SOLAR RADIO EMISSION
Spectral Observations

OCTOBER 2002

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
01			CULG	0000.0E	0034.0	I	S	1	110	180	
	0000	0740	CULG	0000.0E	0215.0	III	N	1	57U	90	
			CULG	0249.0	0249.0	III	B	1	57U	80	
			CULG	0322.0	0324.0	III	G	1	40	370	
			LEAR	0322.0	0323.0	III		1	29	180	
	0000	0822	HIRA	0322.0	0323.5	III	G	1	40	360	
			CULG	0424.0	0622.0	III	N	1	25	180	
			LEAR	0424.0	0915.0	III	N	1	25	180	
			HIRA	0428.0	0429.0	III	G	1	40	150	
	0524	1631	POTS	0524 E	1631 U	I	S,N,DC	2	200U	400	100-200MHz no data
			HIRA	0525.0	0526.0	III	B	1	80	230	
			SVTO	0540.0	0630.0	III	N	1	25	180	
			HIRA	0540.5	0542.0	III	G	1	25X	150	
			CULG	0541.0	0542.0	III	G	2	20	140	
			CULG	0549.0	0549.0	III	B	2	40	160	
			CULG	0552.0	0740.0D	I	S	1	150	280	
	0601	1200	IZMI	0601.0E	1200.0D	I	S	1	120	270X	
	0612	1531	ONDR								
			IZMI	0615.7	0616.0	III	G	2	25X	160	
			POTS	0615.7	0615.9	III	B	2	40X	270	
			IZMI	0622.0U	1200.0D	III	N	1	25U	95U	
			CULG	0718.0	0718.0	III	B	1	30	120	
			IZMI	0718.3	0718.5	III	B,C	2	40	215	
			POTS	0718.4	0718.6	III	B	2	40X	80	
	0610	1600	BLEN	0719.6	1600.0X	I	DC	1	200X	450	
			IZMI	0739.1	0739.2	III	B	2	40	170	
			POTS	0739.1	0739.3	III	B	2	40X	80	
			POTS	0800.1	0800.3	III	B	1	40X	60	
			POTS	0815.3	0815.6	III	B	1	40X	60	
			IZMI	0837.6	0837.8	III	B	1	180	270	
			IZMI	0846.8	0847.0	III	B	1	40	65	
			POTS	0949.6	0949.8	III	B	1	40X	70	
			POTS	1015	1028	III	G,N	1	40X	80	
			IZMI	1017.5	1021.7	III	G	2	40	65	
			SVTO	1022.0	1022.0	III		1	25	84	
			IZMI	1022.6	1023.0	III	G	2	25X	95	
			POTS	1101	1108	III	G	2	40X	280	
			IZMI	1104.3	1105.2	III	GG	2	25X	260	
			SVTO	1105.0	1105.0	III		1	25	180	
			IZMI	1105.2	1105.6	III	GG	2	25X	260	
			IZMI	1105.9	1107.7	III	GG	2	35	145	
			POTS	1117	1131	III	G,N	1	40X	80	
			POTS	1255.1	1255.3	III	B	1	40X	85	
			POTS	1316	1332	III	G,N	1	40X	80	
			POTS	1411	1424	III	G,N	1	40X	55	
			HOLL	1537.0	1859.0	III	N	1	25	82	
	2000	2400	CULG	2100.0	2100.0	III	B	1	57U	130	
			CULG	2106.0	2107.0	III	G	1	20	180	
			HOLL	2106.0	2106.0	III		1	25	151	
			CULG	2109.0	2109.0	III	B	1	25	80	
			LEAR	2221.0	0444.0	III	N	1	25	180	
			CULG	2223.0	2225.0	III	G	1	50	170	
			HOLL	2223.0	2223.0	III		1	25	84	
			CULG	2235.0	2239.0	III	G	1	57U	180	
02	0000	0740	CULG	0046.0	0048.0	III	G	1	57U	90	
			PALE	0245.0	0404.0	CONT		1	25	86	
			CULG	0345.0	0345.0	III	B	1	60	130	
	0523	1627	POTS	0523 E	1319	I	S,N,DC	2	200U	380	100-200MHz no data
	0610	1600	BLEN								
	0614	1528	ONDR								
	0600	1200	IZMI	0630.0	1200.0D	I	N	2	180	270X	
			CULG	0650.0	0659.0	III	GG	2	20	170	
			LEAR	0650.0	0657.0	III		1	25	180	
			SVTO	0650.0	0658.0	III		1	25	152	
			IZMI	0650.3	0658.7	III	GG	2	25X	190	
			POTS	0650.3	0656.0	III	GG	3	40X	250	
			IZMI	0711.0	0711.3	III	G	1	95	160	
			LEAR	0835.0	0836.0	III		1	25	68	

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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			SVTO	0835.0	0836.0	III		1	28U	73U	
			IZMI	0835.8	0836.0	III	G,FS	2	25X	65	
			IZMI	0914.7	0914.8	III	B	1	150	260	
			POTS	0927.1	0929.5	III	GG	2	200U	390	
			IZMI	0927.2	0929.4	III	GG	1	150	270X	
			IZMI	0948.8	0949.0	III	B	1	45	65	
			IZMI	1004.3	1004.4	III	B	1	40	84	
			IZMI	1009.0	1009.2	III	B	1	45	140	
			IZMI	1027.3	1027.4	III	B	1	55	95	
			IZMI	1046.7	1046.9	III	B	2	50	115	
			IZMI	1059.2	1059.2	III	B	1	50	85	
			IZMI	1141.1	1141.2	III	G	1	30	65	
			POTS	1349.7	1350.3	I	DC	2	220	300	
			POTS	1411	1627 U	I	S,N	1	200U	330	
			SGMR	1438.0	1439.0	III		1	30	45	
			SVTO	1438.0	1439.0	III		1	28U	41U	
			POTS	1438.7	1439.1	III	B	2	40X	80	
	2000	2400	CULG								
03	0350	0820	HIRA								
	0000	0740	CULG	0549.0	0549.0	III	B	1	120	180	
	0526	1625	POTS	0607.9	0608.9	I	DC	1	220	280	100-200MHz no data
	0610	1600	BLEN								
			POTS	0641.7	0642.3	I	DC	1	200U	270	
	0610	1200	IZMI	0648.5	0648.7	III	B	1	55	95	
			CULG	0649.0	0649.0	III	B	1	57U	100	
			POTS	0725.0	0725.6	I	DC	1	320	370	
			SVTO	0749.0	0749.0	III		1	25	41	
			IZMI	0811.7	0811.9	III	B	1	45	150	
			IZMI	0816.3	0819.1	III	G	1	45	95	
			POTS	0827	1003 U	I	S,N,DC	1	240	370	
			LEAR	0829.0	0829.0	III		1	31	127	
			SVTO	0829.0	0829.0	III		1	25	127	
			IZMI	0829.5	0829.8	III	B	2	25X	240	
			POTS	0829.5	0829.8	III	B	2	40X	350	
			POTS	0852.7	0853.0	III	B	1	40X	80	
			SVTO	0921.0	0921.0	III		1	25	44	
			IZMI	0921.4	0922.4	III	G	1	40	160	
			POTS	0921.6	0922.6	III	G	1	40X	80	
			IZMI	0933.6	0933.7	III	G	1	45	90	
			IZMI	0938.0	0938.1	III	B	1	45	90	
	0615	1526	ONDR	1009.1	1013.4	DCIM	G	1	2332	4500X	
			POTS	1055	1625 U	I	S,N,DC	2	200U	450	
			IZMI	1106.0	1200.0D	I	S	2	110	270X	
			IZMI	1112.6	1112.8	III	B	2	50	90	
			POTS	1112.6	1112.9	III	B	1	40X	85	
			POTS	1127	1145.2	III	G,N	1	40X	85	
			IZMI	1128.5	1132.3	III	GG	1	45	190	
			SVTO	1129.0	1243.0	CONT		1	64	160	
			IZMI	1139.4	1200.0U	III	N	1	45	95	
			IZMI	1144.1	1144.7	III	G	1	45	95	
			POTS	1238	1243	III	G,N	2	40X	280	
			POTS	1337	1434 U	III	GG,N	2	40X	85	
			SVTO	1357.0	1610.0	CONT		1	50	150	
			HOLL	1412.0	1955.0	CONT		1	64	176	
			HOLL	1916.0	1916.0	III		1	25	47	
			HOLL	1956.0	1956.0	III		1	25	87	
	2000	2400	CULG	2017.0	2019.0	III	G	1	60	90	
			HOLL	2113.0	2114.0	III		1	25	113	
	2034	2400	HIRA	2113.5	2114.0	III	G	1	25X	110	
			CULG	2114.0	2114.0	III	G	1	20	130	
			CULG	2118.0	2119.0	III	G	1	25	170	
			CULG	2132.0	2132.0	III	B	1	45U	90	
04			LEAR	0133.0	0133.0	III		2	40	180	
	0000	0740	CULG	0133.0	0133.0	III	B	3	40	300	
	0000	0818	HIRA	0133.0	0133.5	III	B	3	40	300	
			LEAR	0138.0	0139.0	III		1	25	60	
			CULG	0211.0	0212.0	III	G	2	35	100	

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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			LEAR	0211.0	0212.0	III		1	25	104	
			HIRA	0211.5	0212.0	III	B	1	30	90	
			CULG	0239.0	0239.0	III	B	1	18	50	
			CULG	0241.0	0321.0	III	N	1	57U	230	
			LEAR	0320.0	0413.0	III	N	1	25	180	
			CULG	0338.0	0403.0	III	N	1	35	150	
			HIRA	0445.5	0447.0	III	G	1	30	150	
	0528	1622	POTS	0528 E	0648 U	I	S,N	1	200U	420	100-200MHz no data
			POTS	0644.3	0644.6	DCIM		1	220	550	
	0550	1200	IZMI	0644.5	0644.6	III	B	1	45	90	
			CULG	0645.0	0645.0	III	B	1	35	90	
			IZMI	0719.7	0720.0	III	B,C	2	55	95	
			CULG	0720.0	0720.0	III	B	1	60	75	
			POTS	0730.0	0732.3	III	G	1	40X	60	
			SVTO	0730.0	0732.0	V		1	25	53	
			IZMI	0730.7	0731.9	III	G	1	25X	120	
			CULG	0731.0	0732.0	III	G	1	23	65	
			POTS	0752	0824	III	GG,N	1	40X	75	
			POTS	0754.6	0759.2	I	S,N	1	200U	500	
	0620	1600	BLEN	0754.9	0759.1	III		2	200X	500	
			SVTO	0804.0	0910.0	III	N	1	25	180	
			IZMI	0804.9	0809.4	III	G	1	40	95	
			LEAR	0807.0	0807.0	III		1	25	104	
			IZMI	0823.6	0824.0	III	B,C	2	40	155	
			LEAR	0844.0	0844.0	III		1	25	117	
			IZMI	0844.4	0844.9	III	G	2	35	140	
			POTS	0844.4	0844.9	III	G	2	40X	85	
			POTS	0901	1150 U	I	S,N	1	200U	400	
			IZMI	0901.8	0905.2	III	G	1	45	95	
			POTS	0903	0917	III	G,N	2	40X	280	
			BLEN	0903.7	0911.6	III	RS	2	340	800	
			IZMI	0906.9	0909.6	III	GG,FS	2	25X	210	
			LEAR	0907.0	0916.0	III		1	25	180	
			POTS	0911.4	0911.7	DCIM		2	200U	600	
			IZMI	0911.5	0916.0	III	GG	2	40	140	
			IZMI	1005.1	1005.3	III	B	1	50	85	
			IZMI	1009.9	1010.7	III	B	2	25X	170	
			POTS	1009.9	1010.3	III	B	3	40X	280	
			SVTO	1010.0	1010.0	III		2	25	119	
			BLEN	1019.5	1026.3	III	GG,S	2	200X	2000	
			POTS	1020	1030	III	GG	2	40X	350	
			SVTO	1022.0	1029.0	III		1	25	161	
			IZMI	1022.4	1027.0	III	GG,C,FS	2	25X	270X	
			POTS	1024.8	1025.9	DCIM		1	350	730	
			IZMI	1028.9	1031.1	III	G	1	25	140	
			IZMI	1101.9	1101.9	III	B	1	110	155	
			IZMI	1132.5	1132.5	III	B	2	145	270X	
			IZMI	1148.7	1148.8	III	B	1	55	65	
			IZMI	1159.5	1159.7	III	B,U	1	120	160	
			BLEN	12046.0	1257.6	DCIM	P	3	200X	2000X	
			POTS	1222	1232 U	I	S,N	1	200U	280	
	0725	1524	ONDR	1245.2	1303.0	DCIM	G	1	2000X	4500X	
			POTS	1246.5	1252.8	DCIM		2	230	740	
			SVTO	1247.0	1251.0	V		2	25	180	
			POTS	1247.1	1249.1	III	G	3	40X	300	
			POTS	1247.8	1318 U	I	DC,S	2	200U	420	
			SGMR	1248.0	1249.0	V		2	30	80	
			POTS	1248.4	1251.5	V	G	3	40X	80	
			SVTO	1257.0	1259.0	II		1	112U	156U	ESS 0357
			POTS	1258	1303	II	UE	1	40	60	
			POTS	1357	1423	I	S,N	1	200U	350	
			HOLL	1416.0	1419.0	III		1	25	149	
			SVTO	1416.0	1420.0	III		2	25	127	
			POTS	1416.3	1420.0	III	G	3	40X	85	
			SGMR	1419.0	1420.0	III		1	30	80	
			POTS	1439	1536	I	S,N	1	200U	300	
			PALE	1640.0	0332.0	CONT		1	25	180	
			HOLL	1907.0	1907.0	III		1	25	89	
			PALE	1907.0	1907.0	III		1	25	111	

