S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
01	0000	0700	CULG	0002.0	0003.0	III	G	1	30	180	
			CULG	0032.0	0201.0	III	N	1	30	180	
			PALE	0032.0	0159.0	III	N	1	25	64	
			CULG	0226.0	0345.0	III	N	1	30U	180	
			LEAR	0227.0	0232.0	III		1	25	180	
			PALE	0245.0	0245.0	III		1	25	83	
			PALE	0337.0	0339.0	III		1	25	135	
	0336	1848	POTS	0338.7	0339.1	III	G	2	40X	220	100-200MHz no data
			CULG	0339.0	0339.0	III	G	2	23	180	
			CULG	0343.0	0343.0	III	B	1	340	750	
			POTS	0343.3	0343.6	DCIM		2	300	400X	
			POTS	0415	0943	I	S,N	2	200U	370	
	0435	1815	BLEN								
			CULG	0454.0	0700.0D	III	N	1	30U	180	
			POTS	0531.6	0532.1	DCIM		2	250	400X	
			IZMI	0602.3	0603.6	III	G	1	45	90	
			IZMI	0616.2	0618.7	III	G	2	40	160	
			IZMI	0622.5	0624.0	III	GG	2	25X	250	
			POTS	0622.6	0627.3	III	G	2	40X	260	
			IZMI	0626.9	0628.1	III	GG,C	2	25X	160	
			IZMI	0651.2	0659.7	III	GG,FS	2	40	160	
			POTS	0651.2	0653.9	III	GG	1	40X	60	
			POTS	0700.8	0702.3	III	G,N	1	40X	55	
			IZMI	0705.2	0714.0	III	GG,FS	2	45	165	
			IZMI	0721.1	0722.6	III	G	1	45	95	
			IZMI	0731.0	0732.1	III	G	1	45	160	
			IZMI	0753.3	0757.0	III	GG	1	110U	150	
			IZMI	0811.9	0812.4	III	G	1	110	160	
			IZMI	0812.0	0818.7	I	N	1	130	250	
			IZMI	0835.0	0835.2	III	G	2	90U	270X	
			IZMI	0853.0	0856.9	I	N	1	80	95	
			IZMI	0854.1	0859.5	III	GG	1	45	175	
			POTS	0854.1	0854.3	III	B	1	40X	85U	
			POTS	0858.8	0906.3	III	GG,U	3	40X	400X	
	0418	1742	ONDR	0859.1	0903.2	DCIM	G	1	800X	2000X	
			IZMI	0900.1	0906.3	III	GG,FS	2	25X	270X	
			POTS	0924.5	0924.7	III	G	1	40X	60	
			IZMI	0926.0	0929.1	III	G	1	45	95	
			IZMI	0949.1	1016.0U	III	S	2	25X	270X	
			POTS	0949.2	1013.6	III	GG,RS,U	3	40X	400X	
			IZMI	0954.2	1000.0	III	GG	2	25X	279X	
			ONDR	0955.1	1011.2	DCIM	GG,W	1	800X	2000X	
			ONDR	0957.3	1005.3	DCIM	G	1	2000X	4500X	
			SVTO	1005.0	1024.0	III	N	1	25	83	
			POTS	1008 U	1033 U	I	S,N	2	40X	320	
			IZMI	1009.4	1012.1	III	G,C	2	25X	140	
			IZMI	1012.0U	1035.0U	I	S	2	45	90	
			POTS	1033 U	1153 U	I	S,N	1	200U	320	
			POTS	1100.6	1100.9	DCIM		1	300	400X	
			SGMR	1101.0	1109.0	III		1	30	60	
			SVTO	1101.0	1102.0	III		2	25	150	
			IZMI	1101.2	1102.6	III	GG,C	2	25X	180	
			POTS	1101.6	1102.6	III	G	3	40X	400X	
			SVTO	1108.0	1109.0	V		2	25	130	
			IZMI	1108.7	1109.1	III	G	2	25X	150	
			POTS	1108.8	1109.4	III	G	3	40X	230	
			IZMI	1109.1	1109.7	V		2	25X	40	
			POTS	1237 U	1848 U	I	S,N	1	200U	380	
			HOLL	1600.0	1601.0	III		1	25	85	
			POTS	1600.0	1601.0	III	G	2	60	240	
			SVTO	1600.0	1601.0	III		1	33	145	
			POTS	1734.8	1736.7	DCIM		1	230	400	
			HOLL	1837.0	1920.0	III	N	1	25	180	
			POTS	1837.6	1837.8	DCIM		2	250	400X	
			PALE	2050.0	0452.0	III	N	1	25	64	
			HOLL	2051.0	2051.0	III		1	25	88	
	2100	2400	CULG	2149.0	2149.0	III	B	1	25	180	
			CULG	2208.0	2212.0	III	G	2	23	180	
			HOLL	2208.0	2211.0	III		1	25	136	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
01			SGMR	2210.0	2211.0	III		1	30	70	
02			CULG	0019.0	0026.0	II	FN	2	30	90	
	0000	0700	CULG	0019.0	0026.0	II	SH	3	60	180	ESS 700
			CULG	0020.0	0103.0	IV	FS	1	35U	1000	
			LEAR	0024.0	0033.0	II		2	25	180	ESS 0497
			CULG	0026.0	0038.0	III	G	1	40	130	
			LEAR	0033.0	0120.0	IV		1	25	180	
			HOLL	0036.0	0103.0	III	N	1	25	172	
	0336	1849	POTS	0440.9	0445.7	III	GG	2	40X	330	100-200MHz no data
			CULG	0441.0	0530.0	III	N	1	30U	110	
			SVTO	0441.0	0510.0	III	N	1	25	163	
			SVTO	0441.0	1026.0	III	N	1	25	163	
			LEAR	0443.0	0837.0	III	N	1	25	180	
			CULG	0524.0	0524.0	III	B	1	340	470	
	0435	1815	BLEN	0524.0	0524.6	III	GG,U	2	270	660	
			POTS	0524.1	0524.5	DCIM		2	270	400X	
			POTS	0609	0834.5U	I	S,N	1	200U	380	
			IZMI	0703.3	0705.2	III	GG	1	110	270X	
			POTS	0705.0	0705.2	DCIM		2	370	400X	
			IZMI	0745.5	0746.7	I	GG	2	130	170	
			BLEN	0827.3	0850.6	DCIM	C,S	3	100X	4000X	
			ONDR	0828.0	0846.3	DCIM	GG,SP	3	800X	2000X	
			SVTO	0829.0	1026.0	III	N	1	25	180	
			BLEN	0829.1	0840.6	II		3	100X	1000	
			IZMI	0829.6	0832.1	III	G	2	25X	270X	
			POTS	0829.6	0831.9	III	G	2	40X	85U	
			POTS	0834.5	0851 U	IV		2	40X	400X	
			IZMI	0835.0U	0940.0U	I	S,C	2	45	270X	
			LEAR	0837.0	0906.0	IV		1	45	180	
	0100	0951	HIRA	0837.0	0847.0	IV		1	60	270	
	0417	1743	ONDR	0840.5	0844.2	DCIM	G	2	2000X	4500X	
			HIRA	0841.0	0842.0	III	B	1	60	1000	
			IZMI	0841.0	0843.5	CONT		2	50	270X	
			POTS	0851 U	0903 U	I	S,N	2	40X	250	
			POTS	0859.6	0859.9	DCIM		2	240	400	
			HIRA	0902.5	0905.0	III	G	2	50	210	
			IZMI	0902.7	0905.1	III	GG	2	50	260	
			POTS	0902.8	0905	III	G	3	40X	340	
			POTS	0905	0930	III	GG	2	40X	85U	
			POTS	0928	0935 U	I	S,N	2	200U	280	
			HIRA	0931.5	0932.0	III	B	2	220	520	
			POTS	0931.7	0932.3	DCIM		3	240	400X	
			POTS	0935	1003 U	I	C	2	200U	400X	
			IZMI	0938.9	0941.0	III	G	2	80	260	
			IZMI	0939.0U	1001.0U	CONT		2	180	270X	
			ONDR	0940.0	0953.3	DCIM	GG	2	959	1573	
			POTS	0959.2	1000.4	DCIM		2	240	400X	
			POTS	1003 U	1010	I	S,N	1	200U	280	
			IZMI	1003.6	1004.1	III	G	2	25X	160	
			POTS	1003.6	1006.7	III	G	2	40X	85U	
			POTS	1011.0	1011.9	III	G	2	40X	85U	
			IZMI	1023.8	1032.0	III	GG	2	50	270X	
			POTS	1024.7	1031.8	III	GG	2	40X	300	
			BLEN	1025.9	1029.8	III	GG	2	100X	250	
			POTS	1038	1849 U	I	S,N	1	200U	350	
			POTS	1152.0	1154.9	DCIM		2	230	400X	
			POTS	1216.5	1216.8	III	B	1	50	85U	
			POTS	1525.8	1529.8	III	GG,N	2	200U	320	
			HOLL	1536.0	1543.0	III		1	25	105	
			SGMR	1536.0	1537.0	III		2	30	55	
			SVTO	1536.0	1537.0	V		2	25	83	
			POTS	1536.8	1537.3	III	G	2	40X	85U	
			HOLL	1704.0	2258.0	III	N	1	25	109	
	2100	2400	CULG	2100.0E	2237.0	I	S	1	60	180	
			CULG	2140.0	2141.0	III	G	1	25	200	
			PALE	2140.0	2141.0	III		1	25	180	
	1919	2400	HIRA	2140.5	2141.0	III	B	1	25X	210	
			CULG	2200.0	2200.0	III	B	1	45	180	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
02			CULG	2232.0	2232.0	III	G	1	20	150	
			LEAR	2343.0	2348.0	III		1	25	180	
			CULG	2344.0	2349.0	III	G	1	20	180	
			HIRA	2344.5	2345.0	III	B	1	100	220	
03			PALE	0100.0	0101.0	III		1	25	71	
	0000	0700	CULG	0101.0	0101.0	III	B	1	25	160	
			CULG	0213.0	0232.0	III	N	1	40	180	
	0336	1849	POTS	0415 U	1849 U	I	S,N	2	200U	350	100-200MHz no data
			CULG	0442.0	0447.0	III	G	1	50	180	
			CULG	0525.0	0700.0D	III	N	1	40	180	
			POTS	0532.2	0535.5	III	GG	2	200U	400X	
			LEAR	0552.0	0552.0	III		1	25	180	
			SVTO	0552.0	0552.0	III		1	25	58	
			IZMI	0552.1	0552.7	III	G	1	25X	95	
	0554	1200	IZMI	0554.0	0940.0U	I	S	1	110U	270X	
			LEAR	0610.0	0906.0	III	N	1	25	180	
			IZMI	0611.0	0611.4	III	G,FS	1	40	270	
			SVTO	0611.0	0816.0	III	N	1	29U	180U	
			IZMI	0619.0	0619.8	III	GG	1	45	190	
			IZMI	0624.3	0624.6	III	G	1	55	270X	
			IZMI	0632.3	0637.1	III	GG	1	40	220	
			IZMI	0644.1	0645.0	III	G,C	2	45	220	
			POTS	0648.4	0648.8	III	B	2	40X	230	
			IZMI	0651.8	0655.0	III	G,C	2	45	185	
			POTS	0658.8	0659.0	III	B	2	40X	75	
			IZMI	0718.4	0719.7	III	G	1	40	165	
			IZMI	0800.2	0800.3	III	G,FS	2	45	65	
			POTS	0805.5	0805.7	III	G	2	40X	250	
			IZMI	0816.2	0816.5	III	G,U	1	110	155	
			POTS	0846.2	0848.2	III	GG	3	40X	300	
			POTS	0848.9	0854.6	III	G,N	1	40X	80	
			SVTO	0857.0	0859.0	III		2	25	180	
			IZMI	0857.8	0900.7	III	GG,C	2	25X	270X	
	0000	0951	HIRA	0858.0	0859.0	III	G	3	30	200	
			IZMI	0903.9	0906.0	III	GG	1	25X	170	
			SVTO	0956.0	0957.0	III		1	120	152	
			IZMI	0956.8	0957.0	III	B	2	120	175	
			POTS	1029.3	1029.9	III	G	2	40X	380	
			IZMI	1039.0	1039.5	III	G	1	45	270X	
			SVTO	1039.0	1039.0	III		1	29	138	
			ONDR	1053.4	1055.3	DCIM	G,W	1	800X	2000X	
	0417	1743	ONDR	1053.4	1054.5	DCIM	G	1	2000X	4500X	
	0435	1815	BLEN	1053.7	1054.9	DCIM	C	2	400	4000X	
			ONDR	1112.5	1113.5	DCIM	G	2	800X	1377	
			IZMI	1114.6	1115.0	III	G	1	45	95	
			POTS	1125.9	1127.6	III	GG	2	40X	300	
			IZMI	1127.1	1128.3	III	G	1	60	270X	
			IZMI	1134.0	1136.9	III	GG	2	45	270X	
			POTS	1224.4	1224.7	III	B,U	2	55	85	
			POTS	1238.2	1239.0	III	G	2	45	80	
			HOLL	1310.0	1310.0	III		1	25	46	
			SGMR	1310.0	1310.0	III		1	30	45	
			SVTO	1310.0	1310.0	III		1	25	63	
			ONDR	1446.4	1451.3	DCIM	G	2	800X	1498	
			HOLL	1618.0	1623.0	III		1	25	180	
			SVTO	1618.0	1623.0	III		1	28	164	
			POTS	1620.1	1620.9	III	GG	2	200U	290	
			SVTO	1703.0	1703.0	III		1	41	149	
			HOLL	1751.0	1752.0	III		1	25	87	
