2 TYP=3
2695		PENT	1 S	0042.8	0043.5	2.0	7.6	2.6			
410		LEAR	47 GB	0043.0	0043.1	.6	189.0				QL=6 ST=2 TYP=5
410		PALE	47 GB	0043.0	0043.3	.6	250.0				QL=6 ST=2 TYP=5
245		LEAR	8 S	0043.1	0043.1	2.0	6.0				QL=6 ST=2 TYP=3
15400		PALE	8 S	0043.1	0043.3	.4	31.0				QL=6 ST=2 TYP=3
610		LEAR	47 GB	0043.1	0043.3	.2	50.0				QL=6 ST=2 TYP=5
610		PALE	8 S	0043.1	0043.3	.5	49.0				QL=6 ST=2 TYP=3
9400		TYKW	29 PBI	0045.0		15.0	7.0	2.5			
9400	TYKW	5 S	0133.5	0134.5	2.5	3.0	1.0				
610	LEAR	8 S	0319.1	0319.3	.9	11.0				QL=6 ST=2 TYP=3	
410	LEAR	8 S	0319.3	0319.3	.7	8.0				QL=6 ST=2 TYP=3	
245	LEAR	8 S	0319.3	0319.5	.7	30.0				QL=6 ST=2 TYP=3	
9395	PEKG	3 S	0422.0	0422.8	3.0	20.5	5.3				
9400	TYKW	45 C	0422.5	0422.8	2.5	17.0	6.0				
9100	GORK	2 S/F	0422.5	0423.0	2.8	14.5					
8800	LEAR	8 S	0422.6	0423.0	.5	13.0				QL=6 ST=2 TYP=3	
15400	LEAR	47 GB	0422.8	0424.1	1.3	66.0				QL=6 ST=2 TYP=5	
9400	TYKW	30 PBI	0425.0		30.0	4.0	2.0				
9400	TYKW	5 S	0442.5	0443.4	2.5	10.0	3.0				
9100	GORK	2 S/F	0443.2	0443.5	5.4	7.2					
245	LEAR	47 GB	0446.1	0446.3	.5	78.0				QL=6 ST=2 TYP=5	
3750	TYKW	20 GRF	0534.0	0606.0	135.0	4.0	2.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
16	2000	TYKW	20 GRF	0535.0	0610.0	140.0	2.0	1.0		
	9400	TYKW	21 GRF	0545.0	0610.0	75.0	4.0	2.0		
	9400	TYKW	45 C	0601.7	0603.8	2.30	11.0	3.00		
	9100	GORK	2 S/F	0601.9	0603.8	2.2	108.0			
	245	LEAR	8 S	0628.3	0629.8	1.5	17.0			QL=6 ST=2 TYP=3
	100	GORK	4 S/F	0702.6	0703.9	3.2	20.00			
	410	LEAR	4 S/F	0752.1	0754.3	3.0	21.0			QL=6 ST=2 TYP=3
	430	KRAK	8 S	0754.2	0754.3	.2	61.0			
	410	LEAR	8 S	0832.8	0833.5	2.0	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0833.3	0833.5	.8	8.0			QL=5 ST=2 TYP=3
	610	LEAR	8 S	0833.3	0833.5	.3	21.0			QL=6 ST=2 TYP=3
	1470	POTS	42 SER	1127.0	1153.5	28.0	4.5			
	9500	POTS	42 SER	1132.0	1153.6	26.0	32.0			
	2800	OTTA	8 S	1133.4	1133.7	.5	2.8			
	3000	POTS	42 SER	1135.0	1143.5	12.0	8.0			
	2800	OTTA	21 GRF	1135.0	1240.0	90.0	3.4	1.9		
	650	GORK	21 GRF	1136.5	1143.7	10.3	45.0			
	9100	GORK	21 GRF	1136.6	1152.0	234.00	10.0			
	2800	OTTA	1 S	1137.0	1137.4	1.0	2.8	1.0		
	930	BORD	3 S	1137.0	1137.7	4.0	18.0	4.0		
	810	KRAK	3 S	1137.0	1137.5	2.2	12.0	5.0		
	950	GORK	4 S/F	1137.0	1137.5	3.6	24.0			
	536	ONDR	4 S/F	1137.0	1138.0	3.0	8.0	6.0		
	808	ONDR	2 S/F	1137.0	1138.0	3.0	17.0	12.0		
	610	SGMR	8 S	1137.1	1137.5	2.0	35.0			QL=6 ST=2 TYP=3
	650	GORK	4 S/F	1137.2	1137.5	2.4	17.0	8.0		
	9100	GORK	2 S/F	1137.3	1137.4	4.2	9.0			
	2800	OTTA	45 C	1140.0	1143.5	5.0	5.0	2.3		
	810	KRAK	8 S	1140.0	1140.2	.5	6.0			
	2950	GORK	2 S/F	1140.6	1143.6	3.6	4.9			
	245	SGMR	8 S	1144.8	1145.0	.5	40.0			QL=6 ST=2 TYP=3
	9400	HUAN	4 S/F	1150.6	1153.2	6.5	40.3	14.6		0
	9100	GORK	2 S/F	1152.0	1153.7	3.6	22.0			
	536	ONDR	2 S/F	1158.0	1159.5	4.0	4.0	3.0		
	610	SGMR	8 S	1159.1	1200.8	1.9	25.0			QL=6 ST=2 TYP=3
	8800	ATHN	8 S	1330.1	1330.5	.9	13.0			QL=5 ST=2 TYP=3
	1415	ATHN	8 S	1330.8	1331.1	.5	16.0			QL=5 ST=2 TYP=3
	9500	POTS	29 PBI	1400.0	1402.5	50.0	76.0			
	9400	HUAN	4 S/F	1400.1	1402.3	4.1	77.8	41.7		R
	8800	ATHN	47 GB	1400.3	1402.3	4.5	72.0			QL=6 ST=2 TYP=5
	11800	BERN	4 S/F	1400.4	1401.8	9.0	117.0			
	8400	BERN	3 S	1400.4	1402.4	9.0	78.0			
	19600	BERN	3 S	1400.4	1402.5	9.0	55.0			
	15400	SGMR	47 GB	1401.1	1401.8	1.7	82.0			QL=6 ST=2 TYP=5
	8800	SGMR	47 GB	1401.3	1402.3	2.8	64.0			QL=6 ST=2 TYP=5
	9400	HUAN	29 PBI	1404.2	1404.2	35.3	20.8	5.4		R
	8800	ATHN	4 S/F	1411.3	1414.6	5.30	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	1 S	1438.0	1438.1	1.0	4.2	2.1		
	2800	OTTA	21 GRF	1530.0	1735.0	340.0	15.6	7.0		
	2800	OTTA	1 S	1538.0	1539.0	3.0	2.8	1.3		
3100	BERN	3 S	1630.0	1632.5	7.0	26.0			ONLY PAPER REC	
2800	OTTA	3 S	1631.2	1633.0	4.0	16.6	5.4			
2800	OTTA	1 S	1652.0	1653.0	2.0	9.0	3.0			
245	PALE	49 GB	1652.3	1652.6	.8	1199.0			QL=6 ST=2 TYP=6	
410	SGMR	8 S	1652.5	1652.6	1.3	15.0			QL=6 ST=2 TYP=3	
245	SGMR	49 GB	1652.5	1652.6	.6	820.0			QL=6 ST=2 TYP=6	
410	PALE	8 S	1652.6	1652.6	.4	25.0			QL=6 ST=2 TYP=3	
9400	HUAN	2 S/F	1657.4	1659.9	3.7	9.7	4.0		0	
245	PALE	8 S	1658.6	1658.8	.4	17.0			QL=6 ST=2 TYP=3	
610	PALE	47 GB	1702.8	1703.0	.7	100.0			QL=6 ST=2 TYP=5	
610	SGMR	47 GB	1702.8	1703.0	.7	59.0			QL=6 ST=2 TYP=5	
410	PALE	47 GB	1702.8	1703.1	1.0	139.0			QL=6 ST=2 TYP=5	
410	SGMR	47 GB	1702.8	1703.1	1.0	86.0			QL=6 ST=2 TYP=5	
245	PALE	49 GB	1702.8	1703.1	1.0	2000.0			QL=6 ST=2 TYP=6	
245	SGMR	49 GB	1702.8	1703.1	1.0	1500.0			QL=6 ST=2 TYP=6	
930	BORD	41 F	1716.7	1716.8	.4	27.0				
245	PALE	8 S	1747.3	1747.6	.5	49.0			QL=6 ST=2 TYP=3	
245	SGMR	8 S	1747.3	1747.6	.5	34.0			QL=6 ST=2 TYP=3	
2800	OTTA	20 GRF	2140.0	2155.0	30.0	2.0	0.8			
200	HIRA	42 SER	2157.3	2157.9	6.0	180.0			WL	
100	HIRA	42 SER	2158.5	2158.9	6.0	270.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
16	245	PALE	47 GB	2158.8	2158.8	.5	110.0			QL=6 ST=2 TYP=5
	245	SGMR	47 GB	2158.8	2159.0	.5	90.0			QL=6 ST=2 TYP=5
	100	HIRA	41 F	2244.7	2249.1	6.3	285.0			
	3750	TYKW	20 GRF	2245.0	2250.0	45.0	1.5	0.7		
	1000	TYKW	5 S	2246.4	2246.8	1.5	3.0	1.0		
	200	HIRA	42 SER	2247.5	2248.8	3.5	300.0			WR
	245	PALE	47 GB	2247.8	2249.1	1.8	200.0			QL=6 ST=2 TYP=5
	208	VORO	40 F	2248.0	2250.0	4.0	270.0			
	245	SGMR	47 GB	2249.0	2249.1	.6	189.0			QL=6 ST=2 TYP=5
	2695	LEAR	47 GB	2354.1	2354.8	.9	50.0			QL=6 ST=2 TYP=5
17	245	LEAR	43 NS	0421.1	0625.8	312.9D	29.0			QL=6 ST=2 TYP=1
	260	ONDR	44 NS	0550.0E		490.0D	27.0			
	33	UPIC	43 NS	0722.7		637.3D				
	29	UPIC	43 NS	0722.8		637.2D				
	410	LEAR	8 S	0053.1	0053.5	.5	15.0			QL=6 ST=2 TYP=3
	245	LEAR	47 GB	0145.8	0146.0	.7	50.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	0147.3	0147.8	2.8	56.0			QL=6 ST=2 TYP=5
	245	PALE	49 GB	0209.0	0209.1	.3	1100.0			QL=6 ST=3 TYP=6
	245	LEAR	8 S	0255.1	0255.8	1.0	15.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0351.3	0352.3	1.5	20.0			QL=5 ST=2 TYP=3
	410	LEAR	47 GB	0355.1	0355.8	.9	60.0			QL=6 ST=2 TYP=5
	245	LEAR	49 GB	0355.3	0355.3	1.0	1100.0			QL=6 ST=2 TYP=6
	245	PALE	49 GB	0355.3	0355.5	1.0	1199.0			QL=6 ST=2 TYP=6
	410	PALE	47 GB	0355.6	0355.8	.5	160.0			QL=6 ST=2 TYP=5
	245	LEAR	47 GB	0400.1	0400.3	4.0	90.0			QL=6 ST=2 TYP=5
	245	LEAR	8 S	0459.1	0459.5	.7	26.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0459.3	0459.5	.5	6.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0459.3	0459.5	.5	11.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0555.8	0555.8	.3	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0555.8	0555.8	.3	11.0			QL=6 ST=2 TYP=3
	3750	TYKW	20 GRF	0650.0	0703.0	45.0	2.0	1.0		
	930	BORD	41 F	1108.4	1108.9	.6	17.0	2.0		
	930	BORD	8 S	1148.8	1149.0	.3	36.0	2.0		
	234	POTS	8 S	1242.0	1242.1	.5	450.0	150.0		
	2800	OTTA	21 GRF	1520.0	1610.0	85.0	3.0	1.7		
	245	SGMR	49 GB	1611.3	1611.6	2.0	2399.0			QL=6 ST=2 TYP=6
	2800	OTTA	1 S	1636.0	1636.3	1.0	3.4	1.1		
	2800	OTTA	20 GRF	1650.0	1730.0	60.0	2.2	1.1		
	245	PALE	49 GB	1729.1	1729.1	.7	650.0			QL=6 ST=2 TYP=6
	245	SGMR	49 GB	1729.1	1729.3	.7	500.0			QL=6 ST=2 TYP=6
	245	PALE	47 GB	1740.0	1740.1	.5	430.0			QL=6 ST=2 TYP=5
	930	BORD	41 F	1747.3	1747.6	.3	36.0	2.0		
	2800	OTTA	20 GRF	1755.0	1830.0	90.0	4.4	3.0		
	245	PALE	49 GB	1813.6	1813.8	.5	1899.0			QL=6 ST=2 TYP=6
	245	SGMR	47 GB	1859.6	1859.8	2.2	90.0			QL=6 ST=2 TYP=5
245	PALE	47 GB	1859.6	1859.8	2.2	119.0			QL=5 ST=2 TYP=5	
245	PALE	8 S	1931.8	1932.1	.3	16.0			QL=6 ST=2 TYP=3	
2800	OTTA	22 GRF	1945.0	2015.0	115.0	4.2	2.6			
245	SGMR	47 GB	2014.6	2014.8	.5	219.0			QL=6 ST=2 TYP=5	
200	HIRA	42 SER	2114.7	2120.6	7.3	310.0			0	
100	HIRA	42 SER	2114.7	2121.8	7.6	7100.0				
245	PALE	47 GB	2114.8	2114.8	.3	400.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	2114.8	2114.8	.5	270.0			QL=6 ST=2 TYP=5	
3750	TYKW	32 ABS	2120.0	2150.0	60.0	-4.0	-2.0			
245	PALE	49 GB	2120.8	2121.1	1.7	690.0			QL=6 ST=2 TYP=6	
245	SGMR	49 GB	2120.8	2121.1	1.7	500.0			QL=6 ST=2 TYP=6	
410	PALE	47 GB	2121.0	2121.1	.3	71.0			QL=6 ST=2 TYP=5	
410	SGMR	47 GB	2121.0	2121.1	1.1	56.0			QL=6 ST=2 TYP=5	
610	SGMR	8 S	2121.0	2121.1	.6	37.0			QL=6 ST=2 TYP=3	
2000	TYKW	32 ABS	2125.0	2150.0	60.0	-3.0	-1.5			
2800	OTTA	240 R	2155.0	2215.0	20.0	2.4	1.2			
2695	PENT	20 GRF	2230.0	2300.0	55.0	2.4	1.4			
245	SGMR	8 S	2307.3	2307.5	.5	45.0			QL=6 ST=2 TYP=3	
3750	TYKW	32 ABS	2312.0	2327.0	65.0	-3.0	-1.5			
2000	TYKW	32 ABS	2322.0	2332.0	50.0	-2.0	-1.0			
18	260	ONDR	44 NS	0547.0E		496.0D	108.0			
	29	UPIC	43 NS	0830.2		489.1				
	33	UPIC	43 NS	0831.3		488.0				
	245	LEAR	43 NS	2307.0	0629.0	626.0D	119.0			QL=6 ST=2 TYP=1

