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**ENVIRONMENTAL DATA AND INFORMATION SERVICE**

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## Solar - Geophysical Data

NO 456 AUGUST 1982

**Part II (Comprehensive Reports)**

DATA FOR  
FEBRUARY 1982

### **NATIONAL GEOPHYSICAL DATA CENTER**

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA/EDIS/NGSDC, D631, 325 Broadway, Boulder, Colorado 80303.

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To standardize referencing these reports in the open literature, the following format is recommended:  
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# SOLAR-GEOPHYSICAL DATA

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No. 456

*Issued in two parts*

Helen E. Coffey, Editor

Joe H. Allen, Chief  
Solar-Terrestrial Physics Division

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

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SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
01	208	VORO	44 NS	0000.0E		240.0D		20.0		
	221	ABST	44 NS	0600.0E	0716.0		180.0D	15.0		
	100	GORK	44 NS	0603.0E		357.0D		20.0		
	200	GORK	44 NS	0604.0E		356.0D		90.0		
	204	IZMI	44 NS	0700.0E		300.0D	150.0			
	127	TORN	44 NS	0700.0E	1238.5	480.0D	6900.0	180.0		V2
	536	ONDR	44 NS	0818.0E	1419.3U	385.0D	20.5			
	260	ONDR	44 NS	0818.0E	1456.6	398.6D				
	29	UPIC	43 NS	0959.0		254.2D				
	430	KRAK	43 NS	1231.0	1337.0	117.0	270.0	32.0		
	100	HIRA	44 NS	2138.0E	0044.0	620.0D	3000.0	1500.0		SR
	200	HIRA	44 NS	2138.0E	2347.0	620.0D	930.0	440.0		SR
	1000	TYKW	21 GRF	0017.0	0134.0	135.0	6.0	3.0		
	9395	PEKG	21 GRF	0019.0	0041.5	32.0	26.1	6.6		
	3750	TYKW	45 C	0031.0	0032.3	17.0	41.0	8.0		
	9395	PEKG	5 S	0031.0	0032.4	2.0	46.0	7.6		
	17000	NOBE	4 S/F	0031.1	0032.3	2.0	138.0			0
	17000	NOBE	29 PBI	0031.1	0033.1	23.0	26.0			0
	9400	TYKW	45 C	0031.4	0032.2	18.6	101.0	19.0		
	2000	TYKW	5 S	0031.5	0032.4	2.5	8.0	3.0		
	2840	PEKG	5 S	0032.0	0032.4	4.0	15.2	4.5		
	35000	NAGO	20 GRF	0032.0	0042.0	27.0	22.0			
	4995	MANI	3 S	0033.0	0033.6	1.5	101.5	33.8		
	2695	MANI	3 S	0033.0	0033.8	2.0	34.3	11.4		
	8800	MANI	3 S	0033.3	0033.8	1.7	98.6	32.9		
	3750	TYKW	29 PBI	0048.0		17.0	5.0	2.0		
	9400	TYKW	30 PBI	0050.0		15.0	9.0	4.0		
	9400	TYKW	5 S	0057.7	0058.0	1.0	4.0	1.5		
	3750	TYKW	45 C	0107.0	0110.3	10.0U	18.0	5.0U		
	2000	TYKW	45 C	0109.5	0110.3	2.5	13.0	4.0		
	1000	TYKW	45 C	0109.7	0110.3	4.5	42.0	5.0		
	9400	TYKW	45 C	0110.0	0110.3	5.0	9.0	6.0		
	2840	PEKG	5 S	0110.0	0110.5	7.0	11.5	3.4		
	9400	TYKW	29 PBI	0115.0		23.0	5.0	2.0		
	3750	TYKW	29 PBI	0117.0		30.0	4.0	2.0		
	9395	PEKG	3 S	0143.0	0145.0	18.0	10.5	.8		
	9395	PEKG	5 S	0241.0	0246.2	8.0	10.0	4.2		
	2000	TYKW	21 GRF	0314.0	0357.0	85.0	4.0	2.0		
	3750	TYKW	20 GRF	0318.0	0323.0	80.0	7.0	4.0		
	2000	TYKW	5 S	0320.0	0322.0	4.0	6.0	2.0		
	2000	TYKW	29 PBI	0324.0		10.0	2.0	1.0		
	9400	TYKW	21 GRF	0335.0	0345.0	60.0	6.0	3.0		
	9400	TYKW	5 S	0338.6	0339.3	2.5	11.0	3.0		
	9400	TYKW	5 S	0402.7	0403.0	1.5	3.0	1.0		
	9400	TYKW	5 S	0418.0	0418.2	1.0	4.0	1.5		
	100	HIRA	46 C	0457.7	0457.8	.8	9200.0	500.0		0
	200	HIRA	46 C	0457.8	0458.3	.7	990.0	340.0		0
	3750	TYKW	5 S	0458.0	0458.5	1.5	13.0	2.0		
	1000	TYKW	5 S	0458.0	0458.5	1.0	2.0	.5		
	2000	TYKW	5 S	0458.0	0458.6	1.5	2.0	.5		
3750	TYKW	45 C	0510.0	0518.7	10.0	10.0	4.0			
9400	TYKW	28 PRE	0512.0	0512.6	6.0	2.0	1.0			
2000	TYKW	45 C	0518.0	0518.7	9.0	11.0	2.0			
2840	PEKG	1 S	0518.0	0518.8	9.0	9.6	1.4			
9400	TYKW	5 S	0518.0	0519.4	12.0	10.0	4.0			
1000	TYKW	45 C	0518.5	0518.9	2.0	5.0	2.0			
3750	TYKW	29 PBI	0520.0		25.0	2.0	1.0			
2840	PEKG	3 S	0622.0	0626.3	11.0	11.4	2.8			
2950	GORK	21 GRF	0622.8U	0834.0	330.0D	37.0				
6100	KISV	1 S	0625.0	0626.0	2.0	6.0				
3750	TYKW	5 S	0625.0	0626.1	6.0	19.0	4.0			
2000	TYKW	5 S	0625.0	0626.1	3.0	10.0	3.0			
9400	TYKW	5 S	0625.0	0626.1	3.0	6.0	2.0			
2950	GORK	2 S/F	0625.7	0626.0	2.8	8.3				
3100	CRIM	1 S	0626.0	0627.0	3.0	17.0				
200	HIRA	46 C	0633.2	0633.5	1.0	1500.0	520.0		0	
100	HIRA	46 C	0633.2	0633.7	1.2	1500.0	300.0		WR	
2840	PEKG	20 GRF	0652.0	0742.0	95.0	12.0	4.9			
650	GORK	23 GRF	0654.0E	0734.5	366.0D	18.0				
100	HIRA	42 SER	0703.0	0729.0	27.0	10000.0D				

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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Feb 82

F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
01	9100	GORK	20 GRF	0715.5	0952.0	285.0D	22.0			
	200	HIRA	42 SER	0717.7	0729.0	13.0	5900.0		0	
	200	GORK	41 F	0717.8	0721.4	13.0	340.0D			
	200	GORK		0717.8	0724.9		340.0D			
	200	GORK		0717.8	0730.6		1000.0			
	100	GORK	41 F	0718.2	0718.4	8.3	170.0			
	100	GORK		0718.2	0721.9		280.0D			
	100	GORK		0718.2	0726.0U		280.0D			
	204	IZMI	41 F	0718.2	0729.2	13.5	1120.0			
	950	GORK	1 S	0727.7	0729.0	3.0	6.0			
	650	GORK	4 S/F	0728.8	0729.1	2.5	17.0			
	430	KRAK	42 SER	0806.5	0845.7	67.0	4.4			
	5200	BERN	3 S	0831.0	0834.2	10.0	19.0			
	15000	KISV	27 RF	0831.0	0848.0	35.0	17.0			
	6100	KISV	1 S	0833.3	0834.2	2.5	4.0			
	950	GORK	1 S	0956.6	0957.0	1.5	9.0			
	430	KRAK	42 SER	0958.2	1009.2	15.0	460.0			
	204	IZMI	5 S	0959.0	0959.1	.8	560.0	400.0		
	650	GORK	1 S	0959.0	0959.2	.9	2.0			
	430	KRAK	42 SER	1055.2	1133.9	85.0	430.0			
	430	KRAK		1055.2	1159.4		190.0			
	430	KRAK		1055.2	1220.8		880.0D			
	3000	IZMI	2 S/F	1101.5	1104.5	6.0	22.0	12.0		
	3200	BERN	40 F	1102.0	1104.9	5.0	26.0			
	2950	GORK	4 S/F	1103.4	1104.9	3.3	23.0			
	2650	DWIN	45 C	1104.0	1104.0	2.0	360.0	150.0		
	810	KRAK	8 S	1133.5	1133.5	.2	7.0			
	5200	BERN	3 S	1230.5	1232.1	2.0	29.0			
	3200	BERN	3 S	1230.5	1232.1	2.0	17.0			
	810	KRAK	8 S	1232.0	1232.1	.2	8.0			
	3200	BERN	47 GB	1338.0	1403.0	100.0	1227.0			
	5200	BERN	47 GB	1338.0	1403.0	100.0	1460.0			
	2800	OTTA	28 PRE	1345.0	1352.5	10.0D	23.0			
	2650	DWIN	49 GB	1350.0						SUN SET
	260	ONDR	47 GB	1352.0U	1456.6U	64.6U	111.0U	35.0U		
	2800	OTTA	47 GB	1355.0	1404.0	32.0	1305.0	496.0		
	8400	BERN	47 GB	1357.0	1403.0U	90.0	1522.0D			
	19600	BERN	47 GB	1357.0	1403.7	90.0	1100.0			
	11800	BERN	47 GB	1357.0	1403.7	90.0	1980.0U			
	808	ONDR	47 GB	1357.0	1419.0	33.0	616.0	198.0		
	810	KRAK	49 GB	1357.3	1402.5	30.0D	370.0	120.0U		
	810	KRAK		1357.3	1419.2		840.0D			
	430	KRAK	49 GB	1357.5	1403.0U	30.0D	880.0D	125.0U		
	430	KRAK		1357.5	1408.6		430.0			
	536	ONDR	47 GB	1357.9	1419.3	32.8	208.0	80.0		
35000	BERN	47 GB	1358.0	1403.7	90.0U	594.0				
92500	BERN	4 S/F	1403.0	1411.0	40.0U	91.0U				
127	TORN	42 SER	1404.7	1407.0	8.0	47000.0				
2800	OTTA	30 PBI	1427.0	1427.0	245.0	92.0	38.0			
2800	OTTA	4 S/F	1435.0	1440.2	8.0	37.0	12.0			
2800	OTTA	46F C	1450.0	1459.0	16.0	143.0	63.0			
2800	OTTA	4 S/F	1517.5	1524.0	8.5	19.2	6.4			
2800	OTTA	1 S	1535.0	1536.8	5.0	8.8	4.4			
2800	OTTA	1 S	1654.6	1655.1	1.0	5.8				
2800	OTTA	8 S	1850.5	1850.7	.5	6.2	3.1			
2800	OTTA	8 S	1853.0	1853.5	.6	5.2				
2800	OTTA	21 GRF	1930.0	1950.0	90.0	6.2	3.1			
2800	OTTA	1 S	1935.0	1936.3	3.0	5.0	2.5			
9400	HUAN	1 S	1936.0	1938.0	4.2	11.7	7.5		L	
500	HIRA	24 R	2140.0E	2252.0	620.0D	200.0	40.0		SR	
1000	TYKW	21 GRF	2230.0E	2300.0U	230.0D	20.0U	10.0D			
2695	PENT	3 S	2247.0	2248.0	4.0	13.6	6.0			
3750	TYKW	5 S	2247.0	2248.0	4.0	7.0	2.5			
2000	TYKW	5 S	2247.0	2248.1	4.0	12.0	4.0			
9400	TYKW	21 GRF	2305.0	2320.0	170.0	6.0	3.0			
3750	TYKW	21 GRF	2315.0	2350.0	165.0	12.0	6.0			
2000	TYKW	20 GRF	2320.0	0200.0	175.0	10.0	5.0			
3750	TYKW	45 C	2331.0	2335.0	10.0	5.0	2.0			
9400	TYKW	5 S	2332.0	2332.7	10.0	4.0	1.5			
1000	TYKW	45 C	2342.0	2348.9	32.0	15.0	2.5			

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Feb 82

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
02	208	VORO	44 NS	0000.0E		240.0D		25.0		
	221	ABST	44 NS	0600.0E	0742.2		18.0	17.0		
	100	GORK	44 NS	0602.0E		358.0D		150.0		
	200	GORK	44 NS	0606.0E		354.0D		280.0		
	127	TORN	44 NS	0700.0E		480.0D		64.0		V1
	204	IZMI	44 NS	0700.0E		300.0D	170.0			
	260	ONDR	44 NS	0800.0E		360.0D				
	536	ONDR	44 NS	0800.0E		360.0D				
	430	KRAK	44 NS	0810.0E	0847.4	145.0D	370.0	140.0U		
	33	UPIC	43 NS	0847.0	1219.2	212.8D				
	29	UPIC	43 NS	0847.1	1219.6	213.4D				
	245	SGMR	43 NS	1220.0	1623.6	243.6	740.0			
	430	KRAK	43 NS	1258.9	1415.6	86.0D	210.0	29.0U		
	410	SGMR	43 NS	1314.0	1623.6	189.6	169.0			
	410	PALE	43 NS	1743.0	0109.0	622.0	239.0			
	245	PALE	43 NS	1743.0	0115.0	622.0	310.0			
	200	HIRA	44 NS	2137.0E	0220.0	620.0D	440.0	130.0		SR
	100	HIRA	44 NS	2137.0E	0248.0	620.0D	2800.0	780.0		SR
	245	LEAR	43 NS	2306.0	2322.1	706.0D	500.0			
	3750	TYKW	21 GRF	0010.0	0100.0	110.0	16.0	7.0		
	9400	TYKW	21 GRF	0020.0	0057.0	90.0	11.0	6.0		
	3750	TYKW	5 S	0024.0	0033.0	20.0	4.0	1.5		
	9400	TYKW	5 S	0029.0	0030.2	4.0	12.0	4.0		
	1000	TYKW	45 C	0102.0	0102.8	1.5	9.0	2.5		
	9400	TYKW	5 S	0236.0	0236.5	3.0	16.0	5.0		
	17000	NOBE	1 S	0236.2	0236.5	1.5	17.0			R
	2000	TYKW	21 GRF	0242.0	0330.0	140.0	5.0	2.5		
	3750	TYKW	21 GRF	0243.0	0332.0	155.0	13.0	6.0		
	3750	TYKW	5 S	0245.0	0250.5	12.0	10.0	4.0		
	2000	TYKW	45 C	0245.0	0250.7	15.0	9.0	4.0		
	1000	TYKW	45 C	0246.0	0250.7	14.0	10.0	3.0		
	9400	TYKW	20 GRF	0246.0	0330.0	145.0	8.0	4.0		
	2840	PEKG	1 S	0247.0	0250.0	5.0	2.0	1.1		
	1000	TYKW	5 S	0323.0	0323.6	2.0	1.5	.5		
	1000	TYKW	5 S	0338.0	0338.5	3.0	2.0	.7		
	1000	TYKW	45 C	0349.0	0354.7	10.0	6.0	2.0		
	2000	TYKW	5 S	0353.0	0354.7	5.0	10.0	2.5		
	1000	TYKW	45 C	0407.0	0414.7	16.0	6.0	2.0		
	2000	TYKW	5 S	0435.0	0440.0	20.0	4.0	1.0		
	3750	TYKW	5 S	0438.0	0439.9	5.0	7.0	2.0		
	2000	TYKW	5 S	0446.0	0446.5	1.0	14.0	3.0		
	3750	TYKW	5 S	0500.0	0501.0	13.0	3.0	1.5		
	3750	TYKW	5 S	0539.0	0540.5	5.0	4.0	1.5		
	650	GORK	23 GRF	0545.0E	0848.7	382.0D	55.0			
	2000	TYKW	20 GRF	0548.0	0620.0	90.0	8.0	5.0		
	3750	TYKW	21 GRF	0550.0	0610.0	90.0	11.0	6.0		
	9400	TYKW	20 GRF	0550.0	0620.0	110.0	8.0	4.0		
	6100	KISV	1 S	0602.7	0603.3	1.1	6.0			
	2950	GORK	21 GRF	0612.0U	0651.0	300.0D	15.0			
	3750	TYKW	5 S	0648.0	0651.0	15.0	4.0	2.0		
15000	KISV	8 S	0703.4	0703.6	.3	28.0				
17000	NOBE	1 S	0703.5	0703.6	.5	26.0			R	
2950	GORK	1 S	0836.0	0836.3	1.2	4.0	2.0			
6100	KISV	2 S/F	0856.7	0857.5	1.4	4.0				
2950	GORK	1 S	0857.0	0857.2	.6	3.0	1.5			
650	GORK	4 S/F	0857.0	0857.3	.5	73.0				
810	KRAK	8 S	0857.4	0857.4	.2	10.0				
9100	GORK	21 GRF	0918.0	1042.6	170.0D	33.0				
808	ONDR	40 F	0936.8	0938.0	2.0	12.0	15.0U			
650	GORK	4 S/F	1034.7	1040.1	9.5	15.0				
808	ONDR	40 F	1035.0	1037.8	5.0	32.0				
3200	BERN	3 S	1035.0	1040.0	19.0	64.0				
5200	BERN	3 S	1035.0	1040.0	19.0	120.0				
2950	GORK	4 S/F	1035.5	1039.8	6.3	52.0				
950	GORK	21 GRF	1035.5	1040.5	16.5	10.0				
2650	DWIN	4 S/F	1036.0	1040.0	10.0	50.0	20.0			
6100	KISV	4 S/F	1036.5	1037.1	7.0	40.0				
15000	KISV	3 S	1036.5	1037.3	6.0	67.0				
810	KRAK	4 S/F	1036.6	1037.6	9.1	75.0	4.0			
950	GORK	45 C	1036.8	1037.6	3.0	56.0				

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 <sup>2</sup> Hz)	Mean (2 Hz)		
02	950	GORK		1036.8	1038.0		13.0			
	430	KRAK	4 S/F	1036.8	1040.0	7.6	120.0	3.0		
	9100	GORK	3 S	1039.4	1040.1	3.7	48.0			
	650	GORK	46 C	1047.3	1047.9	5.7	3.0			
	650	GORK		1047.3	1052.0		70.0			
	950	GORK	46 C	1114.2	1115.3	5.8	42.0			
	950	GORK		1114.2	1116.8		35.0			
	808	ONDR	40 F	1114.3	1116.2U	8.7	22.0	11.0		
	5200	BERN	3 S	1203.0	1203.3	1.0	17.0			
	9400	HUAN	20 GRF	1217.0	1222.0	17.6	9.6	3.0		0
	2800	OTTA	240 R	1350.0	1355.0	5.0	10.2	4.0		
	2650	DWIN	1 S	1413.0	1415.0	5.0	15.0	5.0		
	2800	OTTA	23 GRF	1435.0	1805.0	460.0	42.4			
	9400	HUAN	20 GRF	1439.1	1517.0	105.4	14.4	7.9		0
	930	BORD	46 C	1446.0	1447.4	2.0	19.0	3.0		
	2800	OTTA	1 S	1447.0	1447.1	1.0	2.6			
	2800	OTTA	21 GRF	1638.0	1645.0	15.0	11.4	2.7		
	2800	OTTA	3 S	1641.2	1642.0	2.0	14.0	7.0		
	9400	HUAN	20 GRF	1752.9	1802.5	43.1	17.6	7.4		L
	2800	OTTA	1 S	1841.0	1842.0	5.0	6.8	3.4		
	9400	HUAN	21 GRF	1842.8	1857.8	15.0D	19.2	7.7		L
	2800	OTTA	21 GRF	1848.0	1858.0	35.0	9.2	3.1		
	9400	HUAN	41 F	1848.6	1854.6	8.4	27.1	11.8		L
	2800	OTTA	46F C	1848.8	1851.0	5.0	36.0	15.0		
	2800	OTTA	3 S	1854.5	1854.6	1.0	18.6	4.6		
	9400	HUAN	21 GRF	1959.4	2007.2	15.2	4.8	2.5		0
	2800	OTTA	21 GRF	2005.0	2035.0	55.0	13.4	5.0		
	9400	HUAN	1 S	2008.9	2009.3	1.5	9.6	5.3		0
	2800	OTTA	4 S/F	2026.0	2030.0	6.0	28.4	10.0		
	9400	HUAN	21 GRF	2027.1	2036.7	33.5	8.0	5.9		R
	9400	HUAN	1 S	2029.2	2030.0	2.6	11.2	6.4		R
	2695	PENT	3 S	2219.0	2230.0	11.0D	11.0	3.6		
	9400	TYKW	21 GRF	2243.0	2310.0	50.0	11.0	4.0		
9400	TYKW	45 C	2250.0	2251.8	3.5	9.0	2.0			
3750	TYKW	28 PRE	2345.0	2355.7	75.0	41.0	14.0			
9400	TYKW	21 GRF	2350.0	0009.0	55.0	6.0	3.0			
2000	TYKW	28 PRE	2350.0	2355.7	70.0	18.0	7.0			
03	410	LEAR	43 NS	0010.0	1033.1	623.1D	490.0			
	200	GORK	44 NS	0551.0E		369.0D		75.0		
	100	GORK	44 NS	0556.0E		364.0D		25.0		
	200	GORK	44 NS	0606.0E		354.0D		280.0		
	204	IZMI	44 NS	0700.0E		300.0D	50.0			
	127	TORN	44 NS	0700.0E		480.0D		159.0		VI
	221	ABST	43 NS	0712.0	0805.0		85.0	10.0		
	260	ONDR	44 NS	0804.0E		1058.0U	378.0D			
	245	SGMR	43 NS	1218.0	1716.1	558.0D	160.0			
	410	PALE	43 NS	1846.0	1952.6	549.0	119.0			
	245	PALE	43 NS	1846.0	2116.0	549.0	580.0			
	200	HIRA	44 NS	2137.0E	0046.0	620.0D	30.0	10.0		MR
	100	HIRA	44 NS	2137.0E	2217.0	350.0D	80.0	10.0		SR
	245	LEAR	43 NS	2224.0	0800.1	748.0	340.0			
	1000	TYKW	28 PRE	0010.0	0032.9	52.0	10.0	3.0		
	9400	TYKW	5 S	0012.0	0013.3	7.0	12.0	4.0		
	9395	PEKG	47 GB	0042.0	0118.1	91.0	5493.0			
	2840	PEKG	47 GB	0047.0	0118.2	86.0	1146.0			
	3750	TYKW	47 GB	0100.0	0116.7	60.0	2020.0	380.0		
	2930	VORO	47 GB	0100.0	0120.0	60.0	630.0D			
	2000	TYKW	47 GB	0100.0	0122.3	60.0	810.0	210.0		
	2695	MANI	47 GB	0101.7	0117.8	48.8	3784.0	1261.3		
	9400	TYKW		0102.0	0116.6		3300.0			
	4995	MANI	47 GB	0102.0	0116.6	48.0	4825.1	1608.4		
	9400	TYKW	47 GB	0102.0	0118.0	68.0	3350.0	490.0		
	1000	TYKW	47 GB	0102.0	0122.9	58.0	500.0	110.0		
	1415	MANI	46 C	0103.0	0119.5	47.0	482.4	160.8		
606	MANI	46 C	0103.5	0128.0	47.5	343.9	114.7			
1415	PALE	49 GB	0103.6	0111.5	18.9	400.0				
17000	NOBE	47 GB	0104.2	0118.1	21.0	1990.0			L	
1415	LEAR	49 GB	0104.3	0111.8	43.7	580.0				
8800	PALE	49 GB	0104.5	0110.3	18.0	1100.0				



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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 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		
03	8800	MANI	47 GB	0104.5	0118.5	45.5	2615.8	871.9		
	2695	LEAR	49 GB	0105.0	0110.1	31.0	1500.0			
	2695	PALE	49 GB	0105.0	0110.1	17.5	640.0			
	4995	LEAR	49 GB	0105.0	0110.1	31.0	1899.0			
	410	LEAR	47 GB	0106.3	0107.8	47.7	470.0			
	610	LEAR	47 GB	0106.6	0109.8	41.4	189.0			
	500	HIRA	48 C	0106.7	0115.2	42.0	120.0	50.0		SR
	35000	NAGO	28 PRE	0107.0	0110.0	6.0	90.0			
	15400	PALE	49 GB	0107.1	0110.3	15.4	570.0			
	8800	LEAR	49 GB	0107.3	0110.1	28.7	2899.0			
	610	PALE	47 GB	0107.3	0110.3	15.2	200.0			
	15400	LEAR	49 GB	0107.5	0110.1	28.5	540.0			
	200	HIRA	46 C	0108.4	0119.1	17.0	460.0	65.0		WR
	100	HIRA	46 C	0113.0	0114.0	17.0	10000.00	1550.00		
	100	HIRA		0113.0	0127.3		5100.0			O
	35000	NAGO	47 GB	0114.0	0118.0	16.0	1050.0			
	410	PALE	47 GB	0114.3	0114.6	8.2	110.0			
	245	PALE	47 GB	0120.1	0120.3	2.4	160.0			
	1415	PALE	47 GB	0124.1	0124.1	19.9	380.0			
	8800	PALE	49 GB	0124.1	0124.1	19.9	930.0			
	15400	PALE	49 GB	0124.1	0124.1	19.9	640.0			
	2695	PALE	49 GB	0124.1	0124.1	19.9	600.0			
	610	PALE	47 GB	0124.1	0126.1	19.9	110.0			
	17000	NOBE	29 PBI	0125.2	0139.1	100.0	119.0			L
	245	PALE	47 GB	0129.8	0130.5	14.2	160.0			
	35000	NAGO	29 PBI	0130.0	0131.0	43.0	65.0			
	15400	PALE	47 GB	0144.1	0146.6	14.5	130.0			
	1415	PALE	20 GRF	0144.1	0146.6	14.5	48.0			
	2695	PALE	20 GRF	0144.6	0146.6	14.5	49.0			
	8800	PALE	47 GB	0144.8	0146.6	14.5	110.0			
	245	PALE	47 GB	0146.1	0146.6	14.5	180.0			
	610	PALE	4 S/F	0146.1	0146.6	14.5	11.0			
	410	PALE	49 GB	0151.1	0151.6	10.0	34.0			
	3750	TYKW	30 PBI	0200.0		170.0	43.0	22.0		
	1000	TYKW	30 PBI	0200.0		170.0	9.0	5.0		
	2000	TYKW	30 PBI	0200.0		170.0	28.0	14.0		
	8800	PALE	20 GRF	0201.1	0201.6	16.5	53.0			
	245	PALE	47 GB	0201.1	0201.6	16.5	230.0			
	1415	PALE	20 GRF	0201.1	0201.6	16.5	17.0			
	15400	PALE	49 GB	0201.1	0202.5	16.5	73.0			
	410	PALE	20 GRF	0201.1	0203.6	16.5	30.0			
	1000	TYKW	28 PRE	0208.0	0209.2	10.0	13.0			
	9400	TYKW	30 PBI	0210.0		170.0	50.0	25.0		
	2000	TYKW	45 C	0215.0	0223.8	22.0	18.0	7.0		
	1000	TYKW	45 C	0218.0	0223.7	12.0	59.0	9.0		
	3750	TYKW	45 C	0220.0	0228.2	30.0	11.0	2.5		
	1000	TYKW	30 PBI	0230.0		50.0	3.0	1.5		
	2000	TYKW	29 PBI	0237.0		45.0	7.0	3.5		
	1000	TYKW	45 C	0239.0	0240.5	3.0	3.0	1.0		
	9400	TYKW	5 S	0315.0	0315.7	5.0	6.0	2.0		
2000	TYKW	5 S	0333.0	0334.4	5.0	6.0	2.5			
3750	TYKW	5 S	0333.0	0334.4	7.0	7.0	3.0			
9400	TYKW	20 GRF	0413.0	0422.0	35.0	5.0	2.0			
2000	TYKW	20 GRF	0414.0	0419.5	33.0	5.0	2.0			
2840	PEKG	20 GRF	0414.0	0420.0	29.0	2.6	.7			
3750	TYKW	20 GRF	0414.0	0421.0	30.0	10.0	4.0			
3750	TYKW	21 GRF	0500.0	0543.0	80.0	7.0	4.0			
9400	TYKW	21 GRF	0528.0	0556.0	50.0	5.0	2.0			
2000	TYKW	21 GRF	0530.0	0544.0	50.0	3.0	1.5			
1000	TYKW	45 C	0535.0	0536.7	5.0	28.0	4.0			
2000	TYKW	5 S	0535.0	0537.3	5.0	5.0	1.5			
3750	TYKW	5 S	0536.0	0537.3	4.0	11.0	2.5			
1415	LEAR	8 S	0536.3	0536.5	1.3	37.0				
1415	MANI	4 S/F	0536.5	0537.2	3.0	33.7	11.2			
610	LEAR	4 S/F	0536.6	0538.1	3.9	18.0				
9400	TYKW	5 S	0536.7	0537.2	1.5	7.0	3.0			
8800	LEAR	8 S	0537.0	0537.1	.1	11.0				
4995	LEAR	8 S	0537.0	0537.1	.8	13.0				
2695	MANI	1 S	0537.0	0537.4	3.0	9.2	3.1			
606	MANI	4 S/F	0537.5	0538.7	2.5	16.4	5.5			

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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F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
03	2695	LEAR	4 S/F	0537.6	0537.6	435.2	09.0			
	1000	TYKW	45 C	0544.0	0548.4	7.0	13.0	2.0		
	9100	GORK	23 GRF	0556.4	0937.0	394.0D	38.0			
	1000	TYKW	5 S	0615.9	0616.1	.5	4.0	1.5		
	950	GORK	21 GRF	0622.2		338.0				
	4995	LEAR	20 GRF	0622.8	0627.6	15.2	13.0			
	3750	TYKW	21 GRF	0625.0	0632.0	45.0	9.0	4.5		
	2000	TYKW	20 GRF	0625.0	0637.0	45.0	3.0	1.5		
	6100	KISV	1 S	0626.0	0627.7	3.5	6.0			
	9400	TYKW	45 C	0626.0	0631.3	7.0	14.0	7.0		
	6100	KISV	21 GRF	0626.0	0631.3	10.0	11.0			
	3750	TYKW	5 S	0627.0	0627.7	3.0	7.0	2.0		
	8800	LEAR	20 GRF	0629.8	0631.1	8.2	21.0			
	9400	TYKW	29 PBI	0633.0		30.0	11.0	6.0		
	1000	TYKW	45 C	0636.0	0640.5	9.0	15.0	3.0		
	610	LEAR	4 S/F	0636.3	0639.3	6.3	30.0			
	410	LEAR	47 GB	0636.5	0638.1	10.3	130.0			
	650	GORK	40 F	0636.5	0639.2	6.3	10.0			
	950	GORK	2 S/F	0637.7	0642.6	5.9	15.0			
	2950	GORK	1 S	0700.0	0701.1	2.0	11.0	5.5		
	8800	ATHN	4 S/F	0703.6	0705.6	3.9	11.0			
	2695	ATHN	4 S/F	0704.3	0705.6	2.8	05.0			
	4995	ATHN	4 S/F	0704.6	0705.6	2.5	13.0			
	3750	TYKW	5 S	0705.0	0705.6	1.5	19.0	3.0		
	6100	KISV	8 S	0705.4	0705.6	.3	6.0			
	9395	PEKG	20 GRF	0727.0	0732.0	32.0	6.8	2.9		
	930	BORD	41 F	0747.0	0751.7	6.0	189.0	2.0		
	950	GORK	2 S/F	0750.3	0751.6	1.6	65.0			
	610	LEAR	47 GB	0750.8	0751.0	.8	64.0			
	650	GORK	41 F	0750.9	0751.0	.9	18.0			
	650	GORK		0750.9	0751.5		14.0			
	2840	PEKG	20 GRF	0752.0	0803.0	33.0	1.5	.5		
	650	GORK	23 GRF	0809.6U	1006.0U	187.0U	5.4			
	4995	LEAR	20 GRF	0813.1	0822.1	12.7	19.0			
	8800	LEAR	20 GRF	0813.8	0817.6	7.0	16.0			
	2950	GORK	20 GRF	0814.0	0827.0	37.0	7.0			
	930	BORD	46 C	0816.0	0817.3	6.0	55.0	5.0		
	1415	LEAR	47 GB	0816.8	0817.5	2.5	60.0			
	650	GORK	2 S/F	0816.9	0818.4	1.8	4.0			
	810	KRAK	8 S	0817.0	0817.2	.4	21.0			
	950	GORK	2 S/F	0817.1	0817.5	1.5	23.0			
	2840	PEKG	1 S	0831.0	0832.0	6.0	1.9	1.2		
	930	BORD	8 S	0831.4	0831.4	.1	42.0	1.0		
	930	BORD	8 S	0845.6	0846.0	.7	67.0	2.0		
	536	ONDR	8 S	0850.9	0850.9	.2	23.0			
	430	KRAK	8 S	0902.9	0903.0	.2	170.0			
	2950	GORK	1 S	0913.3	0913.4	3.1	16.0			
	2950	GORK	21 GRF	0924.0	0945.0	60.0	8.0			
	3200	BERN	4 S/F	0927.0	0934.5	25.0	90.0			
	5200	BERN	4 S/F	0927.0	0934.5	25.0	110.0			
930	BORD	45 C	0929.0	0933.8	8.0	39.0	6.0			
950	GORK	2 S/F	0929.5	0933.5	6.5	27.0				
610	LEAR	47 GB	0929.6	0933.8	6.2	66.0				
4995	LEAR	47 GB	0929.6	0934.5	9.5	70.0				
2695	LEAR	47 GB	0929.6	0934.6	10.2	66.0				
536	ONDR	4 S/F	0930.0	0933.4	7.0	20.0	6.0			
810	KRAK	7 C	0930.0U	0933.8	6.0U	68.0	23.0			
6100	KISV	4 S/F	0930.0	0934.4	9.0	45.0				
650	GORK	28 PRE	0930.7	0931.1	.9	8.6				
2950	GORK	4 S/F	0930.7	0934.6	5.0	60.0				
3000	IZMI	7 C	0931.0	0934.5	5.8	56.0	20.0			
3100	CRIM	3 S	0931.2	0935.4	11.0	70.0	23.0			
650	GORK	4 S/F	0931.8	0933.8	3.6	44.0				
1415	LEAR	4 S/F	0932.0	0934.1	5.0	27.0				
808	ONDR	2 S/F	0932.1	0934.0	4.8	29.0	15.0			
15400	LEAR	4 S/F	0932.3	0933.3	4.5	36.0				
8800	LEAR	4 S/F	0932.3	0934.6	2.3	49.0				
9100	GORK		0932.5	0934.6	4.0	40.0				
15000	KISV	2 S/F	0932.5	0934.8	3.5	22.0				
2650	DWIN	4 S/F	0933.0	0938.0	10.0	60.0	30.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
03	8400	BERN	4 S/F	0934.0	0934.5	25.0	60.0U			
	930	BORD	41 F	0947.0	0947.8	1.0	28.0	2.0		
	430	KRAK	42 SER	0950.5	1032.9	55.0	950.0D			
	1415	LEAR	4 S/F	1005.3	1007.8	4.7	10.0			
	2695	LEAR	4 S/F	1005.3	1007.8	3.7	11.0			
	8800	LEAR	4 S/F	1005.5	1006.8	3.5	22.0			
	4995	LEAR	4 S/F	1005.6	1006.8	4.4	15.0			
	6100	KISV	2 S/F	1006.0	1006.6	2.2	6.0			
	15400	LEAR	8 S	1006.6	1006.8	1.5	20.0			
	930	BORD	8 S	1006.8	1006.8	.1	17.0	1.0		
	930	BORD	41 F	1028.6	1029.8	4.4	155.0	2.0		
	950	GORK	2 S/F	1029.3	1029.9	.8	42.0			
	2950	GORK	2 S/F	1029.3	1033.5	4.3	8.0			
	536	ONDR	8 S	1033.0	1033.4	.8	45.0			
	6100	KISV	1 S	1046.5	1047.2	1.0	6.0			
	430	KRAK	8 S	1123.7	1123.9	.4	29.0			
	15000	KISV	4 S/F	1144.8	1152.0	9.0	133.0			
	9400	HUAN	21 GRF	1147.4	1154.6	21.4	23.8	14.0		R
	2650	DWIN	4 S/F	1149.0	1153.0	8.0	100.0	50.0		
	4995	ATHN	47 GB	1150.0	1152.0	8.1	230.0			
	8800	ATHN	47 GB	1150.0	1152.0	12.8	139.0			
	3000	IZMI	7 C	1150.0	1152.0	7.5	96.0	40.0		
	2695	ATHN	47 GB	1150.0	1152.1	10.5	90.0			
	5200	BERN	4 S/F	1150.0	1152.1	12.0	175.0U			
	19600	BERN	4 S/F	1150.0	1152.1	8.0	100.0			
	3200	BERN	4 S/F	1150.0	1152.3	12.0	130.0			
	6100	KISV	4 S/F	1150.0	1152.5	6.0	81.0			
	9400	HUAN	45 C	1150.1	1152.1	2.9	170.4	72.4		R
	810	KRAK	40 F	1150.2	1151.9	5.5	70.0			
	8400	BERN	4 S/F	1150.2	1152.1	12.0	165.0U			
	11800	BERN	4 S/F	1150.2	1152.1	10.0	200.0			
	2950	GORK	4 S/F	1150.2	1152.2	7.1	29.0			
	9100	GORK	4 S/F	1150.2	1152.3	8.2	160.0			
	650	GORK	41 F	1150.3	1152.0	6.7	18.5			
	650	GORK	41 F	1150.3	1154.2		24.0			
	930	BORD	40 F	1150.3	1155.6	6.7	42.0	3.0		
	650	GORK	41 F	1150.3	1156.8		25.0			
	950	GORK	2 S/F	1150.4	1151.0	3.9	12.0			
	3100	CRIM	3 S	1150.5	1152.5	10.0	85.0	28.0		
	808	ONDR	40 F	1150.6	1152.4	7.0	12.0	6.0		
	536	ONDR	40 F	1152.4	1154.4	3.0	26.0	11.0U		
	430	KRAK	8 S	1155.7	1155.7	.2	35.0			
	15000	KISV	1 S	1156.0	1156.8	1.5	28.0			
	9400	HUAN	1 S	1156.5	1156.7	.9	26.2	11.1		R
	6100	KISV	1 S	1156.7	1156.9	.7	16.0			
	204	IZMI	5 S	1159.0	1159.5	.6	320.0	200.0		
	536	ONDR	8 S	1324.8	1324.8	.2	18.0			
	9400	HUAN	21 GRF	1330.6	1404.7	70.1	11.1	4.7		L
	930	BORD	46 C	1341.0	1342.7	2.0	111.0	5.0		
	9400	HUAN	2 S/F	1341.2	1341.6	1.7	9.5	7.3		L
	808	ONDR	40 F	1341.6	1341.7	3.0	40.0	15.0		
	9400	HUAN	2 S/F	1422.7	1424.4	2.6	12.7	6.6		O
	2800	OTTA	20 GRF	1610.0	1625.0	30.0	3.8	1.9		
	2800	OTTA	21 GRF	1645.0	1720.0	120.0	12.6	6.3		
	9400	HUAN	21 GRF	1647.0	1707.3	48.8	52.3	45.9		R
	2800	OTTA	46F C	1648.0	1652.2	20.0	128.0	53.0		
	930	BORD	45 C	1649.0	1652.0	6.0	202.0	15.0		
	9400	HUAN	47 GB	1649.1	1652.3	4.2	1071.0	115.8		R
	4995	SGMR	47 GB	1649.8	1652.3	20.0	300.0			
	8800	SGMR	49 GB	1650.3	1652.3	19.5	660.0			
	410	SGMR	47 GB	1650.3	1652.3	12.5	100.0			
	1415	SGMR	47 GB	1650.5	1652.3	17.3	160.0			
	2695	SGMR	47 GB	1650.6	1652.6	16.9	110.0			
	610	SGMR	47 GB	1650.8	1652.3	16.2	119.0			
	245	SGMR	4 S/F	1651.8	1652.1	6.7	590.0			
	9400	HUAN	20 GRF	1750.1	1805.5	28.2	7.9	3.7		O
	9400	HUAN	3 S	1851.5	1852.0	1.9	31.7	10.4		O
	15400	SGMR	8 S	1851.6	1852.0	1.5	30.0			
	15400	PALE	47 GB	1851.8	1852.0	.5	90.0			
	8800	SGMR	8 S	1851.8	1852.0	1.2	20.0			

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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 <sup>2</sup> Hz)	Mean		
03	410	PALE	47 GB	1955.5	1955.6	.3	100.0			
	410	SGMR	47 GB	1955.5	1955.6	.6	78.0			
	245	SGMR	4 S/F	1955.6	1956.3	2.7	35.0			
	245	SGMR	47 GB	2004.1	2005.1	3.9	470.0			
	410	SGMR	47 GB	2004.6	2005.1	3.4	01.0			
	9400	HUAN	41 F	2022.3	2023.2	5.8	73.0	25.5		0
	2800	OTTA	4 S/F	2022.8	2023.5	5.0	39.0	9.8		
	245	PALE	47 GB	2023.0	2023.1	.1	290.0			
	15400	PALE	47 GB	2023.0	2023.3	.6	60.0			
	8800	PALE	47 GB	2023.0	2023.3	4.1	87.0			
	2695	PALE	8 S	2023.1	2023.3	.7	39.0			
	245	PALE	49 GB	2041.6	2043.6	22.7	300.0			
	8800	PALE	4 S/F	2041.8	2042.1	22.5	27.0			
	15400	PALE	4 S/F	2041.8	2042.1	22.5	29.0			
	410	SGMR	47 GB	2050.6	2050.8	.5	80.0			
	245	SGMR	47 GB	2050.6	2050.8	1.0	310.0			
	9400	HUAN	4 S/F	2053.8	2055.3	4.0	23.8	8.8		0
	2695	PENT	27 RF	2100.0		120.0	5.8	4.9		
	2695	PENT	24 R	2100.0	2115.0	15.0	5.8	2.9		
	2695	PENT	24P R	2115.0		85.0	5.8			
	15400	PALE	8 S	2145.3	2145.3	.2	32.0			
	2695	PENT	26 FAL	2240.0	2300.0	20.0	-5.8	-2.9		
	9400	TYKW	5 S	2251.0	2251.4	1.5	6.0	2.0		
9400	TYKW	20 GRF	2325.0	2331.0	35.0	6.0	3.0			
3750	TYKW	5 S	2326.0	2327.6	5.0	3.0	1.0			
04	208	VORO	44 NS	0000.0E	0051.0	240.0D	34.0	16.0		
	200	GORK	44 NS	0557.0E		366.0D		5.0		
	100	GORK	43 NS	0715.0		105.0D		5.0		
	127	TORN	43 NS	0716.0		464.0D		10.0		V1, DISTURBED
	260	ONDR	44 NS	0805.0E	1326.0U	385.0D				
	200	HIRA	44 NS	2136.0E	0032.0	620.0D	60.0	30.0		MR
	100	HIRA	44 NS	2136.0E	2320.0	620.0D	170.0	40.0		SR
	3750	TYKW	20 GRF	0015.0	0025.0	45.0	3.0	1.0		
	208	VORO	40 F	0030.0		13.0	100.0D			
	9400	TYKW	5 S	0141.0	0141.7	2.0	4.0	1.5		
	208	VORO	40 F	0152.0		11.0	100.0D			
	3750	TYKW	20 GRF	0153.0	0203.0	30.0	3.0	1.5		
	1000	TYKW	5 S	0206.0	0206.8	2.0	3.0	.7		
	9400	TYKW	5 S	0230.7	0231.3	2.0	6.0	2.0		
	1000	TYKW	8 S	0233.3	0233.4	.3	87.0	1.5		
	3750	TYKW	21 GRF	0512.0	0520.0	35.0	4.0	2.0		RAIN
	3750	TYKW	5 S	0516.6	0516.8	1.0	4.0	1.5		
	3750	TYKW	5 S	0527.5	0528.2	2.0	2.0	.7		
	3750	TYKW	5 S	0550.0	0550.8	5.0	3.0	1.0		
	3750	TYKW	21 GRF	0558.0	0604.6	45.0	6.0	2.0		
	9100	GORK	22 GRF	0601.2	0831.9	360.0D	22.0			
	2950	GORK	1 S	0618.7	0618.8	1.4	8.4	4.0		
	2950	GORK	1 S	0627.4	0628.4	2.5	14.6	7.0		
	2000	TYKW	5 S	0634.0	0636.7	7.0	2.0	.7		
	9395	PEKG	1 S	0635.0	0635.5	9.0	8.2	2.5		
	3750	TYKW	5 S	0635.0	0636.6	7.0	6.0	2.5		
	2950	GORK	20 GRF	0636.3	0701.1	66.0	7.3			
	3750	TYKW	5 S	0657.0	0658.7	5.0	2.0	.7		
	6100	KISV	1 S	0716.0	0717.2	3.0	5.0			
	204	IZMI	8 S	0800.0	0800.0	.5	100.0	80.0		
	204	IZMI	4 S/F	0805.7	0805.8	.7	60.0	30.0		
	430	KRAK	42 SER	0811.7	0831.4	42.0	290.0			
	950	GORK	21 GRF	0812.5		134.5				
3200	BERN	45 C	0817.0	0831.1	70.0D	40.0				
5200	BERN	45 C	0817.0	0831.9	70.0D	42.0				
650	GORK	40 F	0818.6	0819.1	2.5	7.0				
3100	CRIM	1 S	0822.5	0823.0	3.0	13.0	4.0			
204	IZMI	41 F	0822.8	0822.9	1.5	120.0				
100	GORK	41 F	0822.9	0823.1	12.6	190.0D				
100	GORK		0822.9	0833.4		520.0				
2950	GORK	21 GRF	0822.9	0834.0	43.0	11.0				
100	GORK		0822.9	0835.1		550.0				
3000	IZMI	1 S	0823.0	0824.0	2.0	23.0	12.0			
650	GORK	46 C	0823.0	0826.1	12.7	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 <sup>2</sup> Hz)	Mean		
04	650	GORK		0823.0	0831.6		23.0			
	2950	GORK	1 S	0823.4	0823.8	1.5	11.0			
	2650	DWIN	1 S	0824.0	0824.0	2.0	15.0	7.0		
	2695	MANI	3 S	0824.5	0833.0	10.8	24.2	8.1		
	1415	MANI	4 S/F	0824.5	0833.2	10.5	42.0	14.0		
	3100	CRIM	1 S	0827.0	0829.0	6.0	23.0	7.0		
	4995	MANI	3 S	0827.0	0833.0	8.0	23.2	7.7		
	6100	KISV	27 RF	0827.6	0832.0	8.0	11.0			
	200	GORK	4 S/F	0827.7	0829.4	4.0	180.0			
	8400	BERN	3 S	0828.0	0830.6	70.00	16.00			
	3000	IZMI	1 S	0828.0	0832.0	8.0	35.0	20.0		
	2650	DWIN	1 S	0828.0	0832.0	5.0	20.0	10.0		
	930	BORD	46 C	0829.0	0831.0	6.0	150.0	13.0		
	950	GORK	4 S/F	0829.2	0831.0	3.8	155.0			
	810	KRAK	4 S/F	0829.5	0831.0	2.1	140.0	20.0		
	808	ONDR	2 S/F	0829.6	0831.7	3.6	38.0	14.0		
	2950	GORK	3 S	0830.0	0831.2	3.5	20.0	10.0		
	536	ONDR	7 C	0830.0	0831.8	4.0	34.0	8.0		
	650	GORK	2 S/F	0850.5	0851.8	3.0	3.7			
	204	IZMI	41 F	0851.0	0851.5	1.3	50.0			
	2650	DWIN	2 S/F	0851.0	0852.0	5.0	30.0	15.0		
	930	BORD	41 F	0851.0	0852.8	2.4	17.0	3.0		
	2950	GORK	2 S/F	0851.5	0852.7	1.8	12.5			
	950	GORK	2 S/F	0851.9	0852.7	1.0	12.0			
	430	KRAK	8 S	0920.3	0920.5	.4	43.0			
	536	ONDR	7 C	0924.3	0924.6	.8	12.0	14.0		
	808	ONDR	2 S/F	0937.0	0937.0	.8	11.0			
	430	KRAK	7 C	1006.8	1009.6	7.6	68.0	3.0		
	950	GORK	2 S/F	1006.8	1011.0	5.2	16.0			
	808	ONDR	2 S/F	1006.8	1011.8	7.2	15.0	7.0		
	6100	KISV	2 S/F	1007.0	1007.4	1.2	6.0			
	650	GORK	41 F	1007.0	1007.5	7.0	8.5			
	536	ONDR	7 C	1007.0	1009.3	6.0	27.0	9.0		
	650	GORK		1007.0	1009.5		27.0			
	650	GORK		1007.0	1011.4		10.0			
	810	KRAK	40 F	1007.1	1011.9	6.6	48.0	3.0		
	2950	GORK	1 S	1007.2	1007.3	1.7	9.4	4.5		
	930	BORD	41 F	1008.0	1011.7	6.0	76.0	2.0		
	430	KRAK	42 SER	1022.4	1145.7	167.0	310.0			
	430	KRAK		1022.4	1237.5		660.0			
	536	ONDR	8 S	1104.0	1104.0	.1	10.0			
	810	KRAK	8 S	1106.4	1106.4	.2	80.0			
	808	ONDR	8 S	1106.7	1106.7	.2	10.0			
	204	IZMI	41 F	1135.0	1141.2	7.8	120.0			
	2950	GORK	1 S	1137.7	1138.0	1.2	14.6	7.0		
	2650	DWIN	1 S	1138.0	1138.0	1.0	60.0	30.0		
	33	UPIC	42 SER	1237.4	1323.4	60.4				
	808	ONDR	8 S	1240.6	1240.6	.4	12.0			
	2800	OTTA	21 GRF	1300.0	1400.0	135.0	12.4			
	260	ONDR	45 C	1319.0	1325.9	20.0		44.0		
9400	HUAN	21 GRF	1319.2	1342.0	131.9	46.6	20.4		RLR	
430	KRAK	48 C	1319.4	1335.0	24.0	530.0	53.0			
536	ONDR	45 C	1320.2	1335.4	31.0	62.00	18.0			
8400	BERN	45 C	1322.0	1332.9	22.0	320.00				
19600	BERN	45 C	1322.0	1335.2	18.00	450.0				
3200	BERN	45 C	1322.0	1337.5	22.0	280.0				
5200	BERN	45 C	1322.0	1337.6	22.0	450.0				
810	KRAK	45 C	1322.2	1334.7	17.8	100.0	25.0			
2800	OTTA	46F C	1322.5	1336.5	20.0	203.0	80.0			
9400	HUAN	41 F	1322.7	1332.9	18.5	431.2	218.3		R	
808	ONDR	47 GB	1323.0	1335.4	20.0	60.0	41.0			
2650	DWIN	45 C	1323.0	1347.0	24.00	185.0	90.0			
127	TORN	4 S/F	1323.3	1323.8	2.0	3100.0	1500.0			
9400	HUAN	1 S	1355.8	1356.5	1.9	8.8	4.0		O	
9400	HUAN	2 S/F	1401.7	1402.4	2.6	10.6	3.5		L	
9400	HUAN	2 S/F	1411.0	1411.4	1.3	14.1	7.7		O	
9400	HUAN		1411.0	1411.7		13.2			O	
2800	OTTA	46F C	1539.0	1541.8	6.0	125.0	44.0			
930	BORD	45 C	1539.5	1542.0	6.5	467.0	50.0			
2650	DWIN	4 S/F	1540.0	1541.0	5.0	80.0	40.0			

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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 <sup>2</sup> Hz)	Mean		
04	3200	BERN	45 C	1540.0	1541.8	6.0	150.0			
	5200	BERN	45 C	1540.0	1541.8	6.0	160.0			
	9400	HUAN	4 S/F	1540.5	1541.8	5.3	68.6	36.0		R
	2800	OTTA	29 PBI	1545.0	1545.0	15.0	4.6	2.3		
	9400	HUAN	30 PBI	1545.8	1545.8	23.2	17.6	6.4		0
	9400	HUAN	1 S	1602.8	1603.2	.9	12.3	7.0		0
	2800	OTTA	21 GRF	1640.0	1720.0	80.0	5.6			
	930	BORD	41 F	1642.7	1643.6	1.7	210.0	4.0		
	9400	HUAN	3 S	1642.8	1643.6	3.0	119.7	39.7		L
	2800	OTTA	3 S	1643.0	1643.8	6.0	121.0	30.0		
	930	BORD	41 F	1655.7	1655.8	1.0	210.0	2.0		
	2800	OTTA	40 F	1656.9	1657.4	2.0	5.0			
	9400	HUAN	4 S/F	1717.8	1719.0	1.6	19.4	11.2		L
	2800	OTTA	2 S/F	1718.0	1719.0	1.5	8.6	6.4		
	9400	HUAN	1 S	1752.8	1753.6	2.5	10.6	5.9		L
	9400	HUAN	4 S/F	1810.5	1811.0	3.1	47.5	22.4		L
	2800	OTTA	21 GRF	1845.0	1920.0	150.0	18.6	6.4		
	2800	OTTA	2 S/F	1850.0	1851.0	4.0	5.6	4.2		
	9400	HUAN	23 GRF	1850.6	1920.2	121.5	26.4	14.6		L
	2800	OTTA	4 S/F	1856.5	1900.5	21.0	57.0	21.0		
	9400	HUAN	4 S/F	1856.7	1857.3	2.4	44.0	28.9		L
	9400	HUAN	4 S/F	1900.2	1901.0	1.8	17.6	10.1		L
	9400	HUAN	1 S	1907.2	1907.9	1.2	12.3	6.0		L
	9400	HUAN	2 S/F	1909.5	1910.0	2.2	8.8	4.4		0
	2800	OTTA	8 S	1919.9	1920.0	.5	5.6			
	2800	OTTA	3 S	1959.0	2000.9	4.0	13.8			
	2800	OTTA	45 C	2014.8	2017.0	3.2	11.0	5.0		
	9400	HUAN	2 S/F	2037.9	2038.6	2.4	14.1	6.3		0
	2800	OTTA	3 S	2038.0	2038.7	2.0	17.8	6.0		
	1000	TYKW	5 S	2242.4	2242.5	.5	54.0	1.5		
	3750	TYKW	32 ABS	2257.0	2320.0	55.0	-4.0	-2.0		
	9400	TYKW	45 C	2259.0	2302.2	9.0	13.0	4.0		
9400	TYKW	31 ABS	2308.0	2326.0	42.0	-6.0	-3.0			
9400	TYKW	45 C	2328.0	2332.0	14.0	17.0	3.0			
1000	TYKW	5 S	2337.0	2337.2	.5	3.0	1.0			
1000	TYKW	45 C	2344.3	2344.4	.7	7.0	2.0			
1000	TYKW	8 S	2346.2	2346.4	.3	35.0	12.0			
1000	TYKW	5 S	2354.7	2355.0	.7	6.0	2.0			
05	208	VORO	44 NS	0000.0E	0004.0	240.0D	41.0	24.0		
	200	GORK	44 NS	0550.0E		355.0D		20.0		
	100	GORK	44 NS	0550.0E		355.0D		15.0		
	221	ABST	44 NS	0600.0E	0617.2		180.0	18.0		
	204	IZMI	43 NS	0700.0		300.0D	25.0			
	260	ONDR	44 NS	0805.0E	0908.0U	387.0D				
	127	TORN	44 NS	0850.0E	1053.3	370.0D	2100.0	50.0		VI
	33	UPIC	43 NS	0906.0		328.5D				
	200	HIRA	44 NS	2136.0E	0445.0	630.0D	60.0	30.0		MR
	100	HIRA	44 NS	2136.0E	0521.0	630.0D	60.0	35.0		SR
	3750	TYKW	5 S	0011.5	0011.8	1.0	3.0	1.0		
	9400	TYKW	5 S	0011.6	0011.8	1.5	5.0	2.0		
	1000	TYKW	5 S	0011.7	0011.8	.6	27.0	7.0		
	2000	TYKW	5 S	0011.7	0011.9	.7	1.5	.5		
	9400	TYKW	5 S	0058.0	0105.0	21.0	4.0	2.0		
	3750	TYKW	5 S	0100.0	0102.2	8.0	3.0	1.5		
	9400	TYKW	45 C	0109.5	0109.9	6.5	9.0	2.5		
	17000	NOBE	1 S	0109.7	0110.5	3.5	29.0			0
	3750	TYKW	45 C	0110.0	0110.5	1.0	19.0	4.0		
	1000	TYKW	45 C	0114.0	0121.1	9.0	10.0	2.5		
	1000	TYKW	30 PBI	0123.0		12.0	1.5	.7		
	2840	PEKG	21 GRF	0125.0	0140.0	42.0D	1.6	.8		
	9395	PEKG	21 GRF	0125.0	0150.0	39.0D	9.3	4.2		
2000	TYKW	21 GRF	0127.0	0206.0	95.0	4.0	2.0			
3750	TYKW	45C	0127.5	0129.3	4.5	12.0	4.0			
9400	TYKW	5 S	0129.0	0129.2	1.0	23.0	12.0			
17000	NOBE	1 S	0129.0	0129.3	1.0	22.0			0	
2000	TYKW	5 S	0129.0	0129.3	1.5	6.0	1.5			
9395	PEKG	5 S	0129.0	0129.3	2.0	14.0	2.5			
2840	PEKG	1 S	0129.0	0129.5	4.0	1.7	.4			
1000	TYKW	5 S	0129.1	0129.2	.5	74.0	12.0			