			SGMR	1751.0	1752.0	III		2	30	65	
			HOLL	1955.0	1957.0	III		1	25	180	
			SGMR	1955.0	1957.0	III		3	30	80	
	1919	2400	HIRA	1955.5	1958.0	III	G	2	25X	290	
	2100	2400	CULG								
			PALE	2344.0	2348.0	III		1	25	146	
04	0000	0700	CULG	0011.0	0013.0	III	G	1	50U	180	
	0000	0629	HIRA	0044.0	0044.5	III	B	1	100	330	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
04			CULG	0045.0	0045.0	III	B	1	60	180	
			CULG	0151.0	0155.0	III	G	1	30	180	
			HIRA	0151.0	0154.5	III	B	1	30	180	
			LEAR	0151.0	0154.0	III		1	25	161	
			PALE	0151.0	0154.0	III		1	25	155	
			CULG	0217.0	0218.0	III	G	2	25	200	
			LEAR	0217.0	0218.0	III		1	25	180	
			PALE	0217.0	0218.0	III		1	25	180	
			HIRA	0217.5	0218.0	III	B	1	40	200	
			PALE	0259.0	0453.0	III	N	1	25	180	
			LEAR	0300.0	0545.0	III	N	1	25	180	
			CULG	0301.0	0301.0	III	B	1	23	180	
			HIRA	0304.0	0305.0	III	B	2	25X	200	
	0336	1848	POTS	0413 U	0555	I	S,N	2	200U	380	100-200MHz no data
	0416	1744	ONDR								
			CULG	0422.0	0422.0	III	B	1	40	180	
	0430	1815	BLEN								
			CULG	0449.0	0449.0	III	B	1	40U	180	
			CULG	0527.0	0527.0	III	B	1	40U	180	
			CULG	0541.0	0541.0	III	B	1	40U	180	
			LEAR	0545.0	0547.0	III		2	25	180	
			SVTO	0545.0	0546.0	III		3	25	180	
			HIRA	0545.5	0547.0	III	B	3	25X	220	
			POTS	0545.7	0546.6	III	GG	3	40X	280	
			CULG	0546.0	0546.0	III	G	3	35U	180	
			POTS	0546.0	0546.8	V	G	3	40X	70	
			POTS	0608.7	0609.0	III	G,RS	2	200U	380	
	0555	1200	IZMI	0608.7	0608.9	III	G	1	180	270X	
			POTS	0630	1019	I	S,N	1	210	350	
			IZMI	0700.8	0701.1	III	G	1	45	130	
			IZMI	0729.8	0731.4	III	GG,C	2	25X	230	
			POTS	0730.0	0731.1	III	G	2	40X	230	
			SVTO	0730.0	0731.0	III		1	25	82	
	0747	0952	HIRA								
			IZMI	0925.5	0925.8	III	B	1	25X	45	
			IZMI	0958.3	0959.1	III	GG,C	2	130	270X	
			POTS	0958.3	0959.1	III	G	2	200U	390	
			POTS	1116.4	1117.1	I	S	1	230	320	
			IZMI	1148.4	1150.2	III	GG,C	2	25X	165	
			POTS	1148.4	1150.5	III	GG	2	40X	320	
			POTS	1232	1848 U	I	S,N	1	200U	380	
			POTS	1238.0	1238.7	III	G	2	200U	350	
	1919	2400	HIRA								
	2100	2400	CULG	2239.0	2239.0	III	B	1	23	40	
05			LEAR	0002.0	0002.0	III		1	70	180	
	0000	0700	CULG	0003.0	0003.0	III	B	1	50U	180	
			LEAR	0139.0	0145.0	III		1	25	180	
			CULG	0140.0	0145.0	III	G	1	23	180	
			HOLL	0141.0	0144.0	III		1	25	152	
	0000	0953	HIRA	0141.0	0144.0	III	G	1	25X	200	
			CULG	0159.0	0200.0	III	G	1	40	160	
			CULG	0247.0	0248.0	III	G	2	30	180	
			LEAR	0247.0	0248.0	III		1	25	180	
			PALE	0247.0	0248.0	III		1	25	180	
			HIRA	0247.5	0248.0	III	B	1	25X	150	
			LEAR	0346.0	0350.0	III		1	25	180	
			CULG	0347.0	0347.0	III	B	1	30	130	
			CULG	0350.0	0351.0	III	G	2	25	180	
			HIRA	0350.0	0351.0	III	G	1	40	160	
			SVTO	0350.0	0350.0	III		1	25U	83U	
	0336	1849	POTS	0350.0	0350.7	III	G	2	40X	300U	100-200MHz no data
	0416	1745	ONDR								
	0430	1815	BLEN								
			POTS	0458 U	0544 U	I	S,N	1	200U	350	
			CULG	0503.0	0508.0	III	G	1	23	90	
			LEAR	0503.0	0508.0	III		1	25	98	
			SVTO	0503.0	0508.0	III		1	25	180	
			SVTO	0600.0	0602.0	III		1	25	75	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
05			LEAR	0602.0	0602.0	III		1	25	133	
	0600	1200	IZMI	0602.6	0602.8	III	G	2	45	140	
			CULG	0603.0	0603.0	III	B	1	50	150	
			SVTO	0656.0	0704.0	III		1	25	79	
			IZMI	0656.3	0656.6	III	B	2	25X	95	
			IZMI	0700.8	0701.3	III	G	1	45	85	
			POTS	0701	0725	I	S,N	1	200U	320	
			LEAR	0704.0	0704.0	III		1	25	108	
			IZMI	0704.2	0704.5	III	G	1	45	85	
			IZMI	0711.8	0711.9	III	B	1	190	215	
			LEAR	0714.0	0715.0	III		1	25	68	
			SVTO	0714.0	0715.0	III		1	25	62	
			IZMI	0714.3	0715.0	III	G	2	25X	80	
			IZMI	0826.9	0829.1	III	GG	2	25X	155	
			LEAR	0828.0	0829.0	III		1	25	136	
			SVTO	0828.0	0828.0	III		1	25	124	
			POTS	0828.3	0829.5	III	G	2	40X	330	
			LEAR	0852.0	0853.0	III		1	25	110	
			SVTO	0852.0	0852.0	III		1	25	53	
			IZMI	0852.2	0852.7	III	G	2	25X	125	
			POTS	0852.7	0853.1	III	G	2	40X	370	
			IZMI	0902.2	0902.4	III	G	1	45	75U	
			POTS	1007.4	1007.6	I	S	2	210	230	
			IZMI	1020.8	1020.9	III	B	2	45	90	
			POTS	1021.4	1024.1	III	G	2	40X	85U	
			IZMI	1023.4	1023.5	III	B	1	45	65	
			POTS	1156	1234	I	S,N	1	200U	400X	
			HOLL	1337.0	1544.0	III	N	1	25	180	
			HOLL	1406.0	1406.0	III		1	25	167	
			POTS	1406.0	1406.5	III	G	2	40X	85U	
			SGMR	1406.0	1407.0	III		2	30	80	
			SVTO	1406.0	1412.0	III		1	25	151	
			HOLL	1430.0	1431.0	III		1	25	153	
			SGMR	1430.0	1439.0	III		2	30	80	
			SVTO	1430.0	1439.0	III		2	25	180	
			POTS	1430.4	1430.7	III	B	3	40X	85U	
			HOLL	1436.0	1439.0	III		2	25	179	
			POTS	1436.5	1438.3	III	GG	3	40X	320	
			HOLL	1704.0	1705.0	III		1	25	180	
			PALE	1704.0	1704.0	III		1	74U	180U	
			SVTO	1704.0	1705.0	III		1	47U	180U	
			POTS	1704.6	1705.0	III	G	2	200U	390	
			HOLL	1747.0	1747.0	III		1	25	149	
			PALE	1747.0	1747.0	III		1	25	112	
			SGMR	1747.0	1747.0	III		1	30	60	
			PALE	1818.0	1818.0	III		1	25	84	
			SGMR	1818.0	1835.0	III	N	2	30	65	
			PALE	1835.0	1835.0	III		1	25	141	
			POTS	1835.3	1835.6	DCIM		2	200U	350	
			SGMR	1947.0	1947.0	III		1	30	60	
	1919	2400	HIRA	2002.0	2015.0	II		2	40	140	
			PALE	2004.0	2005.0	III		1	25	93	
	2100	2400	CULG	2150.0	2150.0	III	B	1	27	180	
			CULG	2216.0	2216.0	III	B	1	25	50	
			CULG	2255.0	2255.0	III	B	1	20	90	
			CULG	2301.0	2301.0	III	B	1	23	40	
			CULG	2316.0	2319.0	III	G	1	20	160	
			HIRA	2316.0	2316.5	III	B	1	40	110	
06			LEAR	0038.0	0039.0	III		1	25	114	
			PALE	0038.0	0039.0	III		1	25	118	
	0000	0700	CULG	0039.0	0039.0	III	B	1	40	140	
			CULG	0153.0	0202.0	III	G	1	27	170	
			LEAR	0154.0	0154.0	III		1	62	131	
			LEAR	0222.0	0223.0	III		1	68	162	
			CULG	0223.0	0223.0	III	B	1	40	180	
			CULG	0256.0	0256.0	III	B	1	40	100	
			LEAR	0256.0	0906.0	III	N	1	25	180	
			CULG	0309.0	0309.0	III	B	1	50	90	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
06	0336	1849	POTS	0411	1849 U	I	S,N,DC	2	200U	350	100-200MHz no data
			CULG	0429.0	0429.0	III	B	1	27	180	
			CULG	0438.0	0438.0	III	B	1	50	90	
			CULG	0443.0	0443.0	III	B	1	50	180	
	0557	1209	IZMI	0557.0E	1209.0D	I	N	2	55	270X	
			CULG	0620.0	0700.0D	III	N	1	50	180	
			IZMI	0627.0	0627.7	III	G,C	2	45	160	
			SVTO	0627.0	0627.0	III		1	25	83	
			IZMI	0638.1	0646.1	III	GG	2	45	150	
			IZMI	0651.4	0653.3	III	GG	1	45	145	
			IZMI	0657.0	0657.3	III	G	1	55	140	
			IZMI	0718.5	0718.7	III	G,C	2	115	175	
			IZMI	0731.3	0742.6	III	N	1	25X	150	
			IZMI	0743.8	0745.9	III	G,C	1	25X	150	
			SVTO	0750.0	1544.0	III	N	2	25	180	
			IZMI	0750.3	0751.0	III	G,C	1	25X	95	
			POTS	0750.3	0750.6	III	B	2	40X	85U	
			IZMI	0812.2	0814.0	III	G	1	45	95	
			IZMI	0835.6	0838.6	III	G	1	45	90	
			IZMI	0841.4	0842.8	III	G,C	2	25X	180	
			POTS	0841.5	0844.0	III	G	2	40X	85U	
	0000	0953	HIRA	0841.5	0842.0	III	B	1	25X	150	
			IZMI	0841.7	0841.9	V		2	25X	65	
			IZMI	0904.5	0908.8	III	G	1	45	65	
			POTS	0912.7	0916.7	III	G	2	40X	85U	
			IZMI	0912.8	0913.5	III	G	2	45	125	
			HIRA	0913.0	0916.0	III	G	1	40	150	
			IZMI	0915.3	0917.2	III	G,C	2	25X	165	
			IZMI	0921.0	0927.2	III	G	1	45	95	
			IZMI	0935.8	0936.6	III	G	1	45	175	
			POTS	0935.9	0936.7	III	G	1	40X	85U	
			IZMI	1004.3	1008.2	III	GG,C	2	25X	250	
			POTS	1004.3	1008.2	III	GG	2	40X	250	
			IZMI	1012.3	1027.3	III	N	1	45	140	
			POTS	1024.1	1024.6	III	G	2	40X	85U	
			IZMI	1024.2	1024.7	III	G	1	45	95	
			IZMI	1032.1	1032.2	III	B	2	55	70	
			IZMI	1046.2	1046.5	III	G	1	45	155	
			POTS	1046.4	1046.6	III	B	2	40X	85U	
			IZMI	1051.2	1051.2	III	B	1	50	65	
			IZMI	1102.4	1109.0	III	N	1	45	95	
			POTS	1103.5	1104.0	III	G	2	40X	75	
			IZMI	1112.4	1113.2	III	G,FS,C	2	25X	155	
			POTS	1112.4	1127.3	III	GG,N	2	40X	320	
			SGMR	1118.0	1126.0	III	N	2	30	60	
			IZMI	1118.2	1124.4	III	GG	2	25X	270X	
			IZMI	1126.6	1127.5	III	GG	2	25X	210	
			POTS	1143.8	1149.3	III	G,N	2	40X	85U	
			IZMI	1144.0	1144.6	III	GG,C	2	40	165	
			IZMI	1146.2	1152.5	III	GG	1	45	95	
			IZMI	1159.3	1200.8	III	G	1	45	85	
			SGMR	1337.0	1426.0	III	N	3	30	80	
			POTS	1337.2	1358.8	III	GG,N	3	40X	400X	
	0430	1815	BLEN	1352.0	1357.8	III	GG,C	3	100X	3400	
			ONDR	1352.1	1355.1	DCIM	G	2	800X	2000X	
			POTS	1352.6	1356.0	V	G,N	3	40X	70	
	0416	1746	ONDR	1354.2	1356.3	DCIM	G	2	2000X	4129	
			POTS	1425.3	1434.3	III	G,N	1	40X	85U	
