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

AUGUST 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	0710	CULG	0215.0	0215.0	III	B	1	50U	160	
			CULG	0328.0	0328.0	III	B	1	23	180	
	0446	1730	ONDR								
			CULG	0458.0	0557.0	III	N	1	20	170	
			LEAR	0504.0	0504.0	III		1	69U	150U	
	0000	0945	HIRA	0504.0	0504.5	III	B	1	80	130	
	0600	1200	IZMI	0623.0U	1025.0U	I	N	1	110	270X	
			CULG	0646.0	0646.0	III	B	1	50U	110	
			IZMI	0835.7	0838.0	III	G	1	45	95	
			IZMI	0846.9	0848.8	III	GG	1	45	160	
			IZMI	0851.3	0853.1	III	G	1	45	90	
			IZMI	0901.8	0908.3	III	GG	1	40	95	
			IZMI	0913.9	0914.6	III	G	2	25X	160	
			HIRA	0914.0	0914.5	III	B	1	25X	140	
			SVTO	0914.0	0914.0	III		1	25	53	
			IZMI	0919.0	0930.0	III	N	1	45	95	
			IZMI	0926.9	0927.0	III	B	2	40	95	
			IZMI	0930.6	0930.9	III	G	2	40	130	
			IZMI	0936.3	0937.7	III	G	1	55	95	
			IZMI	1100.7	1101.2	III	G,C	1	25X	90	
			SVTO	1351.0	1406.0	III	N	1	25	130	
			HOLL	1402.0	1406.0	III		1	25	134	
			SGMR	1402.0	1402.0	III		2	30	55	
			HOLL	1604.0	1605.0	III		1	25	81	
	1943	2400	HIRA								
	2100	2400	CULG	2116.0	2134.0	III	N	1	23	180	
			CULG	2335.0	2337.0	III	G	1	50U	150	
02	0000	0710	CULG	0048.0	0055.0	III	G	1	57U	180	
			CULG	0119.0	0120.0	III	G	1	50U	180	
			CULG	0310.0	0312.0	III	G	1	100	180	
			CULG	0342.0	0342.0	III	B	1	57	180	
	0447	1729	ONDR								
	0558	1200	IZMI	0558.0E	1200.0D	I	N	2	55	270X	
			IZMI	0611.4	0614.9	III	GG	1	50	150	
			CULG	0612.0	0635.0	III	N	1	30	180	
			LEAR	0612.0	0614.0	III		1	25	180	
			SVTO	0612.0	0615.0	III		2	25	180	
	0000	0944	HIRA	0612.5	0613.0	III	B	2	40	140	
			IZMI	0612.6	0613.2	III	G,C	2	25X	215	
			CULG	0613.0	0613.0	III	B	3	23	180	
			IZMI	0613.8	0635.3	III	GG	1	45	140	
			IZMI	0712.5	0714.0	III	G	1	110	155	
			LEAR	0721.0	0922.0	III	N	1	25	180	
			IZMI	0721.3	0722.1	III	G,C	1	45	175	
			HIRA	0721.5	0723.5	III	G	1	25X	150	
			SVTO	0722.0	0723.0	III		1	25	142	
			IZMI	0722.7	0723.5	III	GG	2	25X	210	
			IZMI	0740.0	1200.0D	III	N	2	25X	95U	
			IZMI	0741.3	0743.4	III	G	1	25X	150	
			IZMI	0746.6	0749.4	III	GG	1	25X	125	
			IZMI	0804.6	0806.0	III	G	2	25X	95	
			SVTO	0937.0	0939.0	III		1	25	59	
			IZMI	0939.1	0939.3	III	B	2	25X	85	
			IZMI	1001.3	1001.5	III	B	2	25X	82	
			IZMI	1045.4	1047.2	III	G	2	25X	180	
			SGMR	1115.0	1116.0	III		1	30	55	
			IZMI	1115.7	1116.1	III	G,C	2	25X	170	
			IZMI	1146.0	1146.9	III	G	2	45	175	
			HOLL	1253.0	2300.0	CONT		1	71	180	
	1944	2400	HIRA								
	2100	2400	CULG	2100.0E	2207.0	I	S,C	1	70	160	
			CULG	2116.0	2117.0	III	G	1	50U	300	
			CULG	2147.0	2205.0	III	N	1	20	100	
			CULG	2313.0	2343.0	I	S	1	100	160	
03	0000	0710	CULG	0145.0	0629.0	I	S	1	100	180	
	0448	1727	ONDR								
	0600	1200	IZMI	0600.0E	1200.0D	I	N	2	110	270X	