SOLAR RADIO EMISSION  
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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks
							Peak	Mean		
05	9400	TYKW	29 PBI	0130.0		12.0	7.0	3.0		
	17000	NOBE	29 PBI	0130.0	0130.0	12.0	6.0			0
	3750	TYKW	30 PBI	0132.0		60.0	4.0	2.0		
	3750	TYKW	5 S	0135.0	0136.4	10.0	3.0	1.0		
	3750	TYKW	5 S	0150.0	0150.6	1.5	14.0	6.0		
	9400	TYKW	45 C	0150.0	0150.7	2.0	26.0	1.0		
	9395	PEKG	5 S	0150.0	0151.0	5.0	43.0	3.8		
	2840	PEKG	1 S	0150.0	0151.0	10.0	1.9	.7		
	3750	TYKW	29 PBI	0151.5		15.0	2.0	1.0		
	9400	TYKW	29 PBI	0152.0		8.0	2.0	1.0		
	1000	TYKW	20 GRF	0155.0	0240.0	240.0	5.0	2.5		
	9400	TYKW	21 GRF	0211.0	0216.0	45.0	6.0	3.0		
	9400	TYKW	5 S	0231.0	0232.2	2.5	4.0	1.5		
	9400	TYKW	5 S	0234.0	0234.7	10.0	6.0	3.0		
	2000	TYKW	45 C	0247.0	0248.6	5.5D	2.5	1.0D		
	3750	TYKW	5 S	0248.0	0248.6	3.0	10.0	2.5		
	9400	TYKW	5 S	0248.0	0248.7	4.0	3.0	1.0		
	9400	TYKW	28 PRE	0304.0	0311.0	8.0	4.0	2.0		
	9400	TYKW	45 C	0311.0	0314.9	8.0	35.0	12.0		
	3750	TYKW	5 S	0312.0U	0313.3U	3.0U	10.0U	3.0U		
	2000	TYKW	45 C	0313.0	0315.5	7.0	2.0	1.5		
	17000	NOBE	7	0313.1	0315.0	11.0	18.0			0
	3750	TYKW	29 PBI	0315.0		25.0	5.0	2.0		
	9400	TYKW	30 PBI	0319.0		40.0	11.0	2.0		
	2000	TYKW	29 PBI	0320.0		30.0	1.0	.5		
	9400	TYKW	5 S	0336.0	0337.5	6.0	5.0	2.0		
	3750	TYKW	21 GRF	0359.0	0425.0	160.0	9.0	4.5		
	2000	TYKW	20 GRF	0405.0	0425.0	95.0	4.0	3.0		
	9400	TYKW	21 GRF	0407.0	0457.0	125.0	10.0	5.0		
	3750	TYKW	5 S	0414.0	0414.2	.5	2.5	1.0		
	9400	TYKW	45 C	0414.0	0417.0	4.0	10.0	2.0		
	3750	TYKW	21 GRF	0453.0	0500.0	55.0	7.0	3.0		
	9400	TYKW	45 C	0508.0	0512.6	8.0	16.0	5.0		
	9400	TYKW	29 PBI	0516.0		7.0	5.0	2.0		
	3750	TYKW	5 S	0526.0	0526.8	6.0	3.0	1.0		
	9400	TYKW	5 S	0526.5	0526.8	.8	3.0	1.0		
	9100	GORK	23 GRF	0547.2	1001.7	360.0D	28.0			
	3750	TYKW	20 GRF	0550.0	0606.0	45.0	2.0	1.0		
	9400	TYKW	5 S	0557.0	0559.8	6.0	10.0	2.5		
	9395	PEKG	3 S	0711.0	0713.8	12.0	10.6	3.6		
	6100	KISV	2 S/F	0732.2	0733.3	3.5	16.0			
	9100	GORK	2 S/F	0732.8	0733.3	1.8	23.0			
	3750	TYKW	5 S	0733.0	0733.3	3.0	5.0	1.5		
	9400	TYKW	5 S	0733.0	0733.3	3.0	24.0	8.0		
	8400	BERN	3 S	0733.0	0733.3	2.0	25.0U			
	9395	PEKG	5 S	0733.0	0733.6	8.0	23.6	2.5		
	2840	PEKG	5 S	0750.0	0752.4	5.0	11.6	1.5		
	930	BORD	41 F	0751.0	0755.0	8.0	17.0	2.0		
	950	GORK	1 S	0751.2	0752.1	2.7	6.0			
	650	GORK	40 F	0751.3	0757.3	8.0	9.0			
6100	KISV		0751.3	0757.6		9.0				
6100	KISV	45 C	0751.3	0758.7	14.5	12.0				
2950	GORK	1 S	0751.6	0752.0	1.3	4.0	2.0			
2950	GORK	1 S	0754.0	0754.7	2.6	6.0	3.0			
9395	PEKG	5 S	0833.0	0836.0	9.0	17.7	5.9			
15000	KISV	2 S/F	0835.0	0836.0	2.0	21.0				
6100	KISV	1 S	0835.0	0836.0	2.0	6.0				
9100	GORK	1 S	0835.2	0836.0	2.3	18.0	9.0			
3200	BERN	4 S/F	0858.0	0906.3	16.0	230.0				
5200	BERN	4 S/F	0858.0	0906.8	16.0	442.0				
536	ONDR	46 C	0900.4	0906.8	15.7	68.0	11.0			
808	ONDR	46 C	0901.0	0905.0U	21.0		20.0			
6100	KISV	4 S/F	0901.0	0907.0	12.0	276.0				
930	BORD	46 C	0903.0	0905.8	8.0	2770.0	80.0			
430	KRAK	45 C	0903.4	0905.2	6.5	930.0D	80.0			
810	KRAK	45 C	0903.5	0905.0	6.6	820.0D	90.0			
1415	MANI	47 GB	0903.5	0905.5	5.5D	823.2	274.4			
810	KRAK		0903.5	0906.5		820.0D				
15000	KISV	4 S/F	0903.5	0910.0U	25.0	160.0D				
9100	GORK	47 GB	0903.6	0906.7	9.8	990.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks
							Peak	Mean		
05	606	MANI	46 C	0903.8	0906.1	5.2D	132.6	44.2		
	2950	GORK	4 S/F	0903.8	0906.3	7.6	194.0			
	950	GORK	46 C	0904.0E	0905.0	5.6D	97.0			
	950	GORK		0904.0E	0905.7		1080.0			
	19600	BERN	47 GB	0904.0	0906.1	10.0	1548.0			
	4995	MANI	46 C	0904.0	0906.1	5.0D	338.1	112.7		
	35000	BERN	47 GB	0904.0	0906.1	8.0	1560.0			
	2695	MANI	46 C	0904.0	0906.2	5.0D	218.4	72.8		
	8400	BERN	47 GB	0904.0	0906.6	16.0	811.0U			
	11800	BERN	47 GB	0904.0	0906.6	14.0	1193.0U			
	8800	MANI	47 GB	0904.0	0906.8	5.0D	572.3	190.8		
	650	GORK	4 S/F	0904.4U	0906.2	8.0U	129.0			
	3000	IZMI	5 S	0905.0	0906.5	5.0	152.0	84.0		
	2650	DWIN	45 C	0905.0	0908.0	5.0	360.0	150.0		
	200	GORK	46 C	0905.3	0906.1	5.3	6280.0			
	200	GORK		0905.3	0908.8		2790.0			
	204	IZMI	45 C	0905.5	0905.7	10.5	1150.0	400.0		
	127	TORN	27 RF	0905.5	0905.8	17.0	9000.0	120.0		
	260	ONDR	46 C	0905.6	0906.6	14.0				
	6100	KISV	1 S	0926.0	0927.2	2.0	9.0			
	2950	GORK	1 S	0926.8	0927.8	1.0D	2.0	1.0		
	430	KRAK	42 SER	0954.9	1004.1	11.2	120.0			
	15000	KISV	1 S	1001.2	1001.7	1.0	17.0			
	930	BORD	8 S	1001.9	1001.9	.1	12.0	1.0		
	260	ONDR	42 SER	1002.8	1005.9	5.8	54.0	12.0		
	536	ONDR	42 SER	1022.0	1022.9	2.0	41.0			
	430	KRAK	8 S	1043.7	1043.7	.2	26.0			
	204	IZMI	41 F	1048.0	1054.0	6.0	170.0			
	100	GORK	41 F	1052.8	1053.2	6.0	180.0D			
	100	GORK		1052.8	1058.6		180.0D			
	260	ONDR	8 S	1100.9	1101.2					
	204	IZMI	8 S	1101.0	1101.0	.3	920.0	550.0		
	430	KRAK	8 S	1122.8	1122.9	.2	18.0			
	15000	KISV	2 S/F	1141.8	1142.2	1.0	13.0			
	930	BORD	8 S	1146.0	1146.0	.2	17.0	1.0		
	810	KRAK	8 S	1146.7	1146.7	.2	.8			
	3200	BERN	21 GRF	1151.0	1154.0	25.0D	11.0			
	5200	BERN	21 GRF	1153.0	1154.0	22.0	30.0			
	6100	KISV	3 S	1153.0	1154.0	3.0	18.0			
	8400	BERN	21 GRF	1153.0U	1154.0U	20.0U	18.0			
	430	KRAK	8 S	1159.4	1159.4	.2	26.0			
	430	KRAK	42 SER	1216.4	1223.3	16.5	70.0			
	930	BORD	8 S	1228.8	1228.9	.2	32.0	2.0		
	260	ONDR	8 S	1253.0	1253.3	.2	93.0			
	260	ONDR	8 S	1300.8	1300.8	.4	88.0			
	930	BORD	41 F	1308.5	1309.0	.5	17.0	1.0		
	430	KRAK	8 S	1323.9	1324.0	.2	13.0			
	810	KRAK	8 S	1329.5	1329.5	.2	16.0			
	810	KRAK	8 S	1331.0	1331.2	.2	24.0			
	9400	HUAN	4 S/F	1338.2	1339.7	4.1	20.7	9.8		L
430	KRAK	2 S/F	1345.3	1345.6	1.3	70.0	9.0			
930	BORD	46 C	1431.6	1432.3	1.0	22.0	3.0			
245	SGMR	49 GB	1532.8	1533.1	.3D	510.0				
2800	OTTA	4 S/F	1751.7	1754.0	8.3	15.2	5.0			
2800	OTTA	20 GRF	1805.0	1833.0	120.0	6.8	3.0			
9400	HUAN	1 S	1821.1	1821.6	.9	8.1	6.0		0	
9400	HUAN	1 S	1822.3	1823.0	2.0	9.7	5.8		0	
9400	HUAN	21 GRF	2018.9	2048.8	101.9	14.6	8.2		0	
2800	OTTA	20 GRF	2020.0	2045.0	60.0	3.4	1.7			
9400	HUAN	2 S/F	2036.6	2037.7	2.1	16.2	9.2		0	
9400	HUAN	3 S	2041.7	2042.2	1.1	19.4	6.6		0	
9400	HUAN	2 S/F	2113.3	2114.2	2.2	8.1	4.9		0	
9400	HUAN	1 S	2126.1	2127.0	1.3	6.5	3.2		0	
9400	HUAN	2 S/F	2146.7	2147.6	2.5	9.7	5.7		L	
2695	PENT	20 GRF	2215.0	2255.0	60.0	6.4	3.2			
9400	TYKW	45 C	2251.0	2252.3	5.0	17.0	8.0			
3750	TYKW	45 C	2251.0	2259.8	20.0	13.0	3.0			
9400	TYKW	30 PBI	2256.0		30.0	4.0	2.0			
9400	TYKW	45 C	2257.0	2258.0	7.0	25.0	5.0			
06	208	VORO	44 NS	0000.0E		240.0D		28.0		



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
06	100	GORK	44 NS	0553.0E		349.0D		10.0		
	200	GORK	44 NS	0554.0E		349.0D		60.0		
	221	ABST	44 NS	0600.0E	0647.8		180.0	24.0		
	204	IZMI	44 NS	0700.0E		300.0D	66.0			
	33	UPIC	43 NS	0731.6		345.8D				
	260	ONDR	44 NS	0810.0E	1224.0U	350.0D				
	127	TORN	44 NS	1050.0E	1051.5	250.0D	320.0	35.0		V1
	245	SGMR	43 NS	1215.0	1959.1	565.0D	360.0			
	245	PALE	43 NS	1741.0	1854.1	628.0	119.0			
	100	HIRA	44 NS	2134.0E	0352.0	630.0D	70.0	55.0		SR
	200	HIRA	44 NS	2134.0E	2310.0	630.0D	30.0	20.0		MR
	245	LEAR	43 NS	2225.0	1018.3	745.0	119.0			
	9395	PEKG	45 C	0000.0	0426.8	10.0	54.2	5.7		
	9400	TYKW	5 S	0001.0	0001.9	3.0D	15.0	6.0D		
	17000	NOBE	29 PBI	0014.2	0014.2	35.0	37.0			0
	2000	TYKW	5 S	0114.0	0115.0	2.5	2.0	1.0		
	2840	PEKG	20 GRF	0123.0	0135.0	43.0	4.2	2.0		
	9395	PEKG	20 GRF	0140.0	0148.6	48.0	6.8	1.9		
	9400	TYKW	20 GRF	0200.5	0201.5	30.0	6.0	3.0		
	3750	TYKW	21 GRF	0246.0	0325.0	80.0	5.0	3.0		
	9395	PEKG	3 S	0257.0	0305.0	21.0	18.9	5.7		
	9400	TYKW	5 S	0258.5	0259.3	2.5	4.0	2.0		
	9400	TYKW	21 GRF	0258.5	0307.0U	70.0	10.0D	5.0D		
	2000	TYKW	21 GRF	0310.0	0340.0	60.0	2.0	1.0		
	9400	TYKW	5 S	0329.0	0331.4	5.0	13.0	5.0		
	3750	TYKW	5 S	0329.0	0331.5	7.0	7.0	2.5		
	2000	TYKW	5 S	0330.0	0331.4	4.0	3.0	1.0		
	1000	TYKW	5 S	0330.0	0331.5	3.0	3.0	1.0		
	9400	TYKW	45 C	0353.0	0356.0	4.0	18.0	4.0		
	9400	TYKW	30 PBI	0357.0		11.0	3.0	1.5		
	9400	TYKW	5 S	0359.0	0359.5	1.5	3.0	1.0		
	9395	PEKG	1 S	0404.0	0405.5	3.0	7.8	2.4		
	9400	TYKW	5 S	0405.0	0405.4	1.5	6.0	2.0		
	9395	PEKG		0420.0	0426.1					
	2840	PEKG		0424.0	0426.1					
	2840	PEKG	45 C	0424.0	0426.8	17.0	12.9			
	9400	TYKW	45 C	0424.5	0426.0	5.5	104.0	23.0		
	3750	TYKW	45 C	0425.0	0426.0	9.0	25.0	8.0		
	2000	TYKW	5 S	0425.0	0426.0	4.0	4.0	2.5		
	17000	NOBE	1 S	0425.8	0426.0	1.5	38.0			L
	2000	TYKW	29 PBI	0429.0		30.0	2.0	1.0		
	9400	TYKW	30 PBI	0430.0		15.0	6.0	2.0		
	9395	PEKG	30 PBI	0430.0	0430.0	47.0	6.9	2.8		
	3750	TYKW	29 PBI	0434.0		15.0	4.0	2.0		
	9400	TYKW	5 S	0441.5	0442.0	2.5	3.0	1.5		
	9400	TYKW	5 S	0450.5	0452.0	6.0	4.0	2.0		
	3750	TYKW	5 S	0450.5	0453.8	8.0	3.0	1.0		
	2840	PEKG	21 GRF	0505.0	0543.0	118.0	3.8	1.9		
	9400	TYKW	5 S	0506.0	0506.7	5.0	4.0	2.0		
	9395	PEKG	1 S	0506.0	0507.2	4.0	4.5	1.4		
	9395	PEKG	5 S	0519.0	0522.2	5.0	10.8	2.0		
	2000	TYKW	21 GRF	0522.0	0526.0	60.0	4.0	2.0		
	3750	TYKW	5 S	0523.0	0526.0	25.0	3.0	1.5		
	9400	TYKW	5 S	0527.0	0529.0	10.0	4.0	1.5		
	9395	PEKG	21 GRF	0548.0	0601.0	650.0	360.0	150.0		
	9100	GORK	23 GRF	0548.0	0805.2	340.0D	40.0			
	9400	TYKW	28 PRE	0549.0	0550.6	10.0	12.0	7.0		
	3750	TYKW	28 PRE	0550.0	0551.0	10.0D	14.0	2.0D		
	9400	TYKW	45 C	0559.0	0601.5	15.0	38.0	19.0D		
	6100	KISY	3 S	0559.0	0601.7	9.0	21.0			
	9100	GORK	3 S	0600.4	0601.5	5.8	32.0			
	9395	PEKG	5 S	0601.0	0601.7	7.0	11.0	2.4		
	3750	TYKW	30 PBI	0603.0E		18.0D	5.0D	2.5D		
	9395	PEKG	5 S	0608.0	0611.0	5.0	10.4	.3		
	1000	TYKW	45 C	0610.0	0610.7	4.0	14.0	2.5		
	2000	TYKW	45 C	0610.0	0610.7	2.0	7.0	3.0		
	3750	TYKW	5 S	0610.0	0610.8	2.0	2.0	.7		
	9100	GORK	1 S	0610.2	0610.7	1.3	15.0	7.0		
	17000	NOBE	1 S	0610.3	0610.8	2.0	25.0			L
	650	GORK	2 S/F	0610.3	0611.5	1.6	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 <sup>2</sup> Hz)	Mean		
06 A	950	GORK	1 S	0611.2E	0611.5	3.0D	3.0			
	9400	TYKW	30 PBI	0614.0		65.0	13.0	7.0		
	1000	TYKW	45 C	0614.0	0614.8	1.5	8.0	2.5		
	2000	TYKW	45 C	0615.5	0618.7	4.5	2.5	1.5		
	9400	TYKW	20 GRF	0623.0	0634.0	30.0	10.0	4.0		
	2950	GORK	21 GRF	0624.0	0819.0	306.0D	18.0			
	3750	TYKW	21 GRF	0626.0	0634.0	50.0	8.0	3.0		
	2000	TYKW	20 GRF	0626.0	0638.0	60.0	3.0	1.5		
	3750	TYKW	5 S	0656.0	0700.0	15.0	2.0	1.0		
	2840	PEKG	1 S	0657.0	0658.4	3.0	2.6	1.2		
	100	GORK	4 S/F	0839.0	0839.8U	2.0	140.0D			
	9100	GORK	1 S	0859.6	0900.3	1.7	10.0	5.0		
	2950	GORK	1 S	0939.7	0940.7	1.0D	4.0	2.0		
	9100	GORK	1 S	0940.2	0941.1	2.2	15.0	7.0		
	2950	GORK	1 S	0943.2	0943.5	.7	2.0	1.0		
	2950	GORK	1 S	0952.3	0952.6	.5	3.0	1.5		
	930	BORD	1 S	1003.7	1003.7	1.0	10.0	1.0		
	2950	GORK	1 S	1009.6	1010.1	1.2	3.0	1.5		
	430	KRAK	8 S	1031.2	1031.2	.2	26.0			
	430	KRAK	8 S	1052.1	1052.2	.2	30.0			
	6100	KISV	4 S/F	1102.6	1107.9	10.0	32.0			
	5200	BERN	4 S/F	1104.0	1107.9	14.0	65.0			
	8400	BERN	4 S/F	1104.0	1107.9	15.0D	55.0U			
	9100	GORK	4 S/F	1104.7	1107.9	4.4	50.0			
	3200	BERN	4 S/F	1105.0	1107.9	12.0	46.0			
	2950	GORK	3 S	1106.9U	1108.0	3.0U	31.0			
	19600	BERN	45 C	1107.0	1107.9	3.0	40.0			
	2650	DWIN	2 S/F	1107.0	1108.0	3.0	30.0	15.0		
	3000	I ZMI	1 S	1107.0	1108.2	3.0	21.0	13.0		
	930	BORD	41 F	1107.4	1107.5	1.2	71.0	2.0		
	950	GORK	2 S/F	1107.8E	1108.4	.8D	5.0			
	810	KRAK	8 S	1115.7	1115.8	.3	34.0			
	9100	GORK	1 S	1118.8	1119.3	2.2	12.0	6.0		
	3200	BERN	4 S/F	1223.0	1224.8	10.0D	62.0			
	810	KRAK	1 S	1223.6	1224.4	2.0	9.0	4.0		
	2650	DWIN	1 S	1224.0	1224.0	2.0	40.0	20.0		
	536	ONDR	8 S	1224.0	1224.6	1.2	39.0			
	8400	BERN	4 S/F	1224.0	1224.7	10.0D	124.0U			
	9400	HUAN	3 S	1224.0	1224.7	1.8	101.4	43.6		
	19600	BERN	4 S/F	1224.0	1224.8	8.0D	28.0			
	5200	BERN	4 S/F	1224.0	1224.8	10.0	133.0			
	930	BORD	3 S	1224.0	1224.8	6.0	9.0	3.0		
	430	KRAK	45 C	1224.1	1224.2	1.6	800.0	36.0		
	430	KRAK	8 S	1316.3	1316.5	.4	22.0			
	3200	BERN	3 S	1332.0	1334.2	6.0	40.0			
	5200	BERN	4 S/F	1333.0	1334.1	5.0	70.0			
	2800	OTTA	3 S	1333.7	1334.0	3.0	22.0	7.5		
	9400	HUAN	4 S/F	1333.8	1334.2	1.5	40.6	19.9		0
	2650	DWIN	1 S	1334.0	1334.0	1.0	20.0	10.0		
	19600	BERN	4 S/F	1334.0U	1334.1	2.0U	40.0			
	8400	BERN	4 S/F	1334.0U	1334.1	5.0D	37.0U			
	430	KRAK	8 S	1340.6	1340.7	.2	18.0			
	2695	ATHN	47 GB	1422.5	1423.8	3.6	119.0			
	1415	ATHN	47 GB	1422.5	1423.8	3.6	71.0			
	4995	ATHN	47 GB	1422.5	1423.8	3.6	239.0			
	8800	ATHN	47 GB	1422.5	1423.8	2.5	210.0			
	2695	SGMR	47 GB	1423.0	1424.5	3.6	139.0			
	5200	BERN	4 S/F	1423.0	1424.5	9.0	326.0U			
	3200	BERN	4 S/F	1423.0	1424.5	9.0	200.0			
	8400	BERN	4 S/F	1423.0	1424.5	6.0	212.0U			
	2800	OTTA	3 S	1423.0	1424.6	4.0	166.0	36.4		
	2650	DWIN	4 S/F	1423.0	1425.0	5.0	150.0	60.0		
	4995	SGMR	47 GB	1423.1	1424.5	2.5	280.0			
	9400	HUAN	4 S/F	1423.3	1424.6	3.5	141.9	34.1		L
	11800	BERN	4 S/F	1424.0	1424.5	4.0	130.0U			
	8800	SGMR	47 GB	1424.1	1424.5	1.0	189.0			
	15400	SGMR	47 GB	1424.1	1424.6	1.2	80.0			
	127	TORN	8 S	1424.4	1425.0	1.3	4500.0	2300.0		
	2800	OTTA	29 PBI	1427.0	1427.0	9.0	8.4	2.8		
	245	SGMR	49 GB	1507.1	1507.6	2.7	730.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
06	2650	DWIN	45 C	1531.0	1534.0	4.0	220.0	100.0		
	3200	BERN	4 S/F	1531.5	1533.5	5.0	203.0			
	5200	BERN	4 S/F	1532.0	1533.3	5.0	210.0			
	930	BORD	45 C	1532.0	1533.4	5.0	238.0	30.0		
	2800	OTTA	4 S/F	1532.0	1533.5	5.0	149.0	33.0		
	2695	SGMR	47 GB	1532.3	1533.5	4.2	200.0			
	245	SGMR	49 GB	1532.6	1532.8	1.9	510.0			
	610	SGMR	47 GB	1532.6	1533.3	5.0	239.0			
	4995	SGMR	47 GB	1532.6	1533.3	3.4	189.0			
	9400	HUAN	4 S/F	1532.7	1533.2	1.1	142.7	68.1		
	410	SGMR	47 GB	1532.8	1532.8	2.2	119.0			
	1415	SGMR	47 GB	1532.8	1533.3	5.5	180.0			
	8800	SGMR	47 GB	1532.8	1533.3	1.7	169.0			
	15400	SGMR	47 GB	1533.0	1533.3	1.1	74.0			
	8400	BERN	45 C	1533.0	1533.3	8.0	165.0U			
	11800	BERN	45 C	1533.0	1533.3	8.0U	100.0U			
	8800	ATHN	47 GB	1533.0	1533.6	20.1	91.0			
	4995	ATHN	47 GB	1533.0	1533.6	20.1	180.0			
	2695	ATHN	47 GB	1533.0	1533.6	20.1	180.0			
	1415	ATHN	47 GB	1533.3	1533.6	19.8	68.0			
	8800	SGMR	4 S/F	1539.0	1539.6	2.6	32.0			
	4995	SGMR	8 S	1539.0	1539.6	1.5	19.0			
	2800	OTTA	8 S	1539.1	1539.5	.8	3.4			
	610	SGMR	8 S	1539.1	1539.6	1.0	24.0			
	9400	HUAN	3 S	1539.1	1539.6	1.2	30.8	17.2		L
	15400	SGMR	8 S	1539.8	1540.8	1.3	21.0			
	9400	HUAN	29 PBI	1540.3	1540.3	5.8	8.1	6.5		0
	9400	HUAN	21 GRF	1615.2	1644.6	34.8	11.4	3.1		0
	9400	HUAN	4 S/F	1639.8	1640.7	1.4	29.2	10.8		0
	8800	SGMR	8 S	1640.5	1640.6	.3	29.0			
	2800	OTTA	8 S	1640.5	1640.7	.5	2.2	1.1		
	15400	SGMR	8 S	1640.8	1641.5	.7D	18.0			
	410	SGMR	8 S	1701.3	1702.0	1.5	43.0			
	2800	OTTA	1 S	1701.5	1702.0	1.0	4.4	2.2		
	245	SGMR	47 GB	1701.6	1702.0	.7	490.0			
	2800	OTTA	8 S	1720.0	1720.1	.3	5.6			
	2800	OTTA	21 GRF	1720.0	1745.0	100.0	9.0	6.3		
	9400	HUAN	3 S	1725.1	1728.5	5.8	374.5	157.2		L
	8800	SGMR	47 GB	1725.8	1728.5	13.5	400.0			
	2800	OTTA	3 S	1726.0	1729.0	11.0	73.0	20.0		
	4995	SGMR	47 GB	1726.1	1728.6	13.9	230.0			
	15400	SGMR	47 GB	1727.3	1728.5	4.8	200.0			
	2695	SGMR	47 GB	1727.5	1728.6	4.8	64.0			
	245	SGMR	49 GB	1728.3	1729.1	6.5	1399.0			
	9400	HUAN	29 PBI	1730.9	1830.9	67.9	71.4	26.4		L
	610	SGMR	47 GB	1752.3	1752.5	3.8	74.0			
	2800	OTTA	4 S/F	1753.0	1755.0	7.0	23.0	7.7		
	15400	PALE	8 S	1753.6	1753.8	.4	36.0			
	4995	SGMR	4 S/F	1753.6	1754.5	3.5	21.0			
	2695	SGMR	8 S	1754.3	1754.3	1.5	17.0			
1415	SGMR	8 S	1754.6	1755.6	1.0	20.0				
8800	SGMR	4 S/F	1754.6	1755.6	2.7	30.0				
15400	SGMR	8 S	1755.1	1755.3	.2	18.0				
410	SGMR	47 GB	1755.1	1755.6	2.0	260.0				
410	PALE	47 GB	1755.5	1755.6	1.5	210.0				
245	SGMR	49 GB	1817.6	1819.8	2.4	580.0				
245	PALE	49 GB	1817.6	1819.8	2.4	910.0				
2800	OTTA	2 S/F	1817.8	1818.5	5.0	6.8				
1415	SGMR	8 S	1818.3	1818.6	.3	18.0				
610	SGMR	8 S	1820.1	1820.1	.2	24.0				
9400	HUAN	1 S	1907.7	1908.1	1.7	11.4	3.2		0	
2800	OTTA	240 R	1930.0	1945.0	15.0	3.8	1.9			
410	SGMR	8 S	1948.3	1948.6	.5	29.0				
245	PALE	49 GB	1948.3	1948.6	10.7	3000.0				
245	SGMR	49 GB	1948.3	1948.6	2.5	2399.0				
410	PALE	47 GB	1948.5	1948.6	10.5	68.0				
2800	OTTA	1 S	1948.6	1949.0	1.0	4.4	2.2			
2800	OTTA	20 GRF	2005.0	2025.0	35.0	3.8				
9400	HUAN	4 S/F	2005.7	2006.6	1.6	32.4	13.2		0	
15400	SGMR	47 GB	2006.1	2006.3	.7	52.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
06	4995	SGMR	8 S	2006.3	2006.3	.2	13.0			
	8800	SGMR	8 S	2006.3	2006.3	.5	36.0			
	9400	HUAN	21 GRF	2041.5	2100.3	41.1	193.0	6.9		L
	2800	OTTA	8 S	2049.8	2049.8	.5	124.0			
	9400	HUAN	47 GB	2054.8	2058.2	5.0	1012.9	510.4		L
	8800	SGMR	49 GB	2055.0	2058.3	12.1	1300.0			
	2800	OTTA	47 GB	2055.0	2058.5	7.0	570.0	188.0		
	2695	PALE	49 GB	2055.1	2058.1	9.2	780.0			
	2695	SGMR	49 GB	2055.1	2058.3	6.0	660.0			
	1415	SGMR	49 GB	2055.3	2056.3	8.5	2300.0			
	4995	SGMR	49 GB	2055.3	2058.3	8.8	700.0			
	15400	PALE	49 GB	2055.3	2058.3	20.5	2600.0			
	4995	PALE	49 GB	2055.3	2058.3	10.8	700.0			
	8800	PALE	49 GB	2055.3	2058.3	10.8	1600.0			
	1415	PALE	49 GB	2055.6	2056.3	7.7	2600.0			
	610	SGMR	49 GB	2055.8	2058.3	6.5	110.0			
	15400	SGMR	49 GB	2056.1	2058.3	3.5	1600.0			
	610	PALE	49 GB	2056.1	2058.3	6.0	92.0			
	245	SGMR	8 S	2056.6	2056.8	.2	43.0			
	410	SGMR	47 GB	2058.0	2058.1	5.8	29.0			
	410	PALE	49 GB	2059.6	2059.8	3.7	39.0			
	2800	OTTA	30 PBI	2102.0	2102.0	14.0	11.2	3.0		
	2800	OTTA	1 S	2103.5	2104.0	1.5	8.4	4.0		
	2695	PENT	21 GRF	2125.0	2141.0	60.0	13.0	6.0		
	9400	HUAN	8 S	2130.5	2130.8	.7	22.7	13.9		L
	9400	HUAN	22 GRF	2133.6	2143.7	19.6	32.4	11.2		L
	8800	PALE	4 S/F	2139.3	2141.5	7.0	42.0			
	4995	PALE	4 S/F	2139.6	2141.5	6.5	30.0			
	2695	PENT	45 C	2204.5	2205.0	2.0	16.0			
	9400	TYKW	20 GRF	2314.0	2315.7	30.0	5.0	1.5		
	3750	TYKW	28 PRE	2325.0	2339.4	26.0	11.0	4.0		
	2695	PENT		2350.0	0010.0	20.00	213.0			
	3750	TYKW	45 C	2351.0	0002.0	27.0	260.0	120.0		
	2000	TYKW	45 C	2351.0	0008.0	29.0	98.0	35.00		
	3750	TYKW		2351.0	2356.8		260.0			
	2695	MANI	46 C	2352.0	0009.0	25.4	255.1	85.0		
	4995	MANI	46 C	2352.0	2357.2	22.0	356.3	118.8		
	9400	TYKW	45 C	2352.5	2357.4	25.5	195.0	110.0		
	2695	LEAR	47 GB	2352.6	2353.3	17.9	69.0			
	4995	LEAR	47 GB	2352.6	2355.3	17.9	160.0			
	17000	NOBE	7 C	2352.7	2357.8	21.5	103.0			0
	15400	LEAR	47 GB	2352.8	2355.3	17.7	76.0			
	8800	LEAR	47 GB	2353.0	2355.3	17.5	119.0			
	1000	TYKW	47 GB	2353.0	2355.4	20.0	530.0	12.0		
	1415	LEAR	47 GB	2353.1	2353.6	17.4	24.0			
	1415	MANI	4 S/F	2353.1	2357.0	18.9	50.9	17.0		
	8800	MANI	46 C	2353.2	0007.0	22.8	190.4	63.5		
606	MANI	46 C	2353.2	2355.7	17.3	249.7	83.2			
1415	PALE	8 S	2353.3	2355.5	2.20	46.0				
35000	NAGO	20 GRF	2354.0	0001.0	44.0	31.0				
500	HIRA	46 C	2354.0	2355.0	5.3	60.0	10.0		0	
610	LEAR	47 GB	2354.8	2355.3	15.7	300.0				
610	PALE	47 GB	2355.1	2355.3	.5	270.0				
410	LEAR	4 S/F	2355.1	2355.3	15.4	29.0				
245	LEAR	47 GB	2355.8	2356.8	14.7	66.0				
07	208	VORO	44 NS	0000.0E		240.00		12.0		
	200	GORK	44 NS	0550.0E		367.00		25.0		
	100	GORK	44 NS	0550.0E		367.00		15.0		
	127	TORN	43 NS	0720.0	0252.7	420.00	1200.0	33.0		V1
	127	TORN	44 NS	1000.0E	1359.8	300.00	2600.0	38.0		V1
	260	ONDR	44 NS	1010.0E	1255.0U	255.00				
	200	HIRA	44 NS	2134.0E	0515.0	630.00	30.0	20.0		MR
	100	HIRA	44 NS	2134.0E	0525.0	630.00	35.0	25.0		MR
	245	LEAR	43 NS	2301.8	0820.3	708.6	68.0			
	410	LEAR	43 NS	2331.8	0129.0	678.2	60.0			
	3750	TYKW	30 PBI	0018.0		95.0	22.0	8.0		
	9400	TYKW	30 PBI	0018.0		90.0	32.0	13.0		
	3750	TYKW	45 C	0019.0	0033.7	30.0	76.0	7.0		
2000	TYKW	30 PBI	0020.0		80.0	7.0	3.5			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
07	9400	TYKW	45 C	0023.0	0036.0	30.0	14.0	6.0		
	2840	PEKG	5 S	0033.0	0033.7	2.0D	37.6	12.8		
	2000	TYKW	45 C	0033.0	0034.0	5.0	21.0	4.0		
	1000	TYKW	45 C	0033.0	0034.2	2.0	25.0	4.0		
	4995	MANI	3 S	0033.5	0034.0	1.4	81.4	27.1		
	2695	MANI	3 S	0033.5	0034.1	1.5	32.7	10.9		
	1415	MANI	4 S/F	0033.5	0036.2	3.3	26.8	8.9		
	606	MANI	4 S/F	0034.0	0036.1	5.5	174.8	58.3		
	1000	TYKW	42 SER	0035.0	0036.2	4.0	57.0	1.5		
	3750	TYKW	5 S	0101.0	0115.0	25.0	3.0	1.5		
	9400	TYKW	5 S	0103.0	0104.4	1.5	4.0	1.5		
	1000	TYKW	5 S	0121.0	0121.3	.7	4.0	1.5		
	1000	TYKW	45 C	0122.0	0122.8	1.5	29.0	4.0		
	9395	PEKG	5 S	0140.0	0143.3	6.0	10.5	1.6		
	3750	TYKW	5 S	0146.0	0146.6	2.0	1.5	.5		
	9395	PEKG	1 S	0146.0	0148.5	4.0	9.3	2.2		
	9400	TYKW	21 GRF	0153.0	0221.0	170.0	12.0	6.0		
	3750	TYKW	21 GRF	0200.0	0221.6	160.0	13.0	4.0		
	9400	TYKW	5 S	0201.0	0204.0	12.0	4.0	2.0		
	3750	TYKW	5 S	0206.0	0207.7	5.0	4.0	1.5		
	2000	TYKW	21 GRF	0207.0	0221.6	150.0	6.0	2.0		
	9395	PEKG	5 S	0214.0	0216.2	4.0	28.4	4.2		
	9400	TYKW	5 S	0224.0	0225.0	3.0	7.0	2.5		
	3750	TYKW	5 S	0224.0	0225.0	2.5U	3.0	1.0		
	1000	TYKW	5 S	0224.5	0225.0	1.5	2.0	.5		
	9400	TYKW	5 S	0232.0	0235.0	13.0	3.0	1.5		
	9395	PEKG	5 S	0250.0	0252.2	9.0	15.5	5.1		
	9400	TYKW	5 S	0250.0	0252.8	12.0	16.0	6.0		
	3750	TYKW	28 PRE	0303.0U	0314.0	18.0U	4.0D	2.5D		
	9395	PEKG	21 GRF	0314.0	0322.0	39.0	6.8	3.4		
	9400	TYKW	45 C	0318.0	0323.3	12.0	26.0	11.0		
	3750	TYKW	45 C	0321.0	0323.2	12.0	18.0	8.0		
	17000	NOBE	7 C	0322.0	0322.9	20.0	33.0		0	
	9395	PEKG	1 S	0322.0	0324.0	6.0	4.8	1.5		
	1000	TYKW	45 C	0322.0	0324.5	6.0	9.0	3.0		
	2840	PEKG	20 GRF	0322.0E	0324.8	25.0D	21.3	6.6		
	2000	TYKW	45 C	0322.0	0326.4	8.0	7.0	2.5		
	1415	MANI	1 S	0322.1	0323.4	3.4	8.5	2.8		
	2695	MANI	3 S	0322.1	0323.7	4.9	12.5	4.2		
	4995	MANI	3 S	0322.3	0323.7	3.7	48.0	16.0		
	8800	MANI	3 S	0322.3	0323.7	3.5	53.0	17.7		
	606	MANI	2 S/F	0322.7	0325.3	4.5	10.9	3.6		
	9400	TYKW	30 PBI	0330.0		10.0	7.0	3.0		
	2000	TYKW	31 ABS	0330.0	0352.0	60.0	-7.0	-3.5		
	3750	TYKW	31 ABS	0333.0	0352.0	44.0	-7.0	-3.5		
	9400	TYKW	31 ABS	0340.0	0353.0	40.0	-6.0	-3.0		
	9400	TYKW	45 C	0343.5	0347.2	7.0	21.0	7.0		
	9395	PEKG	1 S	0345.0	0347.3	4.0	8.8	2.9		
	9400	TYKW	5 S	0408.5	0409.5	4.0	5.0	2.0		
	9400	TYKW	5 S	0426.0	0429.0	10.0	3.0	1.5		
2000	TYKW	21 GRF	0445.0	0508.0	150.0	9.0	4.0			
3750	TYKW	21 GRF	0448.0	0510.0	110.0	12.0	7.0			
9400	TYKW	21 GRF	0455.0	0533.0	75.0	11.0	5.0			
2000	TYKW	45 C	0457.0	0458.1	2.0	3.0	.7			
1000	TYKW	5 S	0457.2	0457.6	.8	6.0	1.5			
9395	PEKG	21 GRF	0459.0	0508.0	9.0D	6.2	3.0			
2840	PEKG	20 GRF	0500.0	0505.9	40.0	10.0	5.6			
9400	TYKW	45 C	0505.0	0509.7	15.0	14.0	5.0			
9395	PEKG	1 S	0508.0	0509.8	7.0	9.6	4.6			
9400	TYKW	5 S	0528.0	0529.0	3.0	4.0	1.5			
3750	TYKW	45 C	0528.0	0535.6	36.0	7.0	3.0			
2000	TYKW	45 C	0534.0	0544.8	20.0	16.0	1.5			
1000	TYKW	45 C	0544.0	0544.8	2.0	150.0	13.0			
9400	TYKW	5 S	0544.3	0544.8	1.5	3.0	1.0			
1415	MANI	8 S	0544.7	0545.1	.8	118.7	39.6			
606	MANI	8 S	0544.8	0545.1	.5	39.5	13.2			
1000	TYKW	45 C	0547.5	0547.7	.5	16.0	4.0			
9400	TYKW	5 S	0548.2	0548.4	.8	4.0	1.5			
1000	TYKW	42 SER	0548.7	0549.9	1.5	20.0	2.5			
9400	TYKW	5 S	0551.0	0554.0	12.0	16.0	5.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
07	9100	GORK	23 GRF	0551.0	0735.8	360.0	43.0			
	9395	PEKG	5 S	0552.0	0554.0	7.0	15.7	3.3		
	1000	TYKW	45 C	0553.0	0553.6	1.0	38.0	5.0		
	2950	GORK	21 GRF	0600.0U		300.0U				
	9395	PEKG	3 S	0623.0	0626.7	14.0	10.3	5.7		
	9400	TYKW	45 C	0624.0	0626.0	10.0	10.0	4.0		
	3750	TYKW	28 PRE	0643.5	0650.0	6.5	5.0	2.5		
	6100	KISV	2 S/F	0647.3	0652.0	10.0	16.0			
	3750	TYKW	5 S	0650.0	0652.1	4.0	11.0	8.0		
	9395	PEKG	5 S	0650.0	0652.3	5.0	16.6	1.5		
	9400	TYKW	5 S	0650.5	0652.2	6.0	16.0	4.0		
	9100	GORK	1 S	0650.6	0652.1	3.2	21.0	10.0		
	3750	TYKW	29 PBI	0654.0		25.0	8.0	.4		
	9395	PEKG	3 S	0728.0	0735.9	21.0	22.1	5.9		
	9400	TYKW	45 C	0731.0	0735.9	14.0	20.0	6.0		
	6100	KISV	21 GRF	0731.0	0736.0	10.0	11.0			
	3750	TYKW	45 C	0733.0	0735.9	10.0	17.0	4.0		
	2000	TYKW	45 C	0733.0	0735.9	7.0	10.0	2.5		
	2840	PEKG	3 S	0735.0	0736.0	11.0	12.5	3.7		
	2950	GORK	1 S	0735.4	0736.0	4.8	13.0			
	4995	MANI	3 S	0737.5	0738.3	2.0	44.3	14.8		
	2695	MANI	4 S/F	0737.5	0738.3	3.5	17.9	6.0		
	9395	PEKG	3 S	0750.0	0753.8	13.0	19.1	4.3		
	6100	KISV	27 RF	0751.0	0753.8	10.0	18.0			
	9100	GORK	2 S/F	0751.4	0753.2	3.8	15.0			
	2840	PEKG		0752.0	0808.0					
	2840	PEKG	45 C	0752.0	0809.3	29.0	38.3	4.5		
	950	GORK	23 GRF	0756.4	0810.6	18.8	4.0			
	9395	PEKG		0804.0	0808.0					
	9395	PEKG	45 C	0804.0	0809.3	16.0	36.9	4.9		
	6100	KISV		0804.5	0806.6		28.0			
	6100	KISV	46 C	0804.5	0807.9	7.0	35.0			
	6100	KISV		0804.5	0809.0		31.0			
	2950	GORK	45 C	0805.0	0806.6	5.3	21.0			
	3000	IZMI	7 C	0805.0	0807.8	5.0	41.0	24.0		
	2950	GORK		0805.0	0807.8		31.0			
	9100	GORK	46 C	0805.0	0807.8	5.1	37.0			
	9100	GORK		0805.0	0808.9		30.0			
	2950	GORK		0805.0	0809.0		23.0			
	950	GORK	2 S/F	0805.6	0808.0	4.3	12.5			
	650	GORK	22 GRF	0805.6	0808.2	6.9	5.0			
	4995	MANI	4 S/F	0808.0	0811.3	8.0	125.5	41.8		
	2695	MANI	4 S/F	0808.8	0811.5	7.2	28.6	9.5		
	1415	MANI	4 S/F	0809.0	0811.6	4.5	12.7	4.2		
	8800	MANI	4 S/F	0811.0	0811.5	2.5	53.0	17.7		
	810	KRAK	42 SER	0826.4	0849.8	29.0	130.0			
	810	KRAK		0826.4	0852.4		45.0			
	430	KRAK	8 S	0851.8	0851.9	.2	29.0			
	950	GORK	46 C	0922.8	0924.5	5.3	130.0			
	950	GORK		0922.8	0927.0		130.0			
810	KRAK	46 C	0922.9	0924.1	8.1	160.0	4.0			
810	KRAK		0922.9	0927.1		340.0				
930	BORD	46 C	0923.0	0924.5	5.0	419.0	10.0			
204	IZMI	5 S	0924.5	0925.0	1.0	120.0	90.0			
430	KRAK	8 S	0924.8	0924.8	.2	75.0				
430	KRAK	8 S	0933.0	0933.1	.2	110.0				
810	KRAK	42 SER	1000.0	1000.5	25.5	20.0				
930	BORD	41 F	1000.3	1000.6	.6	51.0	3.0			
930	BORD	41 F	1013.4	1013.5	.3	9.0	2.0			
204	IZMI	4 S/F	1013.5	1013.6	.8	120.0	60.0			
33	UPIC	46 C	1013.5	1014.0	3.7					
29	UPIC	46 C	1013.5	1014.5	4.0					
930	BORD	8 S	1020.5	1020.5	.1	34.0	1.0			
430	KRAK	42 SER	1030.0	1030.0	29.5	42.0				
430	KRAK		1030.0	1044.4		40.0				
6100	KISV	21 GRF	1031.0	1043.2	24.0	9.0				
930	BORD	42 SER	1117.0	1119.2	15.0	31.0	2.0			
6100	KISV	1 S	1136.9	1137.1	.5	6.0				
9100	GORK	1 S	1136.9	1137.1	.9	21.0	10.0			
15000	KISV	8 S	1137.0	1137.1	1.3	84.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
07	536	ONDR	8 S	1140.9	1141.0	.2	13.0			
	430	KRAK	42 SER	1205.4	1205.4	13.5	30.0			
	430	KRAK		1205.4	1219.1		25.0			
	930	BORD	41 F	1218.4	1218.9	1.2	30.0	2.0		
	930	BORD	8 S	1222.3	1222.4	.4	12.0	1.0		
	810	KRAK	8 S	1222.6	1222.6	.1	2.0	.4		
	9400	HUAN	45 C	1249.4	1252.8	8.8	239.4	209.4		L
	930	BORD	45 C	1250.3	1253.5	8.7	837.0	250.0		
	808	ONDR	46 C	1251.0	1253.6	8.0	434.0	213.0		
	810	KRAK	45 C	1251.1	1253.8	8.2	650.0	170.0		
	810	KRAK		1251.1	1256.4		470.0			
	430	KRAK	48 C	1251.4	1251.8	1.7	1000.0D	13.0		
	430	KRAK		1251.4	1254.6		660.0			
	430	KRAK		1251.4	1257.9		45.0			
	33	UPIC	45 C	1251.8	1251.9	4.8				
	29	UPIC	45 C	1252.0	1252.4	5.2				
	9400	HUAN	30 PBI	1258.2	1258.2	50.0	43.4	14.8		L
	430	KRAK	42 SER	1308.1	1314.7	22.0	20.0			
	430	KRAK		1308.1	1330.5		19.0			
	9400	HUAN	3 S	1343.9	1344.3	1.2	28.0	10.2		L
	2800	OTTA	1 S	1344.2	1344.5	.3D	4.0	1.8		
	810	KRAK	8 S	1344.7	1344.7	.2	11.0			
	536	ONDR	46 C	1350.9	1356.5	8.0	150.0	15.0		
	536	ONDR	8 S	1402.8	1402.8	.1	57.0			
	930	BORD	41 F	1450.0	1451.1	4.4	87.0	4.0		
	2800	OTTA	8 S	1536.7	1536.7	.1	17.0			
	2800	OTTA	8 S	1547.6	1547.6	.3	75.0			
	9400	HUAN	1 S	1626.7	1627.5	2.4	14.0	6.2		L
	9400	HUAN	1 S	1648.7	1649.2	2.0	10.5	4.7		O
	9400	HUAN	20 GRF	1706.8	1708.0	16.6	15.7	8.0		L
	2800	OTTA	22 GRF	1730.0	1825.0	130.0	8.4	4.0		
	9400	HUAN	1 S	1733.8	1734.3	.9	8.7	5.2		O
	9400	HUAN	3 S	1814.7	1815.7	2.7	28.0	14.0		L
	9400	HUAN	22 GRF	1820.5	1832.0	18.8	15.7	6.6		L
	9400	HUAN	20 GRF	1939.2	1943.3	6.4	7.0	3.2		O
9400	HUAN	4 S/F	2050.0	2056.6U	6.6	138.0	37.9		L	
2800	OTTA	4 S/F	2052.0	2058.3	8.5	118.0	42.0			
2800	OTTA	29 PBI	2100.5	2100.5	40.0	17.0	5.6			
1000	TYKW	8 S	2241.3	2241.4	.4	29.0	8.0			
1000	TYKW	5 S	2336.4	2336.8	1.0	6.0	1.5			
3750	TYKW	5 S	2350.0	2351.2	4.0	2.0	.7			
610	LEAR	47 GB	2350.8	2351.1	.3	79.0				
410	LEAR	47 GB	2351.0	2351.0	.5	60.0				
08	208	VORO	44 NS	0000.0E		240.0D		13.0		
	610	LEAR	43 NS	0021.1	0024.1	628.9D	200.0			
	200	GORK	44 NS	0537.0E		383.0D	10.0			
	100	GORK	44 NS	0539.0E		380.0D		10.0		
	29	UPIC	43 NS	0804.4		363.2D				
	33	UPIC	43 NS	0804.5		390.6D				
	536	ONDR	44 NS	0805.0E	0809.0U	16.0D				
	260	ONDR	44 NS	0805.0E	1305.0	385.0D				
	245	PALE	43 NS	1742.0	2021.3	627.0	380.0			
	410	PALE	43 NS	1742.0	2317.1	627.0	100.0			
	100	HIRA	44 NS	2132.0E	0024.0	630.0D	70.0	25.0		WL
	200	HIRA	44 NS	2132.0E	2300.0	630.0D	35.0	10.0		WR
	245	LEAR	43 NS	2227.0	0925.0	742.0	680.0			
	1000	TYKW	45 C	0003.0	0004.0	1.5	19.0	3.0		
	9395	PEKG	5 S	0009.0	0010.3	5.0	17.9	8.3		
	9400	TYKW	45 C	0010.0	0010.2	2.0	19.0	4.0		
	9400	TYKW	21 GRF	0010.0	0105.0	120.0	6.0	3.0		
	500	HIRA	45 C	0010.9	0011.2	.5	90.0	300.0		O
	410	LEAR	47 GB	0011.0	0011.3	.5	58.0			
	2000	TYKW	5 S	0011.0	0011.4	1.0	1.5	.5		
	3750	TYKW	5 S	0011.0	0011.4	1.0	2.5	1.0		
	1000	TYKW	5 S	0011.0	0011.5	1.5	9.0	1.5		
	610	LEAR	49 GB	0011.1	0011.3	.4	780.0			
2930	VORO	45 C	0020.0	0025.0	14.0	27.0				
3750	TYKW	21 GRF	0020.0	0050.0	110.0	8.0	4.0			
9400	TYKW	5 S	0021.0	0023.0	6.0	2.0	1.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
08	500	HIRA	42 SER	0021.0	0023.2	10.0	80.0			SR
	2000	TYKW	5 S	0021.0	0023.4	8.0	6.0	2.0		
	2000	TYKW	21 GRF	0021.0	0045.0	120.0	4.0	2.0		
	2840	PEKG	3 S	0026.0	0031.4	18.0	37.7	3.3		
	9395	PEKG	3 S	0027.0	0031.2	13.0	16.6	7.1		
	9400	TYKW	5 S	0029.0	0031.3	5.0	15.0	8.0		
	2000	TYKW	5 S	0030.0	0031.0	8.0	30.0	9.0		
	3750	TYKW	45 C	0030.0	0031.0	6.0	27.0	12.0U		
	1000	TYKW	5 S	0030.0	0031.1	3.0D	6.0	4.0D		
	4995	MANI	3 S	0031.3	0032.6	2.7	32.0	10.7		
	2695	MANI	3 S	0031.4	0032.6	3.3	17.2	5.7		
	1415	MANI	3 S	0032.2	0032.6	2.0	19.4	6.5		
	1000	TYKW	29 PBI	0033.0		25.0	2.0	1.0		
	9400	TYKW	29 PBI	0034.0		10.0	5.0	2.0		
	3750	TYKW	29 PBI	0036.0		8.0	5.0	2.0		
	1415	PALE	4 S/F	0042.6	0050.6	11.5	22.0			
	610	PALE	4 S/F	0045.8	0050.8	8.0	41.0			
	610	PALE	4 S/F	0107.8	0112.1	5.7	35.0			
	2840	PEKG	5 S	0112.0	0113.6	2.0	10.3	2.3		
	3750	TYKW	28 PRE	0115.0	0139.5	30.0	14.0	5.0		
	9400	TYKW	45 C	0116.0	0129.0	25.0	11.0	5.0		
	9400	TYKW		0116.0	0139.4		11.0			
	9395	PEKG		0123.0	0149.0					
	9395	PEKG	45 C	0123.0	0149.7	38.0	92.2	41.0		
	2840	PEKG	21 GRF	0136.0	0148.0	41.0	28.9	17.2		
	15400	LEAR	8 S	0139.0	0139.1	1.0	11.0			
	4995	LEAR	8 S	0139.1	0139.3	.4	11.0			
	8800	LEAR	8 S	0139.1	0139.3	.4	13.0			
	4995	PALE	4 S/F	0140.6	0141.6	8.2	46.0			
	15400	PALE	47 GB	0140.8	0141.3	8.0	200.0			
	8800	PALE	47 GB	0140.8	0141.5	8.0	260.0			
	9400	TYKW	45 C	0143.0	0148.9	12.0	85.0	28.0		
	1000	TYKW	45 C	0145.0	0149.0	9.0	32.0	6.0		
	2000	TYKW	45 C	0145.0	0149.9	8.0	78.0	7.0		
	2930	VORO	3 S	0145.0	0150.0	10.0	66.0			
	3750	TYKW	45 C	0145.0	0150.0	10.0	77.0	15.0		
	17000	NOBE	7 C	0147.4	0148.9	3.5	78.0			L
	1415	MANI	4 S/F	0148.5	0149.9	2.5	16.6	5.5		
	606	MANI	4 S/F	0148.5	0149.9	4.5	21.8	7.3		
	2695	MANI	4 S/F	0148.5	0150.1	2.2	160.7	53.6		
	2840	PEKG	5 S	0149.0	0150.0	2.0	60.6	1.3		
	17000	NOBE	29 PBI	0150.9	0150.9	12.0	13.0			O
	2000	TYKW	29 PBI	0153.0		25.0	4.0	2.0		
	1000	TYKW	30 PBI	0154.0		56.0	3.5	1.5		
	9400	TYKW	30 PBI	0155.0		15.0	12.0	5.0		
	3750	TYKW	30 PBI	0155.0		15.0	10.0	5.0		
	9395	PEKG	29 PBI	0210.0	0210.0	3.7	7.6	3.2		
	9400	TYKW	31 ABS	0210.0	0309.0	182.0	-16.0	-8.0		
	3750	TYKW	31 ABS	0210.0	0309.0	168.0	-12.0	-6.0		
	2000	TYKW	5 S	0228.5	0229.5	2.0	3.0	.7		
3750	TYKW	5 S	0229.0	0229.5	1.5	1.5	.5			
9400	TYKW	5 S	0229.0	0229.5	1.5	3.0	1.0			
9395	PEKG		0238.0	0242.2						
9395	PEKG	45 C	0238.0	0242.9	20.0	79.2	35.4			
9400	TYKW	28 PRE	0238.5	0241.5	3.0	6.0	2.0			
2930	VORO	3 S	0240.0	0244.0	5.0	72.0				
2840	PEKG	5 S	0241.0	0242.3	7.0	70.8	6.2			
500	HIRA	46 C	0241.1	0244.4	4.0	200.0	20.0		WR	
200	HIRA	46 C	0241.3	0241.5	3.2	3200.0	85.0		O	
245	LEAR	49 GB	0241.3	0241.6	4.8	780.0				
15400	LEAR	47 GB	0241.3	0242.1	4.8	93.0				
100	HIRA	46 C	0241.4		7.0	10000.0D	1200.0D			
17000	NOBE	7 C	0241.4	0242.1	5.0	78.0			L	
606	MANI	4 S/F	0241.5	0241.8	2.5	23.7	7.0			
9400	TYKW	45 C	0241.5	0242.1	6.5	89.0	22.0			
3750	TYKW	45 C	0241.5	0242.2	6.5	80.0	9.0			
8800	MANI	3 S	0241.5	0242.2	1.5	96.4	32.1			
2000	TYKW	45 C	0241.5	0242.2	5.5	62.0	8.0			
1000	TYKW	45 C	0241.5	0242.3	5.5	53.0	8.0			
410	LEAR	47 GB	0241.5	0242.8	3.1	28.0				