			SGMR	1532.0	1544.0	III	N	2	30	60	
			POTS	1543.9	1544.2	III	B	1	40X	85U	
			HOLL	1736.0	1747.0	III		1	25	127	
			PALE	1740.0	1744.0	III		1	25	105	
			SGMR	1740.0	1747.0	III		1	30	60	
			SVTO	1741.0	1744.0	III		1	75U	153U	
			HOLL	1815.0	1821.0	III		1	25	83	
			PALE	1815.0	1821.0	III		1	25	72	
			HOLL	1915.0	1947.0	III	N	1	25	180	
			PALE	1915.0	0454.0	III	N	1	25	180	
			SGMR	1933.0	1947.0	III	N	2	30	80	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
06	1918	2400	HIRA	1933.5	1935.0	III	G	2	25X	110	
	2100	2400	CULG	2106.0	2107.0	III	G	1	23	180	
			CULG	2152.0	2152.0	III	B	1	50	180	
			CULG	2219.0	2219.0	III	B	1	40	180	
			CULG	2248.0	2249.0	III	G	3	30	190	
			HOLL	2248.0	2248.0	III		1	25	175	
			SGMR	2248.0	2248.0	III		1	30	80	
			HIRA	2248.5	2249.0	III	B	3	40	230	
			CULG	2307.0	2309.0	III	G	1	20	170	
			CULG	2316.0	2316.0	III	B	1	27	330	
			CULG	2329.0	2400.0D	III	N	1	23	180	
			HOLL	2332.0	2338.0	III		2	25	180	
			PALE	2332.0	2339.0	III		2	25	180	
			HIRA	2332.5	2338.0	III	G	3	25X	1200	
			CULG	2333.0	2339.0	III	G	3	18X	1300	
			SGMR	2335.0	2337.0	III		2	30	80	
			LEAR	2337.0	0354.0	CONT		1	55	180	
			LEAR	2337.0	2338.0	III		2	25	180	
			CULG	2341.0	2354.0	II	UE	1	35	90	
			LEAR	2341.0	2353.0	II		1	34	94	ESS 0383
			PALE	2345.0	2353.0	II		1	34	62	ESS 0386
07	0000	0700	CULG	0000.0E	0025.0	III	N	1	20	180	
			CULG	0002.0	0123.0	I	S,C	1	57	160	
			LEAR	0005.0	0906.0	III	N	1	25	180	
			CULG	0124.0	0124.0	III	B	3	18	450	
			HOLL	0124.0	0124.0	III		2	25	180	
			LEAR	0124.0	0124.0	III		2	25	180	
			PALE	0124.0	0124.0	III		2	25	180	
	0000	0954	HIRA	0124.0	0125.0	III	B	3	25X	460	
			CULG	0147.0	0220.0	III	N	1	20	180	
			LEAR	0218.0	0220.0	III		2	25	180	
			HIRA	0218.5	0221.0	III	G	2	25X	240	
			CULG	0220.0	0220.0	III	B	3	18	200	
			PALE	0220.0	0220.0	III		2	25	180	
			CULG	0307.0	0309.0	III	G	1	30	330	
			HIRA	0307.0	0309.0	III	G	1	25X	500	
			CULG	0324.0	0325.0	III	G	1	120	180	
			CULG	0347.0	0350.0	III	G	2	30	260	
			HIRA	0347.5	0350.0	III	G	2	25X	270	
	0336	1849	POTS	0347.5	0350.2	III	GG	2	40X	320	100-200MHz no data
			SVTO	0349.0	0349.0	III		1	25	180	
			POTS	0358	1849 U	I	S,N	2	200U	350	
	0415	0602	ONDR								
			SVTO	0519.0	0520.0	III		1	25	180	
			CULG	0520.0	0521.0	III	G	2	57U	330	
			POTS	0520.4	0522.4	III	GG	2	55	400X	
			HIRA	0520.5	0521.0	III	B	3	50	500	
			CULG	0529.0	0533.0	III	G	1	25	180	
			HIRA	0529.0	0532.0	III	G	1	25X	200	
			SVTO	0529.0	0532.0	III		1	25	147	
			POTS	0529.3	0531.7	III	GG	1	45X	230	
			CULG	0541.0	0541.0	III	B	1	57	180	
			HIRA	0541.0	0541.5	III	B	1	100	400	
			SVTO	0541.0	0541.0	III		1	113	180	
			POTS	0541.2	0546.5	III	GG,N	2	200U	400X	
			CULG	0546.0	0546.0	III	B	1	57	180	
	0600	1200	IZMI	0600.0E	1200.0D	I	S	1	130	270X	
			SVTO	0607.0	0610.0	III		1	25	180	
			IZMI	0607.2	0614.0	III	GG	2	110	270X	
			POTS	0607.2	0611.1	III	GG	2	40X	400X	
			IZMI	0607.9	0610.8	III	GG,C	2	25X	270X	
			CULG	0608.0	0610.0	III	G	2	30	500	
			HIRA	0608.0	0610.0	III	G	2	30	500	
			LEAR	0608.0	0610.0	III		2	25	180	
			IZMI	0609.4	0609.7	V		2	45	160	
			SVTO	0619.0	0726.0	III	N	1	25	180	
			CULG	0624.0	0648.0	III	N	1	40	180	
			IZMI	0624.4	0624.7	III	G,C	2	40	270X	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
07			POTS	0624.4	0624.7	III	G	2	40X	330	
			IZMI	0635.6	0637.1	III	G,C	2	40	250	
			POTS	0636.9	0637.2	III	B	2	40X	340	
			IZMI	0643.4	0646.4	III	G	1	45	155	
			IZMI	0647.3	0647.8	III	G	2	35	190	
			IZMI	0653.5	0700.3	III	G	1	45	170	
	0700	1815	BLEN								
			IZMI	0702.5	0703.2	III	GG	2	50	250	
		0	IZMI	0743.6	0750.7	III	N	2	45	95	
			HIRA	0759.0	0801.0	III	G	3	30	240	
			LEAR	0759.0	0801.0	III		2	25	180	
			SVTO	0759.0	0801.0	III		2	25	180	
			IZMI	0759.3	0803.2	III	GG,C	2	25X	270X	
			POTS	0759.3	0801.6	III	GG	3	40X	390	
			SVTO	0810.0	0821.0	III		1	25	180	
			SVTO	0810.0	0821.0	III	N	1	25	180	
			IZMI	0810.4	0820.0	III	GG	2	25X	200	
			POTS	0810.4	0818.8	III	GG	2	40X	85U	
			HIRA	0813.5	0814.5	III	G	1	30	130	
			IZMI	0840.4	0840.5	III	B	1	80	95	
			POTS	0854.3	0857.1	III	GG	2	40X	85U	
			IZMI	0854.5	0857.0	III	GG	2	25X	175	
			HIRA	0855.0	0857.0	III	G	1	25X	120	
			SVTO	0855.0	0856.0	III		2	25	138	
			IZMI	0901.1	0901.6	III	B	1	50	95	
			IZMI	0904.1	0908.3	III	GG,C	2	45	270X	
			IZMI	0927.2	0928.5	III	G C	1	45	160	
			POTS	0927.2	0928.5	III	G	1	40X	85U	
			IZMI	0944.2	0944.8	III	G	1	45	165	
			POTS	0944.2	0944.8	III	G	1	40X	85U	
			SVTO	0951.0	0958.0	III		2	25	180	
			IZMI	0951.7	0958.4	III	GG	2	25X	270X	
			POTS	0951.7	0958.3	III	G,N	3	40X	400X	
			IZMI	1013.3	1013.5	III	B	2	50	155	
			IZMI	1019.8	1019.9	III	B	1	50	85	
			SVTO	1027.0	1028.0	III		1	25	83	
			IZMI	1027.4	1028.0	III	G,C	2	25X	95	
			POTS	1027.4	1028.3	III	G	2	40X	85U	
			IZMI	1109.0	1109.4	III	G	1	55	160	
			IZMI	1152.9	1153.0	III	G	1	125	270	
			SVTO	1321.0	1324.0	III		2	25	180	
			SGMR	1322.0	1323.0	III		2	30	80	
			POTS	1322.1	1323.7	III	G	3	40X	230	
			SVTO	1347.0	1347.0	III		1	25U	180U	
			SVTO	1408.0	1648.0	III	N	1	25	180	
			PALE	1936.0	1945.0	III		1	25	180	
	1918	2400	HIRA	1936.5	1938.0	III	G	2	40	370	
			SGMR	1937.0	1945.0	III		2	30	80	
			HOLL	2040.0	2042.0	III		1	25	57	
			PALE	2040.0	2042.0	III		1	25	180	
			SGMR	2040.0	2042.0	III		2	30	55	
			HIRA	2040.5	2042.5	III	G	1	25X	210	
	2100	2400	CULG	2100.0E	2343.0	I	S	1	100	280	
			HIRA	2132.5	2134.5	III	G	2	80	300	
			CULG	2133.0	2135.0	III	G	1	70	290	
			CULG	2147.0	2147.0	III	B	1	20	65	
			CULG	2213.0	2213.0	III	B	1	20	90	
			CULG	2236.0	2238.0	III	G	1	260	390	
			PALE	2304.0	2312.0	III		1	25	60	
			CULG	2305.0	2313.0	III	GG	1	20	180	
08	0000	0700	CULG	0029.0	0029.0	III	B	1	57U	90	
			LEAR	0201.0	0201.0	III		1	64	180	
			CULG	0202.0	0202.0	III	B	1	57U	200	
			LEAR	0332.0	0341.0	III		1	25	180	
	0000	0955	HIRA	0332.0	0343.0	III	G	1	30	300	
			CULG	0333.0	0335.0	III	G	1	23	320	
			PALE	0333.0	0338.0	III		1	25	126	
	0336	1849	POTS	0336 E	1849 U	I	S,N	2	200U	370	100-200MHz no data

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
08			CULG	0337.0	0340.0	III	G	1	30	180	
			CULG	0449.0	0501.0	III	G	1	57U	180	
	0600	1200	IZMI	0600.0E	1200.0D	I	S	1	50	270X	
			IZMI	0600.5	0600.6	III	B	1	45	90	
			IZMI	0607.8	0609.8	III	G	1	45	90	
			LEAR	0623.0	0624.0	III		1	25	180	
			SVTO	0623.0	0624.0	III		1	25	180	
			IZMI	0623.8	0624.6	III	GG,C	2	25X	270X	
			POTS	0623.8	0624.5	III	G	2	40X	400X	
			CULG	0624.0	0625.0	III	G	1	40	180	
			HIRA	0624.0	0624.5	III	B	1	50	210	
			CULG	0641.0	0641.0	III	B	1	40	180	
			IZMI	0641.4	0641.9	III	G	2	45	240	
			IZMI	0646.1	0646.2	III	B	2	60	260	
			IZMI	0652.9	0654.0	III	G	1	45	85	
			IZMI	0729.2	0732.1	III	GG	1	50	85	
			POTS	0808.9	0810.1	III	G	2	40X	340	
			IZMI	0809.0	0810.1	III	G,C,FS	1	45	270X	
			IZMI	0816.8	0817.3	III	GG,FS	2	45	200	
			IZMI	0941.2	0941.5	III	B	1	45	85	
			POTS	1029.7	1030.2	DCIM		2	330	400X	
			POTS	1038.7	1040.1	DCIM		1	340	400X	
			SVTO	1043.0	1046.0	III		2	25	180	
			IZMI	1043.7	1046.4	III	GG,C	2	25X	270X	
			POTS	1043.7	1046.6	III	GG	3	40X	400X	
			SVTO	1119.0	1506.0	III	N	1	25	180	
			IZMI	1122.8	1123.0	III	G	1	45	150	
			IZMI	1134.5	1135.4	III	G	1	50	250	
			POTS	1134.8	1147.8	III	G,N	2	40X	250	
			IZMI	1145.5	1148.4	III	GG	2	25X	95	
			POTS	1300.9	1301.3	III	B,U	2	60	240	
			HOLL	1309.0	1309.0	III		1	25	71	
			SGMR	1309.0	1309.0	III		1	30	60	
			POTS	1309.2	1310.2	III	G	2	40X	370	
			POTS	1311.0	1318.8	DCIM		2	220	400X	
			POTS	1315.8	1316.2	III	B	1	40X	80	
			HOLL	1629.0	1629.0	III		1	25	155	
			PALE	1629.0	1629.0	III		1	125	71	
			POTS	1629.0	1632.4	III	G	2	40X	310	
			SGMR	1629.0	1645.0	III	N	2	30	80	
			SVTO	1629.0	1629.0	III		1	25	150	
			HOLL	1644.0	1955.0	III	N	1	25	87	
			SVTO	1644.0	1754.0	III	N	1	25	142	
			SGMR	2040.0	2048.0	III		2	30	80	
	2000	2400	HIRA	2040.5	2048.5	III	G	2	25X	230	
	2100	2400	CULG	2115.0	2152.0	III	N	1	23	180	
			HOLL	2236.0	2350.0	III	N	1	25	180	
			CULG	2237.0	2242.0	III	G	2	20	180	
			HIRA	2237.0	2242.0	III	G	1	25X	200	
			PALE	2238.0	0455.0	III	N	1	25	180	
			CULG	2256.0	2256.0	III	B	1	25	180	
			CULG	2303.0	2400.0D	I	S	1	140	180	
			HIRA	2308.5	2309.5	III	G	1	30	200	
			CULG	2309.0	2310.0	III	G	3	20	200	