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

AUGUST 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
03			IZMI	0601.8	0604.2	III	G	2	45	270X	
			CULG	0602.0	0604.0	III	G	1	27	180	
	0000	0943	HIRA	0603.0	0604.0	III	G	1	30	200	
			SVTO	0809.0	0809.0	III		1	25	56	
			IZMI	0837.5	0837.7	III	G	1	45	90	
			SVTO	0923.0	0930.0	III		1	25	162	
			IZMI	0923.3	0925.3	III	GG	2	25X	190	
			HIRA	0923.5	0925.0	III	G	1	25X	310	
			SVTO	0927.0	1119.0	CONT		1	25	180	
			IZMI	0930.2	0931.9	III	G	2	25X	175	
			IZMI	1029.2	1029.3	III	B	1	45	65	
			IZMI	1032.6	1034.1	III	G	1	50	85	
			IZMI	1052.4	1052.6	III	B	1	50	155	
			SGMR	1157.0	1205.0	III		2	30	62	
			SVTO	1157.0	1205.0	III		2	25	162	
			IZMI	1157.3	1159.0	III	GG	2	25X	270X	
			SGMR	1340.0	1340.0	III		1	30	60	
			SVTO	1340.0	1340.0	III		1	25U	83U	
			SVTO	1500.0	1507.0	III		1	25	67	
			SVTO	1729.0	1731.0	III		1	129	180	
			HOLL	1730.0	1731.0	III		1	25	180	
			SGMR	1730.0	1731.0	III		1	30	55	
			PALE	1755.0	1755.0	III		1	25	54	
			SGMR	1755.0	1755.0	III		1	30	55	
			HOLL	1853.0	1859.0	III		1	25	87	
			SGMR	1853.0	1856.0	III		1	30	55	
			HOLL	2029.0	2030.0	III		1	25	180	
	1945	2400	HIRA	2029.5	2030.0	III	B	2	25X	150	
	2100	2400	CULG	2100.0E	2149.0	III	N	1	25	150	
			CULG	2136.0	2136.0	III	B	3	20	160	
			HIRA	2136.0	2136.5	III	B	2	25X	120	
			HOLL	2136.0	2136.0	III		1	25	93	
			SGMR	2136.0	2136.0	III		2	30	60	
			CULG	2257.0	2257.0	III	B	1	27	140	
			CULG	2342.0	2351.0	III	G	2	20	200	
			HIRA	2346.0	2351.0	III	G	1	25X	230	
			LEAR	2346.0	2350.0	III		1	25	180	
04	0000	0720	CULG	0144.0	0145.0	III	G	1	23	180	
	0000	0942	HIRA	0144.5	0145.0	III	B	1	25X	110	
			CULG	0235.0	0236.0	III	G	1	20	180	
			HIRA	0236.0	0236.5	III	B	1	25X	50	
			CULG	0253.0	0253.0	III	B	1	20	140	
			HIRA	0253.5	0254.0	III	B	1	25X	50	
			CULG	0336.0	0336.0	III	B	1	23	90	
			CULG	0413.0	0432.0	III	N	1	27	180	
	0450	1726	ONDR								
	0600	1200	IZMI	0620.9	0621.3	III	G	1	25X	90	
			CULG	0621.0	0621.0	III	B	1	18	150	
			HIRA	0621.0	0621.5	III	B	1	25X	80	
			SVTO	0621.0	0621.0	III		1	25	77	
			IZMI	0626.0	1200.0D	I	N	1	180	270X	
			IZMI	0728.1	0730.2	III	G	1	45	90	
			HIRA	0752.0	0756.5	III	G	1	30	210	
			IZMI	0752.0	0756.6	III	GG	2	25X	250	
			LEAR	0752.0	0756.0	III		1	25	180	
			SVTO	0752.0	0806.0	III	N	1	25	155	
			IZMI	0805.0	0806.6	III	G	1	25X	160	
			SVTO	0916.0	0921.0	III		2	25	180	
			IZMI	0917.4	0919.2	III	G,C	2	25X	245	
			HIRA	0918.0	0919.0	III	G	2	25X	200	
			LEAR	0918.0	0919.0	III		1	25	180	
			IZMI	0921.4	0921.7	III	G	1	25X	65	
			HOLL	1524.0	1525.0	III		1	25	81	
			SGMR	1524.0	1525.0	III		1	30	50	
			SVTO	1524.0	1524.0	III		1	25	135	
			HOLL	1711.0	1715.0	III		1	25	58	
			HOLL	1823.0	1824.0	III		1	25	159	
			PALE	1823.0	1824.0	III		1	25	131	

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

AUGUST 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			SGMR	1823.0	1825.0	III		1	30	80	
			PALE	1853.0	0428.0	III	N	1	25	180	
			HOLL	1942.0	1943.0	III		1	25	160	
			PALE	1942.0	1944.0	III		1	25	134	
			SGMR	1942.0	1943.0	III		1	30	80	
	1945	2400	HIRA	2105.0	2106.0	III	G	3	80	220	
	2100	2400	CULG	2105.0	2106.0	III	G	3	70	300	
05			LEAR	0412.0	0412.0	III		1	25	180	
	0000	0941	HIRA	0412.5	0413.0	III	B	1	25X	130	
	0000	0720	CULG	0413.0	0413.0	III	B	1	20	170	
			CULG	0450.0	0457.0	III	G	1	20	150	
			CULG	0515.0	0518.0	III	G	2	20	90	
			LEAR	0515.0	0516.0	III		1	25	99	
			SVTO	0515.0	0516.0	III		1	25U	81U	
			CULG	0526.0	0526.0	III	B	1	20	90	
			LEAR	0526.0	0526.0	III		1	25	99	
			SVTO	0526.0	0526.0	III		1	26	74	
			CULG	0552.0	0552.0	III	B	1	27	130	
			CULG	0628.0	0631.0	III	G	1	25	100	
	0603	1200	IZMI	0629.7	0630.8	III	G	1	25X	85	
			SVTO	0636.0	0638.0	III		1	25	82	
			IZMI	0636.8	0638.2	III	G	2	25X	240	
			CULG	0637.0	0638.0	III	G	1	25	180	
			LEAR	0637.0	0638.0	III		1	25	180	
			CULG	0650.0	0655.0	III	G	1	23	90	
			SVTO	0748.0	0748.0	III		1	28	57	
			IZMI	0748.2	0748.3	III	B	1	45	145	
			IZMI	0803.4	0803.5	III	B	1	110	160	
			LEAR	0804.0	0805.0	III		1	25	180	
			SVTO	0804.0	0805.0	III		1	25	151	
			HIRA	0804.5	0805.5	III	G	1	25X	130	
			IZMI	0804.7	0805.4	III	GG	2	25X	250	
			IZMI	0855.5	0856.4	III	GG	1	30	150	
			IZMI	0909.0	0921.0	I	S	1	110	270X	
	0451	1724	ONDR	0910.3	0913.4	DCIM	G	1	800X	1906	
			SVTO	0930.0	0936.0	III		1	25	180	
			IZMI	0930.6	0933.7	III	GG	2	25X	245	
			IZMI	0934.5	0937.1	III	GG	2	25X	150	
			IZMI	1046.2	1046.5	III	G	2	220	270X	
			SGMR	1121.0	1122.0	III		1	30	80	
			SVTO	1121.0	1124.0	III		2	25	180	
			IZMI	1121.1	1122.6	III	GG	2	25X	240	
			IZMI	1123.6	1125.2	III	G	1	25X	145	
			ONDR	1245.1	1248.1	DCIM	G	2	2000X	4500X	
			ONDR	1245.1	1248.1	DCIM	GG,SP	2	800X	2000X	
			SVTO	1251.0	1256.0	II		1	43	130	ESS 0339
			SVTO	1415.0	1415.0	III		1	25	80	
			SVTO	1454.0	1454.0	III		1	56	82	
	2100	2400	CULG	2203.0	2203.0	III	B	1	23	80	
	1946	2400	HIRA	2203.5	2204.0	III	B	1	25X	50	
06	0000	0720	CULG	0128.0	0239.0	III	N	1	20	180	
			LEAR	0137.0	0138.0	III		1	25	50	
	0000	0940	HIRA	0137.5	0138.0	III	B	1	25X	50	
			LEAR	0236.0	0237.0	III		1	25	117	
			HIRA	0237.0	0237.5	III	B	1	25X	100	
	0452	1723	ONDR								
			LEAR	0728.0	0729.0	III		1	54	172	
	0555	1200	IZMI	0728.3	0729.0	III	G,C	1	40	240	
			HIRA	0728.5	0729.0	III	B	1	80	200	
			IZMI	0744.5	0745.2	III	G	1	180	270X	
			IZMI	0746.8	0747.5	III	G	1	190	270X	
			HIRA	0826.0	0826.5	III	B	1	30	170	
			LEAR	0826.0	0826.0	III		1	25	170	
			SVTO	0826.0	0829.0	III		1	25	130	
			IZMI	0826.2	0826.4	III	G	2	25X	155	
			IZMI	0829.7	0829.8	III	B	1	45	85	
			IZMI	0851.0	0851.6	III	G	1	45	95	