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
18	▲ 245	LEAR	43 NS	2308.0	0353.5	625.00	37.0			QL=6 ST=2 TYP=1
	2000	TYKW	32 ABS	0055.0	0135.0	80.0	-1.5	-0.7		
	3750	TYKW	32 ABS	0058.0	0110.0	115.0	-3.0	-1.5		
	245	PALE	47 GB	0108.3	0108.3	.5	98.0			QL=6 ST=2 TYP=5
	3750	TYKW	32 ABS	0337.0	0400.0	60.0	-3.0	-1.5		
	2000	TYKW	32 ABS	0340.0	0350.0	60.0	-1.5	-0.7		
	2000	TYKW	5 S	0444.0	0448.0	10.0	1.5	0.5		
	3750	TYKW	21 GRF	0510.0	0533.0	32.0	2.0	1.0		
	410	LEAR	8 S	0530.6	0530.6	.2	26.0			QL=6 ST=2 TYP=3
	2000	TYKW	32 ABS	0538.0	0600.0	100.0	-5.0	-2.5		
	3750	TYKW	31 ABS	0542.0	0557.0	97.0	-6.0	-3.0		
	9400	TYKW	32 ABS	0542.0	0557.0	95.0	-8.0	-4.0		
	100	HIRA	42 SER	0623.4	0633.5	11.3	2700.0			
	200	HIRA	45 C	0628.4	0628.8	1.0	340.0	85.0		0
	204	IZMI	5 S	0628.5	0628.7	1.0	300.0	150.0		
	3100	CRIM	24 R	0650.0	0950.0		5.0			
	430	KRAK	8 S	0727.5	0727.7	.4	17.0			
	610	LEAR	47 GB	0731.3	0731.8	.8	50.0			QL=6 ST=2 TYP=5
	536	ONDR	8 S	0731.5	0731.5	.5	52.0			
	410	LEAR	47 GB	0731.6	0731.8	.5	100.0			QL=6 ST=2 TYP=5
	245	LEAR	4 S/F	0823.0	0829.8	11.0	40.0			QL=6 ST=2 TYP=3
	200	HIRA	46 C	0823.3	0830.0	15.3	16.0	6.0		0
	204	IZMI	22 GRF	0824.0	0831.2	16.5	26.0	18.0		
	410	LEAR	47 GB	0825.1	0830.3	8.9	83.0			QL=6 ST=2 TYP=5
	430	KRAK	45 C	0825.5	0830.0	20.0	140.0	30.0		
	430	KRAK		0825.5	0835.0		60.0			
	500	HIRA	46 C	0826.8	0829.7	14.0	55.0	25.0		WR
	610	LEAR	4 S/F	0826.8	0830.6	7.2	27.0			QL=6 ST=2 TYP=3
	500	HIRA		0826.8	0835.0		45.0			WR
	536	ONDR	46 C	0827.0	0830.0	20.0	29.0	20.0		
	650	GORK	46 C	0827.0	0830.1	14.0	17.0			
	650	GORK		0827.0	0835.4		21.0			
	810	KRAK	1 S	0829.3	0830.0	1.0	2.0			
	100	GORK	46 C	0830.8	0832.3	4.8	20.00			
	100	GORK		0830.8	0833.1		20.00			
	100	GORK	46 C	0830.8	0834.0		20.00			
	610	LEAR	8 S	0834.3	0835.1	1.8	26.0			QL=6 ST=2 TYP=3
	410	LEAR	47 GB	0834.3	0836.5	3.0	180.0			QL=6 ST=2 TYP=5
	810	KRAK	1 S	0834.5	0835.0	.8	2.0			
	260	ONDR	45 C	0835.0E	0848.0	16.00	47.0	7.0		
	808	ONDR	8 S	1151.0	1151.5	.5	25.0			
	245	SGMR	47 GB	1209.8	1210.1	.5	160.0			QL=6 ST=2 TYP=5
	410	SGMR	8 S	1210.0	1210.1	.1	18.0			QL=6 ST=2 TYP=3
	536	ONDR	8 S	1237.0	1237.0	.5	13.0			
	2800	OTTA	1 S	1322.7	1322.9	6.0	9.0			
	410	SGMR	47 GB	1400.8	1401.6	2.8	119.0			QL=6 ST=2 TYP=5
	930	BORD	41 F	1401.0	1402.5	1.5U	18.0	2.0		
	930	BORD	8 S	1412.8	1412.8	.1	21.0	1.0		
	245	SGMR	47 GB	1434.6	1434.6	.4	82.0			QL=6 ST=2 TYP=5
	2800	OTTA	20 GRF	1440.0	1540.0	125.0	2.8	2.0		
930	BORD	41 F	1531.8	1531.9	1.0	25.0	2.0			
245	SGMR	49 GB	1532.3	1532.5	.5	760.0			QL=6 ST=2 TYP=6	
410	PALE	49 GB	1650.6	1650.8	1.4	850.0			QL=6 ST=3 TYP=6	
410	SGMR	47 GB	1650.6	1650.8	1.5	239.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	1717.1	1717.3	1.2	430.0			QL=6 ST=2 TYP=5	
245	PALE	47 GB	1717.1	1717.3	1.2	460.0			QL=6 ST=2 TYP=5	
610	PALE	47 GB	1717.3	1718.6	2.3	110.0			QL=6 ST=2 TYP=5	
610	SGMR	47 GB	1717.3	1718.6	2.3	100.0			QL=6 ST=2 TYP=5	
410	PALE	47 GB	1717.5	1717.6	.5	72.0			QL=6 ST=2 TYP=5	
410	SGMR	47 GB	1717.5	1717.6	.5	52.0			QL=6 ST=2 TYP=5	
2800	OTTA	21 GRF	1730.0	1850.0	215.0	5.6	2.6			
245	SGMR	47 GB	1744.1	1744.1	.4	69.0			QL=6 ST=2 TYP=5	
245	PALE	47 GB	1744.1	1744.1	.5	85.0			QL=6 ST=2 TYP=5	
2695	SGMR	20 GRF	1758.1	1800.8	4.5	42.0			QL=6 ST=2 TYP=2	
245	PALE	47 GB	1759.1	1800.8	2.0	75.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	1800.6	1800.8	.5	71.0			QL=6 ST=2 TYP=5	
2800	OTTA	1 S	1808.0	1809.5	3.0	3.8	1.2			
2695	SGMR	47 GB	1809.1	1817.0	23.2	189.0			QL=6 ST=2 TYP=5	
9400	HUAN	20 GRF	1816.8	1842.4	45.9	5.6	1.4		0	
245	PALE	49 GB	1849.6	1849.6	1.7	100.0			QL=6 ST=2 TYP=6	
245	SGMR	49 GB	1849.6	1850.1	1.7	1199.0			QL=6 ST=2 TYP=6	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
18	610	SGMR	47 GB	1849.8	1850.3	1.5	54.0			QL=6 ST=2 TYP=5
	610	PALE	8 S	1850.0	1850.3	1.1	50.0			QL=6 ST=2 TYP=3
	410	SGMR	47 GB	1850.0	1850.3	.8	65.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	1926.3	1926.6	.7	60.0			QL=6 ST=3 TYP=5
	245	PALE	4 S/F	1929.0	1931.1	2.8	44.0			QL=6 ST=3 TYP=3
	245	PALE	8 S	1939.8	1939.8	.3	25.0			QL=6 ST=2 TYP=3
	245	PALE	8 S	2003.3	2003.5	.5	49.0			QL=6 ST=2 TYP=3
	200	HIRA	8 S	2049.0	2049.0	.5	2500.0			0
	100	HIRA	8 S	2049.1	2049.2	.5	620.0			
	245	SGMR	49 GB	2049.1	2049.3	.9	1500.0			QL=6 ST=2 TYP=6
	410	SGMR	8 S	2049.1	2049.3	.9	13.0			QL=6 ST=2 TYP=3
	245	PALE	49 GB	2049.3	2049.3	.5	1399.0			QL=6 ST=2 TYP=6
	245	PALE	49 GB	2054.1	2054.1	.4	1199.0			QL=6 ST=2 TYP=6
	245	PALE	47 GB	2153.8	2153.8	.3	110.0			QL=6 ST=2 TYP=5
	245	SGMR	8 S	2153.8	2154.0	.5	73.0			QL=6 ST=2 TYP=3
	200	HIRA	42 SER	2245.3	2247.6	6.5	1300.0			0
	245	PALE	47 GB	2246.0	2247.6	3.8	450.0			QL=6 ST=2 TYP=5
	245	SGMR	47 GB	2247.6	2247.6	2.2	380.0			QL=6 ST=2 TYP=5
	410	SGMR	47 GB	2247.6	2247.6	.5	89.0			QL=6 ST=2 TYP=5
	410	PALE	47 GB	2247.6	2247.8	.5	150.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2256.8	2257.0	.5	80.0			QL=6 ST=2 TYP=5
	245	SGMR	47 GB	2256.8	2257.0	.5	52.0			QL=6 ST=2 TYP=5
	8800	LEAR	4 S/F	2311.3	2314.0	4.2	30.0			QL=4 ST=2 TYP=3
	245	SGMR	49 GB	2312.6	2312.8	.9	1199.0			QL=6 ST=2 TYP=6
	245	PALE	49 GB	2312.6	2313.0	1.0	1300.0			QL=6 ST=2 TYP=6
	245	LEAR	49 GB	2312.8	2313.0	.7	1000.0			QL=4 ST=2 TYP=6
	15400	LEAR	47 GB	2313.0	2314.1	2.0	150.0			QL=4 ST=2 TYP=5
	2695	LEAR	47 GB	2313.0	2314.3	2.1	110.0			QL=4 ST=2 TYP=5
4995	LEAR	8 S	2313.3	2314.1	1.7	30.0			QL=4 ST=2 TYP=3	
100	HIRA	46 C	2327.6	2328.5	1.3	375.0	80.0			
19	260	ONDR	44 NS	0550.0E		499.0D	32.0			
	200	HIRA	43 NS	2132.0	0111.0	720.0D	25.0	5.0		WR
	245	LEAR	47 GB	0102.0	0102.1	.1	219.0			QL=6 ST=2 TYP=5
	410	LEAR	8 S	0102.0	0102.1	.1	10.0			QL=6 ST=2 TYP=3
	100	HIRA	46 C	0544.0	0544.6	1.2	340.0	115.0		
	29	UPIC	42 SER	0544.5	0545.0	277.0				
	33	UPIC	42 SER	0544.5	0545.1	277.3				
	810	KRAK	8 S	0823.3	0823.5	.4	10.0			
	9100	GORK	2 S/F	0931.2	0932.5	2.2	9.3	4.0		
	2950	GORK	1 S	0931.4	0932.3	2.1	3.3			
	808	ONDR	1 S	0933.0	0933.3	.5	20.0			
	810	KRAK	8 S	0933.2	0933.5	.5	8.0			
	204	IZMI	5 S	0934.8	0934.9	.5	180.0D			
	234	POTS	4 S/F	0935.7	0935.8	.3	250.0	40.0		
	2950	GORK	20 GRF	1009.8	1016.8	25.3	50.0	2.0		
	245	SGMR	8 S	1126.3	1126.5	.8	45.0			QL=6 ST=2 TYP=3
	410	SGMR	47 GB	1128.5	1128.6	1.8	110.0			QL=6 ST=2 TYP=5
	536	ONDR	1 S	1129.0	1129.0	.5	7.0	6.0		
	536	ONDR	8 S	1223.5	1223.5	.1	14.0			
	2800	OTTA	20 GRF	1235.0	1320.0	115.0	2.8	2.0		
	2800	OTTA	240 R	1533.0	1548.0	15.0	5.4	2.5		
	245	PALE	47 GB	1921.6	1921.8	.5	110.0			QL=6 ST=2 TYP=5
	245	SGMR	47 GB	1921.6	1921.8	.5	89.0			QL=6 ST=2 TYP=5
	9400	TYKW	5 S	2138.3	2138.6	1.0	6.0	2.0		
	245	PALE	8 S	2138.8	2138.8	.3	45.0			QL=6 ST=2 TYP=3
	3750	TYKW	21 GRF	2200.0	2320.0	500.0	10.0	5.0		
	1000	TYKW	21 GRF	2200.0	2320.0	430.0	3.0	1.5		
	2000	TYKW	21 GRF	2200.0	2320.0	430.0	4.0	2.0		
	2800	OTTA	240 R	2205.0	2315.0	70.0	7.4	4.0		
	9400	TYKW	20 GRF	2220.0	2315.0	100.0	6.0	3.0		
	1000	TYKW	5 S	2326.6	2326.7	1.0	47.0	4.0		
	610	LEAR	8 S	2326.6	2326.8	.5	26.0			QL=4 ST=2 TYP=3
410	LEAR	47 GB	2326.6	2326.8	.4	380.0			QL=4 ST=2 TYP=5	
245	LEAR	47 GB	2326.6	2326.8	.5	100.0			QL=4 ST=2 TYP=5	
2695	PENT	8 S	2327.0	2327.0	.2	5.0				
410	LEAR	47 GB	2329.8	2330.1	1.0	66.0			QL=4 ST=2 TYP=5	
245	LEAR	8 S	2330.0	2330.1	.5	25.0			QL=4 ST=2 TYP=3	
610	LEAR	8 S	2330.0	2330.1	.3	11.0			QL=4 ST=2 TYP=3	
245	PALE	47 GB	2337.6	2338.1	3.2	320.0			QL=6 ST=2 TYP=5	
410	PALE	47 GB	2338.1	2338.1	2.5	88.0			QL=6 ST=2 TYP=5	