			CULG	2315.0	2316.0	III	G	1	25	130	
			CULG	2355.0	2358.0	III	G	1	27	180	
09	0000	0700	CULG	0000.0E	0056.0	I	S	1	140	180	
			CULG	0002.0	0007.0	III	G	1	23	160	
			LEAR	0002.0	0006.0	III		1	25	180	
	0000	0749	HIRA	0004.0	0004.5	III	B	1	60	200	
			CULG	0016.0	0016.0	III	B	1	40	150	
			CULG	0107.0	0107.0	III	B	1	45U	180	
			CULG	0132.0	0246.0	III	N	1	23	180	
			HIRA	0132.0	0139.0	III	G	1	25X	290	
			LEAR	0132.0	0140.0	III		1	25	180	
			LEAR	0148.0	0150.0	III		1	25	173	
			HIRA	0148.5	0151.0	III	G	1	40	210	
			LEAR	0206.0	0207.0	III		1	25	166	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
09			HIRA	0206.5	0207.0	III	B	1	25X	80	
			LEAR	0242.0	0245.0	III		1	25	180	
			HIRA	0244.5	0245.0	III	B	1	25X	130	
			CULG	0316.0	0424.0	III	N	2	20	350	
			HIRA	0316.0	0347.0	III	G	2	25X	300	
			LEAR	0316.0	0346.0	III	N	1	25	180	
	0336	0647	POTS	0337.8	0347.0	III	G,N	2	40X	380	100-200MHz no data
			SVTO	0344.0	0346.0	III		1	25	180	
			POTS	0350 U	1849 U	I	S,N,DC	1	200U	400X	
			HIRA	0407.0	0421.0	III	B	1	30	210	
			LEAR	0407.0	0423.0	III	N	1	25	180	
			SVTO	0407.0	0423.0	III	N	1	25	180	
			POTS	0407.1	0420.4	III	G,N	2	40X	370	
			POTS	0446	0448	DCIM		2	200U	400X	
			CULG	0508.0	0555.0	III	N	2	20	290	
			SVTO	0508.0	0907.0	III	N	2	25	180	
			HIRA	0508.5	0511.0	III	G	1	50	300	
			POTS	0509.0	0521.4	III	G,N	2	40X	370	
			POTS	0519.5	0519.9	DCIM		2	270	400X	
			HIRA	0528.0	0535.0	III	G	1	30	300	
			POTS	0528.5	0540.7	III	GG,N	2	40X	400X	
			CULG	0529.0	0529.0	III	B	3	27	250	
			CULG	0532.0	0532.0	III	B	3	18	90	
			CULG	0537.0	0700.0D	III	N	1	27	300	
			HIRA	0540.0	0544.5	III	G	1	90	310	
			IZMI	0554.7	0558.4	III	GG,C	2	30	95U	
			POTS	0555.7	0557.8	DCIM		1	270	400X	
	0430	1815	BLEN	0555.7	0557.7	III	GG,RS	2	100X	430	
			HIRA	0556.0	0558.0	III	G	1	80	240	
			POTS	0556.1	0557.9	III	G,U	2	40X	270	
	0606	1208	IZMI	0606.0E	1208.0D	I	S	1	120	270X	
			POTS	0615.2	0615.5	III	G	1	200U	320	
			POTS	0616.2	0616.9	DCIM		2	260	400X	
			IZMI	0622.6	0624.6	III	G	2	45	175	
			LEAR	0629.0	0632.0	III		1	64	180	
			IZMI	0629.6	0632.1	III	GG,FS	2	45	270X	
			POTS	0631.9	0632.1	III	B	1	50	270	
			IZMI	0648.1	0654.3	III	GG	2	45	250	
			LEAR	0653.0	0741.0	III	N	1	25	180	
			IZMI	0655.8	0704.1	III	GG,C,FS	2	25X	270X	
			BLEN	0700.3	0709.8	III	GG	2	100X	1200	
			HIRA	0700.5	0703.5	III	G	1	100	210	
			IZMI	0706.0	0706.6	III	GG,C	2	55	270X	
		0	IZMI	0717.2	0719.6	III	G,C	2	40	95	
			IZMI	0726.9	0727.0	III	B	2	40	95	
			IZMI	0730.8	0734.7	III	GG	2	25X	270X	
	0734	1833	POTS	0734.0	0741.4	III	G,N	2	40X	400X	
			IZMI	0735.9	0741.2	III	GG	2	45	250	
			IZMI	0830.8	0831.6	III	G,C	2	45	255	
			POTS	0831.0	0831.5	III	B	2	40X	330	
			IZMI	0842.0	0846.3	III	GG	2	45	270X	
			POTS	0842.0	0908.3	III	GG,N	3	40X	400X	
			LEAR	0846.0	0906.0	III	N	1	25	180	
			IZMI	0846.8	0850.2	III	GG,C	3	25X	270X	
			LEAR	0848.0	0849.0	V		2	25	180	
			SVTO	0848.0	0853.0	III		2	25	180	
			POTS	0848.5	0853.8	V	G,N	3	40X	85	
			IZMI	0852.9	0854.4	III	GG,C	2	25X	270X	
			IZMI	0901.2	0902.2	III	GG,C	2	25X	270X	
			IZMI	0906.5	0907.6	III	G	1	25X	165	
			POTS	0926.3	0926.8	III	G	2	40X	240	
			IZMI	0926.4	0930.2	III	GG	2	45	165	
	0410	1748	ONDR	0950.4	0953.4	DCIM	GG	3	800X	1466	
			SVTO	0953.0	0954.0	III		1	25	83	
			POTS	0953.2	1027.5	III	GG,N	3	40X	310	
			IZMI	0953.3	0954.5	III	GG	2	25X	270X	
			IZMI	0958.7	1002.1	III	GG	2	80	270X	
			BLEN	1000.2	1002.0	III	G,U	2	150	350	
			IZMI	1008.8	1012.8	III	GG	2	40	190	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
09			SVTO	1012.0	1754.0	III	N	2	25	180	
			IZMI	1019.0	1021.5	III	GG,C	1	25X	265	
			ONDR	1019.0	1020.3	DCIM	G	2	800X	1695	
			IZMI	1022.9	1026.3	III	GG,C	2	25X	270X	
			SGMR	1023.0	1024.0	III		1	30	55	
			ONDR	1046.1	1047.4	DCIM	GG	3	1339	2000X	
			POTS	1046.4	1047.2	III	G	2	40X	400X	
			IZMI	1046.6	1047.6	III	G	2	25X	250	
			IZMI	1107.2	1114.0	III	N	1	45	270X	
			IZMI	1116.6	1117.6	III	G	1	45	90	
			IZMI	1121.0	1128.8	III	GG,C,FS	3	25X	270X	
			POTS	1121.1	1148.5	III	GG	3	40X	400X	
			SGMR	1124.0	1136.0	III	N	3	30	80	
			SVTO	1124.0	1129.0	V		3	25	180	
			ONDR	1124.1	1126.5	DCIM	G	2	2000X	4500X	
			ONDR	1124.1	1139.4	DCIM	GG	3	800X	2000X	
			BLEN	1124.2	1128.8	III	GG,C	3	100X	4000X	
			POTS	1124.4	1128.0	V	G	3	40X	85	
			IZMI	1131.7	1138.0	III	GG,C	2	25X	220	
			IZMI	1142.2	1144.4	CONT		1	45	95	
			SVTO	1144.0	1148.0	II		1	40	58	ESS 0789
			IZMI	1145.0U	1146.5	II		2	40	65	
			SGMR	1145.0	1147.0	II		3	42	55	ESS 0750
			IZMI	1153.5	1153.7	III	G	2	50	240	
			IZMI	1203.8	1204.0	III	G	2	50	160	
			POTS	1216.4	1249.8	III	GG,N	2	40X	85U	
			SVTO	1251.0	1754.0	CONT		1	25	180	
			HOLL	1301.0	0149.0	III	N	2	25	180	
			POTS	1301.0	1312.2	III	G,N	3	40X	250	
			SGMR	1301.0	2345.0	III	N	3	30	80	
			POTS	1326.3	1338.2	III	GG,N	2	40X	270	
			POTS	1353.9	1357.7	III	G	2	40X	400X	
			POTS	1413.9	1418.7	III	GG	2	40X	400X	
			BLEN	1436.7	1443.4	III	GG,RS	2	100X	2440	
			POTS	1437.0	1450.7	III	GG	3	40X	400X	
			BLEN	1445.2	1450.3	III	GG,RS	2	100X	600	
			POTS	1512.6	1513.3	III	G	2	45	85U	
			POTS	1530.6	1541.4	III	G,N	2	40X	370	
			POTS	1558.9	1605.7	III	GG,RS	2	40X	400X	
			ONDR	1627.0	1628.5	DCIM	GG	3	800X	2000X	
			BLEN	1627.7	1628.7	III	GG,RS	3	100X	2100	
			POTS	1627.7	1651.4	III	GG,N	2	40X	400X	
			ONDR	1628.2	1628.4	DCIM	G	1	2000X	4500X	
			BLEN	1635.0	1642.8	III	GG,RS	3	100X	1700	
			PALE	1640.0	1651.0	III		2	25	180	
			BLEN	1645.3	1651.1	III	GG	2	100X	800	
			ONDR	1703.5	1707.0	DCIM	GG	2	800X	2000X	
			BLEN	1703.7	1714.2	III	GG,C	3	250	4000X	
			POTS	1713.5	1715.3	DCIM		2	250	400X	
			PALE	1734.0	1735.0	III		1	25	54	
			PALE	1810.0	0455.0	III	N	1	25	92	
			POTS	1824	1849 U	DCIM		2	270	400X	
			PALE	1900.0	1903.0	III		2	25	180	
			PALE	2016.0	2017.0	III		2	25	180	
			PALE	2109.0	2112.0	III		2	25	180	
	2100	2400	CULG	2110.0	2112.0	III	G	3	20	550	
			CULG	2117.0	2118.0	III	G	3	18	170	
			CULG	2136.0	2139.0	III	G	1	350	1000	
			CULG	2138.0	2152.0	II	FN	3	30	180	
			CULG	2138.0	2152.0	II	SH	3	60	360	ESS 550
			HOLL	2138.0	2152.0	II		2	43	180	ESS 1134
			PALE	2139.0	2152.0	II		1	25	180	ESS 0502
			CULG	2140.0	2147.0	CONT		1	400	800	
			SGMR	2142.0	2148.0	II		3	44	80	ESS 0480
			CULG	2208.0	2358.0	III	N	1	23	230	
			CULG	2209.0	2311.0	IV		1	200	700	
			CULG	2231.0	2231.0	III	B	2	27	180	
			CULG	2248.0	2248.0	III	B	2	18	57	
			HOLL	2307.0	0100.0	CONT		1	84	180	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
09			CULG	2317.0	2317.0	III	B	3	18	90	
			CULG	2334.0	2338.0	III	G	3	18	80	
			LEAR	2339.0	0414.0	CONT		1	50	180	
			LEAR	2339.0	0712.0	III	N	1	25	180	
			CULG	2346.0	2347.0	III	G	3	20	170	
			CULG	2354.0	2354.0	III	B	2	40	180	
			CULG	2359.0	2400.0D	IV		1	300	500	
10	0000	0700	CULG	0000.0E	0014.0	IV		1	260	660	
			CULG	0017.0	0238.0	III	N	1	18	180	
			CULG	0024.0	0024.0	III	B	2	35U	800	
			CULG	0029.0	0029.0	III	B	1	300	550	
			CULG	0040.0	0042.0	III	G	1	290	500	
			CULG	0125.0	0126.0	III	G	2	18	180	
	0047	0330	HIRA	0125.0	0128.5	III	G	1	25X	220	
			CULG	0126.0	0127.0	III	G	1	360	550	
			HIRA	0148.5	0151.0	III	G	1	40	220	
			HIRA	0225.0	0226.0	III	G	1	40	200	
			HIRA	0232.0	0232.5	III	B	1	25X	260	
			HIRA	0234.5	0236.0	III	G	2	30	200	
			CULG	0235.0	0235.0	III	G	2	20	230	
			CULG	0355.0	0356.0	III	G	1	40	130	
			SVTO	0355.0	0409.0	III	N	1	25	180	
			CULG	0402.0	0409.0	III	G	2	30	180	
	0336	1849	POTS	0402.4	0409.4	III	G	1	40X	85U	100-200MHz no data
			POTS	0420.0	0421.2	DCIM		2	200	400X	
			POTS	0422	0923	I	S,N	1	200U	380	
	0430	1810	BLEN	0448.2	0450.2	III	GG,C	3	100X	2000	
			CULG	0449.0	0450.0	III	G	3	20	800	
			LEAR	0449.0	0450.0	III		2	25	180	
			SVTO	0449.0	0450.0	III		2	25	180	
			POTS	0449.1	0450.0	III	G	3	40X	400X	
			POTS	0449.5	0450.3	V	B	3	40X	80	
			POTS	0551.7	0552.7	DCIM		3	200U	400X	
			CULG	0552.0	0552.0	III	B	1	120	360	
	0500	0956	HIRA	0552.0	0552.5	III	B	1	210	400	
	0552	1203	IZMI	0552.3	0552.6	III	G,C	2	120	270X	
			IZMI	0602.2	0603.5	III	G	1	50	155	
			POTS	0607.6	0612.8	III	G,N	2	40X	280	
			CULG	0608.0	0613.0	III	G	1	25	180	
			SVTO	0608.0	0612.0	III		1	25	158	
			IZMI	0608.1	0614.1	III	G,G	2	40	270X	
			HIRA	0609.0	0613.0	III	G	1	40	210	