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

AUGUST 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			IZMI	1053.2	1053.5	III	G,FS	1	55	240	
			IZMI	1146.5	1146.6	III	G	2	55	270X	
			SGMR	1358.0	1358.0	III		1	30	40	
			SVTO	1358.0	1359.0	III		1	25	126	
			HOLL	1438.0	1438.0	III		1	75	180	
			HOLL	1546.0	1547.0	III		1	25	82	
			HOLL	1723.0	1723.0	III		1	25	59	
			HOLL	1736.0	1739.0	III		1	25	59	
			HOLL	1840.0	1841.0	V		1	25	85	
			PALE	1840.0	1841.0	V		1	25	66	
			SGMR	1840.0	1841.0	V		1	30	80	
			HOLL	1918.0	1920.0	III		1	25	180	
			PALE	1918.0	1920.0	III		1	25	180	
	2100	2400	CULG	2240.0	2240.0	III	B	1	25	180	
			CULG	2251.0	2252.0	III	G	1	18	180	
			HOLL	2251.0	2251.0	III		1	25	84	
	1947	2400	HIRA	2251.0	2251.5	III	B	1	25X	50	
			CULG	2314.0	2315.0	III	G	1	18	180	
			HIRA	2314.0	2315.0	III	G	1	25X	300	
			HOLL	2314.0	2315.0	III		1	25	85	
07	0000	0720	CULG	0243.0	0243.0	III	B	1	20	90	
			CULG	0343.0	0409.0	III	N	1	30	180	
			CULG	0403.0	0404.0	III	G	2	18	180	
	0000	0939	HIRA	0403.0	0404.0	III	B	1	25X	200	
			CULG	0441.0	0444.0	III	G	1	20	180	
			HIRA	0443.0	0443.5	III	B	1	25X	50	
			LEAR	0443.0	0444.0	III		1	25	180	
			CULG	0457.0	0457.0	III	B	1	57	130	
			LEAR	0525.0	0526.0	III		1	25	180	
	0550	1200	IZMI	0550.0E	1200.0D	I	S	1	80	270X	
			LEAR	0551.0	0552.0	III		1	25	86	
			SVTO	0551.0	0551.0	III		1	25	66	
			IZMI	0551.4	0551.9	III	G	2	25X	155	
			CULG	0552.0	0552.0	III	G	1	20	160	
			CULG	0625.0	0710.0	I	S	1	100	180	
			IZMI	0643.8	0645.0	III	G	1	45	150	
			CULG	0647.0	0649.0	III	N	1	40U	160	
			SVTO	0719.0	0758.0	III	N	2	25	180	
			IZMI	0734.4	0734.5	III	G,C	2	40	145	
			LEAR	0735.0	0736.0	III		1	25	180	
			HIRA	0735.5	0736.0	III	B	2	25X	420	
			IZMI	0735.6	0736.1	III	G,C	3	25X	270X	
			IZMI	0746.3	0746.7	III	G	1	25X	65	
			IZMI	0758.2	0758.6	III	G	1	25X	65	
			IZMI	0844.5	0844.6	III	B	1	40	65	
			SVTO	0938.0	0938.0	III		1	25	123	
			IZMI	0938.1	0938.9	III	G,C	2	25X	255	
			IZMI	0939.8	0940.1	III	G	1	55	160	
			IZMI	0945.3	0946.5	III	GG	1	55	170	
			IZMI	1003.6	1017.1	III	N	1	110	170	
			SVTO	1102.0	1150.0	III	N	2	25	180	
			IZMI	1102.3	1102.8	III	G	2	25X	155	
			IZMI	1110.4	1110.7	III	B	1	25X	55	
			IZMI	1114.7	1116.5	III	G	1	25X	160	
			IZMI	1124.3	1125.1	III	G	2	25X	165	
			SGMR	1128.0	1131.0	III		2	30	80	
			IZMI	1128.2	1134.0	III	GG,C	2	25X	270X	
			IZMI	1139.5	1139.9	III	G,C	1	80	175	
			IZMI	1149.5	1150.1	III	G	1	30	85	
			HOLL	1311.0	1315.0	III		1	25	180	
			SGMR	1312.0	1315.0	III		2	30	65	
			SVTO	1312.0	1315.0	III		2	25	180	
	0453	1722	ONDR	1312.0	1312.4	DCIM	G,W	1	800X	2000X	
			SVTO	1334.0	1502.0	III	N	1	25	180	
			HOLL	1410.0	1410.0	III		1	25	77	
			SGMR	1410.0	1411.0	III		2	30	50	
			SGMR	1501.0	1502.0	III		2	30	60	
			HOLL	1553.0	1558.0	III		1	25	85	