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean			
20	245	PALE	43 NS	0045.0	0408.8	213.00	139.0			QL=6 ST=2 TYP=1	
	100	GORK	44 NS	0300.0E		534.00		10.0			
	245	LEAR	43 NS	0454.1	0812.3	277.90	38.0			QL=6 ST=2 TYP=1	
	260	ONDR	44 NS	0547.0E		200.00	37.0				
	127	TORN	44 NS	0920.0E	1116.0	380.00	40.0	7.0		V=1	
	200	HIRA	43 NS	2050.0	2150.0	760.00	300.0	75.0		ML	
	100	HIRA	43 NS	2054.0	2225.0	760.00	450.0	140.0			
	208	VORO	44 NS	2100.0E		360.00		59.0			
	2695	PENT	21 GRF	0010.0	0140.0	90.00	16.2				
	4995	LEAR	4 S/F	0019.8E	0032.3	34.20	24.0				QL=6 ST=2 TYP=3
	3750	TYKW	45 C	0020.0	0029.6	20.0	16.0	8.0			
	9400	TYKW		0020.0	0032.0		13.0				
	9400	TYKW	45 C	0020.0	0044.4	50.0	41.0	12.0			
	15400	LEAR	47 GB	0020.5E	0044.5	33.50	52.0				QL=6 ST=2 TYP=5
	8800	LEAR	4 S/F	0020.6E	0044.3	33.40	38.0				QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0021.0E	0025.1	33.00	18.0				QL=6 ST=2 TYP=3
	245	LEAR	47 GB	0021.3	0041.1	32.7	89.0				QL=6 ST=2 TYP=5
	2000	TYKW	45 C	0023.0	0029.7	32.0	20.0	8.0			
	1000	TYKW	45 C	0023.0	0032.1	32.0	28.0	6.0			
	610	LEAR	4 S/F	0023.1E	0030.3	30.90	48.0				QL=6 ST=2 TYP=3
	2695	PENT	22 GRF	0023.3	0029.8	15.0	14.4	7.0			
	1415	LEAR	4 S/F	0023.5E	0032.1	30.50	24.0				QL=6 ST=2 TYP=3
	410	LEAR	47 GB	0024.0E	0032.1	30.00	58.0				QL=6 ST=2 TYP=5
	500	HIRA	42 SER	0024.2	0032.0	72.0	45.0				ML
	610	PALE	4 S/F	0029.0	0030.3	6.8	38.0				QL=6 ST=2 TYP=3
	410	PALE	4 S/F	0029.5	0032.1	3.3	46.0				QL=6 ST=2 TYP=3
	245	PALE	47 GB	0029.8	0030.1	2.3	56.0				QL=6 ST=2 TYP=5
	1415	PALE	8 S	0031.8	0032.0	.3	13.0				QL=6 ST=2 TYP=3
	3750	TYKW	30 PBI	0040.0		270.0	8.0	4.0			
	9395	PEKG	3 S	0044.0	0044.6	15.0	16.9	5.5			
	15400	PALE	8 S	0044.3	0044.3	.3	44.0				QL=6 ST=2 TYP=3
	8800	PALE	8 S	0044.3	0044.3	.3	31.0				QL=6 ST=2 TYP=3
	3750	TYKW	45 C	0045.0	0051.0	11.0	4.0	2.0			
	1000	TYKW	30 PBI	0055.0		270.0	2.0	1.0			
	2000	TYKW	30 PBI	0055.0		245.0	4.0	2.0			
	3750	TYKW	45 C	0100.0	0111.5	14.0	2.0	1.0			
	2000	TYKW	45 C	0101.0	0110.1	13.0	4.0	1.5			
	610	LEAR	47 GB	0104.3	0110.1	9.8	58.0				QL=6 ST=2 TYP=5
	245	LEAR	4 S/F	0104.3	0110.1	10.5	20.0				QL=6 ST=2 TYP=3
	410	LEAR	4 S/F	0107.3	0110.1	7.2	23.0				QL=6 ST=2 TYP=3
	1000	TYKW	45 C	0109.0	0111.3	6.0	5.0	2.0			
	610	PALE	4 S/F	0109.5	0110.1	3.0	49.0				QL=6 ST=2 TYP=3
	410	PALE	8 S	0109.6	0111.3	2.0	17.0				QL=6 ST=2 TYP=3
	9400	TYKW	30 PBI	0110.0		240.0	10.0	5.0			
	2000	TYKW	5 S	0116.0	0117.2	2.0	2.0	0.7			
	3750	TYKW	5 S	0116.5	0118.0	4.0	1.5	0.5			
	3750	TYKW	45 C	0121.0	0122.2	8.0	2.0	1.0			
	2000	TYKW	20 GRF	0130.0	0140.0	140.0	8.0	4.0			
	3750	TYKW	45 C	0131.0	0139.3	34.0	10.0	7.0			
	9400	TYKW	20 GRF	0133.0	0140.0	35.0	12.0	4.0			
3750	TYKW	30 PBI	0205.0		110.0	7.0	3.5				
9400	TYKW	20 GRF	0220.0	0255.0	100.0	6.0	3.0				
9100	GORK	21 GRF	0303.0E	0316.8U	267.00	19.0					
410	LEAR	8 S	0304.3	0304.5	.3	13.0				QL=6 ST=2 TYP=3	
2950	GORK	20 GRF	0305.0E	0309.5	189.00	16.6					
610	LEAR	8 S	0305.3	0305.6	.8	16.0				QL=6 ST=2 TYP=3	
3750	TYKW	5 S	0334.0	0335.0	3.0	1.0	0.3				
9400	TYKW	20 GRF	0430.0	0434.0	30.0	4.0	2.0				
245	LEAR	8 S	0430.5	0430.8	.6	20.0				QL=6 ST=2 TYP=3	
245	LEAR	8 S	0431.8	0432.1	1.2	15.0				QL=6 ST=2 TYP=3	
610	LEAR	47 GB	0437.5	0437.8	.6	340.0				QL=6 ST=2 TYP=5	
410	LEAR	47 GB	0437.6	0437.8	.5	89.0				QL=6 ST=2 TYP=5	
3750	TYKW	5 S	0501.0	0502.2	7.0	2.0	1.0				
610	LEAR	8 S	0518.1	0518.3	.2	10.0				QL=6 ST=2 TYP=3	
245	LEAR	47 GB	0518.1	0518.3	.2	71.0				QL=6 ST=2 TYP=5	
3750	TYKW	45 C	0520.0	0521.7	5.0	5.0	3.0				
2000	TYKW	20 GRF	0520.0	0525.0	40.0	2.0	1.0				
9400	TYKW	21 GRF	0520.0	0530.0	40.0	6.0	3.0				
245	LEAR	8 S	0521.8	0522.0	.3	48.0				QL=6 ST=2 TYP=3	
410	LEAR	8 S	0521.8	0522.0	.3	8.0				QL=6 ST=2 TYP=3	
3400	TYKW	5 S	0523.0	0523.6	2.0	6.0	2.0				

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
20	9100	GORK	1 S	0523.0	0523.7	1.2	7.2	3.0		
	3750	TYKW	30 PBI	0525.0		20.0	3.0	1.5		
	3750	TYKW	5 S	0536.0	0537.0	3.0	6.0	2.0		
	9100	GORK	1 S	0536.9	0537.1	1.0	5.4	2.0		
	1000	TYKW	45 C	0550.0	0550.5	1.5	36.0	4.0		
	610	LEAR	49 GB	0550.3	0550.5	.7	2899.0			QL=6 ST=2 TYP=6
	650	GORK	4 S/F	0550.3	0550.5U	1.3	130.00			
	410	LEAR	47 GB	0550.6	0550.6	.4	110.0			QL=6 ST=2 TYP=5
	245	LEAR	47 GB	0550.8	0551.0	.3	150.0			QL=6 ST=2 TYP=5
	200	HIRA	8 S	0613.6	0613.9	.6	54.0			ML
	610	LEAR	47 GB	0632.0	0632.1	.1	59.0			QL=6 ST=3 TYP=5
	410	LEAR	8 S	0632.0	0632.1	.1	5.0			QL=6 ST=3 TYP=3
	3750	TYKW	45 C	0641.0	0647.2	9.0	10.0	5.0		
	4995	LEAR	20 GRF	0641.5	0647.1	12.0	11.0			QL=6 ST=2 TYP=2
	9400	TYKW	21 GRF	0643.0	0650.0	50.0	4.0	2.0		
	8800	LEAR	20 GRF	0644.0	0647.0	5.3	8.0			QL=6 ST=2 TYP=2
	4995	ATHN	4 S/F	0644.5	0647.1	5.6	11.0			QL=2 ST=2 TYP=3
	8800	ATHN	4 S/F	0646.1	0647.1	2.4	10.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	0646.5	0647.0	1.5	6.0	2.0		
	9100	GORK	1 S	0646.5	0647.2	1.0	5.4	2.0		
	610	LEAR	47 GB	0648.5	0648.6	.3	420.0			QL=6 ST=2 TYP=5
	2695	LEAR	47 GB	0648.5	0648.6	.1	78.0			QL=6 ST=2 TYP=5
	1415	LEAR	8 S	0648.5	0648.6	.1	5.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0648.5	0648.6	.1	15.0			QL=6 ST=2 TYP=3
	15400	LEAR	8 S	0648.5	0648.6	.1	10.0			QL=6 ST=2 TYP=3
	3750	TYKW	29 PBI	0650.0		40.0	4.0	2.0		
	430	KRAK	8 S	0705.5	0705.7	.4	25.0			
	810	KRAK	8 S	0705.7	0705.8	.5	13.0			
	610	LEAR	49 GB	0705.8	0705.8	.5	790.0			QL=6 ST=2 TYP=6
	410	LEAR	47 GB	0705.8	0705.8	.3	219.0			QL=6 ST=2 TYP=5
	810	KRAK	8 S	0711.6	0711.8	.3	17.0			
	430	KRAK	8 S	0711.7	0711.7	.1	7.0			
	610	LEAR	47 GB	0711.8	0712.0	.3	160.0			QL=6 ST=2 TYP=5
	430	KRAK	8 S	0719.5	0719.5	.3	37.0			
	410	LEAR	8 S	0719.6	0719.8	.5	30.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0719.6	0719.8	.5	16.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0737.5	0737.6	.1	17.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0737.5	0737.6	.1	4.0			QL=6 ST=2 TYP=3
	430	KRAK	8 S	0737.6	0737.7	.2	7.0			
	810	KRAK	8 S	0737.7	0737.7	.1	6.0			
	9400	TYKW	20 GRF	0753.0	0805.0	30.0	6.0	3.0		
	2000	TYKW	45 C	0754.0	0804.6	22.0	7.0	3.0		
	1470	POTS	20 GRF	0754.0	0805.0	21.0	4.0			
	9100	GORK	20 GRF	0754.0	1004.0	246.0D	11.8			
	2950	GORK	20 GRF	0754.3	0806.0	240.0D	7.7			
3750	TYKW	45 C	0755.0	0800.5	20.0	6.0	3.0			
410	LEAR	8 S	0755.1	0755.3	.4	16.0			QL=6 ST=2 TYP=3	
610	LEAR	8 S	0755.1	0755.3	.4	5.0			QL=6 ST=2 TYP=3	
1415	LEAR	20 GRF	0756.3	0802.5	12.7	5.0			QL=6 ST=2 TYP=2	
2695	LEAR	20 GRF	0756.3	0805.6	12.7	11.0			QL=6 ST=2 TYP=2	
4995	LEAR	20 GRF	0756.3	0805.6	15.7	11.0			QL=6 ST=2 TYP=2	
8800	LEAR	20 GRF	0756.3	0805.6	15.7	10.0			QL=6 ST=2 TYP=2	
6100	KISV	1 S	0957.2	0958.0	2.0	3.0				
6100	KISV	1 S	1102.7	1103.6	2.0	4.0				
33	UPIC	45 C	1511.5	1511.5	2.8					
29	UPIC	45 C	1511.5	1513.0	2.5					
2695	PENT	240 R	1540.0	1550.0	10.0	3.0	1.5			
2800	OTTA	20 GRF	1600.0	1610.0	80.0	3.0	1.5			
2800	OTTA	240 R	1748.0	1750.0	2.0	2.4	1.2			
2800	OTTA	20 GRF	1850.0	1853.0	20.0	2.0	1.0			
245	SGMR	49 GB	1911.8	1913.0	1.5	500.0			QL=6 ST=2 TYP=6	
2800	OTTA	21 GRF	2030.0		300.0D	14.8				
2800	OTTA	20 GRF	2047.0	2058.0	135.0	12.4	6.2			
1000	TYKW	45 C	2103.0	2129.7	75.0	41.0	13.0			
500	HIRA	24 R	2103.5	2127.3	540.0	100.0	20.0		SL	
610	SGMR	47 GB	2105.5	2120.1	146.6	139.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	2105.6	2152.8	154.4	250.0			QL=6 ST=2 TYP=5	
410	SGMR	47 GB	2107.6	2157.9	152.4	130.0			QL=6 ST=2 TYP=5	
610	PALE	47 GB	2110.6	2114.6	7.0	68.0			QL=6 ST=3 TYP=5	
245	PALE	8 S	2111.6	2112.8	1.5	42.0			QL=6 ST=3 TYP=3	
410	PALE	4 S/F	2112.3	2114.8	5.3	29.0			QL=6 ST=3 TYP=3	