			IZMI	0627.0U	1116.0	III	N	1	45	95	
			SVTO	0648.0	0648.0	III		1	25	141	
			IZMI	0648.1	0649.2	III	G	1	25X	160	
			POTS	0648.6	0648.8	III	B	1	40X	250	
			CULG	0649.0	0649.0	III	B	1	40	150	
			LEAR	0750.0	0752.0	III		1	44	135	
			IZMI	0751.9	0752.2	III	G,HARM	2	45	155	
			IZMI	0800.0	0804.4	III	GG,C,F,S	2	25X	270X	
			LEAR	0800.0	0803.0	III		1	25	180	
			SVTO	0800.0	0803.0	III		2	25	180	
	0414	1748	ONDR	0800.3	0805.3	DCIM		1	800X	1948	
			HIRA	0800.5	0802.5	III	B	2	30	500	
			POTS	0800.8	0835 U	III	GG,N	3	40X	400X	
			LEAR	0813.0	0817.0	III		2	25	180	
			IZMI	0813.8	0822.3	III	GG,C	2	25X	270X	
			HIRA	0814.0	0817.0	III	G	2	25X	500	
			SVTO	0814.0	0817.0	III		2	25	180	
			SVTO	0818.0	1755.0	CONT		1	25	170	
			IZMI	0830.7	0839.5	III	G,C,F,S	3	25X	270X	
			SVTO	0831.0	0840.0	III		2	25	180	
			LEAR	0833.0	0838.0	III		2	25	180	
			BLEN	0833.7	0839.6	III	GG,C,S	3	100X	4000X	
			POTS	0835	0841.4	IV	FS	3	40X	400X	
			HIRA	0835.0	0838.0	III	G	3	25X	400	
			ONDR	0835.2	0837.3	DCIM	G	2	2000X	4500X	
			ONDR	0835.2	0838.3	DCIM	GG,SP	2	800X	2000X	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
10			IZMI	0837.5	0840.4	III	UNCUF,FS	2	25X	55	
			IZMI	0838.0U	0845.0U	CONT		1	45	95	
			IZMI	0845.0U	1115.0U	I	N	2	80	260	
			IZMI	0921.7	0921.9	III	G	1	185	270X	
			POTS	0946.7	0947.0	III	B	1	40X	85	
			POTS	1002.8	1010.1	III	G,N	1	40X	65	
			POTS	1004	1849 U	I	S,N	2	220	400X	
			BLEN	1004.2	1021.7	DCIM	P	3	100X	2000	
			SVTO	1014.0	1017.0	III		2	25	180	
			POTS	1014.4	1115	III	GG,N	3	40X	400X	
			IZMI	1014.5	1017.3	III	GG,C	2	25X	270X	
			ONDR	1014.5	1017.2	DCIM	GG,SP	2	800X	1958	
			SGMR	1015.0	1111.0	III	N	2	30	70	
			ONDR	1015.2	1016.5	DCIM	G,W	1	2000X	4500X	
			POTS	1015.8	1016.9	V	G	3	40X	80	
			SVTO	1036.0	1037.0	III		2	25	180	
			IZMI	1036.2	1037.7	III	GG,C	2	25X	270X	
			IZMI	1042.8	1043.8	III	G	2	35	140	
			BLEN	1044.8	1049.7	II		2	380	560	
			BLEN	1055.9	1116.3	DCIM	P,C	3	140	1400	
			ONDR	1056.2	1059.0	DCIM	G	2	800X	2000X	
			ONDR	1057.0	1059.2	DCIM	G	1	2000X	4500X	
			SVTO	1057.0	1113.0	III	N	3	25	180	
			IZMI	1057.2	1057.8	III	G,C	2	25X	215	
			SGMR	1105.0	1109.0	V		3	30	80	
			IZMI	1105.3	1114.0	III	GG,C,F,S	2	25X	270X	
			ONDR	1106.0	1114.0	DCIM	G	1	2000X	4500X	
			ONDR	1106.1	1114.1	DCIM	GG	2	800X	2000X	
			IZMI	1115.0	1203.0D	I	S,DS	2	45U	270X	
			POTS	1116	1228 U	III	GG,N	2	40X	85U	
			IZMI	1116.0	1203.0D	III	S	1	45	95	
			IZMI	1144.2	1144.9	III	G	1	45	155	
			IZMI	1149.5	1149.7	III	B	1	25X	95	
			HOLL	1223.0	0100.0	CONT		1	29	148	
			POTS	1228 U	1259	III	GG,N	2	40X	330	
			POTS	1317.5	1320.5	UNCLF		2	65	85	
			POTS	1335	1350	III	G,N	2	40X	230	
			HOLL	1343.0	1345.0	III		1	25	168	
			HOLL	1407.0	1439.0	III	N	2	25	170	
			SVTO	1407.0	1413.0	III		3	25	180	
			POTS	1407.2	1413.8	III	G,N	3	40X	300	
			BLEN	1407.6	1408.6	DCIM	P	3	360	900	
			POTS	1427.8	1439.4	III	GG,N	2	40X	370	
			SVTO	1428.0	1651.0	III	N	2	25	180	
			BLEN	1521.3	1527.8	DCIM	P	3	100X	1600	
			POTS	1521.3	1529.4	III	GG,N	3	40X	400X	
			ONDR	1522.5	1538.1	DCIM	GG	2	800X	2000X	
			SVTO	1523.0	1524.0	III		3	25	180	
			ONDR	1523.1	1524.2	DCIM	G	1	2000X	4500X	
			ONDR	1618.0	1631.3	DCIM	GG,SP	2	800X	2000X	
			BLEN	1618.3	1631.5	DCIM	P	3	100X	4000X	
			SVTO	1620.0	1622.0	III		2	25	180	
			ONDR	1620.5	1622.4	DCIM	G	2	2000X	4500X	
			POTS	1620.6	1631.0	III	GG,N	3	40X	400X	
			ONDR	1629.0	1632.5	DCIM	GG	2	2557	4500X	
			PALE	1629.0	1632.0	III		2	25	180	
			SVTO	1629.0	1632.0	III		3	25	180	
	1917	2400	HIRA	2000.5	2003.0	III	G	1	25X	200	
			HIRA	2009.5	2011.0	III	G	2	25X	210	
			HIRA	2027.5	2029.0	III	G	1	25X	110	
			PALE	2118.0	2120.0	III		3	25	180	
	2100	2400	CULG	2118.0	2120.0	III	G	3	20	400	
			HIRA	2118.5	2120.0	III	B	3	25X	380	
			CULG	2156.0	2156.0	III	B	1	25	140	
			CULG	2204.0	2204.0	III	B	1	23	180	
			HOLL	2234.0	2235.0	III		1	25	180	
			HIRA	2234.5	2235.5	III	B	2	25X	210	
			CULG	2235.0	2235.0	III	G	3	18	280	
			CULG	2254.0	2254.0	III	B	1	27	90	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
11			HOLL	0019.0	0020.0	III		1	25	118	
			LEAR	0019.0	0020.0	III		1	25	180	
	0000	0956	HIRA	0019.5	0020.0	III	B	1	25X	80	
	0000	0700	CULG	0020.0	0020.0	III	B	1	20	110	
			LEAR	0151.0	0353.0	CONT		1	88	180	
			CULG	0251.0	0251.0	III	B	1	23	90	
	0600	1200	IZMI	0635.0U	0730.0U	I	N	1	210	270X	
			LEAR	0649.0	0650.0	III		1	25	147	
			SVTO	0649.0	0649.0	III		1	25	81	
			HIRA	0649.5	0650.0	III	B	1	40	100	
			IZMI	0649.5	0652.0	III	G	2	25X	175	
			CULG	0650.0	0650.0	III	B	1	23	180	
			IZMI	0657.5	0657.8	III	G	1	180	270X	
			IZMI	0703.5	0703.6	III	B	1	45	95	
			IZMI	0714.1	0716.6	III	G	1	45	95	
			LEAR	0743.0	0752.0	III		1	25	180	
			IZMI	0743.2	0744.7	III	G	2	45	250	
			SVTO	0751.0	0752.0	III		2	25	180	
			HIRA	0751.5	0752.0	III	B	2	40	170	
			IZMI	0751.6	0752.3	III	G,C	2	25X	185	
			IZMI	0829.0	0831.6	III	GG	1	45	180	
			LEAR	0829.0	0829.0	III		1	85	180	
			LEAR	0855.0	0858.0	III		1	25	180	
			HIRA	0855.5	0859.0	III	G	2	25X	230	
			IZMI	0855.7	0856.4	III	GG,C	2	25X	270X	
			SVTO	0856.0	0906.0	III	N	2	25	180	
			IZMI	0856.1	0856.8	V		2	25X	70	
			IZMI	0857.3	0858.3	III	GG,C	2	25X	170	
			IZMI	0857.9	0858.9	V		2	25X	60	
			IZMI	0905.9	0906.5	III	G,C	2	45	265	
			HIRA	0906.0	0906.5	III	B	1	50	210	
			HIRA	0936.0	0936.5	III	B	1	80	230	
			IZMI	0936.0	0936.2	III	G	2	40	260	
			SVTO	0936.0	0941.0	III		1	35	180	
			HIRA	0940.0	0941.5	III	G	1	80	230	
			IZMI	0940.2	0941.7	III	GG	2	40	270X	
	0414	1149	ONDR	0955.3	0956.4	DCIM	GG	2	800X	2000X	
	0430	1810	BLEN	0955.5	0956.8	III	GG,U	2	230	1600	
			SVTO	1051.0	1059.0	III		1	25	53	
			IZMI	1051.1	1053.4	III	GG	1	25X	170	
			IZMI	1057.4	1104.3	III	GG	1	25X	160	
			IZMI	1113.2	1118.0	III	GG	1	45	95	
			IZMI	1133.7	1139.2	III	G	1	25X	190	
			SVTO	1136.0	1137.0	III		1	25	50	
			SVTO	1220.0	1220.0	III		1	25	52	
			HOLL	1311.0	1311.0	III		1	38	180	
			SGMR	1311.0	1312.0	III		2	30	80	
			SVTO	1311.0	1312.0	III		2	25	180	
			SVTO	1326.0	1326.0	III		1	25	51	
			SVTO	1344.0	1755.0	III	N	2	25	180	
			HOLL	1353.0	1354.0	III		1	25	140	
			SGMR	1353.0	1629.0	III	N	3	30	80	
			ONDR	1358.5	1412.5	DCIM	G	2	800X	1620	
			ONDR	1451.1	1451.3	DCIM	GG	2	800X	2000X	
			BLEN	1516.6	1628.6	III	GG,C	2	100X	4000X	
			ONDR	1626.5	1631.0	CONT		1	800X	2000X	
			ONDR	1626.5	1631.0	CONT		2	2000X	4500X	
			SGMR	1727.0	1728.0	III		3	30	80	
			BLEN	1727.2	1753.9	DCIM	P,S	3	280	1000	
			ONDR	1732.5	1749.4	DCIM	G	2	800X	2000X	
			SGMR	1836.0	1837.0	III		3	30	80	
			PALE	1909.0	0316.0	III	N	1	25	180	
			PALE	2004.0	2008.0	III		2	25	180	
			SGMR	2004.0	2008.0	III		3	30	80	
	1917	2400	HIRA	2004.5	2009.0	III	G	3	25X	400	
			HIRA	2010.0	2023.0	II		1	50	170	
			HIRA	2010.0	2023.0	II		1	80	310	
			SGMR	2017.0	2020.0	II		2	34	42	ESS 0490
			PALE	2018.0	2023.0	II		1	25	46	ESS 0513

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
11			SGMR	2032.0	2035.0	III		2	30	55	
	2100	2400	CULG	2100.0E	2400.0D	III	S,C	1	23	180	
			SGMR	2122.0	2216.0	III	N	3	30	80	
			HIRA	2122.5	2124.0	III	G	1	25X	320	
			CULG	2123.0	2123.0	III	G	2	23	290	
			PALE	2132.0	2136.0	III		2	25	180	
			CULG	2133.0	2136.0	III	G	3	20	350	
			HIRA	2133.0	2135.5	III	G	2	25X	400	
			CULG	2149.0	2149.0	III	B	2	20	70	
			HIRA	2211.5	2216.0	III	G	2	25X	500	
			CULG	2212.0	2216.0	III	G	3	20	500	
			HOLL	2338.0	2340.0	III		1	25	150	
			HIRA	2338.5	2340.5	III	G	1	30	320	
			CULG	2339.0	2340.0	III	G	2	23	180	
			LEAR	2341.0	0500.0	CONT		1	52	180	
12	0000	0700	CULG	0000.0E	0700.0D	III	S,C	1	20	180	
			HOLL	0109.0	0111.0	III		1	25	90	
			LEAR	0109.0	0649.0	III	N	2	25	180	
			HOLL	0122.0	0151.0	III	N	1	25	180	
			CULG	0253.0	0254.0	III	G	2	35	180	
	0000	0957	HIRA	0253.0	0254.0	III	G	1	30	200	
			SVTO	0503.0	0613.0	III	N	2	25	180	
			HIRA	0535.5	0536.5	III	B	1	30	200	
			CULG	0536.0	0537.0	III	G	2	20	180	
	0600	1200	IZMI	0600.0E	1200.0D	I	S	1	110	270X	
			IZMI	0603.1	0609.6	III	GG	1	110	170	
			IZMI	0606.8	0607.3	III	G	2	220	270X	
			IZMI	0622.2	0623.9	III	GG	1	140	270X	
			CULG	0628.0	0631.0	III	G	1	260	670	
			CULG	0649.0	0651.0	III	G	1	130	530	
			IZMI	0649.2	0651.7	III	GG	2	130	270X	
	0430	1810	BLEN	0649.2	0654.6	III	GG	2	140	600	
			BLEN	0700.2	0714.0	III	GG	2	140	1200	