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

AUGUST 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			SVTO	1553.0	1617.0	III	N	1	25	82	
			SGMR	1558.0	1558.0	III		1	30	65	
			HOLL	1801.0	1802.0	III		1	25	149	
			SGMR	1801.0	1802.0	III		2	30	80	
			HOLL	2029.0	2029.0	III		1	25	75	
			PALE	2029.0	2029.0	III		1	25	63	
			SGMR	2029.0	2029.0	III		1	30	65	
	1948	2400	HIRA	2029.0	2029.5	III	B	1	30	120	
	2050	2400	CULG	2113.0	2206.0	I	S	1	110	170	
			CULG	2323.0	2323.0	III	B	3	18	200	
			HOLL	2323.0	2323.0	III		1	25	85	
			HIRA	2323.5	2324.0	III	B	2	25X	180	
			CULG	2355.0	2356.0	III	G	1	25	180	
			HIRA	2355.0	2355.5	III	B	1	25X	160	
			LEAR	2355.0	2355.0	III		1	25	180	
08	0000	0720	CULG	0006.0	0025.0	III	N	1	40U	180	
			CULG	0122.0	0208.0	III	N	1	20	180	
			CULG	0335.0	0342.0	III	G	1	20	180	
			LEAR	0338.0	0338.0	III		1	25	127	
	0000	0938	HIRA	0338.0	0338.5	III	B	1	80	130	
			CULG	0538.0	0538.0	III	G	1	27	180	
	0600	1200	IZMI	0617.6	0618.1	III	G,FS	2	45	240	
			CULG	0618.0	0618.0	III	G	1	30	180	
			IZMI	0740.3	0740.3	III	B,FS	1	55	210	
			IZMI	0945.7	0947.1	III	G	2	25X	190	
			IZMI	1010.0	1010.6	III	G	1	110	170	
			IZMI	1102.5	1102.6	III	B	2	95	190	
	0455	1720	ONDR	1110.4	1111.0	DCIM	G	2	1442	2000X	
			ONDR	1212.0	1212.1	DCIM	G	1	2869	4061	
			ONDR	1212.0	1212.2	DCIM	G	2	800X	2000X	
			HOLL	1922.0	1922.0	III		1	25	75	
			PALE	1922.0	1922.0	III		1	25	180	
	2050	2400	CULG	2106.0	2117.0	III	G	1	25	180	
			CULG	2254.0	2256.0	III	G	1	18	180	
			HOLL	2254.0	2255.0	III		1	25	78	
			PALE	2254.0	2254.0	III		1	25	64	
	1949	2400	HIRA	2254.0	2254.5	III	B	1	25X	150	
			PALE	2323.0	2323.0	III		1	25	180	
09	0000	0720	CULG	0107.0	0107.0	III	B	1	23	150	
			CULG	0425.0	0432.0	III	G	1	25	180	
	0456	1719	ONDR								
			LEAR	0742.0	0742.0	III		1	25	147	
			SVTO	0742.0	0743.0	III		1	25	138	
	0608	1200	IZMI	0742.0	0743.3	III	G	2	25X	170	
	0000	0937	HIRA	0742.5	0743.0	III	B	1	30	150	
			IZMI	1140.0U	1145.8	I	N	1	220	270X	
	2050	2400	CULG	2302.0	2302.0	III	B	1	27	90	
			CULG	2311.0	2311.0	III	G	1	80	180	
			LEAR	2319.0	2323.0	III		1	53	180	
			CULG	2320.0	2323.0	III	G	2	25U	200	
			HOLL	2321.0	2322.0	III		1	25	180	
	1950	2400	HIRA	2322.0	2322.5	III	B	2	80	200	
			CULG	2348.0	2350.0	III	G	1	57U	180	
10			LEAR	0024.0	0032.0	III		1	74	180	
	0000	0936	HIRA	0024.5	0025.0	III	B	1	90	130	
	0000	0720	CULG	0025.0	0202.0	III	N	1	27	180	
			HIRA	0031.5	0032.0	III	B	1	80	190	
			LEAR	0100.0	0306.0	III	N	1	25	180	
			CULG	0111.0	0111.0	III	B	3	50U	460	
			HIRA	0111.0	0111.5	III	B	3	90	430	
			CULG	0455.0	0455.0	III	B	1	100	180	
			CULG	0549.0	0549.0	III	B	1	27	90	
	0550	1200	IZMI	0715.0U	1150.0U	I	N	1	130	270X	
			ONDR	1014.4	1016.3	DCIM	G	1	800X	2000X	
	0457	1717	ONDR	1014.5	1016.2	DCIM	GG	2	2000X	4246	
			HOLL	1558.0	1559.0	III		1	53	180	

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

AUGUST 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			SVTO	1558.0	1559.0	III		2	55	180	
			HOLL	1930.0	1935.0	III		1	25	145	
			PALE	1931.0	1935.0	III		1	25	65	
	2050	2400	CULG	2102.0	2102.0	III	B	1	50U	90	
			CULG	2150.0	2152.0	III	G	1	30	180	
	1950	2400	HIRA	2150.0	2151.5	III	G	1	25X	210	
11	0000	0130	HIRA								
	0000	0720	CULG								
	0214	0935	HIRA								
	0458	1715	ONDR								
	0550	1200	IZMI								
	1951	2400	HIRA								
	2040	2400	CULG	2046.0	2046.0	III	B	1	50U	80	
			CULG	2338.0	2338.0	III	B	1	100	180	
12			LEAR	0306.0	0309.0	III		1	25	180	
			LEAR	0356.0	0400.0	III		1	25	180	
	0000	0720	CULG	0357.0	0359.0	III	G	2	18	200	
	0000	0933	HIRA	0357.0	0359.0	III	G	1	25X	180	
			CULG	0411.0	0413.0	III	G	1	50U	85	
			LEAR	0649.0	0654.0	III		1	25	180	
			SVTO	0649.0	0651.0	III		1	25	180	
			HIRA	0649.5	0651.0	III	G	1	30	200	
	0600	1200	IZMI	0649.7	0654.3	III	GG	2	25X	255	
			CULG	0650.0	0651.0	III	G	3	23	180	
			CULG	0651.0	0654.0	III	G	1	35U	170	
			CULG	0700.0	0703.0	III	G	1	35U	180	
			IZMI	0933.7	0934.1	III	G	1	40	65	
	0500	1714	ONDR	1005.0	1010.0	DCIM	G	1	2430	4500X	
			IZMI	1036.0U	1129.0U	I	N	1	180	270X	
			IZMI	1121.5	1122.8	III	G	2	25X	160	
			SVTO	1122.0	1122.0	III		1	25	148	
			IZMI	1127.5	1128.0	III	G	1	110U	240	
			HOLL	1528.0	1529.0	III		1	25	121	
			SVTO	1528.0	1529.0	III		1	26	121	
			HOLL	1829.0	1831.0	III		1	25	180	
			SGMR	1829.0	1831.0	III		3	30	70	
			PALE	1958.0	2000.0	III		1	25	85	
	1952	2400	HIRA	1958.5	2000.0	III	G	1	30	130	
	2040	2400	CULG	2153.0	2155.0	III	G	2	25	170	
			HIRA	2153.5	2155.0	III	G	1	25X	130	
13	0000	0730	CULG								
	0000	0932	HIRA								
	0501	1712	ONDR								
	0601	1200	IZMI								
	1953	2400	HIRA								
	2040	2400	CULG								
			HOLL	2212.0	2214.0	III		1	25	71	
14	0000	0730	CULG								
	0000	0931	HIRA								
	0555	1200	IZMI	1121.1	1121.1	III	B	1	220	270X	
			IZMI	1137.6	1137.8	III	G	2	130	215	
			IZMI	1138.9	1139.0	III	G	1	155	175	
			IZMI	1140.9	1141.5	III	G	1	180	270X	
	0502	1711	ONDR	1355.4	1355.5	DCIM	G	2	800X	1067	
	2040	2400	CULG	2040.0E	2400.0D	CONT		2	27	110	
			CULG	2109.0	2109.0	III	G	1	100	180	
			CULG	2240.0	2400.0D	I	S	1	40	130	
			LEAR	2330.0	0928.0	CONT		1	40	180	
15			CULG	0000.0E	0730.0D	I	S,C	1	45	160	
	0000	0730	CULG	0000.0E	0138.0	CONT		1	30	110	
			CULG	0005.0	0130.0	III	N	1	25	180	
			CULG	0146.0	0155.0	III	G	2	75	320	
			CULG	0326.0	0329.0	III	G	1	65	320	
	0503	1709	ONDR								