SOLAR RADIO EMISSION
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MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
20	2000	TYKW	20 GRF	2114.0	2130.0	65.0	3.0	1.5		
	3750	TYKW	20 GRF	2115.0	2140.0	90.0	4.0	2.0		
	245	PALE	47 GB	2117.6	2118.3	17.2	47.0			QL=6 ST=2 TYP=5
	610	PALE	47 GB	2117.6	2120.1	17.2	93.0			QL=6 ST=2 TYP=5
	410	PALE	20 GRF	2117.6	2120.1	17.2	44.0			QL=6 ST=2 TYP=2
	610	PALE	47 GB	2134.8	2135.0	18.0	150.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2134.8	2137.1	18.0	169.0			QL=6 ST=2 TYP=5
	410	PALE	47 GB	2134.8	2150.6	18.0	119.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2152.8	2152.8	11.5	260.0			QL=6 ST=2 TYP=5
	410	PALE	47 GB	2152.8	2152.8	11.5	130.0			QL=6 ST=2 TYP=5
	610	PALE	47 GB	2152.8	2152.8	11.5	150.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2204.3	2205.3	115.0	219.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2220.1	2225.6	23.7	440.0			QL=6 ST=2 TYP=5
	610	PALE	8 S	2221.8	2223.3	1.7	13.0			QL=6 ST=2 TYP=3
	410	PALE	47 GB	2243.8	2243.8	23.0	130.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2243.8	2247.6	23.0	160.0			QL=6 ST=2 TYP=5
	610	PALE	8 S	2250.8	2252.3	1.7	13.0			QL=6 ST=2 TYP=3
	245	PALE	47 GB	2306.8	2319.6	35.7	150.0			QL=6 ST=2 TYP=5
	245	LEAR	20 GRF	2309.0E	0008.6	61.0D	150.0			QL=4 ST=2 TYP=2
	410	SGMR	47 GB	2309.0	2309.1	31.0	55.0			QL=6 ST=2 TYP=5
	245	SGMR	4 S/F	2309.0	2309.1	31.0	110.0			QL=6 ST=2 TYP=3
	610	SGMR	47 GB	2309.0	2310.6		84.0			QL=6 ST=2 TYP=5
	410	LEAR	20 GRF	2309.0E	2316.5	61.0D	70.0			QL=4 ST=2 TYP=2
	610	LEAR	20 GRF	2309.0E	2346.0	61.0D	70.0			QL=4 ST=2 TYP=2
	3750	TYKW	21 GRF	2315.0	0040.0	300.0	10.0	5.0		
	2695	PENT	20 GRF	2315.0	2330.0	35.0	4.6	3.0		
	2000	TYKW	21 GRF	2317.0	0046.0	290.0	6.0	3.0		
	1000	TYKW	45 C	2317.0	0139.4	195.0	43.0	8.0		
	1000	TYKW		2317.0	2336.6		19.0			
	610	PALE	4 S/F	2317.3	2319.3	11.2	25.0			QL=6 ST=2 TYP=3
	3750	TYKW	45 C	2318.0	2326.7	30.0	8.0	3.0		
	2000	TYKW	45 C	2318.0	2329.0	35.0	4.0	2.0		
9400	TYKW	21 GRF	2320.0	0040.0	240.0	8.0	4.0			
9400	TYKW	20 GRF	2323.0	2333.0	30.0	5.0	2.0			
410	PALE	47 GB	2342.5	2342.6	16.6	130.0			QL=6 ST=2 TYP=5	
610	PALE	47 GB	2342.5	2346.8	12.3	62.0			QL=6 ST=2 TYP=5	
21	245	LEAR	43 NS	0010.0	0140.5	562.0D	260.0			QL=6 ST=2 TYP=1
	100	GORK	44 NS	0300.0E		405.0D		65.0		
	127	TORN	44 NS	0540.0E		600.0D		45.0		V=1
	260	ONDR	44 NS	0600.0E		515.0D	27.0			
	204	IZMI	44 NS	0600.0E		360.0D	80.0			
	245	SGMR	43 NS	0939.0	1306.1	548.5	219.0			QL=6 ST=3 TYP=1
	410	SGMR	43 NS	1525.0	1536.6	55.1	28.0			QL=6 ST=2 TYP=1
	610	SGMR	43 NS	1525.0	1537.1	55.1	32.0			QL=6 ST=2 TYP=1
	245	PALE	43 NS	1639.0	2254.1	699.0D	189.0			QL=6 ST=2 TYP=1
	200	HIRA	44 NS	1927.0E	2105.0	850.0D	15.0	5.0		WR
	245	SGMR	43 NS	2017.0	2032.8	15.8D	119.0			QL=6 ST=3 TYP=1
	208	VORO	44 NS	2100.0E		360.0D				
	245	LEAR	43 NS	2309.0	0311.1	623.0D	49.0			QL=6 ST=2 TYP=1
	245	PALE	47 GB	0004.6	0004.8	14.5	100.0			QL=6 ST=2 TYP=5
	410	PALE	8 S	0006.0	0006.6	.8	16.0			QL=6 ST=2 TYP=3
	610	LEAR	4 S/F	0011.0	0012.3	3.6	20.0			QL=6 ST=2 TYP=3
	245	LEAR	47 GB	0013.8	0014.1	.7	160.0			QL=6 ST=2 TYP=5
	410	LEAR	8 S	0013.8	0014.1	.7	20.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	0016.0	0018.0	10.0	1.5	0.5		
	4995	PALE	8 S	0017.6	0017.8	1.5	11.0			QL=6 ST=2 TYP=3
	245	PALE	47 GB	0019.1	0020.3	11.4	98.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	0036.8	0039.1	3.3	89.0			QL=6 ST=2 TYP=5
	3750	TYKW	20 GRF	0117.0	0137.0	80.0	2.0	1.0		
	610	PALE	47 GB	0126.5	0132.6	21.8	74.0			QL=6 ST=2 TYP=5
	410	PALE	8 S	0133.1	0133.1	.2	17.0			QL=6 ST=2 TYP=3
	245	PALE	47 GB	0138.1	0140.6	8.5	260.0			QL=6 ST=2 TYP=5
	610	LEAR	8 S	0146.8	0147.8	1.8	37.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0147.1	0147.1	.4	33.0			QL=6 ST=2 TYP=3
	610	PALE	47 GB	0150.1	0150.1	.4	74.0			QL=6 ST=2 TYP=5
	15400	PALE	8 S	0150.1	0150.3	.4	24.0			QL=6 ST=2 TYP=3
	610	PALE	47 GB	0152.1	0152.3	7.2	74.0			QL=6 ST=2 TYP=5
	410	PALE	47 GB	0154.5	0155.5	1.3	60.0			QL=6 ST=2 TYP=5
245	PALE	47 GB	0154.8	0155.0	.3	160.0			QL=6 ST=2 TYP=5	
610	LEAR	47 GB	0220.8	0224.5	10.0	50.0			QL=5 ST=2 TYP=5	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks	
							Peak (10 ⁻²² W/m ² Hz)	Mean			
21	610	PALE	47 GB	0223.8	0223.8	2.0	55.0			QL=6 ST=2 TYP=5	
	245	LEAR	4 S/F	0223.8	0224.8	3.0	40.0			QL=5 ST=2 TYP=3	
	410	PALE	47 GB	0224.1	0225.1	6.2	50.0			QL=6 ST=2 TYP=5	
	410	LEAR	47 GB	0224.3	0225.1	6.8	55.0			QL=5 ST=2 TYP=5	
	410	PALE	4 S/F	0232.3	0235.6	5.8	30.0			QL=6 ST=2 TYP=3	
	610	PALE	47 GB	0233.6	0234.1	2.7	50.0			QL=6 ST=2 TYP=5	
	1000	TYKW	45 C	0255.0	0337.6	145.0	41.0	9.0			
	3750	TYKW	5 S	0258.0	0258.2	1.0	3.0	1.0			
	9100	GORK	20 GRF	0301.2E	0304.0U	76.0D	166.0				
	2950	GORK	20 GRF	0301.3E	0305.0	360.0D	12.4				
	650	GORK	21 GRF	0301.5E		302.9D	13.0				
	950	GORK	22 GRF	0309.0E	0336.9	129.0D	44.0				
	650	GORK	40 F	0313.3	0346.3	106.3	134.0				
	610	PALE	47 GB	0315.5	0318.1	15.6	79.0				QL=6 ST=2 TYP=5
	610	PALE	47 GB	0331.1	0336.3	26.0	93.0				QL=6 ST=2 TYP=5
	410	PALE	8 S	0343.8	0344.0	.3	17.0				QL=6 ST=2 TYP=3
	610	LEAR	47 GB	0345.8	0346.1	1.0	139.0				QL=5 ST=3 TYP=5
	245	LEAR	8 S	0345.8	0346.3	1.0	38.0				QL=5 ST=2 TYP=3
	1415	ATHN	4 S/F	0349.3	0353.6	8.7	10.0				QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	0349.3	0353.6	8.7	8.0				QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	0349.3	0353.6	8.7	10.0				QL=2 ST=2 TYP=3
	8800	ATHN	4 S/F	0349.3	0353.6	8.7	13.0				QL=6 ST=2 TYP=3
	245	LEAR	47 GB	0352.1	0352.3	.5	110.0				QL=6 ST=2 TYP=5
	245	PALE	47 GB	0352.1	0352.3	.5	119.0				QL=6 ST=2 TYP=5
	410	LEAR	8 S	0352.1	0352.3	.4	38.0				QL=6 ST=2 TYP=3
	610	LEAR	47 GB	0353.3	0355.0	2.0	70.0				QL=6 ST=2 TYP=5
	410	PALE	8 S	0357.1	0358.0	1.0	17.0				QL=6 ST=2 TYP=3
	610	PALE	47 GB	0357.1	0358.0	9.7	130.0				QL=6 ST=2 TYP=5
	1415	ATHN	20 GRF	0424.8	0431.3	19.3	10.0				QL=6 ST=2 TYP=2
	2695	ATHN	20 GRF	0424.8	0431.3	19.0	11.0				QL=6 ST=2 TYP=2
	4995	ATHN	20 GRF	0424.8	0431.3	15.7	8.0				QL=2 ST=2 TYP=2
	8800	ATHN	20 GRF	0424.8	0431.3	15.7	13.0				QL=6 ST=2 TYP=2
	3750	TYKW	20 GRF	0445.0	0545.0	170.0	4.0	2.0			
	2000	TYKW	20 GRF	0448.0	0545.0	155.0	3.0	1.5			
	9100	GORK	20 GRF	0450.5	0514.2	74.5	11.0				
	6100	KISV	1 S	0512.6	0514.3	6.0	4.0				
	536	ONDR	41 F	0740.0	0759.0	40.0	21.0				
	100	HIRA	46 C	0752.3	0752.8	1.2	380.0	220.0			
	100	GORK	46 C	0752.4	0752.9	2.3	220.0D				
	33	UPI C	45 C	0752.9	0755.5	3.4					
	430	KRAK	8 S	0915.7	0915.8	.2	34.0				
	430	KRAK	8 S	1014.4	1014.6	.3	42.0				
	430	KRAK	27 RF	1020.7	1032.5	19.0	15.0	3.0			
	2800	OTTA	20 GRF	1100.0	1115.0	40.0	3.2	1.6			
	430	KRAK	27 RF	1200.5	1209.0	23.5	14.0	6.0			
2800	OTTA	20 GRF	1233.0	1235.0	15.0	2.0	1.0				
9500	POTS	20 GRF	1337.0	1342.8	18.0	6.0					
2800	OTTA	21 GRF	1337.0	1345.0	35.0	3.2	1.6				
4995	ATHN	20 GRF	1339.3	1342.8	8.3	11.0				QL=2 ST=2 TYP=2	
6100	KISV	2 S/F	1339.5	1345.0	7.5	5.0					
2800	OTTA	2 S/F	1340.0	1342.0	9.0	6.6	3.2				
3000	POTS	20 GRF	1340.0	1344.4	15.0	9.0					
2695	ATHN	20 GRF	1340.6	1342.1	6.0	11.0				QL=6 ST=2 TYP=2	
1470	POTS	20 GRF	1341.0	1342.4	14.0	2.0					
536	ONDR	46 C	1448.0	1450.0	12.0	21.0	6.0				
245	SGMR	47 GB	1448.1	1449.0	1.7	64.0				QL=6 ST=2 TYP=5	
410	SGMR	47 GB	1448.1	1449.0	3.9	58.0				QL=6 ST=2 TYP=5	
610	SGMR	4 S/F	1448.6	1450.1	2.9	39.0				QL=6 ST=2 TYP=3	
2800	OTTA	22 GRF	1720.0	1728.0	30.0	3.2	1.5				
2800	OTTA	22 GRF	1910.0	1915.0	20.0	2.0	1.0				
2800	OTTA	22 GRF	1945.0	1958.0	25.0	3.8	1.4				
500	HIRA	24 R	2004.0	2152.8	300.0	15.0	3.0			SL	
200	HIRA	46 C	2030.0	2031.7	2.7	205.0	47.0			0	
2800	OTTA	1 S	2031.0	2032.0	5.0	2.6	1.4				
245	PALE	47 GB	2031.6	2032.8	1.2	160.0				QL=6 ST=2 TYP=5	
245	SGMR	47 GB	2056.3	2056.8	.7	58.0				QL=6 ST=2 TYP=5	
2800	OTTA	21 GRF	2125.0	2200.0	140.0	4.8	2.2				
1000	TYKW	20 GRF	2125.0	2200.0	140.0	4.0	2.0				
3750	TYKW	21 GRF	2125.0	2200.0	140.0	4.0	2.0				
2000	TYKW	21 GRF	2125.0	2201.0	130.0	4.0	2.0				
3750	TYKW	5 S	2127.0	2129.0	10.0	5.0	2.0				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean (2 Hz)	Int	Remarks
21	2800	OTTA	20 GRF	2127.0	2129.5	13.0	6.0	2.0		
	2000	TYKW	5 S	2127.0	2130.0	7.0	2.0	0.7		
	3750	TYKW	5 S	2225.0	2227.0	15.0	1.5	0.5		
	245	SGMR	8 S	2243.1	2243.3	.5	48.0			QL=6 ST=2 TYP=3
	200	HIRA	46 C	2253.3	2254.0	1.3	360.0	85.0		0
	208	VORO	4 S/F	2254.0	2255.0	2.0	200.0			
	9400	TYKW	5 S	2359.0	2359.3	2.0	18.0	3.0		
22	100	HIRA	43 NS	0040.0	0426.0	530.00	40.0	7.0		
	100	GORK	44 NS	0400.0E		351.00		10.0		
	127	TORN	44 NS	0540.0E	0839.7	600.00	60.0	209.0		V=1
	204	IZMI	44 NS	1005.0E		115.00	50.0			
	245	SGMR	43 NS	1059.0	1114.6	762.00	139.0			QL=6 ST=2 TYP=1
	100	HIRA	44 NS	1926.0E	2010.0	490.00	1000.0	300.0		SR
	200	HIRA	44 NS	1926.0E	2030.0	850.00	80.0	25.0		SR
	208	VORO	44 NS	2100.0E		360.00		26.0		
	3750	TYKW	5 S	0049.0	0049.3	2.0	1.0	0.3		
	3750	TYKW	21 GRF	0130.0	0200.0	80.0	2.0	1.0		
	3750	TYKW	5 S	0231.0	0232.3	11.0	11.0	5.0		
	3750	TYKW	45 C	0333.0	0337.4	18.0	73.0	10.0		
	3653	YUNN	3 S	0334.0	0337.5	15.0	91.0			
	2000	TYKW	45 C	0334.0	0337.6	6.0	20.0	5.0		
	2950	GORK	21 GRF	0334.2	0339.4	16.5	9.5			
	2950	GORK	4 S/F	0334.7	0337.5	3.6	34.0			
	2902	YUNN	3 S	0335.0	0337.8	13.0	50.0			
	9100	GORK	21 GRF	0335.5	0338.5	18.5	9.4			
	1000	TYKW	45 C	0335.7	0337.5	4.0	18.0	2.5		
	2695	LEAR	4 S/F	0335.8	0337.6	4.2	30.0			QL=5 ST=2 TYP=3
	1415	LEAR	4 S/F	0335.8	0337.6	2.7	16.0			QL=5 ST=2 TYP=3
	4995	LEAR	47 GB	0335.8	0337.6	4.7	75.0			QL=5 ST=2 TYP=5
	950	GORK	2 S/F	0335.9	0336.3	.9	9.0			
	9400	TYKW	5 S	0336.0	0337.5	4.0	20.0	6.0		
	650	GORK	4 S/F	0336.0	0337.3	2.3	25.0			
	610	LEAR	47 GB	0336.0	0337.3	2.5	61.0			QL=5 ST=2 TYP=5
	500	HIRA	45 C	0336.6	0337.0	1.6	30.0	15.0		WR
	4995	PALE	47 GB	0337.0	0337.5		68.0			QL=6 ST=1 TYP=5
	950	GORK	2 S/F	0337.0	0337.5	1.5	9.6			
	8800	LEAR	4 S/F	0337.0	0337.5	3.5	23.0			QL=5 ST=2 TYP=3
	9100	GORK	2 S/F	0337.0	0337.6	1.4	20.0			
	410	LEAR	47 GB	0337.1	0337.3	1.4	63.0			QL=5 ST=2 TYP=5
	410	PALE	8 S	0337.3	0337.3		27.0			QL=6 ST=1 TYP=3
	2000	TYKW	30 PBI	0340.0		100.0	3.0	1.0		
	9400	TYKW	29 PBI	0340.0		40.0	4.0	2.0		
	3750	TYKW	30 PBI	0351.0		110.0	2.0	1.0		
	2902	YUNN	24 R	0355.0	0359.0	59.0	9.0			
	3750	TYKW	5 S	0356.0	0359.0	25.0	2.0	1.0		
	2950	GORK	20 GRF	0356.5	0438.4	71.8	4.7			
	200	HIRA	8 S	0425.3	0425.6	.4	225.0			SR
	2000	TYKW	20 GRF	0430.0	0438.0	40.0	2.0	1.0		
	9400	TYKW	20 GRF	0443.0	0455.0	35.0	2.0	1.0		
3750	TYKW	5 S	0443.5	0444.0	4.0	2.0	.7			
6100	KISV	1 S	0443.6	0444.4	3.5	3.0				
610	LEAR	8 S	0814.6	0815.0	.5	47.0			QL=6 ST=2 TYP=3	
2950	GORK	21 GRF	0839.5	0916.5	66.00	9.5				
430	KRAK	21 GRF	0908.5	0914.0	14.2	14.0	7.0			
3000	POTS	23 GRF	0910.0	0912.7	20.0	20.0				
430	KRAK	8 S	0910.8	0911.0	.5	17.0				
2950	GORK	2 S/F	0910.8	0912.8	5.5	17.0				
6100	KISV	45 C	0910.8	0912.8	6.0	25.0				
6100	KISV		0910.8	0914.7		22.0				
3653	YUNN	5 S	0911.0	0912.5	6.0	27.0				
1470	POTS	23 GRF	0911.0	0912.7	19.0	14.0				
260	ONDR	8 S	0911.0	0911.0	1.0	125.0				
204	IZMI	5 S	0911.0	0911.2	.6	180.00				
610	LEAR	8 S	0911.1	0911.1	.2	31.0			QL=6 ST=2 TYP=3	
245	LEAR	47 GB	0911.1	0911.3	.5	160.0			QL=6 ST=2 TYP=5	
410	LEAR	8 S	0911.1	0911.3	.4	11.0			QL=6 ST=2 TYP=3	
950	GORK	1 S	0911.1	0912.7	2.9	26.0				
810	KRAK	8 S	0911.2	0911.2	.1	6.0				
650	GORK	41 F	0911.2	0912.7	3.2	46.0				
9500	POTS	21 GRF	0912.0	0912.7	18.0	15.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
22	2650	DWIN	2 S/F	0912.0	0913.0	5.0	20.0	10.0		
	8800	LEAR	8 S	0912.1	0912.5	1.0	20.0			QL=6 ST=2 TYP=3
	1415	LEAR	8 S	0912.1	0912.6	1.0	15.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0912.1	0912.6	.9	20.0			QL=6 ST=2 TYP=3
	4995	LEAR	8 S	0912.1	0912.6	1.0	26.0			QL=6 ST=2 TYP=3
	9100	GORK	21 GRF	0912.1	0913.1	13.0	95.0			
	810	KRAK	8 S	0912.3	0912.5	.3	6.0			
	610	LEAR	47 GB	0912.3	0913.1	2.5	95.0			QL=6 ST=2 TYP=5
	9100	GORK	3 S	0912.4	0912.7	.8	15.0	7.5		
	6100	KISV	29 PBI	0916.5	0916.5	21.0	8.0			
	260	ONDR	8 S	0921.0	0921.0	1.0	84.0			
	430	KRAK	21 GRF	0924.3	0927.0	10.0	8.0	4.0		
	430	KRAK	8 S	0928.5	0928.5	.1	10.0			
	536	ONDR	46 C	0947.0		13.0		13.0		
	536	ONDR		0947.0	0949.0		31.0			
	536	ONDR		0947.0	0952.0		20.0			
	536	ONDR		0947.0	0955.0		8.0			
	260	ONDR	28 PRE	1013.0		19.0	64.0	26.0		
	810	KRAK	8 S	1021.30	1021.5	.30	28.00			
	245	SGMR	47 GB	1023.5	1050.0	35.6	180.0			QL=6 ST=2 TYP=5
	610	SGMR	4 S/F	1025.0	1036.0	39.5	45.0			QL=6 ST=2 TYP=3
	410	SGMR	47 GB	1025.0	1037.0	42.5	59.0			QL=6 ST=2 TYP=5
	536	ONDR	46 C	1028.0	1035.5	23.0	21.0	18.0		
	430	KRAK	48 C	1028.0	1036.0	30.5	70.0	23.0		
	430	KRAK		1028.0	1044.3		49.0			
	260	ONDR	46 C	1032.0	1042.5	20.0	168.0	120.0		
	260	ONDR	29 PBI	1052.0		88.0	84.0	75.0		
	2800	OTTA	20 GRF	1115.0	1235.0	120.0	5.8	3.2		
	6100	KISV		1219.1	1220.0		6.0			
	6100	KISV	45 C	1219.1	1223.8	15.0	16.0			
	1415	ATHN	4 S/F	1221.0	1225.1	9.8	7.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	1222.3	1223.8	5.0	21.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	1222.3	1224.6	7.7	2.0			QL=6 ST=2 TYP=3
	2800	OTTA	1 S	1355.7	1356.0	1.5	6.4	3.1		
	6100	KISV	1 S	1355.9	1356.2	2.5	4.0			
	930	BORD	8 S	1425.6	1425.7	.1	16.0	1.0		
	2800	OTTA	22 GRF	1445.0	1500.0	30.0	3.2	2.1		
	2800	OTTA	20 GRF	1540.0	1542.0	25.0	2.2	1.1		
	2800	OTTA	260 FAL	1620.0	1700.0	40.0	-3.2	-1.6		
	2800	OTTA	20 GRF	1850.0	2110.0	245.0	4.2	2.1		
245	PALE	47 GB	2007.5	2007.6	.6	100.0			QL=6 ST=2 TYP=5	
9400	HUAN	2 S/F	2027.4	2031.1	4.6	10.0	3.6			
245	LEAR	8 S	2315.1	2315.1	.2	42.0			QL=6 ST=2 TYP=3	
410	LEAR	8 S	2315.1	2315.1	.2	3.0			QL=6 ST=2 TYP=3	
4995	LEAR	8 S	2318.8	2319.8	2.0	18.0			QL=5 ST=2 TYP=3	
15400	LEAR	4 S/F	2318.8	2320.0	2.5	40.0			QL=5 ST=2 TYP=3	
3750	TYKW	21 GRF	2319.0	0025.0	190.0	4.0	2.0			
3750	TYKW	5 S	2319.0	2319.8	2.0	6.0	2.0			
9400	TYKW	5 S	2319.0	2319.8	1.5	8.0	3.0			
8800	LEAR	8 S	2319.3	2319.8	.8	21.0			QL=5 ST=2 TYP=3	
9400	TYKW	29 PBI	2320.5		30.0	2.0	1.0			
3750	TYKW	29 PBI	2321.0		30.0	2.0	1.0			
245	LEAR	8 S	2341.3	2341.5	.3	27.0			QL=6 ST=2 TYP=3	
23	100	GORK	44 NS	0300.0E		540.0D	5.0			
	260	ONDR	44 NS	0548.0E		452.0D	30.0			
	127	TORN	44 NS	0600.0E		530.0D				V=2
	245	PALE	43 NS	2041.0	2053.3	21.5	57.0			QL=5 ST=2 TYP=1
	245	SGMR	43 NS	2311.6	2338.5	30.4D	180.0			QL=6 ST=2 TYP=1
	3750	TYKW	20 GRF	0125.0	0145.0	60.0	2.0	1.0		
	4995	ATHN	49 GB	0243.0	0837.1	354.1D				QL=2 ST=2 TYP=7
	650	GORK	20 GRF	0416.8	0654.0	386.9	11.0			
	3750	TYKW	21 GRF	0505.0	0610.0	160.0	2.0	1.0		
	3750	TYKW	5 S	0543.0	0544.4	6.0	2.0	0.5		
	410	LEAR	47 GB	0744.3	0744.6	.5	74.0			QL=6 ST=2 TYP=5
	610	LEAR	8 S	0744.3	0744.6	.3	9.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	0837.1	0840.6	7.9	26.0			QL=2 ST=3 TYP=3
	2695	ATHN	20 GRF	0837.1	0840.6	7.9	8.0			QL=6 ST=3 TYP=2
	6100	KISV	3 S	0837.6	0840.6	5.0	19.0			
	2950	GORK	22 GRF	0839.0	0840.7	21.7	10.0			
2695	LEAR	4 S/F	0839.8	0840.6	5.0	11.0			QL=6 ST=2 TYP=3	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
23	4995	LEAR	4 S/F	0839.8	0840.6	5.0	28.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	0840.0	0840.7	5.0	14.0	4.0		
	3750	TYKW	29 PBI	0845.0		25.00U	2.0	1.00U		
	113	POTS	4 S/F	0845.2	0845.6	1.1	150.0	15.0		
	2800	OTTA	27A RF	1230.0		85.0	3.0	2.4		
	2800	OTTA	24 R	1230.0	1255.0	25.0	3.0	1.5		
	2800	OTTA	24P R	1255.0		50.0	3.0			
	6100	KISV	1 S	1300.7	1301.0	1.0	4.0			
	2800	OTTA	1 S	1322.0	1323.0	3.0	2.8	1.3		
	2800	OTTA	26 FAL	1345.0	1355.0	10.0	-3.0	-1.5		
	2800	OTTA	21 GRF	1710.0	1845.0	220.0	4.0	2.2		
	2800	OTTA	3 S	1816.0	1816.9	4.0	12.0	4.0		
	4995	PALE	8 S	1816.6	1816.8	.7	17.0			QL=6 ST=2 TYP=3
	4995	SGMR	8 S	1816.6	1816.8	.7	21.0			QL=6 ST=2 TYP=3
2695	SGMR	8 S	1816.6	1816.8	.7	18.0			QL=6 ST=2 TYP=3	
24	100	GORK	44 NS	0257.0E		546.0D		5.0		
	127	TORN	43 NS	0725.0	0910.7	155.0	10.0			V=1
	2695	PENT	20 GRF	0005.0	0020.0	40.0	2.4	1.8		
	3750	TYKW	21 GRF	0010.0	0018.0	45.0	2.0	1.0		
	3750	TYKW	5 S	0029.0	0033.2	14.0	2.0	1.0		
	500	HIRA	27 RF	0040.0	0141.8	75.0	4.0	1.0		MR
	3750	TYKW	20 GRF	0124.0	0131.0	45.0	2.0	1.0		
	245	LEAR	47 GB	0401.5	0401.6	1.0	61.0			QL=6 ST=2 TYP=5
	3750	TYKW	20 GRF	0530.0	0604.0	135.0	4.0	2.0		
	430	KRAK	8 S	0842.9	0843.0	.2	15.0			
	3100	CRIM	26 FAL	0930.0	1100.0		9.0			
	930	BORD	41 F	1007.1	1007.2	.2	17.0	2.0		
	430	KRAK	8 S	1041.5	1041.7	.5	31.0			
	29	UPIC	45 C	1202.1	1203.4	2.3				
	33	UPIC	45 C	1202.5	1204.2	2.2				
	930	BORD	8 S	1501.7	1501.7	.1	72.0	1.0		
	2695	PENT	20 GRF	1517.0	1520.0	20.0	2.2	1.0		
	4995	ATHN	20 GRF	1554.3	1602.8	14.0	11.0			QL=2 ST=2 TYP=2
	245	SGMR	47 GB	1559.8	1601.8	3.8	130.0			QL=6 ST=2 TYP=5
	2695	ATHN	4 S/F	1601.3	1602.3	2.7	11.0			QL=6 ST=2 TYP=3
	930	BORD	3 S	1601.3	1602.3	4.0	19.0	9.0		
	4995	SGMR	4 S/F	1601.5	1602.6	3.1	11.0			QL=6 ST=2 TYP=3
	2800	PENT	2 S/F	1601.6	1602.0	3.0	8.8	4.4		
	1415	ATHN	4 S/F	1601.6	1602.3	3.9	13.0			QL=6 ST=2 TYP=3
	8800	SGMR	4 S/F	1601.6	1602.8	2.9	15.0			QL=6 ST=2 TYP=3
	1415	SGMR	8 S	1601.8	1602.1	2.0	35.0			QL=6 ST=2 TYP=3
	610	SGMR	8 S	1601.8	1602.5	.8	22.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	1602.6	1603.3	3.0	17.0	*		QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1907.0	1920.0	45.0	2.4	1.2		
200	HIRA	46 C	2040.0	2040.2	1.8	125.0	5.0			
245	PALE	47 GB	2040.1	2040.3	.5	68.0			QL=6 ST=2 TYP=5	
2800	OTTA	1 S	2047.0	2047.2	3.0	2.2	1.0			
3750	TYKW	20 GRF	2205.0	2230.0	90.0	2.0	1.0			
245	LEAR	8 S	2324.0	2324.1	.6	27.0			QL=6 ST=2 TYP=3	
25	260	ONDR	44 NS	0559.0E		491.0D	35.0			
	2695	PENT	20 GRF	0040.0	0045.0	35.0	2.0	1.0		
	2000	TYKW	20 GRF	0040.0	0046.0	35.0	2.0	1.0		
	3750	TYKW	20 GRF	0040.0	0104.0	120.0	2.0	1.0		
	2000	TYKW	20 GRF	0141.0	0145.5	35.0	2.0	0.7		
	100	GORK	46 C	0309.4	0309.9	1.8	25.0D			
	100	GORK		0309.4	0310.3		25.0D			
	2950	GORK	23 GRF	0315.0E	0912.3	525.0D	10.0			
	3750	TYKW	45 C	0355.0	0358.2	5.0	9.0	4.0		
	2902	YUNN	3 S	0355.0	0358.2	9.8	36.0			
	2000	TYKW	45 C	0355.0	0358.3	5.0	9.0	4.0		
	2950	GORK	2 S/F	0355.4	0358.0	6.2	9.0			
	3653	YUNN	3 S	0355.4	0358.2	9.8	15.0			
	9400	TYKW	20 GRF	0356.0	0358.0	35.0	3.0	1.5		
	2000	TYKW	29 PBI	0400.0		40.0	2.0	1.0		
	3750	TYKW	29 PBI	0400.0		60.0	3.0	1.0		
	410	LEAR	8 S	0438.8	0439.1	.5	13.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0439.0	0439.1	.1	5.0			QL=6 ST=2 TYP=3
	3750	TYKW	20 GRF	0530.0	0537.0	50.0	2.0	1.0		
2950	GORK	4 S/F	0602.6	0606.1	4.0	24.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
25	2950	GORK	45 C	0611.9	0612.5	6.0	24.0			
	2950	GORK		0611.9	0614.6		55.0			
	2000	TYKW	21 GRF	0651.0	0658.0	40.0	2.0	1.0		
	3750	TYKW	5 S	0652.0	0653.3	3.0	4.0	1.5		
	2000	TYKW	5 S	0652.0	0653.3	3.0	4.0	1.5		
	3100	CRIM	1 S	0652.0	0653.4	3.0	6.0	2.0		
	2950	GORK	4 S/F	0701.0	0703.6	4.5	24.0			
	430	KRAK	42 SER	0725.5	0725.7	6.7	27.0			
	245	LEAR	8 S	0813.0	0813.1	.3	30.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0813.1	0813.1	.2	10.0			QL=6 ST=2 TYP=3
	6100	KISV	1 S	0831.2	0831.6	1.5	3.0			
	6100	KISV	20 GRF	0857.0	0910.5	23.5	4.0			
	9100	GORK	20 GRF	0903.7	0911.3	12.5	7.0			
	204	IZMI	41 F	0925.0	0925.5	3.5	67.0			
	430	KRAK	8 S	0925.8	0926.0	.7	15.0			
	33	UPIC	42 SER	0926.5	0953.3	55.0				
	29	UPIC	42 SER	0927.0	0953.5	54.1				
	430	KRAK	8 S	0946.7	0947.2	1.0	17.0			
	536	ONDR	41 F	0948.0	0949.0	6.0	28.0			
	6100	KISV		0948.5	0949.9		7.0			
	950	GORK	46 C	0948.5	0952.0	5.4	27.0			
	6100	KISV	46 C	0948.5	0952.5	6.5	41.0			
	3000	POTS	4 S/F	0948.5	0952.5	5.5	22.0			
	3100	CRIM	40 F	0948.5	0952.8	6.0	16.0	5.0		
	650	GORK	4 S/F	0948.5	0953.2	7.1	27.0			
	950	GORK		0948.5	0953.3		44.0			
	6100	KISV		0948.5	0953.3		31.0			
	1470	POTS	4 S/F	0948.5	0953.5	7.5	35.0			
	2950	GORK	4 S/F	0948.6	0952.5	6.0	21.0			
	810	KRAK	7 C	0948.8	0953.2	6.0	32.0	9.0		
	3100	BERN	4 S/F	0949.0	0952.5	7.0	33.0			
	8400	BERN	4 S/F	0949.0	0952.6	7.0	118.0			
	19600	BERN	4 S/F	0949.0	0952.6	7.0	113.0			
	11800	BERN	4 S/F	0949.0	0952.6	7.0	163.0			
	5200	BERN	4 S/F	0949.0	0952.6	7.0	74.0			
	808	ONDR	40 F	0949.0	0953.5	6.0	37.0			
	430	KRAK	41 F	0949.0	0954.0	6.5	9.0	4.0		
	9100	GORK	46 C	0949.8	0952.5	5.3	96.0			
	9100	GORK		0949.8	0953.3		72.0			
	9500	POTS	4 S/F	0950.0	0952.5	5.0	102.0			
	204	IZMI	41 F	0950.0	0956.2	9.0	200.0			
	113	POTS	42 SER	0950.0	0959.5	16.0	800.0	15.0		III
	100	GORK	46 C	0950.1	0950.4	13.4	20.00			
	100	GORK		0950.1	0959.5		1600.0			
	35000	BERN	4 S/F	0952.0	0952.6	7.0	60.0			
	650	GORK	29 PBI	0953.9	0954.0	5.9	5.0			
	127	TORN	47 GB	0955.4	0959.4	6.0	830.0	130.0		
	2800	OTTA	20 GRF	1120.0	1205.0	115.0	3.8	1.6		
	2800	OTTA	21 GRF	1450.0	1455.0	85.0	3.2	1.6		
	3000	POTS	1 S	1452.5	1454.0	2.5	15.5			
1470	POTS	1 S	1452.5	1454.0	2.5	3.0				
2800	OTTA	1 S	1453.0	1454.0	2.0	2.2	1.4			
2800	OTTA	20 GRF	1815.0	1822.0	35.0	2.0	1.0			
2800	OTTA	22 GRF	1903.0	1912.0	37.0	3.0	1.2			
245	PALE	47 GB	2101.6	2101.8	.5	62.0			QL=6 ST=2 TYP=5	
245	SGMR	47 GB	2101.6	2101.8	.5	57.0			QL=6 ST=2 TYP=5	
3750	TYKW	5 S	2114.0	2119.0	15.0	2.0	0.7			
245	PALE	8 S	2123.8	2123.8	.3	22.0			QL=6 ST=2 TYP=3	
208	VORO	4 S/F	2153.0	2155.0	4.0	300.00				
500	HIRA	7 C	2153.6	2154.0	2.5	25.0	8.0		ML	
245	SGMR	49 GB	2154.1	2154.6	2.4	570.0			QL=6 ST=2 TYP=6	
245	PALE	49 GB	2154.3	2154.6	2.2	620.0			QL=6 ST=2 TYP=6	
200	HIRA	8 S	2154.4	2154.5	.5	315.0			0	
410	PALE	47 GB	2154.5	2154.8	.8	119.0			QL=6 ST=2 TYP=5	
410	SGMR	8 S	2154.5	2154.8	1.1	47.0			QL=6 ST=2 TYP=3	
3750	TYKW	5 S	2200.0	2203.5	20.0	2.0	1.0			
9400	TYKW	5 S	2208.0	2210.0	12.0	6.0	3.0			
9400	TYKW	31 ABS	2220.0	2240.0	100.0	-4.0	-2.0			
3750	TYKW	31 ABS	2220.0	2344.0	91.0	-3.0	-1.5			
2000	TYKW	32 ABS	2223.0	2354.0	131.00	-2.0	-1.0			
500	HIRA	7 C	2322.3	2322.5	4.0	45.0	5.0		0	