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 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (2 Hz)		
08	610	LEAR	47 GB	0241.5	0243.3	3.1	49.0			
	8800	LEAR	47 GB	0241.6	0242.0	4.5	87.0			
	4995	LEAR	47 GB	0241.6	0242.0	3.5	66.0			
	2695	LEAR	47 GB	0241.6	0242.1	1.2	81.0			
	4995	MANI	3 S	0241.6	0242.2	1.4	84.5	28.2		
	1415	MANI	3 S	0241.6	0242.3	2.2	80.2	26.7		
	1415	LEAR	47 GB	0241.6	0242.3	2.7	63.0			
	2695	MANI	3 S	0241.6	0242.3	1.9	87.4	29.1		
	208	VORO	4 S/F	0242.0	0246.0	5.0	40.00			
	2000	TYKW	31 ABS	0247.0	0320.0	155.0	-5.0	-2.5		
	9400	TYKW	29 PBI	0248.0		15.0	7.0	2.5		
	1000	TYKW	31 ABS	0250.0	0309.0	75.0	-3.0	-1.5		
	2000	TYKW	5 S	0337.8	0338.4	1.5	2.0	.7		
	1000	TYKW	45 C	0416.0	0416.4	1.5	57.0	1.5		
	9395	PEKG	5 S	0416.0	0418.5	15.0	9.7	2.8		
	9400	TYKW	5 S	0417.0	0418.2	8.0	6.0	3.0		
	3750	TYKW	20 GRF	0541.0	0548.0	30.0	2.0	1.0		
	2950	GORK	23 GRF	0603.0U	0648.0	360.00	11.0			
	9100	GORK	23 GRF	0605.2	1021.0	355.00	75.0			
	221	ABST	46 C	0646.2	0649.2		10.0	22.0		
	3750	TYKW	5 S	0648.0	0648.2	.7	4.0	1.0		
	100	HIRA	41 F	0649.6	0651.3	7.3	1400.0			0
	6100	KISV	46 C	0650.0	0651.0	8.0	18.0			
	6100	KISV		0650.0	0652.3		10.0			
	6100	KISV		0650.0	0655.3		16.0			
	9395	PEKG	41 F	0650.0	0655.3	10.0	18.7	8.3		
	6100	KISV		0650.0	0657.0		9.0			
	100	GORK	8 S	0650.3	0651.0U	1.1	130.00			
	200	HIRA	41 F	0650.5	0650.7	7.0	470.0			WR
	3750	TYKW	45 C	0650.5	0651.0	7.5	48.0	6.0		
	3100	CRIM	41 F	0650.5	0651.1	2.0	20.0	7.0		
	3100	CRIM		0650.5	0652.4		20.0			
	2000	TYKW	45 C	0650.5	0652.4	7.5	17.0	3.5		
	9400	TYKW	45 C	0650.5	0655.3	7.0	20.0	6.0		
	650	GORK	41 F	0650.6	0651.2	6.9	8.0			
	650	GORK		0650.6	0652.2		12.0			
	9100	GORK	46 C	0650.6	0652.5	6.9	16.0			WR
	500	HIRA	42 SER	0650.6	0654.0	6.6	250.0			
	650	GORK		0650.6	0655.1		34.0			
	9100	GORK		0650.6	0655.3		20.0			
	650	GORK		0650.6	0657.2		27.0			
	2950	GORK	45 C	0650.7	0651.0	2.1	18.0			
	1000	TYKW	45 C	0650.7	0652.2	2.5	18.0	5.0		
	2950	GORK		0650.7	0652.3		19.0			
	204	IZMI	41 F	0650.8	0654.9	6.5	140.0			
200	GORK	41 F	0651.0	0651.3	6.7	180.00				
950	GORK	46 C	0651.0	0652.5	6.7	17.0				
950	GORK		0651.0	0654.4		18.0				
200	GORK		0651.0	0654.8		180.0				
1000	TYKW	45 C	0654.0	0654.5	1.5	47.0	9.0			
1000	TYKW	45 C	0656.0	0656.7	1.5	16.0	4.0			
100	HIRA	42 SER	0710.3	0710.5	5.6	680.0			WL	
200	GORK	41 F	0710.5	0710.8	4.4	180.0				
200	HIRA	42 SER	0710.5	0710.8	4.0	210.0			WR	
204	IZMI	41 F	0710.5	0710.9	4.5	70.0				
3750	TYKW	45 C	0710.5	0711.2	6.0	10.0	2.0			
200	GORK		0710.5	0713.2		180.0				
9400	TYKW	5 S	0713.0	0714.0	3.0	12.0	4.0			
9400	TYKW	5 S	0742.0	0743.3	9.0	12.0	5.0			
9100	GORK	1 S	0742.3	0743.5	3.5	14.0	7.0			
3100	CRIM	1 S	0803.0	0804.1	2.0	32.0	10.0			
3200	BERN	3 S	0803.0	0805.4	30.00	47.0				
930	BORD	46 C	0803.6	0807.6	6.4	386.0U	6.0			
8800	MANI	4 S/F	0803.8	0805.4	5.7	371.1	123.7			
204	IZMI	41 F	0804.0	0804.5	9.5	580.0				
2840	PEKG		0804.0	0805.0		7.4				
100	GORK	4 S/F	0804.0U	0805.0U	2.7U	1390.0				
5200	BERN	4 S/F	0804.0	0805.4	30.00	95.0				
9400	TYKW	5 S	0804.0	0805.5	3.0	167.0	25.0			
9395	PEKG		0804.0	0805.5						

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 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
08	2840	PEKG		0804.0	0805.6		23.8			
	9395	PEKG	40 F	0804.0	0808.0	16.0	27.0	1.3		
	2840	PEKG	41 F	0804.0	0810.1	19.0	8.2			
	200	GORK	8 S	0804.1	0805.2	2.1	1220.0			
	650	GORK	41 F	0804.2	0805.1U	9.0	170.0D			
	650	GORK		0804.2	0808.5		170.0			
	650	GORK		0804.2	0813.1		93.0			
	1415	MANI	4 S/F	0804.3	0805.1	5.7	55.4	18.5		
	810	KRAK	46 C	0804.3	0805.2	5.5	120.0	13.0		
	4995	MANI	4 S/F	0804.3	0805.3	5.2	161.0	53.7		
	950	GORK	46 C	0804.3	0805.3	6.4	90.0			
	2695	MANI	4 S/F	0804.3	0805.5	6.7	21.2	7.1		
	810	KRAK		0804.3	0807.6		380.0			
	950	GORK		0804.3	0807.6		30.0			
	8400	BERN	4 S/F	0804.5	0805.4	30.0D	161.0U			
	430	KRAK	42 SER	0804.5	0805.4	16.6	530.0	23.0		
	6100	KISV	4 S/F	0804.5	0805.8	2.0	226.0			
	430	KRAK		0804.5	0807.7		1000.0			
	430	KRAK		0804.5	0813.9		87.0			
	2950	GORK	1 S	0804.6	0805.4	1.7	23.0			
	9100	GORK	4 S/F	0804.6	0807.5	4.7	193.0			
	11800	BERN	3 S	0805.0	0805.4	4.0	140.0U			
	3000	IZMI	1 S	0805.0	0805.5	1.5	17.0	13.0		
	19600	BERN	3 S	0805.2	0805.4	1.0U	45.0U			
	6100	KISV	4 S/F	0806.4	0806.8	1.2	23.0			
	204	IZMI	8 S	0821.1	0821.1	.1	60.0	40.0		
	930	BORD	41 F	0835.7	0838.8	3.7	432.0U	2.0		
	810	KRAK	42 SER	0836.3	0838.1	2.5	320.0			
	950	GORK	46 C	0836.5	0836.7	2.7	59.0			
	950	GORK		0836.5	0838.5		75.0			
	650	GORK	41 F	0836.6	0836.7	1.5	12.0			
	2950	GORK	1 S	0836.6	0836.8	2.4	10.0			
	650	GORK		0836.6	0837.7		2.0			
	9100	GORK	1 S	0848.7	0850.0	3.2	14.0	7.0		
	1415	LEAR	49 GB	0909.1	0909.1	.2	690.0			
	6100	KISV	20 GRF	0954.0	1021.0	50.0	29.0			
	8400	BERN	21 GRF	1001.0	1021.1	50.0	51.0U			
	5200	BERN	20 GRF	1001.0	1034.0	50.0D	28.0			
	3200	BERN	20 GRF	1001.0	1035.1	50.0D	12.0			
	810	KRAK	40 F	1006.2	1006.5	2.1	13.0			
	430	KRAK	8 S	1006.3	1006.5	.2	18.0			
	8800	LEAR	47 GB	1007.0	1008.3	9.6	54.0			
	9100	GORK	3 S	1007.1	1008.1	3.3	40.0			
	4995	LEAR	4 S/F	1007.6	1007.8	9.0	11.0			
	430	KRAK	8 S	1143.9	1144.1	.8	170.0			
	204	IZMI	41 F	1144.5	1144.8	3.9	113.0			
	930	BORD	8 S	1158.8	1158.8	.2	25.0	1.0		
	9400	HUAN	4 S/F	1222.0	1223.2	2.1	19.8	11.4		0
	930	BORD	41 F	1222.7	1223.6	1.4	9.0	2.0		
	930	BORD	8 S	1234.6	1234.6	.4	16.0	1.0		
8800	ATHN	49 GB	1245.3	1248.3	13.8	1800.0				
8400	BERN	47 GB	1246.0	1250.1U	20.0	1360.0U				
19600	BERN	47 GB	1246.0	1251.6	20.0	2960.0				
9400	HUAN	45 C	1246.0	1255.6U	12.1	192.8	61.0		L	
11800	BERN	47 GB	1247.0	1249.4	20.0U	1768.0U				
430	KRAK	48 C	1247.2	1248.9	10.5	440.0	62.0			
430	KRAK		1247.2	1250.4		630.0				
810	KRAK	45 C	1247.4	1250.9	8.1	350.0	130.0			
4995	ATHN	49 GB	1247.5	1249.0	10.1	1100.0				
5200	BERN	47 GB	1247.5	1249.3	20.0	1250.0				
3200	BERN	47 GB	1247.5	1250.0	20.0	1068.0				
1415	ATHN	49 GB	1247.5	1250.3	9.5	850.0				
536	ONDR	46 C	1247.8	1249.3	20.0	55.0	22.0			
930	BORD	45 C	1248.0	1250.5	19.0	598.0	50.0			
808	ONDR	46 C	1248.0	1251.5	12.0	283.0	145.0			
35000	BERN	47 GB	1248.5	1250.1	15.0	7628.0				
3100	CRIM	3 S	1248.5	1250.3	10.0	887.0	295.0			
2695	ATHN	49 GB	1248.6	1250.0	11.5	980.0				
127	TORN	47 GB	1249.0	1249.3	9.0	6200.0	160.0			
410	SGMR	49 GB	1249.5	1249.8	5.6	260.0				

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 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (W/m <sup>2</sup> Hz)		
08	2695	SGMR	49 GB	1249.5	1250.0	5.8	880.0			
	8800	SGMR	49 GB	1249.5	1250.0	12.8	1300.0			
	4995	SGMR	49 GB	1249.5	1250.0	12.8	1300.0			
	1415	SGMR	49 GB	1249.5	1250.1	6.3	1100.0			
	245	SGMR	49 GB	1249.5	1251.1	7.3	1199.0			
	15400	SGMR	49 GB	1249.5	1251.5	12.8	3000.0			
	610	SGMR	49 GB	1249.5	1251.6	9.3	270.0			
	9400	HUAN	30 PBI	1258.1	1258.1	21.1	23.1	12.7		L
	430	KRAK	8 S	1302.7	1303.0	.7	1000.00			
	536	ONDR	4 S/F	1303.0	1303.7	4.0	59.0	3.0		
	1415	SGMR	20 GRF	1304.1	1304.8	1.5	22.0			
	610	SGMR	8 S	1304.5	1305.3	.8D	24.0			
	8800	ATHN	4 S/F	1313.6	1314.1	2.7	20.0			
	8800	SGMR	8 S	1314.6	1314.8	.2	20.0			
	2650	DWIN	1 S	1329.0	1330.0	2.0	30.0	15.0		
	930	BORD	41 F	1350.8	1352.2	1.4	15.0	2.0		
	5200	BERN	4 S/F	1359.0	1406.5	9.0	42.0			
	3200	BERN	4 S/F	1359.0	1406.6	8.0	41.0			
	8400	BERN	4 S/F	1359.0	1412.8	13.8D	88.0			
	808	ONDR	46 C	1402.0	1406.2	6.8	32.0	14.0		
	930	BORD	46 C	1403.0	1406.5	6.0	53.0	7.0		
	4995	SGMR	47 GB	1404.0	1404.1	3.6	38.0			
	4995	ATHN	8 S	1404.0	1404.1	1.3	29.0			
	8800	SGMR	8 S	1404.0	1404.1	.1	37.0			
	8800	ATHN	8 S	1404.1	1404.1	1.0	36.0			
	8800	ATHN	47 GB	1405.1	1406.6	6.5	79.0			
	4995	ATHN	47 GB	1405.3	1406.6	4.8	76.0			
	1415	ATHN	4 S/F	1405.3	1406.6	4.0	45.0			
	245	SGMR	8 S	1405.6	1406.0	1.2	130.0			
	1415	SGMR	47 GB	1405.8	1405.8	2.0	17.0			
	2695	SGMR	8 S	1406.0	1406.3	1.3	33.0			
	2695	ATHN	4 S/F	1406.0	1406.6	3.3	27.0			
	536	ONDR	7 C	1406.0	1406.8	4.0	22.0	8.0		
	610	SGMR	47 GB	1406.3	1406.8	1.7	77.0			
	410	SGMR	8 S	1406.5	1406.6	.5	43.0			
	2800	OTTA	21 GRF	1500.0	1610.0	150.0	11.2			
	930	BORD	41 F	1502.8	1503.6	1.0	20.0	2.0		
	930	BORD	46 C	1523.4	1523.5	.6	16.0	4.0		
	8800	ATHN	47 GB	1547.6	1549.1	8.0	360.0			
	4995	ATHN	47 GB	1547.6	1549.1	8.0	310.0			
	1415	ATHN	47 GB	1547.8	1549.1	7.8	70.0			
	2695	ATHN	47 GB	1547.8	1549.1	7.8	110.0			
	2800	OTTA	4 S/F	1606.0	1606.6	1.0	14.0			
	1415	SGMR	8 S	1606.3	1606.6	2.0	44.0			
	2695	SGMR	8 S	1606.3	1606.6	2.0	23.0			
	930	BORD	41 F	1606.4	1607.2	.8	11.0	2.0		
	2800	OTTA	1 S	1656.0	1658.0	6.0	8.4	4.0		
	2800	OTTA	21 GRF	1820.0	1855.0	65.0	6.4	3.6		
	15400	SGMR	4 S/F	1859.6	1900.5	2.4	20.0			
	8800	SGMR	8 S	1859.8	1900.5	1.5	22.0			
2800	OTTA	20 GRF	1900.0	1900.5	9.0	14.6	4.8			
4995	SGMR	8 S	1900.1	1900.5	.5	24.0				
2800	OTTA	1 S	1952.0	1952.3	2.0	6.4	4.4			
2800	OTTA	21 GRF	2015.0	2025.0	35.0	5.2	2.8			
2800	OTTA	1 S	2016.0	2017.5	3.0	8.4	3.0			
4995	SGMR	4 S/F	2120.6	2121.8	2.5	22.0				
2695	SGMR	8 S	2121.5	2121.8	1.3	20.0				
2800	OTTA	4 S/F	2121.5	2122.0	2.0	16.2	5.4			
8800	SGMR	8 S	2121.6	2121.8	.5	28.0				
410	SGMR	8 S	2121.6	2121.8	.5	47.0				
610	SGMR	8 S	2121.8	2122.1	.3	20.0				
2800	OTTA	1 S	2127.5	2127.8	1.0	3.4	1.7			
9400	TYKW	5 S	2304.0	2305.0	2.0	6.0	2.0			
17000	NOBE	1 S	2304.4	2305.0	1.5	43.0			L	
15400	LEAR	47 GB	2304.8	2304.8	.2	57.0				
3750	TYKW	21 GRF	2305.0	2314.0	30.0	4.0	2.0			
9400	TYKW	30 PBI	2306.0		20.0	2.0	1.0			
245	PALE	49 GB	2309.5	2310.0	1.3	590.0				
3750	TYKW	5 S	2309.5	2310.0	2.5	8.0	2.5			
245	LEAR	49 GB	2309.8	2310.0	.3	610.0				

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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Feb 82

F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
08	3750	TYKW	5 S	2316.0	2317.0	3.0	11.0	3.0		
	410	LEAR	8 S	2316.3	2317.0	.8	23.0			
	9400	TYKW	5 S	2316.5	2317.0	1.5	4.0	1.5		
	9400	TYKW	5 S	2334.0	2336.0	3.0	6.0	3.0		
	9400	TYKW	30 PBI	2337.0		22.0	3.0	1.5		
	9400	TYKW	5 S	2349.0	2349.5	1.5	5.0	1.5		
09	208	VORO	44 NS	0000.0E		240.0D		5.0		
	100	GORK	44 NS	0544.0E		376.0D		5.0		
	200	GORK	44 NS	0548.0E		368.0D		10.0		
	221	ABST	44 NS	0600.0E	0731.8		180.0	33.0		
	127	TORN	43 NS	0700.0	1411.7	480.0	500.0	8.0		V1
	260	ONDR	44 NS	0755.0E	1415.0U	387.0D				
	100	HIRA	44 NS	2131.0E	0408.0	630.0D	430.0	155.0		SR
	200	HIRA	44 NS	2131.0E	0636.0	630.0D	80.0	40.0		MR
	245	LEAR	43 NS	2305.0	0942.5	704.0	280.0			
	3750	TYKW	21 GRF	0033.0	0131.0	130.0	10.0	5.0		
	9400	TYKW	28 PRE	0035.0	0036.5	8.0	4.0	2.0		
	3750	TYKW	45 C	0043.0	0046.0	13.5	27.0	9.0		
	9400	TYKW	45 C	0043.0	0046.2	12.0	24.0	9.0		
	9395	PEKG	3 S	0043.0	0046.2	18.0	21.5	11.7		
	2840	PEKG		0043.0	0046.5					
	2840	PEKG		0043.0	0049.5					
	2840	PEKG		0043.0	0051.7					
	1000	TYKW	45 C	0043.0	0052.0	13.0	33.0	3.0		
	2840	PEKG	40 F	0043.0	0054.3	19.0	18.2	9.1		
	4995	MANI	4 S/F	0043.5	0046.4	10.8	43.1	14.4		
	1415	MANI	4 S/F	0043.5	0046.8	13.5	68.3	22.8		
	2695	MANI	4 S/F	0043.5	0046.8	12.0	51.4	17.1		
	8800	MANI	4 S/F	0043.5	0047.0	8.5	53.7	17.9		
	2000	TYKW	45 C	0043.5	0051.7	12.0	9.0	3.0		
	606	MANI	4 S/F	0045.5	0052.0	8.5	20.8	6.9		
	9400	TYKW	30 PBI	0055.0		100.0	8.0	4.0		
	3750	TYKW	29 PBI	0056.5		8.0	3.0	1.5		
	1000	TYKW	45 C	0103.0	0107.2	14.0	9.0	.7		
	9395	PEKG		0103.0	0109.4					
	9400	TYKW	45 C	0103.0	0110.9	16.0	44.0	1.5		
	9395	PEKG	45 C	0103.0	0111.0	29.0	32.5	4.6		
	3750	TYKW	45 C	0106.0	0111.0	11.0	22.0	4.0		
	2000	TYKW	5 S	0106.6	0106.8	.8	27.0	5.0		
	2840	PEKG		0108.0	0109.3					
	2840	PEKG	45 C	0108.0	0111.2	7.0D	18.9	10.5		
	500	HIRA	46 C	0108.0	0111.8	4.3	35.0	6.0		0
2000	TYKW	21 GRF	0108.0	0132.0	95.0	3.0	1.5			
2000	TYKW	45 C	0109.0	0111.0	4.0	7.0	1.5			
9400	TYKW	29 PBI	0119.0		15.0	9.0	4.5			
1000	TYKW	8 S	0126.6	0126.7	.3	42.0	10.0			
9395	PEKG	5 S	0135.0	0141.6	9.0D	174.0	129.0			
9400	TYKW	28 PRE	0137.0	0140.0	3.0	7.0	3.0			
4995	MANI	3 S	0139.8	0141.8	4.7	140.6	46.9			
9400	TYKW	5 S	0140.0	0141.5	15.0	220.0	44.0			
3750	TYKW	5 S	0140.0	0141.7	5.0	43.0	15.0			
2840	PEKG	3 S	0140.0E	0141.8	14.0D	12.8	1.8			
8800	MANI	3 S	0140.2	0141.8	4.3	311.5	103.8			
17000	NOBE	1 S	0140.7	0141.6	4.5	66.0			L	
2695	MANI	3 S	0141.0	0141.8	2.0	10.3	3.4			
9395	PEKG	30 PBI	0144.0	0144.0	32.0D	24.3	9.9			
3750	TYKW	29 PBI	0145.0		45.0	7.0	3.0			
1000	TYKW	45 C	0154.3	0156.3	3.5	5.0	1.0			
9400	TYKW	30 PBI	0155.0		35.0	12.0	6.0			
9395	PEKG		0211.0	0212.0	2.0D	4.5	.7			
9400	TYKW	5 S	0218.0	0219.0	3.0	4.0	1.5			
17000	NOBE	1 S	0218.4	0219.1	1.0	18.0			L	
3750	TYKW	21 GRF	0319.0	0400.0	200.0	9.0	5.0			
9400	TYKW	28 PRE	0326.5	0327.5	8.5	5.0	3.0			
9400	TYKW	45 C	0335.0	0339.3	20.0	68.0	18.0			
9395	PEKG		0335.0	0339.4						
9395	PEKG	45 C	0335.0	0340.4	22.0	69.0	8.6			
2000	TYKW	21 GRF	0335.0	0400.0	175.0	2.0	1.0			
2000	TYKW	45 C	0335.5	0336.2	1.0	15.0	1.5			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		
09	3750	TYKW	45 C	0336.0	0340.3	21.0	29.0	5.0U		
	4995	MANI	4 S/F	0336.8	0340.2	6.7	59.5	19.8		
	8800	MANI	4 S/F	0336.8	0340.2	6.7	68.8	22.9		
	2000	TYKW	45 C	0336.8	0340.3	6.2	11.0	4.0		
	1000	TYKW	42 SER	0337.0	0337.4	.7	22.0	1.0		
	2695	MANI	4 S/F	0337.0	0340.2	6.5	20.0	6.6		
	17000	NOBE	28 PRE	0338.2	0339.3	27.9	44.0			L
	2840	PEKG		0339.0E	0339.5					
	2840	PEKG	45 C	0339.0E	0340.4	14.0D	20.1	5.4		
	606	MANI	4 S/F	0339.4	0340.0	2.1	127.4	42.5		
	2000	TYKW	29 PBI	0343.0		10.0	3.0	1.5		
	2000	TYKW	5 S	0354.6	0354.7	.5	1.5	.5		
	9400	TYKW	30 PBI	0355.0		115.0	4.0	2.0		
	9400	TYKW	5 S	0358.5	0400.0	3.5	3.0	1.5		
	2840	PEKG	3 S	0403.0	0407.2	18.0	263.6			
	9400	TYKW	47 GB	0403.0	0407.5	11.0	910.0	210.0		
	2000	TYKW	28 PRE	0404.0	0406.4	2.4	3.0	1.5		
	4995	MANI	4 S/F	0404.0	0407.0	11.0	401.2	133.7		
	2695	MANI	3 S	0404.0	0407.0	11.0	225.1	75.0		
	3750	TYKW	45 C	0404.0	0407.1	13.0	283.0	40.0		
	9395	PEKG		0404.0	0407.6					
	9395	PEKG	45 C	0404.0	0408.2	11.0	1004.0			
	8800	MANI	47 GB	0405.4	0407.0	9.6	736.2	245.4		
	200	HIRA	46 C	0406.0	0406.3	51.0	2200.0	15.0		0
	35000	NAGO	47 GB	0406.0	0407.0	4.0	1200.0			
	1415	MANI	3 S	0406.0	0407.0	7.0	87.6	29.2		
	1000	TYKW	5 S	0406.0	0407.2	7.0	76.0	23.0		
	17000	NOBE	47 GB	0406.1	0407.6	5.4	1820.0			0
	100	HIRA	46 C	0406.2	0406.3	57.0	7500.0	40.0		WL
	500	HIRA	45 C	0406.2	0407.6	6.0	70.0	10.0		WR
	2000	TYKW	45 C	0406.4	0407.2	6.6	192.0	40.0		
	606	MANI	3 S	0406.5	0407.2	6.0	29.1	9.7		
	35000	NAGO	29 PBI	0410.0	0419.0	39.0	25.0			
	17000	NOBE	29 PBI	0411.5	0411.5	60.0	31.0			0
	1000	TYKW	29 PBI	0413.0		10.0	4.0	1.5		
	2000	TYKW	29 PBI	0413.0		10.0	3.0	1.0		
	9400	TYKW	30 PBI	0414.0		90.0	12.0	7.0		
	3750	TYKW	5 S	0419.0	0420.0	3.0	1.5	.5		
	3750	TYKW	45 C	0427.0	0441.7	35.0	15.0	4.0		
	2840	PEKG	20 GRF	0430.0	0441.7	28.0	11.2	2.5		
	9400	TYKW	45 C	0434.0	0440.0	30.0	13.0	6.0		
	2000	TYKW	45 C	0436.0	0441.8	19.0	7.0	2.0		
	1000	TYKW	45 C	0453.0	0453.2	1.5	14.0	5.0		
	3750	TYKW	20 GRF	0510.0	0514.0	80.0	4.0	2.0		
	2000	TYKW	20 GRF	0510.0	0525.0	80.0	1.5	.7		
9100	GORK	23 GRF	0556.0U	1113.0	360.0D	34.0				
9395	PEKG	5 S	0633.0	0636.1	10.0	9.6	3.2			
9400	TYKW	5 S	0633.0	0636.5	5.0	5.0	3.0			
3750	TYKW	5 S	0635.0	0636.1	3.5	4.0	1.5			
9400	TYKW	30 PBI	0638.0		30.0	2.0	1.0			
2950	GORK	4 S/F	0638.6	0640.8	2.2D	17.0				
1000	TYKW	5 S	0642.0	0642.5	1.0	6.0	2.0			
9395	PEKG		0643.0	0645.4	11.0	16.0	8.0			
9400	TYKW	5 S	0644.4	0645.2	3.6	13.0	7.0			
9100	GORK	1 S	0644.5	0645.2	2.9	12.0	6.0			
9400	TYKW	29 PBI	0648.0		17.0	3.0	1.5			
2950	GORK	21 GRF	0654.0	0703.8	85.0	7.9				
3750	TYKW	21 GRF	0654.0	0705.0	44.0	5.0	3.0			
2000	TYKW	21 GRF	0654.0	0706.0	45.0	3.0	1.5			
950	GORK	23 GRF	0659.7	0715.0	29.4	4.0				
650	GORK	23 GRF	0700.0	0736.0	46.4	2.7				
100	GORK	41 F	0700.5	0701.2	33.0	150.0D				
100	GORK		0700.5	0722.7		150.0D				
100	GORK		0700.5	0724.3		150.0D				
100	GORK		0700.5	0729.5		150.0D				
100	GORK		0700.5	0733.8		150.0D				
2950	GORK	4 S/F	0701.0	0701.2	1.0	30.0				
2000	TYKW	45 C	0701.0	0701.3	.5	10.0	3.0			
3750	TYKW	45 C	0701.0	0701.3	3.0	18.0	3.5			
1000	TYKW	45 C	0701.0	0702.7	2.5	12.0	1.5			

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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F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
09	204	IZMI	41 F	0701.0	0712.3	23.8	260.0			
	2000	TYKW	5 S	0702.3	0702.7	1.0	2.5	1.0		
	3100	CRIM	3 S	0710.5	0712.0U	5.0	31.0D			
	3750	TYKW	5 S	0710.5	0712.6	5.5	138.0	33.0		
	4995	MANI	4 S/F	0711.0	0712.5	14.0	136.0	45.3		
	9400	TYKW	5 S	0711.0	0712.6	4.0	130.0	26.0		
	1415	MANI	3 S	0711.0	0712.6	4.0	30.8	10.2		
	6100	KISV	4 S/F	0711.0	0712.6	5.0	133.0			
	9395	PEKG	3 S	0711.0	0712.6	4.0	119.7			
	15000	KISV	4 S/F	0711.0	0712.6	4.0U	50.0			
	2840	PEKG	5 S	0711.0	0712.7	5.0	51.0	31.0		
	9395	PEKG	21 GRF	0711.0	0724.7	28.0	11.6			
	606	MANI	4 S/F	0711.1	0712.1	3.4	121.9	40.6		
	2695	MANI	4 S/F	0711.2	0712.5	13.8	73.8	24.6		
	500	HIRA	45 C	0711.3	0712.1	4.0	220.0	50.0		WL
	2950	GORK	3 S	0711.3	0712.5	4.0	53.0			
	650	GORK	4 S/F	0711.4	0712.4U	3.0	25.0D			
	3000	IZMI	5 S	0711.5	0712.5	1.2	43.0	30.0		
	8800	MANI	3 S	0711.5	0712.5	3.3	178.9	59.6		
	1000	TYKW	45 C	0711.5	0713.0	4.0	54.0	15.0		
	9100	GORK	3 S	0711.6	0713.5	3.0	155.0	80.0		
	200	GORK	41 F	0711.7E	0712.1	20.0D	30.0D			
	3200	BERN	3 S	0711.7	0712.4	3.0	165.0			
	5200	BERN	3 S	0711.7	0712.4	3.0	385.0U			ONLY PAPER REC
	200	GORK		0711.7	0724.6		30.0D			
	17000	NOBE	1 S	0712.2	0712.7	1.7	26.0			L
	950	GORK	4 S/F	0712.3	0713.2	2.2	40.0			
	9400	TYKW	30 PBI	0715.0		25.0	5.0	2.5		
	6100	KISV	45 C	0719.0	0722.8	7.0	30.0			
	6100	KISV		0719.0	0724.6		15.0			
	3750	TYKW	45 C	0720.5	0722.8	8.0	15.0	6.0		
	2000	TYKW	45 C	0721.0	0721.7	5.0	3.0	1.0		
	9400	TYKW	45 C	0721.0	0722.8	5.0	23.0	5.0		
	1000	TYKW	45 C	0721.0	0724.7	5.0	20.0	4.0		
	9100	GORK	1 S	0721.9	0722.8	2.0	25.0			
	9395	PEKG	1 S	0722.0	0723.0	1.0	12.8	2.6		
	950	GORK	2 S/F	0724.3	0724.7	1.0	10.0			
	536	ONDR	8 S	0836.3	0836.4	.2	12.0			
	8400	BERN	45 C	0846.0	0910.1	90.0U	35.0U			
	3200	BERN	45 C	0846.0	0923.6	90.0U	13.0			
	5200	BERN	45 C	0846.0	0923.6	90.0U	22.0			
	11800	BERN	45 C	0846.0	0929.8	90.0U	50.0U			
	6100	KISV	2 S/F	0849.0	0850.8	3.5	8.0			
	15000	KISV	2 S/F	0849.0	0850.8	2.0	21.0			
	9100	GORK	1 S	0850.4	0851.0	2.0	17.0	8.0		
	204	IZMI	7 C	0855.0	0857.3	3.0	100.0	50.0		
	930	BORD	41 F	0856.4	0856.6	.7	72.0	3.0		
	950	GORK	22 GRF	0915.3	1014.2	153.0	14.0			
	9100	GORK	45 C	0919.7	0921.0	6.4	12.0			
	9100	GORK		0919.7	0923.6		44.0			
100	GORK	41 F	0919.8	0920.3	6.0	340.0D				
100	GORK		0919.8	0925.6		340.0				
200	GORK	41 F	0920.0	0920.4	9.1	40.0				
204	IZMI	41 F	0920.0	0923.0	10.1	80.0				
6100	KISV	2 S/F	0920.0	0923.6	5.0	8.0				
200	GORK		0920.0	0925.8		40.0D				
200	GORK		0920.0	0928.5		40.0D				
810	KRAK	27RF	0920.2	0922.6	15.6	10.0	6.0			
2950	GORK	1 S	0920.2	0923.6	5.0	6.0				
650	GORK	22 GRF	0921.0	0922.8	6.9	4.0				
15000	KISV	4 S/F	0921.0	0923.6	5.0	61.0				
430	KRAK	41 F	0921.7	0921.7	2.1	12.0				
430	KRAK		0921.7	0923.2		84.0				
15000	KISV	2 S/F	0942.5	0945.3	4.5	36.0				
6100	KISV	3 S	0943.5	0945.2	5.0	10.0				
2950	GORK	1 S	0944.2	0944.6	1.4	3.5				
9100	GORK	1 S	0944.2	0945.2	2.9	19.0	10.0			
15000	KISV	4 S/F	1000.5	1001.0	4.5	43.0				
810	KRAK	1 S	1014.8	1015.0	1.0	7.0	3.0			
536	ONDR	8 S	1042.9	1043.2	.3U	12.0				

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OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
09	2950	GORK	1 S	1043.3	1043.6	1.1	3.0	1.5		
	2950	GORK	1 S	1046.2	1046.8	1.2	2.0	1.0		
	5200	BERN	21 GRF	1100.0	1109.0	35.00	34.0			
	8400	BERN	20 GRF	1104.0	1111.5	35.00	30.00			
	3200	BERN	21 GRF	1106.0	1109.0	35.00	34.0			
	6100	KISV	21 GRF	1106.6	1113.0	17.0	15.0			
	11800	BERN	21 GRF	1107.0	1107.6	35.00	45.00			
	19600	BERN	21 GRF	1107.0	1107.6	35.00	70.0			
	15000	KISV	4 S/F	1107.0	1107.7	2.0	77.0			
	2950	GORK	45 C	1107.1	1108.1	4.0	37.0			
	2950	GORK		1107.1	1110.0		24.0			
	2950	GORK	29 PBI	1111.1	1111.2	39.0	12.0			
	430	KRAK	8 S	1124.9	1125.2	.7	640.0			
	536	ONDR	4 S/F	1125.0	1125.8	1.1	13.0			
	15000	KISV	2 S/F	1130.0	1130.8	1.5	38.0			
	9100	GORK	1 S	1130.5	1130.8	1.4	12.0	6.0		
	430	KRAK	8 S	1214.6	1214.6	.2	8.0			
	430	KRAK	8 S	1231.7	1231.7	.2	40.0			
	9400	HUAN	21 GRF	1350.4	1417.2	129.8	45.4	14.8		L
	5200	BERN	45 C	1354.0	1408.8	36.0	95.0			
	8400	BERN	45 C	1354.0	1408.8	36.0	80.00			
	11800	BERN	45 C	1354.0	1413.4	30.0	48.00			
	9400	HUAN	3 S	1354.1	1355.1	2.6	37.3	23.8		L
	810	KRAK	27 RF	1359.2	1402.4	15.5	33.0	8.0		
	810	KRAK		1359.2	1409.7		37.0			
	930	BORD	40 F	1400.0	1401.2	18.0	51.0	7.0		
	2800	OTTA		1400.0	1402.0	2.00	26.0			
	3200	BERN	45 C	1400.0	1402.6	30.0	48.0			
	9400	HUAN	2 S/F	1400.0	1402.6	3.2	16.2	7.2		0
	808	ONDR	7 C	1401.0	1402.6	5.3	25.0	14.0		
	536	ONDR	7 C	1401.0	1403.0	10.2	6.0	5.0		
	430	KRAK	27 RF	1401.4	1402.9	12.6	15.0	6.0		
	430	KRAK		1401.4	1409.0		19.0			
	9400	HUAN	45 C	1406.4	1409.0	9.1	77.8	39.2		L
	9400	HUAN	1 S	1520.1	1521.9	2.0	8.1	3.6		0
	9400	HUAN	3 S	1539.6	1540.2	1.6	26.0	16.5		0
	9400	HUAN	3 S	1630.6	1631.80	3.4	102.2	40.3		L
	9400	HUAN	29 PBI	1634.0	1634.6	12.2	13.0	6.2		L
	2800	OTTA	20 GRF	1705.0	1715.0	40.0	4.2	2.8		
	2800	OTTA	20 GRF	1810.0	1840.0	60.0	3.4	2.0		
	9400	HUAN	2 S/F	1847.4	1848.6	2.9	16.2	8.4		0
	9400	HUAN	29 PBI	1850.2	1850.2	6.1	6.5	3.7		0
	9400	HUAN	3 S	2003.5	2004.0	2.0	47.0	19.5		0
	2695	PENT	3 S	2003.5	2004.2	7.0	80.0	18.0		
	9400	HUAN	20 GRF	2051.8	2104.80	21.4	13.0	4.3		0
9400	HUAN	2 S/F	2119.8	2120.3	3.7	9.7	5.7		0	
2800	OTTA	20 GRF	2125.0	2130.0	85.0	7.2	3.6			
9400	TYKW	20 GRF	2215.0	2242.0	115.0	14.0	7.0			
2000	TYKW	21 GRF	2220.00	2320.0	115.00	4.0	2.0			
3750	TYKW	21 GRF	2220.00	2320.0	115.00	6.0	3.0			
3750	TYKW	28 PRE	2344.0	2351.0	7.0	2.0	1.0			
2000	TYKW	45 C	2351.0	2352.8	3.0	3.0	1.0			
3750	TYKW	45 C	2351.0	2352.9	6.0	14.0	7.0			
3750	TYKW	29 PBI	2357.0		15.0	4.0	2.0			
10	410	LEAR	43 NS	0005.1	0217.8	704.0	500.0			
	208	VORO	44 NS	0100.0E		180.00		39.0		
	204	IZMI	44 NS	0700.0E		300.00	25.0			
	127	TORN	44 NS	0700.0E	0948.0	480.00	1400.0	288.0		V1
	260	ONDR	44 NS	0759.0E	1304.00	395.00				
	33	UPIC	43 NS	0905.5		292.30				
	245	SGMR	43 NS	1804.0	1837.5	222.00	239.0			
	200	HIRA	44 NS	2130.0E	0000.0	640.00	60.0	35.0		MR
	100	HIRA	44 NS	2130.0E	2157.0	640.00	700.00	75.0		SR
	245	LEAR	43 NS	2228.0	0135.3	740.0	260.0			
	410	LEAR	43 NS	2340.0	2341.0	668.0	219.0			
	3750	TYKW	28 PRE	0047.0	0051.7	5.0	12.0	4.0		
	2000	TYKW	28 PRE	0047.0	0052.0	5.0	8.0	3.0		
	2840	PEKG	45 C	0048.0	0058.8	32.0	802.0			
	2695	MANI	47 GB	0049.5	0059.3	50.0	798.6	266.2		

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  
Feb 82

F E B R U A R Y 1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean (2 Hz)		
10	2930	VORO	45 C	0050.0	0058.0	32.0	7382.0			
	1000	TYKW	45 C	0051.0	0108.3	28.0	410.0	75.0		
	1415	MANI	46 C	0051.3	0108.5	52.7	284.7	94.5		
	4995	LEAR	49 GB	0051.6	0056.3	33.4	1300.0			
	245	LEAR	49 GB	0051.8	0057.8	33.2	2000.0			
	2000	TYKW	45 C	0052.0	0056.3	28.0	345.0	130.0		
	9400	TYKW	47 GB	0052.0	0056.4	28.0	1850.0	320.0		
	3750	TYKW	47 GB	0052.0	0058.6	28.0	980.0	230.0		
	1415	LEAR	49 GB	0052.1	0056.0	32.9	300.0			
	2695	LEAR	49 GB	0052.1	0057.6	32.9	570.0			
	8800	LEAR	49 GB	0052.8	0056.3	32.2	1899.0			
	15400	LEAR	49 GB	0052.8	0056.3	32.2	1000.0			
	17000	NOBE	47 GB	0052.9	0058.6	17.8	786.0			R
	9395	PEKG	46 C	0053.0	0056.5	25.0	1070.0	532.0		
	606	MANI	46 C	0053.0	0057.0	46.5	153.3	51.1		
	4995	MANI	47 GB	0053.0	0058.8	46.0	884.1	294.7		
	410	LEAR	49 GB	0053.1	0055.8	31.9	360.0			
	8800	MANI	47 GB	0053.5	0056.7	43.5	2121.7	707.2		
	200	HIRA	46 C	0053.7	0057.2	24.0	2100.0	160.0		O
	610	LEAR	49 GB	0053.8	0056.5	31.2	230.0			
	500	HIRA	46 C	0054.0	0056.0	24.0	200.0	60.0		WL
	100	HIRA	48 C	0054.3		140.0	10000.0D	390.0D		
	35000	NAGO	5 S	0055.0	0058.0	11.0	437.0			
	208	VORO	48 C	0100.0E			14.0D			
	35000	NAGO	29 PBI	0106.0	0107.0	16.0	30.0			
	17000	NOBE	29 PBI	0110.7	0110.7	10.0	28.0			O
	1000	TYKW	30 PBI	0119.0		40.0	4.0	2.0		
	9400	TYKW	30 PBI	0120.0		54.0	33.0	14.0		
	2000	TYKW	30 PBI	0120.0		60.0	13.0	5.0		
	3750	TYKW	30 PBI	0120.0		60.0	19.0	8.0		
	1000	TYKW	45 C	0120.0	0125.6	23.0	62.0	12.0		
	2000	TYKW	45 C	0120.5	0133.1	21.0	69.0	24.0		
	1415	LEAR	49 GB	0120.8	0121.0	3.3	750.0			
	610	LEAR	47 GB	0124.5	0126.1	5.6	169.0			
	9395	PEKG	3 S	0125.0	0137.5	19.0	10.9	2.0		
	1415	PALE	20 GRF	0127.0	0127.3	12.8	52.0			
	2695	PALE	20 GRF	0127.0	0127.3	.8	20.0			
	4995	PALE	20 GRF	0127.0	0127.3	2.0	20.0			
	610	PALE	47 GB	0127.0	0127.5	3.8	119.0			
	410	PALE	8 S	0129.3	0130.8	1.8	17.0			
	1415	LEAR	47 GB	0132.6	0133.1	1.2	50.0			
	610	LEAR	47 GB	0136.6	0136.8	.2	63.0			
	9400	TYKW	45 C	0147.0	0149.7	7.0	8.0	2.0		
	9395	PEKG	3 S	0147.0	0149.9	11.0	13.4	4.0		
	9400	TYKW	28 PRE	0215.0	0223.0	12.0	11.0	2.5		
	2000	TYKW	5 S	0216.0	0216.5	2.0	3.0	1.0		
	1000	TYKW	5 S	0216.3	0216.6	1.5	1.5	.5		
	410	PALE	47 GB	0217.3	0218.0	.8	300.0			
	9395	PEKG	21 GRF	0218.0	0229.0	26.0	16.4	5.6		
	1000	TYKW	32 ABS	0225.0	0240.0	60.0	-1.5	-.7		
	3750	TYKW	45 C	0227.0	0227.5	1.0	74.0	30.0		
	9395	PEKG	5 S	0227.0	0227.7	4.0	75.9	6.6		
	9400	TYKW	5 S	0227.0	0227.7	3.0	95.0	26.0		
	2000	TYKW	45 C	0227.0	0227.8	3.0	22.0	3.0		
	2840	PEKG	3 S	0227.0	0227.8	11.0	47.0	3.3		
	2695	MANI	3 S	0227.0	0228.0	1.5	61.9	20.6		
	8800	MANI	3 S	0227.0	0228.0	2.0	110.5	36.8		
	8800	PALE	47 GB	0227.1	0227.6	1.2	100.0			
	4995	PALE	47 GB	0227.3	0227.6	.5	72.0			
	2695	PALE	8 S	0227.3	0227.6	.5	47.0			
	17000	NOBE	1 S	0227.4	0227.8	.8	45.0			L
	8800	LEAR	47 GB	0227.5	0227.6	.3	53.0			
	15400	PALE	47 GB	0227.5	0227.6	.3	50.0			
	4995	LEAR	47 GB	0227.5	0227.6	.1	60.0			
	15400	LEAR	8 S	0227.5	0227.6	.3	44.0			
	4995	MANI	3 S	0227.5	0227.9	1.5	101.8	33.9		
	3750	TYKW	30 PBI	0228.0		7.0	3.0	1.5		
	9400	TYKW	29 PBI	0230.0		6.0	12.0	4.5		
	2000	TYKW	31 ABS	0230.0	0241.0	50.0	-3.0	-1.5		
	3750	TYKW	31 ABS	0235.0	0247.0	40.0U	-4.0	-2.0U		



SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks
							Peak	Mean		
10	9400	TYKW	5 S	0237.0	0238.0	4.0	7.0	2.0		
	9400	TYKW	5 S	0242.0	0242.7	2.0	3.0	1.0		
	9395	PEKG	5 S	0252.8	0253.0	8.2	13.6	3.3		
	9400	TYKW	5 S	0312.0	0312.3	1.0	8.0	3.0		
	9400	TYKW	5 S	0313.0	0315.0	20.0	5.0	2.0		
	9400	TYKW	5 S	0336.0	0336.7	3.0	3.0	1.0		
	9400	TYKW	21 GRF	0343.0	0502.0	140.0	10.0	5.0		
	3750	TYKW	21 GRF	0357.0	0502.0	160.0	8.0	4.0		
	2000	TYKW	21 GRF	0400.0	0503.0	140.0	4.0	2.0		
	9395	PEKG	20 GRF	0401.0	0419.9	36.0	14.9	8.5		
	9400	TYKW	5 S	0411.0	0411.6	2.0	4.0	1.0		
	9400	TYKW	5 S	0418.0	0420.0	9.0	6.0	3.0		
	17000	NOBE	20 GRF	0418.7	0454.8	162.0	26.0			L
	9400	TYKW	5 S	0429.5	0430.5	3.0	3.0	1.5		
	410	LEAR	47 GB	0429.8	0430.0	.3	130.0			
	245	LEAR	47 GB	0429.8	0430.1	.3D	100.0			
	1000	TYKW	5 S	0430.0	0430.2	1.0	2.0	.7		
	2000	TYKW	5 S	0430.0	0430.2	1.0	1.5	.5		
	9395	PEKG	21 GRF	0446.0	0500.2	27.0	8.7	6.2		
	15400	LEAR	4 S/F	0454.3	0454.6	5.0	28.0			
	9395	PEKG	5 S	0504.0	0505.3	4.0	44.6	2.4		
	8800	LEAR	47 GB	0504.8	0505.1	1.2	59.0			
	4995	LEAR	8 S	0504.8	0505.1	1.2	30.0			
	9400	TYKW	5 S	0504.8	0505.2	2.0	41.0	5.0		
	3750	TYKW	5 S	0504.8	0505.2	1.2	12.0	4.0		
	2000	TYKW	5 S	0504.8	0505.2	1.5	1.5	.5		
	8800	MANI	3 S	0505.8	0506.0	.5	68.4	22.8		
	4995	MANI	3 S	0505.8	0506.0	.5	33.3	11.1		
	3750	TYKW	29 PBI	0506.0		5.0	1.5	.7		
	15400	LEAR	4 S/F	0515.8	0518.0	3.8	26.0			
	9395	PEKG	1 S	0527.0	0529.9	7.0	8.4	4.5		
	9400	TYKW	5 S	0529.0	0529.7	5.0	5.0	2.0		
	9395	PEKG	5 S	0543.0	0547.6	9.0	10.3	5.1		
	9400	TYKW	5 S	0547.0	0547.4	2.5	8.0	3.0		
	2840	PEKG	3 S	0551.0	0553.7	11.0	12.8	1.7		
	9400	TYKW	45 C	0553.0	0553.5	2.0	57.0	17.0		
	950	GORK	1 S	0553.0	0553.6	2.1	4.0	2.0		
	9395	PEKG	5 S	0553.0	0553.6	8.0	55.0	18.0		
	4995	LEAR	8 S	0553.1	0553.5	1.0	44.0			
	8800	LEAR	47 GB	0553.1	0553.5	1.2	72.0			
	2950	GORK	3 S	0553.1	0553.5	1.2	20.0	10.0		
	2000	TYKW	5 S	0553.3	0553.6	.7	7.0	2.0		
	9100	GORK	4 S/F	0553.3	0553.6	6.6	70.0			
	1000	TYKW	5 S	0553.3	0553.6	1.0	3.0	1.0		
	3750	TYKW	5 S	0553.3	0553.6	2.5	24.0	5.0		
	1415	MANI	1 S	0553.5	0553.8	1.0	7.5	2.5		
	8800	MANI	3 S	0553.5	0553.9	1.5	78.9	26.3		
	4995	MANI	3 S	0553.5	0553.9	2.0	35.2	11.7		
	2695	MANI	3 S	0553.7	0553.9	.8	11.6	3.9		
	2000	TYKW	29 PBI	0554.0		5.0	1.0	.5		
	9400	TYKW	29 PBI	0555.0		5.0	6.0	3.0		
	6100	KISV	20 GRF	0613.7	0614.5	5.0	5.0			
	3750	TYKW	5 S	0625.0	0628.2	10.0	4.0	1.5		
	9100	GORK	22 GRF	0654.8	0847.7	300.0D	27.0			
	9395	PEKG	3 S	0655.0	0655.9	12.0	12.9	3.9		
	9400	TYKW	5 S	0655.4	0655.8	2.5	8.0	3.5		
	610	LEAR	8 S	0658.6	0658.6	.2	08.0			
	410	LEAR	47 GB	0658.6	0658.6	.2	73.0			
	245	LEAR	8 S	0658.6	0659.3	1.2	40.0			
	5200	BERN	3 S	0701.0	0701.2	1.0	46.0			
	3200	BERN	3 S	0701.0	0701.2	1.0	25.0			
	9400	TYKW	5 S	0701.0	0702.0	4.0	3.0	1.5		
	15400	LEAR	8 S	0701.6	0701.8	.5	38.0			
	15000	KISV	1 S	0701.7	0701.9	1.0	31.0			
	9395	PEKG	1 S	0721.0	0721.8	3.0	9.7	4.2		
	15400	LEAR	8 S	0729.1	0729.6	.9	32.0			
	15000	KISV	1 S	0729.2	0729.7	.8	25.0			
	9395	PEKG	1 S	0742.0	0743.0	3.0	7.8	3.1		
	9395	PEKG	3 S	0748.0	0751.3	15.0	14.9	3.8		
	6100	KISV	28 PRE	0748.0	0752.5	10.0	5.0			

ONLY PAPER REC

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

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FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
10	15400	LEAR	47 GB	0750.6	0751.1	5.4	54.0			
	430	KRAK	8 S	0754.0	0754.1	.2	82.0			
	6100	KISV	20 GRF	0758.0	0758.8	3.5	9.0			
	8400	BERN	3 S	0803.5	0805.0	2.0	28.0U			
	6100	KISV	4 S/F	0803.6	0805.0	3.0	15.0			
	9395	PEKG	3 S	0804.0	0804.9	10.0	28.4	14.2		
	8800	LEAR	4 S/F	0804.0	0805.0	3.0	37.0			
	9100	GORK	1 S	0804.1	0804.9	2.5	25.0	12.0		
	15000	KISV	1 S	0808.0	0808.5	.7	21.0			
	15000	KISV	1 S	0813.3	0813.4	.2	13.0			
	430	KRAK	8 S	0841.1	0841.1	.2	48.0			
	6100	KISV	20 GRF	0845.7	0848.0	9.0	6.0			
	8400	BERN	20 GRF	0846.0	0847.0U	13.0U	20.0U			
	204	IZMI	5 S	0905.5	0905.6	.7	425.0	270.0		
	430	KRAK	42 SER	0907.6	0908.1	39.0	150.0			
	430	KRAK		0907.6	0919.2		110.0			
	430	KRAK		0907.6	0944.5		100.0			
	536	ONDR	8 S	0908.0	0908.2	.4	13.0			
	536	ONDR	8 S	0919.3	0919.3	.3	7.0			
	536	ONDR	8 S	0936.0	0936.2	.2	34.0			
	204	IZMI	41 F	0942.0	0945.5	7.5	735.0			
	930	BORD	3 S	0944.0	0944.6	3.0	13.0	6.0		
	2695	ATHN	4 S/F	0944.1	0945.1	4.0	37.0			
	4995	ATHN	47 GB	0944.1	0945.3	4.0	56.0			
	8800	ATHN	47 GB	0944.1	0945.3	4.0	119.0			
	950	GORK	2 S/F	0944.2	0944.7	3.2	15.0			
	2950	GORK	4 S/F	0944.2	0945.1	2.8	36.0			
	245	LEAR	49 GB	0944.3	0944.5	1.5	3000.0			
	1415	ATHN	4 S/F	0944.3	0945.1	2.7	36.0			
	15400	LEAR	4 S/F	0944.3	0945.6	3.3	38.0			
	15000	KISV		0944.4	0944.7		28.0			
	6100	KISV	45 C	0944.4	0944.7	2.5	29.0			
	6100	KISV		0944.4	0945.5		75.0			
	15000	KISV	45 C	0944.4	0945.5	2.5	60.0			
	9100	GORK	4 S/F	0944.4	0945.5	3.2	110.0			
	410	LEAR	8 S	0944.5	0944.6	.3	27.0			
	650	GORK	4 S/F	0944.5	0944.7	3.1	10.0	3.5		
	610	LEAR	8 S	0944.5	0944.8	.3D	17.0			
	2695	LEAR	8 S	0944.5	0945.1	1.3	41.0			
	8800	LEAR	47 GB	0944.5	0945.5	1.6	110.0			
	4995	LEAR	47 GB	0944.5	0945.5	1.3	51.0			
	1415	LEAR	4 S/F	0944.6	0945.1	.5D	33.0			
	536	ONDR	4 S/F	0944.7	0945.0	5.0	6.0	4.0		
	2650	DWIN	2 S/F	0945.0	0945.0	1.0	50.0	25.0		
	650	GORK	2 S/F	0953.1	0954.3	2.2	3.0			
	808	ONDR	7 C	1041.8	1042.3	4.9	12.0	9.0		
	15000	KISV	1 S	1050.8	1051.0	.8	23.0			
	15000	KISV	4 S/F	1124.2	1124.7	1.2	51.0			
	430	KRAK	8 S	1200.2	1200.2	.2	73.0			
	9400	HUAN	22 GRF	1221.3	1230.8	16.1	10.8	4.1		0
	930	BORD	41 F	1312.0	1312.7	1.0	15.0	2.0		
	9400	HUAN	20 GRF	1316.2	1324.5	13.2	7.2	2.1		0
	8400	BERN	4 S/F	1410.0	1412.1	8.0	30.0U			
5200	BERN	4 S/F	1410.0	1412.2	10.0	53.0				
3200	BERN	4 S/F	1410.0	1413.6	9.0D	16.0				
930	BORD	41 F	1411.0	1411.8	1.0	20.0	2.0			
8800	SGMR	4 S/F	1411.0	1413.1	2.1	27.0				
9400	HUAN	4 S/F	1411.2	1412.3	3.9	27.0	14.8		L	
4995	SGMR	4 S/F	1411.6	1412.1	5.0	46.0				
245	SGMR	47 GB	1412.5	1413.8	4.6	180.0				
2695	SGMR	8 S	1413.0	1413.1	.3	16.0				
2800	OTTA	20 GRF	1420.0	1450.0	135.0D	9.6				
930	BORD	41 F	1440.0	1440.6	1.0	9.0	2.0			
610	SGMR	47 GB	1602.5	1603.3	1.6	78.0				
410	SGMR	47 GB	1602.6	1603.3	1.2	200.0				
245	SGMR	8 S	1602.6	1603.3	1.2	670.0				
930	BORD	46 C	1603.0	1603.4	.4D	13.0	3.0			
2800	OTTA	1 S	1717.2	1717.9	2.0	8.0	3.0			
2800	OTTA	1 S	1721.3	1721.8	1.0	3.8	1.9			
410	PALE	8 S	1805.3	1805.8	.7	44.0				