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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
04			SGMR	1907.0	1907.0	III		1	30	55	
	2000	2400	CULG	2015.0	2016.0	III	G	1	57U	170	
			CULG	2048.0	2049.0	III	G	1	23	180	
	2035	2400	HIRA	2147.5	2148.5	III	G	1	25X	170	
			CULG	2232.0	2238.0	III	GG	1	23	180	
			CULG	2238.0	2242.0	III	G	3	18X	520	
			CULG	2238.0	2243.0	CONT		1	500	1300	
			HOLL	2238.0	2242.0	III		2	25	180	
			LEAR	2238.0	2243.0	III		3	25	180	
			PALE	2238.0	2243.0	III		1	25	180	
			HIRA	2238.5	2243.0	III	G	3	25X	440	
			CULG	2241.0	2259.0	II	FN	3	30	220	
			CULG	2241.0	2306.0	II	SH	3	35	460	ESS 500
			HIRA	2241.0	2303.0	II		2	25X	210	
			HIRA	2241.0	2306.0	II		3	40	460	
			CULG	2242.0	2245.0	V		1	18	100	
			HOLL	2242.0	2306.0	II		1	25	180	ESS 0383
			LEAR	2244.0	2306.0	II		2	25	180	ESS 0418
			PALE	2245.0	2302.0	II		2	25	180	ESS 0573
05	0000	0816	HIRA								
			LEAR	0006.0	0008.0	III		1	25	106	
	0000	0740	CULG	0006.0	0009.0	III	G	1	57U	100	
			LEAR	0249.0	0249.0	III		1	25	85	
			CULG	0259.0	0259.0	III	B	1	57U	75	
			CULG	0524.0	0552.0	III	N	1	40	100	
	0530	1628	POTS	0658 U	0814 U	I	S,N	1	200U	380	100-200MHz no data
	0724	1521	ONDR	1041.4	1042.3	DCIM	G	2	2000X	4500X	
	0620	1600	BLEN	1041.7	1043.4	DCIM	C	2	500	2000X	
	0600	1200	IZMI	1051.3	1051.4	III	B	1	120	160	
			POTS	1052	1104	I	S,N	1	200U	350	
			POTS	1213.5	1215.9	III	GG	2	40X	270	
			POTS	1218 U	1252 U	I	S,N	1	200U	400	
			BLEN	1240.1	1240.4	III	GG,S	2	430	980	
			POTS	1240.1	1240.4	DCIM		2	400	770	
			POTS	1352.6	1353.1	DCIM		1	400	640	
			BLEN	1352.8	1352.9	III	G	2	400	580	
			BLEN	1405.7	1406.3	III	GG	3	400	650	
			POTS	1405.9	1408.6	DCIM		1	370	730	
			POTS	1415.1	1418.2	DCIM		2	240	760	
			BLEN	1415.2	1418.3	III	GG	3	280	1000	
			POTS	1513.3	1513.5	DCIM		1	360	520	
			POTS	1520.6	1521.7	DCIM		1	320	510	
			POTS	1521.0	1521.8	III	G	1	200U	300	
			POTS	1535.4	1537.4	UNCLF		1	200U	350	
			POTS	1555.4	1555.9	DCIM		1	350	600	
			POTS	1624.6	1628 U	DCIM		1	270U	480U	
	2000	2400	CULG	2045.0	2049.0	III	G	1	57U	180	
	2036	2400	HIRA	2045.5	2047.5	III	G	1	60	130	
			HOLL	2046.0	2047.0	III		1	25	180	
			CULG	2050.0	2059.0	CONT		1	400	1400	
			CULG	2054.0	2056.0	III	G	1	70	160	
			CULG	2057.0	2119.0	II	SH	3	65	180	ESS 250
			HIRA	2057.0	2059.0	II		2	60	200	
			HOLL	2057.0	2119.0	II		1	36	178	ESS 0404
			CULG	2058.0	2112.0	II	FN	2	35	90	
			PALE	2059.0	2115.0	II		1	38	180	ESS 0325
			SGMR	2108.0	2110.0	V		1	30	55	
			PALE	2109.0	2110.0	V		1	34	53	
			LEAR	2325.0	0209.0	CONT		1	25	139	
			CULG	2339.0	2340.0	III	G	1	57U	150	
06			HOLL	0003.0	0004.0	III		1	25	180	
			LEAR	0003.0	0004.0	III		3	25	180	
	0000	0750	CULG	0004.0	0005.0	III	G	3	40	180	
	0000	0815	HIRA	0004.0	0005.0	III	G	3	40	280	
			CULG	0016.0	0158.0	I	S	1	110	160	
			LEAR	0322.0	0322.0	III		1	25	58	
			CULG	0323.0	0323.0	III	B	1	35U	90	

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Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
06	0532	1617	POTS	0535 U	0742 U	I	S,N	1	200U	370	100-200MHz no data
			CULG	0551.0	0551.0	III	B	1	50	100	
			POTS	0816.7	0817.8	III	G	1	200U	300	
	0600	1204	IZMI	0821.2	0821.4	III	G	1	40	95	
			IZMI	0844.4	0846.7	III	G	1	45	95	
			IZMI	0848.4	0849.7	III	G	1	50	150	
			POTS	0850	0931 U	I	S,N	1	200U	340	
			IZMI	0902.0	0902.1	III	B	1	50	85	
			POTS	1000	1319	I	S,N,DC	2	200U	400	
			ONDR	1152.0	1155.4	DCIM	GG	2	800X	1770	
	0620	1519	ONDR	1152.2	1155.3	DCIM	G	1	2000X	4500X	
	0620	1550	BLEN	1152.9	1155.0	III	GG	3	700	1500	
			POTS	1334	1400 U	I	S,N	1	240	330	
			POTS	1519	1617 U	I	S,N	2	200U	400	
			HOLL	1854.0	1854.0	III		1	25	180	
			PALE	1854.0	1854.0	III		1	44	180	
	2000	2400	CULG	2023.0	2025.0	III	G	1	35U	180	
			CULG	2214.0	2221.0	III	G	1	57U	280	
	2037	2400	HIRA	2214.5	2215.0	III	G	1	120	290	
			CULG	2224.0	2225.0	III	G	1	170	400	
			PALE	2246.0	0337.0	III	N	1	25	180	
07	0000	0814	HIRA								
	0000	0750	CULG	0013.0	0015.0	III	G	1	57U	150	
			CULG	0347.0	0347.0	III	B	1	57U	180	
			CULG	0520.0	0520.0	III	B	1	57U	75	
	0534	1551	POTS	0611	0952	I	S,N	1	200U	380	100-200MHz no data
	0622	1517	ONDR								
			CULG	0704.0	0712.0	III	G	1	560U	740	
			POTS	0735.7	0736.9	III	G	1	40X	55	
	0603	1205	IZMI	0756.9	0759.0	I	GG	1	220	270X	
			IZMI	0911.6	0912.1	III	G	2	45	95	
			POTS	0911.6	0912.4	III	G	2	40X	85	
			POTS	1100.1	1100.5	I	DC	1	360	400	
			IZMI	1113.4	1113.5	III	G	1	160	270X	
			POTS	1113.4	1113.6	III	G	2	200U	370	
			POTS	1113.5	1122	I	S,N	1	200U	400	
			POTS	1144.0	1144.2	DCIM		1	300	420	
	0620	1545	BLEN	1220.5	1220.6	III		1	440	540	
			POTS	1248	1551 U	I	S,N,DC	2	270	420	
			POTS	1303.2	1304.8	III	GG	2	70	380	
			SVTO	1304.0	1603.0	CONT		1	25	180	
			POTS	1307.7	1343	III	GG,U	2	200U	420	
			POTS	1312.1	1312.4	III	B	2	200U	730	
			SGMR	1315.0	1316.0	III		1	30	55	
			POTS	1338.4	1339.0	DCIM		2	430	700	
			POTS	1405.3	1408.9	III	G,N	2	200U	390	
	2000	2400	CULG	2140.0	2226.0	III	S	1	130	200	
			CULG	2155.0	2156.0	III	G	1	57U	180	
			LEAR	2216.0	0401.0	CONT		1	64	180	
			CULG	2232.0	2235.0	III	G	1	100	300	
	2038	2400	HIRA	2232.0	2235.0	III	G	1	80	300	
			CULG	2242.0	2242.0	III	B	1	35	100	
			LEAR	2242.0	2242.0	III		1	25	180	
08	0000	0750	CULG	0323.0	0328.0	III	G	1	35	450	
			LEAR	0324.0	0328.0	III		1	25	180	
	0000	0813	HIRA	0324.0	0328.0	III	G	1	60	360	
			PALE	0326.0	0327.0	III		1	25	180	
			CULG	0334.0	0346.0	III	G	1	120	250	
			CULG	0423.0	0425.0	III	G	1	200	270	
			CULG	0432.0	0435.0	III	G	1	75	270	
			HIRA	0432.0	0435.0	III	G	1	80	300	
			LEAR	0432.0	0434.0	III		1	75	180	
			CULG	0441.0	0444.0	III	G	1	57U	360	
			HIRA	0441.0	0444.5	III	G	1	30	320	
			LEAR	0441.0	0444.0	III		2	37	180	
			CULG	0442.0	0442.0	III	B	2	35	160	
			CULG	0445.0	0533.0	I	S	1	120	180	

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08			LEAR	0450.0	0458.0	III		1	75	180	
			CULG	0455.0	0642.0	III	N	1	20	180	
			HIRA	0455.5	0456.0	III	B	1	50	210	
			LEAR	0510.0	0510.0	III		1	34	107	
			LEAR	0533.0	0539.0	III		1	25	180	
			SVTO	0533.0	1126.0	III	N	1	35	180	
			CULG	0534.0	0534.0	III	B	2	20	280	
			HIRA	0534.0	0539.0	III	G	1	25X	300	
	0535	1538	POTS	0535 E	1412 U	I	S,N	1	200U	380	100-200MHz no data
			IZMI	0550.0E	1200.0D	III	N	1	45	95	
	0550	1200	IZMI	0550.0E	1200.0D	I	N	2	110	270X	
			IZMI	0550.3	0550.6	III	G	1	45	95	
			IZMI	0552.8	0556.8	III	GG	2	25X	270X	
			HIRA	0553.0	0557.0	III	G	1	25X	250	
			LEAR	0553.0	0641.0	III	N	2	25	180	
			IZMI	0604.7	0609.4	III	GG	2	35	270X	
			HIRA	0606.5	0609.0	III	G	1	40	260	
			IZMI	0614.9	0615.0	III	B	2	40	90	
	0624	1514	ONDR								
			HIRA	0624.0	0635.0	III	G	1	25X	320	
			IZMI	0624.2	0624.7	III	G	2	35	160	
			POTS	0624.5	0633.5	III	G,N	2	40X	400	
			IZMI	0626.5	0627.8	III	GG	2	35	270X	
	0630	1540	BLEN								
			IZMI	0630.3	0635.0	III	GG	2	25X	270X	
			IZMI	0641.4	0641.5	III	B	2	40	95	
			LEAR	0720.0	0720.0	III		1	36	110	
			IZMI	0720.3	0721.0	III	G	2	40	130	
			POTS	0720.3	0721.0	III	G	1	40X	85	
			LEAR	0735.0	0745.0	III		2	34	167	
			HIRA	0735.5	0738.0	III	G	1	40	190	
			IZMI	0735.6	0737.8	III	GG	2	30	180	
			POTS	0735.6	0745.4	III	G,N	2	40X	90	
			CULG	0736.0	0737.0	III	G	1	20	180	
			CULG	0745.0	0745.0	III	B	1	25	100	
			IZMI	0745.2	0745.3	III	B	2	45	95	
			LEAR	0801.0	0935.0	III	N	1	25	180	
			IZMI	0801.2	0802.0	III	GG	2	40	180	
			POTS	0801.2	0802.0	III	G	2	40X	85	
			IZMI	0811.9	0812.8	III	G,C,U	2	75	270X	
			POTS	0811.9	0813.0	III	GG	2	200U	370	
			POTS	0841.6	0844.3	III	G	2	40X	370	
			IZMI	0842.2	0843.4	III	G,FS	2	25X	270	
			IZMI	0916.1	0918.0	III	G	2	25X	180	
			POTS	0916.2	0926.2	III	G,N	2	40X	85	
			IZMI	0925.6	0925.9	III	B	2	40	65	
			IZMI	0927.7	0927.8	III	G	1	180	270X	
			POTS	0927.7	0928.1	III	G	2	200U	420	
			IZMI	0953.0	0957.7	III	GG,FS	1	40	270X	
			POTS	0953.1	1034 U	III	GG,N	1	40X	80	
			POTS	0953.9	0954.3	III	G	1	200U	450	
			LEAR	1003.0	1005.0	III		1	44	157	
			IZMI	1003.6	1010.5	III	GG	1	45	70	
			IZMI	1027.9	1029.2	III	G	2	25X	160	
			POTS	1028.0	1029.3	III	G	2	40X	85	
			POTS	1034.9	1035.9	III	G	2	40X	300	
			IZMI	1035.0	1036.6	III	G	2	30	270X	
			POTS	1059.2	1059.4	III	B	2	40X	85	
			SVTO	1106.0	1316.0	CONT		1	29	172	
			SVTO	1106.0	1316.0	CONT		1	114	172	
			POTS	1141.1	1151.8	III	G,N	1	40X	85	
			IZMI	1150.2	1151.1	I	GG,DC	2	140	215	
			IZMI	1151.6	1151.7	III	B	2	45	95	
			POTS	1202.0	1203.3	III	G	3	40X	330	
			SVTO	1202.0	1203.0	III		1	29U	169U	
			POTS	1223	1325 U	III	GG,N	2	40X	85	
			POTS	1422.3	1422.5	III	B	1	40X	80	
			SVTO	1437.0	1437.0	III		1	29	118	
			POTS	1437.1	1437.8	III	G	2	40X	320	