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (2 Hz)		
25	1000	TYKW	5 S	2323.0	2325.7	9.0	6.0	2.0		
	2000	TYKW	45 C	2323.5	2325.7	6.0	14.0	5.0		
	3750	TYKW	45 C	2324.0	2325.6	6.0	41.0	12.0		
	9400	TYKW	45 C	2324.0	2325.6	4.0	80.0	25.0		
	2695	PENT	3 S	2324.0	2325.8	6.0	22.0	8.4		
	4995	PALE	47 GB	2324.6	2325.6	2.2	55.0			QL=6 ST=2 TYP=5
	17000	NOBE	1 S	2324.6	2325.6	4.0	34.0			0
	8800	PALE	47 GB	2324.8	2325.5	2.3	81.0			QL=6 ST=2 TYP=5
	15400	PALE	8 S	2325.3	2325.6	1.3	42.0			QL=6 ST=2 TYP=3
	410	PALE	8 S	2325.3	2326.5	1.3	21.0			QL=6 ST=2 TYP=3
	9400	TYKW	29 PBI	2328.0		10.0	4.0	2.0		
	245	PALE	8 S	2328.3	2328.8	.7	26.0			QL=6 ST=2 TYP=3
	410	PALE	8 S	2336.0	2336.1	.3	19.0			QL=6 ST=2 TYP=3
	2695	PENT	20 GRF	2347.0	2349.0	105.0	3.2	1.6		
	2000	TYKW	5 S	2348.0	2348.8	3.0	2.0	0.7		
	3750	TYKW	5 S	2348.0	2348.8	3.0	3.0	1.0		
	245	PALE	8 S	2351.6	2351.8	1.9	44.0			QL=6 ST=2 TYP=3
3750	TYKW	20 GRF	2353.0	0005.0	85.0	2.0	1.0			
410	PALE	8 S	2355.0	2355.1	.3	21.0			QL=6 ST=2 TYP=3	
26	245	PALE	47 GB	0046.8	0047.0	.5	67.0			QL=6 ST=2 TYP=5
	500	HIRA	7 C	0340.2	0340.3	1.0	10.0	4.0		0
	2000	TYKW	20 GRF	0432.0	0452.0	50.0	3.0	1.0		
	3750	TYKW	20 GRF	0443.0	0452.0	75.0	5.0	2.0		
	9400	TYKW	20 GRF	0445.0	0455.0	65.0	2.0	1.0		
	245	LEAR	8 S	0523.5	0523.6	.1	24.0			QL=5 ST=2 TYP=3
	430	KRAK	8 S	1032.0	1032.2	.3	14.0			
	810	KRAK	8 S	1032.2	1032.2	.1	5.0			
	430	KRAK	8 S	1037.8	1037.8	.2	11.0			
	2800	OTTA	20 GRF	1240.0	1310.0	55.0	2.0	1.0		
	245	SGMR	8 S	1639.1	1640.1	1.2	26.0			QL=6 ST=2 TYP=3
	245	SGMR	8 S	1756.1	1756.1	.4	26.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	2010.0	2025.0	50.0	2.6	1.8		
	2930	VORO	45 C	2320.0	2327.0	15.0	223.0			
245	LEAR	47 GB	2357.0	2357.1	1.1	62.0			QL=5 ST=2 TYP=5	
27	260	ONDR	44 NS	0540.0E		495.0D	33.0			
	245	LEAR	44 NS	2312.0E	2331.1	37.3D	13.0			QL=6 ST=2 TYP=1
	245	LEAR	8 S	0314.5	0314.6	.5	31.0			QL=6 ST=2 TYP=3
	650	GORK	20 GRF	0542.0	0615.0	53.0	6.5			
	245	LEAR	8 S	0704.0	0704.1	.1	13.0			QL=6 ST=2 TYP=3
	536	ONDR	8 S	0757.0	0757.0	1.0	14.0			
	245	LEAR	8 S	0858.6	0858.6	.2	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0859.3	0859.5	.3	10.0			QL=6 ST=2 TYP=3
	6100	KISV	2 S/F	1105.6	1106.1	1.0	4.0			
	810	KRAK	2 S/F	1146.0	1146.0	1.0	56.0	5.0		
	430	KRAK	42 SER	1146.3	1147.0	1.5	14.0			
	610	SGMR	47 GB	1146.8	1146.8	.5	75.0			QL=6 ST=2 TYP=5
	410	SGMR	8 S	1146.8	1146.8	1.2	40.0			QL=6 ST=2 TYP=3
	536	ONDR	41 F	1147.0	1147.5	1.0	45.0			
	245	SGMR	8 S	1416.3	1416.5	.7	37.0			QL=6 ST=2 TYP=3
	245	SGMR	8 S	1429.8	1430.1	.8	53.0			QL=6 ST=2 TYP=3
	410	SGMR	8 S	1430.1	1430.6	2.0	13.0			QL=6 ST=2 TYP=3
	15400	SGMR	8 S	1611.3	1612.3	1.8	29.0			QL=6 ST=2 TYP=3
	2800	OTTA	240 R	1650.0	1657.0	7.0	1.4	.7		
	2800	OTTA	240 R	1745.0	1755.0	10.0	2.0	1.0		
	200	HIRA	42 SER	2047.0	2047.1	2.7	170.0			0
	100	HIRA	46 C	2116.7	2117.0	.8	160.0	43.0		
	500	HIRA	7 C	2125.7	2126.5	3.0	20.0	7.0		0
2695	PENT	240 R	2150.0	2245.0	55.0	2.4	.8			
2695	SGMR	4 S/F	2302.8	2305.6	3.2	21.0			QL=6 ST=2 TYP=3	
4995	SGMR	8 S	2307.3	2307.3	.3	17.0			QL=6 ST=2 TYP=3	
1000	TYKW	45 C	2342.0	2344.4	4.0	42.0	6.0			
500	HIRA	42 SER	2346.4	2346.9	11.0	13.0			0	
2695	PENT	20 GRF	2350.0		115.0D	7.4				
610	LEAR	4 S/F	2354.5	2357.1	3.8	34.0			QL=6 ST=2 TYP=3	
28	410	LEAR	43 NS	0255.0	0336.3	155.0	30.0			QL=6 ST=2 TYP=1
	245	LEAR	43 NS	0255.0	0403.8	155.0	32.0			QL=6 ST=2 TYP=1
	260	ONDR	44 NS	0620.0E		467.0D	20.0			
	9400	TYKW	20 GRF	0020.0	0200.0	220.0	10.0	5.0		