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

AUGUST 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
15	0555	1200	IZMI	0555.0E	1136.0U	I	S	1	50	160	
			IZMI	0626.8	0627.2	III	GG	2	80	270X	
			CULG	0627.0	0640.0	III	G	1	75	470	
			IZMI	0630.3	0630.5	III	G,U	2	90	270X	
			IZMI	0639.1	0639.8	III	GG	2	140	270X	
			IZMI	0704.8	0706.4	III	GG,C	2	90	270X	
			CULG	0705.0	0707.0	III	G	2	80	700	
			IZMI	0928.1	0928.2	III	GG,C,U	2	170	270X	
			SVTO	1008.0	1012.0	III		1	25	180	
			IZMI	1008.6	1009.3	III	GG	2	25X	150	
			IZMI	1011.5	1012.5	III	GG	2	25X	150	
			IZMI	1102.6	1105.6	III	GG,C,FS	2	25X	270X	
			SVTO	1103.0	1104.0	III		1	25	150	
			PALE	2108.0	2109.0	III		1	25	91	
	2040	2400	CULG	2109.0	2111.0	III	G	1	23	80	
			CULG	2125.0	2301.0	I	S	1	100	150	
			CULG	2258.0	2259.0	III	G	1	18	90	
			CULG	2336.0	2336.0	III	B	2	57U	180	
16	0000	0730	CULG	0155.0	0155.0	III	B	1	27	90	
	0200	0929	HIRA								
	0600	1205	IZMI								
	0625	1707	ONDR								
	1955	2400	HIRA								
	2040	2400	CULG								
17	0000	0730	CULG								
	0000	0928	HIRA								
	0600	1200	IZMI								
	0622	1703	ONDR	0904.0	0904.4	DCIM	G,W	1	2000X	4500X	
	1956	2400	HIRA								
	2040	2400	CULG								
18	0000	0730	CULG	0239.0	0239.0	III	B	1	18	50	
			CULG	0341.0	0343.0	III	G	1	20	90	
			CULG	0633.0	0633.0	III	B	1	27	80	
	0555	1200	IZMI	0900.3	0902.3	III	GG,C	2	25X	250	
			LEAR	0901.0	0903.0	V		2	25	180	
			SVTO	0901.0	0903.0	V		2	25	180	
	0000	0927	HIRA	0901.0	0903.0	III	B	1	30	200	
	0624	1704	ONDR	0901.1	0903.3	DCIM	G	2	2000X	4500X	
			IZMI	0901.4	0903.7	V	G	2	25X	160	
			HOLL	1357.0	1358.0	III		1	25	180	
			SVTO	1357.0	1357.0	III		1	41	180	
			HOLL	1707.0	1708.0	III		1	51	150	
			SVTO	1707.0	1708.0	III		1	54	164	
	1957	2400	HIRA								
	2040	2400	CULG	2251.0	2257.0	III	G	1	60	180	
19	0000	0114	HIRA								
	0000	0730	CULG	0016.0	0017.0	III	G	1	100	180	
			CULG	0027.0	0027.0	III	B	1	25	70	
			CULG	0149.0	0149.0	III	B	1	60	180	
			CULG	0325.0	0328.0	III	G	1	110	180	
			CULG	0407.0	0409.0	III	G	1	30	280	
			CULG	0414.0	0415.0	III	G	1	30	180	
			CULG	0425.0	0425.0	III	B	1	90	180	
			CULG	0445.0	0451.0	III	G	1	40	200	
			CULG	0545.0	0547.0	III	G	1	57	180	
			CULG	0630.0	0708.0	III	N	1	57	180	
	0555	1205	IZMI	0630.2	0631.2	III	GG	2	110	170	
			IZMI	0636.5	0636.6	III	G	1	115	160	
			IZMI	0751.9	0804.0U	III	N	1	110U	270X	
			IZMI	0754.5	0757.9	III	GG	2	25X	270X	
	0449	0925	HIRA	0754.5	0801.0	III	G	3	25X	500	
			LEAR	0755.0	0801.0	V		3	25	180	
			SVTO	0755.0	0803.0	V		3	25	180	
			IZMI	0755.3	0758.6	V	G	3	25X	160	
	0509	1702	ONDR	0755.3	0801.1	DCIM	G	2	2000X	4500X	