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 <sup>2</sup> Hz)	Mean (2 Hz)		
10	2800	OTTA	21 GRF	1810.0	2055.0	360.00	19.4			
	245	PALE	8 S	1821.6	1822.0	.7	42.0			
	2800	OTTA	23 GRF	1838.0	1855.0	70.0	43.0	14.2		
	2800	OTTA	8 S	1838.2	1838.5	.6	17.2	8.6		
	2800	OTTA	4 S/F	1848.0	1852.2	10.0	162.0	57.0		
	4995	SGMR	47 GB	1848.1	1851.6	16.9	300.0			
	1415	PALE	47 GB	1848.3	1852.1	15.0	100.0			
	2695	SGMR	47 GB	1848.8	1852.1	16.2	139.0			
	1415	SGMR	47 GB	1849.1	1852.1	15.9	99.0			
	8800	SGMR	47 GB	1849.3	1851.6	15.7	200.0			
	610	SGMR	47 GB	1849.3	1852.1	15.7	61.0			
	610	PALE	4 S/F	1849.5	1852.1	4.6	40.0			
	15400	SGMR	47 GB	1850.1	1851.8	14.9	119.0			
	410	SGMR	4 S/F	1902.3	1902.3	2.7	17.0			
	2800	OTTA	4 S/F	1910.0	1910.5	2.0	33.0	8.6		
	15400	PALE	20 GRF	1912.6	1912.8	3.5	31.0			
	8800	PALE	20 GRF	1912.6	1913.5	7.2	39.0			
	1415	PALE	8 S	1913.3	1913.6	.3	13.0			
	2695	PALE	20 GRF	1922.1	1922.8	5.0	21.0			
	4995	PALE	20 GRF	1922.1	1922.8	5.0	24.0			
	610	PALE	49 GB	2000.0	2001.0	6.6	570.0			
	2800	OTTA	4 S/F	2000.0	2001.0	7.0	178.0	30.0		
	4995	SGMR	49 GB	2000.1	2000.8	1.7	300.0			
	2695	SGMR	49 GB	2000.1	2000.8	2.2	139.0			
	4995	PALE	49 GB	2000.1	2000.8	1.7	280.0			
	2695	PALE	49 GB	2000.1	2000.8	2.0	169.0			
	8800	SGMR	49 GB	2000.1	2000.8	2.0	600.0			
	8800	PALE	49 GB	2000.3	2000.8	1.5	700.0			
	15400	PALE	49 GB	2000.3	2000.8	1.8	1100.0			
	15400	SGMR	49 GB	2000.3	2000.8	1.8	1100.0			
	245	PALE	49 GB	2000.3	2001.0	3.3	5000.0			
	410	PALE	49 GB	2000.3	2001.0	4.2	660.0			
	1415	PALE	49 GB	2000.3	2001.1	3.3	119.0			
	1415	SGMR	49 GB	2000.3	2001.1	2.8	130.0			
	410	SGMR	49 GB	2000.8	2000.8	.3	610.0			
	245	SGMR	49 GB	2000.8	2000.8	.5	3399.0			
	610	SGMR	49 GB	2000.8	2000.8	.3	720.0			
	410	PALE	49 GB	2008.8	2008.8	.3	1300.0			
	2695	PENT	3 S	2008.8	2008.9	3.0	22.0	8.0		
	610	PALE	8 S	2008.8	2009.0	.3	16.0			
	1415	PALE	47 GB	2008.8	2009.1	.8	52.0			
	2800	OTTA	45 C	2015.8	2018.0	6.0	15.2	5.0		
	245	PALE	4 S/F	2048.8	2050.1	3.8	29.0			
	500	HIRA	46 C	2153.0	2154.1	1.6	200.0	50.0		WR
	2695	PENT	4 S/F	2153.0	2154.4	3.0	80.0	20.0		
	1415	PALE	47 GB	2153.1	2154.1	2.0	130.0			
	9400	HUAN	2 S/F	2153.1	2154.2	2.3	16.0	6.6		L
	4995	PALE	47 GB	2153.3	2154.3	1.7	53.0			
	610	PALE	47 GB	2153.8	2154.0	.7	210.0			
	2695	PALE	47 GB	2154.1	2154.3	.5	63.0			
8800	PALE	8 S	2154.1	2154.3	.5	30.0				
9400	TYKW	45 C	2212.0	2217.1	8.0	135.0	35.0			
9400	HUAN	45 C	2213.1	2216.9	7.5	148.8	47.0		L	
8800	PALE	47 GB	2213.8	2214.6	8.7	70.0				
4995	PALE	47 GB	2216.6	2217.0	1.0	51.0				
15400	PALE	47 GB	2216.8	2217.0	.3	52.0				
9400	TYKW	30 PB1	2220.0		45.0	20.0	7.0			
9400	TYKW	5 S	2222.0	2222.4	1.0	13.0	4.0			
9400	TYKW	5 S	2234.5	2235.3	2.5	10.0	3.0			
9400	TYKW	5 S	2242.5	2242.9	1.0	5.0	1.5			
410	LEAR	8 S	2259.8	2300.0	.3	18.0				
3750	TYKW	21 GRF	2310.0	0018.0	180.0	11.0	5.0			
410	LEAR	8 S	2313.8	2315.1	2.0	17.0				
245	LEAR	47 GB	2313.8	2315.1	1.7	119.0				
610	LEAR	8 S	2315.0	2315.1	.3	22.0				
1000	TYKW	21 GRF	2320.0	0040.0	190.0	4.0	2.0			
9400	TYKW	21 GRF	2321.0	0020.0	170.0	6.0	3.0			
9400	TYKW	5 S	2321.0	2321.7	2.0	7.0	1.5			
1000	TYKW	45 C	2326.0	2327.2	3.0	19.0	3.0			
3750	TYKW	45 C	2326.0	2327.6	4.0	21.0	8.0			

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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 <sup>2</sup> Hz)	Mean		
10	9400	TYKW	45 C	2327.0	2327.6	25.0	16.0	6.0		
	2000	TYKW	45 C	2327.0	2329.0	3.0	25.0	12.0		
	2695	PENT	4 S/F	2327.2	2327.6	2.0	21.8	6.0		
	8800	PALE	8 S	2327.3	2327.5	.3	26.0			
	4995	PALE	8 S	2327.3	2327.6	.3	20.0			
	1415	PALE	8 S	2327.3	2328.3	1.7	40.0			
	1415	MANI	3 S	2327.3	2328.6	2.7	17.9	6.0		
	4995	MANI	3 S	2327.4	2328.0	1.2	11.7	3.9		
	2695	MANI	3 S	2327.4	2328.2	2.6	12.8	4.3		
	8800	MANI	3 S	2327.4	2328.3	1.6	25.1	8.4		
	2000	TYKW	30 PBI	2330.0		180.0	5.0	2.5		
	3750	TYKW	30 PBI	2330.0		40.0	8.0	5.0		
	3750	TYKW	5 S	2336.0	2337.1	3.0	6.0	2.0		
	2695	PENT	1 S	2336.5	2337.0	1.5	6.6	3.3		
	1415	LEAR	8 S	2336.6	2336.8	.2	20.0			
	610	LEAR	47 GB	2336.6	2336.8	.2	119.0			
	2000	TYKW	45 C	2336.7	2337.8	1.8	23.0	8.0		
	410	LEAR	47 GB	2336.8	2336.8	.2	200.0			
	1000	TYKW	45 C	2336.8	2337.8	1.5	16.0	3.0		
	3750	TYKW	45 C	2352.0	2352.6	3.0	2.0	.7		
	610	LEAR	8 S	2352.3	2352.5	.3	26.0			
	245	LEAR	8 S	2352.3	2352.5	.3	28.0			
	410	LEAR	8 S	2352.3	2352.5	.3	11.0			
	9400	TYKW	5 S	2359.0	0004.0U	11.0	12.0D	3.0D		
11	208	VORO	44 NS	0000.0E		240.0D		27.0		
	100	GORK	44 NS	0542.0E		385.0D		10.0		
	200	GORK	44 NS	0639.0E		389.0D		5.0		
	127	TORN	44 NS	0700.0E		480.0D		15.0		V2, DISTURBED
	29	UPIC	43 NS	0738.5		471.5D				
	260	ONDR	44 NS	0800.0E		393.0D				
	9395	PEKG	5 S	0003.0	0004.3	8.0	20.1	9.2		
	3750	TYKW	28 PRE	0035.0	0042.3	20.0	7.0	2.0		
	9400	TYKW	28 PRE	0040.0	0042.1	15.0	12.0	4.0		
	2000	TYKW	5 S	0040.7	0041.1	1.0	1.5	.5		
	9395	PEKG	1 S	0041.0	0042.3	4.0	8.5	1.9		
	2000	TYKW	5 S	0042.0	0042.3	.7	4.0	1.5		
	3750	TYKW	45 C	0055.0	0102.5	10.0	12.0	5.0		
	9400	TYKW	45 C	0055.0	0102.5	15.0	16.0	8.0		
	9395	PEKG	3 S	0055.0	0102.6	20.0	12.8	2.4		
	2000	TYKW	45 C	0055.5	0056.4	1.5	11.0	3.0		
	1000	TYKW	45 C	0100.0	0102.4	4.0	30.0	1.5		
	2840	PEKG	5 S	0101.0	0102.5	4.0	49.7	7.8		
	2000	TYKW	5 S	0102.0	0102.5	1.0	42.0	12.0		
	3750	TYKW	29 PBI	0105.0		25.0	5.0	2.0U		
	606	MANI	8 S	0106.2	0106.8	.8	1404.9	468.3		
	1415	MANI	8 S	0106.6	0106.9	.5	64.1	21.4		
	2695	MANI	8 S	0106.6	0106.9	.5	89.9	30.0		
	9400	TYKW	29 PBI	0110.0		24.0	4.0	2.0		
	9395	PEKG	3 S	0134.0	0140.5	13.0	12.8	6.2		
	9400	TYKW	45 C	0135.5	0144.8	12.0	12.0	3.0		
	3750	TYKW	5 S	0141.0	0141.3	1.0	15.0	5.0		
	1000	TYKW	5 S	0141.0	0141.4	1.5	16.0	3.0		
	2840	PEKG	3 S	0141.0E	0141.4	6.0D	12.4	.5		
	2000	TYKW	45 C	0142.0	0142.3	1.5	27.0	6.0		
	3750	TYKW	5 S	0144.7	0144.9	1.0	7.0	2.0		
	1000	TYKW	45 C	0144.7	0145.0	5.0	3.0	1.0		
	2000	TYKW	5 S	0145.5	0145.9	2.0	4.0	1.5		
	9400	TYKW	5 S	0153.0	0153.7	5.0	4.0	1.5		
	9400	TYKW	5 S	0208.0	0208.8	2.0	2.0	1.0		
	3750	TYKW	5 S	0215.0	0217.2	3.0	9.0	2.5		
	1000	TYKW	5 S	0217.0	0217.3	1.0	2.0	.7		
	2000	TYKW	5 S	0217.0	0217.3	1.0	3.0	1.0		
	100	HIRA	42 SER	0217.7	0218.2	2.0	3500.0			WL
	3750	TYKW	29 PBI	0218.0		7.0	3.0	1.5		
9395	PEKG	3 S	0219.0	0221.1	3.5	12.2	6.1			
2000	TYKW	21 GRF	0235.0	0244.0	50.0	3.0	1.5			
3750	TYKW	5 S	0240.0	0245.0	15.0	2.0	1.0			
2000	TYKW	5 S	0240.5	0241.2	1.5	4.0	1.0			
9395	PEKG	20 GRF	0253.0	0256.5	20.0	9.1	2.8			

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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 <sup>2</sup> Hz)	Mean (2 Hz)		
11	9400	TYKW	45 C	0254.0E	0256.3	15.0D	13.0	4.0D		
	9400	TYKW	29 FBI	0309.0		20.0	4.0	2.0		
	17000	NOBE	1 S	0316.5	0317.8	2.0	44.0			L
	9400	TYKW	5 S	0345.0	0351.0	10.0	4.0	1.5		
	100	HIRA	42 SER	0347.6	0357.0	28.0	1600.0			WL
	3750	TYKW	5 S	0351.0	0351.5	2.0	2.0	.7		
	2000	TYKW	5 S	0351.3	0351.6	.7	1.5	.5		
	3750	TYKW	5 S	0410.5	0410.8	1.5	4.0	1.0		
	2000	TYKW	5 S	0410.6	0410.8	1.0	2.0	.5		
	9400	TYKW	20 GRF	0415.0	0424.4	35.0	9.0	4.0		
	9395	PEKG	20 GRF	0415.0	0427.3	48.0	15.2	7.2		
	2000	TYKW	21 GRF	0416.0	0426.0	75.0	2.0	1.0		
	2000	TYKW	45 C	0416.3	0417.3	1.5	8.0	1.5		
	3750	TYKW	5 S	0416.5	0417.0	1.5	1.5	.5		
	3750	TYKW	20 GRF	0418.0	0427.0	35.0	8.0	2.5		
	2000	TYKW	45 C	0421.0	0422.3	3.0	40.0	4.0		
	2695	MANI	3 S	0421.0	0422.5	2.0	13.5	4.5		
	1415	MANI	4 S/F	0421.8	0422.5	2.2	46.5	15.5		
	9400	TYKW	5 S	0450.0	0450.6	3.0	8.0	2.0		
	3750	TYKW	5 S	0508.0	0514.0	20.0	5.0	1.5		
	9400	TYKW	5 S	0508.5	0509.2	2.5	4.0	1.0		
	2000	TYKW	45 C	0514.0	0514.1	1.0	2.0	.5		
	1000	TYKW	5 S	0514.0	0514.2	2.0	1.5	.5		
	9400	TYKW	5 S	0524.0	0524.5	3.0	6.0	2.5		
	9395	PEKG	21 GRF	0524.0	0536.3	26.0	9.1	3.2		
	9400	TYKW	5 S	0533.5	0533.9	1.5	49.0	13.0		
	9100	GORK	3 S	0533.5	0533.9	1.4	40.0			
	9395	PEKG	1 S	0533.7	0534.0	1.3	34.0	16.0		
	17000	NOBE	3 S	0533.8	0533.9	.7	99.0			L
	9400	TYKW	29 FBI	0535.0		10.0	6.0	3.0		
	3750	TYKW	5 S	0641.0	0641.3	1.0	1.5	.5		
	650	GORK	21 GRF	0649.1	0700.0	22.0	3.0			
	200	GORK	41 F	0650.9	0652.2	7.7	130.0D			
	200	GORK		0650.9	0656.5		130.0			
	650	GORK	2 S/F	0653.3	0654.0	1.7	4.0	2.0		
	15000	KISV	4 S/F	0653.7	0655.2	3.5	17.0			
	2000	TYKW	45 C	0658.0	0703.7	8.0	4.0	1.5		
	9395	PEKG	5 S	0701.0	0704.0	10.0	7.9	2.0		
	204	IZMI	4 S/F	0701.3	0701.8	1.5	132.0	60.0		
	1000	TYKW	45 C	0702.0	0703.8	3.5	73.0	13.0		
	3750	TYKW	5 S	0702.0	0703.9	5.0	6.0	2.5		
	2840	PEKG	1 S	0702.0	0704.4	6.0	7.5	3.5		
	950	GORK	4 S/F	0702.1	0703.8	3.7	40.0			
	2950	GORK	1 S	0702.2	0703.6	3.9	5.0	2.5		
	650	GORK	4 S/F	0702.2	0703.6	3.0	8.0	3.0		
	9400	TYKW	5 S	0703.0	0704.0	4.0	4.0	2.0		
	9100	GORK	22 GRF	0703.0	0730.1	282.0	16.0			
	9395	PEKG	20 GRF	0721.0	0730.2	24.0	12.8	4.8		
	9400	TYKW	5 S	0729.0	0730.1	3.0	10.0	4.0		
	100	GORK	41 F	0735.6	0736.6	5.8	250.0D			
100	GORK		0735.6	0739.1		250.0D				
204	IZMI	41 F	0736.2	0738.5	4.8	134.0				
200	GORK	41 F	0736.4	0736.6	3.7	160.0				
200	GORK		0736.4	0738.6		160.0D				
33	UPIC	43	0738.5		471.5D					
930	BORD	41 F	0750.0	0750.3	.3	31.0	2.0			
430	KRAK	42 SER	0810.2	0813.2	26.5	780.0				
430	KRAK		0810.2	0836.2		270.0				
810	KRAK	8 S	0839.9	0840.0	.2	19.0				
430	KRAK	8 S	0930.6	0930.8	.4	9.0				
204	IZMI	4 S/F	0948.5	0948.6	.7	150.0	100.0			
430	KRAK	8 S	1018.9	1019.0	.2	2.5				
200	GORK	41 F	1032.1	1033.2	3.5	190.0D				
200	GORK		1032.1	1034.7		190.0				
204	IZMI	41 F	1032.5	1033.0	3.0	155.0				
100	GORK	41 F	1032.5	1033.2U	2.7	350.0D				
100	GORK		1032.5	1034.7U		350.0D				
127	TORN	7 C	1032.6	1033.2	3.0	2200.0	180.0			
430	KRAK	8 S	1040.7	1040.8	.2	11.0				
6100	KISV	25 R	1109.0	1142.0		10.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
11	536	ONDR	8 S	1113.6	1113.8	.2	8.0			
	3200	BERN	4 S/F	1208.0	1211.4	4.0	14.0			
	127	TORN	47 GB	1209.0	1210.0	3.5	9900.0	1100.0		
	5200	BERN	3 S	1209.0	1210.6	9.0	13.0			
	8400	BERN	3 S	1209.0	1211.9	10.0D	20.0U			
	808	ONDR	40 F	1209.3	1212.4	11.0	72.0	6.0		
	430	KRAK	42 SER	1209.4	1211.9	8.1	720.0			
	2950	GORK	1 S	1209.9	1210.5	1.2D	10.0	5.0		
	9400	HUAN	2 S/F	1210.1	1211.8	2.7	17.8	7.6		0
	536	ONDR	40 F	1210.2	1212.0	8.5	18.0	3.0		
	810	KRAK	41 F	1210.4	1212.2	3.8	89.0			
	810	KRAK		1210.4	1213.4		60.0			
	430	KRAK	8 S	1332.6	1332.6	.1	88.0			
	3200	BERN	3 S	1341.0	1346.9	10.0	44.0			
	5200	BERN	3 S	1343.0	1345.5	7.0	101.0			
	2800	OTTA	4 S/F	1344.0	1345.3	3.0	26.0	6.6		
	930	BORD	46 C	1344.0	1348.0	4.0	35.0	4.0		
	810	KRAK	7 C	1344.3	1345.3	4.6	44.0	7.0		
	430	KRAK	42 SER	1344.3	1345.3	4.1	1000.0D			
	430	KRAK		1344.3	1346.3		330.0			
	430	KRAK		1344.3	1347.8		320.0			
	810	KRAK		1344.3	1347.8		40.0			
	8400	BERN	3 S	1345.0	1345.5	5.0	75.0U			
	808	ONDR	3 S	1345.0	1345.9	1.8	10.0	11.0		
	536	ONDR	4 S/F	1345.0	1346.0	2.0	4.0	6.0		
	9400	HUAN	8 S	1345.2	1345.6	1.1	71.1	17.5		L
	536	ONDR	8 S	1348.0	1348.2	.1	30.0			
	808	ONDR	8 S	1348.2	1348.3	.2	10.0			
	2800	OTTA	20 GRF	1425.0	1430.0	25.0	4.0	2.0		
	930	BORD	41 F	1519.0	1520.0	1.2	112.0	2.0		
	9400	HUAN	2 S/F	1532.3	1533.3	3.1	12.9	7.1		0
	9400	HUAN	29 PBI	1535.4	1535.4	6.0	3.2	1.6		0
	9400	HUAN	21 GRF	1601.2	1614.1	19.2	11.3	6.1		0
	2800	OTTA	32 ABS	1608.0		18.0	-4.4			
	9400	HUAN	4 S/F	1611.2	1611.6	2.2	25.8	12.0		0
	930	BORD	41 F	1612.0	1612.7	1.0	167.0	2.0		
	930	BORD	41 F	1623.0	1627.2	7.0	19.0	4.0		
	930	BORD	46 C	1632.0	1635.3	4.0	34.0	4.0		
	2800	OTTA	1 S	1632.3	1633.0	1.5	6.6	2.2		
	9400	HUAN	21 GRF	1632.6	1650.7	18.1D	17.8	4.8		0
	2800	OTTA	3 S	1634.5	1635.0	2.0	14.6	6.0		
	9400	HUAN	1 S	1634.8	1635.1	1.7	9.7	3.2		0
	2800	OTTA	27 RF	1640.0		70.0	5.0	4.2		
	2800	OTTA	24 R	1640.0	1650.0	10.0	5.0	2.8		
	9400	HUAN	1 S	1642.1	1643.1	1.7	6.5	2.4		0
	9400	HUAN	2 S/F	1647.2	1648.3	2.3	18.6	10.2		0
	2800	OTTA	24P R	1650.0		45.0	5.0			
	9400	HUAN	1 S	1653.3	1653.7	1.4	4.8	3.9		0
	9400	HUAN	2 S/F	1720.8	1721.3	1.3	4.8	2.4		0
	2800	OTTA	26 FAL	1735.0	1750.0	15.0	-5.0	-2.6		
9400	HUAN	2 S/F	1757.6	1758.8	3.2	11.3	7.0		0	
9400	HUAN	29 PBI	1800.8	1800.8	8.8	4.8	4.0		0	
2800	OTTA	21 GRF	1825.0	1840.0	30.0	5.0	2.5			
9400	HUAN	1 S	1832.7	1833.5	2.5	8.1	7.5		R	
2800	OTTA	1 S	1833.0	1834.2	3.0	8.0	3.0			
9400	HUAN	29 PBI	1835.2	1835.2	26.8	4.0	2.9		0	
2800	OTTA	20 GRF	1910.0	1922.0	40.0	3.0	1.5			
9400	HUAN	20 GRF	1917.8	1922.1	15.4	8.1	4.1		0	
9400	HUAN	1 S	1945.6	1946.1	2.3	9.7	6.1		R	
2800	OTTA	21 GRF	2030.0	2105.0	85.0	8.6				
9400	HUAN	45 C	2030.2	2034.9	8.9	85.6	41.2		L	
9400	HUAN		2030.2	2035.8		86.4			L	
2800	OTTA	1 S	2034.0	2036.0	3.0	3.4	1.7			
9400	HUAN	22 GRF	2056.3	2102.1	18.9	12.9	5.0		L	
2800	OTTA	1 S	2057.0	2100.0	7.0	8.0	4.0			
2800	OTTA	1 S	2149.0	2149.3	2.0	2.8	1.4			
3750	TYKW	5 S	2306.5	2307.3	3.0	8.0	2.0			
2695	PENT	1 S	2307.0	2307.5	2.0	2.2	1.1			
2000	TYKW	5 S	2307.3	2307.5	.7	3.0	1.0			
1000	TYKW	5 S	2307.3	2307.6	.7	7.0	3.0			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

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	3750	TYKW	45 C	2317.0	2324.5	15.0	5.0	1.5		
	100	HIRA	42 SER	2318.4	2322.0	6.3	360.0			0
	200	HIRA	42 SER	2321.3	2322.0	4.0	390.0			0
	1000	TYKW	45 C	2324.0	2324.7	1.5	10.0			
	100	HIRA	46 C	2349.3	2351.7	5.6	8000.0	640.0		WL
	200	HIRA	46 C	2349.7	2351.8	5.6	5300.0	100.0		ML
	2000	TYKW	21 GRF	2350.0	0010.0	135.0	3.0	1.5		
	2000	TYKW	45 C	2351.0	2352.2	7.0	6.0	1.5		
	3750	TYKW	20 GRF	2351.0	2356.0	50.0	3.0	1.5		
	9400	TYKW	45 C	2351.5	2352.2	4.0	20.0	3.0		
	1000	TYKW	45 C	2351.5	2352.6	2.5	28.0	4.0		
	9400	TYKW	5 S	2359.0	0000.2	3.0	16.0	6.0		
	12	208	VORO	44 NS	0000.0E		240.0D		2.0	
200		GORK	44 NS	0540.0E		380.0D				
33		UPIC	44 NS	0700.0E		478.2D				
29		UPIC	44 NS	0700.0E		403.5D				
127		TORN	43 NS	0802.0	1204.0	438.0	800.0	1.0		V2
260		ONDR	44 NS	0802.0E	1342.0U	398.0D				
100		HIRA	44 NS	2128.0E	0020.0	210.0D	70.0	40.0		WL
200		HIRA	44 NS	2128.0E	2300.0	640.0D	40.0	10.0		WR
245		LEAR	43 NS	2229.0	1038.5	738.0	980.0			
410		LEAR	43 NS	2311.0	0516.1	696.0	340.0			
610		LEAR	43 NS	2312.0	0152.1	695.0	150.0			
9400		TYKW	29 PBI	0002.0		2.0D		4.0	3.0D	
9395		PEKG	3 S	0146.0	0151.1	12.0	14.0	7.2		
9400		TYKW	5 S	0215.0	0215.5	2.0	10.0	3.0		
9400		TYKW	5 S	0341.5	0342.7	2.5	10.0	2.5		
9400		TYKW	30 PBI	0344.0		35.0	3.0	1.5		
9400		TYKW	5 S	0348.5	0349.2	2.0	4.0	1.5		
100		HIRA	42 SER	0402.0	0402.0	2.7	1400.0			WL
2840		PEKG	3 S	0402.0	0403.4	2.0	17.9	.8		
200		HIRA	46 C	0403.6	0403.8	1.3	470.0	100.0		ML
9400		TYKW	5 S	0432.0	0432.4	1.0	10.0	3.0		
200		HIRA	42 SER	0435.0	0444.0	27.0	160.0			0
9395		PEKG	3 S	0443.0	0445.2	6.0	10.4	2.5		
9400		TYKW	5 S	0444.0	0445.4	6.0	7.0	2.5		
9395		PEKG	20 GRF	0455.0	0500.0	51.0	9.8	3.4		
2000		TYKW	21 GRF	0456.0	0530.0	80.0	2.0	1.0		
3750		TYKW	21 GRF	0456.0	0530.0	135.0	6.0	3.0		
2840		PEKG	21 GRF	0542.0	0553.2	32.0	8.9	3.6		
9100		GORK	23 GRF	0543.8	0656.0	379.0D	16.0			
9400		TYKW	45 C	0544.0	0544.6	5.0	14.0	4.0		
100		GORK	41 F	0544.2	0545.3	15.0	270.0D			
100		GORK		0544.2	0548.9		3500.0D			
100		GORK		0544.2	0550.1		26600.0			
100		GORK		0544.2	0558.7		2500.0			
200		GORK	41 F	0545.0	0546.4	13.3	45.0D			
200		GORK		0545.0	0549.4		50.0D			
200		GORK		0545.0	0553.5		445.0			
9395		PEKG	3 S	0546.0	0550.3	12.0	53.0			
2950		GORK	3 S	0546.2	0547.7	1.5D	26.0	13.0		
1000		TYKW	8 S	0546.3	0546.4	.3	46.0	9.0		
500	HIRA	42 SER	0548.6	0549.6	5.0	300.0			0	
650	GORK	41 F	0548.7	0549.9	5.1	37.0D				
1000	TYKW	45 C	0548.7	0549.9	8.0	38.0	4.0			
2000	TYKW	45 C	0548.7	0550.0	8.0	27.0	3.0			
650	GORK		0548.7	0553.5		35.0D				
950	GORK	46 C	0549.0E	0549.7	6.0D	28.0				
3750	TYKW	45 C	0549.0	0550.1	5.0	45.0	7.0			
2840	PEKG	5 S	0549.0	0550.3	2.0	35.4	6.4			
950	GORK		0549.0E	0553.0		22.0				
9400	TYKW	5 S	0549.5	0550.1	1.5	68.0	15.0			
6100	KISV	4 S/F	0549.5	0550.2	1.0	80.0				
9100	GORK	3 S	0549.5	0550.3	1.7	70.0				
1415	MANI	4 S/F	0549.5	0552.0	2.8	32.2	10.7			
606	MANI	4 S/F	0549.7	0550.3	4.4	114.8	38.3			
17000	NOBE	1 S	0549.9	0550.2	.6	23.0			0	
2695	MANI	3 S	0550.0	0550.5	1.5	25.2	8.4			
4995	MANI	3 S	0550.0	0550.5	1.5	88.0	29.3			

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

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Feb 82

F E B R U A R Y 1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
12	▲	8800 MANI	3 S	0550.0	0550.5	1.5	103.5	34.5		
		9400 TYKW	29 PBI	0551.0		7.0	6.0	3.0		
		3750 TYKW	29 PBI	0554.0		30.0	3.0	1.5		
		9395 PEKG	1 S	0609.0	0609.7	3.0	6.1	.9		
		9395 PEKG	1 S	0617.0	0622.0	8.0	5.5	.6		
		9400 TYKW	45 C	0628.0	0629.0	4.0	30.0	6.0		
		9395 PEKG	3 S	0628.0	0629.0	10.0	15.3	2.8		
		15000 KISV	2 S/F	0628.7	0628.9	1.2	24.0			
		6100 KISV	1 S	0628.7	0628.9	.5	5.0			
		9100 GORK	1 S	0628.7	0629.1	2.4	27.0			
		2000 TYKW	20 GRF	0633.0	0641.0	40.0	2.0	1.0		
		6100 KISV	27 RF	0633.2	0634.9	10.5	14.0			
		3750 TYKW	45 C	0634.0	0635.7	12.0	14.0	6.0		
		2840 PEKG	3 S	0634.0	0640.0	14.0	7.4	2.0		
		650 GORK	2 S/F	0634.2	0635.2	1.5	4.0	2.0		
		9100 GORK	1 S	0634.7	0634.9	1.6	10.0	5.0		
		3750 TYKW	30 PBI	0646.0		20.0	3.0	1.5		
		1000 TYKW	5 S	0649.6	0650.0	.7	7.0	1.5		
		1000 TYKW	5 S	0650.9	0651.0	.5	5.0	1.5		
		950 GORK	4 S/F	0654.3	0656.6	47.00	27.0			
		2000 TYKW	45 C	0654.5	0655.6	2.0	3.0	1.0		
		3750 TYKW	5 S	0654.5	0655.7	3.5	4.0	1.0		
		1000 TYKW	45 C	0654.7	0655.5	1.5	17.0	3.5		
		650 GORK	2 S/F	0654.7	0655.6	2.2	10.0			
		1000 TYKW	5 S	0656.5	0656.7	.5	34.0	10.0		
		204 IZMI	42 SER	0707.9	0715.6	24.1	400.0			
		3750 TYKW	45 C	0735.0	0735.4	10.0	8.0	2.5		
		9100 GORK	1 S	0948.9	0950.5	1.60	12.0	6.0		
		430 KRAK	8 S	1026.0	1026.2	.2	26.0			
		930 BORD	41 F	1033.2	1033.4	.7	38.0	2.0		
		810 KRAK	8 S	1033.4	1033.4	.2	13.0			
		204 IZMI	41 F	1039.0	1039.6	1.5	7.5			
		430 KRAK	8 S	1046.9	1047.0	.2	29.0			
		15000 KISV	1 S	1056.2	1056.3	2.0	11.0			
		15000 KISV		1117.6	1118.0		34.0			
		15000 KISV	46 C	1117.6	1118.3	5.5	131.0			
		15000 KISV		1117.6	1118.6		51.0			
		200 GORK	41 F	1127.4	1128.2	15.8	190.0			
		200 GORK		1127.4	1130.5		220.0			
		100 GORK	46 C	1127.7	1128.5	2.0	5100.0			
		100 GORK		1127.7	1129.4		5100.0			
		204 IZMI	41 F	1128.0	1130.5	3.5	110.0			
		430 KRAK	42 SER	1134.8	1203.5	99.0	56.0			
		430 KRAK		1134.8	1311.5		35.0			
		9100 GORK	4 S/F	1147.7	1148.3	1.8	82.0			
		930 BORD	41 F	1243.2	1243.3	.2	13.0	2.0		
		930 BORD	41 F	1247.2	1247.3	.2	13.0	1.0		
		930 BORD	41 F	1257.2	1257.3	.5	53.0	3.0		
		930 BORD	8 S	1333.3	1333.4	.1	14.0	1.0		
		536 ONDR	8 S	1340.3	1340.7	.6	18.0			
		430 KRAK	8 S	1340.3	1340.8	.9	380.0			
		810 KRAK	8 S	1340.3	1340.8	1.1	160.0			
		930 BORD	46 C	1340.4	1340.8	1.4	55.0	6.0		
		2800 OTTA	1 S	1340.5	1340.6	1.0	5.0	2.0		
		808 ONDR	8 S	1340.9	1341.0	.3	44.0			
		9400 HUAN	1 S	1400.7	1401.2	1.4	16.8	7.7		0
		9400 HUAN	30 PBI	1402.1	1402.1	13.3	3.4	2.3		0
		930 BORD	8 S	1405.4	1405.5	.1	12.0	2.0		
		9400 HUAN	2 S/F	1411.7	1412.1	1.1	11.8	5.0		R
		536 ONDR	8 S	1411.9	1412.2	.5	41.0			
		2650 DWIN	1 S	1412.0	1412.0	1.0	30.0	15.0		
		808 ONDR	8 S	1412.0	1412.2	.3	20.0			
		930 BORD	41 F	1445.9	1446.0	.2	28.0	2.0		
		930 BORD	3 S	1503.4	1504.0	1.0	11.0	4.0		
		2800 OTTA	20 GRF	1635.0	1705.0	190.0	24.0	8.8		
		9400 HUAN	2 S/F	1903.8	1905.8	3.8	10.1	8.4		0
		9400 HUAN	20 GRF	1933.1	1937.5	10.9	6.8	5.4		0
		9400 HUAN	2 S/F	1958.9	1959.2	1.4	5.1	3.4		0
		2800 OTTA	8 S	2020.0	2020.3	.6	3.0			
		2800 OTTA	1 S	2026.7	2027.6	4.0	5.2	2.6		



SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		
12	2800	OTTA	28 PRE	2120.0	2126.5	12.0	16.0	9.4		
	9400	HUAN	21 GRF	2123.4	2140.1	38.6	82.8	60.0		LRL
	9400	HUAN	3 S	2126.0	2126.3	1.3	64.2	27.0		L
	2800	OTTA	4 S/F	2132.0	2135.5	14.0	270.0	70.0		
	9400	HUAN	47 GB	2132.3	2135.0	7.2	823.0	399.7		L
	2695	PENT	30 PBI	2146.0	2146.0	80.0	22.4	11.0		
	100	HIRA	42 SER	2154.7	2157.7	13.0	2400.0			WL
	2695	PENT	4 S/F	2155.5	2157.7	9.0	141.0	28.0		
	200	HIRA	46 C	2155.7	2157.5	8.7	3200.0	120.0		O
	2000	TYKW	45 C	2156.0E	2157.7	14.0D	225.0U	40.0D		
	500	HIRA	46 C	2156.8	2202.2	7.6	800.0	300.0		SL
	9400	TYKW	47 GB	2157.0E	2157.7	8.0D	760.0U	110.0D		
	1000	TYKW	45 C	2157.0E	2159.1	7.0D	190.0U	50.0D		
	9400	HUAN	45 C	2157.0	2159.1	3.8	481.6	219.2		R
	9400	TYKW	29 PBI	2205.0		80.0	14.0	7.0		
	2000	TYKW	29 PBI	2210.0		60.0	6.0	3.0		
	2695	PENT	8 S	2245.9	2245.9	.1	3.8			
	3750	TYKW	20 GRF	2327.0	0020.0	130.0	6.0	3.0		
	9400	TYKW	5 S	2328.5	2329.2	4.0	8.0	3.0		
	2000	TYKW	20 GRF	2330.0	0000.0	130.0	3.0	1.5		
	9395	PEKG	2 S/F	2351.0	2352.4	4.0	13.4	3.6		
606	MANI	40 F	2351.0	2356.0	30.0	64.1	21.3			
9395	PEKG	3 S	2358.0	0000.2	10.0	17.9	5.4			
13	208	VORO	44 NS	0000.0E		240.0D		8.0		
	200	GORK	44 NS	0531.0E		361.0D		30.0		
	221	ABST	44 NS	0600.0E	0646.2		180.0	17.0		
	127	TORN	43 NS	0720.0	1038.8	460.0D	1800.0	2.0		V1
	29	UPIC	43 NS	0805.6		296.8D				
	260	ONDR	44 NS	0812.0E		348.0D				
	204	IZMI	43 NS	0910.0		170.0D	125.0			
	430	KRAK	43 NS	0927.7	1133.0U	270.0D	45.0			
	410	SGMR	43 NS	1205.0	1958.0	585.0D	83.0			
	245	SGMR	43 NS	1205.0	2113.0	585.0D	600.0			
	245	PALE	43 NS	1740.0	0133.5	625.0	400.0			
	200	HIRA	44 NS	2128.0E	0430.0	640.0D	130.0	35.0		ML
	245	LEAR	43 NS	2229.0	1037.5	738.0	2300.0			
	410	LEAR	43 NS	2229.0	2309.1	738.0	70.0			
	9400	TYKW	45 C	0114.0	0117.7	8.0	11.0	6.0		
	9400	TYKW	30 PBI	0122.0		22.0	4.0	2.0		
	9400	TYKW	45 C	0124.0	0127.3	13.0	15.0	4.0		
	9395	PEKG	20 GRF	0125.0	0127.6	19.0	14.3	9.9		
	17000	NOBE	1 S	0130.4	0130.8	.7	18.0			O
	2000	TYKW	20 GRF	0208.0	0230.0	55.0	3.0	1.5		
	9400	TYKW	5 S	0240.0	0242.3	10.0	4.0	2.0		
	17000	NOBE	20 GRF	0243.0	0303.9	35.0	28.0			L
	9400	TYKW	5 S	0251.0	0251.7	2.0	4.0	1.5		
	3750	TYKW	21 GRF	0324.0	0420.0	180.0	9.0	5.0		
	15400	LEAR	20 GRF	0328.0	0334.8	13.0	13.0			
	1000	TYKW	45 C	0329.0	0333.9	40.0	25.0	3.0		
	9400	TYKW	21 GRF	0329.0	0334.0	135.0	8.0	4.0		
	2000	TYKW	21 GRF	0330.0	0436.0	180.0	5.0	2.0		
	1415	LEAR	20 GRF	0333.0	0333.8	4.0	13.0			
	2000	TYKW	45 C	0333.0	0334.6	6.0	15.0	1.5		
	8800	LEAR	20 GRF	0335.0	0336.5	6.0	10.0			
	9395	PEKG		0359.0	0403.2					
	9395	PEKG	45 C	0359.0	0404.6	8.0	30.8	2.6		
9400	TYKW	45 C	0402.5	0403.0	5.0	28.0	4.0			
8800	LEAR	4 S/F	0402.6	0403.0	3.0	41.0				
4995	LEAR	8 S	0402.8	0403.0	2.0	13.0				
1000	TYKW	45 C	0416.0	0420.7	11.0	7.0	1.0			
9400	TYKW	20 GRF	0418.0	0458.0	80.0	6.0	3.0			
1000	TYKW	45 C	0435.0	0435.4	4.0	3.0	1.0			
1000	TYKW	45 C	0455.0	0500.7	14.0	6.0	2.0			
17000	NOBE	1 S	0457.1	0457.2	.5	20.0			O	
15400	LEAR	8 S	0457.1	0457.3	.2	20.0				
1000	TYKW	45 C	0511.0	0517.7	18.0	6.0	2.0			
15400	LEAR	8 S	0515.5	0515.6	.3	32.0				
17000	NOBE	1 S	0515.6	0515.8	.6	23.0			O	
9100	GORK	23 GRF	0519.0E		370.0D					

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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F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks	
							Peak	Mean			
13	3750	TYKW	5 S	0522.3	0522.8	1.0	5.0	1.5			
	204	IZMI	4 S/F	0701.5	0701.8	1.0	120.0	80.0			
	650	GORK	21 GRF	0743.6		51.9	2.0				
	950	GORK	22 GRF	0754.2	0755.3	13.0D	4.0				
	650	GORK	46 C	0756.5	0758.6	16.4	6.0				
	650	GORK		0756.5	0802.3		6.0				
	650	GORK		0756.5	0806.3		7.5				
	33	UPIC	43		0805.6		296.7D				
	15400	LEAR	8 S	0820.3	0820.6	.5	19.0				
	950	GORK	41 F	0832.0	0832.3	3.3	15.5				
	650	GORK		0832.0	0833.8		13.0				
	930	BORD	46 C	0832.0	0834.0	4.0	36.0	4.0			
	410	LEAR	49 GB	0832.1	0832.3	2.0	2100.0				
	430	KRAK	45 C	0832.1	0832.5	3.1	950.0D	49.0			
	430	KRAK		0832.1	0834.0		570.0				
	950	GORK	4 S/F	0832.1	0834.5	3.5	2.4				
	810	KRAK	41 F	0832.2	0834.4	3.5	25.0				
	610	LEAR	47 GB	0832.3	0832.3	.2	110.0				
	245	LEAR	8 S	0832.3	0832.3	.2	30.0				
	15000	KISV	27 RF	0939.5	0946.3	8.0	16.0				
	9100	GORK	1 S	0945.7	0946.3	1.3	9.0	4.5			
	204	IZMI	5 S	1029.0	1029.1	.7	210.0	130.0			
	930	BORD	46 C	1038.0	1038.6	1.6	13.0	3.0			
	810	KRAK	8 S	1039.2	1039.3	.2	73.0				
	204	IZMI	41 F	1043.0	1043.8	2.0	150.0				
	650	GORK	22 GRF	1044.0U	1113.1	46.0D	12.0				
	6100	KISV	21 GRF	1106.0	1119.0	19.0	10.0				
	2950	GORK	21 GRF	1106.2		24.0D					
	9100	GORK	1 S	1118.0	1118.6	1.9	9.0	4.5			
	2950	GORK	1 S	1118.0	1119.0	11.9	7.5	3.5			
	204	IZMI	5 S	1134.2	1134.5	.5	370.0	300.0			
	536	ONDR	8 S	1134.5	1134.8	.4	32.0				
	810	KRAK	8 S	1138.0	1138.1	.2	13.0				
	536	ONDR	42 SER	1147.9	1149.6	4.8	55.0	3.0			
	930	BORD	8 S	1148.6	1148.8	.2	31.0	1.0			
	430	KRAK	8 S	1148.7	1148.7	.2	920.0D				
	810	KRAK	8 S	1148.7	1148.7	.2	17.0				
	430	KRAK	8 S	1254.0	1254.1	.2	240.0				
	9400	HUAN	20 GRF	1326.3	1340.0	20.9	11.6	6.3		0	
	9400	HUAN	2 S/F	1351.1	1351.5	2.8	8.3	4.0		0	
	2800	OTTA	23 GRF	1425.0	1635.0	455.0	15.8				
	9400	HUAN	20 GRF	1426.2	1429.0	6.3	6.6	5.6		0	
	2800	OTTA	8 S	1512.6	1512.7	.5	2.2				
	610	SGMR	8 S	1512.6	1512.8	.7	36.0				
	410	SGMR	49 GB	1512.6	1513.0	.7	810.0				
	245	SGMR	8 S	1512.8	1513.0	1.0	42.0				
	610	SGMR	20 GRF	1541.1	1542.1	4.0	30.0				
	9400	HUAN	2 S/F	1644.6	1645.5	1.8	10.0	8.6		0	
	8800	SGMR	20 GRF	1645.0	1645.1	.6	27.0				
	9400	HUAN	29 PBI	1646.4	1646.4	21.4	6.6	4.6		0	
9400	HUAN	1 S	1804.7	1805.5	2.4	6.4	4.2		0		
9400	HUAN	1 S	1856.1	1857.0	2.7	8.0	3.4		R		
9400	HUAN	21 GRF	1926.1	1936.7	36.8	19.3	7.8		0		
15400	SGMR	47 GB	1933.3	1934.1	1.3	110.0					
9400	HUAN	3 S	1933.9	1934.2	1.6	28.9	10.3		0		
15400	PALE	47 GB	1934.0	1934.1	.5	119.0					
8800	PALE	8 S	1934.0	1934.8	4.1	26.0					
9400	HUAN	1 S	1945.0	1945.2	1.7	14.4	6.7		0		
610	SGMR	47 GB	1954.8	1958.1	4.0	270.0					
245	SGMR	49 GB	1957.8	1958.0	.5	540.0					
1415	SGMR	47 GB	1957.8	1958.1	.7	56.0					
410	SGMR	47 GB	1957.8	1958.5	1.8	100.0					
245	PALE	49 GB	1958.0	1958.1	.3	700.0					
410	PALE	47 GB	1958.0	1958.1	.1	100.0					
1415	PALE	47 GB	1958.0	1958.1	.3	58.0					
2800	OTTA	3 S	1958.0	1958.2	1.0	16.6	8.0				
2695	PALE	8 S	1958.1	1958.1	.2	19.0					
610	PALE	47 GB	1958.1	1958.3	.2	189.0					
245	SGMR	47 GB	2010.1	2010.8	1.2	90.0					
610	SGMR	47 GB	2010.3	2010.6	.3	58.0					

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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		
13	410	SGMR	8 S	2010.5	2010.8	.5	30.0			
	9400	HUAN	1 S	2015.0	2016.0	2.9	12.8	6.4		O
	2800	OTTA	8 S	2039.8	2039.9	.3	3.6	1.8		
	9400	HUAN	4 S/F	2052.9	2054.0	3.7	134.9	63.0		R
	8800	PALE	47 GB	2053.1	2054.0	4.0	130.0			
	15400	PALE	47 GB	2053.3	2054.0	.8	57.0			
	4995	PALE	8 S	2053.3	2054.1	1.0	26.0			
	9400	HUAN	30 PBI	2056.6	2056.6	38.7	32.1	14.5		R
	1415	SGMR	4 S/F	2113.1	2113.3	6.7	27.0			
	2800	OTTA	1 S	2113.3	2113.7	1.0	3.2			
	610	SGMR	47 GB	2113.3	2114.6	6.5	32.0			
	410	SGMR	47 GB	2113.5	2114.1	6.5	89.0			
	245	SGMR	4 S/F	2114.6	2115.1	5.2	390.0			
	9400	HUAN	1 S	2119.8	2120.2	1.4	19.3	7.1		O
	245	PALE	47 GB	2138.3	2138.6	2.2	410.0			
	9400	TYKW	45 C	2212.0	2213.6	10.0	20.0	6.0		
	200	HIRA	46 C	2212.6	2212.9	1.4	1660.0	240.0		WL
	100	HIRA	46 C	2212.9	2213.0	1.5	10000.00	1300.00		
	9400	HUAN	2 S/F	2213.1	2213.6	1.3	16.1	5.6		R
	2000	TYKW	5 S	2217.8	2218.2	.6	30.0	10.0		
	2695	PENT	8 S	2218.0	2218.1	.3	3.8	1.9		
	9400	TYKW	29 PBI	2222.0		25.0	6.0	3.0		
	9400	TYKW	5 S	2250.5	2251.2	3.0	3.0	1.0		
	9400	TYKW	5 S	2327.5	2328.2	2.5	4.0	1.5		
	3750	TYKW	45 C	2331.0	2332.2	3.0	15.0	4.0		
	9400	TYKW	5 S	2331.0	2332.2	3.0	12.0	4.0		
	2000	TYKW	45 C	2331.5	2332.2	2.5	63.0	13.0		
	1000	TYKW	45 C	2331.5	2332.3	3.0	38.0	1.0		
	1415	LEAR	47 GB	2331.6	2332.1	1.9	130.0			
	1415	PALE	47 GB	2331.6	2332.1	1.0	119.0			
	610	LEAR	47 GB	2331.8	2331.8	1.3	300.0			
	610	PALE	47 GB	2331.8	2331.8	.5	100.0			
	410	LEAR	47 GB	2331.8	2332.0	1.5	219.0			
	410	PALE	47 GB	2331.8	2332.0	.7	110.0			
	606	MANI	4 S/F	2331.8	2332.1	1.2	60.4	20.1		
	1415	MANI	4 S/F	2331.8	2332.3	1.2	80.7	26.9		
	2695	PENT	4 S/F	2331.9	2332.1	2.0	20.0	7.0		
	2695	LEAR	8 S	2332.0	2332.1	1.0	23.0			
	2695	MANI	4 S/F	2332.0	2332.5	1.0	36.7	12.2		
	245	LEAR	47 GB	2332.8	2333.0	.3	119.0			
1000	TYKW	5 S	2336.0	2336.3	.6	5.0	1.5			
245	LEAR	47 GB	2337.1	2337.6	1.0	430.0				
245	PALE	47 GB	2337.1	2337.6	.9	490.0				
1000	TYKW	28 PRE	2347.0	2348.0	4.0	6.0	1.5			
200	HIRA	42 SER	2347.3	2349.0	12.0	700.0			WL	
9400	TYKW	45 C	2348.0	2349.0	11.0	10.0	2.5			
3750	TYKW	28 PRE	2348.8	2349.1	2.2	4.0	1.0			
245	LEAR	49 GB	2349.1	2352.5	5.9	610.0				
2000	TYKW	45 C	2351.0	2351.7	3.0	11.0	4.0			
1000	TYKW	45 C	2351.0	2351.8	8.0	91.0	7.0			
3750	TYKW	5 S	2351.0	2351.8	8.0	6.0	2.0			
610	LEAR	47 GB	2351.1	2355.1	4.2	65.0				
1415	LEAR	4 S/F	2351.3	2351.5	11.2	23.0				
1415	MANI	4 S/F	2351.5	2352.7	2.5	26.2	8.7			
2695	MANI	3 S	2351.9	2352.3	1.1	16.3	5.4			
4995	MANI	3 S	2352.0	2353.1	2.0	44.2	14.7			
410	LEAR	47 GB	2352.5	2352.6	10.0	89.0				
245	PALE	47 GB	2352.6	2353.0	.9	410.0				
1000	TYKW	45 C	2359.5	2359.7	5.5	14.0	3.00			
14	208	VORO	44 NS	0000.OE	0210.0	240.00	65.0	16.0		
	200	GORK	44 NS	0528.OE		362.00	90.0			
	100	GORK	44 NS	0530.OE		300.00		5.0		
	221	ABST	44 NS	0600.OE	0708.8		180.0	14.0		
	204	IZMI	44 NS	0700.OE		300.00	150.0			
	127	TORN	44 NS	0700.OE		480.00		29.0		V2
	33	UPIC	43 NS	0812.7		336.60				
	29	UPIC	43 NS	0813.0		336.20				
	260	ONDR	44 NS	0818.OE	1108.OU	343.00				
	245	PALE	43 NS	1744.0	2106.3	617.0	160.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks
							Peak	Mean		
14	245	LEAR	43 NS	2230.0	0015.6	736.0	360.0			
	9395	PEKG	2 S/F	0002.0	0004.2	7.0	18.3	5.9		
	2695	PENT	4 S/F	0002.5	0004.0	3.0	20.4	9.0		
	9400	TYKW	45 C	0002.5	0004.0U	1.5D	20.0D	8.0D		
	2000	TYKW	45 C	0002.5	0004.2	2.5D	14.0	8.0D		
	2695	LEAR	4 S/F	0002.6	0004.0	3.4	31.0			
	4995	LEAR	4 S/F	0002.8	0004.0	3.2	31.0			
	8800	LEAR	4 S/F	0003.0	0004.0	3.0	31.0			
	3750	TYKW	45 C	0003.0E	0004.0	3.0D	27.0		11.0D	
	15400	LEAR	4 S/F	0003.8	0004.0	2.2	18.0			
	1415	LEAR	4 S/F	0003.8	0004.0	2.2	11.0			
	3750	TYKW	30 PBI	0006.0		35.0	3.0		1.5	
	9400	TYKW	30 PBI	0007.0E		35.0D	4.0D		2.0D	
	2000	TYKW	21 GRF	0010.0	0110.0	150.0	2.0		1.0	
	3750	TYKW	5 S	0012.5	0014.3	3.5	17.0		5.0	
	9400	TYKW	5 S	0013.0	0014.0	3.0	17.0		4.0	
	9395	PEKG	3 S	0013.0	0014.1	5.0	14.3		5.1	
	2840	PEKG	1 S	0013.0	0014.5	7.0	7.8		3.2	
	4995	LEAR	4 S/F	0013.6	0014.3	3.2	26.0			
	8800	LEAR	8 S	0013.6	0014.6	1.5	20.0			
	8800	PALE	8 S	0013.8	0014.0	.3	20.0			
	4995	PALE	8 S	0013.8	0014.3	.7	22.0			
	2695	PALE	4 S/F	0015.0	0016.0	4.6	23.0			
	3750	TYKW	29 PBI	0016.0		8.0	5.0		2.0	
	1000	TYKW	45 C	0018.0	0036.4	45.0	7.0		1.0	
	9400	TYKW	5 S	0023.0	0028.5	11.0	6.0		3.0	
	15400	LEAR	8 S	0027.3	0027.6	.8	27.0			
	9400	TYKW	21 GRF	0043.0	0109.0	95.0	6.0		2.0	
	3750	TYKW	21 GRF	0050.0	0108.0	90.0	4.0		2.0	
	245	LEAR	47 GB	0059.5	0059.6	.6	84.0			
	410	LEAR	47 GB	0059.5	0059.6	.5	69.0			
	9400	TYKW	5 S	0100.0	0101.2	4.0	24.0		6.0	
	9395	PEKG	3 S	0100.0	0101.3	4.0	18.3		4.3	
	3750	TYKW	5 S	0100.5	0101.2	2.0	2.5		1.0	
	8800	LEAR	8 S	0100.6	0101.1	1.0	34.0			
	8800	PALE	8 S	0100.6	0101.1	.9	39.0			
	4995	PALE	8 S	0100.8	0101.0	.3	17.0			
	4995	LEAR	8 S	0100.8	0101.0	.5	18.0			
	1000	TYKW	45 C	0106.0	0106.1	2.5	3.0		.5	
	2000	TYKW	42 SER	0106.0	0106.1	2.3	6.0		.5	
	1000	TYKW	21 GRF	0106.0	0134.5	160.0	6.0		2.5	
	245	PALE	49 GB	0107.3	0108.0	1.0	640.0			
	1000	TYKW	45 C	0116.0	0121.2	11.0	9.0		2.0	
	410	LEAR	4 S/F	0116.1	0121.8	7.4	01.0			
	3750	TYKW	45 C	0117.0	0120.7	6.0	14.0		3.5	
	2695	LEAR	4 S/F	0117.0	0121.0	9.0	08.0			
	9395	PEKG	3 S	0118.0	0121.0	8.0	10.3		2.5	
	2000	TYKW	5 S	0119.0	0121.1	5.0	4.0		1.5	
	245	LEAR	49 GB	0119.3	0121.3	2.5	700.0			
	245	PALE	49 GB	0119.3	0121.3	2.7	730.0			
610	LEAR	4 S/F	0119.8	0120.1	3.3	32.0				
9400	TYKW	5 S	0120.0	0121.0	2.0	12.0		3.0		
2840	PEKG	1 S	0120.0	0121.0	3.0	7.5		3.1		
2840	PEKG	21 GRF	0120.0	0139.0		2.2		.6		
1415	LEAR	4 S/F	0120.3	0121.1	4.7	10.0				
4995	PALE	8 S	0120.6	0120.8	.5	20.0				
8800	PALE	8 S	0120.6	0120.8	.2	20.0				
4995	LEAR	8 S	0120.6	0120.8	.5	20.0				
606	MANI	3 S	0120.7	0121.2	2.3	21.9		7.3		
2695	MANI	3 S	0120.8	0121.8	2.7	16.3		5.4		
4995	MANI	3 S	0121.0	0121.7	2.0	27.2		9.1		
1415	MANI	1 S	0121.3	0122.0	1.7	8.7		2.9		
9400	TYKW	29 PBI	0122.0		9.0	2.0		1.0		
3750	TYKW	29 PBI	0123.0		7.0	2.0		1.0		
9400	TYKW	5 S	0132.0	0133.0	2.0	3.0		1.0		
9395	PEKG	41 F	0133.0	0144.2	44.0	37.4		15.2		
1000	TYKW	45 C	0138.0	0144.0	37.0	9.0		4.0		
2840	PEKG	3 S	0139.0	0144.2	38.0	17.0		5.6		
245	PALE	8 S	0139.8	0140.6	1.2	43.0				
9400	TYKW	45 C	0140.0	0144.0	16.0	46.0		25.0		