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
28	3750	TYKW	20 GRF	0020.0	0200.0	240.0	9.0	4.0		
	2000	TYKW	20 GRF	0040.0	0140.0	160.0	2.0	1.0		
	245	LEAR	4 S/F	0132.6	0132.6	2.2	11.0			QL=6 ST=2 TYP=3
	9400	TYKW	20 GRF	0430.0	0500.0	90.0	3.0	1.5		
	3750	TYKW	20 GRF	0435.0	0500.0	100.0	2.0	1.0		
	500	HIRA	8 S	0457.7	0457.9	.5	90.0			0
	2000	TYKW	5 S	0522.7	0522.9	0.5	3.0	1.0		
	33	UPIC	42 SER	0547.0	0714.4	259.2				
	29	UPIC	42 SER	0547.5	0907.7	258.7				
	2695	LEAR	47 GB	0553.3	0554.1	1.5	65.0			QL=6 ST=2 TYP=5
	2000	TYKW	20 GRF	0642.0	0648.0	35.0	2.0	1.0		
	410	LEAR	47 GB	0651.1	0651.6	1.0	66.0			QL=6 ST=2 TYP=5
	113	POTS	4 S/F	0713.5	0713.7	.3	1400.0	250.0		111
	410	LEAR	8 S	0806.0	0806.1	.1	11.0			QL=6 ST=2 TYP=3
	245	LEAR	47 GB	0806.0	0806.1	.1	53.0			QL=6 ST=2 TYP=5
	245	LEAR	8 S	2313.8	2313.8	.2	21.0			QL=6 ST=2 TYP=3
245	LEAR	8 S	2329.6	2329.8	.5	18.0			QL=6 ST=2 TYP=3	
29	410	LEAR	43 NS	0231.6	0241.6	88.4	17.0			QL=6 ST=2 TYP=1
	245	LEAR	43 NS	0244.3	0320.3	405.7D	25.0			QL=6 ST=2 TYP=1
	260	ONDR	43 NS	0610.0		30.0D	34.0			
	2000	TYKW	45 C	0015.7	0016.6	3.0	5.0	1.0		
	245	LEAR	8 S	0107.5	0108.5	1.3	9.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0109.1	0109.3	.2	13.0			QL=6 ST=2 TYP=3
	610	LEAR	8 S	0111.8	0111.8	.5	10.0			QL=6 ST=2 TYP=3
	3750	TYKW	5 S	0116.0	0117.7	7.0	2.0	0.7		
	9400	TYKW	5 S	0117.0	0118.0	7.0	2.0	1.0		
	2000	TYKW	20 GRF	0150.0	0230.0	110.0	1.5	0.7		
	3750	TYKW	21 GRF	0150.0	0230.0	100.0	2.0	1.0		
	3750	TYKW	45 C	0202.0	0209.5	17.0	4.0	1.5		
	610	LEAR	8 S	0510.8	0511.1	.5	18.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0618.6	0618.6	.4	49.0			QL=6 ST=2 TYP=3
	260	ONDR	1 S	1057.6	1057.7	2.0	4.0	3.0		
	260	ONDR	41 F	1340.0	1403.0U	27.0D	16.0			
245	PALE	47 GB	1810.3	1810.5	.3	110.0			QL=6 ST=2 TYP=5	
3750	TYKW	20 GRF	2255.0	2311.0	50.0	2.0	1.0			
30	2695	PENT	20 GRF	0002.0	0009.0	30.0	17.2	7.4		
	3750	TYKW	21 GRF	0037.0	0043.0	65.0	2.0	1.0		
	3750	TYKW	5 S	0101.0	0102.4	6.0	2.0	0.5		
	2695	LEAR	47 GB	0310.1	0310.1	.2	65.0			QL=6 ST=2 TYP=5
	9400	TYKW	20 GRF	0442.0	0454.0	70.0	10.0	3.5		
	2000	TYKW	21 GRF	0442.0	0510.0	80.0	2.0	1.0		
	2840	PEKG	3 S	0443.0	0444.3	9.0	26.4	3.7		
	3750	TYKW	21 GRF	0443.0	0457.0	70.0	3.0	1.5		
	2000	TYKW	5 S	0443.3	0444.3	2.5	6.0	1.5		
	3750	TYKW	5 S	0444.0	0444.2	2.0	9.0	2.0		
	6100	K1SV	1 S	0444.0	0444.2	1.0	3.0			
	2950	GORK	1 S	0444.0	0444.3	1.0	11.0			
	2695	ATHN	8 S	0444.1	0444.3	.5	13.0			QL=5 ST=3 TYP=3
	4995	ATHN	8 S	0444.1	0444.3	.5	9.0			QL=2 ST=2 TYP=3
	2695	LEAR	8 S	0513.3	0513.5	1.0	35.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0547.1	0547.3	.5	32.0			QL=6 ST=2 TYP=3
	3750	TYKW	20 GRF	0630.0	0635.0	45.0	2.0	1.0		
	3750	TYKW	5 S	0741.0	0743.0	15.0	3.0	1.0		
	260	ONDR	41 F	0802.0	0821.0	20.0	26.0			
	2800	OTTA	20 GRF	1105.0	1135.0	90.0	2.6	1.3		
	430	KRAK	8 S	1117.5	1118.0	.7	11.0			
	810	KRAK	8 S	1118.0	1118.0	.1	5.0			
2800	OTTA	21 GRF	1340.0	1450.0	100.0	4.0	2.0			
2800	OTTA	1 S	1340.2	1341.0	1.5	2.4	1.2			
2800	OTTA	21 GRF	1528.0	1700.0	180.0	6.2	3.1			
2800	OTTA	1 S	1628.3	1628.6	1.0	2.6	1.3			
3750	TYKW	20 GRF	2130.0	2142.0	35.0	3.0	1.5			
9400	TYKW	5 S	2138.0	2142.5	14.0	4.0	1.5			
9400	TYKW	5 S	2222.3	2222.8	2.0	4.0	1.5			
2800	OTTA	21 GRF	2255.0	0035.0	170.0D	13.6				
1000	TYKW	28 PRE	2256.0	2352.0	64.0D	5.0	2.5D			
2000	TYKW	28 PRE	2258.0	2352.0	64.0	8.0	4.0			
3750	TYKW	5 S	2301.0	0009.0	85.0	23.0	9.0			
9400	TYKW	20 GRF	2310.0	0010.0	240.0	12.0	6.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean (W/m ² Hz)		
30	500	HIRA	45 C	2341.0	0005.0	48.0	23.0	8.0	0	
31	2000	TYKW	5 S	0002.0	0009.0	30.0	25.0	17.00		
	1000	TYKW	45 C	0003.0E	0008.2	28.00	25.0	13.00		
	3750	TYKW	30 PBI	0026.0		330.0	14.0	6.0		
	1000	TYKW	29 PBI	0031.0		130.0	2.0	1.0		
	2000	TYKW	29 PBI	0032.0		160.0	7.0	3.5		
	3750	TYKW	5 S	0317.5	0318.4	2.0	1.5	0.5		
	2950	GORK	20 GRF	0320.0	0329.5	73.0	3.3			
	9400	TYKW	45 C	0326.0	0329.3	6.0	8.0	4.0		
	2000	TYKW	20 GRF	0327.0	0329.0	35.0	1.5	0.7		
	3750	TYKW	5 S	0327.0	0329.4	5.0	8.0	4.0		
	9100	GORK	1 S	0328.5	0329.3	1.4	9.2	4.5		
	3750	TYKW	29 PBI	0332.0		65.0	3.0	1.5		
	9400	TYKW	30 PBI	0332.0		35.0	4.0	2.0		
	610	LEAR	8 S	0338.3	0338.6	.3	3.0			QL=6 ST=2 TYP=3
	245	LEAR	8 S	0338.3	0338.6	.3	18.0			QL=6 ST=2 TYP=3
	410	LEAR	8 S	0338.3	0338.6	.3	6.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	0344.0	0350.0	20.0	3.0	1.5		
	245	LEAR	8 S	0414.6	0414.8	.2	32.0			QL=6 ST=2 TYP=3
	9400	TYKW	5 S	0450.0	0450.3	2.0	3.0	1.0		
	3750	TYKW	20 GRF	0453.0	0458.0	30.0	1.5	0.7		
	2000	TYKW	5 S	0455.0	0500.0	20.0	1.5	0.7		
	9400	TYKW	5 S	0507.0	0508.0	11.0	3.0	1.0		
	3750	TYKW	20 GRF	0704.0	0713.0	65.0	2.0	1.0		
	2000	TYKW	20 GRF	0705.0	0711.0	30.0	2.0	1.0		
	9400	TYKW	20 GRF	0708.0	0711.0	35.0	4.0	2.0		
	29	UPIC	45 C	0749.1	0749.2	2.1				
	33	UPIC	45 C	0749.4	0749.4	2.1				
	260	ONDR	41 F	0904.0	0915.0	13.0	8.0			
	11800	BERN	3 S	0942.6	0943.8	17.0	43.0			
	8400	BERN	3 S	0942.6	0943.8	17.0	70.0			
	5200	BERN	3 S	0942.6	0943.8	17.0	53.0			
	9500	POTS	29 PBI	0943.0	0943.8	22.0	45.0			
	9100	GORK	3 S	0943.2	0943.8	4.3	49.0	25.0		
	6100	KISV	3 S	0943.2	0943.9	4.5	31.0			
	4995	ATHN	4 S/F	0943.3	0943.6	2.2	26.0			QL=2 ST=2 TYP=3
	8800	ATHN	4 S/F	0943.3	0943.6	2.2	38.0			QL=6 ST=3 TYP=3
	6100	KISV	29 PBI	0947.7	0948.5	26.0	3.0			
	33	UPIC	45 C	0950.5	0950.7	3.0				
	29	UPIC	45 C	0950.7	0951.0	3.0				
	6100	KISV	1 S	1230.7	1230.9	.5	4.0			
	2800	OTTA	21 GRF	1240.0	1255.0	50.0	4.0	2.0		
	8800	ATHN	4 S/F	1243.5	1247.3	7.0	15.0			QL=6 ST=2 TYP=3
	6100	KISV	46 C	1245.2	1247.4	18.0	11.0			
	3100	BERN	20 GRF	1245.7	1247.4	23.0	17.0			
	5200	BERN	20 GRF	1245.7	1247.4	23.0	23.0			
	8400	BERN	20 GRF	1245.7	1256.6	23.0	28.0			
	2695	ATHN	4 S/F	1246.3	1247.3	6.2	10.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	1246.3	1247.3	4.8	13.0			QL=2 ST=2 TYP=3
	2800	OTTA	2 S/F	1246.5	1247.2	5.0	8.0	4.0		
	6100	KISV		1249.0	1249.3		9.0			
	6100	KISV		1252.0	1252.3		7.0			
	8800	ATHN	8 S	1254.1	1254.6	.9	11.0			QL=6 ST=2 TYP=3
	6100	KISV		1255.1	1255.2		10.0			
	6100	KISV		1348.0	1348.4		14.0			
	6100	KISV	45 C	1348.0	1349.4	3.0	24.0			
	9500	POTS	29 PBI	1348.0	1349.5	32.0	20.0			
	3000	POTS	29 PBI	1348.0	1349.7	32.0	25.0			
	5200	BERN	3 S	1348.1	1349.3	22.0	47.0			
	8400	BERN	3 S	1348.1	1349.3	22.0	42.0			
	3100	BERN	3 S	1348.1	1349.3	22.0	34.0			
	8800	ATHN	4 S/F	1348.1	1349.5	2.4	23.0			QL=6 ST=2 TYP=3
	1415	ATHN	4 S/F	1348.1	1349.6	4.9	7.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	1348.1	1349.6	6.9	18.0			QL=6 ST=2 TYP=3
	4995	ATHN	4 S/F	1348.1	1349.6	6.5	38.0			QL=2 ST=2 TYP=3
	2800	OTTA	3 S	1348.5	1350.0	3.5	20.0	8.0		
	4995	SGMR	8 S	1349.0	1349.3	1.0	30.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1349.1	1349.5	1.0	20.0			QL=6 ST=2 TYP=3
	15400	SGMR	8 S	1349.1	1349.5	1.0	10.0			QL=6 ST=2 TYP=3
	8800	SGMR	8 S	1349.1	1349.5	1.0	20.0			QL=6 ST=2 TYP=3