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

AUGUST 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
19			IZMI	0756.7	0804.0U	I	NG	2	110U	270X	
			IZMI	0757.8	0801.6	III	GG,FS,C	2	25X	220	
			IZMI	0758.1	0758.8	II	HARM	2	70	160	
			HIRA	0804.0	0813.0	II		1	40	80	
			LEAR	0804.0	0819.0	II		1	25	85	ESS 0559
			SVTO	0804.0	0828.0	II		1	25	79	ESS 0579
			IZMI	0804.6	0814.6	II	HARM	2	25X	70	
			IZMI	0814.2	0823.4	I	N	2	25X	80	
			IZMI	0823.0	0826.7	II	G	1	45	65	
			IZMI	0928.0	0928.4	III	G	1	120	270X	
			IZMI	0938.1	0938.3	III	G	2	220	270X	
			ONDR	0947.2	1024.5	DCIM	G	2	2000X	4500X	
			IZMI	0952.0	1200.0	I	S,C	2	45U	270X	
			IZMI	0956.9	1016.7	II	HARM	2	25X	95	
			SVTO	0957.0	1014.0	II		2	25	151	ESS 0614
			SVTO	1001.0	1340.0	IV		1	25	180	
			IZMI	1008.8	1030.0U	III	N	2	25X	270X	
			ONDR	1105.5	1135.0	DCIM	G	2	2000X	4500X	
			SVTO	1548.0	1549.0	III		1	28	171	
	1958	2400	HIRA								
	2040	2400	CULG								
20	0510	1700	ONDR								
	0000	0730	CULG	0542.0	0550.0	III	G	1	27	180	
	0000	0924	HIRA	0543.0	0543.5	III	B	1	80	200	
			CULG	0609.0	0611.0	III	G	3	20	270	
			SVTO	0609.0	0610.0	III		2	25	180	
			HIRA	0610.0	0611.0	III	G	2	40	290	
			LEAR	0610.0	0610.0	III		1	25	180	
	0600	1200	IZMI	0610.9	0612.2	III	GG,FS,C	2	25X	270X	
			HIRA	0836.0	0837.0	III	B	1	40	150	
			IZMI	0836.0	0837.0	III	G,C	2	25X	215	
			LEAR	0836.0	0836.0	III		1	25U	163U	
			SVTO	0836.0	0836.0	III		1	25	125	
			IZMI	0928.4	0928.6	III	G	2	55	190	
			IZMI	1014.5	1014.8	III	G	1	45	140	
			SVTO	1103.0	1104.0	III		1	25	137	
			IZMI	1103.4	1104.0	III	G	2	40	160	
	2040	2400	CULG	2330.0	2331.0	III	G	1	30	120	
			CULG	2350.0	2350.0	III	B	2	20	180	
	1959	2400	HIRA	2350.5	2351.0	III	B	1	25X	70	
21	0000	0730	CULG	0409.0	0411.0	III	G	1	27	180	
	0000	0922	HIRA	0410.5	0411.0	III	B	1	25X	100	
			CULG	0438.0	0451.0	III	N	1	27	150	
	0605	1200	IZMI	0746.2	0749.0	III	G	1	185	270X	
			IZMI	0800.2	0806.4	III	GG	1	35	95	
			IZMI	0809.5	0910.6	III	GG	1	40	90	
			IZMI	0924.8	0924.8	III	B	2	240	270X	
			IZMI	0942.2	0951.1	III	GG	1	40	85	
			IZMI	1004.3	1004.9	III	GG,C	2	130	270X	
			IZMI	1009.0	1009.3	III	G,C	2	110	270X	
			ONDR	1516.5	1529.5	DCIM	G	2	800X	2000X	
	0511	1658	ONDR	1517.2	1522.2	DCIM	G	2	2000X	4500X	
			HOLL	1730.0	1731.0	III		2	25	180	
			PALE	1730.0	1730.0	III		2	25	180	
			SGMR	1730.0	1731.0	III		2	30	80	
			HOLL	1944.0	2032.0	III	N	1	25	97	
	1959	2400	HIRA								
	2040	2400	CULG								
			HOLL	2350.0	2350.0	III		1	25	70	
22	0000	0921	HIRA								
	0000	0730	CULG	0315.0	0730.0D	III	S,C	2	30	180	
			LEAR	0319.0	0930.0	CONT		1	25	180	
			CULG	0345.0	0507.0	I	S	1	100	180	
			SVTO	0450.0	1513.0	CONT		1	25	180	
	0550	1200	IZMI	0550.0E	0855.0U	I	S,C	2	45U	160U	
			IZMI	0855.0	0950.0U	I	N	1	45	160	

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

AUGUST 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
22			IZMI	1059.0	1059.1	III	B	1	45	90	
			SGMR	1246.0	1246.0	III		1	30	55	
			HOLL	1550.0	1554.0	III		1	108	180	
			HOLL	1606.0	1608.0	III		1	25	180	
			SVTO	1606.0	1608.0	III		1	25	180	
			ONDR	1615.0	1620.4	DCIM	G	2	800X	2000X	
	0513	1657	ONDR	1615.0	1618.1	DCIM	G	1	2000X	4500X	
			ONDR	1628.3	1633.3	DCIM	G	1	2205	4500X	
			PALE	1952.0	1956.0	III		2	25	180	
	2000	2400	HIRA								
	2040	2400	CULG	2040.0E	2040.0D	I	S	1	130	180	
			CULG	2145.0	2222.0	III	N	1	23	100	
			LEAR	2317.0	0930.0	CONT		1	80	180	
23	0000	0920	HIRA								
	0000	0730	CULG	0000.0E	0730.0D	I	S	1	100	180	
			CULG	0054.0	0106.0	III	G	1	27	160	
			CULG	0229.0	0730.0D	III	N	1	20	160	
	0514	1655	ONDR								
			IZMI	0601.0E	1200.0D	III	N	1	25X	95	
	0601	1200	IZMI	0601.0E	1200.0D	I	S	1	110	250	
			IZMI	0906.1	0906.2	III	B,FS	2	35	65	
			IZMI	0912.4	0914.4	III	G	1	45	90	
			SVTO	0935.0	0937.0	III		1	25	148	
			IZMI	0935.6	0937.1	III	G	2	25X	95	
			IZMI	0940.2	0940.3	UNCLF		2	40	65	
			SVTO	1009.0	1235.0	CONT		1	80	180	
			IZMI	1027.0	1027.1	III	B	1	40	65	
			HOLL	1552.0	2000.0	III	N	1	25	75	
			SGMR	1915.0	1916.0	III		1	30	60	
			PALE	1931.0	1934.0	III		1	25	75	
	2001	2400	HIRA								
			CULG	2040.0E	2400.0D	III	N	1	23	130	
	2040	2400	CULG	2040.0E	2400.0D	I	S	1	100	180	
			LEAR	2247.0	0931.0	CONT		1	82	180	
24	0000	0919	HIRA								
			CULG	0503.0E	0730.0D	III	S	1	23	150	
	0503	0730	CULG	0503.0E	0730.0D	I	S	1	110	180	
	0515	1653	ONDR								
			IZMI	0604.0E	1202.0D	I	S	2	110	270X	
			IZMI	0604.0E	1202.0D	III	N	1	25X	270X	
			SVTO	0825.0	1715.0	CONT		1	116	180	
			IZMI	0929.7	0930.7	III	G	2	25X	90	
			PALE	1816.0	1822.0	III		1	25	162	
	2002	2400	HIRA								
	2040	2400	CULG	2040.0E	2327.0	I	S	1	110	180	
			CULG	2122.0	2345.0	III	N	1	25	130	
25			LEAR	0022.0	0024.0	III		1	25	127	
			PALE	0022.0	0024.0	III		1	25	68	
	0000	0730	CULG	0022.0	0133.0	III	N	1	27	140	
	0000	0917	HIRA	0024.5	0025.0	III	B	1	25X	80	
			CULG	0113.0	0158.0	I	S	1	110	180	
			CULG	0242.0	0730.0D	III	S,C	2	25	200	
			LEAR	0246.0	0931.0	CONT		1	25	180	
			CULG	0306.0	0313.0	III	G	3	23	1300	
			HIRA	0306.0	0313.0	III	G	1	25X	1200	
			PALE	0306.0	0312.0	III		1	25	180	
			PALE	0312.0	0340.0	CONT		1	25	86	
			IZMI	0555.0E	1200.0D	III	N	1	45U	95U	
	0550	1200	IZMI	0555.0E	1200.0D	I	S	2	50	160	
			IZMI	0630.4	0632.9	III	GG,FS	2	45	95	
			IZMI	0658.2	0658.4	III	G	2	110	270X	
			IZMI	0708.0	0709.3	III	GG	1	110	270X	
			IZMI	0712.3	0714.3	III	GG,FS	2	45	190	
			IZMI	0718.3	0718.5	III	G,FS	2	35	75	
			IZMI	0821.8	0821.9	III	B	1	45	65	
			SVTO	0901.0	1230.0	CONT		1	25	180	