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08			HOLL	1449.0	1450.0	III		1	25	120	
			POTS	1451.7	1452.8	III	G	1	40X	85	
			HOLL	1642.0	1815.0	III	N	2	25	180	
			HOLL	1833.0	1836.0	III		1	25	122	
			SGMR	1847.0	1847.0	III		1	30	70	
	2000	2400	CULG	2001.0	2006.0	III	G	1	50	100	
			CULG	2046.0	2120.0	III	N	1	57U	160	
			CULG	2104.0	2104.0	III	B	1	23	75	
			CULG	2215.0	2216.0	III	G	1	57U	90	
			CULG	2226.0	2226.0	III	B	1	57U	90	
			CULG	2259.0	2301.0	III	G	2	18X	200	
			HOLL	2259.0	2259.0	III		1	25	180	
			LEAR	2259.0	2300.0	III		1	25	180	
	2039	2400	HIRA	2259.5	2300.0	III	B	2	25X	300	
09	0000	0811	HIRA								
	0000	0750	CULG	0448.0	0448.0	III	G	1	35	80	
	0538	1536	POTS	0609	0802 U	I	S,N	1	200U	330	100-200MHz no data
			CULG	0610.0	0611.0	III	G	1	57U	90	
	0600	0627	IZMI	0610.2	0610.5	III	B	1	45	95	
			IZMI	0625.5	0625.6	III	B	1	45	95	
	0626	1512	ONDR								
	0630	1540	BLEN								
			POTS	0653.5	0653.8	DCIM		1	310	420	
			POTS	0727.8	0743.8	III	G,N	1	40X	85	
			LEAR	0728.0	0756.0	III	N	1	25	138	
			SVTO	0728.0	0824.0	III	N	1	25U	75U	
	0806	0856	IZMI	0816.5	0816.6	III	B	1	45	95	
			POTS	0838 U	0924	I	S,N	1	200U	280	
			POTS	0903.7	0906.7	III	G	1	40X	80	
	0906	1200	IZMI	0906.4	0906.5	III	B	1	45	95	
			POTS	1009.4	1011.2	III	G	1	40X	230	
			IZMI	1011.0	1011.1	III	B	2	40	95	
			POTS	1025.7	1026.3	III	G	1	40X	55	
			POTS	1040.8	1048.7	III	G	1	40X	55	
			IZMI	1042.1	1042.2	CONT	G	1	55	60	
			IZMI	1045.4	1047.8	III	G	1	25X	65	
			POTS	1221	1302 U	I	S,N	1	200U	350	
	2000	2400	CULG	2112.0	2112.0	III	B	1	57U	90	
			CULG	2222.0	2222.0	III	B	1	20	170	
			HOLL	2222.0	2222.0	III		1	25	180	
			LEAR	2222.0	2222.0	III		1	31	180	
			PALE	2222.0	2222.0	III		1	25	180	
	2040	2400	HIRA	2222.0	2222.5	III	B	1	25X	300	
			LEAR	2253.0	2253.0	III		1	32	87	
			LEAR	2316.0	2316.0	III		1	25	107	
			LEAR	2338.0	0004.0	III	N	1	25	109	
10	0000	0750	CULG	0004.0	0004.0	III	B	1	57U	100	
			CULG	0135.0	0137.0	III	G	1	18	170	
			LEAR	0135.0	0136.0	III		1	25	180	
	0000	0810	HIRA	0135.0	0136.5	III	G	1	50	170	
			CULG	0245.0	0249.0	III	G	1	18	120	
			HIRA	0245.0	0248.5	III	G	1	25X	250	
			LEAR	0245.0	0248.0	III		1	25	122	
			LEAR	0346.0	0357.0	III	N	1	25	114	
			CULG	0347.0	0347.0	III	G	1	40	150	
			CULG	0357.0	0358.0	III	G	1	40	90	
			HIRA	0357.0	0357.5	III	B	1	50	100	
			CULG	0502.0	0503.0	III	G	1	20	130	
			LEAR	0502.0	0502.0	III		1	25	140	
			HIRA	0502.5	0503.0	III	B	1	50	130	
	0540	1603	POTS	0540 E	0808 U	I	S,N	2	200U	400	100-200MHz no data
			SVTO	0605.0	0606.0	III		1	28	180	
			CULG	0606.0	0608.0	III	G	1	23	180	
			HIRA	0606.0	0608.0	III	G	1	30	220	
			LEAR	0606.0	0607.0	III		1	25	180	
			POTS	0606.0	0607.0	III	G	2	40X	350	
	0555	1200	IZMI	0606.0	0608.1	III	GG	2	40	270X	

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10			IZMI	0606.7	0607.0	III	G	2	25X	230	
	0627	1510	ONDR								
	0635	1540	BLEN								
			POTS	0642.8	0643.2	III	G,RS,U	2	200U	380	
			POTS	0719.9	0720.1	III	B	1	40X	80	
			IZMI	0746.3	0747.9	III	G	1	185	270	
			POTS	0846.3	0847.6	III	G	1	40X	55	
			IZMI	0846.4	0847.5	III	G	1	45	65	
			SVTO	0847.0	0847.0	III		1	28U	140U	
			POTS	0926	1059	I	S,N,DC	2	200U	400	
			IZMI	0928.2	0931.4	I	GG	1	180	270	
			IZMI	0931.7	0932.8	III	G	1	45	80	
			IZMI	0940.5	0940.5	III	B	1	45	95	
			IZMI	1005.8	1006.0	III	G,FS	1	40	95	
			POTS	1005.8	1006.1	III	B	2	40X	85	
			POTS	1139	1312 U	I	S,N	1	200U	370	
			POTS	1305.0	1306.0	III	G	1	40X	270	
			POTS	1316.7	1317.0	III	B	1	40X	85	
			POTS	1338	1544 U	I	S,N	1	200U	380	
			POTS	1424.4	1424.6	III	B	1	40X	70	
	2000	2400	CULG	2019.0	2019.0	III	B	1	35	90	
			HOLL	2208.0	2315.0	III	N	1	25	180	
	2040	2400	HIRA	2208.5	2212.5	III	G	1	50	400	
			CULG	2209.0	2213.0	III	G	2	35	180	
			PALE	2209.0	2211.0	III		1	25	180	
			CULG	2216.0	2219.0	II	UE	1	60	90	
			LEAR	2220.0	2248.0	III	N	1	25	180	
			HIRA	2220.5	2221.0	III	B	1	80	210	
			CULG	2221.0	2221.0	III	B	1	90	180	
			CULG	2237.0	2238.0	III	G	2	18	180	
			PALE	2237.0	2238.0	III		1	25	180	
			HIRA	2237.5	2238.5	III	B	2	25X	190	
11			LEAR	0002.0	0010.0	III		1	25	99	
	0000	0750	CULG	0003.0	0010.0	III	G	1	57U	130	
	0000	0808	HIRA	0447.5	0448.0	III	B	3	50	230	
			CULG	0457.0	0501.0	III	G	2	40	350	
			LEAR	0457.0	0457.0	III		2	40	180	
	0542	1602	POTS	0542 E	1018 U	I	S,N	2	200U	400	100-200MHz no data
	0600	0642	IZMI	0556.0	0556.1	III	B	2	45	75	
	0803	1200	IZMI	0805.0	0842.0	I	N	1	140	270X	
			IZMI	1001.7	1001.8	III	B,RS	1	210	270X	
			POTS	1009.8	1013.3	III	G	1	40X	270	
			IZMI	1010.9	1011.5	III	G	1	50	215	
			POTS	1048 U	1128 U	I	S,N	1	200U	300	
			POTS	1126.1	1127.8	III	GG	3	40X	420	
			POTS	1126.8U	1128.0	V	G	3	40X	80	
			SGMR	1127.0	1128.0	III		3	30	80	
			SVTO	1127.0	1128.0	III		2	30	180	
	0629	1508	ONDR	1127.2	1128.4	DCIM	GG	1	866	1925	
			IZMI	1127.5	1129.1	III	GG	2	25X	270X	
	0635	1540	BLEN	1127.5	1129.2	III	GG	3	200X	2000X	
			IZMI	1127.7	1129.4	V		2	25X	160	
			POTS	1128 U	1602 U	I	S,N,DC	2	200U	400	
			IZMI	1134.0U	1146.0	I	S	1	110	270X	
			POTS	1134.4	1137.6	III	GG	1	65	300	
			POTS	1154.0	1154.2	DCIM	U	2	320	410	
			POTS	1555	1602 U	III	G	2	200U	330	
			HOLL	1725.0	1729.0	III		1	25	180	
			PALE	1957.0	1957.0	III		1	25	85	
			HOLL	2039.0	2039.0	III		1	25	90	
	2000	2400	CULG	2039.0	2039.0	III	B	1	23	150	
	2040	2400	HIRA								
			LEAR	2256.0	2256.0	III		1	25	180	
12	0000	0806	HIRA	0138.0	0138.5	III	B	1	230	400	
			LEAR	0253.0	0253.0	III		1	25	113	
			LEAR	0317.0	0328.0	III		1	25	113	
	0000	0750	CULG	0317.0	0322.0	III	G	1	57U	130	

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12			HIRA	0317.5	0321.0	III	G	1	40	200	
	0545	1558	POTS	0545 E	1331	I	S,N	2	200U	400	100-200MHz no data
	0631	1505	ONDR								
			LEAR	0857.0	0857.0	III		1	55	140	
			LEAR	0914.0	1009.0	III	N	1	25	180	
			POTS	0914.3	0922.3	III	G,N,U	2	40X	270	
			POTS	0945.5	0947.0	III	GG	3	40X	330	
	0640	1535	BLEN	0945.9	0946.6	III	GG	2	200X	330	
			POTS	0946.8	0947.7	V	G	2	40X	70	
			POTS	1252.8	1254.3	III	G	2	40X	350	
			POTS	1323.9	1324.8	III	G	3	40X	250	
			POTS	1400	1553 U	I	S,N,DC	1	200U	400	
			HOLL	1406.0	1410.0	III		1	25	180	
			POTS	1406.8	1413.3	III	GG,N	3	40X	450U	
			SGMR	1409.0	1410.0	III		2	30	80	
			BLEN	1409.6	1410.0	III	GG,S	3	200X	400	
			POTS	1409.8	1410.5	V	G	3	40X	80	
			POTS	1441.8	1442.0	III	B	1	50	230	
			POTS	1501.1	1501.5	III	B,U	2	40X	85	
			HOLL	2258.0	2259.0	III		1	25	160	
			LEAR	2258.0	2259.0	III		1	30	150	
	2000	2400	CULG	2258.0	2300.0	III	G	1	40	170	
	2041	2400	HIRA	2258.5	2259.5	III	B	1	50	170	
13			LEAR	0427.0	0509.0	III	N	1	25	151	
	0000	0750	CULG	0427.0	0431.0	III	G	1	57U	170	
	0000	0805	HIRA	0427.0	0427.5	III	B	1	80	250	
			CULG	0437.0	0437.0	III	B	1	80	150	
			CULG	0445.0	0445.0	III	B	1	35	75	
			CULG	0510.0	0510.0	III	B	1	40	90	
	0547	1558	POTS	0547 E	1558 U	I	S,N,DC	2	200U	400	100-200MHz no data
	0600	1204	IZMI	0600.0	1205.9D	I	N	1	120	270X	
			CULG	0608.0	0609.0	III	G	1	57U	80	
			IZMI	0608.4	0608.9	III	G	1	50	155	
			LEAR	0629.0	0630.0	III		1	62	135	
			IZMI	0629.7	0631.4	III	G	2	55	270	
			CULG	0630.0	0631.0	III	G	1	60	150	
	0633	1503	ONDR								
			IZMI	0657.0	0657.1	III	B	1	45	70	
			LEAR	0707.0	0715.0	III		1	35	180	
			CULG	0712.0	0716.0	III	G	1	57U	180	
			HIRA	0712.0	0715.5	III	G	1	80	220	
			IZMI	0712.0	0712.2	III	G,HARM	2	50	255	
			POTS	0712.0	0715.4	III	G	2	40X	270	
			IZMI	0714.9	0715.5	III	G	2	80	230	
	0600	1200	IZMI	0748.1	0748.8	III	G	1	45	85	
			LEAR	0812.0	0815.0	III		1	65	180	
			IZMI	0812.6	0813.8	III	G,G	2	50	270X	
			POTS	0812.7	0813.8	III	G	2	60	350	
			IZMI	0815.2	0818.6	III	G	1	110	175	
	0915	1535	BLEN								
			IZMI	1049.0	1049.1	III	B	1	125	160	
			IZMI	1101.0	1101.1	III	B	1	130	160	
			IZMI	1112.9	1113.0	III	B	2	45	85	
			POTS	1243.2	1244.2	III	G	2	40X	320	
			HOLL	1739.0	1739.0	III		1	25	180	
			PALE	1739.0	1821.0	III	N	2	25	180	
			HOLL	1753.0	1817.0	III	N	1	25	180	
			PALE	1754.0	1814.0	II		3	25	94	ESS 0448
			SGMR	1754.0	1823.0	II		3	30	80	ESS 0900
			HOLL	1758.0	1817.0	II		2	25	180	ESS 0453
			HOLL	1759.0	1830.0	IV		1	25	103	
			PALE	1759.0	1824.0	IV		1	25	112	
			HOLL	2208.0	2208.0	III		1	25	86	
			PALE	2208.0	2208.0	III		1	25	100	
	2000	2400	CULG	2208.0	2208.0	III	B	1	23	100	
	2042	2400	HIRA	2208.0	2208.5	III	B	1	30	100	
			LEAR	2352.0	0538.0	III	N	1	25	180	
			HOLL	2356.0	0014.0	CONT		1	37	131	