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 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (2 Hz)		
14	2000	TYKW	5 S	0140.0	0144.0	10.0	5.0	1.5		
	3750	TYKW	45 C	0140.0	0144.1	10.0	20.0	8.0		
	2695	LEAR	4 S/F	0140.1	0144.1	4.5	18.0			
	8800	PALE	47 GB	0140.3	0141.1	11.8	51.0			
	17000	NOBE	20 GRF	0140.4	0144.9	37.0	18.0			R
	8800	LEAR	4 S/F	0140.5	0141.0	10.1	40.0			
	4995	LEAR	4 S/F	0140.5	0142.3	5.8	21.0			
	4995	PALE	4 S/F	0140.6	0142.3	5.7	20.0			
	610	LEAR	4 S/F	0140.6	0150.0	16.4	26.0			
	15400	LEAR	4 S/F	0140.8	0142.5	17.7	19.0			
	610	PALE	8 S	0141.8	0142.6	.8D	11.0			
	1415	LEAR	8 S	0143.8	0144.0	.3	11.0			
	15400	PALE	8 S	0143.8	0144.8	1.2	22.0			
	245	LEAR	47 GB	0145.8	0145.8	1.0	51.0			
	3750	TYKW	29 PBI	0150.0		27.0	5.0	3.0		
	9400	TYKW	29 PBI	0156.0		20.0	12.0	6.0		
	9395	PEKG	3 S	0218.0	0222.8	12.0	14.8	4.9		
	9400	TYKW	45 C	0218.5	0222.6	10.0	14.0	5.0		
	17000	NOBE	7 C	0218.7	0221.1	7.0	18.0			0
	15400	LEAR	4 S/F	0218.8	0221.0	4.7	26.0			
	8800	LEAR	4 S/F	0218.8	0222.6	6.2	19.0			
	15400	PALE	8 S	0220.1	0221.0	1.2	28.0			
	1000	TYKW	45 C	0223.8	0224.0	4.0	35.0	1.5		
	3750	TYKW	5 S	0238.0	0244.0	20.0	2.0	1.0		
	9400	TYKW	45 C	0238.5	0250.5	23.0	9.0	3.0		
	1000	TYKW	8 S	0243.0	0243.1	.3	15.0	4.0		
	245	PALE	47 GB	0251.1	0251.8	1.0	230.0			
	410	LEAR	4 S/F	0306.6	0307.6	3.7	18.0			
	245	LEAR	47 GB	0307.3	0308.3	3.0	300.0			
	610	LEAR	4 S/F	0308.0	0308.3	2.5	15.0			
	1000	TYKW	5 S	0308.0	0308.4	1.0	6.0	1.0		
	2000	TYKW	21 GRF	0321.0	0335.1	65.0	3.0	1.0		
	9400	TYKW	28 PRE	0333.0	0336.1	10.0	14.0	7.0		
	2840	PEKG	5 S	0333.0	0341.2	10.0	7.5	2.5		
	17000	NOBE	28 PRE	0333.1	0343.6	10.5	18.0			0
	3750	TYKW	5 S	0334.5	0335.2	2.5	5.0	1.5		
	9400	TYKW	45 C	0343.0	0344.0	10.0	270.0	45.0		
	8800	LEAR	47 GB	0343.3	0344.0	6.7	290.0			
	3750	TYKW	5 S	0343.5	0344.2	2.5	10.0	5.0		
	15400	PALE	47 GB	0343.6	0343.8	1.2	200.0			
	17000	NOBE	7 C	0343.6	0343.9	2.0	155.0			R
	8800	PALE	47 GB	0343.6	0344.0	1.2	189.0			
	4995	LEAR	4 S/F	0343.6	0344.0	2.9	34.0			
	17000	NOBE	29 PBI	0343.6	0345.6	10.0	18.0			0
	4995	MANI	3 S	0343.7	0344.3	3.3	57.7	19.2		
	8800	MANI	3 S	0343.7	0344.3	4.3	281.7	93.9		
	9395	PEKG	3 S	0344.0E	0344.2	8.0D	226.0			
	15400	LEAR	4 S/F	0344.8E	0345.0	6.7D	46.0			
	9395	PEKG	29 PBI	0345.0	0345.0	7.0	60.9			
	3750	TYKW	29 PBI	0346.0		10.0	4.0	2.0		
9400	TYKW	30 PBI	0353.0		20.0	10.0	3.0			
9400	TYKW	5 S	0356.5	0356.8	1.5	4.0	1.5			
9400	TYKW	5 S	0403.0	0404.4	3.0	5.0	2.0			
2000	TYKW	5 S	0406.0	0408.4	7.0	12.0	1.5			
100	HIRA	46 C	0406.5	0408.1	3.3	4000.0	665.0		WL	
2840	PEKG	5 S	0407.0	0408.4	5.0	15.1	2.7			
200	HIRA	46 C	0407.2	0407.5	1.7	1150.0	360.0		0	
3750	TYKW	5 S	0407.5	0408.0	2.5	12.0	6.0			
1000	TYKW	5 S	0407.5	0408.5	5.0	22.0	5.0			
245	LEAR	49 GB	0407.6	0408.3	1.4	2000.0				
606	MANI	1 S	0407.7	0408.8	3.0	8.2	2.7			
2695	MANI	3 S	0407.7	0408.8	2.8	14.9	5.0			
4995	MANI	3 S	0407.7	0408.8	2.3	16.2	5.4			
1415	LEAR	8 S	0407.8	0408.5	1.0	32.0				
1415	MANI	3 S	0407.9	0408.8	2.6	25.2	8.4			
3750	TYKW	29 PBI	0410.0		10.0	1.5	.7			
9400	TYKW	5 S	0422.5	0423.0	3.0	5.0	2.0			
9400	TYKW	5 S	0427.7	0428.6	8.0	5.0	2.0			
1000	TYKW	45 C	0438.7	0439.1	1.0	25.0	6.0			
9400	TYKW	5 S	0444.5	0445.2	1.5	4.0	1.5			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
14	410	LEAR	47 GB	0457.6	0458.5	1.2	62.0			
	3750	TYKW	45 C	0458.0	0458.6	3.0	1.5	.5		
	1000	TYKW	45 C	0458.2	0458.7	3.5	6.0	1.5		
	1415	LEAR	47 GB	0458.3	0458.6	.5	54.0			
	2000	TYKW	45 C	0458.3	0458.7	3.0	14.0	1.5		
	610	LEAR	47 GB	0459.8	0500.1	.5	70.0			
	2950	GORK	21 GRF	0530.0E	0754.0	360.0D	50.0			
	9395	PEKG	20 GRF	0535.0	0541.3	30.0	18.0	8.2		
	100	HIRA	46 C	0537.7	0539.2	2.4	8600.0	1160.0		WL
	9100	GORK	23 GRF	0537.8	0817.3	250.0	18.0			
	245	LEAR	47 GB	0538.0	0538.1	.3	130.0			
	410	LEAR	8 S	0538.0	0538.1	.3	22.0			
	2000	TYKW	8 S	0538.2	0538.4	.4	15.0	2.0		
	9400	TYKW	5 S	0540.7	0541.2	3.0	13.0	4.0		
	8800	LEAR	8 S	0540.8	0541.1	1.0	16.0			
	15400	LEAR	8 S	0540.8	0541.1	1.0	16.0			
	9400	TYKW	45 C	0546.5	0547.4	17.5	11.0	4.0		
	8800	LEAR	8 S	0547.1	0547.5	1.4	16.0			
	3750	TYKW	5 S	0556.0	0558.6	4.0D	11.0	5.0D		
	4995	LEAR	8 S	0556.8	0557.1	.5	13.0			
	3750	TYKW	29 PBI	0603.0E		50.0D	2.0D	1.0D		
	9400	TYKW	5 S	0607.0	0607.8	3.0	16.0	4.0		
	9395	PEKG	3 S	0607.0	0608.0	3.0	16.1	2.7		
	1000	TYKW	45 C	0612.6	0613.0	1.0	17.0	5.0		
	9400	TYKW	5 S	0618.0	0620.0	8.0	3.0	1.5		
	245	LEAR	47 GB	0624.3	0624.6	1.3	320.0			
	9400	TYKW	5 S	0636.0	0636.5	1.5	11.0	3.0		
	9100	GORK	1 S	0636.0	0636.5	1.2	10.0	5.0		
	8800	LEAR	8 S	0636.3	0636.5	.3	16.0			
	245	LEAR	47 GB	0736.8	0737.1	3.3	210.0			
	410	LEAR	8 S	0737.0	0737.1	.5	22.0			
	200	GORK	41 F	0753.4	0754.0	20.2	550.0			
	200	GORK		0753.4	0813.4		550.0D			
	9100	GORK	1 S	0807.4	0807.9	1.5	17.0	8.0		
	100	GORK	41 F	0808.2	0813.7	12.4	30000.0			
	100	GORK		0808.2	0818.1		7000.0			
	204	IZMI	41 F	0809.0	0811.5	8.0	520.0			
	6100	KISV		0812.0	0813.3		209.0			
	2950	GORK	3 S	0812.0	0813.3	3.1	70.0D			
	6100	KISV	45 C	0812.0	0813.5	2.0	214.0			
	9395	PEKG	5 S	0812.0	0813.6	9.0	264.0	34.9		
	2840	PEKG	5 S	0812.0	0813.7	7.0	114.3	7.1		
	127	TORN	47 GB	0812.0	0817.5	6.5	5400.0U	200.0U		
	9100	GORK	4 S/F	0812.6	0813.6	1.7	290.0			
	2695	ATHN	47 GB	0812.8	0813.6	2.7	92.0			
	8800	ATHN	47 GB	0812.8	0813.6	2.7	300.0			
	1415	ATHN	47 GB	0812.8	0813.6	2.7	71.0			
	2650	DWIN	3 S	0813.0	0813.0	2.0	100.0	5.0		
	650	GORK	4 S/F	0813.0	0813.4	1.7	1.5			
	950	GORK	4 S/F	0813.0	0813.4	2.9	91.0			
3200	BERN	4 S/F	0813.0	0813.6	3.0	157.0			ONLY PAPER REC	
4995	LEAR	47 GB	0813.0	0813.6	1.6	290.0				
8800	LEAR	47 GB	0813.0	0813.6	4.1	390.0				
9400	TYKW	5 S	0813.0	0813.6	1.0D	230.0	75.0D			
5200	BERN	4 S/F	0813.0	0813.6	3.0	370.0D			ONLY PAPER REC	
3750	TYKW	5 S	0813.0U	0813.7	2.0U	160.0U	30.0U			
3000	IZMI	5 S	0813.0	0814.9	2.5	95.0	56.0			
610	LEAR	47 GB	0813.1	0813.1	.2	55.0				
1415	LEAR	47 GB	0813.1	0813.5	1.0	100.0				
245	LEAR	49 GB	0813.1	0813.6	1.4	1800.0				
2695	LEAR	47 GB	0813.1	0813.6	1.7	91.0				
15400	LEAR	47 GB	0813.1	0813.6	2.2	130.0				
430	KRAK	45 C	0813.4	0813.8	3.0	200.0	17.0			
810	KRAK	8 S	0813.5	0813.5	.2	140.0				
410	LEAR	47 GB	0813.6	0813.8	1.2	88.0				
4995	MANI	3 S	0813.7	0814.3	2.3	225.0	75.0			
2695	MANI	3 S	0813.7	0814.3	2.3	81.2	27.1			
8800	MANI	3 S	0813.8	0814.3	1.7	324.0	108.0			
606	MANI	3 S	0813.9	0814.1	1.8	49.2	16.4			
1415	MANI	3 S	0814.0	0814.2	1.5	48.0	16.0			

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							Peak	Mean		
14 <sup>A</sup>	650	GORK	29 PBI	0814.1	0814.7	16.3	25.0	4.5		
	430	KRAK	42 SER	0816.9	0817.0	24.0	25.0			
	200	GORK	41 F	0835.0	0835.8	7.5	1400.0			
	200	GORK		0835.0	0838.5		2200.0			
	200	GORK		0835.0	0841.7		950.0			
	100	GORK	41 F	0835.1	0835.3	6.7	180.0			
	100	GORK		0835.1	0836.5		200.0			
	100	GORK		0835.1	0837.3		270.0D			
	100	GORK		0835.1	0841.5		270.0D			
	410	LEAR	47 GB	0838.3	0938.5	60.3	60.0			
	100	GORK	41 F	0923.2	0926.7	24.0	320.0D			
	100	GORK		0923.2	0934.0		5600.0D			
	100	GORK		0923.2	0940.5		33400.0			
	100	GORK		0923.2	0948.8		33700.0			
	200	GORK	41 F	0925.0	0934.4	24.2	860.0			
	200	GORK		0925.0	0940.5		7900.0D			
	200	GORK		0925.0	0949.0		2000.0			
	430	KRAK	42 SER	0925.7	0938.3	24.7	410.0	11.0		
	430	KRAK		0925.7	0940.3		220.0			
	430	KRAK		0925.7	0946.2		29.0			
	127	TORN	42 SER	0933.2	0934.2	11.0	6300.0			
	245	LEAR	49 GB	0933.5	0933.6	2.1	910.0			
	204	IZMI	42 SER	0933.5	0940.5	16.5	1550.0			
	410	LEAR	8 S	0933.6	0933.6	.2	50.0			
	610	LEAR	8 S	0933.6	0933.8	.2	21.0			
	810	KRAK	45 C	0937.8	0938.3	13.7	18.0	21.0		
	810	KRAK		0937.8	0946.1		50.0			
	245	LEAR	47 GB	0938.3	0938.5	.3	250.0			
	610	LEAR	8 S	0938.3	0938.5	.3	40.0			
	1415	ATHN	47 GB	0939.0	0939.3	9.3	81.0			
	8800	ATHN	47 GB	0939.0	0939.3	10.8	340.0			
	2695	ATHN	47 GB	0939.0	0939.3	8.6	119.0			
	9100	GORK	4 S/F	0939.7	0940.8	2.7	400.0			
	810	KRAK		0939.8	0940.4		77.0			
	2650	DWIN	3 S	0940.0	0940.0	5.0	120.0	60.0		
	3200	BERN	4 S/F	0940.0	0940.5	14.0	371.0			ONLY PAPER REC
	5200	BERN	4 S/F	0940.0	0940.5	14.0	202.0			ONLY PAPER REC
	2950	GORK	45 C	0940.0	0940.5	11.0	248.0			
	3000	IZMI	41 F	0940.0	0940.7	8.0	104.0			
	930	BORD	45 C	0940.0	0940.8	16.0	80.0	30.0		
	950	GORK	45 C	0940.0	0940.9	13.4	90.0			
	950	GORK		0940.0	0946.3		51.0			
	4995	LEAR	47 GB	0940.1	0940.3	1.2	230.0			
	8800	LEAR	47 GB	0940.1	0940.3	1.2	480.0			
	15400	LEAR	47 GB	0940.1	0940.5	1.0	340.0			
	2695	LEAR	47 GB	0940.1	0940.5	2.2	119.0			
	1415	LEAR	47 GB	0940.1	0940.6	7.4	119.0			
	245	LEAR	49 GB	0940.1	0940.6	1.4	4800.0			
	650	GORK	45 C	0940.1	0940.6U	15.1	35.0D			
	650	GORK		0940.1	0946.1		35.0			
410	LEAR	47 GB	0940.3	0940.6	2.8	119.0				
610	LEAR	47 GB	0940.3	0940.6	8.2	100.0				
2950	GORK		0940.5	0946.0		78.0				
2650	DWIN	1 S	0945.0	0945.0	3.0	40.0	20.0			
9100	GORK	2 S/F	0945.6	0946.1	4.0	23.0				
430	KRAK	8 S	1003.8	1003.8	.2	14.0				
200	GORK	4 S/F	1036.7	1037.9	2.5	220.0D				
430	KRAK	42 SER	1037.0	1054.7	38.0	24.0				
430	KRAK		1037.0	1100.5		28.0				
6100	KISV	4 S/F	1039.7	1040.4	2.3	202.0				
6100	KISV	45 C	1045.5	1046.0	2.2	17.0				
6100	KISV		1045.5	1046.5		12.0				
6100	KISV	31 ABS	1049.0	1057.0	35.0	-23.0				
6100	KISV	3 S	1111.5	1112.7	8.0	25.0				
6100	KISV	1 S	1146.5	1148.7	4.0	5.0				
430	KRAK	42 SER	1253.9	1258.4	8.8	310.0				
430	KRAK		1253.9	1302.4		53.0				
536	ONDR	42 SER	1255.9	1258.3	3.8	20.0	4.0			
2800	OTTA	2 S/F	1256.5	1257.0	2.5	4.2	2.0			
810	KRAK	8 S	1258.4	1258.4	.2	30.0				

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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 <sup>2</sup> Hz)	Mean		
14	2800	OTTA	2 S/F	1343.5	1344.3	2.0	3.4			
	430	KRAK	8 S	1347.6	1347.7	.3	100.0			
	3200	BERN	3 S	1402.4	1403.2	2.0	19.0			ONLY PAPER REC
	5200	BERN	3 S	1402.4	1403.2	2.0	31.0			ONLY PAPER REC
	2800	OTTA	21 GRF	1545.0	1610.0	50.0	3.6	1.8		
	2800	OTTA	1 S	1554.0	1555.3	3.0	3.4	1.5		
	410	SGMR	47 GB	1657.3	1657.8	.8	230.0			
	2800	OTTA	2 S/F	1657.5	1658.0	2.0	7.6	2.6		
	245	SGMR	49 GB	1657.6	1657.6	.7	3600.0			
	9400	HUAN	3 S	1730.8	1731.5	1.5	59.6	25.6		R
	15400	SGMR	8 S	1731.1	1731.3	.5	25.0			
	4995	SGMR	8 S	1731.1	1731.3	.9	28.0			
	8800	SGMR	47 GB	1731.1	1731.3	.7	56.0			
	9400	HUAN	29 PBI	1732.3	1732.3	20.0	9.7	4.8		R
	610	SGMR	8 S	1837.8	1837.8	.3	22.0			
	410	SGMR	8 S	1837.8	1837.8	.5	20.0			
	245	SGMR	8 S	1837.8	1838.0	.3	43.0			
	245	SGMR	8 S	1937.5	1939.0	2.0	49.0			
	410	SGMR	47 GB	1938.6	1939.0	.9	93.0			
	2695	PENT	240 R	1955.0	2008.0	13.00	7.4	2.0		
	410	PALE	8 S	2007.8	2008.1	.3	27.0			
	2800	OTTA	21 GRF	2010.0	2046.0	95.0	13.0	6.2		
	2800	OTTA	4 S/F	2011.0	2017.0	19.0	20.0	9.0		
	610	SGMR	47 GB	2011.3	2012.1	7.5	50.0			
	4995	SGMR	4 S/F	2011.3	2012.5	5.5	23.0			
	245	SGMR	49 GB	2012.1	2012.3	4.7	67.0			
	4995	PALE	8 S	2014.6	2015.0	.7	28.0			
	8800	SGMR	8 S	2014.6	2015.0	1.0	33.0			
	245	PALE	49 GB	2014.6	2015.3	2.2	1000.0			
	2695	SGMR	4 S/F	2014.6	2016.6	4.5	26.0			
	9400	HUAN	22 GRF	2014.6	2045.1	63.7	41.9	26.3		R
	410	SGMR	47 GB	2014.8	2015.5	.8	110.0			
	1415	PALE	47 GB	2014.8	2017.0	4.0	40.0			
	610	PALE	8 S	2015.3	2015.3	.2	24.0			
	410	PALE	47 GB	2015.3	2015.5	.3	110.0			
	1415	SGMR	47 GB	2015.8	2016.3	2.0	32.0			
	4995	SGMR	20 GRF	2023.6	2023.6	1.2	18.0			
	2695	SGMR	8 S	2023.6	2024.0	.40	17.0			
	610	SGMR	49 GB	2023.6	2025.6	15.0	37.0			
	410	SGMR	8 S	2024.6	2025.0	.5	20.0			
	610	PALE	47 GB	2026.3	2032.1	9.5	310.0			
	245	SGMR	8 S	2032.8	2033.1	.3	11.0			
	410	SGMR	47 GB	2042.8	2043.3	2.5	100.0			
	245	SGMR	4 S/F	2042.8	2043.5	2.3	110.0			
	245	PALE	47 GB	2043.1	2043.5	2.0	160.0			
	610	SGMR	8 S	2043.1	2044.8	1.70	22.0			
	2800	OTTA	8 S	2044.0	2044.2	.6	6.0	3.0		
	410	PALE	8 S	2045.0	2045.1	.1	20.0			
	2695	PENT	21 GRF	2200.0	2222.0	100.0	5.2	3.0		
	1000	TYKW	45 C	2258.5	2258.8	.5	10.0	3.0		
245	LEAR	49 GB	2307.6	2307.8	.2	690.0				
410	LEAR	8 S	2307.6	2307.8	.2	10.0				
3750	TYKW	21 GRF	2310.0	0015.0	130.0	7.0	3.0			
3750	TYKW	5 S	2311.0	2311.7	2.0	8.0	2.0			
2695	PENT	3 S	2311.2	2311.7	1.0	15.0	3.8			
245	PALE	49 GB	2311.3	2311.6	.8	830.0				
1000	TYKW	45 C	2311.3	2311.7	.7	6.0	2.0			
2695	LEAR	8 S	2311.5	2311.6	.1	18.0				
410	LEAR	4 S/F	2311.5	2311.6	3.1	23.0				
245	LEAR	49 GB	2311.5	2311.6	.1	830.0				
1415	LEAR	8 S	2311.5	2311.6	.1	17.0				
4995	LEAR	8 S	2311.5	2311.6	.1	15.0				
2000	TYKW	5 S	2311.5	2311.7	1.0	17.0	3.5			
245	LEAR	8 S	2313.8	2314.1	.3	21.0				
610	LEAR	8 S	2313.8	2314.1	.3	15.0				
410	LEAR	8 S	2313.8	2314.1	.3	46.0				
3750	TYKW	5 S	2327.5	2328.1	2.5	2.0	.7			
1000	TYKW	45 C	2333.0	2333.7	2.0	17.0	3.0			
1000	TYKW	5 S	2338.6	2338.8	.5	3.0	1.0			
3750	TYKW	5 S	2345.0	2345.5	1.0	4.0	1.5			



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density (10 <sup>-22</sup> W/m <sup>2</sup> Hz)		Int	Remarks
							Peak	Mean		
14	2695	PENT	8 S	2345.2	2345.3	.8	8.2	2.0		
	2000	TYKW	5 S	2345.2	2345.5	1.0	3.0	.7		
	2840	PEKG		2359.0	0003.4					
	2840	PEKG	45 C	2359.0	0004.2	10.0	27.1	6.5		
15	208	VORO	44 NS	0000.0E		240.0D		4.0		
	410	LEAR	43 NS	0010.0	0010.3	636.0D	28.0			ML
	200	HIRA	43 NS	0436.0	0600.0	220.0D	55.0	10.0		ML
	100	HIRA	43 NS	0510.0	0613.0	190.0D	180.0	50.0		
	200	GORK	44 NS	0547.0E		382.0D		5.0		
	100	GORK	44 NS	0557.0E		243.0D		5.0		
	221	ABST	44 NS	0600.0E	0838.8		180.0	18.0		
	127	TORN	44 NS	0700.0E	0820.0	480.0D	220.0	1.0		V1
	29	UPIC	43 NS	0755.7		360.6D				
	33	UPIC	43 NS	0757.0		375.6D				
	260	ONDR	44 NS	0809.0E	1350.0U	388.0D				
	245	SGMR	43 NS	1203.0	1512.8	590.0D	139.0			
	200	HIRA	44 NS	2126.0E	0511.0	650.0D	20.0	10.0		ML
	245	LEAR	43 NS	2230.0	0434.3	735.0	139.0			
	410	LEAR	43 NS	2230.0	0814.3	735.0	37.0			
	2840	PEKG	45 C	0000.0	0722.6	6.0				
	610	LEAR	8 S	0007.8	0008.0	.3	25.0			
	245	LEAR	47 GB	0012.0	0012.6	.8	139.0			
	410	LEAR	8 S	0012.5	0012.6	.1	17.0			
	100	HIRA	46 C	0018.0	0018.3	58.0	250.0	40.0		SL
	100	HIRA		0018.0	0034.6		80.0			SL
	410	LEAR	8 S	0134.0	0134.1	.1	16.0			
	245	PALE	49 GB	0134.0	0134.3	.3	620.0			
	245	LEAR	49 GB	0134.0	0134.3	.3	760.0			
	17000	NOBE	1 S	0159.4	0159.6	.7	18.0			0
	245	LEAR	47 GB	0200.3	0200.5	1.0	300.0			
	410	LEAR	47 GB	0200.3	0200.5	1.0	100.0			
	610	LEAR	8 S	0216.1	0217.0	1.7	21.0			
	606	MANI	1 S	0216.2	0217.0	1.8	9.8	3.3		
	1415	MANI	3 S	0216.5	0217.0	1.8	17.1	5.7		
	410	PALE	8 S	0216.8	0216.8	.3	40.0			
	410	LEAR	4 S/F	0216.8	0216.8	33.6	32.0			
	1415	LEAR	8 S	0216.8	0217.0	.3	20.0			
	2000	TYKW	45 C	0320.0	0323.2	16.0	60.0	9.0		
	9400	TYKW	21 GRF	0320.0	0334.0	130.0U	22.0	7.0U		
	3750	TYKW	45 C	0321.0	0324.4	29.0	17.0	1.0		
	1000	TYKW	45 C	0321.0	0329.2	15.0	85.0	4.0		
	2695	MANI	4 S/F	0321.5	0323.3	4.5	27.8	9.3		
	2695	PALE	4 S/F	0322.5	0323.0	12.6	30.0			
	17000	NOBE	20 GRF	0322.5	0330.3	32.0	18.0			0
2695	LEAR	4 S/F	0322.8	0323.3	8.2	20.0				
4995	LEAR	4 S/F	0323.3	0324.3	11.8	16.0				
1415	LEAR	4 S/F	0324.0	0324.1	2.5	13.0				
9400	TYKW	5 S	0324.0	0324.3	1.0	6.0	2.0			
606	MANI	4 S/F	0324.0	0324.7	1.5	60.7	20.2			
9395	PEKG	20 GRF	0324.0	0334.0	42.0	20.4	4.4			
610	LEAR	4 S/F	0324.3	0325.3	7.5	07.0				
410	LEAR	8 S	0325.1	0331.0	5.9D	65.0				
15400	LEAR	4 S/F	0325.6	0329.8	9.5	23.0				
8800	LEAR	4 S/F	0325.8	0329.8	9.3	20.0				
245	LEAR	49 GB	0326.8	0327.8	1.7	740.0				
245	PALE	49 GB	0326.8	0327.8	1.7	790.0				
100	HIRA	41 F	0327.0	0327.5	13.0	10000.0D				
200	HIRA	46 C	0327.0	0327.6	2.4	1400.0	170.0		0	
208	VORO	4 S/F	0327.0	0330.0U	3.0	150.0D				
410	PALE	47 GB	0329.0	0329.3	2.6	80.0				
8800	PALE	8 S	0330.6	0331.0	1.2	24.0				
2000	TYKW	30 PBI	0336.0		160.0	5.0	3.0			
3750	TYKW	30 PBI	0350.0		140.0	9.0	4.5			
1000	TYKW	45 C	0352.0	0408.4	45.0	5.0	2.0			
9400	TYKW	5 S	0440.0	0440.6	4.0	5.0	1.5			
2000	TYKW	45 C	0500.0	0501.1	2.0	1.5	.5			
9400	TYKW	5 S	0505.0	0511.0	10.0	4.0	1.5			
3750	TYKW	5 S	0508.5	0509.5	5.0	2.0	1.0			
2000	TYKW	5 S	0509.0	0509.5	5.0	3.0	.5			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
15	9400	TYKW	5 S	0522.5	0523.0	2.0	5.0	1.5		
	245	LEAR	49 GB	0612.1	0612.6	.7	510.0			
	3750	TYKW	45 C	0620.0	0620.4	11.0	3.0	1.0		
	650	GORK	41 F	0633.0	0633.1	13.0	6.0			
	3750	TYKW	45 C	0633.0	0634.0	3.0	12.0	4.0		
	2000	TYKW	5 S	0633.0	0634.0	3.0	3.0	1.0		
	650	GORK		0633.0	0635.7		13.0			
	650	GORK		0633.0	0644.2		7.5			
	410	LEAR	8 S	0633.1	0633.6	1.4	18.0			
	245	LEAR	47 GB	0633.3	0634.0	1.7	139.0			
	2695	LEAR	8 S	0633.3	0634.0	1.8	10.0			
	2950	GORK	1 S	0633.3	0634.0	1.2	9.0			
	9100	GORK	22 GRF	0633.4	0634.2	14.0	9.0			
	9400	TYKW	5 S	0633.5	0634.1	3.0	3.0	1.0		
	6100	KISV	46 C	0633.5	0643.0	9.5U	8.0			
	4995	LEAR	8 S	0633.6	0634.0	1.9	11.0			
	8800	LEAR	8 S	0633.6	0634.1	2.0	10.0			
	1000	TYKW	45 C	0633.7	0634.0	1.5	46.0	9.0		
	610	LEAR	47 GB	0634.0	0635.8	2.0	53.0			
	2950	GORK	30 PBI	0634.1	0634.1	23.0	3.5			
	610	LEAR	47 GB	0635.6	0635.8	.4	54.0			
	3750	TYKW	30 PBI	0636.0		20.0	1.5	.7		
	2000	TYKW	45 C	0643.0	0644.0	3.5	17.0	3.0		
	3750	TYKW	5 S	0643.0	0644.0	5.0	3.5	1.5		
	9400	TYKW	5 S	0643.0	0644.5	6.0	3.0	1.0		
	500	HIRA	46 C	0643.3	0643.8	1.0D	45.0	15.0		WL
	610	LEAR	8 S	0643.6	0644.3	1.5	45.0			
	200	HIRA	46 C	0643.7	0644.0	1.5D	1780.0	150.0		WL
	100	HIRA	46 C	0643.7	0644.1	1.0	4200.0	770.0		WL
	200	GORK	4 S/F	0643.7	0644.4	1.5	60.0D			
	950	GORK	1 S	0643.7	0644.5	1.6	10.0			
	1000	TYKW	45 C	0643.7	0644.6	2.0	14.0	1.5		
	410	LEAR	47 GB	0643.8	0644.1	1.3	290.0			
	100	GORK	8 S	0644.0	0644.2U	.7	1600.0D			
	245	LEAR	47 GB	0644.1	0644.3	1.2	320.0			
	2950	GORK	2 S/F	0644.1	0644.6	.5	4.5			
	9395	PEKG	20 GRF	0718.0	0722.6	30.0	15.6	3.9		
	6100	KISV	4 S/F	0718.5	0722.5	165.0	17.0			
	2950	GORK	21 GRF	0718.7	0725.9	48.0	7.8			
	3100	CRIM	3 S	0718.8	0722.4	6.0	42.0	13.0		
	2000	TYKW	45 C	0719.0	0721.7	7.0	35.0	14.0		
	2840	PEKG		0719.0	0722.0					
	5200	BERN	4 S/F	0719.0	0722.3	6.0	37.0			ONLY PAPER REC
	3200	BERN	4 S/F	0719.0	0722.3	6.0	35.0			ONLY PAPER REC
	3750	TYKW	45 C	0719.0	0722.5	7.0	38.0	15.0		
	2695	MANI	4 S/F	0719.0	0722.7	6.0	36.6	12.2		
	9400	TYKW	5 S	0719.0	0723.0	6.0	13.0	8.0		
	2950	GORK	4 S/F	0719.3	0722.4	5.8	31.0			
	950	GORK	4 S/F	0719.3	0722.5	12.2	32.0			
	650	GORK	4 S/F	0719.4	0722.8	4.8	17.0	5.0		
	2695	ATHN	4 S/F	0719.5	0722.8	6.0	37.0			
	1415	ATHN	4 S/F	0719.5	0722.8	6.0	27.0			
3000	IZMI	7 C	0720.0	0722.3	5.0	26.0	14.0			
1000	TYKW	45 C	0720.0	0722.4	5.0	28.0	6.0			
1415	MANI	3 S	0720.0	0722.7	5.0	23.3	7.8			
4995	MANI	3 S	0720.0	0722.7	5.0	29.2	9.8			
606	MANI	4 S/F	0720.0	0722.8	5.0	26.2	8.7			
2695	LEAR	4 S/F	0720.3	0722.3	4.3	36.0				
9100	GORK	22 GRF	0720.4	0722.5	45.6	18.0				
1415	LEAR	4 S/F	0720.8	0722.3	4.8	24.0				
4995	LEAR	4 S/F	0721.0	0722.3	4.6	30.0				
8800	ATHN	4 S/F	0721.3	0723.5	6.7	21.0				
610	LEAR	4 S/F	0721.5	0722.5	2.1	33.0				
8800	MANI	3 S	0721.5	0723.0	3.5	27.4	9.1			
8800	LEAR	4 S/F	0721.6	0722.3	4.0	23.0				
650	GORK	30 PBI	0724.2	0724.2	16.1	1.5				
9400	TYKW	29 PBI	0725.0		35.0	9.0	5.0			
3750	TYKW	29 PBI	0726.0		30.0	6.0	3.0			
2000	TYKW	29 PBI	0726.0		20.0	4.0	2.0			
2840	PEKG	29 PBI	0726.0	0731.7	19.0	11.0	5.1			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
15	650	GORK	2 S/F	0728.3	0729.9	2.5	3.0			
	1000	TYKW	5 S	0731.3	0731.4	.5	5.0	1.5		
	15000	KISV	8 S	0746.0	0746.3	1.5	20.0			
	430	KRAK	42 SER	0807.1	0819.8	36.0	52.0			
	430	KRAK		0807.1	0831.8		320.0			
	245	LEAR	47 GB	0819.3	0819.8	1.0	54.0			
	204	IZMI	4 S/F	0819.5	0819.6	.8	80.0	50.0		
	245	LEAR	8 S	0819.6	0819.6	.2	20.0			
	410	LEAR	8 S	0819.6	0819.6	.2	31.0			
	100	GORK	41 F	0819.6	0819.9	14.5	830.0			
	100	GORK		0819.6	0832.9		970.0			
	245	LEAR	47 GB	0831.3	0831.6	2.2	130.0			
	410	LEAR	47 GB	0831.3	0831.6	.8	100.0			
	810	KRAK	8 S	0831.5	0831.6	.2	10.0			
	610	LEAR	8 S	0831.6	0831.8	.2	36.0			
	204	IZMI	41 F	0831.7	0833.9	3.0	340.0			
	200	GORK	4 S/F	0832.4	0833.0	3.0	200.0D			
	6100	KISV	1 S	0912.0	0913.1	2.0	4.0			
	100	GORK	41 F	0928.7	0929.2	3.5	160.0D			
	100	GORK		0928.7	0930.5		700.0			
	100	GORK		0928.7	0931.5		2000.0D			
	200	GORK	41 F	0928.8	0929.0	3.5	220.0D			
	200	GORK		0928.8	0931.6		220.0D			
	204	IZMI	41 F	0929.0	0930.2	3.8	380.0			
	430	KRAK	8 S	0931.5	0931.5	.2	130.0			
	245	LEAR	49 GB	0931.5	0931.6	.3	730.0			
	410	LEAR	47 GB	0931.5	0931.6	.1	80.0			
	430	KRAK	8 S	1057.5	1057.8	.5	40.0			
	15000	KISV	1 S	1144.0	1144.3	2.0	21.0			
	204	IZMI	8 S	1145.5	1145.6	.5	160.0	120.0		
	127	TORN	48 C	1317.5	1320.2	6.5	180.0	40.0		
	930	BORD	45 C	1318.0	1322.0	7.0	393.0	18.0		
	245	SGMR	4 S/F	1318.6	1321.1	3.0	420.0			
	536	ONDR	4 S/F	1319.0	1321.2	3.0	64.0	17.0		
	810	KRAK	5 S	1319.3	1320.7	2.0	260.0	40.0		
	610	SGMR	47 GB	1319.8	1321.0	2.0	180.0			
	8800	ATHN	47 GB	1320.0	1320.8	2.1	58.0			
	1415	ATHN	47 GB	1320.0	1321.1	2.0	139.0			
	3200	BERN	4 S/F	1320.0	1321.2	2.0	278.0			ONLY PAPER REC
	5200	BERN	4 S/F	1320.0	1321.2	2.0	146.0			ONLY PAPER REC
	2695	ATHN	47 GB	1320.0	1321.3	2.0	260.0			
	2800	OTTA	4 S/F	1320.0	1321.3	2.0	397.0			
	9400	HUAN	4 S/F	1320.1	1320.9	2.1	45.4	28.6		R
	1415	SGMR	47 GB	1320.1	1321.0	1.5	160.0			
	410	SGMR	47 GB	1320.1	1321.1	1.5	239.0			
2695	SGMR	47 GB	1320.3	1321.1	1.3	330.0				
15400	SGMR	47 GB	1320.6	1320.8	.7	53.0				
8800	SGMR	47 GB	1320.6	1321.0	.9	60.0				
4995	SGMR	47 GB	1320.6	1321.1	1.0	54.0				
9400	HUAN	22 GRF	1350.5	1403.4	17.7	10.1	3.7		0	
808	ONDR	1 S	1420.6	1420.8	3.4		15.0		0	
9400	HUAN	2 S/F	1609.1	1610.7	2.4	6.7	3.1		0	
2800	OTTA	20 GRF	1625.0	1638.0	20.0	2.4	1.2			
2800	OTTA	1 S	1648.0	1649.0	2.5	2.2	1.1			
9400	HUAN	1 S	1709.5	1710.0	1.7	10.1	5.7		R	
2800	OTTA	22 GRF	1720.0	1723.0	18.0	5.0	2.3			
410	SGMR	47 GB	1720.8	1721.1	1.8	169.0				
610	SGMR	8 S	1720.8	1721.1	.5	29.0				
1415	SGMR	8 S	1720.8	1721.1	.3	21.0				
9400	HUAN	21 GRF	1720.8	1730.2	19.4	8.4	4.3		R	
245	SGMR	8 S	1727.6	1727.8	.5	440.0				
9400	HUAN	1 S	1727.6	1728.0	2.1	10.1	5.0		R	
410	SGMR	47 GB	1727.6	1728.1	.5	200.0				
2800	OTTA	8 S	1803.5	1803.6	.5	6.6				
2800	OTTA	21 GRF	1937.0	2050.0	130.0	3.2				
2800	OTTA	8 S	1939.0	1939.3	.6	4.6				
2800	OTTA	8 S	1941.6	1941.6	.5	4.6				
9400	HUAN	2 S/F	1959.8	2000.2	1.8	26.9	10.3		R	
8800	SGMR	8 S	2000.0	2000.1	.3	30.0				
15400	SGMR	8 S	2000.1	2000.3	.2	29.0				

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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 <sup>2</sup> Hz)	Mean		
15	2695	PENT	2 S/F	2011.9	2012.1	2.0	5.6	2.4		
	610	PALE	8 S	2012.6	2012.8	.7	49.0			
	610	SGMR	47 GB	2012.6	2012.8	.7	50.0			
	500	HIRA	46 C	2232.0	2232.4	1.5	50.0	15.0		SL
	1000	TYKW	45 C	2232.0	2232.7	2.0	30.0	8.0		
	3750	TYKW	5 S	2232.0	2233.3	4.0	3.0	1.0		
	610	LEAR	8 S	2232.3	2232.6	1.0	48.0			
	2695	PENT	1 S	2232.5	2233.0	2.5	5.0	2.2		
	3750	TYKW	5 S	2302.0	2303.8	4.0	2.0	1.0		
16	208	VORO	44 NS	0000.0E		240.0D		19.0		
	200	GORK	44 NS	0527.0E		425.0D		30.0		
	100	GORK	44 NS	0528.0E		420.0D		5.0		
	221	ABST	44 NS	0600.0E	0810.8		180.0	27.0		
	204	IZMI	43 NS	0700.0		300.0D	4.0			
	260	ONDR	44 NS	0750.0E		423.0D				
	430	KRAK	44 NS	0800.0E	1200.0U	360.0D	58.0	7.0		
	127	TORN	44 NS	0820.0E	1005.3	400.0D	800.0	16.0		V2
	245	SGMR	43 NS	1201.0	1558.8	593.0D	130.0			
	200	HIRA	44 NS	2124.0E	0256.0	650.0D	100.0	20.0		ML
	245	LEAR	43 NS	2231.0	1003.0	734.0	169.0			
	410	LEAR	43 NS	2242.3	2334.1	722.7	63.0			
	3750	TYKW	21 GRF	0030.0	0120.0	95.0	5.0	2.0		
	9400	TYKW	5 S	0045.0	0046.0	5.0	3.0	1.5		
	9395	PEKG	20 GRF	0101.0	0106.3	18.0	9.7	2.7		
	3750	TYKW	45 C	0101.5	0106.6	18.5	41.0	5.0		
	610	LEAR	47 GB	0101.8	0102.1	6.5	50.0			
	245	LEAR	47 GB	0101.8	0102.6	6.5	70.0			
	1000	TYKW	45 C	0101.9	0106.7	6.5	110.0	12.0		
	2000	TYKW	45 C	0102.0	0102.4	6.5	50.0	6.0		
	2695	MANI	4 S/F	0102.0	0102.8	5.5	85.6	28.5		
	410	LEAR	47 GB	0102.0	0103.8	6.3	150.0			
	9400	TYKW	45 C	0102.0	0106.5	8.0	12.0	5.0		
	606	MANI	4 S/F	0102.0	0107.3	6.5	34.8	11.6		
	1415	MANI	4 S/F	0102.0	0108.3	6.5	32.7	10.9		
	1415	LEAR	8 S	0102.1	0102.3	.2	37.0			
	2695	LEAR	8 S	0102.3	0102.3	.2	36.0			
	2840	PEKG	3 S	0103.0	0108.1	11.0	23.6			
	500	HIRA	46 C	0104.8	0106.9	2.4	40.0	16.0		SL
	4995	MANI	3 S	0105.0	0106.5	2.5	22.3	7.4		
	4995	LEAR	4 S/F	0106.1	0106.5	107.8	28.0			
	2000	TYKW	29 PBI	0108.5		20.0	2.0	1.0		
	9400	TYKW	29 PBI	0110.0		20.0	5.0	2.0		
	9400	TYKW	5 S	0118.3	0118.6	.7	7.0	2.0		
	245	LEAR	47 GB	0238.5	0238.6	.3	139.0			
	410	LEAR	8 S	0238.5	0238.8	.3	13.0			
	610	LEAR	8 S	0250.6	0250.6	.2	42.0			
9395	PEKG	3 S	0425.0	0425.8	1.0	12.7				
3750	TYKW	20 GRF	0450.0	0510.0	50.0	2.0	1.0			
610	LEAR	47 GB	0510.0	0510.1	.1	68.0				
15000	KISV	8 S	0716.7	0716.9	.7	15.0				
9100	GORK	22 GRF	0734.1	0751.0	80.0	10.0				
15000	KISV	1 S	0739.0	0739.3	1.8	12.0				
6100	KISV	4 S/F	0750.0	0752.7	7.0	7.0				
650	GORK	46 C	0750.6	0751.2	2.8	7.0				
410	LEAR	47 GB	0750.6	0751.3	2.5	55.0				
650	GORK		0750.6	0752.5		6.5				
610	LEAR	4 S/F	0750.8	0751.3	2.2	22.0				
245	LEAR	47 GB	0751.6	0752.5	2.4	270.0				
930	BORD	46 C	0752.0	0753.7	3.0	29.0	3.0			
100	GORK	4 S/F	0752.1	0752.5	.8	130.0D				
1415	LEAR	8 S	0752.1	0752.8	.9	20.0				
100	GORK	45 C	0812.4	0812.6	1.6	130.0D				
100	GORK		0812.4	0813.7		130.0D				
650	GORK	23 GRF	0828.8	1117.0	271.0D	7.5				
100	GORK	41 F	0845.7	0846.2	4.8	135.0				
100	GORK		0845.7	0846.6		140.0				
100	GORK		0845.7	0848.8		140.0				
950	GORK	23 GRF	0949.9	1036.0	67.0	10.0				
9100	GORK	22 GRF	0950.2	1004.9	120.0D	18.0				

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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 <sup>2</sup> Hz)	Mean		
16	200	GORK	41 F	0954.0	1000.8	13.4	70.0			
	100	GORK	41 F	0954.7	0956.6	12.0	140.00			
	100	GORK		0954.7	1005.2		2460.0			
	200	GORK	41 F	0954.7	1005.2		680.0			
	33	UPIC	42 SER	0956.5		183.8				
	410	LEAR	4 S/F	0956.5	0958.6	3.1	42.0			
	29	UPIC	42 SER	0956.6		183.7				
	245	LEAR	47 GB	0956.6	0957.3	4.2	70.0			
	536	ONDR	40 F	0956.9	1005.0U	10.3	10.0	4.0		
	808	ONDR	40 F	0958.0	1006.3	11.0	32.0	7.0		
	950	GORK	3 S	0958.2	0958.6	1.1	26.0			
	650	GORK	4 S/F	0958.2	0958.7	1.7	20.0			
	610	LEAR	47 GB	0958.3	0958.6	1.2	60.0			
	1415	LEAR	8 S	0958.3	0958.6	1.0	36.0			
	810	KRAK	8 S	0958.5	0958.6	.2	32.0			
	430	KRAK	8 S	0958.5	0958.7	.5	96.0			
	930	BORD	45 C	0959.0	0959.7	2.0	39.0	4.0		
	245	LEAR	47 GB	1002.1	1003.6	4.5	410.0			
	4995	LEAR	4 S/F	1002.8	1004.3	4.0	16.0			
	8800	LEAR	4 S/F	1002.8	1004.3	3.8	19.0			
	2695	LEAR	4 S/F	1002.8	1004.6	4.0	23.0			
	410	LEAR	47 GB	1002.8	1004.6	4.0	63.0			
	1415	LEAR	47 GB	1002.8	1004.8	3.8	110.0			
	2950	GORK	21 GRF	1002.8U	1005.8	6.00D	4.5			
	6100	KISV	4 S/F	1003.0	1004.8	9.0	11.0			
	204	IZMI	7 C	1003.2	1005.2	3.0	250.0	170.0		
	8800	LEAR	8 S	1003.3	1004.3	1.2	19.0			
	410	LEAR	47 GB	1003.3	1004.6	3.0	63.0			
	2950	GORK	4 S/F	1003.3	1004.8	2.5	7.8			
	950	GORK	4 S/F	1003.4	1006.3	3.3	50.0			
	245	LEAR	47 GB	1003.5	1003.6	2.1	410.0			
	2695	LEAR	8 S	1003.5	1004.6	1.8	23.0			
	430	KRAK	45 C	1003.6	1003.7	4.0	240.0	22.0		
	610	LEAR	4 S/F	1003.6	1003.8	3.0	27.0			
	1415	LEAR	47 GB	1003.6	1004.8	1.7	100.0			
	810	KRAK	40 F	1003.6	1006.2	3.2	84.0			
	650	GORK	4 S/F	1003.7E	1004.7	2.90D	10.0			
	610	LEAR	8 S	1003.8	1003.8	1.8	27.0			
	3100	CRIM	3 S	1004.0	1004.8	6.0	22.0	7.0		
	930	BORD	46 C	1004.0	1007.2	6.0	69.0	4.0		
	4995	LEAR	8 S	1004.1	1004.3	.7	16.0			
	8800	LEAR	4 S/F	1020.1	1021.1	3.0	37.0			
	2695	LEAR	4 S/F	1020.1	1021.3	3.0	22.0			
	1415	LEAR	4 S/F	1020.1	1021.3	3.0	15.0			
	15400	LEAR	4 S/F	1020.1	1021.6	2.9	44.0			
	4995	LEAR	4 S/F	1020.6	1021.1	2.5	20.0			
	650	GORK	2 S/F	1035.5	1035.6	1.0	4.0	2.0		
	650	GORK	2 S/F	1040.2	1041.3	2.0	5.0	2.5		
	204	IZMI	5 S	1109.0	1109.2	1.2	210.0	150.0		
	810	KRAK	8 S	1130.5	1130.5	.1	18.0			
	2695	ATHN	8 S	1246.6	1246.8	.5	11.0			
	1415	ATHN	47 GB	1250.3	1252.0	6.3	61.0			
	536	ONDR	4 S/F	1250.7	1252.3	6.8	11.0	5.0		
	2800	OTTA	1A S	1250.8	1252.3	4.0	7.4	3.6		
	810	KRAK	4 S/F	1250.9	1251.9	2.8	25.0	6.0		
	3100	CRIM	1 S	1251.0	1252.6	3.0	13.0	4.0		
	610	SGMR	47 GB	1251.1	1252.1	1.9	60.0			
	410	SGMR	47 GB	1251.3	1251.6	1.8	60.0			
	430	KRAK	4 S/F	1251.3	1251.8	2.7	110.0	36.0		
	245	SGMR	49 GB	1251.8	1252.1	1.3	570.0			
	2800	OTTA	8 S	1252.0	1252.3	.3	8.4			
	930	BORD	46 C	1252.0	1253.6	3.0	39.0	5.0		
	2695	SGMR	8 S	1252.1	1252.3	1.4	19.0			
	4995	SGMR	8 S	1252.1	1252.3	.7	15.0			
	2800	OTTA	4 S/F	1512.0	1515.2	6.0	21.2	8.3		
	1415	ATHN	47 GB	1512.6	1514.5	3.9	90.0			
	9400	HUAN	20 GRF	1512.6	1516.1	20.4	7.0	2.4		R
	1415	SGMR	47 GB	1513.0	1515.0	3.6	119.0			
	410	SGMR	47 GB	1513.1	1513.8	4.7	290.0			
	610	SGMR	47 GB	1513.1	1514.5	2.2	160.0			