			IZMI	0713.5	0713.6	III	B	1	45	85	
	0414	1749	ONDR	0804.3	0813.3	DCIM	G	2	800X	2000X	
			BLEN	0804.5	0930.0	III	GG,RS	1	230	1400	
			ONDR	0827.4	0829.2	DCIM	G,W	1	2850	4500X	
			ONDR	0856.4	0857.5	DCIM	G	2	800X	1939	
			SVTO	0900.0	1045.0	III	N	1	25	80	
			IZMI	0900.8	0901.5	III	G	1	145	210	
			ONDR	1022.2	1055.3	DCIM	GG	2	800X	1934	
			BLEN	1023.8	1028.4	III	GG	3	210	1900	
			IZMI	1034.0	1034.5	III	G	1	50	85	
			IZMI	1121.2	1121.4	III	B	1	45	90	
			ONDR	1141.1	1147.1	DCIM	GG	1	800X	1498	
			BLEN	1141.9	1148.5	III	GG	3	230	1800	
			SGMR	1204.0	1204.0	III		3	30	80	
			SVTO	1204.0	1204.0	III		2	25	180	
			BLEN	1255.3	1259.2	III	GG	2	230	900	
			BLEN	1400.1	1408.8	III	GG,H	3	250	1450	
			ONDR	1400.1	1400.5	DCIM	G	2	800X	1442	
			HOLL	1403.0	1404.0	III		1	25	140	
			SGMR	1403.0	1404.0	III		2	30	80	
			SVTO	1403.0	1404.0	III		2	25	148	
			HOLL	1435.0	1436.0	III		2	25	84	
			SVTO	1435.0	1436.0	V		2	25	142	
			SVTO	1458.0	1502.0	III		1	25	63	
			SVTO	1518.0	1519.0	III		1	25	158	
	1917	2400	HIRA								
	2100	2400	CULG	2100.0E	2303.0	I	S	1	100	160	
			CULG	2124.0	2126.0	III	G	1	400	1300	
			CULG	2213.0	2213.0	III	B	1	23	160	
			CULG	2233.0	2235.0	III	G	1	650	1300	
			CULG	2247.0	2248.0	III	G	1	550	850	
			CULG	2249.0	2251.0	III	G	1	30	160	
			HOLL	2249.0	2250.0	III		1	25	85	
			PALE	2249.0	2250.0	III		1	25	63	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
13			LEAR	0006.0	0010.0	III		2	25	180	
			PALE	0006.0	0009.0	III		1	25	155	
			HOLL	0007.0	0009.0	III		1	25	180	
			LEAR	0007.0	0405.0	CONT		1	110	180	
	0000	0700	CULG	0007.0	0009.0	III	G	2	18	210	
	0000	0957	HIRA	0007.0	0008.5	III	G	1	30	280	
			LEAR	0037.0	0906.0	III	N	1	25	180	
	0414	1750	ONDR								
	0430	1810	BLEN	0433.3	0450.2	III	GG,RS	3	420	4000X	
			CULG	0434.0	0435.0	III	G	1	550	1400	
			CULG	0510.0	0510.0	III	B	1	27	45	
			CULG	0536.0	0536.0	III	B	1	27	90	
			SVTO	0536.0	0536.0	III		1	41	80	
	0609	1203	IZMI	0625.0U	0655.0	I	N	1	45	270	
			CULG	0633.0	0700.0D	III	N	1	27	170	
			IZMI	0633.6	0638.6	III	G	1	55	150	
			IZMI	0634.0U	0825.0	III	N	2	45	95	
			SVTO	0638.0	0921.0	III	N	2	25	180	
			IZMI	0655.0	0850.0U	I	S	2	45U	270X	
			IZMI	0706.5	0709.7	III	GG,C	2	25X	155	
			HIRA	0708.0	0709.0	III	B	1	30	100	
			IZMI	0714.5	0715.2	III	G,C	2	30	270X	
			HIRA	0719.5	0721.0	III	G	3	40	300	
			IZMI	0719.6	0721.2	III	GG	2	30	270X	
			IZMI	0719.8	0720.9	V	G	2	40	160	
			IZMI	0814.1	0815.3	III	G	2	25X	180	
			HIRA	0814.5	0815.5	III	G	1	40	130	
			SVTO	0819.0	0906.0	CONT		1	25	180	
			IZMI	0825.0	0854.0U	III	S	2	25X	95U	
			IZMI	0830.7	0834.9	I	GG,DC	2	50	90	
			IZMI	0837.3	0840.8	III	G	2	25X	95	
			IZMI	0850.0	1203.0D	I	N	1	140	270X	
			IZMI	0854.0	0918.0	III	N	1	45	95	
			HIRA	0905.0	0905.5	III	B	1	50	120	
			IZMI	0905.0	0905.1	III	G	2	45	120	
			IZMI	0921.1	0921.4	III	G	1	40	95	
			SVTO	1055.0	1055.0	III		1	25	58	
			IZMI	1055.4	1055.4	III	G	1	25X	95	
			SVTO	1230.0	1250.0	III	N	1	25	56	
			BLEN	1233.5	1233.7	III		2	300	800	
			SVTO	1517.0	1517.0	III		1	36	143	
			HOLL	2106.0	2108.0	V		1	25	180	
	1917	2400	HIRA	2106.5	2108.0	III	G	2	80	200	
	2100	2400	CULG	2107.0	2107.0	III	G	1	57	180	
14	0000	0700	CULG	0008.0	0008.0	III	B	1	150	300	
			CULG	0021.0	0023.0	III	G	3	18X	200	
			HOLL	0021.0	0024.0	III		2	25	180	
			LEAR	0021.0	0024.0	III		2	25	180	
			PALE	0021.0	0025.0	V		2	25	180	
	0000	0958	HIRA	0021.0	0024.0	III	G	3	25X	200	
			CULG	0022.0	0024.0	V		3	20	35	
			CULG	0242.0	0245.0	III	G	1	40	270	
			HIRA	0243.0	0257.0	III	G	1	25X	620	
			LEAR	0249.0	0256.0	III		1	25	180	
			CULG	0250.0	0253.0	III	G	2	18	800	
			CULG	0256.0	0257.0	III	G	1	23	180	
	0414	1750	ONDR								
			CULG	0415.0	0418.0	III	G	1	27	180	
			SVTO	0515.0	0521.0	III		1	25	82	
			CULG	0519.0	0519.0	III	B	1	25	220	
	0430	1815	BLEN	0533.9	0551.1	DCIM	C	2	1200	4000X	
	0600	1200	IZMI	0942.7	0942.8	III	B	1	110	150	
			IZMI	1015.0U	1200.0D	I	N	1	130	270X	
			SVTO	1050.0	1056.0	III		1	25	52	
			SVTO	1208.0	1208.0	III		1	48	180	
			SVTO	1401.0	1406.0	III		1	29	180	
			SVTO	1531.0	1532.0	III		1	34	81	
			SVTO	1657.0	1659.0	III		1	38	154	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
14			SGMR	1658.0	1658.0	III		1	30	55	
	2100	2400	CULG	2127.0	2127.0	III	G	1	25	150	
			CULG	2134.0	2134.0	III	B	1	23	180	
			CULG	2203.0	2203.0	III	B	1	27	180	
			CULG	2238.0	2305.0	III	N	1	20	90	
			HOLL	2303.0	2303.0	III		1	25	109	
			CULG	2324.0	2324.0	III	G	1	23	130	
			HOLL	2324.0	2324.0	III		1	25	114	
			LEAR	2324.0	2324.0	III		1	25	129	
	1917	2400	HIRA	2324.0	2324.5	III	B	1	40	70	
15			LEAR	0004.0	0004.0	III		1	90	162	
	0000	0700	CULG	0004.0	0004.0	III	B	1	100	180	
			CULG	0438.0	0439.0	III	G	1	75	180	
	0000	0959	HIRA	0438.5	0439.0	III	B	1	80	190	
			SVTO	0456.0	0459.0	III		1	25	146	
			CULG	0457.0	0459.0	III	G	1	50U	180	
			HIRA	0457.0	0459.5	III	G	1	25X	280	
	0555	1215	IZMI	1049.3	1049.4D	III	B	1	25X	65	
			IZMI	1055.0	1055.1	III	G	1	50	90	
			SVTO	1252.0	1252.0	III		1	25	53	
			HOLL	1406.0	1409.0	III		1	25	130	
			SGMR	1406.0	1410.0	III		2	30	80	
			SVTO	1406.0	1411.0	III		2	25	180	
	0430	1815	BLEN	1408.3	1411.5	III	GG,U	2	100X	2000	
	0414	1751	ONDR	1409.1	1416.4	DCIM	G	1	800X	2000X	
			BLEN	1416.4	1421.7	DCIM	C	2	200	1500	
			HOLL	1440.0	1505.0	III	N	1	25	90	
			SGMR	1440.0	1505.0	III	N	1	30	65	
			SVTO	1440.0	1505.0	III	N	1	25	82	
			ONDR	1455.2	1456.1	DCIM	G	2	800X	1203	
			BLEN	1455.3	1456.4	III	GG	2	750	1150	
			HOLL	1603.0	1603.0	III		1	25	90	
			SVTO	1603.0	1603.0	III		1	39	125	
	2100	2400	CULG	2115.0	2121.0	III	G	1	30	80	
			CULG	2341.0	2347.0	III	G	3	18	300	
			PALE	2341.0	2346.0	III		2	25	180	
	1917	2400	HIRA	2341.0	2347.0	III	G	3	25X	310	
			SGMR	2342.0	2346.0	III		1	30	40	
			CULG	2343.0	2348.0	CONT		1	200	1800	
			LEAR	2344.0	2346.0	III		2	25	180	
			HIRA	2345.0	0009.0	IV		2	25X	140	
			LEAR	2346.0	0005.0	II		2	25	180	ESS 0871
			LEAR	2346.0	0008.0	IV		1	25	180	
			PALE	2346.0	0006.0	II		2	25	180	ESS 0501
			CULG	2347.0	2400.0D	III	GG	3	20	180	
16	0000	0458	HIRA								
	0000	0700	CULG	0000.0E	0007.0	III	GG	3	20	120	
			CULG	0012.0	0014.0	III	G	1	20	90	
			LEAR	0012.0	0012.0	III		1	25	84	
			PALE	0012.0	0012.0	III		1	25	54	
	0430	1815	BLEN								
	0605	1200	IZMI	0643.4	0643.5	III	G	2	70	130	
			IZMI	0819.3	0819.6	III	B	1	65	90	
	0841	0959	HIRA								
	0414	1751	ONDR	1155.2	1159.5	DCIM	G,W	1	875	2000X	
	1917	2400	HIRA	2245.5	2246.0	III	B	2	40	130	
	2110	2400	CULG	2246.0	2246.0	III	B	3	30	180	
			HOLL	2350.0	0006.0	II		1	25	68	ESS 0281
17	0000	0700	CULG								
	0000	0959	HIRA								
	0414	1752	ONDR								
	0430	1815	BLEN								
	0555	1205	IZMI	0604.5	0604.7	III	B,U	2	155	270	
	2110	2400	CULG	2240.0	2350.0	IV		1	120	1700	
			CULG	2242.0	2242.0	III	B	1	20	57U	
	1917	2400	HIRA	2243.0	2336.0	IV		2	60	2000	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
17			HIRA	2243.5	2244.0	III	B	1	25X	80	
			CULG	2244.0	2244.0	III	B	3	18	180	
			CULG	2245.0	2259.0	III	GG	2	20	800	
			CULG	2248.0	2258.0	II	SH	2	35	180	FLA ESS 1000
			PALE	2248.0	2300.0	II		2	25	180	ESS 0749
			CULG	2250.0	2257.0	II	FN	2	20	50	
			HIRA	2253.0	2255.5	III	G	2	40	800	
			HOLL	2254.0	2258.0	II		1	38	61	ESS 1145
			SGMR	2255.0	2256.0	II		3	45	55	ESS 1000
			CULG	2259.0	2308.0	III	G	1	30	100	
18	0000	0700	CULG								
	0000	0959	HIRA								
	0414	1752	ONDR								
	0430	1815	BLEN								
	0600	1200	IZMI								
			HOLL	1716.0	1717.0	III		1	25	92	
			HOLL	2141.0	2142.0	III		1	25	89	
			PALE	2141.0	2142.0	III		1	25	134	
			SGMR	2141.0	2142.0	III		1	30	50	
	1917	2400	HIRA	2141.0	2142.5	III	G	1	25X	200	
	2110	2400	CULG	2141.0	2142.0	III	G	1	25	180	
			CULG	2216.0	2216.0	III	B	2	23	70	
			HOLL	2228.0	2229.0	III		1	25	90	
			PALE	2228.0	2236.0	III		1	25	123	
			HIRA	2228.5	2229.5	III	G	1	25X	170	
			CULG	2229.0	2240.0	III	G	2	18	180	
19			LEAR	0025.0	0028.0	III		2	25	180	
	0000	0700	CULG	0025.0	0028.0	III	G	2	18	250	
	0000	0959	HIRA	0025.0	0028.0	III	G	1	25X	270	
			HOLL	0026.0	0027.0	III		1	25	173	
			LEAR	0311.0	0312.0	III		1	25	180	
			HIRA	0311.5	0312.0	III	B	1	25X	130	
			CULG	0312.0	0312.0	III	B	1	30	150	
			PALE	0312.0	0312.0	III		1	25	64	