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Spectral Observations

OCTOBER 2002

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
13			HIRA	2357.0	2416.0	III	G	1	25X	200	
			CULG	2358.0	2400.0D	III	GG	1	57U	180	
14	0000	0750	CULG	0000.0E	0003.0	III	GG	1	30	180	
			CULG	0004.0	0008.0	II	FN	1	25	45	
			CULG	0004.0	0008.0	II	SH	1	50	100	FLA ESS 1000
			CULG	0007.0	0015.0	III	GG	3	27	120	
			PALE	0007.0	0015.0	III		1	25	124	
	0000	0804	HIRA	0151.5	0152.0	III	B	1	120	340	
			CULG	0238.0	0241.0	III	G	1	60	90	
			CULG	0246.0	0247.0	III	G	1	40	75	
			CULG	0251.0	0355.0	III	S,C	1	60	180	
			PALE	0251.0	0328.0	CONT		1	25	180	
			CULG	0256.0	0256.0	III	B	1	23	100	
			HIRA	0256.0	0256.5	III	B	1	25X	110	
			CULG	0301.0	0301.0	III	B	1	30	100	
			CULG	0409.0	0448.0	III	N	1	60	90	
			HIRA	0422.5	0424.5	III	G	1	25X	280	
			CULG	0423.0	0425.0	III	G	2	30	120	
	0556	0755	IZMI	0556.0E	0755.0D	I	N	1	45	270	
			IZMI	0602.6	0603.3	III	G	2	30	100	
	0549	1555	POTS	0602.9	0603.3	III	G	2	40X	85	100-200MHz no data
			CULG	0603.0	0603.0	III	G	1	35	100	
			HIRA	0603.0	0603.5	III	B	1	50	110	
			LEAR	0603.0	0603.0	III		1	25	93	
			SVTO	0603.0	0603.0	III		1	32U	84U	
			CULG	0633.0	0635.0	III	G	1	57U	80	
			IZMI	0633.5	0635.0	III	G,U	2	40	95	
			POTS	0633.9	0634.9	III	G	1	40X	60	
			CULG	0646.0	0654.0	III	G	1	400	740	
			IZMI	0646.0	0717.0U	III	N	1	45	95	
			POTS	0646.0	0703.3	DCIM		2	240	800X	
	0640	1535	BLEN	0646.2	0700.0	II	P	3	200X	800	
			BLEN	0655.7	0745.0	DCIM	C	3	500	2000X	
			POTS	0704	0717	III	G,N	2	40X	85	
			CULG	0705.0	0717.0	III	G	1	30	90	
			IZMI	0712.4	0713.4	I	GG,DC	2	70	85	
			LEAR	0713.0	0716.0	III		1	25	74	
			IZMI	0713.3	0716.5	III	GG,DC	2	25X	75	
			SVTO	0714.0	0714.0	III		1	30	64	
			POTS	0748	0850 U	I	S,N	1	200U	250	
	0815	1200	IZMI	0815.0E	1155.0U	I	N	1	45	270X	
			POTS	0906	1005 U	I	S,N,DC	1	200U	300	
			POTS	0917.9	0918.2	DCIM		2	380	660	
			LEAR	0922.0	0923.0	III		1	25	138	
			IZMI	0922.7	0923.5	III	G,C	2	25X	190	
			POTS	0922.8	0952	III	G,N	2	40X	85	
			SVTO	0923.0	0923.0	III		1	29	81	
	0635	1501	ONDR	0929.2	0932.1	DCIM	GG	2	800X	1377	
	0640	1535	BLEN	0929.5	0939.7	III	GG,RS	2	280	1500	
			IZMI	0937.8	0938.8	III	G	1	40	210	
			IZMI	0941.4	0947.8	III	GG,DC	2	40	65	
			IZMI	1000.1	1000.5	III	G	1	120	170	
			IZMI	1012.4	1012.5	III	B	1	45	85	
			POTS	1012.4	1012.6	III	B	1	40X	80	
			POTS	1052	1056	I	S,N	1	200U	280	
			POTS	1207.0	1207.9	DCIM		2	450	710	
			POTS	1244	1252	I	S,N	1	220	300	
			POTS	1419	1458	IV		2	40X	800X	
			ONDR	1419.1	1432.5	DCIM	GG	2	800X	2000X	
			BLEN	1419.4	1432.2	II	P	3	200X	1600	
			ONDR	1419.5	1429.0	DCIM	G	1	2000X	4500X	
			HOLL	1420.0	1600.0	III	N	1	25	180	
			SVTO	1420.0	1501.0	III	N	2	77U	180U	
			SGMR	1421.0	1438.0	II		1	30	80	ESS 0600
			SGMR	1421.0	1501.0	III	N	2	30	80	
			POTS	1426.5	1439	II	F,H,G	3	40X	85U	
			SGMR	1427.0	1438.0	II		1	30	80	ESS 0600
			HOLL	1429.0	1438.0	II		1	25	180	ESS 0743

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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
14			SVTO	1433.0	1437.0	II		1	28U	180U	ESS 0773
			POTS	1501	1506	III	G,N	2	40X	250	
			POTS	1515	1535	DCIM		2	270	450	
			SGMR	1532.0	1533.0	III		1	30	55	
			POTS	1548.9	1549.7	III	G	2	200U	350	
			HOLL	1659.0	1700.0	III		1	25	131	
			PALE	1659.0	1700.0	III		1	25	120	
			SGMR	1659.0	1700.0	III		1	30	70	
			HOLL	1745.0	1745.0	III		1	25	180	
	2000	2400	CULG								
	2043	2400	HIRA								
			HOLL	2352.0	0014.0	III	N	1	25	142	
			HOLL	2356.0	0014.0	CONT		1	37	131	
15	0000	0130	CULG								
	0230	0750	CULG								
	0629	1200	IZMI	0635.7	0637.6	III	GG	1	45	95	
			IZMI	0731.5	0732.2	III	GG	2	150	270X	
	0000	0802	HIRA	0731.5	0732.0	III	G	1	130	240	
	0551	1551	POTS	0731.5	0732.3	III	G,RS	2	200U	380	100-200MHz no data
			POTS	0732.7	0742	I	S,N	1	200U	300	
			IZMI	0734.8	0734.9	III	B	2	180	210	
			POTS	0858.0	0908.3	III	G,N	1	40X	85	
			LEAR	0908.0	0908.0	III		1	25	143	
			SVTO	0908.0	0908.0	III		1	74	139	
			IZMI	0908.1	0908.2	III	G	2	40	145	
			POTS	1122.2	1131.7	III	G,N	1	40X	55	
			IZMI	1131.4	1131.5	III	B	1	50	65	
			POTS	1334	1342	III	G,N	2	40X	80	
			ONDR	1410.2	1416.0	DCIM	G	1	800X	2000X	
	0645	1535	BLEN	1410.3	1413.7	III	RS	3	450	2000X	
	0637	1458	ONDR	1411.3	1413.3	DCIM	G	1	2000X	4500X	
	2000	2400	CULG								
	2044	2400	HIRA								
16			LEAR	0117.0	1010.0	CONT		1	85	180	
			LEAR	0430.0	0430.0	III		1	64	135	
	0000	0750	CULG	0430.0	0431.0	III	G	1	57U	130	
	0000	0801	HIRA	0430.5	0431.0	III	B	1	60	140	
	0552	1200	IZMI	0552.0E	1200.0D	I	S,DC	2	110	270X	
	0553	1551	POTS	0553 E	1551 U	I	S,N,DC	2	200U	400	100-200MHz no data
	0645	1535	BLEN								
			CULG	0702.0	0706.0	III	G	2	20	110	
			HIRA	0702.0	0705.5	III	G	1	40	180	
			LEAR	0702.0	0705.0	III		2	25	180	
			SVTO	0702.0	0706.0	III		1	29U	142U	
			IZMI	0702.1	0707.2	III	GG,C	2	25X	270	
			POTS	0702.3	0705.7	III	GG	2	40X	450U	
			SVTO	0838.0	1549.0	CONT		1	32U	180U	
			IZMI	0842.9	0843.7	III	G	2	90	250	
			ONDR	0959.2	1000.0	DCIM	G	1	964	1583	
	0638	1456	ONDR	0959.2	0959.5	DCIM	G	1	2000X	4500X	
			IZMI	1048.7	1048.9	UNCLF		2	45	90	
			POTS	1233.2	1234.3	III	G	2	200U	340	
			POTS	1247.7	1251.5	III	G	2	40X	85	
			HOLL	1340.0	0010.0	CONT		1	66	180	
			POTS	1440.9	1441.1	III	B	1	40X	55	
	2000	2400	CULG	2000.0E	2143.0	I	S	1	100	150	
	2045	2400	HIRA								
			LEAR	2207.0	1010.0	CONT		1	78	180	
			CULG	2301.0	2400.0D	I	S	1	120	160	
17	0000	0800	HIRA								
	0000	0750	CULG	0000.0	0215.0	I	S	1	80	140	
			LEAR	0303.0	0303.0	III		1	25	180	
			CULG	0304.0	0304.0	III	B	1	35	90	
			CULG	0330.0	0401.0	I	S	1	110	140	
			CULG	0431.0	0750.0D	I	S	1	110	250	
			SVTO	0518.0	1328.0	CONT		1	44	180	

S O L A R R A D I O E M I S S I O N
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OCTOBER 2002

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			CULG	0550.0	0553.0	III	G	1	23	90	
	0556	1548	POTS	0556 E	1538 U	I	S,N,DC,C	2	200U	400	100-200MHz no data
	0600	1200	IZMI	0600.0E	1200.0D	I	S	2	80	270x	
	0640	1454	ONDR								
	0645	1530	BLEN								
			CULG	0712.0	0720.0	III	G	1	60	110	
			POTS	1124.2	1127.5	DCIM		2	270	480	
			POTS	1250.2	1250.7	III	G	2	40X	330	
			POTS	1348.3	1355.4	III	G,N	1	40X	85	
			POTS	1419.6	1419.8	III	B	1	40X	65	
			PALE	1645.0	0310.0	CONT		1	41	180	
			PALE	1701.0	1701.0	III		1	34	60	
			LEAR	2310.0	2310.0	III		1	25	89	
	2000	2400	CULG	2310.0	2310.0	III	B	1	35	75	
			LEAR	2350.0	2358.0	III		1	25	180	
	2046	2400	HIRA	2350.0	2351.0	III	G	1	100	160	
			CULG	2351.0	2351.0	III	B	1	30	150	
			CULG	2358.0	2358.0	III	B	1	20	90	
18			LEAR	0121.0	0121.0	III		1	25	104	
	0000	0759	HIRA	0121.5	0122.0	III	B	1	30	100	
			LEAR	0333.0	0334.0	III		1	25	129	
			HIRA	0333.5	0334.0	III	B	1	40	110	
	0000	0750	CULG	0334.0	0334.0	III	G	1	35	110	
			HIRA	0432.0	0432.5	III	B	1	110	210	
			LEAR	0519.0	0519.0	III		1	25	120	
	0559	1545	POTS	0559 E	1545 U	I	S,N,C	2	200U	400	100-200MHz no data
	0600	1200	IZMI	0619.5	0620.5	III	G	2	45	85	
			CULG	0620.0	0620.0	III	G	1	55U	75	
	0642	1452	ONDR								
	0645	1530	BLEN								
			IZMI	0719.8	0721.1	III	G	1	130	270	
			POTS	0720.2	0720.7	DCIM		2	320	420	
			POTS	0720.5	0720.7	III	G,RS	1	200U	420	
			POTS	0808	0813	III	G	1	40X	60	
			IZMI	0810.5	0812.9	III	GG	1	40	90	
			LEAR	0914.0	0918.0	III		1	101	180	
			SVTO	0914.0	0915.0	III		1	117	180	
			IZMI	0914.3	0915.1	III	G,U	2	110	270X	
			POTS	0914.3	0918.7	III	G,RS	2	200U	380	
			IZMI	0917.9	0918.6	III	G	2	130	260	
			POTS	1016.2	1016.4	III	G	2	40X	55	
			IZMI	1016.3	1016.4	III	B	1	45	65	
			IZMI	1057.4	1057.8	III	G	1	120	230	
			POTS	1215.2	1215.8	III	G	1	65	300	
			POTS	1217.4	1217.6	III	B	2	40X	85	
			POTS	1242.4	1242.8	III	B	1	40X	85	
			POTS	1302.7	1303.2	III	B	2	40X	270	
			PALE	1744.0	1748.0	III		1	25	180	
	2000	2400	CULG	2007.0	2007.0	III	B	1	30	80	
			CULG	2355.0	2355.0	III	B	1	30	90	
			LEAR	2355.0	2355.0	III		1	25	115	
	2047	2400	HIRA	2355.0	2355.5	III	B	1	30		
19			LEAR	0105.0	0106.0	III		1	25	99	
	0000	0758	HIRA	0105.5	0106.0	III	B	1	30		
	0000	0750	CULG	0106.0	0106.0	III	G	1	30	90	
			LEAR	0524.0	0525.0	III		1	62	147	
			CULG	0525.0	0526.0	III	G	1	60	280	
	0607	0720	IZMI	0607.0E	0720.0E	I	S	1	130	250	
			IZMI	0630.3	0630.6	III	G	1	50	85	
	0606	1543	POTS	0637 U	1543 U	I	S,N,DC,C	2	200U	330	100-200MHz no data
			POTS	0959.5	1012.5	III	G,N	3	40X	800X	
	0650	1530	BLEN	1006.5	1012.4	III	GG,P,S	2	200X	1100	
	0644	1449	ONDR	1011.2	1011.4	DCIM	G	2	800X	1147	
			ONDR	1045.5	1054.0	DCIM	GG	2	800	1414	
			POTS	1045.9	1056.2	III	GG	3	40X	800X	
			BLEN	1046.0	1056.1	III	GG,P,S	2	200X	1600	
			POTS	1127.1	1127.6	III	G	2	200U	380	