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

53  
Feb 82

F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
16	245	SGMR	49 GB	1513.3	1514.3	5.3	790.0			
	2695	SGMR	4 S/F	1513.3	1515.1	2.2	38.0			
	930	BORD	46 C	1514.0	1514.8	4.0	117.0	18.0		
	4995	SGMR	8 S	1514.1	1514.8	.7D	17.0			
	8800	SGMR	8 S	1514.8	1514.8	.2	13.0			
	2800	OTTA	29 PBI	1518.0	1518.0	52.0	5.6		3.0	
	9400	HUAN	3 S	1630.6	1631.5	2.1	33.1	17.8		R
	2800	OTTA	1 S	1631.0	1631.5	1.0	3.0			
	8800	SGMR	4 S/F	1631.3	1631.6	2.7	32.0			
	15400	SGMR	8 S	1631.3	1638.1	6.8D	18.0			
	9400	HUAN	20 GRF	1637.5	1641.1	10.3	8.7	1.4		0
	930	BORD	8 S	1640.0	1640.1	.1	21.0	1.0		
	930	BORD	8 S	1647.9	1647.9	.1	18.0	1.0		
	2800	OTTA	20 GRF	1700.0	1712.0	45.0	2.6	1.8		
	2695	PENT	20 GRF	1755.0	1810.0	45.0	2.0			
	2800	OTTA	1 S	1857.0	1858.8	8.0	5.6	1.8		
	410	SGMR	47 GB	1858.3	1858.6	.8	52.0			
	9400	HUAN	1 S	1858.3	1859.6	2.5	17.4	6.7		0
	245	SGMR	47 GB	1858.5	1858.6	.3	340.0			
	610	SGMR	47 GB	1858.5	1900.3	1.8	57.0			
	8800	SGMR	8 S	1859.1	1859.8	.9	21.0			
	2800	OTTA	27 RF	1910.0	1910.0	150.0	2.6	2.4		
	2800	OTTA	24 R	1910.0	1920.0	10.0	2.6	1.5		
	2800	OTTA	24P R	1920.0	1920.0	130.0	2.6			
	2800	OTTA	26 FAL	2130.0	2140.0	10.0	-2.6	-1.5		
	2695	PENT	20 GRF	2205.0	2245.0	75.0	4.8			
	410	LEAR	49 GB	2231.0E	2232.0	11.3D	710.0			
	200	HIRA	46 C	2240.3	2244.4	5.7	300.0	80.0		SL
	3750	TYKW	20 GRF	2241.0	2245.0	50.0	5.0	2.0		RAIN
	2000	TYKW	5 S	2316.0	2317.4	5.0	2.0	1.0		
	1000	TYKW	45 C	2320.0	2321.4	2.0	36.0	7.0		
	17	208	VORO	44 NS	0000.0E		240.0D		28.0	
100		GORK	44 NS	0530.0E		390.0D		10.0		
200		GORK	44 NS	0530.0E		390.0D		30.0		
127		TORN	44 NS	0700.0E	0959.8	480.0D	340.0	14.0		V1
33		UPIC	43 NS	0723.1		311.8D				
204		IZMI	44 NS	0730.0E		270.0D	60.0			
260		ONDR	44 NS	0740.0E		432.0D				
200		HIRA	44 NS	2123.0E	0030.0	650.0D	100.0	60.0		ML
100		HIRA	44 NS	2123.0E	0542.0	6.5D	190.0	65.0		ML
3750		TYKW	32 ABS	0011.0	0030.0	50.0	-2.0	-1.0		RAIN
2000		TYKW	32 ABS	0011.0	0033.0	35.0	-2.0	-1.0		
9395		PEKG	41 F	0048.0	0055.2	11.0	18.0	.2		
1000		TYKW	45 C	0056.0	0058.2	4.0	6.0	.5		
3750		TYKW	32 ABS	0105.0	0140.0	55.0	-6.0	-3.5		RAIN
2000		TYKW	5 S	0119.0	0119.7	2.0	4.0	1.0		
3750		TYKW	5 S	0119.0	0119.7	3.0	6.0	2.0		
1000		TYKW	45 C	0119.0	0120.7	2.0	21.0	4.0		
100		HIRA	46 C	0119.2	0119.3	1.6	3000.0	350.0		WL
1000		TYKW	31 ABS	0121.0	0130.0	35.0	-3.0	-1.5		
2000		TYKW	31 ABS	0121.0	0140.0	48.0	-4.5	-2.5		
2000		TYKW	32 ABS	0212.0	0221.0	15.0	-2.0	-1.0		
3750		TYKW	32 ABS	0251.0	0305.0	30.0	-4.0	-2.5		RAIN
2000		TYKW	32 ABS	0252.0	0303.0	30.0	-3.0	-1.5		
100		HIRA	46 C	0325.6	0325.7	.7	1900.0	620.0		WL
3750		TYKW	45 C	0326.0	0327.4	2.0	1.5	.5		
2000		TYKW	45 C	0327.0	0327.3	1.0	35.0	7.0		
1000		TYKW	45 C	0327.0	0327.7	1.0	10.0	3.0		
3750		TYKW	31 ABS	0328.0	0340.0	41.0	-5.0	-3.0		RAIN
2000		TYKW	31 ABS	0328.0	0345.0	32.0	-3.0	-1.5		
1000		TYKW	32 ABS	0333.0	0344.0	35.0	-2.0	-1.0		
1000		TYKW	45 C	0348.2	0348.7	.8	5.0	1.5		
2000		TYKW	21 GRF	0400.0	0420.0	100.0	2.0	1.0		
3750	TYKW	21 GRF	0409.0	0415.0	60.0	2.0	1.0			
1000	TYKW	5 S	0420.8	0421.2	1.0	1.0	.3			
3750	TYKW	5 S	0426.0	0427.3	2.0	2.0	.7			
1000	TYKW	5 S	0426.7	0427.1	1.5	13.0	2.5			
2000	TYKW	5 S	0427.7	0428.3	1.5	2.5	1.0			
9400	TYKW	5 S	0438.0	0438.7	3.0	17.0	4.0			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (W/m <sup>2</sup> Hz)		
17	3750	TYKW	45 C	0438.0	0438.8	1.0	27.0	8.0		
	9395	PEKG	3 S	0438.0	0438.8	3.0	24.2	6.8		
	2840	PEKG	5 S	0438.0	0438.8	2.0	27.7	4.3		
	1000	TYKW	5 S	0438.4	0438.7	1.0	3.0	1.0		
	2000	TYKW	5 S	0438.5	0438.7	1.5	4.0	1.0		
	3750	TYKW	29 PBI	0439.0		8.0	1.5	1.0		
	1000	TYKW	5 S	0507.3	0507.6	1.0	3.0	1.0		
	2000	TYKW	5 S	0507.5	0507.7	.5	3.0	1.0		
	1000	TYKW	5 S	0537.4	0537.6	.5	6.0	2.0		
	2000	TYKW	5 S	0627.3	0627.5	.7	1.5	.5		
	9395	PEKG	5 S	0708.0	0709.2	8.0	18.0	2.0		
	6100	KISV	2 S/F	0708.2	0712.3	12.0	7.0			
	200	HIRA	46 C	0713.1	0714.0	3.1	235.0	63.0		ML
	200	GORK	4 S/F	0713.3	0714.2	3.5	180.0D			
	3750	TYKW	45 C	0725.0	0729.3	20.0	3.5	1.5		
	2000	TYKW	5 S	0725.0	0729.4	9.0	3.0	1.0		
	2950	GORK	1 S	0725.1	0729.5	6.2	3.5			
	204	IZMI	41 F	0731.2	0731.5	1.5	340.0			
	2840	PEKG	3 S	0745.0	0747.4	11.0	80.5	3.4		
	1415	MANI	4 S/F	0745.3	0746.8	10.7	92.7	30.9		
	2695	MANI	4 S/F	0745.4	0746.9	10.6	64.4	21.5		
	2950	GORK	45 C	0745.5	0747.2	9.7	74.0			
	2950	GORK		0745.5	0753.7		14.0			
	6100	KISV	4 S/F	0745.7	0745.8	3.5	98.0			
	950	GORK	41 F	0745.7	0747.0	9.7	164.0			
	950	GORK		0745.7	0753.7		266.0			
	3000	IZMI	5 S	0746.0	0746.8	3.0	91.0	65.0		
	3750	TYKW	5 S	0746.0	0746.9	4.0	85.0	22.0		
	650	GORK	41 F	0746.0	0746.9U	9.4	40.0D			
	4995	MANI	3 S	0746.0	0747.0	9.0	86.4	28.8		
	930	BORD		0746.0	0747.0		225.0			
	8800	MANI	3 S	0746.0	0747.0	3.0	143.6	47.9		
	3100	CRIM	3 S	0746.0	0747.3	5.0	83.0	28.0		
	200	GORK	41 F	0746.0	0747.3	8.4	270.0			
	2000	TYKW	5 S	0746.0	0747.4	4.5	90.0	19.0		
	9395	PEKG	3 S	0746.0	0747.5	10.0	85.0	17.3		
	200	GORK		0746.0	0750.6		640.0			
	650	GORK		0746.0	0752.8		140.0			
	930	BORD	46 C	0746.0	0752.8	8.0	300.0	12.0		
	9100	GORK	4 S/F	0746.1	0746.8	9.3	130.0			
	810	KRAK	42 SER	0746.1	0747.2	8.6	340.0	40.0		
	810	KRAK		0746.1	0752.6		410.0			
	5200	BERN	4 S/F	0746.2	0746.8	14.0	184.0			ONLY PAPER REC
	3200	BERN	4 S/F	0746.2	0746.8	14.0	95.0			ONLY PAPER REC
	200	HIRA	46 C	0746.3	0746.7	2.4	1400.0	67.0		WL
	606	MANI	4 S/F	0746.3	0746.8	8.0	213.2	71.1		
	100	HIRA	46 C	0746.3	0747.0	3.0	5300.0	900.0		WL
	500	HIRA	45 C	0746.4	0747.0	2.0	120.0	60.0		WR
	204	IZMI	7 C	0746.5	0746.7	1.5	300.0	150.0		
	100	GORK	45 C	0746.5	0746.8	1.8	1900.0			
9400	TYKW	45 C	0746.5	0746.8	5.0	85.0	19.0		RAIN	
15000	KISV	4 S/F	0746.5	0746.8	2.5	63.0				
17000	NOBE	3 S	0746.5	0747.0	2.5	59.0			0	
100	GORK		0746.5	0747.3		1900.0				
430	KRAK	42 SER	0746.6	0747.2	24.0	780.0				
430	KRAK		0746.6	0751.8		460.0				
536	ONDR	7 C	0746.8	0747.5	2.4	40.0	13.0			
204	IZMI	42 SER	0750.7	0801.8	28.5	600.0				
2840	PEKG	5 S	0751.0	0753.8	5.0	18.0				
6100	KISV	41 F	0751.5	0753.7	4.0	12.0				
2000	TYKW	45 C	0751.5	0753.8	4.0	13.0	5.0			
3750	TYKW	45 C	0751.5	0753.8	3.5	14.0	5.0			
3100	CRIM	31 ABS	0751.6	0754.0	47.0	11.0	4.0			
536	ONDR	40 F	0751.7	0753.9	4.0	26.0				
810	KRAK	8 S	0814.6	0814.6	.2	17.0				
430	KRAK	8 S	0837.0	0837.0	.2	35.0				
6100	KISV	1 S	0839.4	0839.9	1.0	3.0				
9100	GORK	20 GRF	0839.5	0840.0	15.0	7.0				
430	KRAK	8 S	0900.5	0900.5	.2	32.0				
204	IZMI	8 S	0903.8	0903.8	.5	330.0	260.0			

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

F E B R U A R Y 1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
17	430	KRAK	42	SER	0921.8	0959.5	54.0	380.0		
	430	KRAK			0921.8	1013.7		85.0		
	3100	CRIM	3	S	0955.0	0958.8	6.0	96.0	32.0	
	200	GORK	41	F	0955.0	0959.6	10.0	170.0D		
	200	GORK			0955.0	1004.5		600.0		
	6100	KISV			0955.5	0956.5		5.0		
	6100	KISV			0955.5	0957.6		6.0		
	6100	KISV	46	C	0955.5	0959.6	55.0	26.0		
	9100	GORK	4	S/F	0955.6	0959.8	7.9	40.0		
	2950	GORK	4	S/F	0955.9	0959.7	5.3	95.0		
	5200	BERN	4	S/F	0956.0	0959.5	9.0	87.0		
	3200	BERN	4	S/F	0956.0	0959.5	9.0	79.0		ONLY PAPER REC
	930	BORD	46	C	0956.0	0959.7	10.0	788.0	10.0	
	950	GORK	4	S/F	0956.4	0959.8	4.8	340.0		
	3000	IZMI	5	S	0957.5	1000.0	4.0	82.0	56.0	
	650	GORK	4	S/F	0958.8	0959.8	2.2	66.0		
	15000	KISV	2	S/F	0959.1	0959.8	1.7	29.0		
	536	ONDR	7	C	0959.2	0959.8	11.8	52.0		
	100	GORK	4	S/F	0959.4	0959.6	.5	2050.0		
	204	IZMI	8	S	0959.5	0959.5	.5	340.0	300.0	
	810	KRAK	8	S	0959.5	0959.5	.2	400.0		
	6100	KISV	31	ABS	1001.5	1006.0	35.0	-6.0		
	204	IZMI	8	S	1004.7	1004.7	.3	310.0	210.0	
	204	IZMI	41	F	1059.3	1059.4	1.0	300.0		
	430	KRAK	42	SER	1107.6	1115.5	12.0	72.0		
	430	KRAK	42	SER	1338.5	1350.3	12.5	17.0		
	2800	OTTA	20	GRF	1417.0	1419.0	13.0	4.4	1.6	
	2800	OTTA	8	S	1915.3	1915.7	.7	2.6	1.3	
	2800	OTTA	3	S	1943.5	1945.0	3.5	25.6	9.0	
	9400	HUAN	4	S/F	1943.6	1944.8	3.1	85.7	40.0	R
	2800	OTTA	29	PBI	1947.0	1947.0	7.0	2.8	1.4	
	2800	OTTA	46F	C	2133.5	2142.0	11.5	71.0	29.2	
	9400	HUAN	21	GRF	2135.7	2149.3	43.0	23.1	16.6	R
	9400	HUAN	1	S	2136.2	2137.0	2.0	24.7	13.8	R
9400	HUAN	4	S/F	2140.7	2143.4	3.6	37.9	20.4	R	
2800	OTTA	29	PBI	2145.0	2145.0	70.0	13.2	4.6	R	
500	HIRA	45	C	2204.0	2213.0	21.0	18.0	8.0	ML	
1000	TYKW	42	SER	2215.0	2217.2	3.0	21.0	3.0		
2000	TYKW	5	S	2231.0	2231.1	1.0	3.0	1.0		
1000	TYKW	42	SER	2254.0	2254.5	3.0	26.0	2.5		
3750	TYKW	5	S	2255.5	2256.0	2.5	2.0	1.0		
2000	TYKW	5	S	2326.0	2327.3	3.0	4.0	1.5		
3750	TYKW	5	S	2326.0	2327.3	3.0	8.0	2.0		
1000	TYKW	45	C	2326.0	2327.4	2.0	6.0	2.0		
2000	TYKW	45	C	2330.0	2331.2	8.5	43.0	4.0		
2695	PENT	40	F	2330.0	2331.2	7.0	26.0			
3750	TYKW	45	C	2330.0	2336.3	12.0	16.0	3.0		
1000	TYKW	45	C	2330.4	2331.2	8.0	220.0	10.0		
9400	TYKW	45	C	2330.5	2331.2	1.8	15.0	2.0		
606	MANI	4	S/F	2330.6	2331.2	5.4	95.2	31.7		
2695	MANI	4	S/F	2330.7	2331.3	6.3	27.6	9.2		
1415	MANI	4	S/F	2330.7	2331.3	3.6	56.7	19.0		
9400	TYKW	5	S	2333.0	2333.4	1.0	4.0	1.5		
9400	TYKW	5	S	2335.0	2336.6	3.0	8.0	3.0		
2000	TYKW	5	S	2339.9	2340.2	.7	5.0	2.0		
2000	TYKW	5	S	2346.0	2346.5	1.0	2.0	.7		
3750	TYKW	21	GRF	2355.0	0010.0	165.0	7.0	3.5		
18	208	VORO	44	NS	0000.0E		240.0D	43.0		
	200	GORK	44	NS	0528.0E		394.0D	50.0		
	100	GORK	44	NS	0528.0E		394.0D	10.0		
	221	ABST	44	NS	0600.0E	0804.2		180.0	75.0	
	204	IZMI	44	NS	0700.0E		300.0D	110.0		
	127	TORN	44	NS	0700.0E		480.0D		50.0	V1, DISTURBED
	33	UPIC	43	NS	0734.0		405.3D			
	260	ONDR	44	NS	0800.0E		410.0D			
	245	SGMR	43	NS	1158.0	1829.0	600.0D	189.0		
	245	PALE	43	NS	1740.0	2103.8	620.0	200.0		
	410	PALE	43	NS	1740.0	2233.8	620.0	119.0		
	200	HIRA	44	NS	2121.0E		650.0D			



SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
18	100	HIRA	44 NS	2121.0E	0006.0	650.0D	7000.0	1840.0		
	410	LEAR	43 NS	2232.0	2233.8	1.8U	80.0			
	245	LEAR	43 NS	2232.0	2252.6	20.6U	76.0			
	2000	TYKW	21 GRF	0004.0	0010.0	40.0	2.5	1.0		
	9400	TYKW	28 PRE	0008.0	0017.0	25.0	3.0	1.5		
	3750	TYKW	5 S	0023.0	0024.6	5.0	1.5	.5		
	3750	TYKW	45 C	0032.0	0034.0	8.0	11.0	4.0		
	9395	PEKG	5 S	0032.0	0035.0	5.0	18.1	3.4		
	1000	TYKW	42 SER	0033.0	0034.3	2.3	16.0	3.0		
	9400	TYKW	45 C	0033.0	0034.9	8.0	38.0	11.0		
	2000	TYKW	5 S	0033.0	0035.0	4.0	1.5	.5		
	500	HIRA	46 C	0033.3	0034.0	1.0	300.0	40.0		0
	17000	NOBE	20 GRF	0033.5	0035.0	20.0	12.0			0
	2000	TYKW	45 C	0039.0	0039.4	1.0	4.0	.7		
	3750	TYKW	29 PBI	0040.0		25.0	3.0	1.5		
	9400	TYKW	29 PBI	0041.0		23.0	10.0	4.0		
	1000	TYKW	45 C	0103.0	0105.1	7.0	4.0	1.0		
	9400	TYKW	45 C	0108.0	0119.3	20.0	5.0	2.0		
	2000	TYKW	5 S	0129.0	0129.2	.6	1.5	.5		
	1000	TYKW	42 SER	0129.0	0129.2	3.0	11.0	1.5		
	9400	TYKW	5 S	0133.0	0134.0	3.0	3.0	1.0		
	3750	TYKW	21 GRF	0201.0	0206.0	30.0	2.0	1.0		
	500	HIRA	42 SER	0226.4	0228.6	2.3	800.0			0
	2000	TYKW	45 C	0226.6	0227.0	3.0	4.0	1.0		
	1000	TYKW	42 SER	0226.7	0227.0	3.0	29.0	2.5		
	3750	TYKW	5 S	0226.7	0227.0	1.0	3.0	.1		
	100	HIRA	46 C	0228.3	0228.6	.8	7100.0	840.0		ML
	3750	TYKW	28 PRE	0316.0	0320.0	4.0	2.0	1.0		
	4995	MANI	3 S	0320.0	0321.0	3.7	45.4	15.1		
	3750	TYKW	5 S	0320.0	0321.5	5.0	23.0	9.0		
	2840	PEKG	5 S	0320.0	0321.6	14.0	7.9	2.4		
	9400	TYKW	5 S	0320.0	0321.7	3.0	38.0	10.0		
	2695	MANI	3 S	0320.2	0321.0	1.8	10.9	3.6		
	8800	MANI	3 S	0320.5	0321.2	2.5	44.8	14.9		
	17000	NOBE	20 GRF	0320.5	0321.6	25.0	16.0			0
	2000	TYKW	5 S	0321.0	0321.7	2.0	2.5	1.0		
	9400	TYKW	30 PBI	0323.0		30.0	8.0	3.0		
	3750	TYKW	29 PBI	0325.0		15.0	5.0	2.0		
	9400	TYKW	5 S	0339.8	0340.0	3.0	6.0	1.5		
	2000	TYKW	20 GRF	0403.0	0409.0	35.0	2.0	1.0		
	3750	TYKW	20 GRF	0403.0	0410.0	30.0	3.0	1.5		
	1000	TYKW	28 PRE	0423.0	0424.0	6.0	4.0	2.0		
	1000	TYKW	45 C	0429.0	0434.0	11.0	23.0	7.0		
	2840	PEKG	20 GRF	0442.0	0446.4	15.0	11.6	1.6		
	2695	MANI	3 S	0443.7	0445.8	4.6	14.2	4.7		
	1415	MANI	4 S/F	0444.0	0444.3	3.3	26.4	8.8		
	606	MANI	4 S/F	0444.0	0445.8	3.5	82.5	27.5		
	3750	TYKW	45 C	0444.0	0446.2	4.0	15.0	3.0		
	2000	TYKW	45 C	0444.0	0446.3	5.0	9.0	3.0		
	1000	TYKW	45 C	0444.0	0446.4	6.0	23.0	4.0		
	3750	TYKW	21 GRF	0444.0	0451.0	30.0	2.0	1.0		
	9400	TYKW	21 GRF	0444.0	0457.0	35.0	7.0	3.0		
	4995	MANI	3 S	0444.7	0445.8	2.3	25.2	8.4		
	200	HIRA	46 C	0445.3	0446.1	2.5	3400.0	190.0		0
	100	HIRA	46 C	0445.6	0446.0	2.0	10000.0D	1100.0D		
	9400	TYKW	5 S	0446.0	0446.3	1.5	4.0	1.5		
	2000	TYKW	29 PBI	0449.0		10.0	2.0	1.0		
	1000	TYKW	42 SER	0451.5	0456.5	6.5	5.0	1.0		
	17000	NOBE	20 GRF	0451.7	0456.6	15.0	8.0			0
	2840	PEKG	2 S/F	0500.0	0503.3	6.0	8.5	.8		
	2695	MANI	2 S/F	0500.6	0502.8	3.4	9.8	3.3		
	1415	MANI	2 S/F	0500.8	0501.0	2.9	8.3	2.8		
	4995	MANI	4 S/F	0500.8	0502.8	2.7	12.6	4.2		
	3750	TYKW	45 C	0501.0	0503.0	3.5	10.0	2.5		
	2000	TYKW	45 C	0501.0	0503.1	3.5	7.0	2.5		
	1000	TYKW	5 S	0544.0	0544.3	.7	7.0	3.0		
	6100	KISY	1 S	0617.3	0620.5	7.0	4.0			
	9400	TYKW	45 C	0620.0	0620.6	3.0	5.0	2.0		
	3750	TYKW	5 S	0628.0	0628.4	1.0	2.0	.7		
	1000	TYKW	5 S	0630.6	0630.7	.5	15.0	4.0		

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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F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean (2 Hz)		
18	1000	TYKW	45 C	0702.5	0703.7	1.5	10.0	2.0		
	1000	TYKW	5 S	0705.0	0705.2	.5	27.0	7.0		
	606	MANI	40 F	0715.5	0727.3	14.5	66.0	22.0		
	650	GORK	23 GRF	0716.5		19.1	2.0			
	950	GORK	22 GRF	0722.0	0727.8	8.2	18.0			
	1000	TYKW	42 SER	0722.0	0727.9	9.0	33.0	2.0		
	204	IZMI	5 S	0724.0	0724.1	.5	550.0	300.0		
	650	GORK	8 S	0724.1	0724.4	.6	15.0			
	1415	MANI	3 S	0727.0	0727.6	1.5	16.5	5.5		
	650	GORK	46 C	0727.3	0727.8	1.9	37.0			
	650	GORK		0727.3	0729.0		17.0			
	650	GORK	23 GRF	0811.6		13.0	2.0			
	810	KRAK	42 SER	0811.7	0812.4	5.3	35.0			
	810	KRAK		0811.7	0817.3		120.0			
	430	KRAK	42 SER	0811.9	0815.7	9.5	270.0			
	430	KRAK		0811.9	0820.8		130.0			
	950	GORK	41 F	0812.0	0812.5	12.0	33.0			
	930	BORD	46 C	0812.0	0817.3	13.0	139.0	4.0		
	950	GORK		0812.0	0817.4		82.0			
	650	GORK	4 S/F	0816.3	0816.7	1.3	14.0	3.0		
	606	MANI	4 S/F	0825.8	0826.3	1.6	16.5	5.5		
	1415	MANI	4 S/F	0825.8	0826.8	1.7	74.3	24.8		
	204	IZMI	46 C	0902.5	0903.5	3.0	1470.0	600.0		
	536	ONDR	45 C	0902.5	0907.8	10.6	208.0	9.0		
	606	MANI	47 GB	0902.7	0903.3	5.3	921.8	307.3		
	2695	MANI	4 S/F	0902.8	0903.7	5.2	195.0	65.0		
	4995	MANI	4 S/F	0902.9	0903.2	5.1	117.3	39.1		
	9100	GORK	4 S/F	0903.0U	0903.3	5.4U	170.0			
	1415	MANI	4 S/F	0903.0	0903.3	4.5	378.4	126.1		
	8800	MANI	4 S/F	0903.0	0903.4	5.0	74.4	24.8		
	6100	KISV	46 C	0903.0	0903.9	15.0	65.0			
	3000	IZMI	46 C	0903.0	0903.9	5.0	117.0	50.0		
	930	BORD	45 C	0903.0	0904.7	6.0	770.0	55.0		
	6100	KISV		0903.0	0904.9		63.0			
	6100	KISV		0903.0	0906.3		40.0			
	6100	KISV		0903.0	0907.4		42.0			
	127	TORN	47 GB	0903.2	0904.0	6.0	3400.0	680.0		
	15000	KISV	46 C	0903.4	0903.8	10.0	133.0D			
	15000	KISV		0903.4	0905.0		57.0			
	15000	KISV		0903.4	0906.6		77.0			
	15000	KISV		0903.4	0907.5		42.0			
	2950	GORK	4 S/F	0903.5U	0904.0	4.9U	141.0			
	650	GORK	46 C	0903.5E	0905.1U	4.6D	150.0			
	650	GORK		0903.5E	0907.4		600.0			
	808	ONDR	45 C	0903.7	0905.3	6.7	293.0	35.0		
	950	GORK	4 S/F	0904.1E	0904.9	4.3D	342.0			
	100	GORK	45 C	0904.8E	0905.0	308.0D	170.0D			
	100	GORK		0904.8E	0907.1		13800.0			
	200	GORK	4 S/F	0904.9E	0907.0	4.6D	2260.0			
	430	KRAK	45 C	0905.0E	0905.1U	8.0D	350.0			
	810	KRAK	45 C	0905.0E	0905.1U	3.6D	410.0	30.0U		
	810	KRAK		0905.0E	0907.1		200.0			
	430	KRAK		0905.0E	0907.5		910.0D			
	204	IZMI	41 F	0905.5	0906.0	4.2	900.0			
	650	GORK	29 PBI	0908.1	0908.1	12.9	16.0			
	2950	GORK	29 PBI	0908.4	0908.5	22.0	7.6			
	9100	GORK	29 PBI	0908.4	0909.2	30.2	17.0			
	15000	KISV	1 S	0921.7	0923.5	8.0	10.0			
	430	KRAK	8 S	0931.5	0931.8	.8	17.0			
	536	ONDR	8 S	1147.1	1147.3	.2	45.0			
	430	KRAK	42 SER	1241.5	1353.9	72.4U	45.0			
	930	BORD	46 C	1302.0	1319.0	23.0	262.0	8.0		
	430	KRAK	45 C	1302.8	1306.8	6.6	660.0	10.0		
	2800	OTTA	24OAR	1303.0	1308.0	5.0	9.4	4.2		
	808	ONDR	45 C	1304.3	1319.0U	19.4	107.0	16.0		
	9400	HUAN	28 PRE	1304.8	1313.8	9.0	30.1	11.3		R
	536	ONDR	4 S/F	1305.0	1306.4	2.7	14.0	5.0		
	810	KRAK	1 S	1305.6	1305.9	1.9	12.0	9.0		
	9400	HUAN	45 C	1313.8	1318.4	5.4	404.4	110.0		R
	2800	OTTA	46F C	1314.0	1318.9	9.0	455.0	65.0		

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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 <sup>2</sup> Hz)	Mean (2 Hz)		
18	430	KRAK	45 C	1314.3	1316.0	11.7	430.0	58.0		
	430	KRAK		1314.3	1318.8		430.0			
	536	ONDR	45 C	1314.4	1319.0	8.8	59.0	22.0		
	2800	OTTA	46F C	1314.5	1315.7	3.0	27.8	7.0		
	127	TORN	45 C	1315.3	1319.3	5.6	47000.0	240.0		
	810	KRAK	45 C	1315.8	1316.5	6.1	38.0	29.0		
	810	KRAK		1315.8	1318.9		300.0			
	9400	HUAN	29 PBI	1319.2	1319.2	38.5	45.1	10.2		R
	2800	OTTA	29 PBI	1323.0	1323.0	100.0	12.2	5.0		
	2800	OTTA	3 S	1830.5	1831.0	1.2	17.4	5.4		
	2800	OTTA	240 R	2035.0	2050.0	15.0	5.2	2.6		
	410	SGMR	47 GB	2039.6	2039.8	.2	53.0			
	2800	OTTA	20 GRF	2053.0	2115.0	22.00	3.4	1.7		
	2800	OTTA	8 S	2144.0	2144.2	.3	4.4			
	2695	PENT	4 S/F	2231.2	2232.9	1.8	10.4	7.8		
	245	PALE	47 GB	2247.1	2247.5	.5	99.0			
	9400	TYKW	5 S	2256.7	2256.9	.5	9.0	3.0		
	3750	TYKW	28 PRE	2305.0	2330.6	26.0	15.0	2.5		
	9400	TYKW	5 S	2305.5	2305.9	2.5	17.0	5.0		
	9400	TYKW	28 PRE	2325.0	2332.0	7.0	5.0	2.0		
	8800	LEAR	47 GB	2329.8	2333.1	3.30	90.0			
	4995	LEAR	47 GB	2329.8	2333.1	3.30	72.0			
	1000	TYKW	45 C	2330.0	2333.9	20.0	69.0	11.0		
	3750	TYKW	45 C	2331.0	2333.9	14.0	93.0	30.0		
	2695	MANI	4 S/F	2331.0	2349.0	18.00	49.2	16.4		
	245	LEAR	47 GB	2331.1	2331.3	.20	79.0			
	8800	MANI	3 S	2331.5	2334.3	9.5	177.6	59.2		
	4995	MANI	3 S	2331.5	2334.3	9.5	172.9	57.6		
	1415	LEAR	8 S	2332.0	2333.0	1.00	37.0			
	9400	TYKW	45 C	2332.0	2333.9	12.0	128.0	35.0		
	2695	PENT	4 S/F	2332.0	2334.0	5.0	52.0	26.0		
	4995	PALE	47 GB	2332.1	2333.8	11.2	100.0			
	1415	MANI	4 S/F	2332.1	2334.2	12.4	93.2	31.1		
	2695	LEAR	8 S	2332.3	2333.3	1.00	30.0			
	8800	PALE	47 GB	2332.3	2333.8	12.0	130.0			
	500	HIRA	46 C	2332.4	2332.5	4.0	100.0	20.0		WL
	606	MANI	4 S/F	2332.4	2335.1	11.6	115.5	38.5		
	15400	LEAR	8 S	2332.5	2333.3	.80	21.0			
	1415	PALE	47 GB	2332.8	2333.6	2.7	100.0			
	245	PALE	47 GB	2333.3	2335.1	5.3	300.0			
	610	PALE	47 GB	2333.5	2334.8	2.1	200.0			
	610	LEAR	47 GB	2333.5	2334.8	2.0	239.0			
	2695	PALE	8 S	2333.6	2333.8	.5	24.0			
	410	PALE	47 GB	2333.6	2334.8	2.7	64.0			
	410	LEAR	8 S	2334.6	2334.8	1.0	49.0			
2695	PENT	30 PBI	2337.0	2337.0	40.00	17.4				
2695	PENT	46F C	2341.0	2341.7	3.0	75.0	15.4			
2695	LEAR	47 GB	2341.3	2341.8	2.3	55.0				
245	LEAR	47 GB	2341.3	2342.1	1.3	119.0				
610	LEAR	47 GB	2341.6	2341.8	1.2	119.0				
410	LEAR	47 GB	2341.8	2342.3	.8	80.0				
9400	TYKW	29 PBI	2344.0		110.0	23.0	8.0			
3750	TYKW	30 PBI	2345.0		170.0	23.0	9.0			
4995	PALE	8 S	2346.3	2346.6	.30	13.0				
8800	PALE	8 S	2346.3	2347.6	1.5	19.0				
8800	PALE	8 S	2349.8	2350.6	.80	18.0				
1000	TYKW	30 PBI	2350.0		130.0	4.0	2.0			
2000	TYKW	30 PBI	2350.0E		160.00	14.00	6.00			
1000	TYKW	45 C	2352.0	2353.7	3.0	3.0	1.0			
1000	TYKW	45 C	2358.0	0005.0	33.0	190.0	5.0			
19	208	VORO	44 NS	0000.0E		240.00		240.0		
	610	LEAR	43 NS	0017.0	0021.1	626.00	23.0			
	200	GORK	44 NS	0526.0E		411.00		200.0		
	100	GORK	44 NS	0527.0E		408.00		250.0		
	29	UPIC	44 NS	0630.0E		570.00				
	33	UPIC	44 NS	0630.0E		570.00				
	127	TORN	44 NS	0700.0E		480.00		1400.0		V1
	204	IZMI	44 NS	0700.0E		300.00	80.0			
	260	ONDR	44 NS	0758.0E		392.00				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (2 Hz)		
19	245	SGMR	43 NS	1158.0	1247.3	540.0D	590.0			
	410	SGMR	43 NS	1158.0	1555.0	430.0D	94.0			
	245	PALE	43 NS	1731.0	1906.0	640.0	350.0			
	410	PALE	43 NS	1731.0	1907.0	640.0	55.0			
	200	HIRA	44 NS	2119.0E		650.0D				SL
	100	HIRA	44 NS	2119.0E	0000.0	650.0D	4000.0	1330.0		ML
	245	LEAR	43 NS	2232.0	2249.6	731.0	350.0			
	500	HIRA	45 C	0000.0	0030.0	38.0	20.0	14.0		SL
	8800	PALE	8 S	0002.1	0003.1	1.0D	18.0			
	245	PALE	49 GB	0002.1	0007.1	17.5	310.0			
	410	PALE	49 GB	0002.3	0007.5	17.3	100.0			
	9400	TYKW	21 GRF	0003.0E	0005.5	35.0D	7.0	3.0D		
	1415	MANI	4 S/F	0003.8	0005.0	4.6	29.0	9.7		
	606	MANI	4 S/F	0003.8	0005.6	4.2	12.0	4.0		
	4995	PALE	4 S/F	0004.0	0006.1	4.3	18.0			
	245	LEAR	49 GB	0004.3	0004.8	10.5	330.0			
	1415	LEAR	4 S/F	0004.3	0005.0	10.5	32.0			
	410	LEAR	49 GB	0004.3	0005.5	10.5	37.0			
	1415	PALE	8 S	0004.6	0006.5	1.9D	42.0			
	610	LEAR	4 S/F	0005.1	0005.5	9.7	37.0			
	610	PALE	8 S	0005.3	0005.5	.3	32.0			
	3750	TYKW	5 S	0010.0	0010.4	1.0	3.0	1.0		
	245	PALE	47 GB	0019.6	0020.3	12.7	189.0			
	410	PALE	20 GRF	0019.6	0021.6	12.7	50.0			
	8800	PALE	8 S	0020.1	0020.6	.5D	20.0			
	610	PALE	8 S	0021.0	0021.1	.3	32.0			
	410	PALE	20 GRF	0032.3	0033.3	13.7	43.0			
	245	PALE	47 GB	0032.3	0034.3	13.7	230.0			
	610	LEAR	47 GB	0043.1	0053.3	11.4	139.0			
	410	PALE	20 GRF	0046.0	0046.1	15.0	32.0			
	245	PALE	47 GB	0046.0	0046.1	15.0	160.0			
	1000	TYKW	8 S	0048.7	0048.8	.2	11.0	3.0		
	610	LEAR	47 GB	0049.6	0050.1	.9	90.0			
	410	LEAR	47 GB	0049.8	0050.1	.3	87.0			
	606	MANI	4 S/F	0049.8	0053.3	4.6	46.5	15.5		
	1415	MANI	3 S	0052.0	0053.5	2.4	18.6	6.2		
	2695	MANI	3 S	0052.0	0053.8	2.2	14.8	4.9		
	410	LEAR	49 GB	0052.8	0053.3	1.0	500.0			
	3750	TYKW	5 S	0053.0	0053.5	1.5	4.0	1.5		
	1000	TYKW	45 C	0053.0	0054.2	2.0	144.0	8.0		
	245	LEAR	47 GB	0053.1	0053.6	.7	300.0			
	2000	TYKW	5 S	0053.3	0053.6	1.0	4.0	1.5		
	8800	PALE	8 S	0053.8	0054.6	.8D	19.0			
	3750	TYKW	21 GRF	0334.0	0338.0	135.0	3.0	2.0		
	2000	TYKW	20 GRF	0352.0	0359.5	35.0	7.0	2.0		
	3750	TYKW	5 S	0356.0	0359.3	5.0	6.0	2.0		
	3750	TYKW	30 PBI	0401.0		20.0	4.0	2.0		
	3750	TYKW	5 S	0413.5	0414.3	3.0	1.5	.5		
	3750	TYKW	28 PRE	0429.0	0451.0	22.0	3.0	1.5		
	8800	LEAR	20 GRF	0433.1	0433.8	2.9	20.0			
9400	TYKW	30 PBI	0440.0		60.0	4.0	2.0			
2000	TYKW	5 S	0451.0	0453.4	5.0	6.0	2.0			
3750	TYKW	45 C	0451.0	0453.7	9.0	41.0	14.0			
9400	TYKW	45 C	0451.0	0454.0	5.0	32.0	13.0			
9395	PEKG	3 S	0451.0	0454.0	17.0	30.4	4.3			
8800	MANI	3 S	0451.5	0454.0	6.5	50.2	16.7			
1000	TYKW	42 SER	0452.0	0452.6	2.0	21.0	2.0			
4995	MANI	3 S	0452.0	0453.3	6.0	51.8	17.3			
2695	MANI	3 S	0452.0	0453.7	5.0	16.8	5.6			
2695	LEAR	4 S/F	0452.0	0453.8	4.0	18.0				
4995	LEAR	4 S/F	0452.1	0453.3	8.2	41.0				
8800	LEAR	4 S/F	0452.6	0454.0	7.7	40.0				
610	LEAR	47 GB	0452.8	0453.0	.3	100.0				
410	LEAR	47 GB	0452.8	0453.1	.5	56.0				
15400	LEAR	8 S	0453.8	0454.1	.3	19.0				
2000	TYKW	29 PBI	0455.0		25.0	2.0	1.0			
9400	TYKW	30 PBI	0456.0		30.0	14.0	6.0			
3750	TYKW	29 PBI	0500.0		22.0	8.0	3.0			
9400	TYKW	5 S	0504.0	0504.6	2.0	3.0	1.0			
4995	MANI	3 S	0555.0	0556.0	4.5	113.4	37.8			

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 <sup>2</sup> Hz)	Mean		
19	2695	MANI	3 S	0555.0	0556.3	4.0	39.2	13.1		
	3750	TYKW	5 S	0555.0	0556.8	5.0D	71.0	23.0D		
	8800	MANI	3 S	0555.2	0556.1	4.3	92.9	31.0		
	9400	TYKW	5 S	0555.5	0556.7	4.5	64.0	20.0		
	9100	GORK	3 S	0555.8	0556.7	2.3	73.0			
	9395	PEKG	5 S	0556.0	0556.9	6.0	57.7	10.1		
	2950	GORK	3 S	0556.0	0556.9	2.4	45.0			
	2000	TYKW	5 S	0556.0	0557.0	6.0	17.0	4.0		
	2840	PEKG	5 S	0556.0	0557.0	6.0	37.9	25.6		
	4995	LEAR	47 GB	0556.1	0556.6	2.7	83.0			
	8800	LEAR	47 GB	0556.1	0556.6	3.4	87.0			
	17000	NOBE	1 S	0556.3	0556.7	2.0	19.0			0
	2695	LEAR	8 S	0556.3	0556.8	1.7	37.0			
	15400	LEAR	8 S	0556.6	0556.6	1.7	20.0			
	9100	GORK	29 PBI	0558.0	0558.0	180.0	20.0			
	2950	GORK	29 PBI	0558.4	0558.4	7.5	8.5			
	9400	TYKW	30 PBI	0600.0		40.0	6.0	2.0		
	9395	PEKG	29 PBI	0602.0	0610.0	17.0	9.3	4.2		
	3750	TYKW	30 PBI	0603.0E		60.0D	3.0D	1.5D		
	6100	KISV	3 S	0606.0	0609.7	12.0	8.0			
	3750	TYKW	5 S	0608.0E	0609.7	15.0D	3.0D	1.0D		
	9400	TYKW	5 S	0608.0	0610.0	6.0	3.0	1.0		
	1000	TYKW	45 C	0626.0	0626.6	1.0	21.0	7.0		
	1000	TYKW	5 S	0652.6	0653.2	1.0	13.0	4.0		
	6100	KISV	45 C	0819.8	0820.0	2.5	8.0			
	650	GORK	3 S	0911.8	0912.5	1.6	8.0	4.0		
	6100	KISV	3 S	0939.0	0940.5	4.0	5.0			
	9100	GORK	22 GRF	0939.4	0940.7	120.0	11.0			
	6100	KISV	2 S/F	1042.5	1043.0	2.5	4.0			
	100	GORK	8 S	1136.9	1137.1	.5	26000.0D			
	200	GORK	41 F	1136.9	1137.2	6.1	1500.0D			
	200	GORK		1136.9	1149.5		1500.0			
	100	GORK	4 S/F	1202.7E	1203.0	.8D	26000.0D			
	930	BORD	41 F	1242.3	1242.6	.5	29.0	2.0		
	430	KRAK	42 SER	1323.3	1326.3	26.0U	152.0	27.0		
	430	KRAK		1323.3	1340.9		73.0			
	430	KRAK		1323.3	1344.6		1000.0D			
	430	KRAK		1323.3	1359.0		400.0			
	9400	HUAN	21 GRF	1323.6	1344.2	56.4	41.2	27.6		R
	2800	OTTA	3 S	1324.0	1327.7	11.0	205.0	79.0		
	245	SGMR	49 GB	1324.6	1326.1	18.5	2000.0			
	8800	SGMR	47 GB	1324.6	1327.1	18.5	100.0			
	610	SGMR	47 GB	1324.6	1327.5	18.5	110.0			
	410	SGMR	47 GB	1324.8	1326.8	18.3	100.0			
	536	ONDR	7 C	1324.8	1327.2	7.2	24.0	4.0		
	4995	SGMR	47 GB	1325.0	1327.3	18.1	160.0			
	808	ONDR	7 C	1325.0	1327.7	11.3	19.0	21.0		
	9400	HUAN	4 S/F	1325.1	1327.0	3.5	82.4	52.9		R
	2695	SGMR	47 GB	1325.1	1327.5	18.0	200.0			
	1415	SGMR	47 GB	1325.3	1327.8	17.8	169.0			
33	UPIC	49 GB	1326.1		33.4					
29	UPIC	49 GB	1326.3		23.8					
810	KRAK	42 SER	1326.3	1341.1	27.0	30.0	6.0			
810	KRAK		1326.3	1358.9		58.0				
15400	SGMR	4 S/F	1326.5	1327.1	16.6	28.0				
930	BORD	46 C	1328.0D	1341.8	33.0D	54.0	6.0			
536	ONDR	7 C	1332.1	1343.0	14.7	20.0	10.0			
2800	OTTA	30 PBI	1335.0	1335.0	270.0	27.0	9.0			
808	ONDR	7 C	1336.0	1341.8	10.8	38.0	21.0			
2800	OTTA	4 S/F	1337.0	1341.2	10.0	75.0	20.0			
9400	HUAN	4 S/F	1340.0	1341.0	2.3	48.4	21.7		R	
610	SGMR	47 GB	1343.1	1349.8	16.8	91.0				
2695	SGMR	20 GRF	1343.1	1349.8	16.8	47.0				
4995	SGMR	47 GB	1343.1	1349.8	16.8	66.0				
610	SGMR	47 GB	1343.1	1349.8	16.8	139.0				
1415	SGMR	47 GB	1343.1	1350.0	16.6	92.0				
245	SGMR	47 GB	1343.1	1351.5	15.1	169.0				
410	SGMR	4 S/F	1343.1	1357.6	14.5D	13.0				
8800	SGMR	47 GB	1343.3	1349.8	16.8	71.0				
15400	SGMR	20 GRF	1343.5	1349.8	16.8	30.0				

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 <sup>2</sup> Hz)	Mean		
19	536	ONDR	7 C	1346.7	1359.2	15.8	25.0	5.0		
	9400	HUAN	4 S/F	1347.8	1348.8	1.9	37.6	11.4		R
	2800	OTTA	45 C	1347.8	1349.2	2.5	19.0	8.0		
	808	ONDR	7 C	1351.4	1359.0	9.8	38.0	8.0		
	9400	HUAN	4 S/F	1357.3	1358.3	2.6	39.4	17.2		R
	2800	OTTA	4 S/F	1357.7	1358.6	2.3	37.0	18.5		
	2800	OTTA	21 GRF	1515.0	1535.0	100.0	7.0	3.5		
	930	BORD	46 C	1521.0	1523.6	18.0	83.0	7.0		
	610	SGMR	47 GB	1522.3	1523.6	6.5	100.0			
	2800	OTTA	1 S	1522.5	1523.9	3.0	7.0	2.8		
	1415	SGMR	47 GB	1522.8	1523.6	1.5	200.0			
	410	SGMR	8 S	1523.1	1523.3	2.0	50.0			
	245	SGMR	47 GB	1523.3	1523.6	.3	130.0			
	8800	SGMR	8 S	1523.3	1524.0	.7D	17.0			
	2800	OTTA	1 S	1532.0	1533.5	4.0	8.4	2.8		
	930	BORD	46 C	1619.0	1621.2	3.0	431.0	30.0		
	2800	OTTA	45 C	1619.8	1620.1	3.0	7.8	3.0		
	1415	SGMR	8 S	1620.8	1621.1	.8	34.0			
	2800	OTTA	8 S	1716.7	1716.8	.3	3.6			
	2800	OTTA	1 S	1745.0	1747.0	9.0	2.2	0.8		
	410	SGMR	8 S	1747.0	1747.3	.3	37.0			
	2800	OTTA	240AR	1850.0	1910.0	20.0	3.6	1.8		
	2800	OTTA	2 S/F	1903.2	1904.0	5.0	8.4	2.8		
	4995	SGMR	8 S	1903.6	1903.8	1.5	30.0			
	4995	PALE	8 S	1903.6	1904.6	1.4	32.0			
	1415	SGMR	47 GB	1903.8	1903.8	1.3	54.0			
	1415	PALE	47 GB	1903.8	1903.8	1.3	74.0			
	245	SGMR	47 GB	1904.1	1904.5	3.5	410.0			
	245	PALE	47 GB	1904.1	1904.5	.7	480.0			
	410	SGMR	8 S	1904.3	1904.6	.3	18.0			
	2695	SGMR	47 GB	1904.5	1904.6	.1	51.0			
	15400	SGMR	4 S/F	1904.8	1905.8	8.0	23.0			
610	SGMR	8 S	1907.6	1907.8	.4	28.0				
2800	OTTA	3 S	1913.0	1914.0	5.0	10.6	2.6			
2800	OTTA	20 GRF	2005.0	2011.0	85.0	5.2	2.2			
2800	OTTA	1 S	2141.5	2143.0	2.5	5.0	2.5			
2695	PENT	20 GRF	2210.0	2220.0	40.0	5.0	2.6			
410	LEAR	8 S	2301.8	2302.1	.3	20.0				
245	LEAR	47 GB	2302.1	2302.1	.2	490.0				
8800	PALE	47 GB	2322.3	2322.6	.5	200.0				
20	208	VORO	44 NS	0000.0E		240.0D		220.0		
	410	LEAR	43 NS	0006.0	0618.8	637.0D	21.0			
	100	GORK	44 NS	0514.0E		383.0D		30.0		
	200	GORK	44 NS	0515.0E		882.0D		150.0		
	221	ABST	44 NS	0600.0E	0805.0		180.0	14.0		
	127	TORN	44 NS	0700.0E		480.0D		418.0		V1
	260	ONDR	44 NS	0749.0E	1015.0U	375.0D				
	33	UPIC	43 NS	0901.9		200.4D				
	29	UPIC	43 NS	0906.3		198.1D				
	245	SGMR	43 NS	1155.0	1557.8	544.0D	210.0			
	245	PALE	43 NS	1759.0	0044.1	606.0	250.0			
	200	HIRA	44 NS	2118.0E	0208.0	650.0D	170.0	75.0		ML
	100	HIRA	44 NS	2118.0E	0630.0	650.0D	420.0	160.0		ML
	245	LEAR	43 NS	2233.0	0044.1	729.0	230.0			
	245	LEAR	49 GB	0018.1	0019.0	1.5	1100.0			
	410	LEAR	8 S	0019.0	0019.1	.8	30.0			
	500	HIRA	45 C	0049.0	0052.3	8.0	26.0	1.0		ML
	3750	TYKW	45 C	0050.0	0054.3	12.0	5.0	2.0		
	410	LEAR	47 GB	0050.1	0052.3	5.0	69.0			
	245	LEAR	49 GB	0051.0	0054.3	4.1	1000.0			
	410	PALE	47 GB	0051.3	0052.3	1.0D	88.0			
	245	PALE	49 GB	0054.0	0054.3	.3D	740.0			
	3750	TYKW	5 S	0220.0	0225.0	15.0	3.0	1.5		
	1000	TYKW	45 C	0343.0	0346.4	7.0	26.0	4.0		
	1415	LEAR	8 S	0345.8	0345.8	1.2	08.0			
3750	TYKW	5 S	0345.8	0346.0	1.0	1.5	.5			
410	LEAR	8 S	0346.8	0346.8	.8	08.0				
610	LEAR	8 S	0346.8	0347.3	1.0	13.0				
2000	TYKW	45 C	0352.0	0352.9	7.0	23.0	2.0			

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
20	1000	TYKW	45 C	0352.0	0353.7	4.0	4.0	.7		
	3750	TYKW	42 SER	0352.3	0353.8	4.0	5.0	1.0		
	1000	TYKW	45 C	0420.0	0420.2	1.0	24.0	4.0		
	9100	GORK	21 GRF	0545.2	0943.2	345.0D	73.0			
	3750	TYKW	5 S	0548.0	0549.5	7.0	7.0	3.0		
	610	LEAR	8 S	0548.8	0549.0	.3	16.0			
	6100	KISV	21 GRF	0724.0	0727.5	24.0	8.0			
	2950	GORK	21 GRF	0724.0	1000.0	249.0D	19.5			
	3750	TYKW	45 C	0725.0	0727.4	4.0	8.0			
	3750	TYKW	21 GRF	0725.0	0735.0	30.0	6.0	2.0		
	9400	TYKW	21 GRF	0725.0	0735.0	30.0	6.0	3.0		
	9400	TYKW	5 S	0727.0	0727.4	2.0	4.0	1.5		
	2950	GORK	1 S	0727.1	0727.4	1.0	13.0			
	2000	TYKW	8 S	0727.3	0727.4	.2	6.0	2.0		
	430	KRAK	8 S	0841.2	0841.3	.3	33.0			
	100	GORK	27 RF	0852.5	0915.0U	158.0D	2200.0			
	650	GORK	23 GRF	0909.0	0930.4	29.8	15.0			
	6100	KISV	4 S/F	0912.0	0924.6	18.0	196.0			
	950	GORK	21 GRF	0913.1	0930.5	32.9	7.0			
	8400	BERN	42 SER	0916.0	0924.6	60.0	417.0U			
	19600	BERN	42 SER	0916.0	0924.6	30.0U	70.0U			
	15000	KISV	46 C	0918.0	0924.5	11.0	250.0			
	8800	LEAR	47 GB	0918.1	0924.6	27.7	480.0			
	2950	GORK	4 S/F	0919.0	0924.7	8.3	300.0			
	930	BORD	46 C	0919.0	0925.5	29.0	131.0	23.0		
	8800	ATHN	47 GB	0919.1	0924.1	11.2	390.0			
	4995	LEAR	47 GB	0919.1	0924.6	26.7	320.0			
	536	ONDR	45 C	0919.2	0925.4	25.0	36.0	16.0		
	9100	GORK	46 C	0919.5	0924.5	22.0	412.0			
	9100	GORK		0919.5	0934.5		233.0			
	2695	ATHN	47 GB	0919.8	0924.3	10.5	270.0			
	610	LEAR	47 GB	0920.3	0922.3	25.5	139.0			
	2695	LEAR	47 GB	0920.3	0924.6	25.5	300.0			
	1415	ATHN	47 GB	0921.0	0924.6	9.3	200.0			
	1415	LEAR	47 GB	0921.1	0925.0	24.7	219.0			
	650	GORK	4 S/F	0921.2	0926.0	8.8	59.0			
	950	GORK	4 S/F	0921.7	0925.5	8.0	14.7			
	200	GORK	4 S/F	0921.9	0924.8	7.7	1850.0			
	808	ONDR	45 C	0922.0	0925.0	18.8	98.0	41.0		
	430	KRAK	45 C	0922.0	0925.4	35.5	150.0	22.0		
	430	KRAK		0922.0	0934.2		220.0			
	15400	LEAR	47 GB	0922.8	0924.6	23.0	189.0			
	410	LEAR	47 GB	0922.8	0925.6	23.0	70.0			
	3000	IZMI	7 C	0923.0	0925.0	60.0	158.0	85.0		
	8800	MANI	4 S/F	0923.7	0924.2	2.3	145.5	48.5		
4995	MANI	4 S/F	0923.7	0924.2	2.3	180.4	60.1			
1415	MANI	3 S	0923.7	0925.0	2.3	52.5	17.5			
606	MANI	3 S	0923.7	0925.0	2.3	15.7	5.2			
2695	MANI	3 S	0923.7	0925.1	2.3	63.1	21.0			
810	KRAK	45 C	0923.9	0925.7	23.5	140.0	30.0			
810	KRAK		0923.9	0934.6		40.0				
245	LEAR	49 GB	0924.6	0924.8	1.9	2000.0				
100	GORK	4 S/F	0924.7	0925.7	3.5	15800.0				
15000	KISV	29 PBI	0929.0	0929.0	1111.0	27.0				
6100	KISV	29 PBI	0930.0	0930.0		44.0				
8800	ATHN	47 GB	0930.3	0933.6	8.7	160.0				
2695	ATHN	47 GB	0930.3	0933.6	8.7	150.0				
1415	ATHN	4 S/F	0930.3	0933.6	8.7	30.0				
650	GORK	4 S/F	0932.0	0934.4	4.2	15.0				
6100	KISV	4 S/F	0932.0	0934.5	8.0	95.0				
2950	GORK	3 S	0932.2	0934.7	7.5	56.0	28.0			
15000	KISV	4 S/F	0933.0	0934.5	7.0	110.0				
950	GORK	4 S/F	0933.2	0934.7	3.0	42.0				
3000	IZMI	7 C	0934.0	0935.0	5.0	106.0	45.0			
430	KRAK	40 F	1012.2	1014.5	8.2	46.0	8.0			
6100	KISV	1 S	1036.0	1036.5	1.5	5.0				
6100	KISV	2 S/F	1050.0	1051.0	6.5	9.0				
430	KRAK	8 S	1125.4	1125.5	.2	130.0				
9400	HUAN	2 S/F	1201.7	1202.4	2.7	22.9	11.8		R	
9400	HUAN	1 S	1234.7	1235.2	1.6	14.7	4.3		O	

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

63  
Feb 82

F E B R U A R Y 1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int†	Remarks
							Peak (10 -22 W/m	Mean 2 Hz)		
20	9400	HUAN	3 S	1255.8	1256.2	.4	24.6	7.9		R
	8800	SGMR	8 S	1256.1	1256.1	.2	22.0			
	4995	SGMR	8 S	1256.1	1256.3	.4	28.0			
	245	SGMR	8 S	1416.3	1417.3	1.00	13.0			
	2800	OTTA	1 S	1515.1	1515.5	2.0	4.4	2.0		
	9400	HUAN	3 S	1723.7	1724.2	1.5	278.5	72.6		R
	2800	OTTA	3 S	1724.1	1724.3	1.0	14.8	4.8		
	9400	HUAN	29 PBI	1725.2	1725.2	18.9	26.2	7.3		R
	2800	OTTA	32A ABS	1740.0	1750.0	15.0	-3.8	-1.9		
	2800	OTTA	40 F	1754.1	1754.8	.7	9.6			
	2800	OTTA	8 S	1756.6	1756.7	.5	3.6			
	2800	OTTA	45 C	1759.0	1807.0	15.0	85.0	45.4		
	9400	HUAN	23 GRF	1801.1	1853.2	87.7	27.8	16.2		0
	245	PALE	20 GRF	1812.3	1812.3	25.5	30.0			
	2695	PALE	20 GRF	1812.3	1812.3	24.7	34.0			
	1415	PALE	20 GRF	1812.3	1812.6	10.5	41.0			
	4995	PALE	20 GRF	1812.3	1812.8	20.8	23.0			
	8800	PALE	20 GRF	1812.3	1813.3	12.8	20.0			
	15400	PALE	20 GRF	1812.3	1817.1	13.8	32.0			
	2800	OTTA	30 PBI	1814.0	1814.0	200.0	22.0	8.0		
	2800	OTTA	2 S/F	1845.2	1846.0	1.2	5.8	4.4		
	9400	HUAN	1 S	1845.6	1846.3	1.7	13.1	7.6		0
	2800	OTTA	29 PBI	1846.7	1846.7	15.0	3.2	1.6		
	8800	PALE	8 S	1853.0	1853.3	.5	20.0			
	9400	HUAN	2 S/F	1945.1	1945.5	2.7	11.5	9.2		0
	9400	HUAN	29 PBI	1947.8	1947.8	6.9	4.9	3.1		0
	9400	HUAN	1 S	2122.4	2123.0	2.4	8.2	4.1		0
2695	PENT	20 GRF	2156.0	2200.0	30.0	3.2	1.6			
4995	PALE	8 S	2159.6	2159.8	.2	23.0				
9400	TYKW	5 S	2258.3	2258.7	2.0	5.0	2.0			
3750	TYKW	5 S	2325.0	2325.6	2.0	4.0	1.0			
245	LEAR	47 GB	2325.3	2325.8	.5	210.0				
21	208	VORO	44 NS	0000.0E		240.0D		46.0		
	100	GORK	44 NS	0508.0E		384.0D		15.0		
	200	GORK	44 NS	0509.0E		882.0D		40.0		
	204	IZMI	44 NS	0700.0E		300.0D	90.0			
	127	TORN	44 NS	0700.0E	1117.0	480.0D	1900.0	29.0		V1
	260	ONDR	44 NS	0746.0E	1330.0U	421.0D				
	245	SGMR	43 NS	1153.0	1444.5	608.0D	350.0			
	245	PALE	43 NS	1804.8	1805.0	597.2	2600.0			
	200	HIRA	44 NS	2118.0E	0200.0	650.0D	8.0	4.0		WL
	245	LEAR	43 NS	2233.0	0641.8	728.0	130.0			
	9400	TYKW	5 S	0028.5	0029.3	2.5	6.0	1.5		
	2840	PEKG	45 C	0054.0	0129.2	137.0	289.0			
	9395	PEKG		0105.0	0128.5					
	9395	PEKG	45 C	0105.0	0140.1	77.0D	231.0	37.0		
	410	LEAR	8 S	0112.6	0112.8	.2	19.0			
	1415	MANI	4 S/F	0120.0	0128.6	22.0	58.6	19.5		
	2695	MANI	45 C	0120.6	0129.0	23.4	432.6	144.2		
	9400	TYKW	28 PRE	0121.0	0126.0	6.0	12.0	7.0		
	3750	TYKW	28 PRE	0121.0	0127.0	6.0	13.0	6.0		
	3750	TYKW	28 PRE	0121.0	0127.0	6.0	13.0	5.0		
	1000	TYKW	28 PRE	0122.0	0125.7	5.0	4.0	2.0		
	2930	VORO	42 SER	0122.0	0127.0	25.0	348.0			
	8800	MANI	45 C	0123.0	0140.6	20.9	112.9	37.6		
	4995	MANI	45 C	0126.0	0140.6	17.9	497.7	165.9		
	1000	TYKW	45 C	0127.0	0128.1	7.0	25.0	9.0		
	3750	TYKW	45 C	0127.0	0128.3	20.0	260.0	6.0		
	9400	TYKW		0127.0	0128.7		164.0			
2000	TYKW	45 C	0127.0	0128.7	17.0	193.0	45.0			
500	HIRA	46 C	0127.0	0140.0	16.0	14.0	5.0		WL	
9400	TYKW	45 C	0127.0	0140.0	20.0	268.0	45.0			
2000	TYKW		0127.0	0140.2		50.0				
3750	TYKW		0127.0	0140.2		250.0				
4995	PALE	47 GB	0127.1	0128.1	6.7	210.0				
8800	PALE	47 GB	0127.1	0128.1	7.5	180.0				
2695	LEAR	47 GB	0127.1	0128.3	9.2	300.0				
2695	PALE	47 GB	0127.1	0128.3	7.0	280.0				
4995	LEAR	47 GB	0127.1	0128.3	9.2	210.0				



SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean (2 Hz)		
21	8800	LEAR	47 GB	0127.1	0128.3	9.2	189.0			
	1415	LEAR	47 GB	0127.1	0128.6	7.5	52.0			
	17000	NOBE	3 S	0127.2	0128.4	4.0	50.0			R
	15400	LEAR	47 GB	0127.3	0128.1	6.3	84.0			
	1415	PALE	47 GB	0127.3	0128.8	5.7	53.0			
	245	LEAR	47 GB	0127.5	0127.8	.3	80.0			
	15400	PALE	47 GB	0127.5	0128.1	2.6	71.0			
	410	LEAR	4 S/F	0127.6	0130.0	7.5	26.0			
	610	LEAR	4 S/F	0127.8	0128.1	2.3	08.0			
	410	PALE	4 S/F	0128.1	0128.3	4.5	21.0			
	1000	TYKW	30 PBI	0134.0		20.0	3.0	1.0		
	8800	PALE	47 GB	0136.8	0140.0	6.5	300.0			
	17000	NOBE	7 C	0138.5	0140.0	3.5	105.0			R
	4995	PALE	47 GB	0138.6	0140.1	4.2	280.0			
	8800	LEAR	47 GB	0138.8	0139.8	4.3	280.0			
	15400	LEAR	47 GB	0138.8	0139.8	2.7	130.0			
	15400	PALE	47 GB	0138.8	0139.8	2.5	139.0			
	245	LEAR	47 GB	0138.8	0139.8	2.2	169.0			
	4995	LEAR	47 GB	0138.8	0139.8	4.3	239.0			
	2695	PALE	47 GB	0138.8	0140.1	2.8	119.0			
	2695	LEAR	47 GB	0138.8	0140.1	3.3	110.0			
	1000	TYKW	45 C	0139.0	0140.6	4.0	10.0	3.0		
	410	PALE	8 S	0139.6	0140.0	1.0	30.0			
	1415	LEAR	8 S	0139.6	0140.1	1.4	19.0			
	245	PALE	47 GB	0139.8	0139.8	.3	219.0			
	410	LEAR	8 S	0139.8	0139.8	.8	23.0			
	1415	PALE	8 S	0139.8	0140.3	.8	20.0			
	2000	TYKW	29 PBI	0144.0		70.0	6.0	3.0		
	3750	TYKW	29 PBI	0147.0		90.0	13.0	5.0		
	9400	TYKW	29 PBI	0147.0		60.0	16.0	8.0		
	2000	TYKW	5 S	0328.0	0329.1	3.0	1.5	.5		
	9100	GORK	23 GRF	0714.0	1050.1	256.0	12.0			
	9400	TYKW	5 S	0734.0	0735.0	5.0	6.0	2.0		
	204	IZMI	41 F	1002.0	1002.9	1.0	370.0			
	6100	KISV	8 S	1054.5	1055.3	1.5	16.0			
	9100	GORK	1 S	1054.8	1055.4	1.2	26.0	13.0		
	2950	GORK	1 S	1055.0	1055.3	1.1	4.4	2.0		
	204	IZMI	41 F	1156.5	1157.5	2.0	230.0			
	430	KRAK	8 S	1217.3	1217.3	.1	14.0			
	33	UPIC	4 S/F	1224.3	1224.4	1.0				
	29	UPIC	4 S/F	1224.5	1224.6	.8				
	430	KRAK	8 S	1225.4	1225.4	.2	10.0			
	430	KRAK	8 S	1300.0	1300.0	.2	15.0			
	2800	OTTA	20 GRF	1310.0	1355.0	45.00	5.2	2.6		
	2800	OTTA	21 GRF	1320.0	1340.0	145.0	3.8	2.8		
	33	UPIC	2 S/F	1320.2	1320.3	.3				
	29	UPIC	2 S/F	1320.2	1320.3	.2				
	430	KRAK	8 S	1326.3	1326.3	.2	33.0			
	2800	OTTA	2 S/F	1328.5	1329.6	4.0	3.4	1.5		
	8800	SGMR	8 S	1333.3	1334.1	1.8	11.0			
	1415	SGMR	4 S/F	1333.5	1334.1	2.1	11.0			
	2800	OTTA	3 S	1333.8	1334.1	3.0	18.4	4.8		
	2695	SGMR	8 S	1334.0	1334.1	.1	21.0			
	4995	SGMR	8 S	1334.0	1334.1	.1	16.0			
	9400	HUAN	20 GRF	1425.6	1426.6	10.8	6.6	3.6		O
	9400	HUAN	20 GRF	1550.8	1558.8	18.3	8.3	2.5		R
	2800	OTTA	20 GRF	1555.0	1630.0	65.0	2.6	1.6		
930	BORD	41 F	1556.5	1556.8	.5	14.0	2.0			
930	BORD	8 S	1559.6	1559.6	.1	17.0	1.0			
245	SGMR	49 GB	1804.8	1805.0	.5	1399.0				
245	PALE	20 GRF	1804.8	1822.5	45.7	40.0				
410	SGMR	47 GB	1805.0	1805.1	.3	60.0				
2695	PENT	1 S	1852.0	1852.7	1.0	2.2	1.1			
410	SGMR	47 GB	1905.1	1905.3	.7	119.0				
410	PALE	47 GB	1905.1	1905.3	.7	130.0				
245	SGMR	47 GB	1905.3	1905.3	.8	470.0				
245	PALE	49 GB	1905.3	1905.5	.5	630.0				
610	PALE	47 GB	1905.3	1905.5	.5	68.0				
610	SGMR	8 S	1905.3	1905.5	.5	38.0				
2800	OTTA	1 S	1958.0	2001.0	10.0	4.6	2.4			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
21	9400	HUAN	20 GRF	2048.3	2106.3U	26.2	12.4	4.8		R
	2800	OTTA	3 S	2103.0	2106.5	6.0	12.0	6.0		
	2800	OTTA	29 PBI	2109.0	2109.0	30.0	6.2	2.8		
22	208	VORO	44 NS	0000.0E		240.0D		2.0		
	200	GORK	44 NS	0518.0E		402.0D		10.0		
	100	GORK	44 NS	0519.0E		191.0D		5.0		
	221	ABST	44 NS	0600.0E	0723.8		180.0	15.0		
	260	ONDR	44 NS	0740.0E		432.0D				
	245	SGMR	43 NS	1152.0	1202.8	610.0D	169.0			
	127	TORN	43 NS	1203.0	1339.0	297.0D	230.0	5.0		V1
	245	PALE	43 NS	1725.0	2055.6	640.0	200.0			
	100	HIRA	44 NS	2116.0E	0600.0	660.0D	400.0	100.0		WR
	200	HIRA	44 NS	2116.0E	2308.0	660.0D	20.0	8.0		WL
	245	LEAR	43 NS	2234.0	0154.0	727.0	139.0			
	3750	TYKW	5 S	0206.0	0207.4	3.0	7.0	4.0		
	2000	TYKW	5 S	0206.5	0207.4	2.5	3.0	1.0		
	410	LEAR	47 GB	0207.3	0207.6	.7	110.0			
	245	LEAR	47 GB	0207.3	0207.6	.3	210.0			
	3750	TYKW	29 PBI	0209.0		25.0	3.0	1.5		
	410	LEAR	8 S	0210.1	0210.3	.2	15.0			
	15400	PALE	20 GRF	0247.1	0250.3	3.9	28.0			
	245	LEAR	47 GB	0408.8	0409.0	.7	330.0			
	410	LEAR	8 S	0445.6	0445.8	.7	27.0			
	245	LEAR	47 GB	0458.6	0458.8	1.0	84.0			
	204	IZMI	4 S/F	0807.4	0807.5	.5	50.0	40.0		
	430	KRAK	4 S/F	0813.7	0814.9	3.0	200.0	8.0		
	204	IZMI	5 S	0814.5	0814.6	.5	110.0	70.0		
	200	GORK	8 S	0814.5	0814.7	.4	220.0			
	410	LEAR	47 GB	0814.5	0815.8	1.8	80.0			
	245	LEAR	47 GB	0814.6	0814.8	1.7	57.0			
	9100	GORK	23 GRF	0829.3	1204.5	216.0D	19.0			
	6100	KISV	1 S	0853.7	0854.9	5.5	4.0			
	9100	GORK	1 S	0854.0	0854.8	2.2	8.5	4.0		
9100	GORK	46 C	0910.1	0910.7	5.6	17.0				
9100	GORK		0910.1	0914.2		12.0				
6100	KISV	8 S	0910.3	0910.8	1.5	6.0				
6100	KISV	1 S	0913.3	0914.3	2.5	5.0				
8800	LEAR	4 S/F	0913.8	0914.1	2.2	13.0				
4995	LEAR	8 S	0913.8	0914.1	2.0	09.0				
430	KRAK	8 S	0916.7	0916.9	.4	19.0				
430	KRAK	8 S	1057.4	1057.4	.2	15.0				
430	KRAK	8 S	1115.7	1115.7	.4	14.0				
2950	GORK	22 GRF	1125.0	1130.8	13.2	5.4				
9100	GORK	1 S	1130.2	1130.7	1.5	12.0	6.0			
6100	KISV	2 S/F	1130.2	1130.8	3.5	6.0				
9400	HUAN	23 GRF	1201.6	1212.4	31.4	10.1	5.2		R	
2950	GORK		1202.9		2.9D					
9400	HUAN	1 S	1222.8	1223.6	1.8	11.8	8.4		O	
9400	HUAN	20 GRF	1351.6	1357.2	10.2	5.0	2.5		O	
9400	HUAN	20 GRF	1443.6	1448.1	13.3	6.7	3.6		R	
9400	HUAN	1 S	1601.3	1601.6	1.1	21.2	9.4		R	
2800	OTTA	240 R	1815.0	1830.0	15.0	2.2	1.1			
245	SGMR	47 GB	1821.1	1821.8	2.2	110.0				
410	SGMR	47 GB	1821.6	1822.0	.5	64.0				
2800	OTTA	1 S	1905.0	1907.0	8.0	3.2	1.6			
9400	HUAN	1 S	1914.3	1914.7	1.0	10.1	5.0		R	
23	208	VORO	44 NS	0000.0E		240.0D		4.0		
	410	LEAR	43 NS	0120.5	0921.6	560.5D	94.0			
	200	GORK	44 NS	0519.0E		62.0D		20.0		
	100	GORK	44 NS	0520.0E		60.0D		30.0		
	127	TORN	44 NS	0700.0E	0935.2	480.0D	120.0	5.0		V1
	260	ONDR	44 NS	0748.0E	1354.0U	424.0D				
	245	SGMR	43 NS	1150.0	1635.1	613.0	300.0			
	245	PALE	43 NS	1725.0	1908.0	330.0D	250.0			
	410	PALE	43 NS	1725.0	1948.8	330.0D	55.0			
	200	HIRA	43 NS	2200.0	0034.0	560.0D	15.0	5.0		WR
	410	LEAR	43 NS	2234.0	0806.3	646.0	239.0			
	245	LEAR	43 NS	2234.0	2315.8	646.0	119.0			

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

FEBRUARY 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
23	410	PALE	47 GB	0043.1	0043.3	1.5	52.0			
	410	LEAR	8 S	0043.1	0043.5	.9	32.0			
	245	LEAR	47 GB	0151.6	0152.1	1.2	160.0			
	410	LEAR	8 S	0152.1	0152.6	.9	13.0			
	3750	TYKW	45 C	0303.0	0318.8	21.0	14.0	6.0		
	9400	TYKW	28 PRE	0303.5	0304.0U	10.5	5.0D	3.0D		
	2000	TYKW	28 PRE	0304.0	0314.0	10.0	3.0	1.5		
	1000	TYKW	45 C	0312.5	0318.8	12.0	17.0	3.0		
	1415	MANI	4 S/F	0312.6	0314.6	4.9	15.8	5.3		
	2695	MANI	4 S/F	0313.0	0314.6	2.7	12.2	4.1		
	4995	LEAR	4 S/F	0313.3	0319.0	10.3	11.0			
	8800	LEAR	4 S/F	0313.5	0317.3	10.6	21.0			
	610	LEAR	47 GB	0313.8	0314.8	5.2	11.0			
	410	LEAR	47 GB	0314.0	0314.3	6.8	260.0			
	245	PALE	49 GB	0314.0	0314.6	1.1	700.0			
	245	LEAR	49 GB	0314.0	0314.6	7.1	630.0			
	2000	TYKW	45 C	0314.0	0314.8	10.0	10.0	6.0		
	2695	LEAR	4 S/F	0314.0	0314.8	10.3	11.0			
	1415	LEAR	4 S/F	0314.0	0314.8	5.1	21.0			
	9400	TYKW	5 S	0314.0	0317.4	10.0	18.0	11.0		
	410	PALE	47 GB	0314.1	0314.3	.5	370.0			
	1415	PALE	8 S	0314.3	0314.6	.5	39.0			
	2695	PALE	4 S/F	0314.3	0314.6	6.3	27.0			
	17000	NOBE	20 GRF	0315.7	0317.4	20.0	12.0		0	
	15400	LEAR	4 S/F	0315.8	0317.5	6.3	21.0			
	4995	PALE	8 S	0317.1	0317.6	.5D	13.0			
	610	PALE	47 GB	0318.5	0318.6	.3	169.0			
	606	MANI	8 S	0318.5	0318.6	.3	109.2	36.4		
	3750	TYKW	29 PBI	0324.0		50.0	6.0	2.5		
	2000	TYKW	29 PBI	0324.0		45.0	4.0	1.5		
	9400	TYKW	30 PBI	0324.0		40.0	4.0	2.0		
	9400	TYKW	5 S	0328.0	0330.0	5.0	3.0	1.0		
	245	LEAR	49 GB	0516.3	0516.5	.5	970.0			
	1000	TYKW	45 C	0516.4	0516.5	1.0	8.0	2.0		
	610	LEAR	8 S	0516.5	0516.6	.1	10.0			
	410	LEAR	8 S	0516.6	0516.6	.2	18.0			
	9400	TYKW	21 GRF	0520.0	0600.0	120.0	16.0	8.0		
	3750	TYKW	21 GRF	0520.0	0604.0	150.0	11.0	5.0		
	9100	GORK	23 GRF	0524.0	0602.2	366.0	25.0			
	2000	TYKW	21	0525.0	0600.0	110.0	5.0	2.5		
	2000	TYKW	45 C	0525.5	0526.9	24.0	10.0	2.0		
	9400	TYKW	45 C	0528.0	0530.4	25.0	6.0	3.0		
	3750	TYKW	45 C	0528.0	0540.7	22.0	5.0	2.0		
	2000	TYKW	45 C	0548.5	0549.1	1.5	6.0	2.0		
	2000	TYKW	45 C	0601.5	0601.9	2.0	6.0	1.0		
	3100	CRIM	26 FAL	0748.0	0912.0		5.0			
	9100	GORK	1 S	0902.4	0902.7	.7	7.6	4.0		
	430	KRAK	42 SER	0913.2	0914.7	15.5	45.0			
	430	KRAK		0913.2	0921.4		4.8			
	930	BORD	41 F	0925.2	0925.4	.7	31.0	2.0		
	808	ONDR	41 F	0926.7	0932.4	8.0	28.0	3.0		
	6100	KISV	21 GRF	0927.5	0936.5	33.0	4.0			
	8800	LEAR	20 GRF	0930.0	0937.0	9.0	13.0			
	536	ONDR	40 F	0934.2	0936.4	243.2	24.0	8.0		
	650	GORK	4 S/F	0934.2	0936.4	4.2	9.0	2.0		
	204	IZMI	7 C	0934.5	0935.5	3.5	70.0	50.0		
	950	GORK	4 S/F	0934.5	0935.5	4.4	68.0			
	410	LEAR	47 GB	0934.6	0935.3	2.5	200.0			
	245	LEAR	47 GB	0934.6	0935.6	3.2	77.0			
	930	BORD	46 C	0935.0	0935.5	3.0	73.0	4.0		
	430	KRAK	45 C	0935.0	0936.0	5.6	450.0	33.0		
	810	KRAK	8 S	0935.2	0935.5	.8	14.0			
	1415	LEAR	8 S	0935.8	0936.1	1.5	19.0			
	610	LEAR	8 S	0936.1	0936.3	1.7	26.0			
	204	IZMI	5 S	0948.7	0948.8	.3	40.0	30.0		
	430	KRAK	8 S	1053.2	1053.2	.2	14.0			
	950	GORK	20 GRF	1117.4	1120.0	17.2	5.0			
	430	KRAK	8 S	1123.2	1123.2	.4	63.0			
	930	BORD	46 C	1150.4	1150.6	.5	25.0	3.0		
	2800	OTTA	240AR	1610.0	1635.0	25.0	2.8	1.4		

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22)	Mean W/m 2 Hz		
23	2800	OTTA	2 S/F	1612.0	1612.5	1.2	5.2	2.4		
	2800	OTTA	240 R	1700.0	1800.0	60.0	8.0	4.6		
	1000	TYKW	45 C	2304.0	2320.9	30.0	10.0	3.0		
	9400	TYKW	45 C	2318.0	2320.7	3.0	40.0	12.0		
	410	LEAR	8 S	2357.6	2357.6	.2	11.0			
	245	LEAR	8 S	2357.6	2357.6	.2	46.0			
	610	LEAR	8 S	2357.6	2357.6	.2	45.0			
	610	LEAR	4 S/F	2358.1	2359.6	4.0	37.0			
	245	LEAR	4 S/F	2358.3	0001.0	3.5	24.0			
	410	LEAR	4 S/F	2358.6	0001.0	4.0	15.0			
24	208	VORO	44 NS	0000.0E		240.0D		4.0		
	245	PALE	43 NS	0135.0	0155.0	150.0D	110.0			
	200	GORK	44 NS	0639.0E		380.0D		5.0		
	100	GORK	44 NS	0650.0E		190.0D		5.0		
	127	TORN	44 NS	0700.0E		480.0D		3.0		VO
	260	ONDR	44 NS	0757.0E	1410.0U	418.0D				
	245	PALE	43 NS	1721.0	1828.1	654.0	110.0			
	245	LEAR	43 NS	2235.0	0054.8	724.0D	670.0			
	410	LEAR	43 NS	2324.6	0937.5	674.4	33.0			
	610	LEAR	8 S	0007.6	0008.1	1.5	13.0			
	1000	TYKW	5 S	0038.0	0046.0	24.0	2.5	1.5		
	3750	TYKW	5 S	0112.5	0113.0	2.5	3.0	1.0		
	1000	TYKW	45 C	0112.8	0113.2	9.0	5.0	1.0		
	2000	TYKW	45 C	0112.8	0113.2	2.0	1.5	.5		
	610	LEAR	8 S	0113.0	0113.8	2.0	22.0			
	100	HIRA	46 C	0113.5	0115.0	2.3	900.0	260.0		WL
	3750	TYKW	20 GRF	0128.0	0158.0	65.0	2.0	1.0		
	1000	TYKW	45 C	0156.0	0208.1	45.0	11.0	3.0		
	410	LEAR	20 GRF	0205.1	0208.1	9.7	24.0			
	610	LEAR	20 GRF	0205.1	0210.1	7.9	10.0			
	9400	TYKW	5 S	0237.7	0238.3	1.3	4.0	1.5		
	3750	TYKW	21 GRF	0330.0	0400.0	130.0	4.0	2.0		
	245	LEAR	8 S	0330.6	0330.8	1.5	37.0			
	610	LEAR	8 S	0330.8	0331.3	.8	40.0			
	9400	TYKW	5 S	0330.8	0331.3	1.0	6.0	2.0		
	410	LEAR	4 S/F	0333.1	0335.0	2.2	31.0			
	245	LEAR	47 GB	0333.3	0334.5	2.5	110.0			
	245	PALE	47 GB	0333.5	0334.3	1.0	119.0			
	1000	TYKW	45 C	0333.5	0334.5	2.0	2.0	.5		
	2000	TYKW	45 C	0333.6	0334.5	1.5	4.0	.7		
	410	PALE	8 S	0334.1	0334.8	1.0	42.0			
	208	VORO	4 S/F	0336.0	0337.0	2.0	140.0			
	610	LEAR	47 GB	0336.1	0336.1	.2	230.0			
	9400	TYKW	5 S	0509.0	0509.4	1.0	23.0	7.0		
	100	HIRA	46 C	0509.2	0509.3	1.1	10000.0D	2760.0D		
	410	LEAR	8 S	0509.3	0509.3	.3	37.0			
	245	LEAR	49 GB	0509.3	0509.3	.5	3699.0			
	2695	LEAR	8 S	0509.3	0509.5	.8	08.0			
	1000	TYKW	5 S	0509.3	0509.5	1.0	1.5	.5		
	3750	TYKW	5 S	0509.3	0509.5	3.0	9.0	2.0		
	8800	LEAR	8 S	0509.3	0509.5	.3	24.0			
	2000	TYKW	5 S	0509.3	0509.5	2.0	3.0	1.0		
	950	GORK	21 GRF	0614.7	0645.0	79.3	3.0			
	2950	GORK	20 GRF	0628.5	0658.0	330.0D	20.0			
4995	LEAR	20 GRF	0632.1	0635.1	8.7	10.0				
2000	TYKW	28 PRE	0633.0	0648.7	22.0	8.0	3.5			
2695	LEAR	20 GRF	0633.8	0635.1	6.7	11.0				
6100	KISV	27 RF	0633.9	0657.4	70.0	14.0				
9400	TYKW	45 C	0634.0	0635.0	5.0	7.0	2.0			
3100	CRIM	20 GRF	0634.0	0648.0	43.0	15.0	5.0			
3750	TYKW	45 C	0634.0	0657.3	30.0	20.0	8.0			
9100	GORK	20 GRF	0634.0	0657.3	332.0D	26.0				
9400	TYKW	21 GRF	0634.0	0657.5	90.0	25.0	10.0			
1415	LEAR	8 S	0634.5	0634.6	.3	30.0				
610	LEAR	8 S	0634.6	0634.6	1.2	08.0				
8800	LEAR	8 S	0635.1	0635.3	.2	10.0				
650	GORK	21 GRF	0642.0	0703.7	26.2	2.0				
650	GORK	4 S/F	0642.8	0643.3	1.2	6.0	3.0			
8800	LEAR	8 S	0644.1	0644.8	.7D	11.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
24	4995	LEAR	8 S	0644.6	0644.8	.2	11.0			
	650	GORK	4 S/F	0647.4	0648.5	1.4	17.0			
	1000	TYKW	28 PRE	0647.5	0648.6	6.5	45.0	5.0		
	950	GORK	4 S/F	0647.5	0648.6	2.2	20.0			
	1415	LEAR	47 GB	0647.8	0648.3	2.0	100.0			
	610	LEAR	8 S	0647.8	0648.8	1.2	25.0			
	2695	LEAR	4 S/F	0650.6	0651.1	16.4	11.0			
	4995	LEAR	4 S/F	0650.6	0651.6	14.7	18.0			
	8800	LEAR	4 S/F	0650.6	0652.8	20.0	20.0			
	950	GORK	4 S/F	0654.0	0657.0U	10.8	109.0D			
	1000	TYKW	45 C	0654.0	0658.2	11.0	335.0	45.0		
	1415	LEAR	4 S/F	0654.6	0657.8	6.4	100.0			
	2000	TYKW	45 C	0655.0	0655.7	10.0	75.0	13.0		
	650	GORK	46 C	0655.3	0657.2	5.1	15.0			
	650	GORK		0655.3	0659.1		18.0			
	610	LEAR	4 S/F	0656.1	0656.6	4.9	28.0			
	245	LEAR	4 S/F	0656.8	0656.8	.1D	22.0			
	3750	TYKW	29 PBI	0704.0		60.0	11.0	5.0		
	2000	TYKW	29 PBI	0705.0		40.0	4.0	1.5		
	15400	LEAR	8 S	0709.8	0709.8	.2	13.0			
	430	KRAK	42 SER	0804.9	0806.4	13.0	500.0			
	430	KRAK		0804.9	0809.4		260.0			
	536	ONDR	8 S	0849.2	0849.2	.1	19.0			
	6100	KISV	8 S	0856.4	0856.7	.3	4.0			
	29	UPIC	4 S/F	0856.6	0857.3	2.4				
	33	UPIC	4 S/F	0856.7	0857.2	2.4				
	430	KRAK	42 SER	0911.6	0927.4	32.5	250.0			
	430	KRAK		0911.6	0934.0		47.0			
	536	ONDR	8 S	0927.6	0927.7	.3	8.0			
	536	ONDR	8 S	1004.2	1004.2	.3	13.0			
	29	UPIC	42 SER	1123.6	1140.5U	55.6				
	33	UPIC	42 SER	1124.1	1141.4	54.9				
	430	KRAK	42 SER	1132.1	1146.2	148.0D	47.0			
	430	KRAK		1132.1	1206.6		64.0			
	430	KRAK		1132.1	1352.6		130.0			
	536	ONDR	8 S	1206.7	1206.7	.2	13.0			
	9400	HUAN	4 S/F	1232.8	1233.2	4.2	42.5	14.6		R
	9400	HUAN		1232.8	1234.7		40.8			R
	536	ONDR	8 S	1423.8	1423.8	.1	8.0			
	2800	OTTA	1 S	1440.5	1441.2	2.5	2.6	1.2		
	2800	OTTA	21 GRF	1549.0	1640.0	220.0	12.2	5.2		
2800	OTTA	2 S/F	1550.0	1552.2	4.0	7.2	3.6			
1415	SGMR	8 S	1551.8	1552.1	.3	13.0				
9400	HUAN	20 GRF	1634.5	1642.5	51.9	8.2	4.5		O	
2800	OTTA	1 S	1917.0	1918.0	3.0	6.8	2.6			
410	SGMR	8 S	2012.6	2012.8	.4	31.0				
3750	TYKW	21 GRF	2300.0	2343.0	130.0	3.0	1.5			
410	LEAR	47 GB	2304.3	2304.5	.3	119.0				
245	LEAR	49 GB	2304.3	2304.6	.5	520.0				
245	PALE	49 GB	2304.3	2304.6	.3	740.0				
2000	TYKW	5 S	2304.4	2304.6	.8	2.0	.7			
25	200	HIRA	44 NS	0400.0E	0720.0	260.0D	10.0	5.0		O
	200	GORK	44 NS	0513.0E		395.0D		10.0		
	100	GORK	44 NS	0517.0E		214.0D		5.0		
	100	GORK	44 NS	0521.0E		391.0D		5.0		
	200	GORK	44 NS	0526.0E		387.0D		15.0		
	221	ABST	44 NS	0600.0E	0738.8		180.0	22.0		
	204	IZMI	43 NS	0700.0		300.0D	86.0			
	29	UPIC	44 NS	0722.5E		517.5D				
	33	UPIC	43 NS	0723.0		517.0D				
	260	ONDR	44 NS	0755.0E	1330.0U	410.0D				
	430	KRAK	43 NS	0917.8	0946.1	280.0D	350.0			
	127	TORN	43 NS	0956.0	1258.0	304.0D	780.0	27.0		V1
	245	SGMR	43 NS	1149.0	1315.3	617.0D	350.0			
	245	PALE	43 NS	1718.0	1721.0	658.0	180.0			
	245	LEAR	43 NS	2235.0	2340.1	723.0D	110.0			
	245	PALE	47 GB	0051.8	0052.0	9.2	100.0			
	410	PALE	47 GB	0051.8	0052.1	9.2	91.0			
	2000	TYKW	5 S	0053.0	0053.7	2.0	21.0	6.0		

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
25	2695	LEAR	47 GB	0053.3	0053.6	.3	50.0			
	2695	PALE	47 GB	0053.3	0053.6	7.7	57.0			
	1415	LEAR	8 S	0053.3	0053.6	1.0	08.0			
	3750	TYKW	5 S	0053.3	0053.7	1.5	6.0	2.0		
	1000	TYKW	5 S	0053.4	0053.7	1.0	3.0	1.0		
	3750	TYKW	20 GRF	0140.0	0148.0	40.0	2.0	1.0		
	410	LEAR	8 S	0141.8	0141.8	.2	21.0			
	610	LEAR	8 S	0141.8	0141.8	.2	10.0			
	610	LEAR	8 S	0149.6	0149.8	.2	11.0			
	245	LEAR	47 GB	0204.1	0204.1	.7	110.0			
	410	LEAR	8 S	0204.1	0204.6	.5	22.0			
	100	HIRA	46 C	0338.6	0339.7	3.0	270.0	90.0		WL
	245	LEAR	47 GB	0339.8	0340.0	.3	130.0			
	4995	LEAR	8 S	0339.8	0340.1	.3	08.0			
	15400	LEAR	8 S	0339.8	0340.1	1.3	08.0			
	8800	LEAR	8 S	0339.8	0340.1	1.3	08.0			
	610	LEAR	8 S	0340.8	0341.1	.5	25.0			
	1415	LEAR	8 S	0349.8	0350.3	1.0	11.0			
	610	LEAR	8 S	0349.8	0350.3	1.0	18.0			
	1000	TYKW	5 S	0350.0	0350.4	1.0	20.0	6.0		
	2000	TYKW	5 S	0350.0	0350.4	1.0	4.0	1.5		
	3750	TYKW	21 GRF	0430.0	0522.0	170.0	7.0	3.5		
	2000	TYKW	21 GRF	0430.0	0525.0	190.0	4.0	2.0		
	9400	TYKW	20 GRF	0510.0	0540.0	90.0	7.0	3.0		
	3750	TYKW	45 C	0514.0	0517.0	6.0	2.0	.7		
	2000	TYKW	5 S	0519.0	0519.1	.5	3.0	1.0		
	245	LEAR	8 S	0523.0	0523.1	.1	40.0			
	100	GORK	4 S/F	0538.0	0539.3U	2.7	110.0D			
	245	LEAR	47 GB	0538.3	0539.6	3.7	189.0			
	200	GORK	4 S/F	0538.4	0541.0	3.5	350.0			
	2000	TYKW	5 S	0544.8	0545.0	.6	2.0	.7		
	245	LEAR	8 S	0615.1	0615.5	.5	30.0			
	410	LEAR	8 S	0620.8	0621.0	.2	43.0			
	245	LEAR	47 GB	0621.3	0623.0	2.2	71.0			
	410	LEAR	47 GB	0630.3	0630.6	.3	60.0			
	245	LEAR	8 S	0630.3	0630.6	.5	39.0			
	245	LEAR	47 GB	0640.8	0641.0	.3	54.0			
	410	LEAR	47 GB	0641.5	0641.6	.3	98.0			
	650	GORK	1 S	0641.5	0641.7	2.0	1.6			
	2000	TYKW	5 S	0641.5	0641.9	2.5	4.5	1.5		
	3750	TYKW	5 S	0641.5	0641.9	2.0	5.0	1.5		
	950	GORK	1 S	0641.6	0642.0	2.0	2.7			
	1000	TYKW	5 S	0641.6	0642.0	2.0	3.0	1.0		
	2950	GORK	1 S	0641.6	0642.0	1.6	5.3	2.6		
	650	GORK	46 C	0719.4	0721.1	7.0	17.6			
	650	GORK		0719.4	0724.9		13.5			
	9100	GORK	4 S/F	0720.4	0725.3	8.2	56.0			
	4995	ATHN	4 S/F	0720.6	0725.3	9.2	13.0			
	8800	ATHN	4 S/F	0720.6	0725.3	9.2	73.0			
	6100	KISV		0722.0	0723.5		5.0			
	3750	TYKW	45 C	0722.0	0725.4	7.0	6.0	1.5		
	6100	KISV	45 C	0722.0	0725.4	7.0	16.0			
	950	GORK	22 GRF	0722.2	0724.9	10.5	9.0			
	245	LEAR	47 GB	0722.3	0722.6	3.8	110.0			
	410	LEAR	8 S	0722.3	0722.8	.5	24.0			
	100	GORK	41 F	0722.4	0723.2	3.8	190.0D			
	100	GORK		0722.4	0725.3		140.0			
	2000	TYKW	45 C	0722.5	0723.5	2.0	4.0	1.0		
	9400	TYKW	45 C	0722.5	0723.5	1.5	5.0	1.5		
	1000	TYKW	45 C	0722.5	0723.6	1.5	5.0	1.5		
	610	LEAR	8 S	0722.6	0722.6	.2	26.0			
	204	IZMI	8 S	0724.0	0724.2	.5	130.0	100.0		
	9400	TYKW	5 S	0724.5	0725.4	2.0	55.0	7.0		
	15000	KISV	8 S	0724.9	0725.3	1.0	38.0			
	2000	TYKW	5 S	0725.0	0725.5	3.0	5.0	1.5		
	9395	PEKG	5 S	0725.0	0725.6	4.0	41.0	1.9		
	2840	PEKG		0725.0	0725.7	2.0	5.7	2.7		
	8800	LEAR	47 GB	0725.1	0725.3	.4	63.0			
	15400	LEAR	8 S	0725.1	0725.3	.2	26.0			
	2950	GORK	1 S	0725.2	0725.5	1.5	4.3	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 <sup>2</sup> Hz)	Mean (2 Hz)		
25	2695	LEAR	8 S	0725.3	0725.5	.2	11.0			
	650	GORK	29 PBI	0726.4	0726.5	9.5	3.0			
	245	LEAR	47 GB	0747.6	0750.6	4.9	57.0			
	410	LEAR	8 S	0748.8	0749.3	1.2	34.0			
	430	KRAK	42 SER	0753.0E	0807.2	60.0D	85.0			
	100	GORK	4 S/F	0838.6	0839.2U	1.5	190.0D			
	245	LEAR	8 S	0839.0	0840.6	1.8	48.0			
	204	IZMI	41 F	0905.8	0908.0	5.6	230.0			
	430	KRAK		0917.8	0958.6		210.0			
	430	KRAK		0917.8	1022.3		160.0			
	245	LEAR	47 GB	0924.8	0927.1	2.7	230.0			
	410	LEAR	4 S/F	0927.1	0927.3	.2D	27.0			
	6100	KISV	1 S	0927.5	0928.0	1.0	4.0			
	410	LEAR	47 GB	0932.3	0933.3	2.5	110.0			
	245	LEAR	47 GB	0932.6	0933.5	.9D	59.0			
	650	GORK	41 F	0944.8	0945.1	5.2	3.6			
	650	GORK		0944.8	0948.2		8.4			
	2950	GORK	20 GRF	0945.3	0948.2	57.0	5.5			
	810	KRAK	1 S	0946.0	0946.3	1.8	5.0	2.0		
	204	IZMI	41 F	0946.0	0946.5	3.5	220.0			
	6100	KISV	41 F	0947.0	0952.0	8.0	4.0			
	100	GORK	41 F	0947.2	0947.7	11.4	190.0D			
	200	GORK	41 F	0947.2	0947.7	11.6	50.0D			
	100	GORK		0947.2	0949.6		190.0D			
	100	GORK		0947.2	0958.5		190.0D			
	200	GORK		0947.2	0958.6		50.0D			
	204	IZMI	5 S	0958.5	0958.6	.5	360.0	280.0		
	33	UPIC	46 C	1231.5		7.0				
	29	UPIC	46 C	1231.6		6.7				
	536	ONDR	7 C	1232.4	1235.6	6.9	18.0	9.0		
	810	KRAK	4 S/F	1232.9	1234.9	4.0	65.0	6.0		
	430	KRAK	4 S/F	1233.0	1234.9	4.3	66.0	3.0		
	4995	SGMR	4 S/F	1233.3	1233.6	2.2	47.0			
	2695	SGMR	8 S	1233.3	1233.6	1.8	30.0			
	8800	SGMR	8 S	1233.3	1233.6	2.0	49.0			
	127	TORN	8 S	1233.3	1233.8	1.5	14500.0	7300.0		
	930	BORD	46 C	1233.3	1235.2	4.5	50.0	7.0		
	245	SGMR	49 GB	1233.5	1233.6	.3	740.0			
	1415	SGMR	4 S/F	1233.5	1235.0	2.6	39.0			
	15400	SGMR	4 S/F	1233.5	1235.0	2.1	30.0			
	3100	CRIM	45 C	1233.7	1234.0	4.0	28.0	9.0		
3100	CRIM		1233.7	1235.5		22.0				
808	ONDR	7 C	1233.7	1235.6	5.4	35.0	9.0			
2650	DWIN	2 S/F	1234.0	1234.0	4.0	30.0	15.0			
127	TORN	24 R	1244.2		135.8		73.0			
930	BORD	41 F	1312.2	1312.2	.5	34.0	1.0			
2800	OTTA	27A RF	1442.0		128.0	3.0	2.6			
2800	OTTA	24 R	1442.0	1446.0	4.0	3.0	1.5			
2800	OTTA	24P R	1446.0		89.0	3.0				
2800	OTTA	1 S	1605.2	1606.5	5.0	8.6	2.2			
2800	OTTA	26 FAL	1615.0	1650.0	35.0	-3.0	-1.5			
2800	OTTA	240 R	1720.0	1810.0	50.0	5.0	2.4			
2800	OTTA	1 S	1906.8	1907.0	2.0	5.0	2.5			
2800	OTTA	20 GRF	1945.0	2030.0	80.0	7.6	5.0			
610	PALE	4 S/F	1956.3	1957.6	2.5	32.0				
2800	OTTA	27 RF	2115.0		110.0	2.6	2.2			
2800	OTTA	24 R	2115.0	2118.0	3.0	2.6	1.3			
2800	OTTA	24P R	2118.0		72.0	2.6				
2695	PENT	26 FAL	2230.0	2305.0	35.0	-2.6	-1.3			
26	200	HIRA	43 NS	0215.0	0522.0	240.0D	8.0	5.0		WL
	204	IZMI	43 NS	0700.0		180.0D	43.0			
	260	ONDR	44 NS	0751.0E	1323.0U	426.0D				
	127	TORN	43 NS	0906.0	1030.0	354.0	220.0	7.0		V1
	536	ONDR	43 NS	1309.0	1313.2U	11.8D	7.0U	8.0		
	200	HIRA	44 NS	2111.0E	0231.0	670.0D	70.0	20.0		ML
	100	HIRA	44 NS	2111.0E	0733.0	670.0D	140.0	40.0		ML
	245	LEAR	43 NS	2236.0	0206.1	721.0	100.0			
	410	LEAR	43 NS	2334.8	0207.1	662.2	130.0			
3750	TYKW	21 GRF	0025.0	0050.0	60.0	4.0	2.0			

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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F E B R U A R Y 1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
26	9400	TYKW	20 GRF	0030.0	0050.0	90.0	7.0	3.5		
	2000	TYKW	5 S	0036.0	0038.0	4.0	4.0	1.5		
	3750	TYKW	5 S	0036.0	0038.0	8.0	7.0	3.0		
	4995	LEAR	20 GRF	0036.6	0037.8	4.5	10.0			
	2695	LEAR	20 GRF	0036.8	0037.8	2.3	11.0			
	2695	LEAR	8 S	0109.3	0110.3	1.7	06.0			
	4995	LEAR	4 S/F	0109.3	0110.3	2.3	08.0			
	3750	TYKW	5 S	0109.5	0110.2	2.5	10.0	3.0		
	410	PALE	47 GB	0153.6	0155.1	2.4	77.0			
	1000	TYKW	5 S	0210.0	0210.5	1.0	3.0	.7		
	1000	TYKW	5 S	0214.0	0216.0	6.0	2.0	1.0		
	3750	TYKW	21 GRF	0252.0	0336.0	125.0	16.0	7.0		
	2000	TYKW	21 GRF	0300.0	0337.0	90.0	5.0	2.0		
	3750	TYKW	45 C	0307.0	0312.6	20.0	16.0	5.0		
	9400	TYKW	21 GRF	0307.0	0337.0	105.0	30.0	13.0		
	2695	LEAR	20 GRF	0307.1	0312.8	8.4	16.0			
	4995	LEAR	20 GRF	0308.8	0312.8	6.7	18.0			
	15400	LEAR	20 GRF	0309.6	0311.6	7.2	13.0			
	2000	TYKW	45 C	0310.0	0319.2	12.0	4.0	1.5		
	17000	NOBE	20 GRF	0310.2	0336.7	90.0	16.0			0
	245	LEAR	47 GB	0312.6	0312.6	.2	200.0			
	8800	LEAR	20 GRF	0318.8	0329.3	21.0	11.0			
	4995	LEAR	20 GRF	0319.1	0319.6	20.7	13.0			
	15400	LEAR	20 GRF	0319.1	0320.8	20.7	26.0			
	410	PALE	47 GB	0332.5	0335.8	5.5	76.0			
	610	PALE	47 GB	0332.5	0335.8	5.5	210.0			
	245	PALE	47 GB	0332.5	0335.8	5.5	200.0			
	500	HIRA	42 SER	0332.6	0335.4	5.0	200.0			WLWR
	245	LEAR	47 GB	0333.8	0335.6	5.3	169.0			
	200	HIRA	46 C	0334.3	0335.5	3.0	165.0	50.0		WL
	410	LEAR	47 GB	0334.5	0335.6	3.5	77.0			
	1000	TYKW	45 C	0335.5	0336.7	1.5	3.0	1.0		
	610	LEAR	47 GB	0335.6	0335.8	2.2	180.0			
	2000	TYKW	31 ABS	0410.0	0415.0	12.0	-3.0	-1.5		
	9400	TYKW	5 S	0423.5	0423.9	1.5	5.0	2.0		
	200	HIRA	46 C	0424.6	0425.7	1.3	820.0	105.0		0
	2000	TYKW	45 C	0425.0	0425.7	1.5	6.0	1.0		
	3750	TYKW	5 S	0425.0	0426.0	3.0	10.0	2.0		
	100	HIRA	46 C	0425.3	0426.0	1.1	1100.0	420.0		0
	1000	TYKW	5 S	0425.5	0425.9	1.5	2.0	.7		
	245	LEAR	49 GB	0425.5	0426.0	.6	1199.0			
	2950	GORK	20 GRF	0600.00	0915.0	360.00	7.7			
	9100	GORK	22 GRF	0615.0	1026.5	345.00	18.0			
	100	GORK	41 F	0621.5	0621.7	3.7	100.00			
	100	GORK		0621.5	0623.0		100.00			
	100	GORK		0621.5	0624.7		1400.0			
	200	GORK	41 F	0621.8	0621.9	3.6	30.0			
	200	GORK		0621.8	0625.0		80.0			
	650	GORK	4 S/F	0624.5	0624.9	.7	8.0	4.0		
	410	LEAR	47 GB	0624.6	0624.6	.2	160.0			
	245	LEAR	47 GB	0624.6	0624.8	.5	219.0			
	650	GORK	29 FBI	0625.2	0625.2	4.8	1.0			
	9400	TYKW	5 S	0654.0	0655.0	8.0	4.0	1.0		
	610	LEAR	49 GB	0720.8	0721.8	2.2	750.0			
6100	KISV	4 S/F	0721.3	0721.8	2.5	4.0				
1415	MANI	1 S	0721.3	0722.0	1.2	7.1	2.4			
3750	TYKW	45 C	0721.5	0721.7	2.5	7.0	2.0			
2000	TYKW	45 C	0721.5	0721.8	2.0	3.0	1.5			
1000	TYKW	5 S	0721.5	0721.8	1.5	7.0	1.0			
2695	MANI	1 S	0721.5	0722.0	1.0	5.5	1.8			
4995	MANI	3 S	0721.5	0722.0	1.0	20.7	6.9			
1415	LEAR	4 S/F	0721.6	0721.6	.10	13.0				
606	MANI	8 S	0721.6	0721.8	.4	66.0	22.0			
930	BORD	41 F	0832.0	0832.1	.2	21.0	2.0			
930	BORD	41 F	0851.9	0851.9	.2	35.0	2.0			
204	IZMI	4 S/F	1008.1	1008.2	1.0	125.0	90.0			
930	BORD	41 F	1019.6	1019.8	.2	12.0	2.0			
6100	KISV	21 GRF	1024.0	1026.5	12.0	3.0				
930	BORD	41 F	1104.0	1104.1	.4	23.0	2.0			
430	KRAK	8 S	1123.7	1123.8	.2	17.0				



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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
26	430	KRAK	8 S	1145.2	1145.6	1.1	320.0			
	9400	HUAN	2 S/F	1237.3	1238.7	2.4	6.4	3.4		0
	930	BORD	46 C	1237.6	1238.9	1.4	33.0	4.0		
	810	KRAK	8 S	1238.0	1238.1	.3	20.0			
	430	KRAK	27 RF	1241.3	1311.1	70.0	76.0	14.0		
	430	KRAK		1241.3	1313.5		75.0			
	930	BORD	46 C	1241.4	1242.0	2.8	37.0	4.0		
	430	KRAK	8 S	1241.7	1242.1	1.3	490.0			
	536	ONDR	8 S	1241.9	1242.2	.6	38.0			
	810	KRAK	8 S	1242.0	1242.2	.4	70.0			
	808	ONDR	8 S	1242.3	1242.3	.4	22.0			
	536	ONDR	8 S	1244.3	1244.4	.1	27.0			
	245	SGMR	8 S	1305.0	1305.8	1.3	20.0			
	610	SGMR	8 S	1305.3	1305.6	1.2	16.0			
	410	SGMR	8 S	1305.6	1305.8	.5	21.0			
	930	BORD	46 C	1318.4	1318.7	.4	72.0	3.0		
	808	ONDR	8 S	1358.3	1358.3	.1	12.0			
	930	BORD	41 F	1406.7	1407.2	.6	10.0	2.0		
	245	SGMR	20 GRF	1410.1	1418.6	16.2	50.0			
	410	SGMR	20 GRF	1410.3	1412.5	14.5	18.0			
	610	SGMR	47 GB	1422.6	1422.8	.5	99.0			
	536	ONDR	8 S	1424.8	1424.8	.1	58.0			
	536	ONDR	8 S	1432.8	1432.9	.4	24.0			
	536	ONDR	8 S	1454.6	1454.6	.1	16.0			
	245	SGMR	4 S/F	1515.3	1515.3	5.8	27.0			
	930	BORD	46 C	1516.6	1518.4	4.4	118.0	5.0		
	410	SGMR	49 GB	1516.8	1516.8	4.3	49.0			
	2800	OTTA	1 S	1518.3	1519.2	6.0	5.0			2.5
	2650	DWIN	1 S	1519.0	1520.0	1.0	20.0	10.0		
	2650	DWIN	1 S	1612.0	1612.0	2.0	15.0	10.0		
	2800	OTTA	3 S	1612.0	1612.2	2.0	18.4	10.0		
	930	BORD	46 C	1612.0	1612.5	6.0	57.0	4.0		
	410	SGMR	8 S	1612.3	1612.5	.3	40.0			
	245	SGMR	49 GB	1612.3	1612.6	.5	2000.0			
	2695	SGMR	8 S	1612.5	1612.8	.8	22.0			
	4995	SGMR	8 S	1612.5	1612.8	.6	32.0			
	1415	SGMR	8 S	1612.6	1613.3	1.0	22.0			
	2800	OTTA	29 PBI	1614.0	1614.0	12.0	4.6	1.6		
	2800	OTTA	1 S	1724.8	1725.2	2.0	5.0	2.0		
	2800	OTTA	1 S	1928.0	1929.5	8.0	2.4	1.2		
	1000	TYKW	45 C	2206.0	2207.5	4.0	31.0	7.0		
	2695	PENT	27A RF	2207.0		100.0	4.2	3.8		
	2695	PENT	24 R	2207.0	2212.0	5.0	4.2	1.4		
	2695	PENT	24P R	2212.0		80.0	4.2			
	2695	PENT	1 S	2212.1	2212.5	1.0	3.0	1.5		
	2695	PENT	26 FAL	2232.0	2247.0	15.0	-4.2	-2.1		
	410	PALE	49 GB	2254.6	2258.3	4.7	1000.0			
	2695	PENT	40 F	2255.0	2256.1	2.5	4.4			
	3750	TYKW	45 C	2255.0	2256.2	2.5	6.0	1.5		
	610	PALE	47 GB	2255.0	2258.6	5.1	180.0			
1415	PALE	4 S/F	2255.0	2258.6	5.1	22.0				
1000	TYKW	45 C	2255.0	2258.7	7.0	28.0	2.5			
2000	TYKW	45 C	2255.0	2258.7	7.0	21.0	5.0			
610	LEAR	47 GB	2255.1	2255.6	5.0	80.0				
410	LEAR	49 GB	2255.1	2256.1	4.2	400.0				
245	LEAR	47 GB	2255.3	2255.5	.3	169.0				
3750	TYKW	5 S	2258.0	2258.7	2.0	12.0	3.0			
2695	PENT	3 S	2258.2	2258.8	2.5	13.8	4.6			
2695	LEAR	8 S	2258.5	2258.6	.3	20.0				
1415	LEAR	4 S/F	2258.5	2258.6	2.8	19.0				
9400	TYKW	5 S	2258.5	2258.7	.6	6.0	2.0			
245	PALE	49 GB	2312.0	2312.3	1.5	590.0				
410	PALE	49 GB	2312.0	2312.3	1.5	1100.0				
610	PALE	47 GB	2312.0	2312.5	1.5	78.0				
610	LEAR	47 GB	2312.3	2312.5	.2	100.0				
410	LEAR	47 GB	2312.3	2312.6	.5	420.0				
245	LEAR	49 GB	2312.5	2312.6	.3	630.0				
410	LEAR	8 S	2331.6	2332.1	.7	13.0				
27	208	VORO	44 NS	0000.0E		240.0D		15.0		

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean (2 Hz)		
27	200	GORK	44 NS	0508.0E		402.0D		15.0		
	100	GORK	44 NS	0508.0E		304.0D		15.0		
	221	ABST	44 NS	0600.0E	0705.0		180.0	21.0		
	127	TORN	44 NS	0700.0E		480.0D		15.0		V2, DISTURBED
	260	ONDR	44 NS	0743.0E		434.0D				
	245	SGMR	43 NS	1144.0	1532.1	624.0D	430.0			
	245	PALE	43 NS	1745.0	1917.6	620.0	320.0			
	410	PALE	43 NS	1745.0	2058.3	620.0	95.0			
	200	HIRA	44 NS	2110.0E	0231.0	670.0D	15.0	10.0		ML
	100	HIRA	44 NS	2110.0E	0800.0	670.0D	90.0	40.0		WL
	245	LEAR	43 NS	2236.0	0654.0	721.0	42.0			
	9400	TYKW	28 PRE	0000.0	0206.0	4.0	3.0	1.5		
	3750	TYKW	45 C	0010.0	0012.4	5.0	2.0	.7		
	410	PALE	47 GB	0153.6	0155.1	2.4	77.0			
	1000	TYKW	5 S	0155.3	0155.6	.5	7.0	2.0		
	3750	TYKW	28 PRE	0202.0	0203.0	6.0	3.0	1.5		
	410	PALE	47 GB	0204.0	0208.6	8.0	219.0			
	245	PALE	47 GB	0204.8	0206.1	3.7	110.0			
	1000	TYKW	45 C	0205.0	0209.0	9.0	17.0	3.0		
	1000	TYKW		0205.0	0212.4		17.0			
	2000	TYKW	5 S	0205.8	0206.2	.8	2.0	.7		
	610	PALE	49 GB	0205.8	0208.8	23.0	980.0			
	9395	PEKG	1 S	0207.0	0209.0	6.0	32.7	6.1		
	1415	PALE	4 S/F	0208.0	0208.3	20.8	22.0			
	2000	TYKW	5 S	0208.0	0208.8	2.0	28.0	8.0		
	3750	TYKW	5 S	0208.0	0208.8	2.0	18.0	6.0		
	9400	TYKW	5 S	0208.0	0208.8	2.0	42.0	8.0		
	2840	PEKG	3 S	0208.0	0209.0	3.0	22.6	2.3		
	606	MANI	47 GB	0208.2	0209.0	22.8	720.4	240.1		
	245	LEAR	8 S	0208.3	0208.5	.7	21.0			
	610	LEAR	49 GB	0208.3	0208.8	22.5	820.0			
	15400	LEAR	8 S	0208.3	0208.8	1.2	27.0			
	410	LEAR	49 GB	0208.6	0208.6	.4	620.0			
	1415	LEAR	8 S	0208.6	0208.8	1.2	18.0			
	2695	LEAR	8 S	0208.6	0208.8	1.2	22.0			
	8800	LEAR	8 S	0208.6	0208.8	.9	28.0			
	4995	LEAR	8 S	0208.6	0208.8	.9	30.0			
	4995	MANI	3 S	0208.8	0209.2	2.9	36.0	12.0		
	8800	MANI	3 S	0208.8	0209.2	1.2	72.3	24.2		
	2695	MANI	3 S	0208.8	0209.2	4.8	27.7	9.2		
	1415	MANI	3 S	0208.8	0209.2	5.3	13.9	4.7		
	2000	TYKW	30 PBI	0210.0		13.0	2.0	1.0		
	9400	TYKW	29 PBI	0210.0		12.0	3.0	1.5		
	3750	TYKW	30 PBI	0210.0		10.0	2.0	1.0		
	3750	TYKW	5 S	0210.0	0212.2	4.0	1.5	.5		
	2000	TYKW	5 S	0211.0	0211.9	2.0	3.0	1.0		
	2000	TYKW	20 GRF	0230.0	0320.0	140.0	3.0	1.5		
	3750	TYKW	21 GRF	0308.0	0320.0	100.0	5.0	3.0		
	410	LEAR	47 GB	0308.8	0308.8	.2	50.0			
	245	LEAR	8 S	0308.8	0309.1	.5	19.0			
410	PALE	47 GB	0309.0	0309.3	2.0	119.0				
3750	TYKW	45 C	0339.0	0339.6	3.0	20.0	3.0			
3750	TYKW	29 PBI	0342.0		8.0	1.0	.5			
3750	TYKW	20 GRF	0407.0	0415.0	35.0	201.0				
3750	TYKW	45 C	0453.0	0501.7	13.0	4.0	1.0			
410	LEAR	47 GB	0459.8	0501.1	1.5	230.0				
500	HIRA	42 SER	0500.0	0501.4	11.0	700.0			WL	
1000	TYKW	42 SER	0501.0	0501.2	5.0	3.0	.5			
610	LEAR	49 GB	0501.1	0501.1	.5	770.0				
410	LEAR	47 GB	0508.8	0509.0	1.2	280.0				
245	LEAR	49 GB	0508.8	0509.0	1.2	1199.0				
650	GORK	4 S/F	0509.0	0509.9	1.2	29.0				
1000	TYKW	5 S	0509.0	0510.0	3.0	2.0	.5			
100	GORK	8 S	0509.2	0509.3U	1.1	750.0D				
610	LEAR	47 GB	0509.8	0509.8	.1D	189.0				
3750	TYKW	20 GRF	0517.0	0605.0	150.0	5.0	2.5			
610	LEAR	47 GB	0518.0	0518.1	.3	219.0				
1000	TYKW	45 C	0518.0	0518.3	1.0	28.0	4.0			
245	LEAR	49 GB	0518.1	0518.3	.2	860.0				
410	LEAR	47 GB	0518.1	0518.3	.2	68.0				