	0414	1753	ONDR								
			CULG	0416.0	0417.0	III	G	1	23	100	
			HIRA	0416.5	0417.0	III	B	1	60	100	
	0430	1815	BLEN								
			CULG	0523.0	0525.0	III	G	1	20	50	
	0600	1200	IZMI	0748.0	0748.0	III	G	1	80	165	
			LEAR	0812.0	0814.0	III		1	25	180	
			IZMI	0812.4	0814.6	III	G	2	25X	250	
			HIRA	0812.5	0813.5	III	G	1	60	220	
			IZMI	0852.1	0852.4	III	G,C	1	55	85	
			IZMI	0919.1	0920.1	III	G	1	45	90	
			IZMI	1112.9	1113.3	III	G	1	25	85	
			HOLL	1812.0	1812.0	III		1	25	80	
			PALE	1812.0	1812.0	III		1	25	60	
			SGMR	1812.0	1812.0	III		1	30	80	
			PALE	1836.0	1848.0	III		1	25	136	
			HOLL	1922.0	1923.0	III		1	25	84	
			SGMR	1922.0	1923.0	III		2	30	80	
	1918	2400	HIRA	1922.0	1923.0	III	G	2	25X	50	
	2110	2400	CULG								
20			LEAR	0250.0	0557.0	III	N	1	76	180	
	0414	1753	ONDR								
	0550	1200	IZMI	0550.0E	1200.0D	I	N	1	170	270X	
			IZMI	0618.0	0620.4	III	G,C	1	25X	175	
	0000	0700	CULG	0618.0	0621.0	III	G	1	30	180	
			IZMI	0620.2	0620.7	III	GG	2	80	270X	
			IZMI	0637.3	0638.1	III	G,C	1	45	95	
			LEAR	0653.0	0656.0	III		1	25	180	
	0000	1000	HIRA	0653.5	0656.0	III	G	1	30	240	
			IZMI	0653.8	0656.8	III	GG,FS	2	25X	270X	
	0430	1815	BLEN	0653.8	0656.1	III	GG,S	2	100X	700	
			CULG	0654.0	0657.0	III	G	1	23	250	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
20			IZMI	0742.7	0745.5	III	G	1	25X	95	
			LEAR	0836.0	0843.0	III		1	25	180	
			IZMI	0836.4	0838.9	III	GG	1	25X	270X	
			BLEN	0836.9	0851.5	III	GG,RS	2	100X	900	
			HIRA	0843.5	0844.0	III	B	1	40	200	
			IZMI	0843.5	0843.6	III	G	2	25X	235	
			IZMI	0932.3	1022.0U	III	N	1	45	95	
			IZMI	0945.9	0952.3	III	GG	2	45	95	
			IZMI	1019.5	1021.8	III	G,U	2	50	95	
			IZMI	1028.1	1028.3	III	B	2	50	90	
			IZMI	1156.5	1156.6	III	G	2	110	160	
			HOLL	1805.0	1805.0	III		1	25	64	
			PALE	1805.0	1805.0	III		1	25	60	
			SGMR	1805.0	1805.0	III		2	30	60	
			HOLL	2225.0	2225.0	III		1	25	84	
	1918	2400	HIRA	2225.0	2225.5	III	B	1	25X	150	
	2110	2400	CULG	2225.0	2226.0	III	G	1	20	180	
			HOLL	2313.0	2313.0	III		1	25	179	
			HIRA	2313.5	2314.0	III	B	2	25X	160	
			CULG	2314.0	2314.0	III	B	3	18	230	
21			HOLL	0012.0	0014.0	III		2	25	180	
			LEAR	0012.0	0015.0	III		2	25	180	
	0000	0700	CULG	0012.0	0015.0	III	G	3	18	900	
	0000	1000	HIRA	0012.0	0015.0	III	G	2	25X	320	
			CULG	0023.0	0028.0	III	G	1	23	650	
			LEAR	0023.0	0026.0	III		1	25	146	
			LEAR	0116.0	0908.0	III	N	1	25	107	
			CULG	0130.0	0551.0	III	N	1	23	180	
			LEAR	0143.0	0151.0	III		1	25	112	
			HOLL	0145.0	0146.0	III		1	25	84	
			CULG	0146.0	0146.0	III	B	3	18X	180	
			HIRA	0146.0	0146.5	III	B	2	25X	50	
			HIRA	0235.0	0236.0	III	G	1	110	300	
			LEAR	0303.0	0307.0	III		2	25	180	
			HIRA	0303.5	0308.0	III	G	2	25X	210	
			CULG	0304.0	0304.0	III	B	3	18	150	
			CULG	0307.0	0308.0	III	G	2	30	140	
	0600	1200	IZMI	0600.0E	1200.0D	I	S	1	110	270X	
			ONDR	0646.5	0647.4	DCIM	G	1	800X	2000X	
	0414	1753	ONDR	0647.0	0647.2	DCIM	G,W	1	2000X	4500X	
	0430	1815	BLEN	0647.0	0647.9	DCIM	S	3	180	4000X	
			IZMI	0749.7	0749.8	III	G,RS	3	50	65	
			IZMI	0755.4	0756.6	III	G	1	45	90	
			ONDR	0834.3	0835.2	DCIM	G	1	964	2000X	
			IZMI	1056.8	1059.9	III	GG	2	60	270X	
			IZMI	1114.5	1114.8	III	G	1	55	190	
			IZMI	1123.7	1123.9	III	G,C	2	110	160	
			BLEN	1307.8	1313.5	DCIM	P	3	100X	4000X	
			ONDR	1308.4	1313.2	DCIM	G	2	2000X	4500X	
			HOLL	1422.0	1449.0	III		1	25	100	
			SGMR	1434.0	1436.0	III		2	30	55	
			HOLL	1724.0	1727.0	III		1	25	175	
			SGMR	1726.0	1727.0	III		2	30	70	
	1918	2400	HIRA								
	2110	2400	CULG	2125.0	2126.0	III	G	1	50	180	
			CULG	2214.0	2214.0	III	G	1	27	150	
22	0000	1000	HIRA	0208.5	0209.0	III	B	1	25X	160	
	0000	0700	CULG	0209.0	0210.0	III	G	2	18	180	
			CULG	0214.0	0214.0	III	B	1	35	180	
			CULG	0227.0	0228.0	III	G	1	20	180	
			CULG	0412.0	0414.0	III	G	1	100	300	
			HIRA	0412.0	0414.5	III	G	1	130	400	
	0430	1815	BLEN	0534.8	0544.4	III	GG,S	3	100X	1800	
	0415	1753	ONDR	0538.1	0543.5	DCIM	G,SP	2	800X	2000X	
	0600	1200	IZMI	0600.0E	1200.0D	I	N	1	110	270X	
			IZMI	0649.0	0649.1	III	G	2	180	270X	
			SVTO	0811.0	1759.0	CONT		1	25	75	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
22			BLEN	0901.5	0907.2	III	GG,S	3	230	1800	
			IZMI	0901.5	0901.5	III	B	2	245	270X	
			IZMI	0933.9	0934.2	III	G	2	230	270X	
			BLEN	0934.0	0951.6	III	GG,S	3	230	4000X	
			IZMI	0937.3	0938.1	III	GG	2	80	270X	
			ONDR	0937.5	0951.3	DCIM	G	1	800X	2000X	
			IZMI	0947.2	0949.7	III	GG,C	2	65	270X	
			SVTO	0948.0	1017.0	III	N	1	25	180	
			IZMI	1002.6	1002.9	III	B	2	25X	240	
			BLEN	1006.3	1011.2	III	GG,RS	2	100X	600	
			IZMI	1011.1	1011.2	III	G,C	2	115	240	
			BLEN	1017.4	1025.9	III	GG,RS	2	100X	600	
			IZMI	1017.5	1022.7	III	GG	2	110	270X	
			SVTO	1707.0	1708.0	III		1	25	180	
			SGMR	1708.0	1708.0	III		2	30	50	
	2110	2400	CULG	2146.0	2147.0	III	G	1	50	200	
	1918	2400	HIRA	2146.5	2147.0	III	B	1	80	150	
			CULG	2209.0	2305.0	III	N	1	18	50	
			HIRA	2337.0	2337.5	III	B	1	25X	60	
			HOLL	2337.0	2337.0	III		1	25	47	
23	0000	0700	CULG								
	0000	1000	HIRA								
	0415	1753	ONDR								
	0430	1815	BLEN								
	0608	1200	IZMI	0608.0E	1045.0U	I	N	1	110	270X	
			IZMI	1045.0U	1200.0D	I	S	2	45U	270X	
	1918	2400	HIRA	2039.5	2041.0	III	G	1	25X	300	
			HIRA	2256.0	2256.5	III	B	1	25X	50	
			HOLL	2256.0	2256.0	III		1	25	72	
			PALE	2256.0	2256.0	III		1	25	62	
	2110	2400	CULG	2256.0	2257.0	III	G	1	20	180	
			LEAR	2347.0	0000.0	CONT		1	86	180	
24	0000	1000	HIRA								
	0000	0700	CULG	0141.0	0700.0D	I	S	1	60	160	
	0552	1205	IZMI	0552.0E	1020.0U	I	S	2	55	270X	
			SVTO	0900.0	0901.0	III		1	25	135	
			IZMI	0900.2	0901.9	III	G	2	25X	150	
	0415	1753	ONDR	0917.5	0918.2	DCIM	G	2	1072	1569	
			IZMI	1020.3	1020.8	III	G	1	120	170	
			IZMI	1055.2	1055.4	III	B	1	25X	60	
	0430	1815	BLEN	1524.1	1531.5	III	GG	1	100X	500	
			HOLL	1528.0	1528.0	III		1	25	76	
			SGMR	1528.0	1530.0	III		1	30	55	
			SVTO	1528.0	1531.0	III		1	25	146	
			LEAR	2347.0	0521.0	CONT		1	75	180	
			LEAR	2347.0	0838.0	CONT		1	70	180	
	1919	2400	HIRA	2348.0	2348.5	III	B	1	25X	220	
	2110	2400	CULG	2348.0	2348.0	III	B	1	50U	180	
25	0000	0700	CULG								
	0000	1000	HIRA								
	0415	1753	ONDR								
	0430	1815	BLEN								
	0600	1200	IZMI	0636.2	0636.5	III	B	1	25X	65	
			IZMI	0923.0U	1200.0D	I	S	1	120	270X	
			IZMI	0958.1	0958.1	III	B	2	25X	65	
			SVTO	1525.0	1526.0	III		1	43	59	
			HOLL	1624.0	1625.0	III		1	25	91	
			SVTO	1624.0	1624.0	III		1	25	130	
	1920	2400	HIRA								
	2110	2400	CULG								
			HOLL	2348.0	2348.0	III		1	25	77	
26	0000	0700	CULG	0217.0	0217.0	III	B	1	50U	180	
			LEAR	0256.0	0258.0	III		1	25	180	
	0000	1000	HIRA	0257.0	0258.0	III	B	1	30	130	
			CULG	0357.0	0358.0	III	G	1	40	180	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
26	0416	1153	ONDR								
			CULG	0438.0	0438.0	III	B	1	40	180	
			CULG	0445.0	0446.0	III	G	1	23U	250	
			HIRA	0445.0	0446.0	III	B	1	30	300	
			SVTO	0445.0	0445.0	III		1	25	180	
	0430	1815	BLEN	0800.3	0800.6	III	RS	1	180	600	
	0600	1200	IZMI	0800.4	0800.5	III	G,C	1	180	270X	
			IZMI	1051.0	1052.5	III	G	1	45	85	
			IZMI	1115.8	1116.2	III	B	1	45	85	
			SVTO	1449.0	1450.0	III		1	29	66	
	1920	2400	HIRA								
	2110	2400	CULG	2313.0	2315.0	III	G	1	50U	180	
27			LEAR	0015.0	0016.0	III		1	25	106	
			PALE	0015.0	0016.0	III		1	25	60	
	0000	0700	CULG	0016.0	0016.0	III	B	1	35	180	
			CULG	0116.0	0116.0	III	B	1	30	180	
			LEAR	0116.0	0116.0	III		1	25	180	
			PALE	0116.0	0116.0	III		1	25	56	
	0000	1000	HIRA	0116.0	0116.5	III	B	1	25X	50	
			CULG	0326.0	0326.0	III	B	1	40	160	
	0600	1200	IZMI	0616.3	0625.5	I	GG	2	225	270X	
			IZMI	0617.9	0619.5	III	G	2	30	180	
			CULG	0618.0	0619.0	III	G	1	40	180	
			LEAR	0618.0	0618.0	III		1	25	131	
			SVTO	0618.0	0619.0	III		1	25	150	
			HIRA	0618.5	0619.0	III	B	1	25X	200	
			IZMI	0716.8	0717.9	III	G	1	25X	190	
			SVTO	0717.0	0724.0	III		1	25	135	
			LEAR	0724.0	0725.0	III		1	25	180	
			HIRA	0724.5	0725.0	III	B	1	50	210	
			IZMI	0724.5	0725.0	III	G,C	2	35	270X	
			IZMI	1023.9	1024.3	III	B	2	45	95	
			HOLL	1730.0	1732.0	III		1	25	85	
	0416	1754	ONDR	1731.3	1744.2	DCIM	GG	2	800X	2000X	
			HOLL	2039.0	2039.0	III		1	25	77	
			PALE	2039.0	2039.0	III		1	25	180	
	1920	2400	HIRA	2039.0	2039.5	III	B	1	25X	110	