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

AUGUST 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
25			HOLL	1509.0	1757.0	III	N	1	25	113	
	0517	1651	ONDR	1512.3	1513.3	DCIM	G,W	1	2303	4500X	
	2003	2400	HIRA								
	2040	2400	CULG								
26			HIRA								
	0000	0730	CULG	0031.0	0033.0	III	G	1	30	70	
			CULG	0138.0	0216.0	III	N	1	30	140	
			LEAR	0253.0	0300.0	III		1	25	180	
	0000	0916	HIRA	0254.5	0255.0	III	G	1	25X	220	
			CULG	0255.0	0255.0	III	G	2	18	180	
			HIRA	0300.5	0302.0	III	G	1	80	200	
			CULG	0301.0	0302.0	III	G	1	40	180	
	0555	1200	IZMI	0758.2	0759.0	III	G	2	45	95	
			IZMI	0802.9	0803.3	III	G	1	40	95	
			IZMI	1013.8	1014.1	III	G,HARM,U	2	40	95	
			IZMI	1147.0	1151.0	III	G	1	35	60	
			IZMI	1157.4	1159.0	III	G	1	50	65	
			HOLL	1404.0	1409.0	III		1	25	94	
			SGMR	1404.0	1405.0	III		1	30	65	
			SVTO	1404.0	1405.0	III		1	25	66	
			HOLL	1523.0	1531.0	III		1	25	180	
			SGMR	1523.0	1523.0	III		1	30	60	
			SVTO	1523.0	1523.0	III		1	25U	84U	
			HOLL	1550.0	1550.0	III		1	25	180	
			SGMR	1550.0	1550.0	III		1	30	60	
			SVTO	1550.0	1550.0	III		1	25	180	
	0518	1649	ONDR	1551.5	1553.3	DCIM	GG	2	2605	4500X	
			PALE	1744.0	1746.0	III		1	25	145	
			SGMR	1744.0	1746.0	III		1	30	60	
			PALE	1851.0	1852.0	III		1	34	61	
	2004	2400	HIRA								
	2040	2400	CULG	2040.0E	2129.0	III	N	1	27	180	
27	0000	0915	HIRA								
	0000	0730	CULG	0142.0	0220.0	III	N	1	27	180	
			LEAR	0211.0	0220.0	III	N	1	25	180	
			CULG	0340.0	0340.0	III	G	1	30	100	
			CULG	0506.0	0534.0	III	N	1	23	180	
	0519	1647	ONDR								
	0600	1200	IZMI	0600.0E	1200.0D	I	N	1	150	270	
			CULG	0622.0	0622.0	III	B	1	25	90	
			CULG	0652.0	0652.0	III	G	1	23	140	
			IZMI	0921.8	0921.9	III	G	1	125	270X	
			IZMI	1021.5	1021.7	III	B	1	45	150	
			IZMI	1027.3	1027.4	III	B	1	50	90	
			IZMI	1050.2	1050.5	III	G	2	45	215	
			SVTO	1121.0	1203.0	III	N	1	25	180	
			IZMI	1121.7	1122.9	III	GG	2	25X	250	
			IZMI	1123.9	1125.4	III	GG	2	25X	250	
			IZMI	1129.4	1130.2	III	G	1	40	85	
			IZMI	1140.5	1141.1	III	G,C	1	45	170	
			IZMI	1143.8	1144.2	III	G	1	55	145	
			SVTO	1346.0	1437.0	III	N	2	25	180	
			SGMR	1348.0	1348.0	III		1	30	80	
	2040	2400	CULG	2040.0E	2229.0	I	S	1	110	180	
			CULG	2058.0	2058.0	III	G	1	30	90	
			CULG	2235.0	2329.0	III	N	1	27	180	
	2005	2400	HIRA	2240.5	2246.0	III	G	1	30	1100	
			CULG	2243.0	2246.0	III	G	2	27	900	
			CULG	2305.0	2306.0	III	G	2	27	200	
			HIRA	2305.0	2306.0	III	G	1	25X	170	
			HOLL	2305.0	2305.0	III		1	25	123	
28	0000	0730	CULG	0220.0	0730.0D	III	N	1	23	180	
			CULG	0222.0	0222.0	III	B	2	20	160	
			LEAR	0222.0	0222.0	III		1	25	88	
	0000	0914	HIRA	0222.0	0222.5	III	B	1	25X	90	
			LEAR	0304.0	0304.0	III		1	25	103	