SOLAR RADIO EMISSION
Spectral Observations

OCTOBER 2002

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			POTS	1148.2	1149.3	III	G	2	200U	380	
			BLEN	1148.6	1149.3	III	GG,P	2	200X	1600	
			POTS	1149.1	1149.3	DCIM		1	660	700	
			POTS	1201.3	1203.9	III	G	2	40X	450	
			POTS	1241.4	1241.7	III	G	2	40X	570	
			HOLL	1342.0	1445.0	III	N	1	102	180	
			BLEN	1342.3	1343.9	III	GG,P	3	200X	2000X	
			POTS	1342.4	1249.4	III	GG,N	3	50	800X	
			POTS	1407.6	1407.8	III	G	2	200U	500U	
			HOLL	1629.0	1630.0	III		1	25	180	
			HOLL	1755.0	1820.0	III	N	1	25	180	
			PALE	1755.0	1756.0	III		1	25	180	
			SGMR	1756.0	1756.0	III		1	30	65	
			PALE	1805.0	1930.0	III	N	1	25	180	
			SGMR	1818.0	1820.0	III		1	30	65	
	2000	2400	CULG	2051.0	2051.0	III	B	1	27	80	
			CULG	2113.0	2117.0	III	G	2	18X	160	
			HOLL	2113.0	2116.0	III		1	25	180	
			PALE	2114.0	2117.0	III		1	25	180	
	2048	2400	HIRA	2114.0	2116.5	III	G	1	30		
			CULG	2131.0	2131.0	III	B	1	23	80	
20	0000	0750	CULG	0032.0	0032.0	III	G	1	200	280	
			CULG	0039.0	0041.0	III	G	2	18X	420	
			LEAR	0039.0	0051.0	III	N	1	25	180	
	0000	0757	HIRA	0039.5	0041.0	III	G	1	25X		
			CULG	0044.0	0046.0	III	G	1	60	420	
			CULG	0046.0	0049.0	III	G	1	40	90	
			CULG	0206.0	0206.0	III	B	1	200	240	
			LEAR	0222.0	0222.0	III		1	137	180	
			CULG	0318.0	0319.0	III	G	1	50	120	
			CULG	0327.0	0329.0	III	G	2	18	260	
			LEAR	0327.0	0328.0	III		1	25	180	
			PALE	0327.0	0328.0	III		1	25	180	
			HIRA	0327.5	0328.0	III	B	1	30		
			CULG	0421.0	0421.0	III	B	1	30	75	
			LEAR	0421.0	0421.0	III		1	25	180	
			CULG	0451.0	0451.0	III	B	1	50	120	
			LEAR	0451.0	1012.0	III	N	1	25	180	
			CULG	0458.0	0459.0	III	G	2	18	240	
			HIRA	0458.0	0459.0	III	B	1	40		
			CULG	0505.0	0507.0	III	G	1	20	140	
			CULG	0511.0	0515.0	III	G	1	23	1100	
			CULG	0525.0	0547.0	III	N	1	35	120	
			HIRA	0540.0	0540.5	III	B	1	90		
			CULG	0611.0	0617.0	III	GG	2	20	460	
			HIRA	0611.0	0614.0	III	G	2	30	260	
	0605	1541	POTS	0611.4	0616.6	III	GG	2	40X	730	100-200MHz no data
			LEAR	0612.0	0614.0	V		2	25	180	
			SVTO	0612.0	0613.0	III		2	25	180	
			POTS	0633	1523 U	I	S,N,DC	2	200U	400	
			SVTO	0738.0	0739.0	V		2	25	180	
			POTS	0738.1	0738.9	III	G	3	40X	450	
			HIRA	0738.5	0739.0	III	B	1	40		
			POTS	0738.7	0739.2	V	B	3	40X	80	
			CULG	0739.0	0739.0	III	B	2	27	260	
			SVTO	0805.0	0810.0	III		1	63U	180U	
			POTS	0805.7	0810.9	III	G,N	3	40X	440	
			LEAR	0858.0	0903.0	III		2	25	180	
			SVTO	0858.0	0903.0	V		2	25	180	
			POTS	0858.7	0905.0	III	GG	3	40X	450	
	0700	1530	BLEN	0901.2	0905.0	III	GG,P	2	200X	2000X	
			ONDR	0901.3	0903.0	DCIM	G	1	800X	2000X	
	0646	1447	ONDR	0901.3	0902.3	DCIM	G	1	2000X	4500X	
			POTS	0902.5	0903.8	V	G	3	40X	80	
			POTS	0917.0	0917.8	III	G	2	40X	290	
			SVTO	0917.0	0917.0	III		1	52	180	
			POTS	1121.0	1137.0	III	GG,N	2	40X	430	
			SVTO	1121.0	1135.0	III	N	1	25	180	

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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			POTS	1121.7	1122.7	DCIM		1	330	510	
			POTS	1214.6	1214.8	DCIM		1	280	450	
			SVTO	1219.0	1258.0	III	N	1	25	180	
			POTS	1219.7	1226.2	III	G,N	1	40X	80	
			POTS	1235.7	1238.5	III	G,N	2	40X	380	
			POTS	1257.1	1302.8	III	G,N,RS	2	40X	400U	
			POTS	1400.7	1401.0	III	B	2	40X	80	
			POTS	1400.7	1401.0	III	B	2	40X	80	
			HOLL	1410.0	1412.0	III		1	25	180	
			SVTO	1410.0	1412.0	III		2	25	180	
			POTS	1410.9	1413.0	III	GG	3	40X	230	
			SGMR	1411.0	1412.0	III		1	30	60	
			ONDR	1411.2	1413.1	DCIM	G	1	884	2000X	
			ONDR	1411.3	1412.2	DCIM	G	1	2000X	4500X	
			BLEN	1411.5	1412.6	DCIM	C	2	1000	2000X	
			POTS	1421	1439	III	GG	2	40X	75	
			ONDR	1422.0	1428.2	DCIM	GG,SP	1	800X	2000X	
			ONDR	1422.1	1427.1	DCIM	G	1	2000X	4500X	
			BLEN	1422.5	1428.4	DCIM	P	2	200X	2000X	
			POTS	1423.0	1427.2	III	GG	2	40X	330	
			POTS	1426.3	1427.0	DCIM		2	350	480	
			HOLL	1432.0	1439.0	II		1	25	180	ESS 0637
			POTS	1432.8	1442	II	F,H	3	40X	85U	
			SGMR	1433.0	1437.0	II		1	35	60	ESS 0680
			SVTO	1433.0	1439.0	II		2	37	147	ESS 0657
			HOLL	1439.0	1545.0	III	N	1	25	128	
			HOLL	2008.0	2029.0	III	N	1	25	180	
	2000	2400	CULG	2008.0	2008.0	III	B	1	23	140	
			CULG	2029.0	2030.0	III	G	3	23	170	
			CULG	2104.0	2104.0	III	G	1	23	75	
			HOLL	2157.0	2157.0	III		1	25	135	
	2049	2400	HIRA	2157.5	2158.0	III	G	1	30		
21	0000	0750	CULG								
			LEAR	0040.0	1013.0	III	N	1	25	180	
	0000	0755	HIRA	0058.5	0059.0	III	B	1	200	500	
			HIRA	0239.0	0240.0	III	G	2	110	220	
			HIRA	0318.0	0318.5	III	B	1	110	210	
			HIRA	0338.0	0338.5	III	B	1	100	220	
			HIRA	0342.5	0343.0	III	B	1	80	210	
	0604	1200	IZMI	0610.0U	1000.0U	I	N	1	130	270	
	0607	1539	POTS	0612.2	0613.4	III	G	2	200U	340	100-200MHz no data
			HIRA	0613.0	0614.0	III	B	1	50	230	
			IZMI	0613.0	0613.7	III	GG	2	45	270X	
			SVTO	0613.0	0613.0	III		1	60	180	
			POTS	0614 U	1539 U	I	S,N,DC	2	200U	400	
			IZMI	0618.2	0621.4	III	G	1	45	75	
			IZMI	0635.3	0636.5	III	G	1	45	260	
			SVTO	0640.0	0640.0	III		1	41	125	
			IZMI	0640.1	0640.3	III	G	2	40	150	
			IZMI	0702.0	0702.1	III	G	1	45	95	
			HIRA	0718.0	0720.5	III	G	1	50	220	
			SVTO	0718.0	0719.0	III		1	33	125	
			IZMI	0718.3	0720.7	III	GG	2	40	250	
			POTS	0718.4	0719.9	III	G,RS	2	40X	250	
	0648	1445	ONDR	0730.2	0731.2	DCIM	GG	1	1034	2000X	
			ONDR	0742.2	0745.3	DCIM	GG	2	955	2000X	
			IZMI	0758.9	0759.2	III	G	1	55	90	
			POTS	0833.7	0834.4	III	G	2	65	390	
	0705	1520	BLEN	0833.7	0834.4	III	G	3	200X	400	
			IZMI	0833.8	0834.5	III	G,C	2	55	270X	
			SVTO	0834.0	0834.0	III		1	71	180	
			SVTO	0912.0	0921.0	III	N	1	63	180	
			IZMI	0912.7	0913.5	III	GG	2	40	200	
			POTS	0912.9	0913.3	III	G	1	40X	270	
			IZMI	0920.2	0924.7	III	GG	2	110	255	
			POTS	0920.2	0924.4	III	G	2	200U	420	
			IZMI	0938.8	0938.9	III	B	1	180	260	
			IZMI	0946.5	0947.5	III	G	2	45	215	

SOLAR RADIO EMISSION
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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
21			POTS	0946.6	0946.9	III	B	1	40X	230	
			POTS	1015.7	1016.8	III	GG	2	200U	380	
			BLEN	1016.0	1028.0	III	GG	2	200X	800	
			IZMI	1016.0	1016.6	III	GG	2	180	270X	
			POTS	1025.7	1028.0	DCIM		2	270	440	
			IZMI	1034.3	1034.6	III	G	1	55X	170	
			POTS	1034.4	1034.6	III	B	1	40X	80	
			IZMI	1041.6	1042.5	III	GG	2	50	215	
			SVTO	1042.0	1042.0	III		1	71	168	
			POTS	1042.1	1042.5	III	G	1	55	240	
			IZMI	1111.5	1112.2	III	G	1	55	175	
			SVTO	1115.0	1117.0	III		1	60	150	
			IZMI	1115.5	1117.2	III	GG	2	40	230	
			POTS	1115.6	1117.2	III	G	2	40X	300	
			SVTO	1154.0	1201.0	III		1	36	180	
			IZMI	1154.6	1156.7	III	G	1	90	270X	
			POTS	1200.9	1201.6	III	G	2	40X	320	
			SVTO	1346.0	1354.0	III		2	28U	180U	
			POTS	1346.2	1354.8	III	GG	3	40X	500U	
			BLEN	1346.7	1354.0	III	GG,S	2	200X	1800	
			HOLL	1347.0	1354.0	III		1	25	180	
			SGMR	1347.0	1354.0	III		1	30	65	
			BLEN	1418.8	1429.3	III	GG	2	200X	500	
			POTS	1418.9	1419.8	DCIM		2	220	430U	
			POTS	1429.0	1429.2	III	G	2	200U	260	
			POTS	1512.3	1513.6	III	G	3	200U	400U	
			BLEN	1512.4	1512.6	III	G	2	200X	700	
			HOLL	1524.0	1527.0	III		1	25	131	
			SVTO	1524.0	1527.0	III		1	78	171	
			POTS	1524.3	1524.8	III	G	2	40X	380	
			HOLL	1615.0	1627.0	III	N	1	25	180	
			HOLL	1908.0	1910.0	III		1	25	180	
			PALE	1908.0	1910.0	V		1	25	180	
			PALE	2008.0	0348.0	III	N	1	25	180	
	2000	2320	CULG	2028.0	2028.0	III	B	1	30	90	
			CULG	2034.0	2034.0	III	B	1	30	90	
			CULG	2158.0	2241.0	III	N	1	30	160	
	2050	2400	HIRA	2158.0	2158.5	III	B	1	30	130	
			HIRA	2209.0	2211.5	III	G	1	40	220	
			HIRA	2215.5	2217.0	III	G	1	40	210	
			HIRA	2240.5	2241.0	III	B	1	25X	210	
22	0000	0750	CULG	0156.0	0336.0	III	N	1	23	57U	
	0000	0754	HIRA	0156.0	0201.5	III	G	1	25X	230	
			HIRA	0212.0	0213.0	III	G	1	25X	210	
			HIRA	0230.0	0231.0	III	G	1	50	230	
			HIRA	0306.5	0307.0	III	B	1	25X	240	
			HIRA	0321.0	0322.0	III	B	1	40	210	
			HIRA	0334.5	0336.0	III	G	2	30	510	
	0610	1547	POTS	0610 E	0940 U	I	S,N,DC	2	230	400	100-200MHz no data
			IZMI	0629.8	0630.1	III	B	1	55	155	
	0650	1442	ONDR	0702.0	0705.0	DCIM	GG	1	800X	1531	
			IZMI	0707.2	0710.4	III	G	1	45	160	
			CULG	0715.0	0728.0	I	S	1	300	480	
			CULG	0736.0	0737.0	III	G	1	30	70U	
			HIRA	0736.0	0737.0	III	G	1	40	180	
			SVTO	0736.0	0746.0	III		1	25	180	
			IZMI	0736.2	0737.4	III	G,C	2	25X	190	
			POTS	0736.2	0746.5	III	GG,N	2	40X	600	
			IZMI	0739.2	0739.4	III	G	1	55	85	
			IZMI	0742.8	0744.5	III	GG,C	2	40	270X	
			HIRA	0743.0	0746.5	III	G	1	50	510	
			CULG	0744.0	0745.0	III	G	1	35	60U	
			IZMI	0746.1	0747.6	III	G	2	110	270X	
	0705	1515	BLEN	0746.2	0746.6	III	GG	2	200X	800	
	0600	1200	IZMI	0750.0U	0820.0U	I	N	1	50	260U	
			POTS	0805.3	0845	III	GG,N	1	40X	80	
			IZMI	0805.6	0806.0	III	G	1	40	130	
			IZMI	0813.5	0815.6	III	GG	1	45	170	