	2110	2400	CULG								
28	0000	0700	CULG	0357.0	0357.0	III	B	1	23	75	
			CULG	0428.0	0428.0	III	B	1	25	180	
			CULG	0447.0	0447.0	III	G	1	20	180	
			CULG	0553.0	0700.0D	III	N	1	25	170	
	0550	1206	IZMI	0555.0E	1120.0U	I	N	1	110	270X	
			IZMI	0623.2	0624.0	III	G	1	45	260	
			IZMI	0642.0	0644.0	III	G	2	25	190	
			LEAR	0642.0	0642.0	III		1	25	123	
			SVTO	0642.0	0642.0	III		1	25	119	
	0000	1000	HIRA	0642.0	0642.5	III	B	1	30	120	
			CULG	0655.0	0657.0	III	G	1	75	720	
			HIRA	0655.0	0656.5	III	B	1	110	400	
			LEAR	0655.0	0656.0	III		1	125	180	
			SVTO	0655.0	0656.0	III		1	120U	180U	
			IZMI	0655.2	0656.3	III	GG,C	2	120	270X	
			ONDR	0655.3	0707.4	DCIM	GG	2	800X	2000X	
			IZMI	0657.6	0657.7	III	B	1	50	95	
	0417	1753	ONDR	0702.3	0707.4	DCIM	GG	1	2000X	4500X	
			LEAR	0802.0	0802.0	III		1	25	116	
			SVTO	0802.0	0802.0	III		1	25	123	
			IZMI	0802.1	0802.6	III	G	2	45	95	
			IZMI	0820.7	0822.0	III	G,U	2	50	270X	
			IZMI	0827.6	0829.0	III	G,U	2	30	90	
			IZMI	0851.2	0851.4	III	G	2	40	65	
			SVTO	0921.0	0922.0	III		1	25	142	
			IZMI	0921.6	0922.4	III	GG	2	25X	170	
			SVTO	0944.0	0945.0	III		1	25	81	
			IZMI	0944.2	0945.0	III	G,C	2	25X	270X	
			IZMI	1113.7	1114.0	III	G	1	50	240	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
28			HOLL	1435.0	1625.0	III	N	1	25	75	
			SVTO	1435.0	1435.0	III		1	25	42	
			SGMR	1444.0	1446.0	III		2	30	65	
			SVTO	1444.0	1446.0	III		2	25	180	
			SGMR	1535.0	1539.0	III		3	30	80	
			SVTO	1535.0	1538.0	III		2	25	180	
			ONDR	1536.1	1537.0	DCIM	G	2	800X	1330	
			SVTO	1725.0	1725.0	III		1	71	180	
			HOLL	1816.0	1818.0	III		1	25	75	
			SGMR	1818.0	1819.0	III		1	30	80	
			PALE	2051.0	2052.0	III		2	25	180	
			SGMR	2051.0	2052.0	III		2	30	80	
	1920	2400	HIRA	2051.0	2052.0	III	B	2	30	190	
	2110	2400	CULG	2147.0	2149.0	III	G	1	20	130	
			CULG	2200.0	2202.0	III	G	1	40	180	
			CULG	2228.0	2229.0	III	G	1	23	160	
			CULG	2342.0	2342.0	III	B	1	20	180	
29	0000	0700	CULG	0015.0	0015.0	III	B	1	50	100	
			CULG	0233.0	0244.0	III	G	1	25	840	
			CULG	0355.0	0429.0	III	N	1	27	180	
			LEAR	0415.0	0417.0	III		1	72	124	
			SVTO	0417.0	0417.0	III		1	113	127	
			LEAR	0428.0	0429.0	III		1	47U	130U	
			SVTO	0428.0	0429.0	III		1	60	84	
			CULG	0506.0	0506.0	III	B	1	60	140	
			CULG	0544.0	0553.0	III	G	1	30	260	
	0000	1000	HIRA	0552.0	0553.0	III	B	1	100	260	
	0605	1200	IZMI	0605.0E	0928.0U	I	N	1	120	270	
			CULG	0621.0	0700.0D	III	N	1	30	180	
			IZMI	0621.3	0621.5	III	G	2	65	230	
			IZMI	0628.3	0628.4	III	G	2	35	165	
			IZMI	0754.2	0754.2	III	B	1	45	90	
			SVTO	0810.0	0811.0	III		2	25	180	
			IZMI	0810.1	0814.8	III	GG	2	25X	270X	
			HIRA	0810.5	0811.5	III	G	1	25X	300	
			LEAR	0811.0	0815.0	III		1	25U	180U	
			IZMI	0819.0	0819.3	III	G	1	50	175	
			IZMI	0823.7	0823.8	III	G	1	45	90	
			SVTO	0834.0	0840.0	III		1	25	84	
			IZMI	0834.7	0840.4	III	GG	2	25X	175	
			LEAR	0840.0	0840.0	III		1	25	111	
			IZMI	0913.4	0920.9	III	GG	2	25X	270X	
			HIRA	0914.0	0927.0	III	G	1	25X	310	
			SVTO	0914.0	1008.0	III	N	1	25	180	
			IZMI	0924.0	0927.3	III	GG,C	2	25X	270X	
			IZMI	0935.0	0935.2	III	G	1	220	270X	
			IZMI	1003.0	1008.2	III	GG,C	2	25X	95	
			IZMI	1027.3	1027.4	III	B	1	50	90	
			IZMI	1042.2	1042.3	III	G	1	45	90	
			SVTO	1051.0	1715.0	III	N	1	25	180	
			IZMI	1057.3	1101.7	III	GG,C,FS	2	25X	270X	
	0417	1753	ONDR	1057.4	1059.5	DCIM	G	1	2557	4500X	
			IZMI	1105.0	1111.7	II	HARM	1	55	160	
			IZMI	1107.4	1119.8	III	N	1	45	270	
			IZMI	1112.2	1112.9	III	G	2	25X	145	
			IZMI	1132.9	1133.0	III	B	1	50	85	
			IZMI	1144.1	1148.8	III	G	1	45	65	
			SGMR	1402.0	1456.0	III	N	2	30	80	
			HOLL	1607.0	1607.0	III		1	25	180	
			SGMR	1607.0	1607.0	III		2	30	80	
			PALE	1816.0	0438.0	III	N	1	25	180	
			SGMR	1816.0	1817.0	III		1	30	60	
	1921	2400	HIRA	2020.0	2020.5	III	B	1	25X	150	
			HIRA	2114.0	2114.5	III	B	1	100	200	
	2110	2400	CULG	2114.0	2114.0	III	B	1	20	180	
			CULG	2147.0	2238.0	III	N	1	20	180	
			HIRA	2147.5	2156.0	III	G	1	25X	180	
			CULG	2148.0	2148.0	III	B	2	23	60	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
29			HOLL	2148.0	2211.0	III	N	1	75	180	
			SGMR	2159.0	2212.0	III	N	2	30	80	
			HIRA	2159.5	2201.0	III	G	2	25X	190	
			CULG	2200.0	2200.0	III	B	2	23	180	
			HIRA	2210.0	2212.0	III	G	2	25X	200	
			CULG	2211.0	2212.0	III	G	3	20	180	
			HIRA	2235.5	2238.0	III	G	1	25X	200	
			CULG	2236.0	2236.0	III	B	3	18X	160	
			CULG	2345.0	2349.0	III	G	1	30U	180	
30	0000	0700	CULG	0001.0	0003.0	III	G	1	30	140	
			LEAR	0002.0	0123.0	III	N	1	25	180	
	0000	0816	HIRA	0003.0	0003.5	III	B	1	25X	70	
			CULG	0011.0	0026.0	III	GG	1	20	180	
			HOLL	0014.0	0024.0	III		1	75	180	
			HIRA	0016.5	0021.0	III	G	3	25X	360	
			LEAR	0017.0	0020.0	III		2	25	180	
			CULG	0019.0	0021.0	III	G	3	18	320	
			HIRA	0023.5	0025.0	III	G	1	30	120	
			LEAR	0123.0	0452.0	CONT		1	25	180	
			CULG	0124.0	0151.0	III	N	1	23	180	
			CULG	0155.0	0606.0	I	S	1	50	180	
			HIRA	0227.5	0228.5	III	B	2	40	180	
			CULG	0228.0	0230.0	III	G	2	35	180	
			CULG	0331.0	0332.0	III	G	2	30	250	
			HIRA	0331.0	0332.0	III	G	2	40	260	
			LEAR	0331.0	0332.0	III		1	25	180	
			CULG	0408.0	0408.0	III	B	1	57	180	
			HIRA	0408.0	0408.5	III	B	1	60	180	
			SVTO	0415.0	1550.0	CONT		1	25	180	
			HIRA	0423.5	0424.0	III	B	1	100	170	
			CULG	0424.0	0424.0	III	B	1	57	180	
			IZMI	0555.0E	1202.0U	III	N	1	25X	95	
	0550	1202	IZMI	0555.0E	1202.0U	I	N	1	130	270	
			IZMI	0610.7	0611.0	III	B	2	30	90	
			CULG	0611.0	0611.0	III	B	1	35	80	
			CULG	0646.0	0647.0	III	G	1	30	180	
			HIRA	0646.0	0646.5	III	B	1	30	140	
			IZMI	0646.3	0646.9	III	G,C	2	25X	210	
			IZMI	0702.1	0704.7	III	G	2	25X	250	
			IZMI	0713.0	0717.9	III	GG	2	40	270	
			IZMI	0721.5	0732.0	III	GG	2	25X	270X	
			LEAR	0732.0	0742.0	V		2	25	180	
			SVTO	0732.0	0754.0	III	N	3	25	180	
			IZMI	0732.1	0738.0	III	GG,C,FS	3	25X	270X	
			ONDR	0732.4	0758.0	DCIM	GG,FS	3	800X	2000X	
	0417	1753	ONDR	0732.5	0741.4	DCIM	GG	2	2000X	4500X	
			HIRA	0733.0	0744.0	III	G	3	25X	1600	
	0500	1630	BLEN	0733.0	0758.9	DCIM	P,S	3	100X	4000X	
			IZMI	0735.3	0737.2	UNCLF	FS	2	35	60	
			IZMI	0735.8	0740.1	III	GG	2	45	270X	
			IZMI	0742.0	0746.2	III	GG	2	45X	270X	
			LEAR	0743.0	0826.0	CONT		1	25	180	
			IZMI	0743.8	0759.2	II		2	40	160	
			IZMI	0746.3	0817.6	III	N	2	30	270X	
			IZMI	0800.0U	0843.0U	I	S,C	2	40U	160	
			IZMI	0842.8	0843.1	III	G	1	180	270	
			IZMI	0845.8	0847.6	III	G,C	2	25X	250	
			LEAR	0846.0	0847.0	III		1	25	117	
			BLEN	0854.7	0855.2	III	GG,RS	2	140	800	
			IZMI	0854.7	0855.3	III	G,C	1	30	270X	
			IZMI	0949.0	0949.4	III	B	2	45	90	
			IZMI	1057.5	1058.8	III	G,FS	2	45	150	
			IZMI	1103.5	1108.8	III	GG	2	25X	260	
			IZMI	1112.2	1112.3	III	B	2	90	190	
			IZMI	1118.2	1119.2	III	G	2	35	85	
			IZMI	1131.0	1131.3	III	G	1	45	90	
			HOLL	1416.0	1419.0	III		1	25	75	
			SGMR	1416.0	1418.0	III		1	30	60	

S O L A R R A D I O E M I S S I O N
Spectral Observations

JUNE 2003

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
30			SVTO	1524.0	1524.0	III		1	25	79	
			PALE	1807.0	1807.0	III		1	25	52	
	1921	2400	HIRA								
	2110	2400	CULG								

Event Remarks:

B = Single burst
C = Underlyling continuum (particularly with Type I)
DC = Drifting chains
DP = Drifting pairs
F = Fundamental emission (Type II)
FS = Fine structures (Type IV)
G = Small group of bursts (<10)
GG = Large group of bursts (>10)
H = Herringbone
HARM = Harmonic
N = Intermittent activity in this period
MOV = Moving (Type IV)
MWB = Meter wave burst
RS = Reverse slope burst
S = Storm in the sense of intermittent but apparently connected actively
SH = Secondary harmonic emission
STA = Stationary (Type IV)
U = U-shaped burst of Type III
UE = Uncertain emission (Type II)
W = Weak

Frequency qualifiers:

X = Extends beyond instrument range
U = Uncertain frequency

Remarks:

SWF = Associated short wave fade observed
ESS = Estimated shock speed in km/s (Type II)
FLA = Associated flare observed (class optional)

Stations Reporting:

CULG = Culgoora IZMI = Izmiran LEAR = Learmonth ONDR = Ondrejov BLEN = Bleien
PALE = Palehua POTS = Potsdam SGMR = Sagamore Hill SVTO = San Vito

NOTE 1: Beginning June 26, 2001, the Bleien observatory changed to higher frequencies (1-4Ghz).