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
31	6100	KISV	29 PBI	1351.3	1351.3	19.0	7.0			
	2800	OTTA	29 PBI	1352.0	1352.0	38.0	7.2	3.6		
	2800	OTTA	23 GRF	1450.0	1840.0	405.0	8.4	3.8		
	2800	OTTA	20 GRF	1457.0	1500.0	45.0	5.2	2.4		
	1800	BERN	21 GRF	1457.5	1459.1	33.0	32.0			
	8400	BERN	21 GRF	1457.5	1459.2	33.0	55.0			
	5200	BERN	21 GRF	1457.5	1459.4	33.0	33.0			
	3100	BERN	21 GRF	1457.5	1459.9	33.0	15.0			
	8800	SGMR	4 S/F	1457.8	1459.1	2.3	48.0			QL=6 ST=2 TYP=3
	4995	SGMR	8 S	1458.3	1459.1	1.7	23.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	1458.6	1459.1	2.5	34.0			QL=6 ST=3 TYP=3
	4995	ATHN	4 S/F	1458.6	1459.1	2.5	13.0			QL=2 ST=3 TYP=3
	2695	ATHN	4 S/F	1458.6	1459.6	2.5	7.0			QL=6 ST=3 TYP=3
	610	SGMR	8 S	1652.0	1652.8	2.0	16.0			QL=6 ST=2 TYP=3
	245	PALE	8 S	1652.5	1652.6	1.0	48.0			QL=6 ST=2 TYP=3
	245	SGMR	8 S	1652.5	1652.6	1.0	50.0			QL=6 ST=2 TYP=3
	610	PALE	8 S	1652.6	1652.8	.4	17.0			QL=6 ST=2 TYP=3
	245	PALE	8 S	1752.5	1752.6	.3	21.0			QL=6 ST=2 TYP=3
	2800	OTTA	22 GRF	1810.0	1814.9	16.0	12.0	4.0		
	2695	SGMR	20 GRF	1810.6	1814.8	8.5	13.0			QL=6 ST=2 TYP=2
	4995	SGMR	20 GRF	1813.3	1814.6	4.8	24.0			QL=6 ST=2 TYP=2
	8800	SGMR	20 GRF	1813.3	1814.6	1.8	22.0			QL=6 ST=2 TYP=2
	2800	OTTA	20 GRF	2015.0	2018.0	15.0	4.5	1.4		
	245	PALE	8 S	2043.1	2043.3	.5	38.0			QL=6 ST=2 TYP=3
	245	PALE	47 GB	2126.5	2126.6	.5	160.0			QL=6 ST=2 TYP=5
	245	SGMR	47 GB	2126.5	2126.6	.5	150.0			QL=6 ST=2 TYP=5
	245	PALE	47 GB	2241.1	2241.5	5.7	370.0			QL=6 ST=2 TYP=5
	410	PALE	47 GB	2241.3	2241.5	.5	53.0			QL=6 ST=2 TYP=5
2695	PENT	20 GRF	2340.0	2350.0	40.0	2.6	1.4			
2000	TYKW	20 GRF	2341.0	2351.0	40.0	2.0	1.0			
3750	TYKW	20 GRF	2342.0	2352.0	45.0	4.0	2.0			
245	LEAR	47 GB	2351.3	2354.1	3.7	93.0			QL=6 ST=2 TYP=5	

Reports are received routinely from the following observatories:

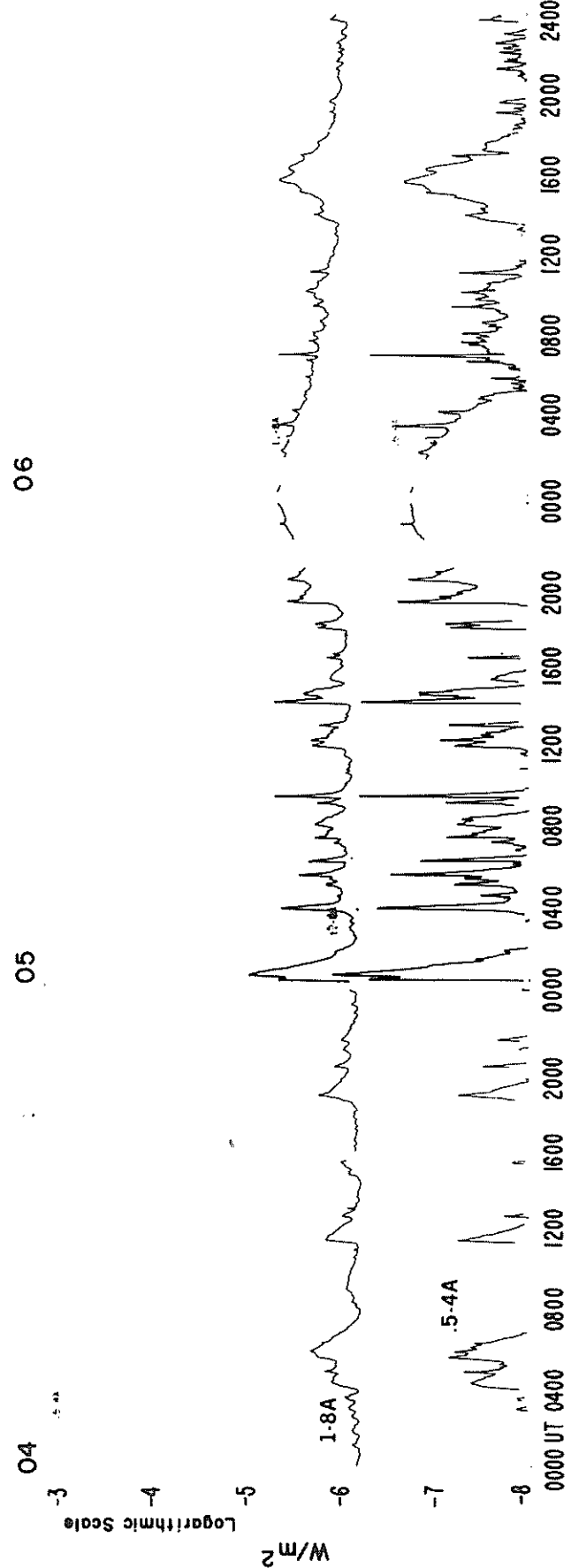
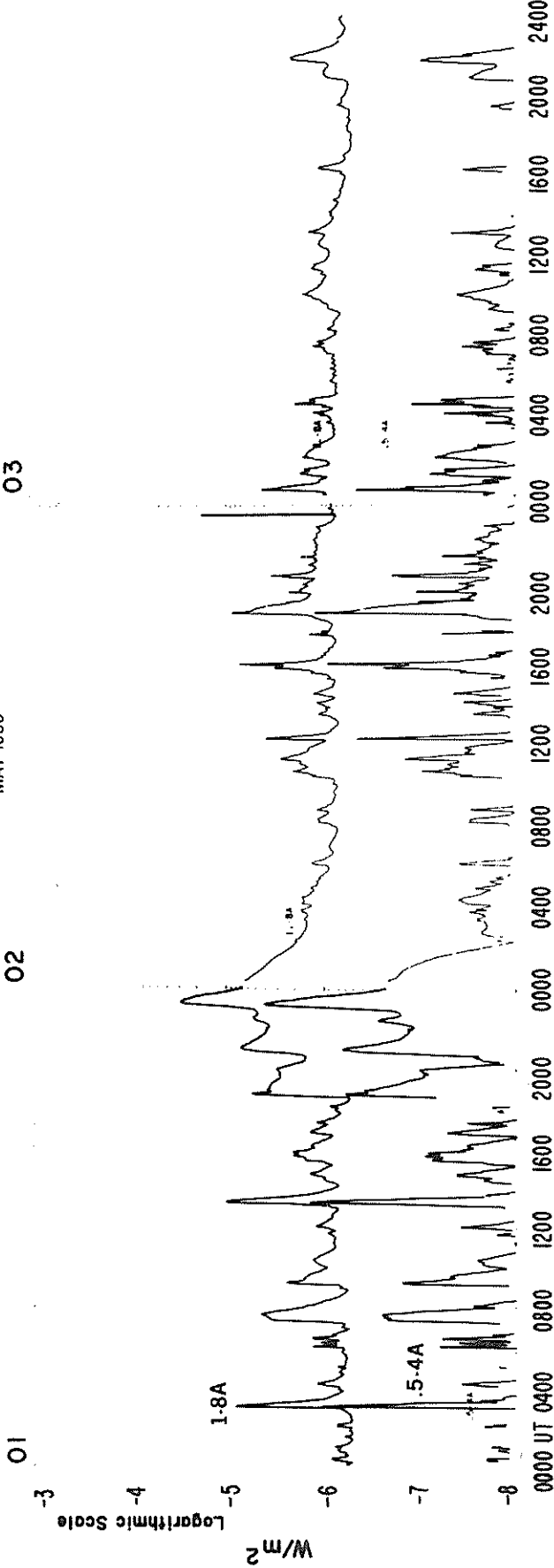
ATHN = Athens	HUAN = Huancayo	NAGO = Nagoya	POTS = Potsdam
BERN = Berne	IRKU = Irkutsk	NOBE = Nobeyama	SAOP = Sao Paulo
BORD = Bordeaux	IZMI = IZMIRAN	ONDR = Ondrejov	SGMR = Sagamore Hill
CRIM = Crimea	KISV = Kislovodsk	OTTA = Ottawa	TORN = Torun
DWIN = Dwingeloo	KRAK = Krakow	PALE = Palehua	TYKW = Toyokawa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

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
				49 Major +
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	24O Rise only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	240F Rise only F	26O Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	24P Post Rise	26F Fall F	32A Absorption A	
			46F Complex F	