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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			SVTO	0824.0	0825.0	III		1	25	180	
			IZMI	0824.4	0825.2	III	GG	2	40	165	
			IZMI	0825.0	0825.7	CONT		2	45	90	
			IZMI	0838.9	0844.5	III	GG	2	40	170	
			IZMI	0916.0	0924.3	III	N	1	45	260	
			SVTO	0925.0	0925.0	III		2	25	180	
			BLEN	0925.3	0925.7	III	GG,S	2	200X	1000	
			POTS	0925.3	0926.7	III	G	2	40X	600	
			IZMI	0925.4	0926.4	III	G,C	2	25X	270X	
			POTS	0940 U	1547 U	I	S,N,DC	2	200U	530	
			IZMI	0948.6	0954.0	III	G	1	45	145	
			IZMI	1016.0	1200.0D	I	S	2	110	270X	
			POTS	1018	1030	III	GG	2	40X	700	
			IZMI	1018.1	1018.3	III	G	2	45	160	
			IZMI	1022.1	1023.0	III	G	2	45	210	
			IZMI	1024.4	1030.8	III	GG,FS	2	25X	270X	
			IZMI	1026.5	1026.8	III	G,C	2	25X	270X	
			IZMI	1046.5	1048.3	III	G,FS	2	40	215	
			POTS	1102	1111	III	G	1	40X	80	
			IZMI	1102.4	1110.9	III	N	2	40	145	
			IZMI	1104.1	1104.9	III	G,FS	2	40	215	
			POTS	1201	1112	III	G	1	40X	80	
			ONDR	1236.3	1239.5	DCIM	GG	1	800X	2000X	
			BLEN	1237.0	1239.9	DCIM	P	3	800	1900	
			POTS	1404.8	1405.5	III	GG	2	200U	450	
			HOLL	1811.0	1814.0	III		1	25	180	
			PALE	1811.0	1812.0	III		1	25	180	
			SGMR	1811.0	1812.0	III		1	30	55	
			PALE	1925.0	1926.0	III		1	25	90	
	2000	2400	CULG	2000.0E	2400.0D	I	S	1	220	290U	
			CULG	2009.0	2017.0	III	G	1	23	90	
			CULG	2050.0	2050.0	III	B	1	30	170	
			HOLL	2056.0	0006.0	CONT		1	25	177	
			CULG	2107.0	2107.0	III	B	1	57U	80	
			CULG	2119.0	2121.0	III	G	1	23	170	
	2050	2400	HIRA	2119.5	2120.0	III	B	1	90	170	
			CULG	2238.0	2238.0	III	B	1	35	90	
			HIRA	2238.0	2238.5	III	B	1	40	110	
			CULG	2320.0	2320.0	III	B	1	35	90	
			HIRA	2320.0	2320.5	III	B	1	40	150	
			LEAR	2320.0	2320.0	III		1	25	148	
			HIRA	2334.5	2335.0	III	B	1	40	80	
			CULG	2335.0	2335.0	III	B	1	35	90	
23	0000	0750	CULG	0000.0E	0044.0	I	S	1	220	320	
			CULG	0007.0	0007.0	III	B	1	35	70	
			CULG	0108.0	0241.0	III	N	1	20	170	
			LEAR	0111.0	0112.0	III		1	25	180	
			CULG	0112.0	0112.0	III	B	2	18	140	
			PALE	0112.0	0112.0	III		1	25	89	
	0000	0752	HIRA	0112.0	0112.5	III	B	2	30	120	
			HIRA	0130.0	0138.5	III	G	1	25X	160	
			LEAR	0130.0	0138.0	III		1	25	180	
			LEAR	0231.0	1014.0	III	N	1	25	180	
			HIRA	0237.5	0242.5	III	G	1	25X	160	
			CULG	0242.0	0242.0	III	G	2	18	180	
			PALE	0242.0	0242.0	III		1	25	180	
			HIRA	0318.5	0319.5	III	G	2	30	220	
			HIRA	0333.0	0334.0	III	G	3	25X	290	
			HIRA	0351.5	0352.0	III	B	1	40	110	
			CULG	0352.0	0750.0D	III	N	1	18	160	
			CULG	0409.0	0410.0	III	G	3	18X	430	
			HIRA	0409.0	0411.0	III	B	3	25X	410	
			LEAR	0409.0	0410.0	III		2	25	180	
			HIRA	0418.0	0423.5	III	G	1	25X	200	
	0550	1200	IZMI	0550.0E	1200.0D	I	N	1	130	270X	
			IZMI	0554.0U	1010.0U	III	N	1	45	95	
			SVTO	0604.0	0606.0	III		1	25	155	
			IZMI	0605.4	0608.9	III	GG,FS	2	45	155	

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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
23			HIRA	0605.5	0607.0	III	G	2	40	140	
	0613	1536	POTS	0613 E	1220 U	I	S,N,DC	2	200U	400	100-200MHz no data
			IZMI	0640.6	0643.6	III	GG	1	40	240	
	0652	1440	ONDR								
			IZMI	0653.3	0655.9	III	G	2	40	140	
			POTS	0711.6	0735 U	III	G,N	2	40X	380	
			IZMI	0717.8	0718.8	III	G	2	40	160	
			IZMI	0728.2	0745.7	III	N	2	45	120	
			POTS	0736 U	0804 U	III	G,N	1	40X	70	
			POTS	0758.7	0759.6	III	GG	2	200U	600	
			IZMI	0758.8	0759.2	III	G	1	80	180	
	0710	1515	BLEN	0758.8	0759.3	III	GG	2	200X	600	
			POTS	0835.0	0838.4	III	G	2	40X	400	
			IZMI	0835.1	0838.4	III	GG	2	25X	170X	
			LEAR	0836.0	0838.0	III		2	25	180	
			SVTO	0837.0	0838.0	V		2	25	180	
			BLEN	0837.4	0837.7	III	G	1	200X	450	
			IZMI	0837.4	0838.3	III	G,C	2	25X	270X	
			POTS	0856.1	0857.0	III	G	1	200U	470	
			IZMI	0856.5	0856.6	III	G	1	120	270	
			POTS	0937.3	0943.8	III	G,N	1	40X	400	
			IZMI	0942.3	0943.7	III	GG	1	40	95	
			IZMI	1028.5	1034.8	III	GG	2	40X	140	
			POTS	1028.6	1123	III	GG,N	2	40X	400	
			SVTO	1031.0	1538.0	III	N	2	25	180	
			IZMI	1031.2	1033.1	III	GG,C	2	25X	270	
			IZMI	1038.9	1039.0	III	G	1	110	180	
			IZMI	1041.9	1042.1	III	G	2	40	270X	
			IZMI	1048.4	1048.5	III	B	1	110	270X	
			IZMI	1056.7	1057.0	III	G	1	85	270X	
			IZMI	1100.7	1101.4	III	G,C	1	40	85	
			IZMI	1106.5	1106.6	III	B	2	45	65	
			IZMI	1116.7	1117.0	III	G,C	2	40	185	
			IZMI	1122.6	1122.8	III	B	2	40	120	
			POTS	1142.9	1143.3	III	G	1	40X	70	
			SVTO	1210.0	1221.0	V		2	25	180	
			POTS	1220.7	1222.2	III	G	3	40X	600	
			BLEN	1220.8	1221.4	III	GG,RS,V	3	200X	650	
			SGMR	1221.0	1221.0	III		2	30	80	
			POTS	1251 U	1418	III	G,N	1	40X	70	
			POTS	1315 U	1536 U	I	S,N	1	200U	400	
			POTS	1444.8	1445.9	III	G	2	40X	300	
			HOLL	1445.0	1445.0	III		1	25	150	
			HOLL	1445.0	1559.0	III	N	1	25	150	
			SGMR	1445.0	1445.0	III		1	30	45	
			POTS	1502.0	1503.1	III	G	2	40X	260	
			HOLL	1746.0	1748.0	III		1	25	130	
			HOLL	1809.0	1809.0	III		1	25	180	
			HOLL	1927.0	1929.0	III		1	25	180	
			PALE	1927.0	1930.0	III		1	25	180	
			SGMR	1929.0	1930.0	III		1	30	80	
	2000	2400	CULG	2000.0E	2059.0	I	S	1	210	280	
			CULG	2039.0	2400.0D	III	N	1	18	180	
			PALE	2055.0	0021.0	III	N	1	25	180	
			LEAR	2309.0	2309.0	III		1	25	180	
	2051	2400	HIRA	2309.0	2309.5	III	B	1	30	120	
			HOLL	2323.0	2323.0	III		1	25	160	
			LEAR	2323.0	2325.0	III		1	25	180	
			HIRA	2323.5	2324.0	III	B	1	30	130	
24	0000	0750	CULG	0000.0E	0750.0D	III	N	1	18	180	
			LEAR	0004.0	0012.0	V		3	25	180	
			CULG	0009.0	0011.0	III	G	3	18X	360	
			PALE	0009.0	0010.0	III		2	25	180	
	0000	0751	HIRA	0009.0	0011.0	III	B	3	25X	400	
			LEAR	0018.0	0556.0	CONT		1	69	180	
			CULG	0021.0	0750.0D	I	S	1	160	280	
			PALE	0031.0	0233.0	CONT		1	111U	180U	
			CULG	0045.0	0045.0	III	B	1	180	300	

S O L A R R A D I O E M I S S I O N
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OCTOBER 2002

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
24			HIRA	0045.0	0048.0	III	G	1	80	320	
			CULG	0053.0	0055.0	III	G	1	220	520	
			LEAR	0123.0	0124.0	III		1	25	93	
			HIRA	0132.5	0133.0	III	B	1	40	70	
			LEAR	0137.0	0138.0	III		1	25	92	
			LEAR	0151.0	1014.0	III	N	1	25	180	
			HIRA	0151.5	0152.0	III	B	1	40	110	
			HIRA	0204.5	0205.0	III	B	1	30	200	
			CULG	0226.0	0228.0	III	G	1	100	450	
			HIRA	0226.0	0229.0	III	G	1	50	610	
			HIRA	0254.0	0254.5	III	B	1	30	90	
			HIRA	0328.0	0328.5	III	B	1	30	200	
			HIRA	0337.0	0357.0	III	G	1	25X	320	
			CULG	0340.0	0342.0	III	G	2	20	250	
			CULG	0355.0	0357.0	III	GG	2	18	280	
			HIRA	0418.5	0419.0	III	B	1	30	140	
			HIRA	0429.0	0429.5	III	B	1	40	220	
			IZMI	0551.0E	1200.0D	III	N	1	25X	95	
	0551	1200	IZMI	0551.0E	0806.0	I	N,C	2	45	270X	
			HIRA	0608.0	0608.5	III	B	1	130	220	
			IZMI	0608.3	0608.6	III	G	2	130	270X	
	0615	1535	POTS	0615 E	0800 U	I	S,N,DC	2	200U	420	100-200MHz no data
			IZMI	0621.0	0621.4	III	G,FS	2	45	90	
			IZMI	0623.6	0624.3	III	G,C	2	50	90	
			IZMI	0632.2	0632.7	III	G,FS	2	45	65	
	0654	1438	ONDR								
			SVTO	0656.0	0815.0	III	N	1	25	180	
			IZMI	0656.5	0657.3	III	GG	2	40	180	
			POTS	0656.6	0802.3	III	GG,N	3	40X	650	
			IZMI	0704.5	0705.9	III	GG,FS	2	40	170	
			IZMI	0706.4	0707.7	III	GG	2	55	190	
			IZMI	0709.0	0718.7	III	GG	2	45	270X	
			IZMI	0710.3	0710.6	III	G,C	2	40	190	
			IZMI	0720.4	0726.6	III	GG	2	55	270X	
			CULG	0722.0	0723.0	III	G	1	60	280	
	0715	1515	BLEN	0734.5	0803.0	III	GG,RS	3	200X	800	
			IZMI	0735.5	0737.6	III	GG,C	2	45	270X	
			CULG	0736.0	0737.0	III	G	1	50U	280	
			HIRA	0736.0	0739.5	III	G	2	40	400	
			CULG	0738.0	0739.0	III	G	2	23	280	
			IZMI	0738.0	0739.8	III	GG,C	2	45	270X	
			SVTO	0738.0	0739.0	III		2	25	180	
			IZMI	0740.2	0741.0	III	G	2	40	270X	
			IZMI	0741.9	0742.4	III	G	1	50	190	
			IZMI	0745.9	0759.0	III	GG,FS	2	25X	270X	
			IZMI	0754.5	0755.2	III	G,C	2	25X	270X	
			POTS	0800	0847	IV		2	40X	650	
			SVTO	0800.0	0802.0	III		2	25	180	
			IZMI	0800.6	0802.1	III	GG,C	2	25X	270X	
			POTS	0801.2	0801.9	V	G	3	40X	70	
			IZMI	0806.0	0850.0U	I	S,C	2	45	270X	
			IZMI	0815.1	0815.6	III	G	2	40	95	
			POTS	0819	0832	II	UE	2	40X	85U	
			IZMI	0835.5	0835.6	CONT		2	130	175	
			POTS	0847	1535	I	S,N,DC	2	200U	420	
			IZMI	0850.0	1200.0D	I	N	2	45	270X	
			IZMI	0854.2	0854.2	III	G,C	2	40	170	
			POTS	0854.2	0854.6	III	B	2	40X	80	
			IZMI	0908.8	0909.1	III	G,C	2	40	95	
			POTS	0908.8	0909.2	III	B	2	40X	420	
			POTS	0934.4	0935.5	DCIM		1	380	480	
			POTS	0934.5	0934.7	III	B	2	40X	70	
			POTS	0947.0	0951.4	III	G	2	40X	400	
			IZMI	0947.1	0947.6	III	G	1	45	140	
			SVTO	0949.0	0951.0	III		2	25	180	
			IZMI	0949.5	0949.7	III	G	2	25X	215	
			IZMI	0949.6	0950.0	V		2	45	95	
			IZMI	0950.9	0951.2	III	G,FS	2	25X	170	
			POTS	0952.2	1024 U	III	G	1	40X	70	