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

AUGUST 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			PALE	0304.0	0304.0	III		1	25	87	
			HIRA	0304.5	0305.0	III	B	1	25X	100	
			CULG	0305.0	0305.0	III	B	3	18	130	
			LEAR	0319.0	0336.0	III	N	1	25	46	
			LEAR	0356.0	0842.0	III	N	1	25	180	
			HIRA	0513.0	0514.0	III	B	1	25X	210	
			SVTO	0513.0	0513.0	III		1	25	180	
			SVTO	0531.0	0638.0	III	N	2	25	180	
			CULG	0547.0	0551.0	III	G	3	20	180	
			HIRA	0547.0	0551.0	III	G	1	30	210	
	0605	1200	IZMI	0549.0E	0551.4	III	GG,C	2	35	95U	
			IZMI	0606.9	0613.6	III	GG	1	45	85	
			IZMI	0608.2	0610.4	III	G	2	25X	100	
			HIRA	0608.5	0609.0	III	B	1	30	100	
			CULG	0609.0	0609.0	III	B	3	27	90	
			IZMI	0630.6	0638.7	III	GG	2	45	155	
			SVTO	0651.0	0658.0	III		2	25	180	
			IZMI	0651.4	0658.4	III	GG	2	25X	270X	
			HIRA	0653.5	0658.5	III	G	2	25X	600	
			CULG	0654.0	0658.0	III	G	3	23	750	
			HIRA	0800.0	0803.5	III	G	1	30	800	
			SVTO	0802.0	0804.0	III		1	25	155	
			IZMI	0802.1	0803.6	III	G	2	25X	270X	
			IZMI	0827.8	0827.8	III	G	1	110	250	
			HIRA	0830.0	0830.5	III	B	1	25X	50	
			SVTO	0830.0	0831.0	III		1	25	50	
			IZMI	0830.3	0830.5	III	B	1	25X	55	
			SVTO	0837.0	0842.0	III		2	25	180	
			IZMI	0837.8	0838.6	III	GG	2	25X	270X	
			HIRA	0838.0	0842.0	III	G	2	30	1000	
			IZMI	0840.0	0842.6	III	GG,C	2	25X	270X	
	0521	1645	ONDR	0840.3	0841.3	DCIM	G	1	800X	1827	
			SVTO	0855.0	0910.0	III	N	2	25	156	
			IZMI	0855.3	0855.5	III	G	1	30	160	
			IZMI	0904.5	0904.8	III	B	1	25X	55	
			LEAR	0909.0	0910.0	III		1	25	180	
			IZMI	0909.6	0910.1	III	G,C	2	25X	270X	
			IZMI	0954.0U	1005.4	I	N	1	180	270	
			IZMI	1006.4	1006.5	III	G	1	180	250	
			IZMI	1124.6	1125.1	III	G,U	2	110	260	
			SVTO	1127.0	1131.0	III		1	25	180	
			IZMI	1127.3	1128.9	III	GG	2	25X	270X	
			IZMI	1130.8	1131.9	III	GG	2	120	270X	
			IZMI	1150.0	1151.6	III	G	1	25X	95	
			SVTO	1150.0	1151.0	III		1	25	83	
			SGMR	1300.0	1333.0	III	N	1	30	55	
			SVTO	1300.0	1301.0	III		1	25	62	
			SVTO	1332.0	1333.0	III		1	25	146	
			SVTO	1339.0	1346.0	II		1	26	147	ESS 0723
			SGMR	1340.0	1346.0	II		1	30	80	ESS 0800
			PALE	1822.0	1822.0	III		1	25	59	
			SGMR	1822.0	1822.0	III		1	30	60	
			HOLL	2010.0	2039.0	III	N	1	25	180	
			PALE	2022.0	2026.0	III		1	25	100	
	2005	2400	HIRA	2022.0	2023.0	III	B	1	25X	80	
			HIRA	2032.0	2040.0	III	G	2	30	400	
	2030	2400	CULG	2032.0	2040.0	III	G	2	23	200	
			PALE	2034.0	2035.0	III		1	25	95	
			SGMR	2034.0	2039.0	III		1	30	80	
			CULG	2106.0	2126.0	III	N	1	50	180	
			PALE	2137.0	2144.0	III		1	25	87	
			CULG	2138.0	2144.0	III	G	2	40	180	
			HIRA	2138.0	2139.0	III	B	1	25X	180	
			CULG	2152.0	2152.0	III	B	2	18	160	
			LEAR	2320.0	2339.0	III	N	1	25	132	
			CULG	2334.0	2340.0	III	G	3	18	180	
			HIRA	2334.0	2334.5	III	B	1	25X	100	
			PALE	2334.0	2334.0	III		1	25	54	
			HIRA	2339.5	2340.0	III	B	1	25X	130	

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

AUGUST 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			LEAR	0041.0	0041.0	III		1	25	54	
	0000	0730	CULG	0041.0	0041.0	III	B	2	20	180	
	0000	0912	HIRA	0041.0	0041.5	III	B	1	25X	50	
			HIRA	0135.5	0136.0	III	B	1	25X	50	
			CULG	0136.0	0136.0	III	B	2	23	100	
			CULG	0152.0	0152.0	III	B	1	23	70	
			CULG	0205.0	0205.0	III	B	1	23	50	
			CULG	0220.0	0220.0	III	B	1	40	160	
			CULG	0342.0	0343.0	III	G	1	30	90	
			CULG	0459.0	0459.0	III	B	1	23	130	
	0522	1643	ONDR								
	0550	1200	IZMI	0623.6	0623.7	III	B	1	45	75	
			CULG	0624.0	0624.0	III	B	1	23	75	
			IZMI	0821.4	0821.6	III	G	2	220	270X	
			SVTO	0900.0	0901.0	III		2	44	170	
			HIRA	0900.5	0901.0	III	B	2	90	190	
			IZMI	0900.9	0901.4	III	GG	2	45	270X	
			LEAR	0901.0	0902.0	III		1	25	180	
			IZMI	0901.7	0902.2	III	G	2	55	260	
			SVTO	0944.0	0946.0	III		1	25	64	
			IZMI	0944.5	0945.8	III	G	2	25X	90	
	2006	2400	HIRA								
	2030	2400	CULG								
			PALE	2352.0	2354.0	III		1	25	65	
30	0000	0910	HIRA								
			LEAR	0435.0	0915.0	CONT		1	25	180	
	0000	0730	CULG	0445.0	0730.0D	III	S,C	1	23	180	
	0523	1641	ONDR								
			IZMI	0630.0E	0825.0U	III	N	1	45	95	
	0600	1200	IZMI	0630.0E	0825.0U	I	S	2	45U	170U	
			SVTO	0705.0	1706.0	CONT		1	25	180	
			IZMI	0954.7	0955.1	III	G	2	220	270X	
			IZMI	1153.9	1154.1	III	G	2	220	270X	
	2007	2400	HIRA								
	2030	2400	CULG								
31	0000	0909	HIRA	0031.5	0032.0	III	B	1	25X	220	
	0000	0730	CULG	0032.0	0032.0	III	B	2	27	180	
	0525	1639	ONDR								
			SVTO	1132.0	1132.0	III		1	25	48	
	0600	1200	IZMI	1132.7	1133.0	III	B	1	25X	45	
	2008	2400	HIRA	2032.5	2033.0	III	B	1	80	200	
	2030	2400	CULG	2033.0	2033.0	III	G	1	50	180	
			CULG	2125.0	2125.0	III	B	1	50U	90	

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