SMS - GOES X-RAYS

MAY 1983



SMS - GOES X-RAYS

MAY 1983

07

08

09

-3

-4

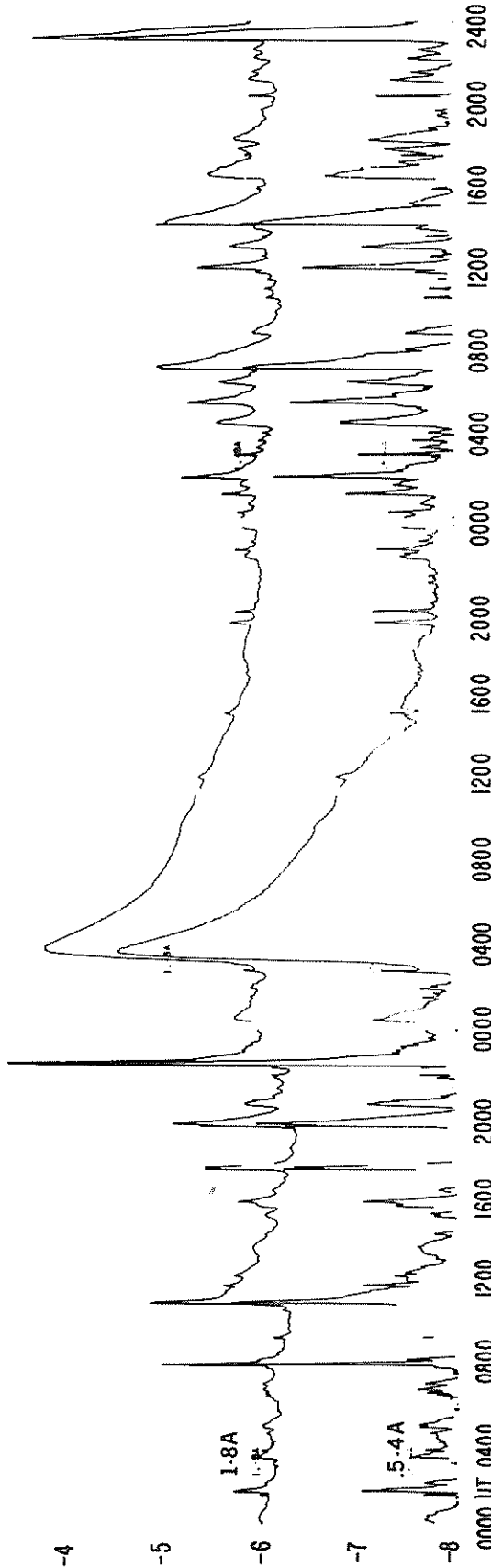
-5

-6

-7

-8

W/m²



10

11

12

-3

-4

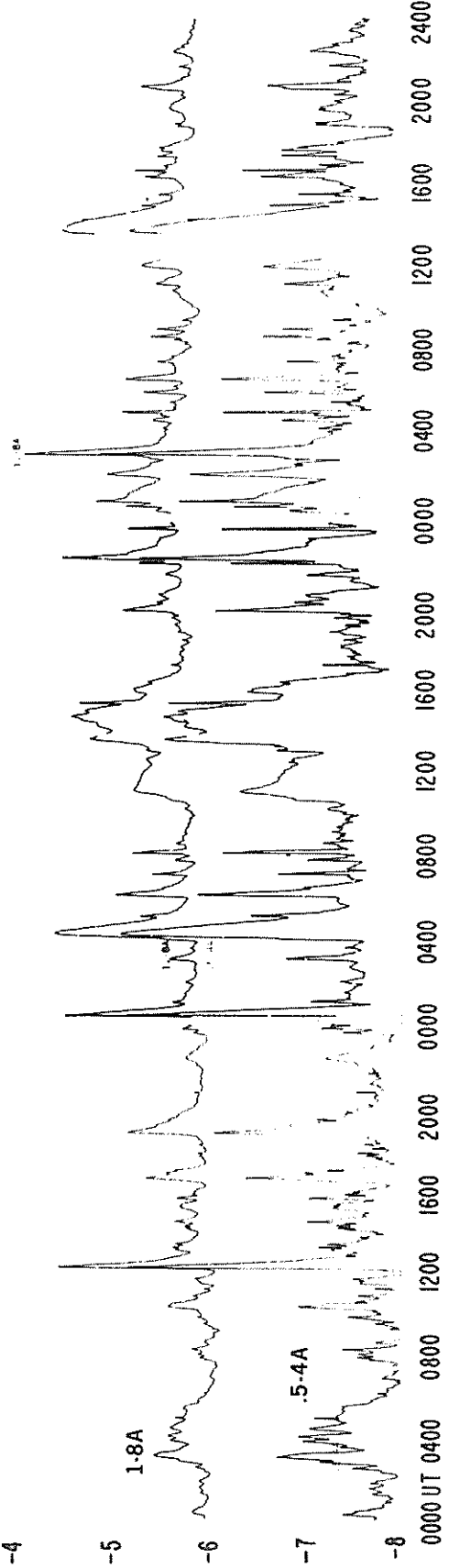
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-6

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-8

W/m²



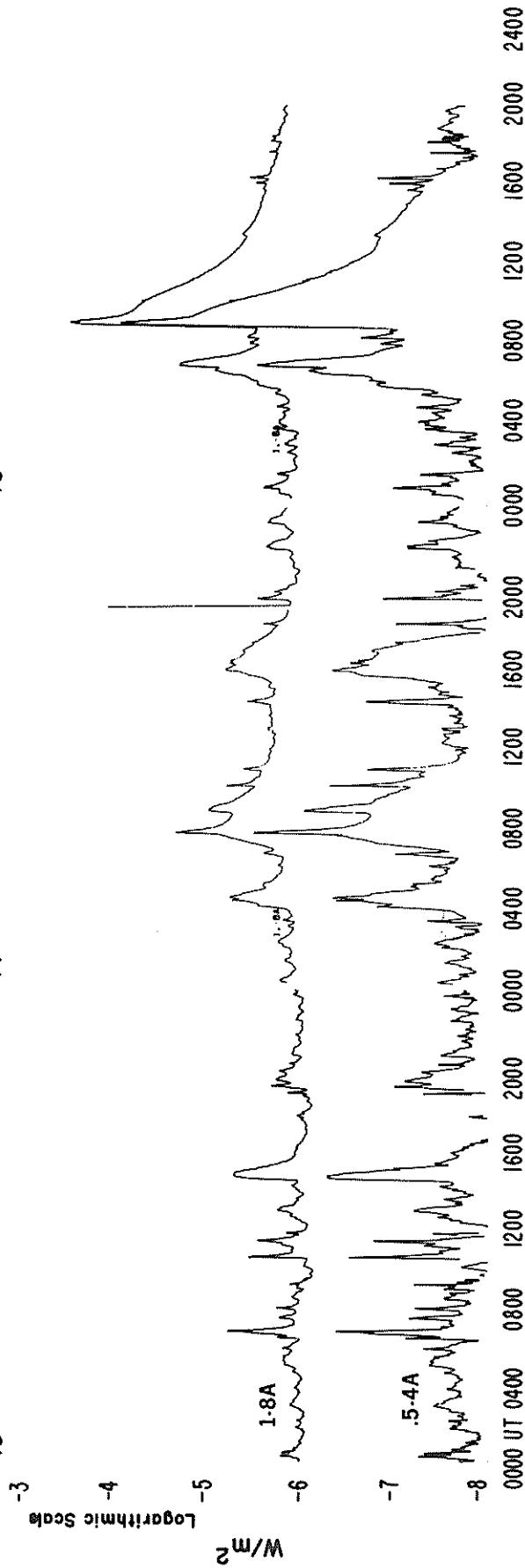
SMS - GOES X-RAYS

MAY 1983

13

14

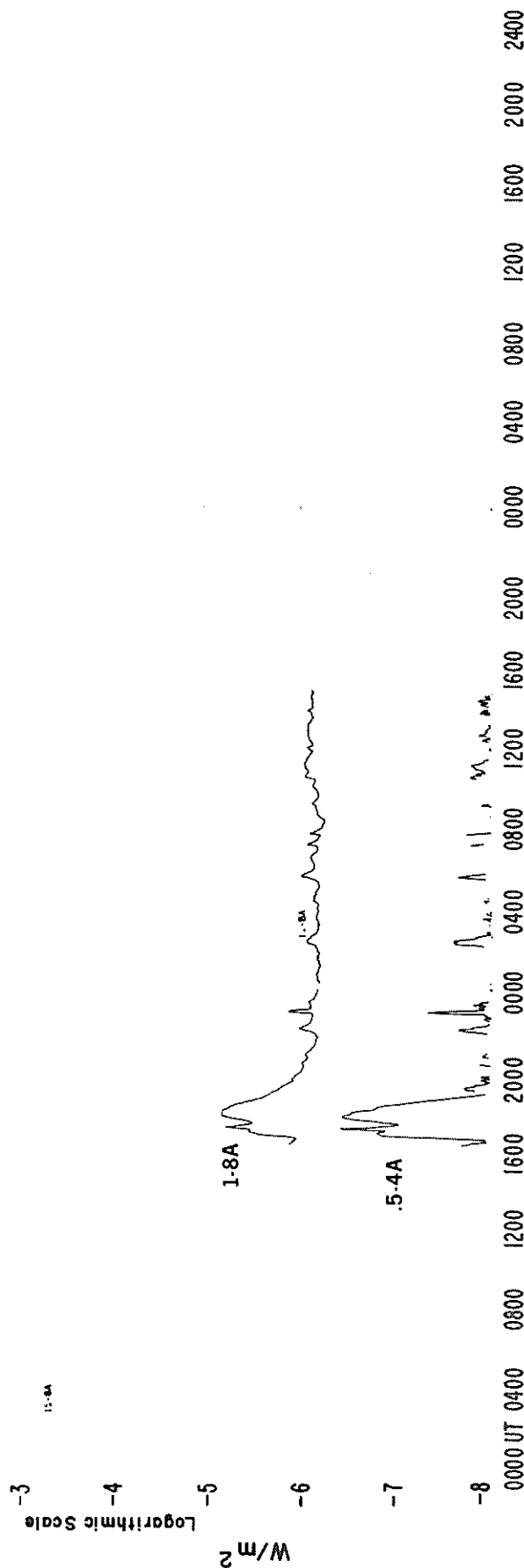
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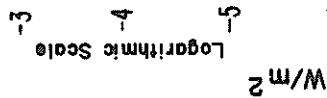
SMS - GOES X-RAYS

MAY 1983

21

20

19



1.4A

1-8A



-7

.5-4A



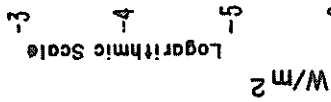
-8

0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

22

23

24



-7

-8

0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

MASS EJECTIONS FROM THE SUN

55
May 83

MAY 1983

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		Start	Max	End	RA°	R/R ₀		
GEOR	May 01	0822	E	0922	D 262	1	H-alpha	S
WEIS	May 01	1441.1		1447.0			Meter	II
GEOR	May 03	0918	E 0937	0958	283	1	H-alpha	S
GEOR	May 05	0730	E	0822	256	1	H-alpha	S
GEOR	May 05	0918	E	0955	105	1	H-alpha	S
GEOR	May 06	0924	E	1004	D 114	1	H-alpha	CB?
GEOR	May 06	0924	E	1004	D 123	1	H-alpha	S
GEOR	May 06	0924	E	1004	D 134	1	H-alpha	CB?
ABST	May 07	0506	E 0508	0518	D 262	0.50	H-alpha	SP
GEOR	May 07	0854	E	0924	D 100	1	H-alpha	CB
CULG	May 07	2216.0		2400.0			Decimeter	IV
CULG	May 07	2219.0		2400.0			Meter	IV
CULG	May 07	2222.0		2257.0			Meter	II Herringbone
SGMR	May 07	2222.1		2238.1			Meter	II
PALE	May 07	2223.1		2237.5			Meter	II
CULG	May 08	0000.0		0136.5			Decimeter; meter	IV
CULG	May 08	0257.0		0410.0			Meter; dekameter	II
LEAR	May 08	0258.3		0311.3			Meter	II
CULG	May 08	0301.0		0333.0			Decimeter	IV Pulsations
CULG	May 08	0305.0		0435.0			Meter	IV
PALE	May 08	0305.0		0314.0			Meter	II
LEAR	May 08	0312.8		0411.6			Meter	IV
CULG	May 09	2304.0		2400.0			Decimeter; meter	IV
CULG	May 09	2307.0		2324.0			Deci; meter; deka	II Herringbone
KHAR	May 10	0938	E	1034	D 235	0.28	H-alpha	S
BLEN	May 10	1208.5		1222.0			Decimeter; meter	IV
WEIS	May 10	1210.2		1215.1			70-260 MHz	II Harmonic
CULG	May 11	0007.5		0012.5			Meter	II
BLEN	May 11	1413.0		1531.0			Decimeter; meter	IV Weak
WEIS	May 11	1424.6		1425.5			60-140 MHz	II Harmonic
LEAR	May 12	0252.8		0402.0			Meter	IV
PALE	May 12	0252.8		0312.5			Meter	IV
CULG	May 12	0253.5		0715.0			Decimeter; meter	IV
CULG	May 12	0254.5		0333.0			Decimeter; meter	II
PALE	May 12	0256.3		0259.3			Meter	II
LEAR	May 12	0256.5		0337.5			Meter	II
ABST	May 13	0610	E 0617	0625	D 264	0.44	H-alpha	SP
KHAR	May 13	0840	E	0848	D 193	0.43	H-alpha	S
KHAR	May 13	0930	E	0950	D 262	0.88	H-alpha	S
KHAR	May 13	1029	E	1046	D 262	0.83	H-alpha	S
KHAR	May 13	1040	E	1048	D 258	0.75	H-alpha	S
GEOR	May 14	0800	E	0822	D 252	1	H-alpha	A?
GEOR	May 15	0720	E 0741	0757	U 256	1	H-alpha	S
BLEN	May 15	0843.8		1050.0			Decimeter; meter	IV
KHAR	May 15	0850	E	1040	D 259	1.00-1.03	H-alpha	S
GEOR	May 15	0923	E 0930	1000	D 256	1	H-alpha	S
			0952					
			0955					
KHAR	May 15	1010	E	1028	D 260	0.58	H-alpha	S
GEOR	May 16	0801	E 0811	0926	D 258	1	H-alpha	S?
KHAR	May 17	0916	E	0928	D 310	0.56	H-alpha	S
WEND	May 17	1150	1157	1215	071	1.00	H-alpha	Flare-Loop

MASS EJECTIONS FROM THE SUN

MAY 1983

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		Start	Max	End	RA°	R/R ₀		
CULG	May 18	0230.5		0232.5			Meter	II
GEOR	May 19	0741	E	0908	D 252	1	H-alpha	EL
GEOR	May 19	0800	E	0819	263	1	H-alpha	S
KHAR	May 19	0800	E	0818	D 050	0.80	H-alpha	S
KHAR	May 19	0821	E	0836	D 248	0.87	H-alpha	S
GEOR	May 19	0835	E	0836	U 243	1	H-alpha	S
KHAR	May 19	1030	E	1140	D 055	0.80	H-alpha	S
GEOR	May 22	0812	E	0936	D 266	1	H-alpha	S
GEOR	May 22	0829		0857	263	1	H-alpha	S?
KHAR	May 23	1030	E	1050	D 283	1.00	H-alpha	S
CULG	May 24	0140.0		0156.0			Meter	II Intermittent
KHAR	May 24	0800	E	0828	D 275	1.00	H-alpha	S
KHAR	May 24	0835	E	0840	D 327	0.35	H-alpha	S
BLEN	May 24	1604.9		1610.0			Meter	II
KHAR	May 25	0800	E	0820	D 300	0.52	H-alpha	S
KHAR	May 25	0805	E	0818	D 310	0.54	H-alpha	S
KHAR	May 25	0850	E	0908	D 148	0.33	H-alpha	S
KHAR	May 25	0947	E	1010	D 098	1.00-1.13	H-alpha	SP
WEIS	May 25	0955.5		1000.5			60-160 MHz	II Harmonic
CULG	May 25	2332.0		2337.0			Meter	II
ABST	May 30	0437	0450	0519	255	1.00	H-alpha	SP
ABST	May 30	0438	0441	0519	258	1.00	H-alpha	SP
GEOR	May 30	0800	E	0955	D 288	1	H-alpha	S
GEOR	May 30	0800	E	0955	D 285	1	H-alpha	CB?
CULG	May 30	2315.5		2338.5			Meter	II Weak
KHAR	May 31	0818	E	0830	D 100	0.77	H-alpha	S
KHAR	May 31	1008	E	1027	D 100	0.77	H-alpha	S

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

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

REPORTING STATIONS
 ABST = Abastumani
 BLEN = Bleien
 CULG = Culgoora
 GEOR = Georgiana
 KHAR = Kharkov
 LEAR = Learmonth
 PALE = Palehua
 SGMR = Sagamore Hill
 WEIS = Weissenau
 WEND = Wendelstein



WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS



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."