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OCTOBER 2002

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
24			IZMI	0952.8	0953.0	III	G	1	130	225	
			IZMI	1014.4	1017.5	III	G	1	50	160	
			IZMI	1025.4	1027.3	III	GG	2	50	175	
			IZMI	1033.6	1035.4	III	GG	1	55	170	
			IZMI	1039.3	1039.7	III	G	1	110	170	
			POTS	1053	1124	III	GG,N	3	40X	450	
			IZMI	1055.5	1056.0	III	G,FS	1	40	90	
			IZMI	1057.0	1057.3	III	G	2	25X	160	
			SVTO	1057.0	1057.0	III		2	25	180	
			IZMI	1057.1	1057.6	V		2	40	70	
			IZMI	1100.2	1105.8	III	GG	1	35	175	
			SVTO	1111.0	1415.0	III	N	2	25	180	
			IZMI	1111.2	1112.2	III	GG,C	2	25X	270	
			IZMI	1120.1	1128.9	III	GG	1	55	190	
			IZMI	1123.1	1124.6	III	GG	2	50	270	
			IZMI	1132.9	1138.4	III	GG	1	35	160	
			POTS	1136	1344 U	III	GG,N	2	40X	70	
			IZMI	1147.1	1149.2	III	GG,C	2	35	270X	
			POTS	1147.4	1148.2	III	B	2	40X	500	
			IZMI	1158.5	1200.4	III	GG	2	30	160	
			POTS	1158.5	1158.9	III	B	2	40X	300	
			SGMR	1218.0	1219.0	III		1	30	55	
			POTS	1334.6	1335.0	III	G	2	40X	600	
			POTS	1402	1427	III	GG,N	3	40X	650	
			BLEN	1402.2	1424.3	III	GG,P	3	200X	1200	
			HOLL	1404.0	1405.0	III		1	25	180	
			HOLL	1404.0	1445.0	III	N	1	25	180	
			SGMR	1404.0	1413.0	V		1	30	50	
			SVTO	1418.0	1421.0	III		2	25	180	
			POTS	1443.9	1446.3	III	G,N	2	40X	300	
			SGMR	1444.0	1445.0	III		2	30	45	
			HOLL	1604.0	1623.0	III	N	1	25	180	
			PALE	1648.0	1848.0	III	N	1	25	180	
			HOLL	1804.0	1814.0	III		2	25	180	
			HOLL	1804.0	1846.0	III	N	2	25	180	
			PALE	1807.0	1810.0	III		2	25	180	
			SGMR	1807.0	1820.0	III	N	3	30	80	
			PALE	1812.0	2041.0	CONT		1	66	180	
			HOLL	1815.0	1953.0	IV		1	75	180	
			HOLL	1932.0	1932.0	III		1	25	160	
	2000	2400	CULG	2000.0E	2024.0	III	S,C	1	40U	180	
			CULG	2019.0	2144.0	I	S	1	65	280	
			CULG	2026.0	2027.0	III	G	2	25	180	
			CULG	2035.0	2214.0	III	N	1	18	180	
			PALE	2125.0	2126.0	III		1	25	135	
	2053	2400	HIRA	2126.0	2126.5	III	B	1	30	200	
			LEAR	2202.0	0930.0	III	N	1	25	180	
			CULG	2249.0	2251.0	III	G	1	30	150	
			CULG	2326.0	2400.0D	III	N	1	27	170	
			CULG	2338.0	2343.0	III	GG	2	18X	280	
			HIRA	2338.0	2343.0	III	G	2	25X	280	
			HOLL	2338.0	2343.0	III		1	25	180	
25	0000	0750	CULG	0000.0E	0039.0	III	N	1	18	180	
			CULG	0120.0	0553.0	I	S	1	110	260	
			CULG	0128.0	0213.0	III	N	1	50U	180	
			CULG	0252.0	0430.0	III	N	1	18	180	
			CULG	0516.0	0516.0	III	B	1	23	130	
	0608	1200	IZMI	0608.0E	1200.0D	I	N	2	120	270X	
			IZMI	0616.1	0616.2	III	B	1	45	85	
	0618	1530	POTS	0618 E	1530 U	I	S,DC,N	2	200U	420	100-200MHz no data
			POTS	0644	0645	III	G	2	40X	350	
			CULG	0644.0	0645.0	III	G	1	18X	230	
			IZMI	0644.0	0645.1	III	GG	2	25X	250	
			SVTO	0644.0	0645.0	III		1	25	180	
	0000	0750	HIRA	0644.0	0645.0	III	B	2	50	210	
			CULG	0702.0	0702.0	III	B	1	200	500	
			POTS	0702.1	0702.7	DCIM		2	220	800X	
	0756	1436	ONDR	0702.1	0702.3	DCIM	G	2	800X	1817	

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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
25			IZMI	0716.1	0716.3	III	G	1	135	215	
			CULG	0721.0	0723.0	III	G	1	20	230	
			POTS	0721.0	0722.9	III	G	2	40X	400	
			IZMI	0721.5	0725.2	III	GG	2	25X	270X	
			SVTO	0722.0	0723.0	III		1	34U	126U	
			HIRA	0722.5	0723.0	III	B	1	40	120	
			IZMI	0800.5	0800.6	III	B	1	40	85	
			POTS	0800.5	0800.8	III	B	2	40X	55	
			IZMI	0843.1	0843.2	III	G	2	95	175	
			POTS	0938	1018	III	GG,N	1	40X	80	
			IZMI	0940.6	0957.0	I	S	2	40	95	
			IZMI	0948.2	0948.3	III	B	2	150	185	
			IZMI	1001.3	1001.5	III	B,C	2	25X	125	
			IZMI	1017.3	1017.5	III	G	1	40	160	
			SVTO	1056.0	1101.0	III		1	31U	180U	
			POTS	1056.6	1111	III	GG	2	40X	650	
			IZMI	1058.7	1059.5	III	G	2	25X	165	
			IZMI	1100.9	1102.4	III	G,DC	2	30	215	
			IZMI	1105.5	1105.7	III	G	1	40	255	
			IZMI	1109.6	1110.7	III	G	2	115	175	
			POTS	1201.6	1214.8	III	GG	2	40X	520	
			SVTO	1202.0	1213.0	III	N	1	32U	180U	
			POTS	1221	1312 U	III	GG,N	1	40X	70	
			POTS	1259.0	1300.8	III	G	2	40X	280	
			SVTO	1300.0	1300.0	III		1	32U	143U	
			POTS	1359	1415	III	GG	3	40X	600	
			SGMR	1403.0	1408.0	V		1	30	75	
			SVTO	1403.0	1414.0	III	N	2	32U	180U	
			ONDR	1403.5	1407.1	DCIM	G	1	800X	2000X	
			HOLL	1404.0	1408.0	III		1	25	180	
	0715	1515	BLEN	1404.0	1413.1	III	GG,P	3	200X	2000X	
			ONDR	1404.1	1407.1	DCIM	G,W	1	2000X	4500X	
			HOLL	1441.0	1847.0	III	N	1	25	135	
			SVTO	1448.0	1448.0	III		1	75U	83U	
			POTS	1448.1	1448.4	III	G	2	40X	85	
			HOLL	1740.0	1752.0	II		1	25	87	ESS 0368
			PALE	1744.0	1748.0	II		1	25	180	ESS 0780
			SGMR	1746.0	1811.0	III	N	2	30	80	
			HOLL	1749.0	1859.0	IV		1	101	180	
			PALE	1754.0	1901.0	IV		1	25	180	
	2000	2400	CULG	2006.0	2016.0	UNCLF		1	23	45	
			CULG	2034.0	2400.0D	I	S	1	120	290	
			CULG	2037.0	2112.0	III	S	1	23	100	
			CULG	2145.0	2154.0	III	GG	1	100	160	
			HOLL	2147.0	2148.0	III		1	25	134	
	2054	2400	HIRA	2147.5	2148.0	III	B	1	40	120	
			CULG	2148.0	2149.0	III	G	2	18	140	
			CULG	2218.0	2220.0	III	G	1	50U	130	
			CULG	2237.0	2237.0	III	B	1	23	90	
			CULG	2240.0	2250.0	III	G	1	50	90	
26	0000	0750	CULG	0000.0E	0750.0D	I	S	1	140	300	
			CULG	0130.0	0130.0	III	B	1	50U	90	
			CULG	0313.0	0329.0	III	GG	1	18	330	
	0000	0749	HIRA	0316.0	0328.5	III	G	3	40	310	
			CULG	0327.0	0328.0	III	G	3	18	520	
			CULG	0332.0	0349.0	CONT		1	50U	120	
			CULG	0404.0	0404.0	III	B	1	30	180	
			CULG	0549.0	0549.0	III	B	1	200	460	
	0601	1200	IZMI	0601.0E	1200.0D	I	S,C	2	120	270X	
	0620	1530	POTS	0620 E	1530 U	I	S,DC,N	2	200U	500U	100-200MHz no data
	0715	1515	BLEN								
			POTS	0719	0729	II	F,H	2	40X	85U	
			IZMI	0719.7	0728.2	I	S	2	40	95	
			CULG	0720.0	0728.0	UNCLF		1	35	90	
			IZMI	0741.3	0741.4	III	B	1	50	65	
			POTS	0756	0807	III	G,N	1	40X	60	
			IZMI	0756.2	0756.5	III	G	1	45	85	
	0758	1433	ONDR								

SOLAR RADIO EMISSION
Spectral Observations

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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			IZMI	0806.7	0807.0	III	B	1	40	90	
			IZMI	0829.5	0830.0	III	GG	1	90	260	
			IZMI	0846.0	0846.2	III	G,C	1	45	85	
			IZMI	1037.9	1038.1	III	G	1	50	190	
			POTS	1037.9	1038.2	III	B	2	40X	270	
			POTS	1224.0	1225.2	DCIM		2	350	600	
			POTS	1428.3	1433.8	III	GG	2	40X	500U	
			HOLL	1643.0	1643.0	III		1	25	139	
	2000	2400	CULG	2000.0E	2333.0	I	S	1	60	170	
			CULG	2012.0	2050.0	III	N	1	25	80	
			HOLL	2032.0	2300.0	CONT		1	75	175	
			HOLL	2034.0	2035.0	III		1	25	180	
			HOLL	2053.0	2053.0	III		1	25	164	
	2055	2400	HIRA								
			LEAR	2203.0	0128.0	III	N	1	25	180	
			HOLL	2252.0	2355.0	III	N	1	25	180	
			HOLL	2258.0	2311.0	II		2	25	180	ESS 1015
27			LEAR	0307.0	0313.0	III		1	25	127	
	0000	0748	HIRA	0308.5	0309.0	III	B	1	25X	110	
	0000	0750	CULG	0309.0	0309.0	III	B	1	18	120	
			LEAR	0326.0	0431.0	III	N	1	25	180	
	0623	1528	POTS	0623 E	1528 U	I	S,DC,N	2	200U	400	100-200MHz no data
	0700	1431	ONDR								
	0715	1515	BLEN								
			POTS	0749	0831	III	GG,N	2	40X	55	
	0650	1200	IZMI	0758.1	0800.0	III	G	1	25X	65	
			IZMI	0811.0	1200.0D	I	N	1	175	270X	
			IZMI	0818.2	0821.2	III	G	2	25X	85	
			IZMI	1013.8	1014.1	III	B	2	30	75	
			POTS	1013.8	1014.1	III	B	2	40X	80	
			IZMI	1046.0	1046.1	III	B	1	55	65	
			IZMI	1152.1	1152.2	III	B	1	25X	45	
			SVTO	1258.0	1258.0	III		1	30U	83U	
			POTS	1258.1	1258.4	III	B	2	40X	350	
			POTS	1357.7	1358.4	III	G	1	40X	70	
			POTS	1418.4	1418.7	III	B	1	40X	50	
	2056	2400	HIRA	2155.5	2201.0	III	G	1	25X	150	
	2000	2400	CULG	2156.0	2201.0	III	G	1	18	90	
			LEAR	2252.0	2255.0	III		2	25	180	
			CULG	2253.0	2312.0	III	G	3	18X	110	
			HIRA	2253.0	2312.0	III	G	2	25X	140	
			PALE	2253.0	2255.0	III		1	25	180	
			HIRA	2258.5	2307.0	II		3	25X	100	
			HIRA	2258.5	2307.0	II		3	50	200	
			CULG	2259.0	2307.0	II	SH	3	45	160	ESS 900
			CULG	2300.0	2310.0	II	FN	3	18X	70	
			LEAR	2302.0	2313.0	II		2	25	180	ESS 0909
			PALE	2304.0	2307.0	II		1	25	180	ESS 0634
			PALE	2308.0	2312.0	III		1	25	180	
			CULG	2329.0	2331.0	III	G	2	18	50U	
28			LEAR	0113.0	0120.0	III		1	25	129	
	0000	0747	HIRA	0117.0	0119.0	III	G	1	25X	110	
	0000	0750	CULG	0117.0	0119.0	III	G	1	18	80	
			HIRA	0139.0	0139.5	III	B	1	25X	80	
			LEAR	0139.0	0139.0	III		1	25	87	
			LEAR	0226.0	0229.0	III		1	25	180	
			CULG	0227.0	0227.0	III	G	1	18	80	
			HIRA	0227.0	0227.5	III	B	1	30	110	
			LEAR	0325.0	0910.0	CONT		1	114	180	
			LEAR	0359.0	0653.0	III	N	1	25	180	
			CULG	0400.0	0401.0	III	G	1	20	90	
			HIRA	0400.0	0401.0	III	B	1	60	130	
			CULG	0423.0	0433.0	III	G	1	20	90	
			HIRA	0430.5	0433.0	III	G	1	30	150	
			LEAR	0513.0	0519.0	III		2	25	180	
			HIRA	0513.5	0520.0	III	G	2	40	180	
			CULG	0514.0	0520.0	III	G	1	20	90	