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
27	2000	TYKW	20 GRF	0520.0	0630.0	140.0	3.0	1.5		
	1000	TYKW	28 PRE	0521.0	0526.0	5.0	4.0	2.0		
	950	GORK	23 GRF	0522.0		320.00				
	200	GORK	46 C	0522.2	0528.8U	25.2	180.00			
	200	GORK		0522.2	0532.7		1050.0			
	1000	TYKW	47 GB	0526.0	0540.2	50.0	1820.0	450.0		
	950	GORK	46 C	0527.0	0542.2	48.0	1627.0			
	950	GORK		0527.0	0602.0		390.0			
	245	LEAR	20 GRF	0527.8	0529.8	12.8	17.0			
	410	LEAR	20 GRF	0527.8	0532.8	13.5	11.0			
	2950	GORK	21 GRF	0528.0	0842.0	374.00	20.0			
	1415	LEAR	20 GRF	0528.6	0533.5	17.5	139.0			
	1415	ATHN	20 GRF	0528.8	0533.5	20.2	90.0			
	650	GORK	23 GRF	0554.0	0849.0	348.00	8.5			
	1000	TYKW	45 C	0617.0	0628.4	12.0	65.0	8.0		SL
	500	HIRA	22 GRF	0629.3	0714.3	60.0	20.0	8.0		
	1000	TYKW	45 C	0631.0	0729.2	105.00	270.0	30.00		
	650	GORK	46 C	0645.0	0652.6	45.0	12.0			
	650	GORK		0645.0	0706.4		10.0			
	650	GORK		0645.0	0717.0		10.0			
	245	LEAR	8 S	0705.6	0706.8	1.5	139.0			
	9100	GORK	1 S	0711.2	0711.7	1.4	6.0	3.0		
	810	KRAK	48 C	0737.0E	0738.6U	27.00	180.0U	60.0U		
	430	KRAK	42 SER	0737.0E	0755.4	38.00	510.0			
	430	KRAK		0737.0E	0811.4		390.0			
	9100	GORK	23 GRF	0738.8	1042.5	243.00	22.0			
	245	LEAR	49 GB	0809.6	0811.3	3.0	940.0			
	410	LEAR	47 GB	0809.6	0811.3	2.2	219.0			
	204	IZMI	41 F	0810.5	0811.5	2.2	250.0			
	200	GORK	8 S	0811.2	0811.6	1.0	160.00			
	100	GORK	8 S	0811.6	0811.7	.2	760.00			
	8800	LEAR	47 GB	0825.5	0835.8	12.8	400.0			
	430	KRAK	46 C	0831.5	0835.5U	9.7	930.00	98.0		
	410	LEAR	49 GB	0832.3	0832.3	4.5	139.0			
	9100	GORK	28 PRE	0832.3	0832.5	.5	6.0	3.0		
	2950	GORK	28 PRE	0832.3	0832.6	.6	4.3	2.0		
	6100	KISV	28 PRE	0832.3	0832.6	1.0	4.0			
	650	GORK	28 PRE	0832.3	0834.9	2.9	8.0			
	200	GORK	8 S	0832.6	0832.9	1.0	200.00			
	2650	DWIN	45 C	0835.0	0836.0	10.0	380.0	200.0		
	430	KRAK	45 C	0835.1E	0835.6	13.80	310.0	44.0		
	15000	KISV	4 S/F	0835.2	0835.6	35.0	150.0U			
	610	LEAR	49 GB	0835.3	0835.5	6.8	770.0			
	650	GORK	4 S/F	0835.3	0835.8U	13.7	155.0			
	650	GORK	4 S/F	0835.3	0836.0	6.3	48.0			
	606	MANI	47 GB	0835.4	0835.8	7.5	664.5	132.9		
	6100	KISV	4 S/F	0835.4	0835.9	3.0	200.0			
	9100	GORK	4 S/F	0835.4	0835.9	3.7	350.0			
	2950	GORK	3 S	0835.4	0836.0	3.4	375.0			
	2695	LEAR	47 GB	0835.5	0835.8	8.8	390.0			
8800	LEAR	47 GB	0835.5	0835.8	2.8	400.0				
8800	ATHN	47 GB	0835.5	0835.8	9.6	300.0				
4995	LEAR	47 GB	0835.5	0835.8	3.6	360.0				
15400	LEAR	47 GB	0835.5	0835.8	1.5	219.0				
4995	ATHN	47 GB	0835.5	0836.0	9.3	350.0				
4995	MANI	47 GB	0835.5	0836.0	4.5	546.0	182.0			
3000	IZMI	5 S	0835.5	0836.0	7.0	350.0	190.0			
2840	PEKG	3 S	0835.5	0836.1	14.5	324.0				
9395	PEKG	3 S	0835.5	0836.1	6.5	294.0	149.0			
1415	LEAR	47 GB	0835.5	0836.3	8.8	300.0				
1415	MANI	4 S/F	0835.5	0836.3	10.5	230.8	76.9			
245	LEAR	49 GB	0835.6	0835.8	.7	3000.0				
2695	ATHN	47 GB	0835.6	0836.0	13.5	320.0				
204	IZMI	7 C	0835.6	0836.0	1.0	450.0	300.0			
1415	ATHN	47 GB	0835.6	0836.3	14.4	230.0				
8800	MANI	47 GB	0835.7	0836.1	4.3	569.3	189.8			
2695	MANI	47 GB	0835.7	0836.1	10.3	561.6	187.2			
100	GORK	8 S	0835.8	0836.1	.4	8200.0				
536	ONDR	4 S/F	0835.8	0836.2	5.5	286.0				
6100	KISV	29 PBI	0838.4	0838.5	10.0	7.0				

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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 <sup>2</sup> Hz)	Mean		
27	430	KRAK	42	SER	0841.7	0847.0	28.0	50.0		
	100	GORK	8	S	1004.3	1004.6	.4	2700.0		
	204	IZMI	8	S	1111.0	1111.0	.5	140.0	100.0	
	430	KRAK	40	F	1132.5	1135.6	4.6	230.0		
	536	ONDR	7	C	1132.8	1136.2	4.9	32.0	5.0	
	15000	KISV	2	S/F	1133.9	1134.0	.2	17.0U		
	650	GORK	4	S/F	1134.7	1135.5	2.2	15.0		
	2650	DWIN	45	C	1135.0	1136.0	1.0	190.0	80.0	
	6100	KISV	45	C	1135.0	1136.3	2.0	10.0		
	810	KRAK	2	S/F	1135.1	1135.7	1.8	16.0	2.0	
	950	GORK	4	S/F	1135.2	1136.2	2.2	18.0		
	930	BORD	46	C	1135.5	1136.3	1.7	19.0	5.0	
	4995	ATHN	8	S	1136.0	1136.3	.8	18.0		
	9100	GORK	2	S/F	1136.0	1136.3	1.1	18.0	9.0	
	8800	ATHN	8	S	1136.0	1136.3	.8	16.0		
	1415	ATHN	47	GB	1136.0	1136.5	.8	110.0		
	2695	ATHN	47	GB	1136.0	1136.5	.8	200.0		
	2950	GORK	4	S/F	1136.0	1136.6	.6	103.0		
	9400	HUAN	2	S/F	1201.1	1201.6	1.6	8.6	3.2	0
	536	ONDR	8	S	1205.0	1205.3	.3	10.1		
	9400	HUAN	2	S/F	1226.4	1227.4	1.6	10.3	5.8	0
	430	KRAK	42	SER	1244.7	1245.2	61.5	260.0		
	430	KRAK			1244.7	1316.1		360.0		
	430	KRAK			1244.7	1337.1		390.0		
	536	ONDR	8	S	1245.3	1245.3	.3	24.0		
	536	ONDR	8	S	1256.2	1256.2	.1	43.0		
	536	ONDR	8	S	1307.8	1307.8	.1	150.0		
	536	ONDR	4	S/F	1309.6	1309.8	.7	18.0		
	410	SGMR	47	GB	1315.6	1315.8	.4	70.0		
	536	ONDR	8	S	1316.3	1316.3	.2	38.0		
	536	ONDR	40	F	1316.9	1319.4	5.2	9.0	2.0	
	410	SGMR	47	GB	1336.6	1336.8	.4	160.0		
	930	BORD	41	F	1338.0	1338.4	.4	41.0	2.0	
	536	ONDR	8	S	1338.5	1338.5	.1	34.0		
	536	ONDR	8	S	1344.3	1344.3	.1	24.0		
	2800	OTTA	20	GRF	1400.0	1430.0	160.0D	10.6		
	410	SGMR	8	S	1531.8	1532.0	.3	30.0		
	245	SGMR	47	GB	1532.0	1532.1	.3	430.0		
	930	BORD	8	S	1553.2	1553.2	.1	14.0	1.0	
	930	BORD	8	S	1707.0	1707.1	.2	79.0	2.0	
410	SGMR	4	S/F	1837.8	1838.5	11.5	19.0			
245	SGMR	47	GB	1837.8	1839.0	17.3	310.0			
610	SGMR	4	S/F	1842.0	1842.1	13.1	20.0			
2800	OTTA	20	GRF	1915.0	1931.0	120.0	10.2	3.8		
9400	HUAN	20	GRF	1929.8	1931.3	18.6	6.8	4.3	0	
2800	OTTA	20	GRF	2138.0	2141.0	15.0	5.2	2.6		
3750	TYKW	20	GRF	2253.0	2300.0	50.0	3.0	1.5		
3750	TYKW	21	GRF	2351.0	0040.0	160.0	11.0	5.0		
410	LEAR	8	S	2357.8	2357.8	.2	13.0			
28	208	VORO	44	NS	0000.0E		240.0D	5.0		
	100	GORK	44	NS	0522.0E		380.0D	10.0		
	200	GORK	44	NS	0522.0E		380.0D	10.0		
	127	TORN	44	NS	0700.0E	1010.3	480.0D	550.0	41.0	VO
	536	ONDR	44	NS	0939.0E	1357.0U	439.0D			
	33	UPIC	43	NS	0945.8		271.8D			
	245	PALE	43	NS	1745.0	0311.3	620.0	100.0		
	100	HIRA	44	NS	2108.0E	0320.0	680.0D	970.0	290.0	SL
	100	HIRA	44	NS	2108.0E	0606.0	680.0D	25.0	10.0	ML
	245	LEAR	43	NS	2236.0	0602.6	720.0	200.0		
	410	LEAR	43	NS	2236.0	2352.3	720.0	42.0		
	2000	TYKW	20	GRF	0020.0	0105.0	120.0	3.0	1.5	
	410	LEAR	8	S	0034.5	0035.1	1.3	40.0		
	9395	PEKG	20	GRF	0058.0	0106.8	21.0	9.7		
	2840	PEKG	20	GRF	0058.0	0106.9	37.0	6.8	3.2	
	3750	TYKW	20	GRF	0104.0	0105.0	65.0	5.0	2.0	
	9400	TYKW	45	C	0104.0	0106.2	4.0	10.0	5.0	
8800	LEAR	20	GRF	0104.6	0106.1	5.5	17.0			
4995	LEAR	20	GRF	0104.6	0106.1	5.5	11.0			
2695	LEAR	20	GRF	0105.1	0105.1	.4	06.0			

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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 <sup>2</sup> Hz)	Mean		
28	9400	TYKW	29 PBI	0108.0		30.0	4.0	2.0		
	410	LEAR	47 GB	0122.8	0123.0	.3	73.0			
	3750	TYKW	5 S	0219.5	0220.4	4.0	3.0	1.0		
	610	LEAR	4 S/F	0223.3	0223.3	14.2	13.0			
	3750	TYKW	28 PRE	0320.0	0450.0	90.0	6.0	3.0		
	2840	PEKG	1 S	0325.0	0327.9	5.0	8.3	3.6		
	3750	TYKW	45 C	0326.0	0327.7	3.0	3.0	.1		
	500	HIRA	46 C	0326.7	0327.3	1.6	130.0	20.0		0
	410	LEAR	47 GB	0326.8	0327.1	.3	80.0			
	2000	TYKW	5 S	0327.0	0327.7	2.0	6.0	1.5		
	1000	TYKW	5 S	0327.0	0327.8	2.0	2.0	1.0		
	245	LEAR	8 S	0348.3	0348.5	.3	22.0			
	3750	TYKW	5 S	0402.0	0402.9	6.0	5.0	2.0		
	2000	TYKW	5 S	0402.0	0403.0	2.0	1.5	.5		
	2000	TYKW	28 PRE	0402.0	0450.0	48.0	3.0	.1		
	3750	TYKW	5 S	0419.0	0422.3	10.0	3.0	1.0		
	9400	TYKW	5 S	0420.0	0423.0	10.0	3.0	1.5		
	500	HIRA	46 C	0420.9	0422.0	1.5	180.0	50.0		0
	410	LEAR	47 GB	0421.8	0422.0	.8	200.0			
	610	LEAR	8 S	0421.8	0422.0	.3	23.0			
	2000	TYKW	5 S	0422.0	0422.6	1.5	3.0	1.0		
	410	LEAR	47 GB	0434.6	0434.8	.5	470.0			
	610	LEAR	8 S	0434.6	0435.5	.9D	40.0			
	2000	TYKW	5 S	0434.7	0435.0	2.0	14.0	3.0		
	3750	TYKW	5 S	0434.7	0435.0	1.5	5.0	1.5		
	1000	TYKW	5 S	0434.7	0435.2	2.0	4.0	1.5		
	1415	LEAR	8 S	0434.8	0435.0	1.2	10.0			
	2695	LEAR	8 S	0434.8	0435.0	1.2	11.0			
	3750	TYKW	5 S	0438.0	0443.0	10.0	6.0	2.0		
	2000	TYKW	5 S	0438.0	0443.0	10.0	3.0	1.5		
	200	HIRA	42 SER	0450.0	0450.1	2.7	60.0			0
	410	LEAR	47 GB	0450.0	0450.5	4.5	320.0			
	3750	TYKW	45 C	0450.0	0452.0	5.0	147.0	55.0		
	1000	TYKW	45 C	0450.0	0452.0	10.0	129.0	25.0		
	9395	PEKG	3 S	0450.0	0452.1	6.0	58.0	6.1		
	2000	TYKW	45 C	0450.0	0452.2	5.0	225.0	35.0		
	500	HIRA	45 C	0450.0	0452.3	10.0	70.0	20.0		WL
	2840	PEKG		0450.0	0452.3	6.0	37.0	9.2		
	2840	PEKG	45 C	0450.0	0453.6					
	245	LEAR	47 GB	0450.3	0451.8	.0	100.0			
	1415	LEAR	47 GB	0450.3	0452.0	4.7	160.0			
	2695	LEAR	47 GB	0450.3	0452.1	4.0	130.0			
	9400	TYKW	45 C	0450.5	0451.9	6.5	223.0	50.0		
	610	LEAR	47 GB	0450.5	0452.5	5.3	69.0			
	4995	LEAR	47 GB	0450.6	0451.8	4.0	230.0			
	8800	LEAR	47 GB	0450.6	0451.8	5.5	280.0			
	17000	NOBE	7 C	0450.6	0451.9	4.6	120.0			0
	15400	LEAR	47 GB	0450.8	0451.8	5.2	160.0			
	35000	NAGO	5 S	0451.0	0452.0	4.0	22.0			
	8800	MANI	3 S	0452.8	0455.4	6.7	315.4	105.1		
	4995	MANI	4 S/F	0453.2	0455.4	6.8	309.9	103.3		
	606	MANI	3 S	0453.4	0456.1	8.6	60.9	20.3		
	1415	MANI	3 S	0453.6	0455.4	6.4	101.6	33.9		
	2695	MANI	4 S/F	0453.6	0455.5	6.4	132.2	44.1		
	3750	TYKW	30 PBI	0455.0		125.0	13.0	5.0		
	2000	TYKW	29 PBI	0455.0		110.0	9.0	3.0		
	17000	NOBE	29 PBI	0455.2	0455.2	30.0	16.0			0
2840	PEKG	29 PBI	0456.0		23.0					
9395	PEKG	29 PBI	0456.0		14.0	4.0	1.1			
9400	TYKW	29 PBI	0457.0		25.0	13.0	6.0			
1000	TYKW	30 PBI	0500.0		110.0	7.0	2.0			
500	HIRA	46 C	0550.6	0550.6	1.0	70.0	25.0		0	
9400	TYKW	5 S	0551.0	0558.0	20.0	4.0	2.0			
2950	GORK	21 GRF	0552.0	0900.0	241.0	10.0				
1000	TYKW	45 C	0610.0	0610.7	2.0	3.0	.5			
9100	GORK	22 GRF	0622.9	0625.2	17.7	12.0				
3750	TYKW	45 C	0623.0	0625.4	13.0	7.0	1.5			
9400	TYKW	5 S	0623.0	0625.4	3.0	10.0	5.0			
6100	KISV		0623.7	0624.0		3.0				
6100	KISV	46 C	0623.7	0625.5	5.0	7.0				

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

F E B R U A R Y   1 9 8 2

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean		
28	6100	KISV		0623.7	0626.7		4.0			
	4995	LEAR	4 S/F	0624.6	0625.3	2.5	11.0			
	8800	LEAR	4 S/F	0624.6	0625.3	2.5	20.0			
	2695	LEAR	20 GRF	0625.0	0625.6	3.8	05.0			
	1415	LEAR	8 S	0625.1	0625.3	.5	23.0			
	1000	TYKW	5 S	0625.3	0625.6	.7	25.0	6.0		
	9400	TYKW	29 PBI	0626.0		20.0	6.0	3.0		
	650	GORK	20 GRF	0639.0E	0845.6	291.0D	4.5			
	6100	KISV	27 RF	0741.0	0743.0	15.0	4.0			
	610	LEAR	47 GB	0811.3	0811.6	.5	84.0			
	930	BORD	41 F	0813.9	0813.9	1.2	11.0	2.0		
	9100	GORK	21 GRF	0827.2	0902.1	92.0	14.0			
	9395	PEKG	1 S	0836.0	0837.9	3.0D	7.1	2.8		
	950	GORK	4 S/F	0837.0	0837.6	1.1	72.0			
	8800	LEAR	8 S	0837.0	0837.6	1.0	36.0			
	930	BORD	46 C	0837.0	0837.7	1.0	193.0	9.0		
	6100	KISV	4 S/F	0837.0	0837.7	2.0	15.0			
	9395	PEKG	5 S	0837.0	0837.8	3.0	16.1	3.2		
	9100	GORK	1 S	0837.1	0837.6	1.3	21.0	10.0		
	4995	LEAR	8 S	0837.3	0837.6	.5	21.0			
	2950	GORK	1 S	0837.3	0837.9	.9	7.4			
	808	ONDR	8 S	0837.8	0837.9	.4	53.0			
	536	ONDR	8 S	0912.7	0912.7	.2	46.0			
	6100	KISV	3 S	0923.0	0923.6	2.0	6.0			
	9100	GORK	1 S	0923.2	0923.5	.8	6.0	3.0		
	200	GORK	8 S	1009.4	1010.1	1.7	90.0			
	100	GORK	8 S	1009.7	1010.0U	1.0	130.0D			
	33	UPIC	4 S/F	1254.2	1254.3	.6				
	29	UPIC	2 S/F	1254.3	1254.4	.6				
	2800	OTTA	21 GRF	1810.0	2052.0	210.0	14.4	5.0		
	2800	OTTA	4 S/F	1838.0	1845.5	12.0	16.4	5.4		
	9400	HUAN	20 GRF	1940.8	2055.7	127.0	18.8	8.4		0
	3750	TYKW	5 S	2228.0	2228.8	2.0	2.0	.7		
	3750	TYKW	5 S	2253.0	2253.9	10.0	3.0	1.0		
	1000	TYKW	45 C	2320.3	2320.7	.7	6.0	2.0		
	1000	TYKW	5 S	2329.5	2330.0	1.5	11.0	2.5		
	3750	TYKW	21 GRF	2351.0	0005.0	45.0	5.0	2.0		
	2000	TYKW	21 GRF	2351.0	2353.0	50.0	2.0	1.0		

Reports are received routinely from the following observatories:

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

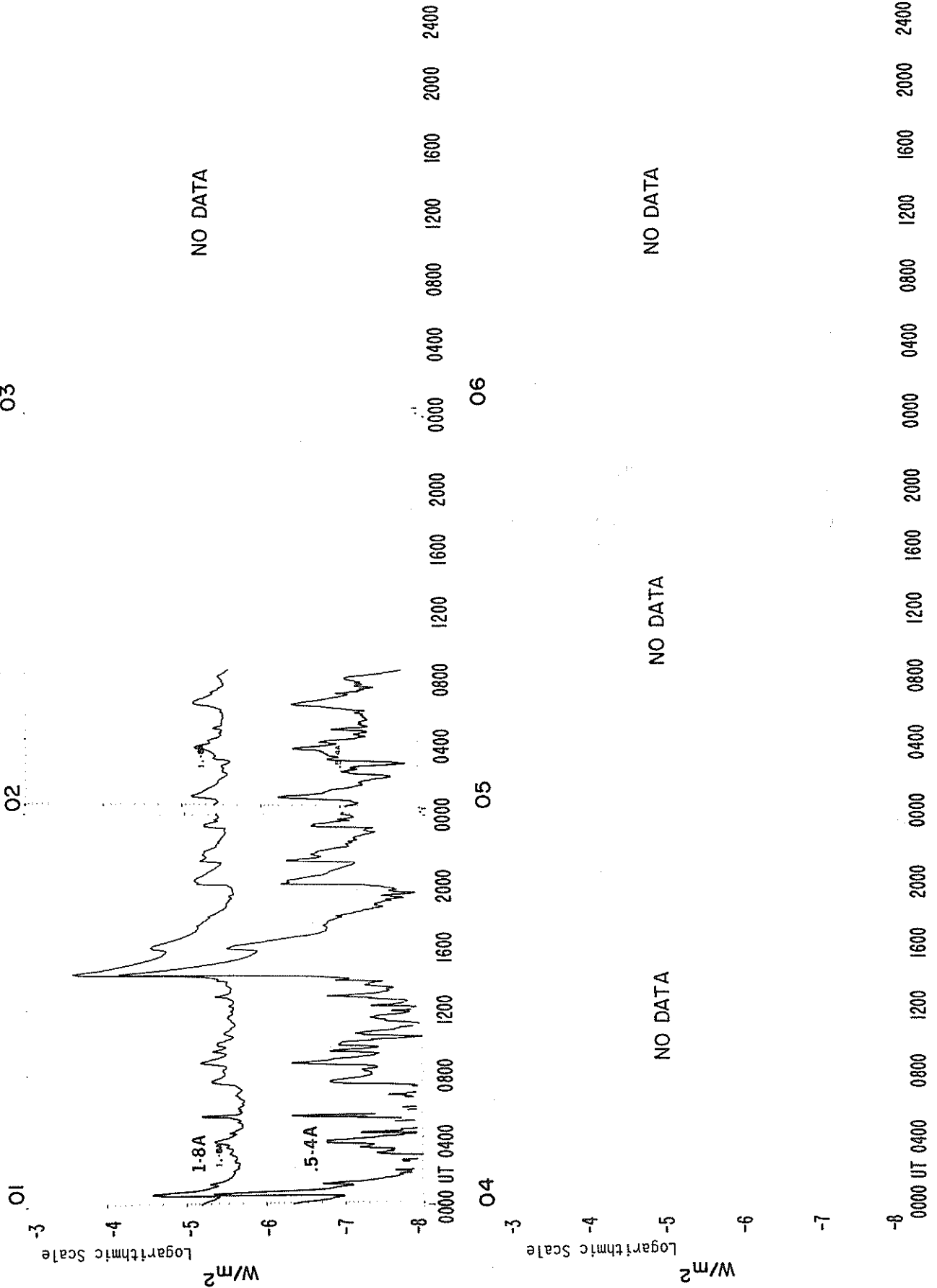
Explanation of Type Code:

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	24OF 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	

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

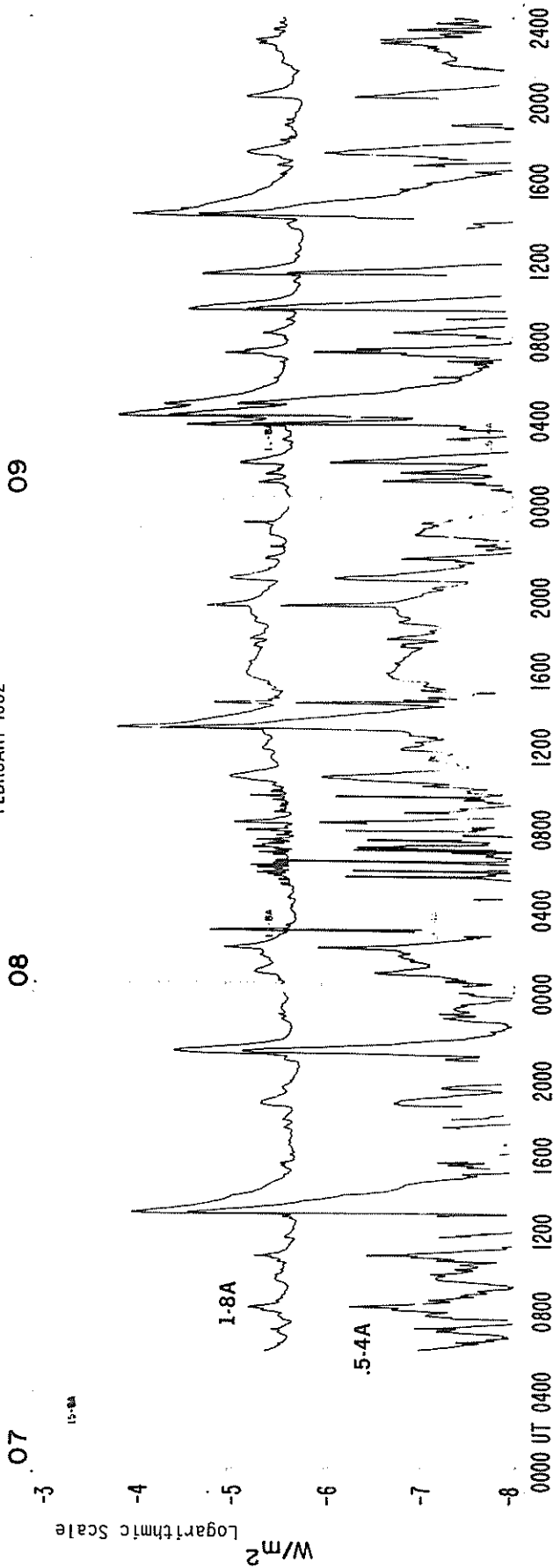
# SMS-GOES X-RAYS

FEBRUARY 1982



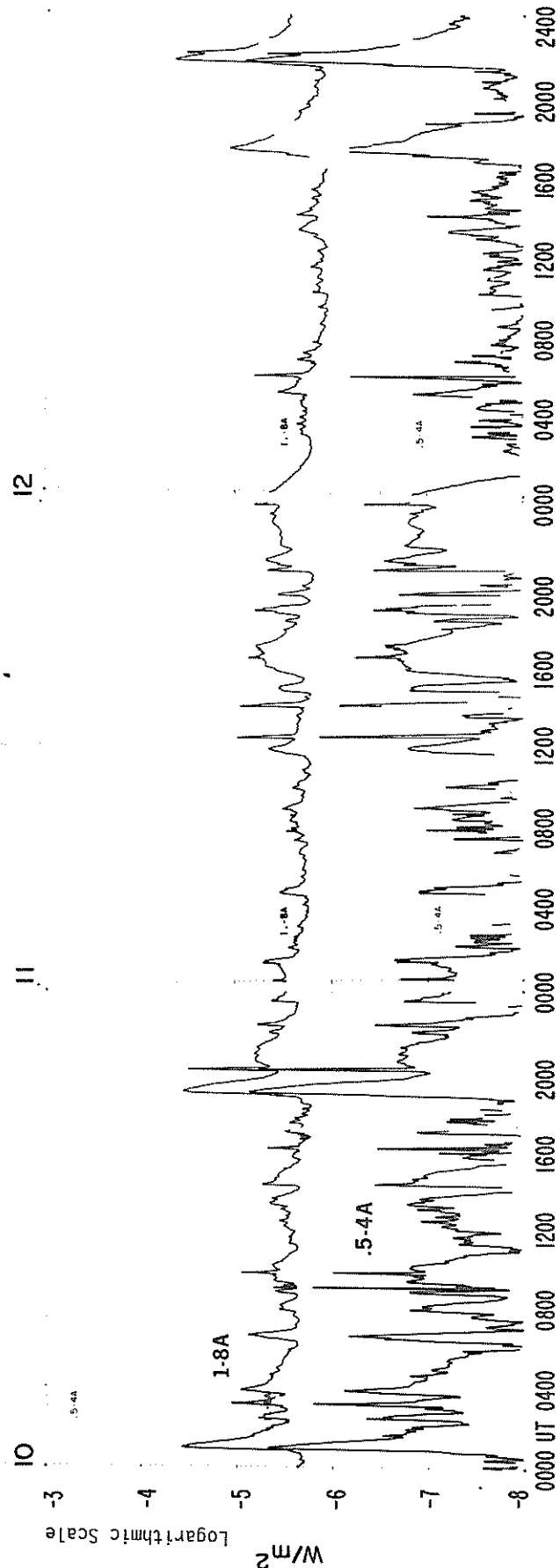
# SMS-GOES X-RAYS

FEBRUARY 1982



12

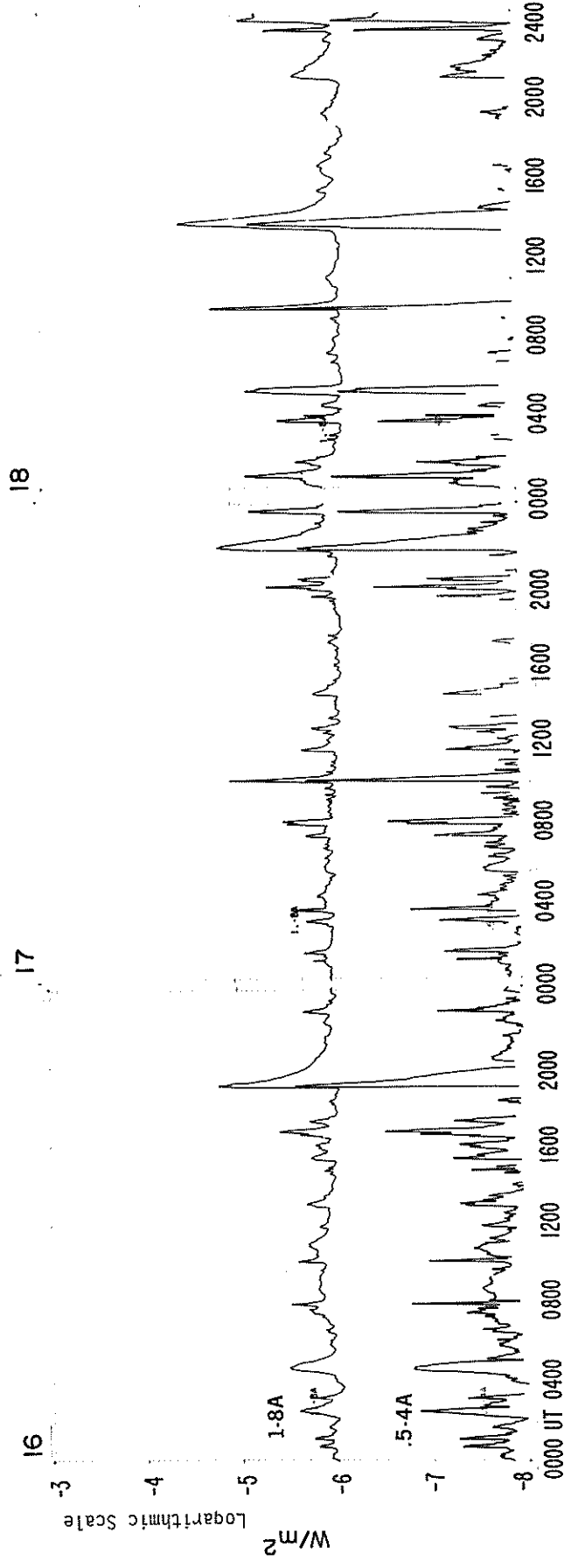
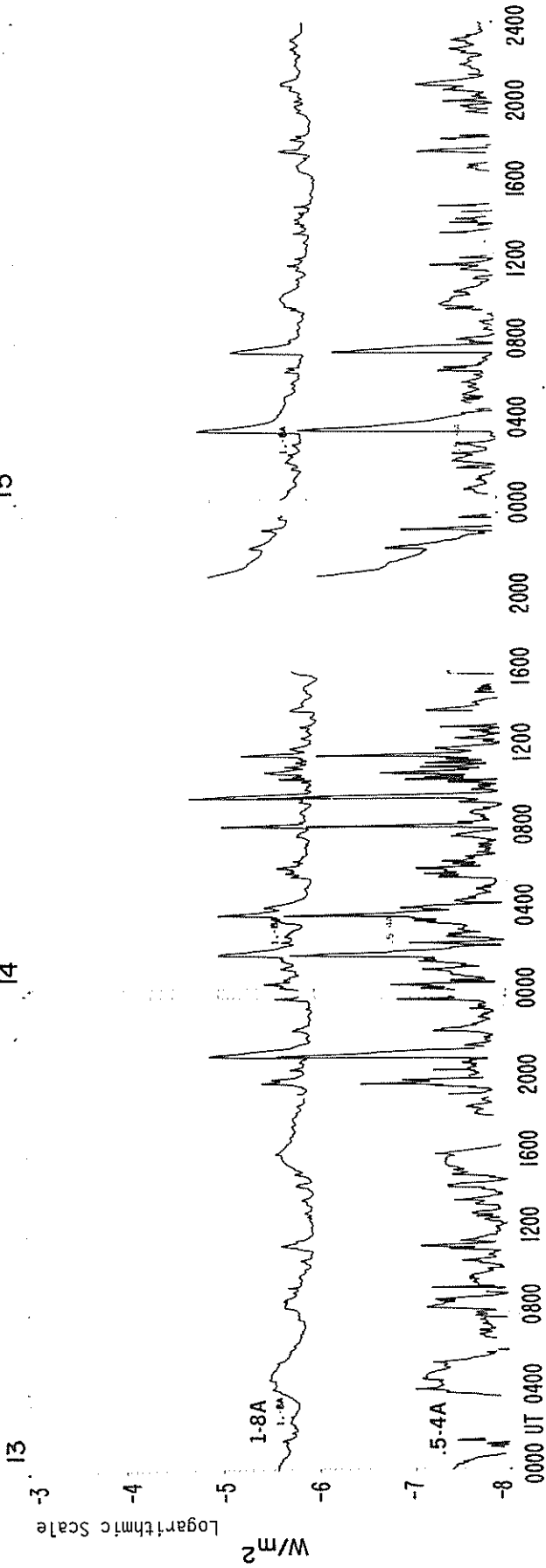
11





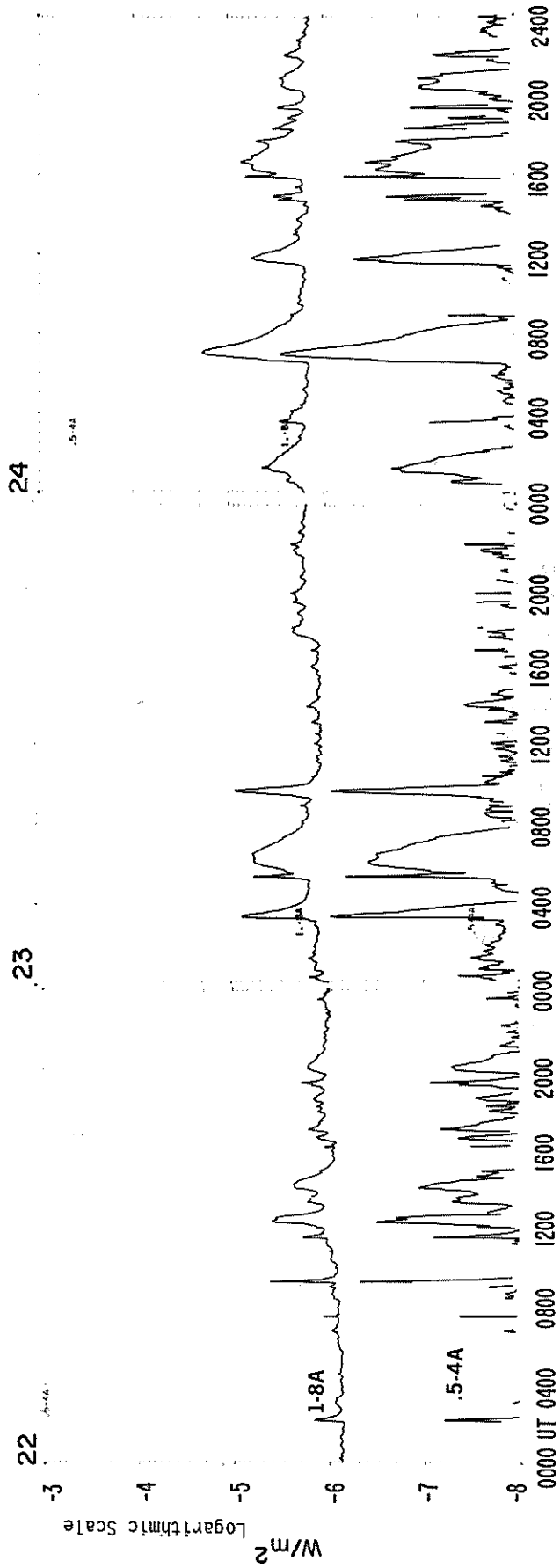
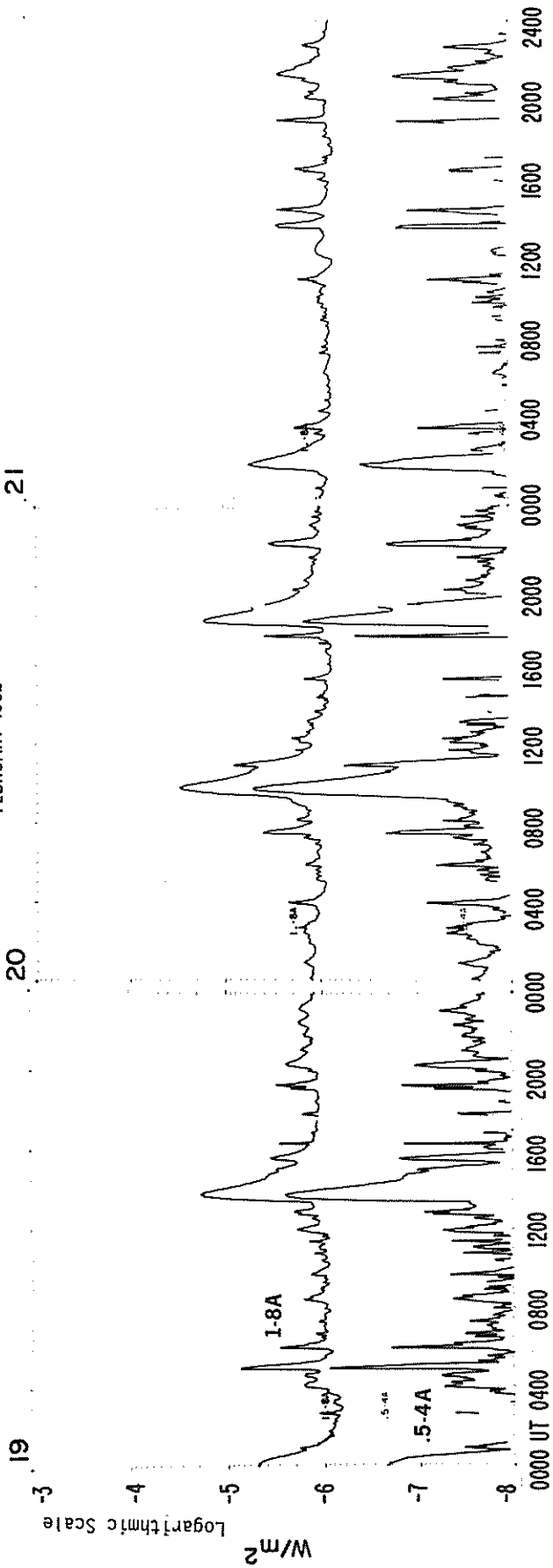
# SMS-GOES X-RAYS

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# SMS-GOES X-RAYS

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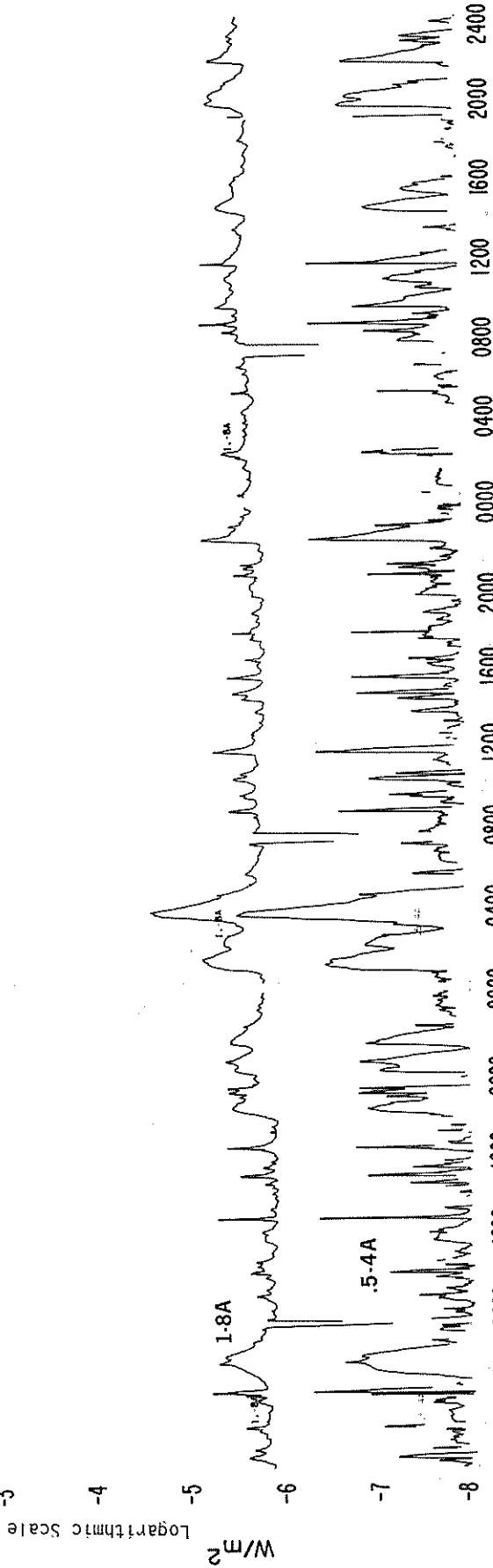
# SMS-GOES X-RAYS

FEBRUARY 1982

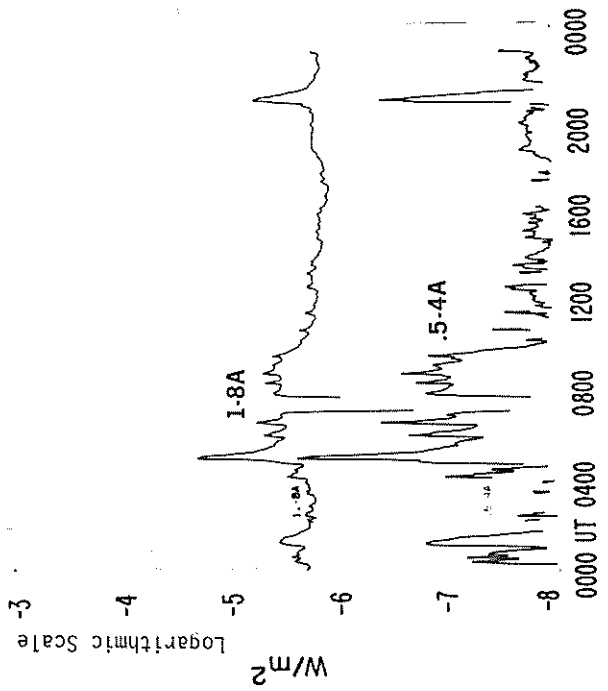
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28



MASS EJECTIONS FROM THE SUN

83  
Feb 82

February 1982

Sta	Day	Start	Observed Max	UT End	Location RA°	R/R <sub>0</sub>	Freq or Wavelength	Kind of Event
VORO	Feb 02	0222	0233	0248	090	0.90	H-alpha	S
WEND	Feb 02	1037	1050	1104	103	1.00	H-alpha	S
WEND	Feb 02	1431		1545D	101	1.00	H-alpha	Flare loop
WEND	Feb 02	1456	1503	1508D	105	1.00-1.06	H-alpha	S
CULG	Feb 03	0111		0113			Meter	Possible II
LEAR	Feb 03	0113.1		0346.2			Meter	IV
PALE	Feb 03	0113.8		0200.8			Meter	IV
LEAR	Feb 03	0118.1		0127.8			Meter	II
CULG	Feb 03	0119		0143.5			Meter	II
PALE	Feb 03	0121.1		0126.0			Meter	II
CULG	Feb 03	0125		0350			Meter	IV
WEND	Feb 03	0816E		1544D	101	1.00	H-alpha	A
WEND	Feb 03	0816E	0828	0906D	099	1.00-1.10	H-alpha	S
WEND	Feb 03	1034	1043	1111	098	1.00-1.12	H-alpha	SP
BLEN	Feb 03	1155.6		1157.2			Decimeter	II
WEND	Feb 03	1319	1324	1338	285	0.98-1.04	H-alpha	S
CULG	Feb 03	2112		2114			Meter	Possible II
VORO	Feb 04	0027	0049	0106	043	1	H-alpha	S
KHAR	Feb 04	0955		1030	252	0.74-0.79	H-alpha	S
WEND	Feb 04	1119	1133	1205	099	1.00-1.05	H-alpha	A
BLEN	Feb 04	1325.1		1329.0			Meter	II
WEIS	Feb 04	1325.6		1326.2			Meter	II Harmonic
BLEN	Feb 04	1328.3		1340.0			Decimeter; meter	IV
WEIS	Feb 04	1540.7		1543.2			500-1000 MHz	IV
HARV	Feb 04	1543		1546U			Meter	II
HARV	Feb 04	1858		1909			Decimeter; meter	IV
WEIS	Feb 05	0907.2		0922.0			Meter	II Harmonic
KHAR	Feb 05	0910		1025	283	1.00	H-alpha	S
KHAR	Feb 05	0928		0942	290	1.00	H-alpha	S
HARV	Feb 06	2059		2104			Decimeter	IV
VORO	Feb 06	2348	0015	0050	240	1	H-alpha	S
LEAR	Feb 06	2355.1		0020.2			Meter	II
CULG	Feb 07	0007		0017			Meter	Possible II
BLEN	Feb 07	1251.2		1253.2			Decimeter	IV
WEIS	Feb 07	1252.0		1257.0			Decimeter	IV
WEIS	Feb 07	1253.7		1258.3			Meter	II
BLEN	Feb 07	1253.8		1258.6			Decimeter; meter	II
WEIS	Feb 07	1358.3		1359.3			30-260 MHz	IV
HARV	Feb 07	2102		2107			Meter	II
ABST	Feb 08	0630E	0643	0650D	095	0.36	H-alpha	SP
BLEN	Feb 08	1248.5		1255.5			Decimeter; meter	IV
BLEN	Feb 08	1250.4		1257.8			Meter	II
WEIS	Feb 08	1250.5		1315.0			Meter	II Harmonic
HARV	Feb 08	1831		1834			Meter	II
CULG	Feb 09	0410		0411.5			Meter	Possible II
KHAR	Feb 09	0910		1025	283	1.00	H-alpha	S
BLEN	Feb 09	0923.8		0930.1			Meter	II
KHAR	Feb 09	0928		0942	290	1.00	H-alpha	S
KHAR	Feb 09	0946		0950	283	0.98	H-alpha	S
KHAR	Feb 09	1032		1058	256	0.96	H-alpha	S
WEIS	Feb 09	1408.3		1414.0			Meter	II
HARV	Feb 09	2005		2008			Decimeter; meter	II
LEAR	Feb 10	0054.5		0122.0			Meter	IV
CULG	Feb 10	0055		0440			Meter	IV
CULG	Feb 10	0059		0125			Meter; dekameter	II Herringbone
LEAR	Feb 10	0059.9		0109.2			Meter	II
WEND	Feb 10	0841	0846	0907	252	1.00-1.15	H-alpha	SP
WEND	Feb 10	0907	0914	0946D	252	1.00-1.25	H-alpha	Q or SP
LEAR	Feb 10	0947.7		0954.0			Meter	II
WEIS	Feb 10	0949.0		0956.8			Meter	II

MASS EJECTIONS FROM THE SUN

February 1982

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		Start	Max	End	RA°	R/R <sub>0</sub>		
WEND	Feb 10	1111E		1153D	252	1.00-1.40	H-alpha	Q
WEND	Feb 10	1304	1313	1344	289	1.00	H-alpha	S
WEND	Feb 10	1334	1400	1414	086	1.00-1.05	H-alpha	A
WEND	Feb 10	1400E	1409	1517D	285	1.00	H-alpha	A
PALE	Feb 10	1959.1		2004.5			Meter	II
HARV	Feb 10	2000		2024			Decimeter; meter	IV
SGMR	Feb 10	2003.8		2009.0			Meter	II
HARV	Feb 10	2004		2016			Meter; dekameter	II Herringbone
PALE	Feb 10	2004.5		2015.0			Meter	IV
ABST	Feb 11	0558E	0610	0624D	104	0.20	H-alpha	SP
ABST	Feb 11	0746E	0752	0800D	078	0.99	H-alpha	SP
WEIS	Feb 11	1217.2		1220.3			Meter	II Harmonic
CULG	Feb 12	0556		0600			Meter	II Herringbone
ABST	Feb 12	0558E	0610	0624D	104	0.20	H-alpha	SP
WEND	Feb 12	0930E	1211	1436D	260	1.00	H-alpha	A?
WEND	Feb 12	0930E	1359	1436D	260	1.00	H-alpha	A?
HARV	Feb 12	2156		2205			Decimeter; meter	IV
HARV	Feb 12	2207		2214			Meter	II
CULG	Feb 12	2207		2213			Meter	II
WEND	Feb 13	1450E	1530	1554D	108	1.00-1.75	H-alpha	Q
PALE	Feb 13	2346.9		2354.4			Meter	IV
VORO	Feb 14	0018	0032	0042	220	0.48	H-alpha	S
CULG	Feb 14	0043		0045			Meter	Possible II
WEIS	Feb 14	0944.7		0957.3			Meter	II Harmonic
LEAR	Feb 14	0944.8		0956.5			Meter	II
HARV	Feb 14	2027		2039			Decimeter	IV
VORO	Feb 15	0029	0034	0038	023	0.60	H-alpha	S
KHAR	Feb 16	0852		1010	079	0.41	H-alpha	S
KHAR	Feb 16	1004		1047	070	0.22	H-alpha	S
HARV	Feb 16	1513		1539			Decimeter; meter	IV
ABST	Feb 17	0625E	0632	0723D	081	0.79	H-alpha	SP
HARV	Feb 17	2134		2150			Decimeter; meter	IV
VORO	Feb 17	2335	2346	0003	295	0.70	H-alpha	S
HARV	Feb 20	1758		1901			Decimeter	IV
HARV	Feb 20	1803		1813			Meter; dekameter	II
BLN	Feb 23	0934.8		0938.5			Decimeter; meter	II
WEIS	Feb 23	0935.5		0944.2			Meter	II Harmonic
LEAR	Feb 23	0935.6		0944.3			Meter	II
LEAR	Feb 25	0732.8		0734.2			Meter	II
HARV	Feb 25	1957		2009			Decimeter	IV
WEND	Feb 27	0745E	0758	0813	258	1.00	H-alpha	S
ABST	Feb 27	0830	0850	0905D	122	1.00	H-alpha	SP
WEND	Feb 27	0834	0844	0904	110	0.98-1.10	H-alpha	S
WEND	Feb 27	0925	0928	0944	259	1.00	H-alpha	S
WEND	Feb 27	1056	1112	1128	259	1.00	H-alpha	A?
WEND	Feb 27	1135	1151	1215	111	0.97-1.12	H-alpha	S
CULG	Feb 28	0503		0509			Meter	II

## SOME OTHER SOURCES OF DATA

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

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

UAG SERIES OF REPORTS

Fewer than four UAG Reports are published at irregular intervals each year. Copies of these publications may be purchased through World Data Center A for Solar-Terrestrial Physics, Environmental Data and Information Service, NOAA, D63, 325 Broadway, Boulder, Colorado 80303, USA. A \$4.00 handling charge per order will be added to the single-copy prices listed below. Please note, too, that some reports are available on microfiche only. Orders must include check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGDC.

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- UAG-3 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 6 July 1966 through 8 September 1968," October 1968, 35 pp, \$0.55.
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- UAG-7 "Observations of the Solar Electron Corona: February 1964 - January 1968," October 1969, 12 pp, \$0.15.
- UAG-8 "Data on Solar-Geophysical Activity October 24 - November 6, 1968," Parts 1 and 2, March 1970, 312 pp, \$1.75 (includes Parts 1 and 2).
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- UAG-10 "Atlas of Ionograms," May 1970, 243 pp, \$1.50.
- UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970," Parts 1, 2 and 3, April 1971, 466 pp, \$3.00 (includes Parts 1-3).
- UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969," May 1971, 76 pp, \$0.90.
- UAG-14 "An Experimental, Comprehensive Flare Index and Its Derivation for 'Major' Flares, 1955-1969," July 1971, 25 pp, \$0.30.
- UAG-16 "Temporal Development of the Geophysical Distribution of Auroral Absorption for 30 Substorm Events in each of IQSY(1964-65) and IASY (1960)," September 1971, 131 pp, \$0.70 (microfiche only).
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- UAG-18 "A Study of Polar Cap and Auroral Zone Magnetic Variations," June 1972, 21 pp, \$0.20.
- UAG-19 "Reevaluation of Solar Flares 1967," June 1972, 15 pp, \$0.15.
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- UAG-22 "Auroral Electrojet Magnetic Activity Indices (AE) for 1970," November 1972, 146 pp, \$0.75.
- UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, November 1972, 324 pp, \$1.75.
- UAG-23A "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, Revision of Chapters 1-4, November 1972, 135 pp, \$2.14.
- UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971," Parts 1 and 2, December 1972, 462 pp, \$2.00 (includes Parts 1 and 2).
- UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971," February 1973, 35 pp, \$0.35.
- UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970," May 1973, 129 pp, \$0.70.
- UAG-27 "High Speed Streams in the Solar Wind," June 1973, 16 pp, \$0.15.
- UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events," Parts 1, 2 and 3, July 1973, 932 pp, \$4.50.
- UAG-29 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1968," October 1973, 148 pp, \$0.75.
- UAG-30 "Catalogue of Data on Solar-Terrestrial Physics," October 1973, 317 pp, \$1.50. Supersedes UAG-11, 15, and 20 catalogs.
- UAG-31 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1969," February 1974, 142 pp, \$0.75.
- UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969," April 1974, 26 pp, \$0.35.
- UAG-33 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1967," May 1974, 142 pp, \$0.75.

- UAG-34 "Absorption Data for the IGY/IGC and IQSY," June 1974, 381 pp, \$2.00.
- UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics," July 1974, 20 pp, \$0.20.
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- UAG-37 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1966," December 1974, 142 pp, \$0.75.
- UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics," December 1974, 110 pp, \$1.60.
- UAG-39 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1971," February 1975, 144 pp, \$2.05.
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**WORLD DATA CENTER A**  
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The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

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