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28	0625	1528	POTS	0625 E	0954 U	I	S,DC	3	200U	450U	100-200MHz no data
			CULG	0647.0	0652.0	CONT		1	120	240	
	0650	1200	IZMI	0650.0E	0900.0E	I	SC	2	110	270X	
			POTS	0701	0719	III	G,N	1	40X	50	
			IZMI	0701.5	0701.6	III	B	2	35	65	
			IZMI	0701.8	0710.0	III	N	1	45	65	
			CULG	0702.0	0702.0	III	B	1	30	50	
			LEAR	0850.0	0852.0	III		2	25	180	
			SVTO	0850.0	0852.0	III		2	25	180	
	0715	1515	BLEN	0850.0	0852.8	III	GG,RS	2	200X	4000X	
			IZMI	0850.1	0852.6	III	GG,C	2	25X	270X	
			POTS	0850.3	0853.3	III	G	3	40X	420	
	0702	1429	ONDR	0850.3	0851.5	DCIM	GG	2	1095	2000X	
			IZMI	0900.0	0915.0U	I	N	1	170	270X	
			IZMI	0930.3	0930.4	III	B	1	45	70	
			IZMI	0956.4	0957.2	III	G	1	45	85	
			POTS	0956.4	0957.3	III	G	1	40X	55	
			POTS	1002 U	1528 U	I	S,N	2	200U	400	
			IZMI	1002.3	1200.0	I	N	1	200	270X	
			IZMI	1005.1	1005.2	III	B	1	110	160	
			IZMI	1059.1	1059.5	III	G	1	130	180	
			IZMI	1107.5	1107.6	III	B	1	110	175	
			SVTO	1245.0	1324.0	CONT		1	77U	180U	
			POTS	1301.3	1315.5	III	G,N	2	40X	85	
			SVTO	1304.0	1305.0	III		1	25	180	
			POTS	1334.6	1343.7	III	GG,N	3	40X	380	
			HOLL	1337.0	1341.0	III		1	25	141	
			SVTO	1338.0	1341.0	III		2	25	149	
			POTS	1339.5	1340.5	V	B	3	40X	75	
			POTS	1359.4	1407.8	III	G,N	2	40X	85	
			HOLL	1404.0	1404.0	III		1	25	88	
			SVTO	1404.0	1404.0	III		1	74U	142U	
			POTS	1430.8	1431.1	III	B	1	50	230	
			HOLL	1910.0	1910.0	III		1	25	172	
			HOLL	1927.0	2128.0	III	N	2	25	180	
			PALE	1928.0	1929.0	V		1	25	180	
			SGMR	1928.0	1929.0	III		3	30	80	
			PALE	1942.0	1948.0	III		1	25	180	
			LEAR	2224.0	2226.0	III		1	25	180	
	2056	2400	HIRA	2224.5	2226.5	III	G	1	30	240	
			HOLL	2225.0	2226.0	III		1	25	167	
			PALE	2225.0	2226.0	III		1	56	180	
	2000	2400	CULG	2225.0	2227.0	III	G	1	18	90	
			HIRA	2237.0	2238.0	III	B	1	30	190	
			LEAR	2237.0	2237.0	III		1	25	180	
			CULG	2238.0	2238.0	III	B	1	20	80	
29			LEAR	0020.0	0022.0	III		1	25	180	
	0000	0745	HIRA	0020.0	0022.0	III	G	1	30	200	
	0000	0750	CULG	0020.0	0022.0	III	G	1	18X	80	
			LEAR	0202.0	0203.0	III		1	25	113	
			HIRA	0202.5	0203.0	III	B	1	30	110	
			CULG	0203.0	0205.0	III	G	1	18	75	
			LEAR	0215.0	0215.0	III		1	25	100	
			LEAR	0231.0	0232.0	III		1	25	180	
			PALE	0231.0	0231.0	III		1	25	138	
			HIRA	0231.5	0232.0	III	B	1	30	130	
			CULG	0232.0	0232.0	III	B	1	18	90	
			LEAR	0251.0	0323.0	CONT		1	112	180	
			CULG	0301.0	0302.0	III	G	1	18X	100	
			HIRA	0301.0	0301.5	III	B	1	25X	160	
			LEAR	0301.0	0301.0	III		1	25	180	
			PALE	0301.0	0301.0	III		1	25	180	
			CULG	0350.0	0352.0	III	G	1	18	90	
			LEAR	0350.0	0351.0	III		1	25	180	
			HIRA	0350.5	0351.5	III	G	1	50	130	
			HIRA	0420.5	0424.0	II		1	110	270	
			LEAR	0422.0	0423.0	III		1	25	180	
			LEAR	0446.0	1016.0	III	N	1	25	180	

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29			CULG	0447.0	0551.0	III	N	1	18	100	
			HIRA	0456.0	0457.0	III	G	1	40	160	
			HIRA	0516.0	0520.0	III	G	1	25X	210	
			HIRA	0536.0	0536.5	III	B	1	40	130	
	0628	1525	POTS	0628 E	1525 U	I	S,N,DC	2	200U	400	100-200MHz no data
	0702	1200	IZMI	0702.0E	1200.0D	I	N	1	120	270X	
	0704	1427	ONDR								
			IZMI	0712.3	0712.4	III	B	1	45	65	
	0715	1515	BLEN								
			SVTO	0738.0	0739.0	III		1	42	144	
			IZMI	0739.2	0741.0	III	GG	2	40	270X	
			POTS	0739.6	0740.1	III	B	2	40X	290	
			CULG	0740.0	0740.0	III	B	1	23	60	
			IZMI	0742.2	0749.3	III	N	1	45	70	
			POTS	0824	0846	III	G,N	2	40X	70	
			IZMI	0829.5	0832.7	III	GG,RS	2	40	75	
			POTS	0837.6	0839.2	III	GG	2	200U	500	
			IZMI	0837.8	0838.3	III	G	2	110	270X	
			SVTO	0838.0	0845.0	III		1	30	147	
			IZMI	0838.8	0838.9	III	G	2	90	270X	
			IZMI	0845.3	0845.5	III	B	2	25	65	
			POTS	0941	0944	III	G,N	1	40X	55	
			IZMI	0941.5	0941.7	III	B	1	45	85	
			POTS	1010	1019.1	III	G,N	2	40X	85	
			SVTO	1018.0	1019.0	III		1	25	83	
			IZMI	1018.5	1019.0	III	G	2	25X	120	
			IZMI	1056.2	1057.0	III	G	2	25X	180	
			IZMI	1105.0	1106.0	III	G	1	45	85	
			IZMI	1119.1U	1120.0	III	G,C,FS	1	40	190	
			POTS	1119.3	1124.4	III	G,N	2	40X	80	
			IZMI	1121.9	1124.1	III	G,FS	1	45	160	
			POTS	1129.8	1135.8	III	G,N	2	200U	500	
			IZMI	1131.4	1139.6	III	G	1	110	270	
			POTS	1346.8	1347.0	III	B	2	40X	75	
			SVTO	1408.0	1441.0	CONT		1	80U	180U	
			HOLL	1414.0	1802.0	CONT		1	64	180	
			HOLL	1935.0	1936.0	III		1	25	180	
	2000	2400	CULG	2000.0E	2044.0	III	N	1	18	80	
	2057	2400	HIRA								
30			LEAR	0007.0	0008.0	III		1	25	180	
			PALE	0007.0	0008.0	III		1	25	180	
	0000	0116	HIRA	0007.5	0008.5	III	G	1	30	200	
	0000	0750	CULG	0008.0	0008.0	III	G	1	18	100	
			LEAR	0602.0	0603.0	III		1	25	103	
			SVTO	0602.0	0603.0	III		1	25U	80U	
	0537	0745	HIRA	0602.5	0603.0	III	B	1	30	120	
			CULG	0603.0	0603.0	III	G	1	23	80	
	0631	1523	POTS	0639	1103	I	S,N,DC	2	200U	440	100-200MHz no data
	0653	1200	IZMI	0653.0E	1145.0U	I	S	1	110X	270X	
	0706	1425	ONDR								
	0720	1510	BLEN								
			IZMI	0812.3	0812.4	III	B	1	80	95	
			LEAR	0836.0	1017.0	CONT		1	99	180	
			SVTO	0853.0	1007.0	CONT		1	82U	180U	
			POTS	0959.9	1000.2	III	B	1	40X	70	
			POTS	1126	1203	I	S,N	1	200U	400	
			POTS	1128.0	1128.4	III	G	1	40X	55	
			POTS	1232	1310	I	S,N	2	200U	280	
			POTS	1318.5	1318.8	III	G	1	40X	55	
			POTS	1323.5	1325.2	DCIM		2	220	450	
			HOLL	1413.0	1414.0	III		1	110	180	
			POTS	1413.4	1415.0	III	G	2	40X	300	
			SVTO	1414.0	1414.0	III		1	111U	165U	
			POTS	1434	1310	I	S,N	2	200U	250	
			POTS	1514.9	1519.0	DCIM		2	230	450	
			HOLL	1712.0	1715.0	III		1	25	180	
			HOLL	1907.0	2001.0	III	N	1	25	180	
			PALE	1907.0	2014.0	III	N	1	25	180	

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30	2000	2400	CULG	2043.0	2048.0	III	G	1	18	70	
			LEAR	2158.0	0131.0	CONT		1	114	180	
			CULG	2232.0	2237.0	III	G	1	18	90	
			LEAR	2232.0	2305.0	III	N	1	25	180	
	2058	2400	HIRA	2233.0	2237.5	III	G	1	25X	210	
			CULG	2302.0	2305.0	III	G	1	23	80	
31			LEAR	0017.0	0017.0	III		1	25	84	
	0000	0750	CULG	0017.0	0017.0	III	B	1	30	80	
			CULG	0034.0	0034.0	III	G	1	30	80	
			LEAR	0034.0	0034.0	III		1	25	80	
			LEAR	0117.0	0219.0	III	N	1	25	180	
			CULG	0144.0	0144.0	III	B	1	18	75	
			CULG	0150.0	0153.0	III	G	1	40U	90	
	0050	0744	HIRA	0150.5	0152.0	III	G	1	30	200	
			LEAR	0506.0	0507.0	III		1	25	104	
			HIRA	0506.5	0507.0	III	B	1	30	120	
			CULG	0507.0	0507.0	III	B	1	30	80	
	0633	1521	POTS	0645	0757	I	S,N,DC	2	200U	330	100-200MHz no data
	0700	1200	IZMI	0700.0E	0720.0	I	N	1	190	270X	
			IZMI	0751.1	0753.9	III	GG	1	180	270	
			POTS	0850	0909	I	S,N	1	200U	320	
			ONDR	0921.0	0926.5	DCIM	GG,SP	2	800X	2000X	
	0708	1423	ONDR	0921.3	0926.5	DCIM	G	1	2000X	4500X	
	0720	1510	BLEN	0921.6	0926.8	DCIM	P	3	500	4000X	
			POTS	0925.4	0925.7	DCIM		2	450	730	
			POTS	0940.9	0943.6	III	G	2	40X	320	
			IZMI	0941.0	0943.0	III	G	1	35	160	
			IZMI	0948.6	0949.2	III	G	1	50	90	
			SVTO	1056.0	1056.0	III		1	63U	180U	
			POTS	1056.4	1058.6	III	G	2	45	280	
			IZMI	1056.7	1057.3	III	G,C	2	50	270X	
			SVTO	1128.0	1131.0	III		1	74	180	
			POTS	1128.2	1132.1	III	G,N	2	40X	360	
			IZMI	1128.3	1128.9	III	G,C	2	80	270X	
			IZMI	1131.0	1132.3	III	G	1	55	170	
			POTS	1157.8	1221	I	S,N	1	200U	330	
			SVTO	1158.0	1205.0	III		2	25	180	
			IZMI	1158.5	1200.0D	III	GG,C	2	25X	210	
			POTS	1158.5	1208.3	III	GG	3	40X	300	
			POTS	1159.5	1201.3	V	B	3	40X	65	
			POTS	1356	1521 U	I	S,N	1	200U	270	
			HOLL	1651.0	1815.0	III	N	1	25	145	
	2000	2400	CULG	2006.0	2006.0	III	B	1	20	90	
			CULG	2129.0	2129.0	III	B	1	18	70	
			CULG	2144.0	2144.0	III	B	1	18	90	
			LEAR	2226.0	2300.0	III	N	1	66	140	
	2059	2400	HIRA	2226.5	2227.0	III	B	1	80	110	
			CULG	2227.0	2230.0	III	G	1	60	170	